



ITT

Flygt

Flygt Product Catalogue

Building Trade – 2007



Engineered for life


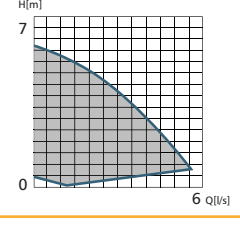

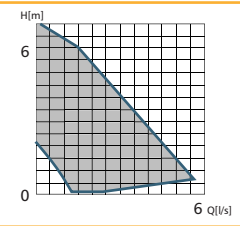

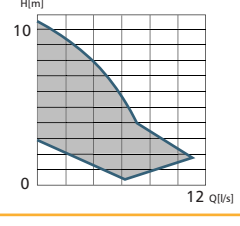

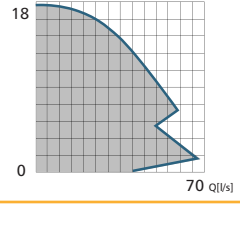

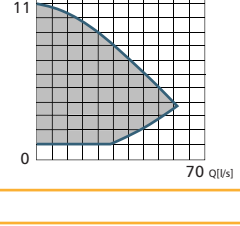

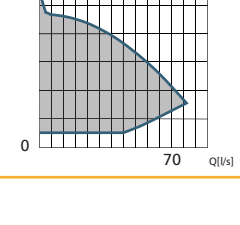


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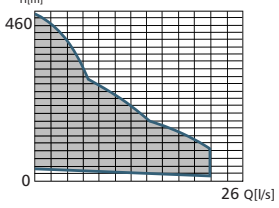

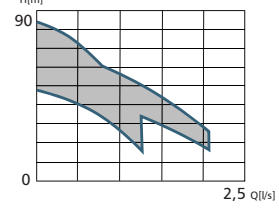

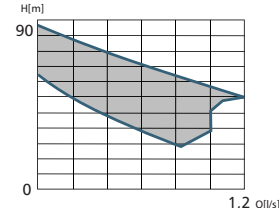

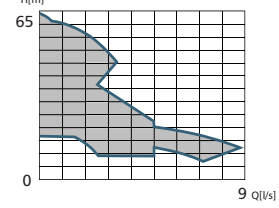
ITT Flygt pumps for HVAC

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Wet rotor pumps		Applications								Technical data		Performance field
		Domestic hot water supply max 110°C	Shunt group	Domestic heating systems	Commercial heating systems	Cooling systems	District heating	District cooling				
FPA/FSA		●								Power (kW):		
									Connection:	DN 15–DN 25 (G 1"–1 1/2")	Material:		Bronze/stainless steel
										Pressure class:	10 bar	
										Capacity control:	3 speed	
										Temperature of pumped media:	-10°C–+110°C	
FLA		●	●							Power (kW):		
									Connection:	DN 25/32 (G 1 1/2"–2")	Material:		Cast iron
										Pressure class:	10 bar	
										Capacity control:	3 speed	
										Temperature of pumped media:	-10°C–+110°C	
FLB		●	●							Power (kW):		
									Connection:	DN 32 (G 2")	Material:		Cast iron
										Pressure class:	10 bar	
										Capacity control:	3 speed	
										Temperature of pumped media:	+20°C–+130°C	
FLB		●	●							Power (kW):	0.18–2.5	
									Connection:	DN 40–DN 80	Material:		Cast iron
										Pressure class:	PN 10/PN 16	
										Capacity control:	3 speed	
										Temperature of pumped media:	-20°C–+130°C	
FLE		●	●	●						Power (kW):	0.18–2.5	
									Connection:	DN 25/32 (G 1 1/2"–2")	Material:		Cast iron
										Pressure class:	10 bar	
										Capacity control:	Electronic	
										Temperature of pumped media:	+20°C–+95°C	
FLE		●	●							Power (kW):	0.18–1.5	
									Connection:	DN 40–DN 80	Material:		Cast iron
										Pressure class:	PN 10/PN 16	
										Capacity control:	Electronic	
										Temperature of pumped media:	+15°C–+95°C	


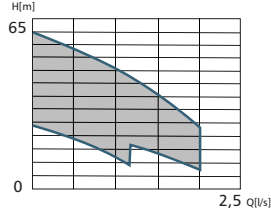
ITT Flygt pumps for clean water/water supply


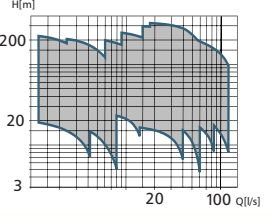
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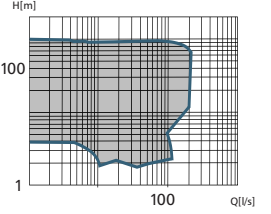
		Applications								Technical data		Performance field
		Water supply/irrigation with suction head	Irrigation, garden	Irrigation, large scale buildings	Water supply family homes/ buildings	Water supply, municipal family homes	Water boosting in building 2-4 fam	Water supply, pressure boosting in building 5- fam	Water supply, pressure boosting in public building			
FX 4" & 6" 		●	●	●	●					Power (kW): 0.37–45		
										Connection: ISO G 1 1/4–3"		
										Material: ASTM 304		
										Capacity control:		
HX 		●								Power (kW): 0.55–1.1		
										Connection: ISO G 1 1/4"		
										Material: ASTM 304		
										Capacity control:		
JET 		●	●							Power (kW): 0.37–1.1		
										Connection: ISO G 1"		
										Material: ASTM 304		
										Capacity control:		
CAX 					●	●	●			Power (kW): 0.37–2.2		
										Connection: ISO G 1–1 1/4"		
										Material: ASTM 304		
										Capacity control:		


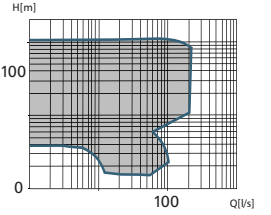
Applications

- Water supply/irrigation with suction head
- Irrigation, garden
- Irrigation, large scale
- Water supply family homes/buildings
- Water supply, municipal family homes
- Pressure boosting in building 2-4 fam
- Water supply, pressure boosting in building 5- fam
- Water supply, pressure boosting in public building

ORX 	●				●	●			Power (kW): 0.3–0.9	Performance field 
									Connection: ISO G 1	
									Material: ASTM 304	
									Capacity control:	

PX 		●		●		●	●	●	Power (kW): 0.37–45	Performance field 
									Connection: DN 25–DN 100	
									Material: ASTM 304	
									Capacity control: Yes, with Technovar	

CH 		●		●		●	●	●	Power (kW): 0.37–45	Performance field 
									Connection: DN 32–DN 80	
									Material: Cast iron	
									Capacity control: Yes, with Technovar	

EQ 		●		●		●	●	●	Power (kW): 0.37–45	Performance field 
									Connection: DN 25–DN 80	
									Material: ASTM 316	
									Capacity control: Yes, with Technovar	

Applications

- Clean water
- Slightly contaminated water (leaves etc.)
- Water contains small amounts of particles
- Water contains large amounts of particles
- Salt water
- Sour water; pH down to 3
- Alkalic liquids up to pH 10


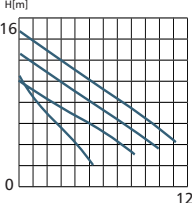

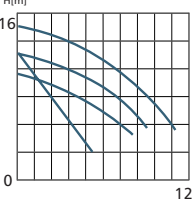

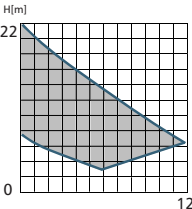

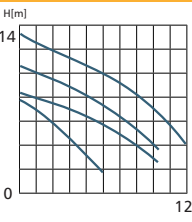

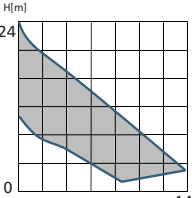
Technical data

Performance field

	●	●*	●	●	●	●			
SX 5-15 	●	●*	●	●	●	●	Power (kW):	0.55–1.5	
							Connection:	ISO G 1 1/2"	
							Material:	ASTM 304	
							Material housing:	ASTM 304	
							* Small amounts of abrasive particles like sand/gravel		
STA 		●				●	Power (kW):	0.6–0.75	
							Connection:	ISO G 1 1/4"	
							Material:	ASTM 304	
							Material housing:	Cast iron	
READY 			●**	●	●	●	Power (kW):	0.4–0.75	
							Connection:	ISO G 2"	
							Material:	ASTM 304	
							Material housing:	PU	
							* Large amounts of abrasive particles like sand/gravel		


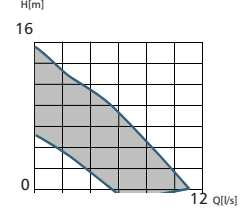
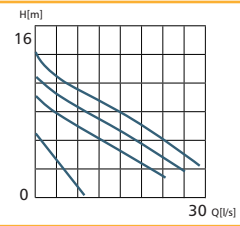

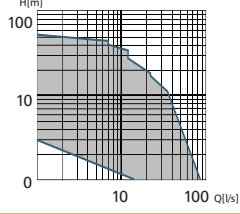
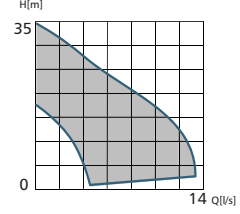
ITT Flygt pumps for wastewater

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	Applications										Technical data		Performance field
	Ground water	Wastewater without WC	Three-chamber septic tank	Wastewater with WC, one household	Wastewater with WC, two households	Wastewater with WC, three households	Sewage in public environments	Municipal sewage	Pressurised sewage system				
DX 	●	●	●								Power (kW): 0.55–1.5 Connection: ISO G 1 1/2–2"	Material housing: ASTM 304 Material pump house/impeller: ASTM 304 Hydraulic end: C	
DXV 			●								Power (kW): 0.55–1.5 Connection: ISO G 1 1/2–2"	Material housing: ASTM 304 Material pump house/impeller: ASTM 304 Hydraulic end: C	
DL 	●	●									Power (kW): 0.55–1.5 Connection: ISO G 1 1/2"	Material housing: ASTM 304 Material pump house/impeller: ASTM 304 Hydraulic end: C	
DLV 			●	●							Power (kW): 0.55–1.5 Connection: ISO G 1 1/2"	Material housing: ASTM 304 Material pump house/impeller: ASTM 304 Hydraulic end: C	
C 3045/3057 	●	●									Power (kW): 0.8–2.4 Connection: ISO G 2"	Material housing: Cast iron Material pump house/impeller: Stainless steel Hydraulic end: C	

Applications

Ground water
 Wastewater without WC
 Three-chamber septic tank
 Wastewater with WC, one household
 Wastewater with WC, two households
 Wastewater with WC, three households
 Sewage in public environments
 Municipal sewage
 Pressurised sewage system

	Ground water	Wastewater without WC	Three-chamber septic tank	Wastewater with WC, one household	Wastewater with WC, two households	Wastewater with WC, three households	Sewage in public environments	Municipal sewage	Pressurised sewage system	Technical data	Performance field
D 3045/3057 				●	●					Power (kW): 0.8–2.4	
										Connection: ISO G 2"	
										Material housing: Cast iron	
										Material pump house/impeller: Cast iron	
										Hydraulic end: D	
C/D 3068 					●	●				Power (kW): 1.8–2.4	
										Connection: ISO G 2", DN 80	
										Material housing: Cast iron	
										Material pump house/impeller: Cast iron	
										Hydraulic end: C, D	
C/D/N 3085-3127 						●	●			Power (kW): 0.9–7.4	
										Connection: ISO G 3" - G 4", DN 80 - DN 200	
										Material housing: Cast iron	
										Material pump house/impeller: Cast iron	
										Hydraulic end: C, D, N	
M 3068-3127 								●		Power (kW): 1.8–7.4	
										Connection: ISO G 1 1/4" - G 2"	
										Material housing: Cast iron	
										Material pump house/impeller: Cast iron	
										Hydraulic end: M	

Brief facts about pumping

Pump theory for building services
- drainage, water supply, circulation and wastewater/sewage



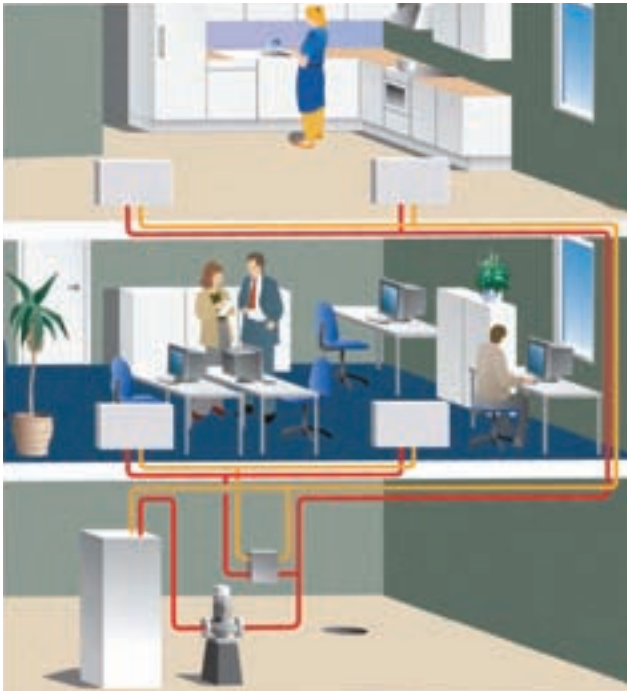
Whether you are pumping drinking water, hot water, wastewater or maintaining the temperature at a comfortable level in an office building, there is money to be saved by selecting the right pump. Understanding the system in which the pump is working is an important factor in making the right choice and achieving as energy-saving a solution as possible. Pump theory in pocket format provides you with the knowledge you need to select the right pump for your building services.

General pump theory	11
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General pump theory

In this section we look at the most important theoretical rules to enable you to select the right pump. With all types of pump system, you will be confronted with a series of similar questions:

- What is the required capacity (the flow)?
- How does the pipe system affect the final solution?
- What head does the pump have to produce?
- What type of liquid is to be pumped?



What is included in a pump system

A pump system comprises:

- One or more pumps, connected in series or in parallel
- A motor that drives the pump
- Pipework
- Connections and valves (before and after the pump)
- Control system
- Liquid

Other components can also be included, such as:

- Accumulators
- Pressure tanks
- Heat exchangers

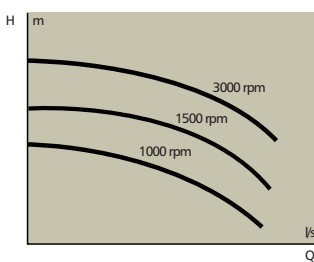


Figure 1. Pump curves showing how the head increases with increased speed.

The pump curve

The pump curve (QH curve) shows the pump's properties and indicates the flow it produces at a particular pressure.

The appearance of the pump curve is dependent on the pump's hydraulic properties and the motor speed. All pump curves are normally defined at 20° C with clean water. Conversion tables are available for other temperatures and liquids.

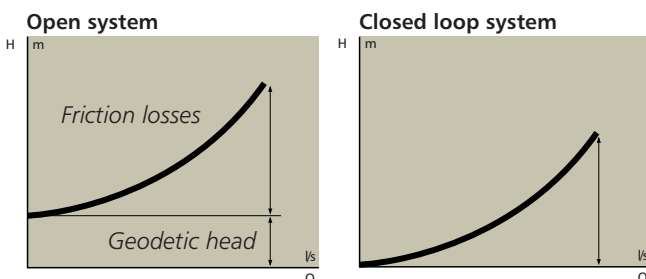


Figure 2. The left-hand system curve applies to pumping between open vessels. The right-hand curve applies to circulation systems (without geodetic head).

The system curve

The system curve describes the resistance that exists in the pipe system. In other words, all losses in the pipework. This counter-pressure consists of **geodetic head**, i.e. how high the liquid has to be pumped, as well as **friction losses**.

In a circulation system for heating or cooling, for example, geodetic head is zero. This is because it's a closed loop system and the pump only has to overcome the friction in the pipeline system.

Duty point

The point where the pump curve and the system curve intersect is called the duty point.

At this point there is equilibrium between the pump and the pipe system, and it is possible in the diagram to read off the head and flow that the pump will deliver for this system.

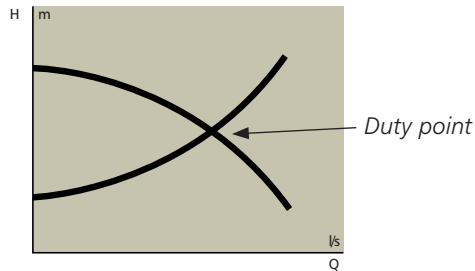


Figure 3. The duty point shows the flow and pressure that a particular pump produces in a given pump system.

Regulating the pump flow

It is frequently important to be able to regulate the flow due to changing needs over time. For example, the water requirement in a block of flats is greater during the day than at night.

Ways of regulating capacity:

- Variable speed control
- Connecting in series and in parallel
- Changing the diameter of the impeller
- Regulating the pump's counter-pressure with a throttle valve

Variable speed control

By regulating the motor speed, it is possible to move the QH curve and adjust the duty point according to the capacity requirement.

This type of regulation is favourable in pump systems with widely varying requirements. An example of this is a heating system that has to pump large flows during the winter months, but which is not required at all in the summer.

Another example is the hot tap water system in a block of flats, where the requirement varies considerably between daytime and at night.

To find out more about variable speed control, see page 416 Technovar, which is ITT Flygt's pump control solution.

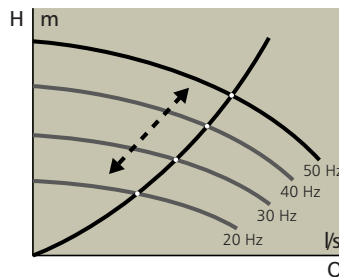


Figure 4. Variable speed regulation provides energy savings and retained efficiency at all motor speeds.

Connecting pumps in series and in parallel

When two pumps are connected together, they acquire a new, common QH curve and it is thereby possible to alter pressure and flow.

With connection in *parallel* the flow is added. When two pumps are connection in *series* the heads are added.

Remember: In an extensive pipe system that has a steep system curve, connection in parallel produces a smaller flow addition than a more basic system with a flat system curve.

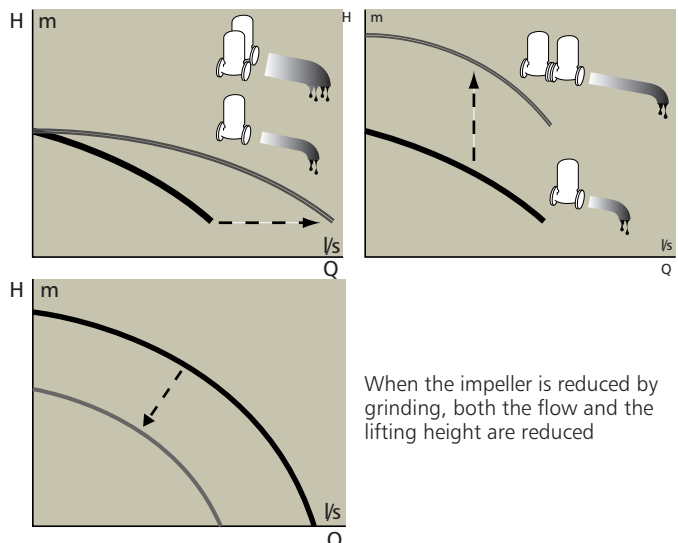


Figure 5. Pumps connected in parallel and in series, as well as reduced impellers.

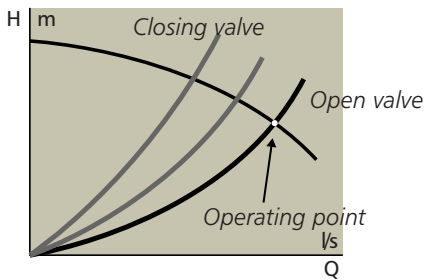


Figure 6. Throttling is a simple and common way of regulating the flow, but that results in impaired efficiency.

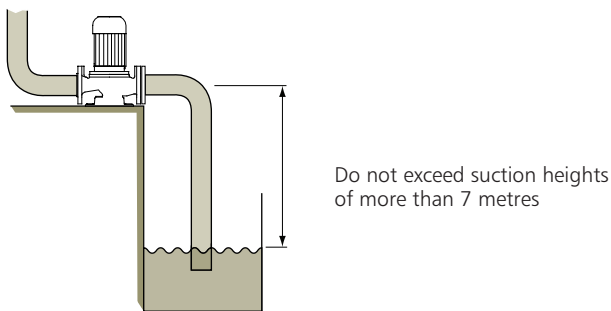


Figure 7. The air pressure of 10.3 metres and friction combined produce a maximum suction height of 7 metres.

Reducing the impeller by diameter

The pump capacity can be altered by either replacing or reducing the impeller by diameter. Both head and flow decline when the size of the impeller is reduced.

Throttling

Throttling the flow with a valve increases the losses in the system, resulting in an altered operating point with a lower flow and higher pressure.

Suction head

The largest theoretical suction head at normal pressure is **10.3 m**, which is the pressure the atmosphere exerts on the surface of the sea. High or low pressure changes this value.

In practice, the suction head is much less dependent on friction in the suction line, the temperature and the density of the liquid.

Rule of thumb: Do not exceed a suction head of 7 m.

($NPSH_A$ must be greater than $NPSH_R$ including a margin of 0.5 m.)

Hydraulic power

The hydraulic power is a product of the pump's head, H, and flow, Q, and is calculated according to:

$$P_{hydr} = Q \cdot H \cdot \rho \cdot g$$

where ρ is the density and g is the gravitational constant.

The outputs relate to each other as follows:

$$P_1 = \frac{P_{hydr}}{\eta_{tot}} \quad P_2 = \frac{P_{hydr}}{\eta_{hydr}}$$

where η is the efficiency for the various parts of the system.

Another way of linking power concepts to each other relates to the power losses in the motor and the pump.

Exempel

A circulation pump with 315 mm impeller. The flow, Q, is 25 l/s and the head, H, is 30 metres. The liquid is water at 20°C, with a density of 0.9998 kg/l.

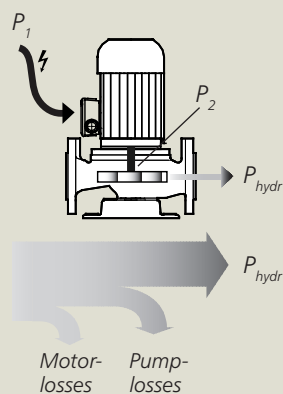
The useful output, P_{hydr} , is then:

$$P_{hydr} = 25 \times 30 \times 0,9998 \times 9,81 = 7360 \text{ W}$$

$P_1 = 11800 \text{ W}$ according to the diagram in the technical specification.

Total efficiency in these pump conditions, η , is thereby:

$$\eta = 7360 / 11800 = 62,4 \%$$



Efficiency/power requirement

In order to indicate how well a pump unit converts supplied power to produced output, the pump's efficiency is specified.

P_1 = supplied power

P_2 = shaft output

In the power curves, you can read off how the pump's power requirement varies according to the flow, both the supplied power P_1 , i.e. the mains electrical power socket, and the shaft output, P_2 .

The hydraulic power, P_{hydr} , also known as useful output, is the power that the impeller transfers to the water.

Efficiency and best efficiency point

The best efficiency point (BEP) or nominal point is the point at which the maximum level of efficiency is achieved. The efficiency curve shows how this point varies. The best efficiency point is often indicated with a small angle on the QH curve.

In order to achieve cost-effective pumping, the power requirement and the duty point are important parameters when dimensioning the pump. This is particularly true if the pump is to be dimensioned for several different duty points, for example in a heating system that is not used all year round.

In the event of major variations in the flow requirement, it can be justified to select a speed-regulated pump in order to minimise energy consumption.

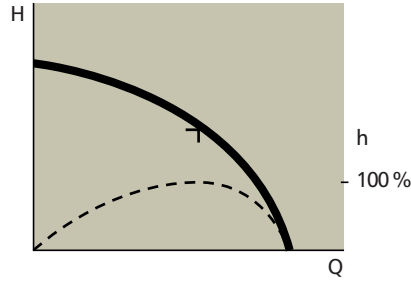


Figure 8. The pump should operate within a range that lies 20% above or below the dimensioning point. In the figure, the efficiency curve is shown with a dashed line.

Cavitation – NPSH

If the available head at the pump inlet is lower than the evaporation head, cavitation occurs, i.e. the liquid evaporates. The vapour bubbles then implode inside the impeller where the pressure increases. These pressure surges cause noise, as well as resulting in damage to the impeller and reduced efficiency.

The head where cavitation arises is called **NPSH**, Net Positive Suction Head, and is normally specified in metres.

When dimensioning larger pumps in particular, check that the available head, $NPSH_A$, at the pump inlet is **greater** than $NPSH_R$ (required) in the NPSH curve for the selected pump and operating point.

Calculating NPSH

In available head, $NPSH_A$ the air pressure of 10.3 m and available head at the suction/inlet side are included in the calculation. If the NPSH curve remains below this value, cavitation will never occur, irrespective of the pump's level in the sump (see example to the right).

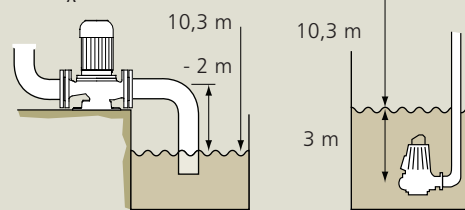
In borderline cases, normally in wastewater stations with large pumps, $NPSH_A$ can be increased by raising the liquid level (for example by having a tall, narrow pump well).

NB: Cavitation is not normally a problem for heating, ventilation and sanitation pumps, as they work with flows where the NPSH value is far below the pressure that is available on the suction side.

Example of cavitation - NPSH

Available pressure inside the pump (suction side), $NPSH_A$, must be greater than $NPSH_R$, for selected pump and operating point.

$NPSH_A$ – is given by the installation:



Alternative 1:

Centrifugal pump with suction height has a negative impact on $NPSH_A$:

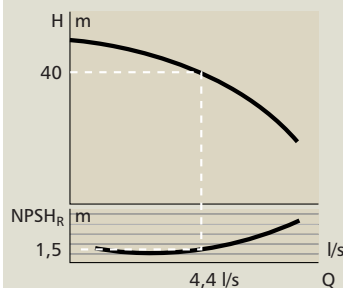
$$10,3 - 2 = 8,3 \text{ m.}$$

Alternative 2:

Submersible pump has a positive impact on $NPSH_A$:

$$10,3 + 3 = 13,3 \text{ m}$$

$NPSH_R$ – check calculated value with the NPSH curve:



For the sake of simplicity, we assume that both pumps have the same pump curves.

The example does not take pipe losses and system pressure into consideration either.

Conclusion:

None of the above pumps will experience cavitation problems.

Point losses h_{fp} :

$$h_{fp} = \frac{\zeta \cdot v^2}{2g} mvp$$

Losses in straight pipe sections h_{fr} :

$$h_{fr} = \lambda \cdot \frac{l}{d} \cdot \frac{v^2}{2g} mvp$$

The loss coefficients ζ and λ are obtained from the pipe manufacturer.

Calculation of losses in pipework

In order to calculate a system curve, it is necessary to calculate the friction losses, h_f . These occur in bends and valves, known as point losses, h_{fp} , as well as in straight pipe sections, h_{fr} .

Point losses, h_{fp}

The losses depend on the number of bends and valves in the pipe system, and increase with increased liquid velocity.

Losses in straight pipe sections, h_{fr}

The losses depend on the liquid velocity and the length, diameter and surface smoothness of the pipe.

Rule of thumb: *The shorter the pipeline and the larger the pipe dimension, the lower the friction losses.*

$$\frac{Q_1}{Q_2} = \frac{n_1}{n_2} \quad \frac{H_1}{H_2} = \left(\frac{n_1}{n_2}\right)^2 \quad \frac{P_1}{P_2} = \left(\frac{n_1}{n_2}\right)^3$$

- **2 times** as great a **flow** at doubled rpm
- **4 times** as great a **head** at doubled rpm
- **8 times** as great a **power consumption** at doubled rpm

Example – altered speed of rotation in pump

In the summer you change the setting of the FLB 32 circulation pump in your heating system from 2160 rpm to 1100 rpm.

According to the affinity laws, the power consumption will then drop in proportion with the cube of motor speed reduction:

$$\frac{1100}{2160} = 51 \% \quad 0,51^3 = 13 \%$$

With this reduction in motor speed, the power consumption falls to **13 %** of the original value.

Affinity laws

Affinity means relationship, and this law refers to the relationship that exists between:

- speed of rotation
- flow
- lifting height
- required power

This rule of thumb provides rapid information about what is happening in a system when the duty point is changed, for example in variable speed-controlled pump systems.

Pump economy

Life Cycle Cost (LCC)

The combined cost for procurement, maintenance, energy consumption and scrapping is known as the Life Cycle Cost (LCC).

Different costs can dominate the LCC analysis, depending on the nature of the pump system. The acquisition cost of the pump normally only constitutes a small proportion of the life cycle cost, while the energy and maintenance cost is responsible for a significantly larger proportion (see figure 9).

The conclusion is that a low LCC entails gaining control of the energy and maintenance costs.

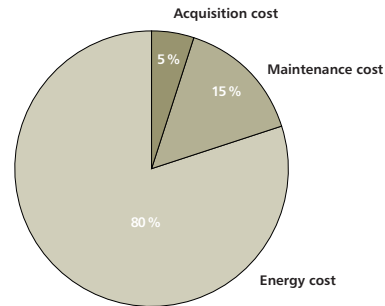


Figure 9. A typical LCC analysis for a circulation pump shows that energy and maintenance costs often make up more than 95% of the total cost spread over 10–20 years.

Variable speed control reduces the energy cost

Heating pumps

Figure 10 shows that full pump capacity is required for barely 2 weeks a year. It should also be noted that an unregulated pump is operating absolutely unnecessarily for almost a third of the year, when no heating at all is required.

Water supply

For pressure boosting pumps, variable speed control can be used to lower the energy consumption at times when there is low water consumption, for example at night.

Drainage pumps

Small drainage pumps often have short operating times, so motor speed regulation is not beneficial to the same extent as for heating and water supply. For drainage pumps, operational reliability is therefore more important as regards pump economy.

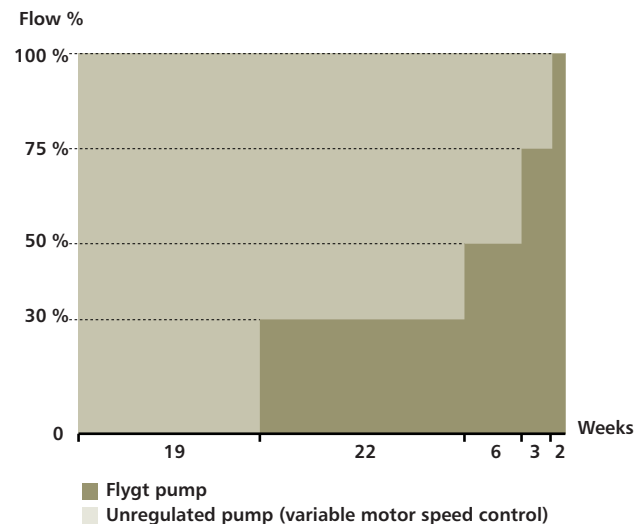


Figure 10. The dark area shows how much a variable speed-controlled pump works compared to an unregulated pump that is constantly running at full rpm. The table is based on an average in Sweden.

Selecting the right pump

In this section we convert the theory into practice in pumps systems within the building services:

- Drainage/dewatering
- Wastewater/wastewater pump stations
- Water supply
- HVAC systems

Checklist when selecting pump

1. Ascertain the flow requirement Q
2. Calculate the required head H.
3. Ascertain how friction in the pipe system affects the head H.
4. Select pipe dimension for optimum liquid-velocity. Check that the selected flow Q produces the correct velocity.
5. Select the correct pump on the basis of the duty point, the flow Q and the head H.



Drainage/dewatering

ITT Flygt has pumps that are suitable for both private and professional usage.

Examples of areas of application.

- Emptying rainwater/discharge water into wells.
- Flooding in apartments, garages and cellars
- Transferring water between tanks, cisterns or swimming pools.
- Dewatering at construction sites.
- All-round pump for rapid initiatives.
- Clearing up after floods.
- Flushing and irrigation.

ITT Flygt's submersible pumps are also installed in holiday cottages and year-round homes that are not connected to the municipal water network. They operate submerged in water, which means that there is no need to worry about running dry or topping up. They are connected with a hose, non-return valve and an automatic control device.

ITT Flygt's pumps for drainage/dewatering



Ready is a series of small, robust pumps for dewatering, which are strong and resistant to corrosion and wear for professional use.



SX are lightweight, submersible pumps made from stainless steel, used for pumping clean or contaminated water. Suitable for dewatering wells, tanks, rainwater tanks and other confined spaces.



Dimensioning

It is not normally necessary to perform advanced system calculations in order to select a pump. The pipes are normally so short that friction losses can be ignored

The pump selection is made on the basis of the desired flow and head. Time is the most important factor here, i.e. how quickly you need to remove the water.

Hose dimension and liquid velocity

The hose is normally selected on the basis of the pump's connection. In the event of long hoses or a large flow requirement, however, the dimensions should be adapted so that the liquid velocity does not exceed 3 m/s.

In more extreme situations with a large flow requirement, friction losses should also be taken into consideration. The pump selection is also dependent on the type of liquid that is to be pumped.

Example – minimum pipe diameter

The calculated flow is 5 l/s. The liquid velocity should not exceed 3 m/s. The minimum hose dimension is therefore:

$$d = 2\sqrt{\frac{Q}{v\pi}} = 2\sqrt{\frac{0,005}{3 \cdot \pi}} \approx 5 \text{ cm}$$

Wastewater pumps

ITT Flygt's wastewater pumps are available in a large number of sizes and can be used in everything from holiday cottages to large blocks of flats or office buildings. They can also be used together with ITT Flygt's prefabricated, complete wastewater pump stations. This section is divided into three parts: small houses, small blocks of flats, as well as large blocks of flats, offices and public environments.

Impeller selection

The first thing you should decide is which impeller you need. Below you can see the most common impellers used for waste water within building services:



Grinder impeller The first choice for houses where slender plastic pipes are used. The grinder impeller is supplied with a cutting device that grinds the solids in the wastewater.



N impeller Open, self-cleaning impeller with two vanes and a relief groove in the pump housing. High efficiency and very low risk of blockage.



Vortex impeller A good choice when the liquid contains wearing particles such as sand or large, solid contaminants.



Channel impeller Provides both high efficiency and good throughlet for solid contaminants. The single-channel impeller is usually used for groundwater and wastewater.

Pump selection for houses

When selecting pumps for houses, a basic pump selection can be made as the pump systems are usually relatively small.

Basic pump selection

The lowest flow requirement for a normal household is 0.4 l/s, although people often choose a pump that produces around 1 l/s in order to achieve sufficiently high water velocity in the pipe system. The table to the right takes this into consideration and, together with the head, a suitable pump type is given. The system curve does not need to be calculated, as the pumps in the table are dimensioned to cope with higher flows. The table also gives consideration to the fact that the liquid velocity in the pipes has to exceed 1 m/s in order to avoid sedimentation.

See the section Sump volume in order to calculate the size of the sump.

Pipe losses

The table is based on a basic pipe system with a few bends; in a more complicated system, a pump selection program should be used.



ITT Flygt's drainage pumps

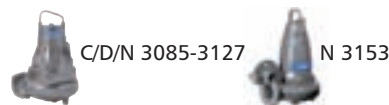
Houses



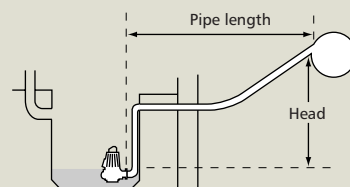
Multifamily buildings and small blocks of flats



Large blocks of flats, offices and public environments



Basic pump selection

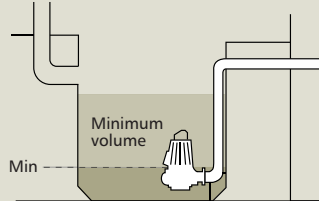


		Pipe length (pipe dimension ø50 or ø63) (m)					
		30	50	100	150	200	300
Head H (m)	4	DXV35; DLV50; DP3045	DXV50; DLV50; DP3045	DXV50; DLV50; DP3045	DXV50; DLV50; DP3057	DP3057	MP3068
	8	DXV50; DLV50; DP3045	DXV50; DLV50; DP3057	DLV50; DP3057	DP3057	MP3068	MP3068
	12	DP3057	MP3068	MP3068	MP3068	MP3068	MP3085

Example: Minimum sump volume

The pump has a flow of 2 l/s. The pump should not start more than 30 times an hour (or every 120 seconds). The sump's effective volume is then:

$$V = \frac{T \cdot Q}{4} = \frac{120 \cdot 2}{4} = 30 \cdot 2 = 60 \text{ l}$$



In order to achieve the total pump well volume, consideration must be given to the lowest water level, the stop level, with which the pump can work (Min). This is usually specified on the dimensioning drawing.

Example: Liquid velocity as dimensioning factor

The pipe to the external drainage system has a diameter of 50 mm. The liquid velocity should be 1 m/s. The dimensioning flow Q is given by the area of the pipe:

$$Q = \pi r^2 \cdot v = \pi \cdot 0,025^2 \cdot 1 \cdot 1000 = 2 \text{ l/s}$$

Pump selection programs

ITT Flygt can also supply the WAPS and FLYPS programs, which will help you to choose the right pump.



Sump volume

The sump in which the pump stands must be sufficiently large to ensure that the pump does not start too often. The pump, which starts automatically, should not start more than approximately 30 times an hour (pump 3085).

Rule of thumb: *The effective pump volume must be 30 times the flow requirement.*

The lowest water level with which a pump can operate can be seen from the dimensional drawing.

The pump must be started at least once a day in order to achieve sufficient turnover of the wastewater. This can be controlled with a control panel equipped with a timer.

Replacing pump

– alternative pump selection method

When replacing the pump, the diameter of the pressure line and the requirement for a liquid velocity of 1 m/s give the flow requirement that the replacement pump has to achieve. This flow, together with the total head, provides the pump system's operating point.

However, the flow requirement given by the number of water supply points in the pipe system should be checked. The highest value is the dimensioning value.

Wastewater pump for small blocks of flats

For blocks of flats with up to approximately 10 flats, a grinder or N impeller is normally chosen.

Flow requirement

The flow requirement is approximately 2 l/s, and the 3068 or 3085 pumps are often installed to cope with the transport of solid objects in the wastewater.

Note that the system should consequently be over-dimensioned, as the risk of sanitary items being flushed down in the pipes increases with the number of users. If the system is dimensioned solely according to the flow requirement, blockages can arise in the system that, in the worst case scenario, might entail the need to rebuild the system, with considerable costs as a consequence. Wastewater pumps are therefore often larger than clean water pumps in the same property.

In other types of property, such as hotels and restaurants, there is also an increased risk of blockage problems that has to be taken into consideration when selecting impeller and size of wastewater pump.

Selecting the right pump

Pipe dimensions and pipe losses

The pump recommendation is based on a normal installation in which PE67 pipes are used. The pumps' over-capacity provides sufficient liquid velocity and overcomes pipe losses in pipes with a few bends and heads up to 25 m. A pump selection program should be used if the pump system is more complicated than this.

Wastewater pump for large blocks of flats, offices and public environments

An N impeller should be selected, as this combines a high level of efficiency with a low risk of blockages.

Flow requirement

In a larger system, the diagram to the right can be used to estimate the flow requirement.

The liquid velocity must also be higher than 1 m/s in order to avoid sedimentation in the pipes. This means that 3 l/s (pipes with a diameter of at least 63 mm) is the minimum flow according to which the pump can be selected.

Head

The head is determined both on the basis of the level of the connection to the external wastewater system, as well as to pressure losses in the pump system.

In a system with a dimensioning flow of more than 2 l/s, calculations should be performed with the aid of the WAPS or FLYPS pump selection programs in order to determine the system losses.

Pipe dimensions and pipe losses

PE pipes with a diameter of 63 mm are normally used in wastewater systems.

Variable speed control

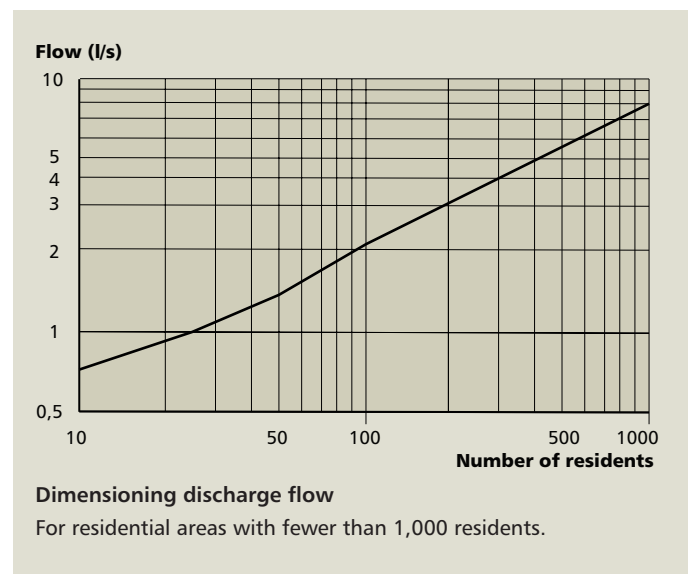
Variable speed control can be used to achieve continuous pumping in the pipe network. By measuring the sump level, the pump's outflow can be adapted to this. This is beneficial when using pipes measuring a few kilometres in length.

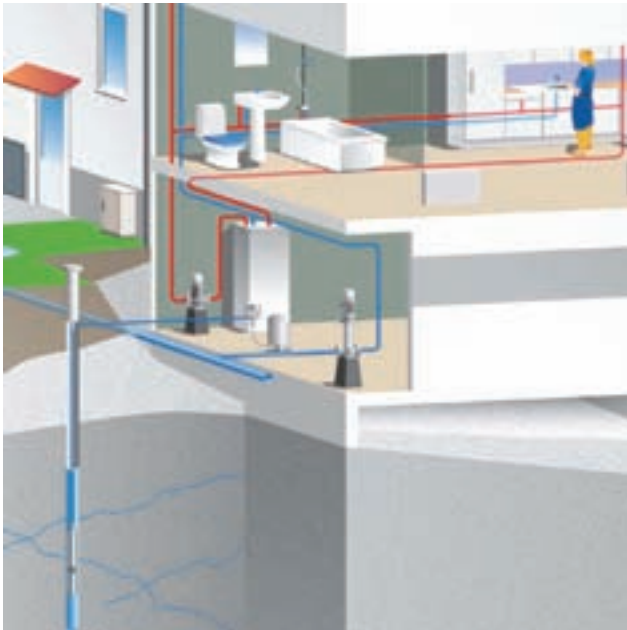
Does cavitation occur?

The problem of cavitation can normally be ignored, as the pumps are relatively small and have a capacity far beyond the area in which the problem arises.

ITT Flygt's complete wastewater pump station

Compit is a complete wastewater pump station that is suitable for holiday cottages or houses, for up to 3–4 households. Compit is adapted for the 3068 and 3085.





Water supply

ITT Flygt's water supply pumps can be used in everything from small holiday cottages to large blocks of flats or office buildings. Their capacity varies from 16 to 850 l/s, while the head can vary between 50 and 450 metres.

Water supply pumps are used in the following systems:

- Roman wells and boreholes
- Pressure boosting in existing water network

The pumps can be either dry or submersible. In addition to supplying water, these pumps can also be used for:

- Irrigation
- Car-wash systems
- Boiler feeding
- Water treatment facilities

Dimensioning

Flow requirement

The dimensioning flow is given by a standard flow calculation. A total standard flow is obtained by adding together all the water supply points. It is then possible to read off the probable flow in the diagram, which is the dimensioning flow and the basis for the pump selection.

Single-family dwelling: For a household, the standard value per household can be calculated at 1.6 l/s, which gives a dimensioning flow of 0.4 l/s.

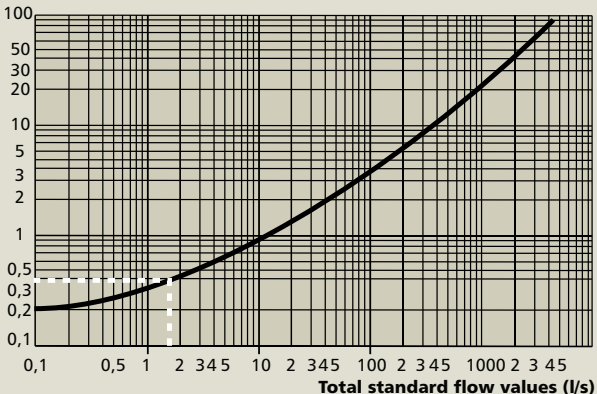
Water sprinklers: The flow requirement is normally 0.2 l/s.

Standard flow table

Water supply point	Standard flow in l/s	
	hot	cold
<i>For both hot and cold water</i>		
Washbasin	0,2	0,2
Shower	0,2	0,2
Washing-up sink	0,2	0,2
Bathtub	0,3	0,3
Bidet	0,1	0,1
<i>For cold water alone</i>		
Tap at floor drain (irrigation)	0,2	
Household washing machine	0,2	
WC	0,1	
<i>For cold water alone</i>		
Household dishwasher	0,2	

The standard flow values according to the table are added and the sum is then converted to the probable flow according to diagram:

Probable flow (l/s)



Selecting the right pump

Head

In smaller buildings (up to ten flats), the head is simply determined by adding the height of the building to the desired head at the water supply point on the uppermost floor. Any incoming water head is then deducted. In general, the outgoing water head from taps should be between 2 and 3 bar.

The appropriate sprinkler pressure is specified by the manufacturer.

Compensation for noise problems: In order to avoid noise problems in pipework and fittings, it is important to ensure the system is not dimensioned with too high a head, as high water velocities leads to noise. The difference between the lowest and the highest water supply point should be a maximum of 2 bar (20 mwc).

This problem can arise in tall buildings where you are forced to dimension an overpressure in order to achieve 3 bar on the top floor. On lower floors, the head can then be regulated with the aid of relief valves.

Pipe losses: If the property comprises more than 10 flats or covers a large floor area, a pipe loss calculation should be carried out.

Variable speed control

In pump systems where constant pressure is required, variable speed control provides considerable cost savings in the form of reduced electricity consumption. The water requirement varies considerably between night and day, and even in multifamily buildings it is worth using motor speed control.

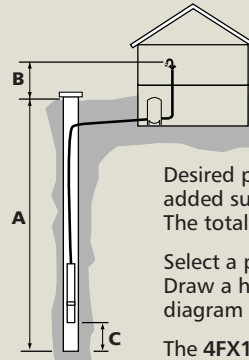
Variable speed control adapts the water requirement continually, as well as solving common problems such as pressure surges and noise in the pipes.

Read more about Technovar pump control at page 416.

Installation tips for water supply pumps

- In installations where dry pumps are used and quiet operation is required, the motor speed should not exceed 1500 rpm.
- When selecting a pump with continuous operation, select a pump with as flat a curve as possible. This enables some throttling of the flow without affecting the head.

Example: Selecting borehole pump



Size of borehole 4 inches, capacity: 20 l/min.

Total geodetic head:

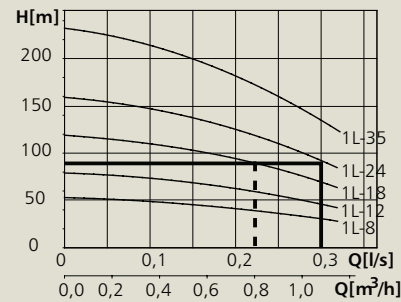
$$A + B - C = 75 + 4 - 9 = 70 \text{ m}$$

Desired pressure in tap, normally 2 bar (20 m), added subsequently.

The total requirement is therefore 90 m.

Select a pump for a 4 inch borehole, e.g. 4FX1. Draw a horizontal line from 90 m in the diagram below and read off.

The 4FX1-24 pump produces 0.3 l/s, which is suitable for a small household or summer house.



Example: Selecting pressure boosting pump

Flow: Block of flats with 30 flats produces the standard flow: $30 \times 1.6 \text{ l/s} = 48 \text{ l/s}$

Common areas with laundry room, three washing machines and six taps: $0.2 \times 3 + 0.2 \times 6 = 1,8 \text{ l/s}$

Total: 49,8 l/s, gives a probable flow of approximately 2 l/s (see diagram on previous page).

Pressure: The dimensioning pressure, P_d , is calculated in accordance with:

$$P_d = P_1 + P_2 + P_3 - P_{in}$$

P_1 = geodetic head P_2 = pipe resistance

P_3 = desired head at highest water supply point P_{in} = available head

Available head $P_{in} = 3,5$ bar before the pump, the geodetic head is calculated at $P_1 = 2$ bar (20 m head = 2 bar), the pipe losses is calculated at $P_2 = 0,5$ bar.

Desired head at the highest water supply point $P_3 = 3$ bar:

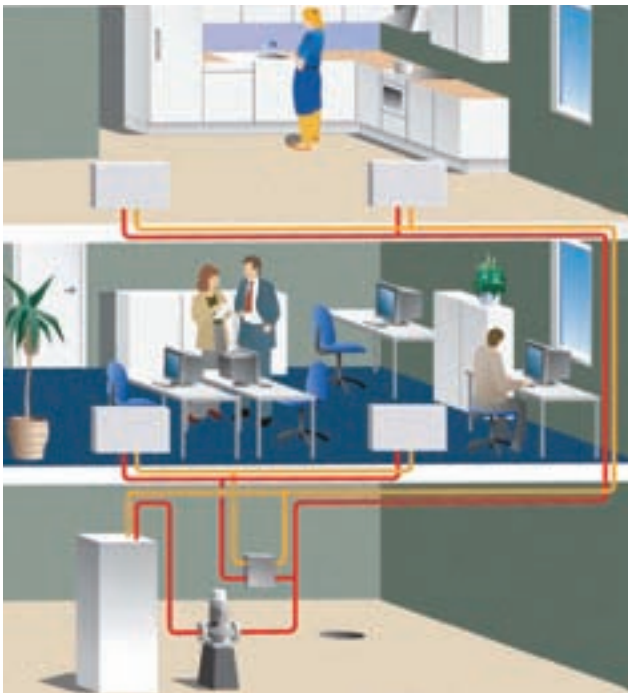
$$P_d = 2 + 0,5 + 3 - 3,5 = 2 \text{ bar (20 mwc)}$$

Irrigation – Basic pump selection

The pump capacity should be 0.2 l/s per sprinkler.

Number of sprinklers	Pipe length	Rec. pipe dimension
1	0–50 m	25 mm
	50–200 m	32 mm
2	0–100 m	32 mm
	100–250 m	40 mm
3	0–100 m	40 mm
	100–250 m	50 mm
4	0–70 m	40 mm
	70–250 m	50 mm

Pipe losses in the above case will not exceed 0.4 bar. The appropriate sprinkler pressure is specified by the manufacturer.



Circulation in heating/cooling systems

Flygt has a very wide range of circulators and in-line pumps that can be used for:

- Heating and cooling systems
- Heat recovery
- District heating installations

They can be used to pump both water as well as aggressive, warm liquids, thanks to the pumps being available in materials such as stainless steel, bronze or nodular cast iron.

Wet or dry motor?

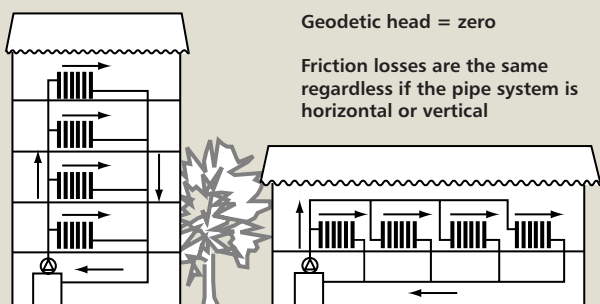
Flygt's circulators are available with both wet and dry motors. (A wet motor means that the pump motor is cooled by the pumped liquid. It is also known as a canned motor). Wet motors are normally used for heating and cooling systems in small installations, for example in houses and blocks of flats. Pumps with a dry motor are used in larger installations, where their larger format means they can deliver better efficiency as well as having the potential to be optimised. In small systems, pumps with wet motors are a quieter and more economic solution.

Closed loop system

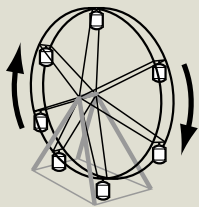
All circulators operate in a closed loop system. This means that there is no geodetic head, and only friction losses occur.

The explanation can be illustrated with a Ferris wheel. When the wheel rotates, the baskets that are going up are balanced by those on the way down. In other words, the motor only needs to overcome the friction. A closed loop pump system works in the same way: the liquid on the way up is balanced by the liquid on the way down, and the pump only needs to overcome the friction in the pipe system. This means that when the system is filled, the geodetic head for the building is zero, regardless of how tall the building is. The required pump capacity is determined instead by the total length, diameter and routing of the pipe system.

Example: Closed system



The two houses above will have the same dynamic head. In the system, only pipe losses need to be taken into consideration, as the geodetic head is always zero in a closed loop system.



The explanation can be illustrated with a Ferris wheel, where the baskets going up are balanced by those on the way down.

Simplified pump selection for houses

House floor area	Head	Required flow	Pump type
<150 m ²	4 m	0,5–0,75 l/s	FLA/E 25
150–200 m ²	4–6 m	0,6–1 l/s	FLA/E 25
200–250 m ²	6 m	1 l/s	FLA/E 25

Dimensioning heating or cooling systems for houses

In houses, a pump with a wet motor should be used such as FLA, or alternatively FLE which incorporates variable speed control.

Flow requirement and pressure

The table to the left shows a simplified way of selecting the right pump for your house, based on the size of the building. FLA is normally used, while for variable speed controlled systems the FLE model is used.

Dimensioning heating or cooling systems for larger properties

Flow requirement

The flow requirement is dependent on a series of factors: the heating or cooling requirement, the indoor volume to be heated or cooled, the outdoor temperature, the material in the walls, roof and floors, as well as the difference between the temperature of the pump medium and the desired temperature. This requires extensive calculations performed by consultants.

Head

The head is determined by the pressure losses caused by friction in the pipework. These are due to the length and material of the pipe, as well as the number of bends and valves. Consideration must also be given to resistance in the boiler and heat exchanger.

Pipe noise

Noise in the pipes can arise if the liquid velocity in the thermostat valve is too high, or if too large a pump is selected. A high water velocity also entails unnecessary wear in the pipes. In order to avoid noise in the pipes, the liquid velocity should not exceed 1 m/s. See the example to the right. This problem can easily be solved with motor speed control.

Installing wet motor pumps

Pumps with a wet motor must always be installed with the motor shaft horizontal. This is because the motor is lubricated by the pump medium, and there is a risk of insufficient lubrication if it is installed vertically.

This type of pump also needs to be operated at least once a day to prevent clogging in the event of prolonged stoppages.

Pumps with a dry motor can be installed in any position.

VFD variable speed control

Major energy savings can be made with the aid of variable speed control in heating systems, as full pump capacity is only required for approximately 2 weeks each year. For circulators with a wet motor, select version FLE, which has built-in motor speed control.

For circulation pumps with a dry motor, use separate control, Technovar.

Point losses h_{fe} :

$$h_{fp} = \frac{\zeta \cdot v^2}{2g} mvp$$

Losses in straight pipe sections h_{fr} :

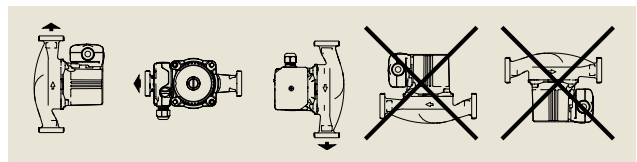
$$h_{fr} = \lambda \cdot \frac{l}{d} \cdot \frac{v^2}{2g} mvp$$

The loss coefficients ζ and λ are obtained from the pipe manufacturer.

Example: Minimum pipe diameter

The liquid velocity should not exceed 1 m/s. In a house of less than 150 m² that requires 0.5 l/s, the pipeline should not be smaller than:

$$d = 2\sqrt{\frac{Q}{v\pi}} = 2\sqrt{\frac{0,0005}{1 \cdot \pi}} = 25 \text{ mm} = 1''$$



Installation tips

- In order to achieve the greatest possible inlet pressure and safer bleeding of the cooling system, install the pumps at a low level in the facility.
- If a reserve pump is required in a cooling system, only use a single pump. Twin pumps should not be used.
- An rpm-regulated pump should be adjusted on the coldest days of the year to achieve optimum function.

Units

Evaporation pressure and density for various water temperatures

Temperature C	Vapour pressure Mpa	Density
0	0,00061	999,8
10	0,00127	1000
20	0,00234	999,8
30	0,00424	999,2
40	0,00738	998,3
50	0,01234	997,2
60	0,01992	995,7
70	0,03166	994,1
80	0,04736	992,3
90	0,07011	988
100	0,10133	983,2
110	0,14327	977,7
120	0,19854	971,6
150	0,476	965,2
200	1,5549	961,7
250	3,9776	958,9

Pipe thread – connection

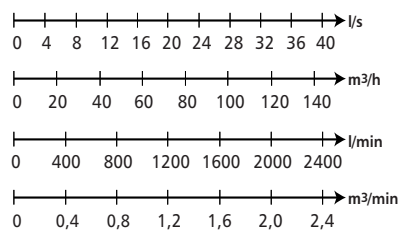
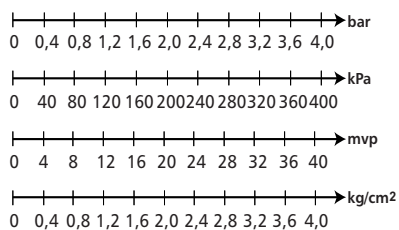
Pipe thread R	Connection (DN)
1/8"	6
1/4"	8
3/8"	10
1/2"	15
3/4"	20
1"	25
1 1/4"	32
1 1/2"	40
2"	50
2 1/2"	65
3"	80

Head units

-bar	kPa	mvp	kp/cm2	
1 bar	-	100	10,22	1,0197
1 kPa	0,01	-	0,1022	0,0102
1 mvp	0,098	9,789	-	0,0998
1 kp/cm ²	0,981	98,07	10,02	-

Flow units

-	l/s	m ³ /h	l/min	m ³ /min
1 l/s	-	3,6	60	0,06
1 m ³ /h	0,2778	-	16,67	0,0167
1 l/min	0,0167	0,06	-	0,001
1 m ³ /min	16,667	60	1000	-





HVAC

- Wet and dry rotor pumps.
- Silent wet rotor pumps are available in a multi speed version or with electronic control for continuously variable delivery to meet the actual needs. These are intended for installations in which the investment cost is important.
- Reliable, high-efficiency dry rotor pumps. Can be equipped with electronic control for optimum operating economy – for applications in which long-term economy is vital.

Circulators with wet rotor

FLA with threaded connection DN 25 .....	.27
FLB/FTB single or twin pump	
Threaded connection DN 25, flange connection DN 40-80 .....	.32
FLE/FTE with electronic speed control	
Threaded connection DN 25-32, flange connection DN 40-80 .....	.55
FPA/FSA for secondary hot water	
Threaded connection DN 15-25 .....	.81
Replacement guide circulators .....	.86
LH in-line centrifugal pumps with dry motors .....	.92



Introduction

FLA is a series of wet-rotor circulators. The pumps are cast iron, in-line pumps with 25 mm threaded connection. The impellers are made of composite.

Pump speed can be regulated manually, with three speeds possible. The pump can be mounted directly on the pipes without support.

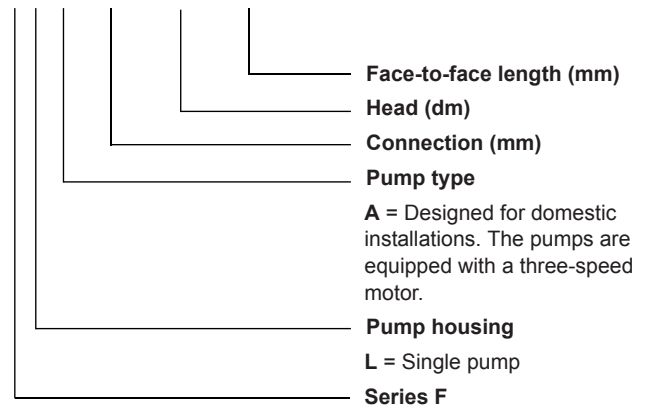
Applications

FLA is designed for installations in small buildings and houses for the following application areas:

- Circulation of hot or cold water
- Air conditioning

Denomination

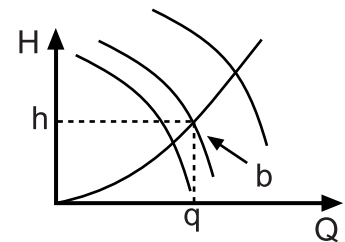
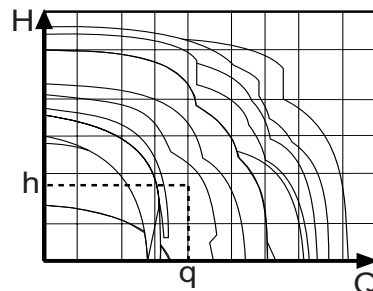
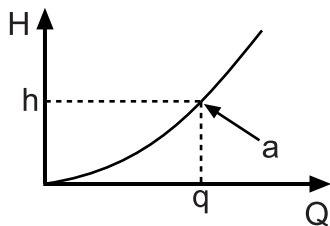
F L A 25 - 40 - 180



Choosing the right pump

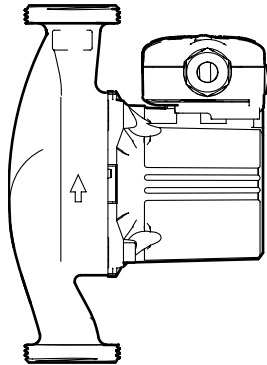
There are several different pumps to choose from. In order to decide which pump is suited to a specific task,

you must first calculate the system's operating point. With the help of the performance curves, you can then choose an appropriate pump. Contact your ITT Flygt representative for a more detailed analysis.



1. Calculate the duty point (a) for the system.
2. Select a pump model from a series of performance curves that meet the system requirements.
3. Select a curve (b) based on the calculated duty point.

Design



Motor

Stator motor with slip bearings that are lubricated by the pump medium. The motor has a built-in condenser. The motor can be run at three different speeds to adjust capacity to meet existing needs.

The pumps are equipped with a bronze filter that prevents particles in the pump medium from penetrating the motor chamber and blocking the motor.

The motor shaft is hollow, when generates automatic deaeration and keeps the water in continual circulation. This also minimises lime deposits in the motor.

The motor is equipped with a bleeder screw for manual deaeration and to make it possible to loosen the rotor in the event of substantial blockage.

To facilitate motor cable connection, the terminal board has quick-release couplings for cables.

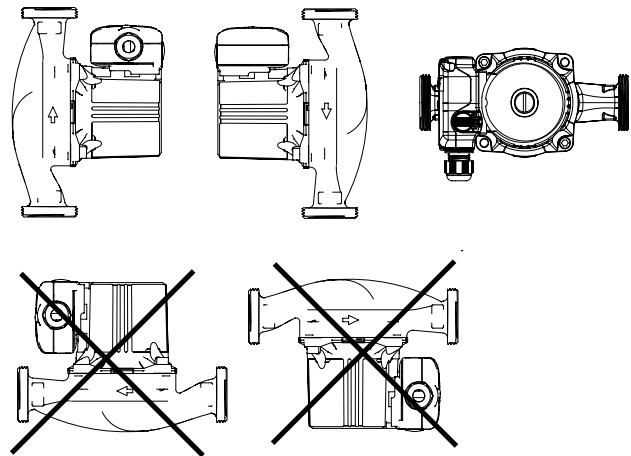
No separate motor protection required.

Pump housing

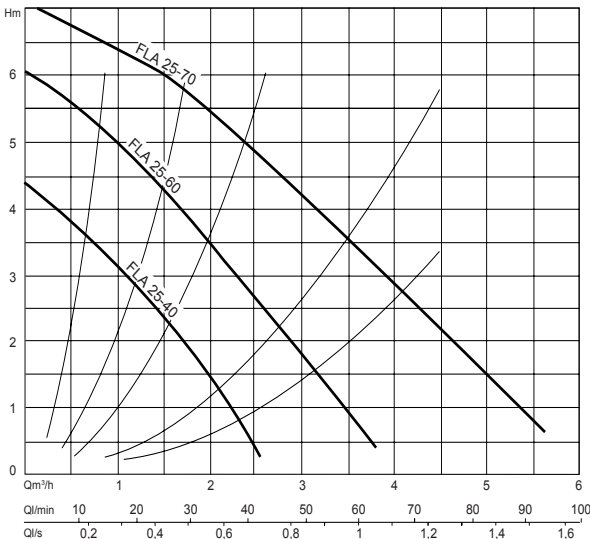
The pump housing is equipped with lugs to facilitate installation in a pipe system. The pump is delivered with gaskets.

Installation instructions

The pump is installed directly on the pipe using union couplings. The motor shaft must always be horizontal. If the pump is installed with the motor shaft vertical, there is a risk of insufficient lubrication. Also note that the junction box must never be installed beneath the motor.



Performance curves





FLA 25

Connection DN25

Product

Circulator with wet motor for heating and cooling systems. In-line pump. The pump has a three-speed control and a threaded connection. Face-to-face length 130 and 180 mm.

Denomination

FLA

Single pump in cast iron

Process data

	Fluid temperature	Max. pressure
FLA	-10°C to +110°C	10 bar (PN 10)

Motor data

Stator motor cooled by the pump medium.

Frequency	50 Hz
Thermal class	F (+155°C)
Protection rating	IP 42
Motor voltage	1-phase 230 V
Ambient temperature	max +40°C

Monitoring equipment

No separate motor protection required.

Material

Part	Material FLA
Pump housing	Cast iron
Impeller	Composite
Impeller ring collar	Stainless steel
O-ring	EPDM
Bearing	Carbon
Stator	Stainless steel

Accessories

Union coupling DN 25 for 3/4" or 1".

Union coupling with valve DN 25 for 1" or 22 and 28 mm CU.

Motor data, dimensions and weight

1-phase, face-to-face length 130 mm

Pump type	Speed	Rated speed	Motor power W	Rated current	Dimen- sions mm		Weight kg
		rpm	P1	A (230 V)	L	H2	
FLA 25-40-130	3	1900	65	0.28	98	73	2.35
	2	1400	46	0.20			
	1	1000	30	0.13			
FLA 25-60-130	3	1850	93	0.40	98	77	2.6
	2	1300	67	0.30			
	1	950	46	0.20			
FLA 25-70-130	3	2240	100	0.64	109	77	2.6
	2	1560	71	0.50			
	1	1070	53	0.33			

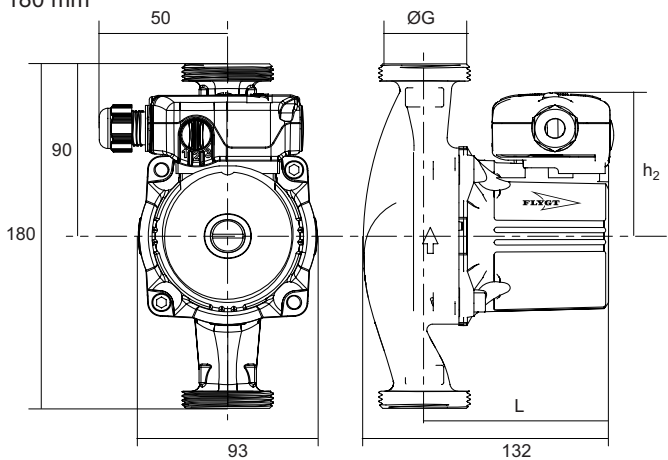
1-phase, face-to-face length 180 mm

Pump type	Speed	Rated speed	Motor power W	Rated current	Dimen- sions mm		Weight kg
		rpm	P1	A (230 V)	L	H2	
FLA 25-40-180	3	1900	65	0.28	98	73	2.35
	2	1400	46	0.20			
	1	1000	30	0.13			
FLA 25-60-180	3	1850	93	0.40	98	77	2.6
	2	1300	67	0.30			
	1	950	46	0.20			
FLA 25-70-180	3	2240	100	0.64	109	77	2.6
	2	1560	71	0.50			
	1	1070	53	0.33			

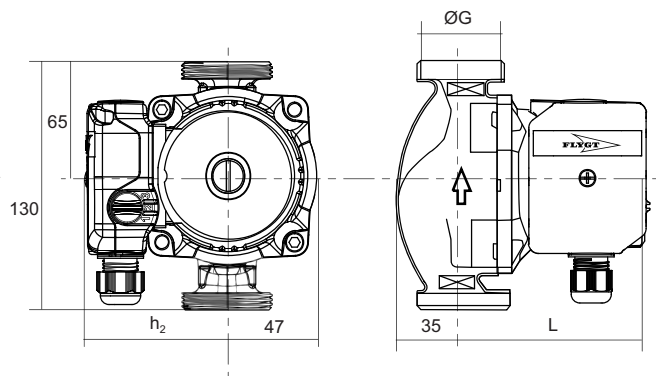
FLA

Face-to-face length:

180 mm



130 mm

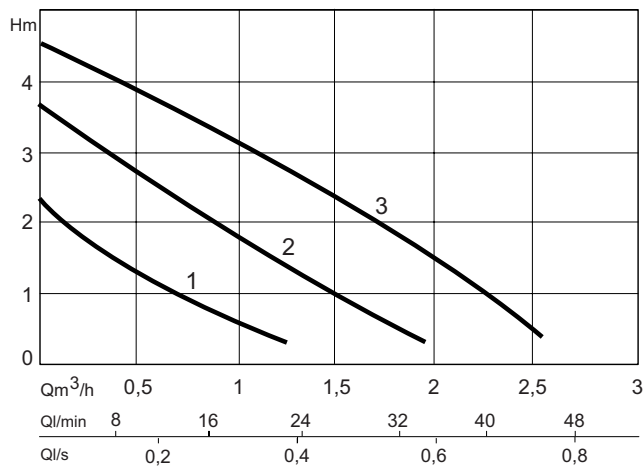


(All measurements in mm)

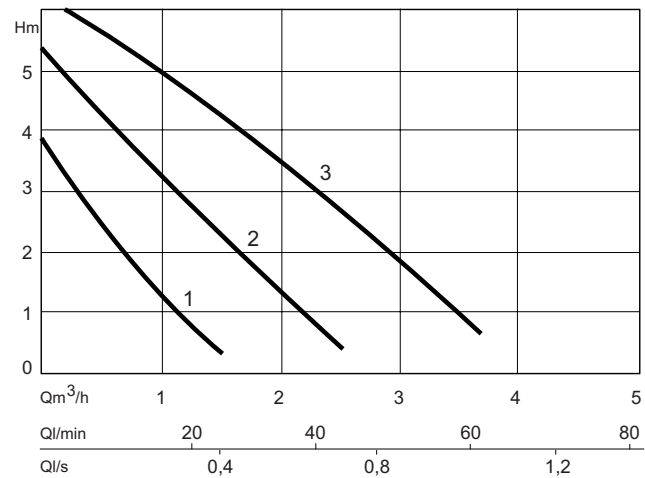
Pump	Thread G	Connection DN
FLA25	G1 1/2"	1" (25 mm)

Pump curves

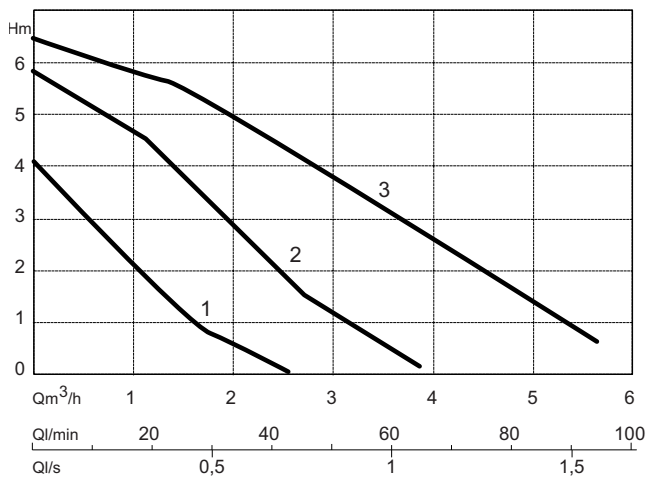
FLA 25-40



FLA 25-60



FLA 25-70





Introduction

FLB/FTB is a series of wet-rotor circulators made of cast iron. The pumps are in-line with flange connection (threaded connection for DN32) The pump is available as a single pump or twin pump.

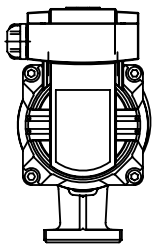
Pump speed can be regulated manually, with three speeds possible. The pump can be mounted directly on the pipes without support. The pump is also available in an electronically controlled version.

Applications

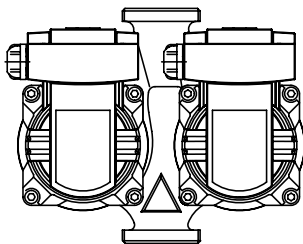
FLB/FTB is designed for all types of installations in everything from small properties to industrial uses within the following application areas:

- Circulation of hot or cold water
- Air conditioning

Versions



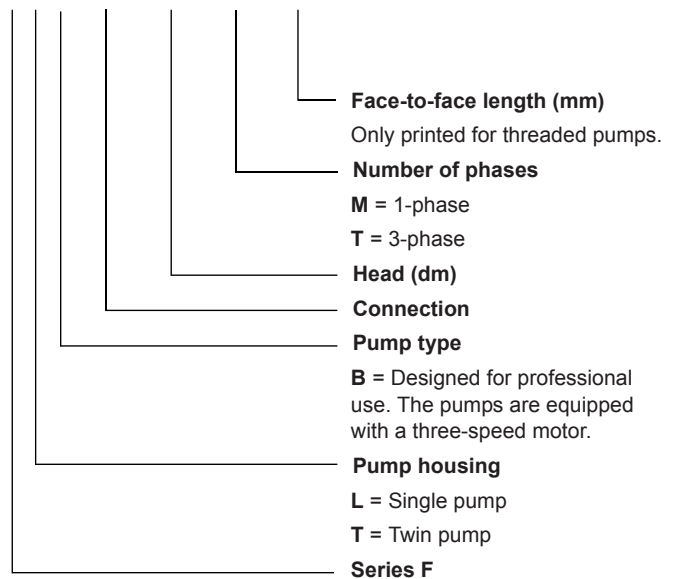
FLB single pump



FTB twin pump

Product identity

FLB 40 - 40 - M - 180



Design

Motor

Stator motor with slip bearings that are lubricated by the pump medium. The pump comes in two voltage variants: 1-phase 230 V and 3-phase 230/400 V. The 1-phase motor has two speeds and is equipped with a built-in condenser. The 3-phase motor can be run at three different speeds to adjust capacity to meet existing needs.

The motor shaft is partially hollow. This generates automatic deaeration and keeps the water in circulation, which minimises lime deposits in the motor.

The motor is equipped with a bleeder screw for manual deaeration and to make it possible to loosen the rotor in the event of substantial blockage.

Pump housing

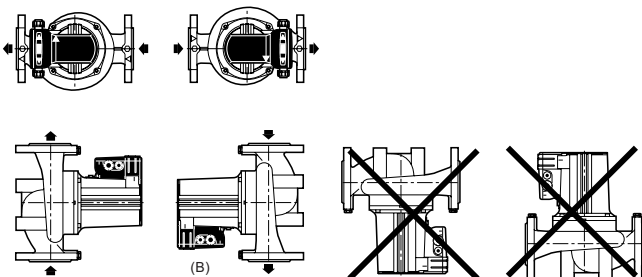
The threaded pump housing is equipped with lugs (face-to-face length 180 mm) to facilitate installation in a pipe system.

The flanged pump housing is equipped with a pressure gauge socket.

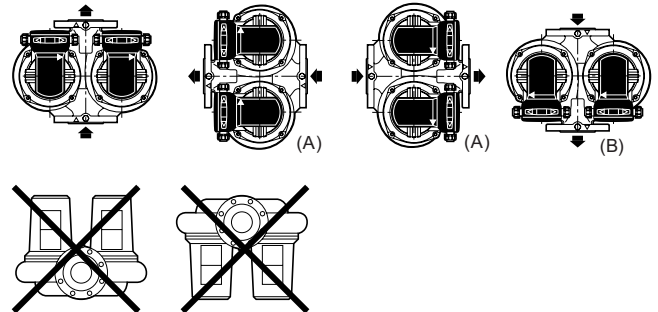
Installation instructions

The pump is installed directly on the pipe. The motor shaft is lubricated by the pump medium and must therefore always be mounted horizontally to ensure sufficient lubrication.

FLB



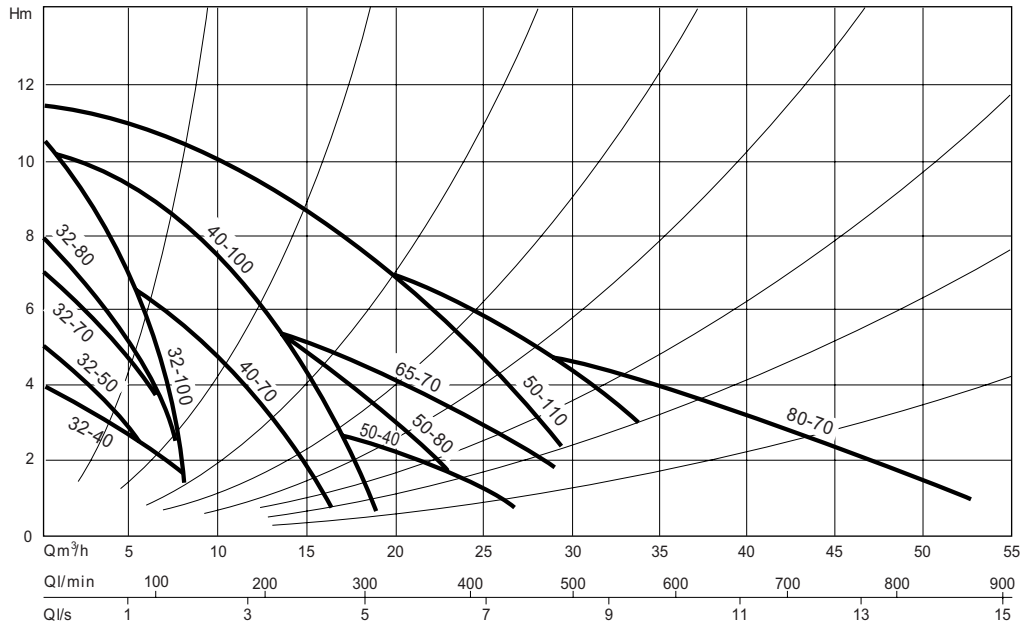
FTB



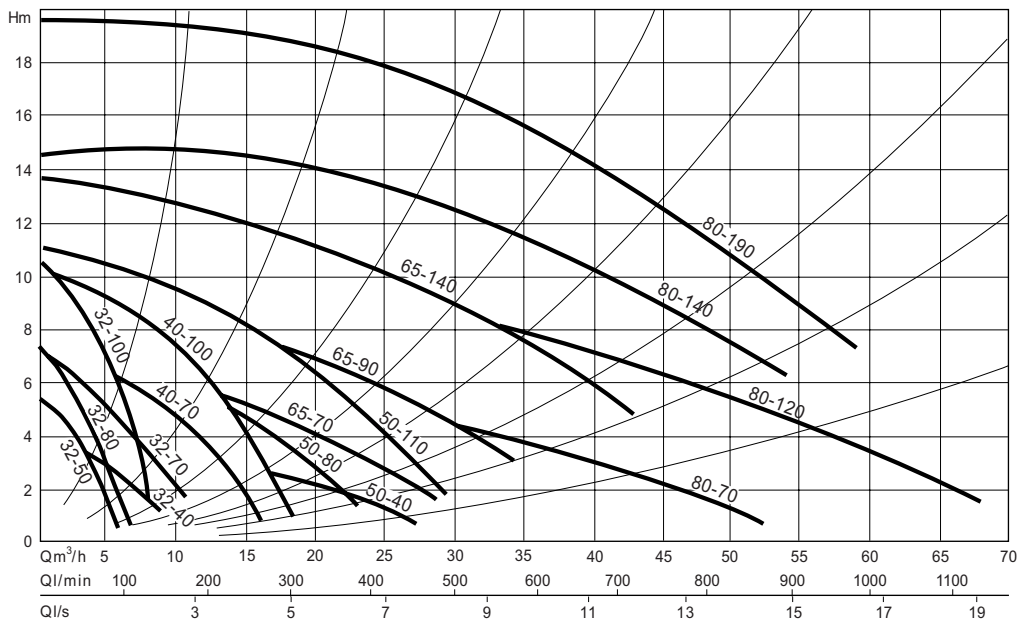
(A) This installation is possible, but requires that the pumps are run alternatingly or that the upper pump housing is equipped with a deaeration device (1/8" connection) to prevent air pockets in the pump housing.

(B) Do not use with cold water.

Performance curves, 1-phase



Performance curves, 3-phase





FLB/FTB 32

Connection DN32

Product

Circulator with wet motor for heating and cooling systems. In-line pump with face-to-face length of 180 mm. The pump has a three-speed control and a threaded connection. The pump is available with a 1-phase or a 3-phase motor.

Denomination

FLB Single pump in cast iron
 FTB Twin pump in cast iron

Process data

	Fluid temperature	Max. pressure
FLB/FTB	-20°C to +130°C	10 bar (PN 10)

Motor data

Stator motor cooled by the pump medium.

Frequency 50 Hz
 Thermal class F (+155°C)
 Protection rating IP 44
 Motor voltage 1-phase 230 V
 3-phase 230/400 V
 Ambient temperature max +40°C
 (+50°C for FLB 32-100)

Monitoring equipment

FLB/FTB 32-40/50/70/80

The motor has a built-in thermal contact.

FLB/FTB 32-100

The pump is equipped with a potential-free output for multi-error reader and a thermal contact. Max 250 V/1 A.

Material

Part	Material FLB/FTB
Pump housing	Cast iron
Impeller	Composite
Shaft	Stainless steel
O-ring	EPDM
Shaft bearing	Carbon
Stator	Stainless steel

Accessories

Union coupling DN32 for 1" and 1 1/4" (Stator diameter 25 mm and 32 mm).

Union coupling with valve DN32 for 1 1/4" (Stator diameter 32 mm).

Motor data, dimensions and weight

FLB single pump

1-phase, face-to-face length 180 mm

Pump type	Speed	Rated speed rpm	Motor power W P1	Rated current A (230 V)	Dimensions (mm)					Weight kg
					H1	H2	P	P1	L	
FLB 32-40-M-180	3	2660	180	0.85						
	2	2340	150	0.75	90	90	204	158	116	4.2
	1	1710	110	0.55						
FLB 32-50-M-180	3	2320	140	0.65						
	2	1640	110	0.55	90	90	189	150	110	4.0
	1	1200	75	0.35						
FLB 32-70-M-180	3	2160	245	1.20						
	2	1480	200	1.00	90	90	204	158	116	4.2
	1	1100	130	0.65						
FLB 32-80-M-180	3	2420	205	1.00						
	2	1950	165	0.80	90	90	189	150	110	3.8
	1	1350	115	0.60						
FLB 32-100-M-180	2	2680	340	1.50						
	1	1950	315	1.45	90	-	228	185	142	7.0

3-phase, face-to-face length 180 mm

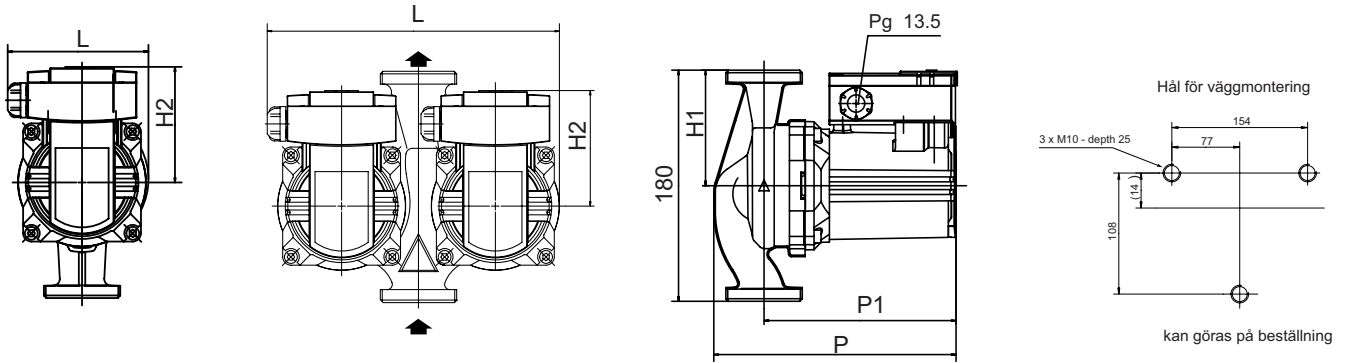
Pump type	Speed	Rated speed rpm	Motor power W P1	Rated current A		Dimensions (mm)					Weight kg
				230 V	400 V	H1	H2	P	P1	L	
FLB 32-40-T-180	3	2610	160	0.65	0.40						
	2	2120	105	0.35	0.20	90	90	204	158	116	4.4
	1	1810	75	0.25	0.15						
FLB 32-50-T-180	3	2650	150	0.65	0.40						
	2	2190	100	0.35	0.20	90	90	189	150	110	3.8
	1	1890	75	0.25	0.15						
FLB 32-70-T-180	3	2320	255	0.90	0.50						
	2	1700	160	0.50	0.30	90	90	204	158	116	4.4
	1	1410	105	0.35	0.20						
FLB 32-80-T-180	3	2420	200	0.75	0.45						
	2	1830	125	0.40	0.25	90	90	189	150	110	4.0
	1	1510	85	0.30	0.15						
FLB 32-100-T-180	3	2665	325	1.15	0.65						
	2	2280	250	0.65	0.45	103	-	229	185	142	7.0
	1	1900	190	0.40	0.35						

FTB twin pump

1-phase, face-to-face length 180 mm

Pump type	Speed	Rated speed rpm	Motor power P1 W	Rated current A (230 V)	Dimensions (mm)					Weight kg
					H1	H2	P	P1	L	
FTB 32-40-M-180	3	1980	67	0.29						
	2	1520	47	0.21	110	74	142	95	207	5.5
	1	1050	31	0.14						
FTB 32-50-M-180	3	2320	140	0.65						
	2	1640	110	0.55	105	90	188	150	228	7.8
	1	1200	75	0.35						
FTB 32-80-M-180	3	2420	205	1.00						
	2	1950	165	0.80	105	90	188	150	228	7.8
	1	1350	115	0.60						

FLB/FTB

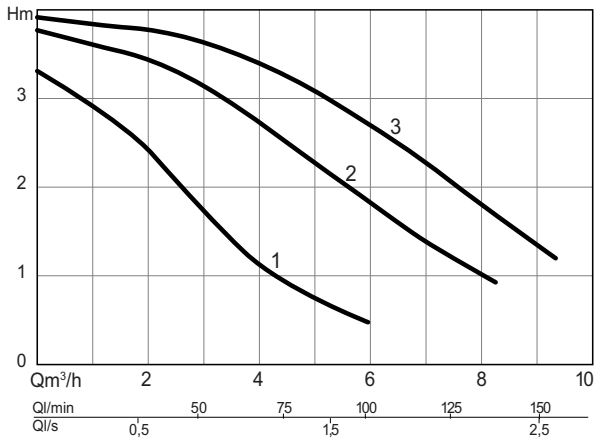


(All measurements in mm)

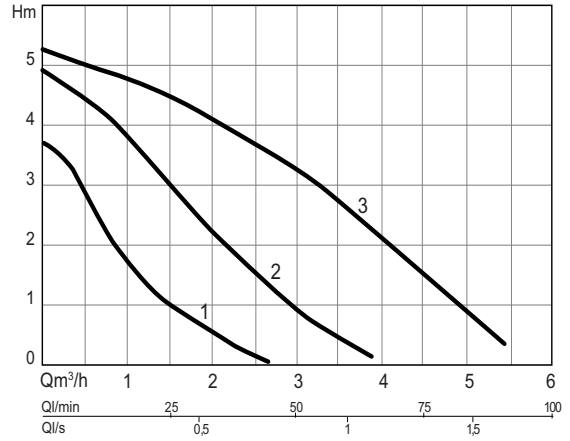
Pump	Thread	Connection
	G	DN
FLB32	G2"	1" 1/4 (32 mm)

Performance curves, 1-phase

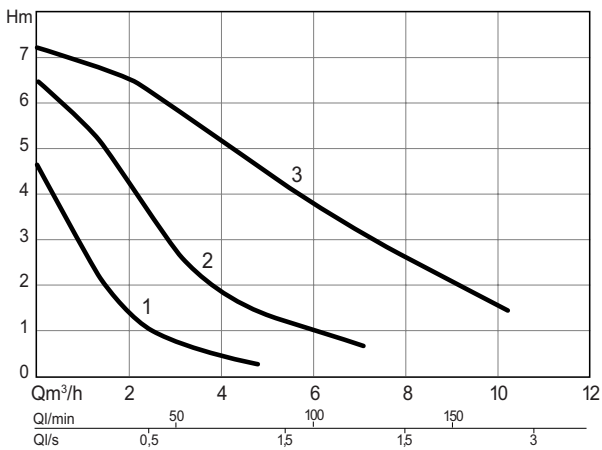
FLB/FTB 32-40-M-180



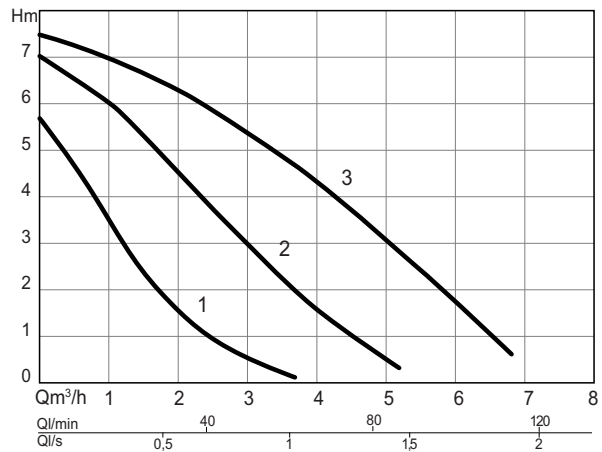
FLB/FTB 32-50-M-180



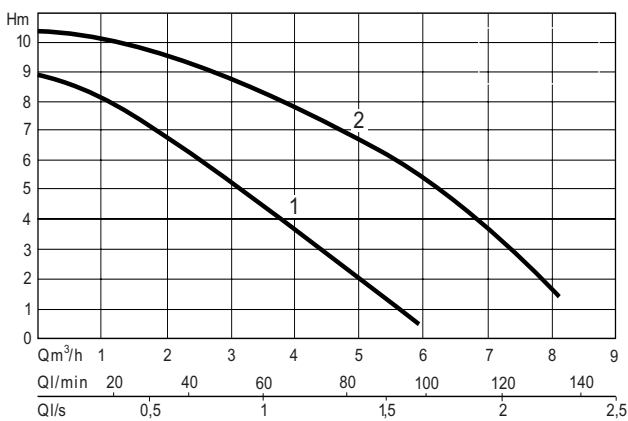
FLB 32-70-M-180



FLB/FTB 32-80-M-180

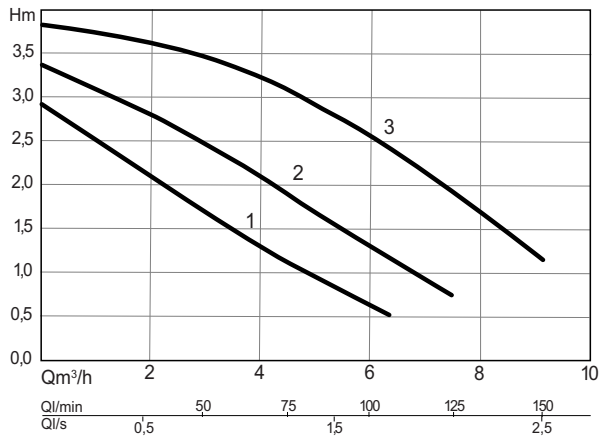


FLB 32-100-M-180

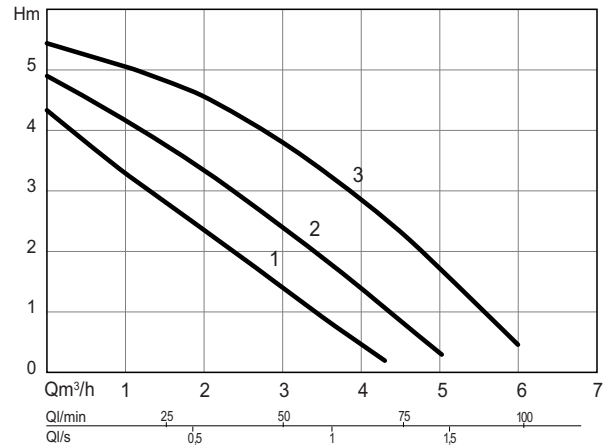


Performance curves, 3-phase

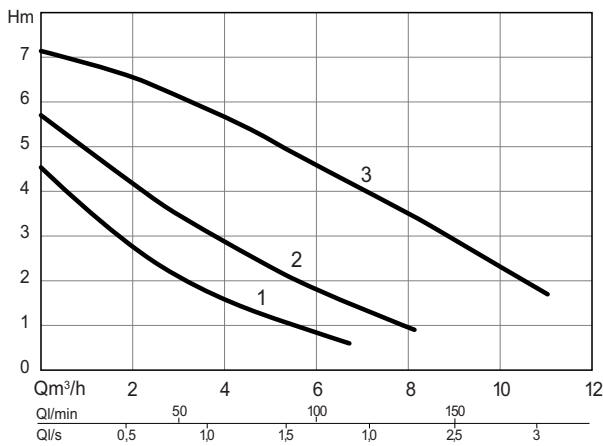
FLB 32-40-T-180



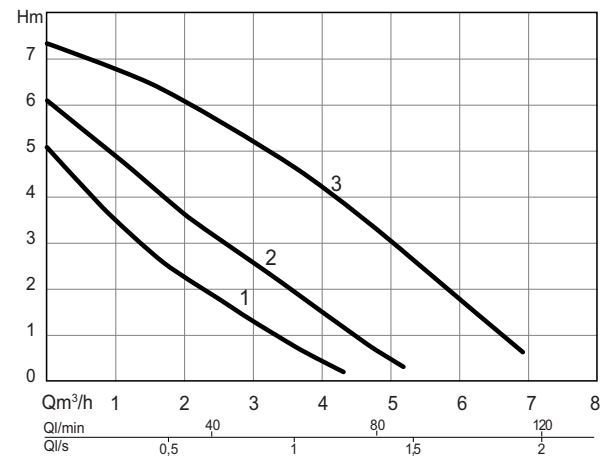
FLB 32-50-T-180



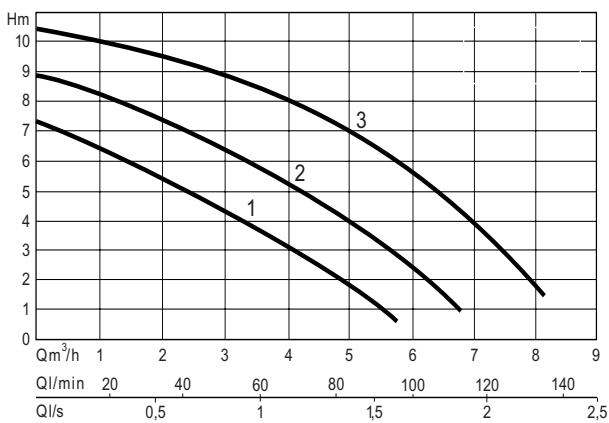
FLB 32-70-T-180



FLB 32-80-T-180



FLB 32-100-T-180



Motor data, dimensions and weight

FLB single pumps, 1-phase

Pump type	Speed	Rated speed rpm	Motor power P1 W (max)	Rated current (A) 1 x230 V	Dimensions (mm)									Weight kg
					H	H1	L	L1	P	P1	X	Y	Y1	
FLB 40-70-M	2	2530	410	1.80	250	125	155	80	268	193	75	147	38	12.0
	1	1470	405	1.80										
FLB 40-100-M	2	2730	665	3.05	250	125	171	90	292	217	90	90	40	16.0
	1	2010	590	2.95										

FLB single pumps, 3-phase

Pump type	Speed	Rated speed rpm	Motor power P1 W (max)	Rated current (A)		Dimensions (mm)									Weight kg
				3x230 V	3x400 V	H	H1	L	L1	P	P1	X	Y	Y1	
FLB 40-70-T	3	2580	390	1.30	0.75	250	125	155	80	269	194	75	147	38	12.0
	2	2060	285	0.70	0.50										
	1	1700	210	0.40	0.35										
FLB 40-100-T	3	2730	550	1.95	1.10	250	125	171	90	292	217	90	90	40	16.0
	2	2390	440	1.15	0.75										
	1	2050	350	0.70	0.60										

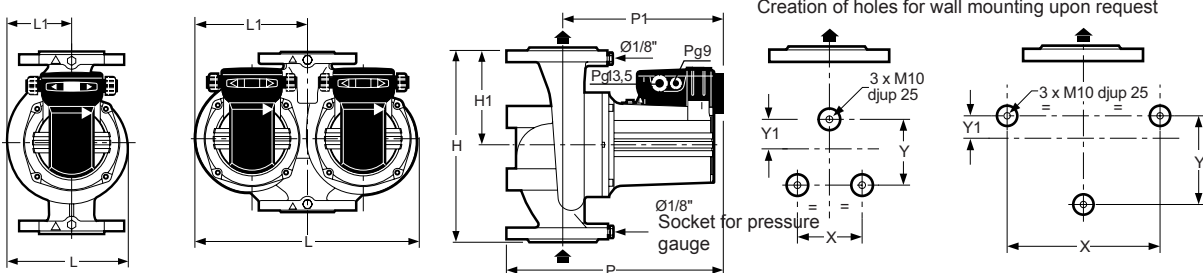
FTB twin pumps, 1-phase

Pump type	Speed	Rated speed rpm	Motor power P1 W (max)	Rated current (A) 1x230 V	Dimensions (mm)									Weight kg
					H	H1	L	L1	P	P1	X	Y	Y1	
FTB 40-40-M	3	2660	180	0.85	250	135	233	158	259	-	154	108	14	15.0
	2	2340	150	0.75										
	1	1710	110	0.55										
FTB 40-70-M	2	2530	430	1.90	250	135	297	154	268	193	173	108	11	20.0
	1	1470	425	1.90										
FTB 40-100-M	2	2720	680	3.20	250	135	350	178	292	217	225	132	35	29.0
	1	1990	600	3.00										

FTB twin pumps, 3-phase

Pump type	Speed	Rated speed rpm	Motor power P1 W (max)	Rated current (A)		Dimensions (mm)									Weight kg
				3x230 V	3x400 V	H	H1	L	L1	P	P1	X	Y	Y1	
FTB 40-70-T	3	2580	410	1.35	0.80	250	135	297	154	269	194	173	108	11	20.0
	2	2060	300	0.75	0.50										
	1	1700	220	0.45	0.40										
FTB 40-100-T	3	2710	590	2.00	1.15	250	135	350	178	292	217	225	132	35	29.0
	2	2330	460	1.20	0.80										
	1	2000	360	0.75	0.60										

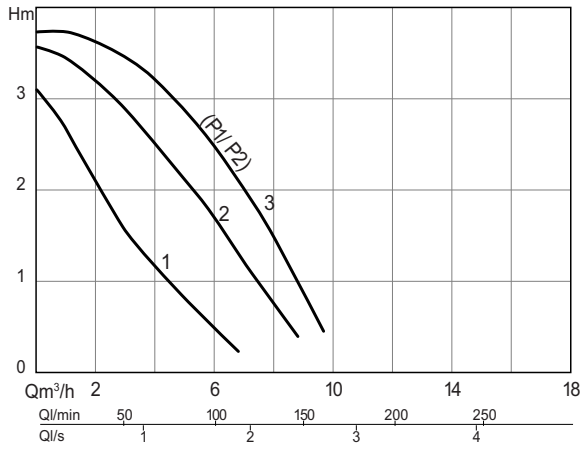
FLB/FTB



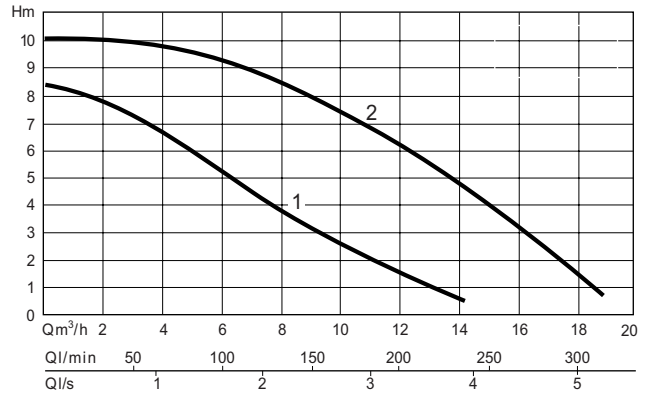
(All measurements in mm)

Performance curves, 1-phase

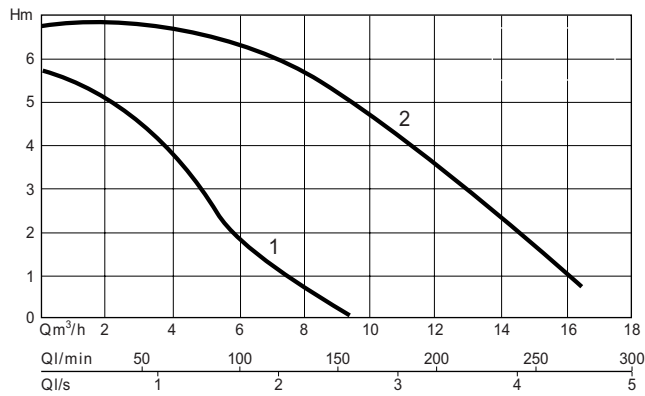
FTB 40-40-M



FLB/FTB 40-100-M

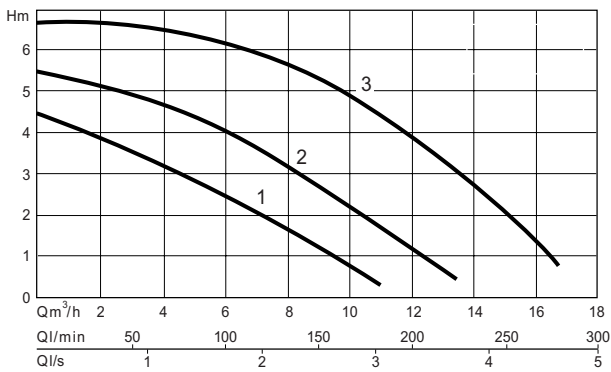


FLB/FTB 40-70-M

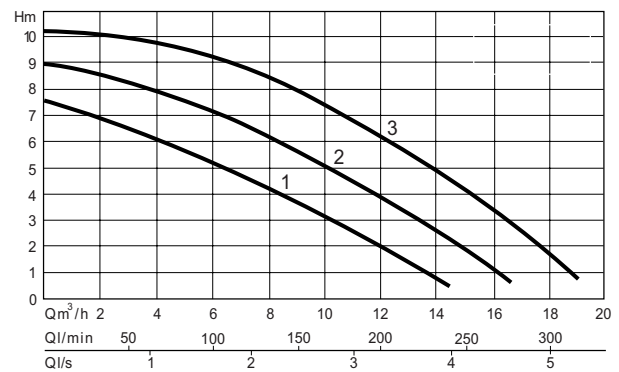


Performance curves, 3-phase

FLB/FTB 40-70-T



FLB/FTB 40-100-T





Material

Part	Material FLB/FTB
Pump housing	Cast iron
Impeller	Composite
Shaft	Stainless steel
O-ring	EPDM
Shaft bearing	Carbon
Stator	Stainless steel

FLB/FTB 50

Connection DN50

Product

Circulator with wet motor for heating and cooling systems. In-line pump. The pump has two or three-speed control and a flange connection.

Denomination

FLB Single pump in cast iron
 FTB Twin pump in cast iron

Process data

	Fluid temperature	Max. pressure
FLB/FTB	-20°C to +130°C	10 bar (PN 10)

Motor data

Stator motor cooled by the pump medium.

Frequency 50 Hz
 Thermal class F (+155°C)
 Protection rating IP 44
 Motor voltage 1-phase 230 V
 3-phase 230/400 V
 Ambient temperature max +50°C

Monitoring equipment

The pump is equipped with a potential-free output for multi-error reader and a thermal contact. Max 250 V/1 A.

Motor data, dimensions and weight

FLB 1-phase

Pump type	Speed	Rated speed rpm	Motor power P1 W (max)	Rated current (A) 1x230 V	Dimensions (mm)									Weight kg
					H	H1	L	L1	P	P1	X	Y	Y1	
FLB 50-40-M	2	2600	385	1.70	280	140	178	95	283	200	85	162	125	14.0
	1	1660	345	1.60										
FLB 50-80-M	2	2800	590	2.75	280	140	174	91	308	225	90	90	40	18.0
	1	2360	480	2.50										
FLB 50-110-M	2	2720	895	3.90	280	140	190	101	306	223	90	90	40	19.0
	1	1960	760	3.65										

FLB 3-phase

Pump type	Speed	Rated speed rpm	Motor power P1 W (max)	Rated current (A)		Dimensions (mm)									Weight kg
				3x230 V	3x400 V	H	H1	L	L1	P	P1	X	Y	Y1	
FLB 50-40-T	3	2620	360	1.20	0.70	280	140	178	95	283	200	85	162	125	14.0
	2	2130	270	0.70	0.45										
	1	1800	200	0.40	0.35										
FLB 50-80-T	3	2770	485	2.00	1.15	280	140	174	91	308	225	85	90	40	18.0
	2	2480	390	1.05	0.70										
	1	2180	315	0.70	0.55										
FLB 50-110-T	3	2660	810	2.55	1.50	280	140	190	101	306	223	90	90	40	19.0
	2	2260	620	1.60	1.05										
	1	1930	475	0.95	0.80										

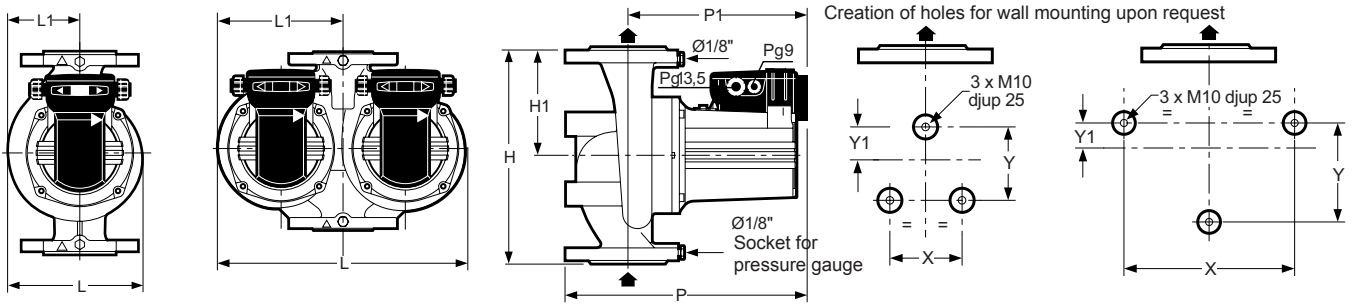
FTB 1-phase

Pump type	Speed	Rated speed rpm	Motor power P1 W (max)	Rated current (A)		Dimensions (mm)									Weight kg
				1x230 V		H	H1	L	L1	P	P1	X	Y	Y1	
FTB 50-40-M	2	2600	405	1.80		280	155	336	178	283	200	225	132	25	23.0
	1	1660	360	1.70											
FTB 50-80-M	2	2780	595	2.90		280	160	348	179	308	225	225	132	30	31.0
	1	1800	805	3.90											
FTB 50-110-M	2	2700	935	4.10		280	155	390	198	306	223	228	157	50	33.0
	1	1800	805	3.90											

FTB 3-phase

Pump type	Speed	Rated speed rpm	Motor power P1 W (max)	Rated current (A)		Dimensions (mm)									Weight kg
				3x230 V	3x400 V	H	H1	L	L1	P	P1	X	Y	Y1	
FTB 50-40-T	3	2620	380	1.25	0.75	280	155	336	178	283	200	225	132	25	23.0
	2	2130	285	0.75	0.50										
	1	1800	210	0.45	0.40										
FTB 50-80-T	3	2760	510	1.85	1.05	280	160	348	179	308	225	225	132	30	31.0
	2	2450	405	1.10	0.70										
	1	2140	325	0.70	0.55										
FTB 50-110-T	3	2650	825	2.65	1.55	280	155	390	198	306	223	228	157	50	33.0
	2	2220	650	1.60	1.05										
	1	1890	490	0.95	0.80										

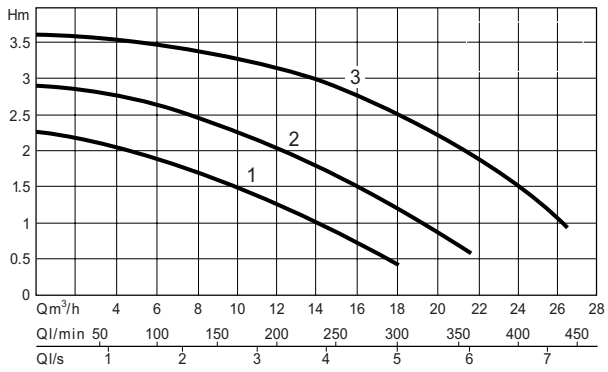
FLB/FTB



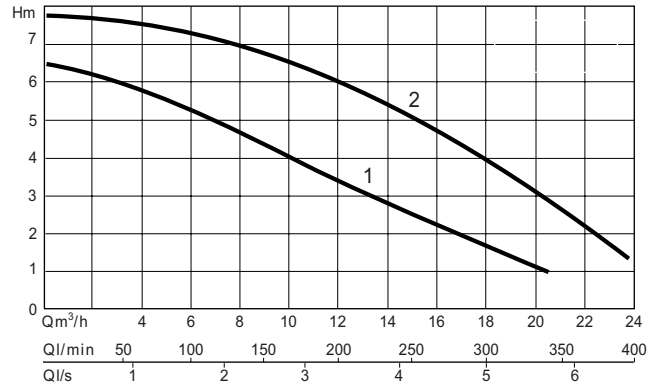
(All measurements in mm)

Performance curves, 1-phase

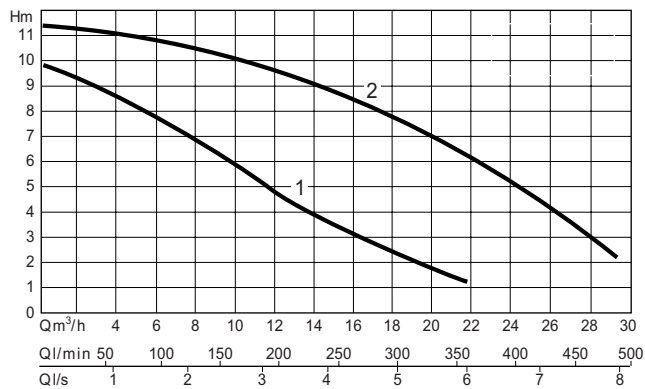
FLB/FTB 50-40-M



FLB/FTB 50-80-M

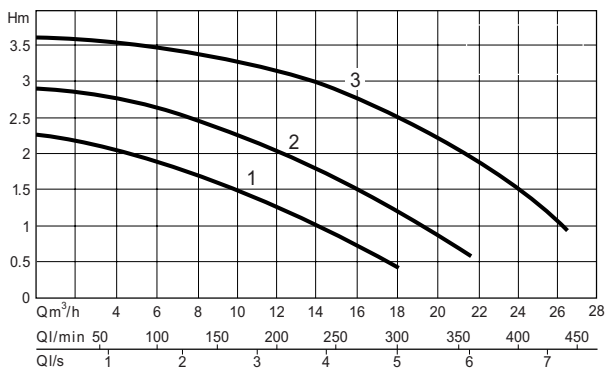


FLB/FTB 50-110-M

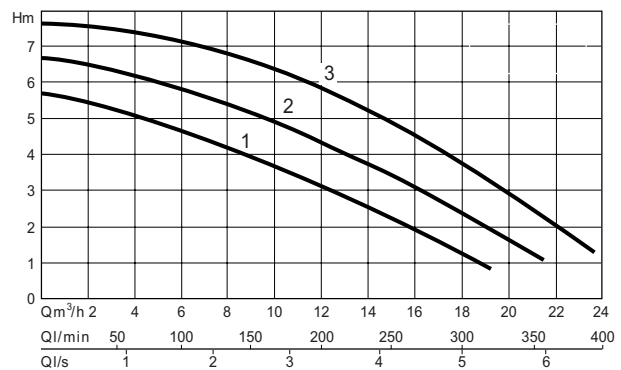


Performance curves, 3-phase

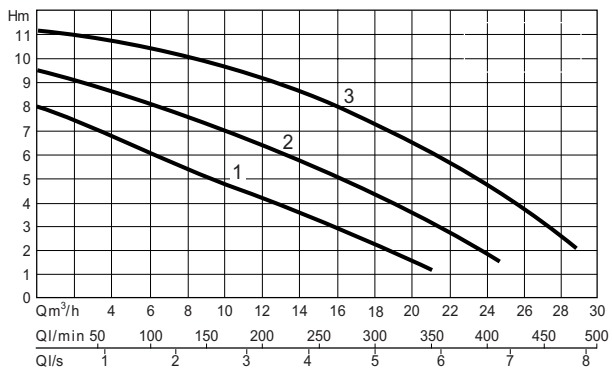
FLB/FTB 50-40-T



FLB/FTB 50-80-T



FLB/FTB 50-110-T



Motor data, dimensions and weight

FLB 1-phase, single pump

Pump type	Speed	Rated speed rpm	Motor power P1 W (max)	Rated current (A) 1x230 V	Dimensions (mm)							Weight kg		
					H	H1	L	L1	P	P1	X		Y	Y1
FLB 65-70-M	2	2730	675	3.15	340	170	204	111	327	234	104	90	40	22.0
	1	2090	580	2.80										
FLB 65-90-M	2	2775	950	4.10	340	170	218	118	349	256	104	90	40	26.0
	1	2290	820	3.80										

FLB 3-phase, single pump

Pump type	Speed	Rated speed rpm	Motor power P1 W (max)	Rated current (A)		Dimensions (mm)							Weight kg		
				3x230 V	3x400 V	H	H1	L	L1	P	P1	X		Y	Y1
FLB 65-70-T	3	2720	570	2.00	1.15	340	170	204	111	327	234	104	90	40	22.0
	2	2350	440	1.20	0.75										
	1	2020	345	0.75	0.60										
FLB 65-90-T	3	2810	870	2.90	1.65	340	170	218	118	349	256	104	90	40	26.0
	2	2510	750	2.05	1.30										
	1	2200	610	1.25	1.05										
FLB 65-140-T	3	2800	1470	4.75	2.75	340	170	218	118	349	256	104	90	40	28.0
	2	2510	1230	3.30	2.10										
	1	2240	1000	2.25	1.75										

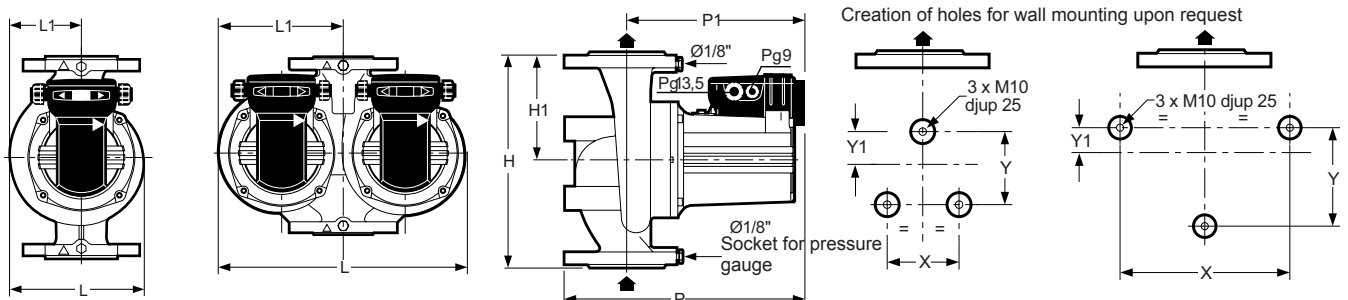
FTB 1-phase, twin pump

Pump type	Speed	Rated speed rpm	Motor power P1 W (max)	Rated current (A) 1x230 V	Dimensions (mm)							Weight kg		
					H	H1	L	L1	P	P1	X		Y	Y1
FTB 65-70-M	2	2740	675	3.15	340	185	414	215	327	234	225	162	25	37.0
	1	2080	595	3.00										
FTB 65-90-M	2	2765	950	4.10	340	185	432	223	349	256	225	162	25	45.0
	1	2245	790	3.85										

FTB 3-phase, twin pump

Pump type	Speed	Rated speed rpm	Motor power P1 W (max)	Rated current (A)		Dimensions (mm)							Weight kg		
				3x230 V	3x400 V	H	H1	L	L1	P	P1	X		Y	Y1
FTB 65-70-T	3	2720	560	2.00	1.15	340	185	414	215	327	234	225	162	25	37.0
	2	2350	435	1.20	0.75										
	1	2020	345	0.75	0.60										
FTB 65-90-T	3	2800	915	3.00	1.75	340	185	432	223	349	256	225	162	25	45.0
	2	2460	790	2.20	1.35										
	1	2120	630	1.30	1.10										
FTB 65-140-T	3	2780	1520	5.10	2.95	340	185	432	223	349	256	225	162	25	49.0
	2	2490	1260	3.35	2.15										
	1	2180	1020	2.35	1.75										

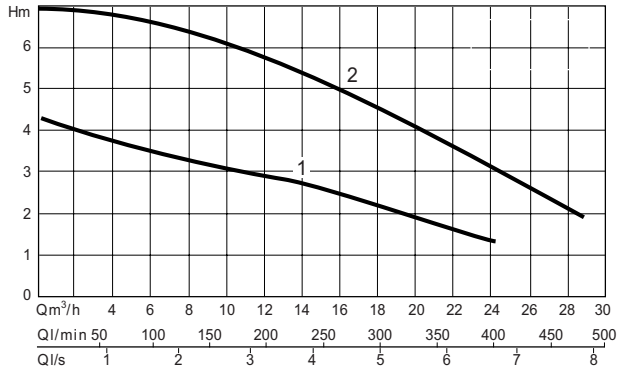
FLB/FTB



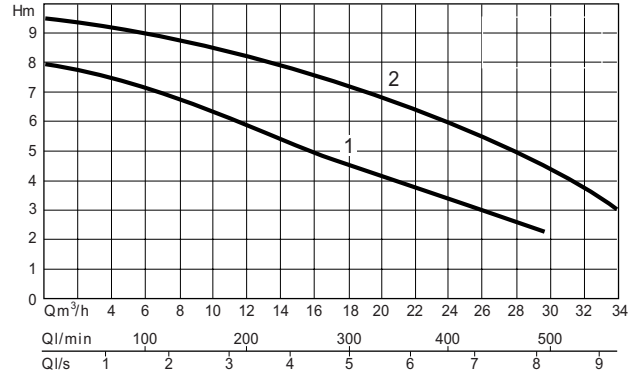
(All measurements in mm)

Performance curves, 1-phase

FLB/FTB 65-70-M

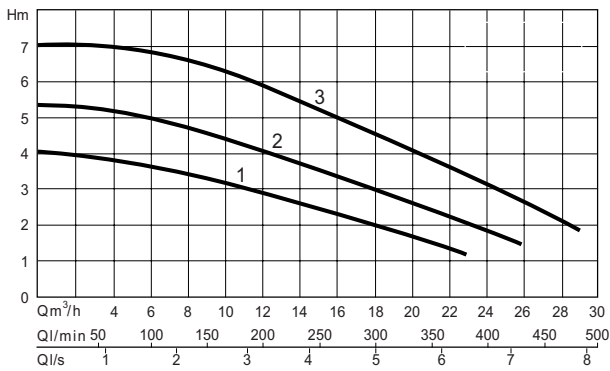


FLB/FTB 65-90-M

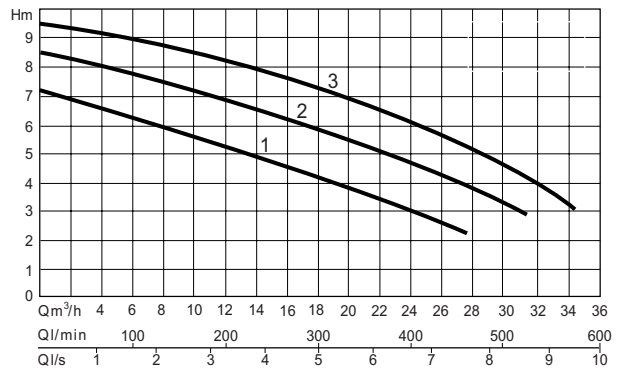


Performance curves, 3-phase

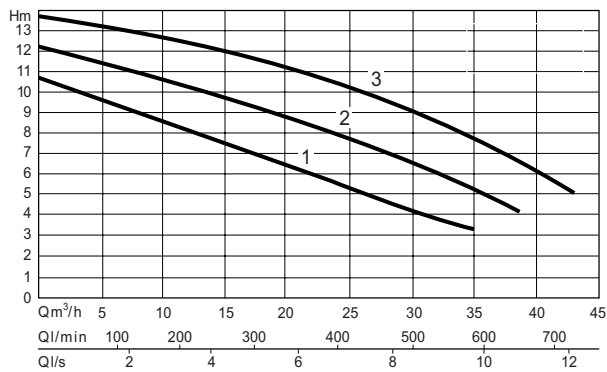
FLB/FTB 65-70-T



FLB/FTB 65-90-T



FLB/FTB 65-140-T





Material

Part	Material FLB/FTB
Pump housing	Cast iron
Impeller	Composite
Shaft	Stainless steel
O-ring	EPDM
Shaft bearing	Carbon
Stator	Stainless steel

FLB/FTB 80

Connection DN80

Product

Circulator with wet motor for heating and cooling systems. In-line pump. The pump has two or three-speed control and a flange connection.

Denomination

FLB Single pump in cast iron
 FTB Twin pump in cast iron

Process data

	Fluid temperature	Max. pressure
FLB/FTB	-20°C to +130°C	10 bar (PN 10)

Motor data

Stator motor cooled by the pump medium.

Frequency 50 Hz
 Thermal class F (+155°C)
 Protection rating IP 44
 Motor voltage 1-phase 230 V
 3-phase 230/400 V
 Ambient temperature max +50°C

Monitoring equipment

The pump is equipped with a potential-free output for multi-error reader and a thermal contact. Max 250 V/1 A.

Motor data, dimensions and weight

FLB 1-phase

Pump type	Speed	Rated speed rpm	Motor power P1 W (max)	Rated current (A) 1x230 V	Dimensions (mm)									Weight kg
					H	H1	L	L1	P	P1	X	Y	W	
FLB 80-70-M	2	2720	1040	4.60	360	180	244	135	358	258	135	95	40	29.0
	1	2060	840	4.10										

FLB 3-phase

Pump type	Speed	Rated speed rpm	Motor power P1 W (max)	Rated current (A)		Dimensions (mm)									Weight kg
				3x230 V	3x400 V	H	H1	L	L1	P	P1	X	Y	W	
FLB 80-70-T	3	2740	1040	3.25	1.85	360	180	480	249	358	258	135	95	40	29.0
	2	2370	850	2.30	1.50										
	1	2060	650	1.35	1.15										
FLB 80-120-T	3	2780	1530	5.00	2.90	360	180	480	249	358	258	135	95	40	31.0
	2	2490	1260	3.35	2.15										
	1	2240	980	2.25	1.75										
FLB 80-140-T	2	2880	2600	10.7	6.20	360	170	600	300	403	294	-	-	-	46.0
	1	2480	1900	5.60	3.25										
FLB 80-190-T	2	2900	3550	12.7	7.30	360	170	600	300	403	294	-	-	-	48.0
	1	2500	2600	7.80	4.50										

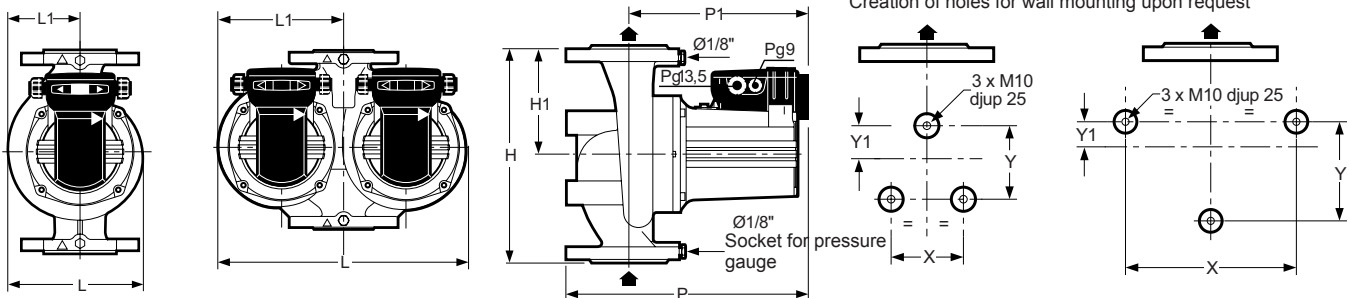
FTB 1-phase

Pump type	Speed	Rated speed rpm	Motor power P1 W (max)	Rated current (A) 1x230 V	Dimensions (mm)									Weight kg
					H	H1	L	L1	P	P1	X	Y	W	
FTB 80-70-M	2	2735	975	4.40	360	205	400	249	358	258	240	180	43	51.0
	1	2110	810	3.95										

FTB 3-phase

Pump type	Speed	Rated speed rpm	Motor power P1 W (max)	Rated current (A)		Dimensions (mm)									Weight kg
				3x230 V	3x400 V	H	H1	L	L1	P	P1	X	Y	W	
FTB 80-70-T	3	2730	1050	3.30	1.95	360	205	480	249	358	258	240	180	43	51.0
	2	2360	860	2.35	1.50										
	1	2050	650	1.40	1.20										
FTB 80-120-T	3	2770	1700	5.35	3.10	360	205	480	249	358	258	240	180	43	55.0
	2	2480	1300	3.40	2.20										
	1	2230	1050	2.30	1.80										
FTB 80-140-T	2	2870	2700	11.0	6.40	360	190	600	300	394	294	358	196	44	86.0
	1	2480	1900	5.60	3.25										
FTB 80-190-T	2	2890	3600	13.0	7.50	360	190	600	300	394	294	358	196	44	90.0
	1	2470	2700	8.10	4.70										

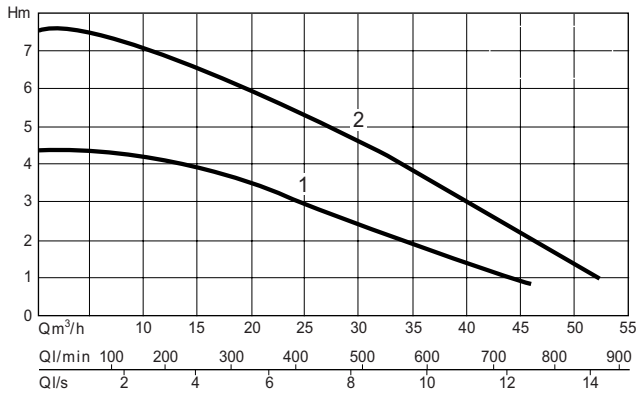
FLB/FTB



(All measurements in mm)

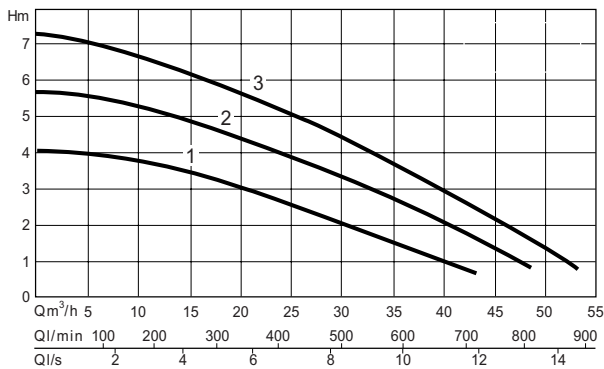
Performance curves, 1-phase

FLB/FTB 80-70-M

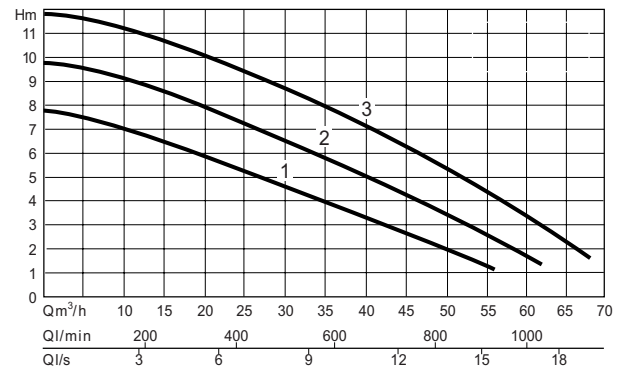


Performance curves, 3-phase

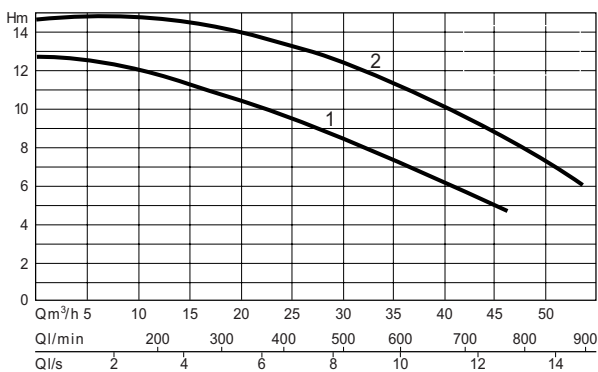
FLB/FTB 80-70-T



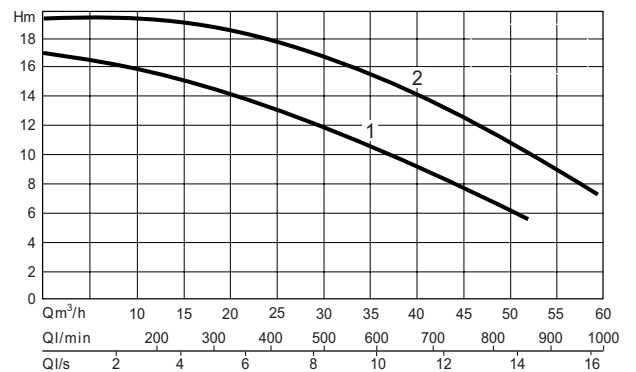
FLB/FTB 80-120-T



FLB/FTB 80-140-T



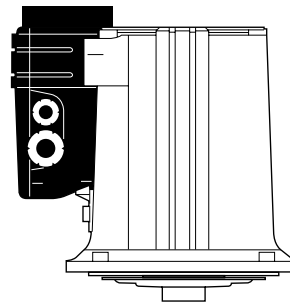
FLB/FTB 80-190-T



Spare parts FLB/FTB

Part number	Pump	Drive unit	Impeller	Complete drive side including impeller
61-110110	FLB 32-40-M-180			61-900215
61-110120	FLB 32-50-M-180			61-900225
61-110130	FLB 32-70-M-180			61-900245
61-110140	FLB 32-80-M-180			61-900205
61-110150	FLB 32-100-M-180	61-900105	61-900400	
61-110210	FLB 32-40-T-180			61-900210
61-110220	FLB 32-50-T-180			61-900220
61-110230	FLB 32-70-T-180			61-900240
61-110240	FLB 32-80-T-180			61-900200
61-110250	FLB 32-100-T-180	61-900100	61-900400	
61-210110	FTB 32-40-M-180	61-900255	61-900413	
61-210120	FTB 32-50-M-180			61-900225
61-210140	FTB 32-80-M-180			61-900205
61-130110	FLB 40-70-M	61-900105	61-900401	
61-130115	FLB 40-70-T	61-900100	61-900401	
61-130120	FLB 40-100-M	61-900115	61-900403	
61-130125	FLB 40-100-T	61-900110	61-900403	
61-130130	FLB 50-40-M	61-900105	61-900402	
61-130135	FLB 50-40-T	61-900100	61-900402	
61-130140	FLB 50-80-M	61-900110	61-900404	
61-130145	FLB 50-80-T	61-900115	61-900404	
61-130150	FLB 50-110-M	61-900125	61-900406	
61-130155	FLB 50-110-T	61-900120	61-900406	
61-130160	FLB 65-70-M	61-900115	61-900405	
61-130165	FLB 65-70-T	61-900110	61-900405	
61-130175	FLB 65-90-T	61-900130	61-900407	
61-130180	FLB 65-90-M	61-900145	61-900409	
61-130185	FLB 65-140-T	61-900140	61-900409	
61-130190	FLB 80-70-M	61-900135	61-900408	
61-130195	FLB 80-70-T	61-900130	61-900408	
61-130205	FLB 80-120-T	61-900140	61-900410	
61-130215	FLB 80-140-T	61-900150	61-900411	
61-130225	FLB 80-190-T	61-900160	61-900412	
61-230100	FTB 40-40-M			61-900235
61-230110	FTB 40-70-M	61-900105	61-900401	
61-230115	FTB 40-70-T	61-900100	61-900401	
61-230120	FTB 40-100-M	61-900115	61-900403	
61-230125	FTB 40-100-T	61-900110	61-900403	
61-230130	FTB 50-40-M	61-900105	61-900402	
61-230135	FTB 50-40-T	61-900100	61-900402	
61-230140	FTB 50-80-M	61-900115	61-900404	
61-230145	FTB 50-80-T	61-900110	61-900404	
61-230150	FTB 50-110-M	61-900125	61-900406	
61-230155	FTB 50-110-T	61-900120	61-900406	

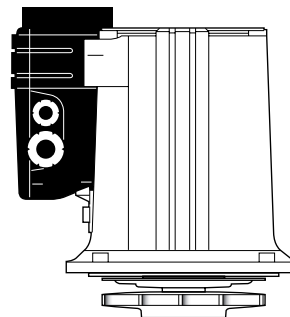
Part number	Pump	Drive unit	Impeller	Complete drive side including impeller
61-230160	FTB 65-70-M	61-900115	61-900405	
61-230165	FTB 65-70-T	61-900110	61-900405	
61-230175	FTB 65-90-T	61-900130	61-900407	
61-230180	FTB 65-90-M	61-900145	61-900409	
61-230185	FTB 65-140-T	61-900140	61-900409	
61-230190	FTB 80-70-M	61-900135	61-900408	
61-230195	FTB 80-70-T	61-900130	61-900408	
61-230205	FTB 80-120-T	61-900140	61-900410	
61-230215	FTB 80-140-T	61-900150	61-900411	
61-230225	FTB 80-190-T	61-900160	61-900412	



Drive unit



Impeller



Complete drive side including impeller

Introduction

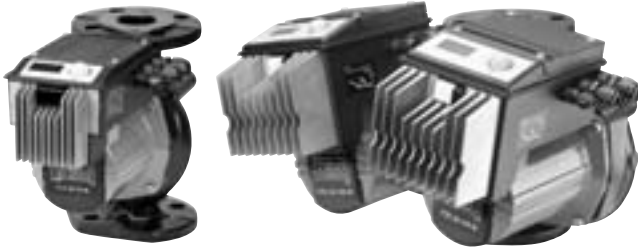
FLE/FTE is a series of wet-rotor circulators with electronic speed control. The pumps are made of cast iron and aluminum and are available with threaded or flange connection. The pump is available as a single pump or twin pump. All pumps have composite impellers.

The pump can be mounted directly on the pipes without support.

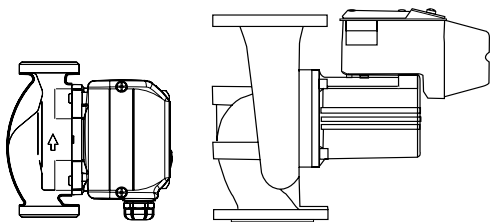
Applications

FLE/FTE is designed for installations in both small houses and large properties in the following application areas:

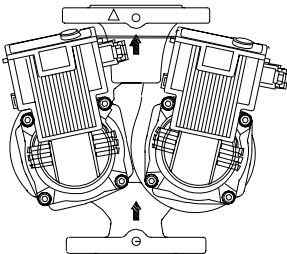
- Circulation of hot or cold water
- Air conditioning



Versions



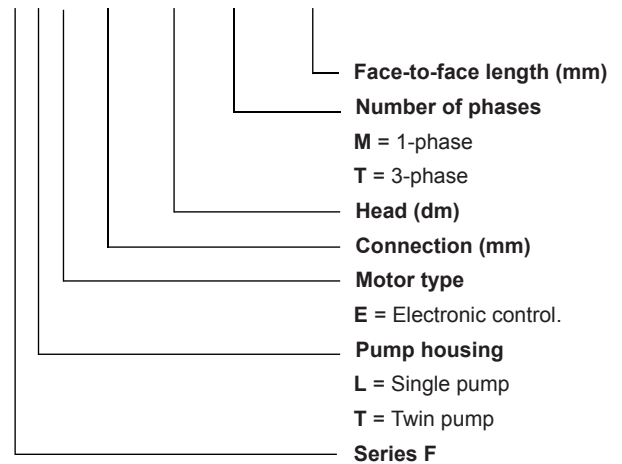
FLE single pump with threaded or flange connection



FTE twin pump with flange connection

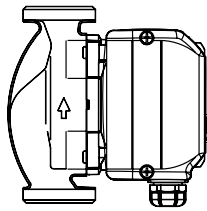
Product identity

FLE 40 - 70 - M - 180



Design

FLE connection 25



Motor

Stator motor with slip bearings that are lubricated by the pump medium. The motor has a built-in condenser.

The pump has 3 different pre-programmed modes. Normal mode (the middle position) is for normal houses. "+" mode is for large houses and heating systems with a small pipe diameter. "-" mode is for older houses with a large pipe size in the heating system. The pump works between different pressures in the different modes and adapts capacity to need. No other settings are required.

The pumps are equipped with a bronze filter that prevents particles in the pump medium from penetrating the motor chamber and blocking the motor.

The motor shaft is hollow. This generates automatic deaeration and keeps the water in circulation, which minimises lime deposits in the motor.

If the motor becomes blocked, the anti-block system is activated automatically. This engages the highest starting torque in order to eliminate the blockage.

The motor is equipped with a bleeder screw for manual deaeration and to make it possible to loosen the rotor in the event of substantial blockage.

To facilitate motor cable connection, the terminal board has quick-release couplings for cables. The quick-release coupling can handle cables up to 2.5 mm².

No separate motor protection is required.

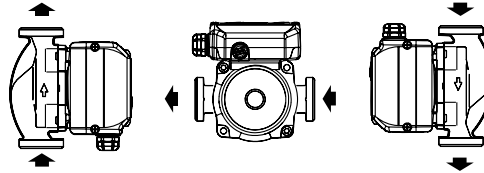
Pump housing

The pump housing is equipped with lugs to facilitate installation in a pipe system (applies to face-to-face length 180 mm). The pump is delivered with gaskets. The pump is available in two different face-to-face lengths: 130 and 180 mm.

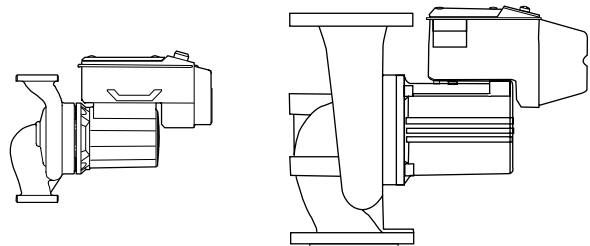
Installation instructions

The pump is installed directly on the pipe using union couplings. The motor shaft is lubricated by the pump

medium and must therefore always be mounted horizontally to ensure sufficient lubrication.



FLE connection 32 - 80



Motor

Stator motor with slip bearings that is lubricated by the pump medium. The motor has a built-in condenser.

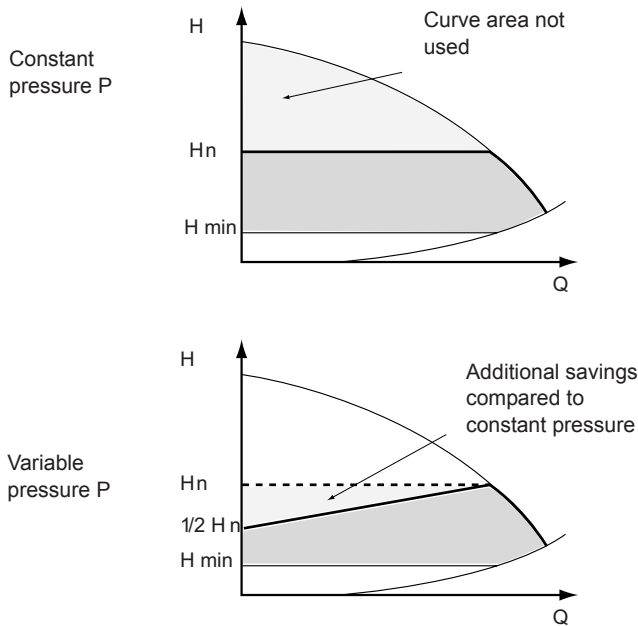
The motor shaft is hollow. This generates automatic deaeration and keeps the water in circulation, which minimises lime deposits in the motor.

FLE 32: The motor is equipped with a bleeder screw for manual deaeration and to make it possible to loosen the rotor in the event of blockage.

Electronic pump control

Pump capacity is controlled electronically in many different ways:

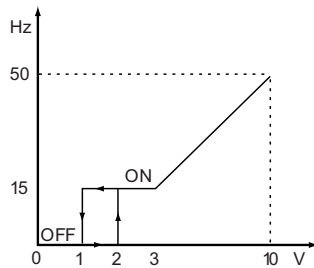
- **Constant pressure P**
With this setting, constant pressure is always maintained in the system regardless of flow.
- **Manual speed setting**
Rated speed can be adjusted to a constant value between 850 and 2850 rpm.
- **Automatic day/night function**
The pump automatically switches to a lower night curve with low energy consumption when the temperature of the pump medium drops. When the temperature rises again, the pump resumes the day curve. This works, for example, in a system with a hot water heater that can be set to maintain a lower water temperature at night.
- **Variable pressure P**
The pump maintains a set pressure at full speed. At a lower speed, a lower pressure is permitted. Since friction losses in the pipe system reduce at lower flow, the pump does not need to operate at full pressure at lower flow.



If the pump is shut off (via the On/Off button), it will start once a day to circulate the water in the pump, thereby preventing blockage due to a long stationary period.

Remote control

- Remote control of pump speed is possible with control signal 0–10 V (Only if P1>500 W).



- Activation and deactivation.
- Fault indication.

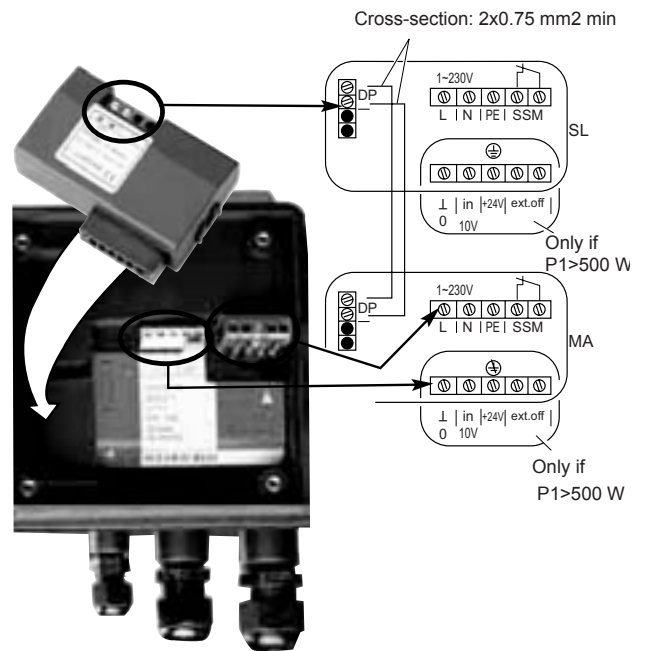
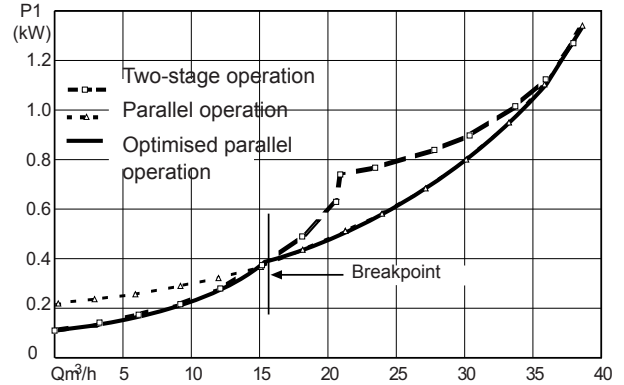
Twin pumps

If the pump is equipped with the IF module accessory (InterFace module), the following extra functions are available:

- **Operating/Standby**
Switch between operating and standby every 24 hours. The standby pump starts automatically if the operating pump breaks down.

Multi-stage operation/parallel operation

At low load, only the operating pump runs. The standby pump starts if need increases. Both pumps then run at a synchronised speed. Switch between operating and standby pump every 24 hours.



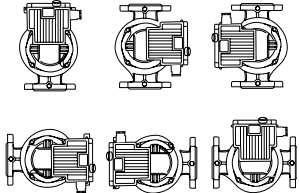
Operation in parallel operation/optimised parallel operation with IF-module.

Installation instructions

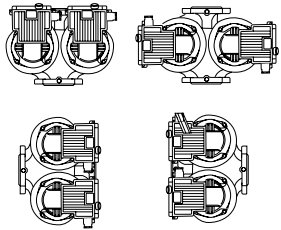
FLE may only be installed with the motor housing in the positions indicated below. If the pump is installed with the motor housing vertical, there is a risk of insufficient bearing lubrication. Also note that the pump may not be installed with the junction box beneath the pump.

Motor power P1 < 500 W

Permitted installation positions for single pump FLE



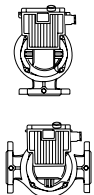
Permitted installation positions for twin pump FLE



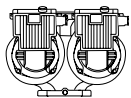
Motor power P1 > 500 W

In addition to that specified earlier, for these pumps the cooling flanges of the electronics unit must be positioned vertically to ensure effective cooling.

Permitted installation positions for single pump FLE

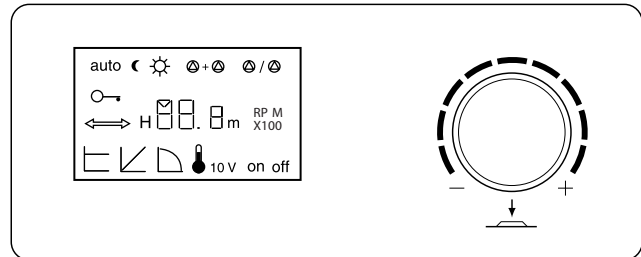


Permitted installation positions for twin pump FLE



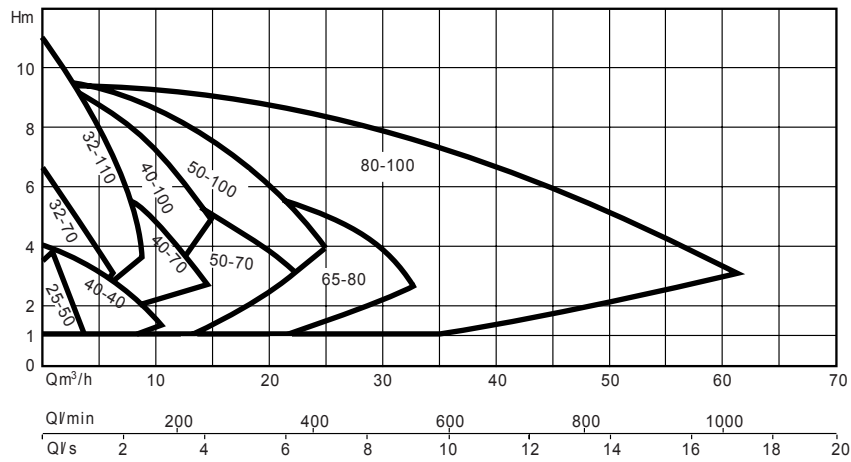
Display

The pump display indicates which settings were made:

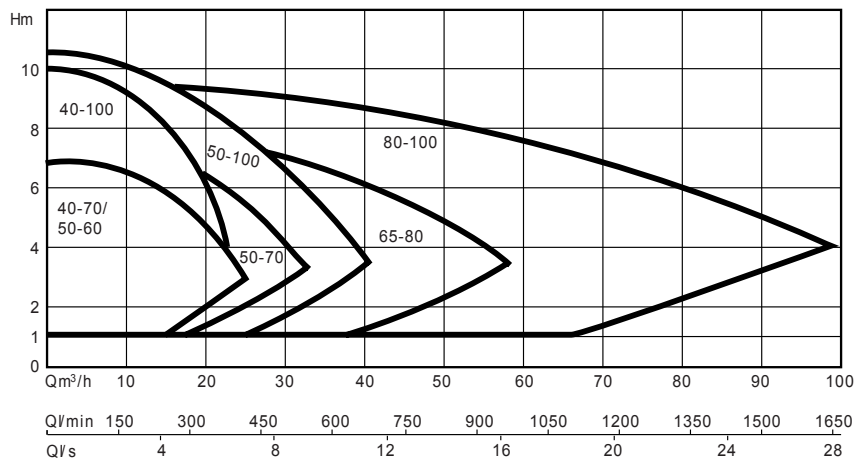


Symbol	Description
auto ☀	Default. The pump automatically switches to the night curve if the media temperature drops significantly.
auto ☾	The pump works following the night curve.
No symbol auto	The night function is deactivated.
H 9.0 m	Differential pressure is set for 9 metres.
18.0 ^{RPM} _{X100}	The pump works at a constant speed. (In this case, 1800 rpm.)
⌊	The pump is set to constant differential pressure.
↘	The pump is set to variable differential pressure.
⌒	Speed is set to a constant speed between 800 and 2800 rpm. This speed is set with the knob.
⌒ 10 V	Remote control is activate. Pump speed (capacity) is regulated with a control signal, 0–10 V. See the description below. The knob has no function.
on off	Indicates whether the pump is ON or OFF.
⊕ + ⊕	Only for twin pump with 2 IF modules. Parallel operation. Both pumps run.
⊕ / ⊕	Operating/standby.

Performance curves, single pumps FLE



Performance curves, twin pumps FTE





FLE 25

Connection DN25 threaded

Product

Circulator with wet motor for heating systems. In-line pump with electronic speed control. Pump with threaded connection. Face-to-face length 130 or 180 mm.

Denomination

FLE Single pump with electronic control

Process data

	Fluid temperature	Max. pressure
FLE	+2°C to +95°C	10 bar (PN 10)

Motor data

Wet-rotor motor cooled by the pump medium.

Frequency	50 Hz
Thermal class	F (+155°C)
Protection rating	IP 42
Motor voltage	1-phase 230 V
Ambient temperature	max +40°C

Monitoring equipment

No separate motor protection required.

Material

Part	Material
	FLE
Pump housing	Cast iron
Impeller	Composite
Shaft bearing	Graphite
Stator	Stainless steel
O-ring	EPDM
Impeller collar seal	Stainless steel

Accessories

Adapter ring for connecting from DN25, G1 1/2" to DN32, G2".

Union coupling DN 25 for 3/4" or 1".

Union coupling with valve DN 25 for 1" or 22 and 28 mm copper pipe.

Motor data, dimensions and weight

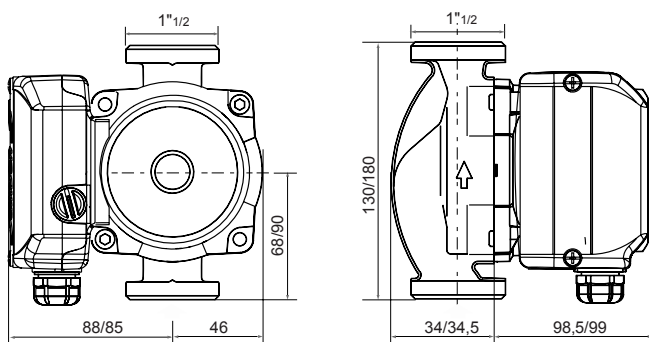
1-phase, face-to-face length 130 mm

Pump type	Rated speed rpm		Motor power W		Rated current A (230 V)	Weight kg
	min.	max.	P1	P2		
FLE 25-50-130	950	1850	93	40	0.40	2.6

1-phase, face-to-face length 180 mm

Pump type	Rated speed rpm		Motor power W		Rated current A (230 V)	Weight kg
	min.	max.	P1	P2		
FLE 25-50-180	1000	1900	65	20	0.28	2.35

FLE

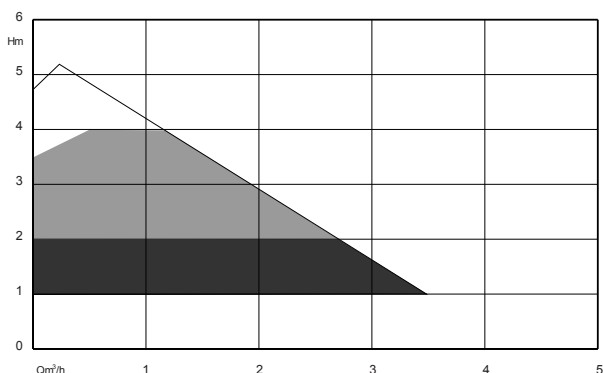


(All measurements in mm)

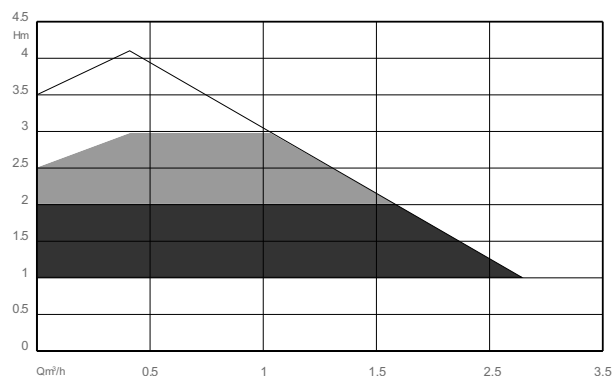
Pump	Thread	Connection
FLE25	G 1 1/2"	1" (25 mm)

Performance curves

FLE 25-50-130



FLE 25-50-180





Material

Part	Material
Pump housing	Cast iron
Impeller	Composite
Shaft bearing	Metal-impregnated graphite
Stator	Stainless steel

Accessories

Union coupling DN 32 for 1" or 1 1/4".

Union coupling with valve DN 32 for 1 1/4".

Motor data, dimensions and weight

1-phase, face-to-face length 180 mm

Pump type	Rated speed rpm		Motor power P1		Rated current A (230 V)		Weight kg
	min.	max.	min.	max.	min.	max.	
FLE 32-70-180	1000	2800	40	200	0.2	0.9	5.5
FLE 32-110-180	900	2600	55	400	0.3	1.9	7.5

FLE 32

Connection DN32 threaded

Product

Circulator with wet motor for heating systems. In-line pump with electronic speed control. Pump with threaded connection. Face-to-face length 180 mm.

Denomination

FLE

Process data

	Fluid temperature	Max. pressure
FLE	+20°C to +110°C	10 bar (PN 10)

Motor data

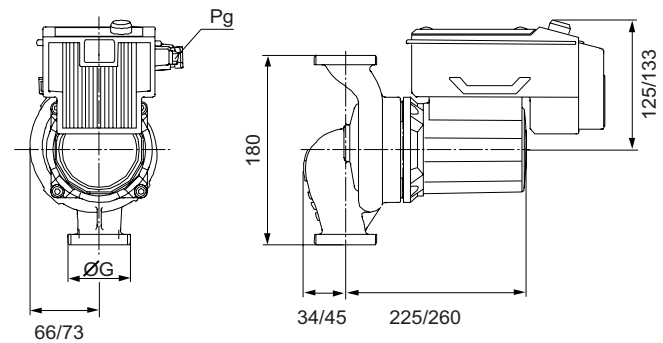
Wet-rotor motor cooled by the pump medium.

Frequency	50 Hz
Thermal class	F (+155°C)
Protection rating	IP 42
Motor voltage	1-phase 230 V
Ambient temperature	max +40°C

Monitoring equipment

The pump is equipped with a potential-free output for multi-error reader. Max 250 V/1 A (SSM).
No separate motor protection required.

FLE

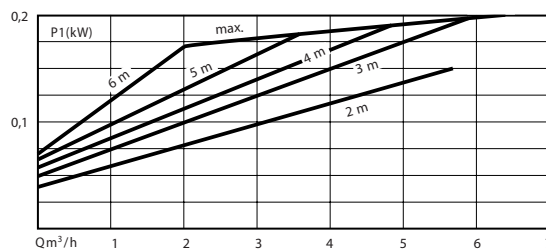
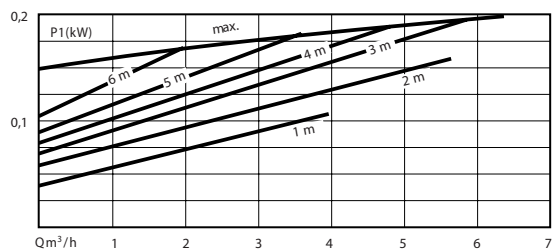
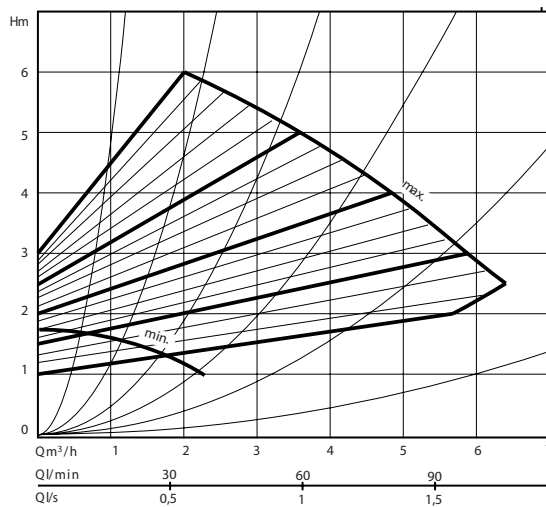
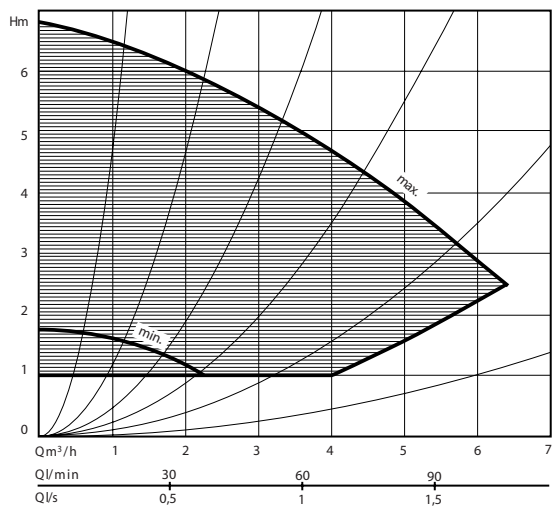


(All measurements in mm)

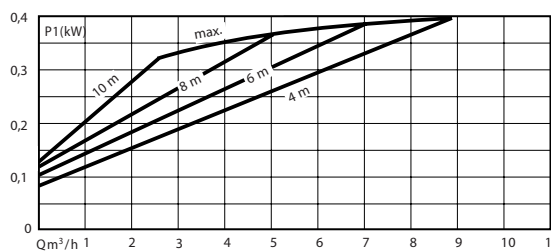
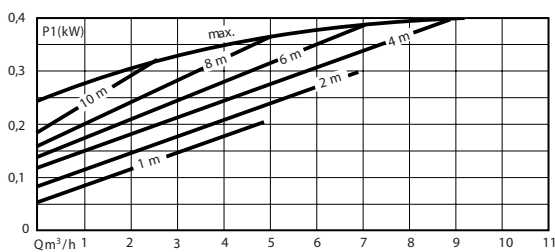
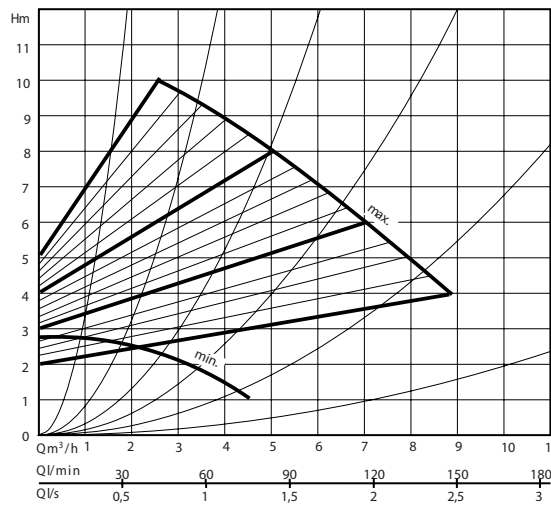
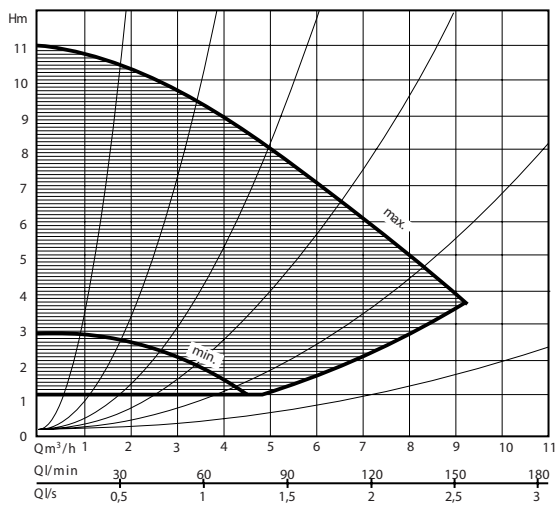
Pump	Thread	Connection
FLE32	G2	1 1/4" (32 mm)

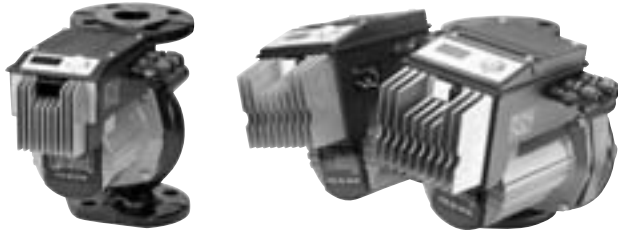
Pump curve

FLE 32-70



FLE 32-110





Material

Part	Material FLE/FTE
Pump housing	Cast iron
Impeller	Composite
Shaft bearing	Metal-impregnated graphite
Stator	Stainless steel

Accessories

IF module for FTE.

FLE/FTE 40

Connection DN40 flange

Product

Circulator with wet motor for heating systems. In-line pump with electronic speed control. Pump with flange connection.

Denomination

FLE Single pump in cast iron
 FTE Twin pump in cast iron

Process data

	Fluid temperature	Max. pressure
FLE/FTE	+20°C to +110°C	10 bar (PN 10)

Motor data

Wet-rotor motor cooled by the pump medium.

Frequency 50 Hz
 Thermal class F (+155°C)
 Protection rating IP 42
 Motor voltage 1-phase 230 V
 Ambient temperature max +40°C

Monitoring equipment

FLE 40-40 and FLE/FTE 40-70

The pump is equipped with a potential-free output for multi-error reader. Max 250 V/1 A (SSM).

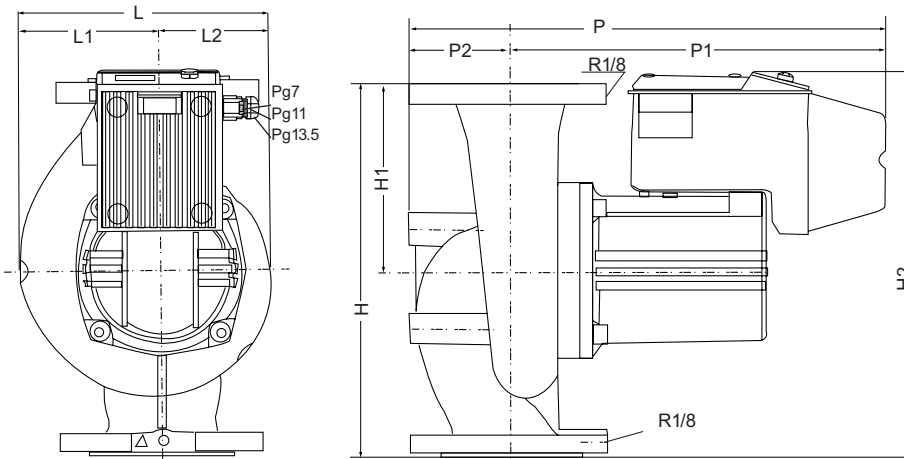
FLE/FTE 40-100

The pump is equipped with a potential-free output for multi-error reader. Max 250 V/1 A (SSM) and 0–10 V input for remote control, external activation and deactivation as well as 24 V output for connection of external sensor.

Motor data, dimensions and weight

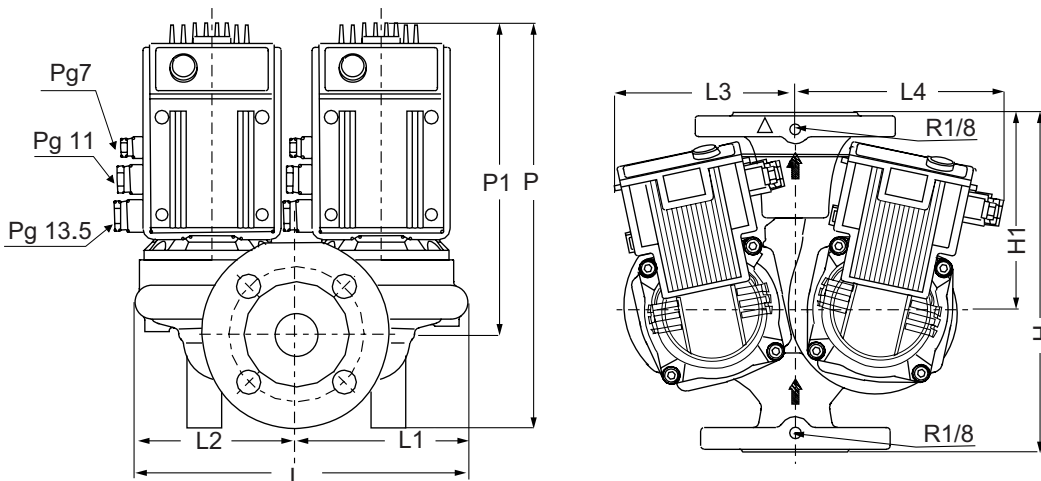
1-phase, FLE single pump

Pump type	Rated speed rpm		Motor power P1		Rated current A (1x230 V)		Dimensions (mm)								Weight	
	min.	max.	min.	max.	min.	max.	H	H1	H2	L	L1	L2	P	P1	P2	kg
FLE 40-40-M	1500	2700	60	200	0.3	0.90	220	110	235	173	83	90	291	237	54	9.0
FLE 40-70-M	1000	2550	90	430	0.45	1.95	250	125	258	195	80	109	345	270	75	11.0
FLE 40-100-M	850	2850	30	570	0.45	4.80	250	125	302.5	171	90	81	385	310	75	18.0



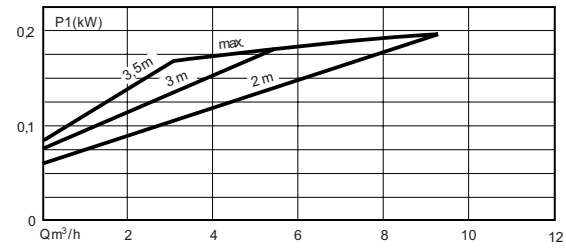
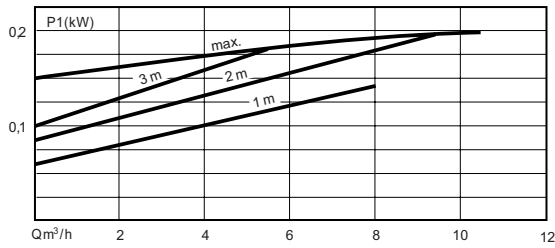
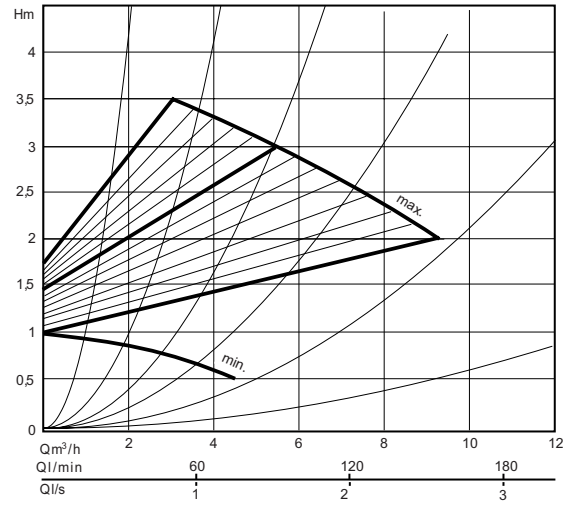
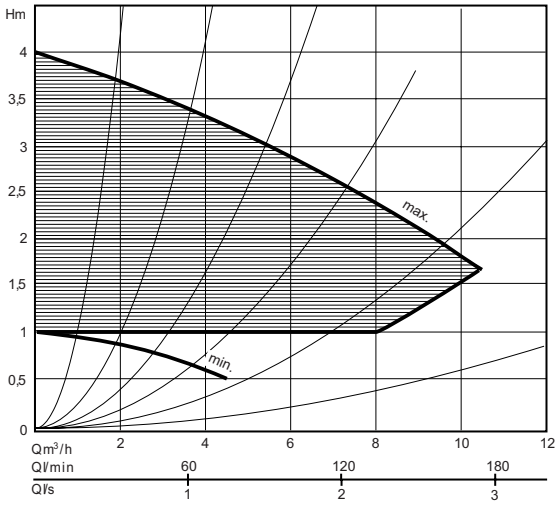
1-phase, FTE twin pump

Pump type	Rated speed rpm		Motor power P1		Rated current A (1x230 V)		Dimensions (mm)								Weight	
	min.	max.	min.	max.	min.	max.	H	H1	L	L1	L2	L3	L4	P	P1	kg
FTE 40-70-M	1000	2550	90	430	0.45	1.95	250	135	297	154	143	152	187	340	267	21.0
FTE 40-100-M	850	2850	30	570	0.45	4.80	250	135	350	178	172	185	198	381	306	32.0

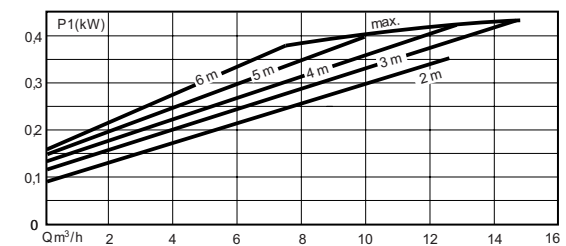
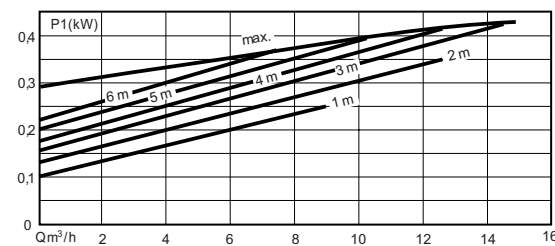
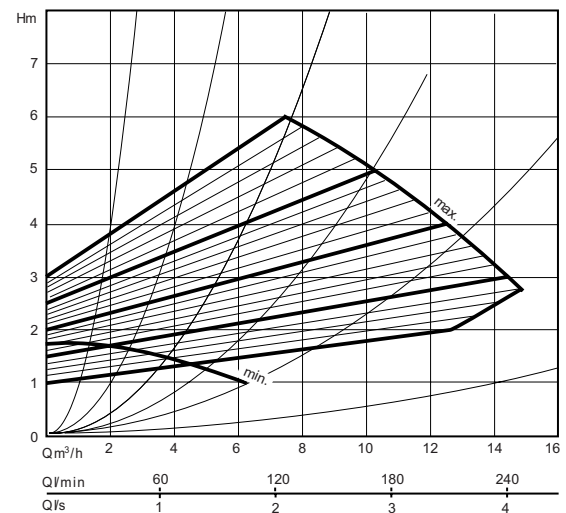
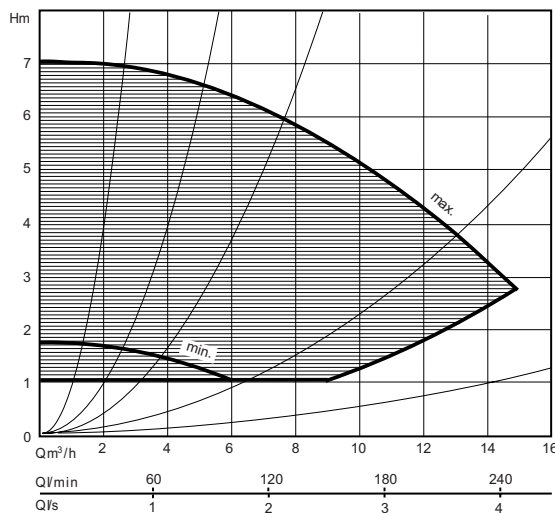


Performance curves, FLE single pump

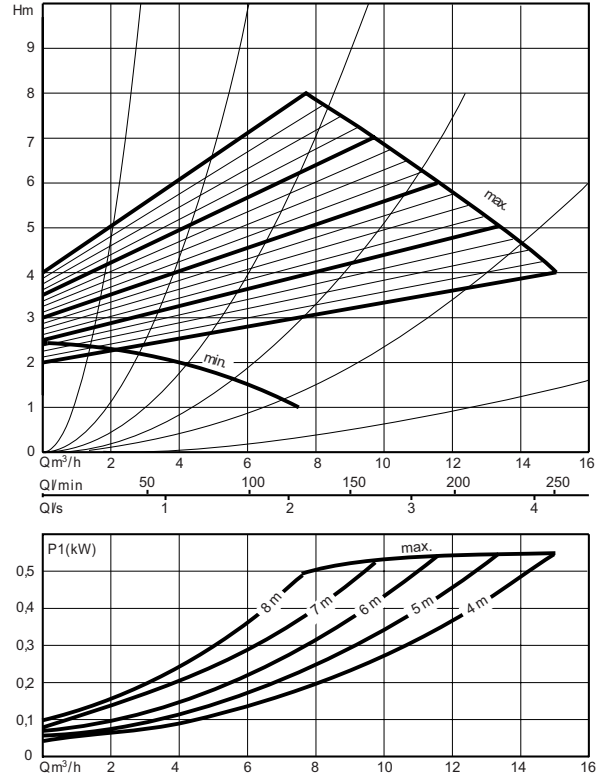
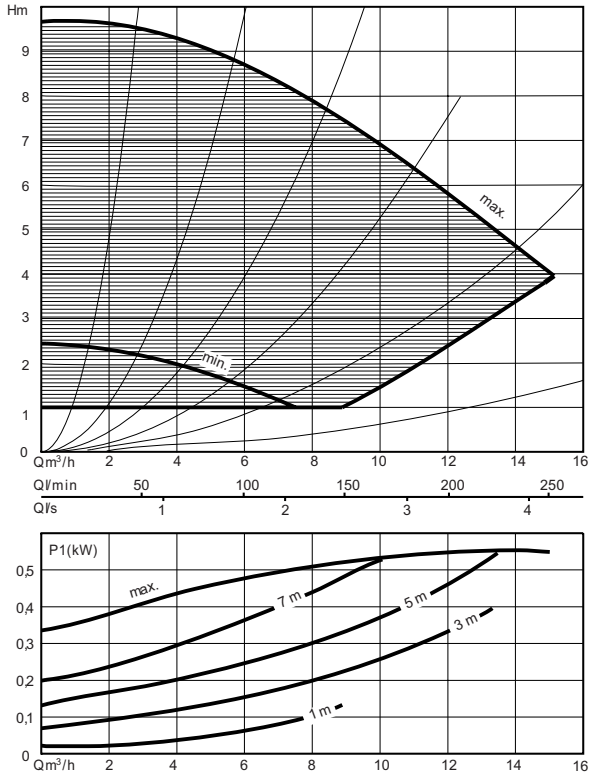
FLE 40-40



FLE 40-70

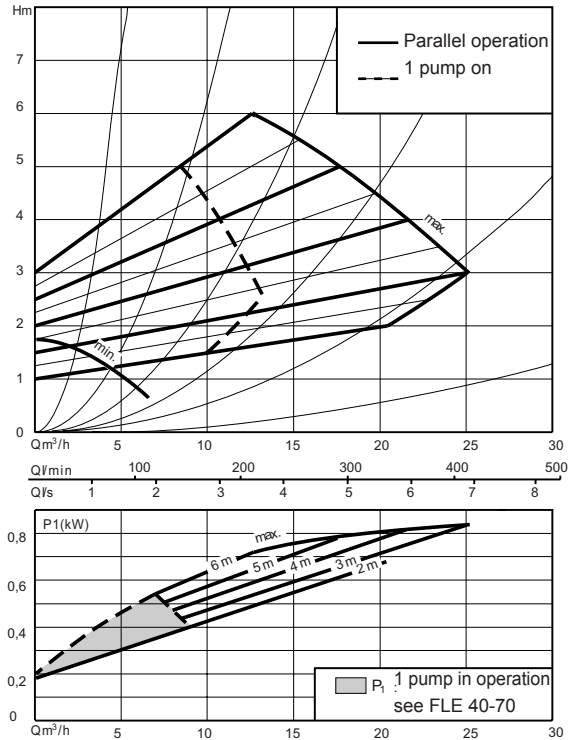
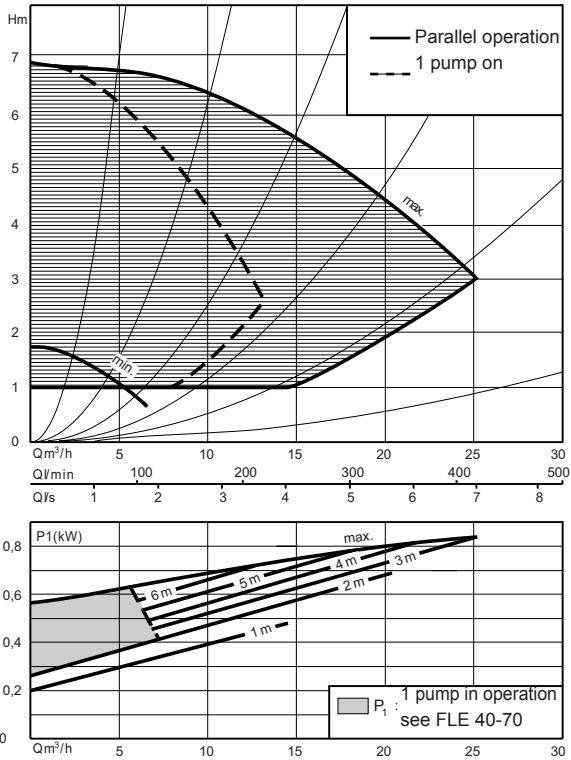


FLE 40-100

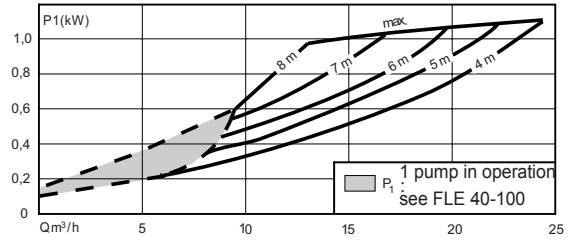
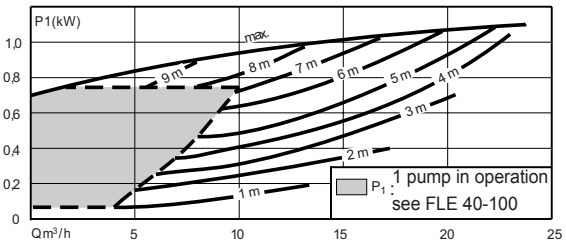
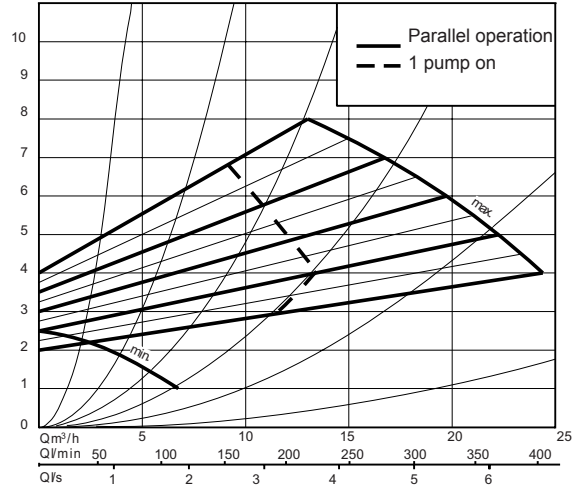
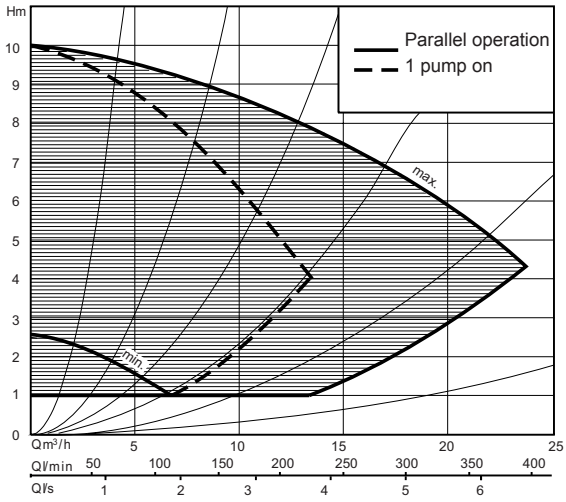


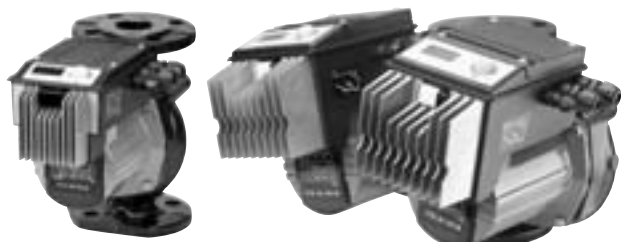
Performance curves, FTE twin pump

FTE 40-70



FTE 40-100





Material

Part	Material FLE/FTE
Pump housing	Cast iron
Impeller	Composite
Shaft bearing	Metal-impregnated graphite
Stator	Stainless steel

Accessories

IF module for FTE.

FLE/FTE 50

Connection DN50 flange

Product

Circulator with wet motor for heating systems. In-line pump with electronic speed control. Pump with flange connection.

Denomination

FLE Single pump in cast iron
 FTE Twin pump in cast iron

Process data

	Fluid temperature	Max. pressure
FLE/FTE	+20°C to +110°C	10 bar (PN 10)

Motor data

Wet-rotor motor cooled by the pump medium.

Frequency 50 Hz
 Thermal class F (+155°C)
 Protection rating IP 42
 Motor voltage 1-phase 230 V
 Ambient temperature max +40°C

Monitoring equipment

FTE 50-60

The pump is equipped with a potential-free output for multi-error reader. Max 250 V/1 A (SSM).

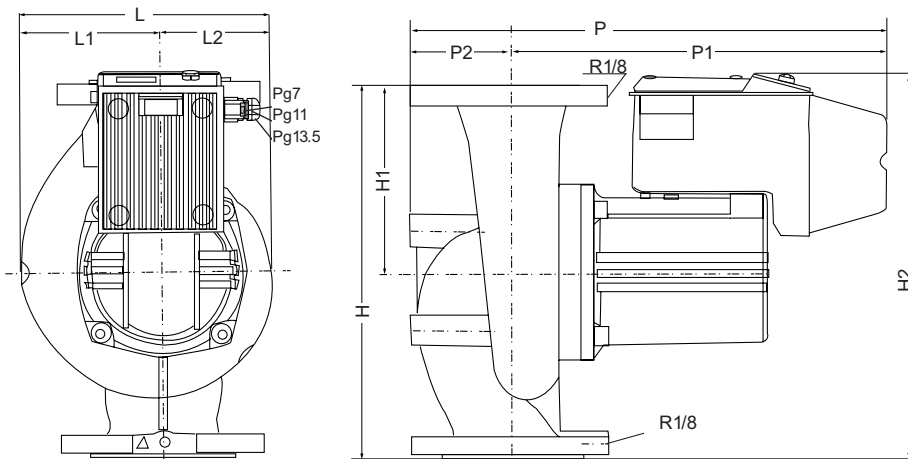
FLE/FTE 50-70 and 50/100

The pump is equipped with a potential-free output for multi-error reader. Max 250 V/1 A (SSM) and 0–10 V input for remote control, external activation and deactivation as well as 24 V output for connection of external sensor.

Motor data, dimensions and weight

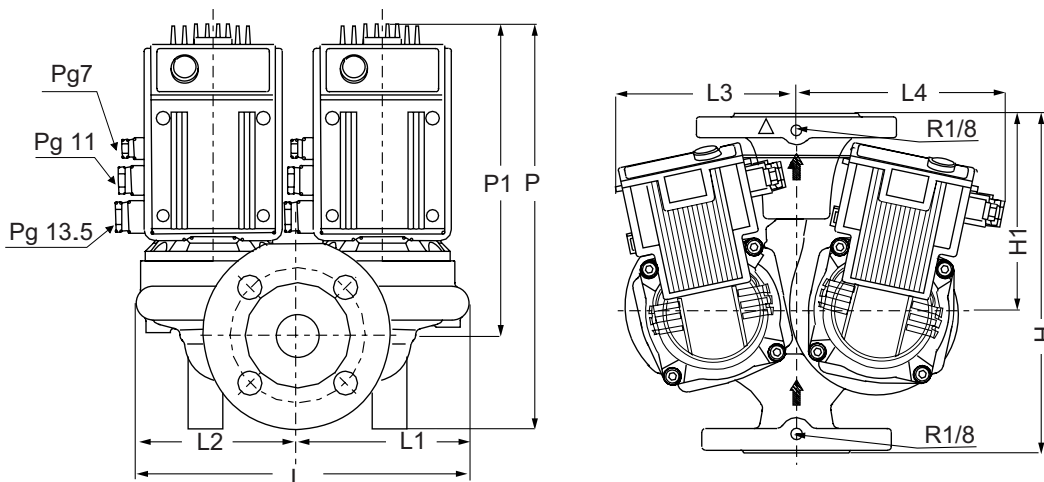
1-phase, FLE single pump

Pump type	Rated speed rpm		Motor power P1		Rated current A (1x230 V)		Dimensions (mm)									Weight kg
	min.	max.	min.	max.	min.	max.	H	H1	H2	L	L1	L2	P	P1	P2	
FLE 50-70-M	850	2850	40	610	0.50	5.30	280	140	317.5	174	091	083	401	318	083	20
FLE 50-100-M	850	2850	30	920	0.45	7.20	280	140	317.5	190	101	089	399	316	083	21



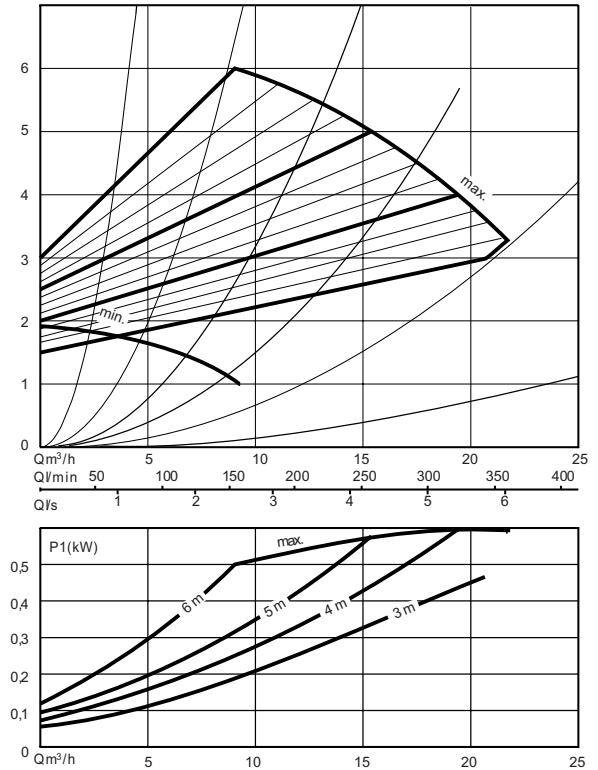
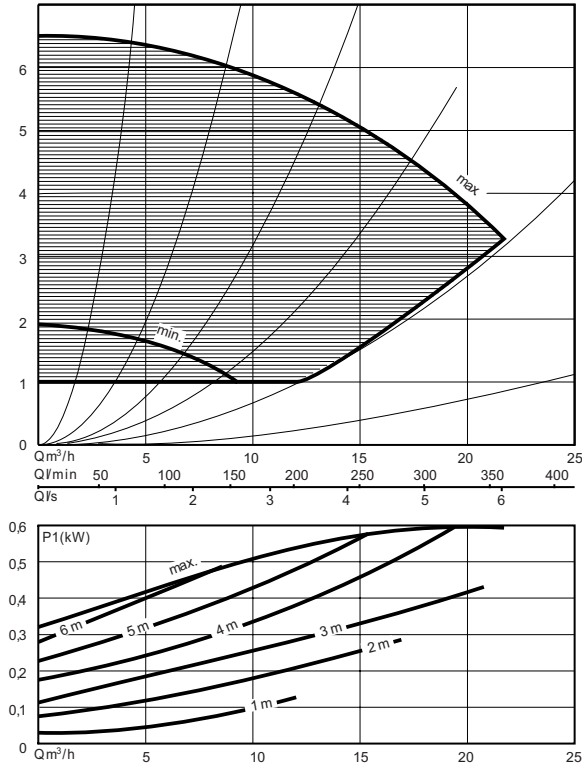
1-phase, FTE twin pump

Pump type	Rated speed rpm		Motor power P1		Rated current A (1x230 V)		Dimensions (mm)										Weight kg
	min.	max.	min.	max.	min.	max.	H	H1	L	L1	L2	L3	L4	P	P1		
FTE 50-60-M	1000	2550	90	430	0.45	1.95	280	160	293	150	143	152	187	358	275	22	
FTE 50-70-M	850	2850	40	610	0.50	5.30	280	160	348	179	169	185	198	397	314	34	
FTE 50-100-M	850	2850	30	920	0.45	7.20	280	155	390	198	192	195	208	395	312	36	

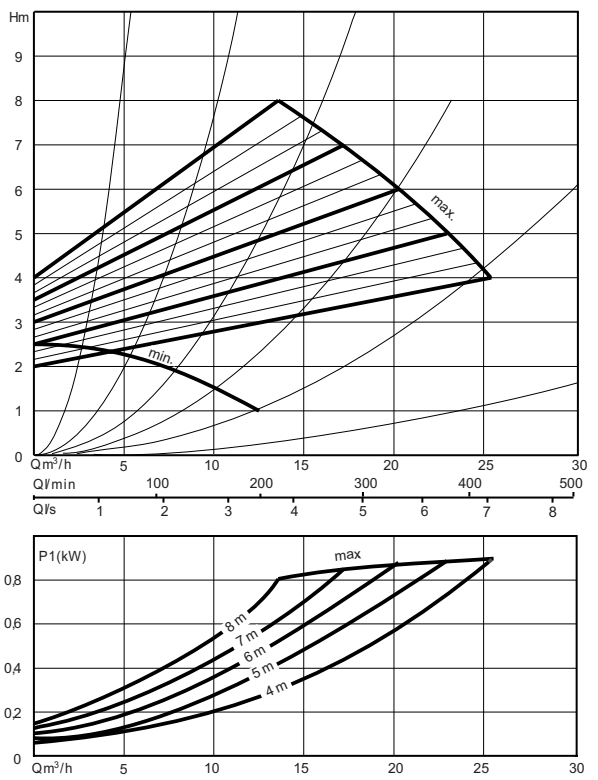
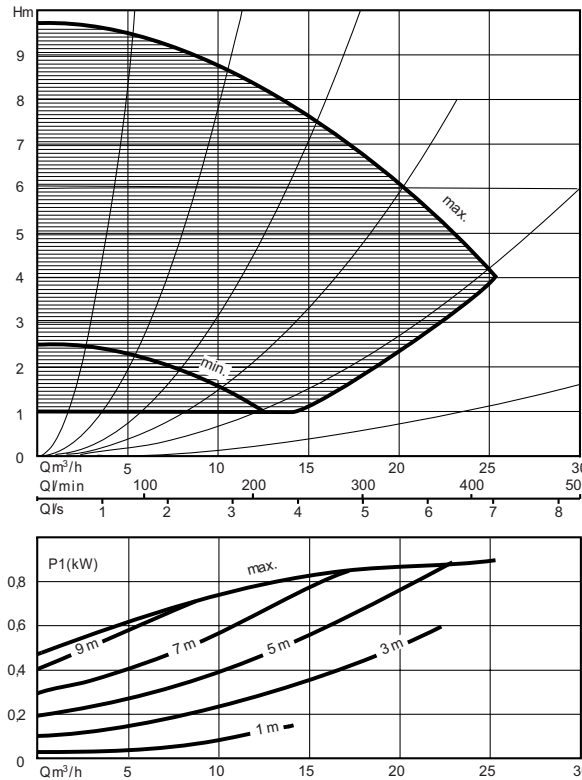


Performance curves, FLE single pump

FLE 50-70

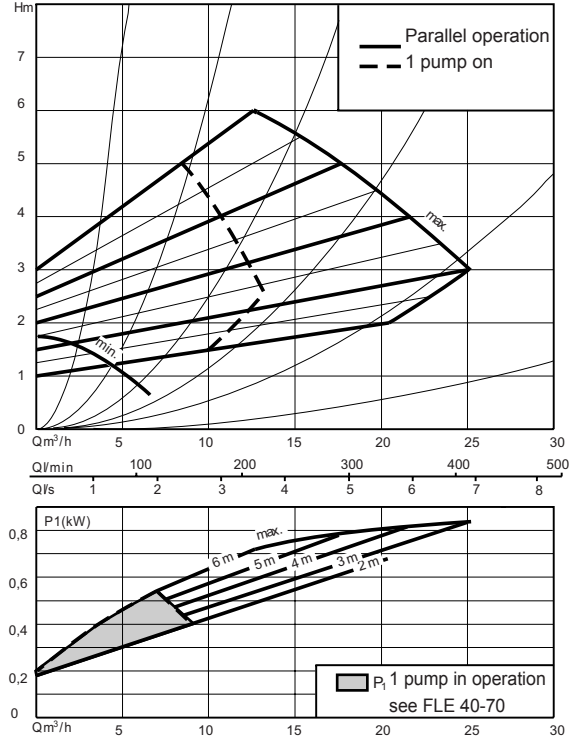
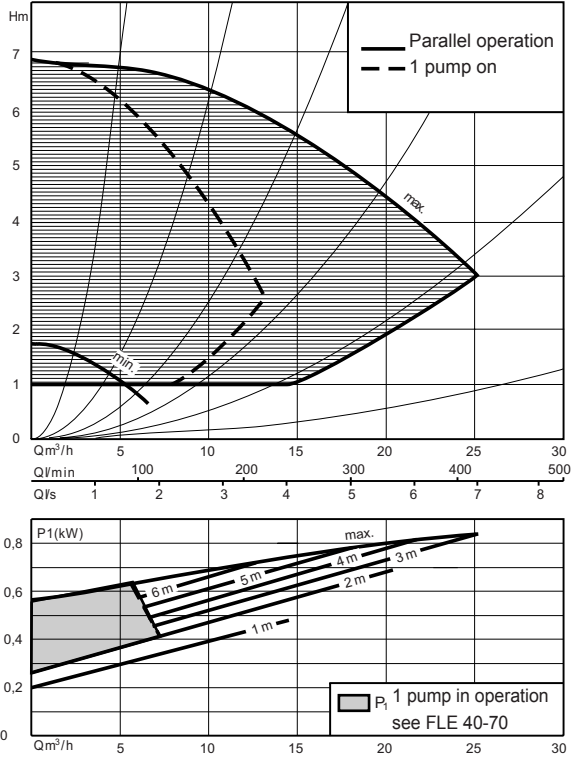


FLE 50-100

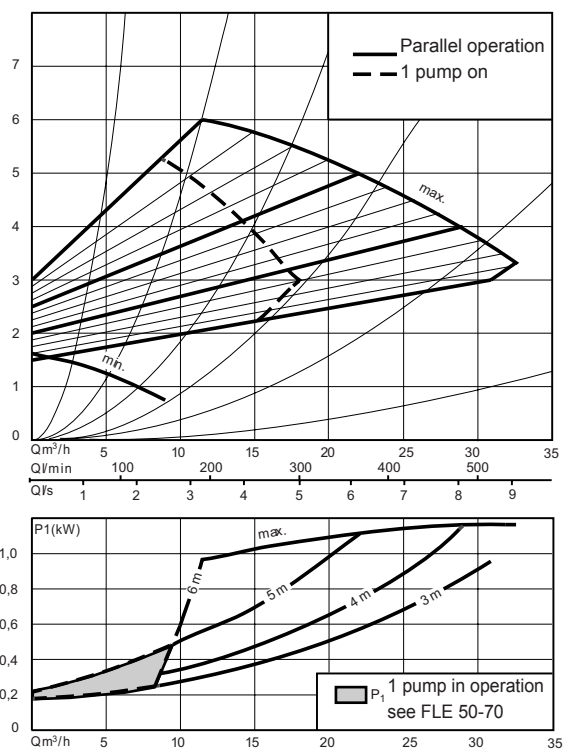
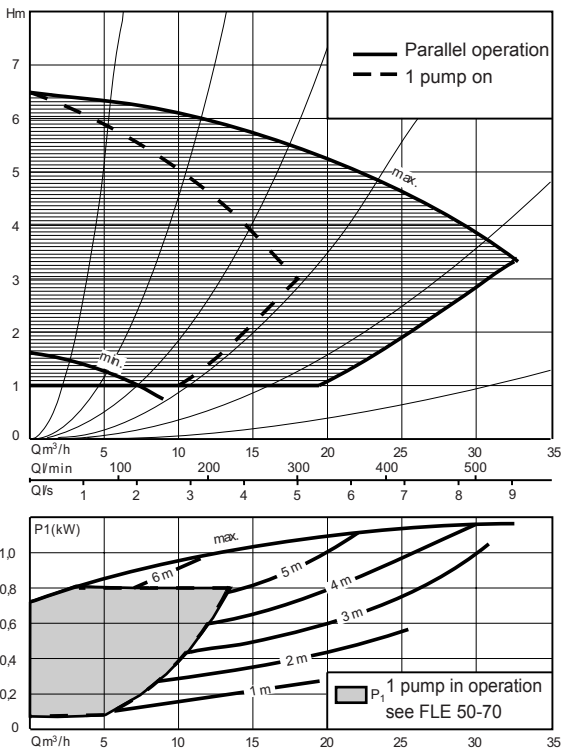


Performance curves, FTE twin pump

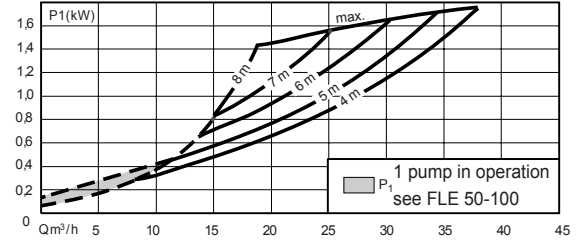
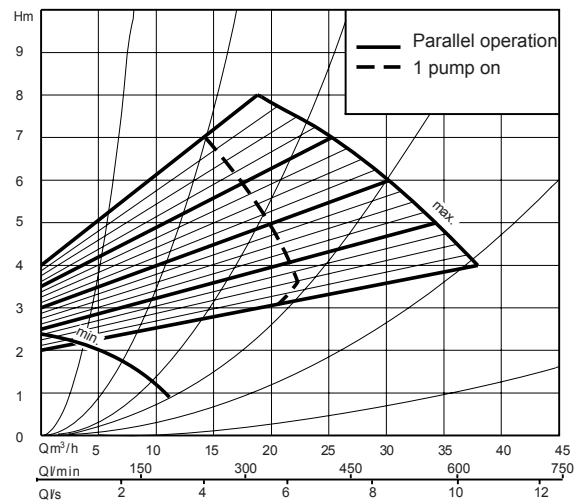
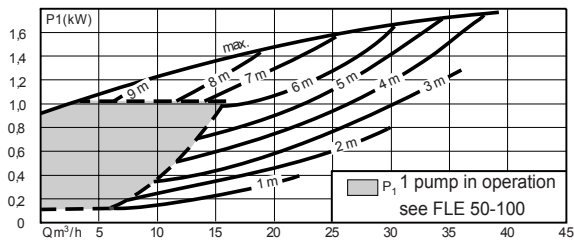
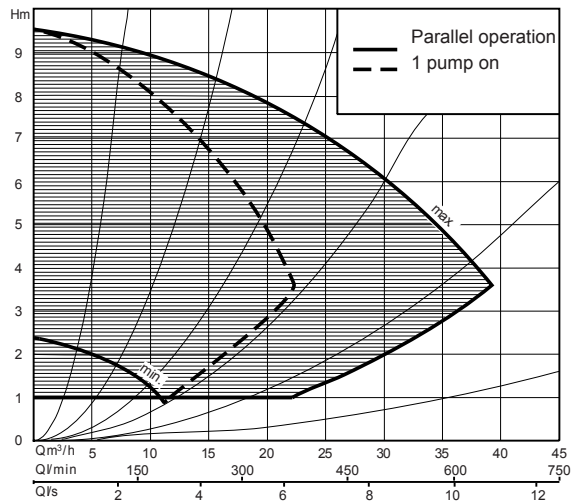
FTE 50-60

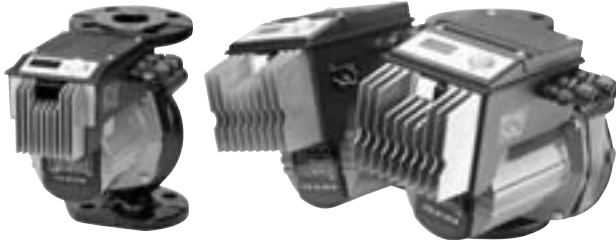


FTE 50-70



FTE 50-100





Material

Part	Material FLE/FTE
Pump housing	Cast iron
Impeller	Composite
Shaft bearing	Metal-impregnated graphite
Stator	Stainless steel

Accessories

IF module for FTE.

FLE/FTE 65

Connection DN65 flange

Product

Circulator with wet motor for heating systems. In-line pump with electronic speed control. Pump with flange connection.

Denomination

FLE Single pump in cast iron
 FTE Twin pump in cast iron

Process data

	Fluid temperature	Max. pressure
FLE/FTE	+20°C to +110°C	10 bar (PN 10)

Motor data

Wet-rotor motor cooled by the pump medium.

Frequency 50 Hz
 Thermal class F (+155°C)
 Protection rating IP 42
 Motor voltage 1-phase 230 V
 Ambient temperature max +40°C

Monitoring equipment

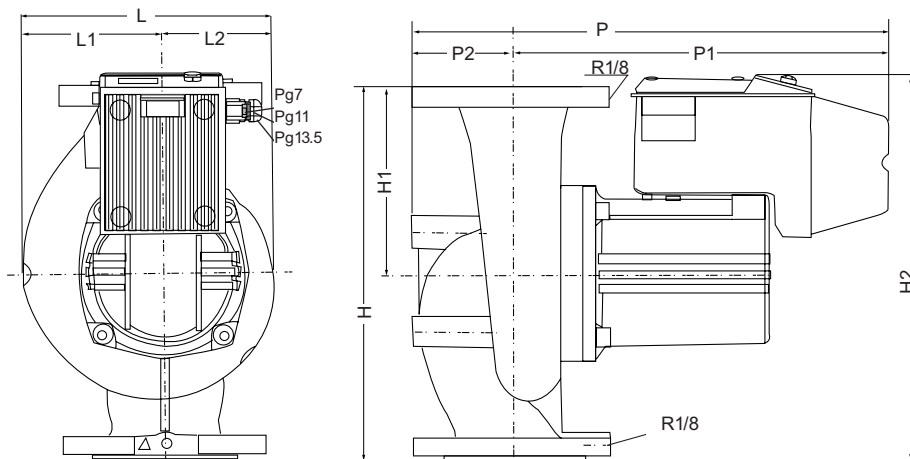
FLE/FTE 65-80

The pump is equipped with a potential-free output for multi-error reader. Max 250 V/1 A (SSM) and 0–10 V input for remote control, external activation and deactivation as well as 24 V output for connection of external sensor.

Motor data, dimensions and weight

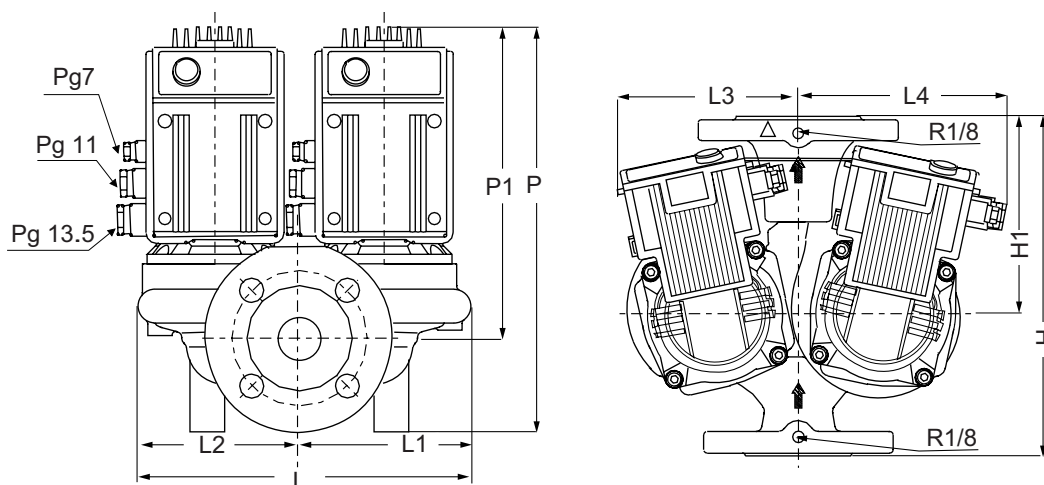
1-phase, FLE single pump

Pump type	Rated speed rpm		Motor power P1		Rated current A (1x230 V)		Dimensions (mm)							Weight		
	min.	max.	min.	max.	min.	max.	H	H1	H2	L	L1	L2	P	P1	P2	kg
FLE 65-80-M	850	2850	70	910	0.70	7.80	340	170	357.5	218	118	100	440	347	93	28.0



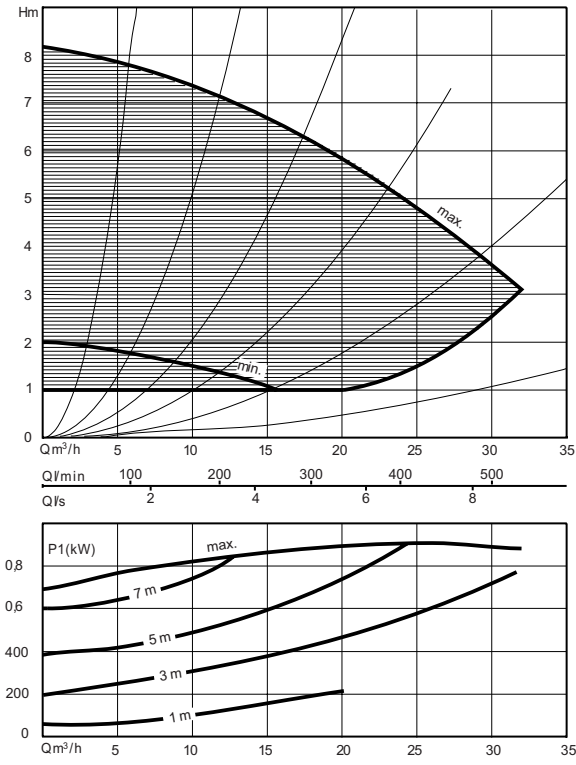
1-phase, FTE single pump

Pump type	Rated speed rpm		Motor power P1		Rated current A (1x230 V)		Dimensions (mm)							Weight		
	min.	max.	min.	max.	min.	max.	H	H1	L	L1	L2	L3	L4	P	P1	kg
FTE 65-80-M	850	2850	70	910	0.70	7.80	340	185	432	223	209	206	218	436	343	49.0



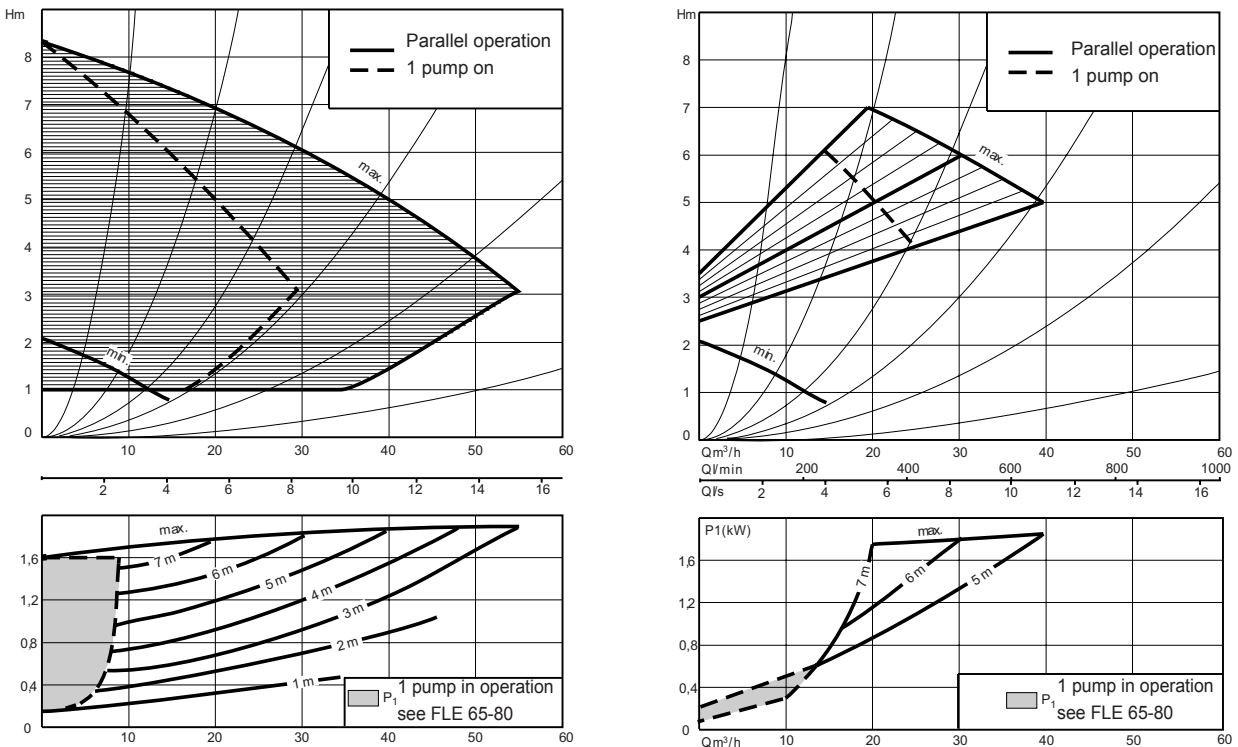
Performance curves, FLE single pump

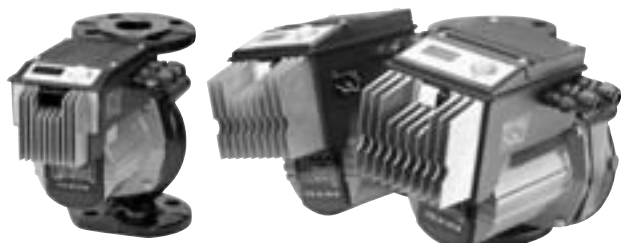
FLE 65-80



Performance curves, FTE twin pump

FTE 65-80





Material

Part	Material FLE/FTE
Pump housing	Cast iron
Impeller	Composite
Shaft bearing	Metal-impregnated graphite
Stator	Stainless steel

Accessories

IF module for FTE.

FLE/FTE 80

Connection DN80 flange

Product

Circulator with wet motor for heating systems. In-line pump with electronic speed control. Pump with flange connection.

Denomination

FLE Single pump in cast iron
 FTE Twin pump in cast iron

Process data

	Fluid temperature	Max. pressure
FLE/FTE	+20°C to +110°C	10 bar (PN 10)

Motor data

Wet-rotor motor cooled by the pump medium.

Frequency 50 Hz
 Thermal class F (+155°C)
 Protection rating IP 42
 Motor voltage 1-phase 230 V
 Ambient temperature max +40°C

Monitoring equipment

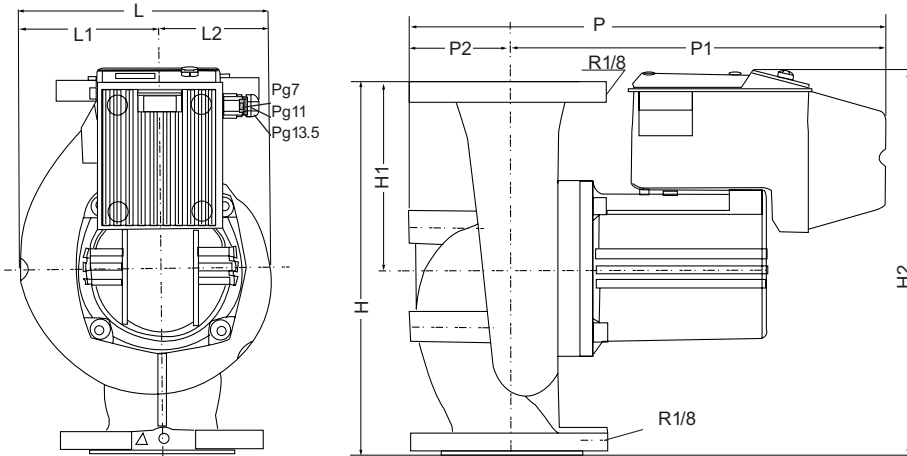
FLE/FTE 80-100

The pump is equipped with a potential-free output for multi-error reader. Max 250 V/1 A (SSM) and 0–10 V input for remote control, external activation and deactivation as well as 24 V output for connection of external sensor.

Motor data, dimensions and weight

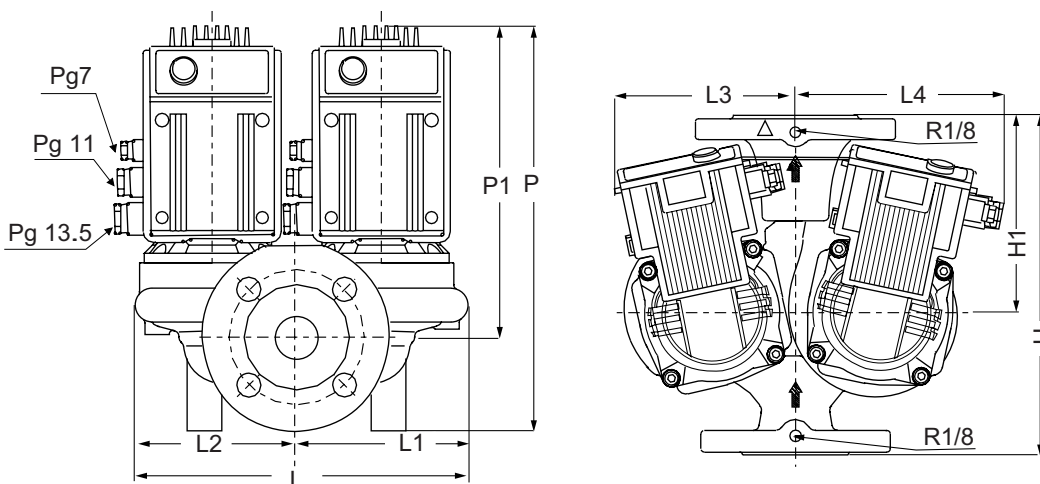
1-phase, FLE single pump

Pump type	Rated speed rpm		Motor power P1		Rated current A (1x230 V)		Dimensions (mm)							Weight kg		
	min.	max.	min.	max.	min.	max.	H	H1	H2	L	L1	L2	P		P1	P2
FLE 80-100-M	850	2850	100	1650	0.50	7.50	360	180	368	244	135	109	466	371	95	36.0



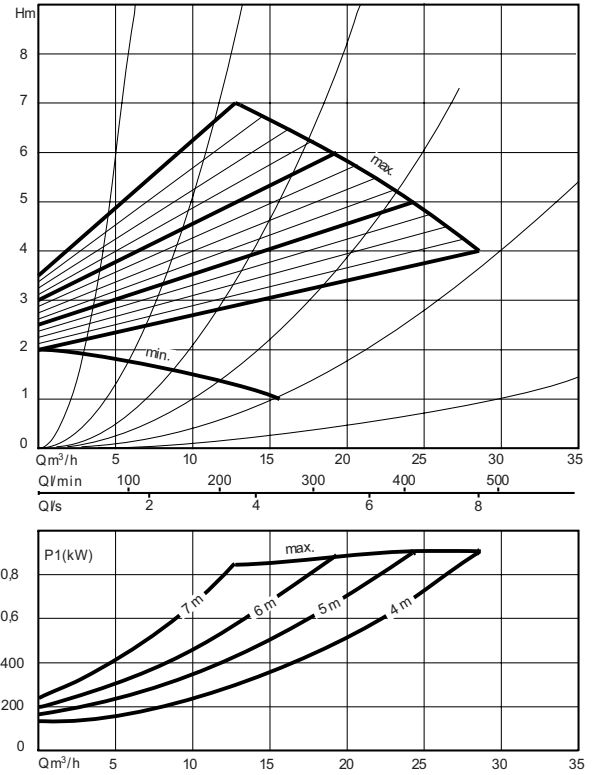
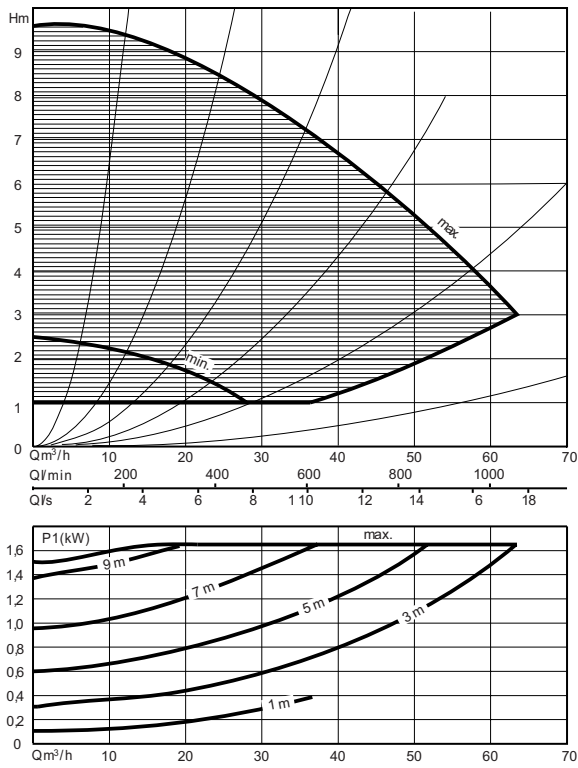
1-phase, FTE twin pump

Pump type	Rated speed rpm		Motor power P1		Rated current A (1x230 V)		Dimensions (mm)								Weight kg	
	min.	max.	min.	max.	min.	max.	H	H1	L	L1	L2	L3	L4	P		P1
FTE 80-100-M	850	2850	100	1650	0.50	7.50	360	205	472	249	231	240	256	471	371	61.0



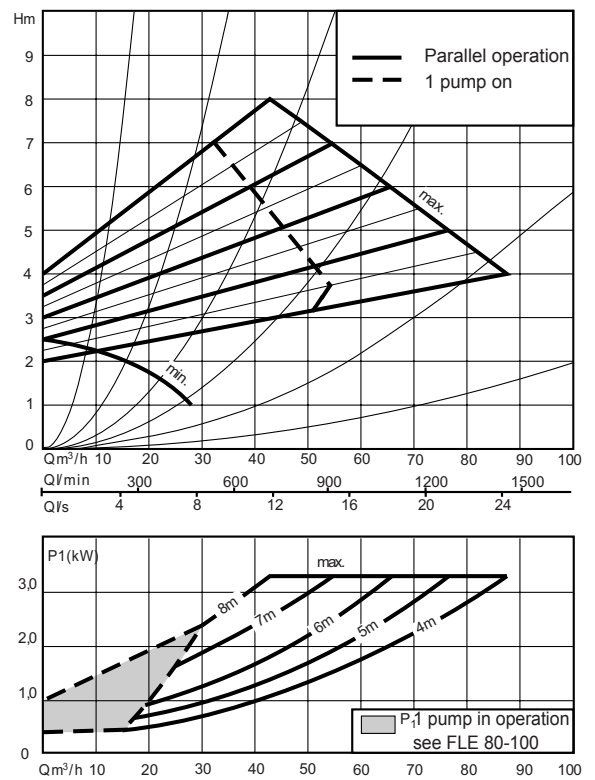
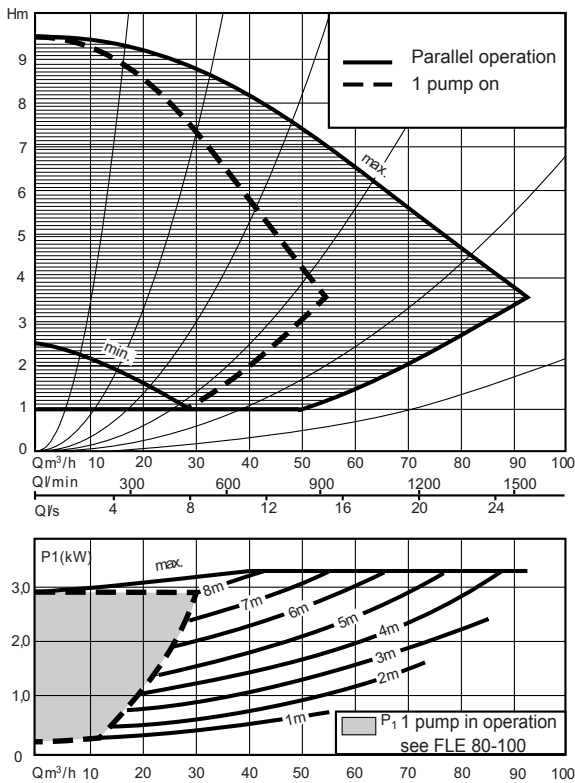
Performance curves, FLE single pump

FLE 80-100



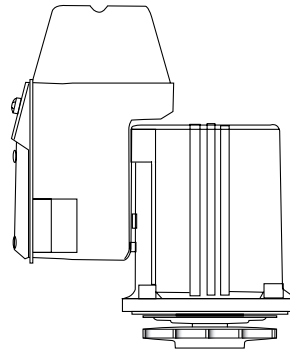
Performance curves, FTE twin pump

FTE 80-100



Spare parts FLE/FTE

Part number	Pump	Complete drive side including impeller
61-150100	FLE 25-50-130	-
61-150110	FLE 25-50-180	-
61-150200	FLE 32-70-180	61-900300
61-150210	FLE 32-110-180	61-900310
61-150220	FLE 40-40-M	61-900320
61-150230	FLE 40-70-M	61-900330
61-150240	FLE 40-100-M	61-900340
61-150250	FLE 50-70-M	61-900350
61-150260	FLE 50-100-M	61-900360
61-150270	FLE 65-80-M	61-900370
61-150280	FLE 80-100-M	61-900380
61-150290	FTE 40-70-M	61-900330
61-150300	FTE 40-100-M	61-900340
61-150310	FTE 50-60-M	61-900390
61-150320	FTE 50-70-M	61-900350
61-150330	FTE 50-100-M	61-900360
61-150340	FTE 65-80-M	61-900370
61-150350	FTE 80-100-M	61-900380



Complete drive side including impeller



Introduction

FPA/FSA is a series of wet-rotor circulators made of bronze and stainless steel. The pumps are in-line with threaded connection. The impellers are made of composite.

Pump speed can be regulated manually, with three speeds possible. The pump can be mounted directly on the pipes without support.

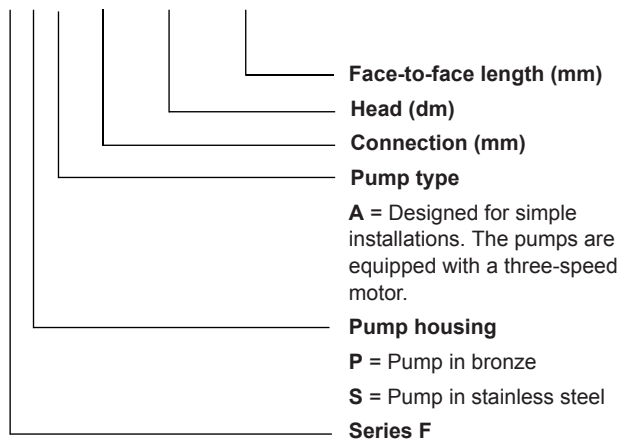
Applications

FPA/FSA is designed for installations in the following application areas:

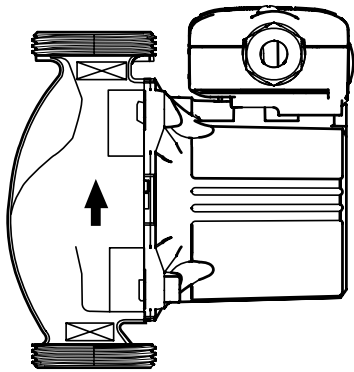
- Residential hot water
- Industrial circulation systems

Product identity

F P A 25 - 50 - 180



Design



Motor

Stator motor with slip bearings that are lubricated by the pump medium. The motor has a built-in condenser. The motor can be run at three different speeds to adjust capacity to meet existing needs.

The motor shaft is hollow. This generates automatic deaeration and keeps the water in circulation, which minimises lime deposits in the motor.

The motor is equipped with a bleeder screw for manual deaeration and to make it possible to loosen the rotor in the event of blockage.

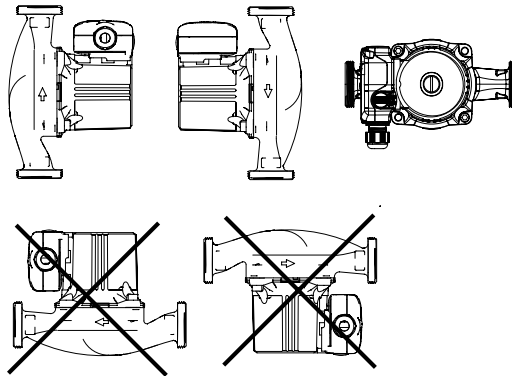
No separate motor protection is needed for version FSA as the motor is equipped with integrated motor protection.

Pump housing

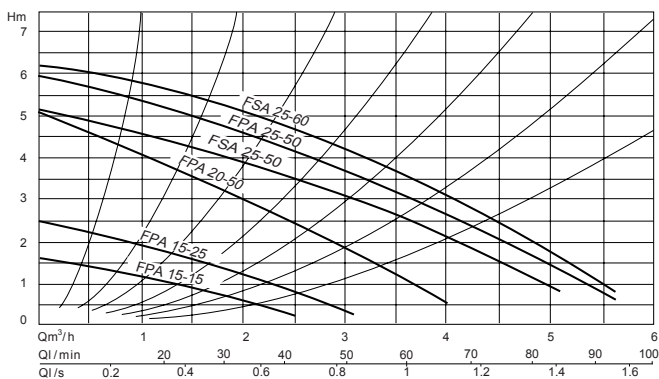
The pump housing is equipped with lugs to facilitate installation in a pipe system. The pump is delivered with gaskets.

Installation instructions

The pump is installed directly on the pipe using union couplings. The motor shaft must always be horizontal. If the pump is installed with the motor shaft vertical, there is a risk of insufficient bearing lubrication. Note that the junction box may not be positioned beneath the motor.



Performance curves, FPA/FSA





Material

Part	Material	
	FPA	FSA
Pump housing	Bronze	Stainless steel
Seal housing	Stainless steel	Stainless steel
Impeller	Composite	Composite
Shaft	Ceramic	Ceramic
Shaft seal	EPDM	EPDM
Bushing	Carbon	Carbon
Stator	Stainless steel	Stainless steel

FPA/FSA

Connection DN15, DN20 and DN25

Product

Wet circulator pump for heating and secondary hot water systems with threaded connection. In-line pump with mechanical three-speed control.

Denomination

FPA Single pump in bronze
 FSA Single pump in stainless steel

Process data

	Fluid temperature	Max. pressure
FPA/FSA	-10°C to +110°C	10 bar (PN 10)

Motor data

Wet-rotor motor cooled by the pump medium.

Frequency 50 Hz
 Thermal class F (+155°C)
 Protection rating IP 44
 Motor voltage 230 V
 Ambient temperature max +40°C

Monitoring equipment

No separate motor protection is required for FPA.

Motor data, dimensions and weight

1-phase, face-to-face length 130 mm

Pump type	Speed	Rated speed rpm	Motor power P1 W	Rated current A (230 V)	Dimensions (mm)					Weight kg
					H1	P	P1	L	L1	
FPA 15-15-130	3	2000	48	0.22						
	2	1600	32	0.15	74	130	96	96	74	2
	1	1000	20	0.10						
FPA 15-25-130	3	2500	56	0.24						
	2	2200	39	0.18	74	130	96	96	74	2
	1	1700	27	0.12						

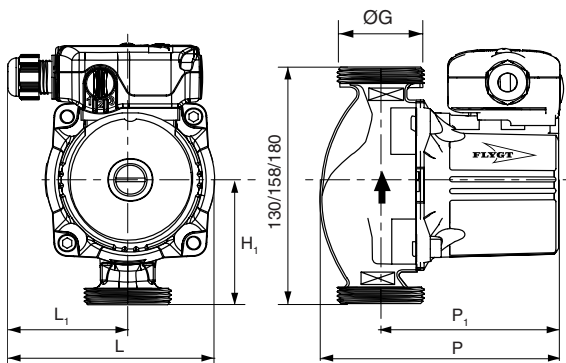
1-phase, face-to-face length 158 mm

Pump type	Speed	Rated speed rpm	Motor power P1 W	Rated current A (230 V)	Dimensions (mm)					Weight kg
					H1	P	P1	L	L1	
FPA 20-50-158	3	1950	89	0.39						
	2	1450	66	0.29	79	132	96	123	77	2.4
	1	1000	45	0.20						

1-phase, face-to-face length 180 mm

Pump type	Speed	Rated speed rpm	Motor power P1 W	Rated current A (230 V)	Dimensions (mm)					Weight kg
					H1	P	P1	L	L1	
FPA 25-50-180	3	2300	114	0.50						
	2	1650	102	0.46	77	145	109	96	77	2.8
	1	1150	70	0.32						
FSA 25-50-180	3	2670	170	0.85						
	2	2354	140	0.70	90	191	163	110	-	3.0
	1	1750	105	0.55						
FSA 25-60-180	3	2390	200	1.00						
	2	1810	175	0.90	90	191	163	110	-	3.4
	1	1260	120	0.65						

FPA/FSA

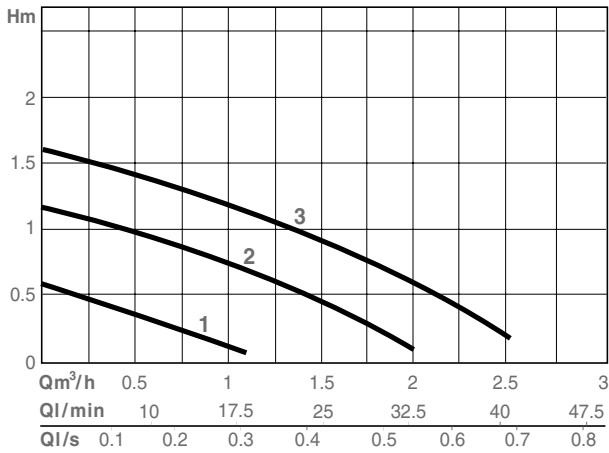


(All measurements in mm)

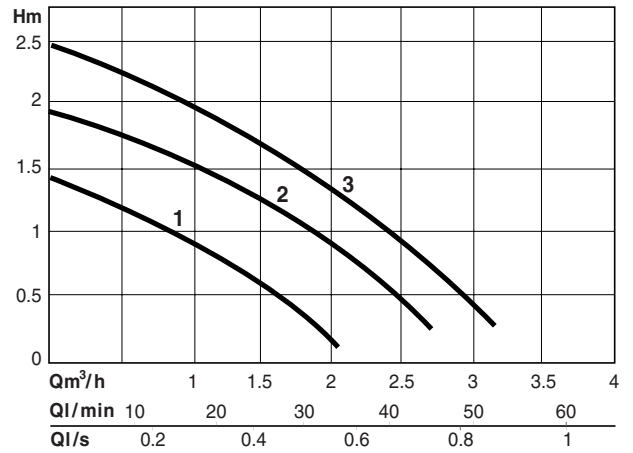
Pump	Thread G	Connection DN
FPA 15	G1"	1/2" (15 mm)
FPA 20	G1 1/4"	3/4" (20 mm)
FPA/FSA 25	G1 1/2"	1" (25 mm)

Performance curves

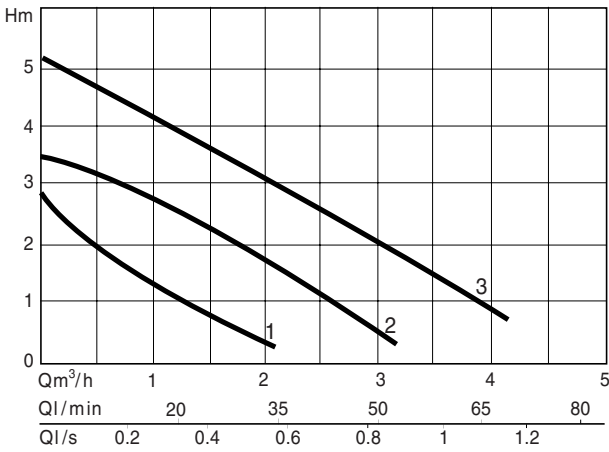
FPA 15-15, bronze face-to-face length 130 mm



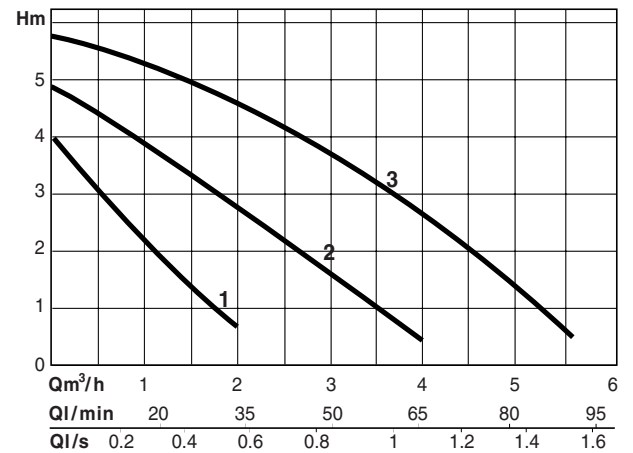
FPA 15-25, bronze face-to-face length 130 mm



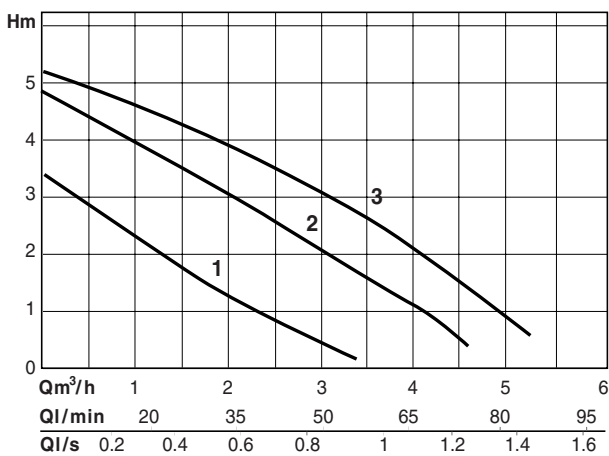
FPA 20-50, bronze face-to-face length 158 mm



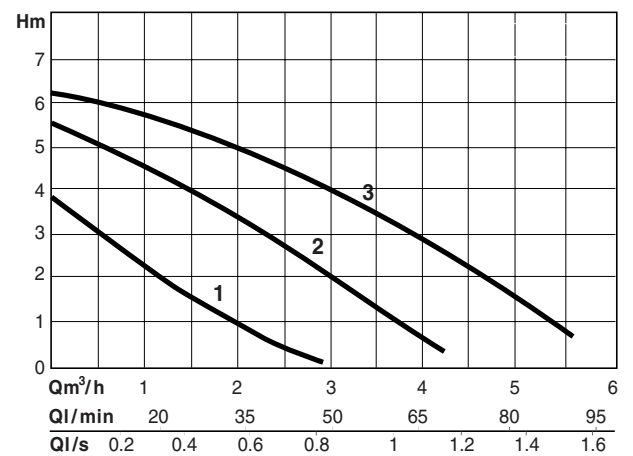
FPA 25-50, bronze face-to-face length 180 mm



FPA 25-50, stainless steel face-to-face length 180 mm



FPA 25-60, stainless steel face-to-face length 180 mm



Wilo - Flygt

Wilo	Flygt	Art nr	Anm
Threaded connection			
RS25/4-130	FLA 25-40-130	61-100160	
RS25/4-180	FLA 25-40-180	61-100180	
RS25/6-F 1 phase			
RS25/6-130	FLA 25-60-130	61-100200	
RS25/6-180	FLA 25-60-180	61-100210	
RS25/7-130	FLA 25-70-130	61-100220	
RS25/7-180	FLA 25-70-180	61-100230	
TOP S 30/4	FLB 32-40-M-180	61-110110	
TOP S 30/4	FLB 32-40-T-180	61-110210	
TOP S 30/5	FLB 32-50-M-180	61-110120	
TOP S 30/5	FLB 32-50-T-180	61-110220	
TOP S 25(30)/7	FLB 32-80-M-180	61-110140	
TOP S 25(30)/7	FLB 32-70-T-180	61-110230	
TOP S 30/10 1 phase	FLB 32-100-M-180	61-110150	
TOP S 30/10 3 phase	FLB 32-100-T-180	61-110250	
STAR RSD 30/4	FTB 32-40-M-180	61-210110	
STAR RSD 30/6	FTB 32-50-M-180	61-210120	
TOP SD30/5	FTB 32-80-M-180	61-210140	
RS25/3-F 3 phase			
RS25/3-F 1 phase			
RS25/3-130 3 phase			
RS25/3-180 3 phase			
AXL80/25-130 3 phase			
Flanged connection			
TOP S 40/7 1 phase	FLB 40-70-M	61-130110	
TOP S 40/7 3 phase	FLB 40-70-T	61-130115	
TOP S 40/10 1 phase	FLB 40-100-M	61-130120	
TOP S 40/10 3 phase	FLB 40-100-T	61-130125	
TOP S 50/4 1 phase	FLB 50-40-M	61-130130	
TOP S 50/4 3 phase	FLB 50-40-T	61-130135	
TOP S 50/7 1 phase	FLB 50-80-M	61-130140	
TOP S 50/7 3 phase	FLB 50-80-T	61-130145	
TOP S 50/10 1 phase	FLB 50-110-M	61-130150	
TOP S 50/10 3 phase	FLB 50-110-T	61-130155	
TOP S 50/15 3 phase			
TOP S 65/7 1 phase	FLB 65-70-M	61-130160	
TOP S 65/7 3 phase	FLB 65-70-T	61-130165	
TOP S 65/10 3 phase	FLB 65-90-T	61-130175	
TOP S 65/10 1 phase	FLB 65-90-M	61-130180	
TOP S 65/13 3 phase	FLB 65-140-T	61-130185	
TOP S 65/15 3 phase			
TOP S 80/7 1 phase	FLB 80-70-M	61-130190	
TOP S 80/7 3 phase	FLB 80-70-T	61-130195	
TOP S 80/10 3 phase	FLB 80-120-T	61-130205	
TOP SD 40/3 1 phase	FTB 40-40-M	61-230100	
TOP SD 40/3 3 phase			

Remarks

- 1 The Flygt pump has a threaded connection
- 2 Dimensions not matching, see dimensional drawing
- 3 The Flygt pump has connection 25 mm
- 4 The Flygt pump is also available in stainless steel (FSA)

FLE/FTE



FLB/FTB



FLA



FSA/FPA



Remarks

- 1 The Flygt pump has a threaded connection
- 2 Dimensions not matching, see dimensional drawing
- 3 The Flygt pump has connection 25 mm
- 4 The Flygt pump is also available in stainless steel (FSA)

Wilo	Flygt	Art nr	Anm
TOP SD 40/7 1 phase	FTB 40-70-M	61-230110	
TOP SD 40/7 3 phase	FTB 40-70-T	61-230115	
TOP SD 40/10 3 phase	FTB 40-100-T	61-230125	
TOP SD 50/7 3 phase	FTB 50-80-T	61-230145	
TOP SD 50/10 3 phase	FTB 50-110-T	61-230155	
TOP SD 50/15 3 phase			
TOP SD 65/10 3 phase	FTB 65-90-T	61-230175	
TOP SD 65/13 3 phase	FTB 65-140-T	61-230185	
TOP SD 65/15 3 phase			
TOP SD 80/10 3 phase	FTB 80-120-T	61-230205	
Threaded connection electronic			
STAR E 25/2 130	FLE 25-50-130	61-150100	
STAR E 25/2 180	FLE 25-50-180	61-150110	
STAR E 25(30)/1-3 130	FLE 25-50-130	61-150100	3
STAR E 25(30)/1-3 180	FLE 25-50-180	61-150110	3
STAR E 25(30)/1-5 130	FLE 25-50-130	61-150100	3
STAR E 25(30)/1-5 180	FLE 25-50-180	61-150110	3
Smart 25/4-130	FLE 25-50-130	61-150100	
Smart 25/4-180	FLE 25-50-180	61-150110	
Smart 25/6-130	FLE 25-50-130	61-150100	
Smart 25/6-180			
Flanged connection electronic			
TOP E 25(30)/1-7-180	FLE 32-70-180	61-150200	1
TOP E 25(30)/1-10-180	FLE 32-110-180	61-150210	1
TOP E 40/1-4-220	FLE 40-40-M	61-150220	
TOP E 40/1-10-250	FLE 40-100-M	61-150240	
TOP E 50/1-6-280	FLE 50-70-M	61-150250	
TOP E 50/1-7-280			
TOP E 50/1-10-280	FLE 50-100-M	61-150260	
TOP E 65/1-10-340	FLE 65-80-M	61-150270	
TOP E 80/1-10-360	FLE 80-100-M	61-150280	
TOP E 100/1-10-360			
TOP ED 32/1-7-220			
TOP ED 40/1-7-250	FTE 40-70-M	61-150290	
TOP ED 40/1-10-250	FTE 40-100-M	61-150300	
TOP ED 50/1-6-280	FTE 50-60-M	61-150310	
TOP ED 50/1-7-280	FTE 50-70-M	61-150320	
TOP ED 50/1-10-280	FTE 50-100-M	61-150330	
TOP ED 65/1-10-340	FTE 65-80-M	61-150340	
TOP ED 80/1-10-360	FTE 80-100-M	61-150350	
Secondary hot water (bronze and stainless steel)			
Z 15-84 1 phase	FPA 15-15-130	61-300130	2
Z 15A-142 1 phase			
Z25/3-150 3 phase			
Z25/4-150 1 phase			
Z20/5-150 1 phase			
Z20/7-150 1 phase			
Z 25/6-180	FPA 25-50-180	61-300160	4

Grundfos - Flygt

Grundfos	Flygt	Art. Nr	Anm
Threaded connection			
UPS25/40/130 1 phase	FLA 25-40-130	61-100160	
UPS25/40/180 1 phase	FLA 25-40-180	61-100180	
UPS25-40/130 3 phase			
UPS25/60/180 1 phase	FLA 25-60-130	61-100200	
UPS25/60/130 1 phase	FLA 25-60-180	61-100210	
UPS25-60/180 3 phase			
UPS25/80/130 1 phase	FLA 25-70-130	61-100220	
UPS25/80/180 1 phase	FLA 25-70-180	61-100230	
UP25-80/180 3 phase			
UPS36-50 1 phase	FLB 32-40-M-180	61-110110	
UPS32-80 1 phase	FLB 32-80-M-180	61-110140	4
UP32-50	FLB 32-50-T-180	61-110220	4
UP32-80/180	FLB 32-70-T-180	61-110230	4
Flanged connection			
UPS36-20F 1 phase 200	FLB 32-40-M-180	61-110110	6
UPS36-20F 1 phase 200			
UPS36-50 1 phase	FLB 32-70-M-180	61-110130	6, 7
UP36-50F/200 3 phase	FLB 32-70-T-180	61-110230	6, 7
UPS32-120F 3 phase	FLB 32-100-T-180	61-110250	6
UPS32-30F 1 phase	FLB 32-40-M-180	61-110110	6
UPS32-30F 3 phase	FLB 32-40-T-180	61-110210	6
UPS32-60F 1 phase	FLB 32-70-M-180	61-110130	6
UPS32-60F 3 phase	FLB 32-70-T-180	61-110230	6
UPS32-120F 1 phase	FLB 32-100-M-180	61-110150	6
UPS32-120F 3 phase	FLB 32-100-T-180	61-110150	6
UPSD32-30F 1 phase	FTB 32-40-M-180	61-210110	6
UPSD32-30F 3 phase			
UPSD32-6F 1 phase	FTB 32-80-M-180	61-210140	6
UPSD32-60F 3 phase			
UPSD32-120F 1 phase			
UPSD32-120F 3 phase			
Flanged connection single pump			
UPS40-30F 1 phase	FLB 40-70M	61-130110	7
UPS40-30F 3 phase	FLB 40-70T	61-130115	7
UPS40-60F 3 phase			
UPS40-60/2F 1 phase	FLB 40-70-M	61-130110	
UPS40-60/2F 3 phase	FLB 40-70-T	61-130115	
UPS40-120F 1 phase	FLB 40-100-M	61-130120	
UPS40-120F 3 phase	FLB 40-100-T	61-130125	
UPS40-180F 3 phase			
UPS50-30F 1 phase	FLB 50-40-M	61-130130	
UPS50-30F 3 phase	FLB 50-40-T	61-130135	
UPS 50-60/4F 1 phase	FLB 50-80-M	61-130140	
UPS 50-60/4F 3 phase	FLB 50-80-T	61-130145	
UPS 50-120F 1 phase	FLB 50-110-M	61-130150	

Remarks

- 1 Use adapter ring 25/32 mm
- 2 The Flygt pump has a different connection
- 3 Dimensions differ, contact Flygt
- 4 Flygt pump with other capacity available
- 5 The Flygt pump is also available in stainless steel
- 6 The Flygt pump has a threaded connection
- 7 The Flygt pump has higher capacity
- 8 The Flygt pump has lower capacity

FLE/FTE



FLB/FTB



FLA



FSA/FPA



Remarks

- 1 Use adapter ring 25/32 mm
- 2 The Flygt pump has a different connection
- 3 Dimensions differ, contact Flygt
- 4 Flygt pump with other capacity available
- 5 The Flygt pump is also available in stainless steel
- 6 The Flygt pump has a threaded connection
- 7 The Flygt pump has higher capacity
- 8 The Flygt pump has lower capacity

Grundfos	Flygt	Art. Nr	Anm
UPS 50-120F 3 phase	FLB 50-110-T	61-130155	
UPS 50-180F 3 phase			
UPS 65-30F 1 phase	FLB 65-70-M	61-130160	7
UPS 65-30F 3 phase	FLB 65-70-T	61-130161	7
UPS 65-60/4F 1 phase	FLB 65-70-M	61-130160	
UPS 65-60/4F 3 phase	FLB 65-70-T	61-130165	
UPS65-120F 1 phase	FLB 65-90-M	61-130175	8
UPS65-120F 3 phase	FLB 65-90-T	61-130180	8
UPS65-180F 1 phase			
UPS65-180F 3 phase	FLB 65-140-T	61-130185	8
UPS80-30F 1 phase	FLB 80-70-M	61-130190	7
UPS80-30F 3 phase	FLB 80-70-T	61-130195	7
UPS80-60F 1 phase	FLB 80-70-M	61-130190	
UPS80-60F 3 phase	FLB 80-70-T	61-130195	
UPS80-120F 1 phase			
UPS80-120F 3 phase	FLB 80-120-T	61-130205	4
UPS100-30F			
Flanged connection twin pump			
UPSD40-30F 1 phase	FTB 40-40-M	61-230100	7
UPSD40-30F 3 phase	FTB 40-70-T	61-230105	7
UPSD40-60/2F 1 phase	FTB 40-70-M	61-230110	
UPSD40-60/2F 3 phase	FTB 40-70-T	61-230115	
UPSD40-120F 1 phase	FTB 40-100-M	61-230120	
UPSD40-120F 3 phase	FTB 40-100-T	61-230125	
UPSD50-30F 1 phase	FTB 50-40-M	61-230130	
UPSD50-30F 3 phase	FTB 50-40-T	61-230135	
UPSD 50-60/4F 1 phase	FTB 50-80-M	61-230140	
UPSD 50-60/4F 3 phase	FTB 50-80-T	61-230145	
UPSD 50-120F 1 phase	FTB 50-110-M	61-230150	
UPSD 50-120F 3 phase	FTB 50-110-T	61-230155	
UPSD 65-30F 1 phase	FTB 65-70-M	61-230160	7
UPSD 65-30F 3 phase	FTB 65-70-T	61-230165	7
UPSD 65-60/4F 1 phase	FTB 65-70-M	61-230160	
UPSD 65-60/4F 3 phase	FTB 65-70-T	61-230165	
UPSD65-120F 1 phase	FTB 65-90-M	61-230180	8
UPSD65-120F 3 phase	FTB 65-90-T	61-230175	8
UPSD65-180F 1 phase			
UPSD65-180F 3 phase	FTB 65-140-T	61-230185	8
UPSD80-30F 1 phase	FTB 80-70-M	61-230190	7
UPSD80-30F 3 phase	FTB 80-70-T	61-230195	7
UPSD80-60F 1 phase	FTB 80-70-M	61-230190	
UPSD80-60F 3 phase	FTB 80-70-T	61-230195	
UPSD80-120F 1 phase			
UPSD80-120F 3 phase	FTB 80-120-T	61-230205	4
UPSD100-30F			
Threaded connection electronic			
UPE25-25 1 phase	FLE 25-50-180	61-150110	
UPE25-45 1 phase	FLE 25-50-180	61-150110	8
ALPHA+ 15-60 130 1 phase	FLE 25-50-130	61-150100	2
ALPHA+ 25-40 130 1 phase			
ALPHA+ 25-40 180 1 phase			

Grundfos	Flygt	Art. Nr	Anm
ALPHA+ 25-60 130 1 phase	FLE 25-50-130	61-150100	
ALPHA+ 25-60 180 1 phase	FLE 25-50-180	61-150110	8
ALPHA+32-60 180 1 phase	FLE 25-50-180	61-150110	1, 8
UPE25-80 180 1 phase	FLE 32-70-180	61-150200	2, 8
UPE32-80 180 1 phase	FLE 32-70-180	61-150200	8
Flanged connection electronic			
UPE32-80F 220 1 phase	FLE 32-70-180	61-150130	6
UPE32-120F 1 phase	FLE 32-110-180	61-150140	6
UPE40-80F 1 phase	FLE 40-70-M	61-150160	7
UPE40-120F 1 phase	FLE 40-100-M	61-150170	
UPE50-60F 1 phase	FLE 50-70-M	61-150180	7
UPE50-120F 1 phase	FLE 50-100-M	61-150190	
UPE65-60F 1 phase	FLE 65-80-M	61-150200	7
UPE65-120F 1 phase	FLE 65-80-M	61-150200	8
UPE80-120F 1 phase	FLE 80-100-M	61-150210	4
UPE100-60F			4
UPED32-120F			4
UPED40-120F 1 phase	FTE 40-100-M	61-250110	4
UPED50-60F 1 phase	FTE 50-70-M	61-250130	4
UPED50-120F 1 phase	FTE 50-100-M	61-250140	4
UPED65-60F 1 phase	FTE 65-80-M	61-250150	4
UPED65-120F 1 phase	FTE 65-80-M	61-250150	4, 8
UPED80-120F	FTE 80-100-M	61-250160	4
Secondary hot water (bronze and stainless steel)			
25-100/180 1 phase			
40-100/220 1 phase			
32-100/180 1 phase			
32-100/220 1 phase			
UP20-13N	FPA 15-15-130	61-300130	7
UP20-15N/150 stainless steel	FPA 15-15-130	61-300130	3
UP20-30N/150 stainless steel 1 phase, 3 phase	FPA 15-25-130	61-300140	3
UP20-45N/150 stainless steel 1 phase, 3 phase			
UPS25-60B/180 1 phase	FPA 25-50-180	61-300160	5
UPS32-80B/180 1 phase, 3 phase			

Remarks

- 1 Use adapter ring 25/32 mm
- 2 The Flygt pump has a different connection
- 3 Dimensions differ, contact Flygt
- 4 Flygt pump with other capacity available
- 5 The Flygt pump is also available in stainless steel
- 6 The Flygt pump has a threaded connection
- 7 The Flygt pump has higher capacity
- 8 The Flygt pump has lower capacity

Perfecta - Flygt

FLB/FTB



FLA



Perfecta	Art. Nr	Flygt	Art. Nr	Alt
A3 32-07U	6294470	FLB 32-80-180-M	61-110140	
A3 32-08U/180	6296710	FLB 32-70-180-M	61-110130	
A3 40-12	6293570	FLB 40-100-T	61-130125	
A3 40-3	6293550	FLB 40-70-T	61-130115	FLB 40-40-M
A3 40-7	6293560	FLB 40-70-T	61-130115	
A3 50-12	6293600			
A3 50-6	6293590	FLB 50-80-T	61-130145	
A3 50-3	6293580	FLB 50-40-T	61-130135	
A3 65-3	6293610	FLB 65-70-T	61-130165	
A3 65-6	6293620	FLB 65-70-T	61-130165	
A3 65-12	6293630	FLB 65-140-T	61-130185	
A3 80-6	6293640	FLB 80-70-T	61-130195	
A3 80-120	6293650	FLB 80-120-T	61-130205	
A3D 40-3	6293660	FTB 40-70-T	61-230115	FLB 40-40-M
A3D 40-7	6293670	FTB 40-70-T	61-230115	
A3D40-12	6293680	FTB 40-100-T	61-230125	
A3D 50-6	6293700	FTB 50-80-T	61-230145	
A3D 50-12	6293710	FTB 50-110-T	61-230155	
A3D 65-3	6293720	FTB 65-70-T	61-230165	
A3D 65-6	6293730	FTB 65-70-T	61-230165	
A3D 65-12	6293740	FTB 65-140-T	61-230185	
A3D 80-6	6293750	FTB 80-70-T	61-230195	
A3D 80-12	6293760	FTB 80-140-T	61-230215	
A4 32-07U	6294490	FLB 32-80-180-T	61-110240	
A4 32-11U 1-F	6294510	FLB 32-100-180-M	61-110150	
A4 32-11U 3-F	6294530	FLB 32-100-180-T	61-110150	
A4 50-5	6245810	FLB 50-40-T	61-130135	
A4 65-5	6245790	FLB 65-70-T	61-130165	
A4 80-5	6245780	FLB 80-70-T	61-130195	
A4D 50-5	6246600	FTB 50-80-T	61-230145	FTB 50-40-T
A4D 65-5	6245360	FTB 65-70-T	61-230165	
A4D 80-5	6247290	FTB 80-70-T	61-230195	
Pivo 25-4F	6292770			
Pivo 25-4U/130	6292780	FLA 25-40-130	61-100160	
Pivo 25-4U/180	6292790	FLA 25-40-180	61-100180	
Pivo 25-6F	6292740			
Pivo 25-6U/130	6292750	FLA 25-60-130	61-100200	
Pivo 25-6U/180	6292760	FLA 25-60-180	61-100210	
Pivo 25-7F	6295300			
Pivo 25-7U/130	6295320	FLA 25-70-130	61-100220	
Pivo 25-7U/180	6295340	FLA 25-70-180	61-100230	
Pivo 32-7U/180	6296580	FLB 32-70-180-M	61-110130	



Introduction

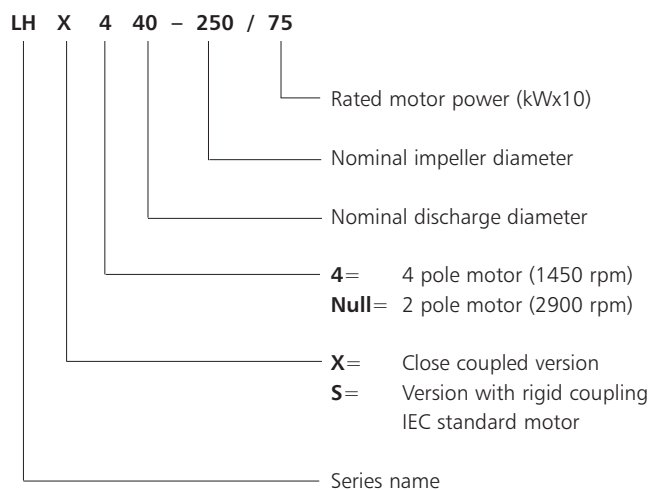
In-line pumps with cast iron pump body and AISI 316 stainless steel impeller. Suitable for handling hot or cold moderately aggressive liquids.

Maximum delivery: 190 m³/h
 Maximum head: 89 m
 Maximum operating pressure: 12 bar (PN 12)

Applications

- Circulation of hot and cold water in heating and cooling systems
- Water circulation and transfer in civil, industrial and agricultural sectors
- Water supply systems in rural applications

Product identity



Design

Mechanical seal

In compliance with DIN 24960, lubricated by internal recirculation of pumped liquid to seal housing. To eliminate the risk of leakage between the seal and the shaft, the seal is locked to the shaft with a slot pin.

Air release valve

All models have an air release valve incorporated in the pump body.

Flanges

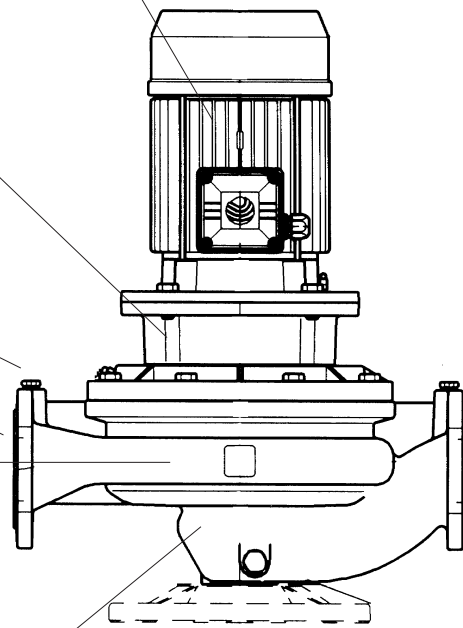
In compliance with UNI 2223 and DIN 2533.

Impeller

The impeller is laser technology welded to ensure optimal performance (up to 80/160). The impeller is made of AISI 316.

Motor

Back pull-out design; Impeller, adapter and motor can be extracted without disconnecting the pump body from the pipe system.



Wear rings

On impeller front and rear wear surfaces, wear rings made of AISI 316 ensure high performance and are easy to replace. This prolongs the impeller life.

Motor noise

The table shows the mean noise levels for sound pressure (Lp) and sound power (LW) measured at 1 meter distance in a free field according to the A curve (ISO R 1680 standard).

The noise is measured with idling 50 Hz motor with a tolerance of 3 dB (A).

Motor type Size	2-poles		4 poles	
	Lp- dB (A)	LW- dB (A)	Lp- dB (A)	LW- dB (A)
71	61	70	48	57
80R	61	70		
80	64	73	50	59
90R	64	73		
90	66	75	51	60
100R	66	75		
100	70	80	53	63
112R	70	80		
112	74	84	56	66
132R	74	84		
132	77	87	66	76
160	78	88		
180R	80	81		



LH 40

Product

In-line pump for pumping hot and cold moderately aggressive liquids, like circulation of water in heating or cooling systems.

Denomination

Product code

LH 40

Available versions

LHX

LHS

Process data

Liquid temperature

-10° C to +130° C

Maximum pressure

12 bar (PN 12)

Motor data

Enclosed motor with external ventilation and aluminium finned casing.

Frequency

50 Hz

Insulation class

F (+155° C)

Protection class

IP 55

Monitoring equipment

To be provided at installation

Material

Part	Material
Pump body	GG 20 Cast Iron
Seal housing	GG 20 Cast Iron
Impeller	AISI 316L
Adapter:	
125,160	Aluminum
200, 250	GG 20 Cast Iron
O-rings	EPDM
Wear rings	AISI 316L
Shaft	AISI 316L
Base	Aluminum
Fill and drain plugs	Nickel plated brass

Mechanical face seals

Alternative	Seal
1 Standard	Ceramic/ Carbon/ EPDM
2	Tungsten carbide/ Carbon/ EPDM or FPM
3	Tungsten carbide/ Silicon carbide/ EPDM or FPM
4	Tungsten carbide/ Tungsten carbide/ EPDM or FPM
5	Silicon carbide/ Silicon carbide/ EPDM or FPM

Option

Version with Technovar frequency converter available on request

External seal flushing.

Accessories

AISI 316 stainless steel counterflanges

Threaded counterflanges

Motor rating

LHS 40

Three-phase 2-pole, 2900 rpm

Pump type	Motor type			Input current in (A)			rpm	Data for 400 V 50 Hz				
	kW	Size	Design	220-240 V	380-415 V	660 V		Is/In	η%	cosφ	Cn (Nm)	Cs/Cn
40-125/07	0.75	80R	B5	3.5	2,0		2855	5.8	74	0.72	2.5	3.8
40-125/11	1.1	80	B5	4.5	2.6		2875	6.8	79	0.77	3.6	3.5
40-160/15	1.5	90R	B5	6.0	3.5		2875	7.0	80	0.78	5.0	3.8
40-160/22	2.2	90R	B5	8.7	5,0		2860	7.3	81	0.78	7.3	4.1
40-200/30	3.0	100R	B5	10.8	6.2		2845	6.8	80	0.87	10.1	3.0
40-200/40	4.0	112R	B5		8,1	4.7	2900	7.9	83	0.85	13.2	2.9
40-200/55	5.5	132R	B5		11.0	6.4	2910	7.7	84	0.85	18.0	2.7
40-250/75	7.5	132R	B5		14.6	8.9	2910	7.6	87	0.85	24.6	3.0
40-250/110	11	160R	B5		21.2	12.2	2925	8.7	89	0.84	35.9	3.7

Three-phase 4-pole, 1450 rpm

Pump type	Motor type			Input current in (A)			rpm	Data for 400 V 50 Hz				
	kW	Size	Design	220-240 V	380-415 V	660 V		Is/In	η%	cosφ	Cn (Nm)	Cs/Cn
40-200/05	0.55	80	B5	3.0	1.8		1390	4.0	68	0.67	3.8	2.5
40-200/07	0.75	80	B5	4.0	2.3		1395	4.1	70	0.66	5.1	2.7
40-250/11	1.1	90	B5	4.4	2.5		1415	4.7	78	0.81	7.4	2.2
40-250/15	1.5	90	B5	5.9	3.4		1420	5.0	80	0.80	10.1	2.3

LHX 40

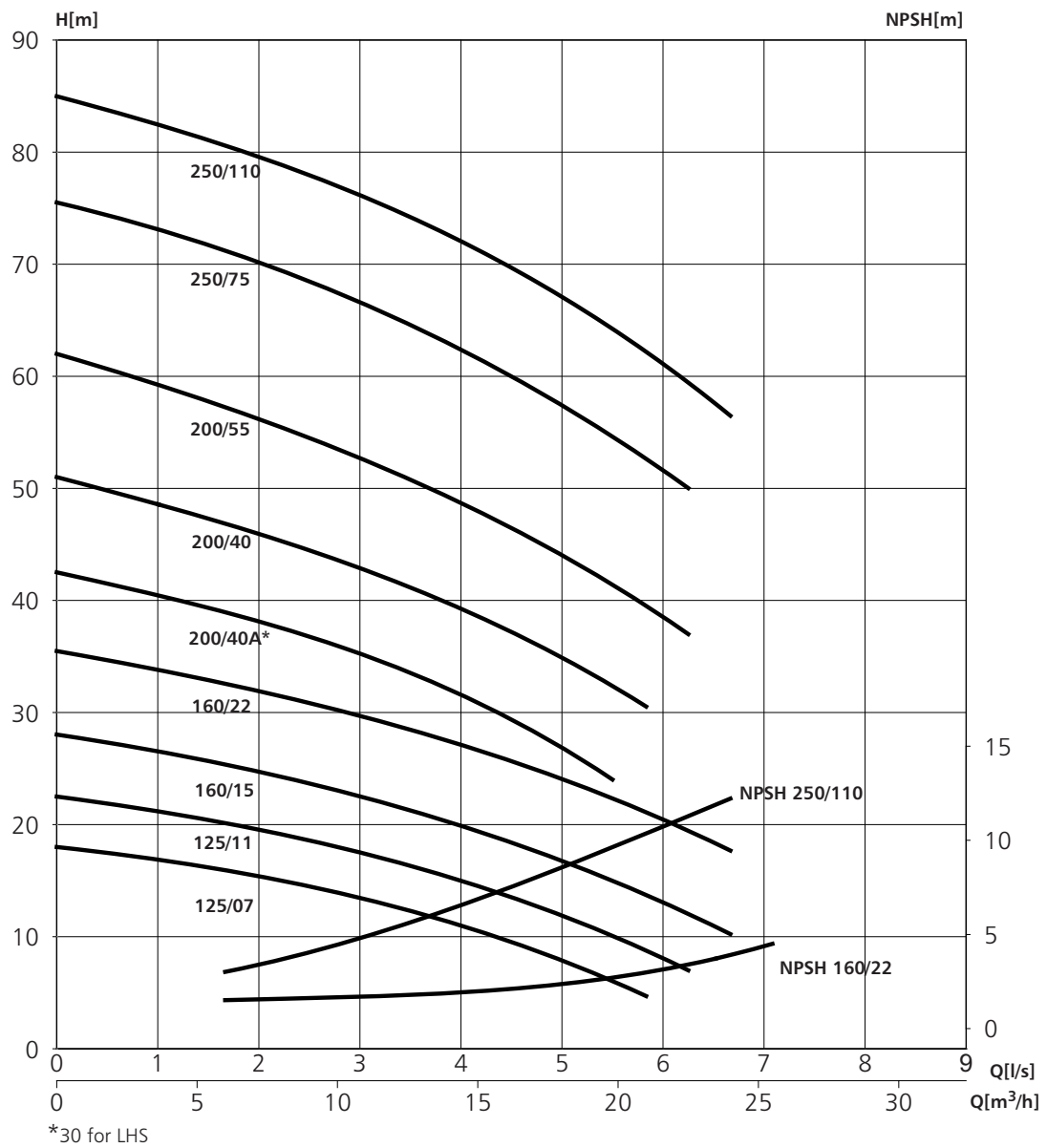
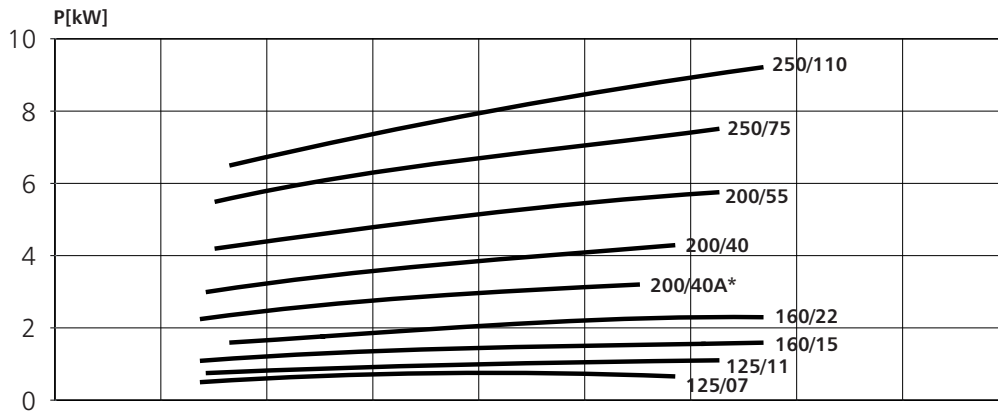
Three-phase 2-pole, 2900 rpm

Pump type	Motor type			Input current in (A)			rpm	Data for 400 V 50 Hz				
	kW	Size	Design	220-240 V	380-415 V	660 V		Is/In	η%	cosφ	Cn (Nm)	Cs/Cn
40-125/11	1.1	90R	B14	4.5	2.6		2875	6.8	79	0.77	3.6	3.5
40-160/15	1.5	90R	B14	6.0	3.5		2875	7.0	80	0.78	5.0	3.8
40-160/22	2.2	90R	B14	8.7	5,0		2860	7.3	81	0.78	7.3	4.1
40-200/40A	4.0	112R	B14		8.1	4.7	2900	7.9	83	0.85	13.2	2.9
40-200/40	4.0	112R	B14		8.1	4.7	2900	7.9	83	0.85	13.2	2.9
40-200/55	5.5	112	B14		11.0	6.4	2910	7.7	84	0.85	18.0	2.7
40-200/75	7.5	112	B14		14.6	8.4	2910	7.6	87	0.85	24.6	3.0
40-250/110	11	160	B14		21.2	12.2	2925	8.7	89	0.84	35.9	3.7

Three-phase 4-pole, 1450 rpm

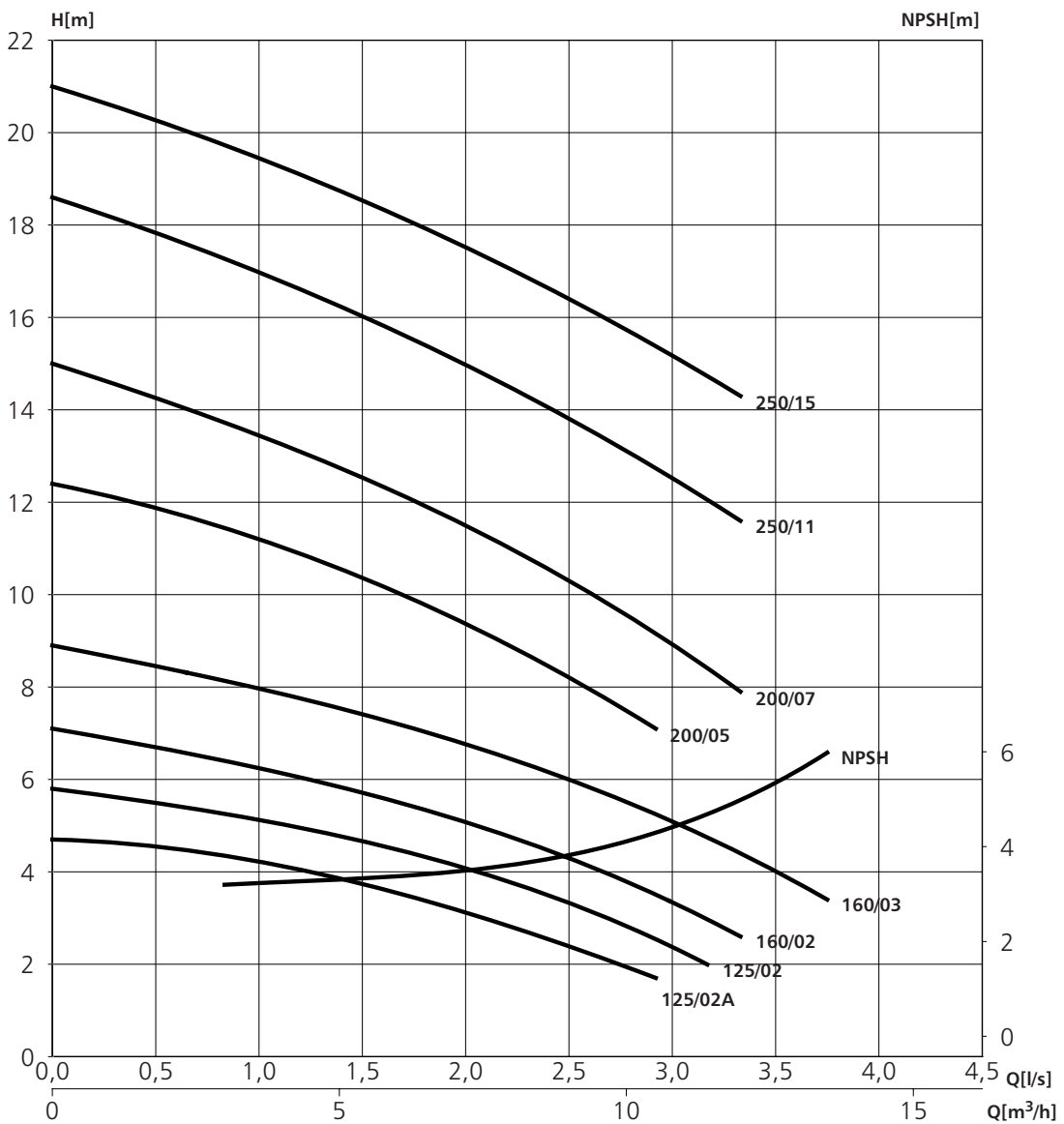
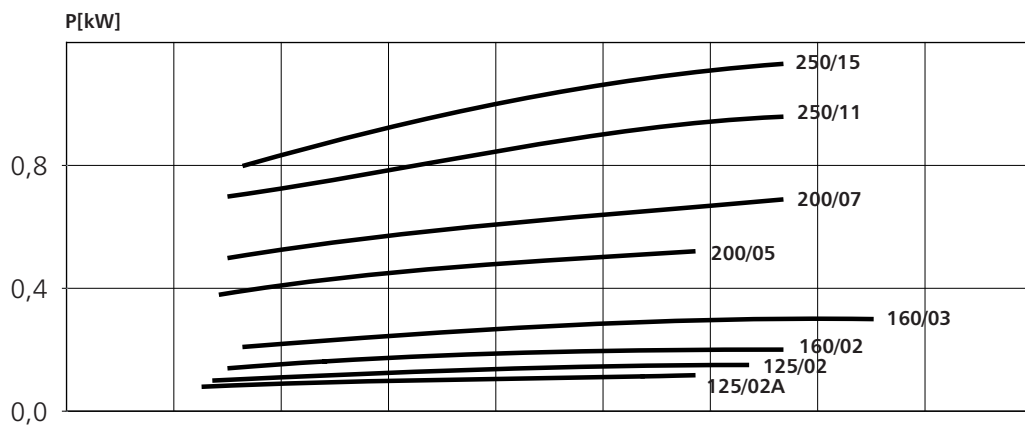
Pump type	Motor type			Input current in (A)			rpm	Data for 400 V 50 Hz				
	kW	Size	Design	220-240 V	380-415 V	660 V		Is/In	η%	cosφ	Cn (Nm)	Cs/Cn
40-125/02A	0.25	71	B5	1.7	1.0		1390	3.6	62	0.59	1.7	3.2
40-125/02	0.25	71	B5	1.7	1.0		1390	3.6	62	0.59	1.7	3.2
40-160/02	0.25	71	B5	1.7	1.0		1390	3,6	62	0.59	1.7	3.2
40-160/03	0.37	71	B5	2.5	1.5		1370	3.4	61	0.60	2.6	3.4
40-160/05	0.55	90R	B5	3.0	1.8		1390	3.9	68	0.67	3.8	2.5
40-200/07	0.75	90R	B5	4.0	2.3		1395	4.1	70	0.66	5.1	2.7
40-250/11	1.1	90	B5	4.3	2.5		1415	4.6	78	0.81	7.4	2.2
40-250/15	1.5	90	B5	5.9	3.4		1420	5.0	80	0.80	10.1	2.3

Performance curves 2900 rpm



*30 for LHS

Performance curves 1450 rpm





LH 50

Product

In-line pump for pumping hot and cold moderately aggressive liquids, like circulation of water in heating or cooling systems.

Denomination

Product code LH 50

Available versions

LHX
LHS

Process data

Liquid temperature -10° C to +130° C
Maximum pressure 12 bar (PN 12)

Motor data

Enclosed motor with external ventilation and aluminum finned casing.

Frequency 50 Hz
Insulation class F (+155° C)
Protection class IP 55

Monitoring equipment

To be provided at installation

Material

Part	Material
Pump body	GG 20 Cast Iron
Seal housing	GG 20 Cast Iron
Impeller	AISI 316L
Adapter:	
125,160	Aluminum
200, 250	GG 20 Cast Iron
O-rings	EPDM
Wear rings	AISI 316L
Shaft	AISI 316L
Base	Aluminum
Fill and drain plugs	Nickel plated brass

Mechanical face seals

Alternative	Seal
1 Standard	Ceramic/ Carbon/ EPDM
2	Tungsten carbide/ Carbon/ EPDM or FPM
3	Tungsten carbide/ Silicon carbide/ EPDM or FPM
4	Tungsten carbide/ Tungsten carbide/ EPDM or FPM
5	Silicon carbide/ Silicon carbide/ EPDM or FPM

Option

Version with Technovar frequency converter available on request
External seal flushing

Accessories

AISI 316 stainless steel counterflanges
Threaded counterflanges

Motor rating

LHS 50

Three-phase 2-pole, 2900 rpm

Pump type	Motor type			Input current in (A)			rpm	Data for 400 V 50 Hz				
	kW	Size	Design	220-240 V	380-415 V	660 V		Is/In	η%	cosφ	Cn (Nm)	Cs/Cn
50-125/11	1.1	80	B5	4.5	2.6		2875	6.8	79	0.77	3.6	3.5
50-125/15	1.5	90R	B5	6.0	3.5		2875	7.0	80	0.78	5.0	3.8
50-160/22	2.2	90R	B5	8.7	5.0		2860	7.3	81	0.78	7.3	4.1
50-160/30	3.0	100R	B5	10.8	6.2		2845	6.8	80	0.87	10.1	3.0
50-160/40	4.0	112R	B5		8.1	4.7	2900	7.9	83	0.85	13.2	2.9
50-200/55	5.5	132R	B5		11.0	6.4	2910	7.7	84	0.85	18.0	2.7
50-200/75	7.5	132R	B5		14.6	8.4	2910	7.6	87	0.85	24.6	3.0
50-250/110A	11	160R	B5		21.2	12.2	2925	8.7	89	0.84	35.9	3.7
50-250/110	11	160R	B5		21.2	12.2	2925	8.7	89	0.84	35.9	3.7
50-250/150	15	160	B5		28.6	16.5	2940	8.6	85	0.89	48.7	3.1

Three-phase 4-pole, 1450 rpm

Pump type	Motor type			Input current in (A)			rpm	Data for 400 V 50 Hz				
	kW	Size	Design	220-240 V	380-415 V	660 V		Is/In	η%	cosφ	Cn (Nm)	Cs/Cn
50-200/07	0.75	80	B5	4.0	2.3		1395	4.1	70	0.66	5.1	2.7
50-200/11	1.1	90	B5	4.4	2.5		1415	4.7	78	0.81	7.4	2.2
50-250/15	1.5	90	B5	5.9	3.4		1420	5.0	80	0.80	10.2	2.3
50-250/22	2.2	100	B5	8.3	4.8		1410	5.5	81	0.82	14.9	2.5

LHX 50

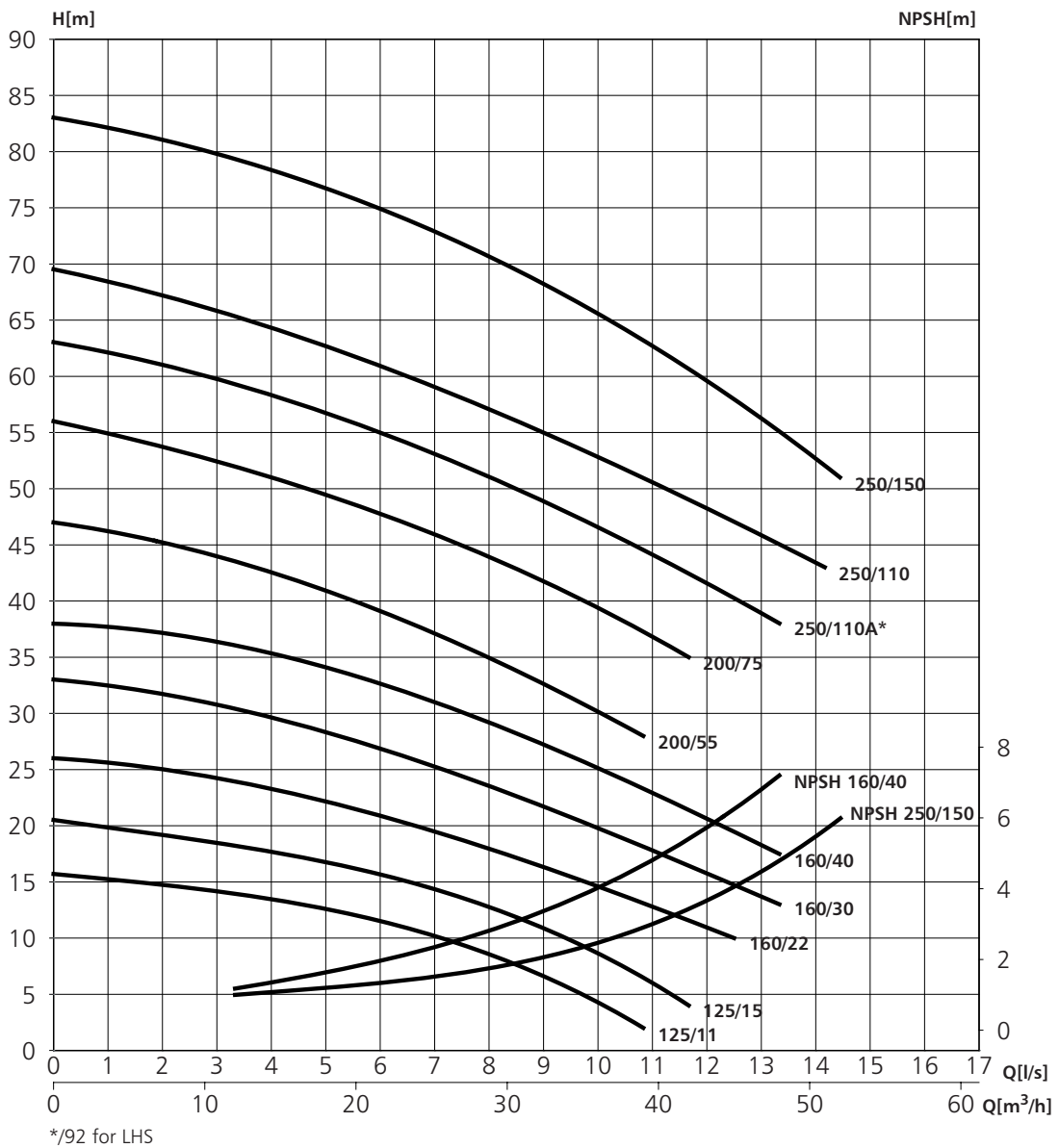
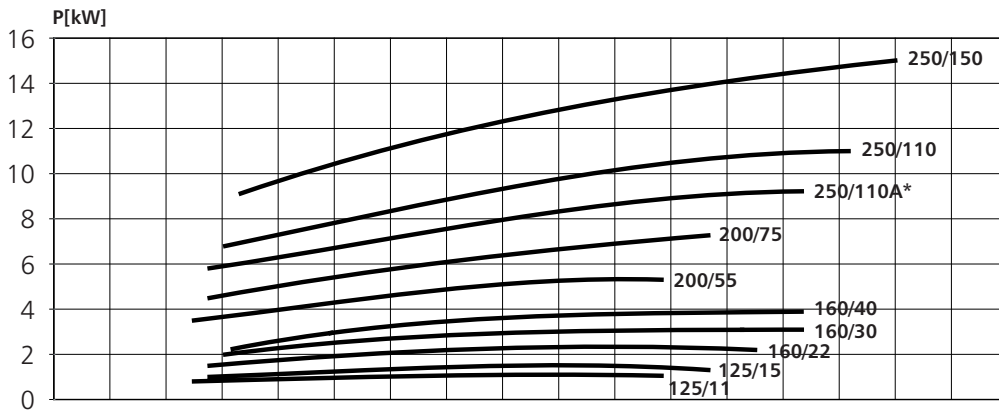
Three-phase 2-pole, 2900 rpm

Pump type	Motor type			Input current in (A)			rpm	Data for 400 V 50 Hz				
	kW	Size	Design	220-240 V	380-415 V	660 V		Is/In	η%	cosφ	Cn (Nm)	Cs/Cn
50-125/11	1.1	90R	B14	4.5	2.6		2875	6.8	79	0.77	3.6	3.5
50-125/15	1.5	90R	B14	6.0	3.5		2875	7.0	80	0.78	5.0	3.8
50-160/22	2.2	90R	B14	8.7	5.0		2860	7.3	81	0.78	7.3	4.1
50-160/30	3.0	90	B14	10.8	6.2		2845	6.8	80	0.87	10.1	3.0
50-160/40	4.0	112R	B14		8.1	4.7	2900	7.9	83	0.85	13.2	2.9
50-200/55	5.5	112	B14		11.0	6.4	2910	7.7	84	0.85	18.0	2.7
50-200/75	7.5	112	B14		14.6	8.4	2910	7.6	87	0.85	24.6	3.0
50-250/92	9.2	132	B14		17.5	10.1	2925	8.7	86	0.88	30.0	3.3
50-250/110	11	160	B14		21.2	12.2	2925	8.7	89	0.84	35.9	3.7
50-250/150	15	160	B14		28.6	16.5	2940	8.6	85	0.89	48.7	3.1

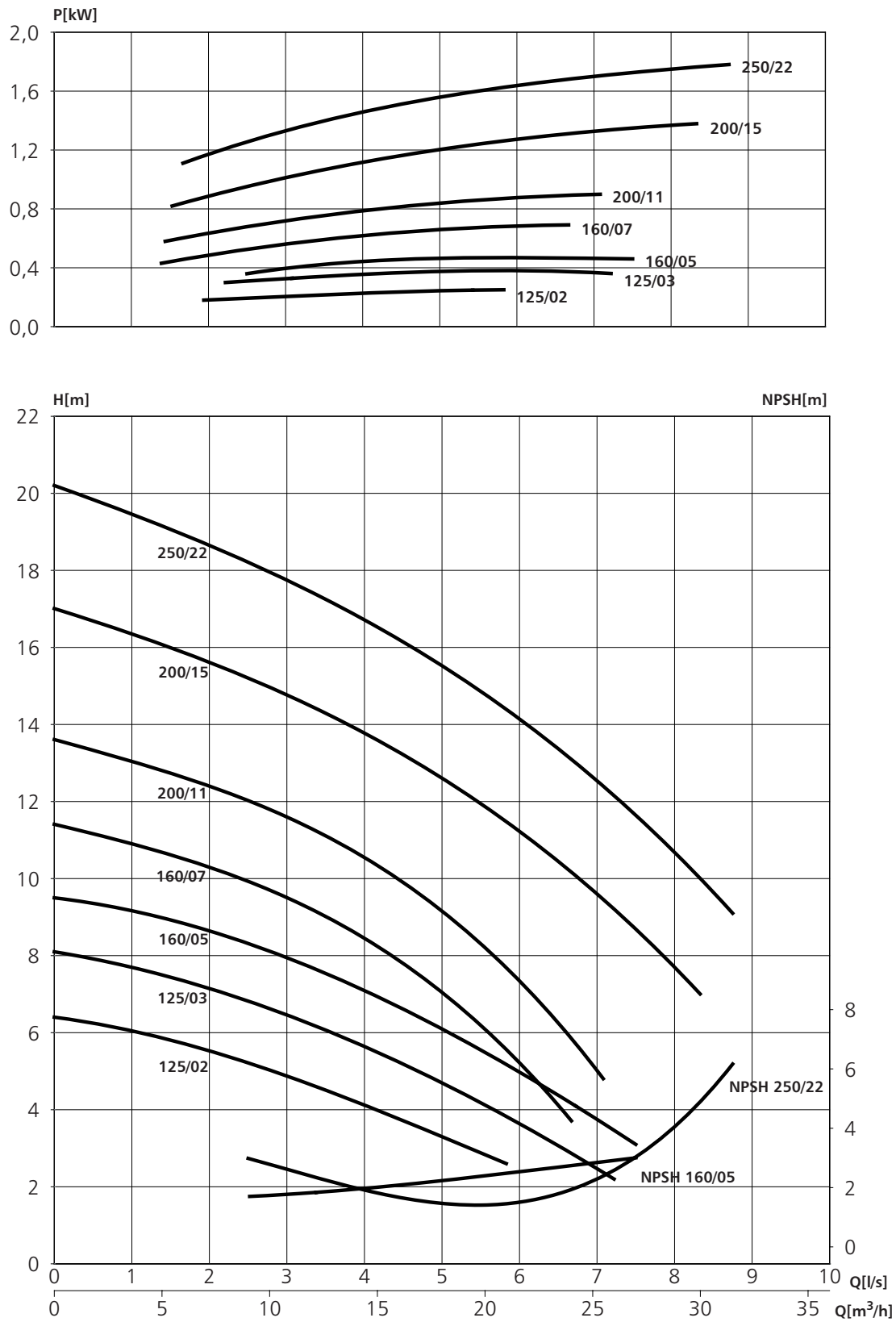
Three-phase 4-pole, 1450 rpm

Pump type	Motor type			Input current in (A)			rpm	Data for 400 V 50 Hz				
	kW	Size	Design	220-240 V	380-415 V	660 V		Is/In	η%	cosφ	Cn (Nm)	Cs/Cn
50-125/02	0.25	71	B5	1.7	1.0		1390	3.6	62	0.59	1.7	3.2
50-125/03	0.37	71	B5	2.5	1.5		1370	3.4	61	0.60	2.6	3.4
50-160/05	0.55	90R	B5	3.0	1.8		1390	3.9	68	0.67	3.8	2.5
50-200/07	0.75	90R	B5	4.0	2.3		1395	4.1	70	0.66	5.1	2.7
50-200/11	1.1	90	B5	4.3	2.5		1415	4.6	78	0.81	7.4	2.2
50-250/15	1.5	90	B5	5.9	3.4		1420	5.0	80	0.80	10.1	2.3
50-250/22	2.2	100	B5	8.3	4.5		1410	5.5	81	0.82	14.9	2.5

Performance curves 2900 rpm



Performance curves 1450 rpm





LH 65

Product

In-line pump for pumping hot and cold moderately aggressive liquids, like circulation of water in heating or cooling systems.

Denomination

Product code

LH 65

Available versions

LHX

LHS

Process data

Liquid temperature

-10° C to +130° C

Maximum pressure

12 bar (PN 12)

Motor data

Enclosed motor with external ventilation and aluminum finned casing.

Frequency

50 Hz

Insulation class

F (+155° C)

Protection class

IP 55

Monitoring equipment

To be provided at installation

Material

Part	Material
Pump body	GG 20 Cast Iron
Seal housing	GG 20 Cast Iron
Impeller	AISI 316L
Adapter	GG 20 Cast Iron
O-rings	EPDM
Wear rings	AISI 316L
Shaft	AISI 316L
Base	Aluminum
Fill and drain plugs	Nickel plated brass

Mechanical face seals

Alternative	Seal
1 Standard	Ceramic/ Carbon/ EPDM
2	Tungsten carbide/ Carbon/ EPDM or FPM
3	Tungsten carbide/ Silicon carbide/ EPDM or FPM
4	Tungsten carbide/ Tungsten carbide/ EPDM or FPM
5	Silicon carbide/ Silicon carbide/ EPDM or FPM

Option

Version with Technovar frequency converter available on request

External seal flushing

Accessories

AISI 316 stainless steel counterflanges

Threaded counterflanges

Motor rating

LHS 65

Three-phase 2-pole, 2900 rpm

Pump type	Motor type			Input current in (A)			rpm	Data for 400 V 50 Hz				
	kW	Size	Design	220-240 V	380-415 V	660 V		Is/In	η%	cosφ	Cn (Nm)	Cs/Cn
65-125/22	2.2	90R	B5	8.7	5.0		2860	7.3	81	0.78	7.3	4.1
65-125/30	3.0	100R	B5	10.8	6.2		2845	6.8	80	0.87	10.1	3.0
65-125/40	4.0	112R	B5		8.1	4.7	2900	7.9	83	0.85	13.2	2.9
65-160/55	5.5	132R	B5		11.0	6.4	2910	7.7	84	0.85	18.0	2.7
65-160/75	7.5	132R	B5		14.6	8.4	2910	7.6	87	0.85	24.6	3.0
65-200/110A	11	160R	B5		21.2	12.2	2925	8.7	89	0.84	35.9	3.7
65-200/110	11	160R	B5		21.2	12.2	2925	8.7	89	0.84	35.9	3.7
65-250/150	15	160	B5		28.6	16.5	2940	8.6	85	0.89	48.7	3.1
65-250/185	18.5	160	B5		34.2	19.7	2945	8.8	87	0.90	60.0	4.1
65-250/220	22	180R	B5		40.3	23.3	2945	8.6	89	0.88	71.2	4.8

Three-phase 4-pole, 1450 rpm

Pump type	Motor type			Input current in (A)			rpm	Data for 400 V 50 Hz				
	kW	Size	Design	220-240 V	380-415 V	660 V		Is/In	η%	cosφ	Cn (Nm)	Cs/Cn
65-160/07	0.75	80	B5	4.0	2.3		1395	4.1	70	0.66	5.1	2.7
65-160/11	1.1	90	B5	4.4	2.5		1415	4.7	78	0.81	7.4	2.2
65-200/15	1.5	90	B5	5.9	3.4		1420	5.0	80	0.80	10.1	2.3
65-250/22	2.2	100	B5	8.3	4.8		1410	5.5	81	0.82	14.9	2.5
65-250/30	3.0	100	B5	11.0	6.4		1425	6.0	82	0.82	20.1	2.5

LHX 65

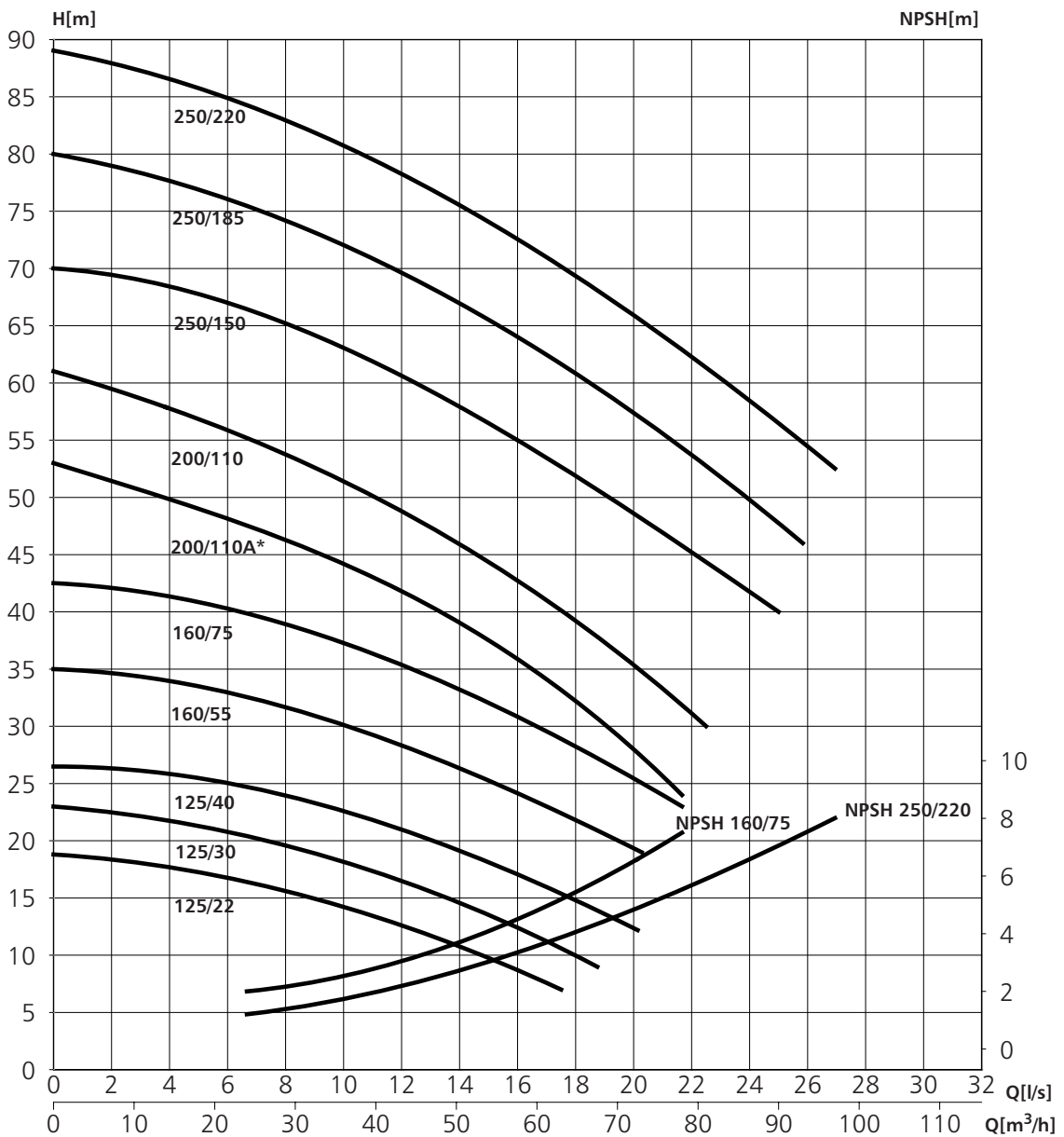
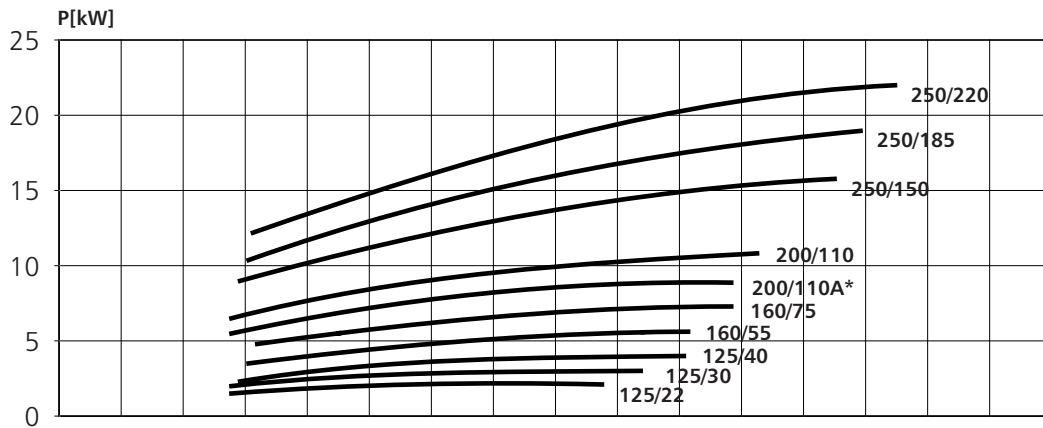
Three-phase 2-pole, 2900 rpm

Pump type	Motor type			Input current in (A)			rpm	Data for 400 V 50 Hz				
	kW	Size	Design	220-240 V	380-415 V	660 V		Is/In	η%	cosφ	Cn (Nm)	Cs/Cn
65-160/22	2.2	90R	B14	8.7	5.0		2860	7.3	81	0.78	7.3	4.1
65-160/30	3.0	90	B14	10.8	6.2		2845	6.8	80	0.87	10.1	3.0
65-160/40	4.0	112R	B14		8.1	4.7	2900	7.9	83	0.85	13.2	2.9
65-200/55	5.5	112	B14		11.0	6.4	2910	7.7	84	0.85	18.0	2.7
65-200/75	7.5	112	B14		14.6	8.4	2910	7.6	87	0.85	24.6	3.0
65-250/92	9.2	132	B14		17.5	10.1	2925	8.7	86	0.88	30.0	3.3
65-250/110	11	160	B14		21.2	12.2	2925	8.7	89	0.84	35.9	3.7
65-250/150	15	160	B14		28.6	16.5	2940	8.6	85	0.89	48.7	3.1
65-250/185	18.5	160	B14		34.2	19.7	2945	8.8	87	0.90	60.0	4.0
65-250/220	22	160	B14		40.3	23.3	2945	8.6	89	0.88	71.2	4.8

Three-phase 4-pole, 1450 rpm

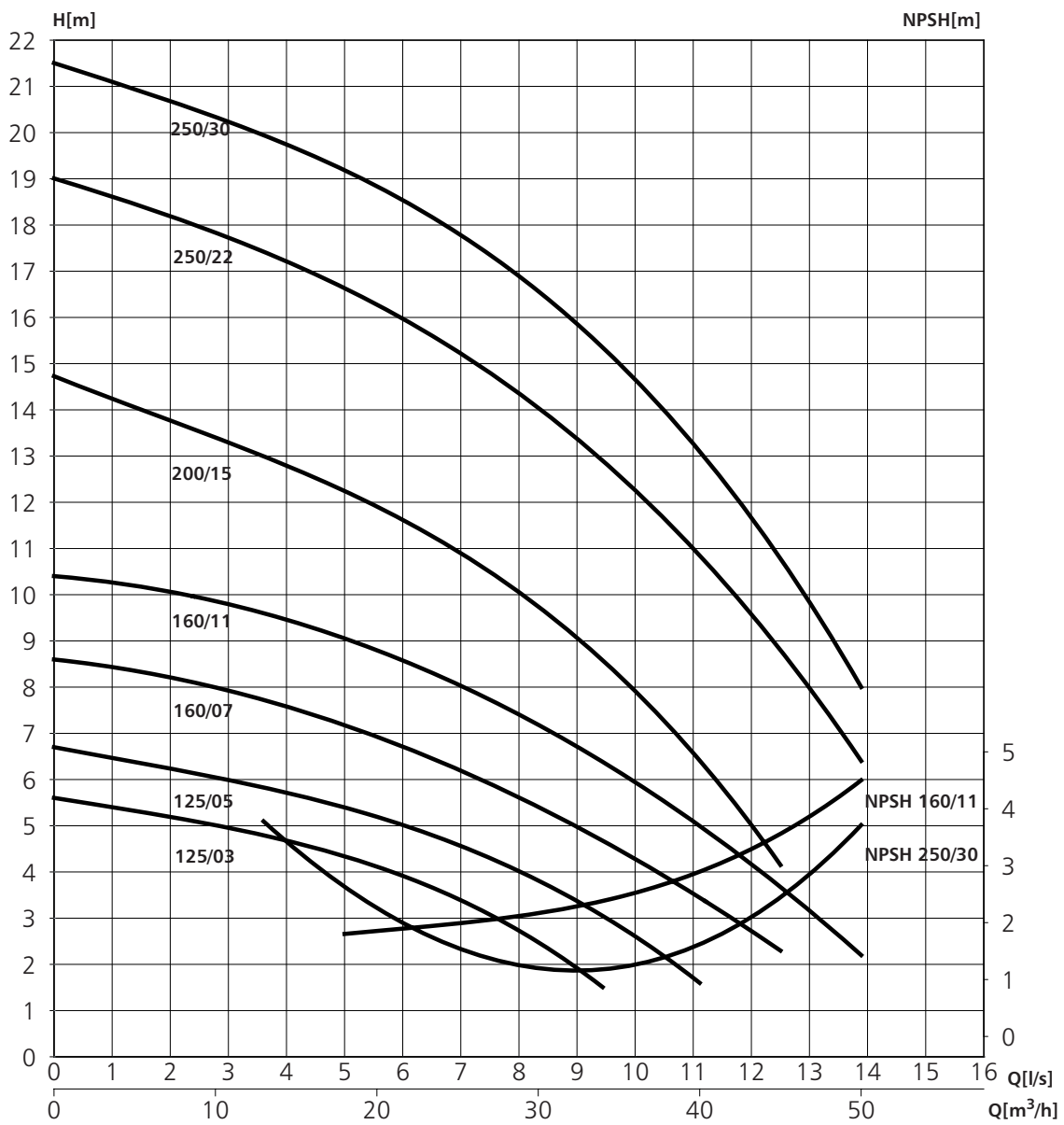
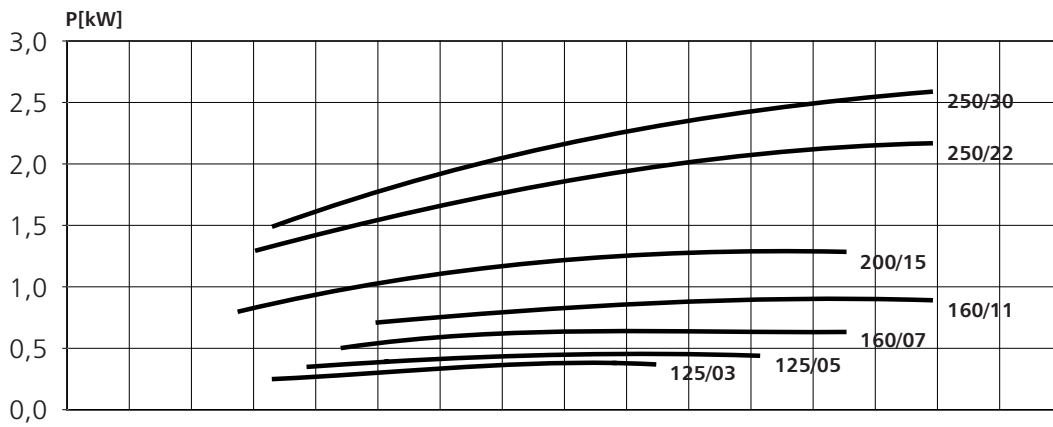
Pump type	Motor type			Input current in (A)			rpm	Data for 400 V 50 Hz				
	kW	Size	Design	220-240 V	380-415 V	660 V		Is/In	η%	cosφ	Cn (Nm)	Cs/Cn
65-125/03	0.37	71	B5	2.5	1.5		1370	3.4	61	0.60	2.6	3.4
65-160/05	0.55	90R	B5	3.0	1.8		1390	3.9	68	0.67	3.8	2.5
65-200/07	0.75	90R	B5	4.0	2.3		1395	4.1	70	0.66	5.1	2.7
65-200/11	1.1	90	B5	4.3	2.5		1415	4.6	78	0.81	7.4	2.2
65-250/15	1.5	90	B5	5.9	3.4		1420	5.0	80	0.80	10.1	2.3
65-250/22	2.2	100	B5	8.3	4.5		1410	5.5	81	0.82	14.9	2.5
65-250/30	3.0	100	B5	11.0	6.4		1425	6.3	82	0.82	20.1	2.5

Performance curves 2900 rpm



*92 for LHS

Performance curves 1450 rpm





LH 80

Product

In-line pump for pumping hot and cold moderately aggressive liquids, like circulation of water in heating or cooling systems.

Denomination

Product code LH 80

Available versions

LHX
LHS

Process data

Liquid temperature -10° C to +130° C
Maximum pressure 12 bar (PN 12)

Motor data

Enclosed motor with external ventilation and aluminum finned casing.

Frequency 50 Hz
Insulation class F (+155° C)
Protection class IP 55

Monitoring equipment

To be provided at installation

Material

Part	Material
Pump body	GG 20 Cast Iron
Seal housing	GG 20 Cast Iron
Impeller	AISI 316L
Adapter	GG 20 Cast Iron
O-rings	EPDM
Wear rings	AISI 316L
Shaft	AISI 316L
Base	Aluminum
Fill and drain plugs	Nickel plated brass

Mechanical face seals

Alternative	Seal
1 Standard	Ceramic/ Carbon/ EPDM
2	Tungsten carbide/ Carbon/ EPDM or FPM
3	Tungsten carbide/ Silicon carbide/ EPDM or FPM
4	Tungsten carbide/ Tungsten carbide/ EPDM or FPM
5	Silicon carbide/ Silicon carbide/ EPDM or FPM

Option

Version with Technovar frequency converter available on request
External seal flushing

Accessories

AISI 316 stainless steel counterflanges
Threaded counterflanges

LHS 80
Three-phase 2-pole, 2900 rpm

Pump type	Motor type			Input current in (A)			rpm	Data for 400 V 50 Hz				
	kW	Size	Design	220-240 V	380-415 V	660 V		Is/In	η%	cosφ	Cn (Nm)	Cs/Cn
80-125/30	3.0	100R	B5	10.8	6.2		2845	6.8	80	0.87	10.1	3.0
80-125/40	4.0	112R	B5		8.1	4.7	2900	7.9	83	0.85	13.2	2.9
80-125/55	5.5	132R	B5		11.0	6.4	2910	7.7	84	0.85	18.0	2.7
80-160/75	7.5	132R	B5		14.6	8.4	2910	7.6	87	0.85	24.6	3.0
80-200/110	11	160R	B5		21.2	12.2	2925	8.7	89	0.84	35.9	3.7
80-200/150	15	160	B5		28,6	16.5	2940	8.6	85	0.89	48.7	3.1
80-200/185	18.5	160	B5		34.2	19.7	2945	8.8	87	0.90	60.0	4.1
80-200/220	22	180R	B5		40.3	23.3	2945	8.6	89	0.88	71.2	4.8

Three-phase 4-pole, 1450 rpm

Pump type	Motor type			Input current in (A)			rpm	Data for 400 V 50 Hz				
	kW	Size	Design	220-240 V	380-415 V	660 V		Is/In	η%	cosφ	Cn (Nm)	Cs/Cn
80-125/07	0.75	80	B5	4.0	2.3		1395	4.1	70	0.66	5.1	2.7
80-125/11	1.1	90	B5	4.4	2.5		1415	4.7	78	0.81	7.4	2.2
80-200/15	1.5	90	B5	5.9	3.4		1420	5.0	80	0.80	10.1	2.3
80-200/22	2.2	100	B5	8.3	4.8		1410	5.5	81	0.82	14.9	2.5
80-200/30	3.0	100	B5	11.0	6.4		1425	6.0	82	0.82	20.1	2.5
80-250/40	4.0	112	B5		8.4	4.5	1440	5.8	85	0.81	26.5	2.5
80-250/55	5.5	132	B5		11.3	6.5	1445	5.9	86	0.82	36.3	2.6

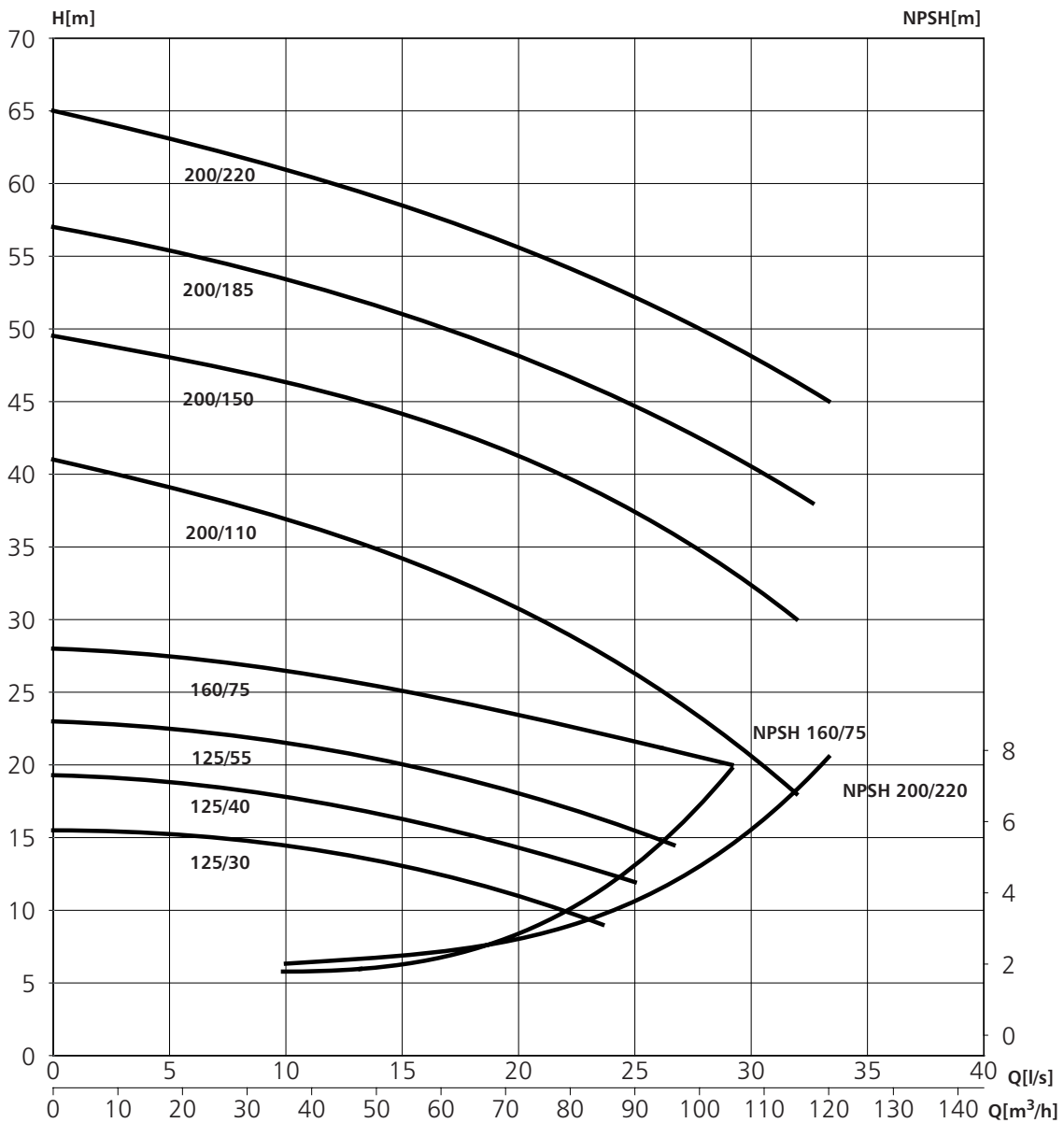
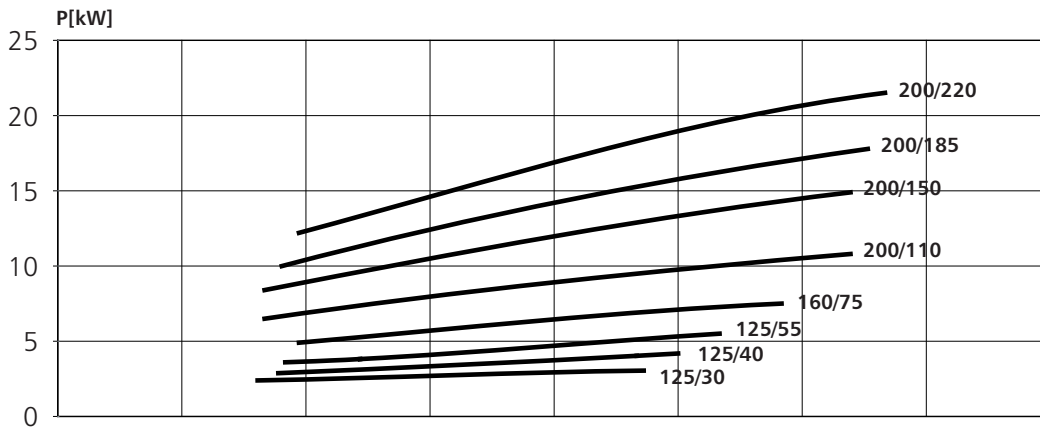
LHX 80
Three-phase 2-pole, 2900 rpm

Pump type	Motor type			Input current in (A)			rpm	Data for 400 V 50 Hz				
	kW	Size	Design	220-240 V	380-415 V	660 V		Is/In	η%	cosφ	Cn (Nm)	Cs/Cn
80-125/30	3.0	90	B14	10.8	6.2		2845	6.8	80	0.87	10.1	3.0
80-125/40	4.0	112R	B14		8.1	4.7	2900	7.9	83	0.85	13.2	2.9
80-125/55	5.5	112	B14		11.0	6.4	2910	7.7	84	0.85	18.0	2.7
80-160/75	7.5	112	B14		14.6	8.4	2910	7.6	87	0.85	24.6	3.0
80-200/110	11	160	B14		21.2	12.2	2925	8.7	89	0.84	35.9	3.7
80-200/150	15	160	B14		28,6	16.5	2940	8.6	85	0.89	48.7	3.1
80-200/185	18.5	160	B14		34.2	19.7	2945	8.8	87	0.90	60.0	4.0
80-200/220	22	160	B14		40.3	23.3	2945	8.6	89	0.88	71.2	4.8

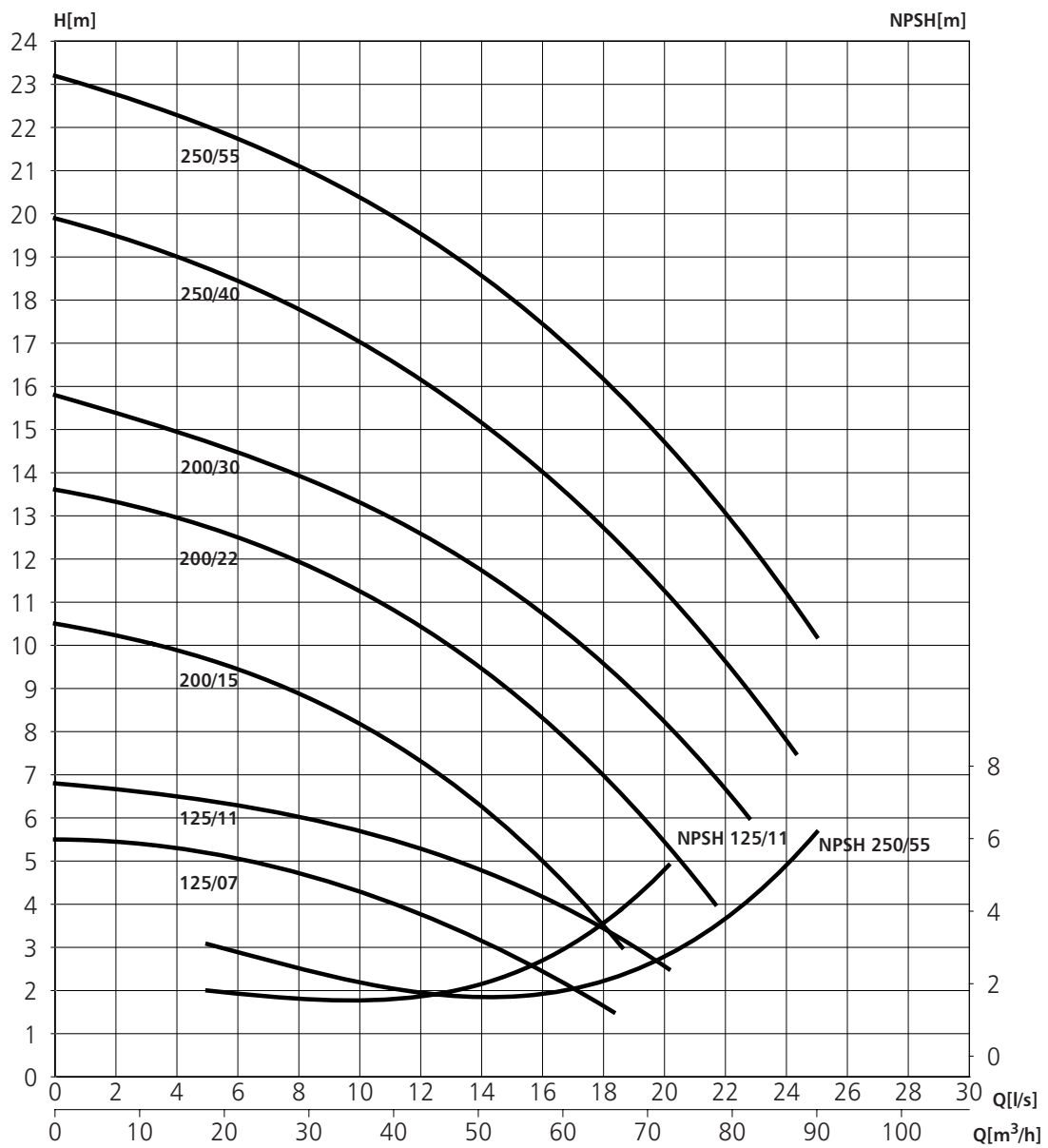
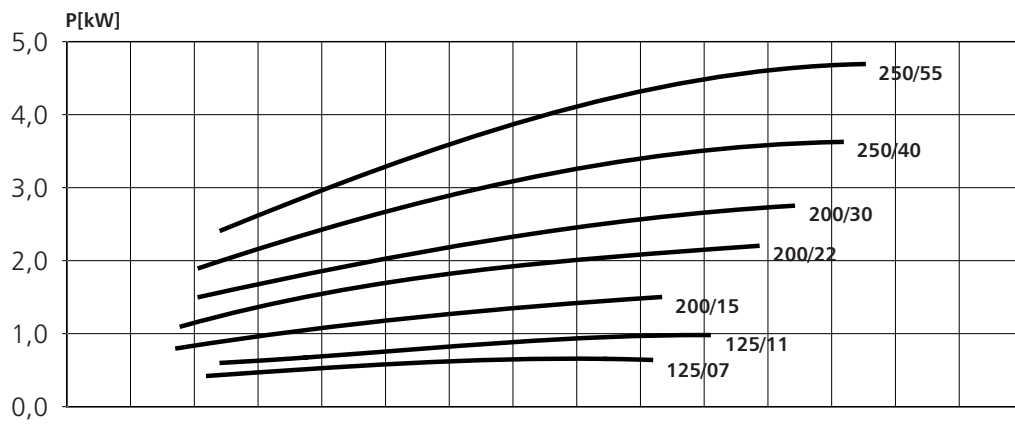
Three-phase 4-pole, 1450 rpm

Pump type	Motor type			Input current in (A)			rpm	Data for 400 V 50 Hz				
	kW	Size	Design	220-240 V	380-415 V	660 V		Is/In	η%	cosφ	Cn (Nm)	Cs/Cn
80-125/07	0.75	90R	B5	4.0	2.3		1395	4.1	70	0.66	5.1	2.7
80-125/11	1.1	90	B5	4.3	2.5		1415	4.6	78	0.81	7.4	2.2
80-200/15	1.5	90	B5	5.9	3.4		1420	5.0	80	0.80	10.1	2.3
80-200/22	2.2	100	B5	8.3	4.5		1410	5.5	81	0.82	14.9	2.5
80-200/30	3.0	100	B5	11.0	6.4		1425	6.3	82	0.82	20.1	2.5
80-250/40	4.0	112	B5		8.4	4.5	1440	5.8	85	0.81	26.5	2.5
80-250/55	5.5	132	B14		11.3	6.5	1445	6.0	86	0.82	36.3	2.6

Performance curves 2900 rpm



Performance curves 1450 rpm





LH 100

Product

In-line pump for pumping hot and cold moderately aggressive liquids, like circulation of water in heating or cooling systems.

Denomination

Product code LH 100

Available versions

LHX

LHS

Process data

Liquid temperature -10° C to +130° C
 Maximum pressure 12 bar (PN 12)

Motor data

Enclosed motor with external ventilation and aluminum finned casing.

Frequency 50 Hz
 Insulation class F (+155° C)
 Protection class IP 55

Monitoring equipment

To be provided at installation

Material

Part	Material
Pump body	GG 20 Cast Iron
Seal housing	GG 20 Cast Iron
Impeller	AISI 316L
Adapter	GG 20 Cast Iron
O-rings	EPDM
Wear rings	AISI 316L
Shaft	AISI 316L
Base	Aluminum
Fill and drain plugs	Nickel plated brass

Mechanical face seals

Alternative	Seal
1 Standard	Ceramic/ Carbon/ EPDM
2	Tungsten carbide/ Carbon/ EPDM or FPM
3	Tungsten carbide/ Silicon carbide/ EPDM or FPM
4	Tungsten carbide/ Tungsten carbide/ EPDM or FPM
5	Silicon carbide/ Silicon carbide/ EPDM or FPM

Option

Version with Technovar frequency converter available on request
 External seal flushing

Accessories

AISI 316 stainless steel counterflanges
 Threaded counterflanges

Motor rating

LHS 100

Three-phase 2-pole, 2900 rpm

Pump type	Motor type			Input current in (A)			Data for 400 V 50 Hz					
	kW	Size	Design	220-240 V	380-415 V	660 V	rpm	Is/In	η%	cosφ	Cn (Nm)	Cs/Cn
100-160/110	11	160R	B5		21.2	12.2	2925	8.7	89	0.84	35.9	3.7
100-160/185	18.5	160	B5		34.2	19.7	2945	8.8	87	0.90	60.0	4.1
100-200/220	22	180R	B5		40.3	23.3	2945	8.6	89	0.88	71.2	4.8

Three-phase 4-pole, 1450 rpm

Pump type	Motor type			Input current in (A)			Data for 400 V 50 Hz					
	kW	Size	Design	220-240 V	380-415 V	660 V	rpm	Is/In	η%	cosφ	Cn (Nm)	Cs/Cn
100-160/15	1.5	90	B5	5.9	3.4		1420	5.0	80	0.80	10.1	2.3
100-200/22	2.2	100	B5	8.3	4.8		1410	5.5	81	0.82	14.9	2.5
100-200/30	3.0	100	B5	11.0	6.4		1425	6.0	82	0.82	20.1	2.5
100-250/40	4.0	112	B5		8.4	4.5	1440	5.8	85	0.81	26.5	2.5
100-250/55	5.5	132	B5		11.3	6.5	1445	5.9	86	0.82	36.3	2.6
100-250/75	7.5	132	B5		15.2	8.8	1450	6.7	88	0.81	49.3	3.1

LHX 100

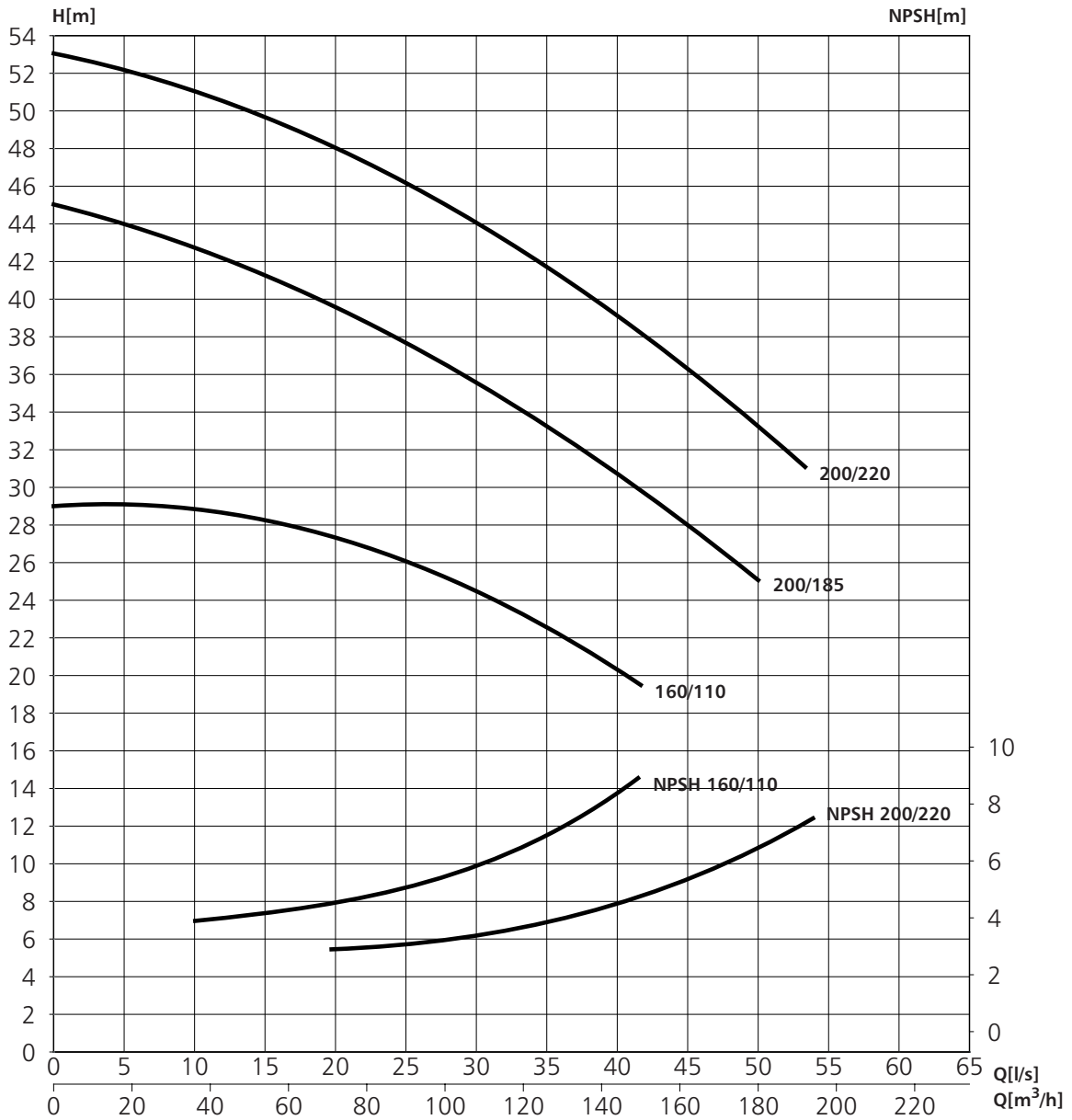
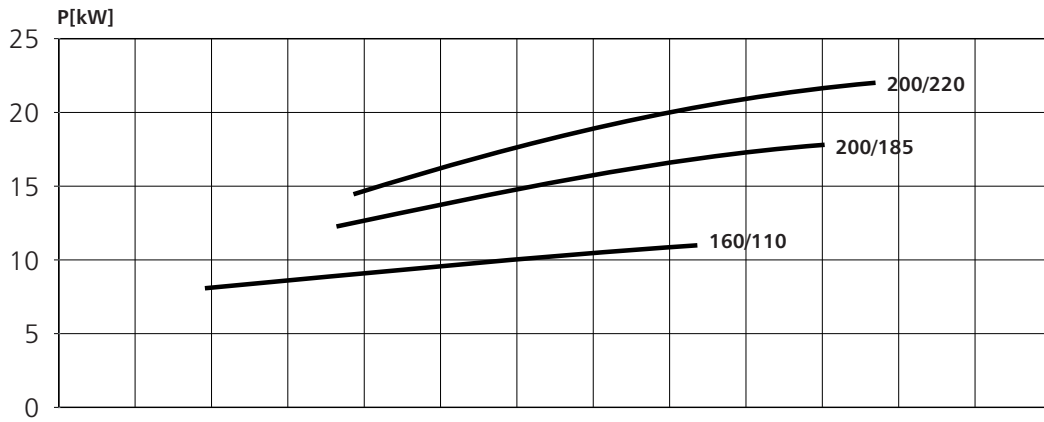
Three-phase 2-pole, 2900 rpm

Pump type	Motor type			Input current in (A)			Data for 400 V 50 Hz					
	kW	Size	Design	220-240 V	380-415 V	660 V	rpm	Is/In	η%	cosφ	Cn (Nm)	Cs/Cn
100-160/110	11	160	B14		21.2	12.2	2925	8.7	89	0.84	35.9	3.7
100-200/185	18.5	160	B14		34.2	19.7	2945	8.8	87	0.90	60.0	4.0
100-200/220	22	160	B14		40.3	23.3	2945	8.6	89	0.88	71.2	4.8

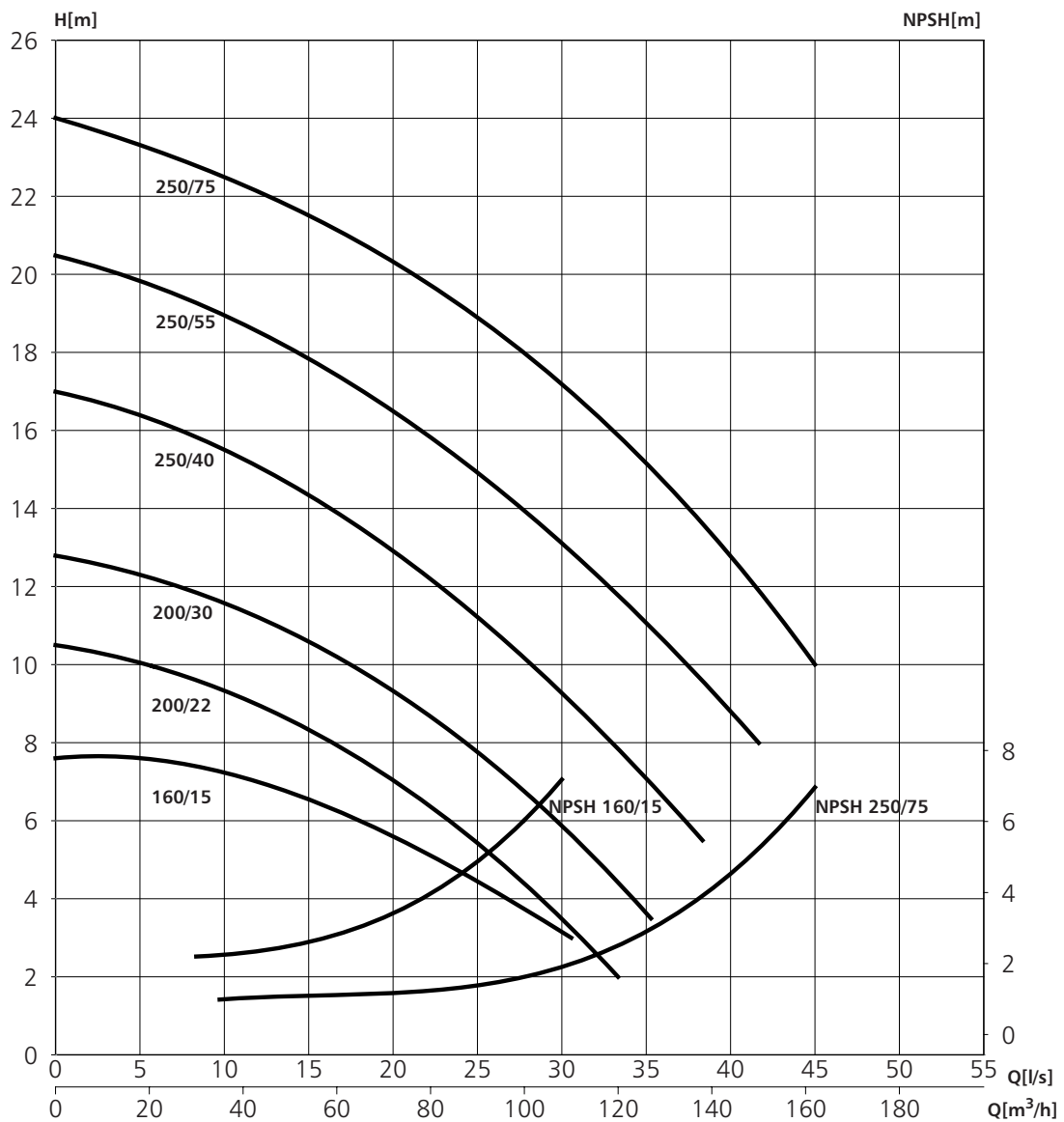
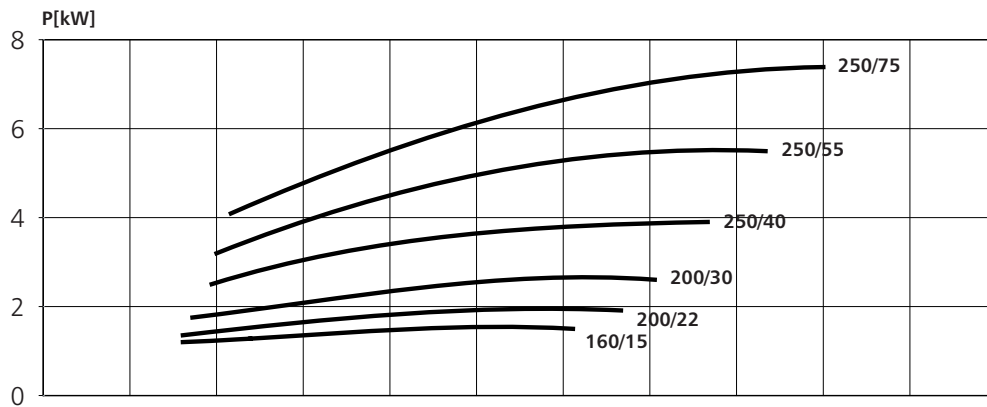
Three-phase 4-pole, 1450 rpm

Pump type	Motor type			Input current in (A)			Data for 400 V 50 Hz					
	kW	Size	Design	220-240 V	380-415 V	660 V	rpm	Is/In	η%	cosφ	Cn (Nm)	Cs/Cn
100-160/15	1.5	90	B5	5.9	3.4		1420	5.0	80	0.80	10.1	2.3
100-200/22	2.2	100	B5	8.3	4.5		1410	5.5	81	0.82	14.9	2.5
100-200/30	3.0	100	B5	11.0	6.4		1425	6.3	82	0.82	20.1	2.5
100-250/40	4.0	112	B5		8.4	4.5	1440	5.8	85	0.81	26.5	2.5
100-250/55	5.5	132	B14		11.3	6.5	1445	6.0	86	0.82	36.3	2.6
100-250/75	7.5	132	B14		15.2	8.8	1450	6.7	88	0.81	49.3	3.2

Performance curves 2900 rpm

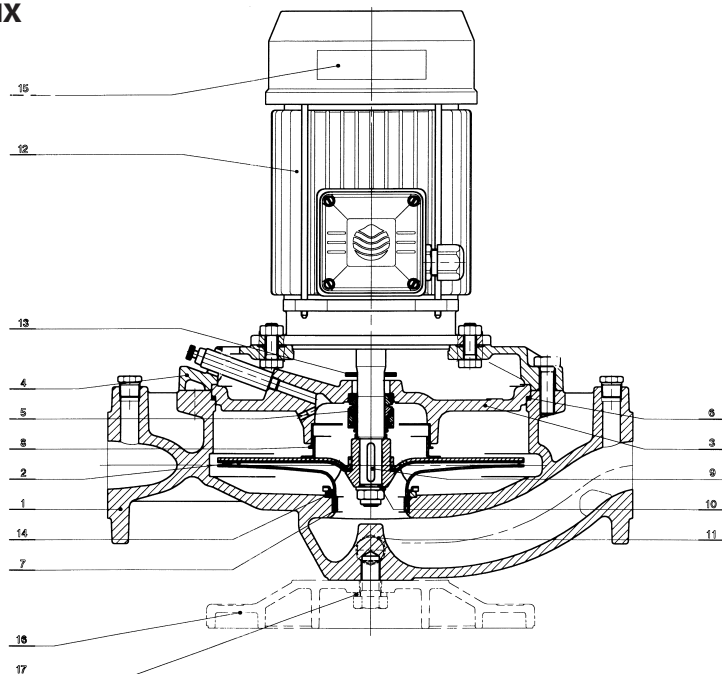


Performance curves 1450 rpm



**Pump parts
LH series**

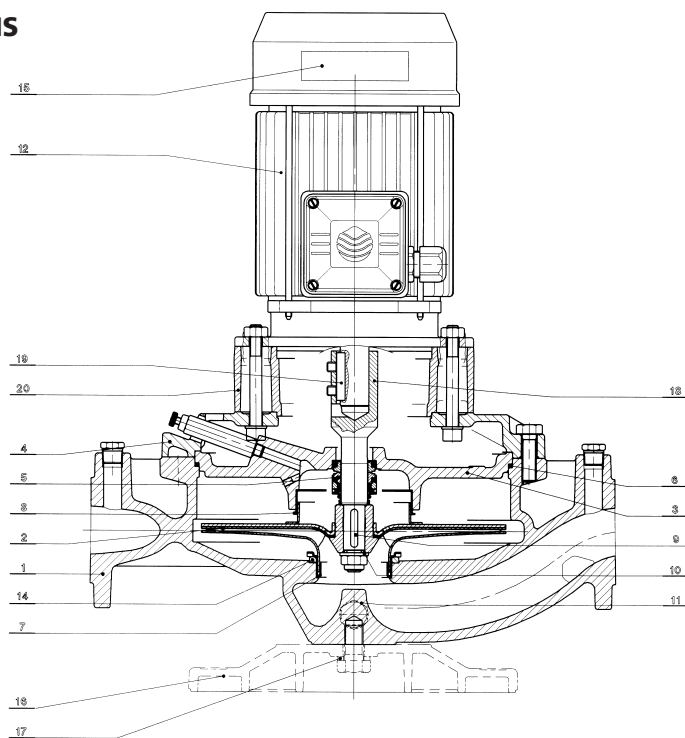
LHX



Ref. n.	Description
1	Pump body
2	Impeller
3	Seal holding disc
4	Adaptor
* 5	Mechanical seal
* 6	O-ring
* 7	Wear ring
* 8	Counterwear ring
9	Key
10	Impeller lock washer
11	Washer
12	Motor
13	Splash guard washer
14	Spacer ring
15	Rating plate
16	Base
17	Base lock washer

* Recommended spare parts

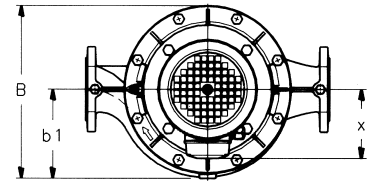
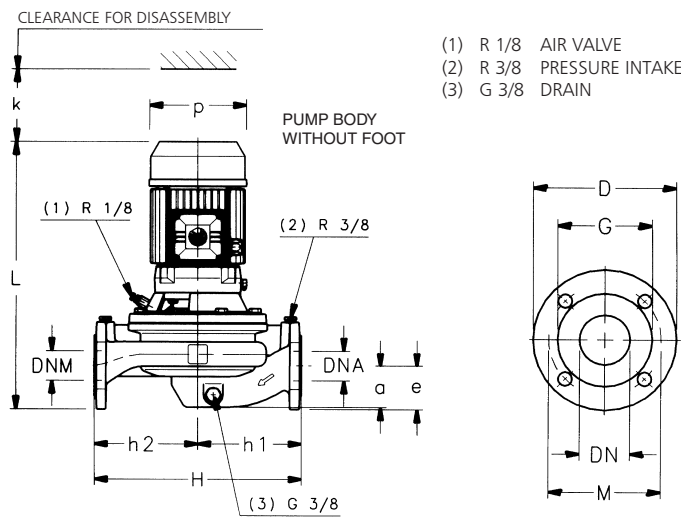
LHS



Ref. n.	Description
1	Pump body
2	Impeller
3	Seal holding disc
4	Adaptor
* 5	Mechanical seal
* 6	O-ring
* 7	Wear ring
* 8	Counterwear ring
9	Key
10	Impeller lock washer
11	Washer
12	Motor
14	Spacer ring
15	Rating plate
16	Base
17	Base lock washer
18	Coupling
19	Key
20	Motor connector

* Recommended spare parts

Dimensions and weights, LHX series

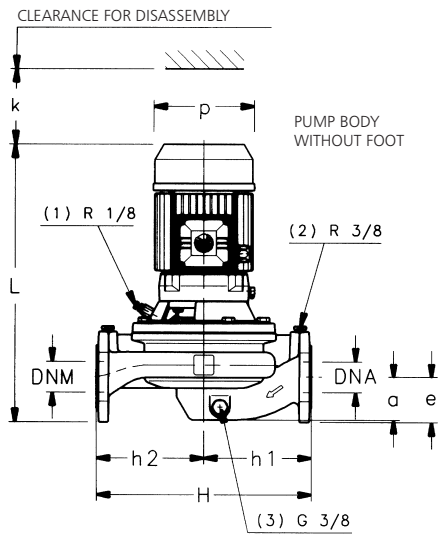


Flanges

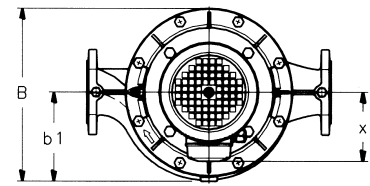
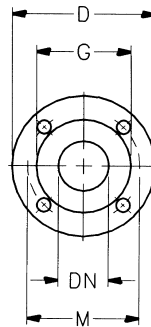
DN	D	M	G	Holes		Max thickness
				N°	Ø	
32	140	100	78	4	18	18
40	150	110	88	4	18	18
50	165	125	102	4	18	20
65	185	145	122	4	18	20
80	200	160	138	8	18	22
100	220	180	158	8	18	22

Pump type	Dimensions in mm													Weight kg
	DNM	DNA	a	e	h1	h2	x	b1	p	B	H max	L	k	
LHX 40-125/07	40	40	70	70	160	160	129	116	155	230	320	448	86	27
LHX 40-125/11	40	40	70	70	160	160	129	116	155	230	320	448	86	29
LHX 40-160/15	40	40	70	70	160	160	129	116	155	235	320	448	86	31
LHX 40-160/22	40	40	70	70	160	160	129	116	155	235	320	448	86	33
LHX 40-220/40A	40	40	95	65	220	220	133	163	193	502	440	548	98	65
LHX 40-200/401	40	40	95	65	220	220	133	163	193	502	440	548	98	65
LHX 40-200/55	40	40	95	65	220	220	151	163	220	325	440	548	98	72
LHX 40-250/75	40	40	95	65	220	220	151	163	220	325	440	548	98	76
LHX 40-250/110	40	40	95	65	220	220	191	163	257	354	440	599	98	99
LHX 50-125/11	50	50	69	73	170	170	129	122	155	243	340	457	88	32
LHX 50-125/15	50	50	69	73	170	170	129	122	155	243	340	457	88	35
LHX 50-160/22	50	50	69	73	170	170	129	122	155	243	340	457	88	37
LHX 50-160/30	50	50	69	73	170	170	121	122	176	236	340	475	88	39
LHX 50-160/40	50	50	69	73	170	170	133	122	193	247	340	501	88	47
LHX 50-200/55	50	50	110	73	220	220	151	163	220	326	440	577	100	72
LHX 50-200/75	50	50	110	73	220	220	151	163	220	326	440	577	100	79
LHX 50-200/92	50	50	110	73	220	220	191	163	257	354	440	628	100	93
LHX 50-250/110	50	50	110	73	220	220	191	163	257	354	440	628	100	99
LHX 50-250/150	50	50	110	73	220	220	232	163	310	395	440	712	100	123
LHX 65-125/22	65	65	77	83	170	170	129	137	155	274	340	476	92	45
LHX 65-125/30	65	65	77	83	170	170	121	137	176	274	340	494	92	47
LHX 65-125/40	65	65	77	83	170	170	133	137	193	274	340	520	92	56
LHX 65-160/55	65	65	77	83	170	170	151	137	220	288	340	566	92	65
LHX 65-160/75	65	65	77	83	170	170	151	137	220	288	340	566	92	69
LHX 65-200/92	65	65	119	83	237,5	237,5	191	172	257	354	475	633	104	96
LHX 65-200/110	65	65	119	83	237,5	237,5	191	172	257	354	475	633	104	105
LHX 65-250/150	65	65	119	83	237,5	237,5	232	172	310	395	475	717	104	130
LHX 65-250/185	65	65	119	83	237,5	237,5	232	172	310	395	475	761	104	140
LHX 65-250/220	65	65	119	83	237,5	237,5	232	172	310	395	475	761	104	154
LHX 80-125/30	80	80	90	90	175	185	121	148	176	287	360	528	102	59
LHX 80-125/40	80	80	90	90	175	185	133	148	193	287	360	554	102	69
LHX 80-125/55	80	80	90	90	175	185	151	148	220	290	360	600	102	77
LHX 80-160/75	80	80	90	90	175	185	151	148	220	290	360	600	102	81
LHX 80-200/110	80	80	130	90	250	250	191	184	257	354	500	660	112	112
LHX 80-200/150	80	80	130	90	250	250	232	184	310	395	500	788	112	140
LHX 80-200/185	80	80	130	90	250	250	232	184	310	395	500	788	112	155
LHX 80-200/220	80	80	130	90	250	250	232	184	310	395	500	788	112	165
LHX 100-160/110	100	100	105	105	225	191	172	257		330	450	675	117	98
LHX 100-200/185	100	100	140	105	275	275	232	196	310	398	550	809	129	155
LHX 100-200/220	100	100	140	105	275	275	232	196	310	398	550	809	129	169

Dimensions and weights, LHX4 series



- (1) R 1/8 AIR VALVE
- (2) R 3/8 PRESSURE
- (3) G 3/8 DRAIN

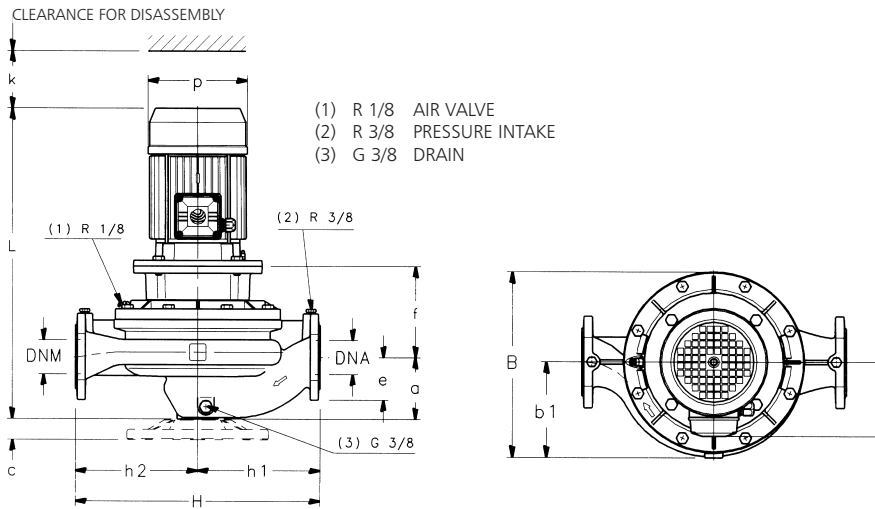


Flanges

DN	D	M	G	Holes		Max thickness
				N°	Ø	
32	140	100	78	4	18	18
40	150	110	88	4	18	18
50	165	125	102	4	18	20
65	185	145	122	4	18	20
80	200	160	138	8	18	22
100	220	180	158	8	18	22

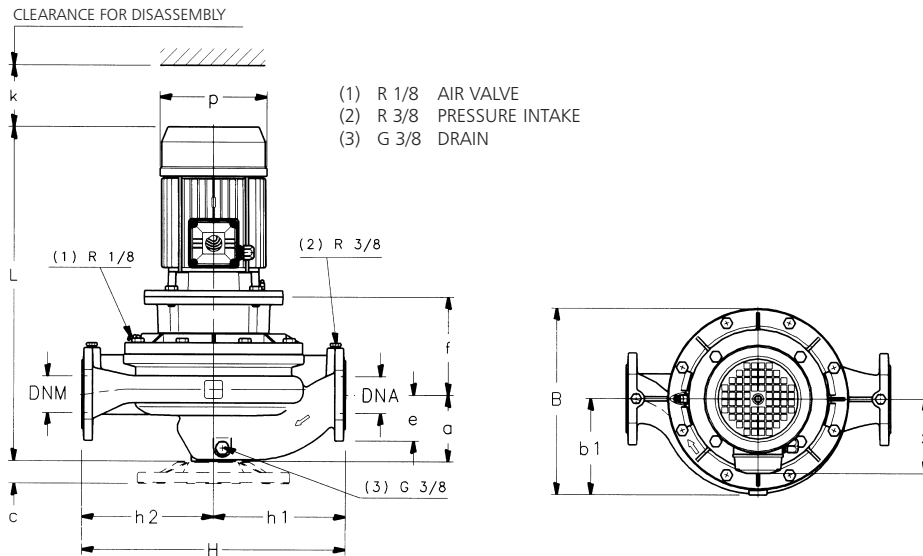
Pump type	Dimensions in mm													Weight kg
	DNM	DNA	a	e	h1	h2	x	b1	p	B max	H	L	k	
LHX4 40-125/02A	40	40	70	70	160	160	101	116	141	230	320	400	86	24
LHX4 40-125/02	40	40	70	70	160	160	101	116	141	230	320	400	86	24
LHX4 40-160/02	40	40	70	70	160	160	101	116	141	230	320	400	86	25
LHX4 40-160/03	40	40	70	70	160	160	101	116	141	230	320	400	86	26
LHX4 40-200/05	40	40	95	65	220	220	116	163	160	325	440	447	98	43
LHX4 40-200/07	40	40	95	65	220	220	116	163	160	325	440	447	98	43
LHX4 40-250/11	40	40	95	65	220	220	121	163	176	325	440	476	98	45
LHX4 40-250/15	40	40	95	65	220	220	121	163	176	325	440	476	98	45
LHX4 50-125/02	50	50	69	73	170	170	101	122	141	236	340	409	88	24
LHX4 50-125/03	50	50	69	73	170	170	101	122	141	236	340	409	88	24
LHX4 50-160/05	50	50	69	73	170	170	116	122	160	236	340	446	88	27
LHX4 50-200/07	50	50	110	73	220	220	116	163	160	326	440	476	100	43
LHX4 50-200/11	50	50	110	73	220	220	121	163	176	326	440	505	100	49
LHX4 50-250/15	50	50	110	73	220	220	121	163	176	326	440	505	100	51
LHX4 50-250/22	50	50	110	73	220	220	133	163	193	326	440	531	100	60
LHX4 65-125/03	65	65	77	83	170	170	101	137	141	274	340	428	92	33
LHX4 65-125/05	65	65	77	83	170	170	116	137	160	274	340	465	92	36
LHX4 65-160/07	65	65	77	83	170	170	116	137	160	274	340	465	92	36
LHX4 65-160/11	65	65	77	83	170	170	121	137	176	274	340	494	92	43
LHX4 65-200/15	65	65	119	83	237,5	237,5	121	172	176	335	475	510	104	60
LHX4 65-250/22	65	65	119	83	237,5	237,5	133	172	193	335	475	536	104	64
LHX4 65-250/30	65	65	119	83	237,5	237,5	133	172	193	335	475	536	104	75
LHX4 80-125/07	80	80	90	90	175	185	116	148	160	287	360	499	102	60
LHX4 80-125/11	80	80	90	90	175	185	121	148	176	287	360	528	102	64
LHX4 80-200/15	80	80	130	90	250	250	121	184	176	347	500	537	112	75
LHX4 80-200/22	80	80	130	90	250	250	133	184	193	347	500	563	112	71
LHX4 80-200/30	80	80	130	90	250	250	133	184	193	347	500	563	112	80
LHX4 80-250/40	80	80	130	90	250	250	151	184	220	347	500	586	112	103
LHX4 80-250/55	80	80	130	90	250	250	191	184	257	354	500	622	112	108
LHX4 100-160/15	100	100	105	105	225	225	121	172	176	311	450	552	117	64
LHX4 100-200/22	100	100	140	105	275	275	133	196	193	362	550	584	129	93
LHX4 100-200/30	100	100	140	105	275	275	133	196	193	362	550	584	129	100
LHX4 100-250/40	100	100	140	105	275	275	151	196	220	362	550	607	129	105
LHX4 100-250/55	100	100	140	105	275	275	191	196	257	362	550	643	129	108
LHX4 100-250/75	100	100	140	105	275	275	191	196	257	362	550	681	129	111

Dimensions and weights, LHS series



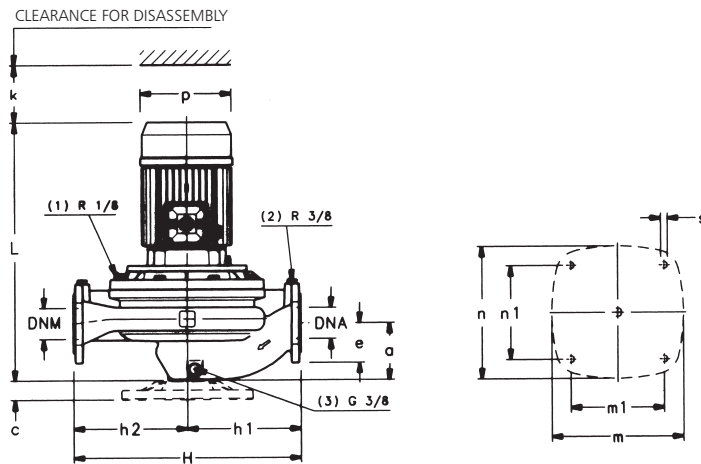
Pump type	Dimensions in mm														Weight kg
	DNM	DNA	a	e	f	h1	h2	x	b1	p	B	H max	L	k	
LHS 40-125/07	40	40	70	70	170	160	160	121	116	140	230	320	466	86	32
LHS 40-125/11	40	40	70	70	170	160	160	129	116	155	230	320	503	86	34
LHS 40-160/15	40	40	70	70	170	160	160	129	116	155	230	320	503	86	36
LHS 40-160/22	40	40	70	70	170	160	160	129	116	155	235	320	503	86	39
LHS 40-200/30	40	40	95	65	165	220	220	121	163	176	325	440	563	98	54
LHS 40-200/40	40	40	95	65	165	220	220	133	163	193	325	440	567	98	67
LHS 40-200/55	40	40	95	65	192	220	220	151	163	220	325	440	661	98	76
LHS 40-250/75	40	40	95	65	192	220	220	151	163	220	325	440	661	98	79
LHS 40-250/110	40	40	95	65	222	220	220	191	163	257	354	440	744	98	120
LHS 50-125/11	50	50	69	73	176	170	170	129	122	155	236	340	512	88	34
LHS 50-125/15	50	50	69	73	176	170	170	129	122	155	236	340	512	88	37
LHS 50-160/22	50	50	69	73	176	170	170	129	122	155	236	340	512	88	40
LHS 50-160/30	50	50	69	73	186	170	170	121	122	176	236	340	562	88	45
LHS 50-160/40	50	50	69	73	186	170	170	133	122	193	247	340	566	88	47
LHS 50-200/55	50	50	110	73	206	220	220	151	163	220	326	440	690	100	76
LHS 50-200/75	50	50	110	73	206	220	220	151	163	220	326	440	690	100	80
LHS 50-250/110A	50	50	110	73	236	220	220	191	163	257	354	440	773	100	120
LHS 50-250/110	50	50	110	73	236	220	220	191	163	257	354	440	773	100	120
LHS 50-250/150	50	50	110	73	236	220	220	232	163	310	395	440	834	100	137
LHS 65-125/22	65	65	77	83	185	170	170	129	137	155	274	340	531	92	46
LHS 65-125/30	65	65	77	83	195	170	170	121	137	176	274	340	581	92	50
LHS 65-125/40	65	65	77	83	195	170	170	153	137	193	274	340	585	92	59
LHS65-160/55	65	65	77	83	222	170	170	151	137	20	288	340	679	92	80
LHS 65-160/75	65	65	77	83	222	170	170	151	137	20	288	340	679	92	84
LHS 65-200/110A	65	65	119	83	232	237,5	237,5	191	172	257	354	475	778	104	115
LHS 65-200/110	65	65	119	83	232	237,5	237,5	191	172	257	354	475	778	104	115
LHS 65-255/150	65	65	119	83	232	237,5	237,5	232	172	310	395	475	839	104	140
LHS 65-250/185	65	65	119	83	232	237,5	237,5	232	172	310	395	475	883	104	153
LHS 65-250/220	65	65	119	83	232	237,5	237,5	232	172	310	395	475	883	104	167
LHS 80-125/30	80	80	90	90	222	175	185	121	148	176	287	360	615	102	68
LHS 80-125/40	80	80	90	90	222	175	185	133	148	193	287	360	619	102	73
LHS 80-125/55	80	80	90	90	249	175	185	151	148	220	290	360	713	102	84
LHS 80-160/75	80	80	90	90	249	175	185	151	148	220	290	360	713	102	87
LHS 80-200/110	80	80	130	90	248	250	250	191	184	257	354	500	805	112	126
LHS 80-200/150	80	80	130	90	248	250	250	191	184	257	354	500	866	112	149
LHS 80-200/185	80	80	130	90	248	250	250	232	184	310	395	500	910	112	149
LHS 80-200/220	80	80	130	90	248	250	250	232	184	310	395	500	910	112	170
LHS 100-160/110	100	100	105	105	288	225	225	191	172	257	330	450	820	117	130
LHS 100-200/185	100	100	140	105	259	275	275	232	196	310	398	550	931	129	160
LHS 100-200/220	100	100	140	105	259	275	275	232	196	310	398	550	931	129	180

Dimensions and weights, LHS4 series



Pump type	Dimensions in mm										B	H max	L	k	Weight kg
	DNM	DNA	a	e	f	h1	h2	x	b1	p					
LHS4 40-200/05	40	40	95	65	155	220	220	116	163	160	325	440	492	98	50
LHS4 40-200/07	40	40	95	65	155	220	220	116	163	160	325	440	492	98	52
LHS4 40-250/11	40	40	95	65	155	220	220	121	163	176	325	440	531	98	53
LHS4 40-250/15	40	40	95	65	155	220	220	121	163	176	325	440	531	98	53
LHS4 50-200/07	50	50	110	73	169	220	220	116	163	160	326	440	521	100	44
LHS4 50-200/11	50	50	110	73	169	220	220	121	163	176	326	440	560	100	51
LHS4 50-250/15	50	50	110	73	169	220	220	121	163	176	326	440	560	100	63
LHS4 50-250/22	50	50	110	73	179	220	220	133	163	193	326	440	596	100	68
LHS4 65-160/07	65	65	77	83	185	170	170	116	137	160	274	340	510	92	48
LHS4 65-160/11	65	65	77	83	185	170	170	121	137	176	274	340	549	92	53
LHS4 65-200/15	65	65	119	83	165	237,5	237,5	121	172	176	335	475	565	104	65
LHS4 65-250/22	65	65	119	83	175	237,5	237,5	133	172	193	335	475	601	104	68
LHS4 65-250/30	65	65	119	83	175	237,5	237,5	133	172	193	335	475	601	104	80
LHS4 80-125/07	80	80	90	90	212	175	185	116	148	160	287	360	544	102	54
LHS4 80-125/11	80	80	90	90	212	175	185	121	148	176	287	360	583	102	57
LHS4 80-200/15	80	80	130	90	181	250	250	121	184	176	347	500	592	112	77
LHS4 80-200/22	80	80	130	90	191	250	250	133	184	193	347	500	628	112	75
LHS4 80-200/30	80	80	130	90	191	250	250	133	184	193	347	500	628	112	85
LHS4 80-250/40	80	80	130	90	191	250	250	151	184	220	347	500	651	112	109
LHS4 80-250/55	80	80	130	90	218	250	250	191	184	257	354	500	714	112	115
LHS4 100-160/15	100	100	105	105	221	225	225	121	172	176	311	450	607	117	72
LHS4 100-200/22	100	100	140	105	202	275	275	133	196	193	362	550	649	129	98
LHS4 100-200/30	100	100	140	105	202	275	275	133	196	193	362	550	649	129	105
LHS4 100-250/40	100	100	140	105	202	275	275	151	196	220	362	550	672	129	113
LHS4 100-250/55	100	100	140	105	229	275	275	191	196	257	362	550	735	129	116
LHS4 100-250/75	100	100	140	105	229	275	275	191	196	257	362	550	773	129	120

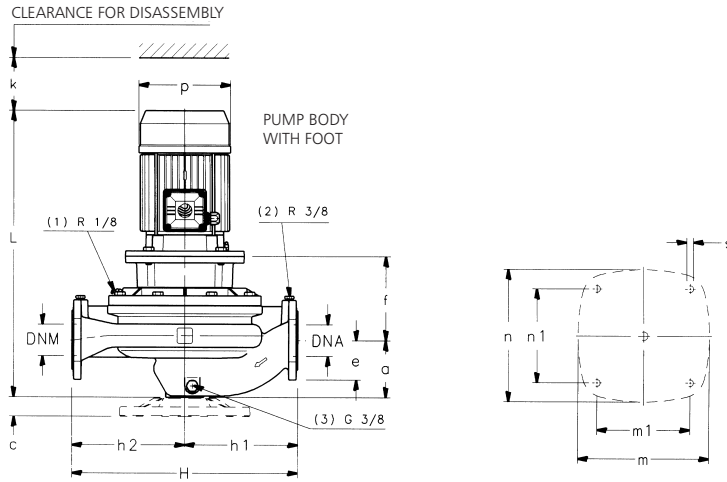
LHX support



Pump type	Dimensions in mm					
	c	m	m1	n	n1	s
LHX 40-125/07						
LHX 40-125/11						
LHX 40-160/15						
LHX 40-160/22						
LHX 40-200/40A	40	275	195	275	195	14
LHX 40-200/40	40	275	195	275	195	14
LHX 40-200/55	40	275	195	275	195	14
LHX 40-250/75	40	275	195	275	195	14
LHX 40-250/110	40	275	195	275	195	14
LHX 50-125/11						
LHX 50-125/15						
LHX 50-160/22						
LHX 50-160/30						
LHX 50-160/40						
LHX 50-200/40	40	275	195	275	195	14
LHX 50-200/55	40	275	195	275	195	14
LHX 50-200/75	40	275	195	275	195	14
LHX 50-250/92	40	275	195	275	195	14
LHX 50-250/110	40	275	195	275	195	14
LHX 50-250/150	40	275	195	275	195	14
LHX 65-125/22						
LHX 65-125/30						
LHX 65-125/40						
LHX 65-160/55						
LHX 65-160/75						
LHX 65-200/92	40	275	195	275	195	14
LHX 65-200/110	40	275	195	275	195	14
LHX 65-250/150	40	275	195	275	195	14
LHX 65-250/185	40	275	195	275	195	14
LHX 65-250/220	40	275	195	275	195	14
LHX 80-125/30						
LHX 80-125/40						
LHX 80-125/55						
LHX 80-160/75						
LHX 80-200/110	40	275	195	275	195	14
LHX 80-200/150	40	275	195	275	195	14
LHX 80-200/185	40	275	195	275	195	14
LHX 80-200/220	40	275	195	275	195	14
LHX 100-160/110						
LHX 100-200/185	40	275	195	275	195	14
LHX 100-200/220	40	275	195	275	195	14

Pump type	Dimensions in mm					
	c	m	m1	n	n1	s
LHX4 40-125/02A						
LHX4 40-125/02						
LHX4 40-160/02						
LHX4 40-160/03						
LHX4 40-200/05	40	275	195	275	195	14
LHX4 40-200/07	40	275	195	275	195	14
LHX4 40-250/11	40	275	195	275	195	14
LHX4 40-250/15	40	275	195	275	195	14
LHX4 50-125/02						
LHX4 50-125/03						
LHX4 50-160/05						
LHX4 50-200/07	40	275	195	275	195	14
LHX4 50-200/11	40	275	195	275	195	14
LHX4 50-250/15	40	275	195	275	195	14
LHX4 50-250/22	40	275	195	275	195	14
LHX4 65-125/03						
LHX4 65-125/05						
LHX4 65-160/07						
LHX4 65-160/11						
LHX4 65-200/11	40	275	195	275	195	14
LHX4 65-200/15	40	275	195	275	195	14
LHX4 65-250/22	40	275	195	275	195	14
LHX4 65-250/30	40	275	195	275	195	14
LHX4 80-125/07						
LHX4 80-125/11						
LHX4 80-160/15						
LHX4 80-200/15	40	275	195	275	195	14
LHX4 80-200/22	40	275	195	275	195	14
LHX4 80-200/30	40	275	195	275	195	14
LHX4 80-250/30	40	275	195	275	195	14
LHX4 80-250/40	40	275	195	275	195	14
LHX4 80-250/55	40	275	195	275	195	14
LHX4 100-160/15						
LHX4100-200/22	40	275	195	275	195	14
LHX4 100-200/30	40	275	195	275	195	14
LHX4 100-200/40	40	275	195	275	195	14
LHX4 100-250/40	40	275	195	275	195	14
LHX4 100-250/55	40	275	195	275	195	14
LHX4 100-250/75	40	275	195	275	195	14

LHS support



Pump type	Dimensions in mm					
	c	m	m1	n	n1	s
LHS 40-125/7						
LHS 40-125/11						
LHS 40-160/15						
LHS 40-160/22						
LHS 40-200/30	40	275	195	275	195	14
LHS 40-200/40	40	275	195	275	195	14
LHS 40-200/55	40	275	195	275	195	14
LHS 40-250/75	40	275	195	275	195	14
LHS 40-250/110	40	275	195	275	195	14
LHS 50-125/11						
LHS 50-125/15						
LHS 50-160/22						
LHS 50-160/30	40	275	195	275	195	14
LHS 50-160/40	40	275	195	275	195	14
LHS 50-200/55	40	275	195	275	195	14
LHS 50-200/75	40	275	195	275	195	14
LHS 50-250/110A	40	275	195	275	195	14
LHS 50-250/110	40	275	195	275	195	14
LHS 50-250/150	40	275	195	275	195	14
LHS 65-125/22						
LHS 65-125/30						
LHS 65-125/40						
LHS 65-160/55						
LHS 65-160/75						
LHS 65-200/110A	40	275	195	275	195	14
LHS 65-200/110	40	275	195	275	195	14
LHS 65-250/150	40	275	195	275	195	14
LHS 65-250/185	40	275	195	275	195	14
LHS 65-250/220	40	275	195	275	195	14
LHS 80-125/30						
LHS 80-125/40						
LHS 80-125/55						
LHS 80-160/75						
LHS 80-200/110	40	275	195	275	195	14
LHS 80-200/150	40	275	195	275	195	14
LHS 80-200/185	40	275	195	275	195	14
LHS 80-200/220	40	275	195	275	195	14
LHS 100-160/110						
LHS 100-200/185	40	275	195	275	195	14
LHS 100-200/220	40	275	195	275	195	14

Pump type	Dimensions in mm					
	c	m	m1	n	n1	s
LHS4 40-200/05	40	275	195	275	195	14
LHS4 40-200/07	40	275	195	275	195	14
LHS4 40-250/11	40	275	195	275	195	14
LHS4 40-250/15	40	275	195	275	195	14
LHS4 50-200/07	40	275	195	275	195	14
LHS4 50-200/11	40	275	195	275	195	14
LHS4 50-250/15	40	275	195	275	195	14
LHS4 50-250/22	40	275	195	275	195	14
LHS4 65-160/07						
LHS4 65-160/11						
LHS4 65-200/15	40	275	195	275	195	14
LHS4 65-250/22	40	275	195	275	195	14
LHS4 65-250/30	40	275	195	275	195	14
LHS4 80-125/07						
LHS4 80-125/11						
LHS4 80-200/15	40	275	195	275	195	14
LHS4 80-200/22	40	275	195	275	195	14
LHS4 80-200/30	40	275	195	275	195	14
LHS4 80-250/40	40	275	195	275	195	14
LHS4 80-250/55	40	275	195	275	195	14
LHS4 100-160/15						
LHS4 100-200/22	40	275	195	275	195	14
LHS4 100-200/30	40	275	195	275	195	14
LHS4 100-200/40	40	275	195	275	195	14
LHS4 100-250/40	40	275	195	275	195	14
LHS4 100-250/55	40	275	195	275	195	14
LHS4 100-250/75	40	275	195	275	195	14



Clean water

- Vertical multistage pumps with delivery heads of up to 330 metres.
- Cast iron and stainless steel and suction pumps.
- Smaller stainless steel pumps with threaded connections.
- Most models can be equipped with Technovar pump controller for optimum operating economy.
- 0,25–75 kW.

FX – submersible boreholes pumps 4" and 6"123
HX – submersible 5" water supply 6 irrigation pumps154
JET – self priming centrifugal pumps made of stainless steel.157
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CH – norm pumps made of cast iron201
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Introduction

Submersible borehole pumps made mainly of AISI 304 stainless steel. The pumps are designed to be abrasion resistant for long life.

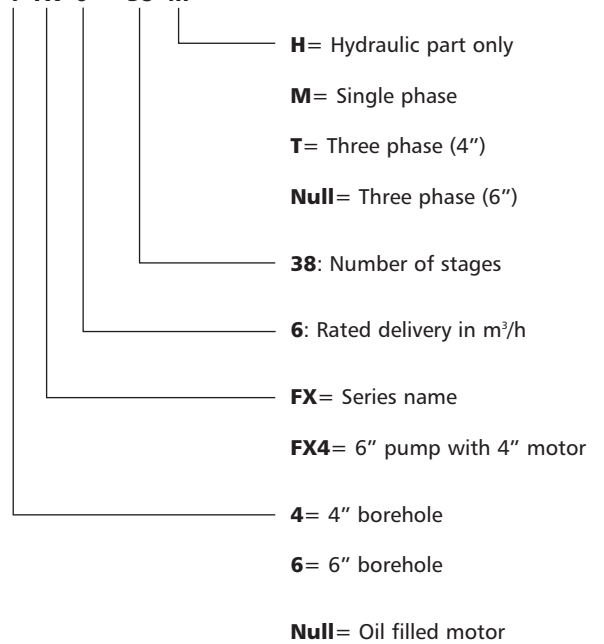
Maximum delivery: 78 m³/h
 Maximum head: 410 m

Applications

- Water supply
- Sprinkler irrigation systems
- Fire fighting
- Irrigation

Product identity

4 FX 6 - 38 M



DESIGN 4FX

Construction, pump

- Impellers and diffusers of polycarbonate, reinforced with fiberglass, protected on the edge by wear rings in stainless steel
- Injection moulded thermoplastic process allows optimum thickness and shape for best hydraulic efficiency

- External casing threaded and screwed on the stator.
- Easy access for simple maintenance: the stator e.g can be removed from the external shell for rewind.

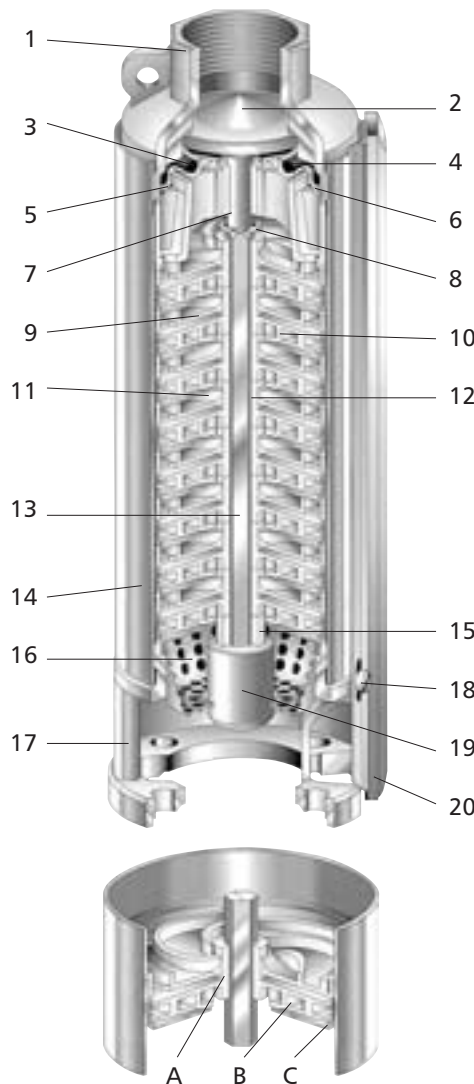
Construction, motor

- Outer casing with precision roll formed threading

- Non-toxic in coolant bath
- Generous space and positioning of inner parts for easy maintenance
- The stator can be loosened and withdrawn from the casing to be rewound
- Back in the casing, screwed into position, the stator will be perfectly centred

Pump components

- 1 Upper head AISI 303, precision casting
- 2 Valve plate AISI 304
- 3 Valve seat AISI 304
- 4 Valve packing, nitrile rubber, FDA approved
- 5 Valve check ring AISI 302
- 6 Upper bracket, glass-filled polycarbonate, FDA approved
- 7 Upper bearing polyurethane, FDA approved
- 8 Snap ring AISI 301
- 9 Diffuser, glass-filled polycarbonate, FDA approved
- 10 Impeller, glass-filled polycarbonate, FDA approved
- 11 Diffuser housing AISI 304
- 12 SHIM 0.25 mm AISI 304
- 13 Shaft AISI 304
- 14 Outer casing AISI 304
- 15 Spacer AISI 304, sintered
- 16 Filter AISI 304
- 17 Lower adapter AISI 303, precision casting
- 18 Cable cover screw AISI 304
- 19 Coupling AISI 304, sintered
- 20 Outside cover



Avoiding sand abrasion. With the floating impeller (A) the pressure keeps the face clearance ring (B) pressed against the stainless steel enclosure (C). Floating upwards, the impeller lets abrasive particles through without resistance, without causing wear.

DESIGN 6FX

Construction, pump

Almost entirely made in stainless steel, the 6FX pumps are sturdy and light, easy to assemble and corrosion-resistant in non-aggressive environments. The guide bearings and wear rings are made of a special high-nitrile rubber to ensure stronger resistance to wear and abrasion. The surfaces in contact with the fluid have been made extremely smooth to ensure

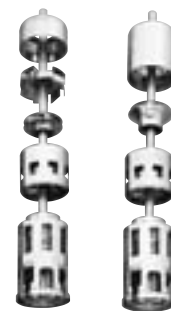
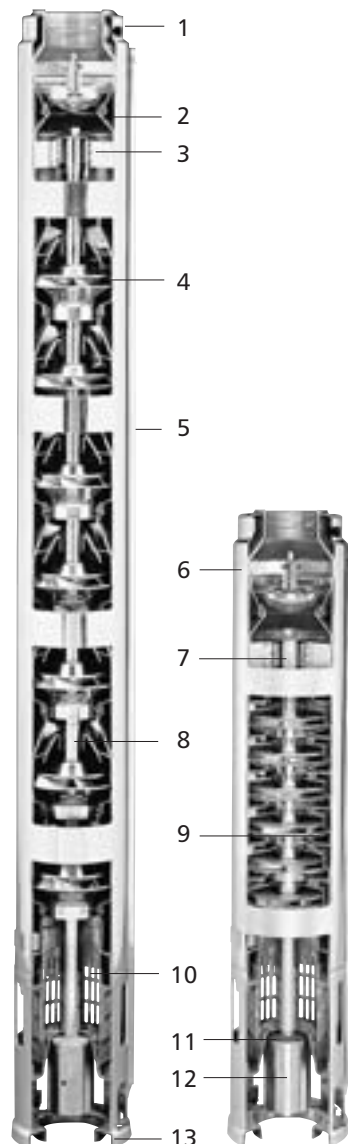
high performance and low energy consumption.

Construction, motor

- Outer casing in roll-formed stainless steel
- Non-toxic filling liquid (with purity according to Italian Pharmacopea and FDA standards) lubricating the bearing and cooling the windings

- Shaft supported by angular contact, ball-bearing type
- Mechanical seal on the shaft with external labyrinth sand-proof protection
- Elastic diaphragm compensating the filling liquid thermal expansion and the pressure gradients
- Stator with enamel-coated copper wire
- Rewindable stator

- Pump components**
- 1 Grub screw preventing pipes from screwing off
 - 2 Check valve
 - 3 Upper bearing designed to optimize lubrication
 - 4 Semi-axial impeller
 - 5 Cable guard
 - 6 Pump's casing & discharge connection
 - 7 Upper bearing designed to optimize lubrication
 - 8 4-spline shaft, transfers the drive directly without keys
 - 9 Radial impeller
 - 10 Suction grid
 - 11 Thrust washer to protect the hydraulic elements from upthrust at the start
 - 12 Splined coupling suitable for coupling with NEMA standard motors
 - 13 Lower bracket in pressed stainless steel, ensuring perfect alignment



Two flow versions. The pumps are subdivided into two groups (A) radial flow for high discharge heads, up to 410 m, and low flow rates, up to 30 m³/h; (B) semi-axial flow for medium flow heads and rates, up to 270 m and 78 m³/h.



4FX 1

Product

Submersible borehole pump for 4" boreholes made of AISI 304. The motor is filled with FDA approved oil.

Denomination

Product code 4FX 1

Process data

Liquid temperature max 30° C
Suspended sand max 150 g/m³

Motor data

Frequency 50 Hz
Insulation class B (+125° C)
Protection class IP 58
Immersion depth max 150 m
Starts per hour max 30
Voltage variations from rated voltage max -10%/ +6%

Cable

Dimension 4x1,5 mm²
Length up to 2,2 kW 1,8 m
Length from 3 kW 2,5 m

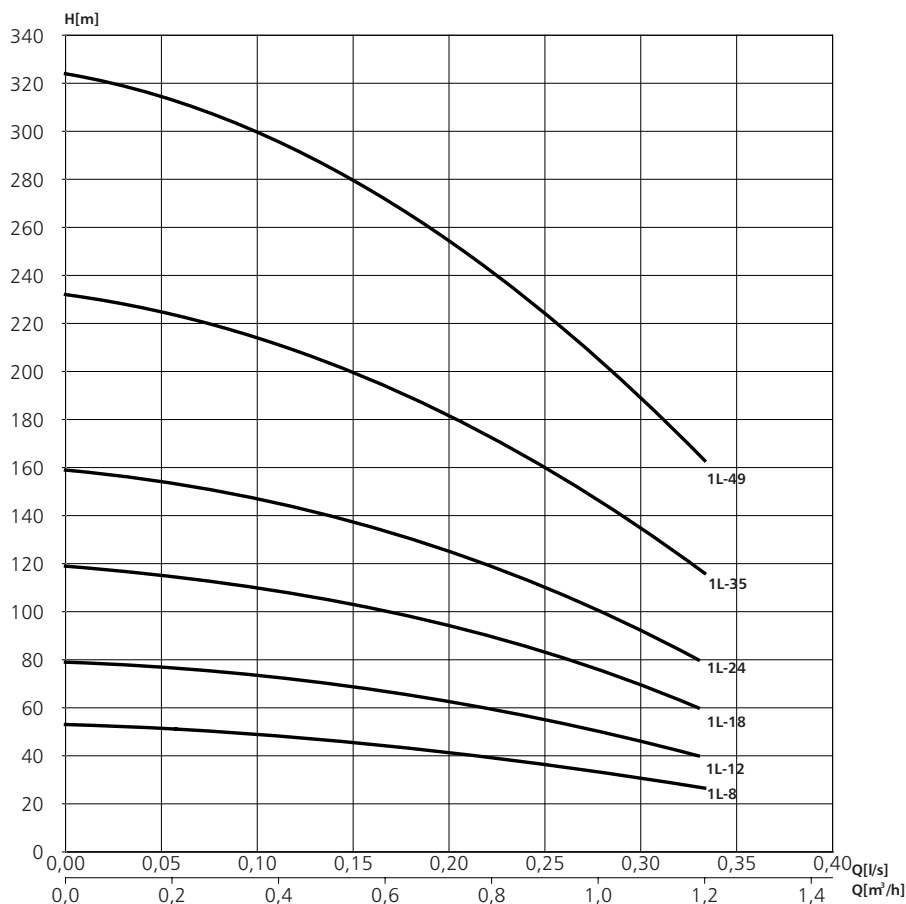
Monitoring equipment

To be provided at installation

Material

Pump	Material
Upper head	Stainless steel AISI 303
Valve cap	Stainless steel AISI 304
Valve seat	Stainless steel AISI 303
Valve gasket	Nitrile rubber
Valve stop ring	Stainless steel AISI 302
Upper support	Polycarbonate/fiberglass
Upper bearing	Polyurethane
Snapping	Stainless steel AISI 304
Diffuser	Polycarbonate/fiberglass
Impeller	Polycarbonate/fiberglass
Diffuser case	Stainless steel AISI 304
Shim	Stainless steel AISI 304
Pump shaft	Stainless steel AISI 304
Outer sleeve	Stainless steel AISI 304
Spacer	Stainless steel AISI 304
Filter	Stainless steel AISI 304
Spiders	Stainless steel AISI 304
Coupling	Stainless steel AISI 304
Cable cover screws	Stainless steel AISI 304
Cable cover	Stainless steel AISI 304
Motor	Material
Outer sleeve	Stainless steel AISI 304
Shaft extension	Stainless steel AISI 304
Upper support	Pressed brass alloy
Mechanical seal	Carbon ceramic with sand labyrinth
Elastomers	Nitrile rubber
Lower protection	Stainless steel AISI 304
Compensation bellows	Oil resistant rubber
Cooling liquid	ESSO MARCOL

Performance curves



Motor rating, dimensions and weight

3 phase

Pumptype	Motor power		Input current In (A)		Data for 400 V 50 Hz				Dimensions Length (mm)			Weight (kg)	
	kW	HP	230 V	400 V	rpm	Is/In	η%	cosφ	Total	Pump only	Outlet	Total	Pump only
4FX 1-12T	0,37	0,5	1,9	1,1	2850	4,3	65	0,7	701	367	Rp 1 1/4"	12,1	3,9
4FX 1-18T	0,55	0,75	2,8	1,6	2840	3,9	66	0,75	826	472	Rp 1 1/4"	14,0	4,9
4FX 1-24T	0,75	1,0	3,7	2,1	2855	4,4	65	0,75	959	577	Rp 1 1/4"	16,1	5,8
4FX 1-35T	1,1	1,5	5,2	3,0	2825	4,9	72	0,76	1203	799	Rp 1 1/4"	19,8	8,3
4FX 1-49T	1,5	2,0	7,0	4,0	2840	4,9	71	0,76	1476	1043	Rp 1 1/4"	23,9	11,4

1 phase

Pumptype	Motor power		Input current In (A)		Capacitor		Data for 230 V 50 Hz				Dimensions Length (mm)			Weight (kg)	
	kW	HP	230 V	μF	V	rpm	Is/In	η%	cosφ	Total	Pump only	Outlet	Total	Pump only	
4FX 1-8M	0,25	0,33	2,4	12,5	450	2835	3,5	50	0,92	632	298	Rp 1 1/4"	11,7	3,1	
4FX 1-12M	0,37	0,5	3,4	16	450	2825	3,5	53	0,94	722	367	Rp 1 1/4"	13,2	3,9	
4FX 1-18M	0,55	0,75	4,4	20	450	2815	3,3	60	0,96	854	472	Rp 1 1/4"	15,7	4,9	
4FX 1-24M	0,75	1,0	5,5	30	450	2825	3,4	60	0,95	981	577	Rp 1 1/4"	17,7	5,8	
4FX 1-35M	1,1	1,5	7,9	40	450	2820	3,5	63	0,98	1232	799	Rp 1 1/4"	21,1	8,3	
4FX 1-49M	1,5	2,0	10,1	50	450	2810	3,4	66	0,98	1504	1043	Rp 1 1/4"	25,4	11,4	



4FX 2

Product

Submersible borehole pump for 4" boreholes made of AISI 304. The motor is filled with FDA approved oil.

Denomination

Product code 4FX 2

Process data

Liquid temperature max 30° C
Suspended sand max 150 g/m³

Motor data

Frequency 50 Hz
Insulation class B (+125° C)
Protection class IP 58
Immersion depth max 150 m
Starts per hour max 30
Voltage variations from rated voltage max -10%/ +6%

Cable

Dimension 4x1,5 mm²
Length up to 2,2 kW 1,8 m
Length from 3 kW 2,5 m

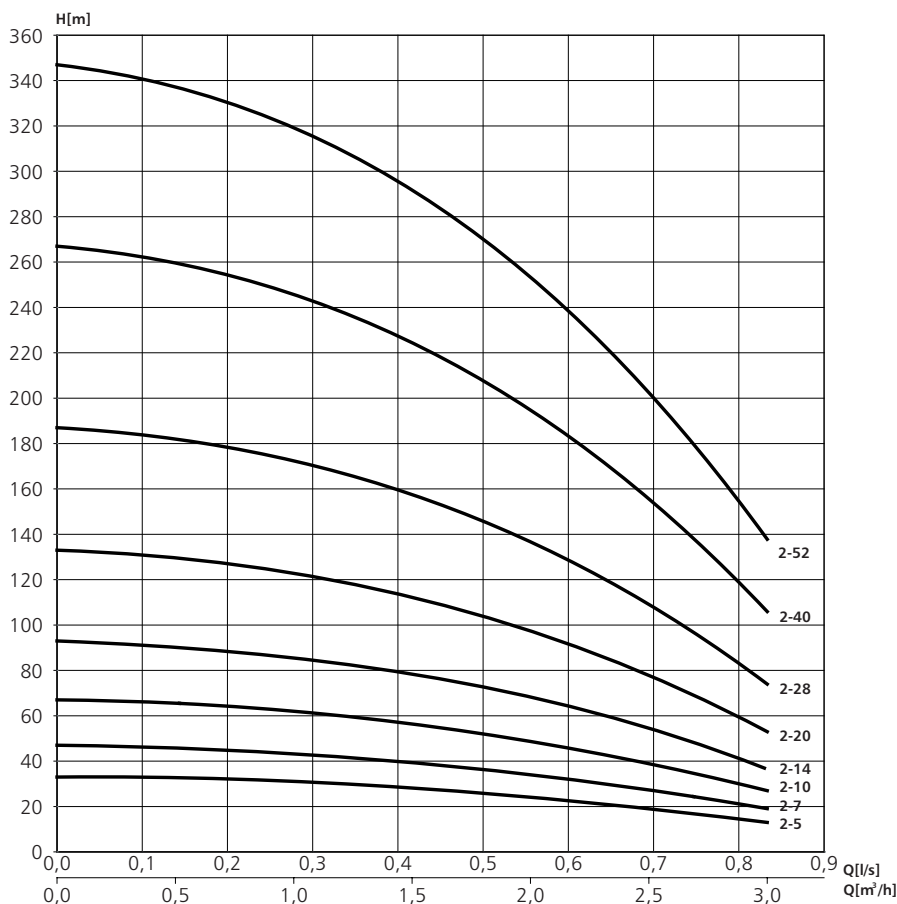
Monitoring equipment

To be provided at installation

Material

Pump	Material
Upper head	Stainless steel AISI 303
Valve cap	Stainless steel AISI 304
Valve seat	Stainless steel AISI 303
Valve gasket	Nitrile rubber
Valve stop ring	Stainless steel AISI 302
Upper support	Polycarbonate/fiberglass
Upper bearing	Polyurethane
Snapping	Stainless steel AISI 304
Diffuser	Polycarbonate/fiberglass
Impeller	Polycarbonate/fiberglass
Diffuser case	Stainless steel AISI 304
Shim	Stainless steel AISI 304
Pump shaft	Stainless steel AISI 304
Outer sleeve	Stainless steel AISI 304
Spacer	Stainless steel AISI 304
Filter	Stainless steel AISI 304
Spiders	Stainless steel AISI 304
Coupling	Stainless steel AISI 304
Cable cover screws	Stainless steel AISI 304
Cable cover	Stainless steel AISI 304
Motor	Material
Outer sleeve	Stainless steel AISI 304
Shaft extension	Stainless steel AISI 304
Upper support	Pressed brass alloy
Mechanical seal	Carbon ceramic with sand labyrinth
Elastomers	Nitrile rubber
Lower protection	Stainless steel AISI 304
Compensation bellows	Oil resistant rubber
Cooling liquid	ESSO MARCOL

Performance curves



Motor rating, dimensions and weight

3 phase

Pumptype	Motor power		Input current In (A)		Data for 400 V 50 Hz				Dimensions Length (mm)			Weight (kg)	
	kW	HP	230 V	400 V	rpm	ls/ln	η%	cosφ	Total	Pump only	Outlet	Total	Pump only
4FX 2-7T	0,37	0,5	1,9	1,1	2850	4,3	65	0,7	614	280	Rp 1 1/4"	11,2	2,7
4FX 2-10T	0,55	0,75	2,8	1,6	2840	3,9	66	0,75	686	332	Rp 1 1/4"	12,6	3,3
4FX 2-14T	0,75	1,0	3,7	2,1	2855	4,4	65	0,75	784	402	Rp 1 1/4"	14,5	3,9
4FX 2-20T	1,1	1,5	5,2	3,0	2825	4,9	72	0,76	911	507	Rp 1 1/4"	16,9	5,0
4FX 2-28T	1,5	2,0	7,0	4,0	2840	4,9	71	0,76	1110	677	Rp 1 1/4"	19,8	6,7
4FX 2-40T	2,2	3,0	10,3	5,9	2825	4,5	72	0,76	1347	886	Rp 1 1/4"	23,7	9,1
4FX 2-52T	3,0	4,0	13,5	7,8	2835	5,0	75	0,75	1623	1095	Rp 1 1/4"	31,8	11,8

1 phase

Pumptype	Motor power		Input current In (A)		Capacitor		Data for 230 V 50 Hz				Dimensions Length (mm)			Weight (kg)	
	kW	HP	230 V	μF	V	rpm	ls/ln	η%	cosφ	Total	Pump only	Outlet	Total	Pump only	
4FX 2-5M	0,25	0,33	2,4	12,5	450	2835	3,5	50	0,92	579	245	Rp 1 1/4"	11,1	2,4	
4FX 2-7M	0,37	0,5	3,4	16	450	2825	3,5	53	0,94	634	280	Rp 1 1/4"	12,3	2,7	
4FX 2-10M	0,55	0,75	4,4	20	450	2815	3,3	60	0,96	714	332	Rp 1 1/4"	14,3	3,3	
4FX 2-14M	0,75	1,0	5,5	30	450	2825	3,4	60	0,95	806	402	Rp 1 1/4"	16,0	3,9	
4FX 2-20M	1,1	1,5	7,9	40	450	2820	3,5	63	0,98	940	507	Rp 1 1/4"	18,2	5,0	
4FX 2-28M	1,5	2,0	10,1	50	450	2810	3,4	66	0,98	1138	677	Rp 1 1/4"	21,3	6,7	
4FX 2-40M	2,2	3,0	15,2	70	450	2805	3,1	66	0,99	1452	886	Rp 1 1/4"	28,6	9,1	



4FX 4

Product

Submersible borehole pump for 4" boreholes made of AISI 304. The motor is filled with FDA approved oil.

Denomination

Product code 4FX 4

Process data

Liquid temperature max 30° C
Suspended sand max 150 g/m³

Motor data

Frequency 50 Hz
Insulation class B (+125° C)
Protection class IP 58
Immersion depth max 150 m
Starts per hour max 30
Voltage variations from rated voltage max -10%/ +6%

Cable

Dimension 4x1,5 mm²
Length up to 2,2 kW 1,8 m
Length from 3 kW 2,5 m

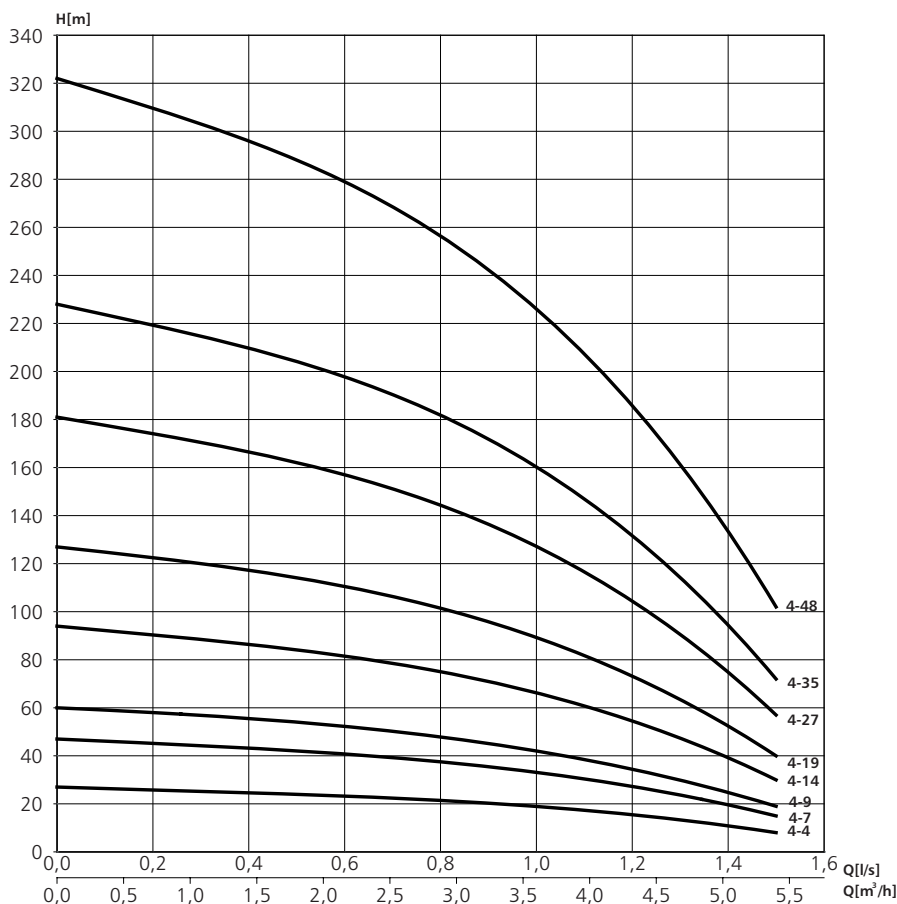
Monitoring equipment

To be provided at installation

Material

Pump	Material
Upper head	Stainless steel AISI 303
Valve cap	Stainless steel AISI 304
Valve seat	Stainless steel AISI 303
Valve gasket	Nitrile rubber
Valve stop ring	Stainless steel AISI 302
Upper support	Polycarbonate/fiberglass
Upper bearing	Polyurethane
Snapping	Stainless steel AISI 304
Diffuser	Polycarbonate/fiberglass
Impeller	Polycarbonate/fiberglass
Diffuser case	Stainless steel AISI 304
Shim	Stainless steel AISI 304
Pump shaft	Stainless steel AISI 304
Outer sleeve	Stainless steel AISI 304
Spacer	Stainless steel AISI 304
Filter	Stainless steel AISI 304
Spiders	Stainless steel AISI 304
Coupling	Stainless steel AISI 304
Cable cover screws	Stainless steel AISI 304
Cable cover	Stainless steel AISI 304
Motor	Material
Outer sleeve	Stainless steel AISI 304
Shaft extension	Stainless steel AISI 304
Upper support	Pressed brass alloy
Mechanical seal	Carbon ceramic with sand labyrinth
Elastomers	Nitrile rubber
Lower protection	Stainless steel AISI 304
Compensation bellows	Oil resistant rubber
Cooling liquid	ESSO MARCOL

Performance curves



Motor rating, dimensions and weight

3 phase

Pumptype	Motor power		Input current In (A)		Data for 400 V 50 Hz				Dimensions Length (mm)			Weight (kg)	
	kW	HP	230 V	400 V	rpm	Is/In	η%	cosφ	Total	Pump only	Outlet	Total	Pump only
4FX 4-4T	0,37	0,5	1,9	1,1	2850	4,3	65	0,7	578	244	Rp 1¼"	10,7	2,5
4FX 4-7T	0,55	0,75	2,8	1,6	2840	3,9	66	0,75	663	309	Rp 1¼"	12,2	3,1
4FX 4-9T	0,75	1,0	3,7	2,1	2855	4,4	65	0,75	734	352	Rp 1¼"	13,8	3,5
4FX 4-14T	1,1	1,5	5,2	3,0	2825	4,9	72	0,76	864	460	Rp 1¼"	16,1	4,6
4FX 4-19T	1,5	2,0	7,0	4,0	2840	4,9	71	0,76	1001	568	Rp 1¼"	18,3	5,7
4FX 4-27T	2,2	3,0	10,3	5,9	2825	4,5	72	0,76	1231	770	Rp 1¼"	21,7	7,6
4FX 4-35T	3,0	4,0	13,5	7,8	2835	5,0	75	0,75	1471	943	Rp 1¼"	29,2	9,2
4FX 4-48T	4,0	5,5	17,3	10,0	2840	5,4	77	0,78	2065	1223	Rp 1¼"	35,4	12,4

1 phase

Pumptype	Motor power		Input current In (A)		Capacitor		Data for 230 V 50 Hz				Dimensions Length (mm)			Weight (kg)	
	kW	HP	230 V	μF	V	rpm	Is/In	η%	cosφ	Total	Pump only	Outlet	Total	Pump only	
4FX 4-4M	0,37	0,5	3,4	16	450	2825	3,5	53	0,94	598	244	Rp 1½"	11,8	2,5	
4FX 4-7M	0,55	0,75	4,4	20	450	2815	3,3	60	0,96	691	309	Rp 1½"	13,9	3,1	
4FX 4-9M	0,75	1,0	5,5	30	450	2825	3,4	60	0,95	756	352	Rp 1½"	15,4	3,5	
4FX 4-14M	1,1	1,5	7,9	40	450	2820	3,5	63	0,98	893	460	Rp 1½"	17,5	4,6	
4FX 4-19M	1,5	2,0	10,1	50	450	2810	3,4	66	0,98	1029	568	Rp 1½"	19,9	5,7	
4FX 4-27M	2,2	3,0	15,2	70	450	2805	3,1	66	0,99	1336	770	Rp 1½"	26,6	7,6	



4FX 6

Product

Submersible borehole pump for 4" boreholes made of AISI 304. The motor is filled with FDA approved oil.

Denomination

Product code 4FX 6

Process data

Liquid temperature max 30° C
Suspended sand max 150 g/m³

Motor data

Frequency 50 Hz
Insulation class B (+125° C)
Protection class IP 58
Immersion depth max 150 m
Starts per hour max 30
Voltage variations from rated voltage max -10%/ +6%

Cable

Dimension 4x1,5 mm²
Length up to 2,2 kW 1,8 m
Length from 3 kW 2,5 m

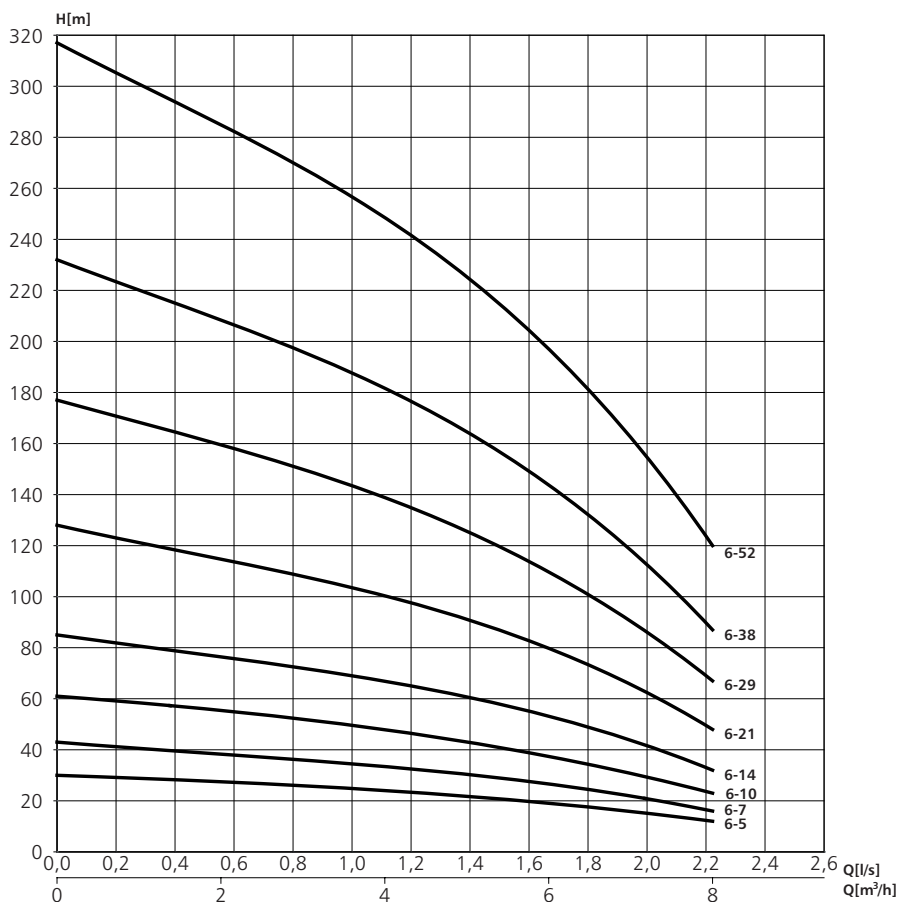
Monitoring equipment

To be provided at installation

Material

Pump	Material
Upper head	Stainless steel AISI 303
Valve cap	Stainless steel AISI 304
Valve seat	Stainless steel AISI 303
Valve gasket	Nitrile rubber
Valve stop ring	Stainless steel AISI 302
Upper support	Polycarbonate/fiberglass
Upper bearing	Polyurethane
Snapping	Stainless steel AISI 304
Diffuser	Polycarbonate/fiberglass
Impeller	Polycarbonate/fiberglass
Diffuser case	Stainless steel AISI 304
Shim	Stainless steel AISI 304
Pump shaft	Stainless steel AISI 304
Outer sleeve	Stainless steel AISI 304
Spacer	Stainless steel AISI 304
Filter	Stainless steel AISI 304
Spiders	Stainless steel AISI 304
Coupling	Stainless steel AISI 304
Cable cover screws	Stainless steel AISI 304
Cable cover	Stainless steel AISI 304
Motor	Material
Outer sleeve	Stainless steel AISI 304
Shaft extension	Stainless steel AISI 304
Upper support	Pressed brass alloy
Mechanical seal	Carbon ceramic with sand labyrinth
Elastomers	Nitrile rubber
Lower protection	Stainless steel AISI 304
Compensation bellows	Oil resistant rubber
Cooling liquid	ESSO MARCOL

Performance curves



Motor rating, dimensions and weight

3 phase

Pumptype	Motor power		Input current In (A)		Data for 400 V 50 Hz				Dimensions Length (mm)			Weight (kg)	
	kW	HP	230 V	400 V	rpm	Is/In	$\eta\%$	cos ϕ	Total	Pump only	Outlet	Total	Pump only
4FX 6-5T	0,55	0,75	2,8	1,6	2840	3,9	66	0,75	682	328	Rp 1/4"	12,6	3,5
4FX 6-7T	0,75	1,0	3,7	2,1	2855	4,4	65	0,75	772	390	Rp 1/4"	14,5	4,2
4FX 6-10T	1,1	1,5	5,2	3,0	2825	4,9	72	0,76	887	483	Rp 1/4"	16,7	5,1
4FX 6-14T	1,5	2,0	7,0	4,0	2840	4,9	71	0,76	1078	645	Rp 1/4"	19,5	6,8
4FX 6-21T	2,2	3,0	10,3	5,9	2825	4,5	72	0,76	1323	862	Rp 1/4"	23,1	9,1
4FX 6-29T	3,0	4,0	13,5	7,8	2835	5,0	75	0,75	1630	1102	Rp 1/4"	31,4	11,4
4FX 6-38T	4,0	5,5	17,3	10,0	2840	5,4	77	0,78	2223	1381	Rp 1/4"	37,3	14,3
4FX 6-52T	5,5	7,5	23,7	13,7	2835	5,4	77	0,80	2657	1815	Rp 1/4"	46,3	18,9

1 phase

Pumptype	Motor power		Input current In (A)		Capacitor		Data for 230 V 50 Hz				Dimensions Length (mm)			Weight (kg)	
	kW	HP	230 V	230 V	μ F	V	rpm	Is/In	$\eta\%$	cos ϕ	Total	Pump only	Outlet	Total	Pump only
4FX 6-5M	0,55	0,75	4,4	4,4	20	450	2815	3,3	60	0,96	710	328	Rp 1/4"	14,3	3,5
4FX 6-7M	0,75	1,0	5,5	5,5	30	450	2825	3,4	60	0,95	794	390	Rp 1/4"	16,0	4,2
4FX 6-10M	1,1	1,5	7,9	7,9	40	450	2820	3,5	63	0,98	916	483	Rp 1/4"	18,0	5,1
4FX 6-14M	1,5	2,0	10,1	10,1	50	450	2810	3,4	66	0,98	1106	645	Rp 1/4"	21,0	6,8
4FX 6-21M	2,2	3,0	15,2	15,2	70	450	2805	3,1	66	0,99	1428	862	Rp 1/4"	28,0	9,1



4FX 8

Product

Submersible borehole pump for 4" boreholes made of AISI 304. The motor is filled with FDA approved oil.

Denomination

Product code 4FX 8

Process data

Liquid temperature max 30° C
Suspended sand max 150 g/m³

Motor data

Frequency 50 Hz
Insulation class B (+125° C)
Protection class IP 58
Immersion depth max 150 m
Starts per hour max 30
Voltage variations from rated voltage max -10%/ +6%

Cable

Dimension 4x1,5 mm²
Length up to 2,2 kW 1,8 m
Length from 3 kW 2,5 m

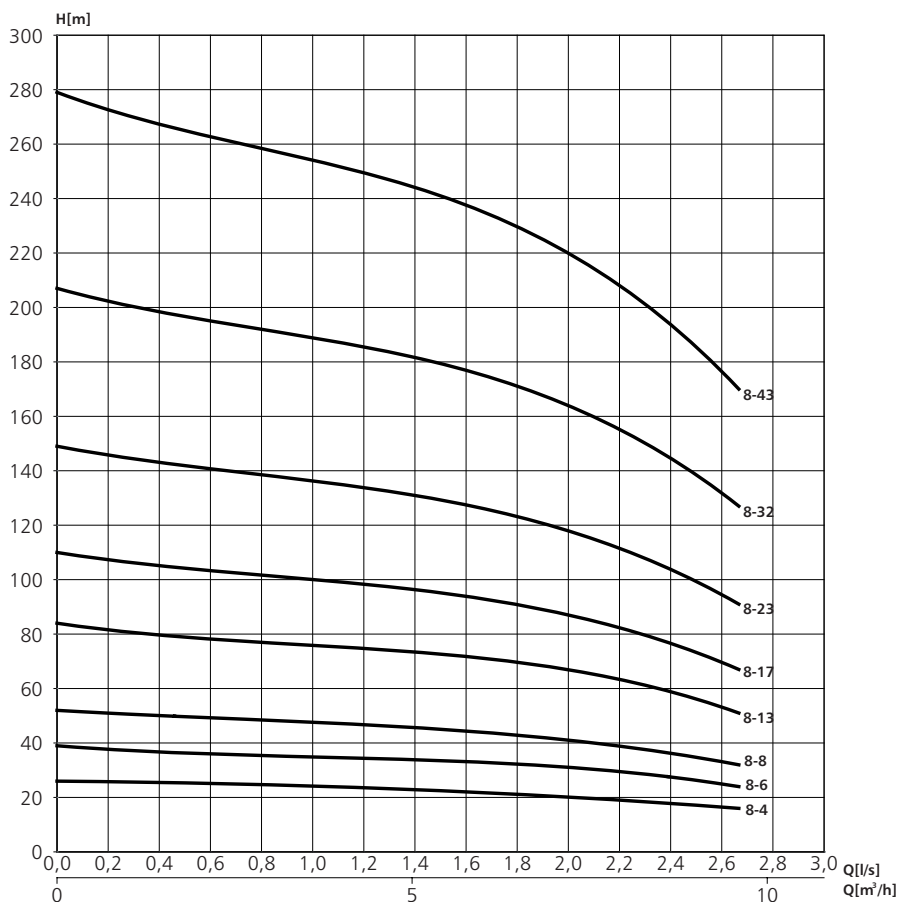
Monitoring equipment

To be provided at installation

Material

Pump	Material
Upper head	Stainless steel AISI 303
Valve cap	Stainless steel AISI 304
Valve seat	Stainless steel AISI 303
Valve gasket	Nitrile rubber
Valve stop ring	Stainless steel AISI 302
Upper support	Polycarbonate/fiberglass
Upper bearing	Polyurethane
Snapping	Stainless steel AISI 304
Diffuser	Polycarbonate/fiberglass
Impeller	Polycarbonate/fiberglass
Diffuser case	Stainless steel AISI 304
Shim	Stainless steel AISI 304
Pump shaft	Stainless steel AISI 304
Outer sleeve	Stainless steel AISI 304
Spacer	Stainless steel AISI 304
Filter	Stainless steel AISI 304
Spiders	Stainless steel AISI 304
Coupling	Stainless steel AISI 304
Cable cover screws	Stainless steel AISI 304
Cable cover	Stainless steel AISI 304
Motor	Material
Outer sleeve	Stainless steel AISI 304
Shaft extension	Stainless steel AISI 304
Upper support	Pressed brass alloy
Mechanical seal	Carbon ceramic with sand labyrinth
Elastomers	Nitrile rubber
Lower protection	Stainless steel AISI 304
Compensation bellows	Oil resistant rubber
Cooling liquid	ESSO MARCOL

Performance curves



Motor rating, dimensions and weight

3 phase

Pumptype	Motor power		Input current In (A)		Data for 400 V 50 Hz				Dimensions Length (mm)			Weight (kg)	
	kW	HP	230 V	400 V	rpm	Is/In	η%	cosφ	Total	Pump only	Outlet	Total	Pump only
4FX 8-4T	0,75	1,0	3,7	2,1	2855	4,4	65	0,75	681	299	Rp 2"	13,5	3,2
4FX 8-6T	1,1	1,5	5,2	3,0	2825	4,9	72	0,76	765	361	Rp 2"	15,3	3,8
4FX 8-8T	1,5	2,0	7,0	4,0	2840	4,9	71	0,76	856	423	Rp 2"	17,1	4,5
4FX 8-13T	2,2	3,0	10,3	5,9	2825	4,5	72	0,76	1039	578	Rp 2"	20,1	6,0
4FX 8-17T	3,0	4,0	13,5	7,8	2835	5,0	75	0,75	1268	740	Rp 2"	27,8	7,8
4FX 8-23T	4,0	5,5	17,3	10,0	2840	5,4	77	0,78	1768	926	Rp 2"	32,6	9,6
4FX 8-32T	5,5	7,5	23,7	13,7	2835	5,4	77	0,80	2039	1197	Rp 2"	39,8	12,4
4FX 8-43T	7,5	10		19,8	2825	4,8	76	0,73	2430	1538	Rp 2"	47,0	15,8

1 phase

Pumptype	Motor power		Input current In (A)		Capacitor		Data for 230 V 50 Hz				Dimensions Length (mm)			Weight (kg)	
	kW	HP	230 V	230 V	μF	V	rpm	Is/In	η%	cosφ	Total	Pump only	Outlet	Total	Pump only
4FX 8-4M	0,75	1,0	5,5	5,5	30	450	2825	3,4	60	0,95	703	299	Rp 2"	15,0	3,2
4FX 8-6M	1,1	1,5	7,9	7,9	40	450	2820	3,5	63	0,98	794	361	Rp 2"	16,6	3,8
4FX 8-8M	1,5	2,0	10,1	10,1	50	450	2810	3,4	66	0,98	884	423	Rp 2"	18,7	4,5
4FX 8-13M	2,2	3,0	15,2	15,2	70	450	2805	3,1	66	0,99	1144	578	Rp 2"	25,0	6,0



4FX 12

Product

Submersible borehole pump for 4" boreholes made of AISI 304. The motor is filled with FDA approved oil.

Denomination

Product code 4FX 12

Process data

Liquid temperature max 30° C
Suspended sand max 150 g/m³

Motor data

Frequency 50 Hz
Insulation class B (+125° C)
Protection class IP 58
Immersion depth max 150 m
Starts per hour max 30
Voltage variations from rated voltage max -10%/ +6%

Cable

Dimension 4x1,5 mm²
Length up to 2,2 kW 1,8 m
Length from 3 kW 2,5 m

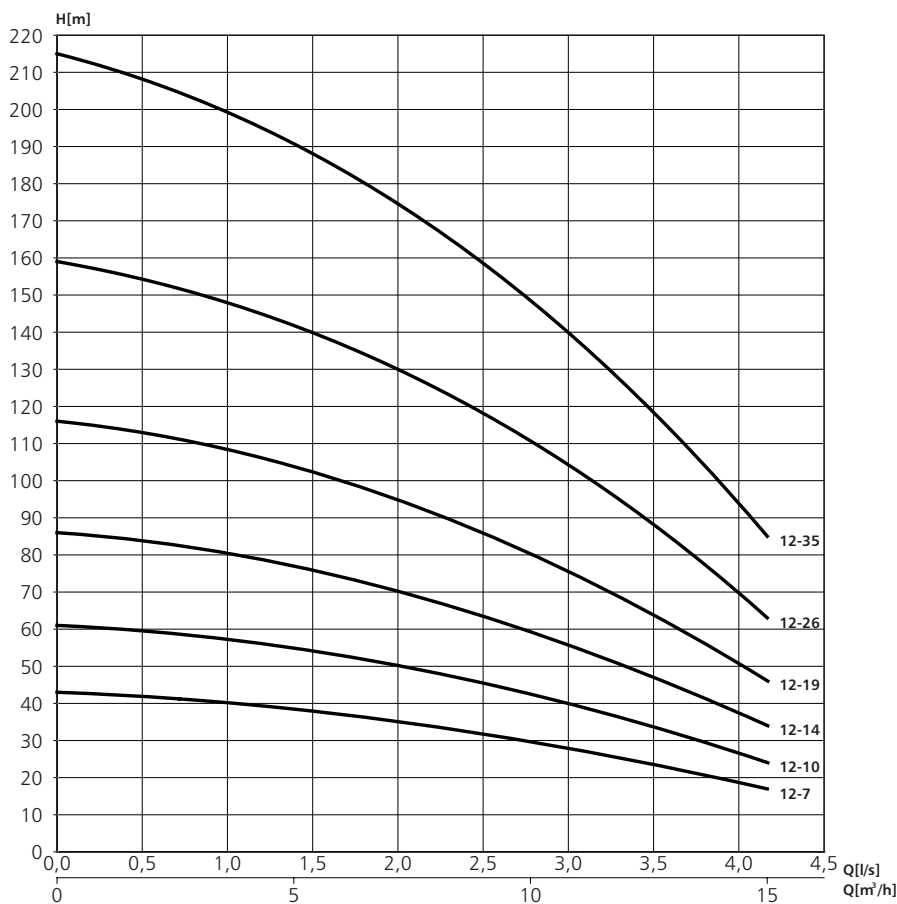
Monitoring equipment

To be provided at installation

Material

Pump	Material
Upper head	Stainless steel AISI 303
Valve cap	Stainless steel AISI 304
Valve seat	Stainless steel AISI 303
Valve gasket	Nitrile rubber
Valve stop ring	Stainless steel AISI 302
Upper support	Polycarbonate/fiberglass
Upper bearing	Polyurethane
Snapping	Stainless steel AISI 304
Diffuser	Polycarbonate/fiberglass
Impeller	Polycarbonate/fiberglass
Diffuser case	Stainless steel AISI 304
Shim	Stainless steel AISI 304
Pump shaft	Stainless steel AISI 304
Outer sleeve	Stainless steel AISI 304
Spacer	Stainless steel AISI 304
Filter	Stainless steel AISI 304
Spiders	Stainless steel AISI 304
Coupling	Stainless steel AISI 304
Cable cover screws	Stainless steel AISI 304
Cable cover	Stainless steel AISI 304
Motor	Material
Outer sleeve	Stainless steel AISI 304
Shaft extension	Stainless steel AISI 304
Upper support	Pressed brass alloy
Mechanical seal	Carbon ceramic with sand labyrinth
Elastomers	Nitrile rubber
Lower protection	Stainless steel AISI 304
Compensation bellows	Oil resistant rubber
Cooling liquid	ESSO MARCOL

Performance curves



Motor rating, dimensions and weight

3 phase

Pumptype	Motor power		Input current In (A)		Data for 400 V 50 Hz				Dimensions Length (mm)			Weight (kg)	
	kW	HP	230 V	400 V	rpm	Is/In	η%	cosφ	Total	Pump only	Outlet	Total	Pump only
4FX 12-7T	1,5	2,0	7,0	4,0	2840	4,9	71	0,76	972	539	Rp 2"	17,8	5,2
4FX 12-10T	2,2	3,0	10,3	5,9	2825	4,5	72	0,76	1194	733	Rp 2"	21,5	7,4
4FX 12-14T	3,0	4,0	13,5	7,8	2835	5,0	75	0,75	1468	940	Rp 2"	29,5	9,5
4FX 12-19T	4,0	5,5	17,3	10,0	2840	5,4	77	0,78	1804	1200	Rp 2"	35,1	12,1
4FX 12-26T	5,5	7,5	23,7	13,7	2835	5,4	77	0,80	2275	1556	Rp 2"	43,3	15,9
4FX 12-35T	7,5	10		19,8	2825	4,8	76	0,73	2818	2023	Rp 2"	51,7	20,5

1 phase

Pumptype	Motor power		Input current In (A)		Capacitor		Data for 230 V 50 Hz				Dimensions Length (mm)			Weight (kg)	
	kW	HP	230 V	230 V	μF	V	rpm	Is/In	η%	cosφ	Total	Pump only	Outlet	Total	Pump only
4FX 12-7M	1,5	2,0	10,1	10,1	50	450	2810	3,4	66	0,98	1000	539	Rp 2"	19,4	5,2
4FX 12-10M	2,2	3,0	15,2	15,2	70	450	2805	3,1	66	0,99	1299	733	Rp 2"	26,4	7,4



4FX 16

Product

Submersible borehole pump for 4" boreholes made of AISI 304. The motor is filled with FDA approved oil.

Denomination

Product code 4FX 16

Process data

Liquid temperature max 30° C
Suspended sand max 150 g/m³

Motor data

Frequency 50 Hz
Insulation class B (+125° C)
Protection class IP 58
Immersion depth max 150 m
Starts per hour max 30
Voltage variations from rated voltage max -10%/ +6%

Cable

Dimension 4x1,5 mm²
Length up to 2,2 kW 1,8 m
Length from 3 kW 2,5 m

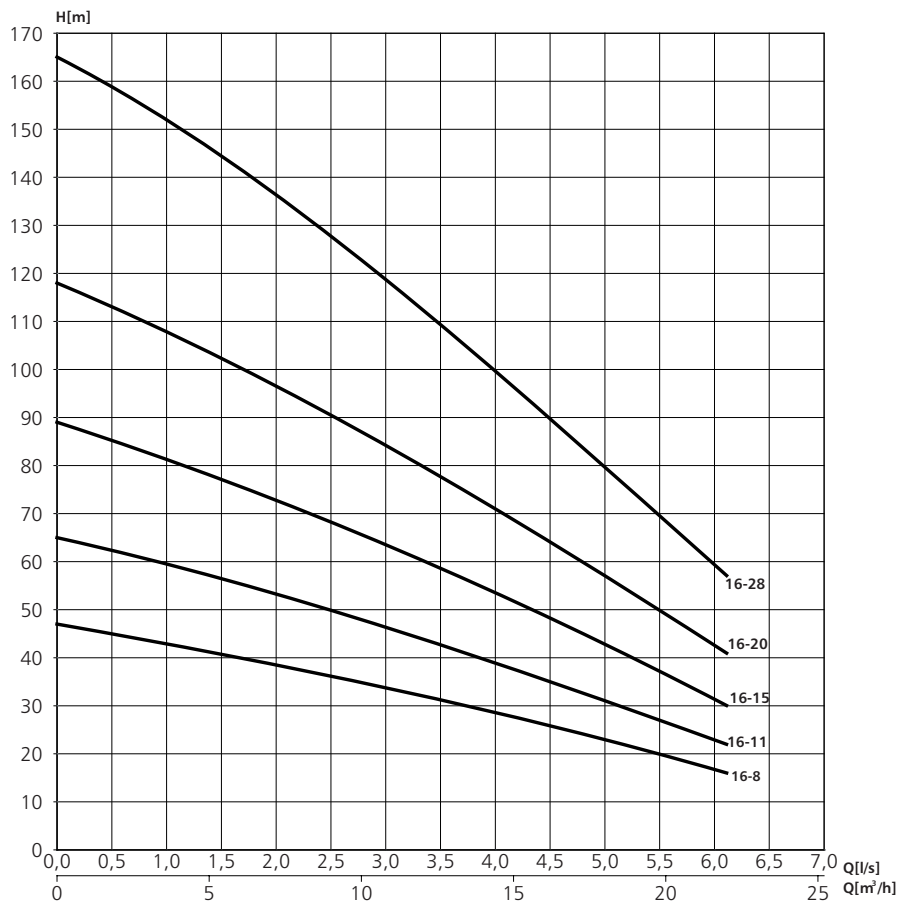
Monitoring equipment

To be provided at installation

Material

Pump	Material
Upper head	Stainless steel AISI 303
Valve cap	Stainless steel AISI 304
Valve seat	Stainless steel AISI 303
Valve gasket	Nitrile rubber
Valve stop ring	Stainless steel AISI 302
Upper support	Polycarbonate/fiberglass
Upper bearing	Polyurethane
Snapping	Stainless steel AISI 304
Diffuser	Polycarbonate/fiberglass
Impeller	Polycarbonate/fiberglass
Diffuser case	Stainless steel AISI 304
Shim	Stainless steel AISI 304
Pump shaft	Stainless steel AISI 304
Outer sleeve	Stainless steel AISI 304
Spacer	Stainless steel AISI 304
Filter	Stainless steel AISI 304
Spiders	Stainless steel AISI 304
Coupling	Stainless steel AISI 304
Cable cover screws	Stainless steel AISI 304
Cable cover	Stainless steel AISI 304
Motor	Material
Outer sleeve	Stainless steel AISI 304
Shaft extension	Stainless steel AISI 304
Upper support	Pressed brass alloy
Mechanical seal	Carbon ceramic with sand labyrinth
Elastomers	Nitrile rubber
Lower protection	Stainless steel AISI 304
Compensation bellows	Oil resistant rubber
Cooling liquid	ESSO MARCOL

Performance curves



Motor rating, dimensions and weight

3 phase

Pumptype	Motor power		Input current In (A)		Data for 400 V 50 Hz				Dimensions Length (mm)			Weight (kg)	
	kW	HP	230 V	400 V	rpm	ls/ln	η%	cosφ	Total	Pump only	Outlet	Total	Pump only
4FX 16-8T	2,2	3,0	10,3	5,9	2825	4,5	72	0,76	1142	681	Rp 2"	21,0	7,0
4FX 16-11T	3,0	4,0	13,5	7,8	2835	5,0	75	0,75	1413	885	Rp 2"	29,0	9,0
4FX 16-15T	4,0	5,5	17,3	10,0	2840	5,4	77	0,78	1760	1156	Rp 2"	34,7	11,7
4FX 16-20T	5,5	7,5	23,7	13,7	2835	5,4	77	0,80	2245	1526	Rp 2"	42,8	15,4
4FX 16-28T	7,5	10	19,8	19,8	2825	4,8	76	0,73	2865	2070	Rp 2"	52,0	20,8

1 phase

Pumptype	Motor power		Input current In (A)		Capacitor		Data for 230 V 50 Hz				Dimensions Length (mm)			Weight (kg)	
	kW	HP	230 V	230 V	μF	V	rpm	ls/ln	η%	cosφ	Total	Pump only	Outlet	Total	Pump only
4FX 16-8M	2,2	3,0	15,2	15,2	70	450	2805	3,1	66	0,99	1247	681	Rp 2"	25,9	7,0



6FX(4) 11

Product

Submersible borehole pump for 6" boreholes made of AISI 304. The motor is filled with FDA approved oil.

Denomination

Product code with 6" motor 6FX 11
 Product code with 4" motor 6FX4 11

Process data

Liquid temperature:
 3-11 kW max 30° C
 15-18,5 kW max 25° C
 22-30 kW max 20° C
 Suspended sand max 50 g/m³

Motor data

Frequency 50 Hz
 Insulation class 6FX F (+155° C)
 Insulation class 6FX 4 B (+125° C)
 Protection class IP 58
 Immersion depth max 150 m
 Starts per hour:
 Direct start max 15
 Impedance start max 20
 Voltage variations from rated voltage max -10%/ +6%

Cable

Dimension:
 3-11 kW 4x4 mm²
 15-18,5 kW 4x6 mm²
 22-30 kW 4x8 mm²
 Length:
 3-18,5 kW 3 m
 22-30 kW 4 m

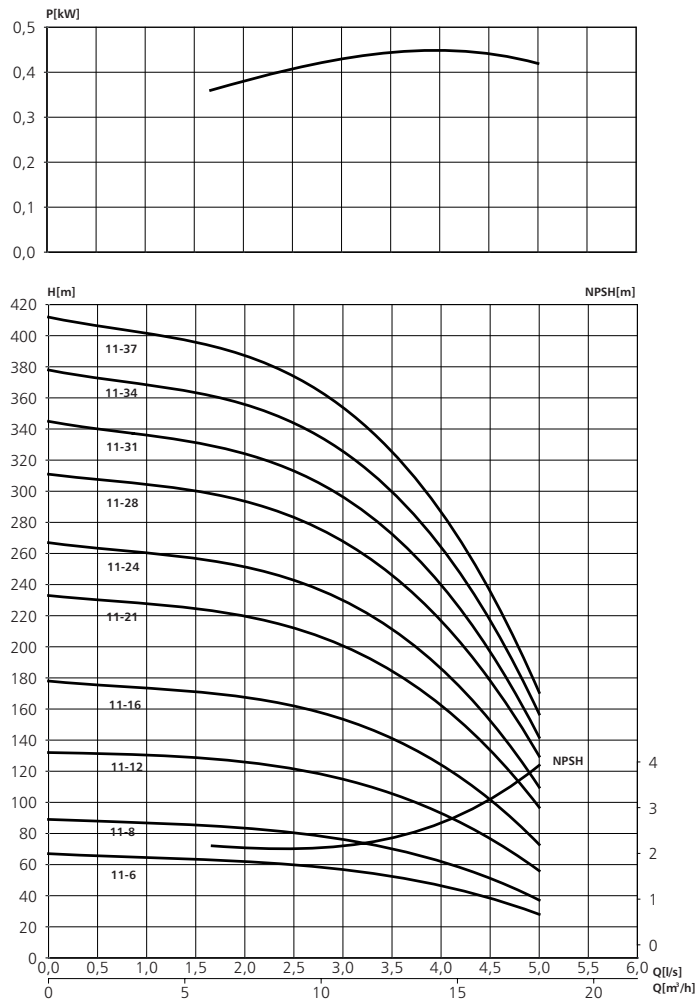
Monitoring equipment

To be provided at installation

Material

Pump	Material
Delivery outlet	Stainless steel AISI 304
Non return valve	Stainless steel AISI 304
Lower support	Stainless steel AISI 304
Bush bearings	Nitrile rubber
Wear ring	Nitrile rubber
Diffuser	Stainless steel AISI 304
Impeller	Stainless steel AISI 304
Convoyer	Stainless steel AISI 304
Shim	Stainless steel AISI 304
Pump shaft	Stainless steel AISI 420
Outer sleeve	Stainless steel AISI 304
Spacer	Stainless steel AISI 304
Filter	Stainless steel AISI 304
Spiders	Stainless steel AISI 304
Coupling	Stainless steel AISI 420
Coupling lock screws	Stainless steel AISI 431
Fasteners	Stainless steel AISI 304
Cable cover	Stainless steel AISI 304
Small blocks	Stainless steel AISI 316L
Fifth wheel	Phenolic resin
Motor	Material
Outer sleeve	Stainless steel AISI 304
Shaft extension	Stainless steel AISI 304
Upper support	Cast iron
Mechanical seal	Carbon ceramic with sand labyrinth
Elastomers	Nitrile rubber
Lower protection	Stainless steel AISI 304
Compensation bellows	Oil resistant rubber
Cooling liquid	ESSO MARCOL

Performance curves



Power per stage.
Multiply with number of stages.

Motor rating, dimensions and weight

3 phase

Pumptype	Motor power		Input current In (A) 380-415 V	Data for 400 V 50 Hz				Total	Dimensions Length (mm)		Weight (kg)	
	kW	HP		rpm	Is/In	η%	cosφ		Pump only	Outlet	Total	Pump only
6FX4 11-6	3,0	4,0	7,0-6,8	2800	6,6	75	0,82	1210	706	Rp 2½"	35,0	15,0
6FX4 11-8	4,0	5,5	9,2-9,0	2800	6,0	74	0,82	1364	784	Rp 2½"	40,0	17,0
6FX4 11-12	5,5	7,5	12,5-12,8	2830	6,6	78	0,83	1635	940	Rp 2½"	48,0	21,0
6FX4 11-16	7,5	10,0	17,5-17,2	2820	6,5	79	0,83	1867	797	Rp 2½"	57,0	26,0
6FX 11-6	3,0	4,0	7,5-7,6	2800	6,6	75	0,83	1320	696	Rp 2½"	53,0	15,0
6FX 11-8	4,0	5,5	9,2-9,0	2800	6,0	74	0,82	1399	775	Rp 2½"	55,0	17,0
6FX 11-12	5,5	7,5	12,5-12,8	2830	6,6	78	0,83	1634	930	Rp 2½"	67,0	21,0
6FX 11-16	7,5	10,0	17,5-17,2	2820	6,5	79	0,83	1840	1086	Rp 2½"	82,0	26,0
6FX 11-21	11,0	15,0	24,5-24,0	2830	7,0	81	0,83	2143	1282	Rp 2½"	96,0	31,0
6FX 11-24	11,0	15,0	24,5-24,0	2830	7,0	81	0,83	2259	1398	Rp 2½"	99,0	34,0
6FX 11-28	15,0	20,0	31,0-30,0	2880	7,0	84	0,83	2505	1554	Rp 2½"	115,0	38,0
6FX 11-31	15,0	20,0	31,0-30,0	2880	7,0	84	0,83	2623	1672	Rp 2½"	118,0	41,0
6FX 11-34	18,5	25,0	39,0-37,5	2850	6,3	83	0,83	2829	1788	Rp 2½"	133,0	44,0
6FX 11-37	18,5	25,0	39,0-37,5	2850	6,3	83	0,83	2947	1906	Rp 2½"	136,0	47,0



6FX(4) 15

Product

Submersible borehole pump for 6" boreholes made of AISI 304. The motor is filled with FDA approved oil.

Denomination

Product code with 6" motor 6FX 15
 Product code with 4" motor 6FX4 15

Process data

Liquid temperature:
 3-11 kW max 30° C
 15-18,5 kW max 25° C
 22-30 kW max 20° C
 Suspended sand max 50 g/m³

Motor data

Frequency 50 Hz
 Insulation class 6FX F (+155° C)
 Insulation class 6FX 4 B (+125° C)
 Protection class IP 58
 Immersion depth max 150 m
 Starts per hour:
 Direct start max 15
 Impedance start max 20
 Voltage variations from rated voltage max -10%/ +6%

Cable

Dimension:
 3-11 kW 4x4 mm²
 15-18,5 kW 4x6 mm²
 22-30 kW 4x8 mm²
 Length:
 3-18,5 kW 3 m
 22-30 kW 4 m

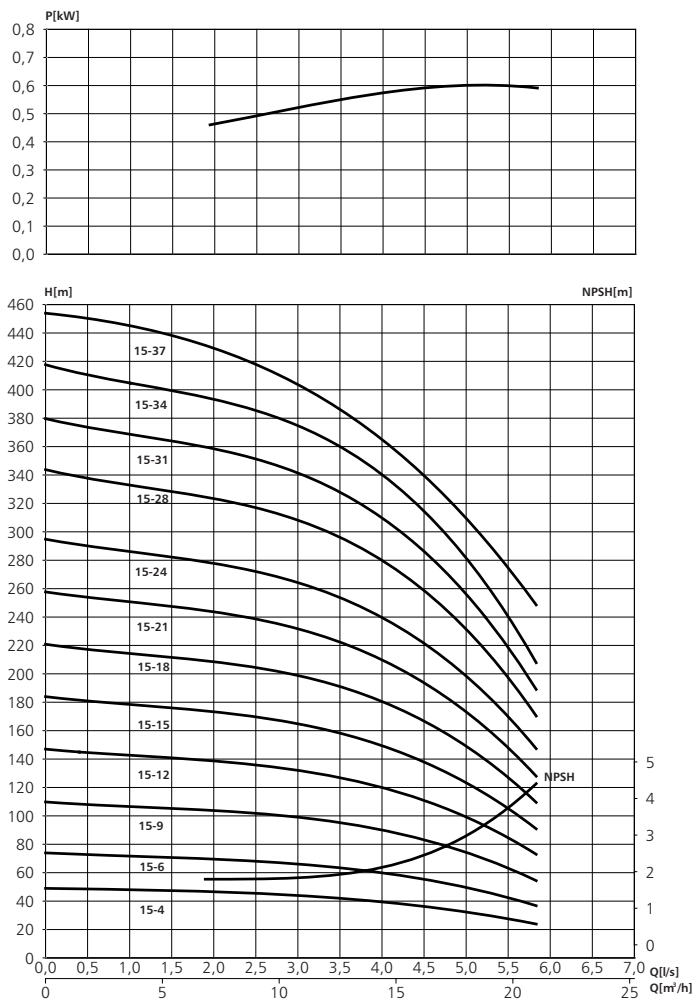
Monitoring equipment

To be provided at installation

Material

Pump	Material
Delivery outlet	Stainless steel AISI 304
Non return valve	Stainless steel AISI 304
Lower support	Stainless steel AISI 304
Bush bearings	Nitrile rubber
Wear ring	Nitrile rubber
Diffuser	Stainless steel AISI 304
Impeller	Stainless steel AISI 304
Convoyer	Stainless steel AISI 304
Shim	Stainless steel AISI 304
Pump shaft	Stainless steel AISI 420
Outer sleeve	Stainless steel AISI 304
Spacer	Stainless steel AISI 304
Filter	Stainless steel AISI 304
Spiders	Stainless steel AISI 304
Coupling	Stainless steel AISI 420
Coupling lock screws	Stainless steel AISI 431
Fasteners	Stainless steel AISI 304
Cable cover	Stainless steel AISI 304
Small blocks	Stainless steel AISI 316L
Fifth wheel	Phenolic resin
Motor	Material
Outer sleeve	Stainless steel AISI 304
Shaft extension	Stainless steel AISI 304
Upper support	Cast iron
Mechanical seal	Carbon ceramic with sand labyrinth
Elastomers	Nitrile rubber
Lower protection	Stainless steel AISI 304
Compensation bellows	Oil resistant rubber
Cooling liquid	ESSO MARCOL

Performance curves



Power per stage.
Multiply with number of stages.

Motor rating, dimensions and weight

3 phase

Pumptype	Motor power		Input current In (A) 380-415 V	Data for 400 V 50 Hz				Dimensions Length (mm)			Weight (kg)	
	kW	HP		rpm	Is/In	η%	cosφ	Total	Pump only	Outlet	Total	Pump only
6FX4 15-4	3,0	4,0	7,0-6,8	2800	6,6	75	0,82	1131	628	Rp 2½"	33,0	13,0
6FX4 15-6	4,0	5,5	9,2-9,0	2800	6,0	74	0,82	1285	706	Rp 2½"	38,0	15,0
6FX4 15-9	5,5	7,5	12,5-12,8	2830	6,6	78	0,83	1518	823	Rp 2½"	45,0	18,0
6FX4 15-12	7,5	10,0	17,5-17,2	2820	6,5	79	0,83	1711	940	Rp 2½"	52,0	21,0
6FX 15-4	3,0	4,0	7,5-7,6	2800	6,6	75	0,83	1242	618	Rp 2½"	51,0	13,0
6FX 15-6	3,7	5,5	8,8-8,6	2800	6,0	74	0,82	1320	696	Rp 2½"	53,0	15,0
6FX 15-9	5,5	7,5	12,5-12,8	2830	6,6	78	0,83	1518	814	Rp 2½"	64,0	18,0
6FX 15-12	7,5	10,0	17,5-17,2	2820	6,5	79	0,83	1684	930	Rp 2½"	72,0	21,0
6FX 15-15	11,0	15,0	24,5-24,0	2830	7,0	81	0,83	1909	1048	Rp 2½"	90,0	25,0
6FX 15-18	11,0	15,0	24,5-24,0	2830	7,0	81	0,83	2025	1164	Rp 2½"	93,0	28,0
6FX 15-21	15,0	20,0	31,0-30,0	2880	7,0	84	0,83	2233	1282	Rp 2½"	108,0	31,0
6FX 15-24	15,0	20,0	31,0-30,0	2880	7,0	84	0,83	2349	1398	Rp 2½"	111,0	34,0
6FX 15-28	18,5	25,0	39,0-37,5	2850	6,3	83	0,83	2595	1554	Rp 2½"	127,0	38,0
6FX 15-31	18,5	25,0	39,0-37,5	2850	6,3	83	0,83	2713	1672	Rp 2½"	130,0	41,0
6FX 15-34	22,0	30,0	46,0-45,0	2870	6,6	84	0,82	2919	1788	Rp 2½"	144,0	44,0
6FX 15-37	22,0	30,0	46,0-45,0	2870	6,6	84	0,82	3037	1906	Rp 2½"	147,0	47,0



6FX(4) 21

Product

Submersible borehole pump for 6" boreholes made of AISI 304. The motor is filled with FDA approved oil.

Denomination

Product code with 6" motor 6FX 21
 Product code with 4" motor 6FX4 21

Process data

Liquid temperature:
 3-11 kW max 30° C
 15-18,5 kW max 25° C
 22-30 kW max 20° C
 Suspended sand max 50 g/m³

Motor data

Frequency 50 Hz
 Insulation class 6FX F (+155° C)
 Insulation class 6FX 4 B (+125° C)
 Protection class IP 58
 Immersion depth max 150 m
 Starts per hour:
 Direct start max 15
 Impedance start max 20
 Voltage variations from rated voltage max -10%/ +6%

Cable

Dimension:
 3-11 kW 4x4 mm²
 15-18,5 kW 4x6 mm²
 22-30 kW 4x8 mm²
 Length:
 3-18,5 kW 3 m
 22-30 kW 4 m

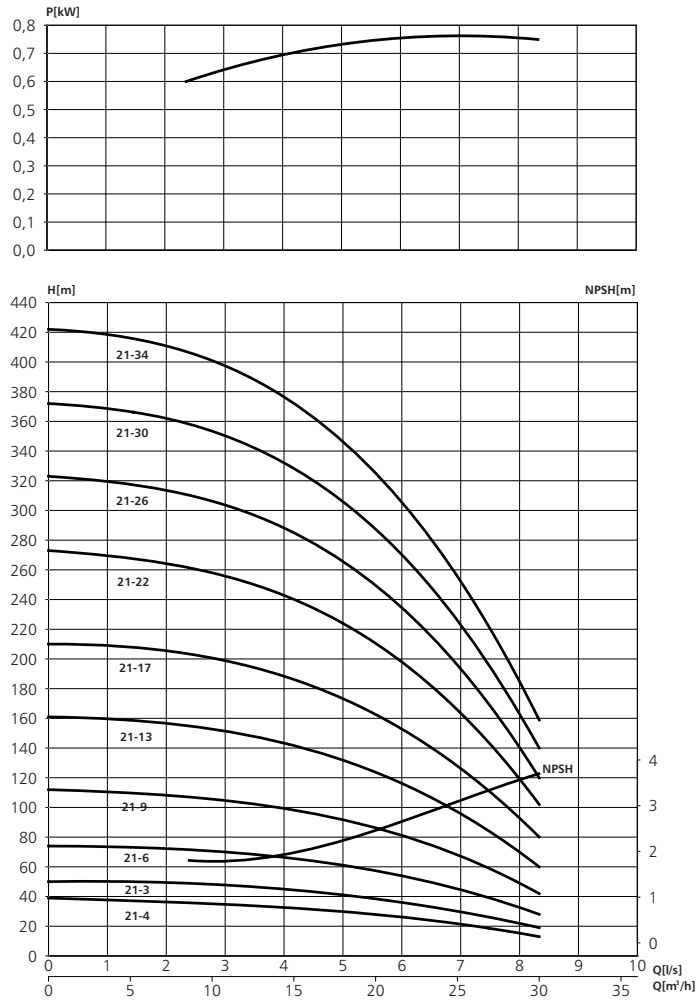
Monitoring equipment

To be provided at installation

Material

Pump	Material
Delivery outlet	Stainless steel AISI 304
Non return valve	Stainless steel AISI 304
Lower support	Stainless steel AISI 304
Bush bearings	Nitrile rubber
Wear ring	Nitrile rubber
Diffuser	Stainless steel AISI 304
Impeller	Stainless steel AISI 304
Convoyer	Stainless steel AISI 304
Shim	Stainless steel AISI 304
Pump shaft	Stainless steel AISI 420
Outer sleeve	Stainless steel AISI 304
Spacer	Stainless steel AISI 304
Filter	Stainless steel AISI 304
Spiders	Stainless steel AISI 304
Coupling	Stainless steel AISI 420
Coupling lock screws	Stainless steel AISI 431
Fasteners	Stainless steel AISI 304
Cable cover	Stainless steel AISI 304
Small blocks	Stainless steel AISI 316L
Fifth wheel	Phenolic resin
Motor	Material
Outer sleeve	Stainless steel AISI 304
Shaft extension	Stainless steel AISI 304
Upper support	Cast iron
Mechanical seal	Carbon ceramic with sand labyrinth
Elastomers	Nitrile rubber
Lower protection	Stainless steel AISI 304
Compensation bellows	Oil resistant rubber
Cooling liquid	ESSO MARCOL

Performance curves



Power per stage.
Multiply with number of stages.

Motor rating, dimensions and weight

3 phase

Pumptype	Motor power		Input current In (A) 380-415 V	Data for 400 V 50 Hz				Total	Dimensions Length (mm)		Weight (kg)	
	kW	HP		rpm	Is/In	η%	cosφ		Pump only	Outlet	Total	Pump only
6FX4 21-3	3,0	4,0	7,0-6,8	2800	6,6	75	0,82	1109	605	Rp 2½"	32,0	12,0
6FX4 21-4	4,0	5,5	9,2-9,0	2800	6,0	74	0,82	1229	650	Rp 2½"	36,0	13,0
6FX4 21-6	5,5	7,5	12,5-12,8	2830	6,6	78	0,83	1434	739	Rp 2½"	42,5	15,5
6FX4 21-9	7,5	10,0	17,5-17,2	2820	6,5	79	0,83	1644	872	Rp 2½"	49,0	18,5
6FX 21-3	3,0	4,0	7,5-7,6	2800	6,6	75	0,83	1220	596	Rp 2½"	50,0	12,0
6FX 21-4	3,7	5,5	8,8-8,6	2800	6,0	74	0,82	1264	640	Rp 2½"	51,0	13,0
6FX 21-6	5,5	7,5	12,5-12,0	2830	6,6	78	0,83	1434	730	Rp 2½"	62,0	15,5
6FX 21-9	7,5	10,0	17,5-16,5	2820	6,5	79	0,83	1618	864	Rp 2½"	75,0	18,5
6FX 21-13	11,0	15,0	24,5-24,0	2830	7,0	81	0,83	1903	1042	Rp 2½"	88,0	23,0
6FX 21-17	15,0	20,0	31,0-30,0	2880	7,0	84	0,83	2169	1218	Rp 2½"	105,0	28,0
6FX 21-22	18,5	25,0	39,0-37,5	2850	6,3	83	0,83	2483	1442	Rp 2½"	123,0	33,5
6FX 21-26	22,0	30,0	46,0-45,0	2870	6,6	84	0,82	2751	1620	Rp 2½"	138,0	42,0
6FX 21-30	30,0	40,0	62,0-60,0	2850	5,8	83	0,85	3039	1798	Rp 2½"	155,0	42,0
6FX 21-34	30,0	40,0	62,0-60,0	2850	5,8	83	0,85	3217	1976	Rp 2½"	160,0	46,5



6FX(4) 30

Product

Submersible borehole pump for 6" boreholes made of AISI 304. The motor is filled with FDA approved oil.

Denomination

Product code with 6" motor 6FX 30
 Product code with 4" motor 6FX4 30

Process data

Liquid temperature:
 3-11 kW max 30° C
 15-18,5 kW max 25° C
 22-30 kW max 20° C
 Suspended sand max 50 g/m³

Motor data

Frequency 50 Hz
 Insulation class 6FX F (+155° C)
 Insulation class 6FX 4 B (+125° C)
 Protection class IP 58
 Immersion depth max 150 m
 Starts per hour:
 Direct start max 15
 Impedance start max 20
 Voltage variations from rated voltage max -10%/ +6%

Cable

Dimension:
 3-11 kW 4x4 mm²
 15-18,5 kW 4x6 mm²
 22-30 kW 4x8 mm²
 Length:
 3-18,5 kW 3 m
 22-30 kW 4 m

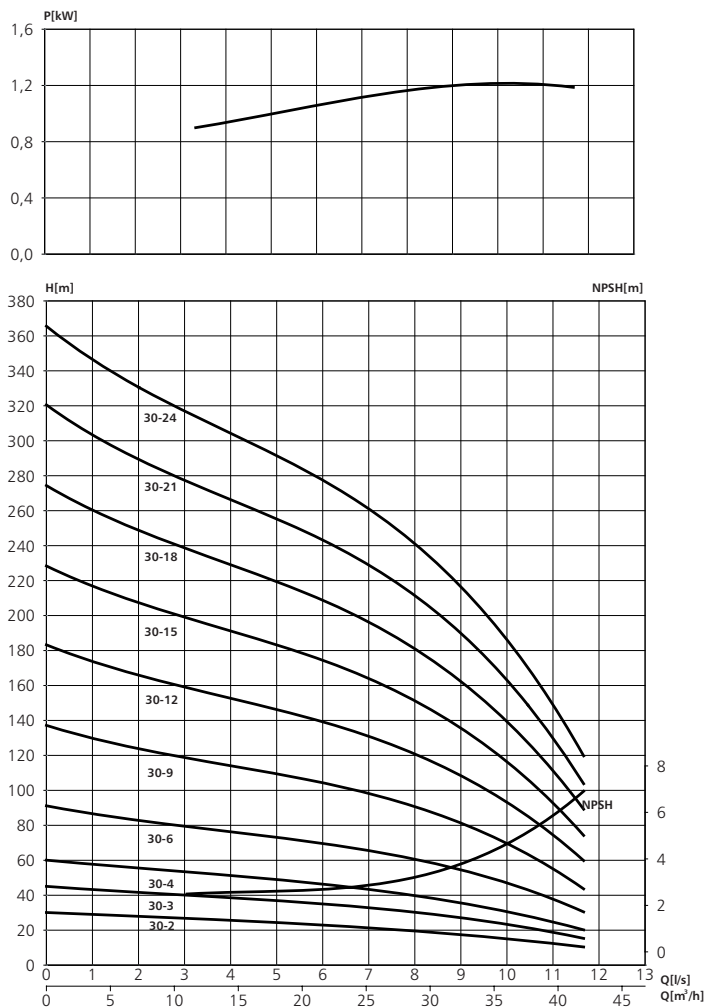
Monitoring equipment

To be provided at installation

Material

Pump	Material
Delivery outlet	Stainless steel AISI 304
Non return valve	Stainless steel AISI 304
Lower support	Stainless steel AISI 304
Bush bearings	Nitrile rubber
Wear ring	Nitrile rubber
Diffuser	Stainless steel AISI 304
Impeller	Stainless steel AISI 304
Convoyer	Stainless steel AISI 304
Shim	Stainless steel AISI 304
Pump shaft	Stainless steel AISI 420
Outer sleeve	Stainless steel AISI 304
Spacer	Stainless steel AISI 304
Filter	Stainless steel AISI 304
Spiders	Stainless steel AISI 304
Coupling	Stainless steel AISI 420
Coupling lock screws	Stainless steel AISI 431
Fasteners	Stainless steel AISI 304
Cable cover	Stainless steel AISI 304
Small blocks	Stainless steel AISI 316L
Fifth wheel	Phenolic resin
Motor	Material
Outer sleeve	Stainless steel AISI 304
Shaft extension	Stainless steel AISI 304
Upper support	Cast iron
Mechanical seal	Carbon ceramic with sand labyrinth
Elastomers	Nitrile rubber
Lower protection	Stainless steel AISI 304
Compensation bellows	Oil resistant rubber
Cooling liquid	ESSO MARCOL

Performance curves



Power per stage.
Multiply with number of stages.

Motor rating, dimensions and weight

3 phase

Pumptype	Motor power		Input current In (A) 380-415 V	Data for 400 V 50 Hz				Total	Dimensions Length (mm)		Weight (kg)	
	kW	HP		rpm	Is/In	η%	cosφ		Pump only	Outlet	Total	Pump only
6FX4 30-2	3,0	4,0	7,0-6,8	2800	6,6	75	0,82	1226	722	Rp 3"	33,0	13,5
6FX4 30-3	4,0	5,5	9,2-9,0	2800	6,0	74	0,82	1414	834	Rp 3"	39,0	16,0
6FX4 30-4	5,5	7,5	12,5-12,8	2830	6,6	78	0,83	1641	946	Rp 3"	45,5	18,5
6FX4 30-6	7,5	10,0	17,5-17,2	2820	6,5	79	0,83	1941	1170	Rp 3"	54,0	23,5
6FX 30-2	3,0	4,0	7,5-7,6	2800	6,6	75	0,83	1337	713	Rp 3"	52,0	13,5
6FX 30-3	3,7	5,5	8,8-8,6	2800	6,0	74	0,82	1449	825	Rp 3"	54,0	16,0
6FX 30-4	5,5	7,5	12,5-12,0	2830	6,6	78	0,83	1641	937	Rp 3"	65,0	18,5
6FX 30-6	7,5	10,0	17,5-16,5	2820	6,5	79	0,83	1915	1161	Rp 3"	80,0	23,5
6FX 30-9	11,0	15,0	24,5-24,0	2830	7,0	81	0,83	2358	1497	Rp 3"	97,0	32,0
6FX 30-12	15,0	20,0	31,0-30,0	2880	7,0	84	0,83	2784	1833	Rp 3"	117,0	39,5
6FX 30-15	18,5	25,0	39,0-37,5	2850	6,3	83	0,83	3210	2169	Rp 3"	136,0	47,0
6FX 30-18	22,0	30,0	46,0-45,0	2870	6,6	84	0,82	3636	2505	Rp 3"	155,0	54,5
6FX 30-21	30,0	40,0	62,0-60,0	2850	5,8	83	0,85	4082	2841	Rp 3"	175,0	62,0
6FX 30-24	30,0	40,0	62,0-60,0	2850	5,8	83	0,85	4418	3177	Rp 3"	183,0	69,5



6FX(4) 42

Product

Submersible borehole pump for 6" boreholes made of AISI 304. The motor is filled with FDA approved oil.

Denomination

Product code with 6" motor 6FX 42
 Product code with 4" motor 6FX4 42

Process data

Liquid temperature:
 3-11 kW max 30° C
 15-18,5 kW max 25° C
 22-30 kW max 20° C
 Suspended sand max 50 g/m³

Motor data

Frequency 50 Hz
 Insulation class 6FX F (+155° C)
 Insulation class 6FX 4 B (+125° C)
 Protection class IP 58
 Immersion depth max 150 m
 Starts per hour:
 Direct start max 15
 Impedance start max 20
 Voltage variations from rated voltage max -10%/ +6%

Cable

Dimension:
 3-11 kW 4x4 mm²
 15-18,5 kW 4x6 mm²
 22-30 kW 4x8 mm²
 Length:
 3-18,5 kW 3 m
 22-30 kW 4 m

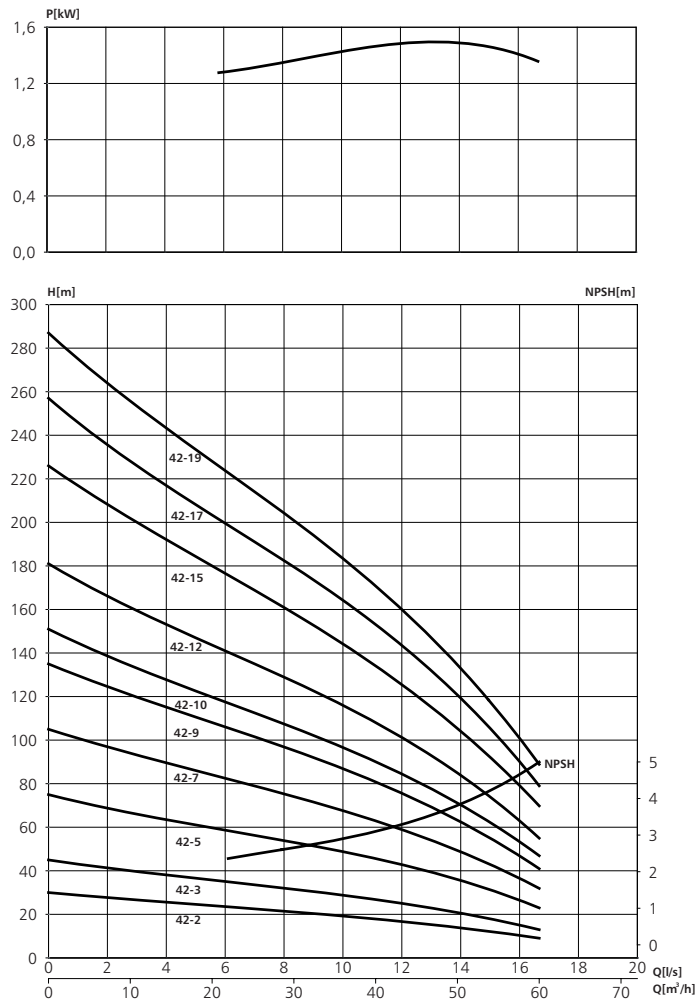
Monitoring equipment

To be provided at installation

Material

Pump	Material
Delivery outlet	Stainless steel AISI 304
Non return valve	Stainless steel AISI 304
Lower support	Stainless steel AISI 304
Bush bearings	Nitrile rubber
Wear ring	Nitrile rubber
Diffuser	Stainless steel AISI 304
Impeller	Stainless steel AISI 304
Convoyer	Stainless steel AISI 304
Shim	Stainless steel AISI 304
Pump shaft	Stainless steel AISI 420
Outer sleeve	Stainless steel AISI 304
Spacer	Stainless steel AISI 304
Filter	Stainless steel AISI 304
Spiders	Stainless steel AISI 304
Coupling	Stainless steel AISI 420
Coupling lock screws	Stainless steel AISI 431
Fasteners	Stainless steel AISI 304
Cable cover	Stainless steel AISI 304
Small blocks	Stainless steel AISI 316L
Fifth wheel	Phenolic resin
Motor	Material
Outer sleeve	Stainless steel AISI 304
Shaft extension	Stainless steel AISI 304
Upper support	Cast iron
Mechanical seal	Carbon ceramic with sand labyrinth
Elastomers	Nitrile rubber
Lower protection	Stainless steel AISI 304
Compensation bellows	Oil resistant rubber
Cooling liquid	ESSO MARCOL

Performance curves



Power per stage.
Multiply with number of stages.

Motor rating, dimensions and weight

3 phase

Pumptype	Motor power		Input current In (A) 380-415 V	Data for 400 V 50 Hz				Total	Dimensions Length (mm)		Weight (kg)	
	kW	HP		rpm	Is/In	η%	cosφ		Pump only	Outlet	Total	Pump only
6FX4 42-2	4,0	5,5	9,2-9,0	2800	6,0	74	0,82	1302	722	Rp 3"	36,0	13,5
6FX4 42-3	5,5	7,5	12,5-12,8	2830	6,6	78	0,83	1529	834	Rp 3"	43,0	16,0
6FX4 42-5	7,5	10,0	17,5-17,2	2820	6,5	79	0,83	1829	1058	Rp 3"	52,0	21,0
6FX 42-2	3,7	5,5	8,8-8,6	2800	6,0	74	0,82	1337	713	Rp 3"	52,0	13,5
6FX 42-3	5,5	7,5	12,5-12,0	2830	6,6	78	0,83	1529	825	Rp 3"	62,0	16,0
6FX 42-5	7,5	10,0	17,5-16,5	2820	6,5	79	0,83	1803	1049	Rp 3"	77,0	21,0
6FX 42-7	11,0	15,0	24,5-24,0	2830	7,0	81	0,83	2134	1273	Rp 3"	91,0	26,0
6FX 42-9	15,0	20,0	31,0-30,0	2880	7,0	84	0,83	2448	1497	Rp 3"	109,0	32,0
6FX 42-10	15,0	20,0	31,0-30,0	2880	7,0	84	0,83	2560	1609	Rp 3"	111,0	33,5
6FX 42-12	18,5	25,0	39,0-37,5	2850	6,3	83	0,83	2874	1833	Rp 3"	128,0	38,5
6FX 42-15	22,0	30,0	46,0-45,0	2870	6,6	84	0,82	3300	2169	Rp 3"	147,0	46,0
6FX 42-17	30,0	40,0	62,0-60,0	2850	5,8	83	0,85	3634	2393	Rp 3"	165,0	51,0
6FX 42-19	30,0	40,0	62,0-60,0	2850	5,8	83	0,85	3857	2617	Rp 3"	170,0	56,0



6FX(4) 58

Product

Submersible borehole pump for 6" boreholes made of AISI 304. The motor is filled with FDA approved oil.

Denomination

Product code with 6" motor 6FX 58
 Product code with 4" motor 6FX4 58

Process data

Liquid temperature:
 3-11 kW max 30° C
 15-18,5 kW max 25° C
 22-30 kW max 20° C
 Suspended sand max 50 g/m³

Motor data

Frequency 50 Hz
 Insulation class 6FX F (+155° C)
 Insulation class 6FX 4 B (+125° C)
 Protection class IP 58
 Immersion depth max 150 m
 Starts per hour:
 Direct start max 15
 Impedance start max 20
 Voltage variations from rated voltage max -10%/ +6%

Cable

Dimension:
 3-11 kW 4x4 mm²
 15-18,5 kW 4x6 mm²
 22-30 kW 4x8 mm²
 Length:
 3-18,5 kW 3 m
 22-30 kW 4 m

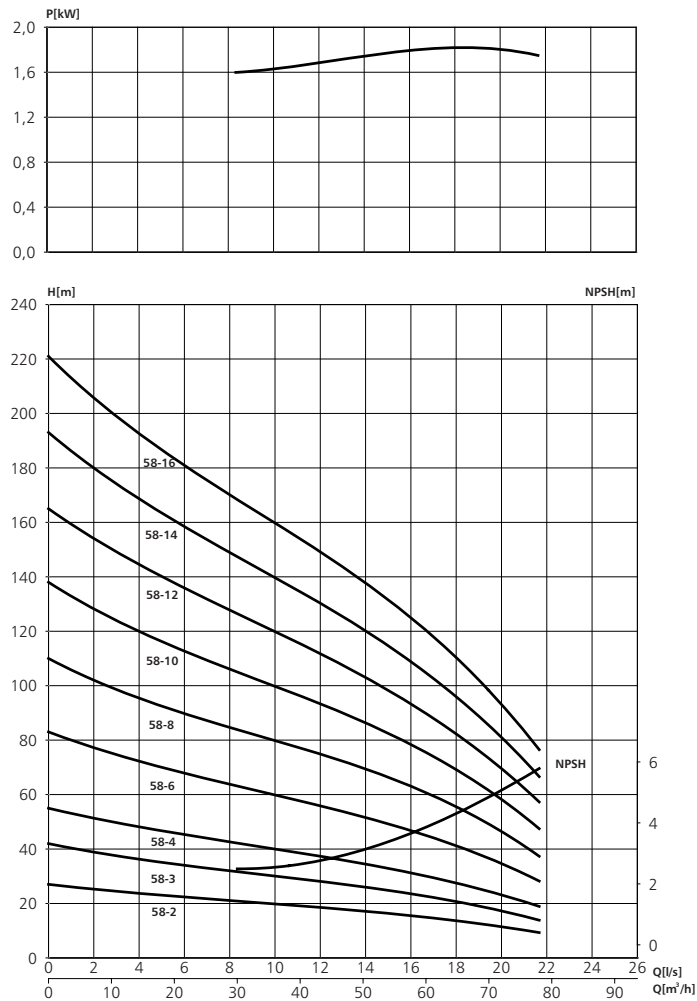
Monitoring equipment

To be provided at installation

Material

Pump	Material
Delivery outlet	Stainless steel AISI 304
Non return valve	Stainless steel AISI 304
Lower support	Stainless steel AISI 304
Bush bearings	Nitrile rubber
Wear ring	Nitrile rubber
Diffuser	Stainless steel AISI 304
Impeller	Stainless steel AISI 304
Convoyer	Stainless steel AISI 304
Shim	Stainless steel AISI 304
Pump shaft	Stainless steel AISI 420
Outer sleeve	Stainless steel AISI 304
Spacer	Stainless steel AISI 304
Filter	Stainless steel AISI 304
Spiders	Stainless steel AISI 304
Coupling	Stainless steel AISI 420
Coupling lock screws	Stainless steel AISI 431
Fasteners	Stainless steel AISI 304
Cable cover	Stainless steel AISI 304
Small blocks	Stainless steel AISI 316L
Fifth wheel	Phenolic resin
Motor	Material
Outer sleeve	Stainless steel AISI 304
Shaft extension	Stainless steel AISI 304
Upper support	Cast iron
Mechanical seal	Carbon ceramic with sand labyrinth
Elastomers	Nitrile rubber
Lower protection	Stainless steel AISI 304
Compensation bellows	Oil resistant rubber
Cooling liquid	ESSO MARCOL

Performance curves



Power per stage.
Multiply with number of stages.

Motor rating, dimensions and weight

3 phase

Pumptype	Motor power		Input current In (A) 380-415 V	Data for 400 V 50 Hz				Total	Dimensions Length (mm)		Weight (kg)	
	kW	HP		rpm	Is/In	η%	cosφ		Pump only	Outlet	Total	Pump only
6FX4 58-2	4,0	5,5	9,2-9,0	2800	6,0	74	0,82	1302	722	Rp 3"	36,0	13,5
6FX4 58-3	5,5	7,5	12,5-12,8	2830	6,6	78	0,83	1529	834	Rp 3"	43,0	16,0
6FX4 58-4	7,5	10,0	17,5-17,2	2820	6,5	79	0,83	1717	946	Rp 3"	49,0	18,5
6FX 58-2	3,7	5,5	8,8-8,6	2800	6,0	74	0,82	1337	713	Rp 3"	52,0	13,5
6FX 58-3	5,5	7,5	12,5-12,0	2830	6,6	78	0,83	1529	825	Rp 3"	62,0	16,0
6FX 58-4	7,5	10,0	17,5-16,5	2820	6,5	79	0,83	1691	937	Rp 3"	75,0	18,5
6FX 58-6	11,0	15,0	24,5-24,0	2830	7,0	81	0,83	2022	1161	Rp 3"	89,0	23,5
6FX 58-8	15,0	20,0	31,0-30,0	2880	7,0	84	0,83	2336	1385	Rp 3"	106,0	28,5
6FX 58-10	18,5	25,0	39,0-37,5	2850	6,3	83	0,83	2650	1609	Rp 3"	123,0	33,5
6FX 58-12	22,0	30,0	46,0-45,0	2870	6,6	84	0,82	2964	1833	Rp 3"	139,0	38,5
6FX 58-14	30,0	40,0	62,0-60,0	2850	5,8	83	0,85	3298	2057	Rp 3"	157,0	43,5
6FX 58-16	30,0	40,0	62,0-60,0	2850	5,8	83	0,85	3522	2281	Rp 3"	162,0	48,5

Drop cables

It's important to use cables of proper size to ensure proper pump operation. The chart below shows the maximum length per cross section and motor power. The charts refer to H07RNF cables with suitable insulation for operating temperatures up to 60°C.

Maximum length of power cable with 220-230V single phase and direct start

Motor power		Cable cross section 4 x ... mm ²						
kW	hp	1	1,5	2,5	4	6	10	16
0,25	0,33	65	95	160				
0,37	0,5	55	80	130				
0,55	0,75	35	55	90	140			
0,75	1,0	25	40	65	105	160		
1,1	1,5	20	30	50	75	115	190	
1,5	2,0		22	36	60	90	145	230
2,2	3,0			25	40	60	100	165

Maximum length of power cable with 380-415V three phase and direct start

Motor power		Cable cross section 4 x ... mm ²										
kW	hp	1	1,5	2,5	4	6	10	16	25	35	50	70
0,37	0,5	315										
0,55	0,75	210	315									
0,75	1,0	165	240									
1,1	1,5	120	180	285								
1,5	2,0	90	135	225	260							
2,2	3,0	65	10	165	255	390						
3,0	4,0	45	65	110	180	255	420					
4,0	5,5	35	50	85	135	195	330	516				
5,5	7,5		42	70	110	165	270	422				
7,5	10,0		32	53	84	126	207	324	482			
11,0	15,0			37	58	87	144	225	335	470		
15,0	20,0				46	69	114	178	265	372	490	
18,5	25,0					55	90	141	210	296	390	
22,0	30,0					46	76	120	178	251	330	
30,0	40,0						57	89	132	186	245	340
37,0	45,0						45	70	105	145	190	265
45,0	60,0						37	60	90	120	160	221

For 220V 3-phase, maximum length is 1/3 of above

Maximum length of power cable with 380V three phase and star/delta start

Motor power		Cable cross 2 cables 4 x ... mm ²										
kW	hp	1	1,5	2,5	4	6	10	16	25	35	50	70
3,0	4,0		108	180	285	427	705					
4,0	5,5		93	153	243	365	600					
5,5	7,5		65	108	171	256	423	660				
7,5	10,0		48	79	126	189	310	486	723			
11,0	15,0			55	87	131	216	337	502	705		
15,0	20,0				69	103	171	267	397	558	735	
18,5	25,0					82	135	212	345	444	585	
22,0	30,0					69	114	180	267	376	495	
30,0	40,0						85	133	198	279	368	510

For 415V, maximum length is 10% longer than above.

Splicing of drop cable to motor cable

4FX

Type of splicing	Four-pole drop cable (mm ²)									Three pole cable (mm ²)								
	1,5	2,5	4	6	10	16	25	35	50	1,5	2,5	4	6	10	16	25	35	50
Resin filled method	GR1	GR1	GR2	GR2	GR2	GR3	GR3			GR1	GR1	GR1	GR1	GR2	GR2	GR3		
Heat shrink method	GT1	GT1	GT2	GT3	GT4					GT1	GT2	GT2	GT3	GT4				
Tape method	Self vulcanising tape+self vulcanising sealing putty and PVC tape (1)																	

6FX

Type of splicing	Four-pole drop cable (mm ²)									Three pole cable (mm ²)								
	1,5	2,5	4	6	10	16	25	35	50	1,5	2,5	4	6	10	16	25	35	50
Resin filled method	GR2	GR2	GR2	GR2	GR2	GR3	GR4	GR4		GR2	GR2	GR2	GR2	GR2	GR2	GR3		
Heat shrink method		GT2	GT2	GT2	GT3	GT4	GT5			GT2	GT2	GT2	GT3	GT3	GT4	GT5		
Tape method	Self vulcanising tape+self vulcanising sealing putty and PVC tape (1)																	
18.5 Kw -																		
Resin filled method			GR2	GR2	GR2	GR3	GR4	GR4	GR5			GR2	GR2	GR2	GR2	GR3	GR4	GR5
Heat shrink method																		
Tape method	Self vulcanising tape+PVC tape																	

(1) Self vulcanising putty is used to fill in the gaps between the three pole cable and the ground cable in the area covered by the final layer of tape, to ensure the continuity of the protective sheath.



Introduction

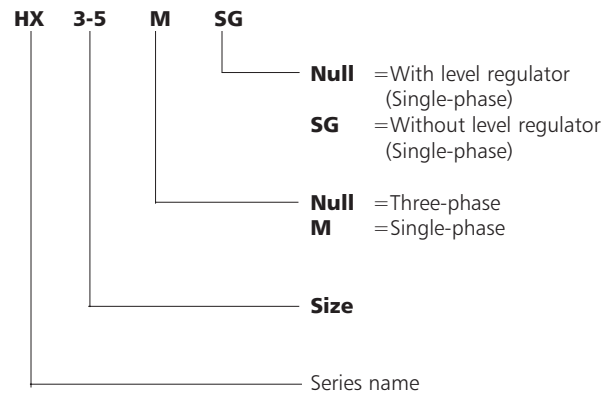
The HX range is a compact 5" diameter multi-impeller, high performance range of submersible pumps in stainless steel.

Delivery: up to 120 l/min
 Head: up to 80 m

Applications

- Transfer of raw water from rivers or lakes
- Transfer of groundwater from springs and wells, bored 6" or dug
- Irrigation of gardens by means of rainwater collected in tanks or river water
- Watering of live stock
- Irrigation of farmland

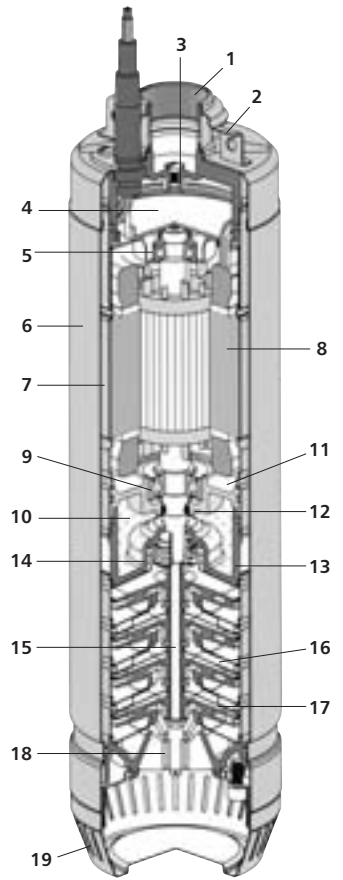
Product identity





Design

1. Delivery outlet 1 1/2".
2. Hook for safety rope.
3. Testing hole for injecting compressed air to check the hermetic seal of the motor gaskets.
4. Terminal covering cap, in technopolymer.
5. Top bearing.
6. External sleeve and top support, in stainless steel AISI 304.
7. Motor housing, in stainless steel AISI 304.
8. Dry motor with class F windings and built-in protection device (For single-phase versions).
9. Bottom bearing.
10. Oil chamber with non-toxic oil.
11. Intermediate support, in die-cast aluminium.
12. Mechanical seal.
13. Mechanical seal seat, in technopolymer.
14. Mechanical seal SIC-SIC, in silicone carbide, resistant to abrasion.
15. Shaft, hexagonal type, in stainless steel; transmits movement to the impellers without the use of keys.
16. Diffuser, in stainless steel AISI 304.
17. Impeller, radial type, made of technopolymer.
18. Lower bearing, in special rubber with lubrication grooves (for versions with more than four impellers).
19. Inlet strainer, in stainless steel, doesn't allow solid bodies bigger than 2.5 mm.



HX

Product

Submersible pump for a variety of irrigation and water transfer applications.

Process data

Liquid temperature max 40°C
 Solids size max 2.5 mm
 Suspended sand content max 25g/m³

Motor data

Frequency 50 Hz
 Insulation class F (155°C)
 Protection class IP 68
 Immersion depth max 20 m

Cable

H07RN-F 20 m

Control

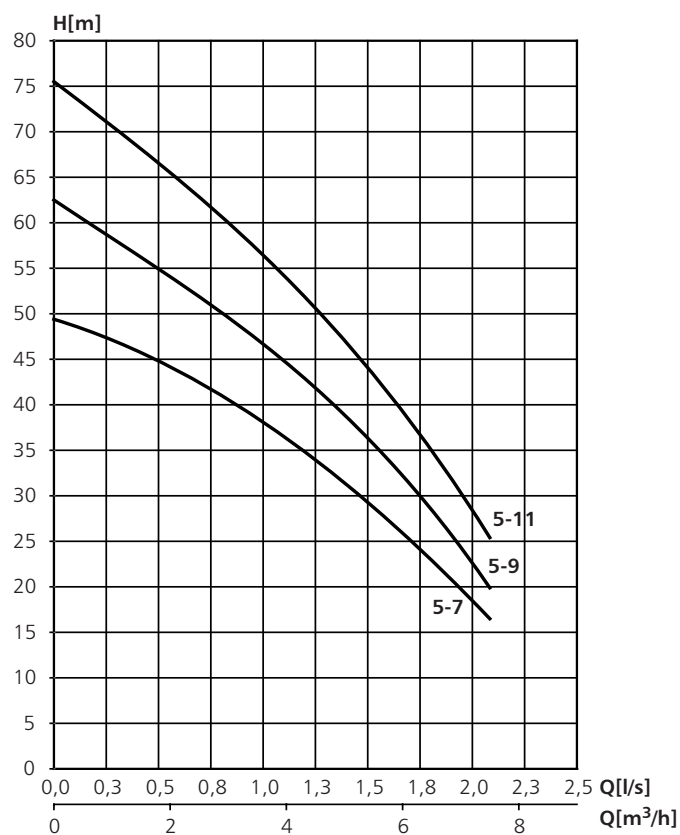
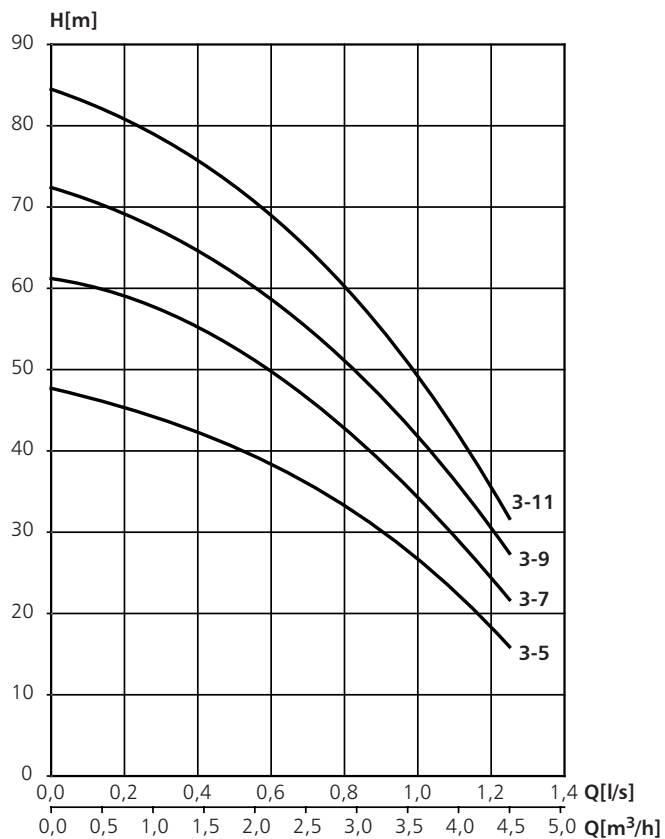
Single-phase
 Three-phase Built in level regulator
 To be provided

Motor rating

Pump type Three phase	Power kW	Input current A	
		220-240 V	380-415 V
HX 3-5	0.55	2.8	1.6
HX3-7	0.75	4.1	2.4
HX 3-9	0.9	4.4	2.5
HX 3-11	1.1	4.7	2.7
HX 5-7	0.75	4.2	2.4
HX 5-9	0.9	4.5	2.6
HX5-11	1.1	4.9	2.9

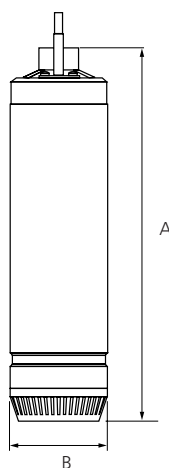
Pump type Single phase	Power kW	Capacitor		Input current A 220-240 V
		µF	V	
HX 3-5 M	0.55	16	450	4.4
HX3-7 M	0.75	25	450	5.2
HX 3-9 M	0.9	25	450	5.9
HX 3-11 M	1.1	30	450	7.2
HX 5-7 M	0.75	25	450	5.3
HX 5-9 M	0.9	25	450	6.2
HX5-11 M	1.1	30	450	7.8

Performance curves



Dimensions and weight

Pump type	Dimensions in mm		Number of stages	Weight kg
	A	B		
HX 3-5(M)	496	128	4	13.5
HX 3-7(M)	536	128	5	15
HX 3-9(M)	561	128	6	16
HX 3-11(M)	606	128	7	18
HX 5-7(M)	511	128	4	14.5
HX 5-9(M)	536	128	5	15.5
HX 5-11(M)	581	128	6	17.5





JET

Product

Closed coupled self priming centrifugal pumps with a built-in ejector system, designed to remain primed even in the presence of water dissolved gases. The extensive use of pressed stainless steel ensures a high performance, durable and lightweight pump.

Applications

- Water handling for domestic use
- Lawn sprinkling
- Composition of surge tank units for pressure boosting in various applications
- Washing
- Water transfer

Denomination

Product code:

Three phase

Single phase

JETS

JETSM

Process data

Liquid temperature	-10° C to +40° C
Maximum pressure	8 bar
Maximum suction head	8 m

Motor data

Enclosed motor with external ventilation and aluminum finned casing.

Frequency	50 Hz
Insulation class	F (+155° C)
Protection class	IP 55
Duty type	Continuous

Monitoring equipment

Single phase	Automatic reset overload protection
Three phase	To be provided at installation

Material

Pump body	AISI 316L
Seal housing	AISI 316L
Impeller	AISI 316L
O-rings	NBR
Shaft extension	AISI 316L
Mechanical seal	Carbon/ Ceramic
Fill and drain plugs	Nickel plated brass
Diffuser	Thermoplastic
Ejector	Thermoplastic

Motor rating

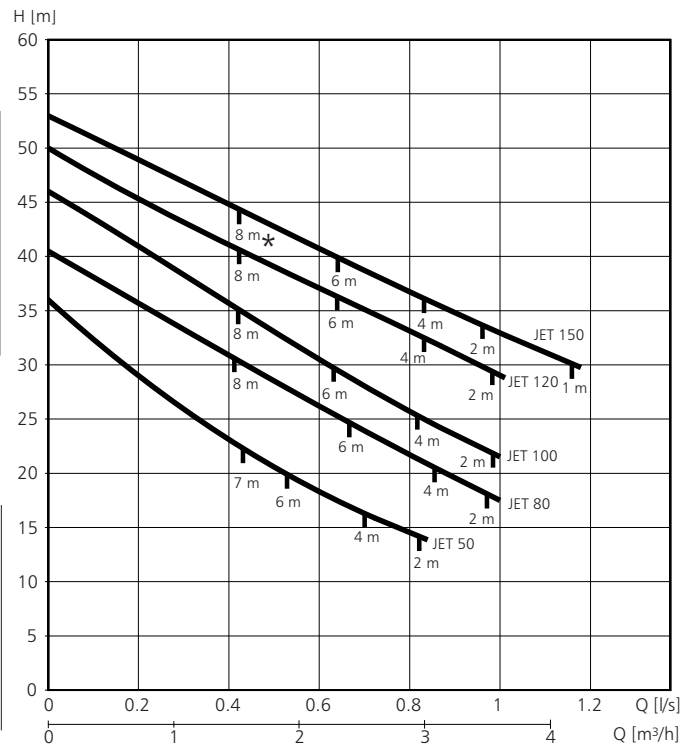
Single phase

Pump type	P2 kW	Capacitor		Input current A 220-240V
		μF	V	
JETSM 50	0.37	12.5	450	3.0
JETSM 80	0.55	18.0	450	4.0
JETSM 100	0.75	22.0	450	4.8
JETSM 120	0.90	22.0	450	5.6
JETSM 150	1.10	30.0	450	6.8

Three phase

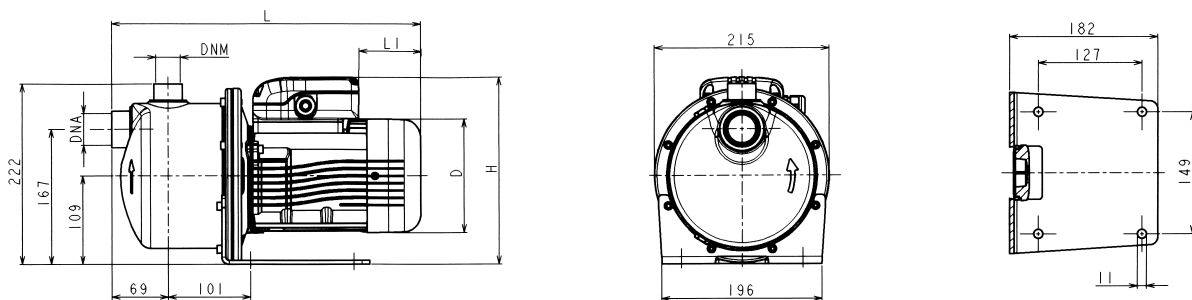
Pump type	P2 kW	Input current A	
		220-240V	380-415V
JETS 50	0.37	2.1	1.2
JETS 80	0.55	2.8	1.6
JETS 100	0.75	3.3	1.9
JETS 120	0.90	4.5	2.6
JETS 150	1.10	4.2	2.4

Performance curves



* Max suction head

Dimensions and weights



Pump type	kW	D	L	L1	H	DNA	DNM	Weight kg
JETSM 50	0.37	120	366	62	220	Rp 1"1/4	Rp 1"	11
JETSM 80	0.55	140	380	76	230	Rp 1"1/4	Rp 1"	12
JETSM 100	0.75	140	380	76	230	Rp 1"1/4	Rp 1"	14
JETSM 120	0.90	140	380	31	239	Rp 1"1/4	Rp 1"	16
JETSM 150	1.10	156	425	69	246	Rp 1"1/4	Rp 1"	20
JETS 50	0.37	120	366	62	220	Rp 1"1/4	Rp 1"	10
JETS 80	0.55	140	380	76	230	Rp 1"1/4	Rp 1"	11
JETS 100	0.75	140	380	76	230	Rp 1"1/4	Rp 1"	12
JETS 120	0.90	140	380	76	230	Rp 1"1/4	Rp 1"	14
JETS 150	1.10	156	425	114	238	Rp 1"1/4	Rp 1"	15

Introduction



Wide range of pumps for domestic and industrial applications. Single-impeller (CAX) and dual-impeller (2CAX) models are available.

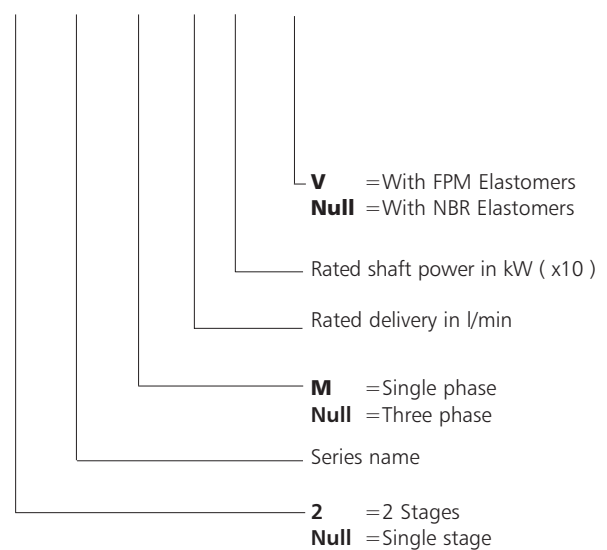
- In the standard version all components in contact with the pumped liquid are made of stainless steel (AISI 304 or AISI 316).
- Delivery: up to 30m³/h.
- Head: up to 62m.
- Maximum operating pressure: 8 bar.
- Continuous duty.

Applications

- Handling of liquids compatible with AISI 304 stainless steel in a wide variety of civil and industrial systems.
- Water circulation for domestic use.
- Sprinkler systems.
- Composition of surge tank units for pressure boosting in various applications.

Product identity

2 CAX M 80 / 7 - V





CAX

Product

Stainless steel single stage pumps suitable for circulation and transfer of chemically and mechanically non-aggressive liquids, water supply, irrigation and hot or cold water circulation.

Process data

Liquid temperature -10°C to +85°C
 Liquid density max. 1100 kg/m³

Motor data

Enclosed motor with external ventilation and aluminium finned casing.

Frequency 50 Hz
 Insulation class F (+155°C)
 Protection class IP 55

Monitoring equipment

Single phase Automatic reset
 ≤ 1.5 kW overload protection
 Single phase To be provided
 > 1.5 kW at installation
 Three phase To be provided
 at installation

Material

Part	Material	
	CAX	CAX-V
Pump body	Stainless steel (AISI 304 - DIN 1.4301)	
Flange		
Seal housing		
Diffuser		
Impeller		
Shaft extension	Stainless steel (AISI 316 - DIN 1.4401)	
Fill and drain plugs	Stainless steel (AISI 316 - DIN 1.4401)	
O-ring seals	NBR	FPM

Mechanical face seals and O-rings

Alternative	Seal face	O-rings
1 Standard	Carbon/ceramic	EPDM
2	Carbon/tungsten carbide	FPM
3	Tungsten carbide/ Silicon carbide	FPM
4	Tungsten carbide/ Tungsten carbide	FPM
5	Silicon carbide/ Silicon carbide	FPM

Motor rating

Single-phase

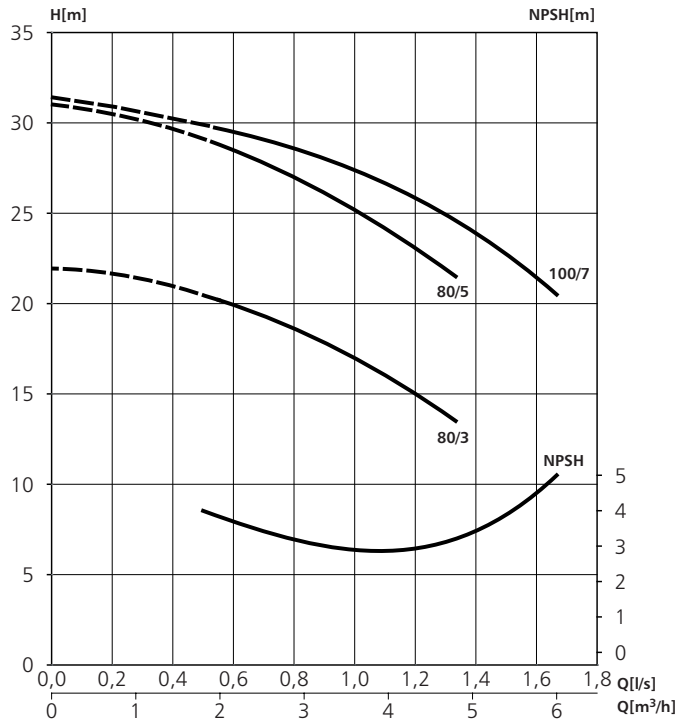
Pump type	Motor power P2		Absorbed Current In (A) 220-240 V	Capacitor		Absorbed Power P1 kW	Starting Current Is/In
	kW	HP		µF	V		
80/3	0.37	0.50	2.6	12.5	450	0.60	3.4
80/5	0.55	0.75	4.2	18.0	450	0.96	3.4
100/7	0.75	1.00	4.8	22.0	450	1.07	3.8
160/5	0.55	0.75	3.8	18.0	450	0.87	3.7
160/9	0.90	1.20	6.0	22.0	450	1.34	3.0
300/7	0.75	1.00	5.2	22.0	450	1.20	3.4
300/11	1.10	1.50	7.4	30.0	450	1.60	3.7
300/15	1.50	2.00	9.0	40.0	450	2.05	4.0
300/18	2.20	3.00	11.0	50.0	450	2.40	3.9
400/11	1.10	1.50	7.4	30.0	450	2.50	3.7
400/15	1.50	2.00	10.4	40.0	450	2.50	3.6
400/18	2.20	3.00	11.5	50.0	450	2.60	3.7

Three phase

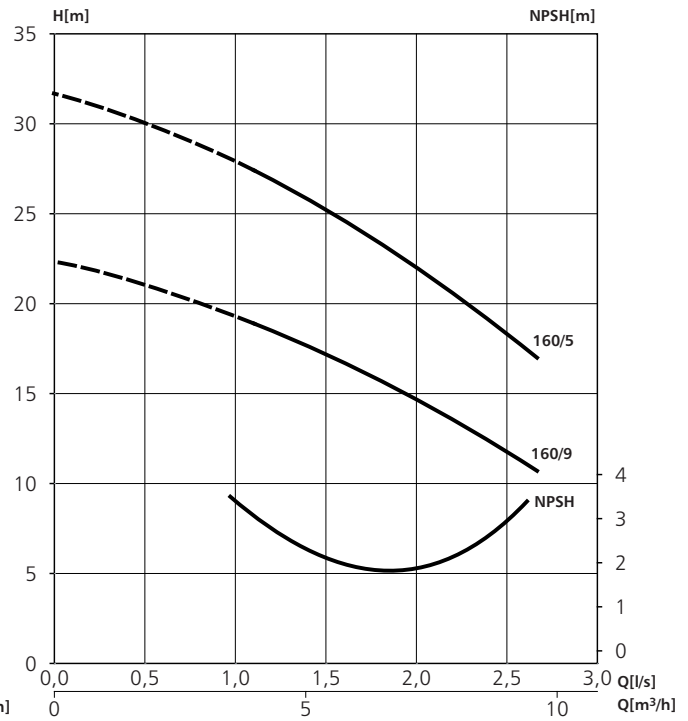
Pump type	Motor power P2		Absorbed current In (A)		Absorbed power P1 kW	Starting current Is/In
	kW	HP	220-240 V	380-415 V		
80/3	0.37	0.50	2.1	1.2	0.58	4.1
80/5	0.55	0.75	2.9	1.7	0.88	4.5
100/7	0.75	1.00	3.6	2.1	1.04	5.1
160/5	0.55	0.75	2.8	1.6	0.79	4.8
160/9	0.90	1.20	4.2	2.4	1.34	4.5
300/7	0.75	1.00	3.8	2.2	1.12	4.9
300/11	1.10	1.50	4.9	2.8	1.50	6.0
300/15	1.50	2.00	6.2	3.6	1.98	6.4
300/18	1.85	2.50	7.6	4.4	2.35	6.4
400/11	1.10	1.50	5.0	2.9	1.53	5.8
400/15	1.50	2.00	6.4	3.7	2.20	6.2
400/18	1.85	2.50	8.0	4.6	2.63	6.1

Performance Curves

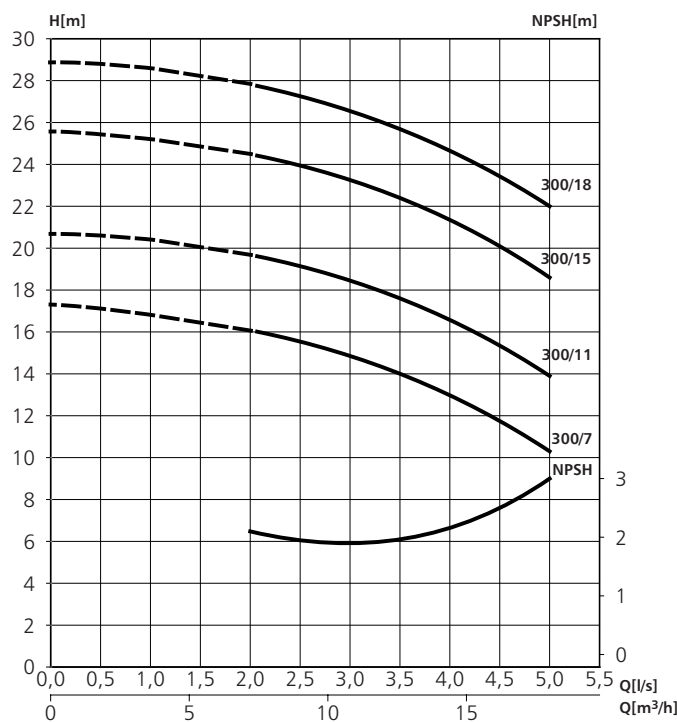
CAX 80-CAX 100 series



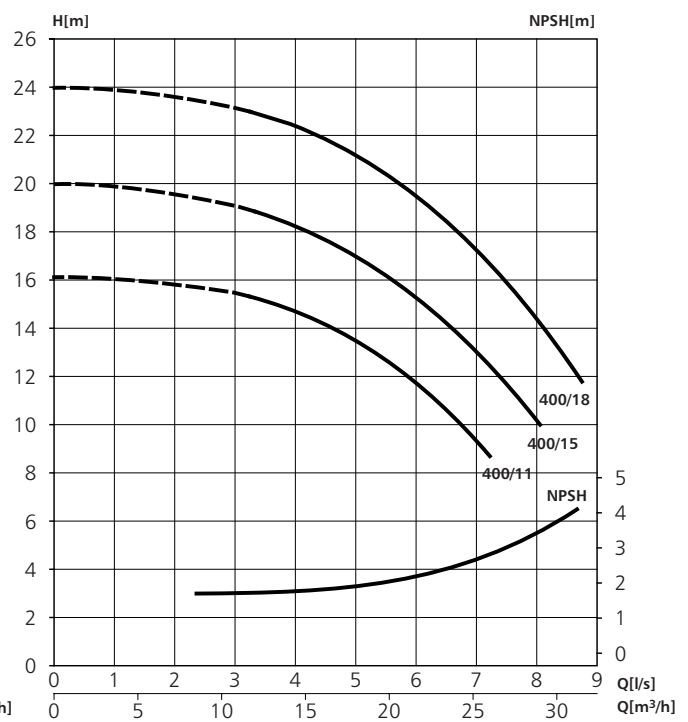
CAX 160 series



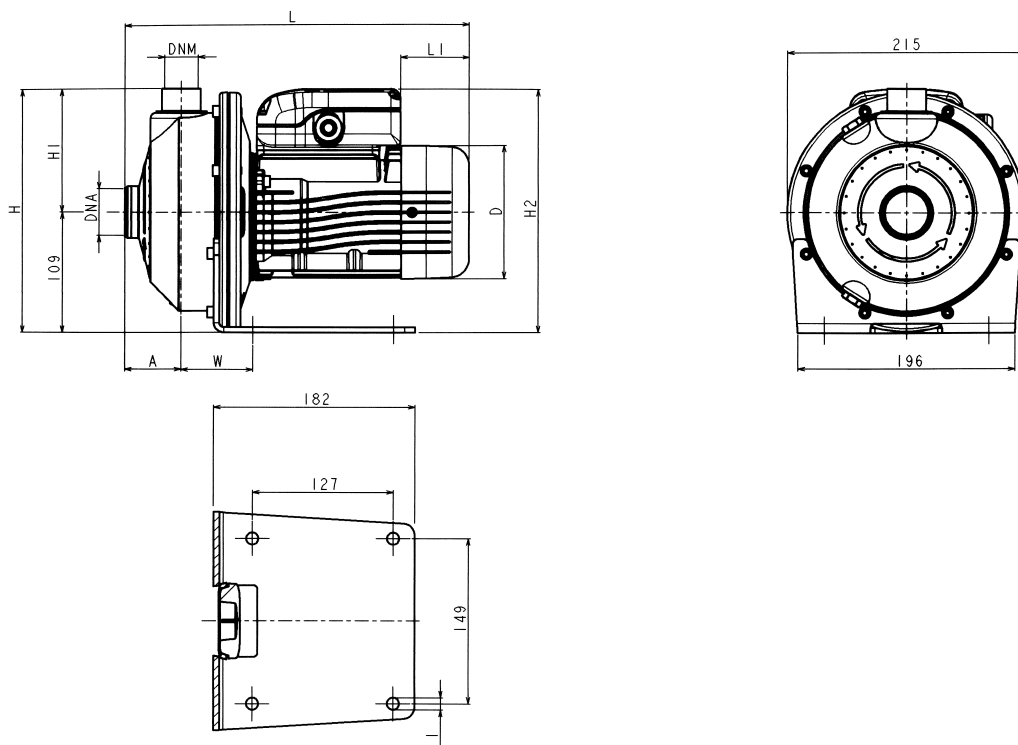
CAX 300 series



CAX 400 series



Dimensional drawing and weights



Pump type	kW	A	D	H	H1	H2	L	L1	W	DNA	DNM	Weight kg
CAX M 80/3	0.37	51	120	220	111	220	311	62	65	Rp 1"1/4	Rp 1"	10
CAX M 80/5	0.55	51	140	220	111	230	325	76	65	Rp 1"1/4	Rp 1"	12
CAX M 100/7	0.75	51	140	220	111	230	325	76	65	Rp 1"1/4	Rp 1"	12
CAX M 160/5	0.55	51	140	220	111	230	325	76	65	Rp 1"1/4	Rp 1"	12
CAX M 160/9	0.90	51	140	220	111	239	325	31	65	Rp 1"1/4	Rp 1"	15
CAX M 300/7	0.75	54	140	222	113	230	339	76	76	Rp 1"1/2	Rp 1"1/4	12
CAX M 300/11	1.10	54	156	222	113	246	385	69	76	Rp 1"1/2	Rp 1"1/4	15
CAX M 300/15	1.50	54	156	222	113	246	385	69	76	Rp 1"1/2	Rp 1"1/4	22
CAX M 300/18	2.20	54	176	222	113	230	416	114	76	Rp 1"1/2	Rp 1"1/4	22
CAX M 400/11	1.10	54	156	222	113	246	385	69	76	Rp 2"	Rp 1"1/4	15
CAX M 400/15	1.50	54	156	222	113	246	385	69	76	Rp 2"	Rp 1"1/4	22
CAX M 400/18	2.20	54	176	222	113	230	416	114	76	Rp 2"	Rp 1"1/4	22
CAX 80/3	0.37	51	120	220	111	220	311	62	65	Rp 1"1/4	Rp 1"	10
CAX 80/5	0.55	51	140	220	111	230	325	76	65	Rp 1"1/4	Rp 1"	12
CAX 100/7	0.75	51	140	220	111	230	325	76	65	Rp 1"1/4	Rp 1"	12
CAX 160/5	0.55	51	140	220	111	230	325	76	65	Rp 1"1/4	Rp 1"	12
CAX 160/9	0.90	51	140	220	111	230	325	76	65	Rp 1"1/4	Rp 1"	15
CAX 300/7	0.75	54	140	222	113	230	339	76	76	Rp 1"1/2	Rp 1"1/4	12
CAX 300/11	1.10	54	156	222	113	238	385	114	76	Rp 1"1/2	Rp 1"1/4	15
CAX 300/15	1.50	54	156	222	113	238	385	114	76	Rp 1"1/2	Rp 1"1/4	17
CAX 300/18	1.85	54	156	222	113	238	385	114	76	Rp 1"1/2	Rp 1"1/4	19
CAX 400/11	1.10	54	156	222	113	238	385	114	76	Rp 2"	Rp 1"1/4	15
CAX 400/15	1.50	54	156	222	113	238	385	114	76	Rp 2"	Rp 1"1/4	17
CAX 400/18	1.85	54	156	222	113	238	385	114	76	Rp 2"	Rp 1"1/4	19



2 CAX

Product

Stainless steel single stage pumps suitable for circulation and transfer of chemically and mechanically non-aggressive liquids, water supply, irrigation and hot or cold water circulation.

Process data

Liquid temperature -10°C to +85°C
 Liquid density max. 1100 kg/m³

Motor data

Frequency 50 Hz
 Insulation class F (+155°C)
 Protection class IP 55

Monitoring equipment

Single phase ≤ 1.5 kW Automatic reset overload protection
 Single phase > 1.5 kW To be provided at installation
 Three phase To be provided at installation

Material

Part	Material	
	2 CAX	2 CAX-V
Pump body	Stainless steel (AISI 304 - DIN 1.4301)	
Flange		
Seal housing		
Diffuser		
Impeller		
Shaft extension	Stainless steel (AISI 304 - DIN 1.4301)	
Fill and drain plugs	Stainless steel(AISI 316 - DIN 1.4401)	
O-ring seals	NBR FPM	

Mechanical face seals and O-rings

Alternative	Seal face	O-rings
1 Standard	Carbon/ceramic	EPDM
2	Carbon/tungsten carbide	FPM
3	Tungsten carbide/ Silicon carbide	FPM
4	Tungsten carbide/ Tungsten carbide	FPM
5	Silicon carbide/ Silicon carbide	FPM

Motor rating

Single phase

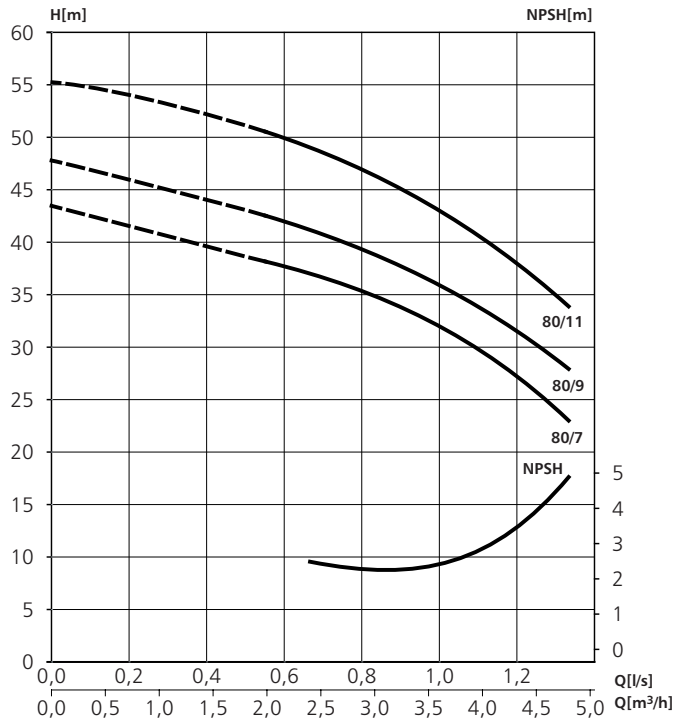
Pump type	Motor power P2		Absorbed current In (A) 220-240 V	Capacitor		Absorbed power P1 kW	Starting current Isp/In
	kW	HP		µF	V		
80/7	0.75	1.0	5.0	22	450	1.50	3.6
80/9	0.90	1.2	5.8	22	450	1.50	3.1
80/11	1.10	1.5	8.1	30	450	1.80	3.4
140/11	1.10	1.5	7.0	30	450	1.55	3.9
140/15	1.50	2.2	9.5	40	450	2.15	4.0
140/18	2.20	3.0	12.2	50	450	2.70	3.5
200/18	2.20	3.0	11.5	50	450	2.60	3.7

Three phase

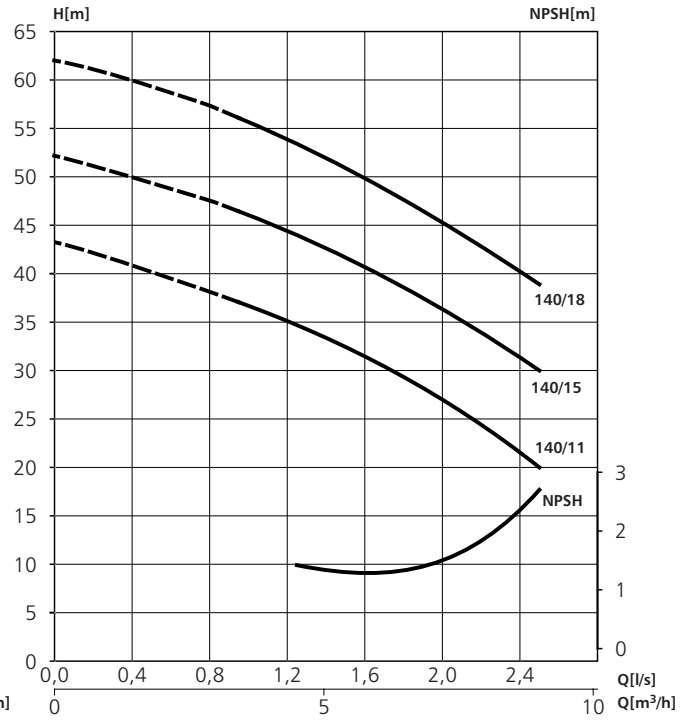
Pump type	Motor power P2		Absorbed current In (A)		Absorbed power P1 kW	Starting current Isp/In
	kW	HP	220-240V	380-415 V		
80/7	0.75	1.0	3.6	2.1	1.09	5.1
80/9	0.90	1.2	4.2	2.4	1.30	4.5
80/11	1.10	1.5	5.2	3.0	1.70	5.7
140/11	1.10	1.5	4.8	2.8	1.56	6.0
140/15	1.50	2.0	6.6	3.8	2.10	6.1
140/18	1.85	2.5	8.0	4.6	2.65	6.1
200/18	1.85	2.5	8.1	4.7	2.64	6.0
200/22	2.20	3.0	9.0	5.2	3.50	6.4
200/30	3.00	4.0	11.2	6.8	4.40	6.5

Performance Curves

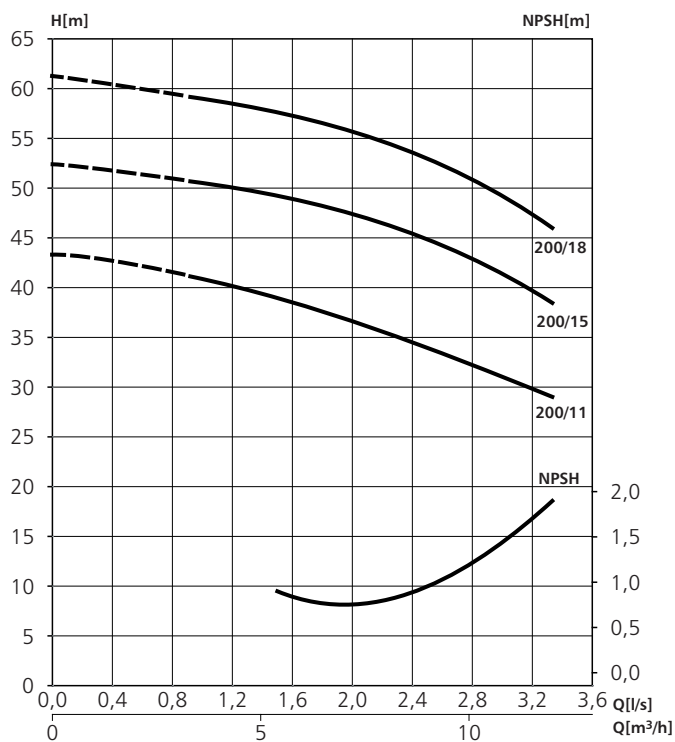
2 CAX 80 series



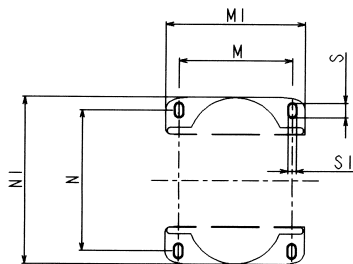
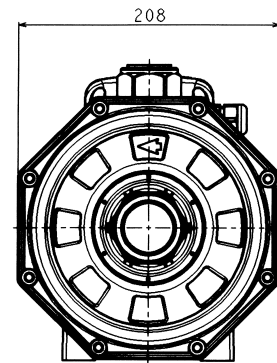
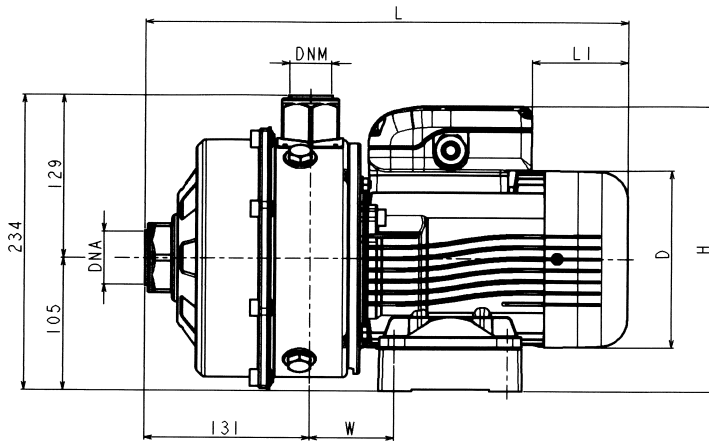
2 CAX 140 series



2 CAX 200 series



Dimensional drawing and weights



Pump type	kW	D	H	L	L1	M	M1	N	N1	S	S1	W	DNA	DNM	Weight kg
2 CAX M 80/7	0.75	140	226	383	76	90	113	112	135	12	7	66	Rp1 ¹ / ₄	Rp 1"	14
2 CAX M 80/9	0.90	140	235	383	31	90	113	112	135	12	7	66	Rp1 ¹ / ₄	Rp 1"	14
2 CAX M 80/11	1.10	156	242	420	69	100	125	125	153	12	9	76	Rp1 ¹ / ₄	Rp 1"	17
2 CAX M 140/11	1.10	156	242	420	69	100	125	125	153	12	9	76	Rp1 ¹ / ₄	Rp 1"	16
2 CAX M 140/15	1.50	156	242	420	69	100	125	125	153	12	9	76	Rp1 ¹ / ₄	Rp 1"	23
2 CAX M 140/18	2.20	176	226	450	114	125	156	140	170	13	9	98	Rp1 ¹ / ₄	Rp 1"	23
2 CAX M 200/18	2.20	176	226	450	114	125	156	140	170	13	9	98	Rp1 ¹ / ₂	Rp 1"	24
2 CAX 80/7	0.75	140	226	383	76	90	113	112	135	12	7	66	Rp1 ¹ / ₄	Rp 1"	14
2 CAX 80/9	0.90	140	226	383	76	90	113	112	135	12	7	66	Rp1 ¹ / ₄	Rp 1"	14
2 CAX 80/11	1.10	156	234	420	114	100	125	125	153	12	9	76	Rp1 ¹ / ₄	Rp 1"	17
2 CAX 140/11	1.10	156	234	420	114	100	125	125	153	12	9	76	Rp1 ¹ / ₄	Rp 1"	16
2 CAX 140/15	1.50	156	234	420	114	100	125	125	153	12	9	76	Rp1 ¹ / ₄	Rp 1"	18
2 CAX 140/18	1.85	156	234	420	114	100	125	125	153	12	9	76	Rp1 ¹ / ₄	Rp 1"	21
2 CAX 200/18	1.85	156	234	420	114	100	125	125	153	12	9	76	Rp1 ¹ / ₂	Rp 1"	21
2 CAX 200/22	2.20	176	226	450	149	125	156	140	170	13	9	98	Rp1 ¹ / ₂	Rp 1"	22
2 CAX 200/30	3.00	176	226	450	149	125	156	140	170	13	9	98	Rp1 ¹ / ₂	Rp 1"	24

Introduction



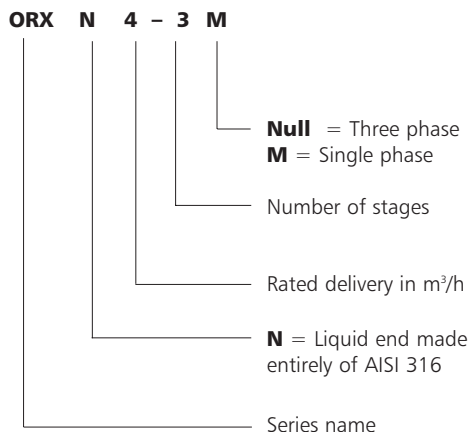
Modern-design noiseless high-efficiency pumps, available in the ORX version for domestic applications and in the ORX N version for industrial applications (made entirely of AISI 316 stainless steel).

Specifications

- Delivery: up to 120 l/min (7.2 m³/h).
- Head: up to 60 m.
- Continuous duty.
- Maximum: operating pressure: 8 bar.
- Power up to 0.9 kW.

Product identity

The ORX - ORX N series models are coded as shown in the following diagram:



Applications

ORX (AISI 304)

- Clean water circulation for domestic use.
- Pressure boosting units for single- or double-family dwelling water supply
- Irrigation systems.
- Washing.

ORX N (AISI 316)

- Industrial washing systems.
- Cooling and heating circuits.
- Handling of special liquids (demineralized or softened water, washing solutions, oils, etc.)
- Irrigation systems handling water containing nutritive and/ or chemically aggressive substances.



Material

Part	Material
Pump body	Stainless steel AISI 304 – DIN 1.4301
Seal housing	Stainless steel AISI 304 – DIN 1.4301
Diffusers	Stainless steel AISI 304 – DIN 1.4301
Covers	Stainless steel AISI 304 – DIN 1.4301
Spacers	Stainless steel AISI 304 – DIN 1.4301
Impellers	Technopolymer suited for handling food products
Shaft extension	Stainless steel AISI 304 – DIN 1.4301
Fill and drain plugs	Nickel-plated brass

Mechanical face seals and O-rings

Alternative	Seal face	O-rings
1 Standard	Carbon/ceramic	EPDM
2	Carbon/tungsten carbide	FPM
3	Tungsten carbide/ Silicon carbide	FPM
4	Tungsten carbide/ Tungsten carbide	FPM
5	Silicon carbide/ Silicon carbide	FPM

ORX

Product

Pump suitable for circulation of water for domestic use.

Process data

Liquid temperature -10° C to +60° C
 Liquid density max. 1100 kg/m³

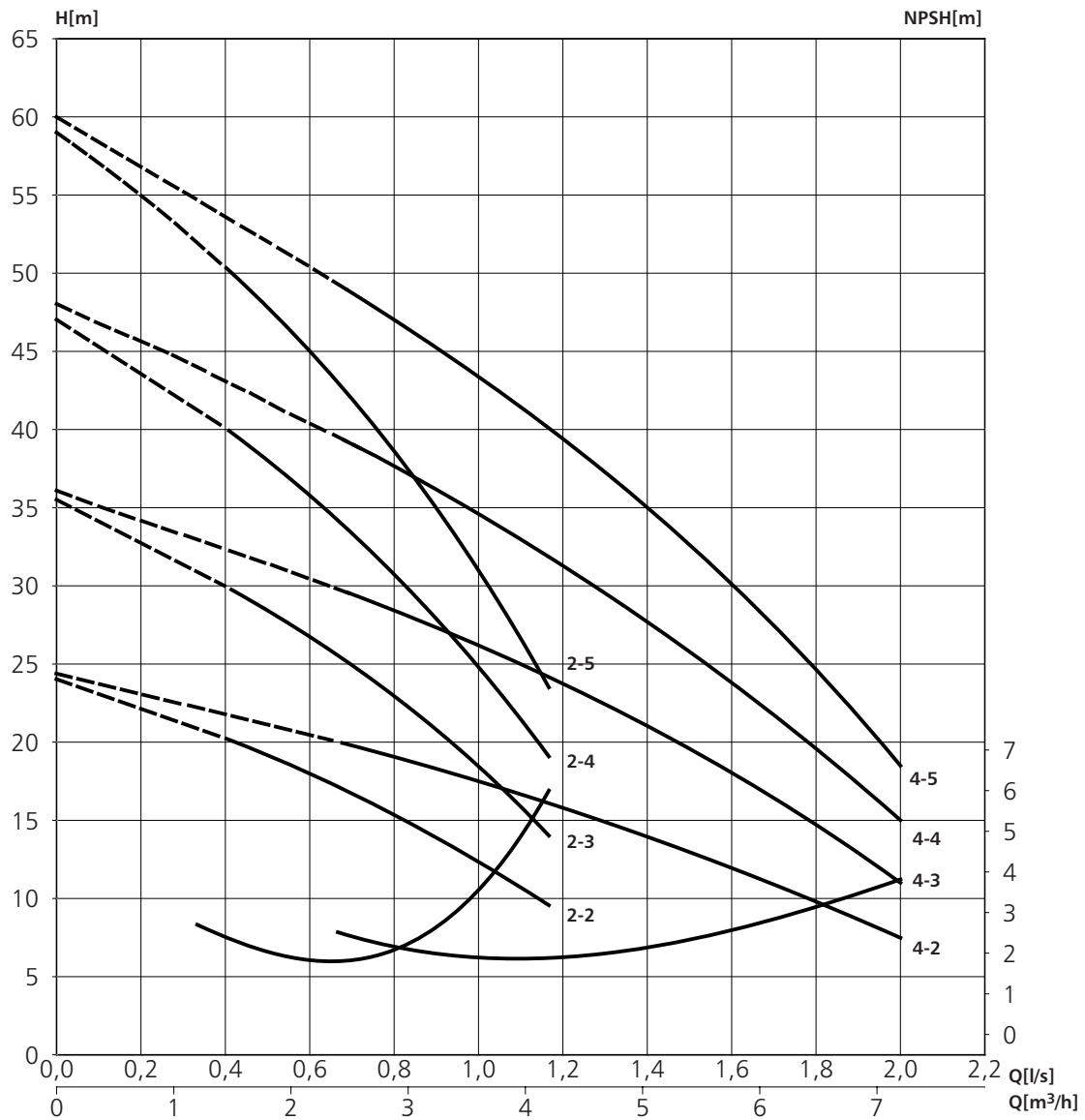
Motor data

Frequency 50 Hz
 Insulation class F (+155° C)
 Protection class IP 44

Monitoring equipment

Single phase : Built in automatic reset
 overload protection
 Three phase: To be provided
 at installation

Performance curves



Motor rating

Pump type		Number of stages	Power		Capacitor		Input current		
Single-phase 220 V	Three-phase 220-240/380-415 V		kW	HP	μF	V	Single-phase 220 V	Three-phase 220-240 V	380-415 V
ORX 2-2M	ORX 2-2	2	0.30	0.40	10.0	450	2.1	1.75	1.01
ORX 2-3M	ORX 2-3	3	0.45	0.60	12.5	450	2.9	2.46	1.42
ORX 2-4M	ORX 2-4	4	0.55	0.75	16.0	450	3.6	2.91	1.68
ORX 2-5M	ORX 2-5	5	0.75	1.00	22.0	450	5.0	3.50	2.00
ORX 4-2M	ORX 4-2	2	0.45	0.60	12.5	450	2.7	2.42	1.40
ORX 4-3M	ORX 4-3	3	0.55	0.75	16.0	450	3.8	2.98	1.72
ORX 4-4M	ORX 4-4	4	0.75	1.00	22.0	450	5.0	3.50	2.00
ORX 4-5M	ORX 4-5	5	0.90	1.20	22.0	450	5.7	4.20	2.40



ORX N

Product

Pump suitable for industrial washing systems handling of special liquids and chemically aggressive medicine

Process data

Liquid temperature -10° C to +110° C
 Liquid density max. 1100 kg/m³

Motor data

Enclosed motor with external ventilation and aluminium tinned casing.

Frequency 50 Hz
 Insulation class F (+155° C)
 Protection class IP 44

Monitoring equipment

Single phase: Built in automatic reset
 overload protection
 Three phase: Overload protection-
 to be provided separately

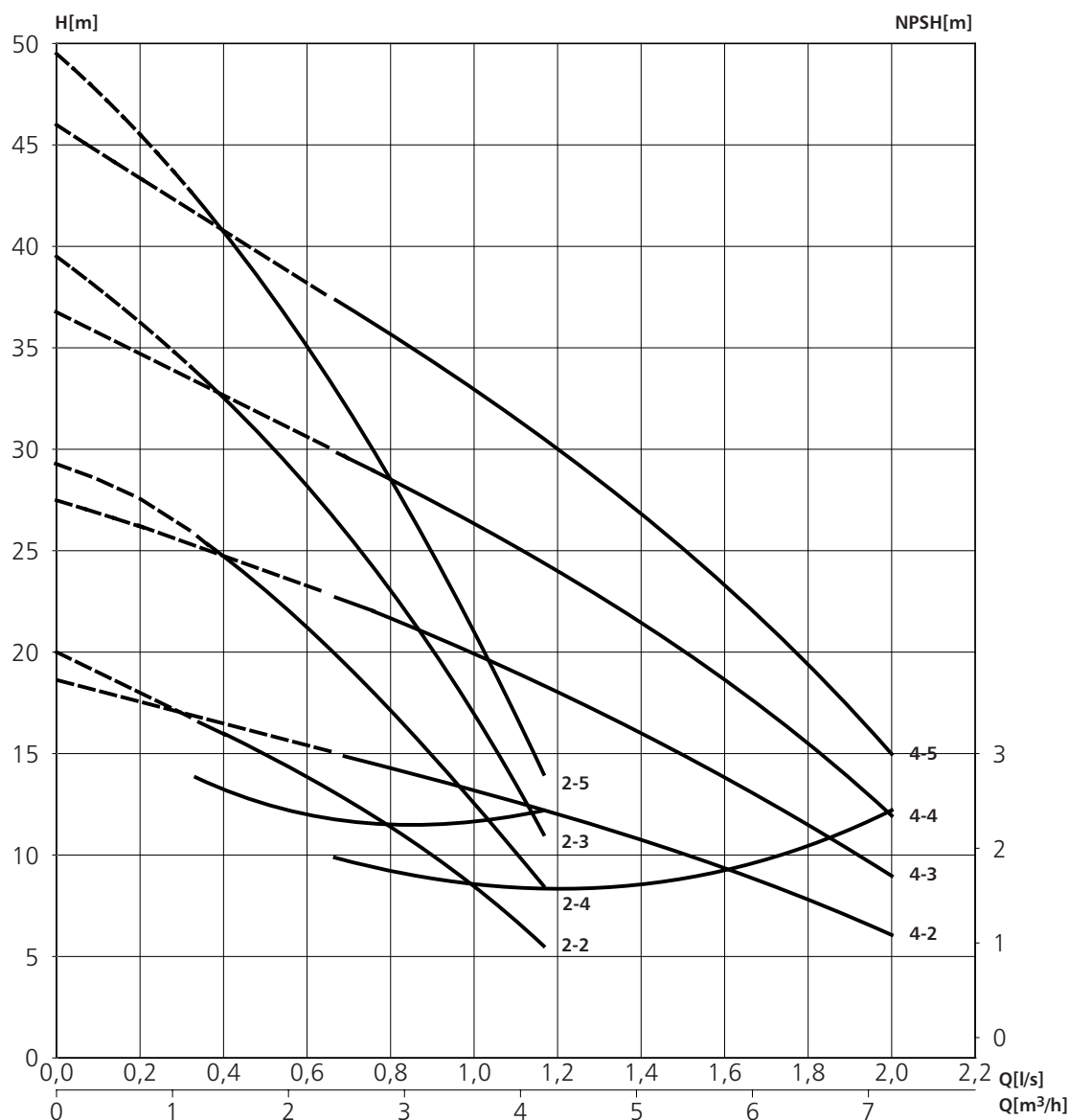
Material

Part	Material
Pump body	Stainless steel AISI 316L – DIN 1.4404
Seal housing	Stainless steel AISI 316L – DIN 1.4404
Diffusers	Stainless steel AISI 316L – DIN 1.4404
Covers	Stainless steel AISI 316L – DIN 1.4404
Spacers	Stainless steel AISI 316L – DIN 1.4404
Impellers	Stainless steel AISI 316L – DIN 1.4404
Shaft extension	Stainless steel AISI 316L – DIN 1.4404
Fill and drain plugs	Nickel-plated brass

Mechanical face seals and O-rings

Alternative	Seal face	O-rings
1 Standard	Carbon/ceramic	EPDM
2	Carbon/tungsten carbide	FPM
3	Tungsten carbide/ Silicon carbide	FPM
4	Tungsten carbide/ Tungsten carbide	FPM
5	Silicon carbide/ Silicon carbide	FPM

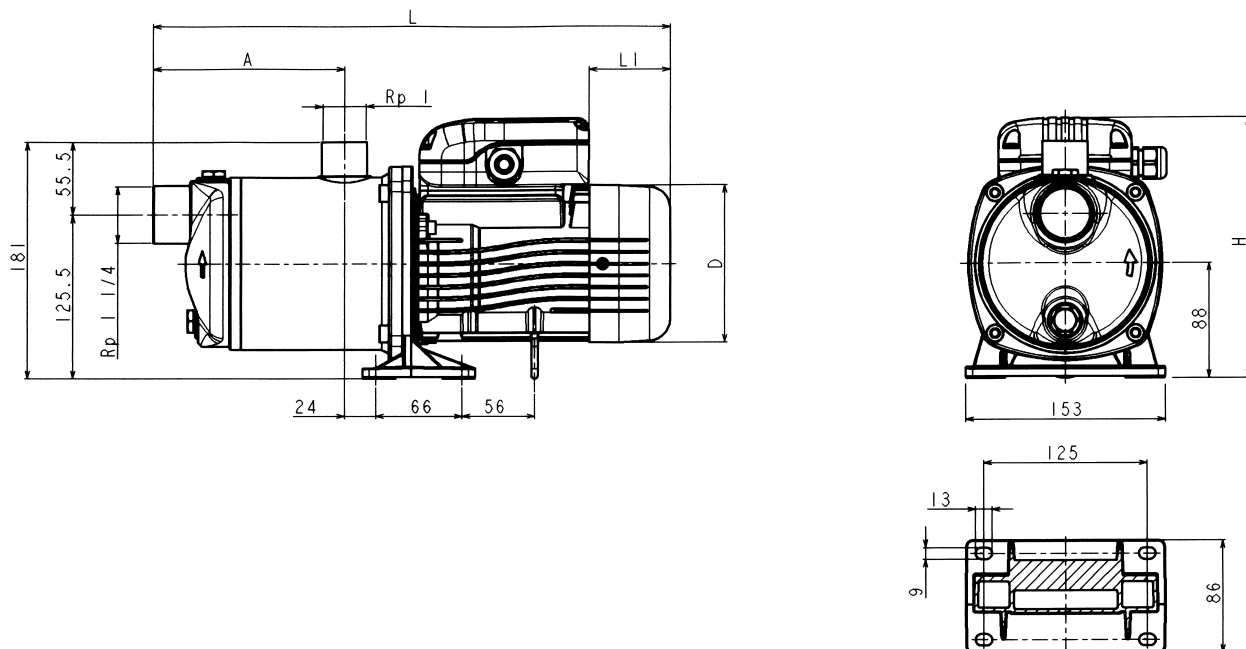
Performance curves



Motor rating

Pump type	Number of stages	Power		Capacitor		Input current			
		Single phase 220 V	Three-phase 220-240/380-415 V	kW	HP	μF	V	Single-phase 220-240 V	220-240 V
ORX N 2-2M	ORX N 2-2	2	0.30	0.40	10.0	450	1.95	1.71	0.99
ORX N 2-3M	ORX N 2-3	3	0.45	0.60	12.5	450	2.64	2.41	1.39
ORX N 2-4M	ORX N 2-4	4	0.45	0.60	12.5	450	3.20	2.53	1.46
ORX N 2-5M	ORX N 2-5	5	0.75	1.00	22.0	450	4.60	3.30	1.90
ORX N 4-2M	ORX N 4-2	2	0.30	0.40	10.0	450	2.12	1.77	1.02
ORX N 4-3M	ORX N 4-3	3	0.45	0.60	12.5	450	3.00	2.49	1.44
ORX N 4-4M	ORX N 4-4	4	0.55	0.75	16.0	450	3.48	2.88	1.66
ORX N 4-5M	ORX N 4-5	5	0.75	1.00	22.0	450	5.00	3.50	2.00

Dimensional drawing and weights



Pump type	Number of stages	kW	A	D	L	L1	H	Weight kg
ORX 2-2 M	2	0.30	96	120	345	62	199	7.0
ORX 2-3 M	3	0.37	121	120	370	62	199	7.5
ORX 2-4 M	4	0.55	146	120	395	62	199	8.5
ORX 2-5 M	5	0.75	171	140	434	76	209	9.5
ORX 4-2 M	2	0.37	96	120	345	62	199	7.5
ORX 4-3 M	3	0.55	121	120	370	62	199	8.0
ORX 4-4 M	4	0.75	146	140	409	31	218	9.5
ORX 4-5 M	5	0.90	171	140	434	31	218	10.0
ORX 2-2	2	0.30	96	120	345	62	199	7.0
ORX 2-3	3	0.37	121	120	370	62	199	7.5
ORX 2-4	4	0.55	146	120	395	62	199	8.5
ORX 2-5	5	0.75	171	140	434	76	209	9.5
ORX 4-2	2	0.37	96	120	345	62	199	7.5
ORX 4-3	3	0.55	121	120	370	62	199	8.0
ORX 4-4	4	0.75	146	140	409	76	209	9.5
ORX 4-5	5	0.90	171	140	434	76	209	10.0
ORX N 2-2 M	2	0.30	96	120	345	62	199	7.0
ORX N 2-3 M	3	0.37	121	120	370	62	199	7.5
ORX N 2-4 M	4	0.55	146	120	395	62	199	8.0
ORX N 2-5 M	5	0.75	171	140	434	76	209	9.5
ORX N 4-2 M	2	0.30	96	120	345	62	199	7.0
ORX N 4-3 M	3	0.37	121	120	370	62	199	7.5
ORX N 4-4 M	4	0.55	146	120	395	62	199	8.5
ORX N 4-5 M	5	0.75	171	140	434	76	209	10.0
ORXN 2-2	2	0.30	96	120	345	62	199	7.0
ORXN 2-3	3	0.37	121	120	370	62	199	7.5
ORXN 2-4	4	0.55	146	120	395	62	199	8.0
ORX N 2-5	5	0.75	171	140	434	76	209	9.5
ORX N 4-2	2	0.30	96	120	345	62	199	7.0
ORX N 4-3	3	0.37	121	120	370	62	199	7.5
ORX N 4-4	4	0.55	146	120	395	62	199	8.5
ORX N 4-5	5	0.75	171	140	434	76	209	10.0



Introduction

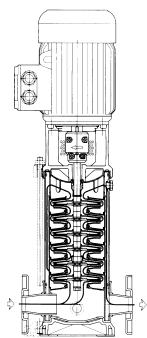
Highly reliable and technically advanced multipurpose pumps capable of satisfying the needs of a wide variety of users. Many different construction designs are available, with models featuring 2-4-8-16-33-46-66-92 m³/h nominal capacities.

- Delivery: up to 120 m³/h.
- Head: up to 330 m.
- Liquid temperature: -30°C to 120°C.
- Maximum operating pressure: up to 40 bar

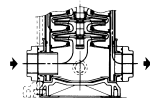
Applications

- Water transfer and circulation in the civil, industrial and agricultural sectors.
- Pressure boosting and water supply systems.
- Irrigation systems for agriculture and sporting facilities.
- Washing systems.
- Boiler feed.
- Water treatment and reverse osmosis plants.
- Fountains.
- Handling of moderately aggressive liquids.

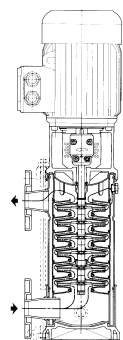
Versions



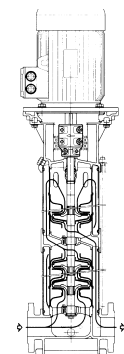
PX R



PX O



PX TB



PX N

Product identity

PX R 2 07/1 M

- T** =Three phase
- M** =Single phase
- Number of reduced impellers
- Total number of stages
- Rated delivery in m³/h
- R** =In line round flanges
- O** =In line oval flanges
- TB** =Overlying ports with position adjustment, round flanges
- N** =Version AISI 316
In line round flanges
- Series name

Design

- All PX pumps can be equipped with Technovar electronic pump control. Up to 22 kW mounted directly on the motor.

PX2-16

- All metal parts in contact with the pumped media is made of stainless steel.

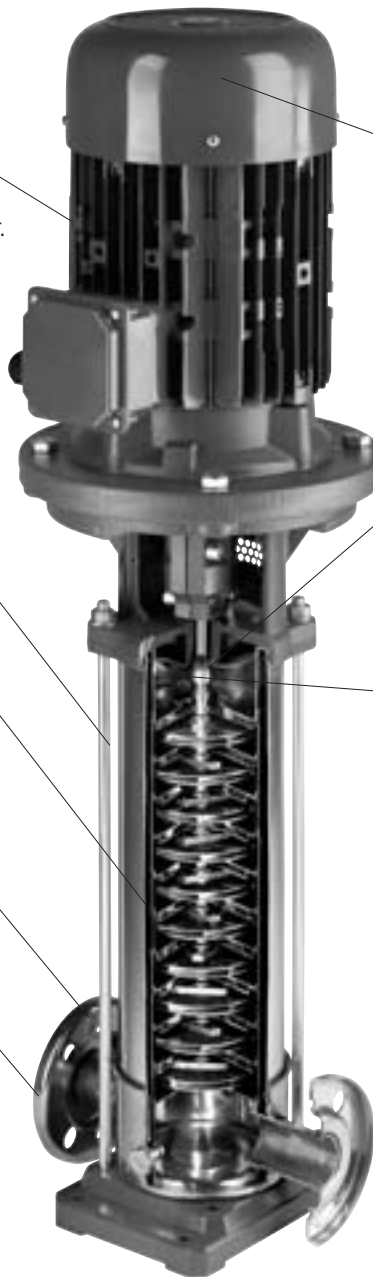
- Long life laser welded impellers

PX2-16

- Versions with round flanges that can be coupled to counterflanges, in compliance with EN 1092 standard.

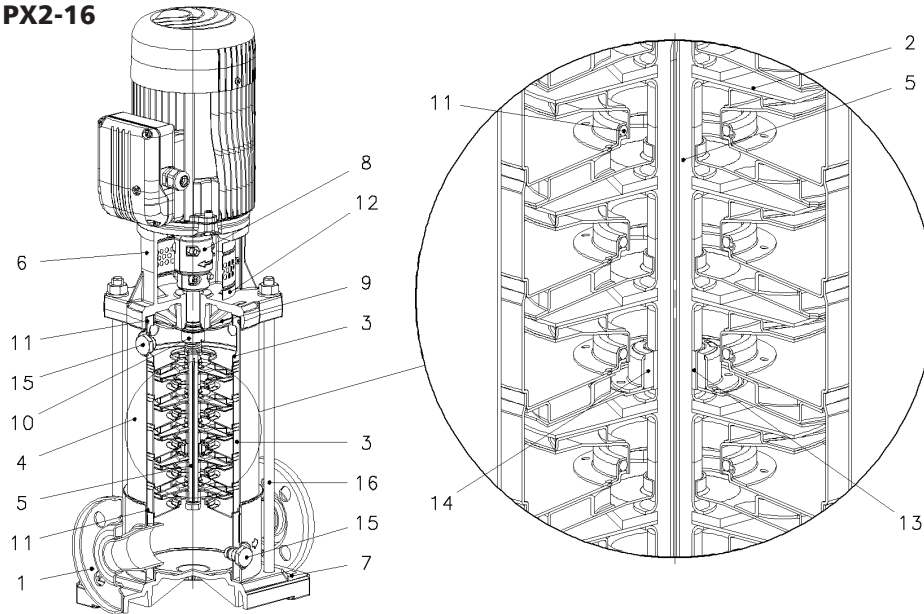
PX33-92

- Pump bodies fitted with couplings for pressure gauge installation on both suction and delivery flanges. Online ports with round flanges that can be coupled to counterflanges, in compliance with EN 1092 standard.



- Reduced axial thrusts, obtained through the adoption of innovative features, permits the use of standard IEC motors.
- Seal holding disk designed to prevent accumulation of air in the critical area next to the mechanical seal.
- Mechanical seal in compliance with EN 12756 and ISO 3069. Can be replaced without removing the motor on PX 33–92.
- Easy maintenance, no special tools required.
- WRAS certified for portable water.

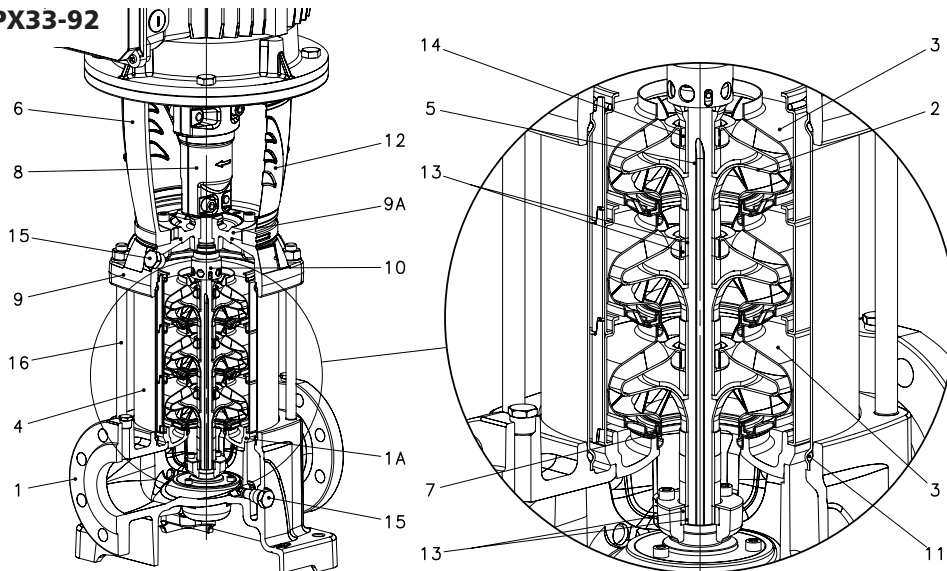
PX2-16



Ref.n.	Name
1	Pump body
2	Impeller
3	Diffuser
4	Outer sleeve
5	Shaft
6	Adapter
7	Base
8	Coupling

Ref.n.	Name
9	Seal housing
10	Mechanical seal
11	Elastomers
12	Coupling protection
13	Shaft sleeve
14	Bushing
15	Fill/drain plugs
16	Tie rods

PX33-92



Ref.n.	Name
1	Pump body
1A	Lower support
2	Impeller
3	Diffuser
4	Outer sleeve
5	Shaft
6	Adapter
7	Wear ring
8	Coupling

Ref.n.	Name
9	Upper head
9A	Seal housing
10	Mechanical seal
11	Elastomers
12	Coupling protection
13	Shaft sleeve and bushing
14	Bushing for diffuser
15	Fill/drain plugs
16	Tie rods

Motor noise levels

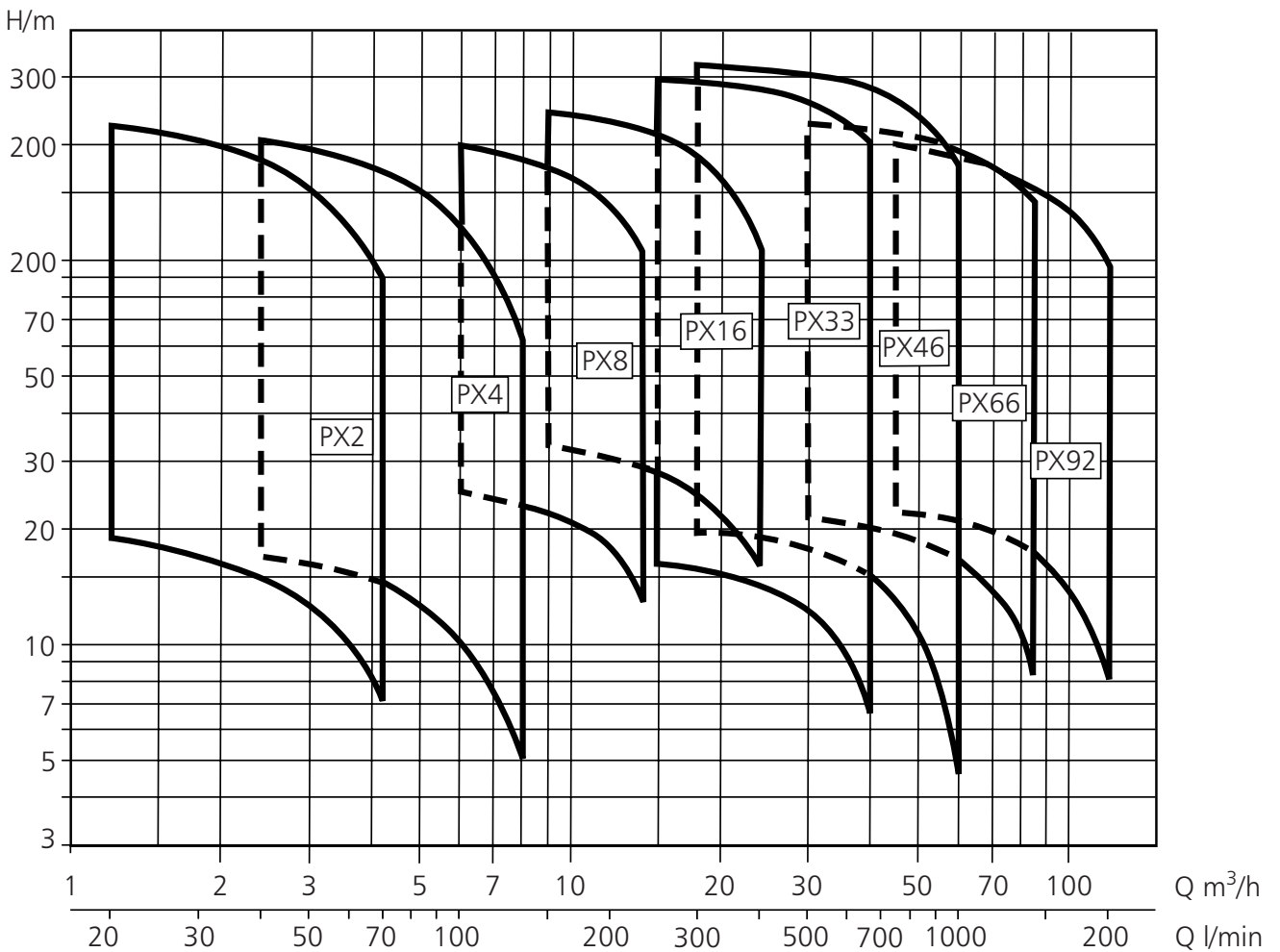
The table shows the mean noise levels for sound pressure (Lp) and sound power (LW), measured at 1 metre distance in a free field according to the A curve (ISO 1680 standard).

The noise values are measured with an idling 50 Hz motor with a tolerance of 3 dB (A).

2-pole motor

Power kW	Motor type IEC size*	Noise LpA dB
0.37	71R	<70
0.55	71	<70
0.75	80R	<70
1.1	80	<70
1.5	90R	<70
2.2	90R	<70
3	100R	<70
4	112R	<70
5.5	132R	<70
7.5	132R	<70
11	160R	73
15	160	75
18.5	160	75
22	180R	75
30	200	74
37	200	74
45	225	78

Performance range





Process data

Liquid temperature -30°C to 120°C
 Maximum pressure Oval flange 16 bar
 Round flange 25 bar

Motor data

Enclosed motor with external ventilation and aluminum finned casing.
 Frequency 50 Hz
 Insulation class F (155°C)
 Protection IP 55
 Contruction design B14

Monitoring equipment

Single phase up to 1.5 kW Automatic reset
 overload protection
 Single phase above 1.5 kW To be provided at
 installation
 Three phase To be provided at
 installation

PX2

Product

Vertical multistage centrifugal pump for circulation and transfer of water free of suspended solids.
 Working delivery 1.2–4.2 m³/h

Denomination

Product code PX2

Available versions

R PX202-PX224
 O PX202-PX214
 TB PX204-PX224
 N PX202-PX224

Material

PART	"R" "O" "TB" materials	"N" materials
Impeller	AISI 304	AISI316 L
Diffuser	AISI 304	AISI 316 L
Shaft	AISI 304	AISI 316
Outer sleeve	AISI 316 L	
Pump body	AISI 304	AISI 316
Shaft sleeve	Tungsten carbide	
Bushing	Ceramic	
Mechanical seal	Silicon Carbide/Carbon/EPDM	
Elastomers	EPDM	
Fill/drain plugs	Stainless steel AISI 316	
Adapter	200 cast iron	
Coupling ≤ 4kW	Aluminum	
Coupling >4kW	200 cast iron	
Coupling protection	Stainless steel AISI 304	
Seal housing	AISI 304	AISI 316
Base mount	Aluminum	

Motor rating

Dimensions and weights

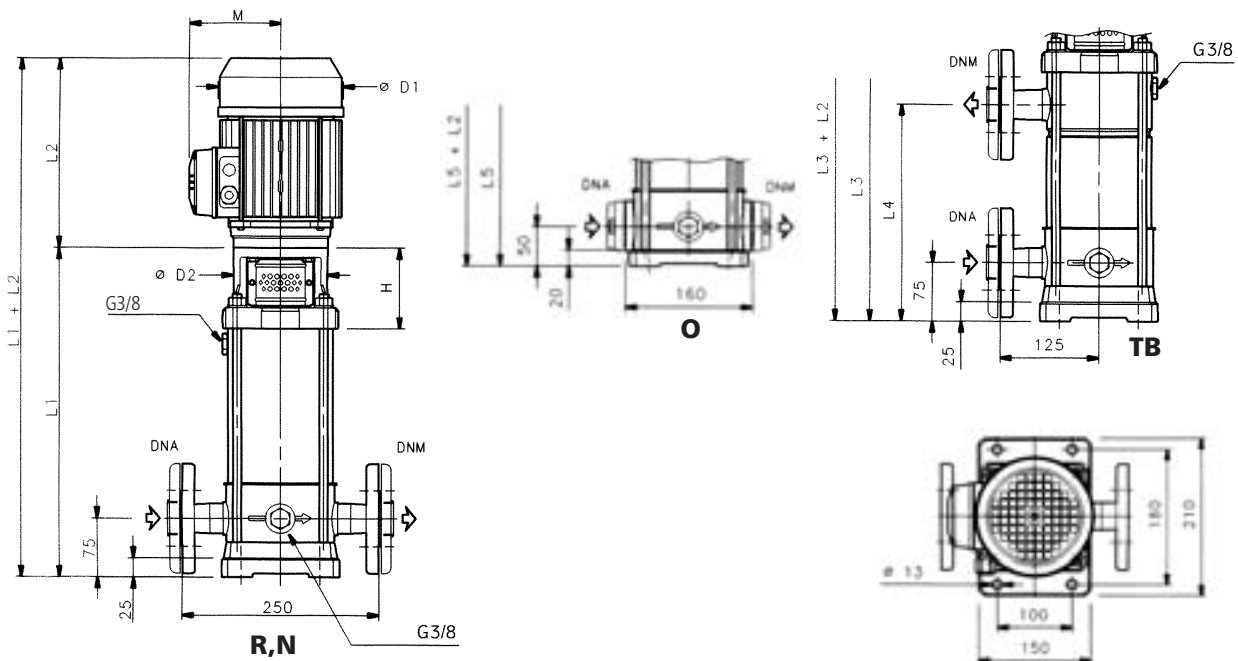
Three Phase

Pump type	Motor type kW	Motor type Size	Input current A		Is/In	Dimensions in mm											Weight (kg)		
			220-240 V	380-415 V		DNA DNM	L1	L2	L3	L4	L5	M	D1	D2	H	Pump	Unit		
PXR202T	0.37	71	1.9-1.9	1.1-1.1	4.5-4.8	RP 1"	285	216					260	105	141	105	93	9.5	17.5
PXR203T	0.37	71	1.9-1.9	1.1-1.1	4.5-4.8	RP 1"	310	216					285	105	141	105	93	10	18
PXR204T	0.55	71	2.6-2.6	1.5-1.5	5.0-5.6	RP 1"	335	216	335	200	310	310	105	141	105	93	10.5	19	
PXR205T	0.75	80R	3.5-3.5	2.0-2.0	5.6-6.1	RP 1"	370	232	370	225	345	105	141	120	103	11.5	21.5		
PXR206T	0.75	80R	3.5-3.5	2.0-2.0	5.6-6.1	RP 1"	395	232	395	250	370	105	141	120	103	12	22		
PXR207T	1.1	80	4.5-4.5	2.6-2.6	6.5-6.8	RP 1"	420	242	420	275	395	116	160	120	103	12.5	23		
PXR208T	1.1	80	4.5-4.5	2.6-2.6	6.5-6.8	RP 1"	445	242	445	300	420	116	160	120	103	13	23.5		
PXR209T	1.1	80	4.5-4.5	2.6-2.6	6.5-6.8	RP 1"	470	272	470	325	445	116	160	120	103	13.5	24		
PXR211T	1.5	90R	6.2-6.0	3.6-3.5	6.3-6.9	RP 1"	530	255	530	375	505	116	160	140	113	15	31		
PXR212T	1.5	90R	6.2-6.0	3.6-3.5	6.3-6.9	RP 1"	555	255	555	400	530	116	160	140	113	15.5	31.5		
PXR214T	2.2	90	8.5-8.3	4.9-4.8	6.5-7.3	RP 1"	605	280	605	450	580	121	176	140	113	16.5	33.5		
PXR216T	2.2	90	8.5-8.3	4.9-4.8	6.5-7.3	RP 1"	655	280	655	500		121	176	140	113	17.5	34.5		
PXR218T	2.2	90	8.5-8.3	4.9-4.8	6.5-7.3	RP 1"	705	280	705	550		121	176	140	113	18.5	35.5		
PXR220T	3.0	100R	11.2-10.9	6.5-6.3	6.5-7.3	RP 1"	765	302	765	600		121	176	160	123	20	42		
PXR222T	3.0	100R	11.2-10.9	6.5-6.3	6.5-7.3	RP 1"	815	302	815	650		121	176	160	123	21	43		
PXR224T	3.0	100R	11.2-10.9	6.5-6.3	6.5-7.3	RP 1"	865	302	865	700		121	176	160	123	22	44		

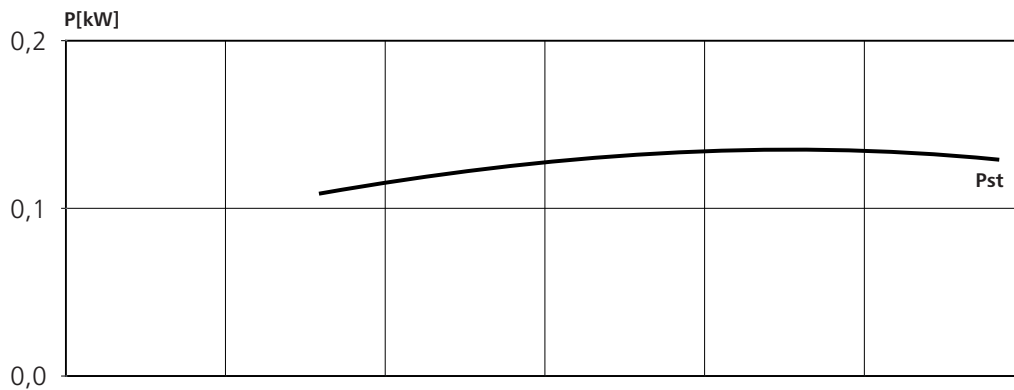
Single Phase

Pump type	Motor type kW	Motor type Size	Input current A		Capacitor μF	Capacitor V	Is/In	Dimensions in mm											Weight (kg)	
			220-240 V					DNA DNM	L1	L2	L3	L4	L5	M	D1	D2	H	Pump	Unit	
PXR202M	0.37	71	2.5-2.6	12.5	450	2.8-3.1	RP 1"	285	213				260	109	141	105	93	9.5	17.5	
PXR203M	0.37	71	2.5-2.6	12.5	450	2.8-3.1	RP 1"	310	213				285	109	141	105	93	10	18	
PXR204M	0.55	71	3.5-3.6	18	450	3.5-3.6	RP 1"	335	213	335	200	310	109	141	105	93	10.5	19		
PXR205M	0.75	80R	4.6-4.7	22	450	3.4-3.9	RP 1"	370	232	370	225	345	109	141	120	93	11.5	21.5		
PXR206M	0.75	80R	4.6-4.7	22	450	3.4-3.9	RP 1"	395	232	395	250	370	109	141	120	103	12	22		
PXR207M	1.1	80	6.5-6.8	30	450	3.9-4.1	RP 1"	420	242	420	275	395	120	160	120	103	12.5	23		
PXR208M	1.1	80	6.5-6.8	30	450	3.9-4.1	RP 1"	445	242	445	300	420	120	160	120	103	13	23.5		
PXR209M	1.1	80	6.5-6.8	30	450	3.9-4.1	RP 1"	470	242	470	325	445	120	160	120	103	13.5	24		
PXR211M	1.5	90	9-8.7	40	450	3.7-4.5	RP 1"	530	280	530	375	505	125	176	140	113	15	31		
PXR212M	1.5	90	9-8.7	40	450	3.7-4.5	RP 1"	555	280	555	400	530	125	176	140	113	15.5	31.5		
PXR214M	2.2	90	13-12.5	50	450	3.0-3.6	RP 1"	605	280	605	450	580	125	176	140	113	16.5	33.5		
PXR216M	2.2	90	13-12.5	50	450	3.0-3.6	RP 1"	655	280	655	500		125	176	140	113	17.5	34.5		
PXR218M	2.2	90	13-12.5	50	450	3.0-3.6	RP 1"	705	280	705	550		125	176	140	113	18.5	35.5		

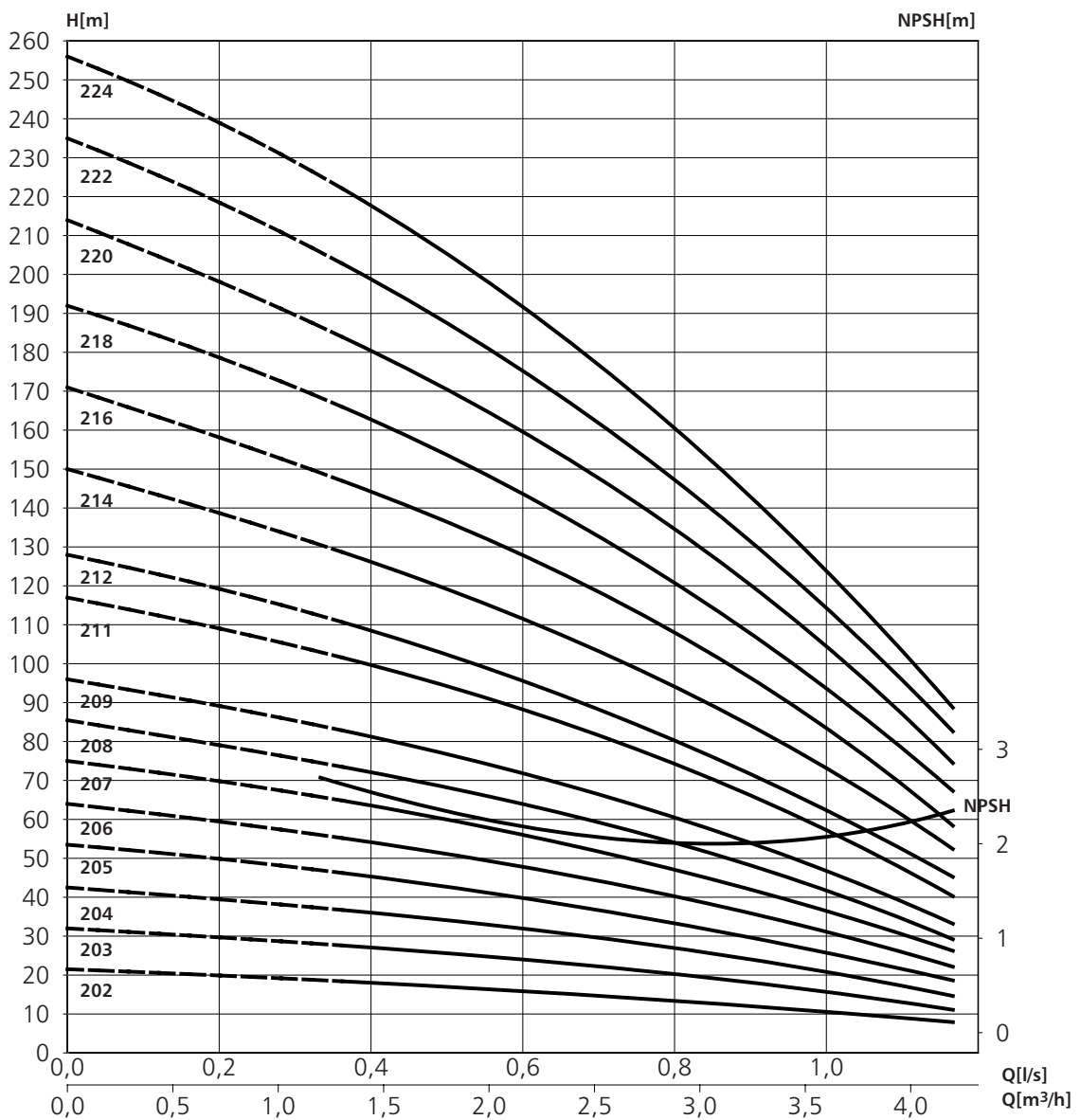
Electrical data valid also for versions O, TB & N.



Performance curves at 2900 rpm 50 Hz



Power shown for one stage. Multiply with number of stages to get actual shaft power.





Process data

Liquid temperature -30°C to 120°C
 Maximum pressure Oval flange 16 bar
 Round flange 25 bar

Motor data

Enclosed motor with external ventilation and aluminum finned casing.
 Frequency 50 Hz
 Insulation class F (155°C)
 Protection IP 55
 Construction design B14

Monitoring equipment

Single phase up to 1.5 kW Automatic reset
 overload protection
 Single phase above 1.5 kW To be provided at
 installation
 Three phase To be provided at
 installation

PX4

Product

Vertical multistage centrifugal pump for circulation and transfer of water free of suspended solids.
 Working delivery 2.4–8.0 m³/h

Denomination

Product code PX4

Available versions

R PX402-PX424
 O PX402-PX414
 TB PX405-PX424
 N PX402-PX424

Material

PART	"R" "O" "TB" materials	"N" materials
Impeller	AISI 304	AISI316 L
Diffuser	AISI 304	AISI 316 L
Shaft	AISI 304	AISI 316
Outer sleeve	AISI 316 L	
Pump body	AISI 304	AISI 316
Shaft sleeve	Tungsten carbide	
Bushing	Ceramic	
Mechanical seal	Silicon Carbide/Carbon/EPDM	
Elastomers	EPDM	
Fill/drain plugs	Stainless steel AISI 316	
Adapter	200 cast iron	
Coupling ≤ 4kW	Aluminum	
Coupling >4kW	200 cast iron	
Coupling protection	Stainless steel AISI 304	
Seal housing	AISI 304	AISI 3160
Base mount	Aluminum	

Motor rating

Dimensions and weights

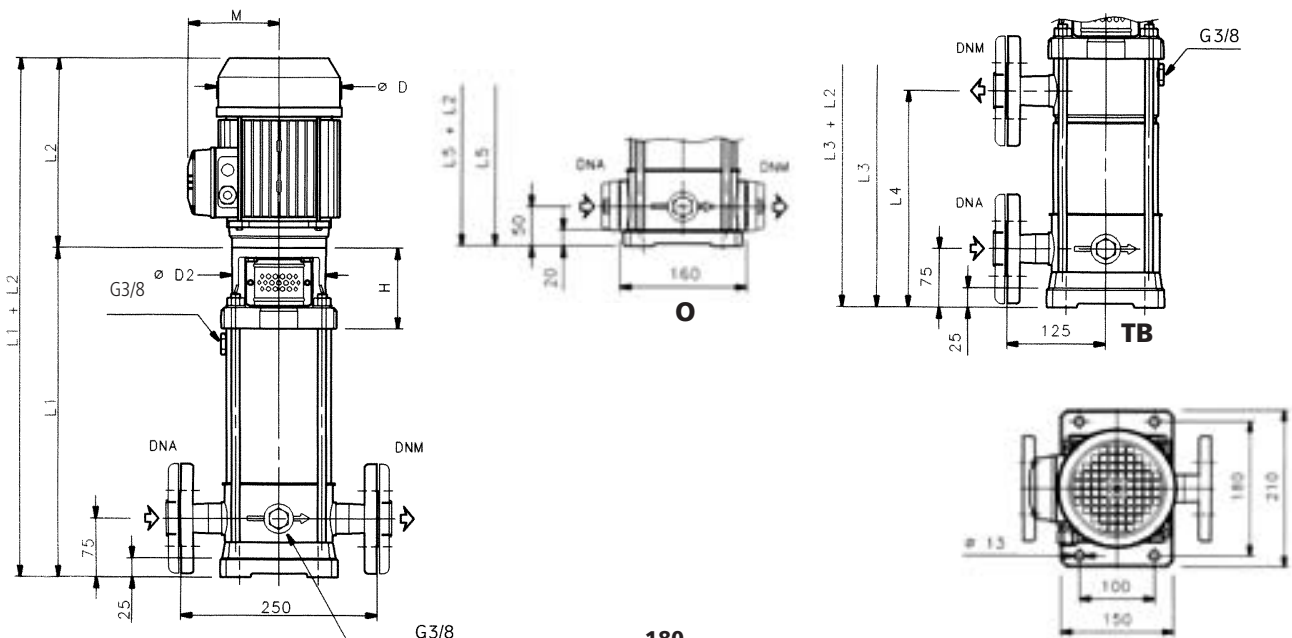
Three phase

Pump type	Motor type		Input current (A)		Is/In	Dimensions in mm										Weight (kg)	
	kW	Size	220-240 V	380-415 V		DNA DNM	L1	L2	L3	L4	L5	M	D1	D2	H	Pump	Unit
PXR402T	0,37	71R	2,3	1,3	4,2	RP 1"1/4	285	209			260	111	120	105	93	9,5	17,5
PXR403T	0,55	71	2,5	1,4	5,9	RP 1"1/4	310	231			285	121	140	105	93	10	18,5
PXR404T	0,75	80R	3,5	2,0	5,8	RP 1"1/4	345	226			320	121	140	120	103	9,5	17,5
PXR405T	1,1	80	4,5	2,6	6,8	RP 1"1/4	370	263	370	225	345	129	155	120	103	11,5	22
PXR406T	1,1	80	4,5	2,6	6,8	RP 1"1/4	395	263	395	250	370	129	155	120	103	12	22
PXR407T	1,1	80	4,5	2,6	6,8	RP 1"1/4	420	263	420	275	395	129	155	120	103	12,5	23
PXR408T	1,5	90R	6,0	3,5	7,0	RP 1"1/4	455	263	455	300	430	129	155	140	113	13,5	29
PXR409T	1,5	90R	6,0	3,5	7,0	RP 1"1/4	480	263	480	325	455	129	155	140	113	14	30
PXR411T	2,2	90R	8,7	5,0	7,3	RP 1"1/4	530	263	530	375	505	129	155	140	113	15	32
PXR413T	2,2	90R	8,7	5,0	7,3	RP 1"1/4	580	263	580	425	555	129	155	140	113	16	33
PXR414T	3	100R	10,4	6,0	6,4	RP 1"1/4	615	303	615	450	590	121	176	160	123	17	39
PXR416T	3	100R	10,4	6,0	6,4	RP 1"1/4	665	303	665	500		121	176	160	123	18	40
PXR418T	3	100R	10,4	6,0	7,4	RP 1"1/4	715	303	715	550		121	176	160	123	19	41
PXR420T	4	112R		8,0	7,4	RP 1"1/4	765	307	765	600		133	193	160	123	20	58
PXR422T	4	112R		8,0	7,4	RP 1"1/4	815	307	815	650		133	193	160	123	21	59
PXR424T	4	112R		8,0	7,4	RP 1"1/4	865	307	865	700		133	193	160	123	22	60

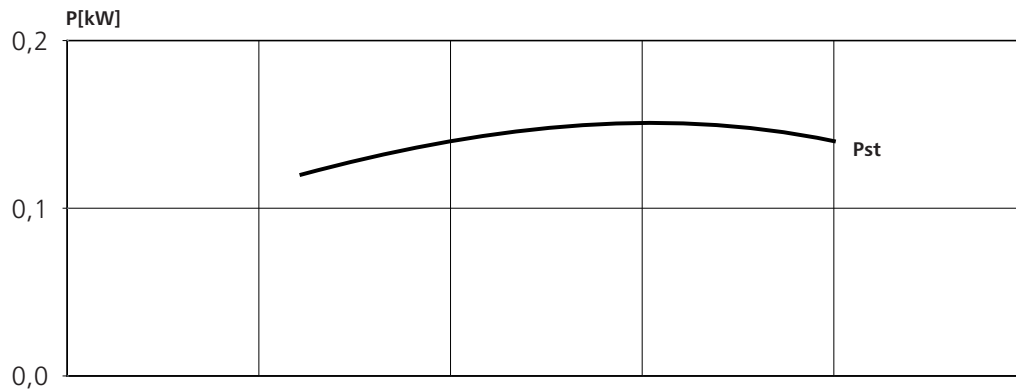
Single phase

Pump type	Motor type		Input current (A)		Capacitor μ F	V	Is/In	Dimensions in mm										Weight (kg)	
	kW	Size	220-240 V					DNA DNM	L1	L2	L3	L4	L5	M	D1	D2	H	Pump	Unit
PXR402M	0,37	71R	2,7-2,6	14	450	2,8-3,1	RP 1"1/4	285	209			260	111	120	105	93	9,5	17,5	
PXR403M	0,55	71	4,0-3,9	16	450	3,5-3,6	RP 1"1/4	310	231			285	121	140	105	93	10,0	18,5	
PXR404M	0,75	80R	5,0-5,2	20	450	3,4-3,9	RP 1"1/4	345	226			320	121	140	120	103	11,0	21,0	
PXR405M	1,10	80	7,0-6,8	30	450	3,9-4,1	RP 1"1/4	370	263	370	225	345	137	155	120	103	11,5	22,0	
PXR406M	1,10	80	7,0-6,8	30	450	3,9-4,1	RP 1"1/4	395	263	395	250	370	137	155	120	103	12,0	22,0	
PXR407M	1,10	80	7,0-6,8	30	450	3,9-4,1	RP 1"1/4	420	263	420	275	395	137	155	120	103	12,5	23,0	
PXR408M	1,50	90R	9,3-8,6	40	450	3,7-4,5	RP 1"1/4	455	263	455	300	430	137	155	140	113	13,5	29,0	
PXR409M	1,50	90R	9,3-8,6	40	450	3,7-4,5	RP 1"1/4	480	263	480	325	455	137	155	140	113	14,0	30,0	
PXR411M	2,20	90	13,3-12,6	50	450	3-3,6	RP 1"1/4	530	281	530	375	505	121	176	140	113	15,0	32,0	
PXR413M	2,20	90	13,3-12,6	50	450	3-3,6	RP 1"1/4	580	281	580	425	555	121	176	140	113	16,0	33,0	

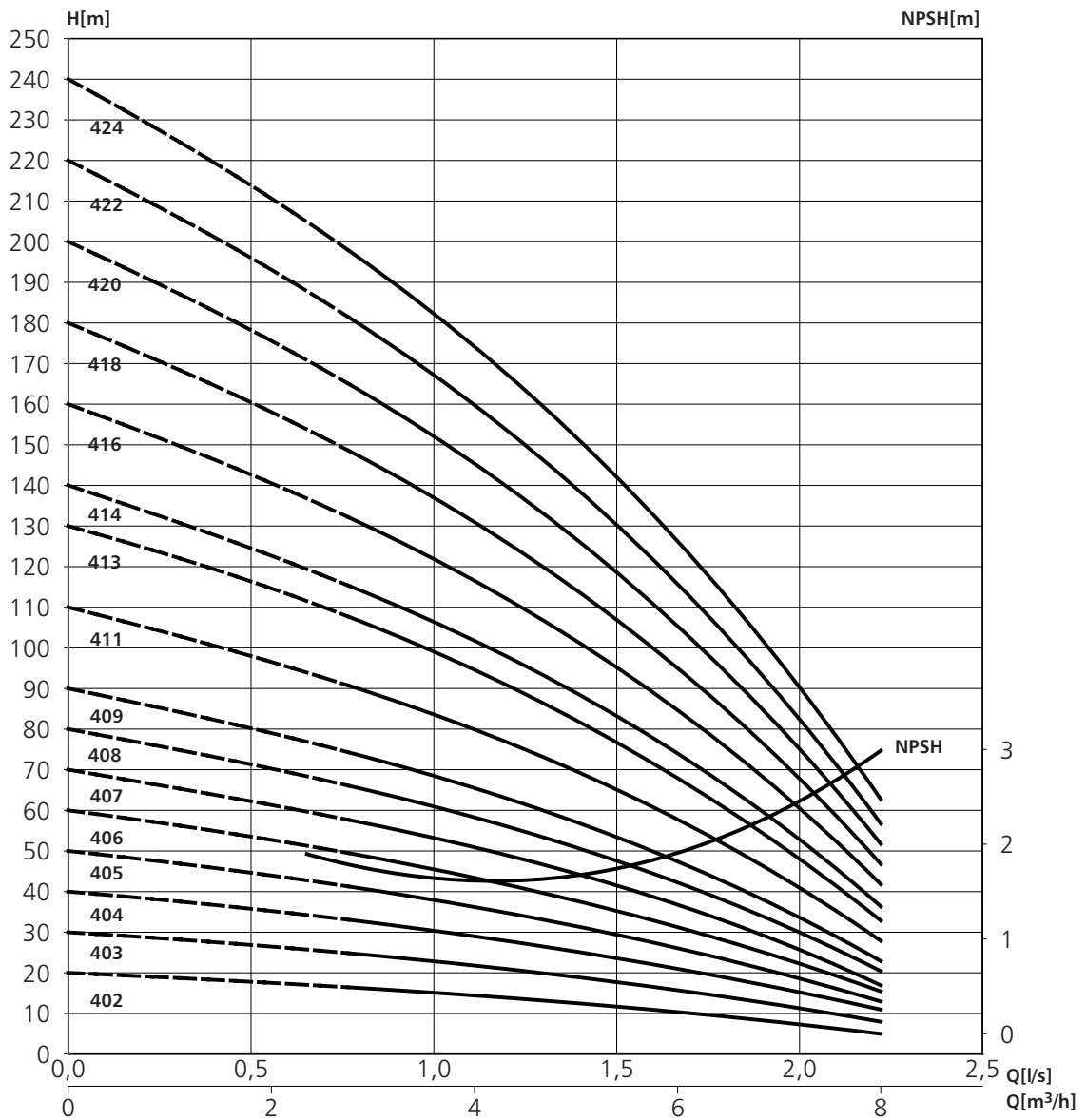
Electrical data valid also for versions O, TB & N.



Performance curves at 2900 rpm 50 Hz



Power shown for one stage. Multiply with number of stages to get actual shaft power.





PX8

Product

Vertical multistage centrifugal pump for circulation and transfer of water free of suspended solids.

Working delivery 6–14 m³/h

Denomination

Product code PX8

Available versions

R	PX802-PX816
O	PX802-PX811
TB	PX803-PX816
N	PX802-PX816

Process data

Liquid temperature	-30°C to 120°C
Maximum pressure	Oval flange 16 bar Round flange 25 bar

Motor data

Enclosed motor with external ventilation and aluminum finned casing.

Frequency	50 Hz
Insulation class	F (155°C)
Protection	IP 55
Construction design ≤ 4.0 kW	B14
> 4.0 kW	B5

Monitoring equipment

Single phase up to 1.5 kW	Automatic reset overload protection
Single phase above 1.5 kW	To be provided at installation
Three phase	To be provided at installation

Material

PART	"R" "O" "TB" materials	"N" materials
Impeller	AISI 304	AISI316 L
Diffuser	AISI 304	AISI 316 L
Shaft	AISI 304	AISI 316
Outer sleeve	AISI 316 L	
Pump body	AISI 304	AISI 316
Shaft sleeve	Tungsten carbide	
Bushing	Ceramic	
Mechanical seal	Silicon Carbide/Carbon/EPDM	
Elastomers	EPDM	
Fill/drain plugs	Stainless steel AISI 316	
Adapter	200 cast iron	
Coupling ≤ 4kW	Aluminum	
Coupling >4kW	200 cast iron	
Coupling protection	Stainless steel AISI 304	
Seal housing	AISI 304	AISI 316
Base mount	Aluminum	

Motor rating

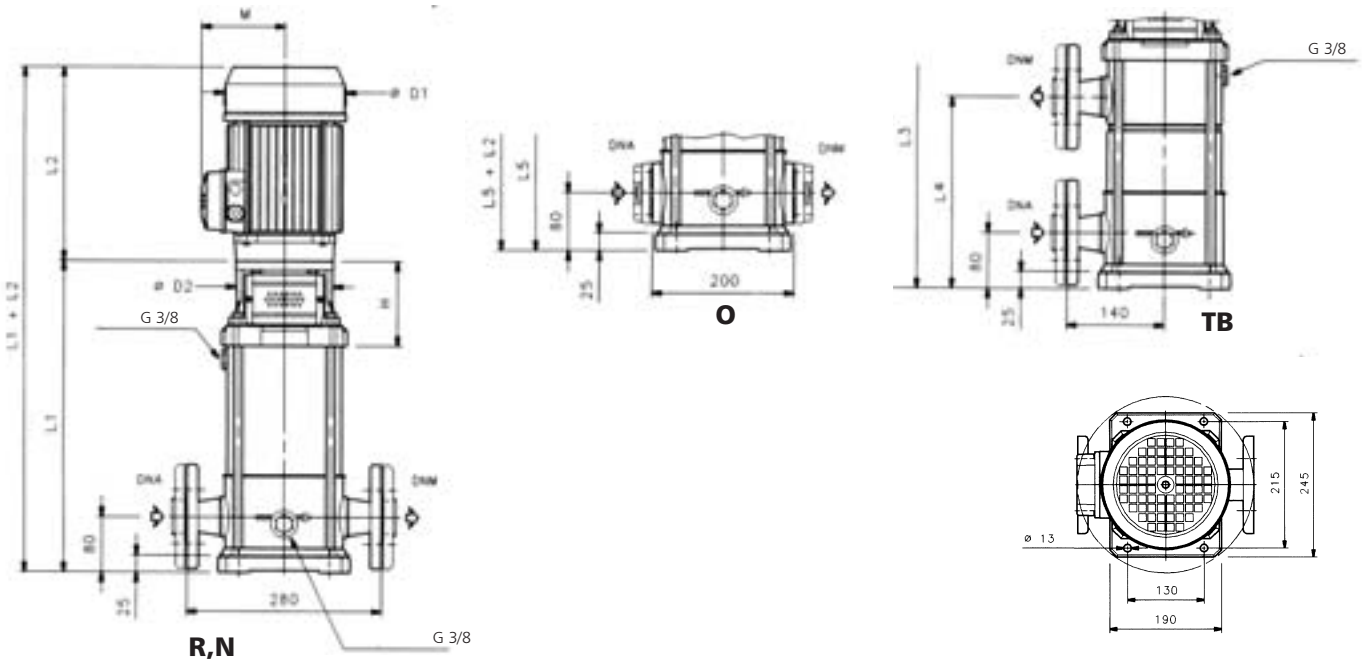
Dimensions and weights

Three phase

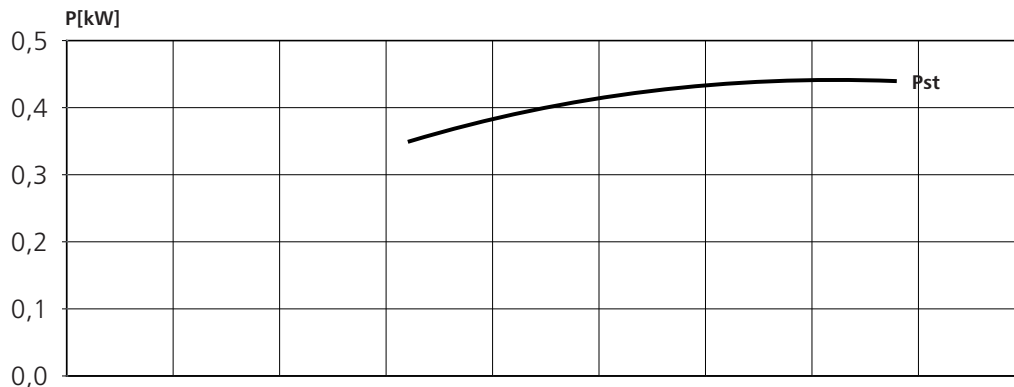
Pump type	Motor type		Input current (A)		Is/In	Dimensions in mm										Weight (kg)	
	kW	Size	220-240 V	380-415 V		DNA	L1	L2	L3	L4	L5	M	D1	D2	H	Pump	Unit
PXR802T	1.1	80	4.5	2.6	6.8	RP 1"1/2	363	242			363	129	160	120	112	15	25
PXR803T	1.5	90R	6.0	3.5	7.0	RP 1"1/2	411	255	411	236	411	129	160	140	122	16	32
PXR804T	2.2	90R	8.7	5.0	7.3	RP 1"1/2	449	280	449	274	449	129	176	140	122	17	34
PXR805T	2.2	90R	8.7	5.0	7.3	RP 1"1/2	487	280	487	312	487	129	176	140	122	18	35
PXR806T	3.0	100R	10.4	6.0	7.3	RP 1"1/2	535	302	535	350	535	121	176	160	132	20	42
PXR808T	4.0	112R		8.1	7.7	RP 1"1/2	611	312	611	426	611	131	193	160	132	20	58
PXR809T	4.0	112R		8.1	7.7	RP 1"1/2	641	312	649	464	649	131	193	160	132	21	59
PXR8011T	5.5	132R		10.0	10.0	RP 1"1/2	745	350	745	540	745	151	220	300	152	28	74
PXR8012T	5.5	132R		10.0	10.0	RP 1"1/2	783	350	783	578		151	220	300	152	29	75
PXR8014T	7.5	132R		13.4	10.0	RP 1"1/2	859	350	859	654		151	220	300	152	31	81
PXR8016T	7.5	132R		13.4	10.0	RP 1"1/2	935	350	935	730		151	220	300	152	32	82

Single phase

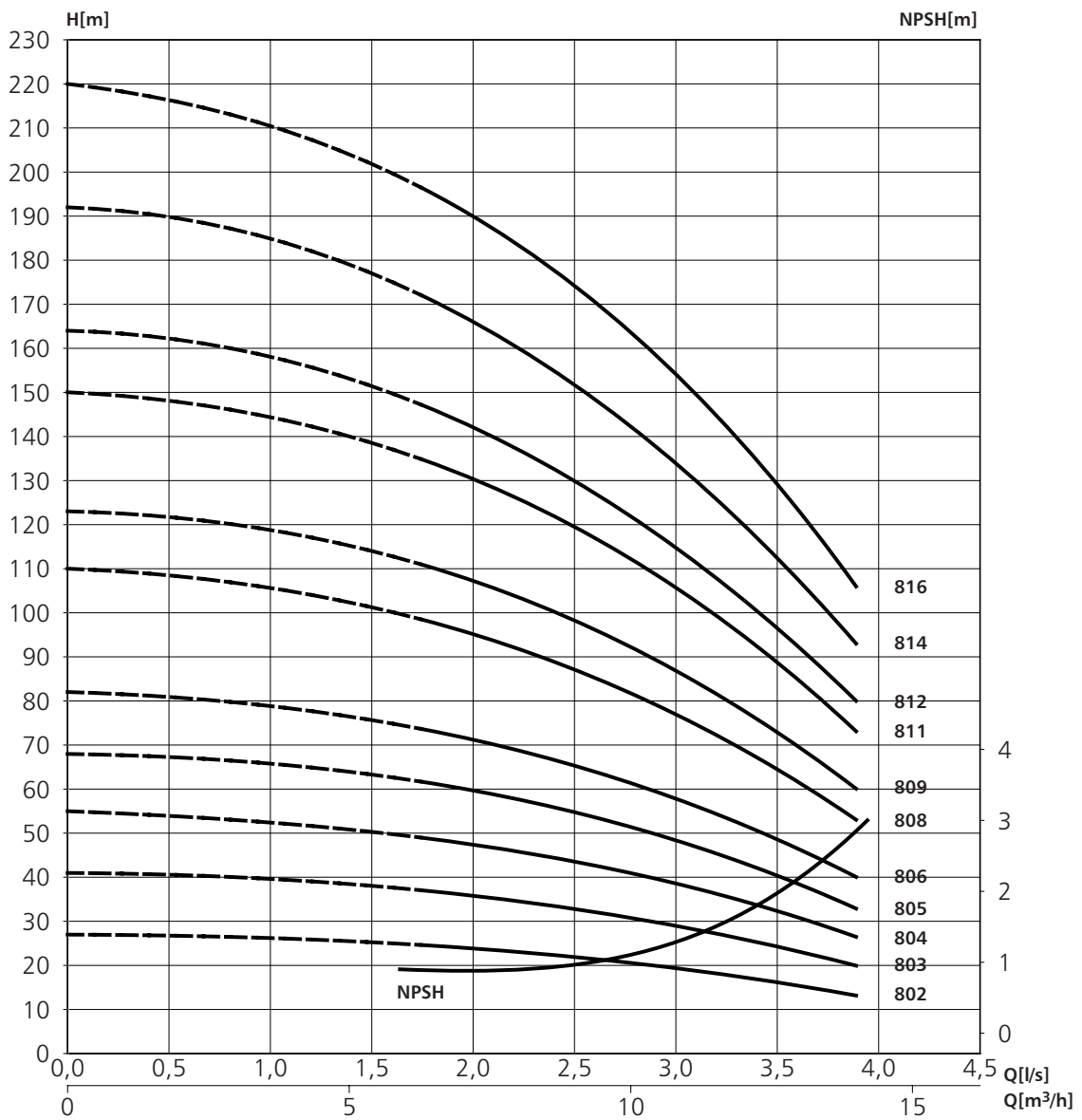
Pump type	Motor type		Input current (A)		Capacitor		Is/In	Dimensions in mm										Weight (kg)	
	kW	Size	220-240 V	μF	V	DNA		L1	L2	L3	L4	L5	M	D1	D2	H	Pump	Unit	
PXR802M	1.1	80	7.1-6.8	30	450	3.8	RP 1"1/2	363	263			363	137	155	120	112	15	25	
PXR803M	1.5	90R	9.3-8.6	40	450	3.4	RP 1"1/2	411	263	411	236	411	137	155	140	122	16	32	
PXR804M	2.2	90	13.3-12.6	50	450	3.4	RP 1"1/2	449	281	449	274	449	121	176	140	122	17	34	
PXR805M	2.2	90	13.3-12.6	50	450	3.4	RP 1" 1/2	487	281	487	312	487	121	176	140	122	18	35	



Performance curves at 2900 rpm 50 Hz



Power shown for one stage. Multiply with number of stages to get actual shaft power.





Process data

Liquid temperature -30°C to 120°C
 Maximum pressure 25 bar

Motor data

Enclosed motor with external ventilation and aluminum finned casing.
 Frequency 50 Hz
 Insulation class F (155°C)
 Protection IP 55
 Construction design
 ≤ 4 kW B14
 >4 kW B5

Monitoring equipment

Single phase To be provided at installation
 Three phase To be provided at installation

PX16

Product

Vertical multistage centrifugal pump for circulation and transfer of water free of suspended solids.
 Working delivery 8–24 m³/h

Denomination

Product code PX16

Available versions

R PX1602-PX1615
 N PX1602-PX1615

Material

PART	"R" "O" "TB" materials	"N" materials
Impeller	AISI 304	AISI316 L
Diffuser	AISI 304	AISI 316 L
Shaft	AISI 304	AISI 316
Outer sleeve	AISI 316 L	
Pump body	AISI 304	AISI 316
Shaft sleeve	Tungsten carbide	
Bushing	Ceramic	
Mechanical seal	Silicon Carbide/Carbon/EPDM	
Elastomers	EPDM	
Fill/drain plugs	Stainless steel AISI 316	
Adapter	200 cast iron	
Coupling ≤ 4kW	Aluminum	
Coupling >4kW	200 cast iron	
Coupling protection	Stainless steel AISI 304	
Seal housing	AISI 304	AISI 316
Base mount	Aluminum	

Motor rating

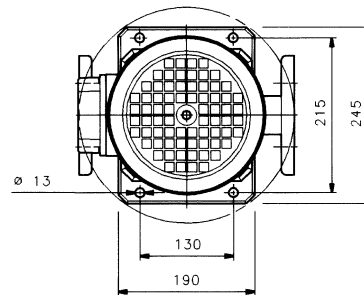
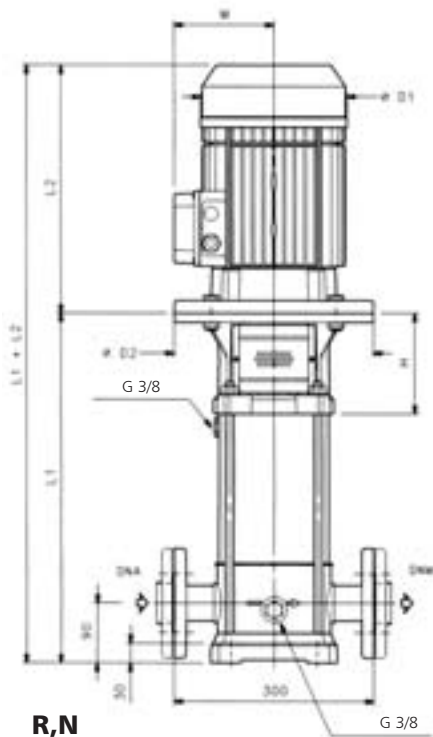
Dimensions and weights

Three phase

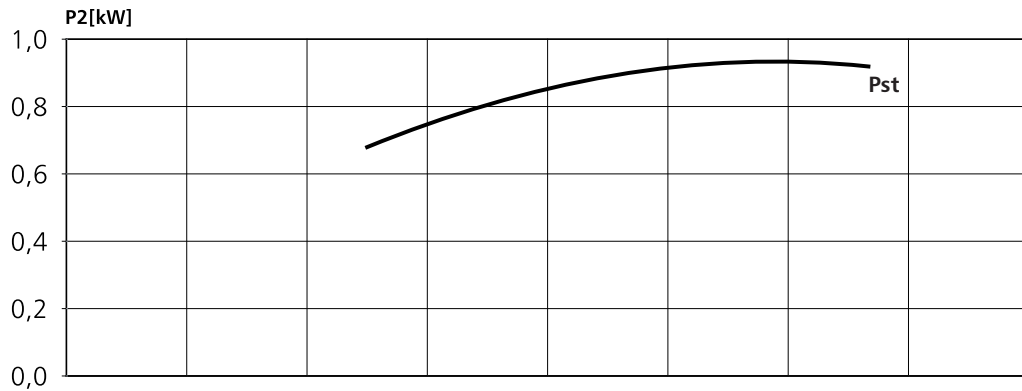
Pump type	Motor type		Input current (A)		Is/In	Dimensions in mm										Weight (kg)	
	kW	Size	220-240 V	380-415 V		DNA DNMM	L1	L2	L3	L4	L5	M	D1	D2	H	Pump	Unit
PXR1602T	2.2	90R	8.7	5.0	7.3	RP 2"	383	280				121	176	140	122	15	32
PXR1603T	3	100R	10.4	6.0	6.4	RP 2"	431	302				121	176	160	132	16	38
PXR1604T	4	112R		8.1	7.7	RP 2"	469	312				136	193	160	132	17.5	55.5
PXR1605T	5.5	132R		10.1	9.6	RP 2"	527	350				150	220	300	152	22	68
PXR1606T	5.5	132R		10.1	9.6	RP 2"	565	350				150	220	300	152	23	69
PXR1607T	7.5	132R		13.7	9.7	RP 2"	603	350				150	220	300	152	24	74
PXR1608T	7.5	132R		13.7	9.7	RP 2"	641	350				150	220	300	152	25	75
PXR16010T	11	160		20.0	8.9	RP 2"	749	495				228	316	350	184	34	119
PXR16012T	11	160		20.0	8.9	RP 2"	825	495				228	316	350	184	36	121
PXR16014T	15	160		26.7	8.7	RP 2"	901	495				228	316	350	184	38	130
PXR16015T	15	160		26.7	8.7	RP 2"	939	495				228	316	350	184	39	131

Single phase

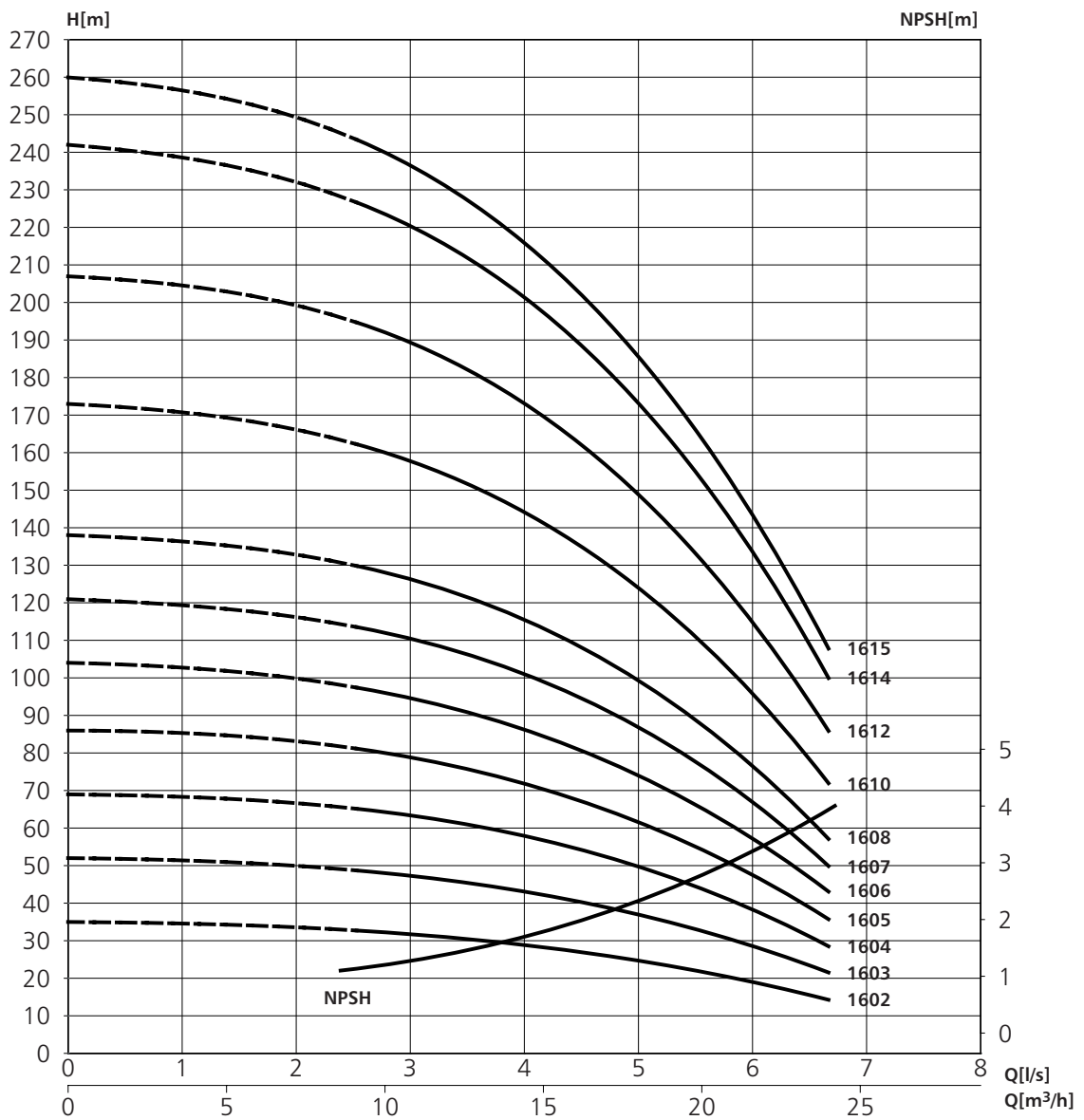
Pump type	Motor type		Input current (A)		Capacitor		Is/In	Dimensions in mm										Weight (kg)		
	kW	Size	220-240 V		μF	V		DNA DNMM	L1	L2	L3	L4	L5	M	D1	D2	H	Pump	Unit	
PXR1602M	2.2	90R	13.3-12.6		50	450	3.4	RP 2"	383	281					121	176	140	122	15	32



Performance curves at 2900 rpm 50 Hz



Power shown for one stage. Multiply with number of stages to get actual shaft power.





PX33

Product

Vertical multistage centrifugal pump for circulation and transfer of water free of suspended solids.
Working delivery 15–40 m³/h

Denomination

Product code PX33

Available versions

R PX3302-PX3312
N PX3302-PX3312

Process data

Liquid temperature -30°C to 120°C
Maximum pressure 30 bar

Motor data

Enclosed motor with external ventilation and aluminum finned casing.
Frequency 50 Hz
Insulation class F (155°C)
Protection IP 55
Construction design ≤ 4 kW B14
>4 kW B5

Monitoring equipment

Three phase To be provided at installation

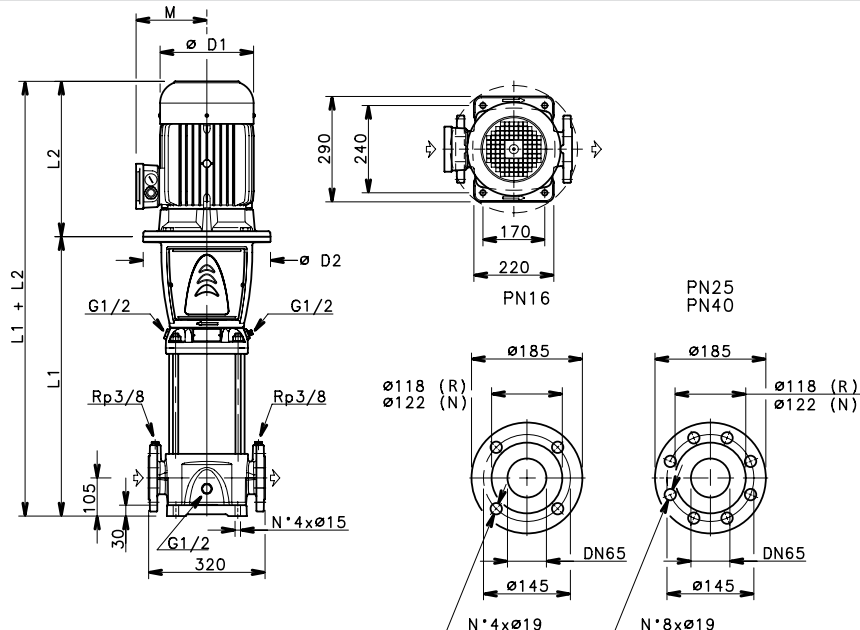
Material

PART	"R" materials	"N" materials
Impeller	Stainless steel AISI316 L	
Diffuser	Stainless steel AISI 316 L	
Shaft	UNS S 31803	
Outer sleeve	AISI 316 L	
Pump body	250 Cast iron	AISI 316
Shaft sleeve	Tungsten carbide	
Bushing	Tungsten carbide	
Mechanical seal	Silicon Carbide/Carbon/EPDM	
Elastomers	EPDM	
Fill/drain plugs	AISI 316	
Adapter	200 Cast iron	
Coupling	200 Cast iron	
Coupling protection	Stainless steel AISI 304	
Seal housing	250 Cast iron	AISI 316
Lower support	250 Cast iron	AISI 316
Wear ring	Technopolymer PPS	

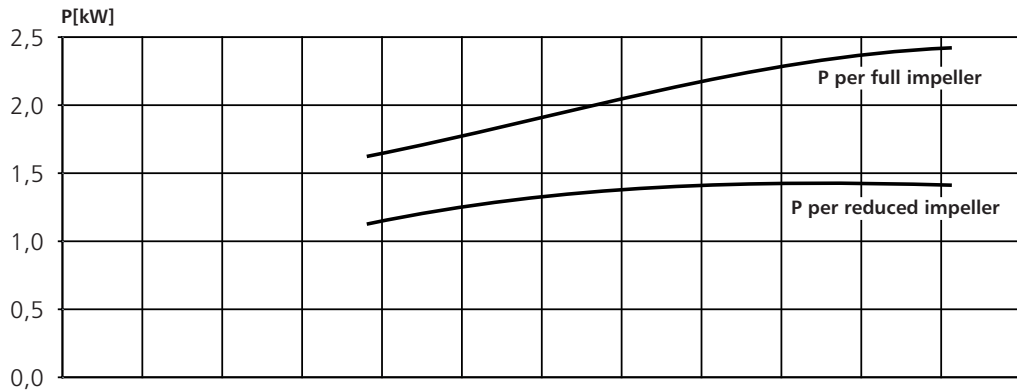
Motor rating
Three phase

Dimensions and weights

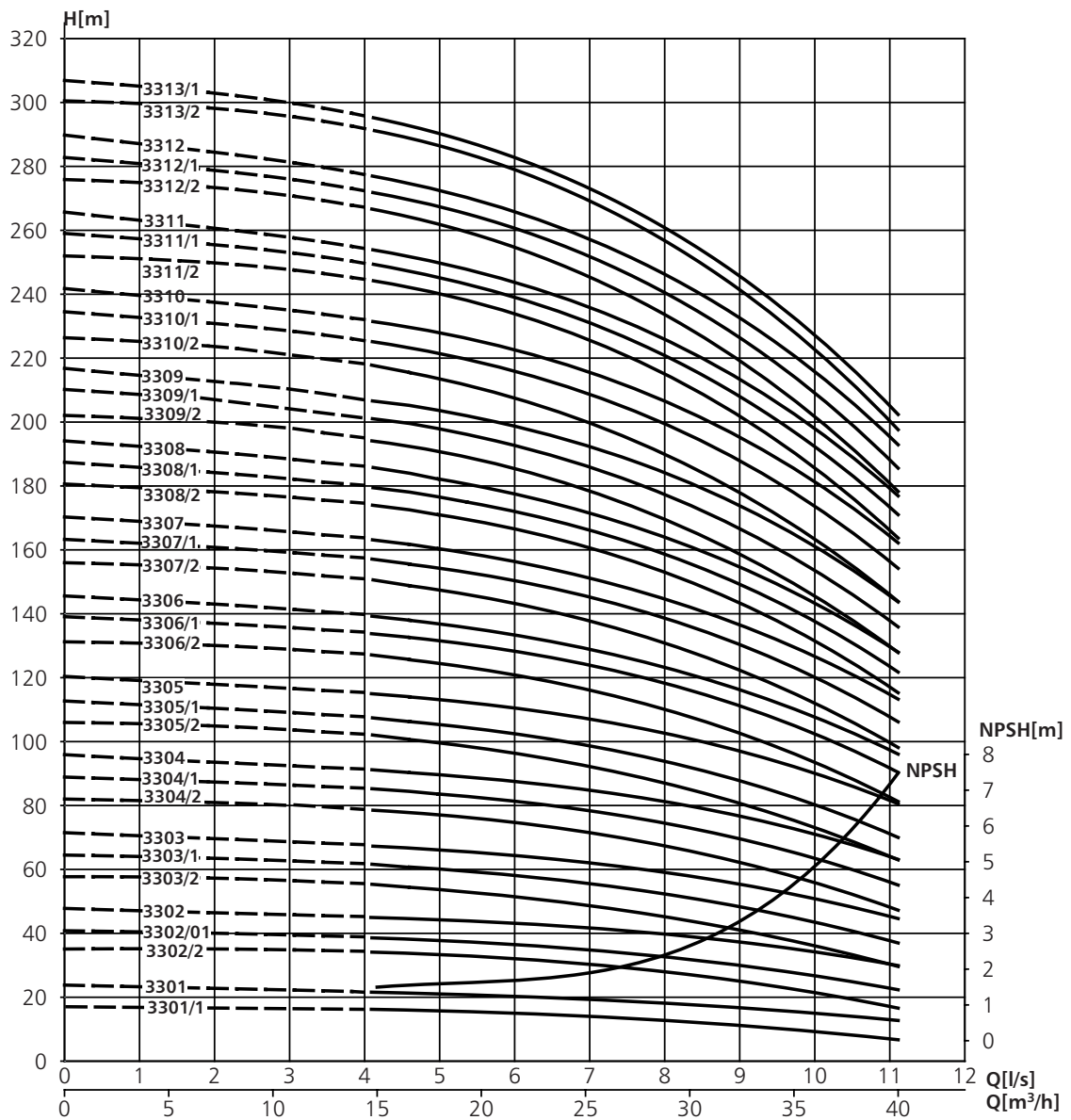
Pump type	Motor kW	Size	Input current (A)			Is/in	Dimensions (mm)						Weight (kg)	
			220-240V	380-415V	660-690V		L1	L2	D1	D2	M	PN	Pump	Total
PXR 3301/1	2.2	90R	8.7	5.0		7.32	489	263	155	140	129	16	52	65
PXR 3301	3.0	100R	10.4	6.0		6.38	489	303	176	160	121	16	52	70
PXR 3302/2	4.0	112R		8.1	4.6	7.70	564	307	193	160	133	16	56	78
PXR 3302/1	4.0	112R		8.1	4.6	7.70	564	307	193	160	133	16	56	78
PXR 3302	5.5	132R		10.1	5.8	9.62	584	374	220	300	151	16	61	96
PXR 3303/2	5.5	132R		10.1	5.8	9.62	659	374	220	300	151	16	65	100
PXR 3303/1	7.5	132R		13.7	7.9	9.73	659	374	220	300	151	16	65	106
PXR 3303	7.5	132R		13.7	7.9	9.73	659	374	220	300	151	16	65	106
PXR 3304/2	7.5	132R		13.7	7.9	9.73	734	374	220	300	151	16	69	110
PXR 3304/1	11	160R		20.0	11.5	8.93	769	427	257	350	194	16	73	140
PXR 3304	11	160R		20.0	11.5	8.93	769	427	257	350	194	16	73	140
PXR 3305/2	11	160R		20.0	11.5	8.93	844	427	257	350	194	16	77	144
PXR 3305/1	11	160R		20.0	11.5	8.93	844	427	257	350	194	16	77	144
PXR 3305	15	160		26.7	15.4	8.70	844	488	310	350	232	16	77	174
PXR 3306/2	15	160		26.7	15.4	8.70	919	488	310	350	232	16	81	178
PXR 3306/1	15	160		26.7	15.4	8.70	919	488	310	350	232	25	81	178
PXR 3306	15	160		26.7	15.4	8.70	919	488	310	350	232	25	81	178
PXR 3307/2	15	160		26.7	15.4	8.70	994	488	310	350	232	25	84	182
PXR 3307/1	18.5	160		32.8	18.9	9.49	994	532	310	350	232	25	84	200
PXR 3307	18.5	160		32.8	18.9	9.49	994	532	310	350	232	25	84	200
PXR 3308/2	18.5	160		32.8	18.9	9.49	1069	532	310	350	232	25	88	204
PXR 3308/1	18.5	160		32.8	18.9	9.49	1069	532	310	350	232	25	88	204
PXR 3308	22	180R		38.7	22.3	9.16	1069	532	310	350	232	25	89	210
PXR 3309/2	22	180R		38.7	22.3	9.16	1144	532	310	350	232	25	93	214
PXR 3309/1	22	180R		38.7	22.3	9.16	1144	532	310	350	232	25	93	214
PXR 3309	22	180R		38.7	22.3	9.16	1144	532	310	350	232	25	93	214
PXR 3310/2	22	180R		38.7	22.3	9.16	1219	532	310	350	232	25	97	218
PXR 3310/1	30	200		54.0	31.0	6.8	1219	613	354	400	278	25	104	237
PXR 3310	30	200		54.0	31.0	6.8	1219	613	354	400	278	25	104	237
PXR 3311/2	30	200		54.0	31.0	6.8	1294	613	354	400	278	40	118	251
PXR 3311/1	30	200		54.0	31.0	6.8	1294	613	354	400	278	40	118	251
PXR 3311	30	200		54.0	31.0	6.8	1294	613	354	400	278	40	118	251
PXR 3312/2	30	200		54.0	31.0	6.8	1369	613	354	400	278	40	122	255
PXR 3312/1	30	200		54.0	31.0	6.8	1369	613	354	400	278	40	122	255
PXR 3312	30	200		54.0	31.0	6.8	1369	613	354	400	278	40	122	255
PXR 3313/2	30	200		54.0	31.0	6.8	1444	613	354	400	278	40	127	260
PXR 3313/1	30	200		54.0	31.0	6.8	1444	613	354	400	278	40	127	260



Performance curves at 2900 rpm 50 Hz



Power shown for one stage. Multiply with number of stages to get actual shaft power.





Process data

Liquid temperature -30°C to 120°C
 Maximum pressure 40 bar

Motor data

Enclosed motor with external ventilation and aluminum finned casing.
 Frequency 50 Hz
 Insulation class F (155°C)
 Protection IP 55
 Construction design ≤ 4 kW B14
 >4 kW B5

Monitoring equipment

Three phase To be provided at installation

Material

PART	"R" materials	"N" materials
Impeller	Stainless steel AISI316 L	
Diffuser	Stainless steel AISI 316 L	
Shaft	UNS S 31803	
Outer sleeve	AISI 316 L	
Pump body	250 Cast iron	AISI 316
Shaft sleeve	Tungsten carbide	
Bushing	Tungsten carbide	
Mechanical seal	Silicon/Carbide/Carbon/EPDM	
Elastomers	EPDM	
Fill/drain plugs	AISI 316	
Adapter	200 Cast iron	
Coupling	200 Cast iron	
Coupling protection	Stainless steel AISI 304	
Seal housing	250 Cast iron	AISI 316
Lower support	250 Cast iron	AISI 316
Wear ring	Technopolymer PPS	

PX46

Product

Vertical multistage centrifugal pump for circulation and transfer of water free of suspended solids.
 Working delivery 22–60 m³/h

Denomination

Product code PX46

Available versions

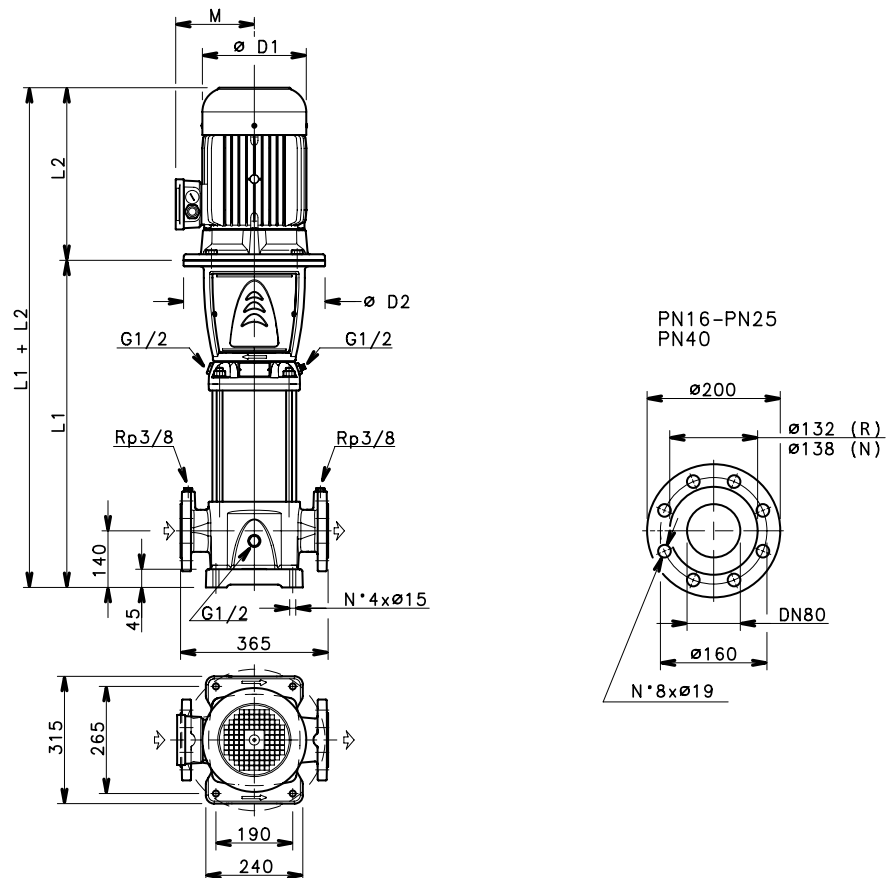
R PX4601-PX4613
 N PX4601-PX4613

Motor rating

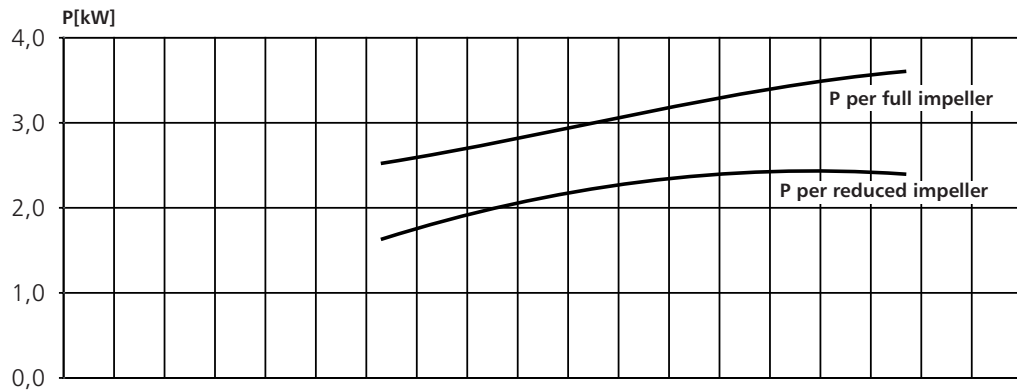
Dimensions and weights

Three phase

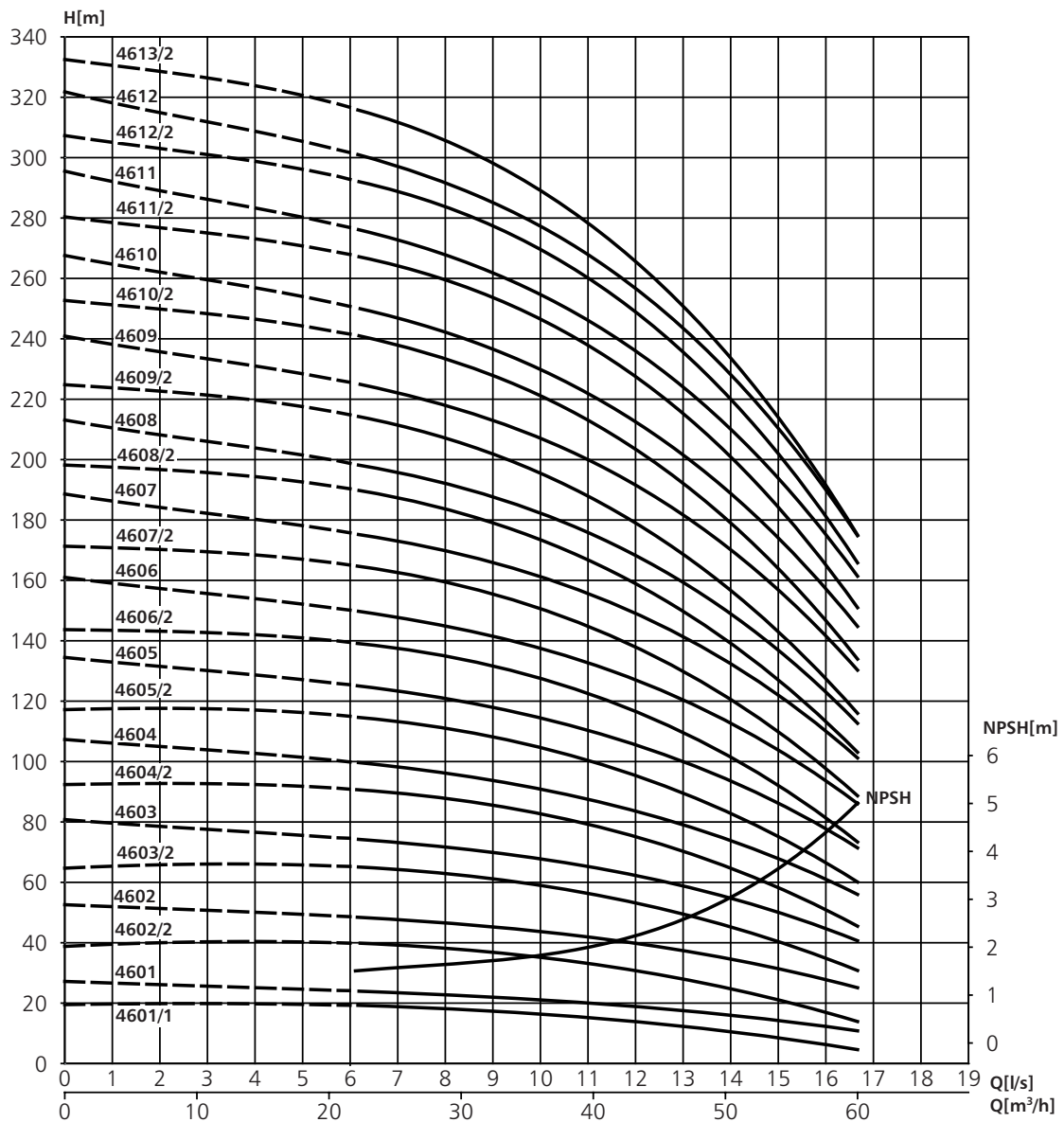
Pump type	Motor kW	Size	Input current (A)			Is/in	Dimensions (mm)						Weight (kg)	
			220-240V	380-415V	660-690V		L1	L2	D1	D2	M	PN	Pump	Total
PXR 4601/1	3	100R	10.4	6.0		6.38	529	303	176	160	121	16	58	75
PXR 4601	4	112R		8.1	4.6	7.70	529	307	193	160	133	16	58	80
PXR 4602/2	5.5	132R		10.1	5.8	9.62	624	374	220	300	151	16	66	102
PXR 4602	7.5	132R		13.7	7.9	9.73	624	374	220	300	151	16	66	108
PXR 4603/2	11	160R		20.0	11.5	8.93	734	427	257	350	194	16	74	142
PXR 4603	11	160R		20.0	11.5	8.93	734	427	257	350	194	16	74	142
PXR 4604/2	15	160		26.7	15.4	8.70	809	488	310	350	232	16	78	176
PXR 4604	15	160		26.7	15.4	8.70	809	488	310	350	232	16	78	176
PXR 4605/2	18.5	160		32.8	18.9	9.49	884	532	310	350	232	16	82	198
PXR 4605	18.5	160		32.8	18.9	9.49	884	532	310	350	232	16	82	198
PXR 4606/2	22	180R		38.7	22.3	9.16	959	532	310	350	232	25	87	207
PXR 4606	22	180R		38.7	22.3	9.16	959	532	310	350	232	25	87	207
PXR 4607/2	30	200		54.0	31.0	6.8	1034	613	354	400	278	25	97	230
PXR 4607	30	200		54.0	31.0	6.8	1034	613	354	400	278	25	97	230
PXR 4608/2	30	200		54.0	31.0	6.8	1109	613	354	400	278	25	101	234
PXR 4608	30	200		54.0	31.0	6.8	1109	613	354	400	278	25	101	234
PXR 4609/2	30	200		54.0	31.0	6.8	1184	613	354	400	278	25	105	238
PXR 4609	37	200		65.0	38.0	7.2	1184	613	354	400	278	25	105	248
PXR 4610/2	37	200		65.0	38.0	7.2	1259	613	354	400	278	40	118	261
PXR 4610	37	200		65.0	38.0	7.2	1259	613	354	400	278	40	118	261
PXR 4611/2	45	225		80.0	46.0	6.7	1334	710	411	450	298	40	126	345
PXR 4611	45	225		80.0	46.0	6.7	1334	710	411	450	298	40	126	345
PXR 4612/2	45	225		80.0	46.0	6.7	1409	710	411	450	298	40	131	350
PXR 4612	45	225		80.0	46.0	6.7	1409	710	411	450	298	40	131	350
PXR 4613/2	45	225		80.0	46.0	6.7	1484	710	411	450	298	40	135	354



Performance curves at 2900 rpm 50 Hz



Power shown for one stage. Multiply with number of stages to get actual shaft power.





PX66

Product

Vertical multistage centrifugal pump for circulation and transfer of water free of suspended solids.
Working delivery 30–85 m³/h

Denomination

Product code PX66

Available versions

R PX6602-PX6612
N PX6602-PX6612

Process data

Liquid temperature -30°C to 120°C
Maximum pressure 25 bar

Motor data

Enclosed motor with external ventilation and aluminum finned casing.
Frequency 50 Hz
Insulation class F (155°C)
Protection IP 55
Construction design B5

Monitoring equipment

Three phase To be provided at installation

Material

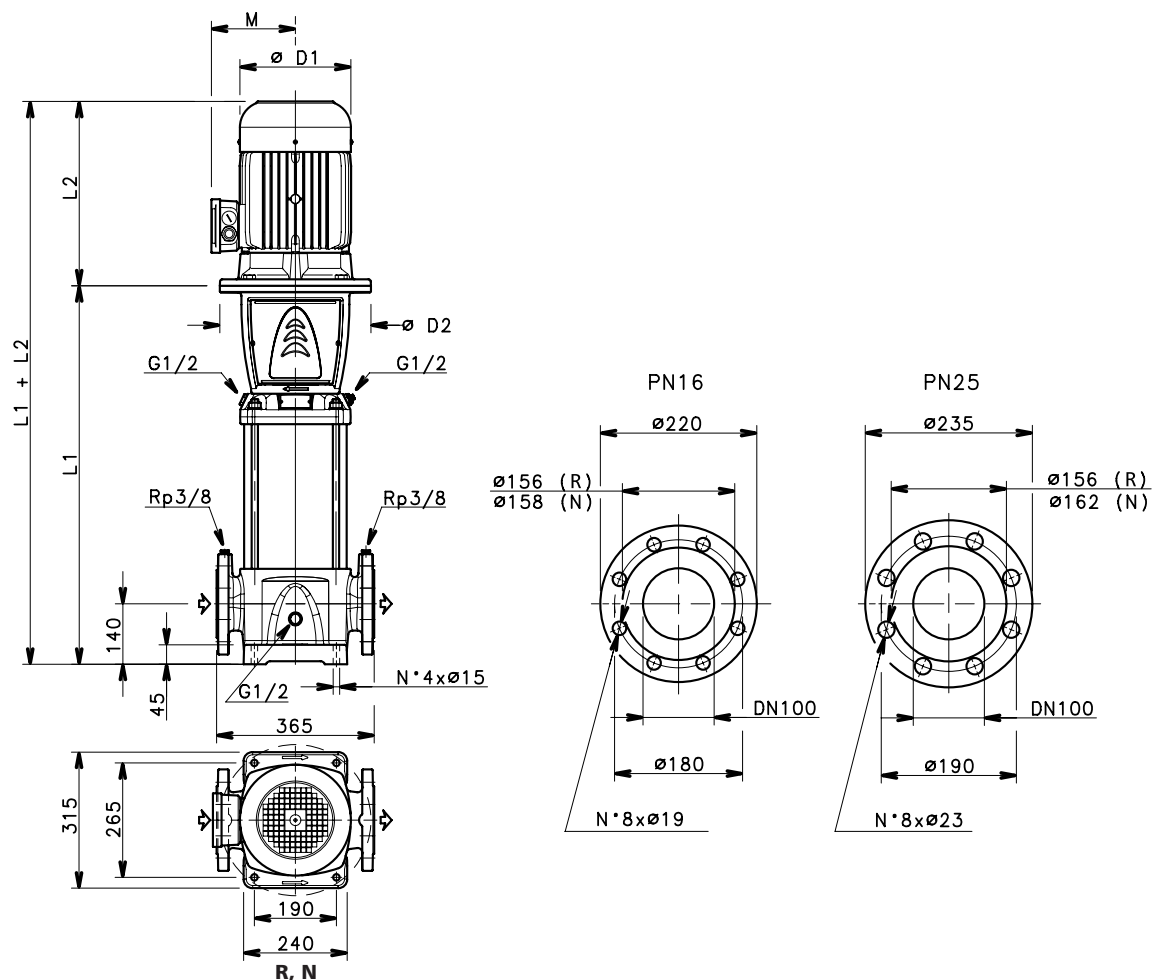
PART	"R" materials	"N" materials
Impeller	Stainless steel AISI316 L	
Diffuser	Stainless steel AISI 316 L	
Shaft	UNS S 31803	
Outer sleeve	AISI 316 L	
Pump body	250 Cast iron	AISI 316
Shaft sleeve	Tungsten carbide	
Bushing	Tungsten carbide	
Mechanical seal	Silicon/Carbide/Carbon/EPDM	
Elastomers	EPDM	
Fill/drain plugs	AISI 316	
Adapter	200 Cast iron	
Coupling	200 Cast iron	
Coupling protection	Stainless steel AISI 304	
Seal housing	250 Cast iron	AISI 316
Lower support	250 Cast iron	AISI 316
Wear ring	Technopolymer PPS	

Motor rating

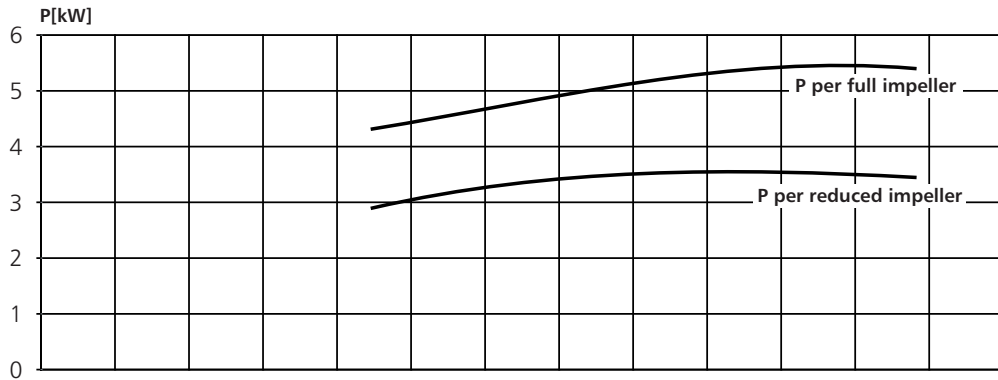
Three phase

Dimensions and weights

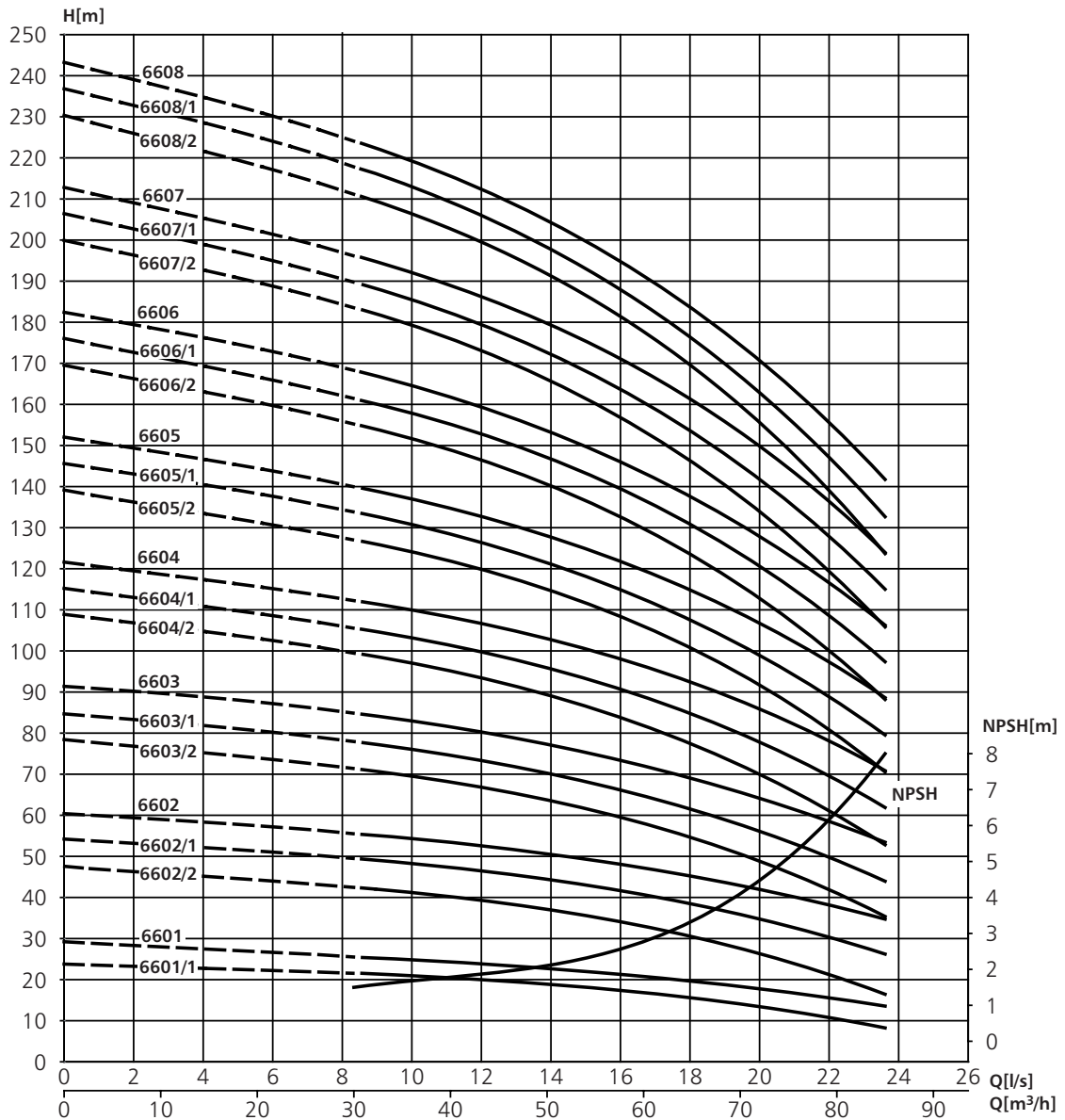
Pump type	Motor kW	Size	Input current (A)			Dimensions (mm)						Weight (kg)	
			380-415V	660-690V	Is/in	L1	L2	D1	D2	M	PN	Pump	Total
PXR 6601/1	4.0	112R	8.1	4.6	7.70	554	307	193	160	133	16	66	89
PXR 6601	5.5	132R	10.1	5.8	9.62	574	374	220	300	151	16	72	107
PXR 6602/2	7.5	132R	13.7	7.9	9.73	664	374	220	300	151	16	77	118
PXR 6602/1	11	160R	20.0	11.5	8.93	699	427	257	350	194	16	81	148
PXR 6602	11	160R	20.0	11.5	8.93	699	427	257	350	194	16	81	148
PXR 6603/2	15	160	26.7	15.4	8.70	789	488	310	350	232	16	86	184
PXR 6603/1	15	160	26.7	15.4	8.70	789	488	310	350	232	16	86	184
PXR 6603	18.5	160	32.8	18.9	9.49	789	532	310	350	232	16	86	202
PXR 6604/2	18.5	160	32.8	18.9	9.49	879	532	310	350	232	16	92	207
PXR 6604/1	22	180R	38.7	22.3	9.16	879	532	310	350	232	16	93	213
PXR 6604	22	180R	38.7	22.3	9.16	879	532	310	350	232	16	93	213
PXR 6605/2	30	200	54.0	31.0	6.8	969	613	354	400	278	16	105	237
PXR 6605/1	30	200	54.0	31.0	6.8	969	613	354	400	278	16	105	237
PXR 6605	30	200	54.0	31.0	6.8	969	613	354	400	278	16	105	237
PXR 6606/2	30	200	54.0	31.0	6.8	1059	613	354	400	278	25	113	245
PXR 6606/1	30	200	54.0	31.0	6.8	1059	613	354	400	278	25	113	245
PXR 6606	37	200	65.0	38.0	7.2	1059	613	354	400	278	25	113	255
PXR 6607/2	37	200	65.0	38.0	7.2	1149	613	354	400	278	25	118	261
PXR 6607/1	37	200	65.0	38.0	7.2	1149	613	354	400	278	25	118	261
PXR 6607	45	225	80.0	46.0	6.7	1149	710	411	450	298	25	122	341
PXR 6608/2	45	225	80.0	46.0	6.7	1239	710	411	450	298	25	127	346
PXR 6608/1	45	225	80.0	46.0	6.7	1239	710	411	450	298	25	127	346
PXR 6608	45	225	80.0	46.0	6.7	1239	710	411	450	298	25	127	346



Performance curves at 2900 rpm 50 Hz



Power shown for one stage. Multiply with number of stages to get actual shaft power.





Process data

Liquid temperature -30°C to 120°C
 Maximum pressure 25 bar

Motor data

Enclosed motor with external ventilation and aluminum finned casing.
 Frequency 50 Hz
 Insulation class F (155°C)
 Protection IP 55
 Construction design B5

Monitoring equipment

Three phase To be provided at installation

Material

PART	"R" materials	"N" materials
Impeller	Stainless steel AISI316 L	
Diffuser	Stainless steel AISI 316 L	
Shaft	UNS S 31803	
Outer sleeve	AISI 316 L	
Pump body	250 Cast iron	AISI 316
Shaft sleeve	Tungsten carbide	
Bushing	Tungsten carbide	
Mechanical seal	Silicon/Carbide/Carbon/EPDM	
Elastomers	EPDM	
Fill/drain plugs	AISI 316	
Adapter	200 Cast iron	
Coupling	200 Cast iron	
Coupling protection	Stainless steel AISI 304	
Seal housing	250 Cast iron	AISI 316
Lower support	250 Cast iron	AISI 316
Wear ring	Technopolymer PPS	

PX92

Product

Vertical multistage centrifugal pump for circulation and transfer of water free of suspended solids.
 Working delivery 45–120 m³/h

Denomination

Product code PX92

Available versions

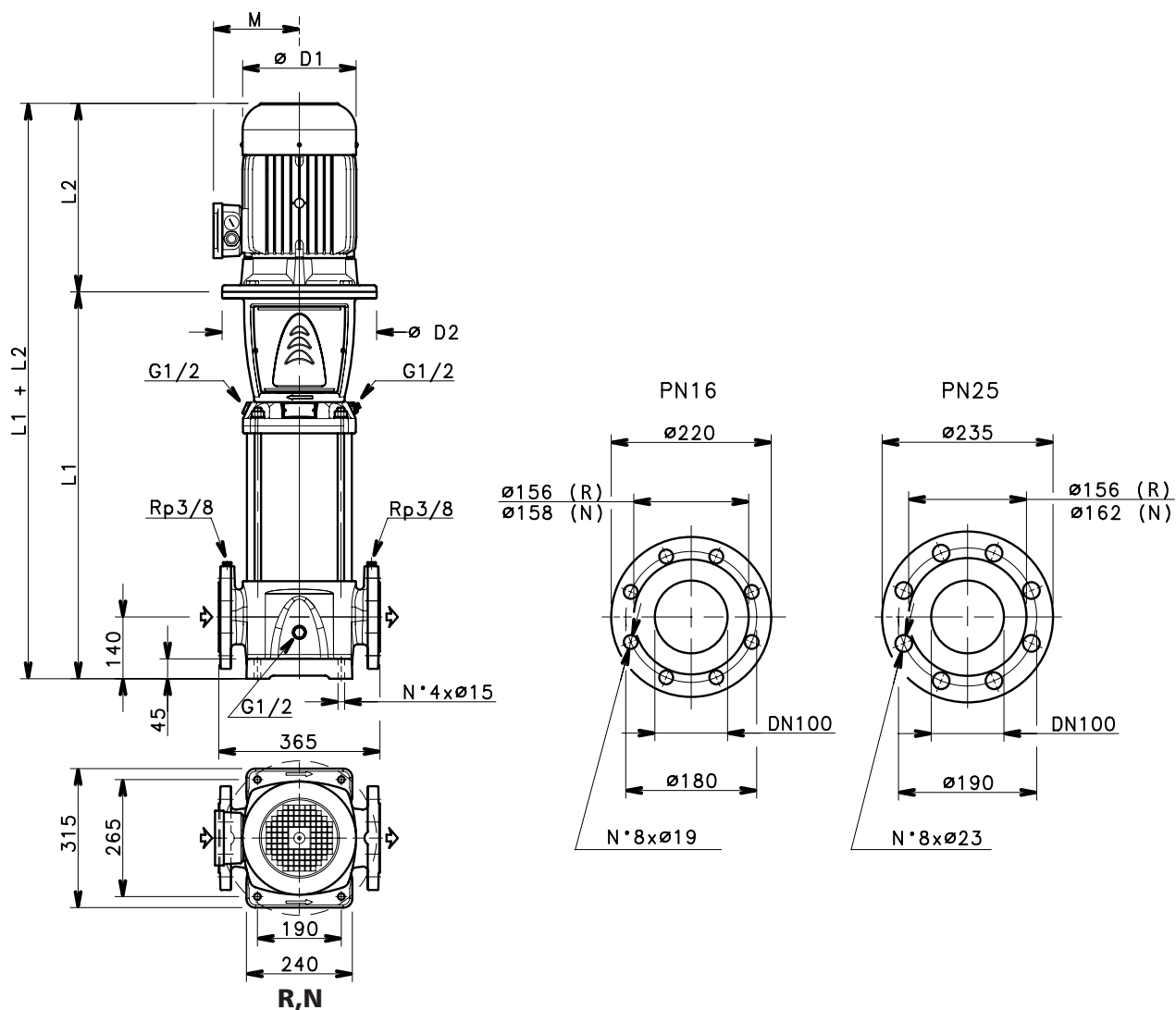
R PX9202-PX9212
 N PX9202-PX9212

Motor rating

Dimensions and weights

Three phase

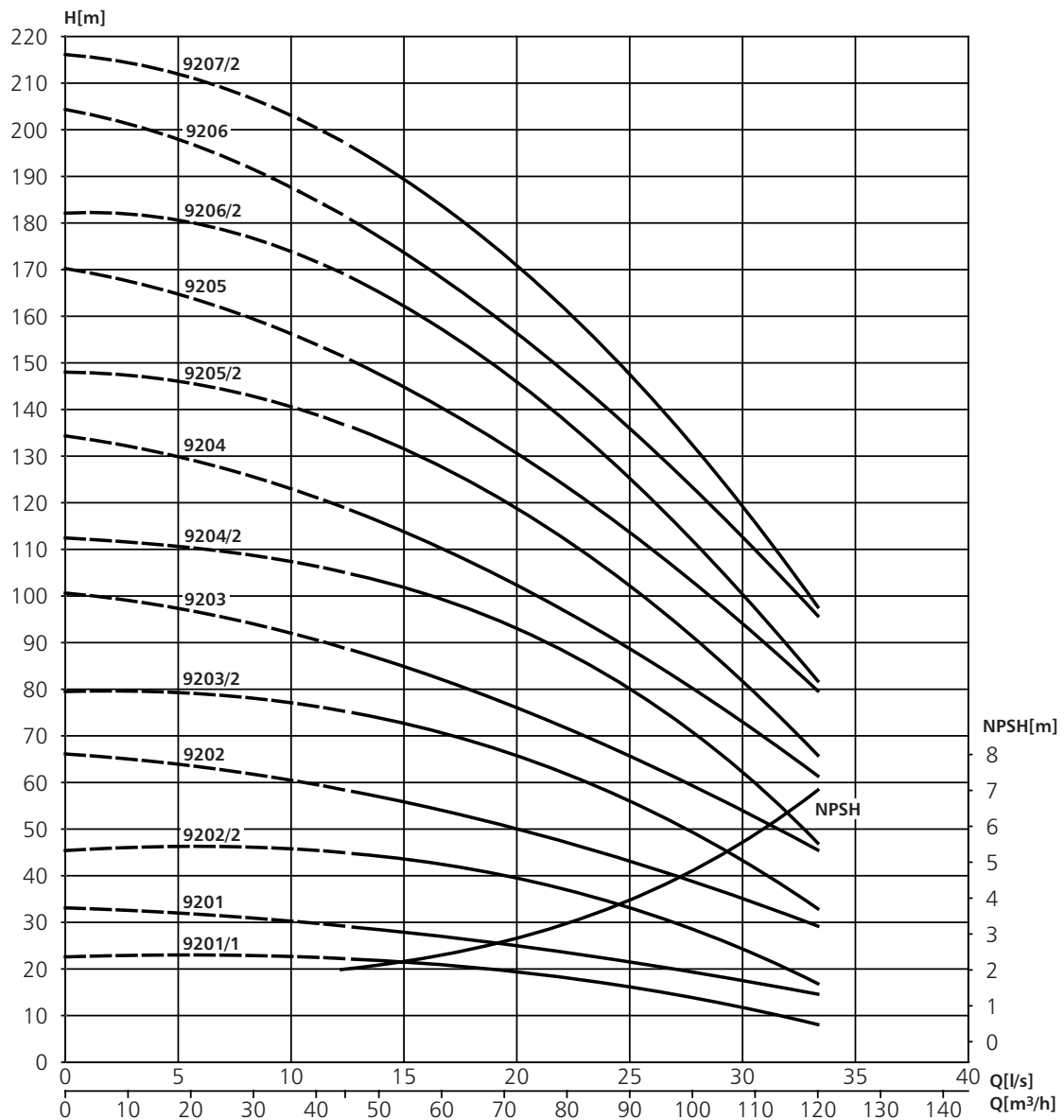
Pump type	Motor kW	Size	Input current (A)			Dimensions (mm)						Weight (kg)	
			380-415V	660-690V	Is/in	L1	L2	D1	D2	M	PN	Pump	Total
PXR 9201/1	5.5	132R	10.1	5.8	9.62	574	374	220	300	151	16	71	107
PXR 9201	7.5	132R	13.7	7.9	9.73	574	374	220	300	151	16	71	113
PXR 9202/2	11	160R	20.0	11.5	8.93	699	427	257	350	194	16	80	148
PXR 9202	15	160	26.7	15.4	8.70	699	488	310	350	232	16	80	178
PXR 9203/2	18.5	160	32.8	18.9	9.49	789	532	310	350	232	16	86	202
PXR 9203	22	180R	38.7	22.3	9.16	789	532	310	350	232	16	87	208
PXR 9204/2	30	200	54.0	31.0	6.8	879	613	354	400	278	16	99	232
PXR 9204	30	200	54.0	31.0	6.8	879	613	354	400	278	16	99	232
PXR 9205/2	37	200	65.0	38.0	7.2	969	613	354	400	278	25	107	250
PXR 9205	37	200	65.0	38.0	7.2	969	613	354	400	278	25	107	250
PXR 9206/2	45	225	80.0	46.0	6.7	1059	710	411	450	298	25	116	335
PXR 9206	45	225	80.0	46.0	6.7	1059	710	411	450	298	25	116	335
PXR 9702/2	45	225	80.0	46.0	6.7	1149	710	411	450	298	25	121	340



Performance curves at 2900 rpm 50 Hz



Power shown for one stage. Multiply with number of stages to get actual shaft power.



Counterflanges

Dimensions and material Oval flanges (PXO)

Material:

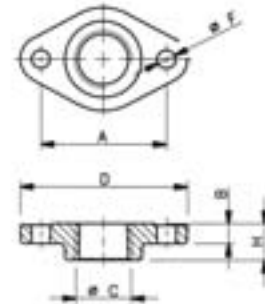
Galvanized steel, included in delivery.

Stainless steel AISI 304.

Oval flanges

Pump type	DN	øC	Dimensions in mm				Holes		
			A	B	D	H	øF	N°	PN
PXO2	25	Rp 1	75	12	100	22	11	2	16
PXO4	32	Rp 1¼	75	12	100	22	11	2	16
PXO8	40	Rp 1½	100	15	132	25	14	2	16
PXO8(*)	50	Rp 2	100	15	132	25	14	2	16

(*) Special version



Round flanges, threaded (PXR, PXN, PXTB)

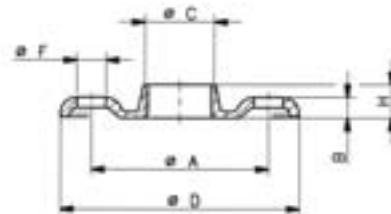
Material:

Galvanized steel, included in PXR and PXTB 2, 4, 8 and 16.

Stainless steel AISI 316, included in PXN 2, 4, 8 and 16.

Round flanges

Pump type	DN	øC	Dimensions in mm				Holes		
			øA	B	øD	H	øF	N°	PN
PX2	25	Rp 1	85	10	115	16	14	4	25
PX4	32	Rp 1¼	100	13	140	16	18	4	25
PX8	40	Rp 1½	110	14	150	19	18	4	25
PX16	50	Rp 2	125	16	165	24	18	4	25
PX33	65	Rp 2½	145	16	185	23	18	4	16
PX46	80	Rp 3	160	17	200	27	18	8	16
PX66	100	Rp 4	180	18	220	31	18	8	16
PX92									



Round flanges, weld-on (PXR, PXN, PXTB)

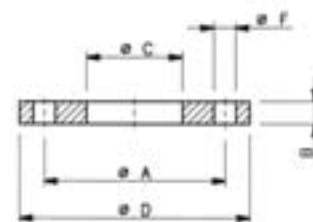
Material:

Galvanized steel.

Stainless steel AISI 316.

Round flanges, weld-on

Pump type	DN	øC	Dimensions in mm				Holes		
			øA	B	øD	øF	N°	PN	
PX33	65	77	145	18	185	18	4	16	
PX46	80	90	160	20	200	18	8	16	
PX66	100	115,5	180	22	220	18	8	16	
PX92									
PXN33	65	77	145	24	185	18	8	25-40	
PXN46	80	90	160	26	200	18	8	25-40	
PXN66	100	115,5	190	26	235	22	8	25-40	
PXN92									



Introduction

Cast iron body and AISI 316 stainless steel , laser technology welded impeller.

Suitable for pumping hot and cold, moderately aggressive liquids. The liquid end is in compliance with EN 733, DIN 24255 and UNI 7467.

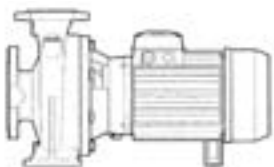
- Maximum delivery: 220 m³/h
- Maximum head: 95 m
- Maximum operating pressure: 12 bar (PN 12)

Applications

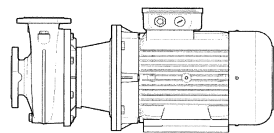
- Water circulation and transfer in civil, industrial and agricultural sectors.
- Pressure boosting.
- Water supply.
- Circulation of hot and cold water in heating and cooling systems.
- Industrial washing.



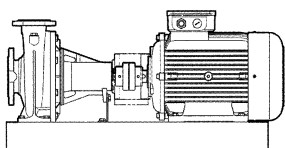
Method of installation



CHX: Close coupled by means of an adaptor bracket with an impeller keyed direct to the motor shaft.



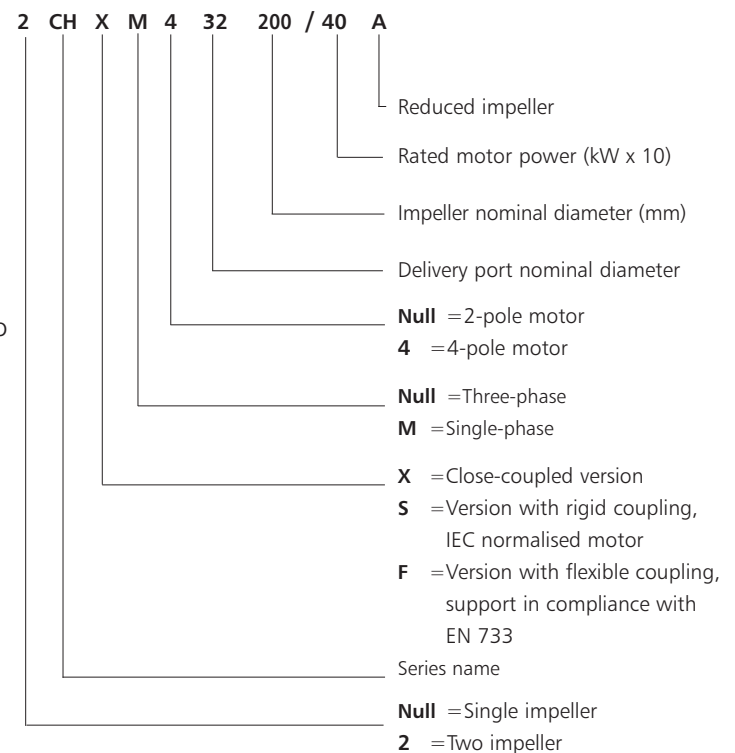
CHS: With a bracket, adaptor and rigid coupling keyed to the motor shaft.



CHF: With a bracket, support, flexible coupling, aligning and base stand.

A bare shaft pump is available on request.

Product identity



Design

Impeller

On smaller sizes made of AISI 316. The impeller is laser technology welded to ensure optimal performance.

Wear rings

Made of AISI 316 on impeller front and rear wear surfaces ensure high performance and are easy to replace.

Flanges

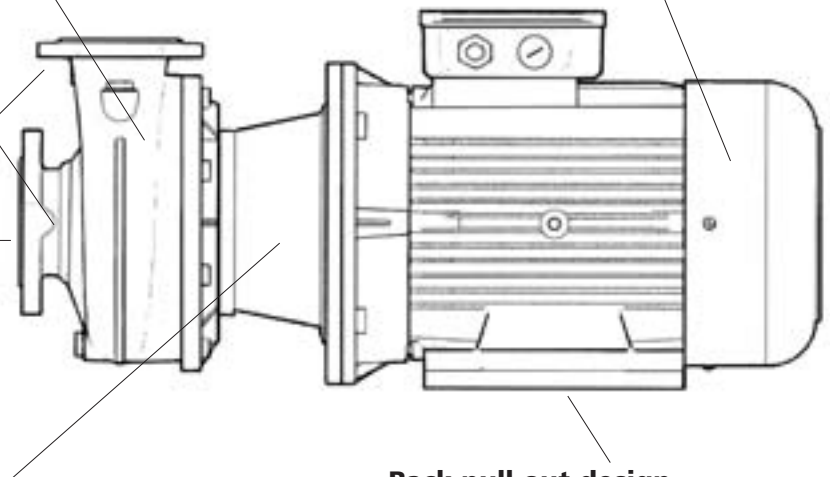
In compliance with UNI 2236 and DIN 2532.

Mechanical seal

In compliance with DIN 24960, lubricated by internal recirculation of pumped liquid to seal housing.

Motor

Back pull-out design; impeller, adapter and motor can be extracted without disconnecting the pump body from the pipe system.



Back pull-out design

Impeller, adapter and motor can be extracted without disconnecting the pump body from the pipe system.

Motor noise

The table shows the mean noise levels for sound pressure (Lp) and sound power (LW) measured at 1 meter distance in a free field according to the A curve (ISO R 1680 standard).

The noise is measured with idling 50 Hz motor with a tolerance of 3 dB (A).

Motor type Size	2-poles		4-poles	
	Lp- dB (A)	LW- dB (A)	Lp- dB (A)	LW- dB (A)
71	61	70	48	57
80R	61	70		
80	64	73	50	59
90R	64	73		
90	66	75	51	60
100R	66	75		
100	70	80	53	63
112R	70	80		
112	74	84	56	66
132R	74	84		
132	77	87	66	76
160	78	88		
180R	80	81		
200	80	81		
225	84	94		
250	84	94		



Motor data

Enclosed motor with external ventilation and aluminium finned casing.

Frequency 50 Hz
 Insulation class F (+155° C)
 Protection class IP 55

Monitoring equipment

Single-phase
 ≤ 1.5 kW Automatic reset
 overload protection
 > 1.5 kW To be provided
 at installation
 Three-phase To be provided
 at installation

CH 32

Product

Horizontal cast iron pump with stainless steel impeller for pumping hot and cold moderately aggressive liquids, like circulation of water, water supply and industrial washing.

Denomination

Product code. CH 32

Available versions

Method of installation CHX, CHF, CHS

Process data

Liquid temperature -10° C to +85° C
 For version with EPDM o-rings -20° C to +120° C
 Maximum pressure 12 bar (PN 12)

Material

Part	Material
Pump body	Cast iron
Seal housing	Cast iron
Impeller	Stainless steel AISI 316L
Adapter:	
125,160, 200 4-pole	Aluminium
200 2-pole, 250	Cast iron
O-rings	NBR
Wear rings	Stainless steel AISI 316L
Shaft (CHX, CHF)	Stainless steel AISI 316L
Coupling (CHS)	Stainless steel AISI 316
Support body (CHF)	Cast Iron
Fill and drain plugs	Nickel plated brass

Mechanical face seals

Alternative	Seal
1 Standard	Ceramic/ Carbon/ NBR
2	Ceramic/ Carbon/ EPDM
3	Tungsten carbide/ Carbon/ EPDM or FPM
4	Tungsten carbide/ Silicon carbide/ EPDM or FPM
5	Tungsten carbide/ Tungsten carbide / EPDM or FPM
6	Silicon carbide / Silicon carbide/ EPDM or FPM

Surface treatment

Epoxy based cationic enamel.

Option

Version with Technovar frequency converter available on request.

Motor rating

CHS/CHF, CHX 32

Three-phase 2-pole, 2900 rpm

Pump type	kW	Motor type					Input current			rpm	Data for 400 V 50 Hz				
		Size		Design			In (A)				Is/In	η%	cosφ	Cn (Nm)	Cs/Cn
		CHS/CHF	CHX	CHS	CHF	CHX	220-240 V	380-415 V	660 V						
32-125/07	0.75	80	90R	B5	B3	B14	3.2-3.3	1.85-1.90		2835	5.5	72	0.79	2.53	3.60
32-125/11	1.10	80	90R	B5	B3	B14	4.5-4.5	2.60-2.60		2845	6.4	75	0.81	3.69	3.85
32-160/15	1.50	90R	90R	B5	B3	B14	6.2-6.0	3.60-3.50		2845	6.6	73	0.83	5.00	4.20
32-160/22	2.20	90R	90R	B5	B3	B14	8.5-8.3	4.90-4.80		2860	6.9	77	0.85	7.30	2.90
32-200/30	3.00	100	90	B5	B3	B14	11.2-10.9	6.50-6.30		2875	6.3	80	0.85	10.00	2.60
32-200/40	4.00	112R	112R	B5	B3	B14		8.50-8.30	4.9	2885	7.5	81	0.85	13.20	3.15
32-250/55*)	5.50		112			B14		11.50-11.20	6.6	2910	7.8	82	0.85	18.00	3.00
32-250/75*)	7.50		112			B14		15.50-15.00	8.9	2905	7.0	82	0.85	24.70	2.60

*) 2CHX

CHF, CHX 32

Three-phase 4-pole, 1450 rpm

Pump type	kW	Motor type				Input current			rpm	Data for 400 V 50 Hz					
		Size		Design		In (A)				Is/In	η%	cosφ	Cn	Cs/Cn (Nm)	
		CHF	CHX	CHF	CHX	220-240 V	380-415 V	660 V							
32-125/02A	0.25	71	71		B3	B5	1.30-1.25	0.75-0.72		1390	4.0	64	0.77	1.72	2.35
32-125/02	0.25	71	71		B3	B5	1.30-1.25	0.75-0.72		1390	4.0	64	0.77	1.72	2.35
32-160/02	0.25	71	71		B3	B5	1.30-1.25	0.75-0.72		1390	4.0	64	0.77	1.72	2.35
32-160/03	0.37	71	71		B3	B5	1.85-1.80	1.07-1.04		1400	4.2	65	0.78	2.52	2.40
32-200/03	0.37	71	71		B3	B5	1.85-1.80	1.07-1.04		1400	4.2	65	0.78	2.52	2.40
32-200/05	0.55	80	90R		B3	B14	2.70-2.60	1.55-1.50		1410	4.4	69	0.77	3.72	1.95
32-250/07*)	0.75		90R			B5	3.60-3.50	2.10-2.00		1410	4.9	69	0.77	5.10	1.90
32-250/11*)	1.10		90			B5	4.80-4.70	2.80-2.70		1410	4.5	75	0.77	7.40	2.25

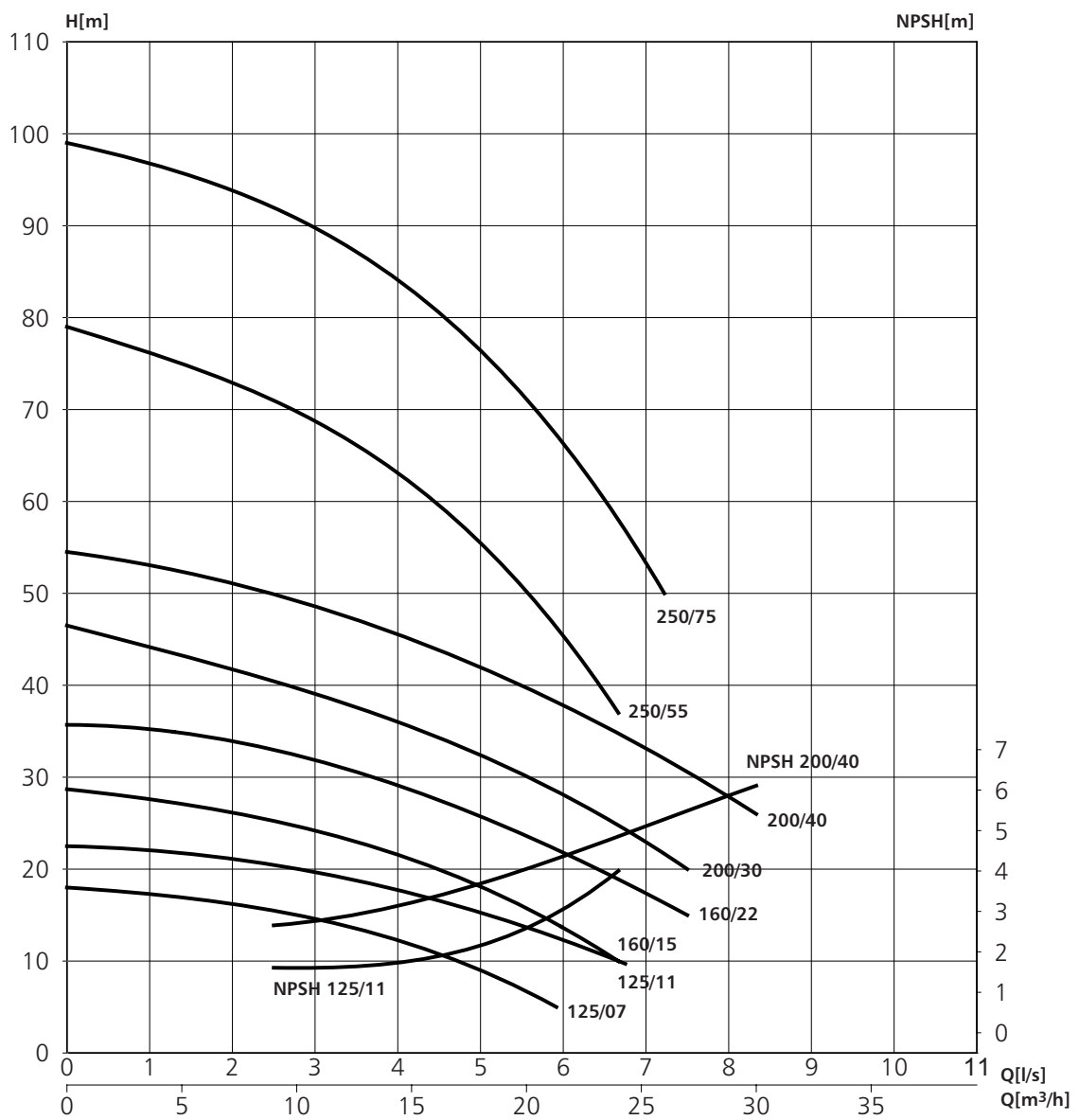
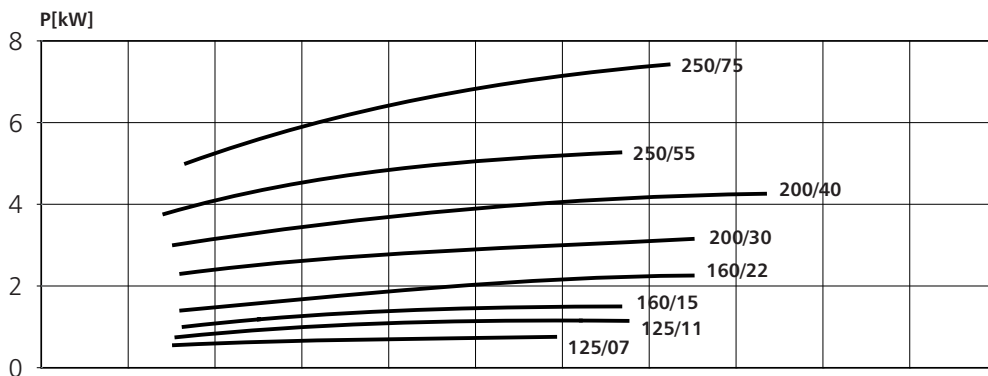
*) 2CHX

CHXM 32

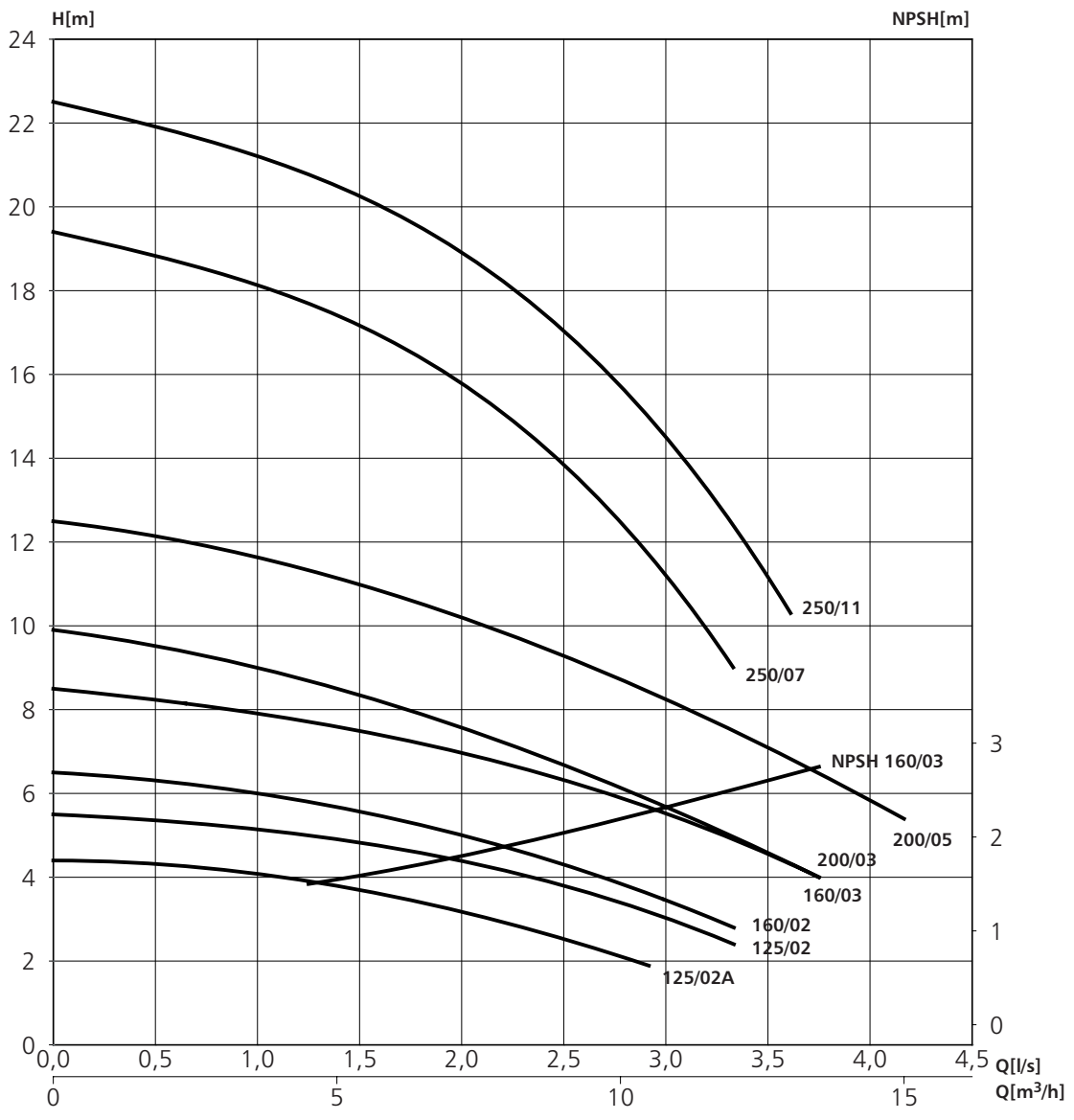
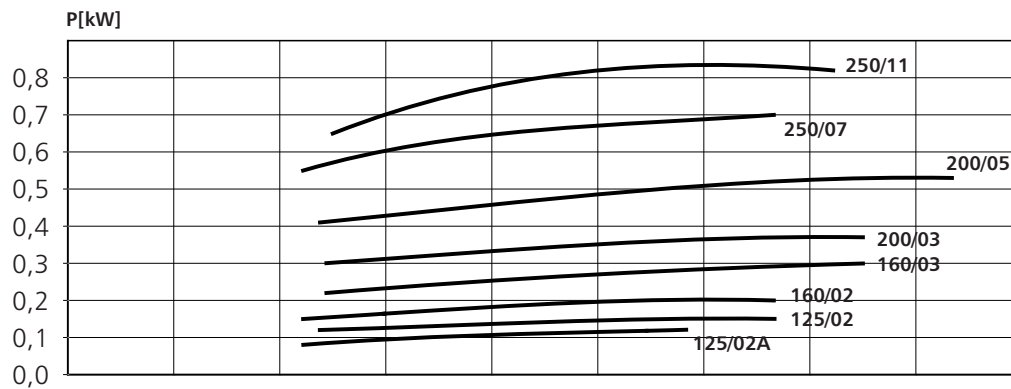
Single-phase 2-pole, 2900 rpm

Pump type	Motor type		Design	Input current In (A) 220-240 V	Capacitor		rpm	Data for 400 V 50 Hz				
	kW	Size			μF	V		Is/In	η%	cosφ	Cn (Nm)	Cs/Cn
32-125/07	0.75	90R	B14	4.6-4.8	22	450	2825	5.5	74	0.94	2.54	0.56
32-125/11	1.10	90R	B14	6.5-6.8	30	450	2825	6.4	76	0.95	3.72	0.53
32-160/15	1.50	90R	B14	9.0-8.7	40	450	2815	6.6	75	0.98	5.00	0.53
32-160/22	2.20	90R	B14	13.0-12.5	50	450	2775	6.9	77	0.98	7.30	0.55

Performance curves at 2900 rpm



Performance curves at 1450 rpm





CH 40

Product

Horizontal cast iron pump with stainless steel impeller for pumping hot and cold moderately aggressive liquids, like circulation of water, water supply and industrial washing.

Denomination

Product code CH 40

Available versions

Method of installation CHX, CHF, CHS

Process data

Liquid temperature -10° C to +85° C
 For version with EPDM o-rings -20° C to +120° C
 Maximum pressure 12 bar (PN 12)

Motor data

Enclosed motor with external ventilation and aluminum finned casing.

Frequency 50 Hz
 Insulation class F (+155° C)
 Protection class IP 55

Monitoring equipment

Single-phase:
 ≤ 1.5 kW Automatic reset
 > 1.5 kW overload protection
 To be provided
 at installation
 Three-phase To be provided
 at installation

Material

Part	Material
Pump body	Cast iron
Seal housing	Cast iron
Impeller	Stainless steel AISI 316L
Adapter:	
125,160, 200 4-pole	Aluminium
200 2-pole, 250	Cast iron
O-rings	NBR
Wear rings	Stainless steel AISI 316L
Shaft (CHX, CHF)	Stainless steel AISI 316L
Coupling (CHS)	Stainless steel AISI 316
Support body (CHF)	Cast Iron
Fill and drain plugs	Nickel plated brass

Mechanical face seals

Alternative	Seal
1 Standard	Ceramic/ Carbon/ NBR
2	Ceramic/ Carbon/ EPDM
3	Tungsten carbide/ Carbon/ EPDM or FPM
4	Tungsten carbide/ Silicon carbide/ EPDM or FPM
5	Tungsten carbide/ Tungsten carbide / EPDM or FPM
6	Silicon carbide / Silicon carbide/ EPDM or FPM

Surface treatment

Epoxy based cationic enamel

Option

Version with Technovar frequency converter available on request

Motor rating

CHS/CHF, CHX 40

Three-phase 2-pole, 2900 rpm

Pump type	Motor type						Input current			Data for 400 V 50 Hz					
	kW	Size		Design		In (A)			rpm	Is/In	η%	cosφ	Cn (Nm)	Cs/Cn	
		CHS/CHF	CHX	CHS	CHF	CHX	220-240 V	380-415 V							660 V
40-125/11	1.1	80	90R	B5	B3	B14	4.5-4.5	2.6-2.6		2845	6.4	75	0.81	3.69	3.85
40-125/15	1.5	90R	90R	B5	B3	B14	6.2-6.0	3.6-3.5		2845	6.6	73	0.83	5.00	4.20
40-125/22	2.2	90R	90R	B5	B3	B14	8.5-8.3	4.9-4.8		2860	6.9	77	0.85	7.30	2.90
40-160/30	3.0	100	90	B5	B3	B14	11.2-10.9	6.5-6.3		2875	6.3	80	0.85	10.00	2.60
40-160/40	4.0	112R	112R	B5	B3	B14		8.5-8.3	4.9	2885	7.5	81	0.85	13.20	3.15
40-200/55	5.5	132R	112	B5	B3	B14		11.5-11.2	6.6	2910	7.8	82	0.85	18.00	3.00
40-200/75	7.5	132R	112	B5	B3	B14		15.5-15.0	8.9	2905	7.0	82	0.85	24.70	2.60
40-250/92	9.2		132			B14		18.4-17.8	10.6	2920	7.3	85	0.88	30.00	3.50
40-250/110A	11.0	160		B35	B3			22.5-21.0	13.0	2930	7.1	86	0.88	36.20	3.40
40-250/110	11.0	160	132	B35	B3	B14		22.5-21.0	13.0	2930	7.1	86	0.88	36.20	3.40
40-250/150	15.0	160	160	B35	B3	B34		30.0-28.5	17.3	2945	8.4	88	0.89	49.00	4.30

CHS/CHF, CHX 40

Three-phase 4-pole, 1450 rpm

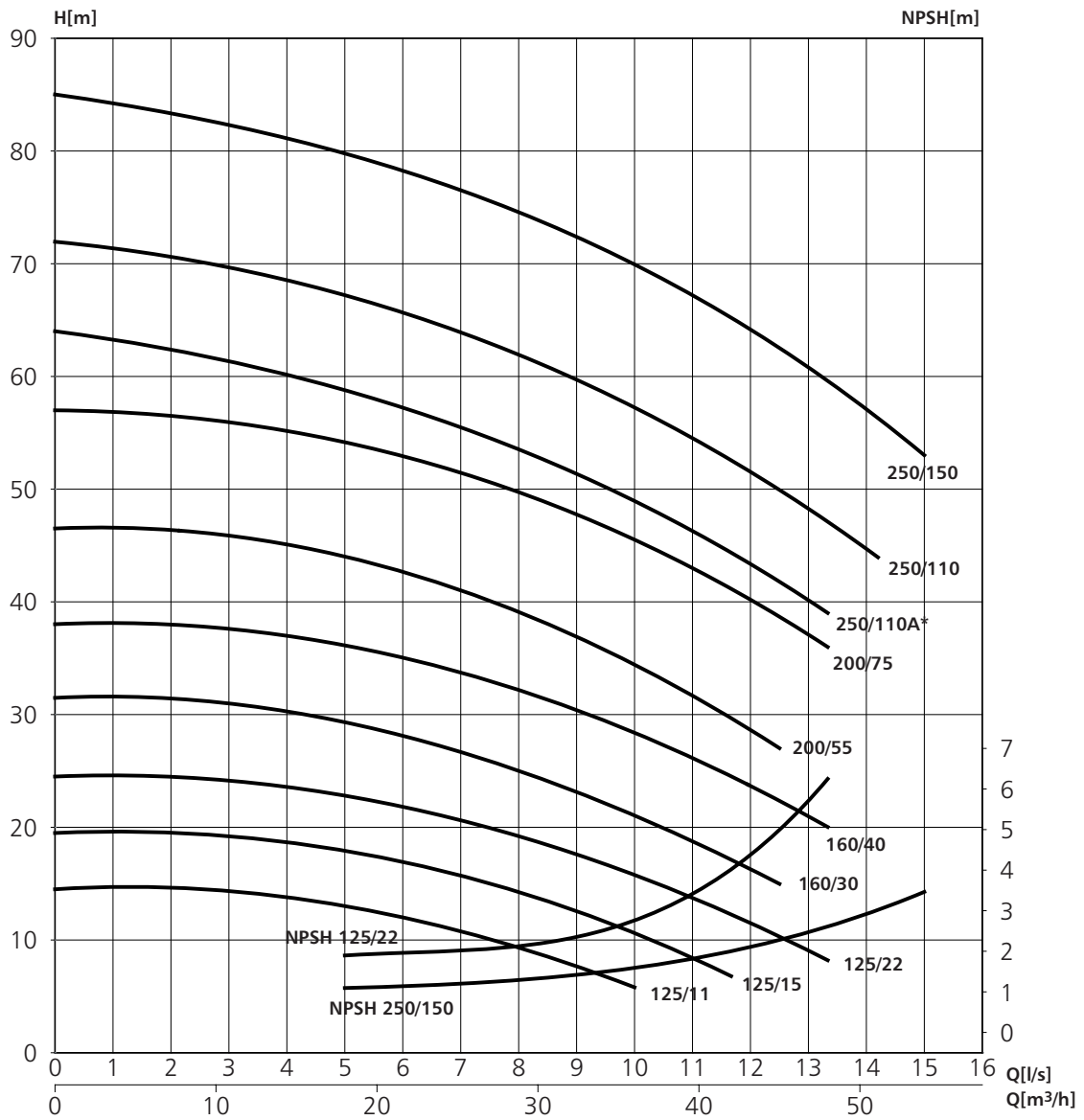
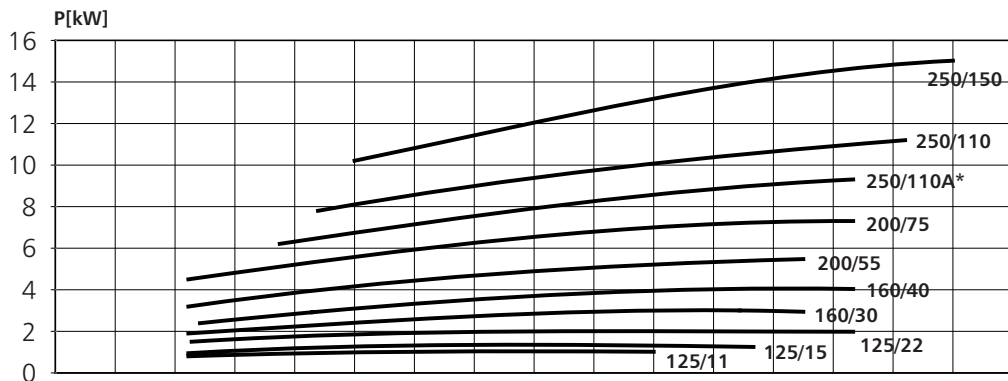
Pump type	Motor type						Input current			Data for 400 V 50 Hz					
	kW	Size		Design		In (A)			rpm	Is/In	η%	cosφ	Cn (Nm)	Cs/Cn	
		CHS/CHF	CHX	CHS	CHF	CHX	220-240 V	380-415 V							660 V
40-125/02A	0.25	71	71		B3	B5	1.30-1.25	0.75-0.72		1390	4.0	64	0.77	1.72	2.35
40-125/02	0.25	71	71		B3	B5	1.30-1.25	0.75-0.72		1390	4.0	64	0.77	1.72	2.35
40-125/03	0.37	71	71		B3	B5	1.85-1.80	1.07-1.04		1400	4.2	65	0.78	2.52	2.40
40-160/03	0.37	71	71		B3	B5	1.85-1.80	1.07-1.04		1400	4.2	65	0.78	2.52	2.40
40-160/05	0.55	80	90R	B5	B3	B14	2.70-2.60	1.55-1.50		1410	4.4	69	0.77	3.72	1.95
40-200/07	0.75	80	90R	B5	B3	B5	3.60-3.50	2.10-2.00		1410	4.9	69	0.77	5.10	1.90
40-200/11	1.10	90	90	B5	B3	B5	4.80-4.70	2.80-2.70		1410	4.5	75	0.77	7.40	2.25
40-250/11	1.10	90	90	B5	B3	B5	4.80-4.70	2.80-2.70		1410	4.5	75	0.77	7.40	2.25
40-250/15	1.50	90	90	B5	B3	B5	6.20-6.00	3.60-3.50		1410	5.1	75	0.81	10.2	2.40
40-250/22	2.20	100	100	B5	B3	B5	9.00-8.60	5.20-5.00		1410	5.0	78	0.80	14.8	2.20

CHXM 40

Single-phase 2-pole, 2900 rpm

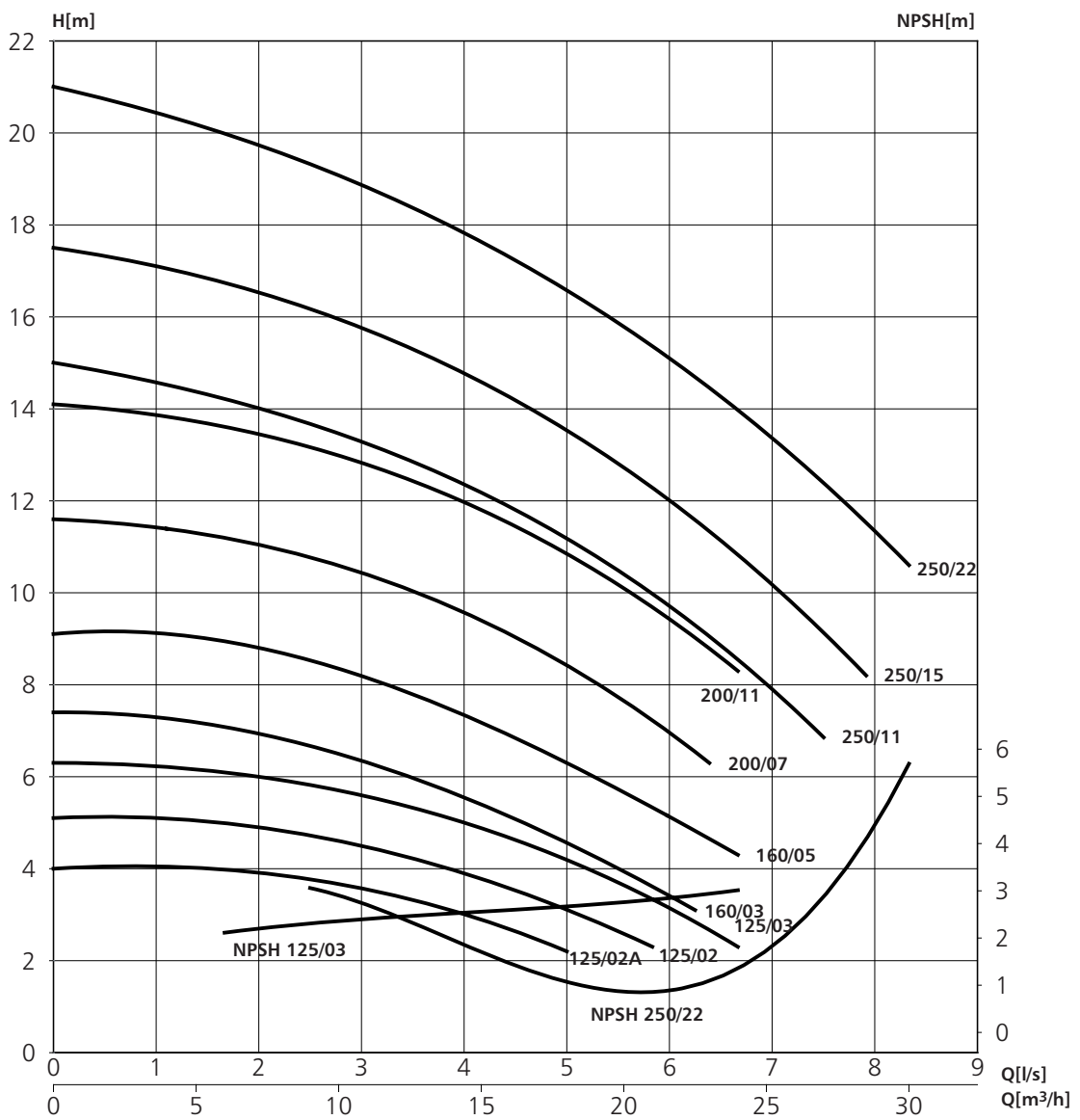
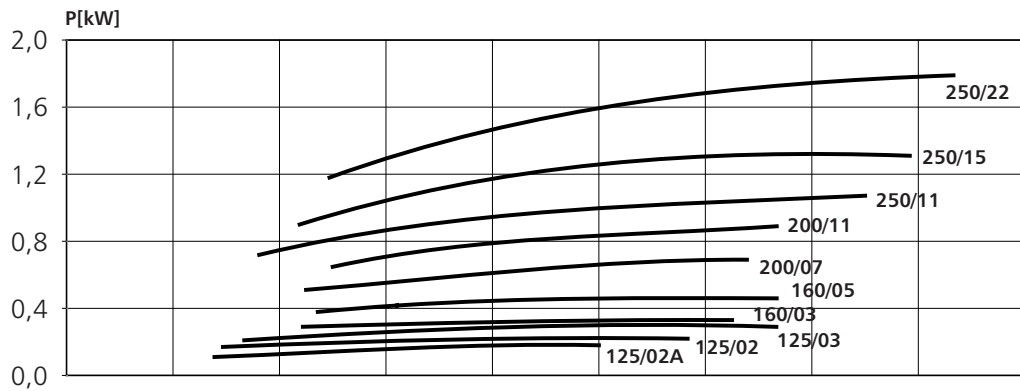
Pump type	Motor type			Input current In (A) 220-240 V	Capacitor		Data for 400 V 50 Hz					
	kW	Size	Design		μF	V	rpm	Is/In	η%	cosφ	Cn (Nm)	Cs/Cn
40-125/11	1.1	90R	B14	6.5-6.8	30	450	2825	6.4	76	0.95	3.72	0.53
40-125/15	1.5	90R	B14	9-8.7	40	450	2815	6.6	75	0.98	5	0.53
40-125/22	2.2	90R	B14	13-12.5	50	450	2775	6.9	77	0.98	7.3	0.55

Performance curves at 2900 rpm



* 250/92 for version CHX

Performance curves at 1450 rpm





CH 50

Product

Horizontal cast iron pump with stainless steel impeller for pumping hot and cold moderately aggressive liquids, like circulation of water, water supply and industrial washing.

Denomination

Product code CH 50

Available versions

Method of installation CHX, CHF, CHS

Process data

Liquid temperature -10° C to +85° C
 For version with EPDM o-rings -20° C to +120° C
 Maximum pressure 12 bar (PN 12)

Motor data

Enclosed motor with external ventilation and aluminium finned casing.

Frequency 50 Hz
 Insulation class F (+155° C)
 Protection class IP 55

Monitoring equipment

Single-phase To be provided at installation
 Three-phase To be provided at installation

Material

Part	Material
Pump body	Cast iron
Seal housing	Cast iron
Impeller	Stainless steel AISI 316L
Adapter:	
125	Aluminium
160-250	Cast iron
O-rings	NBR
Wear rings	Stainless steel AISI 316L
Shaft (CHX, CHF)	Stainless steel AISI 316L
Coupling (CHS)	Stainless steel AISI 316
Support body (CHF)	Cast Iron
Fill and drain plugs	Nickel plated brass

Mechanical face seals

Alternative	Seal
1 Standard	Ceramic/ Carbon/ NBR
2	Ceramic/ Carbon/ EPDM
3	Tungsten carbide/ Carbon/ EPDM or FPM
4	Tungsten carbide/ Silicon carbide/ EPDM or FPM
5	Tungsten carbide/ Tungsten carbide / EPDM or FPM
6	Silicon carbide / Silicon carbide/ EPDM or FPM

Surface treatment

Epoxy based cationic enamel

Option

Version with Technovar frequency converter available on request

Motor rating

CHS/CHF, CHX 50

Three-phase 2-pole, 2900 rpm

Pump type	kW	Motor type					Input current			Data for 400 V 50 Hz					
		Size		Design			In (A)			rpm	Is/In	η%	cosφ	Cn (Nm)	Cs/Cn
		CHS/CHF	CHX	CHS	CHF	CHX	220-240 V	380-415 V	660 V						
50-125/22	2.2	90R	90R	B5	B3	B14		8.5-8.3	4.9-4.8	2860	6.9	77	0.85	7.3	2.90
50-125/30	3.0	100	90	B5	B3	B14		11.2-10.9	6.5-6.3	2875	6.3	80	0.85	10.0	2.60
50-125/40	4.0	112R	112R	B5	B3	B14		8.5-8.3	4.9	2885	7.5	81	0.85	13.2	3.15
50-160/55	5.5	132R	112	B5	B3	B14		11.5-11.2	6.6	2910	7.8	82	0.85	18.0	3.00
50-160/75	7.5	132R	112	B5	B3	B14		15.5-15.0	8.9	2905	7.0	82	0.85	24.7	2.60
50-200/92	9.2		132			B14		18.4-17.8	10.6	2920	7.3	85	0.88	30.0	3.50
50-200/110A	11.0	160		B35	B3			22.5-21.0	13.0	2930	7.1	86	0.88	36.2	3.40
50-200/110	11.0	160	160	B35	B3	B14		22.5-21.0	13.0	2930	7.1	86	0.88	36.2	3.40
50-250/150	15.0	160	160	B35	B3	B34		30.0-28.5	17.3	2945	8.4	88	0.89	49.0	4.30
50-250/185	18.5	160	160	B35	B3	B34		36.4-34.5	21.0	2940	7.8	89	0.87	60.0	3.60
50-250/220	22.0	180R	160	B35	B3	B34		43.0-40.5	24.8	2930	7.5	89	0.89	72.0	4.40

CHS/CHF, CHX 50

Three-phase 4-pole, 1450 rpm

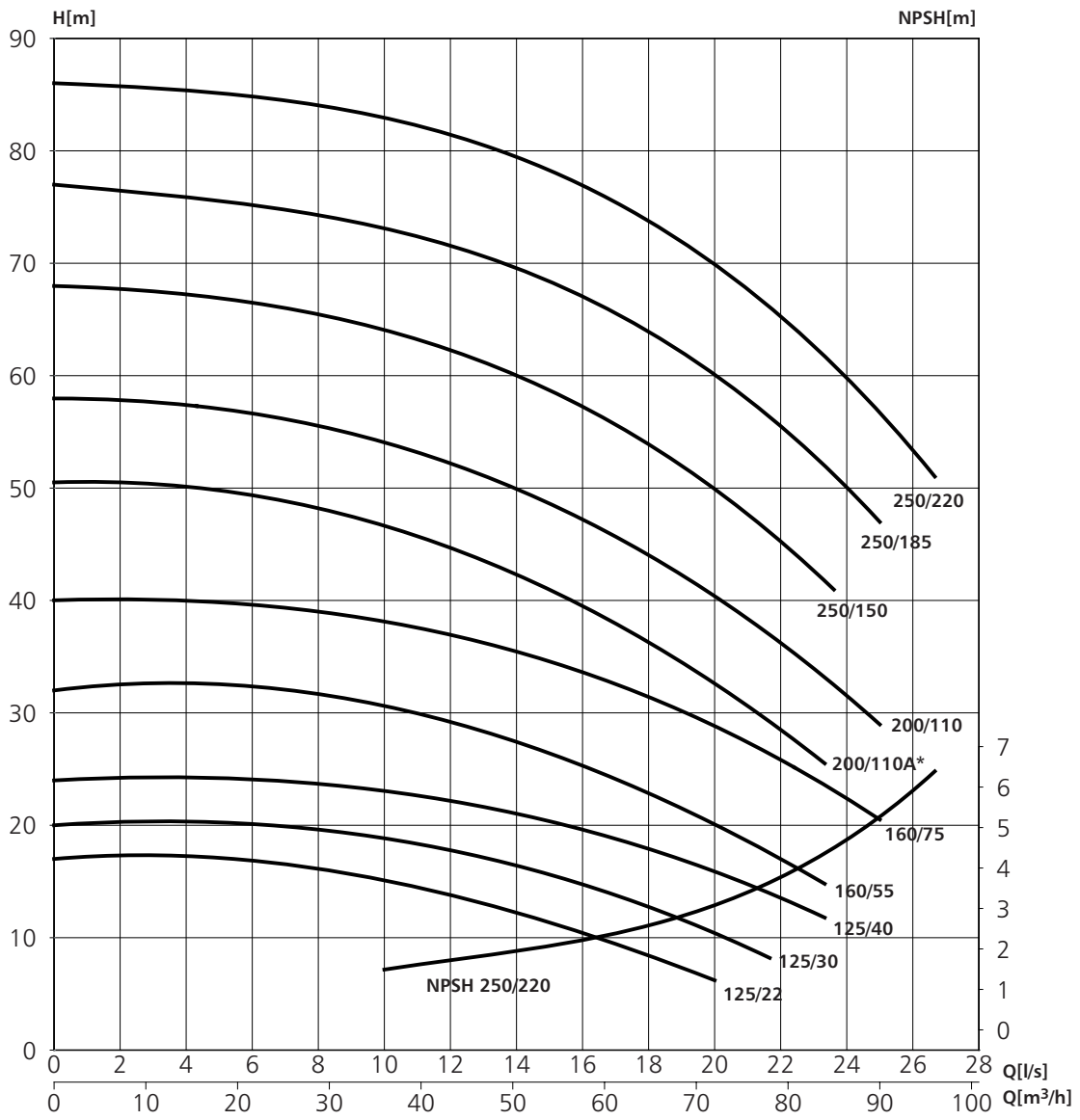
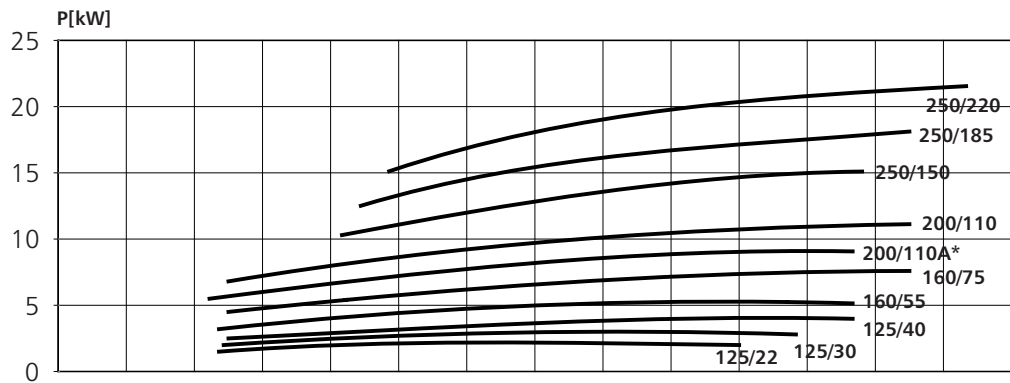
Pump type	kW	Motor type					Input current			Data for 400 V 50 Hz					
		Size		Design			In (A)			rpm	Is/In	η%	cosφ	Cn (Nm)	Cs/Cn
		CHS/CHF	CHX	CHS	CHF	CHX	220-240 V	380-415 V	660 V						
50-125/03A	0.37	71	71		B3	B5	1.85-1.80	1.07-1.04		1400	4.2	65	0.78	2.52	2.40
50-125/03	0.37	71	71		B3	B5	1.85-1.80	1.07-1.04		1400	4.2	65	0.78	2.52	2.40
50-125/05	0.55	80	90R	B5	B3	B14	2.70-2.60	1.55-1.50		1410	4.4	69	0.77	3.72	1.95
50-160/07	0.75	80	90R	B5	B3	B5	3.60-3.50	2.10-2.00		1410	4.9	69	0.77	5.10	1.90
50-160/11	1.10	90	90	B5	B3	B5	4.80-4.70	2.80-2.70		1410	4.5	75	0.77	7.40	2.25
50-200/11	1.10	90	90	B5	B3	B5	4.80-4.70	2.80-2.70		1410	4.5	75	0.77	7.40	2.25
50-200/15	1.50	90	90	B5	B3	B5	6.20-6.00	3.60-3.50		1410	5.1	75	0.81	10.2	2.40
50-250/22A	2.20	100		B5	B3		9.00-8.60	5.20-5.00		1410	5.0	78	0.80	14.8	2.20
50-250/22	2.20	100	100	B5	B3	B5	9.00-8.60	5.20-5.00		1410	5.0	78	0.80	14.8	2.20
50-250/30	3.00	100	100	B5	B3	B5	12.00-11.60	6.90-6.70		1410	5.8	81	0.81	20.2	2.50

CHXM 50

Single-phase 2-pole, 2900 rpm

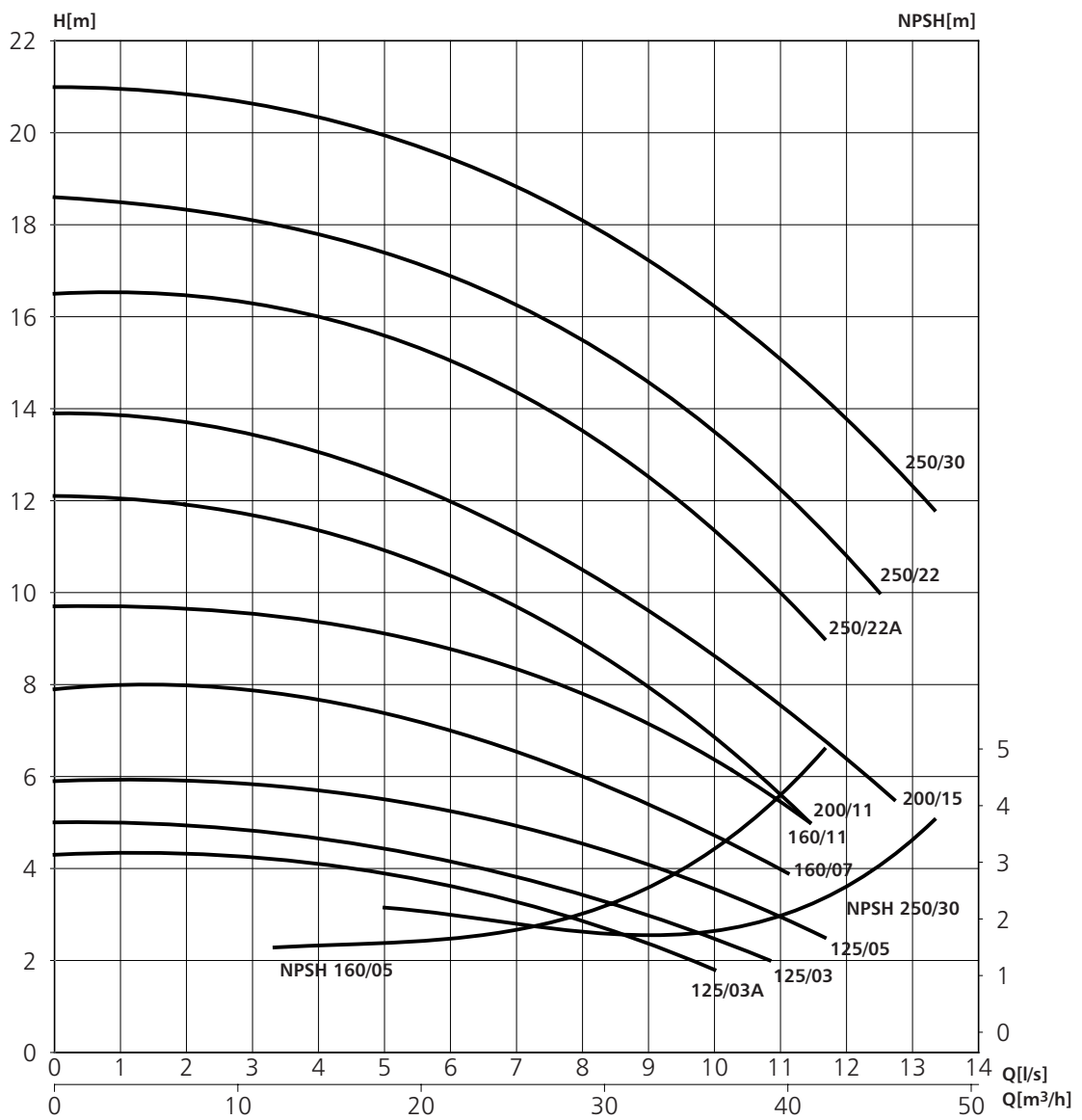
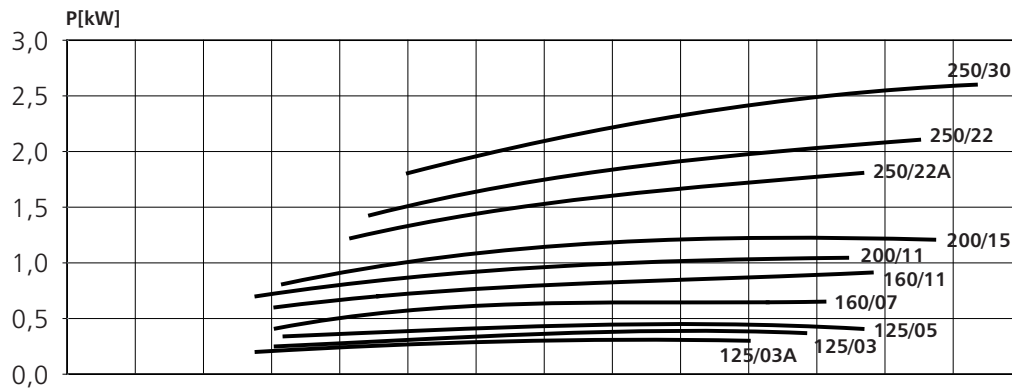
Pump type	kW	Motor type		Input current In (A) 220-240 V	Capacitor		rpm	Data for 400 V 50 Hz					
		Size	Design		μF	V		Is/In	η%	cosφ	Cn (Nm)	Cs/Cn	
50-125/22	2.2	90R	B14	13-12.5	50	450	2775	6.9	77	0.98	7.3	0.55	

Performance curves at 2900 rpm



* 200/92 for version CHX

Performance curves at 1450 rpm





CH 65

Product

Horizontal cast iron pump with stainless steel impeller for pumping hot and cold moderately aggressive liquids, like circulation of water, water supply and industrial washing.

Denomination

Product code CH 65

Available versions

Method of installation CHX, CHF, CHS

Process data

Liquid temperature -10° C to +85° C
 For version with EPDM o-rings -20° C to +120° C
 Maximum pressure 12 bar (PN 12)

Motor data

Enclosed motor with external ventilation and aluminium finned casing.

Frequency 50 Hz
 Insulation class F (+155° C)
 Protection class IP 55

Monitoring equipment

Three-phase To be provided at installation

Material

Part	Material
Pump body	Cast iron
Seal housing	Cast iron
Impeller 65-125	Stainless steel AISI 316L
Impeller 65-160-250	Cast iron
Adapter	Cast iron
O-rings	NBR
Wear rings	Stainless steel AISI 316L
Shaft (CHX, CHF)	Stainless steel AISI 316L
Coupling (CHS)	Stainless steel AISI 316
Support body (CHF)	Cast Iron
Fill and drain plugs	Nickel plated brass

Mechanical face seals

Alternative	Seal
1 Standard	Ceramic/ Carbon/ NBR
2	Ceramic/ Carbon/ EPDM
3	Tungsten carbide/ Carbon/ EPDM or FPM
4	Tungsten carbide/ Silicon carbide/ EPDM or FPM
5	Tungsten carbide/ Tungsten carbide / EPDM or FPM
6	Silicon carbide / Silicon carbide/ EPDM or FPM

Surface treatment

Epoxy based cationic enamel

Option

Version with Technovar frequency converter available on request

Motor rating

CHS/CHF, CHX 65

Three-phase 2-pole, 2900 rpm

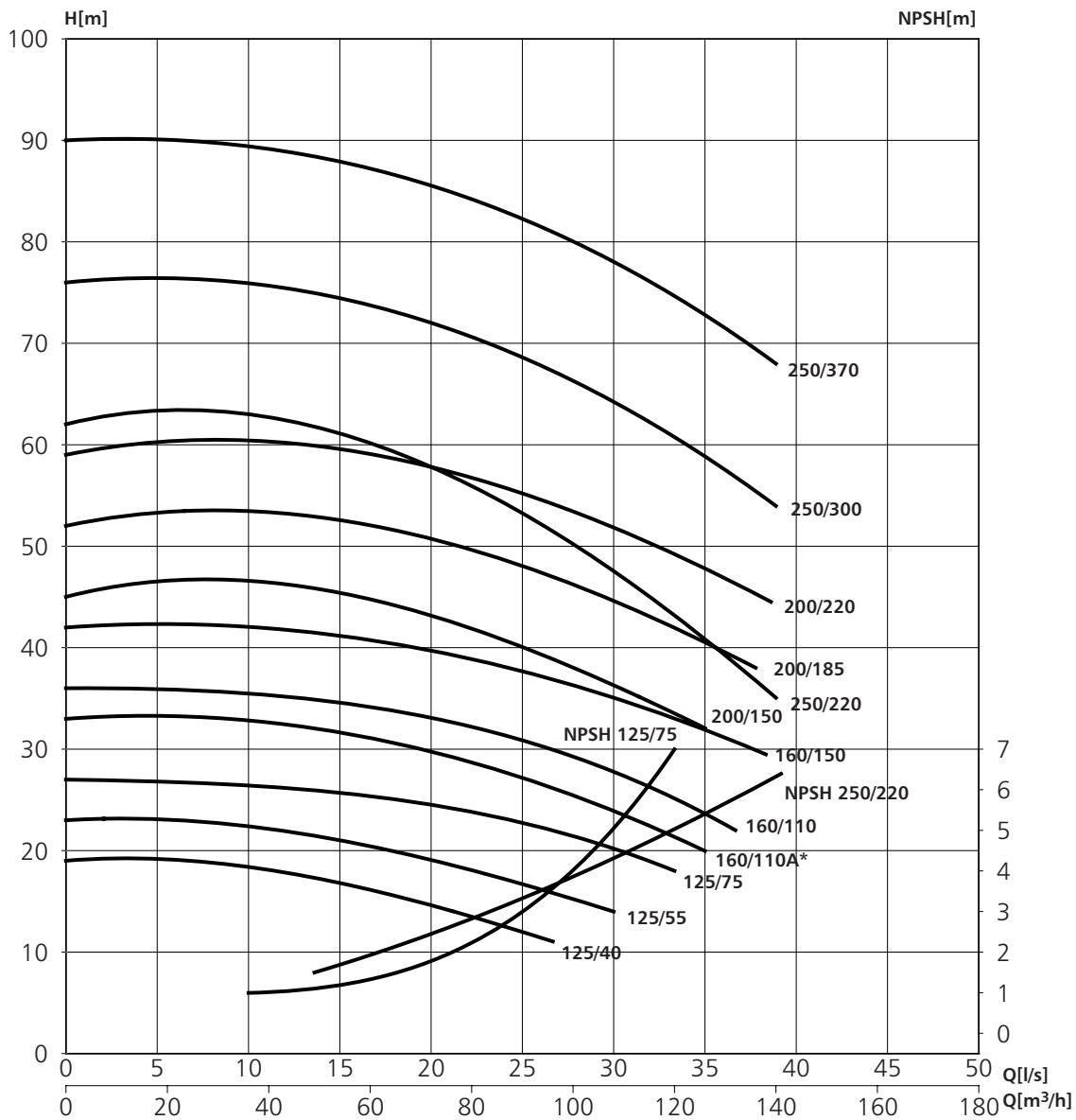
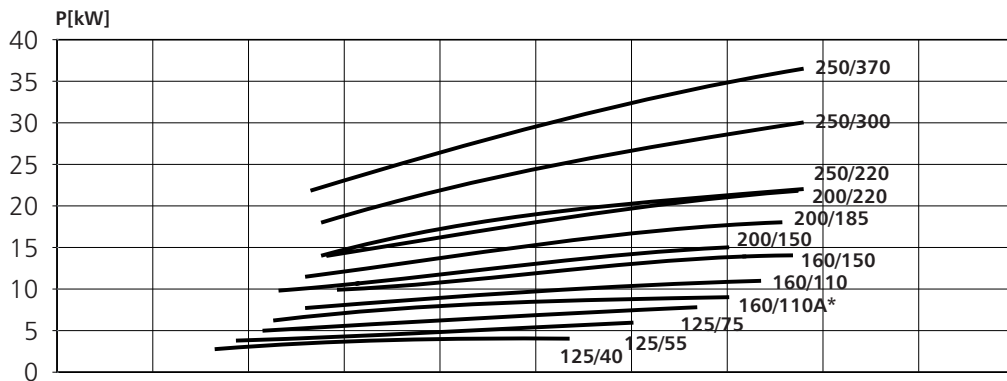
Pump type	kW	Motor type					Input current			rpm	Data for 400 V 50 Hz				
		Size		Design			In (A)				Is/In	η%	cosφ	Cn (Nm)	Cs/Cn
		CHS/CHF	CHX	CHS	CHF	CHX	220-240 V	380-415 V	660 V						
65-125/40	4.0	112R	112R	B5	B3	B14		8.5-8.3	4.9	2885	7.5	81	0.85	13.2	3.15
65-125/55	5.5	132R	112	B5	B3	B14		11.5-11.2	6.6	2910	7.8	82	0.85	18.0	3.00
65-125/75	7.5	132R	112	B5	B3	B14		15.5-15.0	8.9	2905	7.0	82	0.85	24.7	2.60
65-160/92	9.2		132			B14		18.4-17.8	10.6	2920	7.3	85	0.88	30.0	3.50
65-160/110A	11.0	160		B35	B3			22.5-21.0	13.0	2930	7.1	86	0.88	36.2	3.40
65-160/110	11.0	160	132	B35	B3	B14		22.5-21.0	13.0	2930	7.1	86	0.88	36.2	3.40
65-160/150	15.0	160	160	B35	B3	B34		30.0-28.5	17.3	2945	8.4	88	0.89	49.0	4.30
65-200/150	15.0	160	160	B35	B3	B34		30.0-28.5	17.3	2945	8.4	88	0.89	49.0	4.30
65-200/185	18.5	160	160	B35	B3	B34		36.4-34.5	21.0	2940	7.8	89	0.87	60.0	3.60
65-200/220	22.0	180R	160	B35	B3	B34		43.0-40.5	24.8	2930	7.5	89	0.89	72.0	4.40
65-250/220	22.0	180R	160	B35	B3	B34		43.0-40.5	24.8	2930	7.5	89	0.89	72.0	4.40
65-250/300	30.0	200		B35	B3			59.0	34.0	2940	6.8	90	0.84	97.0	2.40
65-250/370	37.0	200		B35	B3			71.5	41.2	2940	7.2	91	0.84	120.0	2.50

CHS/CHF, CHX 65

Three-phase 4-pole, 1450 rpm

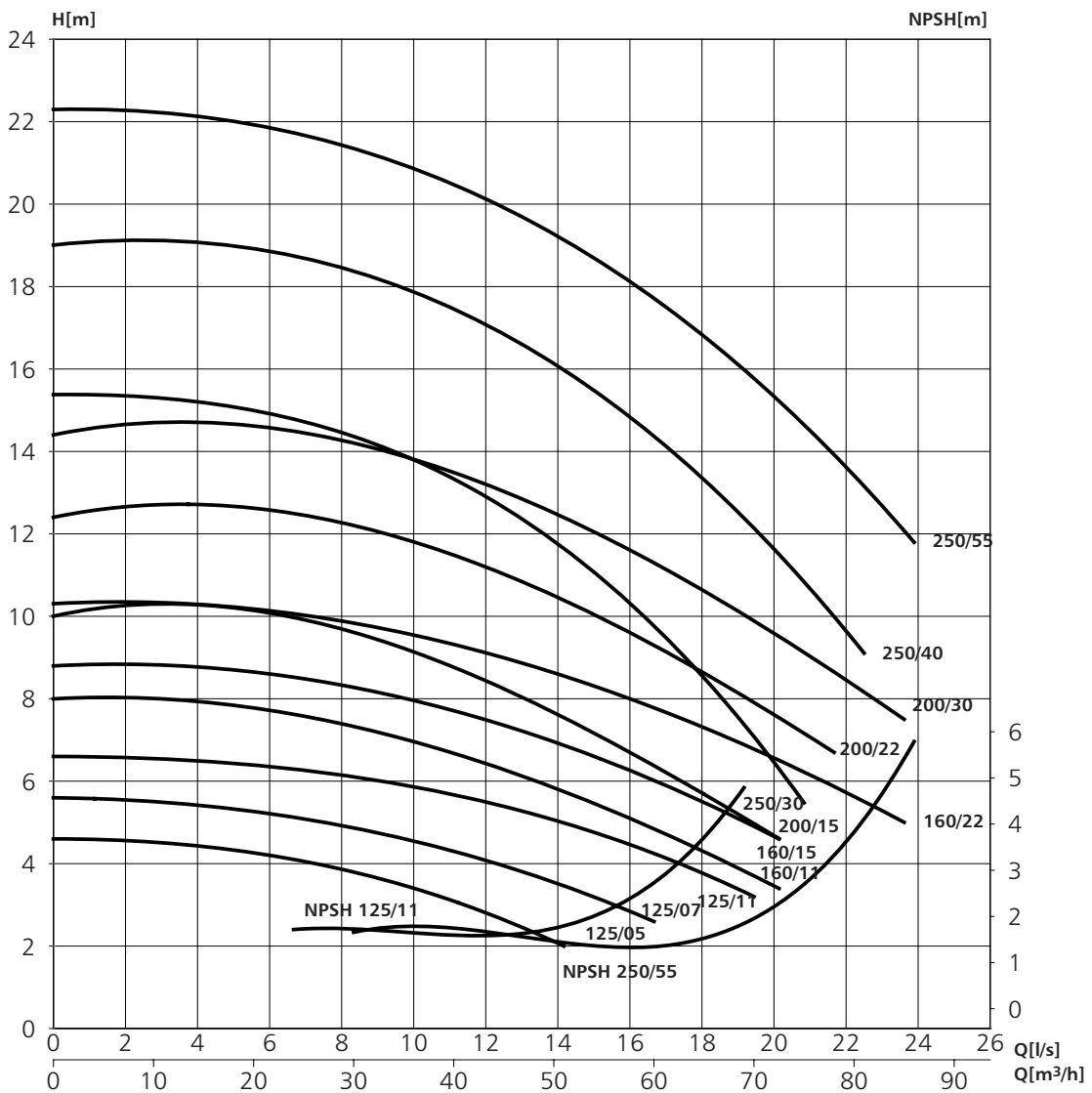
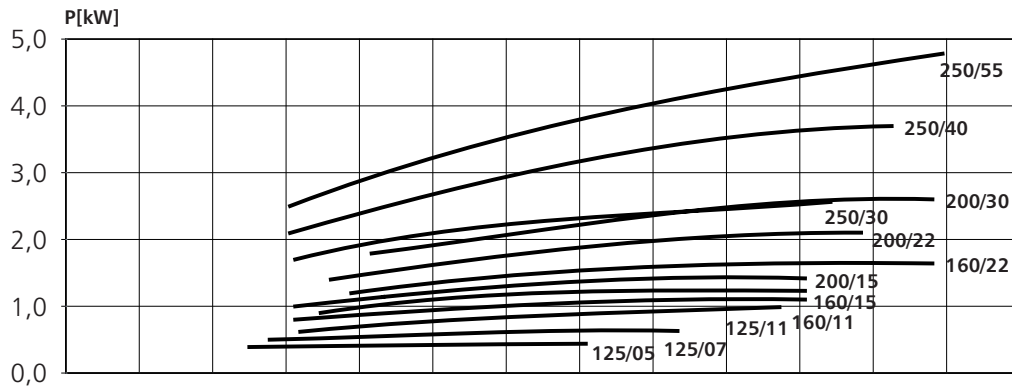
Pump type	kW	Motor type					Input current			rpm	Data for 400 V 50 Hz				
		Size		Design			In (A)				Is/In	η%	cosφ	Cn (Nm)	Cs/Cn
		CHS/CHF	CHX	CHS	CHF	CHX	220-240 V	380-415 V	660 V						
65-125/05	0.55	80	90R	B5	B3	B14	2.7-2.6	1.55-1.50		1410	4.4	69	0.77	3.72	1.95
65-125/07	0.75	80	90R	B5	B3	B5	3.6-3.5	2.10-2.00		1410	4.9	69	0.77	5.10	1.90
65-125/11	1.10	90	90	B5	B3	B5	4.8-4.7	2.80-2.70		1410	4.5	75	0.77	7.40	2.25
65-160/11	1.10	90	90	B5	B3	B5	4.8-4.7	2.80-2.70		1410	4.5	75	0.77	7.40	2.25
65-160/15	1.50	90	90	B5	B3	B5	6.2-6.0	3.60-3.50		1410	5.1	75	0.81	10.20	2.40
65-160/22	2.20	100	100	B5	B3	B5	9.0-8.6	5.20-5.00		1410	5.0	78	0.80	14.80	2.20
65-200/15	1.50	90	90	B5	B3	B5	6.2-6.0	3.60-3.50		1410	5.1	75	0.81	10.20	2.40
65-200/22	2.20	100	100	B5	B3	B5	9.0-8.6	5.20-5.00		1410	5.0	78	0.80	14.80	2.20
65-200/30	3.00	100	100	B5	B3	B5	12.0-11.6	6.90-6.70		1410	5.8	81	0.81	20.20	2.50
65-250/30	3.00	100	100	B5	B3	B5	12.0-11.6	6.90-6.70		1410	5.8	81	0.81	20.20	2.50
65-250/40	4.00	112	112	B5	B3	B5		8.70-8.50	5.0	1440	6.7	83	0.82	26.50	2.70
65-250/55	5.50	132	132	B5	B3	B14		12.40-12.00	7.2	1440	6.8	82	0.87	36.80	2.80

Performance curves at 2900 rpm



*160/92 for version CHX

Performance curves at 1450 rpm





CH 80

Product

Horizontal cast iron pump with stainless steel impeller for pumping hot and cold moderately aggressive liquids, like circulation of water, water supply and industrial washing.

Denomination

Product code CH 80

Available versions

Method of installation CHX, CHF, CHS

Process data

Liquid temperature -10° C to +85° C
 For version with EPDM o-rings -20° C to +120° C
 Maximum pressure 12 bar (PN 12)

Motor data

Enclosed motor with external ventilation and aluminium finned casing.

Frequency 50 Hz
 Insulation class F (+155° C)
 Protection class IP 55

Monitoring equipment

Three-phase To be provided at installation

Material

Part	Material
Pump body	Cast iron
Seal housing	Cast iron
Impeller 65-125	Cast iron
Adapter	Cast iron
O-rings	NBR
Wear rings	Stainless steel AISI 316L
Shaft (CHX, CHF)	Stainless steel AISI 316L
Coupling (CHS)	Stainless steel AISI 316
Support body (CHF)	Cast Iron
Fill and drain plugs	Nickel plated brass

Mechanical face seals

Alternative	Seal
1 Standard	Ceramic/ Carbon/ NBR
2	Ceramic/ Carbon/ EPDM
3	Tungsten carbide/ Carbon/ EPDM or FPM
4	Tungsten carbide/ Silicon carbide/ EPDM or FPM
5	Tungsten carbide/ Tungsten carbide / EPDM or FPM
6	Silicon carbide / Silicon carbide/ EPDM or FPM

Surface treatment

Epoxy based cationic enamel

Option

Version with Technovar frequency converter available on request

Motor rating

CHS/CHF, CHX 80

Three-phase 2-pole, 2900 rpm

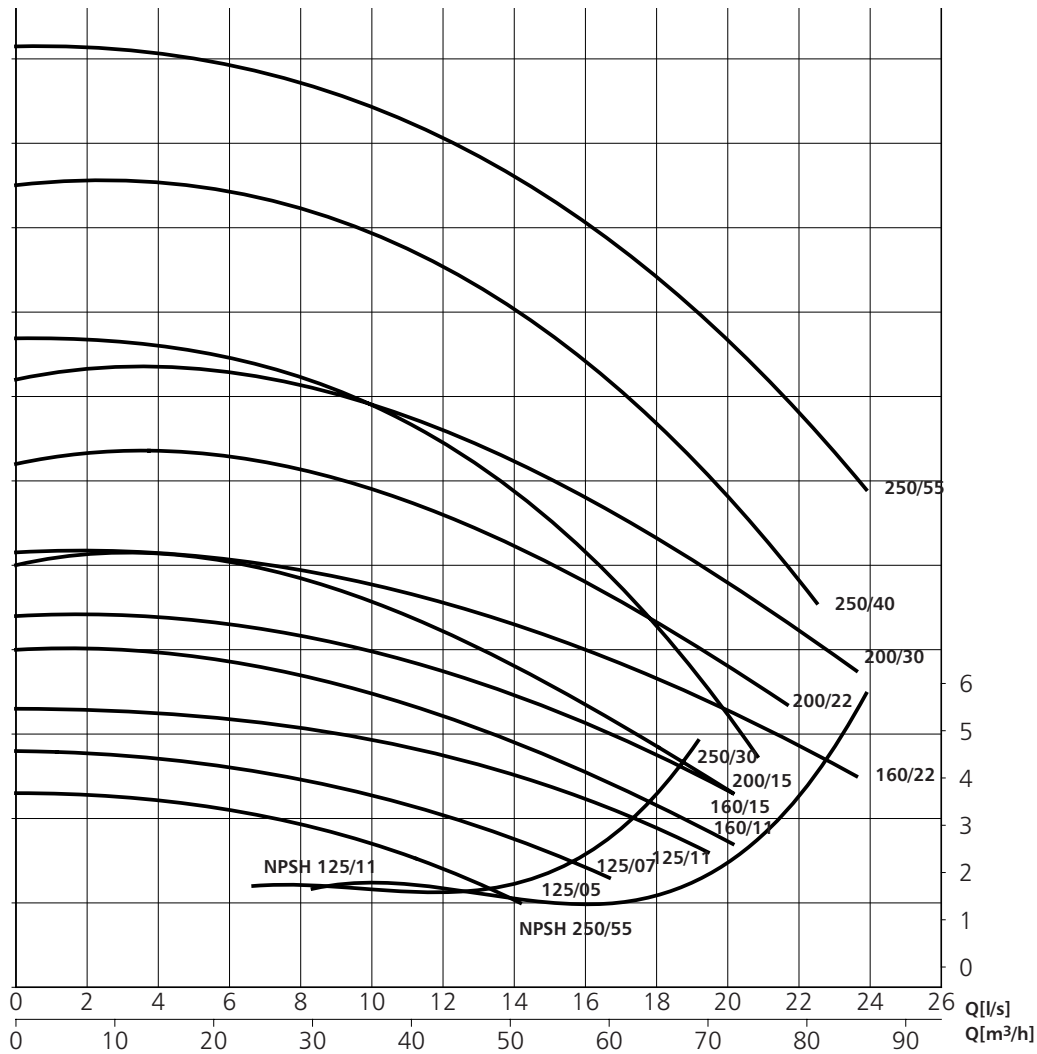
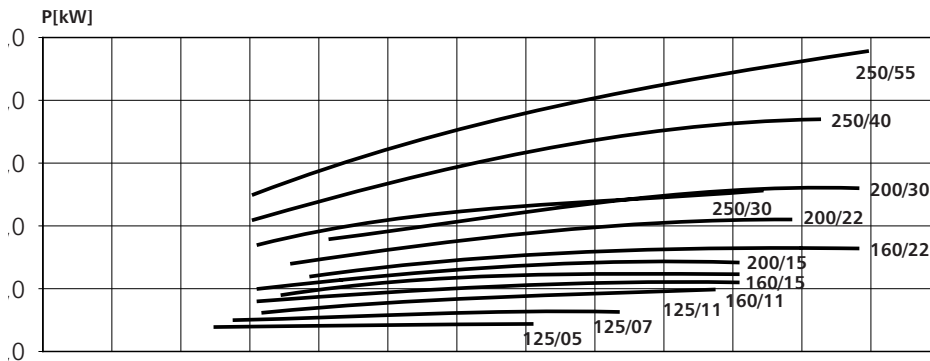
Pump type	kW	Motor type					Input current			rpm	Data for 400 V 50 Hz				
		Size		Design			In (A)				Is/In	η%	cosφ	Cn (Nm)	Cs/Cn
		CHS/CHF	CHX	CHS	CHF	CHX	220-240 V	380-415 V	660 V						
80-160/110	11.0	160	132	B35	B3	B14		22.5-21.0	13.0	2930	7.1	86	0.88	36.2	3.4
80-160/150	15.0	160	160	B35	B3	B34		30.0-28.5	17.3	2945	8.4	88	0.89	49.0	4.3
80-160/185	18.5	160	160	B35	B3	B34		36.4-34.5	21.0	2940	7.8	89	0.87	60.0	3.6
80-200/220	22.0	180R	160	B35	B3	B34		43.0-40.5	24.8	2930	7.5	89	0.89	72.0	4.4
80-200/300	30.0	200		B35	B3			59.0	34.0	2940	6.8	90	0.84	97.0	2.4
80-250/370	37.0	200		B35	B3			71.5	41.2	2940	7.2	91	0.84	120.0	2.5
80-250/450	45.0	225		B35	B3			88.0	50.5	2950	6.7	91	0.85	145.0	2.4
80-250/550	55.0	250		B35	B3			106.0	61.0	2950	6.7	92	0.85	177.0	2.4

CHS/CHF, CHX 80

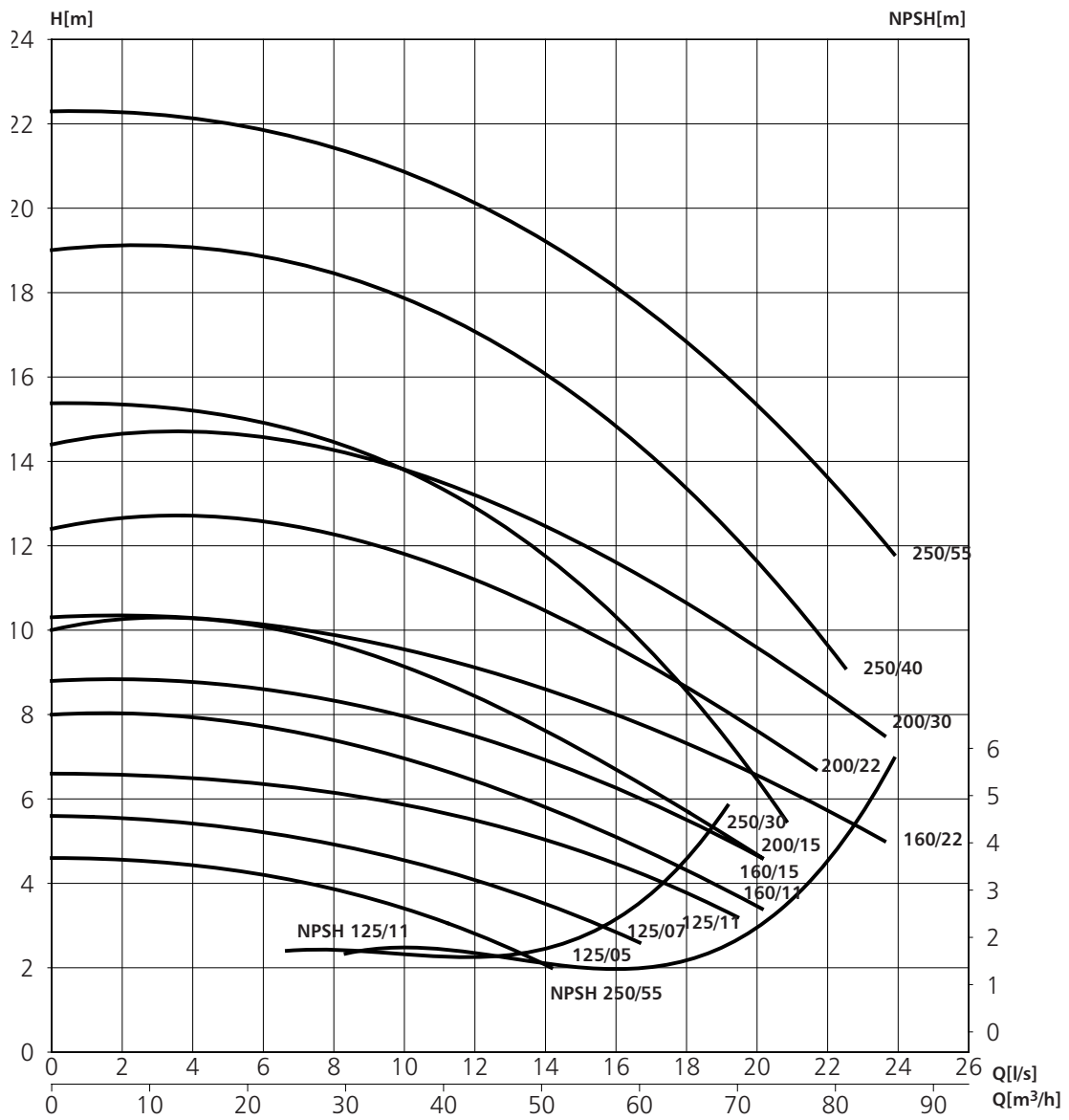
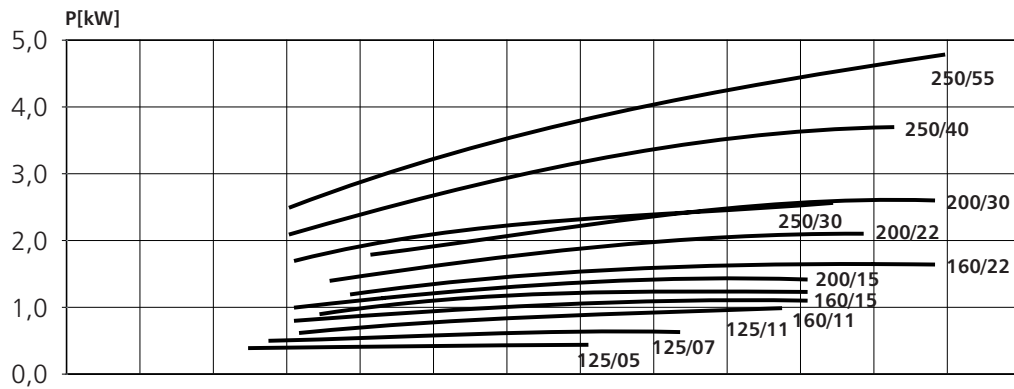
Three-phase 4-pole, 1450 rpm

Pump type	kW	Motor type					Input current			rpm	Data for 400 V 50 Hz				
		Size		Design			In (A)				Is/In	η%	cosφ	Cn (Nm)	Cs/Cn
		CHS/CHF	CHX	CHS	CHF	CHX	220-240 V	380-415 V	660 V						
80-160/15	1.5	90	90	B5	B3	B5	6.2-6.0	3.6-3.5		1410	5.1	75	0.81	10.2	2.4
80-160/22	2.2	100	100	B5	B3	B5	9.0-8.6	5.2-5.0		1410	5.0	78	0.80	14.8	2.2
80-200/30	3.0	100	100	B5	B3	B5	12.0-11.6	6.9-6.7		1410	5.8	81	0.81	20.2	2.5
80-200/40	4.0	112	112	B5	B3	B5		8.7-8.5	5.0	1440	6.7	83	0.82	26.5	2.7
80-250/40	4.0	112	112	B5	B3	B5		8.7-8.5	5.0	1440	6.7	83	0.82	26.5	2.7
80-250/55	5.5	132	132	B5	B3	B14		12.4-12.0	7.2	1440	6.8	82	0.87	36.8	2.8
80-250/75	7.5	132	132	B5	B3	B14		15.8-15.4	9.2	1450	7.7	82	0.81	49.5	2.8

Performance curves at 2900 rpm

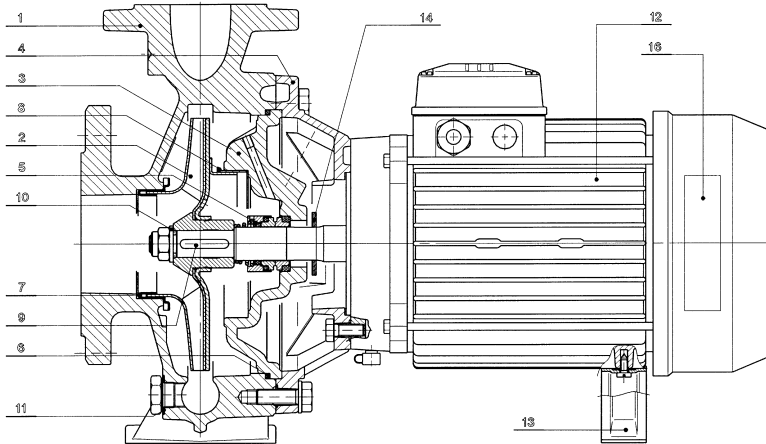


Performance curves at 1450 rpm



Pump parts

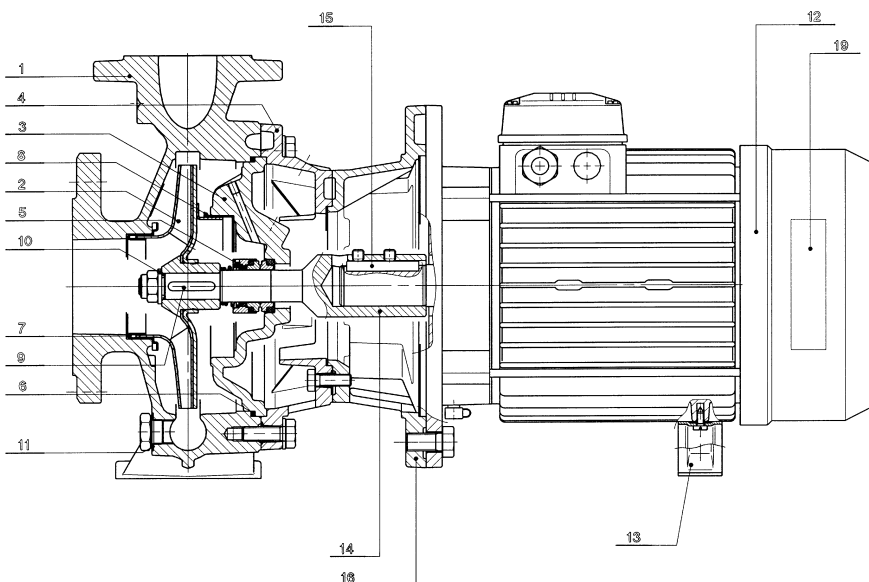
CHX



Ref. n.	Description
1	Pump body
2	Impeller
3	Seal holding disc
4	Adaptor
* 5	Mechanical seal
* 6	O-ring
7	Wear ring
8	Counterwear ring
9	Tab
10	Impeller lock washer
11	Washer
12	Motor
13	Motor support foot
14	Spray guard washer
15	Motor foot shim
16	Rating plate

* Recommended spare parts

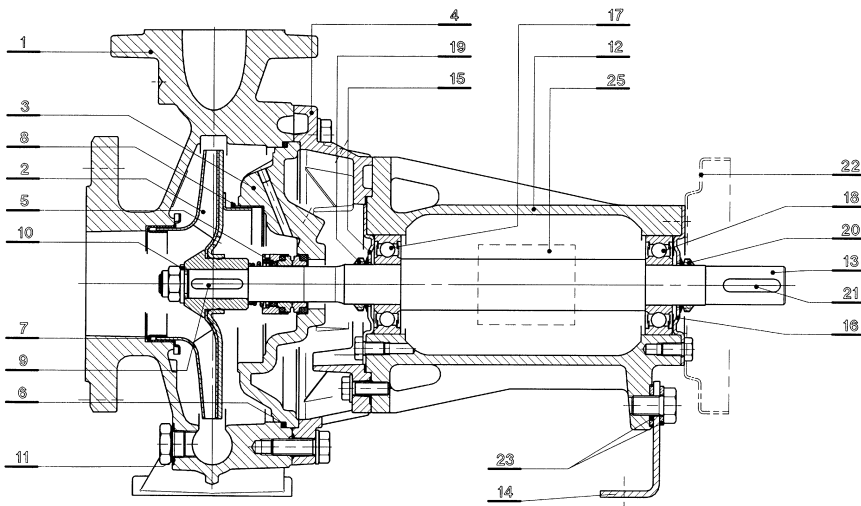
CHS



Ref. n.	Description
1	Pump body
2	Impeller
3	Seal holding disc
4	Adaptor
* 5	Mechanical seal
* 6	O-ring
7	Wear ring
8	Counterwear ring
9	Tab
10	Impeller lock washer
11	Washer
12	Motor
13	Motor support foot
14	Coupling
15	Tab
16	Motor connector
17	Coupling guard
18	Motor foot shim
19	Rating plate

* Recommended spare parts

CHF

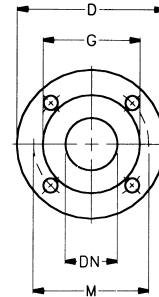
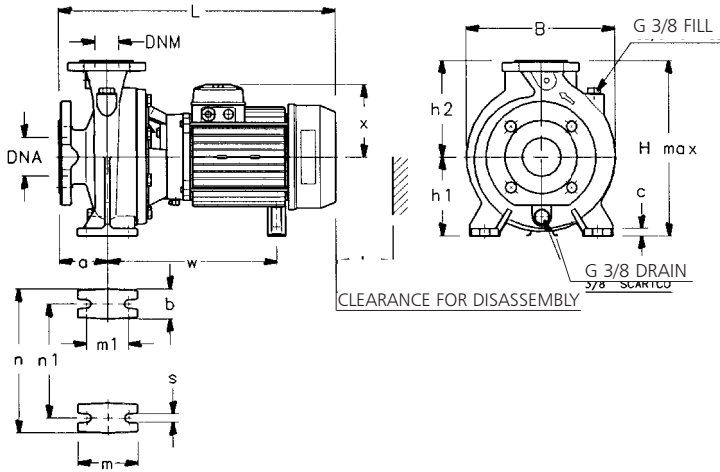


Ref. n.	Description
1	Pump body
2	Impeller
3	Seal holding disc
4	Adaptor
* 5	Mechanical seal
* 6	O-ring
7	Wear ring
8	Counterwear ring
9	Tab
10	Impeller lock washer
11	Washer
12	Support body
13	Shaft
14	Support foot
15	Cap, pump side
16	Cap, motor side
17	Bearing, pump side
18	Bearing, motor side
* 19	V-ring, pump side
* 20	V-ring, motor side
21	Tab
22	Disc
23	Washer
* 24	Seal ring
25	Rating plate

* Recommended spare parts

Dimensions and weights, CHX series, 2 poles

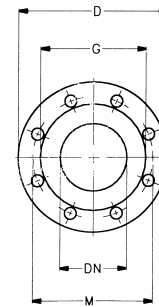
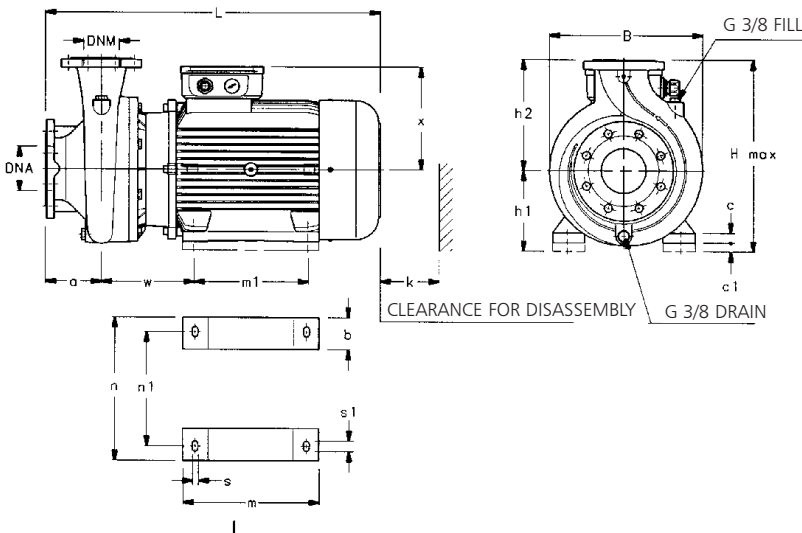
CHX up to 11 kW



Flanges

DN	D	M	G	Holes		Max thickness
				N°	Ø	
32	140	100	78	4	18	18
40	150	110	88	4	18	18
50	165	125	102	4	18	20
65	185	145	122	4	18	20

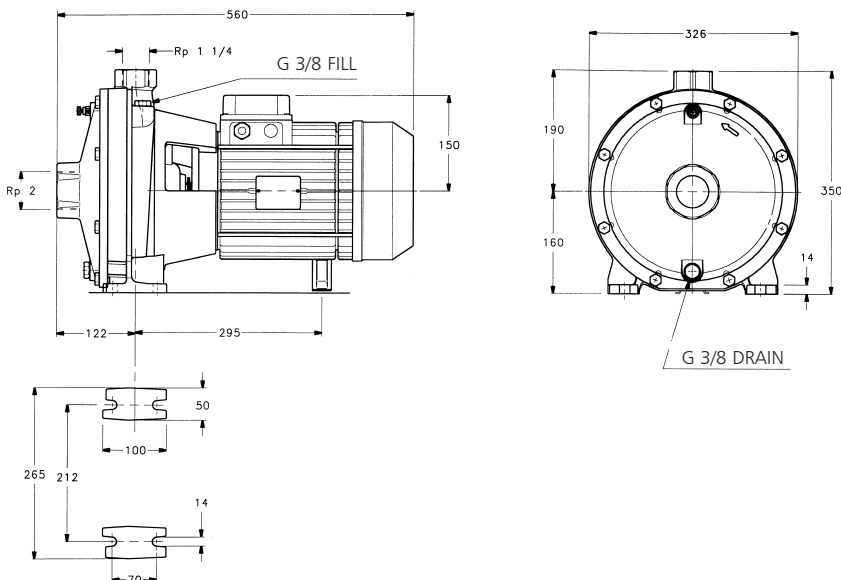
CHX from 15 kW



Flanges

DN	D	M	G	Holes		Max thickness
				N°	Ø	
80	200	160	138	8	18	22
100	220	180	158	8	18	22

Dimensions and weights, 2CHX series, 2 poles

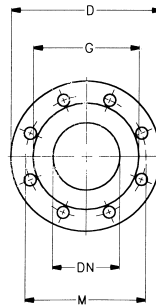
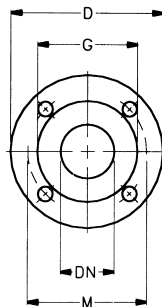
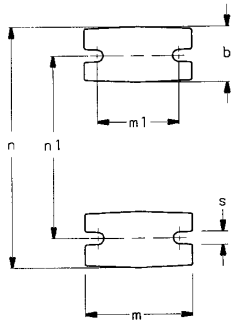
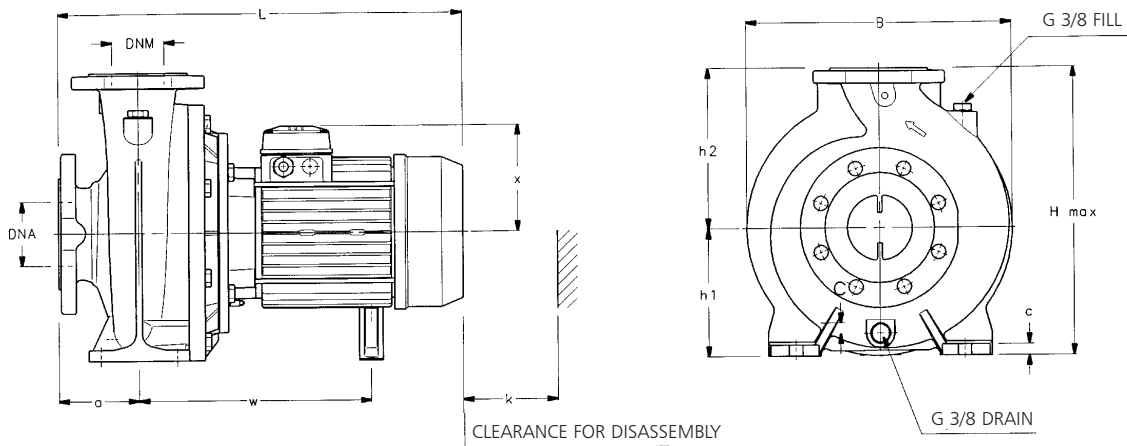


Pump type	Weight kg
2CHX 32-250/55	71
2CHX 32-250/75	75

Dimensions and weights, CHX series, 2 poles

Pump type	Pump										Base						Dimensions in mm				Wt kg
	DNM	DNA	a	h2	w	x	b	c	c1	h1	m	m1	n	n1	s	s1	B	H max	L	k	
CHX 32-125/07	32	50	80	140	235	129	50	12		112	100	70	190	140	14		233	252	443	86	27
CHX 32-125/11	32	50	80	140	235	129	50	12		112	100	70	190	140	14		233	252	443	86	28
CHX 32-160/15	32	50	80	160	235	129	50	12		132	100	70	240	190	14		235	292	443	86	31
CHX 32-160/22	32	50	80	160	235	129	50	12		132	100	70	240	190	14		235	292	443	86	34
CHX 32-200/30	32	50	80	180	283	121	50	12		160	100	70	240	190	14		285	340	461	86	43
CHX 32-200/40	32	50	80	180	290	133	50	12		160	100	70	240	190	14		285	340	487	86	49
CHX 40-125/11	40	65	80	140	235	129	50	12		112	100	70	210	160	14		233	252	443	88	29
CHX 40-125/15	40	65	80	140	235	129	50	12		112	100	70	210	160	14		233	252	443	88	31
CHX 40-125/22	40	65	80	140	235	129	50	12		112	100	70	210	160	14		233	252	443	88	33
CHX 40-160/30	40	65	80	160	283	121	50	12		132	100	70	240	190	14		250	292	46	188	36
CHX 40-160/40	40	65	80	160	290	133	50	12		132	100	70	240	190	14		250	292	487	88	42
CHX 40-200/55	40	65	100	180	311	150	50	12		160	100	70	265	212	14		285	340	553	88	59
CHX 40-200/75	40	65	100	180	311	150	50	12		160	100	70	265	212	14		285	340	553	88	64
CHX 40-250/92	40	65	100	225	278	191	65	14		180	125	95	320	250	14		335	405	604	107	91
CHX 40-250/110	40	65	100	225	278	191	65	14		180	125	95	320	250	14		335	405	604	107	99
CHX 40-250/150	40	65	100	225	208	232	50	22	20	180	260	210	318	254	13	23	335	412	688	107	123
CHX 50-125/22	50	65	100	160	235	129	50	12		132	100	70	240	190	14		255	292	463	92	37
CHX 50-125/30	50	65	100	160	285	121	50	12		132	100	70	240	190	14		255	292	481	92	39
CHX 50-125/40	50	65	100	160	292	133	50	12		132	100	70	240	190	14		255	292	507	92	45
CHX 50-160/55	50	65	100	180	313	150	50	12		160	100	70	265	212	14		285	340	553	92	68
CHX 50-160/75	50	65	100	180	313	150	50	12		160	100	70	265	212	14		285	340	553	92	72
CHX 50-200/92	50	65	100	200	280	191	50	12		160	100	70	265	212	14		305	360	604	92	81
CHX 50-200/110	50	65	100	200	280	191	50	12		160	100	70	265	212	14		305	360	604	92	86
CHX 50-250/150	50	65	100	225	208	232	50	22	20	180	260	210	318	254	13	23	340	412	688	107	123
CHX 50-250/185	50	65	100	225	208	232	50	22	20	180	304	254	318	254	13	23	340	412	732	107	135
CHX 50-250/220	50	65	100	225	208	232	50	22	20	180	304	254	318	254	13	23	340	412	732	107	149
CHX 65-125/40	65	80	100	180	292	133	65	14		160	125	95	280	212	14		285	340	507	105	64
CHX 65-125/55	65	80	100	180	313	150	65	14		160	125	95	280	212	14		285	340	553	105	72
CHX 65-125/75	65	80	100	180	313	150	65	14		160	125	95	280	212	14		285	340	553	105	76
CHX 65-160/92	65	80	100	200	278	191	65	14		160	125	95	280	212	14		331	360	604	112	95
CHX 65-160/110	65	80	100	200	278	191	65	14		160	125	95	280	212	14		331	360	604	112	103
CHX 65-160/150	65	80	100	200	208	232	50	22		160	260	210	318	254	13	23	331	392	688	112	127
CHX 65-200/150	65	80	100	225	208	232	50	22	20	180	260	210	318	254	13	23	335	412	688	112	127
CHX 65-200/185	65	80	100	225	208	232	50	22	20	180	304	254	318	254	13	23	335	412	73	112	139
CHX 65-200/220	65	80	100	225	208	232	50	22	20	180	304	254	318	254	13	23	335	412	732	112	153
CHX 65-250/220	65	80	100	250	208	232	50	22	40	200	304	254	318	254	13	23	332	450	73	112	159
CHX 80-160/110	80	100	125	225	278	191	65	14		180	125	95	320	250	14		332	405	629	129	109
CHX 80-160/150	80	100	125	225	208	232	50	22	20	180	260	210	318	254	13	23	332	412	713	129	133
CHX 80-160/185	80	100	125	225	208	232	50	22	20	180	304	254	318	254	13	23	332	412	757	129	145
CHX 80-200/220	80	100	125	250	208	232	50	22	20	180	304	254	318	254	13	23	332	430	757	129	159

Dimensions and weights, CHX4 series, 4 poles



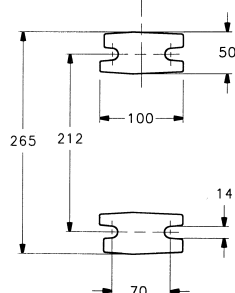
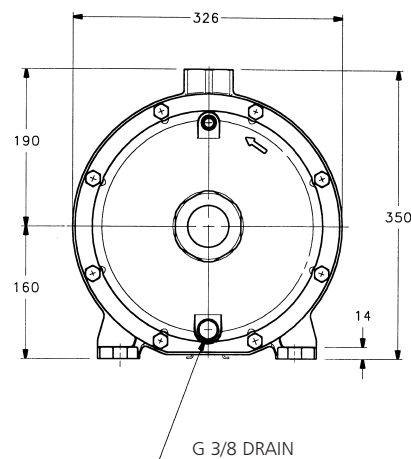
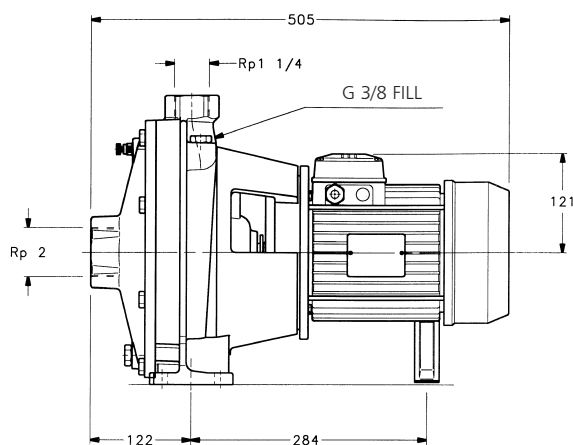
Flanges

DN	D	M	G	Holes		Max thickness
				N°	Ø	
32	140	100	78	4	18	18
40	150	110	88	4	18	18
50	165	125	102	4	18	20
65	185	145	122	4	18	20

Flanges

DN	D	M	G	Holes		Max thickness
				N°	Ø	
80	200	160	138	8	18	22
100	220	180	158	8	18	22

Dimensions and weights, 2 CHX4 series, 4 poles



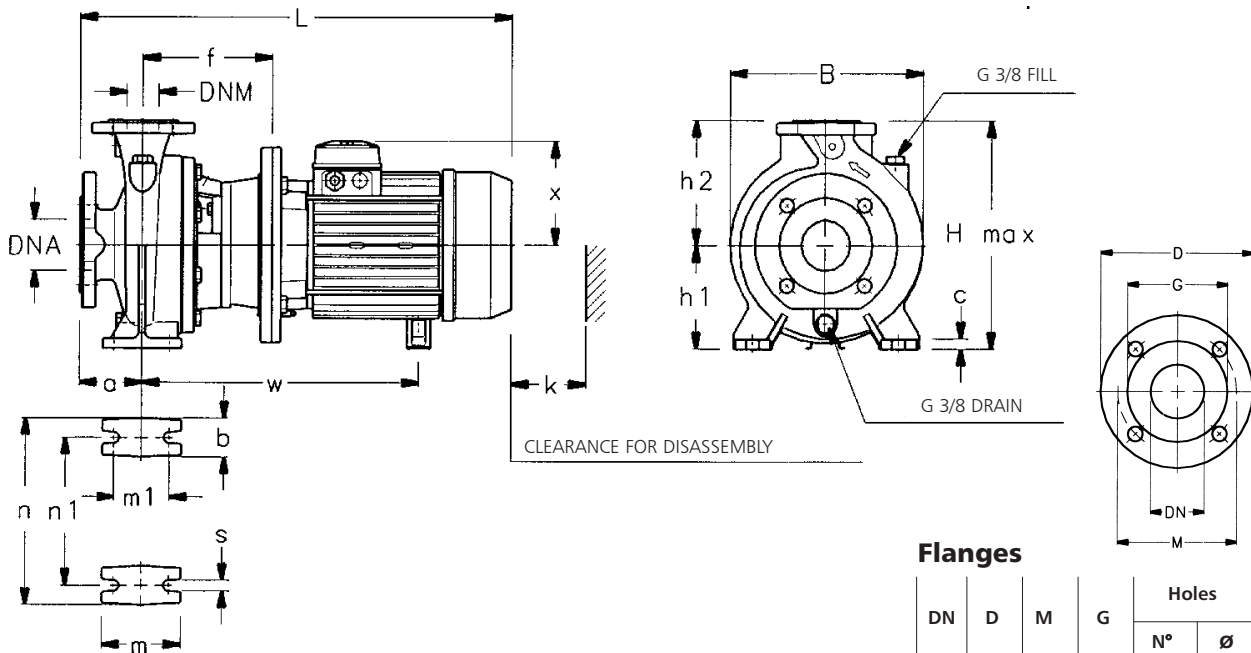
Pump type	Weight kg
2CHX4 32-250/07	71
2CHX4 32-250/11	75

Dimensions and weights, CHX4 series, 4 poles

Pump type	Pump									Base					Dimensions in mm				Wt kg
	DNM	DNA	a	h2	w	x	b	c	h1	m	m1	n	n1	s	B	H max	L	k	
CHX4 32-125/02A	32	50	80	140	230	101	50	12	112	100	70	190	140	14	233	252	395	92	25
CHX4 32-125/02	32	50	80	140	230	101	50	12	112	100	70	190	140	14	233	252	395	92	25
CHX4 32-160/02	32	50	80	160	230	101	50	12	132	100	70	240	190	14	235	292	395	92	26
CHX4 32-160/03	32	50	80	160	230	101	50	12	132	100	70	240	190	14	235	292	395	92	26
CHX4 32-200/03	32	50	80	180	230	101	50	12	160	100	70	240	190	14	285	340	395	92	35
CHX4 32-200/05	32	50	80	180	258	116	50	12	160	100	70	240	190	14	285	340	432	92	37
CHX4 32-250/07	32	50	80	180	258	116	50	12	160	100	70	240	190	14	285	340	432	92	47
CHX4 32-250/11	32	50	80	180	258	116	50	12	160	100	70	240	190	14	285	340	432	92	49
CHX4 40-125/02A	40	65	80	140	230	101	50	12	112	100	70	210	160	14	233	252	395	94	25
CHX4 40-125/02	40	65	80	140	230	101	50	12	112	100	70	210	160	14	233	252	395	94	25
CHX4 40-125/03	40	65	80	140	230	101	50	12	112	100	70	210	160	14	233	252	395	94	25
CHX4 40-160/03	40	65	80	160	258	116	50	12	132	100	70	240	190	14	250	292	395	94	27
CHX4 40-160/05	40	65	80	160	258	116	50	12	132	100	70	240	190	14	250	292	432	94	29
CHX4 40-200/07	40	65	100	180	258	116	50	12	160	100	70	265	212	14	285	340	452	94	39
CHX4 40-200/11	40	65	100	180	283	121	50	12	160	100	70	265	212	14	285	340	481	94	42
CHX4 40-250/11	40	65	100	225	283	121	65	14	180	125	95	320	250	14	335	405	481	113	52
CHX4 40-250/15	40	65	100	225	283	121	65	14	180	125	95	320	250	14	335	405	481	113	55
CHX4 40-250/22	40	65	100	225	290	133	65	14	180	125	95	320	250	14	335	405	507	113	60
CHX4 50-125/03A	50	65	100	160	232	101	50	12	132	100	70	240	190	14	255	292	417	98	29
CHX4 50-125/03	50	65	100	160	232	101	50	12	132	100	70	240	190	14	255	292	417	98	29
CHX4 50-125/05	50	65	100	160	260	116	50	12	132	100	70	240	190	14	255	292	454	98	32
CHX4 50-160/07	50	65	100	180	260	116	50	12	160	100	70	265	212	14	285	340	454	98	42
CHX4 50-160/11	50	65	100	180	285	121	50	12	160	100	70	265	212	14	285	340	483	98	45
CHX4 50-200/11	50	65	100	200	285	121	50	12	160	100	70	265	212	14	305	360	483	98	45
CHX4 50-200/15	50	65	100	200	285	121	50	12	160	100	70	265	212	14	305	360	483	98	48
CHX4 50-250/22A	50	65	100	225	290	133	65	14	180	125	95	320	250	14	340	405	507	113	60
CHX4 50-250/22	50	65	100	225	290	133	65	14	180	125	95	320	250	14	340	405	507	113	60
CHX4 50-250/30	50	65	100	225	290	133	65	14	180	125	95	320	250	14	340	405	507	113	63
CHX4 65-125/05	65	80	100	180	260	116	65	14	160	125	95	280	212	14	285	340	454	108	46
CHX4 65-125/07	65	80	100	180	260	116	65	14	160	125	95	280	212	14	285	340	454	108	46
CHX4 65-125/11	65	80	100	180	265	121	65	14	160	125	95	280	212	14	285	340	483	108	49
CHX4 65-160/11	65	80	100	200	283	121	65	14	160	125	95	280	212	14	331	360	481	117	56
CHX4 65-160/15	65	80	100	200	283	121	65	14	160	125	95	280	212	14	331	360	481	117	59
CHX4 65-160/22	65	80	100	200	290	133	65	14	160	125	95	280	212	14	331	360	507	117	64
CHX4 65-200/15	65	80	100	225	283	121	65	14	180	125	95	320	250	14	335	405	481	117	59
CHX4 65-200/22	65	80	100	225	290	133	65	14	180	125	95	320	250	14	335	405	507	117	64
CHX4 65-200/30	65	80	100	225	290	133	65	14	180	125	95	320	250	14	335	405	507	117	66
CHX4 65-250/30	65	80	100	250	290	133	80	16	200	160	120	360	280	18	360	450	507	125	75
CHX4 65-250/40	65	80	100	250	311	151	80	16	200	160	120	360	280	18	360	450	530	125	105
CHX4 65-250/55	65	80	100	250	259	191	80	16	200	160	120	360	280	18	360	450	566	125	111
CHX4 80-160/15	80	100	125	225	283	121	65	14	180	125	95	320	250	14	332	405	506	132	64
CHX4 80-160/22	80	100	125	225	290	133	65	14	180	125	95	320	250	14	332	405	532	132	69
CHX4 80-200/30	80	100	125	250	290	133	65	14	180	125	95	345	280	14	345	430	532	132	80
CHX4 80-200/40	80	100	125	250	311	151	65	14	180	125	95	345	280	14	345	430	555	132	103
CHX4 80-250/40	80	100	125	280	311	151	80	16	200	160	120	400	315	18	400	480	555	132	100
CHX4 80-250/55	80	100	125	280	259	191	80	16	200	160	120	400	315	18	400	480	591	132	106
CHX4 80-250/75	80	100	125	280	278	191	80	16	200	160	120	400	315	18	400	480	629	132	116

Dimensions and weights, CHS series, 2 poles

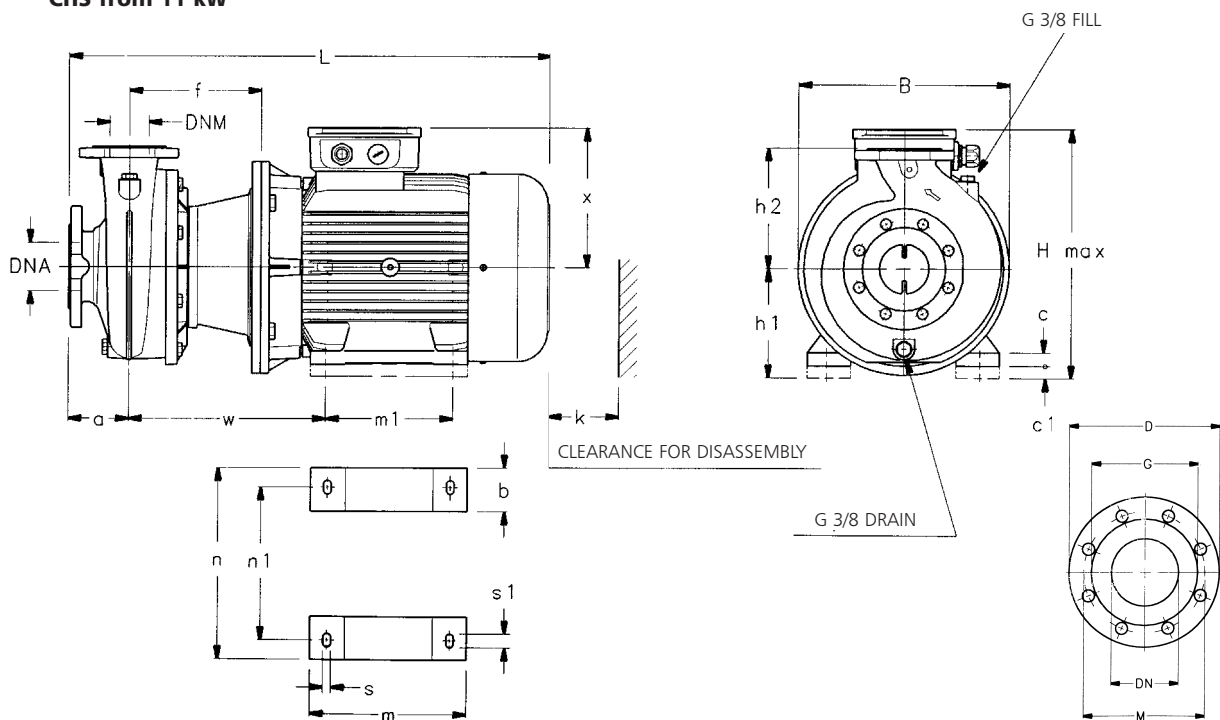
CHS up to 7,5 kW



Flanges

DN	D	M	G	Holes		Max thickness
				N°	∅	
32	140	100	78	4	18	18
40	150	110	88	4	18	18
50	165	125	102	4	18	20
65	185	145	122	4	18	20

CHS from 11 kW



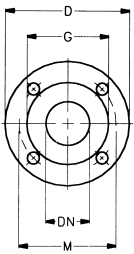
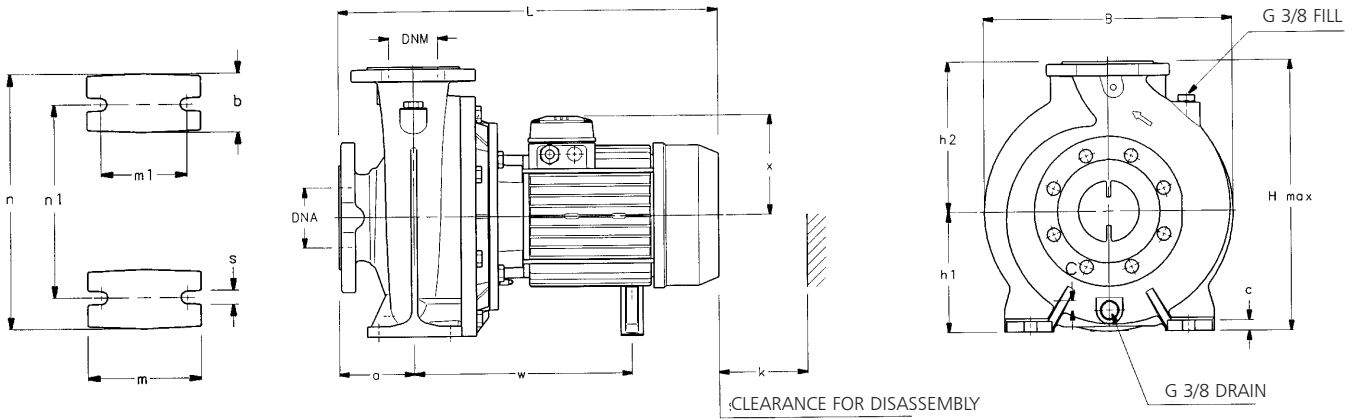
Flanges

DN	D	M	G	Holes		Max thickness
				N°	∅	
80	200	160	138	8	18	22
100	220	180	158	8	18	22

Dimensions and weights, CHS series, 2 poles

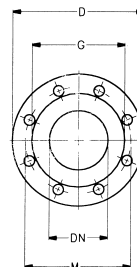
Pump type	Pump					Base											Dimensions in mm					Wt kg	
	DNM	DNA	a	f	h2	w	x	b	c	c1	h1	m	m1	n	n1	s	s1	B	H				
																				max	L	k	
CHS 32-125/07	32	50	80	155	140	265	121	50	12	-	112	100	70	190	140	14	-	233	252	461	86	32	
CHS 32-125/11	32	50	80	155	140	290	129	50	12	-	112	100	70	190	140	14	-	233	252	498	86	32	
CHS 32-160/15	32	50	80	155	160	290	129	50	12	-	132	100	70	240	190	14	-	235	292	498	86	35	
CHS 32-160/22	32	50	80	155	160	290	129	50	12	-	132	100	70	240	190	14	-	235	292	498	86	37	
CHS 32-200/30	32	50	80	165	180	355	121	50	12	-	160	100	70	240	190	14	-	285	340	548	86	51	
CHS 32-200/40	32	50	80	165	180	355	133	50	12	-	160	100	70	240	190	14	-	285	340	552	86	62	
CHS 40-125/11	40	65	80	155	140	290	129	50	12	-	112	100	70	210	160	14	-	233	252	498	88	34	
CHS 40-125/15	40	65	80	155	140	290	129	50	12	-	112	100	70	210	160	14	-	233	252	498	88	36	
CHS40-125/22	40	65	80	155	140	290	129	50	12	-	112	100	70	210	160	14	-	233	252	498	88	39	
CHS40-160/30	40	65	80	165	160	355	121	50	12	-	132	100	70	240	190	14	-	250	292	548	88	44	
CHS 40-160/40	40	65	80	165	160	355	133	50	12	-	132	100	70	240	190	14	-	250	292	552	88	45	
CHS40-200/55	40	65	100	192	180	424	150	50	12	-	160	100	70	265	212	14	-	300	340	666	88	73	
CHS 40-200/75	40	65	100	192	180	424	150	50	12	-	160	100	70	265	212	14	-	300	340	666	88	77	
CHS40-250/110A	40	65	100	222	225	330	232	50	22	20	180	260	210	318	254	13	23	350	412	810	107	119	
CHS 40-250/110	40	65	100	222	225	330	232	50	22	20	180	260	210	318	254	13	23	350	412	810	107	119	
CHS 40-250/150	40	65	100	222	225	330	232	50	22	20	180	260	210	318	254	13	23	350	412	810	107	133	
CHS 50-125/22	50	65	100	157	160	292	129	50	12	-	132	100	70	240	190	14	-	255	292	520	92	43	
CHS 50-125/30	50	65	100	167	160	357	121	50	12	-	132	100	70	240	190	14	-	255	292	570	92	48	
CHS 50-125/40	50	65	100	167	160	357	133	50	12	-	132	100	70	240	190	14	-	255	292	574	92	56	
CHS 50-160/55	50	65	100	194	180	426	150	50	12	-	160	100	70	265	212	14	-	300	340	668	92	76	
CHS 50-160/75	50	65	100	194	180	426	150	50	12	-	160	100	70	265	212	14	-	300	340	668	92	80	
CHS 50-200/110A	50	65	100	224	200	332	232	50	22	-	160	260	210	318	254	13	23	350	392	812	92	111	
CHS 50-200/110	50	65	100	224	200	332	232	50	22	-	160	260	210	318	254	13	23	350	392	812	92	111	
CHS 50-250/150	50	65	100	222	225	330	232	50	22	20	180	260	210	318	254	13	23	350	412	810	107	133	
CHS 50-250/185	50	65	100	222	225	330	232	50	22	20	180	304	254	318	254	13	23	350	412	854	107	145	
CHS 50-250/220	50	65	100	222	225	330	232	50	22	20	180	304	254	318	254	13	23	350	412	854	107	159	
CHS 65-125/40	65	80	100	167	180	357	133	65	14	-	160	125	95	280	212	14	-	285	340	574	105	70	
CHS 65-125/55	65	80	100	194	180	426	150	65	14	-	160	125	95	280	212	14	-	300	340	668	105	80	
CHS 65-125/75	65	80	100	194	180	426	150	65	14	-	160	125	95	280	212	14	-	300	340	668	105	84	
CHS 65-160/110A	65	80	100	222	200	330	232	50	22	20	180	260	210	318	254	13	23	350	412	810	112	123	
CHS 65-160/110	65	80	100	222	200	330	232	50	22	20	180	260	210	318	254	13	23	350	412	810	112	123	
CHS 65-160/150	65	80	100	222	200	330	232	50	22	20	180	260	210	318	254	13	23	350	412	810	112	137	
CHS 65-200/150	65	80	100	222	225	330	232	50	22	20	180	260	210	318	254	13	23	350	412	810	112	137	
CHS 65-200/185	65	80	100	222	225	330	232	50	22	20	180	304	254	318	254	13	23	350	412	854	112	149	
CHS 65-200/220	65	80	100	222	225	330	232	50	22	20	180	304	254	318	254	13	23	350	412	854	112	163	
CHS 65-250/220	65	80	100	222	250	330	232	50	22	40	200	304	254	318	254	13	23	350	450	854	112	157	
CHS 65-250/300	65	80	100	228	250	361	257	60	24	-	200	345	305	360	318	18	18	400	457	941	112	200	
CHS 65-250/370	65	80	100	228	250	361	257	60	24	-	200	345	305	360	318	18	18	400	457	941	112	218	
CHS 80-160/110	80	100	125	222	225	330	232	50	22	20	180	260	210	318	254	13	23	350	412	835	129	124	
CHS 80-160/150	80	100	125	222	225	330	232	50	22	20	180	260	210	318	254	13	23	350	412	835	129	138	
CHS 80-160/185	80	100	125	222	225	330	232	50	22	20	180	304	254	318	254	13	23	350	412	879	129	156	
CHS 80-200/220	80	100	125	222	250	330	232	50	22	20	180	304	254	318	254	13	23	350	430	879	129	163	
CHS 80-200/300	80	100	125	228	250	361	257	60	24	-	200	345	305	360	318	18	18	400	457	966	129	199	
CHS 80-250/370	80	100	125	228	280	361	257	60	24	-	200	345	305	360	318	18	18	400	480	966	129	213	
CHS 80-250/450	80	100	125	228	280	377	280	76	28	-	225	360	311	405	356	18	18	450	505	1043	129	278	
CHS 80-250/550	80	100	125	258	280	426	280	90	28	-	250	406	349	465	406	22	22	550	530	1073	129	311	

Dimensions and weights, CHS4 series, 4 poles



Flanges

DN	D	M	G	Holes		Max thickness
				N°	∅	
32	140	100	78	4	18	18
40	150	110	88	4	18	18
50	165	125	102	4	18	20
65	185	145	122	4	18	20

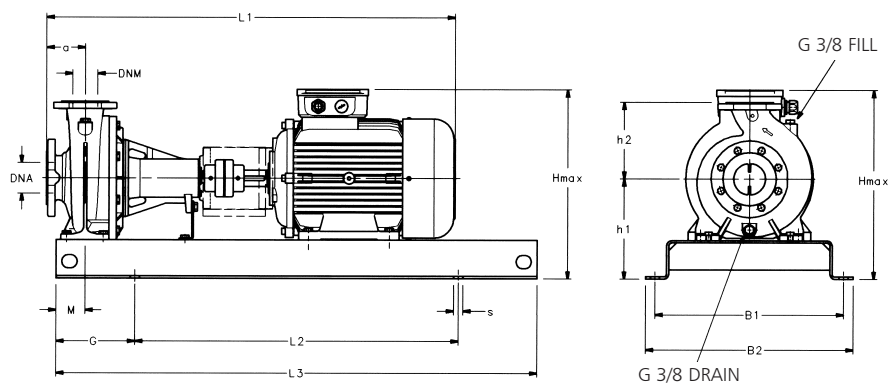


Flanges

DN	D	M	G	Holes		Max thickness
				N°	∅	
80	200	160	138	8	18	22
100	220	180	158	8	18	22

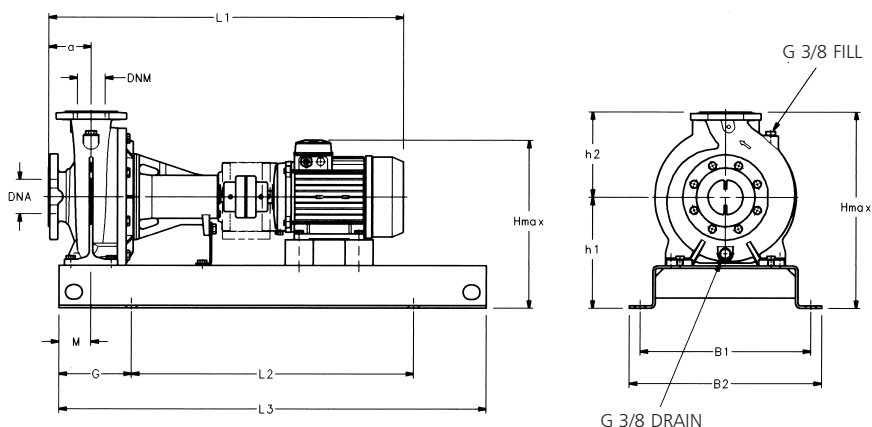
Pump type	Pump							Base							Dimensions in mm				Wt kg	
	DNM	DNA	a	f	h2	w	x	b	c	h1	m	m1	n	n1	s	B	H max	L		k
CHS4 40-200/07	40	65	100	155	180	303	116	50	12	160	100	70	265	212	14	285	340	497	94	44
CHS4 40-200/11	40	65	100	155	180	338	121	50	12	160	100	70	265	212	14	285	340	536	94	47
CHS4 40-250/11	40	65	100	155	225	338	121	65	14	180	125	95	320	250	14	335	405	536	113	57
CHS4 40-250/15	40	65	100	155	225	338	121	65	14	180	125	95	320	250	14	335	405	536	113	60
CHS4 40-250/22	40	65	100	165	225	355	133	65	14	180	125	95	320	250	14	335	405	572	113	66
CHS4 50-160/07	50	65	100	157	180	305	116	50	12	160	100	70	265	212	14	285	340	499	98	47
CHS4 50-160/11	50	65	100	157	180	340	121	50	12	160	100	70	265	212	14	285	340	538	98	50
CHS4 50-200/11	50	65	100	157	200	340	121	50	12	160	100	70	265	212	14	305	360	538	98	50
CHS4 50-200/15	50	65	100	157	200	340	121	50	12	160	100	70	265	212	14	305	360	538	98	53
CHS4 50-250/22A	50	65	100	165	225	355	133	65	14	180	125	95	320	250	14	340	405	572	113	66
CHS4 50-250/22	50	65	100	165	225	355	133	65	14	180	125	95	320	250	14	340	405	572	113	66
CHS4 50-250/30	50	65	100	165	225	355	133	65	14	180	125	95	320	250	14	340	405	572	113	69
CHS4 65-125/05	65	80	100	157	180	305	116	65	14	160	125	95	280	212	14	285	340	499	108	51
CHS4 65-125/07	65	80	100	157	180	305	116	65	14	160	125	95	280	212	14	285	340	499	108	53
CHS4 65-125/11	65	80	100	157	180	340	121	65	14	160	125	95	280	212	14	285	340	538	108	54
CHS4 65-160/11	65	80	100	155	200	338	121	65	14	160	125	95	280	212	14	331	360	536	117	61
CHS4 65-160/15	65	80	100	155	200	338	121	65	14	160	125	95	280	212	14	331	360	536	117	64
CHS4 65-160/22	65	80	100	165	200	345	153	65	14	160	125	95	280	212	14	331	360	572	117	70
CHS4 65-200/15	65	80	100	155	225	338	121	65	14	180	125	95	320	250	14	335	405	536	117	64
CHS4 65-200/22	65	80	100	165	225	355	133	65	14	180	125	95	320	250	14	335	405	572	117	70
CHS4 65-200/30	65	80	100	165	225	355	133	65	14	180	125	95	320	250	14	335	405	572	117	73
CHS4 65-250/30	65	80	100	165	250	355	133	80	16	200	160	120	360	280	18	360	450	572	125	79
CHS4 65-250/40	65	80	100	165	250	376	151	80	16	200	160	120	360	280	18	360	450	595	125	101
CHS4 65-250/55	65	80	100	192	250	351	191	80	16	200	160	120	360	280	18	360	450	658	125	104
CHS4 80-160/15	80	100	125	155	225	338	121	65	14	180	125	95	320	250	14	332	405	561	132	71
CHS4 80-160/22	80	100	125	165	225	355	133	65	14	180	125	95	320	250	14	332	405	597	132	76
CHS4 80-200/30	80	100	125	165	250	355	133	65	14	180	125	95	345	280	14	345	430	597	132	82
CHS4 80-200/40	80	100	125	165	250	376	151	65	14	180	125	95	345	280	14	345	430	620	132	104
CHS4 80-250/40	80	100	125	165	280	376	151	80	16	200	160	120	400	315	18	400	480	620	132	110
CHS4 80-250/55	80	100	125	192	280	351	191	80	16	200	160	120	400	315	18	400	480	683	132	113
CHS4 80-250/75	80	100	125	192	280	370	191	80	16	200	160	120	400	315	18	400	480	721	132	116

Dimensions and weights, CHF series, 2 poles



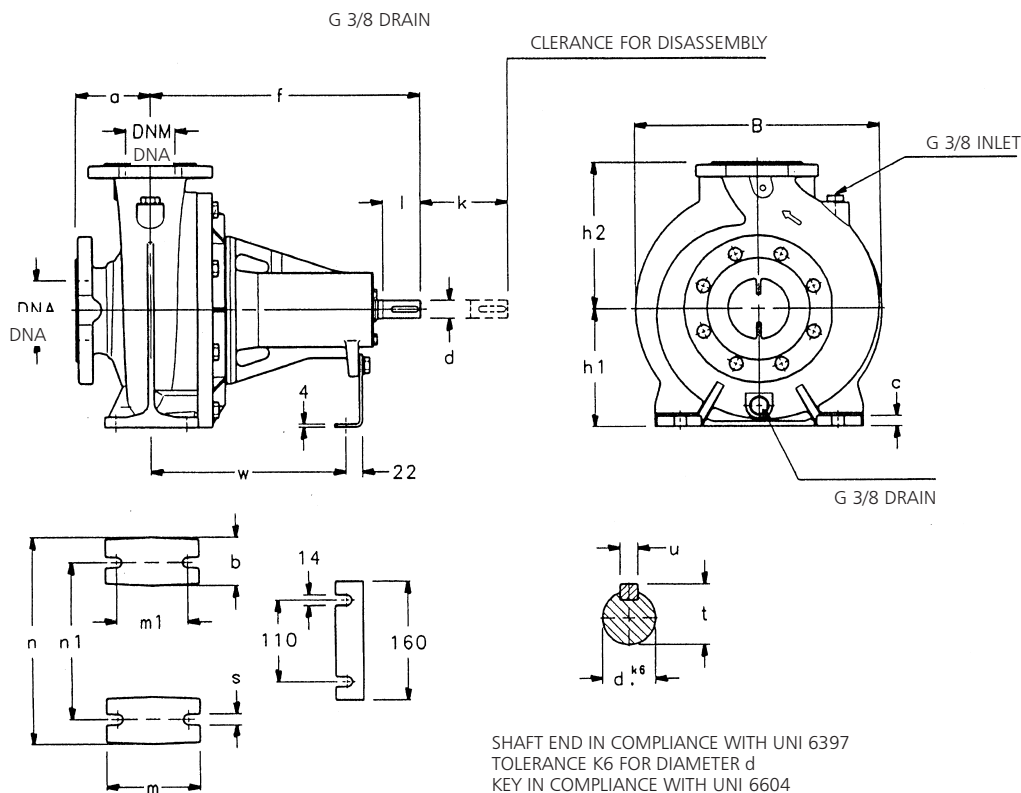
Pump type	Dimensions in mm													s For screws	Weight kg
	DNM	DNA	a	B1	B2	L1	L2	L3	G	M	h1	h2	H max		
CHF 32-125/07	32	50	80	320	360	744	540	800	130	60	212	140	352	M16	67
CHF 32-125/11	32	50	80	320	360	744	540	800	130	60	212	140	352	M16	69
CHF 32-160/15	32	50	80	350	390	773	600	900	150	60	232	160	392	M16	71
CHF 32-160/22	32	50	80	350	390	773	600	900	150	60	232	160	392	M16	73
CHF 32-200/30	32	50	80	350	390	809	600	900	150	60	260	180	440	M16	92
CHF 32-200/40	32	50	80	350	390	832	600	900	150	60	260	180	440	M16	96
CHF 40-125/11	40	65	80	320	360	744	540	800	130	60	212	140	352	M16	72
CHF 40-125/15	40	65	80	350	390	773	600	900	150	60	212	140	352	M16	74
CHF 40-125/22	40	65	80	350	390	773	600	900	150	60	212	140	352	M16	77
CHF 40-160/30	40	65	80	350	390	809	600	900	150	60	232	160	392	M16	91
CHF 40-160/40	40	65	80	350	390	832	600	900	150	60	232	160	392	M16	97
CHF 40-200/55	40	65	100	400	450	909	660	1000	170	60	260	180	451	M20	112
CHF 40-200/75	40	65	100	400	450	909	660	1000	170	60	260	180	451	M20	120
CHF 40-250/110A	40	65	100	490	540	1061	840	1250	205	75	280	225	512	M20	178
CHF 40-250/110	40	65	100	490	540	1061	840	1250	205	75	280	225	512	M20	178
CHF 40-250/150	40	65	100	490	540	1061	840	1250	205	75	280	225	512	M20	188
CHF 50-125/22	50	65	100	350	390	793	600	900	150	60	232	160	392	M16	85
CHF 50-125/30	50	65	100	350	390	829	600	900	150	60	232	160	392	M16	92
CHF 50-125/40	50	65	100	350	390	852	600	900	150	60	232	160	392	M16	97
CHF 50-160/55	50	65	100	400	450	909	660	1000	170	60	260	180	451	M20	111
CHF 50-160/75	50	65	100	400	450	909	660	1000	170	60	260	180	451	M20	115
CHF 50-200/110A	50	65	100	440	490	1061	740	1120	190	60	260	200	492	M20	173
CHF 50-200/110	50	65	100	440	490	1061	740	1120	190	60	260	200	492	M20	173
CHF50-250/150	50	65	100	490	540	1061	840	1250	205	75	280	225	512	M20	179
CHF 50-250/185	50	65	100	490	540	1105	840	1250	205	75	280	225	512	M20	199
CHF 50-250/220	50	65	100	490	540	1111	840	1250	205	75	280	225	510	M20	219
CHF 65-125/40	65	80	100	350	390	852	600	900	150	75	260	180	440	M16	135
CHF 65-125/55	65	80	100	400	450	909	660	1000	170	75	260	180	451	M20	141
CHF 65-125/75	65	80	100	400	450	909	660	1000	170	75	260	180	451	M20	147
CHF 65-160/110A	65	80	100	490	540	1061	840	1250	205	75	260	200	492	M20	164
CHF 65-160/110	65	80	100	490	540	1061	840	1250	205	75	260	200	492	M20	164
CHF 65-160/150	65	80	100	490	540	1061	840	1250	205	75	260	200	492	M20	180
CHF 65-200/150	65	80	100	490	540	1061	840	1250	205	75	280	225	512	M20	187
CHF 65-200/185	65	80	100	490	540	1105	840	1250	205	75	280	225	512	M20	197
CHF 65-200/220	65	80	100	490	540	1111	840	1250	205	75	280	225	510	M20	215
CHF 65-250/220	65	80	100	490	540	1221	840	1250	205	90	300	250	550	M20	223
CHF 65-250/300	65	80	100	550	610	1296	940	1400	230	90	300	250	557	M24	300
CHF 65-250/370	65	80	100	550	610	1296	940	1400	230	90	300	250	557	M24	315
CHF 80-160/110	80	100	125	490	540	1086	840	1250	205	75	280	225	512	M20	202
CHF 80-160/150	80	100	125	490	540	1086	840	1250	205	75	280	225	512	M20	212
CHF 80-160/185	80	100	125	490	540	1130	840	1250	205	75	280	225	512	M20	233
CHF 80-200/220	80	100	125	490	540	1246	840	1250	205	75	280	250	530	M20	245
CHF 80-200/300	80	100	125	550	610	1321	940	1400	230	75	300	250	557	M24	285
CHF 80-250/370	80	100	125	550	610	1321	940	1400	230	90	300	280	580	M24	305
CHF 80-250/450	80	100	125	550	610	1398	940	1400	230	90	325	280	605	M24	365
CHF 80-250/550	80	100	125	600	660	1428	1060	1600	270	90	380	280	660	M24	400

Dimensions and weights, CHF4 series, 4 poles



Pump type	Dimensions in mm													s For screws	Weight kg
	DNM	DNA	a	B1	B2	L1	L2	L3	G	M	h1	h2	H max		
CHF4 32-125/02A	32	50	80	320	360	686	540	800	130	60	212	140	352	M16	74
CHF4 32-125/02	32	50	80	320	360	686	540	800	130	60	212	140	352	M16	74
CHF4 32-160/02	32	50	80	320	360	686	540	800	130	60	232	160	392	M16	76
CHF4 32-160/03	32	50	80	320	360	686	540	800	130	60	232	160	392	M16	78
CHF4 32-200/03	32	50	80	320	360	686	540	800	130	60	260	180	440	M16	80
CHF4 32-200/05	32	50	80	320	360	723	540	800	130	60	260	180	440	M16	82
CHF4 40-125/02A	40	65	80	320	360	686	540	800	130	60	212	140	352	M16	61
CHF4 40-125/02	40	65	80	320	360	686	540	800	130	60	212	140	352	M16	61
CHF4 40-125/03	40	65	80	320	360	686	540	800	130	60	212	140	352	M16	64
CHF4 40-160/03	40	65	80	320	360	686	540	800	130	60	232	160	392	M16	65
CHF4 40-160/05	40	65	80	320	360	723	540	800	130	60	232	160	392	M16	66
CHF4 40-200/07	40	65	100	350	390	743	600	900	150	60	260	180	440	M16	73
CHF4 40-200/11	40	65	100	350	390	793	600	900	150	60	260	180	440	M16	76
CHF4 40-250/11	40	65	100	400	450	793	660	1000	170	75	280	225	505	M20	103
CHF4 40-250/15	40	65	100	400	450	793	660	1000	170	75	280	225	505	M20	106
CHF4 40-250/22	40	65	100	400	450	829	660	1000	170	75	280	225	505	M20	119
CHF4 50-125/03A	50	65	100	320	360	706	540	800	130	60	232	160	392	M16	64
CHF4 50-125/03	50	65	100	320	360	706	540	800	130	60	232	160	392	M16	64
CHF4 50-125/05	50	65	100	320	360	743	540	800	130	60	232	160	392	M16	66
CHF4 50-160/07	50	65	100	350	390	743	600	900	150	60	260	180	440	M16	73
CHF4 50-160/11	50	65	100	350	390	793	600	900	150	60	260	180	440	M16	76
CHF4 50-200/11	50	65	100	350	390	793	600	900	150	60	260	200	460	M16	87
CHF4 50-200/15	50	65	100	350	390	793	600	900	150	60	260	200	460	M16	90
CHF4 50/250/22A	50	65	100	400	450	829	660	1000	170	75	280	225	505	M20	121
CHF4 50-250/22	50	65	100	400	450	829	660	1000	170	75	280	225	505	M20	121
CHF4 50-250/30	50	65	100	400	450	829	660	1000	170	75	280	225	505	M20	125
CHF4 65-125/05	65	80	100	350	390	743	600	900	150	75	260	180	440	M16	90
CHF4 65-125/07	65	80	100	350	390	743	600	900	150	75	260	180	440	M16	91
CHF4 65-125/11	65	80	100	350	390	793	600	900	150	75	260	180	440	M16	95
CHF4 65-160/11	65	80	100	400	450	793	660	1000	170	75	260	200	460	M20	100
CHF4 65-160/15	65	80	100	400	450	793	660	1000	170	75	260	200	460	M20	110
CHF4 65-160/22	65	80	100	400	450	829	660	1000	170	75	260	200	460	M20	119
CHF4 65-200/15	65	80	100	400	450	793	660	1000	170	75	280	225	505	M20	112
CHF4 65-200/22	65	80	100	440	490	829	740	1120	190	75	280	225	505	M20	123
CHF4 65-200/30	65	80	100	440	490	829	740	1120	190	75	280	225	505	M20	126
CHF4 65-250/30	65	80	100	440	490	939	740	1120	190	90	300	250	550	M20	150
CHF4 65-250/40	65	80	100	440	490	962	740	1120	190	90	300	250	550	M20	162
CHF4 65-250/55	65	80	100	440	490	1019	740	1120	190	90	300	250	550	M20	180
CHF4 80-160/15	80	100	125	400	450	818	660	1000	170	75	280	228	505	M20	130
CHF4 80-160/22	80	100	125	440	490	854	740	1120	190	75	280	228	505	M20	136
CHF4 80-200/30	80	100	125	440	490	964	740	1120	190	75	280	250	530	M20	155
CHF4 80-200/40	80	100	125	440	490	987	740	1120	190	75	280	250	530	M20	159
CHF4 80-250/40	80	100	125	490	540	987	840	1250	205	90	300	280	580	M20	165
CHF4 80-250/55	80	100	125	490	540	1044	840	1250	205	90	300	280	580	M20	180
CHF4 80-250/75	80	100	125	490	540	1082	840	1250	205	90	300	280	580	M20	193

Dimensions and weights,



Pump type	Pump		Base							Shaft					B	k	Weight kg				
	DNM	DNA	A	F	H1	H2	B	C	M	M1	N	N1	S	W				D	L	T	U
CHF 32-125	32	50	80	360	112	140	50	12	100	70	190	140	14	260	24	50	27	8	233	86	20.25
CHF 32-160	32	50	80	360	132	160	50	12	100	70	240	190	14	260	24	50	27	8	235	86	21.75
CHF 32-200	32	50	80	360	160	180	50	12	100	70	240	190	14	260	24	50	27	8	285	86	24.75
CHF 40-125	40	65	80	360	112	140	50	12	100	70	210	160	14	260	24	50	27	8	233	88	20.75
CHF 40-160	40	65	80	360	132	160	50	12	100	70	240	190	14	260	24	50	27	8	250	88	24.75
CHF 40-200	40	65	100	360	160	180	50	12	100	70	265	212	14	260	24	50	27	8	285	88	25.75
CHF 40-250	40	65	100	360	180	225	65	14	125	95	320	250	14	260	24	50	27	8	335	100	42.50
CHF 50-125	50	65	100	360	132	160	50	12	100	70	240	190	14	260	24	50	27	8	255	92	25.00
CHF 50-160	50	65	100	360	160	180	50	12	100	70	265	212	14	260	24	50	27	8	285	92	28.75
CHF 50-200	50	65	100	360	160	200	50	12	100	70	265	212	14	260	24	50	27	8	305	92	28.25
CHF 50-250	50	65	100	360	180	225	65	14	125	95	320	250	14	260	24	50	27	8	340	100	42.50
CHF 65-125	65	80	100	360	160	180	65	14	125	95	280	212	14	260	24	50	27	8	285	100	32.75
CHF 65-160	65	80	100	360	160	200	65	14	125	95	280	212	14	260	24	50	27	8	331	100	-
CHF 65-200	65	80	100	360	180	225	65	14	125	95	320	250	14	260	24	50	27	8	335	112	-
CHF 65-250	65	80	100	470	200	250	80	16	160	120	360	280	18	340	32	80	35	10	360	112	-
CHF 80-160	80	100	125	360	180	225	65	14	125	95	320	250	14	260	24	50	27	8	332	129	-
CHF 80-200	80	100	125	470	180	225	65	14	125	95	345	280	14	340	32	80	35	10	345	129	-
CHF 80-250	80	100	125	470	200	280	80	16	160	120	400	315	18	340	32	80	35	10	400	129	-

Introduction



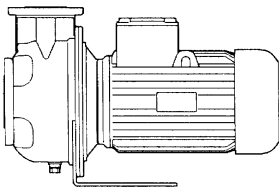
AISI 316 stainless steel, laser technology welded centrifugal pumps. Suitable for pumping hot and cold, moderately aggressive liquids. The liquid end is in compliance with EN 733, DIN 24255 and UNI 7467.

- Maximum delivery: 240 m³/h.
- Maximum head: 110 m.
- Maximum operating pressure: 12 bar (PN 12).

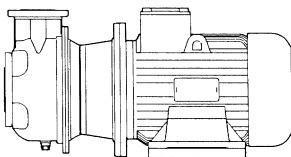
Applications

- Water circulation and transfer in civil, industrial and agricultural sectors.
- Pressure boosting.
- Water supply.
- Circulation of hot and cold water in heating and air conditioning systems.
- Industrial washing.

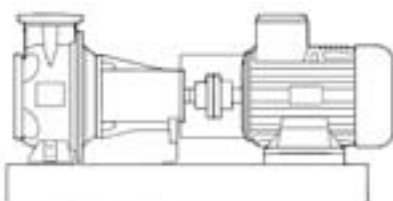
Method of installation



EQX: Close coupled by means of an adapter bracket with an impeller keyed direct to the motor shaft.



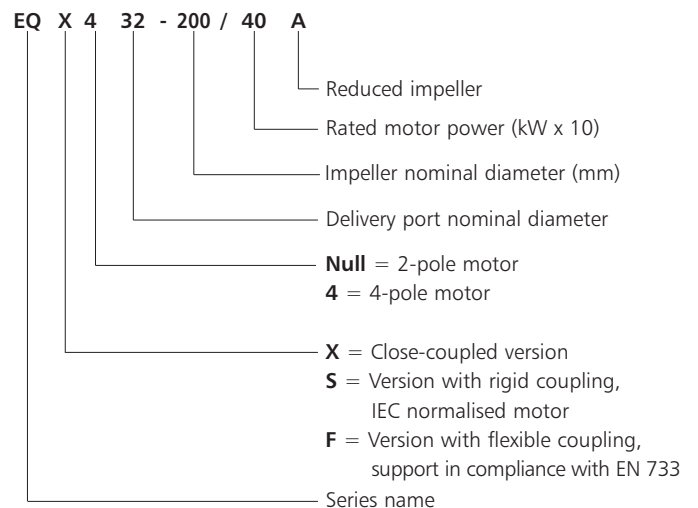
EQS: With a bracket, adapter and rigid coupling keyed to the motor shaft.



EQF: With a bracket, support, flexible coupling, aligning and base stand.

A bare shaft pump is available on request.

Product identity



Design

Impeller

The impeller is laser technology welded to ensure optimal performance.

Wear rings

On impeller front and rear wear surfaces, wear rings ensure high performance and are easy to replace. This prolongs the impeller life.

Flanges

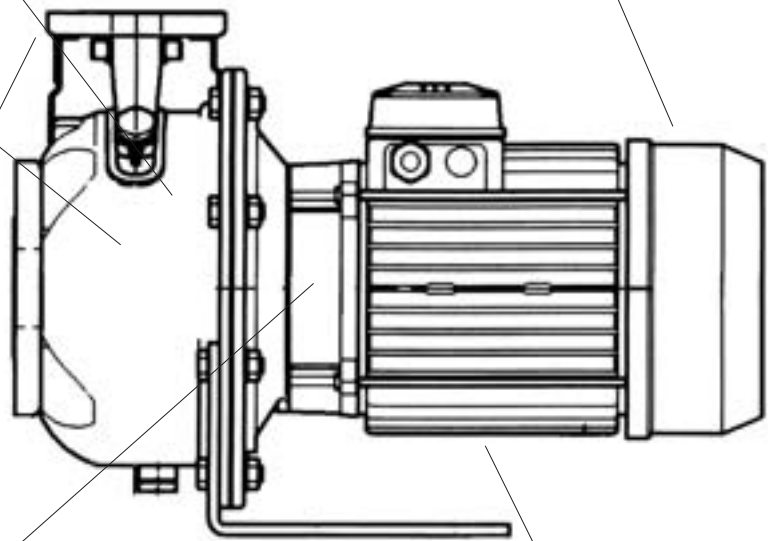
PN 16 in compliance with UNI 2223 and DIN 2533.

Mechanical seal

In compliance with DIN 24960, lubricated by internal recirculation of pumped liquid to seal housing.

Motor

Back pull-out design; impeller, adapter and motor can be extracted without disconnecting the pump body from the pipe system.



Back pull-out design

Impeller, adapter and motor can be extracted without disconnecting the pump body from the pipe system.

Motor noise

The table shows the mean noise levels for sound pressure (Lp) and sound power (LW) measured at 1 meter distance in a free field according to the A curve (ISO R 1680 standard).

The noise is measured with idling 50 Hz motor with a tolerance of 3 dB (A).

Motor type Size	2-poles Lp- dB (A)	LW- dB (A)	4 poles Lp- dB (A)	LW- dB (A)
71	61	70	48	57
80R	61	70		
80	64	73	50	59
90R	64	73		
90	66	75	51	60
100R	66	75		
100	70	80	53	63
112R	70	80		
112	74	84	56	66
132R	74	84		
132	77	87	66	76
160	78	88		
180R	80	81		
200	80	81		
225	84	94		
250	84	94		



EQ 25

Product

Horizontal stainless steel pump for pumping hot and cold moderately aggressive liquids, like circulation of water, water supply and industrial washing. The liquid end is in compliance with EN 733 and DIN 24255.

Denomination

Product code EQ 25

Available versions

Method of installation EQX, EQS, EQF

Process data

Liquid temperature -10° C to +110° C
 Maximum pressure 12 bar (PN 12)

Motor data

Enclosed motor with external ventilation and aluminium finned casing.

Frequency 50 Hz
 Insulation class F (+155° C)
 Protection class IP 55

Monitoring equipment

To be provided at installation

Material

Part	Material
Pump body	Stainless steel AISI 316L
Seal housing	
Impeller	Aluminium
Adapter: 125,160, 200 4-pole	
200 2-pole, 250	Cast iron
O-rings	FPM
Wear rings	Stainless steel AISI 316L
Shaft (EQX, EQF)	Stainless steel AISI 316L
Coupling (EQS)	Stainless steel AISI 316
Support body (EQF)	Cast Iron
Fill and drain plugs	Stainless steel AISI 316L

Mechanical face seals

Alternative	Seal
1 Standard	Ceramic/ Carbon/ FPM
2	Tungsten carbide/ Carbon/ EPDM or FPM
3	Tungsten carbide/ Silicon carbide/ EPDM or FPM
4	Tungsten carbide/ Tungsten carbide/ EPDM or FPM
5	Silicon carbide/ Silicon carbide/ EPDM or FPM

Option

Version with Technovar frequency converter available on request

Motor rating

EQS/EQF, EQX 25

Three-phase 2-pole, 2900 rpm

Pump type	kW	Motor type					Input current			rpm	Data for 400 V 50 Hz				
		Size		Design			In (A)				Is/In	η%	cosφ	Cn (Nm)	Cs/Cn
		EQS/EQF	EQX	EQS	EQF	EQX	220-240 V	380-415 V	660 V						
25-125/07	0.75	80	90R	B5	B3	B14	3.2-3.3	1.85-1.9		2835	5.5	72	0.79	2.53	3.60
25-125/11	1.1	80	90R	B5	B3	B14	4.5-4.5	2.6-2.6		2845	6.4	75	0.81	3.69	3.85
25-160/15	1.5	90R	90R	B5	B3	B14	6.2-6.0	3.6-3.5		2845	6.6	73	0.83	5.00	4.20
25-160/22	2.2	90R	90R	B5	B3	B14	8.5-8.3	4.9-4.8		2860	6.9	77	0.85	7.30	2.90
25-200/30	3.0	100	90	B5	B3	B14	11.2-10.9	6.5-6.3		2875	6.3	80	0.85	10.00	2.60
25-200/40	4.0	112R	112R	B5	B3	B14		8.5-8.3	4.9	2885	7.5	81	0.85	13.20	3.15
25-250/55	5.5	132R	112	B5	B3	B14		11.5-11.2	6.6	2910	7.8	82	0.85	18.00	3.00
25-250/75	7.5	132R	112	B5	B3	B14		15.5-15.0	8.9	2905	7.0	82	0.85	24.70	2.60
25-250/110	11.0	160	132	B35	B3	B14		22.5-21.0	13.0	2930	7.1	86	0.88	36.20	3.40

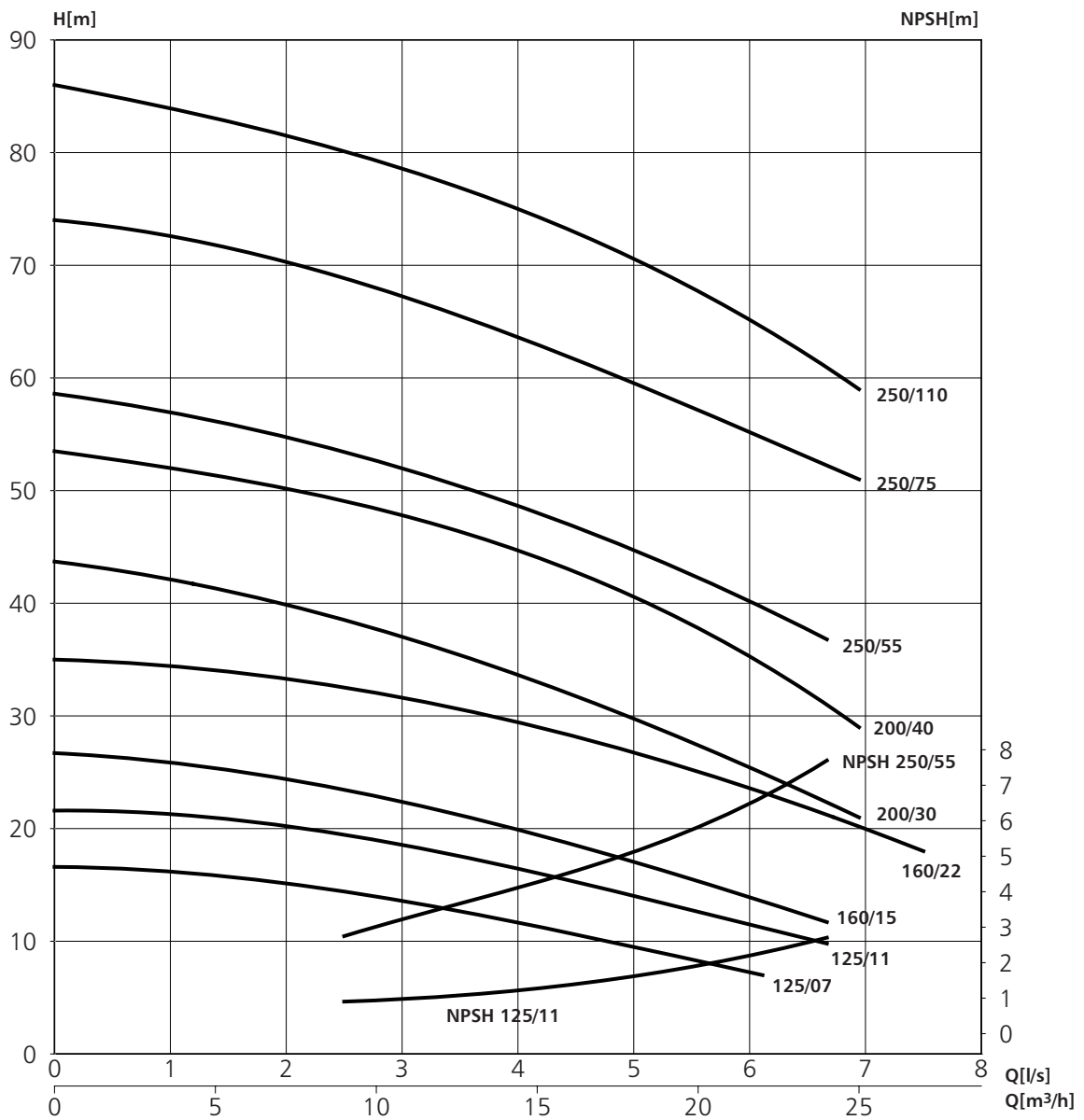
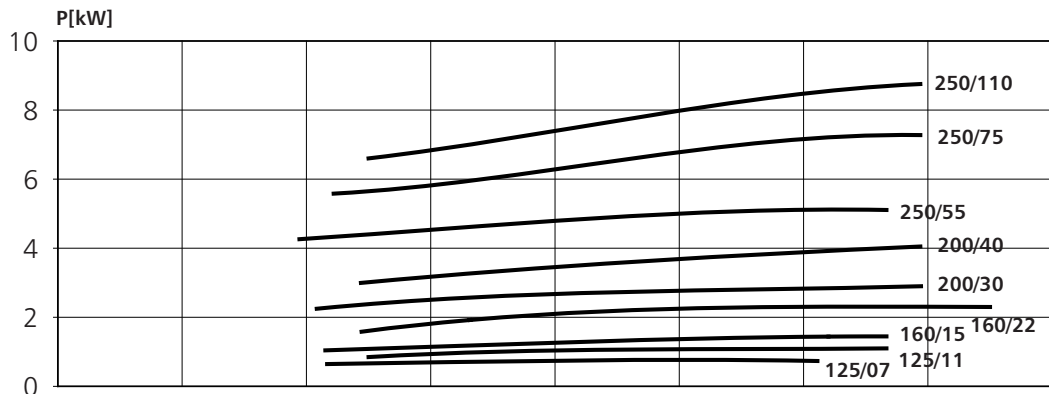
EQS/EQF, EQX 25

Three-phase 4-pole, 1450 rpm

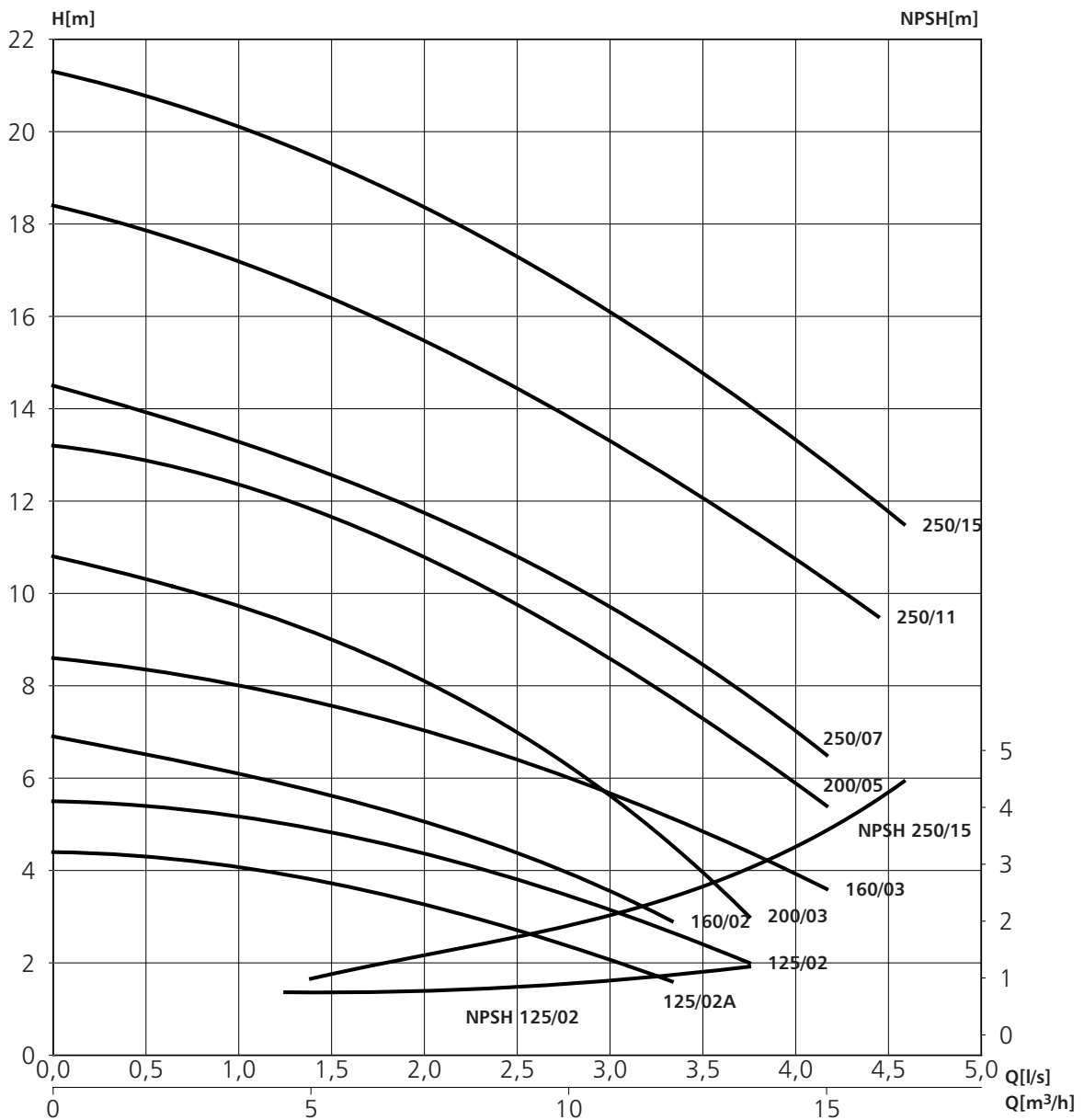
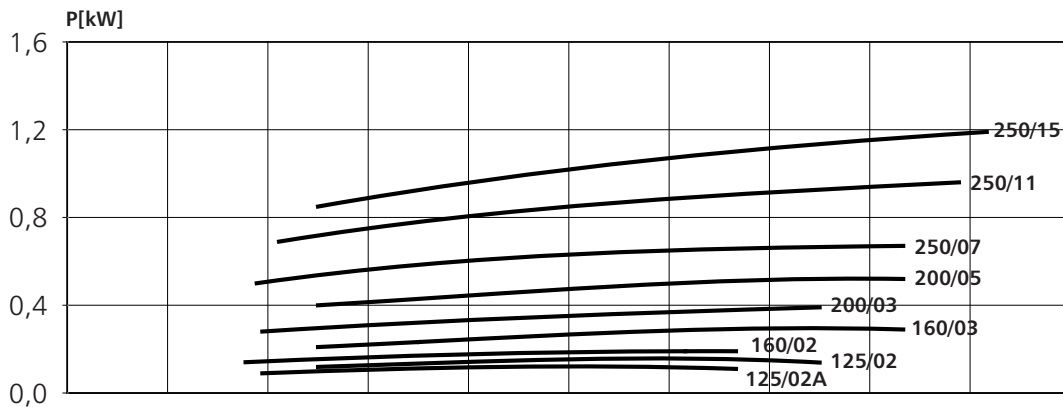
Pump type	kW	Motor type					Input current			rpm	Data for 400 V 50 Hz				
		Size		Design			In (A)				Is/In	η%	cosφ	Cn (Nm)	Cs/Cn
		EQS/EQF	EQX	EQS	EQF	EQX	220-240 V	380-415 V	660 V						
25-125/02A ^{*)}	0.25	71	71		B3	B5	1.30-1.25	0.75-0.72		1390	4.0	64	0.77	1.72	2.35
25-125/02 ^{*)}	0.25	71	71		B3	B5	1.30-1.25	0.75-0.72		1390	4.0	64	0.77	1.72	2.35
25-160/02 ^{*)}	0.25	71	71		B3	B5	1.30-1.25	0.75-0.72		1390	4.0	64	0.77	1.72	2.35
25-160/03 ^{*)}	0.37	71	71		B3	B5	1.85-1.80	1.07-1.04		1400	4.2	65	0.78	2.52	2.40
25-200/03 ^{*)}	0.37	71	71		B3	B5	1.85-1.80	1.07-1.04		1400	4.2	65	0.78	2.52	2.40
25-200/05 ^{*)}	0.55	80	90R		B3	B14	2.70-2.60	1.55-1.50		1410	4.4	69	0.77	3.72	1.95
25-250/07	0.75	80	90R	B5	B3	B14	3.60-3.50	2.10-2.00		1410	4.9	69	0.77	5.10	1.90
25-250/11	1.1	90	90	B5	B3	B5	4.80-4.70	2.80-2.70		1410	4.5	75	0.77	7.40	2.25
25-250/15	1.5	90	90	B5	B3	B5	6.20-6.00	3.60-3.50		1410	5.1	75	0.81	10.20	2.40

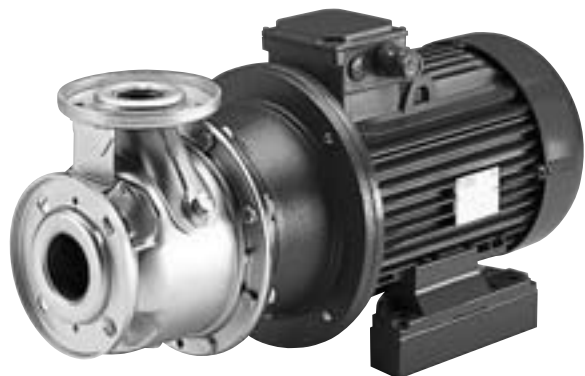
^{*)} not available in EQS version

Performance curves at 2900 rpm



Performance curves at 1450 rpm





EQ 32

Product

Horizontal stainless steel pump for pumping hot and cold moderately aggressive liquids, like circulation of water, water supply and industrial washing. The liquid end is in compliance with EN 733 and DIN 24255.

Denomination

Product code EQ 32

Available versions

Method of installation EQX, EQS, EQF

Process data

Liquid temperature -10° C to +110° C
 Maximum pressure 12 bar (PN 12)

Motor data

Enclosed motor with external ventilation and aluminium finned casing.

Frequency 50 Hz
 Insulation class F (+155° C)
 Protection class IP 55

Monitoring equipment

To be provided at installation

Material

Part	Material
Pump body	Stainless steel AISI 316L
Seal housing	
Impeller	
Adapter:	
125,160, 200 4-pole	Aluminium
200 2-pole, 250	Cast iron
O-rings	FPM
Wear rings	Stainless steel AISI 316L
Shaft (EQX, EQF)	Stainless steel AISI 316L
Coupling (EQS)	Stainless steel AISI 316
Support body (EQF)	Cast Iron
Fill and drain plugs	AISI 316L

Mechanical face seals

Alternative	Seal
1 Standard	Ceramic/ Carbon/ FPM
2	Tungsten carbide/ Carbon/ EPDM or FPM
3	Tungsten carbide/ Silicon carbide/ EPDM or FPM
4	Tungsten carbide/ Tungsten carbide/ EPDM or FPM
5	Silicon carbide/ Silicon carbide/ EPDM or FPM

Option

Version with Technovar frequency converter available on request

Motor rating

EQS/EQF, EQX 32

Three-phase 2-pole, 2900 rpm

Pump type	kW	Motor type					Input current			Data for 400 V 50 Hz					
		Size		Design			In (A)			rpm	Is/In	η%	cosφ	Cn (Nm)	Cs/Cn
		EQS/EQF	EQX	EQS	EQF	EQX	220-240 V	380-415 V	660 V						
32-125/07	0.75	80	90R	B5	B3	B14	3.20-3.30	1.85-1.90		2835	5.5	72	0.79	2.53	3.60
32-125/11	1.10	80	90R	B5	B3	B14	4.50-4.50	2.60-2.60		2845	6.4	75	0.81	3.69	3.85
32-160/15	1.50	90R	90R	B5	B3	B14	6.20-6.00	3.60-3.50		2845	6.6	73	0.83	5.00	4.20
32-160/22	2.20	90R	90R	B5	B3	B14	8.50-8.30	4.90-4.80		2860	6.9	77	0.85	7.30	2.90
32-200/30	3.00	100	90	B5	B3	B14	11.20-10.90	6.50-6.30		2875	6.3	80	0.85	10.00	2.60
32-200/40	4.00	112R	112R	B5	B3	B14		8.50-8.30	4.9	2885	7.5	81	0.85	13.20	3.15
32-250/55	5.50	132R	112	B5	B3	B14		11.50-11.20	6.6	2910	7.8	82	0.85	18.00	3.00
32-250/75	7.50	132R	112	B5	B3	B14		15.50-15.00	8.9	2905	7.0	82	0.85	24.70	2.60
32-250/110	11.00	160	132	B35	B3	B14		22.50-21.00	13.0	2930	7.1	86	0.88	36.20	3.40

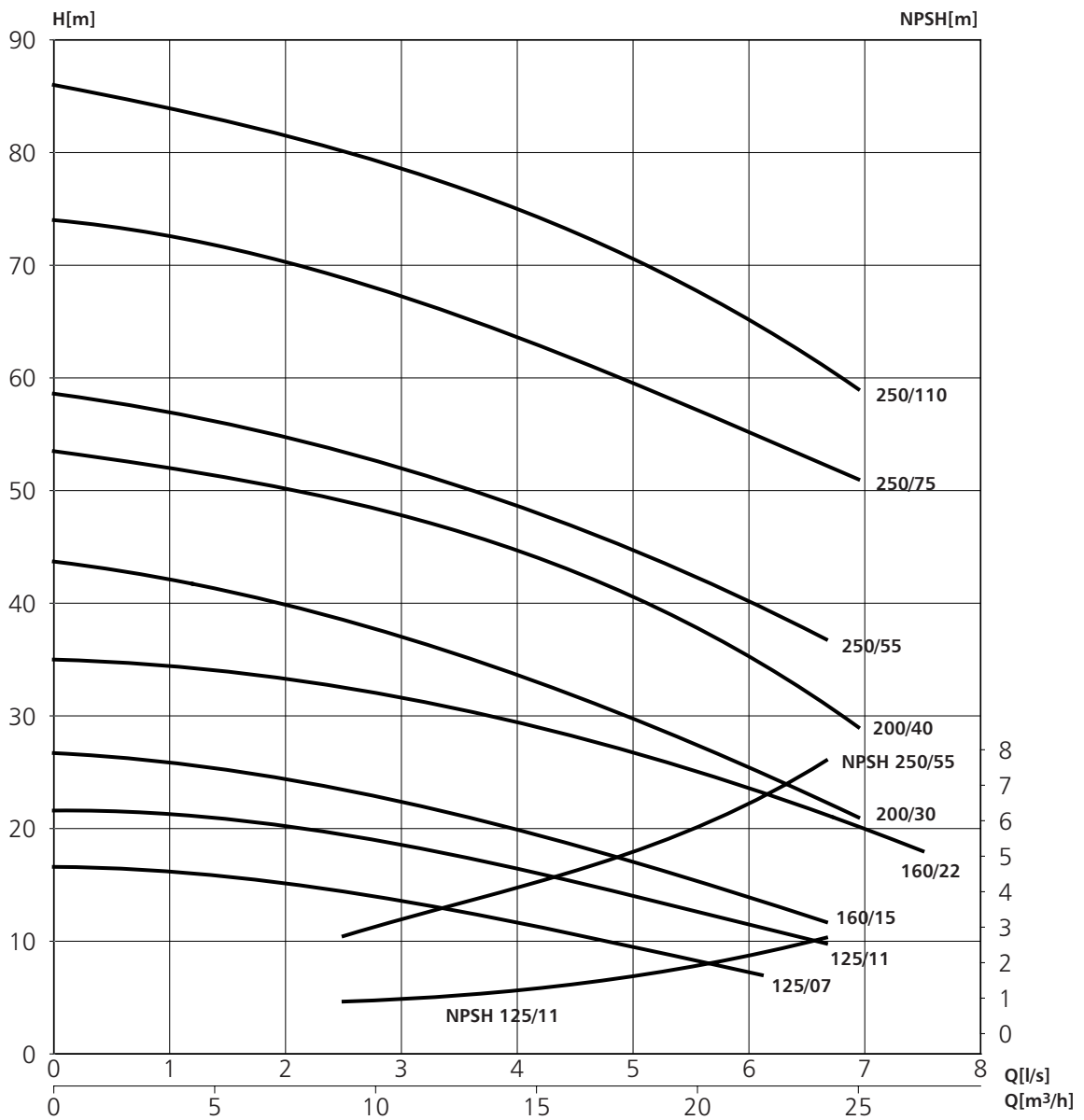
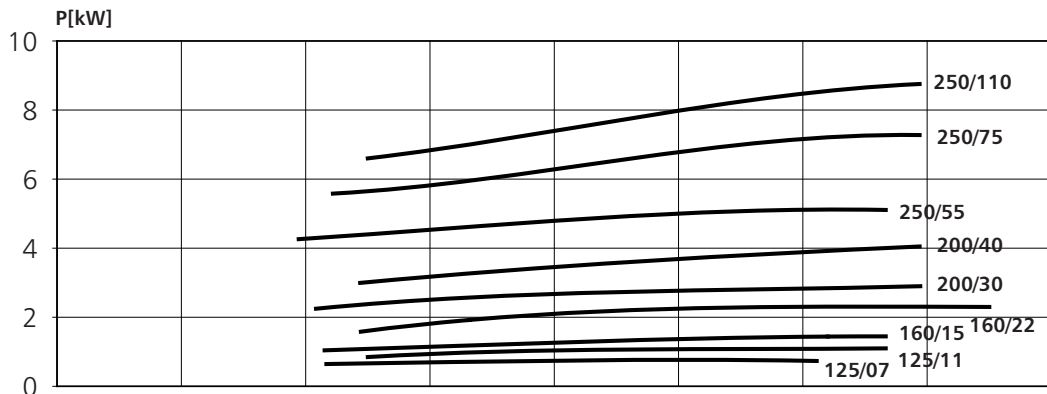
EQS/EQF, EQX 32

Three-phase 4-pole, 1450 rpm

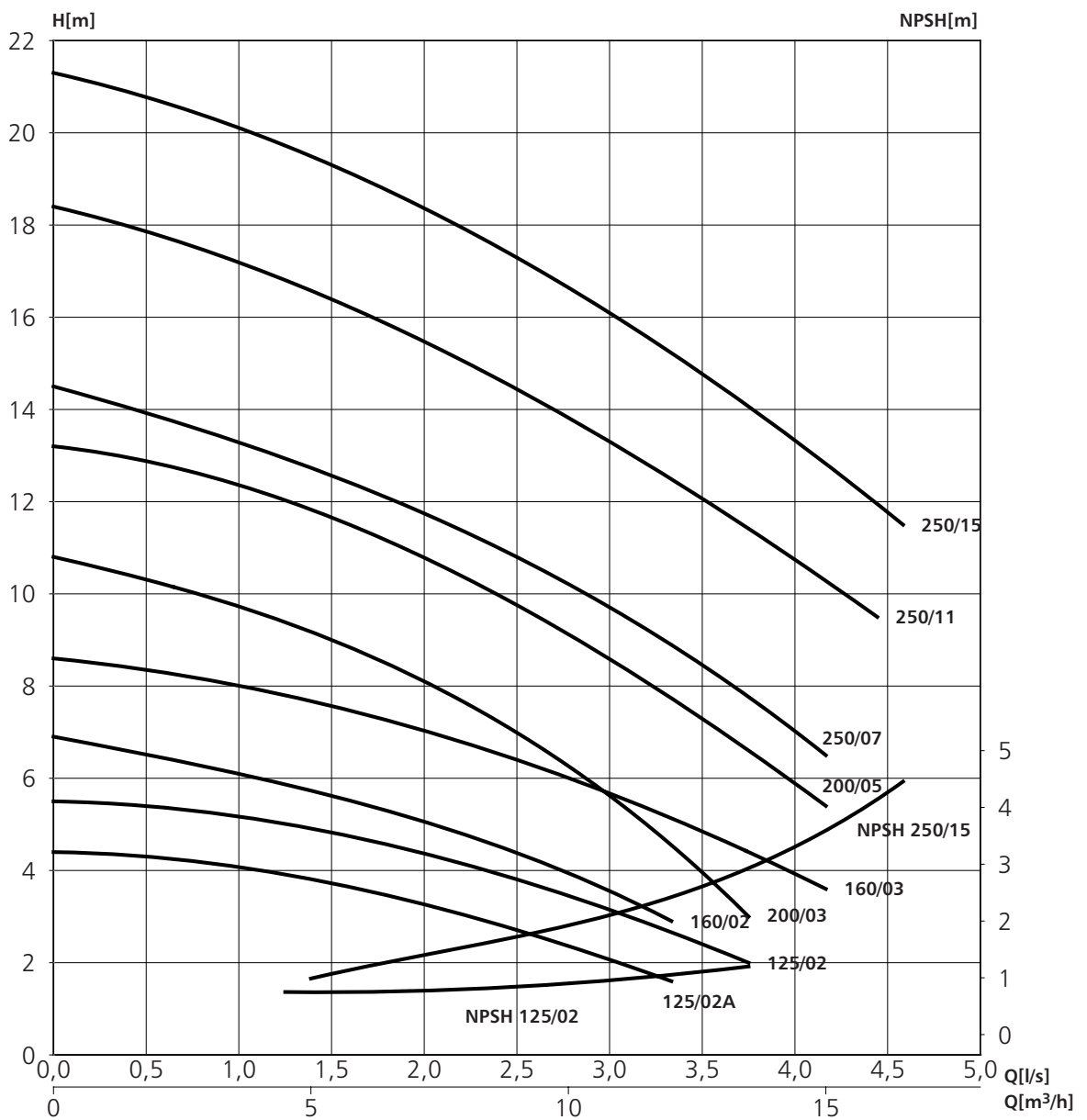
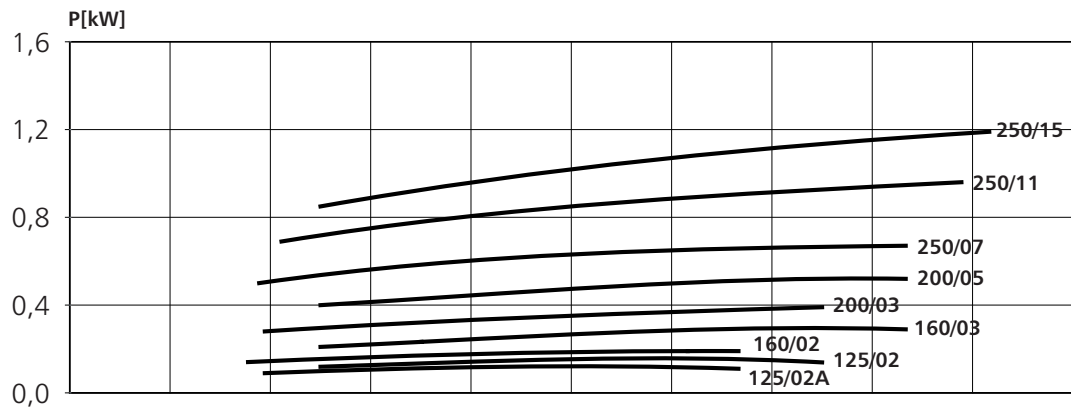
Pump type	kW	Motor type					Input current			Data for 400 V 50 Hz					
		Size		Design			In (A)			rpm	Is/In	η%	cosφ	Cn (Nm)	Cs/Cn
		EQS/EQF	EQX	EQS	EQF	EQX	220-240 V	380-415 V	660 V						
32-125/02A ^{*)}	0.25	71	71		B3	B5	1.30-1.25	0.75-0.72		1390	4.0	64	0.77	1.72	2.35
32-125/02 ^{*)}	0.25	71	71		B3	B5	1.30-1.25	0.75-0.72		1390	4.0	64	0.77	1.72	2.35
32-160/02 ^{*)}	0.25	71	71		B3	B5	1.30-1.25	0.75-0.72		1390	4.0	64	0.77	1.72	2.35
32-160/03 ^{*)}	0.37	71	71		B3	B5	1.85-1.80	1.07-1.04		1400	4.2	65	0.78	2.52	2.40
32-200/03 ^{*)}	0.37	71	71		B3	B5	1.85-1.80	1.07-1.04		1400	4.2	65	0.78	2.52	2.40
32-200/05 ^{*)}	0.55	80	90R		B3	B14	2.70-2.60	1.55-1.50		1410	4.4	69	0.77	3.72	1.95
32-250/07	0.75	80	90R	B5	B3	B14	3.60-3.50	2.10-2.00		1410	4.9	69	0.77	5.10	1.90
32-250/11	1.1	90	90	B5	B3	B5	4.80-4.70	2.80-2.70		1410	4.5	75	0.77	7.40	2.25
32-250/15	1.5	90	90	B5	B3	B5	6.20-6.00	3.60-3.50		1410	5.1	75	0.81	10.20	2.40

^{*)} not available in EQS version

Performance curves at 2900 rpm



Performance curves at 1450 rpm





EQ 40

Product

Horizontal stainless steel pump for pumping hot and cold moderately aggressive liquids, like circulation of water, water supply and industrial washing. The liquid end is in compliance with EN 733 and DIN 24255.

Denomination

Product code EQ 40

Available versions

Method of installation EQX, EQS, EQF

Process data

Liquid temperature -10° C to +110° C

Maximum pressure 12 bar (PN 12)

Motor data

Enclosed motor with external ventilation and aluminium finned casing.

Frequency 50 Hz
 Insulation class F (+155° C)
 Protection class IP 55

Monitoring equipment

To be provided at installation

Material

Part	Material
Pump body	Stainless steel AISI 316L
Seal housing	
Impeller	Aluminium
Adapter: 125,160, 200 4-pole	
200 2-pole, 250	Cast iron
O-rings	FPM
Wear rings	Stainless steel AISI 316L
Shaft (EQX, EQF)	Stainless steel AISI 316L
Coupling (EQS)	Stainless steel AISI 316
Support body (EQF)	Cast Iron
Fill and drain plugs	AISI 316L

Mechanical face seals

Alternative	Seal
1 Standard	Ceramic/ Carbon/ FPM
2	Tungsten carbide/ Carbon/ EPDM or FPM
3	Tungsten carbide/ Silicon carbide/ EPDM or FPM
4	Tungsten carbide/ Tungsten carbide/ EPDM or FPM
5	Silicon carbide/ Silicon carbide/ EPDM or FPM

Option

Version with Technovar frequency converter available on request

Motor rating

EQS/EQF, EQX 40

Three-phase 2-pole, 2900 rpm

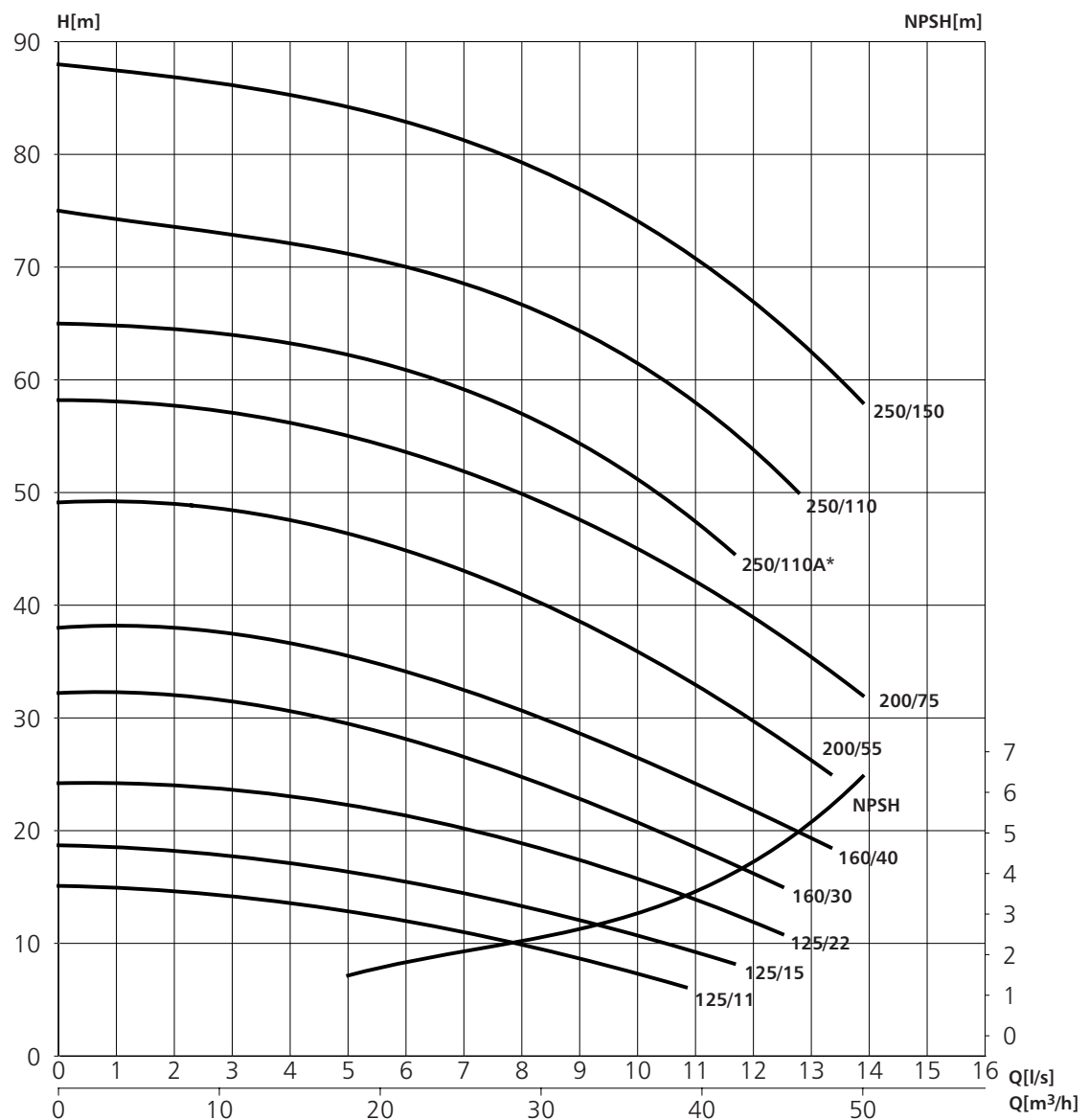
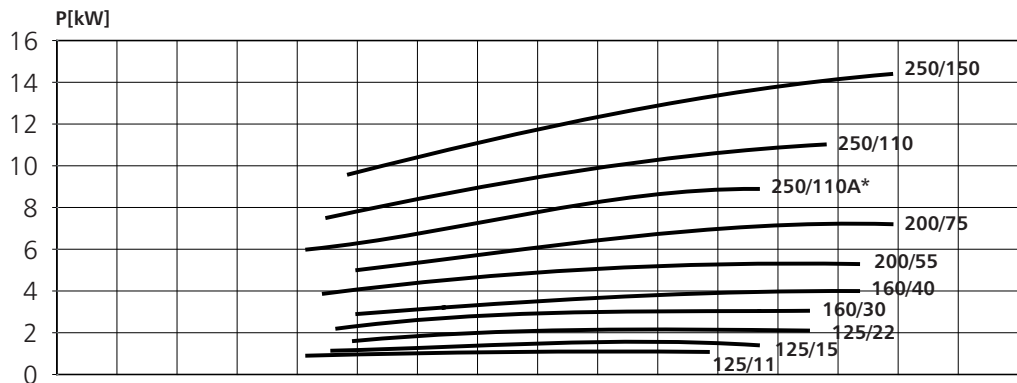
Pump type	kW	Motor type					Input current			rpm	Data for 400 V 50 Hz				
		Size		Design			In (A)				Is/In	η%	cosφ	Cn (Nm)	Cs/Cn
		EQS/EQF	EQX	EQS	EQF	EQX	220-240 V	380-415 V	660 V						
40-125/11	1.1	80	90R	B5	B3	B14	4.5-4.5	2.6-2.6		2845	6.4	75	0.81	3.69	3.85
40-125/15	1.5	90R	90R	B5	B3	B14	6.2-6.0	3.6-3.5		2845	6.6	73	0.83	5.00	4.20
40-125/22	2.2	90R	90R	B5	B3	B14	8.5-8.3	4.9-4.8		2860	6.9	77	0.85	7.30	2.90
40-160/30	3.0	100	90	B5	B3	B14	11.2-10.9	6.5-6.3		2875	6.3	80	0.85	10.00	2.60
40-160/40	4.0	112R	112R	B5	B3	B14		8.5-8.3	4.9	2885	7.5	81	0.85	13.20	3.15
40-200/55	5.5	132R	112	B5	B3	B14		11.5-11.2	6.6	2910	7.8	82	0.85	18.00	3.00
40-200/75	7.5	132R	112	B5	B3	B14		15.5-15.0	8.9	2905	7.0	82	0.85	24.70	2.60
40-250/92	9.2		132			B14		18.4-17.8	10.6	2920	7.3	85	0.88	30.00	3.50
40-250/110A	11.0	160		B35	B3			22.5-21.0	13.0	2930	7.1	86	0.88	36.20	3.40
40-250/110	11.0	160	132	B35	B3	B14		22.5-21.0	13.0	2930	7.1	86	0.88	36.20	3.40
40-250/150	15.0	160	160	B35	B3	B34		30.0-28.5	17.3	2945	8.4	88	0.89	49.00	4.30

EQS/EQF, EQX 40

Three-phase 4-pole, 1450 rpm

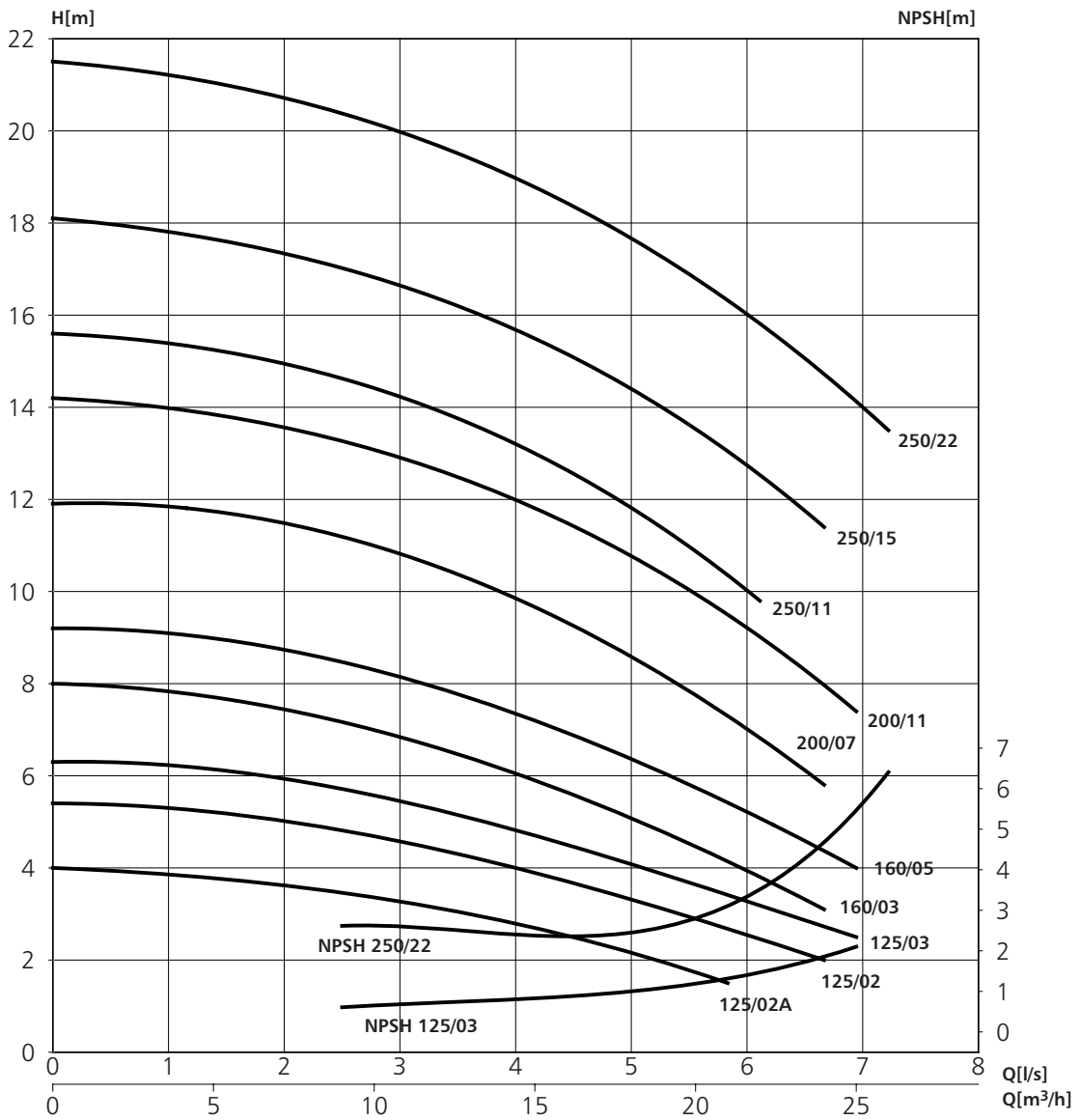
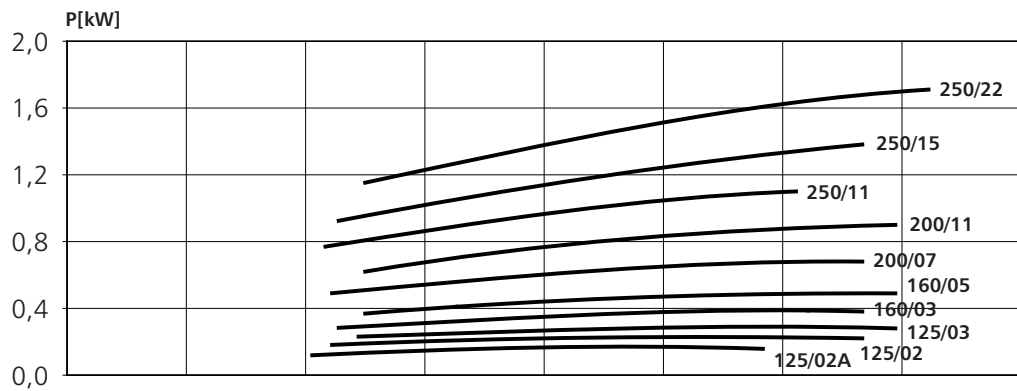
Pump type	kW	Motor type					Input current			rpm	Data for 400 V 50 Hz				
		Size		Design			In (A)				Is/In	η%	cosφ	Cn (Nm)	Cs/Cn
		EQS/EQF	EQX	EQS	EQF	EQX	220-240 V	380-415 V	660 V						
40-125/02A	0.25	71	71		B3	B5	1.30-1.25	0.75-0.72		1390	4.0	64	0.77	1.72	2.35
40-125/02	0.25	71	71		B3	B5	1.30-1.25	0.75-0.72		1390	4.0	64	0.77	1.72	2.35
40-125/03	0.37	71	71		B3	B5	1.85-1.80	1.07-1.04		1400	4.2	65	0.78	2.52	2.40
40-160/03	0.37	71	71		B3	B5	1.85-1.80	1.07-1.04		1400	4.2	65	0.78	2.52	2.40
40-160/05	0.55	80	90R	B5	B3	B14	2.70-2.60	1.55-1.50		1410	4.4	69	0.77	3.72	1.95
40-200/07	0.75	80	90R	B5	B3	B5	3.60-3.50	2.10-2.00		1410	4.9	69	0.77	5.10	1.90
40-200/11	1.10	90	90	B5	B3	B5	4.80-4.70	2.80-2.70		1410	4.5	75	0.77	7.40	2.25
40-250/11	1.10	90	90	B5	B3	B5	4.80-4.70	2.80-2.70		1410	4.5	75	0.77	7.40	2.25
40-250/15	1.50	90	90	B5	B3	B5	6.20-6.00	3.60-3.50		1410	5.1	75	0.81	10.20	2.40
40-250/22	2.20	100	100	B5	B3	B5	9.00-8.60	5.20-5.00		1410	5.0	78	0.80	14.80	2.20

Performance curves at 2900 rpm



*250/92 for version EQX

Performance curves at 1450 rpm





EQ 50

Product

Horizontal stainless steel pump for pumping hot and cold moderately aggressive liquids, like circulation of water, water supply and industrial washing. The liquid end is in compliance with EN 733 and DIN 24255.

Denomination

Product code EQ 50

Available versions

Method of installation EQX, EQS, EQF

Process data

Liquid temperature -10° C to +110° C

Maximum pressure 12 bar (PN 12)

Motor data

Enclosed motor with external ventilation and aluminium finned casing.

Frequency 50 Hz
 Insulation class F (+155° C)
 Protection class IP 55

Monitoring equipment

To be provided at installation

Material

Part	Material
Pump body	Stainless steel AISI 316L
Seal housing	
Impeller	
Adapter:	
125,160, 200 4-pole	Aluminium
200 2-pole, 250	Cast iron
O-rings	FPM
Wear rings	Stainless steel AISI 316L
Shaft (EQX, EQF)	Stainless steel AISI 316L
Coupling (EQS)	Stainless steel AISI 316
Support body (EQF)	Cast Iron
Fill and drain plugs	AISI 316L

Mechanical face seals

Alternative	Seal
1 Standard	Ceramic/ Carbon/ FPM
2	Tungsten carbide/ Carbon/ EPDM or FPM
3	Tungsten carbide/ Silicon carbide/ EPDM or FPM
4	Tungsten carbide/ Tungsten carbide/ EPDM or FPM
5	Silicon carbide/ Silicon carbide/ EPDM or FPM

Option

Version with Technovar frequency converter available on request

Motor rating

EQS/EQF, EQX 50

Three-phase 2-pole, 2900 rpm

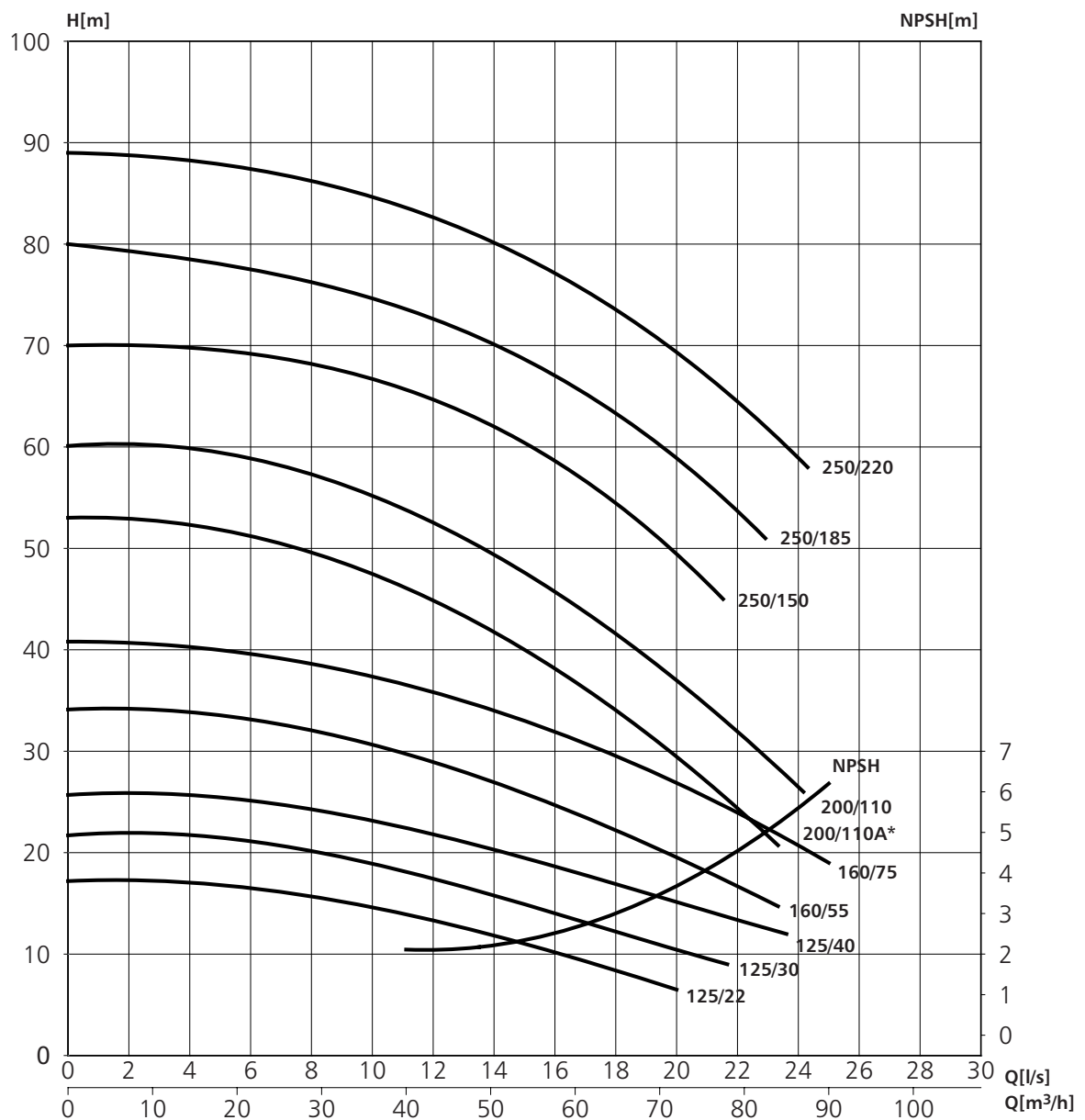
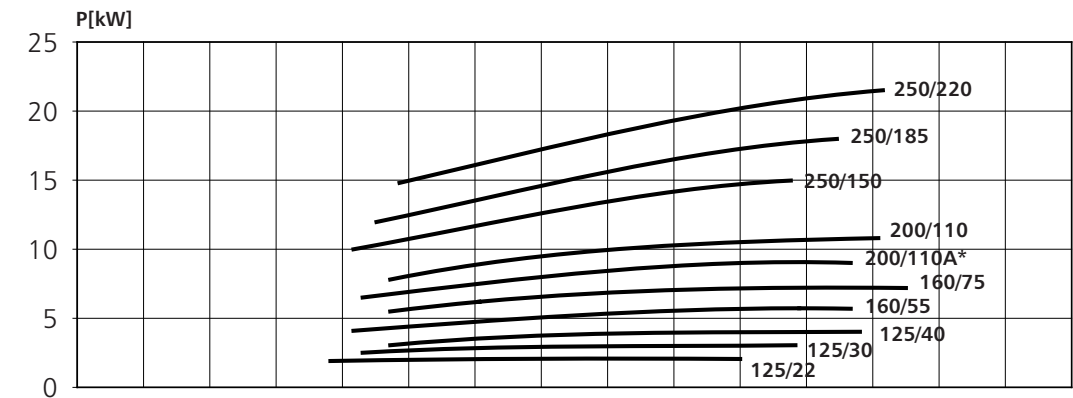
Pump type	kW	Motor type					Input current			rpm	Data for 400 V 50 Hz				
		Size		Design			In (A)				Is/In	η%	cosφ	Cn (Nm)	Cs/Cn
		EQS/EQF	EQX	EQS	EQF	EQX	220-240 V	380-415 V	660 V						
50-125/22	2.2	90R	90R	B5	B3	B14	8.5-8.3	4.9-4.8		2860	6.9	77	0.85	7.3	2.90
50-125/30	3.0	100	90	B5	B3	B14	11.2-10.9	6.5-6.3		2875	6.3	80	0.85	10.0	2.60
50-125/40	4.0	112R	112R	B5	B3	B14		8.5-8.3	4.9	2885	7.5	81	0.85	13.2	3.15
50-160/55	5.5	132R	112	B5	B3	B14		11.5-11.2	6.6	2910	7.8	82	0.85	18.0	3.00
50-160/75	7.5	132R	112	B5	B3	B14		15.5-15.0	8.9	2905	7.0	82	0.85	24.7	2.60
50-200/92	9.2		132			B14		18.4-17.8	10.6	2920	7.3	85	0.88	36.2	3.70
50-200/110A	11.0	160		B35	B3			22.5-21.0	13.0	2930	7.1	86	0.88	36.2	3.40
50-200/110	11.0	160	132	B35	B3	B14		22.5-21.0	13.0	2930	7.1	86	0.88	36.2	3.40
50-250/150	15.0	160	160	B35	B3	B34		30.0-28.5	17.3	2945	8.4	88	0.89	49.0	4.30
50-250/185	18.5	160	160	B35	B3	B34		36.4-34.5	21.0	2940	7.8	89	0.87	60.0	3.60
50-250/220	22.0	180R	160	B35	B3	B34		43.0-40.5	24.8	2930	7.5	89	0.89	72.0	4.40

EQS/EQF, EQX 50

Three-phase 4-pole, 1450 rpm

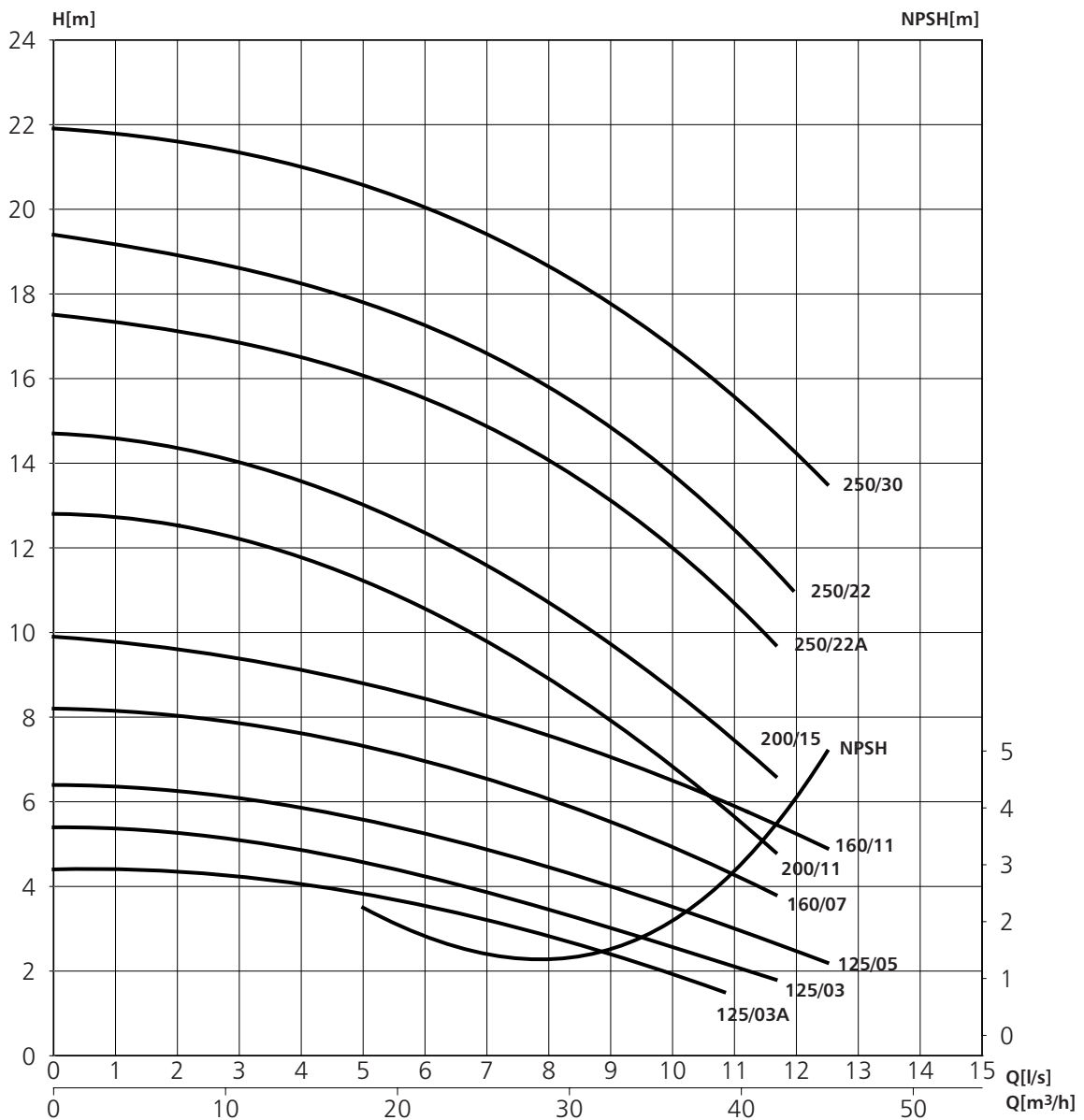
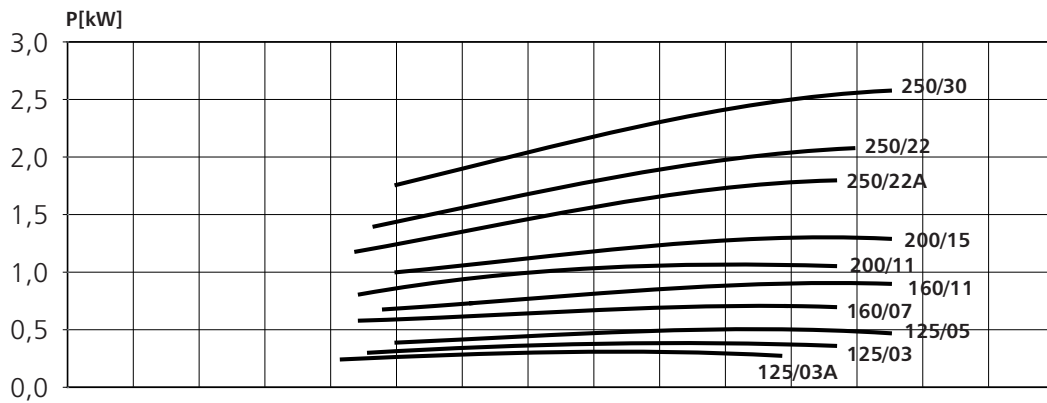
Pump type	kW	Motor type					Input current			rpm	Data for 400 V 50 Hz				
		Size		Design			In (A)				Is/In	η%	cosφ	Cn (Nm)	Cs/Cn
		EQS/EQF	EQX	EQS	EQF	EQX	220-240 V	380-415 V	660 V						
50-125/03A	0.37	71	71		B3	B5	1.85-1.80	1.07-1.04		1410	4.2	65	0.78	2.52	2.4
50-125/03	0.37	71	71		B3	B5	1.85-1.80	1.07-1.04		1400	4.2	65	0.78	2.52	2.40
50-125/05	0.55	80	90R	B5	B3	B14	2.70-2.60	1.55-1.50		1410	4.4	69	0.77	3.72	1.95
50-160/07	0.75	80	90R	B5	B3	B5	3.60-3.50	2.10-2.00		1410	4.9	69	0.77	5.10	1.90
50-160/11	1.10	90	90	B5	B3	B5	4.80-4.70	2.80-2.70		1410	4.5	75	0.77	7.40	2.25
50-200/11	1.10	90	90	B5	B3	B5	4.80-4.70	2.80-2.70		1410	4.5	75	0.77	7.40	2.25
50-200/15	1.50	90	90	B5	B3	B5	6.20-6.00	3.60-3.50		1410	5.1	75	0.81	10.20	2.40
50-250/22A	2.20	100		B5	B3		9.00-8.60	5.20-5.00		1410	5.0	78	0.80	14.80	2.20
50-250/22	2.20	100	100	B5	B3	B5	9.00-8.60	5.20-5.00		1410	5.0	78	0.80	14.80	2.20
50-250/30	3.00	100	100	B5	B3	B5	12.00-11.60	06.90-6.70		1410	5.8	81	0.81	20.20	2.50

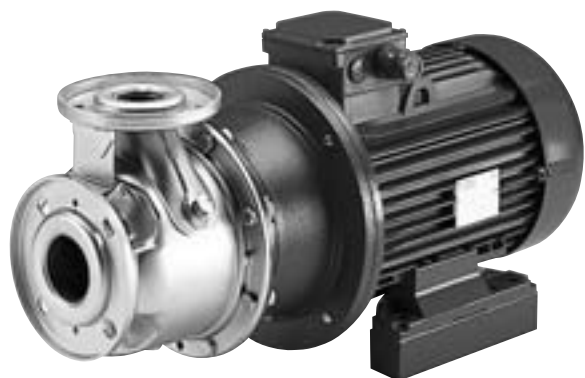
Performance curves at 2900 rpm



* 200/92 for version EQX

Performance curves at 1450 rpm





EQ 65

Product

Horizontal stainless steel pump for pumping hot and cold moderately aggressive liquids, like circulation of water, water supply and industrial washing. The liquid end is in compliance with EN 733 and DIN 24255.

Denomination

Product code EQ 65

Available versions

Method of installation EQX, EQS, EQF

Process data

Liquid temperature -10° C to +110° C
 Maximum pressure 12 bar (PN 12)

Motor data

Enclosed motor with external ventilation and aluminium finned casing.

Frequency 50 Hz
 Insulation class F (+155° C)
 Protection class IP 55

Monitoring equipment

To be provided at installation

Material

Part	Material
Pump body	Stainless steel AISI 316L
Seal housing	Stainless steel AISI 316L
Impeller :	
160	Stainless steel AISI 316L (Pressed)
200,250	Stainless steel CF-8M(Casted)
Adapter	Cast iron
O-rings	FPM
Wear rings	Stainless steel AISI 316L
Shaft (EQX, EQF)	Stainless steel AISI 316L
Coupling (EQS)	Stainless steel AISI 316
Support body (EQF)	Cast Iron
Fill and drain plugs	Stainless steel AISI 316L

Mechanical face seals

Alternative	Seal
1 Standard	Ceramic/ Carbon/ FPM
2	Tungsten carbide/ Carbon/ EPDM or FPM
3	Tungsten carbide/ Silicon carbide/ EPDM or FPM
4	Tungsten carbide/ Tungsten carbide/ EPDM or FPM
5	Silicon carbide/ Silicon carbide/ EPDM or FPM

Option

Version with Technovar frequency converter available on request

Motor rating

EQS/EQF, EQX 65

Three-phase 2-pole, 2900 rpm

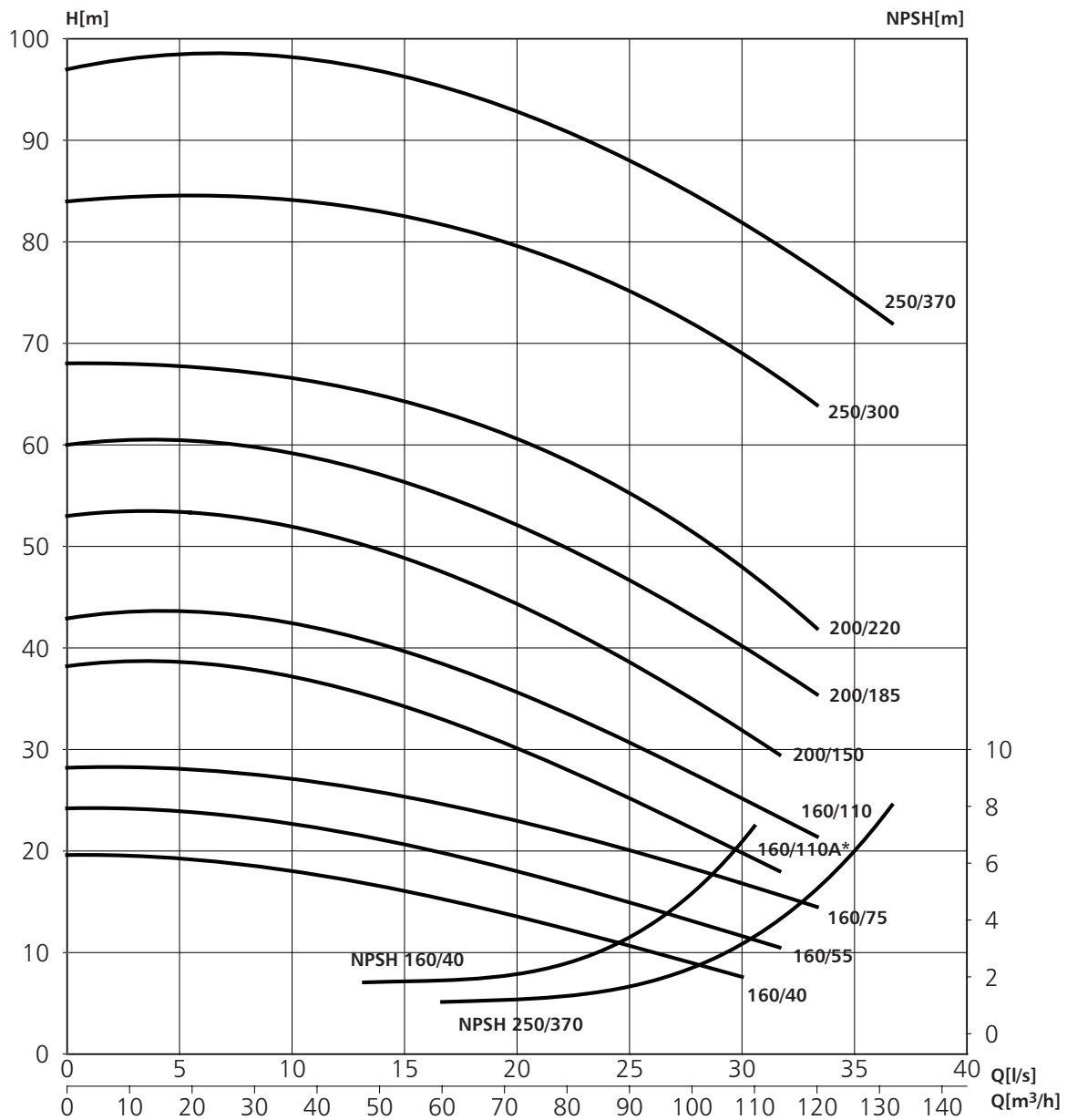
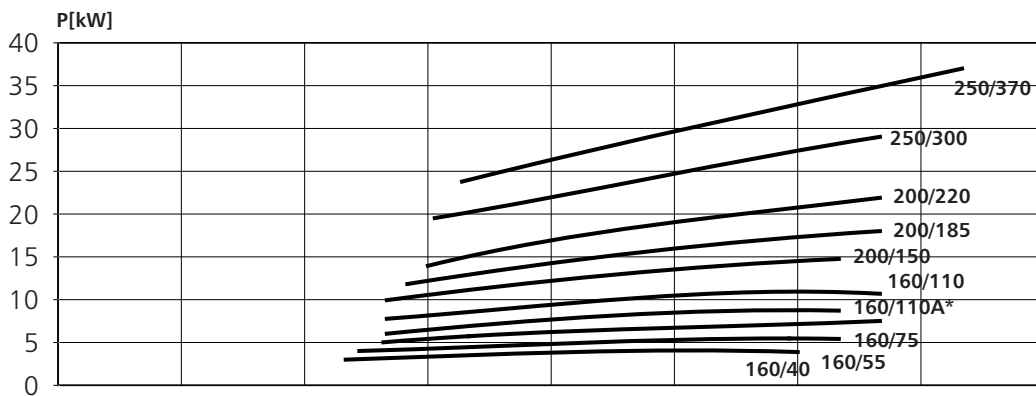
Pump type	kW	Motor type					Input current			rpm	Data for 400 V 50 Hz				
		Size		Design			In (A)				Is/In	η%	cosφ	Cn (Nm)	Cs/Cn
		EQS/EQF	EQX	EQS	EQF	EQX	220-240 V	380-415 V	660 V						
65-160/40	4.0	112R	112R	B5	B3	B14		8.5-8.3	4.9	2885	7.5	81	0.85	13.2	3.15
65-160/55	5.5	132R	112	B5	B3	B14		11.5-11.2	6.6	2910	7.8	82	0.85	18.0	3.00
65-160/75	7.5	132R	112	B5	B3	B14		15.5-15.0	8.9	2905	7.0	82	0.85	24.7	2.60
65-160/92	9.2		132			B14		18.4-17.8	10.6	2920	7.3	85	0.88	30.0	3.50
65-160/110A	11.0	160		B35	B3			22.5-21.0	13.0	2930	7.1	86	0.88	36.2	3.40
65-160/110	11.0	160	132	B35	B3	B14		22.5-21.0	13.0	2930	7.1	86	0.88	36.2	3.40
65-200/150	15.0	160	160	B35	B3	B34		30.0-28.5	17.3	2945	8.4	88	0.89	49.0	4.30
65-200/185	18.5	160	160	B35	B3	B34		36.4-34.5	21.0	2940	7.8	89	0.87	60.0	3.60
65-200/220	22.0	180R	160	B35	B3	B34		43.0-40.5	24.8	2930	7.5	89	0.89	72.0	4.40
65-250/300	30.0	200		B35	B3			59.0	34.0	2940	6.8	90	0.84	97.0	2.40
65-250/370	37.0	200		B35	B3			71.5	41.2	2940	7.2	91	0.84	120.0	2.50

EQS/EQF, EQX 65

Three-phase 4-pole, 1450 rpm

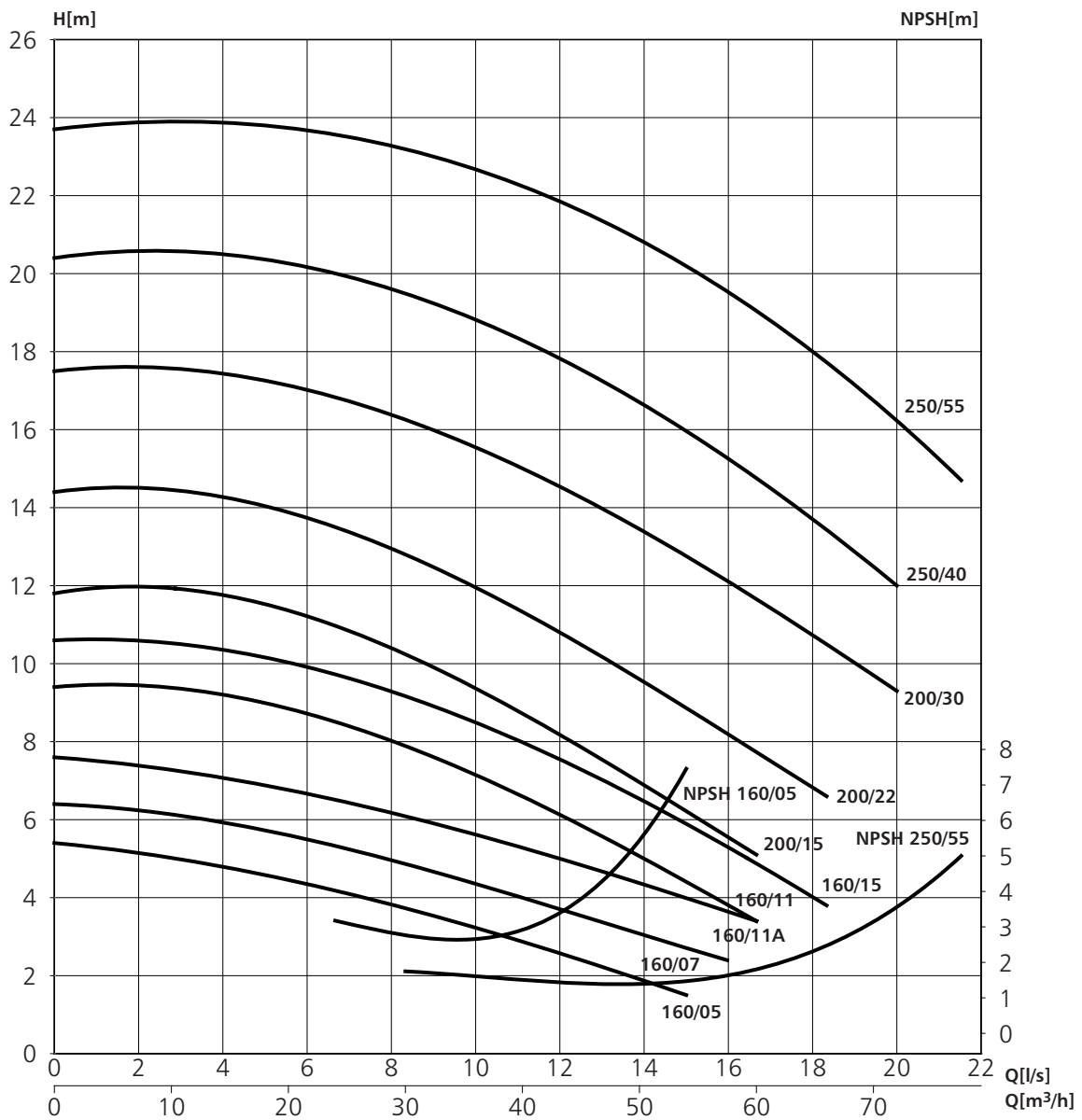
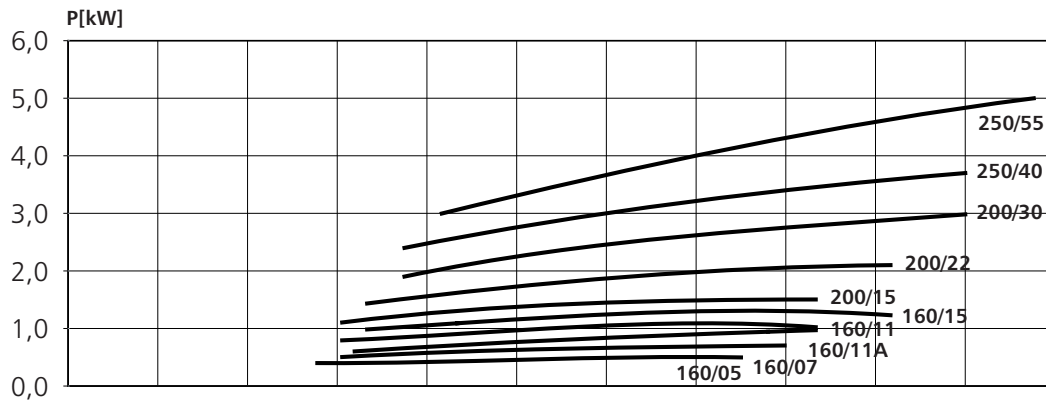
Pump type	kW	Motor type					Input current			rpm	Data for 400 V 50 Hz				
		Size		Design			In (A)				Is/In	η%	cosφ	Cn (Nm)	Cs/Cn
		EQS/EQF	EQX	EQS	EQF	EQX	220-240 V	380-415 V	660 V						
65-160/05	0.55	80	90R	B5	B3	B14	2.7-2.6	1.55-1.5		1410	4.4	69	0.77	3.72	1.95
65-160/07	0.75	80	90R	B5	B3	B5	3.6-3.5	2.1-2.0		1410	4.9	69	0.77	5.1	1.90
65-160/11A	1.10	90	90	B5	B3	B5	4.8-4.7	2.8-2.7		1410	4.5	75	0.77	7.4	2.25
65-160/11	1.10	90	90	B5	B3	B5	4.8-4.7	2.8-2.7		1410	4.5	75	0.77	7.4	2.25
65-160/15	1.50	90	90	B5	B3	B5	6.2-6.0	3.6-3.5		1410	5.1	75	0.81	10.2	2.40
65-200/15	1.50	90	90	B5	B3	B5	6.2-6.0	3.6-3.5		1410	5.1	75	0.81	10.2	2.40
65-200/22	2.20	100	100	B5	B3	B5	9.0-8.6	5.2-5.0		1410	5.0	78	0.80	14.8	2.20
65-200/30	3.00	100	100	B5	B3	B5	12.0-11.6	6.9-6.7		1410	5.8	81	0.81	20.2	2.50
65-250/40	4.00	112		B5	B3			8.7-8.5	5.0	1440	6.7	83	0.82	26.5	2.70
65-250/55	5.50	132		B5	B3			12.4-12.0	7.2	1440	6.8	82	0.87	36.8	2.80

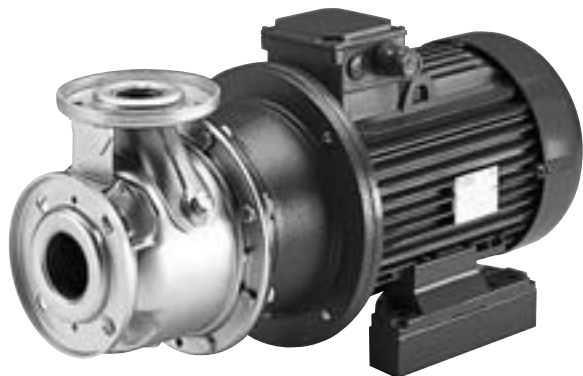
Performance curves at 2900 rpm



*160/92 for version EQX

Performance curves at 1450 rpm





EQ 80

Product

Horizontal stainless steel pump for pumping hot and cold moderately aggressive liquids, like circulation of water, water supply and industrial washing. The liquid end is in compliance with EN 733 and DIN 24255.

Denomination

Product code EQ 80

Available versions

Method of installation EQX, EQS, EQF

Process data

Liquid temperature -10° C to +110° C

Maximum pressure 12 bar (PN 12)

Motor data

Enclosed motor with external ventilation and aluminium finned casing.

Frequency 50 Hz
 Insulation class F (+155° C)
 Protection class IP 55

Monitoring equipment

To be provided at installation

Material

Part	Material
Pump body	Stainless steel AISI 316L
Seal housing	Stainless steel AISI 316L
Impeller	Stainless steel CF-8M(Casted)
Adapter	Cast iron
O-rings	FPM
Wear rings	Stainless steel AISI 316L
Shaft (EQX, EQF)	Stainless steel AISI 316L
Coupling (EQS)	Stainless steel AISI 316
Support body (EQF)	Cast Iron
Fill and drain plugs	Stainless steel AISI 316L

Mechanical face seals

Alternative	Seal
1 Standard	Ceramic/ Carbon/ FPM
2	Tungsten carbide/ Carbon/ EPDM or FPM
3	Tungsten carbide/ Silicon carbide/ EPDM or FPM
4	Tungsten carbide/ Tungsten carbide/ EPDM or FPM
5	Silicon carbide/ Silicon carbide/ EPDM or FPM

Option

Version with Technovar frequency converter available on request

Motor rating

EQS/EQF, EQX 80

Three-phase 2-pole, 2900 rpm

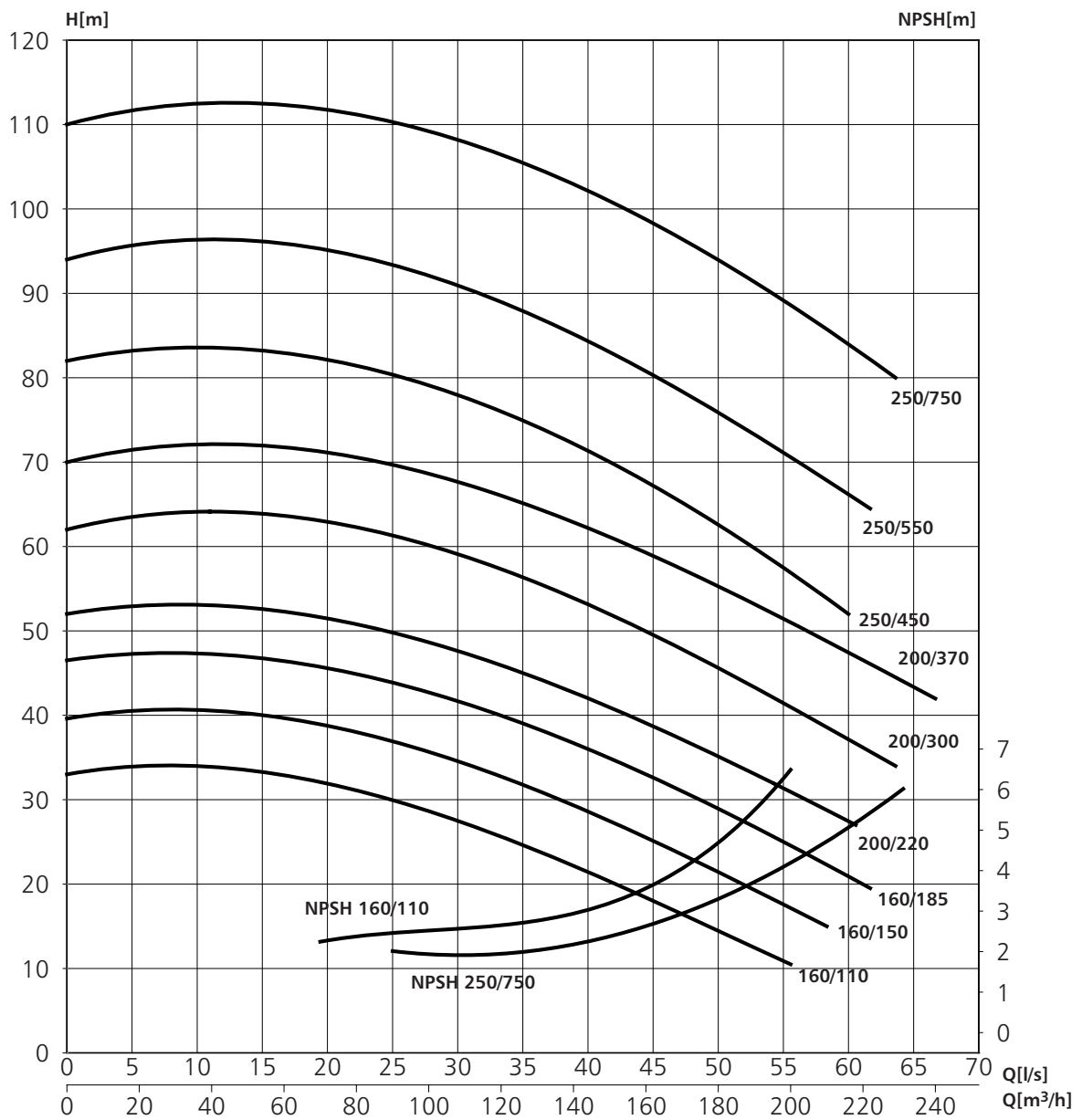
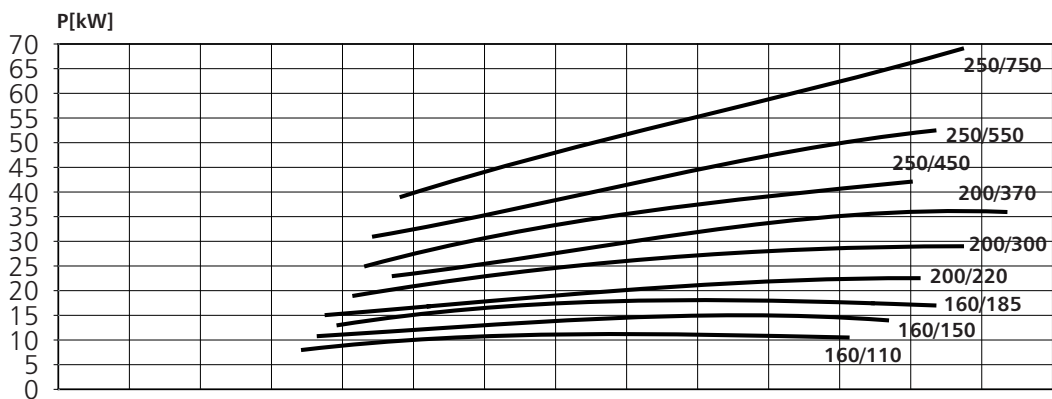
Pump type	kW	Motor type					Input current			rpm	Data for 400 V 50 Hz				
		Size		Design			In (A)				Is/In	η%	cosφ	Cn (Nm)	Cs/Cn
		EQS/EQF	EQX	EQS	EQF	EQX	220-240 V	380-415 V	660 V						
80-160/110	11.0	160	132	B35	B3	B14		22.5-21.0	13.0	2930	7.1	86	0.88	36.2	3.4
80-160/150	15.0	160	160	B35	B3	B34		30.0-28.5	17.3	2945	8.4	88	0.89	49.0	4.3
80-160/185	18.5	160	160	B35	B3	B34		36.4-34.5	21.0	2940	7.8	89	0.87	60.0	3.6
80-200/220	22.0	180R	160	B35	B3	B34		43.0-40.5	24.8	2930	7.5	89	0.89	72.0	4.4
80-200/300	30.0	200		B35	B3			59.0	34.0	2940	6.8	90	0.84	97.0	2.4
80-200/370	37.0	200		B35	B3			71.5	41.2	2940	7.2	91	0.84	120.0	2.5
80-250/450	45.0	225			B3			88.0	50.5	2950	6.7	91	0.85	145.0	2.4
80-250/550	55.0	250			B3			106.0	61.0	2950	6.7	92	0.85	177.0	2.4
80-250/750	75.0	280			B3			134.0	78.0	2965	6.8	92	0.87	241.0	2.3

EQS/EQF, EQX 80

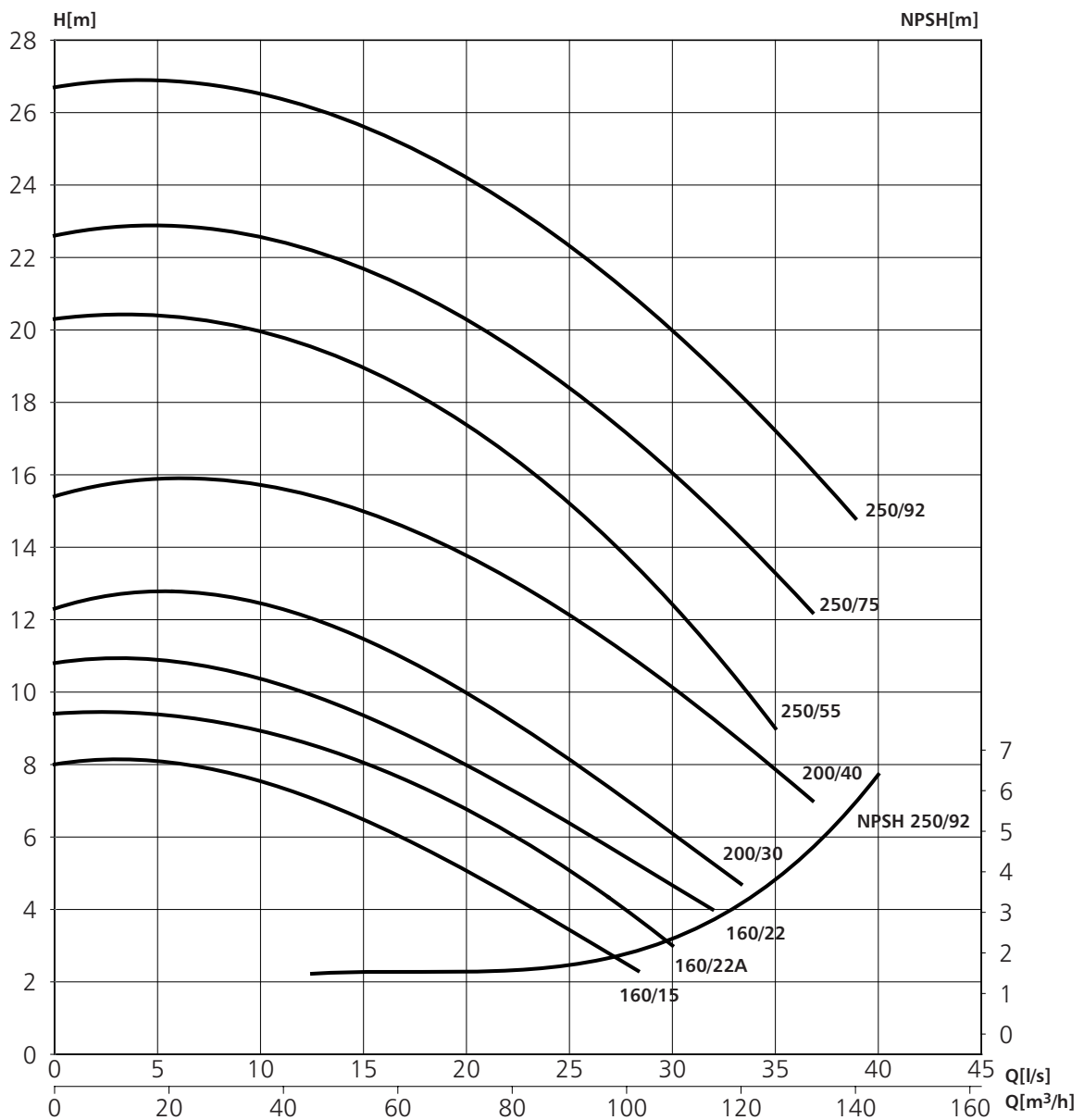
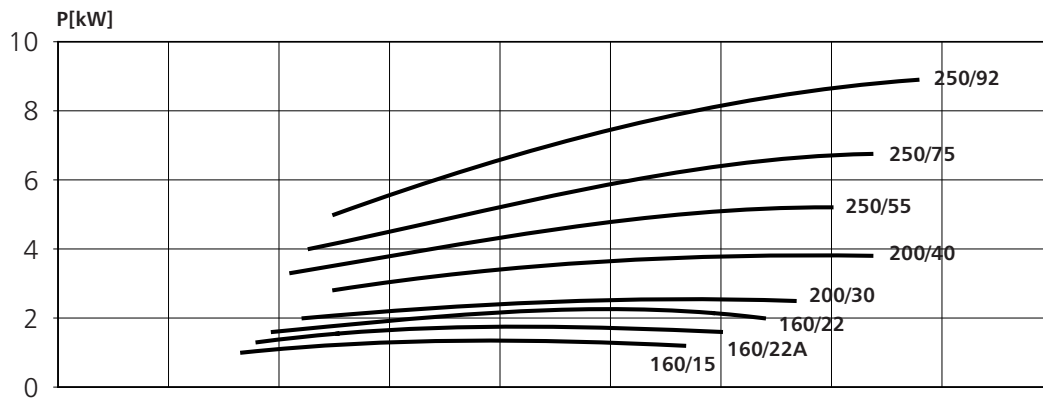
Three-phase 4-pole, 1450 rpm

Pump type	kW	Motor type					Input current			rpm	Data for 400 V 50 Hz				
		Size		Design			In (A)				Is/In	η%	cosφ	Cn (Nm)	Cs/Cn
		EQS/EQF	EQX	EQS	EQF	EQX	220-240 V	380-415 V	660 V						
80-160/15	1.5	90	90	B5	B3	B5	6.2-6.0	3.6-3.5		1410	5.1	75	0.81	10.2	2.4
80-160/22	2.2	100	100	B5	B3	B5	9.0-8.6	5.2-5.0		1410	5.0	78	0.80	14.8	2.2
80-160/22A	2.2	100	100	B5	B3	B5	9.0-8.6	5.2-5.0		1410	5.0	78	0.80	14.8	2.2
80-200/30	3.0	100	100	B5	B3	B5	12.0-11.6	6.9-6.7		1410	5.8	81	0.81	20.2	2.5
80-200/40	4.0	112	112	B5	B3	B5		8.7-8.5	5.0	1440	6.7	83	0.82	26.5	2.7
80-250/55	5.5	132	132	B5	B3	B14		12.4-12.0	7.2	1440	6.8	82	0.87	36.8	2.8
80-250/75	7.5	132	132	B5	B3	B14		15.8-15.4	9.2	1450	7.7	82	0.81	49.5	2.8
80-250/92	9.2	132	132	B5	B3	B14		19.6-18.8	11.5	1445	5.6	88	0.80	60.7	2.8

Performance curves at 2900 rpm

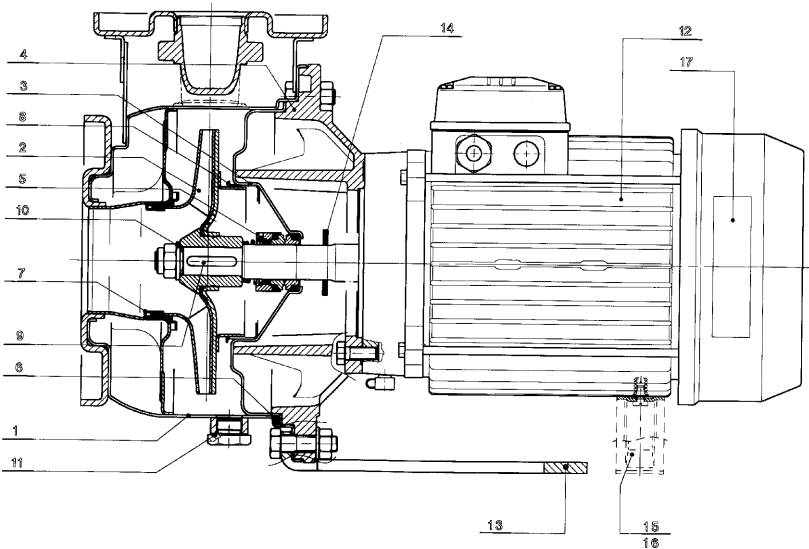


Performance curves at 1450 rpm



Pump parts

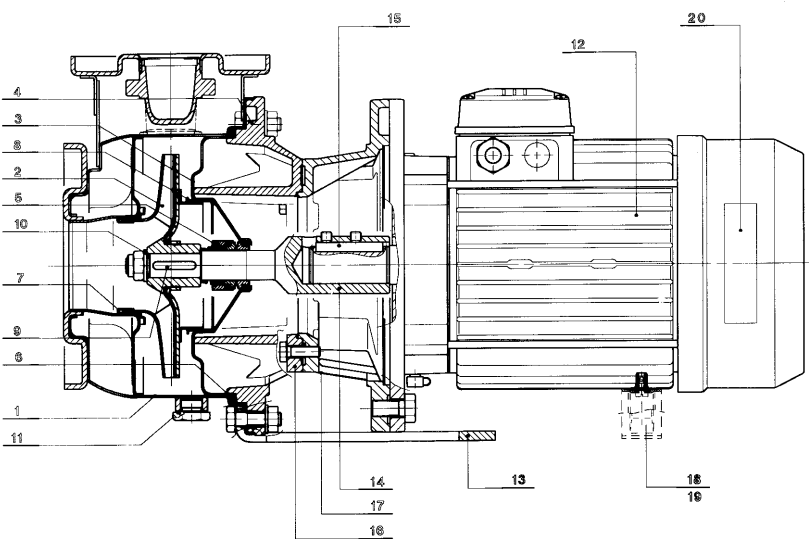
EQX



No.	Description
1	Pump body
2	Impeller
3	Seal holding disc
4	Adapter
* 5	Mechanical seal
* 6	O-ring
7	Wear ring
8	Counterwear ring
9	Key
10	Impeller lock washer
11	O-ring
12	Motor
13	Support foot
14	Spray guard washer
15	Motor support foot
16	Support foot spacer
17	Rating plate

* Recommended spare parts

EQS

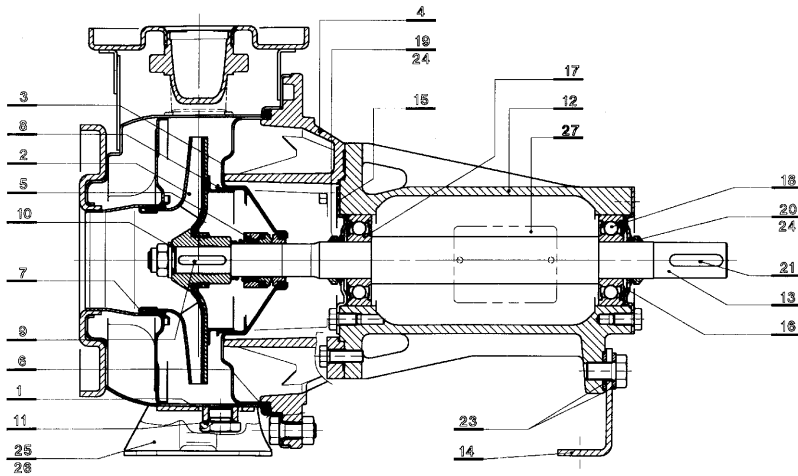


No.	Description
1	Pump body
2	Impeller
3	Seal holding disc
4	Adapter
* 5	Mechanical seal
* 6	O-ring
7	Wear ring
8	Counterwear ring
9	Key
10	Impeller lock washer
11	O-ring
12	Motor
13	Support foot
14	Coupling
15	Key
16	Motor connector
17	Coupling guard
18	Motor support foot
19	Support foot spacer
20	Rating plate

* Recommended spare parts

Pump parts

EQF

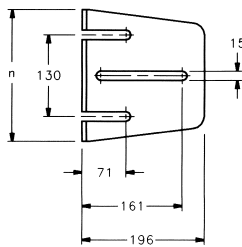
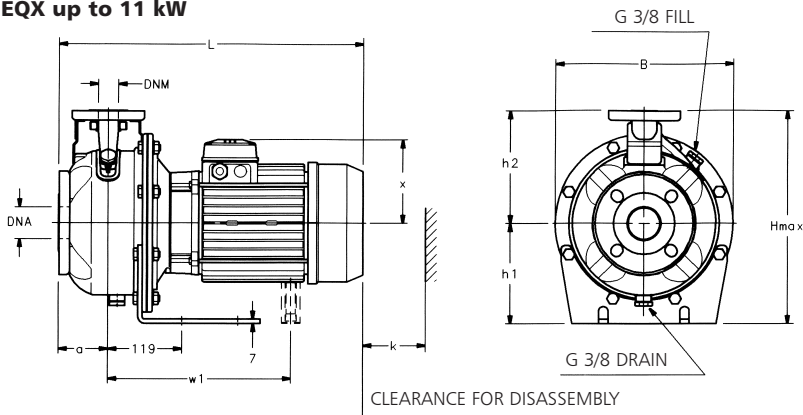


No.	Description
1	Pump body
2	Impeller
3	Seal holding disc
4	Motor/pump support
* 5	Mechanical seal
* 6	O-ring
7	Wear ring
8	Counterwear ring
9	Key
10	Impeller lock washer
11	O-ring
12	Support body
13	Shaft
14	Support foot
15	Cap, pump side
16	Cap, motor side
17	Bearing, pump side
18	Bearing, motor side
19	V-ring, pump side
20	V-ring, motor side
21	Key
23	Washer
24	AS type seal ring
25	Pump body base
26	Cover
27	Pump rating plate

* Recommended spare parts

Dimensions and weights EQX series, 2 poles

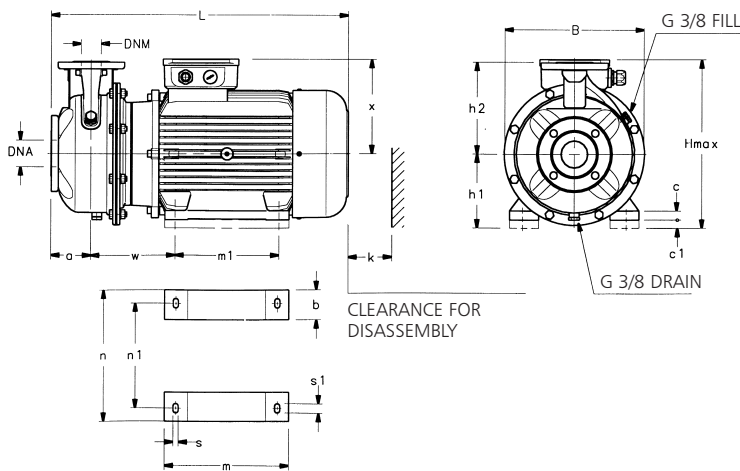
EQX up to 11 kW



Flanges

DN	D	M	G	Holes		Max thickness
				N°	∅	
25	115	85	56	4	14.5	16
32	140	100	64	4	18	16
40	150	110	68	4	18	16
50	165	125	83	4	18	18
65	185	145	104	4	18	18

EQX from 15 kW



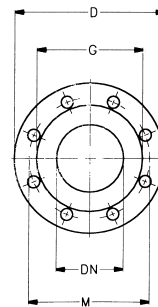
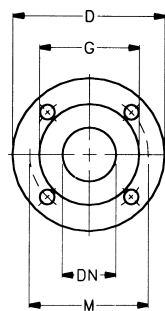
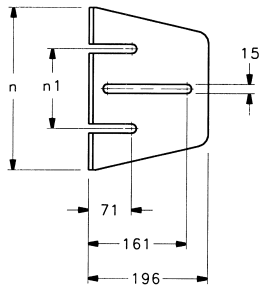
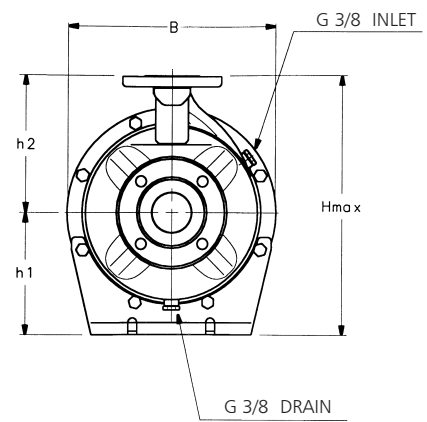
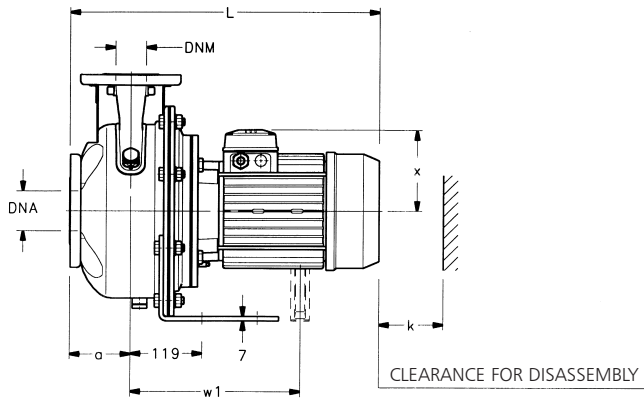
Flanges

DN	D	M	G	Holes		Max thickness
				N°	∅	
80	200	160	116	8	18	20
100	225	180	142	8	18	20

Dimensions and weights EQX series, 2 poles

Pump type	Pump							Support								Dimensions in mm				Weight kg		
	DNM	DNA	a	h2	w	w1	x	b	c	c1	h1	m	m1	n	n1	s	s1	B	H max		L	k
EQX 25-125/07	25	50	80	140			129				160			190				218	252	443	98	20
EQX 25-125/11	25	50	80	140			129				160			190				218	252	443	98	22
EQX 25-160/15	25	50	80	160			129				160			210				253	320	443	98	23
EQX 25-160/22	25	50	80	160			129				160			210				253	320	443	98	25
EQX 25-200/30	25	50	80	180			121				160			230				285	340	461	98	29
EQX 25-200/40	25	50	80	180			133				160			230				285	340	487	98	36
EQX 25-250/55	25	50	100	225			150				180			265				345	405	553	98	48
EQX 25-250/75	25	50	100	225			150				180			265				345	405	553	98	60
EQX 25-250/110	25	50	100	225		278	191				180			265				345	405	604	98	80
EQX 32-125/07	32	50	80	140			129				112			190				218	252	443	98	20
EQX 32-125/11	32	50	80	140			129				112			190				218	252	443	98	22
EQX 32-160/15	32	50	80	160			129				132			210				253	292	443	98	23
EQX 32-160/22	32	50	80	160			129				132			210				253	292	443	98	25
EQX 32-200/30	32	50	80	180			121				160			230				285	340	461	98	29
EQX 32-200/40	32	50	80	180			133				160			230				285	340	487	98	36
EQX 32-250/55	32	50	100	225			150				180			265				345	405	553	98	48
EQX 32-250/75	32	50	100	225			150				180			265				345	405	553	98	60
EQX 32-250/110	32	50	100	225		278	191				180			265				345	405	604	98	80
EQX 40-125/11	40	65	80	140			129				112			190				219	252	443	100	23
EQX 40-125/15	40	65	80	140			129				112			190				219	252	443	100	25
EQX 40-125/22	40	65	80	140			129				112			190				219	252	443	100	26
EQX 40-160/30	40	65	80	160			121				132			210				254	292	461	100	29
EQX 40-160/40	40	65	80	160			133				132			210				254	292	487	100	35
EQX 40-200/55	40	65	100	180			150				160			230				285	340	553	100	46
EQX 40-200/75	40	65	100	180			150				160			230				285	340	553	100	51
EQX 40-250/92	40	65	100	225		278	191				180			265				345	405	604	107	62
EQX 40-250/110	40	65	100	225		278	191				180			265				345	405	604	107	65
EQX 40-250/150	40	65	100	225	208		232	72	22	20	180	260	210	318	254	13	23	345	412	688	107	91
EQX 50-125/22	50	65	100	160			129				132			210				254	292	463	104	29
EQX 50-125/30	50	65	100	160			121				132			210				254	292	481	104	32
EQX 50-125/40	50	65	100	160			133				132			210				254	292	507	104	35
EQX 50-160/55	50	65	100	180			150				160			210				255	340	553	104	47
EQX 50-160/75	50	65	100	180			150				160			210				255	340	553	104	52
EQX 50-200/92	50	65	100	200		278	191				160			245				310	360	604	104	63
EQX 50-200/110	50	65	100	200		278	191				160			245				310	360	604	104	67
EQX 50-250/150	50	65	100	225	208		232	72	22	20	180	260	210	318	254	13	23	345	412	688	107	103
EQX 50-250/185	50	65	100	225	208		232	72	22	20	180	304	254	318	254	13	23	345	412	732	107	119
EQX 50-250/220	50	65	100	225	208		232	72	22	20	180	304	254	318	254	13	23	345	412	732	107	136
EQX 65-160/40	65	80	100	200			133				160			245				310	360	507	115	60
EQX 65-160/55	65	80	100	200			150				160			245				310	360	553	115	69
EQX 65-160/75	65	80	100	200			150				160			245				310	360	553	115	75
EQX 65-160/92	65	80	100	200		278	191				160			245				310	360	604	130	92
EQX 65-160/110	65	80	100	200		278	191				160			245				310	360	604	130	101
EQX 65-200/150	65	80	100	225	208		232	72	22	20	180	260	210	318	254	13	23	310	412	688	130	116
EQX 65-200/185	65	80	100	225	208		232	72	22	20	180	304	254	318	254	13	23	310	412	732	130	126
EQX 65-200/220	65	80	100	225	208		232	72	22	20	180	304	254	318	254	13	23	310	412	732	130	139
EQX 80-160/110	80	100	125	225		278	191				180			265				345	405	629	160	102
EQX 80-160/150	80	100	125	225	208		232	72	22	20	180	260	210	318	254	13	23	345	412	713	160	120
EQX 80-160/185	80	100	125	225	208		232	72	22	20	180	304	254	318	254	13	23	345	412	757	160	139
EQX 80-200/220	80	100	125	250	208		232	72	22	20	180	304	254	318	254	13	23	345	430	757	160	150

Dimensions and weights EQX4 series, 4 poles



Flanges

DN	D	M	G	Holes		Max thickness
				N°	∅	
25	115	85	56	4	14,5	16
32	140	100	64	4	18	16
40	150	110	68	4	18	16
50	165	125	83	4	18	18
65	185	145	104	4	18	18

Flanges

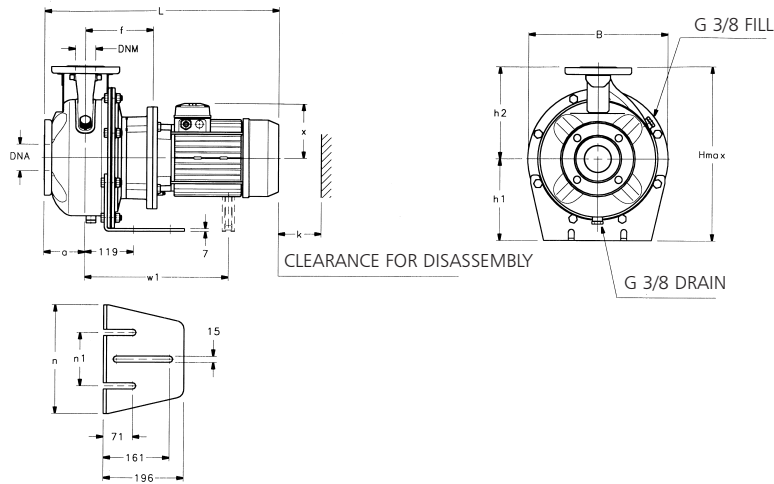
DN	D	M	G	Holes		Max thickness
				N°	∅	
80	200	160	116	8	18	20
100	225	180	142	8	18	20

Dimensions and weights EQX4 series, 4 poles

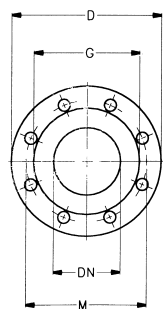
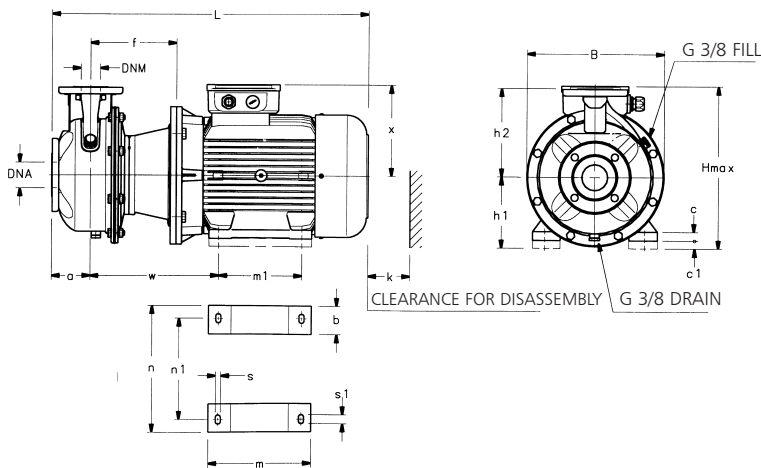
Pump type	Pump						Support			Dimensions in mm				Weight kg
	DNM	DNA	a	h2	w1	x	h1	n	n1	B	H max	L	k	
EQX4 25-125/02A	25	50	80	140		105	112	190	130	218	252	395	98	20
EQX4 25-125/02	25	50	80	140		105	112	190	130	218	252	395	98	20
EQX4 25-160/02	25	50	80	160		105	132	210	130	253	292	395	98	22
EQX4 25-160/03	25	50	80	160		105	132	210	130	253	292	395	98	23
EQX4 25-200/03	25	50	80	180		105	160	230	130	285	340	432	98	28
EQX4 25-200/05	25	50	80	180		116	160	230	130	285	340	452	98	30
EQX4 25-250/07	25	50	100	225		116	180	265	130	345	405	481	98	38
EQX4 25-250/11	25	50	100	225		121	180	265	130	345	405	481	98	40
EQX4 25-250/15	25	50	100	225		121	180	265	130	345	405	481	98	45
EQX4 32-125/02A	32	50	80	140		105	112	190	130	218	252	395	98	20
EQX4 32-125/02	32	50	80	140		105	112	190	130	218	252	395	98	20
EQX4 32-160/02	32	50	80	160		105	132	210	130	253	292	395	98	22
EQX4 32-160/03	32	50	80	160		105	132	210	130	253	292	395	98	23
EQX4 32-200/03	32	50	80	180		105	160	230	130	285	340	432	98	28
EQX4 32-200/05	32	50	80	180		116	160	230	130	285	340	452	98	30
EQX4 32-250/07	32	50	100	225		116	180	265	130	345	405	452	98	38
EQX4 32-250/11	32	50	100	225		121	180	265	130	345	405	481	98	40
EQX4 32-250/15	32	50	100	225		121	180	265	130	345	405	481	98	45
EQX4 40-125/02A	40	65	80	140		105	112	190	130	219	252	395	100	21
EQX4 40-125/02	40	65	80	140		105	112	190	130	219	252	395	100	21
EQX4 40-125/03	40	65	80	140		105	112	190	130	219	252	395	100	22
EQX4 40-160/03	40	65	80	160		105	132	210	130	254	292	395	100	24
EQX4 40-160/05	40	65	80	160		116	132	210	130	254	292	432	100	25
EQX4 40-200/07	40	65	100	180		116	160	230	130	285	340	452	100	26
EQX4 40-200/11	40	65	100	180		121	160	230	130	285	340	481	100	30
EQX4 40-250/11	40	65	100	225		121	180	265	130	345	405	481	107	32
EQX4 40-250/15	40	65	100	225		121	180	265	130	345	405	481	107	42
EQX4 40-250/22	40	65	100	225		133	180	265	130	345	405	507	107	49
EQX4 50-125/03A	50	65	100	160		105	132	210	130	354	292	415	104	22
EQX4 50-125/03	50	65	100	160		105	132	210	130	354	292	415	104	22
EQX4 50-125/05	50	65	100	160		116	132	210	130	354	292	452	104	24
EQX4 50-160/07	50	65	100	180		116	160	210	130	355	340	452	104	26
EQX4 50-160/11	50	65	100	180		121	160	210	130	355	340	481	104	28
EQX4 50-200/11	50	65	100	200		121	160	245	130	310	360	481	104	30
EQX4 50-200/15	50	65	100	200		121	160	245	130	310	360	481	104	41
EQX4 50-250/22A	50	65	100	225		133	180	265	130	345	405	507	107	46
EQX4 50-250/22	50	65	100	225		133	180	265	130	345	405	507	107	46
EQX4 50-250/30	50	65	100	225		133	180	265	130	345	405	507	107	55
EQX4 65-160/05	65	80	100	200		116	160	245	130	310	360	452	115	32
EQX4 65-160/07	65	80	100	200		116	160	245	130	310	360	452	115	35
EQX4 65-160/11A	65	80	100	200		121	160	245	130	310	360	481	115	38
EQX4 65-160/11	65	80	100	200		121	160	245	130	310	360	481	115	38
EQX4 65-160/15	65	80	100	200		121	160	245	130	310	360	481	115	42
EQX4 65-200/15	65	80	100	225		121	180	245	130	310	405	481	115	45
EQX4 65-200/22	65	80	100	225		133	180	245	130	310	405	507	115	50
EQX4 65-200/30	65	80	100	225		133	180	245	130	310	405	507	115	55
EQX4 80-160/15	80	100	125	225		121	180	265	130	345	405	506	160	49
EQX4 80-160/22A	80	100	125	225		133	180	265	130	345	405	532	160	54
EQX4 80-160/22	80	100	125	225		133	180	265	130	345	405	532	160	54
EQX4 80-200/30	80	100	125	250		133	180	265	130	345	430	532	160	59
EQX4 80-200/40	80	100	125	250		150	180	265	130	345	430	555	160	65
EQX4 80-250/55	80	100	125	280	259	191	200	303	210	384	480	591	160	79
EQX4 80-250/75	80	100	125	280	278	191	200	303	210	384	480	629	160	87
EQX4 80-250/92	80	100	125	280	278	191	200	303	210	384	480	629	160	88

Dimensions and weights EQS series, 2 poles

EQS up to 7,5 kW

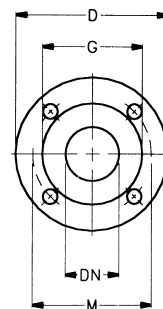


EQS from 11 kW



Flanges

DN	D	M	G	Holes		Max Thickness
				N°	∅	
80	200	160	116	8	18	20
100	225	180	142	8	18	20



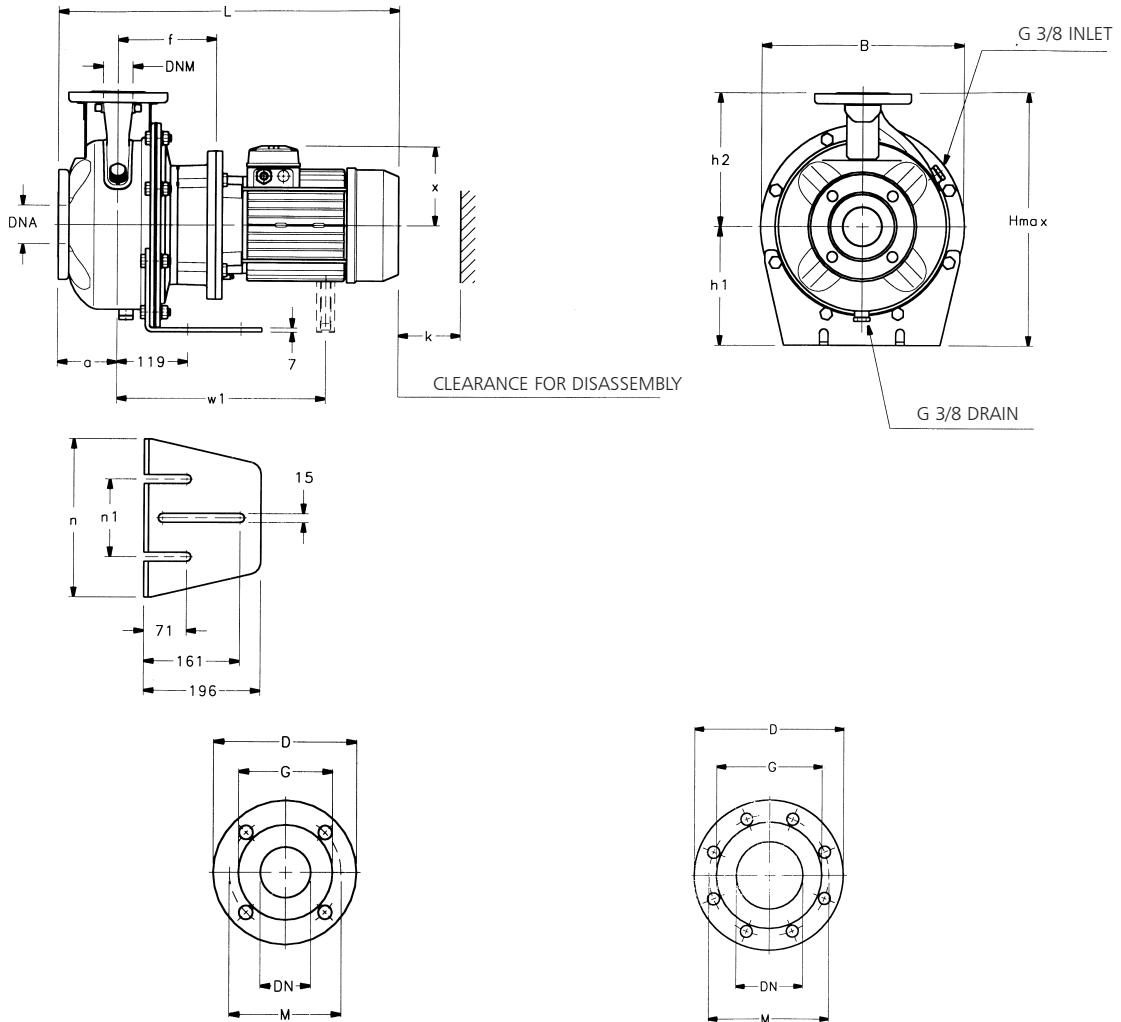
Flanges

DN	D	M	G	Holes		Max thickness
				N°	∅	
25	115	85	56	4	14.5	16
32	140	100	64	4	18	16
40	150	110	68	4	18	16
50	165	125	83	4	18	18
65	185	145	104	4	18	18

Dimensions and weights EQS series, 2 poles

Pump type	Pump											Support							Dimensions in mm				Weight kg
	DNM	DNA	a	f	h2	w	w1	x	b	c	c1	h1	m	m1	n	n1	s	s1	B	H max	L	k	
EQS 25-125/07	25	50	80	155	140			121				160			190				218	252	461	98	25
EQS 25-125/11	25	50	80	155	140			129				160			190				218	252	498	98	26
EQS 25-160/15	25	50	80	155	160			129				160			210				253	320	498	98	28
EQS 25-160/22	25	50	80	155	160			129				160			210				253	320	498	98	30
EQS 25-200/30	25	50	80	165	180			121				160			230				285	340	548	98	41
EQS 25-200/40	25	50	80	165	180			133				160			230				285	340	552	98	44
EQS 25-250/55	25	50	100	192	225		424	150				180			265				345	405	666	98	63
EQS 25-250/75	25	50	100	192	225		424	150				180			265				345	405	666	98	69
EQS 25-250/110	25	50	100	222	225	330		232	72	22	20	180	260	210	318	254	14	23	350	412	810	98	81
EQS 32-125/07	32	50	80	155	140			121				112			190				218	252	461	98	25
EQS 32-125/11	32	50	80	155	140			129				112			190				218	252	498	98	26
EQS 32-160/15	32	50	80	155	160			129				132			210				253	292	498	98	28
EQS 32-160/22	32	50	80	155	160			129				132			210				253	292	498	98	30
EQS 32-200/30	32	50	80	165	180			121				160			230				285	340	548	98	41
EQS 32-200/40	32	50	80	165	180			133				160			230				285	340	552	98	44
EQS 32-250/55	32	50	100	192	225		424	150				180			265				345	405	666	98	63
EQS 32-250/75	32	50	100	192	225		424	150				180			265				345	405	666	98	69
EQS 32-250/110	32	50	100	222	225	330		232	72	22	20	180	260	210	318	254	14	23	350	412	810	98	81
EQS 40-125/11	40	65	80	155	140			129				112			190				219	252	498	100	25
EQS 40-125/15	40	65	80	155	140			129				112			190				219	252	498	100	27
EQS 40-125/22	40	65	80	155	140			129				112			190				219	252	498	100	28
EQS 40-160/30	40	65	80	165	160			121				132			210				254	292	548	100	39
EQS 40-160/40	40	65	80	165	160			133				132			210				254	292	552	100	42
EQS 40-200/55	40	65	100	192	180		424	150				160			230				300	340	666	100	64
EQS 40-200/75	40	65	100	192	180		424	150				160			230				300	340	666	100	66
EQS 40-250/110A	40	65	100	222	225	330		232	72	22	20	180	260	210	318	254	14	23	350	412	810	107	110
EQS 40-250/110	40	65	100	222	225	330		232	72	22	20	180	260	210	318	254	14	23	350	412	810	107	116
EQS 40-250/150	40	65	100	222	225	330		232	72	22	20	180	260	210	318	254	14	23	350	412	810	107	122
EQS 50-125/22	50	65	100	155	160			129				132			210				254	292	518	104	34
EQS 50-125/30	50	65	100	165	160			121				132			210				254	292	568	104	37
EQS 50-125/40	50	65	100	165	160			133				132			210				254	292	572	104	42
EQS 50-160/55	50	65	100	192	180		424	150				160			210				255	340	666	104	60
EQS 50-160/75	50	65	100	192	180		424	150				160			210				255	340	666	104	65
EQS 50-200/110A	50	65	100	222	200	330		232	72	22		160	260	210	318	254	14	23	350	392	810	104	90
EQS 50-200/110	50	65	100	222	200	330		232	72	22		160	260	210	318	254	14	23	350	392	810	104	90
EQS 50-250/150	50	65	100	222	225	330		232	72	22	20	180	260	210	318	254	14	23	350	412	810	107	115
EQS 50-250/185	50	65	100	222	225	330		232	72	22	20	180	304	254	318	254	14	23	350	412	854	107	125
EQS 50-250/220	50	65	100	222	225	330		232	72	22	20	180	304	254	318	254	14	23	350	412	854	107	145
EQS 65-160/40	65	80	100	165	200			133				160			245				310	360	572	115	67
EQS 65-160/55	65	80	100	192	200		424	150				160			245				310	360	666	115	75
EQS 65-160/75	65	80	100	192	200		424	150				160			245				310	360	666	115	80
EQS 65-160/110A	65	80	100	222	200	330		232	72	22		160	260	210	318	254	14	23	350	392	810	130	106
EQS 65-160/110	65	80	100	222	200	330		232	72	22		160	260	210	318	254	14	23	350	392	810	130	106
EQS 65-200/150	65	80	100	222	225	330		232	72	22	20	180	260	210	318	254	14	23	350	412	810	130	122
EQS 65-200/185	65	80	100	222	225	330		232	72	22	20	180	304	254	318	254	14	23	350	412	854	130	135
EQS 65-200/220	65	80	100	222	225	330		232	72	22	20	180	304	254	318	254	14	23	350	412	854	130	149
EQS 65-250/300	65	80	100	228	250	361		257	60	24		200	345	305	360	318	18	18	400	457	941	140	189
EQS 65-250/370	65	80	100	228	250	361		257	60	24		200	345	305	360	318	18	18	400	457	941	140	200
EQS 80-160/110	80	100	125	222	225	330		232	72	22	20	180	260	210	318	254	14	23	350	412	835	155	111
EQS 80-160/150	80	100	125	222	225	330		232	72	22	20	180	260	210	318	254	14	23	350	412	835	155	127
EQS 80-160/185	80	100	125	222	225	330		232	72	22	20	180	304	254	318	254	14	23	350	412	879	155	148
EQS 80-200/220	80	100	125	222	250	330		232	72	22	20	180	304	254	318	254	14	23	350	430	879	155	157
EQS 80-200/300	80	100	125	228	250	361		257	60	24		200	345	305	360	318	18	18	400	457	966	155	191
EQS 80-200/370	80	100	125	228	250	361		257	60	24		200	345	305	360	318	18	18	400	457	966	155	203

Dimensions and weights EQS4 series, 4 poles



Flanges

DN	D	M	G	Holes		Max thickness
				N°	∅	
25	140	100	64	4	18	16
32	140	100	64	4	18	16
40	150	110	68	4	18	16
50	165	125	83	4	18	18
65	185	145	104	4	18	18

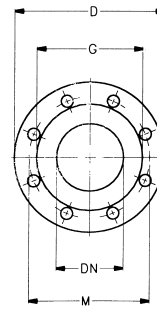
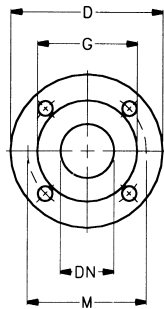
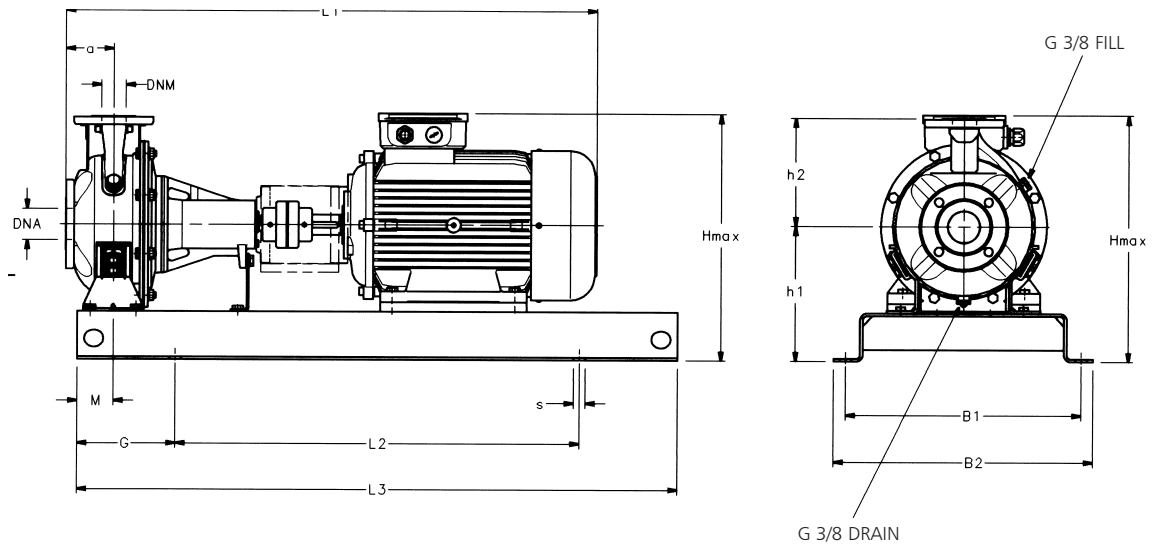
Flanges

DN	D	M	G	Holes		Max thickness
				N°	∅	
80	200	160	116	8	18	20
100	225	180	142	8	18	20

Dimensions and weights EQS4 series, 4 poles

Pump type	Pump						Support				Dimensions in mm				Weight kg
	DNM	DNA	a	f	h2	w1	x	h1	n	n	B	H max	L	k	
EQS4 25-250/07	25	50	100	155	225		116	180	265	130	345	405	497	98	41
EQS4 25-250/11	25	50	100	155	225		121	180	265	130	345	405	536	98	43
EQS4 25-259/15	25	50	100	155	225		121	180	265	130	345	405	536	98	47
EQS4 32-250/07	32	50	100	155	225		116	180	265	130	345	405	497	98	41
EQS4 32-250/11	32	50	100	155	225		121	180	265	130	345	405	536	98	43
EQS4 32-250/15	32	50	100	155	225		121	180	265	130	345	405	536	98	47
EQS4 40-200/07	40	65	100	155	180		116	160	230	130	285	340	497	100	28
EQS4 40-200/11	40	65	100	155	180		121	160	230	130	285	340	536	100	32
EQS4 40-250/11	40	65	100	155	225		121	180	265	130	345	405	536	107	33
EQS4 40-250/15	40	65	100	155	225		121	180	265	130	345	405	536	107	46
EQS4 40-250/22	40	65	100	165	225		133	180	265	130	345	405	572	107	52
EQS4 50-160/07	50	65	100	155	180		116	160	210	130	255	340	497	104	27
EQS4 50-160/11	50	65	100	155	180		121	160	210	130	255	340	536	104	30
EQS4 50-200/11	50	65	100	155	200		121	160	245	130	310	360	536	104	34
EQS4 50-200/15	50	65	100	155	200		121	160	245	130	310	360	536	104	42
EQS4 50-250/22A	50	65	100	165	225		133	180	265	130	345	405	572	107	49
EQS4 50-250/22	50	65	100	165	225		133	180	265	130	345	405	572	107	49
EQS4 50-250/30	50	65	100	165	225		133	180	265	130	345	405	572	107	58
EQS4 65-160/05	65	80	100	155	200		116	160	245	130	310	360	497	115	34
EQS4 65-160/07	65	80	100	155	200		116	160	245	130	310	360	497	115	34
EQS4 65-160/11A	65	80	100	155	200		121	160	245	130	310	360	536	115	40
EQS4 65-160/11	65	80	100	155	200		121	160	245	130	310	360	536	130	40
EQS4 65-160/15	65	80	100	155	200		121	160	245	130	310	360	536	130	45
EQS4 65-200/15	65	80	100	155	225		121	180	245	130	310	405	536	130	48
EQS4 65-200/22	65	80	100	165	225		133	180	245	130	310	405	572	130	54
EQS4 65-200/30	65	80	100	165	225		133	180	245	130	310	405	572	130	59
EQS4 65-250/40	65	80	100	165	225		150	200	265	130	345	450	595	140	65
EQS4 65-250/55	65	80	100	192	250	351	191	200	265	130	345	450	658	140	79
EQS4 80-160/15	80	100	125	155	225		121	180	265	130	345	405	561	160	53
EQS4 80-160/22A	80	100	125	165	225		133	180	265	130	345	405	597	160	58
EQS4 80-160/22	80	100	125	165	225		133	180	265	130	345	405	597	160	58
EQS4 80-200/30	80	100	125	165	250		133	180	265	130	345	430	597	160	63
EQS4 80-200/40	80	100	125	165	250		150	180	265	130	345	430	620	160	83
EQS4 80-250/55	80	100	125	192	280	351	191	200	303	210	384	480	721	160	85
EQS4 80-250/75	80	100	125	192	280	370	191	200	303	210	384	480	721	160	90
EQS4 80-250/92	80	100	125	192	280	370	191	200	303	210	384	480	721	160	91

Dimensions and weights EQF series, 2 poles



Flanges

DN	D	M	G	Holes		Max thickness
				N°	∅	
25	115	85	56	4	14.5	16
32	140	100	64	4	18	16
40	150	110	68	4	18	16
50	165	125	83	4	18	18
65	185	145	104	4	18	18

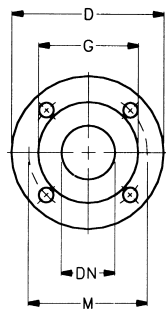
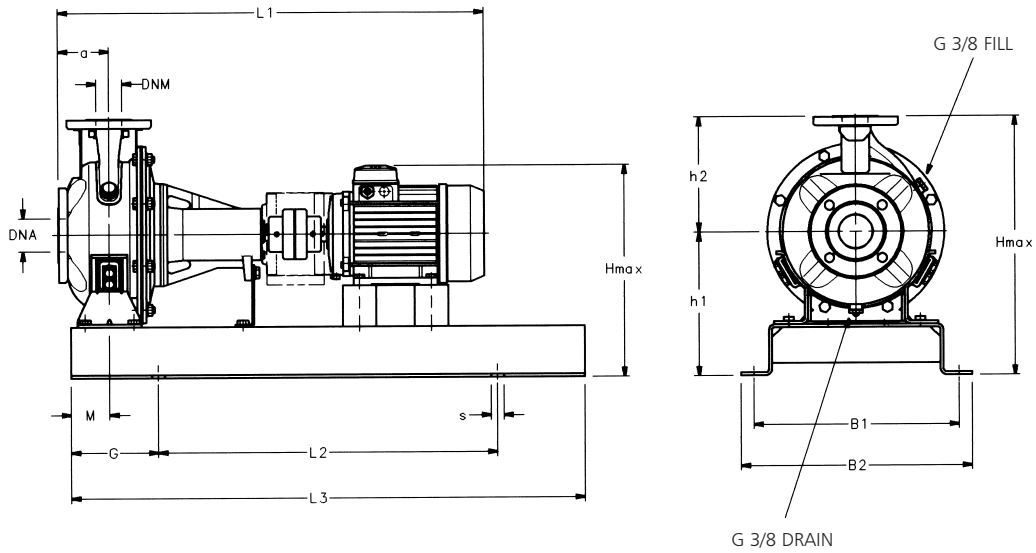
Flanges

DN	D	M	G	Holes		Max thickness
				N°	∅	
80	200	160	116	8	18	20
100	225	180	142	8	18	20

Dimensions and weights EQF series, 2 poles

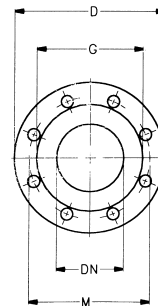
Pump type	Dimensions in mm													s for screws	Weight kg
	DNM	DNA	a	B1	B2	L1	L2	L3	G	M	h1	h2	Hmax		
EQF 25-125/07	25	50	80	320	360	744	540	800	130	60	212	140	352	M16	65
EQF 25-125/11	25	50	80	320	360	744	540	800	130	60	212	140	352	M16	67
EQF 25-160/15	25	50	80	350	390	773	600	900	150	60	232	160	392	M16	69
EQF 25-160/22	25	50	80	350	390	773	600	900	150	60	232	160	392	M16	71
EQF 25-200/30	25	50	80	350	390	809	600	900	150	60	260	180	440	M16	90
EQF 25-200/40	25	50	80	350	390	832	600	900	150	60	260	180	440	M16	94
EQF 25-250/55	25	50	100	440	490	909	740	1120	190	75	280	225	505	M20	126
EQF 25-250/75	25	50	100	440	490	909	740	1120	190	75	280	225	505	M20	131
EQF 25-250/110	25	50	100	490	540	1061	840	1250	205	75	280	225	512	M20	176
EQF 32-125/07	32	50	80	320	360	744	540	800	130	60	212	140	352	M16	65
EQF 32-125/11	32	50	80	320	360	744	540	800	130	60	212	140	352	M16	67
EQF 32-160/15	32	50	80	350	390	773	600	900	150	60	232	160	392	M16	69
EQF 32-160/22	32	50	80	350	390	773	600	900	150	60	232	160	392	M16	71
EQF 32-200/30	32	50	80	350	390	809	600	900	150	60	260	180	440	M16	90
EQF 32-200/40	32	50	80	350	390	832	600	900	150	60	260	180	440	M16	94
EQF 32-250/55	32	50	100	440	490	909	740	1120	190	75	280	225	505	M20	126
EQF 32-250/75	32	50	100	440	490	909	740	1120	190	75	280	225	505	M20	131
EQF 32-250/110	32	50	100	490	540	1061	840	1250	205	75	280	225	512	M20	176
EQF 40-125/11	40	65	80	320	360	744	540	800	130	60	212	140	352	M16	68
EQF 40-125/15	40	65	80	350	390	773	600	900	150	60	212	140	352	M16	70
EQF 40-125/22	40	65	80	350	390	773	600	900	150	60	212	140	352	M16	73
EQF 40-160/30	40	65	80	350	390	809	600	900	150	60	232	160	392	M16	87
EQF 40-160/40	40	65	80	350	390	832	600	900	150	60	232	160	392	M16	93
EQF 40-200/55	40	65	100	400	450	909	660	1000	170	60	260	180	451	M20	108
EQF 40-200/75	40	65	100	400	450	909	660	1000	170	60	260	180	451	M20	116
EQF 40-250/110A	40	65	100	490	540	1061	840	1250	205	75	280	225	512	M20	174
EQF 40-250/110	40	65	100	490	540	1061	840	1250	205	75	280	225	512	M20	174
EQF 40-250/150	40	65	100	490	540	1061	840	1250	205	75	280	225	512	M20	184
EQF 50-125/22	50	65	100	350	390	793	600	900	150	60	232	160	392	M16	80
EQF 50-125/30	50	65	100	350	390	829	600	900	150	60	232	160	392	M16	87
EQF 50-125/40	50	65	100	350	390	852	600	900	150	60	232	160	392	M16	92
EQF 50-160/55	50	65	100	400	450	909	660	1000	170	60	260	180	451	M20	106
EQF 50-160/75	50	65	100	400	450	909	660	1000	170	60	260	180	451	M20	110
EQF 50-200/110A	50	65	100	440	490	1061	740	1120	190	60	260	200	492	M20	168
EQF 50-200/110	50	65	100	440	490	1061	740	1120	190	60	260	200	492	M20	168
EQF 50-250/150	50	65	100	490	540	1061	840	1250	205	75	280	225	512	M20	174
EQF 50-250/185	50	65	100	490	540	1105	840	1250	205	75	280	225	512	M20	194
EQF 50-250/220	50	65	100	490	540	1111	840	1250	205	75	280	225	510	M20	214
EQF 65-160/40	65	80	100	400	450	852	660	1000	170	75	260	200	460	M20	130
EQF 65-160/55	65	80	100	440	490	909	740	1120	190	75	260	200	460	M20	136
EQF 65-160/75	65	80	100	440	490	909	740	1120	190	75	260	200	460	M20	142
EQF 65-160/110A	65	80	100	490	540	1061	840	1250	205	75	260	200	492	M20	157
EQF 65-160/110	65	80	100	490	540	1061	840	1250	205	75	260	200	492	M20	157
EQF 65-200/150	65	80	100	490	540	1061	840	1250	205	75	280	225	512	M20	180
EQF 65-200/185	65	80	100	490	540	1105	840	1250	205	75	280	225	512	M20	192
EQF 65-200/220	65	80	100	490	540	1111	840	1250	205	75	280	225	510	M20	208
EQF 65-250/300	65	80	100	550	610	1296	940	1400	230	90	300	250	557	M24	271
EQF 65-250/370	65	80	100	550	610	1296	940	1400	230	90	300	250	557	M24	296
EQF 80-160/110	80	100	125	490	540	1086	840	1250	205	75	280	225	512	M20	193
EQF 80-160/150	80	100	125	490	540	1086	840	1250	205	75	280	225	512	M20	204
EQF 80-160/185	80	100	125	490	540	1130	840	1250	205	75	280	225	512	M20	225
EQF 80-200/220	80	100	125	490	540	1246	840	1250	205	75	280	250	530	M20	236
EQF 80-200/300	80	100	125	550	610	1321	940	1400	230	75	300	250	557	M24	277
EQF 80-200/370	80	100	125	550	610	1321	940	1400	230	75	300	250	557	M24	295
EQF 80-250/450	80	100	125	550	610	1398	940	1400	230	90	325	280	605	M24	355
EQF 80-250/550	80	100	125	600	660	1428	1060	1600	270	90	380	280	660	M24	394
EQF 80-250/750	80	100	125	670	730	1558	1200	1800	300	90	380	280	735	M24	510

Dimensions and weights EQF series, 4 poles



Flanges

DN	D	M	G	Holes		Max thickness
				N°	∅	
25	115	85	56	4	14,5	16
32	140	100	64	4	18	16
40	150	110	68	4	18	16
50	165	125	83	4	18	18
65	185	145	104	4	18	18



Flanges

DN	D	M	G	Holes		Max thickness
				N°	∅	
80	200	160	116	8	18	20
100	225	180	142	8	18	20

Dimensions and weights EQF series, 4 poles

Pump type	Dimensions in mm													s for screws	Weight kg
	DNM	DNA	a	B1	B2	L1	L2	L3	G	M	h1	h2	H max		
EQF4 25-125/02A	25	50	80	320	360	686	540	800	130	60	212	140	352	M16	72
EQF4 25-125/02	25	50	80	320	360	686	540	800	130	60	212	140	352	M16	72
EQF4 25-160/02	25	50	80	320	360	686	540	800	130	60	232	160	392	M16	74
EQF4 25-160/03	25	50	80	320	360	686	540	800	130	60	232	160	392	M16	76
EQF4 25-200/03	25	50	80	320	360	686	540	800	130	60	260	180	440	M16	78
EQF4 25-200/05	25	50	80	320	360	723	540	800	130	60	260	180	440	M16	80
EQF4 25-250/07	25	50	100	400	450	743	660	1000	170	75	280	225	505	M20	97
EQF4 25-250/11	25	50	100	400	450	793	660	1000	170	75	280	225	505	M20	100
EQF4 25-250/15	25	50	100	400	450	793	660	1000	170	75	280	225	505	M20	102
EQF4 32-125/02A	32	50	80	320	360	686	540	800	130	60	212	140	352	M16	72
EQF4 32-125/02	32	50	80	320	360	686	540	800	130	60	212	140	352	M16	72
EQF4 32-160/02	32	50	80	320	360	686	540	800	130	60	232	160	392	M16	74
EQF4 32-160/03	32	50	80	320	360	686	540	800	130	60	232	160	392	M16	76
EQF4 32-200/03	32	50	80	320	360	686	540	800	130	60	260	180	440	M16	78
EQF4 32-200/05	32	50	80	320	360	723	540	800	130	60	260	180	440	M16	80
EQF4 32-250/07	32	50	100	400	450	743	660	1000	170	75	280	225	505	M20	97
EQF4 32-250/11	32	50	100	400	450	793	660	1000	170	75	280	225	505	M20	100
EQF4 32-250/15	32	50	100	400	450	793	660	1000	170	75	280	225	505	M20	102
EQF4 40-125/02A	40	65	80	320	360	686	540	800	130	60	212	140	352	M16	57
EQF4 40-125/02	40	65	80	320	360	686	540	800	130	60	212	140	352	M16	57
EQF4 40-125/03	40	65	80	320	360	686	540	800	130	60	212	140	352	M16	58
EQF4 40-160/03	40	65	80	320	360	686	540	800	130	60	232	160	392	M16	60
EQF4 40-160/05	40	65	80	320	360	723	540	800	130	60	232	160	392	M16	62
EQF4 40-200/07	40	65	100	350	390	743	600	900	150	60	260	180	440	M16	69
EQF4 40-200/11	40	65	100	350	390	793	600	900	150	60	260	180	440	M16	72
EQF4 40-250/11	40	65	100	400	450	793	660	1000	170	75	280	225	505	M20	99
EQF4 40-250/15	40	65	100	400	450	793	660	1000	170	75	280	225	505	M20	102
EQF4 40-250/22	40	65	100	400	450	829	660	1000	170	75	280	225	505	M20	115
EQF4 50-125/03A	50	65	100	320	360	706	540	800	130	60	232	160	392	M16	59
EQF4 50-125/03	50	65	100	320	360	706	540	800	130	60	232	160	392	M16	59
EQF4 50-125/05	50	65	100	320	360	743	540	800	130	60	260	180	440	M16	61
EQF4 50-160/07	50	65	100	350	390	743	600	900	150	60	260	180	440	M16	68
EQF4 50-160/11	50	65	100	350	390	793	600	900	150	60	260	200	460	M16	71
EQF4 50-200/11	50	65	100	350	390	793	600	900	150	60	260	200	460	M16	82
EQF4 50-200/15	50	65	100	350	390	793	600	900	150	60	260	200	460	M16	85
EQF4 50-250/22A	50	65	100	400	450	829	660	1000	170	75	280	225	505	M20	116
EQF4 50-250/22	50	65	100	400	450	829	660	1000	170	75	280	225	505	M20	116
EQF4 50-250/30	50	65	100	400	450	829	660	1000	170	75	280	225	505	M20	120
EQF4 65-160/05	65	80	100	350	390	743	600	900	150	75	260	200	460	M16	84
EQF4 65-160/07	65	80	100	350	390	743	600	900	150	75	260	200	460	M16	85
EQF4 65-160/11A	65	80	100	400	450	793	660	1000	170	75	260	200	460	M20	88
EQF4 65-160/11	65	80	100	400	450	793	660	1000	170	75	260	200	460	M20	88
EEQF4 65-160/15	65	80	100	400	450	793	660	1000	170	75	260	200	460	M20	91
EQF4 65-200/15	65	80	100	400	450	793	660	1000	170	75	280	225	505	M20	103
EQF4 65-200/22	65	80	100	440	490	829	740	1120	190	75	280	225	505	M20	117
EQF4 65-200/30	65	80	100	440	490	829	740	1120	190	75	280	225	505	M20	121
EQF4 65-250/40	65	80	100	440	490	962	740	1120	190	90	300	250	550	M20	158
EQF4 65-250/55	65	80	100	440	490	1019	740	1120	190	90	300	250	550	M20	174
EQF4 80-160/15	80	100	125	400	450	818	660	1000	170	75	280	225	505	M20	121
EQF4 80-160/22A	80	100	125	440	490	854	740	1120	190	75	280	225	505	M20	127
EQF4 80-160/22	80	100	125	440	490	854	740	1120	190	75	280	225	505	M20	127
EQF4 80-200/30	80	100	125	440	490	964	740	1120	190	75	280	250	530	M20	146
EQF4 80-200/40	80	100	125	440	490	987	740	1120	190	75	280	250	530	M20	151
EQF4 80-250/55	80	100	125	490	540	1044	840	1250	205	90	300	280	580	M20	175
EQF4 80-250/75	80	100	125	490	540	1082	840	1250	205	90	300	280	580	M20	185



Drainage

- Broadest range, particularly for heavy-duty work.
- Light duty of various materials for dewatering of garages, factories and road tunnels.
- 0,25–90 kW.

SX – compact submersible pumps in stainless steel . . . . .	.277
STA – submersible pumps in cast iron and stainless steel . . . . .	.282
Ready – robust and reliable drainage pumps . . . . .	.285



Introduction

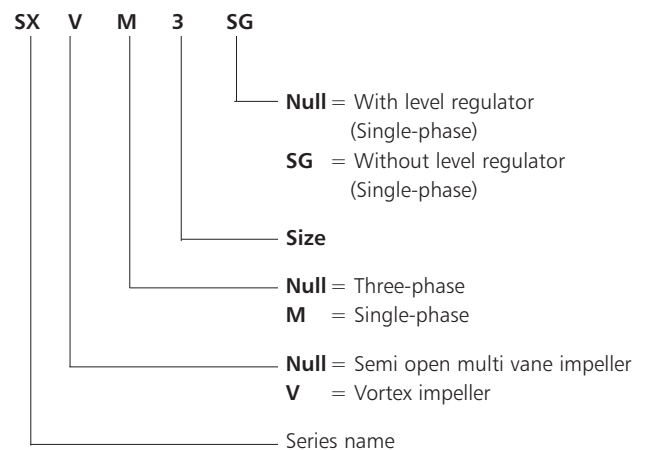
The SX range is a compact high performance range of submersible pumps in stainless steel. The pumps can handle suspended solids up to 20 mm, depending on pump size.

- Delivery: up to 410 l/min
- Head: up to 21 m

Applications

- Routine and general maintenance of basements
- Drainage of underpasses and yards, tanks and reservoirs, ditches and trenches
- Removal of waste water from washing machines and washing stations
- Transfer of raw water
- Transfer of clean or contaminated water
- Emergency drainage in case of flooding
- Fountains

Product identity





SX 2, SX 3, SXV 3

Product

Submersible stainless steel pump suitable for a variety of drainage applications.

Process data

Liquid temperature
40°C
Max size of suspended solids:
SX 2, 3 10 mm
SXV 3 20 mm

Motor data

Dry motor for submersible duty. Single-phase motor has built in capacitor.
Frequency 50 Hz
Insulation class B (125°C)
Protection IP68
Immersion depth max 5 m

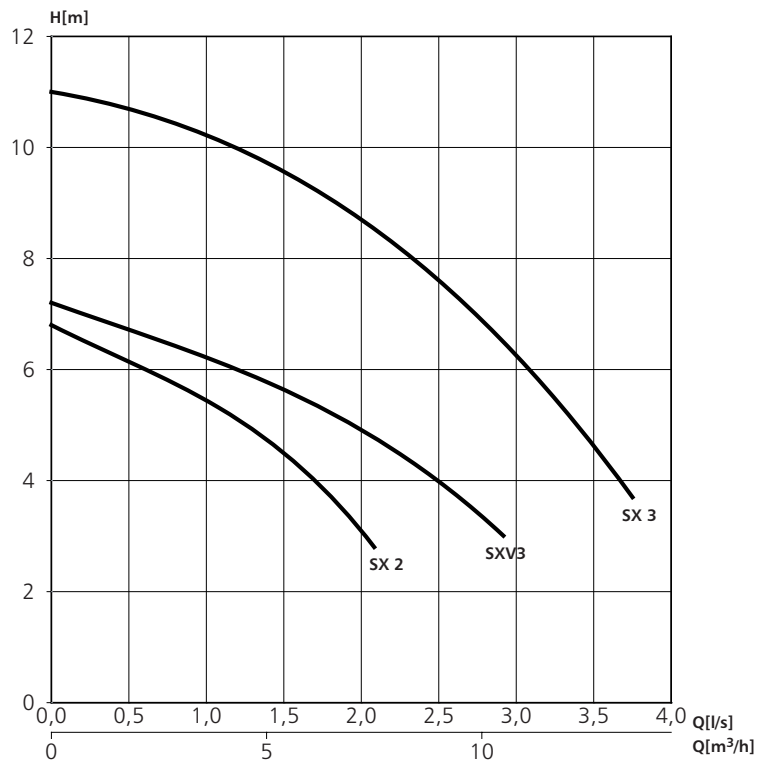
Cable

H07RN-F 10 m

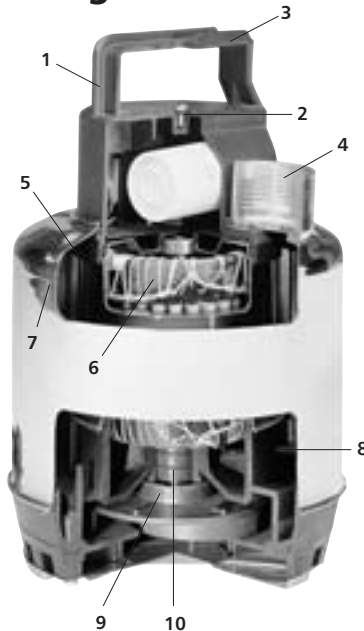
Control

Single-phase Built in level regulator
Three-phase To be provided

Performance curves



Design



1. Lifting handle, fiberglass-reinforced noryl.
2. Testing hole to check hermetic seal of motor gaskets by compressed air.
3. Cable clamp for adjusting the float.
4. Delivery outlet.
5. Motor housing with enclosed upper bearing, seamless & stainless steel.*
6. Dry winding motor, class B windings.
7. External sleeve, one-piece, seamless and stainless steel.*
8. Pump body, fiberglass-reinforced noryl.
9. Triple lip seal.
10. Shaft, stainless steel.*

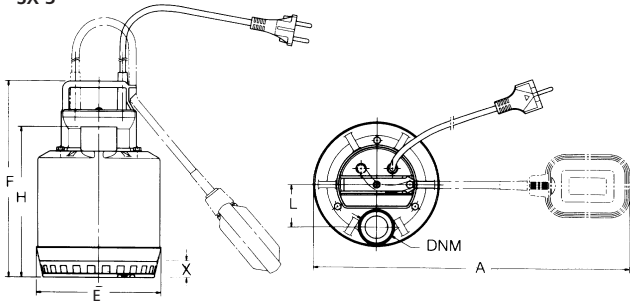
*AISI 304-DIN 1.4301

Motor rating

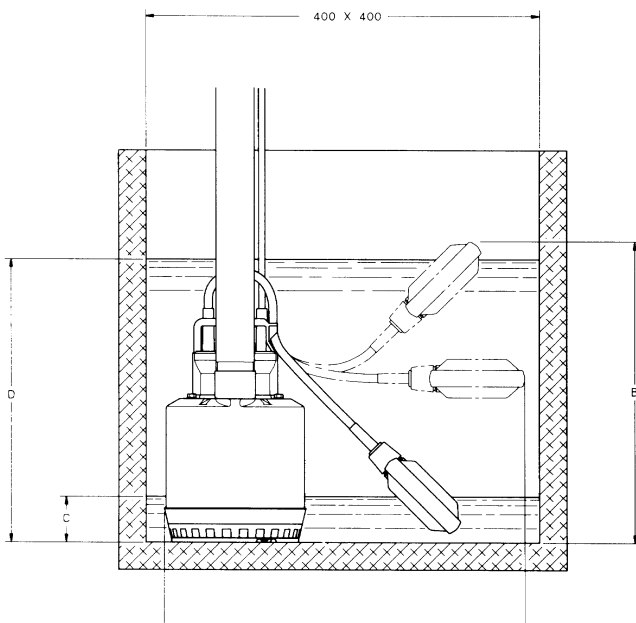
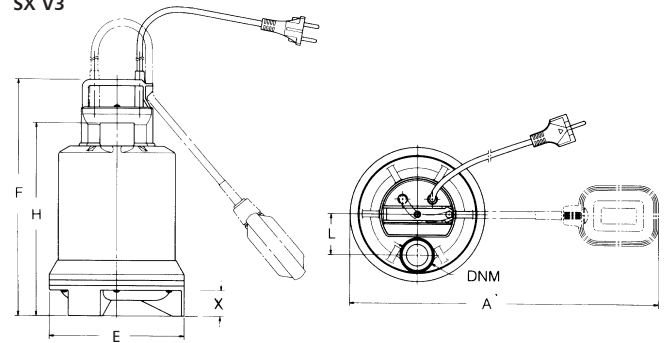
Pump type	Power kW	Capacitor μF	Capacitor V	Input current A	
				Single-phase 230 V	Three-phase 380-415 V
SXM 2	0.25	6	450	1.4	
SXM 3	0.55	16	450	3.5	1.6
SXVM 3	0.55	16	450	3.0	1.5

Dimensions and weight

SX 2
SX 3

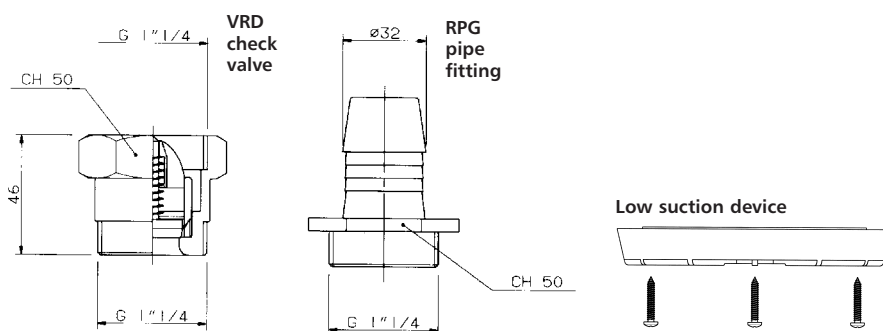


SX V3



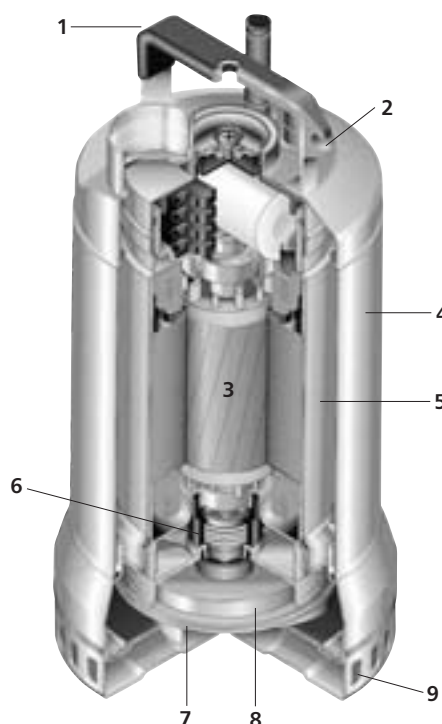
Pump type	Dimensions in mm									DNM	Weight kg
	A	B	C Stop level	D Start level	E	F	H	L	X		
SXM 2	390	330	50	310	155	245	188	54	20	G 1"1/4	4
SXM 3	390	370	90	350	155	285	228	54	20	G 1"1/4	6
SXVM 3	390	395	115	375	175	310	252	54	50	G 1"1/4	6
SX 2					155	245	188	54	20	G 1"1/4	4
SX 3					155	285	228	54	20	G 1"1/4	6
SXV 3					175	310	252	54	50	G 1"1/4	6

Accessories





Design



SX 5, 7, 11, 15

Product

Submersible stainless steel pump suitable for a variety of drainage applications.

Process data

Liquid temperature max 50°C
 Max size of suspended solids: 8 mm

Motor data

Dry motor for submersible duty. Single-phase motor has built in capacitor, except SX 11, which has the control box on the cable.

Frequency 50 Hz
 Insulation class F(155°C)
 Protection IP68
 Max immersion depth 7 m

Cable

H07RN-F 10 m

Control

Single-phase Built in level regulator
 Three-phase To be provided

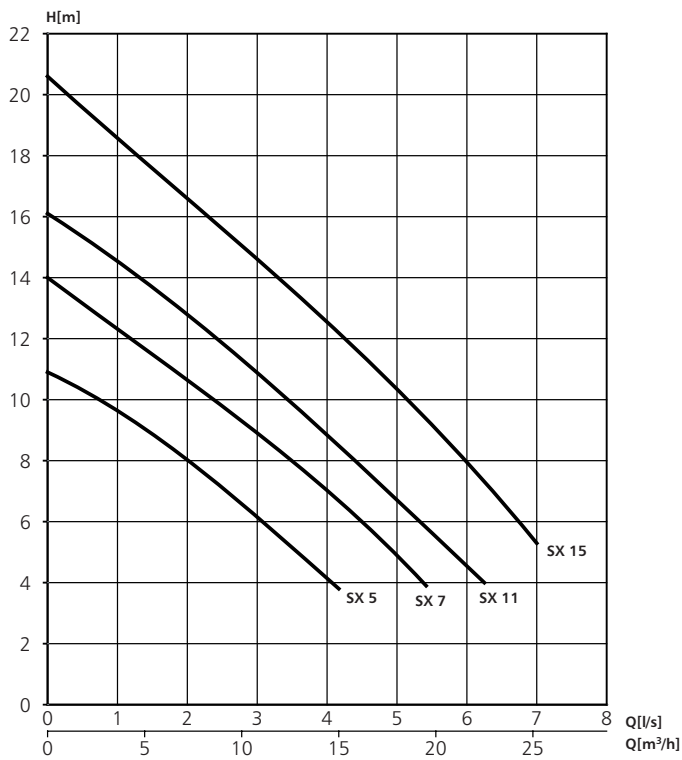
1. Lifting handle, stainless steel*, coated with polyacetal resin.
2. Cable clamp for adjusting the float.
3. Dry winding motor, class F windings.
4. Cooling jacket, stainless steel.*
5. Motor casing and pump body, stainless steel.*
6. Sealing system, double seal with oil chamber.
7. Impeller, open type in stainless steel.*
8. Diffuser plate, stainless steel* coated with polyurethane.
9. Strainer, minimum liquid level 25 mm, suspended solids up to 8 mm.

* AISI 304–DIN 1.4301

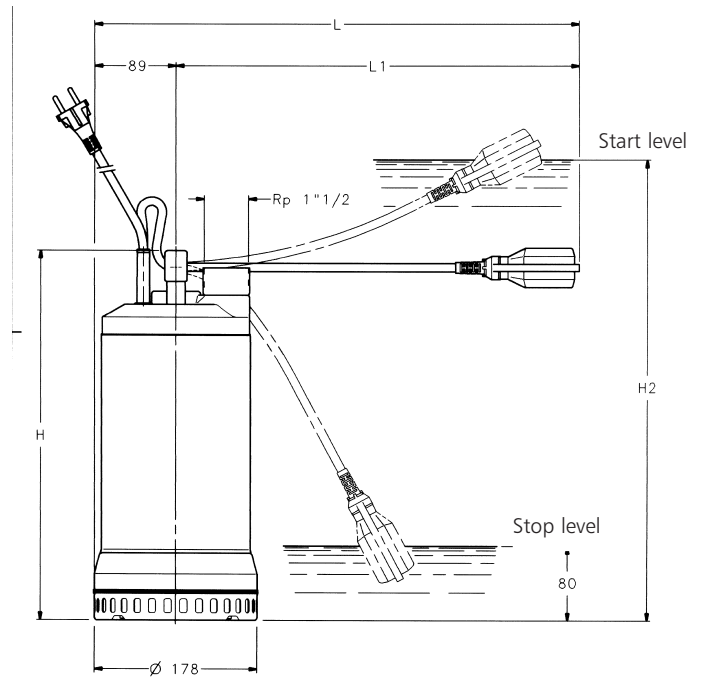
Motor rating

Pump type		Capacitor			Input current	
Single-phase 220–240 V	Three-phase 220–240 V 380–415 V	kW	µF	V	Single-phase 220–240 V	Three-phase 380–415 V
SXM 5	SX5	0.55	16	450	3.9	1.5
SXM 7	SX 7	0.75	22	450	6.2	2.5
SXM 11	SX11	1.1	30	450	6.8	2.7
	SX15	1.5				3.9

Performance curve



Dimensions and weight



Pump type	Dimensions in mm				Weight kg
	H	H2	L	L1	
SXM 5	343	425	459	370	12
SXM 7	388	485	514	425	14.5
SXM 11	388	485	514	425	17
SX 5	343				11
SX 7	358				13
SX 11	388				15
SX 15	388				16.5



Introduction

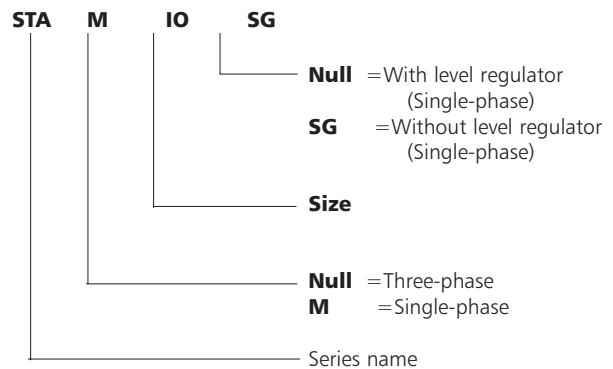
The STA range is a compact high performance range of submersible pumps with pump body in cast iron and motor casing in stainless steel. The impeller is rubber coated to be long lasting.

Delivery: up to 275 l/min
 Head: up to 20.5 m

Applications

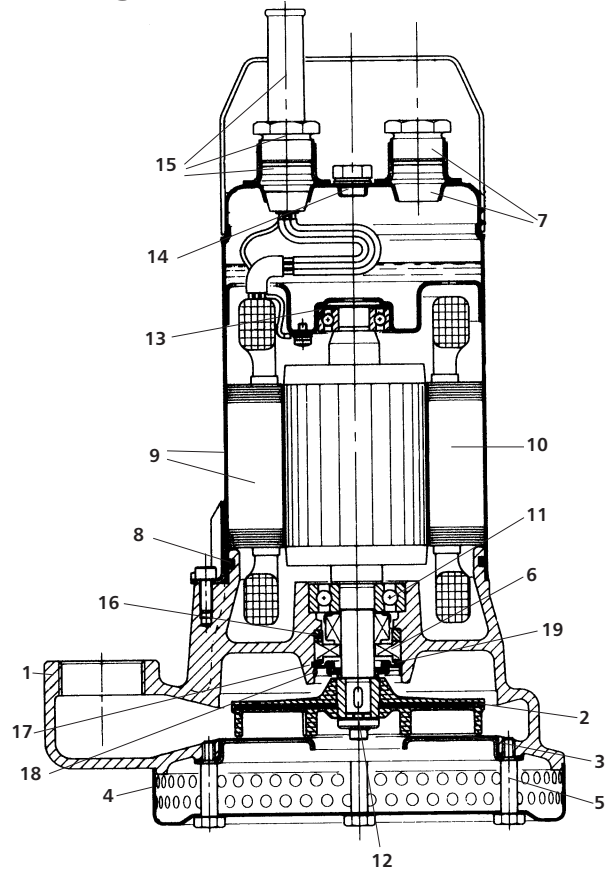
- Drainage of flooded excavations and marshy land
- Irrigation from rainwater reservoirs, ditches and ponds
- Water pumping from pools, lakes and watercourses

Product identity





Design



- 1. Pump body, cast iron
- 2. Impeller, rubber coated
- 3. Wear flange
- 4. Suction filter, stainless steel
- 5. Flange filter fixing screw
- 6. Mechanical seal, carbon/ceramic
- 7. Insert & union plug
- 8. O-ring
- 9. Motor housing (stainless steel) with stator
- 10. Shaft & rotor
- 11. Lower bearing
- 12. Impeller lock washer
- 13. Upper bearing
- 14. Plug & washer
- 15. Supply cable gland
- 16. Spacer for mechanical seal
- 17. Shoulder seal washer
- 18. Labyrinth seal cover
- 19. Sand slinger

STA

Product

Submersible pump suitable for drainage and irrigation applications.

Process data

Liquid temperature: max 50°C
 Fully submerged max 25°C
 Partly submerged

Motor data

Oil filled motor for submersible duty. Capacitor built in control box on cable

Frequency 50 Hz
 Insulation class F (155°C)
 Protection class IP68
 Immersion depth max 5 m
 Oil Dielectric non-toxic

Monitoring equipment

Single-phase Automatic reset overload protection
 Three-phase To be provided at installation

Cable

H07RN-F 5 m

Control

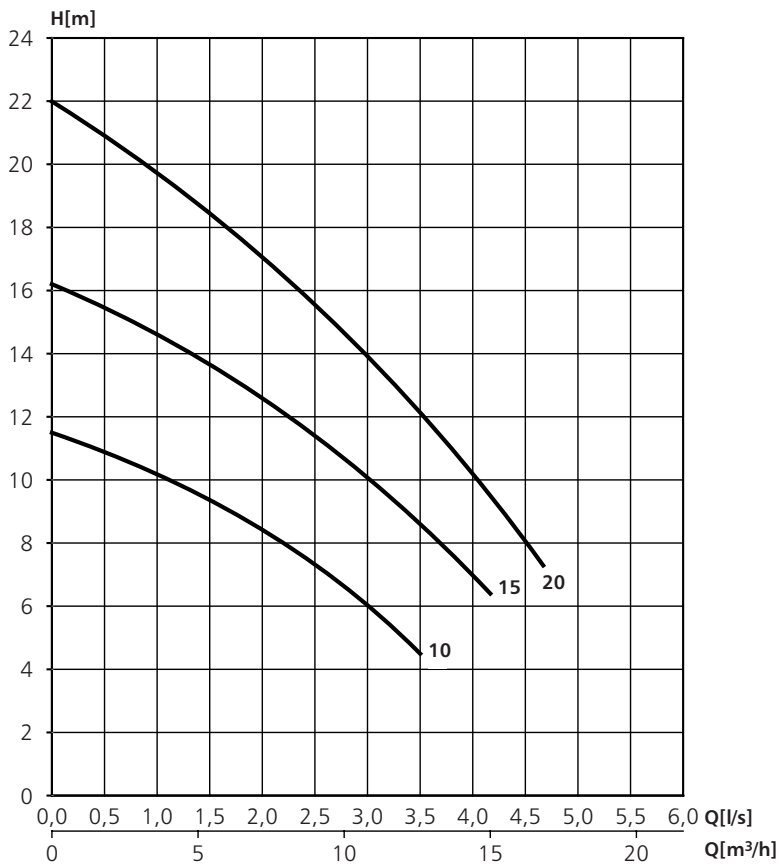
Single-phase Built in level regulator
 Three-phase To be provided

Motor rating

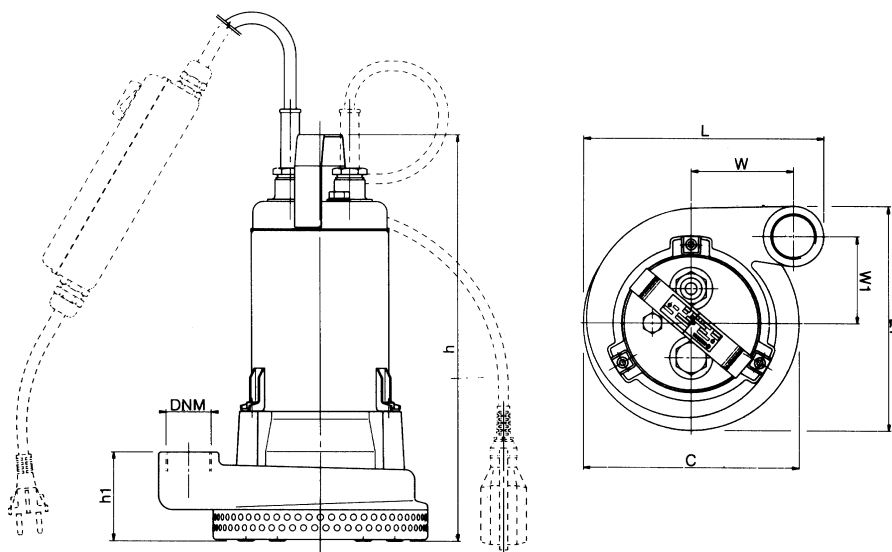
Pump type	Power kW	Input current A	
		220-240 V	380-415 V
Three phase			
STA 10	0.6	2.8	2.0
STA 15	0.6	3.1	2.2
STA 20	0.75	4.0	2.3

Pump type	Power kW	Capacitor μF	V	Input current A
				220-240 V
Single phase				
STAM 10	0.6	25	450	3.6
STAM 15	0.6	25	450	4.3
STAM 20	0.75	25	450	4.8

Performance curves



Dimensions and weight



Pump type	Dimensions in mm							DNM	Weight kg
	C	H	H1	L	L1	W	W1		
STA(M) 10	Ø200	380	81	209	223	81	95	RP 1"1/4	18.5
STA(M) 15	Ø200	380	81	209	223	81	95	RP 1"1/4	18.5
STA(M) 20	Ø200	380	81	209	223	81	95	RP 1"1/4	19.5



READY 4

Product

Submersible pump for dewatering of construction sites, flood cleaning operations and other similar applications. The pump can handle abrasive and corrosive liquids.

Denomination

Product code	2004.211
Installation	S
Impeller characteristic	MT

Process data

Liquid temperature	max 35 °C
Depth of immersion	max 5 m
The pH of the pumped liquid	pH 3-9
Liquid density	max 1100 kg/m ³
Strainer hole size	11 mm x 5 mm

Motor data

Frequency	50 Hz
Insulation class	F (+155 °C)
Voltage variation	
- continuously running	max ± 5%
- intermittent running	max ± 10%
Voltage imbalance between phases	max 2%
No. of starts/hour	max 15

Cable

Direct-on-line start	
H07RN-F	3x1 mm ²

Monitoring equipment

Thermal contacts opening temp.	135 °C
--------------------------------	--------

Material

Outer casing	Stainless steel
Stator housing	Stainless steel
Shaft	Stainless steel
Impeller	Polyurethane
Diffuser	Polyurethane
Pump top	Stainless steel/Reinforced polymer

Mechanical face seals

Alternative	Inner seal	Outer seal
1	Carbon/Ceramic	Silicon carbide/Silicon carbide

Surface Treatment

The pump top is sprayed with red paint. The outer casing is polished.

Weight

Excluding power cable.

Installation	MT			
S	10 kg			

Option

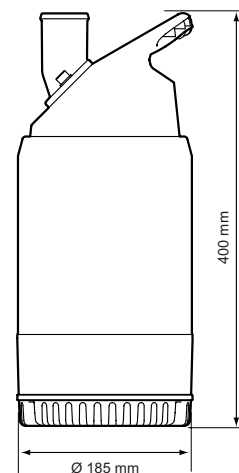
- Level sensor
- Discharge connection with coupling C

Accessories

Adapters, hose connections and other mechanical accessories.
Electrical accessories such as pump controller, control panels, starters, monitoring relays, cables.
See separate booklet for further information.

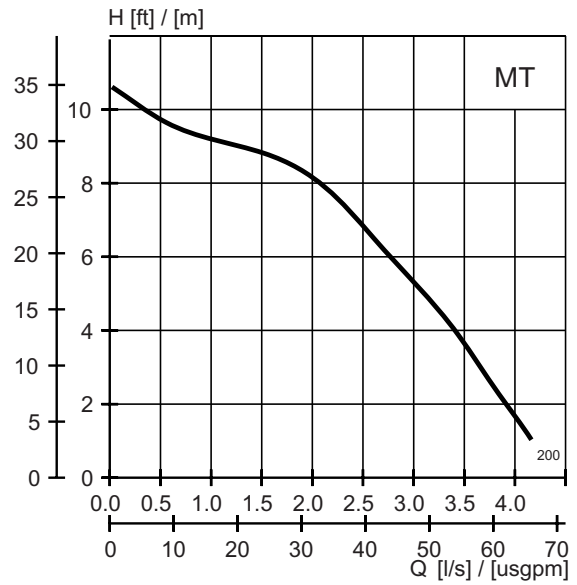
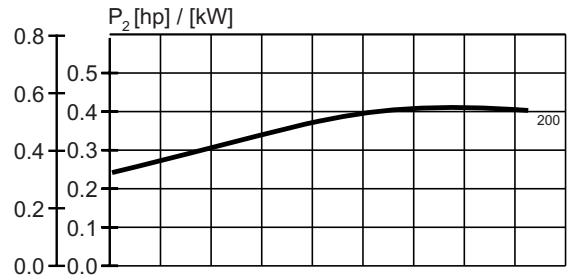
Dimensions

Discharge connection	2"
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MT-Motor rating and performance curve

Curve/impeller No	Rated Power, kW	Rated current, A	Starting current, A	Power factor cos ϕ	Ex proof version available
240 V, 50 Hz, 1~, 2775 r/min					
200	0.42	2.4	7.8	0.99	No
230 V, 50 Hz, 1~, 2760 r/min					
200	0.42	2.7	7.5	0.93	No
115 V, 50 Hz, 1~, 2795 r/min					
200	0,42	5,1	19.0	0.99	No





READY 8

Product

Submersible pump for dewatering of construction sites, flood cleaning operations and other similar applications. The pump can handle abrasive and corrosive liquids.

Denomination

Product code	2008.211
Installation	S
Impeller characteristic	MT

Process data

Liquid temperature	max 35 °C
Depth of immersion	max 5 m
The pH of the pumped liquid	pH 3-9
Liquid density	max 1100 kg/m ³
Strainer hole size	11 mm x 5 mm

Motor data

Frequency	50 Hz
Insulation class	F (+155 °C)
Voltage variation	
- continuously running	max ± 5%
- intermittent running	max ± 10%
Voltage imbalance between phases	max 2%
No. of starts/hour	max 15

Cable

Direct-on-line start	
H07RN-F	3x1 mm ²

Monitoring equipment

Thermal contacts opening temp. 135 °C

Material

Outer casing	Stainless steel
Stator housing	Stainless steel
Shaft	Stainless steel
Impeller	Polyurethane
Diffuser	Polyurethane
Pump top	Stainless steel/Reinforced polymer

Mechanical face seals

Alternative	Inner seal	Outer seal
1	Carbon/Ceramic	Silicon carbide/Silicon carbide

Surface Treatment

The pump top is sprayed with red paint. The outer casing is polished.

Weight

Excluding power cable.

Installation	MT			
S	12.5 kg			

Option

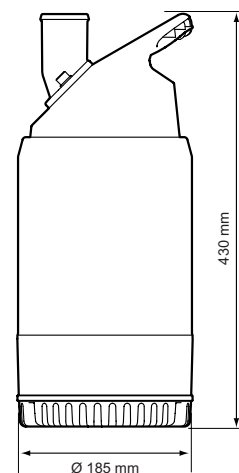
- Level controls
- Discharge connection with coupling C

Accessories

Adapters, hose connections and other mechanical accessories.
Electrical accessories such as pump controller, control panels, starters, monitoring relays, cables.
See separate booklet or for further information.

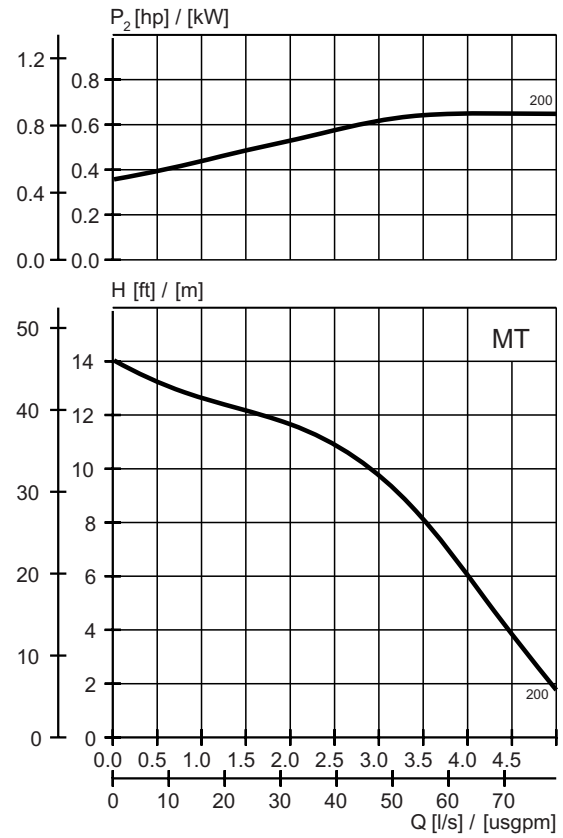
Dimensions

Discharge connection 2"



MT-Motor rating and performance curve

Curve/impeller No	Rated Power, kW	Rated current, A	Starting current, A	Power factor cos ϕ	Ex proof version available
240 V, 50 Hz, 1~, 2835 r/min					
200	0.75	4.0	20.0	0,99	No
230 V, 50 Hz, 1~, 2825 r/min					
200	0.75	4.2	19.0	1.0	No
115 V, 50 Hz, 1~, 2845 r/min					
200	0.75	8.7	43.0	0.95	No





READY 8S

Product

Submersible solids handling pump designed to handle contaminated water and water mixed with sand and gravel.

Denomination

Product code	2008.280
Installation	S
Impeller characteristic	MT

Process data

Liquid temperature	max 35 °C
Depth of immersion	max 5 m
The pH of the pumped liquid	pH 3-9
Liquid density	max 1100 kg/m ³
Inlet	38 mm

Motor data

Frequency	50 Hz
Insulation class	F (+155 °C)
Voltage variation	
- continuously running	max ± 5%
- intermittent running	max ± 10%
Voltage imbalance between phases	max 2%
No. of starts/hour	max 15

Cable

Direct-on-line start	
H07RN-F	3x1 mm ²

Monitoring equipment

Thermal contacts opening temp.	135 °C
--------------------------------	--------

Material

Outer casing	Stainless steel
Stator housing	Stainless steel
Shaft	Stainless steel
Impeller	Polyurethane
Pump housing	Polyurethane
Pump top	Stainless steel/Reinforced polymer

Mechanical face seals

Alternative	Inner seal	Outer seal
1	Carbon/Ceramic	Silicon carbide/Silicon carbide

Surface Treatment

The pump top is sprayed with red paint. The outer casing is polished.

Weight

Excluding power cable.

Installation	MT			
S	15 kg			

Option

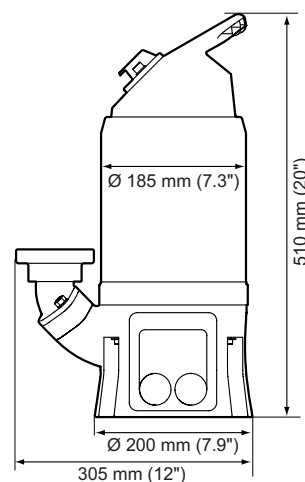
- Level controls
- Discharge connection with coupling C

Accessories

- Adapters, hose connections and other mechanical accessories.
- Electrical accessories such as pump controller, control panels, starters, monitoring relays, cables.
- See separate booklet or for further information.

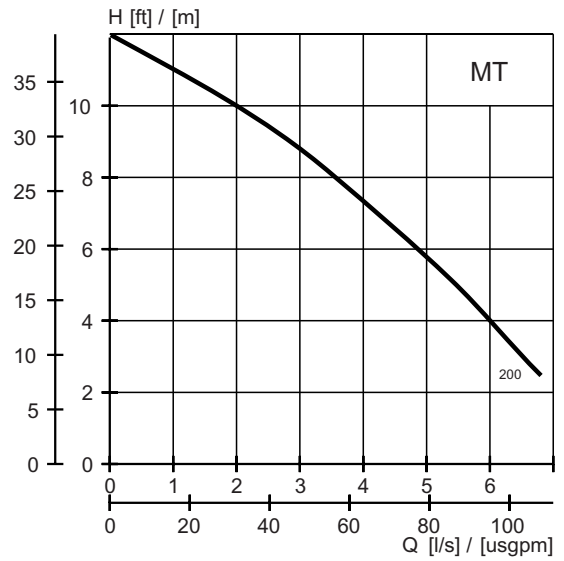
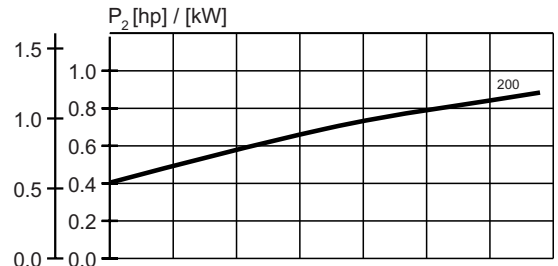
Dimensions

Discharge connection	2"
----------------------	----



MT-Motor rating and performance curve

Curve/impeller No	Rated Power, kW	Rated current, A	Starting current, A	Power factor cos ϕ	Ex proof version available
240 V, 50 Hz, 1~, 2790 r/min					
200	0.9	5.0	20.0	0,99	No
230 V, 50 Hz, 1~, 2770 r/min					
200	0.9	5.2	19.0	1.0	No
115 V, 50 Hz, 1~, 2800 r/min					
200	0.9	11.0	43.0	0.96	No





Wastewater

- Best range on the market for sewage and wastewater.
- Smaller stainless steel pumps with channel or vortex impellers, grinder pumps that can handle any liquid, and large, robust cast iron pumps with N Technology for many years of clogging-free operation.
- Pump stations 0.55 – 800 kW

DX – pumps in stainless steel for groundwater . . . . .	.295
DL – pump body in cast iron . . . . .	.298
G – cast iron pumps for groundwater. . . . .	.301
C – wastewater pumps with single or multi-channel impellers . . . . .	.305
D – wastewater pumps with vortex type impeller . . . . .	.345
N – wastewater high efficiency pumps with semi-open self-cleaning impeller . . . . .	.371
M – wastewater grinder pumps . . . . .	.392
Compit pumpstation – for single or multi – family housing . . . . .	.405
Micro stations for home use. . . . .	.406

Impeller explanation

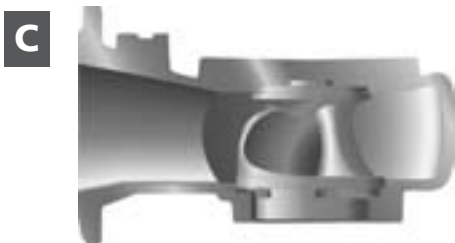
3000-pumps

ITT Flygt uses a simple system to code and thereby identify its products. Each pump is given a code made up of two letters followed by four numbers, e.g., MF 3085. The first letter refers to the pump's hydraulic section, i.e., the impeller and volute. It also refers to the pump, as the impeller used determines the pump type.

Pumps for Groundwater
Closed two or three-vane impeller.



Designed to minimise clogging
Shrouded single or multi-channel impellers with large throughlets and single volute pump casing for liquids containing solids and fibres.



Pumps for solids handling
Vortex type impeller and single volute pump casing with large throughlets for sludge containing solids and fibres.



Pumps for pressurised sewage systems
Semi-open multi-channel impellers with integral grinder cutter in single volute casing for liquids containing solids and fibres.



Sustained high efficiency for wastewater handling
Semi-open self-cleaning impeller with high efficiency and for multipurpose use.

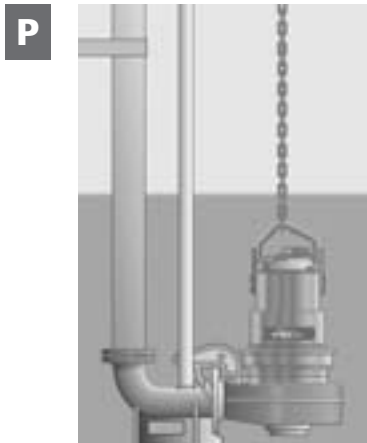


Methods of installation

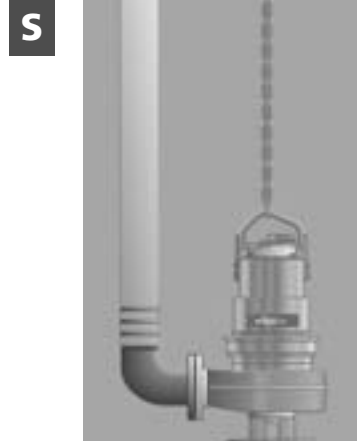
3000-pumps

The second letter refers to the pump's method of installation: semipermanent free-standing, permanent dry vertically mounted, portable etc. The four numbers refer to the pump's model as well as specify its size in comparison to other pumps of the same type. Thus pump MF 3127 is larger than MF 3085.

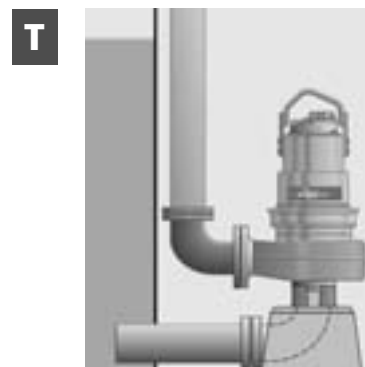
Semi permanent, Wet
Wet well/wet pit arrangement with pump installed on twin guide bars with automatic connection to discharge.



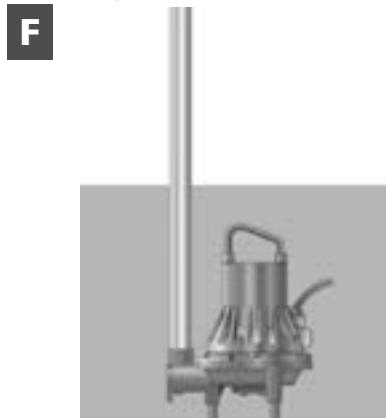
Semi permanent, Wet
Portable version with hose coupling or flange for connection to discharge pipeline.



Permanent, Dry
Dry well/dry pit installation with flange connection to suction and discharge piping; vertical mounting



Semi-permanent, Wet
Free-standing for hose or pipeline connections in restricted sumps.





Introduction

The DX range is a compact high performance range of submersible pumps with pump body and motor casing in stainless steel. Dry motor with class F insulation and twin seal system.

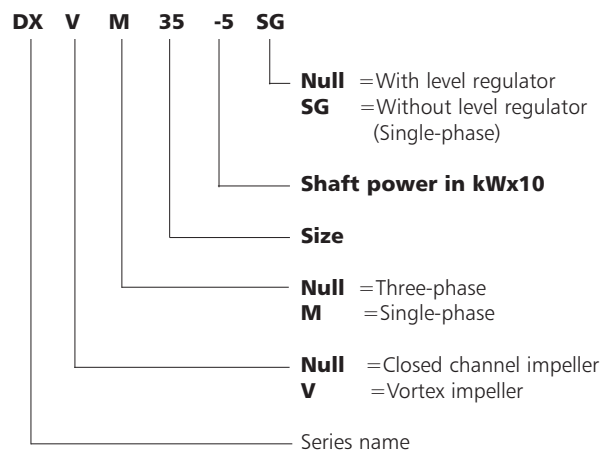
Delivery: up to 700 l/min

Head: up to 14.5 m

Applications

- Emptying of sewage collection tanks, civil drainage and waste water in general
- Drainage of underpasses and yards, tanks and reservoirs, ditches and trenches
- Transfer of dirty water
- Transfer of clean and contaminated water
- Emergency drainage in case of flooding
- Transfer of groundwater

Product identity





DX

Product

Submersible pump for a variety of drainage and waste water applications.

Process data

Liquid temperature max 35°C

Max size of suspended solids:

DX 35 mm
DXV 50 mm

Motor data

Dry motor for submersible duty. Continuously duty when fully submerged. Single phase motor has built in capacitor (except DX 50-11, which has the capacitor in a built in control box on the cable).

Frequency 50 Hz
Insulation class F (155°C)
Protection class IP68
Immersion depth max 5 m

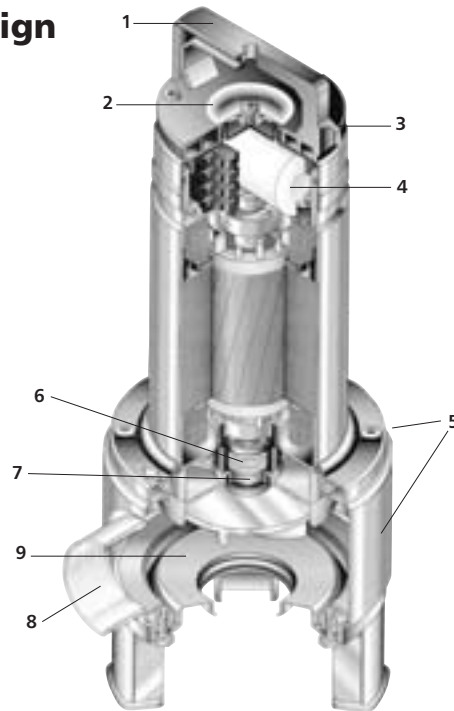
Cable

H07RN-F 10 m

Control

Single-phase Built in level regulator
Three-phase To be provided

Design



- 1. Lifting handle, fibreglass-reinforced nylon
- 2. Testing hole for injecting compressed air to check the hermetic seal of the motor gaskets
- 3. Cable holder. The float switch cable can be fixed at various heights to start the pump at the fluid level required
- 4. Capitor
- 5. Pump body and motorcasing in stainless steel AISI 304
- 6. Sealing system: Outer mechanical seal in silicon carbide. Inner lip seal in nitrile rubber
- 7. Shaft in stainless steel AISI 304
- 8. Delivery port from 2" (50 mm) except DX(V) 35-5 with 1 1/2" ports (35 mm)
- 9. Impeller, vortex or channel type, in stainless steel AISI 304 (or fibreglass-reinforced nylon in the DXV 35-5)
– all elastomers in nitrile rubber (NBR)
– all screws and washers in stainless steel AISI 304

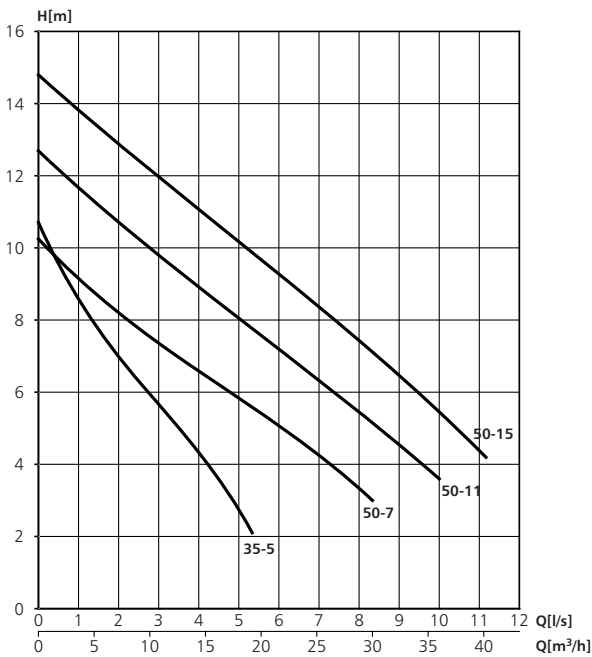
Motor rating

Pump type Three phase	Power kW	Input current A	
		220-240 V	380-415 V
DX(V) 35-5	0.55	2.6	1.5
DX(V) 50-7	0.75	4.1	2.4
DX(V) 50-11	1.1	4.7	2.7
DX(V) 50-15	1.5	6.6	3.8

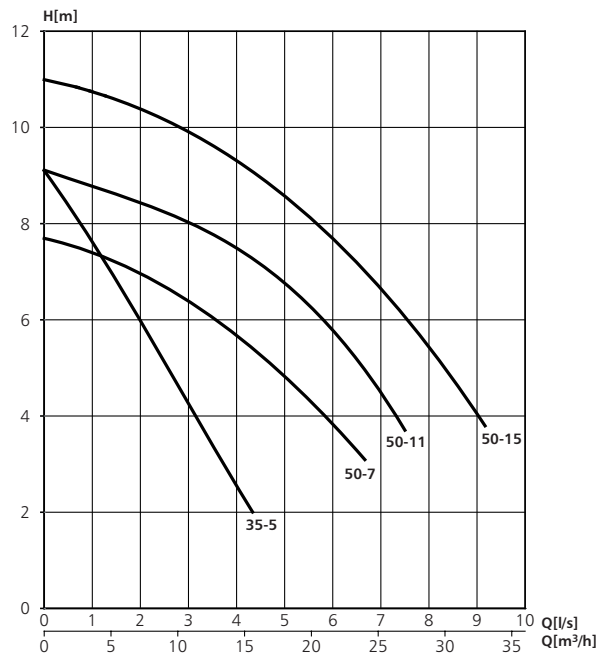
Pump type Single phase	Power kW	Capacitor		Input current A 220-240 V
		µF	V	
DX(V) 35-5 M	0.55	16	450	3.9
DX(V) 50-7 M	0.75	22	450	5.8
DX(V) 50-11 M	1.1	30	450	7.0

Performance curves

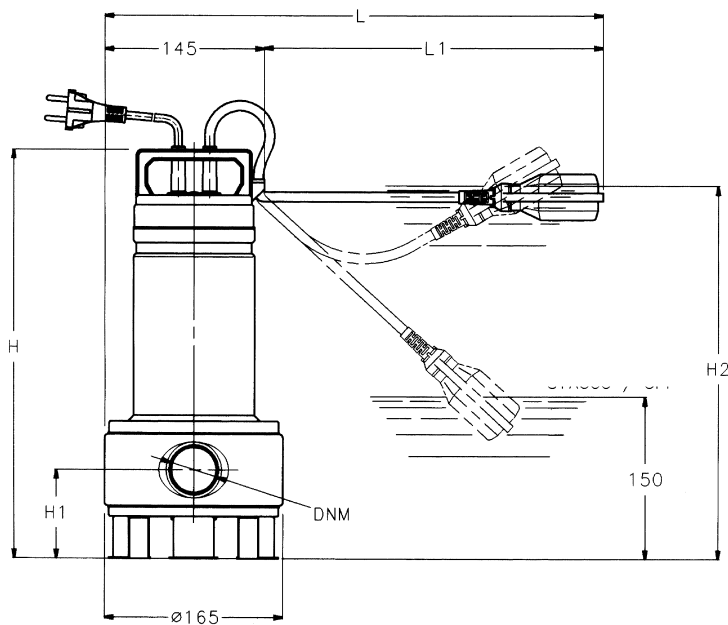
DX



DXV



Dimensions and weight



Pump type	Dimensions in mm						DNM	Weight kg
	H	H1	H2	L	L1	L2		
DX(V) 35-5	386	88				193	RP 1½"	8.7
DX(V) 50-7	433	111				198	RP 2"	11.4
DX(V) 50-11	463	111				198	RP 2"	13.4
DX(V) 50-15	463	111				198	RP 2"	14.4
DX(V) 35-5 M	386	88	370	420	275	193	RP 1½"	10.0
DX(V) 50-7 M	463	111	415	495	350	198	RP 2"	13.4
DX(V) 50-11 M	463	111	415	495	350	198	RP 2"	15.1



Introduction

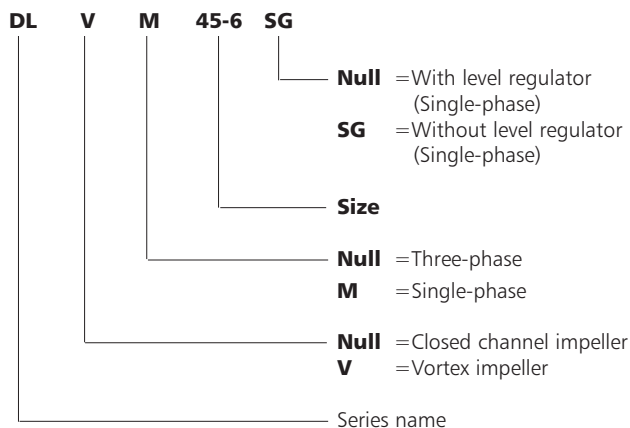
The DL range is a compact high performance range of submersible pumps with pump body in cast iron and motor casing in stainless steel. The throughlet is up to 50 mm, which makes the pump suitable for handling water and waste water containing solids.

Delivery: up to 700 l/min
 Head: up to 21 m

Applications

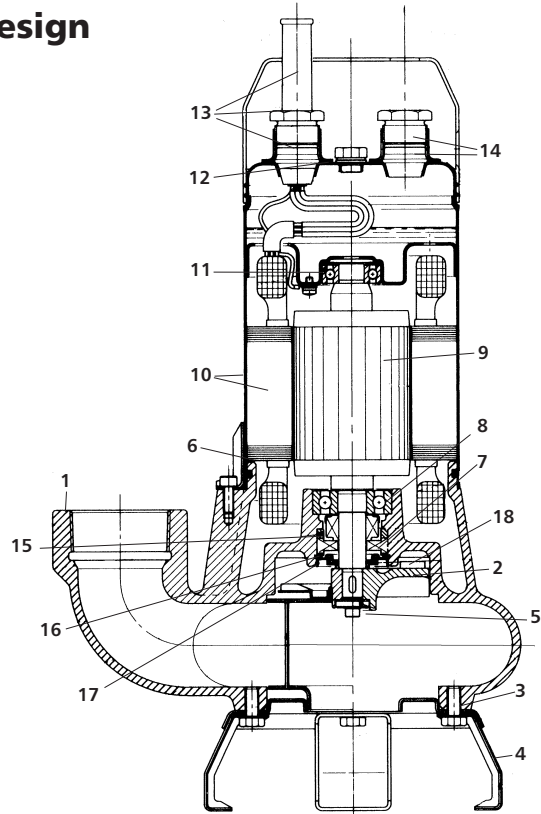
- Pumping of sewage with suspended solids
- Emptying of sewage collection tanks, civil drainage and waste water in general
- Drainage of underpasses and yards, tanks and reservoirs, ditches and trenches and marshy land

Product identity





Design



- 1. Pump body in cast iron
- 2. Impeller, cast iron
- 3. Suction flange
- 4. Supporting foot
- 5. Impeller lock washer
- 6. O-ring
- 7. Mechanical seal, carbon/ceramic
- 8. Lower bearing
- 9. Shaft & rotor
- 10. Motor housing with stator
- 11. Upper bearing
- 12. Shaft and washer
- 13. Supply cable gland
- 14. Insert and union plug
- 15. Mechanical seal spacer
- 16. Shoulder seal washer
- 17. Labyrinth seal cover
- 18. Sand slinger

DL

Product

Submersible pump for a variety of sewage and waste water applications.

Process data

Liquid temperature:
 Fully submerged max 50°C
 Partly submerged max 25°C
 Max size of suspended solids:
 DL 45,46 45 mm
 DL 50 50 mm
 DLV 45 45 mm
 DLV 50 50 mm

Motor data

Oil filled motor for submersible duty
 Frequency 50 Hz
 Insulation class F (155°C)
 Protection class IP68
 Immersion depth max 5 m
 Oil Dielectric non toxic

Cable

H07RN-F 10 m

Control

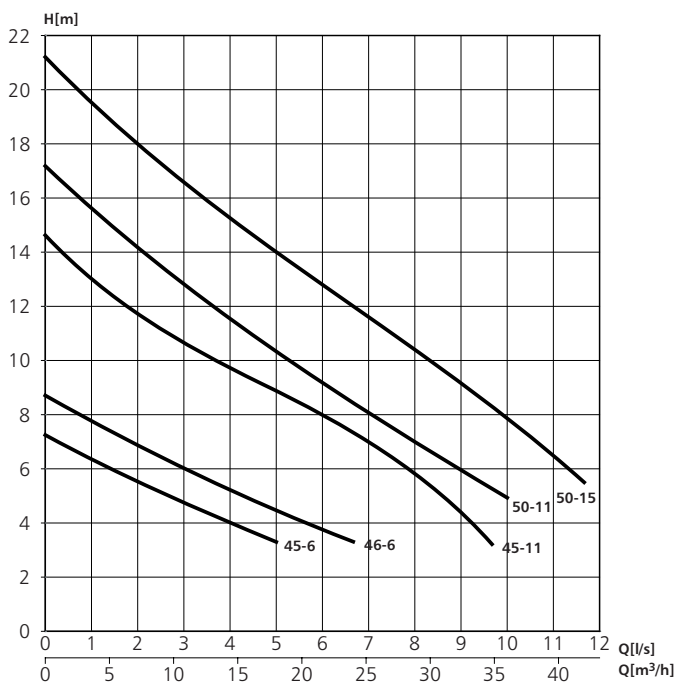
Single-phase Built in level regulator
 Three-phase To be provided

Motor rating

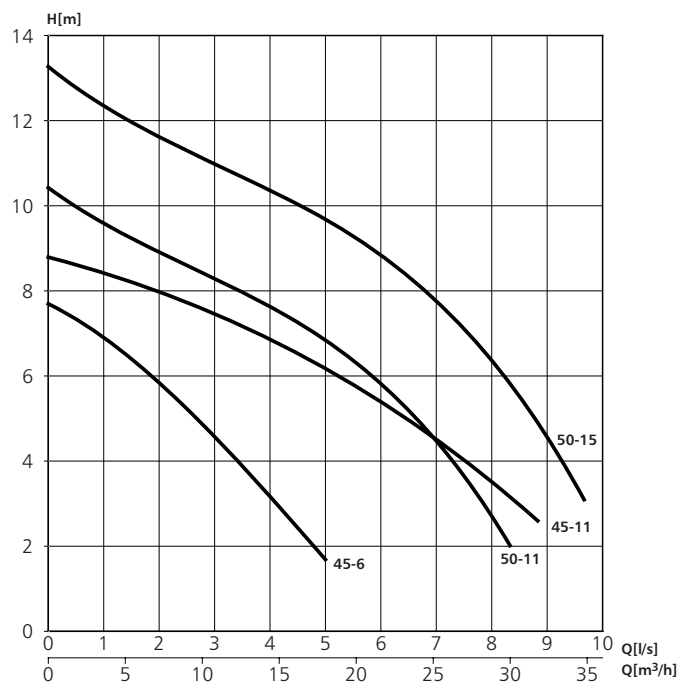
Pump type Three phase	Power kW	Input current A	
		220-240 V	380-415 V
DL 45-6	0.6	2.8	1.6
DL 46-6	0.6	3.0	1.75
DL 45-11	1.1	5.0	2.9
DL 50-11	1.1	5.7	3.3
DL 50-15	1.5	6.6	3.8
DLV 45-6	0.6	3.2	1.85
DLV 45-11	1.1	5.5	3.2
DLV 50-11	1.1	5.6	3.2
DLV 50-15	1.5	6.6	3.8

Pump type Single phase	Power kW	Capacitor		Input current A 220-240 V
		µF	V	
DLM 45-6	0.6	20	450	3.8
DLM 46-6	0.6	20	450	4.2
DLM 50-11	1.1	30	450	8.0
DLVM 45-6	0.6	20	450	4.7
DLVM 50-11	1.1	30	450	7.8

Performance curves DL

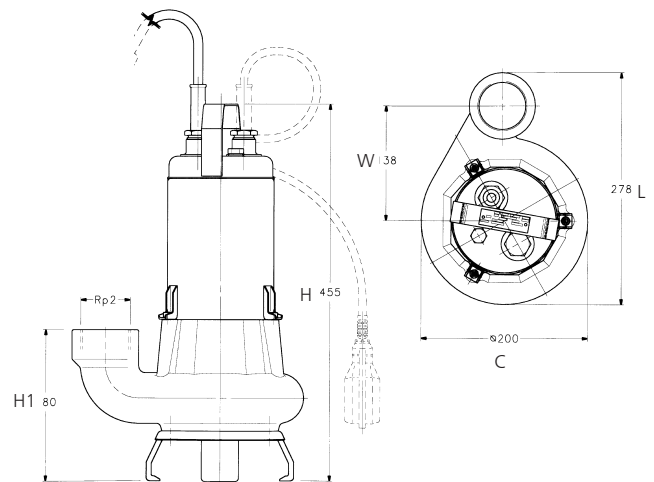


Performance curves DLV



Dimensions and weight

Pump type	Dimensions in mm						Weight kg
	C	h	H1	L	W	DNM	
DL(M) 45-6	200Ø	455	180	278	138	2"	19.5
DL(M) 46-6	200Ø	455	180	278	138	2"	20.5
DL 45-11	239Ø	486	180	343	183	2"	21.0
DL (M)50-11	239Ø	486	180	343	183	2"	27.0
DL 50-11	239Ø	486	180	343	183	2"	27.0
DLV(M) 45-6	200Ø	486	180	278	138	2"	19.0
DLV 45-11	239Ø	455	180	243	183	2"	21.0
DLV 45-11	239Ø	486	180	243	183	2"	27.0
DLV(M) 50-11	239Ø	486	180	243	183	2"	27.0
DLV 50-15	239Ø	486	180	243	183	2"	27.0





G 3033

Product

Submersible pump for pumping raw water.

Denomination

Product code	3033.020
Installation	F
Impeller characteristic	MT

Process data

Liquid temperature	max +40 °C
Depth of immersion	max 20 m
The pH of the pumped liquid	pH 5.5-14
Liquid density	max. 1100 kg/m ³

Motor data

Frequency	50 Hz
Insulation class	F (+155° C)
Voltage variation	
- continuously running	max ± 5%
- intermittent running	max ± 10%
Voltage imbalance between phases	max 2%
No. of starts/hour	max 15

Cable

Direct-on-line start

H07RN-F	4G1,5 mm ²
---------	-----------------------

Monitoring equipment

Thermal contacts opening temperature	125°C
--------------------------------------	-------

Material

Impeller	Cast iron
Pump housing	Cast iron
Stator housing	Cast iron
Shaft	Stainless steel
O-rings	Nitrile rubber

Mechanical face seals

Alternative	Inner seal	Outer seal
1	Carbon/ Aluminium oxide	Carbon/ Aluminium oxide

Surface Treatment

All cast parts are primed with a water-borne primer. The finishing coat is a high-solid two pack paint.

Weight

See dimensional drawing.

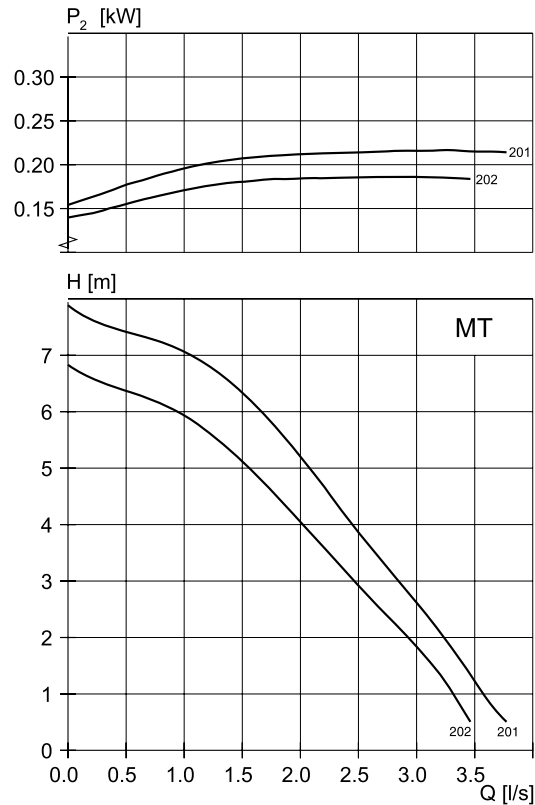
Accessories

Electrical accessories such as pump controller, control panels, starters, monitoring relays, cables.

See separate booklet or www.flygt.com, for further information

MT-Motor rating and performance curve

Curve/Impeller No	Rated power, kW	Rated current, A	Starting current, A	Power factor cos φ	Impeller thoughtlet, mm	Ex proof version available	Installation				
400 V, 50 Hz, 3 ~, 2830 r/min							F				
201	0.22	0.6	3.9	0.84	8	No	•				
202	0.22	0.6	3.9	0.84	8	No	•				

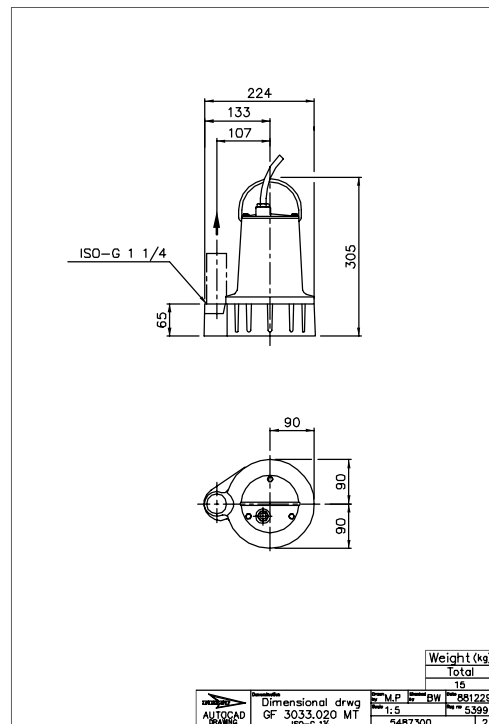


Dimensional drawing

All drawings are available as Acrobat documents (.pdf) and AutoCad drawings (.dwg). Download the drawings from www.flygt.com or contact your ITT Flygt representative for more information.

All dimensions are in mm.

MT, F-installation





G 3085

Product

Submersible pump for pumping raw water.

Denomination

Product code 3085.183
 Installation F
 Impeller characteristic MT

Process data

Liquid temperature max +40 °C
 Depth of immersion max 20 m
 The pH of the pumped liquid pH 5,5-14
 Liquid density max. 1100 kg/m³

Motor data

Frequency 50 Hz
 Insulation class H (+180° C)
 Voltage variation
 - continuously running max ± 5%
 - intermittent running max ± 10%
 Voltage imbalance between phases max 2%
 No. of starts/hour max 30

Cable

Direct-on-line start

SUBCAB® 4G1,5 mm²
 4G1,5+2x1,5 mm²
 4G2,5 mm²
 4G2,5+2x1,5 mm²

Y/D start

SUBCAB® 7G2,5 mm²

Monitoring equipment

Thermal contacts opening temperature 125° C

Material

Impeller Cast iron
 Pump housing Cast iron
 Stator housing Cast iron
 Shaft Stainless steel
 O-rings Nitrile rubber

Mechanical face seals

Alternative	Inner seal	Outer seal
1	Carbon/ Aluminium oxide	Corrosion resistant cemented carbide/ Corrosion resistant cemented carbide
2	Carbon/ Aluminium oxide	Silicon carbide/ Silicon carbide

Surface Treatment

All cast parts are primed with a water-borne primer. The finishing coat is a high-solid two pack paint.

Weight

See dimensional drawing.

Option

Warm liquid version on request
 Leakage sensor in stator housing FLS
 Leakage sensor in oil housing CLS
 Other cables
 Surface treatment Epoxy treatment

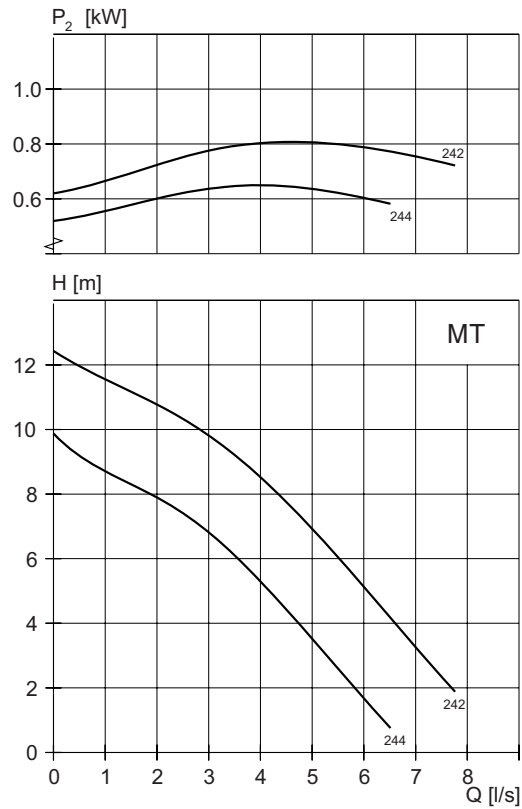
Accessories

Electrical accessories such as pump controller, control panels, starters, monitoring relays, cables.

See separate booklet or www.flygt.com, for further information

MT-Motor rating and performance curve

Curve/Impeller No	Rated power, kW	Rated current, A	Starting current, A	Power factor cos φ	Impeller throatlet, mm	Ex proof version available	Installation				
							F				
400 V, 50 Hz, 3 ~, 2830 r/min											
242	0,77	1,8	9,1	0,86	19	No	•				
244	0,77	1,8	9,1	0,86	19	No	•				
230 V, 50 Hz, 1 ~, 2935 r/min											
242	0,85	4,8	30,0	0,98	19	No	•				
244	0,85	4,8	30,0	0,98	19	No	•				

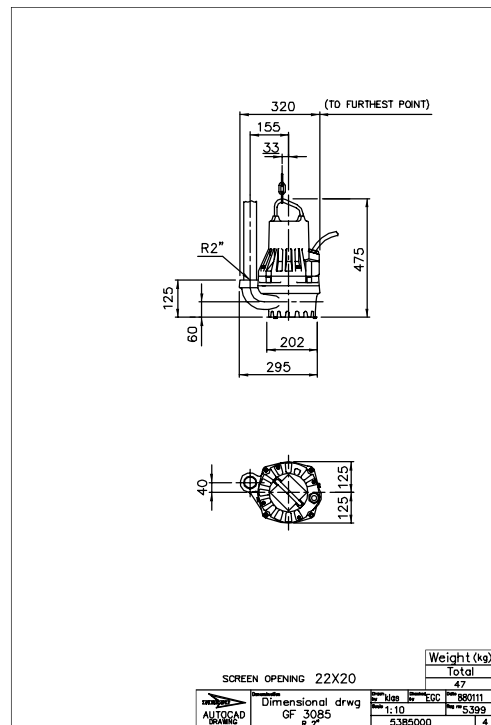


Dimensional drawing

All drawings are available as Acrobat documents (.pdf) and AutoCad drawings (.dwg). Download the drawings from www.flygt.com or contact your ITT Flygt representative for more information.

All dimensions are in mm.

MT, F-installation





C 3045

Product

Submersible pump for pumping waste water and sludge. It can also be used for pumping ground water and other liquids containing solids.

Denomination

Product code	3045.180
Installation	F, H, P, S
Impeller characteristic	HT

Process data

Liquid temperature	max +40 °C
Depth of immersion	max 20 m
The pH of the pumped liquid	pH 5,5-14
Liquid density	max. 1100 kg/m ³

Motor data

Frequency	50 Hz
Insulation class	F (+155 °C)
Voltage variation	
- continuously running	max ± 5%
- intermittent running	max ± 10%
Voltage imbalance between phases	max 2%
No. of starts/hour	max 15

Cable

Direct-on-line start

SUBCAB®	4G2,5 mm ²
	4G2,5+2x1,5 mm ²

Y/D start

SUBCAB®	7G2,5 mm ²
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Material

Impeller	Polyamide
Pump housing	Cast iron
Stator housing	Cast iron
Shaft	Stainless steel
O-rings	Nitrile rubber

Mechanical face seals

Alternative	Inner seal	Outer seal
1	Carbon/Aluminium oxide	Silicon carbide/Silicon carbide

Surface Treatment

All cast parts are coated with a primer. The finish coat is a synthetic varnish.

Weight

See dimensional drawing.

Option

3045.090	Ex. proof design
Warm liquid version on request	
Other cables	
Zinc anodes	

Accessories

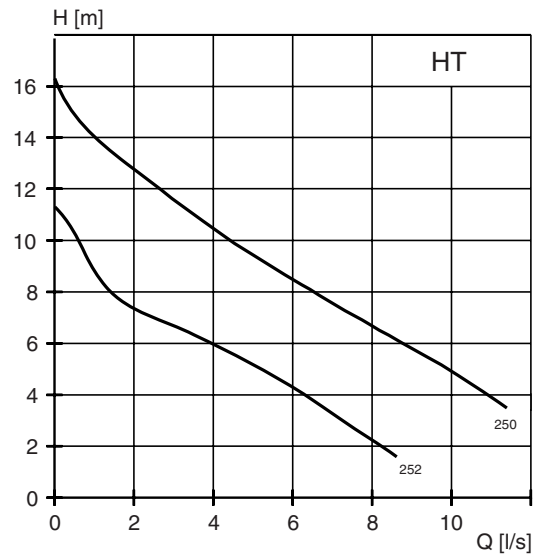
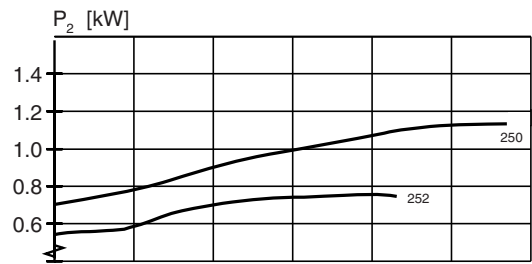
Discharge connections, adapters, hose connections and other mechanical accessories.

Electrical accessories such as pump controller, control panels, starters, monitoring relays, cables.

See separate booklet or www.flygt.com, for further information.

HT-Motor rating and performance curve

Curve/Impeller No	Rated power, kW	Rated current, A	Starting current, A	Power factor cos φ	Impeller throatlet, mm	Ex proof version available	Installation				
							F	H	P	S	
400 V, 50 Hz, 3 ~, 2870 r/min											
252	0,8	2,0	14,0	0,74	44		•	•	•	•	
400 V, 50 Hz, 3 ~, 2790 r/min											
250	1,2	2,6	14,0	0,84	44	•	•	•	•	•	
252	1,2	2,6	14,0	0,84	45	•	•	•	•	•	
230 V, 50 Hz, 1 ~, 2750 r/min											
252	0,75	4,2	15,0	0,99	44		•	•	•	•	

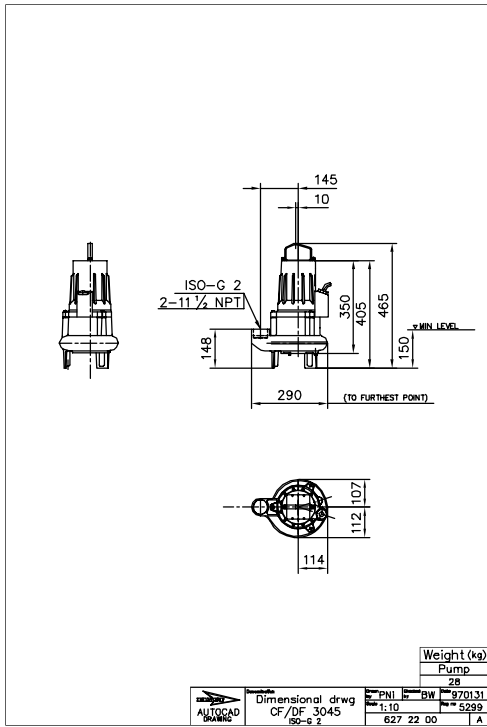


Dimensional drawing

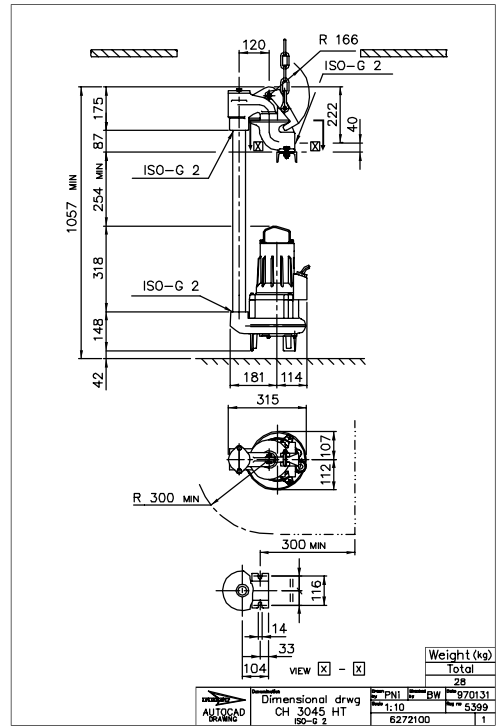
All drawings are available as Acrobat documents (.pdf) and AutoCad drawings (.dwg). Download the drawings from www.flygt.com or contact your ITT Flygt representative for more information.

All dimensions are in mm.

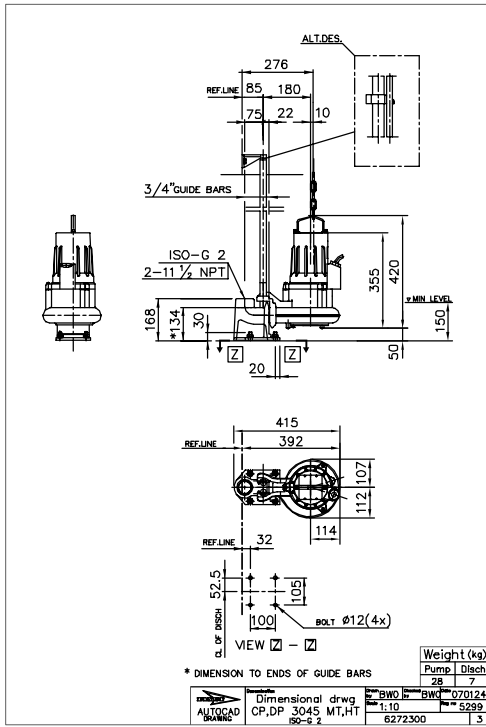
HT, F-installation



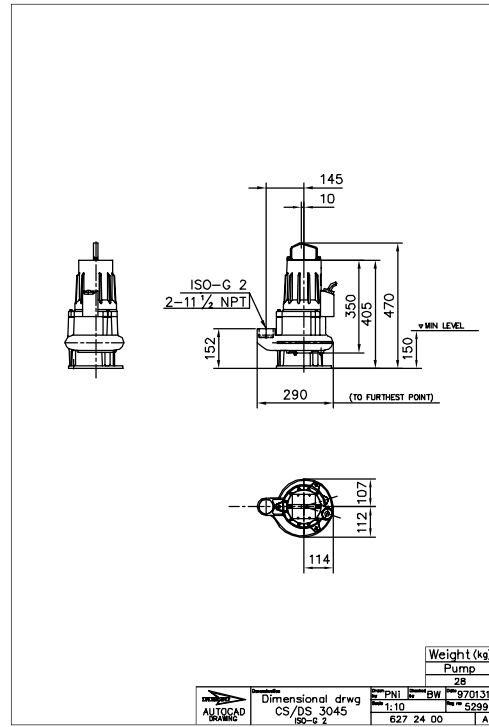
HT, H-installation



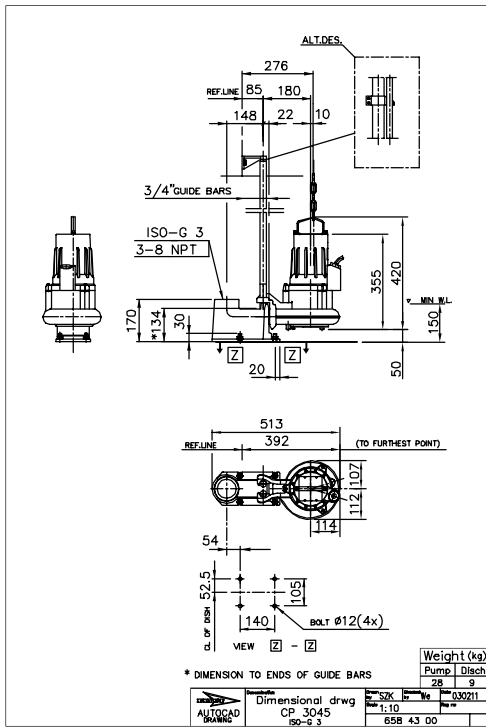
HT, P-installation



HT, S-installation



HT, P-installation





C 3057

Product

Submersible pump for pumping waste water and sludge. It can also be used for pumping ground water and other liquids containing solids.

Denomination

Product code	3057.181
Installation	F, H, P, S
Impeller characteristic	HT

Process data

Liquid temperature	max +40 °C
Depth of immersion	max 20 m
The pH of the pumped liquid	pH 5,5-14
Liquid density	max. 1100 kg/m ³

Motor data

Frequency	50 Hz
Insulation class	F (+155 °C)
Voltage variation	
- continuously running	max ± 5%
- intermittent running	max ± 10%
Voltage imbalance between phases	max 2%
No. of starts/hour	max 15

Cable

Direct-on-line start

SUBCAB®	4G1,5 mm ²
	4G2,5+2x1,5 mm ²

Y/D start

SUBCAB®	7G2,5 mm ²
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Monitoring equipment

Thermal switches in stator windings.	125 °C
Leakage sensor in stator housing	FLS

Material

Impeller	Polyamide
Pump housing	Cast iron
Stator housing	Cast iron
Shaft	Stainless steel
O-rings	Nitrile rubber

Mechanical face seals

Alternative	Inner seal	Outer seal
1	Aluminium oxide/ Corrosion resistant cemented carbide	Aluminium oxide/ Aluminium oxide
2	Aluminium oxide/ Aluminium oxide	Aluminium oxide/ Aluminium oxide
3	Aluminium oxide/ Aluminium oxide	Corrosion resistant cemented carbide/ Corrosion resistant cemented carbide
4	Corrosion resistant cemented carbide/ Corrosion resistant cemented carbide	Corrosion resistant cemented carbide/ Corrosion resistant cemented carbide
5	Corrosion resistant cemented carbide/ Corrosion resistant cemented carbide	Aluminium oxide/ Aluminium oxide
6	Carbon/Aluminium oxide	Aluminium oxide/ Aluminium oxide
7	Carbon/Aluminium oxide	Corrosion resistant cemented carbide/ Corrosion resistant cemented carbide

Surface Treatment

All cast parts are coated with a primer. The finish coat is a synthetic varnish.

Weight

See dimensional drawing.

Option

3057.091	Ex. proof design
Warm liquid version on request	
Other cables	
Zinc anodes	

Accessories

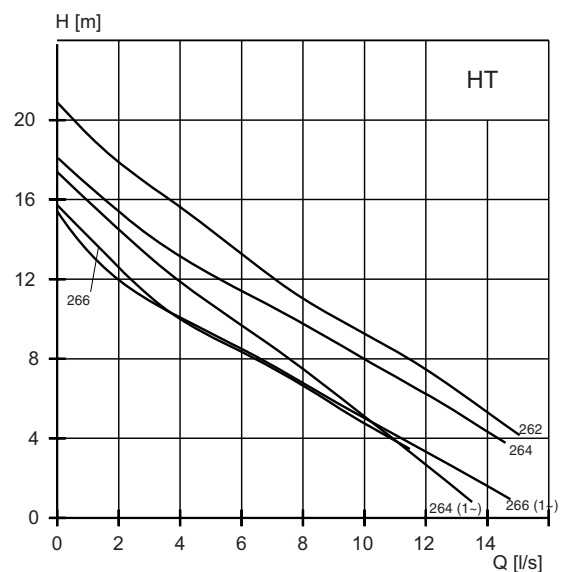
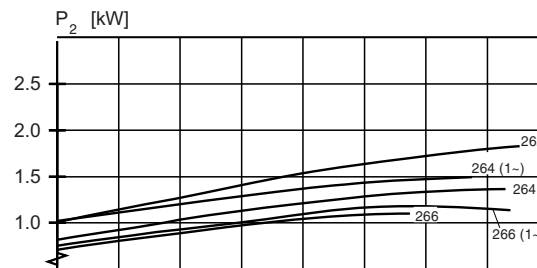
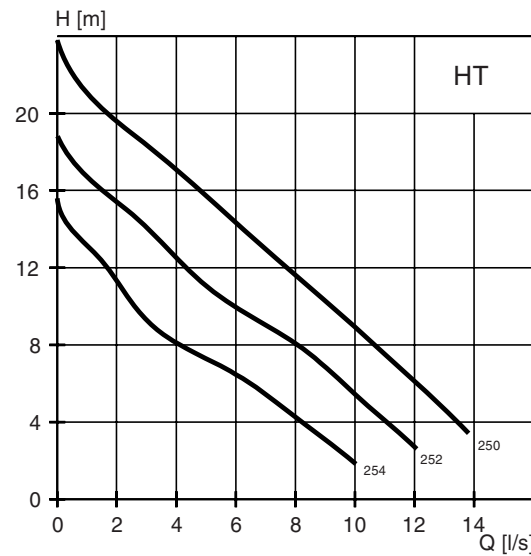
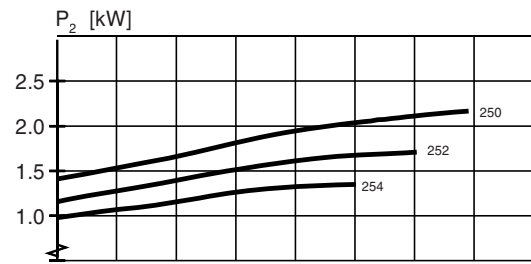
Discharge connections, adapters, hose connections and other mechanical accessories.

Electrical accessories such as pump controller, control panels, starters, monitoring relays, cables.

See separate booklet or www.flygt.com, for further information

HT-Motor rating and performance curve

Curve/Impeller No	Rated power, kW	Rated current, A	Starting current, A	Power factor cos φ	Impeller throatlet, mm	Ex proof version available	Installation			
							F	H	P	S
400 V, 50 Hz, 3 ~, 2695 r/min										
250	1,7	3,8	17,0	0,87	48	•	•	•	•	
250	1,7	3,8	17,0	0,87	48		•			
252	1,7	3,8	17,0	0,87	48	•	•	•	•	
252	1,7	3,8	17,0	0,87	48		•			
254	1,7	3,8	17,0	0,87	48	•	•	•	•	
254	1,7	3,8	17,0	0,87	48		•			
262	1,7	3,8	17,0	0,87	48	•	•	•	•	
262	1,7	3,8	17,0	0,87	48		•			
264	1,7	3,8	17,0	0,87	48	•	•	•	•	
264	1,7	3,8	17,0	0,87	48		•			
266	1,7	3,8	17,0	0,87	48	•	•	•	•	
266	1,7	3,8	17,0	0,87	48		•			
400 V, 50 Hz, 3 ~, 2700 r/min										
250	2,4	5,3	24,0	0,87	48	•	•	•	•	
250	2,4	5,3	24,0	0,87	48		•			
252	2,4	5,3	24,0	0,87	48	•	•	•	•	
252	2,4	5,3	24,0	0,87	48		•			
254	2,4	5,3	24,0	0,87	48	•	•	•	•	
254	2,4	5,3	24,0	0,87	48		•			
262	2,4	5,3	24,0	0,87	48	•	•	•	•	
262	2,4	5,3	24,0	0,87	48		•			
230 V, 50 Hz, 1 ~, 2730 r/min										
252	1,5	8,9	28,0	0,99	48		•	•	•	
254	1,5	8,9	28,0	0,99	48		•	•	•	
264	1,5	8,9	28,0	0,99	48		•	•	•	
266	1,5	8,9	28,0	0,99	48		•	•	•	

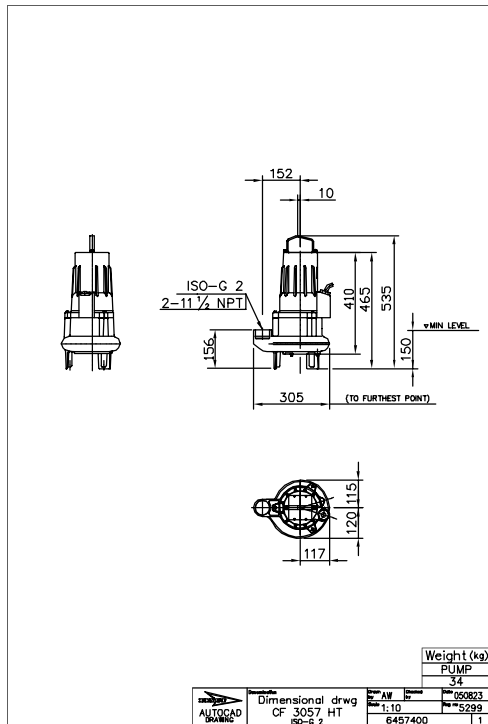


Dimensional drawing

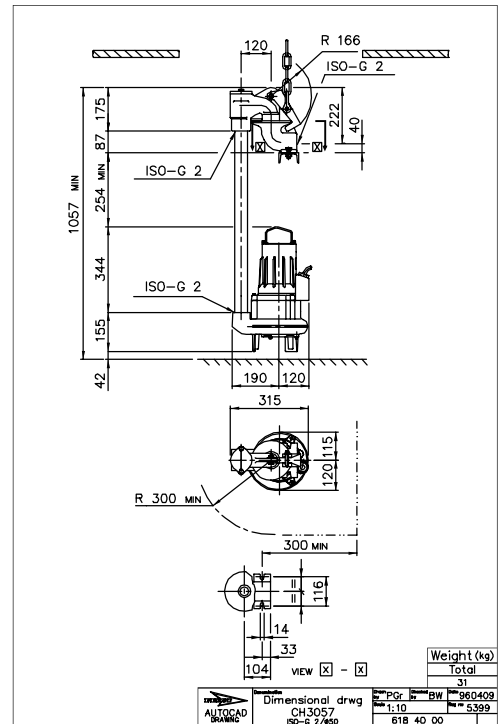
All drawings are available as Acrobat documents (.pdf) and AutoCad drawings (.dwg). Download the drawings from www.flygt.com or contact your ITT Flygt representative for more information.

All dimensions are in mm.

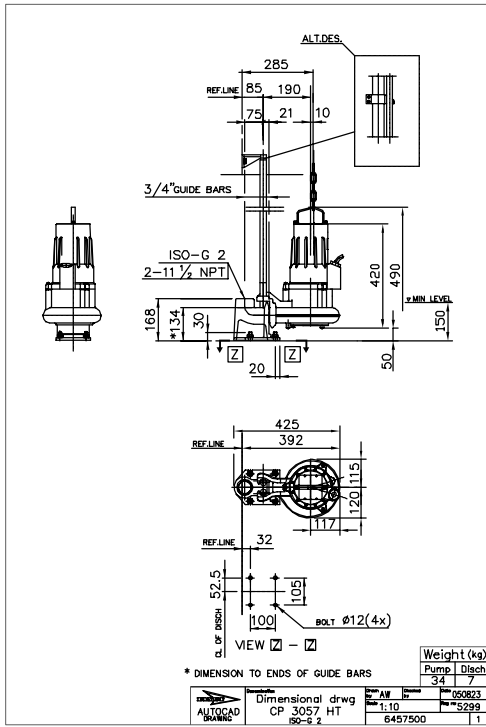
HT, F-installation



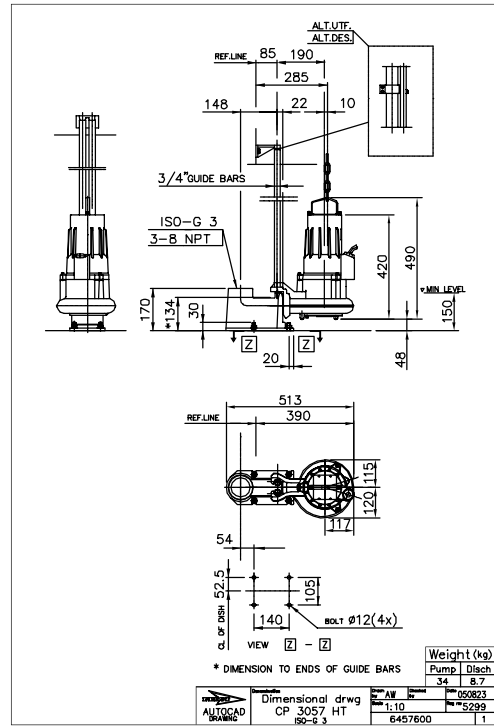
HT, H-installation



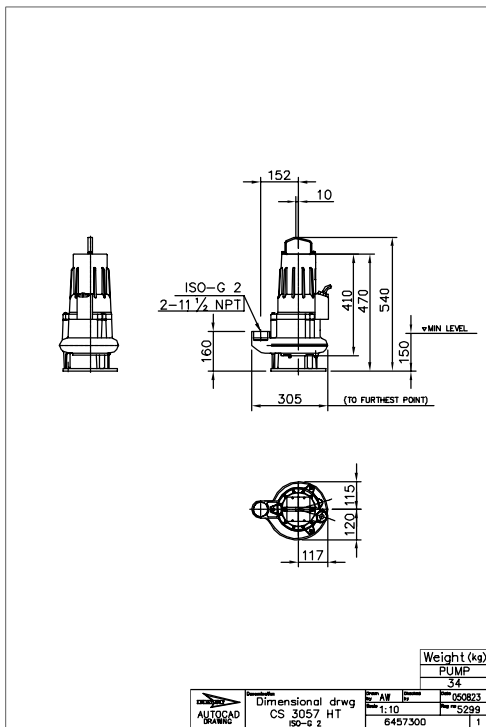
HT, P-installation



HT, P-installation



HT, S-installation





C 3068

Product

Submersible pump for pumping clean water, surface water and waste water containing solids or fibred material.

Denomination

Product code	3068.180
Installation	F, P
Impeller characteristic	HT

Process data

Liquid temperature	max +40 °C
Depth of immersion	max 20 m
The pH of the pumped liquid	pH 5,5-14
Liquid density	max. 1100 kg/m ³
Impeller throatlet	See Motor rating table

Motor data

Frequency	50 Hz
Insulation class	F (+155 °C)
Voltage variation	
- continuously running	max ± 5%
- intermittent running	max ± 10%
Voltage imbalance between phases	max 2%
No. of starts/hour	max 15

Cable

Direct-on-line start	
SUBCAB®	4G2,5 mm ²
	4G2,5+2x1,5 mm ²

Y/D start	
SUBCAB®	7G2,5 mm ²

Monitoring equipment

Thermal contacts opening temperature	125 °C
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Material

Impeller	Cast iron
Pump housing	Cast iron
Stator housing	Cast iron
Shaft	Magnetic stainless steel
O-rings	Fluorinated rubber

Mechanical face seals

Alternative	Inner seal	Outer seal
1	Aluminium oxide/ Aluminium oxide	Aluminium oxide/ Aluminium oxide
2	Aluminium oxide/ Aluminium oxide	Corrosion resistant cemented carbide/ Corrosion resistant cemented carbide
3	Aluminium oxide/ Aluminium oxide	Silicon carbide/Silicon carbide
4	Corrosion resistant cemented carbide/ Corrosion resistant cemented carbide	Aluminium oxide/ Aluminium oxide
5	Corrosion resistant cemented carbide/ Corrosion resistant cemented carbide	Corrosion resistant cemented carbide/ Corrosion resistant cemented carbide
6	Corrosion resistant cemented carbide/ Corrosion resistant cemented carbide	Silicon carbide/Silicon carbide
7	Carbon/Aluminium oxide	Aluminium oxide/ Aluminium oxide
8	Carbon/Aluminium oxide	Corrosion resistant cemented carbide/ Corrosion resistant cemented carbide
9	Carbon/Aluminium oxide	Silicon carbide/Silicon carbide

Surface Treatment

All cast parts are coated with a primer. The finish coat is a synthetic varnish.

Weight

See dimensional drawing.

Option

3068.090	Ex. proof design
Warm liquid version on request	
Leakage sensor in stator housing	FLS
Surface treatment	Epoxy treatment
Other cables	
Zinc anodes	

Accessories

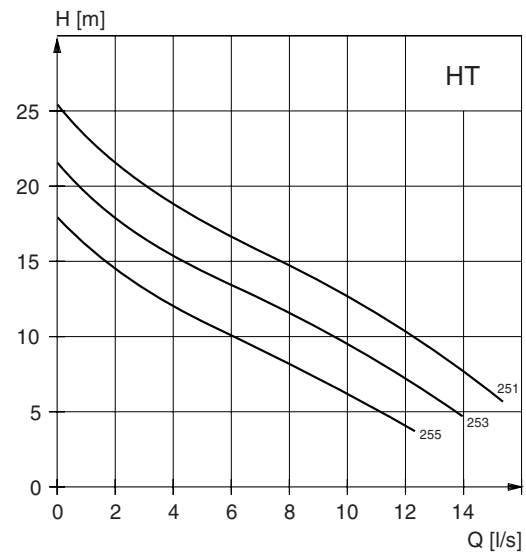
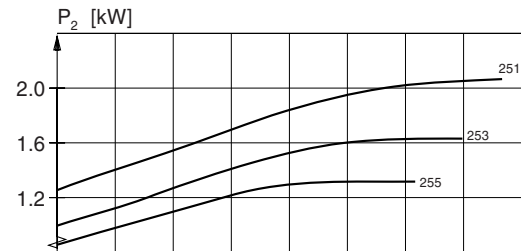
Discharge connections, adapters, hose connections and other mechanical accessories.

Electrical accessories such as pump controller, control panels, starters, monitoring relays, cables.

See separate booklet or www.flygt.com for further information.

HT-Motor rating and performance curve

Curve/Impeller No	Rated power, kW	Rated current, A	Starting current, A	Power factor cos φ	Impeller throatlet, mm	Ex proof version available	Installation			
							F	P		
400 V, 50 Hz, 3 ~, 2700 r/min										
253	1,7	3,8	17,0	0,87	34	•	•	•		
255	1,7	3,8	17,0	0,87	34	•	•	•		
230 V, 50 Hz, 3 ~, 2705 r/min										
251	2,4	5,3	24,0	0,87	34	•	•	•		
253	2,4	5,3	24,0	0,87	34	•	•	•		
255	2,4	5,3	24,0	0,87	34	•	•	•		
230 V, 50 Hz, 1 ~, 2730 r/min										
253	1,5	8,9	28,0	0,99	34		•	•		
255	1,5	8,9	28,0	0,99	34		•	•		



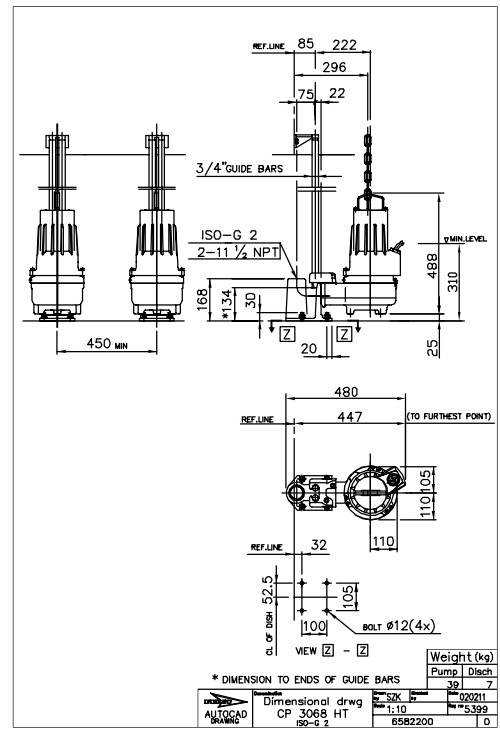
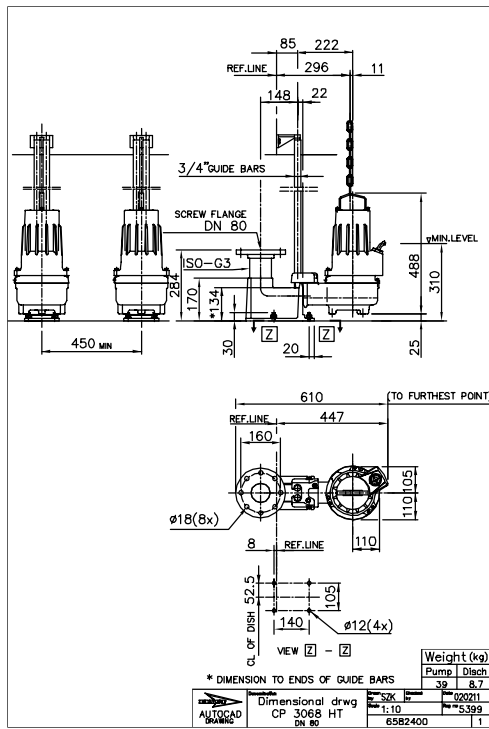
Dimensional drawing

All drawings are available as Acrobat documents (.pdf) and AutoCad drawings (.dwg). Download the drawings from www.flygt.com or contact your ITT Flygt representative for more information.

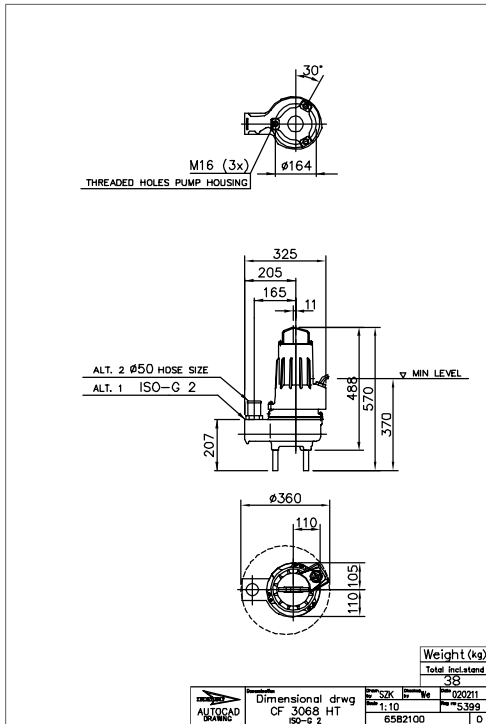
All dimensions are in mm.

HT, F-installation

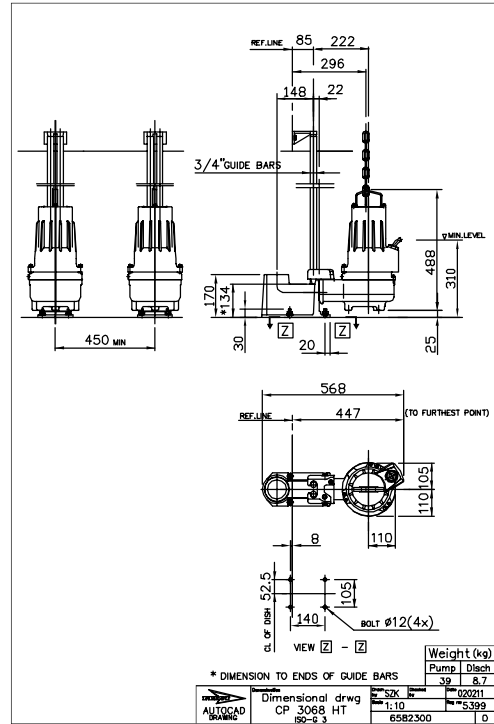
HT, P-installation



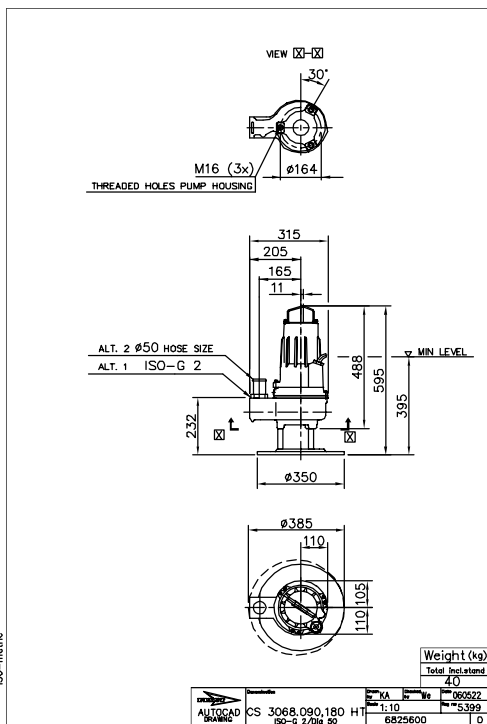
HT, P-installation



HT, P-installation



HT, S-installation





C 3085

Product

Submersible pump for pumping clean water, surface water and waste water containing solids or fibred material.

Denomination

Product code	3085.183
Installation	F, P, S, T, Z
Impeller characteristics	LT, MT, HT

Process data

Liquid temperature	max +40 °C
Depth of immersion	max 20 m
The pH of the pumped liquid	pH 5,5-14
Liquid density	max. 1100 kg/m ³
Impeller throughlet	See Motor rating table

Motor data

Frequency	50 Hz
Insulation class	H (+180 °C)
Voltage variation	
- continuously running	max ± 5%
- intermittent running	max ± 10%
Voltage imbalance between phases	max 2%
No. of starts/hour	max 30

Cable

Direct-on-line start

SUBCAB®	4G1,5 mm ²
	4G1,5+2x1,5 mm ²
	4G2,5 mm ²
	4G2,5+2x1,5 mm ²

Y/D start

SUBCAB®	7G2,5 mm ²
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Monitoring equipment

Thermal contacts opening temperature	125 °C
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Material

Impeller	Cast iron
Pump housing	Cast iron
Stator housing	Cast iron
Shaft	Stainless steel
O-rings	Nitrile rubber

Mechanical face seals

Alternative	Inner seal	Outer seal
1	Carbon/ Aluminium oxide	Corrosion resistant cemented carbide/ Corrosion resistant cemented carbide
2	Carbon/ Aluminium oxide	Silicon carbide/ Silicon carbide

Surface Treatment

All cast parts are primed with a water-borne primer. The finishing coat is a high-solid two pack paint.

Weight

See dimensional drawing.

Option

3085.092	Ex. proof design
3085.280	Stainless steel design
3085.290	Stainless steel/ex proof design
3085.980	Industrial design
Warm liquid version on request	
Leakage sensor in stator housing	FLS
Leakage sensor in oil housing	CLS
Other cables	
Surface treatment	Epoxy treatment
Zinc anodes	

Accessories

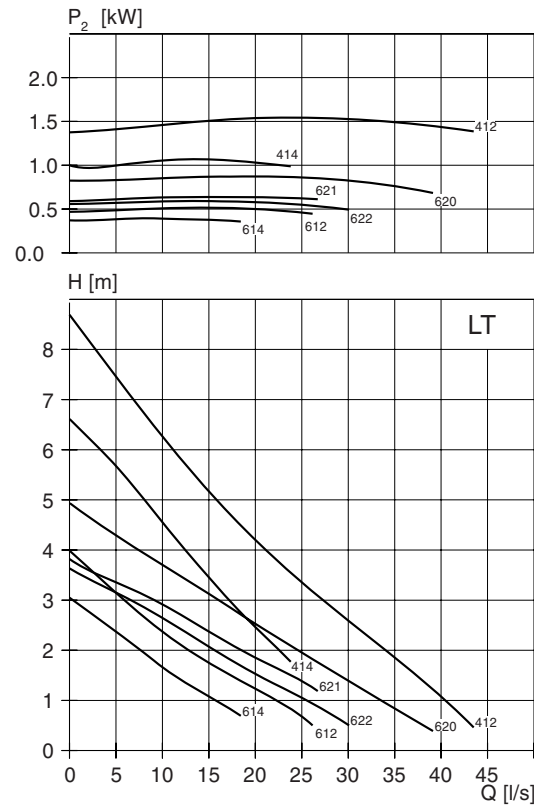
Discharge connections, adapters, hose connections and other mechanical accessories.

Electrical accessories such as pump controller, control panels, starters, monitoring relays, cables.

See separate booklet or www.flygt.com, for further information.

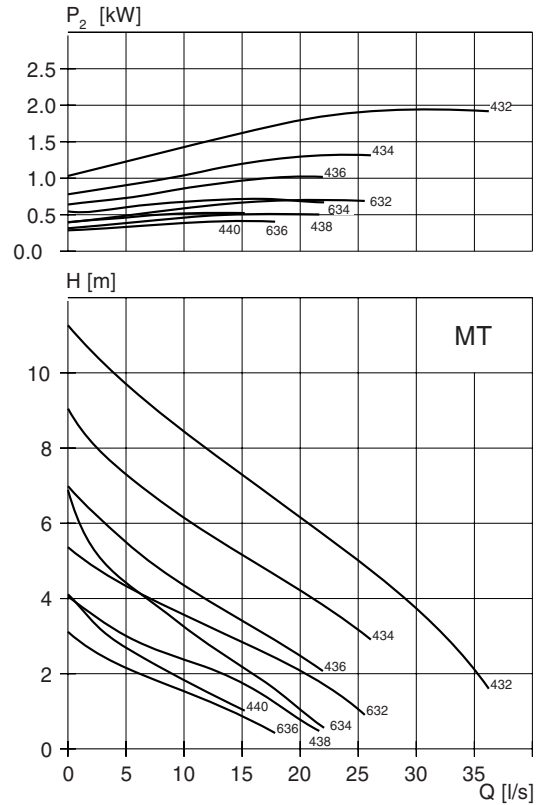
LT-Motor rating and performance curve

Curve/Impeller No	Rated power, kW	Rated current, A	Starting current, A	Power factor cos φ	Impeller thoughtlet, mm	Ex proof version available	Installation			
							P	S		
400 V, 50 Hz, 3 ~, 940 r/min										
612	0,9	2,9	11	0,65	100	•	•	•		
614	0,9	2,9	11	0,65	80	•	•	•		
620	0,9	2,9	11	0,65	100	•	•	•		
621	0,9	2,9	11	0,65	100	•	•	•		
622	0,9	2,9	11	0,65	100	•	•	•		
400 V, 50 Hz, 3 ~, 1385 r/min										
414	1,3	3,2	13	0,83	80	•	•	•		
400 V, 50 Hz, 3 ~, 1395 r/min										
412	2,0	5,1	28	0,74	100	•	•	•		
414	2,0	5,1	28	0,74	100	•	•	•		



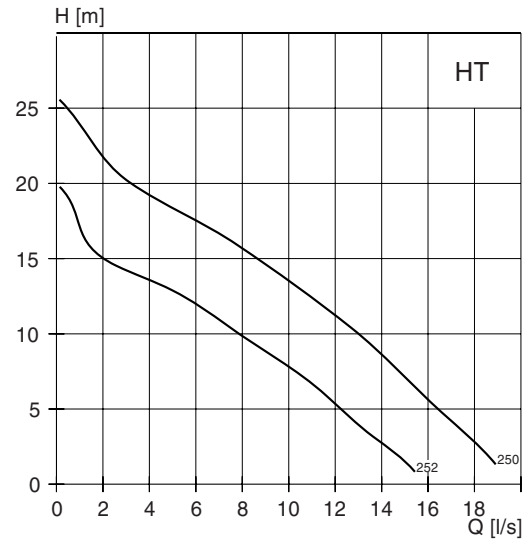
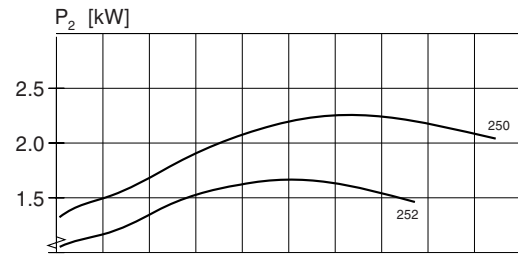
MT-Motor rating and performance curve

Curve/Impeller No	Rated power, kW	Rated current, A	Starting current, A	Power factor cos φ	Impeller throughtlet, mm	Ex proof version available	Installation				
							F	P	S	T	Z
400 V, 50 Hz, 3 ~, 940 r/min											
632	0,9	2,9	11	0,65	76	•	•	•	•		
634	0,9	2,9	11	0,65	76	•	•	•	•		
636	0,9	2,9	11	0,65	76	•	•	•	•		
400 V, 50 Hz, 3 ~, 1435 r/min											
436	1,0	3,0	16	0,67	76	•			•	•	
438	1,0	3,0	16	0,67	64	•			•	•	
440	1,0	3,0	16	0,67	64	•			•	•	
400 V, 50 Hz, 3 ~, 1385 r/min											
434	1,3	3,2	13	0,83	76	•	•	•	•		
436	1,3	3,2	13	0,83	76	•	•	•	•		
438	1,3	3,2	13	0,83	64	•	•	•	•		
440	1,3	3,2	13	0,83	64	•	•	•	•		
400 V, 50 Hz, 3 ~, 1430 r/min											
434	1,4	3,5	22	0,75	76	•			•	•	
436	1,4	3,5	22	0,75	76	•			•	•	
438	1,4	3,5	22	0,75	64	•			•	•	
440	1,4	3,5	22	0,75	64	•			•	•	
400 V, 50 Hz, 3 ~, 1395 r/min											
432	2,0	4,6	22	0,83	76	•	•	•	•		
434	2,0	4,6	22	0,83	76	•	•	•	•		
436	2,0	4,6	22	0,83	76	•	•	•	•		
438	2,0	4,6	22	0,83	64	•	•	•	•		
440	2,0	4,6	22	0,83	64	•	•	•	•		
230 V, 50 Hz, 1 ~, 1410 r/min											
436	0,95	7,2	28	0,86	76		•	•	•		
438	0,95	7,2	28	0,86	64		•	•	•		
440	0,95	7,2	28	0,86	64		•	•	•		
230 V, 50 Hz, 1 ~, 1425 r/min											
434	1,5	9,4	43	0,90	76		•	•	•		
436	1,5	9,4	43	0,90	76		•	•	•		
438	1,5	9,4	43	0,90	64		•	•	•		
440	1,5	9,4	43	0,90	64		•	•	•		



HT-Motor rating and performance curve

Curve/Impeller No	Rated power, kW	Rated current, A	Starting current, A	Power factor cos φ	Impeller throatlet, mm	Ex proof version available	Installation				
							P	S			
400 V, 50 Hz, 3 ~, 2830 r/min											
250	2,4	4,7	27	0,92	40	•	•	•			
252	2,4	4,7	27	0,92	40	•	•	•			



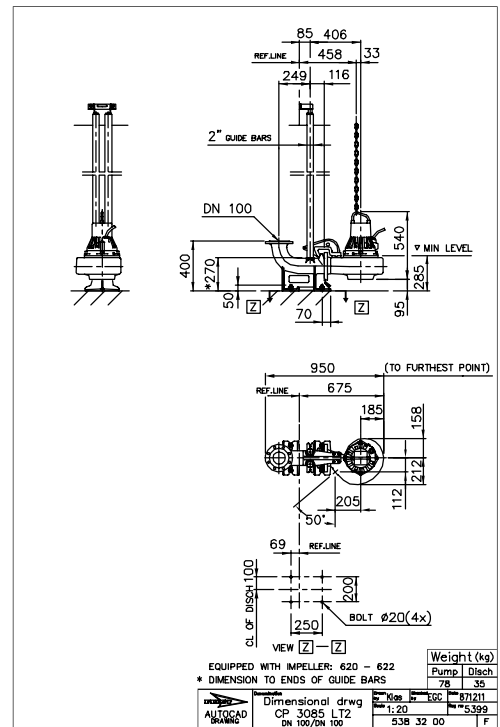
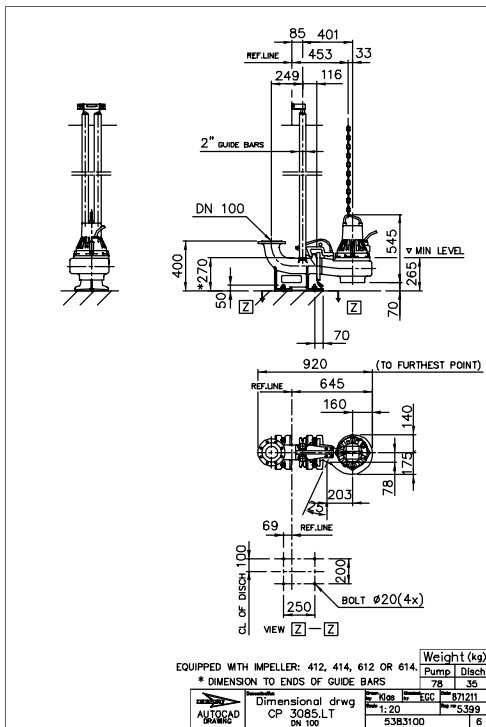
Dimensional drawing

All drawings are available as Acrobat documents (.pdf) and AutoCad drawings (.dwg). Download the drawings from www.flygt.com or contact your ITT Flygt representative for more information.

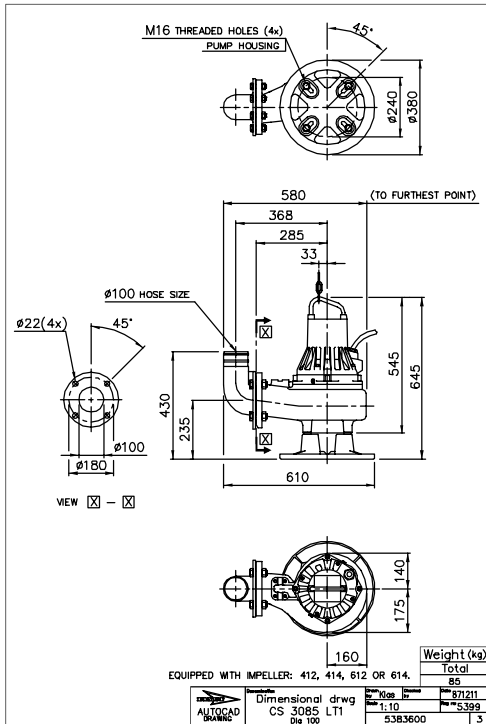
All dimensions are in mm.

LT, P-installation

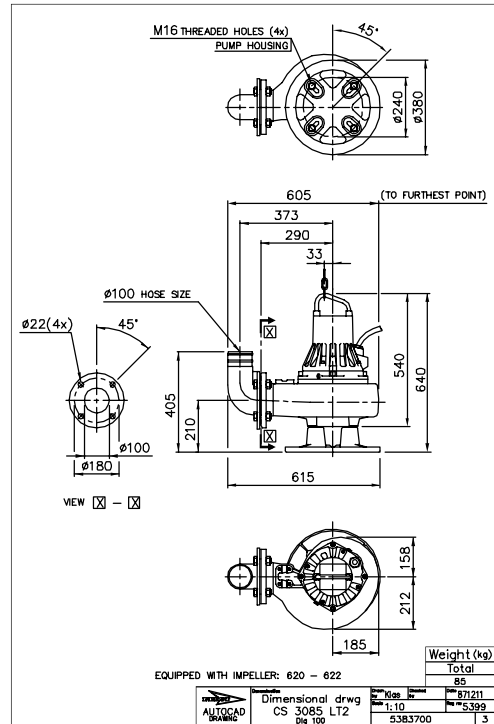
LT, P-installation



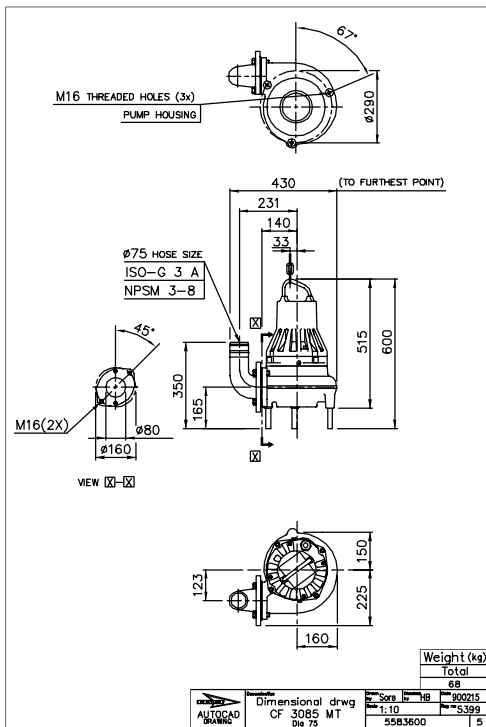
LT, S-installation



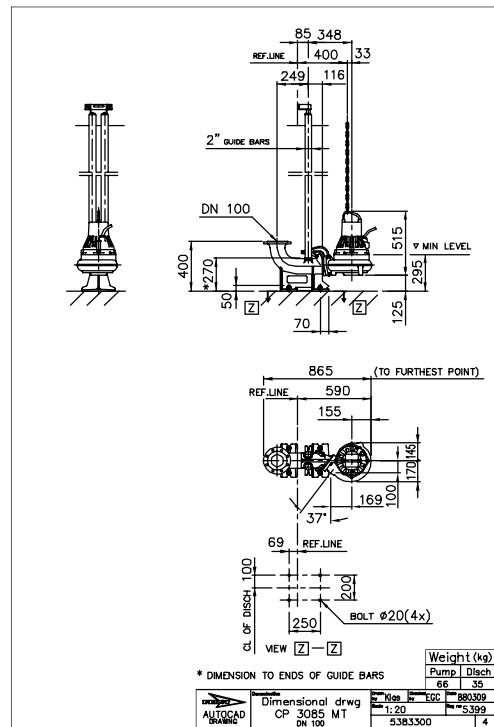
LT, S-installation



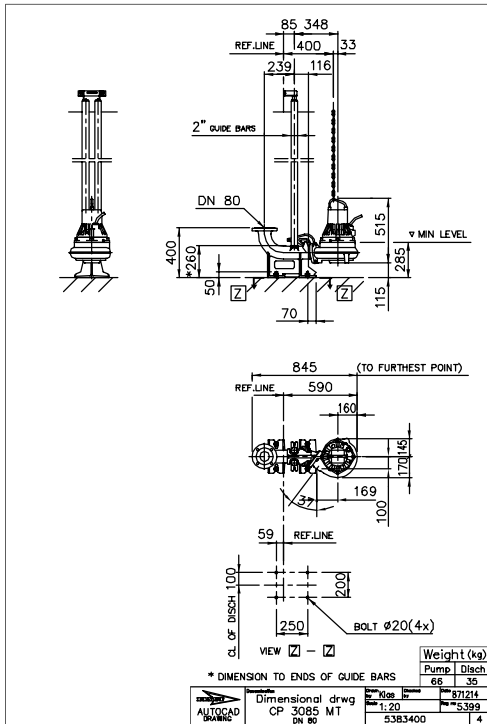
MT, F-installation



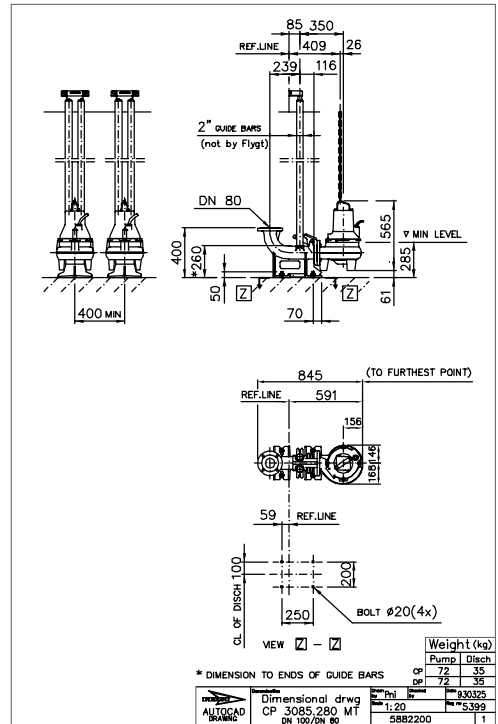
MT, P-installation



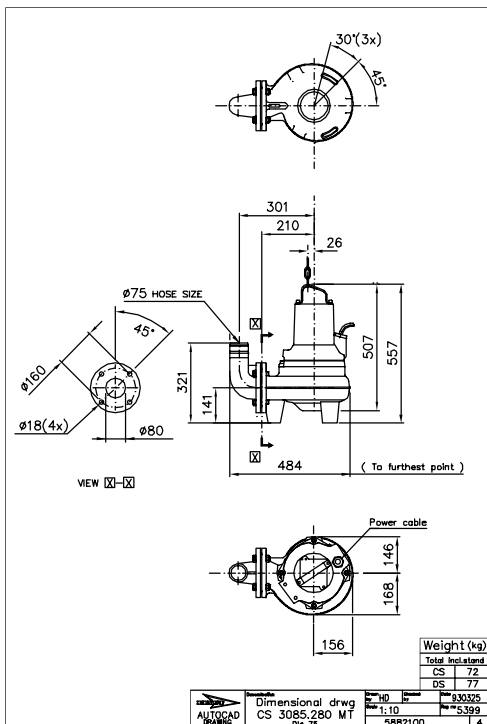
MT, P-installation



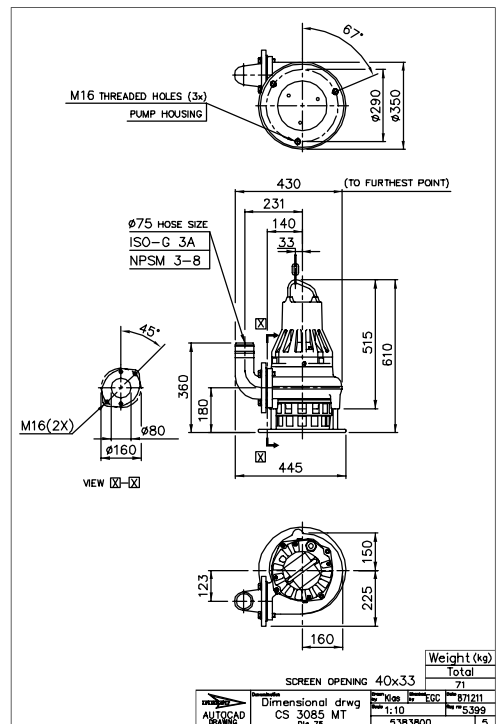
MT, P-installation



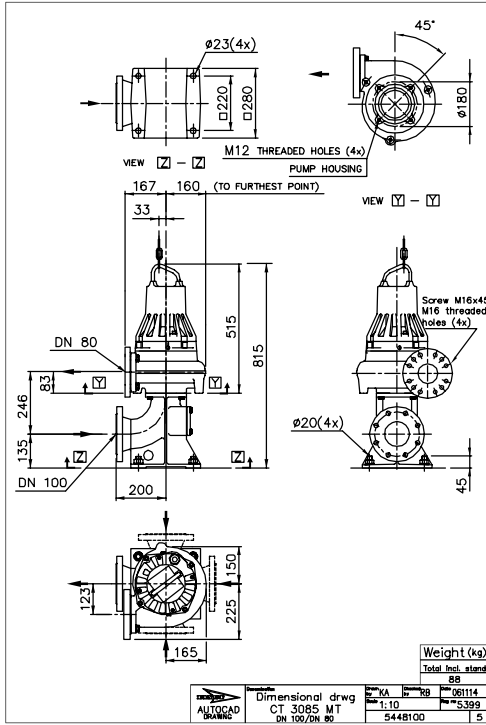
MT, S-installation



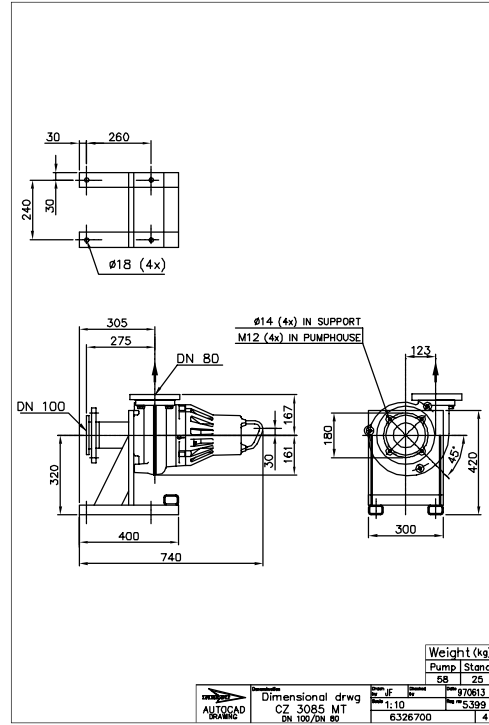
MT, S-installation



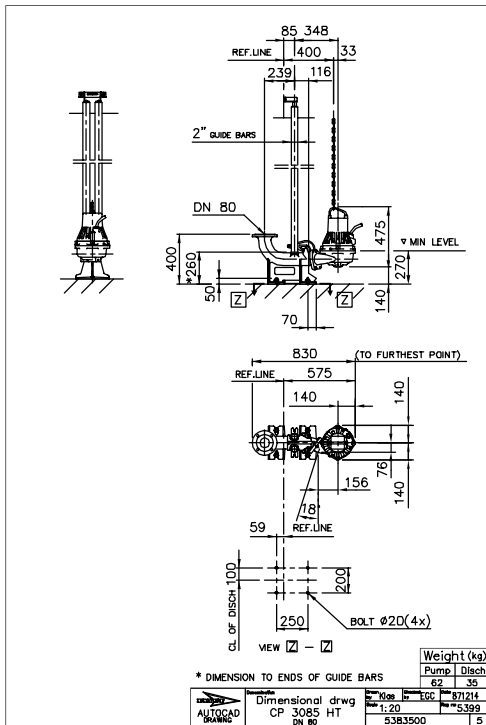
MT, T-installation



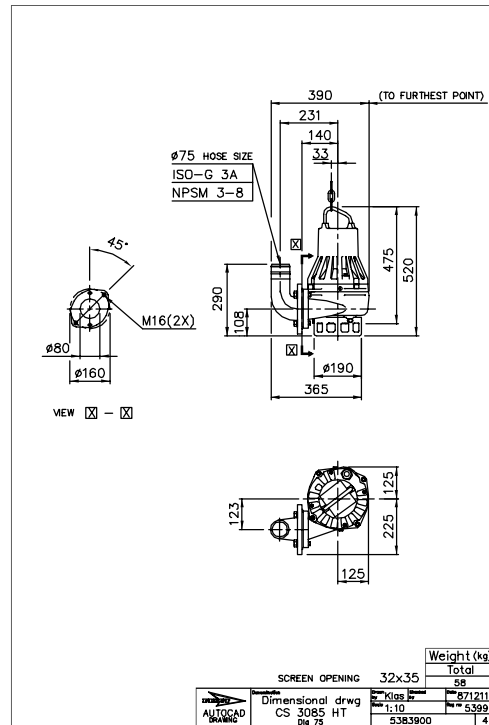
MT, Z-installation



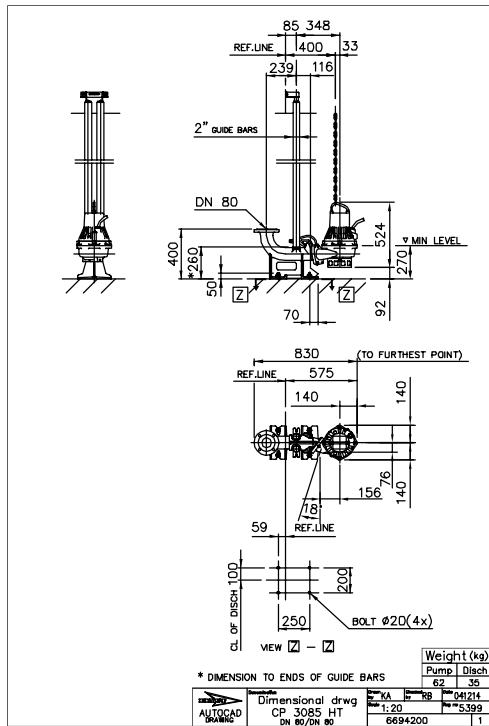
HT, P-installation



HT, S-installation



HT, P-installation





C 3102

Product

Submersible pump for pumping clean water, surface water and waste water containing solids or long-fibred material.

Denomination

Product code	3102.181
Installation	P, S, T, Z
Impeller characteristics	LT, MT, HT

Process data

Liquid temperature	max +40 °C
Depth of immersion	max 20 m
The pH of the pumped liquid	pH 5,5-14
Liquid density	max. 1100 kg/m ³
Impeller throughlet	See Motor rating table

Motor data

Frequency	50 Hz
Insulation class	H (+180 °C)
Voltage variation	
- continuously running	max ± 5%
- intermittent running	max ± 10%
Voltage imbalance between phases	max 2%
No. of starts/hour	max 30

Cable

Direct-on-line start

SUBCAB®	4G2,5 mm ²
	4G2,5+2x1,5 mm ²

Y/D start

SUBCAB®	7G2,5+2x1,5 mm ²
	7G2,5 mm ²

Monitoring equipment

Thermal contacts opening temperature	125 °C
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Material

Impeller	Cast iron
Pump housing	Cast iron
Stator housing	Cast iron
Shaft	Stainless steel
O-rings	Nitrile rubber

Mechanical face seals

Alternative	Inner seal	Outer seal
1	Aluminium oxide/ Corrosion resistant cemented carbide	Aluminium oxide/ Corrosion resistant cemented carbide
2	Aluminium oxide/ Corrosion resistant cemented carbide	Corrosion resistant cemented carbide/ Corrosion resistant cemented carbide
3	Corrosion resistant cemented carbide/ Corrosion resistant cemented carbide	Aluminium oxide/ Corrosion resistant cemented carbide
4	Corrosion resistant cemented carbide/ Corrosion resistant cemented carbide	Corrosion resistant cemented carbide/ Corrosion resistant cemented carbide

Surface Treatment

All cast parts are primed with a water-borne primer. The finishing coat is a high-solid two pack paint.

Weight

See dimensional drawing.

Option

3102.090	Ex. proof design
3102.980	Industrial design
Warm liquid version on request	
Leakage sensor in stator housing	FLS
Leakage sensor in oil housing	CLS
Surface treatment	Epoxy treatment
Other cables	
Zinc anodes	

Accessories

Discharge connections, adapters, hose connections and other mechanical accessories.

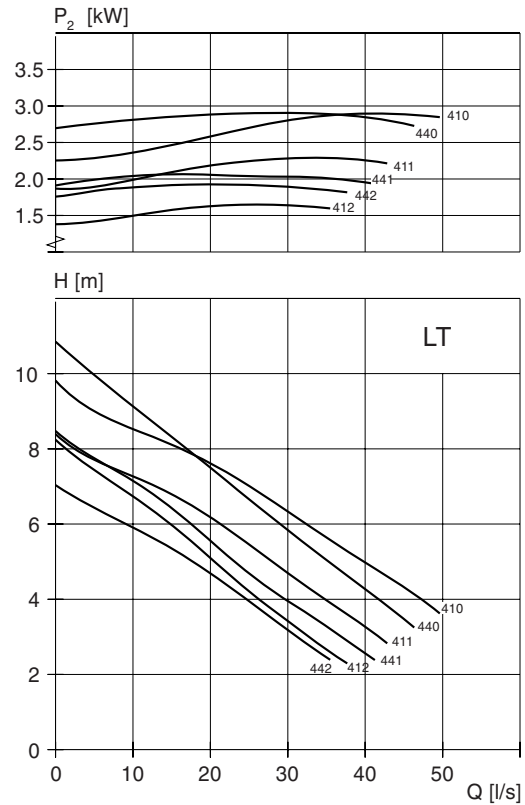
Electrical accessories such as pump controller, control panels, starters, monitoring relays, cables.

See separate booklet or www.flygt.com, for further information.

LT-Motor rating and performance curve

Curve/Impeller No	Rated power, kW	Rated current, A	Starting current, A	Power factor cos φ	Impeller thoughtlet, mm	Ex proof version available	Installation			
							P	S	T	Z
400 V, 50 Hz, 3 ~, 1450 r/min										
411	2,4	5,8	39	0,71	52	•			•	•
412	2,4	5,8	39	0,71	54	•			•	•
441	2,4	5,8	39	0,71	100	•			•	•
442	2,4	5,8	39	0,71	100	•			•	•
400 V, 50 Hz, 3 ~, 1435 r/min										
410	3,1	6,9	39	0,77	55	•	•	•		
411	3,1	6,9	39	0,77	52	•	•	•		
412	3,1	6,9	39	0,77	54	•	•	•		
440	3,1	6,9	39	0,77	100	•	•	•		
441	3,1	6,9	39	0,77	100	•	•	•		
442	3,1	6,9	39	0,77	100	•	•	•		

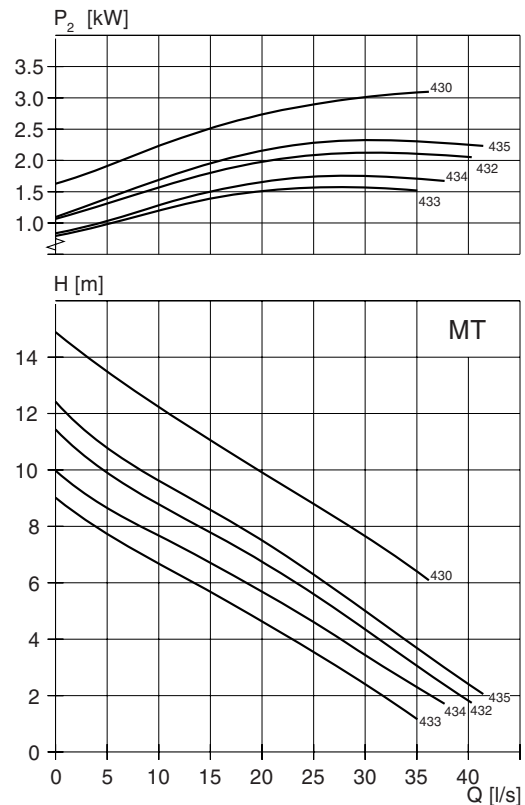
Y/D starting current is approximately 1/3 of D starting current.



MT-Motor rating and performance curve

Curve/Impeller No	Rated power, kW	Rated current, A	Starting current, A	Power factor cos φ	Impeller thoughtlet, mm	Ex proof version available	Installation			
							P	S	T	Z
400 V, 50 Hz, 3 ~, 1450 r/min										
432	2,4	5,1	37	0,83	76	•			•	•
433	2,4	5,1	37	0,83	76	•			•	•
434	2,4	5,1	37	0,83	76	•			•	•
435	2,4	5,1	37	0,83	76	•			•	•
400 V, 50 Hz, 3 ~, 1435 r/min										
430	3,1	6,4	37	0,86	76	•	•	•		
432	3,1	6,4	37	0,86	76	•	•	•		
433	3,1	6,4	37	0,86	76	•	•	•		
434	3,1	6,4	37	0,86	76	•	•	•		
435	3,1	6,4	37	0,86	76	•	•	•		

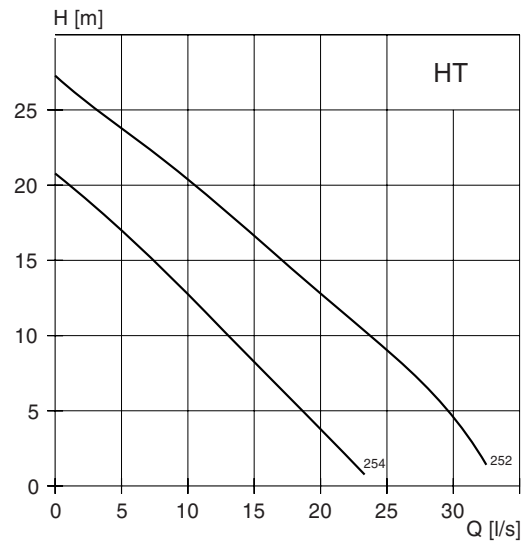
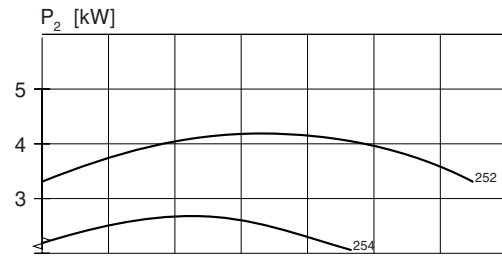
Y/D starting current is approximately 1/3 of D starting current.



HT-Motor rating and performance curve

Curve/Impeller No	Rated power, kW	Rated current, A	Starting current, A	Power factor cos φ	Impeller thoughtlet, mm	Ex proof version available	Installation				
							P	S			
400 V, 50 Hz, 3 ~, 2870 r/min											
252	4,4	8,6	64	0,92	52	•	•	•			
254	4,4	8,6	64	0,92	52	•	•	•			

Y/D starting current is approximately 1/3 of D starting current.



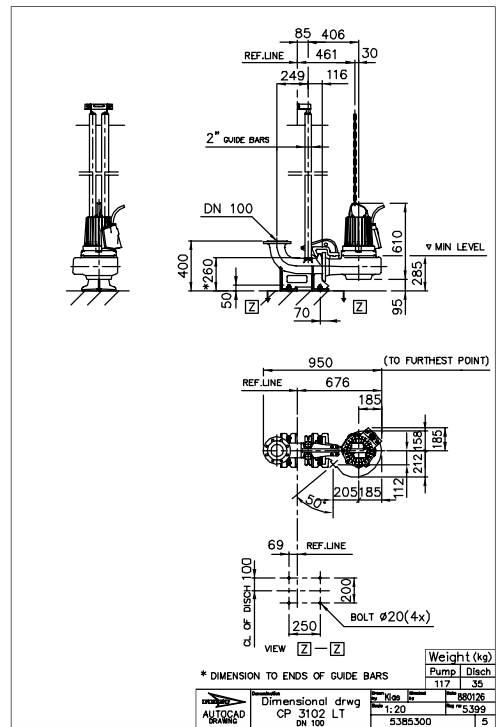
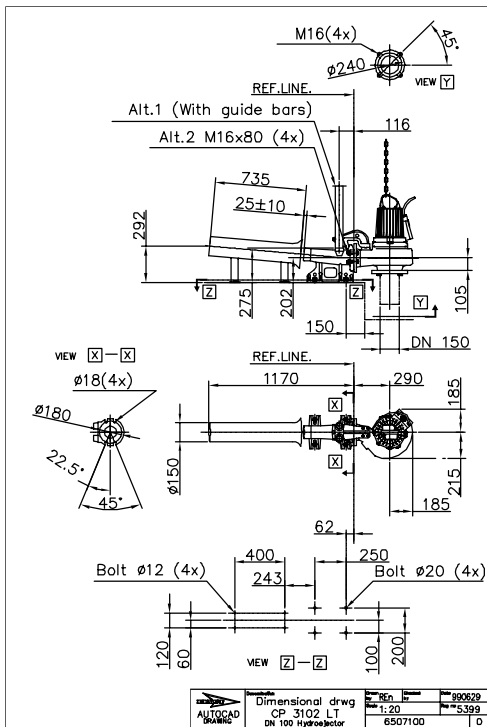
Dimensional drawing

All drawings are available as Acrobat documents (.pdf) and AutoCad drawings (.dwg). Download the drawings from www.flygt.com or contact your ITT Flygt representative for more information.

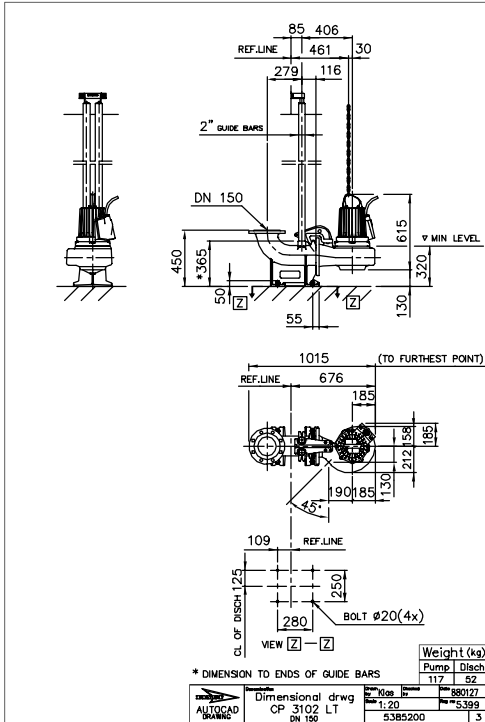
All dimensions are in mm.

LT, P-installation

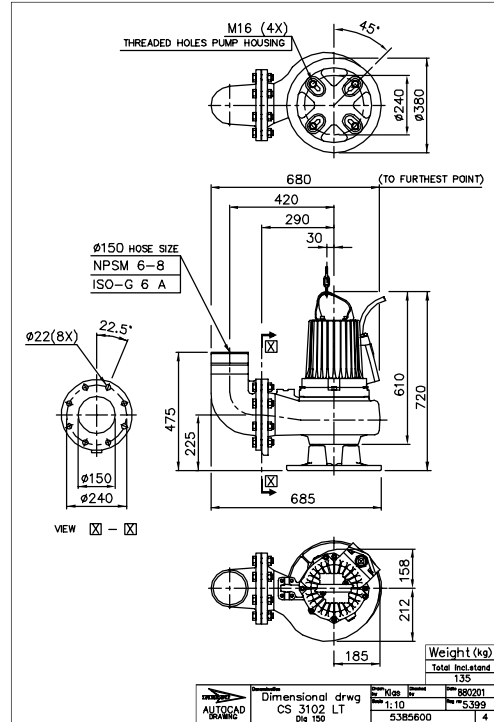
LT, P-installation



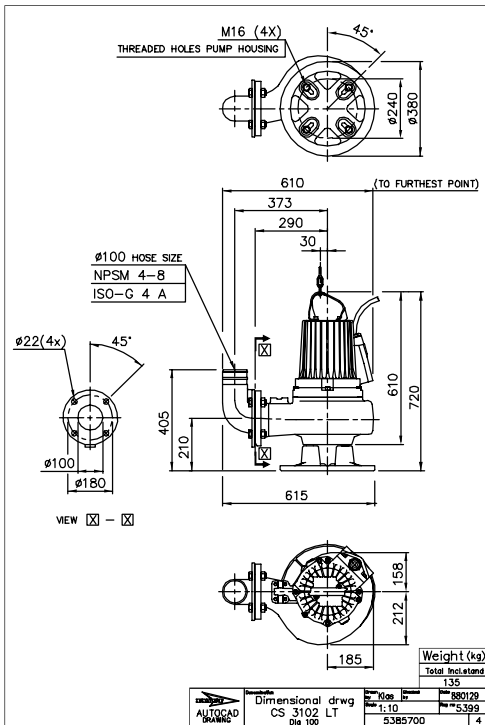
LT, P-installation



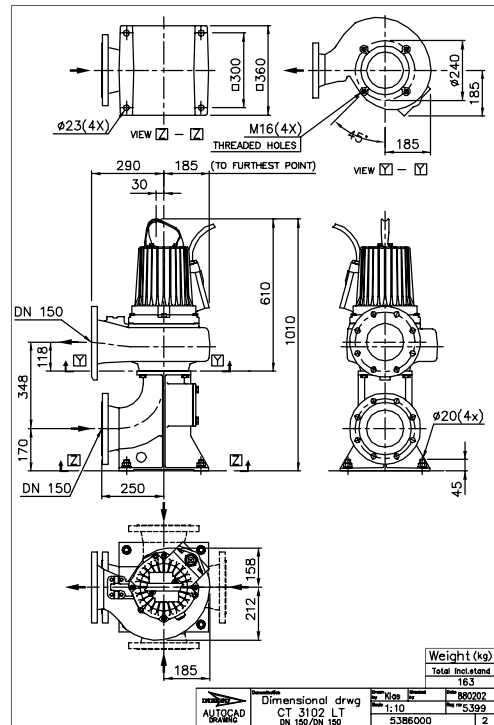
LT, S-installation



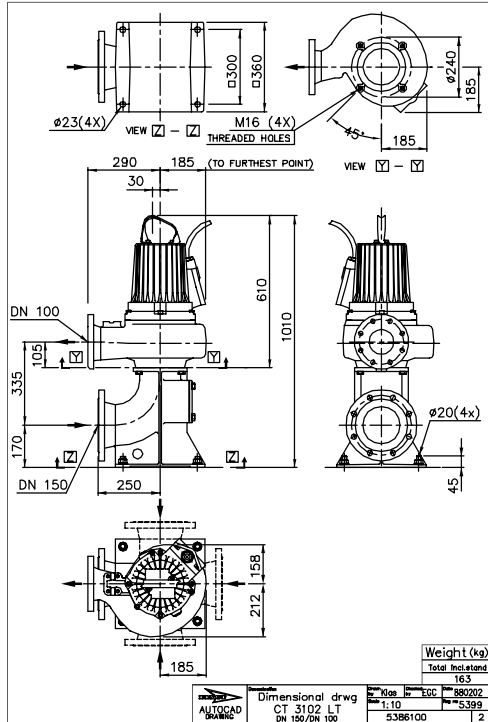
LT, S-installation



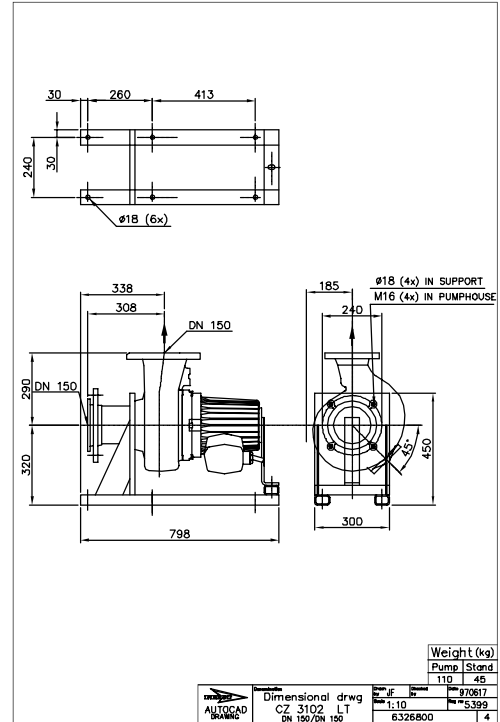
LT, T-installation



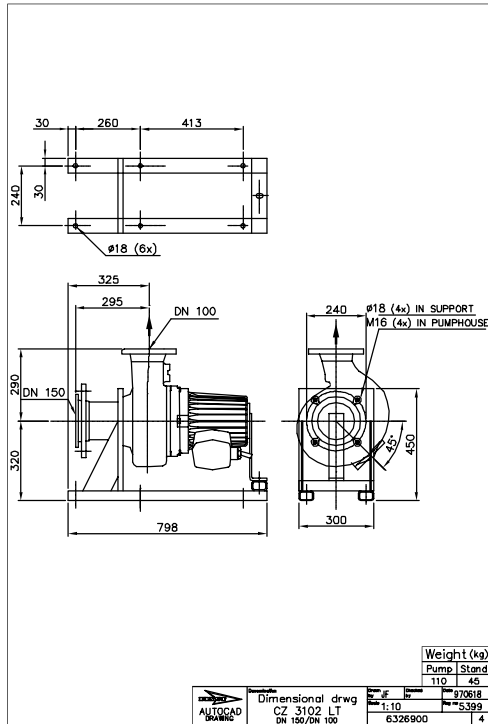
LT, T-installation



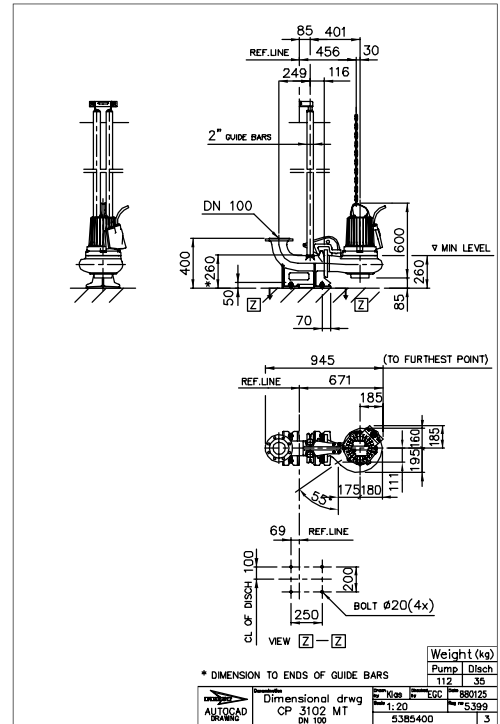
LT, Z-installation



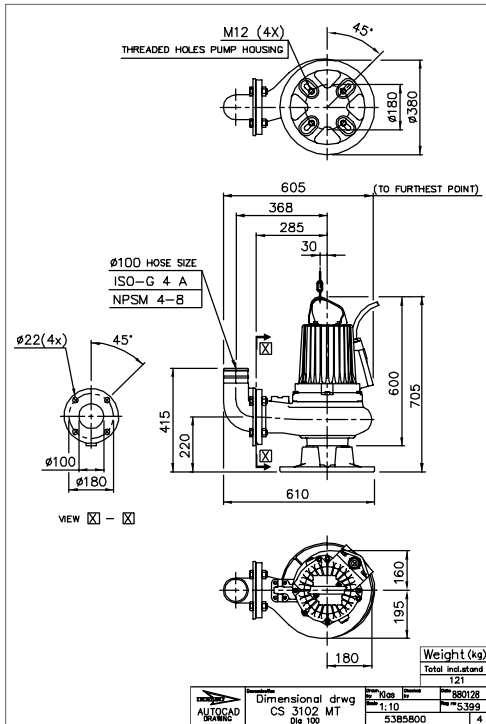
LT, Z-installation



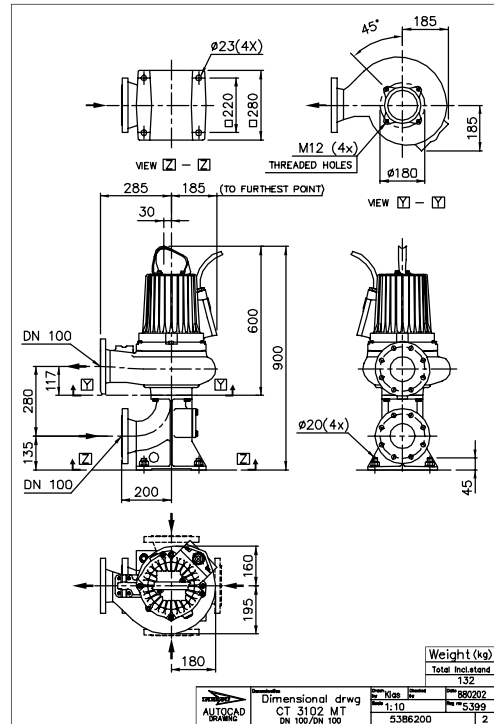
MT, P-installation



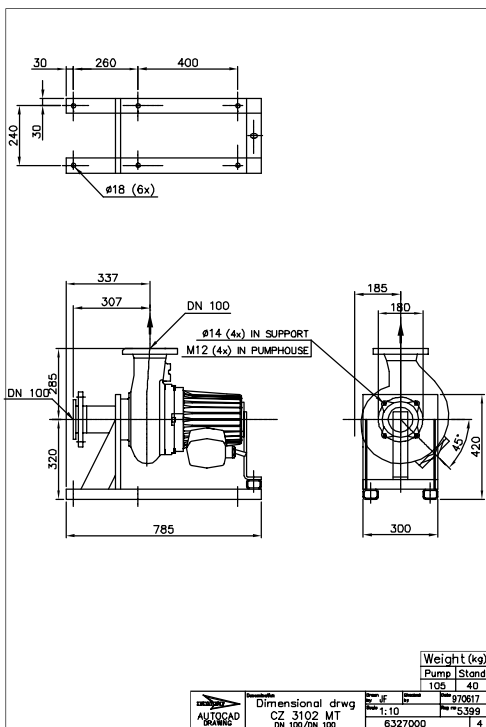
MT, S-installation



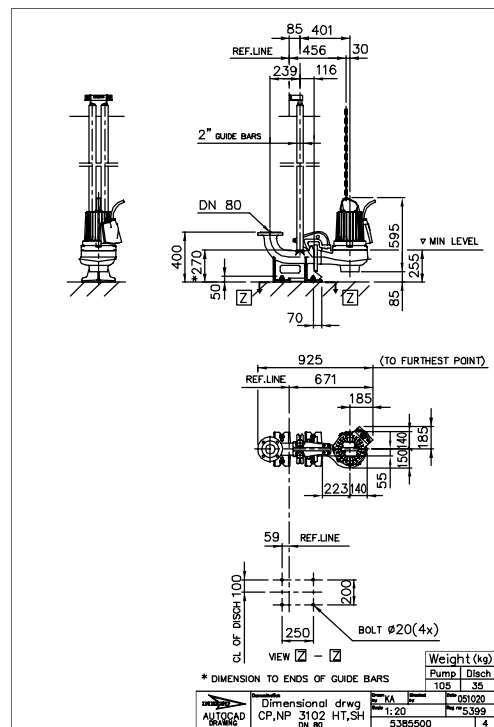
MT, T-installation



MT, Z-installation

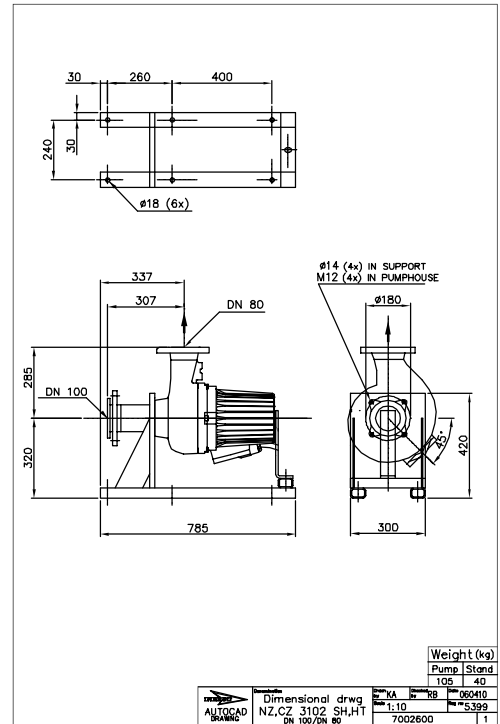
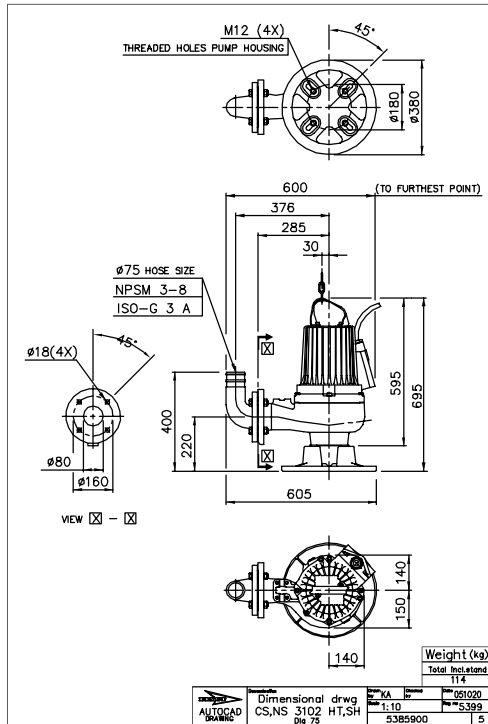


SH-HT, P-installation



HT-SH, S-installation

HT-SH, Z-installation





Y/D start
SUBCAB®

7G2,5 mm²
7G2,5+2x1,5 mm²
7G4 mm²
7G4+2x1,5 mm²

Monitoring equipment

Thermal contacts opening temperature 125 °C

Material

Impeller Cast iron
Pump housing Cast iron
Stator housing Cast iron
Shaft Stainless steel
O-rings Nitrile rubber

Mechanical face seals

Alternative	Inner seal	Outer seal
1	Carbon/Aluminium oxide	Corrosion resistant cemented carbide/ Corrosion resistant cemented carbide
2	Corrosion resistant cemented carbide/ Corrosion resistant cemented carbide	Silicone carbide/ Silicone carbide
3	Corrosion resistant cemented carbide/ Corrosion resistant cemented carbide	Corrosion resistant cemented carbide/ Corrosion resistant cemented carbide

Surface Treatment

All cast parts are primed with a water-borne primer. The finishing coat is a high-solid two pack paint.

Weight

See dimensional drawing.

Option

3127.090 Ex. proof design
3127.980 Industrial design
Warm liquid version on request
Leakage sensor in stator housing FLS
Leakage sensor in oil housing CLS
Surface treatment Epoxy treatment
Other cables
Zinc anodes

Accessories

Discharge connections, adapters, hose connections and other mechanical accessories.

Electrical accessories such as pump controller, control panels, starters, monitoring relays, cables.

See separate booklet or www.flygt.com, for further information.

C 3127

Product

Submersible pump for pumping clean water, surface water and waste water containing solids or fibred material.

Denomination

Product code 3127.181
Installation P, S, T, Z
Impeller characteristics LT, MT, HT, SH

Process data

Liquid temperature max +40 °C
Depth of immersion max 20 m
The pH of the pumped liquid pH 5,5-14
Liquid density max. 1100 kg/m³
Impeller throughlet See Motor rating table

Motor data

Frequency 50 Hz
Insulation class H (+180 °C)
Voltage variation
- continuously running max ± 5%
- intermittent running max ± 10%
Voltage imbalance between phases max 2%
No. of starts/hour max 30

Cable

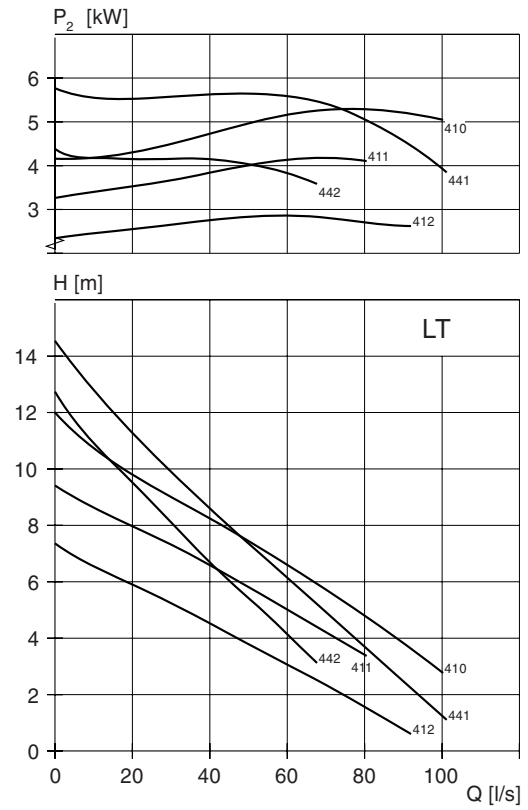
Direct-on-line start
SUBCAB®

4G2,5 mm²
4G2,5+2x1,5 mm²
4G4 mm²
4G4+2x1,5 mm²

LT-Motor rating and performance curve

Curve/Impeller No	Rated power, kW	Rated current, A	Starting current, A	Power factor cos φ	Impeller throatlet, mm	Ex proof version available	Installation			
							P	S	T	Z
400 V, 50 Hz, 3 ~, 1435 r/min										
412	4,0	8,3	56	0,84	76	•			•	•
400 V, 50 Hz, 3 ~, 1445 r/min										
411	4,7	9,6	56	0,86	76	•	•	•		
412	4,7	9,6	56	0,86	76	•	•	•		
442	4,7	9,6	56	0,86	100	•	•	•		
400 V, 50 Hz, 3 ~, 1460 r/min										
411	4,7	9,6	56	0,86	76	•	•	•		
411	4,7	10	77	0,81	76	•			•	•
412	4,7	9,6	56	0,86	76	•	•	•		
412	4,7	10	77	0,81	76	•			•	•
442	4,7	9,6	56	0,86	100	•	•	•		
442	4,7	10	77	0,81	100	•			•	•
400 V, 50 Hz, 3 ~, 2900 r/min										
410	5,9	12	77	0,86	76	•	•	•		
411	5,9	12	77	0,86	76	•	•	•		
412	5,9	12	77	0,86	76	•	•	•		
441	5,9	12	77	0,86	107	•	•	•		
442	5,9	12	77	0,86	100	•	•	•		

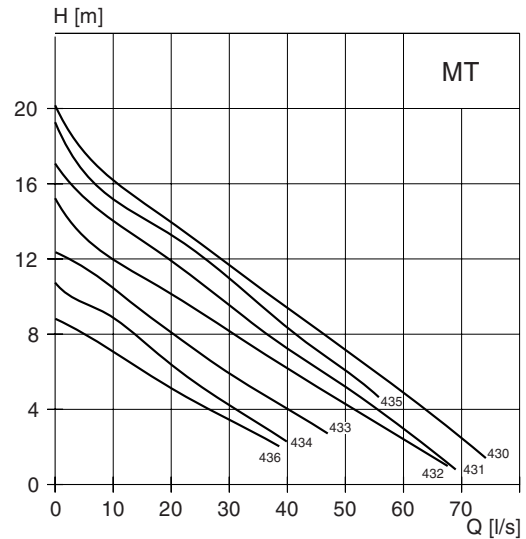
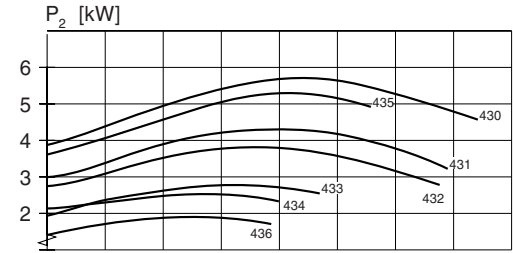
Y/D starting current is approximately 1/3 of D starting current.



MT-Motor rating and performance curve

Curve/Impeller No	Rated power, kW	Rated current, A	Starting current, A	Power factor cos φ	Impeller thoughtlet, mm	Ex proof version available	Installation			
							P	S	T	Z
400 V, 50 Hz, 3 ~, 1435 r/min										
432	4,0	8,3	56	0,84	87	•			•	•
433	4,0	8,3	56	0,84	82	•			•	•
434	4,0	8,3	56	0,84	80	•			•	•
436	4,0	8,3	56	0,84	100	•			•	•
400 V, 50 Hz, 3 ~, 1445 r/min										
431	4,7	9,6	56	0,86	90	•	•	•		
432	4,7	9,6	56	0,86	87	•	•	•		
433	4,7	9,6	56	0,86	82	•	•	•		
434	4,7	9,6	56	0,86	80	•	•	•		
436	4,7	9,6	56	0,86	100	•	•	•		
400 V, 50 Hz, 3 ~, 1460 r/min										
431	4,7	10	77	0,81	90	•			•	•
432	4,7	10	77	0,81	87	•			•	•
433	4,7	10	77	0,81	82	•			•	•
434	4,7	10	77	0,81	80	•			•	•
436	4,7	10	77	0,81	100	•			•	•
400 V, 50 Hz, 3 ~, 1450 r/min										
430	5,9	12	77	0,84	100	•	•	•		
431	5,9	12	77	0,84	90	•	•	•		
432	5,9	12	77	0,84	87	•	•	•		
433	5,9	12	77	0,84	82	•	•	•		
434	5,9	12	77	0,84	80	•	•	•		
435	5,9	12	77	0,84	100	•	•	•		
436	5,9	12	77	0,84	100	•	•	•		

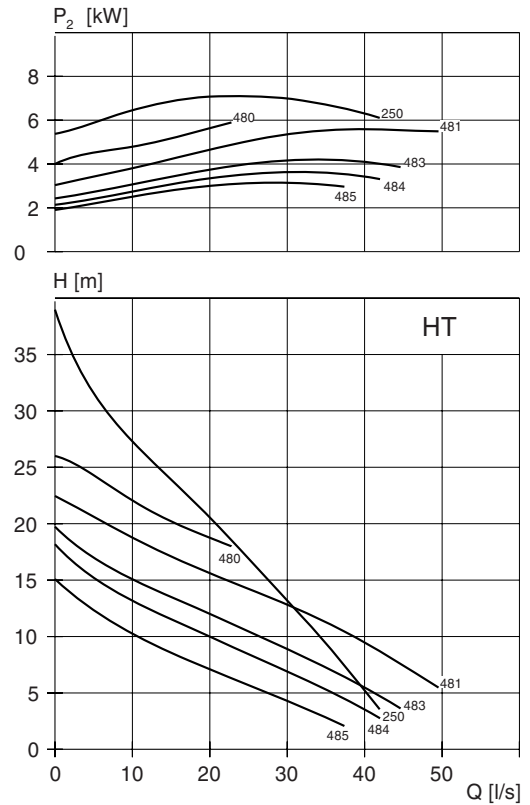
Y/D starting current is approximately 1/3 of D starting current.



HT-Motor rating and performance curve

Curve/Impeller No	Rated power, kW	Rated current, A	Starting current, A	Power factor cos φ	Impeller thoughtlet, mm	Ex proof version available	Installation			
							P	S	T	Z
400 V, 50 Hz, 3 ~, 1435 r/min										
483	4,0	8,3	56	0,84	76	•			•	•
484	4,0	8,3	56	0,84	76	•			•	•
485	4,0	8,3	56	0,84	76	•			•	•
400 V, 50 Hz, 3 ~, 1445 r/min										
483	4,7	9,6	56	0,86	76	•	•	•		
484	4,7	9,6	56	0,86	76	•	•	•		
485	4,7	9,6	56	0,86	76	•	•	•		
400 V, 50 Hz, 3 ~, 1450 r/min										
480	5,9	12	77	0,84	76	•	•	•		
481	5,9	12	77	0,84	76	•	•	•		
483	5,9	12	77	0,84	76	•	•	•		
484	5,9	12	77	0,84	76	•	•	•		
485	5,9	12	77	0,84	76	•	•	•		
400 V, 50 Hz, 3 ~, 1460 r/min										
483	4,7	10	77	0,81	76	•			•	•
484	4,7	10	77	0,81	76	•			•	•
485	4,7	10	77	0,81	76	•			•	•
400 V, 50 Hz, 3 ~, 2900 r/min										
250	7,4	14	114	0,91	58	•	•	•		

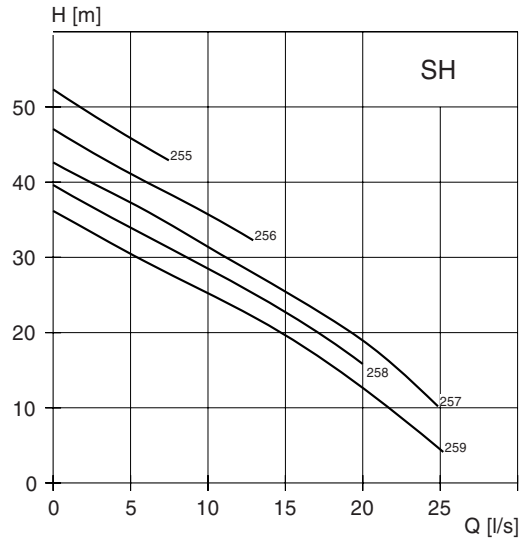
Y/D starting current is approximately 1/3 of D starting current.



SH-Motor rating and performance curve

Curve/Impeller No	Rated power, kW	Rated current, A	Starting current, A	Power factor cos φ	Impeller throatlet, mm	Ex proof version available	Installation				
							P	S			
400 V, 50 Hz, 3 ~, 2900 r/min											
255	7,4	14	114	0,91	40	•	•	•			
256	7,4	14	114	0,91	40	•	•	•			
257	7,4	14	114	0,91	40	•	•	•			
258	7,4	14	114	0,91	40	•	•	•			
259	7,4	14	114	0,91	40	•	•	•			

Y/D starting current is approximately 1/3 of D starting current.



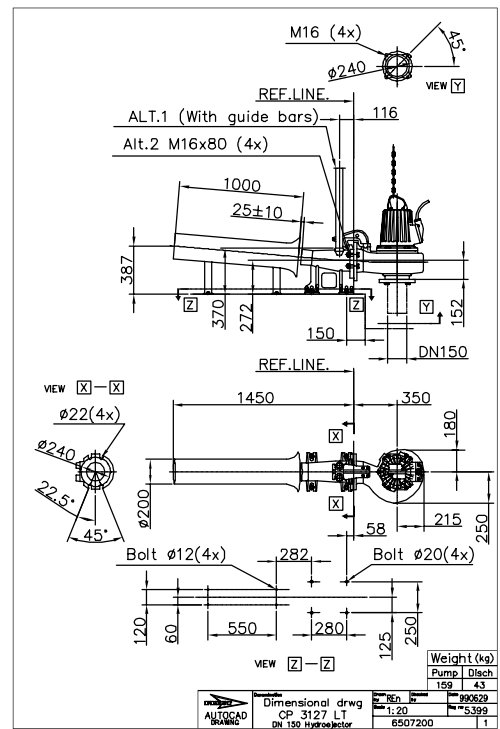
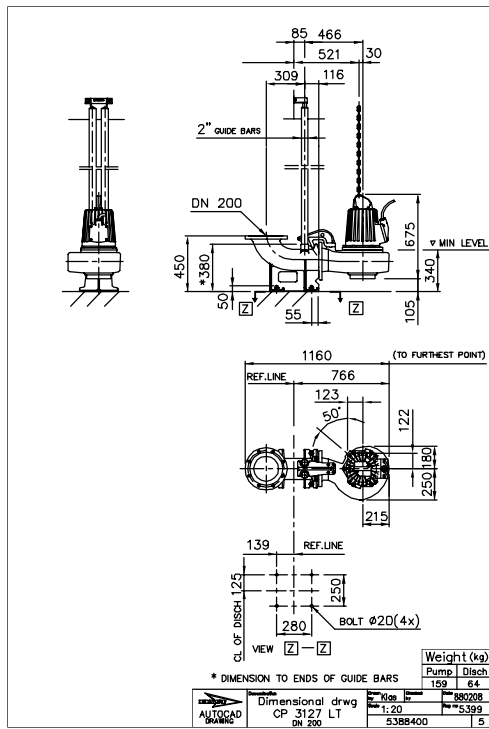
Dimensional drawing

All drawings are available as Acrobat documents (.pdf) and AutoCad drawings (.dwg). Download the drawings from www.flygt.com or contact your ITT Flygt representative for more information.

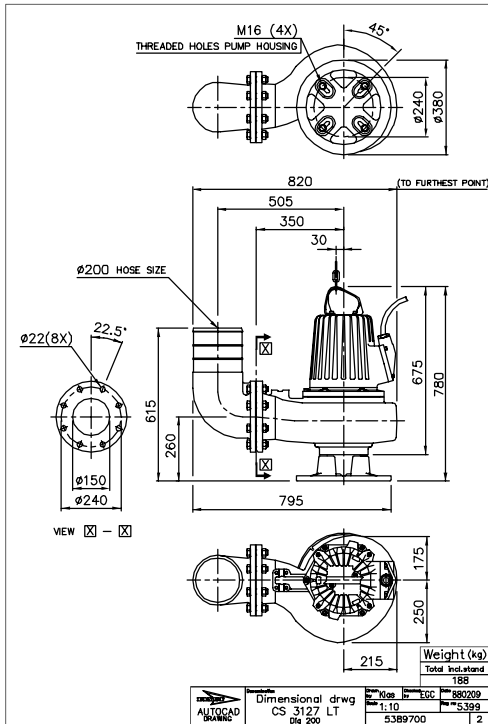
All dimensions are in mm.

LT, P-installation

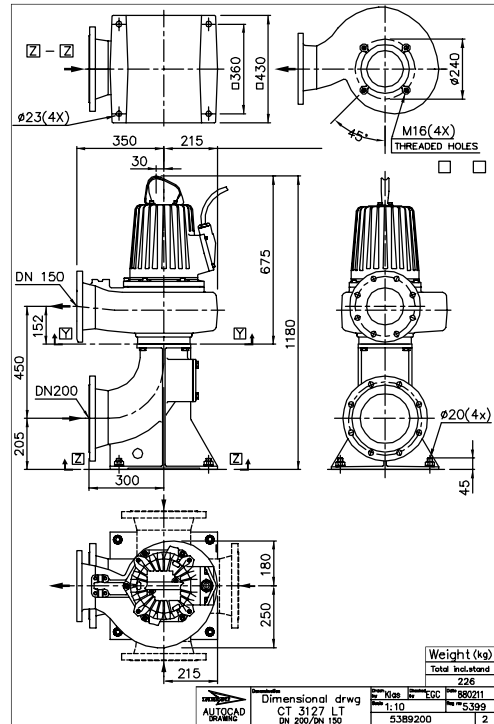
LT, P-installation



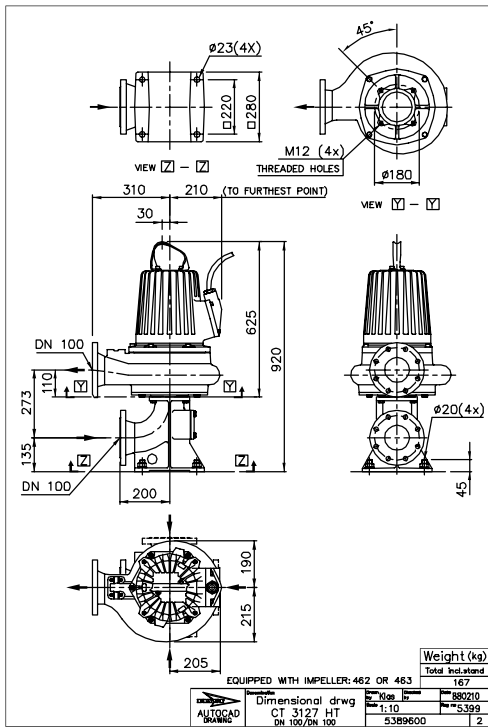
LT, S-installation



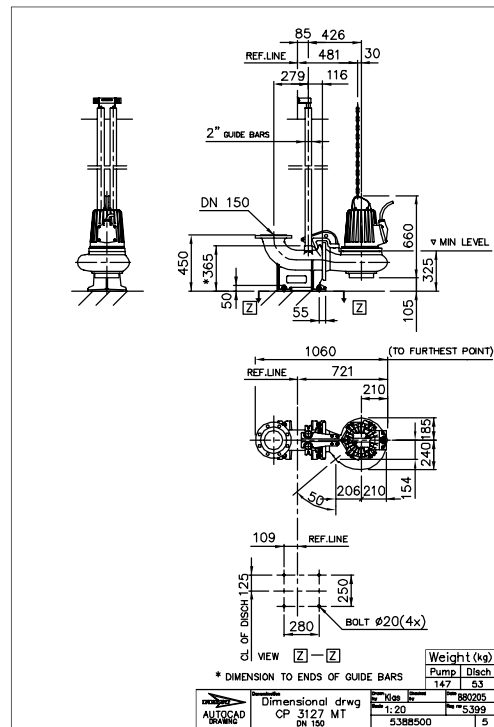
LT, T-installation



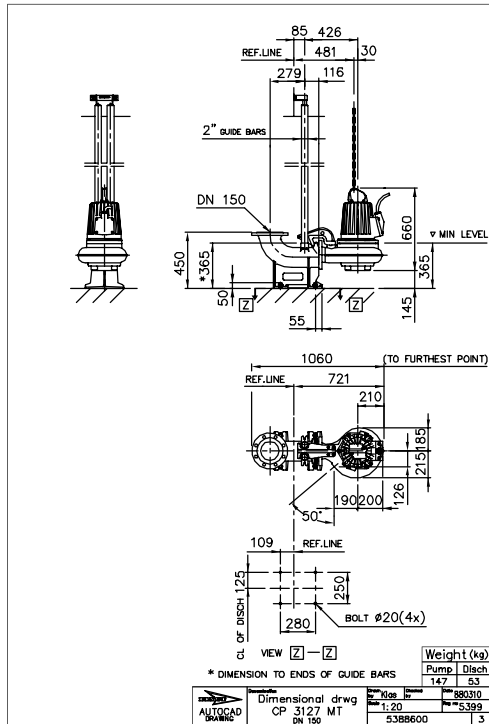
HT, T-installation



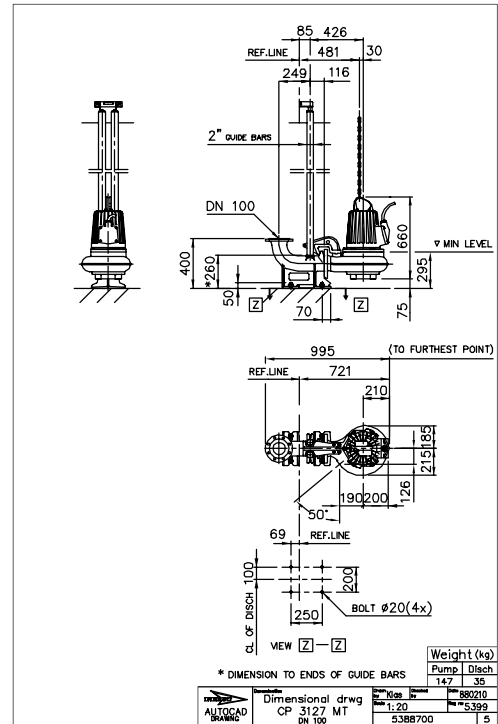
MT, P-installation



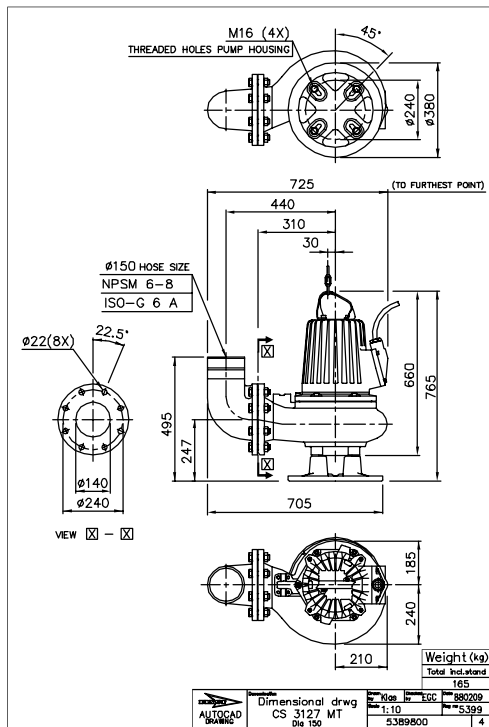
MT, P-installation



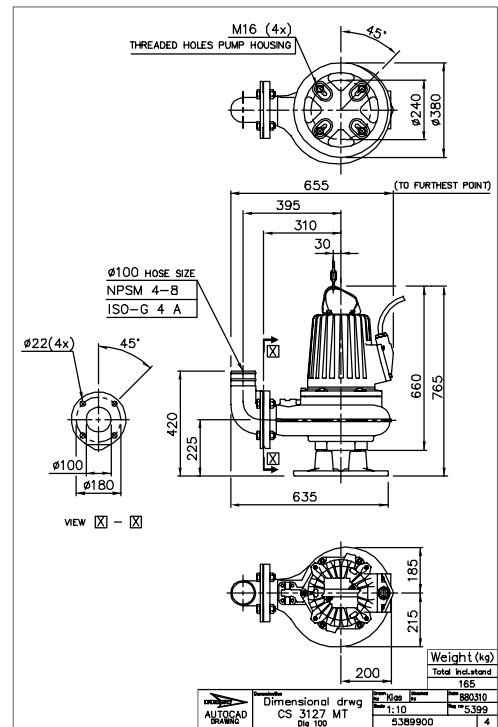
MT, P-installation



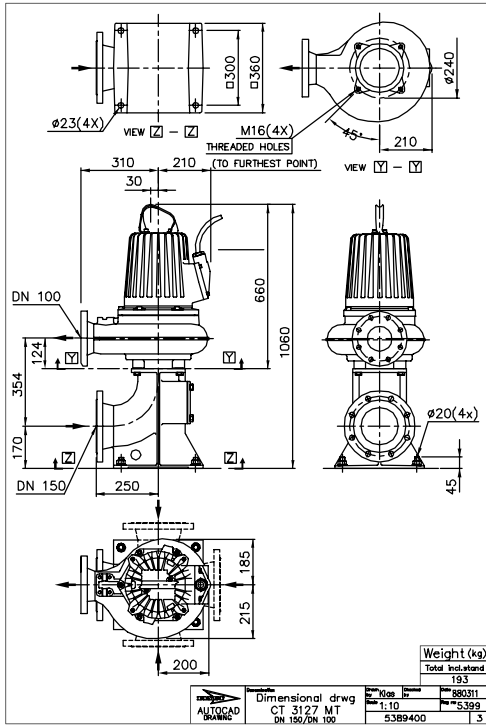
MT, S-installation



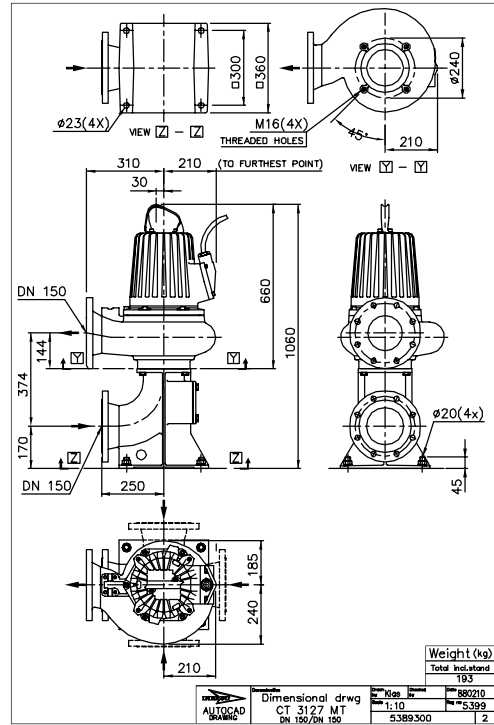
MT, S-installation



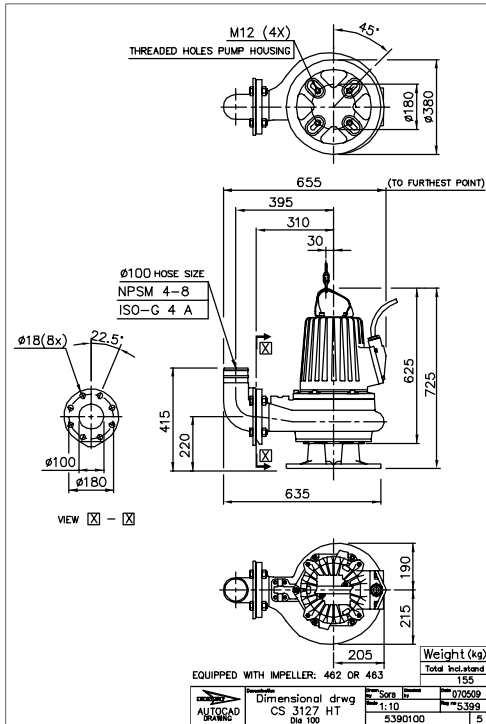
MT, T-installation



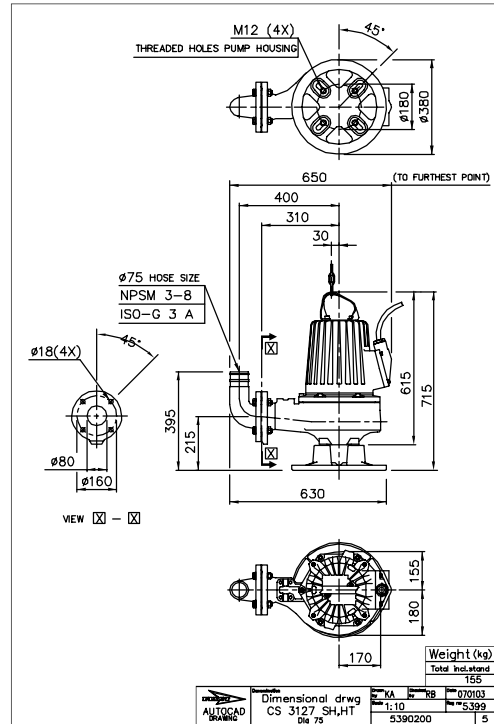
MT, T-installation



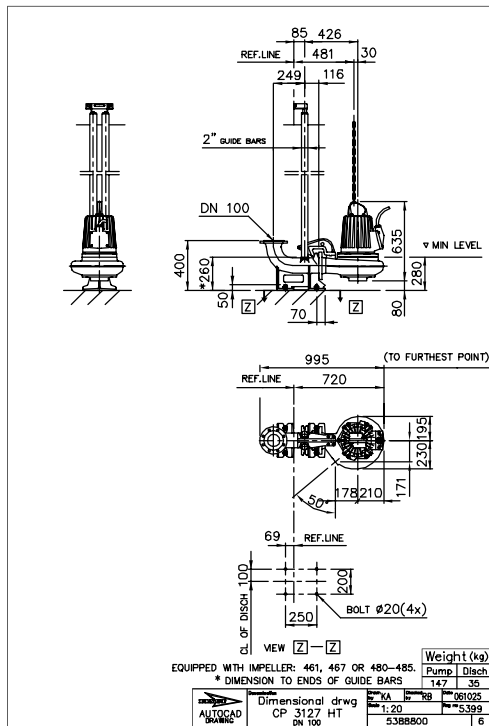
HT, S-installation



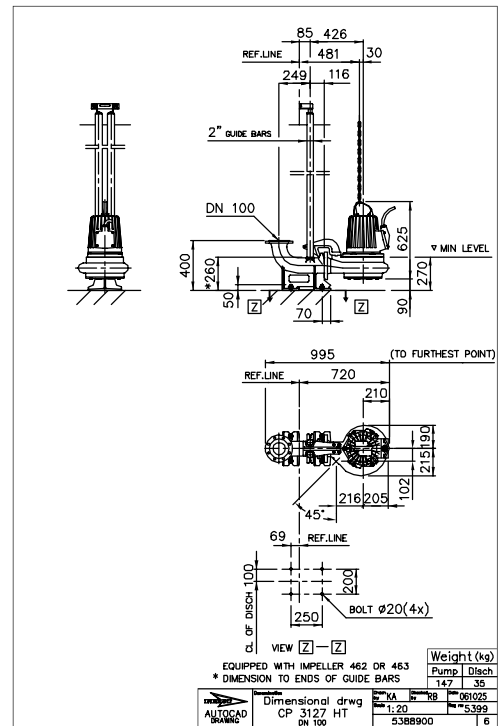
SH, S-installation



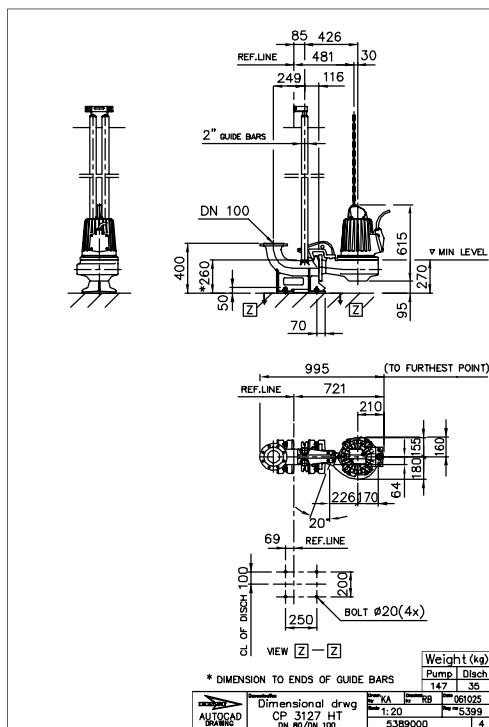
HT, P-installation



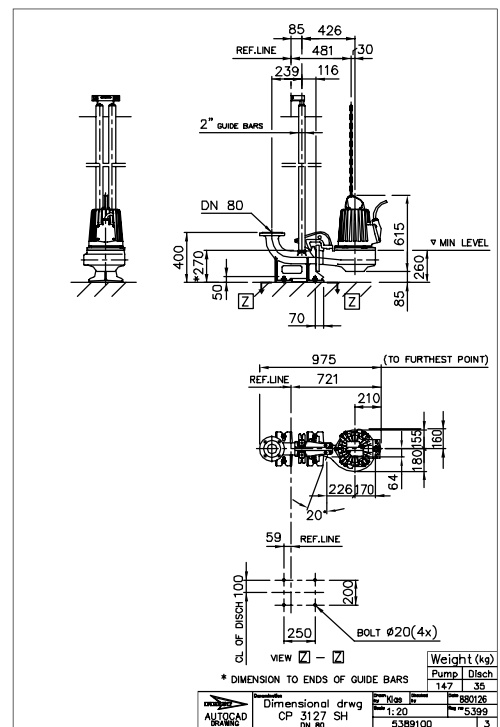
HT, P-installation



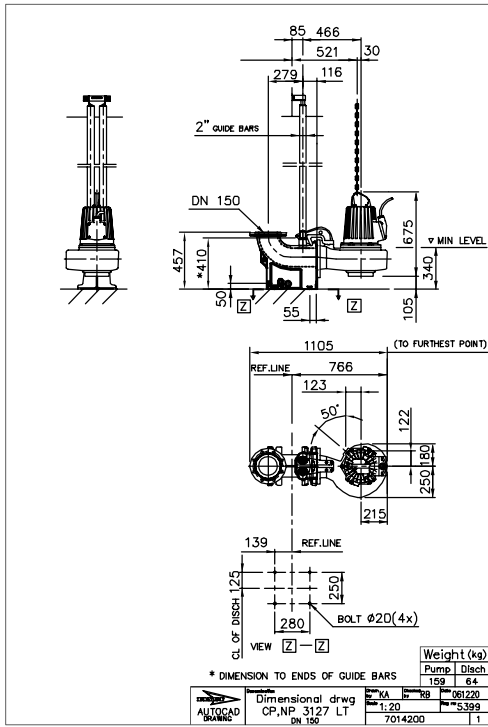
HT, P-installation



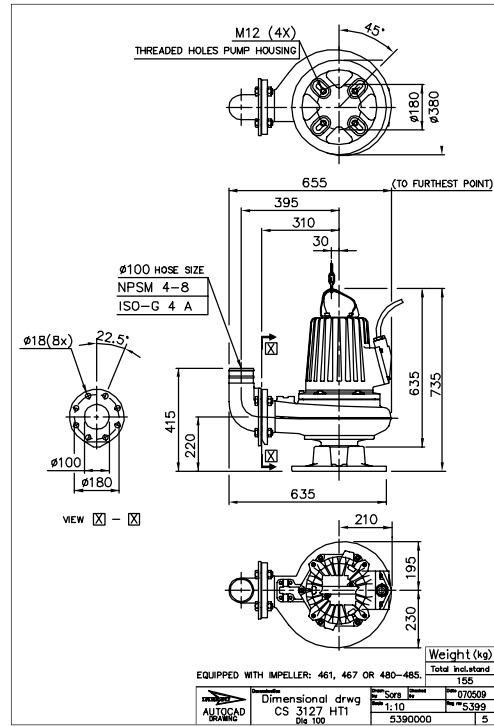
HT-SH, P-installation



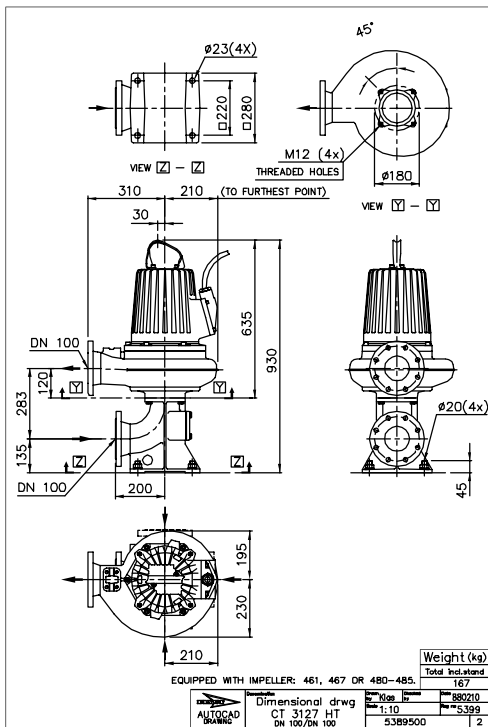
LT, P-installation



HT, S-installation



HT, T-installation





D 3045

Product

Submersible pump for pumping waste water and sludge. It can also be used for pumping ground water and other liquids containing solids.

Denomination

Product code	3045.180
Installation	F, P, S
Impeller characteristic	MT, HT

Process data

Liquid temperature	max +40 °C
Depth of immersion	max 20 m
The pH of the pumped liquid	pH 6-11
Liquid density	max. 1100 kg/m ³

Motor data

Frequency	50 Hz
Insulation class	F (+155 °C)
Voltage variation	
- continuously running	max ± 5%
- intermittent running	max ± 10%
Voltage imbalance between phases	max 2%
No. of starts/hour	max 15

Cable

Direct-on-line start

SUBCAB®	4G2,5 mm ²
	4G2,5+2x1,5 mm ²

Y/D start

SUBCAB®	7G2,5 mm ²
---------	-----------------------

Material

Vortex impeller	Polyamide
Pump housing	Cast iron
Stator housing	Cast iron
Shaft	Stainless steel
O-rings	Nitrile rubber

Mechanical face seals

Alternative	Inner seal	Outer seal
1	Carbon/ Aluminium oxide	Silicon carbide/ Silicon carbide

Surface Treatment

All cast parts are coated with a primer. The finish coat is a synthetic varnish.

Weight

See dimensional drawing.

Option

3045.090	Ex. proof design
Warm liquid version on request	
Other cables	
Zinc anodes	

Accessories

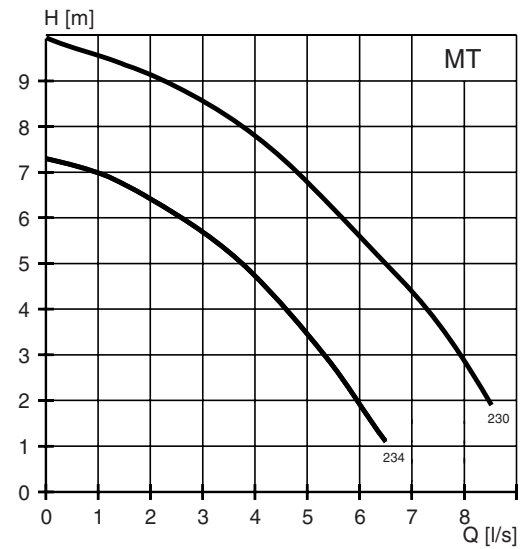
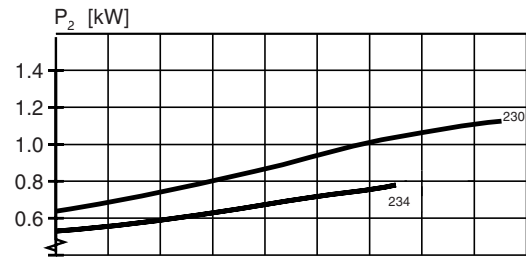
Discharge connections, adapters, hose connections and other mechanical accessories.

Electrical accessories such as pump controller, control panels, starters, monitoring relays, cables.

See separate booklet or www.flygt.com. for further information

MT-Motor rating and performance curve

Curve/Impeller No	Rated power, kW	Rated current, A	Starting current, A	Power factor cos φ	Impeller thoughtlet, mm	Ex proof version available	Installation		
							F	P	S
400 V, 50 Hz, 3 ~, 2870 r/min									
234	0,8	2,0	14,0	0,74	48		•	•	•
400 V, 50 Hz, 3 ~, 2790 r/min									
230	1,2	2,6	14,0	0,84	48	•	•	•	•
234	1,2	2,6	14,0	0,84	48	•	•	•	•
230 V, 50 Hz, 1 ~, 2750 r/min									
234	0,75	4,2	15,0	0,99	48		•	•	•

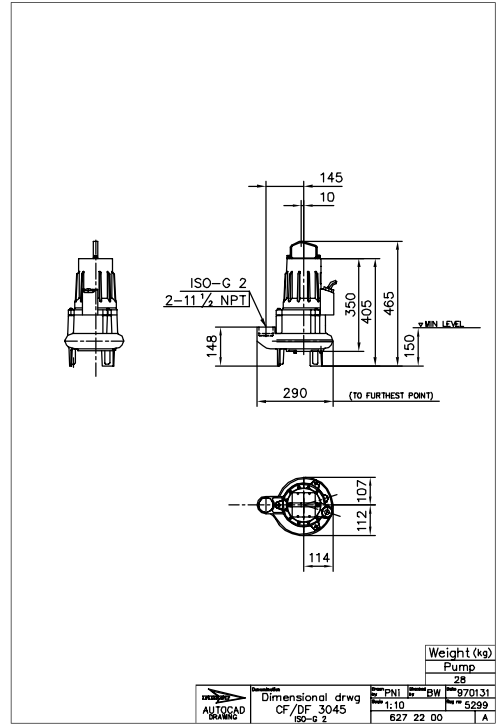


Dimensional drawing

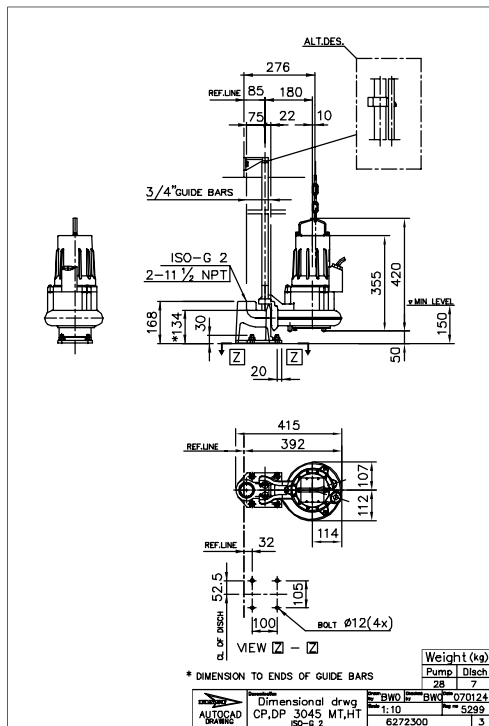
All drawings are available as Acrobat documents (.pdf) and AutoCad drawings (.dwg). Download the drawings from www.flygt.com. or contact your ITT Flygt representative for more information.

All dimensions are in mm.

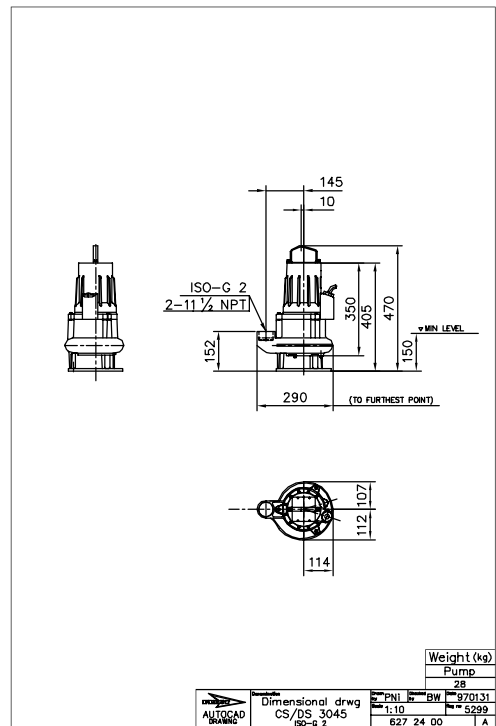
MT, F-installation



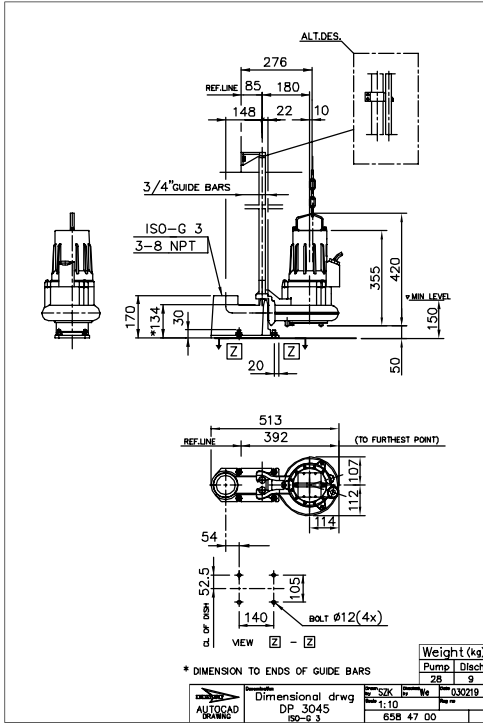
HT, P-installation



HT, S-installation



MT, P-installation





D 3057

Product

Submersible pump for pumping waste water and sludge. It can also be used for pumping ground water and other liquids containing solids. A special version, ARV (Abrasion Resistant Version), is available for pumping media containing light or medium concentrations of abrasive solids.

Denomination

Product code 3057.181
 Installation F, H, P, S
 Impeller characteristic HT

Process data

Liquid temperature max +40 °C
 Depth of immersion max 20 m
 The pH of the pumped liquid pH 6-11
 Liquid density max. 1100 kg/m³

Motor data

Frequency 50 Hz
 Insulation class F (+155 °C)
 Voltage variation
 - continuously running max ± 5%
 - intermittent running max ± 10%
 Voltage imbalance between phases max 2%
 No. of starts/hour max 15

Cable

Direct-on-line start
 SUBCAB® 4G2,5 mm²
 4G2,5+2x1,5 mm²

Y/D start
 SUBCAB® 7G2,5 mm²

Monitoring equipment

Leakage sensor in stator housing FLS
 Thermal switches in stator windings.

Material

Vortex impeller

Alternative	Material
1	Cast iron
2	Ductile cast iron

Pump housing

Alternative	Material
1	Cast iron
2	Ductile cast iron

Stator housing Cast iron
 Shaft Stainless steel
 O-rings Nitrile rubber

Mechanical face seals

Alternative	Inner seal	Outer seal
1	Aluminium oxide/ Corrosion resistant cemented carbide	Aluminium oxide/ Aluminium oxide
2	Aluminium oxide/ Aluminium oxide	Aluminium oxide/ Aluminium oxide
3	Aluminium oxide/ Aluminium oxide	Corrosion resistant cemented carbide/ Corrosion resistant cemented carbide
4	Corrosion resistant cemented carbide/ Corrosion resistant cemented carbide	Corrosion resistant cemented carbide/ Corrosion resistant cemented carbide
5	Corrosion resistant cemented carbide/ Corrosion resistant cemented carbide	Aluminium oxide/ Aluminium oxide
6	Carbon/Aluminium oxide	Aluminium oxide/ Aluminium oxide
7	Carbon/Aluminium oxide	Corrosion resistant cemented carbide/ Corrosion resistant cemented carbide

Surface Treatment

All cast parts are coated with a primer. The finish coat is a synthetic varnish.

Weight

See dimensional drawing.

Option

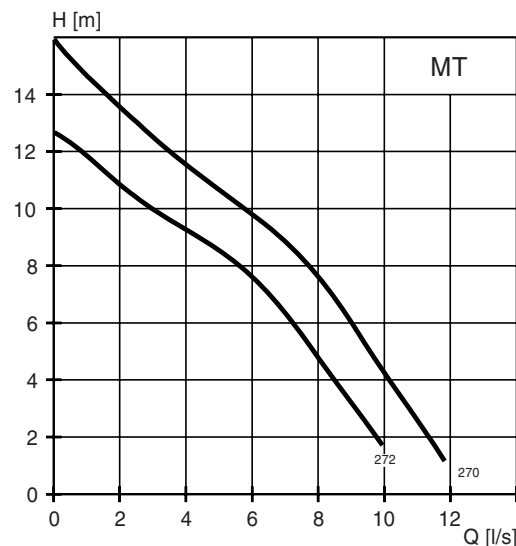
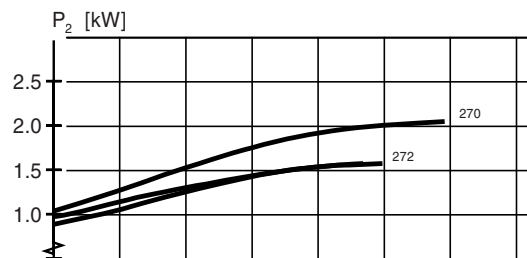
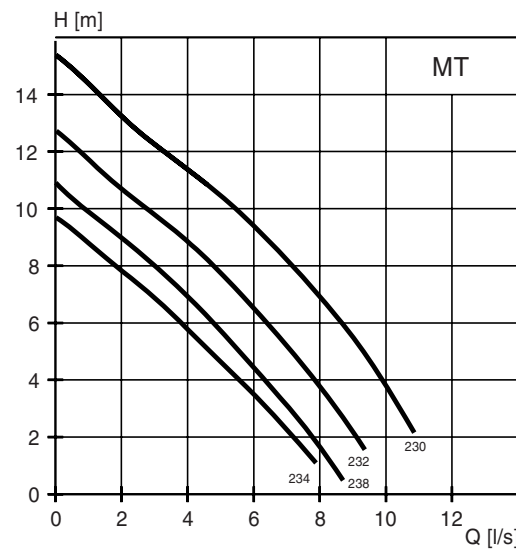
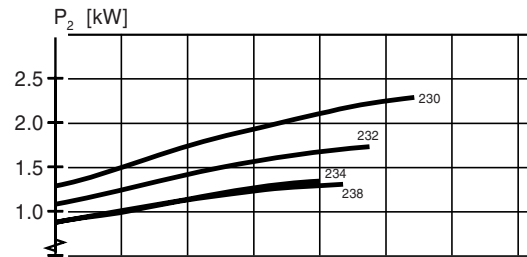
3057.091 Ex. proof design
 Warm liquid version on request
 Other cables
 Thermal switches in stator windings
 Zinc anodes

Accessories

Discharge connections, adapters, hose connections and other mechanical accessories. Electrical accessories such as pump controller, control panels, starters, monitoring relays, cables. See separate booklet or www.flygt.com, for further information

MT-Motor rating and performance curve

Curve/Impeller No	Rated power, kW	Rated current, A	Starting current, A	Power factor cos φ	Impeller throughliet, mm	Ex proof version available	Installation			
							F	H	P	S
400 V, 50 Hz, 3 ~, 2695 r/min										
230	1,7	3,8	17,0	0,87	48	•	•	•	•	
230	1,7	3,8	17,0	0,87	48		•			
232	1,7	3,8	17,0	0,87	48	•	•	•	•	
232	1,7	3,8	17,0	0,87	48		•			
234	1,7	3,8	17,0	0,87	48	•	•	•	•	
234	1,7	3,8	17,0	0,87	48		•			
400 V, 50 Hz, 3 ~, 2700 r/min										
230	2,4	5,3	24,0	0,87	48	•	•	•	•	
230	2,4	5,3	24,0	0,87	48		•			
232	2,4	5,3	24,0	0,87	48	•	•	•	•	
232	2,4	5,3	24,0	0,87	48		•			
234	2,4	5,3	24,0	0,87	48	•	•	•	•	
234	2,4	5,3	24,0	0,87	48		•			
230 V, 50 Hz, 1 ~, 2700 r/min										
234	1,5	8,9	28,0	0,99	48		•	•	•	•
238	1,5	8,9	28,0	0,99	48		•	•	•	•



MT- Motor rating and performance curve (abrasion resistant version)

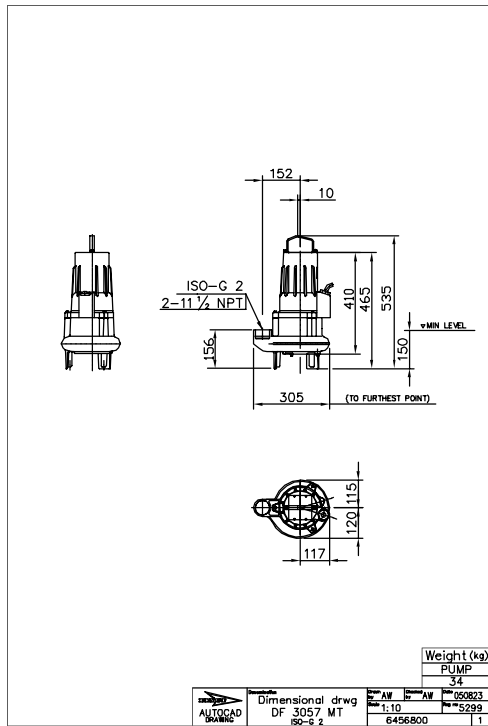
Curve/Impeller No	Rated power, kW	Rated current, A	Starting current, A	Power factor cos φ	Impeller throughliet, mm	Ex proof version available	Installation			
							F	H	P	S
400 V, 50 Hz, 3 ~, 2700 r/min										
270	2,4	5,3	24,0	0,87	24	•	•			•
272	2,4	5,3	24,0	0,87	24	•	•			•

Dimensional drawing

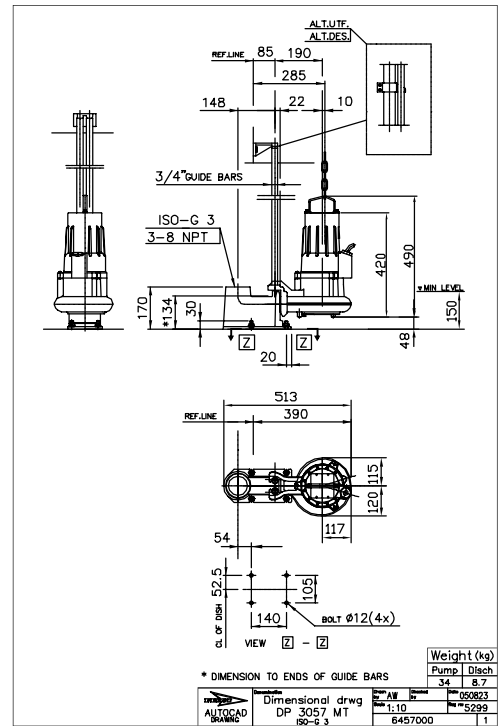
All drawings are available as Acrobat documents (.pdf) and AutoCad drawings (.dwg). Download the drawings from www.flygt.com or contact your ITT Flygt representative for more information.

All dimensions are in mm.

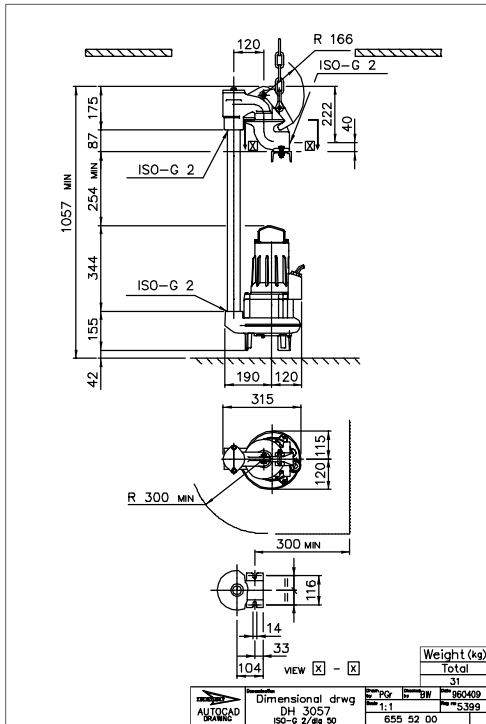
MT, F-installation



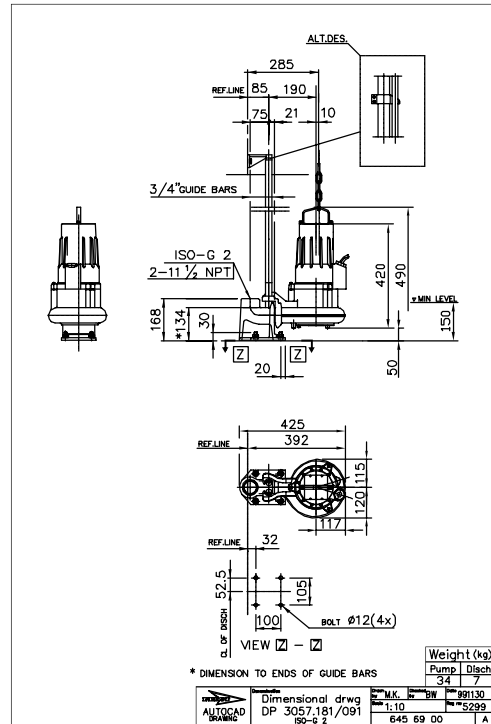
MT, F-installation (ARV)



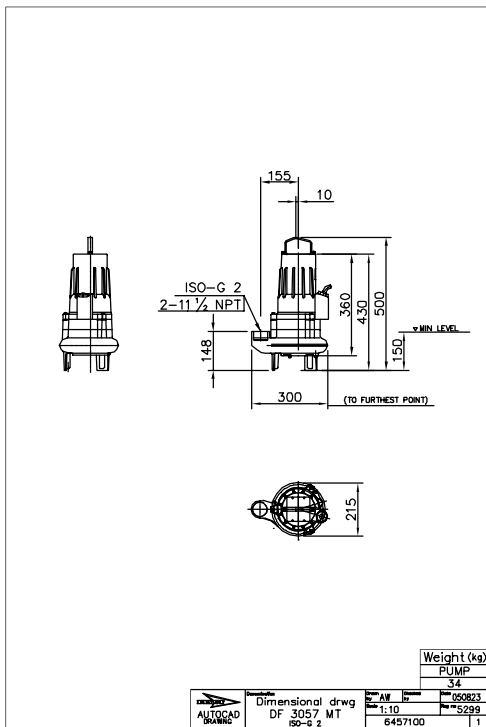
MT, H-installation



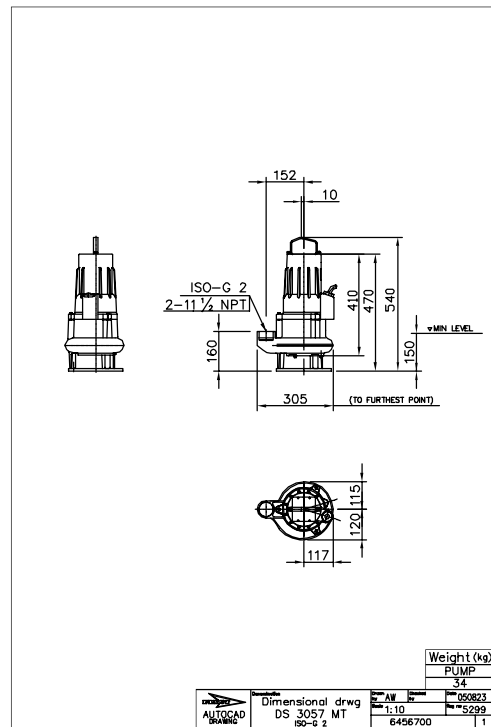
MT, P-installation



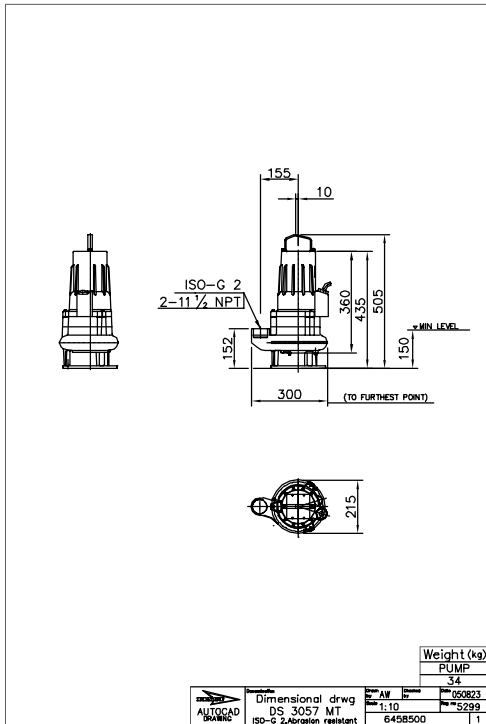
MT, F-installation



MT, S-installation



MT, S-installation (ARV)





D 3068

Product

Submersible pump for pumping clean water, surface water and waste water containing solids or fibred material.

Denomination

Product code 3068.180
 Installation F, P, S
 Impeller characteristic MT, HT

Process data

Liquid temperature max +40 °C
 Depth of immersion max 20 m
 The pH of the pumped liquid pH 5,5-14
 Liquid density max. 1100 kg/m³

Motor data

Frequency 50 Hz
 Insulation class F (+155 °C)
 Voltage variation
 - continuously running max ± 5%
 - intermittent running max ± 10%
 Voltage imbalance between phases max 2%
 No. of starts/hour max 15

Cable

Direct-on-line start

SUBCAB® 4G2,5 mm²
 4G2,5+2x1,5 mm²

Y/D start

SUBCAB® 7G2,5 mm²

Monitoring equipment

Thermal contacts opening temperature 125 °C

Material

Vortex impeller Cast iron
 Pump housing Cast iron
 Stator housing Cast iron
 Shaft Magnetic stainless steel
 O-rings Fluorinated rubber

Mechanical face seals

Alternative	Inner seal	Outer seal
1	Aluminium oxide/ Aluminium oxide	Aluminium oxide/ Aluminium oxide
2	Aluminium oxide/ Aluminium oxide	Corrosion resistant cemented carbide/ Corrosion resistant cemented carbide
3	Aluminium oxide/ Aluminium oxide	Silicon carbide/ Silicon carbide
4	Corrosion resistant cemented carbide/ Corrosion resistant cemented carbide	Aluminium oxide/ Aluminium oxide
5	Corrosion resistant cemented carbide/ Corrosion resistant cemented carbide	Corrosion resistant cemented carbide/ Corrosion resistant cemented carbide
6	Corrosion resistant cemented carbide/ Corrosion resistant cemented carbide	Silicon carbide/ Silicon carbide
7	Carbon/Aluminium oxide	Aluminium oxide/ Aluminium oxide
8	Carbon/Aluminium oxide	Corrosion resistant cemented carbide/ Corrosion resistant cemented carbide
9	Carbon/Aluminium oxide	Silicon carbide/ Silicon carbide

Surface Treatment

All cast parts are coated with a primer. The finish coat is a synthetic varnish.

Weight

See dimensional drawing.

Option

3068.090 Ex. proof design
 Warm liquid version on request
 Leakage sensor in stator housing FLS
 Surface treatment Epoxy treatment
 Other cables
 Zinc anodes

Accessories

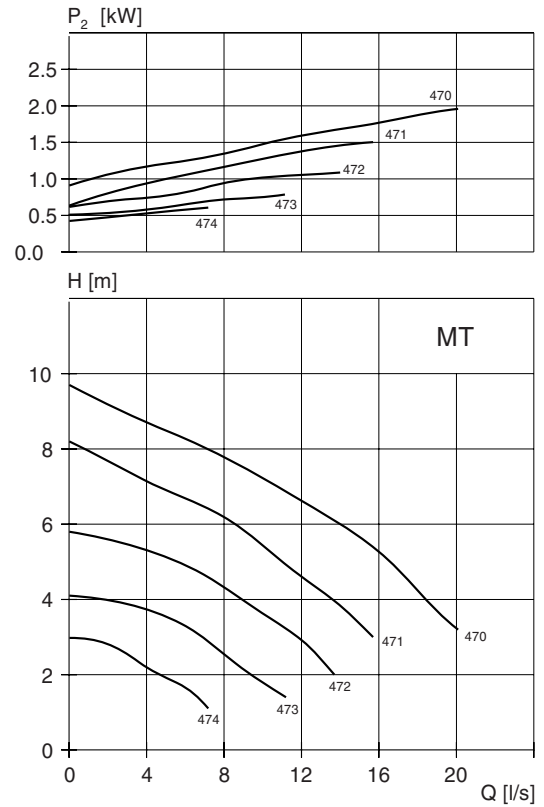
Discharge connections, adapters, hose connections and other mechanical accessories.

Electrical accessories such as pump controller, control panels, starters, monitoring relays, cables.

See separate booklet or www.flygt.com, for further information.

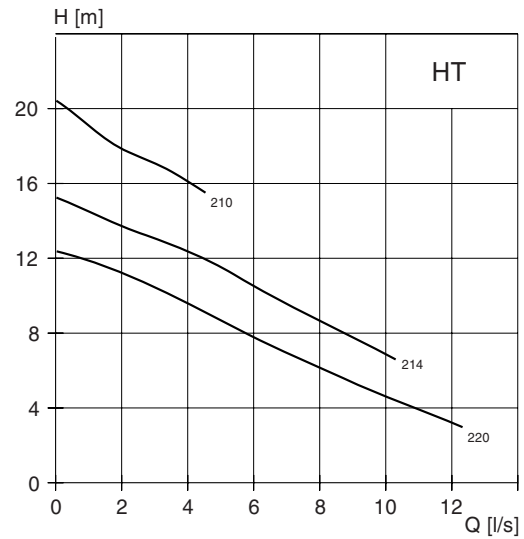
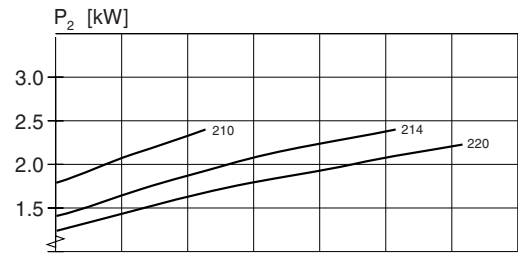
MT-Motor rating and performance curve

Curve/Impeller No	Rated power, kW	Rated current, A	Starting current, A	Power factor cos φ	Impeller throughliet, mm	Ex proof version available	Installation		
							F	P	S
400 V, 50 Hz, 3 ~, 1355 r/min									
471	1,5	3,8	14,0	0,83	65	•	•	•	•
471	1,5	3,8	14,0	0,83	80	•	•	•	•
472	1,5	3,8	14,0	0,83	65	•	•	•	•
472	1,5	3,8	14,0	0,83	80	•	•	•	•
473	1,5	3,8	14,0	0,83	65	•	•	•	•
473	1,5	3,8	14,0	0,83	80	•	•	•	•
474	1,5	3,8	14,0	0,83	65	•	•	•	•
400 V, 50 Hz, 3 ~, 1360 r/min									
470	2,0	5,0	20,0	0,83	65	•	•	•	•
470	2,0	5,0	20,0	0,83	80	•	•	•	•
471	2,0	5,0	20,0	0,83	65	•	•	•	•
471	2,0	5,0	20,0	0,83	80	•	•	•	•
472	2,0	5,0	20,0	0,83	65	•	•	•	•
472	2,0	5,0	20,0	0,83	80	•	•	•	•
473	2,0	5,0	20,0	0,83	65	•	•	•	•
473	2,0	5,0	20,0	0,83	80	•	•	•	•
230 V, 50 Hz, 1 ~, 1400 r/min									
472	1,3	8,4	28,0	0,99	65		•	•	•
472	1,3	8,4	28,0	0,99	80		•	•	•
473	1,3	8,4	28,0	0,99	65		•	•	•
473	1,3	8,4	28,0	0,99	80		•	•	•



HT-Motor rating and performance curve

Curve/Impeller No	Rated power, kW	Rated current, A	Starting current, A	Power factor cos φ	Impeller throatlet, mm	Ex proof version available	Installation				
							F	P	S		
400 V, 50 Hz, 3 ~, 2700 r/min											
210	2,4	5,3	24,0	0,87	55	•	•	•	•		
214	2,4	5,3	24,0	0,87	55	•	•	•	•		
214	2,4	5,3	24,0	0,87	65	•	•	•	•		
220	2,4	5,3	24,0	0,87	65	•	•	•	•		
400 V, 50 Hz, 3 ~, 2695 r/min											
214	1,7	3,8	17,0	0,87	55	•	•	•	•		
220	1,7	3,8	17,0	0,87	55	•	•	•	•		
230 V, 50 Hz, 1 ~, 2730 r/min											
220	1,5	8,9	28,0	0,99	55		•	•	•		
220	1,5	8,9	28,0	0,99	65		•	•	•		

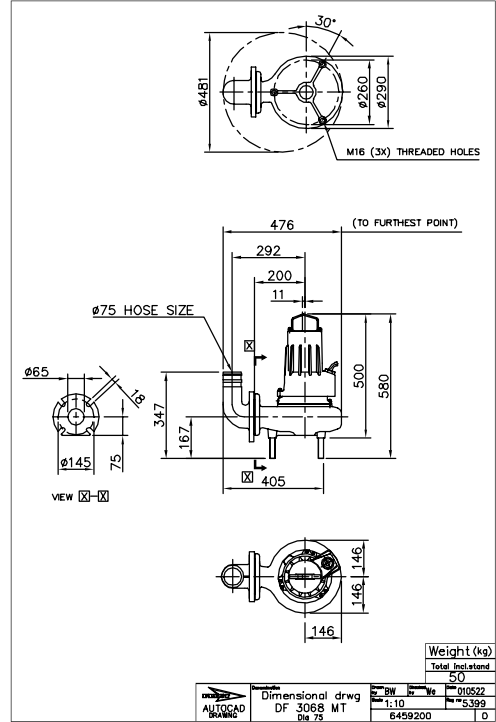


Dimensional drawing

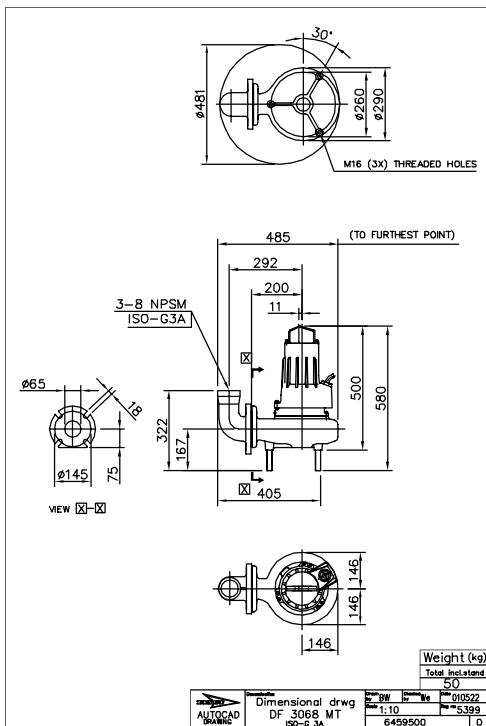
All drawings are available as Acrobat documents (.pdf) and AutoCad drawings (.dwg). Download the drawings from www.flygt.com or contact your ITT Flygt representative for more information.

All dimensions are in mm.

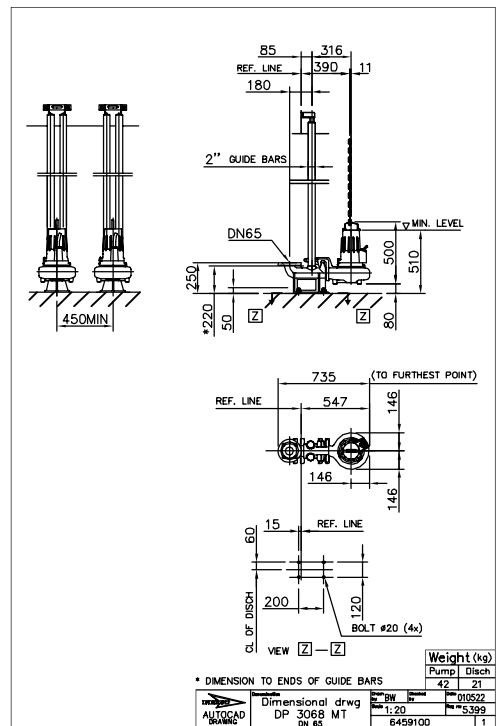
MT, F-installation



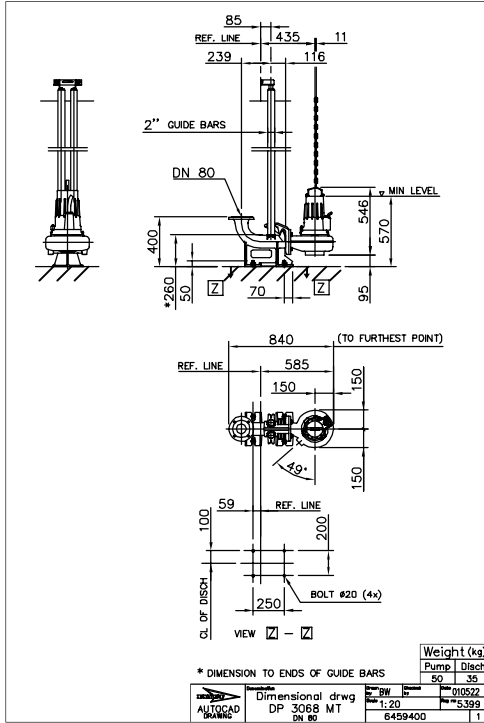
MT, F-installation



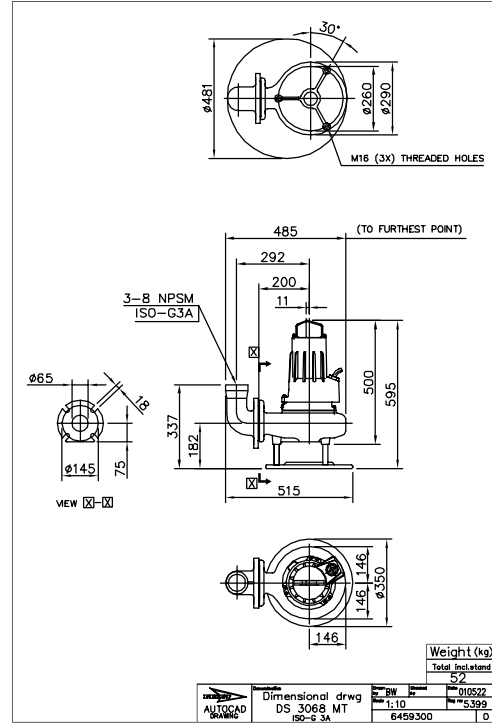
MT, P-installation



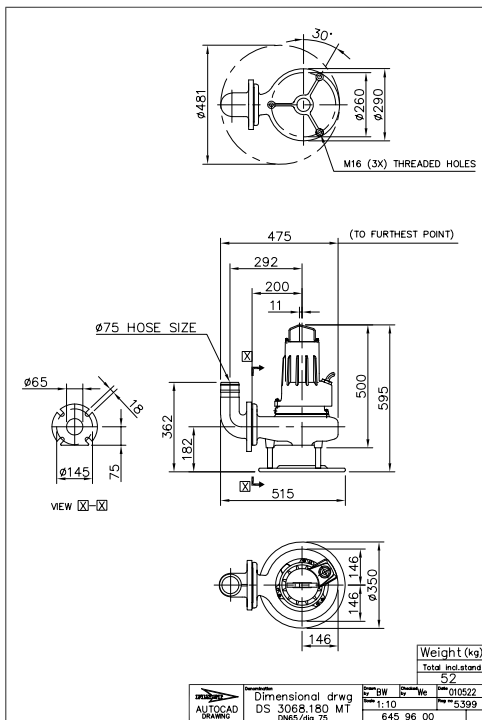
MT, P-installation



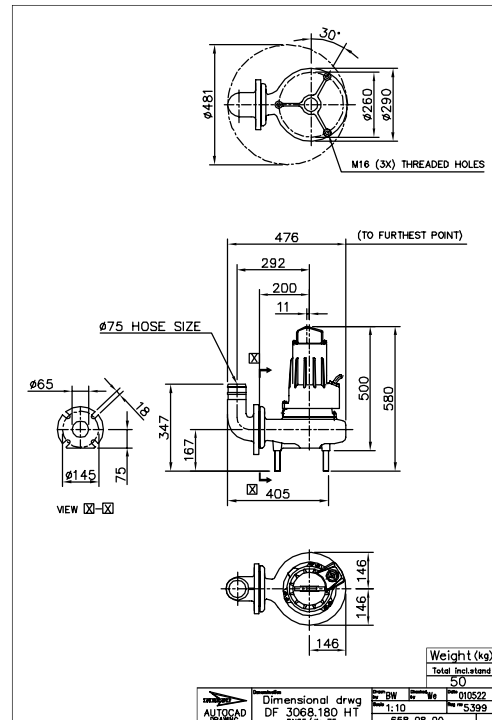
MT, S-installation



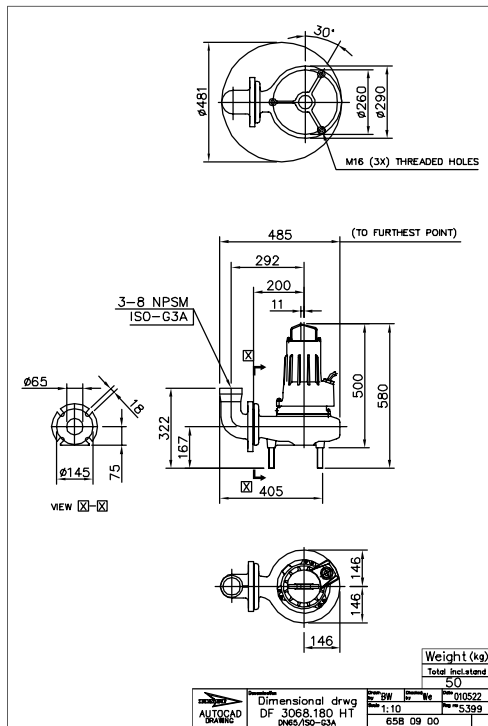
MT, S-installation



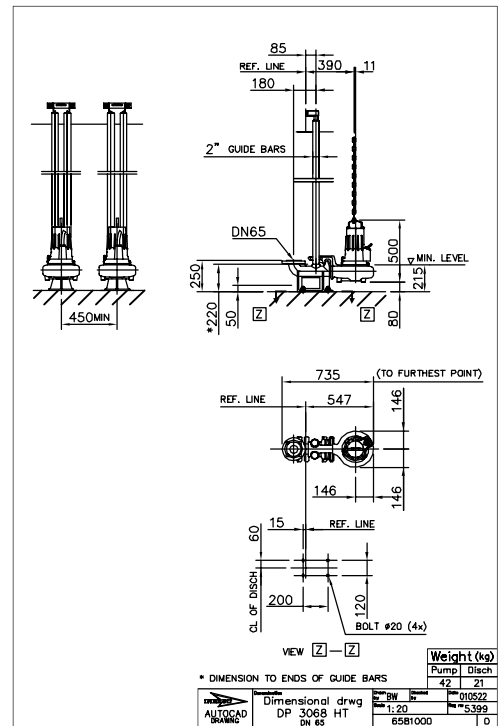
HT, F-installation



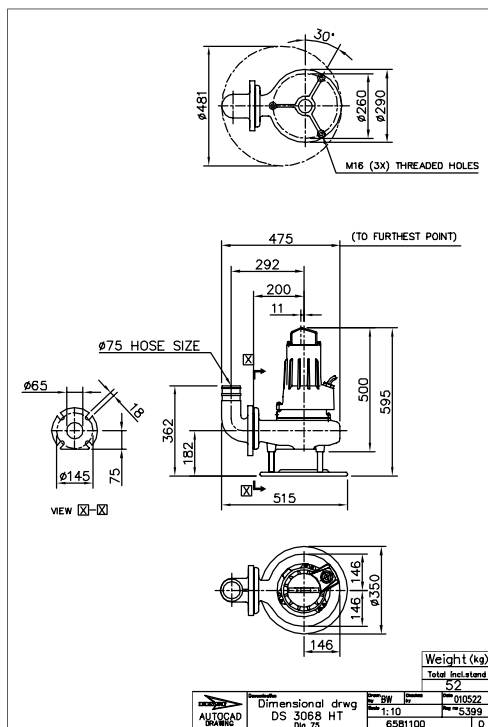
HT, F-installation



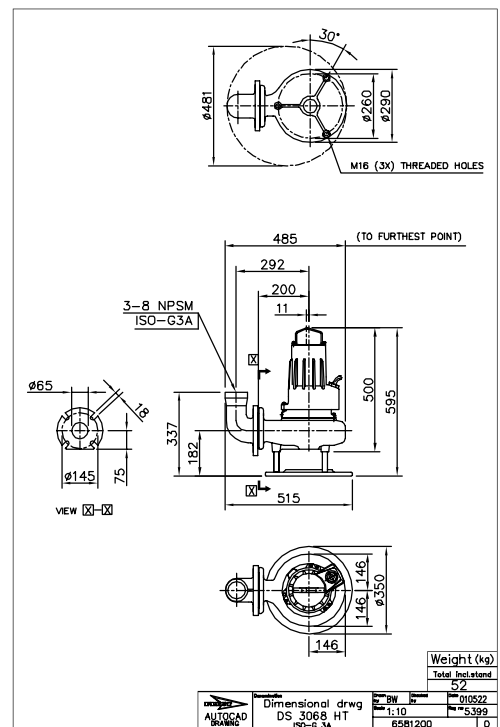
HT, P-installation



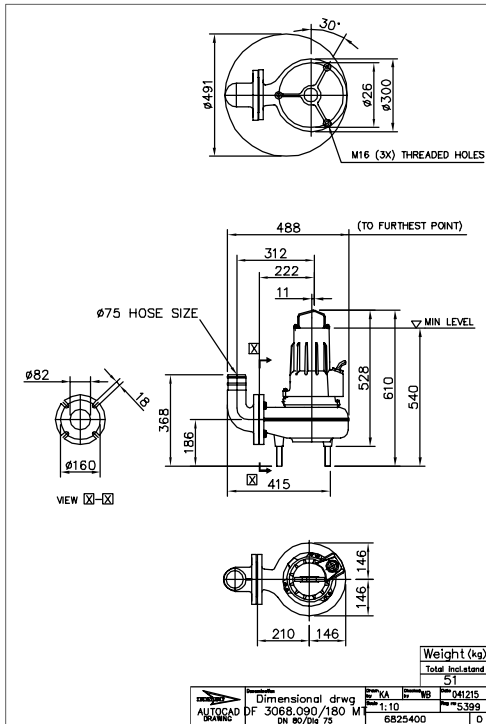
HT, S-installation



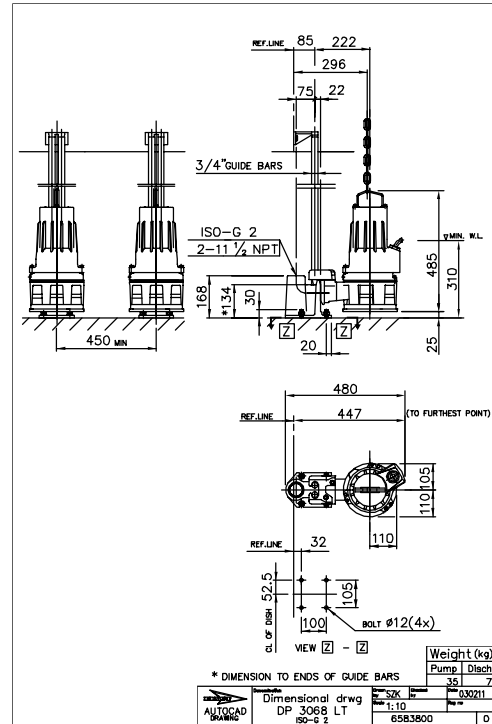
HT, S-installation



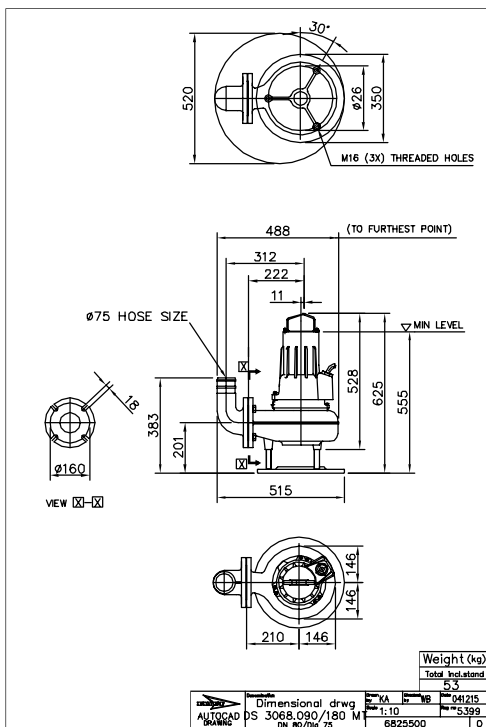
MT, F-installation



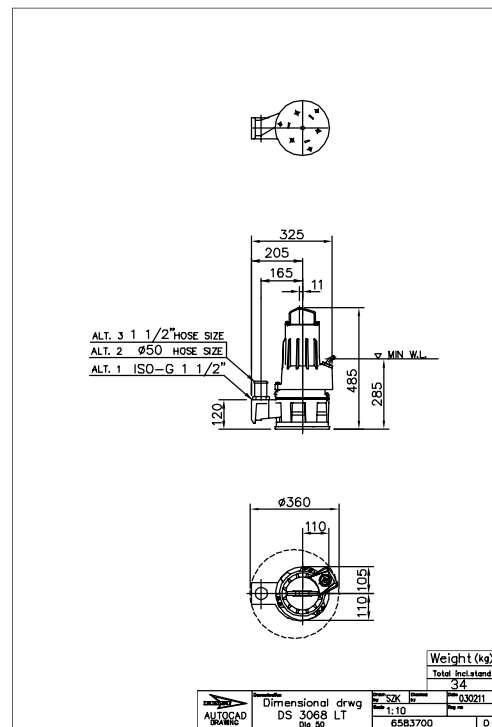
LT, P-installation



MT, S-installation



LT, S-installation





D 3085

Product

Submersible pump for pumping liquids containing solids, abrasive media or low volumes at high heads.

Denomination

Product code	3085.183
Installation	P, S
Impeller characteristic	MT, HT

Process data

Liquid temperature	max +40 °C
Depth of immersion	max 20 m
The pH of the pumped liquid	pH 5,5-14
Liquid density	max. 1100 kg/m ³

Motor data

Frequency	50 Hz
Insulation class	H (+180 °C)
Voltage variation	
- continuously running	max ± 5%
- intermittent running	max ± 10%
Voltage imbalance between phases	max 2%
No. of starts/hour	max 30

Cable

Direct-on-line start

SUBCAB®	4G1,5 mm ²
	4G1,5+2x1,5 mm ²
	4G2,5 mm ²
	4G2,5+2x1,5 mm ²

Y/D start

SUBCAB®	7G2,5 mm ²
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Monitoring equipment

Thermal contacts opening temperature	125 °C
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Material

Vortex impeller	Cast iron
Pump housing	Cast iron
Stator housing	Cast iron
Shaft	Stainless steel
O-rings	Nitrile rubber

Mechanical face seals

Alternative	Inner seal	Outer seal
1	Carbon/ Aluminium oxide	Corrosion resistant cemented carbide/ Corrosion resistant cemented carbide
2	Carbon/ Aluminium oxide	Silicon carbide/ Silicon carbide

Surface Treatment

The finishing coat is a two pack oxiran ester paint.

Weight

See dimensional drawing.

Option

3085.092	Ex. proof design
3085.280	Stainless steel design
3085.290	Stainless steel/ex proof design
Warm liquid version on request	
Pump housing	Hardened design
Leakage sensor in stator housing	FLS
Leakage sensor in oil housing	CLS
Other cables	
Surface treatment	Epoxy treatment
Hydraulic parts in hardened cast iron	

Accessories

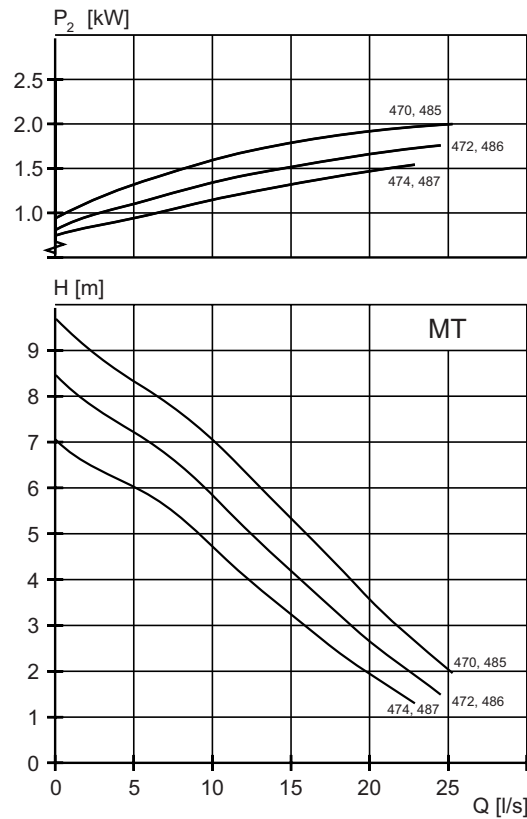
Discharge connections, adapters, hose connections and other mechanical accessories.

Electrical accessories such as pump controller, control panels, starters, monitoring relays, cables.

See separate booklet or www.flygt.com, for further information

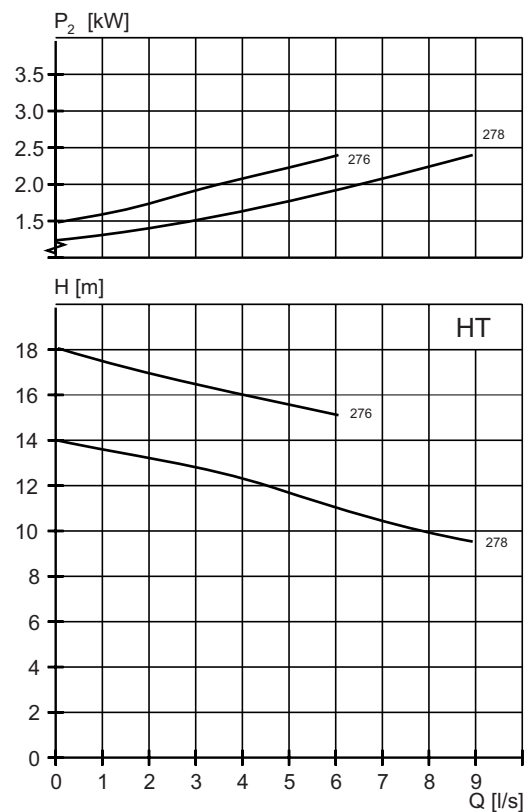
MT-Motor rating and performance curve

Curve/Impeller No	Rated power, kW	Rated current, A	Starting current, A	Power factor cos φ	Impeller throughliet, mm	Ex proof version available	Installation			
							P	S		
400 V, 50 Hz, 3 ~, 1385 r/min										
474	1,3	3,2	13,0	0,83	76	•	•	•		
400 V, 50 Hz, 3 ~, 1395 r/min										
470	2,0	4,6	22,0	0,83	76	•	•	•		
472	2,0	4,6	22,0	0,83	76	•	•	•		
474	2,0	4,6	22,0	0,83	76	•	•	•		
485	2,0	4,6	22,0	0,83	76	•	•	•		
486	2,0	4,6	22,0	0,83	76	•	•	•		
487	2,0	4,6	22,0	0,83	76	•	•	•		
230 V, 50 Hz, 1 ~, 1425 r/min										
472	1,5	9,4	44,0	0,90	76		•	•		
474	1,5	9,4	44,0	0,90	76		•	•		
486	1,5	9,4	44,0	0,90	76		•	•		
487	1,5	9,4	44,0	0,90	76		•	•		



HT- Motor rating and performance curve

Curve/Impeller No	Rated power, kW	Rated current, A	Starting current, A	Power factor cos φ	Impeller throughliet, mm	Ex proof version available	Installation			
							P	S		
400 V, 50 Hz, 3 ~, 2830 r/min										
276	2,4	4,7	27,0	0,92	52	•	•	•		
278	2,4	4,7	27,0	0,92	52	•	•	•		

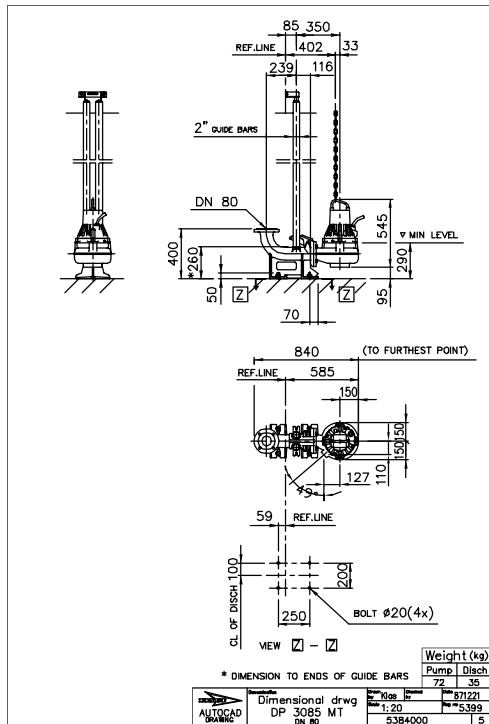


Dimensional drawing

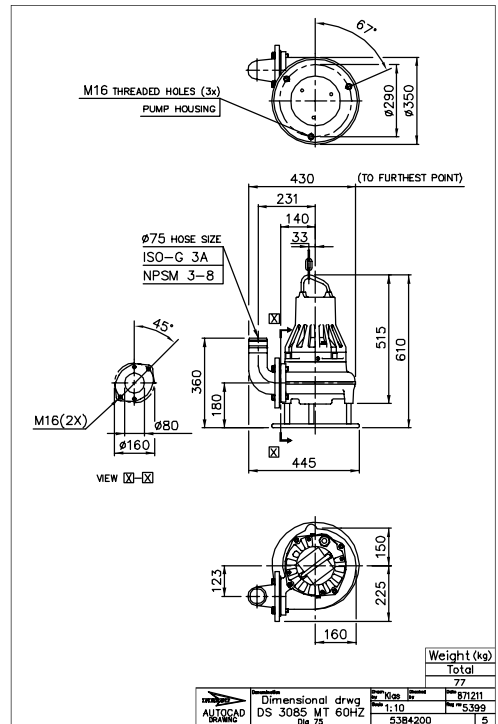
All drawings are available as Acrobat documents (.pdf) and AutoCad drawings (.dwg). Download the drawings from www.flygt.com or contact your ITT Flygt representative for more information.

All dimensions are in mm.

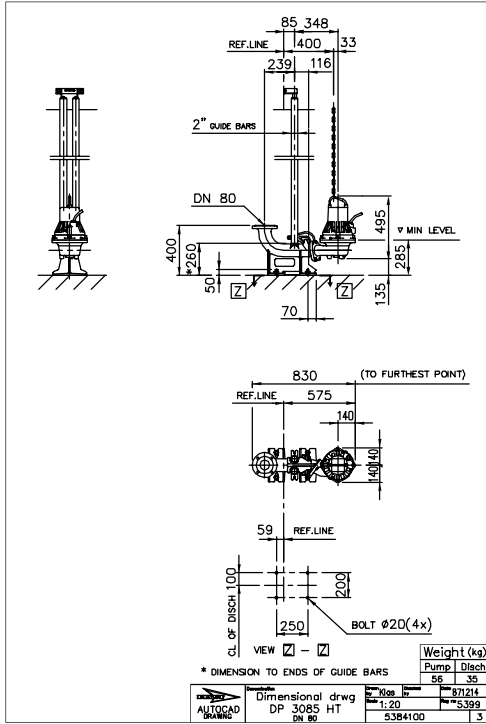
MT, P-installation



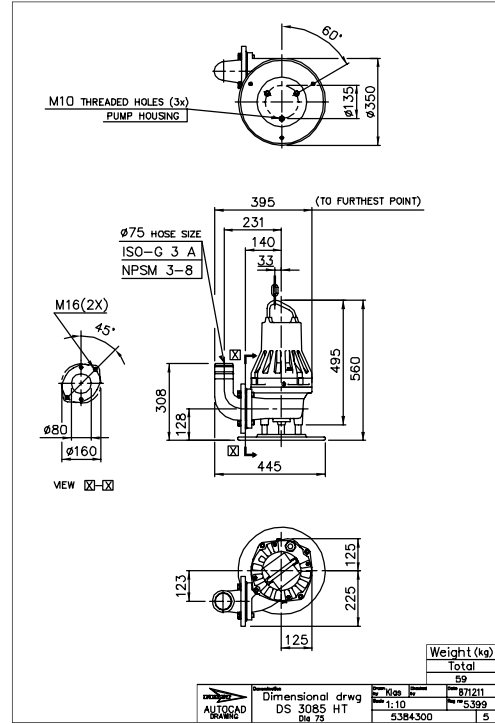
MT, S-installation



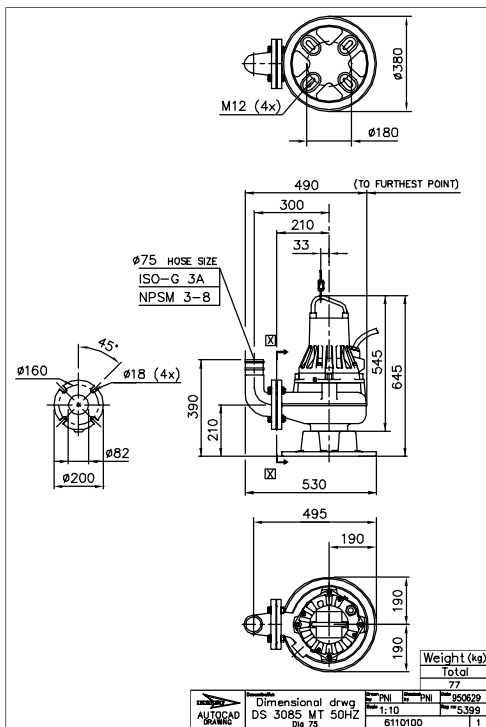
HT, P-installation



HT, S-installation



MT, S-installation





D 3102

Product

Submersible pump for pumping liquids containing solids, abrasive media or low volumes at high heads.

Denomination

Product code 3102.181
 Installation P
 Impeller characteristic MT, HT

Process data

Liquid temperature max +40 °C
 Depth of immersion max 20 m
 The pH of the pumped liquid pH 5,5-14
 Liquid density max. 1100 kg/m³

Motor data

Frequency 50 Hz
 Insulation class H (+180 °C)
 Voltage variation
 - continuously running max ± 5%
 - intermittent running max ± 10%
 Voltage imbalance between phases max 2%
 No. of starts/hour max 30

Cable

Direct-on-line start

SUBCAB® 4G2,5 mm²
 4G2,5+2x1,5 mm²

Y/D start

SUBCAB® 7G2,5 mm²
 7G2,5+2x1,5 mm²

Monitoring equipment

Thermal contacts opening temperature 125 °C

Material

Vortex impeller Cast iron
 Pump housing Cast iron
 Stator housing Cast iron
 Shaft Stainless steel
 O-rings Nitrile rubber

Mechanical face seals

Alternative	Inner seal	Outer seal
1	Aluminium oxide/ Corrosion resistant cemented carbide	Aluminium oxide/ Corrosion resistant cemented carbide
2	Aluminium oxide/ Corrosion resistant cemented carbide	Corrosion resistant cemented carbide/ Corrosion resistant cemented carbide
3	Corrosion resistant cemented carbide/ Corrosion resistant cemented carbide	Aluminium oxide/ Corrosion resistant cemented carbide
4	Corrosion resistant cemented carbide/ Corrosion resistant cemented carbide	Corrosion resistant cemented carbide/ Corrosion resistant cemented carbide

Surface Treatment

All cast parts are primed with a water-borne primer. The finishing coat is a high-solid two pack paint.

Weight

See dimensional drawing.

Option

3102.090 Ex. proof design
 3102.980 Industrial design
 Warm liquid version on request
 Leakage sensor in stator housing FLS
 Leakage sensor in oil housing CLS
 Surface treatment Epoxy treatment
 Other cables
 Zinc anodes

Accessories

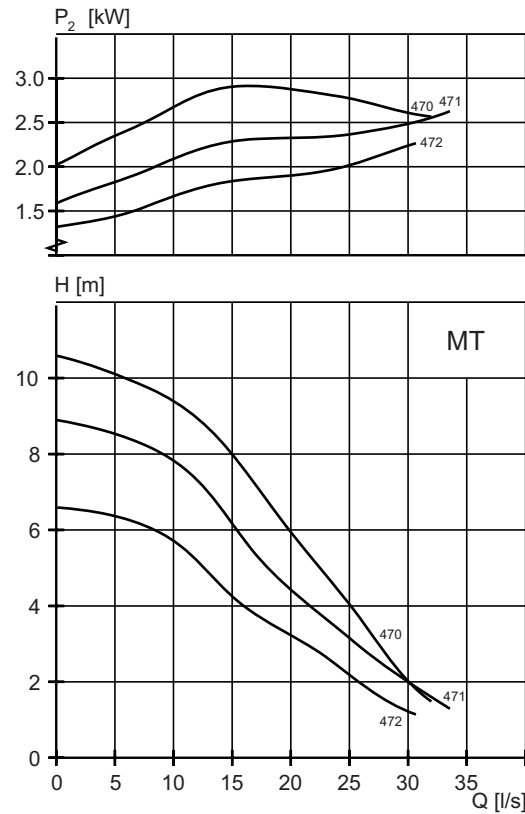
Discharge connections, adapters, hose connections and other mechanical accessories.

Electrical accessories such as pump controller, control panels, starters, monitoring relays, cables.

See separate booklet or www.flygt.com, for further information

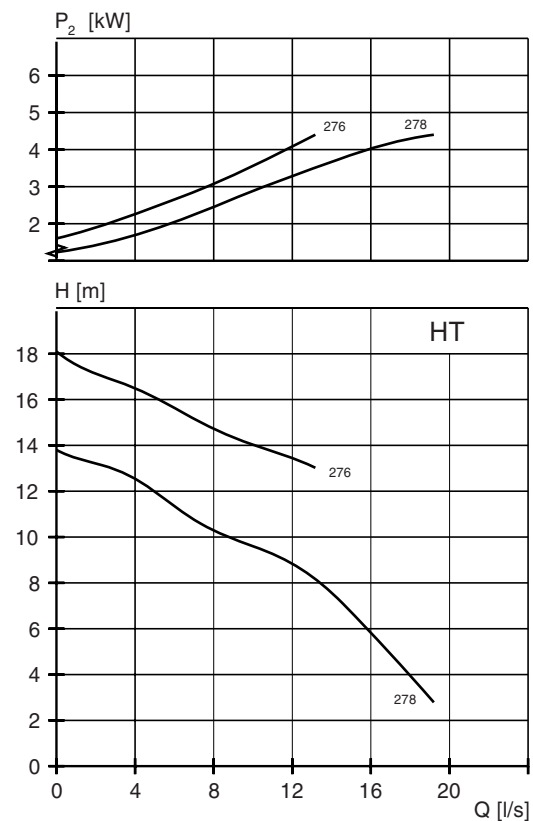
MT-Motor rating and performance curve

Curve/Impeller No	Rated power, kW	Rated current, A	Starting current, A	Power factor cos φ	Impeller thoughtlet, mm	Ex proof version available	Installation				
							P				
400 V, 50 Hz, 3 ~, 1435 r/min											
470	3,1	6,9	39,0	0,77	100	•	•				
471	3,1	6,9	39,0	0,77	100	•	•				
472	3,1	6,9	39,0	0,77	100	•	•				



HT-Motor rating and performance curve

Curve/Impeller No	Rated power, kW	Rated current, A	Starting current, A	Power factor cos φ	Impeller thoughtlet, mm	Ex proof version available	Installation				
							P				
400 V, 50 Hz, 3 ~, 2870 r/min											
276	4,4	8,6	64	0,92	52	•	•				
278	4,4	8,6	64	0,92	52	•	•				

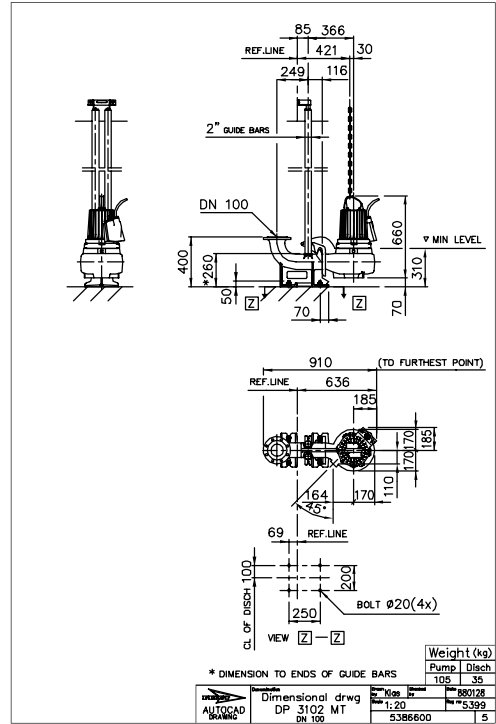


Dimensional drawing

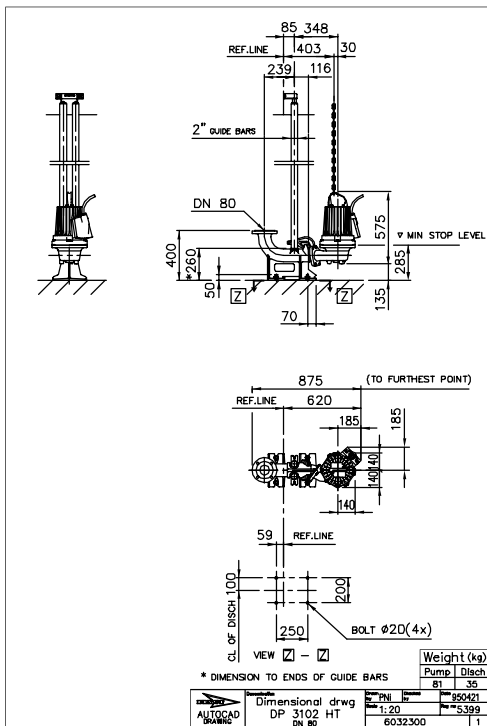
All drawings are available as Acrobat documents (.pdf) and AutoCad drawings (.dwg). Download the drawings from www.flygt.com or contact your ITT Flygt representative for more information.

All dimensions are in mm.

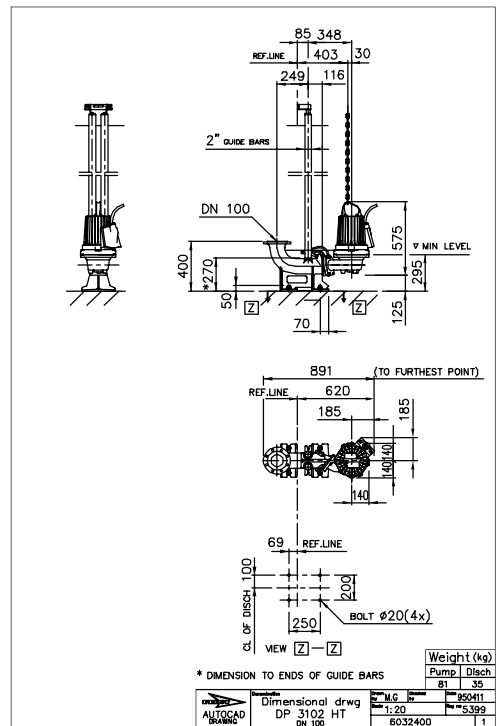
MT, P-installation



HT, P-installation



HT, P-installation





D 3127

Product

Submersible pump for pumping liquids containing solids, abrasive media or low volumes at high heads.

Denomination

Product code 3127.181
 Installation P
 Impeller characteristic MT, HT

Process data

Liquid temperature max +40 °C
 Depth of immersion max 20 m
 The pH of the pumped liquid pH 5,5-14
 Liquid density max. 1100 kg/m³

Motor data

Frequency 50 Hz
 Insulation class H (+180 °C)
 Voltage variation
 - continuously running max ± 5%
 - intermittent running max ± 10%
 Voltage imbalance between phases max 2%
 No. of starts/hour max 30

Cable

Direct-on-line start

SUBCAB®
 4G2,5 mm²
 4G2,5+2x1,5 mm²
 4G4 mm²
 4G4+2x1,5 mm²

Y/D start

SUBCAB®
 7G2,5 mm²
 7G2,5+2x1,5 mm²
 7G4+2x1,5 mm²

Monitoring equipment

Thermal contacts opening temperature 125 °C

Material

Vortex impeller Cast iron
 Pump housing Cast iron
 Stator housing Cast iron
 Shaft Stainless steel
 O-rings Nitrile rubber

Mechanical face seals

Alternative	Inner seal	Outer seal
1	Carbon/ Aluminium oxide	Corrosion resistant cemented carbide/ Corrosion resistant cemented carbide
2	Corrosion resistant cemented carbide/ Corrosion resistant cemented carbide	Corrosion resistant cemented carbide/ Corrosion resistant cemented carbide
3	Corrosion resistant cemented carbide/ Corrosion resistant cemented carbide	Silicon carbide/ Silicon carbide

Surface Treatment

All cast parts are primed with a water-borne primer. The finishing coat is a high-solid two pack paint.

Weight

See dimensional drawing.

Option

3127.090 Ex. proof design
 Pump housing Hardened design
 Warm liquid version on request
 Leakage sensor in stator housing FLS
 Leakage sensor in oil housing CLS
 Surface treatment Epoxy treatment
 Other cables
 Zinc anodes

Accessories

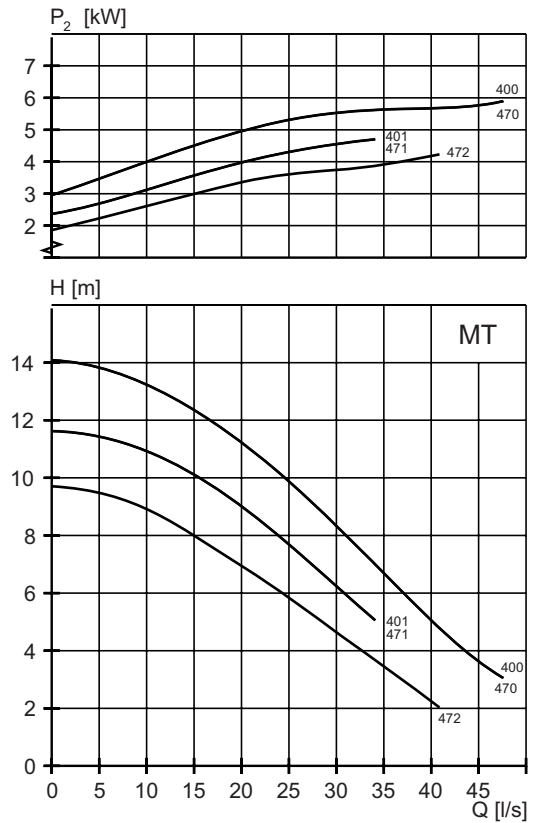
Discharge connections, adapters, hose connections and other mechanical accessories.

Electrical accessories such as pump controller, control panels, starters, monitoring relays, cables.

See separate booklet or www.flygt.com, for further information

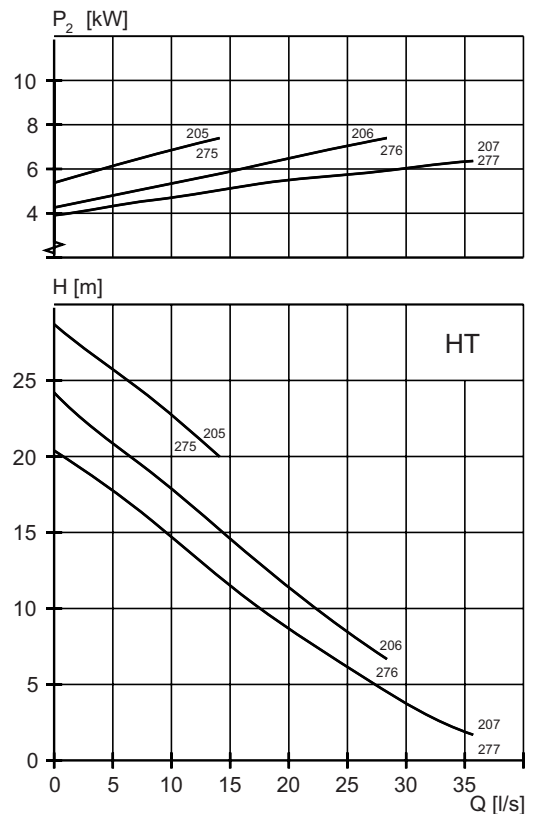
MT-Motor rating and performance curve

Curve/Impeller No	Rated power, kW	Rated current, A	Starting current, A	Power factor cos φ	Impeller thoughtlet, mm	Ex proof version available	Installation				
							P				
400 V, 50 Hz, 3 ~, 1460 r/min											
401	4,7	10,0	73,0	0,78	100	•	•				
471	4,7	10,0	73,0	0,78	100	•	•				
472	4,7	10,0	73,0	0,78	100	•	•				
400 V, 50 Hz, 3 ~, 1450 r/min											
400	5,9	12,0	77,0	0,84	100	•	•				
401	5,9	12,0	77,0	0,84	100	•	•				
470	5,9	12,0	77,0	0,84	100	•	•				
471	5,9	12,0	77,0	0,84	100	•	•				
472	5,9	12,0	77,0	0,84	100	•	•				



HT-Motor rating and performance curve

Curve/Impeller No	Rated power, kW	Rated current, A	Starting current, A	Power factor cos φ	Impeller thoughtlet, mm	Ex proof version available	Installation				
							P				
400 V, 50 Hz, 3 ~, 2920 r/min											
205	7,4	15,0	137,0	0,86	76	•	•				
206	7,4	15,0	137,0	0,86	76	•	•				
207	7,4	15,0	137,0	0,86	76	•	•				
275	7,4	15,0	137,0	0,86	76	•	•				
276	7,4	15,0	137,0	0,86	76	•	•				
277	7,4	15,0	137,0	0,86	76	•	•				

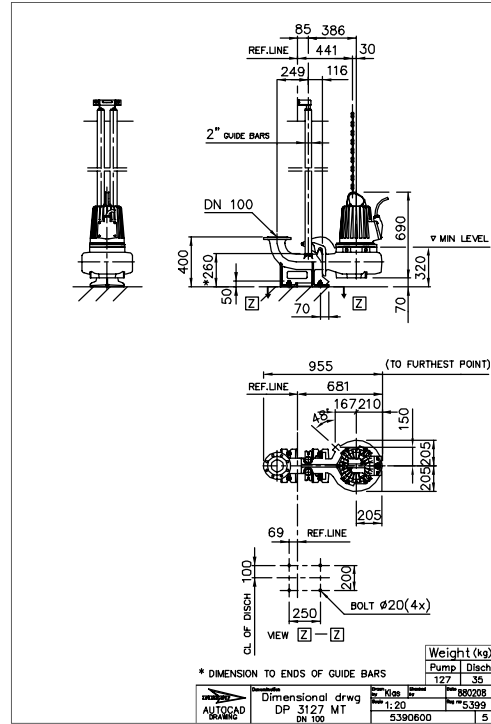


Dimensional drawing

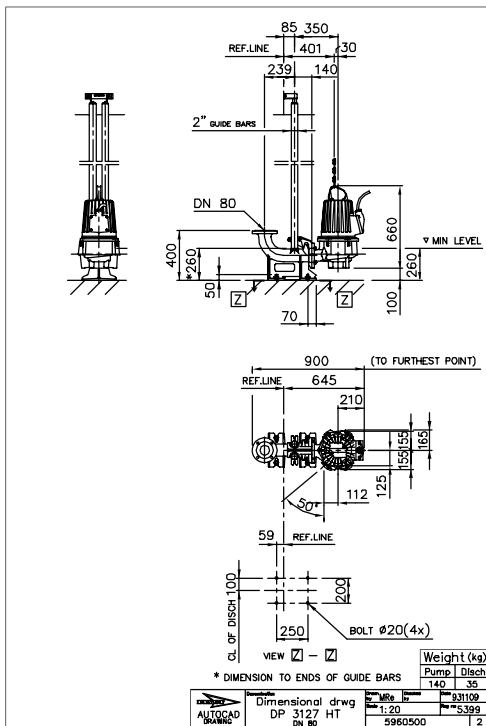
All drawings are available as Acrobat documents (.pdf) and AutoCad drawings (.dwg). Download the drawings from www.flygt.com or contact your ITT Flygt representative for more information.

All dimensions are in mm.

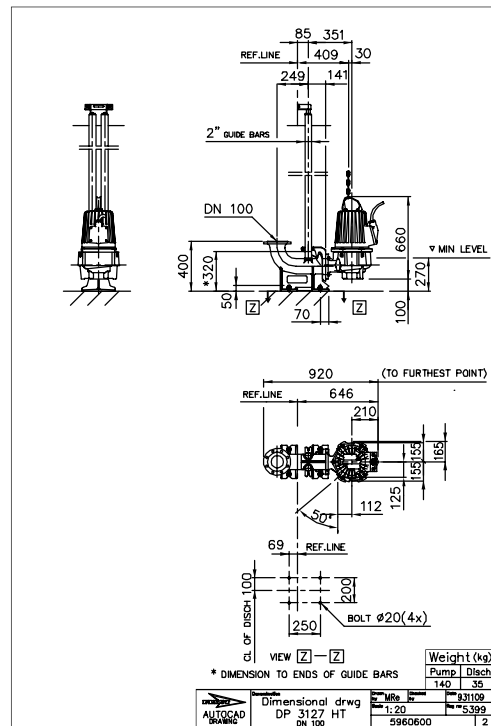
MT, P-installation



HT, P-installation



HT, P-installation





N 3085

Product

Submersible pump for pumping clean water, surface water and waste water containing solids or long-fibred material.

Denomination

Product code	3085.183
Installation	P, S, T, Z
Impeller characteristic	MT

Process data

Liquid temperature	max +40 °C
Depth of immersion	max 20 m
The pH of the pumped liquid	pH 5,5-14
Liquid density	max. 1100 kg/m ³

Motor data

Frequency	50 Hz
Insulation class	H (+180 °C)
Voltage variation	
- continuously running	max ± 5%
- intermittent running	max ± 10%
Voltage imbalance between phases	max 2%
No. of starts/hour	max 30

Cable

Direct-on-line start

SUBCAB [®]	4G1,5 mm ²
	4G1,5+2x1,5 mm ²
	4G2,5 mm ²
	4G2,5+2x1,5 mm ²

Y/D start

SUBCAB [®]	7G2,5 mm ²
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Monitoring equipment

Thermal contacts opening temp. 125 °C

Material

Impeller	Cast iron
Pump housing	Cast iron
Stator housing	Cast iron
Shaft	Stainless steel
O-rings	Nitrile rubber

Mechanical face seals

Alternative	Inner seal	Outer seal
1	Carbon/ Aluminium oxide	Corrosion resistant cemented carbide/ Corrosion resistant cemented carbide
2	Carbon/ Aluminium oxide	Silicon carbide/ Silicon carbide

Surface Treatment

All cast parts are primed with a water-borne primer. The finishing coat is a high-solid two pack paint.

Weight

See dimensional drawing.

Option

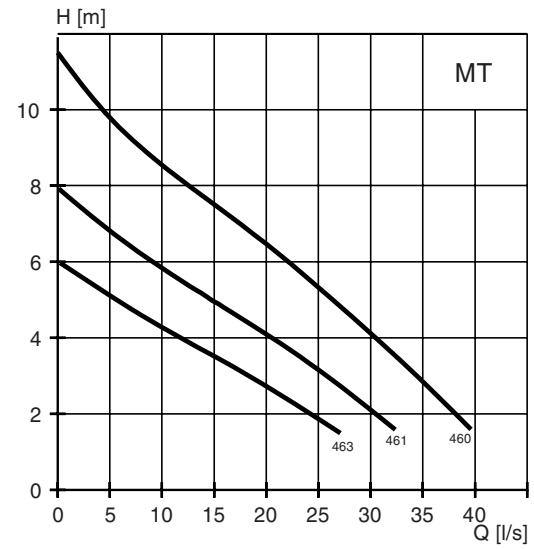
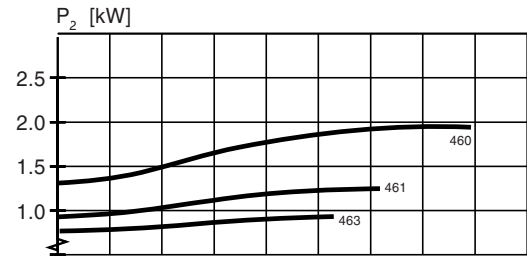
3085.092	Ex. proof design
3085.980	Industrial design
Warm liquid version on request	
Leakage sensor in stator housing	FLS
Leakage sensor in oil housing	CLS
Surface treatment	Epoxy treatment
Other cables	
Zinc anodes	

Accessories

Discharge connections, adapters, hose connections and other mechanical accessories.
Electrical accessories such as pump controller, control panels, starters.
See separate booklet or www.flygt.com, for further information.

MT-Motor rating and performance curve

Curve/Impeller No	Rated power, kW	Rated current, A	Starting current, A	Power factor cos φ	Ex proof version available	Installation			
						P	S	T	Z
400 V, 50 Hz, 3 ~, 1415 r/min									
463	1,0	2,6	13	0,77	•			•	•
400 V, 50 Hz, 3 ~, 1385 r/min									
461	1,3	3,2	13	0,83	•	•	•		
463	1,3	3,2	13	0,83	•	•	•		
400 V, 50 Hz, 3 ~, 1430 r/min									
461	1,4	3,5	22	0,75	•			•	•
463	1,4	3,5	22	0,75	•			•	•
400 V, 50 Hz, 3 ~, 1395 r/min									
460	2,0	4,6	22	0,83	•	•	•		
461	2,0	4,6	22	0,83	•	•	•		
463	2,0	4,6	22	0,83	•	•	•		
230 V, 50 Hz, 1 ~, 1425 r/min									
461	1,5	9,4	44	0,90		•	•		
463	1,5	9,4	44	0,90		•	•		



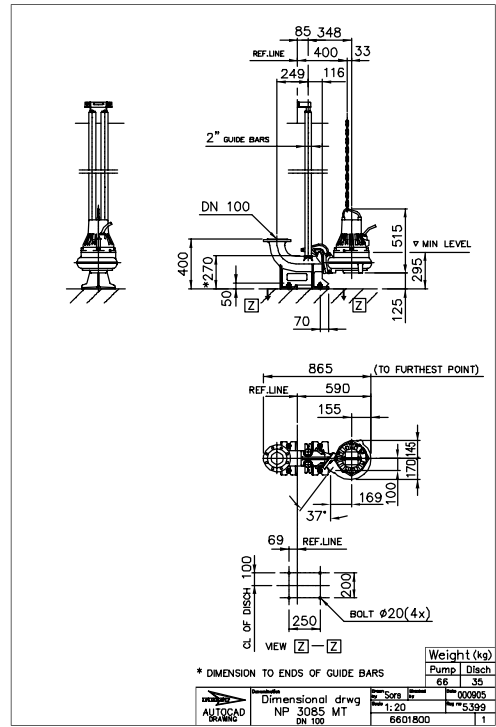
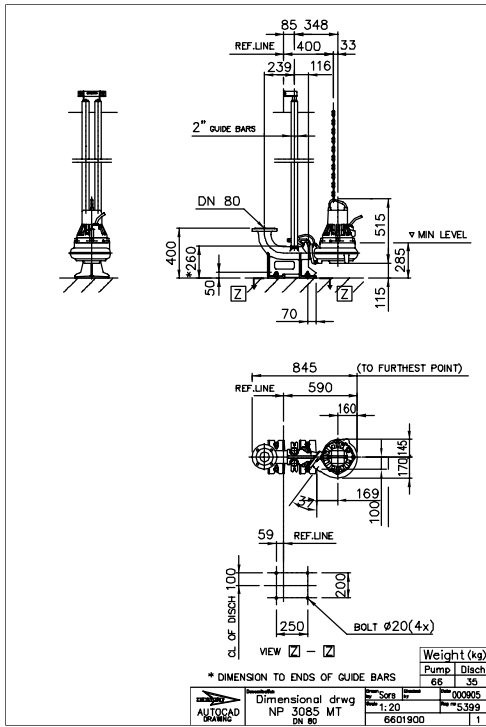
Dimensional drawing

All drawings are available as Acrobat documents (.pdf) and AutoCad drawings (.dwg). Download the drawings from www.flygt.com or contact your ITT Flygt representative for more information.

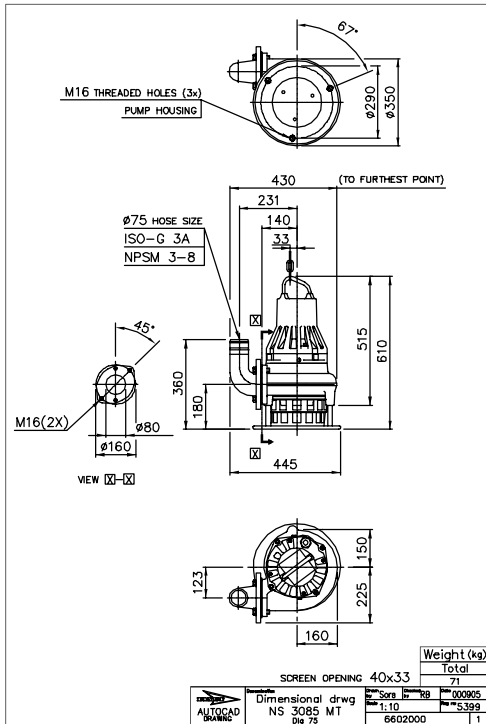
All dimensions are in mm.

MT, P-installation

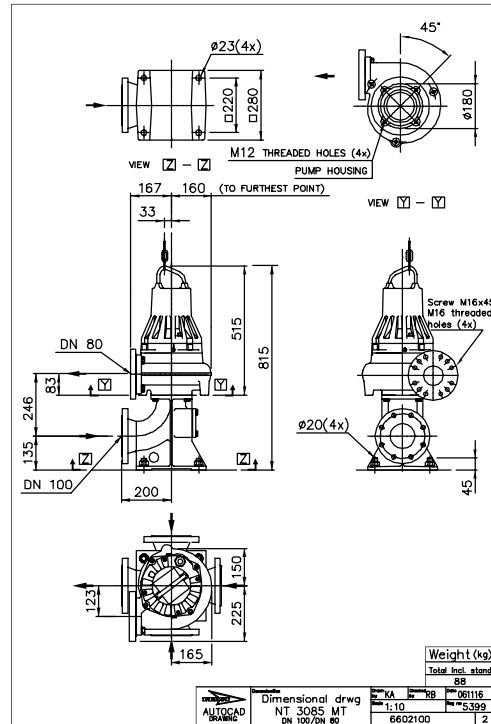
MT, P-installation



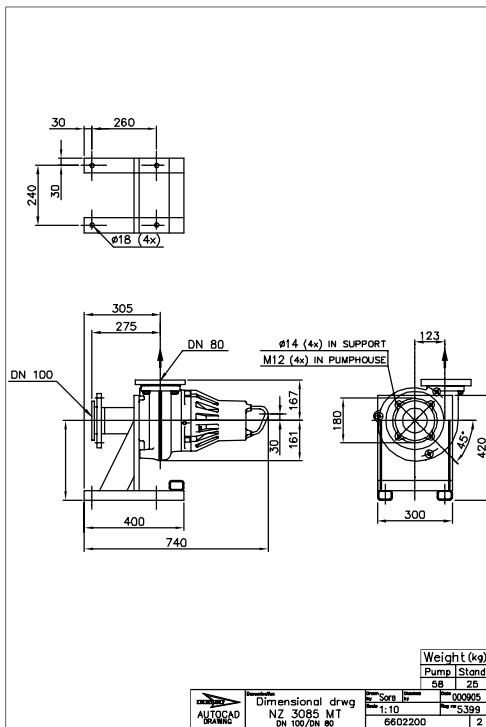
MT, S-installation



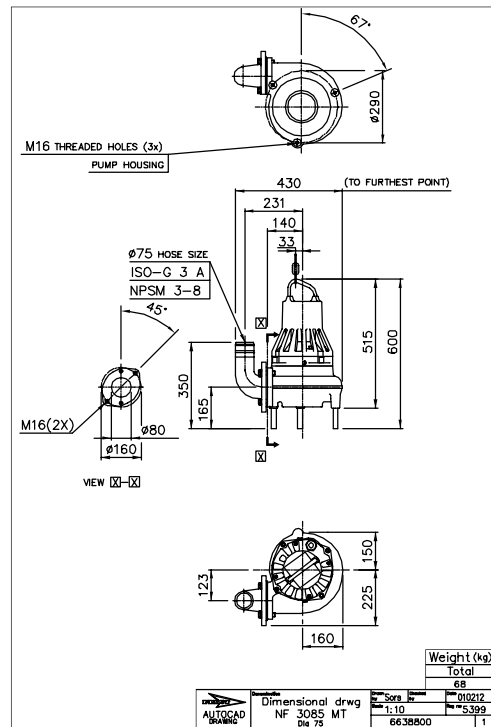
MT, T-installation



MT, Z-installation



MT, F-installation





N 3102

Product

Submersible pump for pumping clean water, surface water and waste water containing solids or long-fibred material.

Denomination

Product code	3102.181
Installation	P, S, T, Z
Impeller characteristics	LT, MT, SH

Process data

Liquid temperature	max +40 °C
Depth of immersion	max 20 m
The pH of the pumped liquid	pH 5,5-14
Liquid density	max. 1100 kg/m ³

Motor data

Frequency	50 Hz
Insulation class	H (+180 °C)
Voltage variation	
- continuously running	max ± 5%
- intermittent running	max ± 10%
Voltage imbalance between phases	max 2%
No. of starts/hour	max 30

Cable

Direct-on-line start

SUBCAB®	4G2,5 mm ²
	4G2,5+2x1,5 mm ²

Y/D start

SUBCAB®	7G2,5 mm ²
	7G2,5+2x1,5 mm ²

Monitoring equipment

Thermal contacts opening temp. 125 °C

Material

Impeller	Cast iron
Pump housing	Cast iron
Stator housing	Cast iron
Shaft	Stainless steel
O-rings	Nitrile rubber

Mechanical face seals

Alternative	Inner seal	Outer seal
1	Aluminium oxide/ Corrosion resistant cemented carbide	Aluminium oxide/ Corrosion resistant cemented carbide
2	Aluminium oxide/ Corrosion resistant cemented carbide	Corrosion resistant cemented carbide/ Corrosion resistant cemented carbide
3	Corrosion resistant cemented carbide/ Corrosion resistant cemented carbide	Aluminium oxide/ Corrosion resistant cemented carbide
4	Corrosion resistant cemented carbide/ Corrosion resistant cemented carbide	Corrosion resistant cemented carbide/ Corrosion resistant cemented carbide

Surface Treatment

All cast parts are primed with a water-borne primer. The finishing coat is a high-solid two pack paint.

Weight

See dimensional drawing.

Option

3102.090	Ex. proof design
3102.980	Industrial design
Warm liquid version on request	
Leakage sensor in stator housing	FLS
Leakage sensor in oil housing	CLS
Surface treatment	Epoxy treatment
Other cables	
Zinc anodes	

Accessories

Discharge connections, adapters, hose connections and other mechanical accessories.

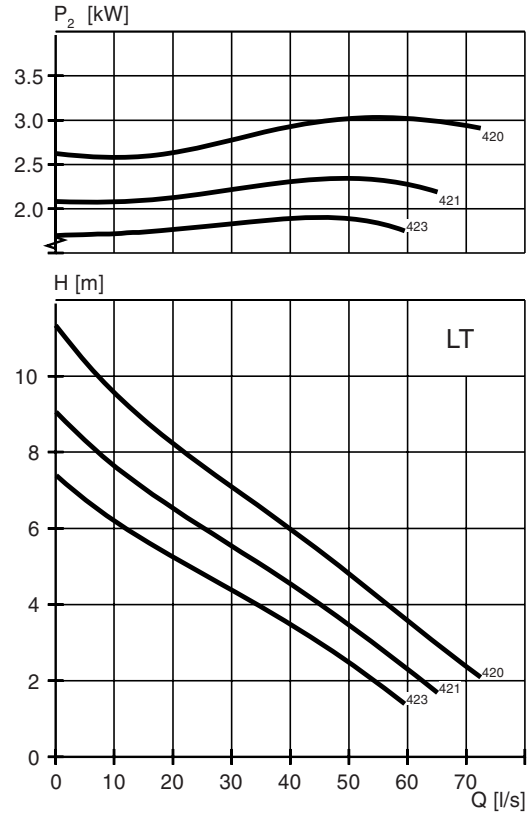
Electrical accessories such as pump controller, control panels, starters.

See separate booklet or www.flygt.com, for further information.

LT-Motor rating and performance curve

Curve/Impeller No	Rated power, kW	Rated current, A	Starting current, A	Power factor cos φ	Ex proof version available	Installation				
						P	S	T	Z	
400 V, 50 Hz, 3 ~, 1460 r/min										
421	2,4	5,8	39,0	0,71	•			•	•	
423	2,4	5,8	39,0	0,71	•			•	•	
400 V, 50 Hz, 3 ~, 1450 r/min										
420	3,1	6,9	39,0	0,77	•	•	•			
421	3,1	6,9	39,0	0,77	•	•	•			
423	3,1	6,9	39,0	0,77	•	•	•			

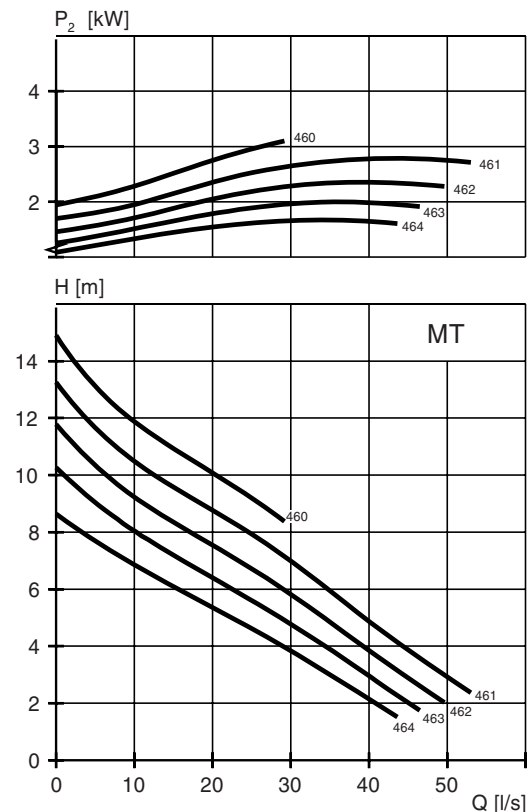
Y/D starting current is approximately 1/3 of D starting current.



MT-Motor rating and performance curve

Curve/Impeller No	Rated power, kW	Rated current, A	Starting current, A	Power factor cos φ	Ex proof version available	Installation				
						P	S	T	Z	
400 V, 50 Hz, 3 ~, 1460 r/min										
462	2,4	5,8	39,0	0,71	•			•	•	
463	2,4	5,8	39,0	0,71	•			•	•	
464	2,4	5,8	39,0	0,71	•			•	•	
400 V, 50 Hz, 3 ~, 1450 r/min										
460	3,1	6,9	39,0	0,77	•	•	•			
461	3,1	6,9	39,0	0,77	•	•	•			
462	3,1	6,9	39,0	0,77	•	•	•			
463	3,1	6,9	39,0	0,77	•	•	•			
464	3,1	6,9	39,0	0,77	•	•	•			

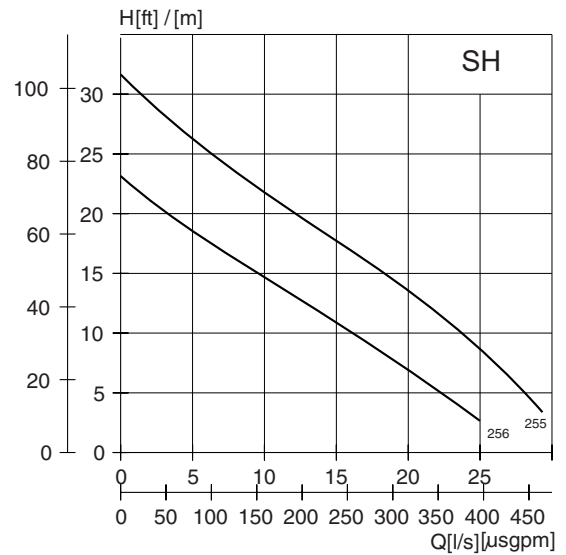
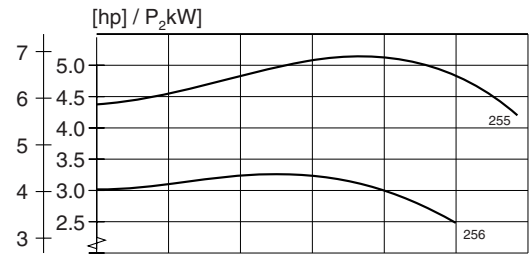
Y/D starting current is approximately 1/3 of D starting current.



SH-Motor rating and performance curve

Curve/Impeller No	Rated power, kW	Rated current, A	Starting current, A	Power factor cos φ	Ex proof version available	Installation			
						P	S	T	Z
400 V, 50 Hz, 3 ~, 2875 r/min, 2 poles									
255	4.2	8.2	64	0,91	•	•	•		
256	4.2	8.2	64	0,91	•	•	•		

Y/D starting current is approximately 1/3 of D starting current.



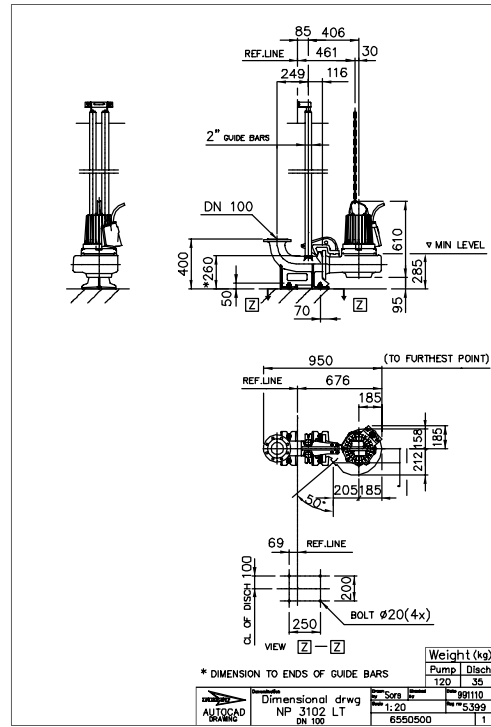
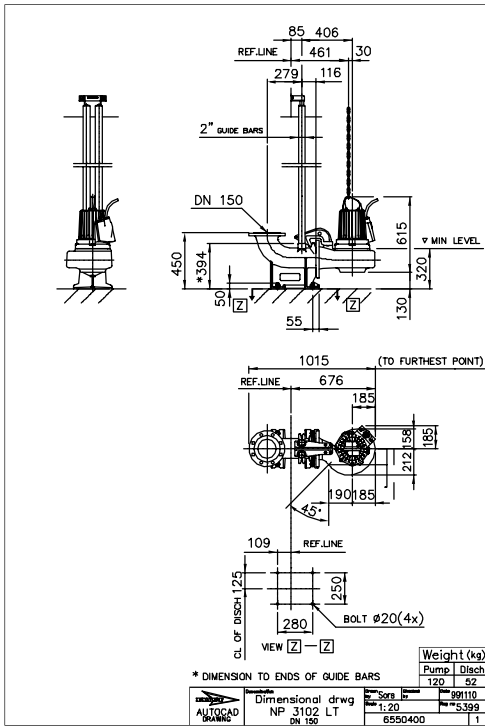
Dimensional drawing

All drawings are available as Acrobat documents (.pdf) and AutoCad drawings (.dwg). Download the drawings from www.flygt.com or contact your ITT Flygt representative for more information.

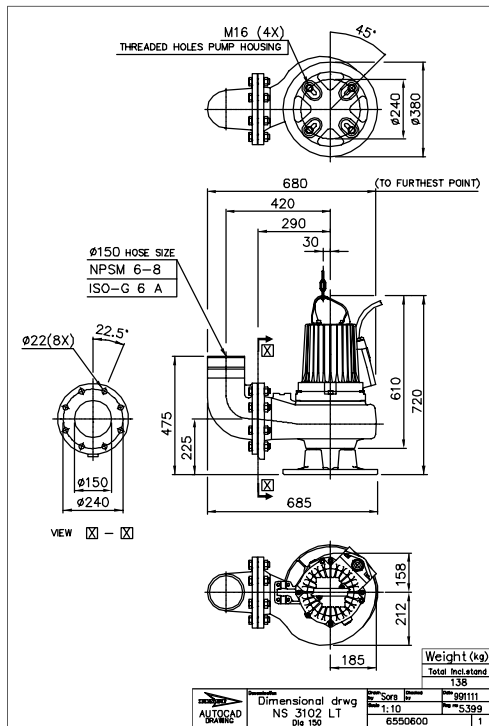
All dimensions are in mm.

LT, P-installation

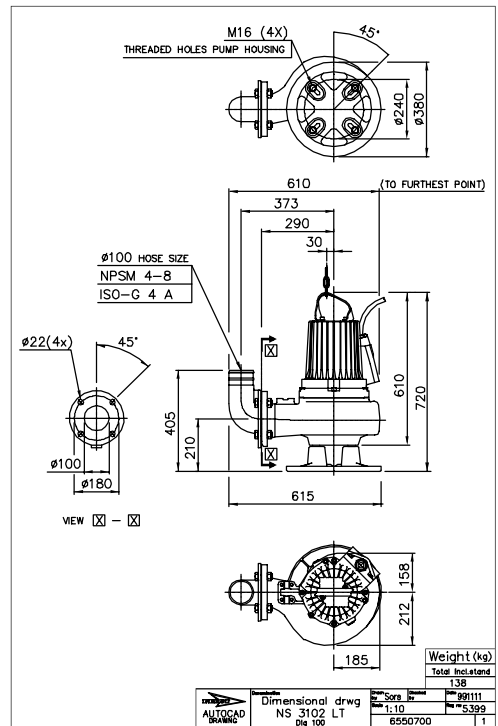
LT, P-installation



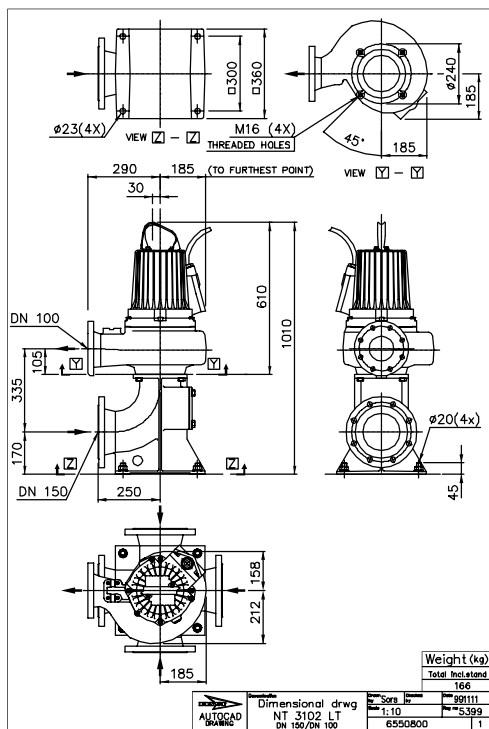
LT, S-installation



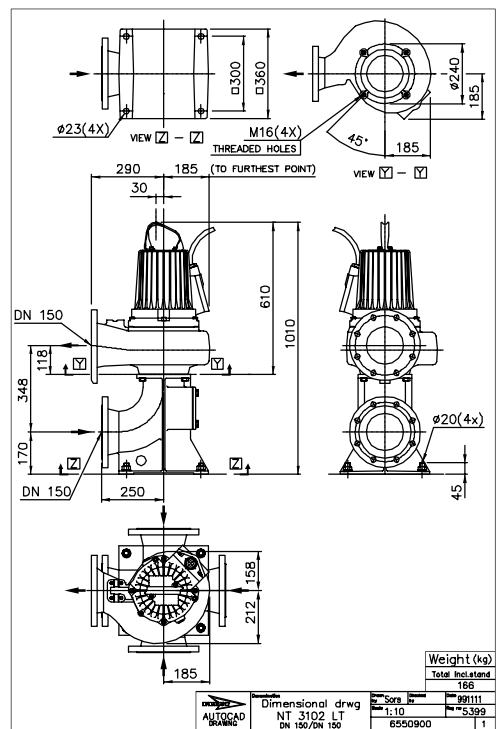
LT, S-installation



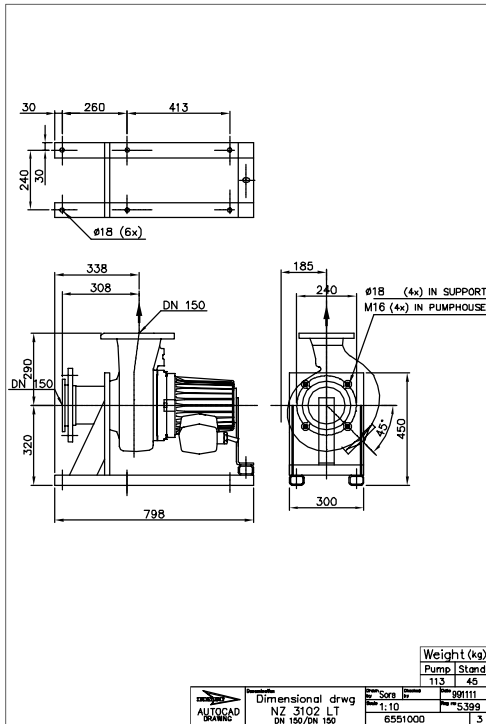
LT, T-installation



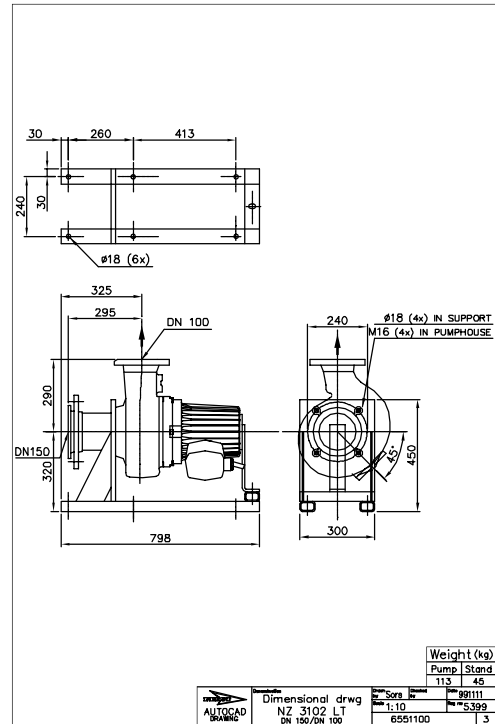
LT, T-installation



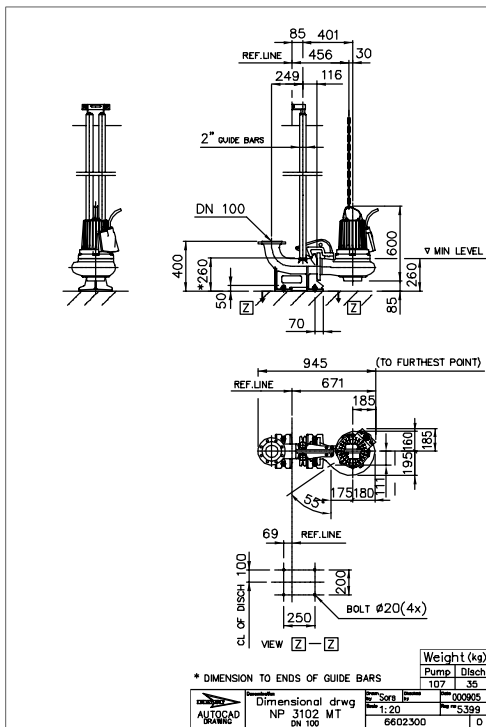
LT, Z-installation



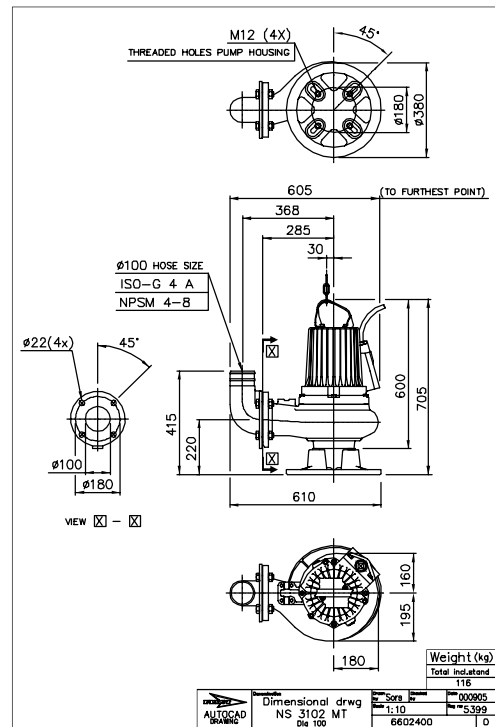
LT, Z-installation



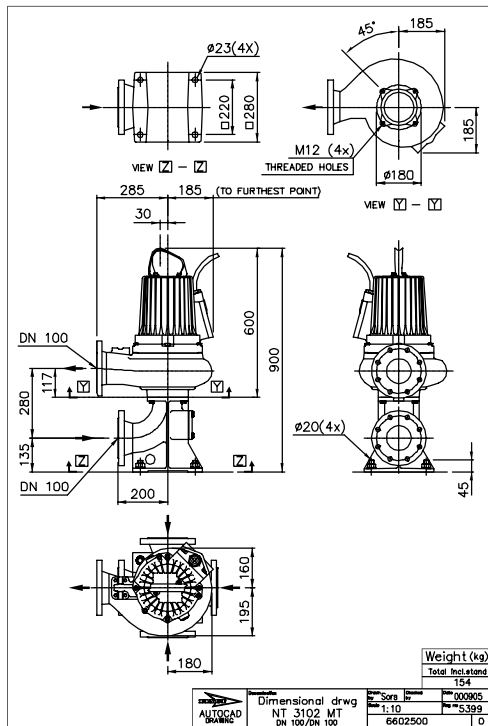
MT, P-installation



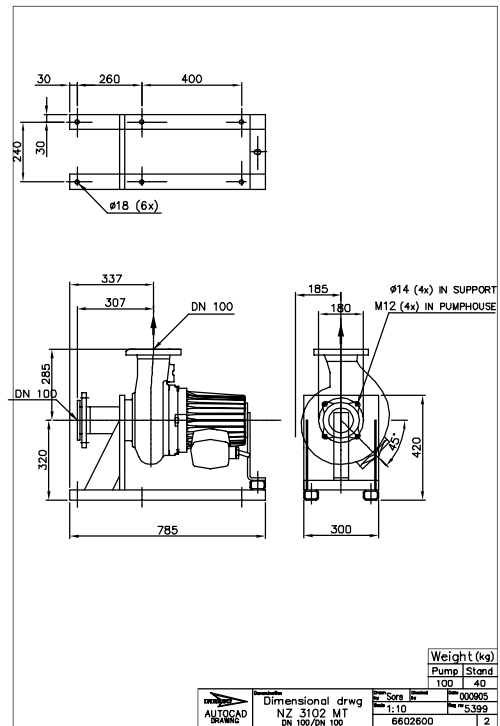
MT, S-installation



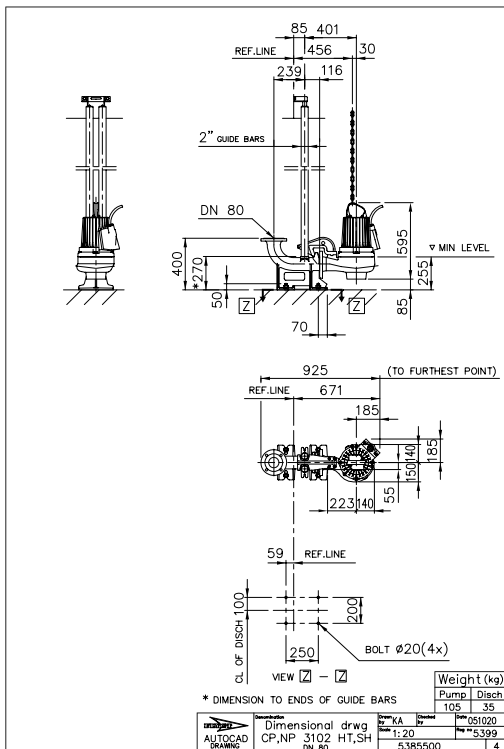
MT, T-installation



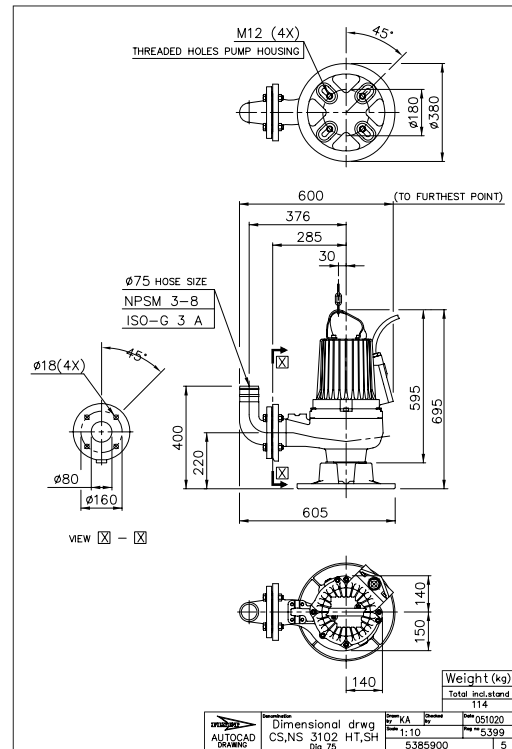
MT, Z-installation



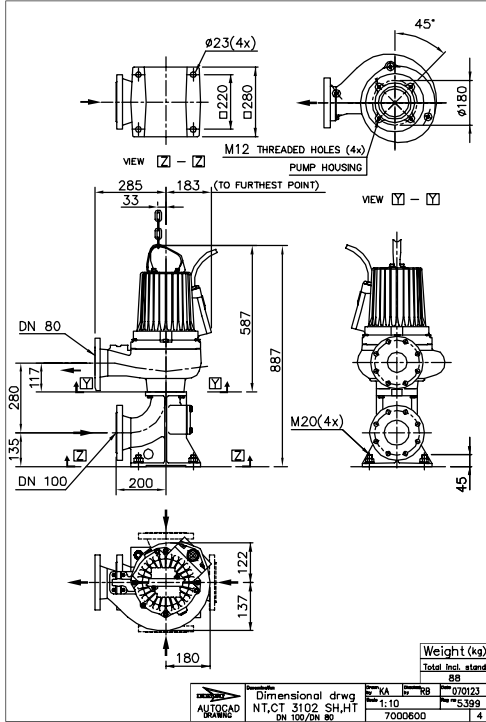
HT- SH, P-installation



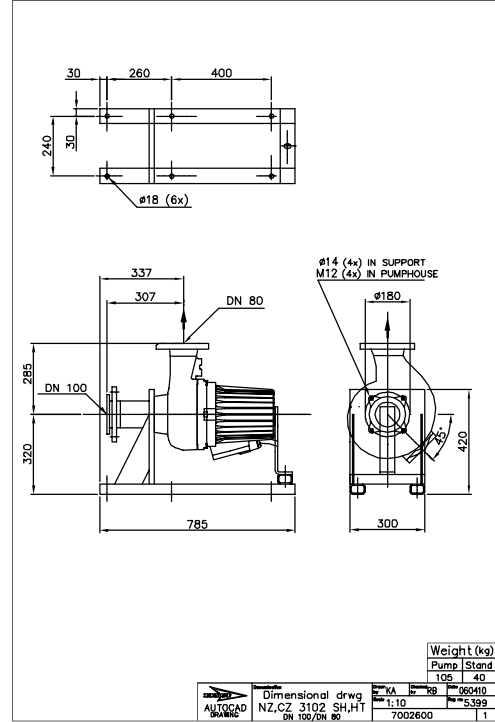
HT- SH, S-installation



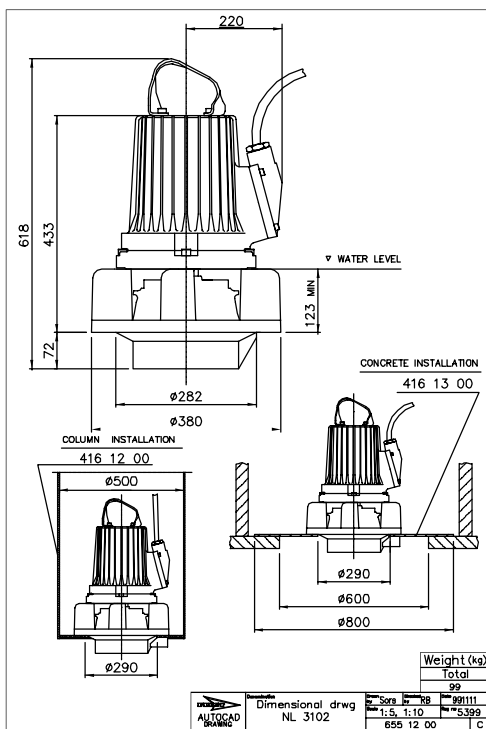
SH, T-installation



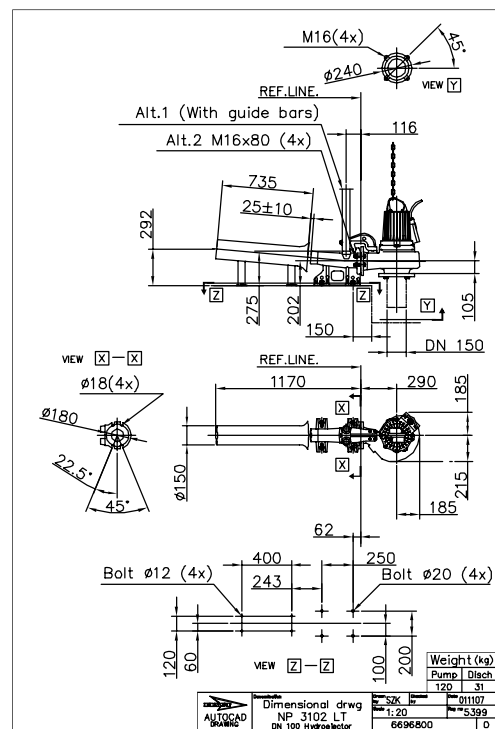
HT-SH, Z-installation



L-installation



LT, P-installation





N 3127

Product

Submersible pump for pumping clean water, surface water and waste water containing solids or long-fibred material.

Denomination

Product code	3127.181
Installation	P, S, T, Z
Impeller characteristics	LT, MT, HT

Process data

Liquid temperature-standard	max +40 °C
Depth of immersion	max 20 m
The pH of the pumped liquid	pH 5,5-14
Liquid density	max. 1100 kg/m ³

Motor data

Frequency	50 Hz
Insulation class	H (+180 °C)
Voltage variation	
- continuously running	max ± 5%
- intermittent running	max ± 10%
Voltage imbalance between phases	max 2%
No. of starts/hour	max 30

Cable

Direct-on-line start

SUBCAB®	4G2,5 mm ²
	4G2,5+2x1,5 mm ²
	4G4 mm ²
	4G4+2x1,5 mm ²

Y/D start

SUBCAB®	7G2,5 mm ²
	7G2,5+2x1,5 mm ²
	7G4+2x1,5 mm ²

Monitoring equipment

Thermal contacts opening temp.	125 °C
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Material

Impeller	Cast iron
Pump housing	Cast iron
Stator housing	Cast iron
Shaft	Stainless steel
O-rings	Nitrile rubber

Mechanical face seals

Alternative	Inner seal	Outer seal
1	Carbon/ Aluminium oxide	Corrosion resistant cemented carbide/ Corrosion resistant cemented carbide
2	Corrosion resistant cemented carbide/ Corrosion resistant cemented carbide	Silicone carbide/ Silicone carbide
3	Corrosion resistant cemented carbide/ Corrosion resistant cemented carbide	Corrosion resistant cemented carbide/ Corrosion resistant cemented carbide

Surface Treatment

All cast parts are primed with a water-borne primer. The finishing coat is a high-solid two pack paint.

Weight

See dimensional drawing.

Option

3127.090	Ex. proof design
3127.980	Industrial design
Warm liquid version on request	
Leakage sensor in stator housing	FLS
Leakage sensor in oil housing	CLS
Surface treatment	Epoxy treatment
Other cables	
Zinc anodes	

Accessories

Discharge connections, adapters, hose connections and other mechanical accessories.

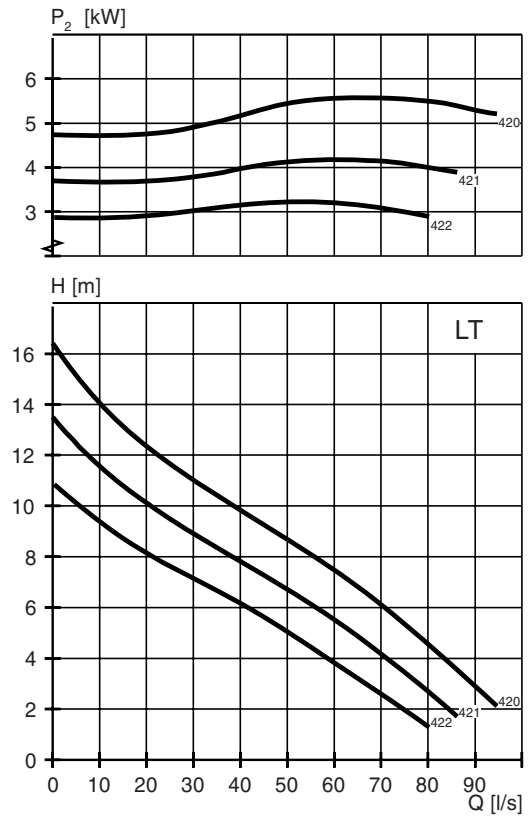
Electrical accessories such as pump controller, control panels, starters, monitoring relays, cables.

See separate booklet or www.flygt.com, for further information.

LT-Motor rating and performance curve

Curve/Impeller No	Rated power, kW	Rated current, A	Starting current, A	Power factor cos φ	Ex proof version available	Installation				
						P	S	T	Z	
400 V, 50 Hz, 3 ~, 1455 r/min										
421	4,0	8,3	56	0,84	•			•	•	
422	4,0	8,3	56	0,84	•			•	•	
400 V, 50 Hz, 3 ~, 1445 r/min										
421	4,7	9,6	56	0,86	•	•	•			
422	4,7	9,6	56	0,86	•	•	•			
400 V, 50 Hz, 3 ~, 1460 r/min										
421	4,7	10	77	0,81	•			•	•	
422	4,7	10	77	0,81	•			•	•	
400 V, 50 Hz, 3 ~, 1450 r/min										
420	5,9	12	77	0,84	•	•	•			
421	5,9	12	77	0,84	•	•	•			
422	5,9	12	77	0,84	•	•	•			

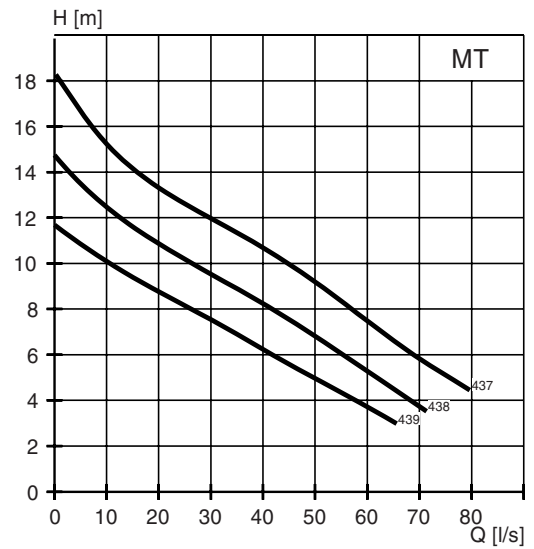
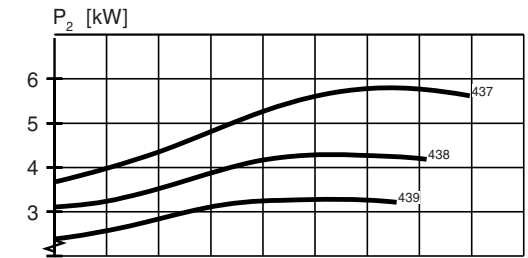
Y/D starting current is approximately 1/3 of D starting current.



MT-Motor rating and performance curve

Curve/Impeller No	Rated power, kW	Rated current, A	Starting current, A	Power factor cos φ	Ex proof version available	Installation			
						P	S	T	Z
400 V, 50 Hz, 3 ~, 1455 r/min									
439	4,0	8,3	56	0,84	•			•	•
400 V, 50 Hz, 3 ~, 1445 r/min									
438	4,7	9,6	56	0,86	•	•	•		
439	4,7	9,6	56	0,86	•	•	•		
400 V, 50 Hz, 3 ~, 1460 r/min									
438	4,7	10	77	0,81	•			•	•
439	4,7	10	77	0,81	•			•	•
400 V, 50 Hz, 3 ~, 1450 r/min									
437	5,9	12	77	0,84	•	•	•		
438	5,9	12	77	0,84	•	•	•		
439	5,9	12	77	0,84	•	•	•		

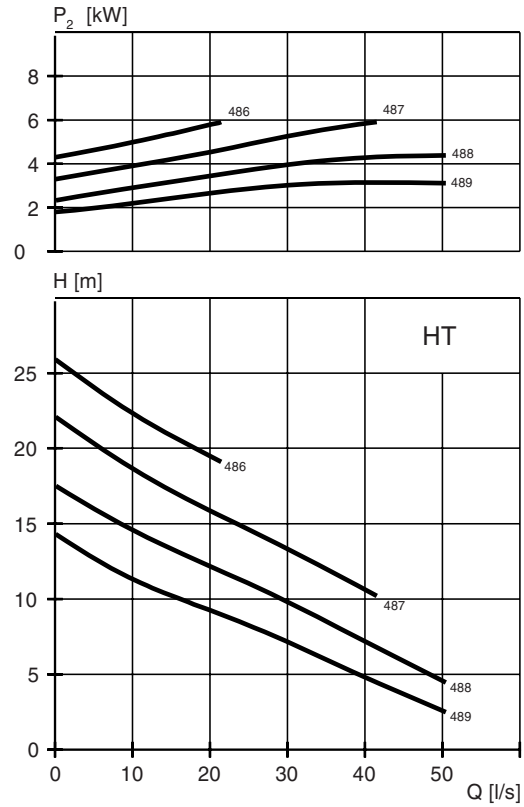
Y/D starting current is approximately 1/3 of D starting current.



HT-Motor rating and performance curve

Curve/Impeller No	Rated power, kW	Rated current, A	Starting current, A	Power factor cos φ	Ex proof version available	Installation			
						P	S	T	Z
400 V, 50 Hz, 3 ~, 1455 r/min									
488	4,0	8,3	56	0,84	•			•	•
489	4,0	8,3	56	0,84	•			•	•
400 V, 50 Hz, 3 ~, 1445 r/min									
488	4,7	9,6	56	0,86	•	•	•		
489	4,7	9,6	56	0,86	•	•	•		
400 V, 50 Hz, 3 ~, 1460 r/min									
488	4,7	10	77	0,81	•			•	•
489	4,7	10	77	0,81	•			•	•
400 V, 50 Hz, 3 ~, 1450 r/min									
486	5,9	12	77	0,84	•	•	•		
487	5,9	12	77	0,84	•	•	•		
488	5,9	12	77	0,84	•	•	•		
489	5,9	12	77	0,84	•	•	•		

Y/D starting current is approximately 1/3 of D starting current.

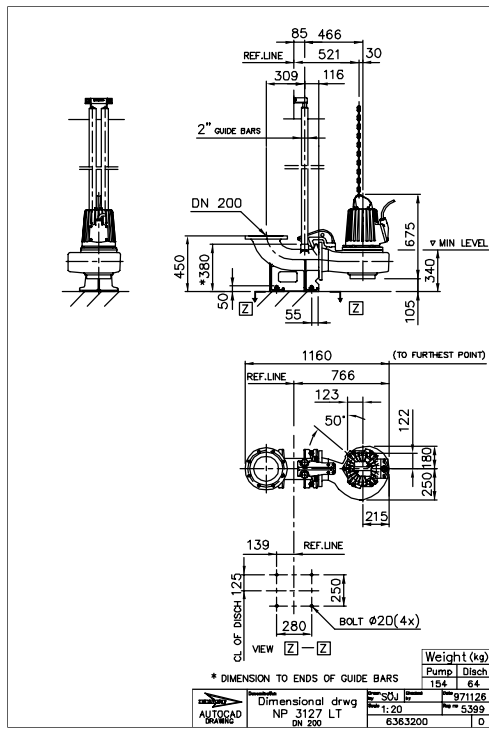


Dimensional drawing

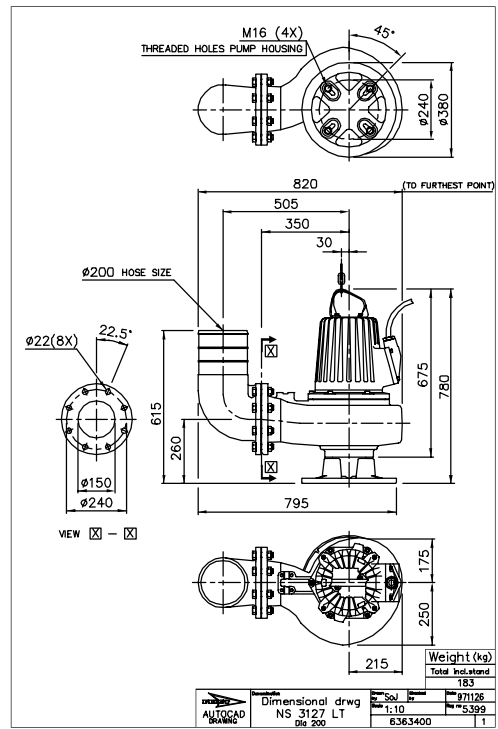
All drawings are available as Acrobat documents (.pdf) and AutoCad drawings (.dwg). Download the drawings from www.flygt.com or contact your ITT Flygt representative for more information.

All dimensions are in mm.

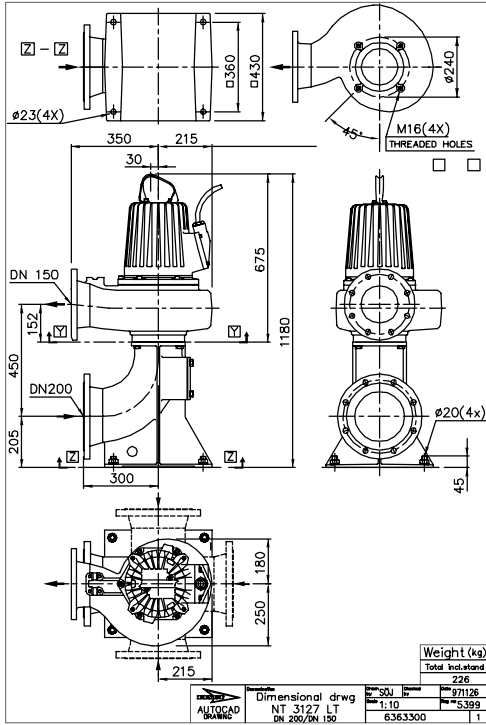
LT, P-installation



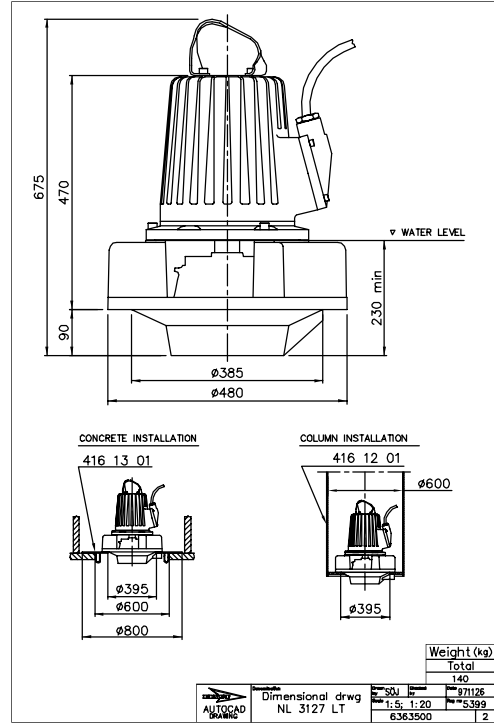
LT, S-installation



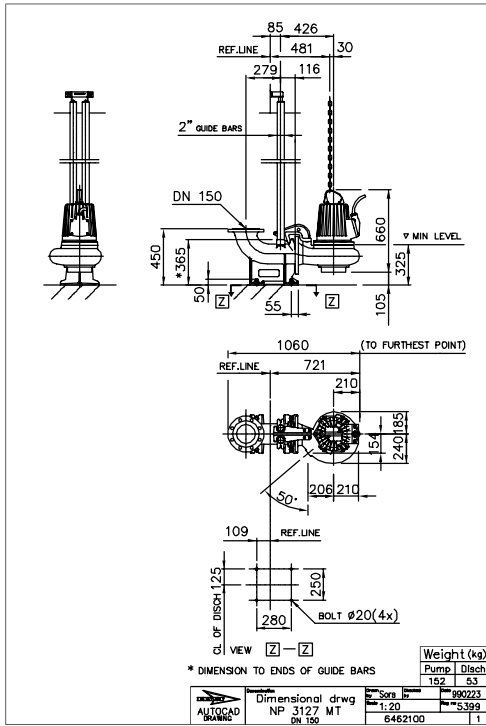
LT, T-installation



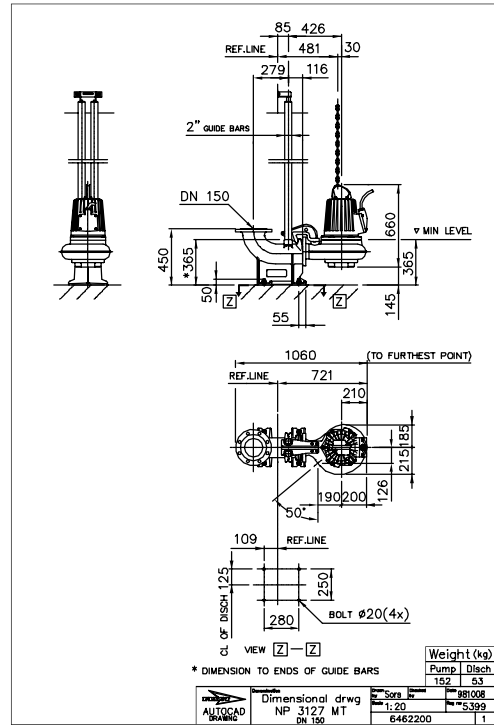
LT, L-installation



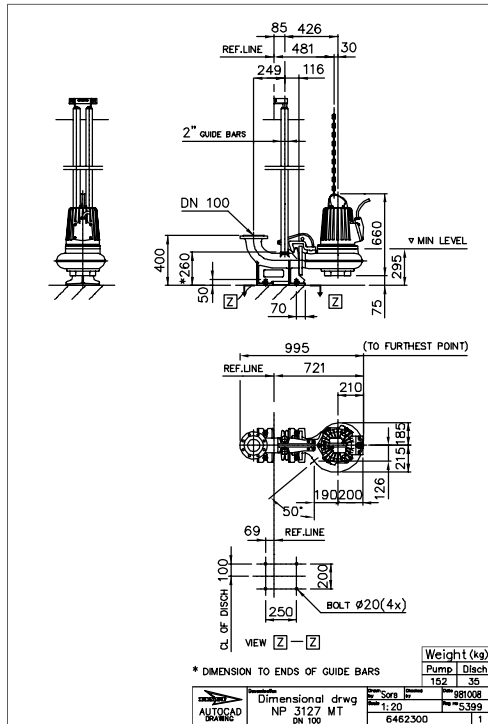
MT, P-installation



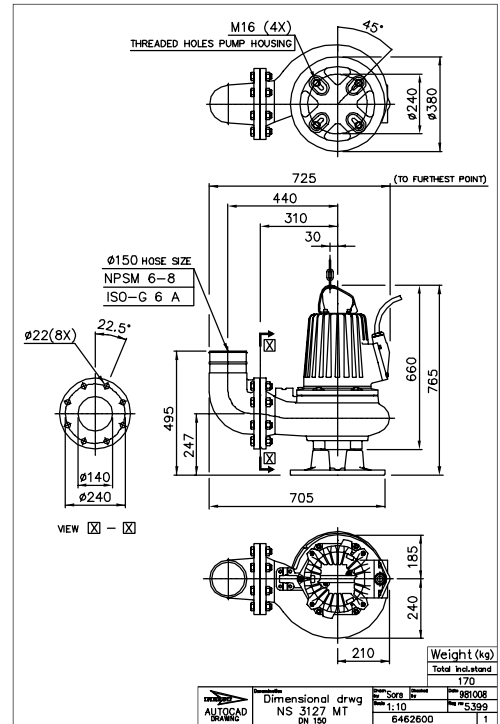
MT, P-installation



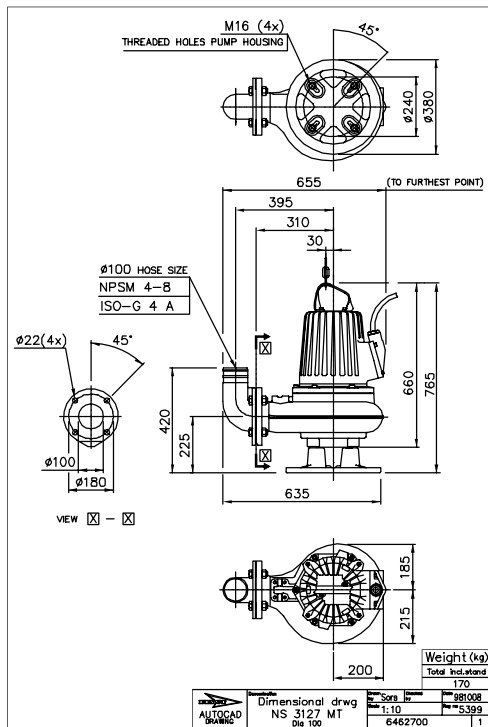
MT, P-installation



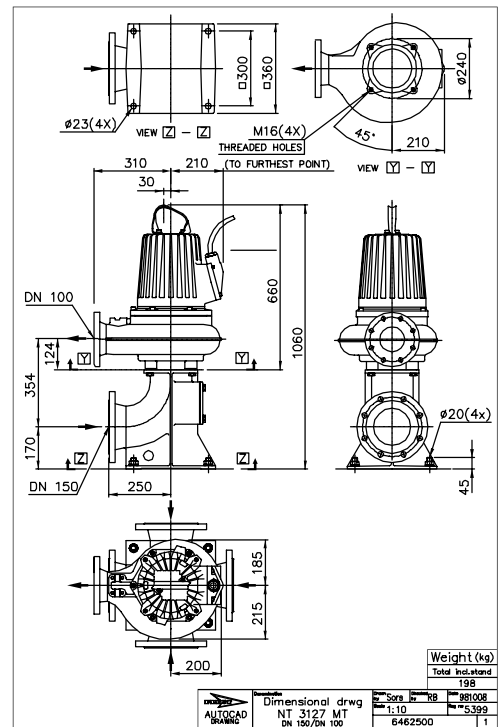
MT, S-installation



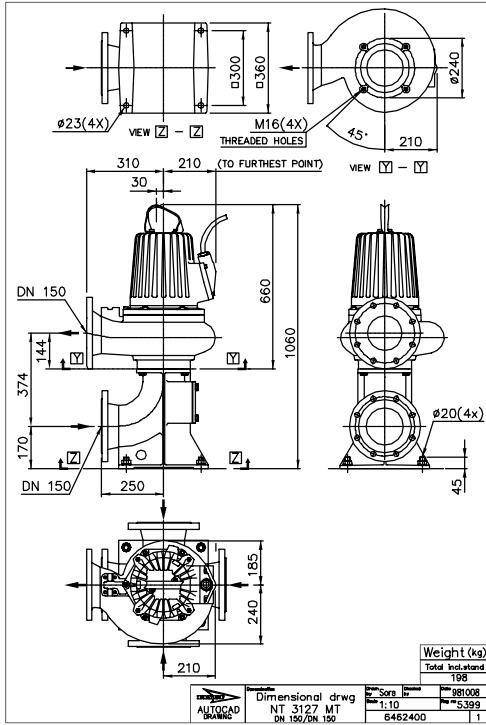
MT, S-installation



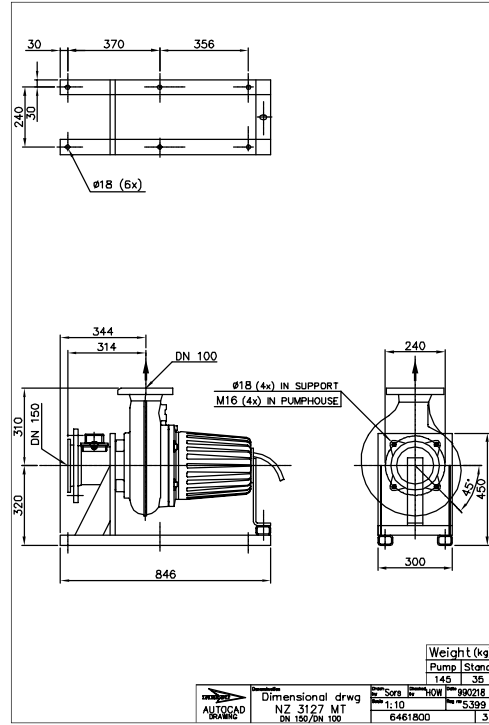
MT, T-installation



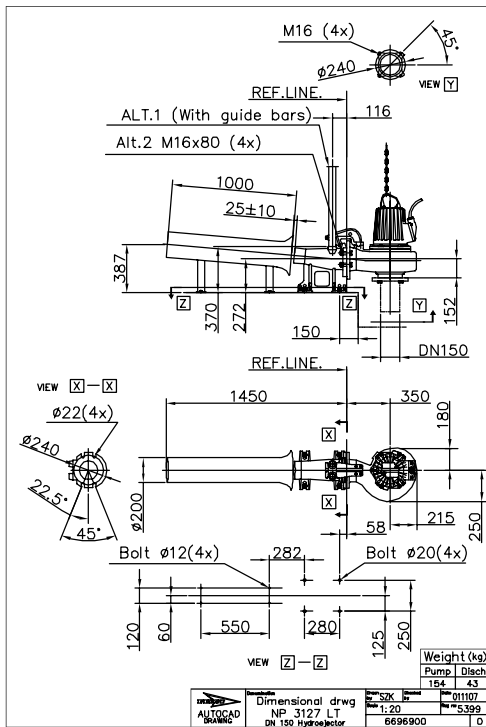
MT, T-installation



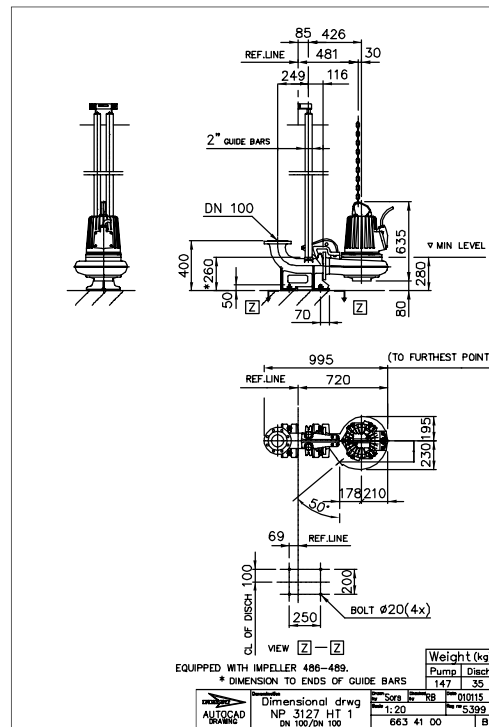
MT, Z-installation



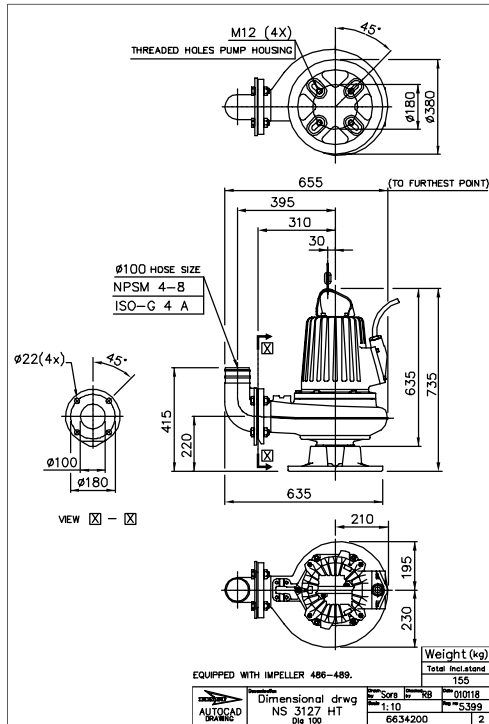
LT, P-installation



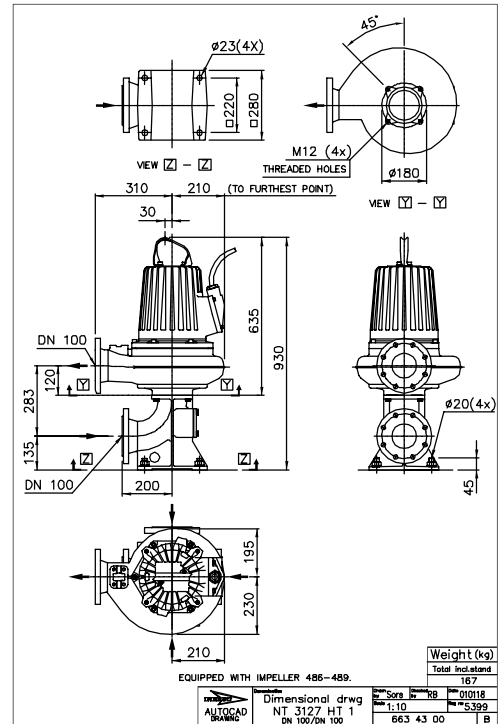
HT, P-installation



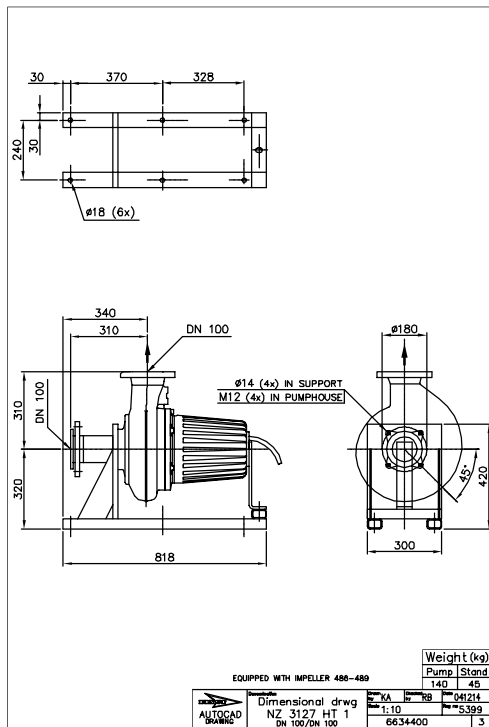
HT, S-installation



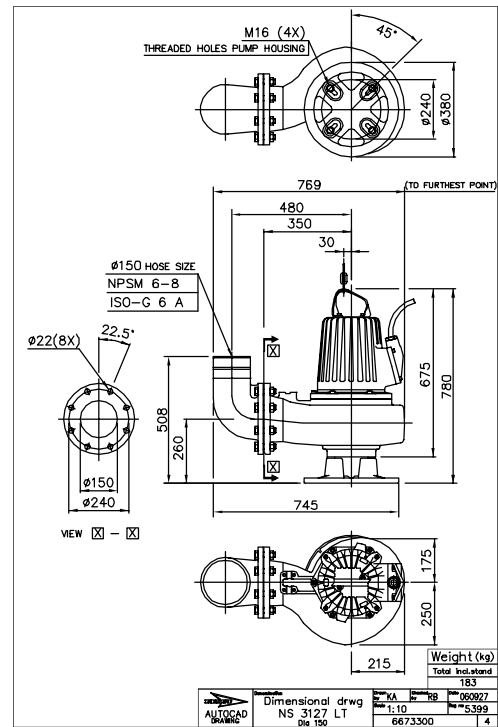
HT, T-installation



HT, Z-installation



LT, S-installation





M 3068

Product

Submersible pump for pumping waste water containing solids that needs to be grinded. The impeller is equipped with a grinder device.

Denomination

Product code	3068.170
Installation	F, P
Impeller characteristic	HT

Process data

Liquid temperature	max +40 °C
Depth of immersion	max 20 m
pH of liquid	pH 5,5-14
Liquid density	max. 1100 kg/m ³

Motor data

Frequency	50 Hz
Insulation class	F (+155 °C)
Voltage variation	
- continuously running	max ± 5%
- intermittent running	max ± 10%
Voltage imbalance between phases	max 2%
No. of starts/hour	max 15

Cable

Direct-on-line start

SUBCAB [®]	4G2,5 mm ²
	4G2,5+2x1,5 mm ²

Y/D start

SUBCAB [®]	7G2,5 mm ²
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Monitoring equipment

Thermal contacts opening temperature	125 °C
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Material

Impeller	Cast iron
Pump housing	Cast iron
Stator housing	Cast iron
Shaft	Magnetic stainless steel
O-rings	Nitrile rubber

Mechanical face seals

Alternative	Inner seal	Outer seal
1	Aluminium oxide/ Aluminium oxide	Corrosion resistant tungsten carbide/ Corrosion resistant tungsten carbide

Surface Treatment

All cast parts are coated with a primer. The finish coat is a synthetic varnish.

Weight

See dimensional drawing.

Option

3068.890	Ex. proof version
Leakage sensor in stator housing	FLS
Other cables	
Surface treatment	Epoxy treatment
Zinc anodes	

Accessories

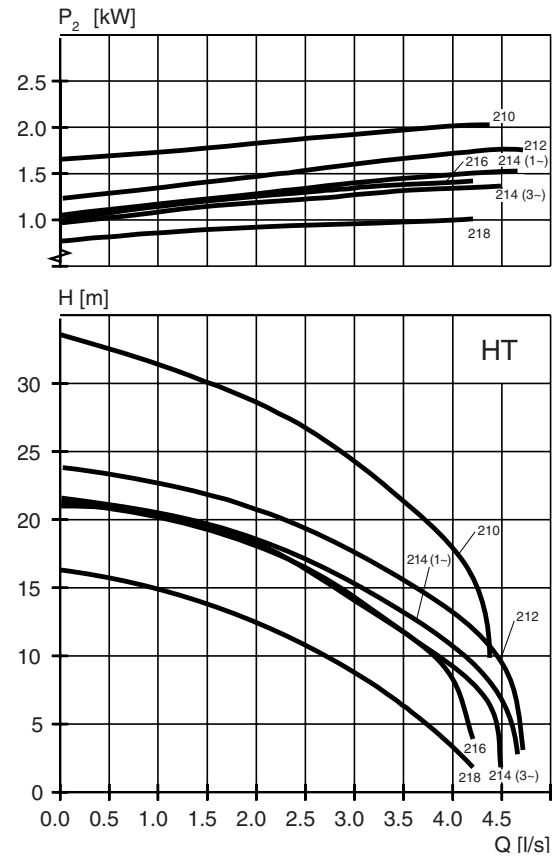
Discharge connections, adapters, hose connections and other mechanical accessories.

Electrical accessories such as pump controller, control panels, starters, monitoring relays.

See separate booklet or www.flygt.com, for further information.

HT - Motor rating and performance curve

Curve/Impeller No	Rated power, kW	Rated current, A	Starting current, A	Power factor cos φ	Ex proof version available	Installation				
						F	P			
400 V, 50 Hz, 3 ~, 2695 r/min										
212	1,7	3,8	17	0,87	•	•	•			
214	1,7	3,8	17	0,87	•	•	•			
400 V, 50 Hz, 3 ~, 2700 r/min										
210	2,4	5,3	24	0,87	•	•	•			
212	2,4	5,3	24	0,87	•	•	•			
216	2,4	5,3	24	0,87	•	•	•			
230 V, 50 Hz, 1 ~, 2730 r/min										
214	1,5	8,9	28	0,99	•	•	•			
218	1,5	8,9	28	0,99		•	•			

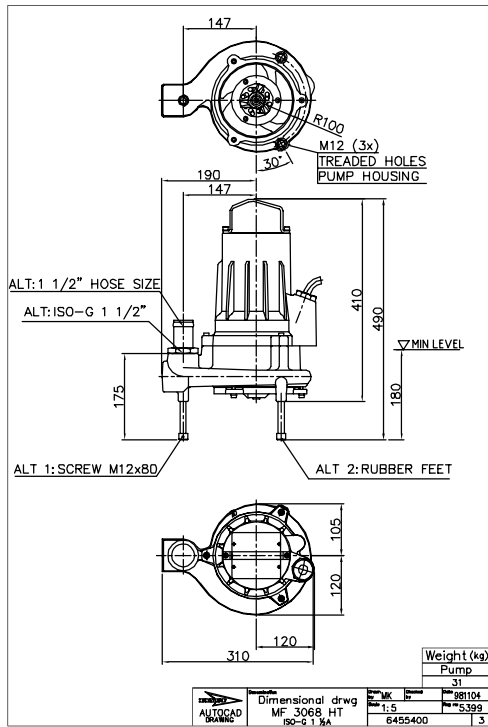


Dimensional drawing

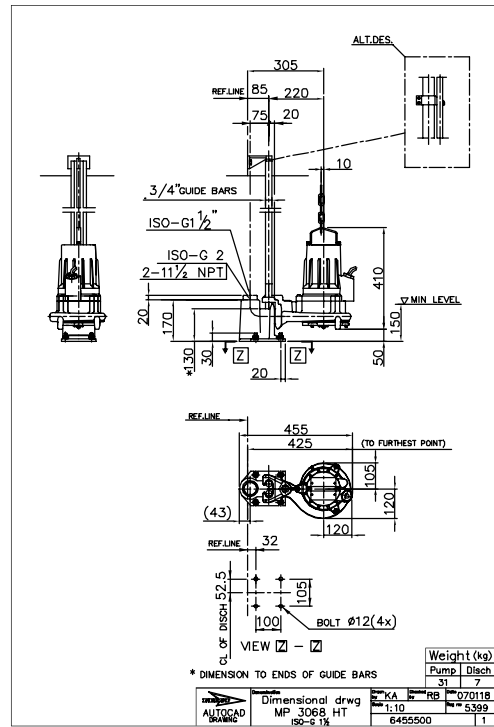
All drawings are available as Acrobat documents (.pdf) and AutoCad drawings (.dwg). Download the drawings from www.flygt.com or contact your ITT Flygt representative for more information.

All dimensions are in mm.

HT, F-installation



HT, P-installation





M 3085

Product

Submersible pump for pumping waste water containing solids that needs to be grinded. The impeller is equipped with a grinder device.

Denomination

Product code	3085.172
Installation	F, H, P
Impeller characteristic	HT

Process data

Liquid temperature	max +40 °C
Depth of immersion	max 20 m
pH of liquid	pH 5,5-14
Liquid density	max. 1100 kg/m ³

Motor data

Frequency	50 Hz
Insulation class	H (+180 °C)
Voltage variation	
- continuously running	max ± 5%
- intermittent running	max ± 10%
Voltage imbalance between phases	max 2%
No. of starts/hour	max 30

Cable

Direct-on-line start

SUBCAB®	4G1,5 mm ²
	4G1,5+2x1,5 mm ²
	4G2,5 mm ²
	4G2,5+2x1,5 mm ²

Y/D start

SUBCAB®	7G2,5 mm ²
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Monitoring equipment

Thermal contacts opening temperature	125 °C
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Material

Impeller	Cast iron
Pump housing	Cast iron
Stator housing	Cast iron
Shaft	Stainless steel
O-rings	Nitrile rubber

Mechanical face seals

Alternative	Inner seal	Outer seal
1	Carbon/Aluminium oxide	Corrosion resistant cemented carbide/ Corrosion resistant cemented carbide
2	Carbon/Aluminium oxide	Silicon carbide/Silicon carbide

Surface Treatment

All cast parts are primed with a water-borne primer. The finishing coat is a high-solid two pack paint.

Weight

See dimensional drawing.

Option

3085.891	Ex. proof version
Leakage sensor in stator housing	FLS
Leakage sensor in oil housing	CLS
Other cables	
Surface treatment	Epoxy treatment
Zinc anodes	

Accessories

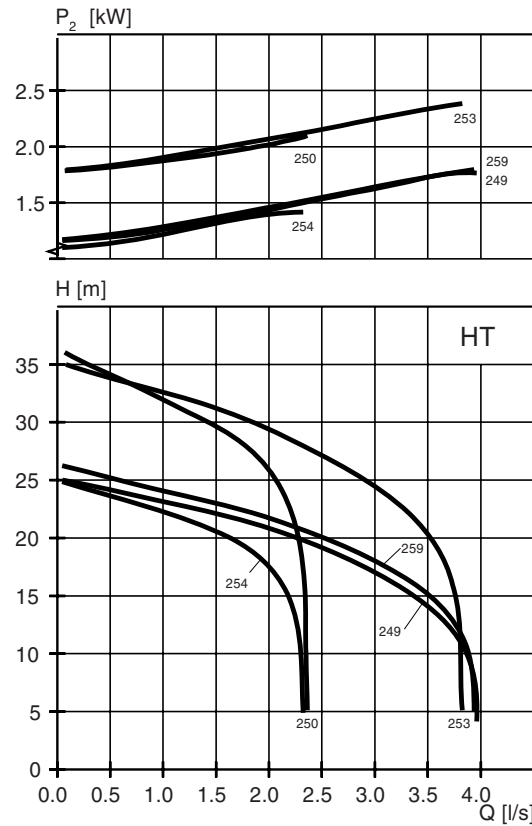
Discharge connections, adapters, hose connections and other mechanical accessories.

Electrical accessories such as pump controller, control panels, starters, monitoring relays.

See separate booklet or www.flygt.com, for further information.

HT - Motor rating and performance curve

Curve/Impeller No	Rated power, kW	Rated current, A	Starting current, A	Power factor $\cos \varphi$	Ex proof version available	Installation		
						F	H	P
400 V, 50 Hz, 3 ~, 2880 r/min								
254	1,8	3,5	27	0,90	•	•	•	
259	1,8	3,5	27	0,90	•	•	•	
400 V, 50 Hz, 3 ~, 2830 r/min								
250	2,4	4,7	27	0,92	•	•	•	
253	2,4	4,7	27	0,92	•	•	•	
254	2,4	4,7	27	0,92	•	•	•	
259	2,4	4,7	27	0,92	•	•	•	
230 V, 50 Hz, 1 ~, 2915 r/min								
249	1,9	12	61	0,87	•	•	•	
254	1,9	12	61	0,87	•	•	•	

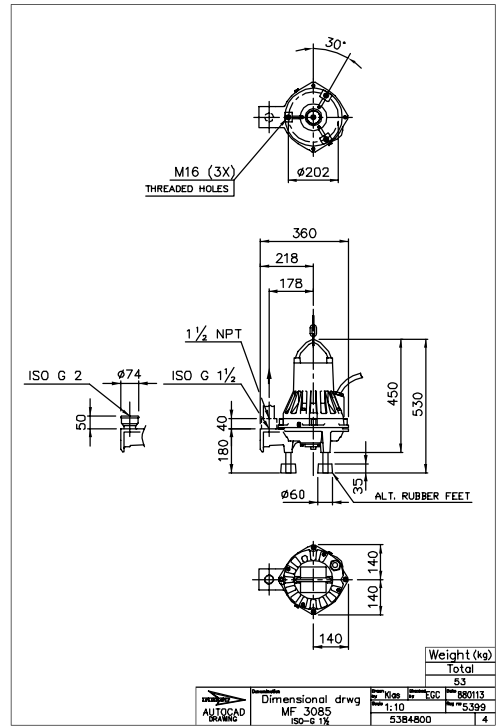


Dimensional drawing

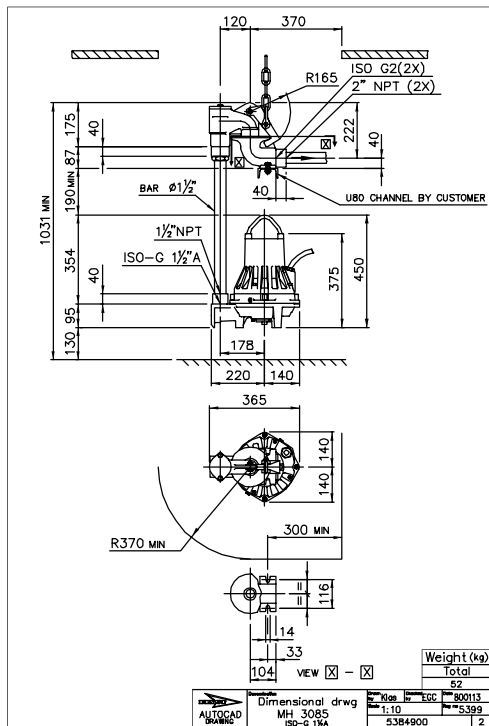
All drawings are available as Acrobat documents (.pdf) and AutoCad drawings (.dwg). Download the drawings from www.flygt.com or contact your ITT Flygt representative for more information.

All dimensions are in mm.

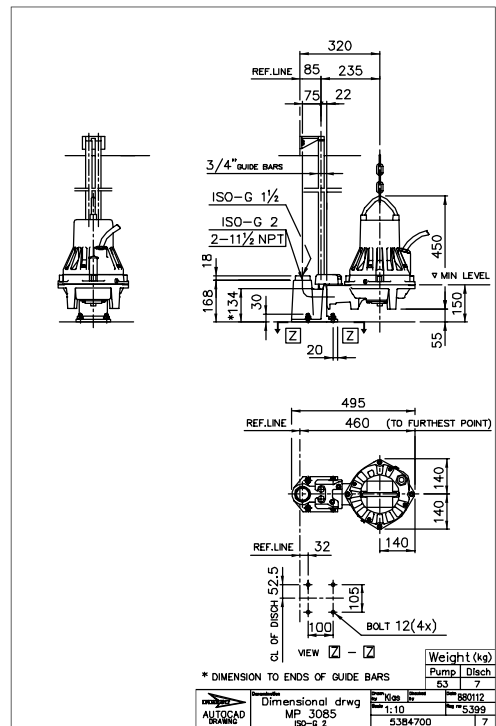
HT, F-installation



HT, H-installation



HT, P-installation





M 3102

Product

Submersible pump for pumping waste water containing solids that needs to be grinded. The impeller is equipped with a grinder device.

Denomination

Product code	3102.170
Installation	F, P
Impeller characteristics	LT, HT

Process data

Liquid temperature	max +40 °C
Depth of immersion	max 20 m
pH of liquid	pH 5,5-14
Liquid density	max. 1100 kg/m ³

Motor data

Frequency	50 Hz
Insulation class	H (+180 °C)
Voltage variation	
- continuously running	max ± 5%
- intermittent running	max ± 10%
Voltage imbalance between phases	max 2%
No. of starts/hour	max 30

Cable

Direct-on-line start

SUBCAB®	4G2,5 mm ²
	4G2,5+2x1,5 mm ²

Y/D start

SUBCAB®	7G2,5 mm ²
	7G2,5+2x1,5 mm ²

Monitoring equipment

Thermal contacts opening temperature	125 °C
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Material

Impeller	Cast iron
Pump housing	Cast iron
Stator housing	Cast iron
Shaft	Stainless steel
O-rings	Nitrile rubber

Mechanical face seals

Alternative	Inner seal	Outer seal
1	Aluminium oxide/ Corrosion resistant cemented carbide	Aluminium oxide/ Corrosion resistant cemented carbide
2	Aluminium oxide/ Corrosion resistant cemented carbide	Corrosion resistant cemented carbide/ Corrosion resistant cemented carbide
3	Corrosion resistant cemented carbide/ Corrosion resistant cemented carbide	Aluminium oxide/ Corrosion resistant cemented carbide
4	Corrosion resistant cemented carbide/ Corrosion resistant cemented carbide	Corrosion resistant cemented carbide/ Corrosion resistant cemented carbide

Surface Treatment

All cast parts are primed with a water-borne primer. The finishing coat is a high-solid two pack paint.

Weight

See dimensional drawing.

Option

3102.890	Ex. proof version
Leakage sensor in stator housing	FLS
Leakage sensor in oil housing	CLS
Other cables	
Surface treatment	Epoxy treatment
Zinc anodes	

Accessories

Discharge connections, adapters, hose connections and other mechanical accessories.

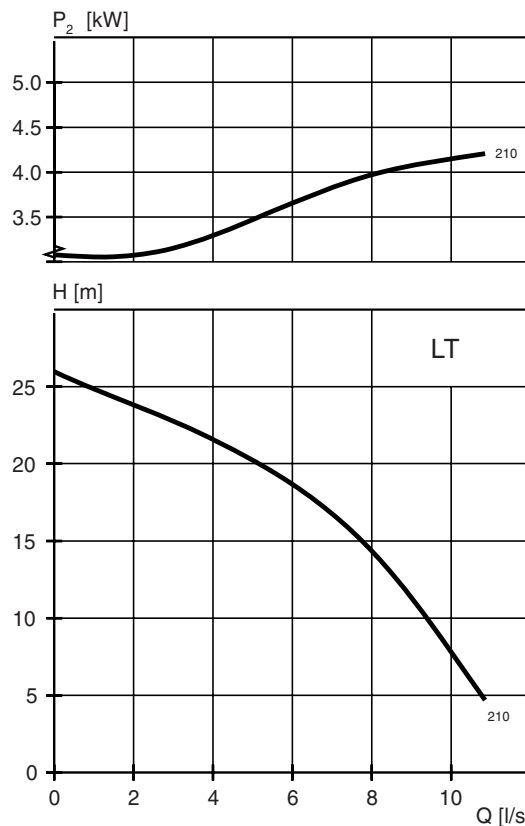
Electrical accessories such as pump controller, control panels, starters, monitoring relays.

See separate booklet or www.flygt.com, for further information.

LT - Motor rating and performance curve

Curve/Impeller No	Rated power, kW	Rated current, A	Starting current, A	Power factor cos φ	Ex proof version available	Installation				
						F	P			
400 V, 50 Hz, 3 ~, 2870 r/min										
210	4,4	8,6	64	0,92	•	•	•			

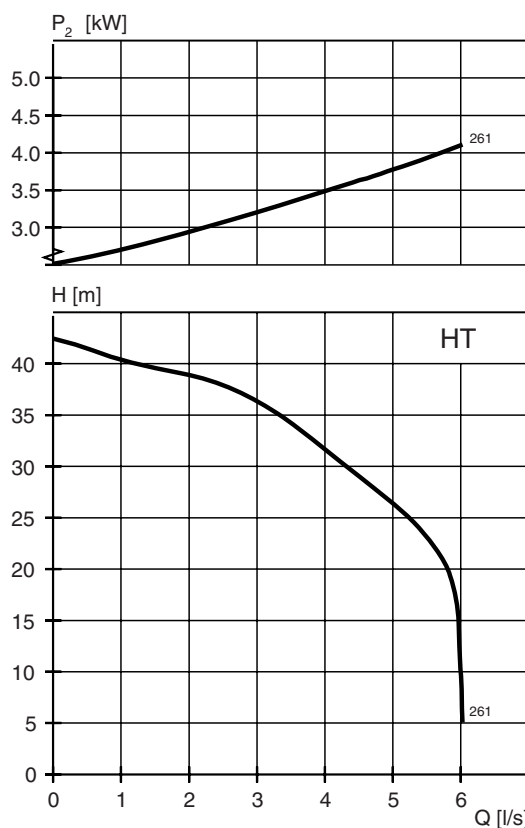
Y/D starting current is approximately 1/3 of D starting current.



HT - Motor rating and performance curve

Curve/Impeller No	Rated power, kW	Rated current, A	Starting current, A	Power factor cos φ	Ex proof version available	Installation				
						F	P			
400 V, 50 Hz, 3 ~, 2870 r/min										
261	4,4	8,6	64	0,92	•	•	•			

Y/D starting current is approximately 1/3 of D starting current.



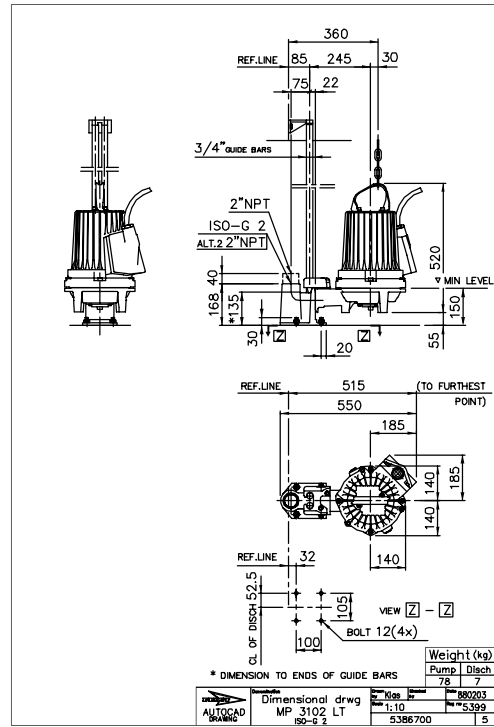
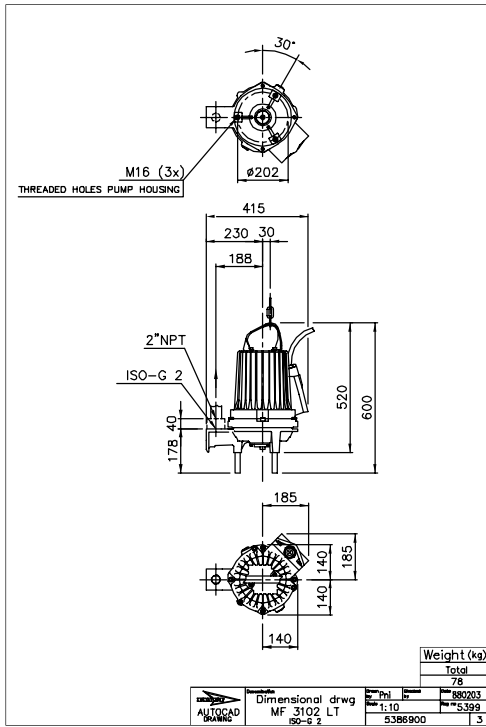
Dimensional drawing

All drawings are available as Acrobat documents (.pdf) and AutoCad drawings (.dwg). Download the drawings from www.flygt.com or contact your ITT Flygt representative for more information.

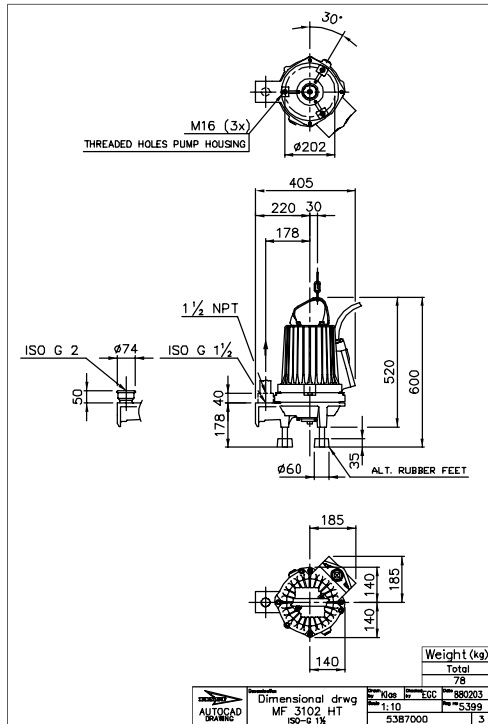
All dimensions are in mm.

LT, F-installation

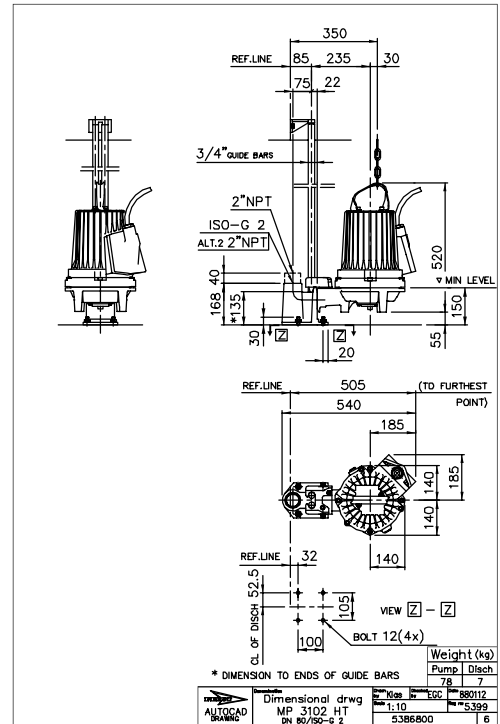
LT, P-installation



HT, F-installation



HT, P-installation





M 3127

Product

Submersible pump for pumping waste water containing solids that needs to be grinded. The impeller is equipped with a grinder device.

Denomination

Product code	3127.170
Installation	F, P
Impeller characteristics	LT, HT

Process data

Liquid temperature	max +40 °C
Depth of immersion	max 20 m
pH of liquid	pH 5,5-14
Liquid density	max. 1100 kg/m ³

Motor data

Frequency	50 Hz
Insulation class	H (+180 °C)
Voltage variation	
- continuously running	max ± 5%
- intermittent running	max ± 10%
Voltage imbalance between phases	max 2%
No. of starts/hour	max 30

Cable

Direct-on-line start

SUBCAB®	4G2,5 mm ²
	4G2,5+2x1,5 mm ²
	4G4 mm ²
	4G4+2x1,5 mm ²

Y/D start

SUBCAB®	7G2,5 mm ²
	7G2,5+2x1,5 mm ²
	7G4+2x1,5 mm ²

Monitoring equipment

Thermal contacts opening temperature	125 °C
--------------------------------------	--------

Material

Impeller	Cast iron
Pump housing	Cast iron
Stator housing	Cast iron
Shaft	Stainless steel
O-rings	Nitrile rubber

Mechanical face seals

Alternative	Inner seal	Outer seal
1	Aluminium oxide/ Corrosion resistant cemented carbide	Corrosion resistant cemented carbide/ Corrosion resistant cemented carbide

Surface Treatment

All cast parts are primed with a water-borne primer. The finishing coat is a high-solid two pack paint.

Weight

See dimensional drawing.

Option

3127.890	Ex. proof version
Leakage sensor in stator housing	FLS
Leakage sensor in oil housing	CLS
Other cables	
Surface treatment	Epoxy treatment
Zinc anodes	

Accessories

Discharge connections, adapters, hose connections and other mechanical accessories.

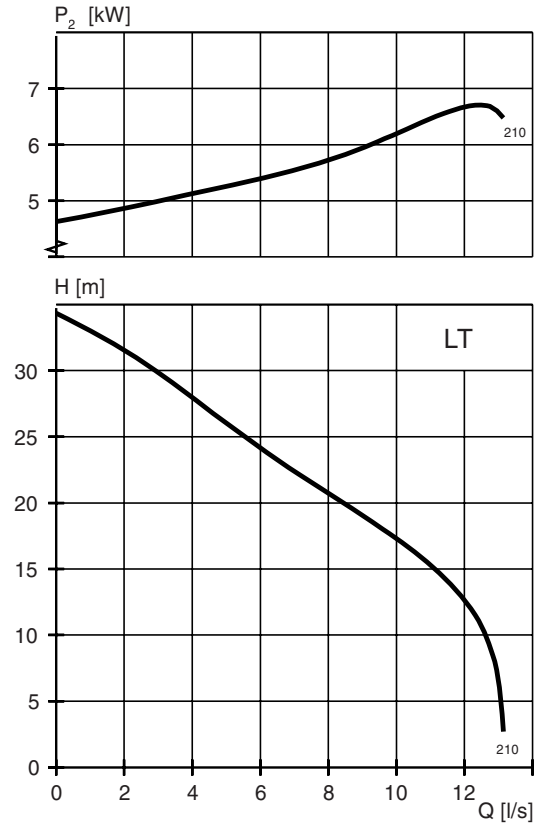
Electrical accessories such as pump controller, control panels, starters, monitoring relays.

See separate booklet or www.flygt.com, for further information.

LT - Motor rating and performance curve

Curve/Impeller No	Rated power, kW	Rated current, A	Starting current, A	Power factor cos φ	Ex proof version available	Installation				
						F	P			
400 V, 50 Hz, 3 ~, 2900 r/min										
210	7,4	14	114	0,91	•	•	•			

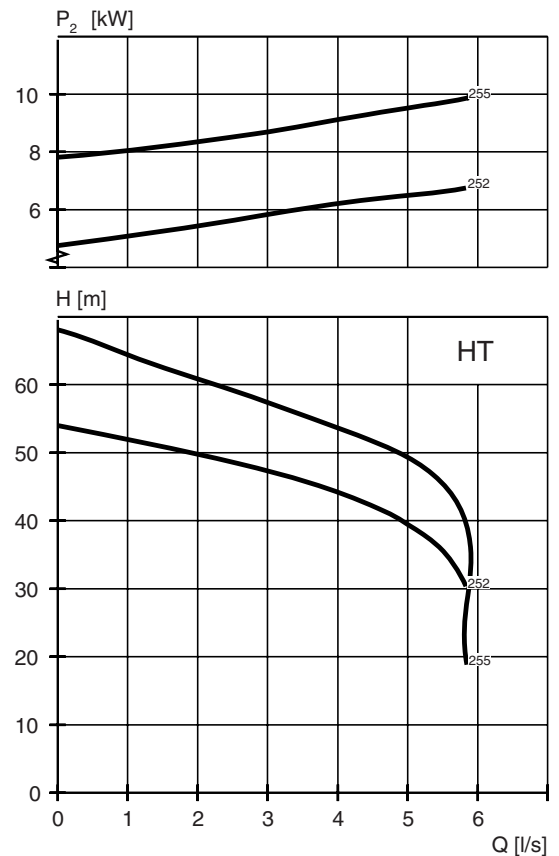
Y/D starting current is approximately 1/3 of D starting current.



HT - Motor rating and performance curve

Curve/Impeller No	Rated power, kW	Rated current, A	Starting current, A	Power factor cos φ	Ex proof version available	Installation				
						F	P			
400 V, 50 Hz, 3 ~, 2900 r/min										
252	7,4	15	137	0,86	•	•	•			
255	10,9	21	137	0,88		•	•			

Y/D starting current is approximately 1/3 of D starting current.



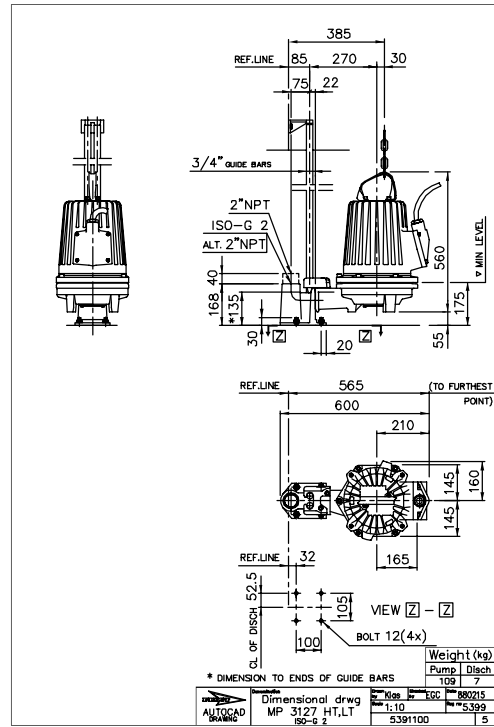
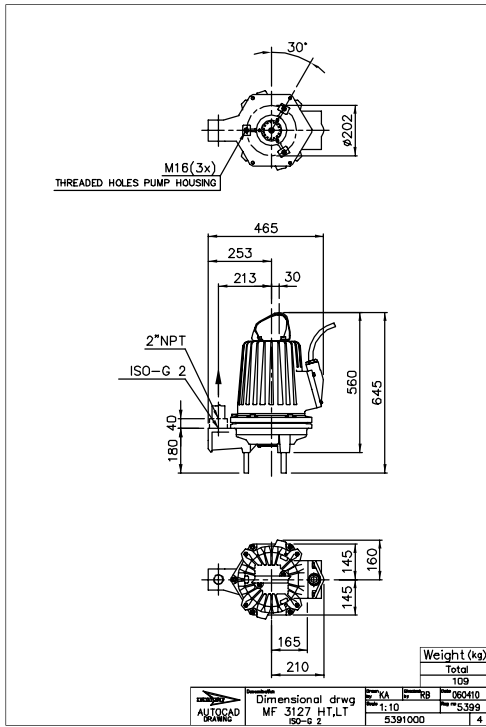
Dimensional drawing

All drawings are available as Acrobat documents (.pdf) and AutoCad drawings (.dwg). Download the drawings from www.flygt.com or contact your ITT Flygt representative for more information.

All dimensions are in mm.

LT/HT, F-installation

LT/HT P-installation



Compit

One pump station for single or multi-family housing

Quick installation

Compit is a prefabricated pump station for sewage or pressurized sewage systems and for groundwater.

Compit is complete on delivery and ready for installation and immediate connection.

The pump station is made of rotomoulded polyethylene and is easy to handle. Its weight excluding the pump is between 181 and 244 kg, depending on the version.

Flexible design

The Compit pump station can be installed at a depth of 1.9 and up to 3 meters using an extension shaft that can be cut to the required length. Each pump station can be equipped with one or two pumps.

Reliable operation

The bowl-shaped bottom and smooth inner surface of the pump station mean that it is self-cleaning.

Technicalities that matter

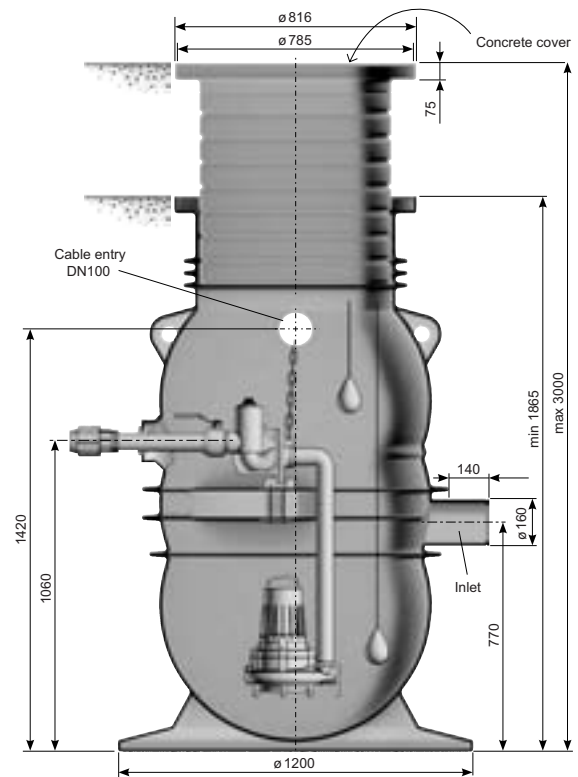
- The pump is easily installed by lowering it onto the discharge connection.
- All internal discharge piping is stainless steel and all fittings are made of surface-treated cast iron.
- Check valve and shut-off valve.
- Concrete cover (40 kg) with lifting handle.
- Stainless steel lifting chain.
- Polyethylene extension shaft (20 - 40 kg).
- DN 150 inlet.
- The outlet pipe is equipped with a DN 50 connection (Dy 63 mm).

Grinder pumps with cutting impeller for sewage

Flygt submersible grinder pumps such as the 3068, 3085 and 3102 have an impeller unit designed specially for handling the rigours of pressurized sewage systems.

Pumps for greywater and groundwater

Flygt submersible 3045 and 3057 sewage pumps are suitable for greywater from baths, showers and washing machines. Both are made of cast iron and highly wear-resistant. Flygt DX groundwater pumps feature stainless steel pump and motor casings.



Flygt Micro pump stations

For waste and wash water from single or several households and public buildings.

The ITT Flygt range of Micro pump stations is available in several different sizes and is the ideal solution when domestic wastewater must be delivered to sewer mains located at a higher level, or where gravity drainage is not possible. Other applications are e.g. ground water or run-off from garage driveways.




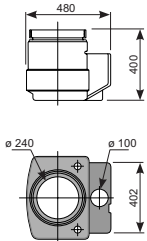
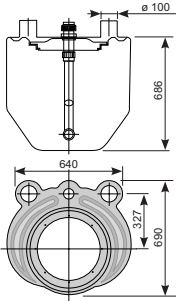
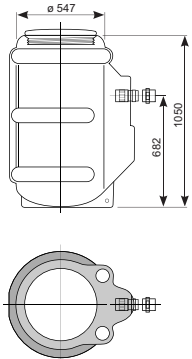
The smallest unit can simply be installed on the floor under the sink, and the larger under the basement for driveways. There is one design for indoor installation and one for installation under ground.

The Micro station is delivered pre-assembled with discharge piping and inlet piping prepared for connection.

The stations are made in polyethylene, a lightweight and strong material that makes them easy to handle and install. All are designed according to EN 12050-1 and 2.



Selecting your Flygt Micro pump station

Denomination	Micro 3	Micro 5 & 7	Micro 5G & 7G
			
Installation Sump volume Dimensions [mm]:	Indoor 80 litre 	Indoor 250 litre 	Underground 250 litre 

Features

Micro 3, 5 and 7, for indoor installation These versions, for use in basements and sanitary spaces, are very quick and easy to install. All incorporate several technical innovations that make it a new reference in its field.

Micro 5G and 7G – for installation below ground The Micro 5G and 7G series are installed underground for maximum convenience and absolute discretion.

Micro 3, 5 and 7



Features	Advantages
Tank with carrying handle and pictograms with "easy-to-install symbols".	Easy handling and direct visual guidance for the various connections.
Easy to close cover with rubber seal.	For reliable closure and no odour.
Prepared connections for inlet pipe, discharge pipe and power supply.	Simplified installation of pipes, everything grouped together at the same location.
Connection of discharge pipe with a self-clamping joint.	Quick connection and easy to remove.

Micro 5G and 7G



Features	Advantages
Round tank with reinforcing bulges.	The tank is installed below ground, with excellent resistance to soil stress.
Easy to close cover with rubber seal.	For reliable closure and no odour.
Tank bottom specially designed for optimum pumping of wastewater.	Less sedimentation and better pumping performance and reliable operation.
Inlet connection with a rubber seal.	Easy and leak-free installation.
Discharge pipe preassembled.	Quick and easy connection and secured tightness.
Check valve included as standard.	Station complete and ready to use.

The right pump in the right sump

Choosing a FLYGT wastewater pump assures you of reliable performance over time. Whatever the medium pumped, Flygt pays the greatest possible attention to the quality of its products.

PUMP	Power kW	Indoor Installation			Below Ground		Outlet size	EN approval
		MICRO 3	MICRO 5	MICRO 7	MICRO 5G	MICRO 7G		
SXM 2GT	0.3	83 38 50					1 1/4"	EN 12050-2
SXM 3 GT	0.78	83 38 50					1 1/4"	EN 12050-2
DXVM 35-5	0.55		83 38 55		83 38 56		1 1/2"	EN 12050-2
DXM 35-5	0.55		83 38 55		83 38 56		1 1/2"	EN 12050-2
DXVM 50-7	0.75		83 38 51	83 38 52	83 38 53	83 38 54	DN50	EN 12050-1
DXM 50-7	0.75		83 38 51	83 38 52	83 38 53	83 38 54	DN50	EN 12050-1
DXVM 50-11	1.1		83 38 51	83 38 52	83 38 53	83 38 54	DN50	EN 12050-1
DXM 50-11	1.1		83 38 51	83 38 52	83 38 53	83 38 54	DN50	EN 12050-1
DXV 50-15	1.5			83 38 52		83 38 54	DN50	EN 12050-1
DXV 50-11	1.1			83 38 52		83 38 54	DN50	EN 12050-1
DXV 50-15	1.5			83 38 52		83 38 54	DN50	EN 12050-1
DP 3045	1.2			83 38 52		83 38 54	DN50	EN 12050-1
DP 3057	1.5			83 38 52		83 38 54	DN50	EN 12050-1
CP 3057	1.5			83 38 52		83 38 54	DN50	EN 12050-1
CP 3057	1.7			83 38 52		83 38 54	DN50	EN 12050-1
MP 3068	2.4			83 38 52		83 38 54	DN50	EN 12050-1

Monitoring and control

ITT Flygt has suitable start and control equipment for the pump.

- Pumpcontrollers** 409
- Level regulators** 414
- Technovar pump controller** 416



FGC 010

Product

Stationary hand-operated 3-phase starter for D-O-L start of pumps without thermal contacts built-in.

Denomination

FGC 010

Manuel starter for pumps

Equipment Data

Voltage:	Max 690V
Frequency:	50-60 Hz
Current range:	1,0 - 14 A
Overload protection:	Thermal/magnetic overload protection
Monitoring:	None
Connection supply:	Terminal connection directly on the breaker 2xM20 cable entry knock-out
Connection pump:	Terminal connection directly on the breaker 2xM20 cable entry knock-out
Protection class	IP64

Material, size and weight

Part	Material	Size H x W x D mm	Weight
Housing	Polycarbonate	150 x 95 x 129	0,8 kg

Electrical Rating

Type	Voltages max	Current range	Part number
FGC 010 - A	690V	0,10-0,16 A	40-9350.030.0001
FGC 010 - B	"	0,16-0,25 A	40-9350.030.0002
FGC 010 - C	"	0,25-0,4 A	40-9350.030.0003
FGC 010 - D	"	0,4-0,63 A	40-9350.030.0004
FGC 010 - E	"	0,63-1,0 A	40-9350.030.0005
FGC 010 - F	"	1,0-1,6 A	40-9350.030.0006
FGC 010 - G	"	1,6-2,5 A	40-9350.030.0007
FGC 010 - H	"	2,5-4,0 A	40-9350.030.0008
FGC 010 - I	"	4,0-6,3 A	40-9350.030.0009
FGC 010 - K	"	6,3-10,0 A	40-9350.030.0010
FGC 010 - L	"	10,0-14,0 A	40-9350.030.0011

FGC 211

Product

FGC 211 is a pump controller designed for single pump installations and household usage.

Denomination

Model	Part. no	Type	Pumps	LCD Display
FGC 211-31000	40 501400	Small	1	Yes
FGC 211-33000	40 501401	Medium	1	Yes

Power Supply

Rated voltage

3-phase with neutral 3 x 400 VAC 50/60 Hz

Rated pump current

3-phase Max 4,5 kW at 400 VAC,
Max. 9 A, Min. 0,5 A

Current consumption, internal < 50 mA at 400 V
Contactor ABB B7-30-10

Basic fuses¹

Main supply fuse² Max. 16 A
Internal fuse 100 mA (non-replaceable)

¹ These fuses are common to both types. Medium type has additional fuses.

² Use automatic switch acting on all poles.

Approvals and Standards

EMC emission standard	EN61000-6-3
EMC immunity standard	EN61000-6-2
LVD electrical safety	EN/IEC 61010-1
CE marking	

Environment

Operational temperature ³	-20° C to +45° C
Storage Temperature	- 20° C to +70° C
Humidity (non-condensing)	90% RH
Enclosure	Class I, IP 54, CAT II
Altitude	Max. 2000 m
Pollution degree	2

³ The LCD display will update slower below 0° C.

Material

Enclosure, bottom	ABS-V0
Enclosure, lid	ABS-V0

Data Processing Power

Processor	PIC18F4620
Executed word length	8 bits
Clock frequency	32 MHz
Text memory	64 kB
Watchdog	Yes

User Interface

Display	LCD 2x16 characters
Push buttons	9 pcs
Alarm indications	4 LEDs
FGC status indications	3 LEDs

Digital Inputs

Start switch
Stop switch
High level switch
Thermal contact

Relay Outputs

Common alarm	Voltage free, Max load 230 VAC (5 A)
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Analogue input

Analogue level 4-20 mA⁴

⁴ The supply from the FGC can carry max 12 VDC.

Terminals

Signal	1,5 mm ²
Power	6 mm ²
Earth terminal	6 mm ²

Type of level sensors to be used

Pneumatic sensor LTU 301 (4-20 mA) with 0-2,5 m sensor range
External level sensor (4-20 mA)
ENM-10 external level regulator

Details for Small Type



Dimensions (W x D x H)	180x130x85 mm
Weight, total	1,0 kg
Mounting	Wall
Cable entries	Knock-out holes (2 pcs M25/M16, 4 pcs M20)
Special Features	Use this type when no main breaker or fuses are needed in the FGC panel.

Options and Accessories

Cable entries. They are used to connect cables through the knock-out holes.

ATU 001. External buzzer with its own battery backup.

Level control accessories:

- **Level regulators ENM-10.** Different level switches (start, stop and high level) that provide digital input signals.
- **Open bell system, and pneumatic sensor LTU 301.** The open bell system includes a cast bell and a tube that can be connected to a pneumatic sensor. It transforms the generated pressure to an analogue signal (4-20 mA).
- **Pressure sensor.** It transforms the measured pressure to an analogue signal (4-20 mA).
- **High water module.** It is used to detect a high level in the pump sump.

Details for Medium Type



Dimensions (W x D x H)	180x255x100 mm
Weight, total	1,1 kg
Mounting	Wall
Cable entries	Knock-out holes (2 pcs M25/M16, 4 pcs M20)
Special Features	Use this type when external equipment as main breaker, or fuses are to be included in the FGC panel.

FGC 313/323

Product

Flygt General pump Controller (FGC) is produced for small pumping systems. It will serve small or large residential areas in almost any location. The FGC range offers comprehensive functionality, flexible sensor handling, and operational data for status handling. The FGC is available for single or dual pump applications.

Denomination

Model	Part. no	Type	Pumps	LCD Display
FGC 313-31000	40 501301	Small	1	Yes
FGC 313-30000	40 501302	Small	1	No
FGC 323-31000	40 501303	Small	2	Yes
FGC 323-30000	40 501304	Small	2	No

Power Supply

Rated Voltage

- 1-phase 120–240 VAC 50/60 Hz, or
- 3-phase with neutral 3 x 200–460 VAC 50/60 Hz, or
- 3-phase without neutral: 3 x 400 VAC 50/60 Hz

Power output

120–240 VAC¹ Max. 4 A
24 VDC Max. 10 W

¹ This output can only be used when the neutral is connected.

Rated current for the pump

3-phase Max 5,5 kW at 400 VAC, Max. 11 A²
1-phase Max. 11 A²

Current consumption, internal < 50 mA at 400 V
Contactor ABB BC7-30-10-1.4

² For a 2-pump installation, max 18A in total.

Basic fuses³

Main supply fuse⁴ Max. 25 A
Fuse AC output T4AH 250 VAC
Internal fuse 1 A (non-replaceable)

³ These fuses are common to all 3 types. Medium and Large types have additional fuses.

⁴ Use automatic switch acting on all poles.

Approvals and Standards

EMC emission standard	EN61000-6-3
EMC immunity standard	EN61000-6-2
LVD electrical safety	IEC 61010-1
CE marking	

Environment

Operational temperature ⁵	- 20° C to + 45° C
Storage Temperature	- 20° C to + 70° C
Humidity (non-condensing)	90 % RH
Enclosure	Class I, IP 54, CAT II
Altitude	Max. 2000 m
Pollution degree	2

⁵ The LCD display will update slower below 0° C.

Material

Enclosure, bottom	ABS-V0
Enclosure, lid (FGC incl. display)	ABS-V0
Enclosure, transparent lid	Polycarbonate

Data Processing Power

Processor	PIC18F252
Executed word length	8 bits
Clock frequency	32 MHz
Text memory	64 kB
Watchdog	Yes

User Interface

Display ⁶	LCD 2x16 characters
Push buttons ⁶	5 pcs
Hand-0-Auto switch	1 pcs ⁷ , 2 pcs ⁸
Alarm indications	2 LEDs ⁷ , 3 LEDs ⁸
FGC status indications	2 LEDs ⁷ , 3 LEDs ⁸

⁶ Some FGC versions have neither display, nor push buttons, on the front lid. Instead a handheld display unit is connected when reading and changing data.

⁷ 1-pump controllers.

⁸ 2-pump controllers.

Digital Inputs

Start switch ⁹	
Stop switch	
High level switch	
Thermal contact ⁹	
General input	

⁹ 1-pump controllers have one input, and 2-pump controllers have two inputs.

Relay Outputs

General output¹⁰

¹⁰ The output is voltage free, and has a max load of 250 VAC (5 A)

Analogue input

Analogue level 4-20 mA¹¹

¹¹ The supply from the FGC can carry max 18 VDC.

Terminals

Signal	1.5 mm ²
Power	6 mm ²

Type of level sensors to be used

Pneumatic sensor LTU 301 (4-20 mA) with 0-2,5 m sensor range

External level sensor (4-20 mA)

External level regulator ENM-10

Details for Small Type



Dimensions (W x D x H)	255x180x100 mm
Weight, total	1,2 kg ¹² , 1,4 kg ¹³
Mounting	Wall
Cable entries	Knock-out holes (3 pcs M25, 5 pcs M20)
Special Features	Use this type when no main breaker or fuses are needed in the FGC panel.

¹² 1-pump controllers.

¹³ 2-pump controllers.



ENM-10

Product

ENM 10 is a mechanical switch in a plastic casing, freely suspended at the desired height from its own cable. When the liquid level reaches the regulator, the casing will tilt and the mechanical switch will close or break the circuit, thereby starting or stopping a pump or actuating an alarm device.

The regulator casing is made of polypropylene and the cable is sheathed with a special PVC compound. The plastic components are welded and screwed together.

Adhesive is never used. Impurities and deposits will not adhere to the smooth casing.

This level regulator is available in different versions, depending upon the medium in which it is to be used. As standard, the regulator can be obtained with 6, 13, 20, 30 or 50 metres (20, 42, 65, 100 or 167 feet) of cable for liquids with specific density between 0.95 and 1.10 g/cm³ for other specific densities, the regulator is only available with 20 metres (65 ft) of cable. The regulator can withstand up to 60 °C (140 °F).

Wiring alternative

To conform to local regulations, the level regulators are normally connected through a transformer to a low-tension control circuit. Two regulators are used — one for starting and one for stopping. A third regulator can be connected if an alarm is required at a given level. Identical regulators can be used for all functions.

Technical data

Liquid temperature	Min. 0 °C (32 °F) Max. 60 °C (140 °F)
Liquid density	Min. 0.65 g/cm ³ Max. 1.5 g/cm ³
Degree of protection	IP68, 20 m (65 ft)
Interrupting capacity of micro switch*	AC, resistive load, 250V 10A AC, inductive load, 250V 3A cos φ = 0.5 DC, 30V 5A
Weight	2 kg (4.5 lb) for a standard density regulator with 20 m cable

Materials

Body	Polypropylene
Bending relief	EPDM rubber
Cable	Special compound PVC or chlorinated polyethylene CPE rubber

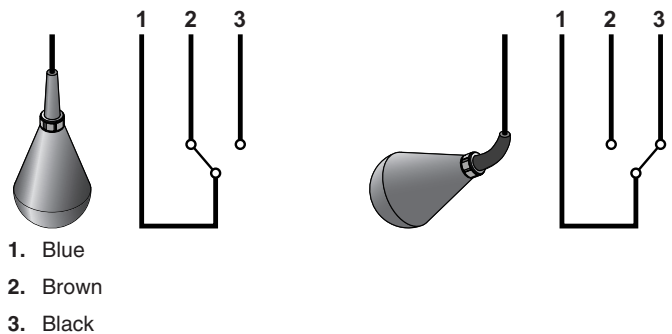
* Note that local regulations may limit the voltage.

Approvals

CSA, SEMKO, NEMKO, CE
EN61058

Dimensions

Density (g/cm ³)	Regulator length (mm (in))	Diameter (mm (in))
0,65—0,80	194 (7 ¹⁰ / ₁₆)	100 (4)
0,80—0,95	177 (7)	100 (4)
0,95—1,10	162 (6 ³ / ₈)	100 (4)
1,05—1,20	142 (5 ⁹ / ₁₆)	100 (4)
1,20—1,30	133 (5 ¹ / ₄)	100 (4)
1,30—1,40	130 (5 ² / ₁₆)	100 (4)
1,40—1,50	126 (5)	100 (4)



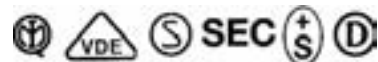


NF5

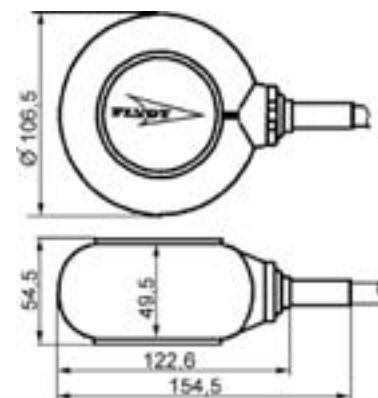
Product

Floating level regulator for use in drainage and light wastewater applications.

Approvals



Dimensions



All dimensions in mm.

Technical data

Cable	Data
H07RN-F3G1	Ambient temp.: 60 C max. Storage temp.: -20 C / + 60 C Switching on angle: +45 (ref.to horiz.line) Switching off angle: -45 (ref.to horiz.line) Max. rated current: 10/4A Max. rated voltage; 250V Material: Polypropylene PP Weight float switch: 265g Application: Only emptying Operations: Heavy 50.000 switches The float switch is CE marked
PVC A07VV -F3x1	Ambient temp.:60 C max. Storage temp.: -20 C / + 60 C Switch on angle: +45 (ref. to horiz. line) Switch off angle: -45 (ref. to horiz. line) Max. rated current: 15/8A max. rated voltage; 250V Material: Polypropylene PP Weight float switch: 250g Application: Filling or emptying Operations: Light 10000 switches The float switch is CE marked

Part number

Type	Length	Cable	Part number
NF5	5 m	PVC A07VV -F3x1	84 30 64
NF5	10 m	H07RN-F3G1	84 30 65



Technovar

Variable speed control direct on the pump motor with Technovar

Technovar is the world's first pump mounted, microprocessor-based pumping system controller. The Technovar does much more than just change motor speed. It truly manages your pump performance to match a wide range of system conditions and requirements. It can be combined with most pump types, creating an extremely versatile range of pumps for use in HVAC, water supply, irrigation, filtration, pressure wash, boiler feed, circulation, and a wide range of OEM applications.

Technovar

The Technovar unit adjusts the performance of the pump so it runs at the optimum operating point to meet various process requirements on performance, while also ensuring the best possible operating economy.

Pressure, differential pressure or flow sensors provide the input signals to the integrated frequency converter and microprocessor that control the pump. The pump can also be controlled manually. In multi-pump installations (up to four pumps), every pump has its own Technovar unit for best adaptability and reliability. Communication is made via an RS 485 interface. Features include automatic changeover in the event of failure of one pump, cyclic changeover between primary and secondary pumps, and automatic starting and stopping of the secondary pump to suit the flow or pressure requirements.

The voltage-controlled frequency converter delivers a sinusoidal voltage with a variable pulse width. The converter has controlled generation of sinusoidal current and dynamic limitation of overcurrent.

EMC approved

In the direct-mounted version, the Technovar unit conforms to the general EMC provisions of EN 55082 part 2 and EN 55011 for HV 2.1 to 3.11. EN 50082 part 2 and EN 50081 part 2 for applies for HV 3.15 to 3.22. For EN55011 is applicable for HV 1.XX.

Reliable cooling

When the pump motor is running, the electronic unit is cooled by the pump motor fan. Designed for pump control with smooth starting and stopping functions the Technovar unit has been developed specifically for controlling pumps. All monitoring necessary for safe pump operation is therefore included. Preset ramp times control the starting and stopping sequences.

For any three-phase motor

A Technovar unit can control any standard fan-cooled, three-phase motor to IEC, 230/400V Class F, up to and including 22 kW*. Short interconnecting cables between the frequency converter and motor minimize the risk of electromagnetic disturbances..



Flygt PX pump equipped with Technovar.

*) Wall mounted version available for motors up to and including 45 kW.

Ready for immediate installation

The Technovar unit and pump are delivered as one complete unit. Both electrical connections and pipes are included right from the start - just connect the power supply and the pumped medium pipes and start pumping.

- Technovar frequency converter with IP 54 degree of protection and 8 kHz switching frequency.
- Integrated microprocessor, including RS 485 interface, for sequencing, changeover in the event of a fault, etc.
- Circulation or pressurizing pump with motor.
- Sensors for pressure or differential pressure.

Existing Flygt pumps

The Technovar unit can easily also be fitted on existing pumps.

Product range

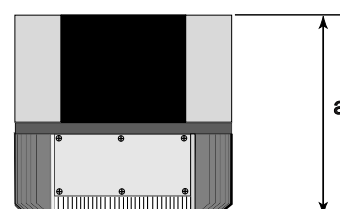
Type designation	Nominal motor rating	Supply voltage (to the frequency converter)	Supply voltage (to the motor)	Fuse rating	Dimensions a
	kW	V	V	A	mm
HV 1.1 **)	0.55-1.10	1 x 220-240	3x230	10	120
HV 1.15 **)	1.50	1 x 220-240	3x230	10	155
HV 1.2 **)	2.20	1 x 220-240	3x230	16	155
HV 2.1	1.50	1 x 220-240	3x230	10	185
HV 2.2	2.20	1 x 220-240	3x230	16	185
HV 3.2	2.20	3 x 380-460	3x400	10	185
HV 3.3	3.00	3 x 380-460	3x400	10	185
HV 3.4	4.00	3 x 380-460	3x400	16	185
HV 3.5	5.50	3 x 380-460	3x400	20	185
HV 3.7	7.50	3 x 380-460	3x400	25	185
HV 3.11	11.00	3 x 380-460	3x400	35	185
HV 3.15	15.00	3 x 380-460	3x400	35	300
HV 3.18	18.50	3 x 380-460	3x400	50	300
HV 3.22	22.00	3 x 380-460	3x400	50	300
*) HV 3.30	30.00	3 x 380-460	3x400	80	–
*) HV 3.37	37.00	3 x 380-460	3x400	100	–
*) HV 3.45	45.00	3 x 380-460	3x400	125	–

*) available only as a wall-mounted unit

***) separate programming unit



Installation directly on the fan casing is simple. The cover of the Technovar unit is secured by means of three screws and the centring dowel is inserted into the hole in the casing. Four clips are hooked on and secured by means of four screws.



Accessories

ITT Flygt has suitable accessories and equipment for the pump.

Circulation .....	.419
Drainage .....	.420
Wastewater .....	.421

Union connection

Type	Pipe-diameter	Pump	Material	Article number
Union connection DN 25 to 1"	25 mm	FLA/FLE 25	Steel	61-84 67 63
Union connection DN 25 to 3/4"	20 mm	FLA/FLE 25	Steel	61-84 67 64
Union connection DN 32 to 1 1/4"	32 mm	FLB/FTB/FLE 32	Steel	61-84 67 65
Union connection DN 32 to 1"	25 mm	FLB/FTB/FLE 32	Steel	61-84 67 66



Union connection

Union connection with valve

Type	Pipe-diameter	Pump	Material	Article-number
Union connection with valve DN 25 to 1"	25 mm	FLA/FLE 25	Brass	61-84 67 69
Union connection with valve DN 32 to 1 1/4"	32 mm	FLB/FTB/FLE 32	Brass	61-84 67 70
Union connection with valve DN 25 to 22 mm Cu	22 mm Cu	FLA/FLE 25	Brass	61-84 67 71
Union connection with valve DN 25 to 28	28 mm Cu	FLA/FLE 25	Brass	61-84 67 72



Union connection with valve

Accessories Ready

Hose 2"

The hoses are available in PVC (0,5Mpa)

Part number 94 06 64



Accessories SX

VRD check valve R32/R32 for SX(M)2 and SX(M)3

Part number 26-2675040



Hose clamp 2"

Part number 94 06 64



Low Suction unit for Ready 4 and 8

The Low Suction collar allows the pump to remove water right down to the floor level. It is used e.g. by the fire brigade to empty basements when flooded.

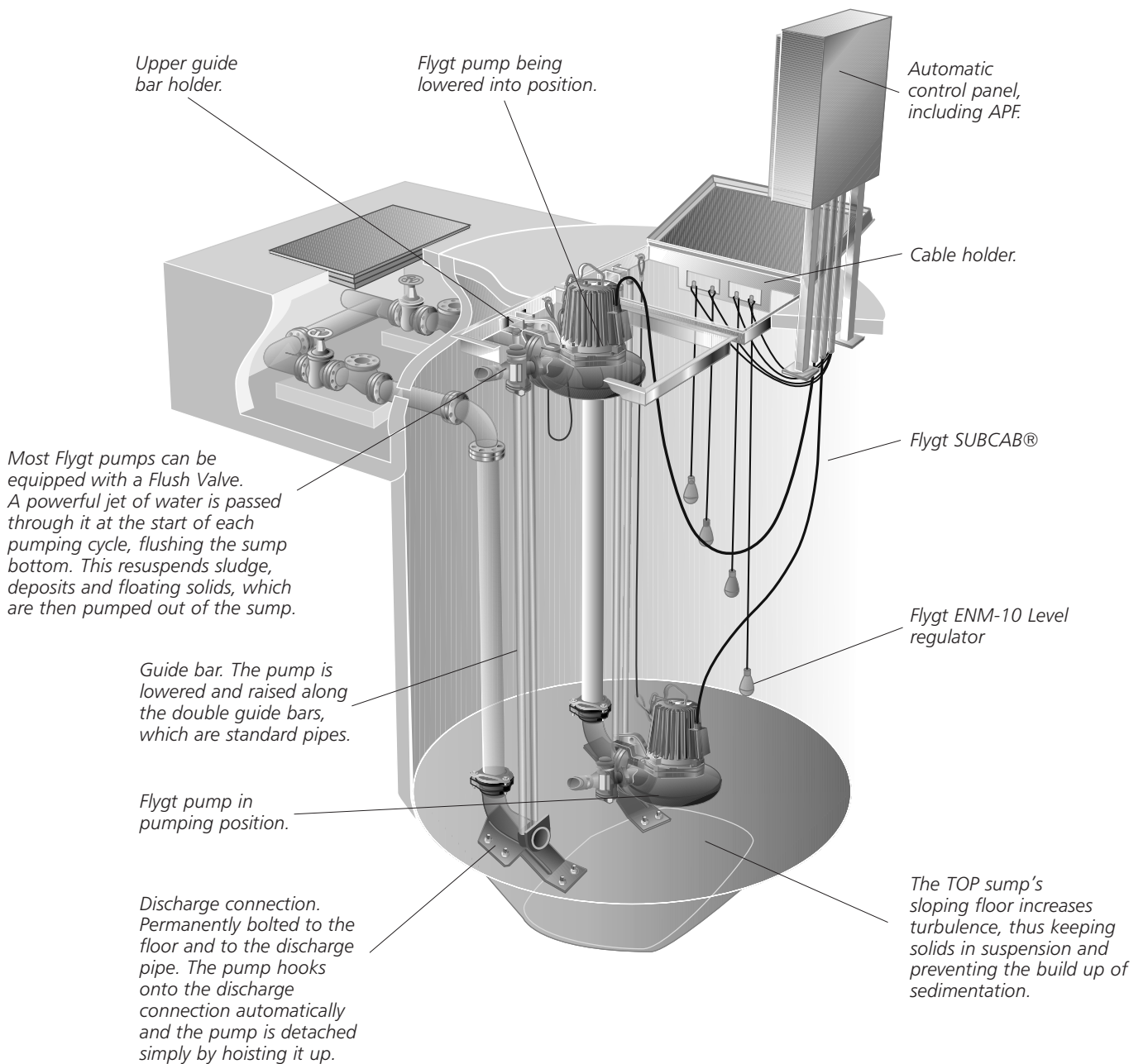
Part number 633 07 00

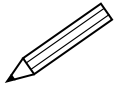


Accessories for trouble-free, efficient pumping

Supplying customers with problem-free solutions is our goal at ITT Flygt – and that means more than simply supplying the correct pump for your particular application.

The following are examples of some of the ancillary equipment and systems which we can supply as aids to improving the all-round efficiency of your operation.





A series of horizontal dotted lines spanning the width of the page, providing a guide for writing notes. There are approximately 20 dotted lines in total, starting from the top of the page and extending to the bottom.



What can ITT Flygt do for you?

From water supply to mining, sewage systems to construction, and process industries to emergency services, ITT Flygt solutions are helping our customers solve some of the toughest fluid-handling problems in a safe and cost-effective way.

As a leading supplier of fluid-handling solutions, we have the products and expertise to provide you with complete pumping solutions, from planning and delivery, to installation and after-sales service. With a worldwide service network, you can always get the support you need.

Flygt, a wholly owned subsidiary of ITT of White Plains, New York, is represented in more than 130 countries and has more than 40 sales companies.

www.flygt.com