

Hydro 2000

Grundfos Hydro 2000 booster sets with 2 to 6 CR(E) pumps
50 Hz



Contents

Product data

Performance range	3
Hydro 2000	4
Control 2000	4
Functions	4
Application and need	5
Water supply	5
Industry	5
Irrigation	5
Type key	6
Construction	6
System configuration	7

Hydraulic functions

Overview of functions	8
-----------------------	---

Product range

System overview	10
-----------------	----

Sizing

General information	12
Consumption pattern	12
System selection	13
Type of booster set	14
System size	15
Diaphragm tank	16
Dry-running protection	16
Friction-loss compensation	16
Understanding the curve charts	18
Example: How to select a system	19

Performance curves, Hydro 2000 S

CR 3	20
CR 5	22
CR 10	24
CR 15	26
CR 20	28
CR 32	30
CR 45	32
CR 64	34
CR 90	36

Technical data, Hydro 2000 S Electrical data

CR 3/ CR 5	38
CR 10	40
CR 15	42
CR 20	45
CR 32	48
CR 45	50
CR 64	52
CR 90	54

Performance curves, Hydro 2000 F-E

CR 3	56
CR 5	58
CR 10	60
CR 15	62
CR 20	64
CR 32	66
CR 45	68
CR 64	70
CR 90	72

Technical data, Hydro 2000 F-E Electrical data

CR 3	74
CR 5	76
CR 10	79
CR 15	82
CR 20	85
CR 32	87
CR 45	90
CR 64	92
CR 90	95

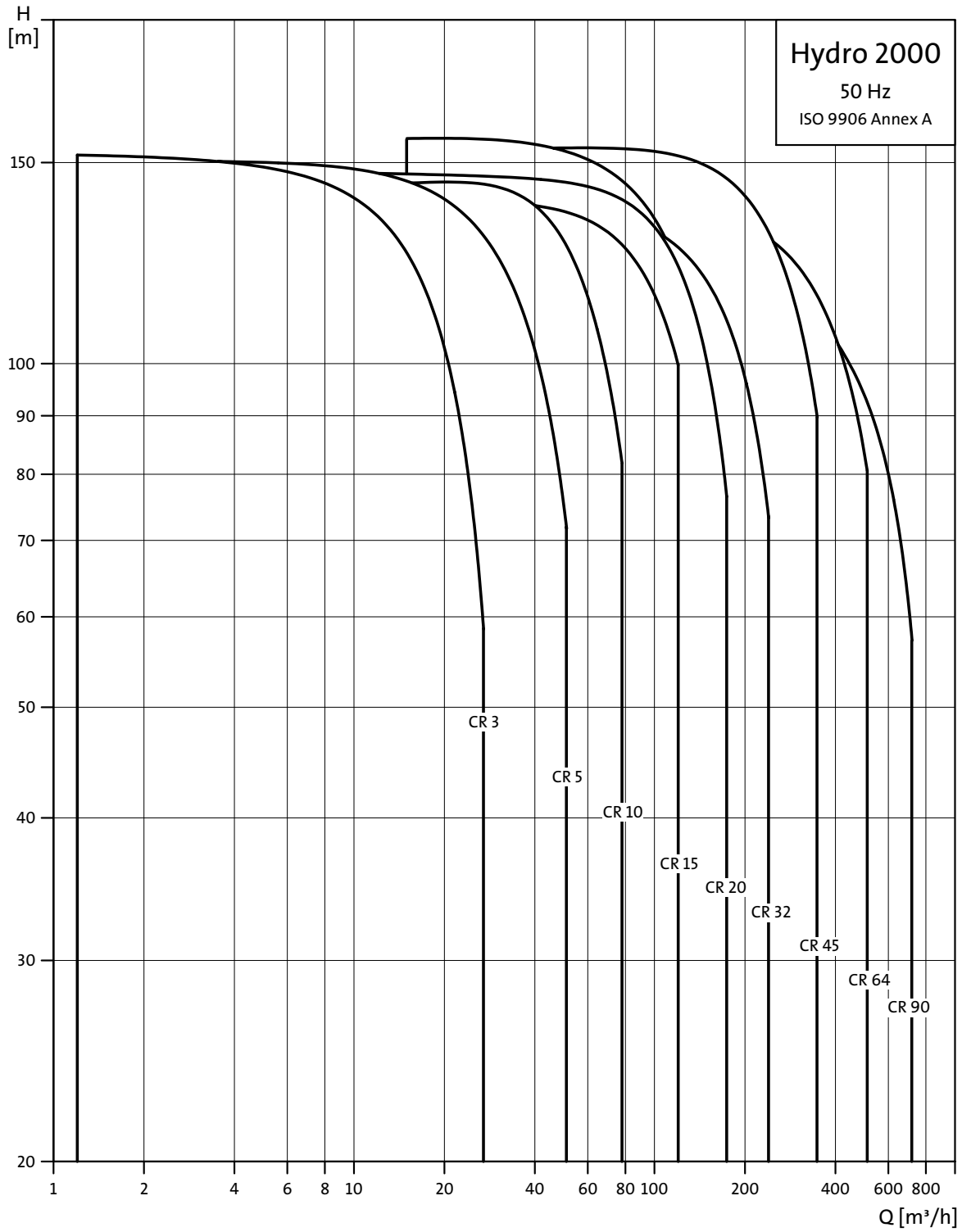
Technical data

Dimensions and weights	98
Construction	98
Operating conditions	98
Installation	98
Mechanical installation	98
Electrical connection	98

Further product documentation

WinCAPS	99
WebCAPS	100

Performance range



TM02 7576 3803

Hydro 2000

The Grundfos Hydro 2000 booster set consists of 2 to 6 CR(E) pumps coupled in parallel and mounted on a common base frame provided with all the necessary fittings and a Grundfos Control 2000 cabinet.

Booster sets with up to 8 pumps are available on request.

When delivered, the Grundfos Hydro 2000 booster set is factory-tested and set according to the customer's wishes, ready for operation..

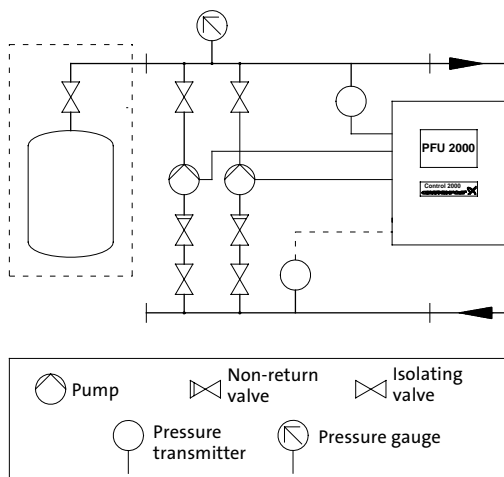


Fig. 1 Hydro 2000 pressure boosting system

TM00 5391 1302

Control 2000

A Grundfos Control 2000 control cabinet holds a **PFU 2000** (Pump Functional Unit 2000).

The Grundfos Control 2000 may also be supplied with a **PMU 2000** (Pump Management Unit 2000).

	TM00 2721 1302	<p>PFU 2000 Simple operation</p>
	TM00 7023 1302	<p>PMU 2000 Advanced operation Enables regular optimisation of operating conditions and read-out of operating data.</p>

Functions

Control 2000 offers the following functions:

- **Performance control.**
 - Grundfos bus communication.
 - **Stop function** when operating at low flow (increases the efficiency when operating at low flow).
 - Automatic **cascade control** of pumps.
 - Automatic **changeover between pumps** in operation (ensures the same number of operating hours for all pumps).
 - **Manual operation** (enables testing of individual pumps).
 - Various **setpoint influences**:
 - friction-loss compensation (pressure decreases with a decreasing flow)
 - setpoint adjustment via external signals (temperature, time, level and flow).
 - Various **digital remote-control functions**:
 - start/stop of system
 - reduced operation (limits the maximum number of pumps in operation)*
 - 2-point control of the setpoint (enables control of the setpoint by means of 2-point contact)*
 - 3-point control of the setpoint (enables control of the setpoint by means of 3-point contact)*
 - firefighting operation*.
 - **Pump and system monitoring functions**:
 - minimum and maximum limits for the value measured*
 - pre-pressure measurement*
 - motor protection
 - Grundfos bus communication.
 - **Display, alarm and signal functions**:
 - 2 x 24 character LCD display*
 - indicator lights for operating and fault indication (green and red light-emitting diodes)
 - potential-free changeover contacts for operating and fault signals.
 - **Clock program***.
- * Setting can be changed only when a PMU 2000 is connected.

Application and need

Abundant water is the key to progress and comfort.

A booster set should be planned the right way whether used for water supply, industrial purposes or irrigation. The purpose is to optimise operating costs and achieve a high degree of comfort.

The starting point when planning a booster set is need. Every supply area has its own consumption pattern.

The Grundfos Hydro 2000 booster set can be used for a wide range of applications. A number of typical examples are shown below.

Water supply

Access to the right quantity of clean water at the right time is the key to a healthy life.

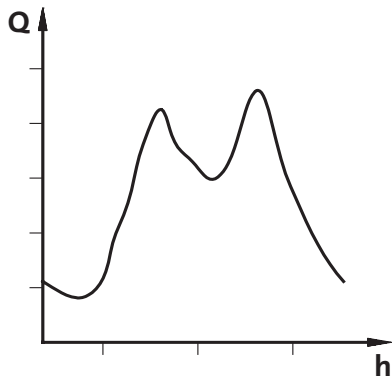
The term water supply covers:

- waterworks, pressure boosting in distribution circuits
- blocks of flats, schools, hotels, hospitals, etc.

Studies of the water consumption in a typical waterworks have revealed large differences in the daily water consumption pattern.

Consumption is characterised by:

- sudden variations between min. and max. consumption
- variation taking place over long periods
- constant pressure.



TM00 9197 1303

Fig. 2 Typical consumption pattern in waterworks

Industry

In a number of processes, water plays a vital part. The industrial consumption pattern varies with the type of industry. Many manufacturing processes consist of a cycle requiring an absolute constant pressure even where large and very quick flow variations are concerned.

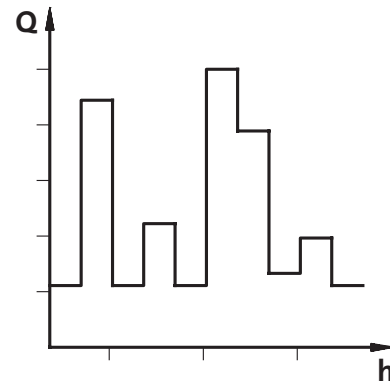
Among others, industrial pressure boosting and liquid transfer comprise:

- the food industry
- the textile industry

- the petrochemical industry
- the pharmaceutical industry.

In general, consumption is characterised by:

- large variations from minimum load to peak load
- sudden variations
- constant pressure.



TM00 9200 1303

Fig. 3 Typical industrial consumption pattern

Irrigation

In order to maintain recreational areas used for specific purposes, it may be necessary to irrigate.

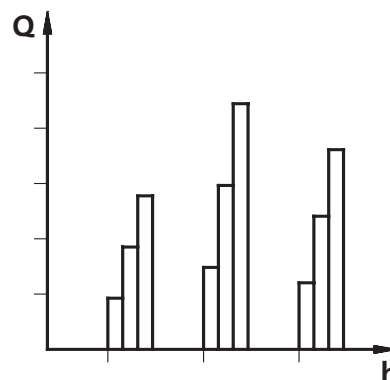
The term irrigation covers:

- gardening
- parks
- sports grounds, etc.

A typical irrigation system could be used in connection with e.g. a golf course. When the irrigation system is started, consumption depends on the number of sprinklers activated.

A typical irrigation system is characterised by:

- irrigation zones
- variable, but known consumption
- system divided into pressure zones.



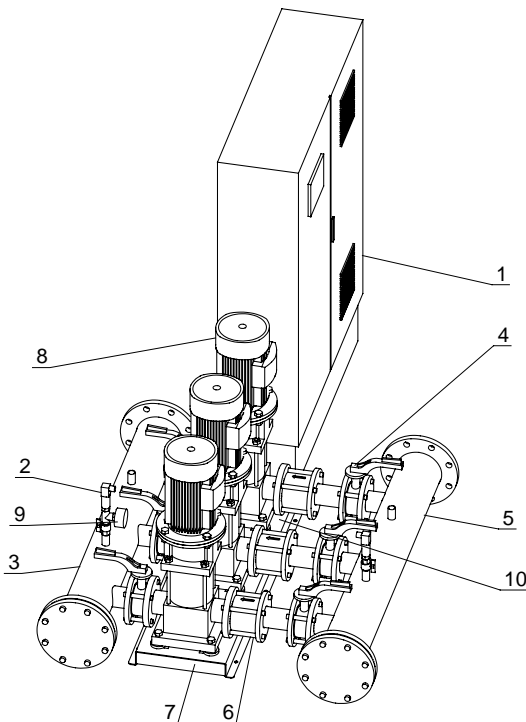
TM00 9198 1303

Fig. 4 Typical consumption pattern in irrigation application

Type key

Example	Hydro 2000	MEH	/G	/NS	2	CR 10-3	2	CRE 5-5	PMU	3 x 400/230 V, 50 Hz
Type range										
Subgroups: MS, MSH, MF, MFH, ME, MEH, MES										
Manifold material: : Stainless steel /C : Copper /G : Galvanised steel										
Suction manifold fitted: : With suction manifold /NS: Without suction manifold										
Number of full-size pumps: 2-6										
Full-size pump type										
Number of half-size pumps: 1-2										
Half-size pump type										
Control panel of Control 2000: PMU:PMU 2000 PFU:PFU 2000										
Supply voltage, frequency										

Construction



TM00 9385 4796

Pos.	Designation	Qty.
1	Control 2000	1
2	Pressure transmitter	1
3	Discharge manifold (stainless steel)	1
4	Isolating valve	2 per pump
5	Suction manifold (stainless steel)	1
6	Non-return valve	1 per pump
7	Base frame (stainless steel)	1
8	CR(E) pump	2-6
9	Pressure gauge	1
10	Nameplate	1

Fig. 5 Hydro 2000 booster set

System configuration

Hydro 2000 consists of three main groups:

- Hydro 2000 S
- Hydro 2000 F
- Hydro 2000 E.

The main groups are divided into subgroups as shown in the table below.

Main group	Subgroup	Description of pumps				
		Size	Number	Number of controlled pumps	Mode of operation	Comments
Hydro 2000 S (start/stop)	MS	Full-size	All		Mains operation (start/stop)	
	MSH	Half-size	1		Mains operation (start/stop)	
		Full-size	All other pumps		Mains operation (start/stop)	
Hydro 2000 F (variable speed)	MF	Full-size	1	1	Speed control via frequency converter mounted in control cabinet	Frequency-converter control alternates among all pumps in the system.
			All other pumps		Mains operation (start/stop)	
	MFH	Half-size	2	1	Speed control via frequency converter mounted in control cabinet	Only one pump is frequency-converter-controlled at a time. Frequency-converter control alternates between the two pumps. The uncontrolled pump is mains-operated (start/stop).
Hydro 2000 E (variable speed)	ME	Full-size	All	All	Speed control via frequency converter integrated in the motor	All pumps in operation run at the same speed.
			2	2	Speed control via frequency converter integrated in the motor	The two pumps run at the same speed when both are in operation.
	MEH	Full-size	All other pumps		Mains operation (start/stop)	
	MES	Full-size	1	1	Speed control via frequency converter integrated in the motor	
			All other pumps		Mains operation (start/stop)	

Abbreviations:

M: Control 2000 features a microprocessor for the control of all functions.

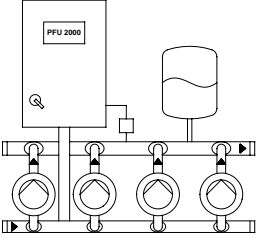
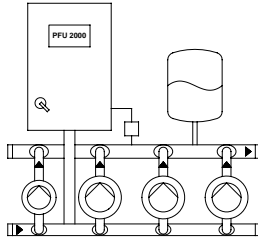
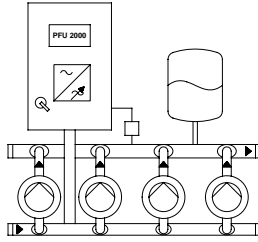
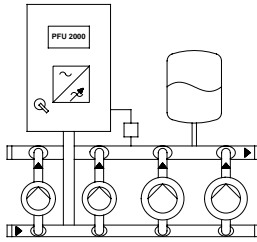
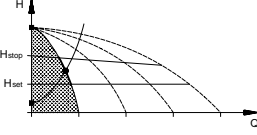
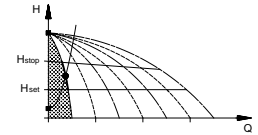
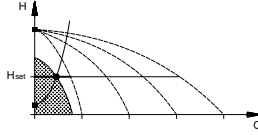
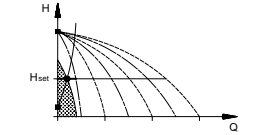
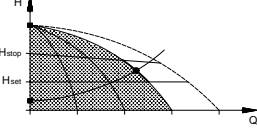
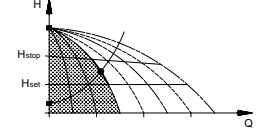
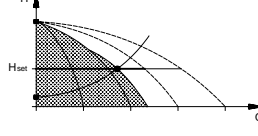
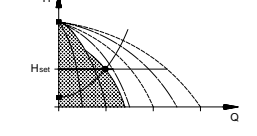
S: Some or all of the pumps in the system are mains-operated (start/stop).

F: Control 2000 features a frequency converter for the control of some of the pumps in the system.

E: Some or all of the pumps in the system are fitted with MGE motors with integrated frequency converter.

H: The system has one or two half-size pumps. (One half-size pump provides approximately the same head as one full-size pump, but only approximately half the flow).

Overview of functions

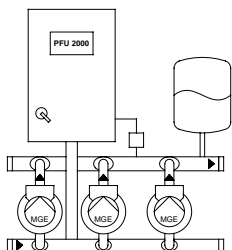
Start/stop		Variable speed	
Grundfos Hydro 2000 MS	Grundfos Hydro 2000 MSH	Grundfos Hydro 2000 MF	Grundfos Hydro 2000 MFH
 <p>TM00 2674 0294</p> <p>One pump in operation.</p>	 <p>TM00 2678 0294</p> <p>One half-size pump in operation.</p>	 <p>TM00 2680 0294</p> <p>One pump in operation via frequency converter.</p>	 <p>TM00 2677 0294</p> <p>One half-size pump in operation via frequency converter.</p>
 <p>TM00 2749 0294</p> <p>Three pumps in operation.</p>	 <p>TM00 2773 0294</p> <p>One full-size pump and one half-size pump in operation.</p>	 <p>TM00 2757 0294</p> <p>One pump in operation via frequency converter and two mains-operated pumps.</p>	 <p>TM00 2781 0294</p> <p>One half-size pump in operation via frequency converter and one mains-operated full-size pump (start/stop).</p>
 <p>TM00 2751 0294</p>	 <p>TM00 2775 0294</p>	 <p>TM00 2759 0294</p>	 <p>TM00 2783 0294</p>
<ul style="list-style-type: none"> • Maintains an almost constant pressure by cutting the pumps in or out, as required. • Pump changeover is automatic and depends on load, time and fault. • The cut-out pressure (H_{stop}) cannot be set, but is calculated automatically. 	<ul style="list-style-type: none"> • Maintains an almost constant pressure by cutting the half-size and full-size pumps in or out, as required. • The half-size pump is always started first and cut out when a full-size pump is cut in. • Pump changeover between the full-size pumps is automatic and depends on load, time and fault. • The cut-out pressure (H_{stop}) cannot be set, but is calculated automatically. 	<ul style="list-style-type: none"> • Maintains a constant pressure through continuously variable adjustment of the speed of one pump. The other pumps are cut in or out on mains operation, as required. • The frequency-converter-controlled pump is always started first. • Pump changeover is automatic and depends on load, time and fault, and all pumps are frequency-converter-controlled in rotation. • Furthermore, all pumps are controlled alternately by the frequency converter. 	<ul style="list-style-type: none"> • Maintains a constant pressure through continuously variable adjustment of the speed of one half-size pump. The other pumps are mains-operated. • The frequency-converter-controlled half-size pump is always started first. • Pump changeover is automatic and depends on load, time and fault.

Variable speed

Grundfos Hydro 2000 ME

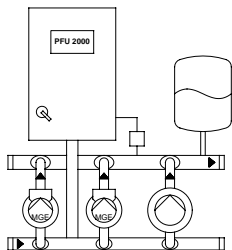
Grundfos Hydro 2000 MEH

Grundfos Hydro 2000 MES



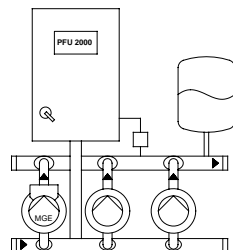
TIM00 7983 2296

One pump in operation.



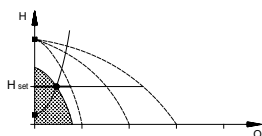
TIM00 7984 2296

One half-size pump with MGE motor in operation.



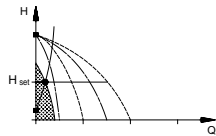
TIM00 7985 2296

One pump with MGE motor in operation.



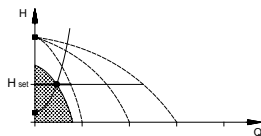
TIM00 7995 2296

Three pumps in operation.



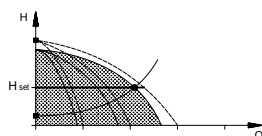
TIM00 7994 2296

One half-size pump with MGE motor and the full-size pump in operation.



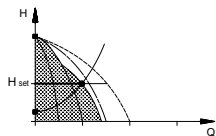
TIM00 7993 2296

One pump with MGE motor and mains-operated pumps in operation.



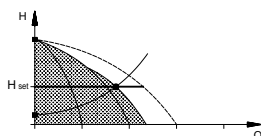
TIM00 7996 2296

- Maintains a constant pressure through continuously variable adjustment of the speed of the pumps connected.
- The system performance is adjusted to the demand through cutting in/out of pumps and parallel control of the pumps in operation.
- Pump changeover is automatic and depends on load, time and fault.



TIM00 7997 2296

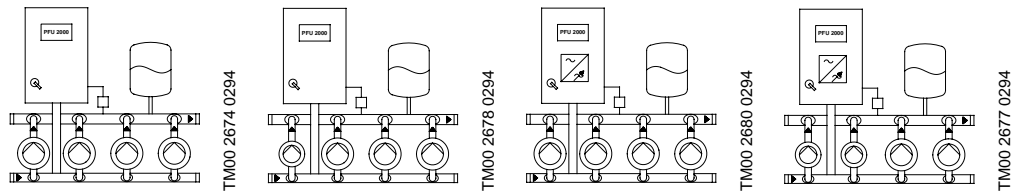
- Maintains a constant pressure through continuously variable adjustment of the speed of the two half-size pumps with MGE motors, while the full-size pump is mains-operated (start/stop).
- The half-size pumps always start first.
- Pump changeover is automatic and depends on load, time and fault.



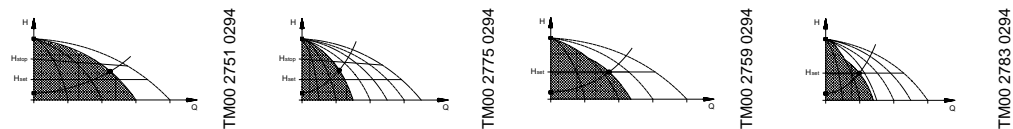
TIM00 7998 2296

- Maintains a constant pressure through continuously variable adjustment of the speed of one pump. The other pumps are cut in or out on mains operation, according to demand, thus achieving a performance corresponding to the consumption.
- The pump with MGE motor will always be started first.
- Pump changeover is automatic and depends on load, time and fault.

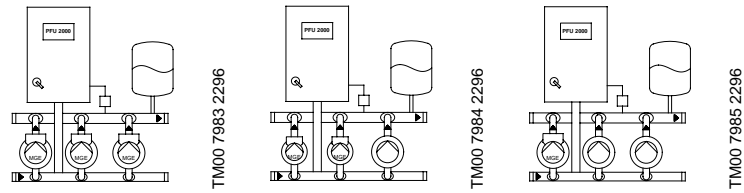
System overview



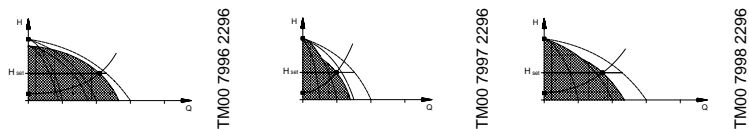
System	MS	MSH	MF	MFH
Range				
Number of full-size pumps	2-6	1-3	2-6	1-2
Motor [kW]	0.37-30	0.75-30	0.37-30	3-30
Number of half-size pumps	-	1	-	2
Mechanical version				
In-line piping	●	●	●	●
Stainless-steel manifold	●	●	●	●
Stainless-steel base frame	●	●	●	●
Identical pump size	●	-	●	-
Control				
PFU 2000 (simple operation)	●	●	●	●
Bus communication	●	●	●	●
Pump changeover	●	○	●	○
Soft start	-	-	○	○
Constant pressure	-	-	●	●
Friction-loss compensation	○	○	●	●
External frequency converter	-	-	●	●
Integrated frequency converter (MGE)				
Quick control	○	-	●	-
Application				
Water supply	-	-	●	●
Industry	-	-	●	-
Irrigation	●	●	○	○
Accessories				
PMU 2000 (advanced operation)	●	●	●	●
Diaphragm tank	●	-	●	●
Dry-running protection	●	●	●	●
PCU 2000 (Communication Unit)	●	●	●	●
Expansion joint	●	●	●	●
Bypass	●	●	●	●
Safety switch	●	●	●	●
Optional positioning of non-return valve	●	●	●	●



- Standard
- Available on request



System	ME	MEH	MES
Range			
Number of full-size pumps	2-4	1-2	2-4
Motor (kW)	0.37-22	0.75-22	0.37-22
Number of half-size pumps	-	2	-
Mechanical version			
In-line piping	●	●	●
Stainless-steel manifold	●	●	●
Stainless-steel base frame	●	●	●
Identical pump size	●	-	-
Control			
PFU 2000 (simple operation)	●	●	●
Bus communication	●	●	●
Pump changeover	●	○	○
Soft start	●	○	○
Constant pressure	●	●	●
Friction-loss compensation	●	●	●
External frequency converter	-	-	-
Integrated frequency converter (MGE)	●	●	●
Quick control	●	-	●
Application			
Water supply	●	●	●
Industry	●	-	●
Irrigation	○	○	○
Accessories			
PMU 2000 (advanced operation)	●	●	●
Diaphragm tank	●	●	●
Dry-running protection	●	●	●
PCU 2000 (Communication Unit)	●	●	●
Expansion joint	●	●	●
Bypass	●	●	●
Safety switch	●	●	●
Optional positioning of non-return valve	●	●	●



- Standard
- Available on request

General information

When sizing a booster set, it is important to ensure

- that the performance of the booster set can meet the highest possible demand both in terms of flow and pressure.

- that the booster set is not oversized. This is important in relation to the installation and operating costs. If required, the performance can always be enhanced at a later stage by adding one or more pumps connected in parallel.

Consumption pattern

The consumption pattern can be illustrated in different ways:

24-hour profile

A 24-hour profile shows the consumption at different times of the day.

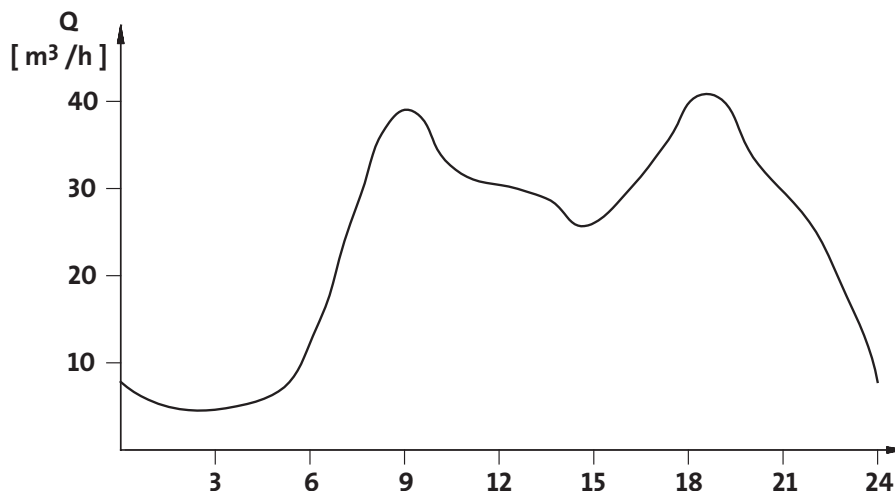


Fig. 6 24-hour profile

Duty-time profile

Based on the 24-hour profile, a **duty-time profile** is worked out.

This profile is used to give an overview of how long the system is operating at a specific flow.

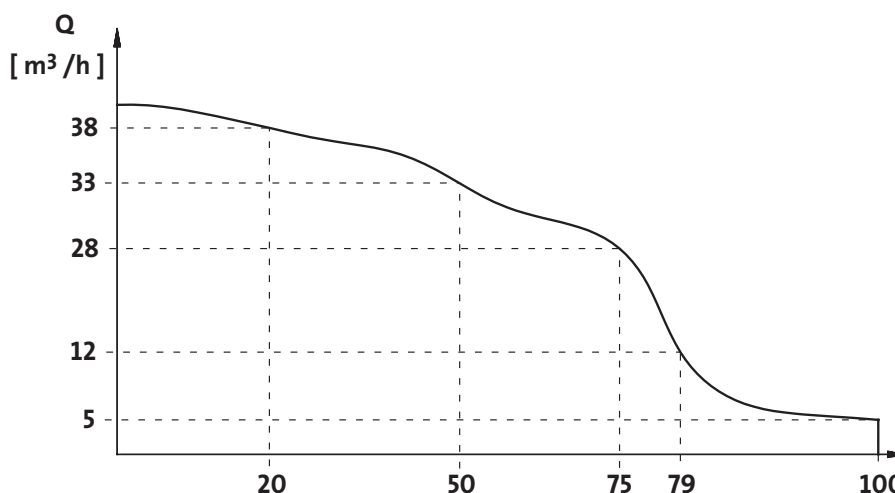


Fig. 7 Duty-time profile

The example in fig. 7 shows the following:

- 100% of the time: flow $\geq 5 \text{ m}^3/\text{h}$
- 79% of the time: flow $> 12 \text{ m}^3/\text{h}$
- 75% of the time: flow $> 28 \text{ m}^3/\text{h}$
- 50% of the time: flow $> 33 \text{ m}^3/\text{h}$
- 20% of the time: flow $\geq 38 \text{ m}^3/\text{h}$

TM00 9188 1303

TM00 9189 1303

System selection

When sizing, the following should be considered:

1. The **consumption pattern** to be met by the booster set, including
 - how much does the consumption vary,
 - how suddenly does the consumption vary. See page 14.
2. The distribution of consumption over **time**. See page 14.
3. The **type** of booster set to be selected. The selection of type should be based upon the consumption pattern. The following types are available:
 - MS, MSH, MF, MFH, ME, MEH, MES. See page 14.
4. The **system size** to be selected (pump performance and number of pumps). The selection of system size should be based upon the consumption pattern, considering the following aspects:
 - efficiency,
 - NPSH value,
 - are standby pumps required? See page 15.
5. The **diaphragm tank** to be selected. See page 16.
6. The **dry-running protection** to be selected. See page 16.
7. Is **friction-loss compensation** required? See page 16.

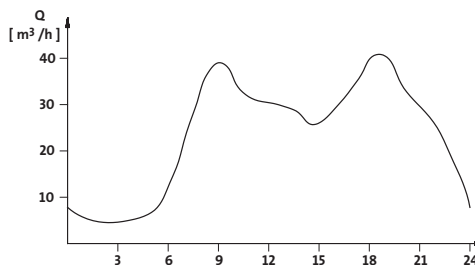


Fig. 8 Consumption pattern

TM00 9186 1303

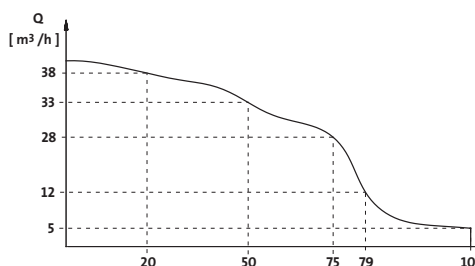


Fig. 9 Duty-time profile

TM00 9189 1303

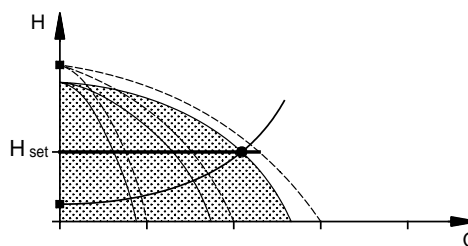


Fig. 10 System/control type

TM00 7996 2296

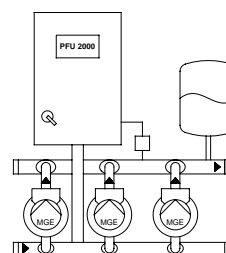


Fig. 11 System size

TM00 7983 2296

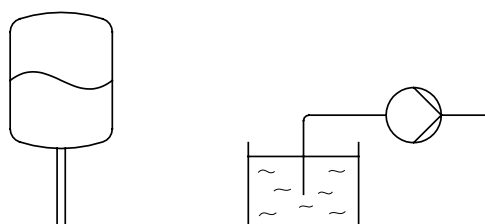


Fig. 12 Accessories

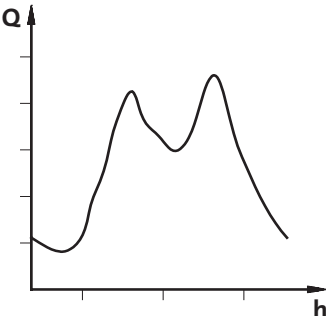
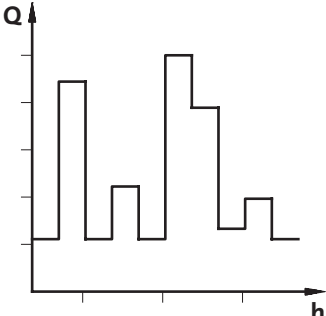
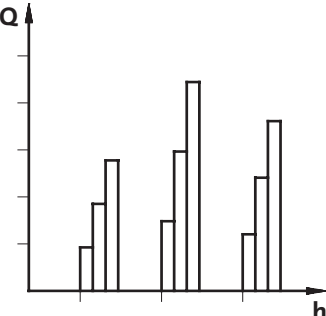
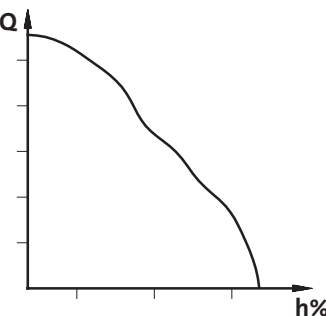
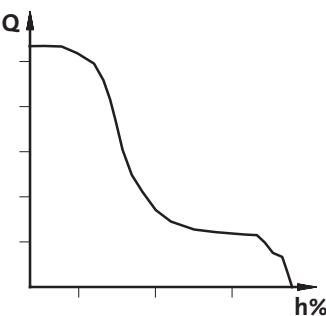
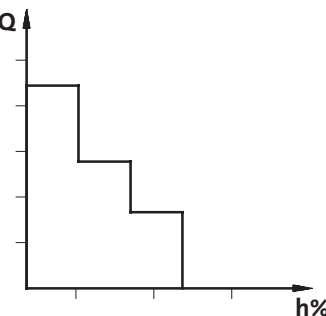
TM00 9397 4896

Type of booster set

The booster set type should be selected on the basis of the consumption pattern, i.e. the 24-hour and duty-time profiles.

If the consumption is highly variable and optimum comfort is required, pumps with continuously variable speed control should be used.

Examples of different consumption patterns and their 24-hour and duty-time profiles:

	Water supply	Industry	Irrigation
24-hour profile	 <p style="text-align: right; font-size: small;">TM00 9197 1303</p>	 <p style="text-align: right; font-size: small;">TM00 9200 1303</p>	 <p style="text-align: right; font-size: small;">TM00 9198 1303</p>
	<p>Flow: High degree of variation.</p> <p>Pressure: Constant.</p>	<p>Flow: High and sudden variation.</p> <p>Pressure: Constant.</p>	<p>Flow: Constant and known.</p> <p>Pressure: Constant.</p>
Duty-time profile	 <p style="text-align: right; font-size: small;">TM00 9201 1303</p>	 <p style="text-align: right; font-size: small;">TM00 9199 1303</p>	 <p style="text-align: right; font-size: small;">TM00 9202 1303</p>
	<p>As appears, consumption is highly variable.</p> <p>Continuously variable speed control of the pumps is recommended.</p> <p>It is expedient to use any of the systems with half-size pumps.</p> <p>Recommended system types: MF, MFH, ME, MEH, MES.</p>	<p>As appears, consumption is highly variable and sudden.</p> <p>Continuously variable speed control of the pumps is recommended.</p> <p>Systems using half-size pumps should not be used if the variation in consumption over a very short time is higher than the performance of one full-size pump.</p> <p>Recommended system types: MF, ME, MES.</p>	<p>As appears, variations in consumption are regular yet known.</p> <p>Simple control is recommended.</p> <p>Any system with half-size pumps may be used.</p> <p>Recommended system types: MS, MSH, (MF, ME, MES).</p>

System size

Pump size

As mentioned before, the system should be capable of meeting the highest possible demand. But as the highest demand will often occur for a comparatively short part of the duty period only, it is important to select a type of pump which can meet the varying demand throughout the duty period.

It is not recommended to select a pump type whose performance is lower than the lowest possible consumption. Nor is it recommended to select a pump type whose performance is higher than the highest possible consumption.

Efficiency

In order to achieve the optimum operating economy, attempts should be made to select the pumps on the basis of optimum efficiency, i.e. the pumps should, as far as possible, operate within their nominal operating ranges.

As the system is always sized on the basis of the highest possible consumption, meaning that it will always be regulated down, it is important always to have the duty point of the pumps to the right on the efficiency curve (see the pump performance curve), in order to keep efficiency high when consumption drops.

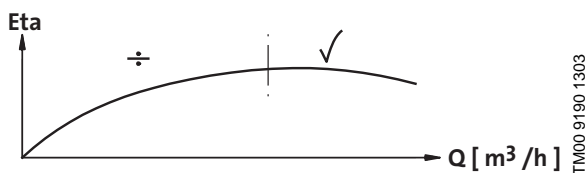


Fig. 13 Pump efficiency curve

The optimum efficiency is ensured by selecting a duty point within the hatched area.

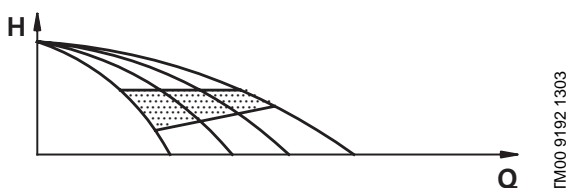


Fig. 14 Area of optimum efficiency

NPSH

In order to avoid cavitation, never select a pump whose duty point lies too far to the right on the NPSH curve. Always check the NPSH values of the pumps at the highest possible consumption (see the pump performance curve).

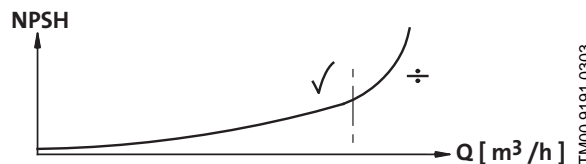


Fig. 15 NPSH curve

Standby pump

To most customers reliable supplies are a major factor. Often it is not acceptable if the system does not maintain its maximum flow even during pump repairs or breakdown. In order to prevent any disruption of the supply in such a situation, the system may be sized with a standby pump.

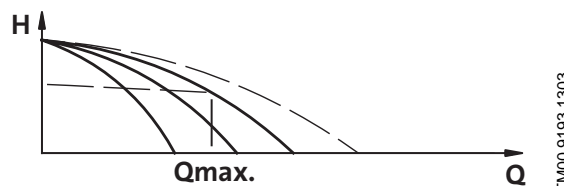


Fig. 16 System with standby pump

If it is acceptable that the system does not produce the required pressure but an unchanged flow during pump repair and breakdown, a standby pump may, in certain circumstances, not be required.

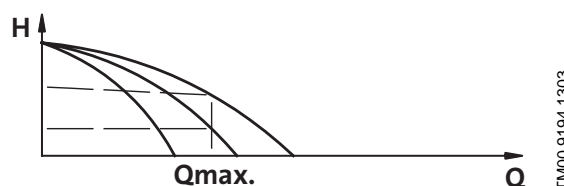


Fig. 17 System without standby pump

Diaphragm tank

The need for a diaphragm tank should be estimated on the basis of the following general guidelines:

- All Hydro 2000 systems installed inside buildings must be equipped with a diaphragm tank due to the auto-stop function.
- Hydro 2000 systems used in water supply applications do not have to be equipped with a diaphragm tank as miles of PVC piping partly hold the necessary capacity, partly have the elasticity to give sufficient capacity.
- The need for a diaphragm tank for Hydro 2000 systems used in industrial applications should be estimated from situation to situation on the basis of the individual factors on site.

Full-size pump type	Recommended diaphragm tank size [litres]						
	MS	MSH	MF	MFH	ME	MEH	MES
CR(E) 3	120	-	8	-	8	-	8
CR(E) 5	180	-	18	-	18	-	18
CR(E) 10	325	180	33	18	33	18	33
CR(E) 15	800	-	80	-	80	-	80
CR(E) 20	1300	800	120	33	120	33	120
CR(E) 32	2600	1300	180	120	180	120	180
CR(E) 45	3700	2600	325	180	325	180	325
CR(E) 64	5200	3700	325	180	325	325	325
CR(E) 90	7300	5200	325	325	325	325	325

The size of the obligatory diaphragm tank can also be calculated from the following formula:

$$V = \frac{Q \times 1000 \times (1 + p_{\text{set}} + \text{On/off}_{\text{band}})}{4 \times n_{\text{max}} \times \text{On/off}_{\text{band}}} \times \frac{1}{k}$$

V = Tank volume [litres]

Q = Mean flow [m³/h]
 Q = rated flow for the smallest pump in Hydro 2000 S systems, and Q = 25% of rated flow for the smallest pump in Hydro 2000 F and E systems.

On/off_{band} = Difference between setpoint and stop pressure [bar]

p_{set} = Setpoint [bar]

k = 0.9 for Hydro 2000 S
 = 0.7 for Hydro 2000 E and F

n_{max} = Maximum number of starts/stops per hour.

Dry-running protection

To protect the booster set against dry running, dry-running protection is obligatory. The actual inlet conditions determine the type of dry-running protection to be used.

If the system draws from a tank, dry-running protection should be in the form of a level switch or electrode relay.

If the system has an inlet pressure, a pressure transmitter should be used to protect against dry running.

Example of Hydro 2000 MS CR 10 system:

Q = 8 m³/h

On/off_{band} = 1 bar

p_{set} = 4.0 bar

n_{max}

CR 3, 5 and 10 = 40 per hour

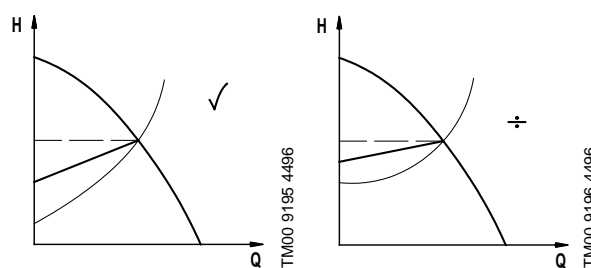
CR 15 to CR 90 = 20 per hour

$$V = \frac{8 \times 1000 \times (1 + 4 + 1)}{4 \times 40 \times 1} \times \frac{1}{0.9} = 333 \text{ [litres]}$$

On the basis of this calculation, choose a 325-litre tank.

Friction-loss compensation

Friction-loss compensation often improves the economy of the system. The system characteristic determines whether friction-loss compensation can be used or not.



Friction-loss compensation can be used.

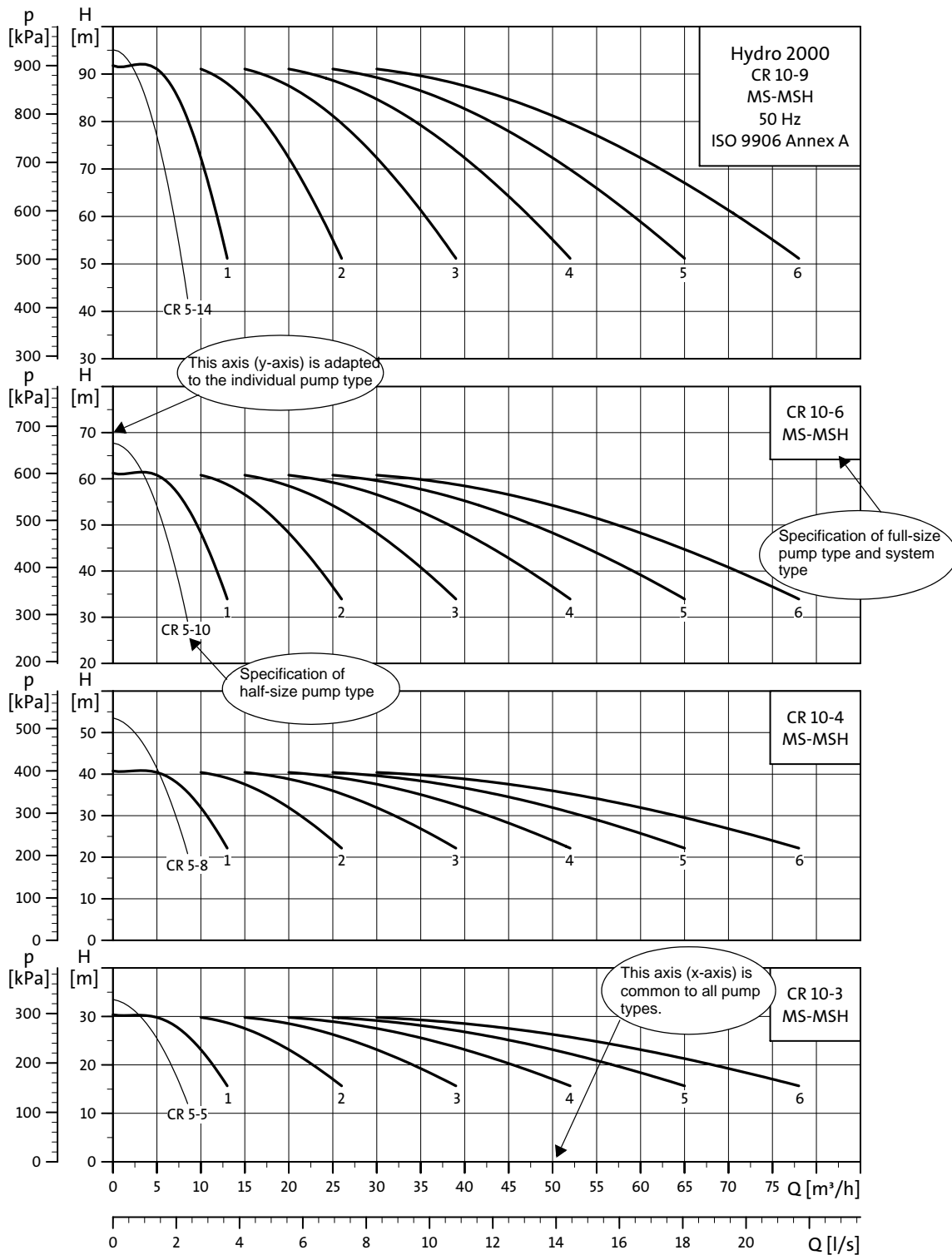
Friction-loss compensation cannot be used.

Understanding the curve charts

The curves should be read as follows:

The x-axis, giving the flow (Q) in m^3/h , is common to all the curves, whereas the y-axis, giving the head (H) in m, has been adapted to the individual pump type.

When operating systems with half-size pumps, the performance of one half-size pump is illustrated in the curve chart as a thin curve. The half-size pump type can be read in the lower left corner.



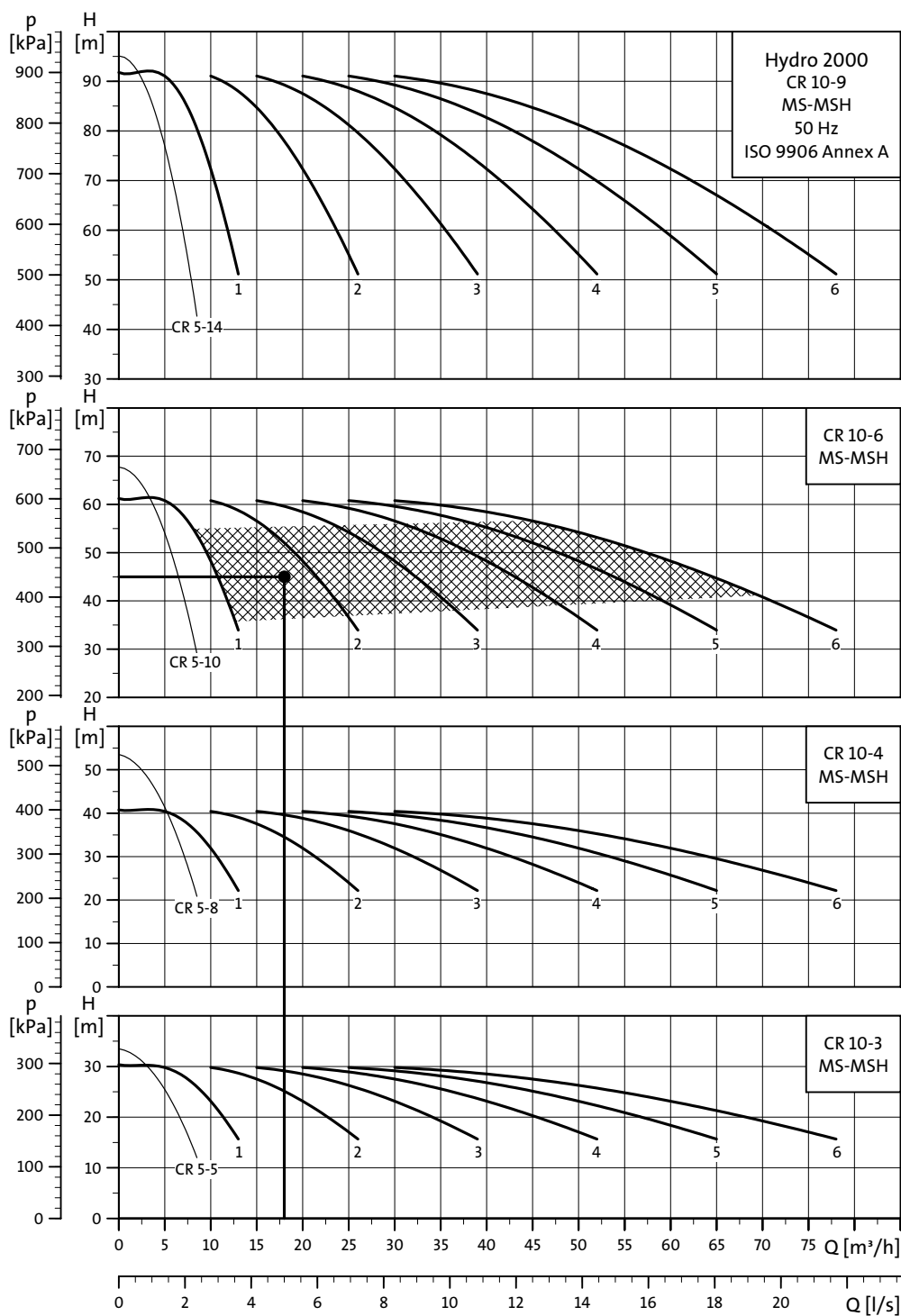
TM02 7544 3803

Example: How to select a system

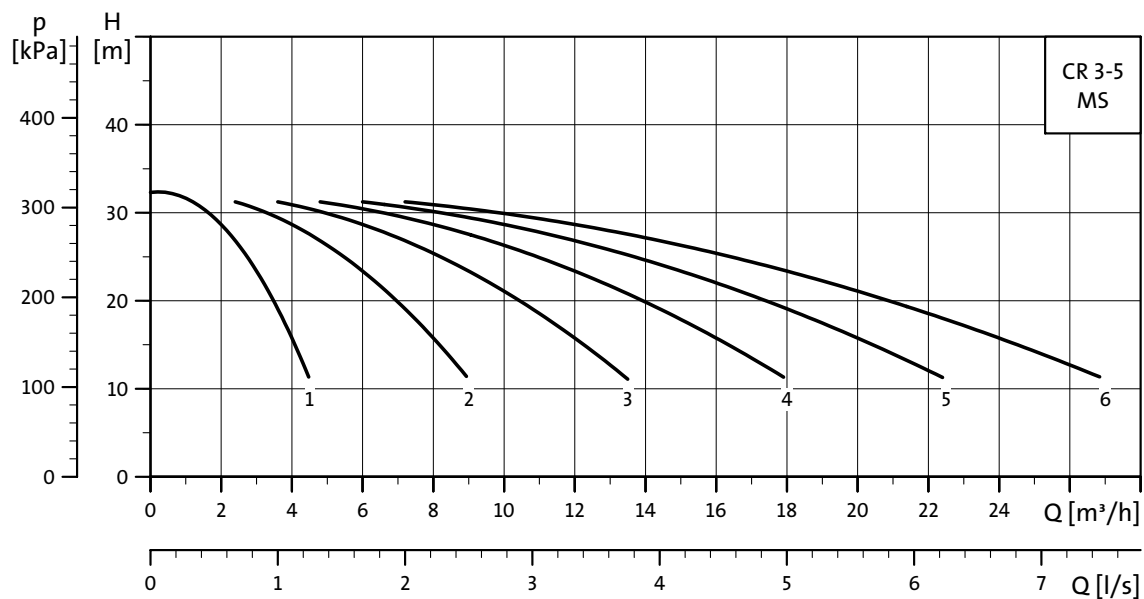
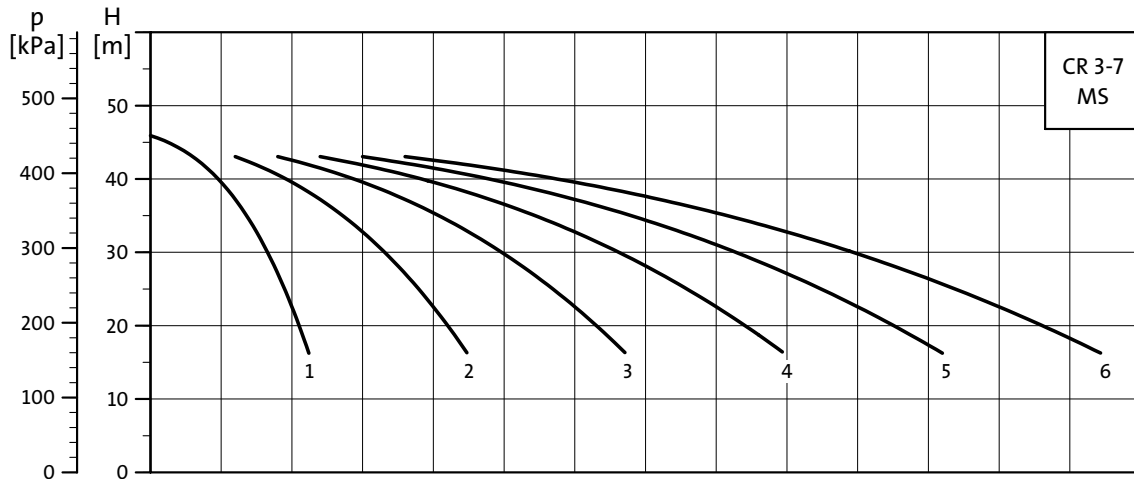
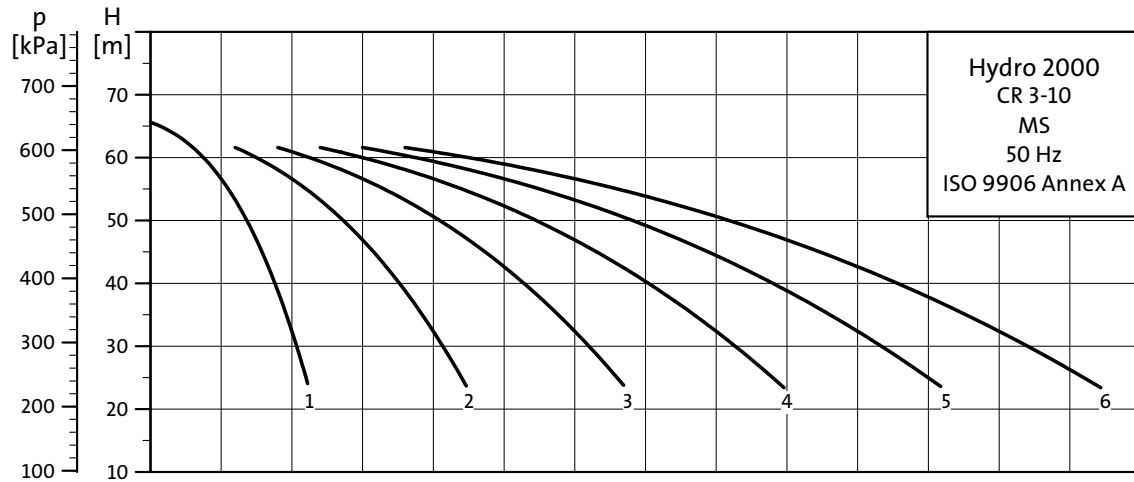
- A head of 45 m is required.
The pump type best meeting this specification is found by means of the y-axis, e.g. CR 10-6.
Draw a rightward, horizontal line from the head required.

- A flow of 18 m³/h is required.
Now draw an upward, vertical line from the specified flow. The intersection of the two lines gives the number of pumps required for the system (2 CR 10-6).

Only systems whose operating ranges lie within the hatched area of the example should be selected.



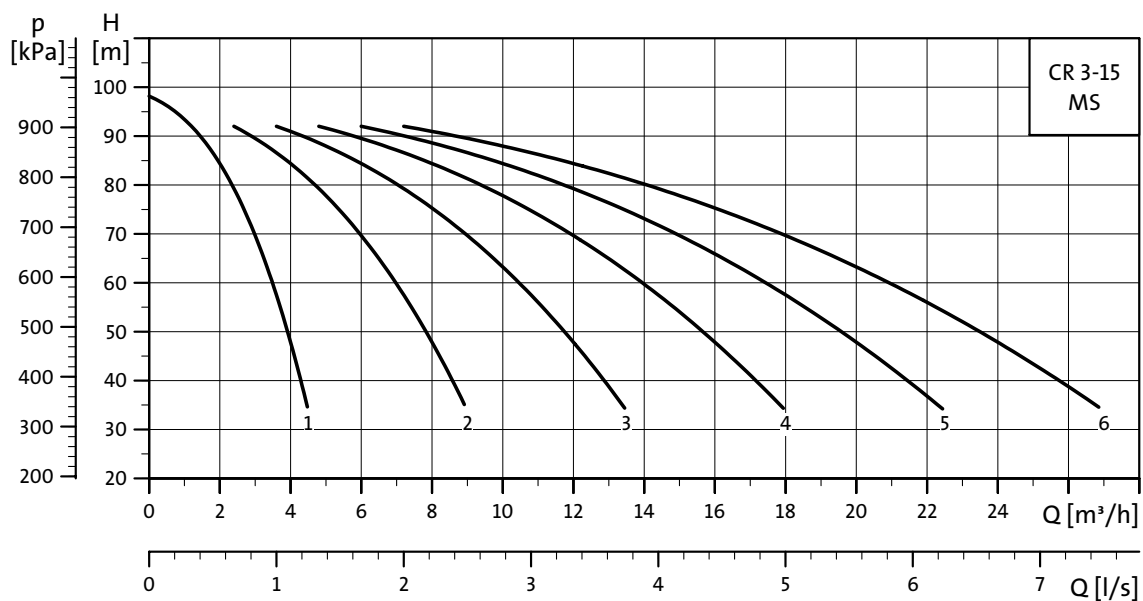
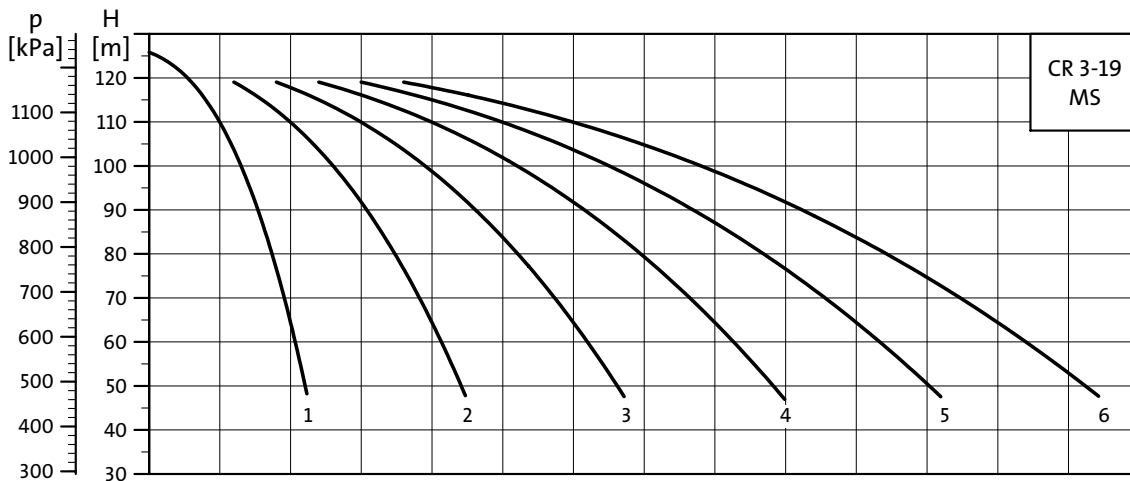
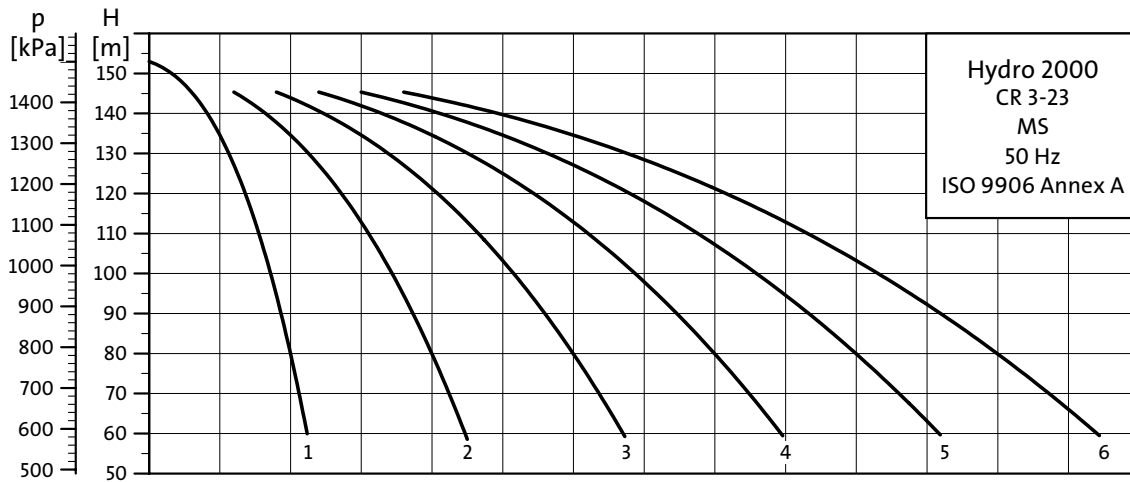
TM02 7578 3803



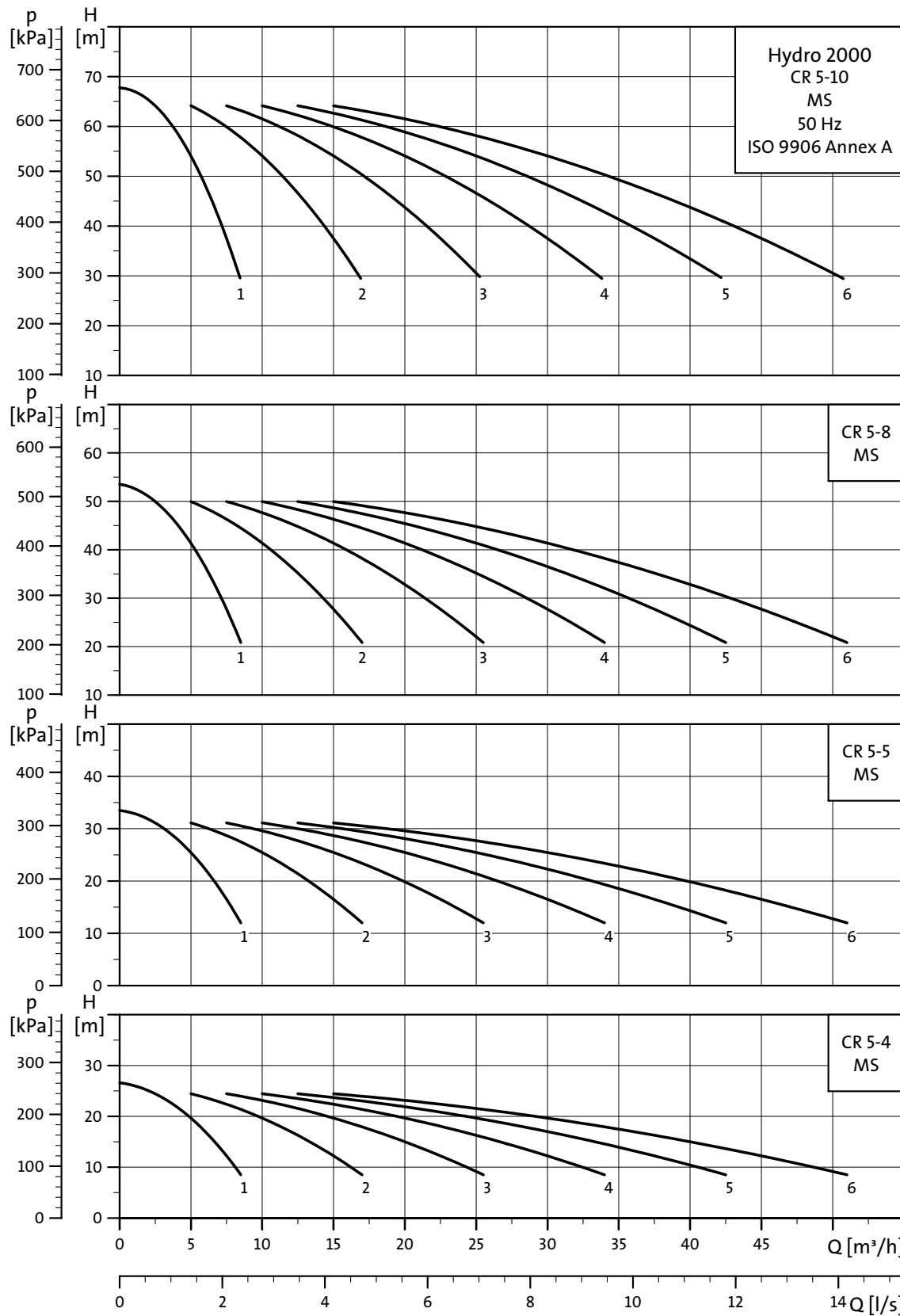
TM00 8763 3803

Performance curves

Hydro 2000 S
CR 3



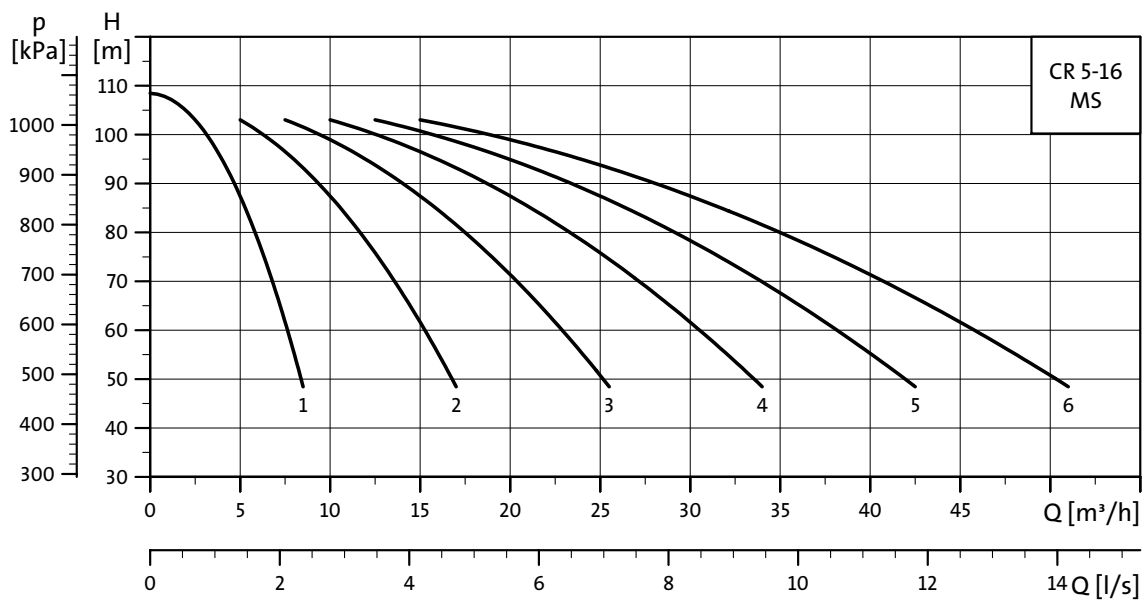
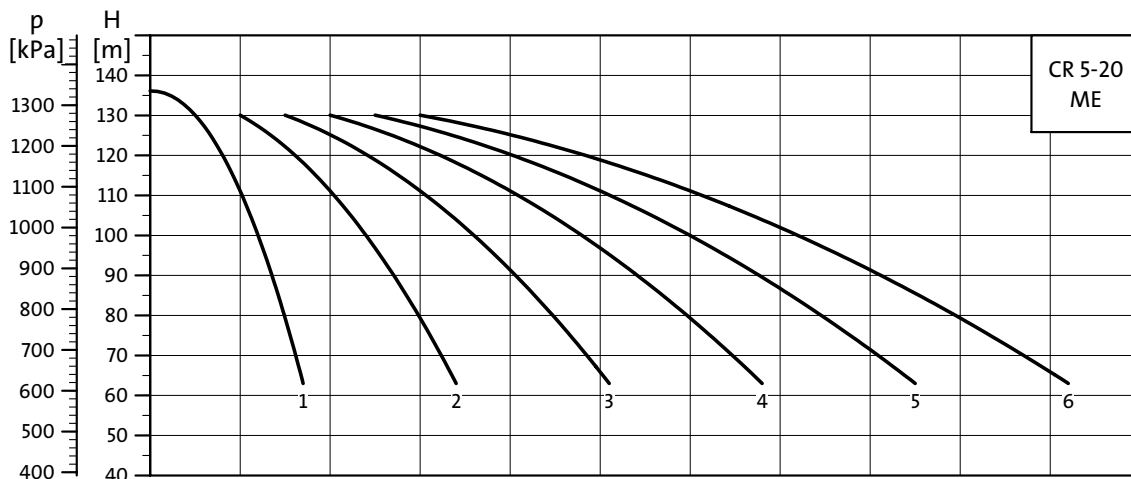
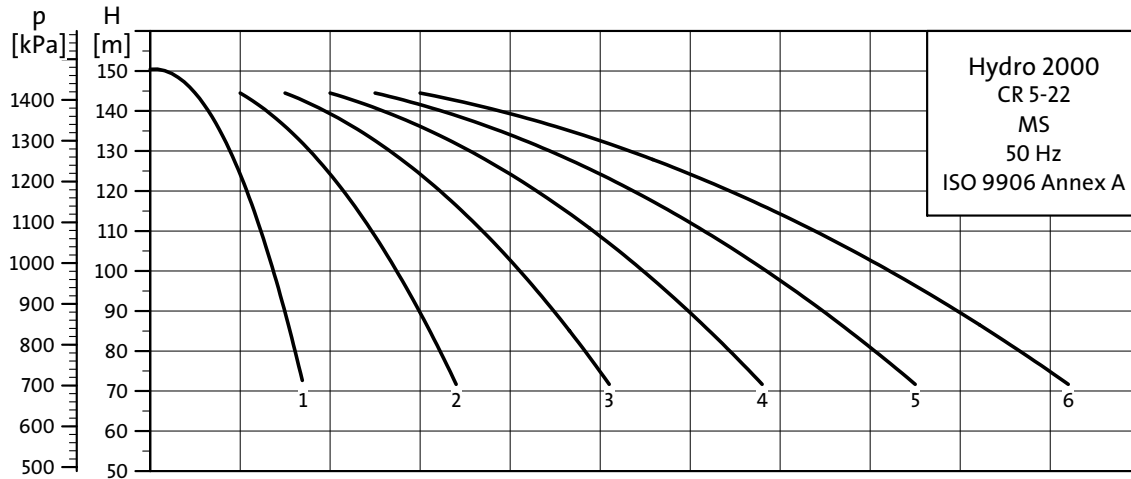
TM00 8765 3803



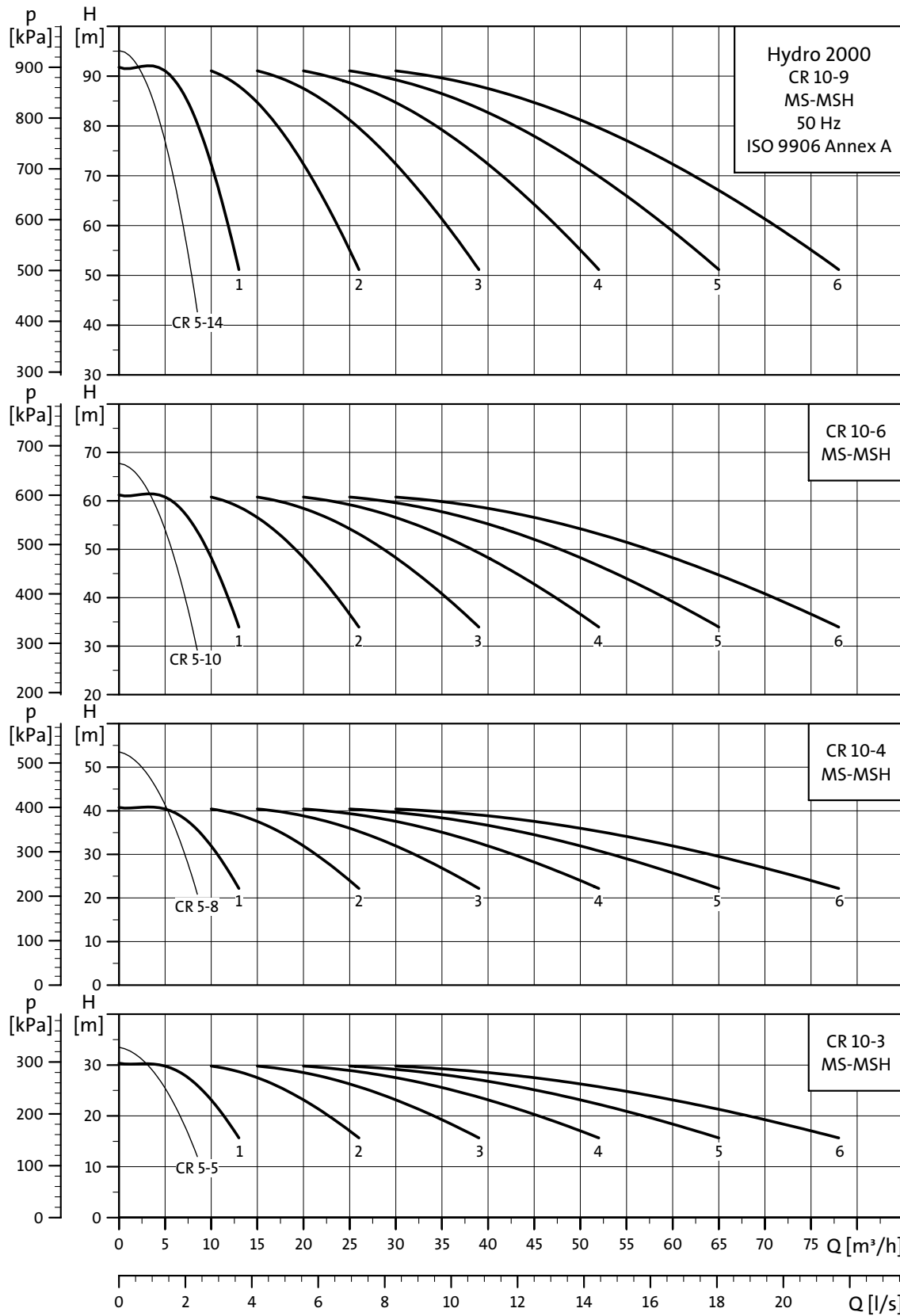
TM00 8771 3803

Performance curves

Hydro 2000 S
CR 5



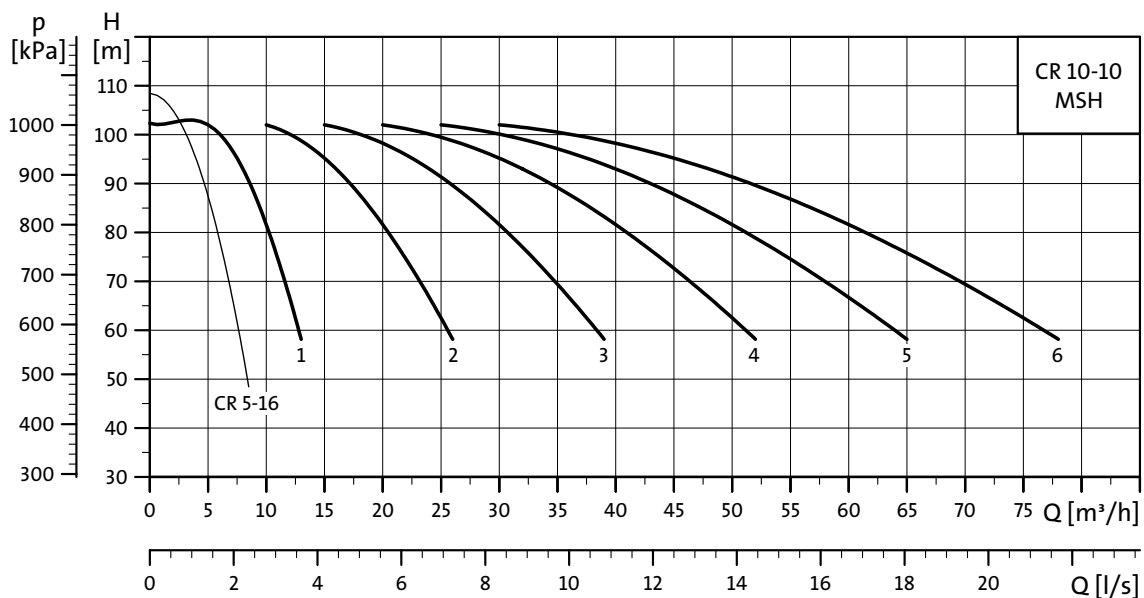
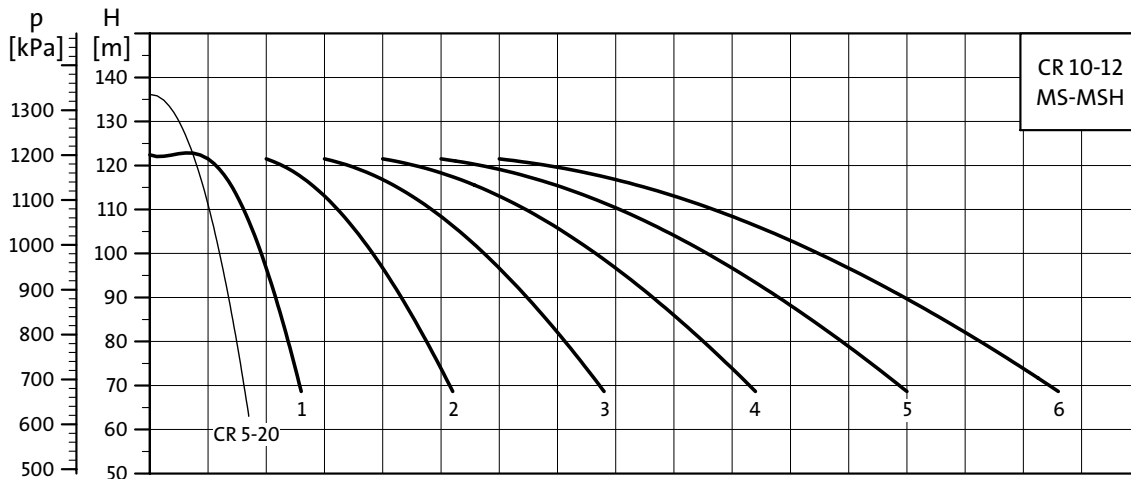
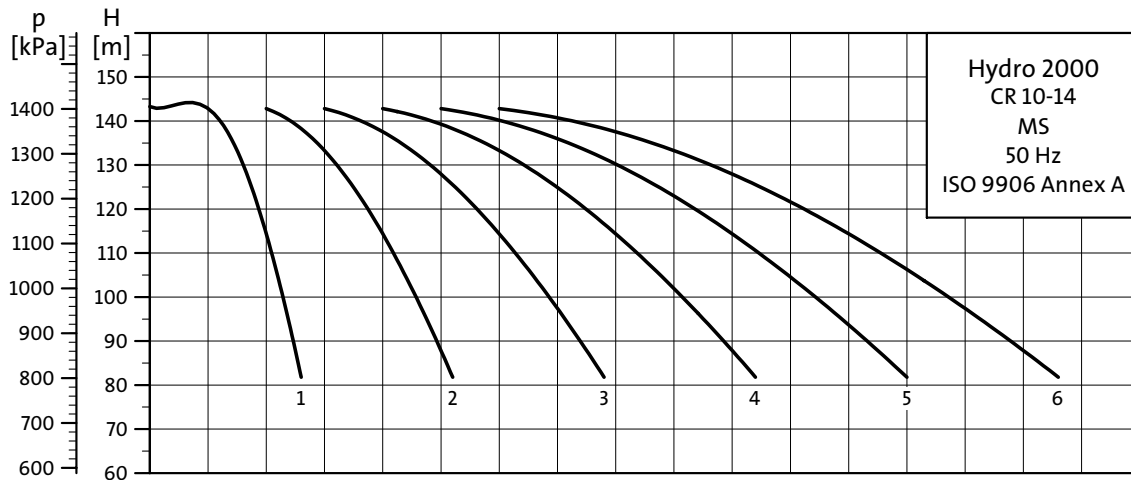
TM00 8774 3803



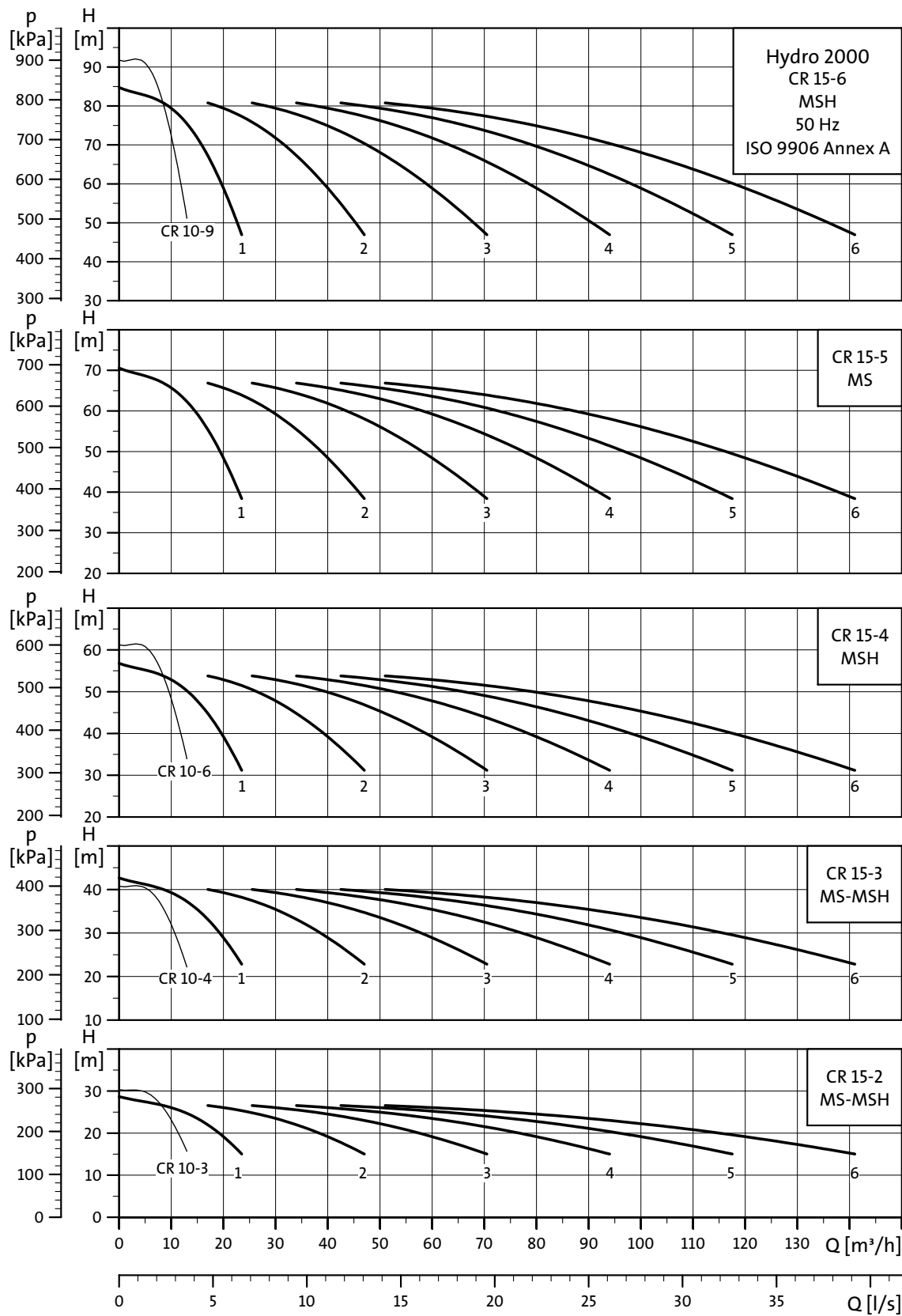
TM02 7544 3803

Performance curves

Hydro 2000 S
CR 10



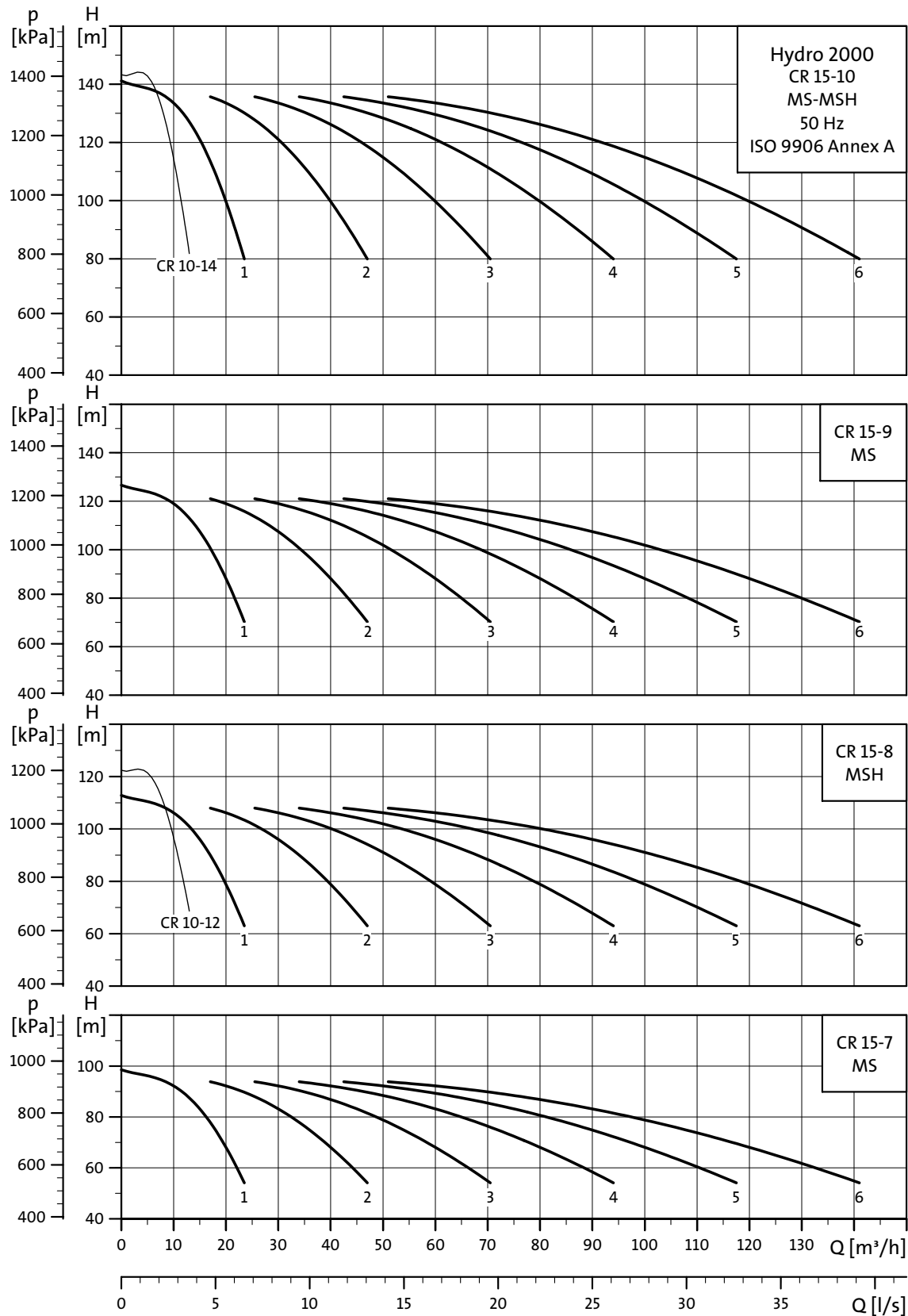
TM02 7545 3803



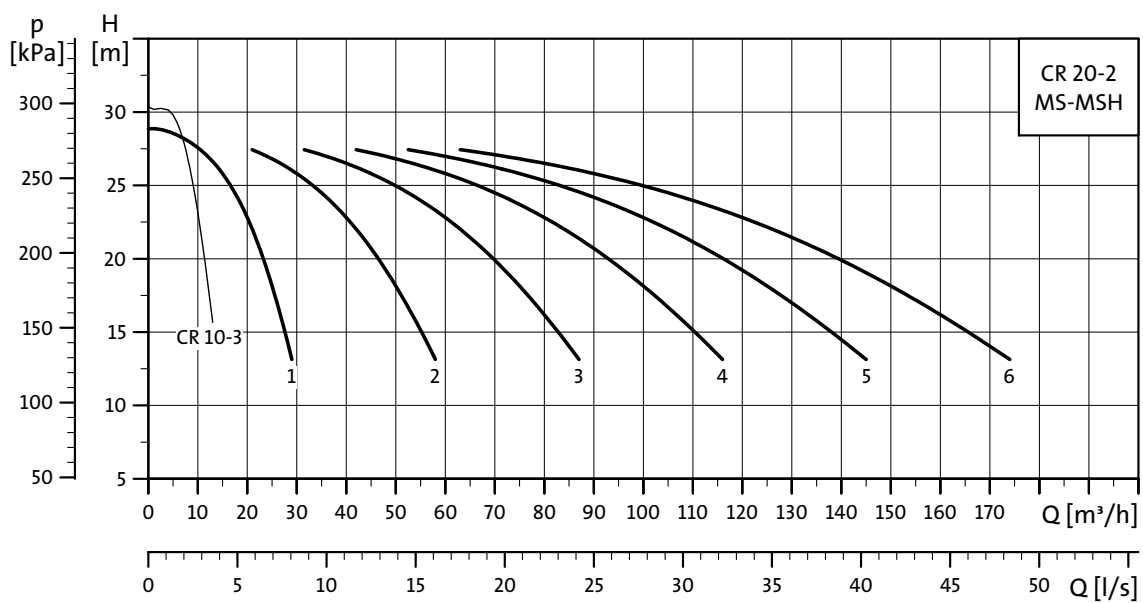
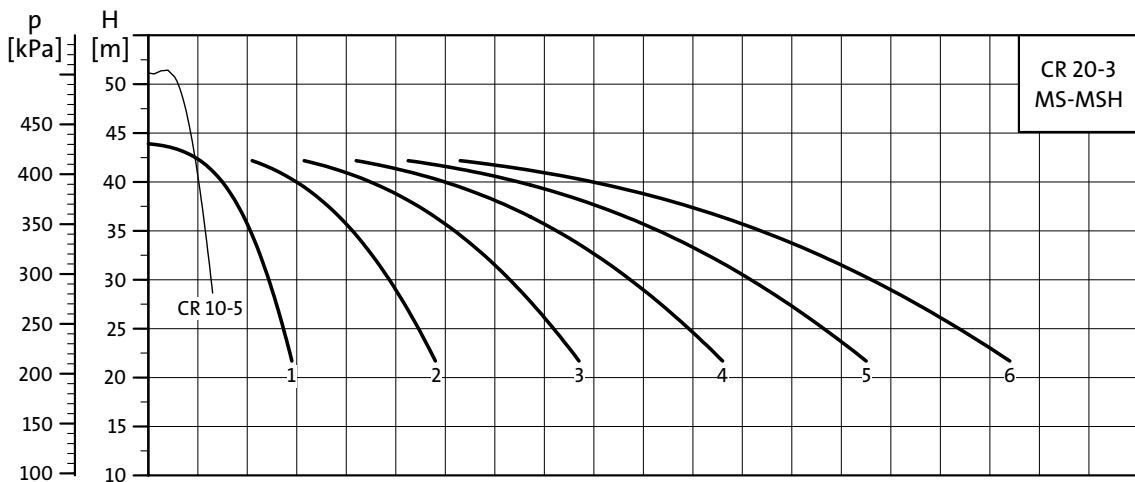
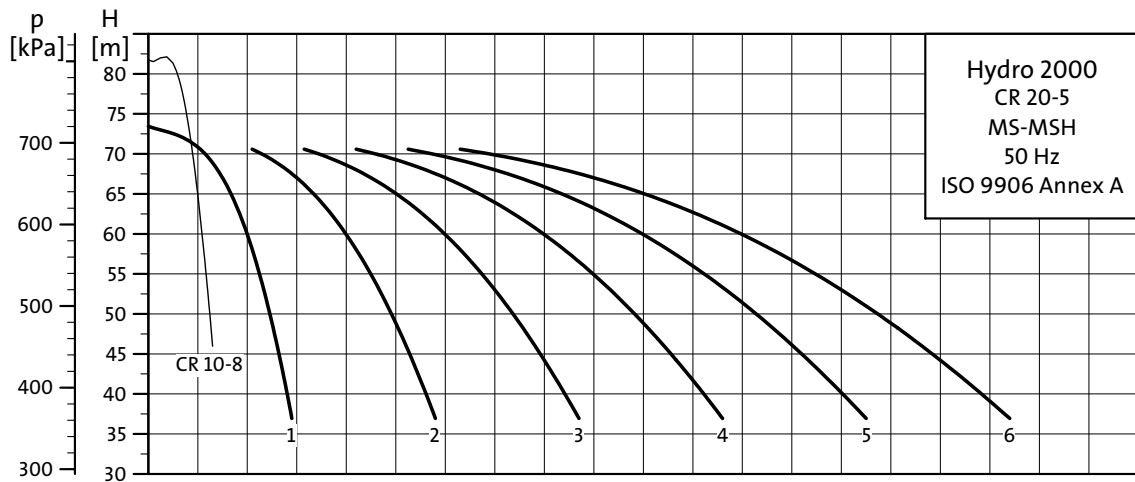
TM02 7546 3803

Performance curves

Hydro 2000 S
CR 15



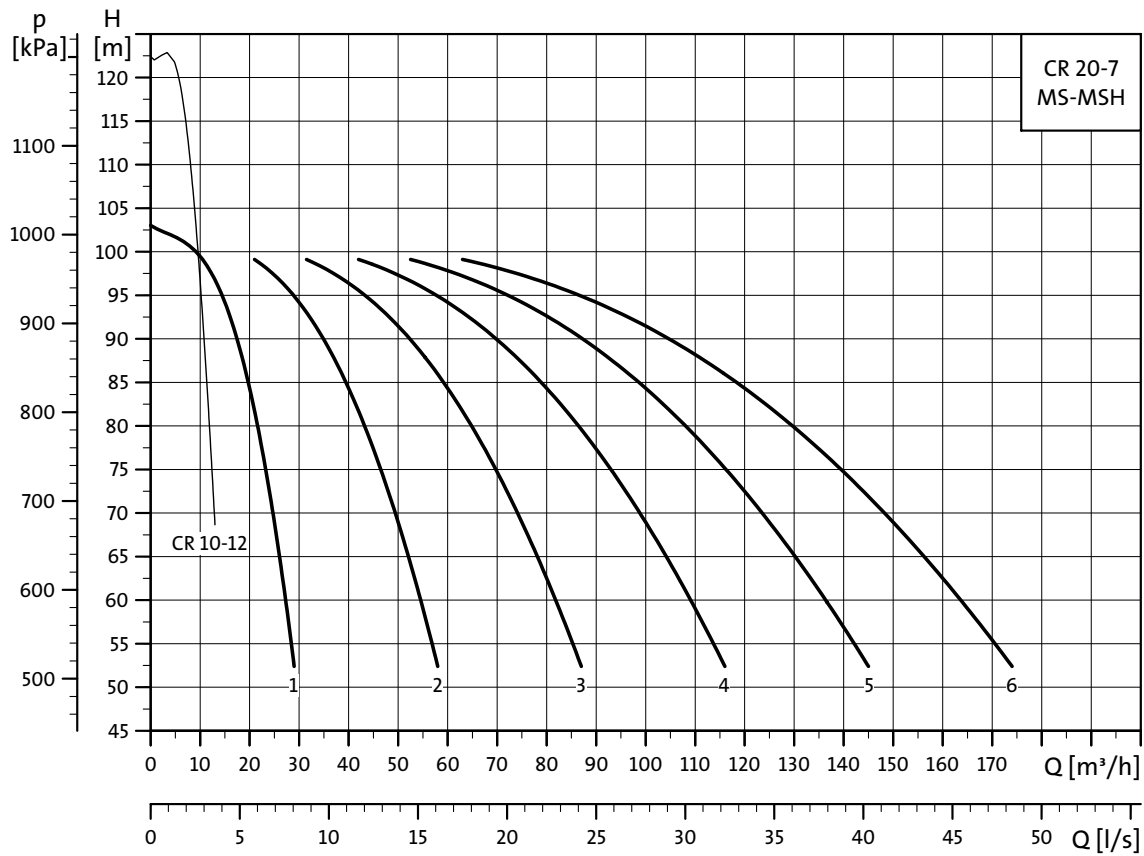
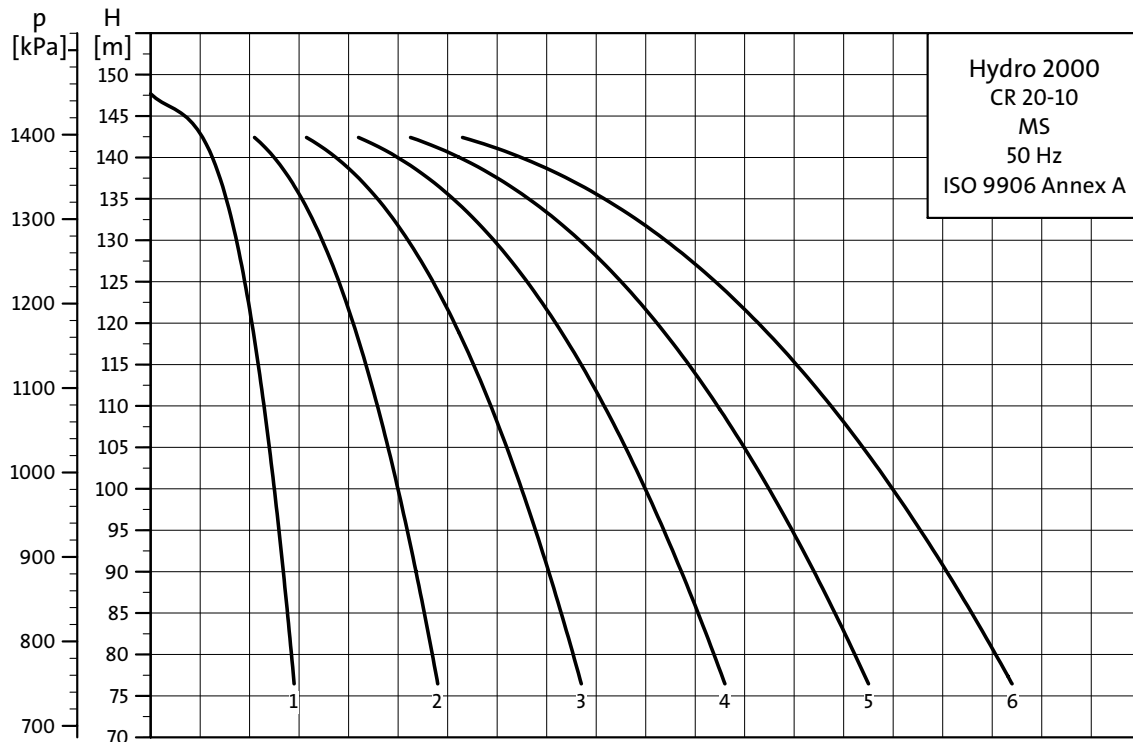
TM02 7547 3803



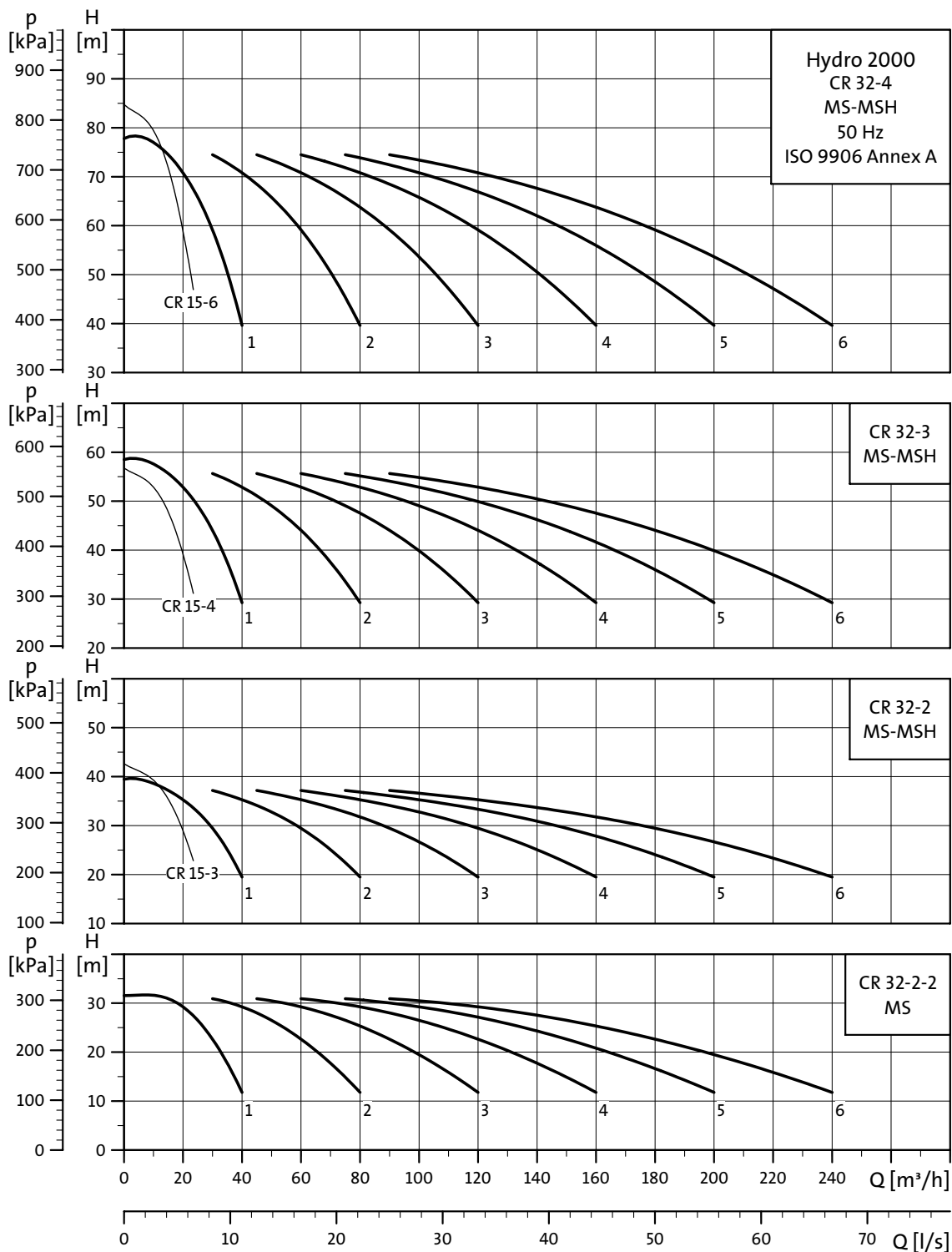
TM02 7548 3803

Performance curves

Hydro 2000 S
CR 20



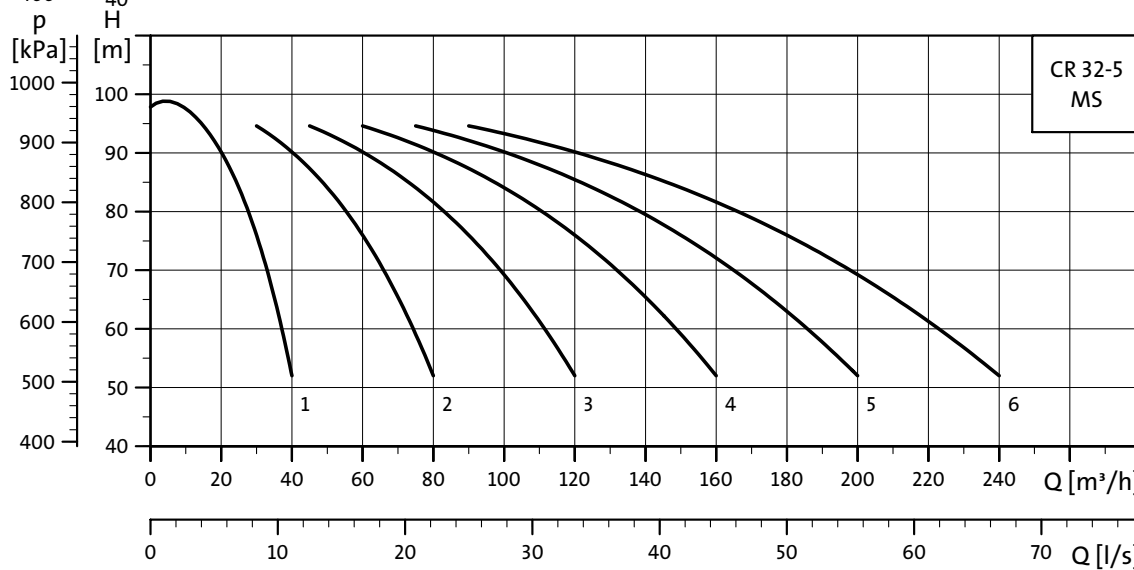
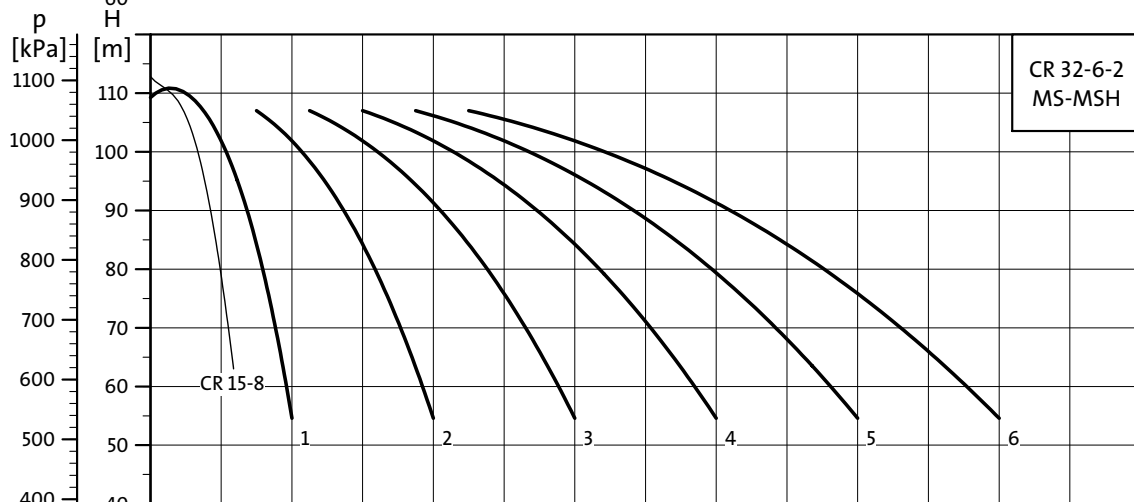
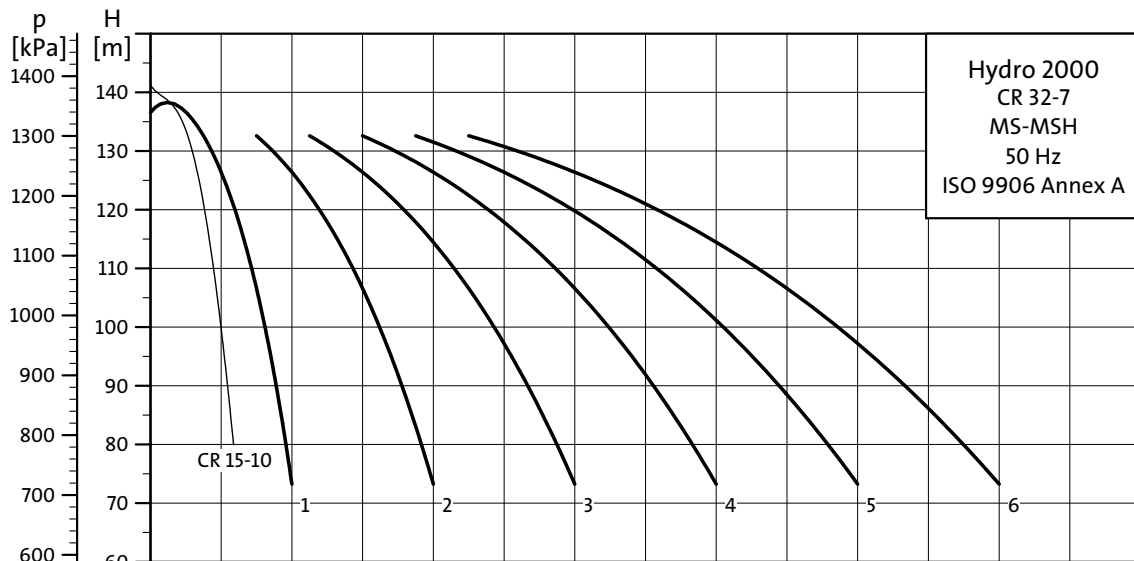
TM02 7549 3803



TM01 2763 3803

Performance curves

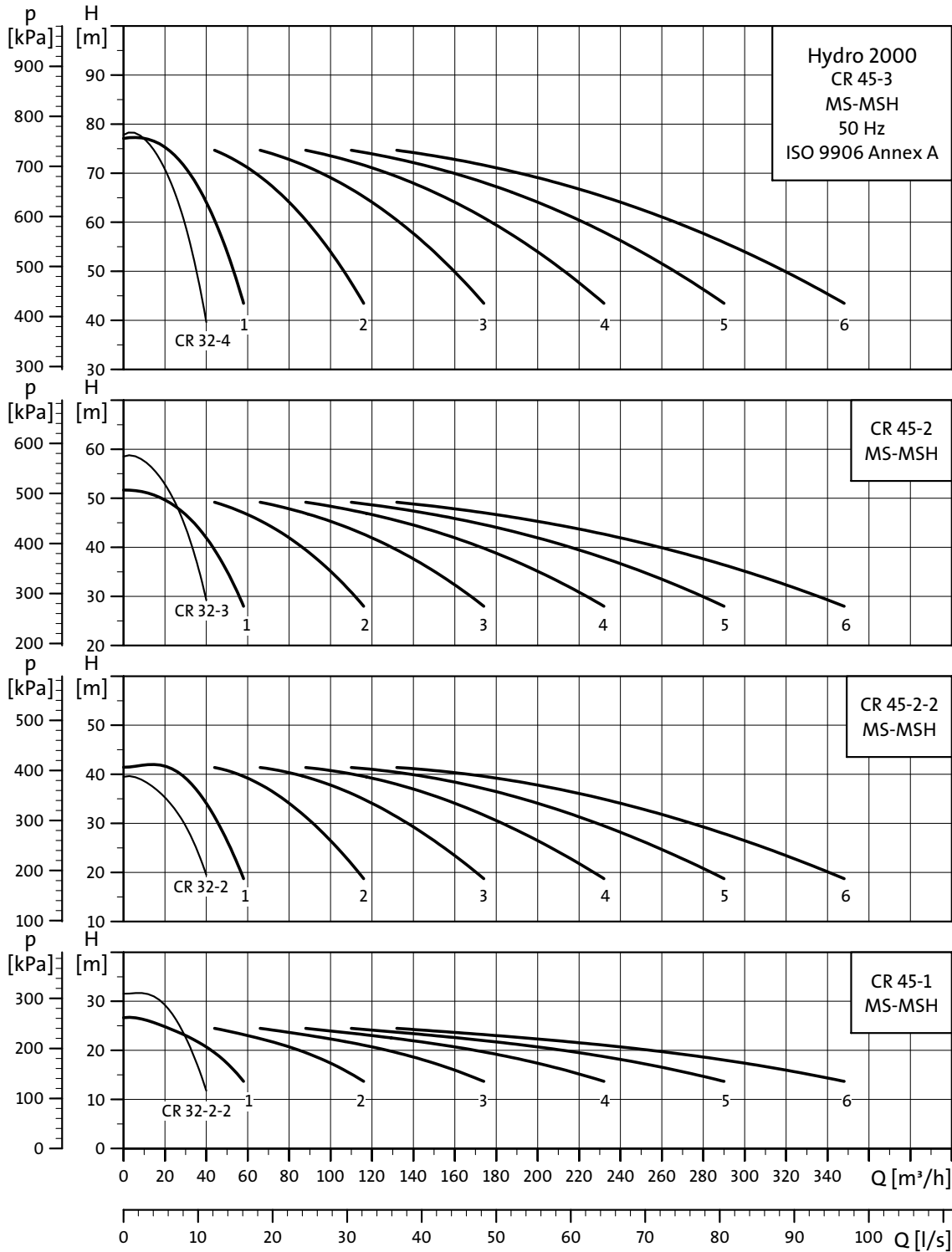
Hydro 2000 S
CR 32



TM01 2764 3803

Performance curves

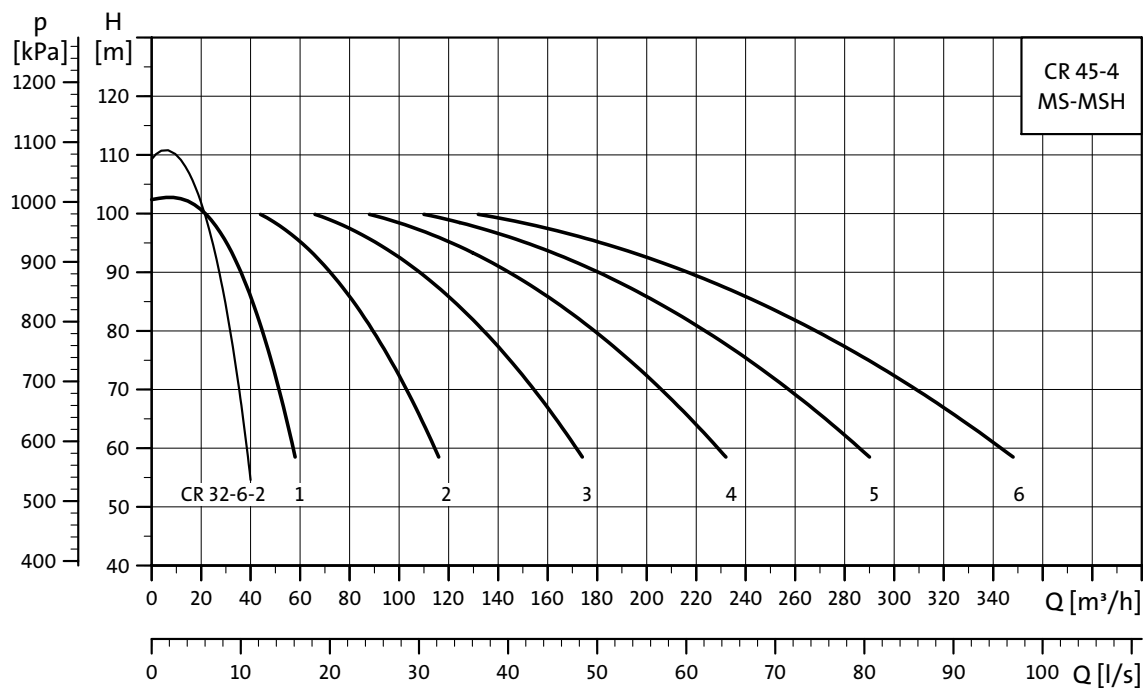
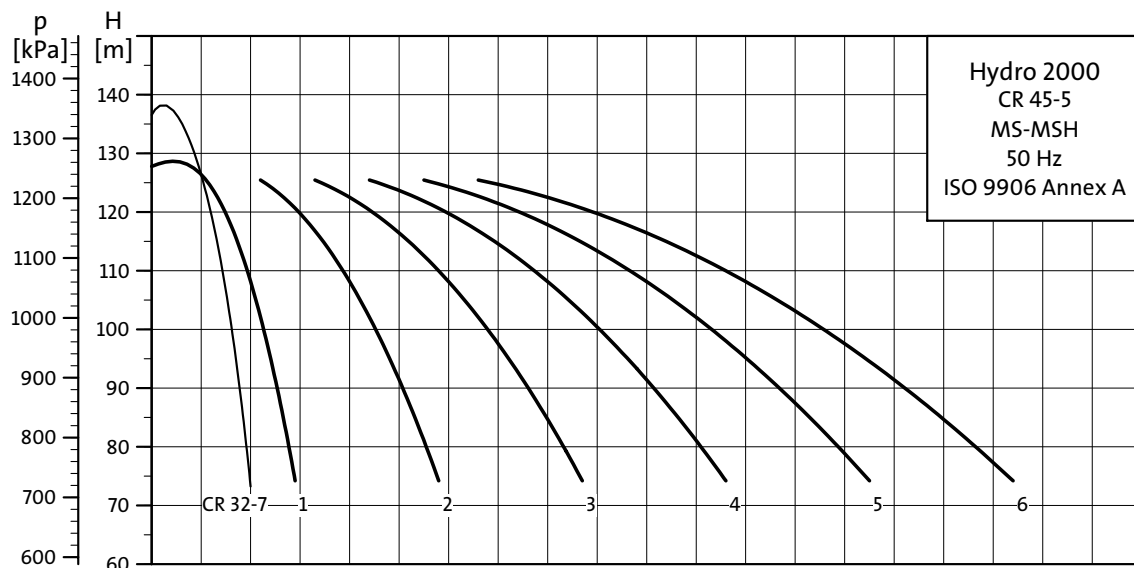
Hydro 2000 S
CR 45



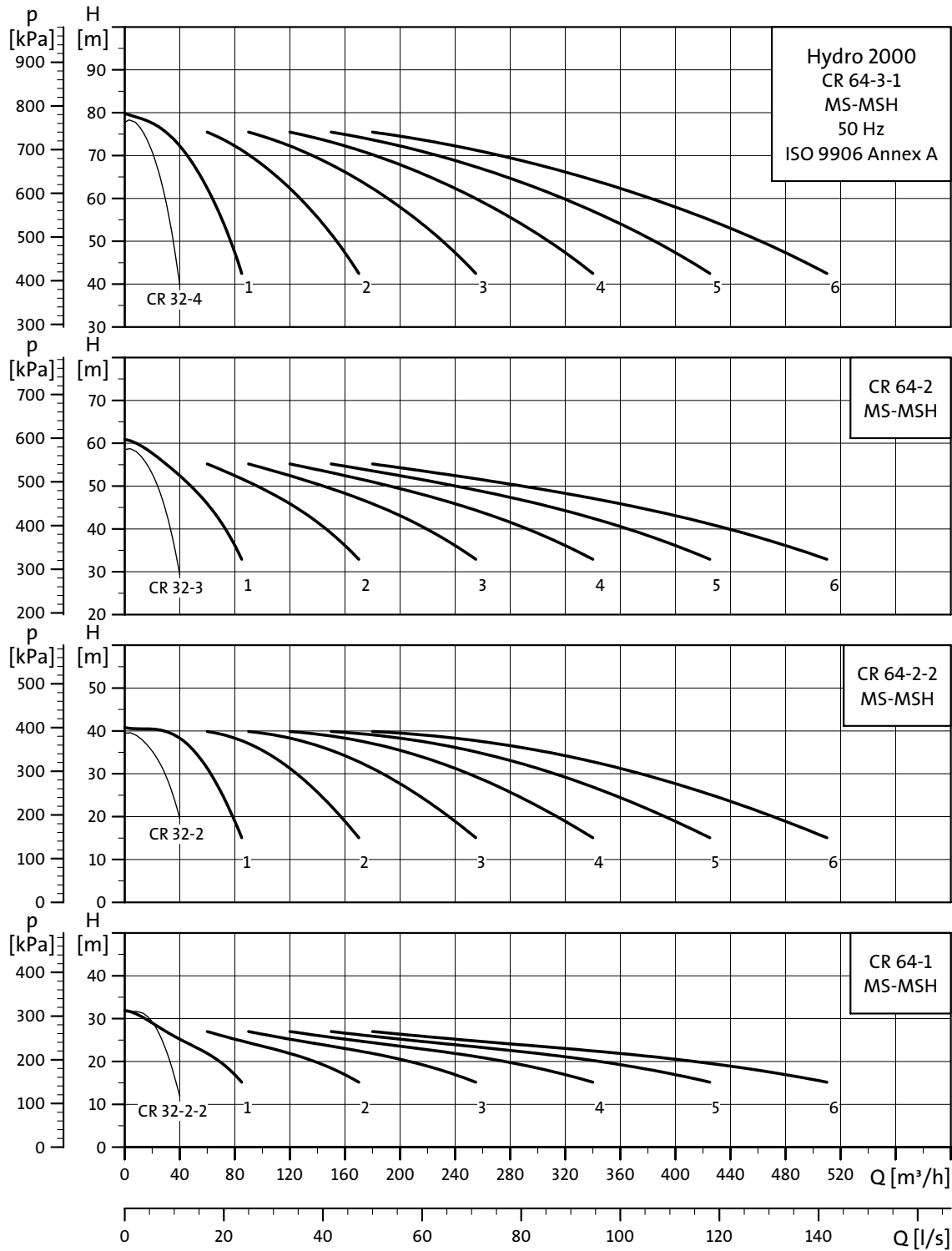
TM01 2765 3803

Performance curves

Hydro 2000 S
CR 45



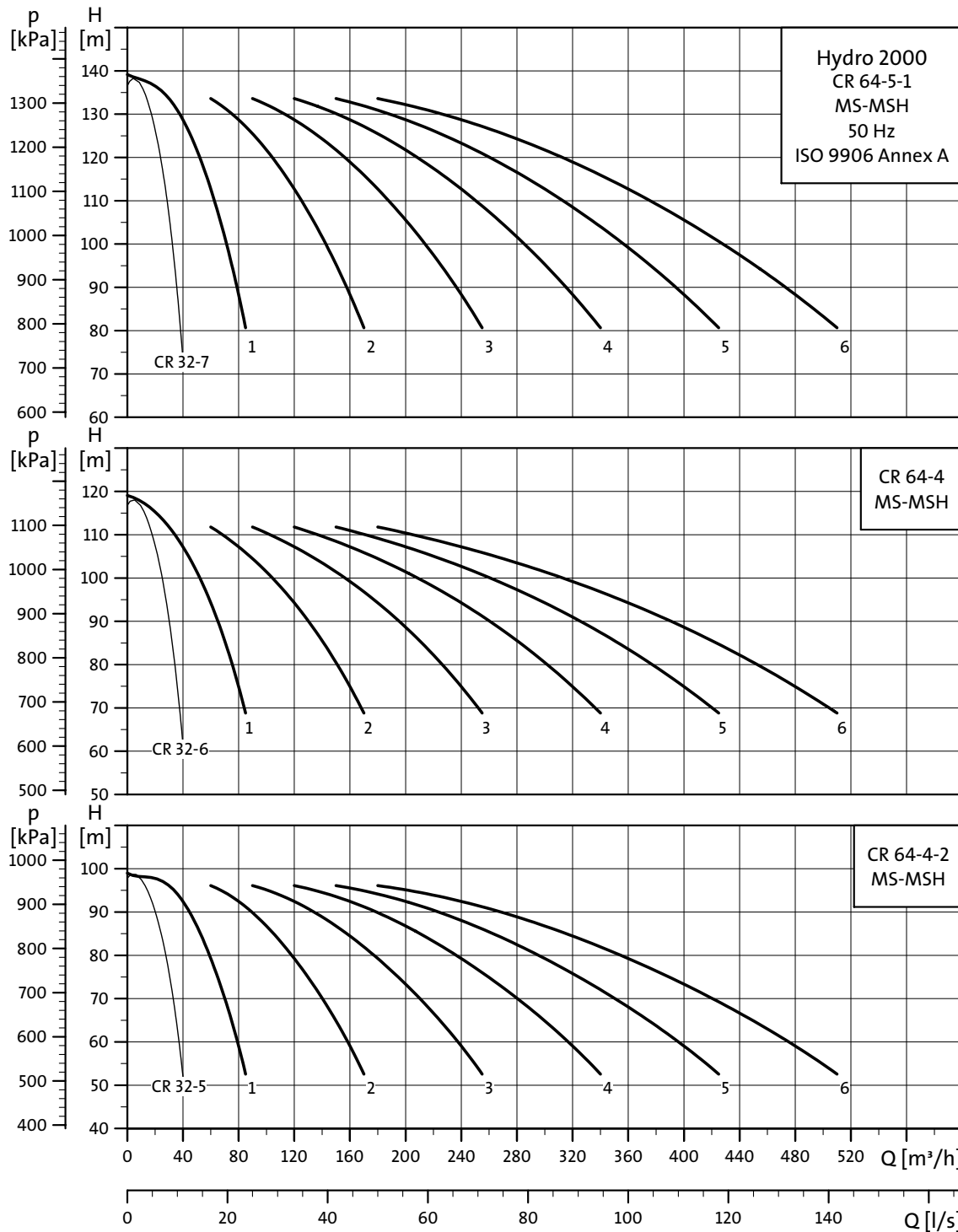
TM01 2766 3603



TM01 2767 3803

Performance curves

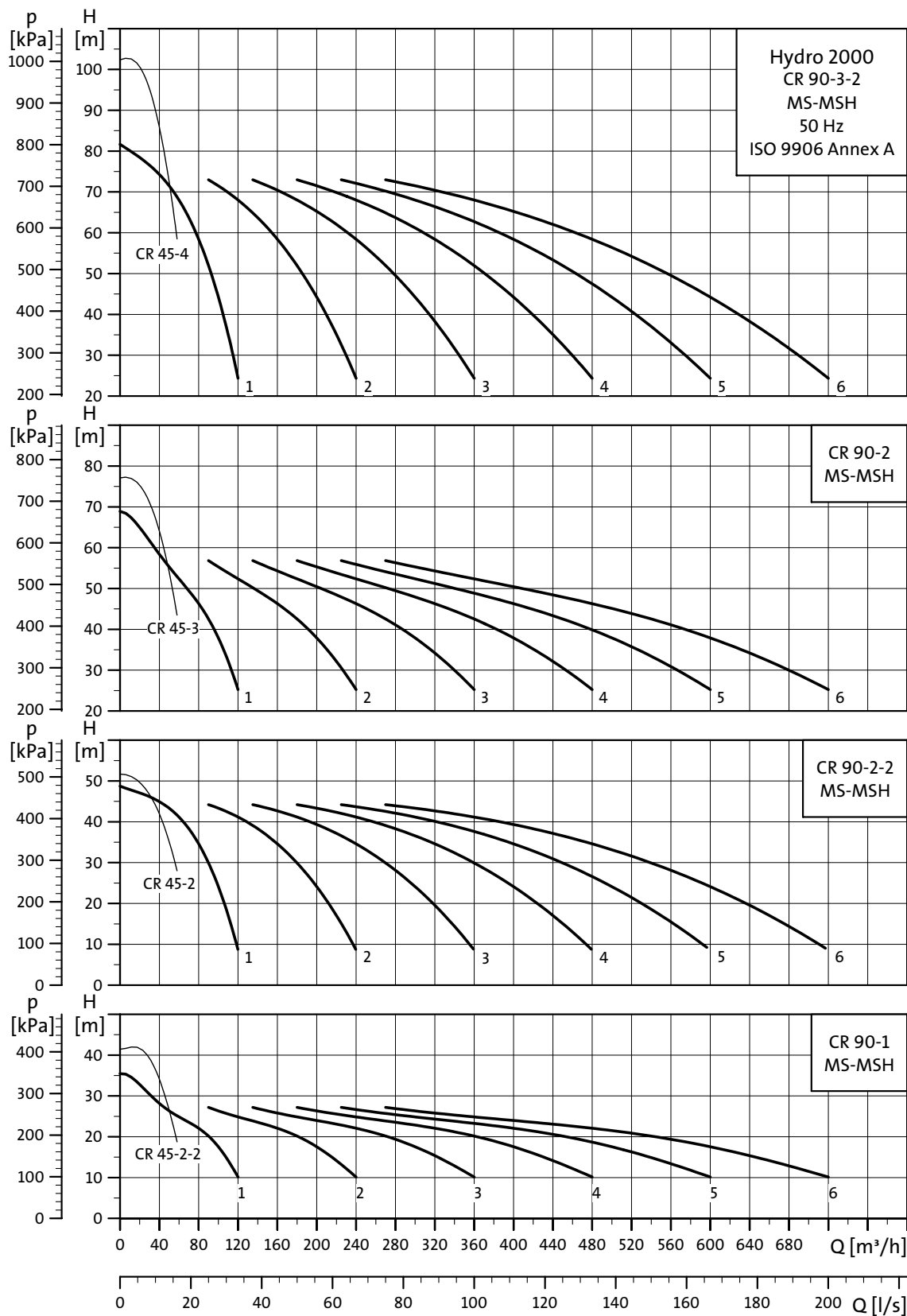
Hydro 2000 S
CR 64



TM01 2768 3803

Performance curves

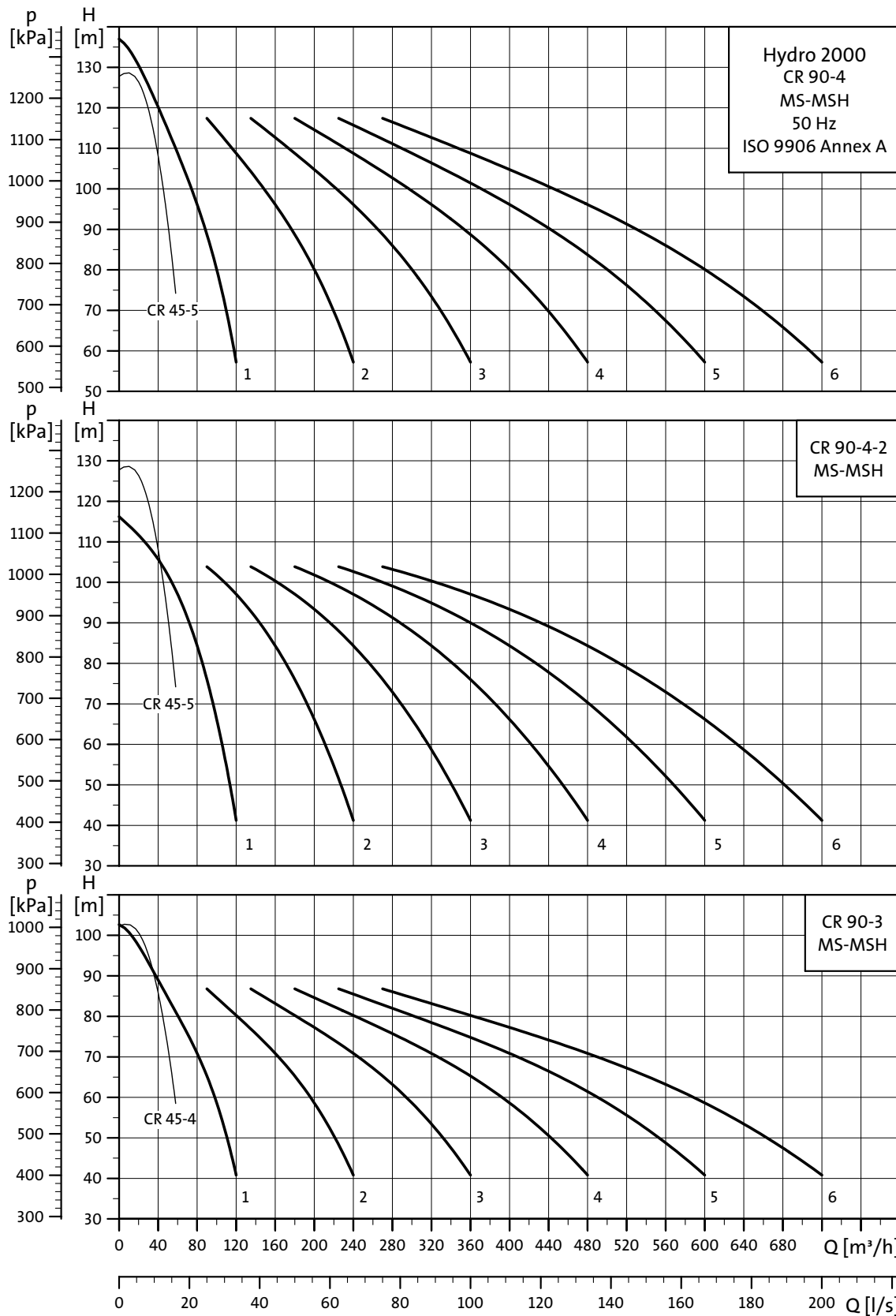
Hydro 2000 S
CR 90



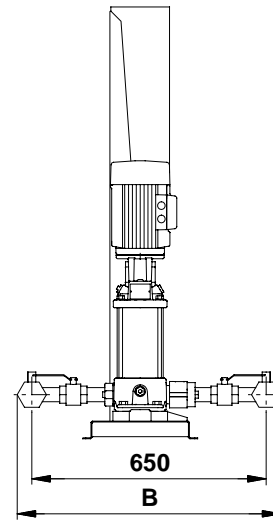
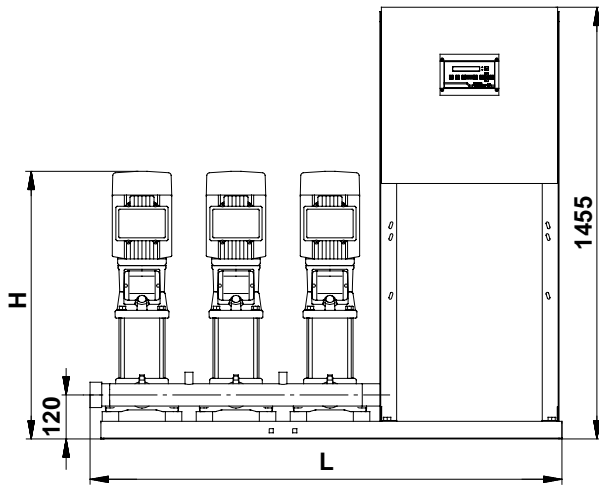
TM01 2769 3803

Performance curves

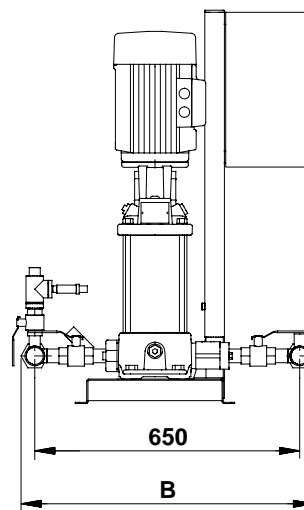
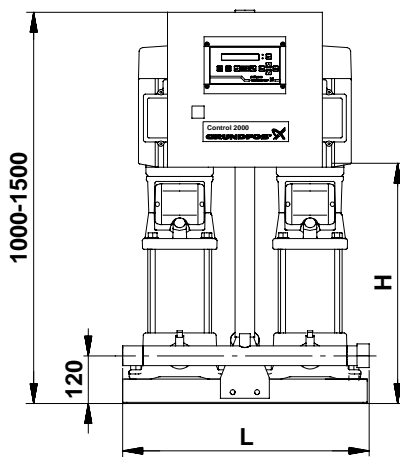
Hydro 2000 S
CR 90



TM01 2770 3803

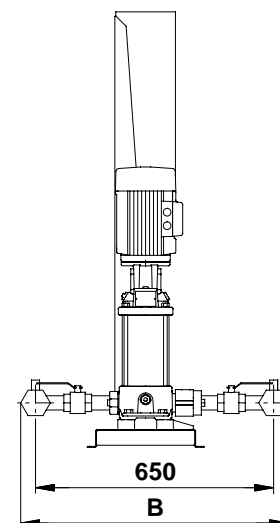
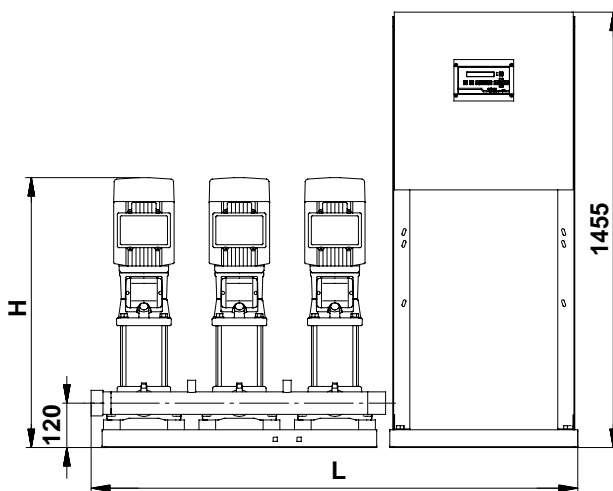


TM00 9365 1303



★

TM00 9366 1303



★★

TM00 9367 1801

For information about ★ and ★★, please see page 98.

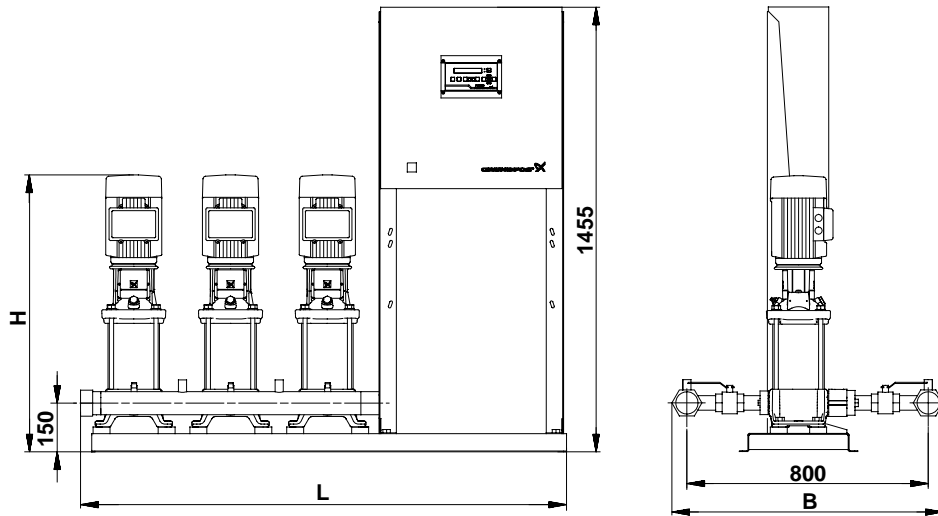
Electrical data, weights and dimensions

No. of pumps	Full-size pumps		Connection	B [mm]	Hydro 2000 MS			
	Pump type	Motor [kW]			L [mm]	H [mm]	Weight [kg]	Max. I _n [A]
2	CR 3-5	0.37	Rp 2	710	600 ★	553	89	2.0
	CR 3-7	0.55				589	92	2.8
	CR 3-10	0.75				687	98	3.8
	CR 3-15	1.1				777	105	5.4
	CR 3-19	1.5				915	119	6.8
	CR 3-23	2.2				987	126	9.6
3	CR 3-5	0.37	Rp 2	710	1370	553	143	3.0
	CR 3-7	0.55				589	147	4.2
	CR 3-10	0.75				687	157	5.7
	CR 3-15	1.1				777	167	8.1
	CR 3-19	1.5				915	188	10.2
	CR 3-23	2.2				987	199	14.4
4	CR 3-5	0.37	Rp 2½	726	1890	553	197	4.0
	CR 3-7	0.55				589	202	5.6
	CR 3-10	0.75				687	216	7.6
	CR 3-15	1.1				777	229	10.8
	CR 3-19	1.5				915	257	13.6
	CR 3-23	2.2				987	271	19.2
5	CR 3-5	0.37	Rp 2½	726	2190 ★★	553	229	5.0
	CR 3-7	0.55				589	235	7.0
	CR 3-10	0.75				687	252	9.5
	CR 3-15	1.1				777	269	13.5
	CR 3-19	1.5				915	304	17.0
	CR 3-23	2.2				987	322	24.0
6	CR 3-5	0.37	Rp 2½	726	2510 ★★	553	260	6.0
	CR 3-7	0.55				589	268	8.4
	CR 3-10	0.75				687	288	11.4
	CR 3-15	1.1				777	307	16.2
	CR 3-19	1.5				915	350	20.4
	CR 3-23	2.2				987	372	28.8

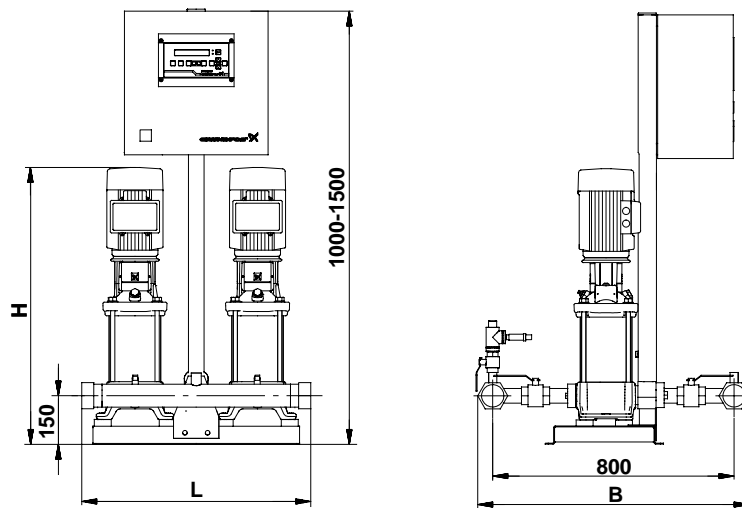
For information about ★ and ★★, please see page 98.

No. of pumps	Full-size pumps		Connection	B [mm]	Hydro 2000 MS			
	Pump type	Motor [kW]			L [mm]	H [mm]	Weight [kg]	Max. I _n [A]
2	CR 5-4	0.55	Rp 2	710	600 ★	571	90	2.8
	CR 5-5	0.75				642	96	3.8
	CR 5-8	1.1				723	103	5.4
	CR 5-10	1.5				843	117	6.8
	CR 5-16	2.2				1005	127	9.6
	CR 5-20	3.0				1171	143	12.8
3	CR 5-22	4.0	Rp 2	710	1370	1262	174	16.0
	CR 5-4	0.55				571	145	4.2
	CR 5-5	0.75				642	154	5.7
	CR 5-8	1.1				723	164	8.1
	CR 5-10	1.5				843	184	10.2
	CR 5-16	2.2				1005	200	14.4
4	CR 5-20	3.0	Rp 2½	726	1890	1171	224	19.2
	CR 5-22	4.0				1262	264	24.0
	CR 5-4	0.55				571	200	5.6
	CR 5-5	0.75				642	211	7.6
	CR 5-8	1.1				723	225	10.8
	CR 5-10	1.5				843	252	13.6
5	CR 5-16	2.2	Rp 2½	726	2190 ★★	1005	273	19.2
	CR 5-20	3.0				1171	305	25.6
	CR 5-22	4.0				1262	379	32.0
	CR 5-4	0.55				571	233	7.0
	CR 5-5	0.75				642	247	9.5
	CR 5-8	1.1				723	265	13.5
6	CR 5-10	1.5	Rp 2½	726	2510 ★★	843	298	17.0
	CR 5-16	2.2				1005	324	24.0
	CR 5-20	3.0				1171	365	32.0
	CR 5-22	4.0				1262	450	40.0
	CR 5-4	0.55				571	264	8.4
	CR 5-5	0.75				642	282	11.4
6	CR 5-8	1.1	Rp 2½	726	2510 ★★	723	303	16.2
	CR 5-10	1.5				843	343	20.4
	CR 5-16	2.2				1005	374	28.8
	CR 5-20	3.0				1171	423	38.4
	CR 5-22	4.0				1262	518	48.0

For information about ★ and ★★, please see page 98.

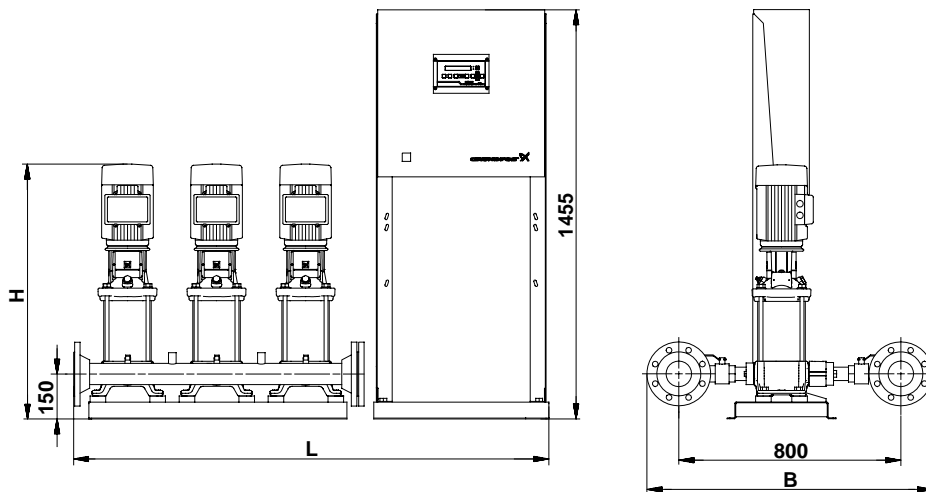


TM02 7754 3903



★

TM02 7755 3903



★★

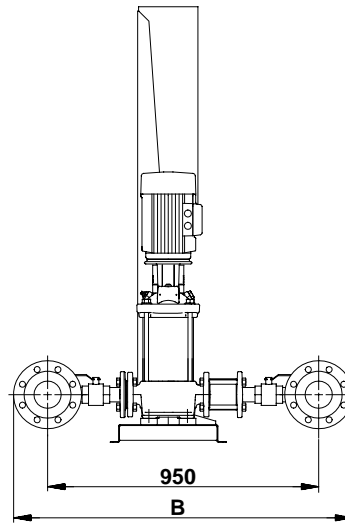
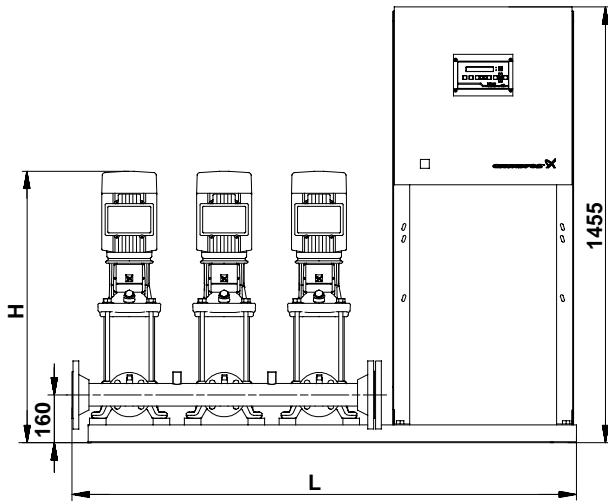
TM02 7756 3903

For information about ★ and ★★, please see page 98.

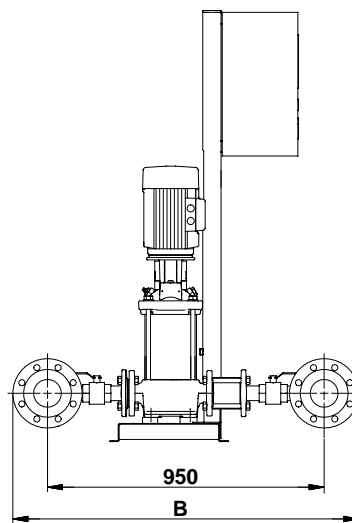
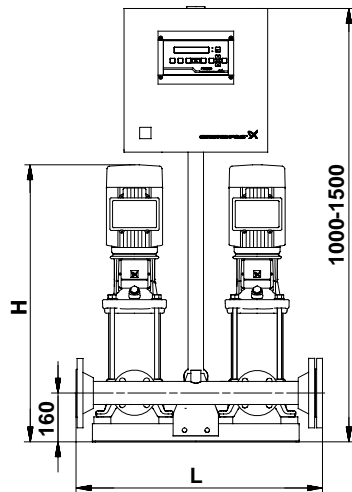
Electrical data, weights and dimensions

No. of pumps	Full-size pumps		Half-size pumps		Connection	Hydro 2000 MS					Hydro 2000 MSH					
	Pump type	Motor [kW]	Pump type	Motor [kW]		B [mm]	L [mm]	H [mm]	Weight [kg]	Max. I _n [A]	L [mm]	H [mm]	Weight [kg]	Max. I _n [A]		
2	CR 10-3	1.1	CR 5-5	0.75	Rp 2½	876		678	128	5.4	660		678	147	4.6	
	CR 10-4	1.5	CR 5-8	1.1			660	774	142	6.8		774	154	6.1		
	CR 10-6	2.2	CR 5-10	1.5			★	834	150	9.6		★	843	164	8.2	
	CR 10-9	3.0	CR 5-14	2.2				983	164	12.8			983	177	11.2	
	CR 10-10	4.0	CR 5-16	2.2			-	-	-	-		-	1280	1050	220	12.8
	CR 10-12	4.0	CR 5-20	3.0			660	1110	190	16.0			1206	227	14.4	
	CR 10-14	5.5	-	-			★	1221	200	22.0		-	-	-	-	
3	CR 10-3	1.1	CR 5-5	0.75	Rp 2½	876		678	198	8.1	1400		678	209	7.3	
	CR 10-4	1.5	CR 5-8	1.1				774	219	10.2			774	223	9.5	
	CR 10-6	2.2	CR 5-10	1.5				834	231	14.4			843	237	13.0	
	CR 10-9	3.0	CR 5-14	2.2				983	252	19.2			983	257	17.6	
	CR 10-10	4.0	CR 5-16	2.2			-	-	-	-		-	1600	1050	302	20.8
	CR 10-12	4.0	CR 5-20	3.0			1400	1110	291	24.0			1206	315	22.4	
	CR 10-14	5.5	-	-				1221	305	33.0		-	-	-	-	
4	CR 10-3	1.1	CR 5-5	0.75	DN 80	889		678	284	10.8	1920		678	260	10.0	
	CR 10-4	1.5	CR 5-8	1.1			1720	774	312	13.6			774	281	12.9	
	CR 10-6	2.2	CR 5-10	1.5			★★	834	328	19.2			843	299	17.8	
	CR 10-9	3.0	CR 5-14	2.2				983	356	25.6			983	326	24.0	
	CR 10-10	4.0	CR 5-16	2.2			-	-	-	-		-	2100	1050	446	28.8
	CR 10-12	4.0	CR 5-20	3.0			1920	1110	410	32.0			1206	457	30.4	
	CR 10-14	5.5	-	-			★★	1221	427	44.0		-	-	-	-	
5	CR 10-3	1.1	-	-	DN 80	889		678	336	13.5	2220		-	-	-	
	CR 10-4	1.5	-	-			★★	774	371	17.0			-	-	-	
	CR 10-6	2.2	-	-			★★	834	391	24.0			-	-	-	
	CR 10-9	3.0	-	-				983	426	32.0			-	-	-	
	CR 10-12	4.0	-	-			2420	1110	508	40.0			-	-	-	
	CR 10-14	5.5	-	-			★★	1221	549	55.0			-	-	-	
6	CR 10-3	1.1	-	-	DN 100	914		678	403	16.2	2540		-	-	-	
	CR 10-4	1.5	-	-			★★	774	445	20.4			-	-	-	
	CR 10-6	2.2	-	-			★★	834	469	28.8			-	-	-	
	CR 10-9	3.0	-	-				983	511	38.4			-	-	-	
	CR 10-12	4.0	-	-			2740	1110	609	48.0			-	-	-	
	CR 10-14	5.5	-	-			★★	1221	657	66.0			-	-	-	

For information about ★ and ★★. please see page 98.

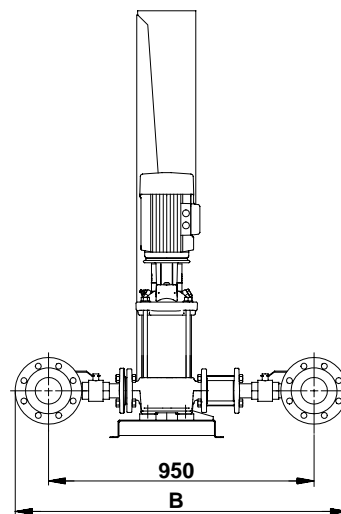
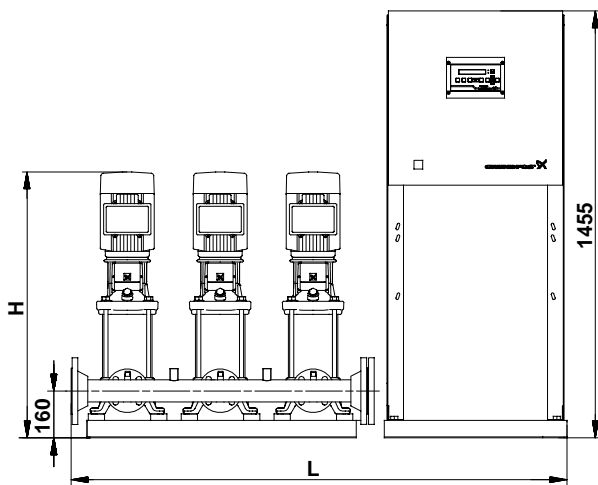


TM02 7757 3903



★

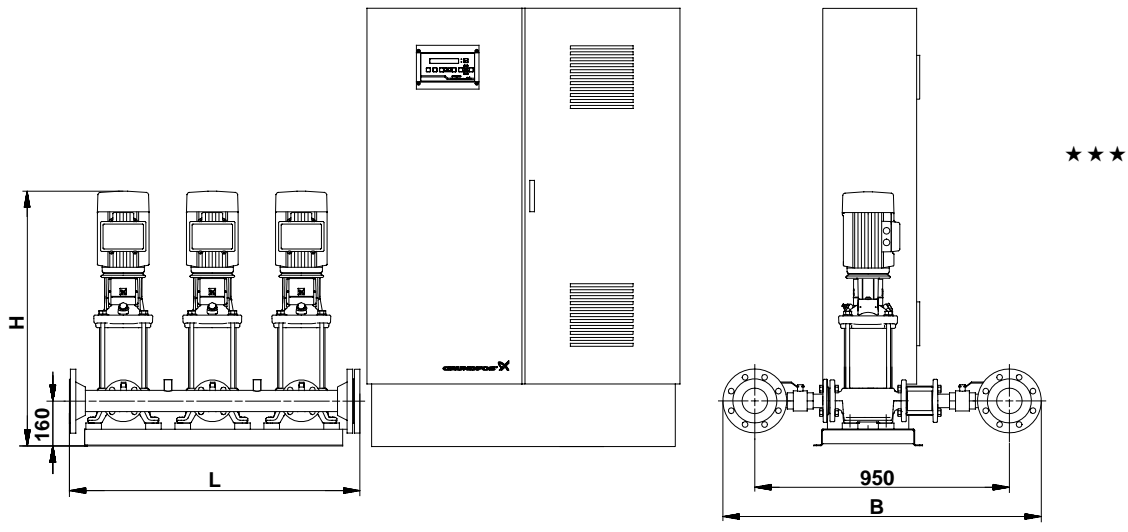
TM02 7758 3903



★★

TM02 7759 3903

For information about ★ and ★★, please see page 98.



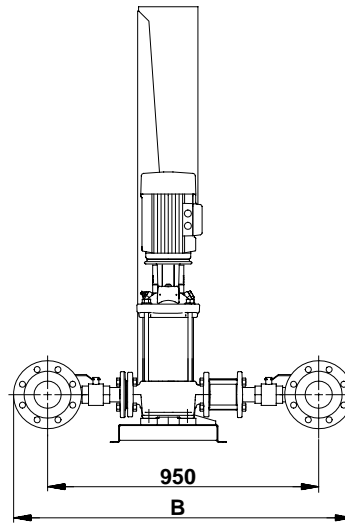
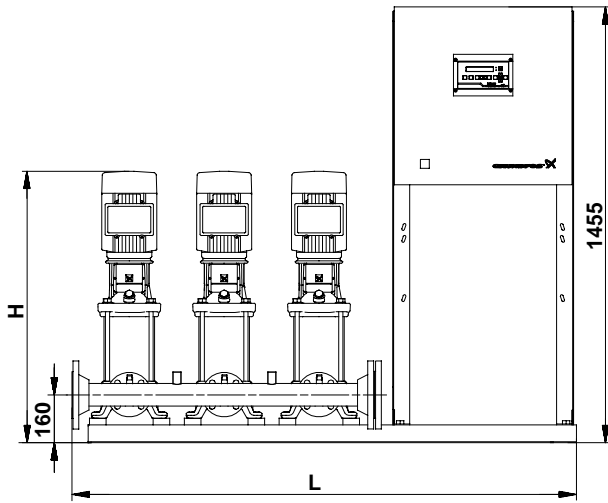
TM02.7788-4003

For information about ***, please see page 98.

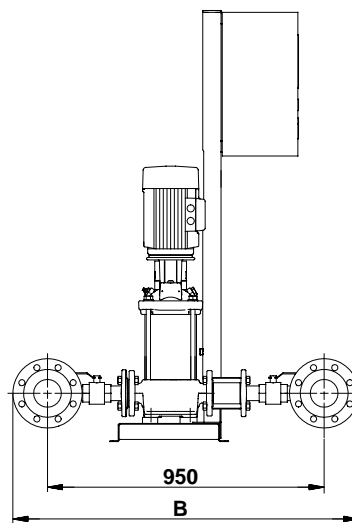
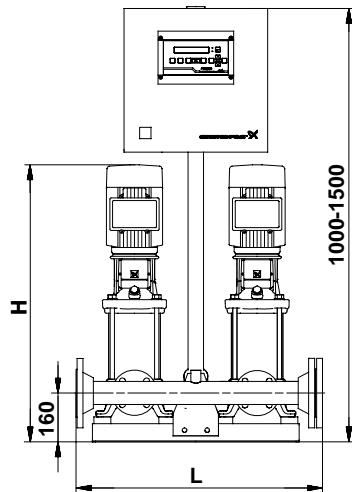
Electrical data, weights and dimensions

No. of pumps	Full-size pumps		Half-size pumps		Connection	B [mm]	Hydro 2000 MS				Hydro 2000 MSH				
	Pump type	Motor [kW]	Pump type	Motor [kW]			L [mm]	H [mm]	Weight [kg]	Max. I _n [A]	L [mm]	H [mm]	Weight [kg]	Max. I _n [A]	
2	CR 15-2	2.2	CR10-3	1.1	DN 80	1039	720	766	176	9.6	720	766	178	7.5	
	CR 15-3	3.0	CR10-4	1.5			★	870	186	12.8	★	870	190	9.8	
	CR 15-4	4.0	CR10-6	2.2			-	-	-	-	1310	952	224	12.8	
	CR 15-5	4.0	-	-			1310	997	257	16.0	-	-	-	-	
	CR 15-6	5.5	CR10-9	3.0			-	-	-	-	1310	1093	255	17.4	
	CR 15-7	5.5	-	-			1310	1138	295	22.0	-	-	-	-	
	CR 15-8	7.5	CR10-12	4.0			-	-	-	-	1310	1183	272	23.2	
	CR 15-9	7.5	-	-			1310	1228	305	30.4	-	-	-	-	
	CR 15-10	11.0	CR10-14	5.5			1410	1423	360	43.0	1410	1423	318	32.5	
	★★	-	-	-			★★	-	-	-	★★	-	-	-	-
3	CR 15-2	2.2	CR10-3	1.1	DN 100	1064	1370	766	276	14.4	1430	766	273	12.3	
	CR 15-3	3.0	CR10-4	1.5			-	870	291	19.2	-	870	287	16.2	
	CR 15-4	4.0	CR10-6	2.2			-	-	-	-	1630	952	327	20.8	
	CR 15-5	4.0	-	-			1570	997	355	24.0	-	-	-	-	
	CR 15-6	5.5	CR10-9	3.0			-	-	-	-	1630	1093	384	28.4	
	CR 15-7	5.5	-	-			1570	1138	402	33.0	-	-	-	-	
	CR 15-8	7.5	CR10-12	4.0			-	-	-	-	1630	1183	417	38.4	
	CR 15-9	7.5	-	-			1570	1228	433	45.6	-	-	-	-	
	CR 15-10	11.0	CR10-14	5.5			1810	1423	551	64.5	1810	1423	488	54.0	
	★★	-	-	-			★★	-	-	-	★★	-	-	-	-
4	CR 15-2	2.2	CR10-3	1.1	DN 100	1064	1750	766	355	19.2	1950	766	349	17.1	
	CR 15-3	3.0	CR10-4	1.5			-	870	377	25.6	-	870	365	22.6	
	CR 15-4	4.0	CR10-6	2.2			-	-	-	-	2130	952	445	28.8	
	CR 15-5	4.0	-	-			1950	997	476	32.0	-	-	-	-	
	CR 15-6	5.5	CR10-9	3.0			-	-	-	-	2130	1093	528	39.4	
	CR 15-7	5.5	-	-			1950	1138	562	44.0	-	-	-	-	
	CR 15-8	7.5	CR10-12	4.0			-	-	-	-	2130	1183	577	53.6	
	CR 15-9	7.5	-	-			1950	1228	582	60.8	-	-	-	-	
	CR 15-10	11.0	CR10-14	5.5			2210	1423	729	86.0	2410	1423	683	75.5	
	★★	-	-	-			★★	-	-	-	★★	-	-	-	-
5	CR 15-2	2.2	-	-	DN 150	1118	2270	766	463	24.0	-	-	-	-	
	CR 15-3	3.0	-	-			★★	870	488	32.0	-	-	-	-	
	CR 15-5	4.0	-	-			-	997	601	40.0	-	-	-	-	
	CR 15-7	5.5	-	-			2450	1138	711	55.0	-	-	-	-	
	CR 15-9	7.5	-	-			★★	1228	738	76.0	-	-	-	-	
	CR 15-10	11.0	-	-			-	1680	1423	826	107.5	-	-	-	-
6	CR 15-2	2.2	-	-	DN 150	1118	2570	766	539	28.8	-	-	-	-	
	CR 15-3	3.0	-	-			★★	870	569	38.4	-	-	-	-	
	CR 15-5	4.0	-	-			-	2770	997	696	48.0	-	-	-	-
	CR 15-7	5.5	-	-			★★	2000	1138	731	66.0	-	-	-	-
	CR 15-9	7.5	-	-			★★★	1228	761	91.2	-	-	-	-	
	CR 15-10	11.0	-	-			-	2360	1423	987	129.0	-	-	-	-
★★★	-	-	-	★★★	-	-	-	★★★	-	-	-	-			

For information about ★, ★★ and ★★★, please see page 98.

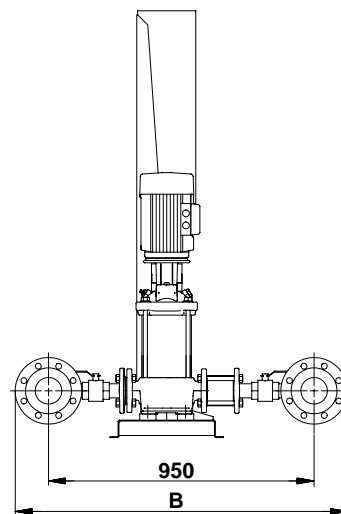
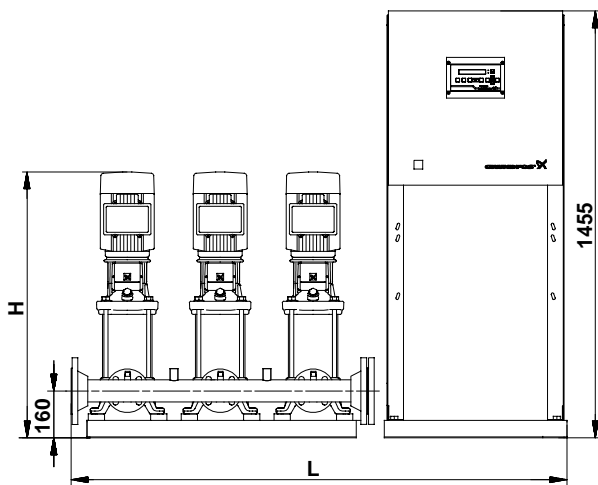


TM02 7757 3903



★

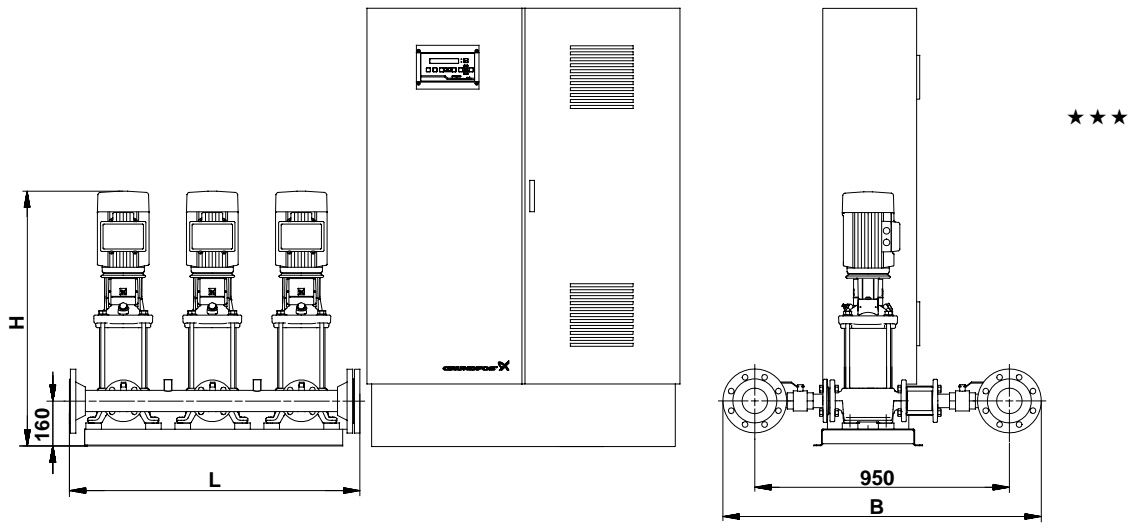
TM02 7758 3903



★★

TM02 7759 3903

For information about ★ and ★★, please see page 98.



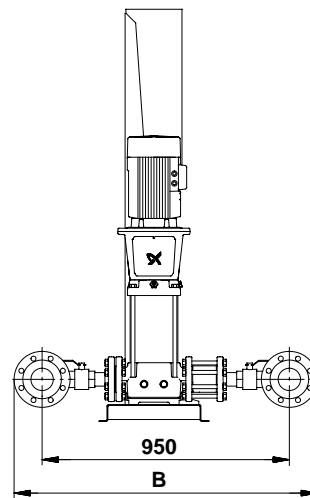
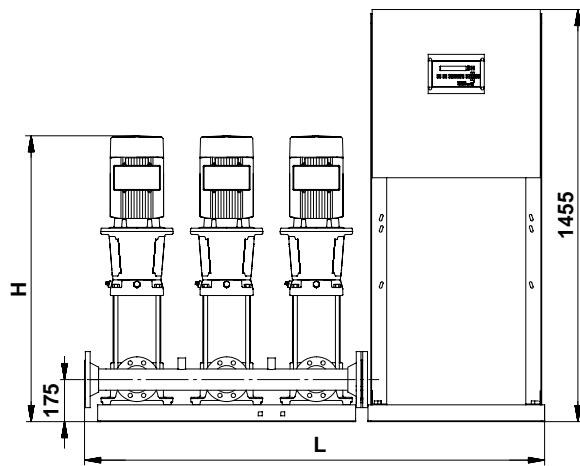
TM02.7788-4003

For information about ***, please see page 98.

Electrical data, weights and dimensions

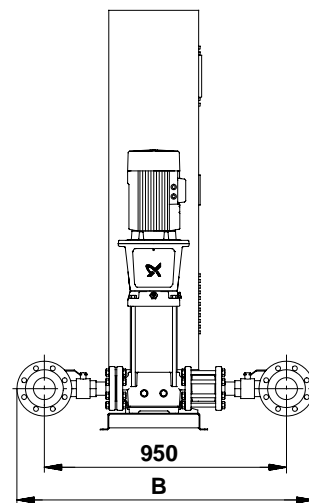
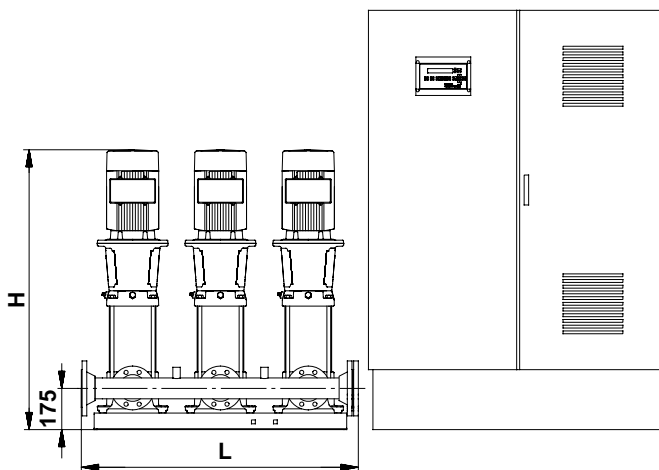
No. of pumps	Full-size pumps		Half-size pumps		Connection	B [mm]	Hydro 2000 MS				Hydro 2000 MSH			
	Pump type	Motor [kW]	Pump type	Motor [kW]			L [mm]	H [mm]	Weight [kg]	Max. I _n [A]	L [mm]	H [mm]	Weight [kg]	Max. I _n [A]
2	CR20-2	2.2	CR10-3	1.1	DN 80	1039	720 ★	766	176	9.6	720 ★	766	178	7.5
	CR20-3	4.0	CR10-5	2.2			907	236	16.0	1310	907	224	12.8	
	CR20-5	5.5	CR10-8	3.0			1048	280	22.0		1048	252	17.4	
	CR20-7	7.5	CR10-12	4.0			1138	295	30.4	1410 ★★	1138	260	23.2	
	CR20-10	11.0	-	-			1410 ★★	1423	356	43.0	-	-	-	-
3	CR20-2	2.2	CR10-3	1.1	DN 100	1064	1370	766	276	14.4	1430	766	273	12.3
	CR20-3	4.0	CR10-5	2.2			907	331	24.0	1630	907	327	20.8	
	CR20-5	5.5	CR10-8	3.0			1570	1048	39.0		1048	378	28.4	
	CR20-7	7.5	CR10-12	4.0			1138	420	45.6	1810	1138	393	38.4	
	CR20-10	11.0	-	-			1810 ★★	1423	547	64.5	-	-	-	-
4	CR20-2	2.2	CR10-3	1.1	DN 100	1064	1750	766	355	19.2	1950	766	349	17.1
	CR20-3	4.0	CR10-5	2.2			907	449	32.0	2130	907	445	28.8	
	CR20-5	5.5	CR10-8	3.0			1950	1048	44.0		1048	519	39.4	
	CR20-7	7.5	CR10-12	4.0			1138	566	60.8	2410	1138	517	53.6	
	CR20-10	11.0	-	-			2210 ★★	1423	725	86.0	-	-	-	-
5	CR20-2	2.2	-	-	DN 150	1118	2250 ★★	766	463	24.0	-	-	-	-
	CR20-3	4.0	-	-			2450	907	571	40.0	-	-	-	-
	CR20-5	5.5	-	-			★	1048	687	55.0	-	-	-	-
	CR20-7	7.5	-	-			1680 ★★★	1138	619	76.0	-	-	-	-
	CR20-10	11.0	-	-			2040 ★★★	1423	822	107.5	-	-	-	-
6	CR20-2	2.2	-	-	DN 150	1118	2570 ★★	766	539	28.8	-	-	-	-
	CR20-3	4.0	-	-			2770 ★★	907	668	48.0	-	-	-	-
	CR20-5	5.5	-	-			2000	1048	713	66.0	-	-	-	-
	CR20-7	7.5	-	-			★★★	1138	743	91.2	-	-	-	-
	CR20-10	11.0	-	-			2360 ★★★	1423	987	129.0	-	-	-	-

For information about ★, ★★ and ★★★, please see page 98.



★★

TM01 2968 1303



★★★

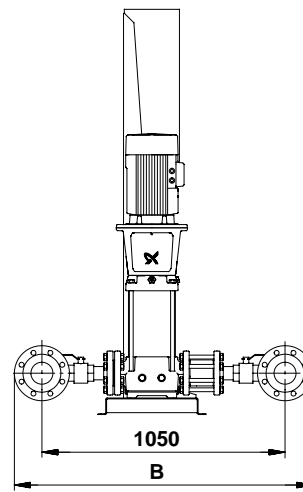
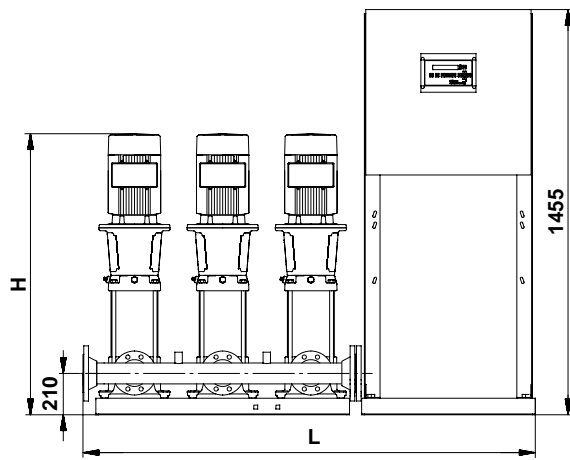
TM01 2964 1303

For information about ★★ and ★★★, please see page 98.

Electrical data, weights and dimensions

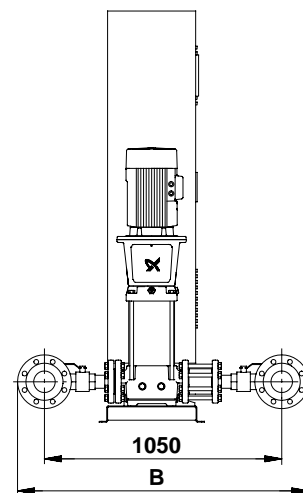
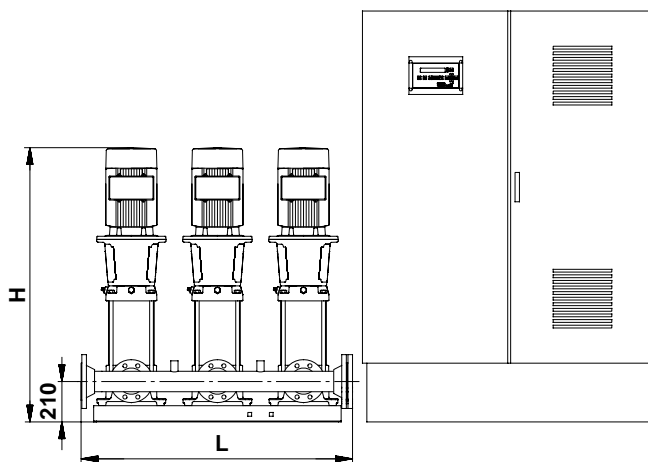
No. of pumps	Full-size pumps		Half-size pumps		Connection	B [mm]	Hydro 2000 MS				Hydro 2000 MSH			
	Pump type	Motor [kW]	Pump type	Motor [kW]			L [mm]	H [mm]	Weight [kg]	Max. I _n [A]	L [mm]	H [mm]	Weight [kg]	Max. I _n [A]
2	CR 32-2-2	3.0	-	-	DN 100	1062	1400 ★★	980	302	12.8	-	-	-	-
	CR 32-2	4.0	CR15-3	3.0			1017	336	16.0	1600 ★★	1017	290	14.4	
	CR 32-3	5.5	CR15-4	4.0			1106	354	22.0		1106	311	19.0	
	CR 32-4	7.5	CR15-6	5.5			1600 ★★	1176	370	30.4	1176	349	26.2	
	CR 32-5	11.0	-	-			1429	454	43.0	-	-	-	-	
	CR 32-6-2	11.0	CR15-8	7.5			1499	462	43.0	1600 ★★	1499	394	36.7	
	CR 32-7	15.0	CR15-10	11.0			1623	537	57.4	1623	467	50.2		
3	CR 32-2-2	3.0	-	-	DN 150	1116	1902 ★★	980	444	19.2	-	-	-	-
	CR 32-2	4.0	CR15-3	3.0			1017	487	24.0	2102 ★★	1017	439	22.4	
	CR 32-3	5.5	CR15-4	4.0			1106	514	33.0		1106	475	30.0	
	CR 32-4	7.5	CR15-6	5.5			1176	538	45.6	1176	526	41.4		
	CR 32-5	11.0	-	-			1429	697	64.5	-	-	-	-	
	CR 32-6-2	11.0	CR15-8	7.5			2302 ★★	1499	709	64.5	2102 ★★	1499	612	58.2
	CR 32-7	15.0	CR15-10	11.0			1623	822	86.1	2301 ★★	1623	754	78.9	
4	CR 32-2-2	3.0	-	-	DN 150	1116	2602 ★★	980	583	25.6	-	-	-	-
	CR 32-2	4.0	CR15-3	3.0			1017	656	32.0	2802 ★★	1017	610	30.4	
	CR 32-3	5.5	CR15-4	4.0			1106	693	44.0		1106	661	41.0	
	CR 32-4	7.5	CR15-6	5.5			2802 ★★	1176	725	60.8	1176	723	56.6	
	CR 32-5	11.0	-	-			1429	894	86.0	-	-	-	-	
	CR 32-6-2	11.0	CR15-8	7.5			1499	910	86.0	2802 ★★	1499	852	79.7	
	CR 32-7	15.0	CR15-10	11.0			1623	1059	114.8	1623	996	107.6		
5	CR 32-2-2	3.0	-	-	DN 150	1116	3102 ★★	980	724	32.0	-	-	-	-
	CR 32-2	4.0	-	-			3302 ★★	1017	807	40.0	-	-	-	-
	CR 32-3	5.5	-	-			1106	852	55.0	-	-	-	-	
	CR 32-4	7.5	-	-			1176	795	76.0	-	-	-	-	
	CR 32-5	11.0	-	-			2522 ★★★	1429	1005	107.5	-	-	-	-
	CR 32-6-2	11.0	-	-			1499	1025	107.5	-	-	-	-	
	CR 32-7	15.0	-	-			1623	1210	143.5	-	-	-	-	
6	CR 32-2-2	3.0	-	-	DN 150	1116	3602 ★★	980	851	38.4	-	-	-	-
	CR 32-2	4.0	-	-			3802 ★★	1017	944	48.0	-	-	-	-
	CR 32-3	5.5	-	-			1106	898	66.0	-	-	-	-	
	CR 32-4	7.5	-	-			1176	946	91.2	-	-	-	-	
	CR 32-5	11.0	-	-			3022 ★★★	1429	1198	129.0	-	-	-	-
	CR 32-6-2	11.0	-	-			1499	1222	129.0	-	-	-	-	
	CR 32-7	15.0	-	-			1623	1444	172.2	-	-	-	-	

For information about ★★ and ★★★, please see page 98.



★★

TM01 2969 1303



★★★

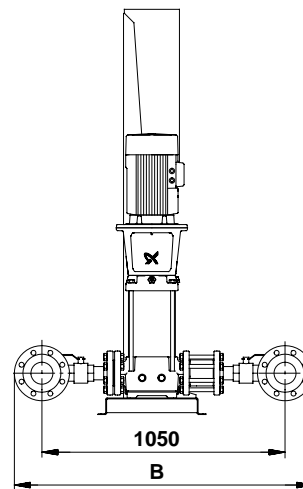
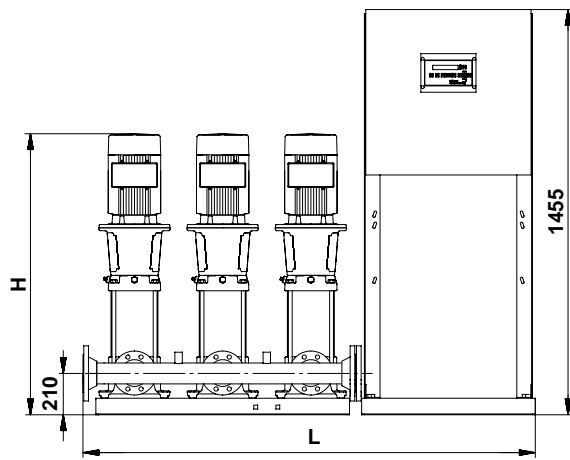
TM01 2965 1303

For information about ★★ and ★★★, please see page 98.

Electrical data, weights and dimensions

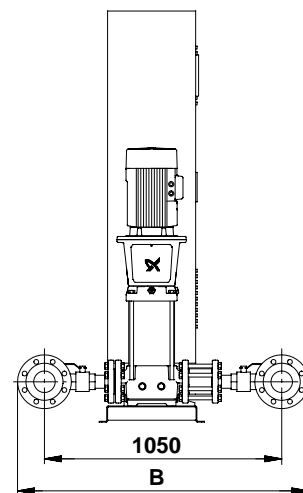
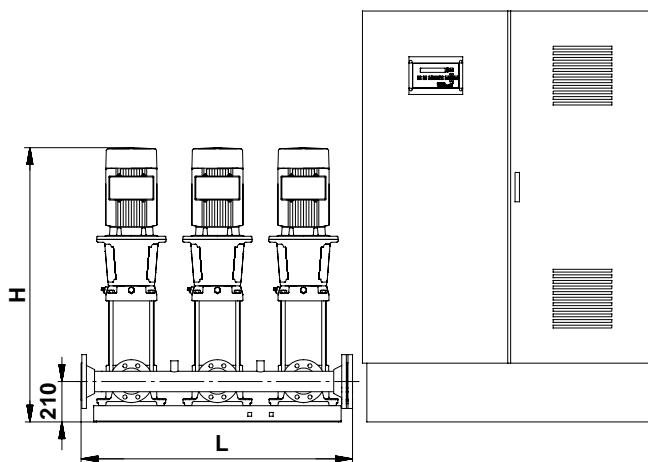
No. of pumps	Full-size pumps		Half-size pumps		Connection	B [mm]	Hydro 2000 MS				Hydro 2000 MSH					
	Pump type	Motor [kW]	Pump type	Motor [kW]			L [mm]	H [mm]	Weight [kg]	Max. I _n [A]	L [mm]	H [mm]	Weight [kg]	Max. I _n [A]		
2	CR 45-1	4.0	CR 32-2-2	3.0	DN 150	1216		1040	376	16.0	1602 ★★		1040	355	14.4	
	CR 45-2-2	5.5	CR 32-2	4.0				1139	394	22.0			1139	374	19.0	
	CR 45-2	7.5	CR 32-3	5.5				1146	404	30.4			1146	389	26.2	
	CR 45-3	11.0	CR 32-4	7.5				1402	488	43.0			1402	438	36.7	
	CR 45-4	15.0	CR 32-6-2	11.0				1539	563	57.4			1539	522	50.2	
	CR 45-5	18.5	CR 32-7	15.0				1802 ★★	1623	627		71.8	1802 ★★	1623	609	64.6
3	CR 45-1	4.0	CR 32-2-2	3.0	DN 200	1267		1040	540	24.0	2104 ★★		1040	518	22.4	
	CR 45-2-2	5.5	CR 32-2	4.0				1139	567	33.0			1139	546	30.0	
	CR 45-2	7.5	CR 32-3	5.5				1146	582	45.6			1146	567	41.4	
	CR 45-3	11.0	CR 32-4	7.5				1402	741	64.5			1402	658	58.2	
	CR 45-4	15.0	CR 32-6-2	11.0				2304 ★★	1539	854		86.1	2304 ★★	1539	813	78.9
	CR 45-5	18.5	CR 32-7	15.0				1623	900	107.7			1623	881	100.5	
4	CR 45-1	4.0	CR 32-2-2	3.0	DN 200	1267		1040	725	32.0	2804 ★★		1040	704	30.4	
	CR 45-2-2	5.5	CR 32-2	4.0				1139	762	44.0			1139	741	41.0	
	CR 45-2	7.5	CR 32-3	5.5				1146	782	60.8			1146	766	56.6	
	CR 45-3	11.0	CR 32-4	7.5				1402	951	86.0			1402	901	79.7	
	CR 45-4	15.0	CR 32-6-2	11.0				1539	1100	114.8			1539	1058	107.6	
	CR 45-5	18.5	CR 32-7	15.0				1623	1161	143.6			1623	1140	136.4	
5	CR 45-1	4.0	-	-	DN 200	1267		3304 ★★	1040	894	40.0		-	-	-	
	CR 45-2-2	5.5	-	-				1139	939	55.0		-	-	-		
	CR 45-2	7.5	-	-				1146	867	76.0		-	-	-		
	CR 45-3	11.0	-	-				2524 ★★★	1402	1077	107.5		-	-	-	
	CR 45-4	15.0	-	-				1539	1262	143.5		-	-	-		
	CR 45-5	18.5	-	-				1623	1336	179.5		-	-	-		
6	CR 45-1	4.0	-	-	DN 200	1267		3804 ★★	1040	1039	48.0		-	-	-	
	CR 45-2-2	5.5	-	-				1139	1000	66.0		-	-	-		
	CR 45-2	7.5	-	-				1146	1030	91.2		-	-	-		
	CR 45-3	11.0	-	-				3024 ★★★	1402	1282	129.0		-	-	-	
	CR 45-4	15.0	-	-				1539	1504	172.2		-	-	-		
	CR 45-5	18.5	-	-				1623	1594	215.4		-	-	-		

For information about ★★ and ★★★, please see page 98.



★★

TM01 2969 1303



★★★

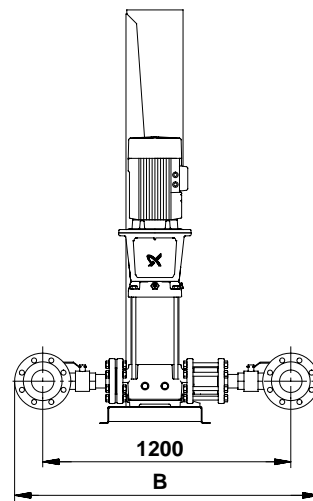
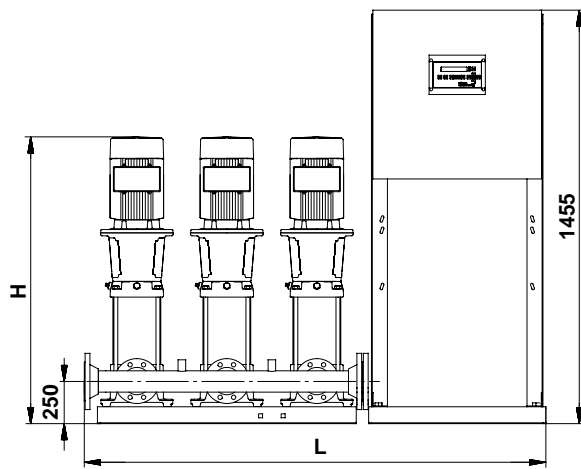
TM01 2965 1303

For information about ★★ and ★★★, please see page 98.

Electrical data, weights and dimensions

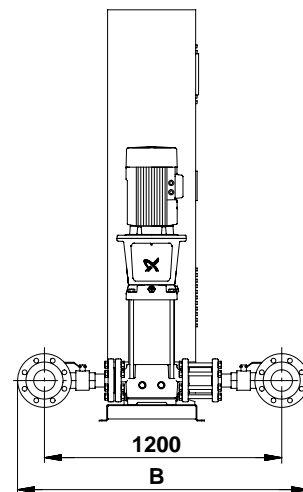
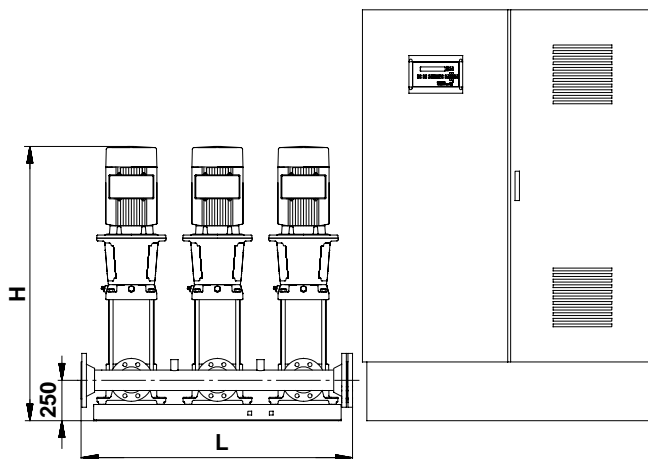
No. of pumps	Full-size pumps		Half-size pumps		Connection	B [mm]	Hydro 2000 MS				Hydro 2000 MSH			
	Pump type	Motor [kW]	Pump type	Motor [kW]			L [mm]	H [mm]	Weight [kg]	Max. I _n [A]	L [mm]	H [mm]	Weight [kg]	Max. I _n [A]
2	CR 64-1	5.5	CR 32-2-2	3.0	DN 150	1214		1062	397	22.0		1062	365	17.4
	CR 64-2-2	7.5	CR 32-2	4.0			1602	1145	415	30.4	1602	1145	384	23.2
	CR 64-2	11.0	CR 32-3	5.5			★★	1328	491	43.0	★★	1328	431	32.5
	CR 64-3-1	15.0	CR 32-4	7.5				1424	568	57.4		1424	478	43.9
	CR 64-4-2	18.5	CR 32-5	11.0			1802	1507	630	71.8	1802	1507	533	57.4
	CR 64-4	22.0	CR 32-6-2	11.0			★★	1629	739	84.0	★★	1629	627	63.5
	CR 64-5-1	30.0	CR 32-7	15.0			2002	1778	944	112.0	2002	1778	783	84.7
3	CR 64-1	5.5	CR 32-2-2	3.0	DN 200	1265	2104	1062	571	33.0	2104	1062	539	28.4
	CR 64-2-2	7.5	CR 32-2	4.0			★★	1145	598	45.6	★★	1145	568	38.4
	CR 64-2	11.0	CR 32-3	5.5				1328	745	64.5		1328	652	54.0
	CR 64-3-1	15.0	CR 32-4	7.5			2304	1424	861	86.1	2304	1424	773	72.6
	CR 64-4-2	18.5	CR 32-5	11.0			★★	1507	904	107.7	★★	1507	842	93.3
	CR 64-4	22.0	CR 32-6-2	11.0				1629	1067	126.0		1629	955	105.5
	CR 64-5-1	30.0	CR 32-7	15.0			2504	1778	1359	168.0	2504	1778	1199	140.7
4	CR 64-1	5.5	CR 32-2-2	3.0	DN 200	1265		1062	768	44.0		1062	736	39.4
	CR 64-2-2	7.5	CR 32-2	4.0				1145	804	60.8		1145	774	53.6
	CR 64-2	11.0	CR 32-3	5.5			2804	1328	957	86.0	2804	1328	897	75.5
	CR 64-3-1	15.0	CR 32-4	7.5			★★	1424	1110	114.8	★★	1424	1021	101.3
	CR 64-4-2	18.5	CR 32-5	11.0				1507	1167	143.6		1507	1104	129.2
	CR 64-4	22.0	CR 32-6-2	11.0				1629	1385	168.0		1629	1272	147.5
	CR 64-5-1	30.0	CR 32-7	15.0			3004	1778	1764	224.0	3004	1778	1601	196.7
5	CR 64-1	5.5	-	-	DN 200	1265	3304	1062	946	55.0	-	-	-	-
	CR 64-2-2	7.5	-	-			★★	1145	894	76.0	-	-	-	-
	CR 64-2	11.0	-	-				1328	1084	107.5	-	-	-	-
	CR 64-3-1	15.0	-	-			2524	1424	1273	143.5	-	-	-	-
	CR 64-4-2	18.5	-	-			★★★	1507	1344	179.5	-	-	-	-
	CR 64-4	22.0	-	-				1629	1614	210.0	-	-	-	-
	CR 64-5-1	30.0	-	-				1778	2045	280.0	-	-	-	-
6	CR 64-1	5.5	-	-	DN 200	1265		1062	1009	66.0	-	-	-	-
	CR 64-2-2	7.5	-	-				1145	1063	91.2	-	-	-	-
	CR 64-2	11.0	-	-			3024	1328	1291	129.0	-	-	-	-
	CR 64-3-1	15.0	-	-			★★★	1424	1519	172.2	-	-	-	-
	CR 64-4-2	18.5	-	-				1507	1603	215.4	-	-	-	-
	CR 64-4	22.0	-	-				1629	1927	252.0	-	-	-	-
	CR 64-5-1	30.0	-	-				1778	2443	336.0	-	-	-	-

For information about ★★ and ★★★, please see page 98.



★★

TM01 2971 1303



★★★

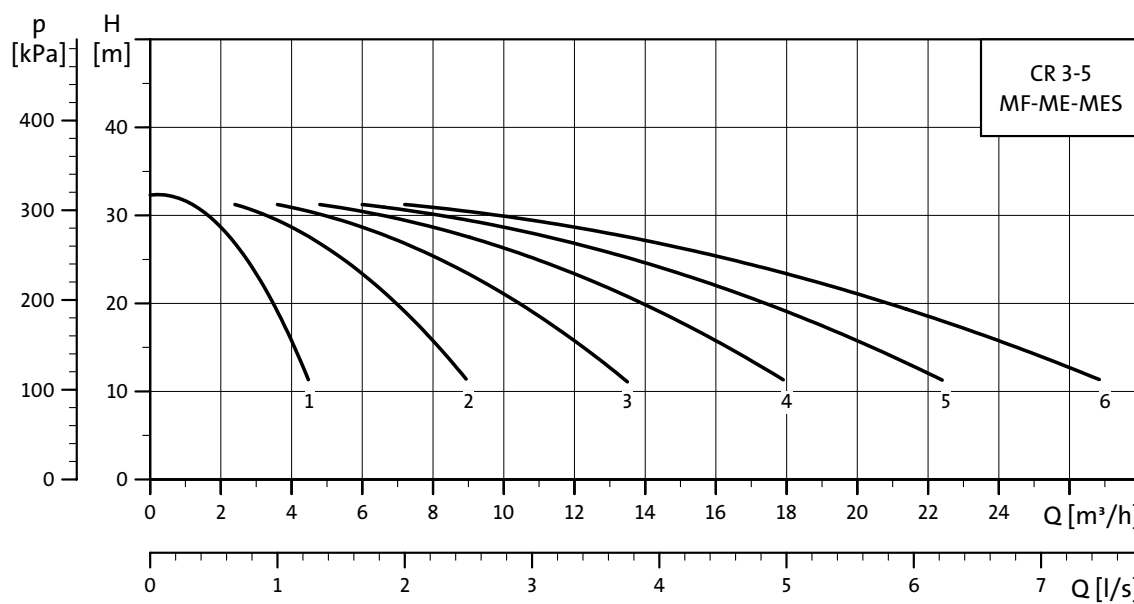
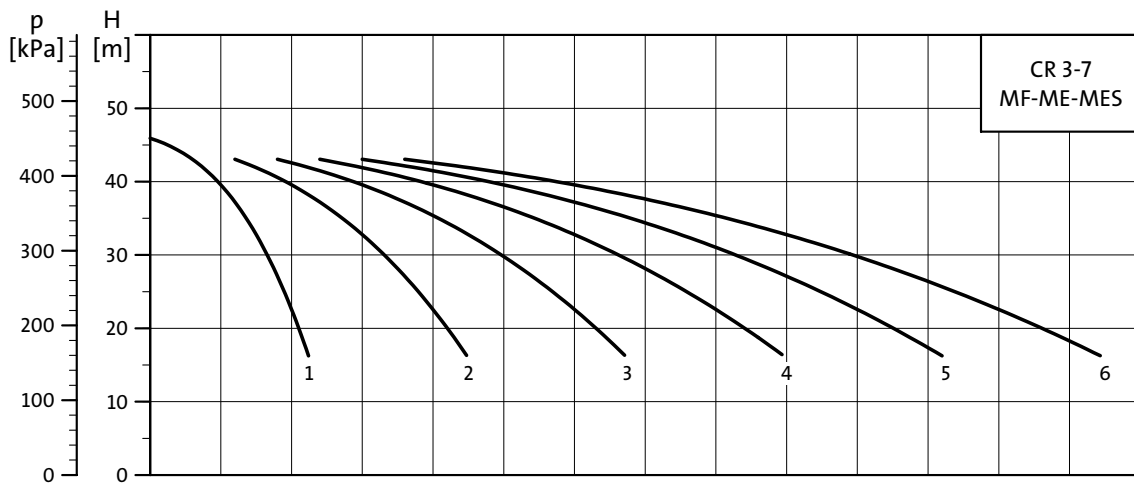
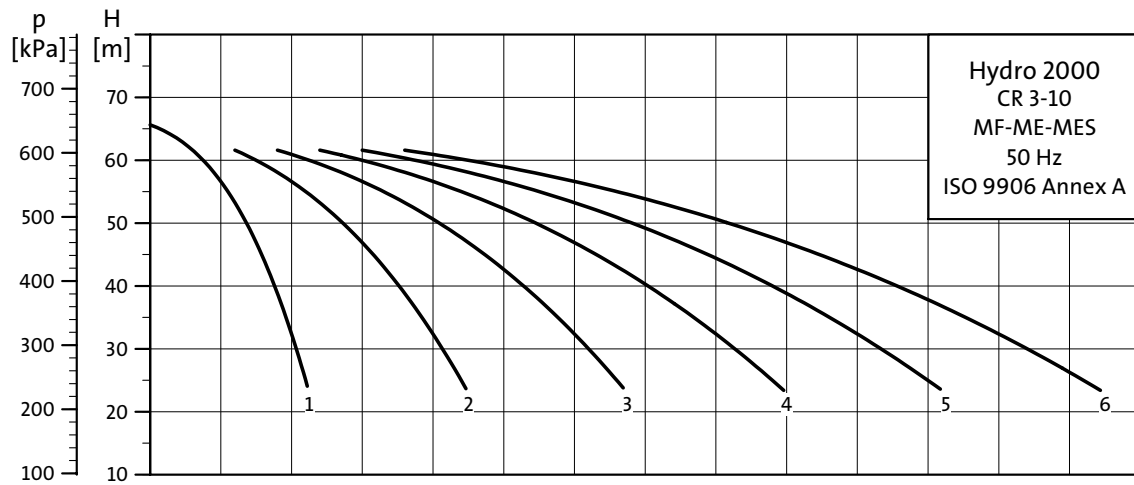
TM01 2967 1303

For information about ★★ and ★★★, please see page 98,

Electrical data, weights and dimensions

No. of pumps	Full-size pumps		Half-size pumps		Connection	B [mm]	Hydro 2000 MS				Hydro 2000 MSH				
	Pump type	Motor [kW]	Pump type	Motor [kW]			L [mm]	H [mm]	Weight [kg]	Max. I _n [A]	L [mm]	H [mm]	Weight [kg]	Max. I _n [A]	
2	CR 90-1	7.5	CR 45-2-2	5.5	DN 150	1364	1602 ★★	1139	427	30.4	1602 ★★	1139	418	26.2	
	CR 90-2-2	11.0	CR 45-2	7.5				1347	513	43.0		1347	465	36.7	
	CR 90-2	15.0	CR 45-3	11.0				1402	580	57.4		1402	541	50.2	
	CR 90-3-2	18.5	CR 45-4	15.0			2002 ★★	1802	1496	644	71.8	1802	1496	627	64.6
	CR 90-3	22.0	CR 45-4	15.0				1575	753	84.0	1575	681	70.7		
	CR 90-4-2	30.0	CR 45-5	18.5				1734	958	112.0	1734	816	91.9		
	CR 90-4	30.0	CR 45-5	18.5				1734	958	112.0	1734	816	91.9		
3	CR 90-1	7.5	CR 45-2-2	5.5	DN 200	1415	2104 ★★	1139	618	45.6	2104 ★★	1139	608	41.4	
	CR 90-2-2	11.0	CR 45-2	7.5				1347	780	64.5		1347	698	58.2	
	CR 90-2	15.0	CR 45-3	11.0			2304 ★★	1402	881	86.1	2304	1402	840	78.9	
	CR 90-3-2	18.5	CR 45-4	15.0				1496	927	107.7	1496	908	100.5		
	CR 90-3	22.0	CR 45-4	15.0				1575	1090	126.0	1575	1017	112.7		
	CR 90-4-2	30.0	CR 45-5	18.5			2504 ★★	1734	1383	168.0	2504	1734	1239	147.9	
	CR 90-4	30.0	CR 45-5	18.5				1734	1382	168.0	1734	1239	147.9		
4	CR 90-1	7.5	CR 45-2-2	5.5	DN 200	1415	2804 ★★	1139	830	60.8	2804 ★★	1139	819	56.6	
	CR 90-2-2	11.0	CR 45-2	7.5				1347	1003	86.0		1347	954	79.7	
	CR 90-2	15.0	CR 45-3	11.0				1402	1136	114.8		1402	1095	107.6	
	CR 90-3-2	18.5	CR 45-4	15.0				1496	1197	143.6		1496	1177	136.4	
	CR 90-3	22.0	CR 45-4	15.0			1575	1415	168.0	1575	1341	154.7			
	CR 90-4-2	30.0	CR 45-5	18.5			3004 ★★	1734	1793	224.0	3004	1734	1648	203.9	
	CR 90-4	30.0	CR 45-5	18.5				1734	1793	224.0	1734	1648	203.9		
5	CR 90-1	7.5	-	-	DN 250	1469	2526 ★★★	1139	1083	76.0	-	-	-	-	
	CR 90-2-2	11.0	-	-				1347	1298	107.5	-	-	-	-	
	CR 90-2	15.0	-	-				1402	1463	143.5	-	-	-	-	
	CR 90-3-2	18.5	-	-				1496	1538	179.5	-	-	-	-	
	CR 90-3	22.0	-	-				1575	1808	210.0	-	-	-	-	
	CR 90-4-2	30.0	-	-				1734	2239	280.0	-	-	-	-	
	CR 90-4	30.0	-	-				1734	2239	280.0	-	-	-	-	
6	CR 90-1	7.5	-	-	DN 250	1469	3026 ★★★	1139	1262	91.2	-	-	-	-	
	CR 90-2-2	11.0	-	-				1347	1520	129.0	-	-	-	-	
	CR 90-2	15.0	-	-				1402	1718	172.2	-	-	-	-	
	CR 90-3-2	18.5	-	-				1496	1808	215.4	-	-	-	-	
	CR 90-3	22.0	-	-				1575	2132	252.0	-	-	-	-	
	CR 90-4-2	30.0	-	-				1734	2648	336.0	-	-	-	-	
	CR 90-4	30.0	-	-				1734	2648	336.0	-	-	-	-	

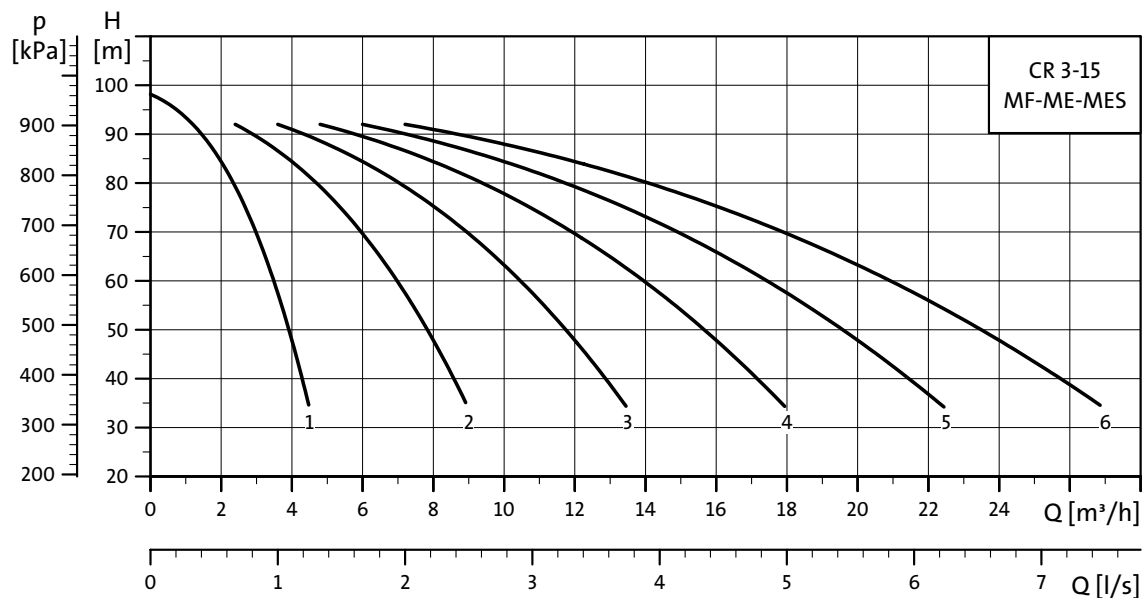
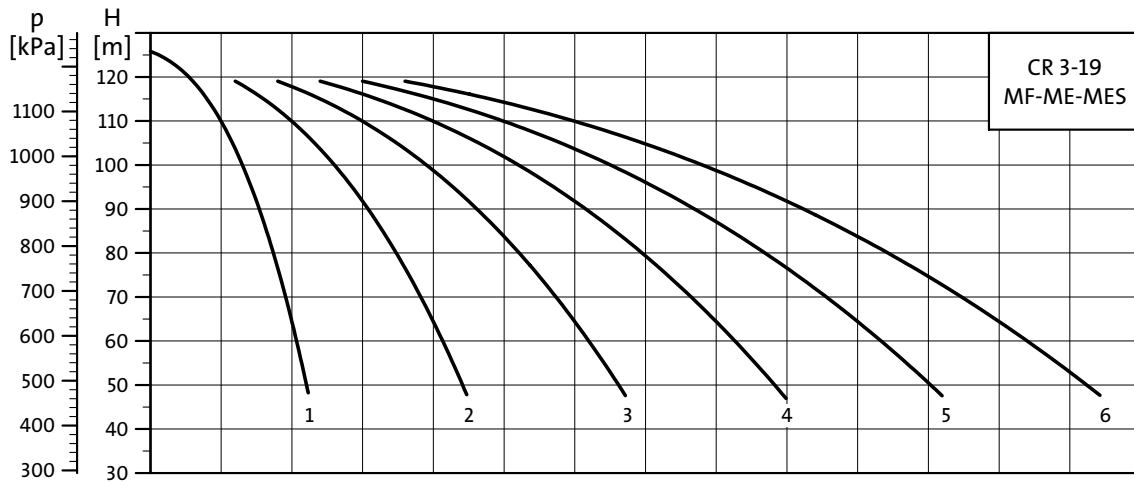
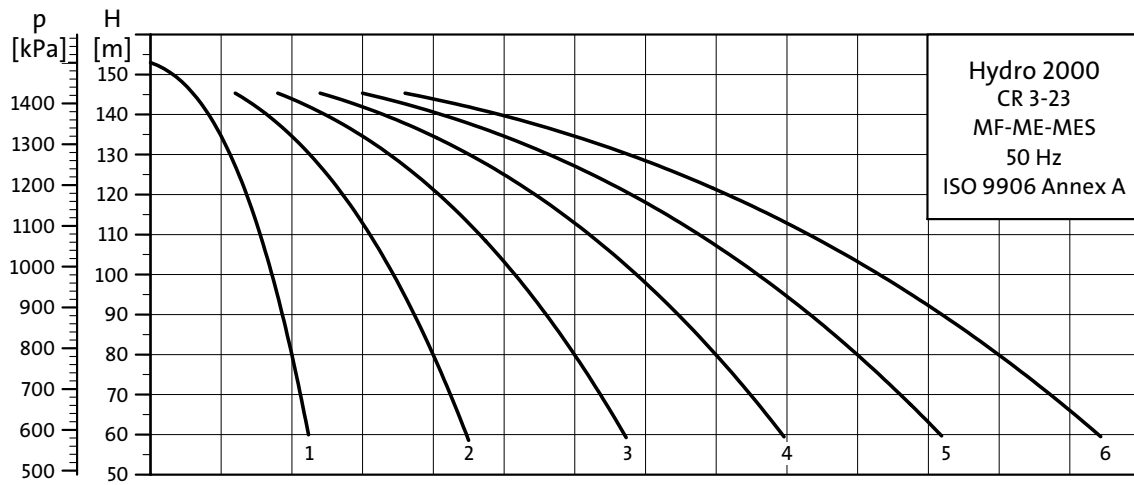
For information about ★★ and ★★★, please see page 98.



TM00 8767 3803

Performance curves

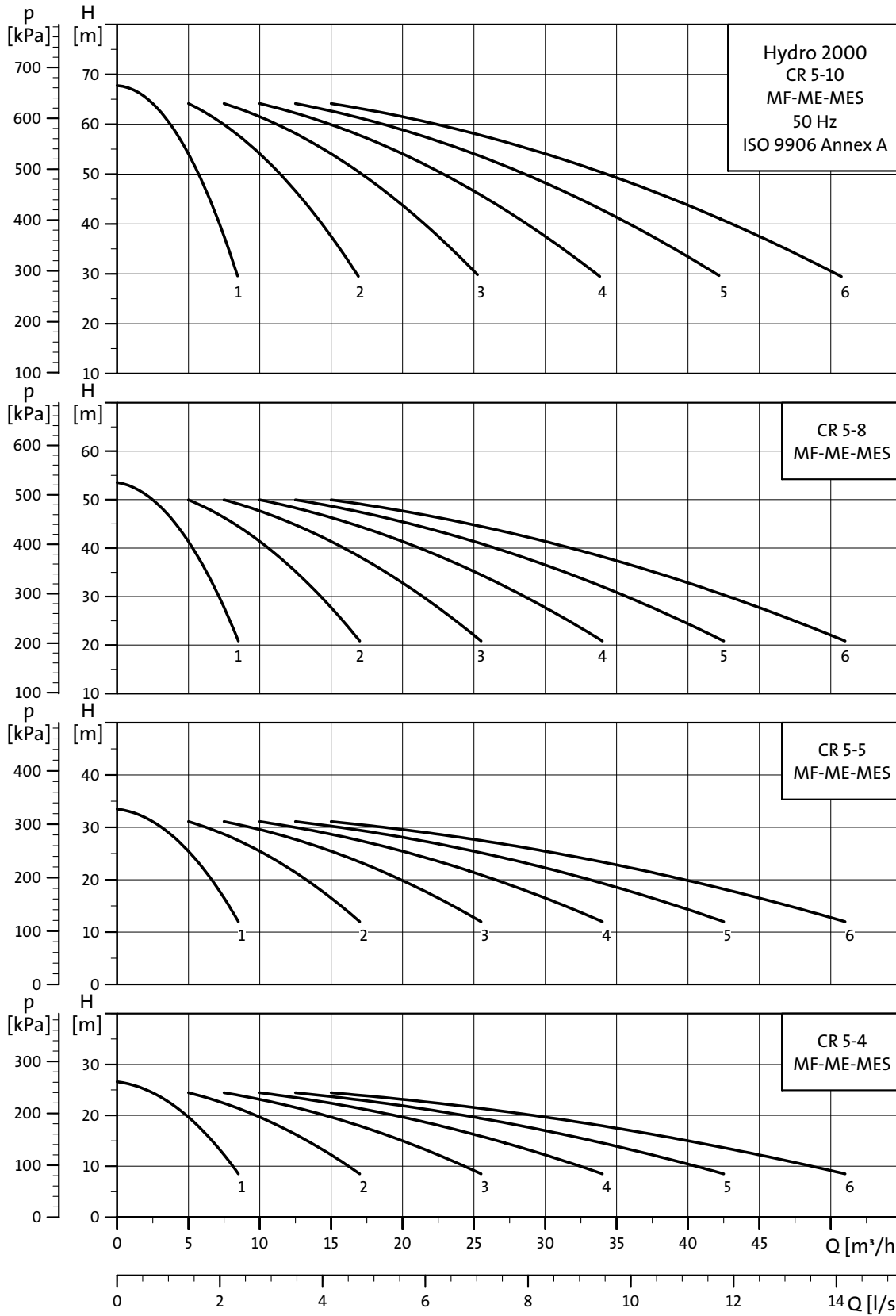
Hydro 2000 F-E
CR 3



TM00 8769 3803

Performance curves

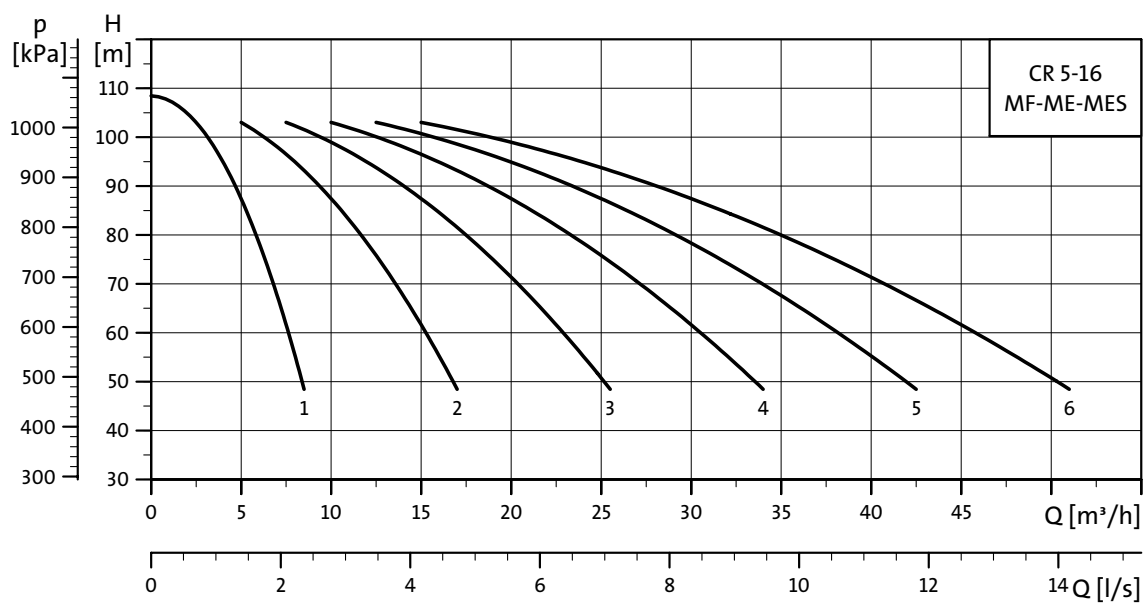
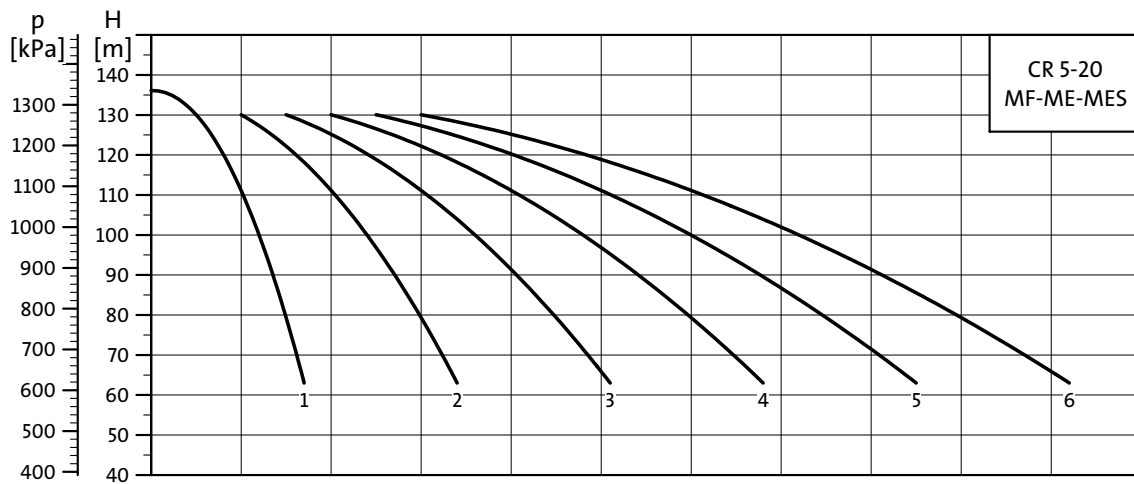
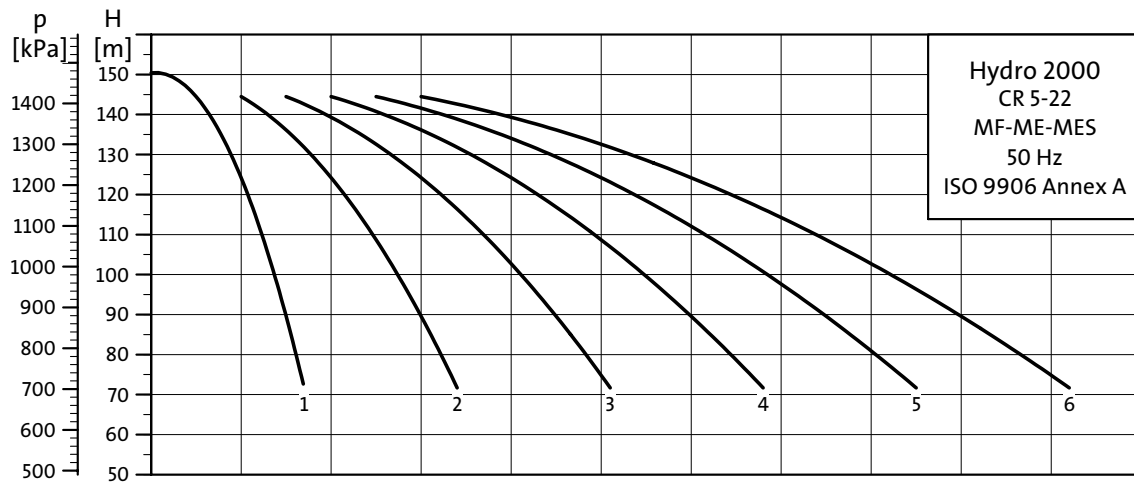
Hydro 2000 F-E
CR 5



TM00 8775 3803

Performance curves

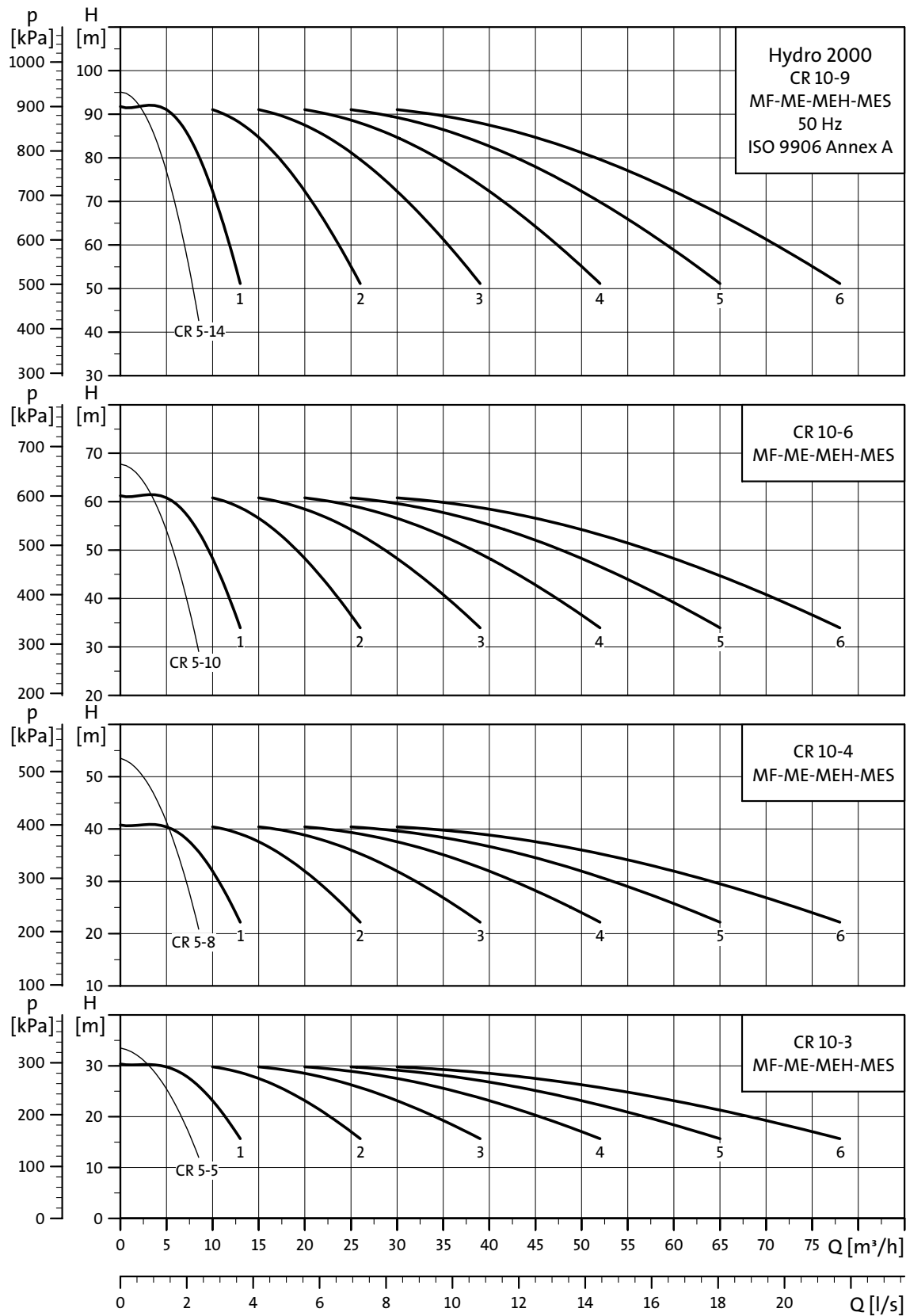
Hydro 2000 F-E
CR 5



TM00 8777 3803

Performance curves

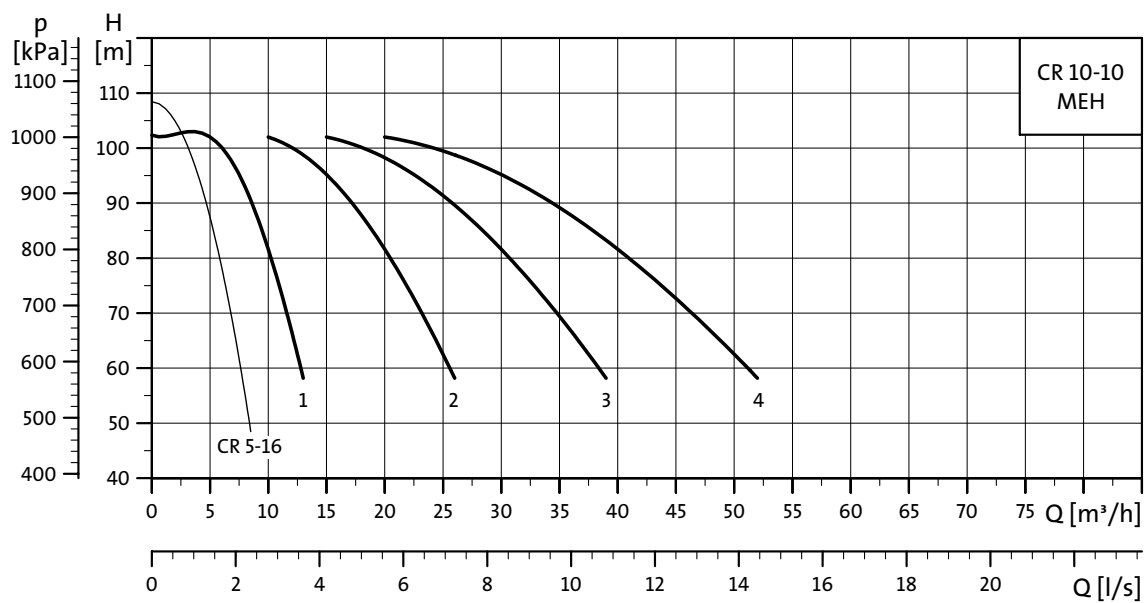
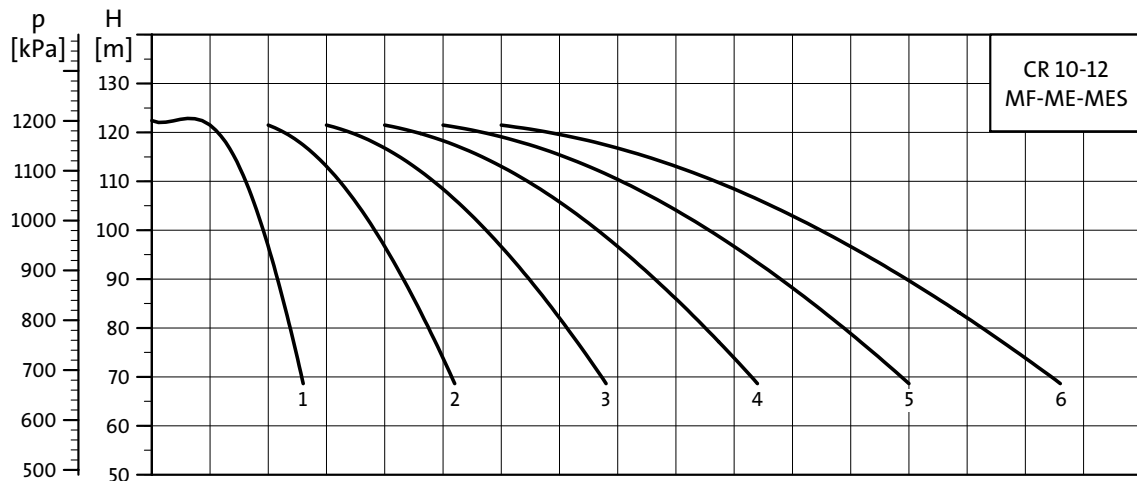
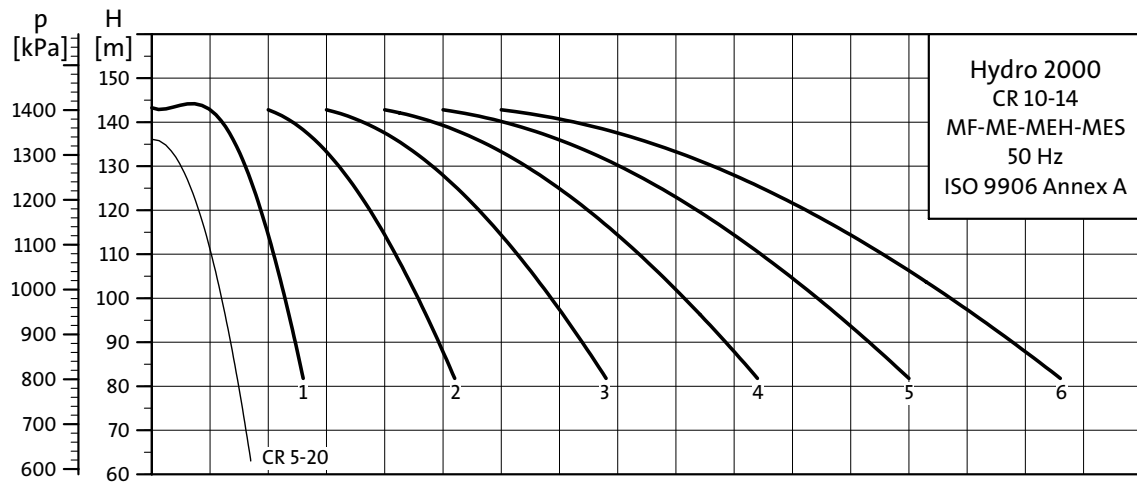
Hydro 2000 F-E
CR 10



TM02 7552 3803

Performance curves

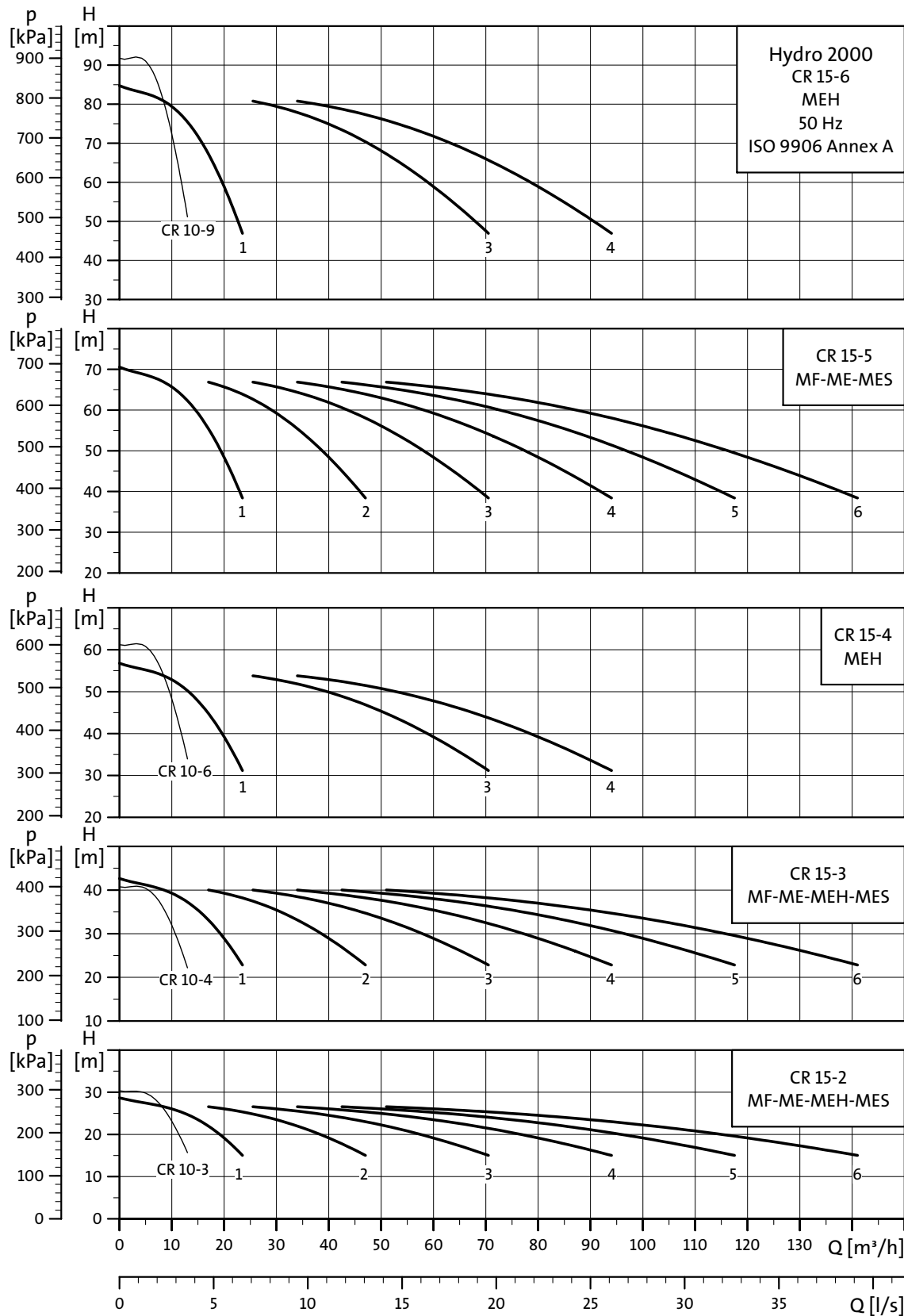
Hydro 2000 F-E
CR 10



TM02 7553 3803

Performance curves

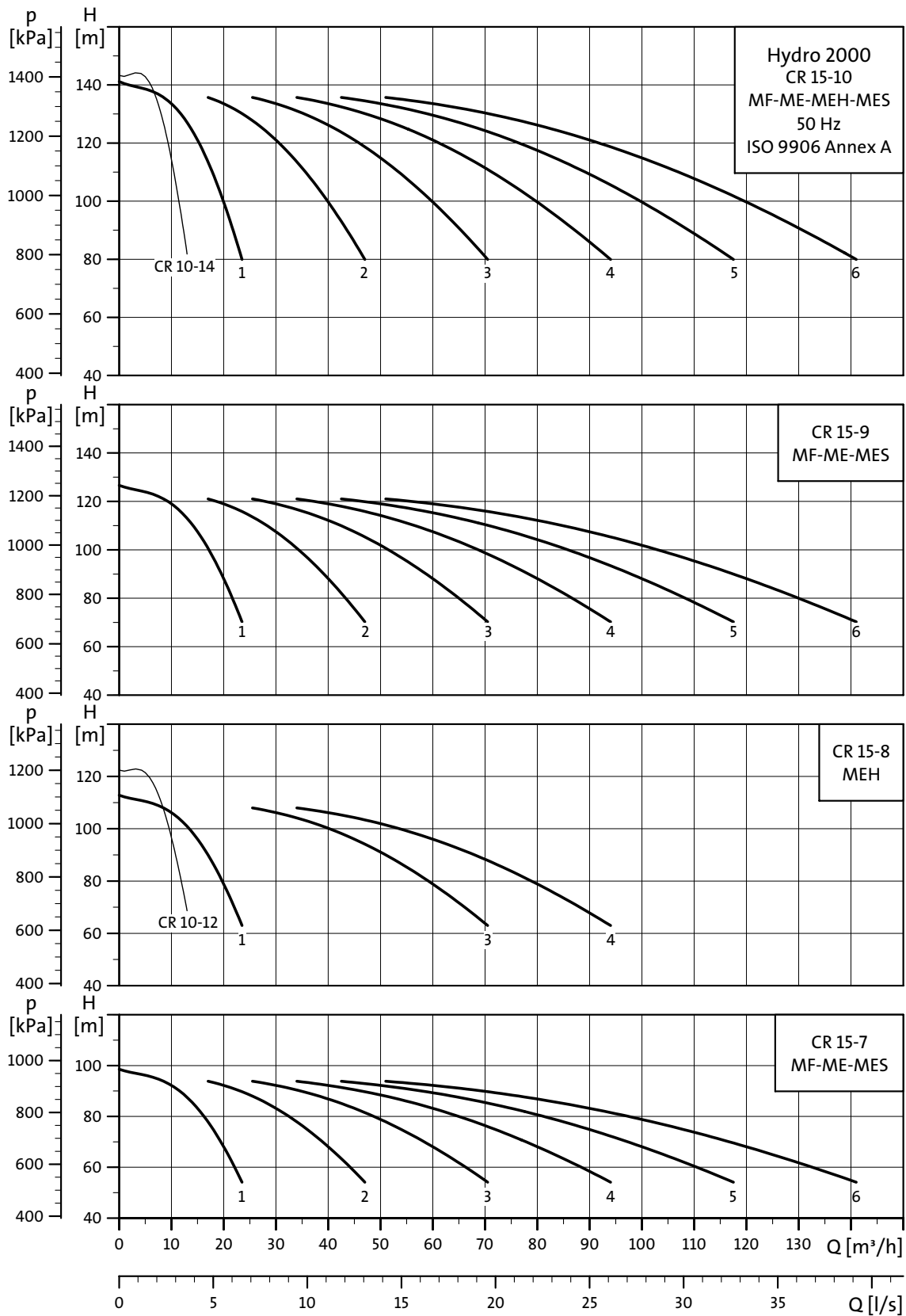
Hydro 2000 F-E
CR 15



TM02 7554 3803

Performance curves

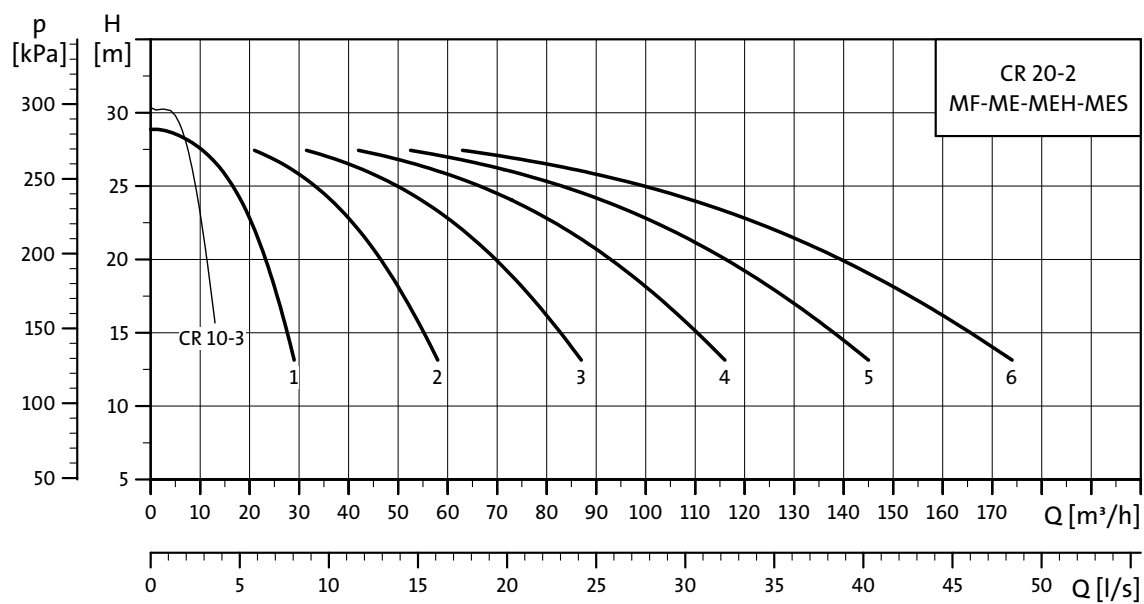
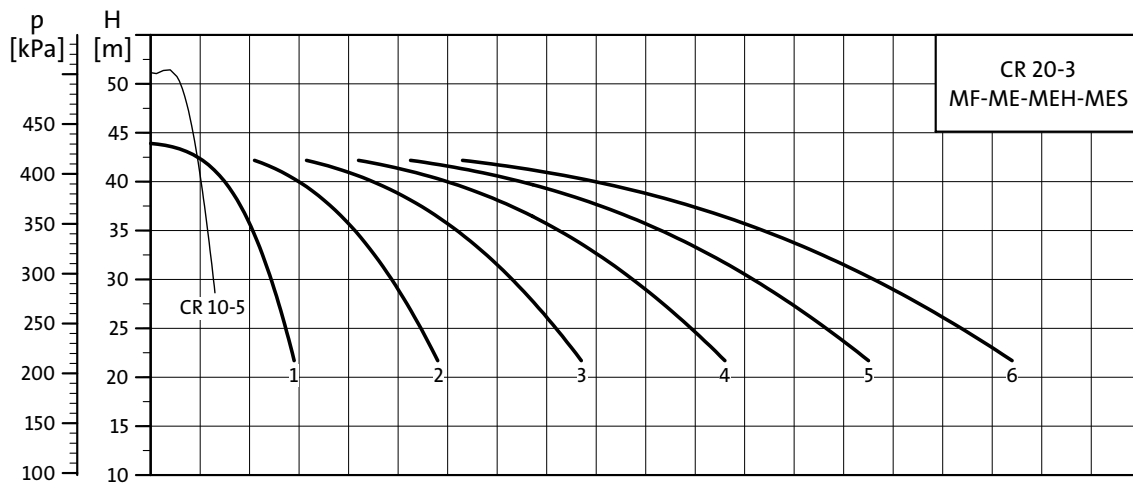
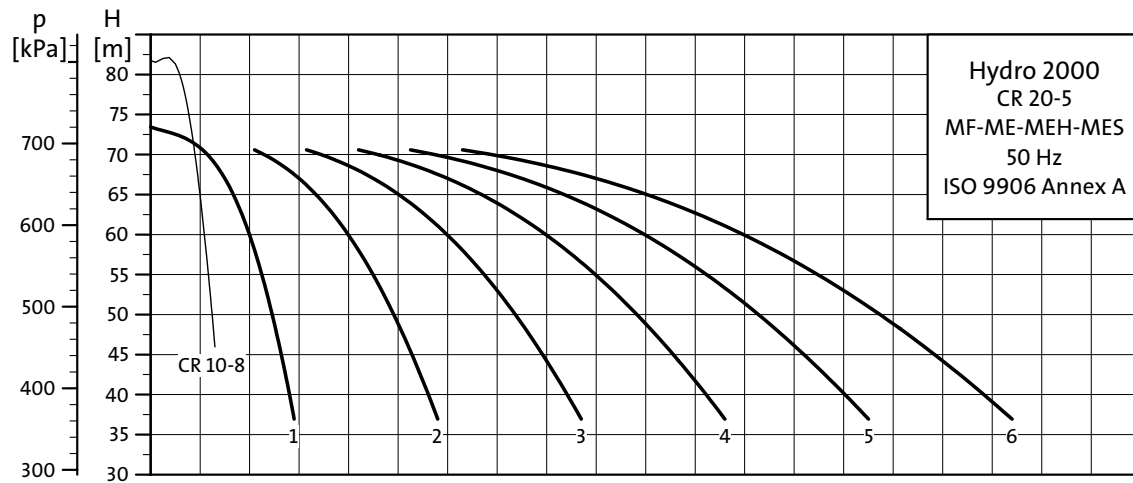
Hydro 2000 F-E
CR 15



TM02 7555 3803

Performance curves

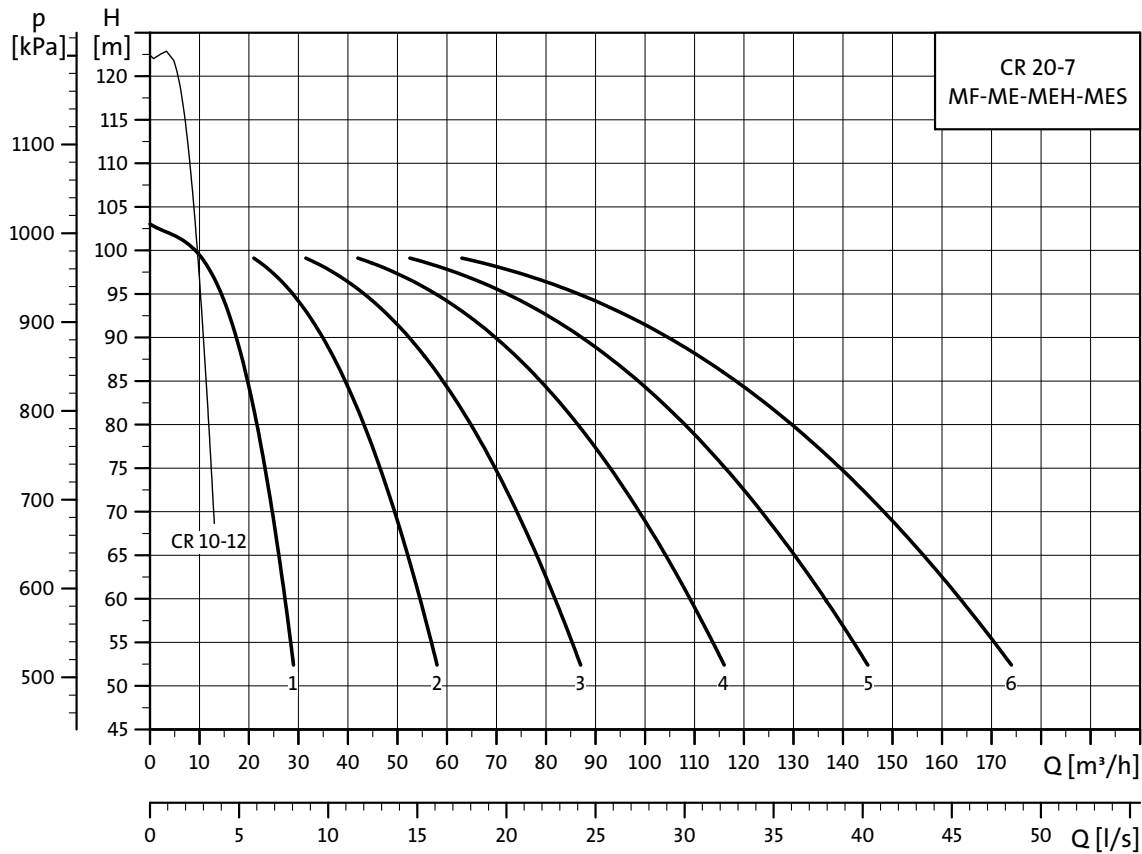
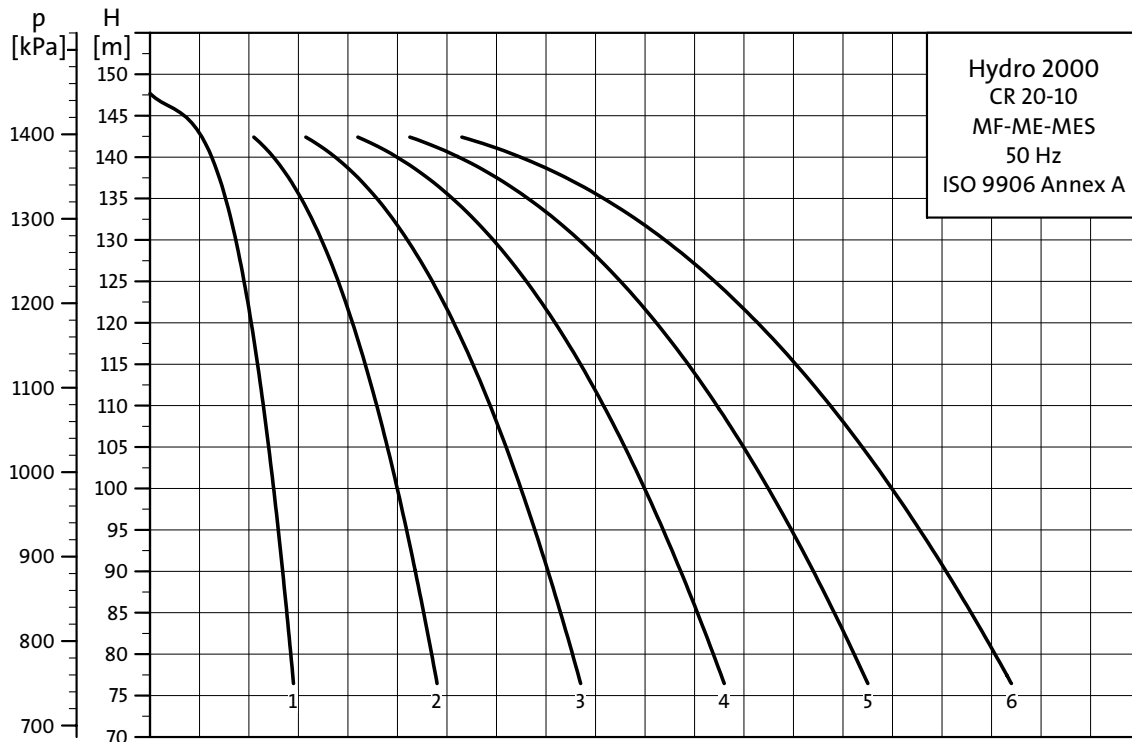
Hydro 2000 F-E
CR 20



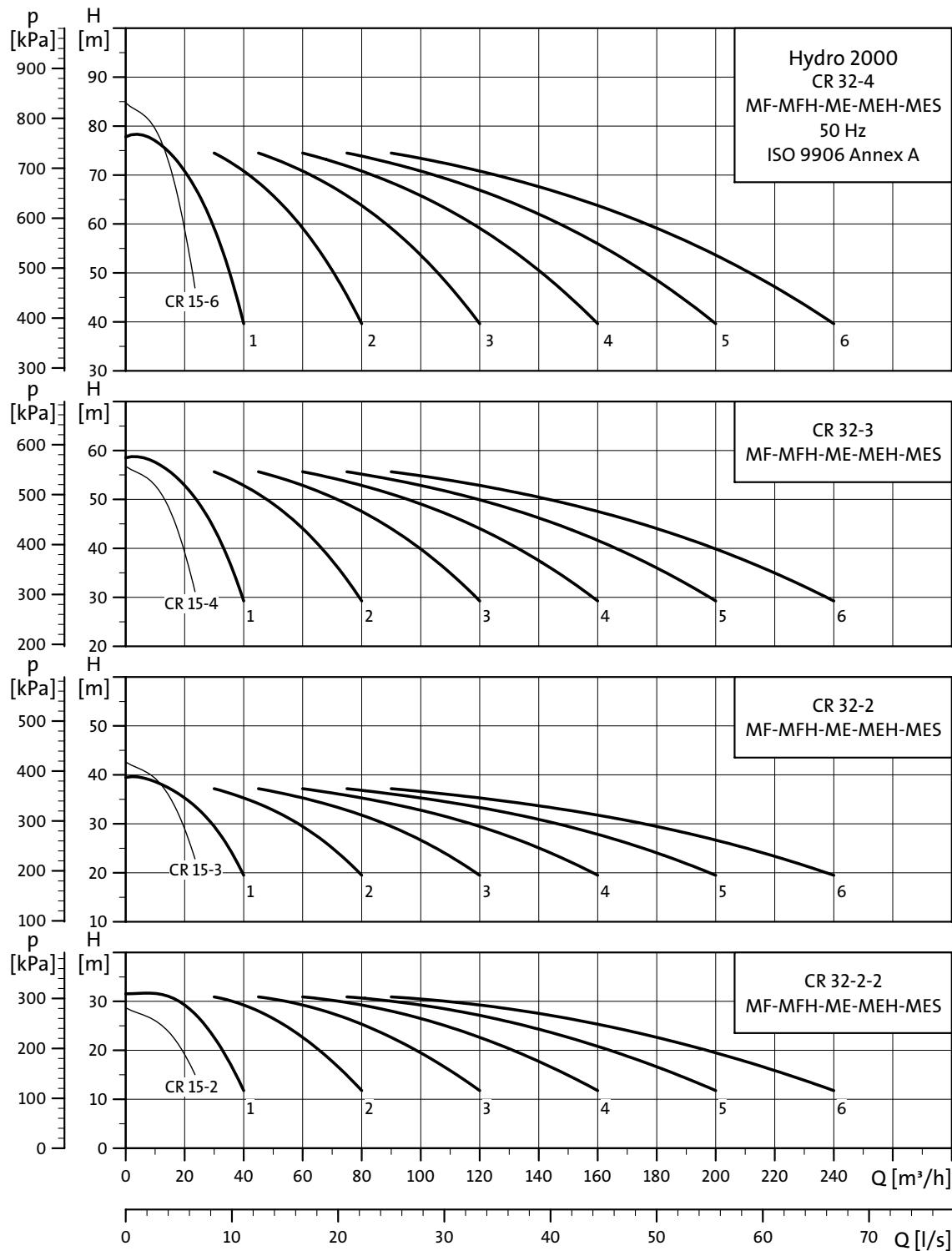
TM02 7556 3803

Performance curves

Hydro 2000 F-E
CR 20



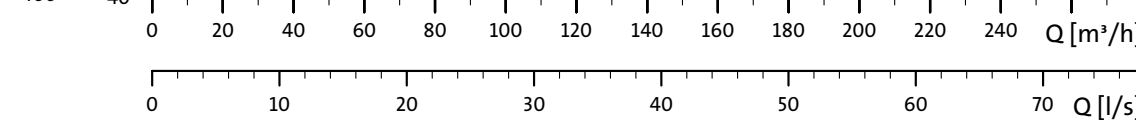
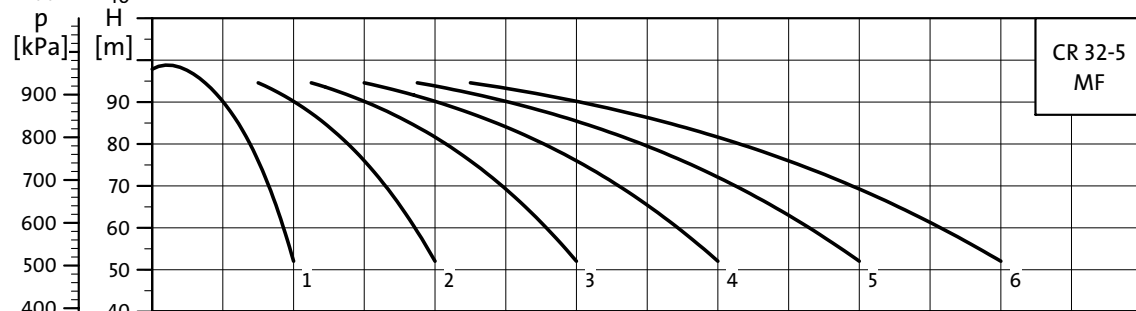
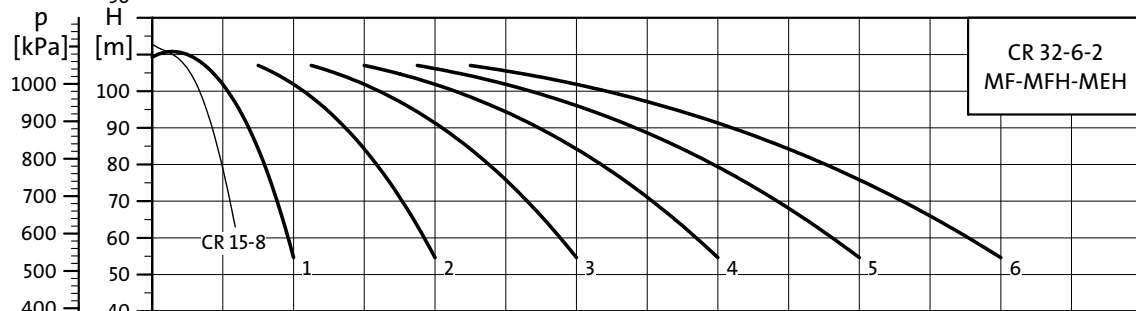
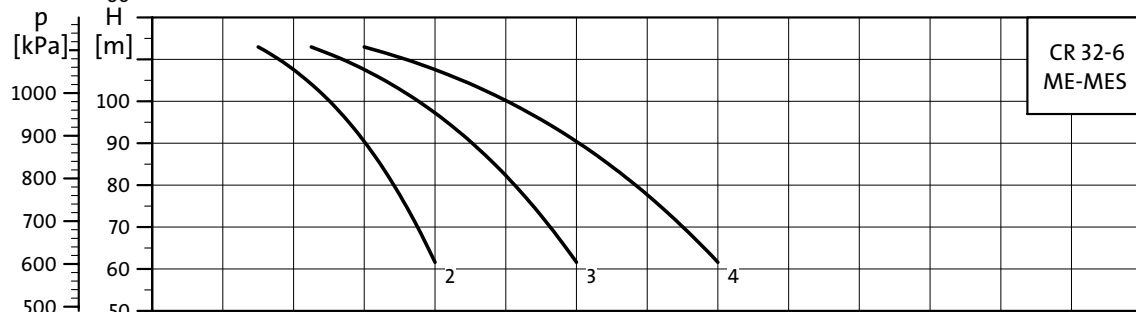
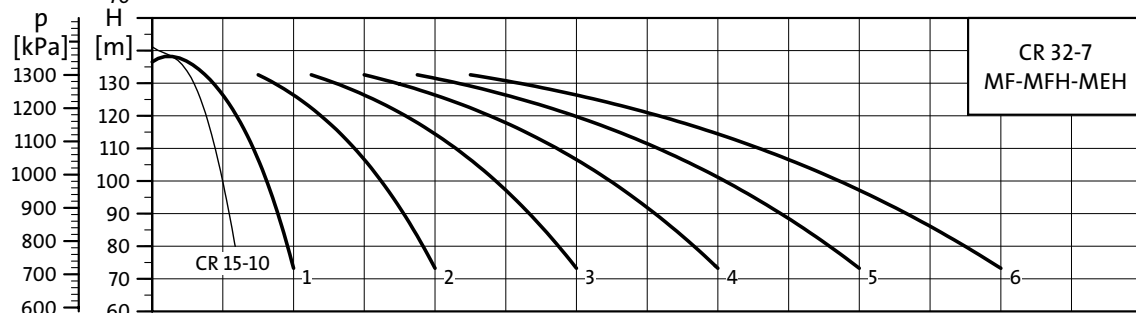
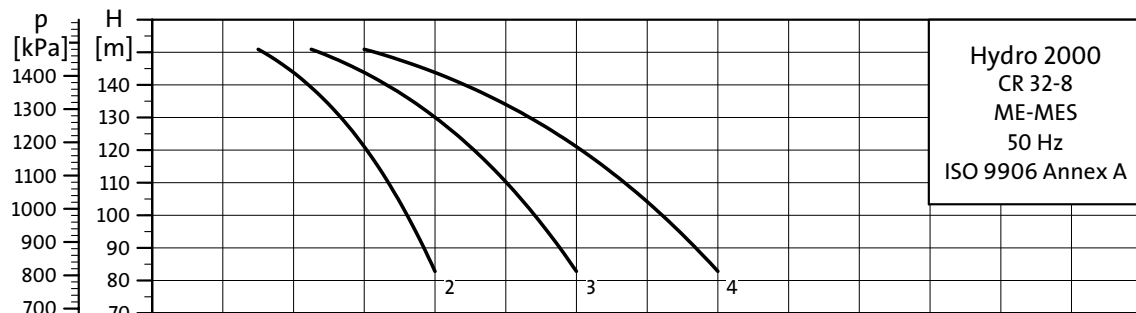
TM02 7557 3803



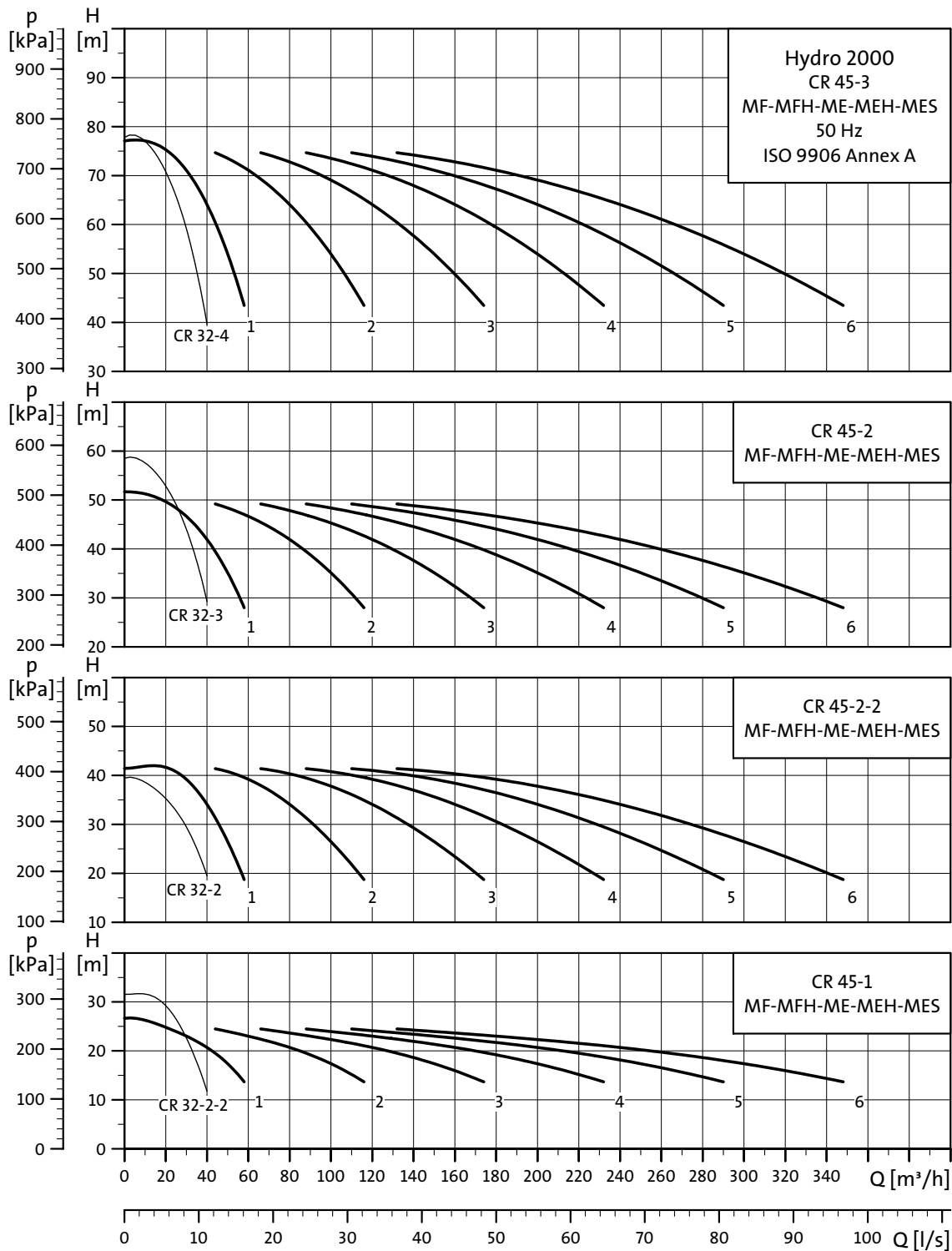
TM01 2771 3803

Performance curves

Hydro 2000 F-E
CR 32



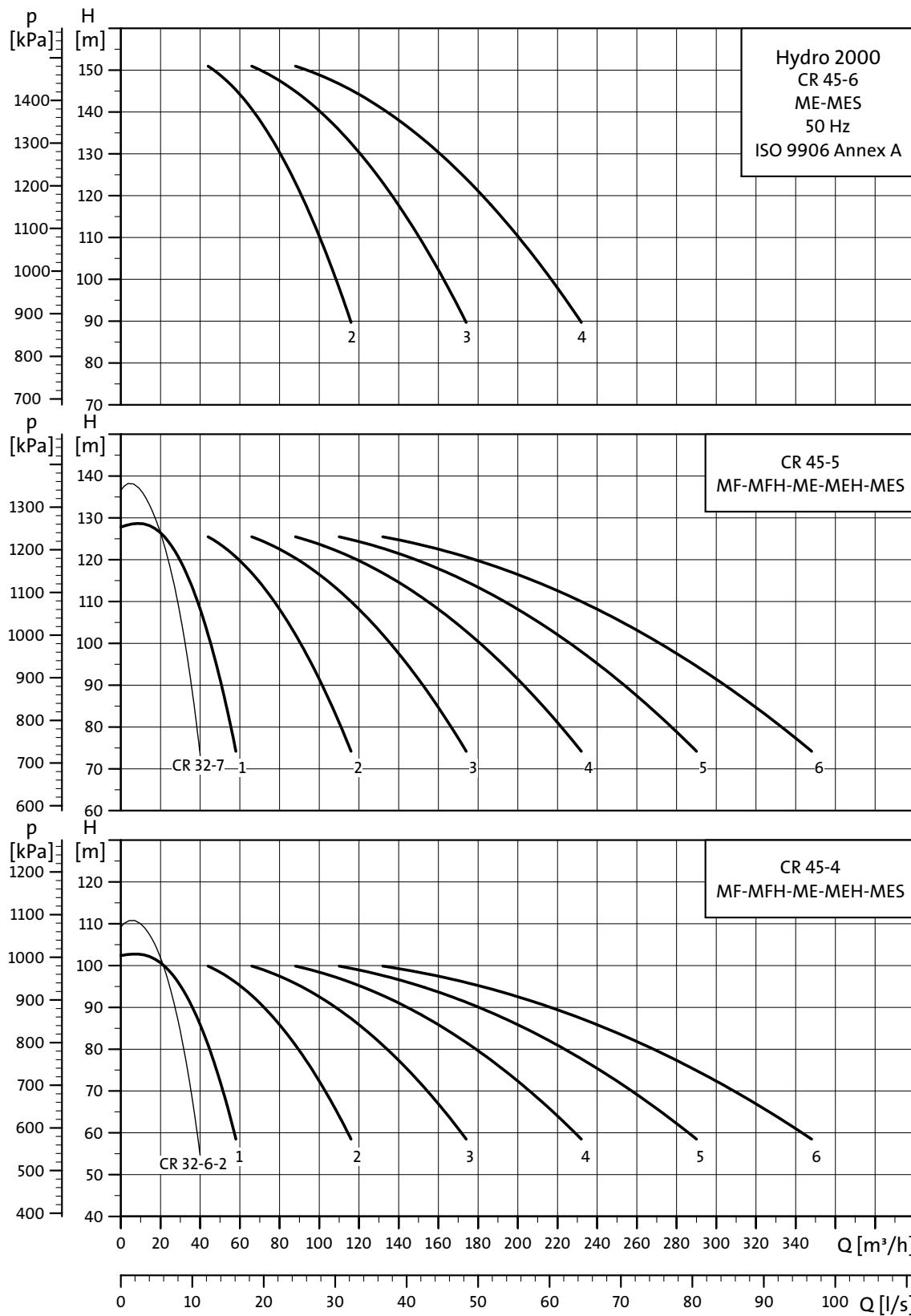
TM01 2772-3803



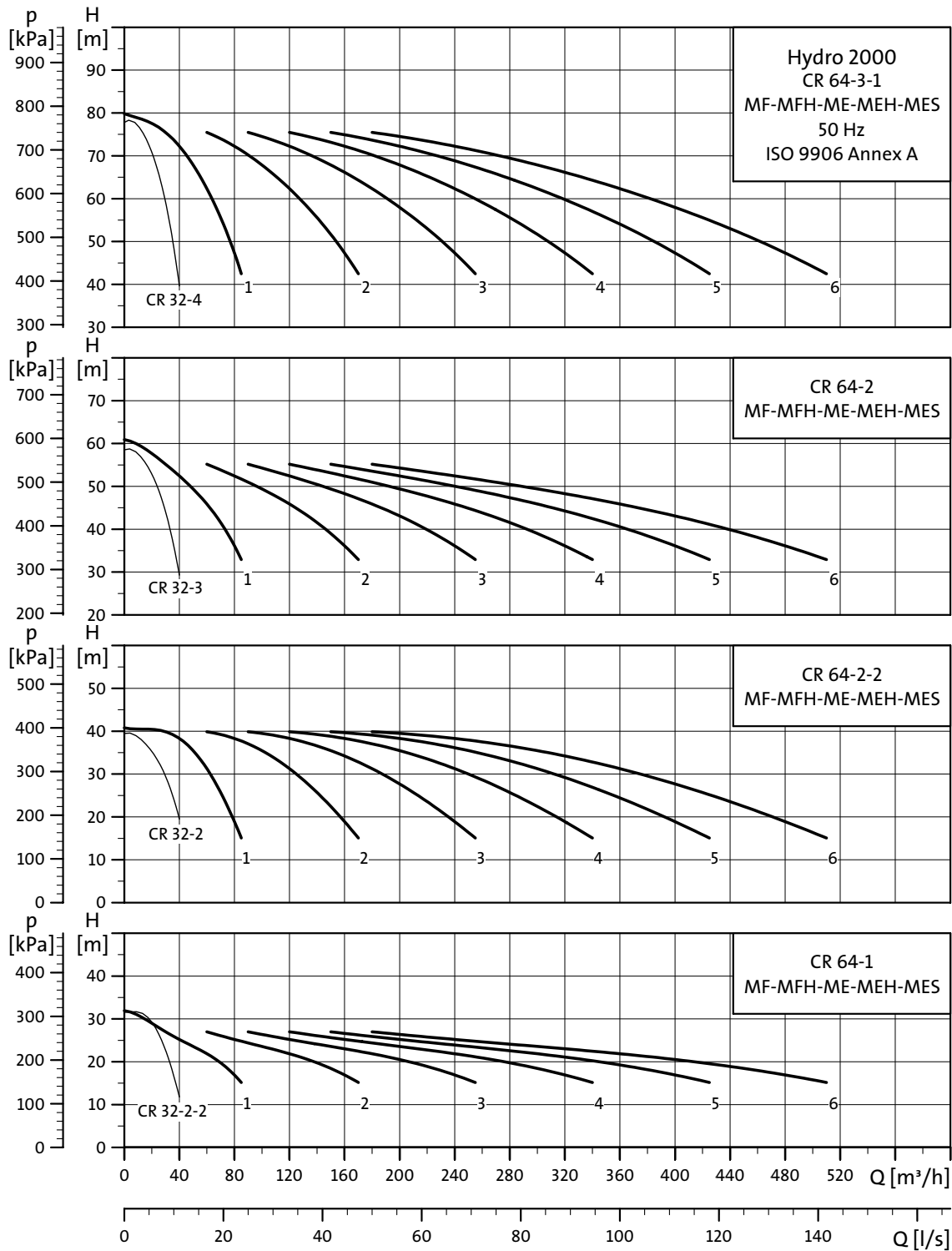
TM01 2773 9803

Performance curves

Hydro 2000 F-E
CR 45



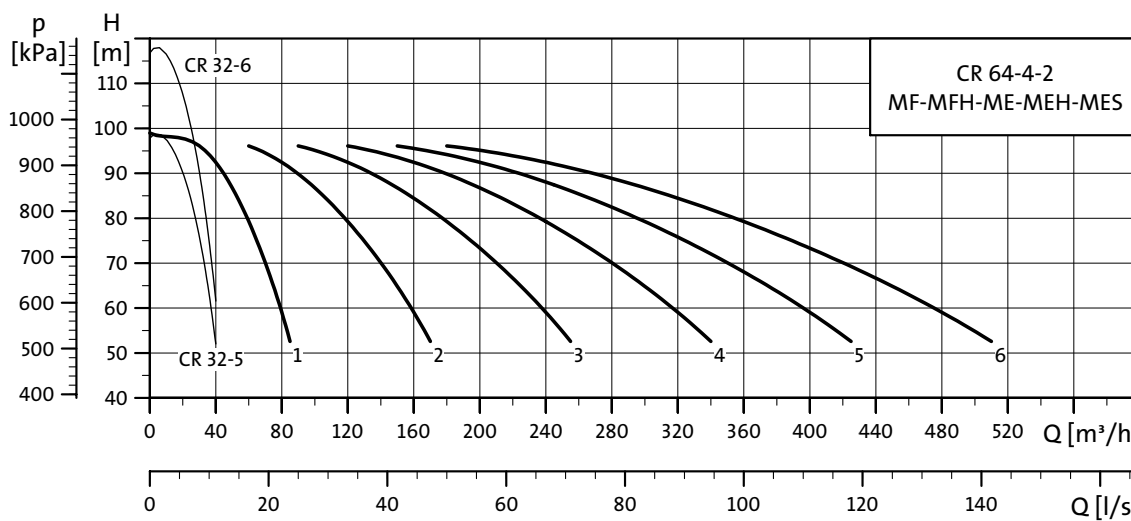
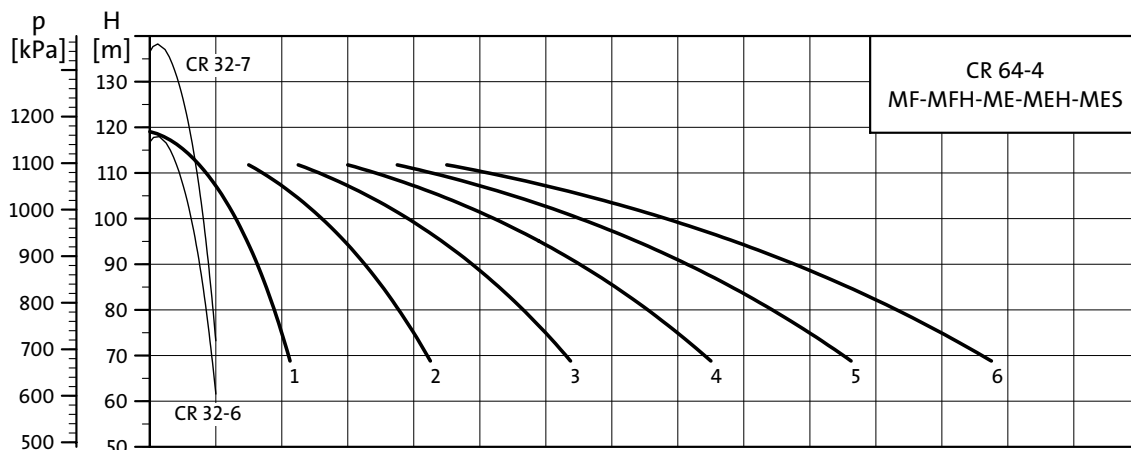
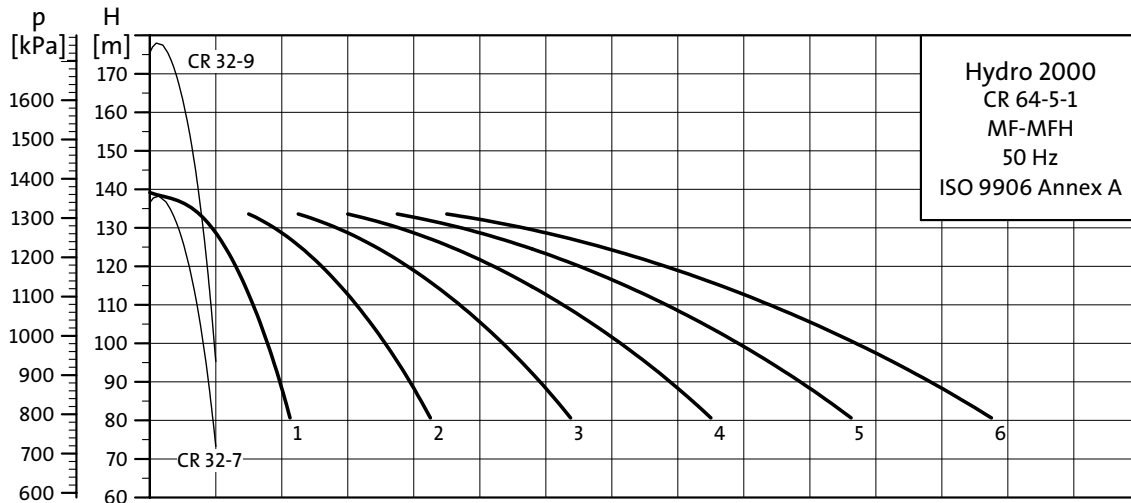
TM01 2774 3803



TM01 2775 3803

Performance curves

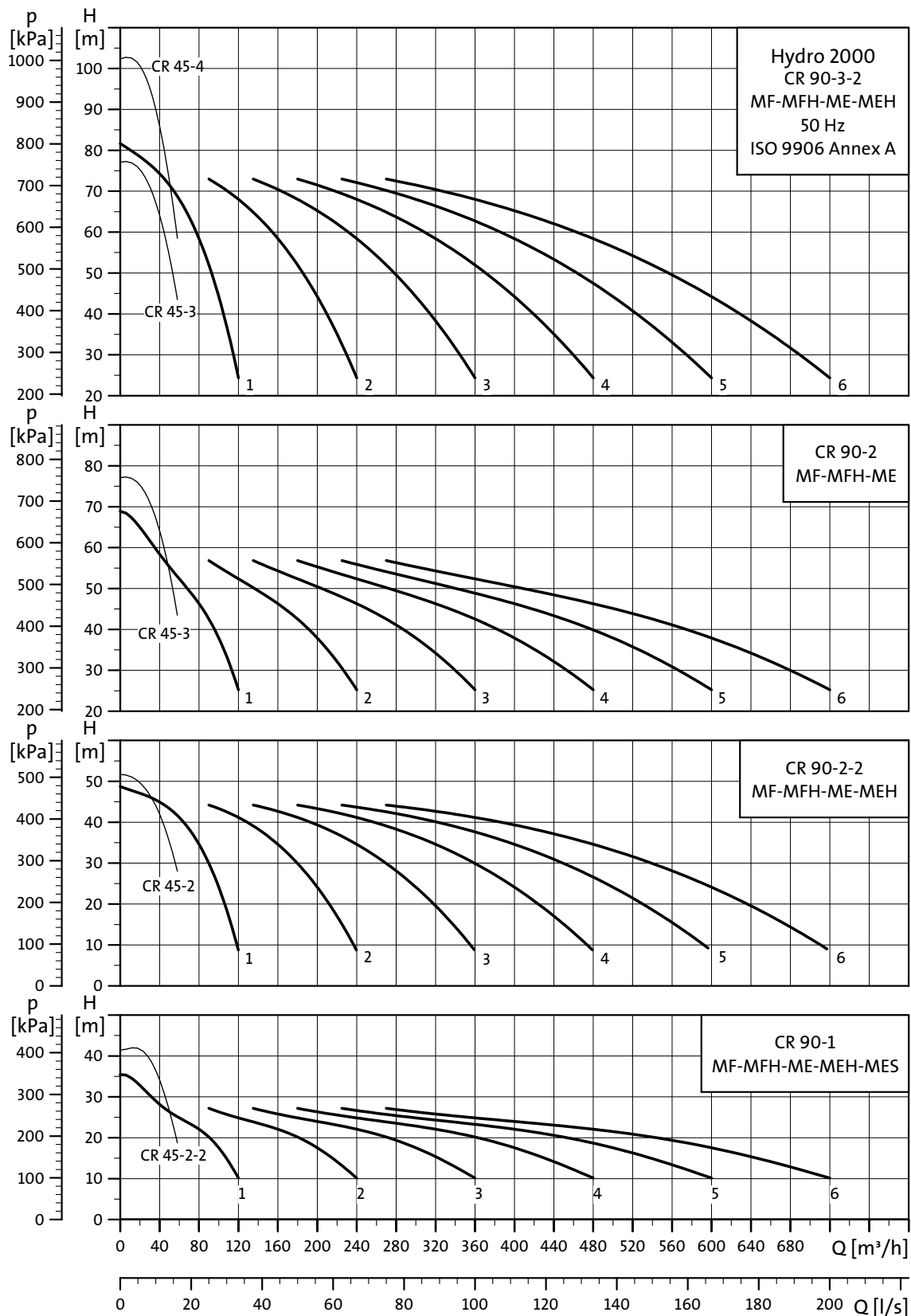
Hydro 2000 F-E
CR 64



TM01 2776 3603

Performance curves

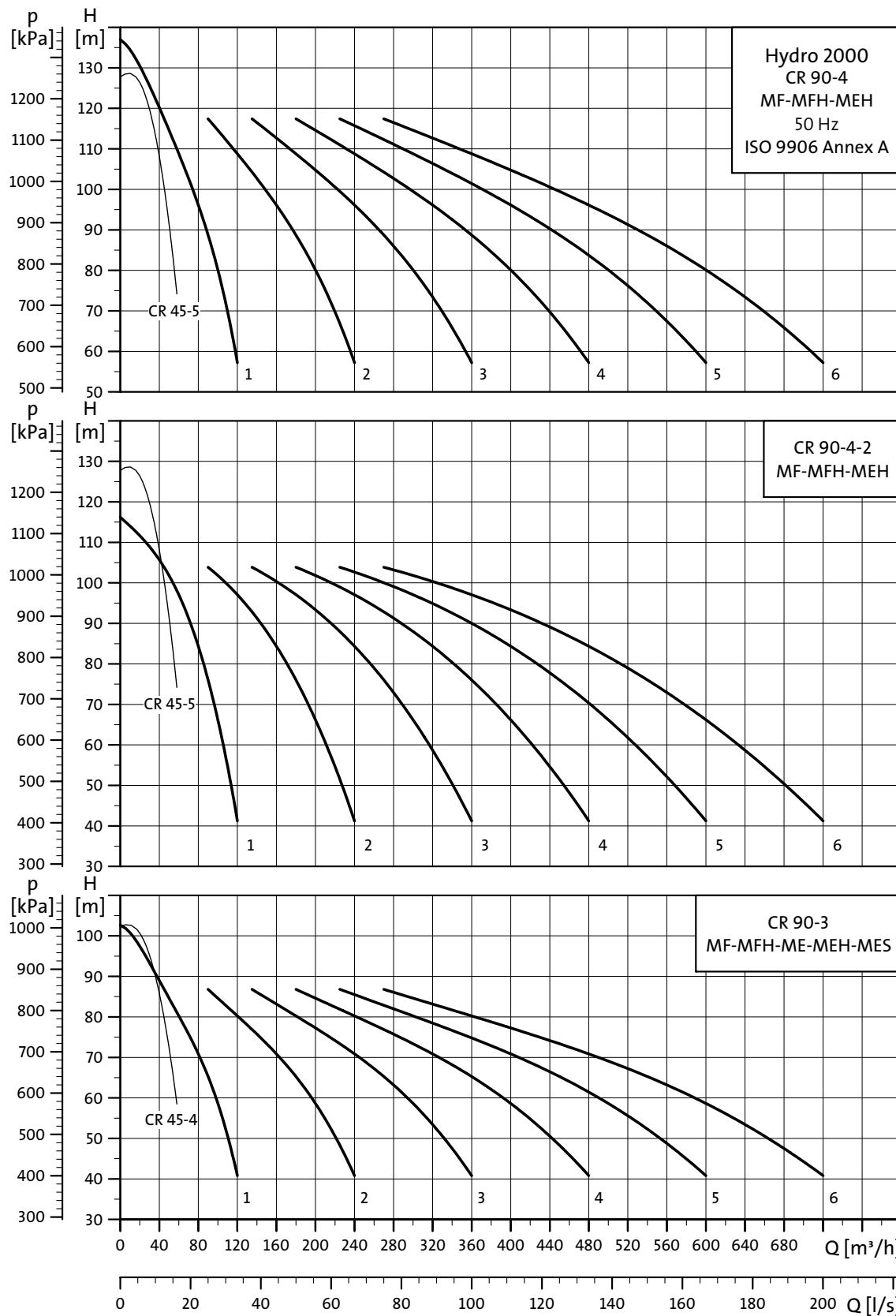
Hydro 2000 F-E
CR 90



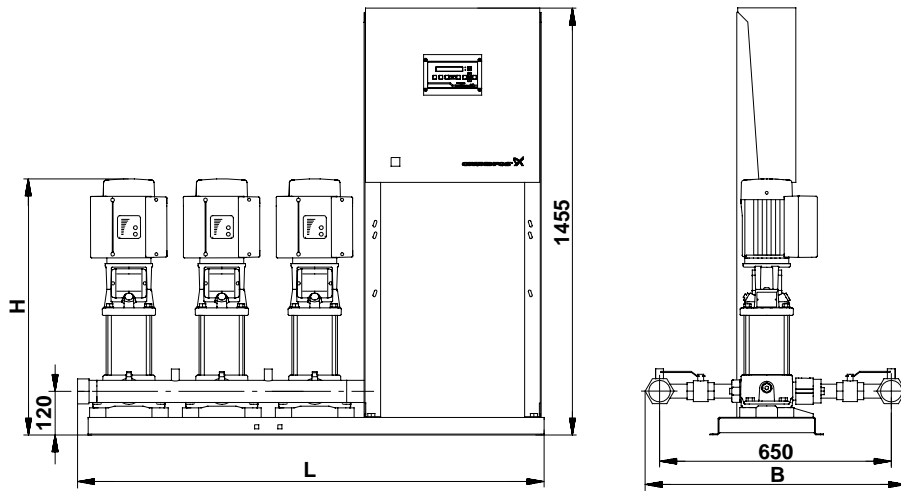
TM01 2777 9803

Performance curves

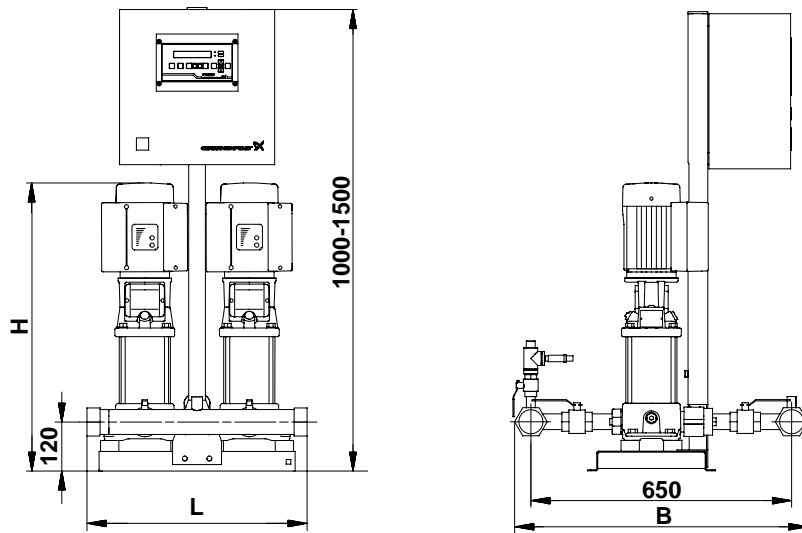
Hydro 2000 F-E
CR 90



TM01 2778 3803

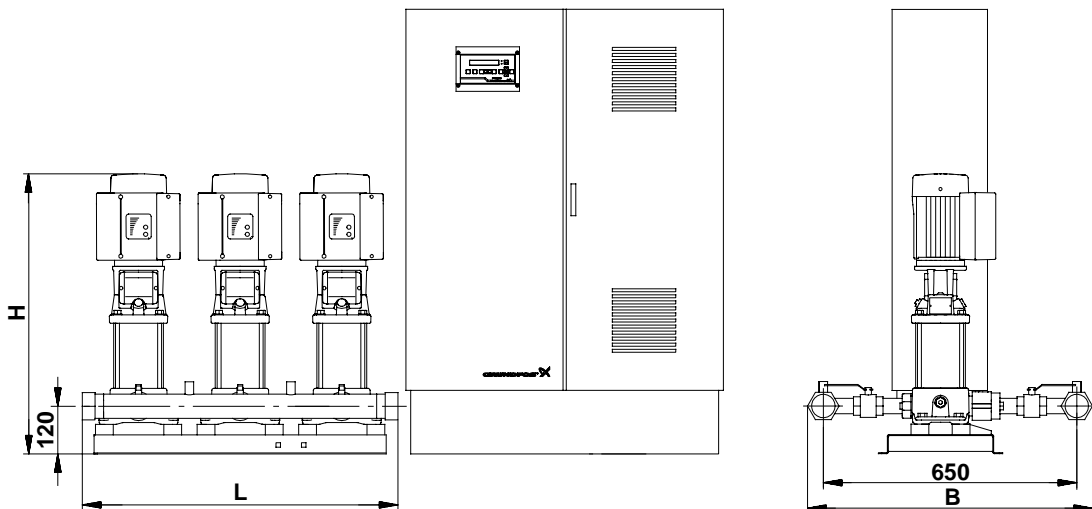


TM02 7732 3903



★

TM02 7733 3903



★★★

TM02 7734 3903

For information about ★ and ★★★, please see page 98.

Electrical data, weights and dimensions for Hydro 2000 E

No. of pumps	Full-size pumps		Connection	B [mm]	Hydro 2000 ME					Hydro 2000 MES				
	Pump type	Motor [kW]			L [mm]	H [mm]	Weight [kg]	Max. I _n [A]	Max. I ₀ [A]	L [mm]	H [mm]	Weight [kg]	Max. I _n [A]	Max. I ₀ [A]
2	CR(E) 3-5 ●	0.37	Rp 2	710	600 ★	553	90	2.7	2.7	600 ★	553	93	3.7	2.7
	CR(E) 3-7 ●	0.55				589	95	3.9	3.9		589	96	5.3	3.9
	CR(E) 3-10 ●	0.75				687	102	5.1	5.1		687	103	7.0	5.1
	CR(E) 3-15 ●	1.1				777	118	7.4	7.4		777	114	10.0	7.4
	CR(E) 3-19	1.5				915	131	6.6	-		915	125	6.7	-
	CR(E) 3-23	2.2				1027	138	9.2	-		1027	132	9.4	-
3	CR(E) 3-5 ●	0.37	Rp 2	710	1370	553	151	2.7	2.7	1370	553	145	4.7	2.7
	CR(E) 3-7 ●	0.55				589	158	3.9	3.9		589	150	6.78	3.9
	CR(E) 3-10 ●	0.75				687	169	5.1	5.1		687	160	8.9	5.1
	CR(E) 3-15 ●	1.1				777	193	7.4	7.4		777	175	12.6	7.4
	CR(E) 3-19	1.5				915	204	9.9	-		915	193	10.1	-
	CR(E) 3-23	2.2				1027	214	13.8	-		1027	204	14.1	-
4	CR(E) 3-5 ●	0.37	Rp 2½	726	1890	-	-	-	-	1890	553	200	5.7	2.7
	CR(E) 3-7 ●	0.55				-	-	-	-		589	207	8.2	3.9
	CR(E) 3-10 ●	0.75				-	-	-	-		687	220	10.8	5.1
	CR(E) 3-15 ●	1.1				-	-	-	-		777	238	15.2	7.4
	CR(E) 3-19	1.5				915	269	13.2	-		915	263	13.5	-
	CR(E) 3-23	2.2				1027	283	18.4	-		1027	277	18.9	-

For information about ★, please see page 98.

Specification of maximum current in neutral lead **Max. I₀ [A]** applies to single-phase MGE motors.

Note: CRE pumps marked with "●" are fitted with single-phase motors.

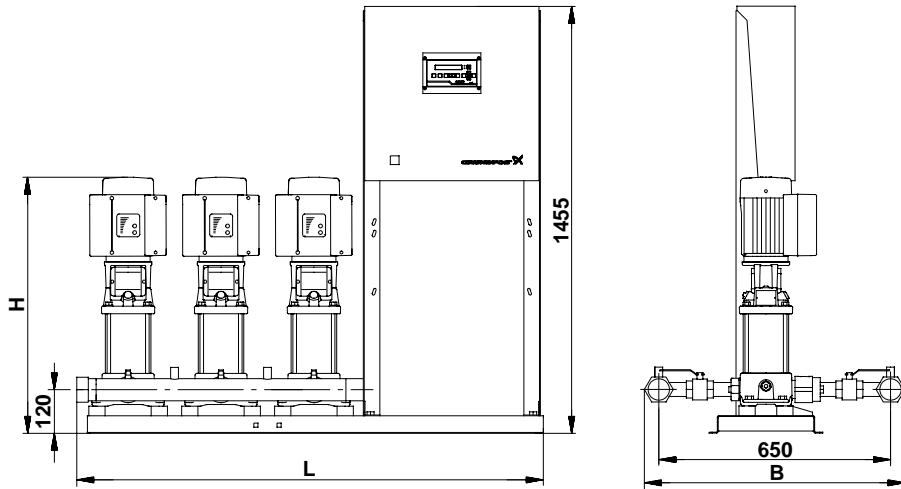
Electrical data, weights and dimensions for Hydro 2000 F

No. of pumps	Full-size pumps		Connection	B [mm]	Hydro 2000 MF			
	Pump type	Motor [kW]			L [mm]	H [mm]	Weight [kg]	Max. I _n [A]
2	CR 3-5	0.37	Rp 2	710	600	553	66	2.0
	CR 3-7	0.55				589	69	2.9
	CR 3-10	0.75				687	76	3.8
	CR 3-15	1.1				777	82	5.2
	CR 3-19	1.5				915	96	6.8
	CR 3-23	2.2				987	104	9.5
3	CR 3-5	0.37	Rp 2	710	920	553	98	3.0
	CR 3-7	0.55				589	102	4.3
	CR 3-10	0.75				687	112	5.7
	CR 3-15	1.1				777	122	7.8
	CR 3-19	1.5				915	143	10.2
	CR 3-23	2.2				987	154	14.3
4	CR 3-5	0.37	Rp 2½	726	1240	553	141	4.0
	CR 3-7	0.55				589	146	5.8
	CR 3-10	0.75				687	160	7.6
	CR 3-15	1.1				777	172	10.4
	CR 3-19	1.5				915	201	13.6
	CR 3-23	2.2				987	215	19.0
5	CR 3-5	0.37	Rp 2½	726	1560	553	174	5.0
	CR 3-7	0.55				589	181	7.2
	CR 3-10	0.75				687	198	9.5
	CR 3-15	1.1				777	214	13.0
	CR 3-19	1.5				915	249	17.0
	CR 3-23	2.2				987	267	23.75
6	CR 3-5	0.37	Rp 2½	726	1880	553	203	6.0
	CR 3-7	0.55				589	211	8.6
	CR 3-10	0.75				687	231	11.4
	CR 3-15	1.1				777	250	15.6
	CR 3-19	1.5				915	293	20.4
	CR 3-23	2.2				987	315	28.5

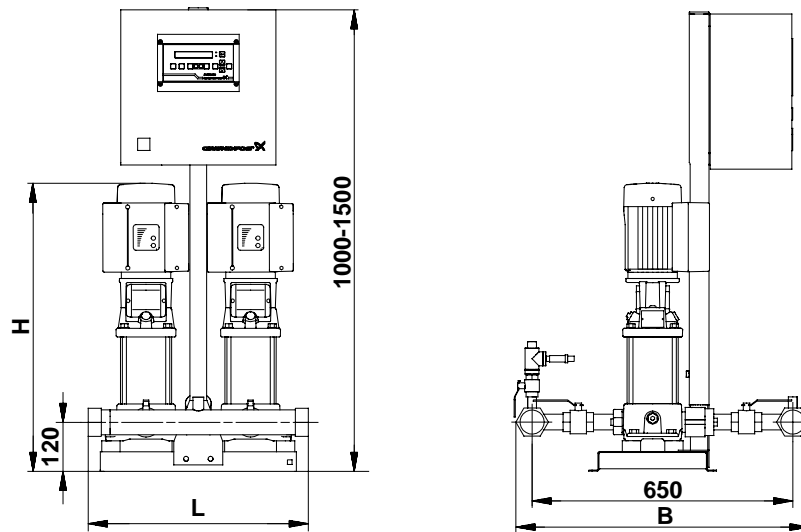
For information about ★★★, please see page 98.

All pumps are fitted with three-phase motors.

Dimensions may vary by ±10 mm.

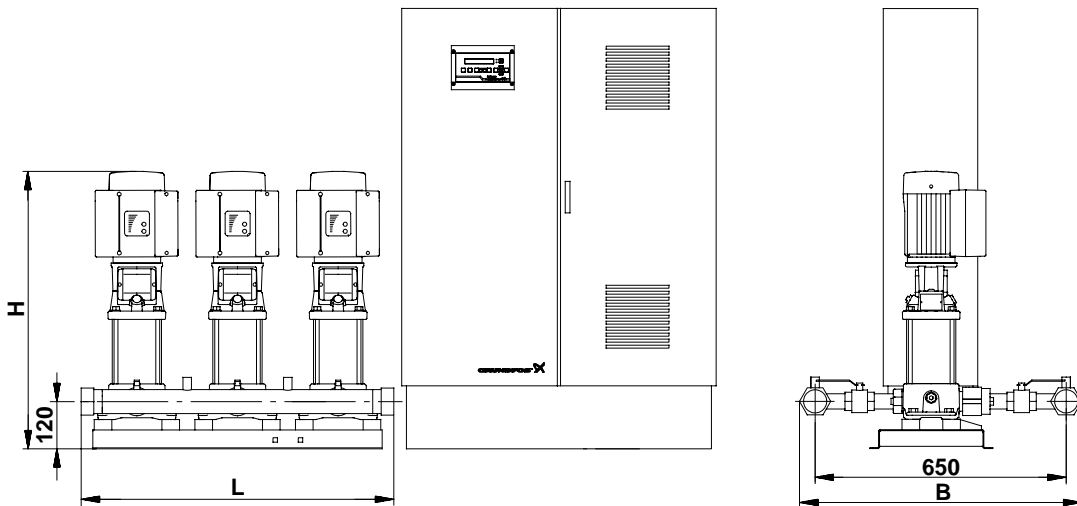


TM02 7732 3903



★

TM02 7733 3903



★★★

TM02 7734 3903

For information about ★ and ★★★, please see page 98.

Electrical data, weights and dimensions for Hydro 2000 E

No. of pumps	Full-size pumps		Connection	Hydro 2000 ME						Hydro 2000 MES				
	Pump type	Motor [kW]		B [mm]	L [mm]	H [mm]	Weight [kg]	Max. I _n [A]	Max. I ₀ [A]★	L [mm]	H [mm]	Weight [kg]	Max. I _n [A]	Max. I ₀ [A]
2	CR(E) 5-4 ①	0.55	Rp 2	710	600 ★	571	94	3.9	3.9	600 ★	571	95	5.3	3.9
	CR(E) 5-5 ①	0.75				642	100	5.1	5.1		642	101	7.0	5.1
	CR(E) 5-8 ①	1.1				723	116	7.4	7.4		723	113	10.0	7.4
	CR(E) 5-10	1.5			1050	843	129	6.6	-	843	123	6.7	-	
	CR(E) 5-16	2.2				1045	139	9.2	-	1045	133	9.4	-	
	CR(E) 5-20	3.0				1171	155	12.4	-	1171	149	12.6	-	
	CR(E) 5-22	4.0				1262	181	16.2	-	1262	183	16.1	-	
3	CR(E) 5-4 ①	0.55	Rp 2	710	1370	571	157	3.9	3.9	1370	571	148	6.8	3.9
	CR(E) 5-5 ①	0.75				642	166	5.1	5.1		642	157	8.9	5.1
	CR(E) 5-8 ①	1.1				723	190	7.4	7.4		723	172	12.6	7.4
	CR(E) 5-10	1.5				843	200	9.9	-		843	190	10.1	-
	CR(E) 5-16	2.2				1045	216	13.8	-		1045	205	14.1	-
	CR(E) 5-20	3.0				1171	240	18.6	-		1171	230	19.0	-
	CR(E) 5-22	4.0				1262	278	24.3	-		1262	274	24.1	-
4	CR(E) 5-4 ①	0.55	Rp 2½	726	1890	-	-	-	-	1890	571	204	8.2	3.9
	CR(E) 5-5 ①	0.75				-	-	-	-		642	216	10.8	5.1
	CR(E) 5-8 ①	1.1				-	-	-	-		723	235	15.2	7.4
	CR(E) 5-10	1.5				843	264	13.2	-		843	258	13.5	-
	CR(E) 5-16	2.2				1045	285	18.4	-		1045	279	18.9	-
	CR(E) 5-20	3.0				1171	317	24.8	-		1171	311	25.4	-
	CR(E) 5-22	4.0				1262	368	32.4	-		1262	356	32.1	-

For information about ★, please see page 98.

Specification of maximum current in neutral lead **Max. I₀ [A]** applies to single-phase MGE motors.

Note: CRE pumps marked with "①" are fitted with single-phase motors.

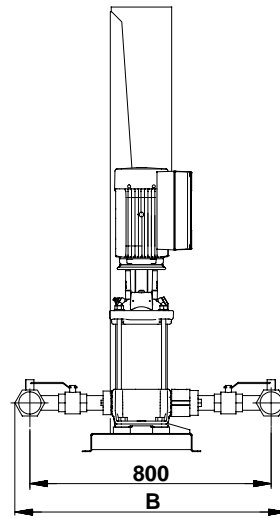
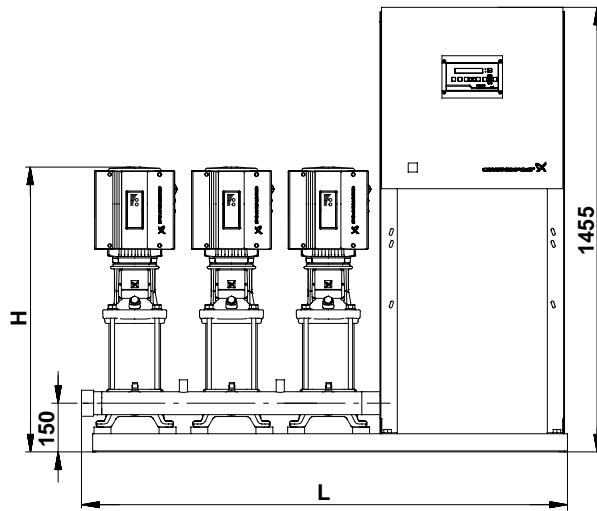
Electrical data, weights and dimensions for Hydro 2000 F

No. of pumps	Full-size pumps		Connection	Hydro 2000 MF				
	Pump type	Motor [kW]		B [mm]	L [mm]	H [mm]	Weight [kg]	Max. I _n [A]
2	CR 5-4	0.55	Rp 2	710	600 ***	571	68	2.9
	CR 5-5	0.75				642	74	3.8
	CR 5-8	1.1				723	81	5.2
	CR 5-10	1.5				843	94	6.8
	CR 5-16	2.2				1005	104	9.5
	CR 5-20	3.0				1171	121	12.8
	CR 5-22	4.0				1262	140	16.0
3	CR 5-4	0.55	Rp 2	710	920 ***	571	100	4.3
	CR 5-5	0.75				642	109	5.7
	CR 5-8	1.1				723	120	7.8
	CR 5-10	1.5				843	140	10.2
	CR 5-16	2.2				1005	155	14.3
	CR 5-20	3.0				1171	180	19.2
	CR 5-22	4.0				1262	209	24.0
4	CR 5-4	0.55	Rp 2 ½	726	1240 ***	571	144	5.8
	CR 5-5	0.75				642	155	7.6
	CR 5-8	1.1				723	169	10.4
	CR 5-10	1.5				843	196	13.6
	CR 5-16	2.2				1005	217	19.0
	CR 5-20	3.0				1171	249	25.6
	CR 5-22	4.0				1262	288	32.0
5	CR 5-4	0.55	Rp 2 ½	726	1560 ***	571	178	7.2
	CR 5-5	0.75				642	192	9.5
	CR 5-8	1.1				723	210	13.0
	CR 5-10	1.5				843	243	17.0
	CR 5-16	2.2				1005	269	23.8
	CR 5-20	3.0				1171	310	32.0
	CR 5-22	4.0				1262	358	40.0
6	CR 5-4	0.55	Rp 2 ½	726	1880 ***	571	207	8.6
	CR 5-5	0.75				642	225	11.4
	CR 5-8	1.1				723	246	15.6
	CR 5-10	1.5				843	286	20.4
	CR 5-16	2.2				1005	317	28.5
	CR 5-20	3.0				1171	366	38.4
	CR 5-22	4.0				1262	424	48.0

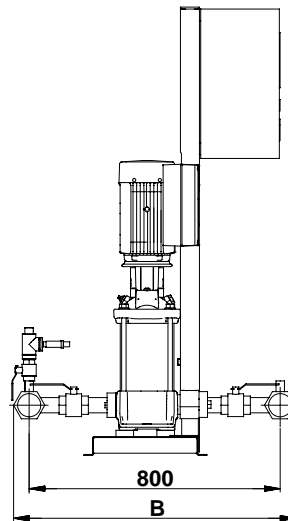
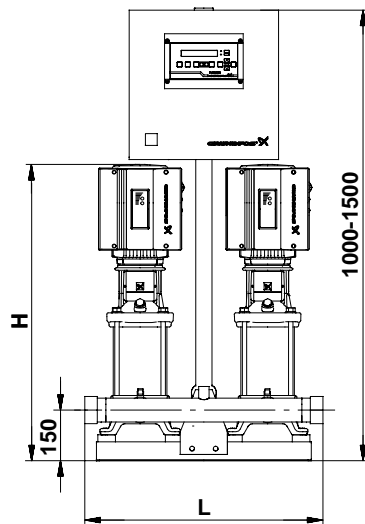
For information about ***, please see page 98.

All pumps are fitted with three-phase motors.

Dimensions may vary by ±10 mm.

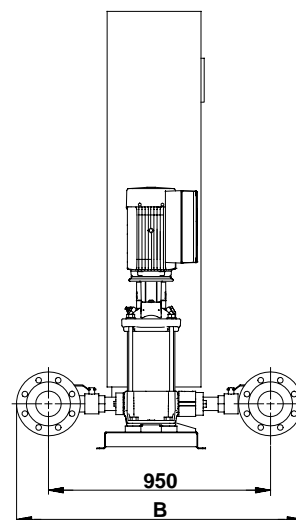
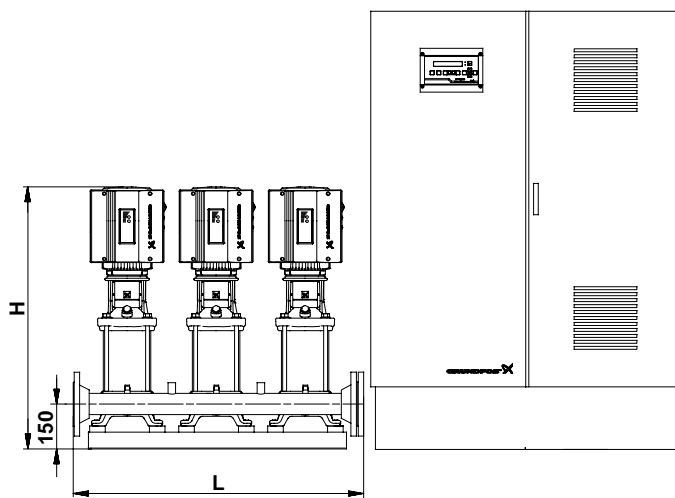


TM02 7735 3903



★

TM02 7736 3903



★★★

TM02 7737 3903

For information about ★ and ★★★, please see page 98.

Electrical data, weights and dimensions for Hydro 2000 E

No. of pumps	Full-size pumps		Half-size pumps		Connection	Hydro 2000 ME					Hydro 2000 MEH					Hydro 2000 MES							
	Pump type	Motor [kW]	Pump type	Motor [kW]		B [mm]	L [mm]	H [mm]	Weight [kg]	Max. I _n [A]	Max. I ₀ [A]	L [mm]	H [mm]	Weight [kg]	Max. I _n [A]	Max. I ₀ [A]	L [mm]	H [mm]	Weight [kg]	Max. I _n [A]	Max. I ₀ [A]		
2	CR(E) 10-3●	1.1	-	-	R 2½	876	660	678	124	7.4	7.4	-	-	-	-	-	-	-	-	-	-		
	CR(E) 10-4	1.5	-	-			774	140	6.6	-	-	-	-	-	-	-	-	-	-	-	-	-	
	CR(E) 10-6	2.2	-	-			1080	834	158	9.2	-	-	-	-	-	-	-	1080	834	153	9.35	-	-
	CR(E) 10-9	3.0	-	-			983	172	12.4	-	-	-	-	-	-	-	-	983	187	12.6	-	-	-
	CR(E) 10-12	4.0	-	-			1080	1110	174	16.2	-	-	-	-	-	-	-	1280	1110	215	16.1	-	-
	CR(E) 10-14	5.5	-	-			★	1221	184	22.0	-	-	-	-	-	-	-	1280	1221	239	22.0	-	-
3	CR(E) 10-3●	1.1	CR(E) 5-5●	0.75	R 2½	876	1400	678	200	7.4	7.4	1400	678	179	7.7	5.1	-	-	-	-	-		
	CR(E) 10-4	1.5	CR(E) 5-8●	1.1			-	-	-	-	-	-	814	191	10.8	7.4	-	-	-	-	-	-	
	CR(E) 10-4	1.5	-	-			774	230	9.9	-	-	-	-	-	-	-	-	774	206	10.1	-	-	
	CR(E) 10-6	2.2	CR(E) 5-10	1.5			1400	834	257	13.8	-	-	874	197	11.4	-	-	834	234	14.1	-	-	
	CR(E) 10-9	3.0	CR(E) 5-14	2.2			983	294	18.6	-	-	1600	983	210	15.6	-	-	1400	983	280	19.0	-	-
	CR(E) 10-10	4.0	CR(E) 5-16	2.2			-	-	-	-	-	-	1050	260	17.2	-	-	-	-	-	-	-	-
	CR(E) 10-12	4.0	-	-			1110	276	24.3	-	-	-	-	-	-	-	-	1110	287	24.1	-	-	
	CR(E) 10-14	5.5	CR(E) 5-20	3.0			1400	1221	281	33.0	-	-	1600	1221	295	23.4	-	1600	1221	337	33.0	-	-
4	CR(E) 10-3●	1.1	CR(E) 5-5●	0.75	DN 80	889	1920	678	278	7.4	7.4	1720	678	276	10.3	5.1	-	-	-	-	-		
	CR(E) 10-4	1.5	CR(E) 5-8●	1.1			-	-	-	-	-	-	814	323	14.2	7.4	-	-	-	-	-		
	CR(E) 10-4	1.5	-	-			774	301	13.2	-	-	-	-	-	-	-	-	774	306	13.5	-	-	
	CR(E) 10-6	2.2	CR(E) 5-10	1.5			1920	834	337	18.4	-	-	874	339	16.1	-	-	834	354	18.85	-	-	
	CR(E) 10-9	3.0	CR(E) 5-14	2.2			983	367	24.8	-	-	1920	983	358	22.0	-	-	1920	983	375	25.4	-	-
	CR(E) 10-10	4.0	CR(E) 5-16	2.2			-	-	-	-	-	-	1050	406	25.2	-	-	-	-	-	-	-	
	CR(E) 10-12	4.0	-	-			1110	373	32.4	-	-	-	-	-	-	-	-	1110	386	32.1	-	-	
	CR(E) 10-14	5.5	CR(E) 5-20	3.0			1920	1221	387	44.0	-	-	1920	1221	425	34.4	-	1920	1221	461	44.0	-	-

For information about ★, please see page 98.

Specification of maximum current in neutral lead **Max. I₀ [A]** applies to single-phase MGE motors.

Note: CRE pumps marked with "●" are fitted with single-phase motors.

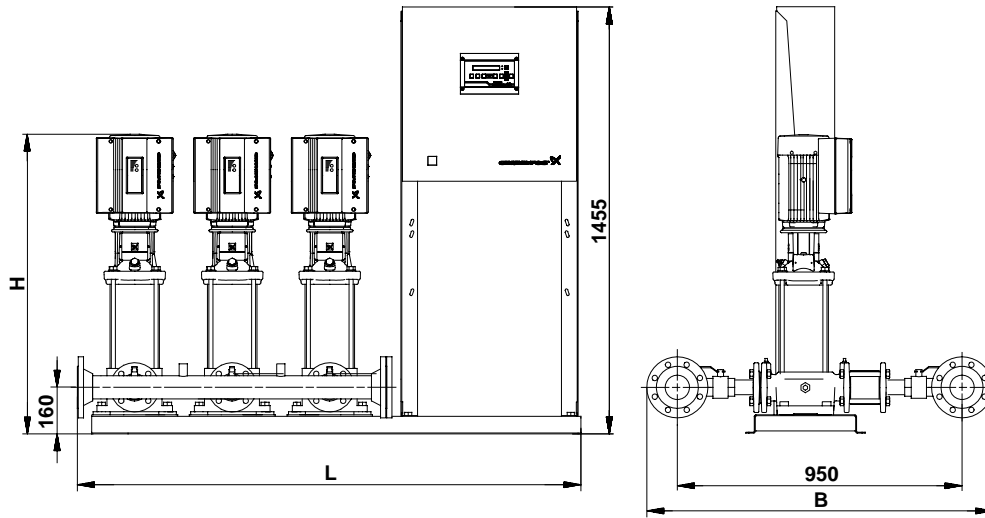
Electrical data, weights and dimensions for Hydro 2000 F

No. of pumps	Full-size pumps		Half-size pumps		Connection	B [mm]	Hydro 2000 MF			
	Pump type	Motor [kW]	Pump type	Motor [kW]			L [mm]	H [mm]	Weight [kg]	Max. I _n [A]
2	CR 10-3	1.1	-	-	Rp 2½	876		678	104	5.2
	CR 10-4	1.5	-	-			660	774	118	6.8
	CR 10-6	2.2	-	-			★★	834	126	9.5
	CR 10-9	3.0	-	-			*	983	141	12.8
	CR 10-12	4.0	-	-			660	1110	167	16.0
	CR 10-14	5.5	-	-			★★	1221	177	22.0
3	CR 10-3	1.1	CR 5-5	0.75	Rp 2½	876	980	678	152	7.8
	CR 10-4	1.5	-	-			★★	774	173	10.2
	CR 10-6	2.2	CR 5-10	1.5			*	834	185	14.3
	CR 10-9	3.0	CR 5-14	2.2			*	983	207	19.2
	CR 10-12	4.0	-	-			980	1110	246	24.0
	CR 10-14	5.5	CR 5-20	3.0			★★	1221	260	33.0
4	CR 10-3	1.1	CR 5-5	-	DN 80	889	1300	678	227	10.4
	CR 10-4	1.5	-	-			★★	774	256	13.6
	CR 10-6	2.2	CR 5-10	1.5			*	834	272	19.0
	CR 10-9	3.0	CR 5-14	2.2			*	983	300	25.6
	CR 10-12	4.0	-	-			1300	1110	352	32.0
	CR 10-14	5.5	CR 5-20	3.0			★★	1221	369	44.0
5	CR 10-3	1.1	-	-	DN 80	889		678	277	13.0
	CR 10-4	1.5	-	-				774	312	17.0
	CR 10-6	2.2	-	-			1620	834	332	23.8
	CR 10-9	3.0	-	-			★★	983	367	32.0
	CR 10-12	4.0	-	-			*	1110	433	40.0
	CR 10-14	5.5	-	-				1221	453	55.0
6	CR 10-3	1.1	-	-	DN 100	914		678	343	15.6
	CR 10-4	1.5	-	-				774	385	20.4
	CR 10-6	2.2	-	-			1940	834	409	28.5
	CR 10-9	3.0	-	-			★★	983	421	38.4
	CR 10-12	4.0	-	-			*	1110	530	48.0
	CR 10-14	5.5	-	-				1221	557	66.0

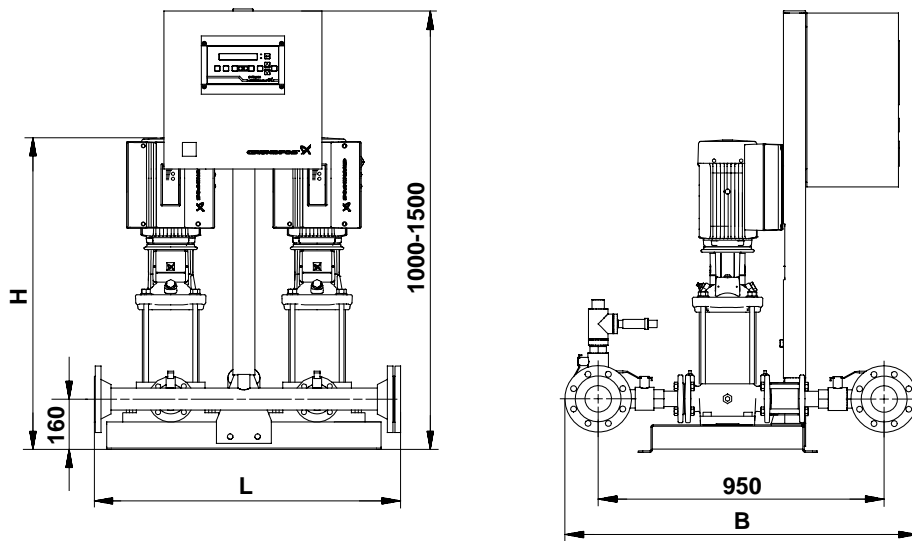
For information about ★★, please see page 98.

All pumps are fitted with three-phase motors.

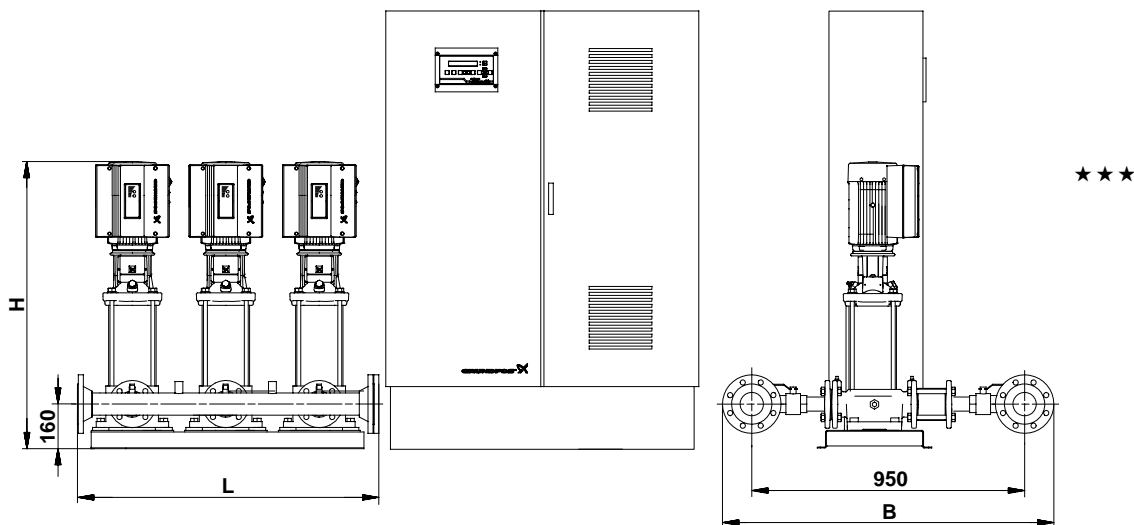
Dimensions may vary by ±10 mm.



TM02 7738 3903



TM02 7739 3903



TM02 7740 3903

For information about ★ and ★★★, please see page 98.

Electrical data, weights and dimensions for Hydro 2000 E

No. of pumps	Full-size pumps		Half-size pumps		Connection	Hydro 2000 ME					Hydro 2000 MEH				Hydro 2000 MES					
	Pump type	Motor [kW]	Pump type	Motor [kW]		B [mm]	L [mm]	H [mm]	Weight [kg]	Max. I _n [A]	Max. I ₀ [A]	L [mm]	H [mm]	Weight [kg]	Max. I _n [A]	Max. I ₀ [A]	L [mm]	H [mm]	Weight [kg]	Max. I _n [A]
2	CR(E) 15-2	2.2	-	-	DN 80	1037	806	186	9.2	-	-	-	-	-	-	1110	806	181	9.4	-
	CR(E) 15-3	3.0	-	-			870	196	12.4	-	-	-	-	-	-		870	191	12.6	-
	CR(E) 15-5	4.0	-	-			997	233	16.2	-	-	-	-	-	-		997	256	16.1	-
	CR(E) 15-7	5.5	-	-			1138	268	22.0	-	-	-	-	-	-	1138	315	22.0	-	
	CR(E) 15-9	7.5	-	-			1228	289	30.	-	-	-	-	-	-	1228	322	30.2	-	
	CR(E) 15-10	11.0	-	-			820 ***	1423	348	42.8	-	-	-	-	-	820 ***	1423	386	42.8	-
3	CR(E) 15-2	2.2	-	-	DN 100	1062	806	291	13.8	-	-	-	-	-	1430	806	281	14.1	-	
	CR(E) 15-3	3.0	CR(E) 10-4	1.5			870	306	18.6	-	1430	870	279	13.0		-	870	296	19.0	-
	CR(E) 15-4	4.0	CR(E) 10-6	2.2			-	-	-	-	1630	952	323	17.2	-	-	-	-	-	
	CR(E) 15-5	4.0	-	-			1430	997	361	24.3	-	-	-	-	-	1630	997	356	24.1	-
	CR(E) 15-6	5.5	CR(E) 10-9	3.0			-	-	-	-	1630	1093	376	23.4	-	-	-	-	-	
	CR(E) 15-7	5.5	-	-			1430	1138	433	33.0	-	-	-	-	-	1630	1138	428	33.0	-
	CR(E) 15-8	7.5	CR(E) 10-12	4.0			-	-	-	-	1630	1183	420	31.4	-	-	-	-	-	
	CR(E) 15-9	7.5	-	-			1430	1228	466	45.0	-	-	-	-	-	1630	1228	445	45.4	-
CR(E) 15-10	11.0	CR(E) 10-14	5.5	1240 ***	1423	515	64.2	-	1810	1423	434	43.4	-	1630	1423	510	64.2	-		
4	CR(E) 15-2	2.2	-	-	DN 100	1062	806	366	18.4	-	-	-	-	-	1950	806	362	18.9	-	
	CR(E) 15-3	3.0	CR(E) 10-4	1.5			870	388	24.8	-	1750	870	326	19.4		-	870	384	25.4	-
	CR(E) 15-4	4.0	CR(E) 10-6	2.2			-	-	-	-	1950	952	378	25.2	-	-	-	-	-	
	CR(E) 15-5	4.0	-	-			1950	997	460	32.4	-	-	-	-	-	1950	997	444	32.1	-
	CR(E) 15-6	5.5	CR(E) 10-9	3.0			-	-	-	-	1950	1093	496	34.4	-	-	-	-	-	
	CR(E) 15-7	5.5	-	-			1950	1138	514	44.0	-	-	-	-	-	1950	1138	540	44.0	-
	CR(E) 15-8	7.5	CR(E) 10-12	4.0			-	-	-	-	2135	1183	585	46.6	-	-	-	-	-	
	CR(E) 15-9	7.5	-	-			1950	1228	558	60.0	-	-	-	-	-	1950	1228	557	60.6	-
CR(E) 15-10	11.0	CR(E) 10-14	5.5	1640 ***	1423	586	85.6	-	2410	1423	625	64.8	-	1950	1423	615	85.6	-		

For information about *** , please see page 98.

Specification of maximum current in neutral lead **Max. I₀ [A]** applies to single-phase MGE motors.

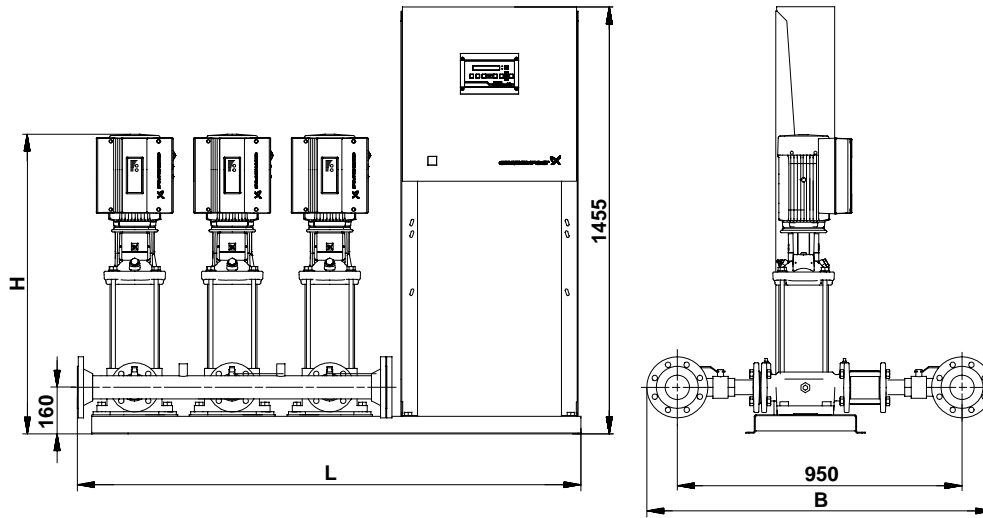
Electrical data, weights and dimensions for Hydro 2000 F

No. of pumps	Full-size pumps		Half-size pumps		Connection	B [mm]	Hydro 2000 MF				
	Pump type	Motor [kW]	Pump type	Motor [kW]			L [mm]	H [mm]	Weight [kg]	Max. I _n [A]	
2	CR 15-2	2.2	-	-	DN 80	1037	700 ***	766	153	9.5	
	CR 15-3	3.0	-	-				870	163	12.8	
	CR 15-5	4.0	-	-				997	230	16.0	
	CR 15-7	5.5	-	-				1138	248	22.0	
	CR 15-9	7.5	-	-				1228	248	30.4	
	CR 15-10	11.0	-	-				820 ***	1423	318	42.8
3	CR 15-2	2.2	-	-	DN 100	1062	1040 ***	766	233	14.3	
	CR 15-3	3.0	CR 10-4	1.5				870	248	19.2	
	CR 15-5	4.0	-	-				1040 ***	997	348	24.0
	CR 15-7	5.5	-	-				1040	1138	375	33.0
	CR 15-9	7.5	-	-				***	1228	375	45.6
	CR 15-10	11.0	CR 10-14	5.5				1240 ***	1423	482	64.2
4	CR 15-2	2.2	-	-	DN 100	1062	1360 ***	766	302	19.0	
	CR 15-3	3.0	CR 10-4	1.5				870	322	25.6	
	CR 15-5	4.0	-	-				1360 ***	997	456	32.0
	CR 15-7	5.5	-	-				1360 ***	1138	492	44.0
	CR 15-9	7.5	-	-				1360 ***	1228	492	60.8
	CR 15-10	11.0	CR 10-14	5.5				1640 ***	1423	636	85.6
5	CR 15-2	2.2	-	-	DN 150	1116	1680 ***	766	406	23.8	
	CR 15-3	3.0	-	-				870	431	32.0	
	CR 15-5	4.0	-	-				997	598	40.0	
	CR 15-7	5.5	-	-				1138	643	55.0	
	CR 15-9	7.5	-	-				1228	643	76.0	
	CR 15-10	11.0	-	-				2040 ***	1423	831	107.0
6	CR 15-2	2.2	-	-	DN 150	1116	2000 ***	766	482	28.5	
	CR 15-3	3.0	-	-				870	512	38.4	
	CR 15-5	4.0	-	-				997	713	48.0	
	CR 15-7	5.5	-	-				1138	767	66.0	
	CR 15-9	7.5	-	-				1228	767	91.2	
	CR 15-10	11.0	-	-				2360 ***	1423	993	128.4

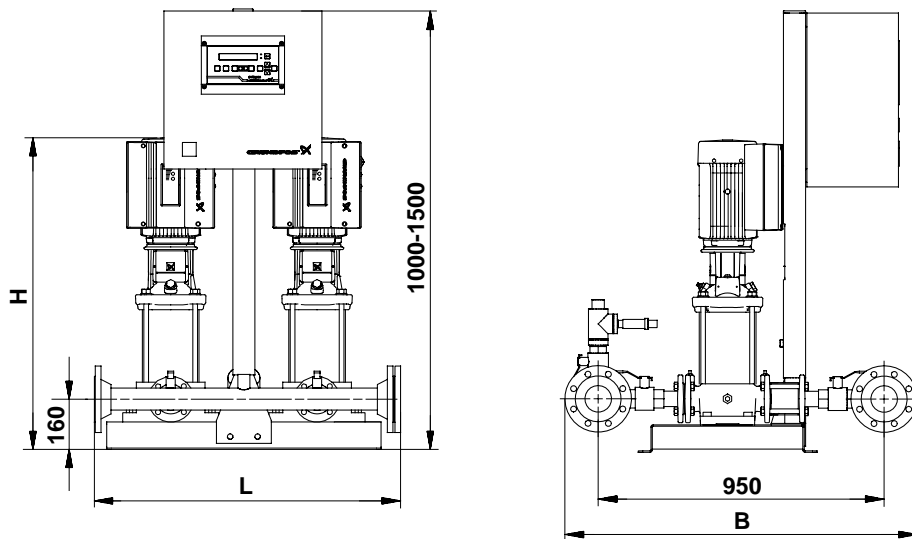
For information about ***, please see page 98.

All pumps are fitted with three-phase motors.

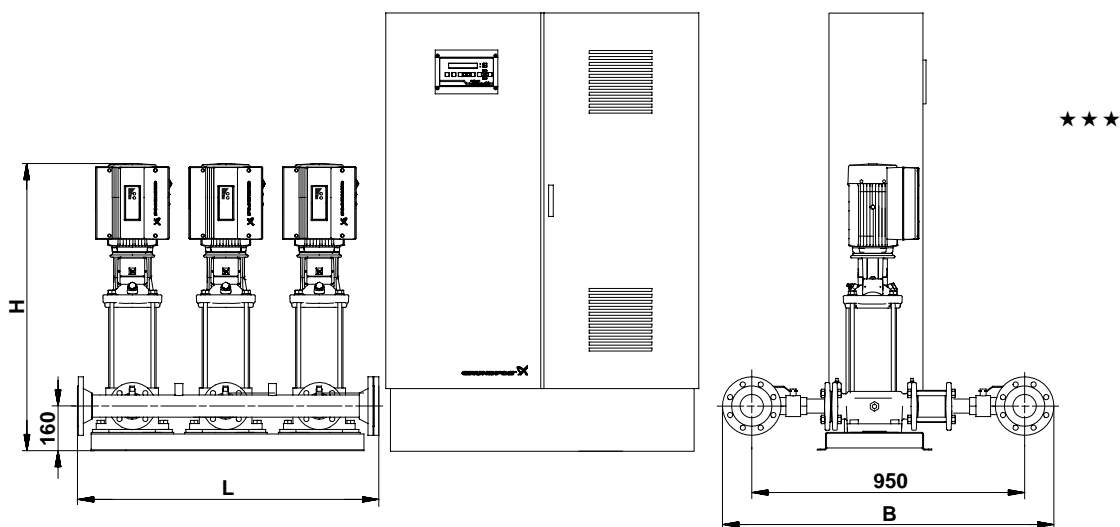
Dimensions may vary by ±10 mm.



TM02 7738 3903



TM02 7739 3903



TM02 7740 3903

For information about ★ and ★★★, please see page 98.

Electrical data, weights and dimensions for Hydro 2000 E

No. of pumps	Full-size pumps		Half-size pumps		Connection	Hydro 2000 ME				Hydro 2000 MEH				Hydro 2000 MES							
	Pump type	Motor [kW]	Pump type	Motor [kW]		B [mm]	L [mm]	H [mm]	Weight [kg]	Max. I _n [A]	Max. I ₀ [A]	L [mm]	H [mm]	Weight [kg]	Max. I _n [A]	Max. I ₀ [A]	L [mm]	H [mm]	Weight [kg]	Max. I _n [A]	Max. I ₀ [A]
2	CR(E) 20-2	2.2	-	-	DN 80	1037	766	186	9.2	-	-	-	-	-	-	1110	766	181	9.4	-	
	CR(E) 20-3	4.0	-	-			1110	907	206	16.2	-	-	-	-	-	-	1310	907	201	16.1	-
	CR(E) 20-5	5.5	-	-			1048	235	22.0	-	-	-	-	-	-	-	1138	299	22.0	-	
	CR(E) 20-7	7.5	-	-			1138	283	30.0	-	-	-	-	-	-	-	820	1138	299	30.2	-
	CR(E) 20-10	11.0	-	-			820	1423	348	42.8	-	-	-	-	-	-	820	1423	386	42.8	-
3	CR(E) 20-2	2.2	-	-	DN 100	1062	766	291	13.8	-	-	-	-	-	-	1430	766	281	14.1	-	
	CR(E) 20-3	4.0	CR(E) 10-5	2.2			1430	907	321	24.3	-	1630	907	285	17.2	-	1630	907	311	24.1	-
	CR(E) 20-5	5.5	CR(E) 10-8	3.0			1048	439	33.0	-	-	1630	1048	326	23.4	-	1630	1048	359	33.0	-
	CR(E) 20-7	7.5	CR(E) 10-12	4.0			1138	457	45.0	-	-	1630	1138	372	31.4	-	1630	1138	419	45.4	-
	CR(E) 20-10	11.0	-	-			1240	1423	515	64.2	-	-	-	-	-	-	1240	1423	510	64.2	-
4	CR(E) 20-2	2.2	-	-	DN 100	1062	766	366	18.4	-	-	-	-	-	-	1950	766	362	18.9	-	
	CR(E) 20-3	4.0	CR(E) 10-5	2.2			1950	907	408	32.4	-	1950	907	366	25.2	-	1950	907	404	32.1	-
	CR(E) 20-5	5.5	CR(E) 10-8	3.0			1048	522	44.0	-	-	2135	1048	415	34.4	-	2135	1048	548	44.0	-
	CR(E) 20-7	7.5	CR(E) 10-12	4.0			1138	546	60.0	-	-	2135	1138	521	46.6	-	2135	1138	545	60.6	-
	CR(E) 20-10	11.0	-	-			1640	1423	586	85.6	-	-	-	-	-	-	1640	1423	615	85.6	-

For information about ★★★, please see page 98.

Specification of maximum current in neutral lead **Max. I₀ [A]** applies to single-phase MGE motors.

Note: CRE pumps marked with "●" are fitted with single-phase motors.

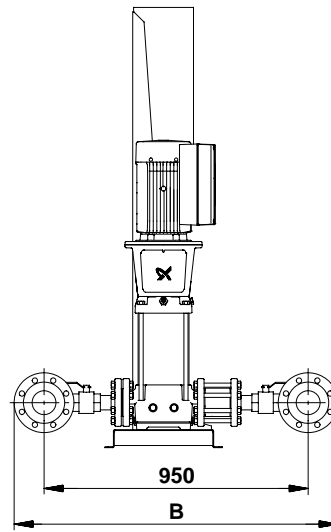
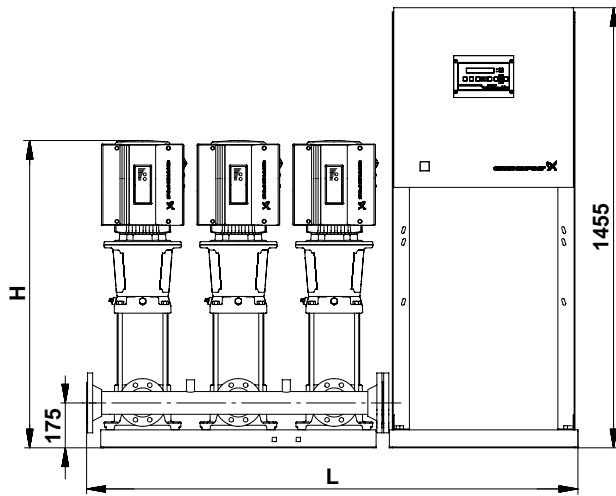
Electrical data, weights and dimensions for Hydro 2000 F

No. of pumps	Full-size pumps		Half-size pumps		Connection	Hydro 2000 MF					
	Pump type	Motor [kW]	Pump type	Motor [kW]		B [mm]	L [mm]	H [mm]	Weight [kg]	Max. I _n [A]	
2	CR 20-2	2.2	-	-	DN 80	1037	766	153	9.5	-	
	CR 20-3	4.0	-	-			700	907	173	16.0	-
	CR 20-5	5.5	-	-			★★★	1048	232	22.0	-
	CR 20-7	7.5	-	-			1138	242	30.4	-	
	CR 20-10	11.0	-	-			820	1423	318	42.8	-
3	CR 20-2	2.2	-	-	DN 100	1062	766	233	14.3	-	
	CR 20-3	4.0	CR 10-5	2.2			1040	907	263	24.0	-
	CR 20-5	5.5	CR 10-8	3.0			★★★	1048	351	33.0	-
	CR 20-7	7.5	CR 10-12	4.0			1138	366	45.6	-	
	CR 20-10	11.0	-	-			1240	1423	482	64.2	-
4	CR 20-2	2.2	-	-	DN 100	1062	766	302	19.0	-	
	CR 20-3	4.0	CR 10-5	2.2			1360	907	342	32.0	-
	CR 20-5	5.5	CR 10-8	3.0			★★★	1048	460	44.0	-
	CR 20-7	7.5	CR 10-12	4.0			1138	480	60.8	-	
	CR 20-10	11.0	-	-			1640	1423	636	85.6	-
5	CR 20-2	2.2	-	-	DN 150	1116	766	406	23.8	-	
	CR 20-3	4.0	-	-			1680	907	456	40.0	-
	CR 20-5	5.5	-	-			★★★	1048	603	55.0	-
	CR 20-7	7.5	-	-			1138	628	76.0	-	
	CR 20-10	11.0	-	-			2040	1423	831	107.0	-
6	CR 20-2	2.2	-	-	DN 150	1116	766	482	28.5	-	
	CR 20-3	4.0	-	-			2000	907	542	48.0	-
	CR 20-5	5.5	-	-			★★★	1048	719	66.0	-
	CR 20-7	7.5	-	-			1138	749	91.2	-	
	CR 20-10	11.0	-	-			2360	1423	993	128.4	-

For information about ★★★, please see page 98.

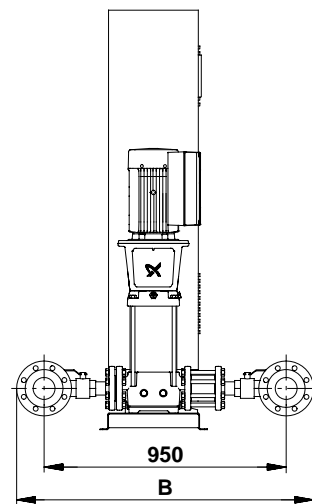
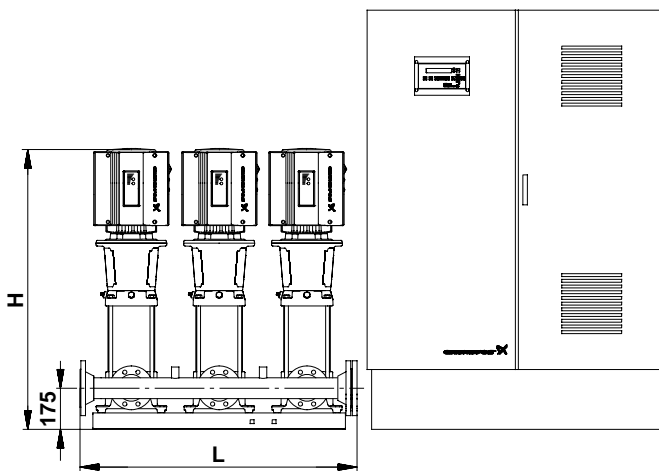
All pumps are fitted with three-phase motors.

Dimensions may vary by ±10 mm.



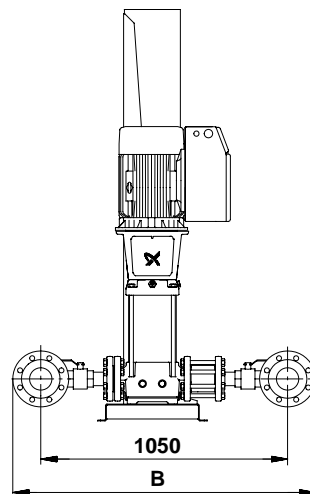
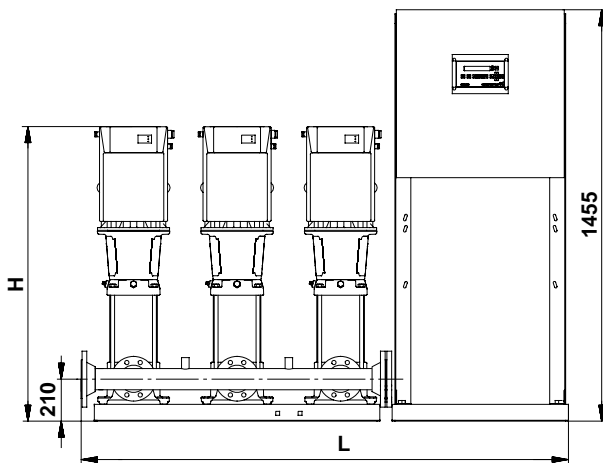
★★

TM02 7745 3903



★★★

TM02 7746 3903



★★

TM02 4586 1302

For information about ★★ and ★★★, please see page 98.

Electrical data, weights and dimensions for Hydro 2000 E

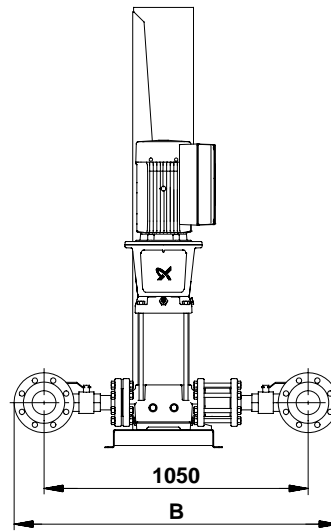
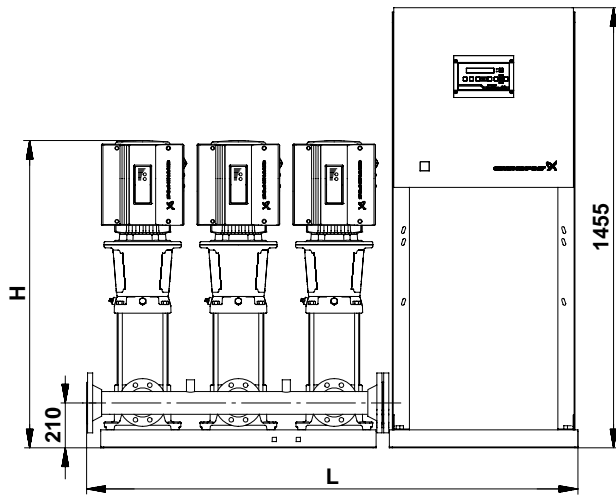
No. of pumps	Full-size pumps		Half-size pumps		Connection	Hydro 2000 ME					Hydro 2000 MEH				Hydro 2000 MES				
	Pump type	Motor [kW]	Pump type	Motor [kW]		B [mm]	L [mm]	H [mm]	Weight [kg]	Max. I _n [A]	L [mm]	H [mm]	Weight [kg]	Max. I _n [A]	L [mm]	H [mm]	Weight [kg]	Max. I _n [A]	
2	CR(E) 32-2-2	3.0	-	-	DN 100	1064		1180	310	12.4	-	-	-	-	1400**	1180	307	12.6	
	CR(E) 32-2	4.0	-	-			1400**	1221	333	16.2	-	-	-	-	-	1600**	1221	341	32.2
	CR(E) 32-3	5.5	-	-			1400**	1310	363	22.0	-	-	-	-	-	1600**	1310	365	44.0
	CR(E) 32-4	7.5	-	-			1400**	1133	377	30.0	-	-	-	-	-	1600**	1133	380	60.4
	CR(E) 32-6	11.0	-	-			1400**	1513	550	42.8	-	-	-	-	-	1600**	1513	512	42.8
	CR(E) 32-8	15.0	-	-			1400**	1666	600	56.0	-	-	-	-	-	1600**	1666	577	56.0
3	CR(E) 32-2-2	3.0	CR(E) 15-2	2.2	DN 150	1118		1180	452	18.6	1902**	1180	368	15.6	1902**	1180	447	19.0	
	CR(E) 32-2	4.0	CR(E) 15-3	3.0			1902**	1221	487	24.3	2102**	1221	401	20.4	2802**	1221	492	24.1	
	CR(E) 32-3	5.5	CR(E) 15-4	4.0			1902**	1310	532	33.0	2102**	1310	443	27.2	2802**	1310	525	33.0	
	CR(E) 32-4	7.5	CR(E) 15-6	5.5			1902**	1133	554	45.0	2102**	1133	509	37.2	2802**	1133	548	45.4	
	CR 32-6-2	11.0	CR(E) 15-8	7.5			2102**	-	-	-	-	2102**	1223	555	51.4	-	-	-	-
	CR(E) 32-6	11.0	-	-			2102**	1513	637	64.2	-	-	-	-	-	2802**	1513	725	64.2
	CR 32-7	15.0	CR(E) 15-10	11.0			2102**	-	-	-	-	2102**	1596	647	71.3	-	-	-	-
	CR(E) 32-8	15.0	-	-			2102**	1666	712	84.0	-	-	-	-	-	2802**	1666	831	84.0
4	CR(E) 32-2-2	3.0	CR(E) 15-2	2.2	DN 150	1118		1180	584	24.8	2402**	1180	495	22.0	2622**	1180	583	25.4	
	CR(E) 32-2	4.0	CR(E) 15-3	3.0			2402**	1221	628	32.4	2602**	1221	538	28.4	2802**	1221	627	32.1	
	CR(E) 32-3	5.5	CR(E) 15-4	4.0			2402**	1310	689	44.0	2602**	1310	589	38.2	2802**	1310	669	44.0	
	CR(E) 32-4	7.5	CR(E) 15-6	5.5			2402**	1133	716	60.0	2602**	1133	698	52.4	2802**	1133	735	60.6	
	CR 32-6-2	11.0	CR(E) 15-8	7.5			2802**	-	-	-	-	2802**	1223	791	72.8	-	-	-	-
	CR(E) 32-6	11.0	-	-			2802**	1513	723	85.6	-	-	-	-	-	2802**	1513	957	85.6
	CR 32-7	15.0	CR(E) 15-10	11.0			2802**	-	-	-	-	2802**	1596	883	100	-	-	-	-
	CR(E) 32-8	15.0	-	-			2802**	1666	823	112.0	-	-	-	-	-	2802**	1666	1104	112.0

For information about **, please see page 98.

Electrical data, weights and dimensions for Hydro 2000 F

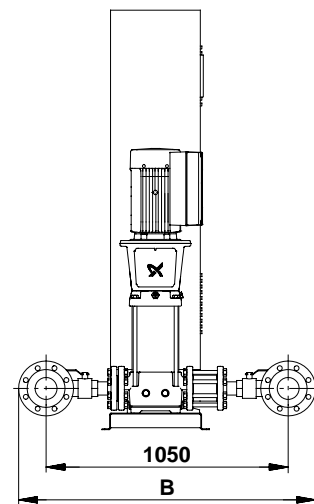
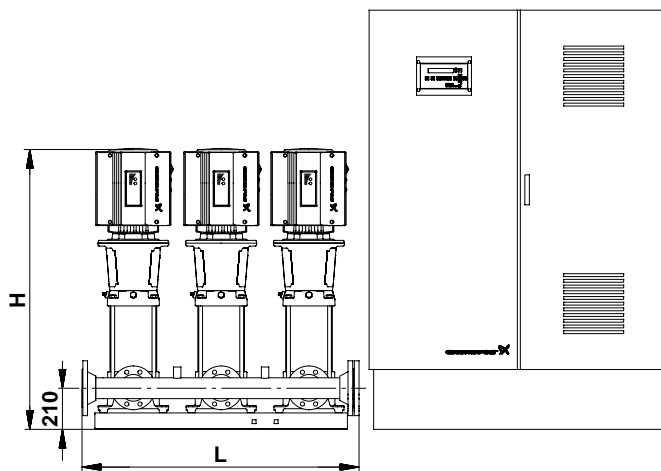
No. of pumps	Full-size pumps		Half-size pumps		Connection	B [mm]	Hydro 2000 MF				Hydro 2000 MFH			
	Pump type	Motor [kW]	Pump type	Motor [kW]			L [mm]	H [mm]	Weight [kg]	Max. I _n [A]	L [mm]	H [mm]	Weight [kg]	Max. I _n [A]
2	CR 32-2-2	3.0	-	-	DN 100	1064	1020 ***	1180	260	12.8	-	-	-	-
	CR 32-2	4.0	-	-				1221	279	16.0	-	-	-	-
	CR 32-3	5.5	-	-				1310	297	22.0	-	-	-	-
	CR 32-4	7.5	-	-				1133	313	30.4	-	-	-	-
	CR 32-5	11.0	-	-				1443	397	42.8	-	-	-	-
	CR 32-6-2	11.0	-	-				1223	405	42.8	-	-	-	-
	CR 32-7	15.0	-	-			1020 ***	1623	479	56.0	-	-	-	-
3	CR 32-2-2	3.0	CR 15-2	2.2	DN 150	1118	1522 ***	1180	401	19.2	1522 ***	1180	314	15.9
	CR 32-2	4.0	CR 15-3	3.0				1221	430	24.0		1221	334	20.8
	CR 32-3	5.5	CR 15-4	4.0				1310	457	33.0		1310	372	27.0
	CR 32-4	7.5	CR 15-6	5.5				1133	481	45.6		1133	442	37.2
	CR 32-5	11.0	-	-				1443	605	64.2		-	-	-
	CR 32-6-2	11.0	CR 15-8	7.5				1223	617	64.2		1522 ***	1223	482
	CR 32-7	15.0	CR 15-10	11.0			1522 ***	1596	617	84.0	1522 ***	1596	588	70.8
4	CR 32-2-2	3.0	CR 15-2	2.2	DN 150	1118	2022 ***	1180	527	25.6	2022 ***	1180	441	22.3
	CR 32-2	4.0	CR 15-3	3.0				1221	565	32.0		1221	469	28.8
	CR 32-3	5.5	CR 15-4	4.0				1310	601	44.0		1310	522	38.0
	CR 32-4	7.5	CR 15-6	5.5				1133	633	60.8		1133	604	52.4
	CR 32-5	11.0	-	-				1443	799	85.6		-	-	-
	CR 32-6-2	11.0	CR 15-8	7.5				1223	815	85.6		2022 ***	1223	688
	CR 32-7	15.0	CR 15-10	11.0			2022 ***	1596	965	112.0	2022 ***	1596	828	98.8
5	CR 32-2-2	3.0	-	-	DN 150	1118	2522 ***	980	667	32.0	-	-	-	-
	CR 32-2	4.0	-	-				1017	715	40.0	-	-	-	-
	CR 32-3	5.5	-	-				1106	760	55.0	-	-	-	-
	CR 32-4	7.5	-	-				1176	800	76.0	-	-	-	-
	CR 32-5	11.0	-	-				1429	1010	107.0	-	-	-	-
	CR 32-6-2	11.0	-	-				1499	1030	107.0	-	-	-	-
	CR 32-7	15.0	-	-				1623	1215	140.0	-	-	-	-
6	CR 32-2-2	3.0	-	-	DN 150	1118	3022 ***	980	794	38.4	-	-	-	-
	CR 32-2	4.0	-	-				1017	851	48.0	-	-	-	-
	CR 32-3	5.5	-	-				1106	905	66.0	-	-	-	-
	CR 32-4	7.5	-	-				1176	953	91.2	-	-	-	-
	CR 32-5	11.0	-	-				1429	1204	128.4	-	-	-	-
	CR 32-6-2	11.0	-	-				1499	1229	128.4	-	-	-	-
	CR 32-7	15.0	-	-				1623	1451	168.0	-	-	-	-

For information about ***, please see page 98.



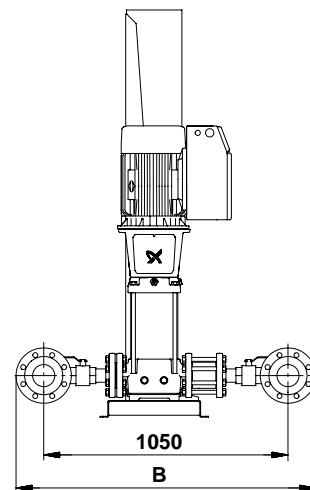
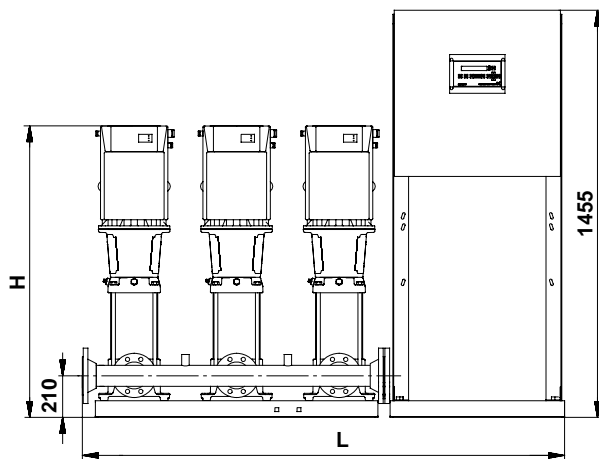
★★

TM02 7747 3903



★★★

TM02 7748 3903



★★

TM02 4586 1302

For information about ★★ and ★★★, please see page 98.

Electrical data, weights and dimensions for Hydro 2000 E

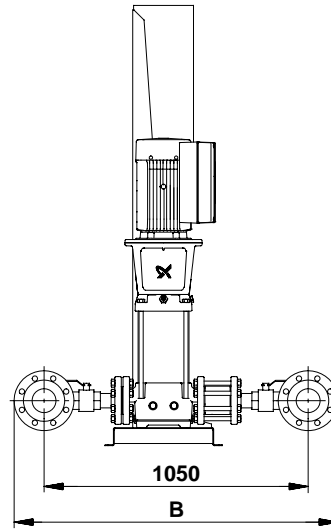
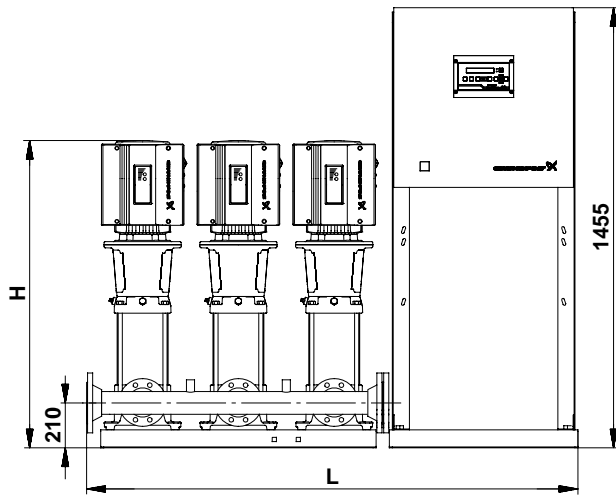
No. of pumps	Full-size pumps		Half-size pumps		Connection	B [mm]	Hydro 2000 ME				Hydro 2000 MEH				Hydro 2000 MES			
	Pump type	Motor [kW]	Pump type	Motor [kW]			L [mm]	H [mm]	Weight [kg]	Max. I _n [A]	L [mm]	H [mm]	Weight [kg]	Max. I _n [A]	L [mm]	H [mm]	Weight [kg]	Max. I _n [A]
2	CR(E) 45-1	4.0	-	-	DN 150	1218	1180	373	16.2	-	-	-	-	1180	381	16.1		
	CR(E) 45-2-2	5.5	-	-			1303	403	22.0	-	-	-	-	-	1303	405	22.0	
	CR(E) 45-2	7.5	-	-			1402	409	30.0	-	-	-	-	-	1310	413	30.2	
	CR(E) 45-3	11.0	-	-			★ ★	1376	575	42.8	-	-	-	-	★ ★	1376	528	42.8
	CR(E) 45-4	15.0	-	-			1469	617	56.0	-	-	-	-	-	★ ★	1469	595	56.0
	CR(E) 45-5	18.5	-	-			1596	711	68.0	-	-	-	-	-	★ ★	1596	656	68.0
	CR(E) 45-6	22.0	-	-			1602	781	84.0	-	-	-	-	-	★ ★	1686	748	98.0
3	CR(E) 45-1	4.0	CR(E) 32-2-2	3.0	DN 200	1269	1180	540	24.3	1180	501	20.4	1180	545	24.1			
	CR(E) 45-2-2	5.5	CR(E) 32-2	4.0			1904	585	33.0	1303	533	27.2	1303	578	33.0			
	CR(E) 45-2	7.5	CR(E) 32-3	5.5			★ ★	1310	595	45.0	★ ★	1310	568	37.2	★ ★	1310	591	45.4
	CR(E) 45-3	11.0	CR(E) 32-4	7.5			1901	658	64.2	2104	623	51.4	2104	843	64.2			
	CR(E) 45-4	15.0	CR(E) 32-6-2	11.0			★ ★	1469	721	84.0	★ ★	1469	841	70.8	★ ★	1469	956	84.0
	CR(E) 45-5	18.5	CR(E) 32-7	15.0			2304	862	102.0	2304	897	90.0	2304	1031	102.0			
	CR(E) 45-6	22.0	-	-			★ ★	1686	967	126.0	★ ★	1686	1180	154.0	★ ★	1686	1180	154.0
4	CR(E) 45-1	4.0	CR(E) 32-2-2	3.0	DN 200	1269	1180	697	32.4	2604	1180	653	28.4	2604	1180	696	32.1	
	CR(E) 45-2-2	5.5	CR(E) 32-2	4.0			★ ★	1303	758	44.0	★ ★	1303	694	38.2	★ ★	1303	738	44.0
	CR(E) 45-2	7.5	CR(E) 32-3	5.5			2404	769	60.0	2804	769	52.4	2804	791	60.6			
	CR(E) 45-3	11.0	CR(E) 32-4	7.5			★ ★	1376	741	85.6	★ ★	1376	867	72.8	★ ★	1376	970	85.6
	CR(E) 45-4	15.0	CR(E) 32-6-2	11.0			2604	825	112.0	2964	1131	98.8	2964	1129	112.0			
	CR(E) 45-5	18.5	CR(E) 32-7	15.0			★ ★	1596	1013	136.0	★ ★	1596	1201	124.0	★ ★	1596	1218	136.0
	CR(E) 45-6	22.0	-	-			★ ★	1686	1153	168.0	★ ★	1686	1424	210.0	★ ★	1686	1424	210.0

For information about ★ ★, please see page 98.

Electrical data, weights and dimensions for Hydro 2000 F

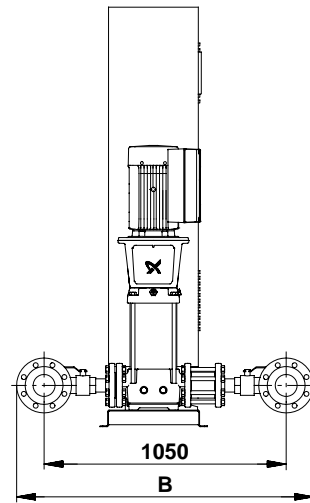
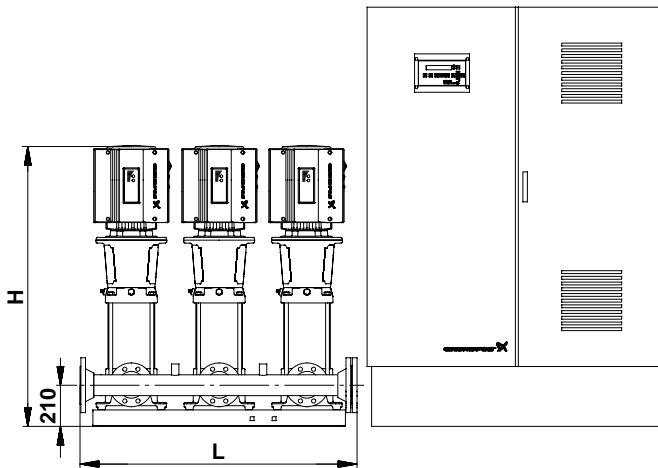
No. of pumps	Full-size pumps		Half-size pumps		Connection	B [mm]	Hydro 2000 MF				Hydro 2000 MFH							
	Pump type	Motor [kW]	Pump type	Motor [kW]			L [mm]	H [mm]	Weight [kg]	Max. I _n [A]	L [mm]	H [mm]	Weight [kg]	Max. I _n [A]				
2	CR 45-1	4.0	-	-	DN 150	1218	1180	319	16.0	-	-	-	-					
	CR 45-2-2	5.5	-	-			1303	337	22.0	-	-	-	-					
	CR 45-2	7.5	-	-			1022	346	30.4	-	-	-	-					
	CR 45-3	11.0	-	-			★ ★ ★	1376	430	42.8	-	-	-	-				
	CR 45-4	15.0	-	-			1469	505	56.0	-	-	-	-					
	CR 45-5	18.5	-	-			1596	534	68.0	-	-	-	-					
3	CR 45-1	4.0	CR 32-2-2	3.0	DN 200	1269	1180	483	24.0	1180	437	20.8	1180	437	20.8			
	CR 45-2-2	5.5	CR 32-2	4.0			1303	509	33.0	1303	465	27.0	1303	465	27.0			
	CR 45-2	7.5	CR 32-3	5.5			1534	525	45.6	1534	488	37.2	1534	488	37.2			
	CR 45-3	11.0	CR 32-4	7.5			★ ★ ★	1376	649	64.2	★ ★ ★	1376	546	51.8	★ ★ ★	1376	546	51.8
	CR 45-4	15.0	CR 32-6-2	11.0			1469	760	84.0	1469	675	70.8	1469	675	70.8			
	CR 45-5	18.5	CR 32-7	15.0			1596	807	102.0	1596	764	90.0	1596	764	90.0			
4	CR 45-1	4.0	CR 32-2-2	3.0	DN 200	1269	1180	634	32.0	1180	587	28.8	1180	587	28.8			
	CR 45-2-2	5.5	CR 32-2	4.0			1303	670	44.0	1303	625	38.0	1303	625	38.0			
	CR 45-2	7.5	CR 32-3	5.5			2024	690	60.8	2024	653	52.4	2024	653	52.4			
	CR 45-3	11.0	CR 32-4	7.5			★ ★ ★	1376	855	85.6	★ ★ ★	1376	753	73.2	★ ★ ★	1376	753	73.2
	CR 45-4	15.0	CR 32-6-2	11.0			1469	1005	112.0	1469	919	98.8	1469	919	98.8			
	CR 45-5	18.5	CR 32-7	15.0			1596	1066	136.0	1596	1023	124.0	1596	1023	124.0			
5	CR 45-1	4.0	-	-	DN 200	1269	1040	802	40.0	-	-	-	-					
	CR 45-2-2	5.5	-	-			1139	847	55.0	-	-	-	-					
	CR 45-2	7.5	-	-			2524	872	76.0	-	-	-	-					
	CR 45-3	11.0	-	-			★ ★ ★	1402	1082	107.0	-	-	-	-				
	CR 45-4	15.0	-	-			1539	1266	140.0	-	-	-	-					
	CR 45-5	18.5	-	-			1623	1344	170.0	-	-	-	-					
6	CR 45-1	4.0	-	-	DN 200	1269	1040	953	48.0	-	-	-	-					
	CR 45-2-2	5.5	-	-			1139	1007	66.0	-	-	-	-					
	CR 45-2	7.5	-	-			3024	1036	91.2	-	-	-	-					
	CR 45-3	11.0	-	-			★ ★ ★	1402	1289	128.4	-	-	-	-				
	CR 45-4	15.0	-	-			1539	1510	168.0	-	-	-	-					
	CR 45-5	18.5	-	-			1623	1604	204.0	-	-	-	-					

For information about ★ ★ ★, please see page 98.



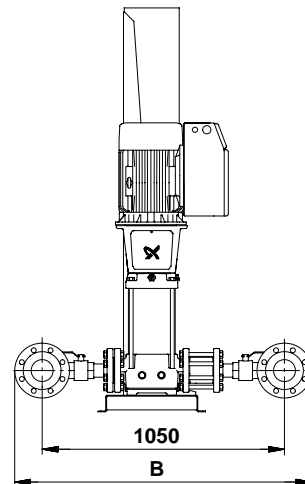
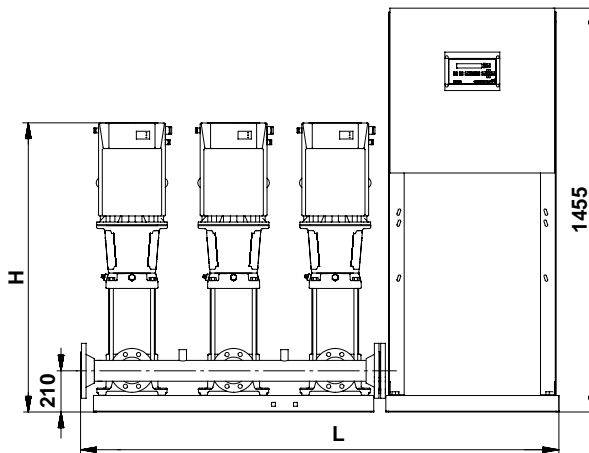
★★

TM02 7747 3903



★★★

TM02 7748 3903



★★

TM02 4586 1302

For information about ★★ and ★★★, please see page 98.

Electrical data, weights and dimensions for Hydro 2000 E

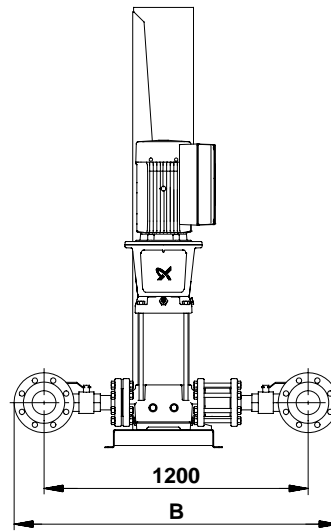
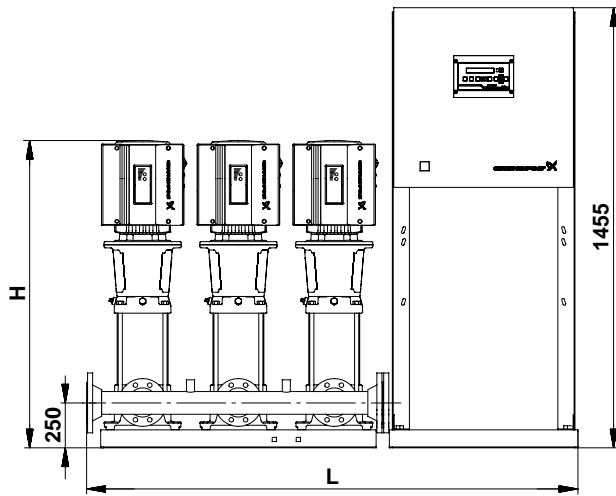
No. of pumps	Full-size pumps		Half-size pumps		Hydro 2000 ME					Hydro 2000 MEH				Hydro 2000 MES					
	Pump type	Motor [kW]	Pump type	Motor [kW]	Connection	B [mm]	L [mm]	H [mm]	Weight [kg]	Max. I _n [A]	L [mm]	H [mm]	Weight [kg]	Max. I _n [A]	L [mm]	H [mm]	Weight [kg]	Max. I _n [A]	
2	CR(E) 64-1	5.5	-	-				1226	406	22.0	-	-	-	-			1226	408	22.0
	CR(E) 64-2-2	7.5	-	-				1309	420	30.0	-	-	-	-			1309	424	30.2
	CR(E) 64-2	11.0	-	-			1402	1310	576	42.8	-	-	-	-			1310	540	42.8
	CR(E) 64-3-1	15.0	-	-	DN 150	1218	**	1397	620	56.0	-	-	-	-	1602	**	1397	600	56.0
	CR(E) 64-4-2	18.5	-	-				1482	714	68.0	-	-	-	-			1482	930	68.0
	CR(E) 64-4	22.0	-	-			1602	1537	776	84.0	-	-	-	-			1537	743	98.0
3	CR(E) 64-1	5.5	CR(E) 32-2-2	3.0				1226	589	33.0		1226	515	23.4			1226	582	33.0
	CR(E) 64-2-2	7.5	CR(E) 32-2	4.0			1904	1309	611	45.0	**	1309	547	31.4			1309	607	45.4
	CR(E) 64-2	11.0	CR(E) 32-3	5.5				1310	654	64.2		1310	614	43.4	2104	**	1310	760	64.2
	CR(E) 64-3-1	15.0	CR(E) 32-4	7.5	DN 200	1269	**	1397	720	84.0		1397	699	58.0			1397	862	84.0
	CR(E) 64-4-2	18.5	CR(E) 32-5	11.0			2304	1482	861	102.0	**	1482	876	76.8	2264	**	1482	930	102.0
	CR(E) 64-4	22.0	CR(E) 32-6	11.0			**	1537	954	126.0		1537	884	84.3	**	**	1537	1067	154.0
4	CR(E) 64-1	5.5	CR(E) 32-2-2	3.0			2404	1226	764	44.0	**	1226	674	34.4	2604	**	1226	744	44.0
	CR(E) 64-2-2	7.5	CR(E) 32-2	4.0			**	1309	791	60.0		1309	750	46.6			1309	913	60.6
	CR(E) 64-2	11.0	CR(E) 32-3	5.5	DN 200	1269	**	1310	732	85.6	**	1310	856	64.8	2804	**	1310	1003	85.6
	CR(E) 64-3-1	15.0	CR(E) 32-4	7.5				1397	820	112.0		1397	943	86.0			1397	1139	112.0
	CR(E) 64-4-2	18.5	CR(E) 32-5	11.0			2804	1482	1008	136.0	**	1482	1133	110.8	2964	**	1482	1224	136.0
	CR(E) 64-4	22.0	CR(E) 32-6	11.0			**	1537	1132	168.0	**	1537	1141	125.8	**	**	1537	1414	210.0

For information about **, please see page 98.

Electrical data, weights and dimensions for Hydro 2000 F

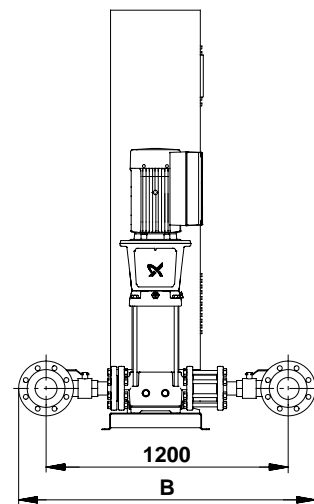
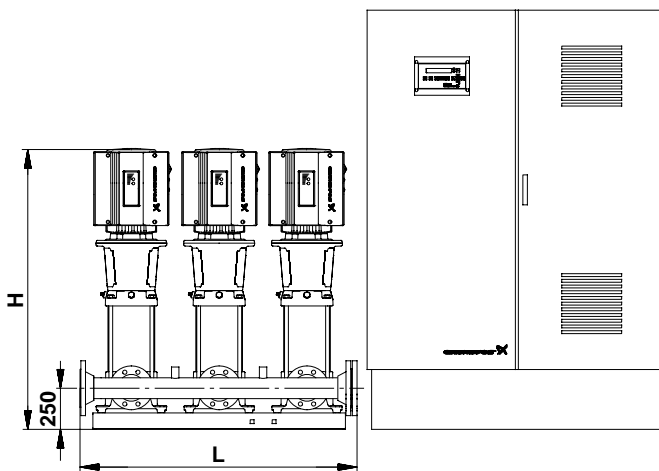
No. of pumps	Full-size pumps		Half-size pumps		Connection	B [mm]	Hydro 2000 MF				Hydro 2000 MFH			
	Pump type	Motor [kW]	Pump type	Motor [kW]			L [mm]	H [mm]	Weight [kg]	Max. I _n [A]	L [mm]	H [mm]	Weight [kg]	Max. I _n [A]
2	CR 64-1	5.5	-	-	DN 150	1218	1022 ***	1226	340	22.0	-	-	-	-
	CR 64-2-2	7.5	-	-				1309	357	30.4	-	-	-	-
	CR 64-2	11.0	-	-				1310	433	42.8	-	-	-	-
	CR 64-3-1	15.0	-	-				1397	510	56.0	-	-	-	-
	CR 64-4-2	18.5	-	-				1482	537	68.0	-	-	-	-
	CR 64-4	22.0	-	-				1537	646	83.0	-	-	-	-
	CR 64-5-1	30.0	-	-				1596	818	112.0	-	-	-	-
3	CR 64-1	5.5	CR 32-2-2	3.0	DN 200	1269	1524 ***	1226	513	33.0	1524 ***	1226	451	23.8
	CR 64-2-2	7.5	CR 32-2	4.0				1309	541	45.6		1309	479	31.2
	CR 64-2	11.0	CR 32-3	5.5				1310	653	64.2		1310	535	43.4
	CR 64-3-1	15.0	CR 32-4	7.5				1397	767	84.0		1397	589	58.4
	CR 64-4-2	18.5	CR 32-5	11.0				1482	811	102.0		1482	687	76.8
	CR 64-4	22.0	CR 32-6	11.0				1537	972	124.5		1537	749	84.3
	CR 64-5-1	30.0	CR 32-7	15.0				1596	1232	168.0		1596	909	112.0
4	CR 64-1	5.5	CR 32-2-2	3.0	DN 200	1269	2024 ***	1226	676	44.0	2024 ***	1226	608	34.8
	CR 64-2-2	7.5	CR 32-2	4.0				1309	712	60.8		1309	646	46.4
	CR 64-2	11.0	CR 32-3	5.5				1310	861	85.6		1310	739	64.8
	CR 64-3-1	15.0	CR 32-4	7.5				1397	1015	112.0		1397	832	86.4
	CR 64-4-2	18.5	CR 32-5	11.0				1482	1072	136.0		1482	944	110.8
	CR 64-4	22.0	CR 32-6	11.0				1537	1289	166.0		1537	1060	125.8
	CR 64-5-1	30.0	CR 32-7	15.0				1596	1636	224.0		1596	1305	168.0
5	CR 64-1	5.5	-	-	DN 200	1269	2524 ***	1062	854	55.0	-	-	-	-
	CR 64-2-2	7.5	-	-				1145	899	76.0	-	-	-	-
	CR 64-2	11.0	-	-				1328	1089	107.0	-	-	-	-
	CR 64-3-1	15.0	-	-				1424	1278	140.0	-	-	-	-
	CR 64-4-2	18.5	-	-				1507	1351	170.0	-	-	-	-
	CR 64-4	22.0	-	-				1629	1621	207.5	-	-	-	-
	CR 64-5-1	30.0	-	-				1778	2057	280.0	-	-	-	-
6	CR 64-1	5.5	-	-	DN 200	1269	3024 ***	1062	1015	66.0	-	-	-	-
	CR 64-2-2	7.5	-	-				1145	1068	91.2	-	-	-	-
	CR 64-2	11.0	-	-				1328	1297	128.4	-	-	-	-
	CR 64-3-1	15.0	-	-				1424	1524	168.0	-	-	-	-
	CR 64-4-2	18.5	-	-				1507	1612	204.0	-	-	-	-
	CR 64-4	22.0	-	-				1629	1935	249.0	-	-	-	-
	CR 64-5-1	30.0	-	-				1778	2457	336.0	-	-	-	-

For information about *** , please see page 98.



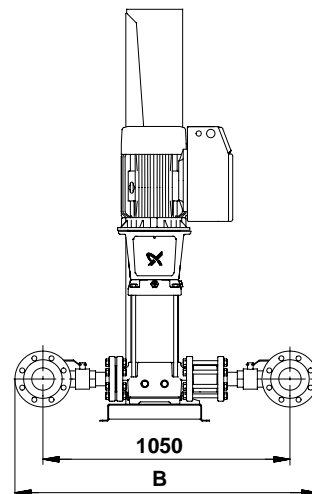
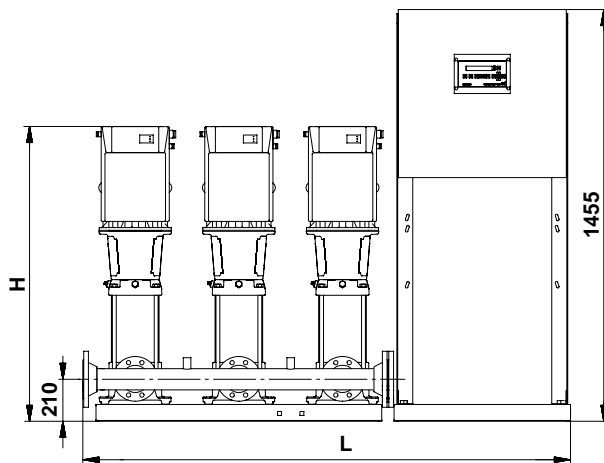
★★

TM02 7752 3903



★★★

TM02 7753 3903



★★

TM02 4586 1302

For information about ★★ and ★★★, please see page 98.

Electrical data, weights and dimensions for Hydro 2000 E

No. of pumps	Full-size pumps		Half-size pumps		Connection	Hydro 2000 ME				Hydro 2000 MEH				Hydro 2000 MES				
	Pump type	Motor [kW]	Pump type	Motor [kW]		B [mm]	L [mm]	H [mm]	Weight [kg]	Max. I _n [A]	L [mm]	H [mm]	Weight [kg]	Max. I _n [A]	L [mm]	H [mm]	Weight [kg]	Max. I _n [A]
2	CR(E) 90-1	7.5	-	-	DN 150 1364	1402 ★★	1303	434	30.0	-	-	-	-	1303	437	30.2		
	CR(E) 90-2-2	11.0	-	-			1321	580	42.8	-	-	-	-	1321	571	42.8		
	CR(E) 90-2	15.0	-	-			1376	614	56.0	-	-	-	-	1376	613	56.0		
	CR(E) 90-3-2	18.5	-	-			1469	710	68.0	-	-	-	-	1469	674	68.0		
	CR(E) 90-3	22.0	-	-			1483	772	84.0	-	-	-	-	1483	758	98.0		
3	CR(E) 90-1	7.5	CR(E) 45-2-2	5.5	DN 200 1415	1602 ★★	1904	1303	634	45.0	2104 ★★	1303	616	43.4	1303	628	45.4	
	CR(E) 90-2-2	11.0	CR(E) 45-2	7.5			1402	1321	653	64.2		1321	664	58.0	1321	786	64.2	
	CR(E) 90-2	15.0	CR(E) 45-3	11.0			1602	1376	704	84.0		1376	883	76.8	1376	869	84.0	
	CR(E) 90-3-2	18.5	CR(E) 45-4	15.0			1802	1469	710	102.0		1469	919	84.3	1469	944	102.0	
	CR(E) 90-3	22.0	CR(E) 45-4	15.0			★★	1483	772	126.0		1483	972	109.5	1483	1081	154.0	
	CR 90-4-2	30.0	CR(E) 45-5	18.5			-	-	-	-		1551	1149	124.0	-	-	-	-
	CR 90-4	30.0	CR(E) 45-5	18.5			-	-	-	-		1551	1149	124.0	-	-	-	-
4	CR(E) 90-1	7.5	CR(E) 45-2-2	5.5	DN 200 1415	2804 ★★	2404	1303	821	60.0	2804 ★★	1303	828	64.8	1303	840	60.6	
	CR(E) 90-2-2	11.0	CR(E) 45-2	7.5			2804	1321	726	85.6		1321	920	86.0	1321	1040	85.6	
	CR(E) 90-2	15.0	CR(E) 45-3	11.0			1376	794	112.0	1376		1152	110.8	1376	1156	112.0		
	CR(E) 90-3-2	18.5	CR(E) 45-4	15.0			3004	1469	986	136.0		1469	1222	125.8	1469	1245	136.0	
	CR(E) 90-3	22.0	CR(E) 45-4	15.0			★★	1483	1110	168.0		1483	1328	151.0	1483	1435	210.0	
	CR 90-4-2	30.0	CR(E) 45-5	18.5			-	-	-	-		1551	1588	180.0	-	-	-	-
	CR 90-4	30.0	CR(E) 45-5	18.5			-	-	-	-		1551	1588	180.0	-	-	-	-

For information about ★★, please see page 98.

Electrical data, weights and dimensions for Hydro 2000 F

No. of pumps	Full-size pumps		Half-size pumps		Connection	B [mm]	Hydro 2000 MF				Hydro 2000 MFH			
	Pump type	Motor [kW]	Pump type	Motor [kW]			L [mm]	H [mm]	Weight [kg]	Max. I _n [A]	L [mm]	H [mm]	Weight [kg]	Max. I _n [A]
2	CR 90-1	7.5	-	-	DN 150	1364	1022 ***	1303	369	30.4	-	-	-	-
	CR 90-2-2	11.0	-	-				1321	455	43.0	-	-	-	-
	CR 90-2	15.0	-	-				1376	522	57.4	-	-	-	-
	CR 90-3-2	18.5	-	-				1469	551	71.8	-	-	-	-
	CR 90-3	22.0	-	-				1483	660	84.0	-	-	-	-
	CR 90-4-2	30.0	-	-				1551	832	112.0	-	-	-	-
	CR 90-4	30.0	-	-				1551	832	1120.0	-	-	-	-
3	CR 90-1	7.5	CR 45-2-2	5.5	DN 200	1415	1524 ***	1303	561	45.6	1524 ***	1303	535	37.2
	CR 90-2-2	11.0	CR 45-2	7.5				1321	688	64.5		1321	588	51.9
	CR 90-2	15.0	CR 45-3	11.0				1376	787	86.1		1376	705	71.7
	CR 90-3-2	18.5	CR 45-4	15.0				1469	834	107.7		1469	794	93.3
	CR 90-3	22.0	CR 45-4	15.0				1483	995	126.0		1483	848	99.4
	CR 90-4-2	30.0	CR 45-5	18.5				1551	1255	168.0		1551	963	127.8
	CR 90-4	30.0	CR 45-5	18.5				1551	1255	168.0		1551	963	127.8
4	CR 90-1	7.5	CR 45-2-2	5.5	DN 200	1415	2024 ***	1303	737	60.8	2024 ***	1303	711	52.4
	CR 90-2-2	11.0	CR 45-2	7.5				1321	906	86.0		1321	807	73.4
	CR 90-2	15.0	CR 45-3	11.0				1376	1040	114.8		1376	957	100.4
	CR 90-3-2	18.5	CR 45-4	15.0				1469	1101	143.6		1469	1061	129.2
	CR 90-3	22.0	CR 45-4	15.0				1483	1318	168.0		1483	1168	141.4
	CR 90-4-2	30.0	CR 45-5	18.5				1551	1665	224.0		1551	1369	183.8
	CR 90-4	30.0	CR 45-5	18.5				1551	1665	224.0		1551	1369	183.8
5	CR 90-1	7.5	-	-	DN 250	1469	2526 ***	1139	1088	76.0	-	-	-	-
	CR 90-2-2	11.0	-	-				1347	1303	107.5	-	-	-	-
	CR 90-2	15.0	-	-				1402	1467	143.5	-	-	-	-
	CR 90-3-2	18.5	-	-				1496	1545	179.5	-	-	-	-
	CR 90-3	22.0	-	-				1575	1815	210.0	-	-	-	-
	CR 90-4-2	30.0	-	-				1734	2251	280.0	-	-	-	-
	CR 90-4	30.0	-	-				1734	2251	280.0	-	-	-	-
6	CR 90-1	7.5	-	-	DN 250	1469	3026 ***	1139	1267	91.2	-	-	-	-
	CR 90-2-2	11.0	-	-				1347	1526	129.0	-	-	-	-
	CR 90-2	15.0	-	-				1402	1723	172.2	-	-	-	-
	CR 90-3-2	18.5	-	-				1496	1817	215.4	-	-	-	-
	CR 90-3	22.0	-	-				1575	2140	252.0	-	-	-	-
	CR 90-4-2	30.0	-	-				1734	2662	336.0	-	-	-	-
	CR 90-4	30.0	-	-				1734	2662	336.0	-	-	-	-

For information about ***, please see page 98.

Dimensions and weights

The previous pages state dimensions and weights for Hydro 2000.

Please note that the dimensions stated may vary by ± 10 mm and that all systems are supplied without vibration dampers.

All systems have the control cabinet mounted to the right of the pumps on a common base frame. However, there are certain exceptions:

- Systems marked ★ have the control cabinet centred on the base frame.
- Systems marked ★★ are supplied with the control cabinet mounted on a separate base frame.
- Systems marked ★★★ are supplied without a separate base frame for the control cabinet. The control cabinet is mounted on its own base. The weights stated for these systems do not include the control cabinet.

Construction

Hydro 2000 is built up on a common stainless-steel base frame (EN/DIN 1.4301). The pumps are fixed to the base frame by means of bolts. The control cabinet is fixed to the base frame by means of a stainless-steel stand (EN/DIN 1.4301).

A suction manifold of stainless steel (EN/DIN 1.4401 or EN/DIN 1.4571) is mounted on the suction side of the pumps. An isolating valve and a non-return valve are mounted between the suction manifold and the individual pumps. The non-return valve may be mounted on the discharge side on request.

A discharge manifold of stainless steel (EN/DIN 1.4401 or EN/DIN 1.4571) is mounted on the discharge side of the pumps. An isolating valve is mounted between the discharge manifold and the individual pumps.

The Control 2000 control cabinet is fitted with all necessary components. All Hydro 2000 F control cabinets are fitted with a fan to remove surplus heat generated by the frequency converter.

Operating conditions

Liquid temperature: 0°C to +70°C.

Ambient temperature: 0°C to +70°C.

Operating pressure:

The operating pressure depends on the pressure transmitter, but maximum is 16 bar. The maximum operating pressure may also be limited by the diaphragm tank installed.

Installation

A Hydro 2000 booster set must be installed in a well ventilated room to ensure sufficient cooling of pumps and control cabinet.

The booster set should be placed with a 1-metre clearance in front and on the two sides.

Mechanical installation

The pipes connected to the booster set must be of adequate size. To avoid resonance, expansion joints should be fitted in the suction and discharge pipes. The pipes are to be connected to the manifolds of the booster set. Either end can be used.

It is advisable to fit pipe hangers both on the suction and discharge sides.

The booster set should be positioned on an even and solid surface, e.g. a concrete floor or foundation. If the booster set is not fitted with vibration dampers, it must be bolted to the floor or foundation.

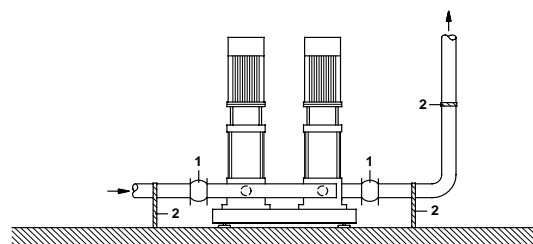


Fig. 18 Mechanical installation

1. Expansion joints.
2. Pipe hangers.

Electrical connection

50 Hz standard voltage:

3 x 400 V -10%/+6%, N, PE.

Starting method:

≤ 3 kW direct-on-line starting

≥ 4 kW Y/ Δ .

Note:

For single-phase MGE motors ≤ 1.1 kW, the mains neutral lead must be sized in relation to the full-load current in the neutral lead.

Further product documentation

In addition to the printed data booklet, Grundfos offers the following sources of product documentation.

- WinCAPS
- WebCAPS.

WinCAPS

WinCAPS is a **Windows-based Computer-Aided Product Selection** program containing information on more than 90,000 Grundfos products.

Available on CD-ROM in more than 15 languages, WinCAPS offers

- detailed technical information
- selection of the optimum pump solution
- dimensional drawings of each pump
- detailed service documentation
- installation and operating instructions
- wiring diagrams of each pump.



Fig. 19 WinCAPS CD-ROM

cd-wincaps

Click on **Catalogue** and select a product from the extensive product catalogue.

Click on **Sizing** and select the most suitable pump for your application.

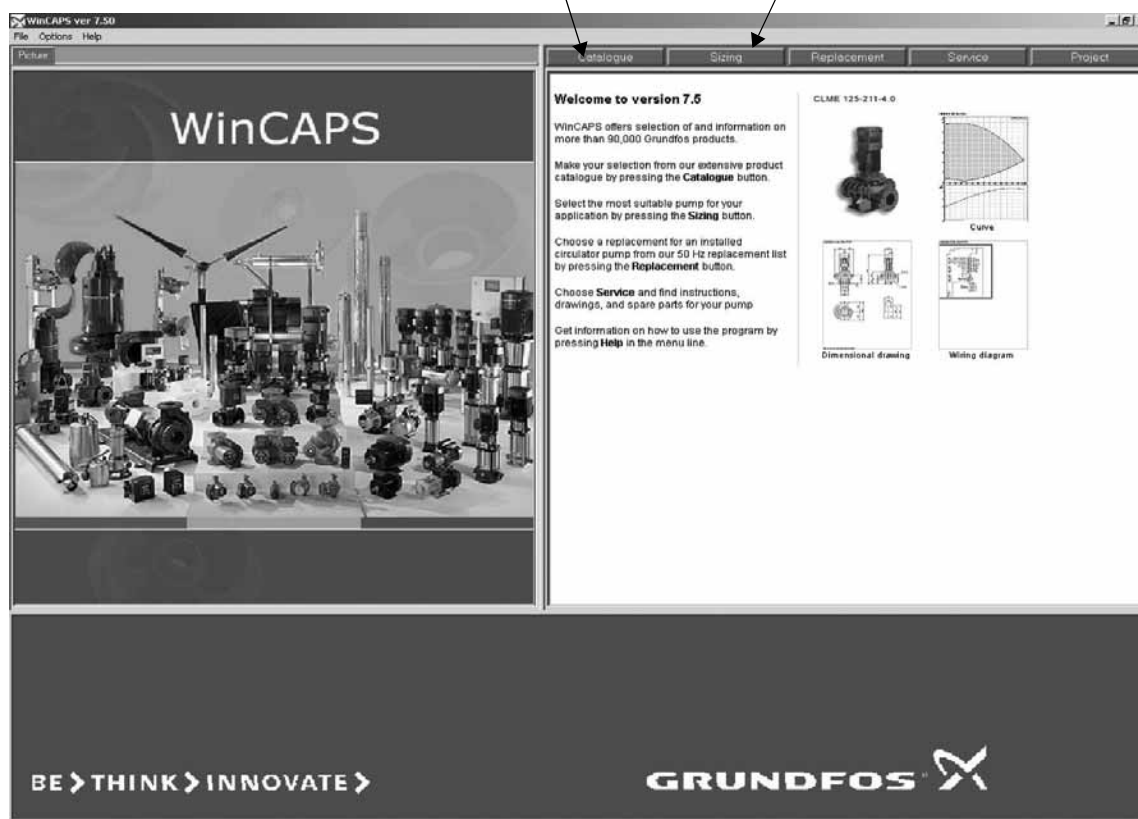


Fig. 20 WinCAPS

WinCAPS

Further product documentation

WebCAPS

WebCAPS is a **Web-based Computer Aided-Product Selection** program and a web-version of WinCAPS.

Available on Grundfos' homepage, **www.grundfos.com**, WebCAPS offers

- detailed technical information
- dimensional drawings of each pump
- wiring diagrams of each pump.

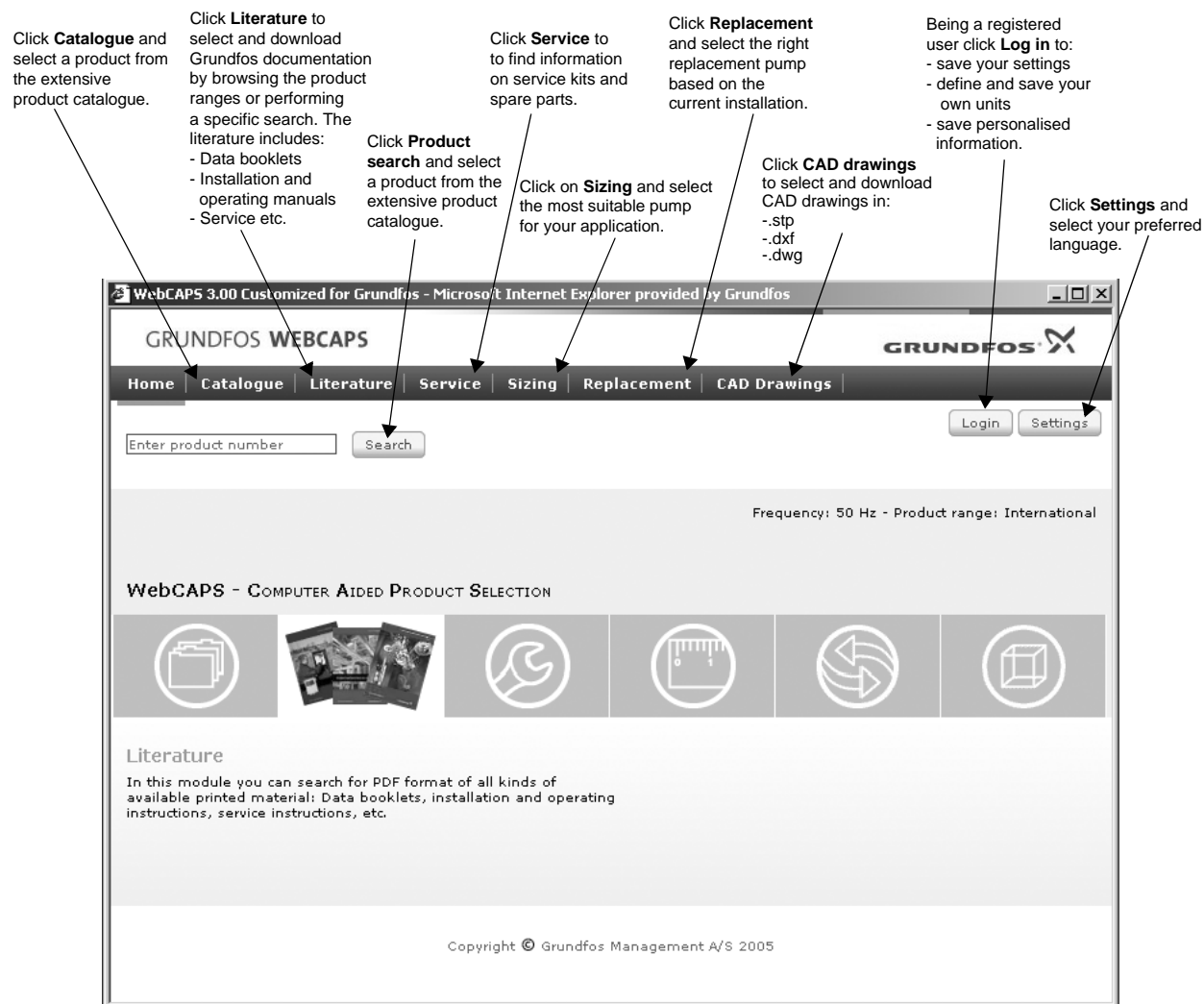


Fig. 21 WebCAPS

WebCAPS_English

V7124825 0305	GB
Repl. V7124825 0804	

Subject to alterations.