

Multistage Horizontal High-pressure
Centrifugal Pump

Movitec H(S)I

Type Series Booklet



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Type Series Booklet Movitec H(S)I

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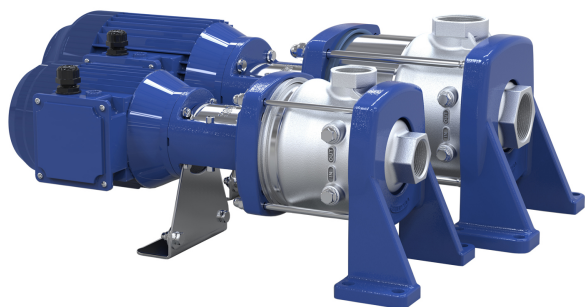
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High-pressure Pumps

Multistage Horizontal High-pressure Centrifugal Pump

Movitec H(S)I



Main applications

- Spray irrigation systems
- General irrigation systems
- Washing plants
- Fire-fighting systems
- Pressure boosting
- Industrial plants
- Water supply systems
- Heating, ventilation and air-conditioning systems
- Marine applications

Fluids handled

- High-temperature hot water
- Clear water
- Condensate
- Cooling water
- Fire-fighting water
- Oil
- Cleaning agents
- And others

Operating data

Operating properties

Characteristic		Value
Flow rate	Q [m³/h]	≤ 26,3
Head	H [m]	≤ 195
Fluid temperature	T [°C]	≥ -20
		≤ +140
Operating pressure	p [bar]	≤ 25

Design details

Design

- High-pressure Pump
- Maximum pressure class PN 25
- Centrifugal pump
- Single-stage or multistage

Installation

- Horizontal installation

Drive

- Surface-cooled KSB squirrel-cage motor
- Thermal class F to IEC 34-1
- Efficiency class IE3 to IEC 60034-30 (≥ 0.75 kW)
- Enclosure IP55
- Frequency 50 Hz/60 Hz

Optional:

- Harting connector, type HAN 10E

Shaft seal

- Uncooled maintenance-free mechanical seal
 - Fixed mechanical seal
 - Easy Access mechanical seal
 - Cartridge mechanical seal

Bearings

- Tungsten carbide plain bearings at the hydraulic rotor

Designation

Designation example

Position																															
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
M	o	v	i	t	e	c	H	S	I	0	1	5	/	0	4	-	B	4	S	1	3	E	S	1	1	2	B	7	U	A	X
See name plate and data sheet																		See data sheet													

Designation key

Position	Code	Description
1-7	Pump type	
	Movitec	Movitec
8-9	Design	
	H	Cast steel 1.4308
	HS	Cast steel 1.4408
10	Connection type	
	I	Internal thread
11-13	Size	
	002	2
	...	...
	015	15
15-16	Number of stages	
	01	1
	...	...
	14	14
17	Number of stages with special impeller	
	_1)	No stage with a special impeller
	L	First stage with a special impeller for lower NPSH values
18	Product generation	
	B	Movitec from 2010
19	Connection standard	
	4	Internal thread EN ISO 228-1
20	Material variant	
	S	Cast steel 1.4408 - 1.4408 - EN-GJS-400-15
21-22	Seal code	
	13	Q1BEGG
	14	Q1BVGG
	15	U3U3X4GG
	16	U3U3VGG
	18	U3BEGG
	23	Q1BEGG
	24	Q1Q1VGG
	28	Q1Q1X4GG
	29	Q1Q1EGG
23	Mechanical seal design	
	F	Fixed mechanical seal
	E	Easy Access mechanical seal
	C	Cartridge mechanical seal
24	Drive	
	0	Without motor
	2	With PumpDrive 2
	E	With PumpDrive 2 Eco
	S	Standard IEC
25-27	Motor size	
	071	IEC 071
	080	IEC 080
	090	IEC 090
	100	IEC 100
	112	IEC 112

1) Blank

Position	Code	Description
25-27	132	IEC 132
28	Pressure class	
	A	PN16 / PN25
	B	PN25
29	Number of motor poles	
	5	50 Hz, 2 poles
	6	60 Hz, 2 poles
	7	50 Hz, 4 poles
	8	60 Hz, 4 poles
30	Motor specification	
	M	230 V, single-phase AC motor
	O	0.37/0.55 [kW], without IE classification
	U	230/400 V - IE3
	V	400/690 V - IE3
	W	230/400 V - IE4/IE5 (KSB SuPremE)
	X	400/690 V - IE4/IE5 (KSB SuPremE)
31	PumpMeter	
	A	Mit PumpMeter
	W	Without PumpMeter
32	Design	
	.. ¹⁾	Standard
	X	Non-standard (BT3D, BT3)

Materials

Overview of materials depending on the design

Part No.	Description	Design	
		H	HS
10-6	Pump shroud	1.4301	1.4404
101	Pump casing	1.4408	1.4408
108	Stage casing	1.4301	1.4404
160	Discharge cover	1.4301	1.4404
210	Shaft	1.4057	1.4460
230	Impeller	1.4301	1.4404
341	Drive lantern	EN-GJL-250 ²⁾ / EN-GJS-400-15 ³⁾	
412	O-ring	EPDM-WRc / ACS	FPM / HNBR
525	Spacer sleeve	1.4301	1.4401
529	Bearing sleeve	Tungsten carbide / aluminium oxide	
89-11	Retaining bracket	1.4301	
890	Baseplate	EN-GJS-400-15	
905	Tie bolt	1.4057	
920	Nut	1.4301	1.4404
932	Circlip	1.4571	

Comparison of materials

EN	ASTM
EN-GJL-250	A48 Class 35 B
EN-GJS-400-15	A536 Grade 60-40-18
1.4057	SS 431
1.4301	SS 304
1.4308	Grade CF8
1.4404	SS 316L
1.4408	Grade CF8M
1.4460	SS 329
1.4571	SS 316Ti

Coating and preservation

Coating of pump components

Component	Coating
Drive lantern	Cataphoretic coating
Pump foot	Powder coating

2) H(S)I 2B, 4B, 6B, 10B, 15B, (≤ 4 kW)
3) H(S)I 2B, 4B, 6B, 10B, 15B (≥ 5.5 kW)

Product benefits

- Reliable: product-lubricated plain bearings made of tungsten carbide, cast pump foot, torsion-resistant pump shroud and confined O-rings
- Long service life: corrosion-resistant hydraulic components made of stainless steel
- Easy to service: can be fitted with any standardised mechanical seal (to EN 12756)
- Easy to install underneath other machinery due to horizontal installation

Acceptance tests and warranty

- Pressure test
 - to EN 809
- Leak test
 - with water

- Materials testing
 - Certificate of compliance with the order (corresponds to EN 10204)
In the certificate of compliance with the order the manufacturer confirms by way of an informal report without specifying test results that the delivery complies with the stipulations of the purchase order.
 - Test report 2.2 on request
- Final inspection
 - Inspection certificate 3.1 to EN 10204 on request
- Hydraulic test
The duty point of each pump is guaranteed to ISO 9906:2012 Grade 3B.
This test is always carried out using the original motor.
The NPSH and the suction lift are not measured (3.2 certificate available).
- Warranties
Warranties are given within the scope of the valid terms and conditions of sale and delivery.

Selection Information

Impeller for lower NPSH values

An impeller for lower NPSH values is available for sizes 2, 4, 6, 10 and 15.

This type of impeller ensures that the pump's NPSH curve is significantly improved.

The solution is based on a newly developed impeller for lower NPSH values and a modified stage casing. Cavitation inside the pump can hence be prevented in the case of critical inlet conditions.

Risks of cavitation:

- Reduced lifetime of the pump due to damaged parts and unbalanced hydraulic system
- Excessive wear of pump parts or motor bearings
- Insufficient cooling and/or lubrication of the mechanical seal and pump bearing

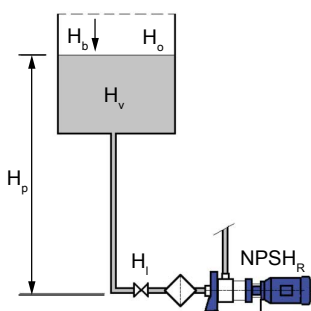
Benefits of using impellers for lower NPSH values:

- More suitable in critical inlet conditions
- Easy adaptation to non-optimised application parameters
- The suction lift (H_p) is less critical (the height of the degassing tank used in boiler feeding can be reduced).

Consequences of using impellers for lower NPSH values:

- No need to change pump installation heights or pump nozzles
- Minor adjustments to the characteristic curve

Calculation:



$$NPSH_A \geq NPSH_R + H_z$$

$$NPSH_A = H_b + H_o + H_p - H_v - H_i$$

$$x = H_b + H_o + H_p - H_v - H_i - NPSH_R - H_z$$

$$x \geq 0$$

Fig. 1: Calculating the $NPSH_A$

$NPSH_A$	NPSH system value at operating point
$NPSH_R$	NPSH pump value at operating point (see characteristic curve of the pump)
H_b	Atmospheric pressure [mWc]
H_o	Positive pressure (with tank closed) [mWc]
H_p	Suction lift [mWc]
H_v	Vaporisation pressure [mWc] (see water vaporisation pressure diagram)

H_f	Friction losses in pipes and accessories [mWc]
H_z	Safety margin (min. 0,5 m)
x	Minimum pressure

Result:

If the minimum pressure (x) is positive, there is no risk of cavitation.

If the minimum pressure (x) is negative, there is a risk of cavitation which can be avoided by using an impeller for lower NPSH values.

Another option is to change one of the other values so that the value becomes positive.

Example:

- Boiler feed water: 105 °C
- Positive height of tank: 2 m
- Positive pressure in tank: 3 mWc
- Flow rate: 5 m³/h
- Head: 100 m (10 bar)
- Size selected: 4

Calculation of positive pressure on suction flange:

Calculation of positive pressure on suction flange:	Standard impeller	Special impeller for lower NPSH values
Atmospheric pressure [mWc]	10,3	10,3
Positive pressure (with tank closed)	3,0	3,0
Suction lift	2,0	2,0
Vaporisation pressure [mWc] (see water vaporisation pressure diagram)	-12,5	-12,5
Friction losses in pipes and accessories [mWc]	-1,0	-1,0
Safety margin (min. 0,5 m)	-0,5	-0,5
NPSH pump value at operating point (see characteristic curve of the pump)	-2,1	-0,8
Minimum pressure	-0,8	+0,5
Conclusion	Cavitation will occur.	No cavitation

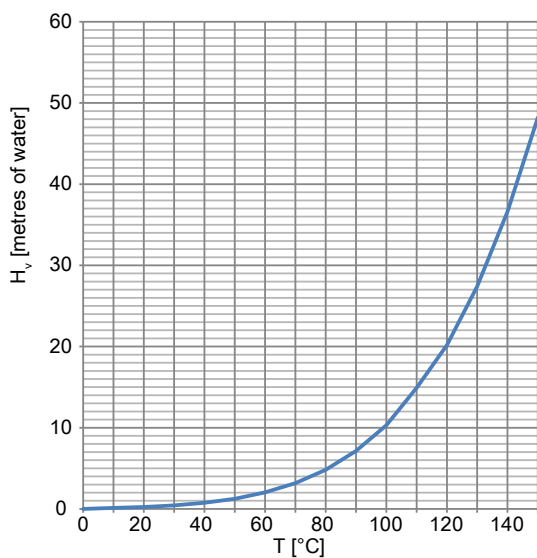


Fig. 2: Vaporisation pressure diagram (H_v) for water

Information about the characteristic curve

NPSH [m], [ft]:

- The NPSH values given in the individual characteristic curves are minimum values which correspond to the cavitation limit.
- A safety margin of at least 0.5 m must be added when selecting the pump to compensate for measuring inaccuracies.
- The NPSH curves reflect average values.
- A safety margin of 0.5 m must be added to the NPSH value of the characteristic curve when selecting a system.

P [kW], [hp]:

- The power input is indicated per stage (St = 1).
The pump input power can be calculated accordingly.
Calculation: value indicated in the diagram (St = 1) × number of stages
Example: Movitec H(S)I 15/4: P = (St = 1) × 4

Fluid handled

The actual operating conditions must always be checked (concentration, temperature, solids content). Penetration of air into the system must be avoided by all means.

If the fluid handled contains solids such as steel chips or steel chip dust, check the permissible particle concentration with KSB.

Minimum flow rate and maximum flow rate

Minimum flow rate and maximum flow rate Q at a fluid temperature ≤ +20 °C depending on the speed, 50 Hz

Movitec H(S)I	Q			
	2900 rpm		1450 rpm	
	Min.	Max.	Min.	Max.
	[m³/h]	[m³/h]	[m³/h]	[m³/h]
2B	0,2	3,3	-	-
4B	0,4	6,5	-	-
6B	0,6	9,0	-	-
10B	1,1	13,2	0,5	6,6
15B	1,6	22,5	0,8	11,3

Minimum flow rate and maximum flow rate Q at a fluid temperature ≤ +20 °C depending on the speed, 60 Hz

Movitec H(S)I	Q			
	3500 rpm		1750 rpm	
	Min.	Max.	Min.	Max.
	[m³/h]	[m³/h]	[m³/h]	[m³/h]
2B	0,2	4,0	-	-
4B	0,5	7,8	-	-
6B	0,8	8,6	-	-
10B	1,3	15,8	0,6	7,9
15B	2,0	27,0	1,0	13,5

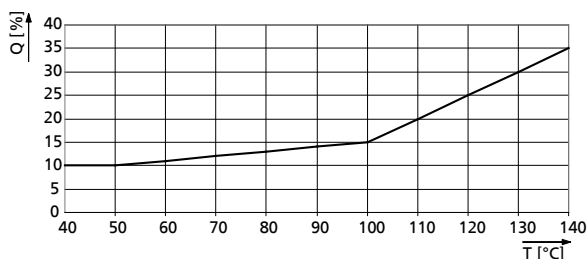


Fig. 3: Minimum flow rate required as a function of fluid temperature at a fluid temperature > +20 °C

Overview of product features / selection tables

Table of fluids handled

The data refer to the chemical resistance of the materials. The relevant regulations / standards governing individual pump applications have to be complied with.

If the operating conditions differ from the data given (e.g. mixed products) or if the fluids handled are not included in the table below, please contact KSB.

- **Temperature ranges:**
 - Reference temperature: +20 °C
 - For temperatures <0 °C: contact KSB.
 - For temperatures > +50 °C: check and observe the vapour pressure of the fluid handled.
 - Max. temperature = +120 °C, unless indicated otherwise.
- Max. concentration = 100 % unless indicated otherwise.
- Mechanical seal silicon carbide / carbon (Q1B): not suitable for fluids containing solid substances. This rule also covers particles developing as a result of salt crystallisation at low fluid temperatures.
- Mechanical seal tungsten carbide / tungsten carbide (U3U3): solids content max. 20 ppm (depending on particle size), with the exception of corrosive fluids. Fluids with a higher solids content are not permitted (ppm = 1 mg/kg).
- Caution: High temperatures will increase corrosion (reference temperature = +20 °C).
- Under unfavourable conditions (high temperatures, deposits, long idle periods), chloride contents of more than 300 mg/l may result in localised corrosion.

Selecting the design of pump and mechanical seal depending on the fluid to be handled

Fluid handled			Design									
Substance contained	Max. percentage	T _{max.}	H					HS				
	[%]	[°C]	13	14	15	16	18	13	14	15	16	18
Alum, acid-free	≤ 3	+50	-	X	-	-	-	-	X	-	-	-
Alum, acid-free	≤ 3	+80	-	-	-	-	-	-	X	-	-	-
Alkaline solution, bottle rinsing, max. 2 % sodium hydroxide	≤ 100	+40	-	-	X	-	-	-	-	X	-	-
Alcohol												
▪ Butanol	≤ 100	+60	X	-	-	-	-	X	-	-	-	-
▪ Ethanol	≤ 100	+60	X	-	-	-	-	X	-	-	-	-
▪ Propanol	≤ 100	+80	X	-	-	-	-	X	-	-	-	-
▪ Spirits (40 % ethanol)	≤ 100	+60	X	-	-	-	-	X	-	-	-	-
Wine (white, red)	≤ 100	+60	X	X	-	-	-	X	X	-	-	-
Tartaric acid	≤ 100	+60	-	-	-	-	-	-	-	-	-	-
Ammonium bicarbonate	≤ 10	+40	X	-	-	-	-	X	-	-	-	-
Aluminium sulphate, acid-free	≤ 5	+50	-	-	-	X	-	-	-	-	X	-
Aluminium sulphate, acid-free	≤ 5	+60	-	-	-	-	-	-	-	-	X	-
Ammonium sulphate	≤ 20	+60	X	-	-	-	-	X	-	-	-	-
Calcium acetate, acid-free	≤ 10	+60	X	-	-	-	-	X	-	-	-	-
Calcium nitrate, acid-free	≤ 10	+60	-	-	-	X	-	-	-	-	X	-
Ferric sulphate (II)	≤ 5	+80	-	-	-	X	-	-	-	-	X	-
Water-oil emulsion (95 %, 5 %), free of solids	≤ 100	+80	-	X	-	-	-	-	X	-	-	-
Ethylene glycol base anti-freeze, inhibited, closed system	≤ 20	+110	X ⁴⁾	X	-	X	-	X ⁴⁾	X	-	X	-
	≤ 25	+110	X ⁴⁾	X	-	X	-	X ⁴⁾	X	-	X	-
	≤ 30	+110	X ⁴⁾	X	-	X	-	X ⁴⁾	X	-	X	-
	≤ 35	+110	X ⁴⁾	X	-	X	-	X ⁴⁾	X	-	X	-
	≤ 40	+110	X ⁴⁾	X	-	X	-	X ⁴⁾	X	-	X	-
	≤ 45	+110	X ⁴⁾	X	-	X	-	X ⁴⁾	X	-	X	-
	≤ 50	+110	X ⁴⁾	X	-	X	-	X ⁴⁾	X	-	X	-
Ethylene glycol base anti-freeze, inhibited, open system	≤ 20	+110	X ⁴⁾	X	-	X	-	X ⁴⁾	X	-	X	-
	≤ 25	+110	X ⁴⁾	X	-	X	-	X ⁴⁾	X	-	X	-
	≤ 30	+110	X ⁴⁾	X	-	X	-	X ⁴⁾	X	-	X	-
	≤ 35	+110	X ⁴⁾	X	-	X	-	X ⁴⁾	X	-	X	-
	≤ 40	+110	X ⁴⁾	X	-	X	-	X ⁴⁾	X	-	X	-
	≤ 45	+110	X ⁴⁾	X	-	X	-	X ⁴⁾	X	-	X	-

4) ≤ 100 °C

Fluid handled			Design										
Substance contained	Max. percentage	T _{max.}	H					HS					
	[%]	[°C]	13	14	15	16	18	13	14	15	16	18	
Ethylene glycol base anti-freeze, inhibited, open system	≤ 50	+110	X ⁴⁾	X	-	X	-	X ⁴⁾	X	-	X	-	
Glycerine	≤ 40	+80	X	X	-	-	-	X	X	-	-	-	
Glycols (pure)	≤ 100	+100	-	-	-	-	-	-	-	-	-	-	
Diethylene glycol	≤ 100	+100	X	X	-	-	-	X	X	-	-	-	
Ethylene glycol	≤ 100	+100	X	X	-	-	-	X	X	-	-	-	
Potassium hydroxide	≤ 5	+40	-	-	X	-	-	-	-	X	-	-	
Potassium nitrate, acid-free	≤ 5	+30	-	-	X	-	-	-	-	X	-	-	
Potassium sulphate, acid-free	≤ 3	+20	-	X	-	-	-	-	X	-	-	-	
Copper sulphate	≤ 5	+80	-	-	X	-	-	-	-	X	-	-	
Magnesium sulphate	≤ 10	+80	-	X	-	-	-	-	X	-	-	-	
Milk	≤ 100	+60	X	X	-	-	-	X	X	-	-	-	
Lactic acid	≤ 40	+60	-	-	-	-	-	-	-	-	-	-	
Miscella ⁵⁾	≤ 100	+40	-	-	-	-	-	-	-	-	-	-	
Sodium carbonate	≤ 6	+60	X	-	-	-	-	X	-	-	-	-	
Sodium hydroxide	≤ 5	+60	-	-	X	-	-	-	-	X	-	-	
Sodium nitrate, acid-free	≤ 10	+30	X	-	-	-	-	X	-	-	-	-	
Sodium nitrate, acid-free	≤ 10	+60	X	-	-	-	-	-	-	-	-	-	
Sodium sulphate, acid-free	≤ 5	+60	X	-	-	-	-	X	-	-	-	-	
Oil													
▪ Peanut oil	≤ 100	+90	-	X	-	-	-	-	X	-	-	-	
▪ Peanut oil	≤ 100	+100	-	-	-	-	-	-	-	-	-	-	
▪ Linseed oil, ≤ 3 % H ₂ SO ₄	≤ 100	+20	-	X	-	-	-	-	X	-	-	-	
▪ Linseed oil, ≤ 3 % H ₂ SO ₄	≤ 100	+60	-	-	-	-	-	-	X	-	-	-	
▪ Hydraulic oil ⁵⁾	≤ 100	+80	-	-	-	-	-	-	-	-	-	-	
▪ Linseed oil	≤ 100	+60	-	X	-	-	-	-	X	-	-	-	
▪ Linseed oil	≤ 100	+60	-	-	-	-	-	-	-	-	-	-	
▪ Corn oil	≤ 100	+100	-	X	-	-	-	-	X	-	-	-	
▪ Mineral oil ⁵⁾	≤ 100	+80	-	-	-	-	-	-	-	-	-	-	
▪ Vegetable oil ⁵⁾	≤ 100	+100	-	-	-	-	-	-	-	-	-	-	
▪ Rapeseed oil	≤ 100	+100	-	X	-	-	-	-	X	-	-	-	
▪ Salad oil	≤ 100	+100	-	-	-	-	-	-	-	-	-	-	
▪ Lubricating oil ⁵⁾	≤ 100	+100	-	-	-	-	-	-	-	-	-	-	
▪ Silicone oil ⁵⁾	≤ 100	+60	-	-	-	-	-	-	-	-	-	-	
▪ Soybean oil	≤ 100	+100	-	X	-	-	-	-	X	-	-	-	
▪ Turpentine oil ⁵⁾	≤ 100	+60	-	-	-	-	-	-	-	-	-	-	
▪ Turbine oil (no SDF oils) ⁵⁾	≤ 100	+100	-	-	-	-	-	-	-	-	-	-	
▪ Oil-water mixtures	≤ 100	+100	-	-	-	-	-	-	-	-	-	-	
Paraffin ⁵⁾	≤ 100	+100	-	-	-	-	-	-	-	-	-	-	
Kerosene	≤ 100	+80	-	X	-	-	-	-	X	-	-	-	
Polyethylene glycol ⁵⁾	≤ 100	+80	-	-	-	-	-	-	-	-	-	-	
Polyglycol ⁵⁾	≤ 100	+80	-	-	-	-	-	-	-	-	-	-	
Crude oil ⁵⁾	≤ 100	+80	-	-	-	-	-	-	-	-	-	-	
Crude oil condensate ⁵⁾	≤ 100	+80	-	-	-	-	-	-	-	-	-	-	
Juice (fruit and sugar juice)	≤ 100	+60	-	X	-	-	-	-	X	-	-	-	
Acid													
▪ Acetic acid	≤ 10	+60	X	-	-	-	-	X	-	-	-	-	
▪ Acetic acid	≤ 5	+60	X	-	-	-	-	X	-	-	-	-	
▪ Tannic acid	≤ 20	+80	-	X	-	-	-	-	X	-	-	-	

5) Fluid details are required in this case.

Fluid handled			Design									
Substance contained	Max. percentage	T _{max.}	H					HS				
	[%]	[°C]	13	14	15	16	18	13	14	15	16	18
▪ Maleic acid	≤ 10	+60	-	X	-	-	-	-	X	-	-	-
▪ Lactic acid	≤ 5	+60	-	X	-	-	-	-	X	-	-	-
▪ Lactic acid	≤ 40	+60	-	X	-	-	-	-	X	-	-	-
▪ Phosphoric acid	≤ 5	+20	-	X	-	-	-	-	X	-	-	-
▪ Sulphuric acid	≤ 5	+20	-	-	-	-	-	-	-	-	X	-
▪ Tartaric acid	≤ 8	+40	-	-	-	-	-	-	X	-	-	-
▪ Citric acid	≤ 25	+30	-	X	-	-	-	-	X	-	-	-
▪ Citric acid	≤ 10	+30	-	X	-	-	-	-	X	-	-	-
Fuel												
▪ Diesel oil	≤ 100	+80	-	X	-	-	-	-	X	-	-	-
▪ Fuel oil	≤ 100	+80	-	X	-	-	-	-	X	-	-	-
▪ Jet fuel	≤ 100	+80	-	X	-	-	-	-	X	-	-	-
Trisodium phosphate	≤ 4	+80	-	-	X	-	-	-	-	X	-	-
Water												
▪ Deionised water (fully desalinated)	≤ 100	+140	X	-	-	-	X ⁶⁾	X	-	-	-	X ⁶⁾
▪ Distilled water	≤ 100	+140	-	-	-	-	-	-	-	-	-	-
▪ Dealkalised water	≤ 100	+120	-	-	X	-	-	-	-	X	-	-
▪ Decarbonised water	≤ 100	+120	-	-	X	-	-	-	-	X	-	-
▪ Swimming pool water (no brine)	≤ 100	+100	-	-	-	-	-	-	-	-	-	-
▪ Permeate (osmosis)	≤ 100	+140	X	-	-	-	X ⁶⁾	X	-	-	-	X ⁶⁾
▪ Partly desalinated water	≤ 100	+120	-	-	X	-	-	-	-	X	-	-
▪ Fire-fighting water	≤ 100	+60	-	-	X	-	X	-	-	X	-	X
▪ Heating water in accordance with VDI 2035	≤ 100	+100	X	-	-	-	X	X	-	-	-	X
▪ Hot water treated in accordance with VdTÜV 1466	≤ 100	+140	X ⁴⁾	-	-	-	X ⁶⁾	X ⁴⁾	-	-	-	X ⁶⁾
▪ Boiler feed water to VdTÜV 1466	≤ 100	+140	X ⁴⁾	-	-	-	X ⁶⁾	X ⁴⁾	-	-	-	X ⁶⁾
▪ Condensate treated in acc. with VdTÜV 1466	≤ 100	+140	X ⁴⁾	-	-	-	X ⁶⁾	X ⁴⁾	-	-	-	X ⁶⁾
▪ Vapour condensate (brewery)	≤ 100	+140	X ⁴⁾	-	-	-	X ⁶⁾	X ⁴⁾	-	-	-	X ⁶⁾
▪ Cooling water	≤ 100	+100	-	-	-	X	-	-	-	-	X	-
▪ Tap water	≤ 100	+60	X	-	-	-	-	X	-	-	-	-
▪ Brewing water	≤ 100	+60	X	-	-	-	-	X	-	-	-	-
▪ Ice water (brewery)	≤ 100	+60	X	-	-	-	-	X	-	-	-	-
▪ Drinking water / tap water	≤ 100	+60	X	-	-	-	-	X	-	-	-	-
▪ Hot water (brewery)	≤ 100	+60	X	-	-	-	-	X	-	-	-	-
▪ Clean water	≤ 100	+60	X	X	X	X	X	X	X	X	X	X
▪ Brackish water	≤ 100	+15	-	-	-	-	-	-	-	-	X	-
▪ Seawater	≤ 100	+15	-	-	-	-	-	-	-	-	X	-
▪ Raw water	≤ 100	+60	-	-	X	-	-	-	-	X	-	-
▪ Grey water, slightly contaminated water	≤ 100	+60	-	-	X	-	-	-	-	X	-	-
▪ River water	≤ 100	+60	-	-	X	-	-	-	-	X	-	-
▪ Lake water	≤ 100	+60	-	-	X	-	-	-	-	X	-	-
▪ Dam water	≤ 100	+60	-	-	X	-	-	-	-	X	-	-
▪ Surface water	≤ 100	+60	-	-	X	-	-	-	-	X	-	-

6) ≤ 120 °C, depending on the pressure classes

Fluid handled			Design									
Substance contained	Max. percentage	T _{max.}	H					HS				
	[%]	[°C]	13	14	15	16	18	13	14	15	16	18
▪ Fresh water	≤ 100	+60	-	X	-	-	-	-	X	-	-	-
▪ Barrier water	≤ 100	+70	-	-	-	X	-	-	-	-	X	-
▪ Rinsing water	≤ 100	+70	-	-	-	X	-	-	-	-	X	-
▪ Rainwater, with strainer	≥ 20	+60	-	-	-	X	-	-	-	-	X	-
▪ Water-glycol mixture	≤ 100	+100	-	-	-	-	-	-	-	-	-	-

Shaft seal

Available mechanical seals

Mechanical seal							T		p
Code	Type	Code to EN 12756	Elastomer	Design			Min.	Max.	[bar]
				C	E	F	[°C]	[°C]	
13	RMG-G606	Q1 B E G G	EPDM WRAS / ACS	X	X	X	-20	+100	25
14	RMG-G606	Q1 B V G G	FPM	X	X	X	-20	+120	25
15	RMG-G606	U3 U3 X4 G G	HNBR	X	X	X	-20	+120 ⁷⁾	25
16	RMG-G606	U3 U3 V G G	FPM	X	X	X	-20	+120 ⁷⁾	25
18	RMG-G606	U3 B E G G	EPDM 559236	X	X	X	-20	+120 ⁷⁾	25
23	RMG-G606	Q1 B E G G	EPDM	X	X	X	-20	+100	25
24	MG-G606	Q1 Q1 V G G	FPM	X	X	X	-20	+120	10
28	MG-G606	Q1 Q1 X4 G G	HNBR	X	X	X	-20	+120	10
29	MG-G606	Q1 Q1 E G G	EPDM	X	X	X	-20	+100	10

Key to mechanical seal materials

Description	Code to EN 12756	Seal face materials / secondary seals
Primary ring	U3	Tungsten carbide (CrNiMo binder)
	Q1	Silicon carbide (sintered without pressure)
Mating ring	B	Hard carbon, resin-impregnated
	U3	Tungsten carbide (CrNiMo binder)
	Q1	Silicon carbide (sintered without pressure)
Elastomer	E	EPDM (ethylene propylene rubber)
	V	FPM (fluoroelastomer)
	X4	HNBR
Spring	G	CrNiMo steel
Other metal parts	G	CrNiMo steel

Pressure limits and temperature limits

The pump's pressure limits and temperature limits are indicated on the name plate.

7) Temperatures up to 140 °C if the pressure does not exceed 16 bar

Technical data
Motors

- Efficiency class IE3 to IEC 60034-30 (for three-phase motors ≥ 0.75 kW)

Technical motor data, 50 Hz

P_N	U_N	I_A	I_A/I_N	$\cos \varphi$	Tolerance V_N	n	η	L_p	Cable gland	Maximum frequency of starts
[kW]	[V]	[A]			[%]	rpm	[%]	[dB]		[h ⁻¹]
0,37	1 × 230	2,60	3,7	0,92	+/-10	2750	67,00	58	1 × M18 × 1,5	20
0,55	1 × 230	3,69	3,9	0,92	+/-10	2760	70,00	56	1 × M18 × 1,5	20
0,75	1 × 230	5,00	3,9	0,92	+/-10	2780	70,00	56	1 × M20 × 1,5	20
1,10	1 × 230	6,68	4,3	0,95	+/-10	2790	75,00	58	1 × M20 × 1,5	20
1,50	1 × 230	8,99	4,8	0,95	+/-10	2800	76,00	58	1 × M20 × 1,5	20
2,20	1 × 230	13,04	4,8	0,95	+/-10	2800	77,00	58	1 × M20 × 1,5	20
0,37	230/400	1,64/0,94	4,6	0,78	+/-10	2750	74,20	58	1 × M20 × 1,5	20
0,55	230/400	2,31/1,33	5,2	0,75	+/-10	2790	77,60	58	1 × M20 × 1,5	20
0,75	230/400	2,92/1,68	6,8	0,80	+/-10	2855	80,50	60	2 × M20 × 1,5	25
1,10	230/400	4,17/2,40	7,0	0,80	+/-10	2855	82,70	60	2 × M25 × 1,5	25
1,50	230/400	5,08/2,92	7,7	0,88	+/-10	2900	84,20	63	2 × M25 × 1,5	25
2,20	230/400	7,22/4,15	7,7	0,89	+/-10	2900	86,00	63	2 × M25 × 1,5	25
3,00	230/400	9,71/5,59	8,8	0,89	+/-10	2910	87,10	63	2 × M25 × 1,5	20
3,00	400/690	5,59/3,24	8,8	0,89	+/-10	2910	87,10	63	2 × M25 × 1,5	20
4,00	230/400	13,00/7,45	8,5	0,88	+/-10	2910	88,10	63	2 × M25 × 1,5	20
4,00	400/690	7,45/4,32	8,5	0,88	+/-10	2910	88,10	63	2 × M25 × 1,5	20
5,50	230/400	17,40/10,00	8,8	0,89	+/-10	2925	89,20	68	2 × M32 × 1,5	20
5,50	400/690	10,00/5,80	8,8	0,89	+/-10	2925	89,20	68	2 × M32 × 1,5	20
7,50	230/400	23,20/13,40	8,8	0,90	+/-10	2925	89,80	68	2 × M32 × 1,5	20
7,50	400/690	13,40/7,74	8,8	0,90	+/-10	2925	89,80	68	2 × M32 × 1,5	20
0,55	230/400	2,34/1,34	5,3	0,73	+/-10	1425	80,70	57	1 × M20 × 1,5	20
0,75	230/400	3,13/1,80	6,5	0,73	+/-10	1425	82,50	57	1 × M20 × 1,5	20
1,10	230/400	4,21/2,42	6,5	0,78	+/-10	1440	84,40	58	1 × M20 × 1,5	20
1,50	230/400	5,59/3,21	7,0	0,79	+/-10	1440	85,30	58	1 × M25 × 1,5	20
2,20	230/400	7,86/4,52	7,5	0,81	+/-10	1445	86,70	59	2 × M25 × 1,5	20
3,00	230/400	10,60/6,10	7,5	0,81	+/-10	1445	87,70	59	2 × M25 × 1,5	20
3,00	400/690	6,10/3,53	7,5	0,81	+/-10	1445	87,70	59	2 × M25 × 1,5	20
4,00	230/400	14,00/8,05	8,5	0,81	+/-10	1450	88,50	60	2 × M25 × 1,5	20
4,00	400/690	8,05/4,66	8,5	0,81	+/-10	1450	88,60	60	2 × M25 × 1,5	20
5,50	230/400	19,00/10,90	8,5	0,81	+/-10	1460	89,90	60	2 × M32 × 1,5	20
5,50	400/690	10,90/6,34	8,5	0,81	+/-10	1460	89,60	60	2 × M32 × 1,5	20
7,50	230/400	25,40/14,60	8,5	0,82	+/-10	1460	90,40	60	2 × M32 × 1,5	20
7,50	400/690	14,60/8,47	8,5	0,82	+/-10	1460	90,40	60	2 × M32 × 1,5	20

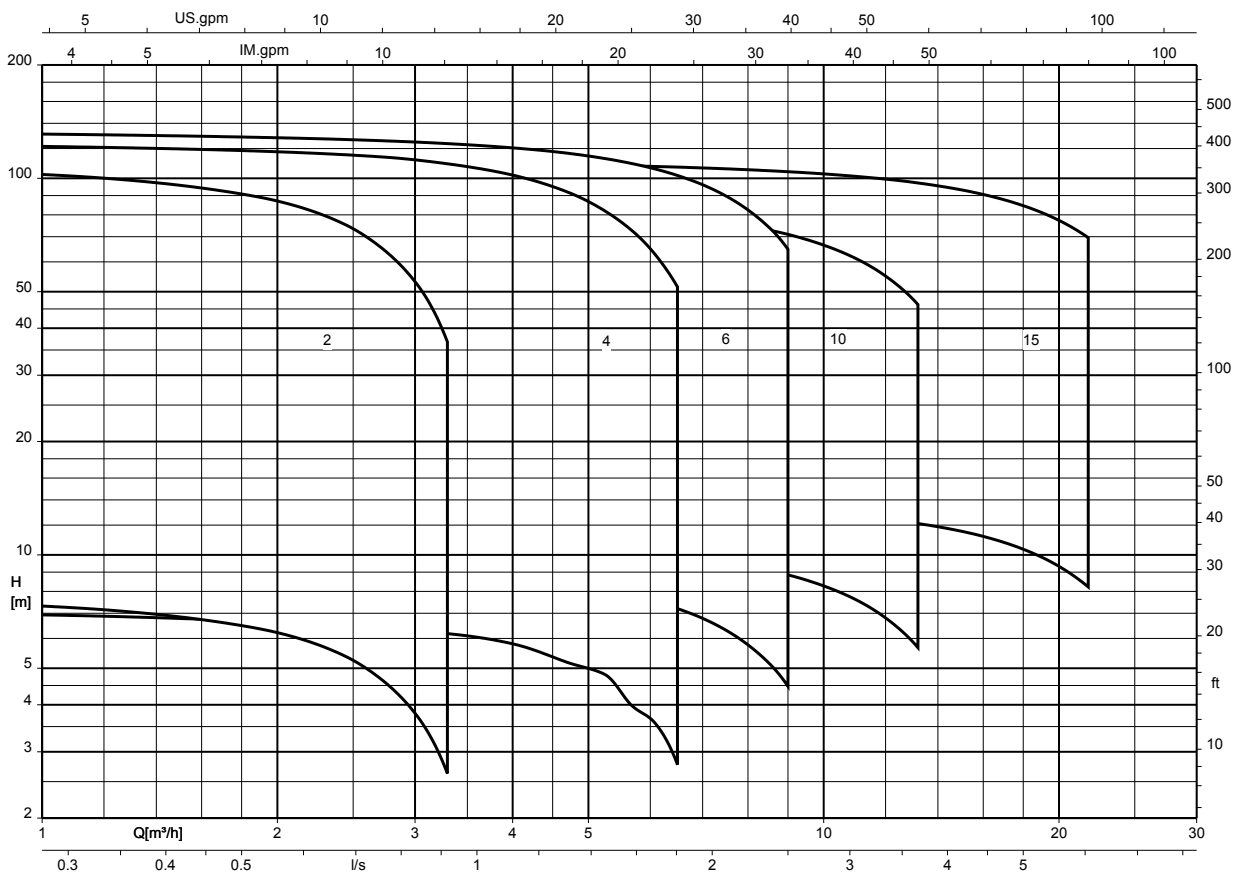
Technical motor data, 60 Hz

P_N	U_N	I_A	I_A/I_N	$\cos \varphi$	Tolerance V_N	n	η	L_p	Cable gland	Maximum frequency of starts
[kW]	[V]	[A]			[%]	[rpm]	[%]	[dB]		[h ⁻¹]
0,37	230/400	1,54/0,89	3,90	0,79	+20/-5	3300	75,70	58	1 × M20 × 1,5	20
0,55	230/400	2,29/1,32	4,40	0,76	+20/-5	3345	79,10	58	1 × M20 × 1,5	20
0,75	230/400	2,94/1,69	7,40	0,79	+20/-5	3450	81,10	58	1 × M20 × 1,5	20
1,10	230/400	4,14/2,38	5,80	0,80	+20/-5	3450	83,30	58	1 × M20 × 1,5	20
1,50	230/400	4,98/2,86	6,20	0,89	+20/-5	3480	85,00	58	1 × M25 × 1,5	20
2,20	230/400	7,14/4,11	6,20	0,90	+20/-5	3480	85,90	60	1 × M25 × 1,5	20
3,00	230/400	9,51/5,47	7,50	0,91	+20/-5	3480	87,00	62	2 × M25 × 1,5	20
3,00	400/690	5,47/3,17	7,50	0,91	+20/-5	3480	87,00	62	2 × M25 × 1,5	20
4,00	230/400	12,49/7,18	7,20	0,90	+20/-5	3500	89,30	64	2 × M25 × 1,5	20
4,00	400/690	7,18/4,16	7,20	0,90	+20/-5	3500	89,30	64	2 × M25 × 1,5	20
5,50	230/400	17,22/9,90	6,40	0,90	+20/-5	3510	89,10	68	2 × M32 × 1,5	20
5,50	400/690	9,90/5,74	6,40	0,90	+20/-5	3510	89,10	68	2 × M32 × 1,5	20
7,50	230/400	23,29/13,29	6,40	0,90	+20/-5	3510	89,80	68	2 × M32 × 1,5	20
7,50	400/690	13,39/7,76	6,40	0,90	+20/-5	3510	89,80	68	2 × M32 × 1,5	20
0,55	230/400	2,30/1,32	4,50	0,74	+20/-5	1710	81,00	57	1 × M20 × 1,5	20

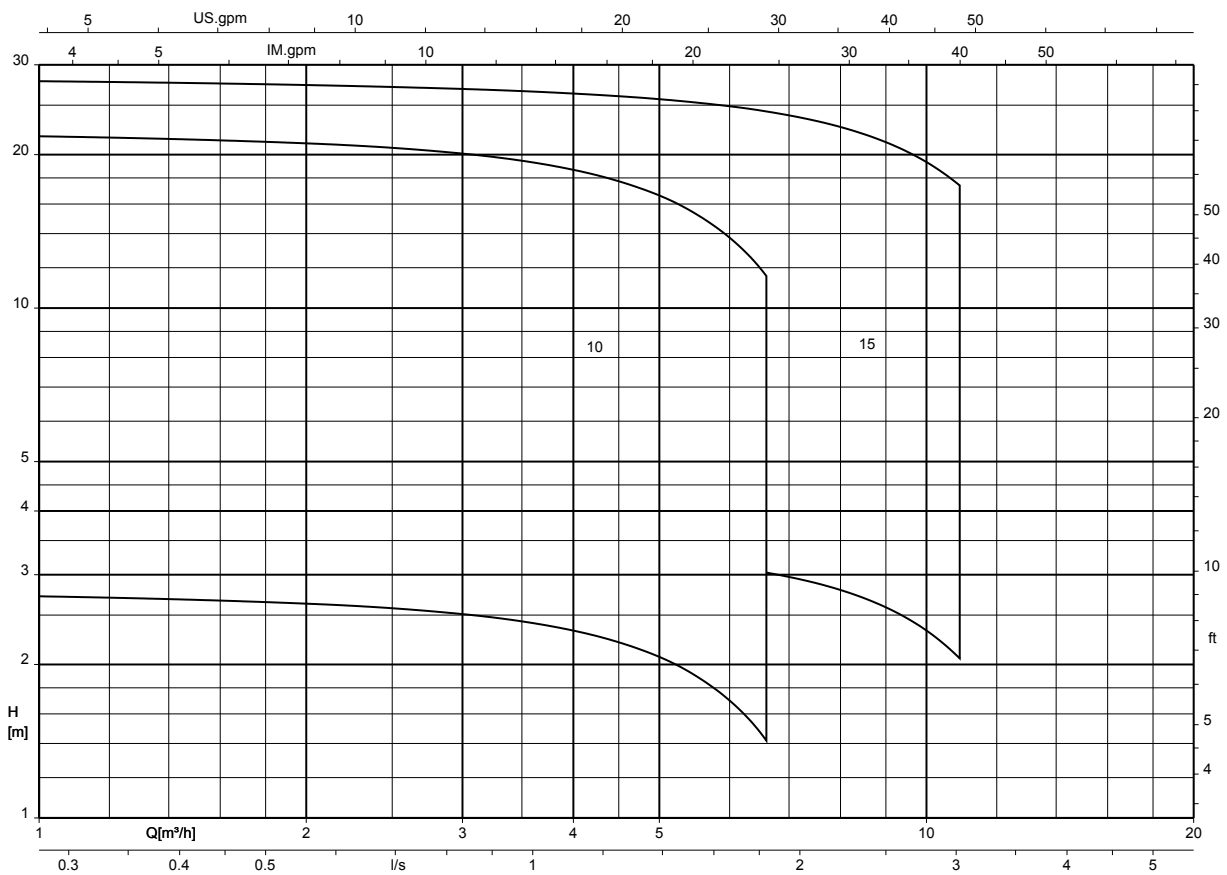
P_N	U_N	I_A	I_A/I_N	$\cos \varphi$	Tolerance V_N	n	η	L_p	Cable gland	Maximum frequency of starts
[kW]	[V]	[A]			[%]	[rpm]	[%]	[dB]		[h ⁻¹]
0,75	230/400	3,04/1,75	6,30	0,75	+20/-5	1710	82,60	56	1 × M20 × 1,5	20
1,10	230/400	4,10/2,36	7,50	0,80	+20/-5	1735	84,10	58	1 × M20 × 1,5	20
1,50	230/400	5,52/3,17	7,30	0,80	+20/-5	1735	85,30	58	1 × M25 × 1,5	20
2,20	230/400	8,06/4,64	7,20	0,79	+20/-5	1720	86,70	57	2 × M25 × 1,5	20
3,00	230/400	10,14/5,86	7,20	0,83	+20/-5	1720	87,90	57	2 × M25 × 1,5	20
3,00	400/690	6,25/3,62	7,20	0,79	+20/-5	1720	87,70	57	2 × M25 × 1,5	20
4,00	230/400	13,23/7,76	5,95	0,84	+20/-5	1745	88,60	60	2 × M25 × 1,5	20
4,00	400/690	7,76/4,50	5,95	0,84	+20/-5	1745	88,60	60	2 × M25 × 1,5	20
5,50	230/400	24,74/14,23	5,95	0,83	+20/-5	1746	90,98	62	2 × M32 × 1,5	20
5,50	400/690	10,69/6,20	5,95	0,83	+20/-5	1750	89,50	62	2 × M32 × 1,5	20
7,50	230/400	24,70/14,26	5,95	0,84	+20/-5	1750	90,40	62	2 × M32 × 1,5	20
7,50	400/690	14,26/8,26	5,95	0,84	+20/-5	1750	90,40	62	2 × M32 × 1,5	20

Selection chart

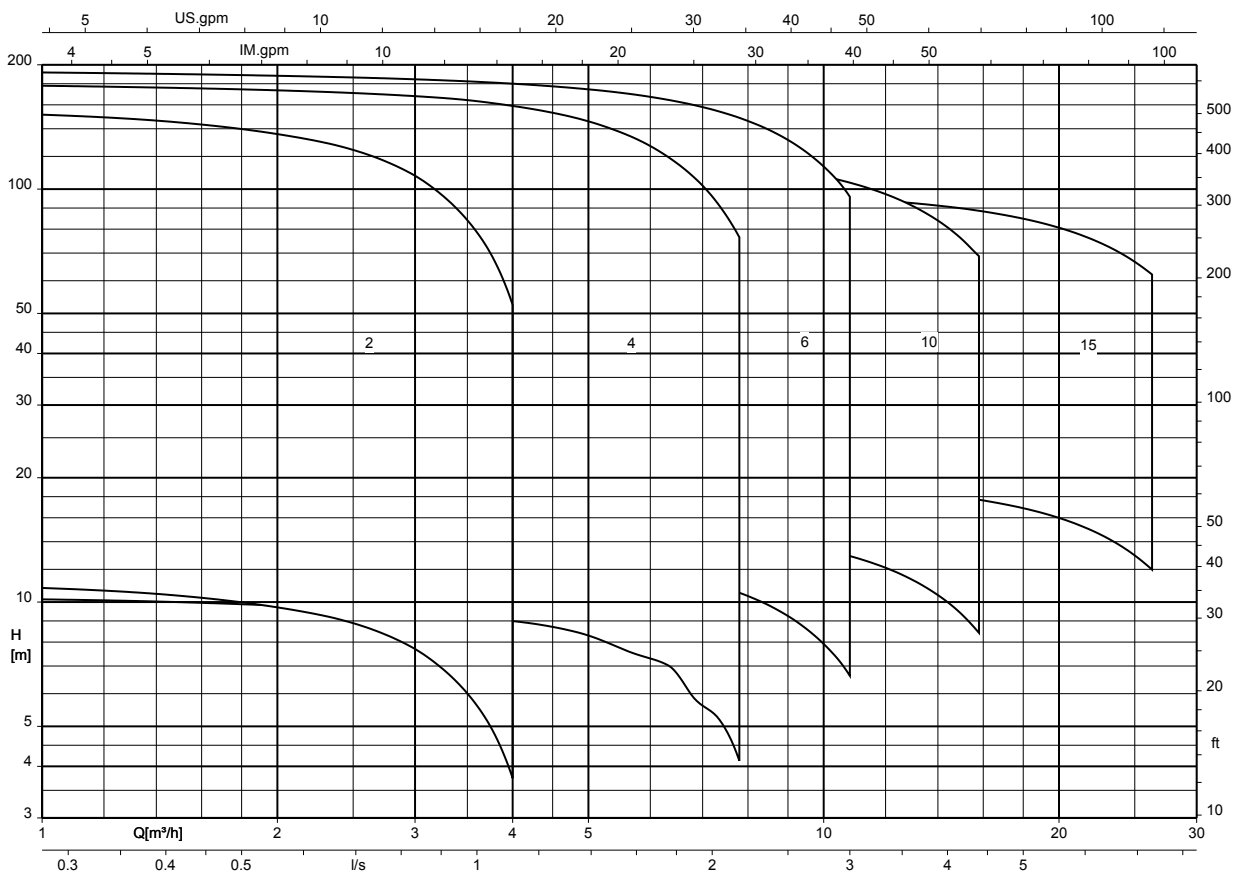
Movitec H(S)I, n = 2900 rpm



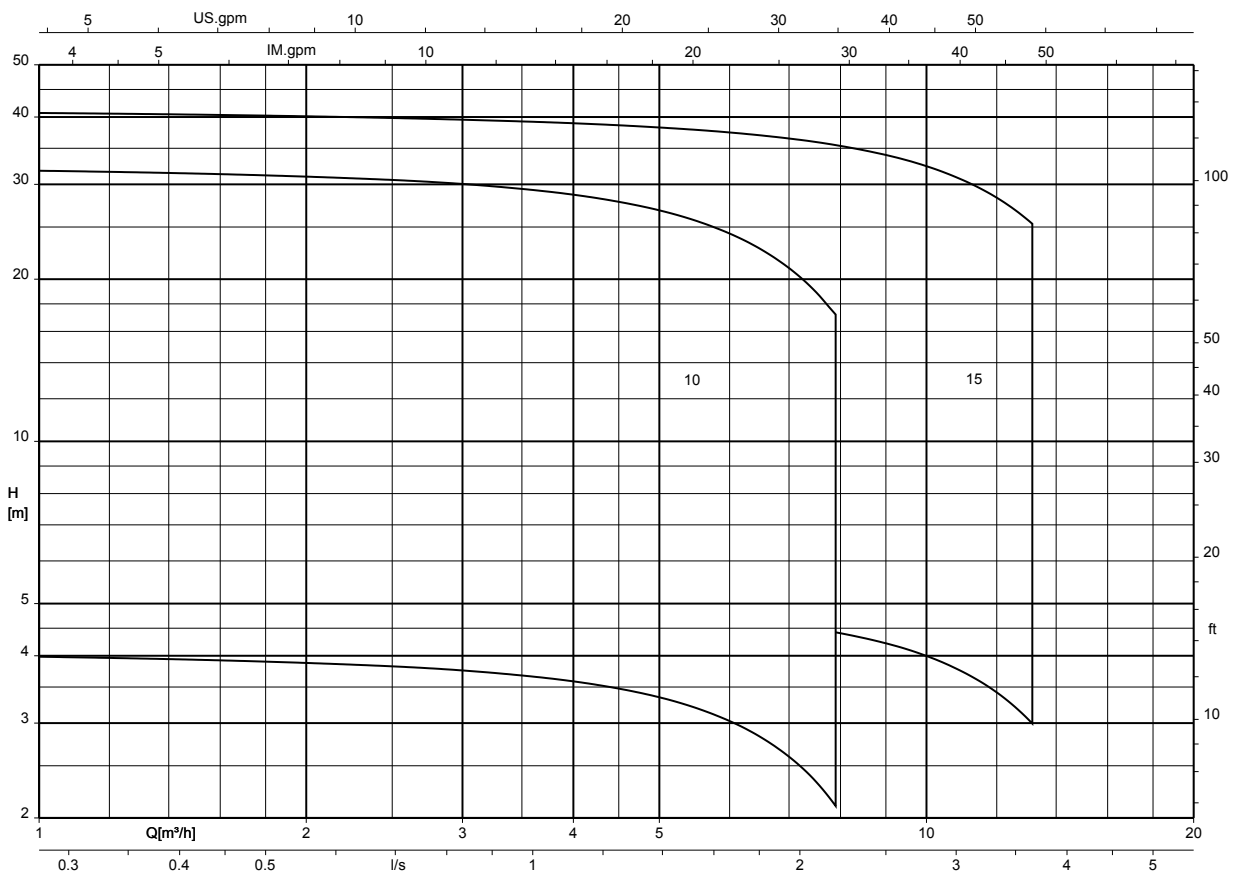
Movitec H(S)I, n = 1450 rpm



Movitec H(S)I, n = 3500 rpm



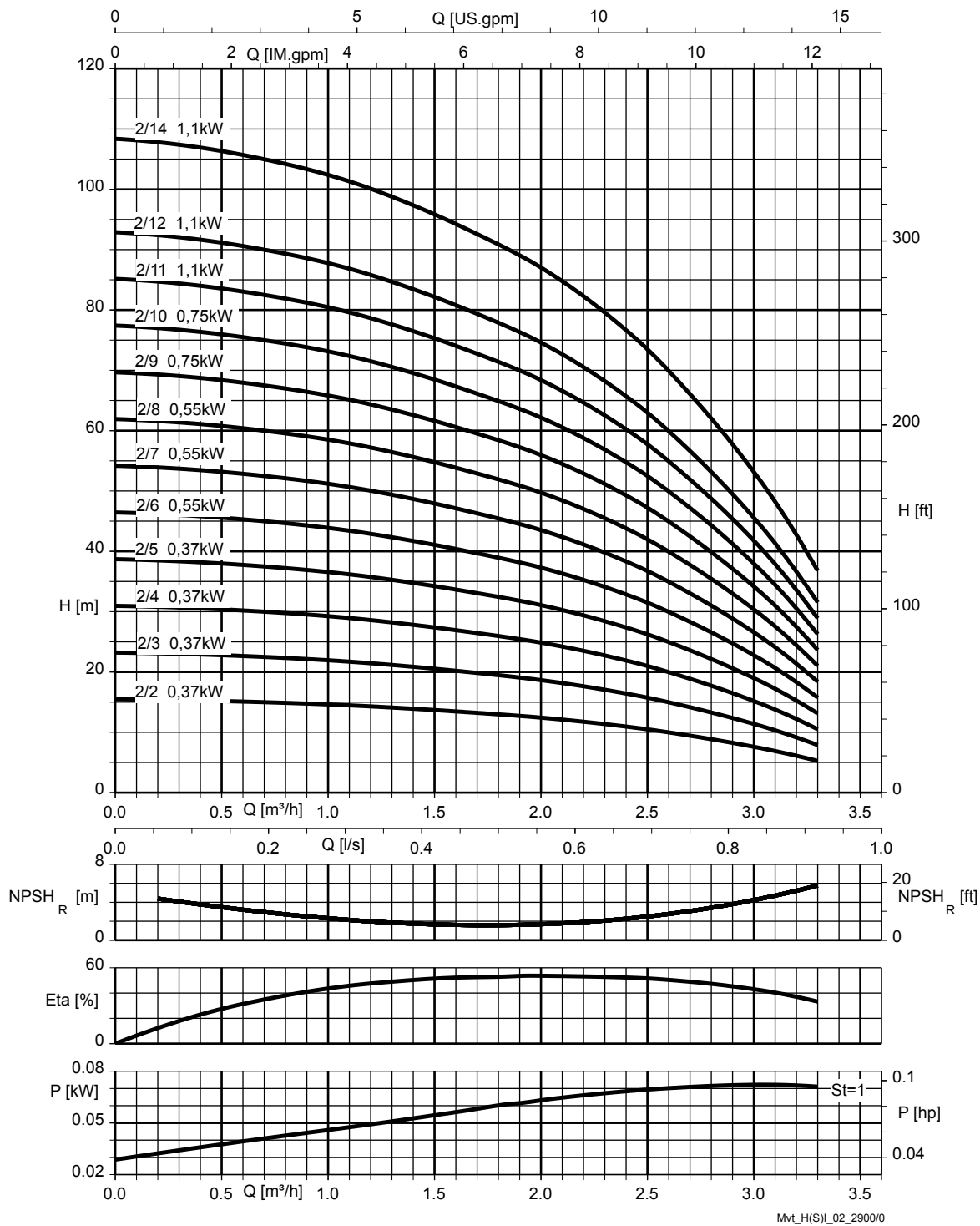
Movitec H(S)I, n = 1750 rpm



Characteristic curves

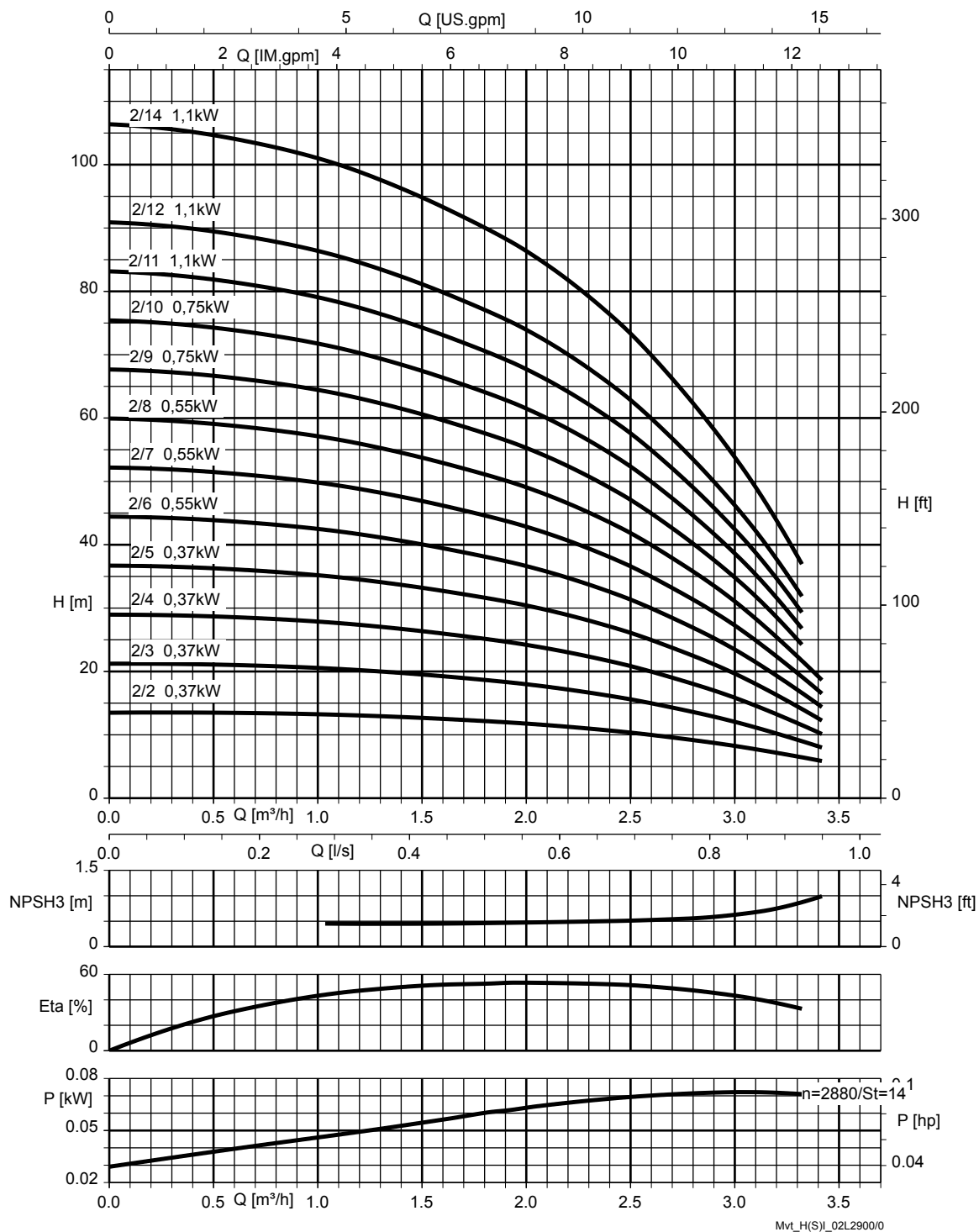
$n = 2900 \text{ rpm}$

Movitec H(S)I, 2B, $n = 2900 \text{ rpm}$



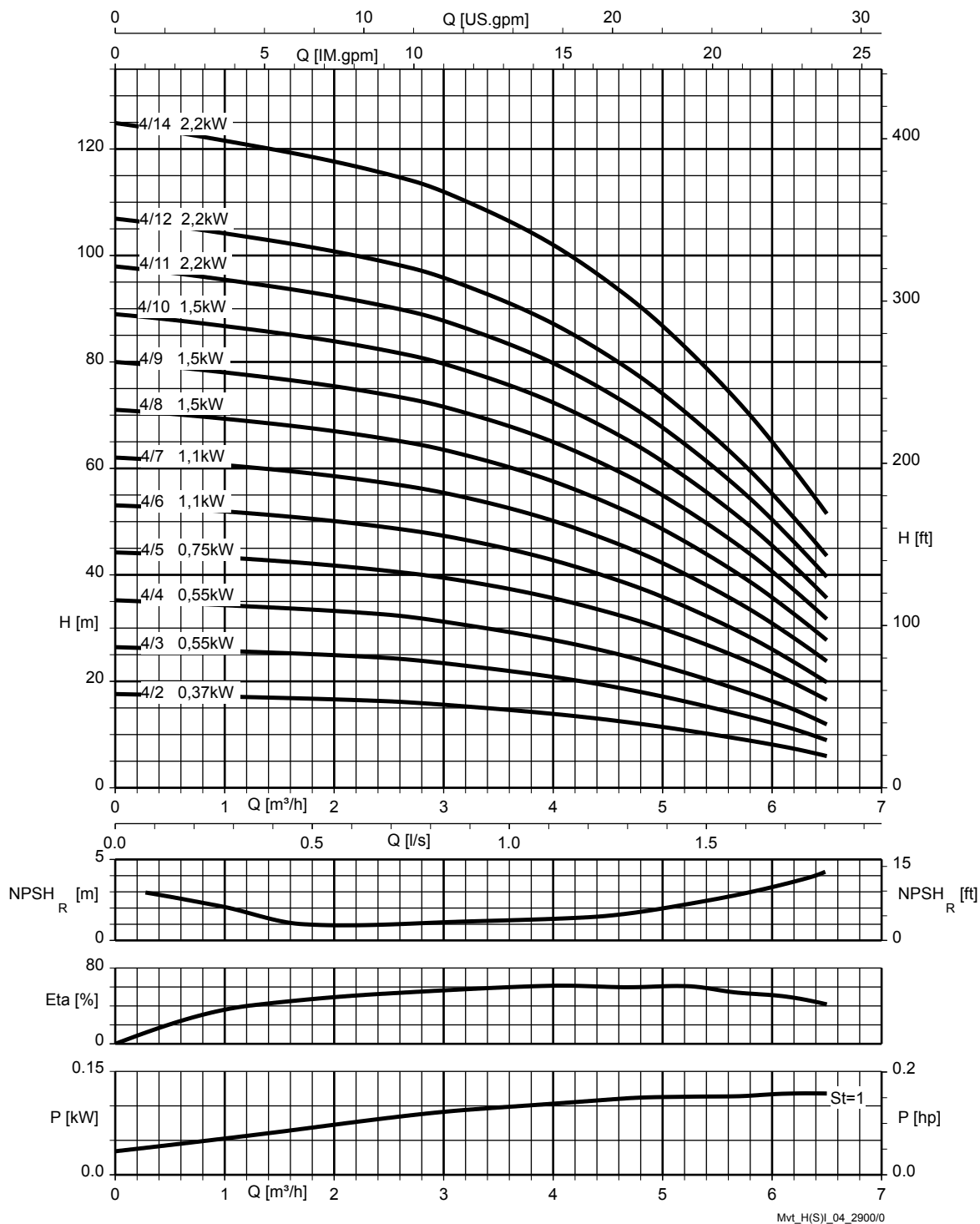
St = 1 | P per stage

Movitec H(S)I, 2-LB, n = 2900 rpm



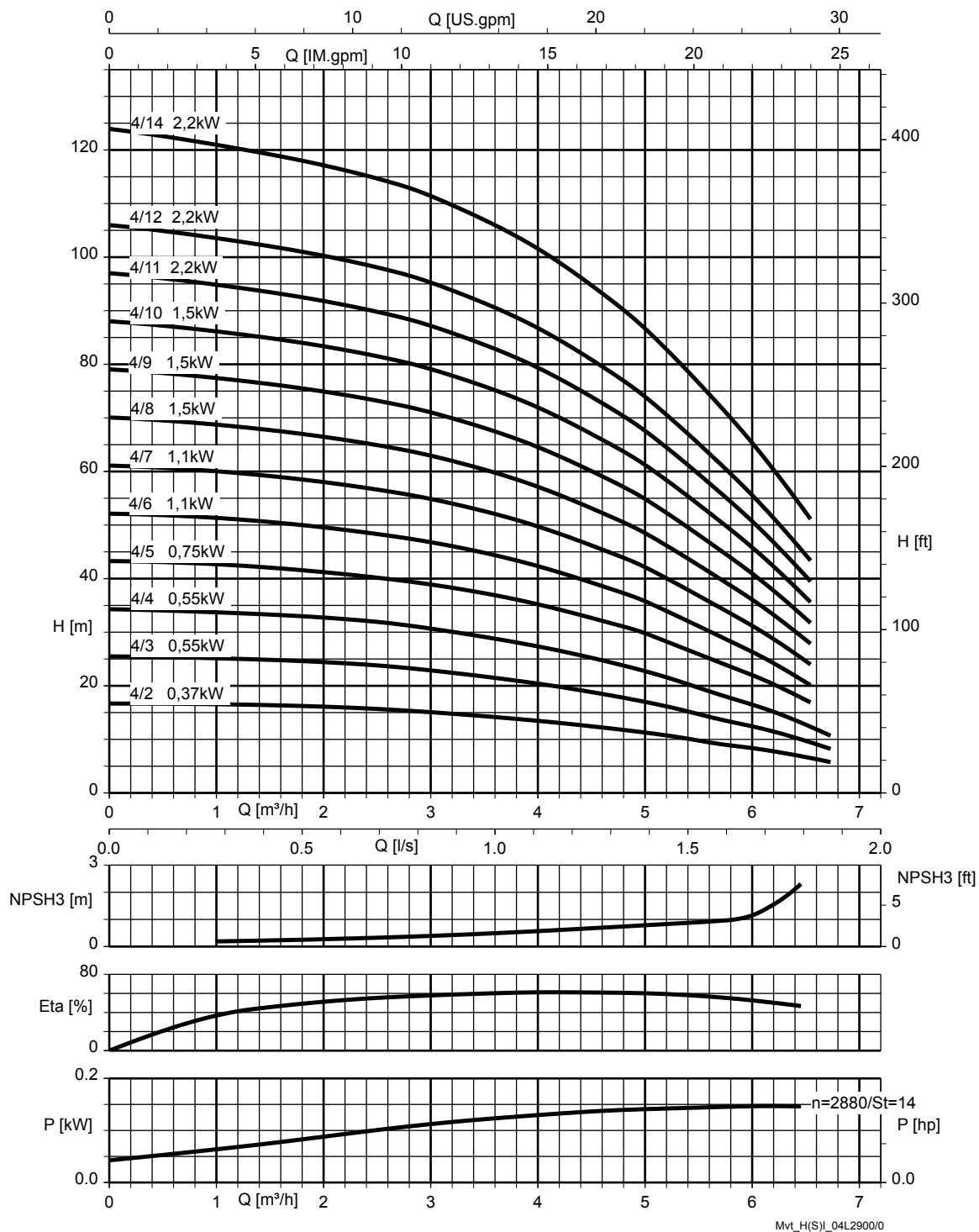
St = 1 | P per stage

Movitec H(S)I, 4B, n = 2900 rpm



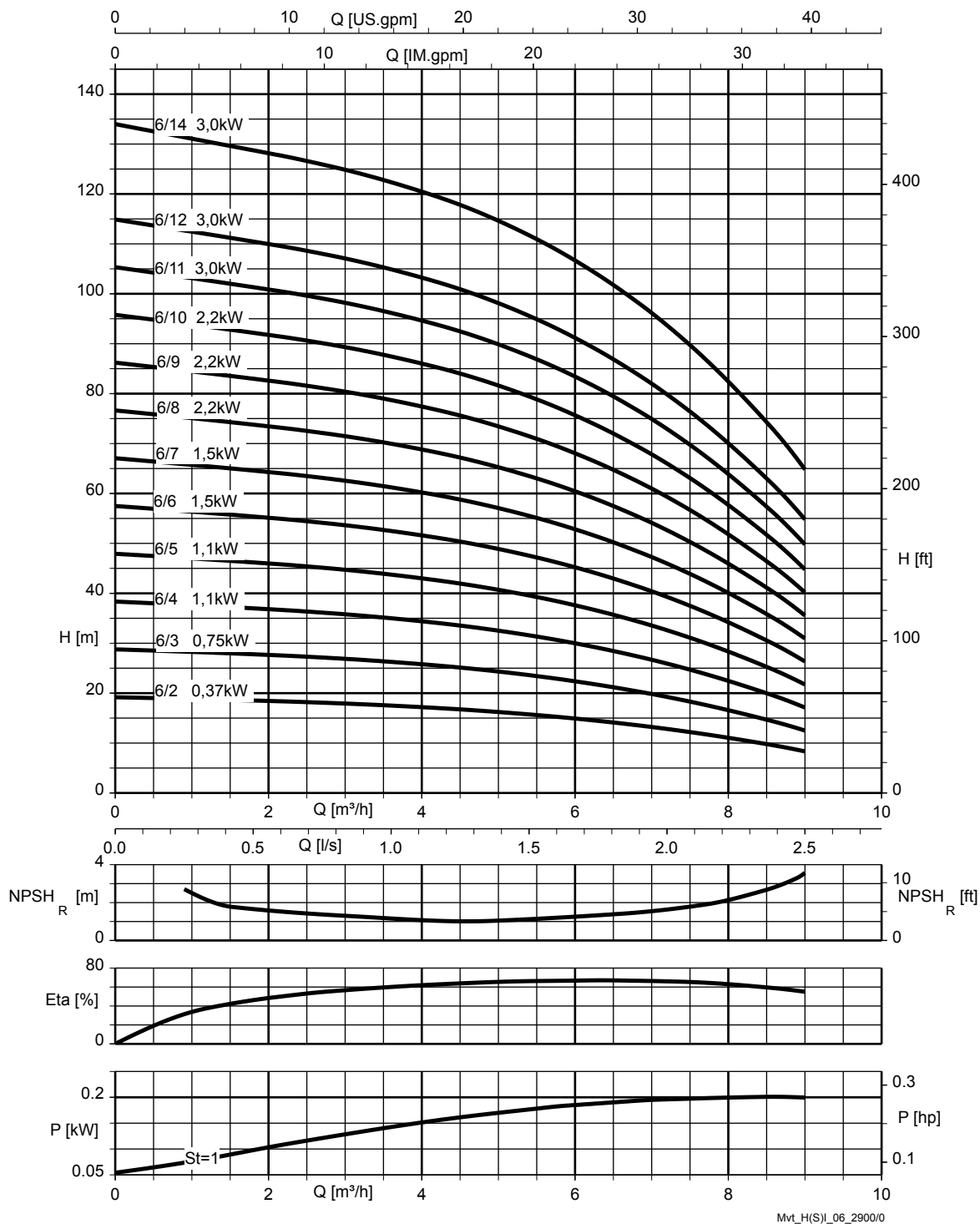
St = 1 | P per stage

Movitec H(S)I, 4-LB, n = 2900 rpm



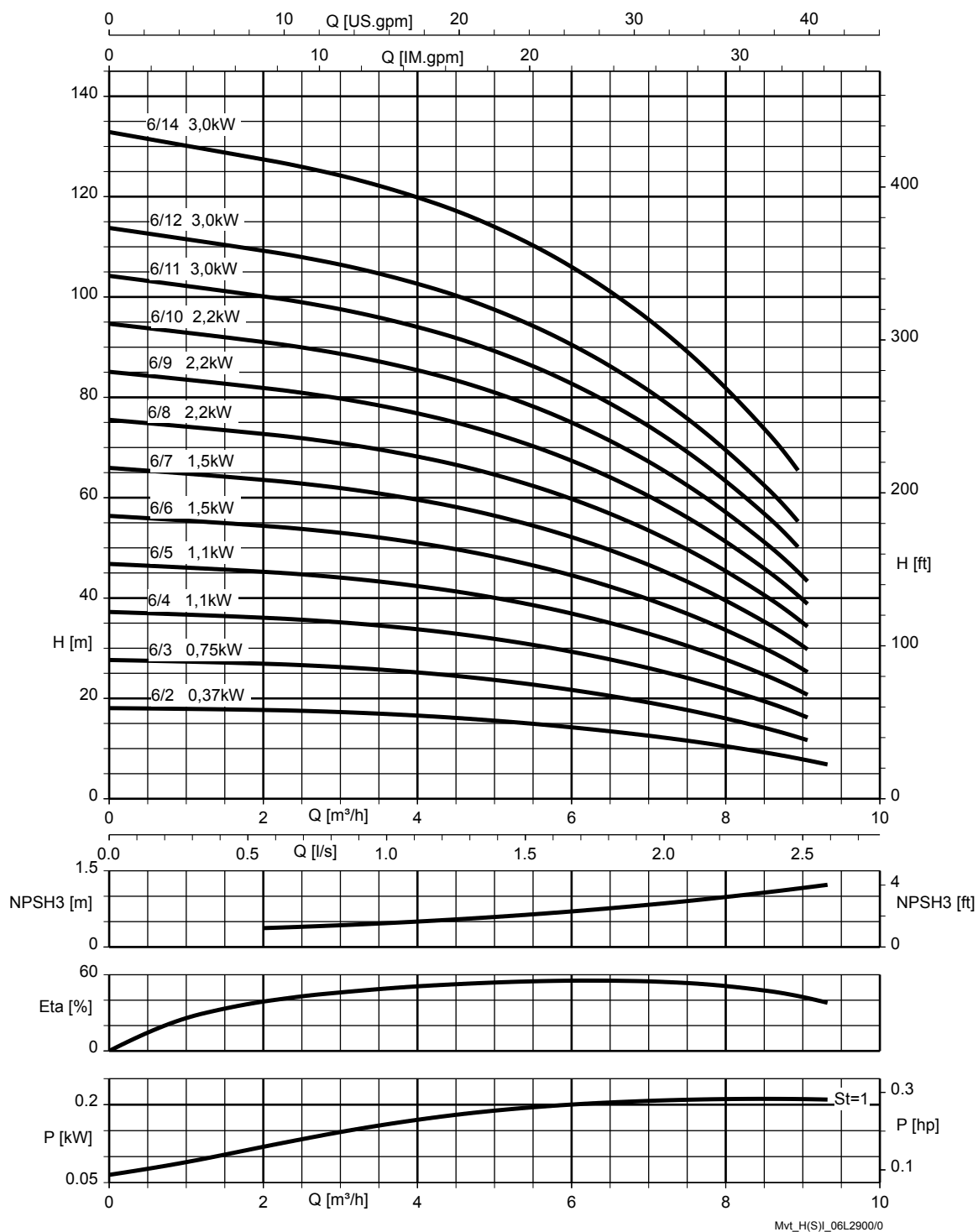
St = 1 | P per stage

Movitec H(S)I, 6B, n = 2900 rpm



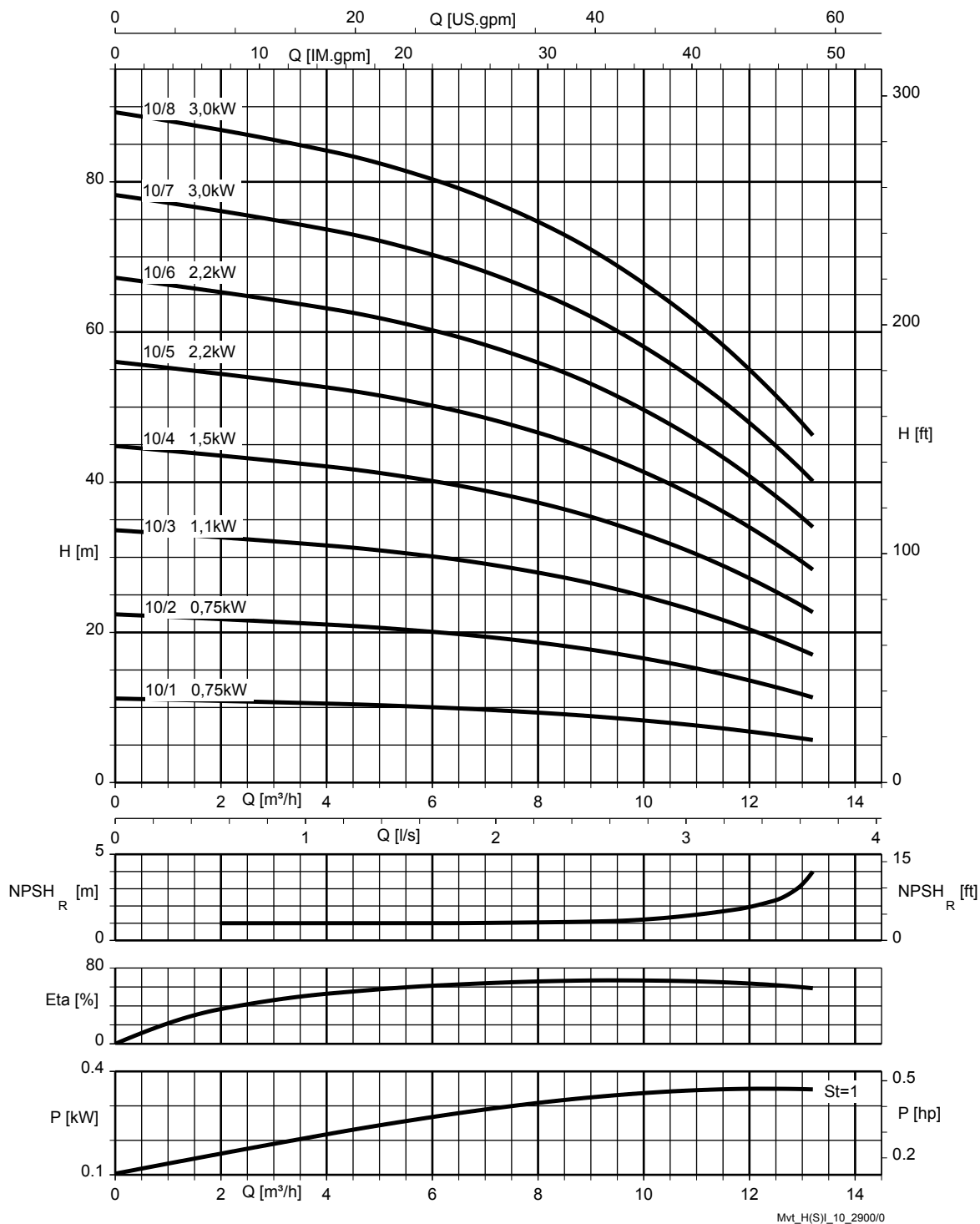
St = 1 | P per stage

Movitec H(S)I, 6-LB, n = 2900 rpm



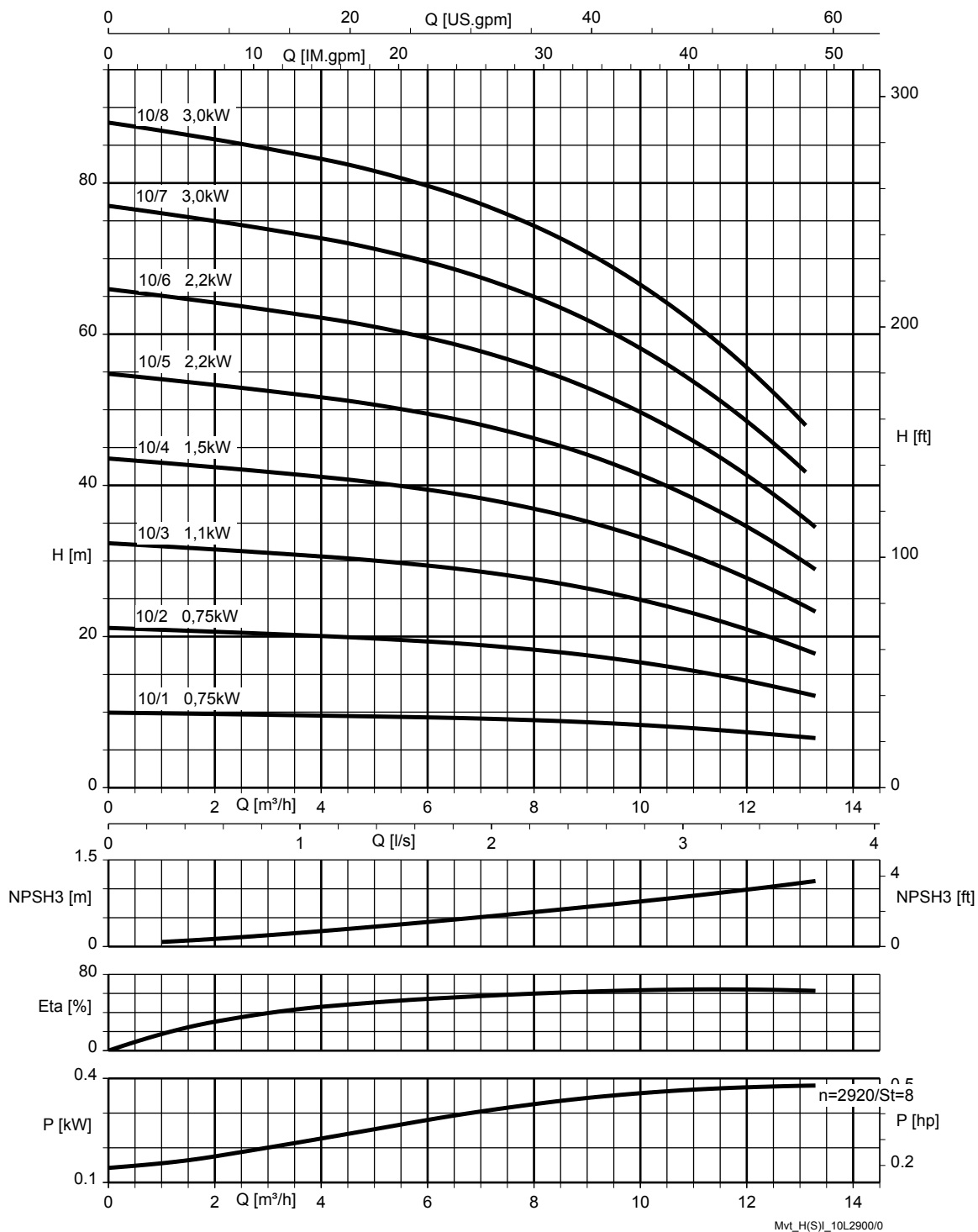
St = 1 | P per stage

Movitec H(S)I, 10B, n = 2900 rpm



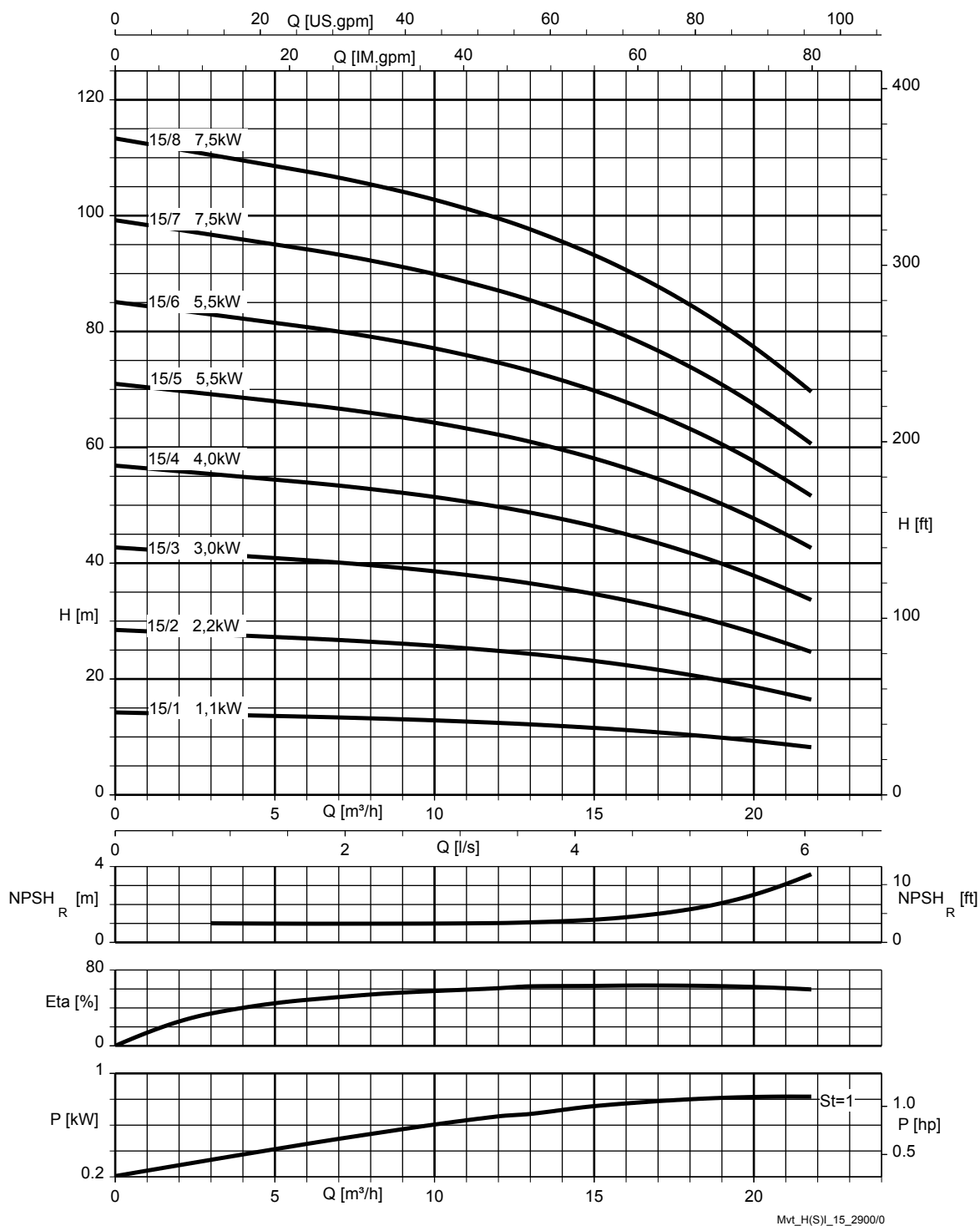
St = 1 P per stage

Movitec H(S)I, 10-LB, n = 2900 rpm



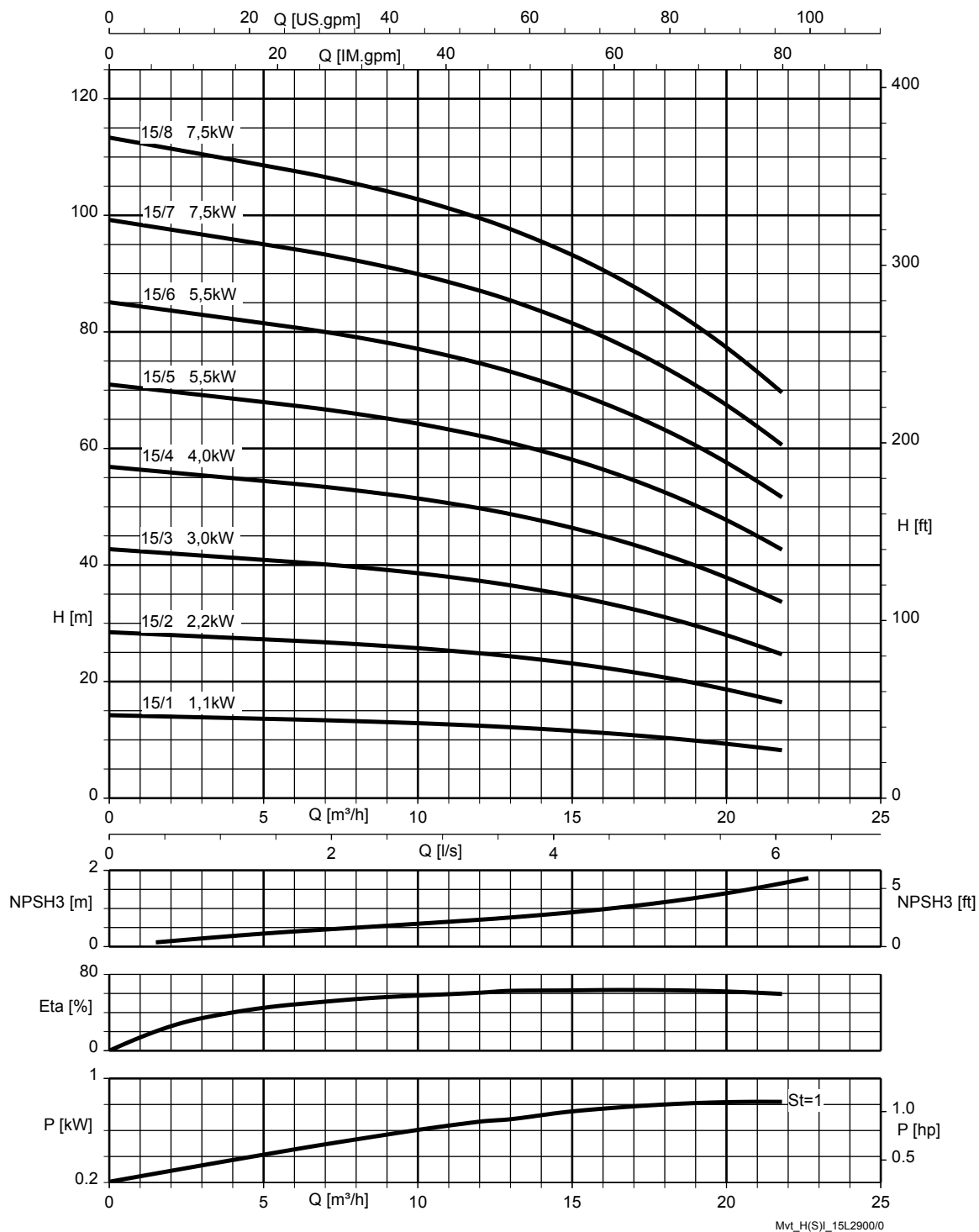
St = 1 P per stage

Movitec H(S)I, 15B, n = 2900 rpm



St = 1 P per stage

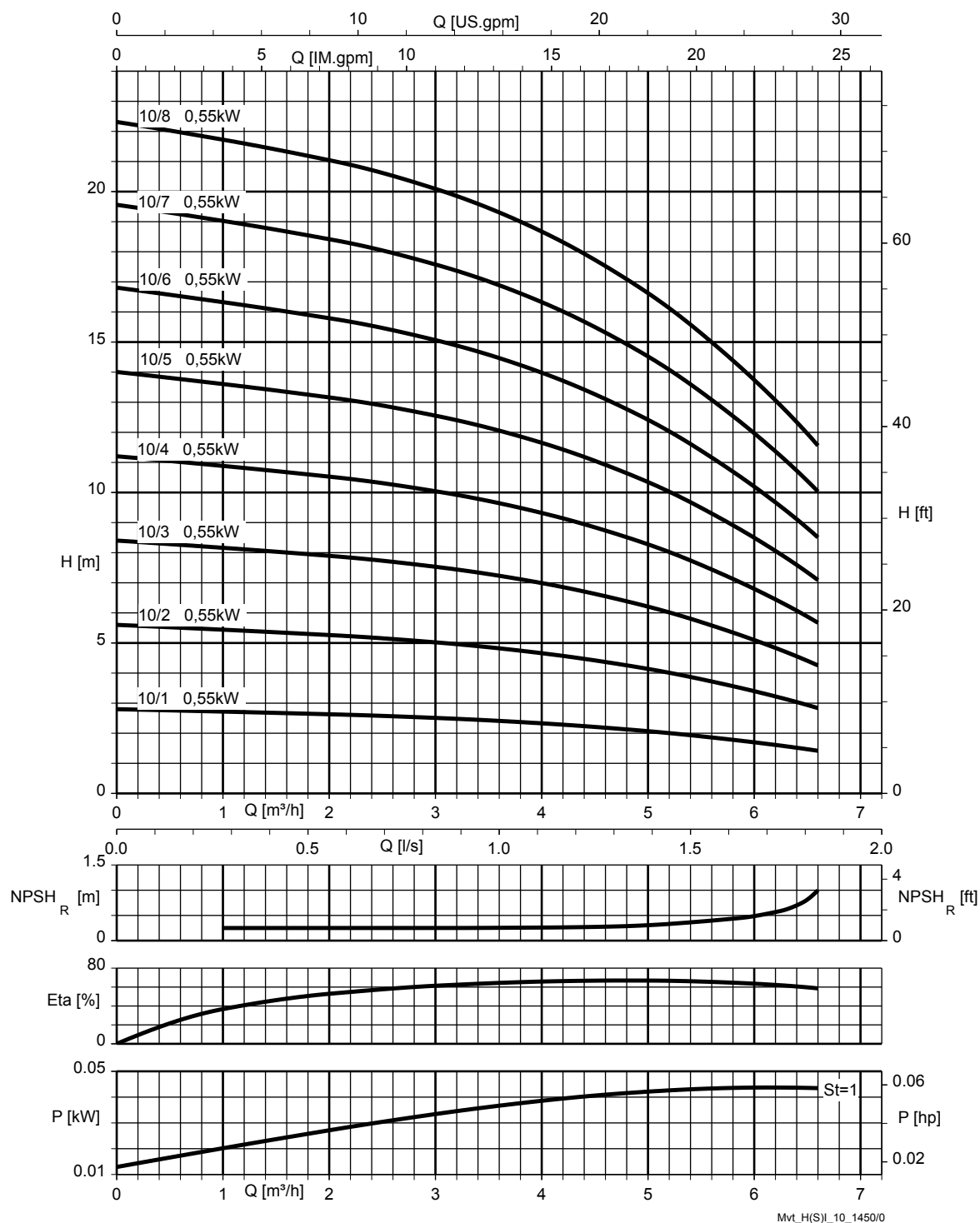
Movitec H(S)I, 15-LB, n = 2900 rpm



St = 1 | P per stage

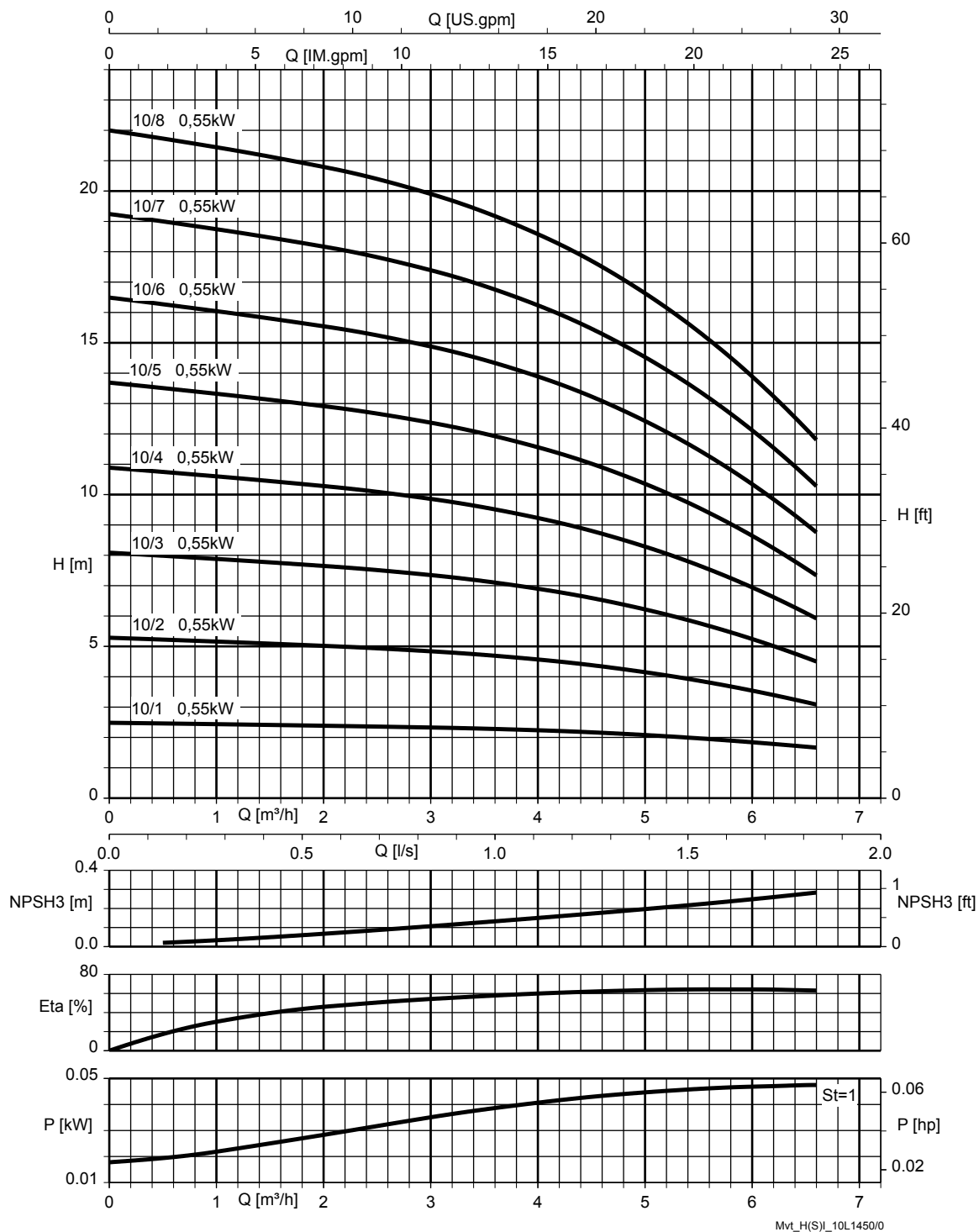
$n = 1450 \text{ rpm}$

Movitec H(S)I, 10B, $n = 1450 \text{ rpm}$



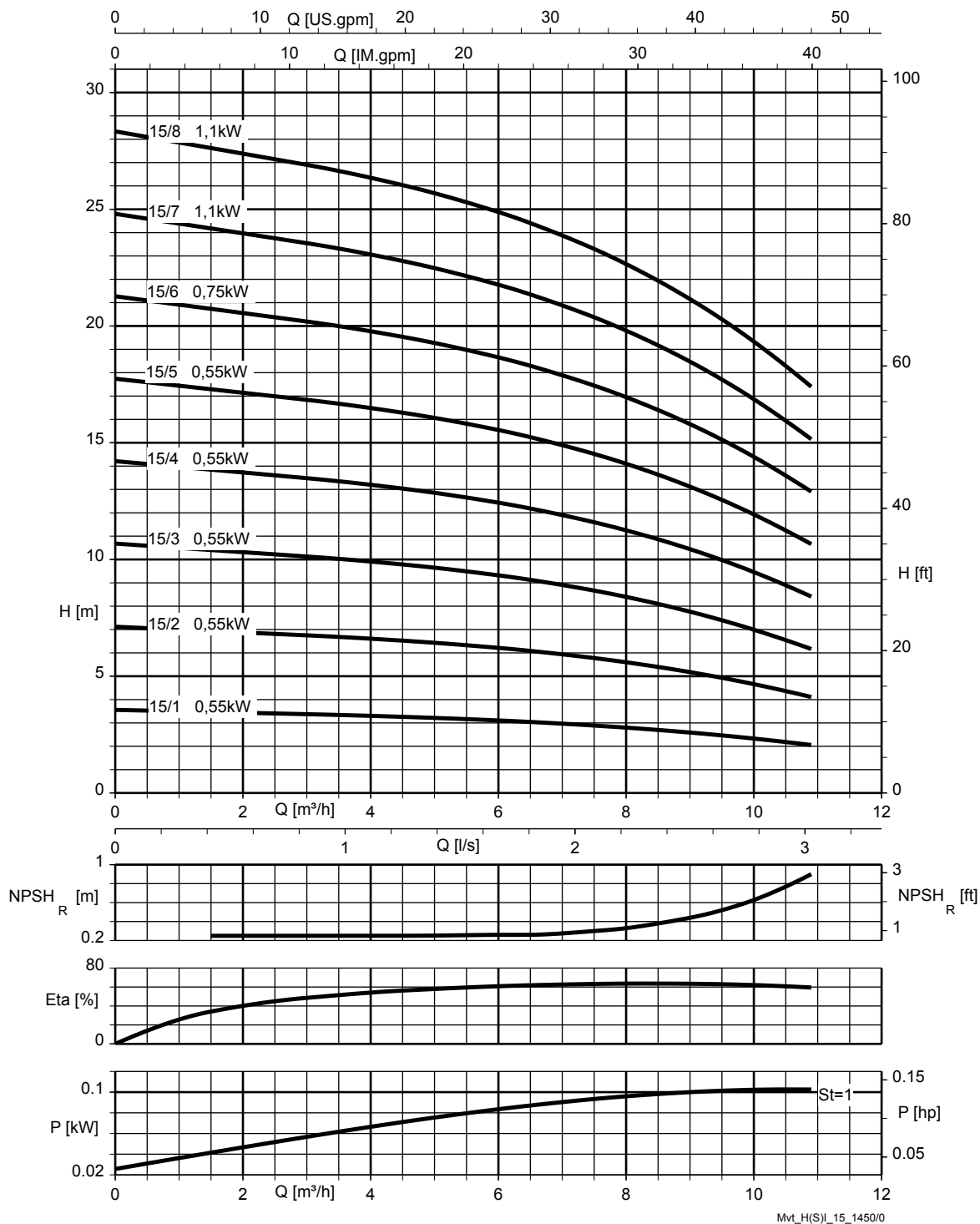
St = 1 P per stage

Movitec H(S)I, 10-LB, n = 1450 rpm



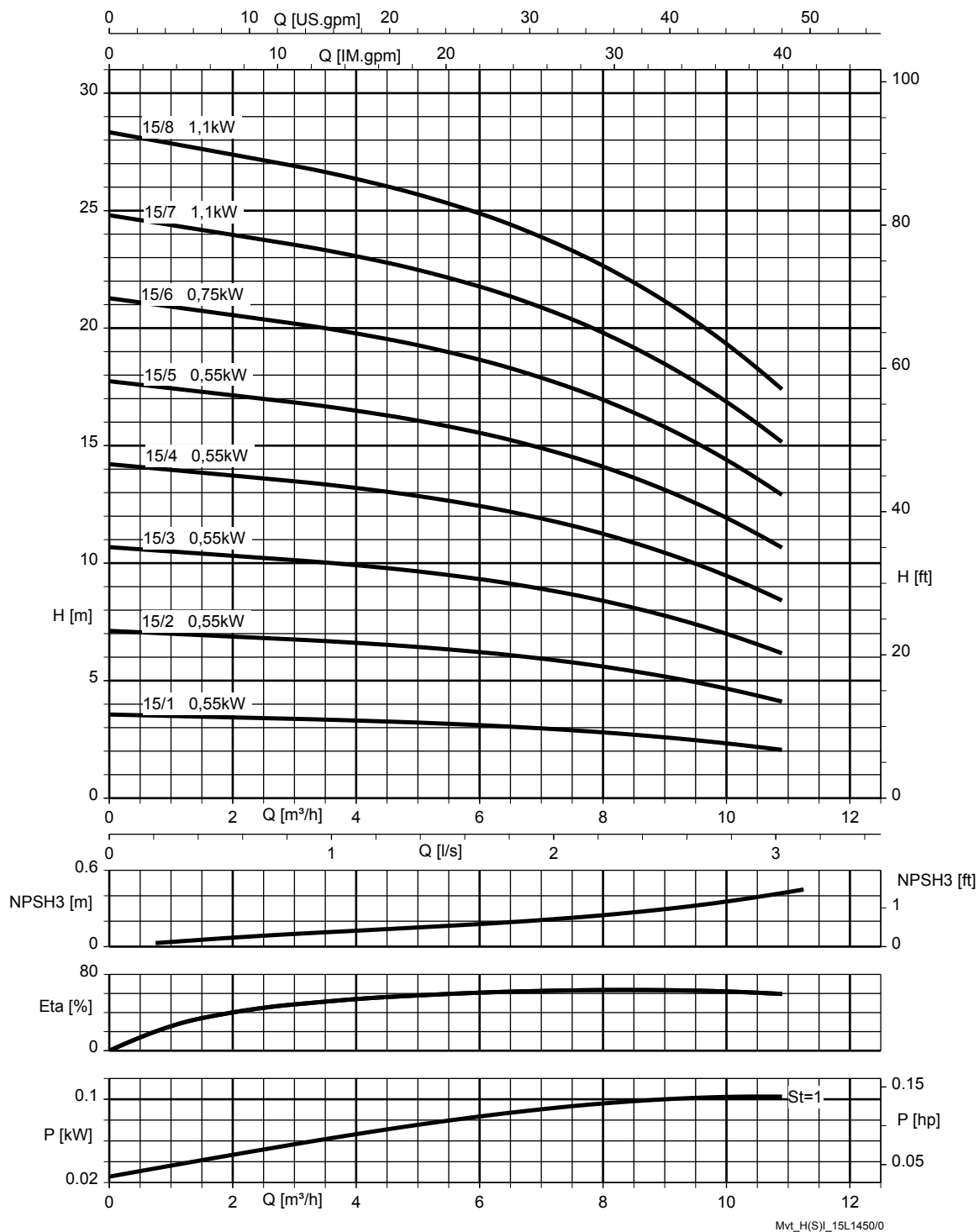
St = 1 P per stage

Movitec H(S)I, 15B, n = 1450 rpm



St = 1 | P per stage

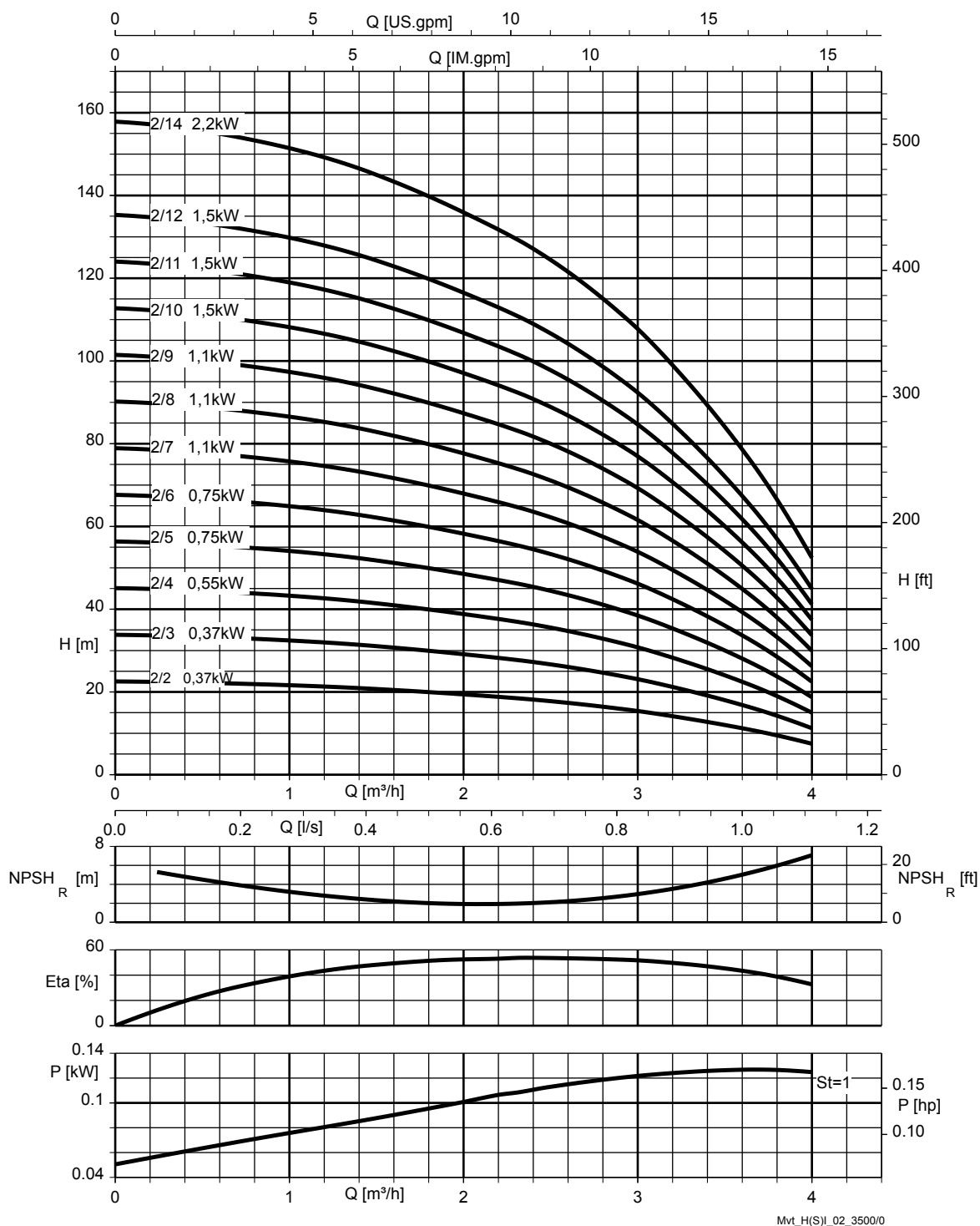
Movitec H(S)I, 15-LB, n = 1450 rpm



St = 1 | P per stage

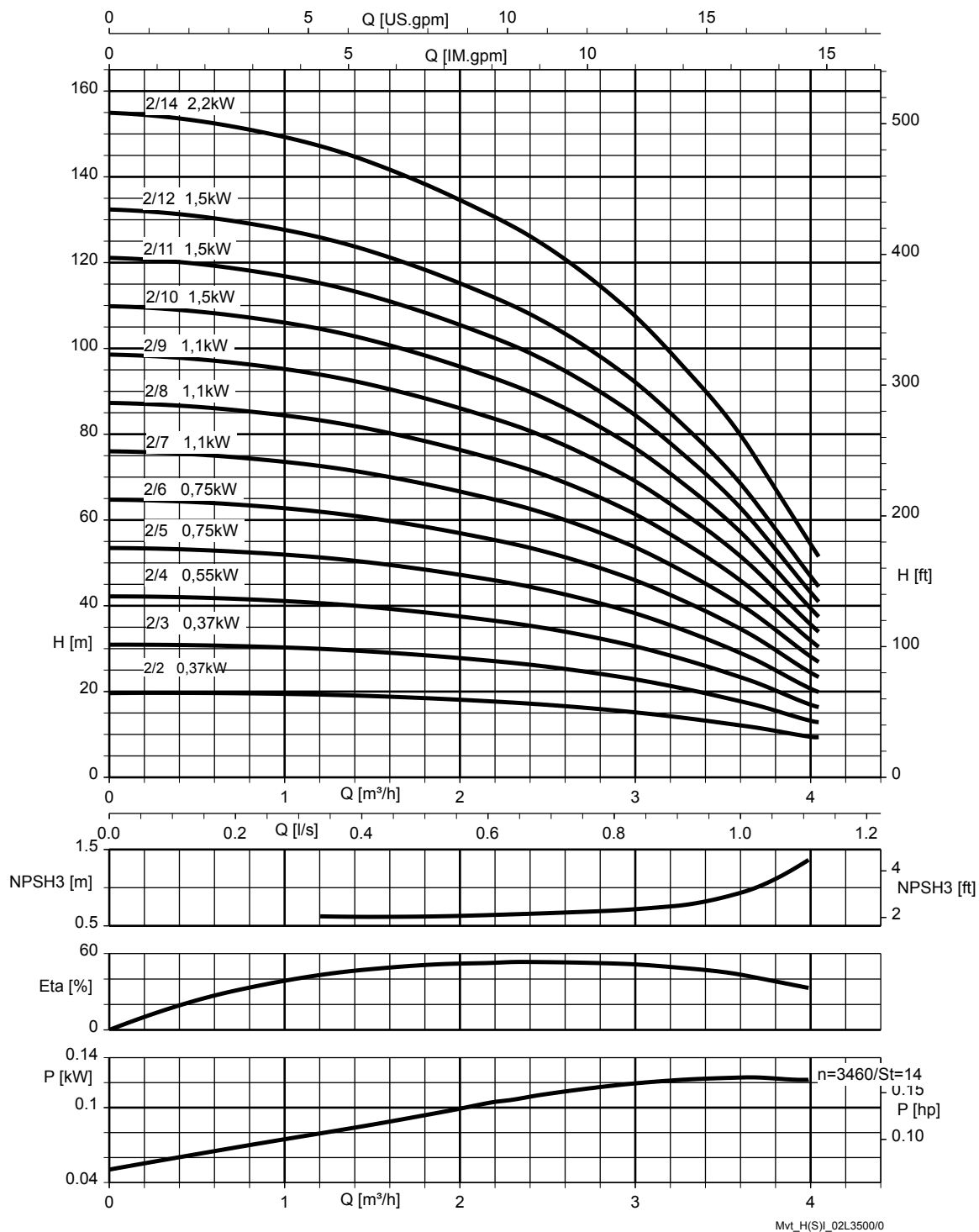
$n = 3500 \text{ rpm}$

Movitec H(S)I, 2B, $n = 3500 \text{ rpm}$



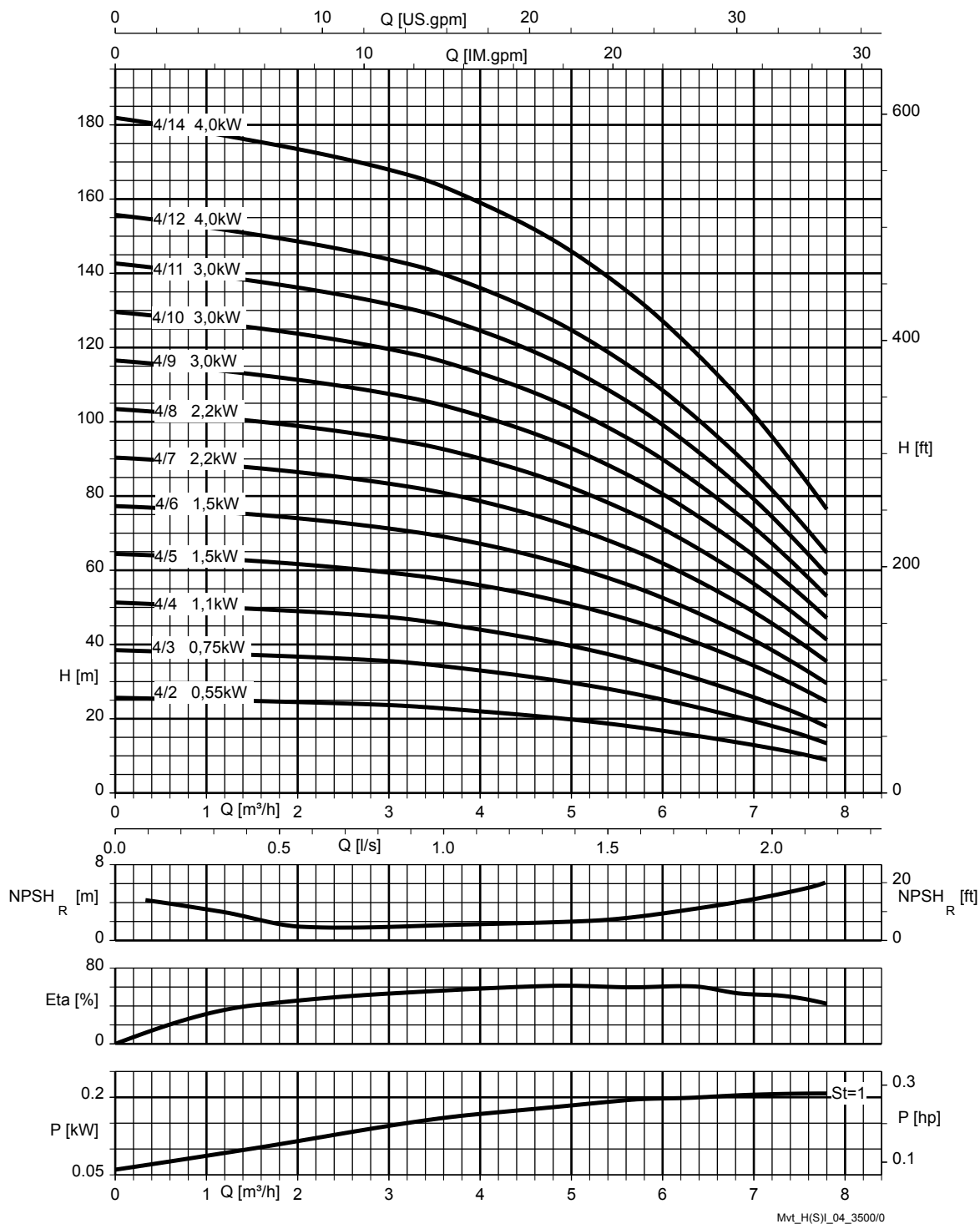
St = 1 | P per stage

Movitec H(S)I, 2-LB, n = 3500 rpm



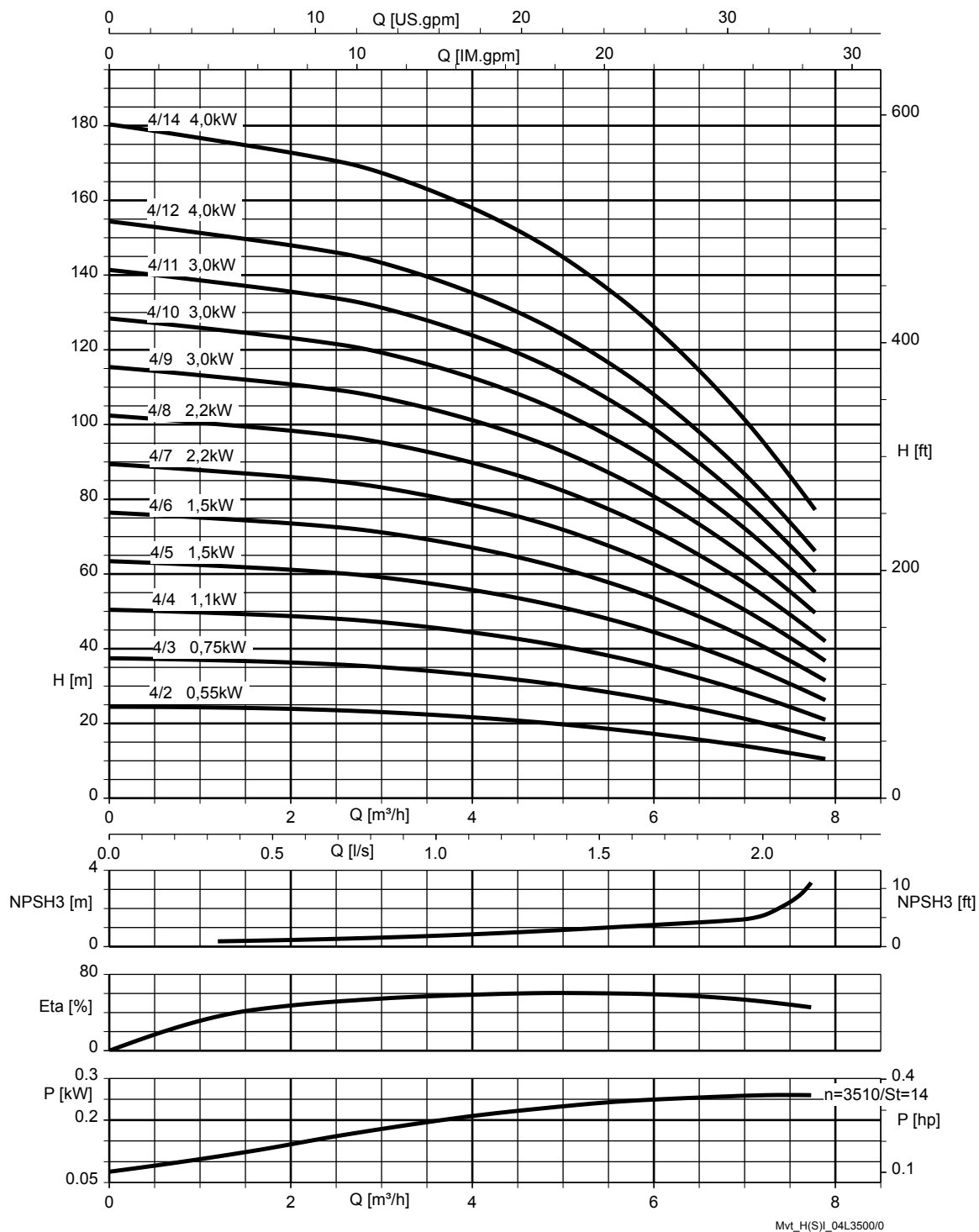
St = 1 | P per stage

Movitec H(S)I, 4B, n = 3500 rpm



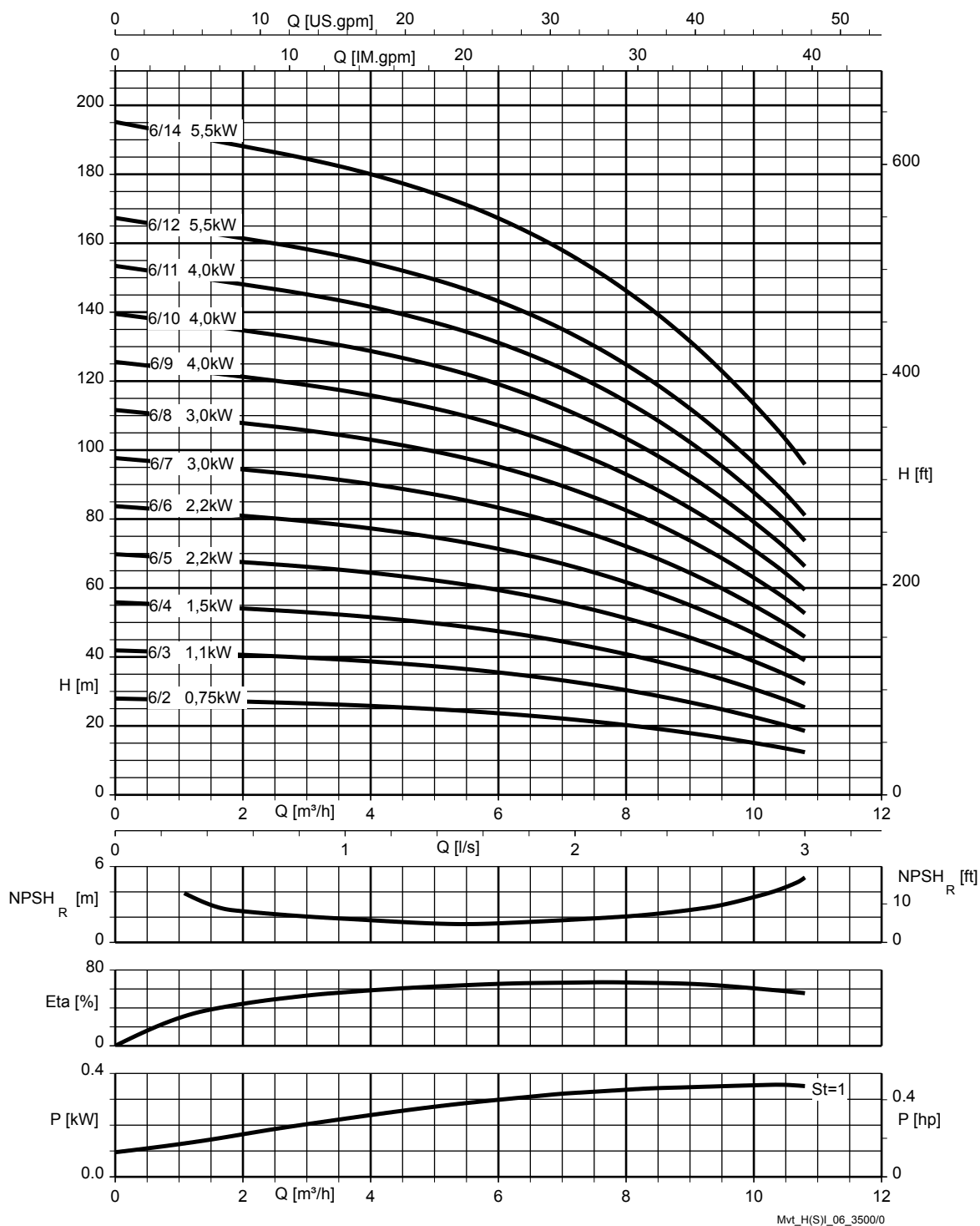
St = 1 | P per stage

Movitec H(S)I, 4-LB, n = 3500 rpm



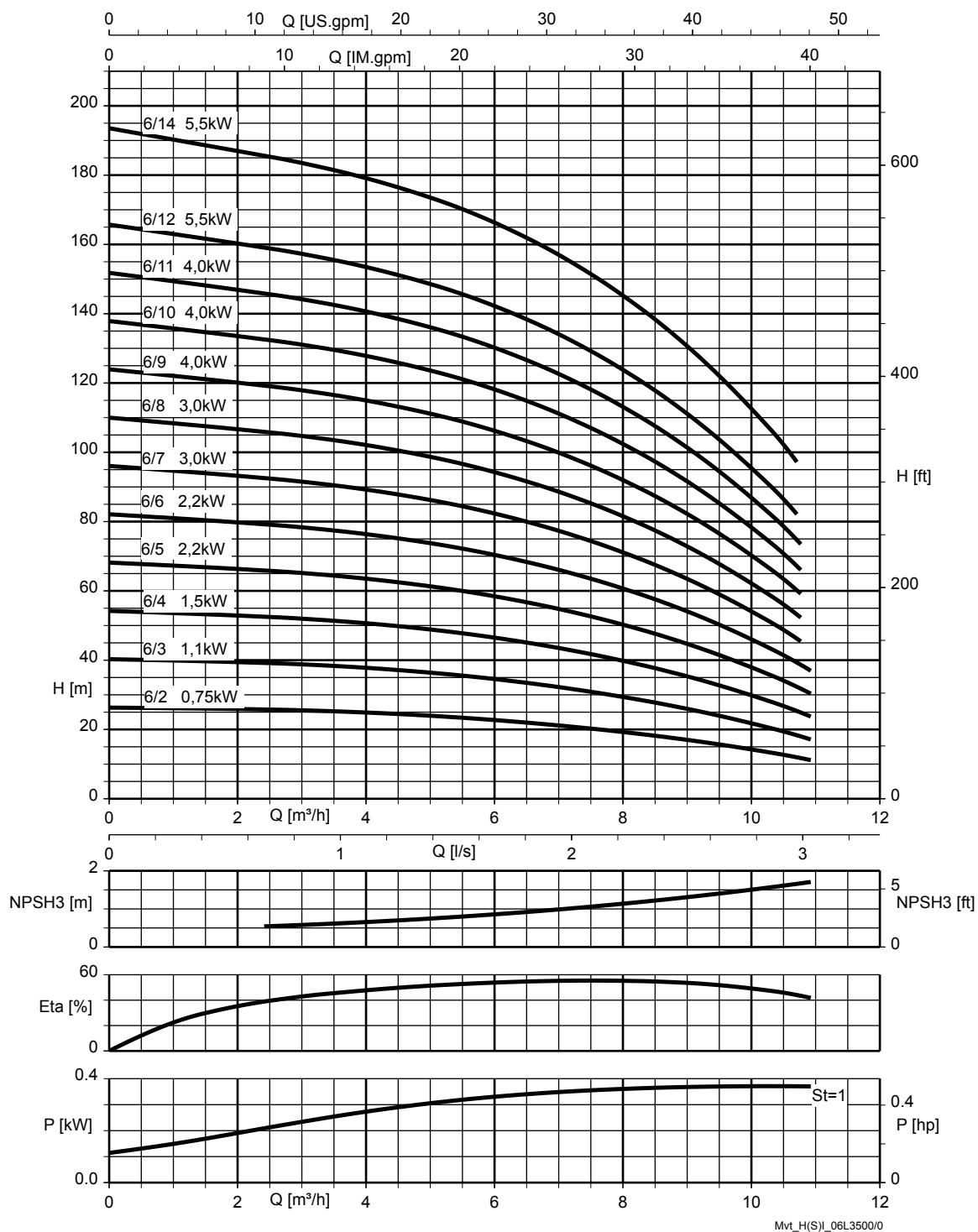
St = 1 | P per stage

Movitec H(S)I, 6B, n = 3500 rpm



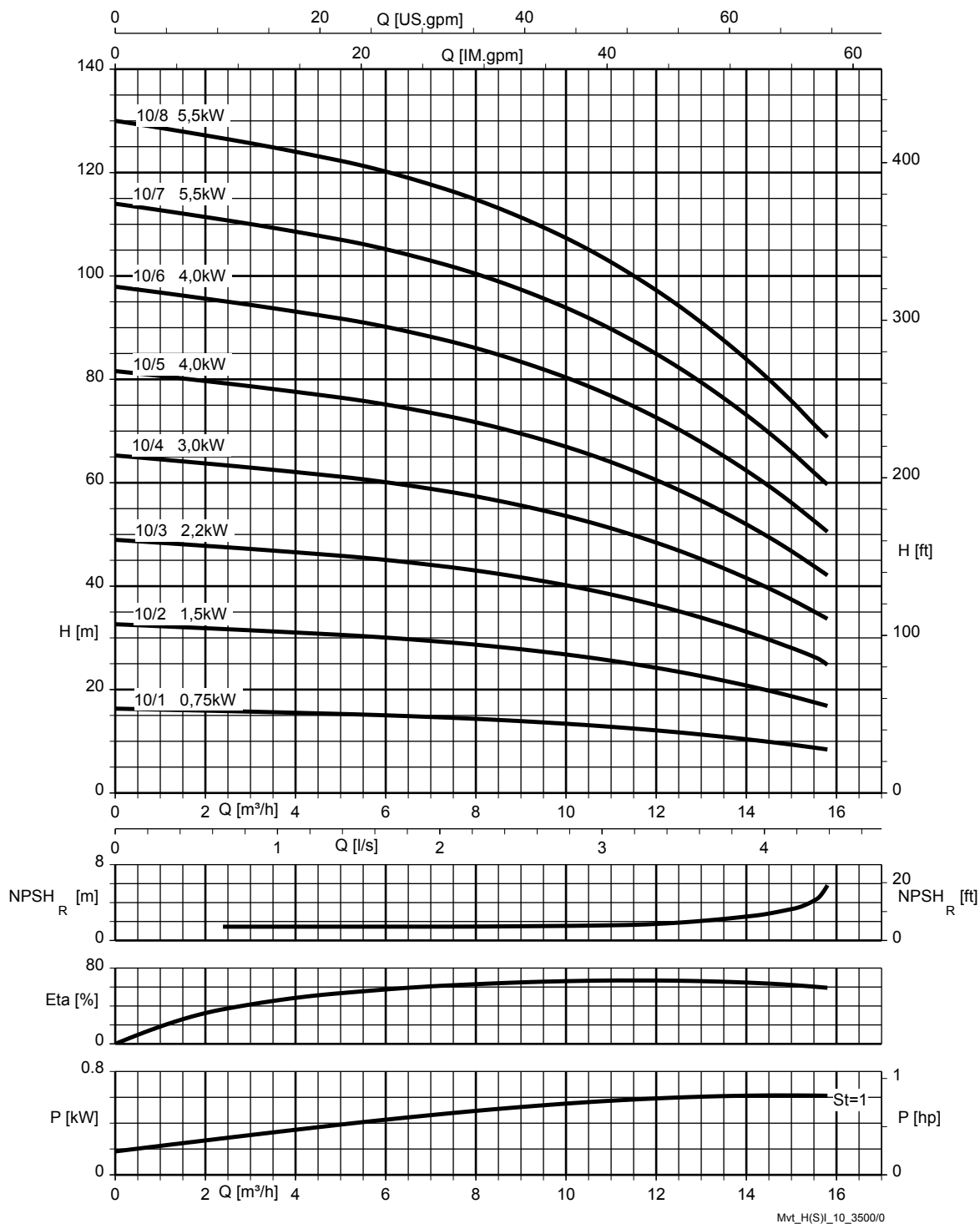
St = 1 | P per stage

Movitec H(S)I, 6-LB, n = 3500 rpm



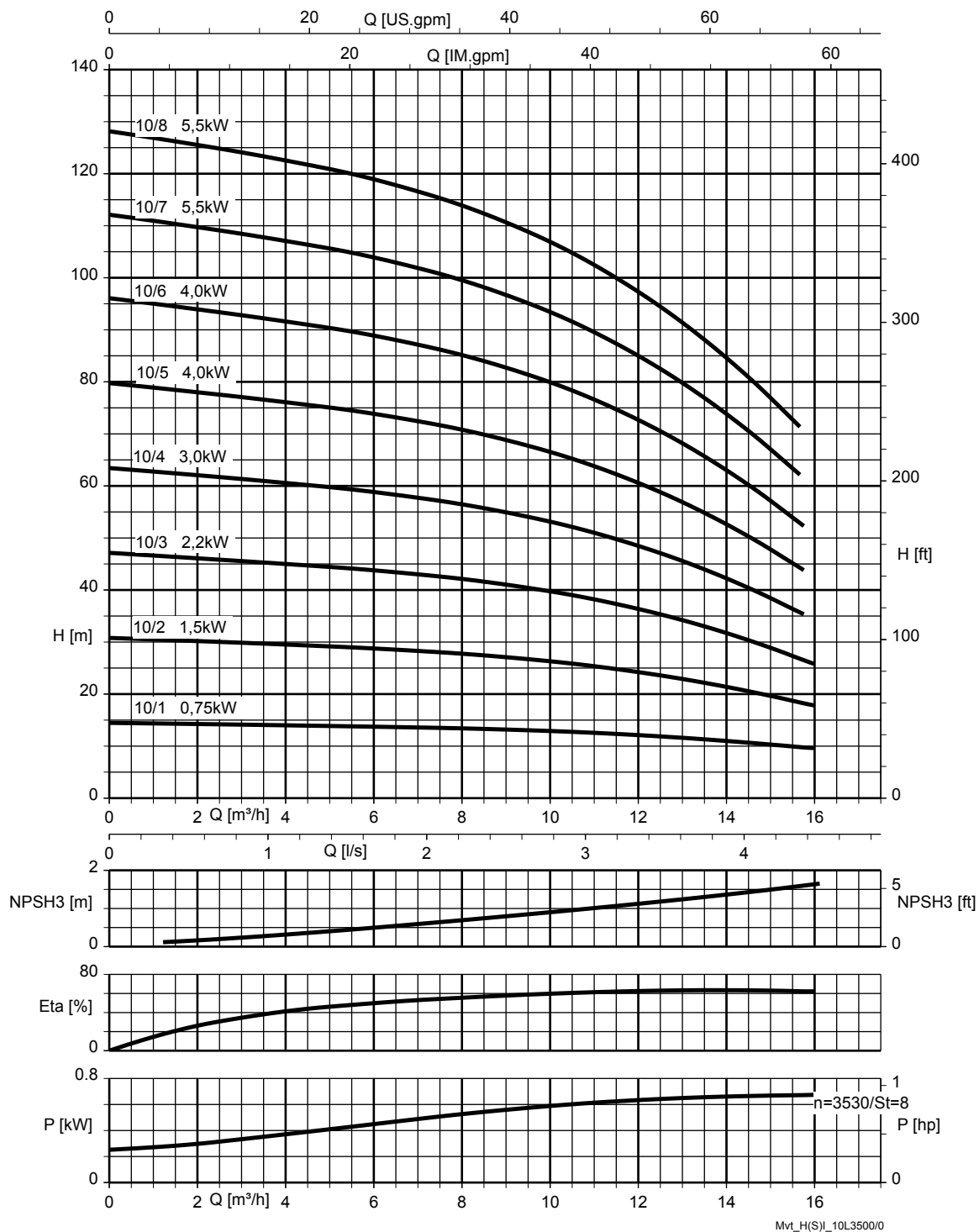
St = 1 | P per stage

Movitec H(S)I, 10B, n = 3500 rpm



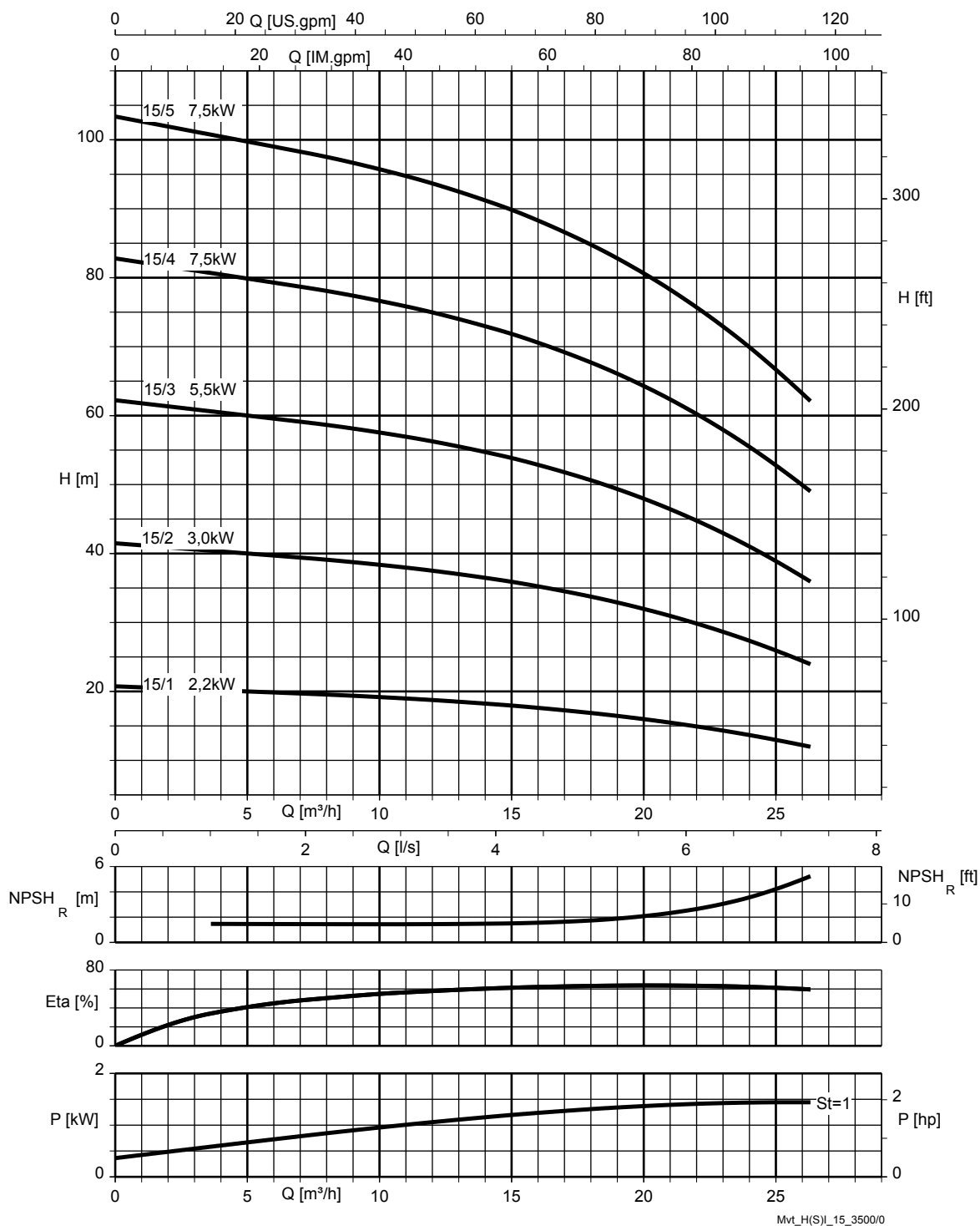
St = 1 | P per stage

Movitec H(S)I, 10-LB, n = 3500 rpm



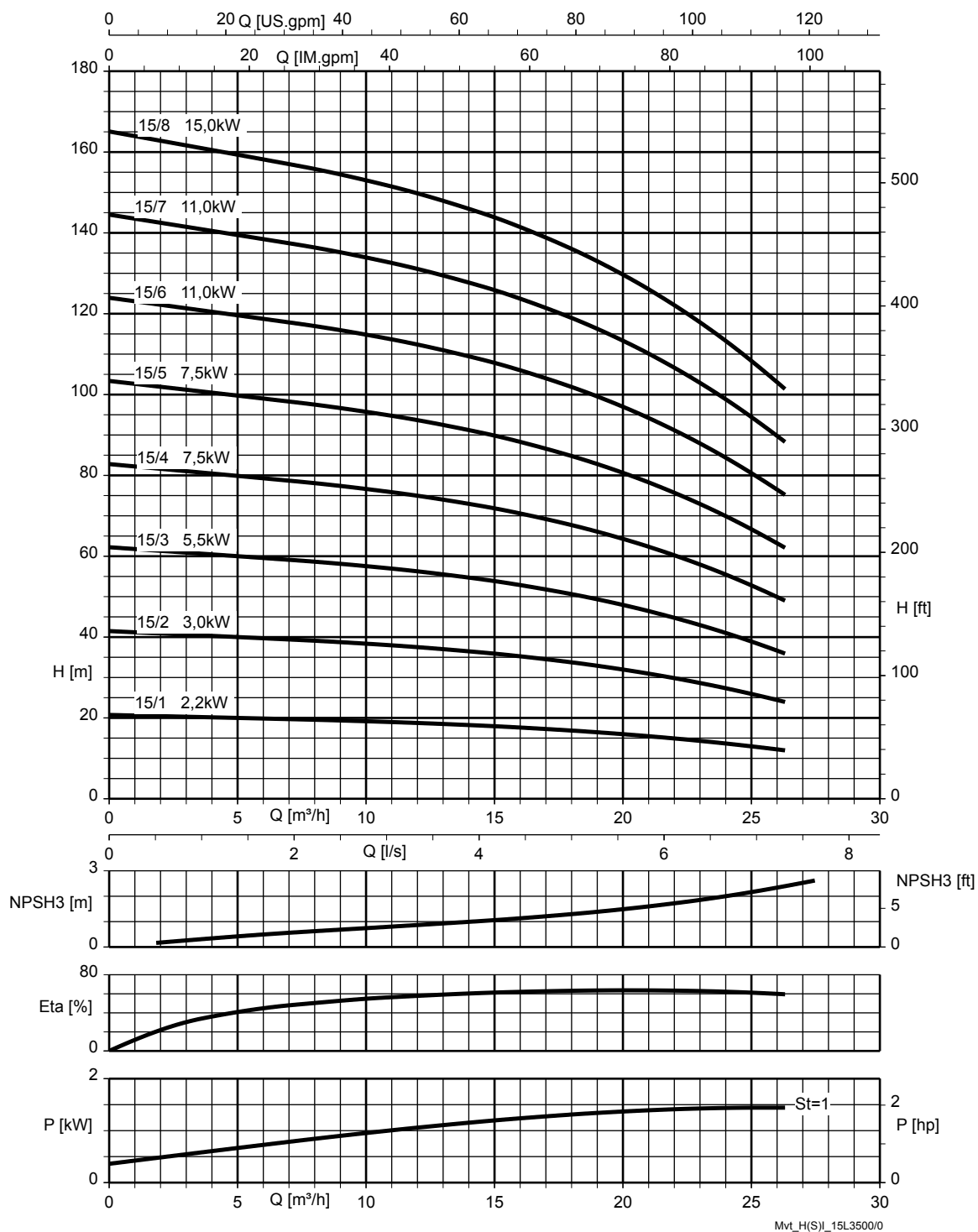
St = 1 | P per stage

Movitec H(S)I, 15B, n = 3500 rpm



St = 1 | P per stage

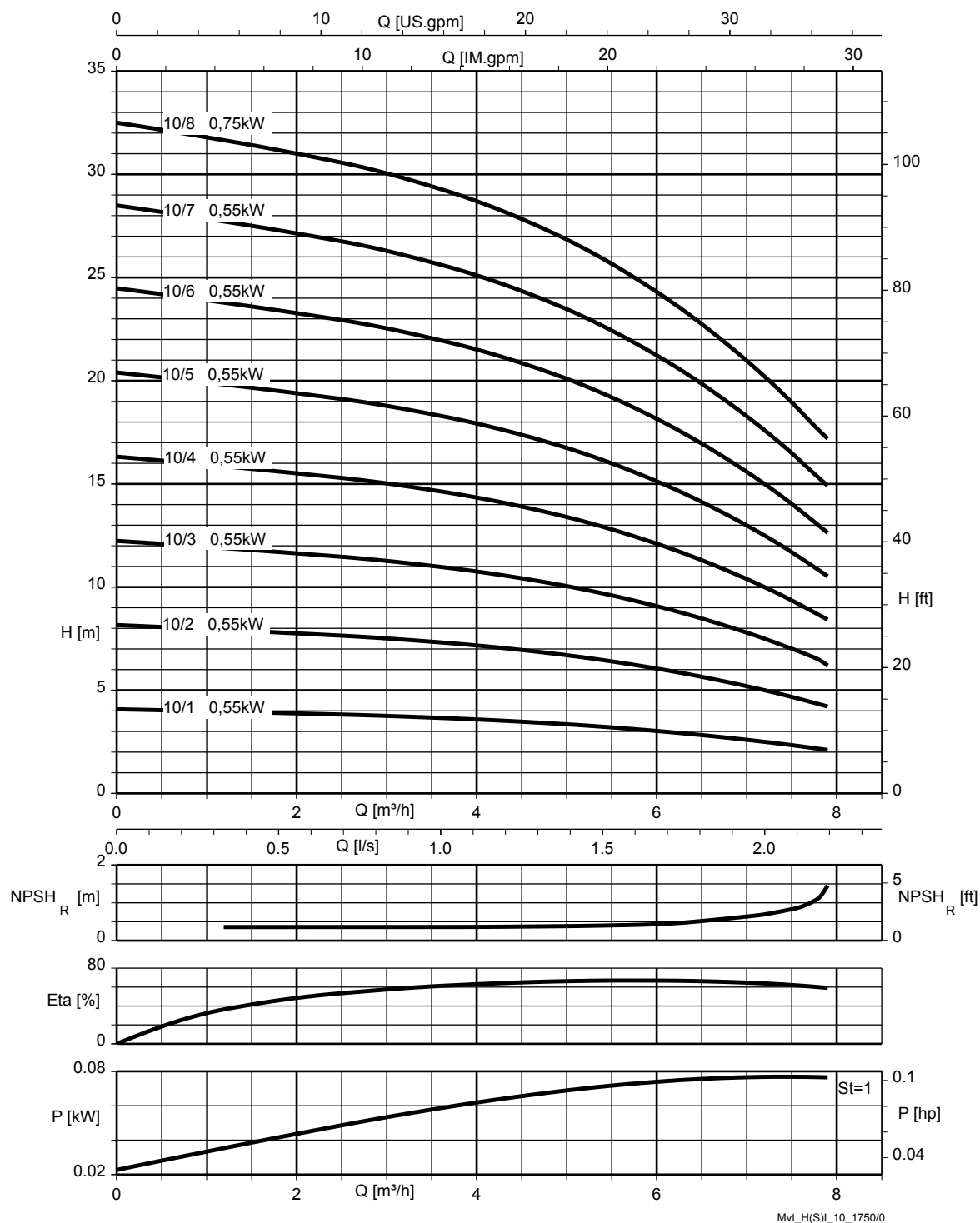
Movitec H(S)I, 15-LB, n = 3500 rpm



St = 1 | P per stage

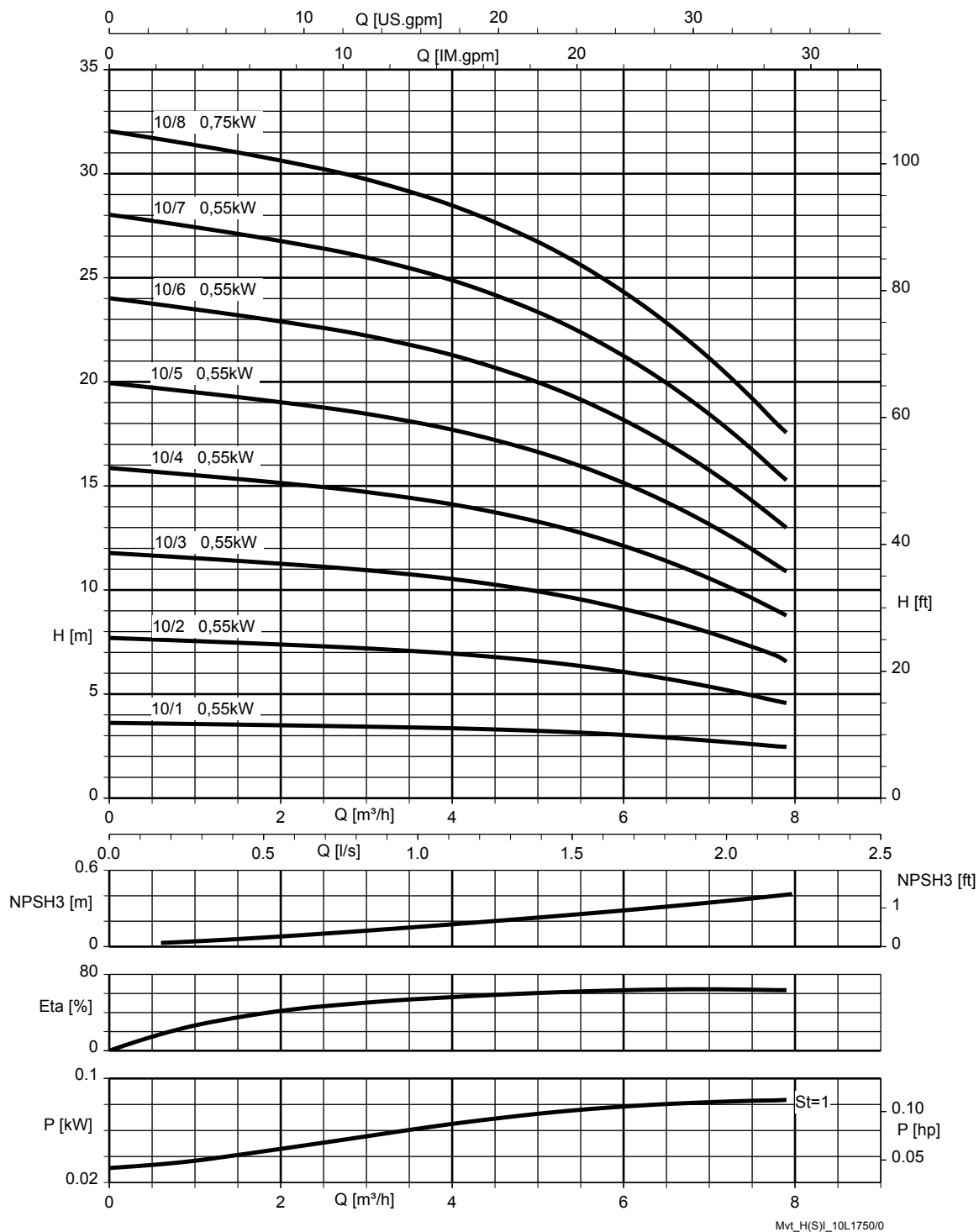
$n = 1750 \text{ rpm}$

Movitec H(S)I, 10B, $n = 1750 \text{ rpm}$



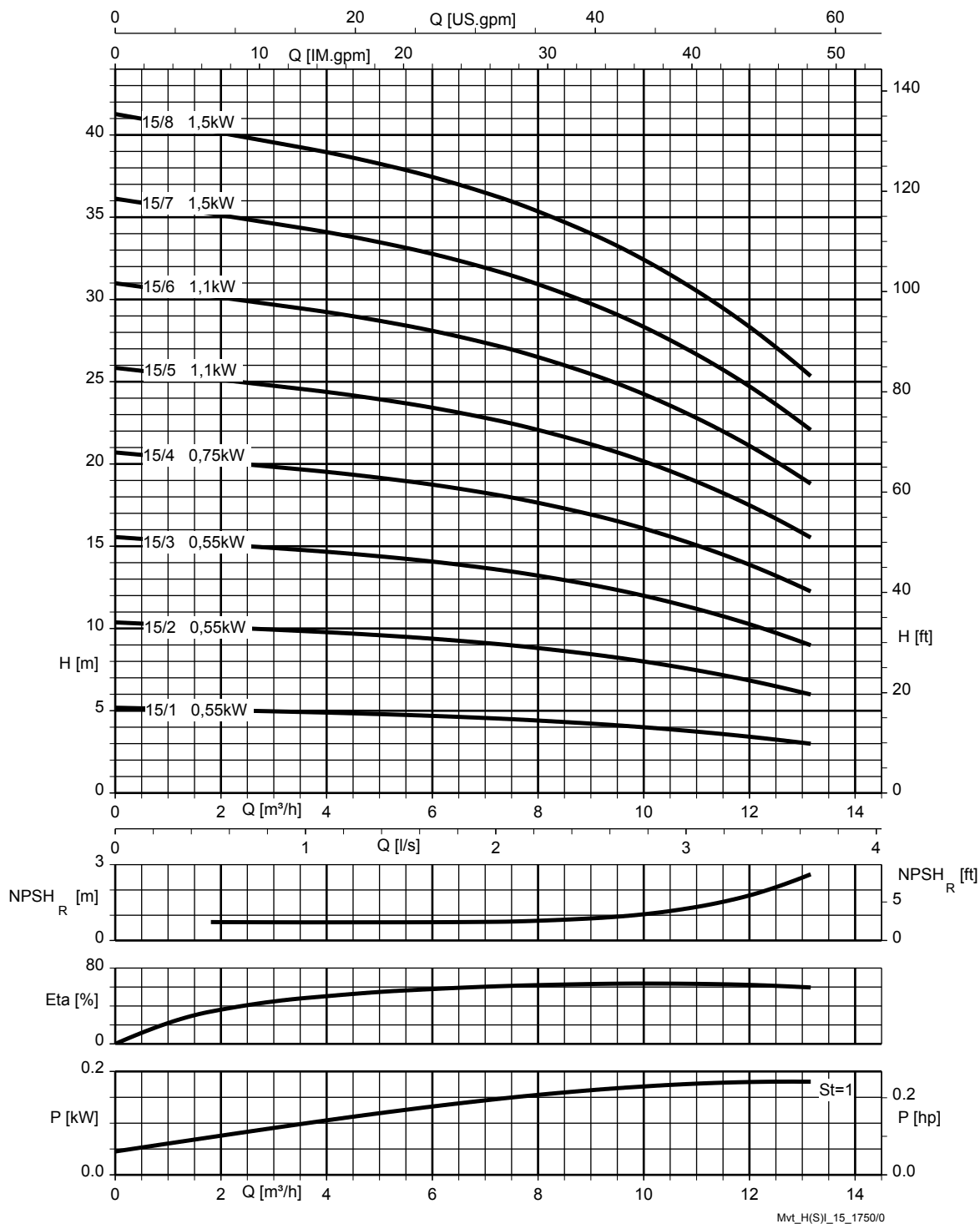
St = 1 | P per stage

Movitec H(S)I, 10-LB, n = 1750 rpm



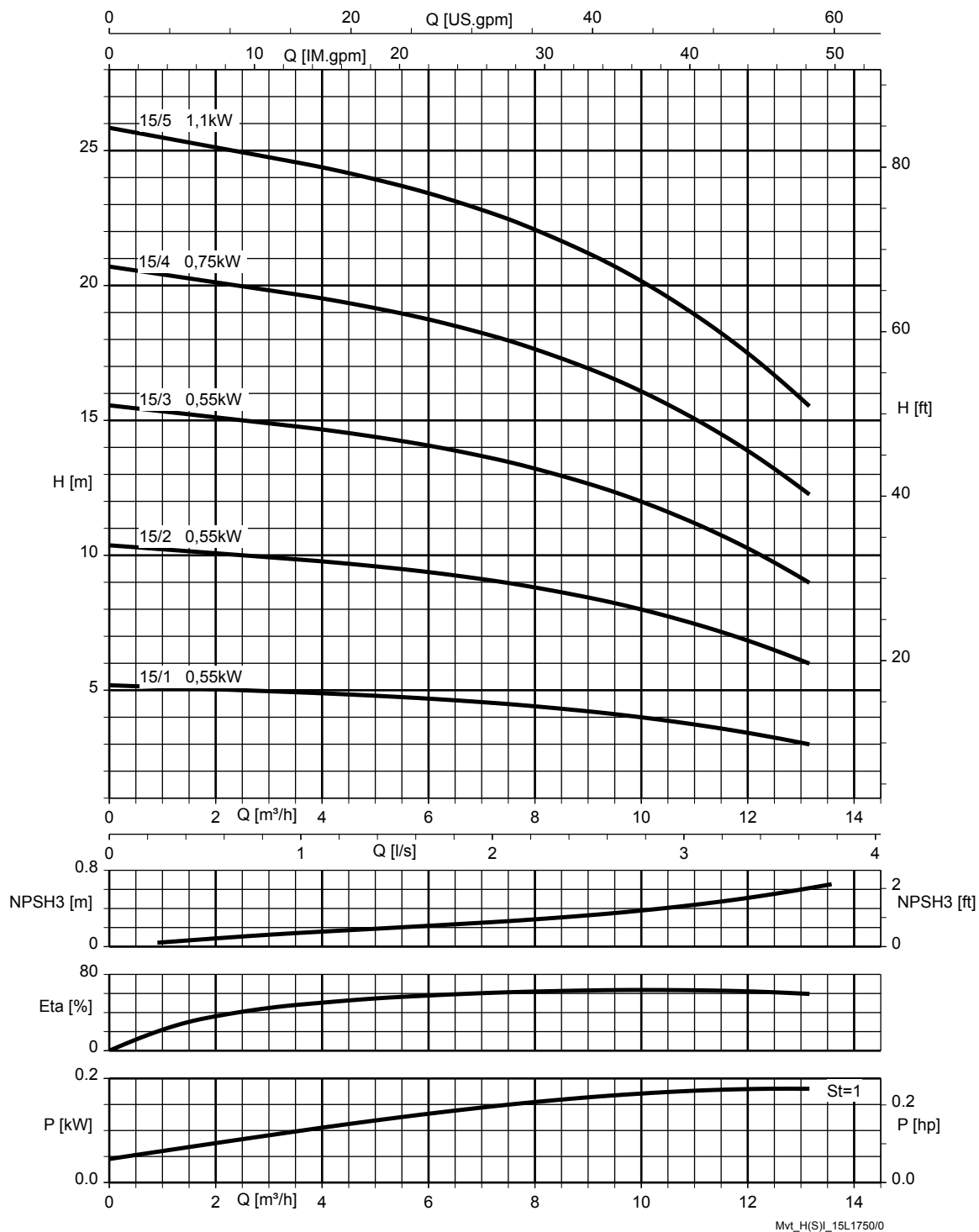
St = 1 | P per stage

Movitec H(S)I, 15B, n = 1750 rpm



St = 1 | P per stage

Movitec H(S)I, 15-LB, n = 1750 rpm



St = 1 | P per stage

Installation types

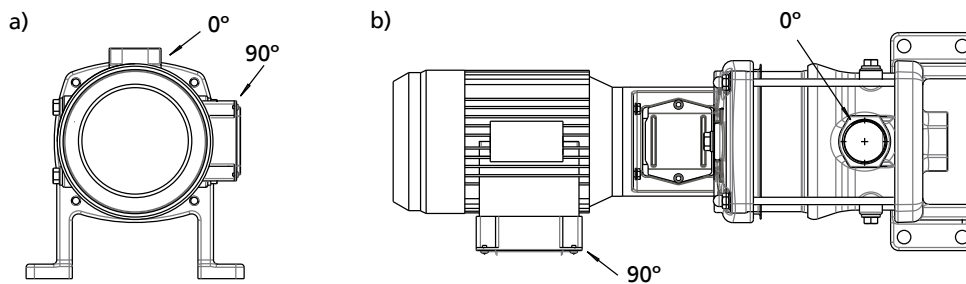


Fig. 4: Standard installation type a) Side view (seen from the motor) b) Top view

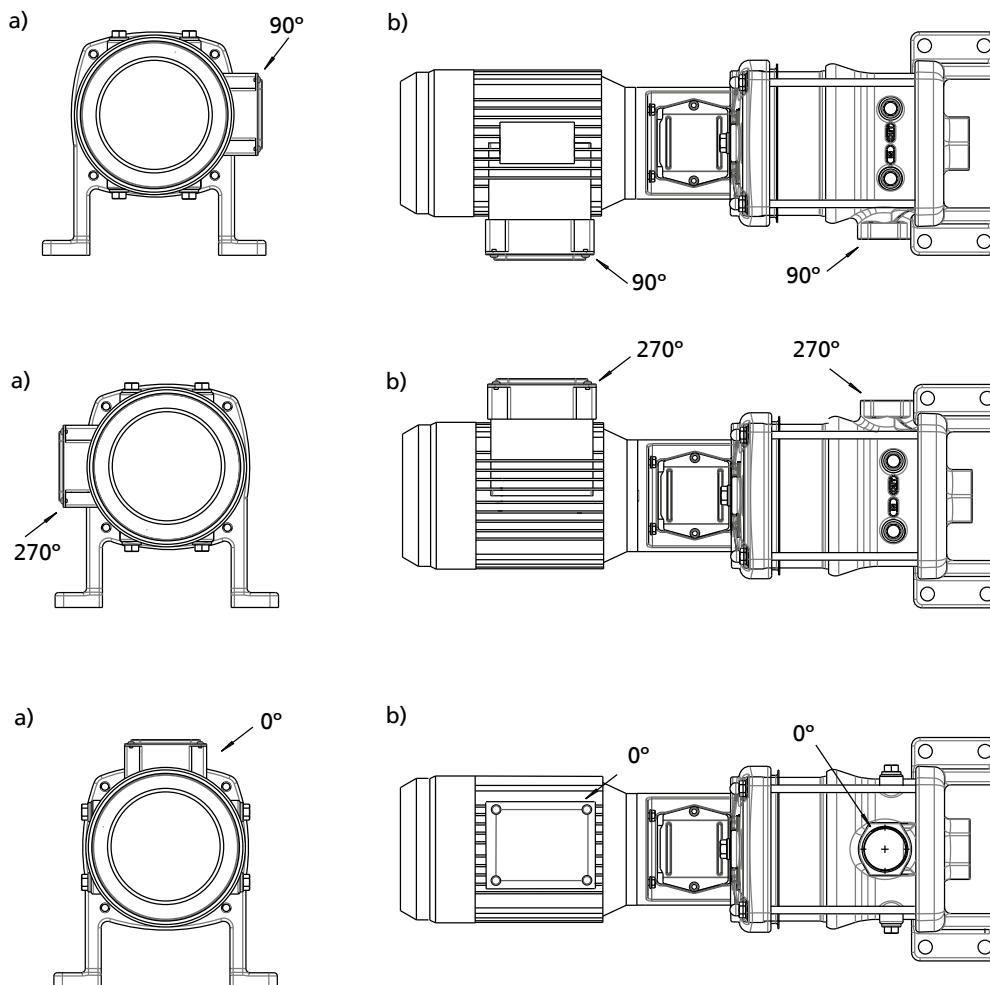


Fig. 5: Optional installation types for terminal box position = position discharge side connection a) Side view (seen from the motor) b) Top view

Dimensions and connections

Movitec H(S)I 2B, n = 2900 rpm

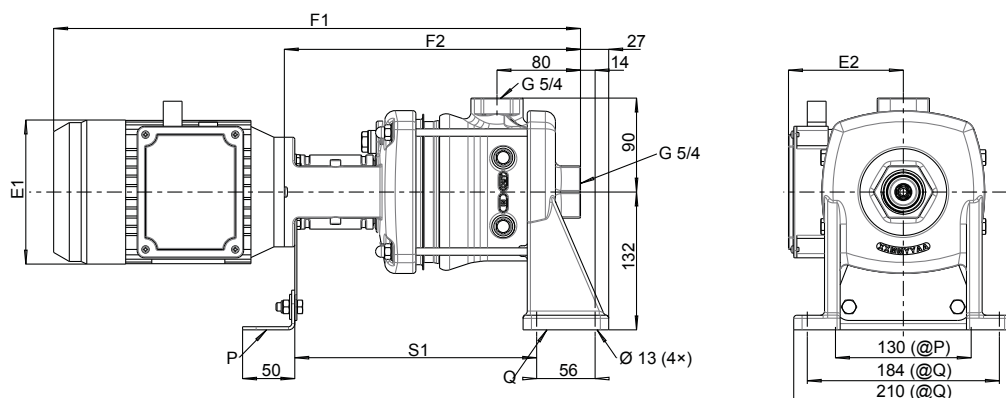


Fig. 6: Dimensions and connections of Movitec H(S)I 2 with V18 motor⁸⁾

Dimensions [mm]

Number of stages	Motor	E1	E2	F1	F2	S1
2	V18	138	109	502	289	236,5
3	V18	138	109	523	310	257,5
4	V18	138	109	545	332	279,5
5	V18	138	109	566	353	300,5
6	V18	138	109	588	375	322,5
7	V18	138	109	609	396	343,5
8	V18	138	109	631	418	365,5
9	V18	157	133	706	449	396,5
10	V18	157	133	728	471	418,5
11	V18	157	133	749	492	439,5
12	V18	157	133	771	514	461,5
14	V18	157	133	814	557	504,5

8) Optional: connection height 160 mm

Movitec H(S)I 2B, n = 3500 rpm

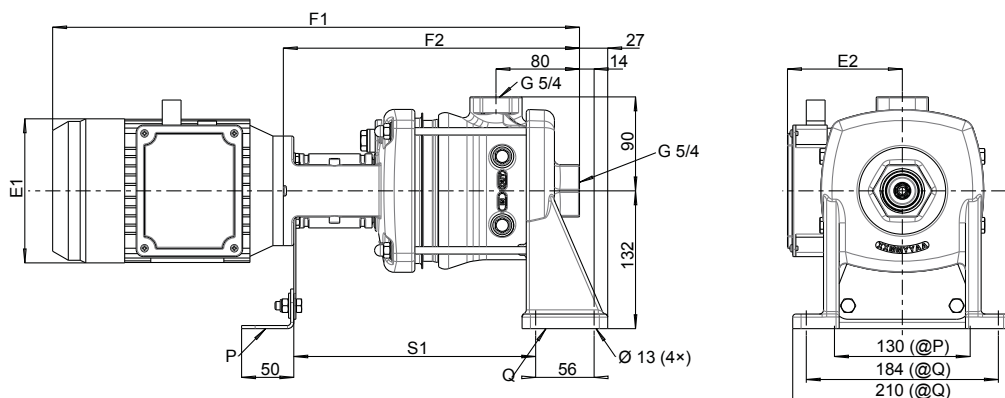


Fig. 7: Dimensions and connections of Movitec H(S)I 2 with V18 motor⁹⁾

Dimensions [mm]

Number of stages	Motor	E1	E2	F1	F2	S1
2	V18	138	109	502	289	236,5
3	V18	138	109	523	310	257,5
4	V18	138	109	545	332	279,5
5	V18	157	133	620	363	310,5
6	V18	157	133	642	385	332,5
7	V18	157	133	663	406	353,5
8	V18	157	133	685	428	375,5
9	V18	180	145	706	449	396,5
10	V18	180	145	734	481	426,5
11	V18	180	145	755	502	447,5
12	V18	180	145	504	524	469,5
14	V18	180	145	849	567	512,5

9) Optional: connection height 160 mm

Movitec H(S)I 4B, n = 2900 rpm

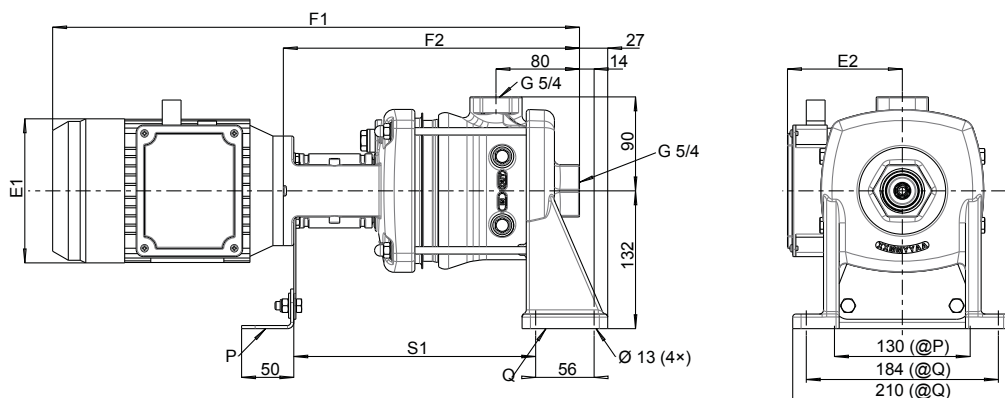


Fig. 8: Dimensions and connections of Movitec H(S)I 4 with V18 motor¹⁰⁾

Dimensions [mm]

Number of stages	Motor	E1	E2	F1	F2	S1
2	V18	138	109	502	289	236,5
3	V18	138	109	523	310	257,5
4	V18	138	109	545	332	279,5
5	V18	157	133	620	363	310,5
6	V18	157	133	642	385	332,5
7	V18	157	133	663	406	353,5
8	V18	180	145	691	438	383,5
9	V18	180	145	712	459	404,5
10	V18	180	145	734	481	426,5
11	V18	180	145	784	502	447,5
12	V18	180	145	806	524	469,5
14	V18	180	145	849	567	512,5

10) Optional: connection height 160 mm

Movitec H(S)I 4B, n = 3500 rpm

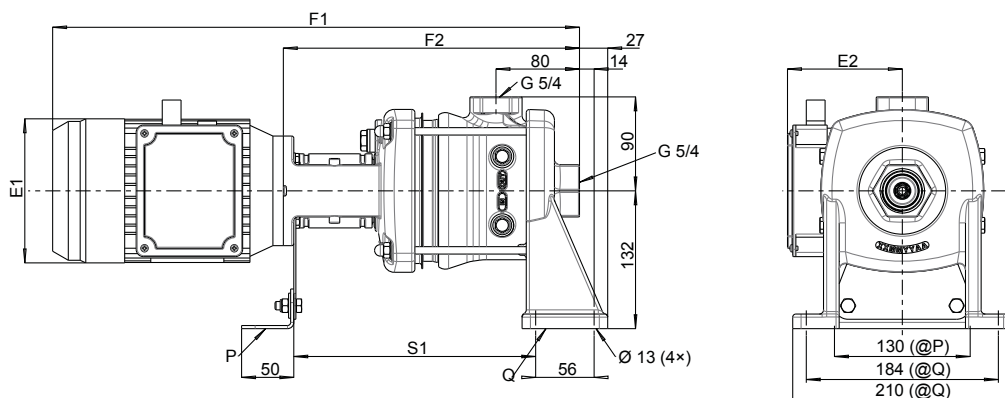


Fig. 9: Dimensions and connections of Movitec H(S)I 4 with V18 motor¹¹⁾

Dimensions [mm]

Number of stages	Motor	E1	E2	F1	F2	S1
2	V18	138	109	502	289	236,5
3	V18	157	133	577	320	267,5
4	V18	157	133	599	342	289,5
5	V18	180	145	626	373	318,5
6	V18	180	145	648	395	340,5
7	V18	180	145	698	416	361,5
8	V18	180	145	720	438	383,5
9	V18	200	155	783	459	404,5
10	V18	200	155	805	491	436,5
11	V18	200	155	826	512	457,5
12	V18	223	166	848	534	479,5
14	V18	223	166	900	577	522,5

¹¹⁾ Optional: connection height 160 mm

Movitec H(S)I 6B, n = 2900 rpm

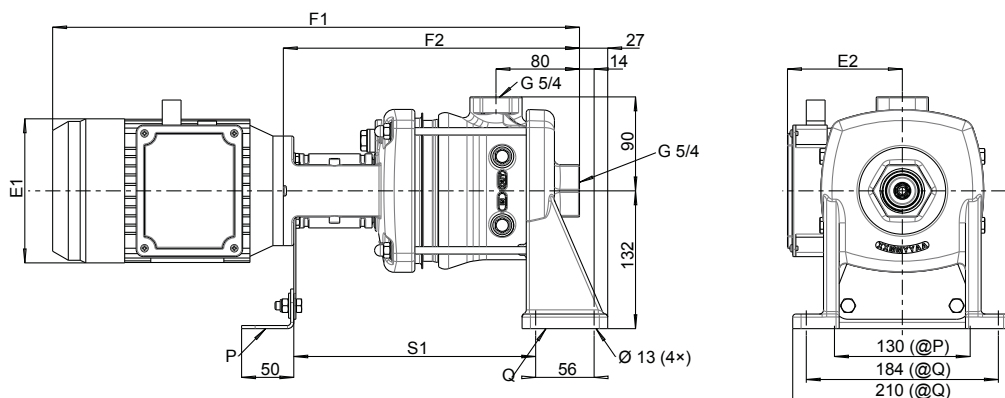


Fig. 10: Dimensions and connections of Movitec H(S)I 6 with V18 motor¹²⁾

Dimensions [mm]

Number of stages	Motor	E1	E2	F1	F2	S1
2	V18	138	109	509	296	243,5
3	V18	157	133	588	331	278,5
4	V18	157	133	613	356	303,5
5	V18	157	133	638	381	328,5
6	V18	180	145	669	416	361,5
7	V18	180	145	694	441	386,5
8	V18	180	145	748	466	411,5
9	V18	180	145	773	491	436,5
10	V18	180	145	798	516	461,5
11	V18	200	155	865	551	496,5
12	V18	200	155	890	576	521,5
14	V18	200	155	940	626	571,5

12) Optional: connection height 160 mm

Movitec H(S)I 6B, n = 3500 rpm

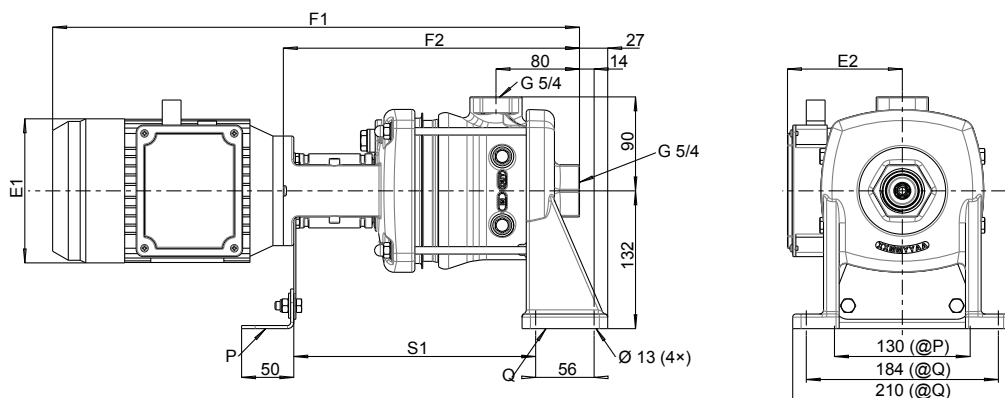


Fig. 11: Dimensions and connections of Movitec H(S)I 6 with V18 motor¹³⁾

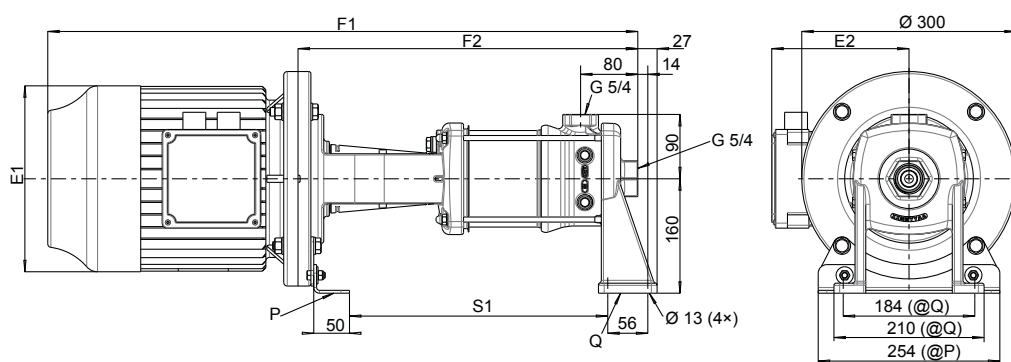


Fig. 12: Dimensions and connections of Movitec H(S)I 6 with V1 motor

Dimensions [mm]

Number of stages	Motor	E1	E2	F1	F2	S1
2	V18	157	133	563	306	253,5
3	V18	157	133	588	331	278,5
4	V18	180	145	619	366	311,5
5	V18	180	145	673	391	336,5
6	V18	180	145	698	416	361,5
7	V18	200	155	765	451	396,5
8	V18	200	155	790	476	421,5
9	V18	223	166	824	501	446,5
10	V18	223	166	849	526	471,5
11	V18	223	166	874	551	496,5
12	V1	260	190	998	652	552
14	V1	260	190	1048	702	602

13) Optional: connection height 160 mm

Movitec H(S)I 10B, n = 1450 rpm

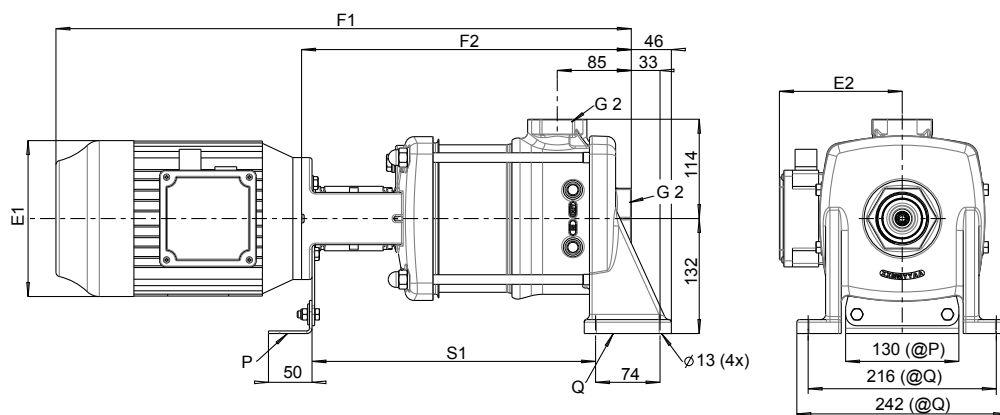


Fig. 13: Dimensions and connections of Movitec H(S)I 10 with V18 motor¹⁴⁾

Dimensions [mm]

Number of stages	Motor	E1	E2	F1	F2	S1
1	V18	157	112	597	351	280,5
2	V18	157	112	597	351	280,5
3	V18	157	112	623	377	306,5
4	V18	157	112	650	404	333,5
5	V18	157	112	676	430	359,5
6	V18	157	112	703	457	386,5
7	V18	157	112	729	483	412,5
8	V18	157	112	755	510	439,5

14) Optional: connection height 160 mm

Movitec H(S)I 10B, n = 1750 rpm

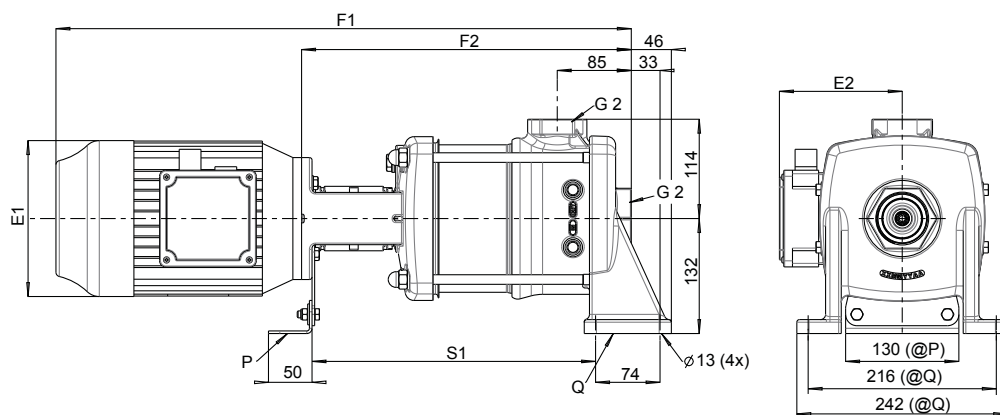


Fig. 14: Dimensions and connections of Movitec H(S)I 10 with V18 motor¹⁵⁾

Dimensions [mm]

Number of stages	Motor	E1	E2	F1	F2	S1
1	V18	157	112	597	351	280,5
2	V18	157	112	597	361	290,5
3	V18	157	112	623	377	306,5
4	V18	157	112	650	404	333,5
5	V18	157	112	676	430	359,5
6	V18	157	112	703	457	386,5
7	V18	157	112	729	483	412,5
8	V18	157	112	783	510	439,5

¹⁵⁾ Optional: connection height 160 mm

Movitec H(S)I 10B, n = 2900 rpm

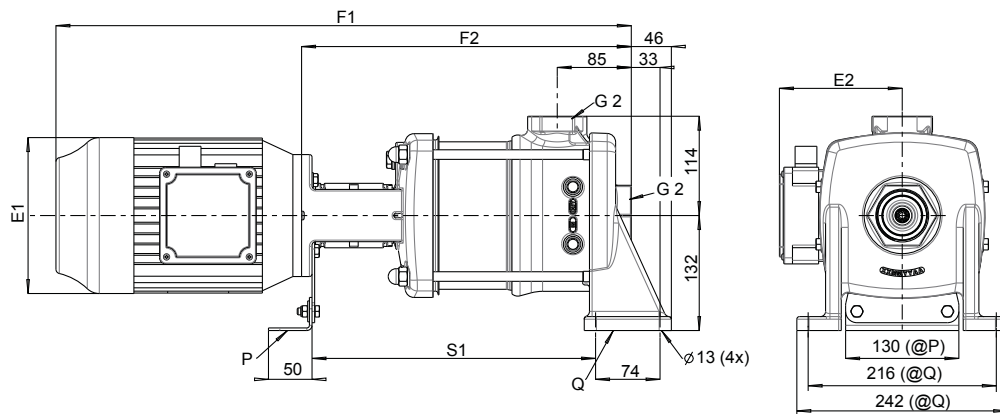


Fig. 15: Dimensions and connections of Movitec H(S)I 10 with V18 motor¹⁶⁾

Dimensions [mm]

Number of stages	Motor	E1	E2	F1	F2	S1
1	V18	157	133	626	351	280,5
2	V18	157	133	651	376	305,5
3	V18	157	133	677	402	331,5
4	V18	180	145	709	439	366,5
5	V18	180	145	750	465	392,5
6	V18	180	145	777	492	419,5
7	V18	200	155	858	528	455,5
8	V18	200	155	885	555	482,5

16) Optional: connection height 160 mm

Movitec H(S)I 10B, n = 3500 rpm

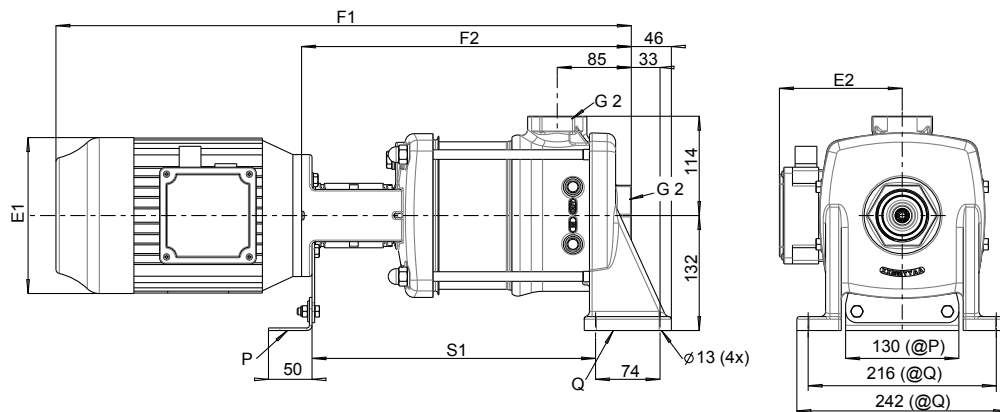


Fig. 16: Dimensions and connections of Movitec H(S)I 10 with V18 motor¹⁷⁾

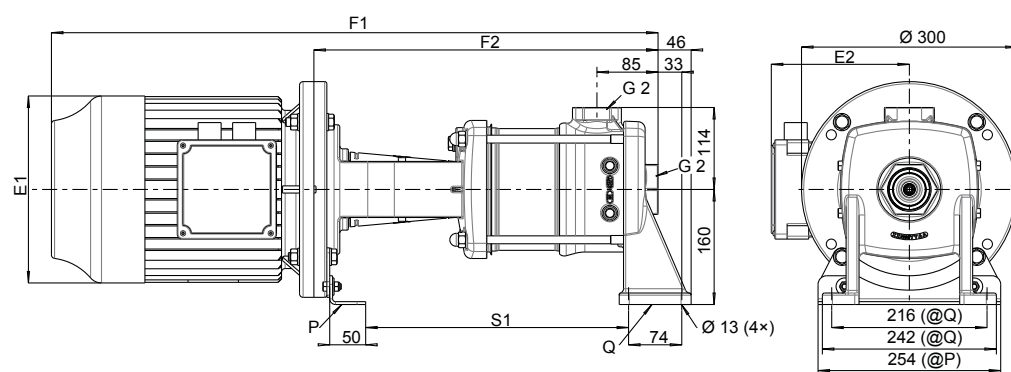


Fig. 17: Dimensions and connections of Movitec H(S)I 10 with V1 motor

Dimensions [mm]

Number of stages	Motor	E1	E2	F1	F2	S1
1	V18	157	133	626	351	280,5
2	V18	180	145	656	386	313,5
3	V18	180	145	697	412	339,5
4	V18	200	155	779	449	376,5
5	V18	223	166	815	475	402,5
6	V18	223	166	842	502	429,5
7	V1	260	190	973	608	483,5
8	V1	260	190	999	634	509,5

17) Optional: connection height 160 mm up to a maximum of 7 stages

Movitec H(S)I 15B, n = 1450 rpm

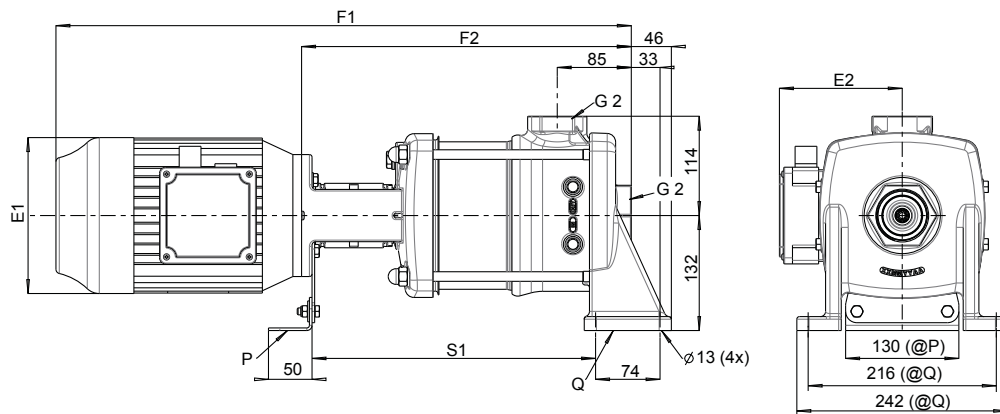


Fig. 18: Dimensions and connections of Movitec H(S)I 15 with V18 motor¹⁸⁾

Dimensions [mm]

Number of stages	Motor	E1	E2	F1	F2	S1
1	V18	157	112	597	351	280,5
2	V18	157	112	597	351	280,5
3	V18	157	112	623	377	306,5
4	V18	157	112	650	404	333,5
5	V18	157	112	676	430	359,5
6	V18	157	112	732	457	386,5
7	V18	180	145	763	493	420,5
8	V18	180	145	790	520	447,5

18) Optional: connection height 160 mm

Movitec H(S)I 15B, n = 1750 rpm

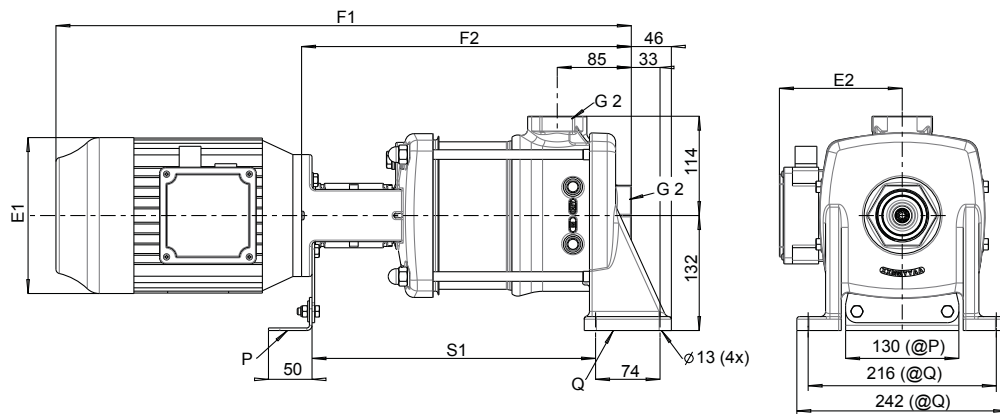


Fig. 19: Dimensions and connections of Movitec H(S)I 15 with V18 motor¹⁹⁾

Dimensions [mm]

Number of stages	Motor	E1	E2	F1	F2	S1
1	V18	157	112	597	351	280,5
2	V18	157	112	597	351	280,5
3	V18	157	112	623	377	306,5
4	V18	157	112	679	404	333,5
5	V18	180	145	710	440	367,5
6	V18	180	145	737	467	394,5
7	V18	180	145	778	493	420,5
8	V18	180	145	805	520	447,5

¹⁹⁾ Optional: connection height 160 mm

Movitec H(S)I 15B, n = 2900 rpm

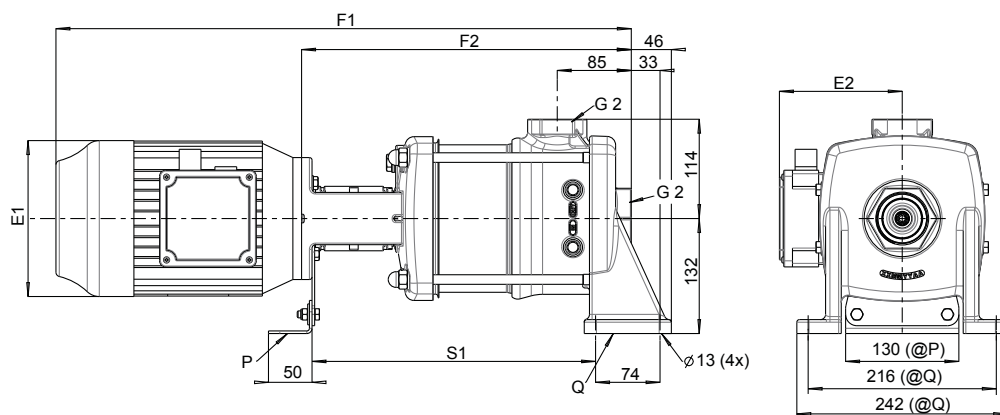


Fig. 20: Dimensions and connections of Movitec H(S)I 15 with V18 motor²⁰⁾

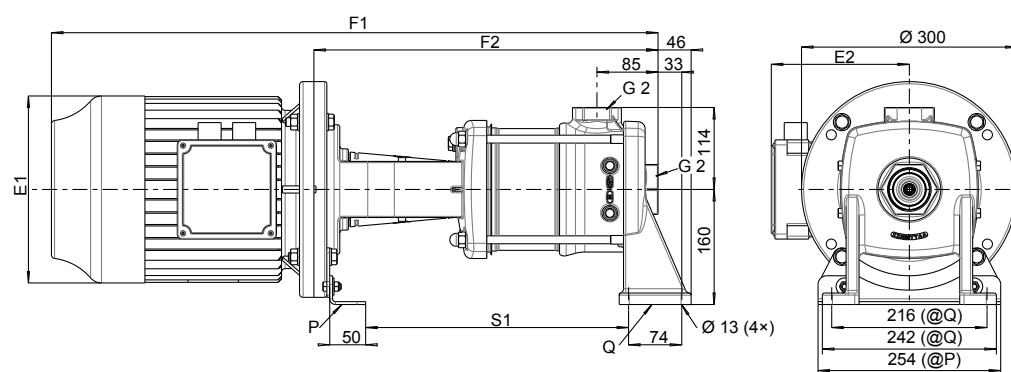


Fig. 21: Dimensions and connections of Movitec H(S)I 15 with V1 motor

Dimensions [mm]

Number of stages	Motor	E1	E2	F1	F2	S1
1	V18	157	133	626	351	280,5
2	V18	180	145	646	361	288,5
3	V18	200	155	727	397	324,5
4	V18	223	166	764	424	351,5
5	V1	260	190	895	530	405,5
6	V1	260	190	921	556	431,5
7	V1	260	190	948	583	458,5
8	V1	260	190	974	609	484,5

20) Optional: connection height 160 mm up to a maximum of 4 stages

Movitec H(S)I 15B, n = 3500 rpm

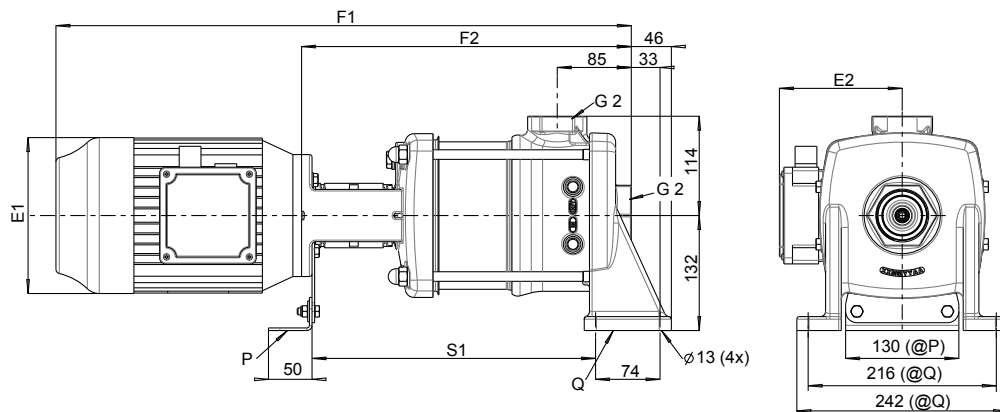


Fig. 22: Dimensions and connections of Movitec H(S)I 15 with V18 motor²¹⁾

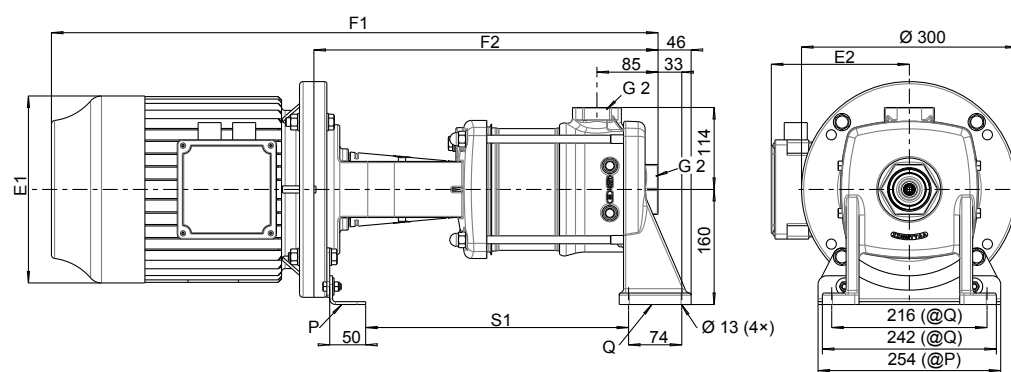


Fig. 23: Dimensions and connections of Movitec H(S)I 15 with V1 motor

Dimensions [mm]

Number of stages	Motor	E1	E2	F1	F2	S1
1	V18	185	145	646	361	288,5
2	V18	200	155	701	371	298,5
3	V1	260	190	842	477	352,5
4	V1	260	190	868	503	378,5
5	V1	260	190	895	530	405,5

²¹⁾ Optional: connection height 160 mm up to a maximum of 2 stages

General assembly drawing with list of components

Movitec H(S)I

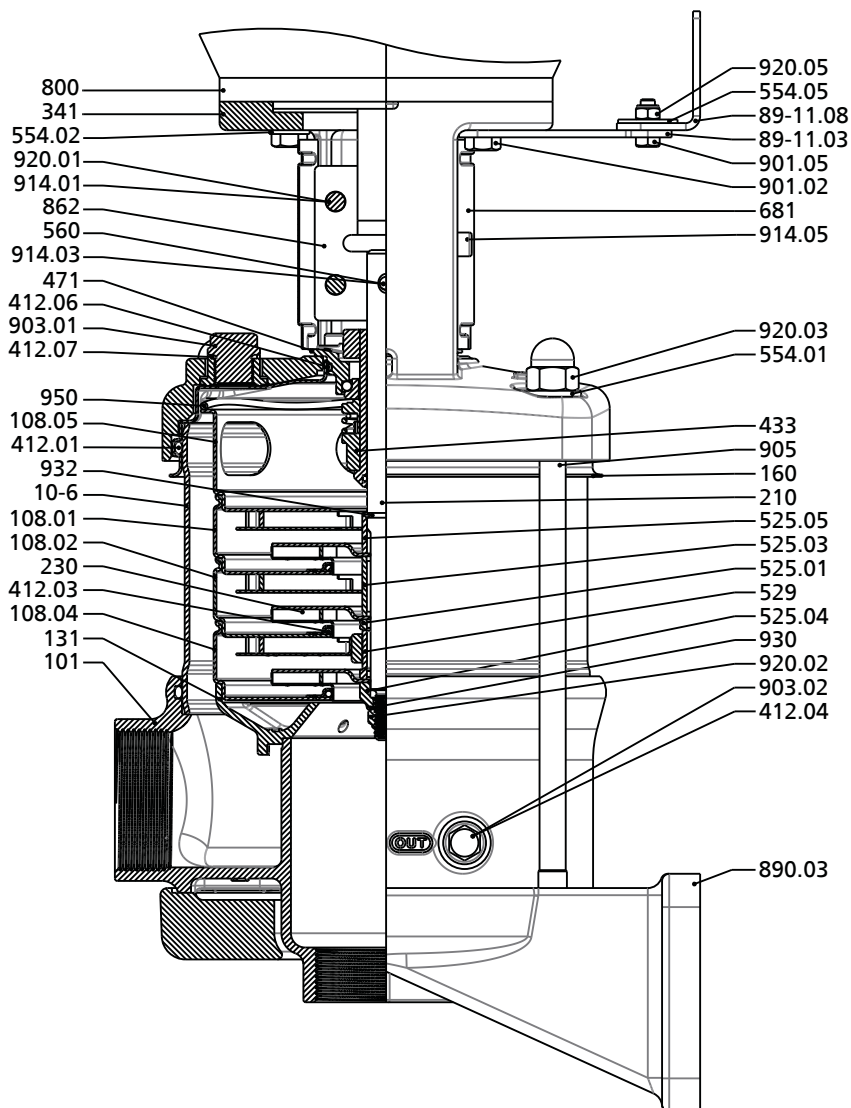


Fig. 24: General assembly drawing

List of components

Part No.	Description	Part No.	Description
10-6	Pump shroud	560	Pin
101	Pump casing	681	Coupling guard
108.01/02/04/05	Stage casing	800	Motor
131	Inlet ring	862	Coupling shell
160	Cover	89-11.03/08	Retaining bracket
210	Shaft	890.03	Baseplate
230	Impeller	901.02/05	Hexagon head bolt
341	Drive lantern	903.01/02	Screw plug
412.01/03/04/06/07	O-ring	905	Tie bolt
433	Mechanical seal	914.01/03/05	Hexagon socket head cap screw
471	Seal cover	920.01/02/03/05	Nut
525.01/03/04/05	Spacer sleeve	930	Safety device
529	Bearing sleeve	932	Circlip
554.01/02/05	Washer	950	Spring



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