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Насосные агрегаты KSB. Техническое описание

Pressure Booster System

Hya-Eco VP

Type Series Booklet



Legal information/Copyright

Type Series Booklet Hya-Eco VP

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Building Services: Water Supply

Pressure Booster Systems

Hya-Eco VP



Main applications

- Pressure boosting

Fluids handled

Pump for handling clean liquids not chemically and mechanically aggressive to the pump materials.

- Drinking water
- Service water
- Cooling water

Operating data

Operating properties

Characteristic		Value
Flow rate	Q [m ³ /h]	≤ 70 with a max. of 3 pumps ¹⁾)
	Q [l/s]	≤ 19.5 with a max. of 3 pumps
Head	H [m]	≤ 110
Fluid temperature	T [°C]	≤ 70
		≤ 25 to DIN 1988 (DVGW)
Operating pressure	p [bar]	≤ 16
Inlet pressure	p _{vor} [bar]	≤ 6

Designation

Example: Hya-Eco VP 2 / 0406 / _ _ B

Designation key

Code	Description
Hya-Eco VP	Type series
2	Number of pumps
04	Movitec pump size
06	Number of stages
_	Inlet pressure [bar]
B	Design status

Design details

Design

- Fully automatic pressure booster package system
- Baseplate-mounted
- Either two or three vertical high-pressure centrifugal pumps, type Movitec, with oval flange
- One check valve and shut-off valves to DIN/DVGW for each pump
- Anti-vibration pads per pump
- Membrane-type accumulator (direct-flow) to DIN 4807-5 on the discharge side, approved for drinking water
- Pressure transmitter on the discharge side
- Pressure gauge for pressure indication
- Two standard volt-free changeover contacts for fault indication
- Design and function as per DIN 1988-500

Installation type

- Stationary installation

Drive

- Electric motor 60 Hz, 2-pole, IE2, special KSB model, for three-phase mains

Automation

- Control cabinet IP54
- Graphical display with operating panel
- LEDs indicating operational availability and fault of the system
- Service interface for connection to a PC
- Frequency inverter
- Transformer for control voltage
- Motor protection switch per pump
- Lockable master switch (repair switch)
- Pressure transmitter on the discharge side
- Wiring plan to VDE and parts list for electric parts
- Terminal strip/terminals with identification for all connections
- Terminal connection for digital dry running protection
- Remote ON connection
- Remote OFF connection

¹⁾ With stand-by pump as peak load pump

Configuration and function



Hya-Eco VP

1	Control unit	2	Control cabinet
3	Pump	4	Collecting line
5	Baseplate		

Design

Fully automatic pressure booster package system, with 2 to 3 vertical high-pressure pumps and continuously variable speed adjustment of each pump for fully electronic control of the required supply pressure, with two standard volt-free changeover contacts for fault indication.

Function

Automatic mode

Either two or three pumps (3) are controlled and monitored by a micro-processor control unit (1). Each pump is connected to a frequency inverter and controlled by the control unit so as to ensure a constant discharge pressure of the pressure booster system. As the demand increases or decreases, peak load pumps are started and stopped automatically.

As soon as the demand increases again after one pump has been stopped, another pump which has not been in operation before is started up. When the last pump has been stopped and the demand increases again, the next pump in line is started up in variable-speed operation. The stand-by pump is also included in the alternating cycle. The standard setting is for the pressure booster system to start automatically as a function of pressure; the actual pressure is measured by an analog pressure measuring device (pressure transmitter). The function of this pressure transmitter is monitored (live-zero).

As long as the pressure booster system is in operation, the pumps are started and stopped as a function of demand (standard setting). In this way it is ensured that the individual pumps operate only in line with the actual demand. The use of variable-speed pumps reduces wear as well as the pumps' frequency of starts in parallel operation. If a duty pump fails, the next pump is started up immediately and a fault is output, which can be reported via volt-free contacts (e.g. to the control station). If the demand drops towards 0, the pressure booster system slowly runs down to the stop point. The operating status is displayed via LEDs.

Function

Manual mode

In exceptional cases, the system can also be operated in manual mode.

Minimum flow for pump in manual mode

Minimum flow per pump in manual mode

Pump	Minimum flow per pump in manual mode [l/h]
Movitec 2B	200
Movitec 4B	400
Movitec 6B	600
Movitec 10B	1100
Movitec 15B	1600

Materials

Overview of available materials

Component	Material
Inlet casing	Stainless steel
Discharge casing	Stainless steel
Hydraulic system	Stainless steel
Mechanical seal	Complies with EN 12756
Primary ring	Silicon carbide
Mating ring	Hard carbon
Elastomer	EPDM
Baseplate	Steel, powder-coated
Hydraulic design	
Distributor pipe	Stainless steel
Valves	Copper base alloy/brass DVGW-approved
Membrane-type accumulator	Connection made of stainless steel, flow through valve to DIN 4807-5
Membrane	Approved for drinking water

Product benefits

- Energy-efficient operation and constant pressure ensured by speed control of all pumps (all systems non-compliant with Drinking Water Directive, except for single-pump systems)
- Ease of use and fully automatic control by BoosterControl Advanced
- Corrosion-resistant by using high-quality stainless steel
- Ready-to-connect baseplate-mounted package system
- Pumps mounted on the baseplate on anti-vibration pads
- Suitable for drinking water installations, manufactured under stringent hygienic conditions

Selection information

Requirements:

Flow rate 4 m³/h

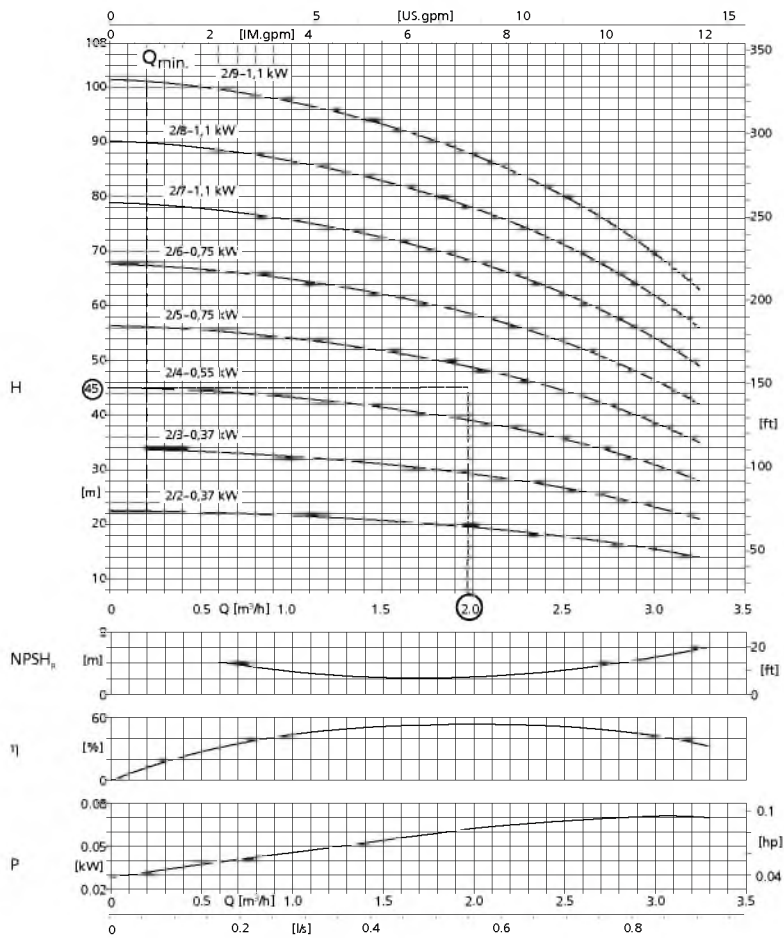
Start-up pressure 4.5 bar

Requested stand-by pump to DIN 1988

Solution:

Hya Eco-VP 2/0205 B

1. According to the table *Flow rate as a function of the number of pumps* the system may comprise 1 or 2 duty pumps (as stand-by pump is requested)
2. According to the table *Flow rate as a function of the number of pumps* the flow rate requirement can be either 4 m³/h (1 duty pump) or 2 m³/h (2 duty pumps)
3. The characteristic curves accordingly suggest Hya-Eco VP 2/205 (operating point close to Q_{opt})



The required flow rate is split according to the number of the duty pumps (not taking into account any stand-by pumps).

Flow rate as a function of the number of pumps

Duty pumps	Stand-by pumps	Flow rate as a function of the number of pumps
1	1	Required flow rate $\hat{=}$ flow rate as per characteristic curve Q [m ³ /h]
2	0	Required flow rate / 2 $\hat{=}$ flow rate as per characteristic curve Q [m ³ /h]
2	1	Required flow rate / 2 $\hat{=}$ flow rate as per characteristic curve Q [m ³ /h]
3	0	Required flow rate / 3 $\hat{=}$ flow rate as per characteristic curve Q [m ³ /h]

Technical data

Systems with 2 and 3 pumps

Hya-Eco VP	Per motor			Total rated power requirement	Mat. No.	[kg]
	Rated power	Rated current				
2/0202 B	0,37	0,89	1,3	29132656	120	
2/0203 B	0,37	0,89	1,3	29132657	121	
2/0204 B	0,55	1,32	1,9	29132658	122	
2/0205 B	0,75	1,65	2,4	29132659	123	
2/0206 B	0,75	1,65	2,4	29132660	127	
2/0207 B	1,10	2,36	3,4	29132661	128	
2/0208 B	1,10	2,36	3,4	29132662	129	
2/0209 B	1,10	2,36	3,4	29132663	133	
3/0202 B	0,37	0,89	1,9	29132664	147	
3/0203 B	0,37	0,89	1,9	29132665	152.6	
3/0204 B	0,55	1,32	2,9	29132666	150	
3/0205 B	0,75	1,65	3,6	29132667	151	
3/0206 B	0,75	1,65	3,6	29132668	158	
3/0207 B	1,10	2,36	5,2	29132669	159	
3/0208 B	1,10	2,36	5,2	29132670	160	
3/0209 B	1,10	2,36	5,2	29132671	167	
2/0402 B	0,55	1,32	1,9	29132672	120	
2/0403 B	0,75	1,65	2,4	29132673	125	
2/0404 B	1,10	2,36	3,4	29132674	126	
2/0405 B	1,50	2,88	4,2	29132675	130	
2/0406 B	1,50	2,88	4,2	29132676	136	
2/0407 B	2,20	4,09	6,0	29132677	137	
2/0408 B	2,20	4,09	6,0	29132678	144	
3/0402 B	0,55	1,32	2,9	29132679	148	
3/0403 B	0,75	1,65	3,6	29132680	154	
3/0404 B	1,10	2,36	5,2	29132681	156	
3/0405 B	1,50	2,88	6,3	29132682	162	
3/0406 B	1,50	2,88	6,3	29132683	171	
3/0407 B	2,20	4,09	8,9	29132684	172	
3/0408 B	2,20	4,09	8,9	29132685	183	
2/0602 B	0,75	1,65	2,4	29132686	122	
2/0603 B	1,10	2,36	3,4	29132687	131	
2/0604 B	1,50	2,88	4,2	29132688	136	
2/0605 B	2,20	4,09	6,0	29132689	137	
2/0606 B	2,20	4,09	6,0	29132690	146	
2/0607 B	3,00	5,51	8,0	29132691	147	
3/0602 B	0,75	1,65	3,6	29132692	150	
3/0603 B	1,10	2,36	5,2	29132693	162	
3/0604 B	1,50	2,88	6,3	29132694	171	
3/0605 B	2,20	4,09	8,9	29132695	172	
3/0606 B	2,20	4,09	8,9	29132696	184	
3/0607 B	3,00	5,51	12,0	29132697	186	
2/1002 B	1,50	2,88	4,2	29133769	167	
2/1003 B	2,20	4,09	6,0	29133770	175	
2/1004 B	3,00	5,51	8,0	29133771	193	
2/1005 B	4,00	7,34	10,7	29133772	195	
2/1006 B	4,00	7,34	10,7	29133773	207	

Hya-Eco VP	Per motor			Total rated power requirement	Mat. No.	[kg]
	Rated power	Rated current				
3/1002 B	1,50	2,88	6,3	29133775	218	
3/1003 B	2,20	4,09	8,9	29133776	230	
3/1004 B	3,00	5,51	12,0	29133777	256	
3/1005 B	4,00	7,34	16,0	29133778	259	
3/1006 B	4,00	7,34	16,0	29133779	277	
2/1502 B	3,00	5,51	8,0	29133781	213	
2/1503 B	5,50	9,86	14,3	29133782	310	
2/1504 B	7,50	13,20	19,2	29133783	320	
2/1505 B	7,50	13,20	19,2	29133784	322	
3/1502 B	3,00	5,51	12,0	29133786	281	
3/1503 B	5,50	9,86	21,5	29133787	422	
3/1504 B	7,50	13,20	28,8	29133788	437	
3/1505 B	7,50	13,20	28,8	29133789	440	

Type of connection

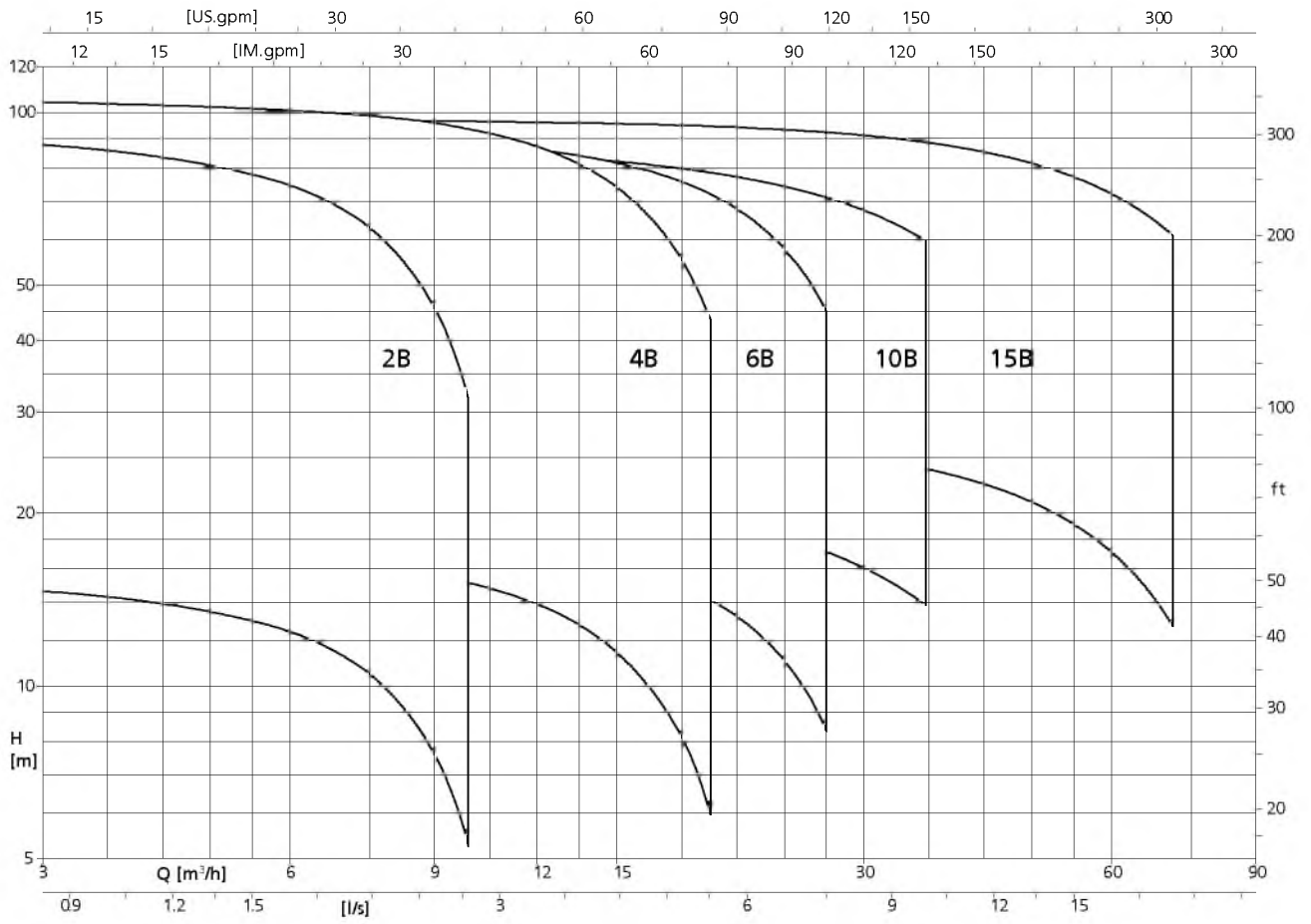
Types of connection (schematic)

Direct	Indirect	
<p style="text-align: right;">1952-106</p>	<p>Unpressurised inlet tank at the same or at a higher level</p> <p style="text-align: right;">1952-107</p>	<p>Unpressurised inlet tank at a lower level (suction-lift operation) ²⁾</p> <p style="text-align: right;">1952-108</p>
<p>Inlet pressure monitoring (see Supplementary equipment or Accessories)</p>		
<p>At $p_{in} > 0.5$ bar (min. 1 bar, DIN 1988)</p> <ul style="list-style-type: none"> - Pressure switch - Pressure sensor <p>At $p_{in} < 0.5$ bar</p> <ul style="list-style-type: none"> - Pressure sensor - Flow monitoring 	<ul style="list-style-type: none"> - Float switch - Set of electrodes and relay - Dry running protection for PE inlet tank - Pressure sensor - Flow monitoring³⁾ 	<ul style="list-style-type: none"> - Float switch - Set of electrodes and relay - Dry running protection for PE inlet tank - Flow monitoring³⁾

²⁾ Non-priming pumps, suitable for suction-lift operation (for selection, please consult KSB)

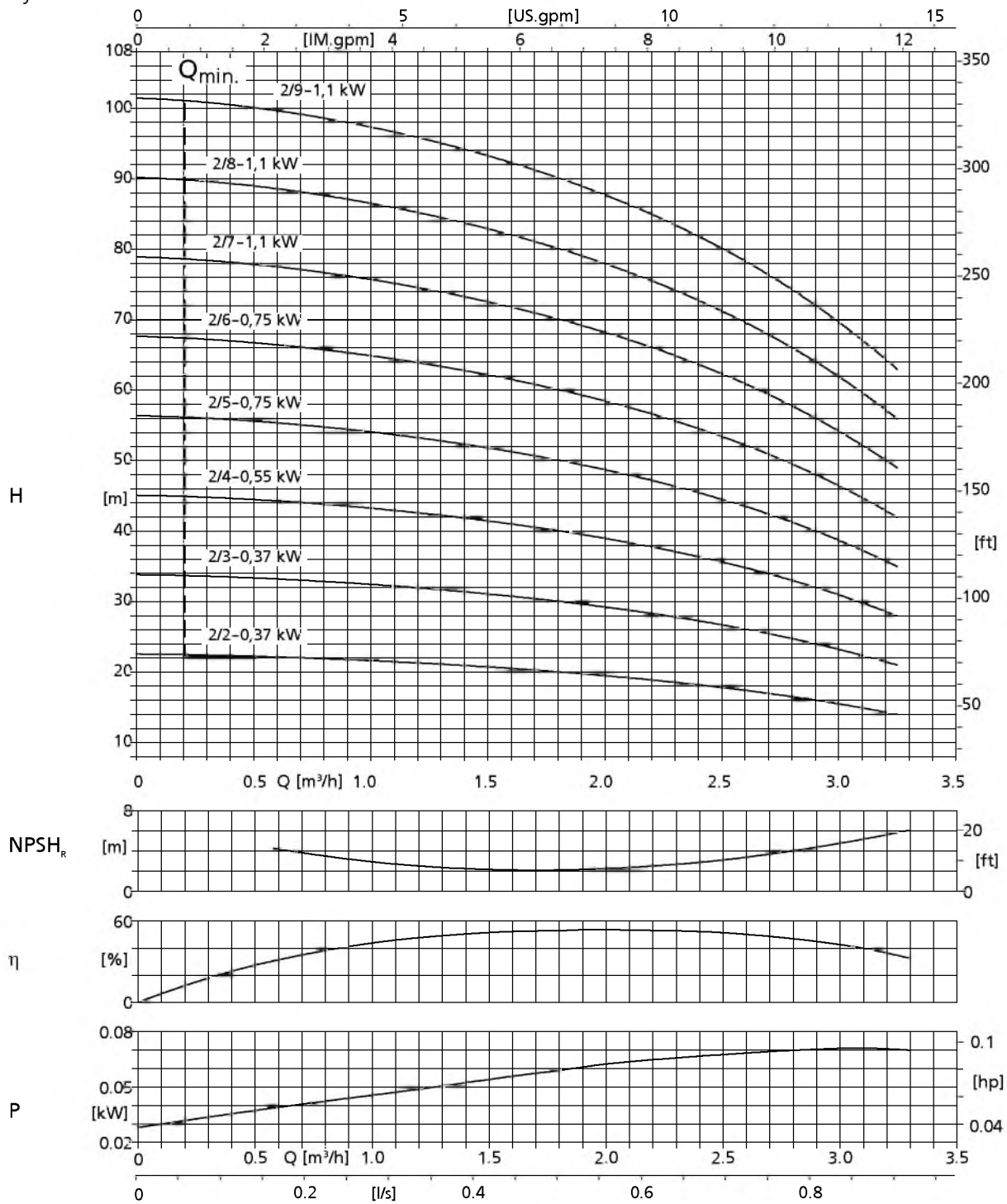
³⁾ Automatic reset is not possible for this type of dry running protection

Hya-Eco; n = 3500 rpm



Characteristic curves

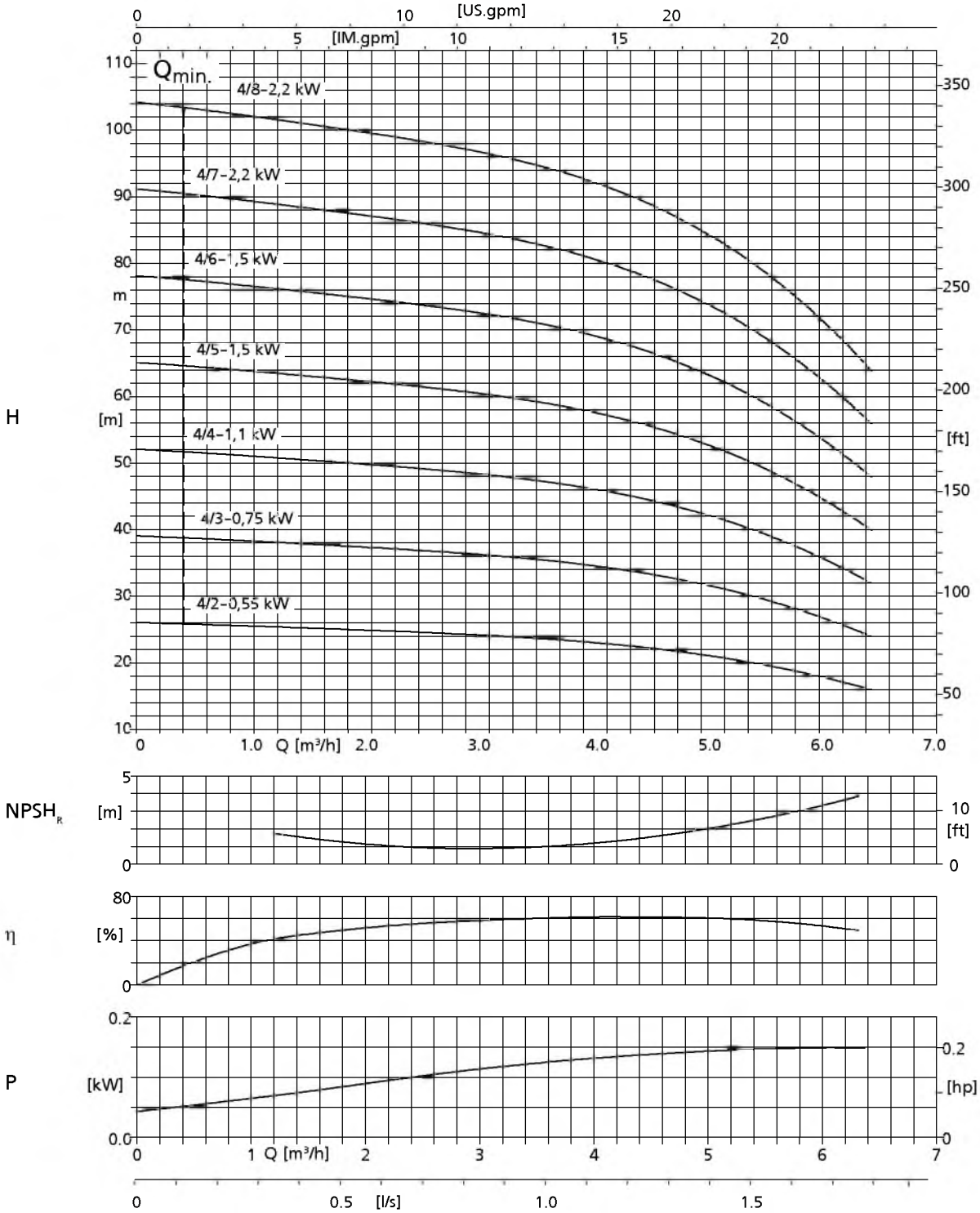
Hya-Eco VP with Movitec 2B



Flow rate as a function of the number of pumps

Duty pumps	Stand-by pumps	Flow rate as a function of the number of pumps
1	1	Required flow rate \triangleq flow rate as per characteristic curve Q [m³/h]
2	0	Required flow rate: 2 \triangleq flow rate as per characteristic curve Q [m³/h]
2	1	Required flow rate: 2 \triangleq flow rate as per characteristic curve Q [m³/h]
3	0	Required flow rate: 3 \triangleq flow rate as per characteristic curve Q [m³/h]

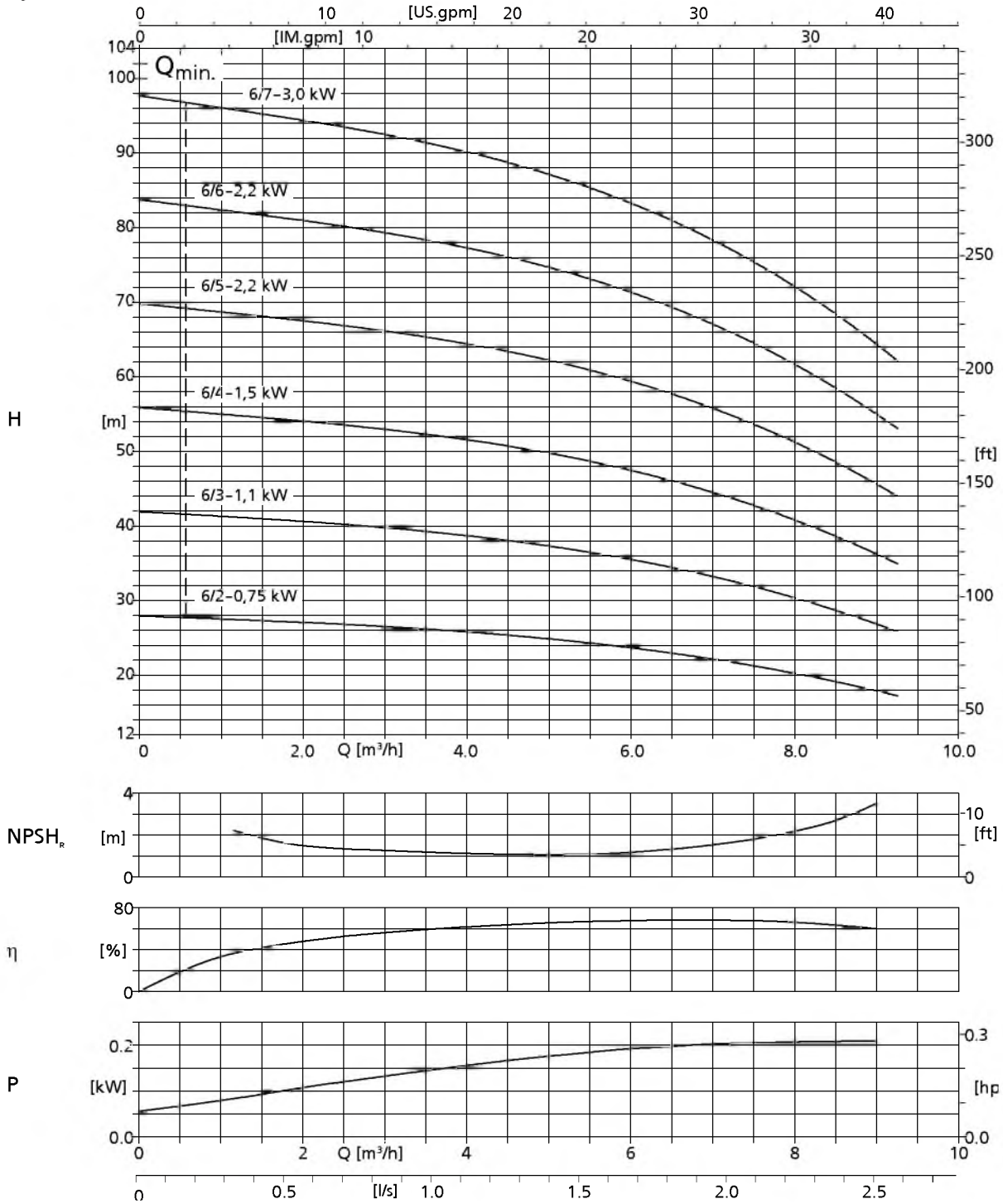
Hya-Eco VP with Movitec 4B



Flow rate as a function of the number of pumps

Duty pumps	Stand-by pumps	Flow rate as a function of the number of pumps
1	1	Required flow rate \triangleq flow rate as per characteristic curve Q [m ³ /h]
2	0	Required flow rate: 2 \triangleq flow rate as per characteristic curve Q [m ³ /h]
2	1	Required flow rate: 2 \triangleq flow rate as per characteristic curve Q [m ³ /h]
3	0	Required flow rate: 3 \triangleq flow rate as per characteristic curve Q [m ³ /h]

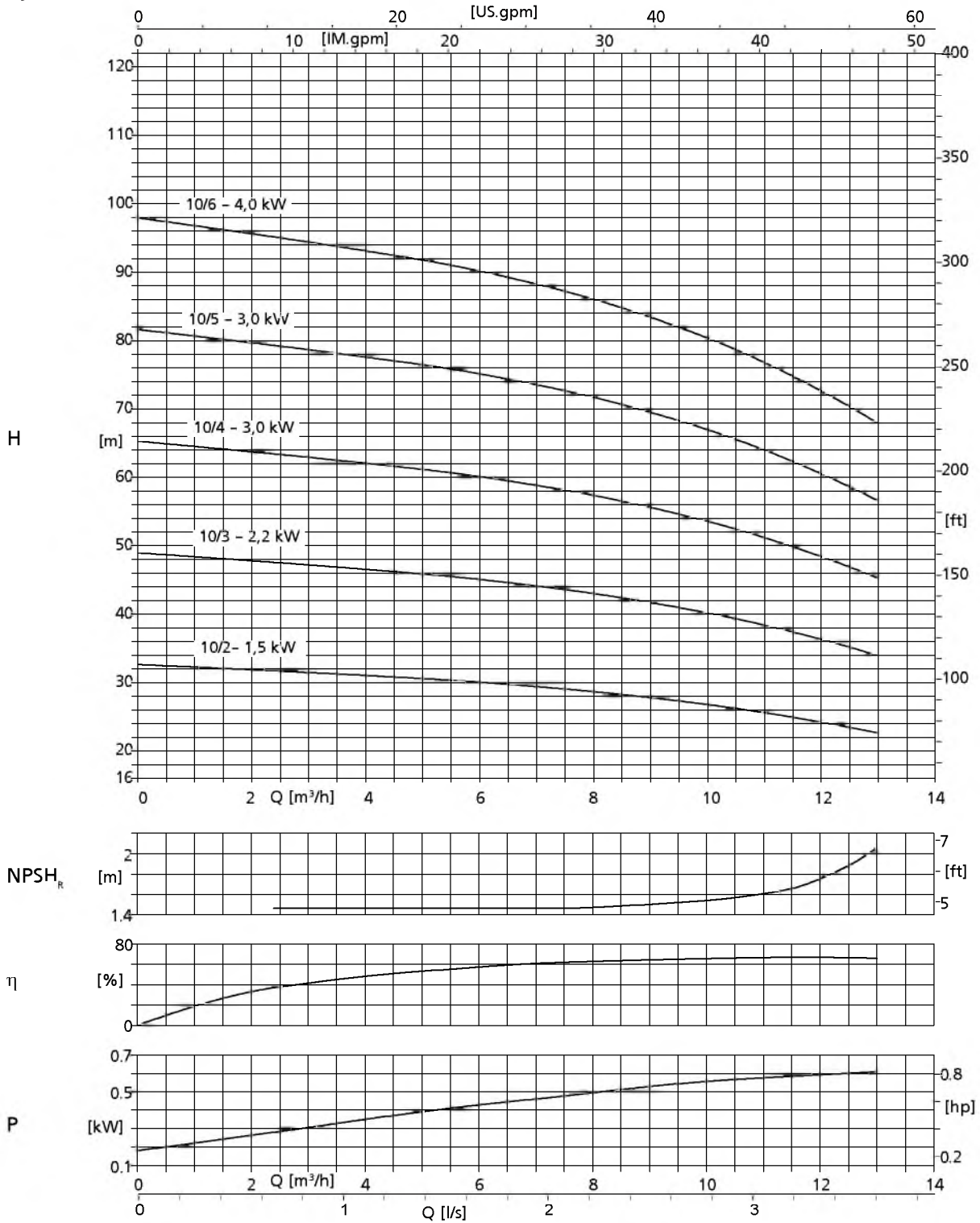
Hya-Eco VP with Movitec 6B



Flow rate as a function of the number of pumps

Duty pumps	Stand-by pumps	Flow rate as a function of the number of pumps
1	1	Required flow rate $\hat{=}$ flow rate as per characteristic curve Q [m ³ /h]
2	0	Required flow rate: 2 $\hat{=}$ flow rate as per characteristic curve Q [m ³ /h]
2	1	Required flow rate: 2 $\hat{=}$ flow rate as per characteristic curve Q [m ³ /h]
3	0	Required flow rate: 3 $\hat{=}$ flow rate as per characteristic curve Q [m ³ /h]

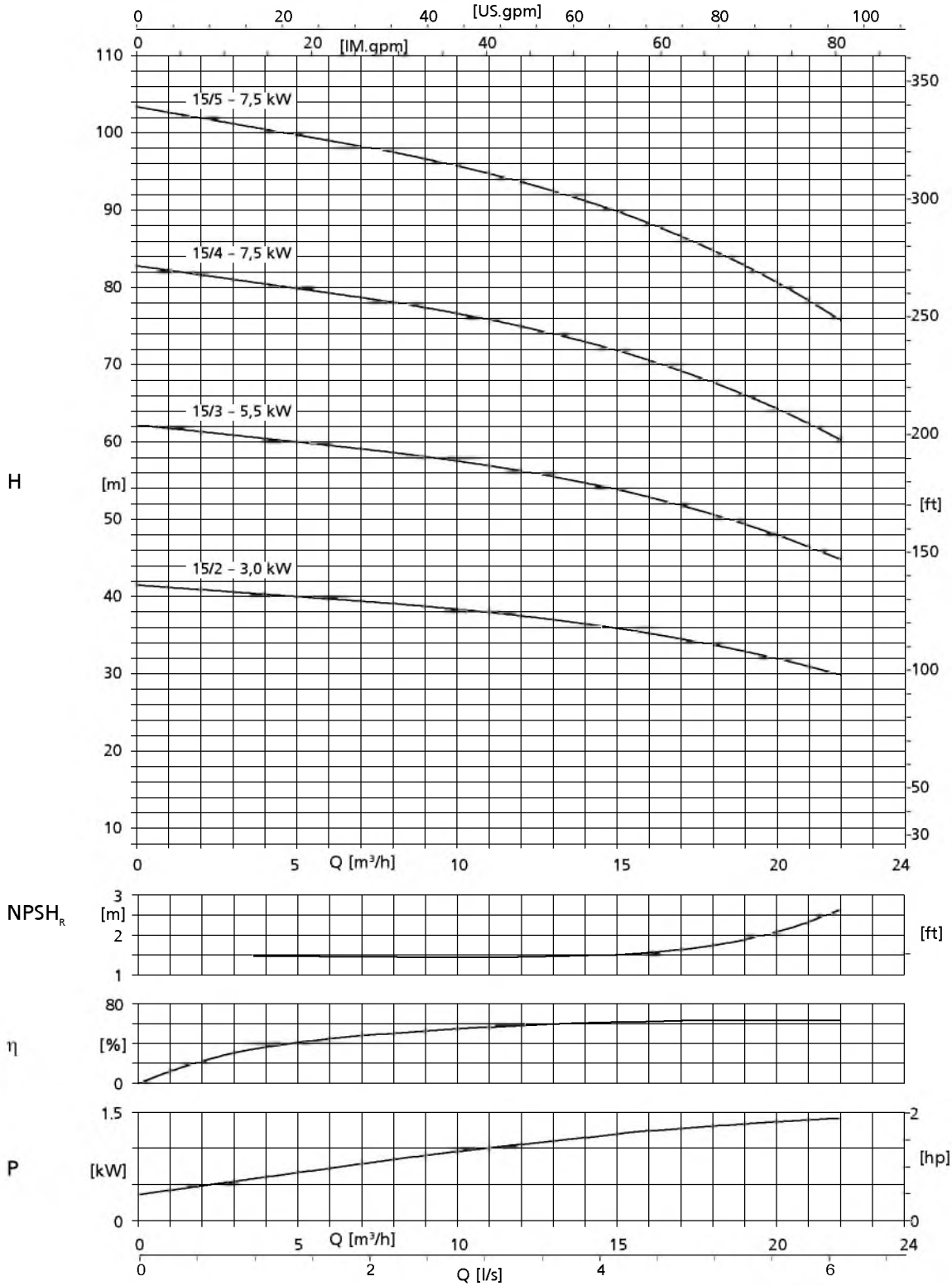
Hya-Eco VP with Movitec 10B



Flow rate as a function of the number of pumps

Duty pumps	Stand-by pumps	Flow rate as a function of the number of pumps
1	1	Required flow rate $\hat{=}$ flow rate as per characteristic curve Q [m³/h]
2	0	Required flow rate: 2 $\hat{=}$ flow rate as per characteristic curve Q [m³/h]
2	1	Required flow rate: 2 $\hat{=}$ flow rate as per characteristic curve Q [m³/h]
3	0	Required flow rate: 3 $\hat{=}$ flow rate as per characteristic curve Q [m³/h]

Hya-Eco VP with Movitec 15B

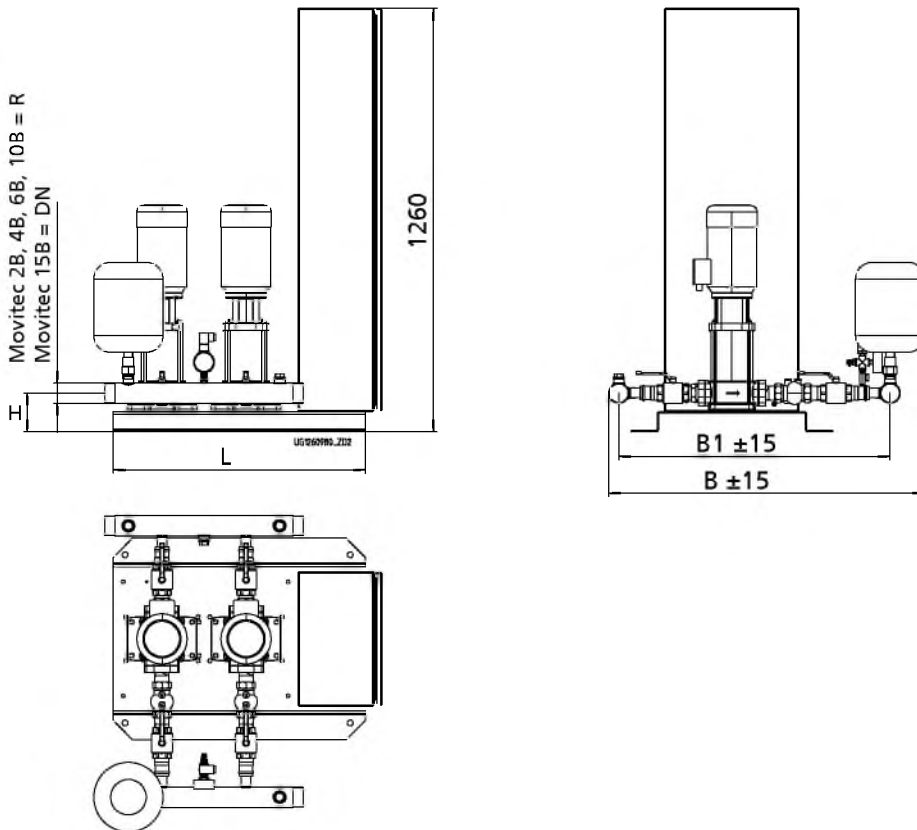


Flow rate as a function of the number of pumps

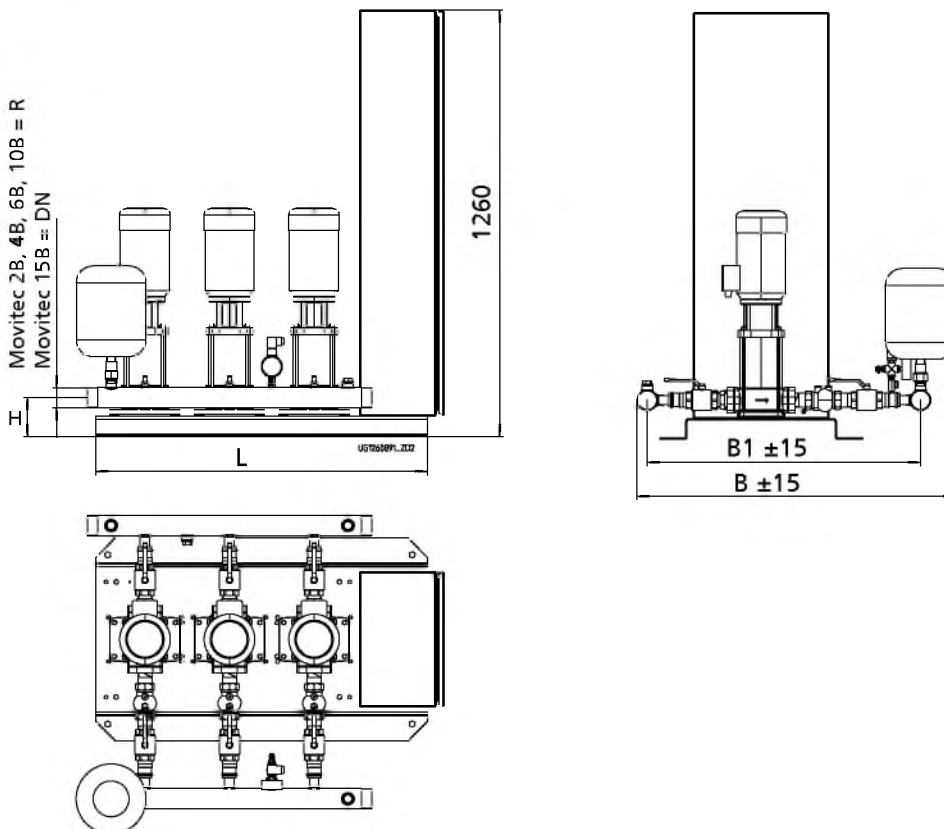
Duty pumps	Stand-by pumps	Flow rate as a function of the number of pumps
1	1	Required flow rate $\hat{=}$ flow rate as per characteristic curve Q [m³/h]
2	0	Required flow rate: 2 $\hat{=}$ flow rate as per characteristic curve Q [m³/h]
2	1	Required flow rate: 2 $\hat{=}$ flow rate as per characteristic curve Q [m³/h]
3	0	Required flow rate: 3 $\hat{=}$ flow rate as per characteristic curve Q [m³/h]

Dimensions

Hya-Eco VP with Movitec 2B, 4B, 6B, 10B and 15B with 2 pumps



Hya-Eco VP with Movitec 2B, 4B, 6B, 10B and 15B with 3 pumps




Thread R to DIN EN 10226
Flanges drilled to EN 1092-1 PN 16

Dimensions [mm]

Number of pumps	2	3	Movitec
B	874	874	2B/.. and 4B/..
	941	941	6B/..
	1018	1018	10B/..
	1087	1087	15B/..
B1	740	740	2B/.. and 4B/..
	808	808	6B/..
	885	885	10B/..
	884	884	15B/..
L	750	980	2B/.. and 4B/..
	750	980	6B/..
	750	980	10B/..
	980	1210	15B/..
R	R 2	R 2	2B/.. and 4B/..
	R 2	R 2	6B/..
	R 2	R 2	10B/..
DN	DN 80	DN 80	15B/..
H	115	115	2B/.. and 4B/..
	115	115	6B/..
	145	145	10B/..
	145	145	15B/..

- Connection for analog or digital dry running protection equipment
- External connection ON
- External connection OFF

Accessories

 See the separate type series booklet Accessories for Pressure Booster Systems 1954.5.

Scope of supply

Depending on the model, the following items are included in the scope of supply:

Pressure booster system

- Two to three vertical high-pressure centrifugal pumps (standard pumps)
- Membrane-type accumulator on the discharge side, approved for drinking water
- Pressure transmitter on the discharge side
- Pressure gauge
- Powder-coated steel baseplate
- Pumps mounted on the baseplate with anti-vibration mounts

Per pump:

- Check valve
- Shut-off valves

Control cabinet

- Control cabinet IP54
- Pump control and monitoring unit
- Graphical display with operating panel
- LEDs indicating operational availability and fault of the pressure booster system
- Service interface for connection to a PC
- Transformer for control voltage
- Motor protection switch per pump
- Lockable master switch (repair switch)
- Terminal strip/terminals with identification for all connections
- Circuit diagram, settings for frequency inverters and list of electrical components

Pressure Booster System

Hyamat SVP

Type Series Booklet



Contents

Building Services: Water Supply	4
Pressure Booster Systems	4
Hyamat SVP	4
Main applications	4
Fluids handled	4
Operating data	4
Designation	4
Design details	4
Configuration and function	5
Materials	5
Product benefits	6
Selection information	7
Technical data	8
Type of connection	10
Selection chart	11
Characteristic curves	12
Dimensions and weights	21
Scope of supply	25
Accessories	26

Building Services: Water Supply

Pressure Booster Systems

Hyamat SVP



Main applications

- Pressure boosting

Fluids handled

Pump for handling clean liquids not chemically and mechanically aggressive to the pump materials.

- Drinking water
- Service water
- Cooling water

Operating data

Operating properties

Characteristic		Value
Flow rate	Q [m ³ /h]	≤ 660 with a max. of 6 pumps ¹⁾
	Q [l/s]	≤ 183 with a max. of 6 pumps ¹⁾
Head	H [m]	≤ 160
Fluid temperature	T [°C]	≤ 70
		≤ 25 to DIN 1988 (DVGW)
Operating pressure	p _d [bar]	≤ 16
Inlet pressure	p _{vor} [bar]	≤ 10

¹⁾ With stand-by pump as peak load pump

Designation

Example: Hyamat SVP 4/0408/1.2 - 3.5

Designation key

Code	Description
Hyamat	Pressure booster system
SVP	All pumps in variable-speed operation
4	Number of pumps
04	Pump size
08	Number of pump stages
1,2	Min. inlet pressure [bar]
3,5	Max. usable inlet pressure [bar]

Design details

Design

- Fully automatic pressure booster package system
- Baseplate-mounted
- Two to six vertical high-pressure centrifugal pumps with continuously variable speed adjustment
- Hydraulic components made of stainless steel / brass
- One check valve and shut-off valves to DIN/DVGW for each pump
- Anti-vibration mounts for each pump for systems with Movitec 2B, 4B, 6B, 10B, 15B
- Systems with level-adjustable feet with rubber pads (supplied but not fitted) for systems with Movitec 25B, 40B, 60B and 90B
- Membrane-type accumulator (direct-flow) to DIN 4807-5 on the discharge side, approved for drinking water
- Pressure gauge for pressure indication
- Pressure transmitter on the discharge side
- Design and function as per DIN EN 806-2, DIN 1988-500

Installation type

- Stationary installation

Drive

- High-efficiency magnet-less KSB-SuPremE-IE4 motor (as per IEC/CD 60034-30 Ed. 2)

Automation

- Control cabinet IP54
- Pump control and monitoring unit
- Graphical display with operating panel
- LEDs indicating operational availability and fault of the system
- Service interface for connection to a PC
- Frequency inverter
- Transformer for control voltage
- Motor protection switch per pump
- Lockable master switch (repair switch)
- Pressure transmitter on the discharge side
- Wiring plan to VDE and parts list for electric parts
- Terminal strip/terminals with identification for all connections

- Connection for analog or digital dry running protection equipment
- External ON/OFF connection
- Field bus connection (optional)

Configuration and function



Hyamat SVP illustration

1	Control unit	2	Control cabinet
3	Motor with variable-speed system	4	Pump
5	Manifold	6	Baseplate

Design

The fully automatic pressure booster system is equipped with two to six vertical high-pressure pumps (4) (all of which are speed-controlled) for pumping the fluid handled to the consumer installations in the set pressure range.

Function

Automatic mode

Two to six pumps (4) are controlled and monitored by a micro-processor control unit (1). Each pump is connected to a frequency inverter and controlled by the control unit so as to ensure a constant discharge pressure of the pressure booster system. As the demand increases or decreases, peak load pumps are started and stopped automatically.

As soon as the demand increases again after one pump has been stopped, another pump which has not been in operation before is started up. When the last pump has been stopped and the demand increases again, the next pump in line is started up in variable-speed operation. The stand-by pump is also included in the alternating cycle. The standard setting is for the pressure booster system to start automatically as a function of pressure; the actual pressure is measured by an analog pressure measuring device (pressure transmitter). The function of this pressure transmitter is monitored (live-zero). As long as the pressure booster system is in operation, the pumps are started and stopped as a function of demand (standard setting). In this way it is ensured that the individual pumps operate only in line with the actual demand. The use of variable-speed pumps reduces wear as well as the pumps' frequency of starts in parallel operation. If a duty pump fails, the next pump is started up immediately and a fault is output, which can be reported via volt-free contacts (e.g. to the control station). If the demand drops towards 0, the pressure booster system slowly runs down to the stop point. The operating status is displayed via LEDs.

Function

Energy-saving mode

In conjunction with a very large discharge-side accumulator, the energy-saving mode prevents the pressure booster system from running at the least efficient operating point, supplying very small amounts of water.

If very small amounts of water are consumed the pressure booster system only fills the downstream accumulator and stops.

Any small water volumes required can then be supplied from the accumulator.

Function

Manual mode

Depending on the equipment the pressure booster system is supplied with, the pumps can be operated in manual mode in either one or two different ways.

Standard: By making the appropriate settings at the display, one of the pumps can be operated directly via the mains for 10 seconds, independently of the control unit. The pump will then automatically return to OFF mode.

Supplementary equipment: Manual-0-automatic selector switches can be supplied as supplementary equipment. They can be used to operate each pump directly on mains power.

In manual mode, a minimum flow (see table below) is essential to prevent the fluid handled and the pump from overheating when no water is consumed at the consumer installations.

Minimum flow for pump in manual mode

Minimum flow per pump in manual mode

Pump	Minimum flow per pump in manual mode [l/h]
Movitec 2B	200
Movitec 4B	400
Movitec 6B	600
Movitec 10B	1100
Movitec 15B	1600
Movitec 25B	2800
Movitec 40B	4600
Movitec 60B	6100
Movitec 90B	8500

Example

An open 1/2-inch tap equals a water consumption of approx. 800 to 1,200 l/h.

Dry running protection (supplementary equipment)

To protect the system from dry running, a range of protective equipment (see Supplementary equipment / Accessories) is available for various installation conditions.

Digital or analog lack-of-water monitoring equipment can be connected to the corresponding terminals.

Field bus connection (supplementary equipment)

For remote monitoring of all system-relevant parameters and connection to a control station the system can optionally be supplied fitted with a field bus module.

Materials

Overview of available materials

Component	Material
Pump casing	Stainless steel
Shroud	Stainless steel
Hydraulic system	Stainless steel

Component	Material
Mechanical seal	Complies with EN 12756
Primary ring	Silicon carbide
Mating ring	Hard carbon
Elastomer	EPDM
Baseplate	Steel, with powder or paint coating
Hydraulic design	
Manifold	Stainless steel
Valves	Copper-base alloy / brass or nodular cast iron / EPDM DVGW-approved Approved for drinking water
Accumulator	Connection made of stainless steel, flow through valve to DIN 4807-5
Membrane	Approved for drinking water

Product benefits

- Energy-efficiency optimised by high-efficiency magnet-less KSB-SuPremE-IE4 motor (to IEC/CD 60034-30 Ed. 2) and energy-saving function
- Ready-to-connect, supplied pre-set and tested for functionality
- User-friendly, straightforward menu navigation
- Reliable operation by corrosion-resistant internal parts
- Suitable for drinking water installations, manufactured under stringent hygienic conditions
- Hydraulic components made of stainless steel / brass

Selection information

Selecting the pressure booster system

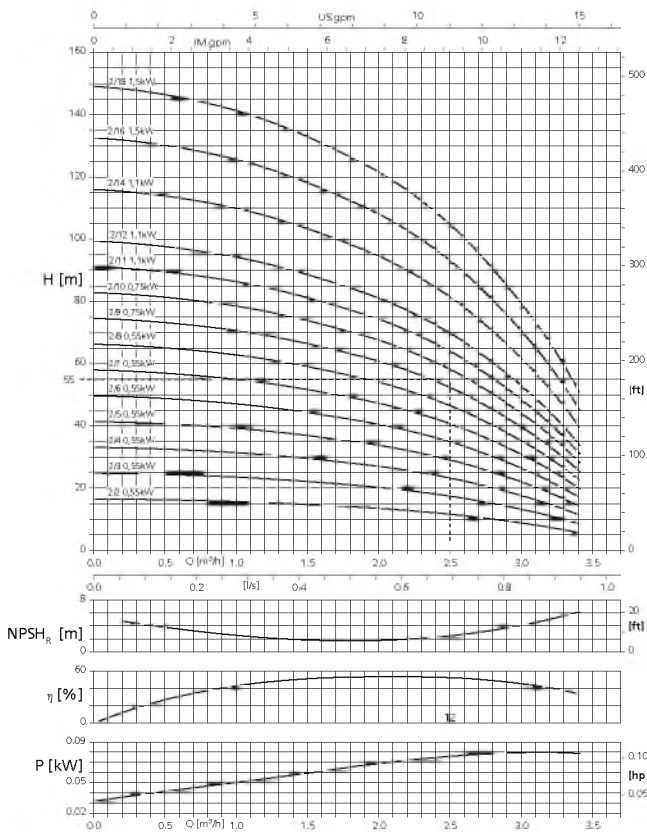
Requirements:

Flow rate 10 m³/h
Start-up pressure 5.5 bar
Stand-by pump to DIN 1988

Solution:

Hyamat SVP 5/0210 B

1. According to the table *Flow rate as a function of the number of pumps* the system may comprise either 2 or 3 duty pumps (as stand-by pump is requested)
2. According to the table *Flow rate as a function of the number of pumps* the flow rate requirement can be either 24.4 m³/h (2 duty pumps) or 12.2 m³/h (1 duty pump)
3. The characteristic curves accordingly suggest Hyamat SVP 5/0210 B (operating point close to Q_{opt})



The flow rate in the characteristic curve is based on one duty pump:
The flow rate of a stand-by pump, if any, is not taken into account when calculating the flow rate required.

Flow rate as a function of the number of pumps

Number of duty pumps	With stand-by pump	Flow rate indicated in the diagram
1	No	Flow rate [Q] as shown in characteristic curve
1	Yes	Flow rate [Q] as shown in characteristic curve
2	No	Flow rate required divided by 2 = flow rate in characteristic curve [Q]
2	Yes	Flow rate required divided by 2 = flow rate in characteristic curve [Q]
3	No	Flow rate required divided by 3 = flow rate in characteristic curve [Q]
3	Yes	Flow rate required divided by 3 = flow rate in characteristic curve [Q]
4	No	Flow rate required divided by 4 = flow rate in characteristic curve [Q]
4	Yes	Flow rate required divided by 4 = flow rate in characteristic curve [Q]
5	No	Flow rate required divided by 5 = flow rate in characteristic curve [Q]
5	Yes	Flow rate required divided by 5 = flow rate in characteristic curve [Q]
6	No	Flow rate required divided by 6 = flow rate in characteristic curve [Q]

Determining the power input

- The power input is indicated per stage (St = 1) and/or per stage with a smaller impeller (St = -1).
The pump input power can be calculated accordingly.
Calculation: value indicated in the diagram (St = 1) × number of stages + value indicated in the diagram (St = -1) × number of stages with a smaller impeller
Example 1, Movitec 90/4: P = (St = 1) × 4
Example 2, Movitec 90/4-1: P = (St = 1) × 3 + (St = -1)
Example 3, Movitec 90/4-2: P = (St = 1) × 2 + (St = -1) × 2

Technical data

Electrical performance data

Electrical performance data

Hyamat SVP with Movitec pumps	Rated power per motor	Rated current per motor at 400 V	Total rated power [kVA]				
			Number of pumps (motors)				
	[kW]	[A]	2	3	4	5	6
0202B	0,55	1,6	2,3	3,5	4,7	5,8	7
0203B	0,55	1,6	2,3	3,5	4,7	5,8	7
0204B	0,55	1,6	2,3	3,5	4,7	5,8	7
0205B	0,55	1,6	2,3	3,5	4,7	5,8	7
0206B	0,55	1,6	2,3	3,5	4,7	5,8	7
0207B	0,55	1,6	2,3	3,5	4,7	5,8	7
0208B	0,55	1,6	2,3	3,5	4,7	5,8	7
0209B	0,75	2,1	3,1	4,6	6,1	7,6	9,2
0210B	0,75	2,1	3,1	4,6	6,1	7,6	9,2
0211B	1,1	3	4,4	6,5	8,7	10,9	13,1
0212B	1,1	3	4,4	6,5	8,7	10,9	13,1
0214B	1,1	3	4,4	6,5	8,7	10,9	13,1
0216B	1,5	4,1	6	8,9	11,9	14,9	17,9
0218B	1,5	4,1	6	8,9	11,9	14,9	17,9
0402B	0,55	1,6	2,3	3,5	4,7	5,8	7
0403B	0,55	1,6	2,3	3,5	4,7	5,8	7
0404B	0,55	1,6	2,3	3,5	4,7	5,8	7
0405B	0,75	2,1	3,1	4,6	6,1	7,6	9,2
0406B	1,1	3	4,4	6,5	8,7	10,9	13,1
0407B	1,1	3	4,4	6,5	8,7	10,9	13,1
0408B	1,5	4,1	6	8,9	11,9	14,9	17,9
0409B	1,5	4,1	6	8,9	11,9	14,9	17,9
0410B	1,5	4,1	6	8,9	11,9	14,9	17,9
0411B	2,2	5,6	8,1	12,2	16,3	20,4	24,4
0412B	2,2	5,6	8,1	12,2	16,3	20,4	24,4
0414B	2,2	5,6	8,1	12,2	16,3	20,4	24,4
0416B	3	7,6	11,1	16,6	22,1	27,6	33,2
0602B	0,55	1,6	2,3	3,5	4,7	5,8	7
0603B	0,75	2,1	3,1	4,6	6,1	7,6	9,2
0604B	1,1	3	4,4	6,5	8,7	10,9	13,1
0605B	1,1	3	4,4	6,5	8,7	10,9	13,1
0606B	1,5	4,1	6	8,9	11,9	14,9	17,9
0607B	1,5	4,1	6	8,9	11,9	14,9	17,9
0608B	2,2	5,6	8,1	12,2	16,3	20,4	24,4
0609B	2,2	5,6	8,1	12,2	16,3	20,4	24,4
0610B	2,2	5,6	8,1	12,2	16,3	20,4	24,4
0611B	3	7,6	11,1	16,6	22,1	27,6	33,2
0612B	3	7,6	11,1	16,6	22,1	27,6	33,2
0614B	3	7,6	11,1	16,6	22,1	27,6	33,2
1002B	0,75	2,1	3,1	4,6	6,1	7,6	9,2
1003B	1,1	3	4,4	6,5	8,7	10,9	13,1
1004B	1,5	4,1	6	8,9	11,9	14,9	17,9

Hyamat SVP with Movitec pumps	Rated power per motor	Rated current per motor at 400 V	Total rated power [kVA]				
			Number of pumps (motors)				
	[kW]	[A]	2	3	4	5	6
1005B	2,2	5,6	8,1	12,2	16,3	20,4	24,4
1006B	2,2	5,6	8,1	12,2	16,3	20,4	24,4
1007B	3	7,6	11,1	16,6	22,1	27,6	33,2
1008B	3	7,6	11,1	16,6	22,1	27,6	33,2
1009B	4	9,4	13,7	20,5	27,4	34,2	41
1010B	4	9,4	13,7	20,5	27,4	34,2	41
1011B	4	9,4	13,7	20,5	27,4	34,2	41
1013B	5,5	12,5	18,2	27,3	36,4	45,5	54,6
1502B	2,2	5,6	8,1	12,2	16,3	20,4	24,4
1503B	3	7,6	11,1	16,6	22,1	27,6	33,2
1504B	4	9,4	13,7	20,5	27,4	34,2	41
1505B	5,5	12,5	18,2	27,3	36,4	45,5	54,6
1506B	5,5	12,5	18,2	27,3	36,4	45,5	54,6
1507B	7,5	16,7	24,3	36,4	48,6	60,7	72,9
1508B	7,5	16,7	24,3	36,4	48,6	60,7	72,9
2502B	4	9,4	13,7	20,5	27,4	34,2	41
2503B	5,5	12,5	18,2	27,3	36,4	45,5	54,6
2504B	7,5	16,7	24,3	36,4	48,6	60,7	72,9
2505B	11	23,7	34,5	51,7	69	86,2	103,4
2506B	11	23,7	34,5	51,7	69	86,2	103,4
2507B	15	32	46,6	69,8	93,1	116,4	139,7
4002-2B	5,5	12,5	18,2	27,3	36,4	45,5	54,6
4002B	7,5	16,7	24,3	36,4	48,6	60,7	72,9
4003-2B	11	23,7	34,5	51,7	69	86,2	103,4
4003B	11	23,7	34,5	51,7	69	86,2	103,4
4004-2B	15	32	46,6	69,8	93,1	116,4	139,7
4004B	15	32	46,6	69,8	93,1	116,4	139,7
4005-2B	18,5	38,8	56,5	84,7	112,9	141,1	169,4
4005B	18,5	38,8	56,5	84,7	112,9	141,1	169,4
4006-2B	18,5	38,8	56,5	84,7	112,9	141,1	169,4
4006B	22	50,7	73,8	110,6	147,5	184,4	221,3
6001B	5,5	12,5	18,2	27,3	36,4	45,5	54,6
6002-2B	7,5	16,7	24,3	36,4	48,6	60,7	72,9
6002B	11	23,7	34,5	51,7	69	86,2	103,4
6003-2B	15	32	46,6	69,8	93,1	116,4	139,7
6003B	18,5	38,8	56,5	84,7	112,9	141,1	169,4
6004-2B	18,5	38,8	56,5	84,7	112,9	141,1	169,4
6004B	22	50,7	73,8	110,6	147,5	184,4	221,3
6005-2B	22	50,7	73,8	110,6	147,5	184,4	221,3
9002-2-2B	11	23,7	34,5	51,7	69	86,2	103,4
9002-2-1B	15	32	46,6	69,8	93,1	116,4	139,7
9002-2B	15	32	46,6	69,8	93,1	116,4	139,7
9002-3-2B	18,5	38,8	56,5	84,7	112,9	141,1	169,4
9002-3-1B	22	50,7	73,8	110,6	147,5	184,4	221,3
9002-3B	22	50,7	73,8	110,6	147,5	184,4	221,3

Type of connection

Types of connection (schematic)

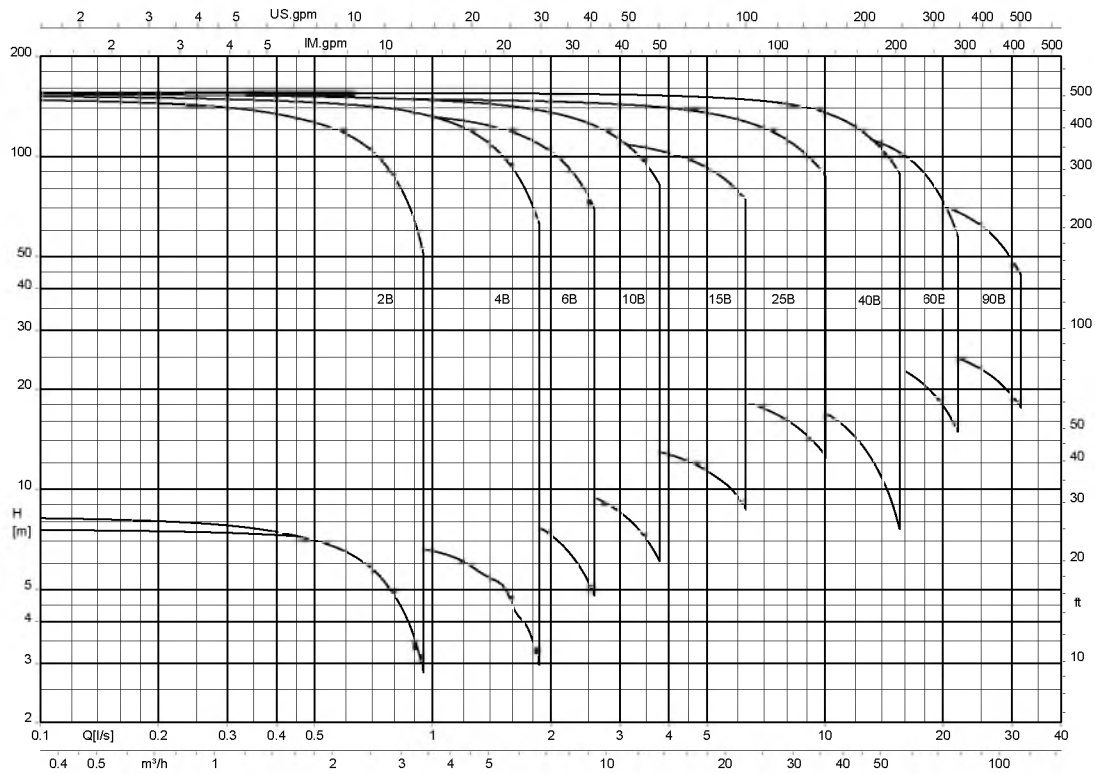
Direct	Indirect	
<p style="text-align: right;">1952-106</p>	<p>Unpressurised inlet tank at the same or at a higher level</p> <p style="text-align: right;">1952-107</p>	<p>Unpressurised inlet tank at a lower level (suction-lift operation) ²⁾</p> <p style="text-align: right;">1952-108</p>
<p>Inlet pressure monitoring (see Supplementary equipment or Accessories)</p>		
<p>At $p_{in} > 0.5$ bar (min. 1 bar, DIN 1988)</p> <ul style="list-style-type: none"> - Pressure switch - Pressure sensor <p>At $p_{in} < 0.5$ bar</p> <ul style="list-style-type: none"> - Pressure sensor - Flow monitoring 	<ul style="list-style-type: none"> - Float switch - Set of electrodes and relay - Dry running protection for PE inlet tank - Pressure sensor - Flow monitoring³⁾ 	<ul style="list-style-type: none"> - Float switch - Set of electrodes and relay - Dry running protection for PE inlet tank - Flow monitoring³⁾

²⁾ Non-priming pumps, suitable for suction-lift operation (for selection, please consult KSB)

³⁾ Automatic reset is not possible for this type of dry running protection

Selection chart

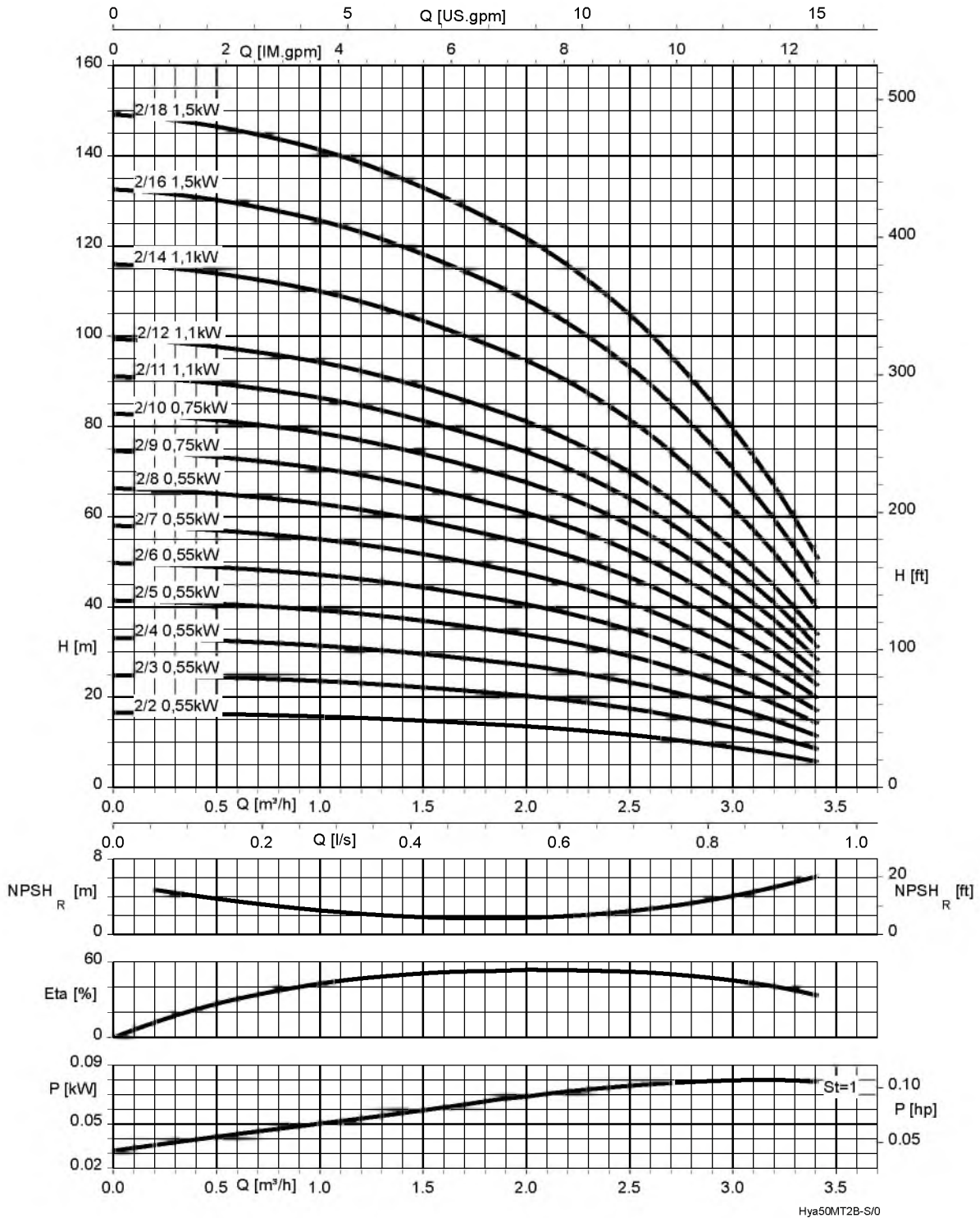
Hyamat SVP; n = 3000 rpm



The flow rate in the characteristic curves is based on one duty pump:
 The flow rate of a stand-by pump, if any, is not taken into account when calculating the flow rate required.
 Flow rates for multiple pump systems (⇒ Page 7)

Characteristic curves

Hyamat SVP with Movitec 2B; n = 3000 rpm

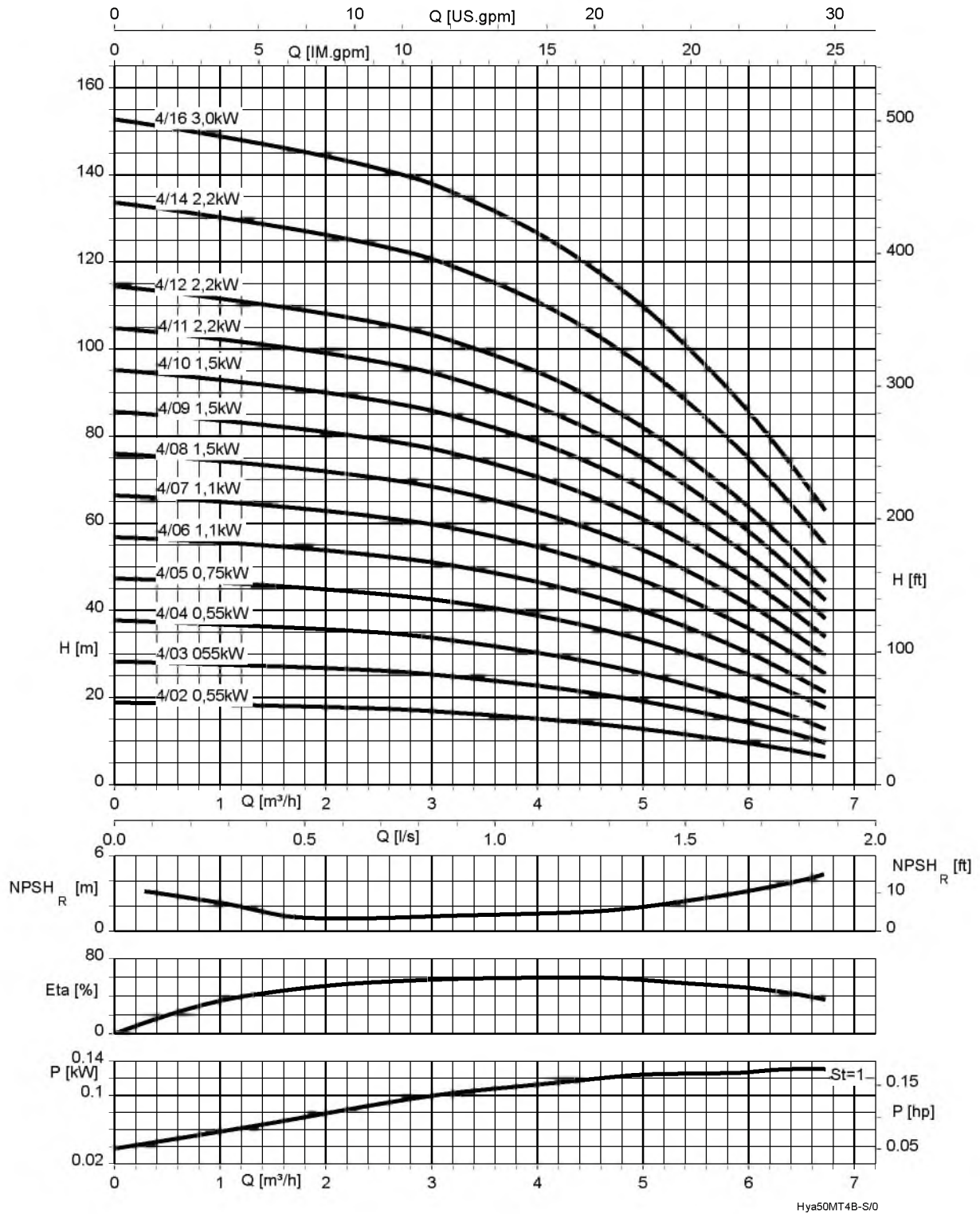


Systems with 4 and 8 stages

The actual curve will deviate from the documented curve due to the reduced speed. An accurate selection can only be made with KSB's selection program KSB EasySelect.

St = 1 | P per stage

Hyamat SVP with Movitec 4B; n = 3000 rpm

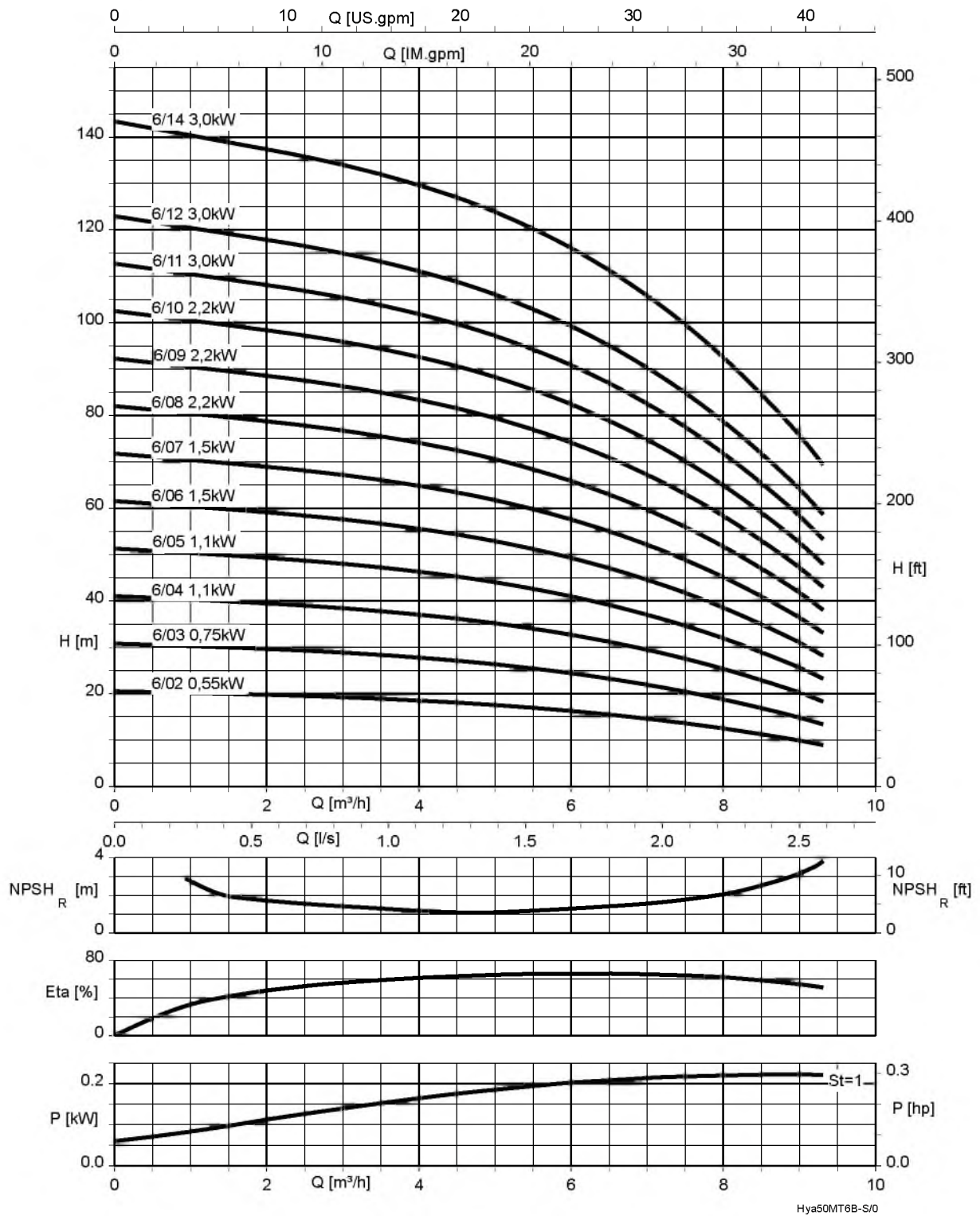


Systems with 4, 5 and 10 stages

The actual curve will deviate from the documented curve due to the reduced speed. An accurate selection can only be made with KSB's selection program KSB EasySelect.

St = 1 | P per stage

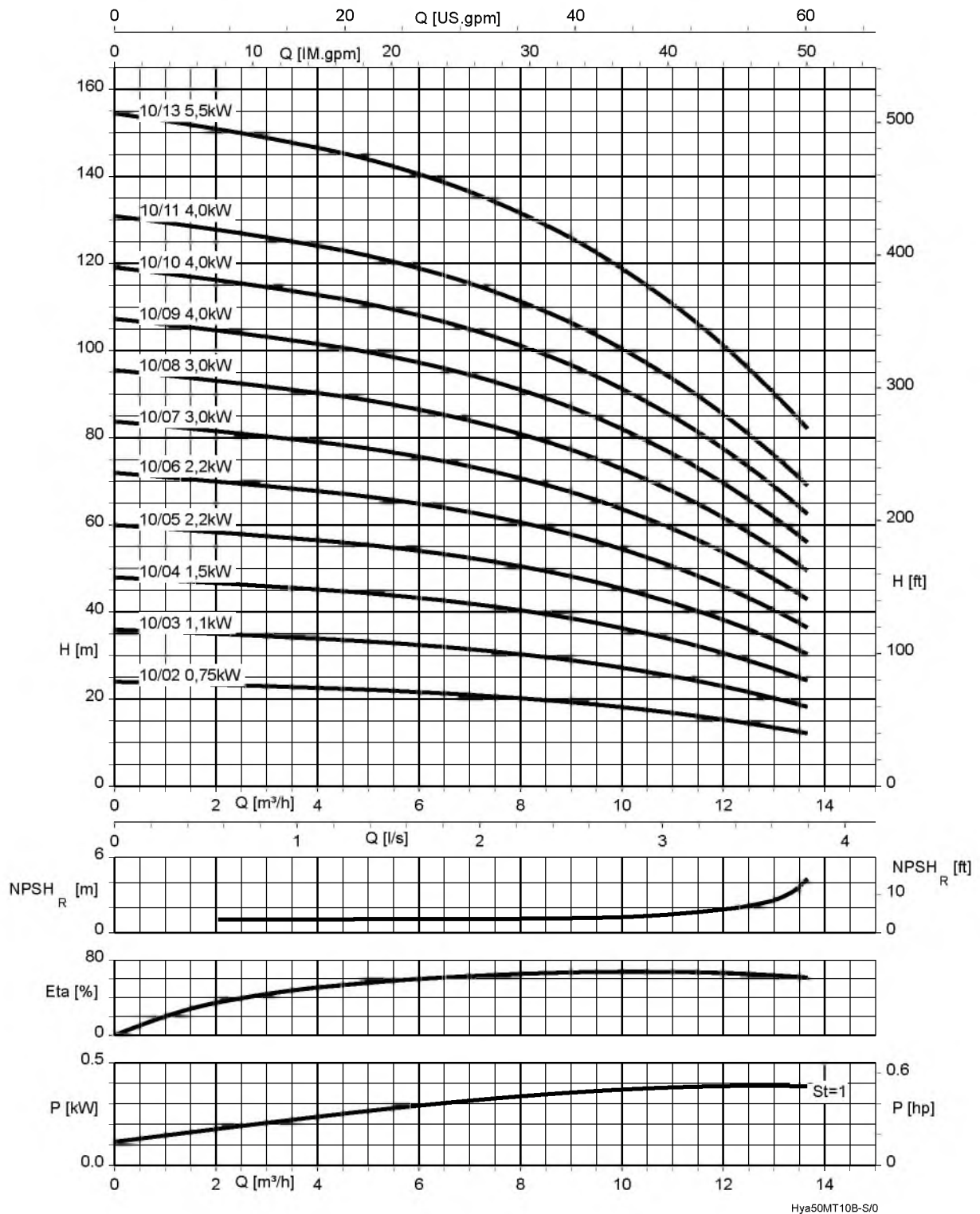
Hyamat SVP with Movitec 6B; n = 3000 rpm



i Systems with 2 and 14 stages
The actual curve will deviate from the documented curve due to the reduced speed. An accurate selection can only be made with KSB's selection program KSB EasySelect.

St = 1 | P per stage

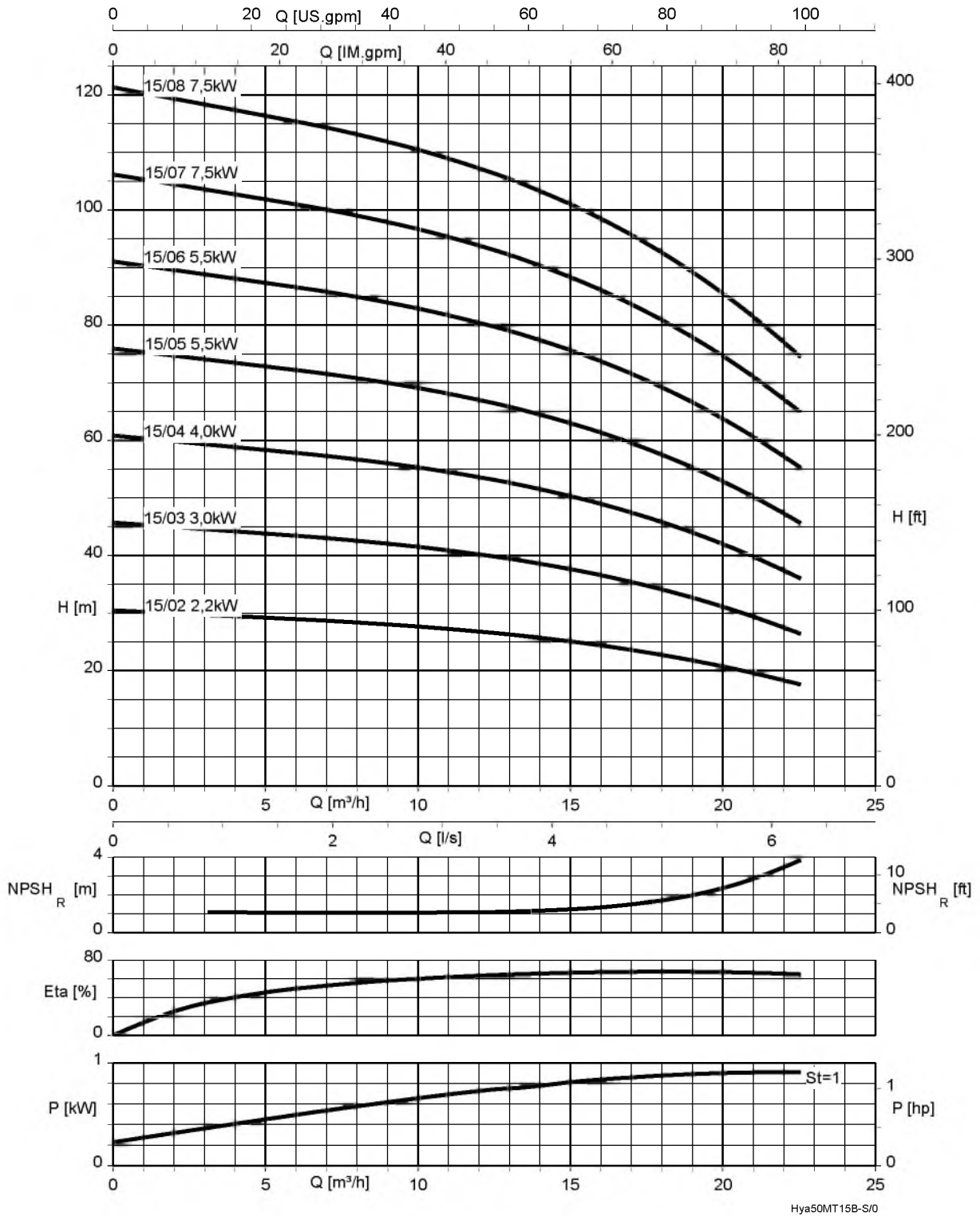
Hyamat SVP with Movitec 10B; n = 3000 rpm



i Systems with 2, 3, 4, 8 and 11 stages
The actual curve will deviate from the documented curve due to the reduced speed. An accurate selection can only be made with KSB's selection program KSB EasySelect.

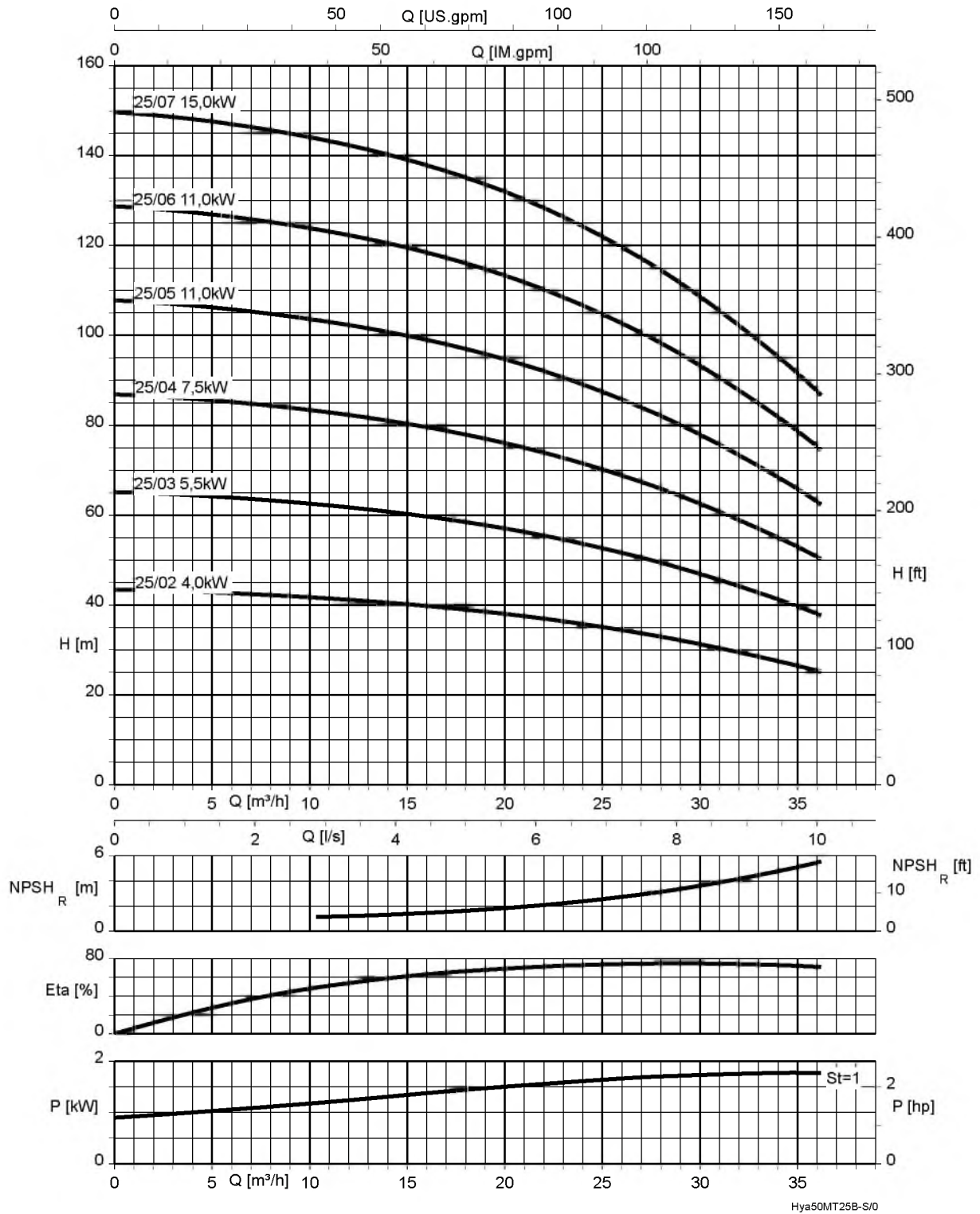
St = 1 | P per stage

Hyamat SVP with Movitec 15B; n = 3000 rpm



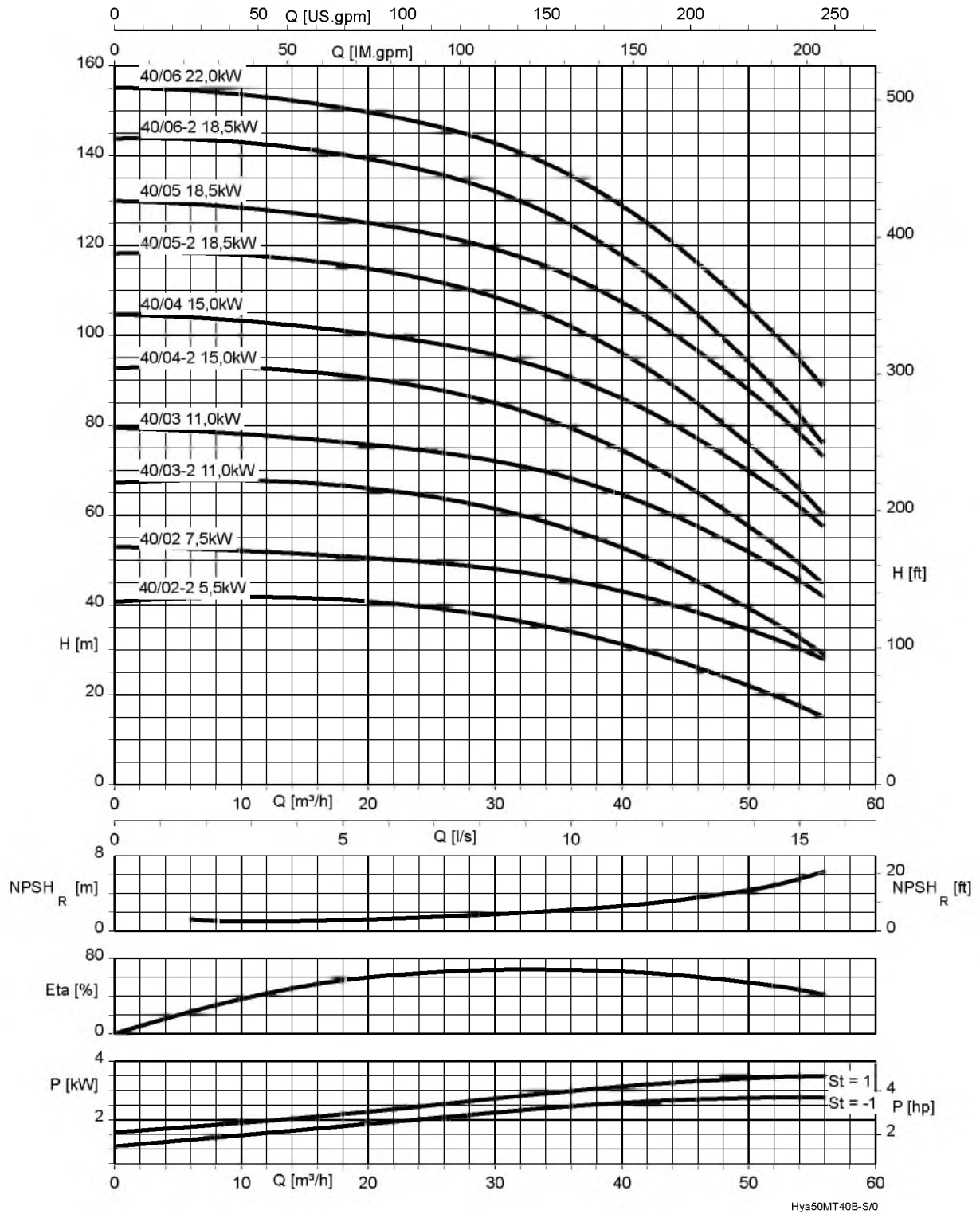
St = 1 | P per stage

Hyamat SVP with Movitec 25B; n = 3000 rpm



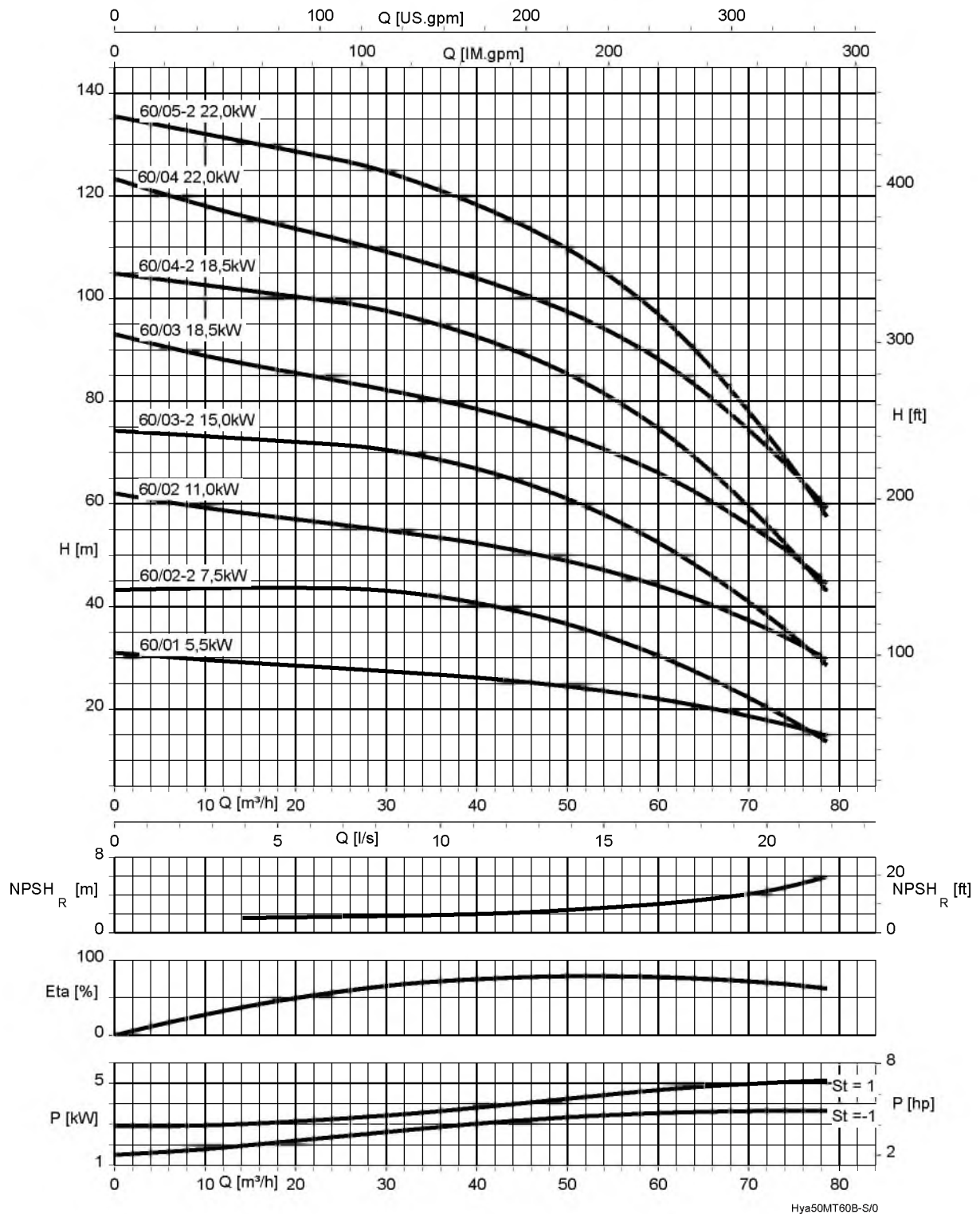
St = 1 | P per stage

Hyamat SVP with Movitec 40B; n = 3000 rpm



St = 1 P per stage	St = -1 P per stage with a smaller impeller
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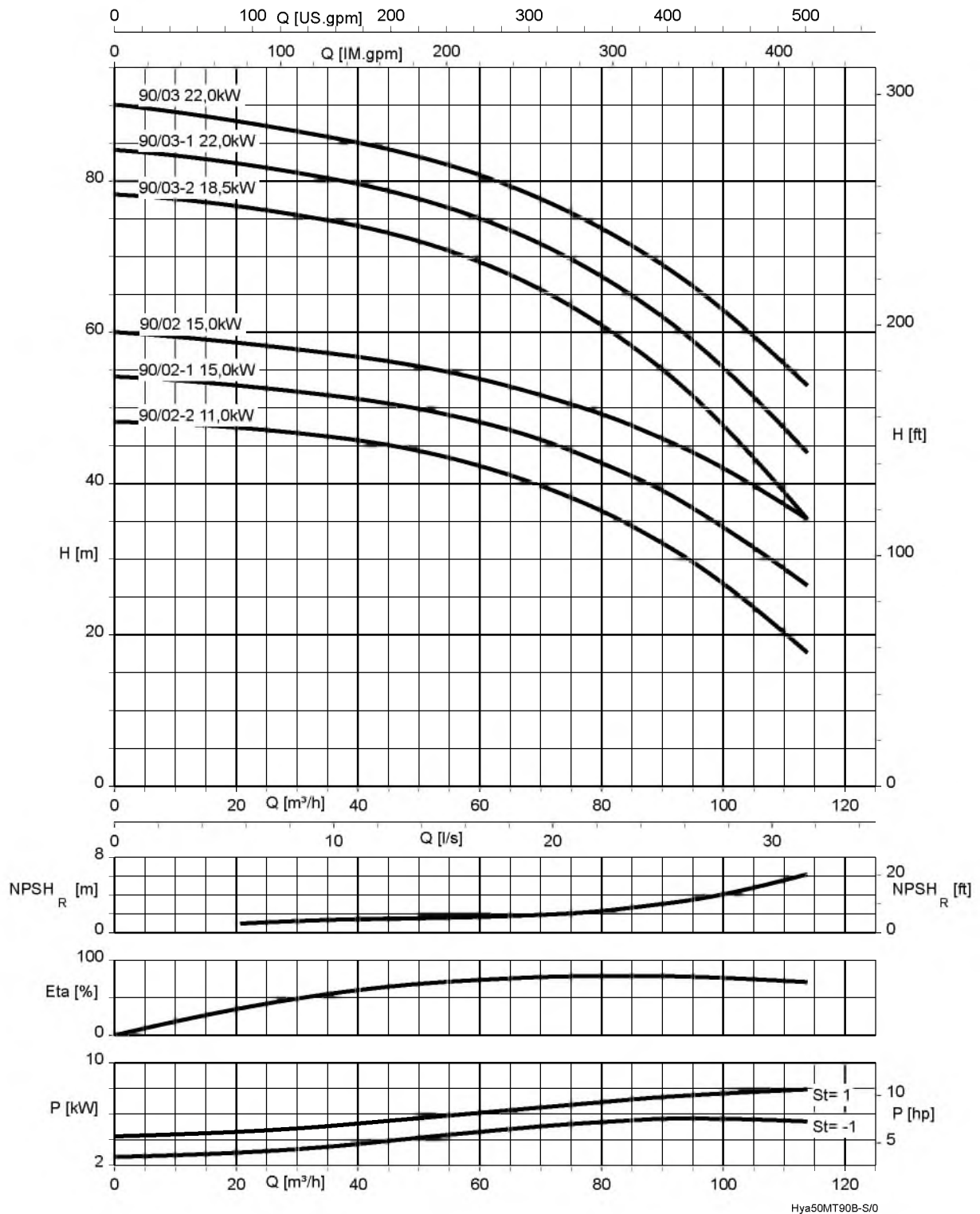
Hyamat SVP with Movitec 60B; n = 3000 rpm



St = 1 | P per stage

St = -1 | P per stage with a smaller impeller

Hyamat SVP with Movitec 90B; n = 3000 rpm

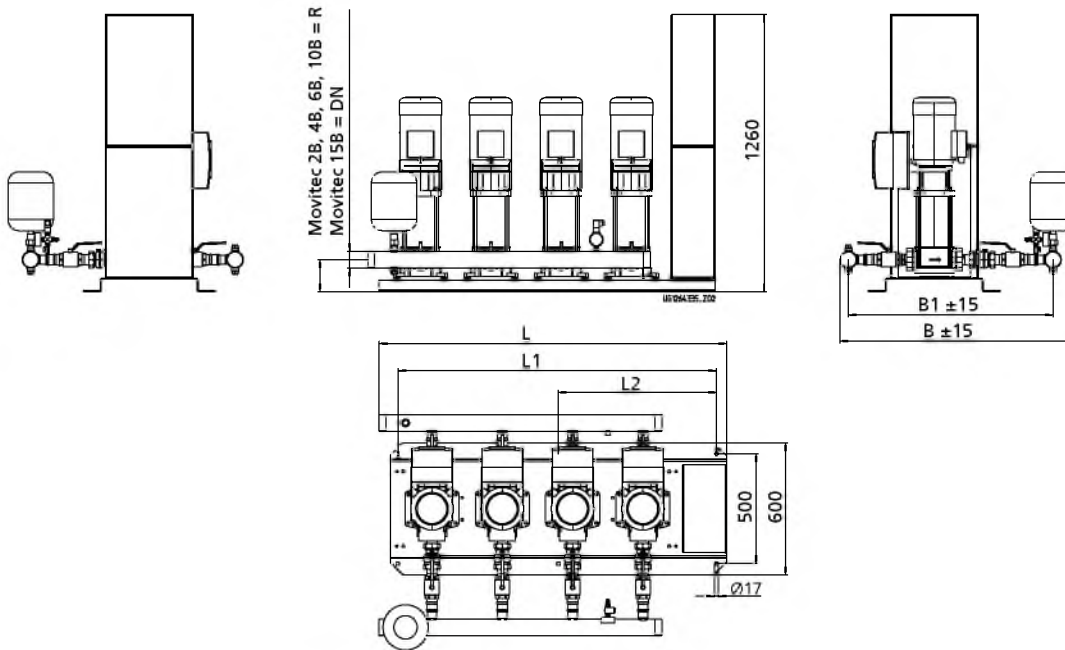


i Systems with 2, 3-2 and 3 stages
The actual curve will deviate from the documented curve due to the reduced speed. An accurate selection can only be made with KSB's selection program KSB EasySelect.

St = 1 P per stage	St = -1 P per stage with a smaller impeller
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Dimensions and weights

Hyamat SVP with Movitec 2B / 4B / 6B / 10B / 15B

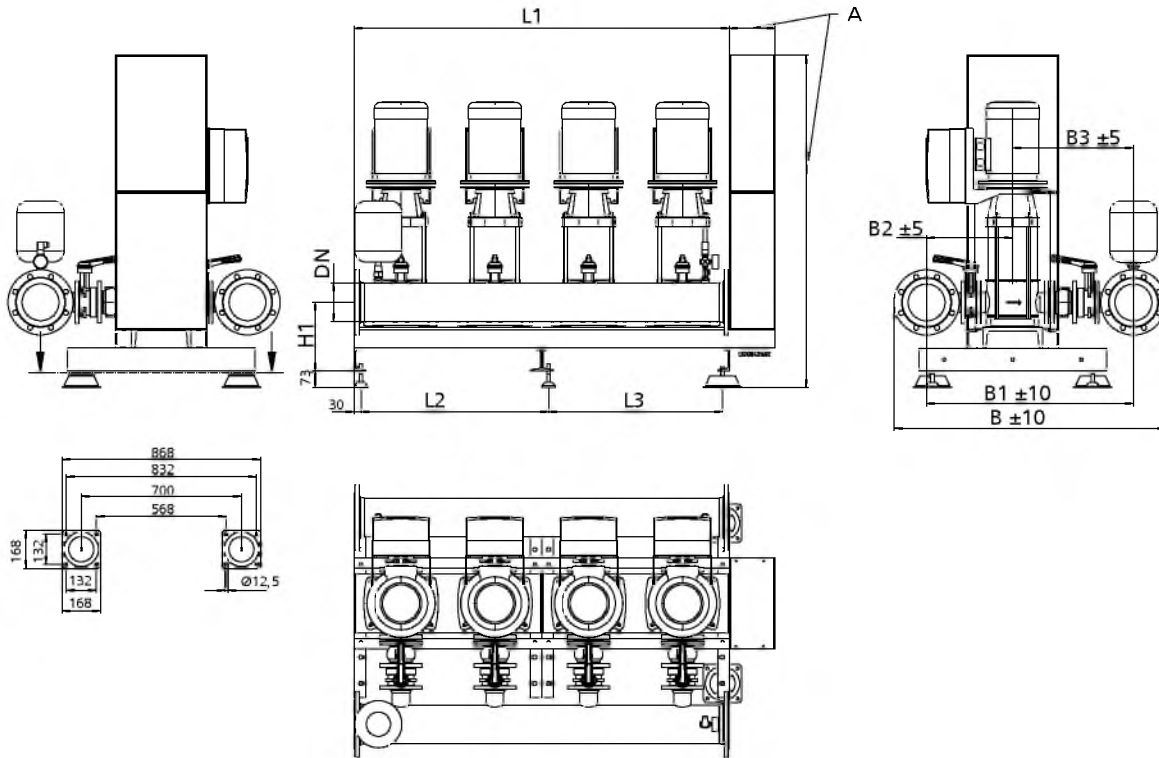


Dimensions of Hyamat SVP with Movitec 2B / 4B / 6B / 10B / 15B
Control cabinet dimensions, Hyamat SVP (⇒ Page 23)
Flanges drilled to EN 1092-1 PN 16
Baseplate RAL 5002, control unit RAL 7035

Dimensions [mm]

Size	Connection	B	B1	H1	L	L1	L2
2/02.. B	R 2	896	763	115	825	670	-
2/04.. B	R 2	896	763	115	825	670	-
2/06.. B	R 2	961	828	115	825	670	-
2/10.. B	R 2	1050	916	145	985	900	-
2/15.. B	DN 80	1097	894	145	980	900	-
3/02.. B	R 2	896	763	115	1055	900	-
3/04.. B	R 2	896	763	115	1055	900	-
3/06.. B	R 2	961	828	115	1055	900	-
3/10.. B	R 2 1/2	1073	932	145	1260	1130	560
3/15.. B	DN 80	1097	894	145	1210	1130	560
4/02.. B	R 2	896	763	115	1285	1130	560
4/04.. B	R 2	896	763	115	1285	1130	560
4/06.. B	R 2	961	828	115	1285	1130	560
4/10.. B	R 2 1/2	1073	932	145	1580	1450	720
4/15.. B	DN 100	1272	1052	145	1544	1450	720
5/02.. B	R 2 1/2	920	778	115	1605	1450	720
5/04.. B	R 2 1/2	920	778	115	1605	1450	720
5/06.. B	R 2 1/2	987	846	115	1605	1450	720
5/10.. B	R 2 1/2	1073	932	145	1900	1770	880
5/15.. B	DN 100	1221	1001	145	1850	1770	880
6/02.. B	R 2 1/2	920	778	115	1925	1770	880
6/04.. B	R 2 1/2	920	778	115	1925	1770	880
6/06.. B	R 2 1/2	987	846	115	1925	1770	880
6/10.. B	R 3	1090	943	145	2220	2090	1040
6/15.. B	DN 150	1352	1067	145	2170	2090	1040

Hyamat SVP with Movitec 25B / 40B / 60B / 90B



Dimensions of Hyamat SVP with Movitec 25B / 40B / 60B / 90B

A = control cabinet dimensions, Hyamat SVP (⇔ Page 23)

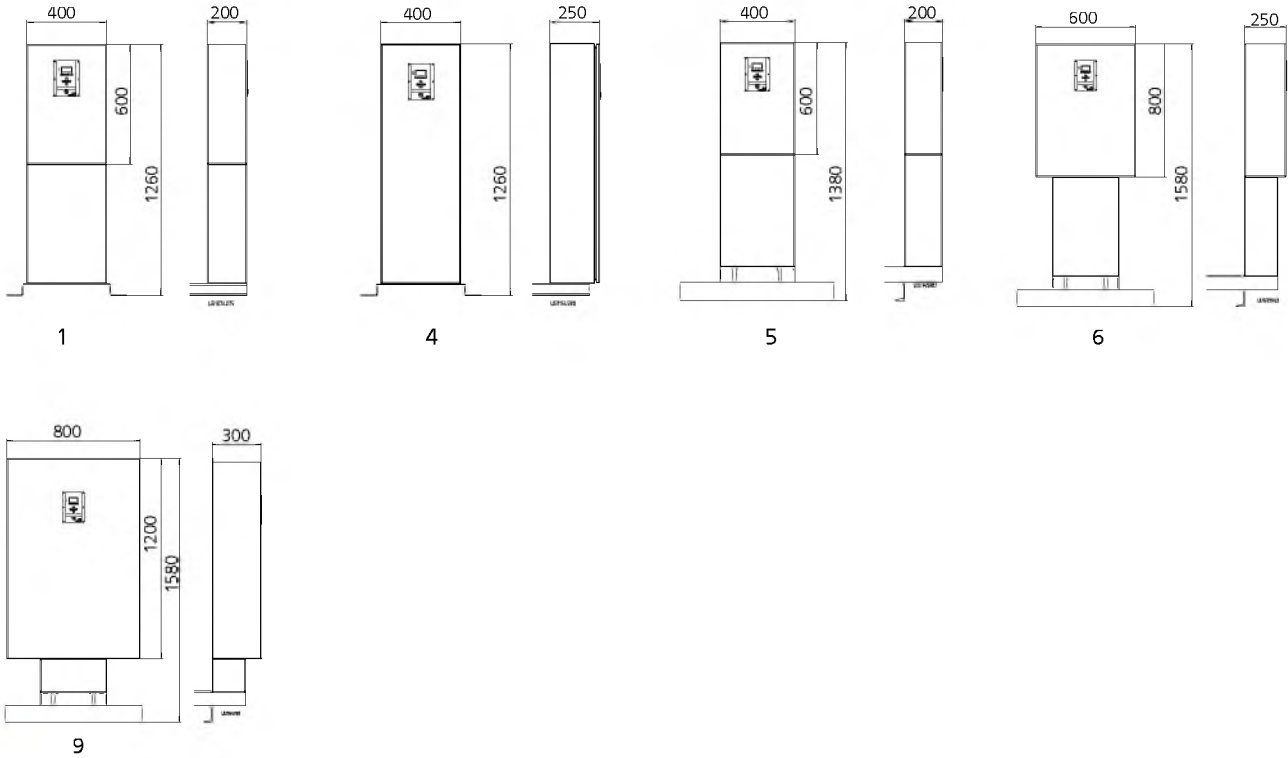
Flanges drilled to EN 1092-1 PN 16

Baseplate RAL 5002, control unit RAL 7035

Dimensions [mm]

Size	Connection	B	B1	B2	B3	H1	L1	L2	L3
2/25.. B	DN 100	1074	854	351	503	302	820	-	760
2/40.. B	DN 100	1139	919	374	545	337	820	-	760
2/60.. B	DN 150	1320	1035	431	604	337	820	-	760
2/90.. B	DN 150	1335	1050	439	611	337	820	-	760
3/25.. B	DN 100	1074	854	351	503	302	1230	-	1170
3/40.. B	DN 150	1248	963	396	567	337	1230	-	1170
3/60.. B	DN 150	1320	1035	431	604	337	1230	-	1170
3/90.. B	DN 200	1436	1096	462	634	337	1230	-	1170
4/25.. B	DN 150	1189	904	376	528	302	1640	820	760
4/40.. B	DN 150	1248	963	396	567	337	1640	820	760
4/60.. B	DN 200	1421	1081	454	627	337	1640	820	760
4/90.. B	DN 200	1436	1096	462	634	337	1640	820	760
5/25.. B	DN 150	1189	904	376	528	302	2050	1230	760
5/40.. B	DN 200	1349	1009	419	590	337	2050	1230	760
5/60.. B	DN 200	1421	1081	454	627	337	2050	1230	760
5/90.. B	DN 250	1561	1156	492	664	337	2050	1230	760
6/25.. B	DN 150	1189	904	376	528	302	2460	1230	1170
6/40.. B	DN 200	1349	1009	419	590	337	2460	1230	1170
6/60.. B	DN 200	1421	1081	454	627	337	2460	1230	1170
6/90.. B	DN 250	1561	1156	492	664	337	2460	1230	1170

Control cabinet – Hyamat SVP with Movitec 2B / 4B / 6B / 10B / 15B / 25B / 40B / 60B / 90B



Control cabinet dimensions for Hyamat SVP [mm]

The control cabinet dimensions refer to systems in the standard design. Larger control cabinets may be required for installing other optional equipment.

Combinations of Hyamat SVP systems and control cabinet dimensions

Hyamat SVP	P [kW] (per pump)						
	4,00	5,50	7,50	11,00	15,00	18,50	22,00
2/02.. B	1	1	1	-	-	-	-
2/04.. B	1	1	1	-	-	-	-
2/06.. B	1	1	1	-	-	-	-
2/10.. B	1	1	1	-	-	-	-
2/15.. B	1	1	1	-	-	-	-
2/25.. B	5	5	5	9	9	9	9
2/40.. B	5	5	5	9	9	9	9
2/60.. B	5	5	5	9	9	9	9
2/90.. B	5	5	5	9	9	9	9
3/02.. B	1	1	1	-	-	-	-
3/04.. B	1	1	1	-	-	-	-
3/06.. B	1	1	1	-	-	-	-
3/10.. B	1	1	1	-	-	-	-
3/15.. B	1	1	1	-	-	-	-
3/25.. B	5	5	5	9	9	9	9
3/40.. B	5	5	5	9	9	9	9
3/60.. B	5	5	5	9	9	9	9
3/90.. B	5	5	5	9	9	9	9
4/02.. B	1	1	1	-	-	-	-
4/04.. B	1	1	1	-	-	-	-
4/06.. B	1	1	1	-	-	-	-
4/10.. B	1	1	1	-	-	-	-
4/15.. B	1	1	1	-	-	-	-
4/25.. B	5	5	5	9	9	9	9
4/40.. B	5	5	5	9	9	9	9
4/60.. B	5	5	5	9	9	9	9

Hyamat SVP	P [kW] (per pump)						
	4,00	5,50	7,50	11,00	15,00	18,50	22,00
4/90.. B	5	5	5	9	9	9	9
5/02.. B	1	4	4	-	-	-	-
5/04.. B	1	4	4	-	-	-	-
5/06.. B	1	4	4	-	-	-	-
5/10.. B	1	4	4	-	-	-	-
5/15.. B	1	4	4	-	-	-	-
5/25.. B	5	6	6	9	9	9	9
5/40.. B	5	6	6	9	9	9	9
5/60.. B	5	6	6	9	9	9	9
5/90.. B	5	6	6	9	9	9	9
6/02.. B	1	4	4	-	-	-	-
6/04.. B	1	4	4	-	-	-	-
6/06.. B	1	4	4	-	-	-	-
6/10.. B	1	4	4	-	-	-	-
6/15.. B	1	4	4	-	-	-	-
6/25.. B	5	6	6	9	9	9	9
6/40.. B	5	6	6	9	9	9	9
6/60.. B	5	6	6	9	9	9	9
6/90.. B	5	6	6	9	9	9	9

Weights

Hyamat SVP weights [kg]

Hyamat SVP	1	2-2	2-1	2	3-2	3-1	3	4-2	4	5-2	5	6-2	6	7	8	9	10	11	12	13	14	16	18
2/B 02../	-	-	-	136	-	-	136	-	137	-	138	-	142	143	144	149	149	155	156	-	158	167	168
3/B 02../	-	-	-	172	-	-	173	-	174	-	176	-	182	183	184	191	193	202	203	-	205	218	221
4/B 02../	-	-	-	211	-	-	213	-	214	-	216	-	225	226	228	237	239	251	252	-	256	273	277
5/B 02../	-	-	-	256	-	-	258	-	260	-	262	-	274	276	278	289	291	306	308	-	312	334	338
6/B 02../	-	-	-	297	-	-	299	-	302	-	304	-	317	320	322	336	338	356	359	-	363	390	395
2/B 04../	-	-	-	136	-	-	140	-	141	-	145	-	151	152	160	161	162	168	170	-	171	200	-
3/B 04../	-	-	-	172	-	-	178	-	181	-	187	-	196	197	208	210	212	220	223	-	226	268	-
4/B 04../	-	-	-	212	-	-	220	-	223	-	231	-	243	244	259	262	264	276	279	-	283	340	-
5/B 04../	-	-	-	257	-	-	268	-	271	-	281	-	296	298	316	320	322	338	342	-	346	417	-
6/B 04../	-	-	-	297	-	-	310	-	314	-	326	-	344	347	369	374	376	394	399	-	404	489	-
2/B 06../	-	-	-	138	-	-	146	-	152	-	153	-	161	162	169	170	171	191	192	-	193	-	-
3/B 06../	-	-	-	174	-	-	186	-	195	-	197	-	209	210	221	222	224	254	255	-	256	-	-
4/B 06../	-	-	-	214	-	-	230	-	242	-	244	-	260	262	276	278	280	320	321	-	323	-	-
5/B 06../	-	-	-	258	-	-	278	-	293	-	296	-	316	318	336	338	341	390	392	-	395	-	-
6/B 06../	-	-	-	297	-	-	322	-	339	-	342	-	367	370	391	394	397	456	459	-	462	-	-
2/B 10../	-	-	-	171	-	-	177	-	187	-	194	-	196	214	216	229	231	233	-	315	-	-	-
3/B 10../	-	-	-	224	-	-	234	-	250	-	260	-	263	289	292	312	314	317	-	441	-	-	-
4/B 10../	-	-	-	281	-	-	294	-	315	-	329	-	333	368	372	397	401	405	-	570	-	-	-
5/B 10../	-	-	-	342	-	-	358	-	384	-	402	-	406	450	455	487	492	497	-	708	-	-	-
6/B 10../	-	-	-	398	-	-	417	-	448	-	469	-	475	528	533	572	578	584	-	836	-	-	-
2/B 15../	-	-	-	211	-	-	230	-	242	-	320	-	322	332	337	-	-	-	-	-	-	-	-
3/B 15../	-	-	-	282	-	-	309	-	327	-	444	-	447	462	469	-	-	-	-	-	-	-	-
4/B 15../	-	-	-	369	-	-	406	-	430	-	586	-	590	609	619	-	-	-	-	-	-	-	-
5/B 15../	-	-	-	580	-	-	626	-	656	-	856	-	860	885	898	-	-	-	-	-	-	-	-
6/B 15../	-	-	-	705	-	-	761	-	797	-	1036	-	1041	1071	1086	-	-	-	-	-	-	-	-
2/B 25../	-	-	-	396	-	-	455	-	469	-	699	-	705	729	-	-	-	-	-	-	-	-	-
3/B 25../	-	-	-	546	-	-	634	-	654	-	980	-	988	1024	-	-	-	-	-	-	-	-	-
4/B 25../	-	-	-	760	-	-	877	-	905	-	1325	-	1337	1385	-	-	-	-	-	-	-	-	-
5/B 25../	-	-	-	948	-	-	1100	-	1134	-	1644	-	1660	1720	-	-	-	-	-	-	-	-	-
6/B 25../	-	-	-	1104	-	-	1235	-	1277	-	1932	-	1950	2022	-	-	-	-	-	-	-	-	-
2/B 40../	-	411	-	419	627	-	628	632	660	682	712	717	789	-	-	-	-	-	-	-	-	-	-
3/B 40../	-	616	-	629	922	-	922	629	971	1004	1048	1056	1163	-	-	-	-	-	-	-	-	-	-
4/B 40../	-	793	-	810	1187	-	1187	1196	1252	1296	1356	1366	1509	-	-	-	-	-	-	-	-	-	-
5/B 40../	-	1094	-	1114	1571	-	1572	1583	1653	1708	1782	1794	1974	-	-	-	-	-	-	-	-	-	-
6/B 40../	-	1274	-	1298	1839	-	1840	1854	1938	2003	2093	2107	2323	-	-	-	-	-	-	-	-	-	-
2/B 60../	481	496	-	701	736	-	760	796	875	882	-	-	-	-	-	-	-	-	-	-	-	-	-
3/B 60../	638	660	-	948	1000	-	1036	1091	1209	1220	-	-	-	-	-	-	-	-	-	-	-	-	-
4/B 60../	926	956	-	1326	1396	-	1443	1517	1674	1688	-	-	-	-	-	-	-	-	-	-	-	-	-
5/B 60../	1175	1212	-	1660	1747	-	1806	1898	2096	2112	-	-	-	-	-	-	-	-	-	-	-	-	-
6/B 60../	1369	1413	-	1944	2048	-	2120	2230	2467	2487	-	-	-	-	-	-	-	-	-	-	-	-	-
2/B 90../	-	822	834	834	905	977	977	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3/B 90../	-	1178	1196	1196	1302	1388	1388	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4/B 90../	-	1568	1592	1592	1734	1878	1878	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5/B 90../	-	2098	2128	2128	2306	2486	2486	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6/B 90../	-	2463	2499	2499	2712	2928	2928	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Scope of supply

Depending on the model, the following items are included in the scope of supply:

Pressure booster system

- Two to six vertical high-pressure centrifugal pumps (standard pumps)

For Movitec 2B, 4B, 6B, 10B and 15B:

- With oval/round flange

For Movitec 25B, 40B, 60B and 90B:

- With round flange
- Membrane-type accumulator on the discharge side, approved for drinking water
- Pressure transmitter on the discharge side
- Pressure gauge
- Powder-coated / epoxy resin-coated steel baseplate

For Movitec 2B, 4B, 6B, 10B and 15B:

- Pumps mounted on the baseplate with anti-vibration mounts

For Movitec 25B, 40B, 60B and 90B:

- Pressure booster system with level-adjustable feet and rubber pads (supplied but not fitted)

Per pump:


- Check valve
- Shut-off valves

Control cabinet

- Control cabinet IP54
- Pump control and monitoring unit
- Graphical display with operating panel
- LEDs indicating operational availability and fault of the pressure booster system
- Service interface for connection to a PC
- Transformer for control voltage
- Motor protection switch per pump

- Lockable master switch (repair switch)
- Terminal strip/terminals with identification for all connections
- Circuit diagram and list of electric components
- Connection for analog or digital dry running protection equipment
- External connection ON
- External connection OFF

Accessories

 See the separate type series booklet Accessories for Pressure Booster Systems 1954.5.

Pressure Booster System

Hya-Solo

Type Series Booklet



Contents

Building Services: Water Supply	4
Pressure Booster Systems	4
Hya-Solo D / DSV	4
Main applications	4
Fluids handled	4
Operating data	4
Designation	4
Design details	4
Materials	5
Product benefits	5
Selection information	6
Technical data	7
Selection charts	11
Characteristic curves	13
Dimensions	31
Accessories	36

Building Services: Water Supply

Pressure Booster Systems

Hya-Solo D / DSV



Hya-Solo D



Hya-Solo DSV

Main applications

- Spray irrigation systems
- General irrigation systems
- Service water supply systems
- Domestic water supply
- Rainwater harvesting
- Water supply systems

Fluids handled

- Drinking water
- Service water
- Cooling water
- Fluids not chemically or mechanically aggressive to the materials

Operating data

Operating properties

Characteristic	Value	
Flow rate	Q [m ³ /h]	≤ 110
	Q [l/s]	≤ 30.6
Head	H [m]	≤ 160
Fluid temperature	T [°C]	≤ 70
Operating pressure	p [bar]	≤ 16

Designation

Example: Hya-Solo D 1 / 0405 / 2 B

Designation key

Code	Description
Hya-Solo	Type series
D	Three-phase current
1	Number of pumps
04	Pump size
05	Number of pump stages
2	Inlet pressure [bar] (for DSV, from - to)
B	Design status

Design details

Design

Hya-Solo D

- Fully automatic pressure booster package system
- Membrane-type accumulator (direct-flow) to DIN 4807-5 on the discharge side, approved for drinking water
- Pressure gauge for pressure indication

Hya-Solo DSV

- Fully automatic pressure booster package system
- Membrane-type accumulator (direct-flow) to DIN 4807-5 on the discharge side, approved for drinking water
- Pressure gauge for pressure indication

Installation type

- Stationary installation

Drive

Hya-Solo D

- Three-phase asynchronous squirrel-cage motor
- Efficiency class IE3
- 220-240 V / 380-420 V ; 380-420 V / 660-720 V
- IP55 enclosure
- Thermal class F
- DOL starting up to and including 4 kW
- Star-delta starting for 5.5 kW and above

Hya-Solo DSV

- KSB SuPremE IE4 motor (as per IEC/CD 60034-30 Ed. 2)
- Three-phase motor
- 380 V AC -10% up to 480 V AC +10%, 50/60 Hz
- IP55 enclosure

Automation

Hya-Solo D

- Control unit for pressure-controlled starting and stopping
- Control cabinet IP54
- LEDs indicate faults and lack of water (red)
- Motor protection switch
- Manual-0-automatic selector switch
- Timer for daily operation check run
- Terminal strip with markings for all connections
- Volt-free contacts for operation, fault, lack of water
- Remote ON/OFF
- Lockable master switch (repair switch)

Hya-Solo DSV

- Self-cooling motor-mounted frequency inverter (PumpDrive) for pressure-controlled starting and demand-based stopping
- Plain-text display (for voltage, current, power, speed, frequency)
- Control panel with operating keys (manual-0-automatic), navigation and function keys
- LEDs signalling operational availability (green), warning (yellow), alert (red)
- Two freely parameterisable relay outputs (operation/fault, alert, etc.)
- Analog input for external setpoint adjustment

- Analog output for transmitting the actual value, motor speed, etc.
- Control cabinet IP54
- Lockable master switch (repair switch)

Materials

Overview of available materials

Component	Material
Pump	
Pump casing	Stainless steel
Pump shroud	Stainless steel
Hydraulic system	Stainless steel
Sealing element	EPDM
Plain bearing	Aluminium oxide
Mechanical seal	To EN 12756
Primary ring	Silicon carbide
Mating ring	Hard carbon
Elastomer	EPDM
Piping	
Hya-Solo D/DSV	Chrome steel
PumpDrive housing	
Heat sink	Die-cast aluminium
Casing cover	PBT, glass fibre reinforced
Accumulator	Connection made of stainless steel, flow through valve to DIN 4807-5
Membrane	Approved for drinking water

Product benefits

- Corrosion-resistant by using high-quality stainless steel
- Very compact, space-saving design

Hya-Solo DSV

- Saves energy through efficient operating mode

Selection information

Selecting the pressure booster system

Selection example

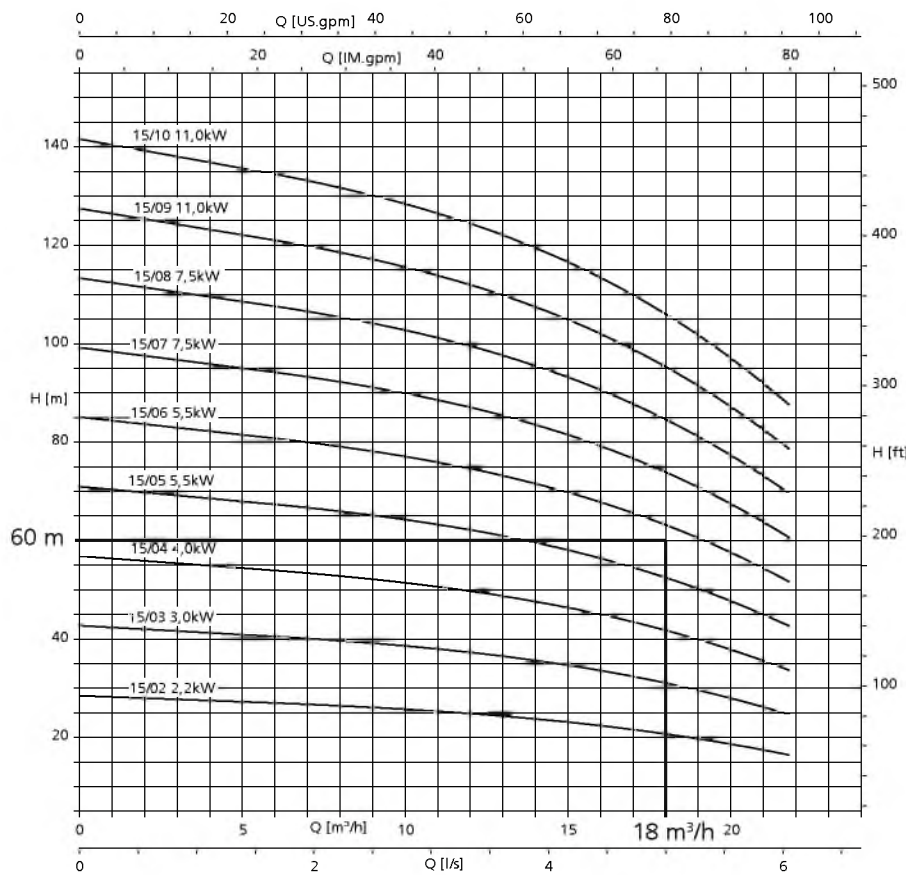
Requirements:

Specified duty point at:

- Flow rate: 18 m³/h
- Head: 60 m

Solution:

1. The values are transferred to the selection chart to select the most suitable pump.
- ⇒ At an inlet pressure $p_{in} = 0$ bar: Movitec 15/06 => Hya-Solo D / 1506/0



Determining the power input

- The power input is indicated per stage (St = 1) and/or per stage with a smaller impeller (St = -1).
The pump input power can be calculated accordingly.
Calculation: value indicated in the diagram (St = 1) × number of stages + value indicated in the diagram (St = -1) × number of stages with a smaller impeller
- Example 1, Movitec 90/4: $P = (St = 1) \times 4$
 Example 2, Movitec 90/4-1: $P = (St = 1) \times 3 + (St = -1)$
 Example 3, Movitec 90/4-2: $P = (St = 1) \times 2 + (St = -1) \times 2$

Technical data

Hya-Solo D

Selection table

Hya-Solo D	P _N [kW]	I _N 3~400 V [A]	[kg]	Connection Suction side - Discharge side
1/0202 B	0,37	0,94	64	G 1 - R 1
1/0203 B	0,37	0,94	64	G 1 - R 1
1/0204 B	0,37	0,94	65	G 1 - R 1
1/0205 B	0,37	0,94	65	G 1 - R 1
1/0206 B	0,55	1,33	68	G 1 - R 1
1/0207 B	0,55	1,33	68	G 1 - R 1
1/0208 B	0,55	1,33	68	G 1 - R 1
1/0209 B	0,75	1,68	71	G 1 - R 1
1/0210 B	0,75	1,68	71	G 1 - R 1
1/0211 B	1,10	2,40	74	G 1 - R 1
1/0212 B	1,10	2,40	74	G 1 - R 1
1/0214 B	1,10	2,40	75	G 1 - R 1
1/0216 B	1,50	2,92	80	G 1 - R 1
1/0218 B	1,50	2,92	80	G 1 - R 1
1/0402 B	0,37	0,94	64	G 1 - R 1
1/0403 B	0,55	1,33	66	G 1 - R 1
1/0404 B	0,55	1,33	67	G 1 - R 1
1/0405 B	0,75	1,68	69	G 1 - R 1
1/0406 B	1,10	2,40	72	G 1 - R 1
1/0407 B	1,10	2,40	72	G 1 - R 1
1/0408 B	1,50	2,92	76	G 1 - R 1
1/0409 B	1,50	2,92	77	G 1 - R 1
1/0410 B	1,50	2,92	77	G 1 - R 1
1/0411 B	2,20	4,15	80	G 1 - R 1
1/0412 B	2,20	4,15	81	G 1 - R 1
1/0414 B	2,20	4,15	82	G 1 - R 1
1/0416 B	3,00	5,59	96	G 1 - R 1
1/0602 B	0,37	0,94	65	G 1 1/4 - R 1 1/4
1/0603 B	0,75	1,68	69	G 1 1/4 - R 1 1/4
1/0604 B	1,10	2,40	72	G 1 1/4 - R 1 1/4
1/0605 B	1,10	2,40	73	G 1 1/4 - R 1 1/4
1/0606 B	1,50	2,92	77	G 1 1/4 - R 1 1/4
1/0607 B	1,50	2,92	77	G 1 1/4 - R 1 1/4
1/0608 B	2,20	4,15	81	G 1 1/4 - R 1 1/4
1/0609 B	2,20	4,15	81	G 1 1/4 - R 1 1/4
1/0610 B	2,20	4,15	82	G 1 1/4 - R 1 1/4
1/0611 B	3,00	5,59	92	G 1 1/4 - R 1 1/4
1/0612 B	3,00	5,59	92	G 1 1/4 - R 1 1/4
1/0614 B	3,00	5,59	93	G 1 1/4 - R 1 1/4
1/0616 B	4,00	7,45	103	G 1 1/4 - R 1 1/4
1/1002 B	0,75	1,68	82	G 1 1/2 - R 1 1/2
1/1003 B	1,10	2,40	85	G 1 1/2 - R 1 1/2
1/1004 B	1,50	2,92	90	G 1 1/2 - R 1 1/2
1/1005 B	2,20	4,15	94	G 1 1/2 - R 1 1/2
1/1006 B	2,20	4,15	94	G 1 1/2 - R 1 1/2
1/1007 B	3,00	5,59	103	G 1 1/2 - R 1 1/2
1/1008 B	3,00	5,59	104	G 1 1/2 - R 1 1/2
1/1009 B	4,00	7,45	111	G 1 1/2 - R 1 1/2
1/1010 B	4,00	7,45	112	G 1 1/2 - R 1 1/2
1/1011 B	4,00	7,45	113	G 1 1/2 - R 1 1/2
1/1013 B	5,50	10,00	156	G 1 1/2 - R 1 1/2
1/1502 B	2,20	4,15	91	G 2 - R 2

Hya-Solo D	P _N	I _N		[kg]	Connection Suction side - Discharge side
		3~400 V			
	[kW]	[A]			
1/1503 B	3,00	5,59	100		G 2 - R 2
1/1504 B	4,00	7,45	106		G 2 - R 2
1/1505 B	5,50	10,00	148		G 2 - R 2
1/1506 B	5,50	10,00	149		G 2 - R 2
1/1507 B	7,50	13,40	154		G 2 - R 2
1/1508 B	7,50	13,40	156		G 2 - R 2
1/1509 B	11,00	19,30	238		G 2 - R 2
1/1510 B	11,00	19,30	239		G 2 - R 2
1/2502 B	4,00	7,45	141		DN 65
1/2503 B	5,50	10,00	173		DN 65
1/2504 B	7,50	13,40	180		DN 65
1/2505 B	11,00	19,30	267		DN 65
1/2506 B	11,00	19,30	270		DN 65
1/2507 B	15,00	26,20	308		DN 65
1/4002-2 B	5,50	10,00	147		DN 80
1/4002 B	7,50	13,40	151		DN 80
1/4003-2 B	11,00	19,30	228		DN 80
1/4003 B	11,00	19,30	228		DN 80
1/4004-2 B	15,00	26,20	256		DN 80
1/4004 B	15,00	26,20	270		DN 80
1/4005-2 B	18,50	31,80	280		DN 80
1/4005 B	18,50	31,80	296		DN 80
1/4006-2 B	18,50	31,80	298		DN 80
1/4006 B	22,00	37,60	335		DN 80
1/6001 B	5,50	10,00	156		DN 100
1/6002-2 B	7,50	13,40	163		DN 100
1/6002 B	11,00	19,30	238		DN 100
1/6003-2 B	15,00	26,20	281		DN 100
1/6003 B	18,50	31,80	292		DN 100
1/6004-2 B	18,50	31,80	311		DN 100
1/6004 B	22,00	37,60	351		DN 100
1/6005-2 B	22,00	37,60	354		DN 100
1/9002-2 B	11,00	19,30	298		DN 100
1/9002-1 B	15,00	26,20	330		DN 100
1/9002 B	15,00	26,20	330		DN 100
1/9003-2 B	18,5	37,60	402		DN 100
1/9003-1 B	22,0	31,80	365		DN 100
1/9003 B	22,00	37,60	402		DN 100
1/9004-2 B	30,00	51,60	527		DN 100
1/9004-1 B	30,00	51,60	527		DN 100
1/9004 B	30,00	51,60	527		DN 100
1/9005-2 B	37,00	63,30	567		DN 100
1/9005-1 B	37,00	63,30	567		DN 100
1/9005 B	37,00	63,30	567		DN 100

Hya-Solo DSV

Selection table

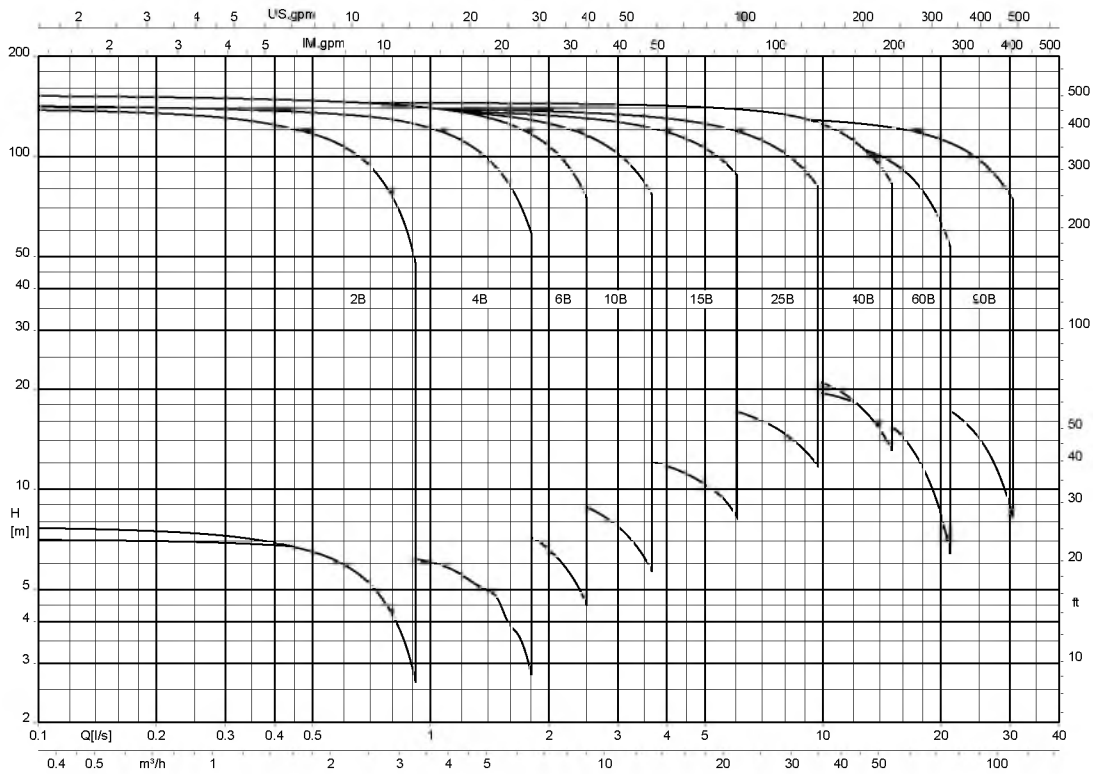
Hya-Solo DSV	P _N	I _N		[kg]	Connection Suction side - Discharge side
		3~400 V			
	[kW]	[A]			
1/0202 B	0,55	1,60	46		G 1 - R 1
1/0203 B	0,55	1,60	46		G 1 - R 1
1/0204 B	0,55	1,60	47		G 1 - R 1
1/0205 B	0,55	1,60	47		G 1 - R 1
1/0206 B	0,55	1,60	50		G 1 - R 1

Hya-Solo DSV	P _N [kW]	I _N 3~400 V		[kg]	Connection Suction side - Discharge side
		[A]			
1/0207 B	0,55	1,60		50	G 1 - R 1
1/0208 B	0,55	1,60		50	G 1 - R 1
1/0209 B	0,75	2,10		53	G 1 - R 1
1/0210 B	0,75	2,10		53	G 1 - R 1
1/0211 B	1,10	3,00		56	G 1 - R 1
1/0212 B	1,10	3,00		56	G 1 - R 1
1/0214 B	1,10	3,00		57	G 1 - R 1
1/0216 B	1,50	4,10		62	G 1 - R 1
1/0218 B	1,50	4,10		62	G 1 - R 1
1/0402 B	0,55	1,60		46	G 1 - R 1
1/0403 B	0,55	1,60		48	G 1 - R 1
1/0404 B	0,55	1,60		49	G 1 - R 1
1/0405 B	0,75	2,10		51	G 1 - R 1
1/0406 B	1,10	3,00		54	G 1 - R 1
1/0407 B	1,10	3,00		54	G 1 - R 1
1/0408 B	1,50	4,10		58	G 1 - R 1
1/0409 B	1,50	4,10		59	G 1 - R 1
1/0410 B	1,50	4,10		59	G 1 - R 1
1/0411 B	2,20	5,60		62	G 1 - R 1
1/0412 B	2,20	5,60		63	G 1 - R 1
1/0414 B	2,20	5,60		64	G 1 - R 1
1/0416 B	3,00	7,60		78	G 1 - R 1
1/0602 B	0,55	1,60		47	G 1 1/4 - R 1 1/4
1/0603 B	0,75	2,10		51	G 1 1/4 - R 1 1/4
1/0604 B	1,10	3,00		54	G 1 1/4 - R 1 1/4
1/0605 B	1,10	3,00		55	G 1 1/4 - R 1 1/4
1/0606 B	1,50	4,10		59	G 1 1/4 - R 1 1/4
1/0607 B	1,50	4,10		59	G 1 1/4 - R 1 1/4
1/0608 B	2,20	5,60		63	G 1 1/4 - R 1 1/4
1/0609 B	2,20	5,60		63	G 1 1/4 - R 1 1/4
1/0610 B	2,20	5,60		64	G 1 1/4 - R 1 1/4
1/0611 B	3,00	7,60		74	G 1 1/4 - R 1 1/4
1/0612 B	3,00	7,60		74	G 1 1/4 - R 1 1/4
1/0614 B	3,00	7,60		75	G 1 1/4 - R 1 1/4
1/0616 B	4,00	9,40		85	G 1 1/4 - R 1 1/4
1/1002 B	0,75	2,10		64	G 1 1/2 - R 1 1/2
1/1003 B	1,10	3,00		67	G 1 1/2 - R 1 1/2
1/1004 B	1,50	4,10		72	G 1 1/2 - R 1 1/2
1/1005 B	2,20	5,60		76	G 1 1/2 - R 1 1/2
1/1006 B	2,20	5,60		76	G 1 1/2 - R 1 1/2
1/1007 B	3,00	7,60		85	G 1 1/2 - R 1 1/2
1/1008 B	3,00	7,60		86	G 1 1/2 - R 1 1/2
1/1009 B	4,00	9,40		93	G 1 1/2 - R 1 1/2
1/1010 B	4,00	9,40		94	G 1 1/2 - R 1 1/2
1/1011 B	4,00	9,40		95	G 1 1/2 - R 1 1/2
1/1013 B	5,50	12,50		135	G 1 1/2 - R 1 1/2
1/1502 B	2,20	5,60		73	G 2 - R 2
1/1503 B	3,00	7,60		82	G 2 - R 2
1/1504 B	4,00	9,40		88	G 2 - R 2
1/1505 B	5,50	12,50		127	G 2 - R 2
1/1506 B	5,50	12,50		128	G 2 - R 2
1/1507 B	7,50	16,70		133	G 2 - R 2
1/1508 B	7,50	16,70		135	G 2 - R 2
1/1509 B	11,00	23,70		225	G 2 - R 2
1/1510 B	11,00	23,70		226	G 2 - R 2
1/2502 B	4,00	9,40		134	DN 65

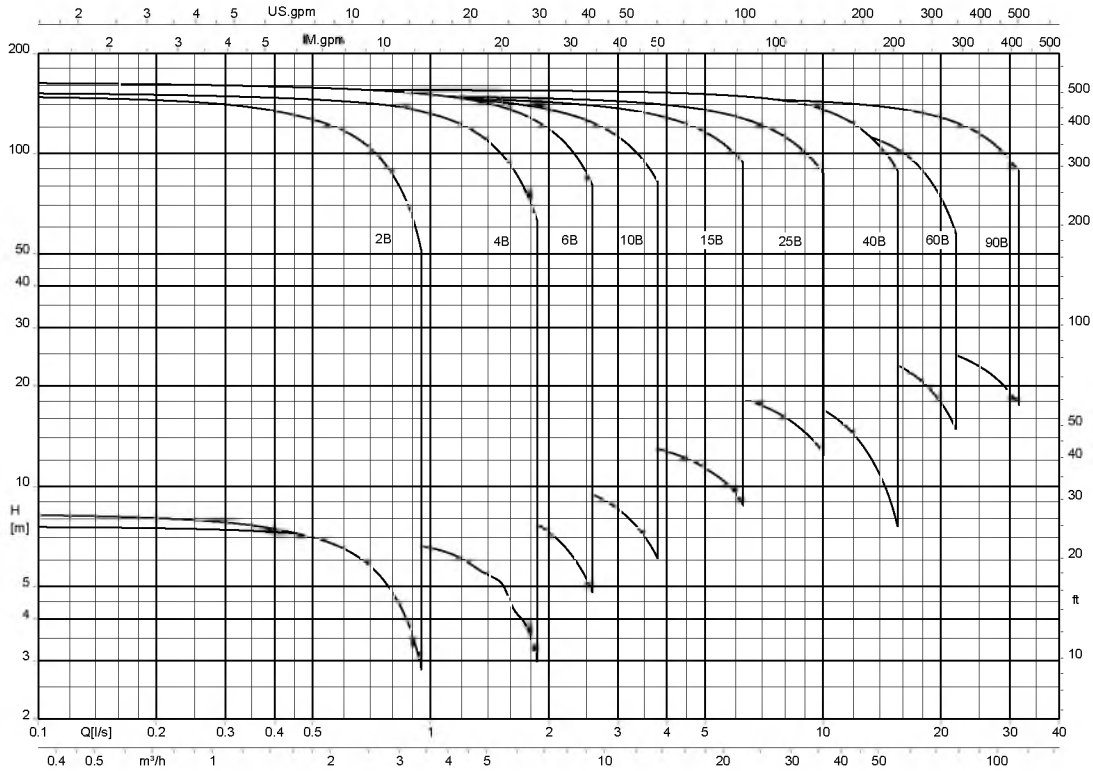
Hya-Solo DSV	P _N [kW]	I _N 3~400 V	[kg]	Connection Suction side - Discharge side
		[A]		
1/2503 B	5,50	12,50	163	DN 65
1/2504 B	7,50	16,70	170	DN 65
1/2505 B	11,00	23,70	265	DN 65
1/2506 B	11,00	23,70	268	DN 65
1/2507 B	15,00	32,00	280	DN 65
1/4002-2 B	5,50	12,50	137	DN 80
1/4002 B	7,50	16,70	141	DN 80
1/4003-2 B	11,00	23,70	226	DN 80
1/4003 B	11,00	23,70	226	DN 80
1/4004-2 B	15,00	32,00	228	DN 80
1/4004 B	15,00	32,00	242	DN 80
1/4005-2 B	18,50	38,80	252	DN 80
1/4005 B	18,50	38,80	266	DN 80
1/4006-2 B	18,50	38,80	269	DN 80
1/4006 B	22,00	50,70	305	DN 80
1/6001 B	5,50	12,50	146	DN 100
1/6002-2 B	7,50	16,70	153	DN 100
1/6002 B	11,00	23,70	236	DN 100
1/6003-2 B	15,00	32,00	253	DN 100
1/6003 B	18,50	38,80	263	DN 100
1/6004-2 B	18,50	38,80	282	DN 100
1/6004 B	22,00	50,70	321	DN 100
1/6005-2 B	22,00	50,70	324	DN 100
1/9002-2 B	11,00	23,70	296	DN 100
1/9002-1 B	15,00	32,00	302	DN 100
1/9002 B	15,00	32,00	302	DN 100
1/9003-2 B	18,50	38,80	336	DN 100
1/9003-1 B	22,00	50,70	372	DN 100
1/9003 B	22,00	50,70	372	DN 100
1/9004-2 B	30,00	63,50	496	DN 100
1/9004-1 B	30,00	63,50	496	DN 100
1/9004 B	30,00	63,50	496	DN 100
1/9005-2 B	37,00	77,80	534	DN 100
1/9005-1 B	37,00	77,80	534	DN 100
1/9005 B	37,00	77,80	534	DN 100

Selection charts

Hya-Solo D, n = 2900 rpm

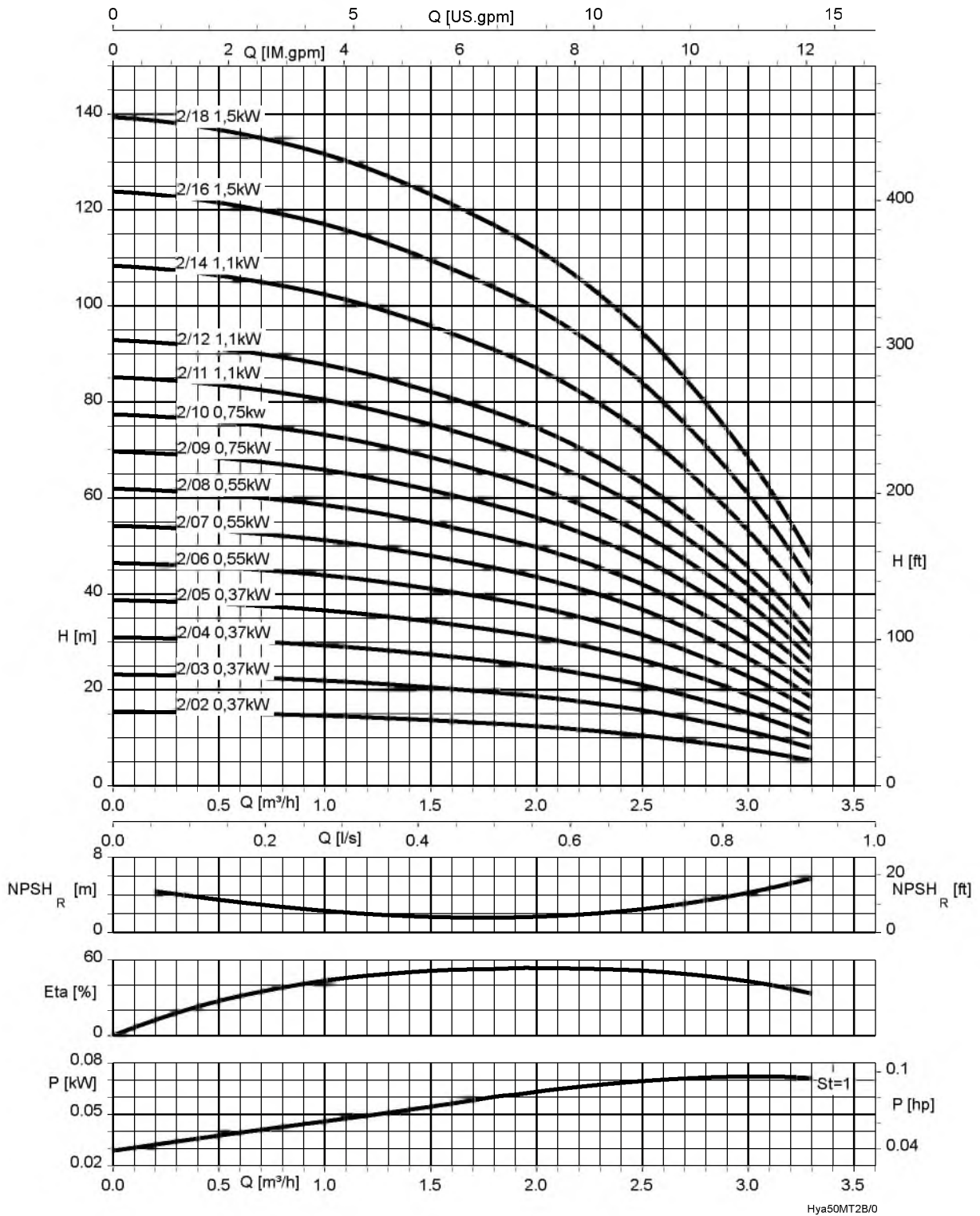


Hya-Solo DSV, n = 3000 rpm



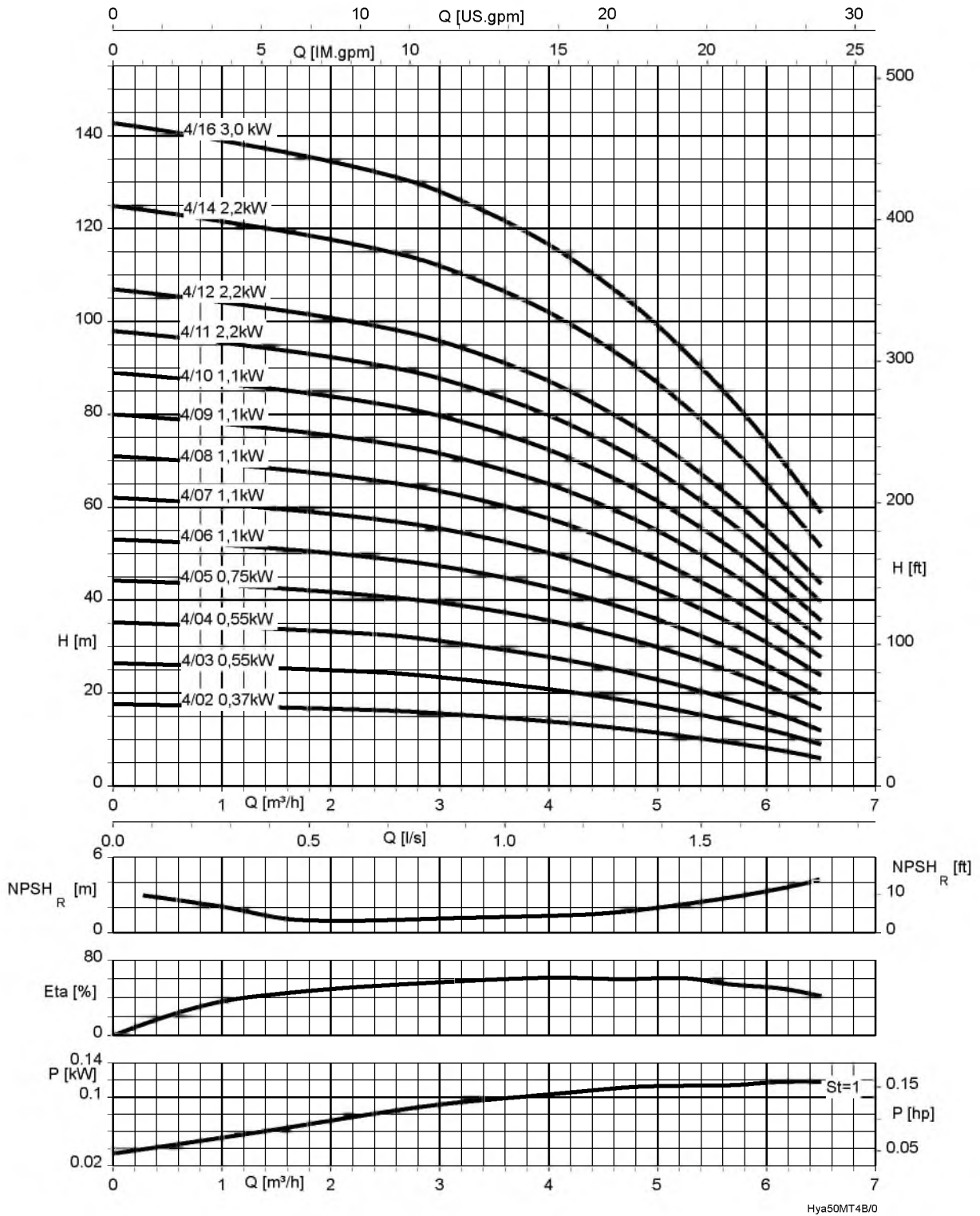
Characteristic curves

Hya-Solo D with Movitec 2B, n = 2900 rpm



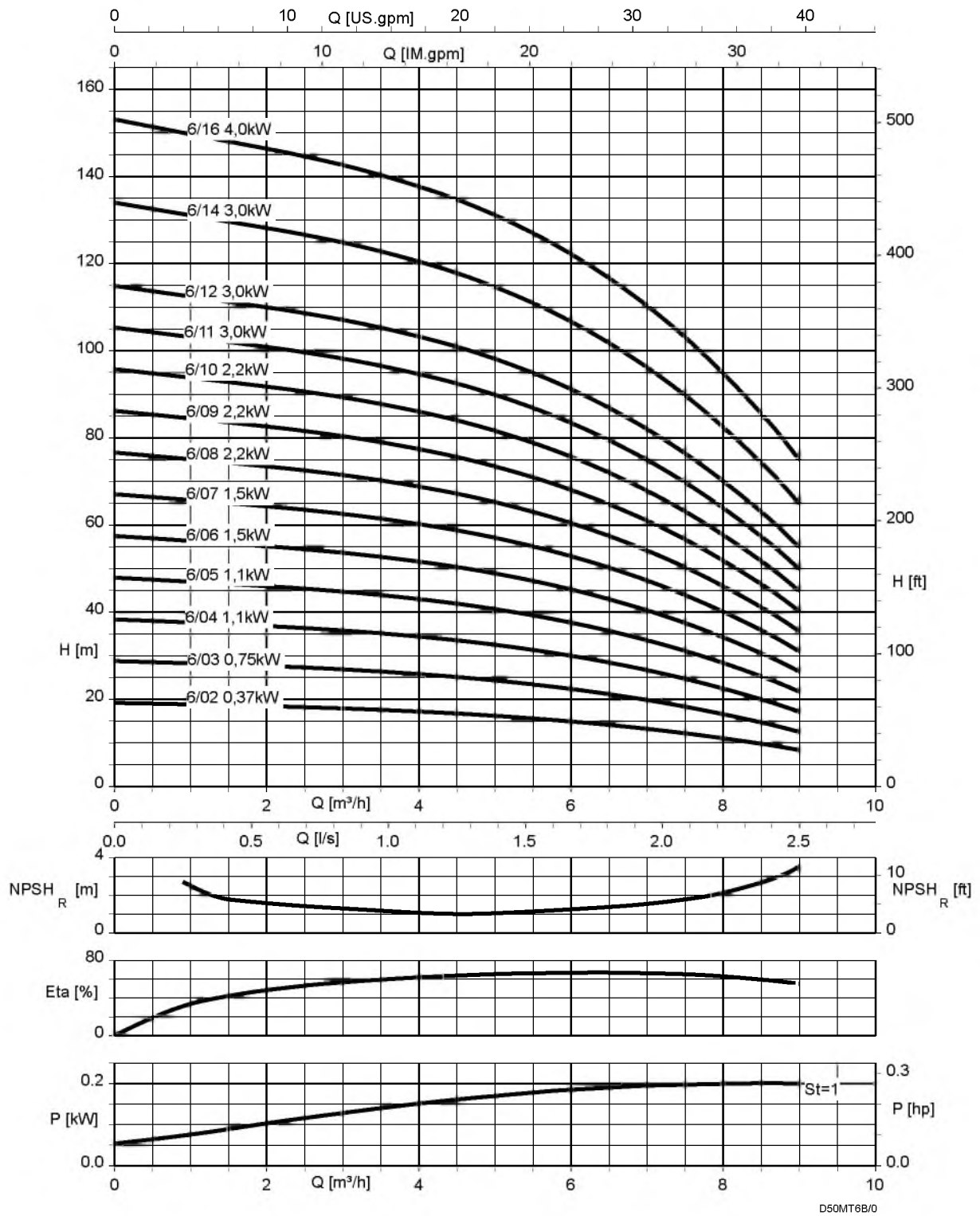
St = 1 | P per stage

Hya-Solo D with Movitec 4B, n = 2900 rpm



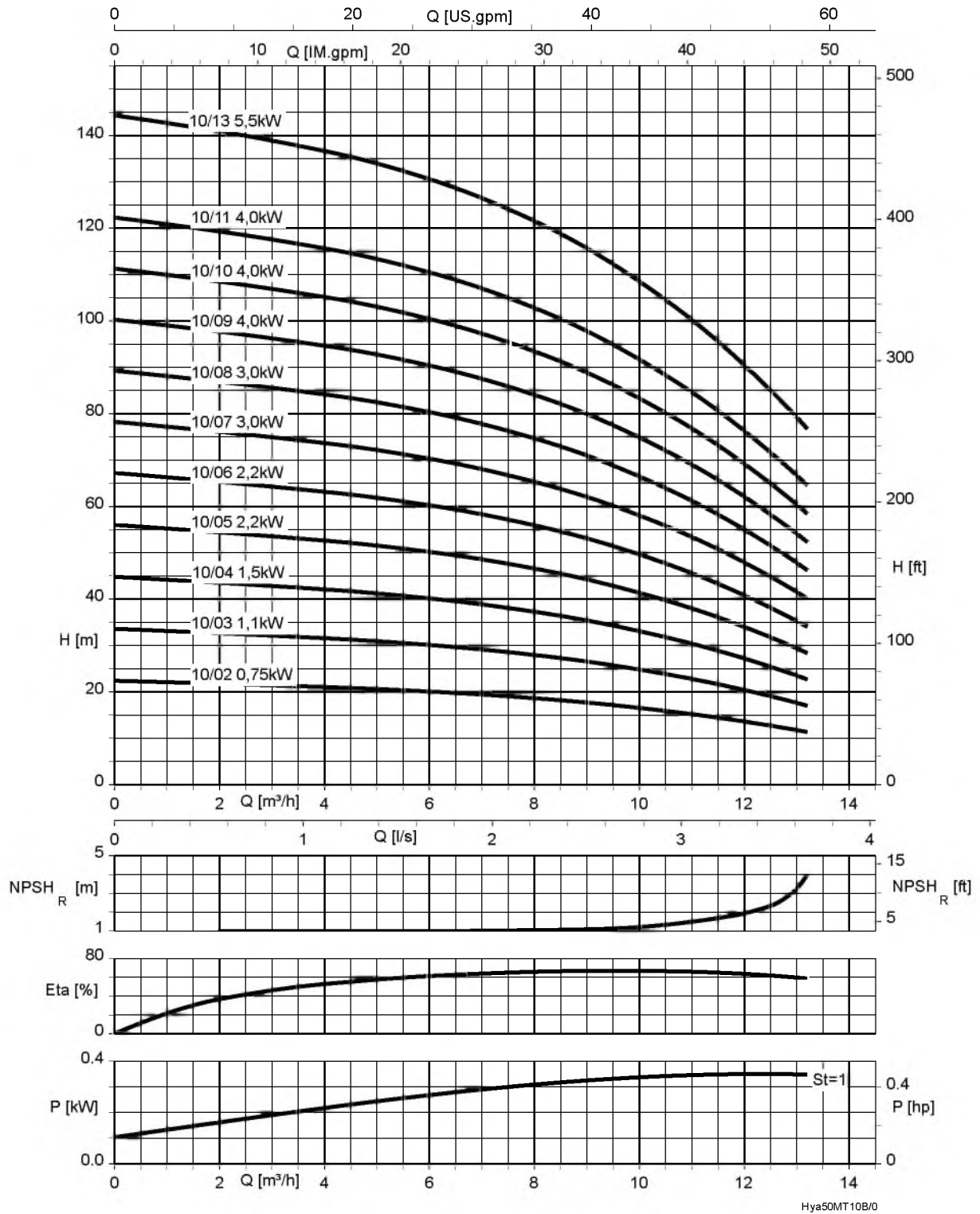
St = 1 | P per stage

Hya-Solo D with Movitec 6B, n = 2900 rpm



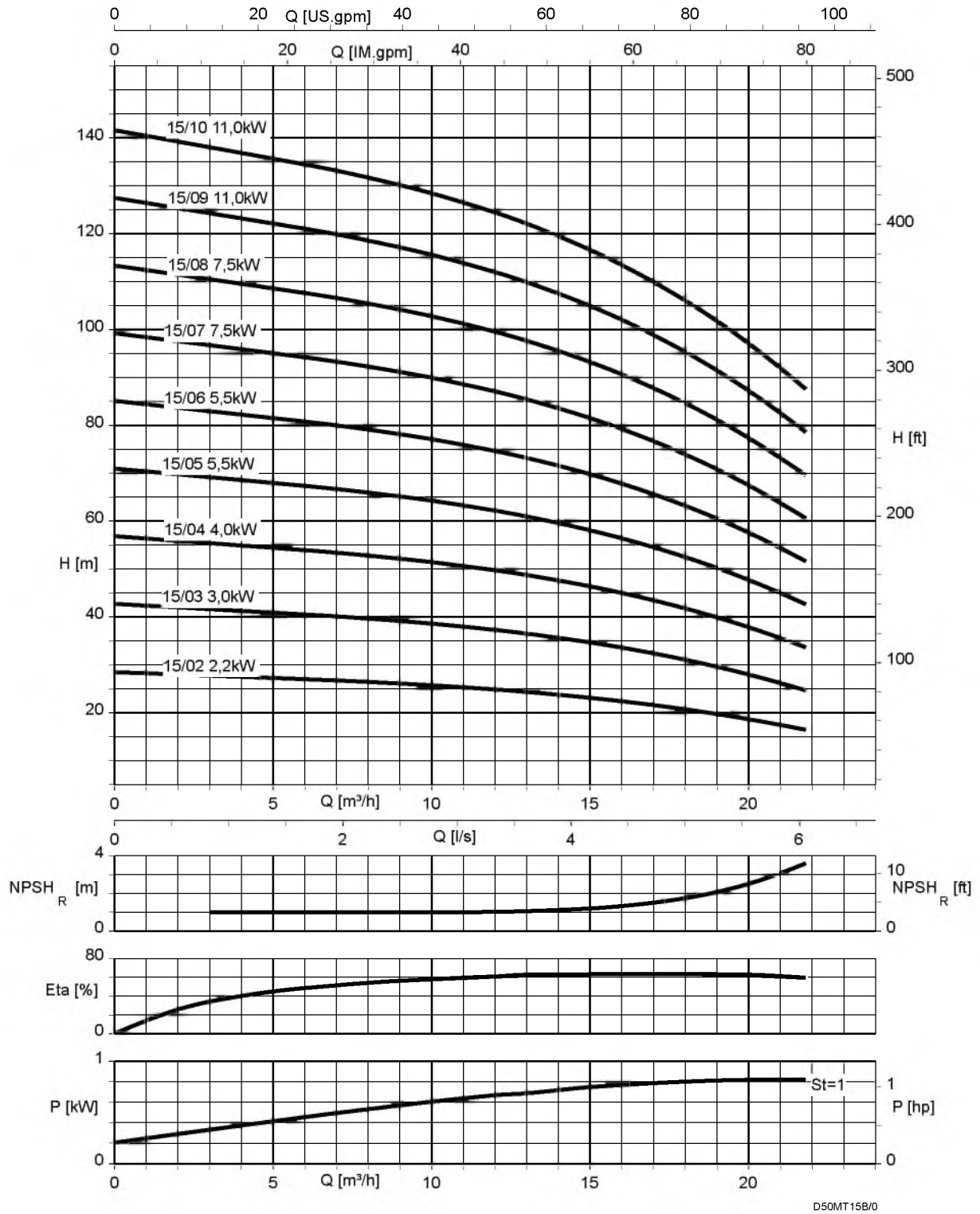
St = 1 | P per stage

Hya-Solo D with Movitec 10B, n = 2900 rpm



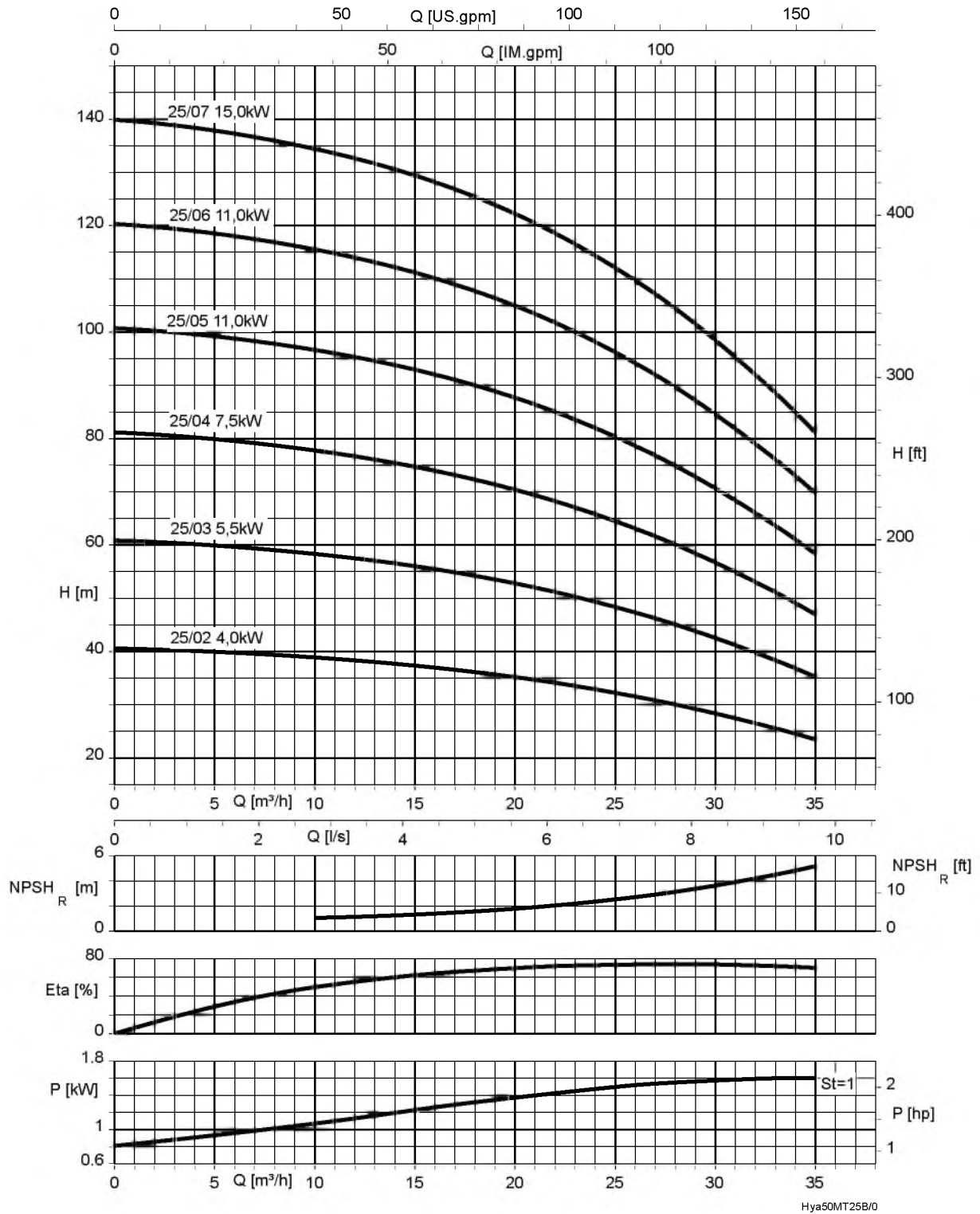
St = 1 | P per stage

Hya-Solo D with Movitec 15B, n = 2900 rpm



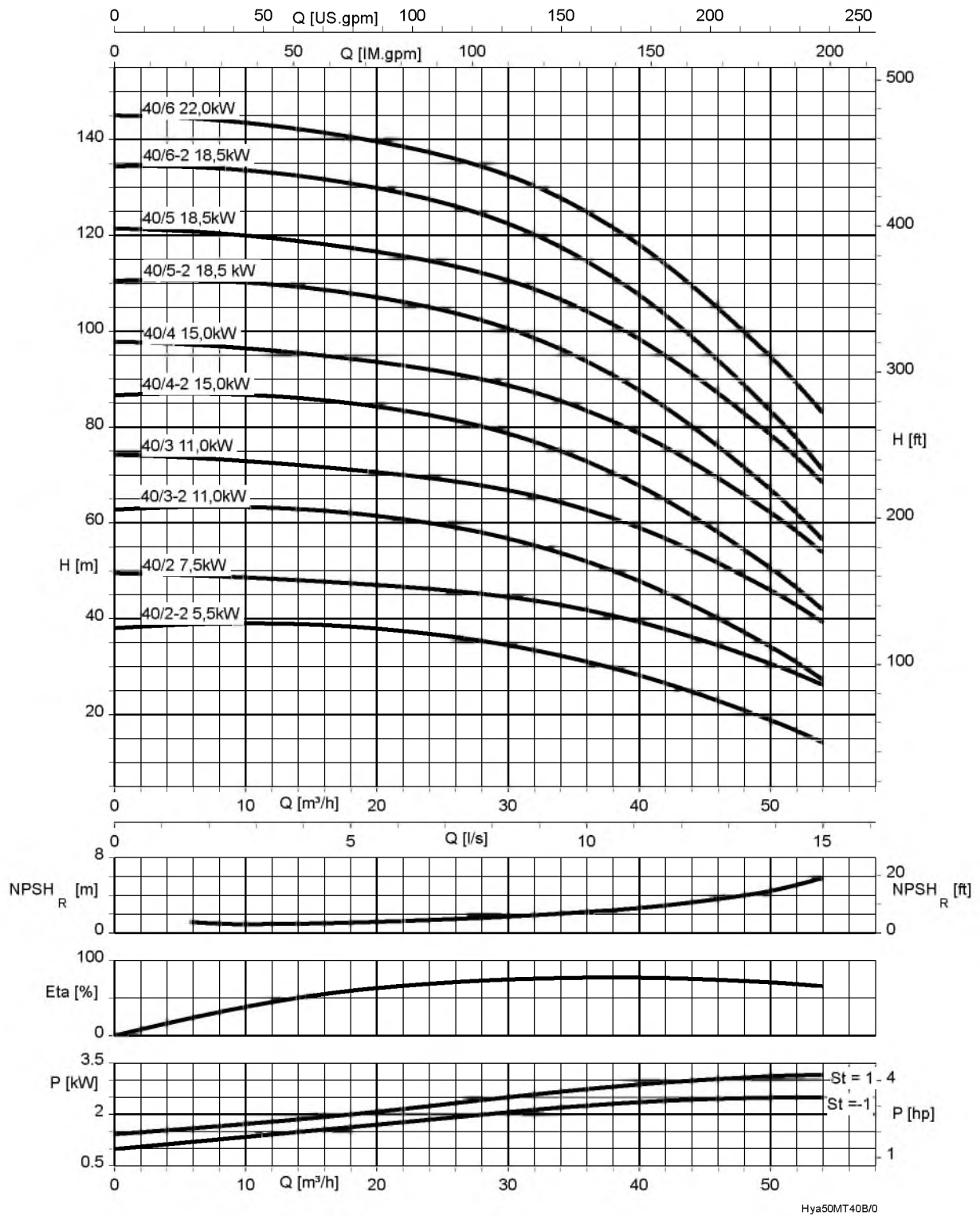
St = 1 | P per stage

Hya-Solo D with Movitec 25B, n = 2900 rpm



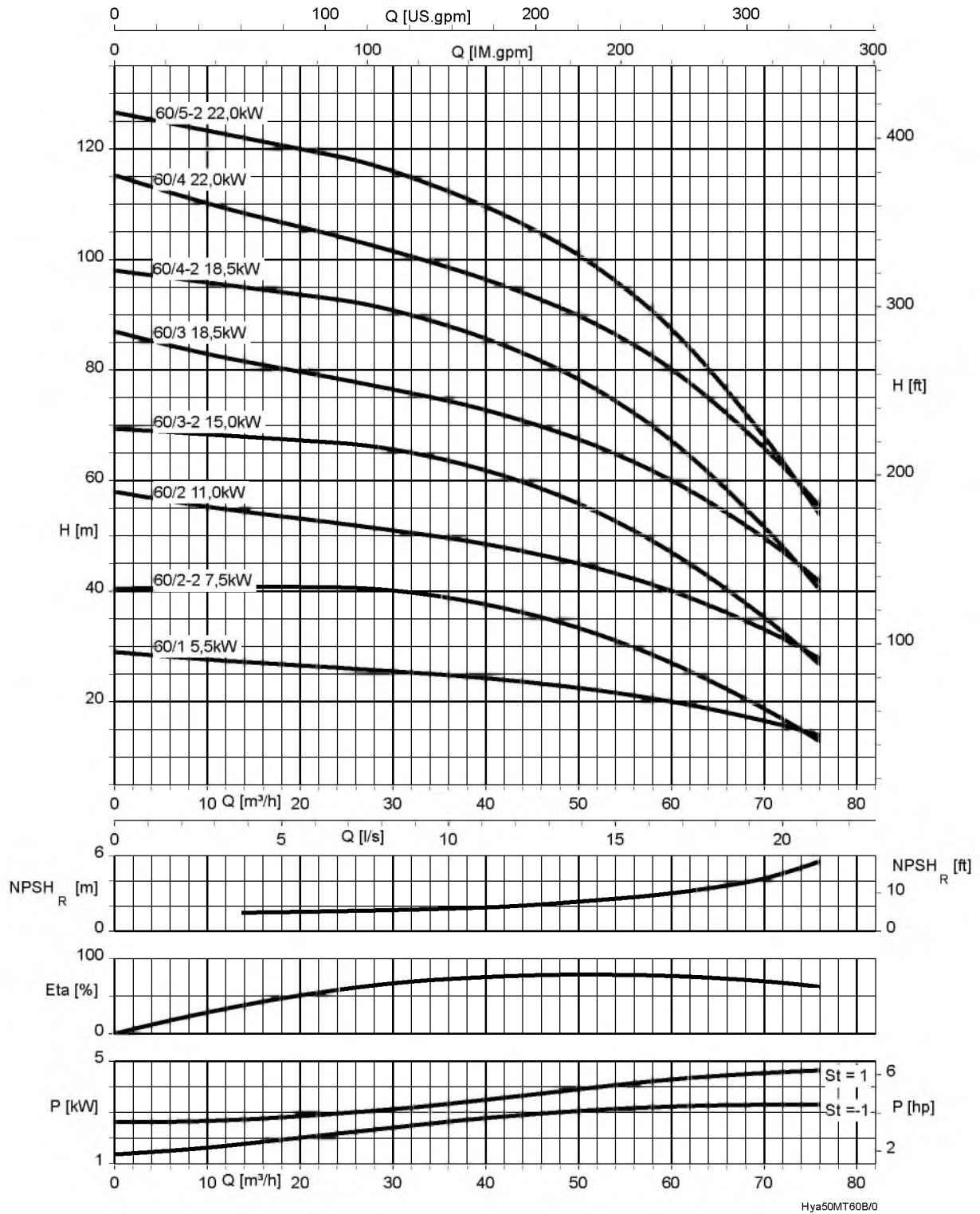
St = 1 | P per stage

Hya-Solo D with Movitec 40B, n = 2900 rpm



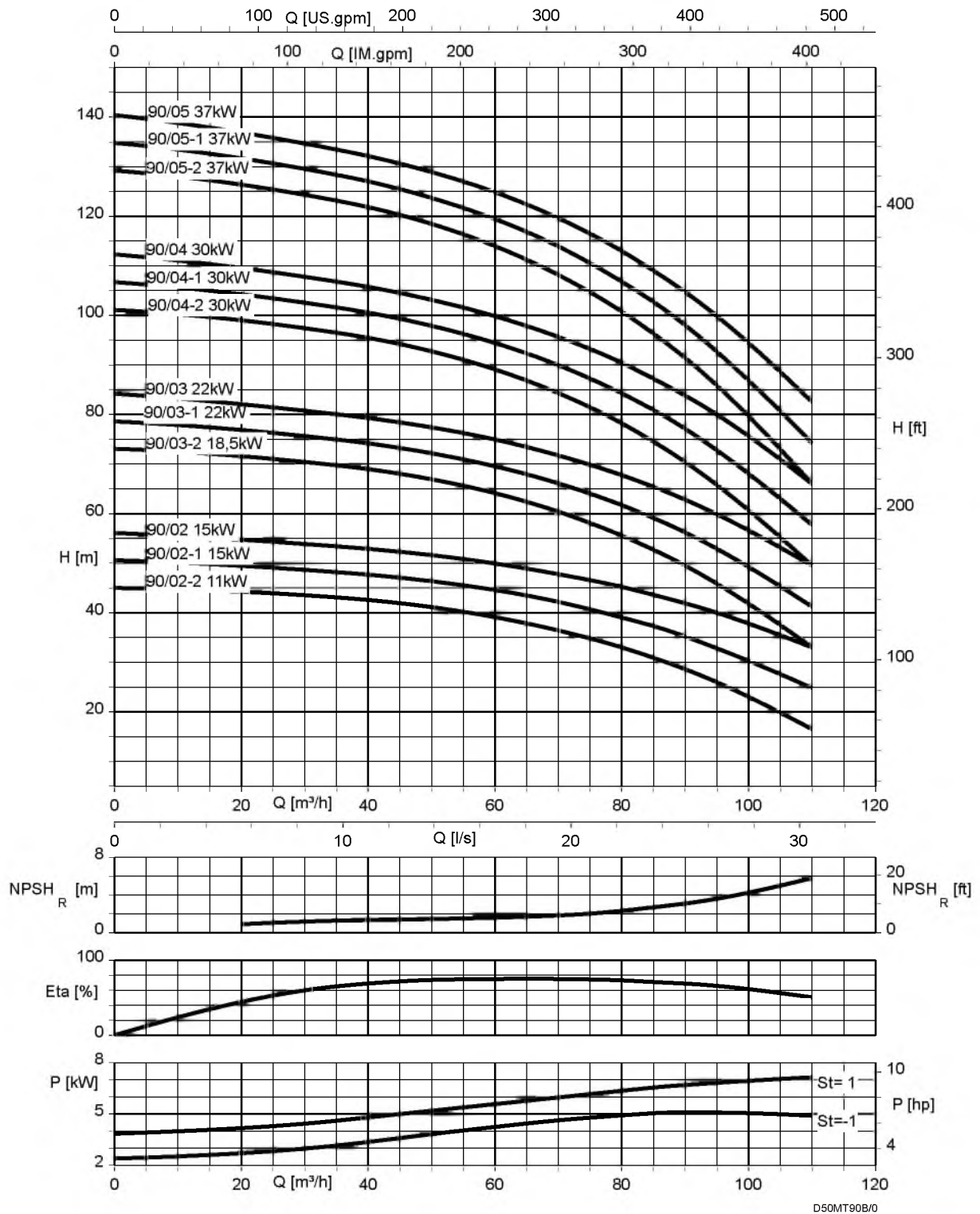
St = 1 P per stage	St = -1 P per stage with a smaller impeller
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Hya-Solo D with Movitec 60B, n = 2900 rpm



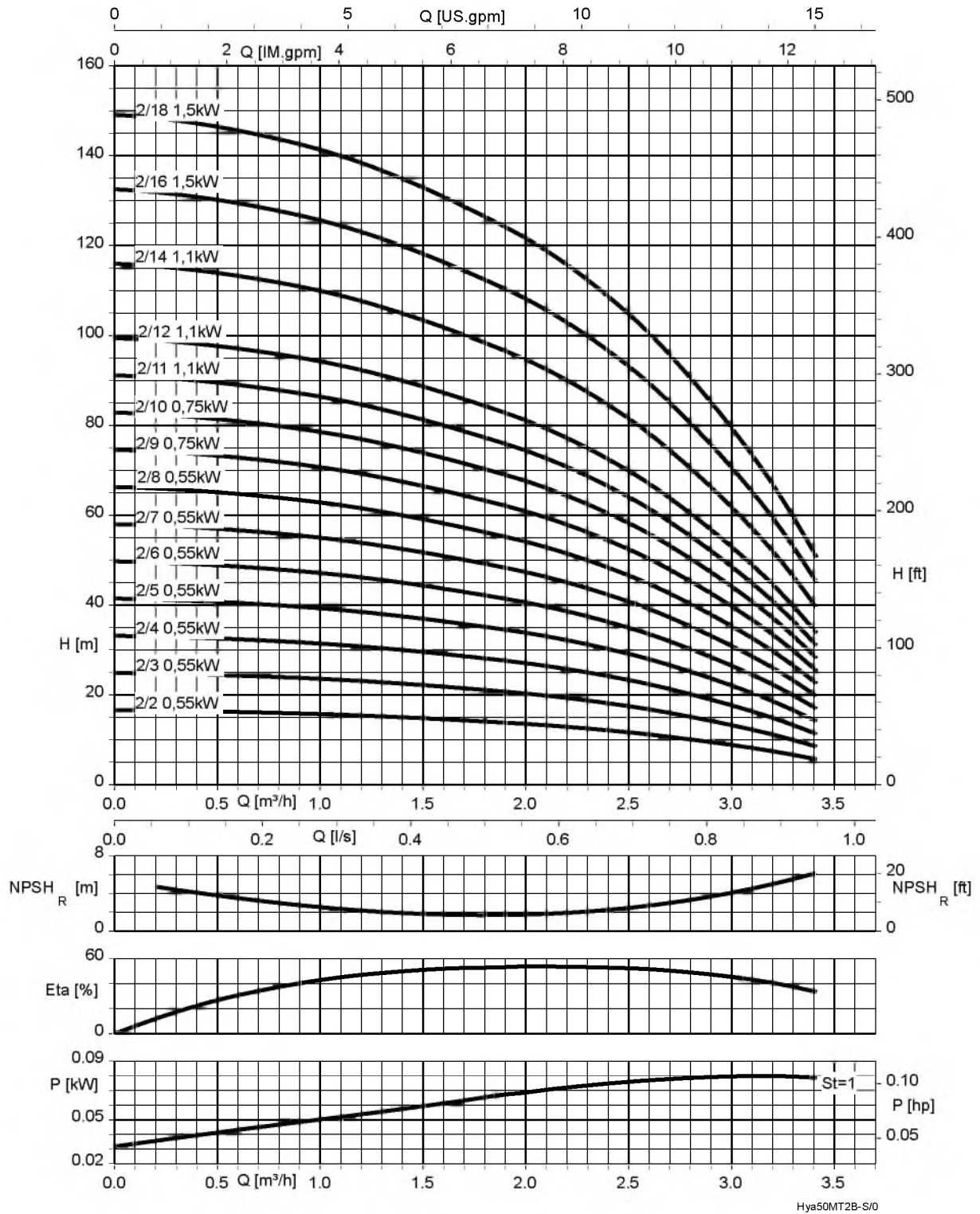
St = 1 P per stage	St = -1 P per stage with a smaller impeller
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Hya-Solo D with Movitec 90B, n = 2900 rpm



St = 1 P per stage	St = -1 P per stage with a smaller impeller
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Hya-Solo DSV with Movitec 2B, n = 3000 rpm

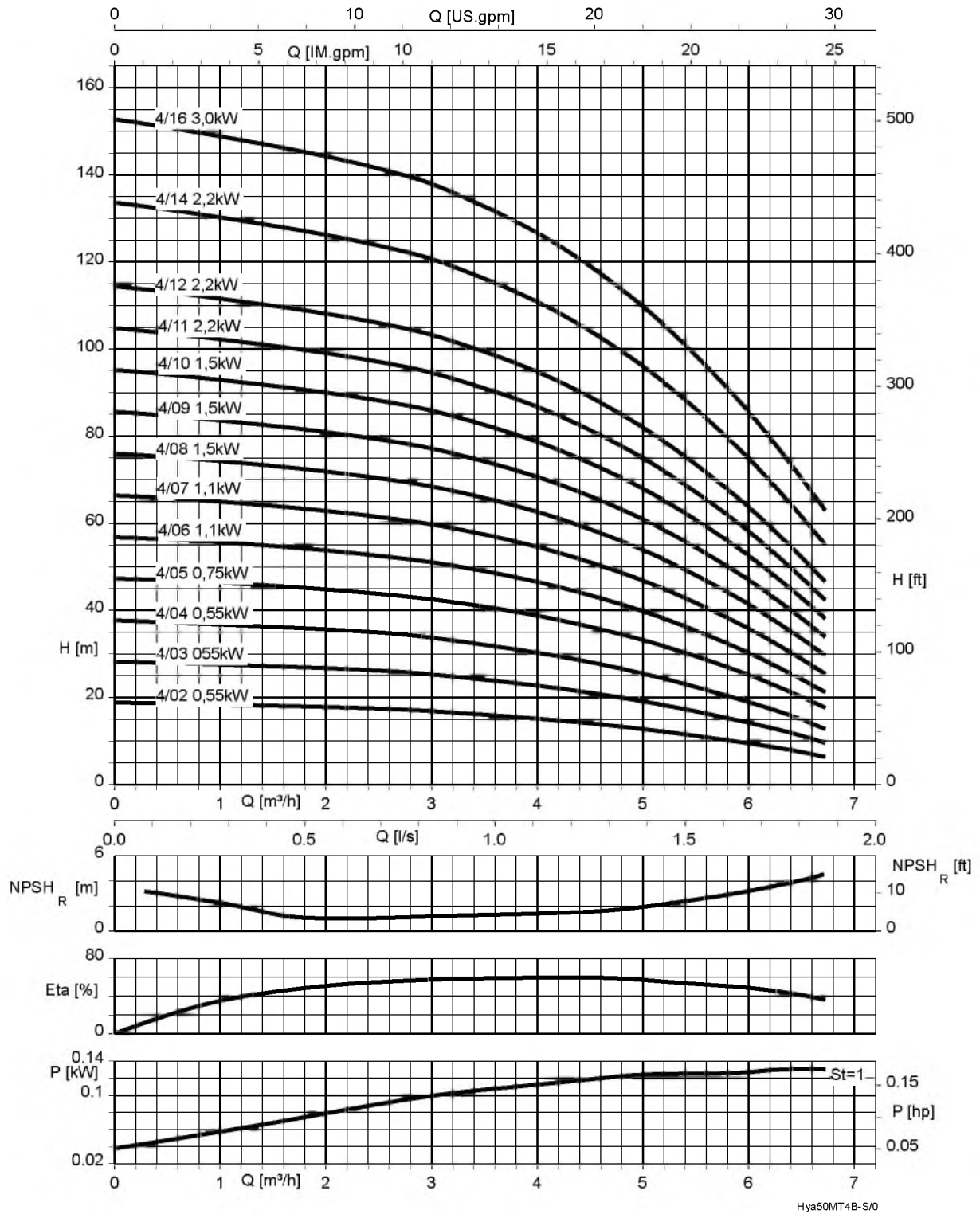


Systems with 8 and 10 stages

The actual curve will deviate from the documented curve due to the reduced speed. An accurate selection can only be made with KSB's selection program KSB EasySelect.

St = 1 | P per stage

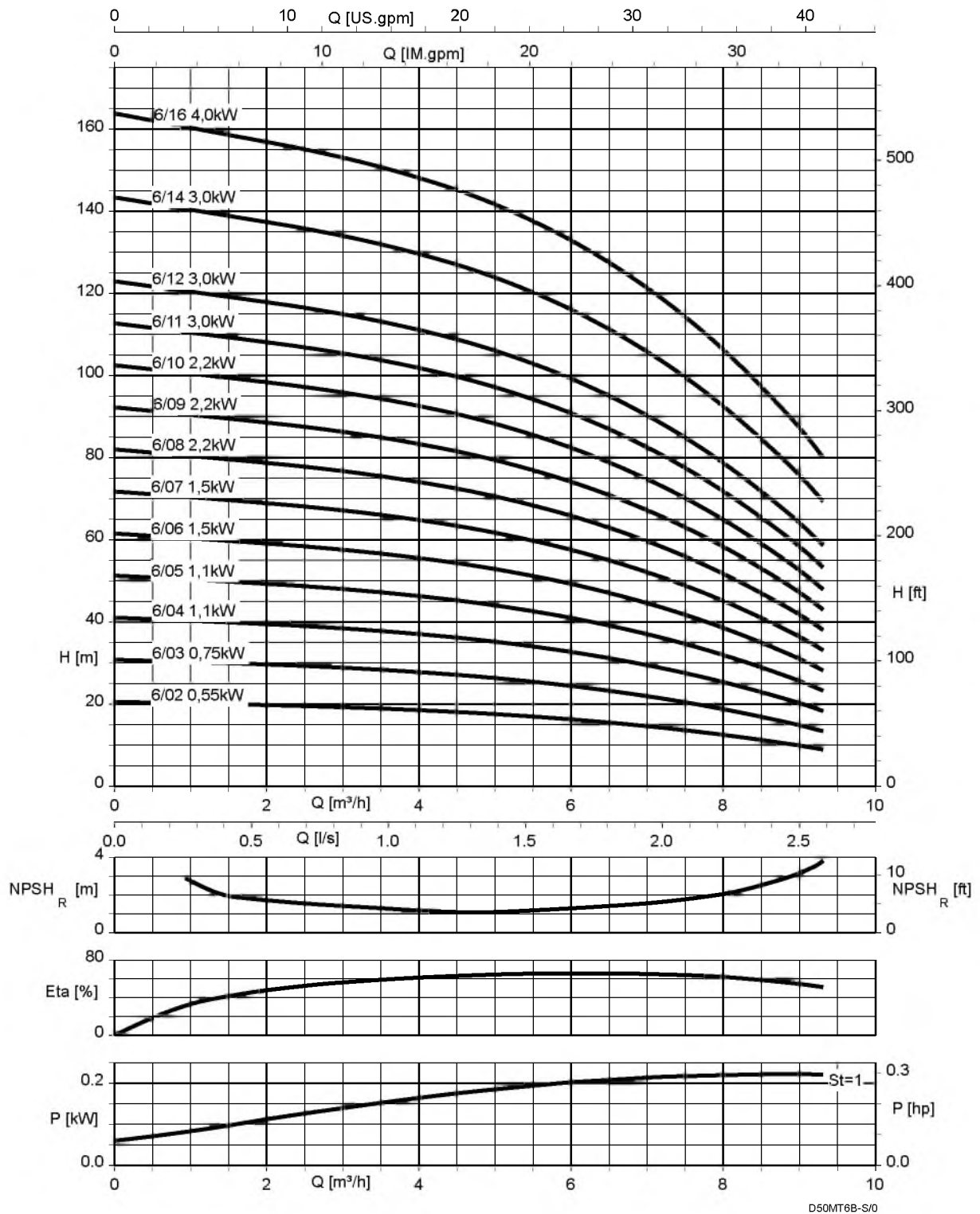
Hya-Solo DSV with Movitec 4B, n = 3000 rpm



i Systems with 4, 5 and 10 stages
 The actual curve will deviate from the documented curve due to the reduced speed. An accurate selection can only be made with KSB's selection program KSB EasySelect.

St = 1 | P per stage

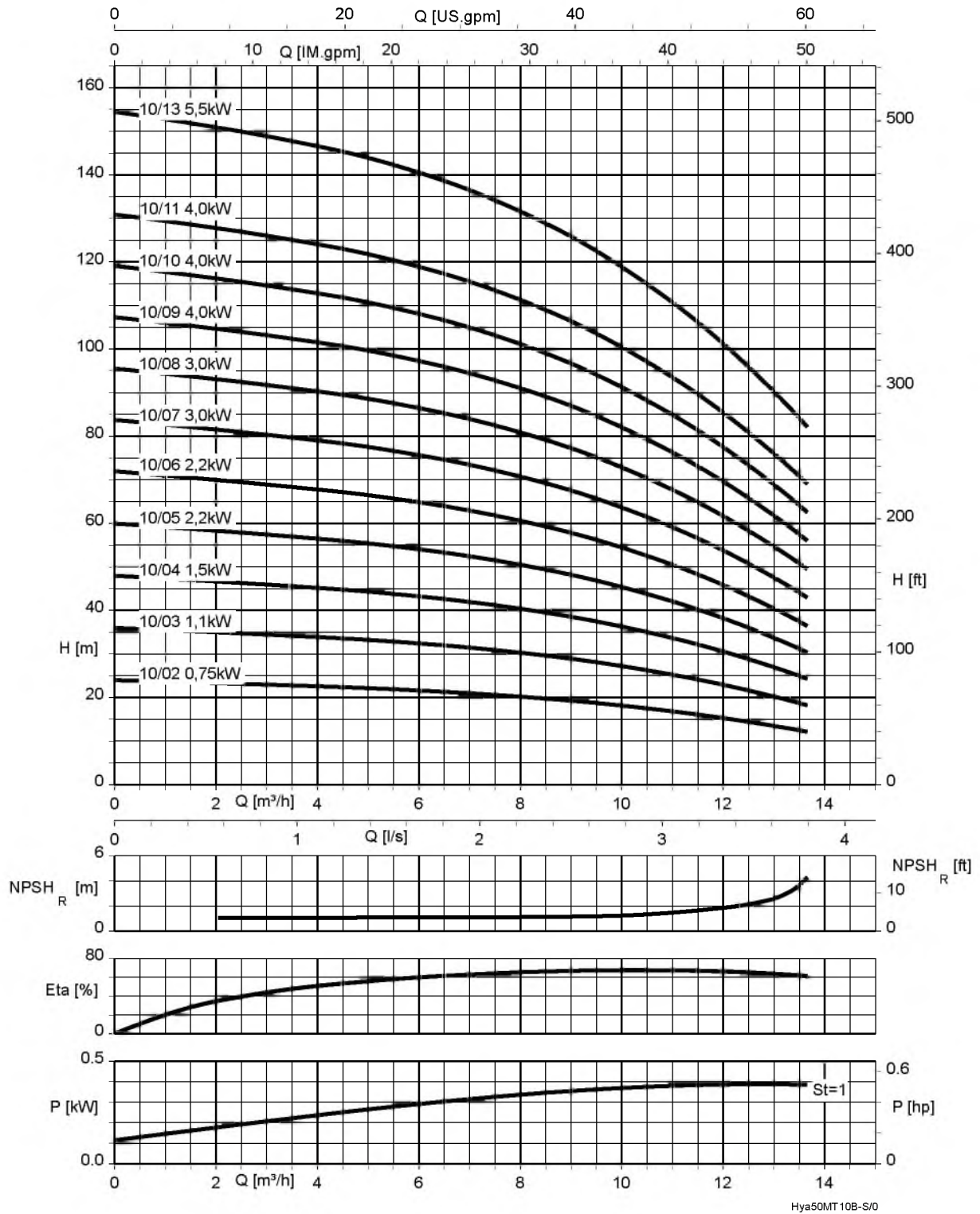
Hya-Solo DSV with Movitec 6B, n = 3000 rpm



i Systems with 2, 14 and 16 stages
The actual curve will deviate from the documented curve due to the reduced speed. An accurate selection can only be made with KSB's selection program KSB EasySelect.

St = 1 | P per stage

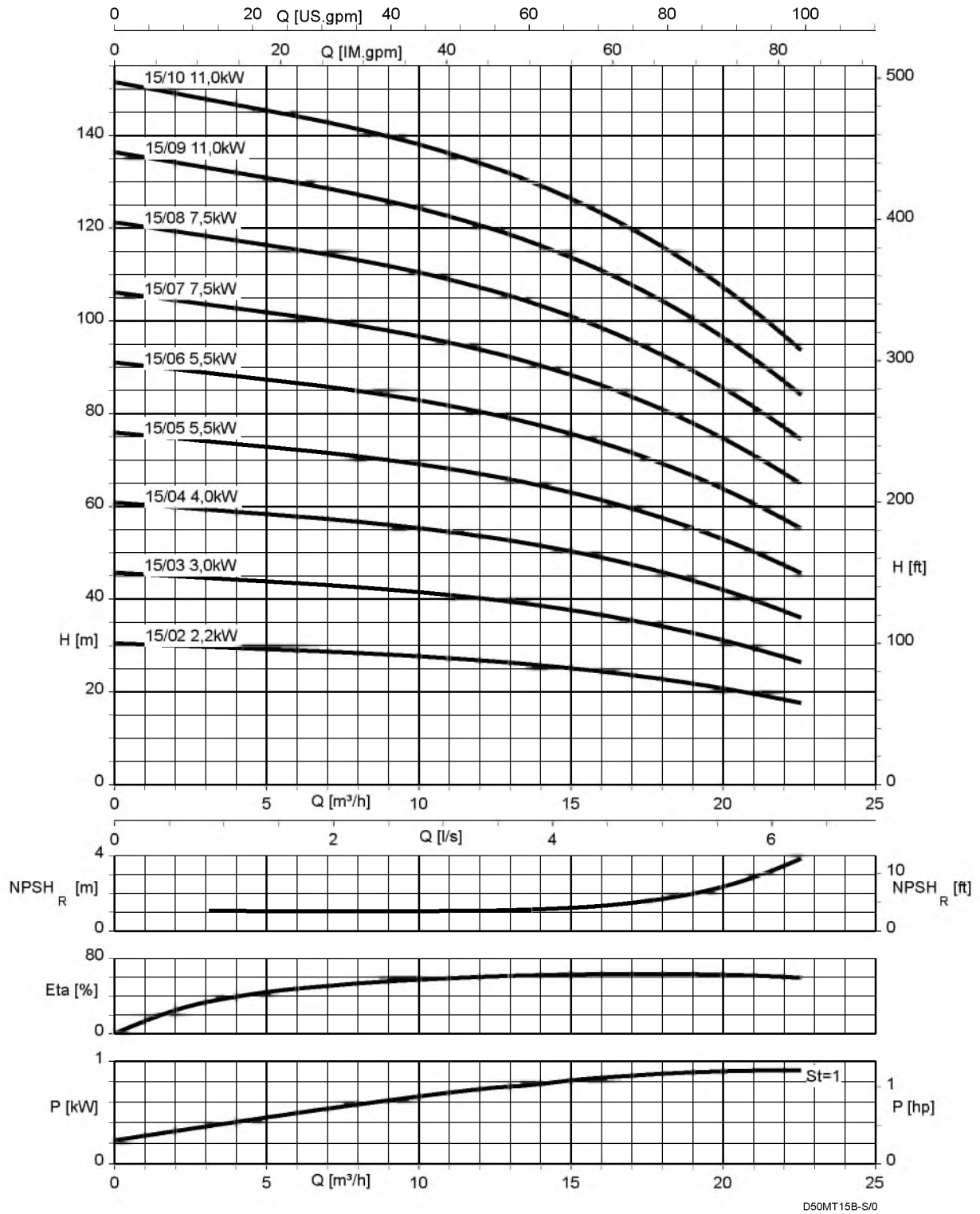
Hya-Solo DSV with Movitec 10B, n = 3000 rpm



i Systems with 2, 3, 4, 8 and 11 stages
The actual curve will deviate from the documented curve due to the reduced speed. An accurate selection can only be made with KSB's selection program KSB EasySelect.

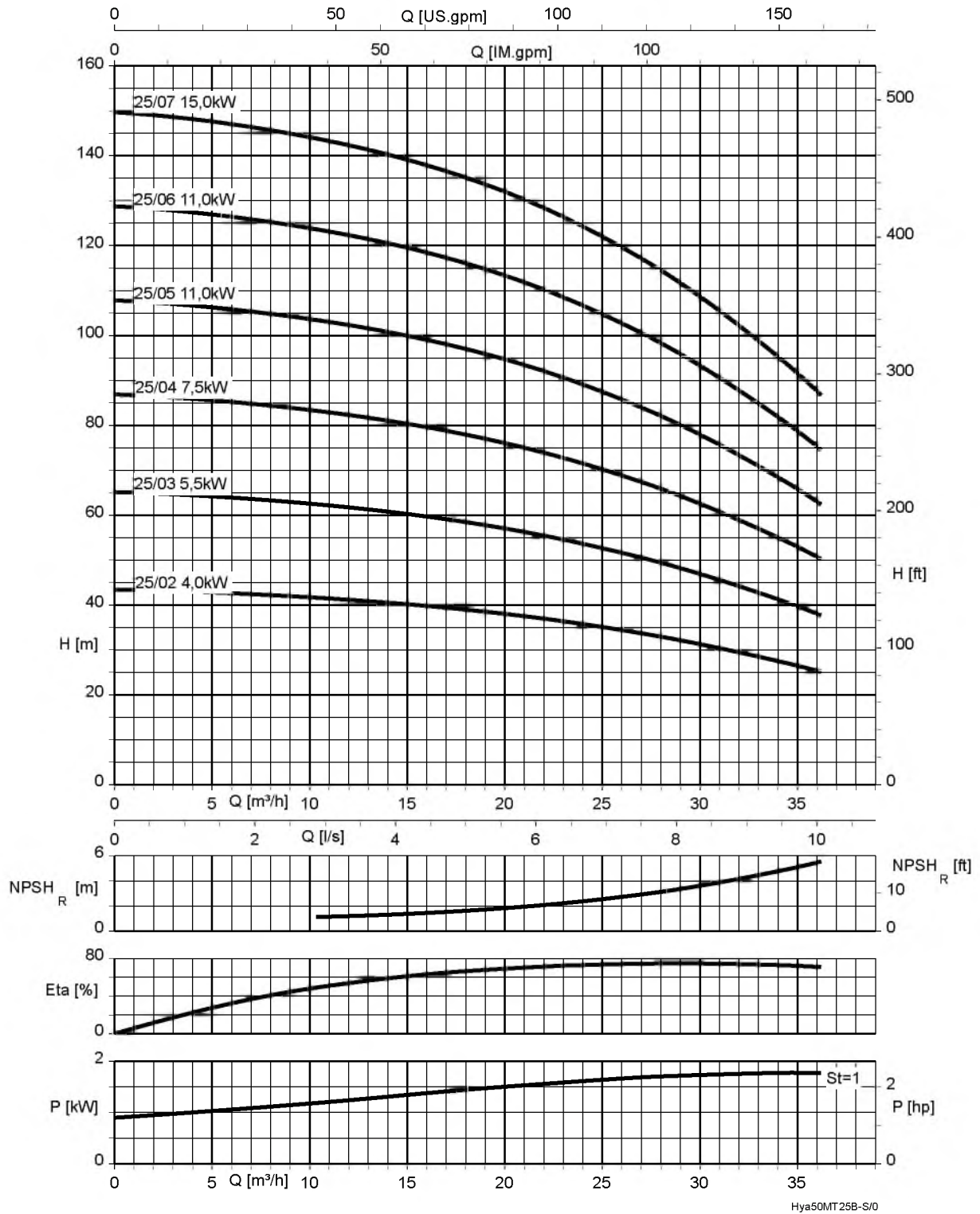
St = 1 | P per stage

Hya-Solo DSV with Movitec 15B, n = 3000 rpm



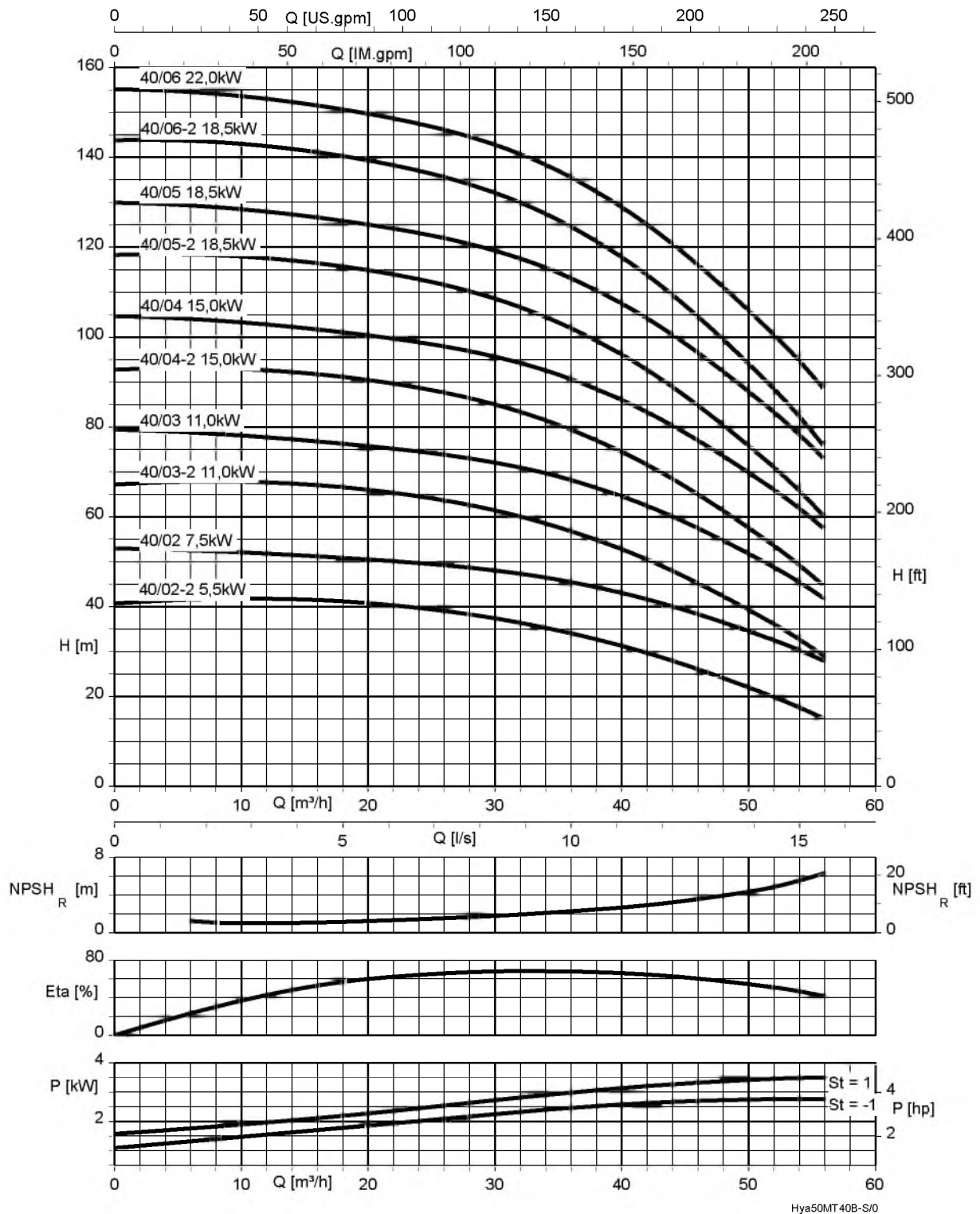
St = 1 | P per stage

Hya-Solo DSV with Movitec 25B, n = 3000 rpm



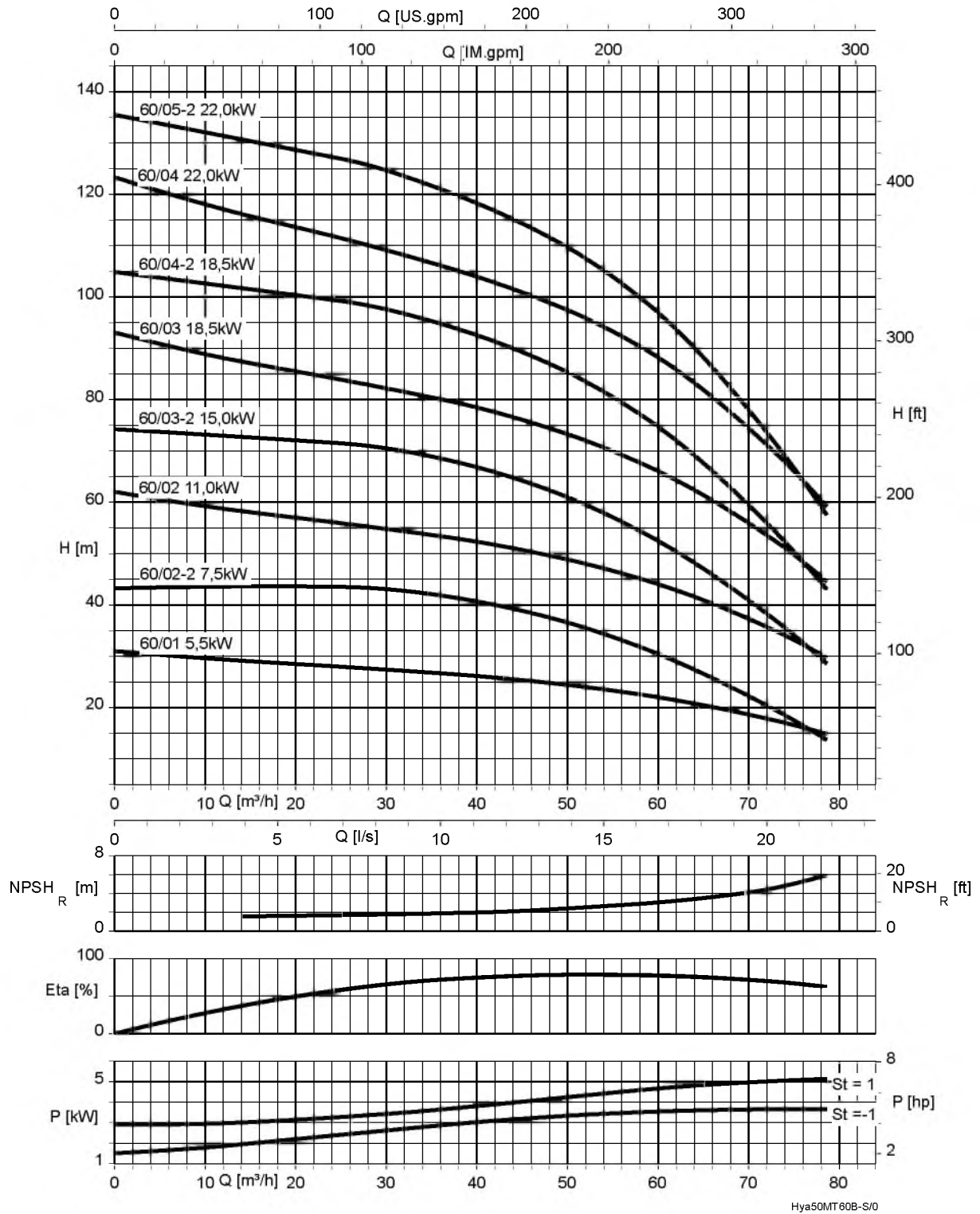
St = 1 | P per stage

Hya-Solo DSV with Movitec 40B, n = 3000 rpm



St = 1 P per stage	St = -1 P per stage with a smaller impeller
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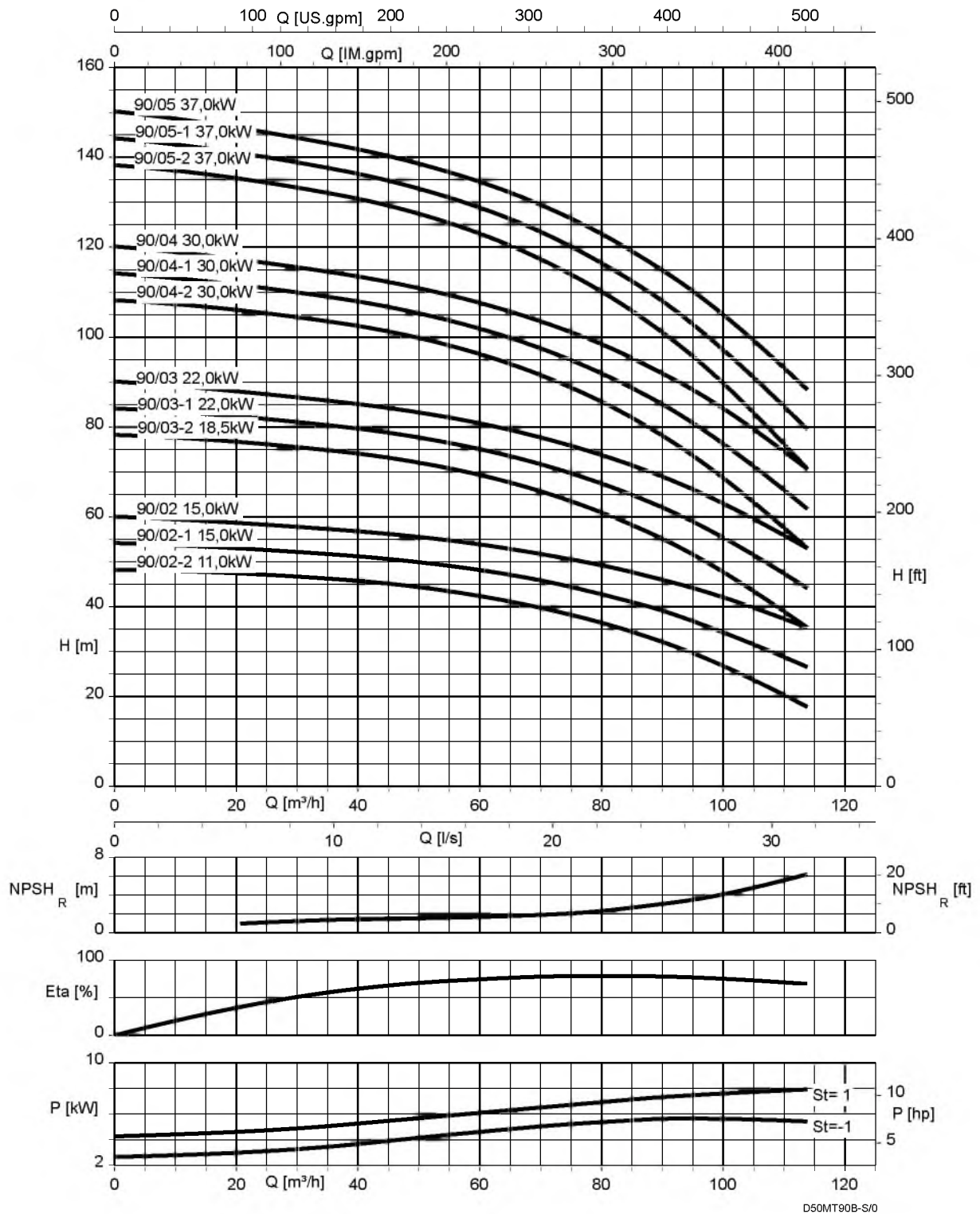
Hya-Solo DSV with Movitec 60B, n = 3000 rpm



St = 1 | P per stage

St = -1 | P per stage with a smaller impeller

Hya-Solo DSV with Movitec 90B, n = 3000 rpm



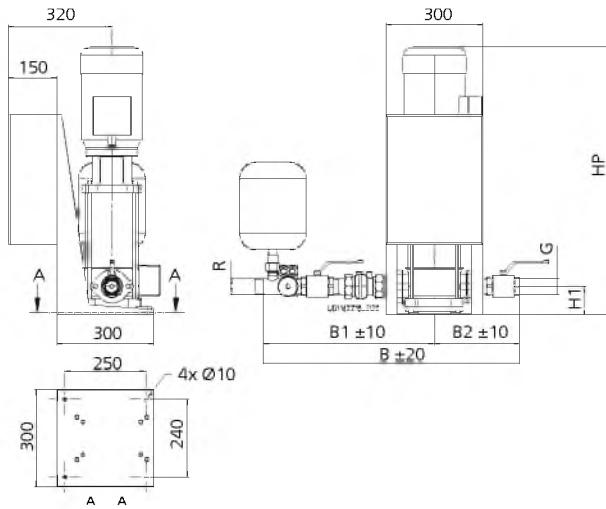
i Systems with 1, 1-1, 2, 2-2, 3 and 3-2 stages
The actual curve will deviate from the documented curve due to the reduced speed. An accurate selection can only be made with KSB's selection program KSB EasySelect.

St = 1 P per stage	St = -1 P per stage with a smaller impeller
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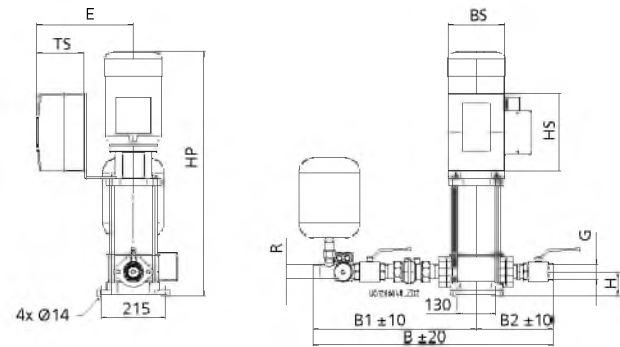
Dimensions

Hya-Solo D / DSV with Movitec 2B / 4B

Hya-Solo D with Movitec 2B / 4B



Hya-Solo DSV with Movitec 2B / 4B



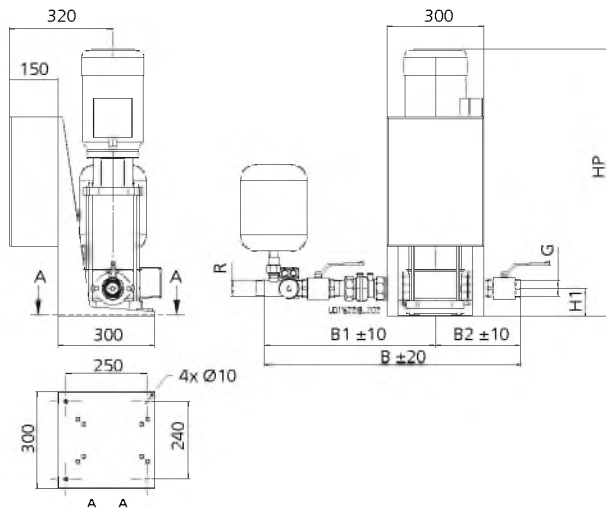
External thread R to DIN EN 10226
Internal thread G to DIN ISO 228-1

Dimensions [mm]

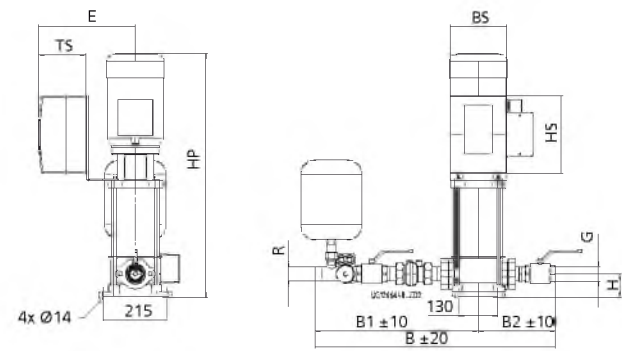
Hya-Solo D / DSV	Suction-side connection	Discharge-side connection	Pump					PumpDrive HS × BS × TS	Distance E
			HP	H1	B	B1	B2		
1/0202 B	G 1	R 1	472	50	684	476	208	260 × 190 × 158	251
1/0203 B	G 1	R 1	493	50	684	476	208	260 × 190 × 158	251
1/0204 B	G 1	R 1	515	50	684	476	208	260 × 190 × 158	251
1/0205 B	G 1	R 1	536	50	684	476	208	260 × 190 × 158	251
1/0206 B	G 1	R 1	558	50	684	476	208	260 × 190 × 158	251
1/0207 B	G 1	R 1	579	50	684	476	208	260 × 190 × 158	251
1/0208 B	G 1	R 1	601	50	684	476	208	260 × 190 × 158	251
1/0209 B	G 1	R 1	676	50	684	476	208	260 × 190 × 158	251
1/0210 B	G 1	R 1	698	50	684	476	208	260 × 190 × 158	251
1/0211 B	G 1	R 1	719	50	684	476	208	260 × 190 × 158	251
1/0212 B	G 1	R 1	741	50	684	476	208	260 × 190 × 158	251
1/0214 B	G 1	R 1	784	50	684	476	208	260 × 190 × 158	286
1/0216 B	G 1	R 1	833	50	684	476	208	260 × 190 × 158	286
1/0218 B	G 1	R 1	833	50	684	476	208	260 × 190 × 158	286
1/0402 B	G 1	R 1	472	50	728	502	226	260 × 190 × 158	251
1/0403 B	G 1	R 1	493	50	728	502	226	260 × 190 × 158	251
1/0404 B	G 1	R 1	515	50	728	502	226	260 × 190 × 158	251
1/0405 B	G 1	R 1	590	50	728	502	226	260 × 190 × 158	251
1/0406 B	G 1	R 1	612	50	728	502	226	260 × 190 × 158	251
1/0407 B	G 1	R 1	633	50	728	502	226	260 × 190 × 158	251
1/0408 B	G 1	R 1	661	50	728	502	226	260 × 190 × 158	286
1/0409 B	G 1	R 1	682	50	728	502	226	260 × 190 × 158	286
1/0410 B	G 1	R 1	704	50	728	502	226	260 × 190 × 158	286
1/0411 B	G 1	R 1	754	50	728	502	226	260 × 190 × 158	286
1/0412 B	G 1	R 1	776	50	728	502	226	260 × 190 × 158	286
1/0414 B	G 1	R 1	819	50	728	502	226	260 × 190 × 158	286
1/0416 B	G 1	R 1	904	50	728	502	226	260 × 190 × 158	286

Hya-Solo D / DSV with Movitec 6B / 10B

Hya-Solo D with Movitec 6B / 10B



Hya-Solo DSV with Movitec 6B / 10B



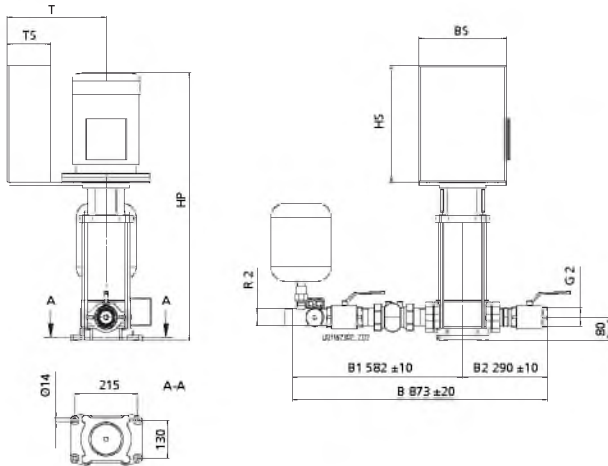
External thread R to DIN EN 10226
Internal thread G to DIN ISO 228-1

Dimensions [mm]

Hya-Solo D / DSV	Suction-side connection	Discharge-side connection	Pump					PumpDrive HS × BS × TS	Distance E
			HP	H1	B	B1	B2		
1/0602 B	G 1 1/4	R 1 1/4	479	50	728	502	226	260 × 190 × 158	251
1/0603 B	G 1 1/4	R 1 1/4	558	50	728	502	226	260 × 190 × 158	251
1/0604 B	G 1 1/4	R 1 1/4	583	50	728	502	226	260 × 190 × 158	251
1/0605 B	G 1 1/4	R 1 1/4	608	50	728	502	226	260 × 190 × 158	286
1/0606 B	G 1 1/4	R 1 1/4	639	50	728	502	226	260 × 190 × 158	286
1/0607 B	G 1 1/4	R 1 1/4	664	50	728	502	226	260 × 190 × 158	286
1/0608 B	G 1 1/4	R 1 1/4	718	50	728	502	226	260 × 190 × 158	286
1/0609 B	G 1 1/4	R 1 1/4	743	50	728	502	226	260 × 190 × 158	286
1/0610 B	G 1 1/4	R 1 1/4	768	50	728	502	226	260 × 190 × 158	286
1/0611 B	G 1 1/4	R 1 1/4	835	50	728	502	226	260 × 190 × 158	286
1/0612 B	G 1 1/4	R 1 1/4	835	50	728	502	226	400 × 300 × 150	286
1/0614 B	G 1 1/4	R 1 1/4	860	50	728	502	226	260 × 190 × 158	286
1/0616 B	G 1 1/4	R 1 1/4	910	50	728	502	226	260 × 190 × 158	286
1/1002 B	G 1 1/2	R 1 1/2	608	80	818	554	264	260 × 190 × 158	251
1/1003 B	G 1 1/2	R 1 1/2	634	80	818	554	264	260 × 190 × 158	251
1/1004 B	G 1 1/2	R 1 1/2	666	80	818	554	264	260 × 190 × 158	286
1/1005 B	G 1 1/2	R 1 1/2	707	80	818	554	264	260 × 190 × 158	286
1/1006 B	G 1 1/2	R 1 1/2	734	80	818	554	264	260 × 190 × 158	286
1/1007 B	G 1 1/2	R 1 1/2	815	80	818	554	264	260 × 190 × 158	286
1/1008 B	G 1 1/2	R 1 1/2	842	80	818	554	264	260 × 190 × 158	286
1/1009 B	G 1 1/2	R 1 1/2	878	80	818	554	264	260 × 190 × 158	305
1/1010 B	G 1 1/2	R 1 1/2	905	80	818	554	264	260 × 190 × 158	305
1/1011 B	G 1 1/2	R 1 1/2	931	80	818	554	264	260 × 190 × 158	328
1/1013 B	G 1 1/2	R 1 1/2	1089	80	818	554	264	325 × 250 × 170	328

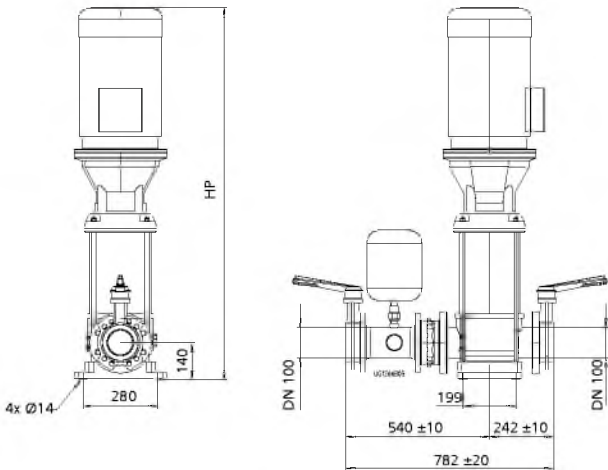
Hya-Solo D with Movitec 15B / 25B / 40B / 60B / 90B

Hya-Solo D with Movitec 15B



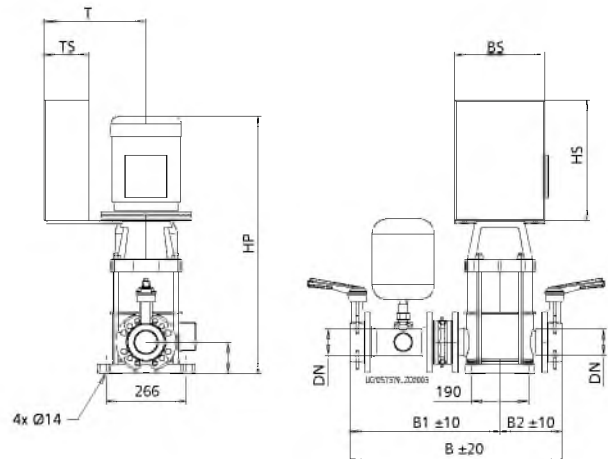
External thread R to DIN EN 10226
Internal thread G to DIN ISO 228-1

Hya-Solo D with Movitec 90B



Flanges drilled to EN 1092-1 PN 16
Butterfly valves and dry running protection equipment are supplied but not fitted.
Control cabinet for wall mounting

Hya-Solo D with Movitec 25B / 40B / 60B



Flanges drilled to EN 1092-1 PN 16
Butterfly valves and dry running protection equipment are supplied but not fitted.

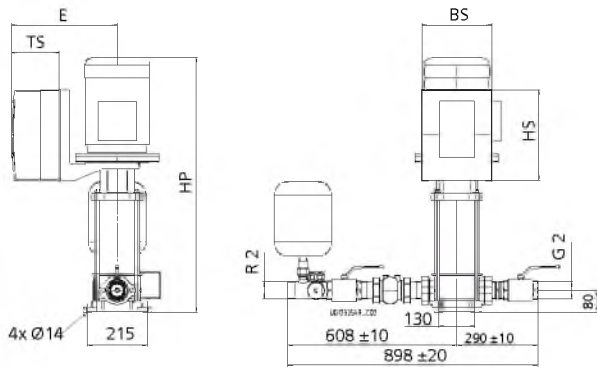
Dimensions [mm]

Hya-Solo D	Suction-side connection	Discharge-side connection	Pump					Control unit HS x WS x DS	Distance T
			HP	H1	B	B1	B2		
1/1502 B	G 2	R 2	628	80	873	582	290	400 × 300 × 150	286
1/1503 B	G 2	R 2	709	80	873	582	290	400 × 300 × 150	286
1/1504 B	G 2	R 2	746	80	873	582	290	400 × 300 × 150	305
1/1505 B	G 2	R 2	877	80	873	582	290	600 × 400 × 200	328
1/1506 B	G 2	R 2	903	80	873	582	290	600 × 400 × 200	328
1/1507 B	G 2	R 2	930	80	873	582	290	600 × 400 × 200	328
1/1508 B	G 2	R 2	956	80	873	582	290	600 × 400 × 200	328
1/1509 B	G 2	R 2	1146	80	873	582	290	600 × 400 × 200	431
1/1510 B	G 2	R 2	1172	80	873	582	290	600 × 400 × 200	431
1/2502 B	DN 65	DN 65	818	105	700	494	206	400 × 300 × 150	305
1/2503 B	DN 65	DN 65	998	105	700	494	206	600 × 400 × 200	328
1/2504 B	DN 65	DN 65	1064	105	700	494	206	600 × 400 × 200	328
1/2505 B	DN 65	DN 65	1292	105	700	494	206	600 × 400 × 200	431
1/2506 B	DN 65	DN 65	1357	105	700	494	206	600 × 400 × 200	431

Hya-Solo D	Suction-side connection	Discharge-side connection	Pump					Control unit	Distance
			HP	H1	B	B1	B2	HS x WS x DS	T
1/2507 B	DN 65	DN 65	1422	105	700	494	206	600 × 400 × 200	431
1/4002-2 B	DN 80	DN 80	1002	140	748	520	228	600 × 400 × 200	328
1/4002 B	DN 80	DN 80	1002	140	748	520	228	600 × 400 × 200	328
1/4003-2 B	DN 80	DN 80	1261	140	748	520	228	600 × 400 × 200	431
1/4003 B	DN 80	DN 80	1261	140	748	520	228	600 × 400 × 200	431
1/4004-2 B	DN 80	DN 80	1339	140	748	520	228	600 × 400 × 200	431
1/4004 B	DN 80	DN 80	1339	140	748	520	228	600 × 400 × 200	431
1/4005-2 B	DN 80	DN 80	1499	140	748	520	228	600 × 400 × 200	431
1/4005 B	DN 80	DN 80	1499	140	748	520	228	600 × 400 × 200	431
1/4006-2 B	DN 80	DN 80	1577	140	748	520	228	600 × 400 × 200	431
1/4006 B	DN 80	DN 80	1577	140	748	520	228	600 × 400 × 200	431
1/6001 B	DN 100	DN 100	942	140	767	533	234	600 × 400 × 200	328
1/6002-2 B	DN 100	DN 100	1020	140	767	533	234	600 × 400 × 200	328
1/6002 B	DN 100	DN 100	1183	140	767	533	234	600 × 400 × 200	431
1/6003-2 B	DN 100	DN 100	1261	140	767	533	234	600 × 400 × 200	431
1/6003 B	DN 100	DN 100	1341	140	767	533	234	600 × 400 × 200	431
1/6004-2 B	DN 100	DN 100	1421	140	767	533	234	600 × 400 × 200	431
1/6004 B	DN 100	DN 100	1421	140	767	533	234	600 × 400 × 200	431
1/6005-2 B	DN 100	DN 100	1499	140	767	533	234	600 × 400 × 200	431
1/9002-2 B	DN 100	DN 100	1282	140	782	533	242	600 × 400 × 200	-
1/9002-1 B	DN 100	DN 100	1282	140	782	533	242	600 × 400 × 200	-
1/9002 B	DN 100	DN 100	1282	140	782	533	242	600 × 400 × 200	-
1/9003-1 B	DN 100	DN 100	1484	140	782	533	242	600 × 400 × 200	-
1/9003-2 B	DN 100	DN 100	1484	140	782	533	242	600 × 400 × 200	-
1/9003 B	DN 100	DN 100	1484	140	782	533	242	600 × 400 × 200	-
1/9004-1 B	DN 100	DN 100	1713	140	782	533	242	600 × 400 × 200	-
1/9004-2 B	DN 100	DN 100	1713	140	782	533	242	600 × 400 × 200	-
1/9004 B	DN 100	DN 100	1713	140	782	533	242	600 × 400 × 200	-
1/9005-2 B	DN 100	DN 100	1822	140	782	533	242	600 × 400 × 200	-
1/9005-1 B	DN 100	DN 100	1822	140	782	533	242	600 × 400 × 200	-
1/9005 B	DN 100	DN 100	1822	140	782	533	242	600 × 400 × 200	-

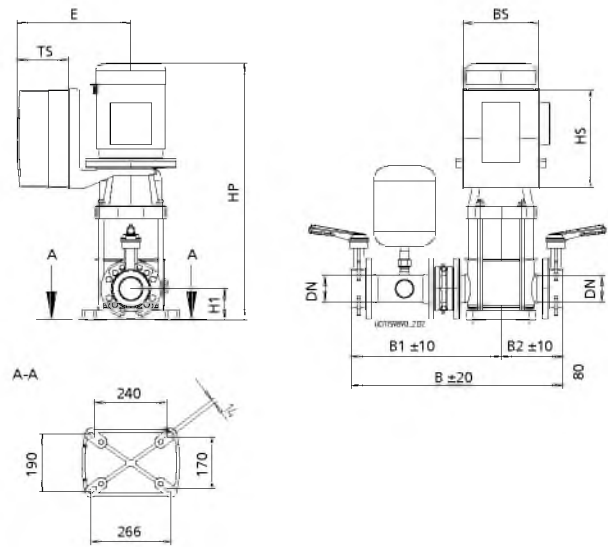
Hya-Solo DSV with Movitec 15B / 25B / 40B / 60B / 90B

Hya-Solo DSV with Movitec 15B



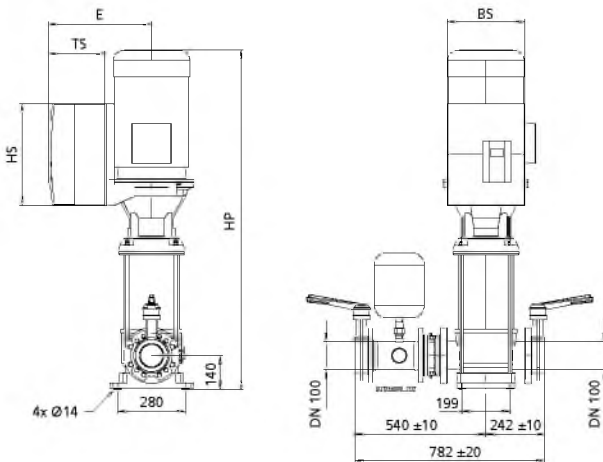
External thread R to DIN EN 10226
Internal thread G to DIN ISO 228-1

Hya-Solo DSV with Movitec 25B / 40B / 60B



Flanges drilled to EN 1092-1 PN 16
Butterfly valves and dry running protection equipment are supplied but not fitted.

Hya-Solo DSV with Movitec 90B




Flanges drilled to EN 1092-1 PN 16
Butterfly valves and dry running protection equipment are supplied but not fitted.

Dimensions [mm]

Hya-Solo DSV	Suction-side connection	Discharge-side connection	Pump					PumpDrive	Distance
			HP	H1	B	B1	B2		
1/1502 B	G 2	R 2	628	80	898	608	290	260 × 190 × 158	286
1/1503 B	G 2	R 2	709	80	898	608	290	260 × 190 × 158	286
1/1504 B	G 2	R 2	746	80	898	608	290	260 × 190 × 158	305
1/1505 B	G 2	R 2	877	80	898	608	290	325 × 250 × 170	328
1/1506 B	G 2	R 2	903	80	898	608	290	325 × 250 × 170	328
1/1507 B	G 2	R 2	930	80	898	608	290	325 × 250 × 170	328
1/1508 B	G 2	R 2	956	80	898	608	290	325 × 250 × 170	328
1/1509 B	G 2	R 2	1146	80	898	608	290	420 × 320 × 235	431
1/1510 B	G 2	R 2	1172	80	898	608	290	420 × 320 × 235	431
1/2502 B	DN 65	DN 65	818	105	700	494	206	260 × 190 × 158	305
1/2503 B	DN 65	DN 65	999	105	700	494	206	325 × 250 × 170	328
1/2504 B	DN 65	DN 65	1064	105	700	494	206	325 × 250 × 170	328

Hya-Solo DSV	Suction-side connection	Discharge-side connection	Pump					PumpDrive	Distance
			HP	H1	B	B1	B2	HS x WS x DS	E
1/2505 B	DN 65	DN 65	1292	105	700	494	206	420 x 320 x 235	431
1/2506 B	DN 65	DN 65	1357	105	700	494	206	420 x 320 x 235	431
1/2507 B	DN 65	DN 65	1422	105	700	494	206	420 x 320 x 235	431
1/4002-2 B	DN 80	DN 80	1002	140	703	497	206	325 x 250 x 170	328
1/4002 B	DN 80	DN 80	1002	140	703	497	206	325 x 250 x 170	328
1/4003-2 B	DN 80	DN 80	1261	140	703	497	206	420 x 320 x 235	431
1/4003 B	DN 80	DN 80	1261	140	703	497	206	420 x 320 x 235	431
1/4004-2 B	DN 80	DN 80	1339	140	703	497	206	420 x 320 x 235	431
1/4004 B	DN 80	DN 80	1339	140	703	497	206	420 x 320 x 235	431
1/4005-2 B	DN 80	DN 80	1499	140	703	497	206	420 x 320 x 235	431
1/4005 B	DN 80	DN 80	1499	140	703	497	206	420 x 320 x 235	431
1/4006-2 B	DN 80	DN 80	1577	140	703	497	206	420 x 320 x 235	431
1/4006 B	DN 80	DN 80	1577	140	703	497	206	420 x 320 x 235	431
1/6001 B	DN 100	DN 100	942	140	767	533	234	325 x 250 x 170	328
1/6002-2 B	DN 100	DN 100	1020	140	767	533	234	325 x 250 x 170	328
1/6002 B	DN 100	DN 100	1183	140	767	533	234	420 x 320 x 235	431
1/6003-2 B	DN 100	DN 100	1261	140	767	533	234	420 x 320 x 235	431
1/6003 B	DN 100	DN 100	1341	140	767	533	234	420 x 320 x 235	431
1/6004-2 B	DN 100	DN 100	1421	140	767	533	234	420 x 320 x 235	431
1/6004 B	DN 100	DN 100	1421	140	767	533	234	420 x 320 x 235	431
1/6005-2 B	DN 100	DN 100	1499	140	767	533	234	420 x 320 x 235	431
1/9002-2 B	DN 100	DN 100	1282	140	782	540	242	420 x 320 x 235	431
1/9002-1 B	DN 100	DN 100	1282	140	782	540	242	420 x 320 x 235	431
1/9002 B	DN 100	DN 100	1282	140	782	540	242	420 x 320 x 235	431
1/9003-1 B	DN 100	DN 100	1484	140	782	540	242	420 x 320 x 235	431
1/9003-2 B	DN 100	DN 100	1484	140	782	540	242	420 x 320 x 235	431
1/9003 B	DN 100	DN 100	1484	140	782	540	242	420 x 320 x 235	431
1/9004-1 B	DN 100	DN 100	1713	140	782	540	242	600 x 450 x 290	520
1/9004-2 B	DN 100	DN 100	1713	140	782	540	242	600 x 450 x 290	520
1/9004 B	DN 100	DN 100	1713	140	782	540	242	600 x 450 x 290	520
1/9005-2 B	DN 100	DN 100	1822	140	782	540	242	600 x 450 x 290	520
1/9005-1 B	DN 100	DN 100	1822	140	782	540	242	600 x 450 x 290	520
1/9005 B	DN 100	DN 100	1822	140	782	540	242	600 x 450 x 290	520

Accessories

 See the separate type series booklet Accessories for Pressure Booster Systems 1954.5.

Pressure Booster System

Surpresschrom SIC.2 SVP

Type Series Booklet



Contents

Building Services: Water Supply 4

 Pressure Booster Systems 4

 Surpresschrom SIC.2 SVP 4

 Main applications 4

 Fluids handled 4

 Operating data 4

 Designation 4

 Design details 4

 Configuration and function 5

 Materials 5

 Product benefits 6

 Selection information 6

 Flow diagram 7

 Technical data 9

 Selection chart 11

 Characteristic curves 12

 Dimensions and weights 21

 Scope of supply 29

 Accessories 29

Building Services: Water Supply

Pressure Booster Systems

Surpresschrom SIC.2 SVP



Main applications

- Pressure boosting

Fluids handled

Pump for handling clean liquids not chemically and mechanically aggressive to the pump materials.

- Drinking water
- Service water
- Cooling water

Operating data

Operating properties

Characteristic	Value
Flow rate	Q [m ³ /h] ≤ 660 with a max. of 6 pumps ¹⁾
	Q [l/s] ≤ 183 with a max. of 6 pumps ¹⁾
Head	H [m] ≤ 160
Fluid temperature	T [°C] ≤ 70
	≤ 25 to DIN 1988 (DVGW)
Operating pressure	p _d [bar] ≤ 16
Inlet pressure	p _{vor} [bar] ≤ 10

Designation

Example: Surpresschrom SIC.2B SVP 4.2.8 C

Designation key

Code	Description
Surpresschrom SIC	Pressure booster system
2B	Design status

¹⁾ With stand-by pump as peak load pump

Code	Description
SVP	All pumps in variable-speed operation
4	Pump size
2	Number of pumps
8	Number of stages
C	Types of connection V, C or A

Design details

Design

- Fully automatic pressure booster package system
- Baseplate-mounted
- Two to six vertical high-pressure centrifugal pumps with continuously variable speed adjustment
- Hydraulic components made of stainless steel / brass
- One check valve (depending on the installation type) and shut-off valves for each pump
- Anti-vibration mounts for each pump for systems with Movitec 2B, 4B, 6B, 10B, 15B
- Systems with level-adjustable feet with rubber pads (supplied but not fitted) for systems with Movitec 25B, 40B, 60B and 90B
- Membrane-type accumulator (direct-flow) to DIN 4807-5 on the discharge side, approved for drinking water
- Pressure gauge for pressure indication
- Pressure transmitter on the discharge side

Compliance with standards

- EN 809
- EN 806-2
- EN 60204-1
- ISO 12100-1 and 2
- NFC 15-100

ACS-approved (Attestation de Conformité Sanitaire)

Installation type

- Stationary installation

Drive

- High-efficiency magnet-less KSB-SuPremE-IE4 motor (as per IEC/CD 60034-30 Ed. 2)

Automation

- Control cabinet IP54
- Pump control and monitoring unit
- Graphical display with operating panel
- LEDs indicating operational availability and fault of the system
- Service interface for connection to a PC
- Frequency inverter
- Transformer for control voltage
- Motor protection switch per pump
- Lockable master switch (repair switch)
- Pressure transmitter on the discharge side
- Circuit diagram and list of electric components
- Terminal strip/terminals with identification for all connections

- Connection for analog or digital dry running protection equipment
- External ON/OFF connection
- Field bus connection (optional)

Volt-free signals

- Volt-free signals for dry running protection, warning and alert as standard
- Volt-free signals for operation and fault per pump, voltage monitoring and phase monitoring (optional)

Configuration and function



Illustration of pressure booster system

1	Control unit	2	Control cabinet
3	Motor with variable speed system	4	Pump
5	Manifold	6	Baseplate

Design

The fully automatic pressure booster system is equipped with two to six vertical high-pressure pumps (4) (all of which are speed-controlled) for pumping the fluid handled to the consumer installations in the set pressure range.

Function

Automatic mode

Two to six pumps (4) are controlled and monitored by a micro-processor control unit (1). Each pump is operated on a frequency inverter and controlled by the control unit so as to ensure a constant discharge pressure of the pressure booster system. As the demand increases or decreases, peak load pumps are started and stopped automatically.

As soon as the demand increases again after one pump has been stopped, another pump which has not been in operation before is started up. When the last pump has been stopped and the demand increases again, the next pump in line is started up in variable speed operation. The stand-by pump is also included in the alternating cycle. The standard setting is for the pressure booster system to start automatically as a function of pressure; the actual pressure is measured by an analog pressure measuring device (pressure transmitter). The function of this pressure transmitter is monitored (live-zero). As long as the pressure booster system is in operation, the pumps are started and stopped as a function of demand (standard setting). In this way it is ensured that the individual pumps operate only in line with actual demand. The use of variable speed pumps reduces wear as well as the pumps' frequency of starts in parallel operation. If a duty pump fails,

the next pump is started up immediately and a fault is output, which can be reported via volt-free contacts (e.g. to the control station). If the demand drops towards 0, the pressure booster system slowly runs down to the stop point. The operating status is displayed via LEDs.

Function

Energy-saving mode

In conjunction with a very large discharge-side accumulator, the energy-saving mode prevents the pressure booster system from running at the least efficient operating point, supplying very small amounts of water.

If very small amounts of water are consumed the pressure booster system only fills the downstream accumulator and stops.

Any small water volumes required can then be supplied from the accumulator.

Function

Manual mode

Depending on the equipment the pressure booster system is supplied with, the pumps can be operated in manual mode in either one or two different ways.

Standard: By making the appropriate settings at the display, one of the pumps can be operated directly on mains power for 10 seconds, independently of the control unit. The pump will then automatically return to OFF mode.

Supplementary equipment: Manual-0-automatic selector switches can be supplied as supplementary equipment. They can be used to operate each pump directly on mains power, independently of the control unit.

In manual mode, a minimum flow (see table below) is essential to prevent the fluid handled and/or the pump from overheating when no water is consumed at the consumer installations.

Minimum flow for pump in manual mode

Minimum flow per pump in manual mode

Pump	Minimum flow per pump in manual mode [l/h]
Movitec 2B	200
Movitec 4B	400
Movitec 6B	600
Movitec 10B	1100
Movitec 15B	1600
Movitec 25B	2800
Movitec 40B	4600
Movitec 60B	6100
Movitec 90B	8500

Example

An open 1/2-inch tap equals a water consumption of approx. 800 to 1,200 l/h.

Materials

Overview of available materials

Component	Material
Pump casing	Stainless steel
Shroud	Stainless steel
Hydraulic system	Stainless steel
Mechanical seal	Complies with EN 12756
Primary ring	Silicon carbide
Mating ring	Hard carbon
Elastomer	EPDM
Baseplate	Steel, with powder or paint coating
Hydraulic design	

Component	Material
Manifold	Stainless steel
Valves	Copper-base alloy / brass or nodular cast iron / EPDM DVGW-approved Approved for drinking water
Accumulator	Connection made of stainless steel, flow through valve to DIN 4807-5
Membrane	Approved for drinking water

Product benefits

- Energy-efficiency optimised by high-efficiency magnet-less KSB-SuPremE-IE4 motor (to IEC/CD 60034-30 Ed. 2) and energy-saving function
- Ready-to-connect, supplied pre-set and tested for functionality
- User-friendly, straightforward menu navigation
- Reliable operation by corrosion-resistant internal parts
- Suitable for drinking water installations, manufactured under stringent hygienic conditions
- Hydraulic components made of stainless steel / brass

Selection information

A pressure booster system in an overall system behaves similar to a single pump. Its behaviour depends on several factors, some of which are system-specific. All conditions that can influence the operation of the pressure booster system should be considered during selection. Rather than focussing entirely on the demand to be satisfied on the discharge side, make sure that the suction-side conditions of the pressure booster system are also met.

The following parameters define the operating data of the system:

- Flow rate Q: maximum demand
- Head H in metres of water: system head at the least favourable consumer installation
- Conditions for supplying the pressure booster system with water and power. See the section on "Operating limit"
- Always inform KSB if the distribution network comprises control equipment, such as pressure reducers or control valves, installed downstream of the pressure booster system.

Operating conditions

- Consumption profile
This reflects the consumption and its minimum/maximum peaks. This parameter is required to determine the optimum number of pumps and the most suitable control mode. Typical profiles are known especially from drinking water supply or pressure boosting tasks for drinking water applications. For industrial applications an exact analysis of the profile is essential.
- Special requirements mentioned in the functional requirements specification (if any)

Application limits

Place of installation:
The maximum ambient temperature depends on the relative atmospheric humidity.

Atmospheric humidity

Temperature [°C]	Atmospheric humidity [%]
40	50
30	65
20	80

Maximum installation altitude: 1000 m above MSL (for higher altitudes, derate the motor power by 1 % per 100 m).

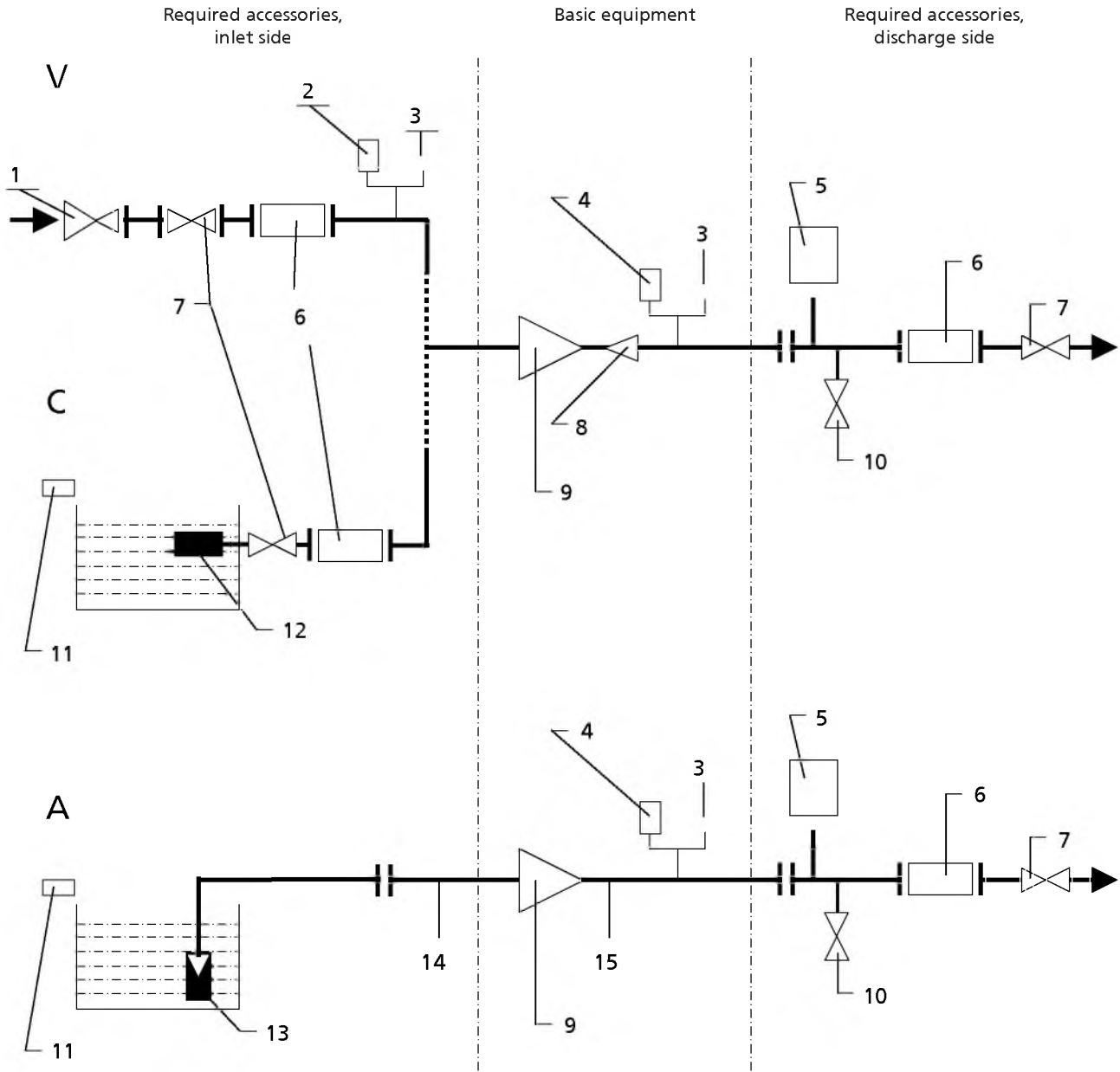
Accumulator in combination with a variable speed system

Unless otherwise specified in special regulations, installing an accumulator is recommended, especially for maintaining the pressure in the piping network during standstill of the pressure booster system. The accumulator volume is not stipulated in any regulations. The selection is based on the system-specific conditions (as a basic solution KSB offers an 8-litre accumulator). The standstill times of the pressure booster system depend on the volume the accumulator can feed back into the piping system. The accumulator size should be a compromise and take into account possible leakages in the piping system.

Determining the power input

- The power input is indicated per stage (St = 1) and/or per stage with a smaller impeller (St = -1).
The pump input power can be calculated accordingly.
Calculation: value indicated in the diagram (St = 1) × number of stages + value indicated in the diagram (St = -1) × number of stages with a smaller impeller
Example 1, Movitec 90/4: P = (St = 1) × 4
Example 2, Movitec 90/4-1: P = (St = 1) × 3 + (St = -1)
Example 3, Movitec 90/4-2: P = (St = 1) × 2 + (St = -1) × 2

Flow diagram



1	Pressure reducer	2	Pressure switch
3	Pressure gauge	4	Pressure sensor
5	Membrane-type accumulator	6	Expansion joint
7	Shut-off valve, system	8	Check valve (integrated in pump)
9	Pressure booster system	10	Drain valve
11	Float switch	12	Suction-side filter
13	Foot valve (1 per pump)	14	Inlet pipe per pump
15	Removed check valve		
V	Connection type V (direct connection)	C	Connection type C (indirect connection)
A	Connection type A (suction lift operation)		

V = connection type V (direct connection)	C = connection type C (indirect connection)	A = connection type A (suction lift operation)
<p>For strong inlet pressure fluctuations using a pressure reducer is recommended (see accessories).</p> <p>Accessories to be added to the scope of supply:</p> <ul style="list-style-type: none"> ▪ Dry running protection via pressure switch ▪ Membrane-type accumulator 	<p>For connection type C the pressure booster system is factory-set to a supply head of 1 m.</p> <p>In order to prevent water vortices in the inlet tank the minimum water level for the inlet tank must be observed.</p> <p>The inlet line diameter must be chosen for the flow velocity not to exceed 1.5 m/s.</p> <p>Accessories to be added to the scope of supply:</p> <ul style="list-style-type: none"> ▪ Dry running protection via float switch ▪ Membrane-type accumulator <p>For supply heads of 8 m and higher, direct connection (connection type V) has to be selected.</p>	<p>The pressure booster system is supplied without a suction-side manifold and check valve.</p> <p>In this design the pumps are connected to the water supply with individual inlet pipes. A foot valve (check valve) for each pump is required to prevent backflow.</p> <p>The inlet line diameter must be chosen for the flow velocity not to exceed 1.5 m/s.</p> <p>For selecting the foot valve observe the manufacturer's information (consultation by KSB on request).</p> <p>Verify that the NPSH values of pump and system are suitable.</p> <p>Accessories to be added to the scope of supply:</p> <ul style="list-style-type: none"> ▪ Dry running protection via float switch ▪ Membrane-type accumulator

Technical data
Electrical performance data

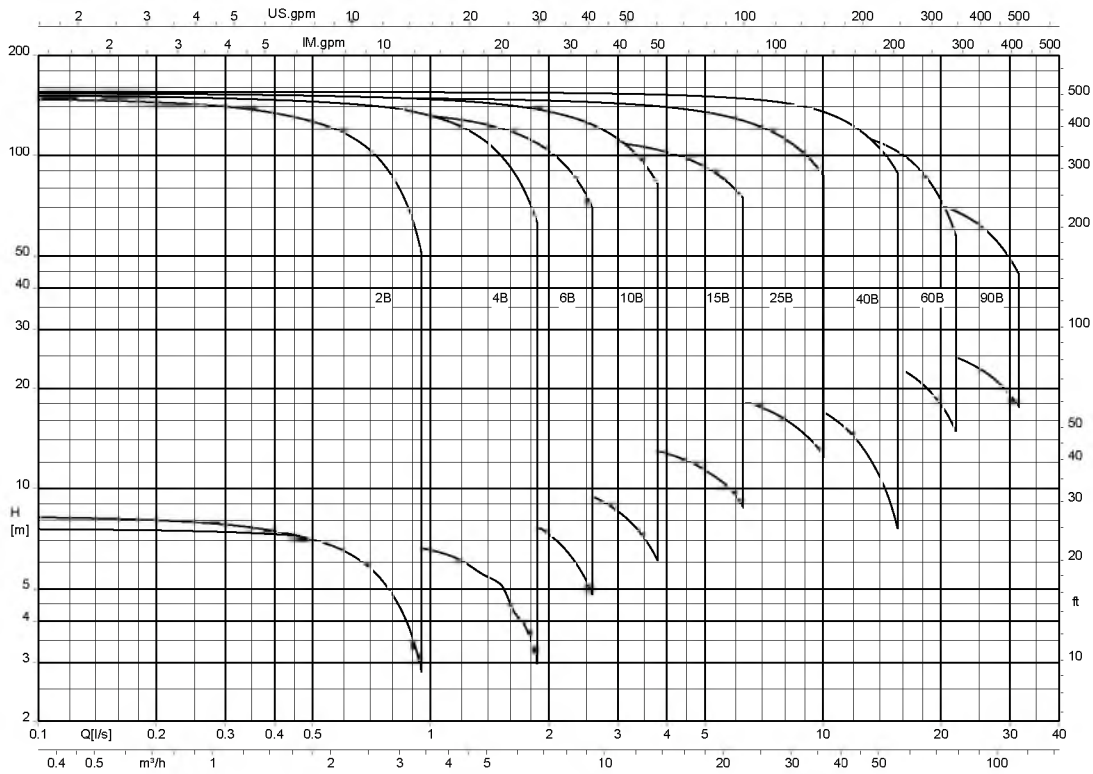
Electrical performance data

Surpresschrom SIC.2 SVP with Movitec pumps	Rated power per motor	Rated current per motor at 400 V	Total rated power [kVA]						Noise characteristics					
			Number of pumps (motors)						Number of pumps (motors)					
	[kW]	[A]	2	3	4	5	6	2	3	4	5	6		
0202 B	0,55	1,6	2,3	3,5	4,7	5,8	7	73	74,8	76	77	77,8		
0203 B	0,55	1,6	2,3	3,5	4,7	5,8	7	73	74,8	76	77	77,8		
0204 B	0,55	1,6	2,3	3,5	4,7	5,8	7	73	74,8	76	77	77,8		
0205 B	0,55	1,6	2,3	3,5	4,7	5,8	7	73	74,8	76	77	77,8		
0206 B	0,55	1,6	2,3	3,5	4,7	5,8	7	73	74,8	76	77	77,8		
0207 B	0,55	1,6	2,3	3,5	4,7	5,8	7	73	74,8	76	77	77,8		
0208 B	0,55	1,6	2,3	3,5	4,7	5,8	7	73	74,8	76	77	77,8		
0209 B	0,75	2,1	3,1	4,6	6,1	7,6	9,2	73	74,8	76	77	77,8		
0210 B	0,75	2,1	3,1	4,6	6,1	7,6	9,2	73	74,8	76	77	77,8		
0211 B	1,1	3	4,4	6,5	8,7	10,9	13,1	73	74,8	76	77	77,8		
0212 B	1,1	3	4,4	6,5	8,7	10,9	13,1	73	74,8	76	77	77,8		
0214 B	1,1	3	4,4	6,5	8,7	10,9	13,1	73	74,8	76	77	77,8		
0216 B	1,5	4,1	6	8,9	11,9	14,9	17,9	73	74,8	76	77	77,8		
0218 B	1,5	4,1	6	8,9	11,9	14,9	17,9	73	74,8	76	77	77,8		
0402 B	0,55	1,6	2,3	3,5	4,7	5,8	7	73	74,8	76	77	77,8		
0403 B	0,55	1,6	2,3	3,5	4,7	5,8	7	73	74,8	76	77	77,8		
0404 B	0,55	1,6	2,3	3,5	4,7	5,8	7	73	74,8	76	77	77,8		
0405 B	0,75	2,1	3,1	4,6	6,1	7,6	9,2	73	74,8	76	77	77,8		
0406 B	1,1	3	4,4	6,5	8,7	10,9	13,1	73	74,8	76	77	77,8		
0407 B	1,1	3	4,4	6,5	8,7	10,9	13,1	73	74,8	76	77	77,8		
0408 B	1,5	4,1	6	8,9	11,9	14,9	17,9	73	74,8	76	77	77,8		
0409 B	1,5	4,1	6	8,9	11,9	14,9	17,9	73	74,8	76	77	77,8		
0410 B	1,5	4,1	6	8,9	11,9	14,9	17,9	73	74,8	76	77	77,8		
0411 B	2,2	5,6	8,1	12,2	16,3	20,4	24,4	73	74,8	76	77	77,8		
0412 B	2,2	5,6	8,1	12,2	16,3	20,4	24,4	73	74,8	76	77	77,8		
0414 B	2,2	5,6	8,1	12,2	16,3	20,4	24,4	73	74,8	76	77	77,8		
0416 B	3	7,6	11,1	16,6	22,1	27,6	33,2	74	75,8	77	78	78,8		
0602 B	0,55	1,6	2,3	3,5	4,7	5,8	7	73	74,8	76	77	77,8		
0603 B	0,75	2,1	3,1	4,6	6,1	7,6	9,2	73	74,8	76	77	77,8		
0604 B	1,1	3	4,4	6,5	8,7	10,9	13,1	73	74,8	76	77	77,8		
0605 B	1,1	3	4,4	6,5	8,7	10,9	13,1	73	74,8	76	77	77,8		
0606 B	1,5	4,1	6	8,9	11,9	14,9	17,9	73	74,8	76	77	77,8		
0607 B	1,5	4,1	6	8,9	11,9	14,9	17,9	73	74,8	76	77	77,8		
0608 B	2,2	5,6	8,1	12,2	16,3	20,4	24,4	73	74,8	76	77	77,8		
0609 B	2,2	5,6	8,1	12,2	16,3	20,4	24,4	73	74,8	76	77	77,8		
0610 B	2,2	5,6	8,1	12,2	16,3	20,4	24,4	73	74,8	76	77	77,8		
0611 B	3	7,6	11,1	16,6	22,1	27,6	33,2	74	75,8	77	78	78,8		
0612 B	3	7,6	11,1	16,6	22,1	27,6	33,2	74	75,8	77	78	78,8		
0614 B	3	7,6	11,1	16,6	22,1	27,6	33,2	74	75,8	77	78	78,8		
1002 B	0,75	2,1	3,1	4,6	6,1	7,6	9,2	73	74,8	76	77	77,8		
1003 B	1,1	3	4,4	6,5	8,7	10,9	13,1	73	74,8	76	77	77,8		
1004 B	1,5	4,1	6	8,9	11,9	14,9	17,9	73	74,8	76	77	77,8		
1005 B	2,2	5,6	8,1	12,2	16,3	20,4	24,4	73	74,8	76	77	77,8		
1006 B	2,2	5,6	8,1	12,2	16,3	20,4	24,4	73	74,8	76	77	77,8		
1007 B	3	7,6	11,1	16,6	22,1	27,6	33,2	74	75,8	77	78	78,8		
1008 B	3	7,6	11,1	16,6	22,1	27,6	33,2	74	75,8	77	78	78,8		
1009 B	4	9,4	13,7	20,5	27,4	34,2	41	74	75,8	77	78	78,8		
1010 B	4	9,4	13,7	20,5	27,4	34,2	41	74	75,8	77	78	78,8		
1011 B	4	9,4	13,7	20,5	27,4	34,2	41	74	75,8	77	78	78,8		
1013 B	5,5	12,5	18,2	27,3	36,4	45,5	54,6	74	75,8	77	78	78,8		
1502 B	2,2	5,6	8,1	12,2	16,3	20,4	24,4	73	74,8	76	77	77,8		
1503 B	3	7,6	11,1	16,6	22,1	27,6	33,2	74	75,8	77	78	78,8		
1504 B	4	9,4	13,7	20,5	27,4	34,2	41	74	75,8	77	78	78,8		
1505 B	5,5	12,5	18,2	27,3	36,4	45,5	54,6	74	75,8	77	78	78,8		
1506 B	5,5	12,5	18,2	27,3	36,4	45,5	54,6	74	75,8	77	78	78,8		
1507 B	7,5	16,7	24,3	36,4	48,6	60,7	72,9	74	75,8	77	78	78,8		
1508 B	7,5	16,7	24,3	36,4	48,6	60,7	72,9	74	75,8	77	78	78,8		

Surpresschrom SIC.2 SVP with Movitec pumps	Rated power per motor	Rated current per motor at 400 V	Total rated power [kVA]					Noise characteristics				
			Number of pumps (motors)					Number of pumps (motors)				
	[kW]	[A]	2	3	4	5	6	2	3	4	5	6
2502 B	4	9,4	13,7	20,5	27,4	34,2	41	74	75,8	77	78	78,8
2503 B	5,5	12,5	18,2	27,3	36,4	45,5	54,6	74	75,8	77	78	78,8
2504 B	7,5	16,7	24,3	36,4	48,6	60,7	72,9	74	75,8	77	78	78,8
2505 B	11	23,7	34,5	51,7	69	86,2	103,4	74	75,8	77	78	78,8
2506 B	11	23,7	34,5	51,7	69	86,2	103,4	74	75,8	77	78	78,8
2507 B	15	32	46,6	69,8	93,1	116,4	139,7	74	75,8	77	78	78,8
4002-2 B	5,5	12,5	18,2	27,3	36,4	45,5	54,6	74	75,8	77	78	78,8
4002 B	7,5	16,7	24,3	36,4	48,6	60,7	72,9	74	75,8	77	78	78,8
4003-2 B	11	23,7	34,5	51,7	69	86,2	103,4	74	75,8	77	78	78,8
4003 B	11	23,7	34,5	51,7	69	86,2	103,4	74	75,8	77	78	78,8
4004-2 B	15	32	46,6	69,8	93,1	116,4	139,7	74	75,8	77	78	78,8
4004 B	15	32	46,6	69,8	93,1	116,4	139,7	74	75,8	77	78	78,8
4005-2 B	18,5	38,8	56,5	84,7	112,9	141,1	169,4	75	76,8	78	79	79,8
4005 B	18,5	38,8	56,5	84,7	112,9	141,1	169,4	75	76,8	78	79	79,8
4006-2 B	18,5	38,8	56,5	84,7	112,9	141,1	169,4	75	76,8	78	79	79,8
4006 B	22	50,7	73,8	110,6	147,5	184,4	221,3	75	76,8	78	79	79,8
6001 B	5,5	12,5	18,2	27,3	36,4	45,5	54,6	74	75,8	77	78	78,8
6002-2 B	7,5	16,7	24,3	36,4	48,6	60,7	72,9	74	75,8	77	78	78,8
6002 B	11	23,7	34,5	51,7	69	86,2	103,4	74	75,8	77	78	78,8
6003-2 B	15	32	46,6	69,8	93,1	116,4	139,7	74	75,8	77	78	78,8
6003 B	18,5	38,8	56,5	84,7	112,9	141,1	169,4	75	76,8	78	79	79,8
6004-2 B	18,5	38,8	56,5	84,7	112,9	141,1	169,4	75	76,8	78	79	79,8
6004 B	22	50,7	73,8	110,6	147,5	184,4	221,3	75	76,8	78	79	79,8
6005-2 B	22	50,7	73,8	110,6	147,5	184,4	221,3	75	76,8	78	79	79,8
9002-2 B	11	23,7	34,5	51,7	69	86,2	103,4	74	75,8	77	78	78,8
9002-1 B	15	32	46,6	69,8	93,1	116,4	139,7	74	75,8	77	78	78,8
9002 B	15	32	46,6	69,8	93,1	116,4	139,7	74	75,8	77	78	78,8
9003-2 B	18,5	38,8	56,5	84,7	112,9	141,1	169,4	75	76,8	78	79	79,8
9003-1 B	22	50,7	73,8	110,6	147,5	184,4	221,3	75	76,8	78	79	79,8
9003 B	22	50,7	73,8	110,6	147,5	184,4	221,3	75	76,8	78	79	79,8

Selection chart

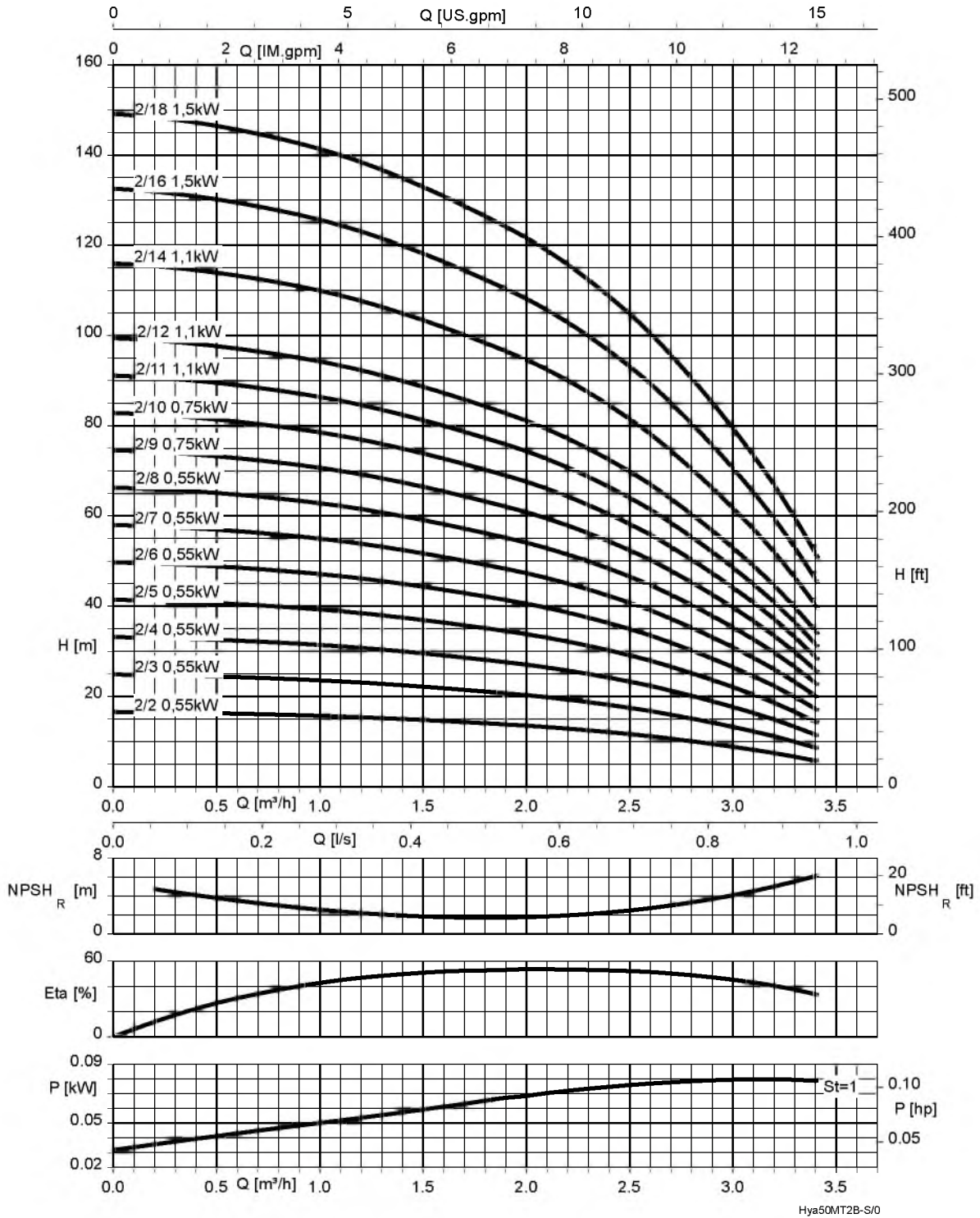
Surpresschrom SIC.2 SVP, n = 3000 rpm



The flow rate in the characteristic curves is based on one duty pump:
 The flow rate of a stand-by pump, if any, is not taken into account when calculating the flow rate required.
 Flow rates for multiple pump systems

Characteristic curves

Surpresschrom SIC.2 SVP with Movitec 2B, n = 3000 rpm

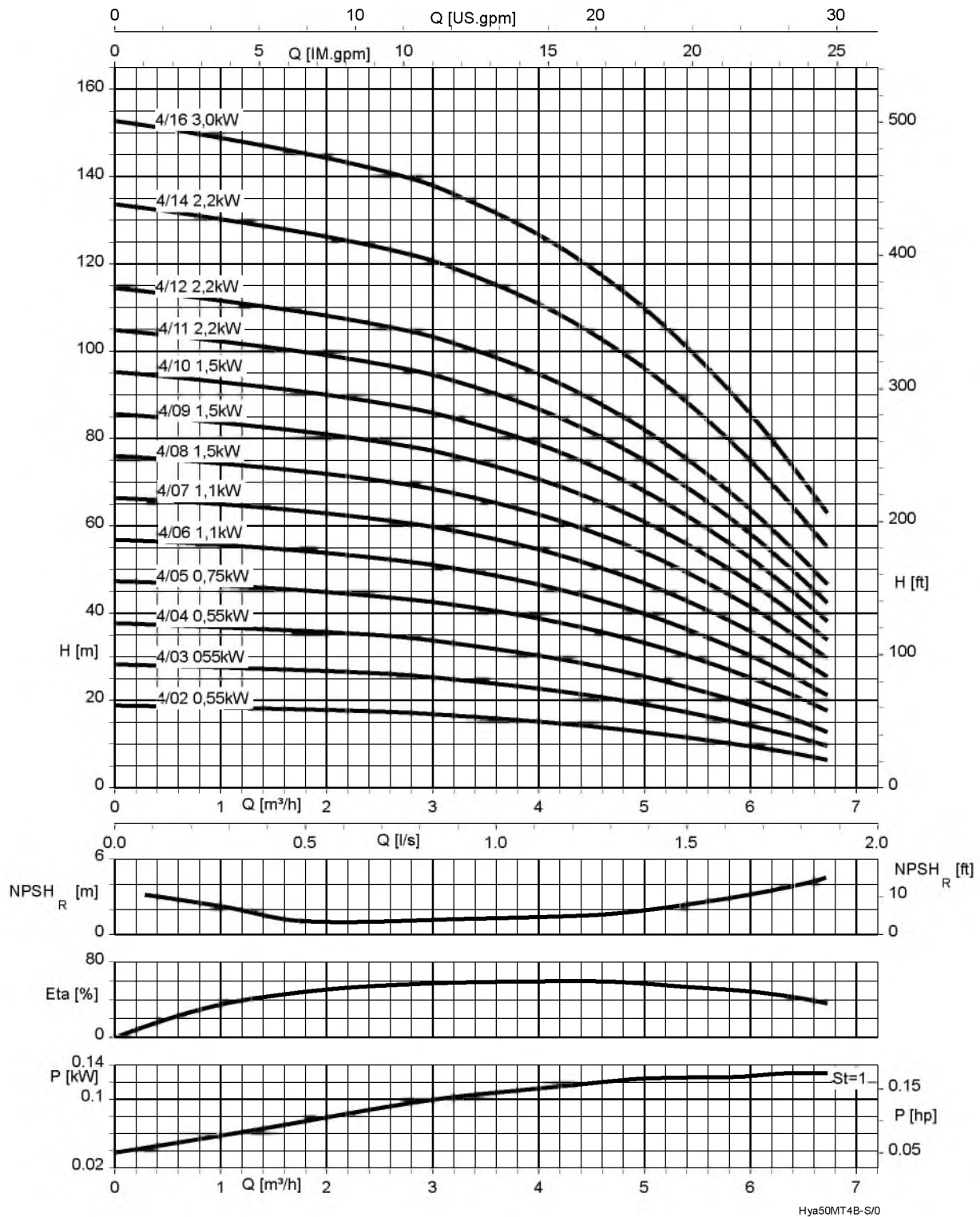


Systems with 4 and 8 stages

The actual curve will deviate from the documented curve due to the reduced speed. An accurate selection can only be made with KSB's selection program KSB EasySelect.

St = 1 | P per stage

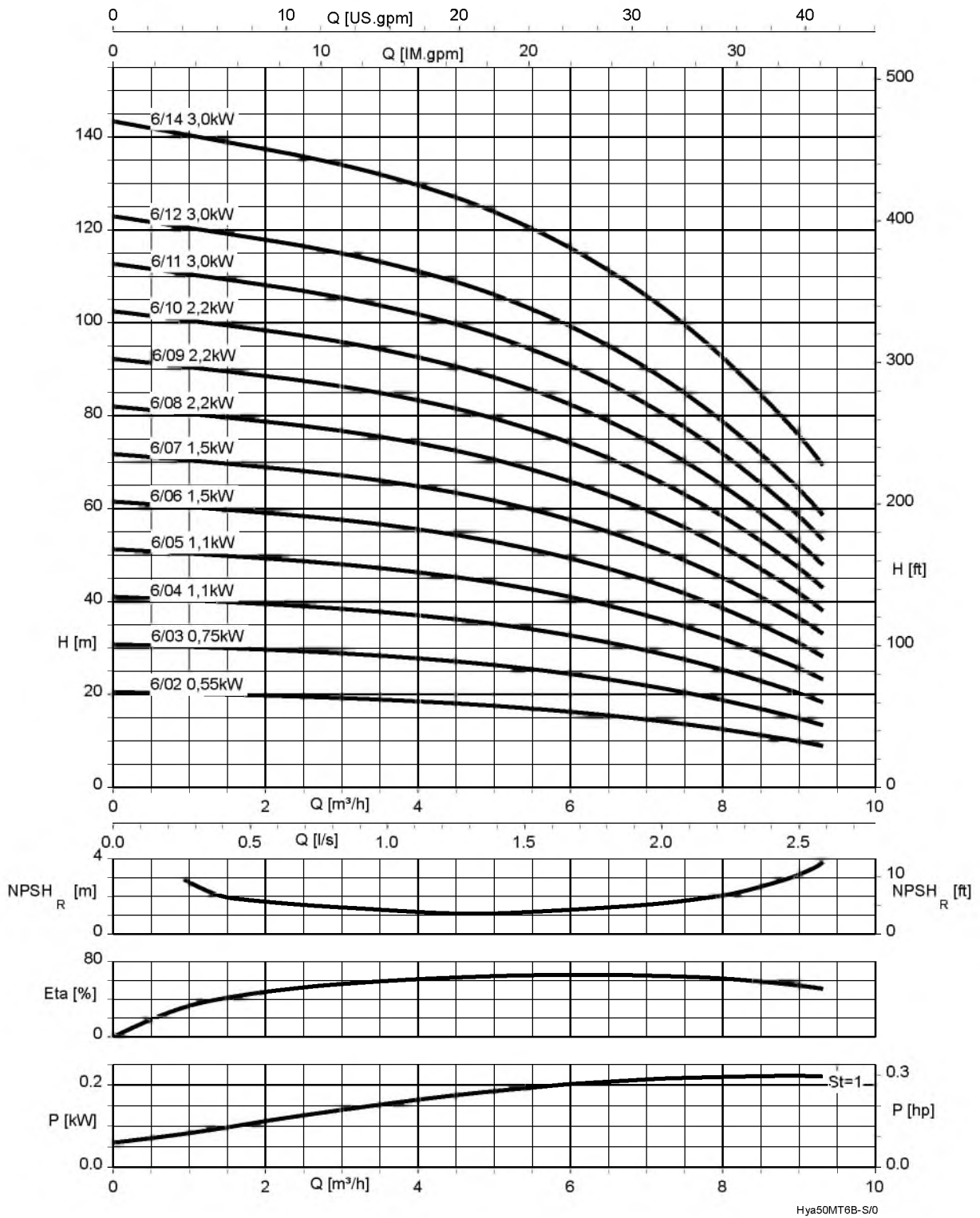
Surpresschrom SIC.2 SVP with Movitec 4B, n = 3000 rpm



i Systems with 4, 5 and 10 stages
The actual curve will deviate from the documented curve due to the reduced speed. An accurate selection can only be made with KSB's selection program KSB EasySelect.

St = 1 | P per stage

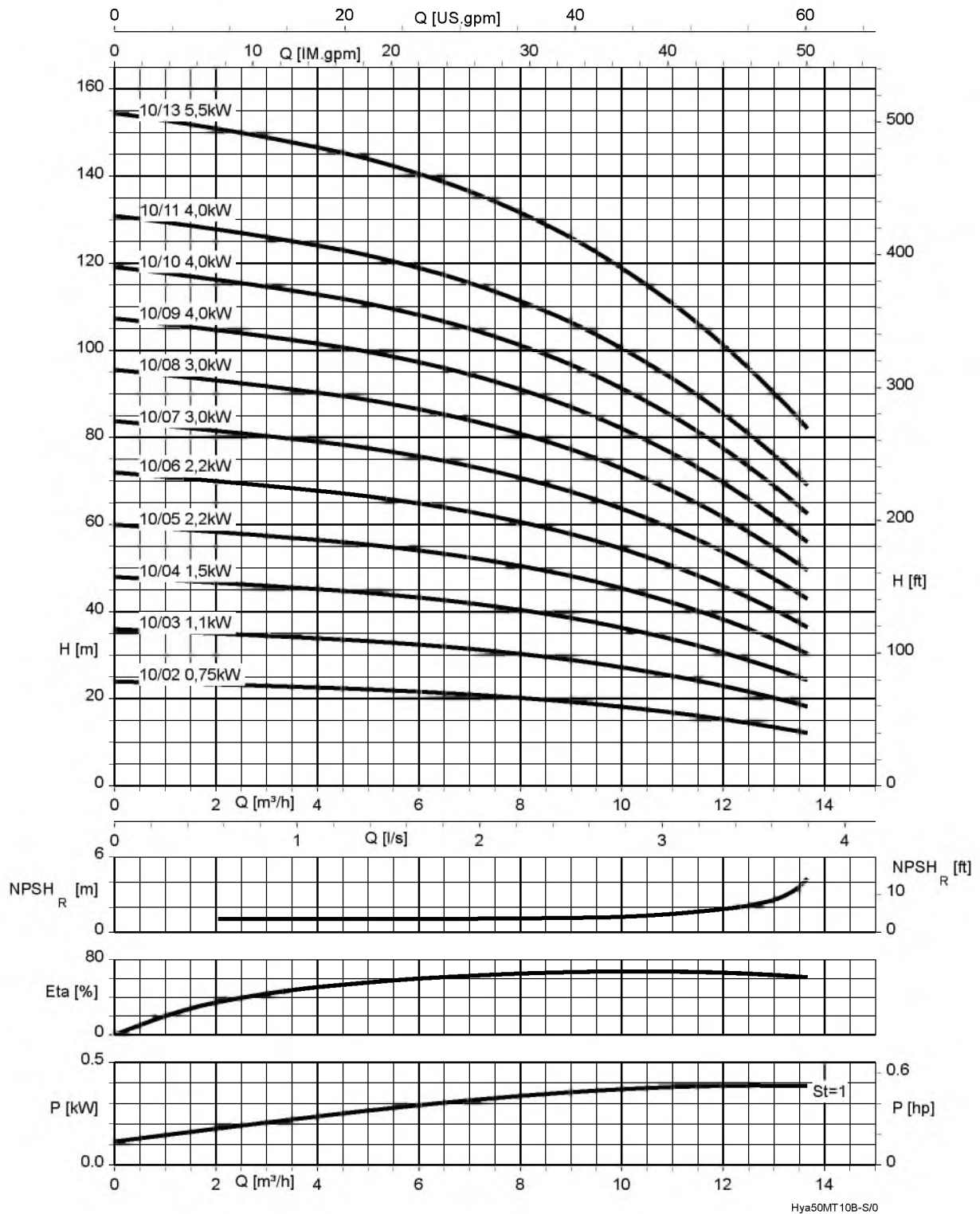
Surpresschrom SIC.2 SVP with Movitec 6B, n = 3000 rpm



i Systems with 2 and 14 stages
The actual curve will deviate from the documented curve due to the reduced speed. An accurate selection can only be made with KSB's selection program KSB EasySelect.

St = 1 | P per stage

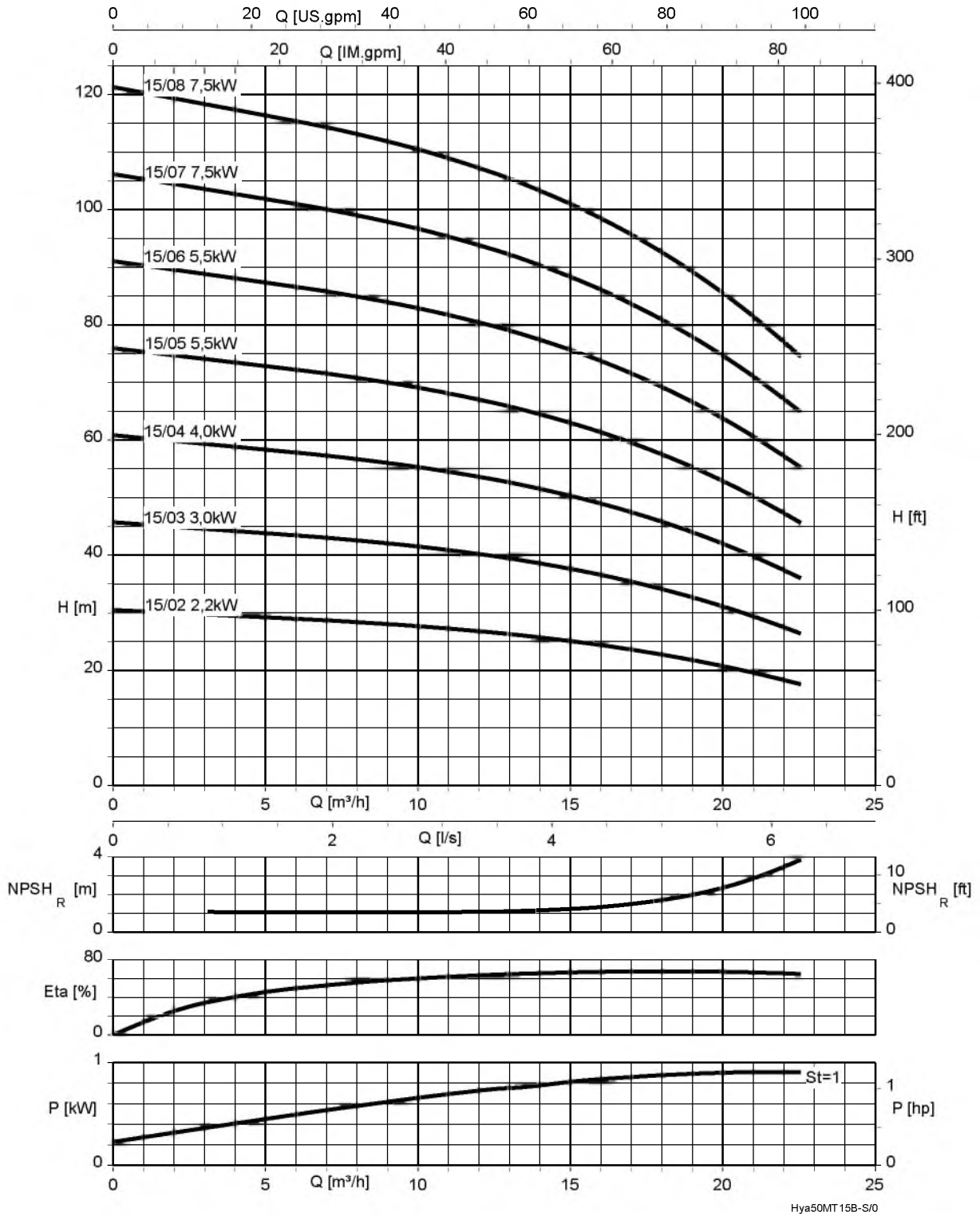
Surpresschrom SIC.2 SVP with Movitec 10B, n = 3000 rpm



i Systems with 2, 3, 4, 8 and 11 stages
The actual curve will deviate from the documented curve due to the reduced speed. An accurate selection can only be made with KSB's selection program KSB EasySelect.

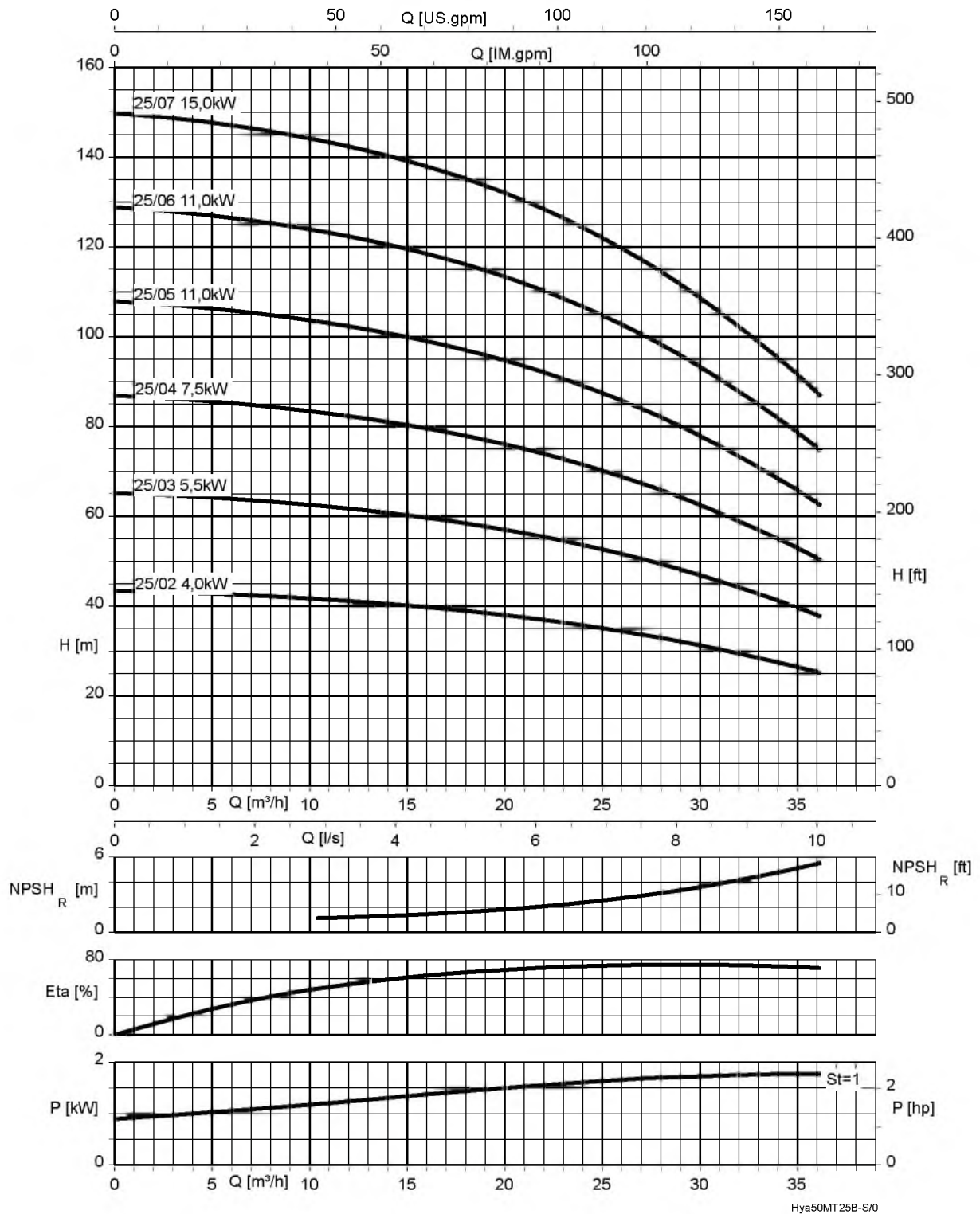
St = 1 | P per stage

Surpresschrom SIC.2 SVP with Movitec 15B, n = 3000 rpm



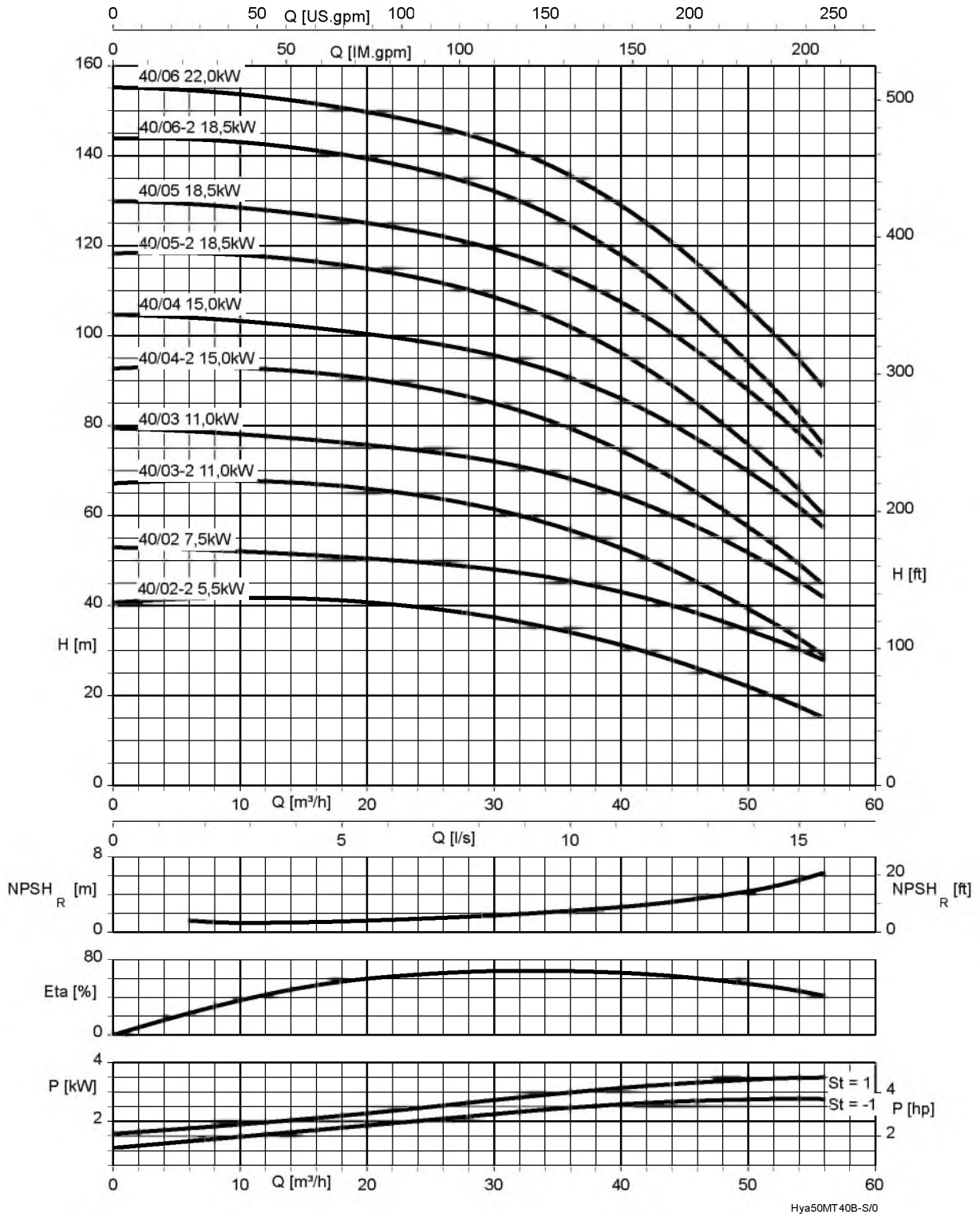
St = 1 | P per stage

Surpresschrom SIC.2 SVP with Movitec 25B, n = 3000 rpm



St = 1 | P per stage

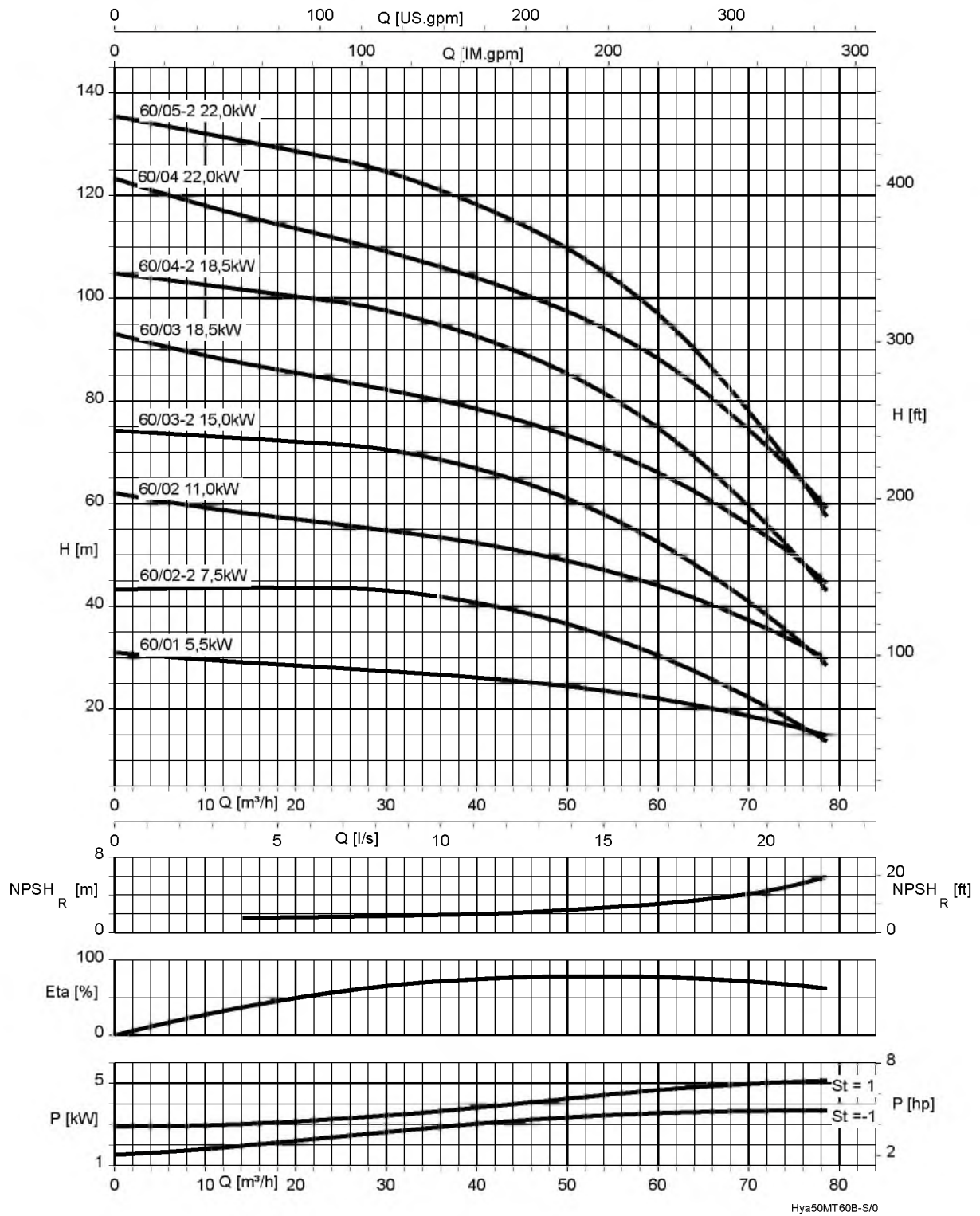
Surpresschrom SIC.2 SVP with Movitec 40B, n = 3000 rpm



St = 1 | P per stage

St = -1 | P per stage with a smaller impeller

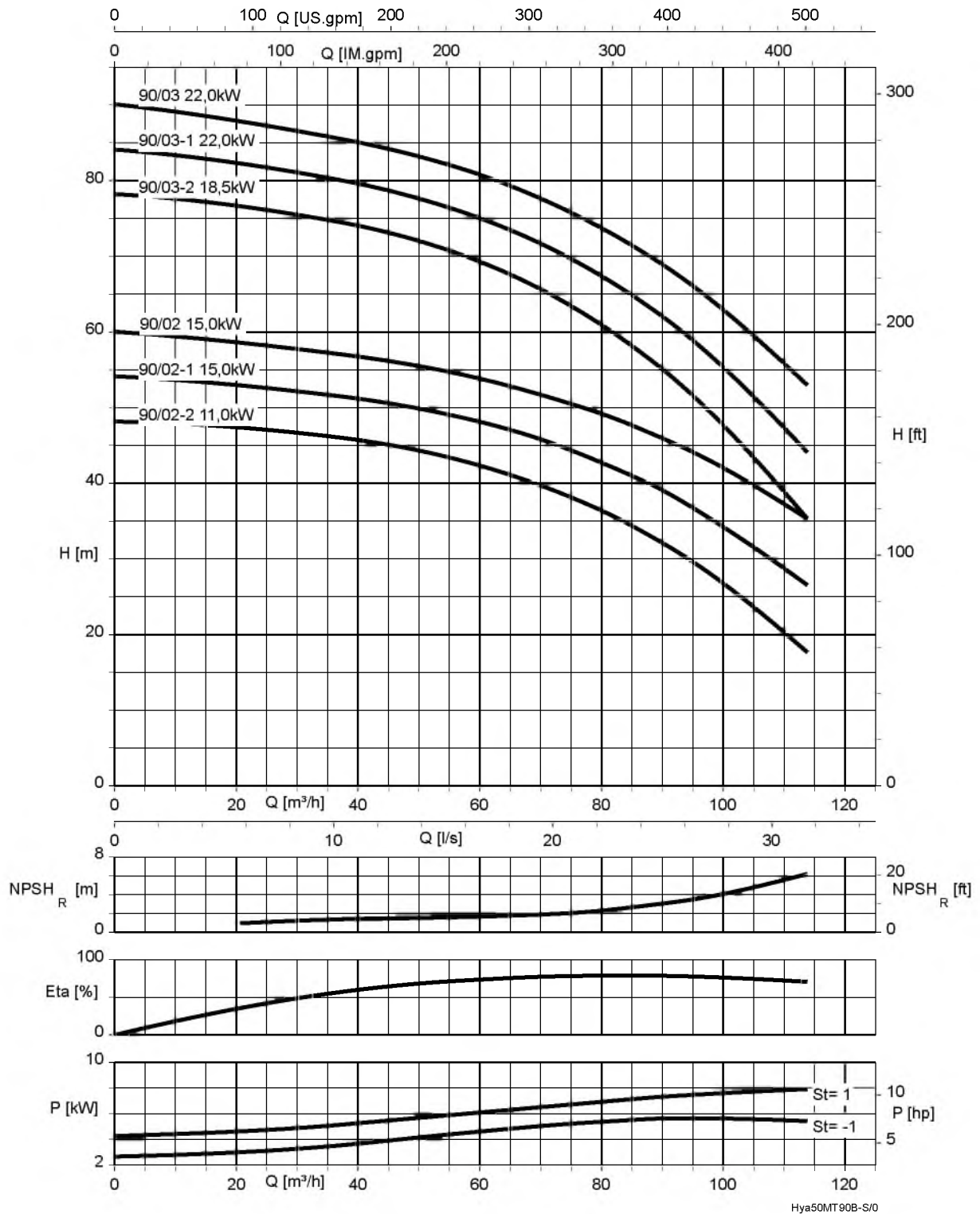
Surpresschrom SIC.2 SVP with Movitec 60B, n = 3000 rpm



$St = 1$ | P per stage

$St = -1$ | P per stage with a smaller impeller

Surpresschrom SIC.2 SVP with Movitec 90B, n = 3000 rpm

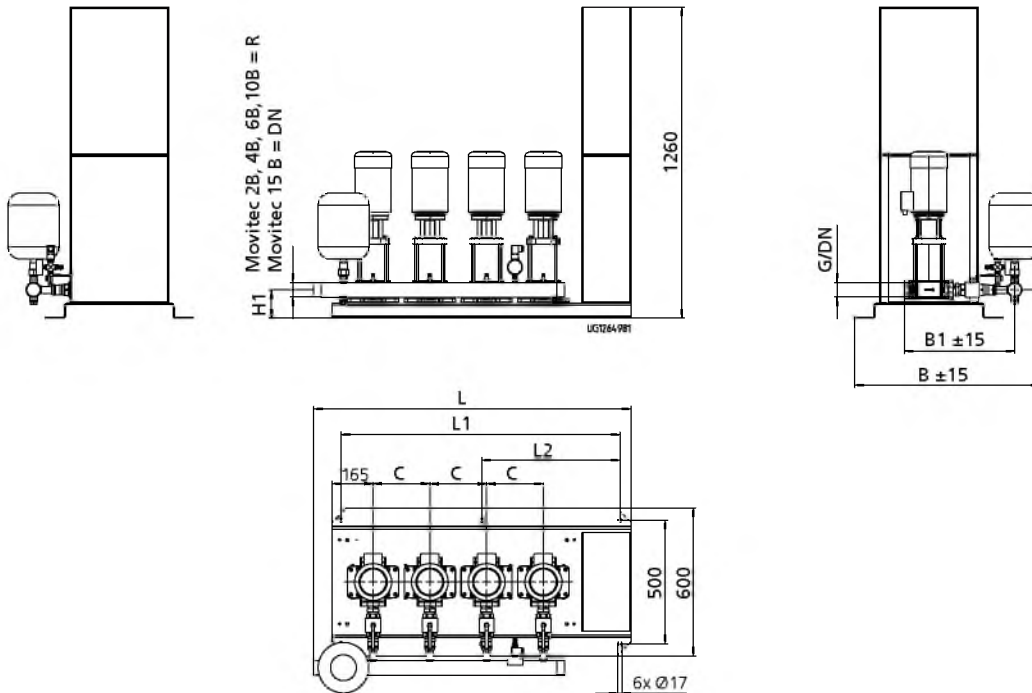


i Systems with 2, 3-2 and 3 stages
The actual curve will deviate from the documented curve due to the reduced speed. An accurate selection can only be made with KSB's selection program KSB EasySelect.

St = 1 P per stage	St = -1 P per stage with a smaller impeller
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Dimensions and weights

Surpresschrom SIC.2 SVP – Connection type A – Movitec 2B, 4B, 6B, 10B and 15B



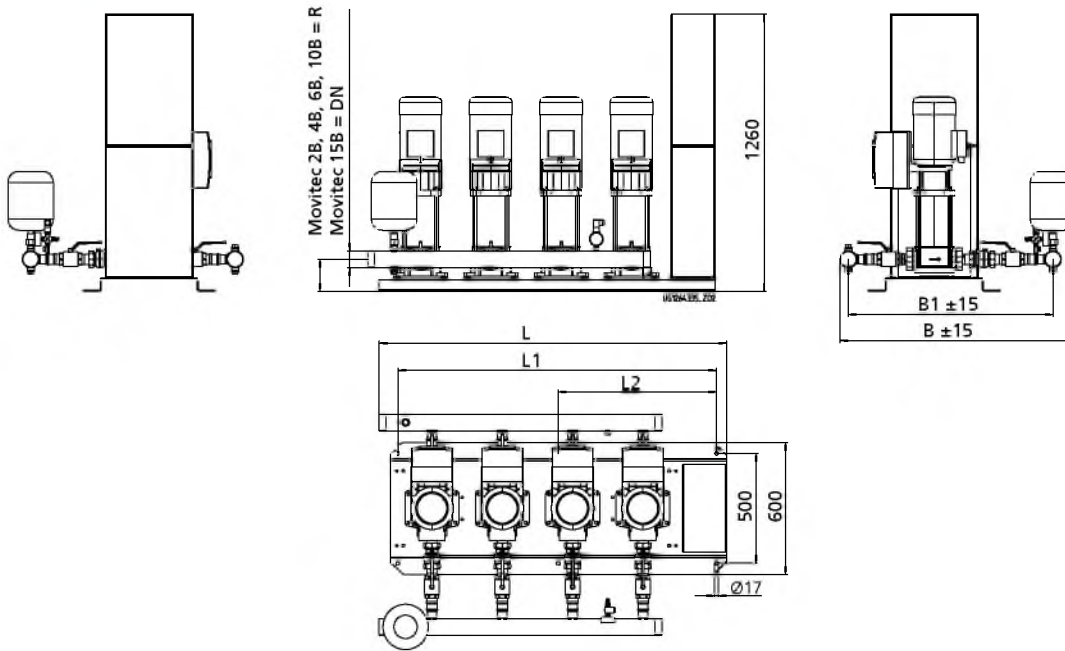
Dimensions of Surpresschrom SIC.2 SVP – Connection type A – with Movitec 2B / 4B / 6B / 10B / 15B
Control cabinet dimensions Surpresschrom SIC.2 SVP
Baseplate RAL 5002, control cabinet RAL 7035

Dimensions [mm]

Size	Connection		B	B1	C	H1	L	L1	L2
	R / DN	G / DN							
2/02.. B	R 2	1	723	420	230	115	825	670	-
2/04.. B	R 2	1	723	420	230	115	825	670	-
2/06.. B	R 2	1 1/4	751	447	230	115	825	670	-
2/10.. B	R 2	1 1/2	787	510	320	145	985	900	-
2/15.. B	DN 80	2	762	486	320	145	980	900	-
3/02.. B	R 2	1	723	420	230	115	1055	900	-
3/04.. B	R 2	1	723	420	230	115	1055	900	-
3/06.. B	R 2	1 1/4	794	447	230	115	1055	900	-
3/10.. B	R 2	1 1/2	794	517	320	145	1260	1130	560
3/15.. B	DN 80	2	762	486	320	145	1210	1130	560
4/02.. B	R 2	1	723	420	230	115	1285	1130	560
4/04.. B	R 2	1	723	420	230	115	1285	1130	560
4/06.. B	R 2	1 1/4	751	447	230	115	1285	1130	560
4/10.. B	R 2	1 1/2	794	517	320	145	1580	1450	720
4/15.. B	DN 100	2	848	565	320	145	1544	1450	720
5/02.. B	R 2	1	731	428	252,5	115	1605	1450	720
5/04.. B	R 2	1	731	428	252,5	115	1605	1450	720
5/06.. B	R 2	1 1/4	758	455	252,5	115	1605	1450	720
5/10.. B	R 2	1 1/2	794	517	320	145	1900	1770	880
5/15.. B	DN 100	DN 50	810	550	320	155	1850	1770	880
6/02.. B	R 2	1	731	428	266	115	1925	1770	880
6/04.. B	R 2	1	731	428	266	115	1925	1770	880
6/06.. B	R 2	1 1/4	758	455	266	115	1925	1770	880

Size	Connection		B	B1	C	H1	L	L1	L2
	R / DN	G / DN							
6/10.. B	R 2	1 1/2	800	523	320	145	2220	2090	1040
6/15.. B	DN 150	DN 50	876	584	320	155	2170	2090	1040

Surpresschrom SIC.2 SVP – Connection types C & V – Movitec 2B, 4B, 6B, 10B and 15B

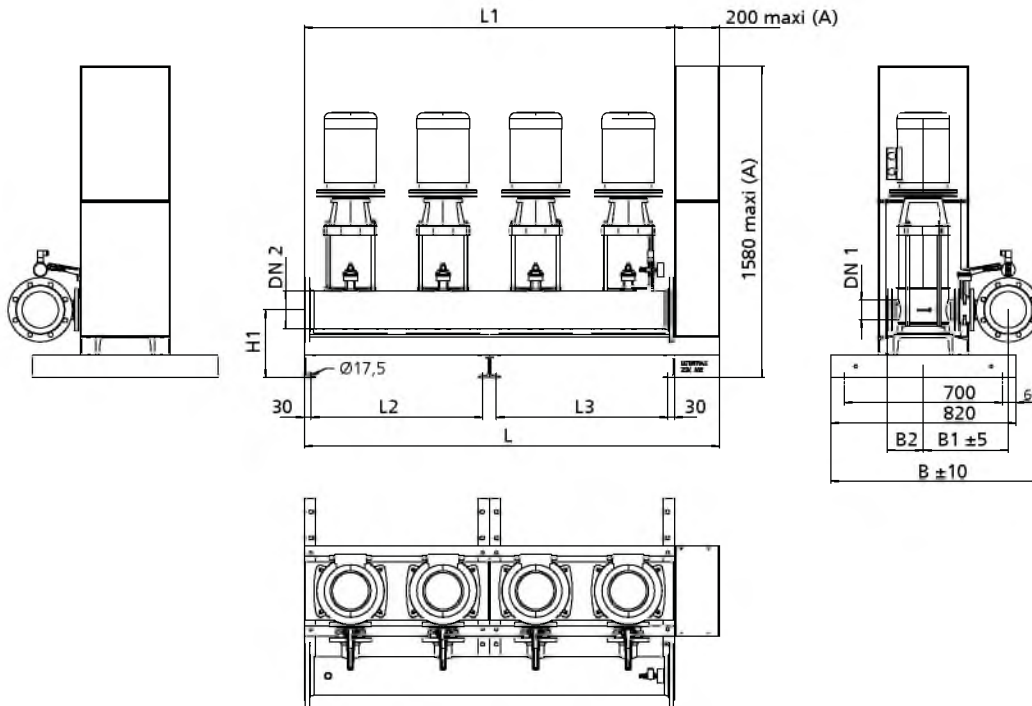


Dimensions of Surpresschrom SIC.2 SVP – Connection types C & V – with Movitec 2B / 4B / 6B / 10B / 15B
Control cabinet dimensions Surpresschrom SIC.2 SVP
Baseplate RAL 5002, control cabinet RAL 7035

Dimensions [mm]

Size	Connection	B	B1	H1	L	L1	L2
	R / DN						
2/02.. B	R 2	896	763	115	825	670	-
2/04.. B	R 2	896	763	115	825	670	-
2/06.. B	R 2	961	828	115	825	670	-
2/10.. B	R 2	1050	916	145	985	900	-
2/15.. B	DN 80	1097	894	145	980	900	-
3/02.. B	R 2	896	763	115	1055	900	-
3/04.. B	R 2	896	763	115	1055	900	-
3/06.. B	R 2	961	828	115	1055	900	-
3/10.. B	R 2	1073	932	145	1260	1130	560
3/15.. B	DN 80	1097	894	145	1210	1130	560
4/02.. B	R 2	896	763	115	1285	1130	560
4/04.. B	R 2	896	763	115	1285	1130	560
4/06.. B	R 2	961	828	115	1285	1130	560
4/10.. B	R 2	1073	932	145	1580	1450	720
4/15.. B	DN 100	1272	1052	145	1544	1450	720
5/02.. B	R 2	920	778	115	1605	1450	720
5/04.. B	R 2	920	778	115	1605	1450	720
5/06.. B	R 2	987	846	115	1605	1450	720
5/10.. B	R 2	1073	932	145	1900	1770	880
5/15.. B	DN 100	1221	1001	155	1850	1770	880
6/02.. B	R 2	920	778	115	1925	1770	880
6/04.. B	R 2	920	778	115	1925	1770	880
6/06.. B	R 2	981	846	115	1925	1770	880
6/10.. B	R 2	1090	943	145	2220	2090	1040
6/15.. B	DN 150	1352	1067	155	2170	2090	1040

Surpresschrom SIC.2 SVP – Connection type A – Movitec 25B, 40B, 60B and 90B



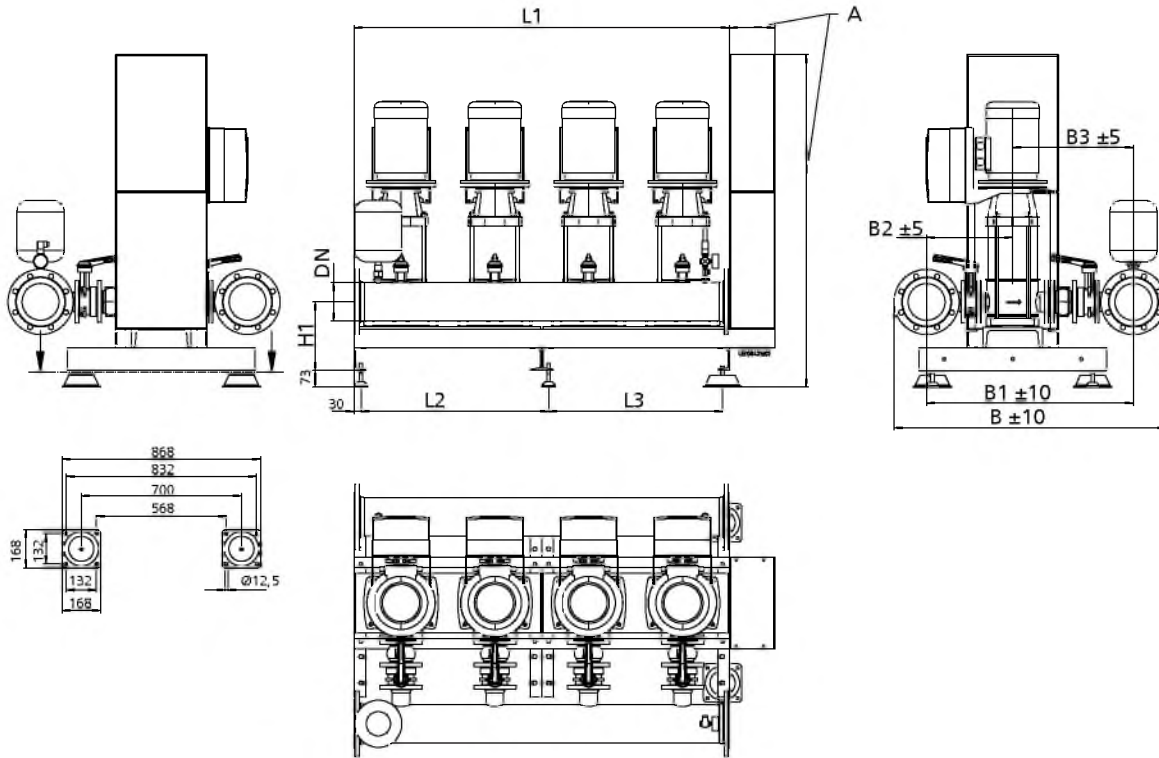
Dimensions of Surpresschrom SIC.2 SVP - Connection type A - with Movitec 25B / 40B / 60B / 90B
Control cabinet dimensions Surpresschrom SIC.2 SVP (⇒ Page 26)
Baseplate RAL 5002, control cabinet RAL 7035

A See control cabinets (⇒ Page 26)

Dimensions [mm]

Size	Connection		B	B1	B2	B3	H1	L	L1	L2	L3
	DN 1	DN 2									
2/25.. B	DN 65	DN 100	871	351	351	503	302	1020	820	-	760
2/40.. B	DN 80	DN 100	894	373	373	373	337	1020	820	-	760
2/60.. B	DN 100	DN 150	984	431	431	431	337	1020	820	-	760
2/90.. B	DN 100	DN 150	992	439	439	439	337	1020	820	-	760
3/25.. B	DN 65	DN 100	871	351	351	503	302	1430	1230	-	1170
3/40.. B	DN 80	DN 150	951	395	395	395	337	1430	1230	-	1170
3/60.. B	DN 100	DN 150	984	431	431	431	337	1430	1230	-	1170
3/90.. B	DN 100	DN 200	1042	462	462	462	337	1430	1230	-	1170
4/25.. B	DN 65	DN 150	928	376	376	376	302	1840	1640	820	760
4/40.. B	DN 80	DN 150	951	395	395	395	337	1840	1640	820	760
4/60.. B	DN 100	DN 200	1034	454	454	454	337	1840	1640	820	760
4/90.. B	DN 100	DN 200	1042	462	462	462	337	1840	1640	820	760
5/25.. B	DN 65	DN 150	928	376	376	376	302	2250	2050	1230	760
5/40.. B	DN 80	DN 200	999	418	418	418	337	2250	2050	1230	760
5/60.. B	DN 100	DN 200	1034	454	454	454	337	2250	2050	1230	760
5/90.. B	DN 100	DN 250	1105	492	492	492	337	2250	2050	1230	760
6/25.. B	DN 65	DN 150	928	376	376	376	302	2660	2460	1230	1170
6/40.. B	DN 80	DN 200	999	418	418	418	337	2660	2460	1230	1170
6/60.. B	DN 100	DN 200	1034	454	454	454	337	2660	2460	1230	1170
6/90.. B	DN 100	DN 250	1105	492	492	492	337	2660	2460	1230	1170

Surpresschrom SIC.2 SVP – Connection types C & V – Movitec 25B, 40B, 60B and 90B



Dimensions of Surpresschrom SIC.2 SVP - Connection types C & V - with Movitec 25B / 40B / 60B / 90B
Control cabinet dimensions Surpresschrom SIC.2 SVP (⇒ Page 26)
Baseplate RAL 5002, control cabinet RAL 7035

A See control cabinets (⇒ Page 26)

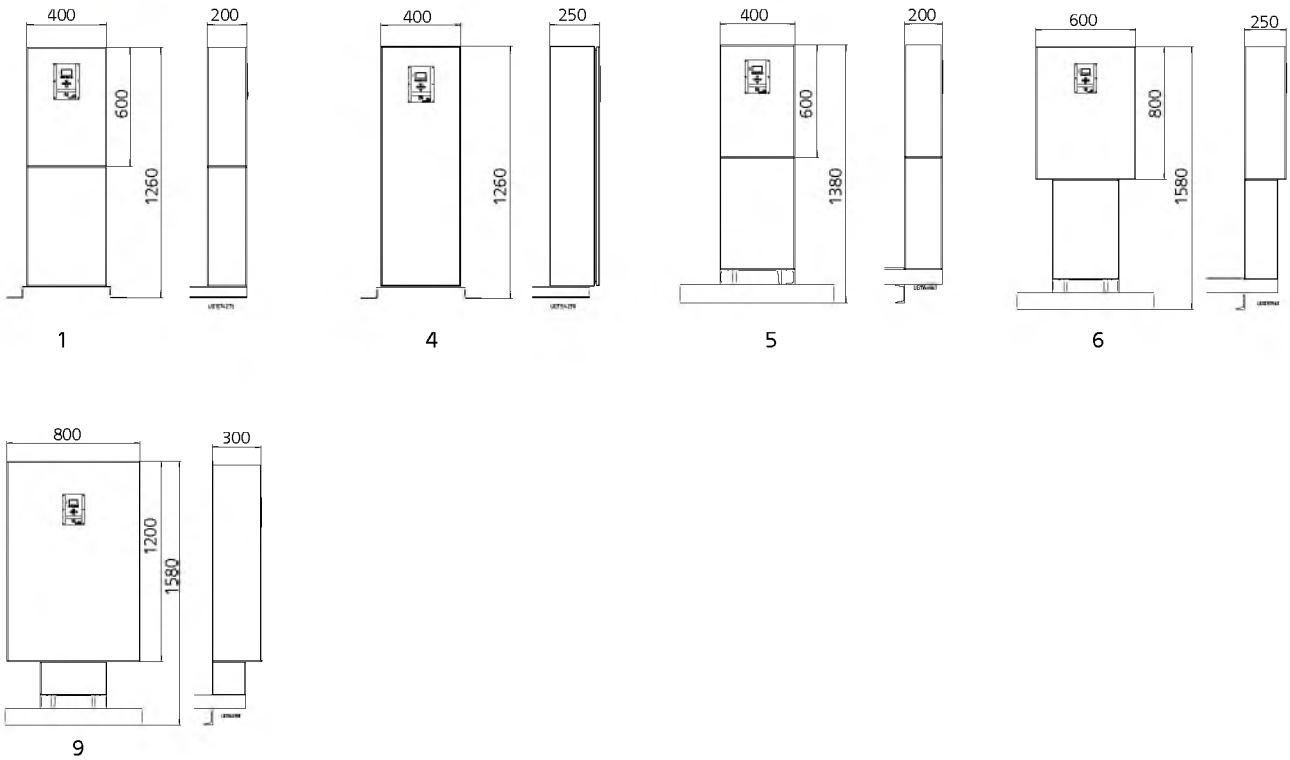
Dimensions [mm]

Size	Connection	B	B1	B2	H1	L	L1	L2	L3
DN 2									
2/25.. B	DN 100	1074	854	351	302	1020	820	-	760
2/40.. B	DN 100	1139	919	374	337	1020	820	-	760
2/60.. B	DN 150	1320	1035	431	337	1020	820	-	760
2/90.. B	DN 150	1335	1050	439	337	1020	820	-	760
3/25.. B	DN 100	1074	854	351	302	1430	1230	-	1170
3/40.. B	DN 150	1248	963	396	337	1430	1230	-	1170
3/60.. B	DN 150	1320	1035	431	337	1430	1230	-	1170
3/90.. B	DN 200	1436	1096	462	337	1430	1230	-	1170
4/25.. B	DN 150	1189	904	376	302	1840	1640	820	760
4/40.. B	DN 150	1248	963	396	337	1840	1640	820	760
4/60.. B	DN 200	1421	1081	454	337	1840	1640	820	760
4/90.. B	DN 200	1436	1096	462	337	1840	1640	820	760
5/25.. B	DN 150	1189	904	376	302	2250	2050	1230	760
5/40.. B	DN 200	1349	1009	419	337	2250	2050	1230	760
5/60.. B	DN 200	1421	1081	454	337	2250	2050	1230	760
5/90.. B	DN 250	1561	1156	492	337	2250	2050	1230	760
6/25.. B	DN 150	1189	904	376	302	2660	2460	1230	1170
6/40.. B	DN 200	1349	1009	419	337	2660	2460	1230	1170
6/60.. B	DN 200	1421	1081	454	337	2660	2460	1230	1170
6/90.. B	DN 250	1561	1156	492	337	2660	2460	1230	1170

Control cabinet dimensions

Combinations of Surpresschrom SIC.2 SVP systems and control cabinet dimensions

Size	P [kW] (per pump)						
	4,00	5,50	7,50	11,00	15,00	18,50	22,00
2/02.. B	1	-	-	-	-	-	-
2/04.. B	1	-	-	-	-	-	-
2/06.. B	1	-	-	-	-	-	-
2/10.. B	1	1	-	-	-	-	-
2/15.. B	1	1	1	-	-	-	-
2/25.. B	5	5	5	9	6	-	-
2/40.. B	-	5	5	9	6	9	6
2/60.. B	-	5	5	9	6	9	6
2/90.. B	-	-	-	9	6	9	6
3/02.. B	1	-	-	-	-	-	-
3/04.. B	1	-	-	-	-	-	-
3/06.. B	1	-	-	-	-	-	-
3/10.. B	1	1	-	-	-	-	-
3/15.. B	1	1	1	-	-	-	-
3/25.. B	5	5	5	9	9	-	-
3/40.. B	-	5	5	9	9	9	6
3/60.. B	-	5	5	9	9	9	6
3/90.. B	-	-	-	9	9	9	6
4/02.. B	1	-	-	-	-	-	-
4/04.. B	1	-	-	-	-	-	-
4/06.. B	1	-	-	-	-	-	-
4/10.. B	1	1	-	-	-	-	-
4/15.. B	1	1	1	-	-	-	-
4/25.. B	5	5	5	9	9	-	-
4/40.. B	-	5	5	9	9	9	9
4/60.. B	-	5	5	9	9	9	9
4/90.. B	-	-	-	9	9	9	9
5/02.. B	1	-	-	-	-	-	-
5/04.. B	1	-	-	-	-	-	-
5/06.. B	1	-	-	-	-	-	-
5/10.. B	1	4	-	-	-	-	-
5/15.. B	1	4	4	-	-	-	-
5/25.. B	5	6	4	9	9	-	-
5/40.. B	-	6	6	9	9	9	9
5/60.. B	-	6	6	9	9	9	9
5/90.. B	-	-	-	9	9	9	9
6/02.. B	1	-	-	-	-	-	-
6/04.. B	1	-	-	-	-	-	-
6/06.. B	1	-	-	-	-	-	-
6/10.. B	1	4	-	-	-	-	-
6/15.. B	1	4	4	-	-	-	-
6/25.. B	5	6	6	9	9	-	-
6/40.. B	-	6	6	9	9	9	9
6/60.. B	-	6	6	9	9	9	9
6/90.. B	-	-	-	9	9	9	9



Control cabinet dimensions Surpresschrom SIC.2 SVP

i The control cabinet dimensions refer to systems in the standard design. Larger control cabinets may be required for installing other optional equipment.

Weights

Surpresschrom SIC.2 SVP – Connection type A

Surpresschrom SIC.2 SVP weights [kg]

SIC.2 SVP	1	2-2	2-1	2	3-2	3-1	3	4-2	4	5-2	5	6-2	6	7	8	9	10	11	12	13	14	16	18
3/B 02../.	-	-	-	161	-	-	162	-	163	-	164	-	171	172	174	180	182	191	192	-	194	207	210
4/B 02../.	-	-	-	198	-	-	200	-	201	-	203	-	212	213	215	224	226	238	239	-	243	260	264
5/B 02../.	-	-	-	238	-	-	240	-	242	-	244	-	256	258	260	271	273	288	290	-	294	316	320
6/B 02../.	-	-	-	285	-	-	287	-	290	-	292	-	305	308	310	324	326	344	347	-	351	378	383
2/B 04../.	-	-	-	126	-	-	130	-	131	-	135	-	141	142	150	151	152	158	160	-	161	190	-
3/B 04../.	-	-	-	161	-	-	168	-	170	-	176	-	185	186	197	199	200	210	212	-	215	257	-
4/B 04../.	-	-	-	199	-	-	207	-	210	-	218	-	230	231	246	249	251	263	266	-	270	327	-
5/B 04../.	-	-	-	239	-	-	250	-	253	-	263	-	278	280	298	302	304	320	324	-	328	399	-
6/B 04../.	-	-	-	285	-	-	298	-	302	-	314	-	332	335	357	362	364	382	387	-	392	477	-
2/B 06../.	-	-	-	128	-	-	136	-	142	-	143	-	151	152	159	160	161	181	182	-	183	-	-
3/B 06../.	-	-	-	163	-	-	176	-	184	-	186	-	198	200	210	212	213	243	244	-	245	-	-
4/B 06../.	-	-	-	201	-	-	217	-	229	-	231	-	247	249	263	265	267	307	308	-	310	-	-
5/B 06../.	-	-	-	240	-	-	260	-	275	-	278	-	298	300	318	320	323	372	374	-	377	-	-
6/B 06../.	-	-	-	285	-	-	310	-	327	-	330	-	355	358	379	382	385	444	447	-	450	-	-
2/B 10../.	-	-	-	161	-	-	167	-	177	-	184	-	186	204	206	219	221	223	-	305	-	-	-
3/B 10../.	-	-	-	213	-	-	223	-	239	-	249	-	252	278	281	301	303	306	-	430	-	-	-
4/B 10../.	-	-	-	268	-	-	281	-	302	-	316	-	320	355	359	384	388	392	-	557	-	-	-
5/B 10../.	-	-	-	324	-	-	340	-	366	-	384	-	388	432	437	469	474	479	-	690	-	-	-
6/B 10../.	-	-	-	386	-	-	405	-	436	-	457	-	463	516	521	560	566	572	-	824	-	-	-
2/B 15../.	-	-	-	201	-	-	220	-	232	-	310	-	312	322	327	-	-	-	-	-	-	-	-
3/B 15../.	-	-	-	258	-	-	285	-	303	-	420	-	423	438	445	-	-	-	-	-	-	-	-
4/B 15../.	-	-	-	345	-	-	382	-	406	-	562	-	566	585	595	-	-	-	-	-	-	-	-
5/B 15../.	-	-	-	398	-	-	478	-	508	-	708	-	712	737	750	-	-	-	-	-	-	-	-
6/B 15../.	-	-	-	509	-	-	592	-	628	-	867	-	872	902	917	-	-	-	-	-	-	-	-
2/B 25../.	-	-	-	369	-	-	428	-	442	-	672	-	678	667	-	-	-	-	-	-	-	-	-
3/B 25../.	-	-	-	459	-	-	546	-	568	-	892	-	902	938	-	-	-	-	-	-	-	-	-
4/B 25../.	-	-	-	633	-	-	750	-	778	-	1198	-	1210	1258	-	-	-	-	-	-	-	-	-
5/B 25../.	-	-	-	781	-	-	932	-	968	-	1478	-	1492	1552	-	-	-	-	-	-	-	-	-
6/B 25../.	-	-	-	901	-	-	1082	-	1124	-	1729	-	1747	1819	-	-	-	-	-	-	-	-	-
2/B 40../.	-	335	-	343	551	-	552	521	549	606	636	641	678	-	-	-	-	-	-	-	-	-	-
3/B 40../.	-	493	-	506	799	-	799	806	848	880	926	933	1005	-	-	-	-	-	-	-	-	-	-
4/B 40../.	-	650	-	667	1044	-	1044	1053	1109	1153	1213	1223	1366	-	-	-	-	-	-	-	-	-	-
5/B 40../.	-	856	-	876	1333	-	1334	1345	1415	1470	1544	1556	1736	-	-	-	-	-	-	-	-	-	-
6/B 40../.	-	1001	-	1025	1566	-	1567	1581	1665	1730	1820	1834	2050	-	-	-	-	-	-	-	-	-	-
2/B 60../.	382	397	-	602	602	-	661	697	741	748	-	-	-	-	-	-	-	-	-	-	-	-	-
3/B 60../.	503	525	-	813	865	-	901	956	1039	1050	-	-	-	-	-	-	-	-	-	-	-	-	-
4/B 60../.	718	748	-	1118	1188	-	1235	1309	1466	1480	-	-	-	-	-	-	-	-	-	-	-	-	-
5/B 60../.	886	923	-	1371	1458	-	1518	1610	1806	1824	-	-	-	-	-	-	-	-	-	-	-	-	-
6/B 60../.	1034	1078	-	1609	1713	-	1785	1895	2132	2152	-	-	-	-	-	-	-	-	-	-	-	-	-
2/B 90../.	-	723	700	700	806	843	843	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3/B 90../.	-	1012	1030	1030	1136	1209	1209	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4/B 90../.	-	1360	1384	1384	1526	1670	1670	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5/B 90../.	-	1754	1784	1784	1962	2142	2142	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6/B 90../.	-	2067	2103	2103	2316	2532	2532	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6/B 90../.	-	2067	2103	2103	2316	2532	2532	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Surpresschrom SIC.2 SVP – Connection types C & V

Surpresschrom SIC.2 SVP weights [kg]

SIC.2 SVP	1	2-2	2-1	2	3-2	3-1	3	4-2	4	5-2	5	6-2	6	7	8	9	10	11	12	13	14	16	18
2/B 02../.	-	-	-	136	-	-	136	-	137	-	138	-	142	143	144	149	149	155	156	-	158	167	168
3/B 02../.	-	-	-	173	-	-	174	-	175	-	176	-	183	184	186	192	194	203	204	-	206	219	222
4/B 02../.	-	-	-	212	-	-	214	-	215	-	217	-	226	227	229	238	240	252	253	-	257	274	278
5/B 02../.	-	-	-	254	-	-	256	-	258	-	260	-	270	272	274	286	288	303	305	-	309	331	336
6/B 02../.	-	-	-	302	-	-	304	-	307	-	309	-	322	325	327	341	343	361	364	-	368	395	400
2/B 04../.	-	-	-	136	-	-	140	-	141	-	145	-	151	152	160	161	162	168	170	-	171	200	-
3/B 04../.	-	-	-	173	-	-	180	-	182	-	188	-	197	198	209	211	212	222	224	-	227	269	-
4/B 04../.	-	-	-	213	-	-	221	-	224	-	232	-	244	245	260	263	265	277	280	-	284	341	-
5/B 04../.	-	-	-	254	-	-	264	-	268	-	278	-	293	295	314	318	320	334	338	-	343	414	-
6/B 04../.	-	-	-	302	-	-	315	-	319	-	331	-	349	352	374	379	381	399	404	-	409	494	-
2/B 06../.	-	-	-	138	-	-	146	-	152	-	153	-	161	162	169	170	171	191	192	-	193	-	-
3/B 06../.	-	-	-	175	-	-	188	-	196	-	198	-	210	212	222	224	225	255	256	-	257	-	-
4/B 06../.	-	-	-	215	-	-	231	-	243	-	245	-	261	263	277	279	281	321	322	-	324	-	-
5/B 06../.	-	-	-	255	-	-	276	-	290	-	292	-	313	316	333	336	338	388	390	-	392	-	-
6/B 06../.	-	-	-	302	-	-	327	-	344	-	347	-	372	375	396	399	402	461	464	-	467	-	-
2/B 10../.	-	-	-	171	-	-	177	-	187	-	194	-	196	214	216	229	231	233	-	315	-	-	-
3/B 10../.	-	-	-	225	-	-	235	-	251	-	261	-	264	290	293	313	315	318	-	442	-	-	-
4/B 10../.	-	-	-	282	-	-	295	-	316	-	330	-	334	369	373	398	402	406	-	571	-	-	-

SIC.2 SVP	1	2-2	2-1	2	3-2	3-1	3	4-2	4	5-2	5	6-2	6	7	8	9	10	11	12	13	14	16	18
5/B 10./.	-	-	-	339	-	-	355	-	381	-	399	-	403	447	452	484	489	494	-	705	-	-	-
6/B 10./.	-	-	-	403	-	-	422	-	453	-	474	-	480	533	538	577	583	589	-	841	-	-	-
2/B 15./.	-	-	-	211	-	-	230	-	242	-	320	-	322	332	337	-	-	-	-	-	-	-	-
3/B 15./.	-	-	-	282	-	-	309	-	327	-	444	-	447	462	469	-	-	-	-	-	-	-	-
4/B 15./.	-	-	-	369	-	-	406	-	430	-	586	-	590	609	619	-	-	-	-	-	-	-	-
5/B 15./.	-	-	-	445	-	-	626	-	656	-	856	-	860	885	898	-	-	-	-	-	-	-	-
6/B 15./.	-	-	-	584	-	-	761	-	797	-	1036	-	1041	1071	1086	-	-	-	-	-	-	-	-
2/B 25./.	-	-	-	426	-	-	485	-	499	-	729	-	735	724	-	-	-	-	-	-	-	-	-
3/B 25./.	-	-	-	537	-	-	624	-	646	-	970	-	980	1016	-	-	-	-	-	-	-	-	-
4/B 25./.	-	-	-	760	-	-	877	-	905	-	1325	-	1337	1385	-	-	-	-	-	-	-	-	-
5/B 25./.	-	-	-	948	-	-	1100	-	1134	-	1644	-	1660	1720	-	-	-	-	-	-	-	-	-
6/B 25./.	-	-	-	1092	-	-	1273	-	1315	-	1920	-	1938	2010	-	-	-	-	-	-	-	-	-
2/B 40./.	-	411	-	419	627	-	628	597	625	682	712	717	754	-	-	-	-	-	-	-	-	-	-
3/B 40./.	-	606	-	619	912	-	912	919	961	994	1038	1046	1118	-	-	-	-	-	-	-	-	-	-
4/B 40./.	-	793	-	810	1187	-	1187	1196	1252	1296	1356	1366	1509	-	-	-	-	-	-	-	-	-	-
5/B 40./.	-	1094	-	1114	1571	-	1572	1583	1653	1708	1782	1794	1974	-	-	-	-	-	-	-	-	-	-
6/B 40./.	-	1274	-	1298	1839	-	1840	1854	1938	2003	2093	2107	2323	-	-	-	-	-	-	-	-	-	-
2/B 60./.	481	496	-	701	701	-	760	796	840	847	-	-	-	-	-	-	-	-	-	-	-	-	-
3/B 60./.	638	660	-	948	1000	-	1036	1091	1174	1184	-	-	-	-	-	-	-	-	-	-	-	-	-
4/B 60./.	927	957	-	1327	1397	-	1444	1518	1675	1689	-	-	-	-	-	-	-	-	-	-	-	-	-
5/B 60./.	1159	1196	-	1644	1731	-	1790	1882	2080	2096	-	-	-	-	-	-	-	-	-	-	-	-	-
6/B 60./.	1349	1393	-	1924	2028	-	2100	2210	2447	2467	-	-	-	-	-	-	-	-	-	-	-	-	-
2/B 90./.	-	822	799	799	905	942	942	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3/B 90./.	-	1178	1196	1196	1302	1375	1375	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4/B 90./.	-	1569	1593	1593	1735	1879	1879	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5/B 90./.	-	2098	2128	2128	2306	2486	2486	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6/B 90./.	-	2463	2499	2499	2712	2928	2928	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Scope of supply

Depending on the model, the following items are included in the scope of supply:

Pressure booster system

- Two to six vertical high-pressure centrifugal pumps (standard pumps)

For Movitec 2B, 4B, 6B, 10B and 15B:

- With oval/round flange

For Movitec 25B, 40B, 60B and 90B:

- With round flange
- Membrane-type accumulator on the discharge side, approved for drinking water
- Pressure transmitter on the discharge side
- Pressure gauge
- Powder-coated / epoxy resin-coated steel baseplate

For Movitec 2B, 4B, 6B, 10B and 15B:

- Pumps mounted on the baseplate with anti-vibration mounts

For Movitec 25B, 40B, 60B and 90B:

- Pressure booster system with level-adjustable feet and rubber pads (supplied but not fitted)

Per pump:


- Check valve
- Shut-off valves

Control cabinet

- Control cabinet IP54
- Pump control and monitoring unit
- Graphical display with operating panel
- LEDs indicating operational availability and fault of the pressure booster system
- Service interface for connection to a PC
- Transformer for control voltage
- Motor protection switch per pump

- Lockable master switch (repair switch)
- Terminal strip/terminals with identification for all connections
- Circuit diagram and list of electric components
- Connection for analog or digital dry running protection equipment
- External connection ON
- External connection OFF

Accessories

 See the separate type series booklet Accessories for Pressure Booster Systems 1954.51.

По вопросам продаж и поддержки обращайтесь:

Архангельск (8182)63-90-72	Краснодар (861)203-40-90	Санкт-Петербург (812)309-46-40
Астана (7172)727-132	Красноярск (391)204-63-61	Саратов (845)249-38-78
Астрахань (8512)99-46-04	Курск (4712)77-13-04	Севастополь (8692)22-31-93
Барнаул (3852)73-04-60	Липецк (4742)52-20-81	Симферополь (3652)67-13-56
Белгород (4722)40-23-64	Магнитогорск (3519)55-03-13	Смоленск (4812)29-41-54
Брянск (4832)59-03-52	Москва (495)268-04-70	Сочи (862)225-72-31
Владивосток (423)249-28-31	Мурманск (8152)59-64-93	Ставрополь (8652)20-65-13
Волгоград (844)278-03-48	Набережные Челны (8552)20-53-41	Сургут (3462)77-98-35
Вологда (8172)26-41-59	Нижний Новгород (831)429-08-12	Тверь (4822)63-31-35
Воронеж (473)204-51-73	Новокузнецк (3843)20-46-81	Томск (3822)98-41-53
Екатеринбург (343)384-55-89	Новосибирск (383)227-86-73	Тула (4872)74-02-29
Иваново (4932)77-34-06	Омск (3812)21-46-40	Тюмень (3452)66-21-18
Ижевск (3412)26-03-58	Орел (4862)44-53-42	Ульяновск (8422)24-23-59
Казань (843)206-01-48	Оренбург (3532)37-68-04	Уфа (347)229-48-12
Калининград (4012)72-03-81	Пенза (8412)22-31-16	Хабаровск (4212)92-98-04
Калуга (4842)92-23-67	Пермь (342)205-81-47	Челябинск (351)202-03-61
Кемерово (3842)65-04-62	Ростов-на-Дону (863)308-18-15	Череповец (8202)49-02-64
Киров (8332)68-02-04	Рязань (4912)46-61-64	Ярославль (4852)69-52-93
	Самара (846)206-03-16	

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