

NK, NKE

50 Hz CHINA

Fixed speed range

Speed-controlled, non-sensor range

Speed-controlled, Series 2000, 2-channel sensor range

Single-stage end-suction pumps



1. Applications	4	Condensation cover	54
Introduction	4	Elimination of noise and vibrations	55
HVAC	4	Alignment	56
Industrial pressure boosting	4		
Industrial liquid transfer	4		
Water supply	4		
Irrigation	5		
2. Features and benefits	6	9. Speed-controlled pumps	57
Pumps with standard motors	6	Why select an E-pump	58
Pumps with electronic speed control	6	Maximum speed of the impeller	58
Why select an E-pump	6	Affinity equations	58
Energy-optimised pumps	6	Communication with the E-solution	60
		Communication with E-pumps	62
3. Performance range	7	10. Pumps connected in parallel	63
NKE Full range	7	Control of pumps connected in parallel	63
NKE Medium speed (Sensor & non sensor)	8	Pumps connected to Control MPC	63
NKE Medium speed (Non sensor only)	8		
NKE Low speed (Sensor & non sensor)	9	11. Saving time for selecting the product	64
NK, 2-pole	9	Key application data sheet	64
NK, 4-pole	10	Pump size	65
NK, 6-pole	10	Efficiency	65
		Material	65
		Motor size	65
4. Product range	11	12. Pumped liquids	66
NKE, medium speed/NK, 2-pole	12	General recommendations	66
NKE, low speed/NK, 4-pole	16	"Liquids" in Grundfos.com	66
NK, 6-pole	25		
E-pumps	29	13. NK/NKE, bare-shaft pumps	67
		NK/NKE, center-line outlet	67
5. Identification	30	NK/NKE, tangential outlet	70
Nameplate	30		
Type key	31	14. Pump flange dimensions	71
		Pump flanges, EN 1092-2	71
6. Construction	36	Fixed pump flanges, ASME/ANSI B16.1	71
NK, centre-line outlet	36	Loose pump flanges, ASME/ANSI B16.42	72
NK, tangential outlet	36		
Material specification, NK	37	15. Introduction to curves and technical data	73
Mechanical construction	39	How to read the curve charts	73
Surface treatment	40	Curve conditions	74
Test pressure	40	Pump performance testing	74
Motors and drives	41	Performance-test types for end-suction pumps	75
		Specifying acceptance grades	77
7. Operating conditions	45	16. Performance curves	79
Pump location	45	Overview	79
Ambient temperature and installation altitude	45	Medium speed, 4000 RPM	81
Flow rates	47	Low speed, 2000 / 2200 RPM	91
Sound pressure level	47	2-pole	105
Liquid temperatures	48	4-pole	118
Operating range of mechanical shaft seals	49	6-pole	149
Recommended shaft seal for water-glycol mixture	50		
Pressures in the pump	51	17. Dimensional drawings and dimensions	171
		Dimensional drawings, NK/NKE	171
8. Mechanical installation	53	Dimensions NK/NKE	172
Foundation and grouting	53	Dimensional drawing, NKE Series 2000	188
Pipes	54		

Dimensions NKE Series 2000.	188
18. Minimum efficiency index	189
19. Base frames	191
NK/NKE base frame	191
NK with C-channel base frames, dimensional sketches	192
20. Motor data	201
Standard motor range	201
E-solution range	201
Electrical data, MGE motors	202
Pump dimensions with other motors	203
21. Accessories	208
Counter-flange	208
Sensors	211
External Grundfos sensors	212
Potentiometer	214
Grundfos GO	214
CIU communication interface units	215
CIM communication interface modules	215
Antennas and battery	216
EMC filter	216
Shims	216
22. Service	217
23. Flange forces and torques	218
24. Grundfos Product Center	221
25. Document quality feedback	222

1. Applications

Introduction

NK are multipurpose pumps suitable for a variety of different applications demanding reliable and cost-efficient supply.

NK pumps are used in five main fields of application:

- HVAC
- industrial pressure boosting
- industrial liquid transfer
- water supply
- irrigation.

HVAC

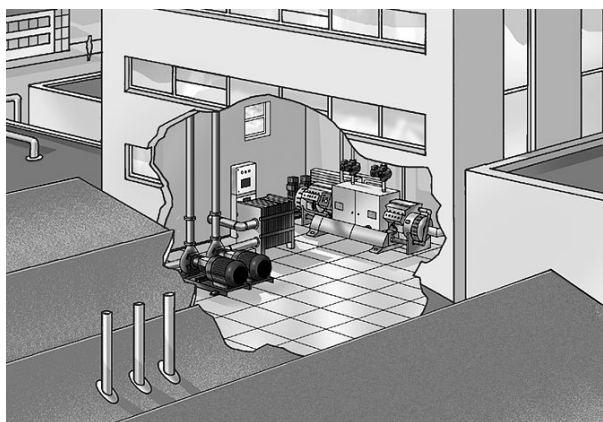
Liquid transfer in these applications:

- hot water heating systems
- chilled water systems.

Industrial pressure boosting

Pressure boosting in these applications:

- industrial washing and cleaning systems
- industrial wash-down systems
- vehicle washing tunnels
- firefighting systems.

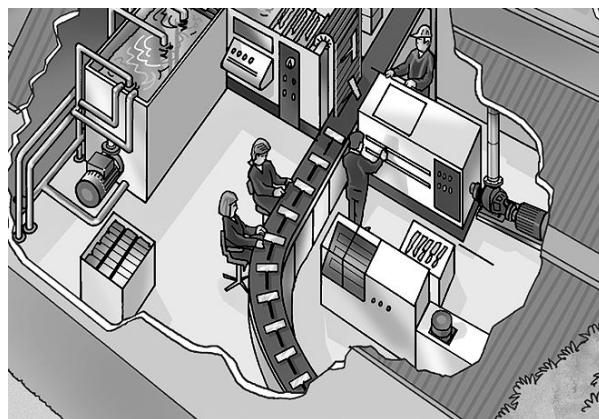


TM030147

Industrial liquid transfer

Liquid transfer in these applications:

- cooling and air-conditioning systems, refrigerants
- boiler-feed and condensate systems
- aquafarming
- industrial heating systems
- district heating plants.

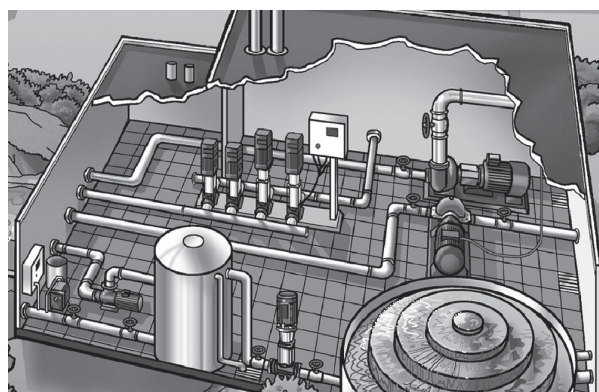


TM030148

Water supply

Besides general water supply in municipal and industrial waterworks, the NK pumps are used for these specific applications:

- filtration and transfer at waterworks
- pressure boosting in mains
- pressure boosting in high-rise buildings, hotels, etc.
- pressure boosting in industrial buildings
- various swimming bath applications.

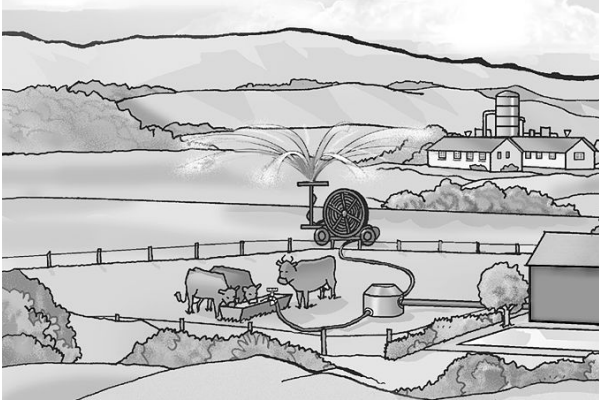


TM030146

Irrigation

Irrigation covers these applications:

- field irrigation, flooding
- sprinkler irrigation
- drip-feed irrigation.

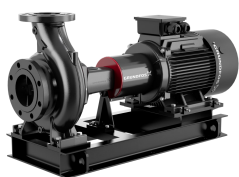


TM030149

2. Features and benefits

NK pumps offer the following features and benefits:

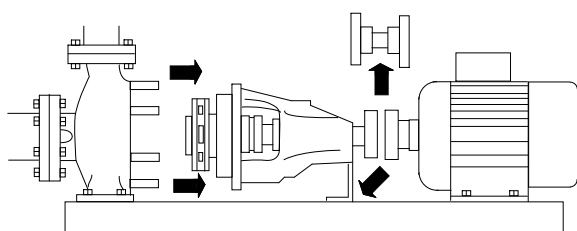
- The pumps are non-self-priming, single-stage, centrifugal volute pumps with axial inlet port, radial outlet port and horizontal shaft.
- All pumps are according to ISO 5199.
- Inlet and outlet flanges are according to EN 1092-2.
- Connection dimensions are according to EN 733.
- Pumps are for 10/16/25 bar operation.
- Larger pumps have a double volute design which prolongs seals and bearing life, and thereby lowers life cycle costs.
- The mechanical shaft seal has dimensions according to EN 12756.
- The pumps can be equipped with an MGE motor with integrated frequency converter or connected to a Grundfos CUE external frequency converter.
- All pumps are statically balanced according to ISO 1940-1 class 6.3.
Impellers are hydraulically balanced.



TM1040532

NK pump

- For NK pumps the back pull-out design enables removal of the motor, motor stool and impeller without disturbing the pump housing or pipes. Even the largest pumps can thus be serviced by a single person with a crane.



TM031004

NK back pull-out design

- The NK pump is long-coupled with a totally enclosed fan-cooled standard motor with main dimensions to IEC and DIN standards and mounting designation B3 (IM 1001).

Pumps with standard motors

IE3 IE4

NK pumps are fitted with standard motors with efficiency class IE3/IE4 for low-voltage three-phase motors.

Pumps with electronic speed control

IE5

NKE pumps are NK pumps equipped with a motor with built-in frequency converter and the necessary application software to achieve an all-in-one solution enabling electronic speed control.

Electronic speed control enables continuously variable control of motor speed which again enables adaptation of the performance to a given requirement.

If a sensor is installed, NKE pumps allow for any of these configurations and control methods:

- constant pressure
- proportional control
- temperature control
- constant flow.

NKE pumps with medium speed motors up to 26 kW and low speed motors up to 22 kW are fitted with Grundfos permanent-magnet MGE motors that have motor efficiency class IE5 according to IEC 60034-30-2.

Why select an E-pump

A pump with electronic speed control offers these benefits:

- energy savings
- increased comfort
- control and monitoring of pump performance
- communication with the pump.

For further information on electronic speed control, refer to section Speed-controlled pumps.

Related information

[9. Speed-controlled pumps](#)

Energy-optimised pumps

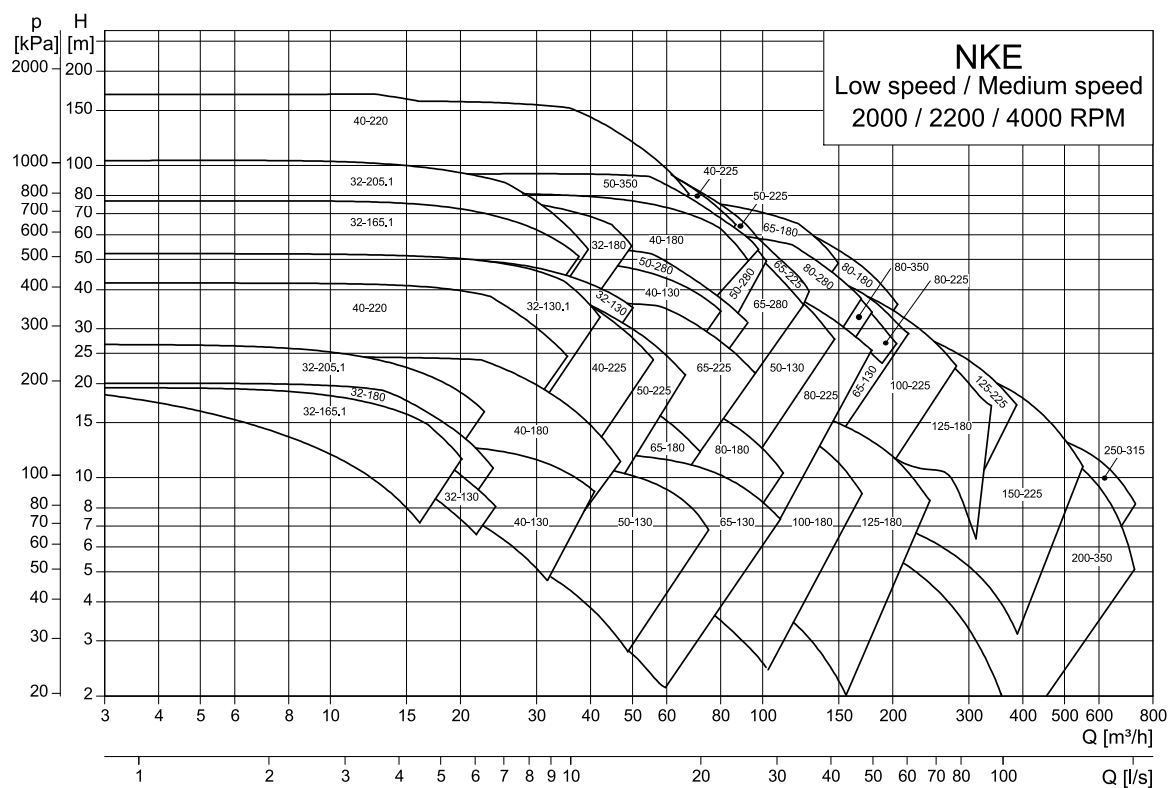
NK pumps are energy-optimised and comply with the EuP Directive, Commission Regulation (EC) No 547/2012, in which most pumps are classified or graduated in an energy efficiency index (MEI). See also section Minimum efficiency index.

Related information

[18. Minimum efficiency index](#)

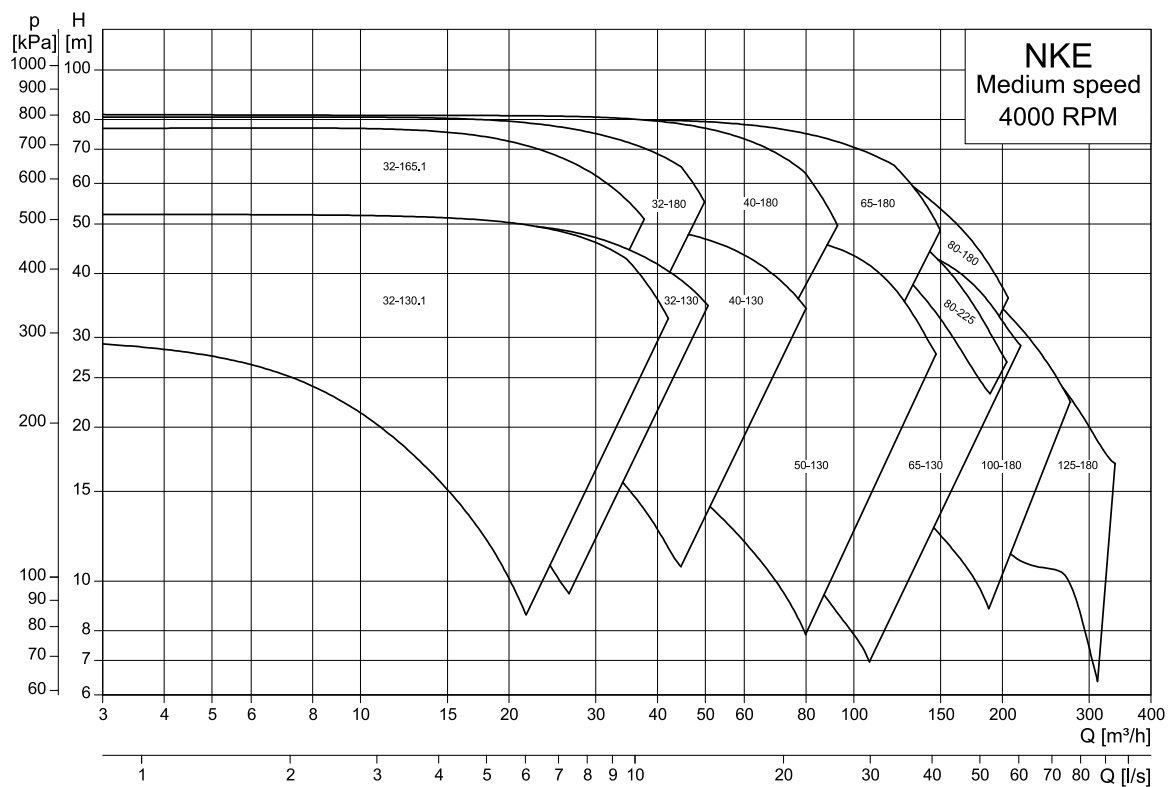
3. Performance range

NKE Full range



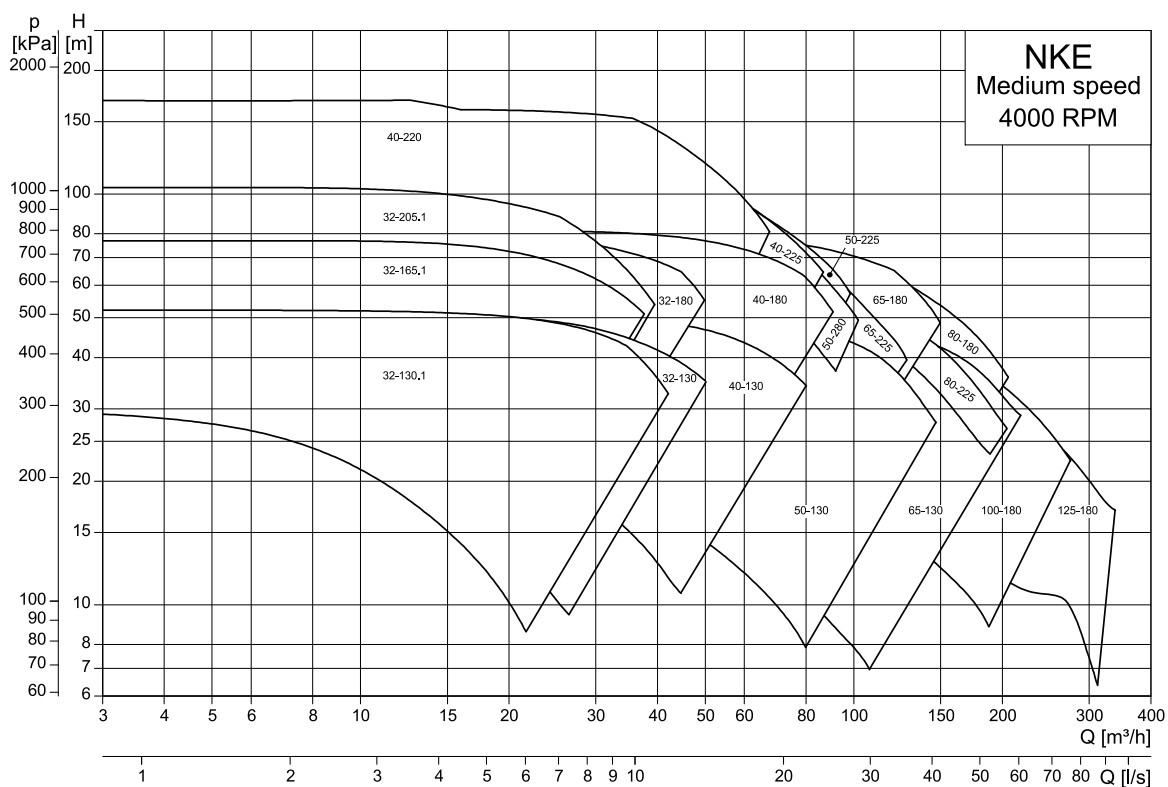
TM082125

NKE Medium speed (Sensor & non sensor)



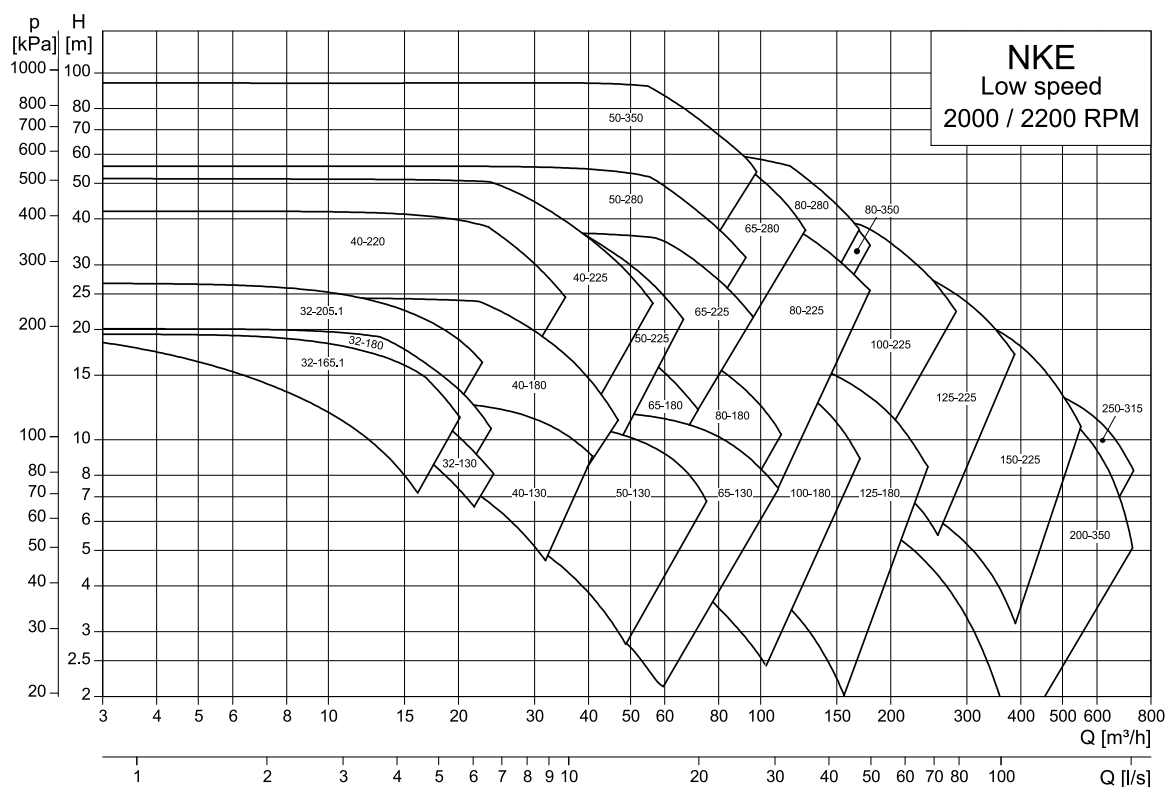
TM082123

NKE Medium speed (Non sensor only)



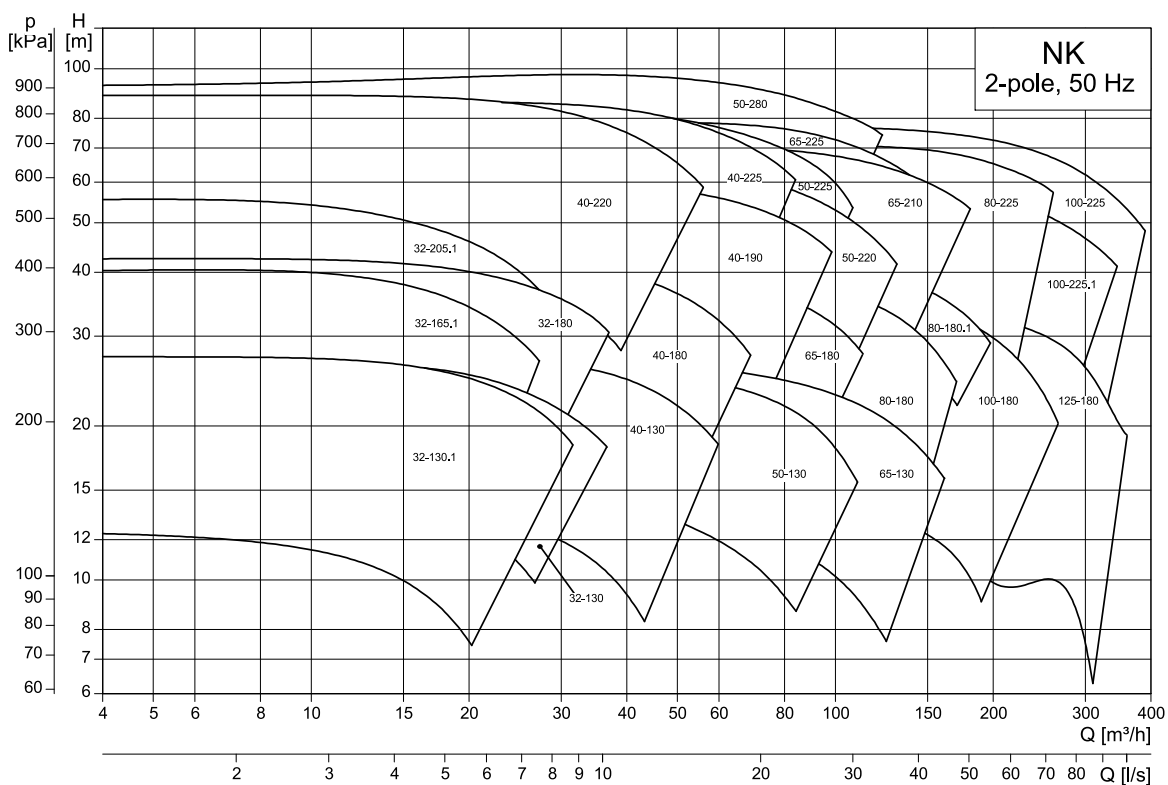
TM086904

NKE Low speed (Sensor & non sensor)



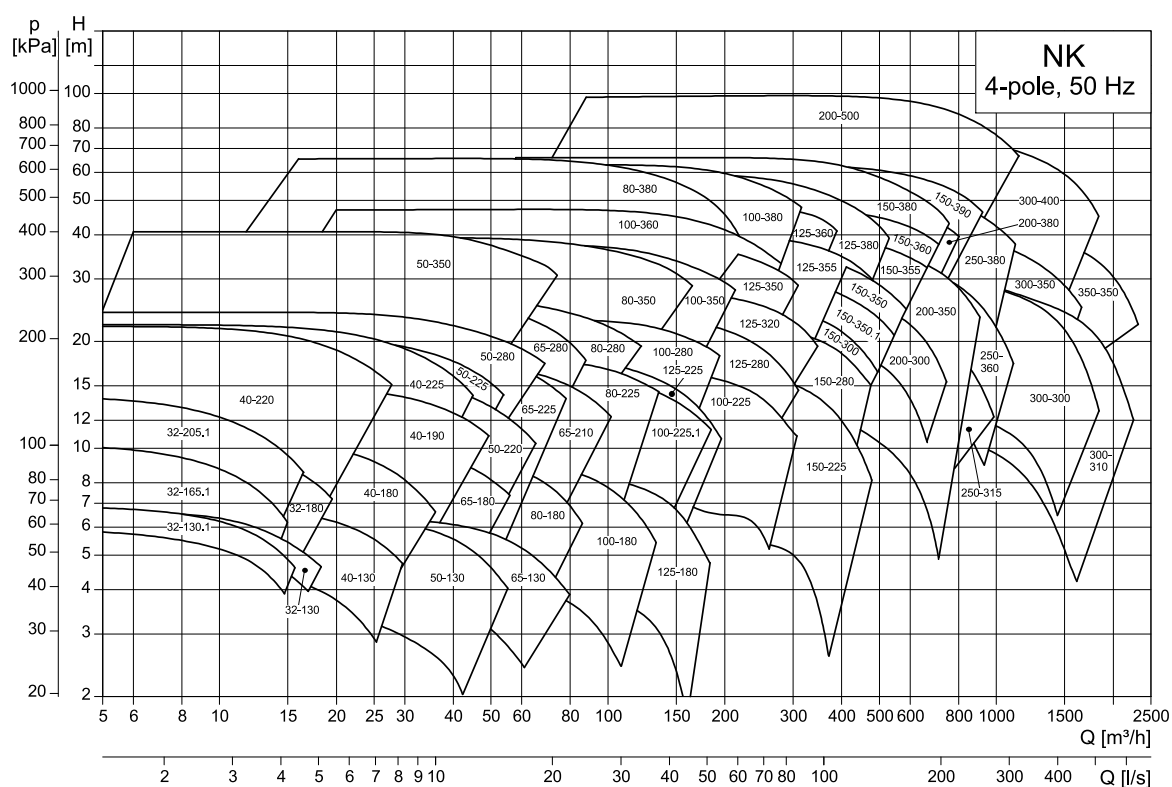
TM082124

NK, 2-pole



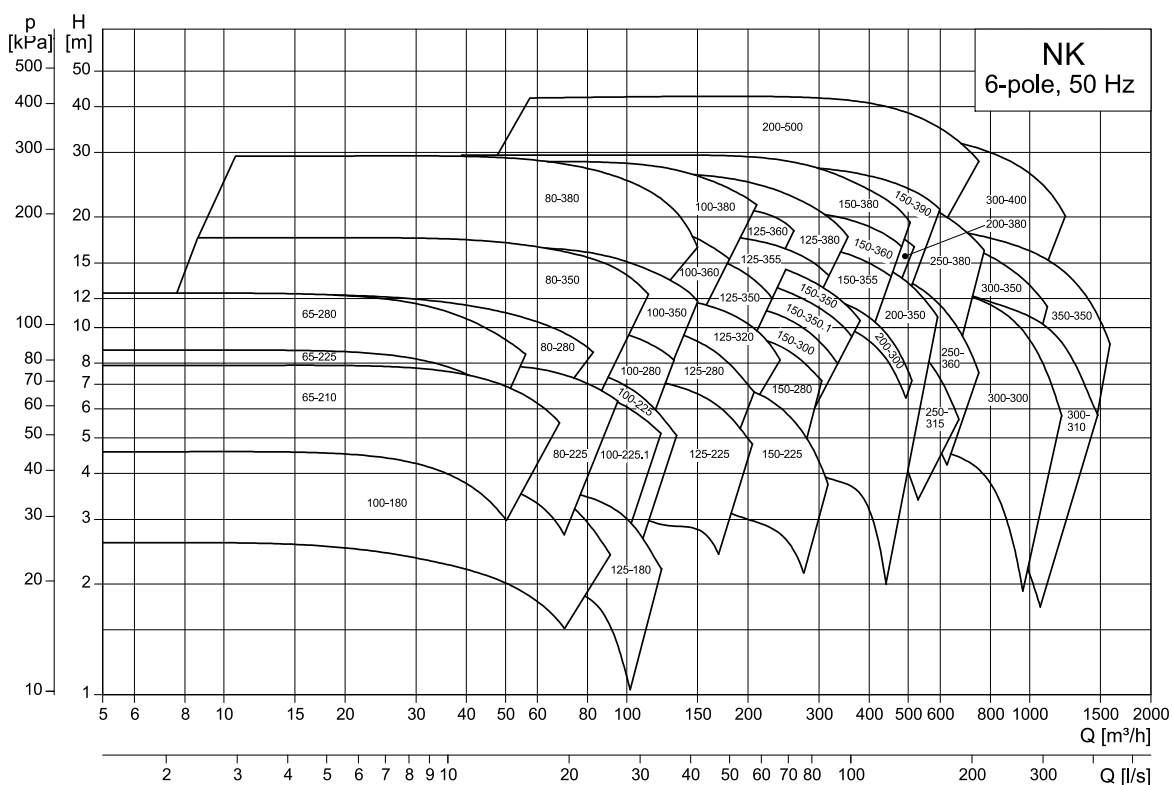
TM1040303

NK, 4-pole



TM1040304

NK, 6-pole



TM1040305

4. Product range

The tables on the following pages show the complete product ranges of NK, NKE pumps. The standard range has been combined on the basis of the following parameters:

Pump

- Pump housings have outlet flanges from DN 32 to DN 350.
- In general, cast iron pumps have either fixed flanges or loose flanges depending on pump models and rated pressure.

Motor

- Motors are for 50 Hz.
- NK pumps are available with 2-, 4- and 6-pole motors; NKE with medium speed and low speed motors.
- NK pumps are as standard available with IE3/IE4 motors.
- Motors with power rating up to and including 3 kW are available for "low voltage"; motors as from 4 kW are available for "high voltage".
- Some pumps can be delivered as -E products in combination with MGE IE5 motor.
- All pumps with non-E-motor can be connected to an external frequency converter.

Custom-built pumps

See the data booklet "NB, NBG, NK, NKG, NBE, NBGE, NKE, NKGE - Custom-built pumps according to EN 733 and ISO 2858", or contact Grundfos.

NKE, medium speed/NK, 2-pole

50 Hz, 2-pole				NK - Standard range										NK Options							
				Cast iron pump variants										Bearing bracket				Pump	Motor		
Pump type	P2 [kW]	NKE		Pressure rating and flange type				Pump material codes ¹⁾			Bearing bracket design		Heavy duty (HD) bearing design				Special seals	Special motor brand	Special voltage	Insulated bearings for VFD operation	
		No sensor	Integrated sensor																		Flange mounting ²⁾
				Re-grease		Oil															
				PN 10	PN 16	PN25	SPM fittings ⁶⁾	Pt100 sensors ⁶⁾	SPM fittings ⁶⁾	Pt100 sensors ⁶⁾											
32-130.1	0.75	-	-	F	F	F	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	1.1	●	●	F	F	F	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	1.5	●	●	F	F	F	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	2.2	●	●	F	F	F	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	3	●	●	F	F	F	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	4 ⁷⁾	●	●	F	F	F	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	5.5 ⁷⁾	●	●	F	F	F	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
32-130	1.1	●	●	F	F	F	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	1.5	●	●	F	F	F	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	2.2	●	●	F	F	F	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	3	●	●	F	F	F	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	4 ⁷⁾	●	●	F	F	F	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	5.5 ⁷⁾	●	●	F	F	F	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	7.5 ⁷⁾	●	●	F	F	F	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
32-165.1	1.5	●	●	F	F	F	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	2.2	●	●	F	F	F	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	3	●	●	F	F	F	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	4	●	●	F	F	F	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	5.5 ⁷⁾	●	●	F	F	F	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	7.5 ⁷⁾	●	●	F	F	F	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	11 ⁷⁾	●	●	F	F	F	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
32-180	1.5	-	-	F	F	F	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	2.2	●	●	F	F	F	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	3	●	●	F	F	F	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	4	●	●	F	F	F	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	5.5	●	●	F	F	F	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	7.5 ⁷⁾	●	●	F	F	F	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	11 ⁷⁾	●	●	F	F	F	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
32-205.1	3	●	●	F	F	F	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	4	●	●	F	F	F	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	5.5	●	●	F	F	F	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	7.5	-	-	F	F	F	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	7.5 ⁷⁾	●	●	F	F	F	F	C	C	D	-	●	□	□	■	□	●	●	●	●	
	11 ⁷⁾	●	●	F	F	F	F	C	C	D	-	●	□	□	■	□	●	●	●	●	
40-130	1.5	-	-	F	F	F	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	2.2	●	●	F	F	F	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	3	●	●	F	F	F	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	4	●	●	F	F	F	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	5.5	●	●	F	F	F	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	7.5 ⁷⁾	●	●	F	F	F	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	11 ⁷⁾	●	●	F	F	F	F	C	C	D	●	-	□	□	■	□	●	●	●	●	

50 Hz, 2-pole				NK - Standard range											NK Options							
				Cast iron pump variants											Bearing bracket				Pump	Motor		
Pump type	P2 [kW]	NKE		Pressure rating and flange type				Pump material codes ¹⁾			Bearing bracket design		Heavy duty (HD) bearing design				Special seals	Special motor brand	Special voltage	Insulated bearings for VFD operation		
																					Flange mounting ²⁾	
		Re-grease		Oil																		
		PN 10	PN 16	PN25	Flange standard ³⁾	PN 10	PN 16	PN25	SPM fittings ⁶⁾	Pt100 sensors ⁶⁾	SPM fittings ⁶⁾	Pt100 sensors ⁶⁾										
40-180	2.2	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●		
	3	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●		
	4	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●		
	5.5	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●		
	7.5	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●		
	11	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●		
	15 ⁷⁾	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●		
40-190	18.5 ⁷⁾	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●		
	7.5	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●		
	11	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●		
	15	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●		
40-220	18.5	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●		
	5.5	●	-	F	F	L	F	C	C	D	-	●	□	□	■	□	●	●	●	●		
	7.5	●	-	F	F	L	F	C	C	D	-	●	□	□	■	□	●	●	●	●		
	11	●	-	F	F	L	F	C	C	D	-	●	□	□	■	□	●	●	●	●		
	15	●	-	F	F	L	F	C	C	D	-	●	□	□	■	□	●	●	●	●		
	18.5	●	-	F	F	L	F	C	C	D	-	●	□	□	■	□	●	●	●	●		
	22 ⁷⁾	●	-	F	F	L	F	C	C	D	-	●	□	□	■	□	●	●	●	●		
40-225	26 ⁷⁾	●	-	F	F	L	F	C	C	D	-	●	□	□	■	□	●	●	●	●		
	5.5	-	-	F	F	L	F	C	C	D	-	●	□	□	■	□	●	●	●	●		
	7.5	●	-	F	F	L	F	C	C	D	-	●	□	□	■	□	●	●	●	●		
	11	●	-	F	F	L	F	C	C	D	-	●	□	□	■	□	●	●	●	●		
	15	●	-	F	F	L	F	C	C	D	-	●	□	□	■	□	●	●	●	●		
	18.5	●	-	F	F	L	F	C	C	D	-	●	□	□	■	□	●	●	●	●		
50-130	22	●	-	F	F	L	F	C	C	D	-	●	□	□	■	□	●	●	●	●		
	3	●	●	F	F	F	F	C	C	D	●	-	□	□	■	□	●	●	●	●		
	4	●	●	F	F	F	F	C	C	D	●	-	□	□	■	□	●	●	●	●		
	5.5	●	●	F	F	F	F	C	C	D	●	-	□	□	■	□	●	●	●	●		
	7.5	●	●	F	F	F	F	C	C	D	●	-	□	□	■	□	●	●	●	●		
	11 ⁷⁾	●	●	F	F	F	F	C	C	D	●	-	□	□	■	□	●	●	●	●		
50-220	15 ⁷⁾	●	●	F	F	F	F	C	C	D	●	-	□	□	■	□	●	●	●	●		
	5.5	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●		
	7.5	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●		
	11	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●		
	15	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●		
	18.5	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●		

50 Hz, 2-pole				NK - Standard range										NK Options							
				Cast iron pump variants										Bearing bracket				Pump	Motor		
Pump type	P2 [kW]	NKE		Pressure rating and flange type				Pump material codes ¹⁾			Bearing bracket design		Heavy duty (HD) bearing design				Special seals	Special motor brand	Special voltage	Insulated bearings for VFD operation	
		No sensor	Integrated sensor																		Flange mounting ²⁾
				Re-grease		Oil															
				PN 10	PN 16	PN25	PN 10	PN 16	PN25	SPM fittings ⁶⁾	Pt100 sensors ⁶⁾	SPM fittings ⁶⁾	Pt100 sensors ⁶⁾								
50-225	5.5	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	7.5	●	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	11	●	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	15	●	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	18.5	●	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	22	●	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	30 ⁷⁾	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
50-280	15	●	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	18.5	●	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	22	●	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	30	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	37	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
65-130	4	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	5.5	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	7.5	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	11	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	15 ⁷⁾	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	18.5 ⁷⁾	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	22 ⁷⁾	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
65-180	3	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	4	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	5.5	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	7.5	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	11	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	15	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	18.5 ⁷⁾	●	●	F	F	L	F	C	C	D	-	●	□	□	■	□	●	●	●	●	
	22 ⁷⁾	●	●	F	F	L	F	C	C	D	-	●	□	□	■	□	●	●	●	●	
65-210	26 ⁷⁾	●	●	F	F	L	F	C	C	D	-	●	□	□	■	□	●	●	●	●	
	18.5	-	-	F	F	L	F	C	C	D	-	●	□	□	■	□	●	●	●	●	
	22	-	-	F	F	L	F	C	C	D	-	●	□	□	■	□	●	●	●	●	
	30	-	-	F	F	L	F	C	C	D	-	●	□	□	■	□	●	●	●	●	
65-225	37	-	-	F	F	L	F	C	C	D	-	●	□	□	■	□	●	●	●	●	
	11	●	-	F	F	L	F	C	C	D	-	●	□	□	■	□	●	●	●	●	
	15	●	-	F	F	L	F	C	C	D	-	●	□	□	■	□	●	●	●	●	
	18.5	●	-	F	F	L	F	C	C	D	-	●	□	□	■	□	●	●	●	●	
	22	●	-	F	F	L	F	C	C	D	-	●	□	□	■	□	●	●	●	●	
	30	-	-	F	F	L	F	C	C	D	-	●	□	□	■	□	●	●	●	●	
80-180.1	37	-	-	F	F	L	F	C	C	D	-	●	□	□	■	□	●	●	●	●	
	15	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	18.5	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	

50 Hz, 2-pole				NK - Standard range										NK Options							
				Cast iron pump variants										Bearing bracket				Pump	Motor		
Pump type	P2 [kW]	NKE		Pressure rating and flange type				Pump material codes ¹⁾			Bearing bracket design		Heavy duty (HD) bearing design		Special seals	Special motor brand	Special voltage	Insulated bearings for VFD operation			
		No sensor	Integrated sensor	Flange mounting ²⁾			Flange standard ³⁾				Standard ⁴⁾	Heavy duty (HD) ⁵⁾							Lubrication type		
								Re-grease		Oil											
				PN 10	PN 16	PN25		PN 10	PN 16	PN25			SPM fittings ⁶⁾	Pt100 sensors ⁶⁾					SPM fittings ⁶⁾	Pt100 sensors ⁶⁾	
80-180	4	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	5.5	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	7.5	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	11	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	15	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	18.5	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	22 ⁷⁾	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	26 ⁷⁾	●	●	F	F	L	F	C	C	D	-	●	□	□	■	□	●	●	●	●	
80-225	18.5	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	22	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	30	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	37	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	45	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	55	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
100-180	7.5	●	●	F	F	L	F	C	C	D	-	●	□	□	■	□	●	●	●	●	
	11	●	●	F	F	L	F	C	C	D	-	●	□	□	■	□	●	●	●	●	
	15	●	●	F	F	L	F	C	C	D	-	●	□	□	■	□	●	●	●	●	
	18.5	●	●	F	F	L	F	C	C	D	-	●	□	□	■	□	●	●	●	●	
	22	●	●	F	F	L	F	C	C	D	-	●	□	□	■	□	●	●	●	●	
100-225.1	22	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	30	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	37	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	45	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	55	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
100-225	22	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	30	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	37	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	45	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	55	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	75	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
125-180	11	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	15	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	18.5	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	22	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	30	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	

1) C = S3, S4, S5, S8, S9, SK, SL, T2, T3; D = QE, QF, QG, QH, SB, SC, SD, SG, SH, SI, SJ, TA, TB

2) F = Fixed flange; L = Loose flange; NA = Not available

3) F = DIN flange machining; G = ANSI flange machining; J = JIS flange machining

4) Standard bearing bracket with greased for life bearings

5) Heavy duty bearing bracket, re-greaseable or oil lubricated bearings

6) □ = Optional; ■ = Standard

7) Only for E-pumps

NKE, low speed/NK, 4-pole

50 Hz, 4-pole				NK - Standard range										NK Options							
				Cast iron pump variants										Bearing bracket				Pump	Motor		
Pump type	P2 [kW]	NKE		Pressure rating and flange type				Pump material codes ⁸⁾			Bearing bracket design		Heavy duty (HD) bearing design				Special seals	Special motor brand	Special voltage	Insulated bearings for VFD operation	
		No sensor	Integrated sensor	Flange mounting ⁹⁾			Flange standard ¹⁰⁾						Lubrication type								
				PN 10	PN 16	PN25	PN 10	PN 16	PN25	Standard ¹¹⁾	Heavy duty (HD) ¹²⁾	Re-grease		Oil							
												SPM fittings ¹³⁾	Pt100 sensors ¹³⁾	SPM fittings ¹³⁾	Pt100 sensors ¹³⁾						
32-130.1	0.25	-	-	F	F	F	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	0.37	-	-	F	F	F	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
32-130	0.25	-	-	F	F	F	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	0.37	-	-	F	F	F	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	0.55 ¹⁴⁾	●	●	F	F	F	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	0.75 ¹⁴⁾	●	●	F	F	F	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
32-165.1	0.25	-	-	F	F	F	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	0.37	-	-	F	F	F	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	0.55	●	●	F	F	F	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	0.75 ¹⁴⁾	●	●	F	F	F	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	1.1 ¹⁴⁾	●	●	F	F	F	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
32-180	0.25	-	-	F	F	F	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	0.37	-	-	F	F	F	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	0.55	●	●	F	F	F	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	0.75	●	●	F	F	F	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	1.1 ¹⁴⁾	●	●	F	F	F	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
32-205.1	0.37	-	-	F	F	F	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	0.55	●	●	F	F	F	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	0.75	●	●	F	F	F	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	1.1 ¹⁴⁾	●	●	F	F	F	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	1.5 ¹⁴⁾	●	●	F	F	F	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	2.2 ¹⁴⁾	●	●	F	F	F	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
40-130	0.25	-	-	F	F	F	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	0.37	-	-	F	F	F	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	0.55	●	●	F	F	F	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	0.75 ¹⁴⁾	●	●	F	F	F	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	1.1 ¹⁴⁾	●	●	F	F	F	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	1.5 ¹⁴⁾	●	●	F	F	F	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
40-180	0.37	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	0.55	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	0.75	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	1.1	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	1.5 ¹⁴⁾	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	2.2 ¹⁴⁾	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
40-190	0.75	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	1.1	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	1.5	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	2.2	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	

50 Hz, 4-pole				NK - Standard range										NK Options								
				Cast iron pump variants										Bearing bracket				Pump	Motor			
Pump type	P2 [kW]	NKE		Pressure rating and flange type				Pump material codes ⁸⁾			Bearing bracket design		Heavy duty (HD) bearing design				Special seals	Special motor brand	Special voltage	Insulated bearings for VFD operation		
																					Flange mounting ⁹⁾	
		Re-grease		Oil																		
		No sensor	Integrated sensor	PN 10	PN 16	PN25	PN 10	PN 16	PN25	Standard ¹¹⁾	Heavy duty (HD) ¹²⁾	SPM fittings ¹³⁾	Pt100 sensors ¹³⁾	SPM fittings ¹³⁾	Pt100 sensors ¹³⁾							
40-220	0.55	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●		
	0.75	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●		
	1.1	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●		
	1.5	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●		
	2.2	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●		
	3 ¹⁴⁾	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●		
	4 ¹⁴⁾	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●		
40-225	0.75	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●		
	1.1	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●		
	1.5	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●		
	2.2	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●		
	3	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●		
	4 ¹⁴⁾	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●		
50-130	5.5 ¹⁴⁾	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●		
	0.37	-	-	F	F	F	F	C	C	D	●	-	□	□	■	□	●	●	●	●		
	0.55	●	●	F	F	F	F	C	C	D	●	-	□	□	■	□	●	●	●	●		
	0.75	●	●	F	F	F	F	C	C	D	●	-	□	□	■	□	●	●	●	●		
	1.1	●	●	F	F	F	F	C	C	D	●	-	□	□	■	□	●	●	●	●		
	1.5 ¹⁴⁾	●	●	F	F	F	F	C	C	D	●	-	□	□	■	□	●	●	●	●		
50-220	2.2 ¹⁴⁾	●	●	F	F	F	F	C	C	D	●	-	□	□	■	□	●	●	●	●		
	0.75	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●		
	1.1	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●		
	1.5	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●		
	2.2	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●		
50-225	3	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●		
	0.75	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●		
	1.1	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●		
	1.5	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●		
	2.2	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●		
	3	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●		
	4	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●		
50-280	5.5 ¹⁴⁾	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●		
	2.2	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●		
	3	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●		
	4	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●		
	5.5	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●		
	7.5 ¹⁴⁾	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●		
11 ¹⁴⁾	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●			

50 Hz, 4-pole				NK - Standard range										NK Options							
				Cast iron pump variants										Bearing bracket				Pump	Motor		
Pump type	P2 [kW]	NKE		Pressure rating and flange type				Pump material codes ⁸⁾			Bearing bracket design		Heavy duty (HD) bearing design				Special seals	Special motor brand	Special voltage	Insulated bearings for VFD operation	
																					Flange mounting ⁹⁾
		Re-grease		Oil																	
		No sensor	Integrated sensor	PN 10	PN 16	PN25	PN 10	PN 16	PN25	Standard ¹¹⁾	Heavy duty (HD) ¹²⁾	SPM fittings ¹³⁾	Pt100 sensors ¹³⁾	SPM fittings ¹³⁾	Pt100 sensors ¹³⁾						
50-350	3	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	4	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	5.5	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	7.5	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	11	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	15 ¹⁴⁾	●	●	F	F	L	F	C	C	D	-	●	□	□	■	□	●	●	●	●	
	18.5 ¹⁴⁾	●	●	F	F	L	F	C	C	D	-	●	□	□	■	□	●	●	●	●	
65-130	22 ¹⁴⁾	●	●	F	F	L	F	C	C	D	-	●	□	□	■	□	●	●	●	●	
	0.55	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	0.75	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	1.1	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	1.5 ¹⁴⁾	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	2.2 ¹⁴⁾	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
65-180	3 ¹⁴⁾	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	0.55	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	0.75	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	1.1	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	1.5	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	2.2 ¹⁴⁾	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
65-210	3 ¹⁴⁾	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	2.2	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	3	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	4	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	5.5	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
65-225	1.1	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	1.5	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	2.2	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	3	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	4	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	5.5 ¹⁴⁾	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	7.5 ¹⁴⁾	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
65-280	3	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	4	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	5.5	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	7.5	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	11 ¹⁴⁾	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	15 ¹⁴⁾	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	18.5 ¹⁴⁾	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	

50 Hz, 4-pole			NK - Standard range										NK Options							
			Cast iron pump variants										Bearing bracket				Pump	Motor		
Pump type	P2 [kW]	NKE		Pressure rating and flange type				Pump material codes ⁸⁾			Bearing bracket design		Heavy duty (HD) bearing design				Special seals	Special motor brand	Special voltage	Insulated bearings for VFD operation
				Flange mounting ⁹⁾			Flange standard ¹⁰⁾						Lubrication type							
		PN 10	PN 16	PN25	Re-grease			Oil												
					SPM fittings ¹³⁾	Pt100 sensors ¹³⁾		SPM fittings ¹³⁾	Pt100 sensors ¹³⁾											
		No sensor	Integrated sensor	PN 10	PN 16	PN25		Flange standard ¹⁰⁾	PN 10	PN 16	PN25	Standard ¹¹⁾	Heavy duty (HD) ¹²⁾	SPM fittings ¹³⁾	Pt100 sensors ¹³⁾	SPM fittings ¹³⁾				
80-180	0.75	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●
	1.1	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●
	1.5	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●
	2.2	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●
	3 ¹⁴⁾	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●
	4 ¹⁴⁾	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●
80-225	1.5	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●
	2.2	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●
	3	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●
	4	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●
	5.5	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●
	7.5	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●
	11 ¹⁴⁾	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●
15 ¹⁴⁾	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
80-280	4	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●
	5.5	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●
	7.5	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●
	11	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●
	15 ¹⁴⁾	●	●	F	F	L	F	C	C	D	-	●	□	□	■	□	●	●	●	●
	18.5 ¹⁴⁾	●	●	F	F	L	F	C	C	D	-	●	□	□	■	□	●	●	●	●
	22 ¹⁴⁾	●	●	F	F	L	F	C	C	D	-	●	□	□	■	□	●	●	●	●
80-350	5.5	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●
	7.5	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●
	11	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●
	15	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●
	18.5	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●
	22 ¹⁴⁾	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●
80-380	22	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●
	30	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●
	37	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●
	45	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●
100-180	1.1	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●
	1.5	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●
	2.2	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●
	3	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●
	4 ¹⁴⁾	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●
	5.5 ¹⁴⁾	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●
100-225.1	3	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●
	4	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●
	5.5	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●
	7.5	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●

50 Hz, 4-pole			NK - Standard range										NK Options							
			Cast iron pump variants										Bearing bracket				Pump	Motor		
Pump type	P2 [kW]	NKE		Pressure rating and flange type				Pump material codes ⁸⁾			Bearing bracket design		Heavy duty (HD) bearing design				Special seals	Special motor brand	Special voltage	Insulated bearings for VFD operation
				Flange mounting ⁹⁾			Flange standard ¹⁰⁾						Lubrication type							
		No sensor	Integrated sensor	PN 10	PN 16	PN25	Standard ¹¹⁾	Heavy duty (HD) ¹²⁾	Re-grease		Oil									
									SPM fittings ¹³⁾	Pt100 sensors ¹³⁾	SPM fittings ¹³⁾	Pt100 sensors ¹³⁾								
100-225	3	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●
	4	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●
	5.5	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●
	7.5	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●
	11 ¹⁴⁾	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●
	15 ¹⁴⁾	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●
	18.5 ¹⁴⁾	●	●	F	F	L	F	C	C	D	-	●	□	□	■	□	●	●	●	●
	22 ¹⁴⁾	●	●	F	F	L	F	C	C	D	-	●	□	□	■	□	●	●	●	●
100-280	5.5	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●
	7.5	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●
	11	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●
	15	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●
100-350	7.5	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●
	11	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●
	15	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●
	18.5	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●
100-360	22	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●
	18.5	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●
	22	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●
	30	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●
100-380	37	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●
	22	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●
	30	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●
	37	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●
	45	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●
	55	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●
125-180	75	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●
	1.5	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●
	2.2	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●
	3	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●
	4	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●
	5.5 ¹⁴⁾	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●
	7.5 ¹⁴⁾	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●
	11	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●
125-225	15	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●
	18.5 ¹⁴⁾	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●
	22 ¹⁴⁾	●	●	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●
	7.5	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●
	11	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●
	15	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●
125-280	18.5	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●

50 Hz, 4-pole				NK - Standard range										NK Options							
				Cast iron pump variants										Bearing bracket				Pump	Motor		
Pump type	P2 [kW]	NKE		Pressure rating and flange type				Pump material codes ⁸⁾			Bearing bracket design		Heavy duty (HD) bearing design				Special seals	Special motor brand	Special voltage	Insulated bearings for VFD operation	
																					Flange mounting ⁹⁾
		No sensor	Integrated sensor	PN 10	PN 16	PN25	PN 10	PN 16	PN25	Standard ¹¹⁾	Heavy duty (HD) ¹²⁾	Re-grease		Oil							
												SPM fittings ¹³⁾	Pt100 sensors ¹³⁾	SPM fittings ¹³⁾	Pt100 sensors ¹³⁾						
125-320	11	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	15	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	18.5	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	22	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	30	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
125-350	11	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	15	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	18.5	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	22	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	30	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
125-355	37	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	22	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	30	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	37	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	45	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
125-360	55	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	22	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	30	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	37	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	45	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
125-380	55	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	75	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	30	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	37	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	45	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
150-225	55	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	75	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	90	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	5.5	●	●	F	L	L	F	C	D	D	●	-	□	□	■	□	●	●	●	●	
	7.5	●	●	F	L	L	F	C	D	D	●	-	□	□	■	□	●	●	●	●	
150-280	11	●	●	F	L	L	F	C	D	D	●	-	□	□	■	□	●	●	●	●	
	15	●	●	F	L	L	F	C	D	D	●	-	□	□	■	□	●	●	●	●	
	18.5	●	●	F	L	L	F	C	D	D	●	-	□	□	■	□	●	●	●	●	
	22	-	-	F	L	L	F	C	D	D	●	-	□	□	■	□	●	●	●	●	
	30	-	-	F	L	L	F	C	D	D	●	-	□	□	■	□	●	●	●	●	
150-300	22	-	-	F	L	L	F	C	D	D	●	-	□	□	■	□	●	●	●	●	
	30	-	-	F	L	L	F	C	D	D	●	-	□	□	■	□	●	●	●	●	

50 Hz, 4-pole				NK - Standard range										NK Options							
				Cast iron pump variants										Bearing bracket				Pump	Motor		
Pump type	P2 [kW]	NKE		Pressure rating and flange type				Pump material codes ⁸⁾			Bearing bracket design		Heavy duty (HD) bearing design				Special seals	Special motor brand	Special voltage	Insulated bearings for VFD operation	
				Flange mounting ⁹⁾			Flange standard ¹⁰⁾						Lubrication type								
		No sensor	Integrated sensor	PN 10	PN 16	PN25	PN 10	PN 16	PN25	Standard ¹¹⁾	Heavy duty (HD) ¹²⁾	Re-grease		Oil							
												SPM fittings ¹³⁾	Pt100 sensors ¹³⁾	SPM fittings ¹³⁾	Pt100 sensors ¹³⁾						
150-350.1	18.5	-	-	F	L	L	F	C	D	D	●	-	□	□	■	□	●	●	●	●	
	22	-	-	F	L	L	F	C	D	D	●	-	□	□	■	□	●	●	●	●	
	30	-	-	F	L	L	F	C	D	D	●	-	□	□	■	□	●	●	●	●	
	37	-	-	F	L	L	F	C	D	D	●	-	□	□	■	□	●	●	●	●	
	45	-	-	F	L	L	F	C	D	D	●	-	□	□	■	□	●	●	●	●	
150-350	18.5	-	-	F	L	L	F	C	D	D	●	-	□	□	■	□	●	●	●	●	
	22	-	-	F	L	L	F	C	D	D	●	-	□	□	■	□	●	●	●	●	
	30	-	-	F	L	L	F	C	D	D	●	-	□	□	■	□	●	●	●	●	
	37	-	-	F	L	L	F	C	D	D	●	-	□	□	■	□	●	●	●	●	
	45	-	-	F	L	L	F	C	D	D	●	-	□	□	■	□	●	●	●	●	
	55	-	-	F	L	L	F	C	D	D	●	-	□	□	■	□	●	●	●	●	
	75	-	-	F	L	L	F	C	D	D	●	-	□	□	■	□	●	●	●	●	
150-355	45	-	-	F	L	L	F	C	D	D	●	-	□	□	■	□	●	●	●	●	
	55	-	-	F	L	L	F	C	D	D	●	-	□	□	■	□	●	●	●	●	
	75	-	-	F	L	L	F	C	D	D	●	-	□	□	■	□	●	●	●	●	
	90	-	-	F	L	L	F	C	D	D	●	-	□	□	■	□	●	●	●	●	
150-360	37	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	45	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	55	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	75	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	90	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	110	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
150-380	55	-	-	F	L	L	F	C	D	D	●	-	□	□	■	□	●	●	●	●	
	75	-	-	F	L	L	F	C	D	D	●	-	□	□	■	□	●	●	●	●	
	90	-	-	F	L	L	F	C	D	D	●	-	□	□	■	□	●	●	●	●	
	110	-	-	F	L	L	F	C	D	D	●	-	□	□	■	□	●	●	●	●	
150-390	132	-	-	F	L	L	F	C	D	D	●	-	□	□	■	□	●	●	●	●	
	55	-	-	F	F	F	F	C	D	D	●	-	□	□	■	□	●	●	●	●	
	75	-	-	F	F	F	F	C	D	D	●	-	□	□	■	□	●	●	●	●	
	90	-	-	F	F	F	F	C	D	D	●	-	□	□	■	□	●	●	●	●	
	110	-	-	F	F	F	F	C	D	D	●	-	□	□	■	□	●	●	●	●	
	132	-	-	F	F	F	F	C	D	D	●	-	□	□	■	□	●	●	●	●	
200-300	160	-	-	F	F	F	F	C	D	D	●	-	□	□	■	□	●	●	●	●	
	30	-	-	F	L	L	F	C	D	D	●	-	□	□	■	□	●	●	●	●	
	37	-	-	F	L	L	F	C	D	D	●	-	□	□	■	□	●	●	●	●	
	45	-	-	F	L	L	F	C	D	D	●	-	□	□	■	□	●	●	●	●	
	55	-	-	F	L	L	F	C	D	D	●	-	□	□	■	□	●	●	●	●	

50 Hz, 4-pole			NK - Standard range										NK Options							
			Cast iron pump variants										Bearing bracket				Pump	Motor		
Pump type	P2 [kW]	NKE		Pressure rating and flange type				Pump material codes ⁸⁾			Bearing bracket design		Heavy duty (HD) bearing design				Special seals	Special motor brand	Special voltage	Insulated bearings for VFD operation
		No sensor	Integrated sensor	Flange mounting ⁹⁾			Flange standard ¹⁰⁾						Lubrication type							
				PN 10	PN 16	PN25		Re-grease		Oil										
								SPM fittings ¹³⁾	Pt100 sensors ¹³⁾	SPM fittings ¹³⁾	Pt100 sensors ¹³⁾									
200-350	11 ¹⁴⁾	●	●	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●
	15 ¹⁴⁾	●	●	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●
	18.5 ¹⁴⁾	●	●	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●
	22	●	●	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●
	30	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●
	37	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●
	45	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●
	55	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●
	75	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●
	90	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●
200-380	55	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●
	75	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●
	90	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●
	110	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●
200-500	132	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●
	132	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●
	160	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●
	185	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●
	200	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●
	220	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●
	250	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●
250-315	280	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●
	11 ¹⁴⁾	●	●	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●
	15 ¹⁴⁾	●	●	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●
	18.5 ¹⁴⁾	●	●	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●
	22	●	●	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●
	30	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●
	37	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●
	45	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●
	55	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●
250-360	37	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●
	45	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●
	55	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●
	75	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●
	90	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●
250-380	55	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●
	75	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●
	90	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●
	110	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●
	132	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●
	160	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●

50 Hz, 4-pole				NK - Standard range										NK Options							
				Cast iron pump variants										Bearing bracket				Pump	Motor		
Pump type	P2 [kW]	NKE		Pressure rating and flange type				Pump material codes ⁸⁾			Bearing bracket design		Heavy duty (HD) bearing design				Special seals	Special motor brand	Special voltage	Insulated bearings for VFD operation	
																					Flange mounting ⁹⁾
		Re-grease		Oil																	
		PN 10	PN 16	PN25	PN 10	PN 16	PN25	Standard ¹¹⁾	Heavy duty (HD) ¹²⁾	SPM fittings ¹³⁾	Pt100 sensors ¹³⁾	SPM fittings ¹³⁾	Pt100 sensors ¹³⁾								
300-300	45	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●	
	55	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●	
	75	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●	
	90	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●	
	110	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●	
300-310	55	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●	
	75	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●	
	90	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●	
	110	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●	
	132	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●	
300-350	90	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●	
	110	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●	
	132	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●	
	160	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●	
300-400	200	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●	
	220	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●	
	250	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●	
	280	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●	
	315	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●	
350-350	110	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●	
	132	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●	
	160	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●	
	185	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●	
	200	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●	
	220	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●	
	250	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●	
	280	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●	
	315	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●	

⁸⁾ C = S3, S4, S5, S8, S9, SK, SL, T2, T3; D = QE, QF, QG, QH, SB, SC, SD, SG, SH, SI, SJ, TA, TB

⁹⁾ F = Fixed flange; L = Loose flange; NA = Not available

¹⁰⁾ F = DIN flange machining; G = ANSI flange machining; J = JIS flange machining

¹¹⁾ Standard bearing bracket with greased for life bearings

¹²⁾ Heavy duty bearing bracket, re-greaseable or oil lubricated bearings

¹³⁾ □ = Optional; ■ = Standard

¹⁴⁾ Only for E-pumps

NK, 6-pole

50 Hz, 6-pole				NK - Standard range										NK Options							
				Cast iron pump variants										Bearing bracket				Pump	Motor		
Pump type	P2 [kW]	NKE		Pressure rating and flange type				Pump material codes ¹⁵⁾			Bearing bracket design		Heavy duty (HD) bearing design				Special seals	Special motor brand	Special voltage	Insulated bearings for VFD operation	
		No sensor	Integrated sensor	Flange mounting ¹⁶⁾			Flange standard ¹⁷⁾				Standard ¹⁸⁾	Heavy duty (HD) ¹⁹⁾	Lubrication type								
				PN 10	PN 16	PN25		Re-grease		Oil											
								SPM fittings ²⁰⁾	Pt100 sensors ²⁰⁾	SPM fittings ²⁰⁾			Pt100 sensors ²⁰⁾								
65-210	0.55	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	0.75	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	1.1	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	1.5	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
65-225	0.55	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	0.75	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	1.1	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
65-280	0.75	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	1.1	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	1.5	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	2.2	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
80-225	0.75	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	1.1	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	1.5	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	2.2	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
80-280	1.1	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	1.5	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	2.2	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	3	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
80-350	2.2	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	3	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	4	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
80-380	5.5	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	5.5	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●	
	7.5	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●	
	11	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●	
	15	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●	
100-180	0.37	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	0.55	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	0.75	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	1.1	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
100-225.1	1.1	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	1.5	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	2.2	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
100-225	1.1	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	1.5	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	2.2	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	3	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
100-280	1.5	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	2.2	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	3	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	4	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	

50 Hz, 6-pole				NK - Standard range										NK Options							
				Cast iron pump variants										Bearing bracket				Pump	Motor		
Pump type	NKE			Pressure rating and flange type				Pump material codes ¹⁵⁾			Bearing bracket design		Heavy duty (HD) bearing design				Special seals	Special motor brand	Special voltage	Insulated bearings for VFD operation	
																					Flange mounting ¹⁶⁾
	Re-grease		Oil																		
	P2 [kW]	No sensor	Integrated sensor	PN 10	PN 16	PN25	Flange standard ¹⁷⁾	PN 10	PN 16	PN25	Standard ¹⁸⁾	Heavy duty (HD) ¹⁹⁾	SPM fittings ²⁰⁾	Pt100 sensors ²⁰⁾	SPM fittings ²⁰⁾	Pt100 sensors ²⁰⁾					
100-350	2.2	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	3	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	4	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	5.5	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	7.5	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
100-360	5.5	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	7.5	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	11	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
100-380	5.5	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	7.5	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	11	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	15	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	18.5	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
125-180	0.37	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	0.55	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	0.75	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	1.1	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
125-225	1.5	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	2.2	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	3	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
125-280	4	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	2.2	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	3	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	4	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	5.5	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
125-320	4	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	5.5	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	7.5	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	11	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
125-350	4	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	5.5	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	7.5	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	11	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
125-355	7.5	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	11	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	15	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	18.5	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
125-360	7.5	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	11	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	15	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	18.5	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	

50 Hz, 6-pole				NK - Standard range										NK Options							
				Cast iron pump variants										Bearing bracket				Pump	Motor		
Pump type	P2 [kW]	NKE		Pressure rating and flange type				Pump material codes ¹⁵⁾				Bearing bracket design		Heavy duty (HD) bearing design				Special seals	Special motor brand	Special voltage	Insulated bearings for VFD operation
		Re-grease		Oil																	
		No sensor	Integrated sensor	PN 10	PN 16	PN25	PN 10	PN 16	PN25	Standard ¹⁸⁾	Heavy duty (HD) ¹⁹⁾	SPM fittings ²⁰⁾	Pt100 sensors ²⁰⁾	SPM fittings ²⁰⁾	Pt100 sensors ²⁰⁾						
125-380	11	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	15	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	18.5	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	22	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	30	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
150-225	2.2	-	-	F	L	L	F	C	D	D	●	-	□	□	■	□	●	●	●	●	
	3	-	-	F	L	L	F	C	D	D	●	-	□	□	■	□	●	●	●	●	
	4	-	-	F	L	L	F	C	D	D	●	-	□	□	■	□	●	●	●	●	
	5.5	-	-	F	L	L	F	C	D	D	●	-	□	□	■	□	●	●	●	●	
150-280	3	-	-	F	L	L	F	C	D	D	●	-	□	□	■	□	●	●	●	●	
	4	-	-	F	L	L	F	C	D	D	●	-	□	□	■	□	●	●	●	●	
	5.5	-	-	F	L	L	F	C	D	D	●	-	□	□	■	□	●	●	●	●	
	7.5	-	-	F	L	L	F	C	D	D	●	-	□	□	■	□	●	●	●	●	
150-300	7.5	-	-	F	L	L	F	C	D	D	●	-	□	□	■	□	●	●	●	●	
150-350.1	11	-	-	F	L	L	F	C	D	D	●	-	□	□	■	□	●	●	●	●	
	5.5	-	-	F	L	L	F	C	D	D	●	-	□	□	■	□	●	●	●	●	
	7.5	-	-	F	L	L	F	C	D	D	●	-	□	□	■	□	●	●	●	●	
	11	-	-	F	L	L	F	C	D	D	●	-	□	□	■	□	●	●	●	●	
150-350	4	-	-	F	L	L	F	C	D	D	●	-	□	□	■	□	●	●	●	●	
	5.5	-	-	F	L	L	F	C	D	D	●	-	□	□	■	□	●	●	●	●	
	7.5	-	-	F	L	L	F	C	D	D	●	-	□	□	■	□	●	●	●	●	
	11	-	-	F	L	L	F	C	D	D	●	-	□	□	■	□	●	●	●	●	
150-355	15	-	-	F	L	L	F	C	D	D	●	-	□	□	■	□	●	●	●	●	
	15	-	-	F	L	L	F	C	D	D	●	-	□	□	■	□	●	●	●	●	
	18.5	-	-	F	L	L	F	C	D	D	●	-	□	□	■	□	●	●	●	●	
	22	-	-	F	L	L	F	C	D	D	●	-	□	□	■	□	●	●	●	●	
150-360	11	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	15	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	18.5	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	22	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
	30	-	-	F	F	L	F	C	C	D	●	-	□	□	■	□	●	●	●	●	
150-380	15	-	-	F	L	L	F	C	D	D	●	-	□	□	■	□	●	●	●	●	
	18.5	-	-	F	L	L	F	C	D	D	●	-	□	□	■	□	●	●	●	●	
	22	-	-	F	L	L	F	C	D	D	●	-	□	□	■	□	●	●	●	●	
	30	-	-	F	L	L	F	C	D	D	●	-	□	□	■	□	●	●	●	●	
	37	-	-	F	L	L	F	C	D	D	●	-	□	□	■	□	●	●	●	●	
150-390	18.5	-	-	F	F	F	F	C	D	D	●	-	□	□	■	□	●	●	●	●	
	22	-	-	F	F	F	F	C	D	D	●	-	□	□	■	□	●	●	●	●	
	30	-	-	F	F	F	F	C	D	D	●	-	□	□	■	□	●	●	●	●	
	37	-	-	F	F	F	F	C	D	D	●	-	□	□	■	□	●	●	●	●	
	45	-	-	F	F	F	F	C	D	D	●	-	□	□	■	□	●	●	●	●	
200-300	11	-	-	F	L	L	F	C	D	D	●	-	□	□	■	□	●	●	●	●	
	15	-	-	F	L	L	F	C	D	D	●	-	□	□	■	□	●	●	●	●	

50 Hz, 6-pole				NK - Standard range										NK Options							
				Cast iron pump variants										Bearing bracket				Pump	Motor		
Pump type	NKE			Pressure rating and flange type				Pump material codes ¹⁵⁾			Bearing bracket design		Heavy duty (HD) bearing design				Special seals	Special motor brand	Special voltage	Insulated bearings for VFD operation	
																					Flange mounting ¹⁶⁾
	Re-grease		Oil																		
	P2 [kW]	No sensor	Integrated sensor	PN 10	PN 16	PN25	PN 10	PN 16	PN25	Standard ¹⁸⁾	Heavy duty (HD) ¹⁹⁾	SPM fittings ²⁰⁾	Pt100 sensors ²⁰⁾	SPM fittings ²⁰⁾	Pt100 sensors ²⁰⁾						
200-350	5.5	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●	
	7.5	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●	
	11	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●	
	15	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●	
	18.5	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●	
	22	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●	
200-380	15	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●	
	18.5	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●	
	22	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●	
	30	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●	
200-500	37	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●	
	45	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●	
	55	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●	
	75	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●	
	90	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●	
	110	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●	
250-315	7.5	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●	
	11	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●	
	15	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●	
250-360	11	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●	
	15	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●	
	18.5	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●	
	22	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●	
	30	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●	
	37	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●	
250-380	18.5	-	-	F	F	F	F	C	D	D	●	-	□	□	■	□	●	●	●	●	
	22	-	-	F	F	F	F	C	D	D	●	-	□	□	■	□	●	●	●	●	
	30	-	-	F	F	F	F	C	D	D	●	-	□	□	■	□	●	●	●	●	
	37	-	-	F	F	F	F	C	D	D	●	-	□	□	■	□	●	●	●	●	
	45	-	-	F	F	F	F	C	D	D	●	-	□	□	■	□	●	●	●	●	
300-300	11	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●	
	15	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●	
	18.5	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●	
	22	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●	
	30	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●	
300-310	15	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●	
	18.5	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●	
	22	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●	
	30	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●	
300-350	37	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●	
	30	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●	
	37	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●	
300-400	45	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●	
	55	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●	
	75	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●	
	90	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●	

50 Hz, 6-pole				NK - Standard range								NK Options								
				Cast iron pump variants								Bearing bracket				Pump	Motor			
Pump type	P2 [kW]	NKE		Pressure rating and flange type				Pump material codes ¹⁵⁾			Bearing bracket design		Heavy duty (HD) bearing design				Special seals	Special motor brand	Special voltage	Insulated bearings for VFD operation
		No sensor	Integrated sensor	Flange mounting ¹⁶⁾			Flange standard ¹⁷⁾						PN 10	PN 16	PN25	Lubrication type				
								Re-grease		Oil										
				SPM fittings ²⁰⁾	Pt100 sensors ²⁰⁾	SPM fittings ²⁰⁾		Pt100 sensors ²⁰⁾												
350-350	30	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●
	37	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●
	45	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●
	55	-	-	F	F	F	F	D	D	D	●	-	□	□	■	□	●	●	●	●

¹⁵⁾ C = S3, S4, S5, S8, S9, SK, SL, T2, T3; D = QE, QF, QG, QH, SB, SC, SD, SG, SH, SI, SJ, TA, TB

¹⁶⁾ F = Fixed flange; L = Loose flange; NA = Not available

¹⁷⁾ F = DIN flange machining; G = ANSI flange machining; J = JIS flange machining

¹⁸⁾ Standard bearing bracket with greased for life bearings

¹⁹⁾ Heavy duty bearing bracket, re-greaseable or oil lubricated bearings

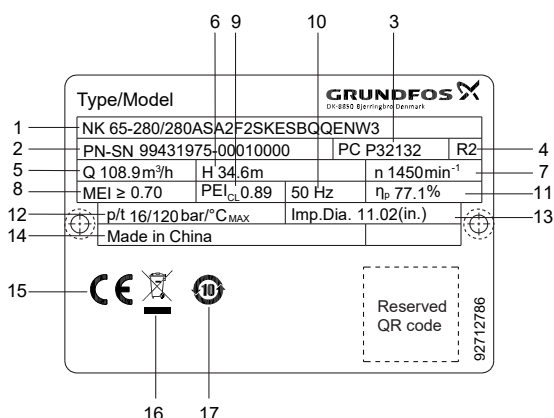
²⁰⁾ □ = Optional; ■ = Standard

E-pumps

P2, MGE motor [kW]	NKE		NKE Series 2000	
	Medium speed, 4000 RPM	Low speed, 2000 / 2200 RPM	Medium speed, 4000 RPM	Low speed, 2000 / 2200 RPM
0.55	-	•	-	•
0.75	-	•	-	•
1.1	•	•	•	•
2.2	•	•	•	•
3	•	•	•	•
4	•	•	•	•
5.5	•	•	•	•
7.5	•	•	•	•
11	•	•	•	•
15	•	•	•	•
18.5	•	•	•	•
22	•	•	•	•
26	•	-	-	-

5. Identification

Nameplate



TM1040533

Example of NK nameplate

Pos.	Description
1	Type designation
2	Identification code
	99431975 Product number
	00010000 Serial number
3	Production code - production site, year and week
4	Range identification (service range code)
5	Nominal flow rate
6	Nominal pump head
7	Rated pump speed
8	Minimum efficiency index (MEI)
9	Pump Energy Index (PEI), constant load
10	Frequency
11	Hydraulic pump efficiency
12	Pressure rating and maximum temperature
13	Actual impeller diameter
14	Country of origin
15	CE mark
16	EU/WEEE mark
17	China RoHS mark

Type key

Example 1: NK 32-180/166AAEF2S3ESBQQEGX4

Example 2: NK 150-350/328-324AAEF2TBESBQQEWX4

Example 3: NKE 65-225/242ASA2F2SKESBQQENWA

Pos.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Example 1	NK	32	-180	/166		A		AE	F	2	S3	E	S	BQQE	G	X	4
Example 2	NK	150	-350	/328-324		A		AE	F	2	TB	E	S	BQQE	W	X	4
Example 3	NKE	65	-225	/242		A	S	A2	F	2	SK	E	S	BQQE	N	W	A

Pos.	Explanation
1	Type range
2	Nominal diameter of outlet port (DN)
3	Nominal impeller diameter [mm]
4	Actual impeller diameter [mm]
	Impeller type
	'blank': Closed impeller, cylindrical trim. If one dimension is shown, the impeller has a cylindrical trim, for example 166.
5	'blank': Closed impeller, conical trim. If two dimensions are shown, the impeller has a conical trim, for example 328-324.
	S: Special open impeller
	V: Super vortex impeller
	Hydraulic version
	A: 1st version
6	B: 2nd version
	C: 3rd version
	D: 4th version
	Sensor/motor version
	'blank': Pump without sensor
	C: Without built-in sensor, one cable and one pressure sensor are supplied with the pump.
7	S: Pump with built-in differential-pressure sensor, Series 2000
	G: Non -E pump/ -E pump with semi-integrated VFD/CUE: Motor with Grounding ring
	H: Non -E pump/ -E pump with semi-integrated VFD/CUE: Motor with hybrid bearing (HYB): Non drive-end
	I: Non -E pump/ -E pump with semi-integrated VFD/CUE: Motor with insulated bearing: Non drive-end
	Code for pump version; the codes may be combined
	A1: Basic version, grease-lubricated standard bearing design, standard coupling
	A2: Basic version, grease-lubricated standard bearing design, spacer coupling
	B: Oversize motor
	(+E): With ATEX approval, certificate or test report, the second character of the pump version code is an E
	G1: Grease-lubricated heavy-duty bearing design, standard coupling
	G2: Grease-lubricated heavy-duty bearing design, spacer coupling
	H1: Oil-lubricated heavy-duty bearing design, standard coupling
	H2: Oil-lubricated heavy-duty bearing design, spacer coupling
8	I1: Pump without motor, grease-lubricated standard bearing design, standard coupling
	I2: Pump without motor, grease-lubricated standard bearing design, spacer coupling
	J1: Pump without motor, grease-lubricated heavy-duty bearing design, standard coupling
	J2: Pump without motor, grease-lubricated heavy-duty bearing design, spacer coupling
	K1: Pump without motor, oil-lubricated heavy-duty bearing design, standard coupling
	K2: Pump without motor, oil-lubricated heavy-duty bearing design, spacer coupling
	Y1: Bare shaft + grease lub. std. bearing design
	W1: Bare shaft + grease lubricated H.D. bearing design
	X: Special version; used in case of further customisation than already listed
	Pipe connection
	E: Table E flange
9	F: DIN flange
	G: ANSI flange
	J: JIS flange
	Flange pressure rating (PN - rated pressure)
	1: 10 bar
10	2: 16 bar
	3: 25 bar
	4: 40 bar
	5: Other pressure rating

Pos.	Explanation																																																																																																																																											
11	Code for materials																																																																																																																																											
	Code	Pump housing	Impeller	Wear ring	Shaft	B4	EN-GJL-250	Bronze CuSn10	No wear ring	1.4301 + 1.0503	B5	EN-GJL-250	Bronze CuSn10	No wear ring	1.4401	B6	EN-GJL-250	Bronze CuSn10	No wear ring	1.4462	B7	EN-GJL-250	Bronze CuSn10	No wear ring	1.4410	BA	EN-GJL-500	Bronze CuSn10	No wear ring	1.4301 + 1.0503	BB	EN-GJL-500	Bronze CuSn10	No wear ring	1.4401	BC	EN-GJL-500	Bronze CuSn10	No wear ring	1.4462	BD	EN-GJL-500	Bronze CuSn10	No wear ring	1.4410	S3	EN-GJL-250	1.4308	No wear ring	1.4301 + 1.0503	S4	EN-GJL-250	1.4308	No wear ring	1.4401	S5	EN-GJL-250	1.4308	No wear ring	1.4462	S8	EN-GJL-250	1.4408	No wear ring	1.4401	S9	EN-GJL-250	1.4408	No wear ring	1.4462	SB	EN-GJS-500-7 ductile	1.4308	No wear ring	1.4301 + 1.0503	SC	EN-GJS-500-7 ductile	1.4308	No wear ring	1.4401	SD	EN-GJS-500-7 ductile	1.4308	No wear ring	1.4462	SG	EN-GJS-500-7 ductile	1.4408	No wear ring	1.4401	SH	EN-GJS-500-7 ductile	1.4408	No wear ring	1.4462	SI	EN-GJS-500-7 ductile	1.4308	No wear ring	1.4410	SJ	EN-GJS-500-7 ductile	1.4408	No wear ring	1.4410	SK	EN-GJL-250	1.4308	No wear ring	1.4410	SL	EN-GJL-250	1.4408	No wear ring	1.4410	T2	EN-GJL-250	1.4517	No wear ring	1.4462	T3	EN-GJL-250	1.4517	No wear ring	1.4410	TA	EN-GJS-500-7 ductile	1.4517	No wear ring	1.4462	TB	EN-GJS-500-7 ductile	1.4517	No wear ring	1.4410	X	Special version			
	Code	Pump housing	Impeller	Wear ring	Shaft																																																																																																																																							
	B4	EN-GJL-250	Bronze CuSn10	No wear ring	1.4301 + 1.0503																																																																																																																																							
	B5	EN-GJL-250	Bronze CuSn10	No wear ring	1.4401																																																																																																																																							
	B6	EN-GJL-250	Bronze CuSn10	No wear ring	1.4462																																																																																																																																							
	B7	EN-GJL-250	Bronze CuSn10	No wear ring	1.4410																																																																																																																																							
	BA	EN-GJL-500	Bronze CuSn10	No wear ring	1.4301 + 1.0503																																																																																																																																							
	BB	EN-GJL-500	Bronze CuSn10	No wear ring	1.4401																																																																																																																																							
	BC	EN-GJL-500	Bronze CuSn10	No wear ring	1.4462																																																																																																																																							
	BD	EN-GJL-500	Bronze CuSn10	No wear ring	1.4410																																																																																																																																							
	S3	EN-GJL-250	1.4308	No wear ring	1.4301 + 1.0503																																																																																																																																							
	S4	EN-GJL-250	1.4308	No wear ring	1.4401																																																																																																																																							
	S5	EN-GJL-250	1.4308	No wear ring	1.4462																																																																																																																																							
	S8	EN-GJL-250	1.4408	No wear ring	1.4401																																																																																																																																							
	S9	EN-GJL-250	1.4408	No wear ring	1.4462																																																																																																																																							
	SB	EN-GJS-500-7 ductile	1.4308	No wear ring	1.4301 + 1.0503																																																																																																																																							
	SC	EN-GJS-500-7 ductile	1.4308	No wear ring	1.4401																																																																																																																																							
	SD	EN-GJS-500-7 ductile	1.4308	No wear ring	1.4462																																																																																																																																							
	SG	EN-GJS-500-7 ductile	1.4408	No wear ring	1.4401																																																																																																																																							
	SH	EN-GJS-500-7 ductile	1.4408	No wear ring	1.4462																																																																																																																																							
	SI	EN-GJS-500-7 ductile	1.4308	No wear ring	1.4410																																																																																																																																							
	SJ	EN-GJS-500-7 ductile	1.4408	No wear ring	1.4410																																																																																																																																							
	SK	EN-GJL-250	1.4308	No wear ring	1.4410																																																																																																																																							
	SL	EN-GJL-250	1.4408	No wear ring	1.4410																																																																																																																																							
	T2	EN-GJL-250	1.4517	No wear ring	1.4462																																																																																																																																							
	T3	EN-GJL-250	1.4517	No wear ring	1.4410																																																																																																																																							
	TA	EN-GJS-500-7 ductile	1.4517	No wear ring	1.4462																																																																																																																																							
	TB	EN-GJS-500-7 ductile	1.4517	No wear ring	1.4410																																																																																																																																							
X	Special version																																																																																																																																											
12	Rubber parts in pump E: EPDM F: FXM (Fluoraz®) K: FFKM (Kalrez®) M: FEPS (PTFE-sheathed silicone O-ring) O: HNBR V: FKM (Viton®)																																																																																																																																											
	Shaft seal arrangement B: Stuffing box C: Cartridge seal, single D: Cartridge seal, double O: Back-to-back, double seal P: Tandem, double seal S: Single seal																																																																																																																																											
	Shaft seal(s) in pump Letter or digit code for mechanical shaft seal and shaft seal rubber parts • 4 letters: Single mechanical shaft seal, such as BQQE, or single cartridge seal, such as HBQV • 4 digits: - double seal solution; example 2716, where 27 is DQQV, primary seal, and 16 is BQQV, secondary seal; - double cartridge seal; example 5150, where 51 is HQQU, primary seal, and 50 is HBQV, secondary seal The relation between letters and digits of the shaft seals is described in Codes for shaft seals.																																																																																																																																											
	15	Code for rated motor power [kW]. See Codes for rated motor power.																																																																																																																																										
	16	Code for DOE identification. See Code for DOE identification.																																																																																																																																										
	17	Code for speed variant [rpm]. See Codes for speed variant.																																																																																																																																										

Example 1: NK 32-180/166AAEF2S3ESBQQEGX4

shows an NK 32-180 pump with these characteristics:

- 166 mm closed impeller, cylindrical trim
- hydraulic version A
- pump without sensor
- grease-lubricated standard bearing design
- with certificate/report (with standard coupling)
- DIN flange to EN1092-2
- 16 bar flange pressure rating
- cast iron pump housing, EN-GJL-250
- stainless steel impeller, 1.4308
- no wear ring
- 1.0503 shaft + 1.4301 sleeve
- EPDM O-rings for pump cover and seal cover
- single shaft seal arrangement
- BQQE shaft seal
- 1.1 kW motor, no motor or US DOE Regulated Motor (CC marked motor), 4-pole, 60 Hz.

Example 2: NK

150-350/328-324AAEF2TBESBQQEWX2 shows an NK 150-350 pump with these characteristics:

- 328-324 mm closed impeller, conical trim
- hydraulic version A
- pump without sensor
- grease-lubricated standard bearing design
- with certificate/report (with standard coupling)
- DIN flange to EN1092-2
- 16 bar flange pressure rating
- ductile iron pump housing, EN-GJS-500-7
- duplex stainless steel impeller, 1.4517
- no wear ring
- super duplex stainless steel shaft, 1.4410
- EPDM O-rings for pump cover and seal cover
- single shaft seal arrangement
- BQQE shaft seal
- 90 kW motor, no motor or US DOE Regulated Motor (CC marked motor), 2-pole, 60 Hz.

Example 3: NKE 65-225/242ASA2F2SKESBQQENWA

shows an NKE 65-225 pump with these characteristics:

- 242 mm closed impeller, cylindrical trim
- hydraulic version A
- Built-in differential-pressure sensor, Series 2000
- grease-lubricated standard bearing design
- spacer coupling
- DIN flange to EN1092-2
- 16 bar flange pressure rating
- cast iron pump housing, EN-GJL-250
- stainless steel impeller, 1.4308
- no wear ring
- super duplex stainless steel shaft, 1.4410
- EPDM O-rings for pump cover and seal cover
- single shaft seal arrangement
- BQQE shaft seal
- 11 kW motor, not for sale in North American, 1450-2200 rpm.

Related information

[Codes for shaft seals](#)

[Codes for rated motor power](#)

[Code for DOE identification](#)

[Codes for speed variant](#)

Codes for shaft seals

Digits	Letters	Description
12	BBQE	Single mechanical shaft seal
13	BBQV	Single mechanical shaft seal
15	BQQE	Single mechanical shaft seal
16	BQQV	Single mechanical shaft seal
19	AQAE	Single mechanical shaft seal
20	AQAV	Single mechanical shaft seal
21	AQQE	Single mechanical shaft seal
22	AQQV	Single mechanical shaft seal
23	AQQX	Single mechanical shaft seal
24	AQQK	Single mechanical shaft seal
25	DAQF	Single mechanical shaft seal
26	DQQE	Single mechanical shaft seal
27	DQQV	Single mechanical shaft seal
28	DQQX	Single mechanical shaft seal
29	DQQK	Single mechanical shaft seal
50	HBQV	Cartridge seal
51	HQQU	Cartridge seal
52	HAQK	Cartridge seal
	SNEA	Stuffing box
	SNEB	Stuffing box
	SNEC	Stuffing box
	SNED	Stuffing box
	SNOA	Stuffing box
	SNOB	Stuffing box
	SNOC	Stuffing box
	SNOD	Stuffing box
	SNFA	Stuffing box
	SNFB	Stuffing box
	SNFC	Stuffing box
	SNFD	Stuffing box

Letter codes for shaft seals

Pos. 14 in NK type key example.

Code	Description	Explanation
B	Shaft seal type	A: O-ring seal with fixed driver B: Rubber bellows seal D: O-ring seal, balanced H: Cartridge seal, balanced
Q	Material of rotating seal face	A: Carbon, metal-impregnated with antimony which is not approved for potable water B: Carbon, resin-impregnated Q: Silicon carbide
Q	Material of stationary seal	A: Carbon, metal-impregnated with antimony which is not approved for potable water Q: Silicon carbide
E	Material of secondary seal and other rubber and composite parts, except the wear ring	E: EPDM V: FKM (Viton®) F: FXM (Fluoraz®) K: FFKM (Kalrez®) X: HNBR U: Dynamic O-rings in FFKM and static O-rings in PTFE

For a thorough description of shaft seal types and materials, see the data booklet "NB, NBG, NK, NKG, NBE, NBGE, NKE, NKGE - Custom-built pumps according to EN 733 and ISO 2858".

Codes for rated motor power

Pos. 15 in NK type key example.

Code	Description	
	[hp]	[kW]
A	0.16	0.12
B	0.25	0.18
C	0.33	0.25
D	0.5	0.37
E	0.75	0.55
F	1	0.75
G	1.5	1.1
H	2	1.5
I	3	2.2
J	4	3
K	5 (5.5 ²¹⁾)	3.7 (4 ²¹⁾)
L	7.5	5.5
M	10	7.5
N	15	11
O	20	15
P	25	18.5
Q	30	22
R	40	30
S	50	37
T	60	45
U	75	55
V	100	75
W	125	90
X	Bare shaft pump	
Y	> 200 ²²⁾	> 150 ²²⁾
1	150	110
2	175	132
3	200	150
4	215 ²³⁾	160 ²³⁾
5	250 ²³⁾	185 ²³⁾
6	-	26

²¹⁾ Value in bracket is for the standard IEC motor size. Value outside bracket is for the motor size according to NEMA standards.

²²⁾ Used for pumps where the pump shaft input power exceeds 200 hp (150 kW) and is not regulated under the DOE pump rule.

²³⁾ Special cases with power sizes above 200 hp (150 kW) which are still regulated under the DOE pump rule. For example: Pump has a P2 value of 198 hp (147.6 kW) in its duty point (in DOE scope) but customer wants the 215 hp (160 kW) motor instead of the 200 hp (150 kW). The pump is in scope of the DOE regulation and requires a PEI value and a motor code.

Code for DOE identification

Pos. 16 in NK type key example.

Code	Description
A	DOE reported with E-motor (ECM ²⁴⁾), 1 × 200-240 V
B	DOE reported with E-motor (ECM ²⁴⁾), 3 × 200-240 V
C	DOE reported with E-motor (ECM ²⁴⁾), 3 × 440-480 V
D	DOE reported with E-motor (ECM ²⁴⁾), 3 × 380-500 V
E	DOE reported with E-motor (ECM ²⁴⁾), 3 × 525-690 V
W	In DOE scope but not compliant with or out of DOE scope but not for sale in North America
X	DOE reported, sell as bare shaft pump or DOE regulated Motor (CC marked motor)
Y	Pumps not subject to the DOE regulation, and can be sold in North America
Z	DOE reported with Asynchronous E-Motor

²⁴⁾ ECM: Electronically Commutated Motor.

Codes for speed variant

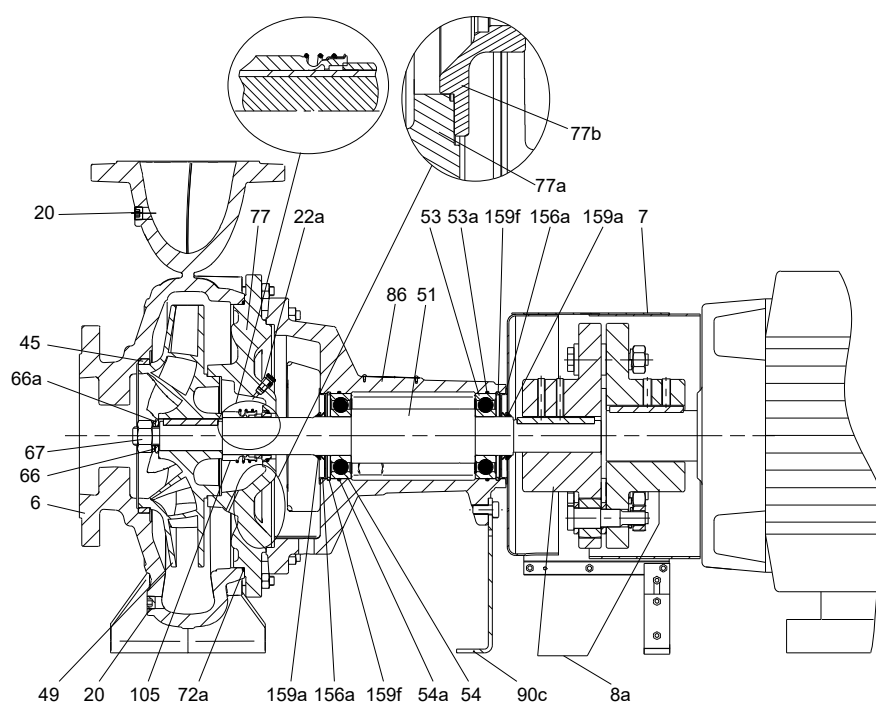
Pos. 17 in NK type key example.

Code	Description
A	1450-2200 RPM, E-motor (ECM ²⁵⁾)
B	2900-4000 RPM, E-motor (ECM ²⁵⁾)
C	4000-5900 RPM, E-motor (ECM ²⁵⁾)
D	1450-2200 RPM, CUE + PM motor
E	2900-4000 RPM, CUE + PM motor
1	2-pole, 50 Hz (Asynchronous motor)
2	2-pole, 60 Hz (Asynchronous motor)
3	4-pole, 50 Hz (Asynchronous motor)
4	4-pole, 60 Hz (Asynchronous motor)
5	6-pole, 50 Hz (Asynchronous motor)
6	6-pole, 60 Hz (Asynchronous motor)
7	8-pole, 50 Hz (Asynchronous motor)
8	8-pole, 60 Hz (Asynchronous motor)

²⁵⁾ ECM: Electronically Commutated Motor.

6. Construction

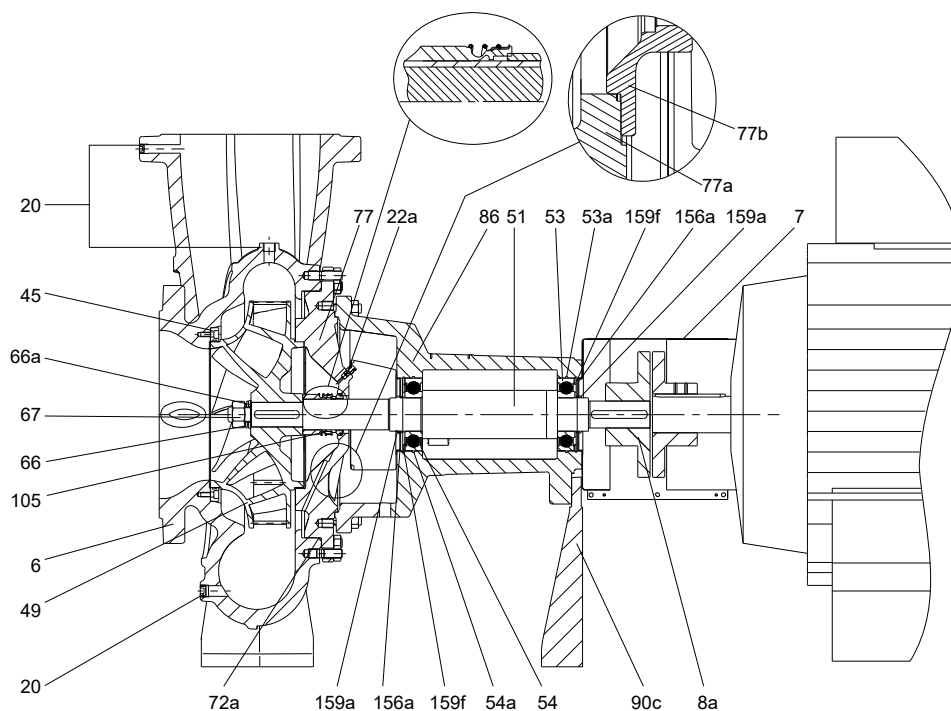
NK, centre-line outlet



TM1040097

Sectional drawing, centre-line outlet

NK, tangential outlet



TM1040098

Sectional drawing, with tangential outlet

Material specification, NK

Pos.	Description	Materials	Material code																	
			S3	S4	S5	S8	S9	SB	SC	SD	SG	SH	SI	SJ	SK	SL	T2	T3	TA	TB
6	Pump housing	EN-GJL-250	•	•	•	•	•	-	-	-	-	-	-	-	•	•	•	•	-	-
6	Pump housing	EN-GJS-500-7	-	-	-	-	-	•	•	•	•	•	•	•	-	-	-	-	•	•
7	Coupling guard	1.0301+ powder paint	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
8a	Standard coupling	EN-GJL-250	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
8a	Spacer coupling	1.0503/1.7045	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
11	Key	1.4401/AISI 316	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
11a	Key	Steel	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
20	Hexagon socket head plug	Class 5.8 carbon steel	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
20b	Hexagon socket head plug	Class 5.8 carbon steel	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
45	Wear ring	CuZn37Pb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
49	Impeller	1.4308/CF8	•	•	•	-	-	•	•	•	-	-	•	-	•	-	-	-	-	-
49	Impeller	1.4408/CF8M	-	-	-	•	•	-	-	-	•	•	-	•	-	•	-	-	-	-
49	Impeller	1.4517/ASTM A890 CD4MCuN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	•	•	•	•
51	Shaft + Sleeve	1.0503 + 1.4301/304	•	-	-	-	-	•	-	-	-	-	-	-	-	-	-	-	-	-
51	Shaft	1.4401/316	-	•	-	•	-	-	•	-	•	-	-	-	-	-	-	-	-	-
51	Shaft	1.4462/SAF2205	-	-	•	-	•	-	-	•	-	•	-	-	-	-	•	-	•	-
51	Shaft	1.4410/SAF2507	-	-	-	-	-	-	-	-	-	-	•	•	•	•	-	•	-	•
53 ²⁶⁾	Deep-groove ball bearings	2ZR.C3	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
	Angular contact bearing	BECBJ	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
53a	O-ring	EPDM/FKM	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
54 ²⁶⁾	Deep-groove ball bearings	2ZR.C3	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
	Roller bearing	ECJ	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
54a	O-ring	EPDM/FKM	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
66	Washer	1.4301/AISI 304	•	-	-	-	-	•	-	-	-	-	-	-	-	-	-	-	-	-
66	Washer	1.4401/AISI 316	-	•	-	•	-	-	•	-	•	-	-	-	-	-	-	-	-	-
66	Washer	1.4539/AISI 904L	-	-	•	-	•	-	-	•	-	•	-	-	-	-	•	-	•	-
66	Washer	1.4410/SAF2507	-	-	-	-	-	-	-	-	-	-	•	•	•	•	-	•	-	•
66a	Spring lock washer	1.4301/AISI 304	•	-	-	-	-	•	-	-	-	-	-	-	-	-	-	-	-	-
66a	Spring lock washer	1.4401/AISI 316	-	•	-	•	-	-	•	-	•	-	-	-	-	-	-	-	-	-
66a	Spring lock washer	1.4539/AISI 904L	-	-	•	-	•	-	-	•	-	•	-	-	-	-	•	-	•	-
66a	Spring lock washer	1.4410/SAF2507	-	-	-	-	-	-	-	-	-	-	•	•	•	•	-	•	-	•
67	Impeller nut	1.4301/AISI 304	•	-	-	-	-	•	-	-	-	-	-	-	-	-	-	-	-	-
67	Impeller nut	1.4401/AISI 316	-	•	-	•	-	-	•	-	•	-	-	-	-	-	-	-	-	-
67	Impeller nut	1.4539/AISI 904L	-	-	•	-	•	-	-	•	-	•	-	-	-	-	•	-	•	-
67	Impeller nut	1.4410/SAF2507	-	-	-	-	-	-	-	-	-	-	•	•	•	•	-	•	-	•
72a	O-ring	E / F / K / M / V / X	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
77	Cover	EN-GJL-250	•	•	•	•	•	-	-	-	-	-	-	-	•	•	•	•	-	-
77a	Split cover	EN-GJS-500-7	-	-	-	-	-	•	•	•	•	•	•	•	-	-	-	-	-	-
77b	Seal cover	1.4517/CD4MCuN	-	-	-	-	-	•	•	•	•	•	•	•	-	-	-	-	-	-
86	Bearing bracket	EN-GJL-250	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
90c	Foot	EN-GJL-250/1.0338/ carbon steel DC04	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
105	Shaft seal	Burgmann 1.4401/ AISI 316	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
		Burgmann 2.4610/ Hastelloy C-4	-	-	-	-	-	-	-	-	-	Opt.	Opt.	Opt.	Opt.	Opt.	Opt.	Opt.	Opt.	Opt.

Pos.	Description	Materials	Material code																	
			S3	S4	S5	S8	S9	SB	SC	SD	SG	SH	SI	SJ	SK	SL	T2	T3	TA	TB
156a	Cover, bearing	1.0338/carbon steel DC04	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
159a	Thrower	EPDM	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
159f	Locking ring, circlip	DIN 472 (C75 DIN 17 222)	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

26) The actual bearing type depends on the pump model and the speed.

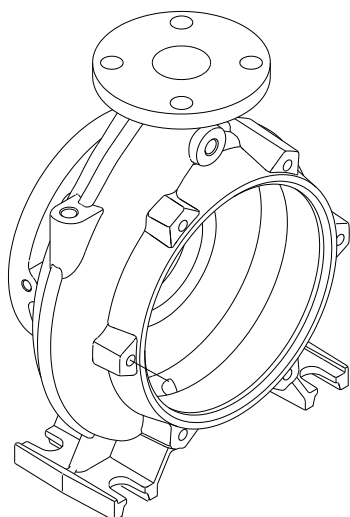
Mechanical construction

Pump housing

The volute pump housing has an axial inlet port and a radial outlet centre-line port. Flange dimensions are in accordance with EN 1092-2.

For DN 200 outlet and above, the outlet port is tangential.

The pump houses have both a priming and a drain hole closed by plugs.



NK pump housing with centre-line outlet

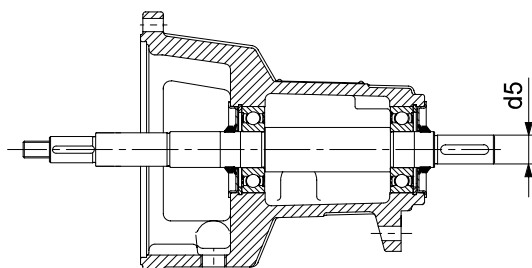
Bearing bracket and shaft, NK

The bearing bracket has two sturdy anti-friction, lubricated-for-life bearings.

The bearing bracket is made of cast iron EN-GJL-250 and supported by a foot made of EN-GJL-250 or carbon steel.

The shaft can be provided in different material grades depending on the application. Shaft diameter d_5 is either $\varnothing 16$, $\varnothing 24$, $\varnothing 32$, $\varnothing 42$, $\varnothing 48$ or $\varnothing 60$ where the coupling is mounted.

A thrower on the shaft prevents liquid from entering the bearing bracket.



Bearing bracket and shaft

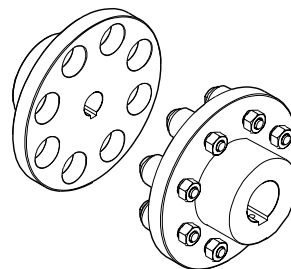
All NK pumps are fitted with one of six shaft, shaft seal and bearing sizes. As the bearings and shafts are large, the NK pumps can be driven by a belt drive or a diesel engine, if required.

For prolonged lifetime and to suit high inlet pressure, heavy duty bearing brackets are available. See the data booklet "NB, NBG, NK, NKG, NBE, NBGE, NKE, NKGE - Custom-built pumps according to EN 733 and ISO 2858", or contact Grundfos.

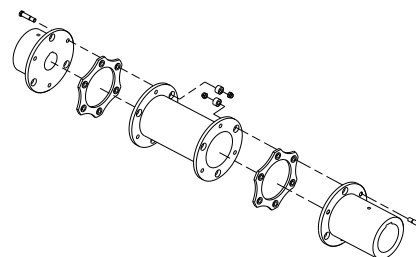
Coupling, NK

NK pumps are available with two types of coupling:

- standard coupling
- spacer coupling.



Standard coupling

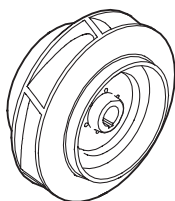


Spacer coupling

Pumps fitted with a spacer coupling can be serviced without dismantling the motor from the base frame and without removing the pump housing from the pipes. This saves realignment of pump and motor after service.

Impeller

The impeller is a closed impeller with double-curved blades with smooth surfaces. This ensures high efficiency.



TM030231

Impeller, NK pumps

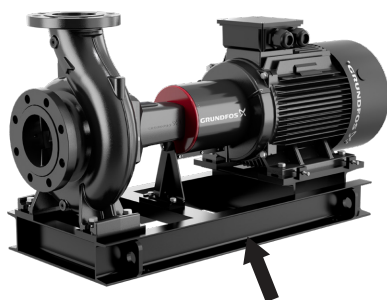
All impellers are statically and hydraulically balanced. The hydraulic balancing compensates for axial thrust.

The direction of rotation of the impeller is clockwise when viewed from the motor.

All impellers can be adapted to the duty point as requested by the customer.

Base frame, NK

C-channel base frame



TM1040534

Schematic view of NK pump mounted on a C-channel base frame

Pump and motor are mounted on a common steel base frame optimised for the length of the pump and motor.

Dimensions are not in accordance with EN 23661. All C-channel base frames can be grouted.

Surface treatment

Internal and external surfaces are protected by 1 layer of Primer (4-6 mil inch/ 100-150 µm).

The assembled pump will have a final layer of paint (4-6 mil inch/100-150 µm) on all external parts.

The color code for the finished product is NCS 9000/AL 9005.

Test pressure

Pressure testing was made with 20 °C water containing corrosion inhibitor.

Pressure stage	Operating pressure		Test pressure	
	[bar]	[MPa]	[bar]	[MPa]
PN 10	10	1.0	15	1.5
PN 16	16	1.6	24	2.4
PN 25	25	2.5	37.5	3.75

Motors and drives

For NK, NKE pumps Grundfos can provide a wide range of motors and drives within these two main categories:

- standard motors
- speed-controlled motors.

Standard motors are mains-operated whereas the speed-controlled motors can be started and operated in various ways.

The speed-controlled NK pumps can be driven in two ways:

- by a standard motor with an external frequency converter. The frequency converter can be a Grundfos CUE solution or another make.
- by a motor with an integrated frequency converter, a Grundfos MGE motor.

Standard motors

The motor is a totally enclosed, fan-cooled standard motor with main dimensions according to IEC and DIN standards. Electrical tolerances are to IEC 60034.

Motor protection

Three-phase motors must be connected to a motor-protective circuit breaker according to local regulations. E pumps have integrated motor protection and no need to have additional one.

Standard motor range

The table shows the range of standard motors currently used for NK pumps. The motors stated in section Dimensional drawings and dimensions are MMG-W motors.

IE class	Motor	Poles	P2 [kW]																													
			0.25	0.37	0.55	0.75	1.1	1.5	2.2	3	4	5.5	7.5	11	15	18.5	22	30	37	45	55	75	90	110	132	160	200	250	315	355	375	
IE3	MMG-W	2	-	-	-	-	-	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	-	-	-	-	-	-	-	-	-	-
		4	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	-	-
		6	-	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	-	-	-	-	-	-	-	-	-
IE4	MMG-H	2	-	-	-	-	-	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	-	-	-	-	-	-	-	-	-	-
		4	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	-	-
		6	-	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	-	-	-	-	-	-	-	-	-
	MMG-W	2	-	-	-	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	-	-	-	-	-	-	-	-	-	-
		4	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	-	-
		6	-	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	-	-	-	-	-	-	-	-	-

Note: Not all motor makes are available worldwide. For specific information about the motor makes available in your region, contact your Grundfos Customer Service Unit (CSU).

Three-phase Grundfos MG motors as from 3 kW have a built-in PTC thermistor according to DIN 44082 (IEC 34-11: TP 211).

Energy efficiency classification

IE3 IE4 IE5

Along with the international discussion on energy efficiency a worldwide harmonised energy efficiency classification system has been established for low-voltage, three-phase asynchronous motors. The International Electrotechnical Commission, IEC, has developed and issued a new standard for the determination of motor efficiencies worldwide. The new standard IEC 60034-30 defines and harmonises the efficiency classes IE3 for low-voltage, three-phase motors from 0.25 to 375 kW for 2-, 4- and 6-pole motors.

IE4 motors are available on request.

Speed-controlled standard motors

General considerations

If you connect an external frequency converter to your standard motor, the motor insulation is exposed to higher voltage peaks due to the operation of the frequency converter. This causes the motor to be more noisy than in normal operation. In addition, large motors are exposed to bearing currents caused by the frequency converter.

If you operate the motor via a frequency converter, consider the following:

- In 2-, 4- and 6-pole motors, frame size 225 and up, isolate one of the motor bearings electrically to prevent damaging currents from passing through the motor bearings.
- In noise-sensitive applications, you can reduce the motor noise by fitting a dU/dt filter between the motor and the frequency converter. For particularly noise-sensitive applications, we recommend a sinusoidal filter.
- The length of the cable between motor and frequency converter affects the motor load. Therefore, check that the cable length meets the specifications laid down by the frequency converter supplier.
- For supply voltages between 500 and 690 V, fit a dU/dt filter to reduce voltage peaks, or use a motor with reinforced insulation.
- For supply voltages of 690 V, use a motor with reinforced insulation, and fit a dU/dt filter.

Grundfos CUE

Pumps connected to Grundfos CUE external frequency converters



TM1040611

Grundfos CUE frequency converters

Grundfos CUE is a complete range of wall-mounted frequency converters for pump control in a wide range of applications.

Grundfos CUE provides a variety of benefits to the end-user, such as:

- Grundfos E-pump functionality and user interface
- application- and pump family-related functions
- increased comfort compared to fixed-speed pump solutions
- simple installation and commissioning compared to standard frequency converters
- speed control of pumps up to 250 kW.

Intuitive startup guide

The startup guide enables easy installation and commissioning as well as plug-and-pump convenience. Few settings need to be made by the installer as the rest is done automatically or preset from the factory.

Smart user interface



TM043283

Grundfos CUE user interface

Grundfos CUE features a unique user-friendly operating panel with graphic display and easy-to-use buttons.

Controlling the selected parameter

Grundfos CUE has a built-in PI controller offering closed-loop control of these parameters:

- constant differential pressure
- proportional pressure
- constant temperature
- constant flow rate.

Wide product range

The CUE product range is quite comprehensive, covering five different voltage ranges, enclosure classes IP20/21 (NEMA 1) and IP54/55 (NEMA 12), and a wide range of output powers.

The table below provides a general overview.

Input voltage [V]	Output voltage [V]	Motor [kW]
1 x 200-240	3 x 200-240	1.1 - 7.5
3 x 200-240	3 x 200-240	0.75 - 45
3 x 380-500	3 x 380-500	0.55 - 250
3 x 525-600	3 x 525-600	0.75 - 7.5
3 x 525-690	3 x 525-690	11-250

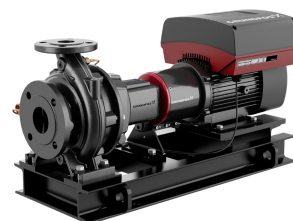
External communication

Grundfos CUE can communicate by means of LON, PROFIBUS, Modbus or BACnet via Grundfos CIU.

E-solution range

IE5

NKE pumps with a motor with an integrated frequency converter.



TM1040535

Motor protection

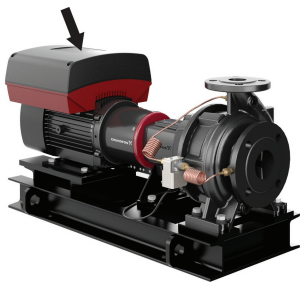
The motor requires no external motor protection. MGE motors incorporate thermal protection against steady overload and stalled condition (IEC 34-11: TP 211).

Benefits

Grundfos MGE motors provide a variety of benefits to the end-user, such as:

- Grundfos E-pump functionality and user interface
- a perfect match between pump and frequency drive
- application- and pump family-related functions
- increased comfort compared to fixed-speed pump solutions
- simple installation and commissioning compared to standard frequency converters.

Smart user interface



TM1040536

Grundfos MGE motors feature a user-friendly operating panel with easy-to-use buttons.

Controlling the selected parameter

Grundfos MGE has a built-in PI controller offering closed-loop control of these parameters:

- constant differential pressure
- proportional pressure
- constant temperature
- constant flow rate.

E-solution range

		P2 [kW]													
		0.55	0.75	1.1	1.5	2.2	3	4	5.5	7.5	11	15	18.5	22	26
Medium speed	IE5	-	-	●	●	●	●	●	●	●	●	●	●	●	●
Low speed	IE5	●	●	●	●	●	●	●	●	●	●	●	●	●	-

External communication

Grundfos MGE can communicate by means of LON, PROFIBUS, Modbus or BACnet as described in section Communication with E-pumps.

Related information

[Communication with E-pumps](#)

Optional motors

The Grundfos standard range of motors covers a wide variety of application requirements. However, for special applications or operating conditions, custom-built motor solutions can be provided.

For special applications or operating conditions, Grundfos offers custom-built motors such as:

- motors with anti-condensation heating unit
- motors with thermal protection.

7. Operating conditions

Pump location

The pump is designed for installation in a non-aggressive and non-explosive atmosphere.

The relative air humidity must not exceed 95 %.

Ambient temperature and installation altitude

The ambient temperature and the installation altitude are important factors for the motor life, as they affect the life of the bearings and the insulation system.

The installation altitude is the height of the installation site above sea level.

If the ambient temperature exceeds the recommended maximum ambient temperature or maximum altitude above sea level, see figure Maximum motor output in relation to ambient temperature and altitude, the motor must not be fully loaded due to the low density and consequently low cooling effect of the air. In such cases, it may be necessary to use a motor with a higher output.

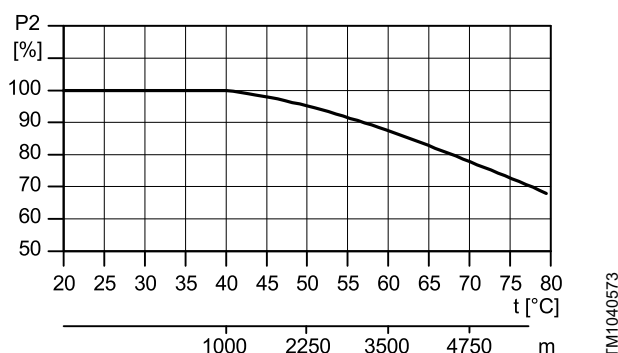
Pump with standard motor

Ambient temperature

Motor make	Motor P2	Permissible ambient temperature
MMG-W	0.25 - 315 kW	-15 to +40 °C
MMG-H	0.25 - 315 kW	-15 to +40 °C

Maximum motor output in relation to ambient temperature and altitude

Motor make	Motor P2	Derating curve
MMG-W	0.25 - 315 kW	As below
MMG-H	0.25 - 315 kW	As below



Maximum motor output in relation to ambient temperature and altitude

Example with a pump with a 1.1 kW IE3 MMG-W motor:

If the pump is installed 4750 m above sea level, the motor must not be loaded more than 77 % of rated output.

At an ambient temperature of 75 °C, the motor must not be loaded more than 72 % of rated output. If the pump is installed 4750 m above sea level at an ambient temperature of 75 °C, the motor must not be loaded more than 77 % x 72 % equal to 55.4 % of the rated output.

Pump with Grundfos MGE motor

Ambient temperature

Motor make	Motor P2	Permissible ambient temperature
Grundfos MGE	1.1 - 26 kW, 2-pole	-20 to +50 °C
	0.55 - 22 kW, 4-pole	-20 to +50 °C

The motor can operate with the rated power output, P2, at 50 °C, but continuous operation at higher temperatures reduces the expected product life. If the motor is to operate at ambient temperatures between 50 and 60 °C, select an oversize motor.

Contact Grundfos for further information.

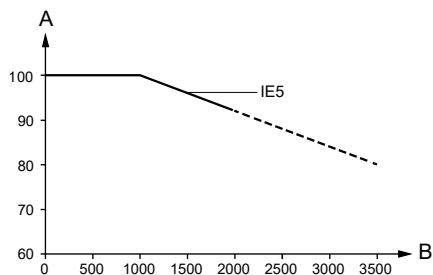
Installation altitude

Installation altitude is the height above sea level of the installation site.

The motors can be installed up to 3500 m above sea level.

Motors installed up to 1000 m above sea level can be loaded 100 %.

Motors installed more than 1000 meters above sea level must not be fully loaded due to the low density and consequent low cooling effect of the air.

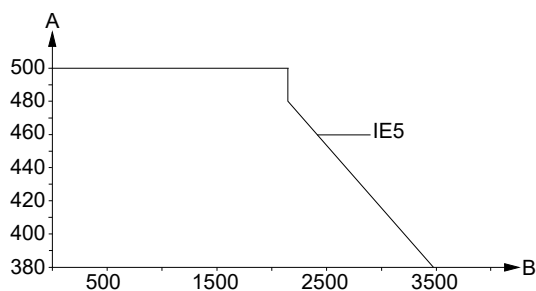


TM055243

Motor output power in relation to altitude

Pos.	Description
A	P2 [%]
B	Altitude [m]

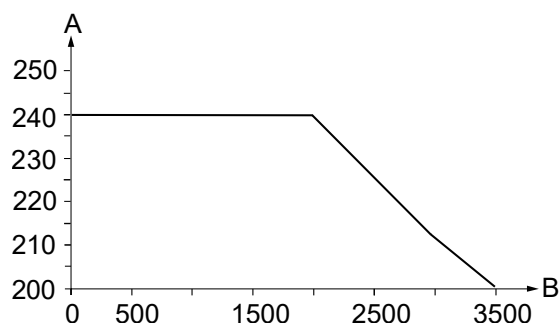
In order to maintain the galvanic isolation and ensure correct clearance according to EN 60664-1:2007, you must adapt the supply voltage to the altitude:



TM069866

Supply voltage for three-phase motor in relation to altitude

Pos.	Description
A	Supply voltage [V]
B	Altitude [m]



TM069867

Supply voltage for single-phase motor in relation to altitude

Pos.	Description
A	Supply voltage [V]
B	Altitude [m]

Note:

If the motor is to operate at ambient temperatures between 50 and 60 °C, select an oversized motor. Contact Grundfos.

Flow rates

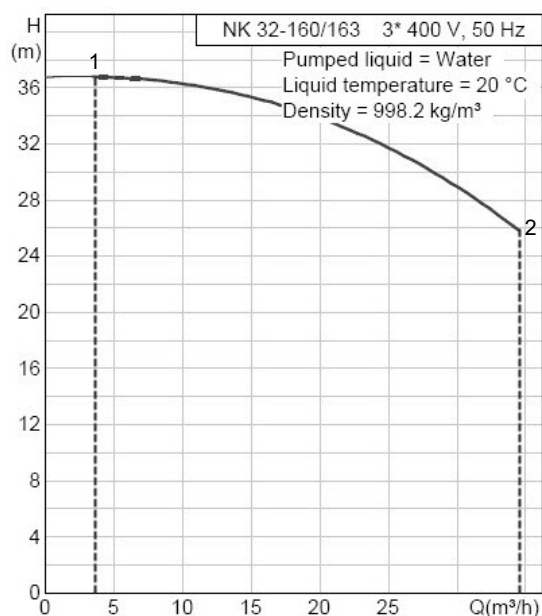
Minimum flow rate

The pump must not run against a closed outlet valve as this causes an increase in temperature or formation of steam in the pump. This may cause shaft damage, impeller erosion, short life of bearings, damage to stuffing boxes or mechanical shaft seals due to stress or vibration. The continuous flow rate must be at least 10 % of the maximum flow rate.

Maximum flow rate

The maximum flow rate must not be exceeded as otherwise there is a risk of for instance cavitation and overload.

The maximum flow rate can be read either from the performance curve pages or from a curve on a specific pump when selecting it in Grundfos Product Center.



TM051652

Example from Grundfos Product Center showing minimum and maximum flow rate

Pos.	Description
1	Minimum flow rate
2	Maximum flow rate

Sound pressure level

Data in this table apply to pump including motor.

Motor [kW]	Maximum sound pressure level [dB(A)] - ISO 3743		
	Three-phase motors		
	2-pole	4-pole	6-pole
0.25	-	55	-
0.37	-	55	57
0.55	-	55	57
0.75	66	55	58
1.1	67	55	58
1.5	69	55	58
2.2	69	55	59
3	69	55	60
4	69	56	60
5.5	70	62	60
7.5	70	64	67
11	77	66	67
15	77	66	67
18.5	79	67	68
22	80	67	68
30	85	70	69
37	85	72	70
45	85	72	72
55	88	74	72
75	88	77	75
90	-	77	75
110	-	78	-
132	-	87	-
160	-	87	-
185	-	87	-
200	-	88	-
220	-	90	-
250	-	90	-
280	-	90	-
315	-	90	-

Liquid temperatures

Liquids with temperatures ranging from -25 to +140 °C are covered in this data booklet.

For liquids from -40 to +220 °C, see the data booklet "NB, NBG, NK, NKG, NBE, NBGE, NKE, NKGE - Custom-built pumps according to EN 733 and ISO 2858", or contact Grundfos. In that data booklet, you will also find information about the seals being used for other liquids than water and glycols, i.e. oils, chemicals and silicone oil. Further seal types are also described to support more application types and pumped liquids.

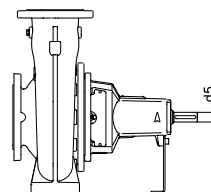
The maximum liquid temperature is stamped on the nameplate.

Note that the maximum liquid temperature limits stated by Grundfos may be overruled by local regulations and various laws.

Operating range of mechanical shaft seals

The temperature range applies to water and coolants.

Seals with a temperature range of 0 °C and up are mainly used for pumping water, while seals for temperatures below 0 °C are mainly intended for coolants.

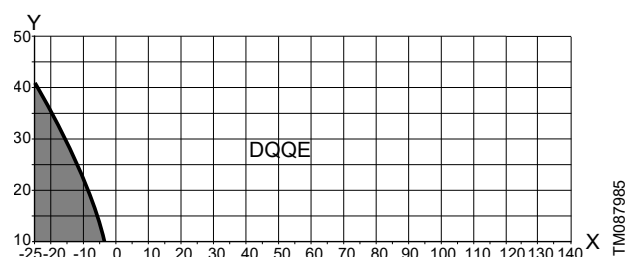
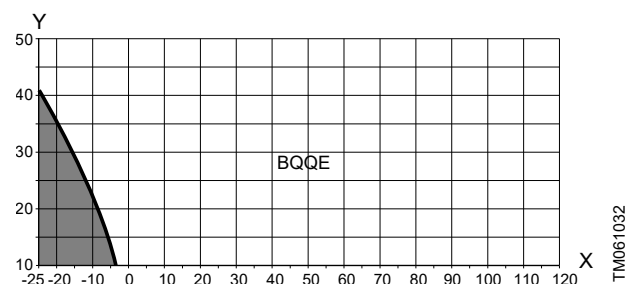


Shaft seal diameter [mm]		NK	20	28, 38	48	55	60		
d5 [mm]		NK	16	24, 32	42	48	60		
Shaft seal type		Code	Temperature range	Maximum pressure [bar]				Seal faces	Rubber
 Bellows seal, type B, unbalanced		BBQE ²⁷⁾ , 28)	0-120 °C	16	16	16	16	BQ ₇	EPDM
		BBQV	0-90 °C	16	16	16	16	BQ ₇	FKM
		BQQE ²⁷⁾	-25 to +120 °C	16	16	16	16	Q ₇ Q ₇	EPDM
		BQQV	-10 to +90 °C	16	16	16	16	Q ₇ Q ₇	FKM
 O-ring seal, type D, balanced		DAQF	0-140 °C	25	25	25	25	AQ ₇	FXM
		DQQE	-20 to +140 °C	25	25	25	25	Q ₆ Q ₇	EPDM

²⁷⁾ Shaft seals with drinking water approvals.

²⁸⁾ For ultra pure water applications having a conductivity lower than 2 microSiemens, contact Grundfos for a special shaft seal version.

Recommended shaft seal for water-glycol mixture



Operating range of EPDM shaft seals

Pos.	Description
X	Temperature [°C]
Y	Glycol content [%]

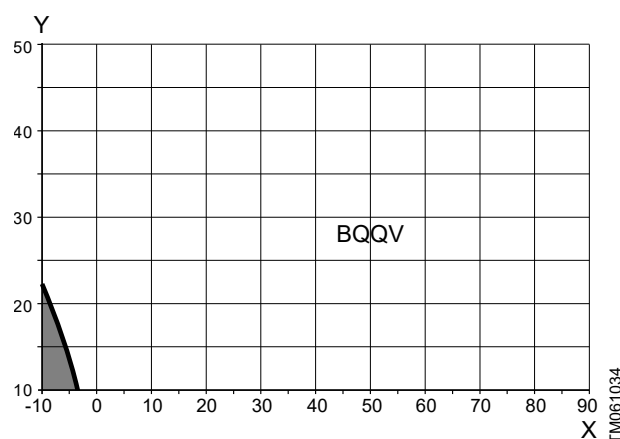
Carbon-silicon carbide (xAQx), (xBQx)

Mechanical shaft seals with carbon-silicon carbide seal faces have a wide range of applications and are especially suitable if there is risk of dry running and/or if the temperature is high. These mechanical shaft seals are not suitable for liquids containing abrasive particles as the carbon parts will be worn. At temperatures below 0 °C, corrosion inhibitors containing abrasive particles are usually added to the pumped liquid, and these seals will thus not be suitable.

Note: The antimony impregnation (A) is not approved for potable water applications.

Silicon carbide-silicon carbide (xQQx)

Mechanical shaft seals with silicon carbide-silicon carbide seal faces also have a very wide range of applications. These seals are very resistant to abrasive particles and well suited at liquid temperatures up to 120 °C for Q₇ types. At higher temperatures, the reduced lubricating properties of the pumped liquid may cause noise problems and limit the life of the seal faces.



Operating range of FKM shaft seals

Pos.	Description
X	Temperature [°C]
Y	Glycol content [%]

EPDM (xxxE)

Mechanical shaft seals with EPDM (xxxE) rubber are primarily suitable for water.

If the water contains oil or if chemicals or other liquids than water are pumped, you may have to replace the rubber parts of the mechanical shaft seal.

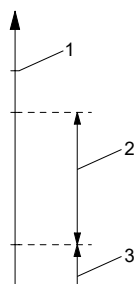
FKM (xxxV)

Mechanical shaft seals with FKM (xxxV) rubber have excellent resistance against oil and a number of chemicals.

Note: For detailed information about properties of all shaft seal components, see the data booklet "NB, NBG, NK, NKG, NBE, NBGE, NKE, NKGE - Custom-built pumps according to EN 733 and ISO 2858".

Pressures in the pump

Maximum operating pressure



TM075513

Pressures in the pump

Pos.	Description
1	Maximum operating pressure (pressure above atmospheric pressure)
2	Pump pressure
3	Inlet pressure

The inlet pressure + pump pressure must be lower than the maximum operating pressure (p) stated on the pump nameplate. The maximum operating pressure can be checked by closing the outlet valve briefly for maximum 30 seconds.

Minimum inlet pressure

The minimum inlet pressure must be according to the NPSH curve + correction for Vapour pressure. We do, however, recommend that you calculate the inlet pressure in these cases:

- The liquid temperature is high.
- The flow rate is considerably higher than the pump's rated flow rate.
- The pump is operating in an open system with suction lift.
- The liquid is sucked through long pipes.
- The inlet conditions are poor.
- The operating pressure is low.

Maximum inlet pressure

The inlet pressure + pump pressure must be lower than the maximum operating pressure (p) stated on the pump nameplate. The maximum operating pressure can be checked by closing the outlet valve briefly for maximum 30 seconds.

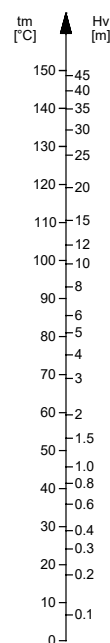
Suction lift in open systems

Calculation of suction lift in open systems (water)

The suction lift "H" in metres head required during operation to avoid cavitation in the pump can be calculated by means of the following formula:

$$H = p_b \times 10.2 - \text{NPSH} - H_f - H_v$$

H	Suction lift
p_b	Barometric pressure in bar. The barometric pressure can be taken as equal to 1 bar. In closed systems, p _b indicates system pressure in bar.
NPSH	Net Positive Suction Head in metres head. The NPSH value can be read from the NPSH curve at the highest flow rate the pump will be delivering. The maximum flow rate must not exceed the maximum flow rate shown on the QH curve. The NPSH curve and QH curve for the individual pump can be found in Grundfos Product Center and in the relevant data booklet.
H_f	Friction loss in the inlet pipe in metres head at the highest flow rate the pump will be delivering.
H_v	Vapour pressure in metres head. See figure below.



TM003037

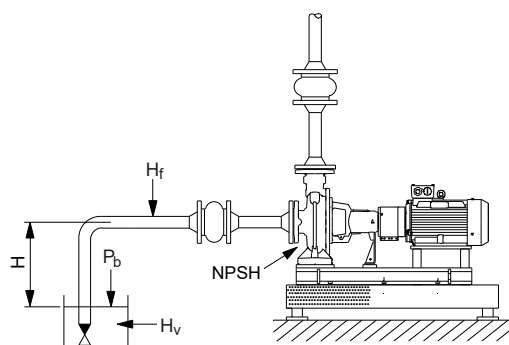
Relation between liquid temperature and vapour pressure

Positive H value

Example:

Liquid temperature:	20 °C
Pump type:	NK 100-350/326, 4-pole, 50 Hz
Flow rate:	200 m ³ /h
p_b :	1 bar
NPSH:	4.2 m head
H_f :	3.0 m head
H_v :	0.24 m head
$H = p_b \times 10.2 - \text{NPSH} - H_f - H_v$ [m head]	
$H = 1 \times 10.2 - 4.2 - 3.0 - 0.24 = \mathbf{2.76 \text{ m head}}$	

If the calculated value of H is positive, the pump can operate with a maximum suction lift of H metres.



TM1040099

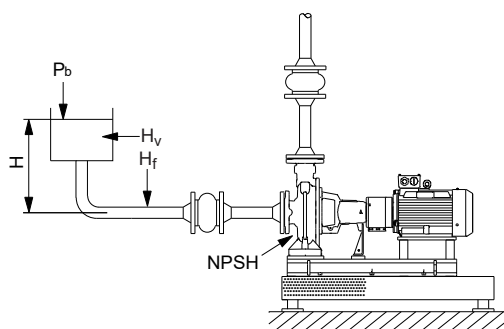
Suction lift with positive H

Negative H value

Example:

Liquid temperature:	90 °C
Pump type:	NK 100-350/326, 4-pole, 50 Hz
Flow rate:	200 m ³ /h
p_b :	1 bar
NPSH:	4.2 m head
H_f :	3.0 m head
H_v :	7.2 m head
$H = p_b \times 10.2 - \text{NPSH} - H_f - H_v$ [m head]	
$H = 1 \times 10.2 - 4.2 - 3.0 - 7.2 = \mathbf{-4.2 \text{ m head}}$	

If the calculated value of H is negative, a minimum suction head of H metres is required. The calculated H must be present during operation.



TM1040100

Suction lift with negative H

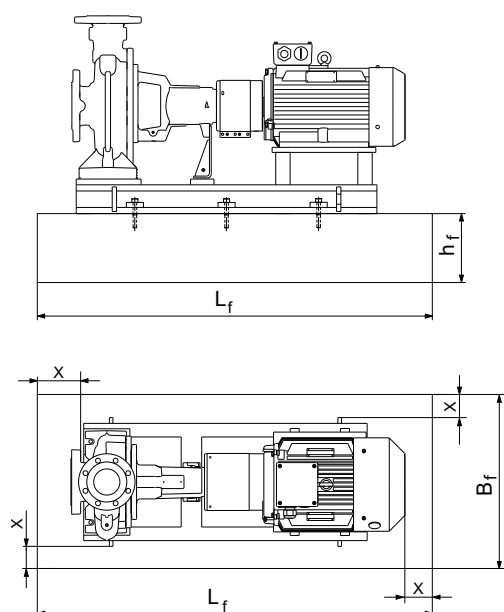
8. Mechanical installation

Foundation and grouting

Foundation

We recommend that you install the pump on a plane and rigid concrete foundation which is heavy enough to provide permanent support for the entire pump. The foundation must be capable of absorbing any vibration, normal strain or shock. As a rule of thumb, the weight of the concrete foundation must be 1.5 times the weight of the pump.

The foundation must be 100 mm larger than the base frame on all four sides. See figure below.



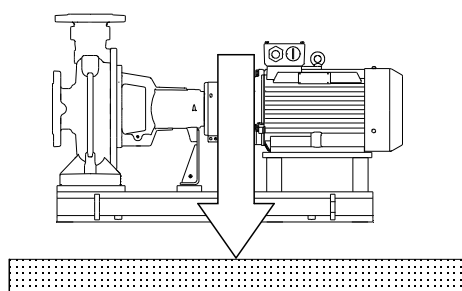
Foundation, X is equal to minimum 100 mm

The minimum height of the foundation (h_f) can then be calculated:

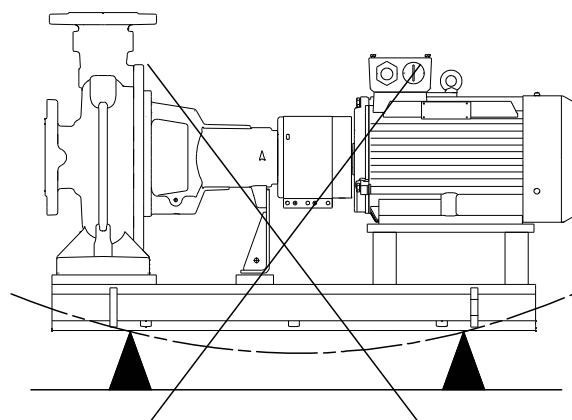
$$h_f = \frac{m_{\text{pump}} \times 1.5}{L_f \times B_f \times \delta_{\text{concrete}}}$$

The density (δ) of concrete is usually taken as 2200 kg/m³.

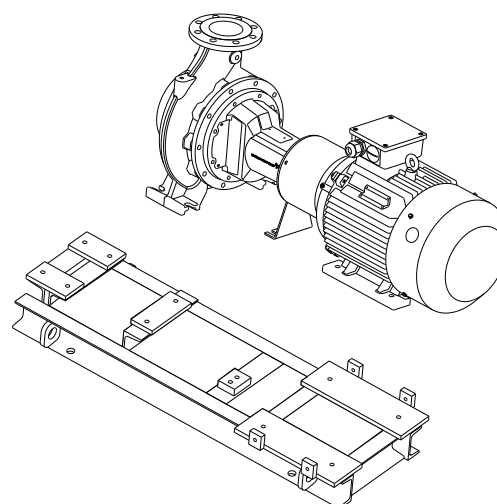
Place the pump on the foundation, and fasten it. The base frame must be supported under its entire area. See figure below.



Correct foundation



Incorrect foundation



Base frame prepared for grouting

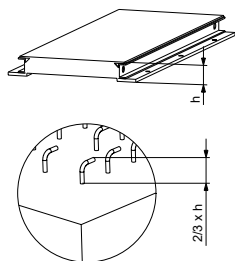
Grouting

Grouting compensates for uneven foundation, distributes the weight of the unit, dampens vibrations and prevents shifting.

All NK pumps can be delivered with base frames prepared for grouting as an option.

NOTE: For 2-pole NK pumps with motors as from 55 kW, grouting of the base frame is mandatory in order to prevent vibration energy from the rotating motor and the liquid flow.

Use an approved, non-shrinking grout. If in doubt, contact your grout supplier.



TM040490

Reinforcing steel bars embedded in foundation

Use reinforcing steel bars embedded in the foundation to ensure proper grouting.

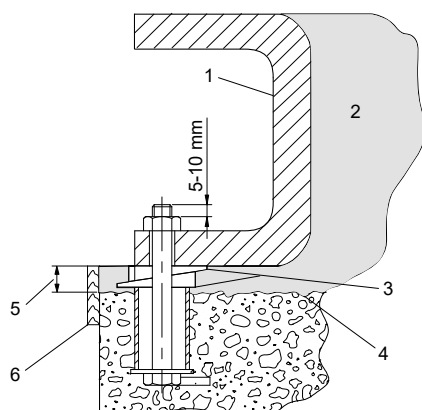
Build a strong formwork around the foundation.

Soak the top of the concrete foundation thoroughly, and remove surface water.

Fill the formwork with grout up to the base frame top level. See figure below. Allow the grout to dry thoroughly before attaching pipes to the pump. 24 hours is sufficient time with approved grouting procedure.

When the grout has thoroughly hardened, check the anchor bolt nuts and tighten, if necessary.

Approximately two weeks after the grout has been poured, or when the grout has thoroughly dried, apply an oil-based paint to the exposed edges of the grout to prevent air and moisture from getting into contact with the grout.



TM032946

Sectional view of foundation with anchor bolt, grouting and base frame

Pos.	Description
1	Base frame
2	Grout
3	Levelling wedges or shims left in place
4	Top of foundation (rough)
5	19 to 32 mm grout
6	Formwork

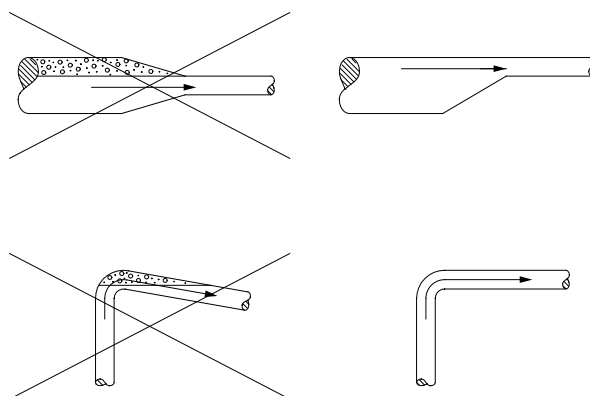
Pipes

Pipes

When installing the pipes, make sure that the pump housing is not stressed by the pipes.

The inlet and outlet pipes must be of an adequate size, taking the pump inlet pressure into account.

Install the pipes so that air locks are avoided, especially on the inlet side of the pump. See figure below.

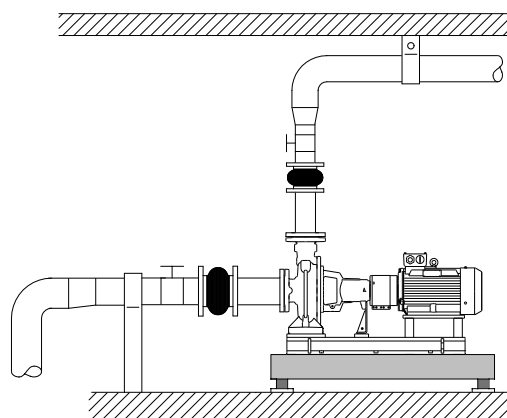


TM002263

Pipelines

Fit isolating valves on either side of the pump to avoid having to drain the system if the pump needs to be cleaned or repaired.

Make sure that the pipes are adequately supported as close to the pump as possible, both on the inlet and the outlet side. The counterflanges must lie true against the pump flanges without being stressed as this would cause damage to the pump.



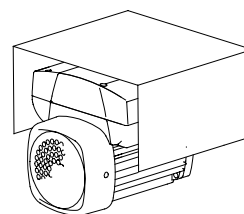
TM1040358

Pipeline mounting

Condensation cover

When installing the pumps outdoors, provide the motor with a suitable cover to protect the pump and motor against the direct effects of the elements.

When mounting the condensation cover on top of the motor, make sure to leave enough space for the air to cool the motor.



TM1040101

Motors with condensation cover

Elimination of noise and vibrations

In order to achieve optimum operation and minimum noise and vibration, consider vibration dampening of the pump. Generally, always consider this for pumps with motors above 15 hp (11 kW). Smaller motor sizes, however, may also cause undesirable noise and vibration.

Noise and vibration are generated by the revolutions of the motor and pump and by the flow in pipes and fittings. The effect on the environment is subjective and depends on correct installation and the state of the remaining system.

Elimination of noise and vibrations is best achieved by means of vibration dampers and expansion joints. See figure Pipeline mounting.

Vibration dampers

To prevent the transmission of vibrations to buildings, we recommend that you isolate the pump foundation from building parts by means of vibration dampers.

The selection of the right vibration damper requires the following data:

- forces transmitted through the damper
- motor speed considering speed control, if any
- required dampening in %; the suggested value is 70 %.

The selection of vibration damper differs from installation to installation. In certain cases, a wrong damper may increase the vibration level. Vibration dampers must therefore be sized by the supplier of the vibration dampers.

If you install the pump on a foundation with vibration dampers, always fit expansion joints on the pump flanges. This is important to prevent the pump from "hanging" in the flanges.

Expansion joints

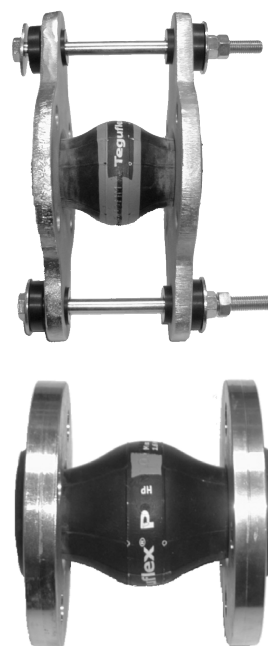
Install expansion joints for these purposes:

- to absorb expansions or contractions in the pipes caused by changing liquid temperature
- to reduce mechanical strains in connection with pressure surges in the pipes
- to isolate mechanical structure-borne noise in the pipes; this applies only to rubber bellows expansion joints.

Note: Do not install expansion joints to make up for inaccuracies in the pipes, such as center displacement or misalignment of flanges.

Fit the expansion joints at a minimum distance of 1 to 1 1/2 pipe diameters (DN) away from the pump on the inlet and the outlet side. This prevents turbulence in the joints, thus ensuring optimum suction conditions and minimum pressure loss on the outlet side. At flow velocities greater than 5 m/s, we recommend that you fit larger expansion joints matching the pipes.

The illustration below shows examples of rubber bellows expansion joints with or without limiting rods.



TM024979

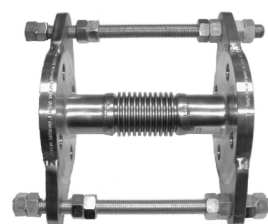
TM024981

Rubber bellows expansion joints with and without limiting rods

Expansion joints with limiting rods can be used to reduce the effects of the expansion or contraction forces on the pipes. We always recommend expansion joints with limiting rods for flanges larger than DN 100.

Anchor the pipes in such a way that they do not stress the expansion joints and the pump. Follow the supplier's instructions and pass them on to advisers or pipe installers.

The illustration below shows an example of a metal bellows expansion joint with limiting rods.



TM024980

Metal bellows expansion joint with limiting rods

Due to the risk of rupture of the rubber bellows, metal bellows expansion joints may be preferred at temperatures above 100 °C combined with high pressure.

Alignment

In a complete pump unit assembled and supplied from factory, the coupling halves have been accurately aligned. Alignment is made by inserting shims under the pump and motor mounting surfaces as required.

The pump-motor alignment may be affected during transport. Always check alignment after the pump has been installed.

If misalignment has occurred due to radial or angular shifting, realign by inserting or removing shims under the feet of the pump or the motor.

Take care to align carefully, as this increases the lives of the coupling, bearings and shaft seal considerably.

Note: Check the final alignment when the pump has obtained its operating temperature under normal operating conditions.

9. Speed-controlled pumps

NK pumps are available with MGE motors with integrated speed control. These pumps are also called E-pumps and the pump designation is NKE.

E-pumps are suitable for applications where the pressure, temperature, flow rate or another parameter is to be controlled on the basis of signals from a sensor at some point in the system.

There are two variants of E-pumps for NK products:

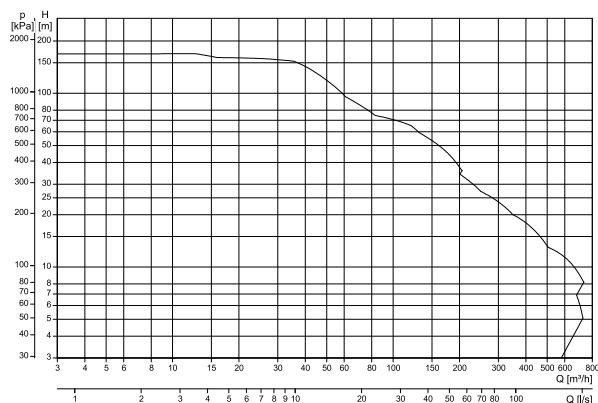
- NKE pumps without sensors from the factory
- NKE Series 2000 pumps with factory-fitted differential-pressure sensors



TM1040535

E-pump type	Medium speed	Low speed
NKE	1.1 - 26 kW	0.55 - 22 kW
NKE Series 2000	1.1 - 22 kW	0.55 - 22 kW

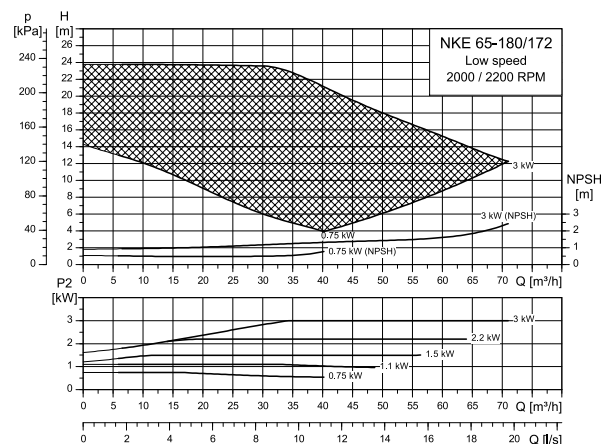
Pumps larger than 22 kW 2-pole / 4-pole and all 6-pole can be connected to a Grundfos CUE or an external frequency converter.



TM082126

E-pumps full performance range

Extra performance range with the same motor power



TM082127

Example: NKE 65-180/172

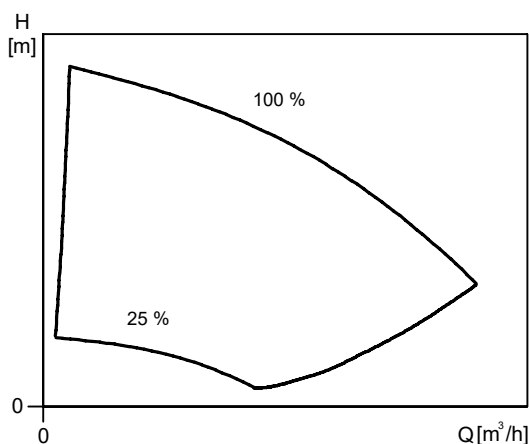
This E- pump has got a power range from 0.75 to 3 kW and is equipped with the same impeller trim size for all different motor sizes.

The NKE pump utilizes the best possible hydraulic efficiency that is obtained from having the largest possible impeller diameter in combination with - at all times - a maximum speed of the motor, based on load conditions of the motor.

The E-motor maintains a speed of approximately 2200 rpm until the motor reaches its power limit (in this example around 30 m³/h) and the E-motor makes a controlled speed down to avoid overload when reaching for larger flows. What happens is that the NKE motor maintains the maximum power output until the maximum flow is reached (approximately 71 m³/h) - illustrated by a linear curve for both Flow-Head and Flow-Power performance. In comparison, the fixed speed NKE pump operates at approximately 1750 rpm in the entire performance range. This feature for the NKE pump provides a large extension to the performance range from zero to the maximum flow as compared to the fixed speed pump, and in addition makes it possible to adjust the given load in the system based on the given control parameter.

E-pumps in connection with a CUE

Pumps larger than 22 kW, 2-pole, 4-pole, and 6-pole can be connected to a Grundfos CUE or an external frequency converter. The external speed control enables the pump to operate at any duty point between 25 % and 100 % speed. The performance adapts to current conditions and keeps the energy consumption at a minimum. The 100 % curve corresponds to the curve of a pump with a mains-operated motor.



TM082188

Duty range of E-pumps in connection with a CUE

Why select an E-pump

The main reasons for choosing the Grundfos E-motor instead of a conventional standard motor and separate frequency converter are the following:

1. Unique product
 - The motor and frequency converter are perfectly matched. The customer will not experience the same problems which may occur when using a standard motor with separate frequency converter, such as noise due to switch frequency.
 - Predefined intelligent control modes, such as constant pressure and constant level. These predefined control modes make it easy to fit the pump into any application.
2. Full application adaptation
 - Functionality is matched to the specific pump application.
 - Grundfos makes a customised configuration file to suit the customer's requirements.
 - Full adaptation to any control management system by means of various interfaces.
3. Simple and easy installation
 - Reduced installation and wiring costs compared to standard frequency converters.
 - No further programming required. An E-motor is a plug-and-pump product.
 - On-site customisation of the software configuration file to adapt to changed operating parameters.
 - Control, monitor, install, commission, and email reports all from your smart device via the Grundfos GO technology.

4. One supplier

- Complete product is supplied by one sole supplier. This gives the customer security as only one supplier needs to be contacted in case of problems or complaints.

For more information on the E-pumps for NKE and detailed functionalities, see the data booklet "NB, NBG, NK, NKG, NBE, NBGE, NKE, NKGE - Custom-built pumps according to EN 733 and ISO 2858".

Maximum speed of the impeller

For stainless steel impellers, the limit is 4000 RPM regardless of impeller size.

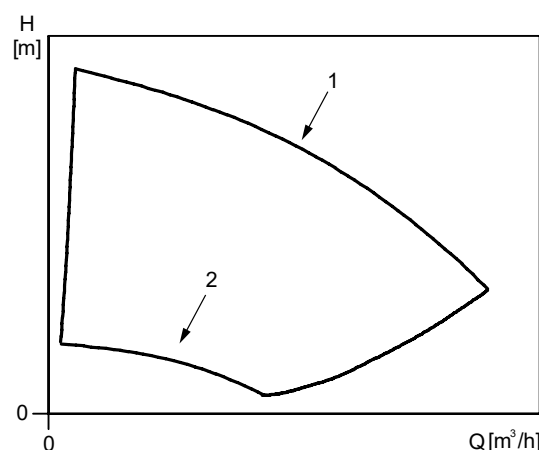
Affinity equations

Normally, NKE pumps are used in applications characterised by a variable flow. Consequently, it is not possible to select a pump that is constantly operating at its optimum efficiency.

To achieve optimum operating economy, select the pump on the basis of the following criteria:

- The maximum duty point required must be as close as possible to the QH curve of the pump.
- The flow rate at the duty point required must be close to the optimum efficiency (η) for most operating hours

Between the minimum and maximum performance curve, NKE pumps have an infinite number of performance curves each representing a specific speed. It may therefore not be possible to select a duty point close to the maximum curve.



TM014916

Minimum and maximum performance curves

Pos.	Description
1	Maximum curve
2	Minimum curve

In situations where it is not possible to select a duty point close to the maximum curve, use the affinity equations below. The head (H), the flow rate (Q) and the input power (P) are the appropriate variables you need to be able to calculate the motor speed (n).

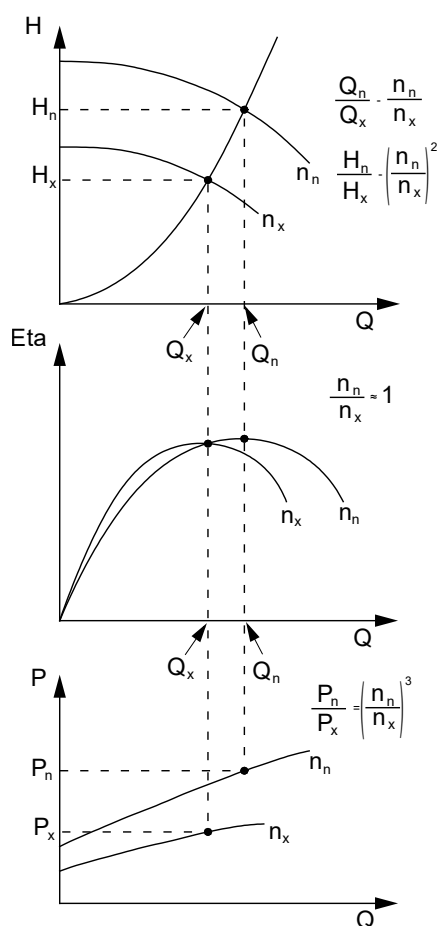
Note: The approximated formulas apply on condition that the system characteristic remains unchanged for n_n and n_x and that it is based on the formula $H = k \times Q^2$, where k is a constant.

The power equation implies that the pump efficiency is unchanged at the two speeds. In practice, this is not quite correct.

Finally, it is worth noting that the efficiencies of the frequency converter and the motor must be taken into account if a precise calculation of the power saving resulting from a reduction of the pump speed is wanted.

Grundfos.com webpage

Via the Grundfos.com 'solutions' the complete range of Grundfos pumps are available. Here it is possible to calculate the exact duty point and energy consumption of any NK or NKE pump.



TM008720

Affinity equations

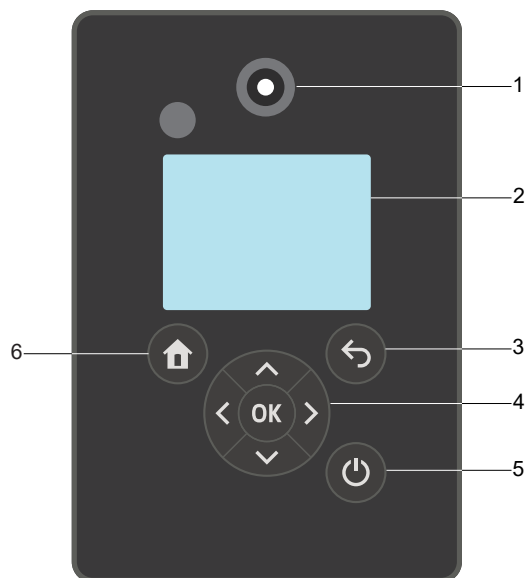
H_n	Rated head in m
H_x	Actual head in m
Q_n	Rated flow rate in m ³ /h
Q_x	Actual flow rate in m ³ /h
P_n	Rated input power in kW
P_x	Actual input power in kW
n_n	Rated motor speed in min ⁻¹
n_x	Actual motor speed in min ⁻¹
η_n	Rated efficiency in %
η_x	Actual efficiency in %

Communication with the E-solution

	E-solution	
	MGE	CUE
Operating panel on unit	x	x
Grundfos GO control	x	-
Central building management system	x	x

Operating panel

Operating panel for 1.1 - 22 kW, 2-pole and 0.55 - 22 kW 4-pole motors



TM082874

Pos.	Symbol	Description
1		Grundfos Eye: The indicator light shows the operating status of the product.
2	-	Graphical colour display.
3		Back: Press the button to go one step back.

Pos.	Symbol	Description
		Left/Right: Press the buttons to navigate between main menus, displays and digits. When you change the menu, the display shows the top display of the new menu.
		Up/Down: Press the buttons to navigate between submenus or change the value settings. If you have disabled the possibility to make settings with the Enable/disable settings function, you can enable it again temporarily by pressing these buttons simultaneously for at least 5 seconds.
4		OK: Press the button to do as follows: - save changed values, reset alarms and expand the value field - enable communication with Grundfos GO and other products of the same type. When you try to establish radio communication between the product and Grundfos GO or another product, the green indicator light in Grundfos Eye flashes. In the controller display, a note states that a device wants to connect to the product. Press OK on the product operating panel to allow communication with Grundfos GO or Grundfos GO Link and other products of the same type.
5		Start/Stop: Press the button to make the product ready for operation or to start and stop the product. Start: If you press the button when the product is stopped, the product starts if no other functions with higher priority have been enabled. Stop: If you press the button when the product is running, the product always stops. When you press the button, the stop icon appears at the bottom of the display.
6		Home: Press the button to go to the Home menu.

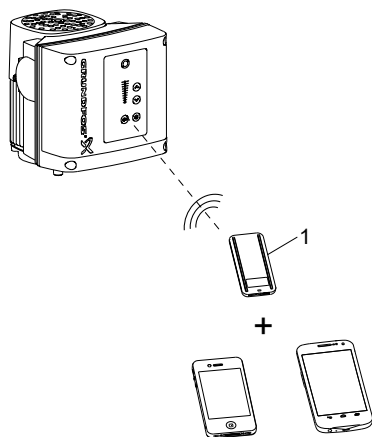
Grundfos GO

Grundfos GO, up to 2.2 kW medium/high speed and 1.5 kW low speed

The pump is designed for wireless radio or infrared communication with Grundfos GO.

Grundfos GO enables setting of functions and gives access to status overviews, technical product information and actual operating parameters.

Grundfos GO offers the following mobile interface, MI.



TM066256

Grundfos GO communicating with the pump via radio or infrared connection, IR

Pos.	Description
1	Grundfos MI 301: Separate module enabling radio or infrared communication. You can use the module in conjunction with an Android or iOS-based smart device with Bluetooth connection.

Grundfos GO, 3-22 kW medium/high speed and 2.2 - 22 kW low speed



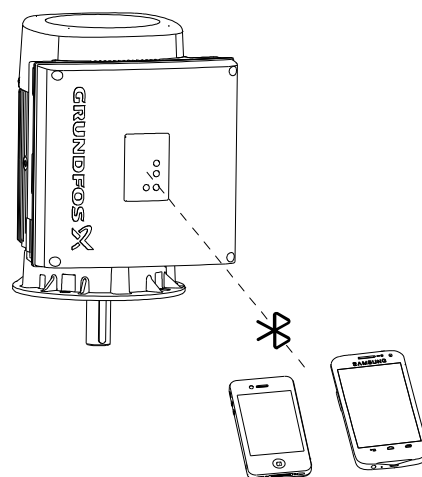
CAUTION Radiation

Minor or moderate personal injury

- Human tissue may be heated by RF energy.

The product is designed for wireless communication with Grundfos GO using Bluetooth (BLE).

Grundfos GO enables you to set functions and gives you access to status overviews, technical product information and current operating parameters.



TM082930

Communication

When Grundfos GO initiates communication with the pump, the indicator light in the middle of Grundfos Eye flashes green. Refer to section Priority of settings.

Furthermore, on pumps fitted with an advanced control panel a text appears in the display saying that a wireless device is trying to establish connection. Press **OK** on the pump in order to establish connection with Grundfos GO or press **Home** to reject connection.

Establish communication using one of these communication types:

- radio communication
- infrared communication
- Bluetooth communication

Communication with E-pumps

Communication with E-pumps is possible via a central building management system, remote control (Grundfos GO) or operating panel.

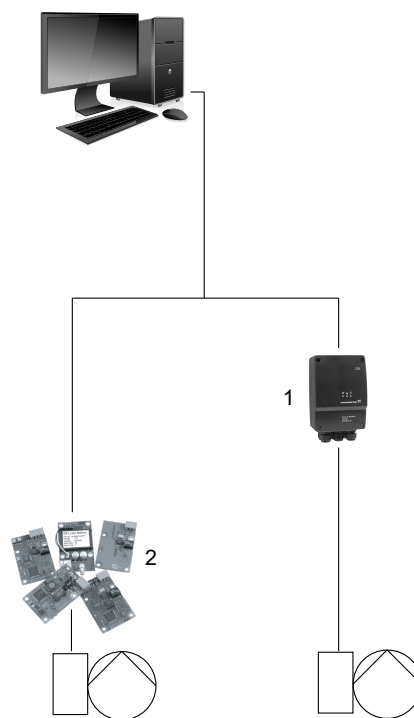
Central building management system

The operator can communicate with an E-pump at a distance by means of the CIU or CIM. Communication can take place via a central building management system allowing the operator to monitor and change control modes and setpoint settings.

The CIU unit can be used for all E-pumps and CIM module can only be used for pumps with MGE/MLE motors. Both can be ordered as accessory. For ordering details, refer to section CIU communication interface units and CIM communication interface modules.

Integrated communication modules

- E-pumps with CUE: Pumps with firmware version 1.4 or newer are integrated with BACnet MS/TP. Older firmware versions can be upgraded.
- E-pumps with MLE/MGE: Pumps rated at 20-30 hp (15 - 22 kW) medium speed or 15-30 hp (11 - 22 kW) low speed are integrated with Modbus RTU and Ethernet/IP.



TM058607

Structure of a central building management system

Pos.	Description
1	CIU 100: LonWorks
	CIU 150: PROFIBUS DP
	CIU 200: Modbus RTU
	CIU 250: GSM
	CIU 270: GRM
	CIU 300: BACnet MS/TP
	CIU 500: Modbus TCP
	CIU 500: PROFINET IO
	CIM 100: LonWorks
	CIM 150: PROFIBUS DP
2	CIM 200: Modbus RTU
	CIM 260: 3G/4G cellular
	CIM 280: GRM GiC 3G/4G
	CIM 300: BACnet MS/TP
	CIM 500: PROFINET
	CIM 500: Modbus TCP
	CIM 500: BACnet IP
	CIM 500: EtherNet/IP
	CIM 500: GRM IP

Related information

[CIU communication interface units](#)

[CIM communication interface modules](#)

10. Pumps connected in parallel

Control of pumps connected in parallel

In some applications, parallel pump operation is required for one or more of the following reasons:

- One pump cannot achieve the required performance or flow rate.
- Standby capacity is required to ensure reliability of supply.
- Overall efficiency needs to be improved in case of big variations in the flow rate demand.

NK, NKE pumps connected in parallel can be controlled by Control MPC.



Control MPC

Pumps connected to Control MPC

NK, NKE pumps can be connected directly to Grundfos Control MPC.

Control MPC incorporates, among others, a CU 352 controller that can control up to six pumps.

By means of an external sensor, Control MPC can ensure optimum adaptation of the performance to the demand by closed-loop control of these parameters:

- proportional differential pressure
- constant differential pressure
- differential pressure, remote
- flow rate
- temperature.

CU 352 incorporates features such as those below:

Startup wizard

Correct installation and commissioning is a prerequisite for attaining optimum performance of the system and trouble-free operation year in and year out.

During commissioning of the system, a startup wizard is shown on the display of the CU 352. The wizard guides the operator through the various steps via a series of dialogue boxes to ensure that all settings are done in the correct sequence.

Application-optimised software

CU 352 incorporates application-optimised software which helps you set your system to the application in question.

Furthermore, you can easily navigate through the menus of the controller. You do not need any training to be able to set and monitor the system.

Ethernet connection

CU 352 incorporates an Ethernet connection which makes it possible to get full and unlimited access to the setting and monitoring of the system via a remote PC.

Service port, GENI TTL

The service port of the CU 352 enables easy access to updating software and data logging in service situations.

External communication

Control MPC enables communication with other fieldbus protocols. In order to communicate with other fieldbus protocols, a GENIbus module and a gateway is needed. Control MPC can communicate with LON, PROFIBUS, Modbus or BACnet via Grundfos CIM or CIU.

Note: For further information about Control MPC, see the "Control MPC" data booklet. The data booklet is available in Grundfos Product Center on www.grundfos.com. For further information on Grundfos Product Center, refer to section Grundfos Product Center.

Related information

[24. Grundfos Product Center](#)

11. Saving time for selecting the product

Key application data sheet

Our "Key application data sheet" can be used to gather the information typically needed in order to make the most suitable pump configuration.

Consider the following aspects when configuring a pump:

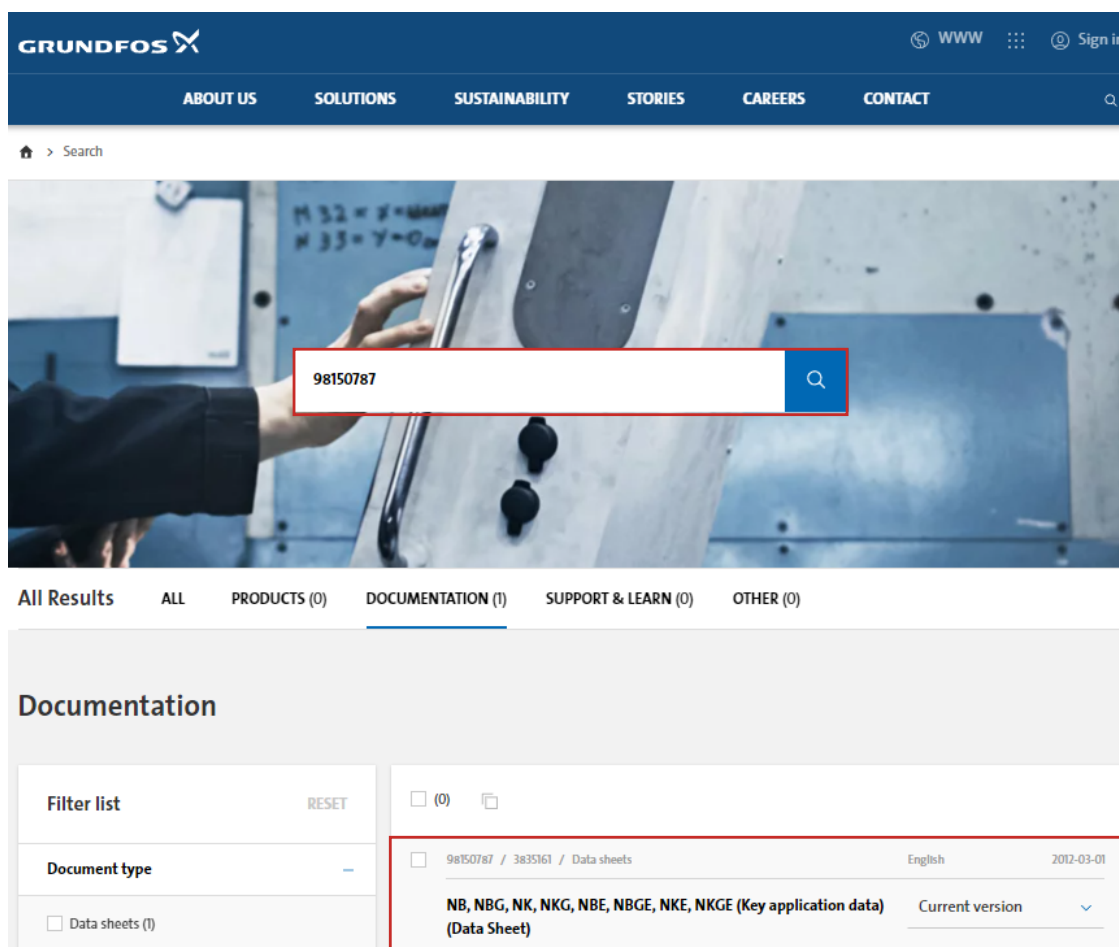
- the pumped liquid
- viscosity and density
- solids in the liquid
- operating temperatures and pressures
- customer-specific requirements.

These and other operating conditions listed in the data sheet are important for choosing the right pump material, shaft seal and shaft seal arrangement.

The data sheet can be seen as a check list and can be filled in by the customer alone or together with a Grundfos representative.

We recommend that you always fill in this data sheet as it saves a lot of time for the customer and for Grundfos.

The "Key application data sheet" can be found via the Grundfos.com web page.



How to find the "Key application data sheet" via the Grundfos.com web page.

TM1040614

Pump size

Select the pump size on the basis of these conditions:

- required flow rate and pressure at the draw-off point
- pressure loss as a result of height differences
- friction loss in the pipes. It may be necessary to account for pressure loss in connection with long pipes, bends or valves, etc.
- optimum efficiency at the estimated duty point.

Efficiency

If you expect the pump to always operate at the same duty point, select a pump which operates at a duty point corresponding to the optimum efficiency of the pump.

In case of controlled operation or varying consumption, select a pump whose optimum efficiency falls within the duty range covering the greater part of the duty time.

Material

Select the material variant on the basis of the liquid to be pumped. Refer to section Pumped liquids.

Related information

[General recommendations](#)

Motor size

Select the motor size on the basis of the power required to achieve the duty point of the chosen pump. This information can be found in the power chart below each performance chart. Refer to section Performance curves. When a pump is fitted with a stuffing box, select the motor size according to ISO 5199.

Find the power curve corresponding to the required QH-value or interpolate between curves.

To select the motor size, read the value of the P2 curve at the duty point and add a 5 % safety margin.

If the motor size must be selected according to ISO 5199, see the table below.

Safety margins according to ISO 5199

Required pump power up to [kW]	Motor power P2 [kW]
0.18	0.25
0.27	0.37
0.40	0.55
0.55	0.75
0.81	1.1
1.1	1.5
1.7	2.2
2.3	3
3.2	4
4.3	5.5
6.1	7.5
9.1	11
12.8	15
15.9	18.5
19	22
26	30
32.5	37
40	45
49	55
68	75
81	90
100	110
120	132
145	160
181	200
227	250
286	315
322	355
364	400

Related information

[NK pumps with fixed-speed motors](#)

12. Pumped liquids

General recommendations

We recommend NK pumps for thin, clean and non-explosive liquids not containing solid particles or fibres.

Liquids with temperatures ranging from -25 to +140 °C are covered in this data booklet.

For liquids ranging from -40 to +220 °C, see the data booklet "NB, NBG, NK, NKG, NBE, NBGE, NKE, NKGE - Custom-built pumps according to EN 733 and ISO 2858", or contact Grundfos.

Water in heating and ventilating systems often contains additives to prevent negative effects, such as system corrosion or calcareous deposits. In these cases, we recommend special shaft seals to avoid crystallisation/precipitation between the seal faces.

"Liquids" in Grundfos.com

Via 'Solutions' on the Grundfos.com webpage a "liquids" module is accessible. This is based on the type and properties of the pumped liquid and gives recommendations with regard to materials for the wetted parts of the pump, i.e. recommend suitable and durable materials for pump housing, impeller, shaft, mechanical shaft seal and O-rings.

The "Liquids" module covers more than 170 widely used liquids.

Please note that other factors also affect the chemical resistance of the pump materials:

- solids
- contaminants
- pressure
- cleaning procedures.

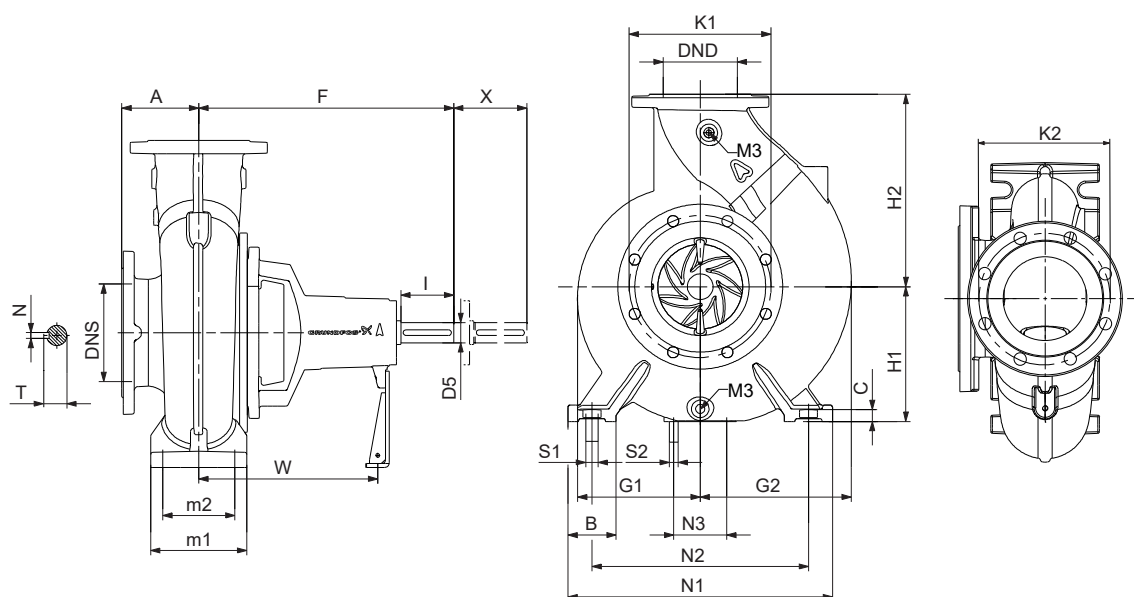
These factors are NOT considered in this tool, and the suitability of the pump material configuration can only be proved through a test.

When selecting the shaft seal and the shaft seal arrangement, we recommend that you consult the data booklet "NB, NBG, NK, NKG, NBE, NBGE, NKE, NKGE - Custom-built pumps" for further information.

For pumped liquids with a density and/or viscosity higher than those of water, use motors with correspondingly higher outputs.

13. NK/NKE, bare-shaft pumps

NK/NKE, center-line outlet



TM1040373

M3 Drain plug or priming plug

Type	Pole	Pump [mm]										Supporting feet [mm]										Shaft [mm]				
		DNS	DND	A	F	H1	H2	M3	G1	G2	B	m1	m2	N1	N2	N3	W	S1	S2	C	D5	I	X ²⁹⁾	T	N	
32-130.1	2	50	32	80	325	112	140	Rp3/8"	117	117	50	100	70	190	140	110	231	M12	M12	14	16	50	100	18	5	
32-130.1	4	50	32	80	325	112	140	Rp3/8"	117	117	50	100	70	190	140	110	231	M12	M12	14	16	50	100	18	5	
32-130	2	50	32	80	325	112	140	Rp3/8"	117	117	50	100	70	190	140	110	231	M12	M12	14	16	50	100	18	5	
32-130	4	50	32	80	325	112	140	Rp3/8"	117	117	50	100	70	190	140	110	231	M12	M12	14	16	50	100	18	5	
32-165.1	2	50	32	80	360	132	160	Rp3/8"	117	122	50	100	70	240	190	110	266	M12	M12	18	24	50	100	27	8	
32-165.1	4	50	32	80	325	132	160	Rp3/8"	117	122	50	100	70	240	190	110	231	M12	M12	18	16	50	100	18	5	
32-180	2	50	32	80	325	132	180	Rp3/8"	118	132	50	100	70	240	190	110	231	M12	M12	16	16	50	100	18	5	
32-180	4	50	32	80	325	132	180	Rp3/8"	118	132	50	100	70	240	190	110	231	M12	M12	16	16	50	100	18	5	
32-205.1	2	50	32	80	360	160	180	Rp3/8"	135	137	50	100	70	240	190	110	266	M12	M12	18	24	50	100	27	8	
32-205.1	4	50	32	80	325	160	180	Rp3/8"	135	137	50	100	70	240	190	110	231	M12	M12	18	16	50	100	18	5	
40-130	2	65	40	80	360	112	140	Rp3/8"	118	118	50	100	70	210	160	110	266	M12	M12	17	24	50	100	27	8	
40-130	4	65	40	80	325	112	140	Rp3/8"	118	118	50	100	70	210	160	110	231	M12	M12	17	16	50	100	18	5	
40-180	2	65	40	80	360	132	180	Rp3/8"	122	143	50	100	70	240	190	110	266	M12	M12	13	24	50	100	27	8	
40-180	4	65	40	80	325	132	180	Rp3/8"	122	143	50	100	70	240	190	110	231	M12	M12	13	16	50	100	18	5	
40-190	2	65	40	100	360	160	180	Rp3/8"	147	159	72	95	70	262	190	110	266	M12	M12	21	24	50	100	27	8	
40-190	4	65	40	100	325	160	180	Rp3/8"	147	159	72	95	70	262	190	110	231	M12	M12	21	16	50	100	18	5	
40-220	2	65	40	100	385	180	225	Rp3/8"	168	168	65	125	95	320	250	110	288	M12	M12	17	24	50	100	27	8	
40-220	4	65	40	100	360	180	225	Rp3/8"	168	168	65	125	95	320	250	110	263	M12	M12	17	24	50	100	27	8	
40-225	2	65	40	100	385	180	225	Rp3/8"	169	168	65	125	95	320	250	110	288	M12	M12	17	24	50	100	27	8	
40-225	4	65	40	100	360	180	225	Rp3/8"	169	168	65	125	95	320	250	110	263	M12	M12	17	24	50	100	27	8	
50-130	2	65	50	100	360	132	160	Rp3/8"	120	139	50	100	70	240	190	110	266	M12	M12	17	24	50	100	27	8	
50-130	4	65	50	100	325	132	160	Rp3/8"	120	139	50	100	70	240	190	110	231	M12	M12	17	16	50	100	18	5	
50-220	2	65	50	100	404	180	225	Rp3/8"	167	178	68	125	95	318	250	110	279	M12	M12	24	32	80	100	35	10	
50-220	4	65	50	100	364	180	225	Rp3/8"	167	178	68	125	95	318	250	110	267	M12	M12	24	24	50	100	27	8	
50-225	2	65	50	100	400	180	225	Rp3/8"	168	170	65	125	95	320	250	110	275	M12	M12	19	32	80	100	35	10	
50-225	4	65	50	100	360	180	225	Rp3/8"	168	170	65	125	95	320	250	110	263	M12	M12	19	24	50	100	27	8	
50-280	2	65	50	100	400	180	225	Rp3/8"	165	179	65	125	95	320	250	110	275	M12	M12	18	32	80	100	35	10	

Type	Pole	Pump [mm]									Supporting feet [mm]												Shaft [mm]				
		DNS	DND	A	F	H1	H2	M3	G1	G2	B	m1	m2	N1	N2	N3	W	S1	S2	C	D5	I	X ²⁹⁾	T	N		
50-280	4	65	50	100	360	180	225	Rp3/8"	165	179	65	125	95	320	250	110	263	M12	M12	18	24	50	100	27	8		
50-350	4	80	50	125	470	225	280	Rp1/2"	206	220	65	125	95	345	280	110	339	M12	M12	17	32	80	140	35	10		
65-130	2	80	65	100	360	160	180	Rp3/8"	117	156	65	125	95	280	212	110	266	M12	M12	18	24	50	140	27	8		
65-130	4	80	65	100	325	160	180	Rp3/8"	117	156	65	125	95	280	212	110	231	M12	M12	18	16	50	140	18	5		
65-180	2	80	65	100	360	160	200	Rp3/8"	126	147	65	125	95	280	212	110	266	M12	M12	16	24	50	140	27	8		
65-180	4	80	65	100	325	160	200	Rp3/8"	126	147	65	125	95	280	212	110	231	M12	M12	16	16	50	140	18	5		
65-210	2	80	65	100	396	180	225	Rp3/8"	150	184.4	65	125	95	320	250	110	299	M12	M12	18	24	50	140	27	8		
65-210	4,6	80	65	100	371	180	225	Rp3/8"	150	184.4	65	125	95	320	250	110	274	M12	M12	18	24	50	140	27	8		
65-225	2	80	65	100	400	200	250	Rp3/8"	169	191	80	160	116	360	280	110	275	M16	M12	24	32	80	100	35	10		
65-225	4	80	65	100	360	200	250	Rp3/8"	169	191	80	160	116	360	280	110	263	M16	M12	24	24	50	100	27	8		
65-280	4,6	80	65	125	470	200	280	Rp1/2"	183	199	80	160	120	360	280	110	339	M16	M12	17	32	80	140	35	10		
80-180.1	2	100	80	100	360	160	225	Rp3/8"	138	168	65	125	95	280	212	110	266	M12	M12	18	24	50	140	27	8		
80-180	2	100	80	100	360	160	225	Rp3/8"	138	168	65	125	95	280	212	110	266	M12	M12	18	24	50	140	27	8		
80-180	4	100	80	100	325	160	225	Rp3/8"	138	168	65	125	95	280	212	110	231	M12	M12	18	16	50	140	18	5		
80-225	2	100	80	125	420	200	280	Rp3/8"	174	212	80	160	120	400	315	110	295	M16	M12	21	32	80	140	35	10		
80-225	4	100	80	125	380	200	280	Rp3/8"	174	212	80	160	120	400	315	110	283	M16	M12	21	24	50	140	27	8		
80-280	4,6	100	80	125	470	200	315	Rp1/2"	183	207	80	160	120	400	315	110	339	M16	M12	19	32	80	140	35	10		
80-350	4,6	100	80	125	470	250	315	Rp1/2"	214	245	76	160	120	400	315	110	339	M16	M12	14	32	80	140	35	10		
80-380	4,6	100	80	125	530	280	355	Rp1/2"	269	287.1	80	160	120	435	355	110	369	M16	M12	22	42	110	180	45	12		
100-180	2	125	100	125	360	180	250	Rp1/2"	140	181	65	125	95	345	280	110	263	M12	M12	17	24	50	140	27	8		
100-180	4	125	100	125	360	180	250	Rp1/2"	140	181	65	125	95	345	280	110	263	M12	M12	17	24	50	140	27	8		
100-225.1	2	125	100	140	420	225	280	Rp1/2"	184	229	80	160	120	400	315	110	295	M16	M12	25	32	80	140	35	10		
100-225.1 ³⁰⁾	4,6	125	100	140	380	225	280	Rp1/2"	184	229	80	160	120	400	315	110	283	M16	M12	25	24	50	140	27	8		
100-225	2	125	100	140	420	225	280	Rp1/2"	184	229	80	160	120	400	315	110	295	M16	M12	25	32	80	140	35	10		
100-225 ³⁰⁾	4	125	100	140	380	225	280	Rp1/2"	184	229	80	160	120	400	315	110	283	M16	M12	25	24	50	140	27	8		
100-280	4,6	125	100	140	470	225	315	Rp1/2"	189	229	80	160	120	400	315	110	339	M16	M12	21	32	80	140	35	10		
100-350	4,6	125	100	140	470	250	315	Rp1/2"	214	250	80	160	116	400	315	110	339	M16	M12	22	32	80	140	35	10		
100-360	4,6	125	100	150	530	280	355	Rp1/2"	263	300	100	200	150	500	400	110	369	M20	M12	23.5	42	110	180	45	12		
100-380	4,6	125	100	140	530	280	355	Rp1/2"	278	305	100	200	150	500	400	110	369	M20	M12	23	42	110	180	45	12		
125-180 ³⁰⁾	2	150	125	125	360	200	280	Rp1/2"	163	216	80	160	120	360	280	110	263	M16	M12	18	24	50	140	27	8		
125-180	4	150	125	125	360	200	280	Rp1/2"	163	216	80	160	120	360	280	110	263	M16	M12	18	24	50	140	27	8		
125-225	4,6	150	125	140	420	250	355	Rp1/2"	188	256	80	160	120	400	315	110	295	M16	M12	29	32	80	140	35	10		
125-280	4,6	150	125	140	470	250	355	Rp1/2"	210	273	86	160	120	400	315	110	339	M16	M12	24	32	80	180	35	10		
125-320	4,6	150	125	140	470	280	355	Rp1/2"	226	272	100	200	150	500	400	110	339	M20	M12	26	32	80	140	35	10		
125-350	4,6	150	125	140	530	280	355	Rp1/2"	226	272	100	200	150	500	400	110	369	M20	M12	22	42	110	180	45	12		
125-355	4,6	150	125	140	530	280	355	Rp1/2"	251	292.4	100	200	150	500	400	110	369	M20	M12	28	42	110	180	45	12		
125-360	4,6	150	125	140	530	315	400	Rp1/2"	271	286	105	200	150	505	400	110	369	M20	M12	27	42	110	180	45	12		
125-380	4,6	150	125	140	530	315	400	Rp1/2"	278	341	100	200	150	500	400	110	369	M20	M12	25	42	110	180	45	12		
150-225	4,6	200	150	160	420	280	375	Rp1/2"	230	300	100	200	150	500	400	110	295	M20	M12	18	32	80	180	35	10		
150-280	4,6	200	150	160	530	280	375	Rp1/2"	227	291	100	200	150	500	400	110	369	M20	M12	21.5	42	110	180	45	12		
150-300	4,6	200	150	160	540	280	400	Rp1/2"	232	307	100	200	150	550	450	110	379	M20	M12	18	42	110	180	45	12		
150-350.1	4,6	200	150	160	530	280	400	Rp1/2"	258	317	100	200	150	550	450	110	369	M20	M12	24	42	110	180	45	12		
150-350 ³⁰⁾	4,6	200	150	160	530	280	400	Rp1/2"	258	317	100	200	150	550	450	110	369	M20	M12	24	42	110	180	45	12		
150-355	4,6	200	150	180	692	315	400	Rp1/2"	282	346	100	200	150	550	450	140	525	M20	M16	28	48	110	200	52	14		
150-360	4,6	200	150	160	550	315	400	Rp1/2"	273	321	100	200	150	500	400	110	389	M20	M12	30	42	110	180	45	12		
150-380 ³⁰⁾	4,6	200	150	160	670	315	450	Rp1/2"	288	356	100	200	150	550	450	140	503	M20	M16	24	48	110	180	51.5	14		
150-390	4,6	200	150	160	675	315	450	Rp1/2"	291	344	105	200	150	555	450	140	508	M20	M16	30	48	110	180	51.5	14		
200-300	4,6	250	200	160	555	350	400	Rp1/2"	253	341	125	200	150	625	500	110	394	M20	M12	32	42	110	200	45	12		
200-350 ³⁰⁾	4,6	250	200	160	530	350	450	Rp1/2"	301	399	125	200	150	625	500	110	369	M20	M12	25.5	42	110	180	45	12		
200-380 ³⁰⁾	4,6	250	200	185	670	400	500	Rp1/2"	322	411	125	200	150	625	500	140	504	M20	M16	28	48	110	200	51.5	14		
200-500 ³⁰⁾	4,6	250	200	200	670	400	605	Rp1/2"	378	432	125	200	150	625	500	140	493	M20	M16	29	60	110	250	64	18		

²⁹⁾ X is the minimum pull-back length of the bearing bracket required for service of impeller and shaft seal.

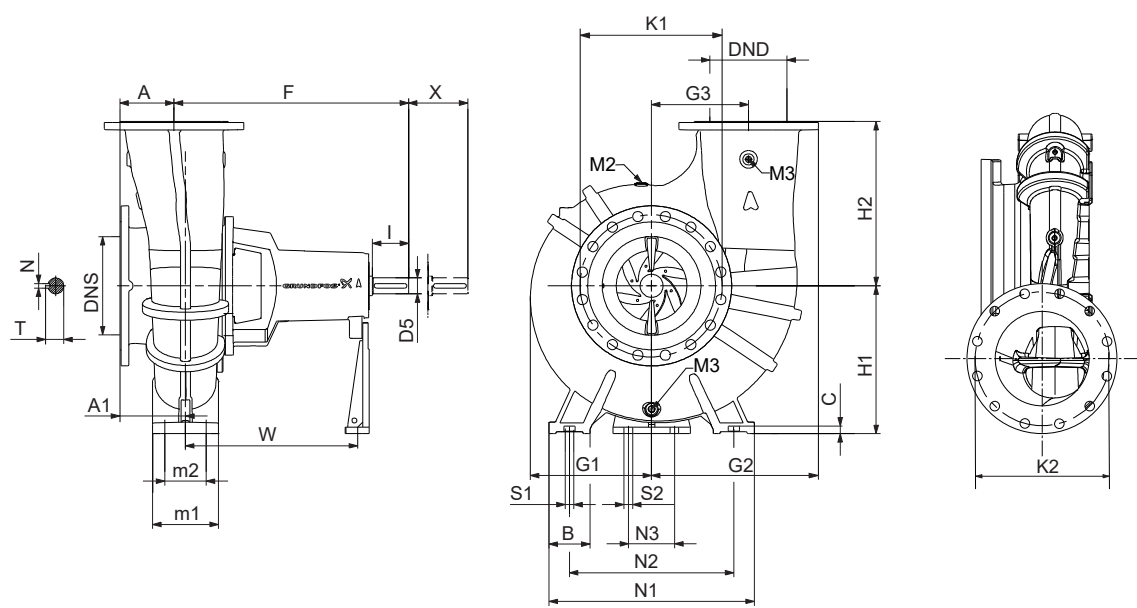
³⁰⁾ With double volute design

Type	Pole	Flange (mm)					
		K1			K2		
		PN10	PN16	PN25	PN10	PN16	PN25
32-130.1	2	125	125	125	100	100	100
32-130.1	4	125	125	125	100	100	100
32-130	2	125	125	125	100	100	100
32-130	4	125	125	125	100	100	100
32-165.1	2	125	125	125	100	100	100
32-165.1	4	125	125	125	100	100	100
32-180	2	125	125	125	100	100	100
32-180	4	125	125	125	100	100	100
32-205.1	2	125	125	125	100	100	100
32-205.1	4	125	125	125	100	100	100
40-130	2	145	145	145	110	110	110
40-130	4	145	145	145	110	110	110
40-180	2	145	145	145	110	110	110
40-180	4	145	145	145	110	110	110
40-190	2	145	145	145	110	110	110
40-190	4	145	145	145	110	110	110
40-220	2	145	145	145	110	110	110
40-220	4	145	145	145	110	110	110
40-225	2	145	145	145	110	110	110
40-225	4	145	145	145	110	110	110
50-130	2	145	145	145	110	110	110
50-130	4	145	145	145	110	110	110
50-220	2	145	145	145	125	125	125
50-220	4	145	145	145	125	125	125
50-225	2	145	145	145	110	110	110
50-225	4	145	145	145	110	110	110
50-280	2	145	145	145	110	110	110
50-280	4	145	145	145	110	110	110
50-350	4	160	160	160	125	125	125
65-130	2	160	160	160	145	145	145
65-130	4	160	160	160	145	145	145
65-180	2	160	160	160	145	145	145
65-180	4	160	160	160	145	145	145
65-210	2	160	160	160	145	145	145
65-210	4,6	160	160	160	145	145	145
65-225	2	160	160	160	145	145	145
65-225	4	160	160	160	145	145	145
65-280	4,6	160	160	160	145	145	145
80-180.1	2	180	180	190	160	160	160
80-180	2	180	180	190	160	160	160
80-180	4	180	180	190	160	160	160
80-225	2	180	180	190	160	160	160
80-225	4	180	180	190	160	160	160
80-280	4,6	180	180	190	160	160	160
80-350	4,6	180	180	190	160	160	160
80-380	4,6	180	180	190	160	160	160
100-180	2	210	210	220	180	180	190
100-180	4	210	210	220	180	180	190
100-225.1	2	210	210	220	180	180	190
100-225.1 ³⁰⁾	4	210	210	220	180	180	190
100-225	2	210	210	220	180	180	190

Type	Pole	Flange (mm)					
		K1			K2		
		PN10	PN16	PN25	PN10	PN16	PN25
100-225 ³⁰⁾	4	210	210	220	180	180	190
100-280	4,6	210	210	220	180	180	190
100-350	4,6	210	210	220	180	180	190
100-360	4,6	210	210	220	180	180	190
100-380	4,6	210	210	220	180	180	190
125-180 ³⁰⁾	2	240	240	250	210	210	220
125-180	4	240	240	250	210	210	220
125-225	4,6	240	240	250	210	210	220
125-280	4,6	240	240	250	210	210	220
125-320	4,6	240	240	250	210	210	220
125-350	4,6	240	240	250	210	210	220
125-355	4,6	240	240	250	210	210	220
125-360	4,6	240	240	250	210	210	220
125-380	4,6	240	240	250	210	210	220
150-225	4,6	295	295	310	240	240	250
150-280	4,6	295	295	310	240	240	250
150-300	4,6	295	295	310	240	240	250
150-350.1	4,6	295	295	310	240	240	250
150-350 ³⁰⁾	4,6	295	295	310	240	240	250
150-355	4,6	295	295	310	240	240	250
150-360	4,6	295	295	310	240	240	250
150-380 ³⁰⁾	4,6	295	295	310	240	240	250
150-390	4,6	295	295	310	240	240	250
200-300	4,6	350	355	370	295	295	310
200-350 ³⁰⁾	4,6	350	355	370	295	295	310
200-380 ³⁰⁾	4,6	350	355	370	295	295	310
200-500 ³⁰⁾	4,6	350	355	370	295	295	310

³⁰⁾ With double volute design

NK/NKE, tangential outlet



TM1040374

M3 Drain plug or priming plug

Type	Pole	Pump [mm]											Supporting feet [mm]											Shaft [mm]				
		DNS	DND	A	A1	F	H1	H2	M3	G1	G2	G3	B	m1	m2	N1	N2	N3	W	S1	S2	C	D5	I	X ³¹⁾	T	N	
250-315 ³²⁾	4,6	300	250	185	215	735	400	400	Rp1/2"	334	483	270	125	200	150	625	500	140	539	M20	M16	33	48	110	250	52	14	
250-360	4,6	300	250	175	177	739	450	400	Rp1/2"	418	573	320	125	200	150	625	500	140	562	M20	M16	32	48	110	250	52	14	
250-380 ³²⁾	4,6	300	250	165	200	714	450	500	Rp1/2"	369	508	295	125	200	150	625	500	140	512	M20	M16	24	48	110	200	52	14	
300-300 ³²⁾	4,6	350	300	200	279	780	510	400	Rp1/2"	429	588	345	160	215	180	700	540	140	531	M20	M16	33	48	110	250	52	14	
300-310 ³²⁾	4,6	350	300	220	272	780	510	400	Rp1/2"	432	573	330	160	215	180	700	540	140	558	M20	M16	30	48	110	300	52	14	
300-350 ³²⁾	4,6	350	300	190	230	735	450	400	Rp1/2"	400	603	330	140	210	180	640	500	140	517	M20	M16	30	60	110	250	64	18	
300-400 ³²⁾	4,6	350	300	190	202	727	450	400	Rp1/2"	417	603	360	125	200	150	725	600	140	529	M20	M16	32	60	110	250	64	18	
350-350 ³²⁾	4,6	400	350	275	275	710	560	500	Rp1/2"	477	638	360	160	215	180	740	580	140	529	M20	M16	32	60	110	300	64	18	

31) X is the minimum pull-back length of the bearing bracket required for service of impeller and shaft seal.
32) With double volute design

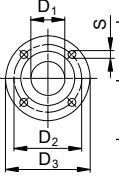
Type	Pole	Flange (mm)					
		K1			K2		
		PN10	PN16	PN25	PN10	PN16	PN25
250-315 ³²⁾	4,6	400	410	430	350	355	370
250-360	4,6	400	410	430	350	355	370
250-380 ³²⁾	4,6	400	410	430	350	355	370
300-300 ³²⁾	4,6	460	470	490	400	410	430
300-310 ³²⁾	4,6	460	470	490	400	410	430
300-350 ³²⁾	4,6	460	470	490	400	410	430
300-400 ³²⁾	4,6	460	470	490	400	410	430
350-350 ³²⁾	4,6	515	525	550	460	470	490

32) With double volute design

14. Pump flange dimensions

Pump flanges, EN 1092-2

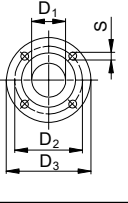
EN 1092-2 is the standard used for cast iron and ductile iron pump flanges. The flange dimensions are stated in mm.

EN 1092-2														
	Nominal diameter													
	DN 32	DN 40	DN 50	DN 65	DN 80	DN 100	DN 125	DN 150	DN 200	DN 250	DN 300	DN 350	DN 400	
PN 10	D ₁	32	40	50	65	80	100	125	150	200	250	300	350	400
	D ₂	100	110	125	145	160	180	210	240	295	350	400	460	515
	D ₃ ³³⁾	140	150	165	185	200	220	250	285	340	395	445	505	565
	S	4 x Φ19	4 x Φ19	4 x Φ19	4 x Φ19	8 x Φ19	8 x Φ19	8 x Φ19	8 x Φ23	8 x Φ23	12 x Φ23	12 x Φ23	16 x Φ23	16 x Φ28
	Thickness ³³⁾	-	-	17	17	19	21.1	23	23	23	30.2	23.5	-	-
PN 16	D ₂	100	110	125	145	160	180	210	240	295	355	410	470	525
	D ₃ ³³⁾	140	150	165	185	200	220	250	285	340	405	460	520	580
	S	4 x Φ19	4 x Φ19	4 x Φ19	4 x Φ19	8 x Φ19	8 x Φ19	8 x Φ19	8 x Φ23	12 x Φ23	12 x Φ28	12 x Φ28	16 x Φ28	16 x Φ31
	Thickness ³³⁾	-	-	17	17	19	21.1	23	23	23	40	23.5	-	-
PN 25	D ₂	100	110	125	145	160	190	220	250	310	370	430	490	550
	D ₃ ³³⁾	140	150	165	185	200	235	270	300	360	425	485	555	620
	S	4 x Φ19	4 x Φ19	4 x Φ19	8 x Φ19	8 x Φ19	8 x Φ23	8 xΦ28	8 xΦ28	12 x Φ28	12 x Φ31	16 x Φ31	16 x Φ34	16 x Φ37
	Thickness ³³⁾	-	-	17	19	25	25	26	28	34	40	28	26	28

³³⁾ Not fully aligned with the standard

Fixed pump flanges, ASME/ANSI B16.1

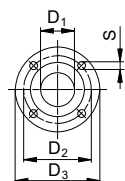
ASME/ANSI B16.1 is the standard used for cast iron pump flanges and flange fittings, classes 125 and 250.

Class 125												
		Nominal diameter [inch]										
		1 1/4	1 1/2	2	2 1/2	3	4	5	6	8	10	12
	D₁	1 1/4	1 1/2	2	2 1/2	3	4	5	6	8	10	12
	D₂	3 1/2	3 7/8	4 3/4	5 1/2	6	7 1/2	8 1/2	9 1/2	11 3/4	14 1/4	17
	D₃³⁴⁾	4 5/8	5	6	7	7 1/2	9	10	11	13 1/2	16	19
	S	4 x Ø5/8	4 x Ø5/8	4 x Ø3/4	4 x Ø3/4	4 x Ø3/4	8 x Ø3/4	8 x Ø7/8	8 x Ø7/8	8 x Ø7/8	12 x Ø1	12 x Ø1
	Thickness³⁴⁾	0.51	0.59	0.67	0.72	0.78	0.98	0.97	1.03	1.13	1.22	1.25

³⁴⁾ Not fully aligned with the standard

Loose pump flanges, ASME/ANSI B16.42

ASME/ANSI B16.42 is the standard used for ductile iron flanges and flanged fittings, classes 150 and 300.

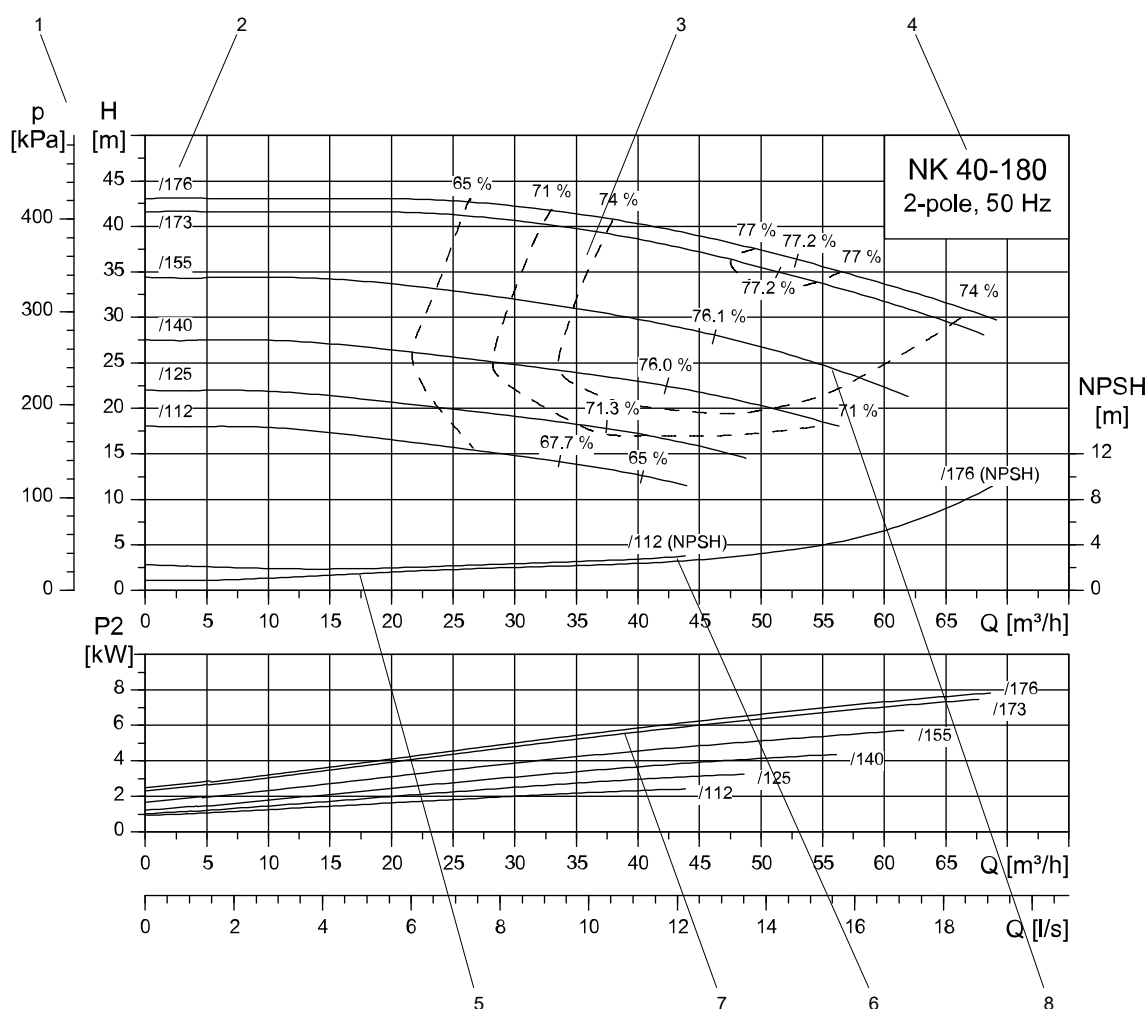


Class 300										
	Nominal diameter [inch]									
D₁	1 1/2	2	2 1/2	3	4	5	6	8	10	12
D₂	4 1/2	5	5 7/8	6 5/8	7 7/8	9 1/4	10 5/8	13	15 1/4	17 3/4
D₃ ³⁵⁾	6 1/8	6 1/2	7 1/2	8 1/4	10	11	12 1/2	15	17 1/2	20 1/2
S	4 x Ø7/8	8 x Ø3/4	8 x Ø7/8	8 x Ø7/8	8 x Ø7/8	8 x Ø7/8	12 x Ø7/8	12 x Ø1	16 x Ø1 1/8	16 x Ø1 1/4
Thickness ³⁵⁾	0.71	0.81	0.94	0.98	0.98	1.02	1.10	1.34	1.57	1.81

³⁵⁾ Not fully aligned with the standard

15. Introduction to curves and technical data

How to read the curve charts



TM1040540

Pos.	Description
1	Total pump head, p [kPa] or H [m] is equal to H_{total}
2	Impeller diameter [mm]
3	Hydraulic efficiency curves are shown as dashed lines, η [%]
4	Pump type, pole number and frequency
5	The NPSH curve is shown for maximum impeller size.
6	The NPSH curve is shown for minimum impeller size.
7	The power curve indicates pump input power P2 [kW]
8	QH curve for the individual pump. The bold curve indicates the recommended performance range.

The shown pump performance curves in section Performance curves represent the pump in combination with an IE3 motor.

Related information

[NK pumps with fixed-speed motors](#)

Curve conditions

The guidelines below apply to the curves shown in the section Performance curves.

- Tolerances are according to ISO 9906:2012 Grade 2B.
- The curves show pump performance with different impeller diameters at the nominal speed.
- The bold part of the curves show the recommended operating range.
- We do not recommend the thin parts as the possible operating range here might suggest the selection of a smaller or larger pump type.
- Do not use the pumps at minimum flow rates below $0.1 \times Q_{\max}$ because of the danger of overheating the pump.
- The curves apply to the pumping of water at a temperature of 20 °C and a kinematic viscosity of 1 mm²/s (1 cSt).
- **Eta:** The dashed lines show values of the hydraulic efficiency of the pump.
- **NPSH:** The curves show maximum values measured under the same conditions as the performance curves.
- In case of other densities than 1000 kg/m³, the outlet pressure is proportional to the density.
- When pumping liquids with a density higher than 1000 kg/m³, motors with correspondingly higher outputs must be used.
- When stuffing box shaft seal is selected for a pump, select the motor size according to ISO 5199.

Calculation of total head

The total pump head consists of the height difference between the measuring points + the differential head + the dynamic head.

$$H_{\text{total}} = H_{\text{geo}} + H_{\text{stat}} + H_{\text{dyn}}$$

H_{geo}	Height difference between measuring points.
H_{stat}	Differential head between the inlet and outlet sides of the pump.
H_{dyn}	Calculated values based on the velocity of the pumped liquid on the inlet and outlet sides of the pump.

Pump performance testing

NK testers are all capable of performing hydraulic performance tests according to ISO 9906:2012 requirements.

The standard ISO 9906:2012 sets standards for "rotodynamic pumps, Hydraulic performance acceptance tests, Grades 1, 2 and 3".

Performance acceptance grades

Six pump-performance-test acceptance grades, 3B, 2B, 2U, 1B, 1E and 1U are defined in ISO 9906:2012.

Acceptance grade	Mandatory measurements		Optional measurements	
	Q	H	P1	Eta-tot
3B	± 9 %	± 7 %	+ 9 %	- 7 %
2B	± 8 %	± 5 %	+ 8 %	- 5 %
2U	+ 16 %	+ 10 %	+ 16 %	
1B	± 5 %	± 3 %	+ 4 %	- 3 %
1E	± 5 %	± 3 %	+ 4 %	≥ 0 %
1U	+ 10 %	+ 6 %	+ 10 %	

Q:	Flow
H:	Head
P1:	Total consumed power
Eta-tot:	Total efficiency

These tolerance grades can be used in the contract between the pump manufacturer and the purchaser, or they can be used in a default tolerance factor which will apply if no specific tolerance grade has been agreed between the manufacturer and the customer.

The performance acceptance grades are explained in section Specifying acceptance grades, showing the performance grades related to an ordinary pump curve.

Related information

[Specifying acceptance grades](#)

The guarantee point

According to ISO 9906:2012 the acceptance-grade tolerance applies to one guarantee point.

A guarantee point is defined by a guaranteed flow and a guaranteed head.

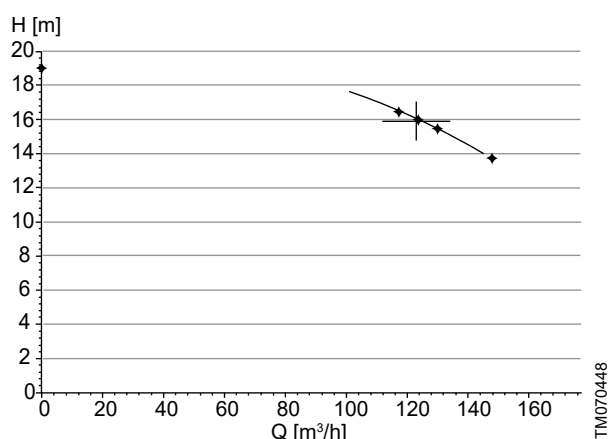
In addition either minimum total efficiency or maximum total input power may be guaranteed at the specified conditions.

This means that the standard sets guidelines for a duty point guaranteed for the following:

- Q and H - or
- Q, H and total efficiency (Eta-total) - or
- Q, H and total consumed power (P1).

The guarantee point is defined by a minimum of five measured test points.

Example on a duty point test living up to ISO 9906:2012 requirements

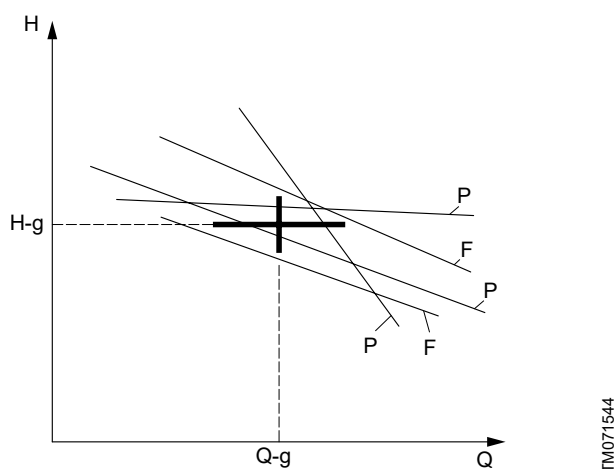


Five measured test points are used to verify one guarantee point

Evaluation of performance

The test must show that the measured pump curve touches or passes through a tolerance surrounding the guarantee point, as defined by the selected acceptance grade.

Guarantee-point evaluation must be made at the rated speed, which for NK, NKE pumps means 50 Hz or 60 Hz.



Pump curves that either pass or fail to cross the tolerance cross of the guarantee point

Pos.	Description
H	Head
H-g	H-guaranteed
Q-g	Q-guaranteed
F	Flow
P	Pass
F	Fail

Performance-test types for end-suction pumps

A duty point test can be made for NK pumps.

Tests carried out on pumps

- Tests are saved for at least five years and can be traced using the pump's unique serial number.
- It is not possible to change acceptance grade on an already tested and supplied pump - if this should be required a re-test of the pump is needed.
- Witness testing can be arranged.

Duty-point-verification test, Grades 3B, 2B, 2U, 1B, 1E and 1U

This test method offers the possibility to perform a duty-point verification of the following:

- Q and H - or
- Q, H and total efficiency (Eta-tot) - or
- Q, H and total consumed power (P1).

Acceptance grade	Mandatory measurements		Optional measurements	
	Q	H	P1	Eta-tot
2B	Standard		Refer to factory	
3B	Refer to factory		Refer to factory	
2U	Refer to factory		Refer to factory	
1B	Refer to factory		Refer to factory	
1E	Refer to factory		Refer to factory	
1U	Refer to factory		Refer to factory	

What Grundfos is able to guarantee for the different acceptance grades will be evaluated case by case. Contact your local sales company on this.

Grundfos makes duty-point verification according to ISO 9906:2012 for one guarantee point at full speed, 50 or 60 Hz. The customer must tell Grundfos which duty point to verify.

The requested duty point is verified by five measured points.

Grade 2B duty-point verification

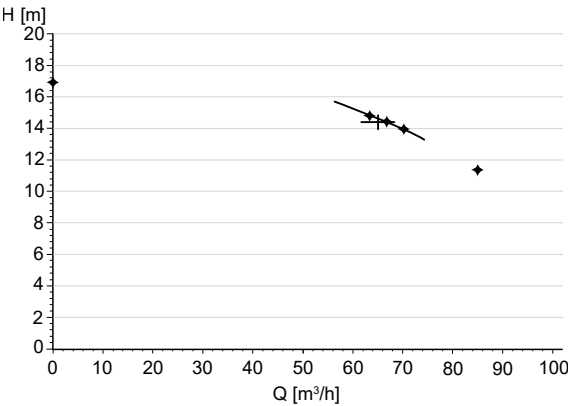
The following example illustrates performance testing according to Grade 2B.

Flow and head are mandatory and efficiency or power consumption, P1, is optional.

Tolerances for a Grade 2B test are as follows:

- Flow: $\pm 8 \%$
- Head: $\pm 5 \%$
- Efficiency: $- 5 \%$, only equal to or better than the guaranteed value
- P1: $+ 8 \%$

Q and H are tested and verified



Measured values for flow and head

Grade 1U duty-point verification

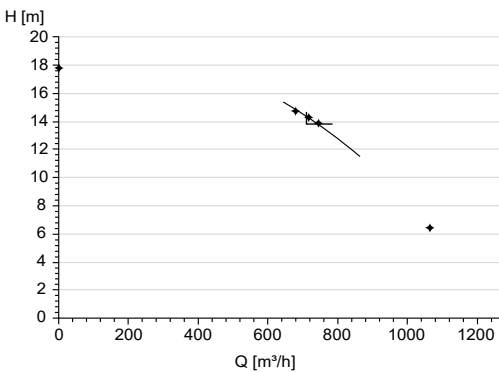
The following example illustrates performance testing according to Grade 1U.

Flow and head are mandatory and efficiency or power consumption, P1, is optional.

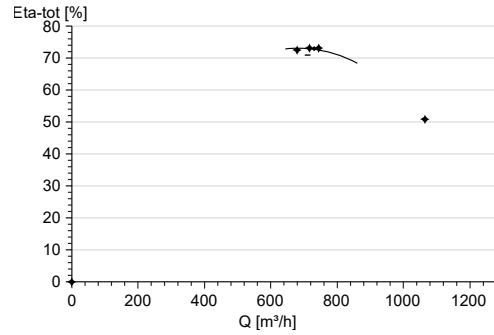
Tolerances for a Grade 1U test are as follows:

- Flow: $+ 10 \%$
- Head: $+ 6 \%$
- Efficiency: 0% , only equal to or better than the guaranteed value
- P1: $+ 10 \%$

1. Q, H and Eta-tot is tested and verified

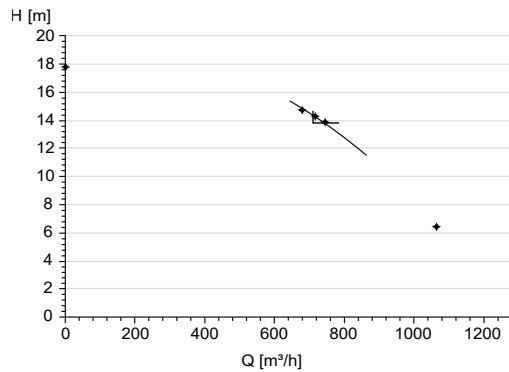


Measured values for flow and head

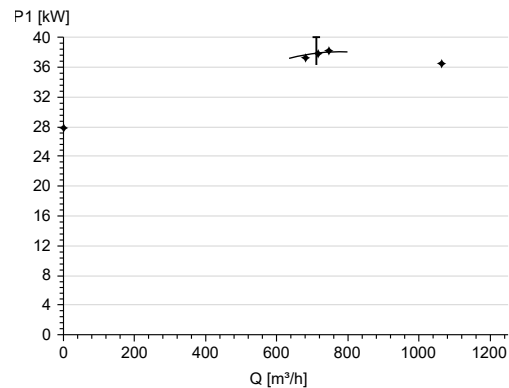


Measured values for total efficiency

2. Q, H and P1 is tested and verified



Measured values for flow and head



Measured values for consumed power

Note that other points than the guarantee point can be measured and displayed in a curve-test report according to Grade 3B tolerances.

Static high pressure test

All produced pumps undergo a static high pressure test of $1.5 \times PN$ (pressure rating of the pump).

Specifying acceptance grades

The graphs in section Acceptance grades and tolerances show the tolerances as stated in the standard, related to an ordinary pump curve. The graphs also show which pump performance to expect if the customer, having the same pump to start with, orders a pump with the same guarantee point for different tolerances (B, E or U) within the acceptance grades.

In some cases it will not be possible to fulfil the same guarantee point for a unilateral tolerance as it will for a bilateral tolerance. This is indicated by the lowered curve for "E" and "U" grades.

If the requested guarantee point is the same for a Grade U pump as for a Grade B pump, the consequence of the production tolerances could result in a larger pump being required to obtain the requested duty point.

What Grundfos is able to guarantee for the different acceptance grades will be evaluated case by case. Contact your local sales company on this.

Acceptance grades and tolerances

Acceptance grade B

This acceptance grade refers to grades with a bilateral tolerance on flow and head and with a tolerance on efficiency.

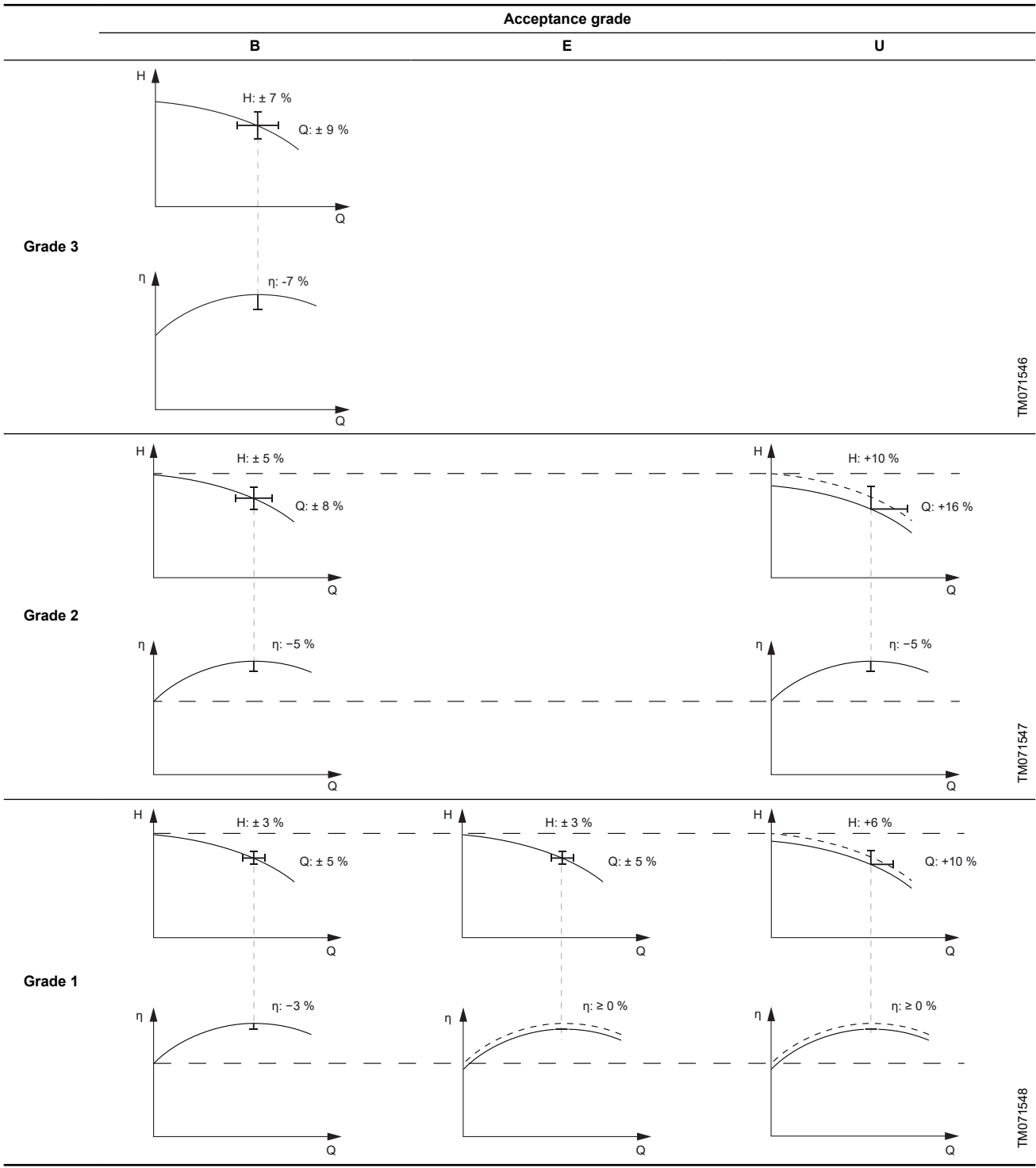
Acceptance grade E

This acceptance grade refers to a grade with a bilateral tolerance on flow and head but without tolerance on efficiency.

Acceptance grade U

This acceptance grade refers to a grade with a unilateral tolerance on flow and head. For the 2U grade there is a tolerance on efficiency. For the 1U grade there is no tolerance on efficiency.

Note that if the acceptance grade changes from Grade 1B to 1U, the customer does not necessarily get a better pump with a higher efficiency. More likely, he gets a pump where the performance is always to the positive side of the guarantee point.



TM071546

TM071547

TM071548

16. Performance curves

Overview

NKE pumps with speed-controlled motors

Pump size	Medium speed	Low speed
NKE 32-130.1	Refer to 32-130.1	-
NKE 32-130	Refer to 32-130	Refer to 32-130
NKE 32-165.1	Refer to 32-165.1	Refer to 32-165.1
NKE 32-180	Refer to 32-180	Refer to 32-180
NKE 32-205.1	Refer to 32-205.1	Refer to 32-205.1
NKE 40-130	Refer to 40-130	Refer to 40-130
NKE 40-180	Refer to 40-180	Refer to 40-180
NKE 40-220	Refer to 40-220	Refer to 40-220
NKE 40-225	Refer to 40-225	Refer to 40-225
NKE 50-130	Refer to 50-130	Refer to 50-130
NKE 50-225	Refer to 50-225	Refer to 50-225
NKE 50-280	Refer to 50-280	Refer to 50-280
NKE 50-350	-	Refer to 50-350
NKE 65-130	Refer to 65-130	Refer to 65-130
NKE 65-180	Refer to 65-180	Refer to 65-180
NKE 65-225	Refer to 65-225	Refer to 65-225
NKE 65-280	-	Refer to 65-280
NKE 80-180	Refer to 80-180	Refer to 80-180
NKE 80-225	Refer to 80-225	Refer to 80-225
NKE 80-280	-	Refer to 80-280
NKE 80-350	-	Refer to 80-350
NKE 100-180	Refer to 100-180	Refer to 100-180
NKE 100-225	-	Refer to 100-225
NKE 125-180	Refer to 125-180	Refer to 125-180
NKE 125-225	-	Refer to 125-225
NKE 150-225	-	Refer to 150-225
NKE 200-350	-	Refer to 200-350
NKE 250-315	-	Refer to 250-315

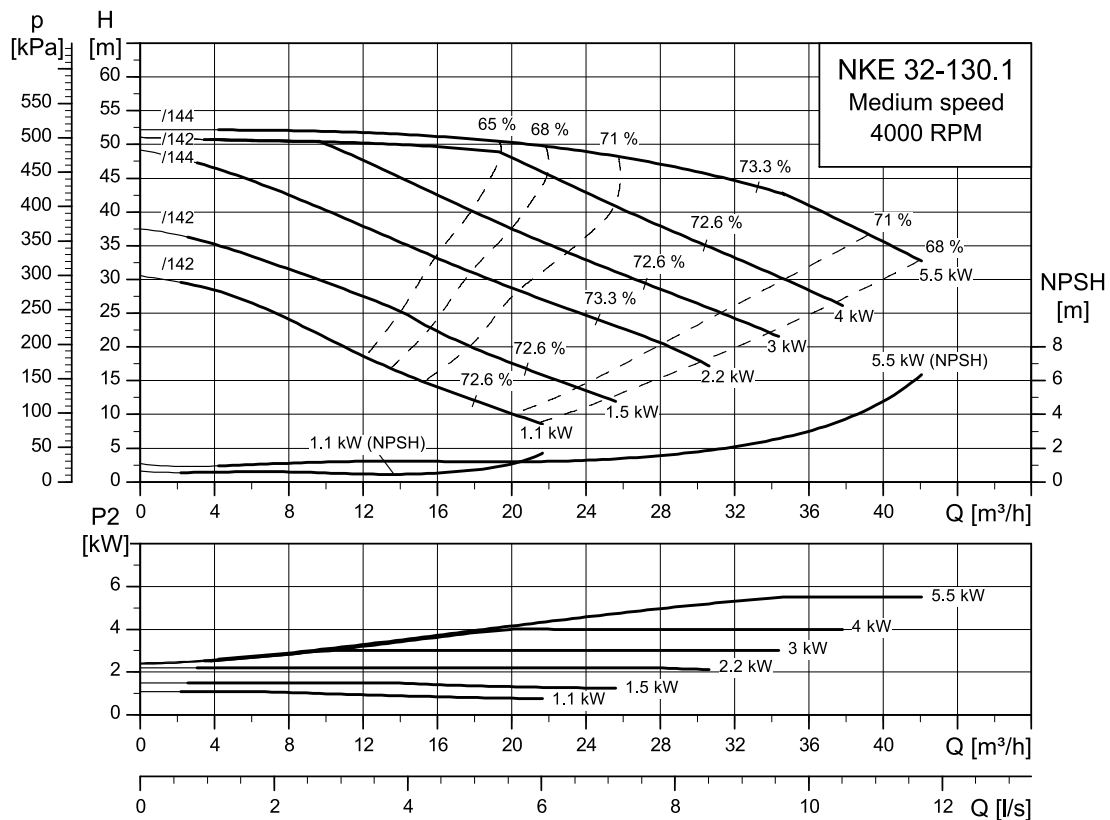
NK pumps with fixed-speed motors

Pump size	2-pole	4-pole	6-pole
NK 032-130.1	Refer to 32-130.1	Refer to 32-130.1	-
NK 032-130	Refer to 32-130	Refer to 32-130	-
NK 032-165.1	Refer to 32-165.1	Refer to 32-165.1	-
NK 032-180	Refer to 32-180	Refer to 32-180	-
NK 032-205.1	Refer to 32-205.1	Refer to 32-205.1	-
NK 040-130	Refer to 40-130	Refer to 40-130	-
NK 040-180	Refer to 40-180	Refer to 40-180	-
NK 040-190	Refer to 40-190	Refer to 40-190	-
NK 040-220	Refer to 40-220	Refer to 40-220	-
NK 040-225	Refer to 40-225	Refer to 40-225	-
NK 050-130	Refer to 50-130	Refer to 50-130	-
NK 050-220	Refer to 50-220	Refer to 50-220	-
NK 050-225	Refer to 50-225	Refer to 50-225	-
NK 050-280	Refer to 50-280	Refer to 50-280	-
NK 050-350	-	Refer to 50-350	-
NK 065-130	Refer to 65-130	Refer to 65-130	-
NK 065-180	Refer to 65-180	Refer to 65-180	-

Pump size	2-pole	4-pole	6-pole
NK 065-210	Refer to 65-210	Refer to 65-210	Refer to 65-210
NK 065-225	Refer to 65-225	Refer to 65-225	Refer to 65-225
NK 065-280	-	Refer to 65-280	Refer to 65-280
NK 080-180.1	Refer to 80-180.1	-	-
NK 080-180	Refer to 80-180	Refer to 80-180	-
NK 080-225	Refer to 80-225	Refer to 80-225	Refer to 80-225
NK 080-280	-	Refer to 80-280	Refer to 80-280
NK 080-350	-	Refer to 80-350	Refer to 80-350
NK 080-380	-	Refer to 80-380	Refer to 80-380
NK 100-180	Refer to 100-180	Refer to 100-180	Refer to 100-180
NK 100-225.1	Refer to 100-225.1	Refer to 100-225.1	Refer to 100-225.1
NK 100-225	Refer to 100-225	Refer to 100-225	Refer to 100-225
NK 100-280	-	Refer to 100-280	Refer to 100-280
NK 100-350	-	Refer to 100-350	Refer to 100-350
NK 100-360	-	Refer to 100-360	Refer to 100-360
NK 100-380	-	Refer to 100-380	Refer to 100-380
NK 125-180	Refer to 125-180	Refer to 125-180	Refer to 125-180
NK 125-225	-	Refer to 125-225	Refer to 125-225
NK 125-280	-	Refer to 125-280	Refer to 125-280
NK 125-320	-	Refer to 125-320	Refer to 125-320
NK 125-350	-	Refer to 125-350	Refer to 125-350
NK 125-355	-	Refer to 125-355	Refer to 125-355
NK 125-360	-	Refer to 125-360	Refer to 125-360
NK 125-380	-	Refer to 125-380	Refer to 125-380
NK 150-225	-	Refer to 150-225	Refer to 150-225
NK 150-280	-	Refer to 150-280	Refer to 150-280
NK 150-300	-	Refer to 150-300	Refer to 150-300
NK 150-350.1	-	Refer to 150-350.1	Refer to 150-350.1
NK 150-350	-	Refer to 150-350	Refer to 150-350
NK 150-355	-	Refer to 150-355	Refer to 150-355
NK 150-360	-	Refer to 150-360	Refer to 150-360
NK 150-380	-	Refer to 150-380	Refer to 150-380
NK 150-390	-	Refer to 150-390	Refer to 150-390
NK 200-300	-	Refer to 200-300	Refer to 200-300
NK 200-350	-	Refer to 200-350	Refer to 200-350
NK 200-380	-	Refer to 200-380	Refer to 200-380
NK 200-500	-	Refer to 200-500	Refer to 200-500
NK 250-315	-	Refer to 250-315	Refer to 250-315
NK 250-360	-	Refer to 250-360	Refer to 250-360
NK 250-380	-	Refer to 250-380	Refer to 250-380
NK 300-300	-	Refer to 300-300	Refer to 300-300
NK 300-310	-	Refer to 300-310	Refer to 300-310
NK 300-350	-	Refer to 300-350	Refer to 300-350
NK 300-400	-	Refer to 300-400	Refer to 300-400
NK 350-350	-	Refer to 350-350	Refer to 350-350

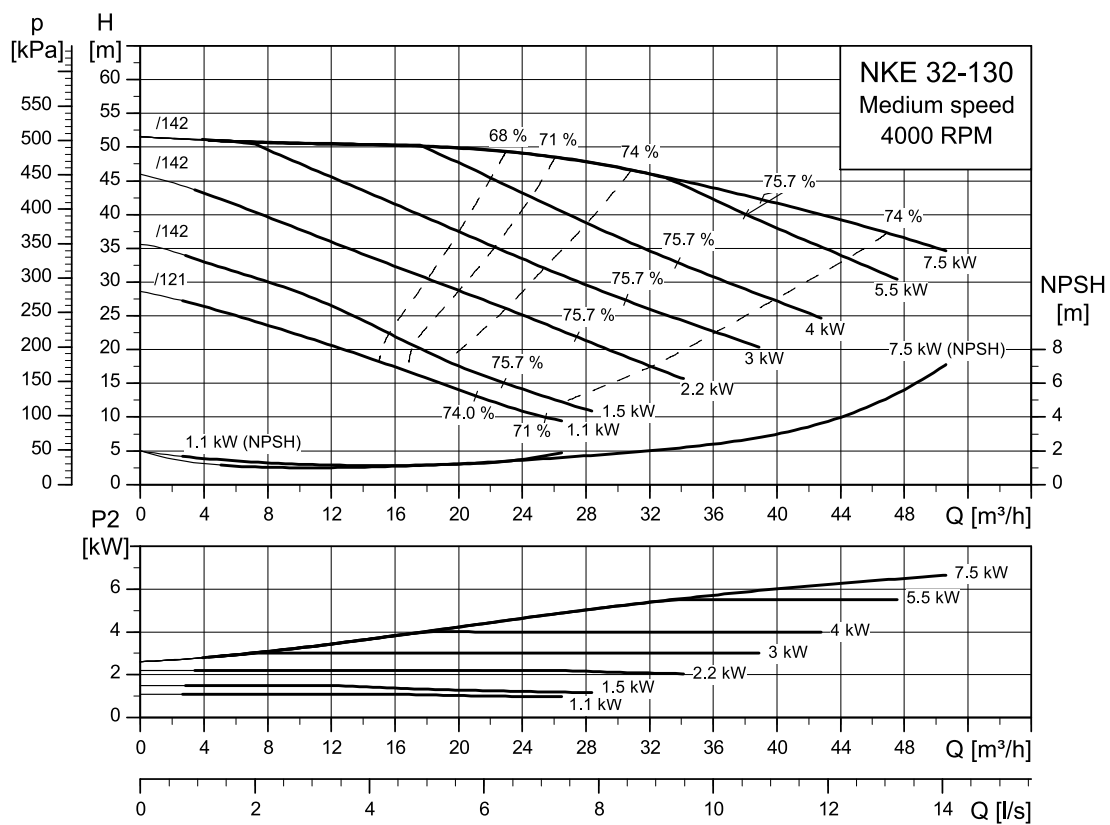
Medium speed, 4000 RPM

32-130.1



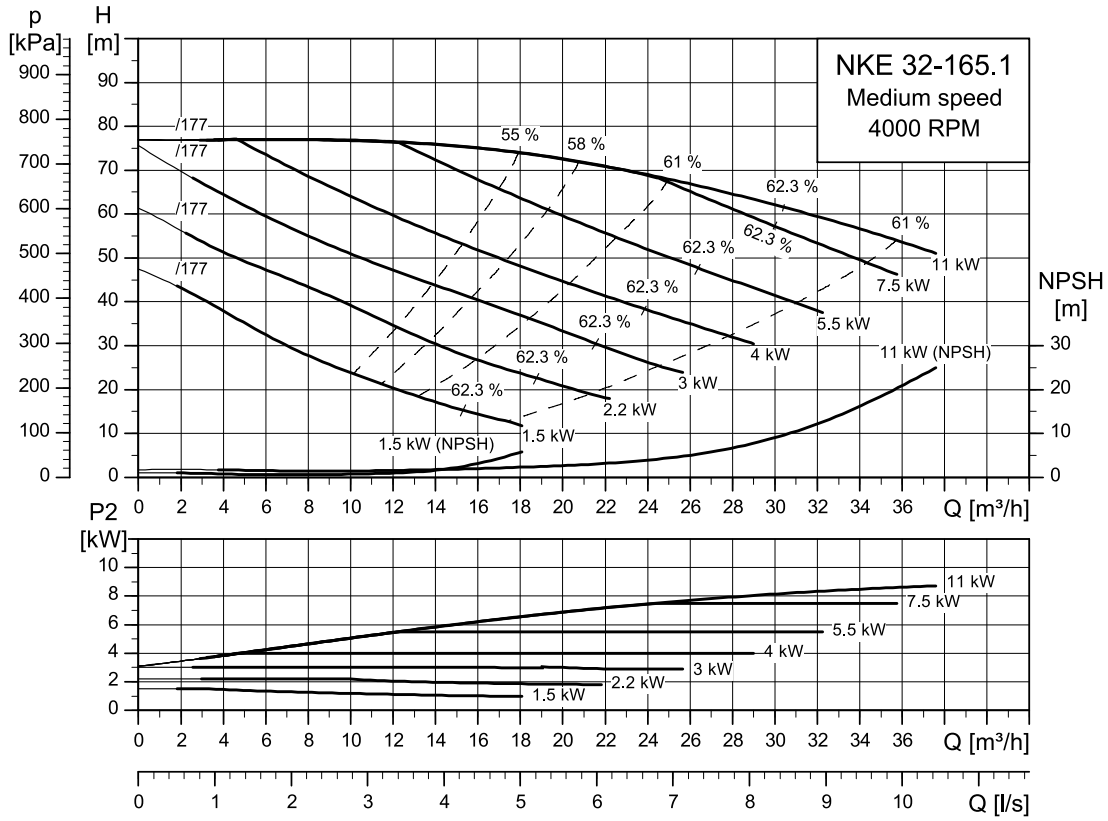
TM085346

32-130



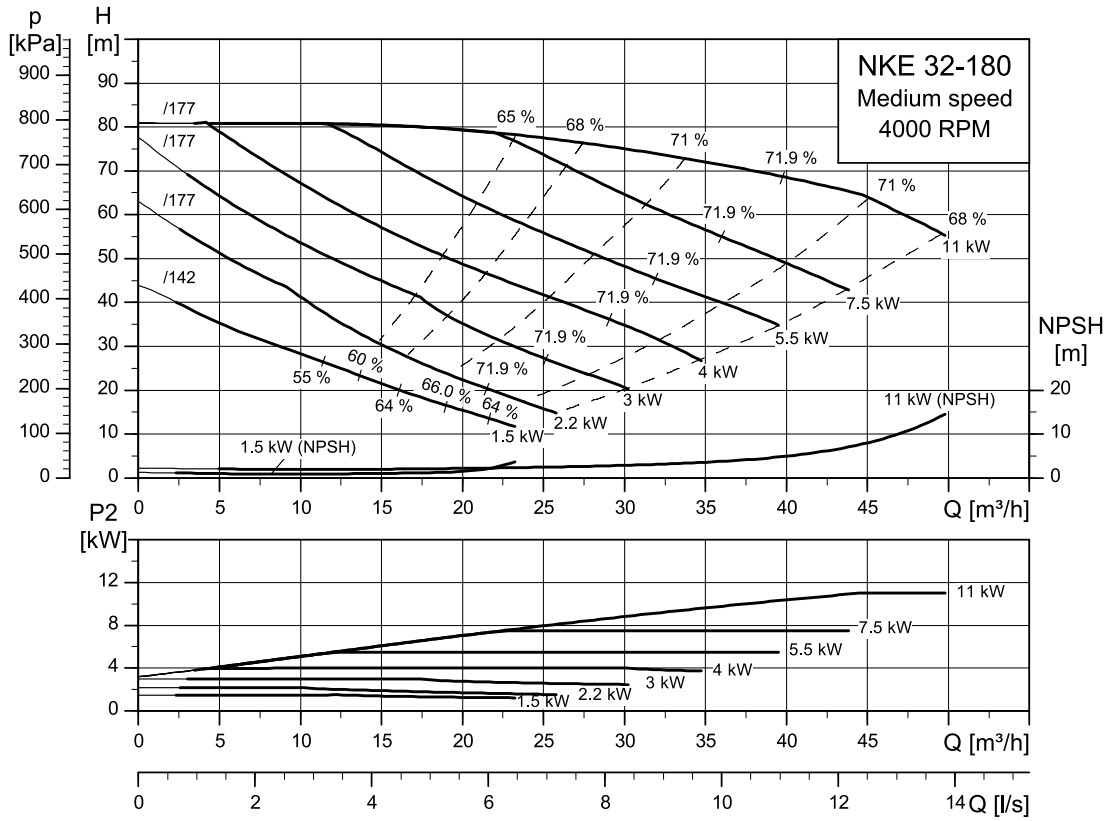
TM085348

32-165.1



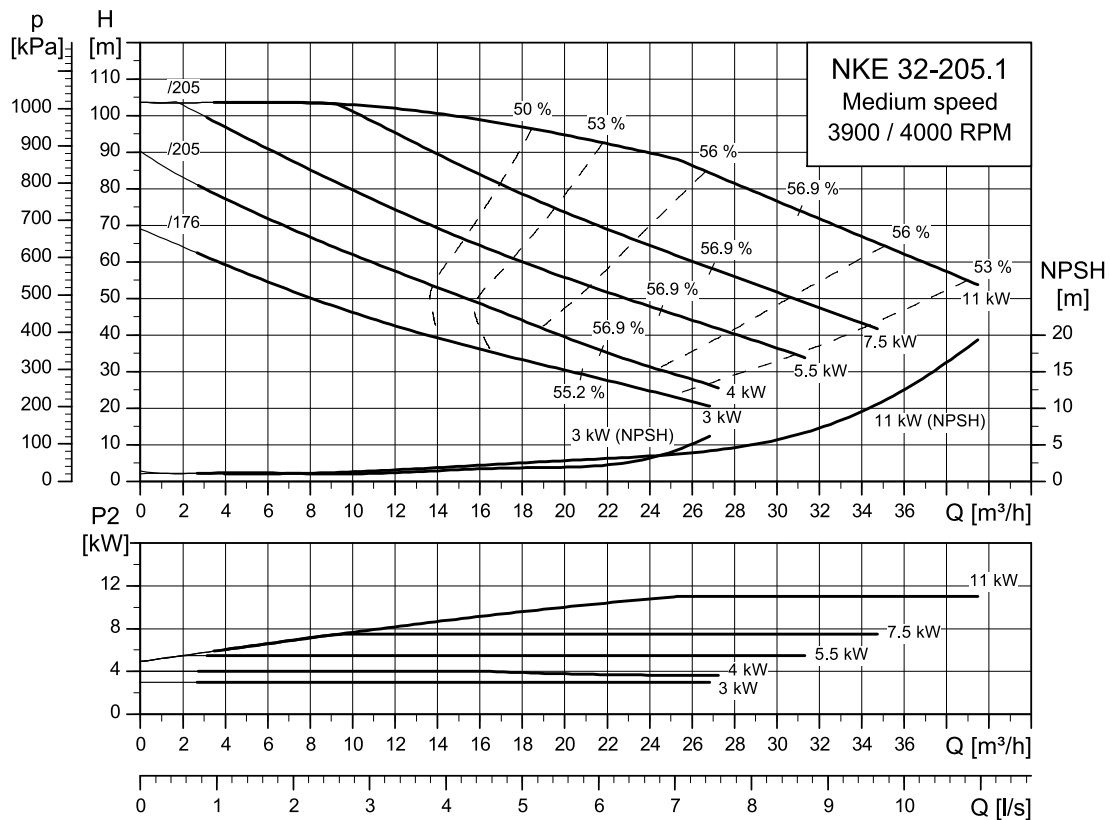
TM085351

32-180



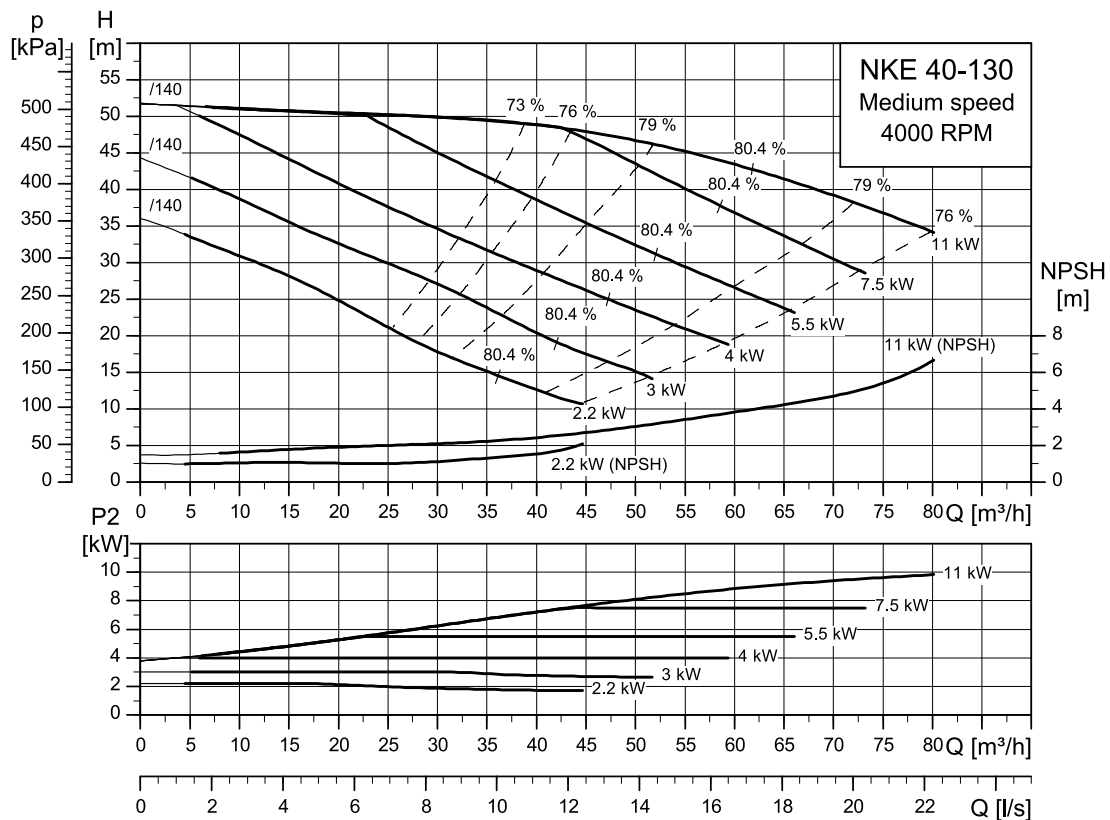
TM082106

32-250.1



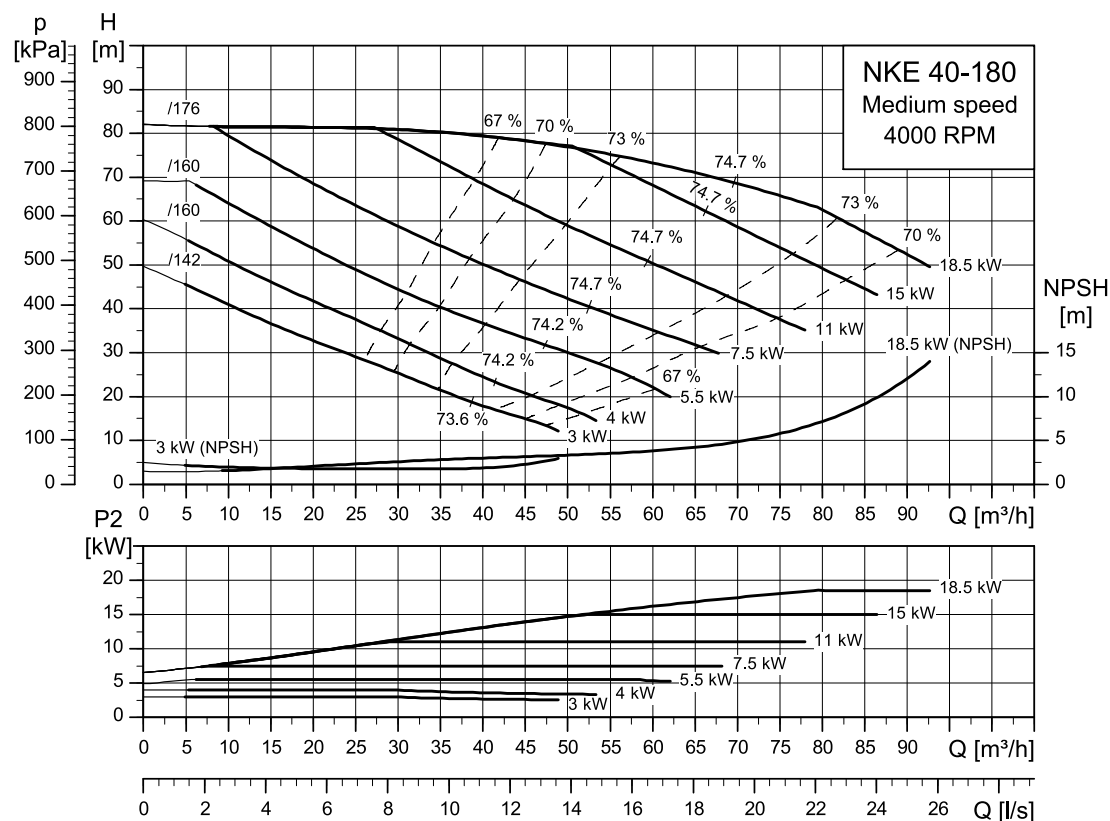
TM085353

40-130



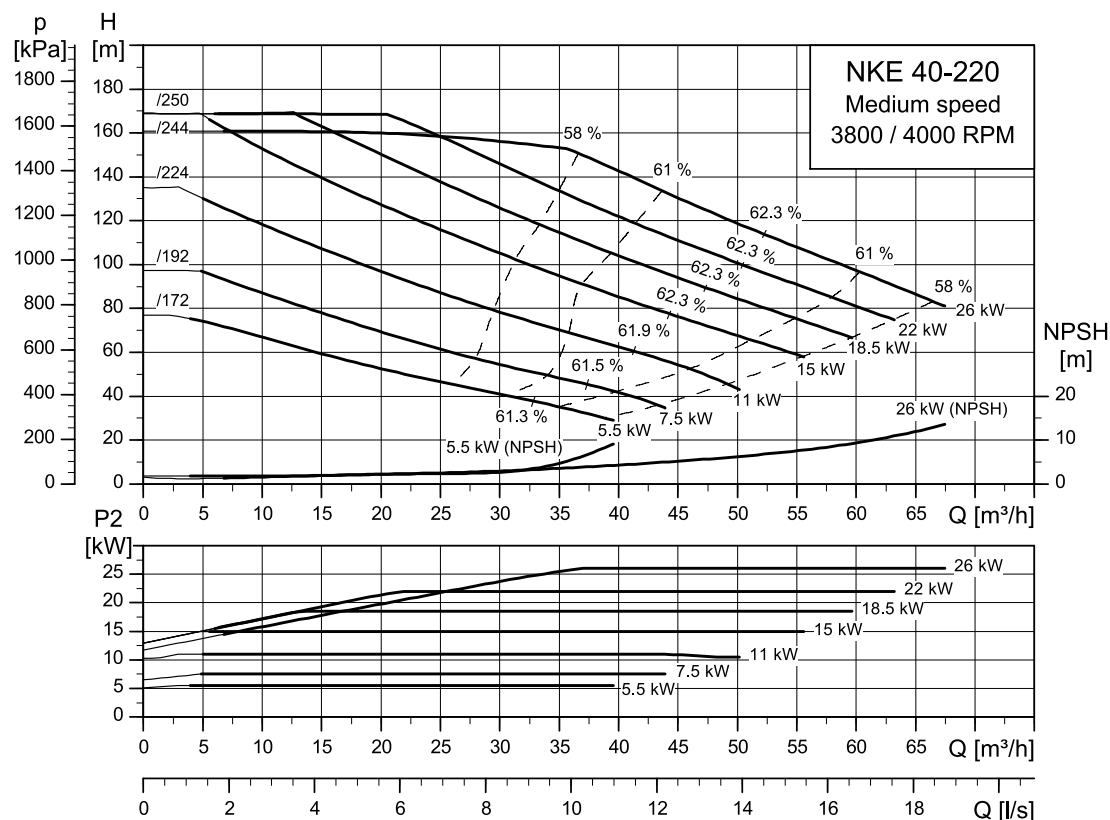
TM085357

40-180



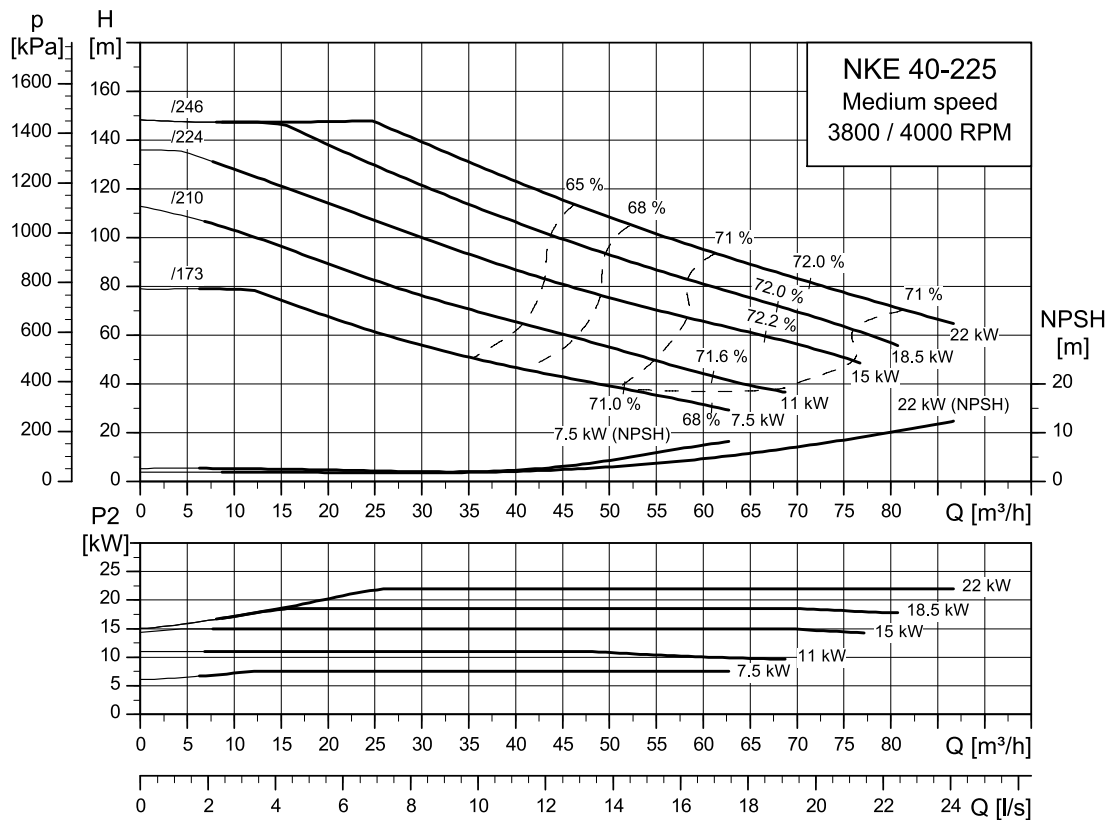
TM086750

40-220



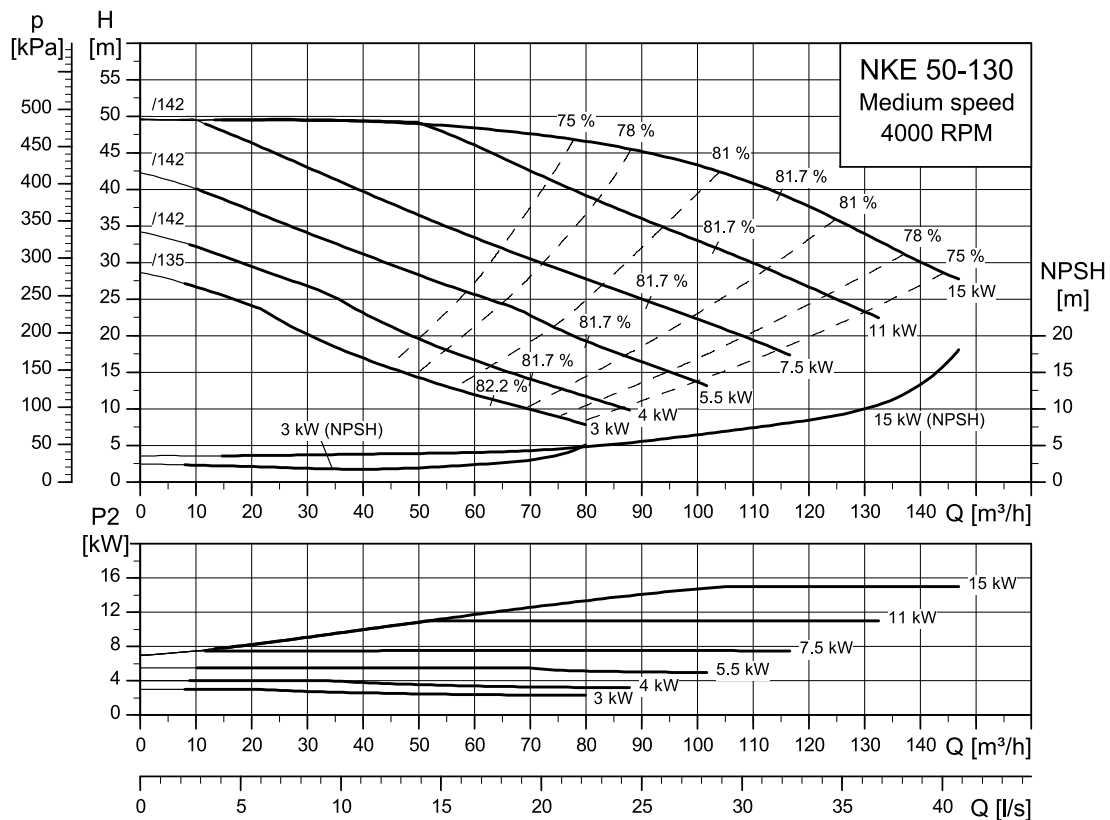
TM086867

40-225



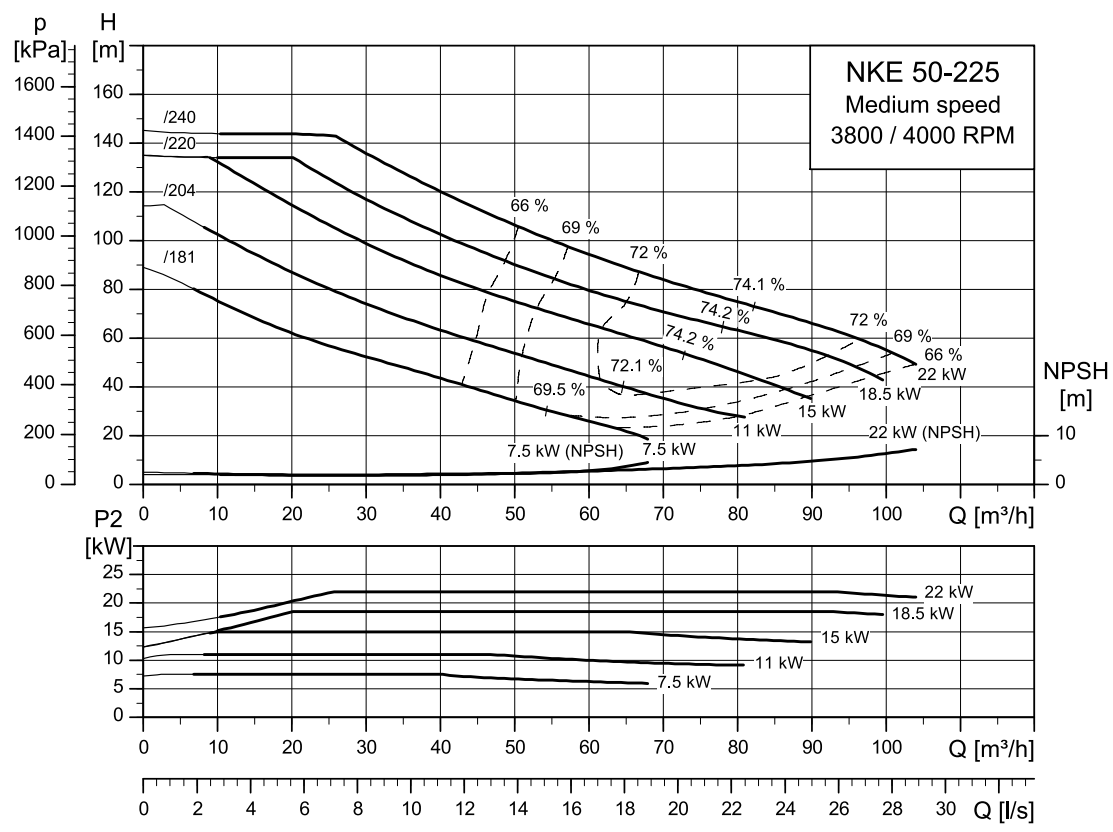
TM086866

50-130



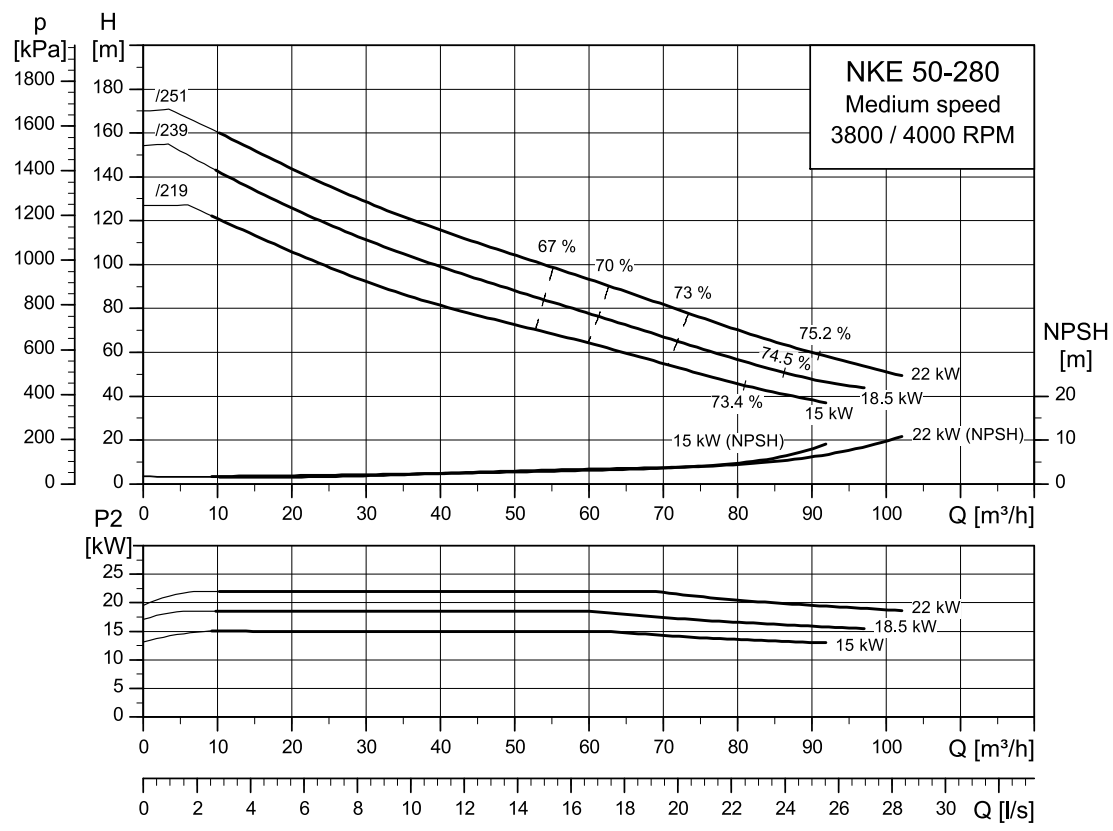
TM085360

50-225



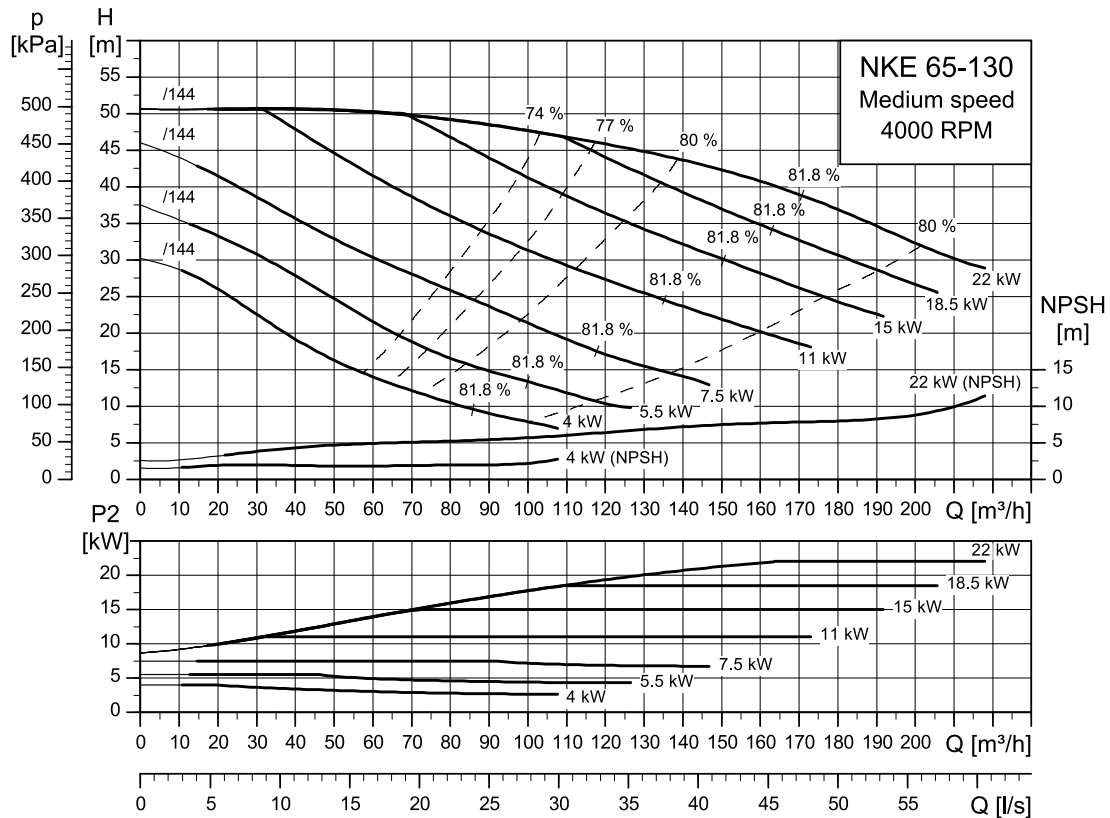
TM086868

50-280



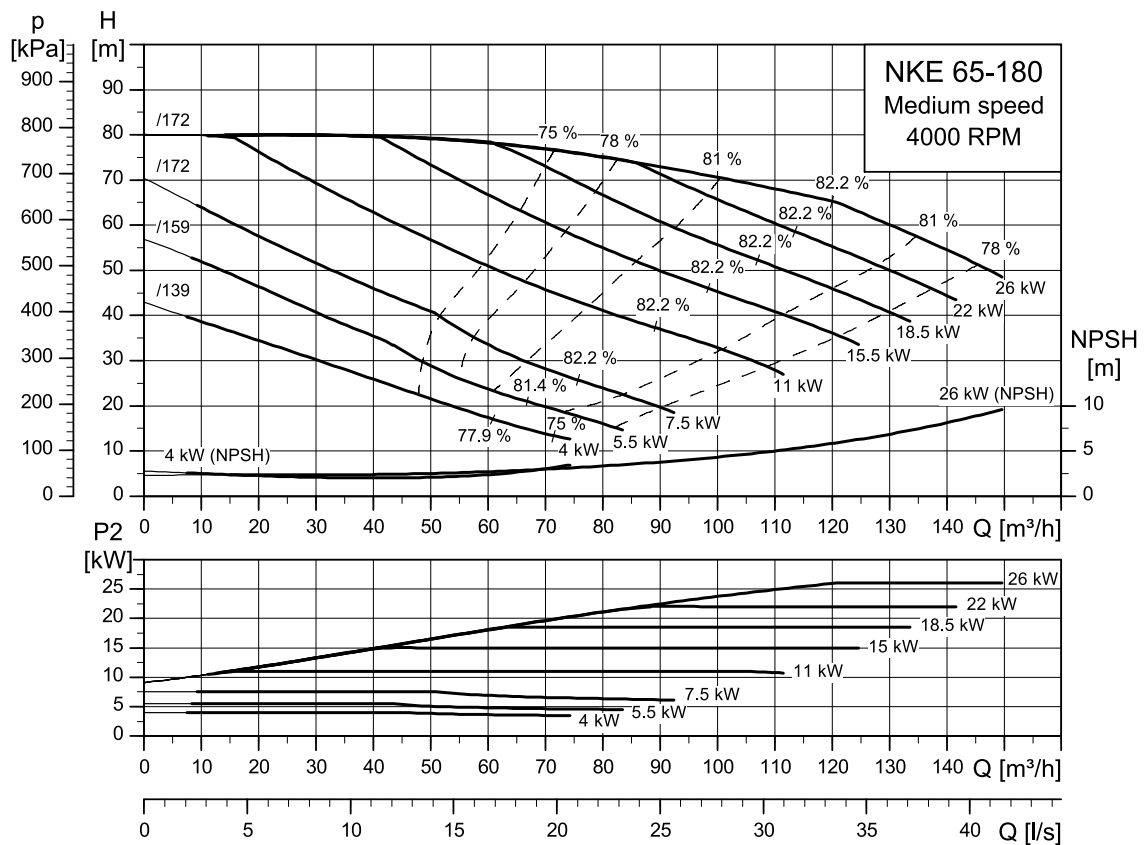
TM086869

65-130



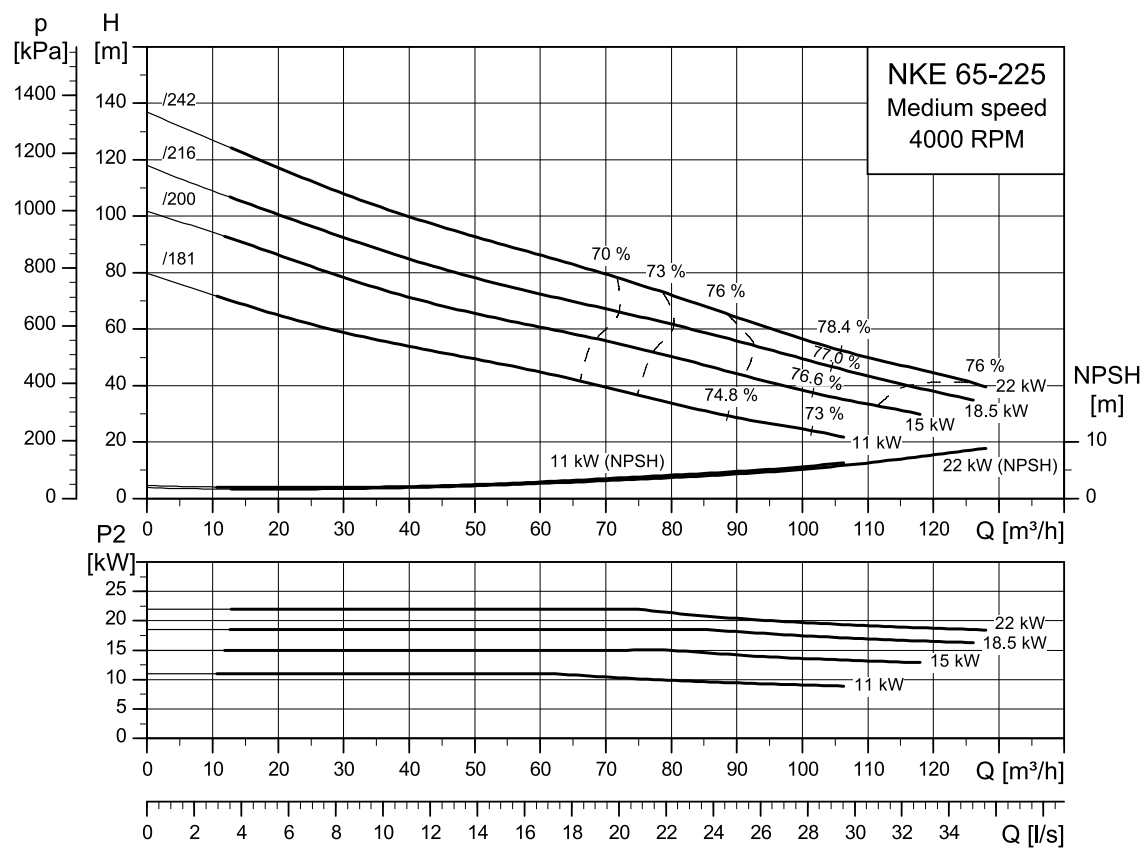
TM085364

65-180



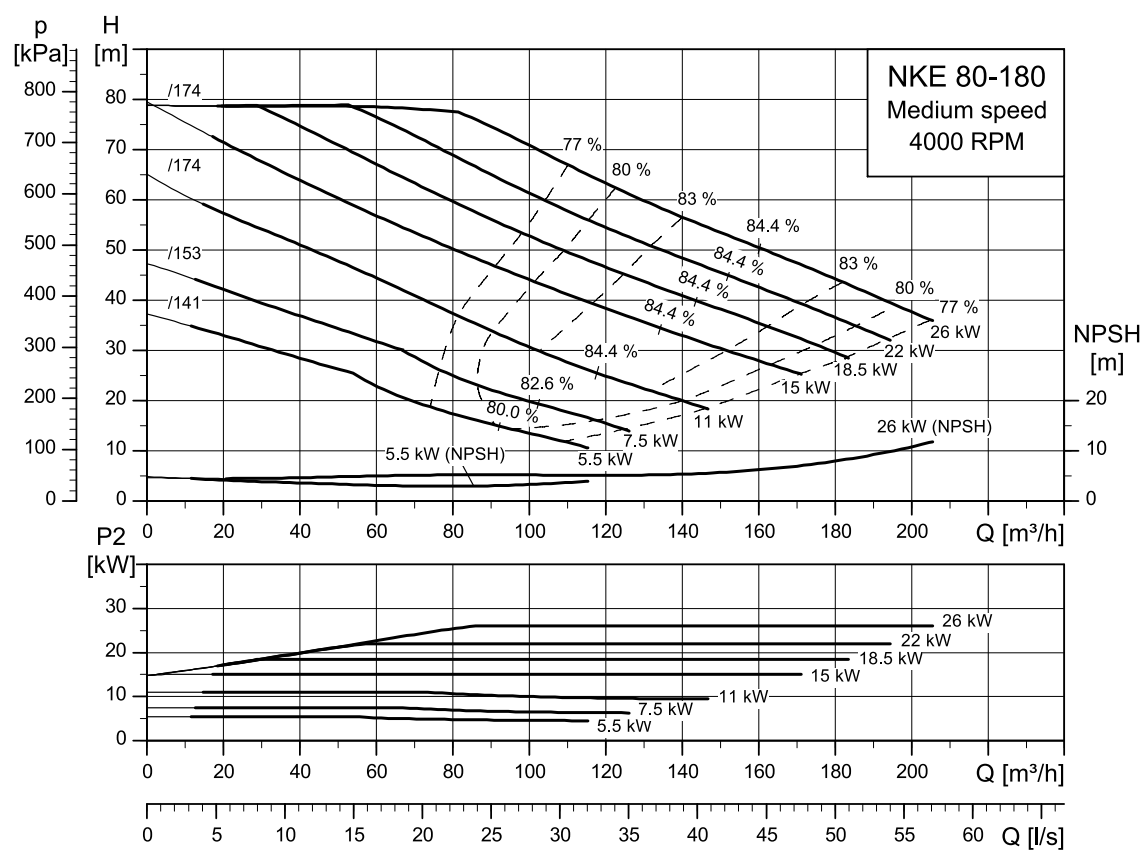
TM086752

65-225



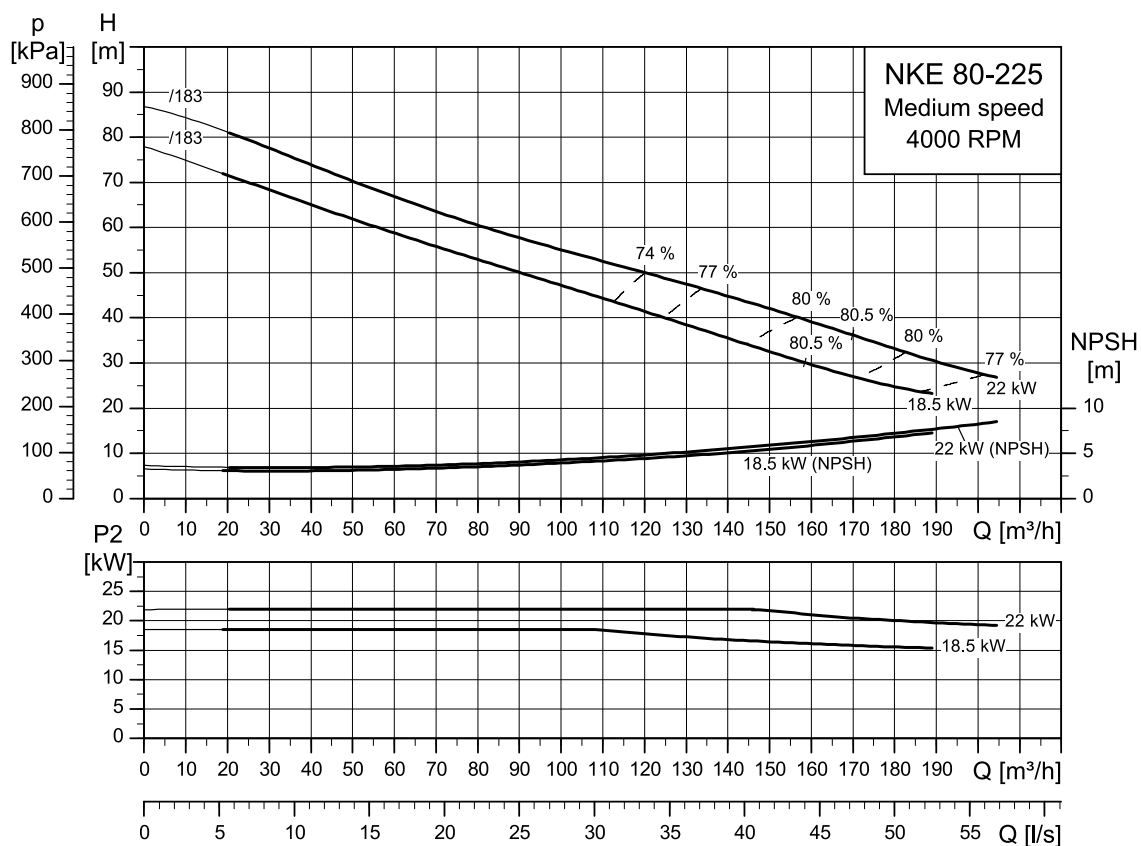
TM086870

80-180



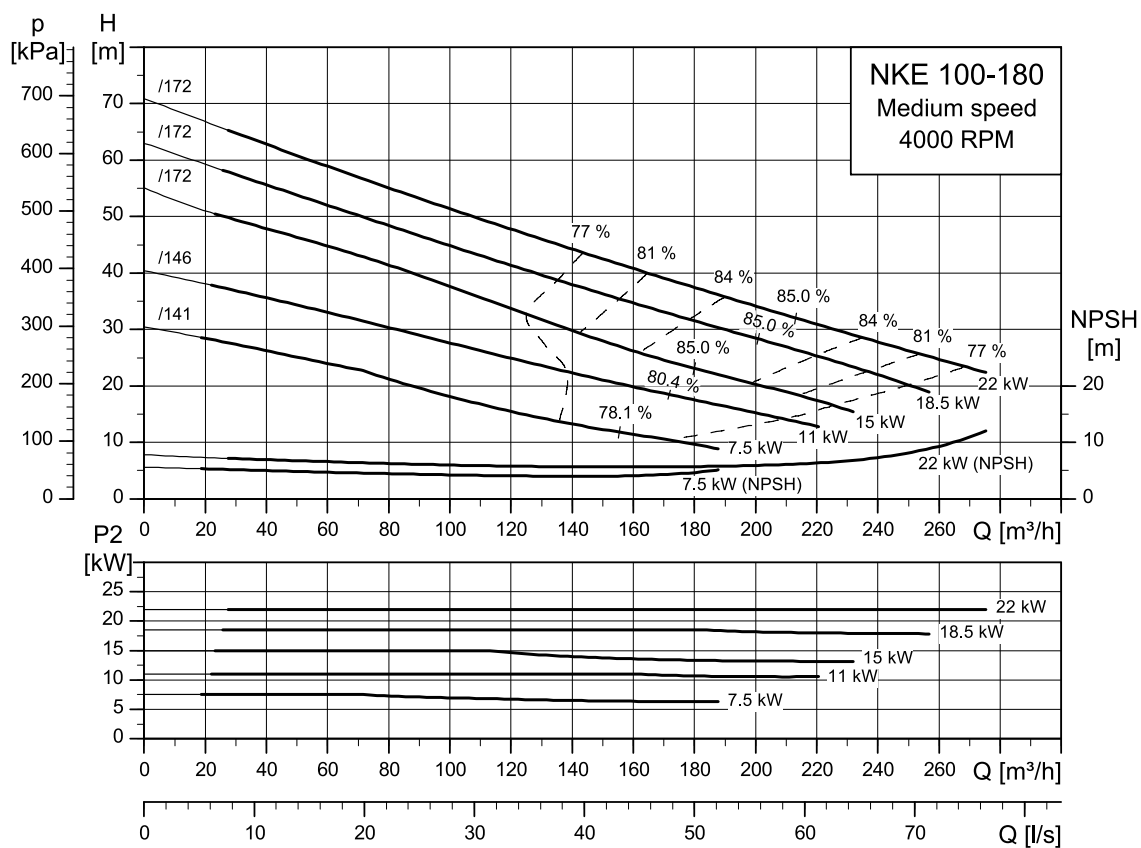
TM086755

80-225



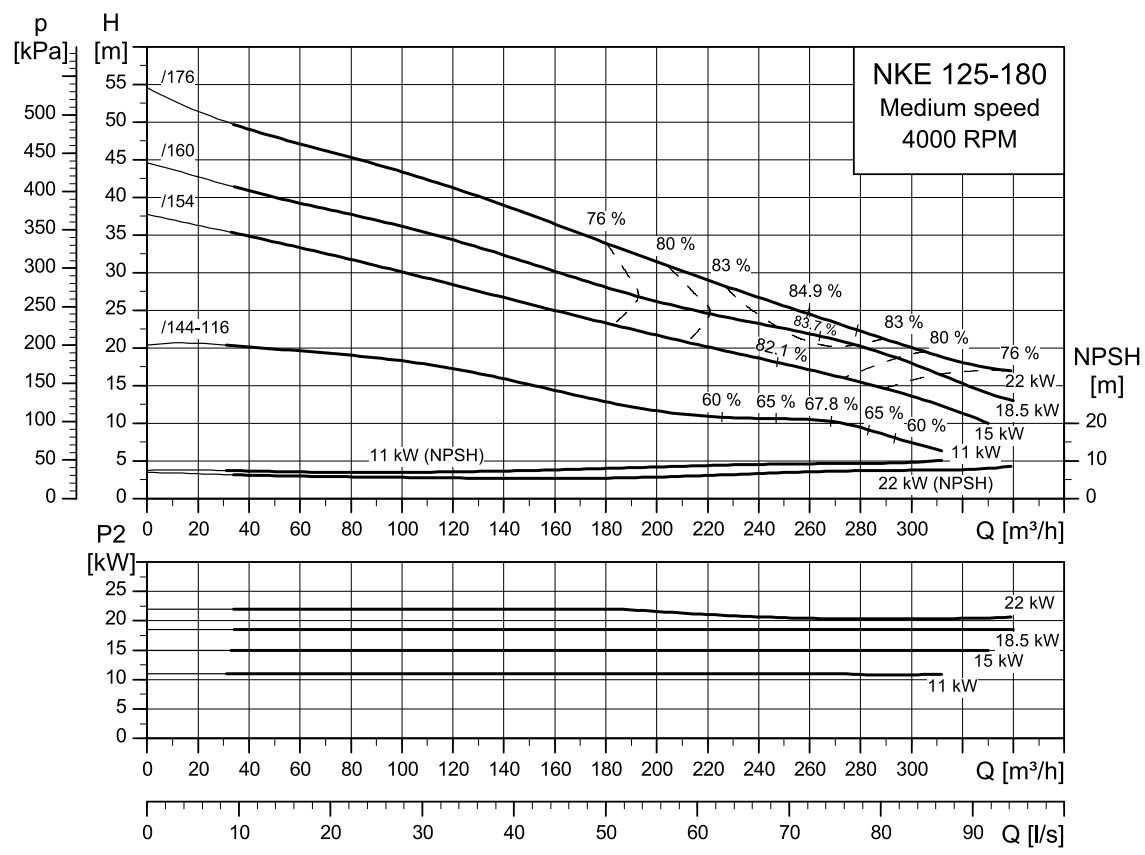
TM086758

100-180



TM086759

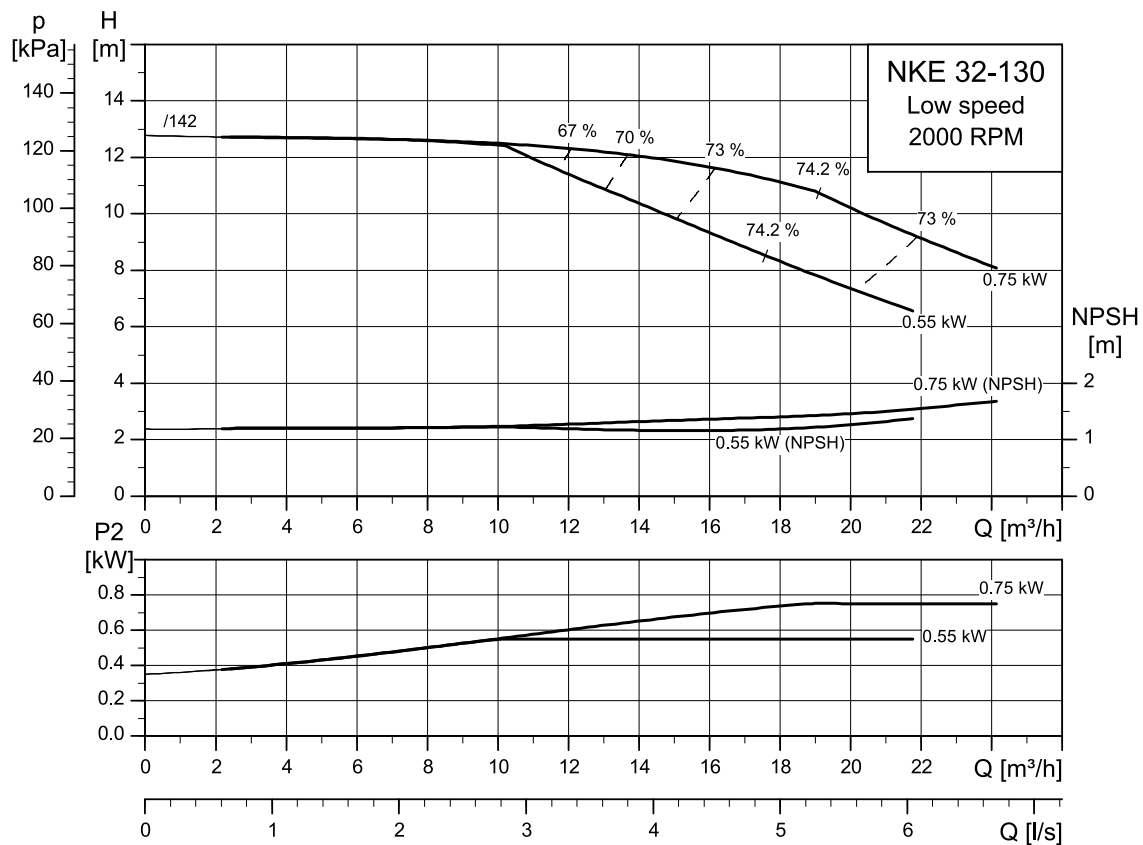
125-180



TM086762

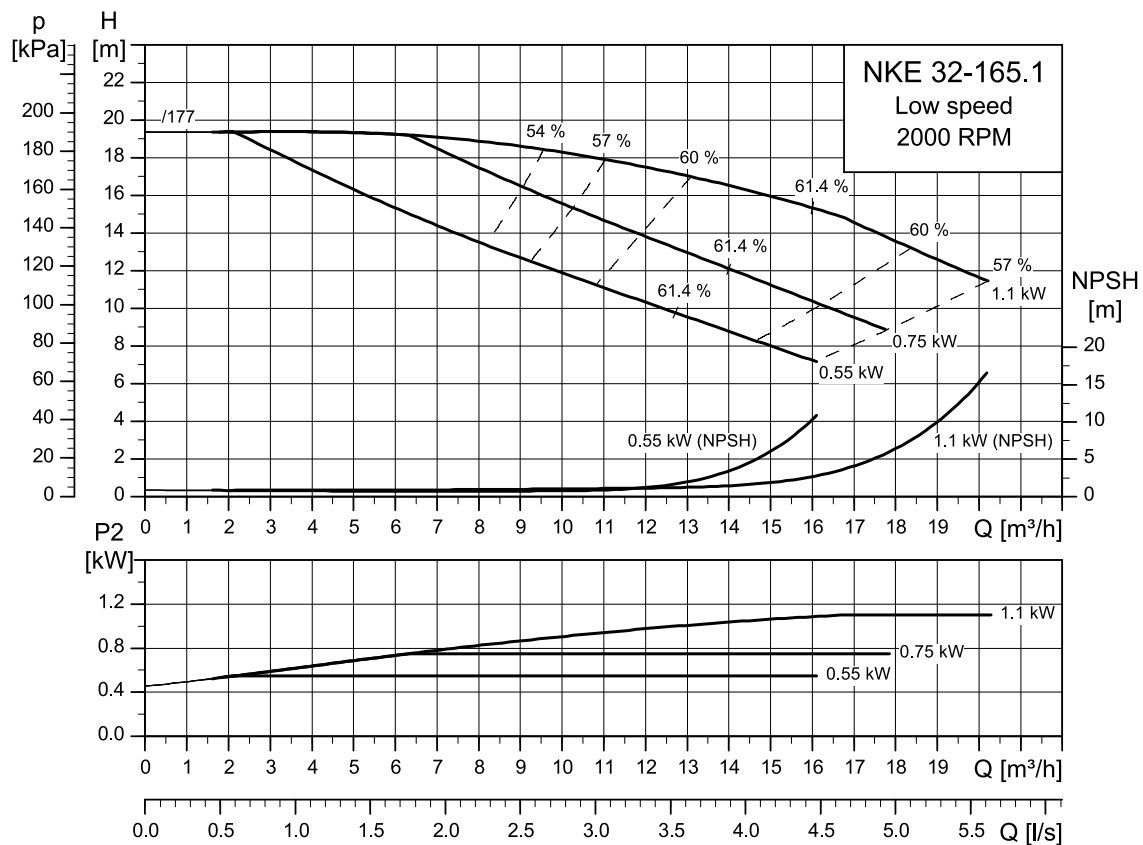
Low speed, 2000 / 2200 RPM

32-130



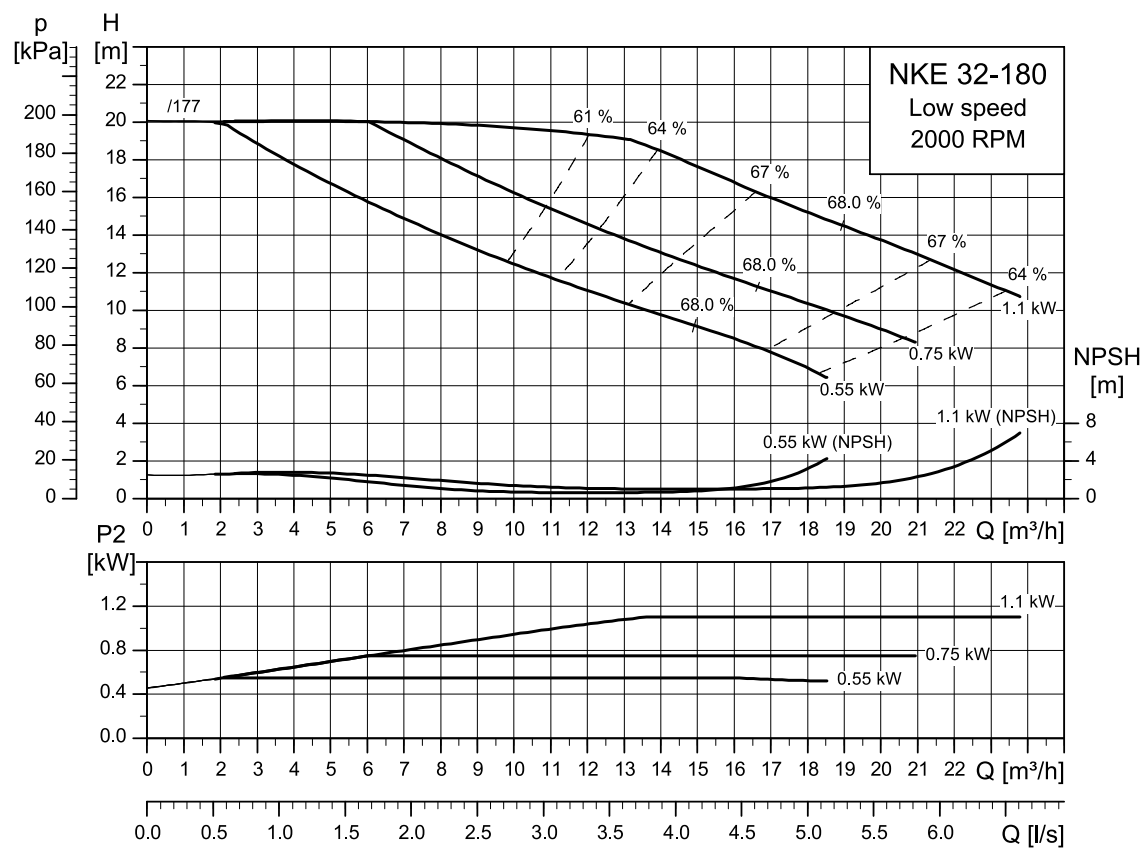
TM086871

32-165.1



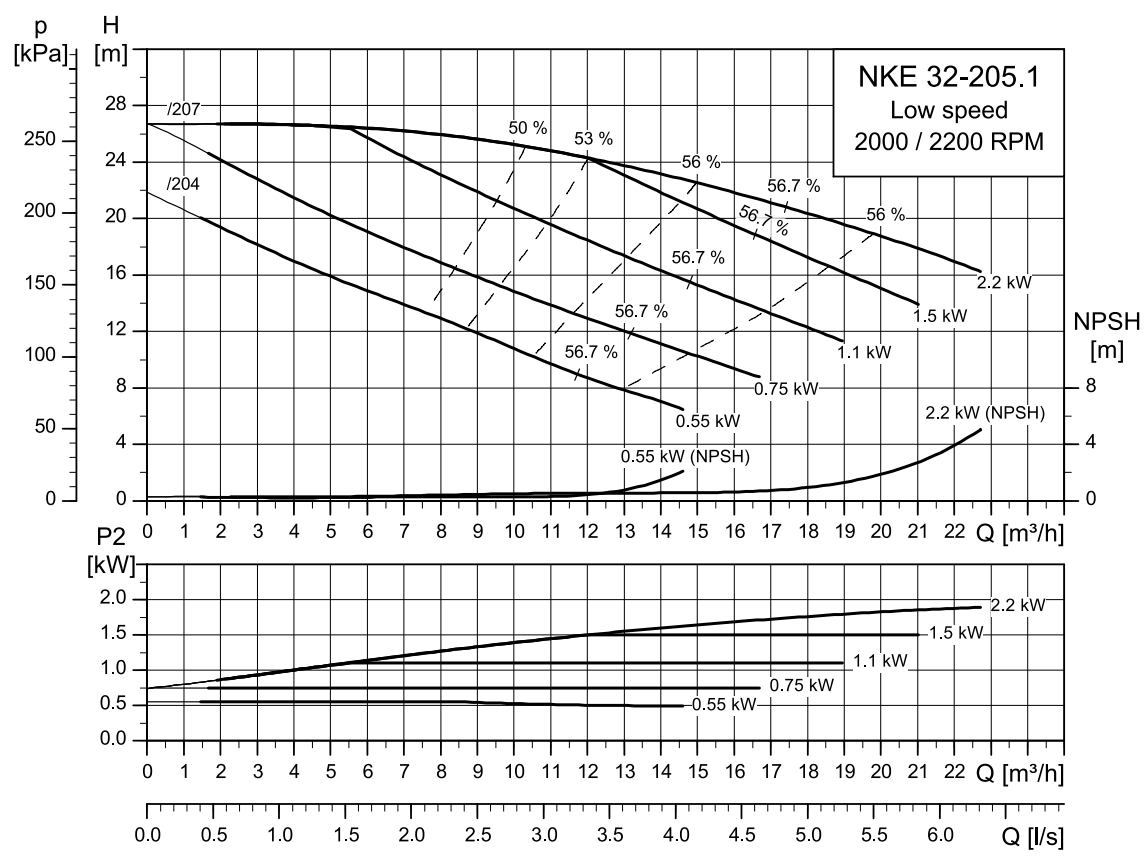
TM086872

32-180



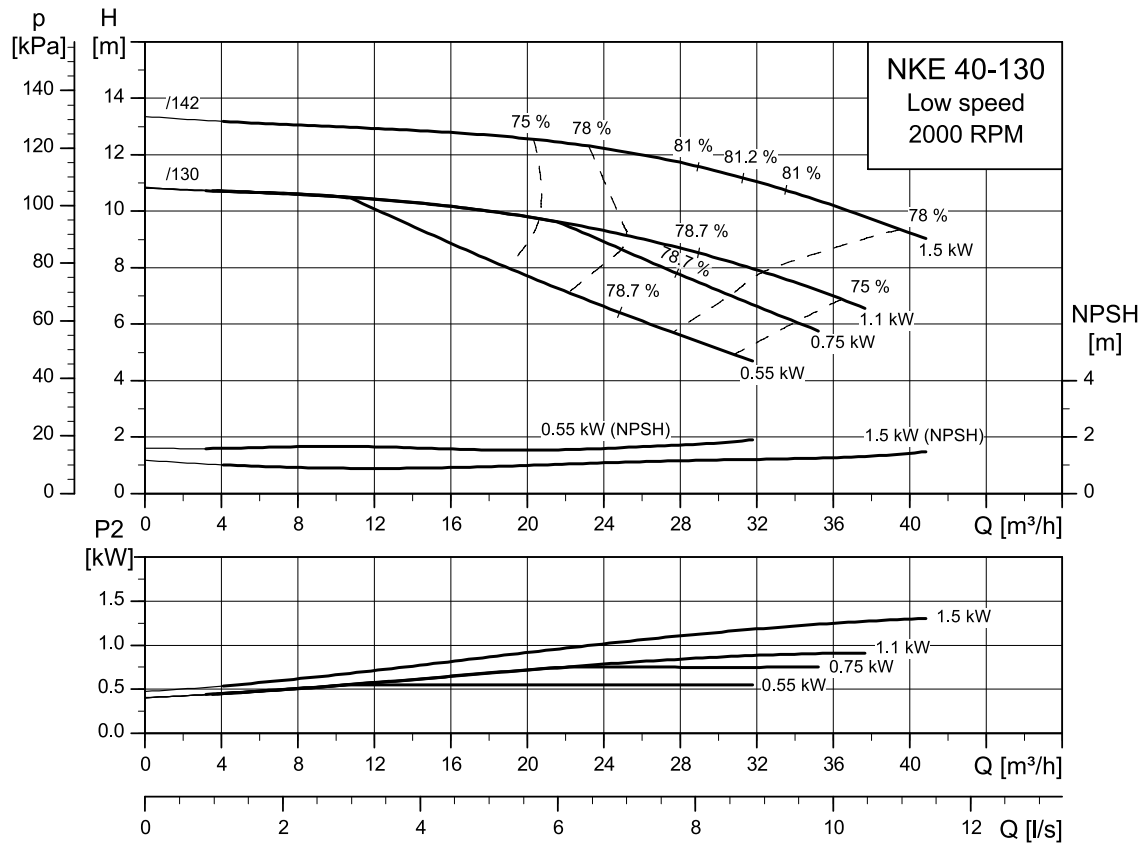
TM086873

32-205.1



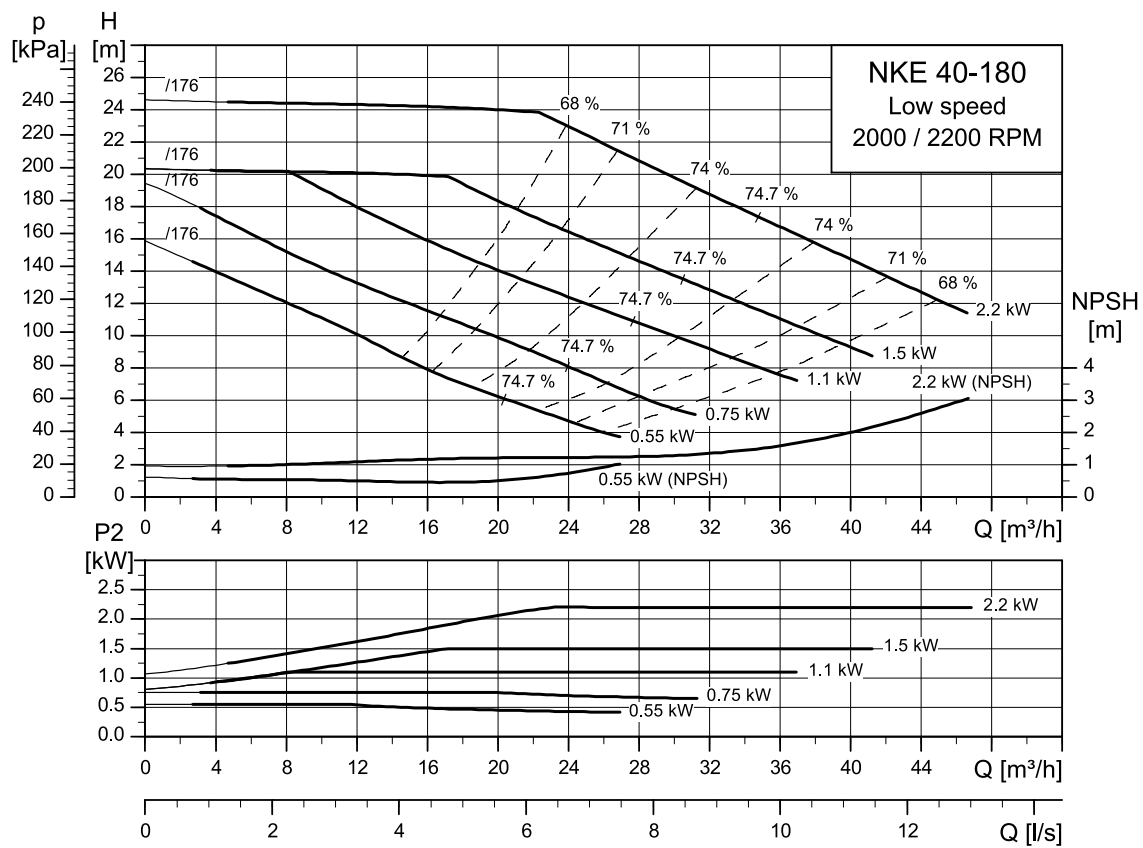
TM086874

40-130



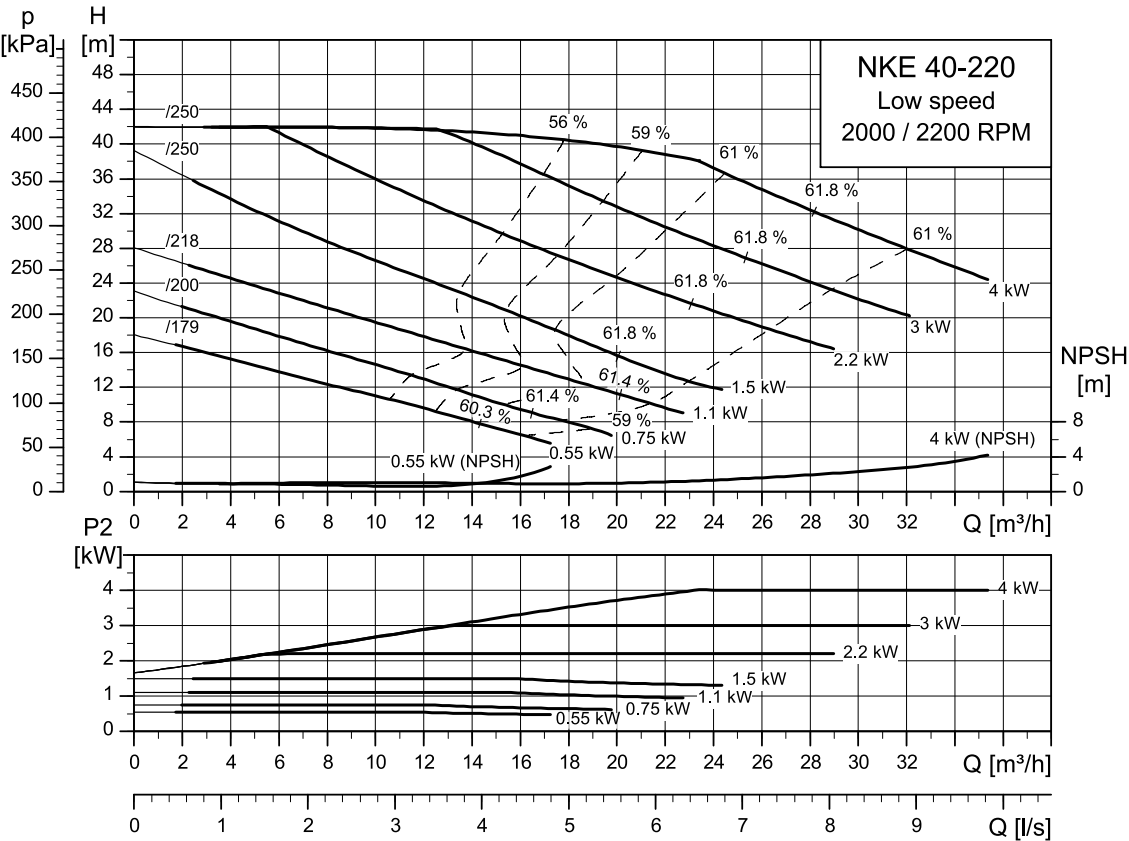
TM086875

40-180



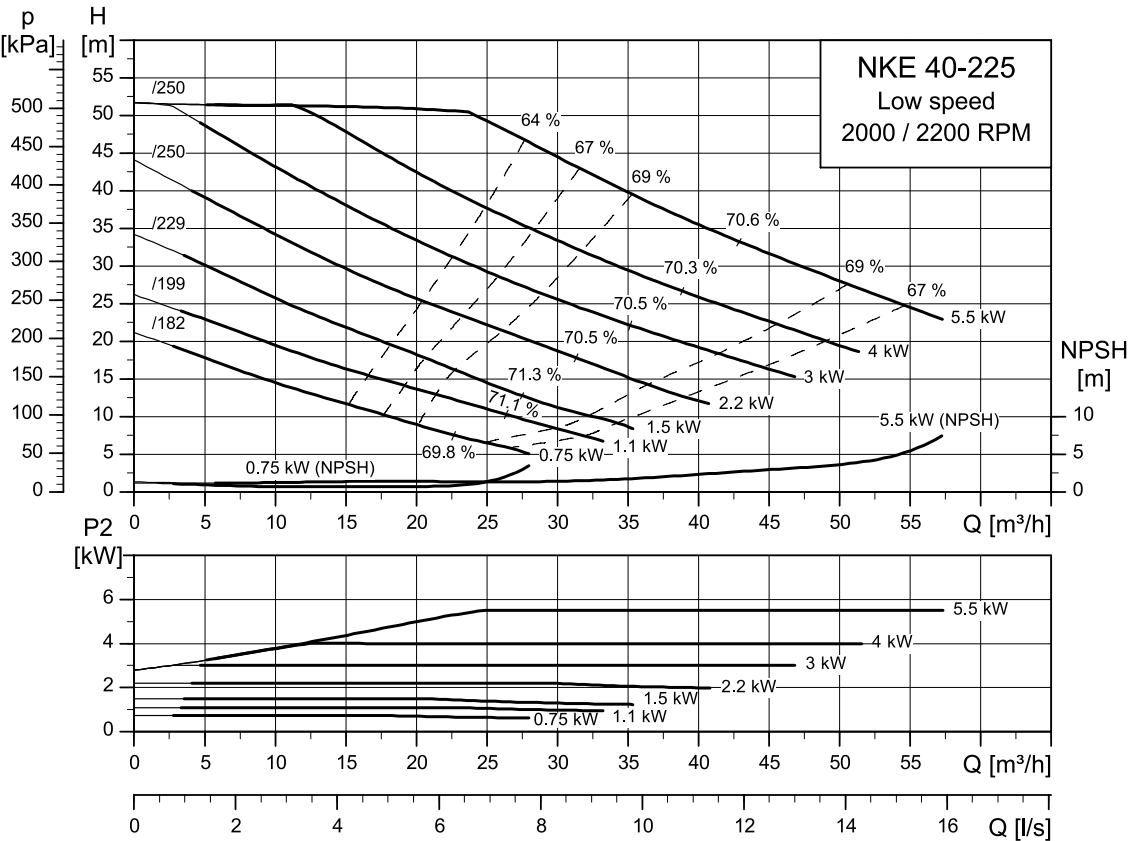
TM086876

40-220



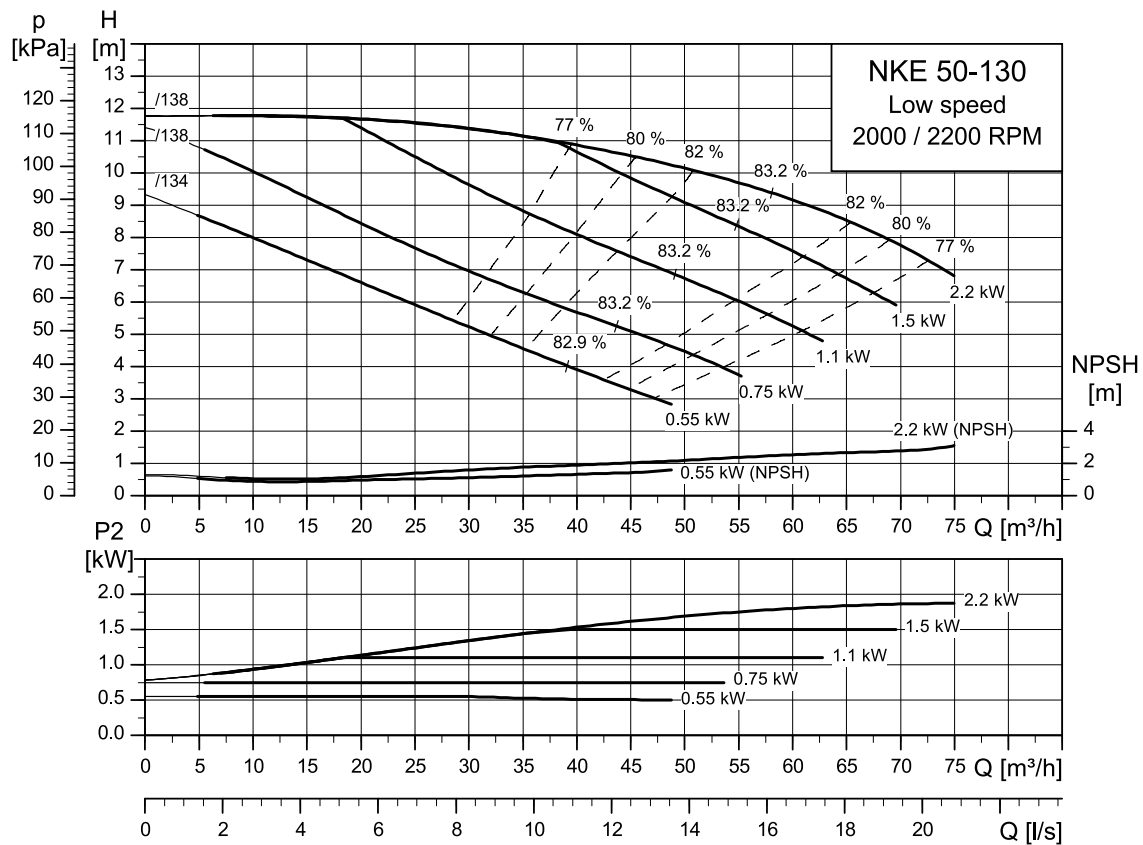
TM086877

40-225



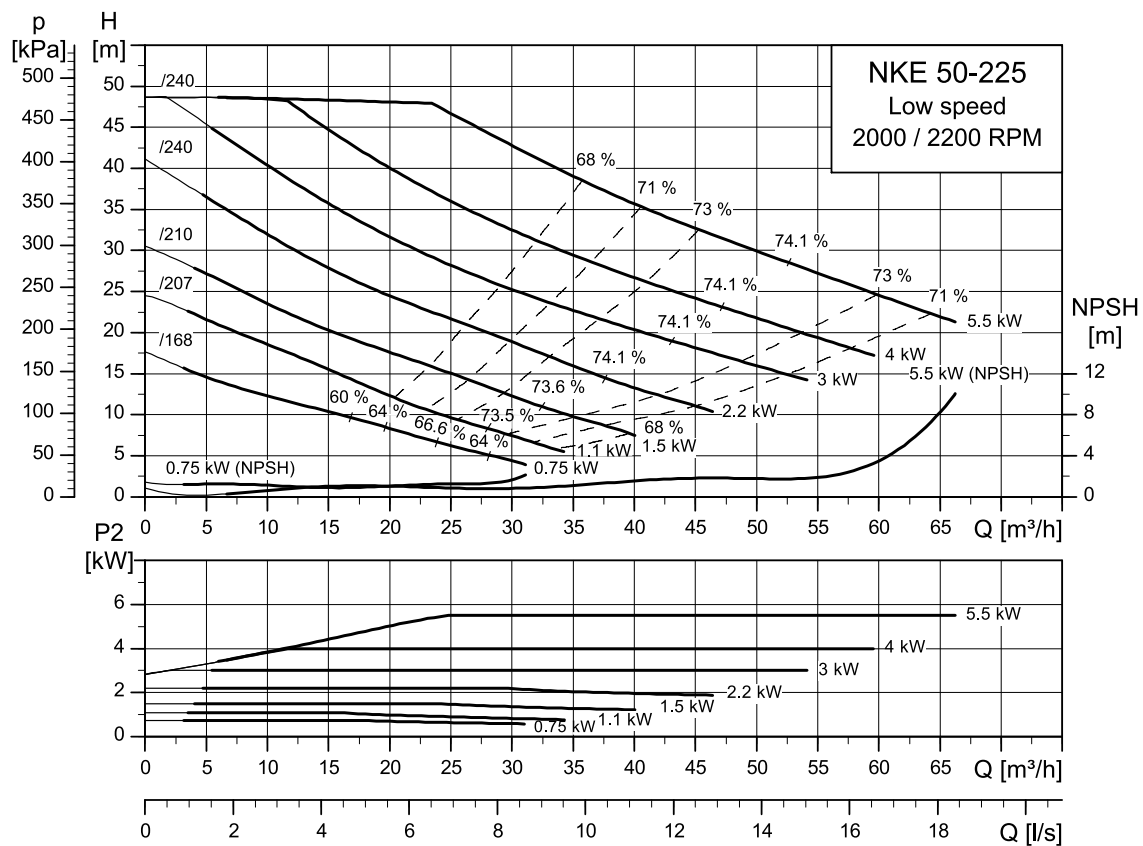
TM086878

50-130



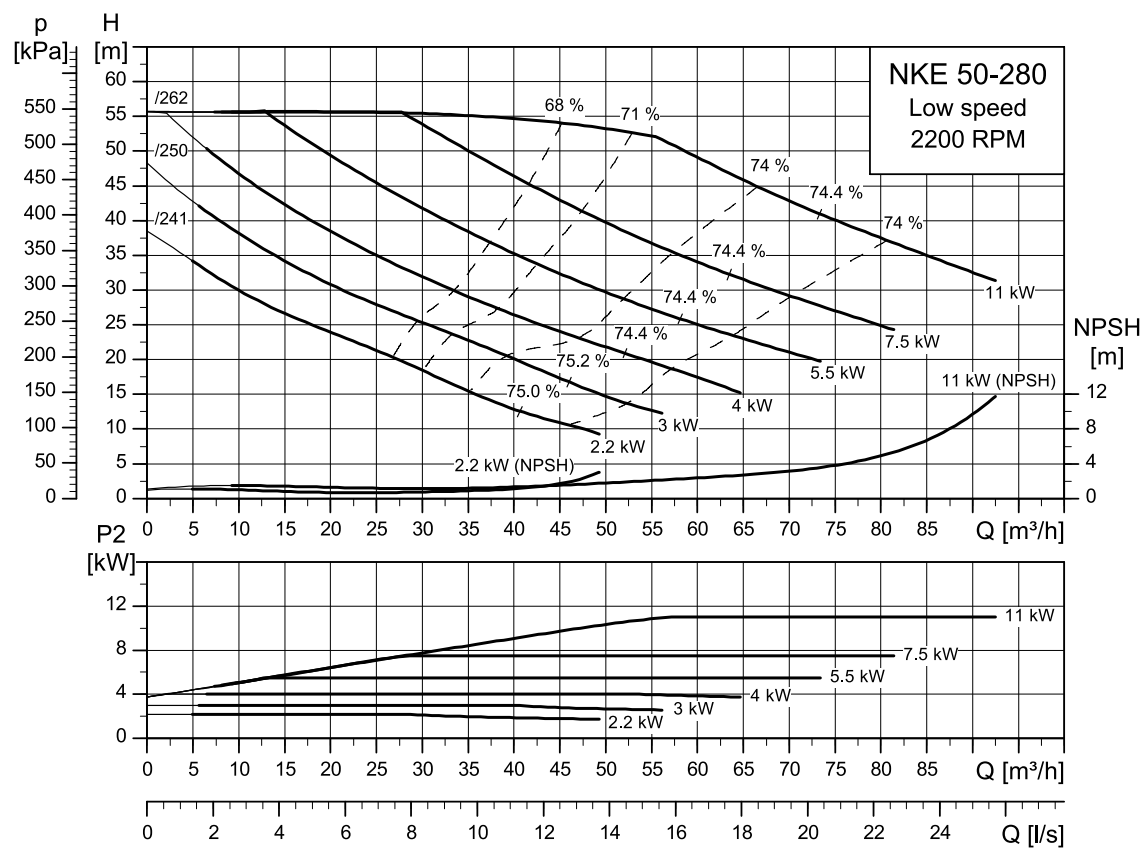
TM086879

50-225



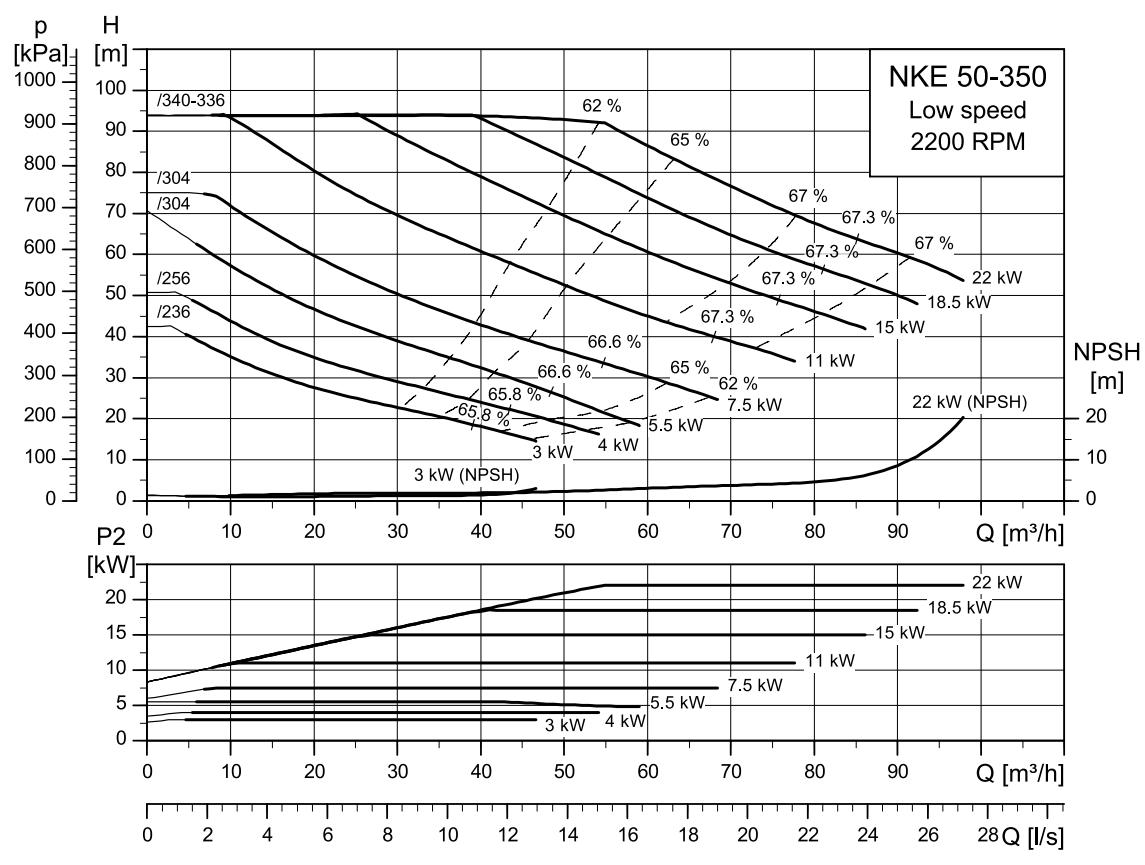
TM086880

50-280



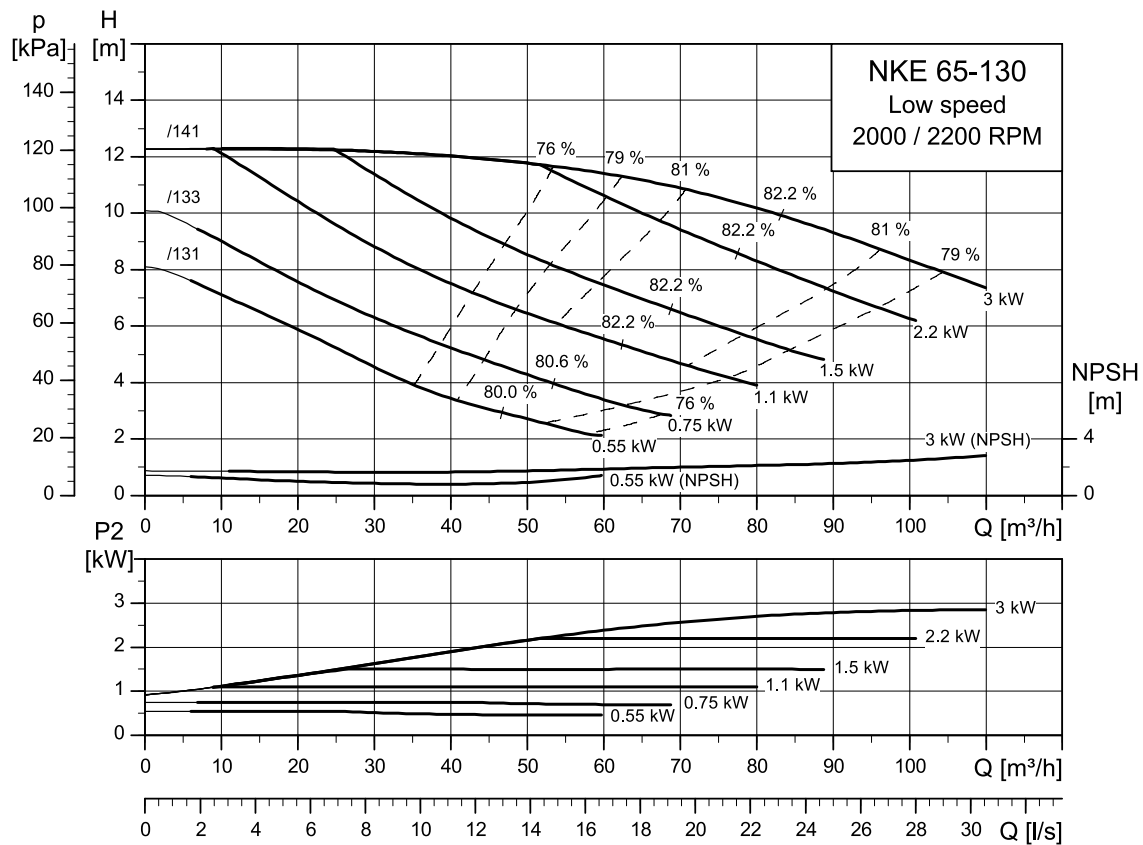
TM086881

50-350



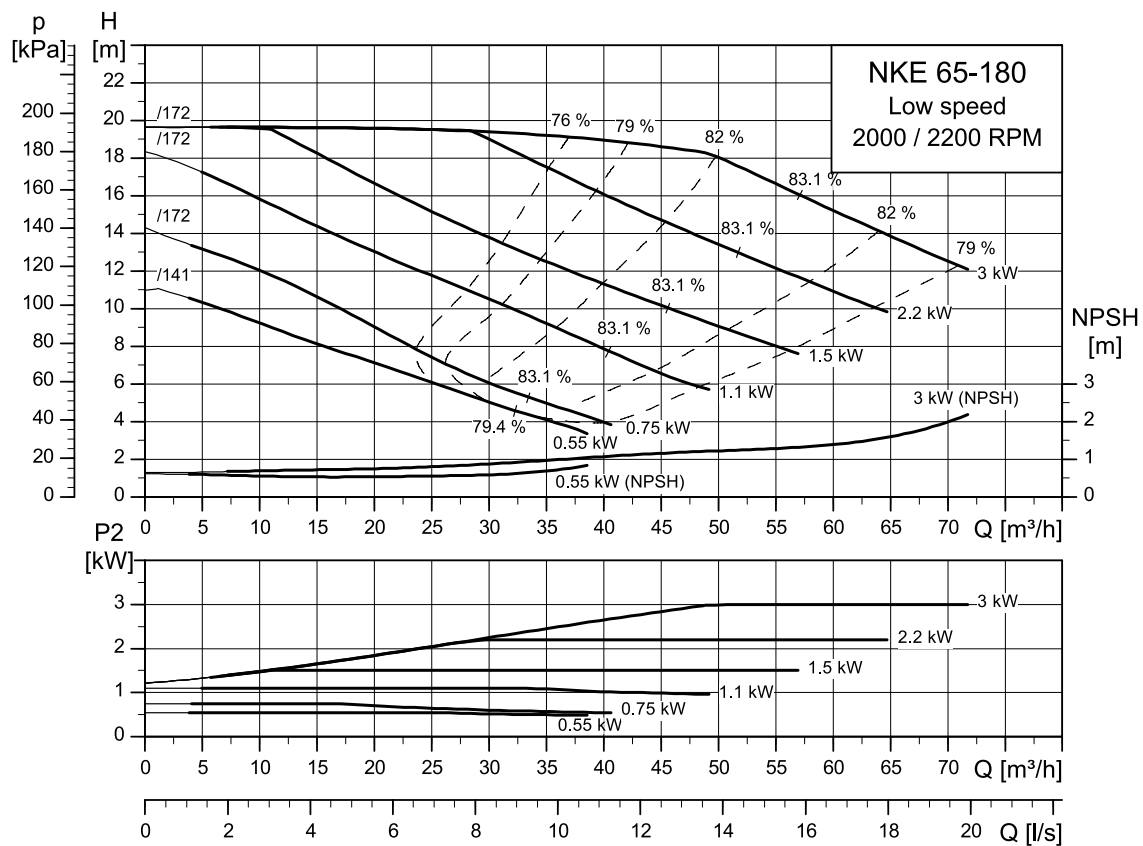
TM086882

65-130



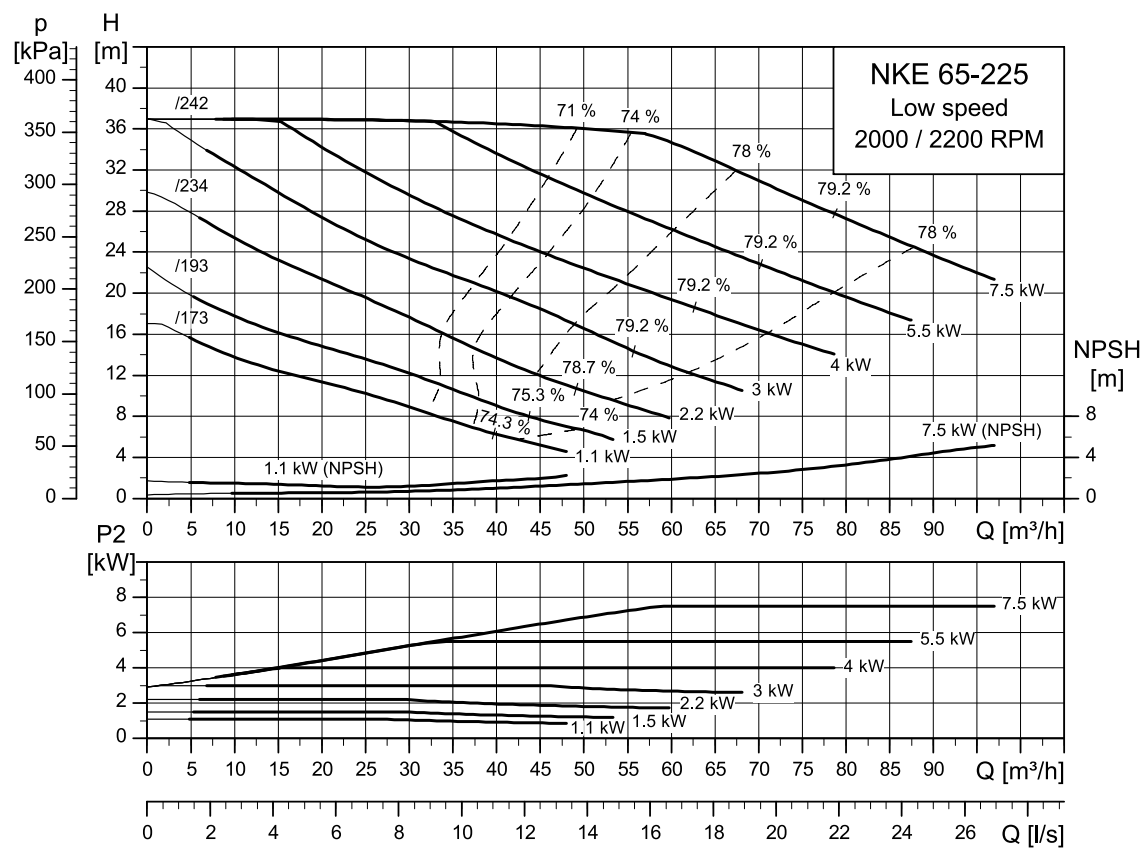
TM086883

65-180

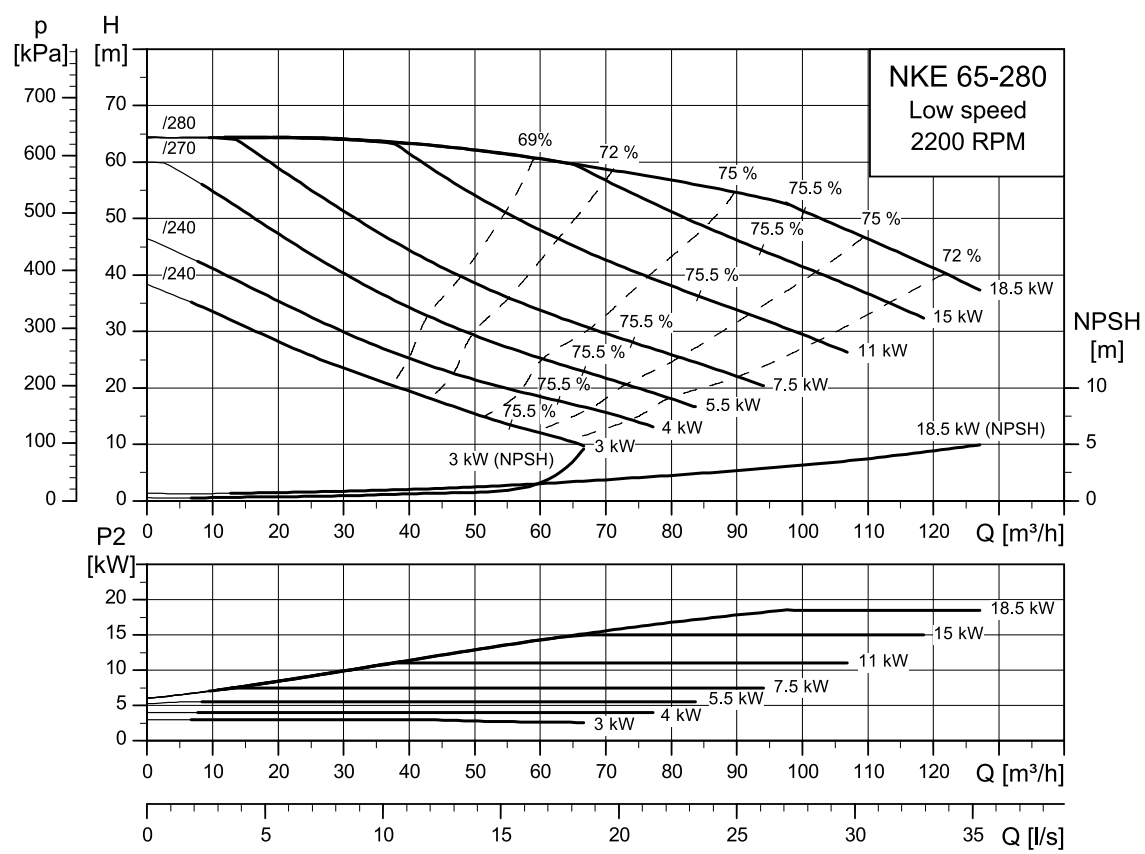


TM086884

65-225



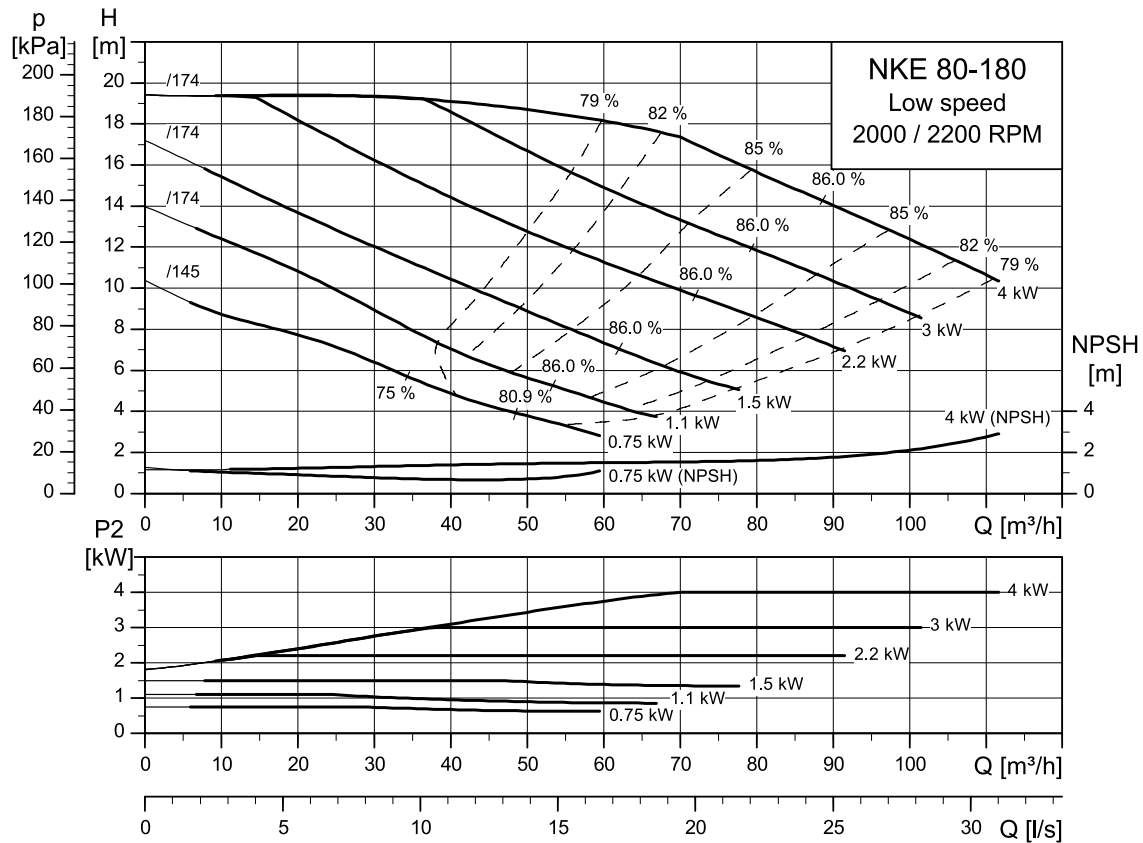
65-280



TM086885

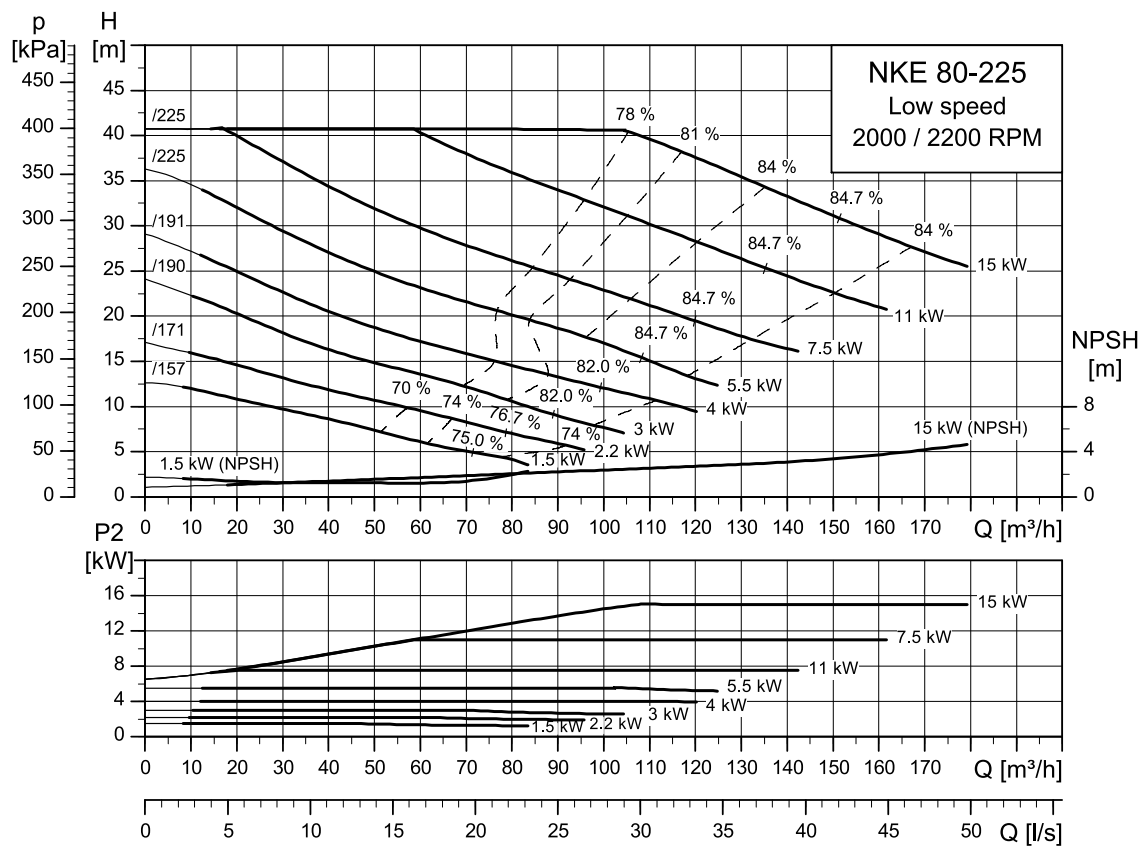
TM086886

80-180



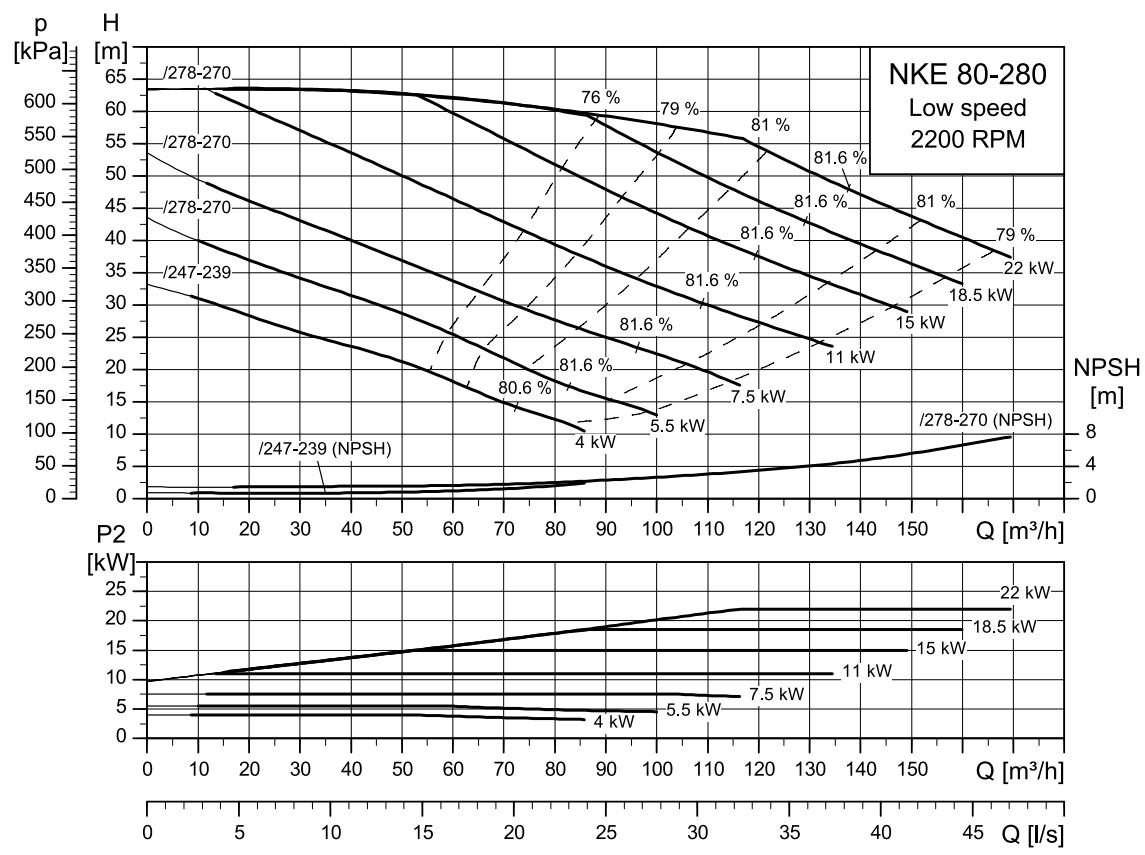
TM086887

80-225



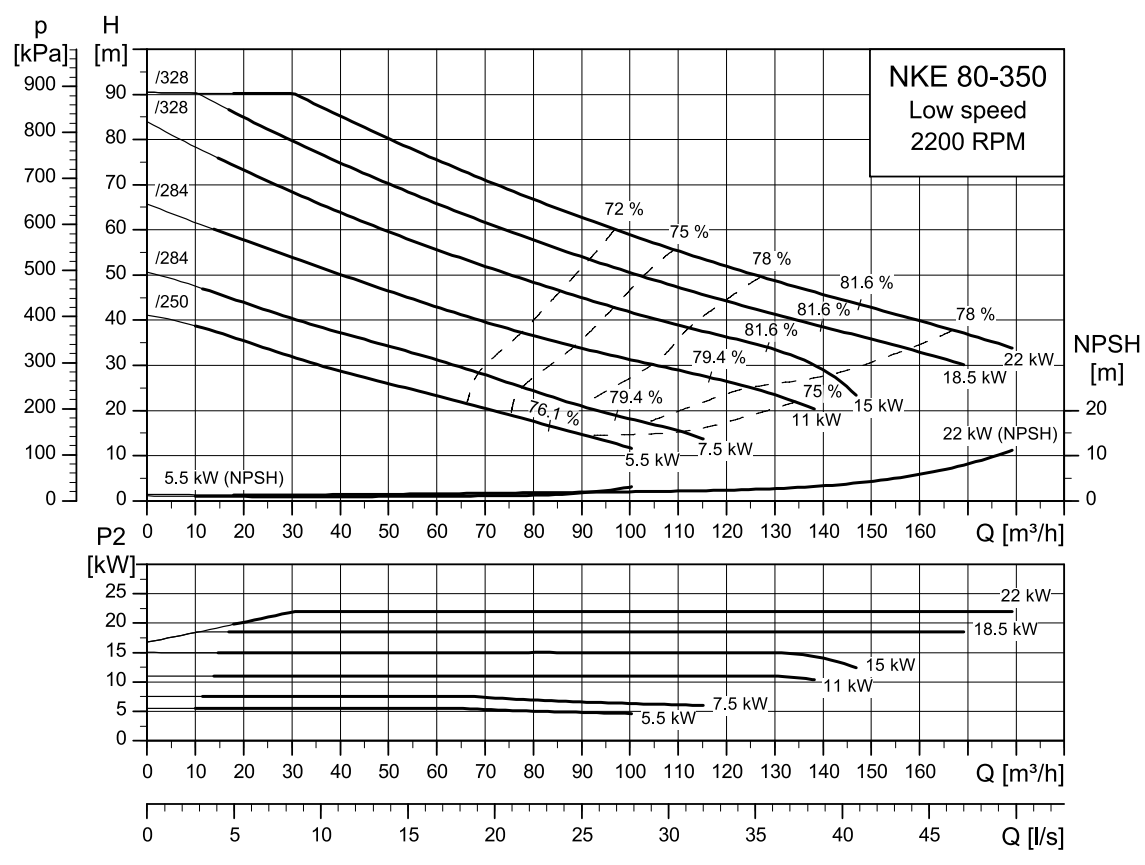
TM086888

80-280



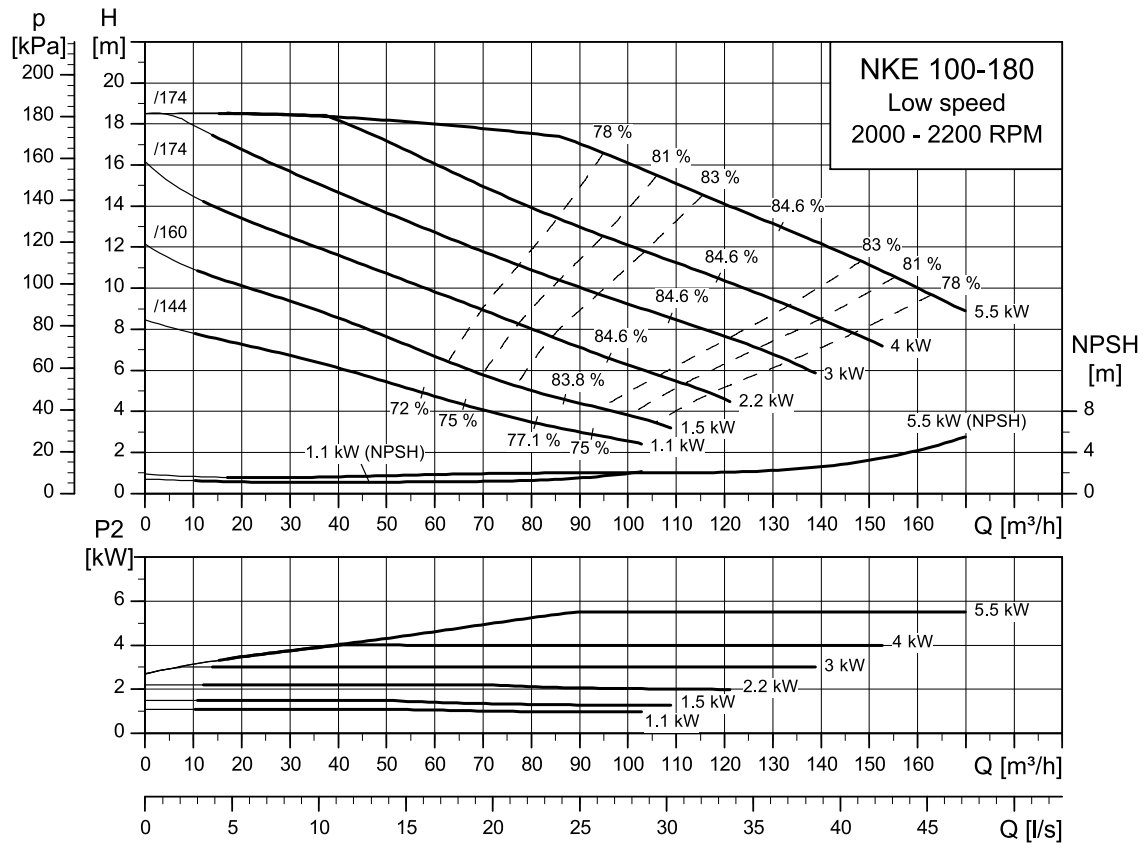
TM086889

80-350



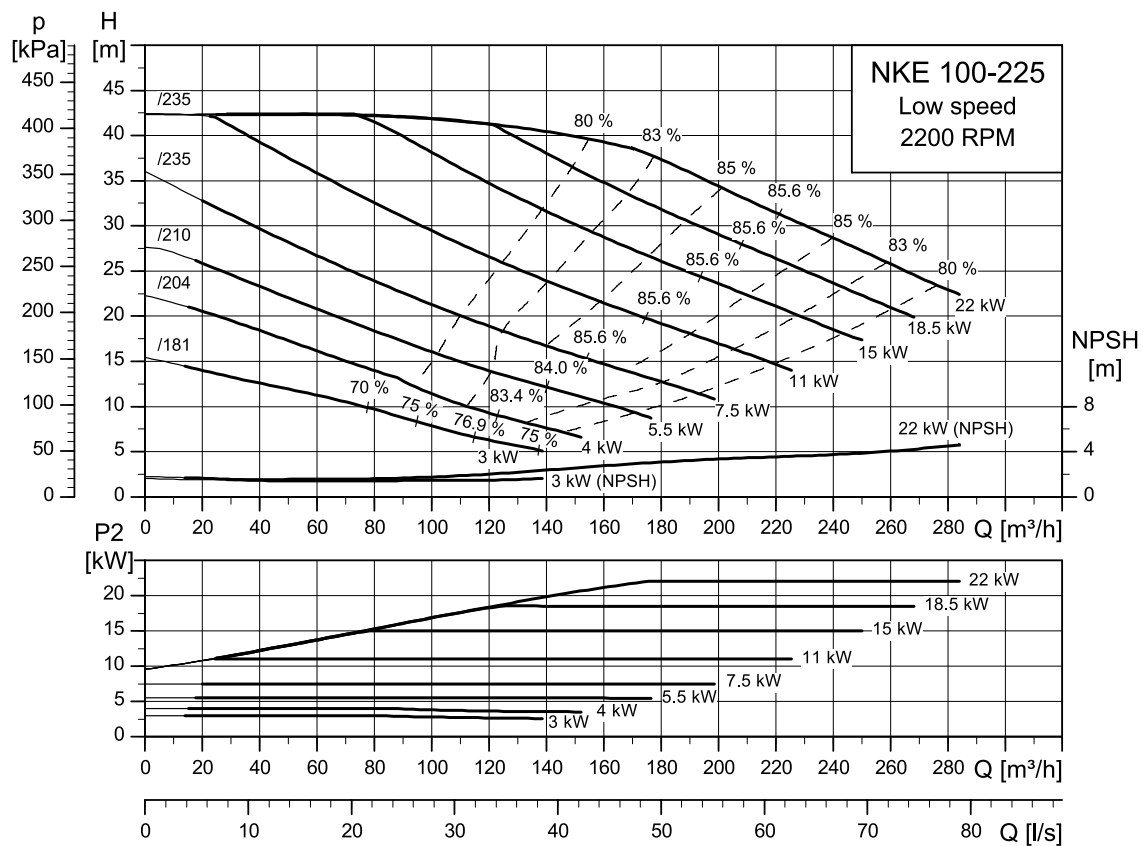
TM086890

100-180



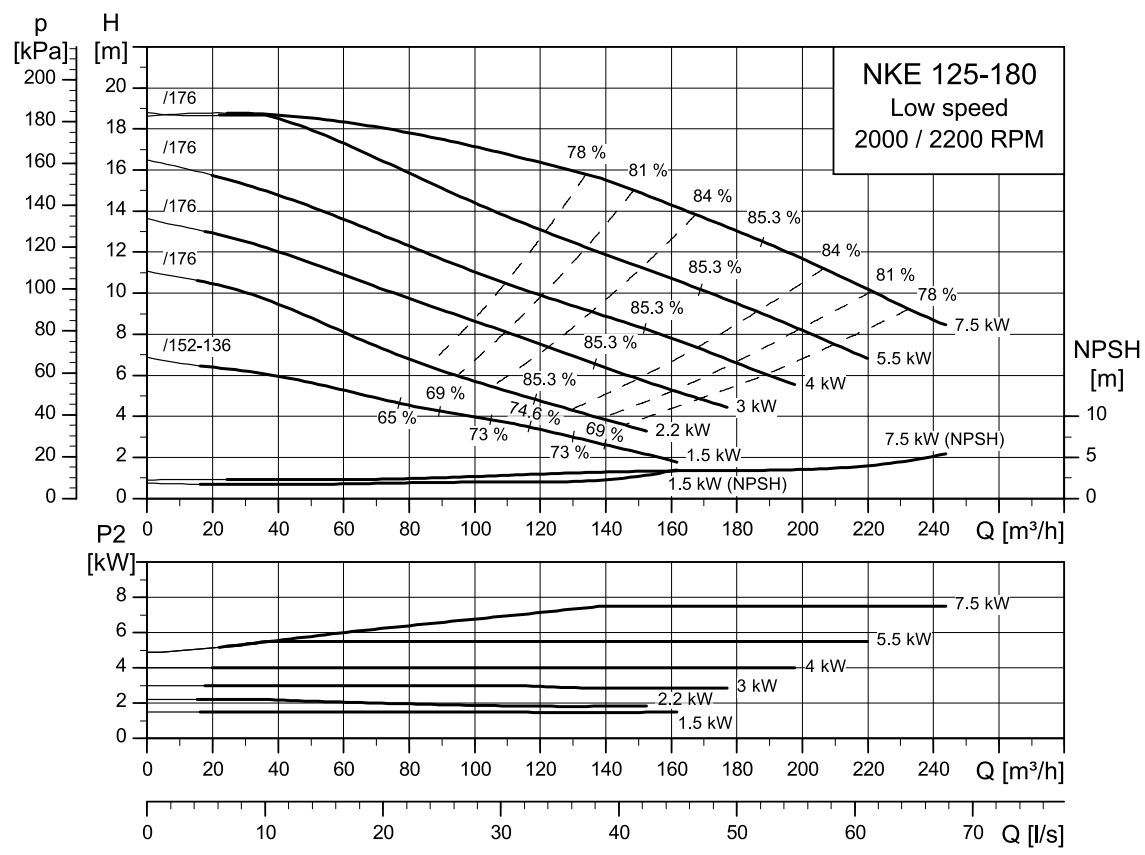
TM086891

100-225



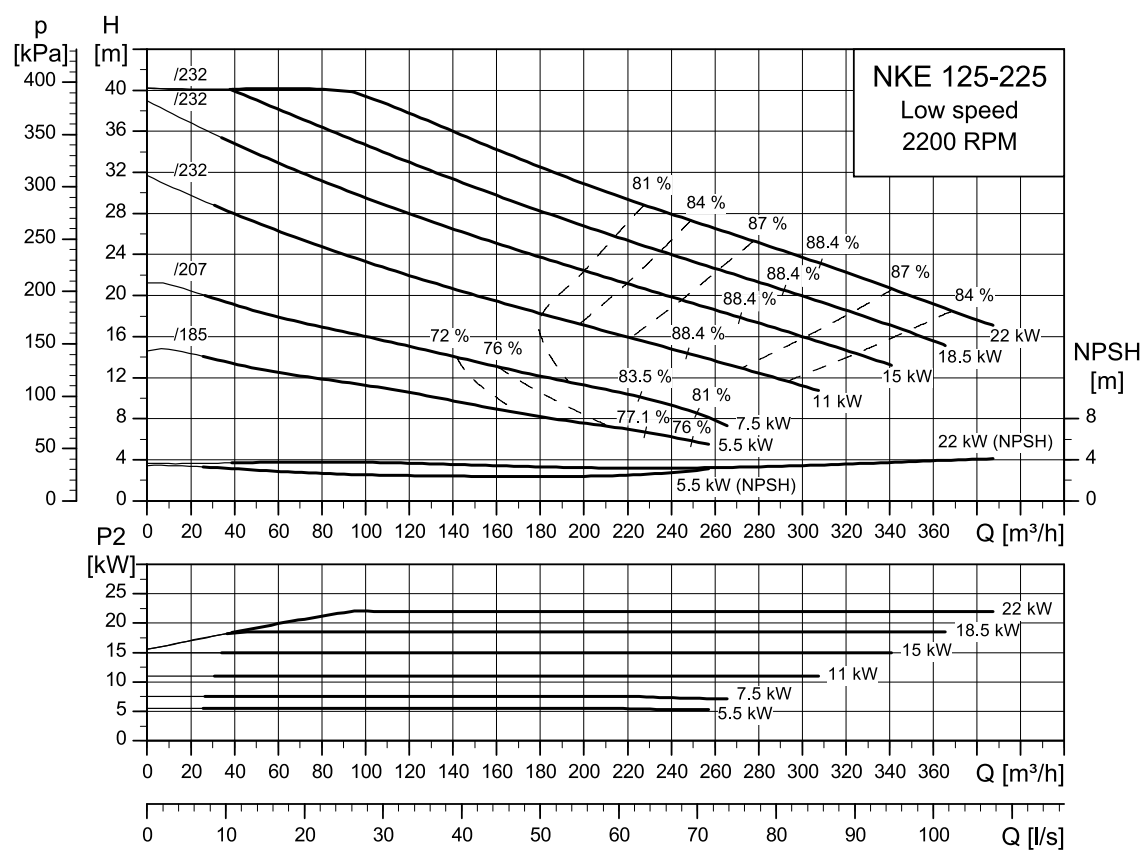
TM086892

125-180



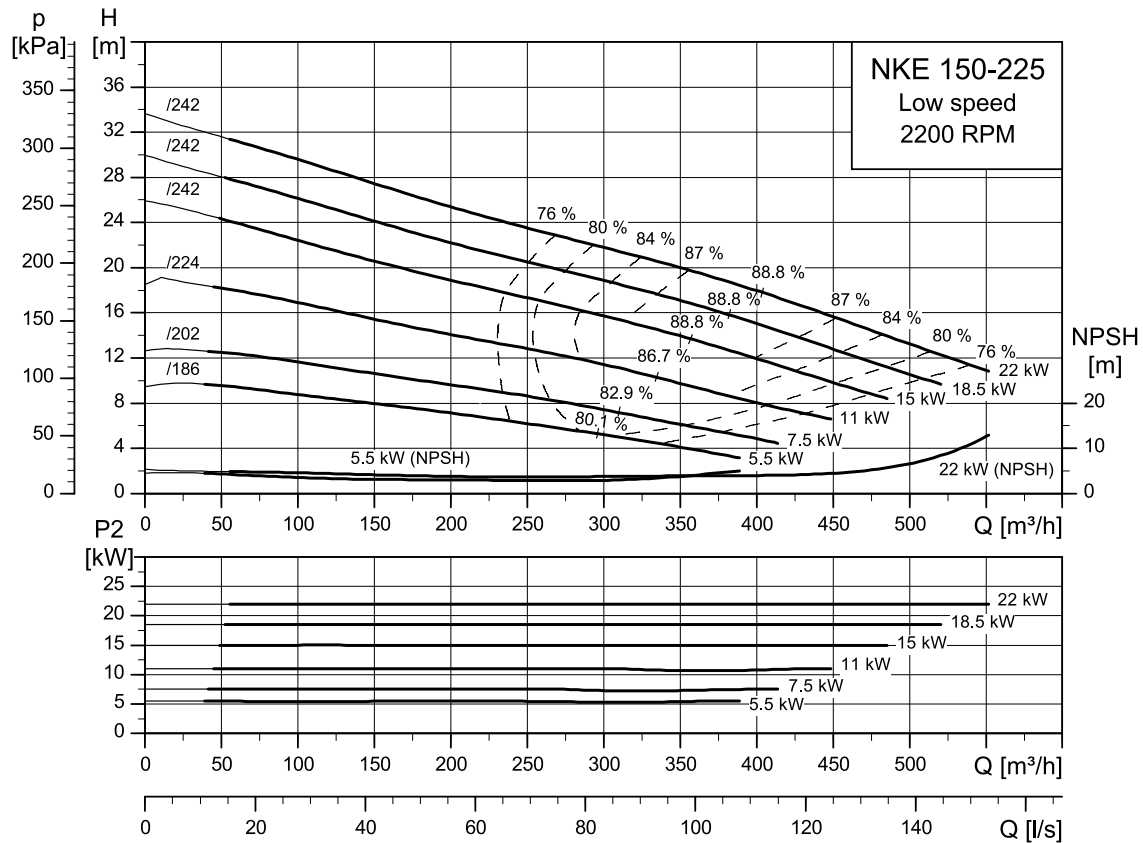
TM086893

125-225



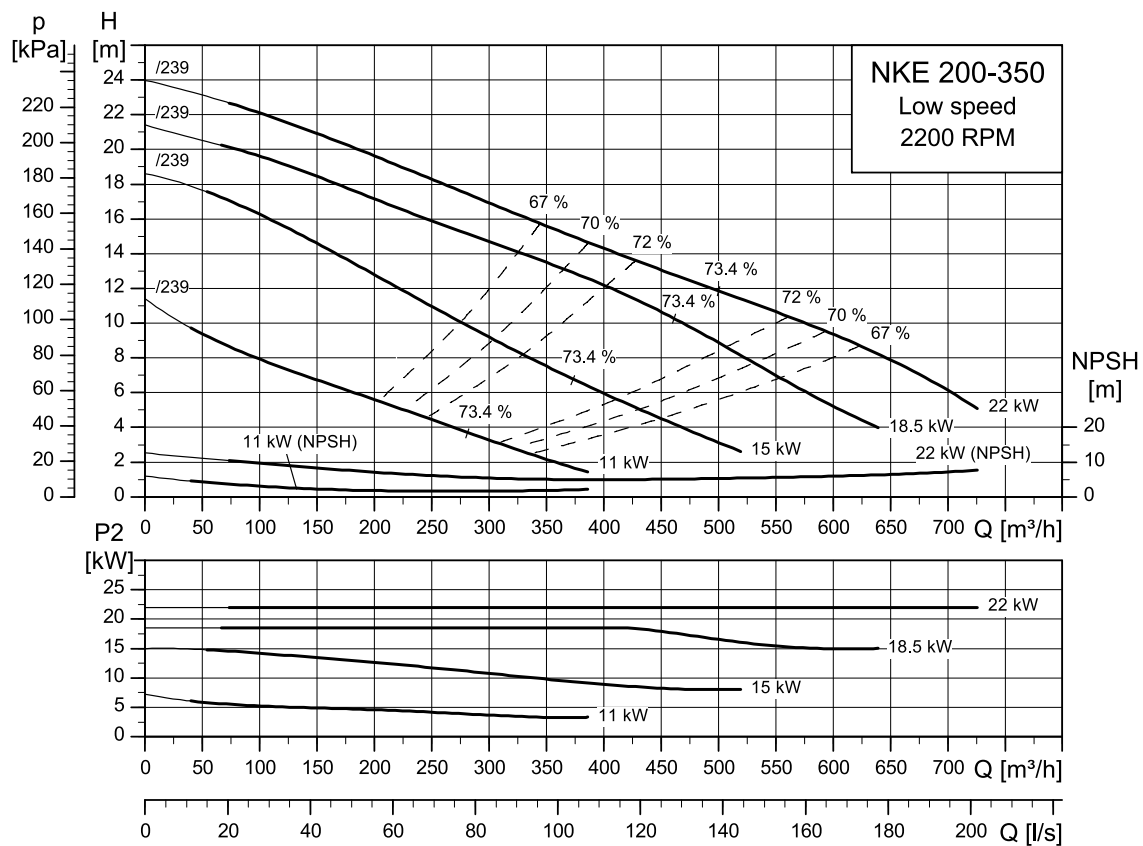
TM086894

150-225



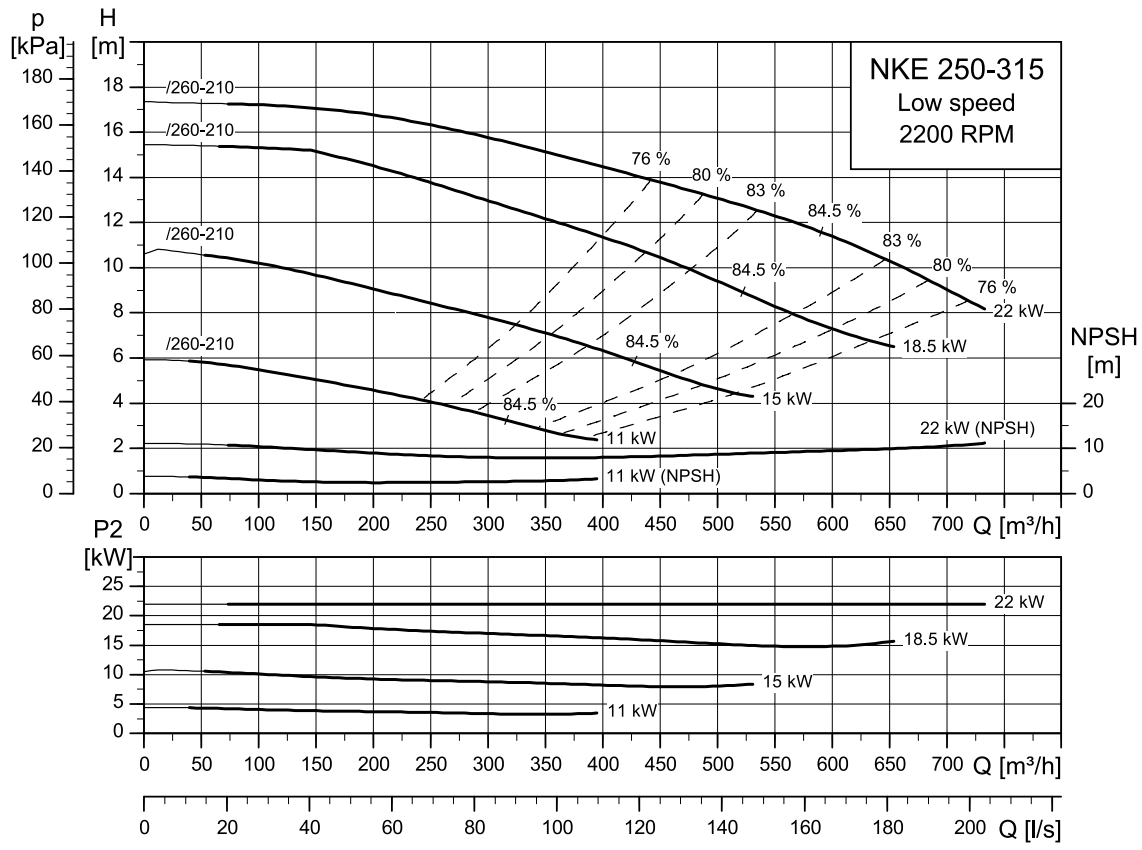
TM086895

200-350

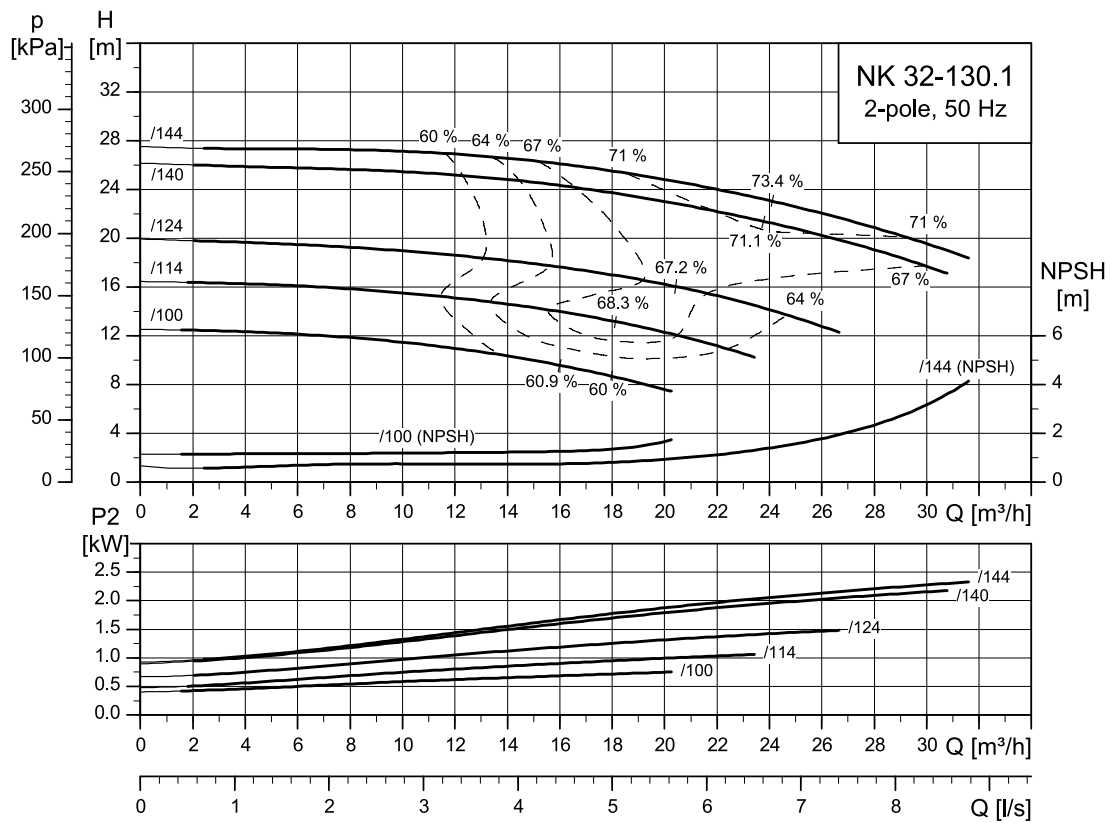


TM086896

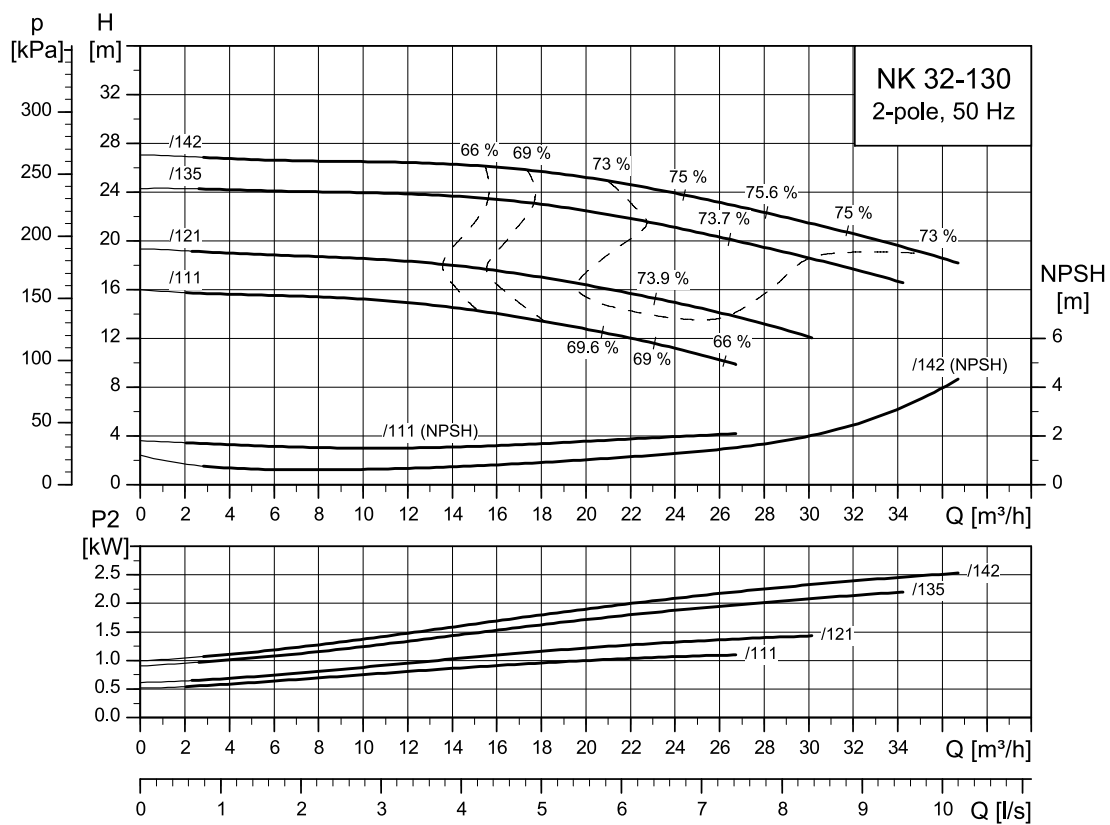
250-315



TM086897

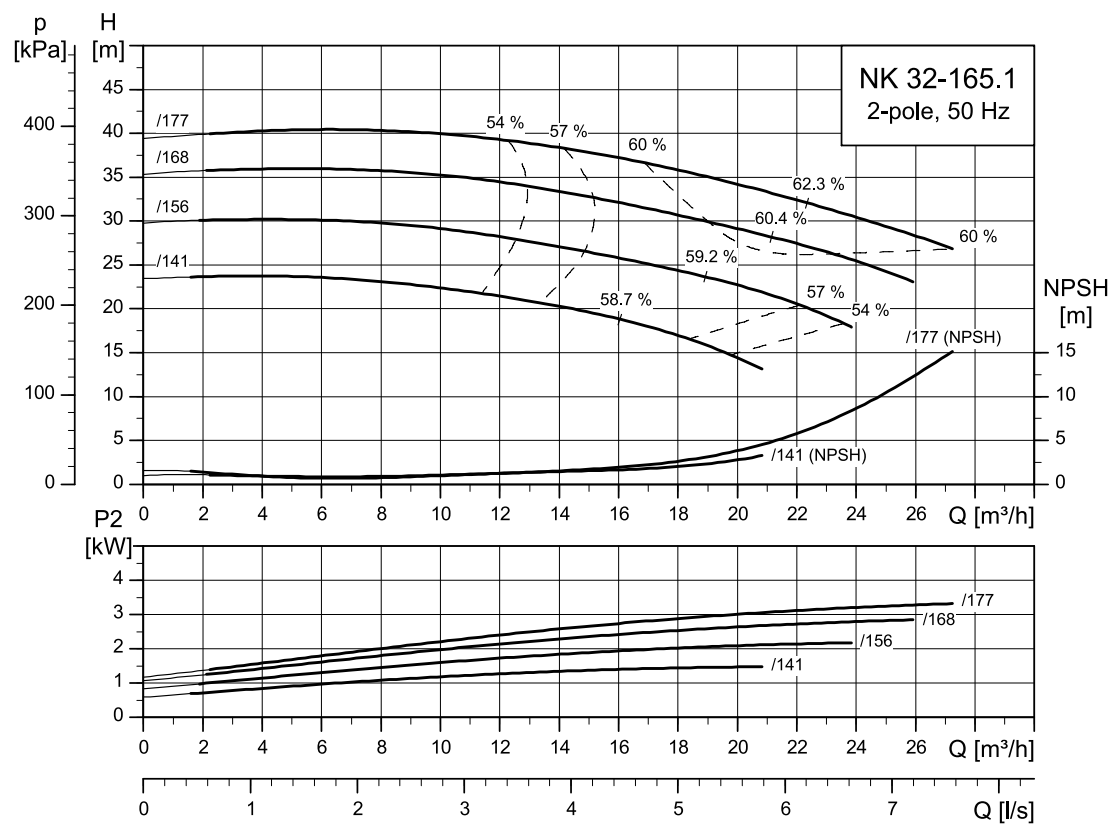
2-pole**32-130.1**

TM083775

32-130

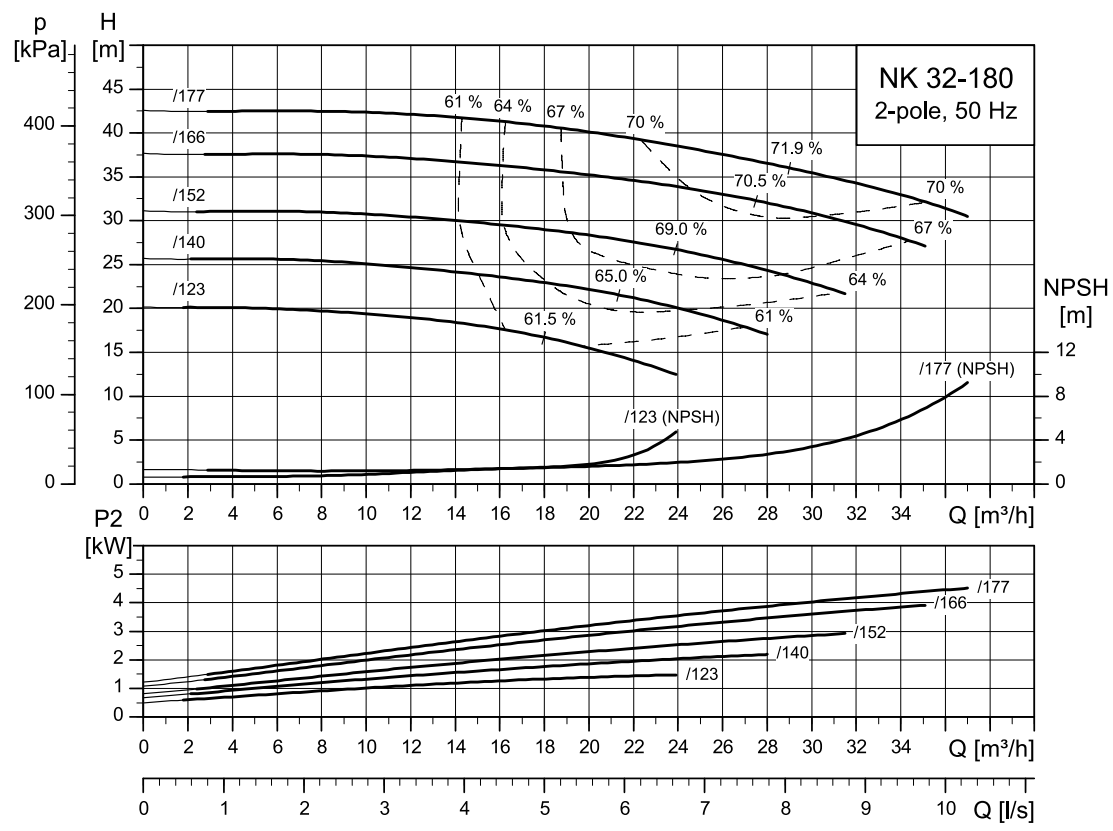
TM083774

32-165.1



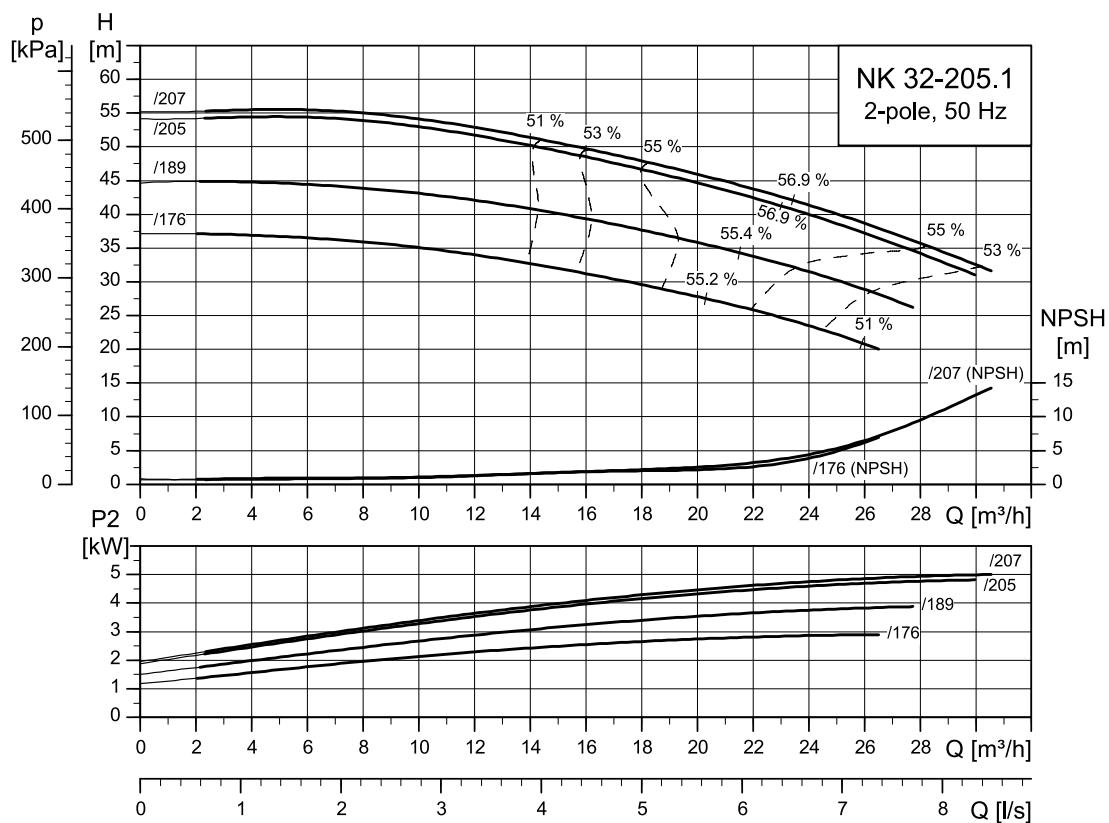
TM083776

32-180



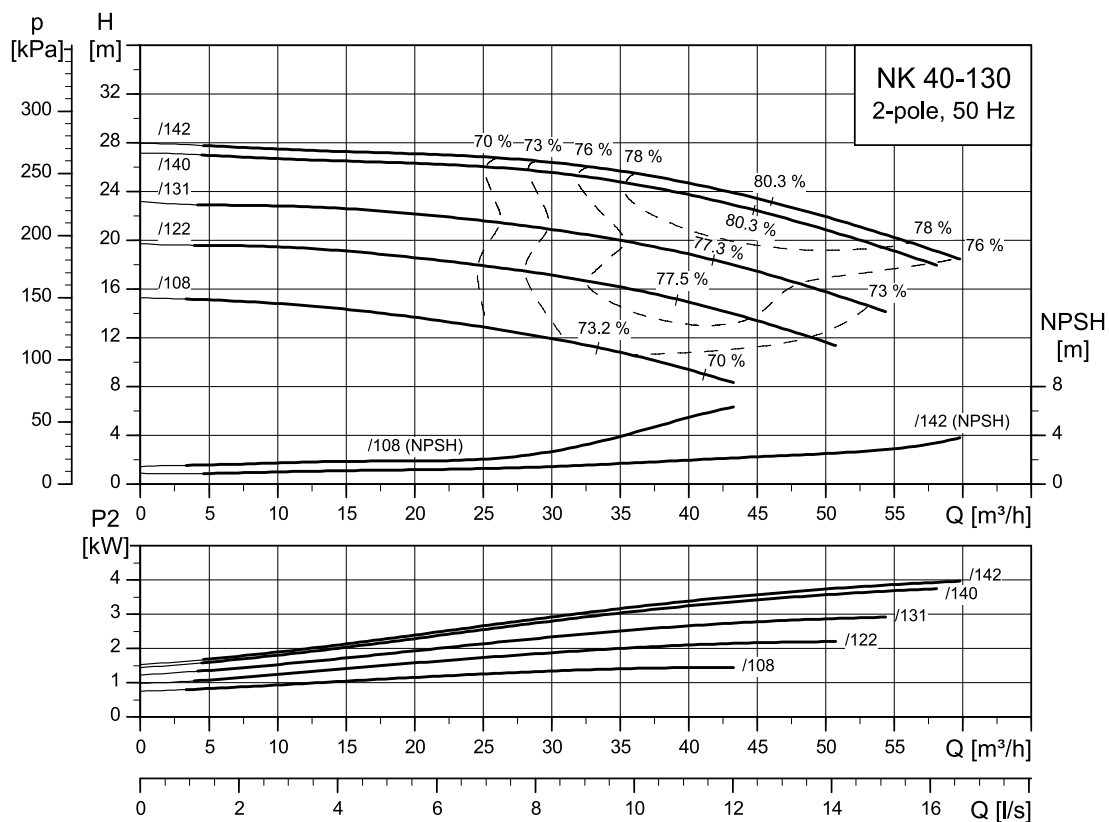
TM1040242

32-205.1



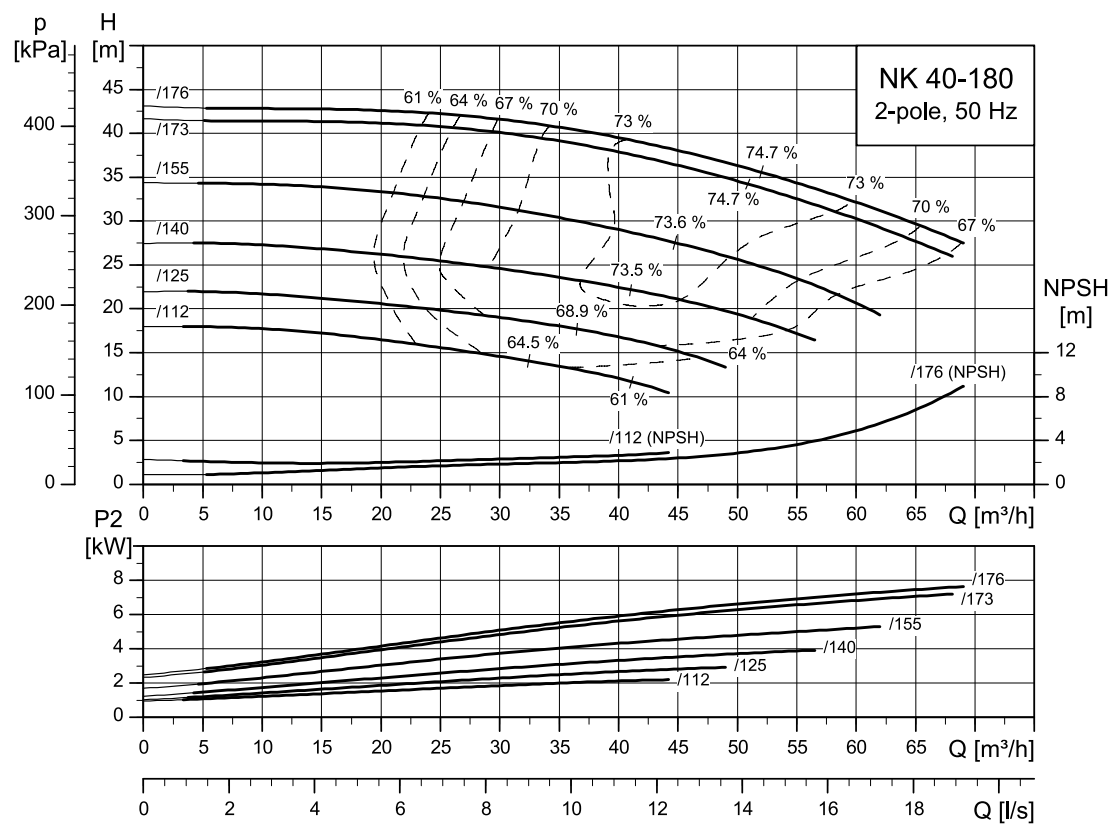
TM083777

40-130

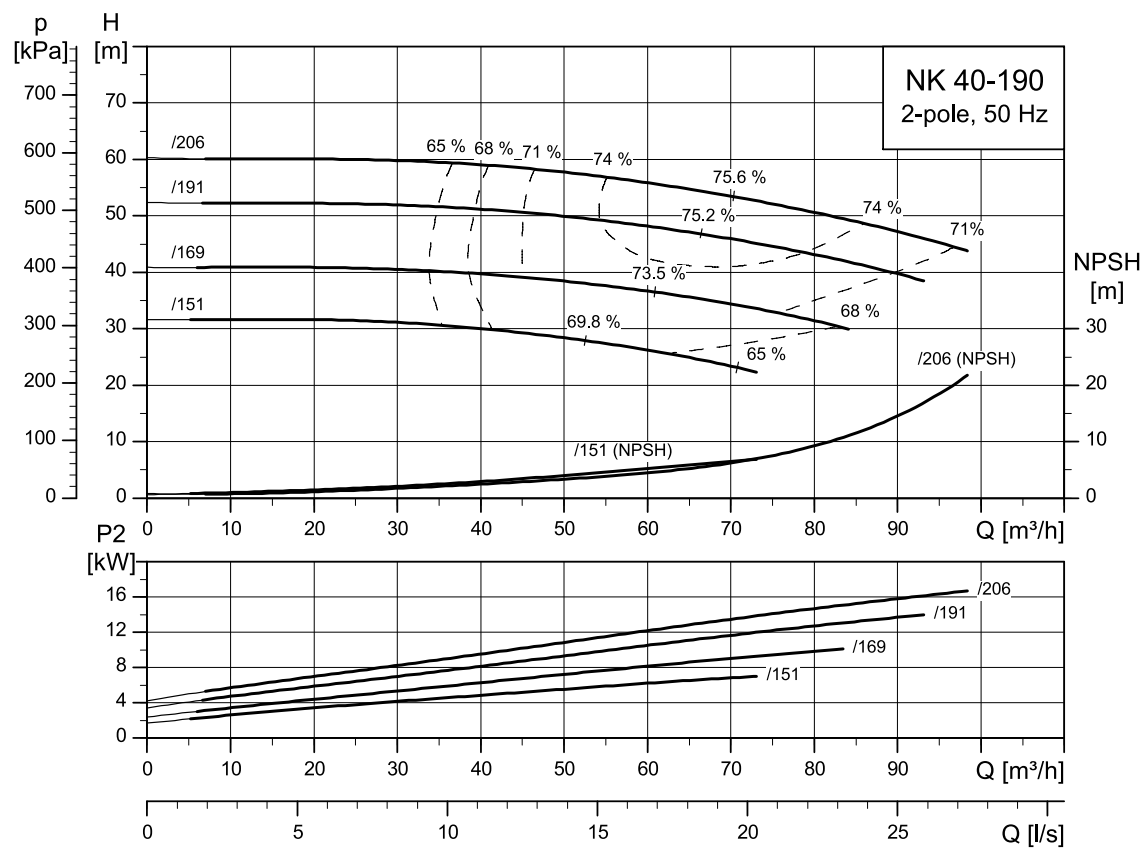


TM083778

40-180



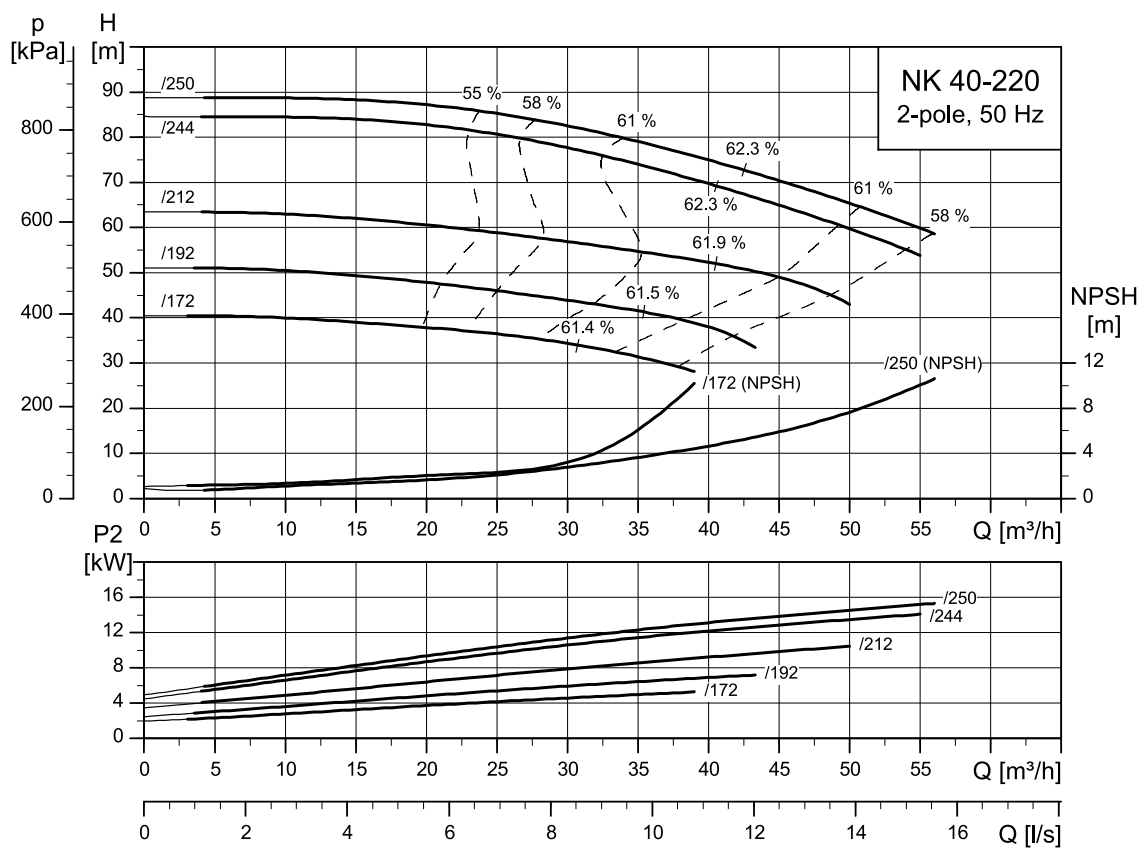
40-190



TM1040243

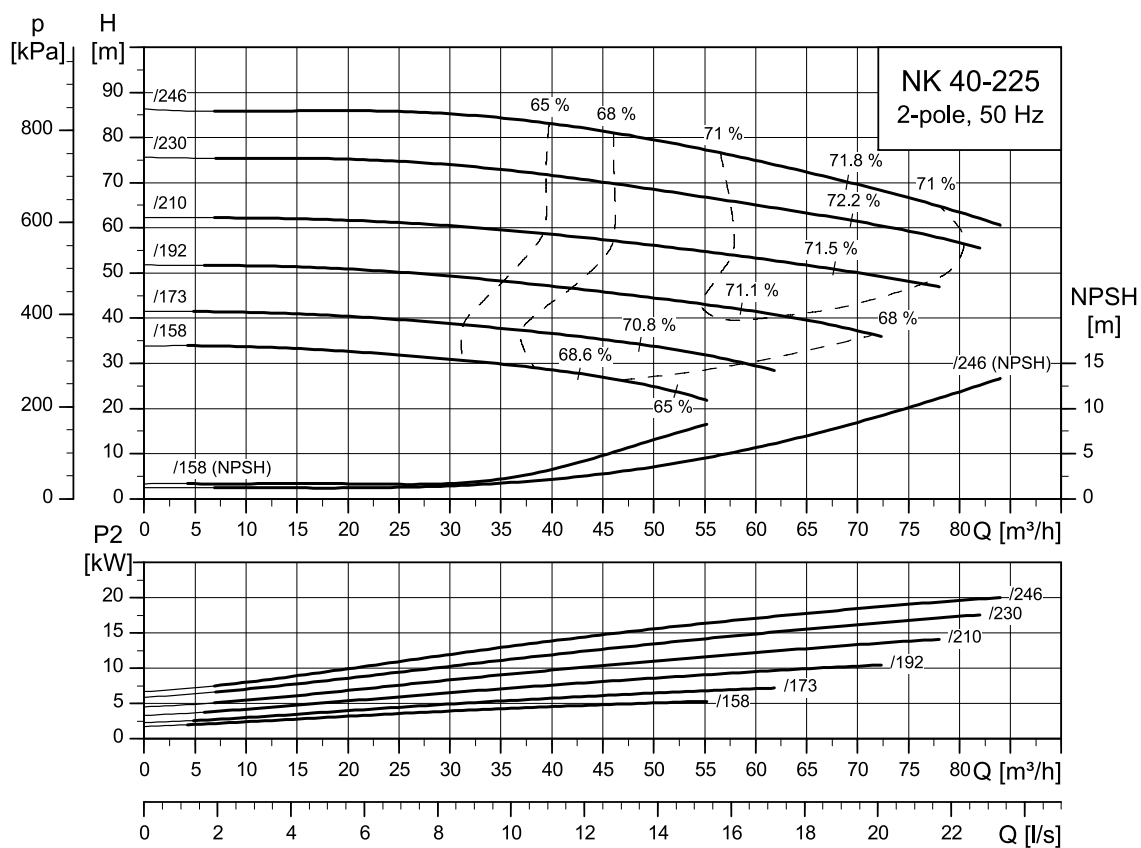
TM088659

40-220



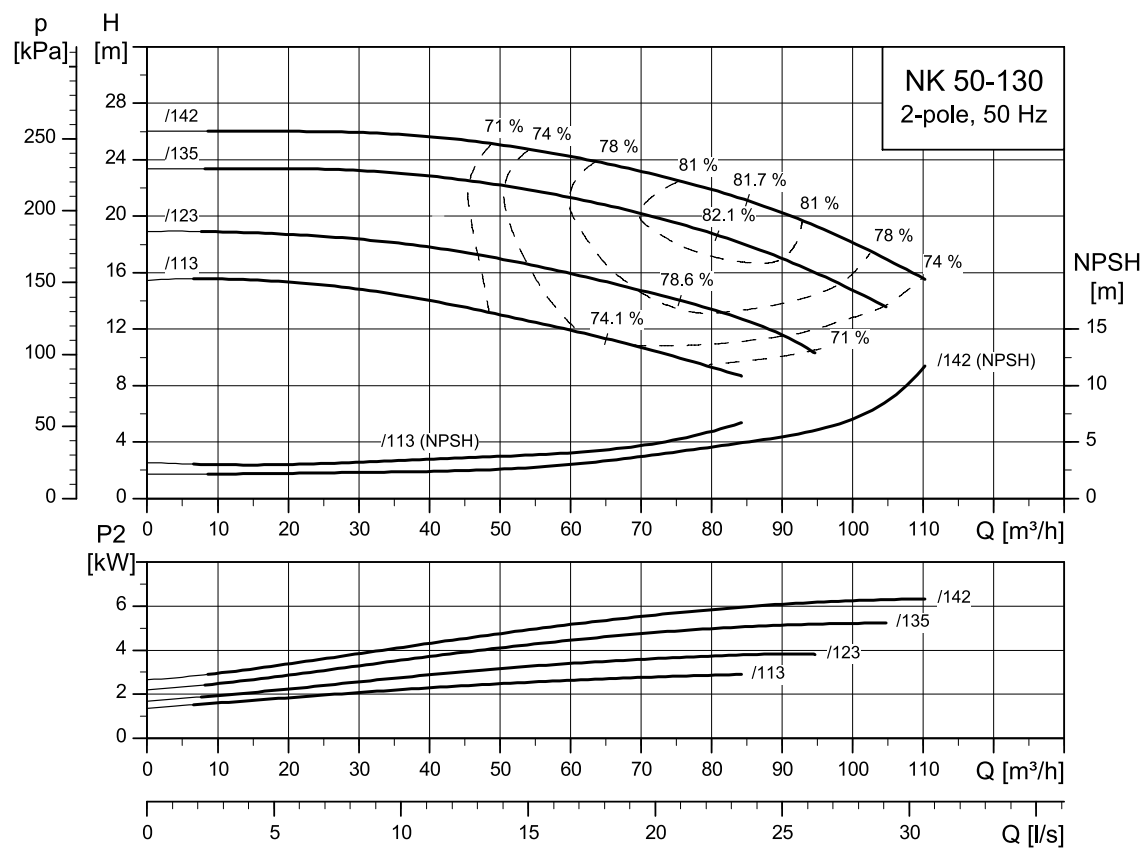
TM1040244

40-225



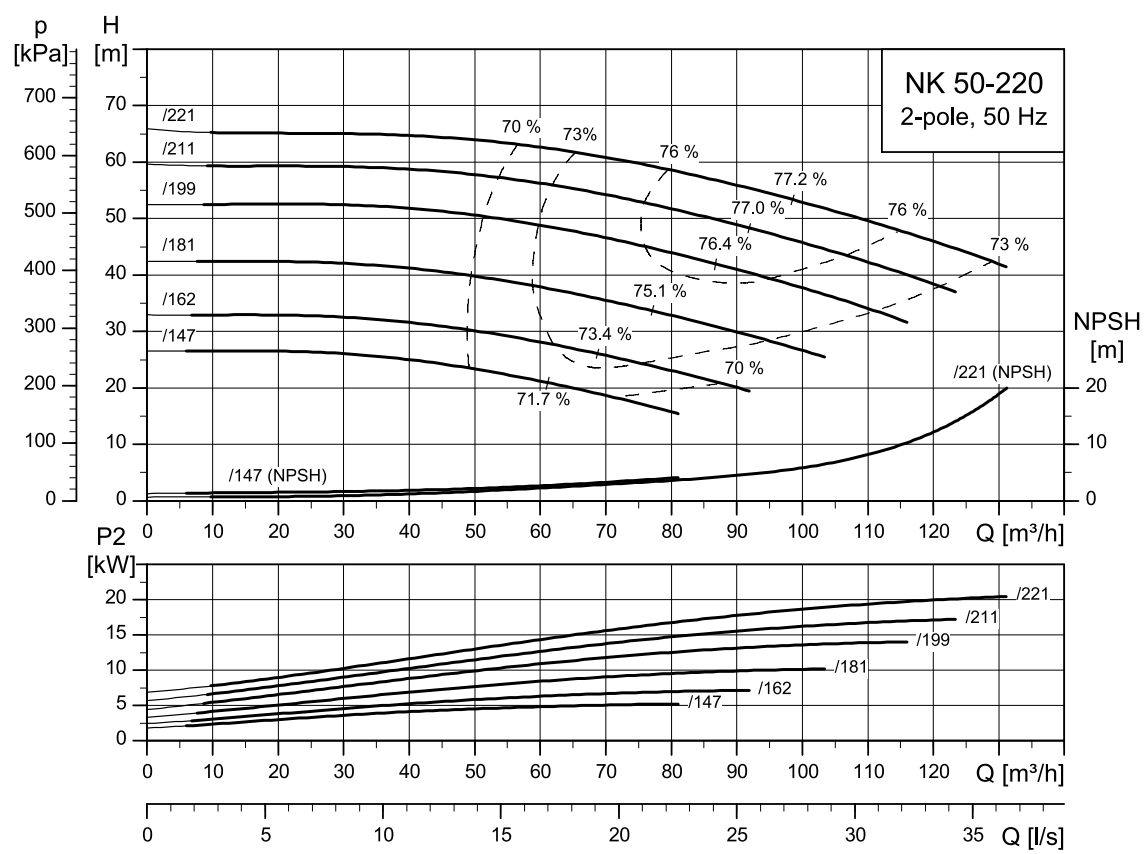
TM1040245

50-130



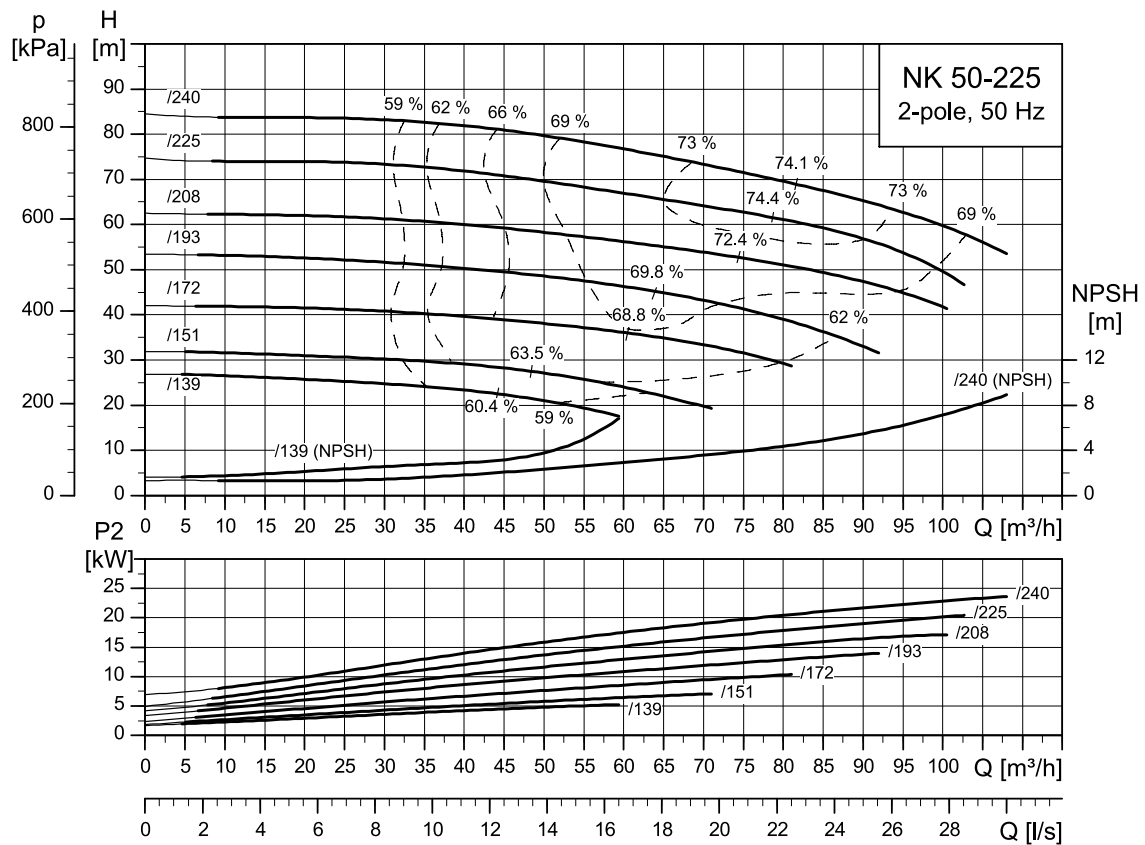
TM083779

50-220



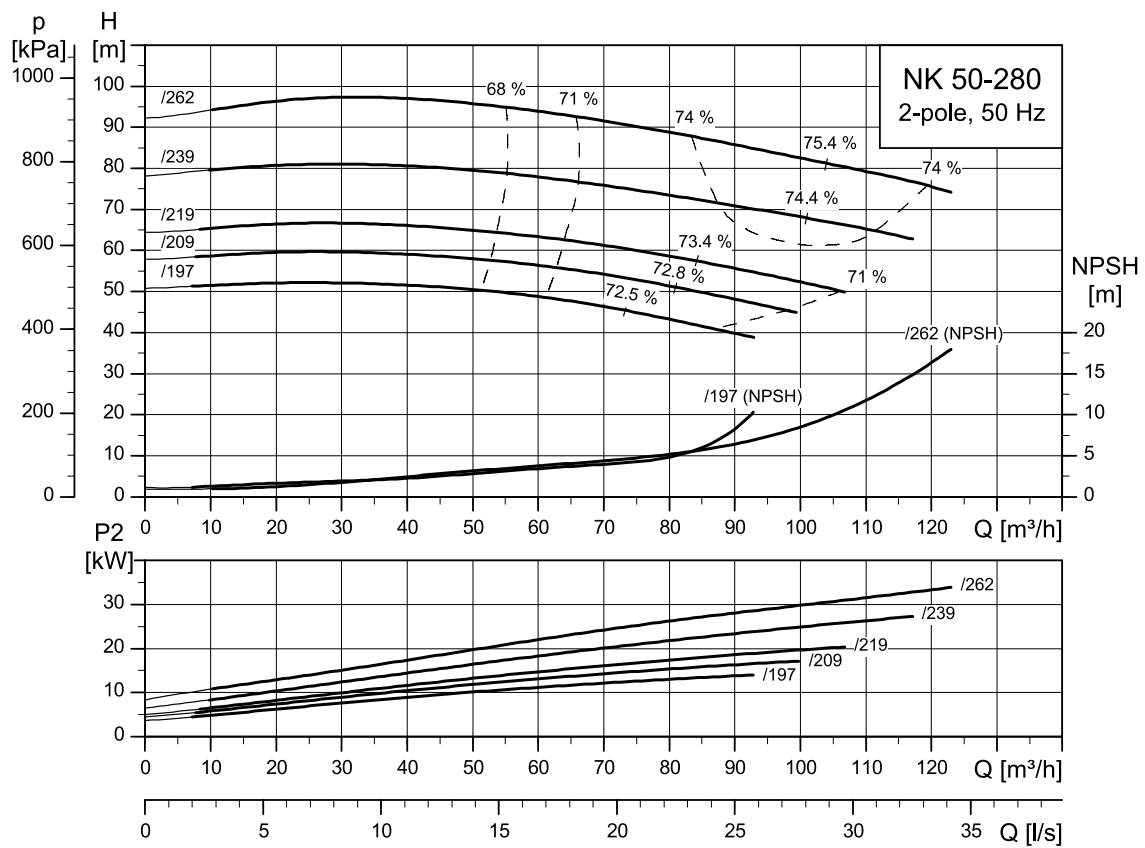
TM088657

50-225



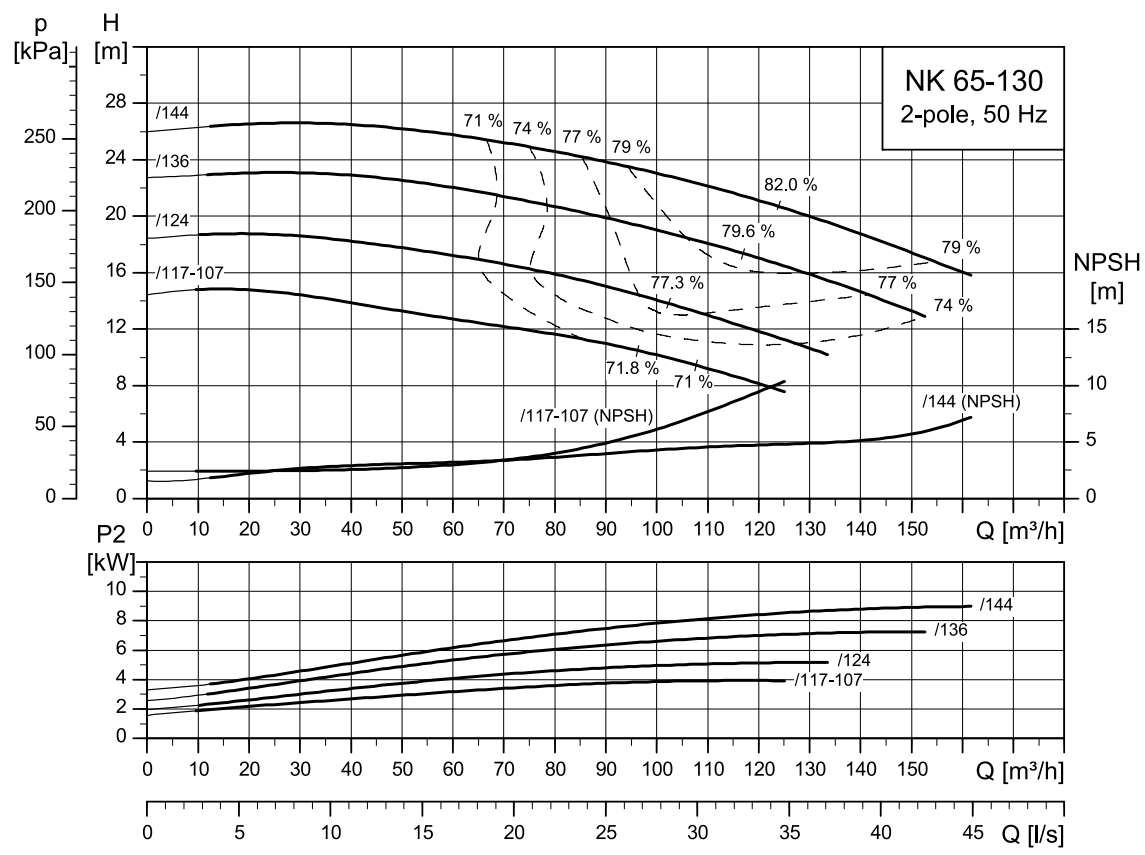
TM1040246

50-280



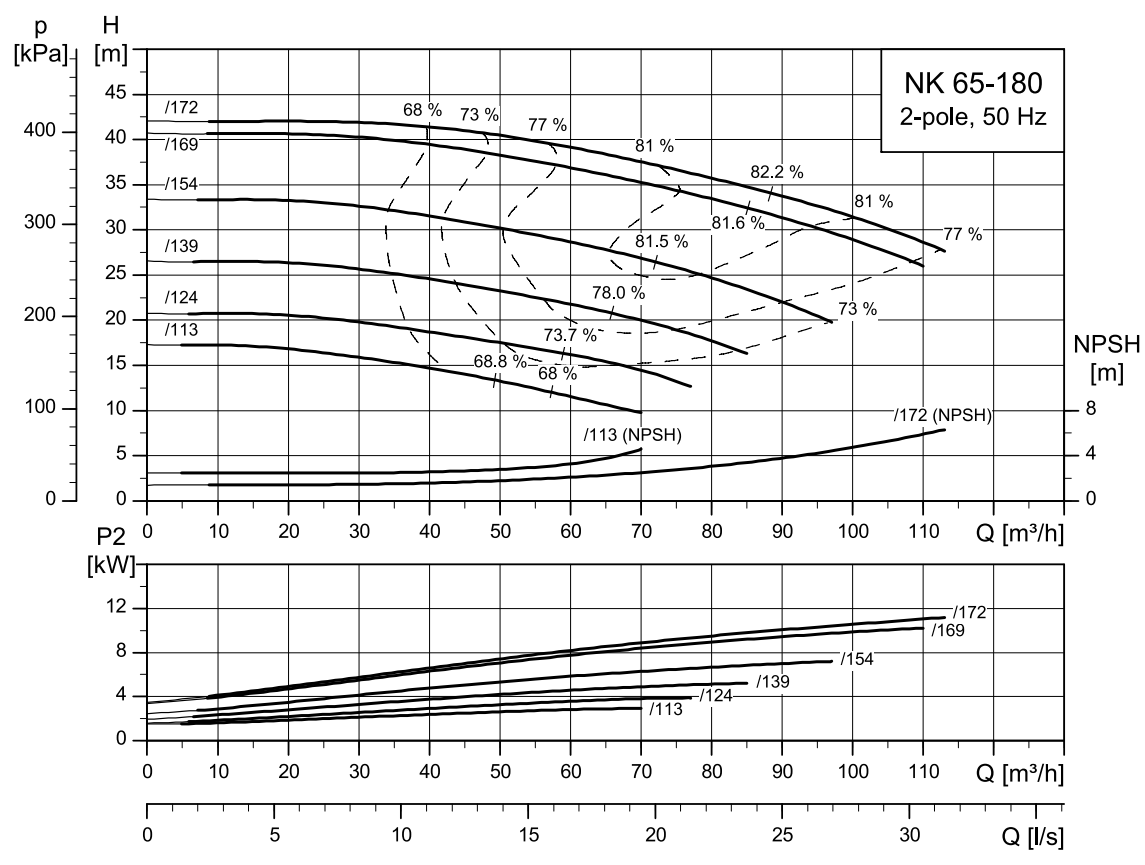
TM084979

65-130



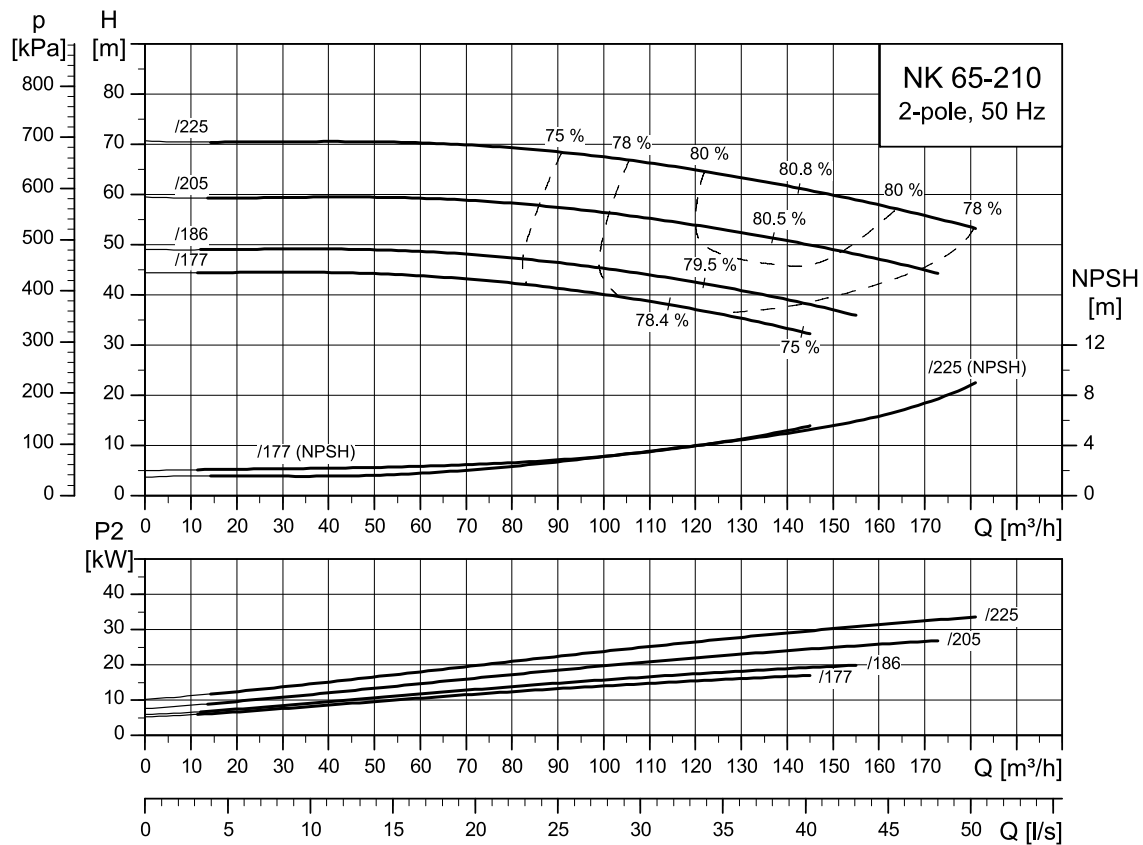
TM083780

65-180



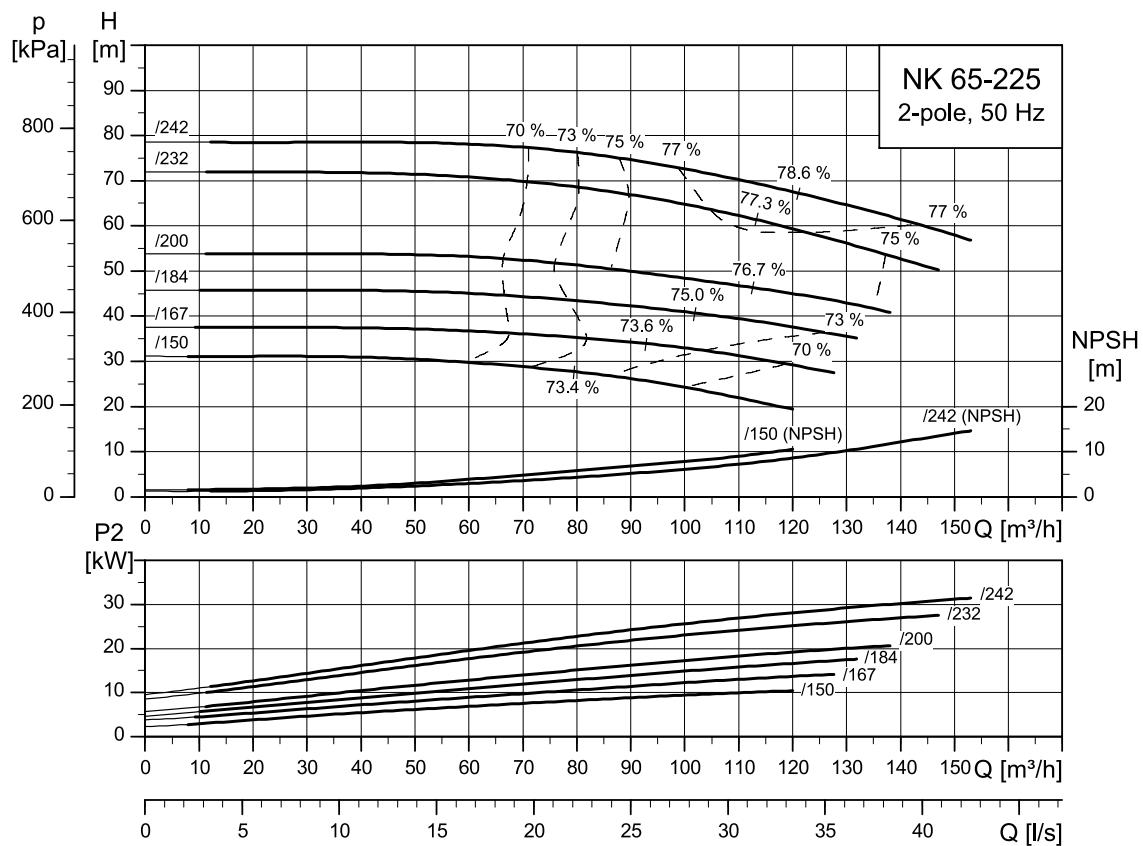
TM1040247

65-210



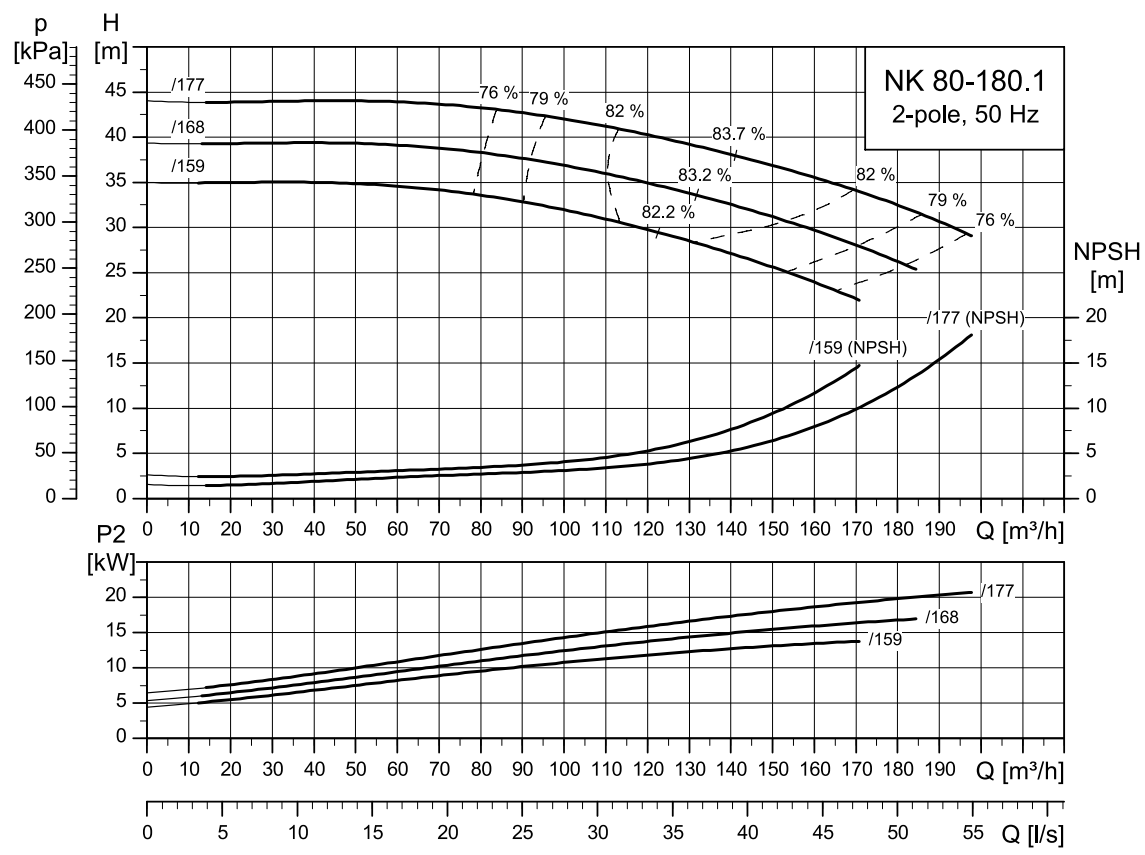
TM091558

65-225

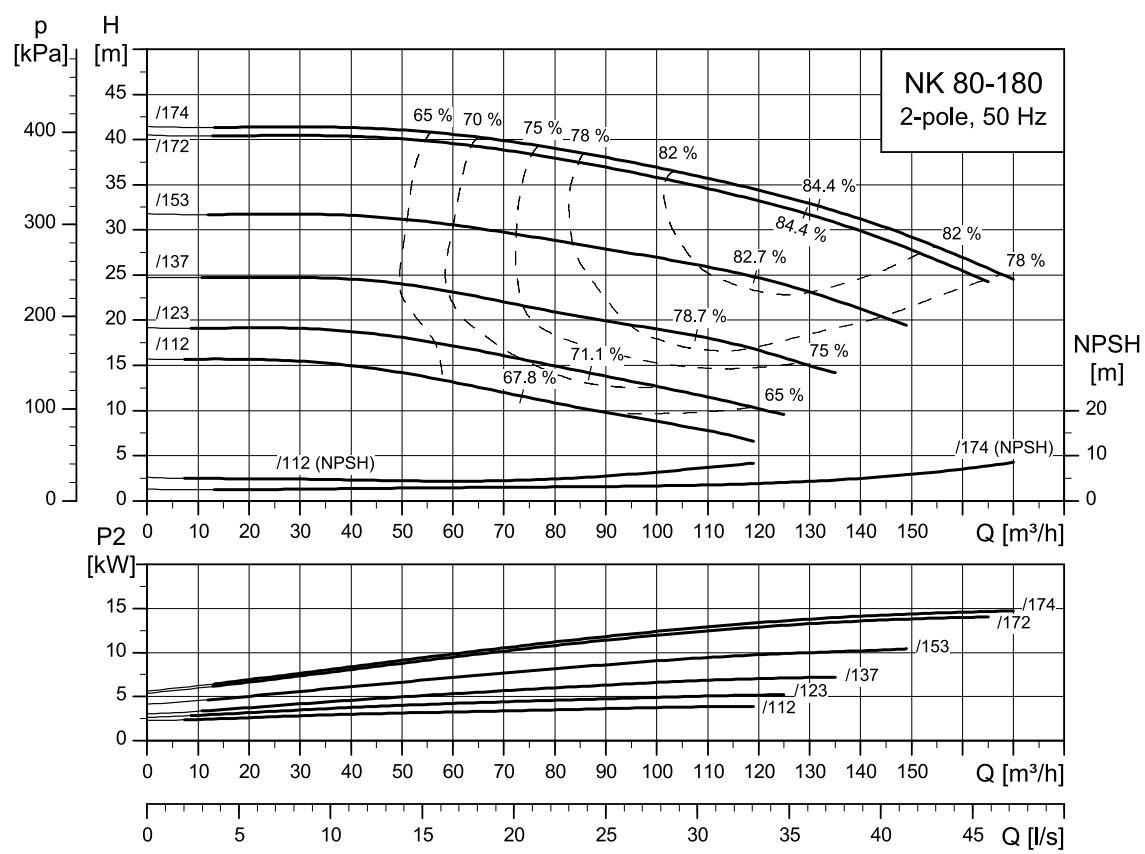


TM1040248

80-180.1



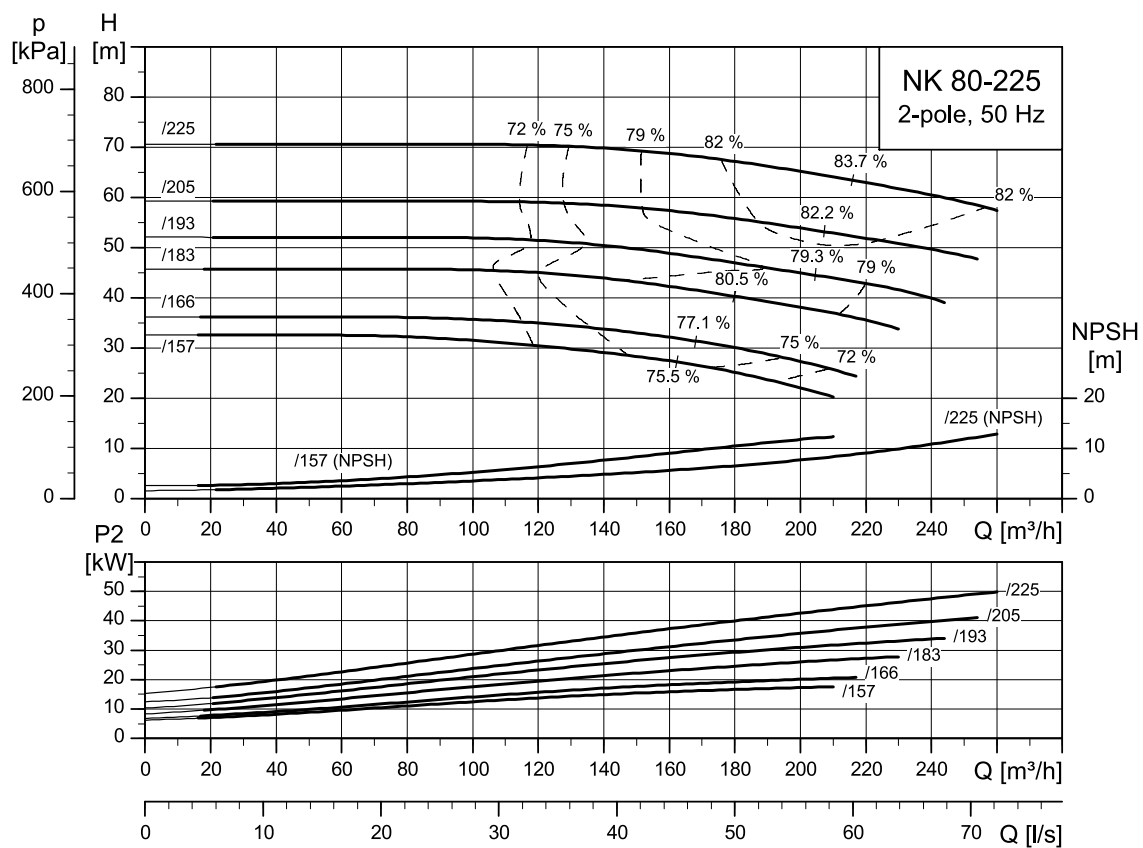
80-180



TM091561

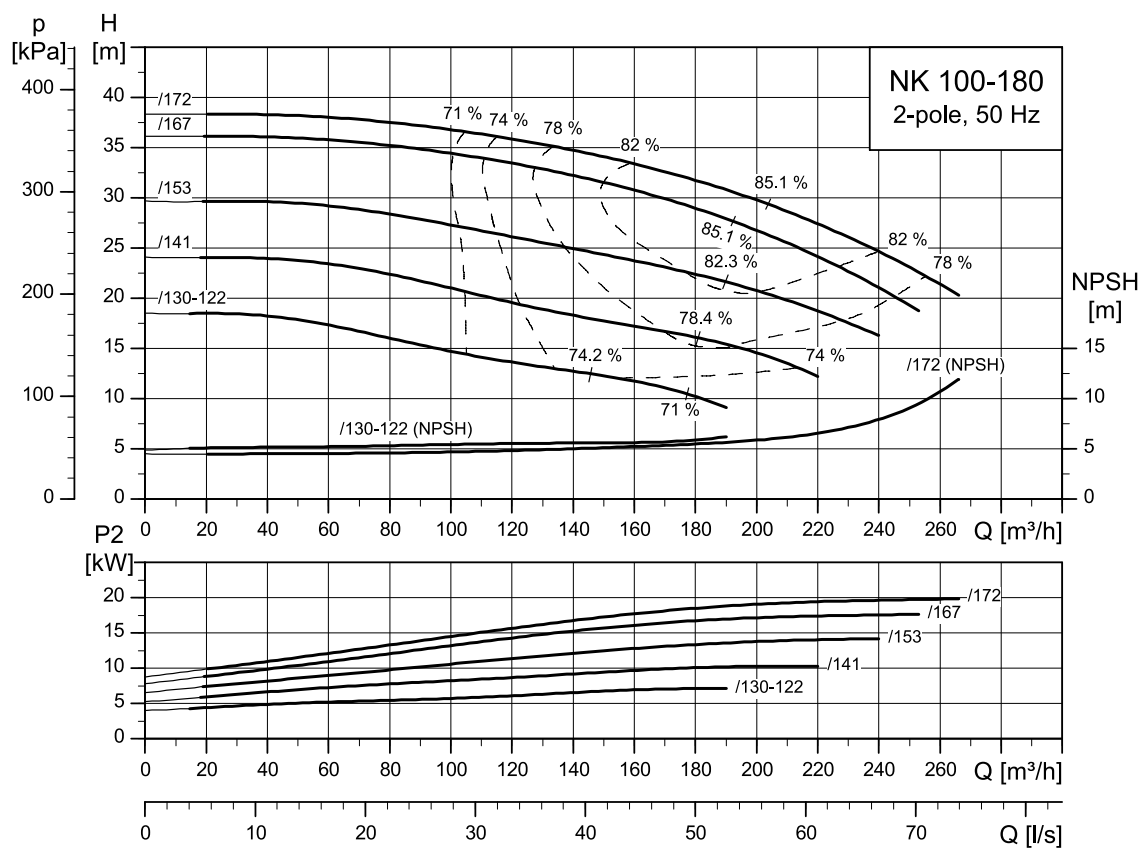
TM1040249

80-225



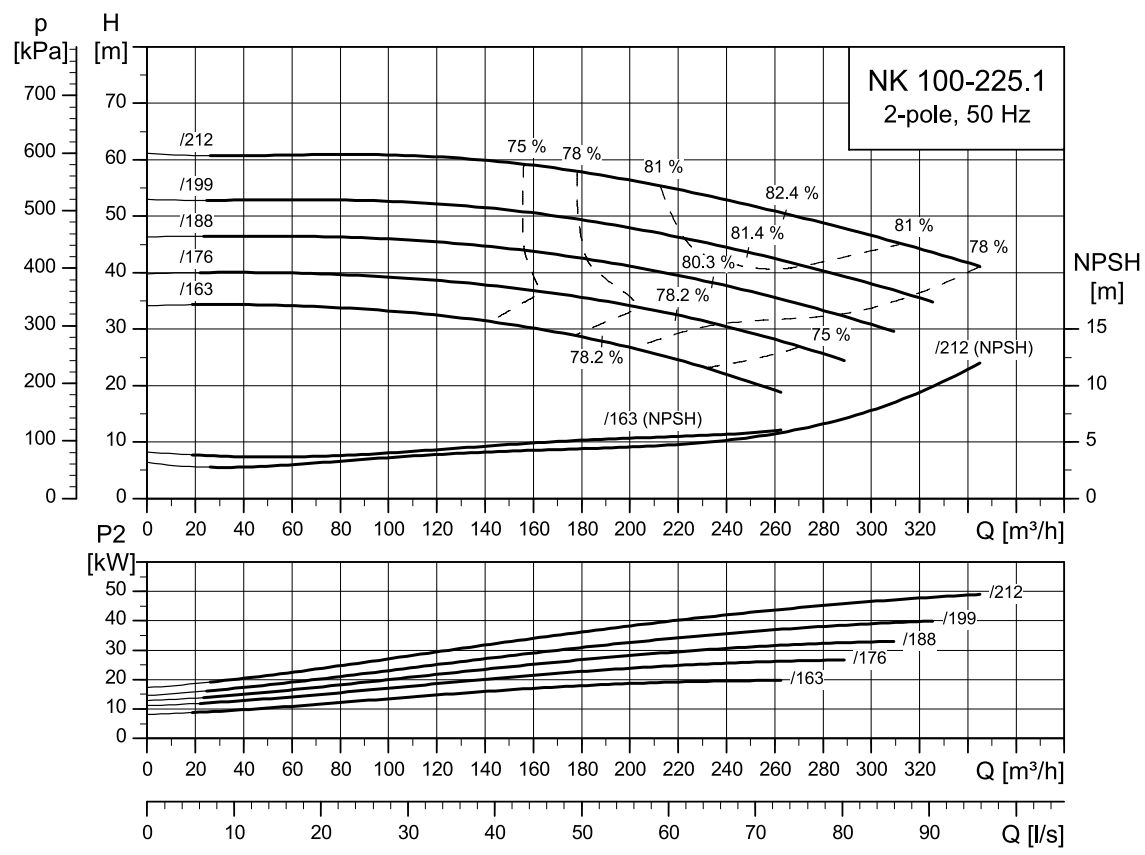
TM1040250

100-180



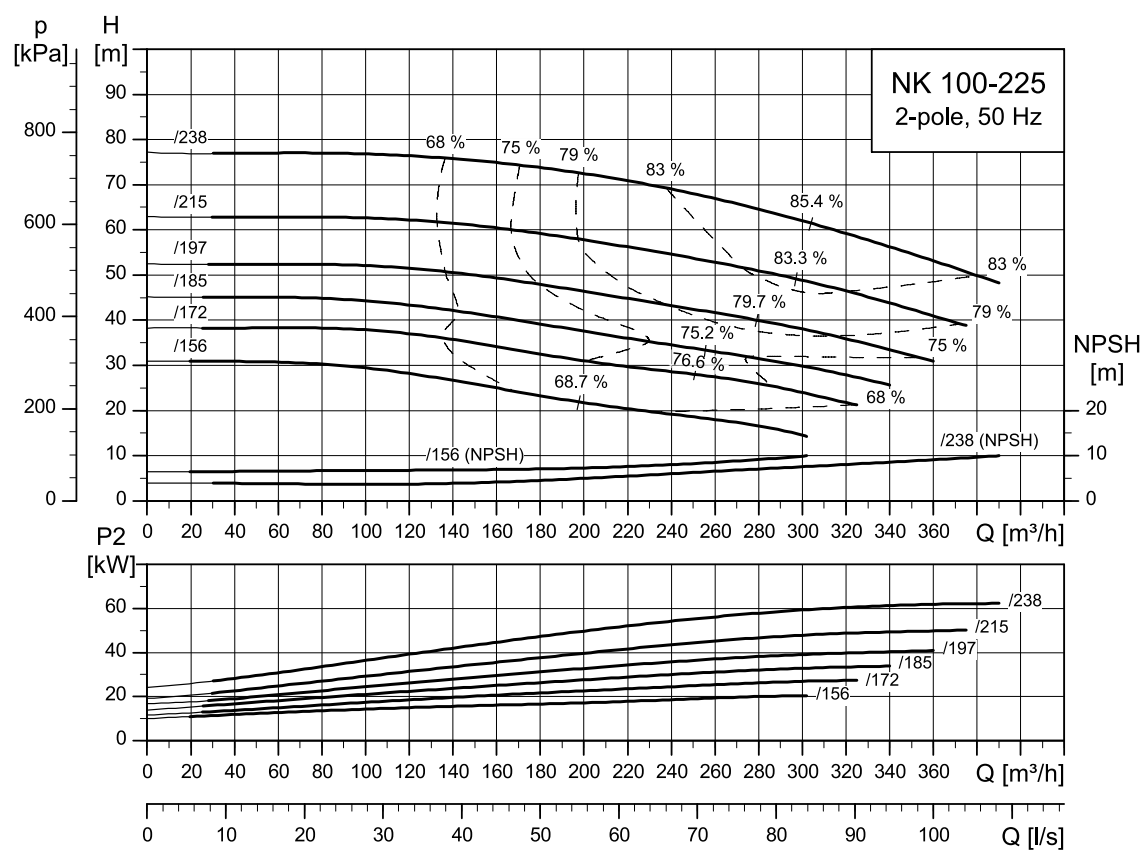
TM1040251

100-225.1



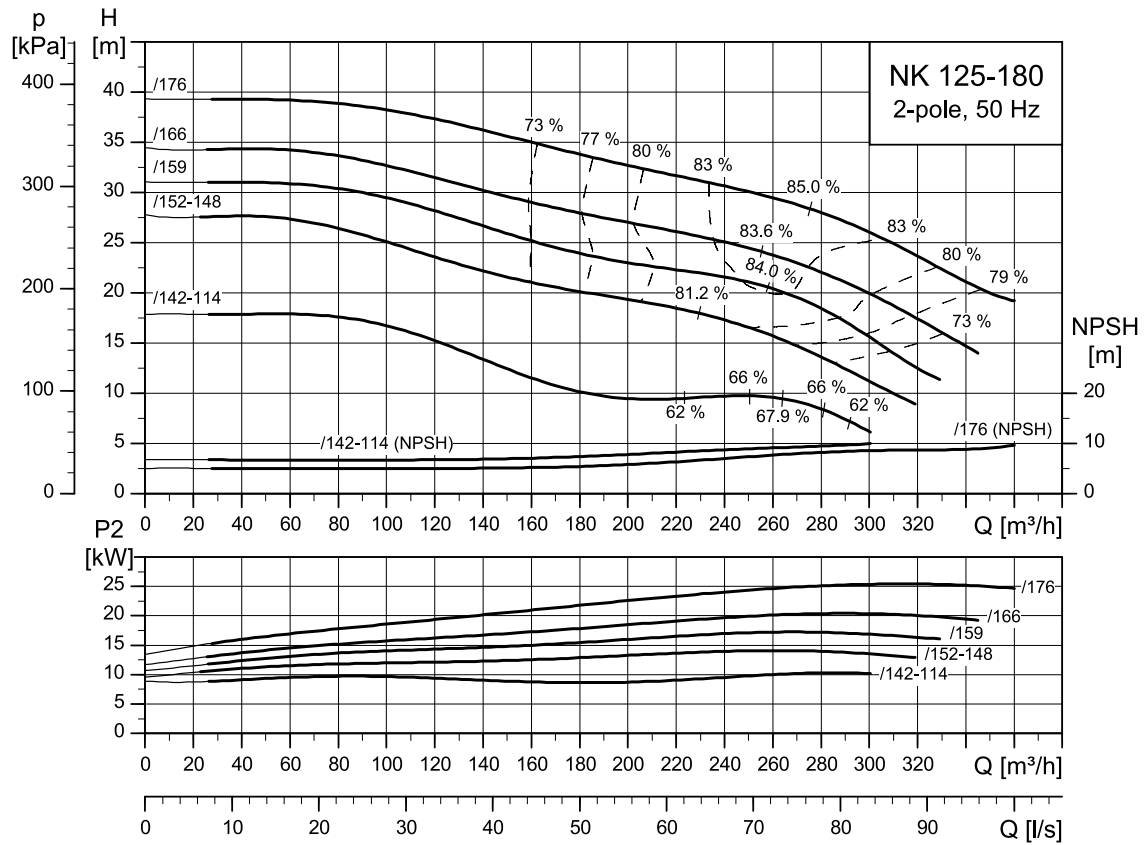
TM087732

100-225



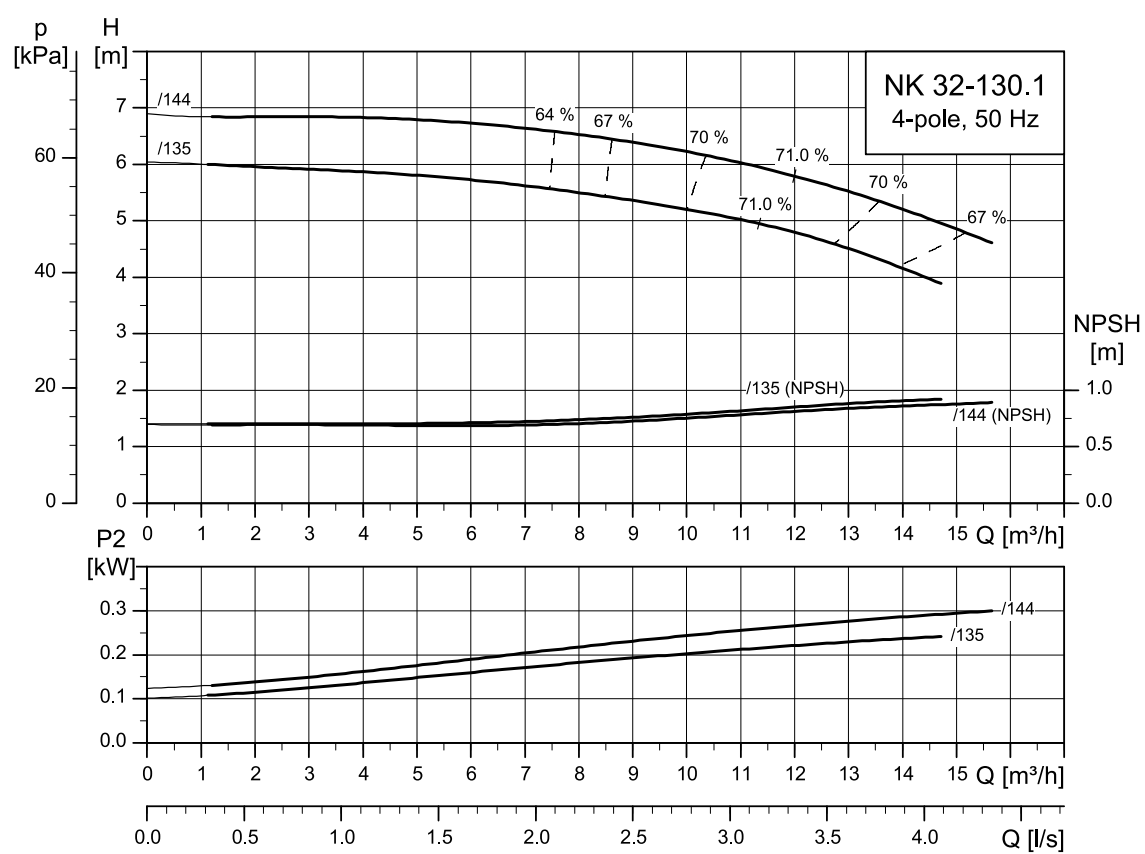
TM1040252

125-180



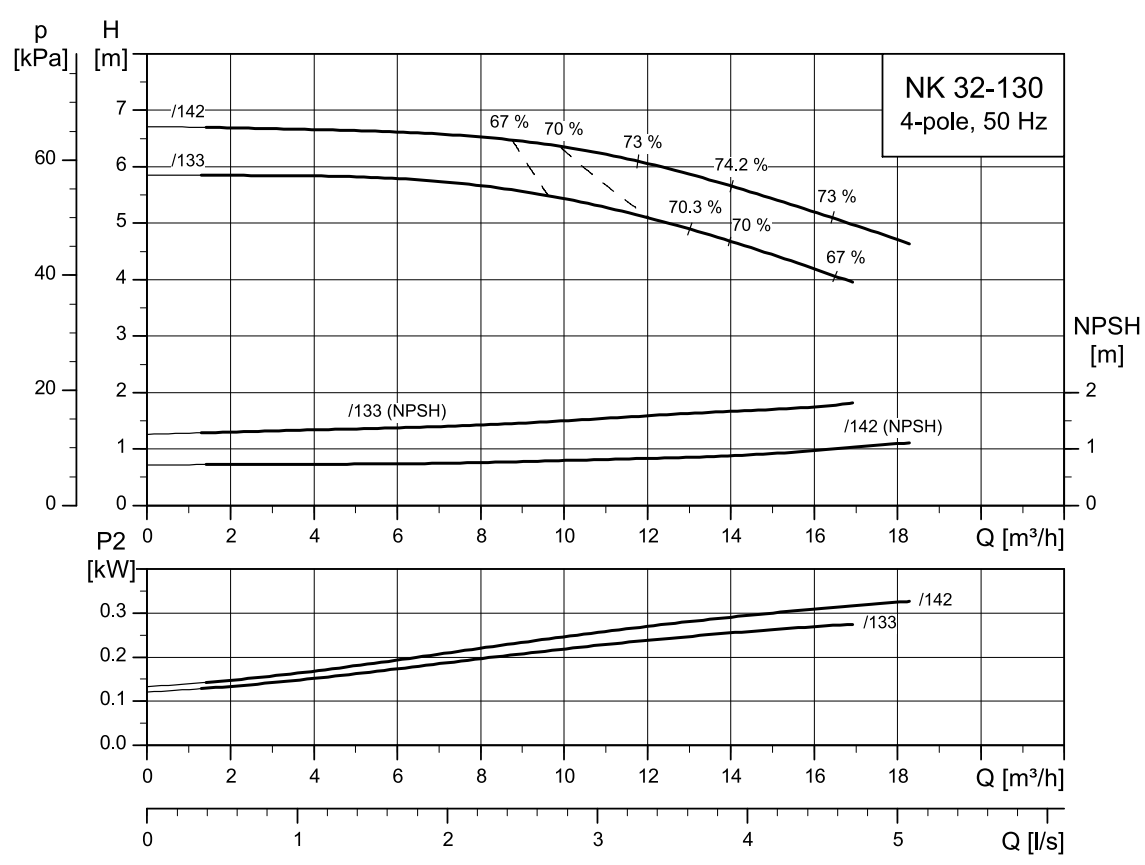
TM1040253

4-pole
32-130.1



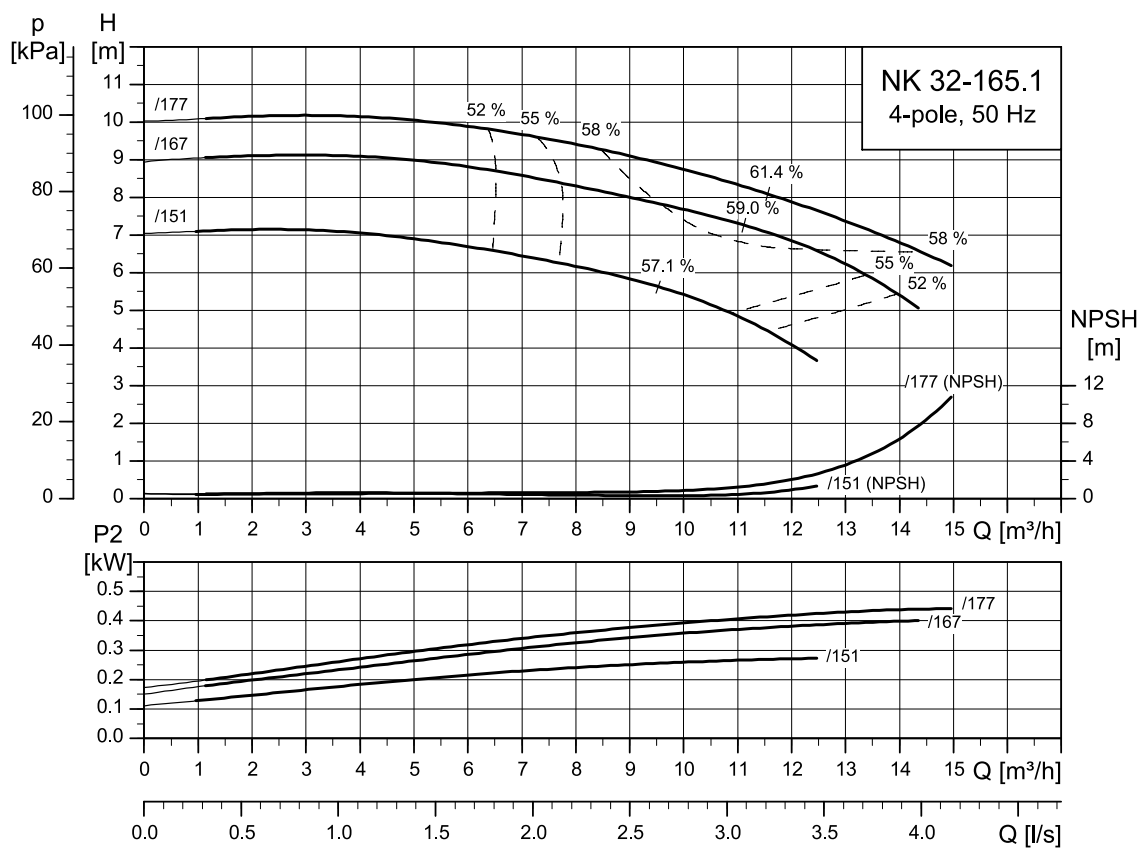
TM083782

32-130



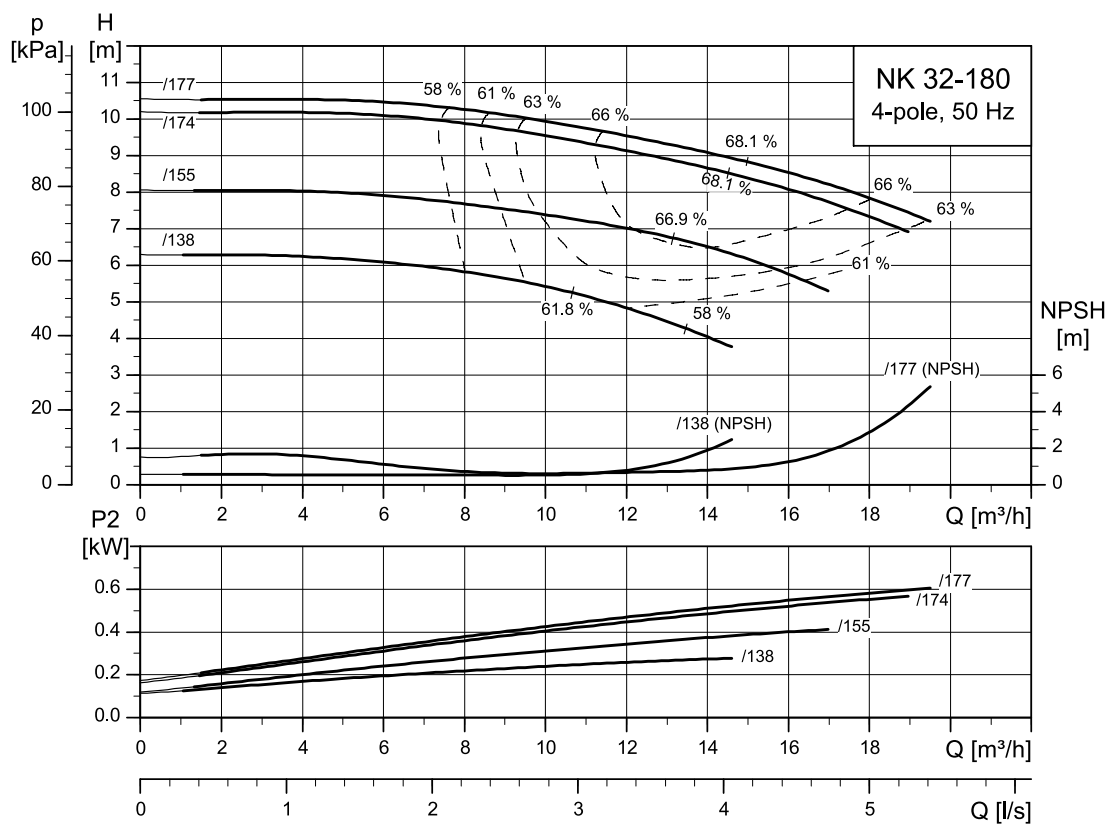
TM083781

32-165.1



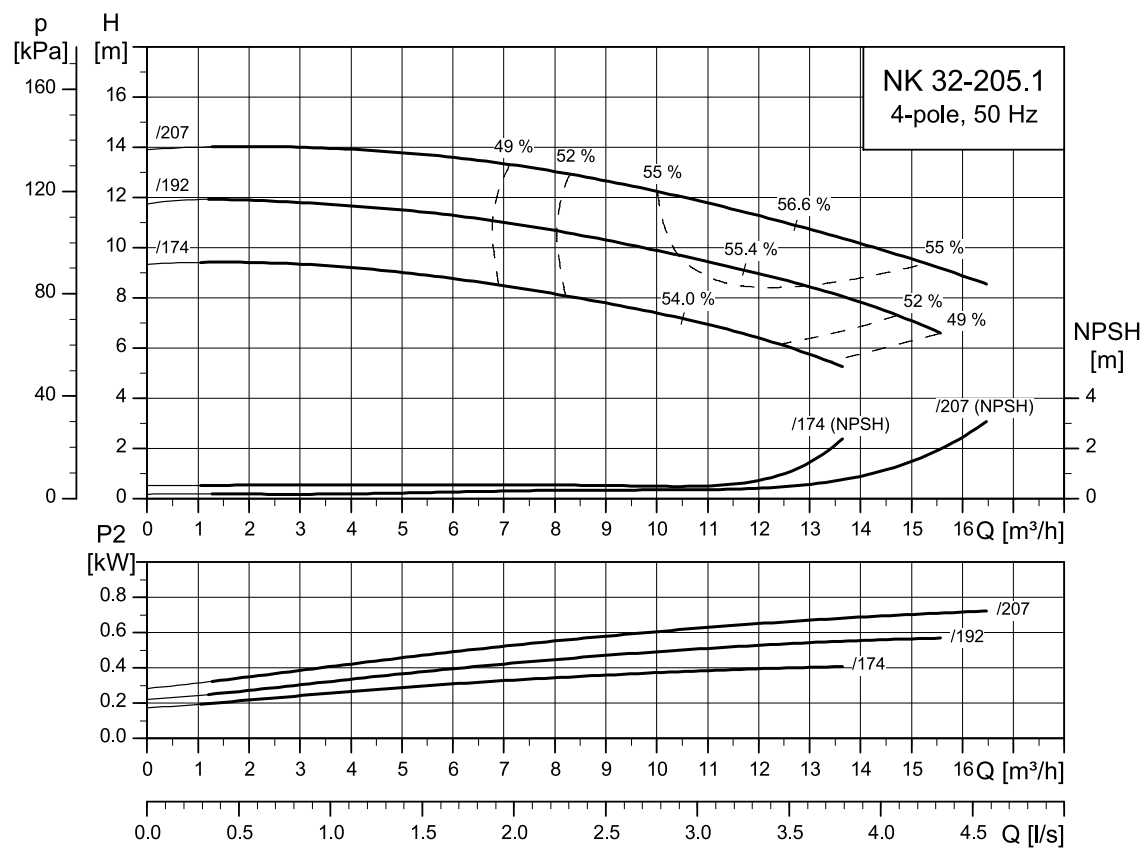
TM084967

32-180



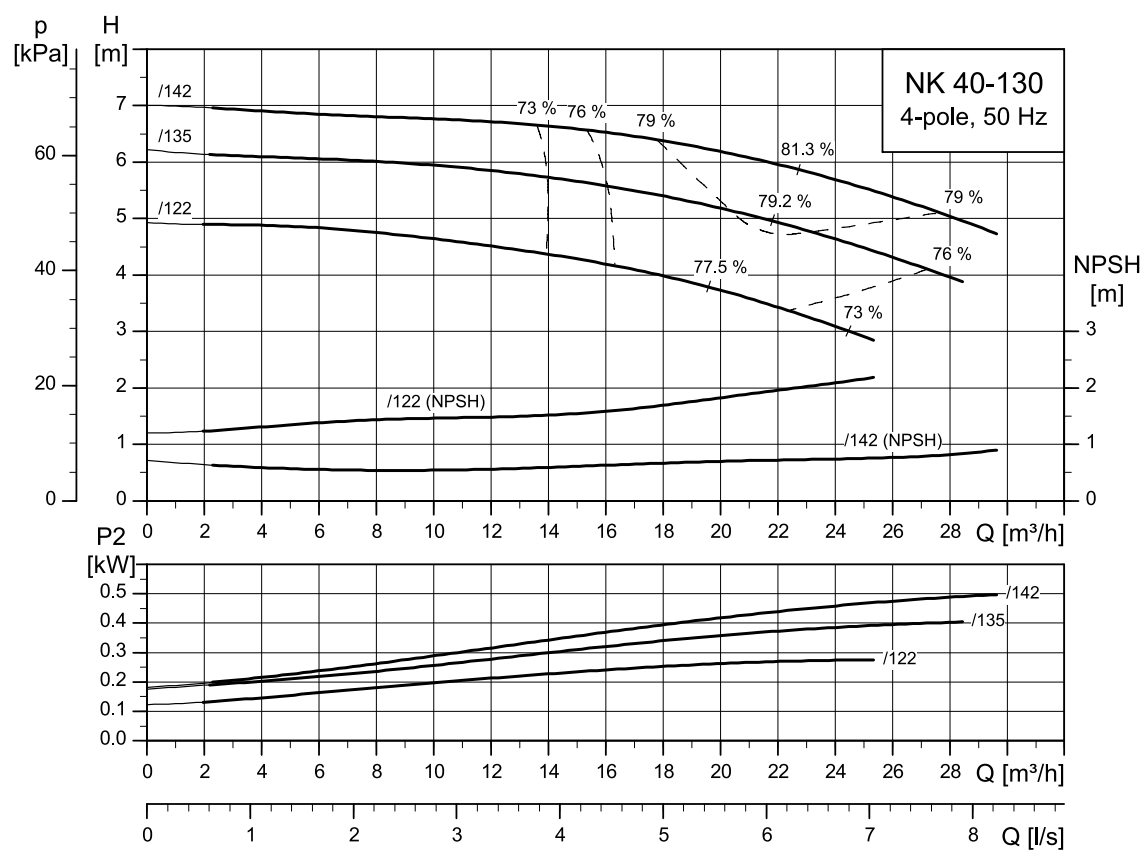
TM1040254

32-205.1



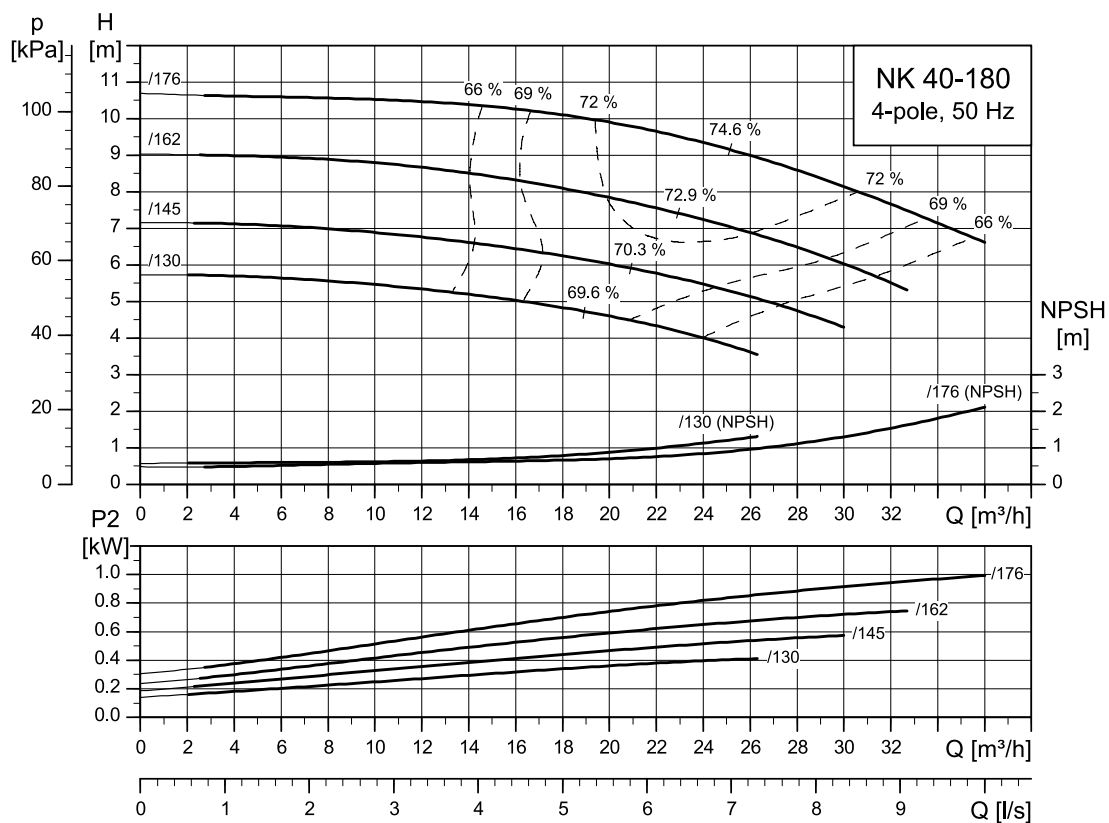
TM084970

40-130



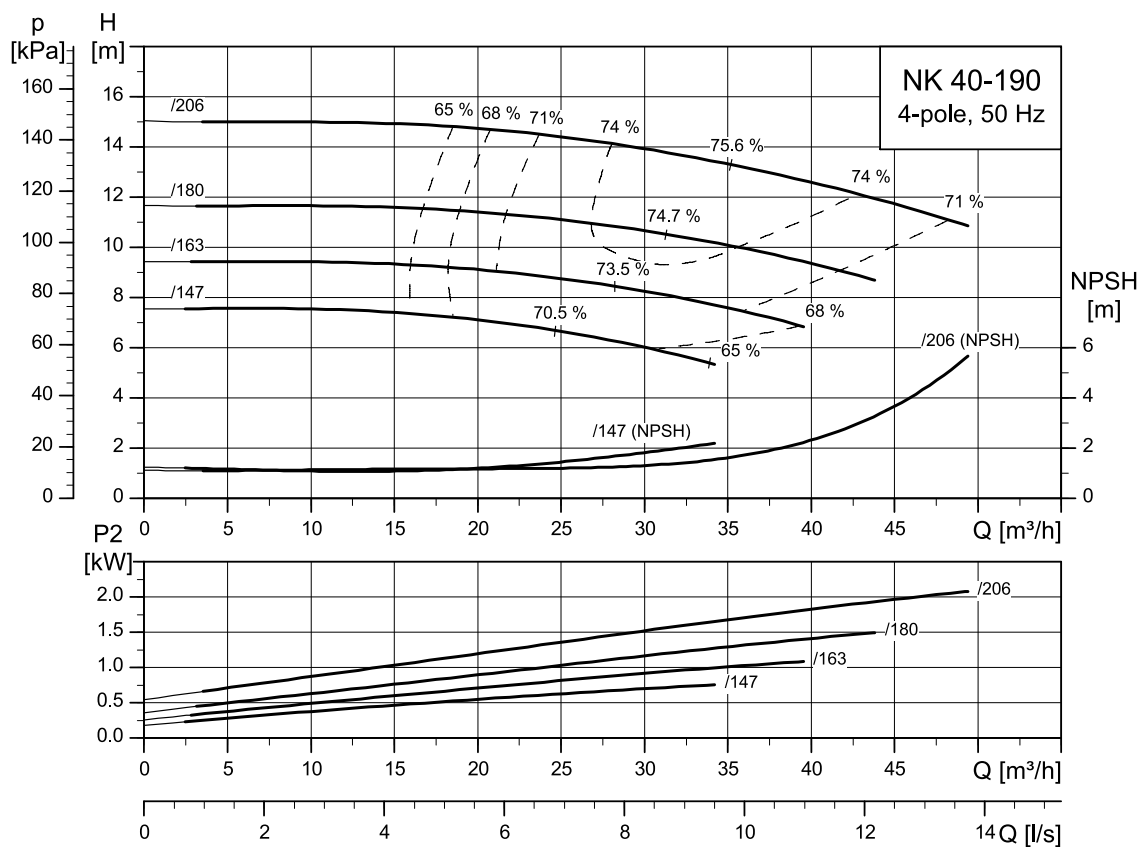
TM083783

40-180



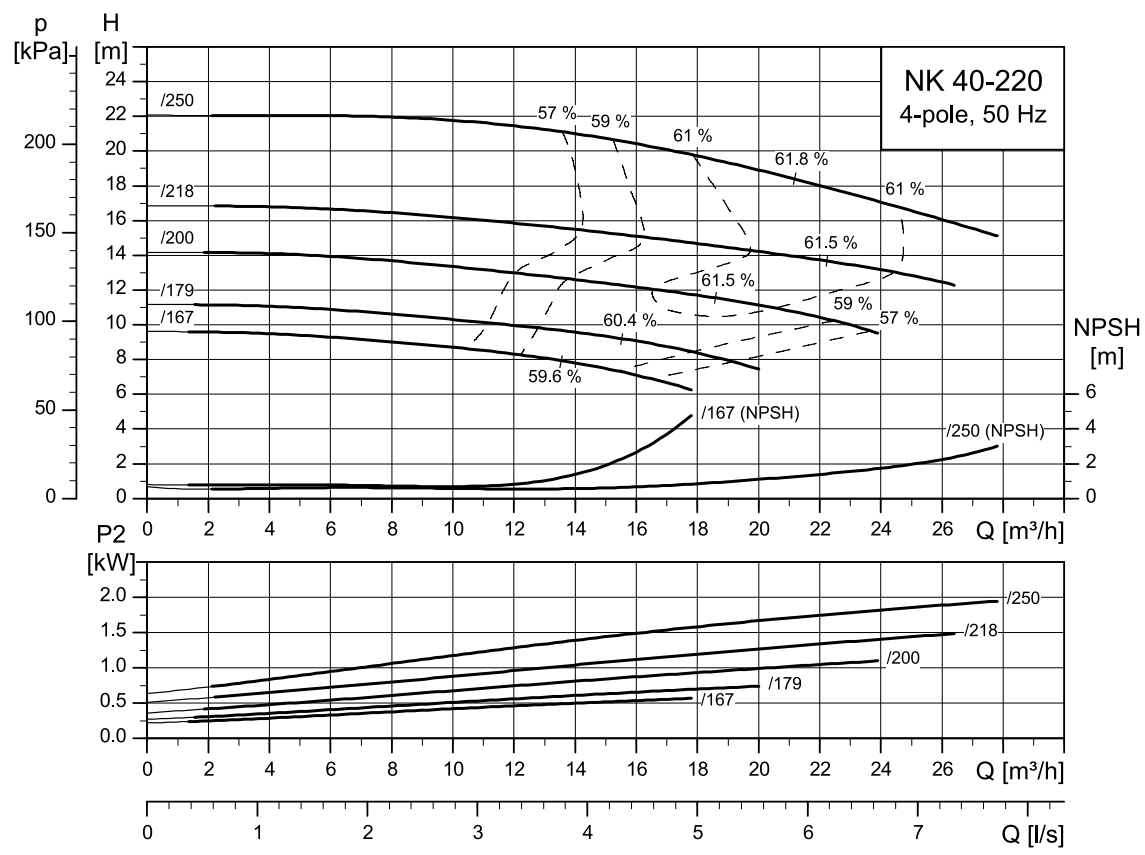
TM1040255

40-190



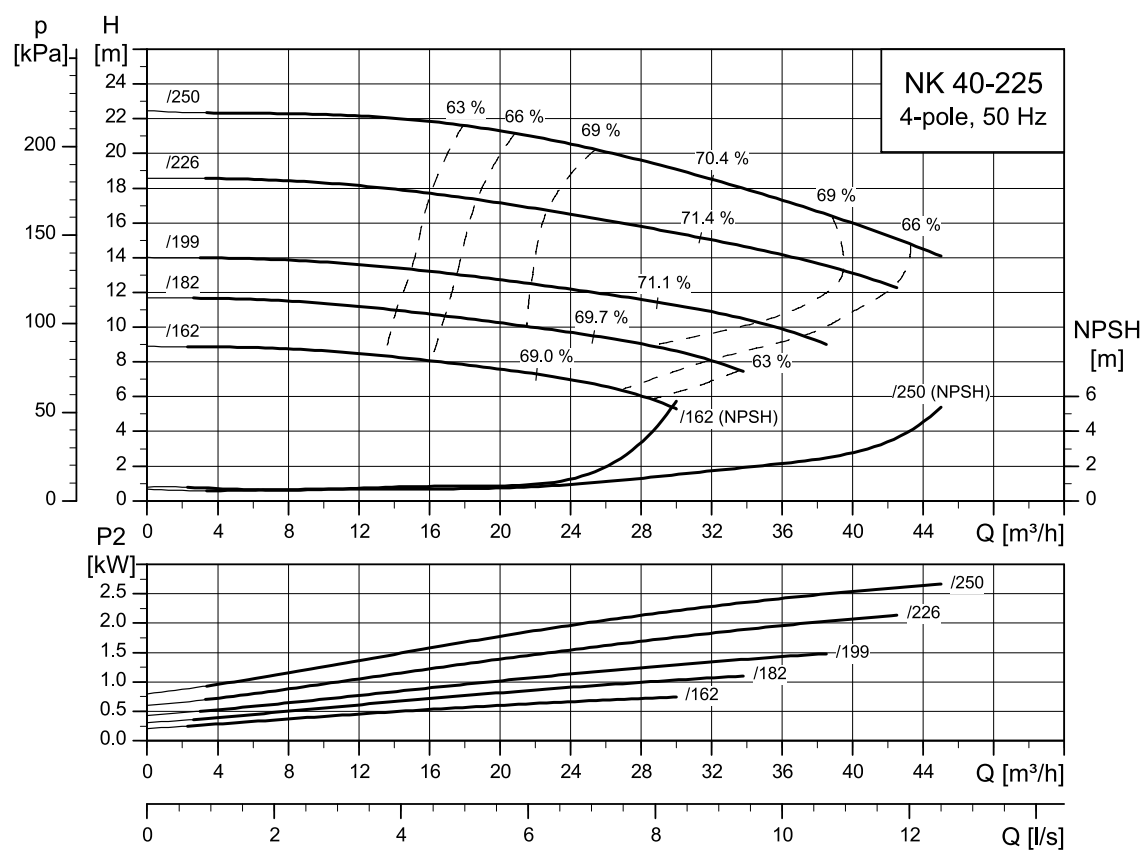
TM088658

40-220



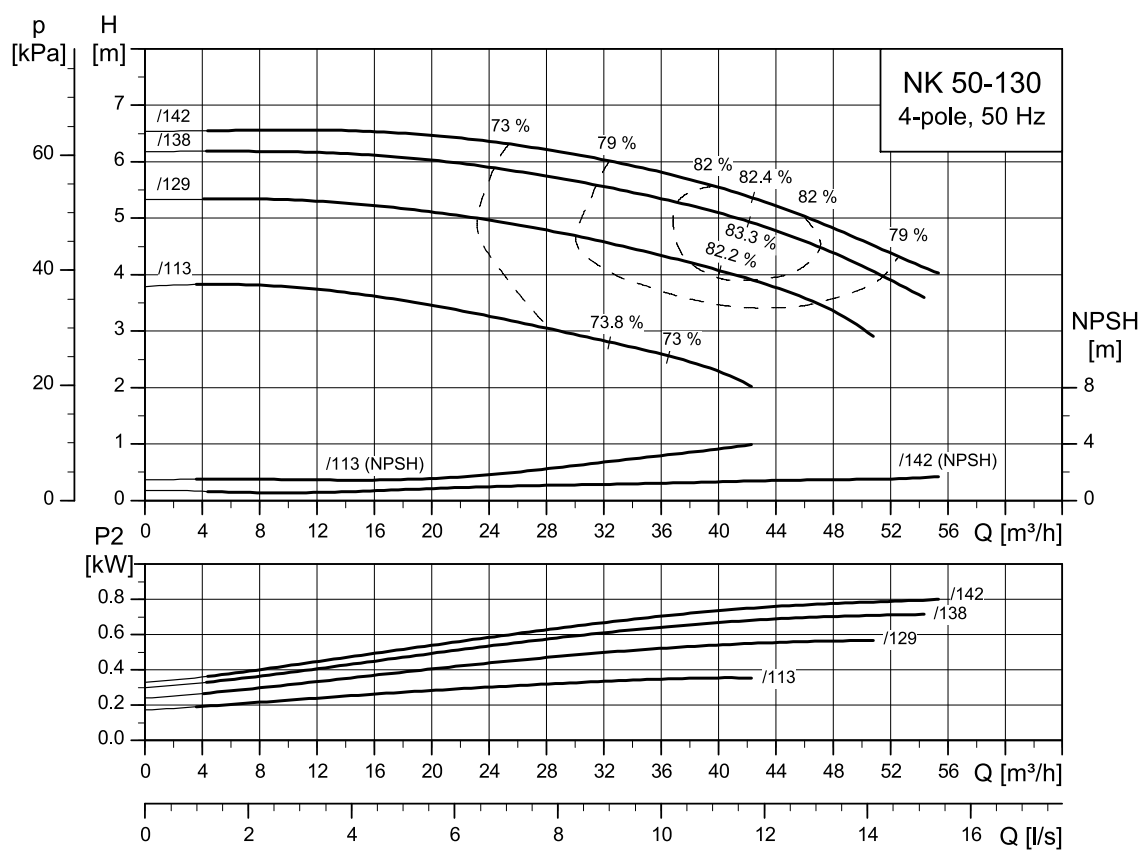
TM1040256

40-225



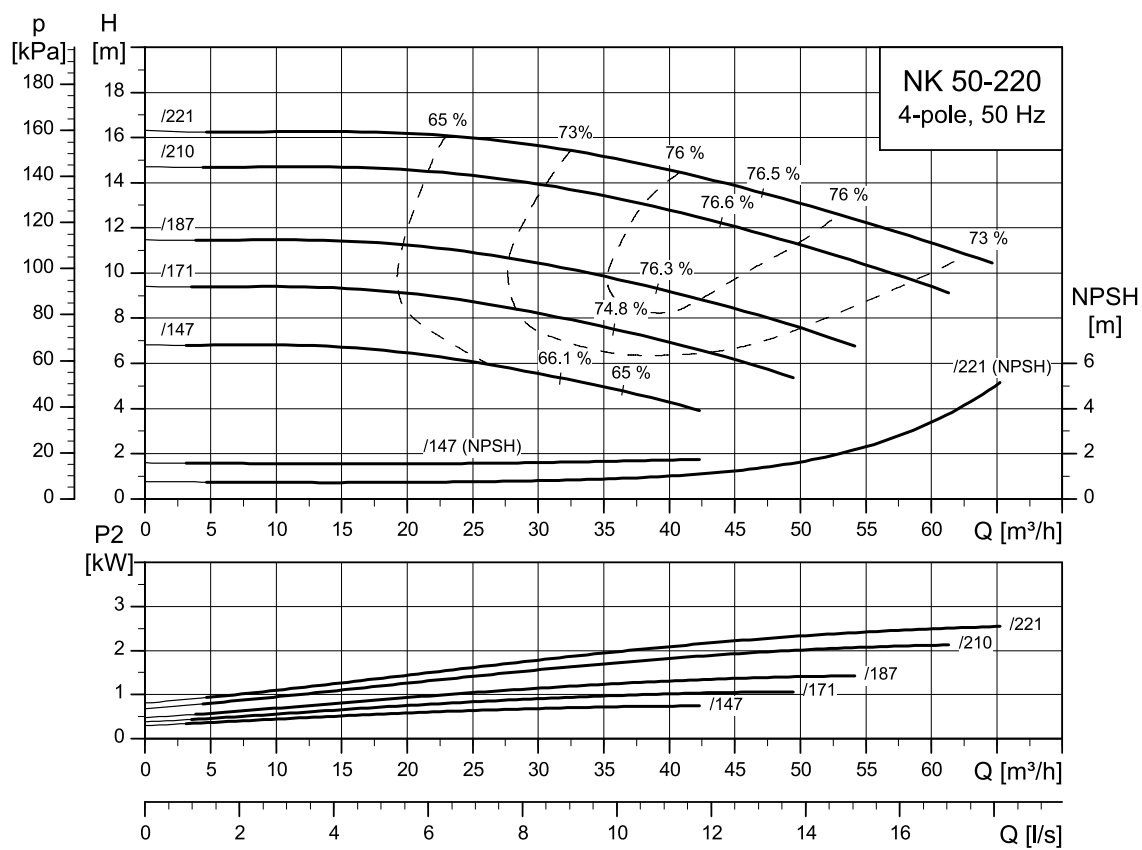
TM1040257

50-130



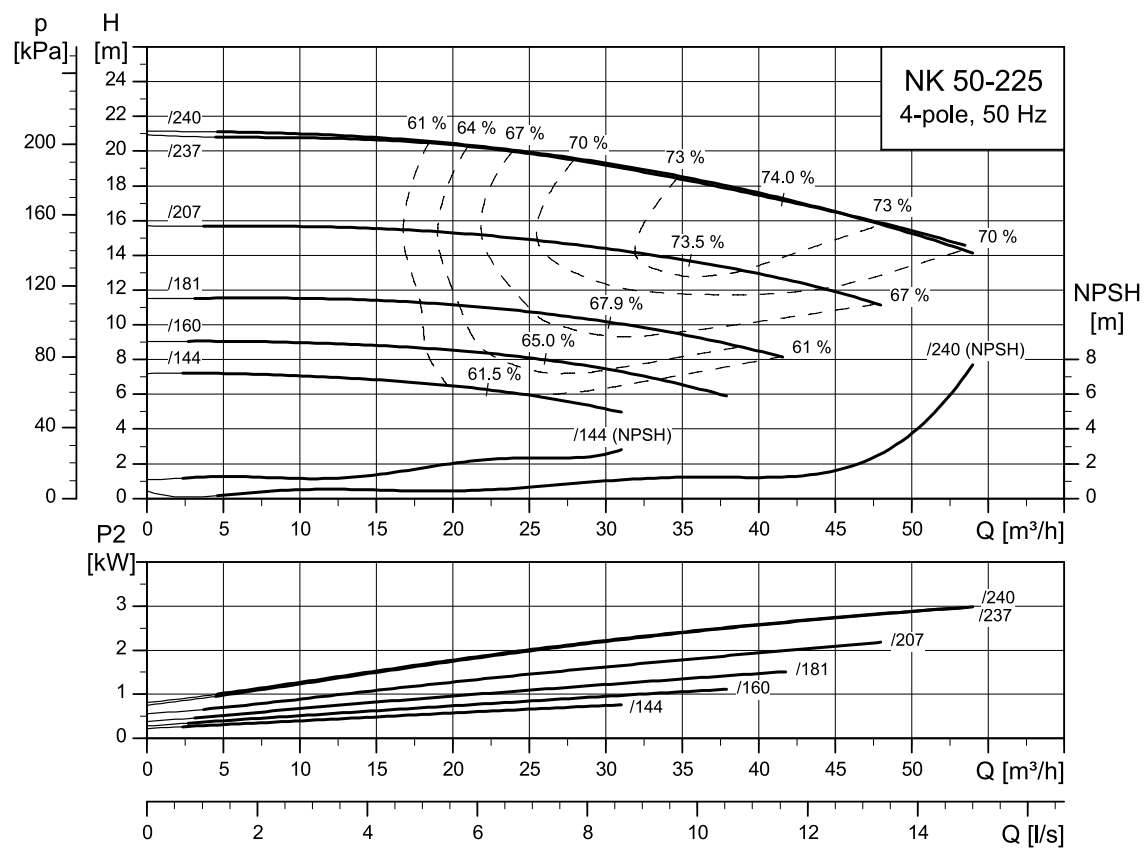
TM083784

50-220



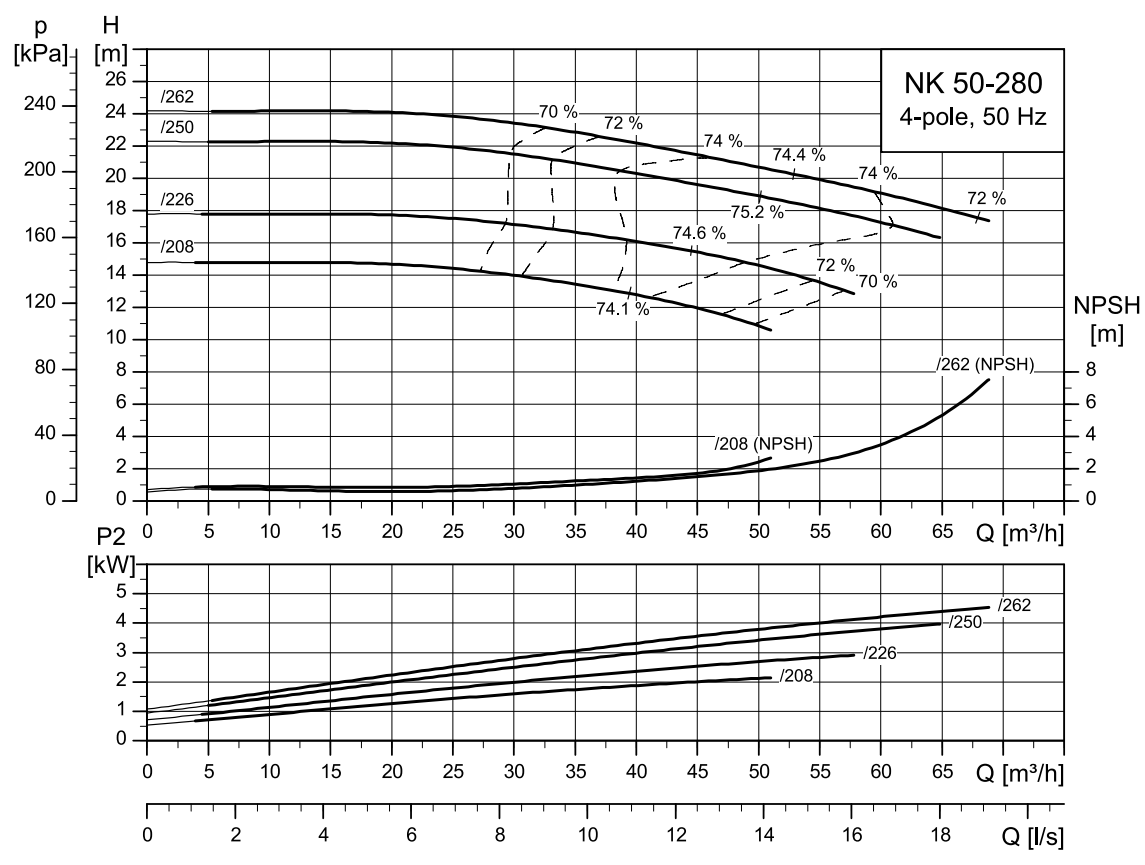
TM088656

50-225



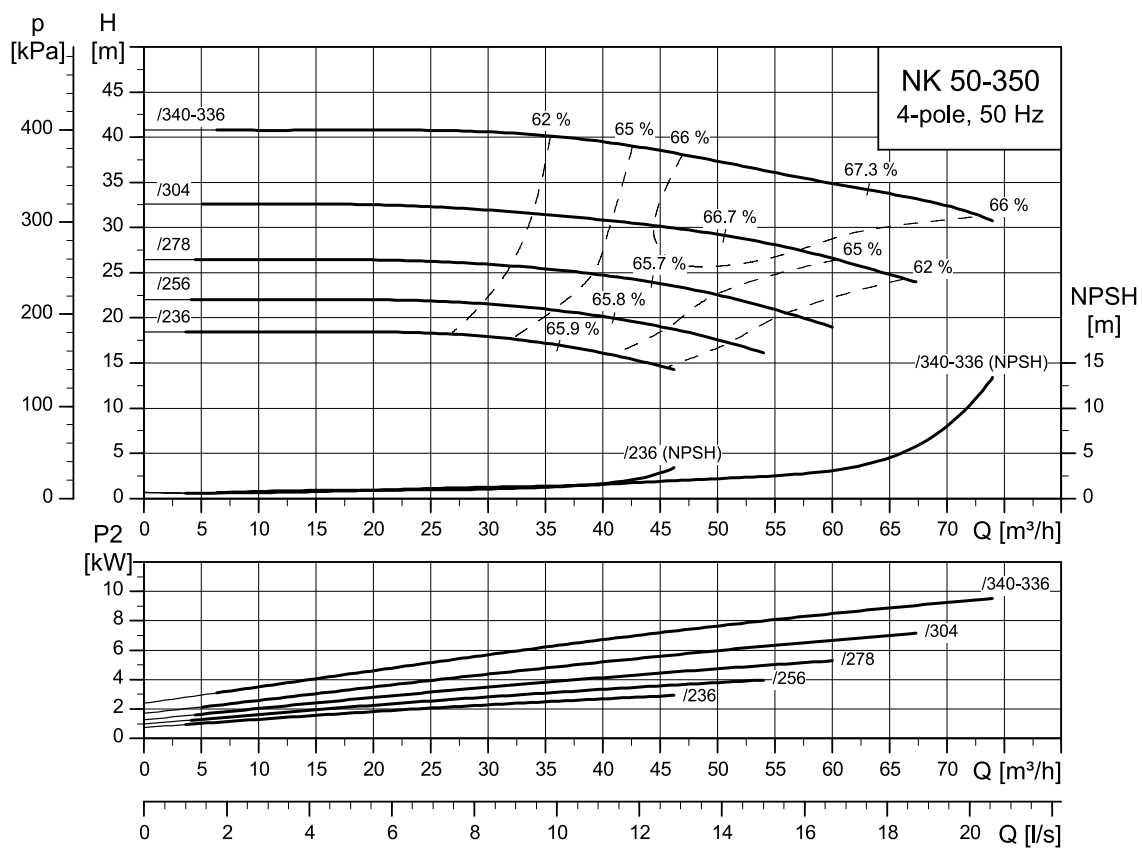
TM1040258

50-280



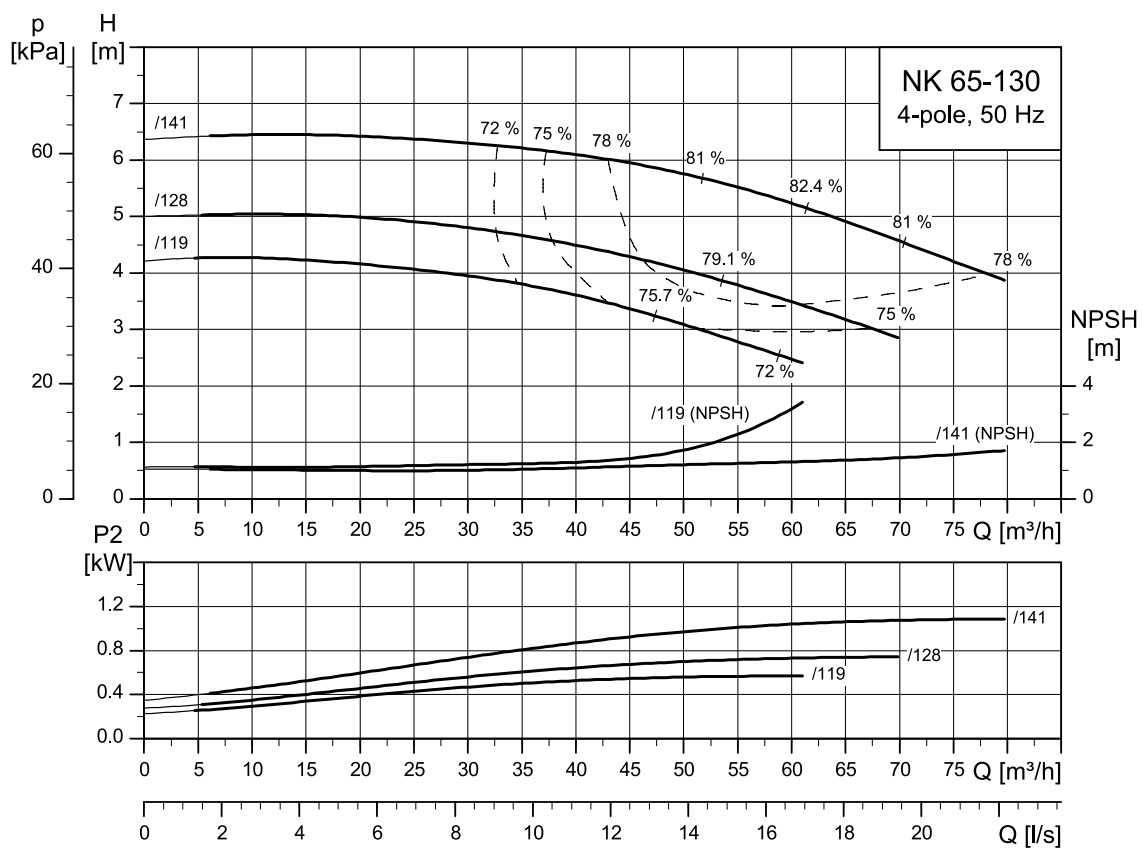
TM1040259

50-350



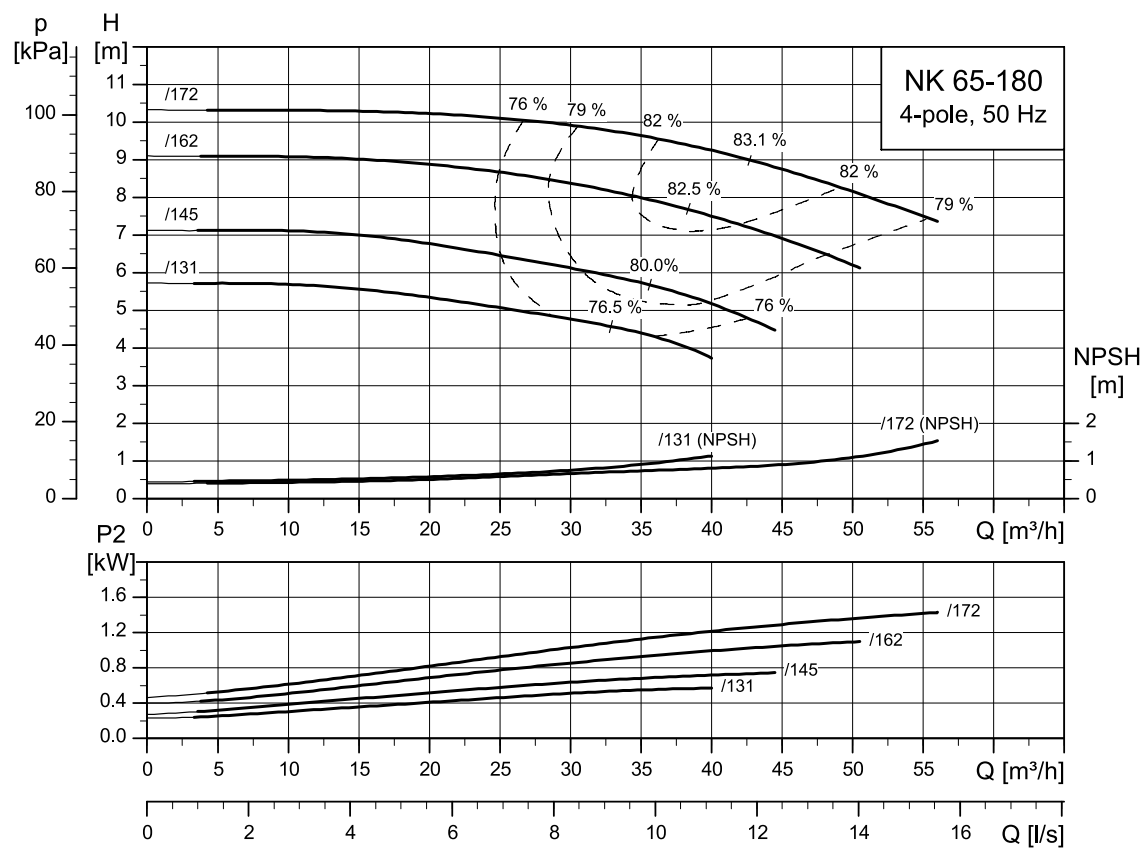
TM1040260

65-130

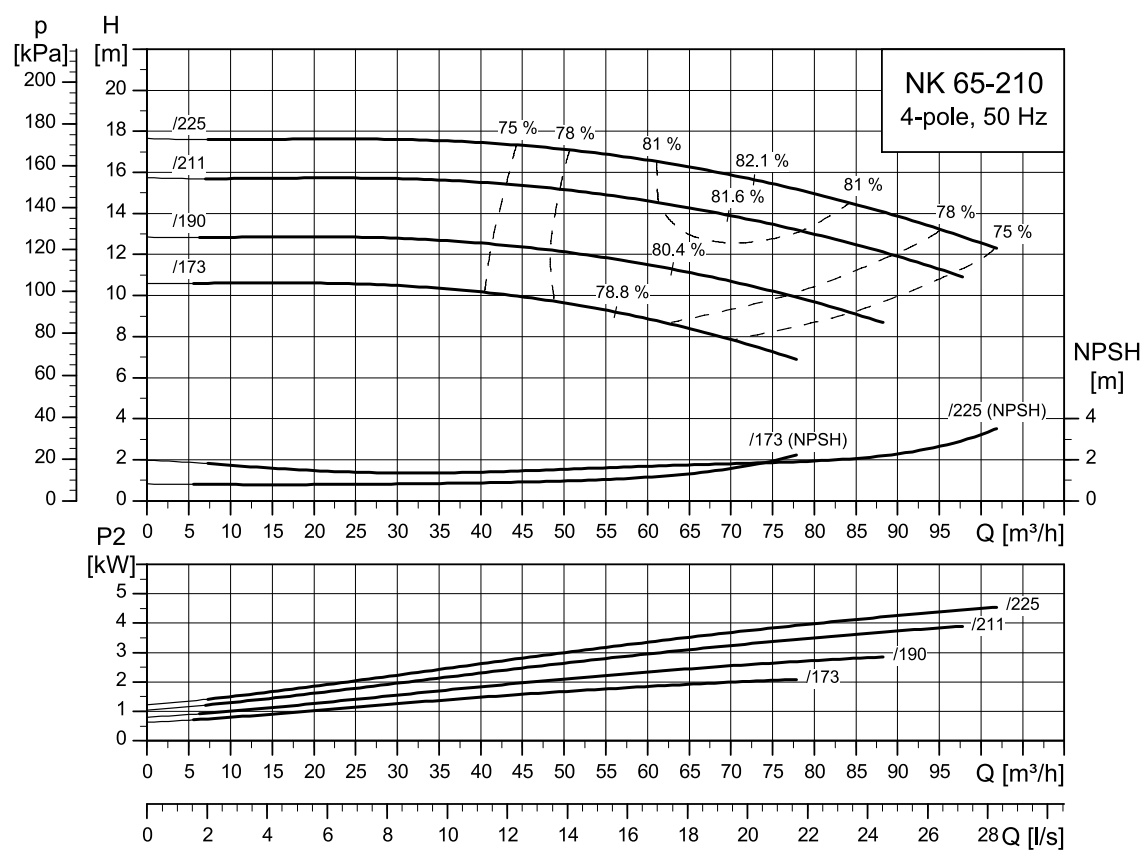


TM083785

65-180



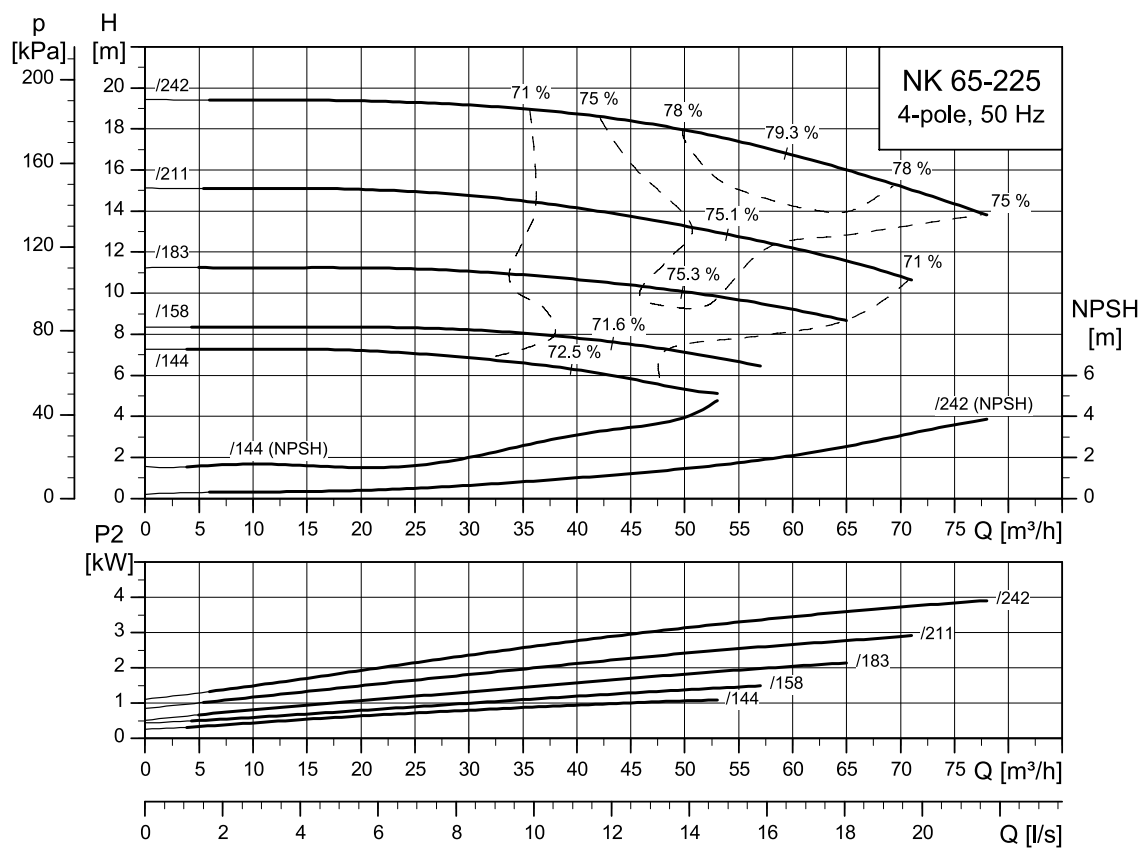
65-210



TM1040261

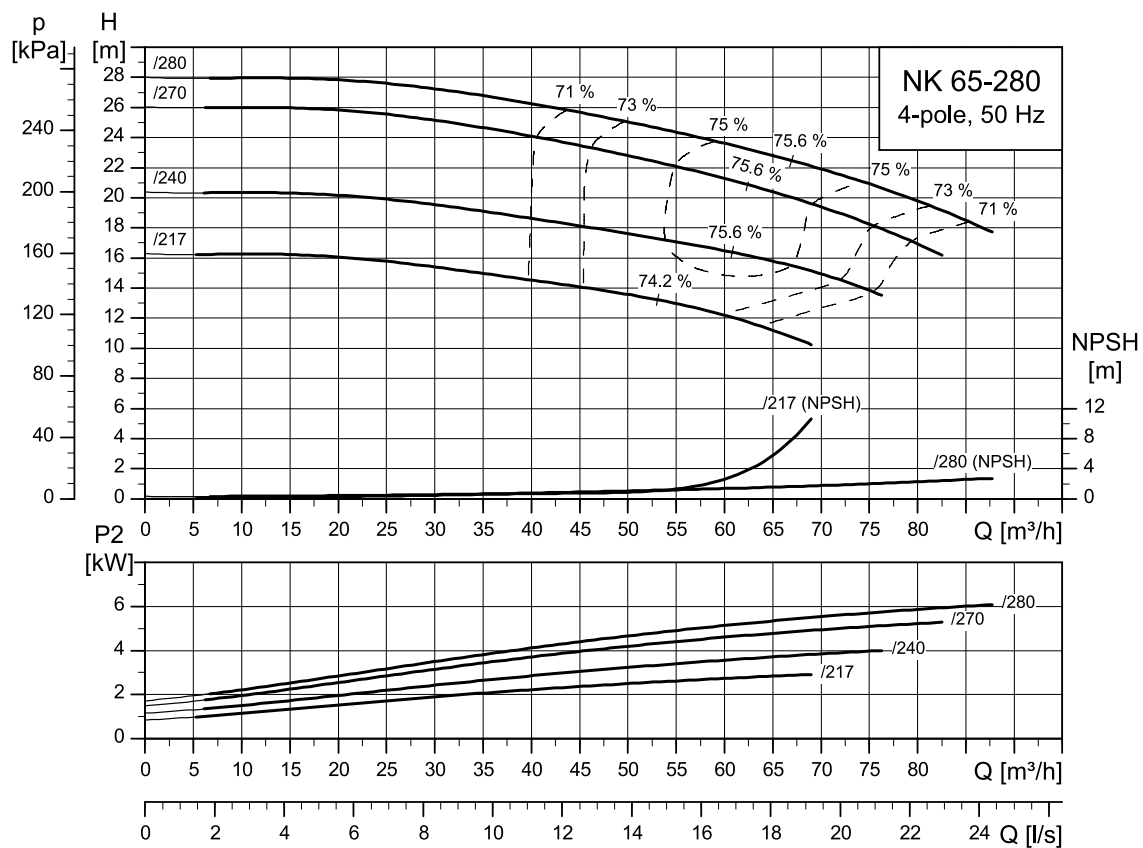
TM091559

65-225



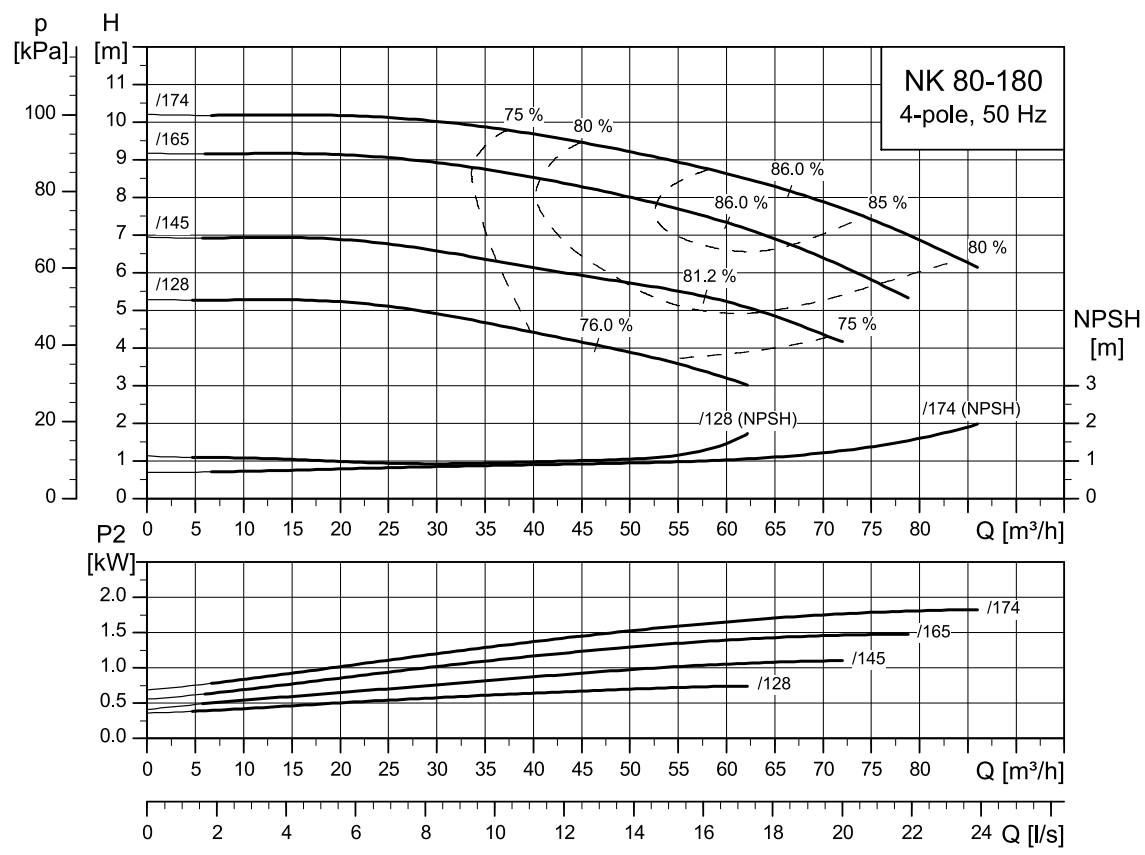
TM1040262

65-280



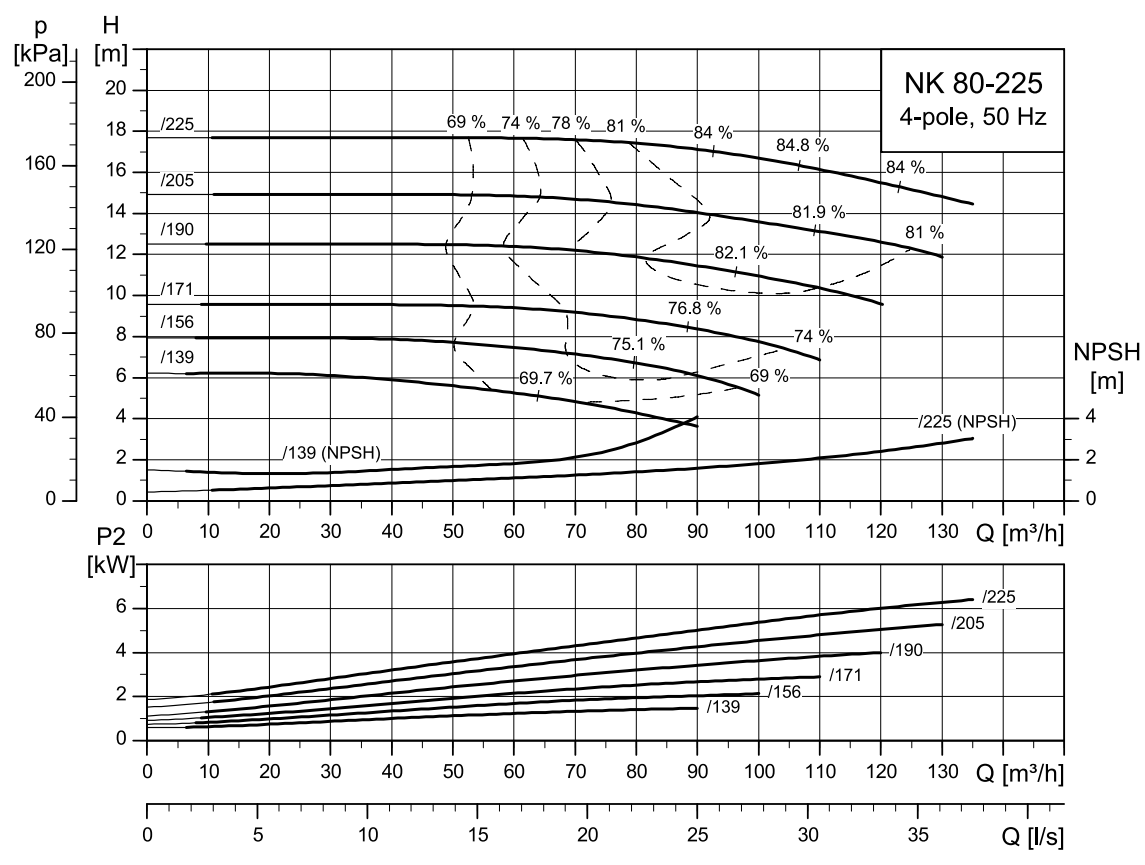
TM1040263

80-180



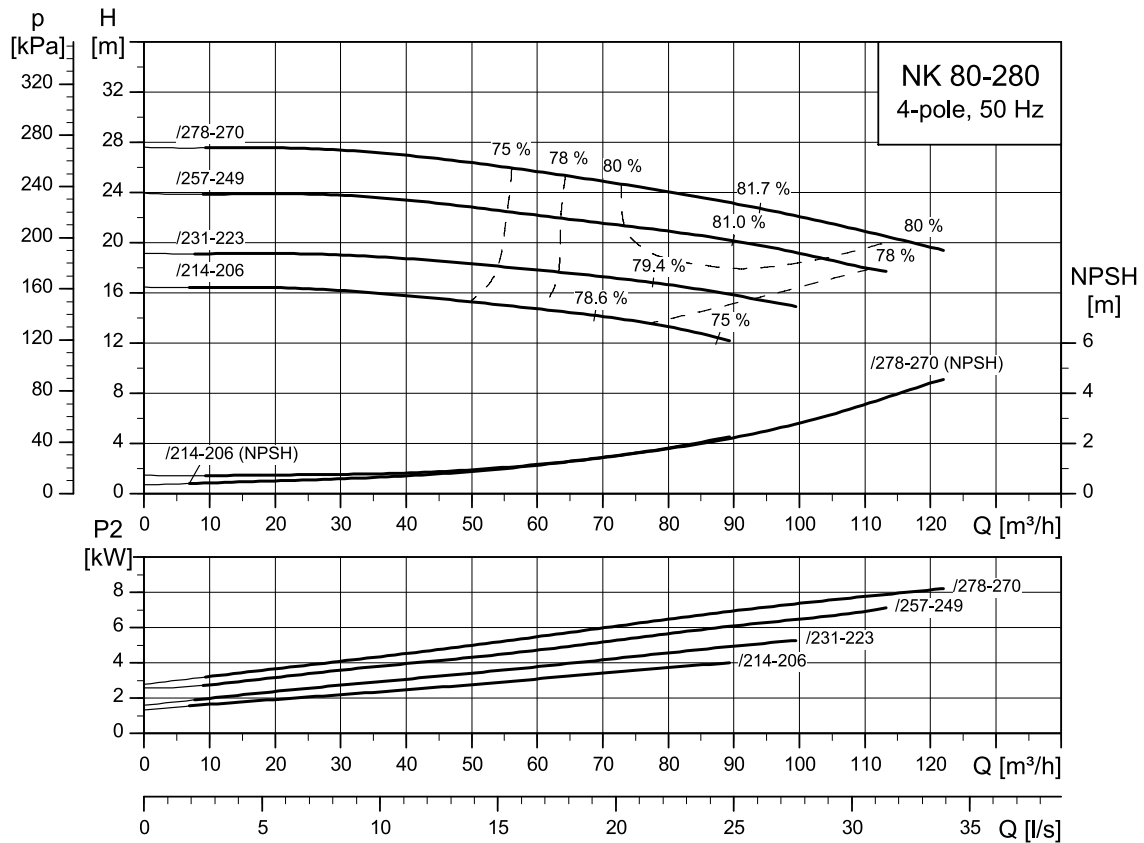
TM1040264

80-225



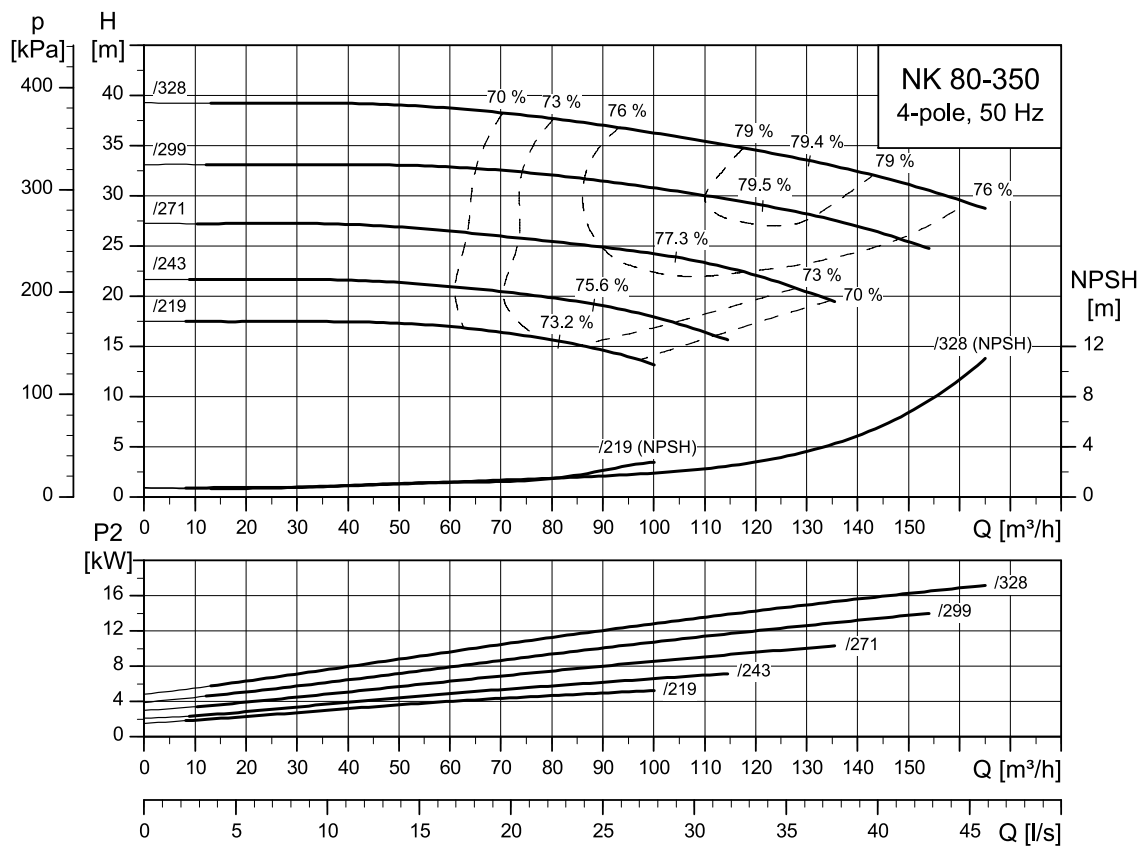
TM1040265

80-280



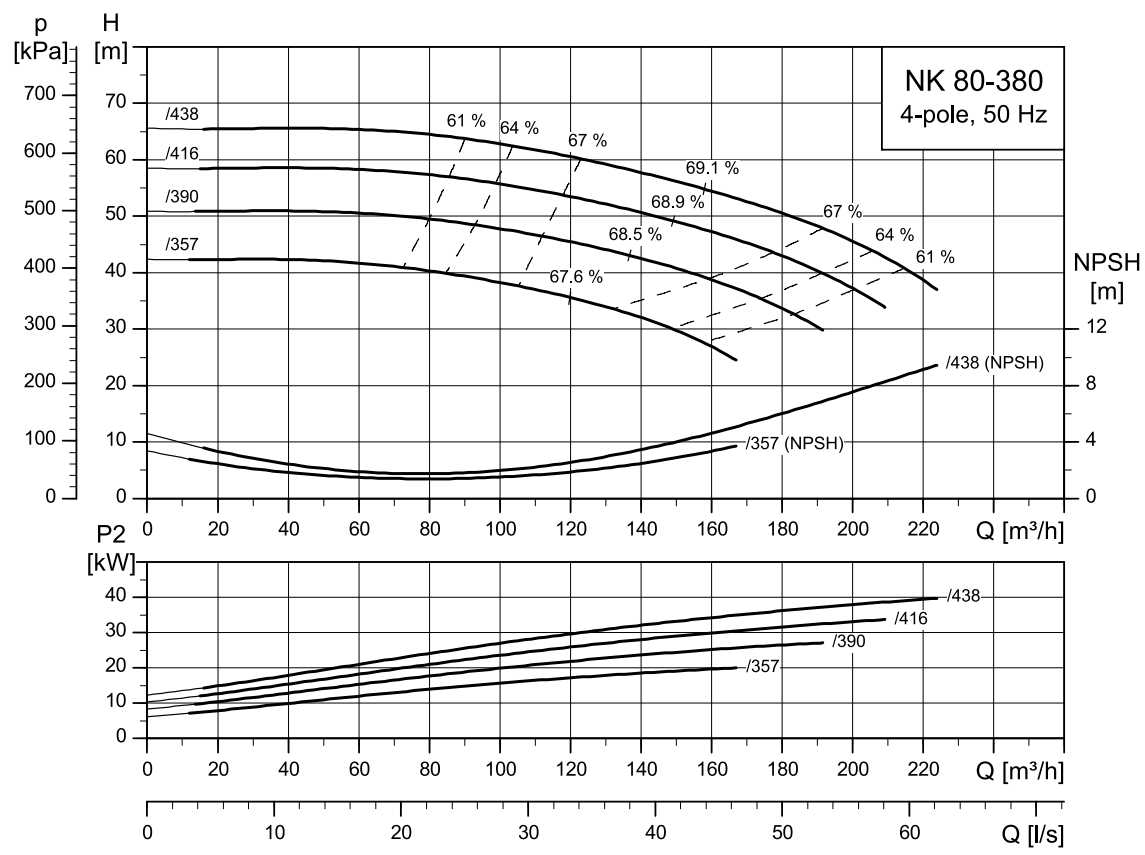
TM1040266

80-350



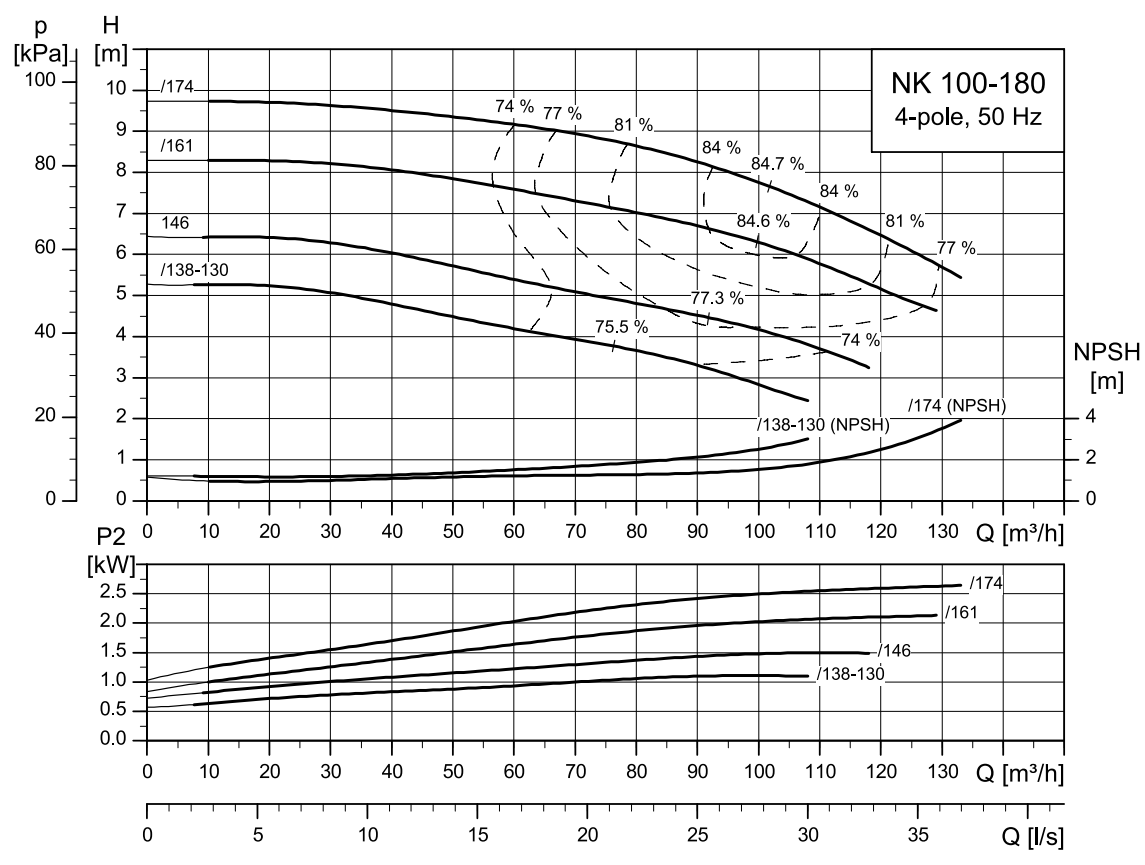
TM1040267

80-380



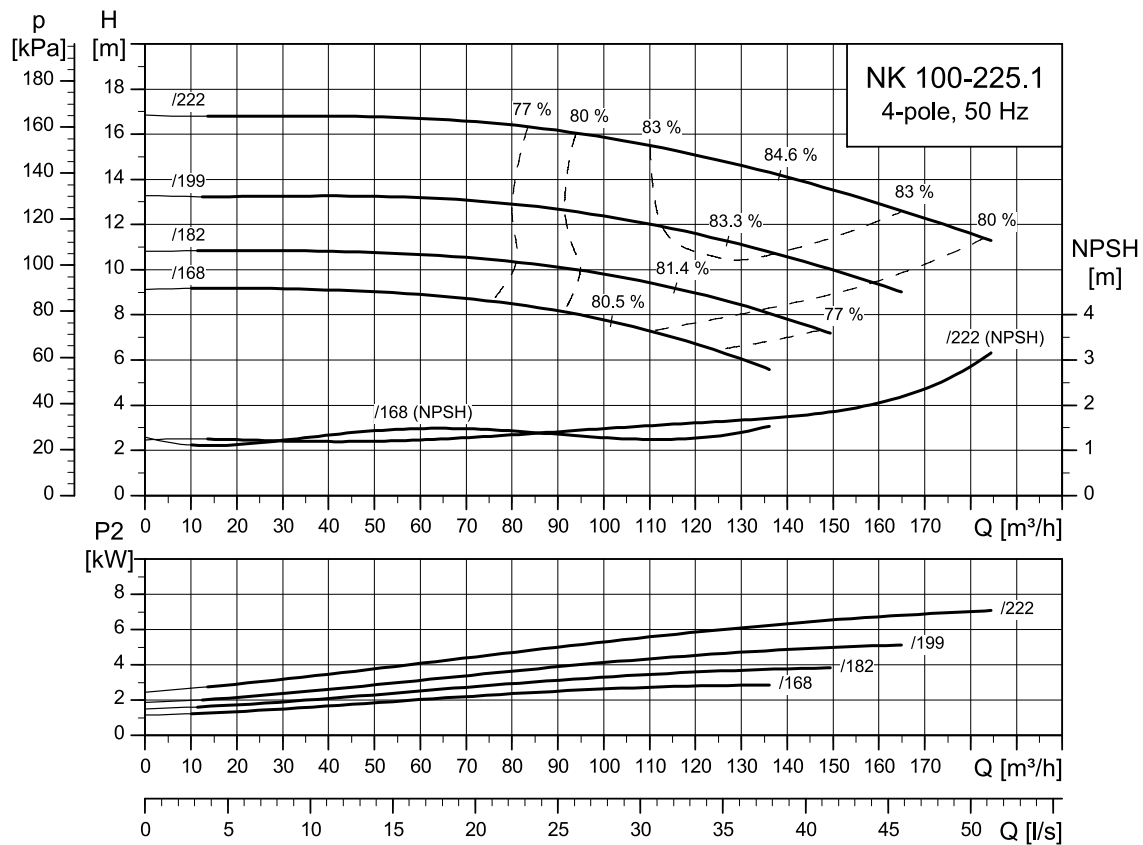
TM091556

100-180



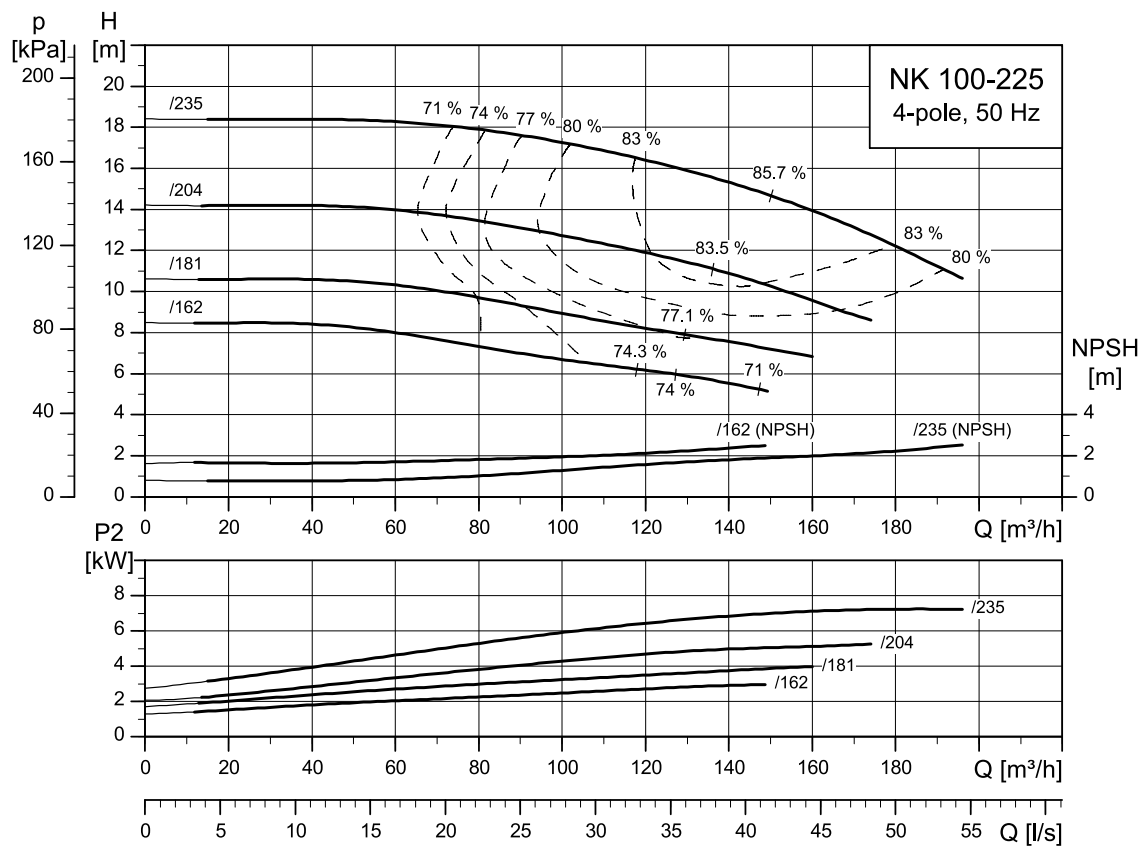
TM1040268

100-225.1



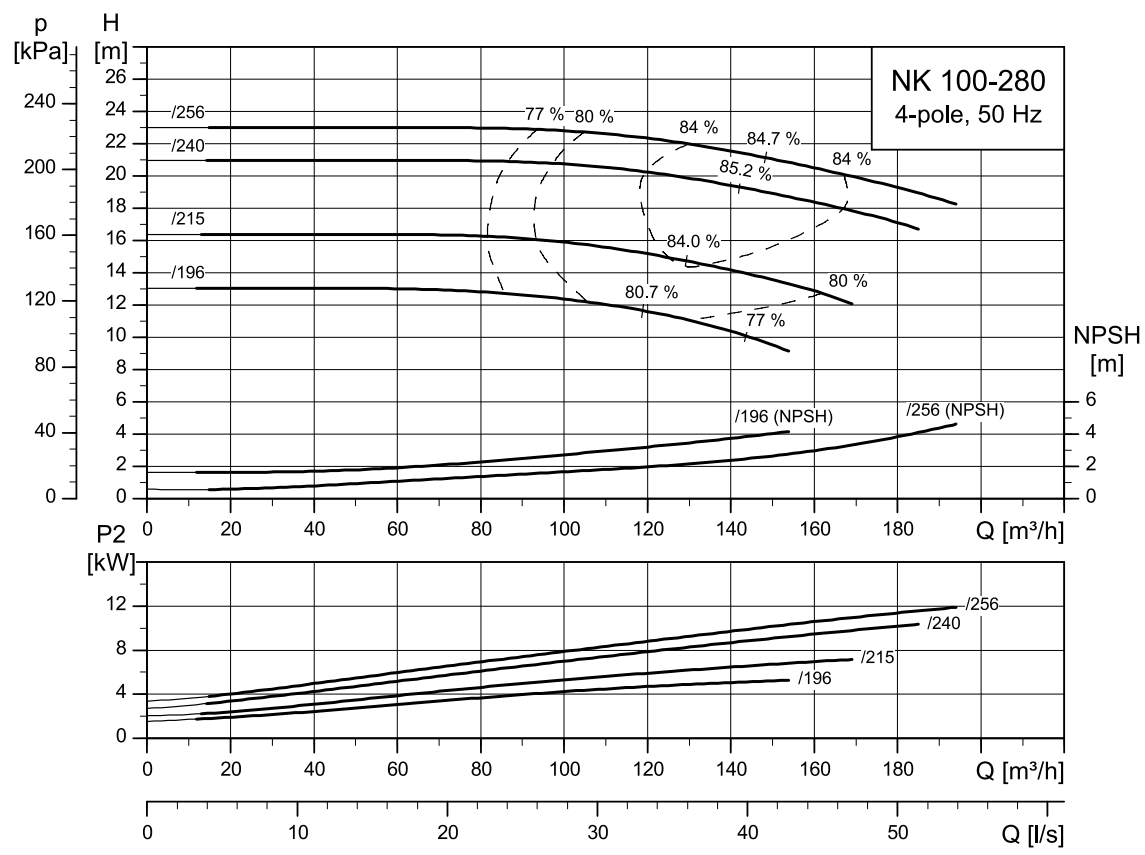
TM087733

100-225



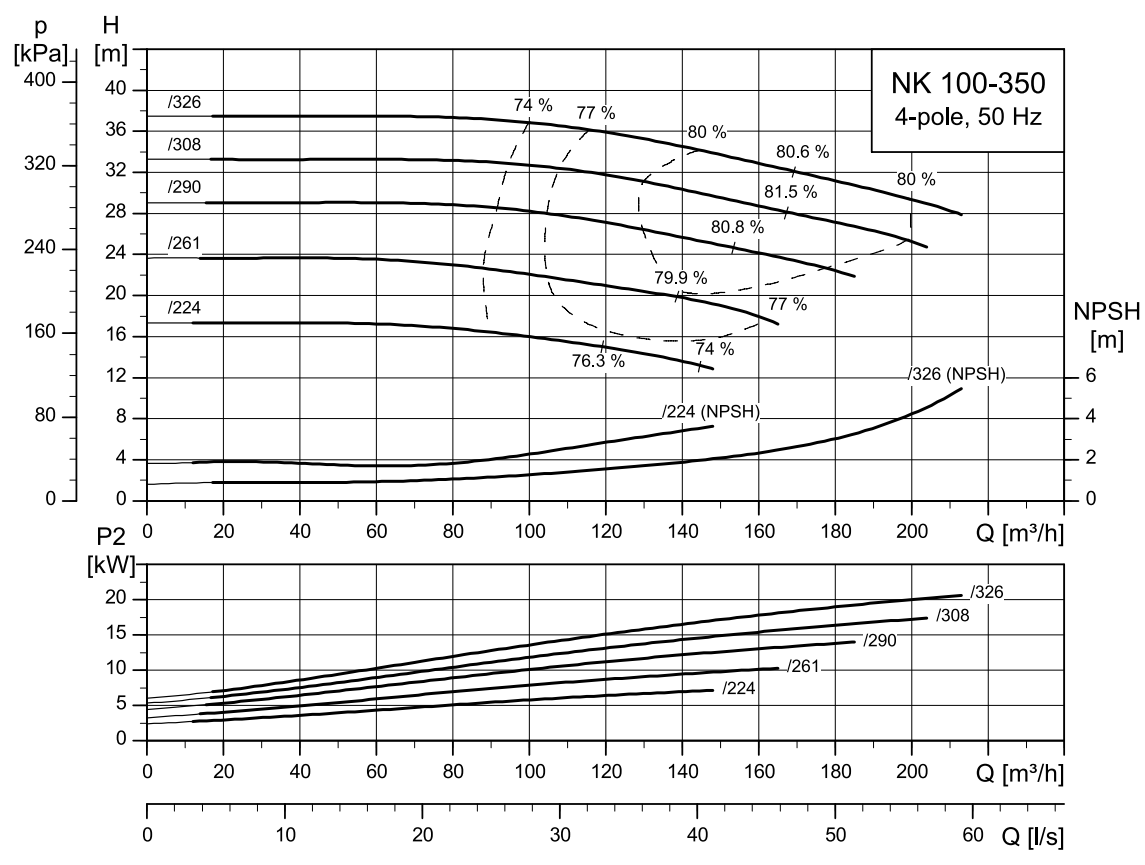
TM1040269

100-280



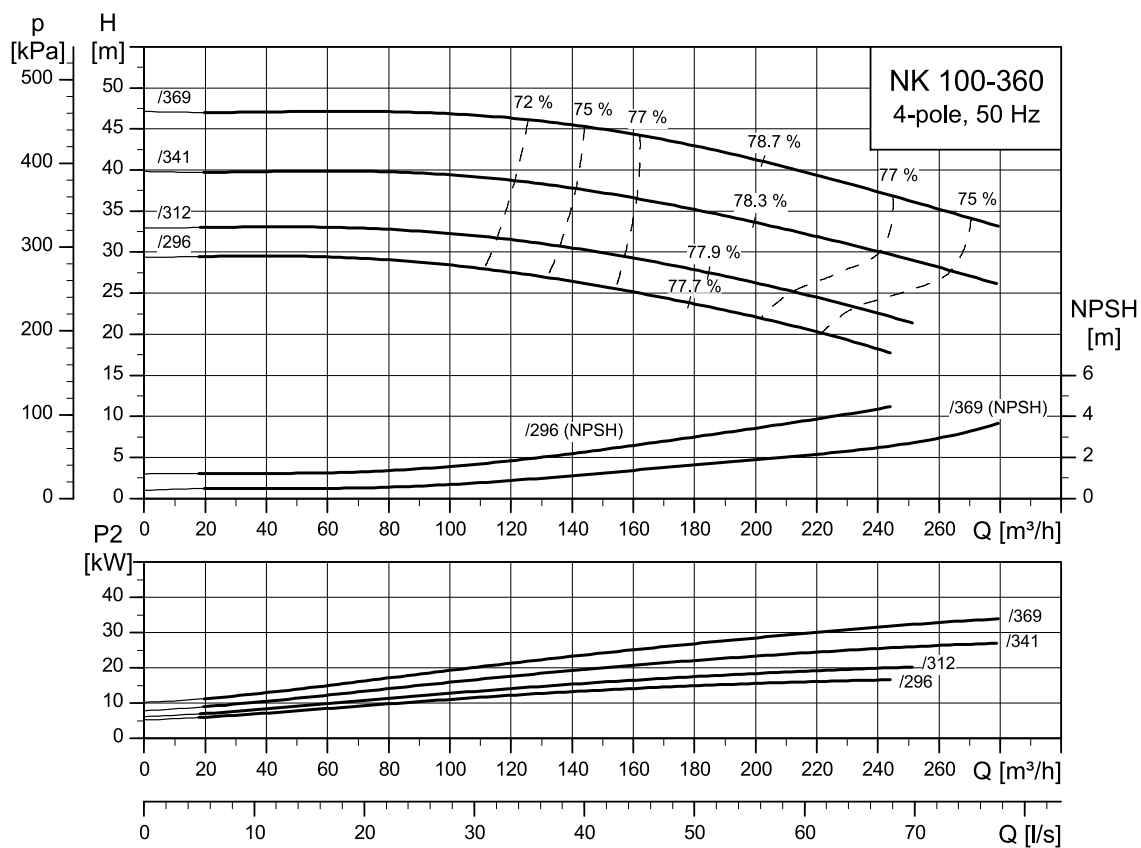
TM1040270

100-350



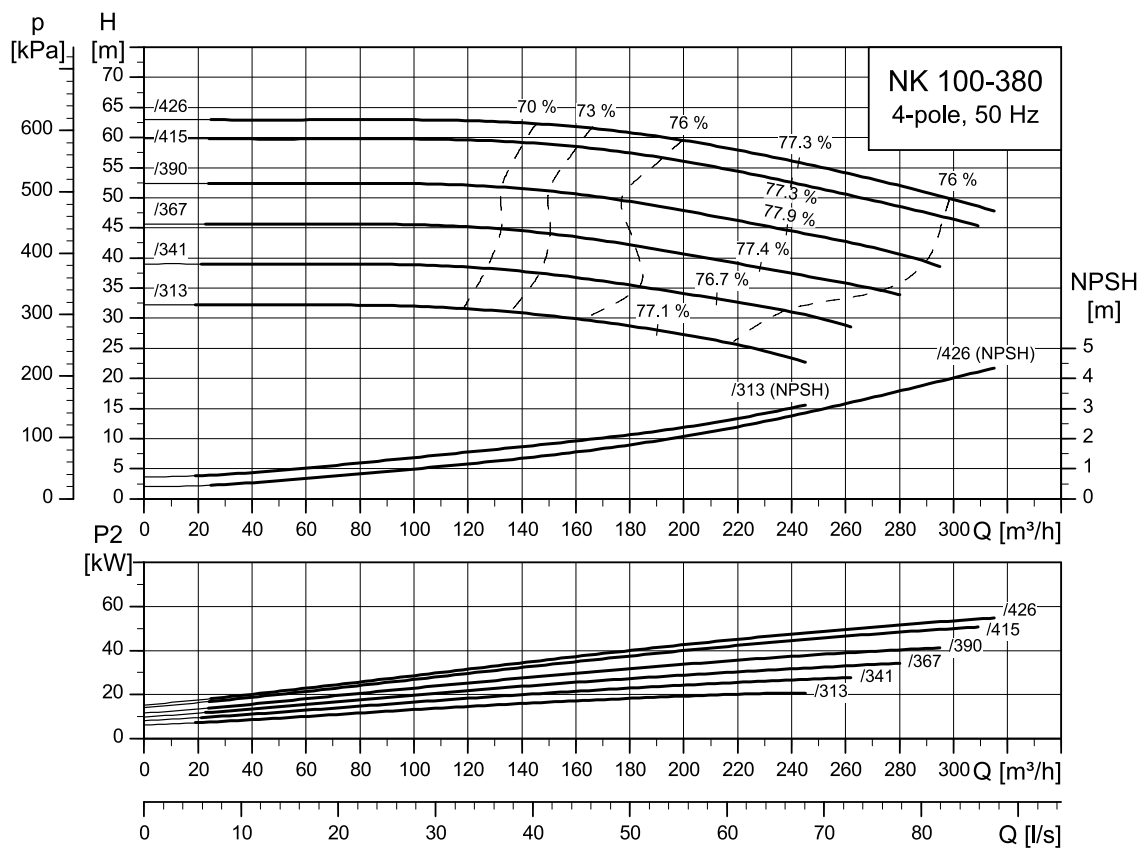
TM1040271

100-360



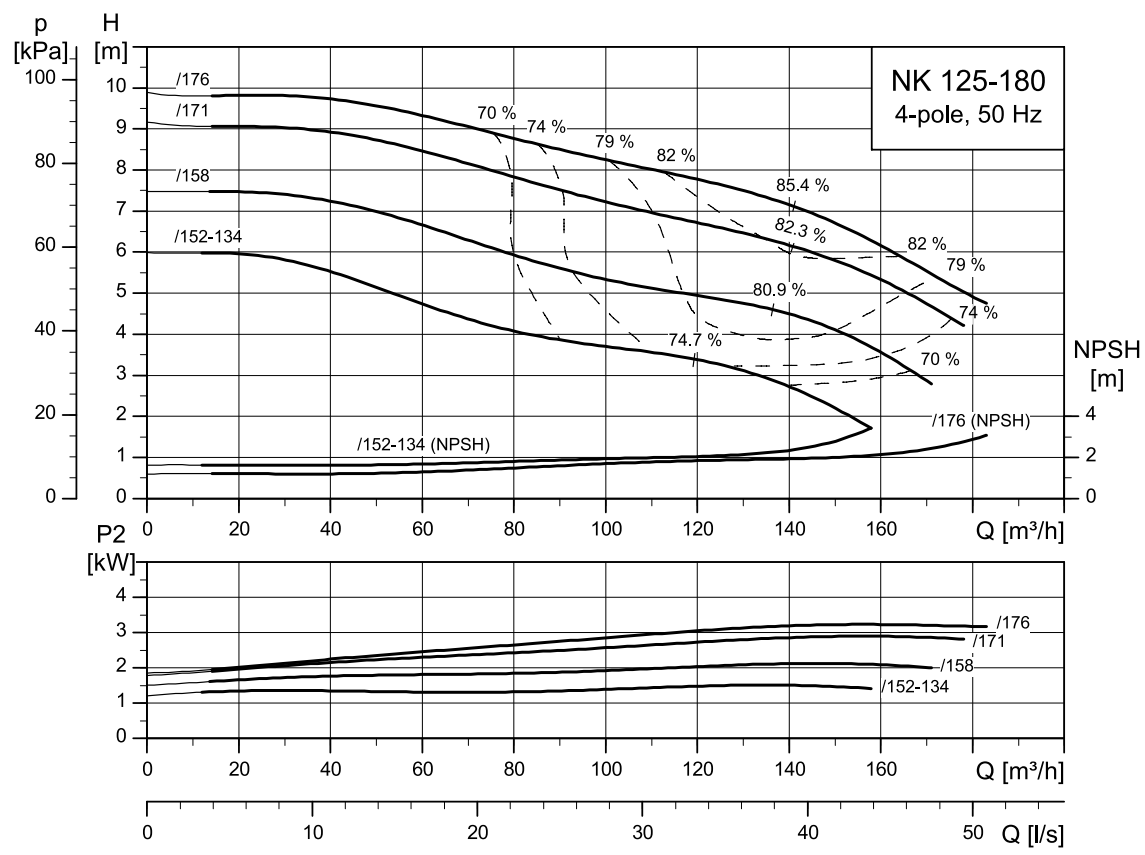
TM090725

100-380



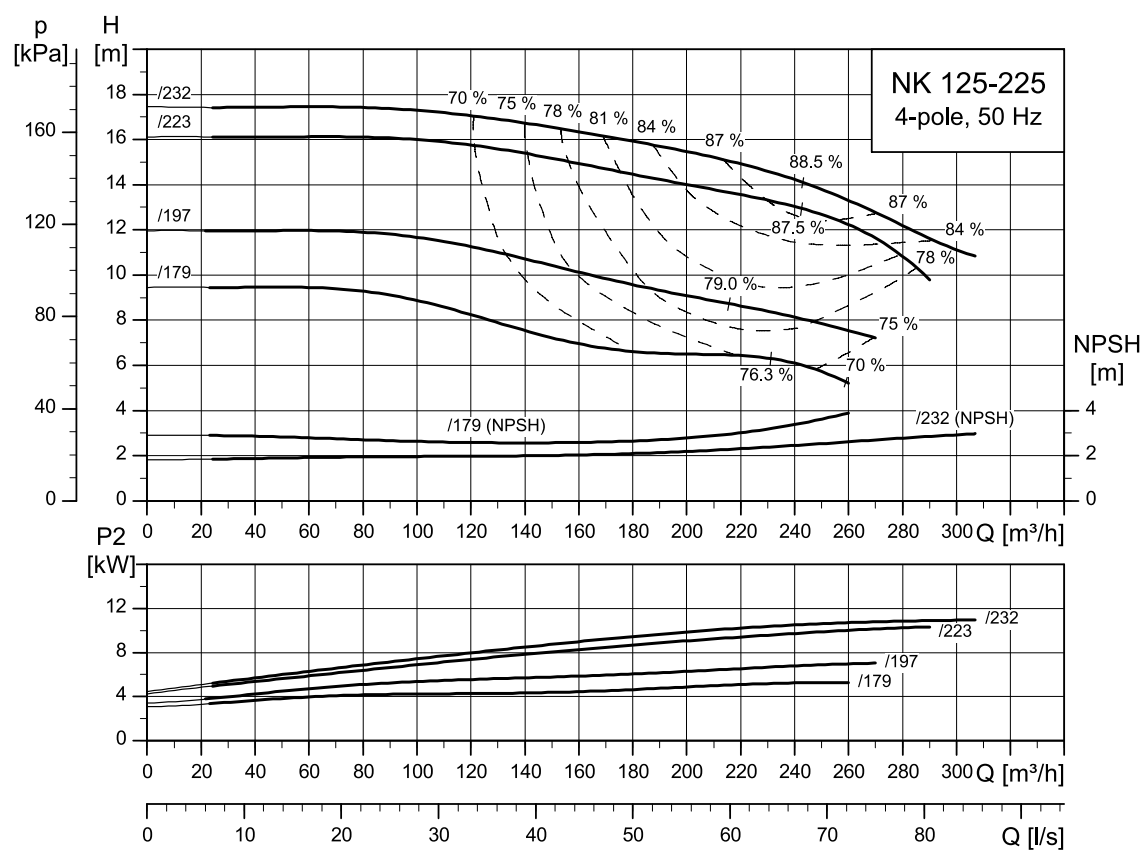
TM1040272

125-180



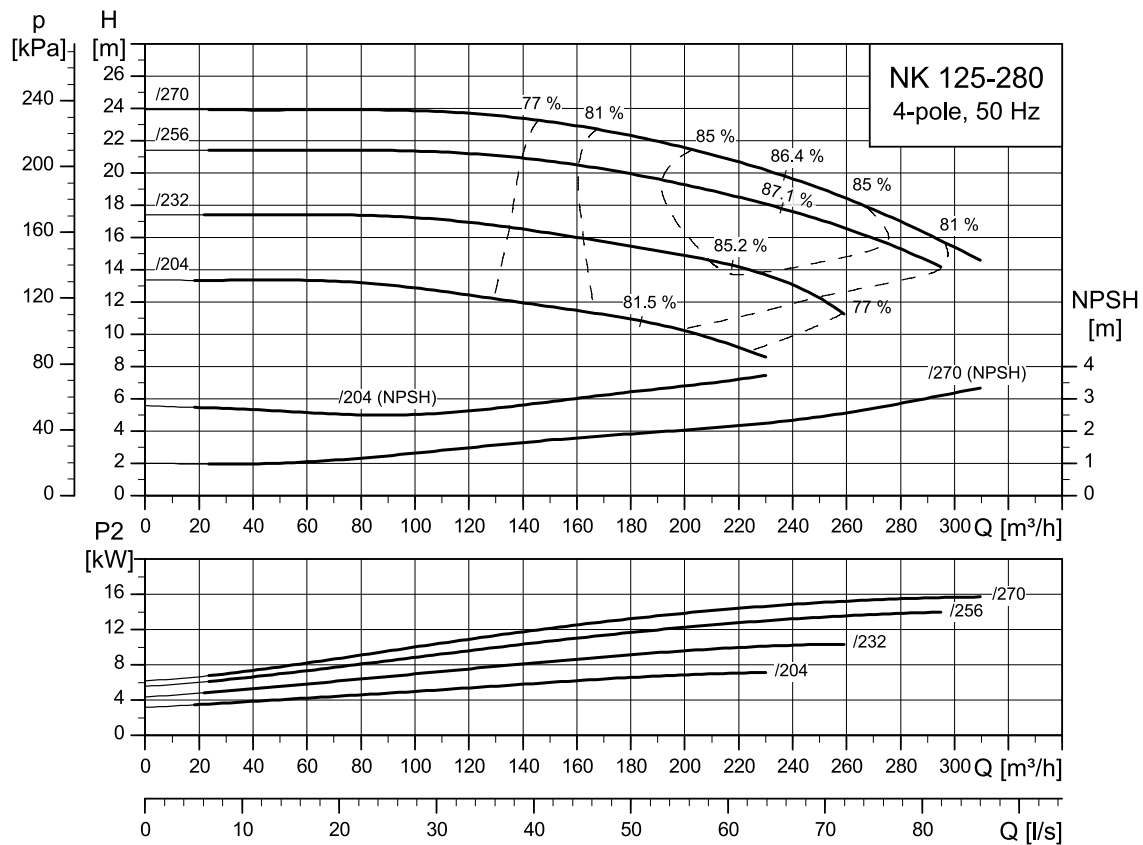
TM1040277

125-225



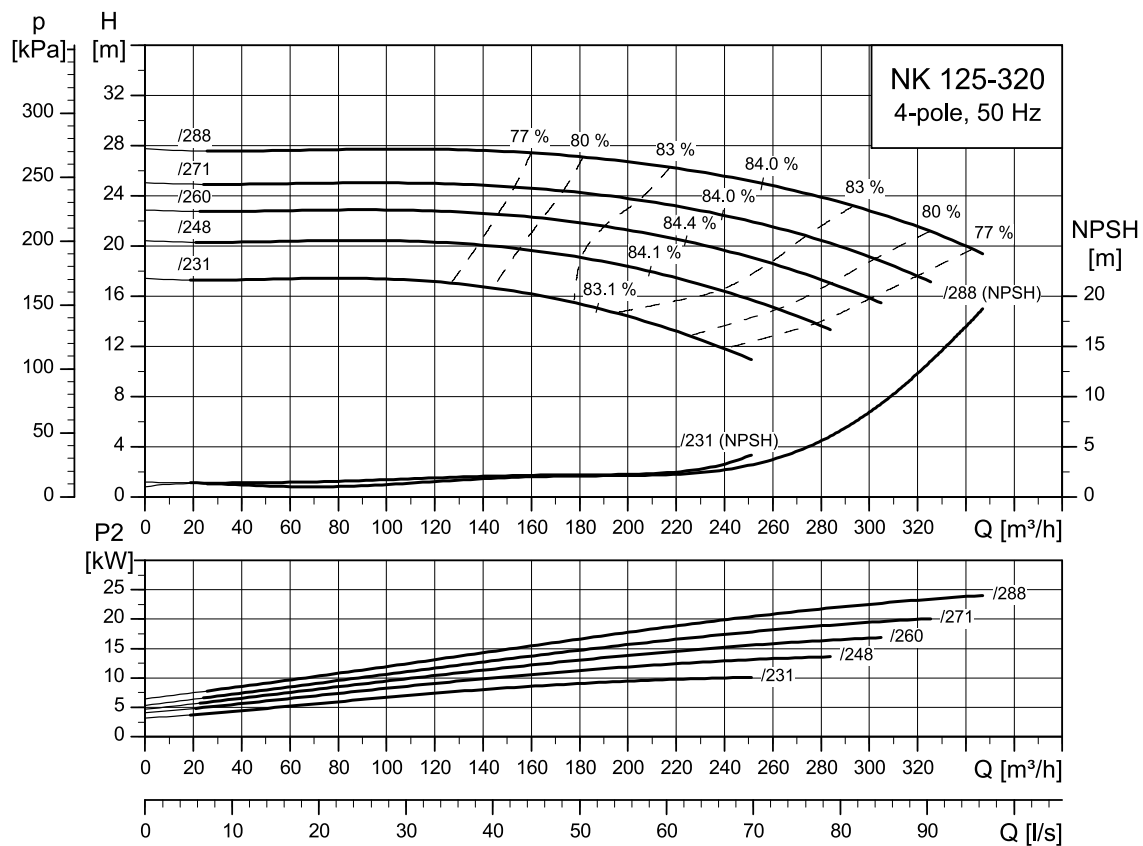
TM1040273

125-280



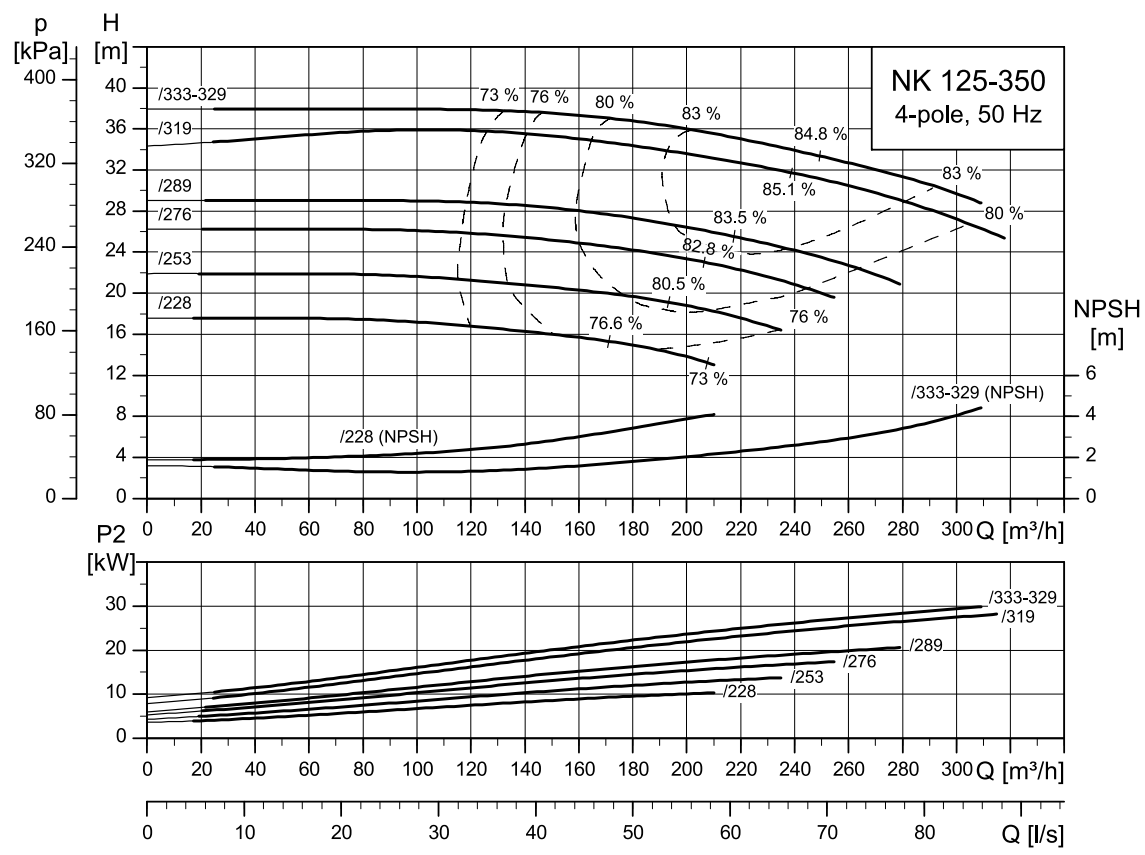
TM1040274

125-320



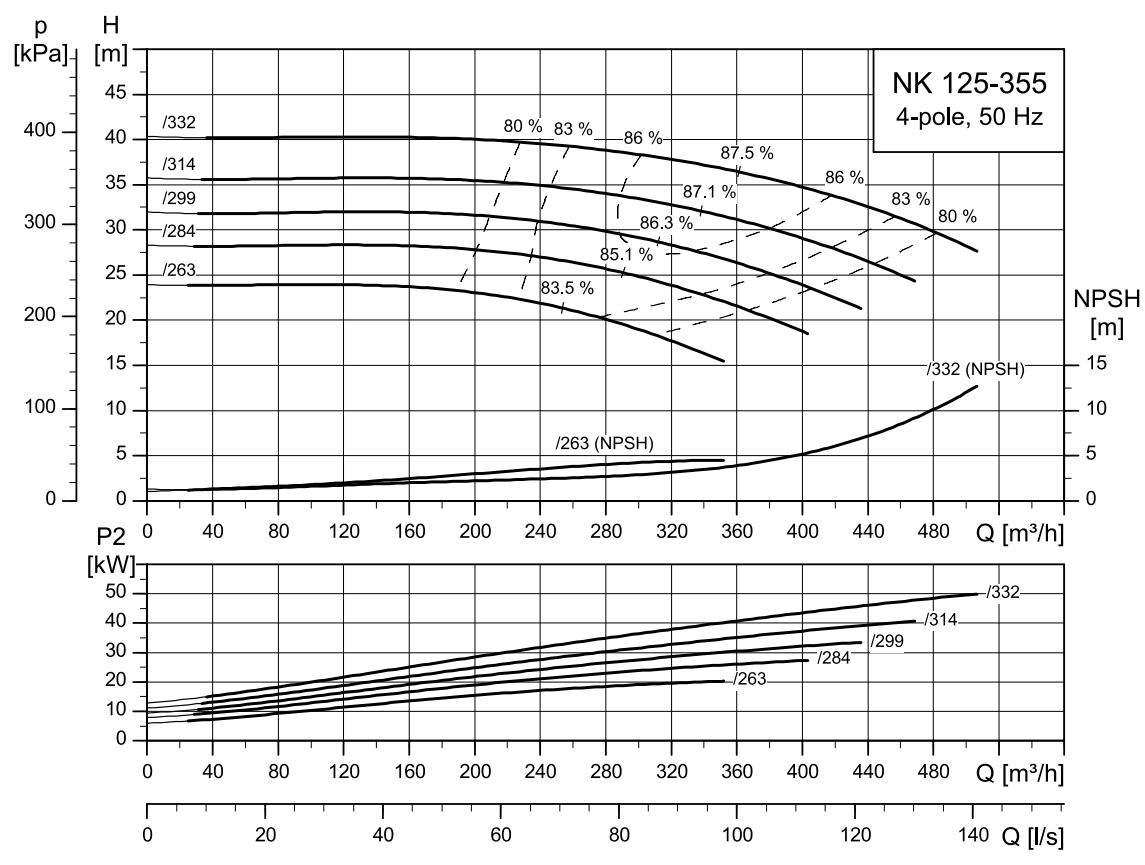
TM087734

125-350



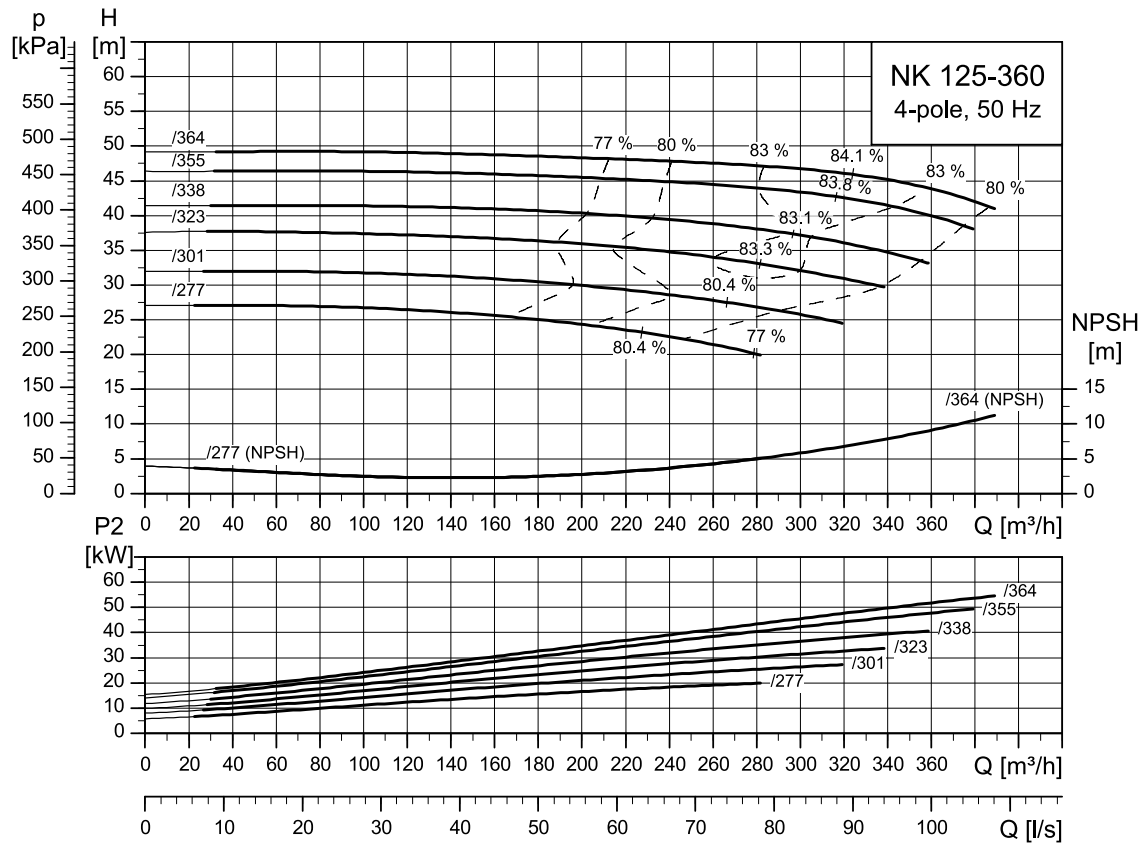
TM1040275

125-355



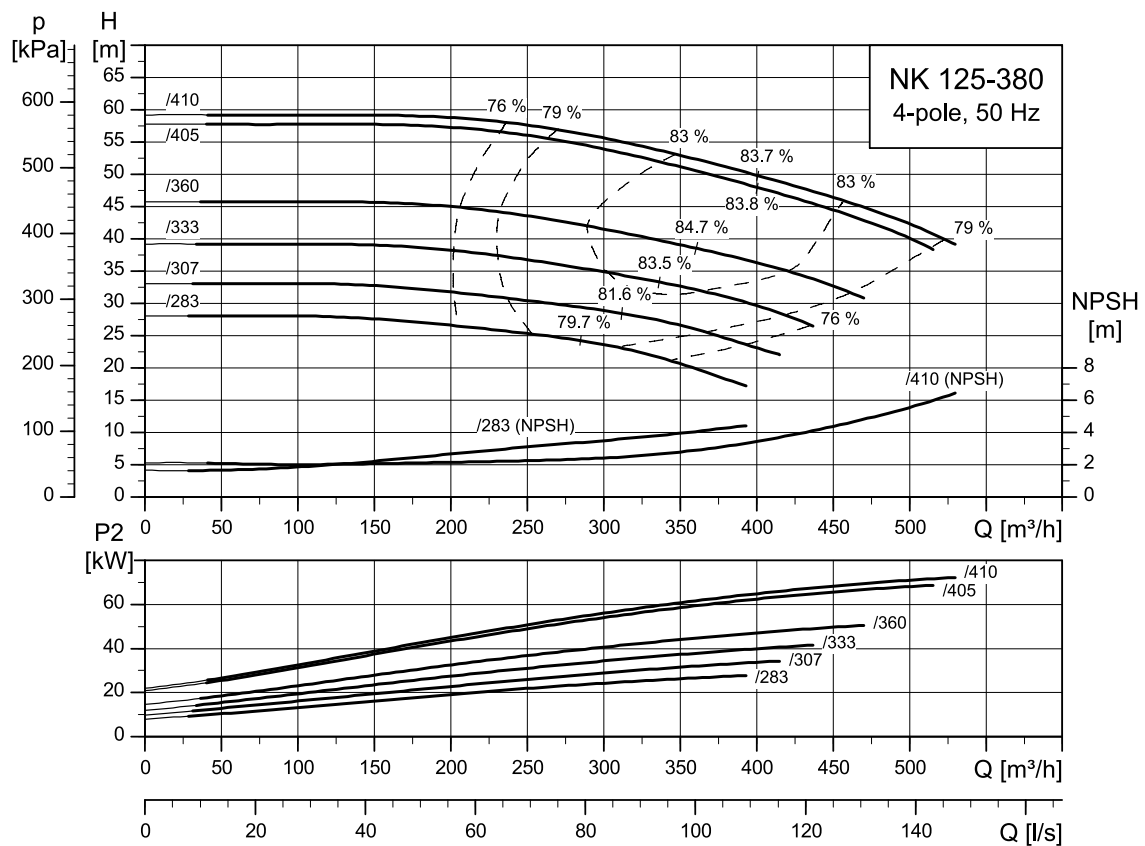
TM090726

125-360



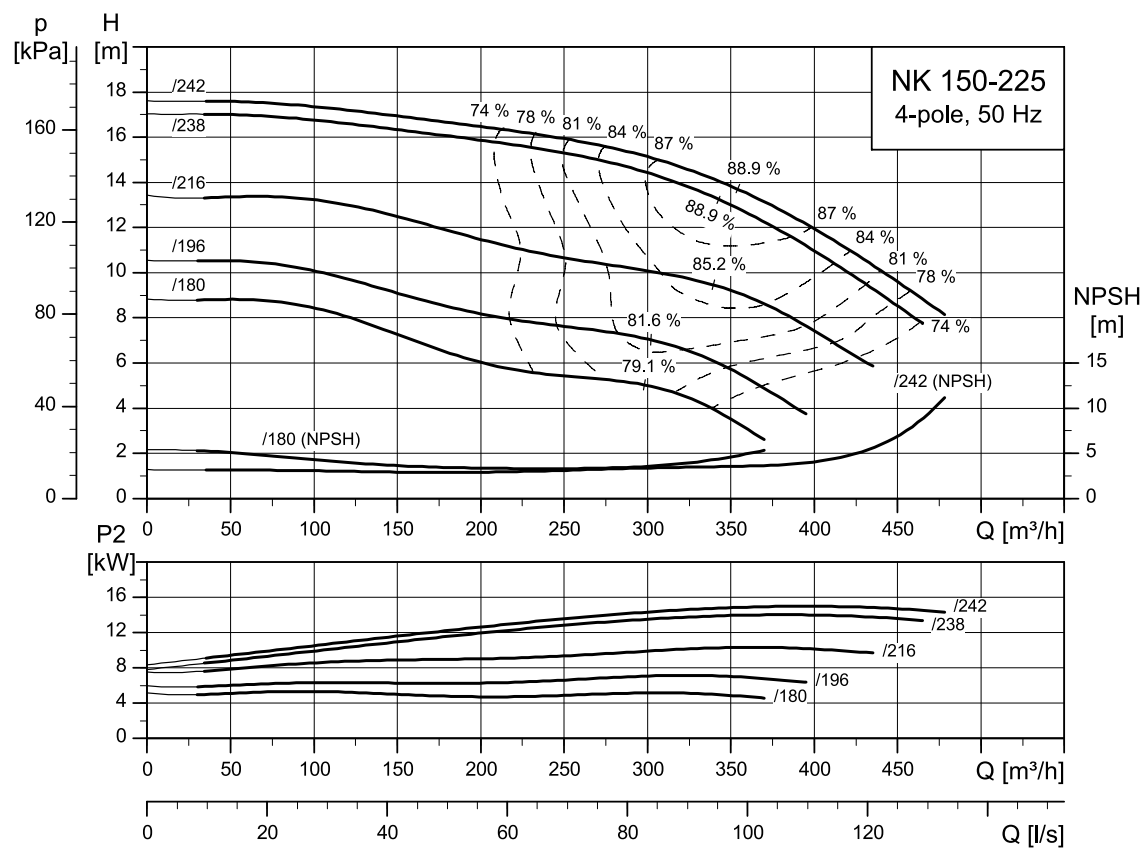
TM087735

125-380



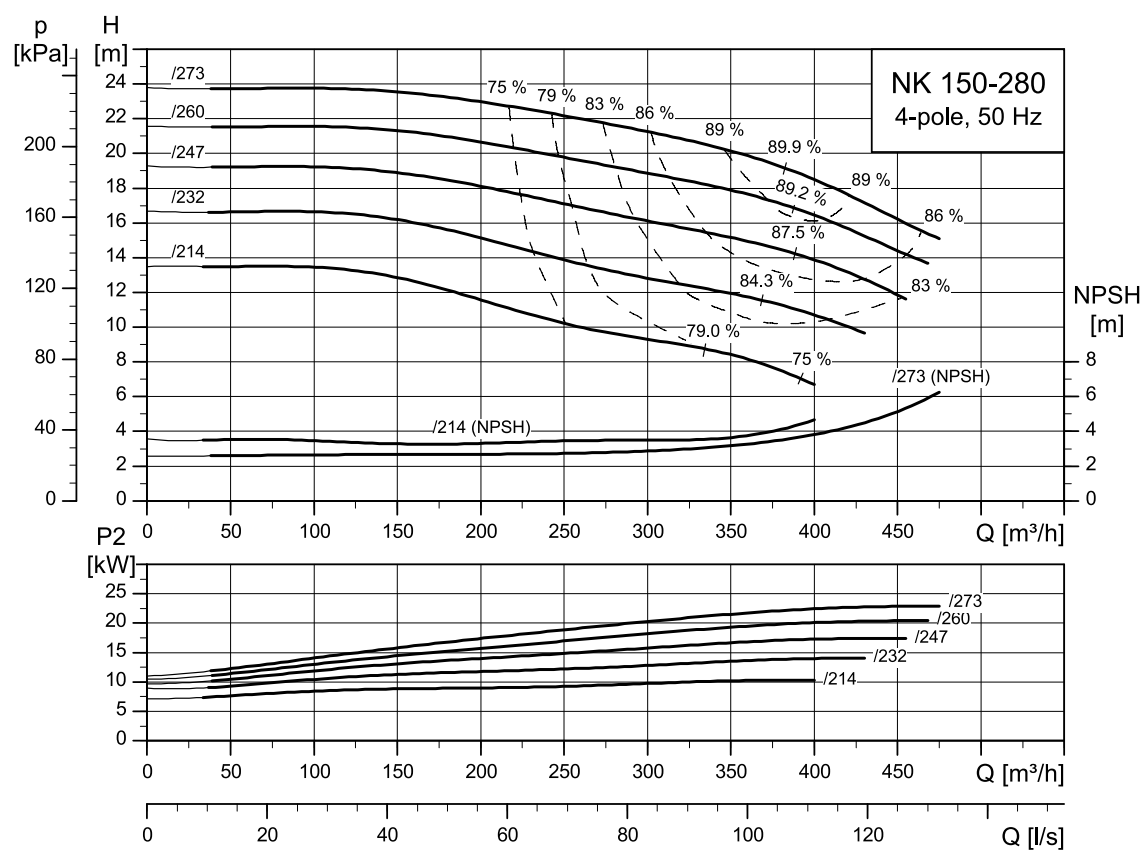
TM1040276

150-225



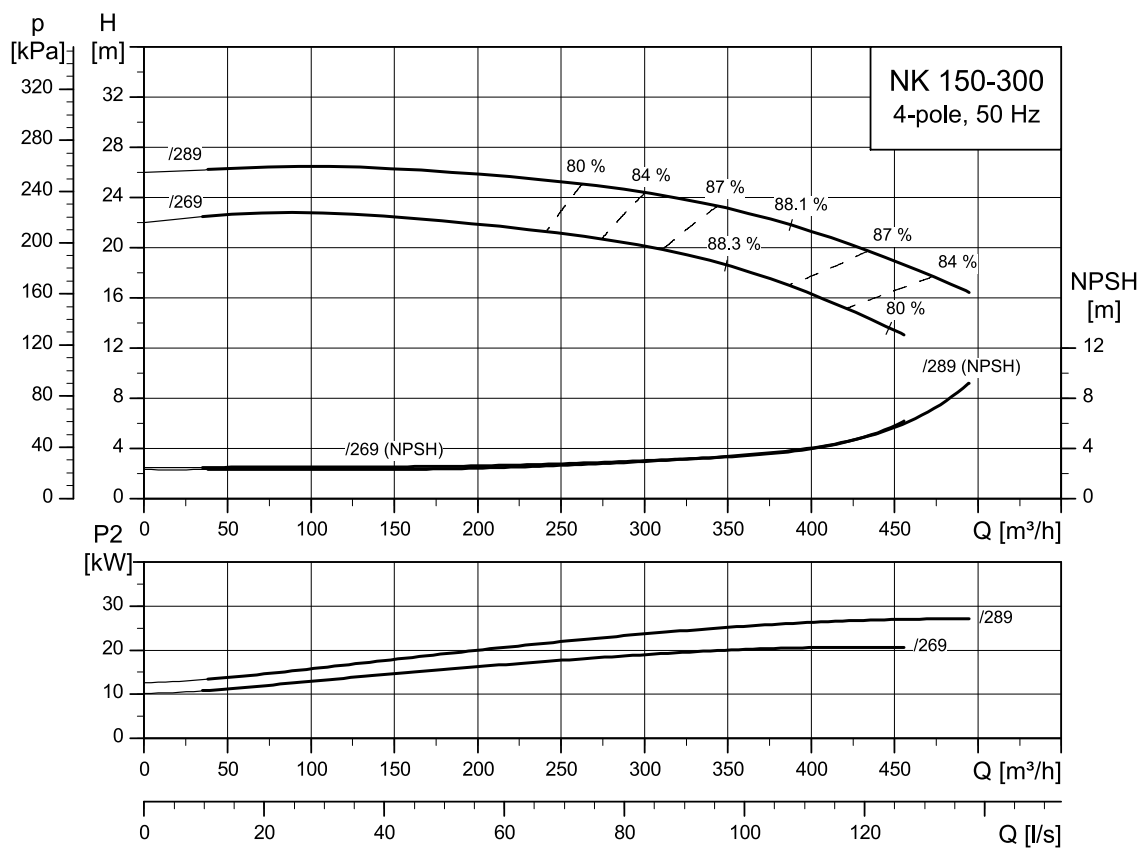
TM1040278

150-280



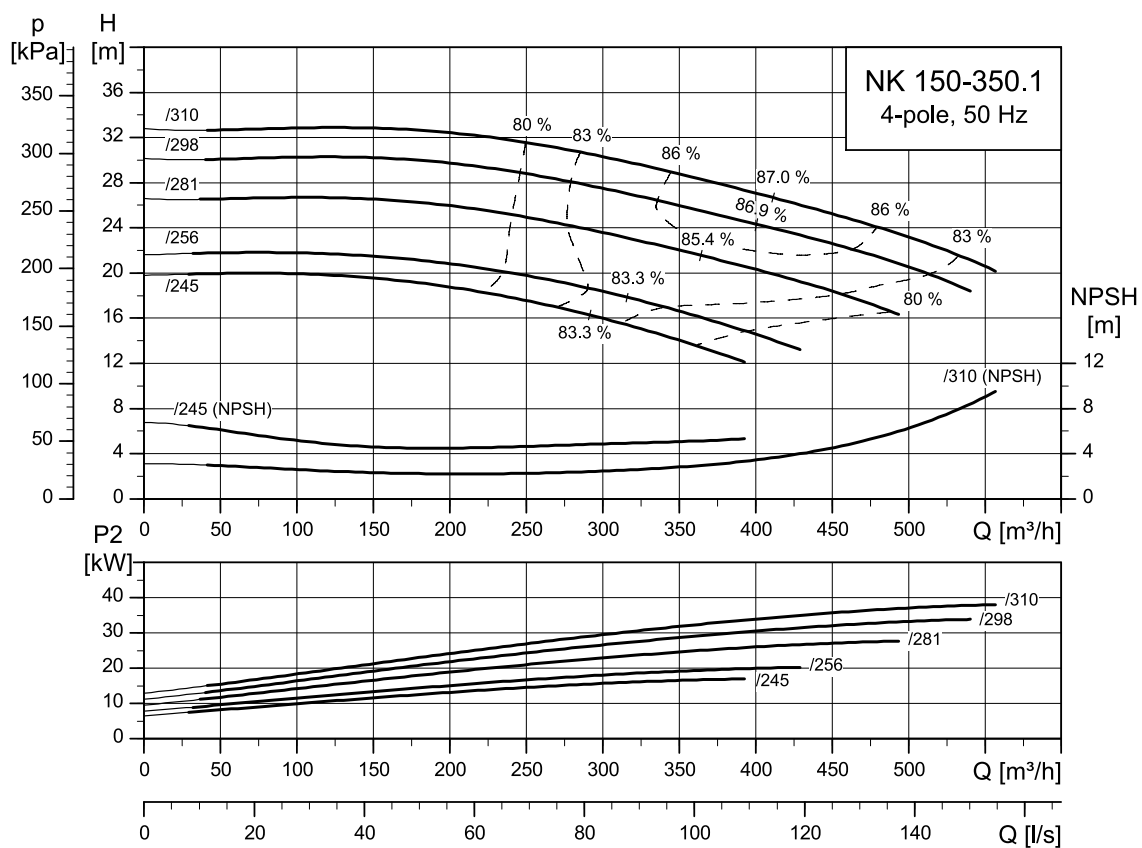
TM1040279

150-300



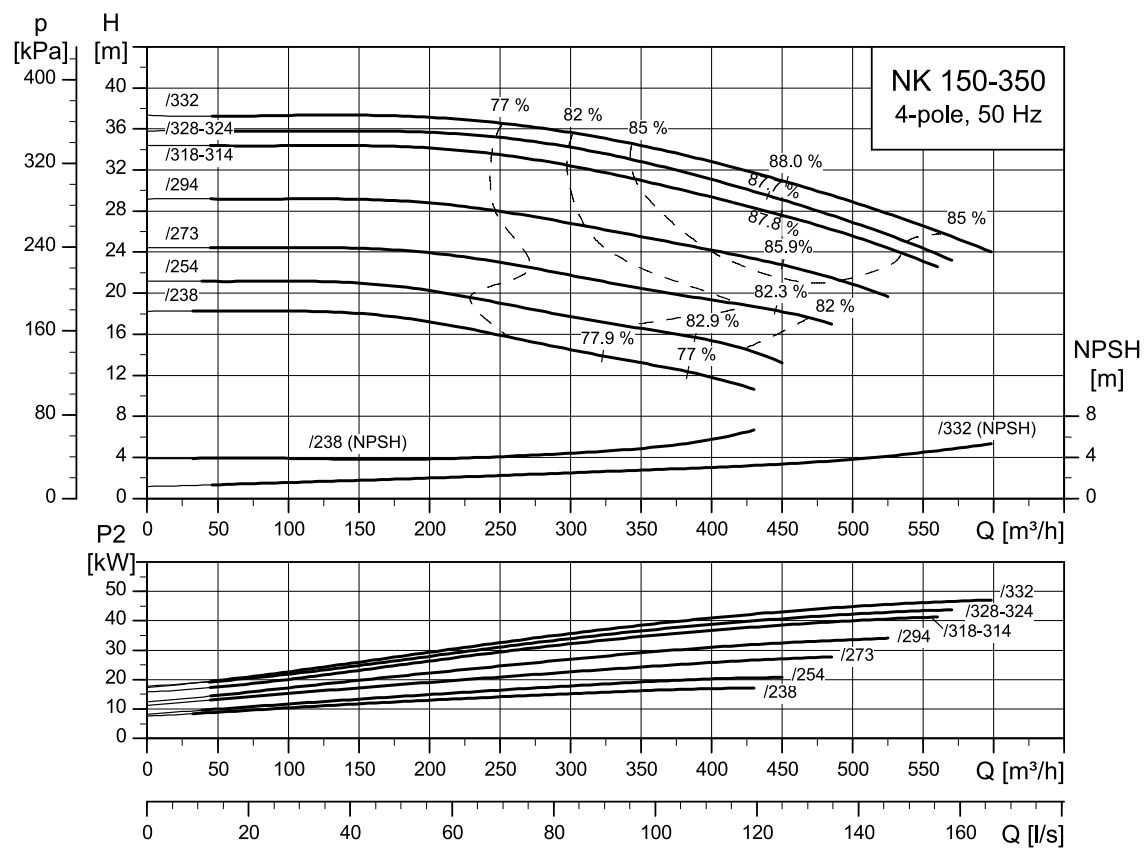
TM084997

150-350.1

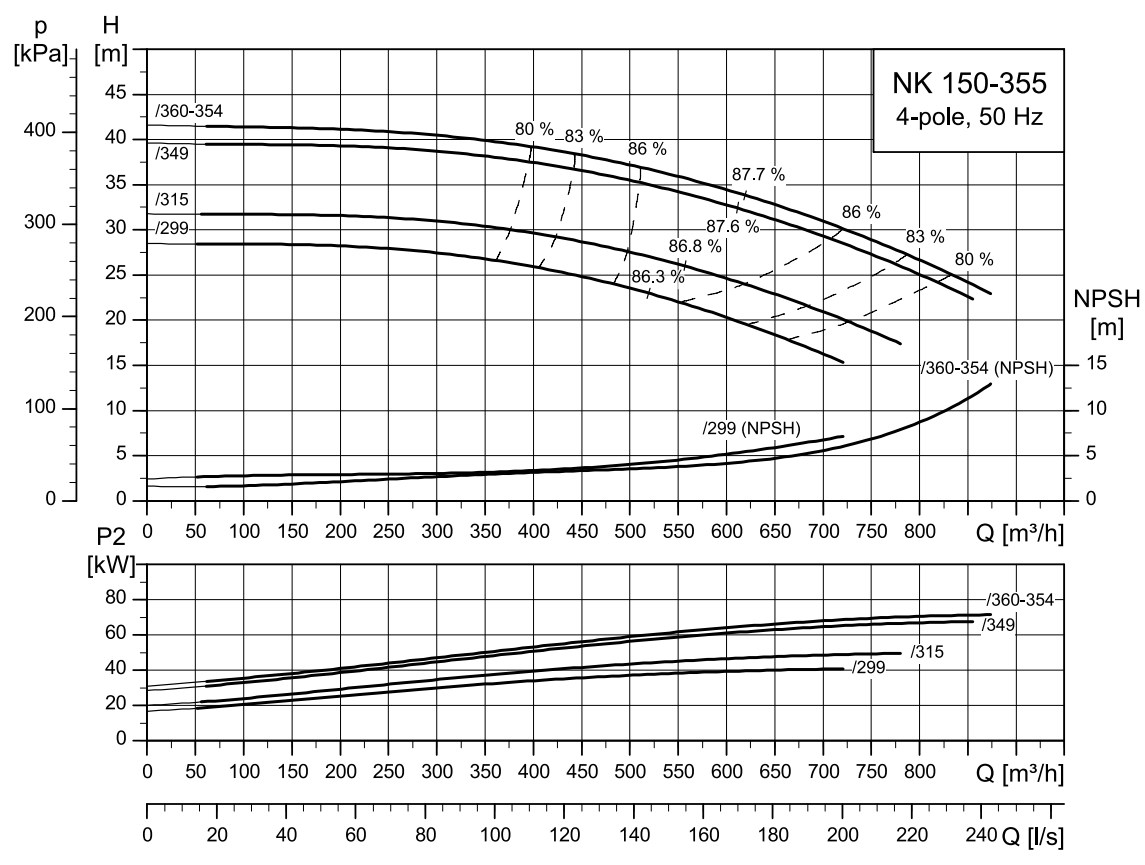


TM087736

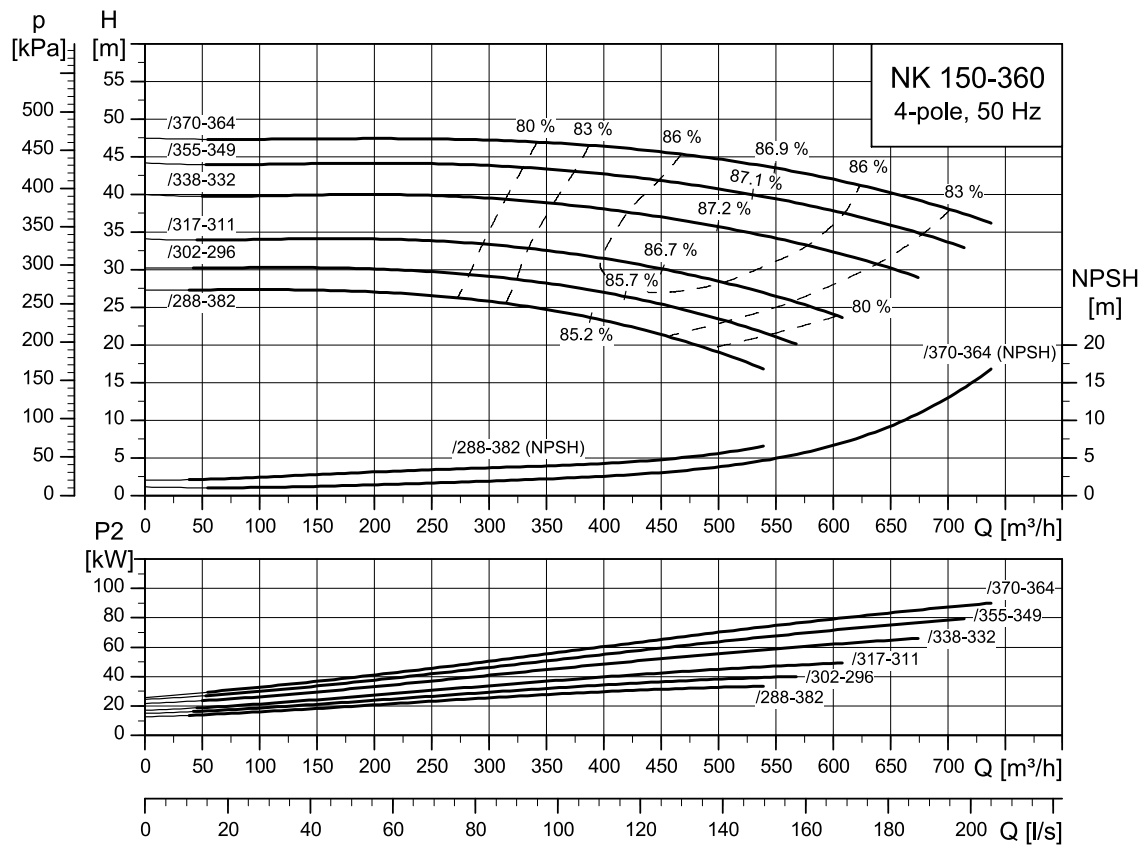
150-350



150-355

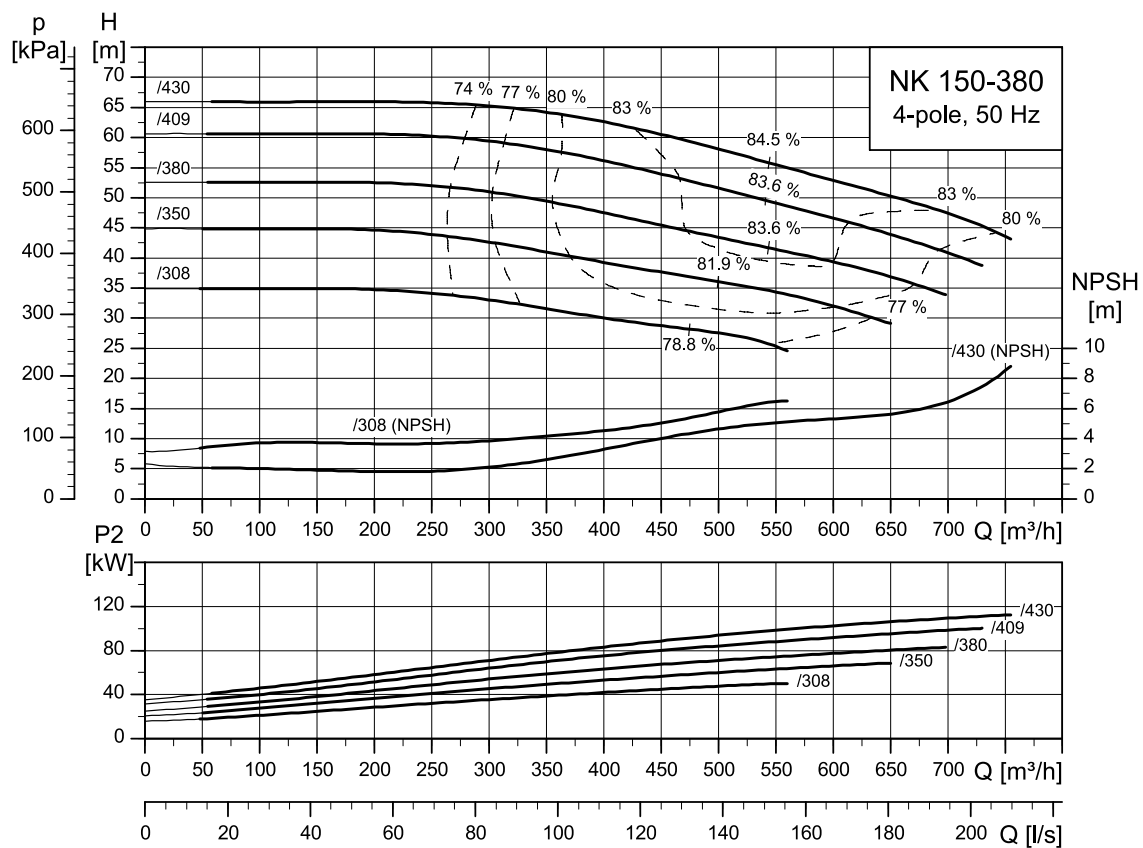


150-360



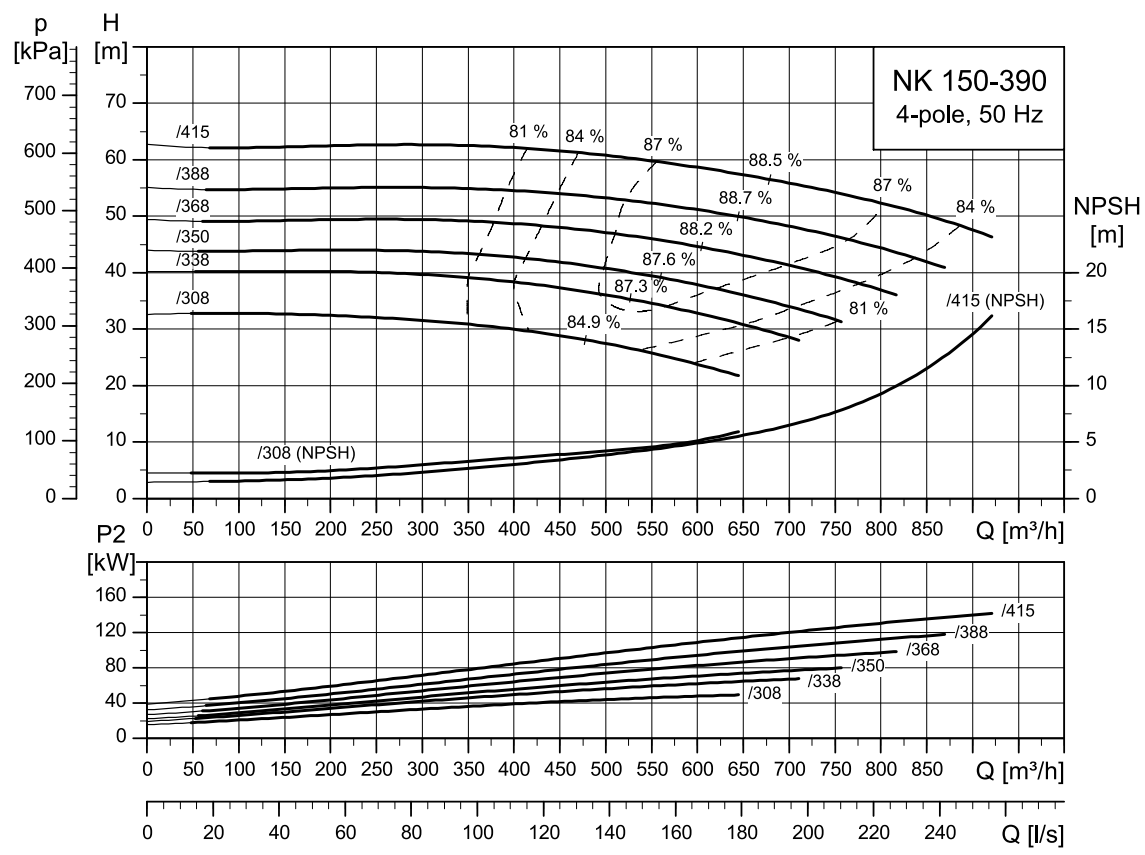
TM087737

150-380



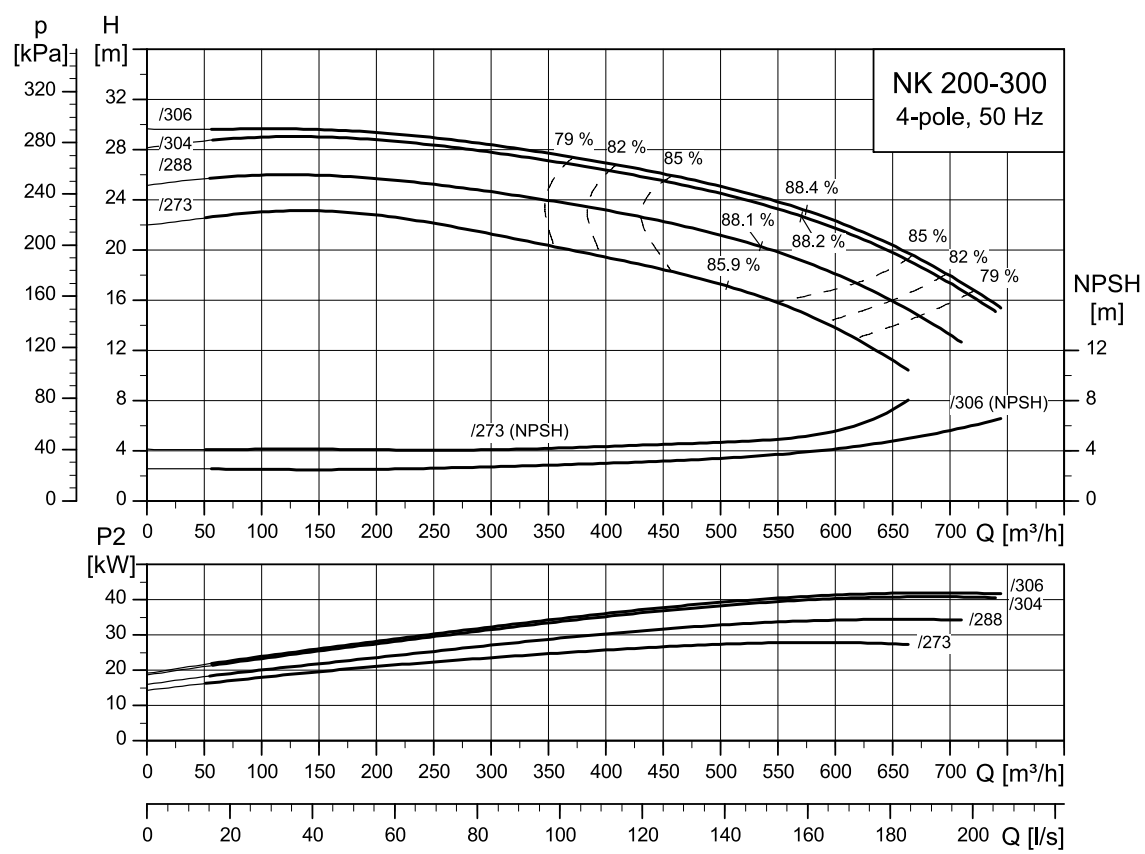
TM1040281

150-390



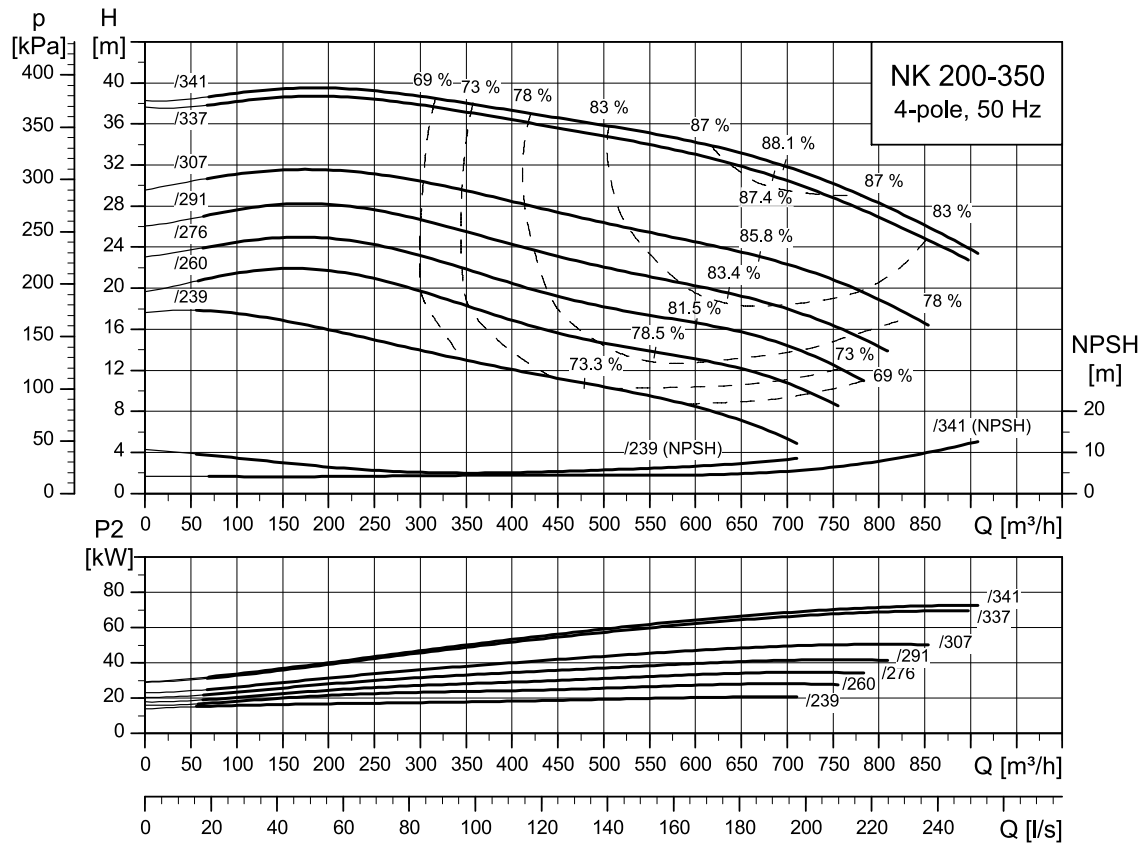
TM087738

200-300



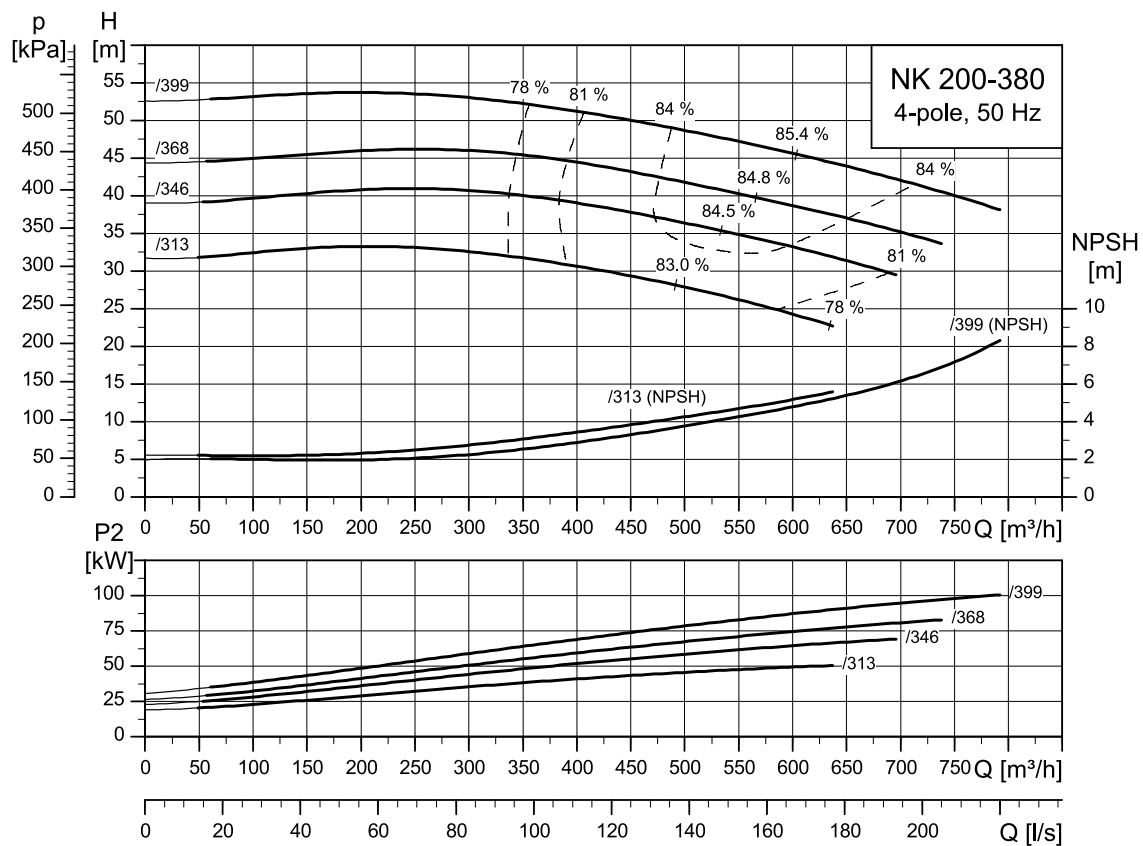
TM085001

200-350



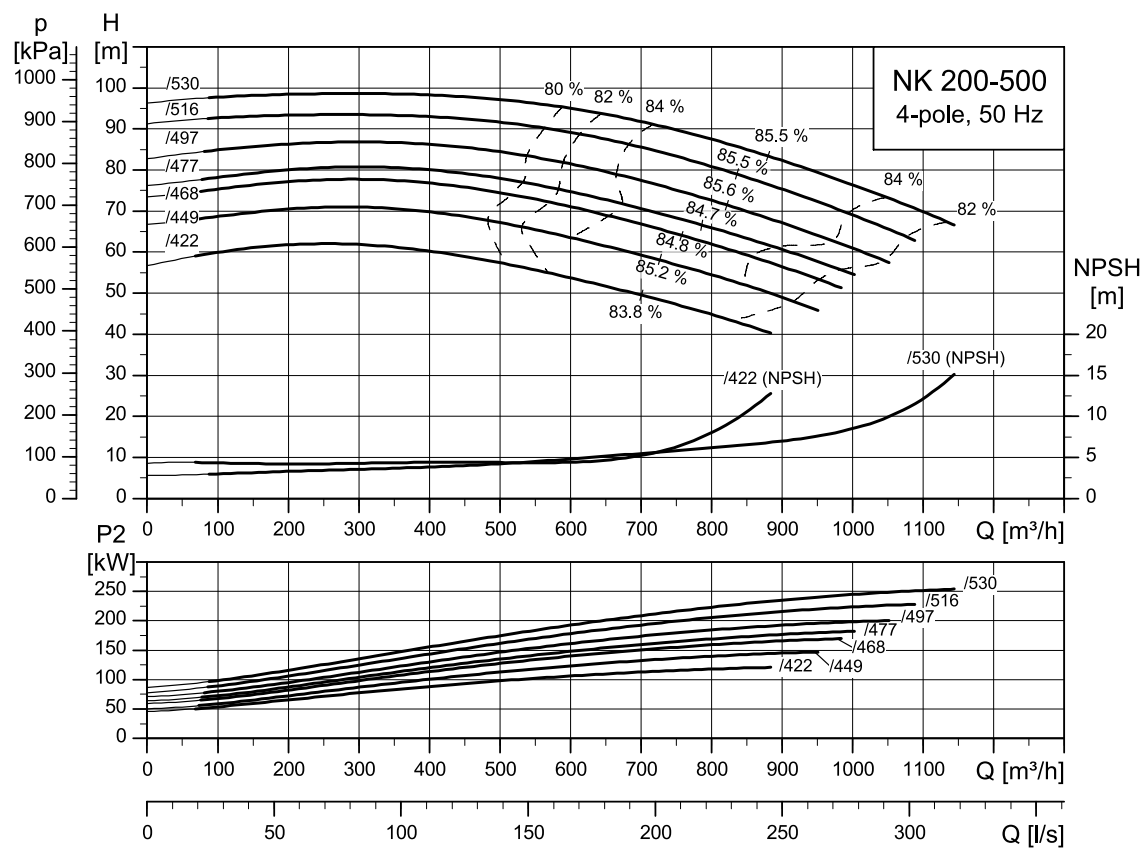
TM085020

200-380

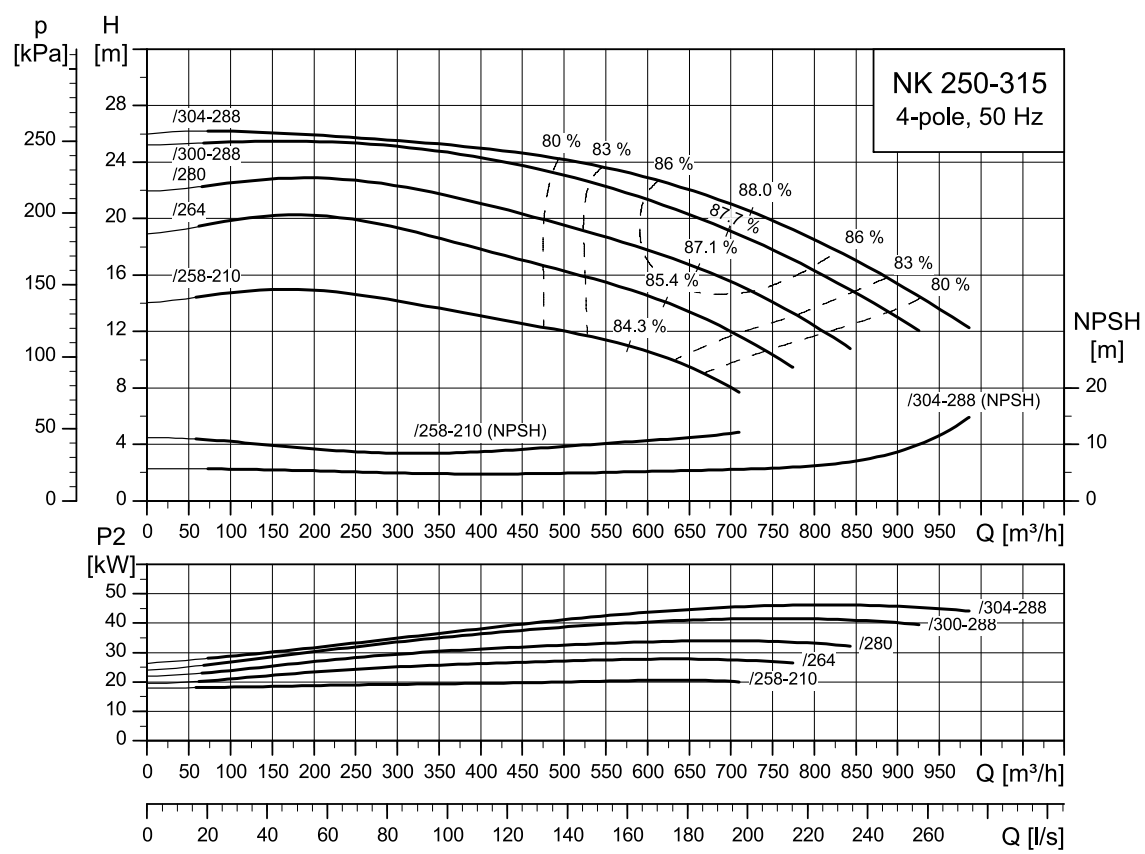


TM084985

200-500



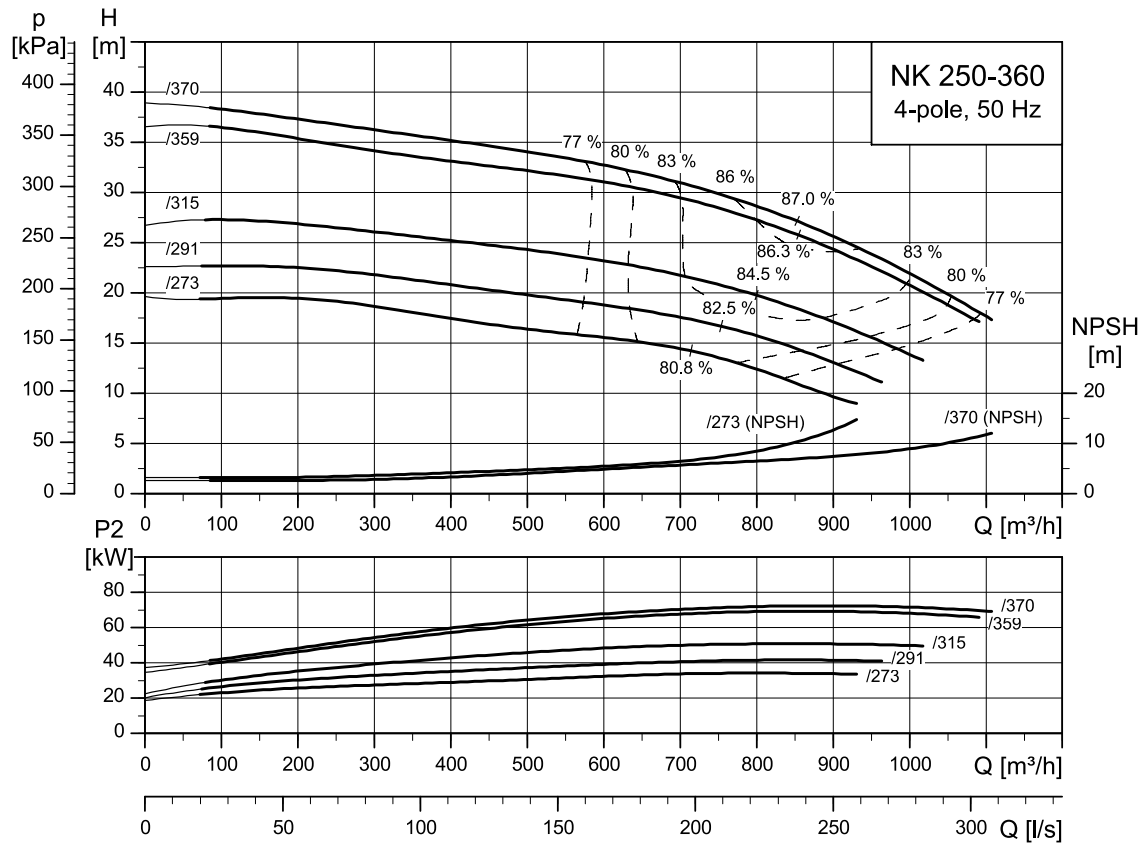
250-315



TM085005

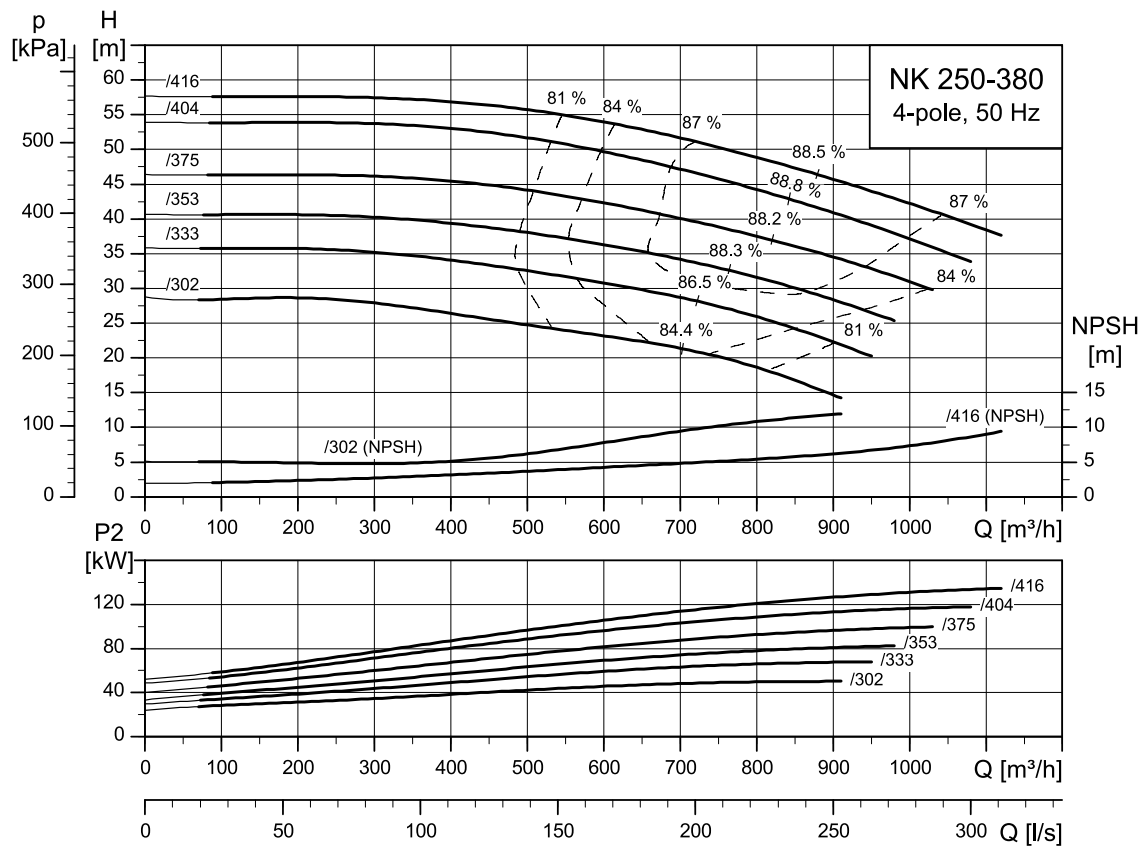
TM085016

250-360



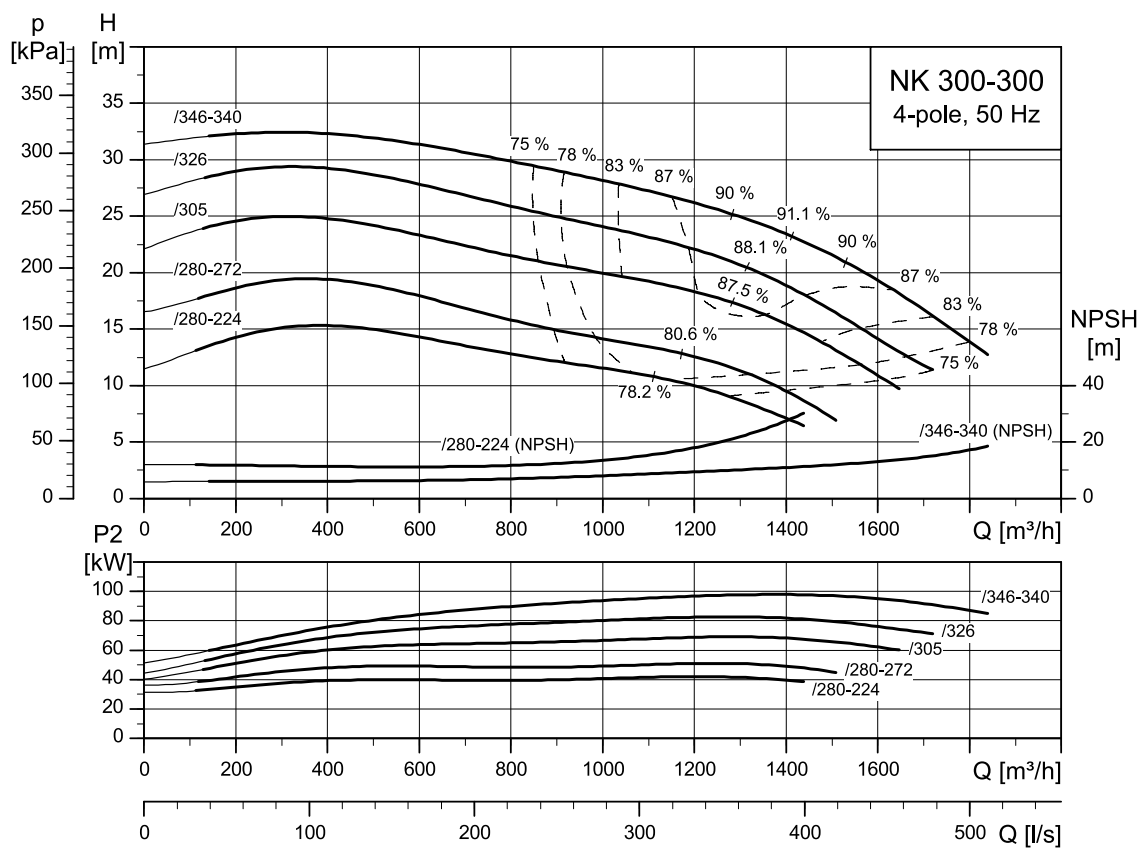
TM084981

250-380



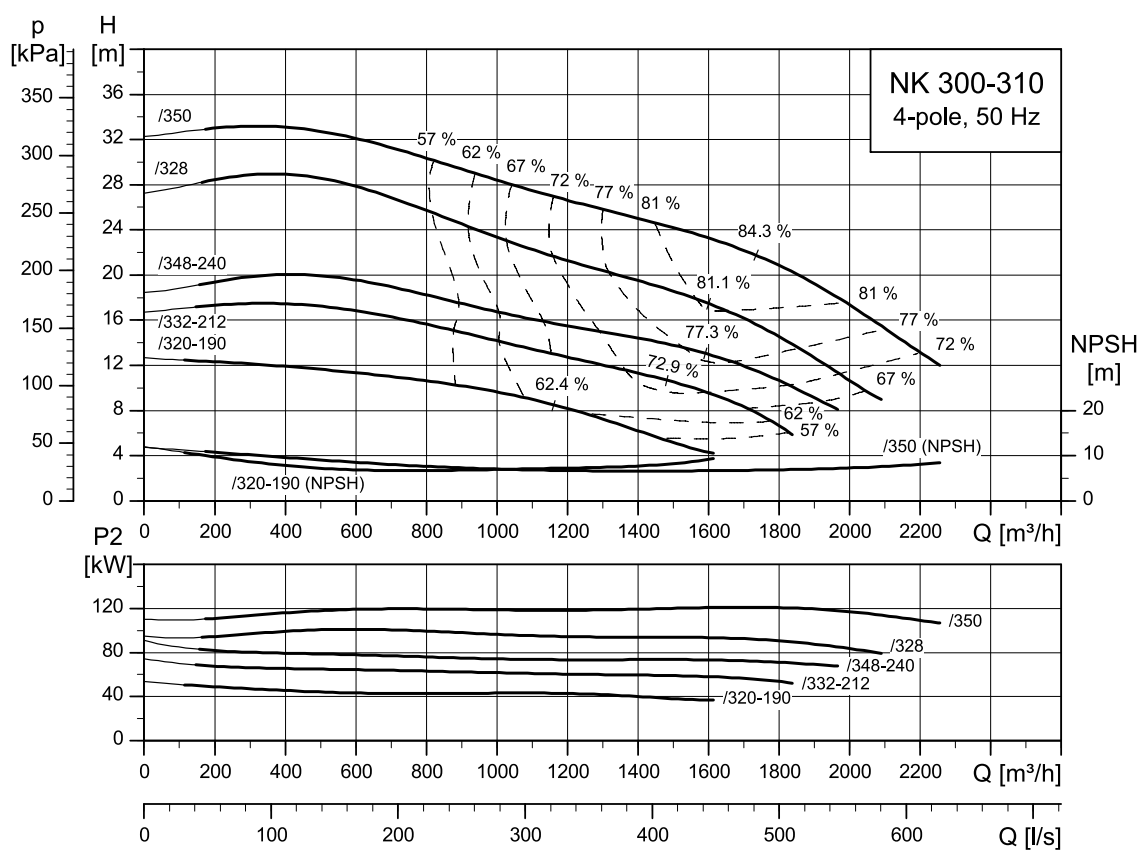
TM1040282

300-300



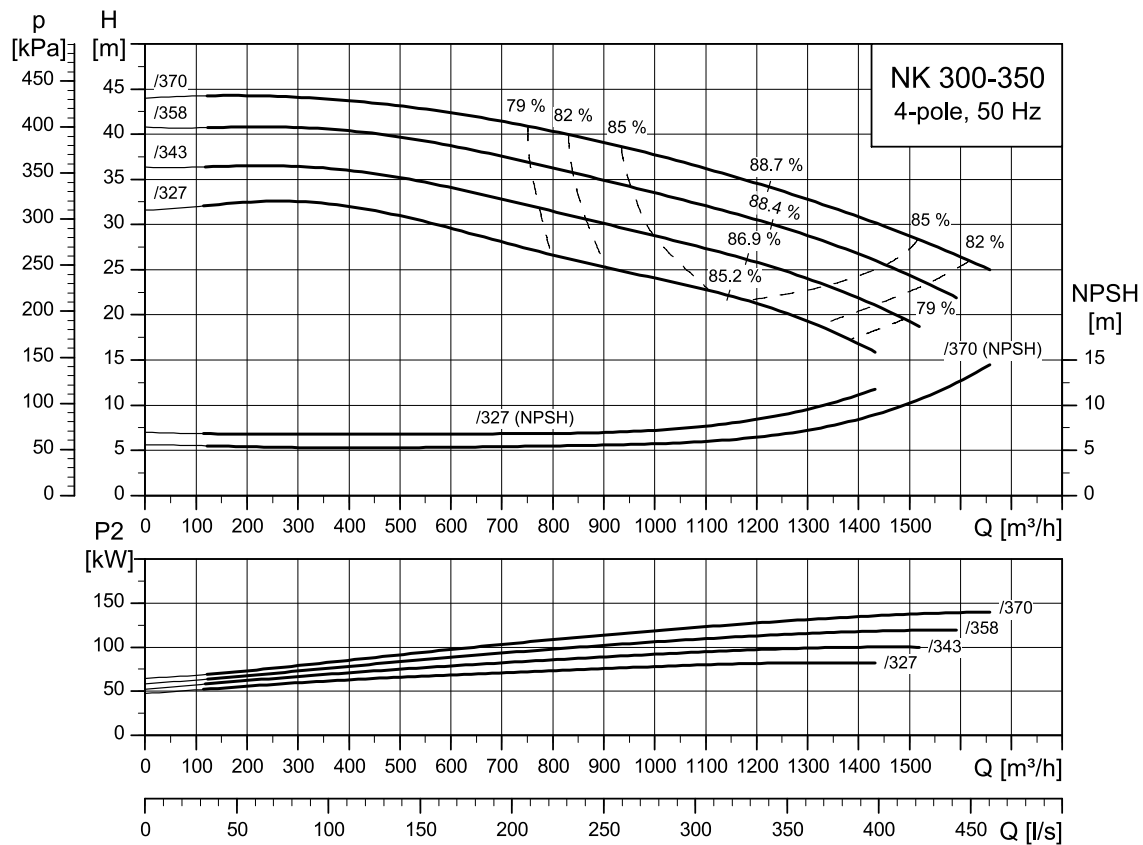
TM084989

300-310



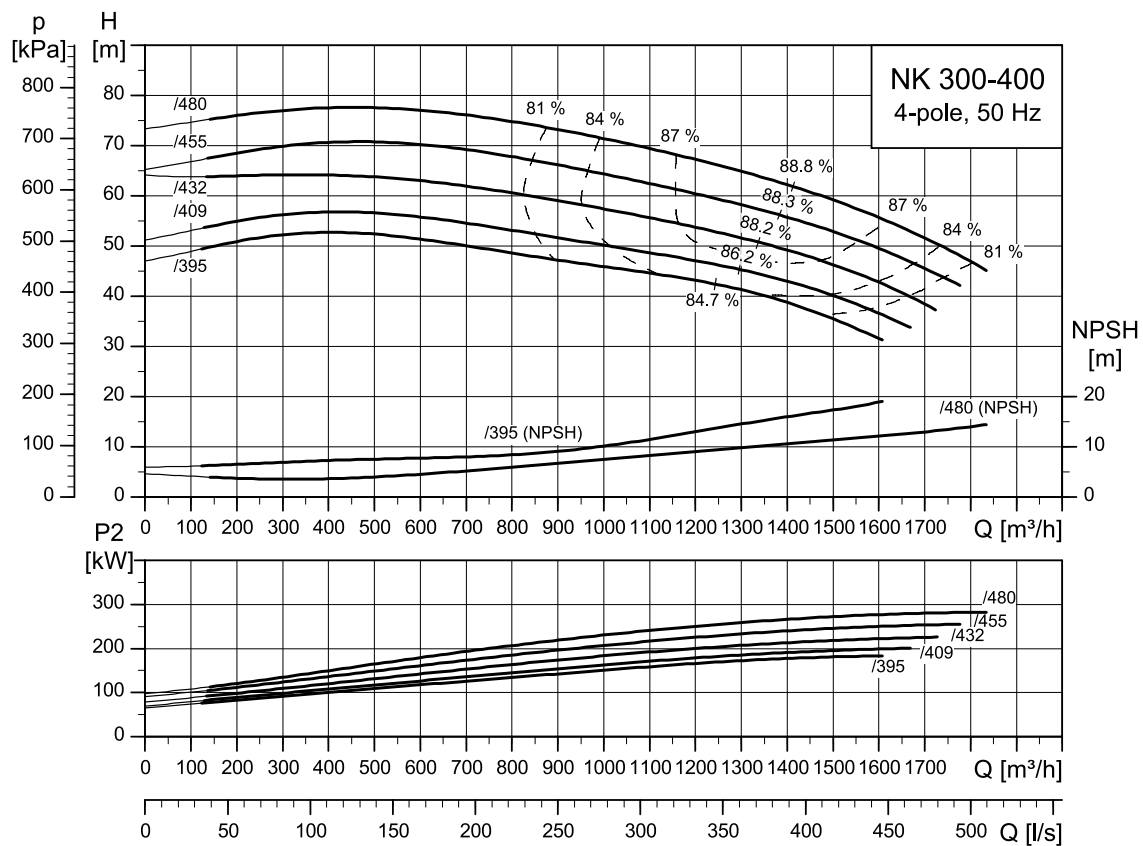
TM085018

300-350



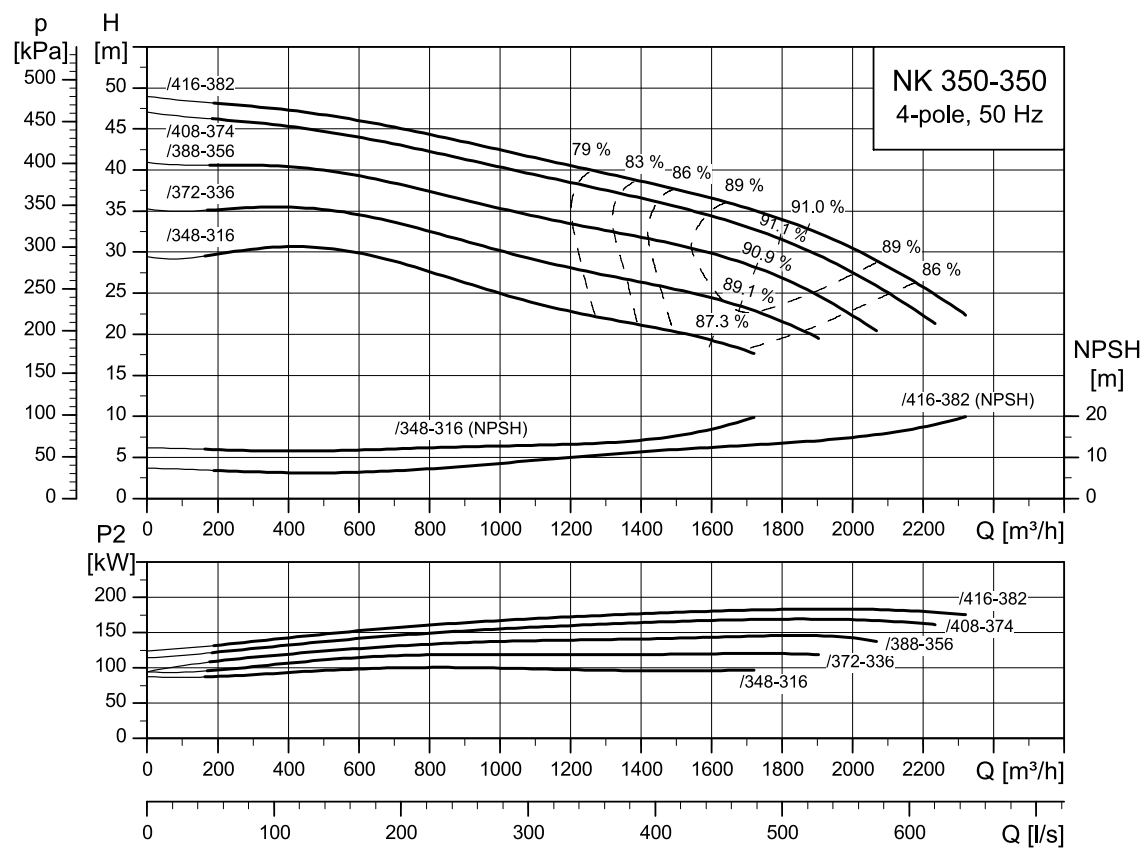
TM085012

300-400



TM085009

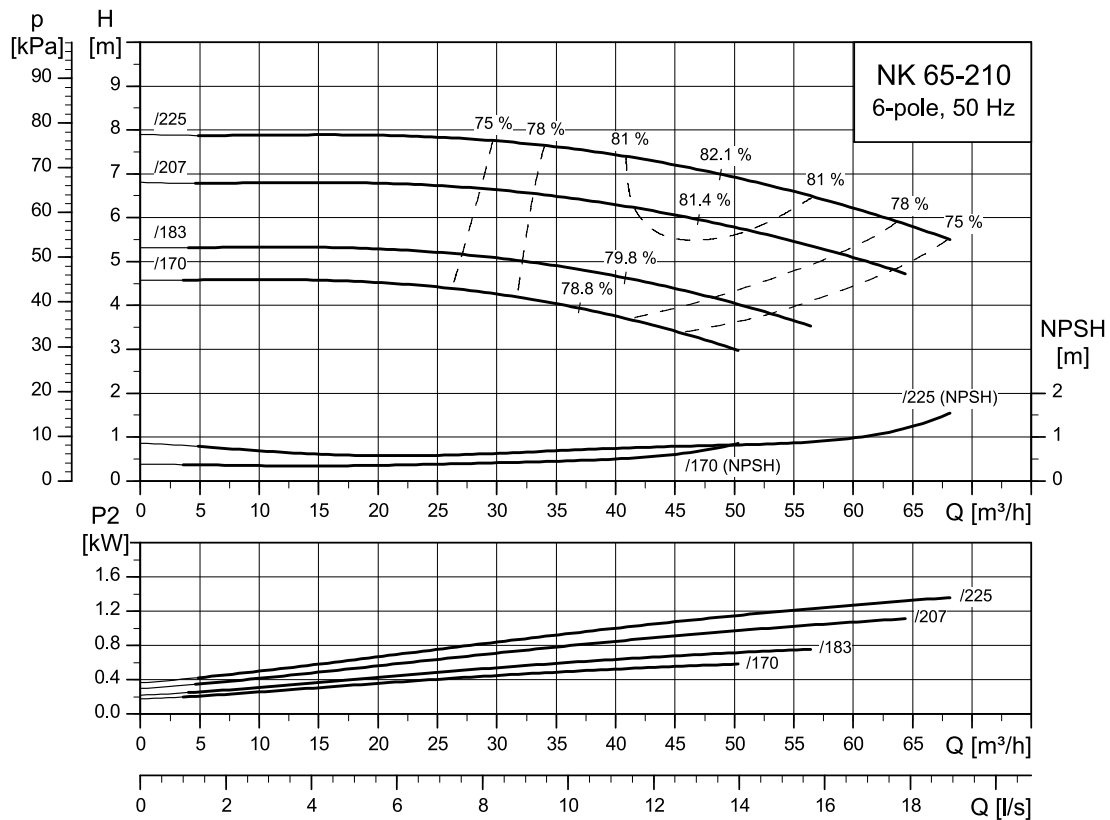
350-350



TM084993

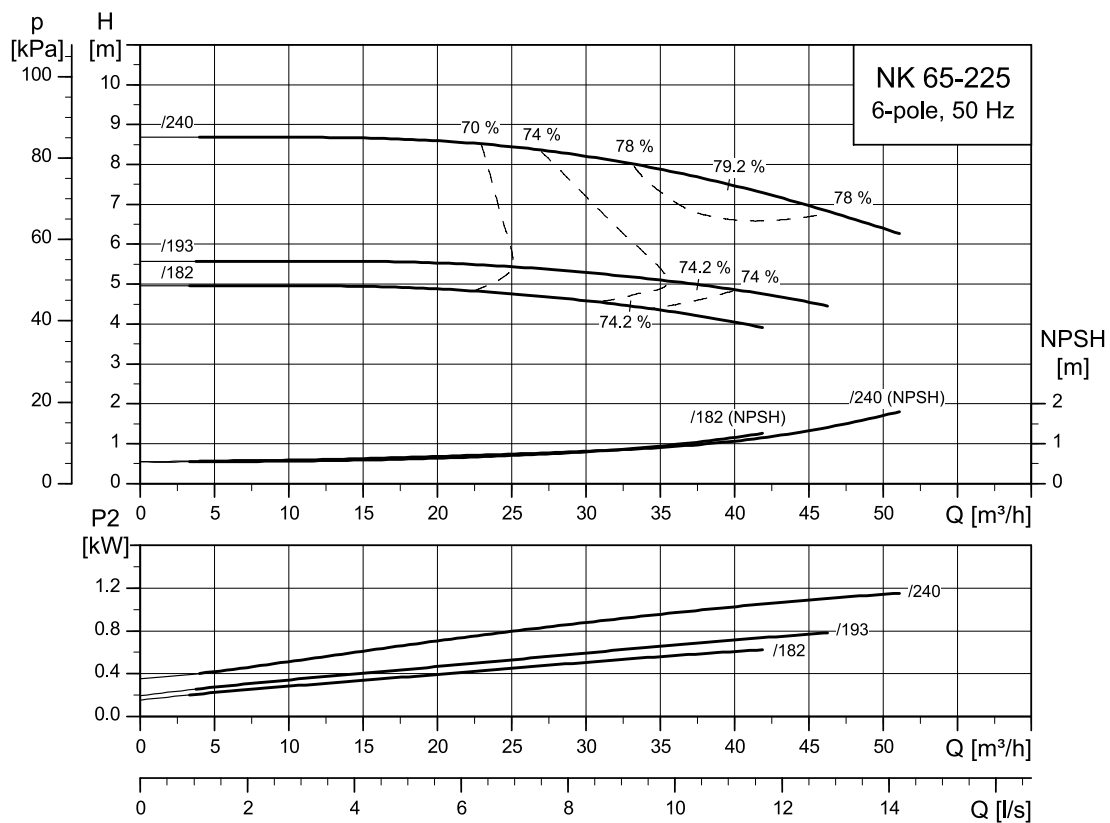
6-pole

65-210



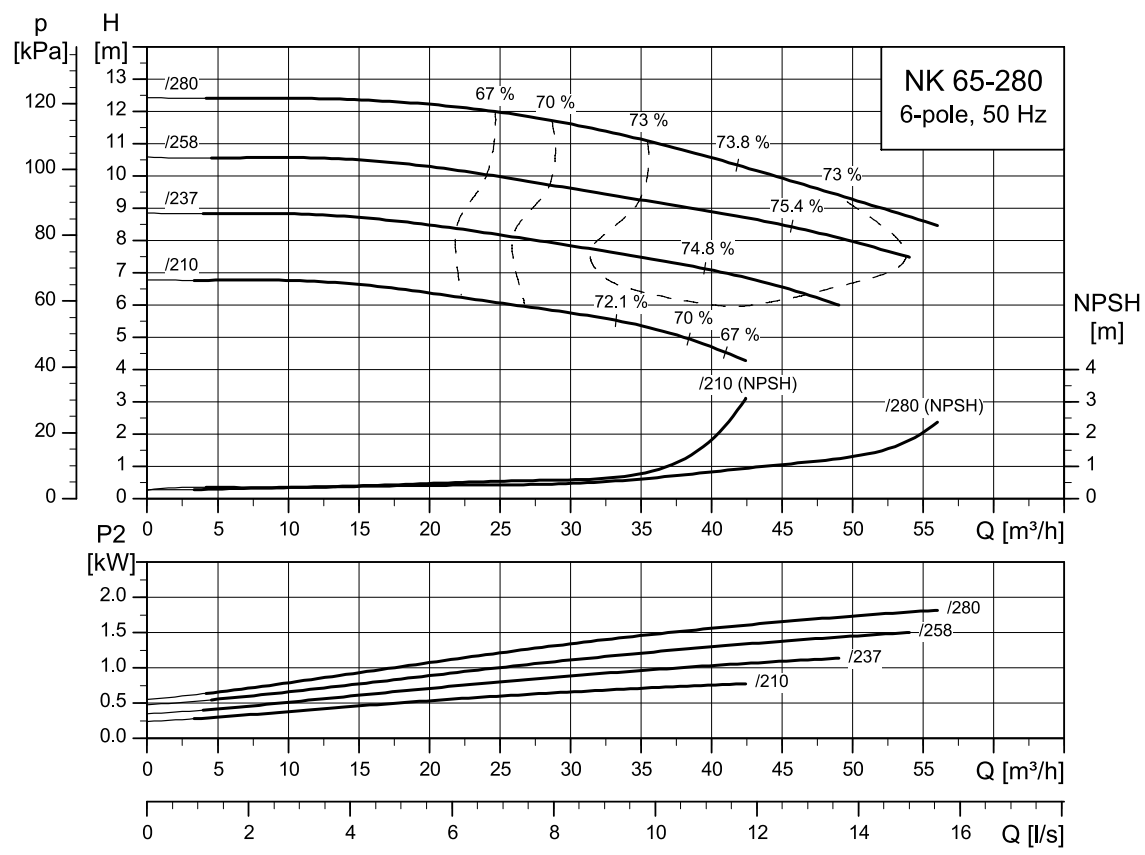
TM091560

65-225



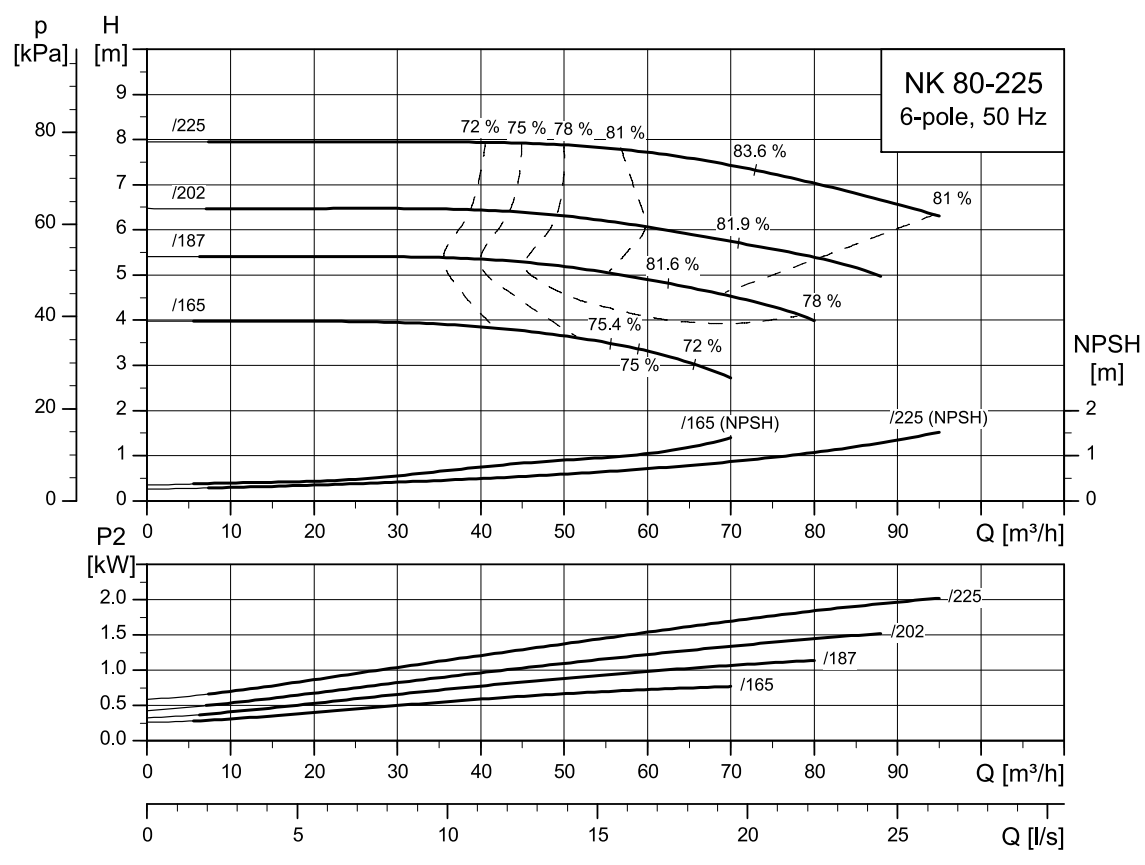
TM1040283

65-280



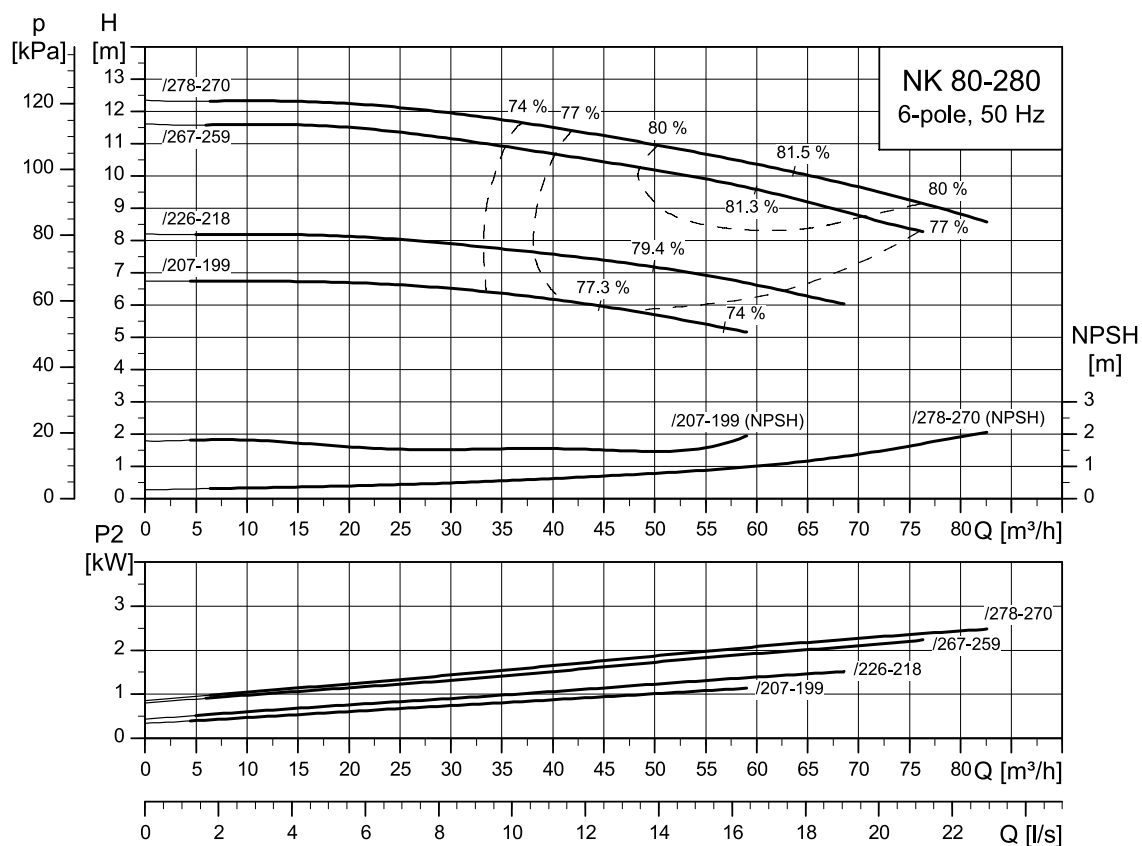
TM1040284

80-225



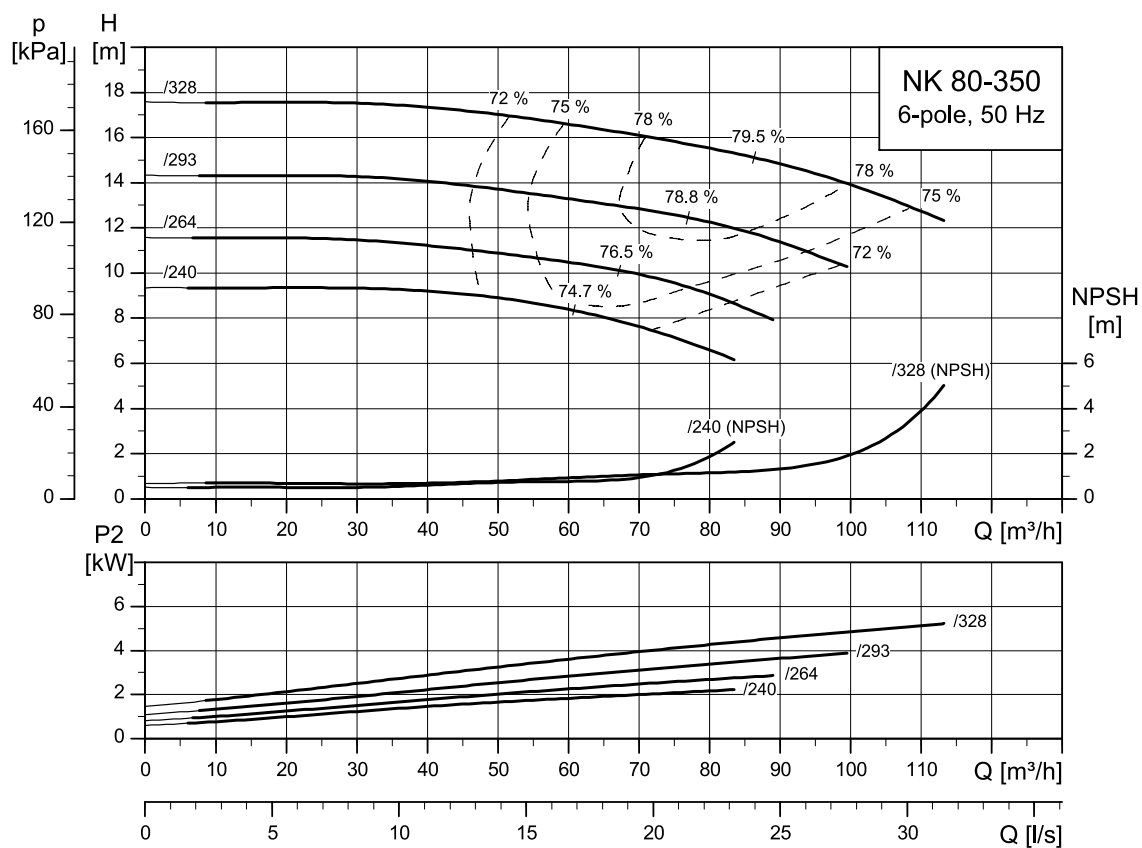
TM1040285

80-280



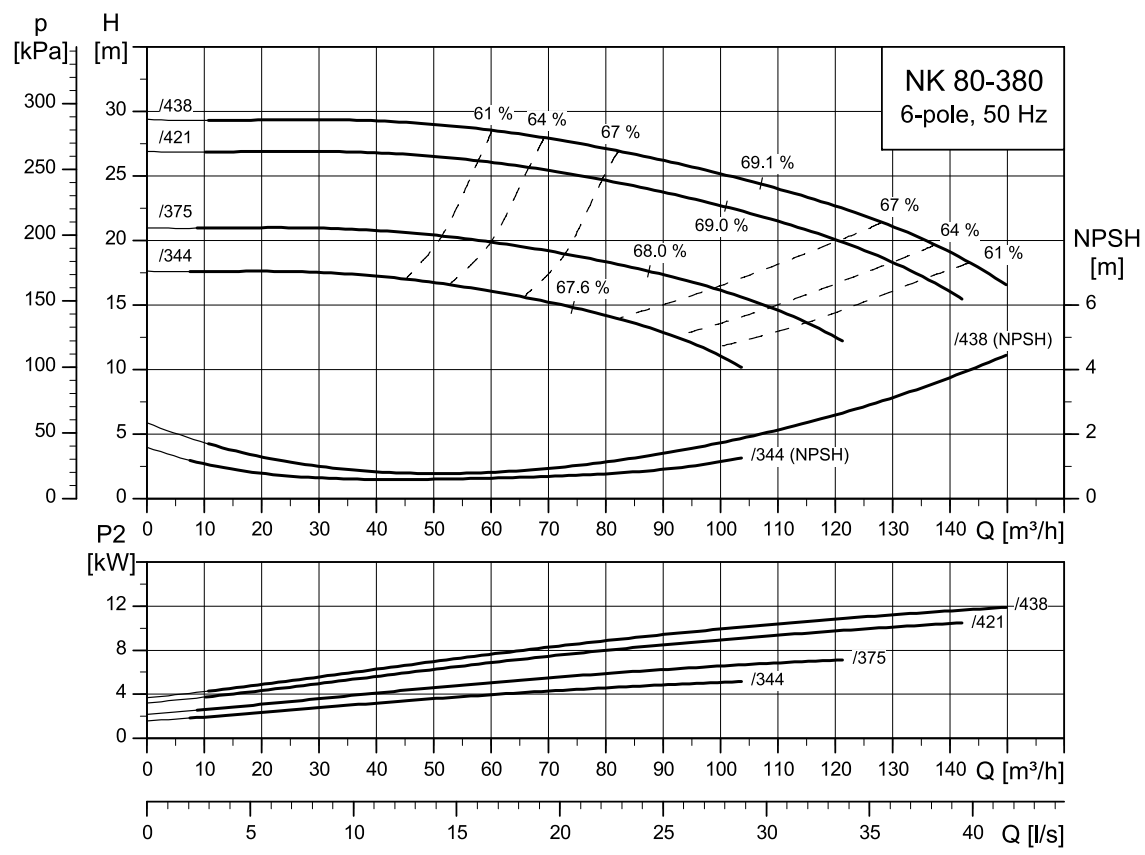
TM1040286

80-350



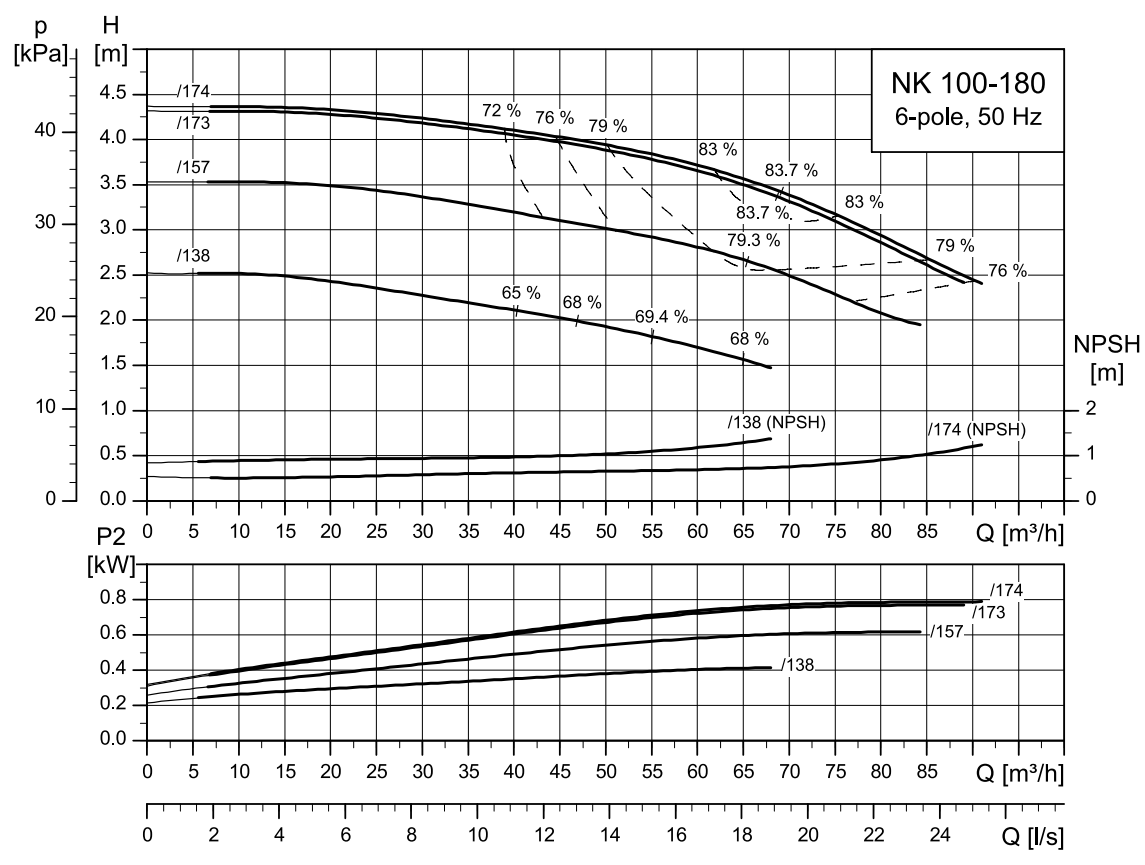
TM1040287

80-380



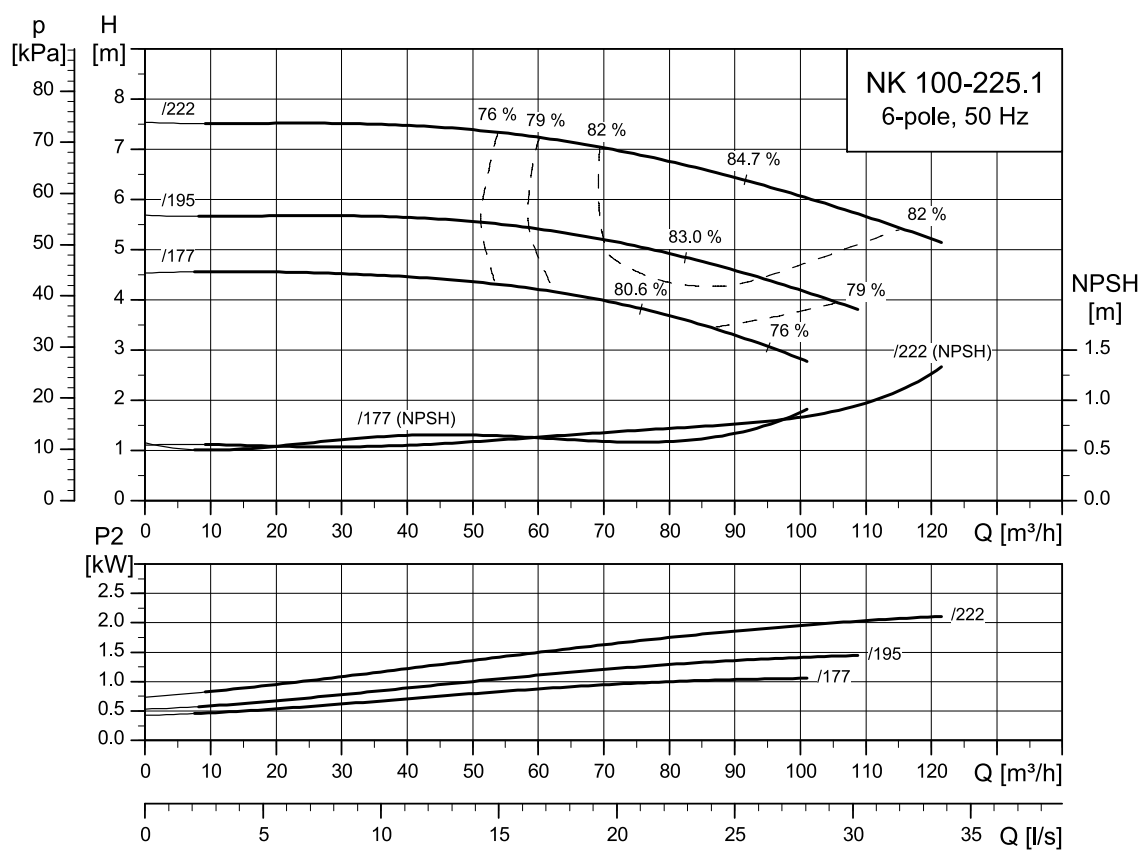
TM091557

100-180



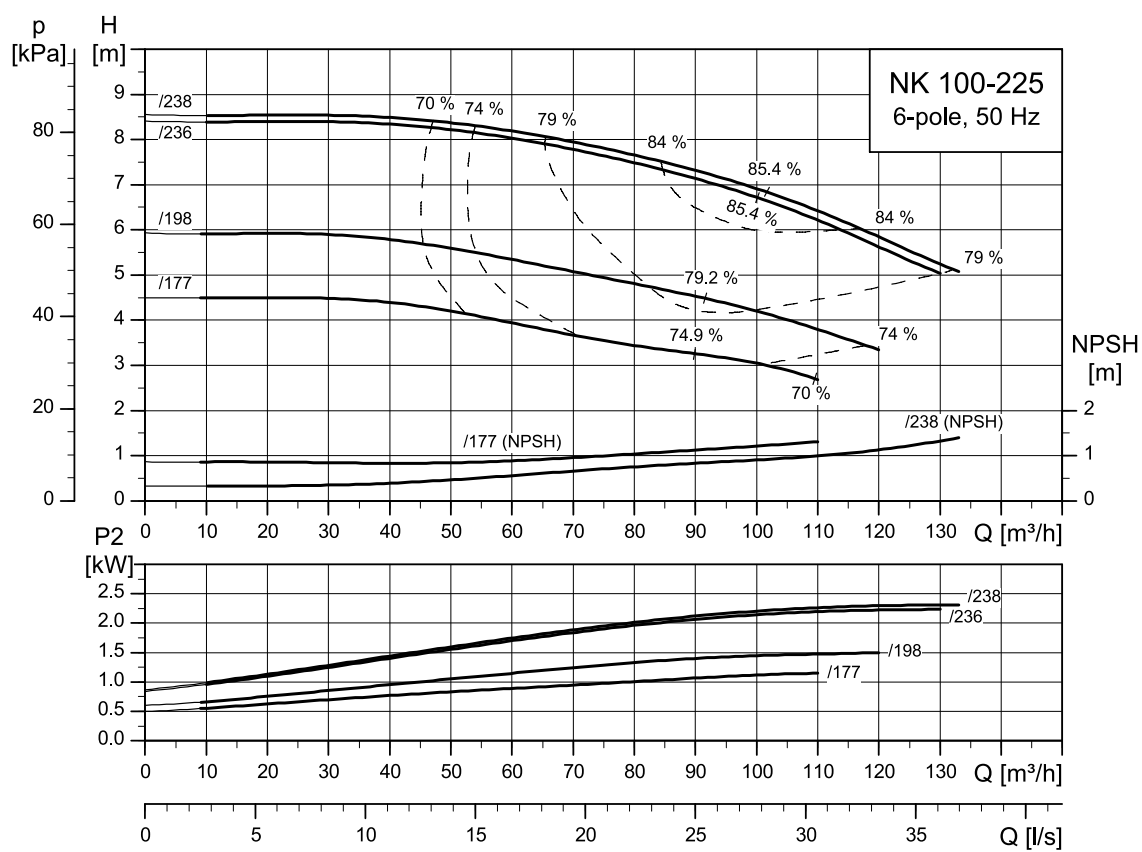
TM1040288

100-225.1



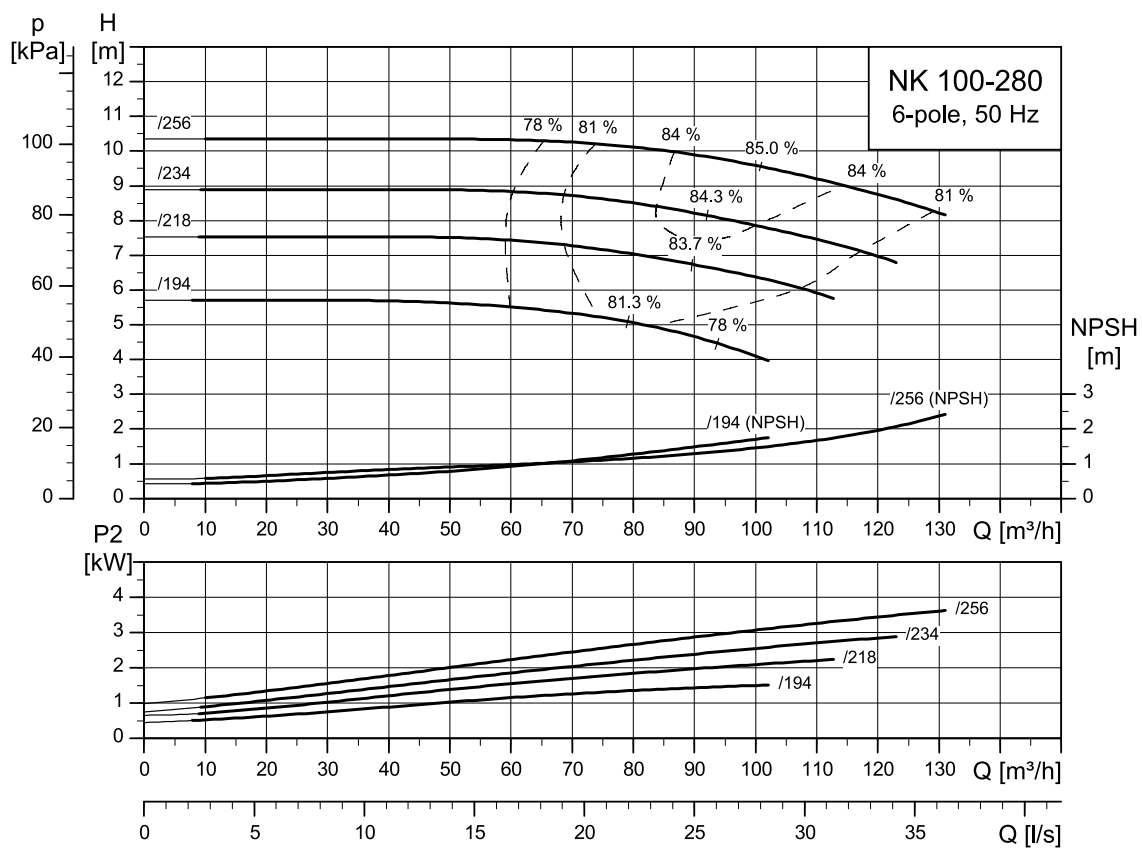
TM087739

100-225



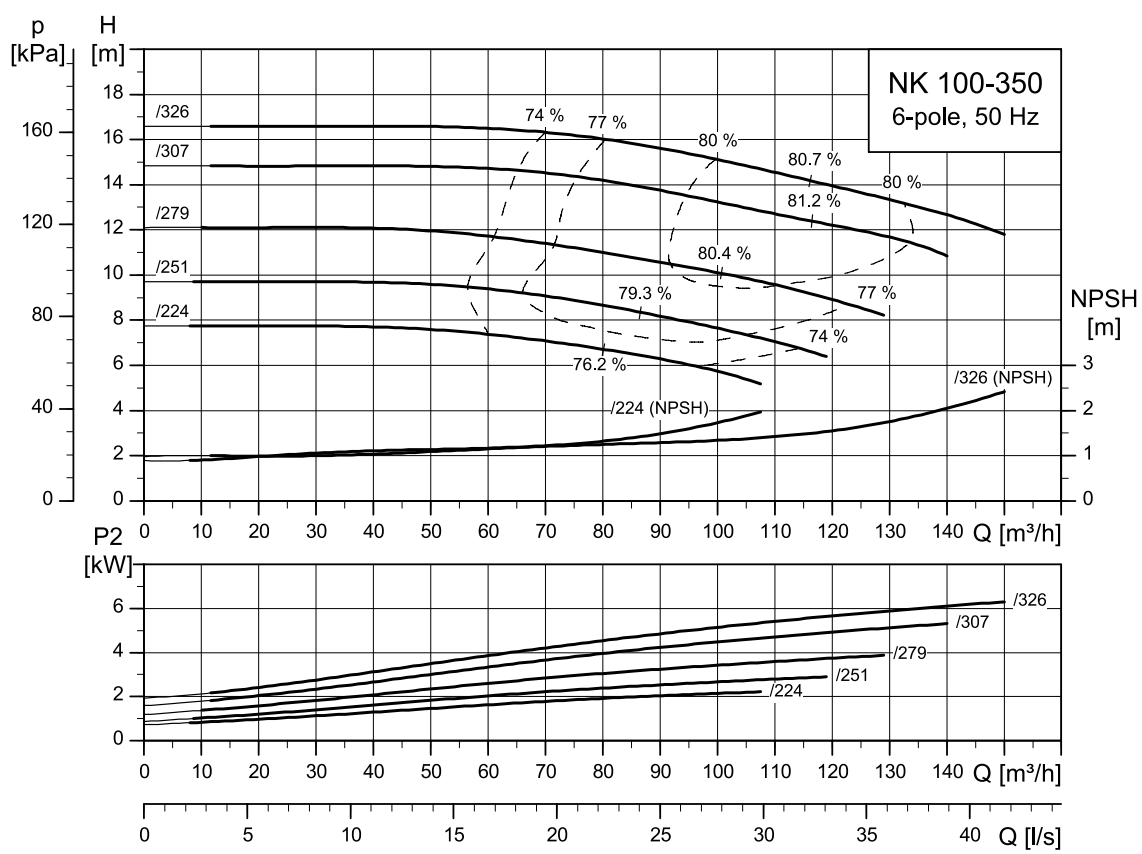
TM1040289

100-280



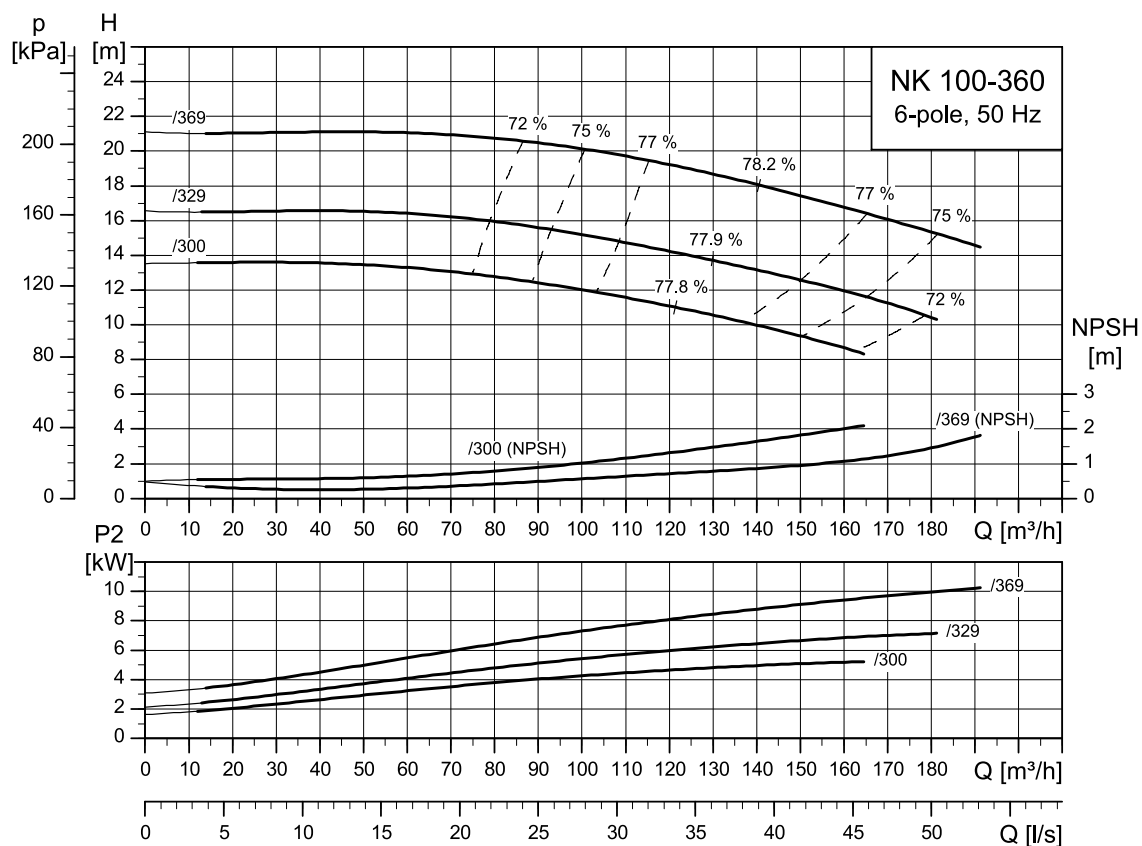
TM1040290

100-350



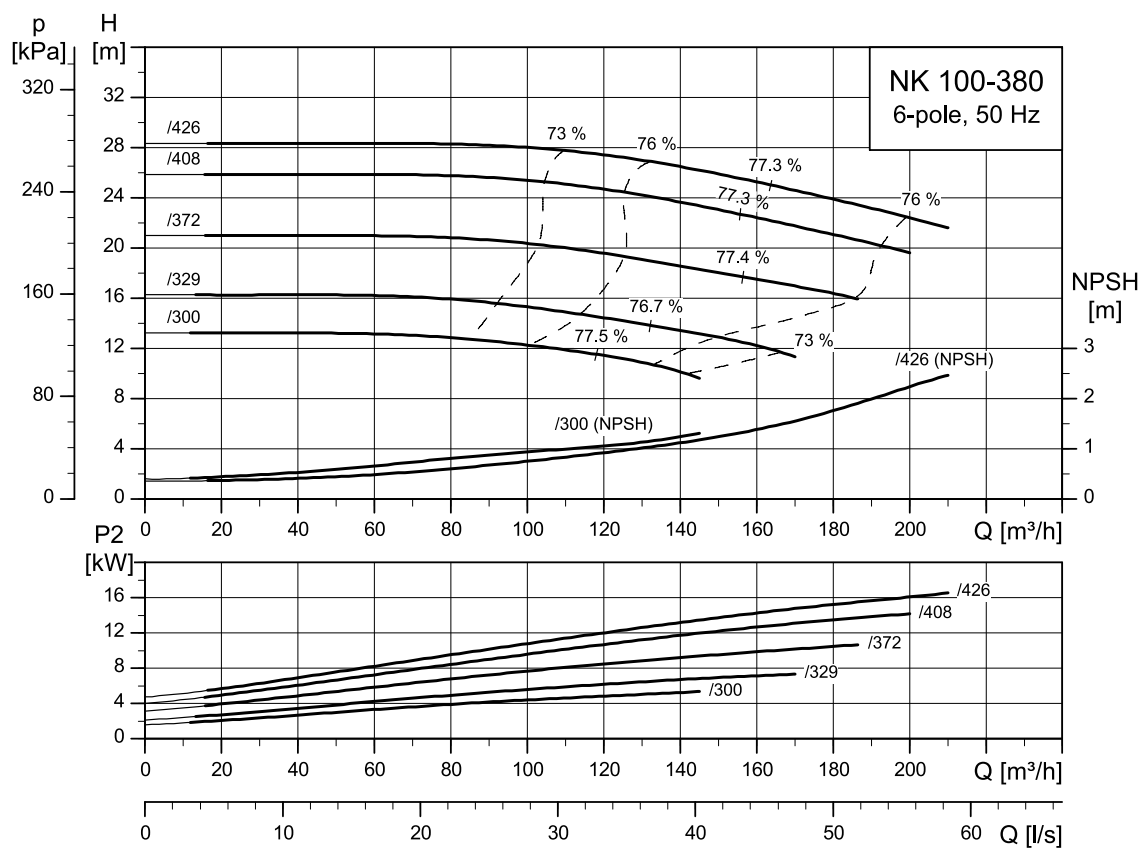
TM1040291

100-360



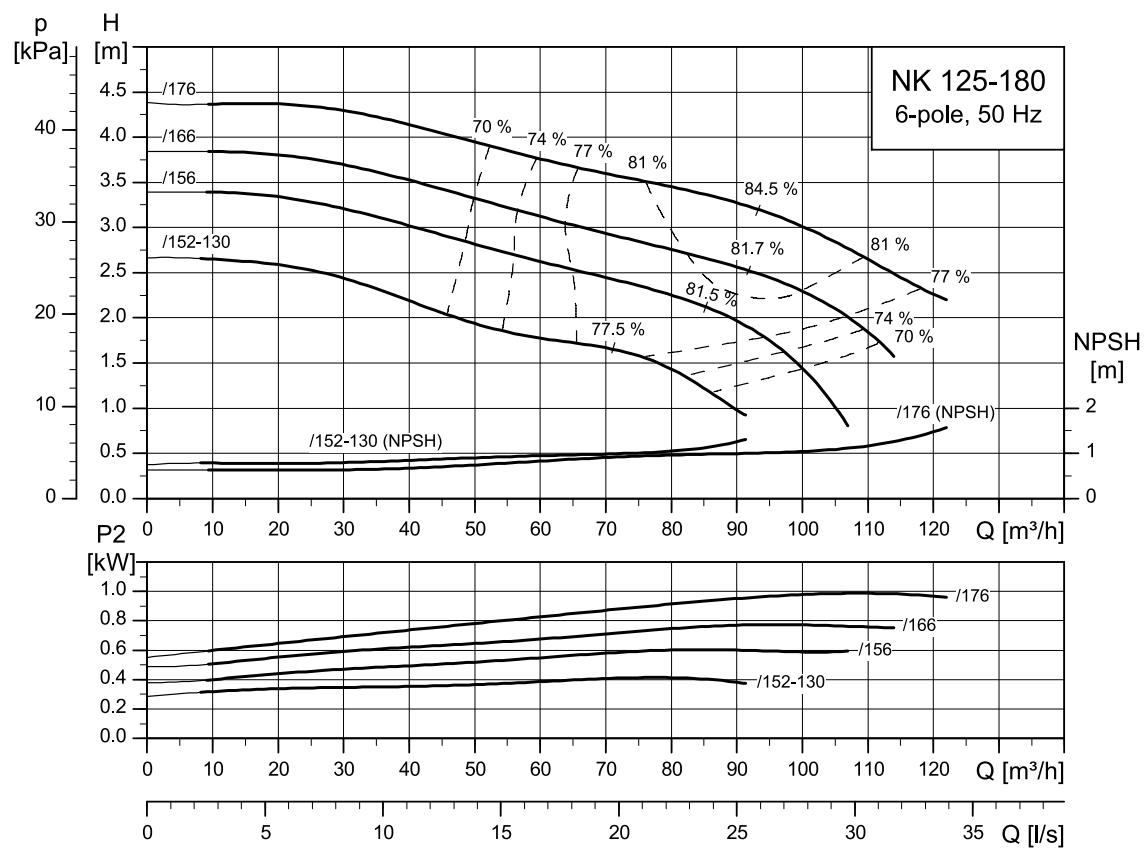
TM090728

100-380

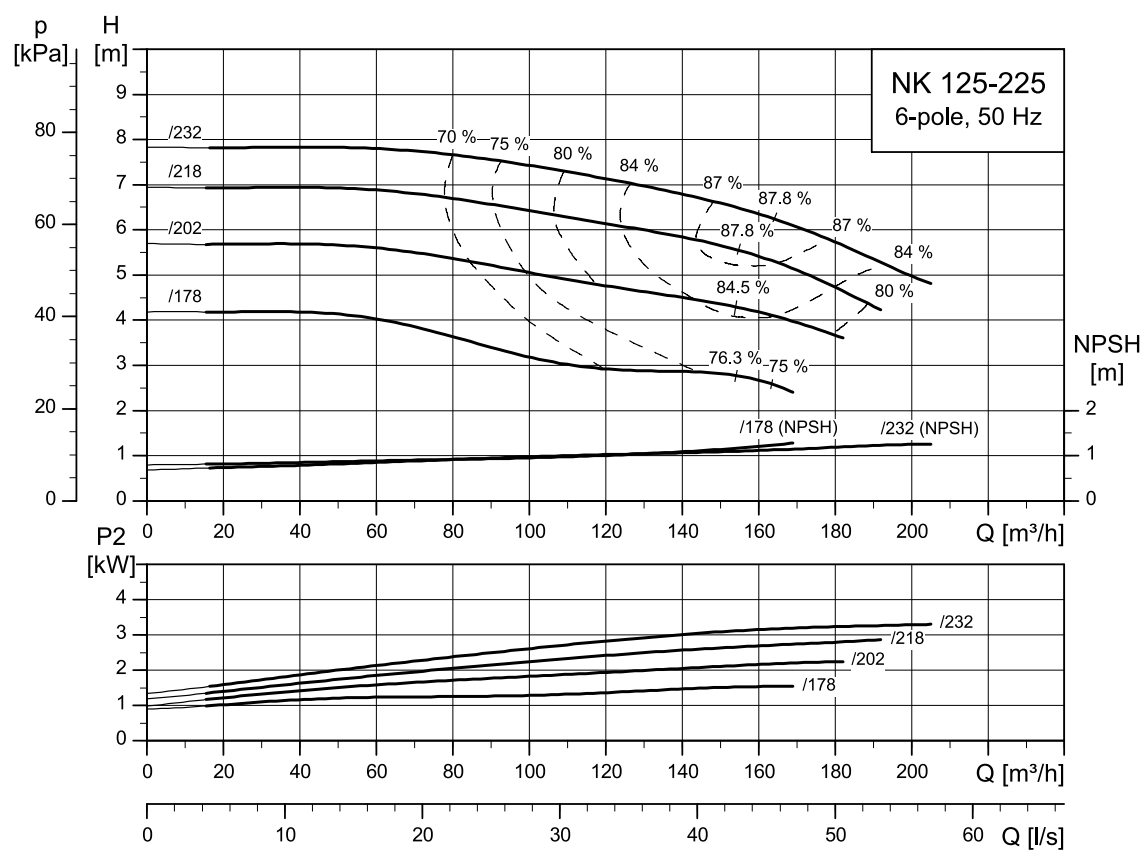


TM1040292

125-180



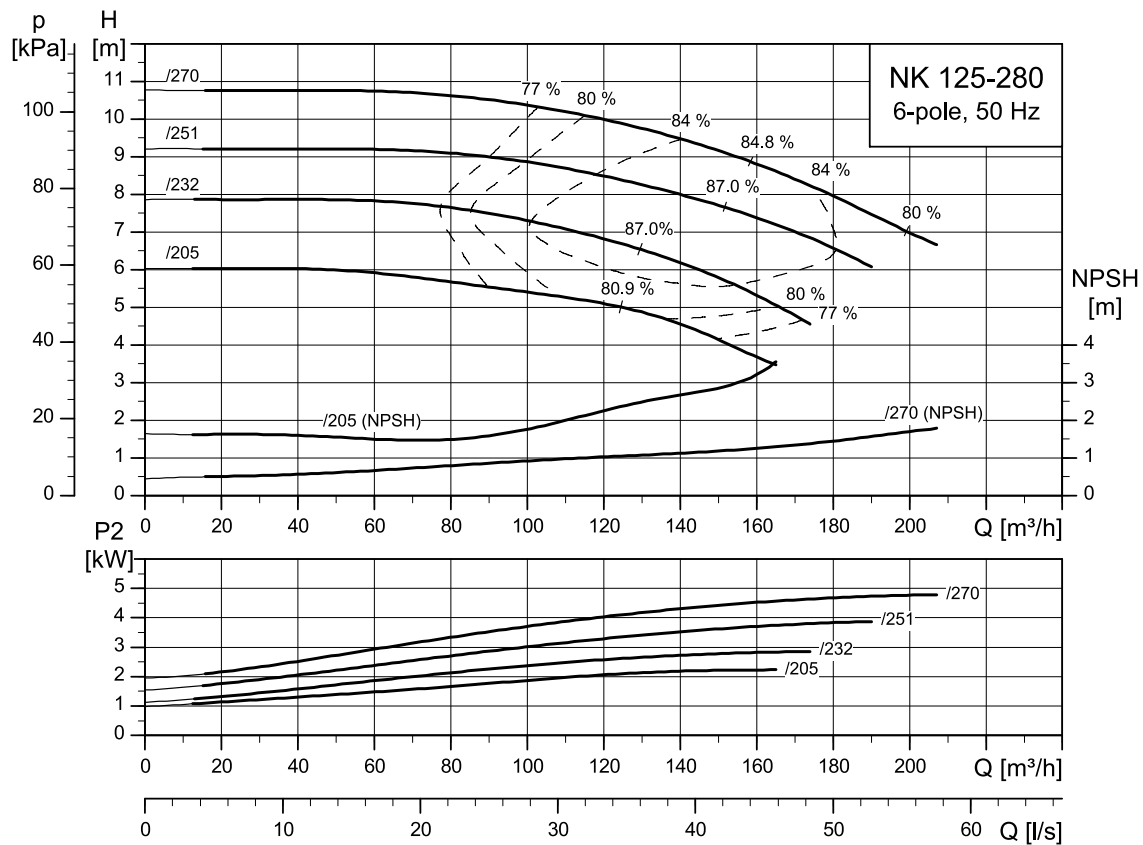
125-225



TM1040297

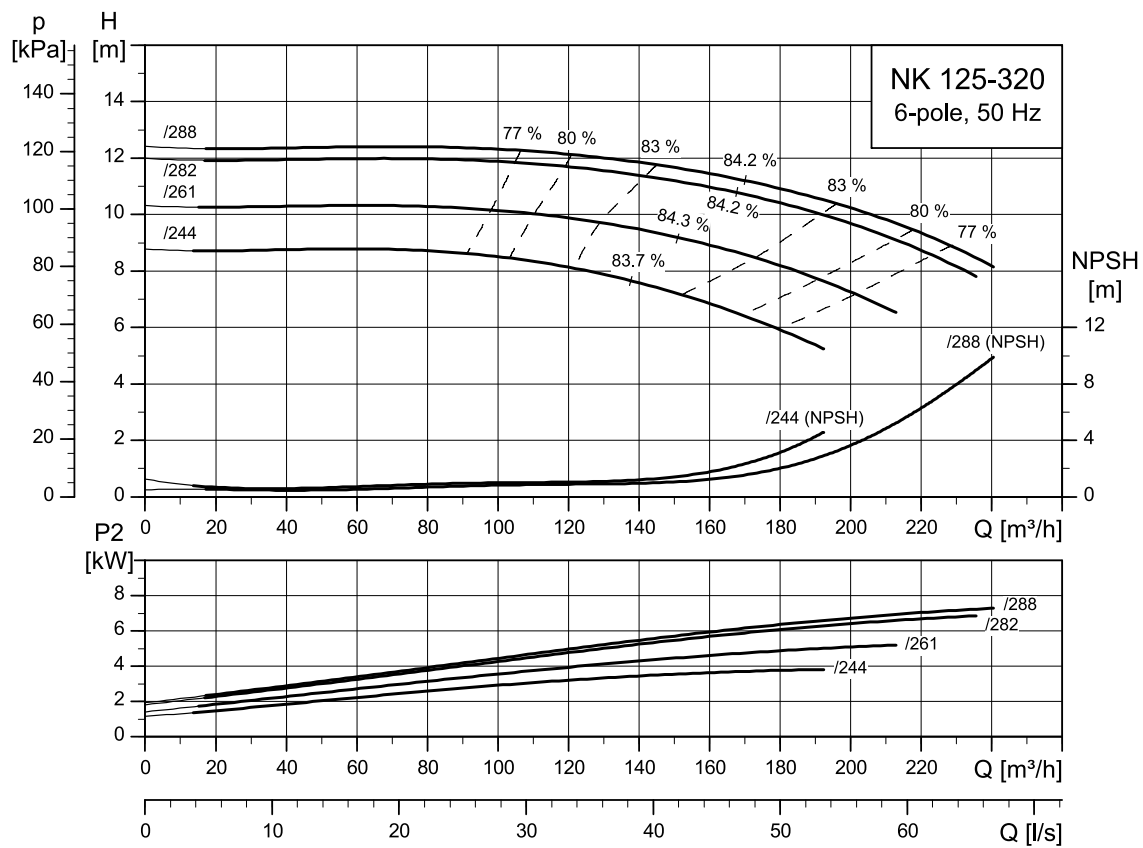
TM1040293

125-280



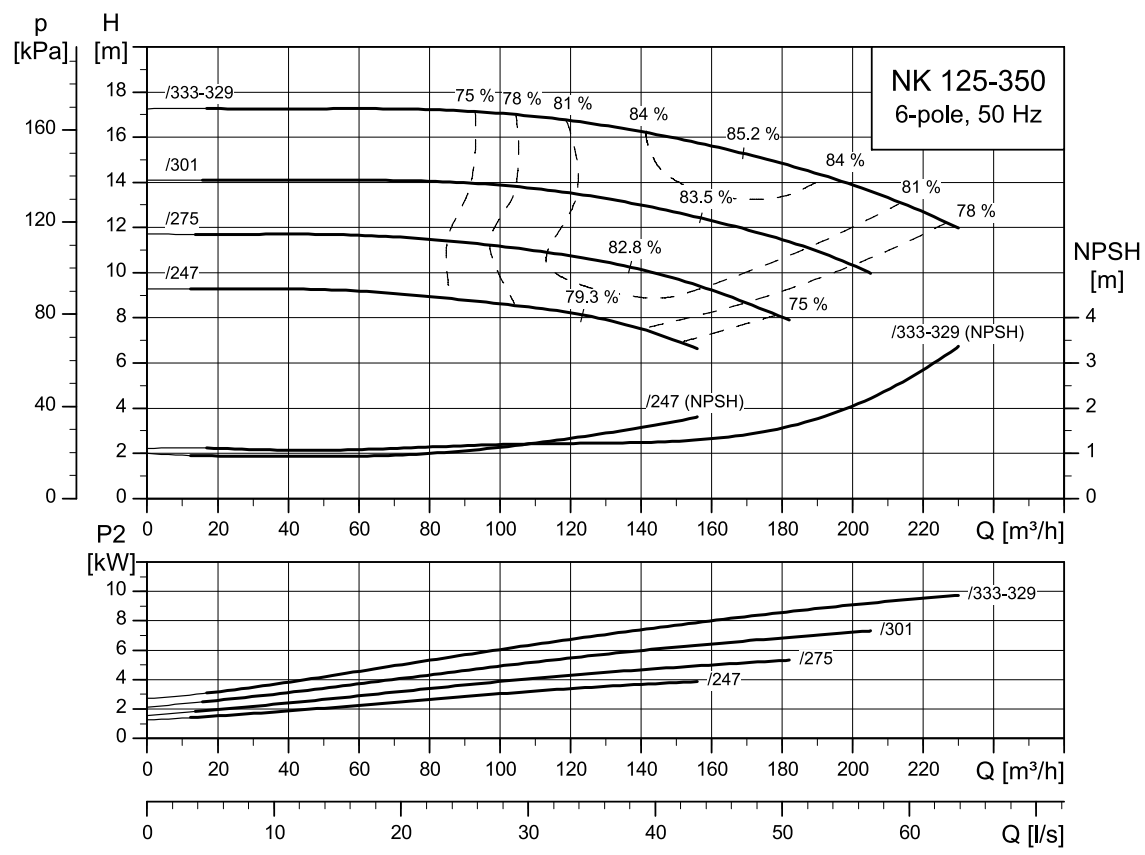
TM1040294

125-320



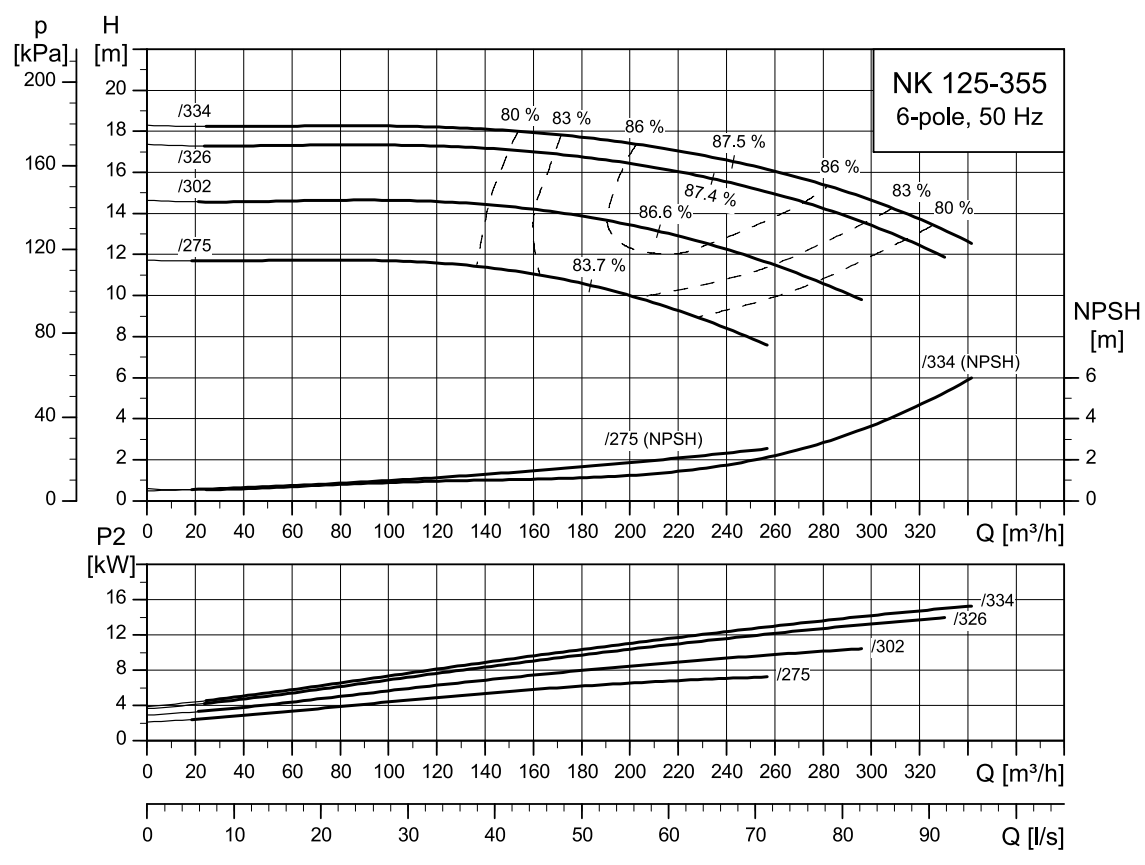
TM087740

125-350



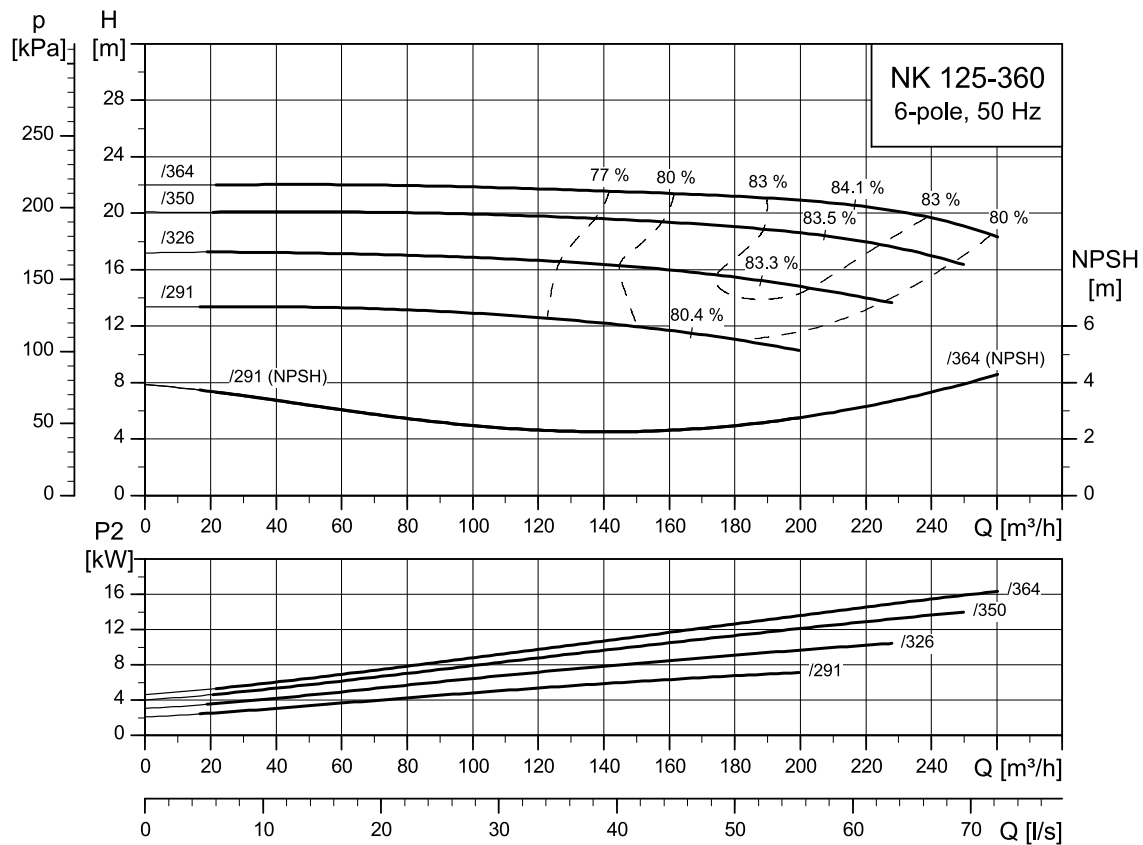
TM1040295

125-355



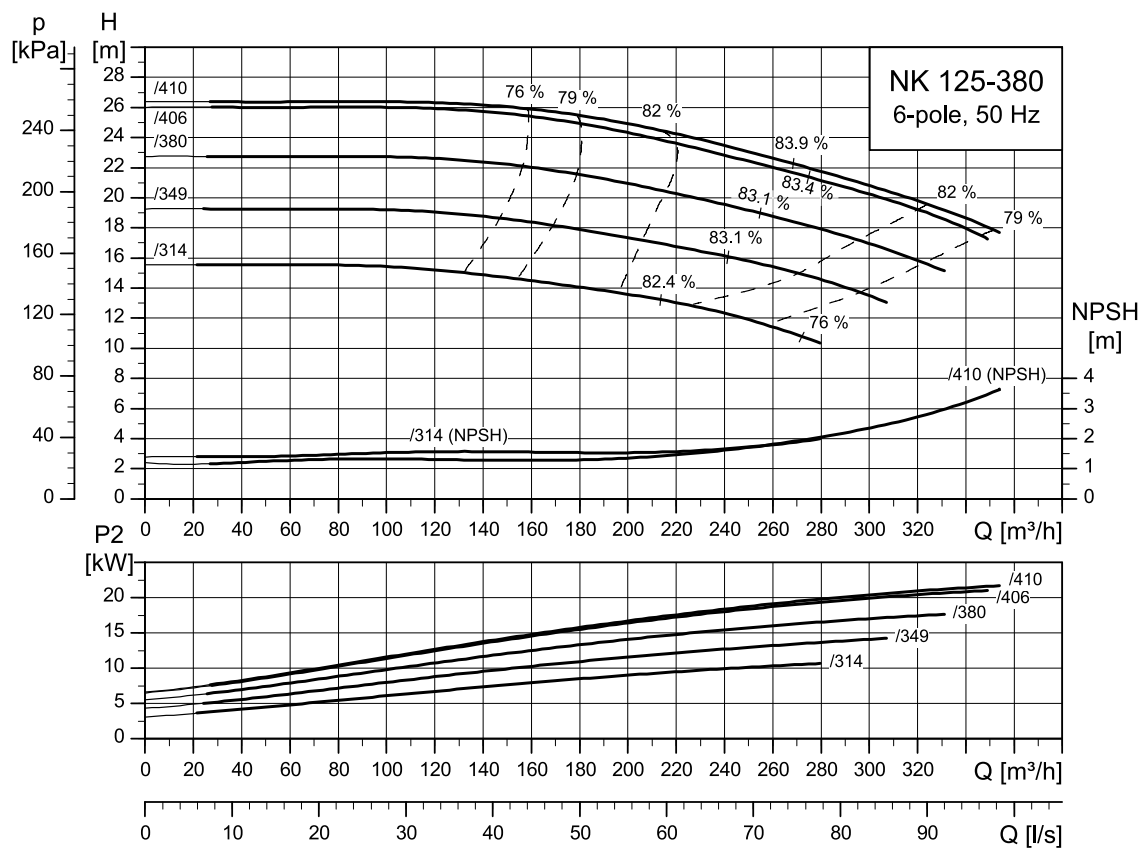
TM090729

125-360



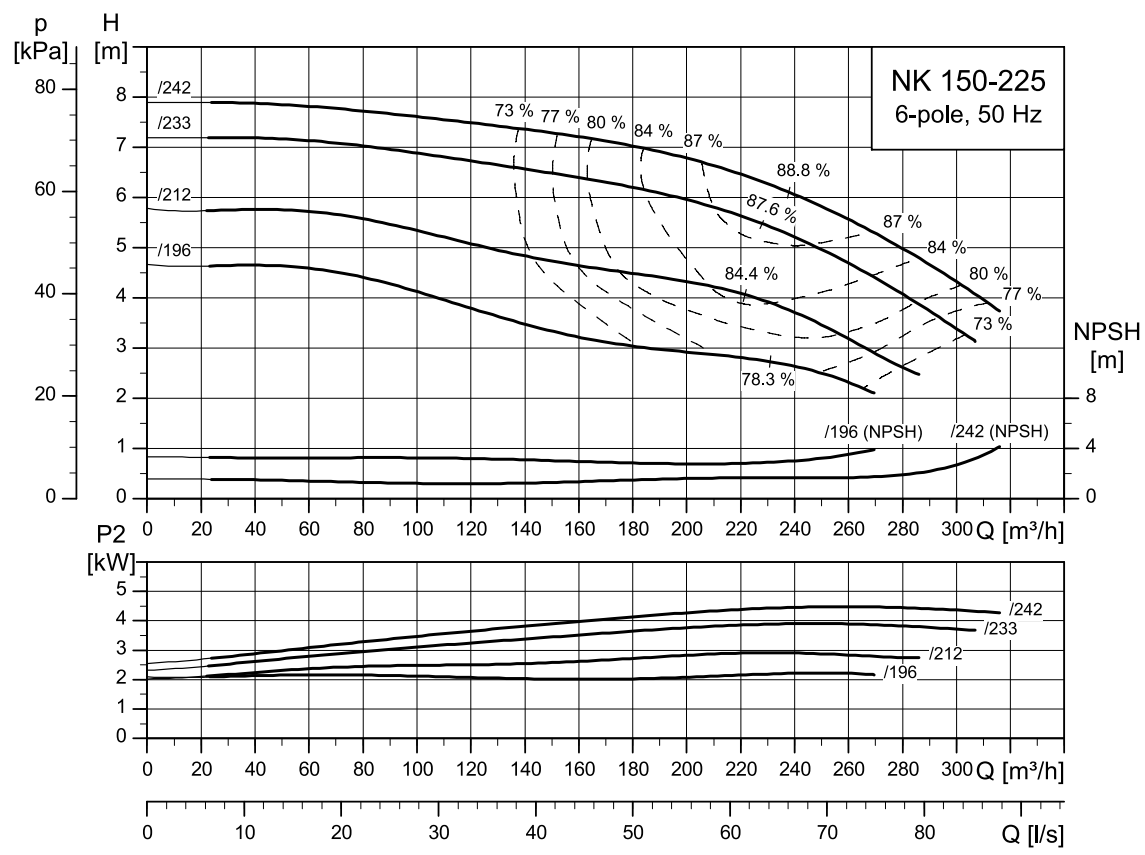
TM087741

125-380



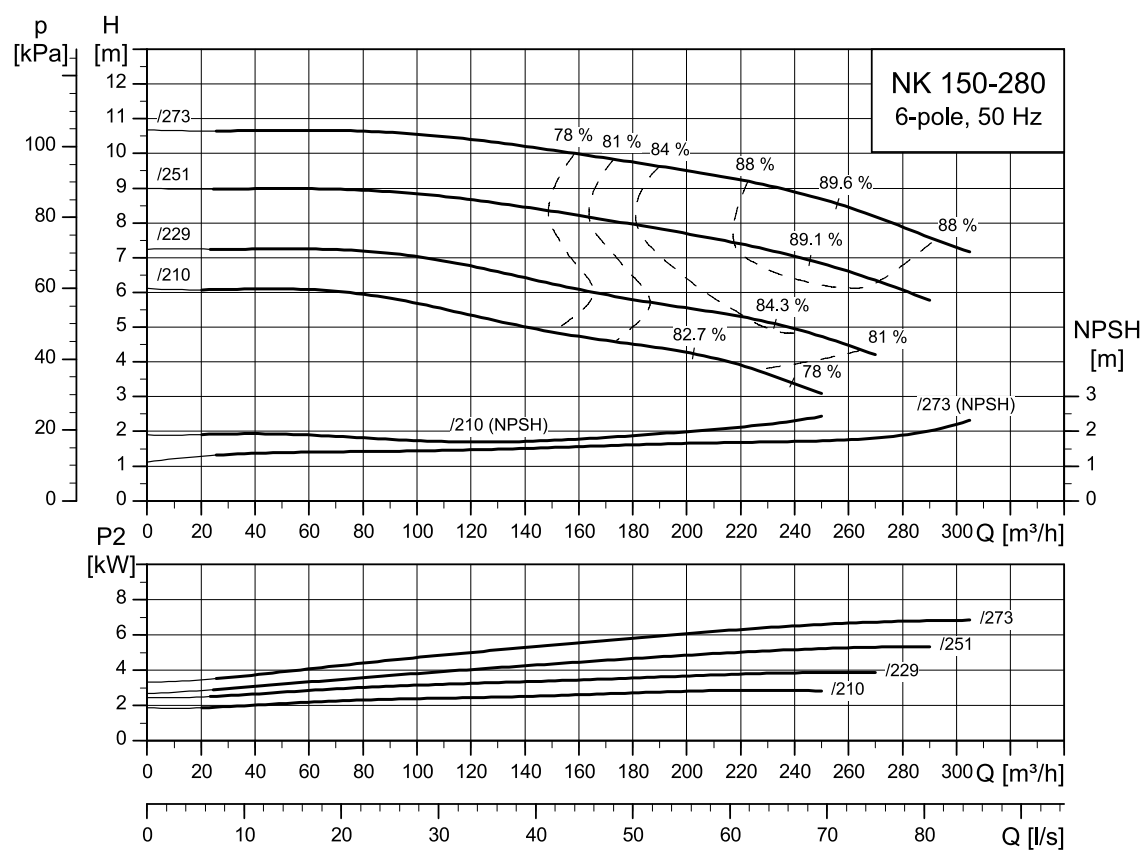
TM1040296

150-225



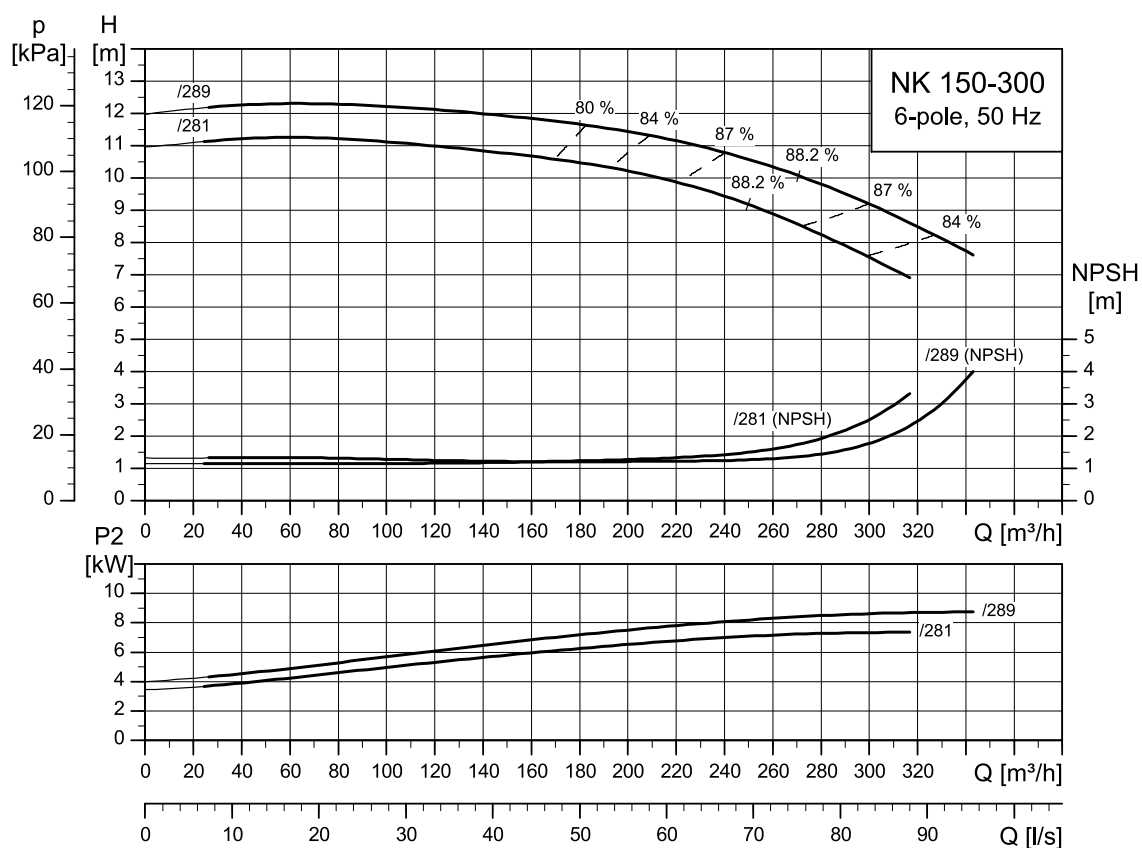
TM1040298

150-280



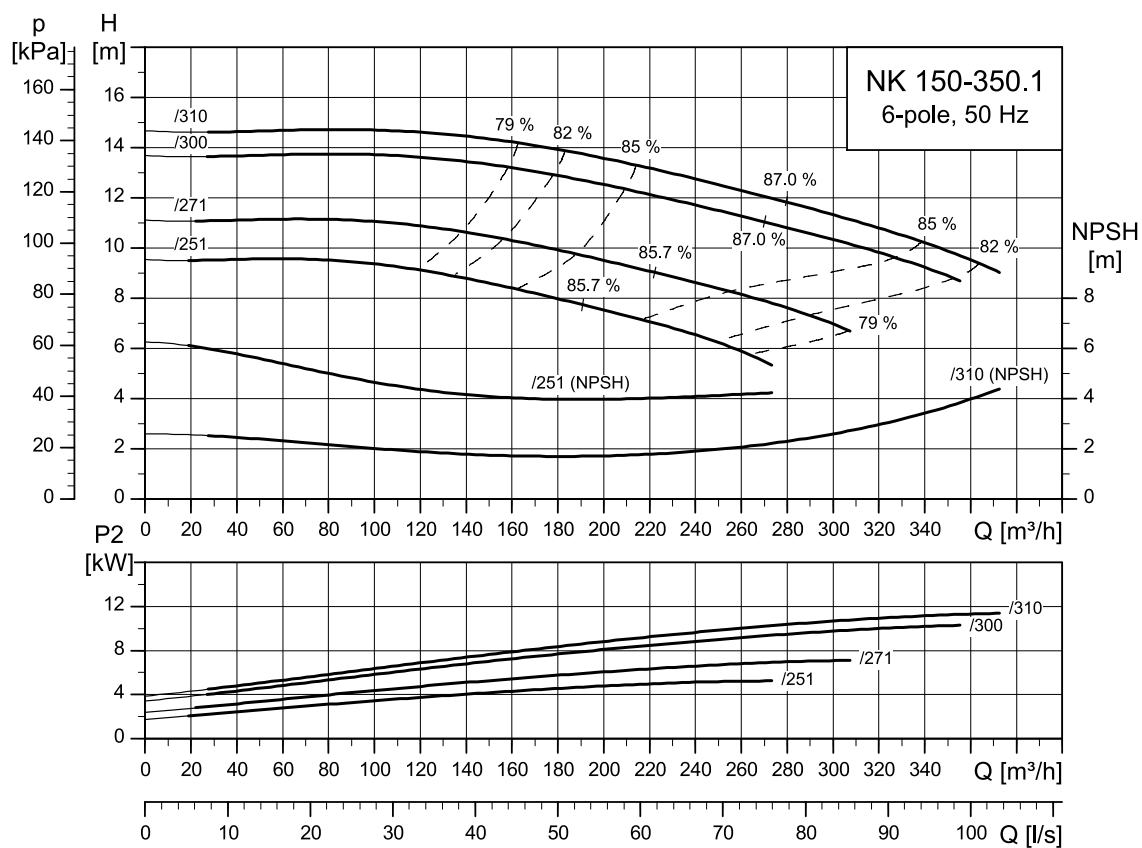
TM1040299

150-300



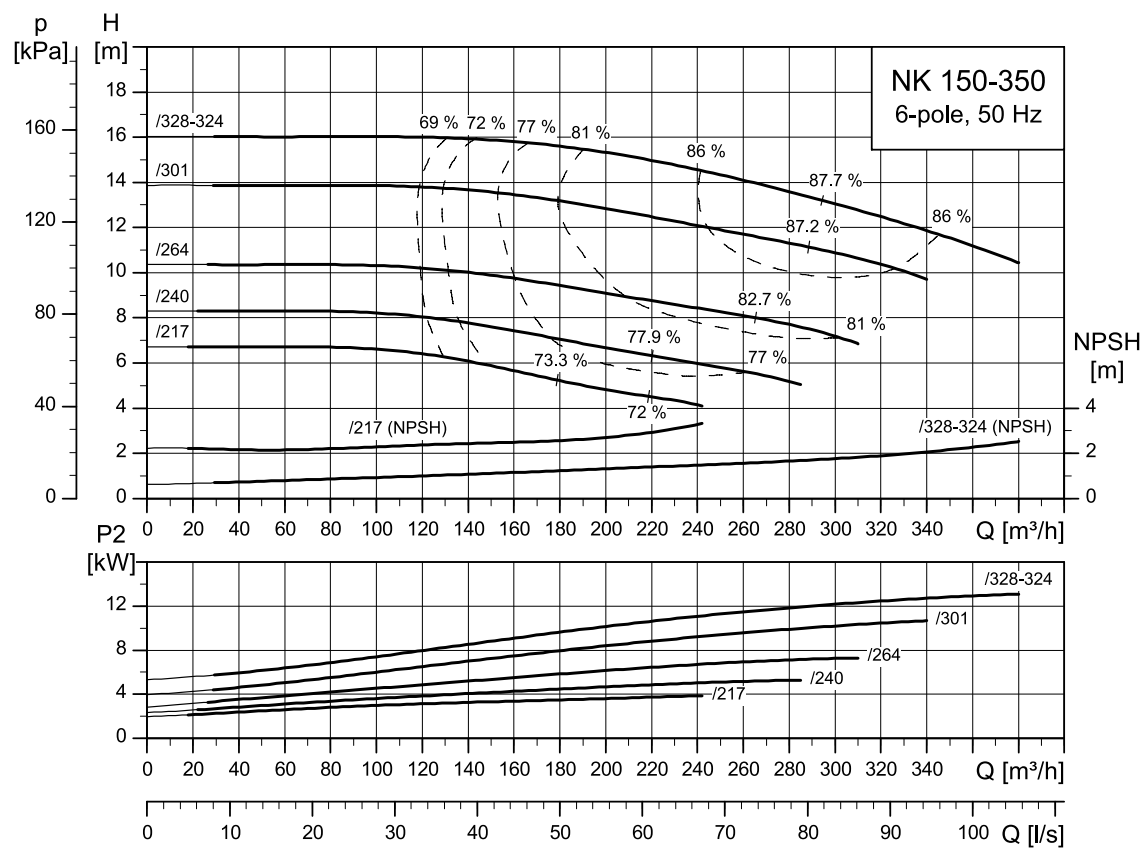
TM084998

150-350.1



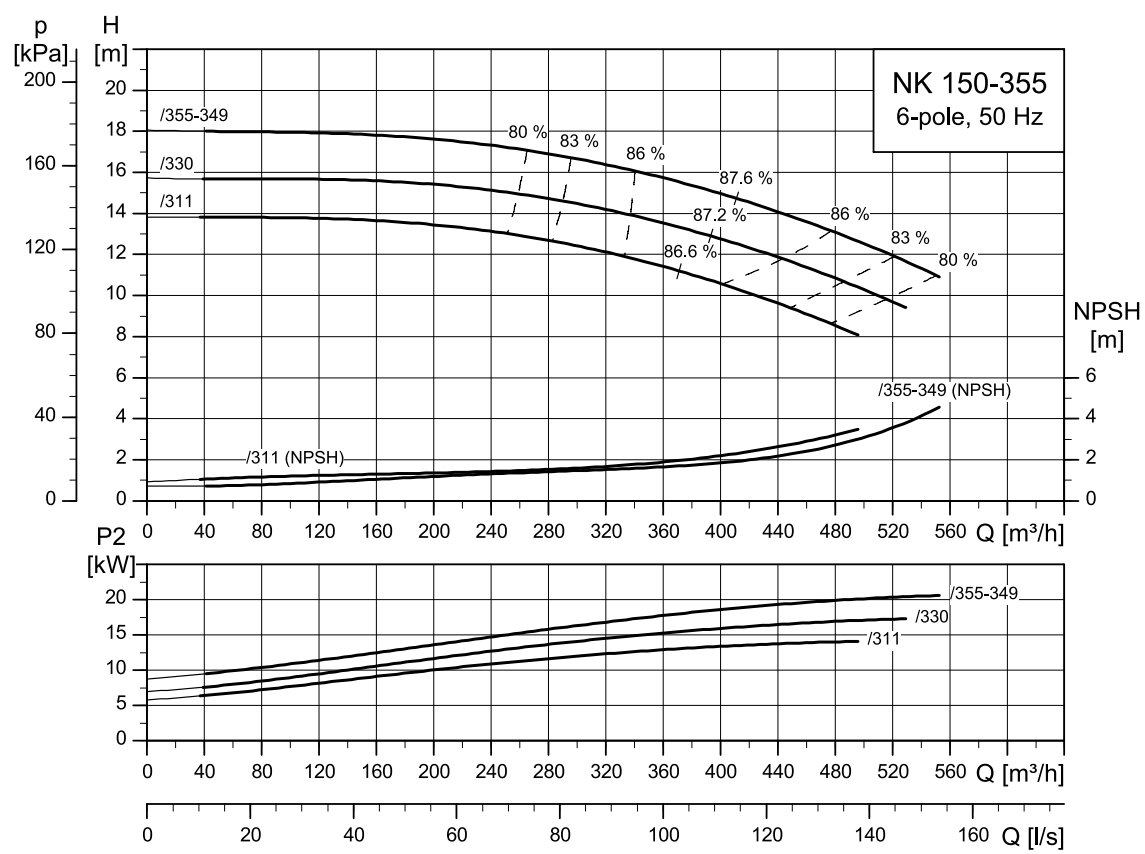
TM087742

150-350



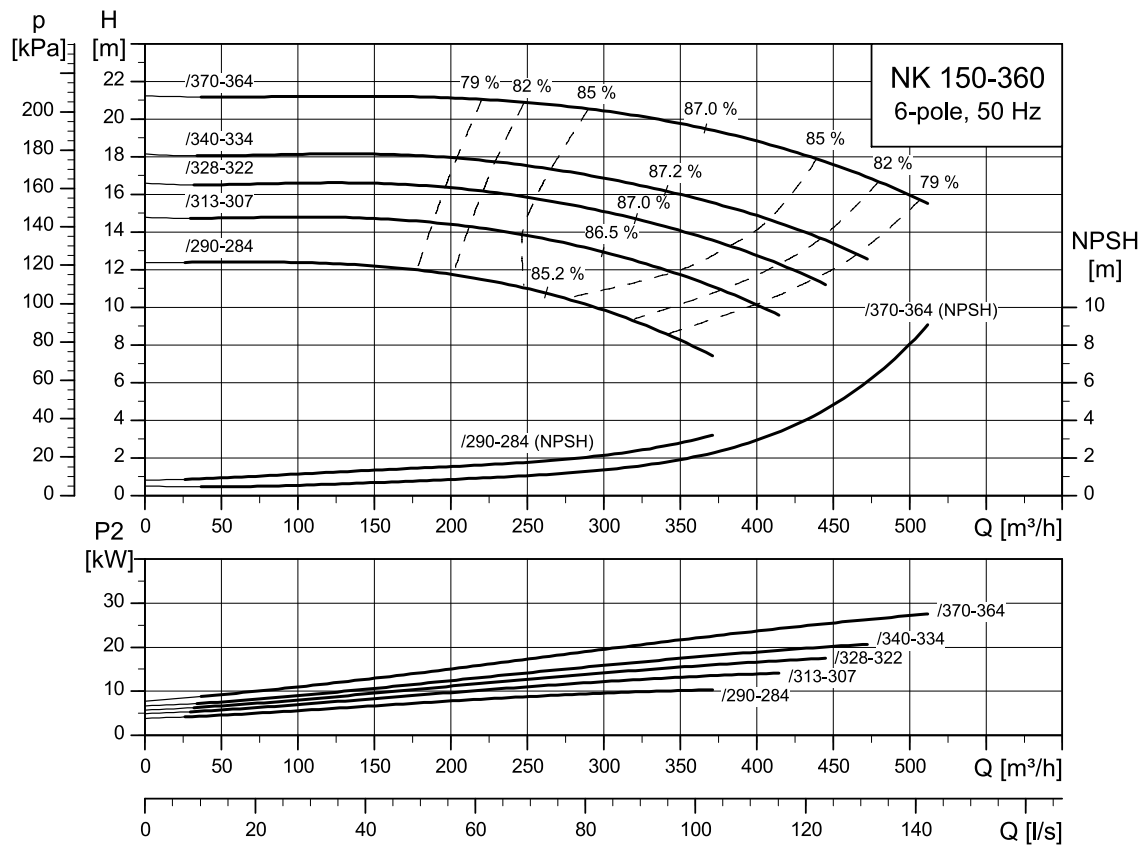
TM1040300

150-355



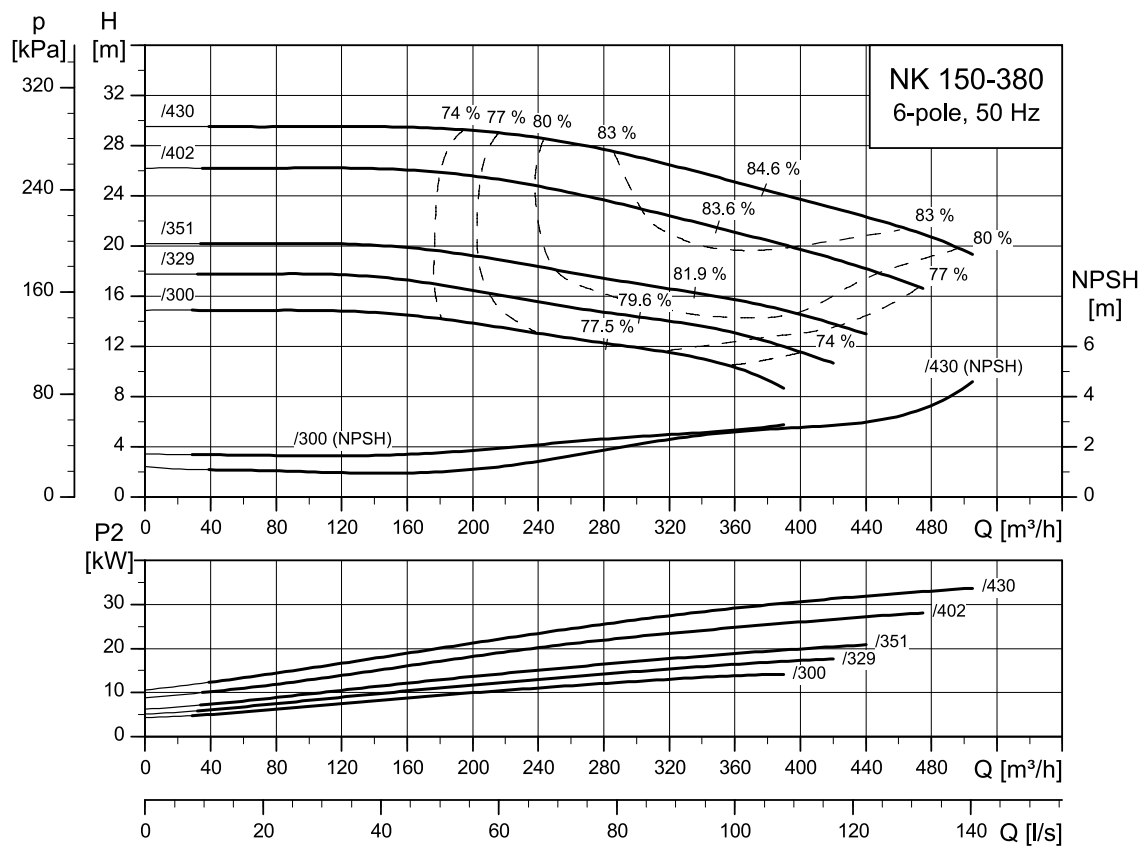
TM090730

150-360



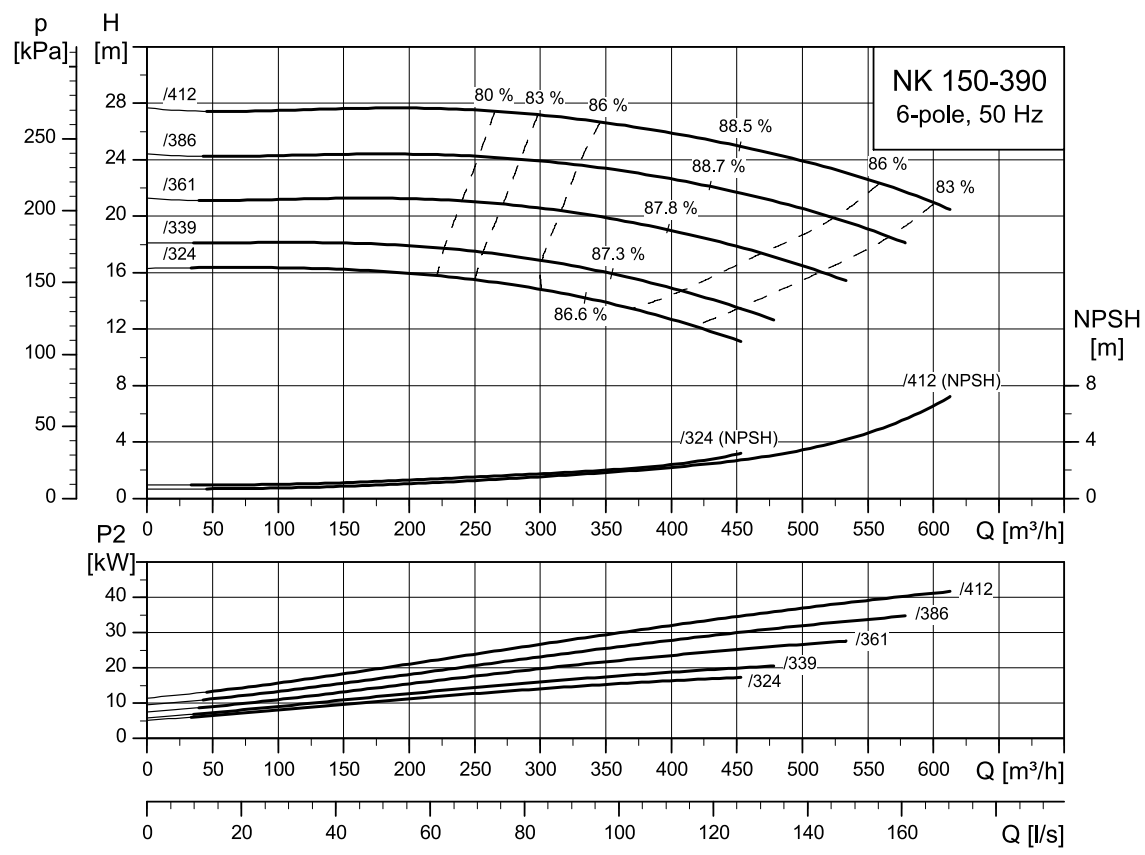
TM087743

150-380



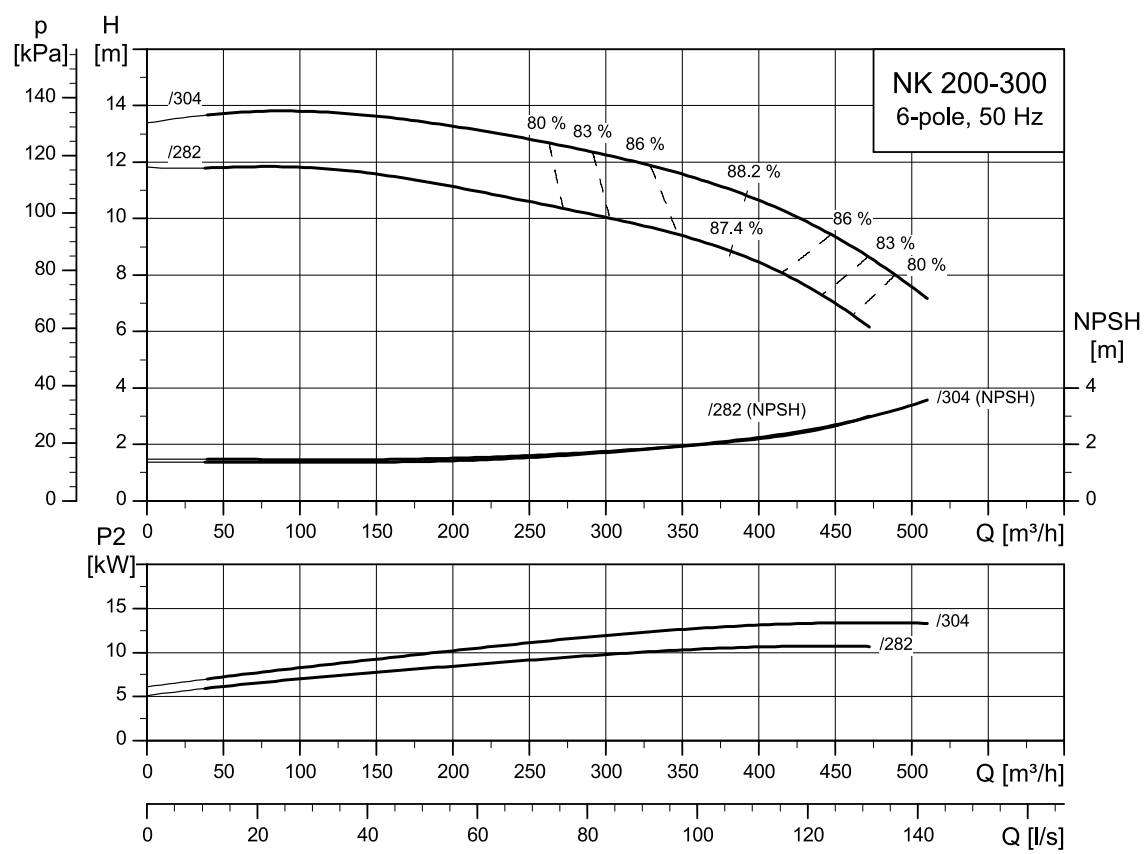
TM1040301

150-390



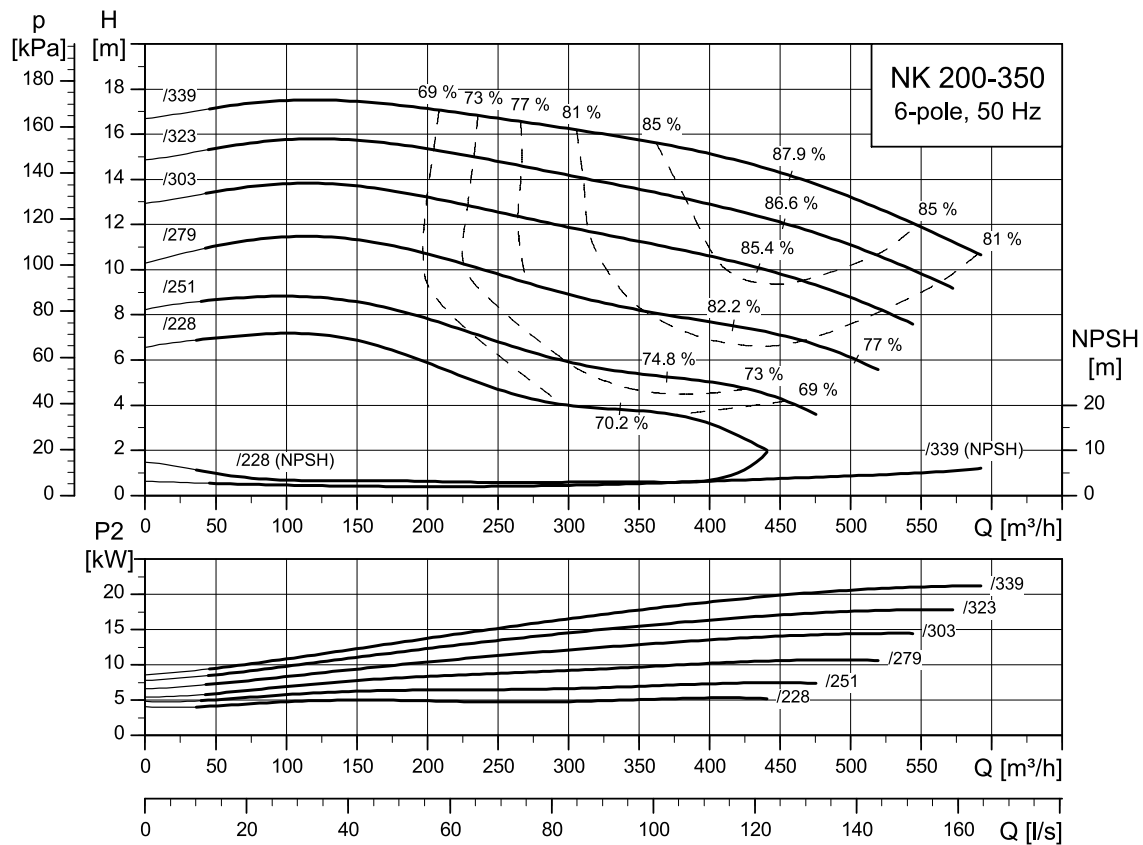
TM087744

200-300



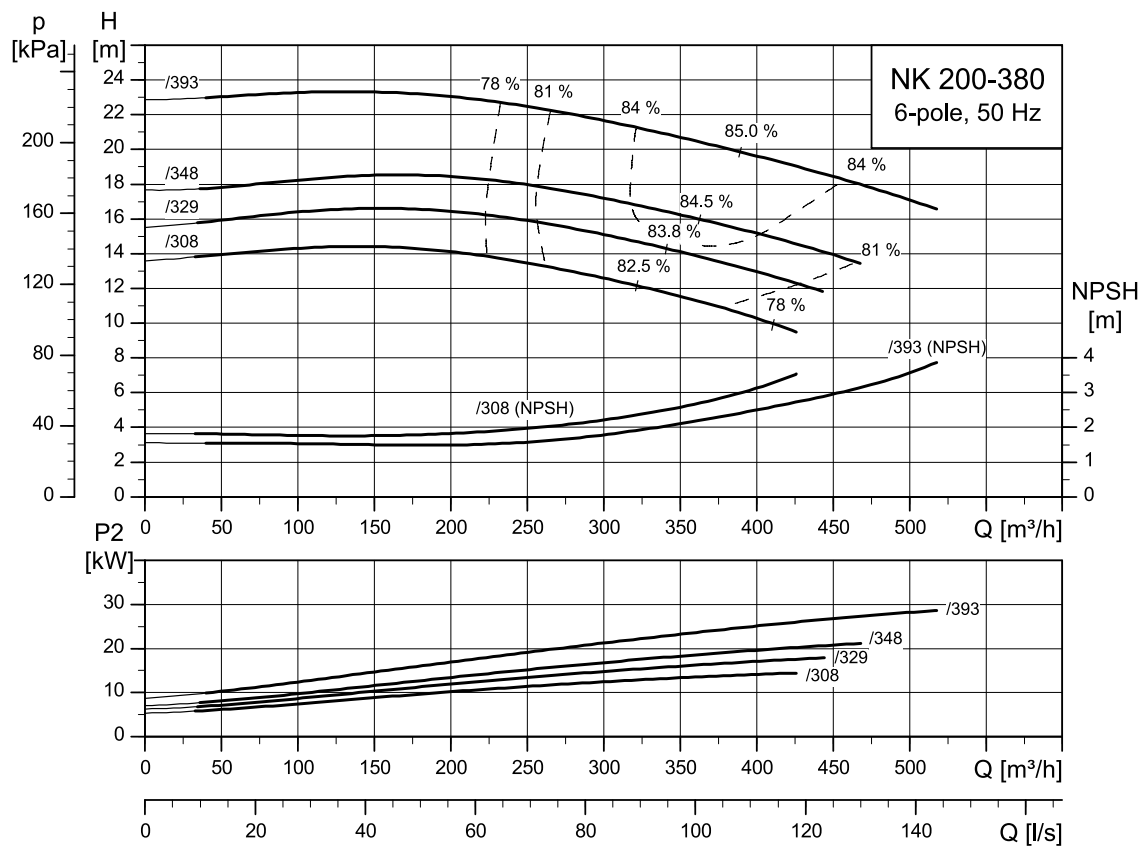
TM085002

200-350



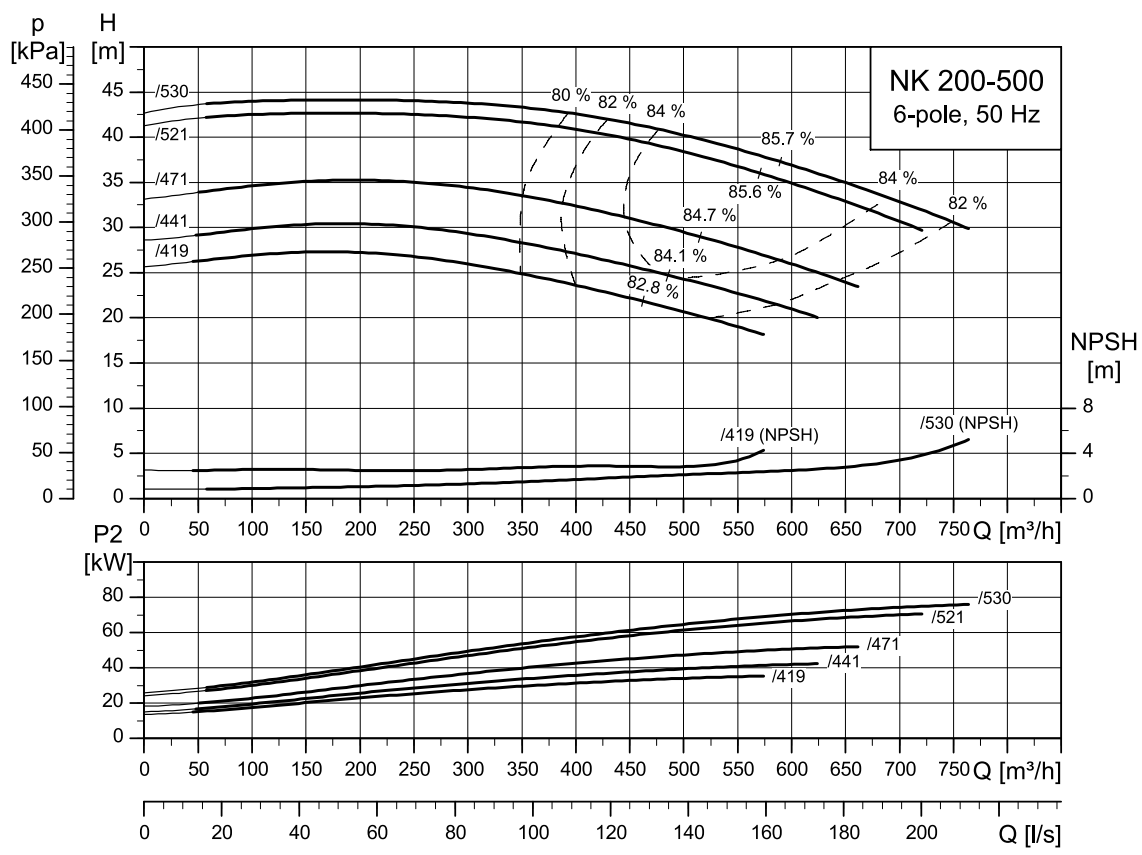
TM085021

200-380



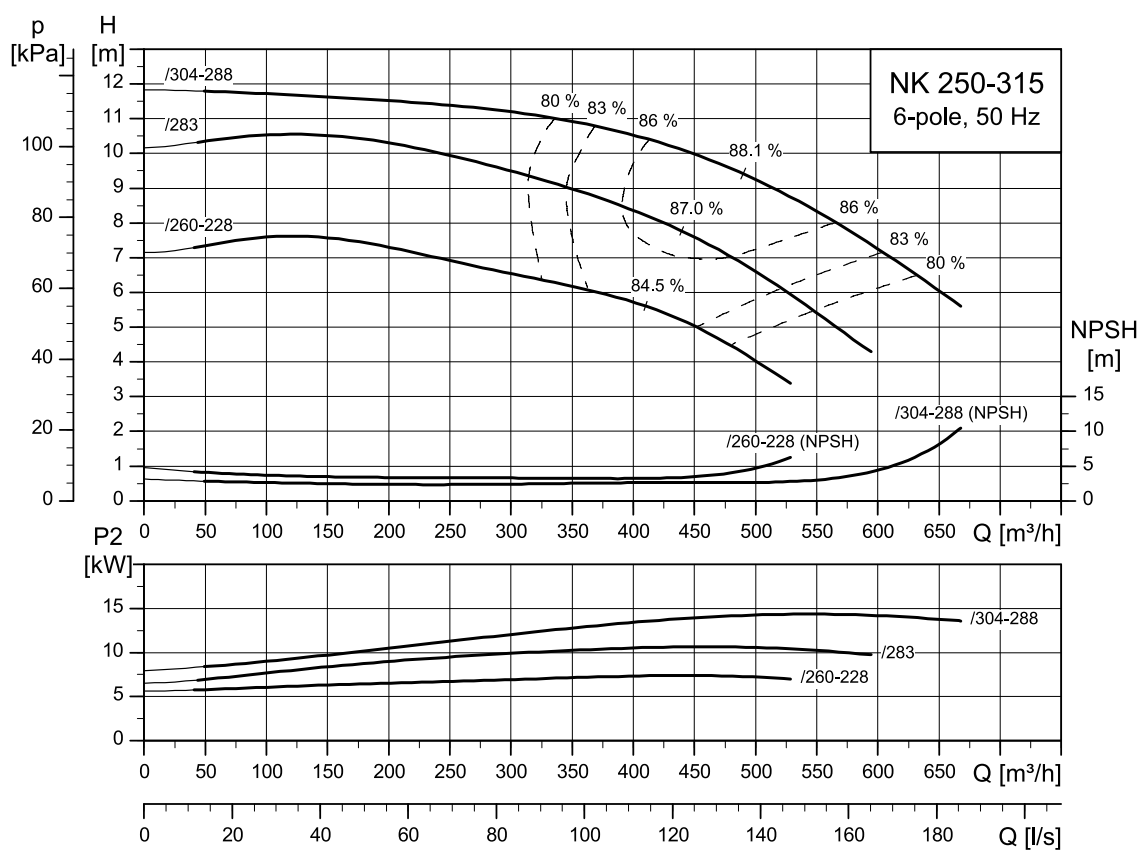
TM084986

200-500



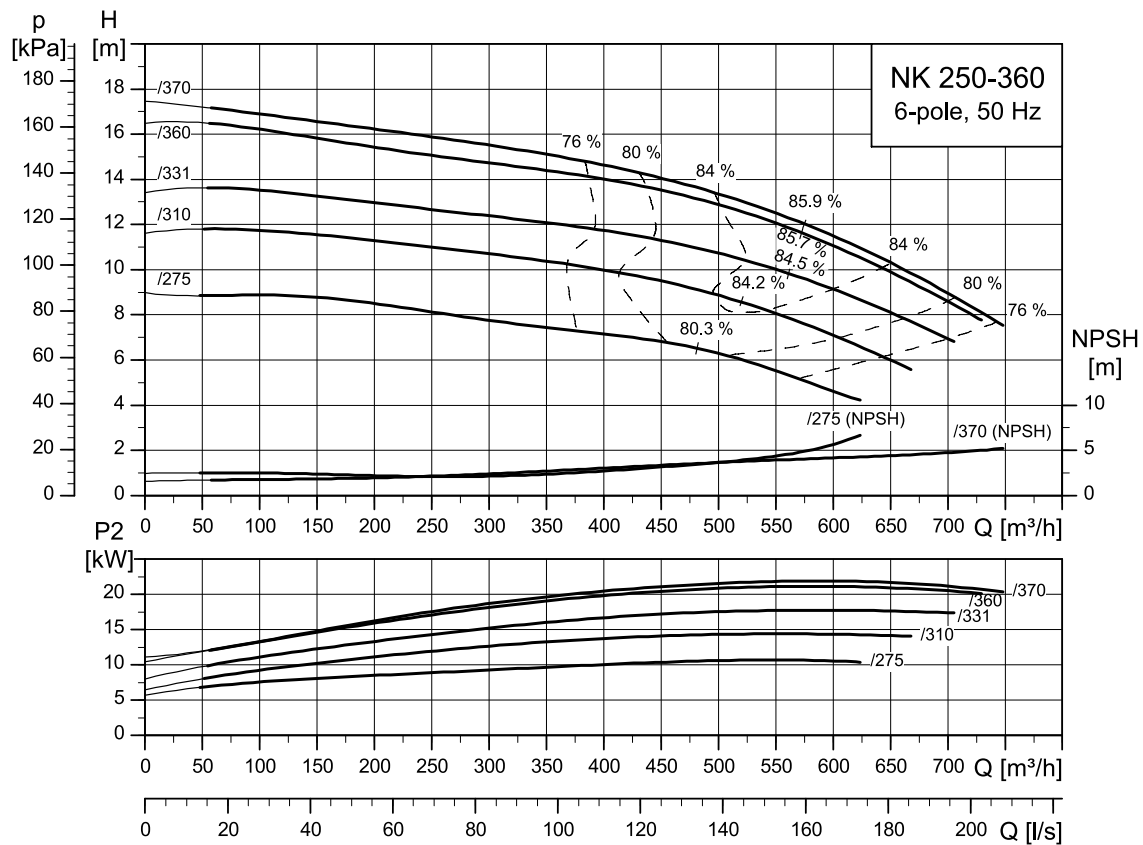
TM085006

250-315



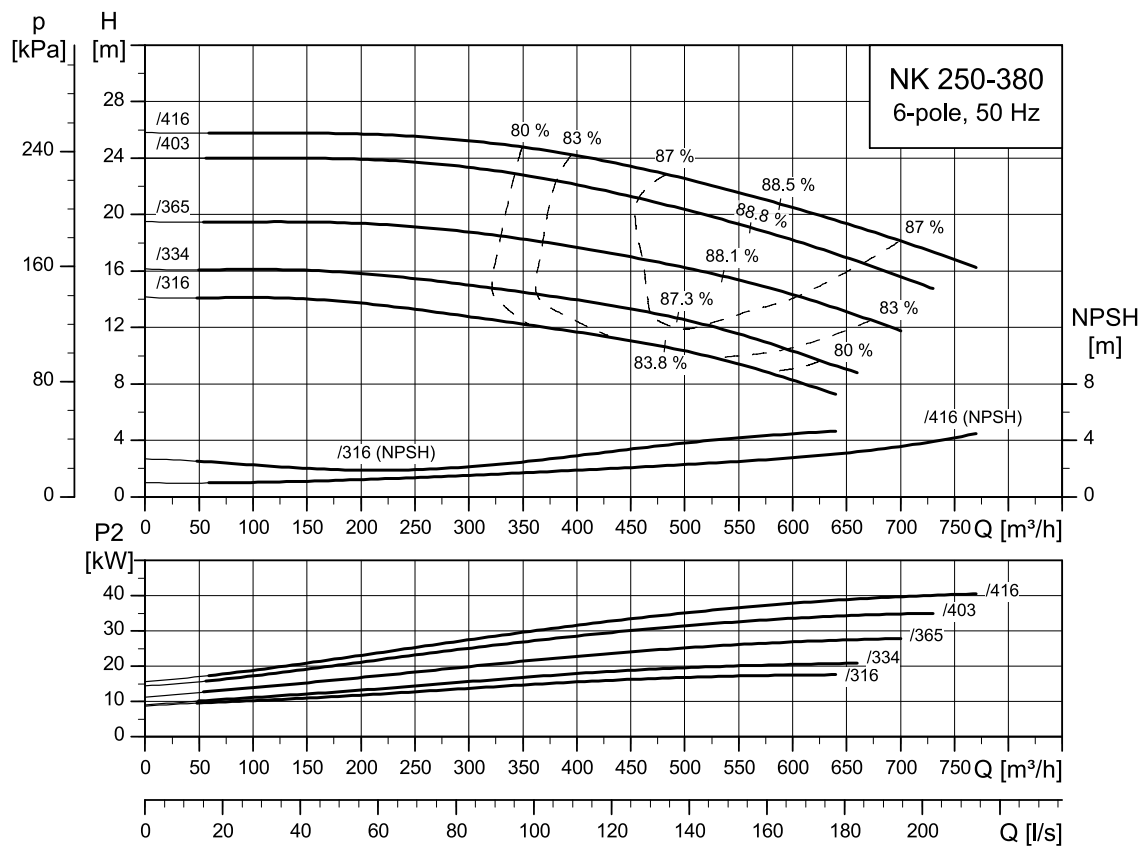
TM085017

250-360



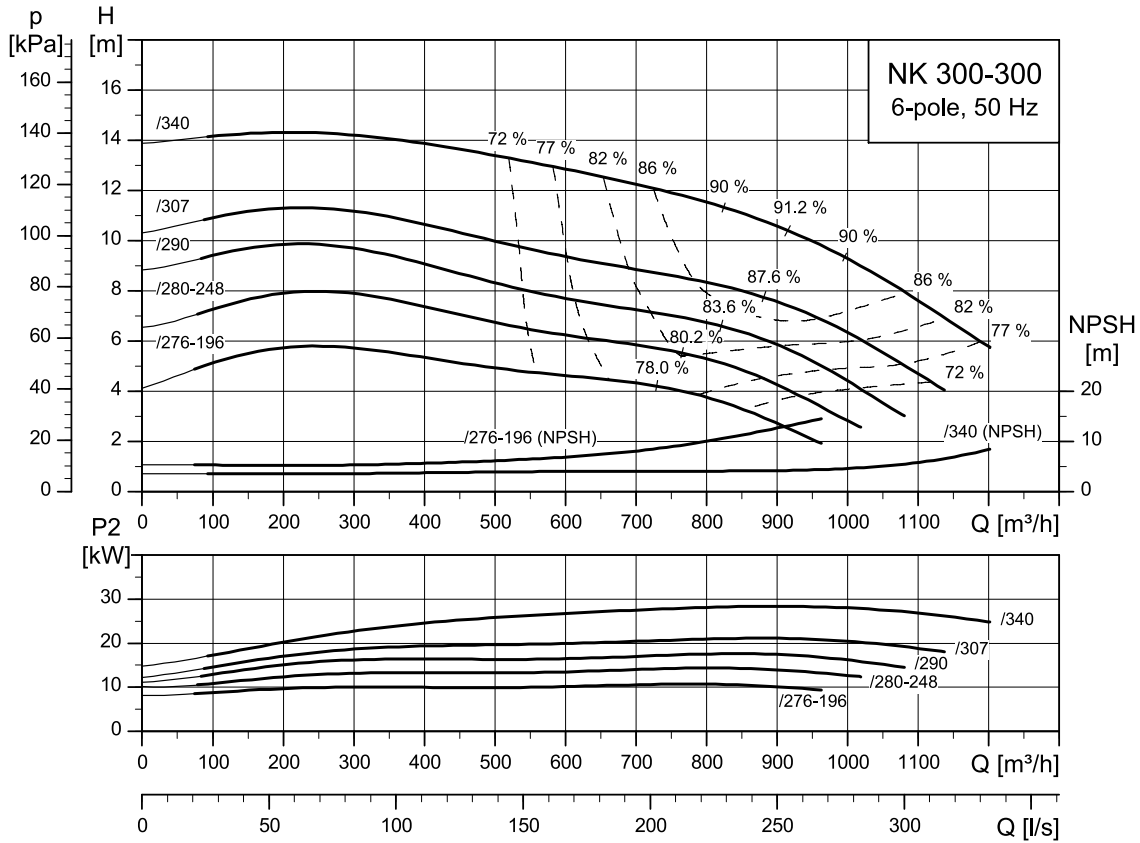
TM084982

250-380



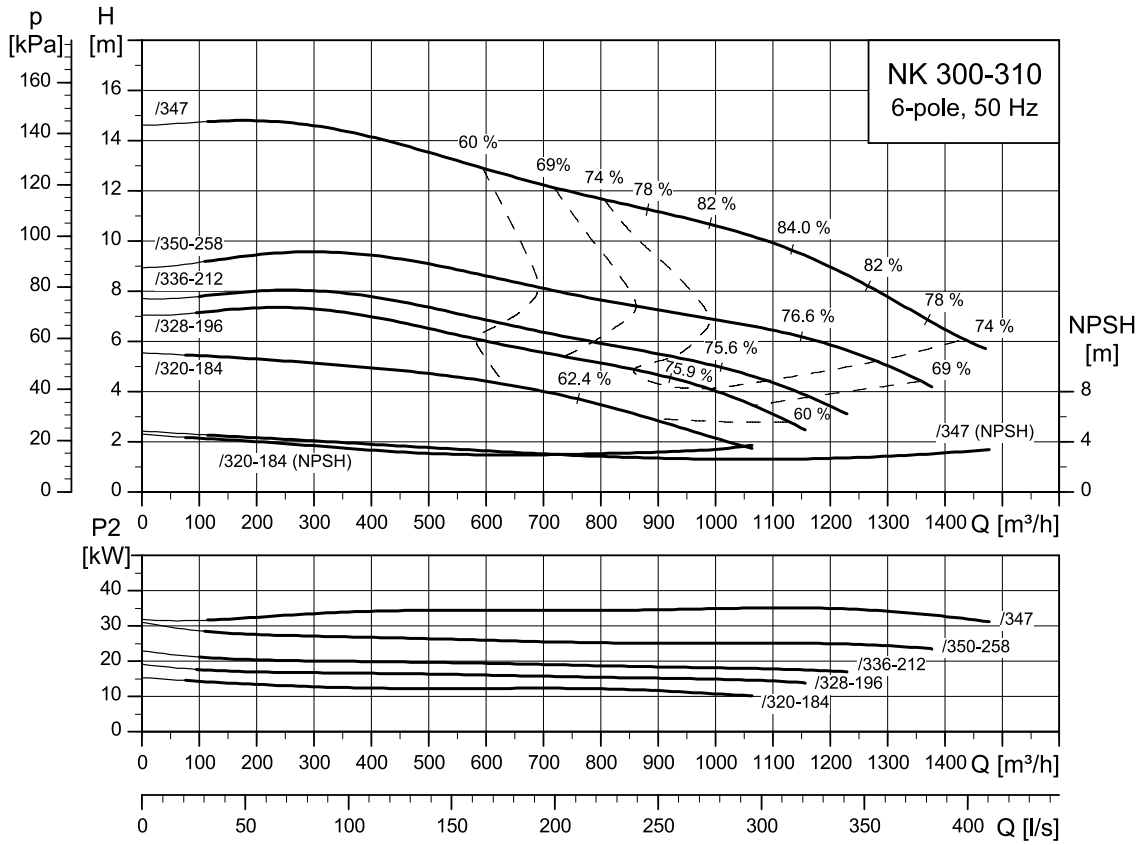
TM1040302

300-300



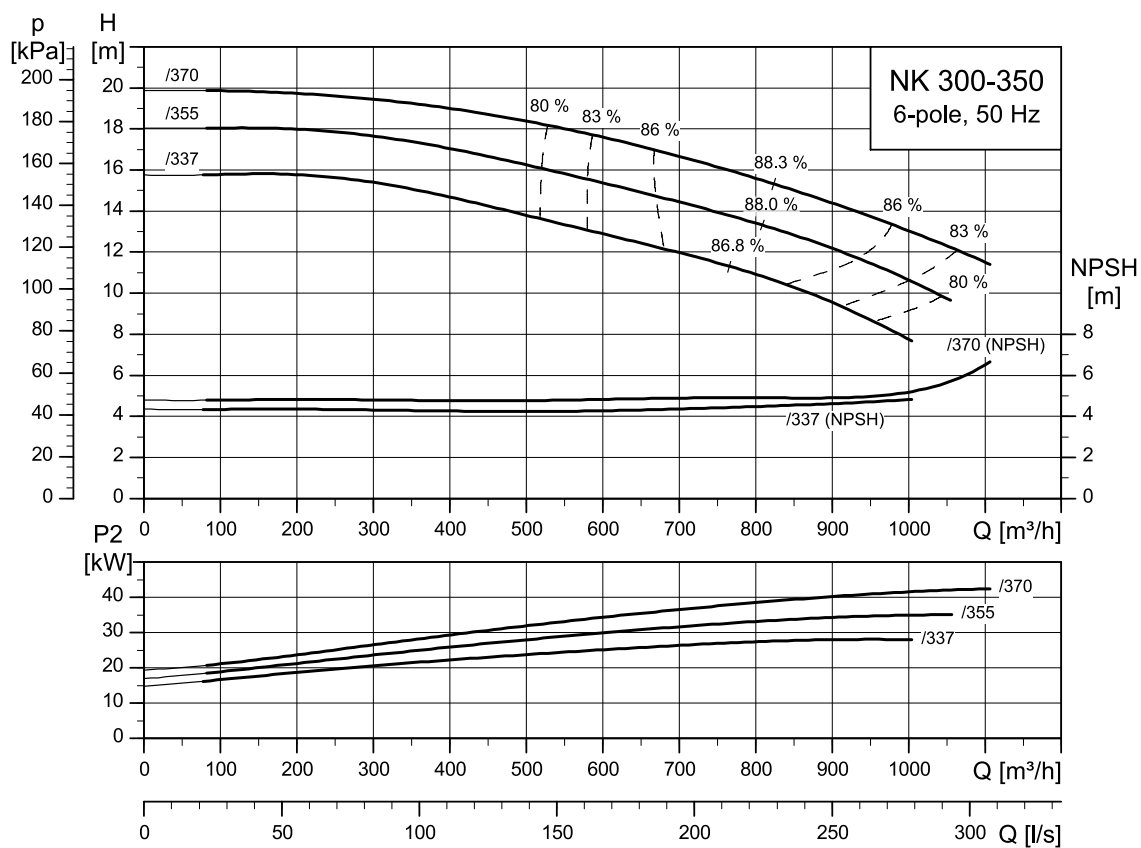
TM084990

300-310



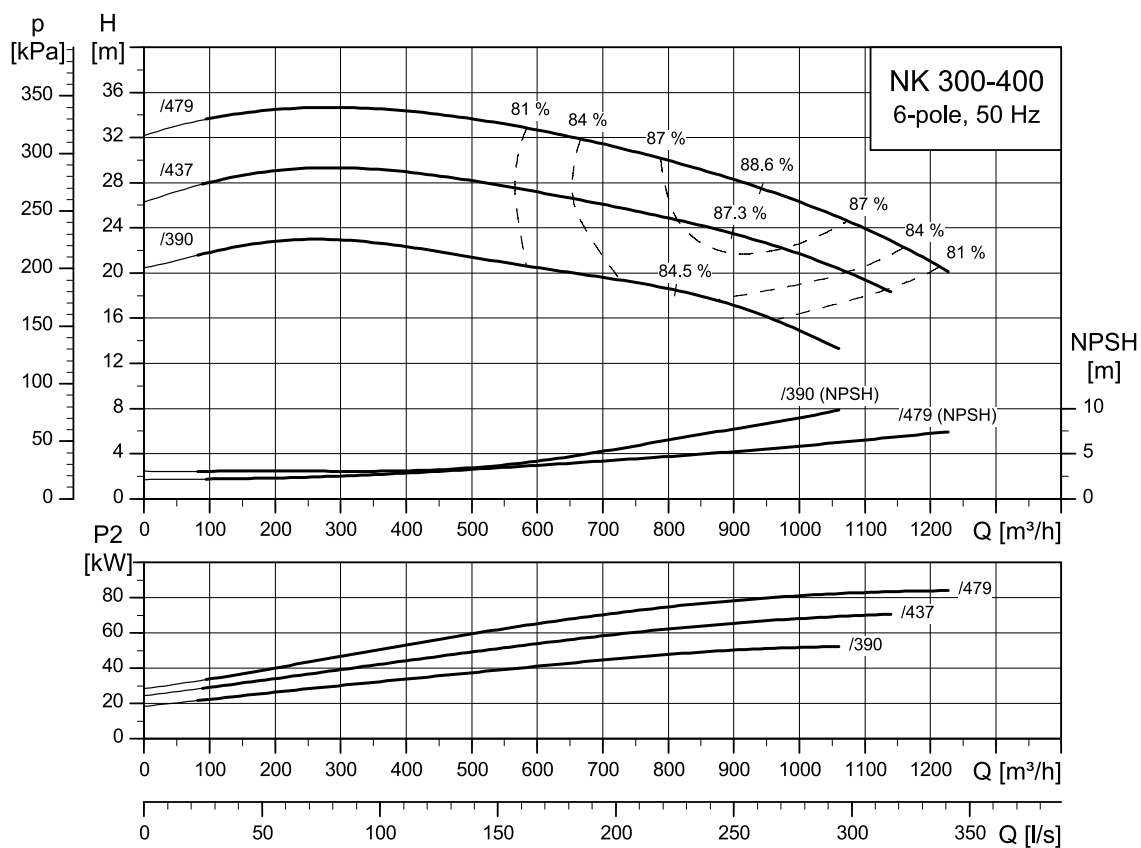
TM085019

300-350



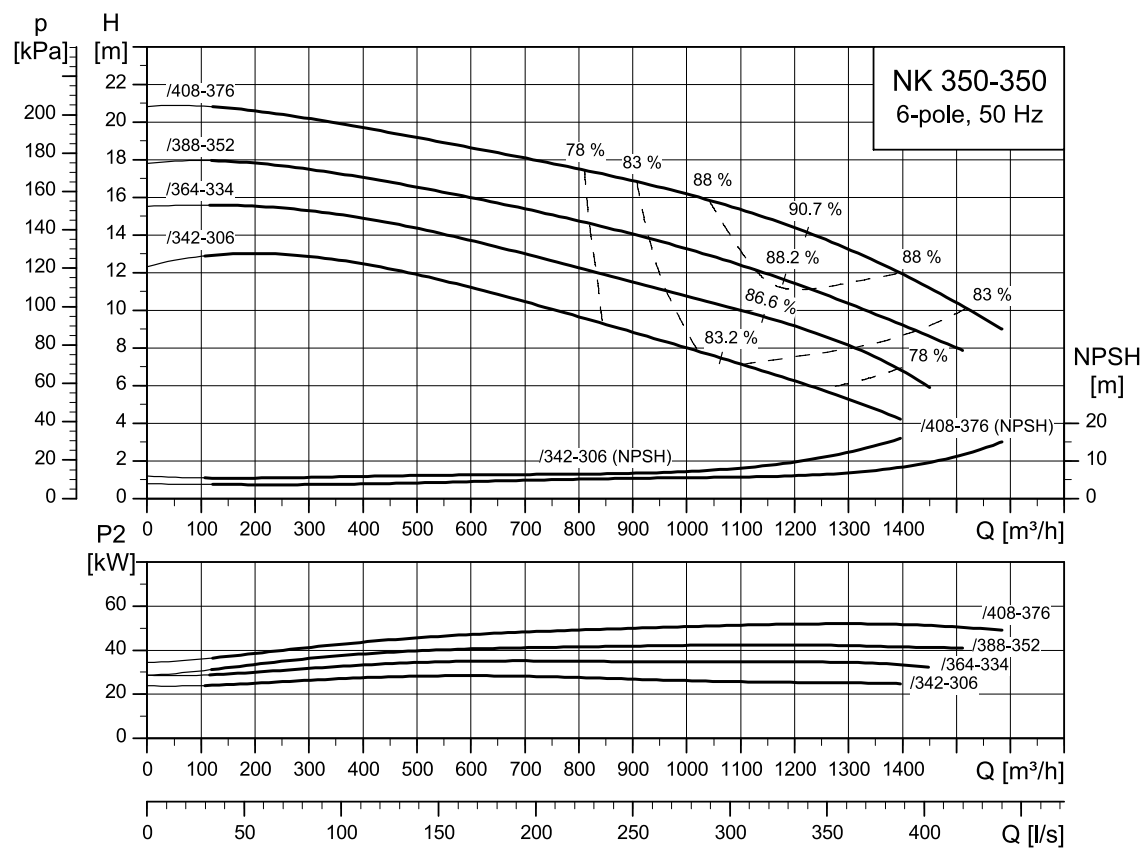
TM085013

300-400



TM085010

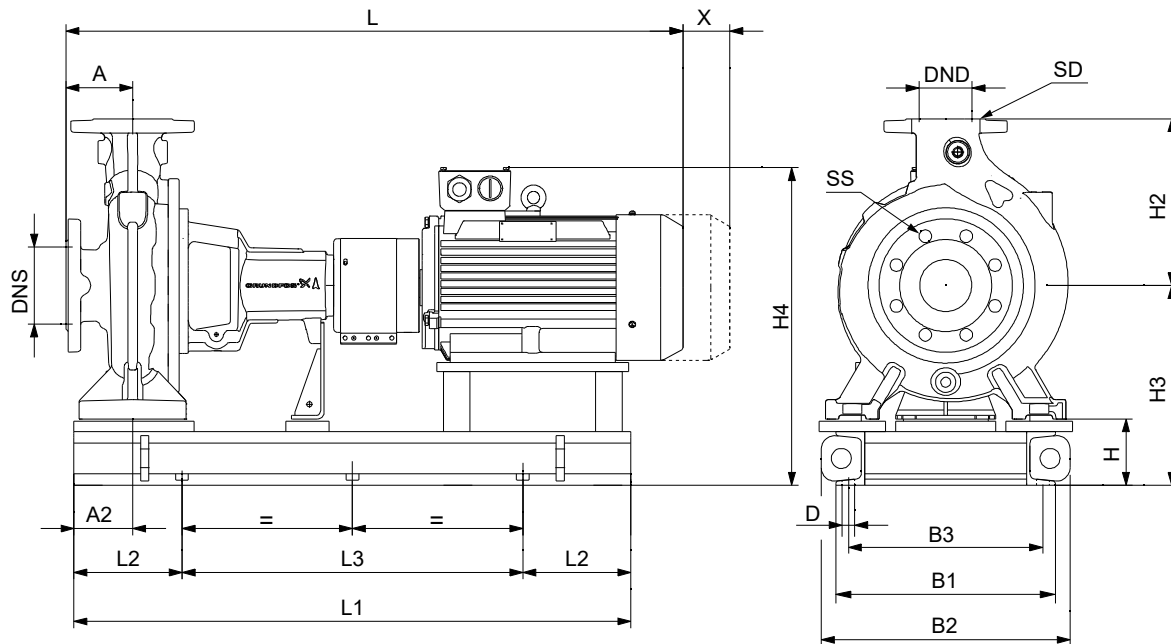
350-350



TM084994

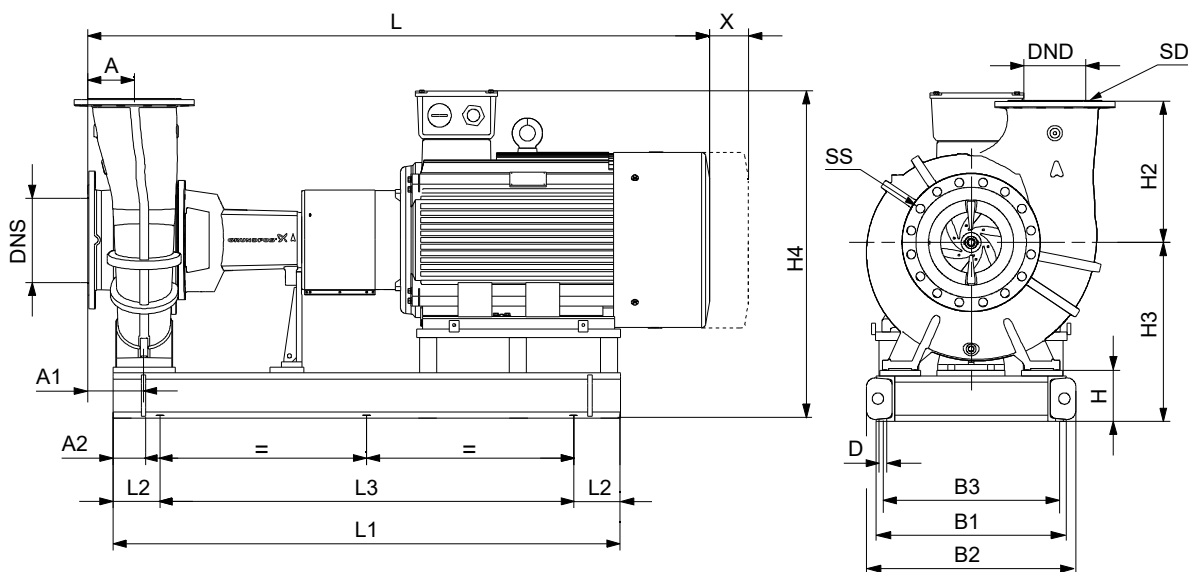
17. Dimensional drawings and dimensions

Dimensional drawings, NK/NKE



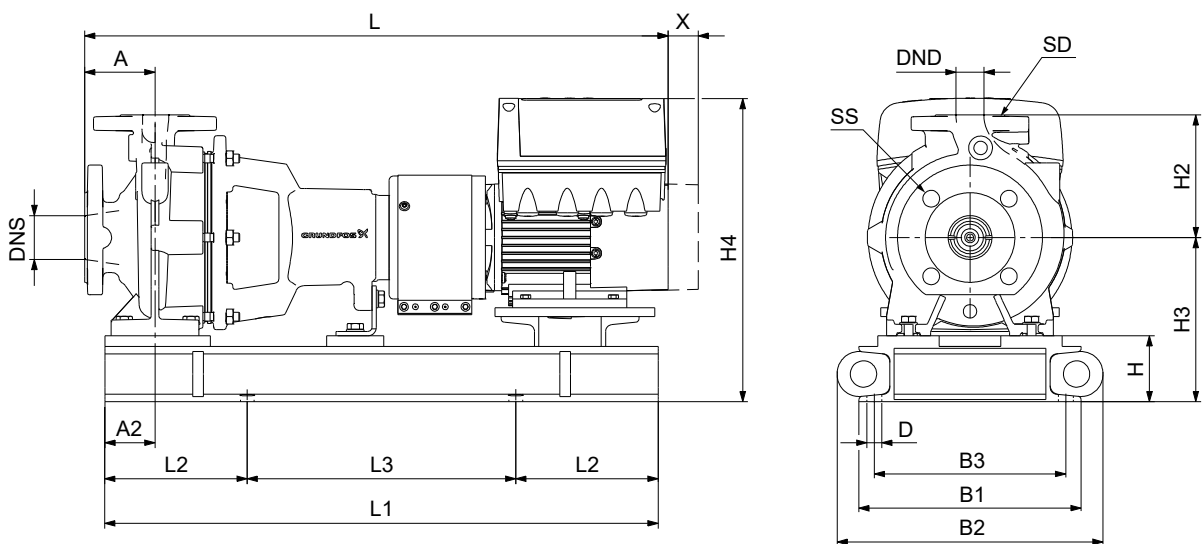
TM1040091

NK, C-channel base frame, center outlet



TM1040092

NK, C-channel base frame, tangential outlet



TM082638

NKE, C-channel base frame, center outlet

Dimensions NK/NKE

Standard motors in this table are IE3/IE4 MMG-W motors:

E-motors in this table:

- Medium speed, 4000 RPM: P2 less than or equal to 22 kW, pump with MGE motor.
- Low speed, 2000 / 2200 RPM: P2 less than or equal to 7.5 kW, pump with MGE motor.

Pump size	Poles	P2 [kW]	Flanges							NK/NKE dimensions [mm]											Base frame code ³⁶⁾
			DNS	DND	SS			SD			A	A2	H2	H3	H4		L ³⁶⁾				
					PN10	PN16	PN25	PN10	PN16	PN25					NK		NKE	NK		NKE	
															IE3	IE4		IE3	IE4		
32-130.1	2	0.75	50	32	4xø19	4xø19	4xø19	4xø19	4xø19	4xø19	80	60	140	187	327	328	-	709/805	729/-	-/-	201/201S
		1.1	50	32	4xø19	4xø19	4xø19	4xø19	4xø19	4xø19	80	60	140	187	327	328	345	709/805	729/-	723/819	201/201S
		1.5	50	32	4xø19	4xø19	4xø19	4xø19	4xø19	4xø19	80	60	140	187	352	341	345	759/855	754/-	733/829	202/202S
		2.2	50	32	4xø19	4xø19	4xø19	4xø19	4xø19	4xø19	80	60	140	187	352	341	345	789/885	779/-	733/830	203/203S
		3	50	32	4xø19	4xø19	4xø19	4xø19	4xø19	4xø19	80	60	140	204	374	372	405	839/935	829/-	803/899	204/204S
		4	50	32	4xø19	4xø19	4xø19	4xø19	4xø19	4xø19	80	60	140	204	-	-	405	-/-	-/-	803/899	205/205S
	4	5.5	50	32	4xø19	4xø19	4xø19	4xø19	4xø19	4xø19	80	60	140	224	-	-	425	-/-	-/-	854/950	206/206S
		0.25	50	32	4xø19	4xø19	4xø19	4xø19	4xø19	4xø19	80	60	140	187	311	305	-	665/755	697/-	-/-	200/200S
		0.37	50	32	4xø19	4xø19	4xø19	4xø19	4xø19	4xø19	80	60	140	187	311	305	-	665/755	697/-	-/-	200/200S
		32-130	2	1.1	50	32	4xø19	4xø19	4xø19	4xø19	4xø19	4xø19	80	60	140	187	327	328	345	709/805	729/-
1.5	50			32	4xø19	4xø19	4xø19	4xø19	4xø19	4xø19	80	60	140	187	352	341	345	759/855	754/-	733/829	202/202S
2.2	50			32	4xø19	4xø19	4xø19	4xø19	4xø19	4xø19	80	60	140	187	352	341	345	789/885	779/-	733/830	203/203S
3	50			32	4xø19	4xø19	4xø19	4xø19	4xø19	4xø19	80	60	140	204	374	372	405	839/935	829/-	803/899	204/204S
4	50			32	4xø19	4xø19	4xø19	4xø19	4xø19	4xø19	80	60	140	204	-	-	405	-/-	-/-	803/899	205/205S
5.5	50			32	4xø19	4xø19	4xø19	4xø19	4xø19	4xø19	80	60	140	224	-	-	425	-/-	-/-	854/950	206/206S
4	7.5		50	32	4xø19	4xø19	4xø19	4xø19	4xø19	4xø19	80	60	140	224	-	-	461	-/-	-/-	878/974	206/206S
	0.25		50	32	4xø19	4xø19	4xø19	4xø19	4xø19	4xø19	80	60	140	187	311	305	-	665/755	697/-	-/-	200/200S
	0.37		50	32	4xø19	4xø19	4xø19	4xø19	4xø19	4xø19	80	60	140	187	311	305	-	-/-	697/-	-/-	200/200S
	0.55		50	32	4xø19	4xø19	4xø19	4xø19	4xø19	4xø19	80	60	140	187	-	-	345	-/-	-/-	723/819	201/201S
0.75	50	32	4xø19	4xø19	4xø19	4xø19	4xø19	4xø19	80	60	140	187	-	-	345	-/-	-/-	723/819	201/201S		

Pump size	Poles	P2 [kW]	Flanges								NK/NKE dimensions [mm]											Base frame code ³⁶⁾	
			DNS	DND	SS			SD			A	A2	H2	H3	H4			L ³⁶⁾					
					PN10	PN16	PN25	PN10	PN16	PN25					NK		NKE	NK		NKE			
															IE3	IE4		IE3	IE4				
32-165.1	2	1.5	50	32	4xø19	4xø19	4xø19	4xø19	4xø19	4xø19	80	60	160	207	372	361	365	794/890	789/-	768/864	210/210S		
		2.2	50	32	4xø19	4xø19	4xø19	4xø19	4xø19	4xø19	80	60	160	207	372	361	365	824/920	814/-	768/865	211/211S		
		3	50	32	4xø19	4xø19	4xø19	4xø19	4xø19	4xø19	80	60	160	224	394	392	425	874/970	864/-	838/934	212/212S		
		4	50	32	4xø19	4xø19	4xø19	4xø19	4xø19	4xø19	80	60	160	224	412	417	425	839/935	909/-	838/934	213/213S		
		5.5	50	32	4xø19	4xø19	4xø19	4xø19	4xø19	4xø19	80	60	160	224	-	-	425	-/-	-/-	889/985	214/214S		
		7.5	50	32	4xø19	4xø19	4xø19	4xø19	4xø19	4xø19	80	60	160	224	-	-	461	-/-	-/-	913/1009	214/214S		
		11	50	32	4xø19	4xø19	4xø19	4xø19	4xø19	4xø19	80	60	160	252	-	-	489	-/-	-/-	960/1056	236/236S		
	4	0.25	50	32	4xø19	4xø19	4xø19	4xø19	4xø19	4xø19	80	60	160	207	331	325	-	665/755	697/-	-/-	207/207S		
		0.37	50	32	4xø19	4xø19	4xø19	4xø19	4xø19	4xø19	80	60	160	207	331	325	-	665/755	697/-	-/-	207/207S		
		0.55	50	32	4xø19	4xø19	4xø19	4xø19	4xø19	4xø19	80	60	160	207	347	348	365	709/805	729/-	723/819	208/208S		
		0.75	50	32	4xø19	4xø19	4xø19	4xø19	4xø19	4xø19	80	60	160	207	-	-	365	-/-	-/-	723/819	208/208S		
		1.1	50	32	4xø19	4xø19	4xø19	4xø19	4xø19	4xø19	80	60	160	207	-	-	365	-/-	-/-	733/834	209/209S		
	32-180	2	1.5	50	32	4xø19	4xø19	4xø19	4xø19	4xø19	4xø19	80	60	180	207	372	361	365	759/860	754/-	733/834	209/209S	
			2.2	50	32	4xø19	4xø19	4xø19	4xø19	4xø19	4xø19	80	60	180	207	372	361	365	789/885	779/-	733/830	215/215S	
			3	50	32	4xø19	4xø19	4xø19	4xø19	4xø19	4xø19	80	60	180	224	394	392	425	839/935	829/-	803/899	216/216S	
4			50	32	4xø19	4xø19	4xø19	4xø19	4xø19	4xø19	80	60	180	224	412	417	425	804/900	874/-	803/899	217/217S		
5.5			50	32	4xø19	4xø19	4xø19	4xø19	4xø19	4xø19	80	60	180	224	437	437	425	879/975	859/-	854/950	218/218S		
7.5			50	32	4xø19	4xø19	4xø19	4xø19	4xø19	4xø19	80	60	180	224	-	-	461	-/-	-/-	878/974	218/218S		
11			50	32	4xø19	4xø19	4xø19	4xø19	4xø19	4xø19	80	60	180	252	-	-	489	-/-	-/-	925/1021	439/439S		
4		0.25	50	32	4xø19	4xø19	4xø19	4xø19	4xø19	4xø19	80	60	180	207	331	325	-	665/755	697/-	-/-	207/207S		
		0.37	50	32	4xø19	4xø19	4xø19	4xø19	4xø19	4xø19	80	60	180	207	331	325	-	665/755	697/-	-/-	207/207S		
		0.55	50	32	4xø19	4xø19	4xø19	4xø19	4xø19	4xø19	80	60	180	207	347	348	365	709/805	729/-	723/819	208/208S		
		0.75	50	32	4xø19	4xø19	4xø19	4xø19	4xø19	4xø19	80	60	180	207	347	348	365	709/805	729/-	723/819	208/208S		
		1.1	50	32	4xø19	4xø19	4xø19	4xø19	4xø19	4xø19	80	60	180	207	-	-	323	-/-	-/-	733/834	209/209S		
32-205.1		2	3	50	32	4xø19	4xø19	4xø19	4xø19	4xø19	4xø19	80	60	180	252	422	420	453	874/970	864/-	838/934	223/223S	
			4	50	32	4xø19	4xø19	4xø19	4xø19	4xø19	4xø19	80	60	180	252	440	445	453	839/935	909/-	838/934	224/224S	
			5.5	50	32	4xø19	4xø19	4xø19	4xø19	4xø19	4xø19	80	60	180	252	465	465	453	914/1010	894/-	889/985	225/225S	
	7.5		50	32	4xø19	4xø19	4xø19	4xø19	4xø19	4xø19	80	60	180	252	465	465	-	914/1010	894/-	-/-	225/225S		
	7.5		50	32	4xø19	4xø19	4xø19	4xø19	4xø19	4xø19	80	60	180	252	-	-	489	-/-	894/-	938/1034	587/587S		
	11		50	32	4xø19	4xø19	4xø19	4xø19	4xø19	4xø19	80	60	180	252	-	-	489	-/-	-/-	985/1081	579/579S		
	0.37		50	32	4xø19	4xø19	4xø19	4xø19	4xø19	4xø19	80	60	180	235	359	353	-	665/755	697/-	-/-	219/219S		
	4	0.55	50	32	4xø19	4xø19	4xø19	4xø19	4xø19	4xø19	80	60	180	235	375	376	393	709/805	729/-	723/819	220/220S		
		0.75	50	32	4xø19	4xø19	4xø19	4xø19	4xø19	4xø19	80	60	180	235	375	376	393	709/805	729/-	723/819	220/220S		
		1.1	50	32	4xø19	4xø19	4xø19	4xø19	4xø19	4xø19	80	60	180	235	-	-	393	-/-	-/-	733/829	221/221S		
		1.5	50	32	4xø19	4xø19	4xø19	4xø19	4xø19	4xø19	80	60	180	235	-	-	393	-/-	-/-	733/830	222/222S		
		2.2	50	32	4xø19	4xø19	4xø19	4xø19	4xø19	4xø19	80	60	180	235	-	-	436	-/-	-/-	803/899	580/580S		
	40-130	2	1.5	65	40	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	80	60	140	187	352	341	-	794/890	789/-	-/-	230/230S	
			2.2	65	40	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	80	60	140	187	352	341	345	824/920	814/-	768/865	231/231S	
			3	65	40	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	80	60	140	204	374	372	405	874/970	864/-	838/934	232/232S	
4			65	40	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	80	60	140	204	392	397	405	839/935	909/-	838/934	233/233S		
5.5			65	40	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	80	60	140	226	439	439	427	914/1010	894/-	889/985	234/234S		
7.5			65	40	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	80	60	140	226	-	-	463	-/-	-/-	913/1009	234/234S		
11			65	40	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	80	60	140	252	-	-	489	-/-	-/-	960/1056	235/235S		
4		0.25	65	40	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	80	60	140	187	311	305	-	665/755	697/-	-/-	227/227S		
		0.37	65	40	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	80	60	140	187	311	305	-	665/755	697/-	-/-	227/227S		
		0.55	65	40	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	80	60	140	187	327	328	345	709/805	729/-	723/819	228/228S		
		0.75	65	40	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	80	60	140	187	-	-	345	-/-	-/-	723/819	228/228S		
		1.1	65	40	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	80	60	140	187	-	-	345	-/-	-/-	733/829	229/229S		
1.5		65	40	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	80	60	140	187	-	-	345	-/-	-/-	733/829	581/581S			

Pump size	Poles	P2 [kW]	Flanges							NK/NKE dimensions [mm]											Base frame code ³⁶⁾	
			DNS	DND	SS			SD			A	A2	H2	H3	H4			L ³⁶⁾				
					PN10	PN16	PN25	PN10	PN16	PN25					NK		NKE	NK		NKE		
															IE3	IE4		IE3	IE4			
40-180	2	2.2	65	40	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	80	60	180	207	372	361	-	824/920	814/-	-/-	211/211S	
		3	65	40	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	80	60	180	224	394	392	425	874/970	864/-	838/934	212/212S	
		4	65	40	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	80	60	180	224	412	417	425	839/935	909/-	838/934	213/213S	
		5.5	65	40	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	80	60	180	224	437	437	425	919/1010	894/-	889/985	214/214S	
		7.5	65	40	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	80	60	180	224	437	437	461	919/1010	894/-	889/1009	214/214S	
		11	65	40	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	80	60	180	252	512	514	489	1069/1160	1064/-	960/1056	236/236S	
		15	65	40	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	80	60	180	252	-	-	555	-/-	-/-	1036/1132	236/236S	
		18.5	65	40	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	80	60	180	252	-	-	555	-/-	-/-	1036/1132	236/236S	
	4	0.37	65	40	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	80	60	180	207	331	325	-	664/755	696/-	-/-	207/207S	
		0.55	65	40	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	80	60	180	207	347	348	365	709/805	729/-	723/819	208/208S	
		0.75	65	40	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	80	60	180	207	347	348	365	709/805	729/-	723/819	208/208S	
		1.1	65	40	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	80	60	180	207	372	361	365	759/860	754/-	733/834	209/209S	
		1.5	65	40	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	80	60	180	207	-	-	365	-/-	-/-	733/830	215/215S	
		2.2	65	40	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	80	60	180	224	-	-	425	-/-	-/-	803/899	216/216S	
		7.5	65	40	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	60	180	252	465	465	-	934/1030	914/-	-/-	225/225S	
40-190	2	11	65	40	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	60	180	252	512	514	-	1084/1180	1084/-	-/-	226/226S	
		15	65	40	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	60	180	252	512	514	-	1084/1180	1084/-	-/-	226/226S	
		18.5	65	40	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	60	180	252	512	514	-	1129/1225	1129/-	-/-	619/619S	
	4	0.75	65	40	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	60	180	235	375	376	-	729/840	749/-	-/-	220/220S	
		1.1	65	40	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	60	180	235	400	389	-	779/880	774/-	-/-	221/221S	
		1.5	65	40	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	60	180	235	400	389	-	809/910	799/-	-/-	222/222S	
		2.2	65	40	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	60	180	252	422	420	-	859/955	849/-	-/-	580/580S	
		2.2	65	40	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	60	180	252	422	420	-	859/955	849/-	-/-	580/580S	
40-220	2	5.5	65	40	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	72.5	225	180	485	485	473	959/1055	939/-	909/1005	243/243S	
		7.5	65	40	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	72.5	225	180	485	485	509	959/1055	939/-	933/1029	243/243S	
		11	65	40	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	72.5	225	180	532	534	509	1109/1205	1109/-	980/1076	244/244S	
		15	65	40	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	72.5	225	180	532	534	575	1109/1205	1109/-	1056/1152	244/244S	
		18.5	65	40	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	72.5	225	180	532	534	575	1154/1250	1154/-	1056/1152	245/245S	
		22	65	40	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	72.5	225	180	-	-	575	-/-	-/-	1088/1178	246/246S	
		26	65	40	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	72.5	225	180	-	-	575	-/-	-/-	1088/1178	246/246S	
	4	0.55	65	40	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	72.5	225	255	395	396	413	764/860	784/-	778/874	237/237S	
		0.75	65	40	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	72.5	225	255	395	396	413	764/860	784/-	778/874	237/237S	
		1.1	65	40	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	72.5	225	255	420	409	413	814/910	809/-	788/884	238/238S	
		1.5	65	40	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	72.5	225	255	420	409	413	844/940	834/-	788/884	239/239S	
		2.2	65	40	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	72.5	225	272	442	440	473	894/990	884/-	858/954	240/240S	
		3	65	40	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	72.5	225	272	-	-	473	-/-	-/-	858/954	240/240S	
		4	65	40	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	72.5	225	272	-	-	473	-/-	-/-	858/954	241/241S	
40-225	2	5.5	65	40	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	72.5	225	180	485	485	-	959/1055	939/-	-/-	243/243S	
		7.5	65	40	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	72.5	225	180	485	485	509	959/1055	939/-	933/1029	243/243S	
		11	65	40	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	72.5	225	180	532	534	509	1109/1205	1109/-	980/1076	244/244S	
		15	65	40	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	72.5	225	180	532	534	575	1109/1205	1109/-	1056/1152	244/244S	
		18.5	65	40	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	72.5	225	180	532	534	575	1154/1250	1154/-	1056/1152	245/245S	
		22	65	40	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	72.5	225	180	592	595	615	1205/1295	1230/-	1088/1178	246/246S	
		0.75	65	40	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	72.5	225	255	395	396	413	764/860	784/-	778/874	237/237S	
	4	1.1	65	40	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	72.5	225	255	420	409	413	814/910	809/-	788/884	238/238S	
		1.5	65	40	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	72.5	225	255	420	409	413	844/940	834/-	788/884	239/239S	
		2.2	65	40	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	72.5	225	272	442	440	473	894/990	884/-	858/954	240/240S	
		3	65	40	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	72.5	225	272	442	440	473	894/990	884/-	858/954	240/240S	
		4	65	40	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	72.5	225	272	-	-	473	-/-	-/-	858/954	241/241S	
		5.5	65	40	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	72.5	225	272	-	-	509	-/-	-/-	933/1029	242/242S	

Pump size	Poles	P2 [kW]	Flanges							NK/NKE dimensions [mm]											Base frame code ³⁶⁾	
			DNS	DND	SS			SD			A	A2	H2	H3	H4			L ³⁶⁾				
					PN10	PN16	PN25	PN10	PN16	PN25					NK		NKE	NK		NKE		
															IE3	IE4		IE3	IE4			
50-130	2	3	65	50	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	60	160	224	394	392	425	894/990	884/-	858/954	212/212S	
		4	65	50	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	60	160	224	412	417	425	859/955	929/-	858/954	213/213S	
		5.5	65	50	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	60	160	224	437	437	425	934/1030	914/-	909/1005	214/214S	
		7.5	65	50	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	60	160	224	437	437	461	934/1030	914/-	933/1029	214/214S	
		11	65	50	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	60	160	252	-	-	489	-/-	-/-	980/1076	236/236S	
		15	65	50	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	60	160	252	-	-	555	-/-	-/-	1056/1152	236/236S	
	4	0.37	65	50	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	60	160	207	331	325	-	685/775	717/-	-/-	207/207S	
		0.55	65	50	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	60	160	207	347	348	365	729/825	749/-	743/839	208/208S	
		0.75	65	50	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	60	160	207	347	348	365	729/825	749/-	743/839	208/208S	
		1.1	65	50	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	60	160	207	372	361	365	779/880	774/-	753/854	209/209S	
		1.5	65	50	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	60	160	207	-	-	365	-/-	-/-	753/850	215/215S	
		2.2	65	50	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	60	160	224	-	-	425	-/-	-/-	823/919	216/216S	
50-220	2	5.5	65	50	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	72.5	225	272	485	485	-	978/1074	958/-	-/-	615/615S	
		7.5	65	50	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	72.5	225	272	485	485	-	978/1074	958/-	-/-	615/615S	
		11	65	50	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	72.5	225	272	532	534	-	1128/1224	1128/-	-/-	616/616S	
		15	65	50	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	72.5	225	272	532	534	-	1128/1224	1128/-	-/-	616/616S	
		18.5	65	50	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	72.5	225	272	532	534	-	1173/1269	1173/-	-/-	617/617S	
		22	65	50	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	72.5	225	312	592	595	-	1218/1314	1243/-	-/-	618/618S	
	4	0.75	65	50	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	72.5	225	255	395	396	-	768/879	788/-	-/-	611/611S	
		1.1	65	50	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	72.5	225	255	420	409	-	818/919	813/-	-/-	612/612S	
		1.5	65	50	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	72.5	225	255	420	409	-	848/949	838/-	-/-	613/613S	
		2.2	65	50	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	72.5	225	272	442	440	-	898/994	888/-	-/-	614/614S	
		3	65	50	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	72.5	225	272	442	440	-	898/994	888/-	-/-	614/614S	
		5.5	65	50	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	72.5	225	272	485	485	-	974/1070	954/-	-/-	248/248S	
50-225	2	7.5	65	50	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	72.5	225	272	485	485	509	974/1070	954/-	973/1069	248/248S	
		11	65	50	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	72.5	225	272	532	534	509	1124/1220	1124/-	1020/1116	249/249S	
		15	65	50	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	72.5	225	272	532	534	575	1124/1220	1124/-	1096/1192	249/249S	
		18.5	65	50	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	72.5	225	272	532	534	575	1169/1265	1169/-	1096/1192	250/250S	
		22	65	50	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	72.5	225	312	592	595	615	1214/1310	1239/-	1122/1218	251/251S	
		30	65	50	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	72.5	225	336	641	662	-	1274/1370	1349/-	-/-	252/252S	
	4	0.75	65	50	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	72.5	225	255	395	396	413	764/860	784/-	778/874	237/237S	
		1.1	65	50	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	72.5	225	255	420	409	413	814/910	809/-	788/874	238/238S	
		1.5	65	50	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	72.5	225	255	420	409	413	844/940	834/-	788/874	239/239S	
		2.2	65	50	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	72.5	225	272	442	440	473	894/990	884/-	858/954	240/240S	
		3	65	50	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	72.5	225	272	442	440	473	894/990	884/-	858/954	240/240S	
		4	65	50	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	72.5	225	272	460	465	473	929/1025	929/-	858/954	241/241S	
50-280	2	5.5	65	50	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	72.5	225	272	-	-	509	-/-	-/-	933/1029	242/242S	
		15	65	50	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	72.5	225	272	532	534	575	1124/1220	1124/-	1096/1192	249/249S	
		18.5	65	50	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	72.5	225	272	532	534	575	1169/1265	1169/-	1096/1192	250/250S	
		22	65	50	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	72.5	225	312	592	595	615	1214/1310	1239/-	1122/1218	251/251S	
		30	65	50	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	72.5	225	336	641	662	-	1274/1370	1349/-	-/-	252/252S	
		37	65	50	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	72.5	225	336	641	662	-	1274/1370	1349/-	-/-	252/252S	
	4	2.2	65	50	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	72.5	225	272	442	440	473	894/990	884/-	858/954	240/240S	
		3	65	50	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	72.5	225	272	442	440	473	894/990	884/-	858/954	240/240S	
		4	65	50	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	72.5	225	272	460	465	473	929/1025	929/-	858/954	241/241S	
		5.5	65	50	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	72.5	225	272	485	485	509	934/1035	914/-	933/1029	242/242S	
		7.5	65	50	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	72.5	225	272	-	-	509	-/-	-/-	933/1029	242/242S	
		11	65	50	4xø19	4xø19	8xø19	4xø19	4xø19	4xø19	100	72.5	225	272	-	-	575	-/-	-/-	1056/1152	242/242S	

Pump size	Poles	P2 [kW]	Flanges							NK/NKE dimensions [mm]												Base frame code ³⁶⁾
			DNS	DND	SS			SD			A	A2	H2	H3	H4			L ³⁶⁾				
					PN10	PN16	PN25	PN10	PN16	PN25					NK		NKE	NK		NKE		
															IE3	IE4		IE3	IE4			
50-350	4	3	80	50	8xø19	8xø19	8xø19	4xø19	4xø19	4xø19	125	72.5	280	317	487	485	518	1029/1165	1019/-	993/1129	258/258S	
		4	80	50	8xø19	8xø19	8xø19	4xø19	4xø19	4xø19	125	72.5	280	317	505	510	518	1064/1200	1064/-	993/1129	259/259S	
		5.5	80	50	8xø19	8xø19	8xø19	4xø19	4xø19	4xø19	125	72.5	280	317	530	530	554	1069/1205	1049/-	1068/1204	260/260S	
		7.5	80	50	8xø19	8xø19	8xø19	4xø19	4xø19	4xø19	125	72.5	280	317	530	530	554	1109/1245	1089/-	1068/1204	261/261S	
		11	80	50	8xø19	8xø19	8xø19	4xø19	4xø19	4xø19	125	72.5	280	317	577	579	620	1219/1355	1219/-	1068/1204	262/262S	
		15	80	50	8xø19	8xø19	8xø19	4xø19	4xø19	4xø19	125	72.5	280	317	-	-	620	-/-	-/-	1221/1357	588/588S	
		18.5	80	50	8xø19	8xø19	8xø19	4xø19	4xø19	4xø19	125	72.5	280	357	-	-	660	-/-	-/-	1291/1427	582/582S	
		22	80	50	8xø19	8xø19	8xø19	4xø19	4xø19	4xø19	125	72.5	280	357	-660	-	-	-/-	-/-	1291/1427	582/582S	
65-130	2	4	80	65	8xø19	8xø19	8xø19	4xø19	4xø19	8xø19	100	72.5	180	252	440	445	453	859/995	929/-	858/994	269/269S	
		5.5	80	65	8xø19	8xø19	8xø19	4xø19	4xø19	8xø19	100	72.5	180	252	465	465	453	934/1070	914/-	909/1045	270/270S	
		7.5	80	65	8xø19	8xø19	8xø19	4xø19	4xø19	8xø19	100	72.5	180	252	465	465	489	934/1070	914/-	933/1069	270/270S	
		11	80	65	8xø19	8xø19	8xø19	4xø19	4xø19	8xø19	100	72.5	180	252	512	514	489	1084/1220	1084/-	980/1116	271/271S	
		15	80	65	8xø19	8xø19	8xø19	4xø19	4xø19	8xø19	100	72.5	180	252	-	-	555	-/-	-/-	1056/1192	271/271S	
		18.5	80	65	8xø19	8xø19	8xø19	4xø19	4xø19	8xø19	100	72.5	180	252	-	-	555	-/-	-/-	1056/1192	272/272S	
		22	80	65	8xø19	8xø19	8xø19	4xø19	4xø19	8xø19	100	72.5	180	312	-	-	615	-/-	-/-	1088/1218	275/275S	
	4	0.55	80	65	8xø19	8xø19	8xø19	4xø19	4xø19	8xø19	100	72.5	180	235	375	376	393	729/865	749/-	743/879	265/265S	
		0.75	80	65	8xø19	8xø19	8xø19	4xø19	4xø19	8xø19	100	72.5	180	235	375	376	393	729/865	749/-	743/879	265/265S	
		1.1	80	65	8xø19	8xø19	8xø19	4xø19	4xø19	8xø19	100	72.5	180	235	400	389	393	779/915	774/-	753/889	266/266S	
		1.5	80	65	8xø19	8xø19	8xø19	4xø19	4xø19	8xø19	100	72.5	180	235	-	-	393	-/-	-/-	753/889	267/267S	
		2.2	80	65	8xø19	8xø19	8xø19	4xø19	4xø19	8xø19	100	72.5	180	252	-	-	453	-/-	-/-	823/959	268/268S	
		3	80	65	8xø19	8xø19	8xø19	4xø19	4xø19	8xø19	100	72.5	180	252	-	-	453	-/-	-/-	823/959	268/268S	
		65-180	2	3	80	65	8xø19	8xø19	8xø19	4xø19	4xø19	8xø19	100	72.5	200	252	422	420	-	894/1030	884/-	-/-
4	80	65		8xø19	8xø19	8xø19	4xø19	4xø19	8xø19	100	72.5	200	252	440	445	453	859/995	929/-	858/994	269/269S		
5.5	80	65		8xø19	8xø19	8xø19	4xø19	4xø19	8xø19	100	72.5	200	252	465	465	453	934/1070	914/-	909/1045	270/270S		
7.5	80	65		8xø19	8xø19	8xø19	4xø19	4xø19	8xø19	100	72.5	200	252	465	465	489	934/1070	914/-	933/1069	270/270S		
11	80	65		8xø19	8xø19	8xø19	4xø19	4xø19	8xø19	100	72.5	200	252	512	514	489	1084/1220	1084/-	980/1220	271/271S		
15	80	65		8xø19	8xø19	8xø19	4xø19	4xø19	8xø19	100	72.5	200	252	512	514	555	1084/1220	1084/-	1056/1220	271/271S		
18.5	80	65		8xø19	8xø19	8xø19	4xø19	4xø19	8xø19	100	72.5	200	252	-	-	555	-/-	-/-	1081/1217	577/577S		
4	22	80		65	8xø19	8xø19	8xø19	4xø19	4xø19	8xø19	100	72.5	200	312	-	-	615	-/-	-/-	1113/1253	578/578S	
	26	80		65	8xø19	8xø19	8xø19	4xø19	4xø19	8xø19	100	72.5	200	312	-	-	615	-/-	-/-	1113/1253	578/578S	
	0.55	80		65	8xø19	8xø19	8xø19	4xø19	4xø19	8xø19	100	72.5	200	235	375	376	393	729/865	749/-	743/879	265/265S	
	0.75	80		65	8xø19	8xø19	8xø19	4xø19	4xø19	8xø19	100	72.5	200	235	375	376	393	729/865	749/-	743/879	265/265S	
	1.1	80		65	8xø19	8xø19	8xø19	4xø19	4xø19	8xø19	100	72.5	200	235	400	389	393	779/915	774/-	753/889	266/266S	
	1.5	80		65	8xø19	8xø19	8xø19	4xø19	4xø19	8xø19	100	72.5	200	235	400	389	393	809/945	799/-	753/889	267/267S	
	2.2	80		65	8xø19	8xø19	8xø19	4xø19	4xø19	8xø19	100	72.5	200	252	-	-	393	-/-	-/-	823/959	268/268S	
65-210	2	3	80	65	8xø19	8xø19	8xø19	4xø19	4xø19	8xø19	100	72.5	200	252	-	-	393	-/-	-/-	823/959	268/268S	
18.5		80	65	8xø19	8xø19	8xø19	4xø19	4xø19	8xø19	100	72.5	225	276	536	538	-	1165/1301	1165/-	-/-	678/678S		
22		80	65	8xø19	8xø19	8xø19	4xø19	4xø19	8xø19	100	72.5	225	316	596	599	-	1216/1356	1241/-	-/-	679/679S		
30		80	65	8xø19	8xø19	8xø19	4xø19	4xø19	8xø19	100	72.5	225	336	641	662	-	1283/1416	1358/-	-/-	680/680S		
37		80	65	8xø19	8xø19	8xø19	4xø19	4xø19	8xø19	100	72.5	225	336	641	662	-	1283/1416	1358/-	-/-	680/680S		
4		2.2	80	65	8xø19	8xø19	8xø19	4xø19	4xø19	8xø19	100	72.5	225	276	446	444	-	905/1041	895/-	-/-	673/673S	
		3	80	65	8xø19	8xø19	8xø19	4xø19	4xø19	8xø19	100	72.5	225	276	446	444	-	905/1041	895/-	-/-	673/673S	
		4	80	65	8xø19	8xø19	8xø19	4xø19	4xø19	8xø19	100	72.5	225	276	464	469	-	940/1076	940/-	-/-	674/674S	
		5.5	80	65	8xø19	8xø19	8xø19	4xø19	4xø19	8xø19	100	72.5	225	276	489	489	-	945/1081	925/-	-/-	675/675S	
6		0.55	80	65	8xø19	8xø19	8xø19	4xø19	4xø19	8xø19	100	72.5	225	259	399	400	-	775/926	795/-	-/-	683/683S	
	0.75	80	65	8xø19	8xø19	8xø19	4xø19	4xø19	8xø19	100	72.5	225	259	424	413	-	825/966	820/-	-/-	684/684S		
	1.1	80	65	8xø19	8xø19	8xø19	4xø19	4xø19	8xø19	100	72.5	225	259	424	413	-	855/996	845/-	-/-	685/685S		
	1.5	80	65	8xø19	8xø19	8xø19	4xø19	4xø19	8xø19	100	72.5	225	276	446	444	-	905/1041	895/-	-/-	673/673S		

Pump size	Poles	P2 [kW]	Flanges								NK/NKE dimensions [mm]												Base frame code ³⁶⁾
			DNS	DND	SS			SD			A	A2	H2	H3	H4			L ³⁶⁾					
					PN10	PN16	PN25	PN10	PN16	PN25					NK		NKE	NK		NKE			
															IE3	IE4		IE3	IE4				
2	11	80	65	8xø19	8xø19	8xø19	4xø19	4xø19	8xø19	100	90	250	296	556	558	533	1124/1331	1124/-	1020/1116	284/284S			
	15	80	65	8xø19	8xø19	8xø19	4xø19	4xø19	8xø19	100	90	250	296	556	558	599	1124/1331	1124/-	1096/1192	284/284S			
	18.5	80	65	8xø19	8xø19	8xø19	4xø19	4xø19	8xø19	100	90	250	296	556	558	599	1169/1376	1169/-	1096/1192	285/285S			
	22	80	65	8xø19	8xø19	8xø19	4xø19	4xø19	8xø19	100	90	250	336	616	619	639	1214/1421	1239/-	1122/1218	286/286S			
	30	80	65	8xø19	8xø19	8xø19	4xø19	4xø19	8xø19	100	90	250	336	641	662	-	1274/1481	1349/-	-/-	287/287S			
	37	80	65	8xø19	8xø19	8xø19	4xø19	4xø19	8xø19	100	90	250	336	641	662	-	1274/1481	1349/-	-/-	287/287S			
65-225	1.1	80	65	8xø19	8xø19	8xø19	4xø19	4xø19	8xø19	100	90	250	279	444	433	437	814/910	809/-	788/884	277/277S			
	1.5	80	65	8xø19	8xø19	8xø19	4xø19	4xø19	8xø19	100	90	250	279	444	433	437	844/940	834/-	788/885	278/278S			
	2.2	80	65	8xø19	8xø19	8xø19	4xø19	4xø19	8xø19	100	90	250	296	466	464	497	894/990	884/-	858/954	279/279S			
	3	80	65	8xø19	8xø19	8xø19	4xø19	4xø19	8xø19	100	90	250	296	466	464	497	894/990	884/-	858/954	279/279S			
	4	80	65	8xø19	8xø19	8xø19	4xø19	4xø19	8xø19	100	90	250	296	484	489	497	929/1025	929/-	858/954	281/281S			
	5.5	80	65	8xø19	8xø19	8xø19	4xø19	4xø19	8xø19	100	90	250	296	-	-	533	-/-	-/-	933/1029	279/279S			
6	7.5	80	65	8xø19	8xø19	8xø19	4xø19	4xø19	8xø19	100	90	250	296	-	-	533	-/-	-/-	933/1029	278/278S			
	0.55	80	65	8xø19	8xø19	8xø19	4xø19	4xø19	8xø19	100	90	250	279	419	420	-	764/860	784/-	-/-	276/276S			
	0.75	80	65	8xø19	8xø19	8xø19	4xø19	4xø19	8xø19	100	90	250	279	444	433	-	814/910	809/-	-/-	277/277S			
65-280	1.1	80	65	8xø19	8xø19	8xø19	4xø19	4xø19	8xø19	100	90	250	279	444	433	-	814/910	834/-	-/-	277/277S			
	3	80	65	8xø19	8xø19	8xø19	4xø19	4xø19	8xø19	125	90	280	296	466	464	497	1029/1165	1019/-	993/1129	295/295S			
	4	80	65	8xø19	8xø19	8xø19	4xø19	4xø19	8xø19	125	90	280	296	484	489	-	1064/1200	1064/-	993/1129	297/297S			
	5.5	80	65	8xø19	8xø19	8xø19	4xø19	4xø19	8xø19	125	90	280	296	509	509	-	1069/1205	1049/-	1068/1204	298/298S			
	7.5	80	65	8xø19	8xø19	8xø19	4xø19	4xø19	8xø19	125	90	280	296	509	509	-	1109/1245	1089/-	1068/1204	299/299S			
	11	80	65	8xø19	8xø19	8xø19	4xø19	4xø19	8xø19	125	90	280	296	-	-	599	-/-	-/-	1191/1327	300/300S			
	15	80	65	8xø19	8xø19	8xø19	4xø19	4xø19	8xø19	125	90	280	296	-	-	599	-/-	-/-	1191/1327	300/300S			
	18.5	80	65	8xø19	8xø19	8xø19	4xø19	4xø19	8xø19	125	90	280	296	-	-	599	-/-	-/-	1261/1397	586/586S			
	0.75	80	65	8xø19	8xø19	8xø19	4xø19	4xø19	8xø19	125	90	280	279	444	433	-	949/1085	944/-	-/-	293/293S			
	1.1	80	65	8xø19	8xø19	8xø19	4xø19	4xø19	8xø19	125	90	280	279	444	433	-	979/1115	969/-	-/-	294/294S			
	1.5	80	65	8xø19	8xø19	8xø19	4xø19	4xø19	8xø19	125	90	280	296	466	464	-	1029/1165	1019/-	-/-	295/295S			
	2.2	80	65	8xø19	8xø19	8xø19	4xø19	4xø19	8xø19	125	90	280	296	484	489	-	994/1130	1064/-	-/-	296/296S			
	80-180.1	15	100	80	8xø19	8xø19	8xø23	8xø19	8xø19	8xø19	100	72.5	225	252	512	514	-	1109/1245	1084/-	-/-	271/271S		
		18.5	100	80	8xø19	8xø19	8xø23	8xø19	8xø19	8xø19	100	72.5	225	252	512	514	-	1154/1290	1129/-	-/-	272/272S		
		22	100	80	8xø19	8xø19	8xø23	8xø19	8xø19	8xø19	100	72.5	225	312	592	595	-	1205/1345	1205/-	-/-	275/275S		
4		100	80	8xø19	8xø19	8xø23	8xø19	8xø19	8xø19	100	72.5	225	252	440	445	-	859/995	929/-	-/-	269/269S			
80-180	5.5	100	80	8xø19	8xø19	8xø23	8xø19	8xø19	8xø19	100	72.5	225	252	465	465	436	934/1070	914/-	909/1045	270/270S			
	7.5	100	80	8xø19	8xø19	8xø23	8xø19	8xø19	8xø19	100	72.5	225	252	465	465	489	934/1070	914/-	933/1069	270/270S			
	11	100	80	8xø19	8xø19	8xø23	8xø19	8xø19	8xø19	100	72.5	225	252	512	514	489	1084/1220	1084/-	980/1116	271/271S			
	15	100	80	8xø19	8xø19	8xø23	8xø19	8xø19	8xø19	100	72.5	225	252	512	514	555	1084/1220	1084/-	1056/1192	271/271S			
	18.5	100	80	8xø19	8xø19	8xø23	8xø19	8xø19	8xø19	100	72.5	225	252	512	514	555	1129/1265	1129/-	1056/1192	272/272S			
	22	100	80	8xø19	8xø19	8xø23	8xø19	8xø19	8xø19	100	72.5	225	312	-	-	615	-/-	-/-	1088/1218	275/275S			
	26	100	80	8xø19	8xø19	8xø23	8xø19	8xø19	8xø19	100	72.5	225	312	-	-	615	-/-	-/-	1113/1253	578/578S			
	0.75	100	80	8xø19	8xø19	8xø23	8xø19	8xø19	8xø19	100	72.5	225	235	375	376	393	729/865	749/-	743/879	265/265S			
	1.1	100	80	8xø19	8xø19	8xø23	8xø19	8xø19	8xø19	100	72.5	225	235	400	389	393	779/915	774/-	753/889	266/266S			
	1.5	100	80	8xø19	8xø19	8xø23	8xø19	8xø19	8xø19	100	72.5	225	235	400	389	393	809/945	799/-	753/889	267/267S			
	2.2	100	80	8xø19	8xø19	8xø23	8xø19	8xø19	8xø19	100	72.5	225	252	422	420	453	859/995	849/-	823/959	268/268S			
	3	100	80	8xø19	8xø19	8xø23	8xø19	8xø19	8xø19	100	72.5	225	252	-	-	453	-/-	-/-	823/959	268/268S			
4	100	80	8xø19	8xø19	8xø23	8xø19	8xø19	8xø19	100	72.5	225	252	-	-	453	-/-	-/-	823/959	273/273S				

Pump size	Poles	P2 [kW]	Flanges							NK/NKE dimensions [mm]												Base frame code ³⁶⁾
			DNS	DND	SS			SD			A	A2	H2	H3	H4			L ³⁶⁾				
					PN10	PN16	PN25	PN10	PN16	PN25					NK		NKE	NK		NKE		
															IE3	IE4		IE3	IE4			
80-225	2	18.5	100	80	8xø19	8xø19	8xø23	8xø19	8xø19	8xø19	125	90	280	296	556	558	599	1214/1350	1214/-	1141/1277	310/310S	
		22	100	80	8xø19	8xø19	8xø23	8xø19	8xø19	8xø19	125	90	280	336	616	619	639	1259/1395	1284/-	1167/1303	311/311S	
		30	100	80	8xø19	8xø19	8xø23	8xø19	8xø19	8xø19	125	90	280	336	641	662	-	1319/1455	1394/-	-/-	312/312S	
		37	100	80	8xø19	8xø19	8xø23	8xø19	8xø19	8xø19	125	90	280	336	641	662	-	1319/1455	1394/-	-/-	312/312S	
		45	100	80	8xø19	8xø19	8xø23	8xø19	8xø19	8xø19	125	90	280	361	696	706	-	1359/1495	1449/-	-/-	313/313S	
	4	55	100	80	8xø19	8xø19	8xø23	8xø19	8xø19	8xø19	125	90	280	430	795	851	-	1469/1605	1499/-	-/-	314/314S	
		1.5	100	80	8xø19	8xø19	8xø23	8xø19	8xø19	8xø19	125	90	280	279	444	433	437	889/1025	879/-	833/970	303/303S	
		2.2	100	80	8xø19	8xø19	8xø23	8xø19	8xø19	8xø19	125	90	280	296	466	464	497	939/1075	929/-	903/1039	304/304S	
		3	100	80	8xø19	8xø19	8xø23	8xø19	8xø19	8xø19	125	90	280	296	466	464	497	939/1075	929/-	903/1039	304/304S	
		4	100	80	8xø19	8xø19	8xø23	8xø19	8xø19	8xø19	125	90	280	296	484	489	497	974/1110	974/-	903/1309	306/306S	
	6	5.5	100	80	8xø19	8xø19	8xø23	8xø19	8xø19	8xø19	125	90	280	296	509	509	533	979/1115	959/-	978/1114	307/307S	
		7.5	100	80	8xø19	8xø19	8xø23	8xø19	8xø19	8xø19	125	90	280	296	509	509	533	1019/1155	999/-	978/1114	308/308S	
		11	100	80	8xø19	8xø19	8xø23	8xø19	8xø19	8xø19	125	90	280	296	-	-	599	-/-	-/-	1101/1237	310/310S	
		15	100	80	8xø19	8xø19	8xø23	8xø19	8xø19	8xø19	125	90	280	296	-	-	599	-/-	-/-	1101/1237	310/310S	
		0.75	100	80	8xø19	8xø19	8xø23	8xø19	8xø19	8xø19	125	90	280	279	444	433	-	859/995	854/-	-/-	302/302S	
80-280	6	1.1	100	80	8xø19	8xø19	8xø23	8xø19	8xø19	8xø19	125	90	280	279	444	433	-	889/1025	879/-	-/-	303/303S	
		1.5	100	80	8xø19	8xø19	8xø23	8xø19	8xø19	8xø19	125	90	280	279	444	464	-	889/1025	929/-	-/-	303/303S	
		2.2	100	80	8xø19	8xø19	8xø23	8xø19	8xø19	8xø19	125	90	280	296	466	489	-	939/1075	974/-	-/-	304/304S	
		4	100	80	8xø19	8xø19	8xø23	8xø19	8xø19	8xø19	125	90	315	296	484	489	494	1064/1200	1064/-	993/1129	320/320S	
		5.5	100	80	8xø19	8xø19	8xø23	8xø19	8xø19	8xø19	125	90	315	296	509	509	533	1069/1205	1049/-	1068/1204	321/321S	
	4	7.5	100	80	8xø19	8xø19	8xø23	8xø19	8xø19	8xø19	125	90	315	296	509	509	533	1109/1245	1089/-	1068/1204	322/322S	
		11	100	80	8xø19	8xø19	8xø23	8xø19	8xø19	8xø19	125	90	315	296	556	558	599	1219/1355	1219/-	1191/1237	323/323S	
		15	100	80	8xø19	8xø19	8xø23	8xø19	8xø19	8xø19	125	90	315	296	-	-	599	-/-	-/-	1221/1357	584/584S	
		18.5	100	80	8xø19	8xø19	8xø23	8xø19	8xø19	8xø19	125	90	315	296	-	-	503	-/-	-/-	1291/1427	585/585S	
		22	100	80	8xø19	8xø19	8xø23	8xø19	8xø19	8xø19	125	90	315	296	-	-	503	-/-	-/-	1291/1427	585/585S	
	6	1.1	100	80	8xø19	8xø19	8xø23	8xø19	8xø19	8xø19	125	90	315	279	444	433	-	979/1115	969/-	-/-	317/317S	
		1.5	100	80	8xø19	8xø19	8xø23	8xø19	8xø19	8xø19	125	90	315	296	466	464	-	1029/1165	1019/-	-/-	318/318S	
		2.2	100	80	8xø19	8xø19	8xø23	8xø19	8xø19	8xø19	125	90	315	296	484	489	-	994/1130	1064/-	-/-	319/319S	
		3	100	80	8xø19	8xø19	8xø23	8xø19	8xø19	8xø19	125	90	315	296	509	509	-	1069/1205	1049/-	-/-	321/321S	
		5.5	100	80	8xø19	8xø19	8xø23	8xø19	8xø19	8xø19	125	90	315	346	559	559	583	1069/1205	1049/-	1068/1204	326/326S	
80-350	4	7.5	100	80	8xø19	8xø19	8xø23	8xø19	8xø19	8xø19	125	90	315	346	559	559	583	1109/1245	1089/-	1068/1204	327/327S	
		11	100	80	8xø19	8xø19	8xø23	8xø19	8xø19	8xø19	125	90	315	346	606	608	649	1219/1355	1219/-	1191/1327	328/328S	
		15	100	80	8xø19	8xø19	8xø23	8xø19	8xø19	8xø19	125	90	315	346	606	608	649	1264/1400	1264/-	1191/1327	329/329S	
		18.5	100	80	8xø19	8xø19	8xø23	8xø19	8xø19	8xø19	125	90	315	386	666	669	69	1309/1445	1334/-	1261/1397	330/330S	
		22	100	80	8xø19	8xø19	8xø23	8xø19	8xø19	8xø19	125	90	315	386	-	-	689	-/-	-/-	1261/1397	331/331S	
	6	2.2	100	80	8xø19	8xø19	8xø23	8xø19	8xø19	8xø19	125	90	315	346	534	539	-	994/1130	1064/-	-/-	325/325S	
		3	100	80	8xø19	8xø19	8xø23	8xø19	8xø19	8xø19	125	90	315	346	559	559	-	1069/1205	1049/-	-/-	326/326S	
		4	100	80	8xø19	8xø19	8xø23	8xø19	8xø19	8xø19	125	90	315	346	559	559	-	1109/1245	1089/-	-/-	327/327S	
		5.5	100	80	8xø19	8xø19	8xø23	8xø19	8xø19	8xø19	125	90	315	346	559	559	-	1069/1205	1089/-	-/-	326/326S	
		22	100	80	8xø19	8xø19	8xø23	8xø19	8xø19	8xø19	125	90	355	420	700	703	-	1414/1590	1429/-	-/-	661/661S	
	80-380	4	30	100	80	8xø19	8xø19	8xø23	8xø19	8xø19	8xø19	125	90	355	420	725	746	-	1439/1615	1504/-	-/-	662/662S
			37	100	80	8xø19	8xø19	8xø23	8xø19	8xø19	8xø19	125	90	355	420	755	765	-	1484/1660	1559/-	-/-	663/663S
			45	100	80	8xø19	8xø19	8xø23	8xø19	8xø19	8xø19	125	90	355	420	755	765	-	1509/1685	1584/-	-/-	664/664S
			5.5	100	80	8xø19	8xø19	8xø23	8xø19	8xø19	8xø19	125	90	355	380	593	593	-	1179/1355	1149/-	-/-	658/658S
		6	7.5	100	80	8xø19	8xø19	8xø23	8xø19	8xø19	8xø19	125	90	355	380	640	642	-	1289/1465	1279/-	-/-	659/659S
11			100	80	8xø19	8xø19	8xø23	8xø19	8xø19	8xø19	125	90	355	380	640	642	-	1334/1510	1324/-	-/-	660/660S	
15			100	80	8xø19	8xø19	8xø23	8xø19	8xø19	8xø19	125	90	355	420	700	703	-	1414/1590	1429/-	-/-	661/661S	

Pump size	Poles	P2 [kW]	Flanges							NK/NKE dimensions [mm]											Base frame code ³⁶⁾
			DNS	DND	SS			SD			A	A2	H2	H3	H4			L ³⁶⁾			
					PN10	PN16	PN25	PN10	PN16	PN25					NK		NKE	NK		NKE	
															IE3	IE4		IE3	IE4		
100-180	2	7.5	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	125	72.5	250	276	489	489	513	959/1120	939/-	958/1094	338/338S
		11	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	125	72.5	250	276	536	538	513	1109/1270	1109/-	1005/1141	339/339S
		15	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	125	72.5	250	276	536	538	579	1109/1270	1109/-	1081/1217	339/339S
		18.5	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	125	72.5	250	276	536	538	579	1154/1315	1154/-	1081/1217	340/340S
		22	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	125	72.5	250	316	596	599	619	1205/1360	1230/-	1113/1243	341/341S
	4	1.1	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	125	72.5	250	259	424	413	417	839/975	834/-	813/949	334/334S
		1.5	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	125	72.5	250	259	424	413	417	869/1005	859/-	813/949	335/335S
		2.2	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	125	72.5	250	276	446	444	477	919/1055	909/-	883/1019	336/336S
		3	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	125	72.5	250	276	446	444	477	919/1055	909/-	883/1019	336/336S
		4	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	125	72.5	250	276	-	477	-/-	-/-	883/1019	337/337S	
	6	5.5	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	125	72.5	250	276	-	513	-/-	-/-	958/1094	338/338S	
		0.37	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	125	72.5	250	259	399	400	-	789/925	809/-	-/-	333/333S
		0.55	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	125	72.5	250	259	399	400	-	789/925	809/-	-/-	333/333S
		0.75	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	125	72.5	250	259	424	413	-	839/975	834/-	-/-	334/334S
		1.1	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	125	72.5	250	259	424	413	-	839/975	859/-	/-	334/334S
100-225.1	2	22	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	140	90	280	361	641	644	-	1274/1410	1299/-	-/-	354/354S
		30	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	140	90	280	361	666	687	-	1334/1470	1409/-	-/-	355/355S
		37	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	140	90	280	361	666	687	-	1334/1470	1409/-	-/-	355/355S
		45	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	140	90	280	361	696	706	-	1374/1510	1464/-	-/-	356/356S
		55	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	140	90	280	430	795	851	-	1484/1620	1514/-	-/-	357/357S
	4	3	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	140	90	280	321	491	489	-	954/1090	944/-	-/-	347/347S
		4	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	140	90	280	321	509	514	-	989/1125	989/-	-/-	349/349S
		5.5	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	140	90	280	321	534	534	-	994/1130	974/-	-/-	350/350S
		7.5	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	140	90	280	321	534	534	-	1034/1170	1014/-	-/-	351/351S
		1.1	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	140	90	280	304	469	458	-	904/1045	894/-	-/-	346/346S
	6	1.5	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	140	90	280	321	491	489	-	954/1090	944/-	-/-	347/347S
		2.2	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	140	90	280	321	509	514	-	919/1055	989/-	-/-	348/348S
		22	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	140	90	280	361	641	644	-	1274/1410	1299/-	-/-	354/354S
		30	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	140	90	280	361	666	687	-	1334/1470	1409/-	-/-	355/355S
		37	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	140	90	280	361	666	687	-	1334/1470	1409/-	-/-	355/355S
100-225	2	45	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	140	90	280	361	696	706	-	1374/1510	1464/-	-/-	356/356S
		55	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	140	90	280	430	795	851	-	1484/1620	1514/-	-/-	357/357S
		75	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	140	90	280	460	860	908	-	1534/1670	1571/-	-/-	358/358S
		3	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	140	90	280	321	491	489	522	954/1090	944/-	918/1054	347/347S
		4	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	140	90	280	321	509	514	522	989/1125	989/-	918/1054	349/349S
	4	5.5	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	140	90	280	321	534	534	558	994/1130	974/-	993/1129	350/350S
		7.5	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	140	90	280	321	534	534	558	1034/1170	1014/-	993/1129	351/351S
		11	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	140	90	280	321	-	-	624	-/-	-/-	1116/1252	352/352S
		15	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	140	90	280	321	-	-	624	-/-	-/-	1116/1252	353/353S
		18.5	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	140	90	280	361	-	-	664	-/-	-/-	1217/1357	583/583S
	6	22	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	140	90	280	361	-	-	664	-/	-/-	1217/1357	583/583S
		1.1	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	140	90	280	304	469	458	-	904/1040	894/-	-/-	346/346S
		1.5	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	140	90	280	321	491	489	-	954/1090	944/-	-/-	347/347S
		2.2	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	140	90	280	321	509	514	-	919/1055	989/-	-/-	348/348S
		3	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	140	90	280	321	491	534	-	954/1090	974/-	-/-	347/347S

Pump size	Poles	P2 [kW]	Flanges							NK/NKE dimensions [mm]											Base frame code ³⁶⁾	
			DNS	DND	SS			SD			A	A2	H2	H3	H4		L ³⁶⁾					
					PN10	PN16	PN25	PN10	PN16	PN25					NK		NKE	NK		NKE		
															IE3	IE4		IE3	IE4			
100-280	4	5.5	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	140	90	315	321	534	534	-	1084/1220	1064/-	-/-	362/362S	
		7.5	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	140	90	315	321	534	534	-	1124/1260	1104/-	-/-	363/363S	
		11	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	140	90	315	321	581	583	-	1234/1370	1234/-	-/-	364/364S	
		15	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	140	90	315	321	581	583	-	1279/1415	1279/-	-/-	365/365S	
	6	1.5	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	140	90	315	321	491	489	-	1044/1180	1034/-	-/-	360/360S	
		2.2	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	140	90	315	321	509	514	-	1009/1145	1079/-	-/-	361/361S	
		3	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	140	90	315	321	534	534	-	1084/1220	1064/-	-/-	362/362S	
		4	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	140	90	315	321	534	534	-	1124/1260	1104/-	-/-	363/363S	
100-350	4	7.5	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	140	90	315	346	559	559	-	1124/1260	1104/-	-/-	327/327S	
		11	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	140	90	315	346	606	608	-	1234/1370	1234/-	-/-	328/328S	
		15	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	140	90	315	346	606	608	-	1279/1415	1279/-	-/-	329/329S	
		18.5	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	140	90	315	386	666	669	-	1324/1460	1349/-	-/-	330/330S	
	6	2.2	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	140	90	315	386	666	669	-	1359/1495	1384/-	-/-	331/331S	
		2.2	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	140	90	315	346	534	539	-	1009/1145	1079/-	-/-	325/325S	
		3	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	140	90	315	346	559	559	-	1084/1220	1064/-	-/-	326/326S	
		4	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	140	90	315	346	559	559	-	1124/1260	1104/-	-/-	327/327S	
	100-360	4	5.5	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	140	90	315	346	559	559	-	1124/1260	1104/-	-/-	327/327S
			7.5	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	140	90	315	346	559	608	-	1124/1260	1234/-	-/-	327/327S
			18.5	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	150	105	355	420	700	703	-	1394/1570	1419/-	-/-	443/443S
			22	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	150	105	355	420	700	703	-	1429/1605	1454/-	-/-	444/444S
6		30	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	150	105	355	420	725	746	-	1454/1630	1529/-	-/-	445/445S	
		37	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	150	105	355	420	755	765	-	1499/1675	1584/-	-/-	446/446S	
		5.5	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	150	105	355	380	593	593	-	1194/1370	1174/-	-/-	440/440S	
		7.5	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	150	105	355	380	640	642	-	1304/1480	1304/-	-/-	441/441S	
100-380	4	11	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	150	105	355	380	640	642	-	1349/1525	1349/-	-/-	442/442S	
		22	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	140	110	355	420	700	703	-	1419/1595	1444/-	-/-	372/372S	
		30	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	140	110	355	420	725	746	-	1444/1620	1519/-	-/-	373/373S	
		37	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	140	110	355	420	755	765	-	1489/1665	1574/-	-/-	374/374S	
	6	45	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	140	110	355	420	755	765	-	1514/1690	1599/-	-/-	375/375S	
		55	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	140	110	355	460	825	881	-	1594/1770	1624/-	-/-	376/376S	
		75	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	140	110	355	458	858	906	-	1644/1820	1681/-	-/-	377/377S	
		5.5	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	140	110	355	380	593	593	-	1184/1360	1164/-	-/-	369/369S	
	6	7.5	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	140	110	355	380	640	642	-	1294/1470	1294/-	-/-	370/370S	
		11	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	140	110	355	380	640	642	-	1339/1515	1339/-	-/-	371/371S	
		15	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	140	110	355	420	700	703	-	1419/1595	1444/-	-/-	372/372S	
		18.5	125	100	8xø19	8xø19	8xø28	8xø19	8xø19	8xø23	140	110	355	420	725	746	-	1444/1620	1519/-	-/-	373/373S	

Pump size	Poles	P2 [kW]	Flanges							NK/NKE dimensions [mm]											Base frame code ³⁶⁾	
			DNS	DND	SS			SD			A	A2	H2	H3	H4			L ³⁶⁾				
					PN10	PN16	PN25	PN10	PN16	PN25					NK		NKE	NK		NKE		
															IE3	IE4		IE3	IE4			
125-180	2	11	150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	125	90	280	296	556	558	533	1109/1255	1109/-	1015/1151	380/380S	
		15	150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	125	90	280	296	556	558	599	1109/1255	1109/-	1091/1227	380/380S	
		18.5	150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	125	90	280	296	556	558	599	1154/1300	1154/-	1091/1227	381/381S	
		22	150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	125	90	280	336	616	619	639	1205/1345	1230/-	1123/1253	382/382S	
		30	150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	125	90	280	336	641	662	-	1272/1405	1347/-	-/-	383/383S	
	4	1.5	150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	125	90	280	279	444	433	437	869/1010	859/-	823/954	278/636S	
		2.2	150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	125	90	280	296	466	464	497	919/1055	909/-	893/1019	279/637S	
		3	150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	125	90	280	296	466	464	497	919/1055	909/-	893/1019	279/637S	
		4	150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	125	90	280	296	484	489	-	954/1090	954/-	-/-	281/639S	
		4	15	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	125	90	280	296	-	-	497	-/-	954/-	893/1019	280/638S	
		5.5	150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	125	90	280	296	-	-	533	-/-	-/-	968/1094	282/640S	
		7.5	150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	125	90	280	296	-	-	533	-/-	-/-	968/1094	283/641S	
	6	0.37	150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	125	90	280	279	419	420	-	789/940	809/-	-/-	276/634S	
		0.55	150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	125	90	280	279	419	420	-	789/940	809/-	-/-	276/634S	
		0.75	150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	125	90	280	279	444	433	-	839/980	834/-	-/-	277/635S	
		1.1	150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	125	90	280	279	444	433	-	869/1010	859/-	-/-	278/636S	
	125-225	4	5.5	150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	140	90	355	346	559	559	583	1034/1170	1014/-	1033/1169	388/388S
			7.5	150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	140	90	355	346	559	559	583	1074/1210	1054/-	1033/1169	389/389S
11			150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	140	90	355	346	606	608	649	1184/1320	1184/-	1156/1292	390/390S	
15			150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	140	90	355	346	606	608	649	1229/1365	1229/-	1156/1292	391/391S	
18.5			150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	140	90	355	346	-	-	689	-/-	-/-	1226/1362	392/392S	
6		22	150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	140	90	355	346	-	-	689	-/-	-/-	1226/1362	393/393S	
		1.5	150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	140	90	355	346	516	514	-	994/1130	984/-	-/-	386/386S	
		2.2	150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	140	90	355	346	534	539	-	959/1095	1029/-	-/-	387/387S	
		3	150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	140	90	355	346	559	559	-	1034/1170	1014/-	-/-	388/388S	
		4	150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	140	90	355	346	559	559	-	1074/1210	1054/-	-/-	389/389S	
		7.5	150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	140	90	355	346	559	559	-	1124/1300	1104/-	-/-	327/644S	
		11	150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	140	90	355	346	606	608	-	1234/1410	1234/-	-/-	328/633S	
125-280	4	15	150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	140	90	355	346	606	608	-	1279/1455	1279/-	-/-	329/645S	
		18.5	150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	140	90	355	386	666	669	-	1324/1500	1349/-	-/-	330/646S	
		2.2	150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	140	90	355	346	534	539	-	1009/1185	1079/-	-/-	325/642S	
		3	150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	140	90	355	346	559	559	-	1084/1260	1064/-	-/-	326/643S	
	6	4	150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	140	90	355	346	559	559	-	1124/1300	1104/-	-/-	327/644S	
		5.5	150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	140	90	355	346	559	559	-	1124/1300	1104/-	-/-	327/644S	
		11	150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	140	110	355	380	640	642	-	1234/1370	1234/-	-/-	590/590S	
		15	150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	140	110	355	380	640	642	-	1279/1415	1279/-	-/-	591/591S	
	125-320	4	18.5	150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	140	110	355	420	700	703	-	1324/1460	1349/-	-/-	592/592S
			22	150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	140	110	355	420	700	703	-	1359/1495	1384/-	-/-	593/593S
			30	150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	140	110	355	420	725	746	-	1384/1520	1459/-	-/-	594/594S
			4	150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	140	110	355	380	593	593	-	1124/1260	1104/-	-/-	589/589S
6		5.5	150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	140	110	355	380	593	593	-	1124/1260	1104/-	-/-	589/589S	
		7.5	150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	140	110	355	380	640	642	-	1234/1370	1234/-	-/-	590/590S	
		11	150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	140	110	355	380	640	642	-	1279/1415	1279/-	-/-	591/591S	

Pump size	Poles	P2 [kW]	Flanges							NK/NKE dimensions [mm]											Base frame code ³⁶⁾	
			DNS	DND	SS			SD			A	A2	H2	H3	H4			L ³⁶⁾				
					PN10	PN16	PN25	PN10	PN16	PN25					NK	NKE	NK		NKE			
																	IE3	IE4		IE3		IE4
125-350	4	11	150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	140	110	355	380	640	642	-	1294/1470	1294/-	-/-	370/370S	
		15	150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	140	110	355	380	640	642	-	1339/1515	1339/-	-/-	371/371S	
		18.5	150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	140	110	355	420	700	703	-	1384/1560	1409/-	-/-	394/394S	
		22	150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	140	110	355	420	700	703	-	1419/1595	1444/-	-/-	372/372S	
		30	150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	140	110	355	420	725	746	-	1444/1620	1519/-	-/-	373/373S	
	6	37	150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	140	110	355	420	755	765	-	1489/1665	1574/-	-/-	374/374S	
		4	150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	140	110	355	380	593	593	-	1184/1360	1164/-	-/-	369/369S	
		5.5	150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	140	110	355	380	593	593	-	1184/1360	1164/-	-/-	369/369S	
		7.5	150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	140	110	355	380	640	642	-	1294/1470	1294/-	-/-	370/370S	
		11	150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	140	110	355	380	640	642	-	1294/1470	1339/-	-/-	370/370S	
125-355	4	22	150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	140	110	355	420	700	703	-	1419/1595	1444/-	-/-	372/372S	
		30	150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	140	110	355	420	725	746	-	1444/1620	1519/-	-/-	373/373S	
		37	150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	140	110	355	420	755	765	-	1489/1665	1574/-	-/-	374/374S	
		45	150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	140	110	355	420	755	765	-	1514/1690	1599/-	-/-	375/375S	
		55	150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	140	110	355	460	825	881	-	1594/1770	1624/-	-/-	376/376S	
	6	7.5	150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	140	110	355	380	640	642	-	1294/1470	1294/-	-/-	370/370S	
		11	150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	140	110	355	380	640	642	-	1339/1515	1339/-	-/-	371/371S	
		15	150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	140	110	355	420	700	703	-	1419/1595	1444/-	-/-	372/372S	
		18.5	150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	140	110	355	420	725	746	-	1444/1620	1519/-	-/-	373/373S	
		22	150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	140	110	400	455	735	738	-	1419/1605	1444/-	-/-	396/396S	
125-360	4	30	150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	140	110	400	455	760	781	-	1444/1630	1519/-	-/-	397/397S	
		37	150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	140	110	400	455	790	800	-	1489/1675	1574/-	-/-	398/398S	
		45	150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	140	110	400	455	790	800	-	1514/1700	1599/-	-/-	399/399S	
		55	150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	140	110	400	495	860	916	-	1594/1780	1624/-	-/-	400/400S	
		75	150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	140	110	400	495	895	943	-	1644/1830	1681/-	-/-	401/401S	
	6	7.5	150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	140	110	400	415	675	677	-	1294/1480	1294/-	-/-	620/620S	
		11	150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	140	110	400	415	675	677	-	1339/1525	1339/-	-/-	395/395S	
		15	150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	140	110	400	455	735	738	-	1419/1605	1444/-	-/-	396/396S	
		18.5	150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	140	110	400	455	760	781	-	1444/1630	1519/-	-/-	397/397S	
		30	150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	140	110	400	455	760	781	-	1444/1620	1519/-	-/-	397/397S	
125-380	4	37	150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	140	110	400	455	790	800	-	1489/1665	1574/-	-/-	398/398S	
		45	150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	140	110	400	455	790	800	-	1514/1690	1599/-	-/-	399/399S	
		55	150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	140	110	400	495	860	916	-	1594/1770	1624/-	-/-	400/400S	
		75	150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	140	110	400	495	895	943	-	1644/1820	1681/-	-/-	401/401S	
		90	150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	140	110	400	495	895	943	-	1694/1870	1729/-	-/-	402/402S	
	6	11	150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	140	110	400	415	675	677	-	1339/1515	1339/-	-/-	395/395S	
		15	150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	140	110	400	455	735	738	-	1419/1595	1444/-	-/-	396/396S	
		18.5	150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	140	110	400	455	760	781	-	1444/1620	1519/-	-/-	397/397S	
		22	150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	140	110	400	455	760	781	-	1444/1620	1519/-	-/-	397/397S	
		30	150	125	8xø23	8xø23	8xø28	8xø19	8xø19	8xø28	140	110	400	455	760	800	-	1444/1620	1599/-	-/-	397/397S	
150-225	4	5.5	200	150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	160	110	375	380	593	593	617	1054/1230	1034/-	1053/1229	405/405S	
		7.5	200	150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	160	110	375	380	593	593	-	1094/1270	1074/-	1053/1229	406/406S	
		11	200	150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	160	110	375	380	640	642	-	1204/1380	1204/-	1176/1352	407/407S	
		15	200	150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	160	110	375	380	640	642	-	1249/1425	1249/-	1176/1352	408/408S	
		18.5	200	150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	160	110	375	420	700	703	-	1294/1470	1319/-	1246/1422	409/409S	
	6	22	200	150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	160	110	375	420	-	-	723	-/-	-/-	1246/1422	410/410S	
		2.2	200	150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	160	110	375	380	568	573	-	979/1155	1049/-	-/-	404/404S	
		3	200	150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	160	110	375	380	593	593	-	1054/1230	1034/-	-/-	405/405S	
		4	200	150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	160	110	375	380	593	593	-	1094/1270	1074/-	-/-	406/406S	
		5.5	200	150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	160	110	375	380	593	593	-	1054/1230	1074/-	-/-	405/405S	

Pump size	Poles	P2 [kW]	Flanges							NK/NKE dimensions [mm]											Base frame code ³⁶⁾	
			DNS	DND	SS			SD			A	A2	H2	H3	H4		L ³⁶⁾					
					PN10	PN16	PN25	PN10	PN16	PN25					NK		NKE	NK		NKE		
															IE3	IE4		IE3	IE4			
150-280	4	11	200	150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	160	110	375	380	640	642	-	1314/1490	1314/-	-/-	370/370S	
		15	200	150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	160	110	375	380	640	642	-	1359/1535	1359/-	-/-	371/371S	
		18.5	200	150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	160	110	375	420	700	703	-	1404/1580	1429/-	-/-	394/394S	
		22	200	150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	160	110	375	420	700	703	-	1439/1615	1464/-	-/-	372/372S	
		30	200	150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	160	110	375	420	725	746	-	1464/1640	1539/-	-/-	373/373S	
	6	3	200	150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	160	110	375	380	593	593	-	1164/1340	1144/-	-/-	412/412S	
		4	200	150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	160	110	375	380	593	593	-	1204/1380	1184/-	-/-	369/369S	
		5.5	200	150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	160	110	375	380	593	593	-	1204/1380	1184/-	-/-	369 / 369S	
		7.5	200	150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	160	110	375	380	640	642	-	1314/1490	1314/-	-/-	370/370S	
		150-300	4	22	200	150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	160	110	400	420	700	703	-	1449/1625	1474/-	-/-
30	200			150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	160	110	400	420	725	746	-	1474/1650	1549/-	-/-	453/453S	
6	7.5		200	150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	160	110	400	380	640	642	-	1324/1500	1324/-	-/-	450/450S	
	11		200	150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	160	110	400	380	640	642	-	1369/1545	1369/-	-/-	451/451S	
150-350.1	4	18.5	200	150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	160	110	400	420	700	703	-	1404/1580	1429/-	-/-	416/416S	
		22	200	150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	160	110	400	420	700	703	-	1439/1615	1464/-	-/-	417/417S	
		30	200	150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	160	110	400	420	725	746	-	1464/1640	1539/-	-/-	418/418S	
		37	200	150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	160	110	400	420	755	765	-	1509/1685	1594/-	-/-	419/419S	
		45	200	150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	160	110	400	420	755	765	-	1534/1710	1619/-	-/-	420/420S	
	6	5.5	200	150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	160	110	400	380	593	593	-	1204/1380	1184/-	-/-	413/413S	
		7.5	200	150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	160	110	400	380	640	642	-	1314/1490	1314/-	-/-	414/414S	
		11	200	150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	160	110	400	380	640	642	-	1359/1535	1359/-	-/-	415/415S	
		15	200	150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	160	110	400	420	700	703	-	1439/1615	1464/-	-/-	417/417S	
		150-350	4	18.5	200	150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	160	110	400	420	700	703	-	1404/1580	1429/-	-/-
22	200			150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	160	110	400	420	700	703	-	1439/1615	1464/-	-/-	417/417S	
30	200			150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	160	110	400	420	725	746	-	1464/1640	1539/-	-/-	418/418S	
37	200			150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	160	110	400	420	755	765	-	1509/1685	1594/-	-/-	419/419S	
45	200			150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	160	110	400	420	755	765	-	1534/1710	1619/-	-/-	420/420S	
6	55		200	150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	160	110	400	460	825	881	-	1614/1790	1644/-	-/-	421/421S	
	75		200	150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	160	110	400	458	858	906	-	1664/1840	1701/-	-/-	422/422S	
	4		200	150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	160	110	400	380	593	593	-	1204/1380	1184/-	-/-	413/413S	
	5.5		200	150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	160	110	400	380	593	593	-	1204/1380	1184/-	-/-	413/413S	
	7.5		200	150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	160	110	400	380	640	642	-	1314/1490	1314/-	-/-	414/414S	
150-355	6	11	200	150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	160	110	400	380	640	642	-	1359/1535	1359/-	-/-	415/415S	
		15	200	150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	160	110	400	420	700	703	-	1439/1615	1464/-	-/-	417/417S	
		45	200	150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	180	110	400	455	790	800	-	1716/1912	1801/-	-/-	651/651S	
		55	200	150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	180	110	400	495	860	916	-	1796/1992	1826/-	-/-	652/652S	
		75	200	150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	180	110	400	495	895	943	-	1846/2042	1883/-	-/-	653/653S	
	6	90	200	150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	180	110	400	495	895	943	-	1896/2092	1931/-	-/-	654/654S	
		15	200	150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	180	110	400	455	735	738	-	1621/1817	1646/-	-/-	649/649S	
		18.5	200	150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	180	110	400	455	760	781	-	1646/1842	1721/-	-/-	650/650S	
		22	200	150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	180	110	400	455	760	781	-	1646/1842	1721/-	-/-	650/650S	

Pump size	Poles	P2 [kW]	Flanges							NK/NKE dimensions [mm]											Base frame code ³⁶⁾	
			DNS	DND	SS			SD			A	A2	H2	H3	H4		L ³⁶⁾					
					PN10	PN16	PN25	PN10	PN16	PN25					NK		NKE	NK		NKE		
															IE3	IE4		IE3	IE4			
150-360	4	37	200	150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	160	110	400	455	790	800	-	1529/1705	1614/-	-/-	598/598S	
		45	200	150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	160	110	400	455	790	800	-	1554/1730	1639/-	-/-	599/599S	
		55	200	150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	160	110	400	495	860	916	-	1634/1810	1664/-	-/-	600/600S	
		75	200	150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	160	110	400	495	895	943	-	1684/1860	1721/-	-/-	601/601S	
		90	200	150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	160	110	400	495	895	943	-	1734/1910	1769/-	-/-	602/602S	
	6	110	200	150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	160	110	400	503	1033	1010	-	1934/2110	1934/-	-/-	603/603S	
		11	200	150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	160	110	400	415	675	677	-	1379/1555	1379/-	-/-	595/595S	
		15	200	150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	160	110	400	455	735	738	-	1459/1635	1484/-	-/-	596/596S	
		18.5	200	150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	160	110	400	455	760	781	-	1484/1660	1559/-	-/-	597/597S	
		22	200	150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	160	110	400	455	760	781	-	1484/1660	1559/-	-/-	597/597S	
150-380	4	30	200	150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	160	110	400	455	790	800	-	1554/1730	1639/-	-/-	599/599S	
		55	200	150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	160	110	450	495	860	916	-	1754/1930	1784/-	-/-	427/427S	
		75	200	150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	160	110	450	495	895	943	-	1804/1980	1841/-	-/-	428/428S	
		90	200	150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	160	110	450	495	895	943	-	1854/2030	1889/-	-/-	429/429S	
		110	200	150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	160	110	450	503	1033	1010	-	2054/2230	2054/-	-/-	430/430S	
	6	132	200	150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	160	110	450	503	1033	1010	-	2164/2340	2154/-	-/-	431/431S	
		15	200	150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	160	110	450	455	735	738	-	1579/1755	1604/-	-/-	424/424S	
		18.5	200	150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	160	110	450	455	760	781	-	1604/1780	1679/-	-/-	425/425S	
		22	200	150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	160	110	450	455	760	781	-	1604/1780	1679/-	-/-	425/425S	
		30	200	150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	160	110	450	455	790	800	-	1674/1850	1759/-	-/-	426/426S	
150-390	4	37	200	150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	160	110	450	495	860	916	-	1754/1930	1784/-	-/-	427/427S	
		55	200	150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	160	110	450	495	860	916	-	1759/1935	1789/-	-/-	606/606S	
		75	200	150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	160	110	450	495	895	943	-	1809/1985	1846/-	-/-	607/607S	
		90	200	150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	160	110	450	495	895	943	-	1859/2035	1894/-	-/-	608/608S	
		110	200	150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	160	110	450	503	1033	1010	-	2059/2235	2059/-	-/-	609/609S	
	6	132	200	150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	160	110	450	503	1033	1010	-	2169/2345	2159/-	-/-	610/610S	
		160	200	150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	160	110	450	503	1033	1010	-	2169/2345	2159/-	-/-	610/610S	
		18.5	200	150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	160	110	450	455	760	781	-	1609/1785	1684/-	-/-	604/604S	
		22	200	150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	160	110	450	455	760	781	-	1609/1785	1684/-	-/-	604/604S	
		30	200	150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	160	110	450	455	790	800	-	1679/1855	1764/-	-/-	605/605S	
200-300	4	37	200	150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	160	110	450	495	860	916	-	1759/1935	1789/-	-/-	606/606S	
		45	200	150	8xø23	12xø23	12xø28	8xø23	8xø23	8xø28	160	110	450	495	895	943	-	1809/1985	1846/-	-/-	607/607S	
		30	250	200	12xø23	12xø28	12xø31	8xø23	12xø23	12xø28	160	110	400	490	795	816	-	1489/1705	1564/-	-/-	459/459S	
		37	250	200	12xø23	12xø28	12xø31	8xø23	12xø23	12xø28	160	110	400	490	825	835	-	1534/1750	1619/-	-/-	460/460S	
	6	45	250	200	12xø23	12xø28	12xø31	8xø23	12xø23	12xø28	160	110	400	490	825	835	-	1559/1775	1644/-	-/-	461/461S	
		55	250	200	12xø23	12xø28	12xø31	8xø23	12xø23	12xø28	160	110	400	530	895	951	-	1659/1855	1669/-	-/-	462/462S	
		11	250	200	12xø23	12xø28	12xø31	8xø23	12xø23	12xø28	160	110	400	490	750	752	-	1384/1600	1384/-	-/-	457/457S	
		15	250	200	12xø23	12xø28	12xø31	8xø23	12xø23	12xø28	160	110	400	490	770	773	-	1464/1680	1489/-	-/-	458/458S	

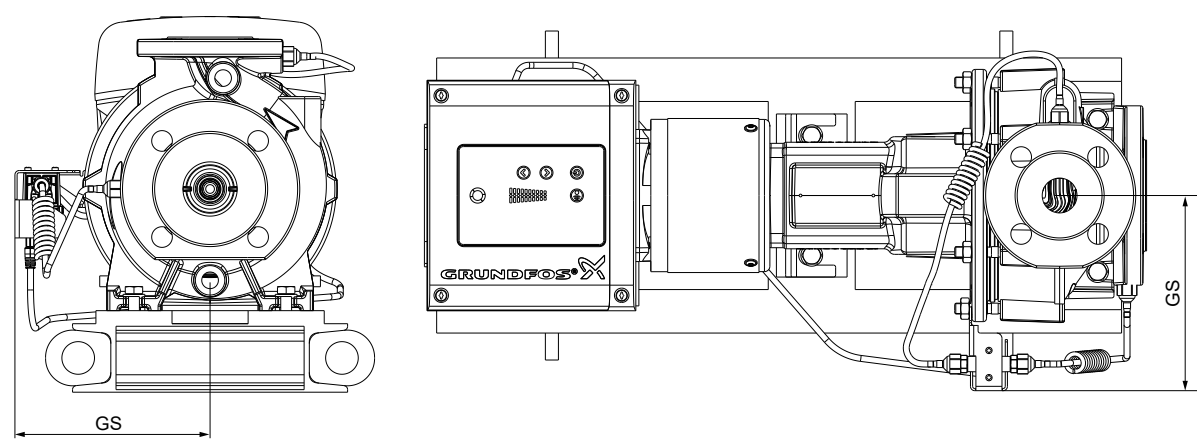
Pump size	Poles	P2 [kW]	Flanges							NK/NKE dimensions [mm]										Base frame code ³⁶⁾	
			DNS	DND	SS			SD			A	A2	H2	H3	H4		L ³⁶⁾				
					PN10	PN16	PN25	PN10	PN16	PN25					NK		NKE	NK			NKE
															IE3	IE4		IE3	IE4		
200-350	4	11	250	200	12xø23	12xø28	12xø31	8xø23	12xø23	12xø28	160	110	450	490	-	-	940	-/-	-/-	1306/1482	465/456S
		15	250	200	12xø23	12xø28	12xø31	8xø23	12xø23	12xø28	160	110	450	490	-	-	940	-/-	-/-	1306/1482	466/466S
		18.5	250	200	12xø23	12xø28	12xø31	8xø23	12xø23	12xø28	160	110	450	490	-	-	940	-/-	-/-	1376/1552	467/467S
		22	250	200	12xø23	12xø28	12xø31	8xø23	12xø23	12xø28	160	110	450	490	770	773	940	1439/1645	1464/-	1376/1552	467/467S
		30	250	200	12xø23	12xø28	12xø31	8xø23	12xø23	12xø28	160	110	450	490	795	816	-	1464/1670	1539/-	-/-	468/468S
		37	250	200	12xø23	12xø28	12xø31	8xø23	12xø23	12xø28	160	110	450	490	825	835	-	1509/1715	1594/-	-/-	469/469S
		45	250	200	12xø23	12xø28	12xø31	8xø23	12xø23	12xø28	160	110	450	490	825	835	-	1534/1740	1619/-	-/-	470/470S
		55	250	200	12xø23	12xø28	12xø31	8xø23	12xø23	12xø28	160	110	450	530	895	951	-	1614/1820	1644/-	-/-	471/471S
		75	250	200	12xø23	12xø28	12xø31	8xø23	12xø23	12xø28	160	110	450	530	930	978	-	1664/1870	1701/-	-/-	472/472S
		90	250	200	12xø23	12xø28	12xø31	8xø23	12xø23	12xø28	160	110	450	530	930	978	-	1714/1920	1749/-	-/-	473/473S
	6	5.5	250	200	12xø23	12xø28	12xø31	8xø23	12xø23	12xø28	160	110	450	490	703	703	-	1204/1410	1184/-	-/-	464/464S
		7.5	250	200	12xø23	12xø28	12xø31	8xø23	12xø23	12xø28	160	110	450	490	750	752	-	1314/1520	1314/-	-/-	465/465S
		11	250	200	12xø23	12xø28	12xø31	8xø23	12xø23	12xø28	160	110	450	490	750	752	-	1359/1565	1359/-	-/-	466/466S
		15	250	200	12xø23	12xø28	12xø31	8xø23	12xø23	12xø28	160	110	450	490	770	773	-	1439/1645	1464/-	-/-	467/467S
		18.5	250	200	12xø23	12xø28	12xø31	8xø23	12xø23	12xø28	160	110	450	490	795	816	-	1464/1670	1539/-	-/-	468/468S
		22	250	200	12xø23	12xø28	12xø31	8xø23	12xø23	12xø28	160	110	450	490	770	816	-	1439/1645	1539/-	-/-	467/467S
200-380	4	55	250	200	12xø23	12xø28	12xø31	8xø23	12xø23	12xø28	185	110	500	580	945	1001	-	1779/1975	1809/-	-/-	491/491S
		75	250	200	12xø23	12xø28	12xø31	8xø23	12xø23	12xø28	185	110	500	580	980	1028	-	1829/2025	1866/-	-/-	492/492S
		90	250	200	12xø23	12xø28	12xø31	8xø23	12xø23	12xø28	185	110	500	580	980	1028	-	1879/2075	1914/-	-/-	493/493S
		110	250	200	12xø23	12xø28	12xø31	8xø23	12xø23	12xø28	185	110	500	580	1110	1087	-	2079/2275	2079/-	-/-	494/494S
		132	250	200	12xø23	12xø28	12xø31	8xø23	12xø23	12xø28	185	110	500	580	1110	1087	-	2189/2385	2179/-	-/-	495/495S
		15	250	200	12xø23	12xø28	12xø31	8xø23	12xø23	12xø28	185	110	500	540	820	823	-	1604/1800	1629/-	-/-	488/488S
	6	18.5	250	200	12xø23	12xø28	12xø31	8xø23	12xø23	12xø28	185	110	500	540	845	866	-	1629/1825	1704/-	-/-	489/489S
		22	250	200	12xø23	12xø28	12xø31	8xø23	12xø23	12xø28	185	110	500	540	845	866	-	1629/1825	1704/-	-/-	489/489S
		30	250	200	12xø23	12xø28	12xø31	8xø23	12xø23	12xø28	185	110	500	540	875	885	-	1699/1895	1784/-	-/-	490/490S
		132	250	200	12xø23	12xø28	12xø31	8xø23	12xø23	12xø28	200	110	605	580	1110	1087	-	2204/2450	2194/-	-/-	500/500S
200-500	4	160	250	200	12xø23	12xø28	12xø31	8xø23	12xø23	12xø28	200	110	605	580	1110	1087	-	2204/2450	2194/-	-/-	500/500S
		185	250	200	12xø23	12xø28	12xø31	8xø23	12xø23	12xø28	200	110	605	580	1110	1087	-	2204/2450	2194/-	-/-	500/500S
		200	250	200	12xø23	12xø28	12xø31	8xø23	12xø23	12xø28	200	110	605	580	1110	1087	-	2204/2450	2194/-	-/-	500/500S
		220	250	200	12xø23	12xø28	12xø31	8xø23	12xø23	12xø28	200	110	605	580	1235	1224	-	2404/2650	2336/-	-/-	501/501S
		250	250	200	12xø23	12xø28	12xø31	8xø23	12xø23	12xø28	200	110	605	580	1235	1224	-	2404/2650	2336/-	-/-	501/501S
		280	250	200	12xø23	12xø28	12xø31	8xø23	12xø23	12xø28	200	110	605	580	1235	1224	-	2404/2650	2506/-	-/-	501/501S
	6	37	250	200	12xø23	12xø28	12xø31	8xø23	12xø23	12xø28	200	110	605	580	945	1001	-	1794/2040	1824/-	-/-	496/496S
		45	250	200	12xø23	12xø28	12xø31	8xø23	12xø23	12xø28	200	110	605	580	980	1028	-	1844/2090	1881/-	-/-	497/497S
		55	250	200	12xø23	12xø28	12xø31	8xø23	12xø23	12xø28	200	110	605	580	980	1028	-	1894/2140	1929/-	-/-	498/498S
		75	250	200	12xø23	12xø28	12xø31	8xø23	12xø23	12xø28	200	110	605	580	1110	1087	-	2094/2340	2094/-	-/-	499/499S
250-315	4	90	250	200	12xø23	12xø28	12xø31	8xø23	12xø23	12xø28	200	110	605	580	1110	1087	-	2204/2450	2194/-	-/-	500/500S
		11	300	250	12xø23	12xø28	16xø31	12xø23	12xø28	12xø31	185	110	400	540	-	-	940	-/-	-/-	1544/1762	503/503S
		15	300	250	12xø23	12xø28	16xø31	12xø23	12xø28	12xø31	185	110	400	540	-	-	940	-/-	-/-	1544/1762	504/504S
		18.5	300	250	12xø23	12xø28	16xø31	12xø23	12xø28	12xø31	185	110	400	540	-	-	940	-/-	-/-	1614/1832	505/505S
		22	300	250	12xø23	12xø28	16xø31	12xø23	12xø28	12xø31	185	110	400	540	820	823	940	1669/1943	1694/-	1614/1832	505/505S
		30	300	250	12xø23	12xø28	16xø31	12xø23	12xø28	12xø31	185	110	400	540	845	866	-	1694/1968	1769/-	-/-	506/506S
		37	300	250	12xø23	12xø28	16xø31	12xø23	12xø28	12xø31	185	110	400	540	875	885	-	1739/2013	1824/-	-/-	507/507S
		45	300	250	12xø23	12xø28	16xø31	12xø23	12xø28	12xø31	185	110	400	540	875	885	-	1764/2038	1849/-	-/-	508/508S
		55	300	250	12xø23	12xø28	16xø31	12xø23	12xø28	12xø31	185	110	400	580	945	1001	-	1844/2118	1874/-	-/-	509/509S
	6	7.5	300	250	12xø23	12xø28	16xø31	12xø23	12xø28	12xø31	185	110	400	540	800	802	-	1544/1818	1544/-	-/-	503/503S
11		300	250	12xø23	12xø28	16xø31	12xø23	12xø28	12xø31	185	110	400	540	800	802	-	1589/1863	1589/-	-/-	504/504S	
15		300	250	12xø23	12xø28	16xø31	12xø23	12xø28	12xø31	185	110	400	540	820	823	-	1669/1968	1694/-	-/-	505/505S	

Pump size	Poles	P2 [kW]	Flanges							NK/NKE dimensions [mm]											Base frame code ³⁶⁾
			DNS	DND	SS			SD			A	A2	H2	H3	H4		L ³⁶⁾				
					PN10	PN16	PN25	PN10	PN16	PN25					NK	NKE	NK		NKE		
																	IE3	IE4		IE3	
250-360	4	37	300	250	12xø23	12xø28	16xø31	12xø23	12xø28	12xø31	175	110	400	590	925	935	-	1733/2017	1818/-	-/-	515/515S
		45	300	250	12xø23	12xø28	16xø31	12xø23	12xø28	12xø31	175	110	400	590	925	935	-	1758/2042	1843/-	-/-	516/516S
		55	300	250	12xø23	12xø28	16xø31	12xø23	12xø28	12xø31	175	110	400	630	995	1051	-	1838/2122	1868/-	-/-	517/517S
		75	300	250	12xø23	12xø28	16xø31	12xø23	12xø28	12xø31	175	110	400	630	1030	1078	-	1888/2172	1925/-	-/-	518/518S
		90	300	250	12xø23	12xø28	16xø31	12xø23	12xø28	12xø31	175	110	400	630	1030	1078	-	1938/2222	1973/-	-/-	519/519S
	6	11	300	250	12xø23	12xø28	16xø31	12xø23	12xø28	12xø31	175	110	400	590	850	852	-	1583/1867	1583/-	-/-	512/512S
		15	300	250	12xø23	12xø28	16xø31	12xø23	12xø28	12xø31	175	110	400	590	870	873	-	1663/1947	1688/-	-/-	513/513S
		18.5	300	250	12xø23	12xø28	16xø31	12xø23	12xø28	12xø31	175	110	400	590	895	916	-	1688/1972	1763/-	-/-	514/514S
		22	300	250	12xø23	12xø28	16xø31	12xø23	12xø28	12xø31	175	110	400	590	895	916	-	1688/1972	1763/-	-/-	514/514S
		30	300	250	12xø23	12xø28	16xø31	12xø23	12xø28	12xø31	175	110	400	590	925	935	-	1758/2042	1843/-	-/-	516/516S
250-380	4	55	300	250	12xø23	12xø28	16xø31	12xø23	12xø28	12xø31	165	110	500	630	995	1051	-	1768/2047	1833/-	-/-	434/434S
		75	300	250	12xø23	12xø28	16xø31	12xø23	12xø28	12xø31	165	110	500	630	1030	1078	-	1818/2097	1890/-	-/-	435/435S
		90	300	250	12xø23	12xø28	16xø31	12xø23	12xø28	12xø31	165	110	500	630	1030	1078	-	1868/2147	1938/-	-/-	436/436S
		110	300	250	12xø23	12xø28	16xø31	12xø23	12xø28	12xø31	165	110	500	630	1160	1137	-	2068/2347	2103/-	-/-	437/437S
		132	300	250	12xø23	12xø28	16xø31	12xø23	12xø28	12xø31	165	110	500	630	1160	1137	-	2178/2457	2203/-	-/-	438/438S
	6	160	300	250	12xø23	12xø28	16xø31	12xø23	12xø28	12xø31	165	110	500	630	1160	1137	-	2178/2457	2203/-	-/-	438/438S
		18.5	300	250	12xø23	12xø28	16xø31	12xø23	12xø28	12xø31	165	110	500	590	895	916	-	1618/1897	1728/-	-/-	432/432S
		22	300	250	12xø23	12xø28	16xø31	12xø23	12xø28	12xø31	165	110	500	590	895	916	-	1618/1897	1728/-	-/-	432/432S
		30	300	250	12xø23	12xø28	16xø31	12xø23	12xø28	12xø31	165	110	500	590	925	935	-	1688/1967	1808/-	-/-	433/433S
		37	300	250	12xø23	12xø28	16xø31	12xø23	12xø28	12xø31	165	110	500	630	995	1051	-	1768/2047	1833/-	-/-	434/434S
300-300	4	45	350	300	16xø23	16xø28	16xø34	12xø23	12xø28	16xø31	200	125	400	650	985	995	-	1824/2113	1909/-	-/-	525/525S
		55	350	300	16xø23	16xø28	16xø34	12xø23	12xø28	16xø31	200	125	400	690	1055	1111	-	1904/2193	1934/-	-/-	526/526S
		75	350	300	16xø23	16xø28	16xø34	12xø23	12xø28	16xø31	200	125	400	690	1090	1138	-	1954/2243	1991/-	-/-	527/527S
		90	350	300	16xø23	16xø28	16xø34	12xø23	12xø28	16xø31	200	125	400	690	1090	1138	-	2004/2293	2039/-	-/-	528/528S
		110	350	300	16xø23	16xø28	16xø34	12xø23	12xø28	16xø31	200	125	400	690	1220	1197	-	2204/2493	2204/-	-/-	529/529S
	6	11	350	300	16xø23	16xø28	16xø34	12xø23	12xø28	16xø31	200	125	400	650	910	912	-	1649/1938	1649/-	-/-	522/522S
		15	350	300	16xø23	16xø28	16xø34	12xø23	12xø28	16xø31	200	125	400	650	930	933	-	1729/2018	1754/-	-/-	523/523S
		18.5	350	300	16xø23	16xø28	16xø34	12xø23	12xø28	16xø31	200	125	400	650	955	976	-	1754/2043	1829/-	-/-	524/524S
		22	350	300	16xø23	16xø28	16xø34	12xø23	12xø28	16xø31	200	125	400	650	955	976	-	1754/2043	1829/-	-/-	524/524S
		30	350	300	16xø23	16xø28	16xø34	12xø23	12xø28	16xø31	200	125	400	650	985	995	-	1824/2113	1909/-	-/-	525/525S
300-310	4	55	350	300	16xø23	16xø28	16xø34	12xø23	12xø28	16xø31	220	125	400	690	1055	1111	-	1924/2243	1954/-	-/-	534/534S
		75	350	300	16xø23	16xø28	16xø34	12xø23	12xø28	16xø31	220	125	400	690	1090	1138	-	1974/2293	2011/-	-/-	535/535S
		90	350	300	16xø23	16xø28	16xø34	12xø23	12xø28	16xø31	220	125	400	690	1090	1138	-	2024/2343	2059/-	-/-	536/536S
		110	350	300	16xø23	16xø28	16xø34	12xø23	12xø28	16xø31	220	125	400	690	1220	1197	-	2224/2543	2224/-	-/-	537/537S
		132	350	300	16xø23	16xø28	16xø34	12xø23	12xø28	16xø31	220	125	400	690	1220	1197	-	2334/2653	2324/-	-/-	538/538S
	6	15	350	300	16xø23	16xø28	16xø34	12xø23	12xø28	16xø31	220	125	400	650	930	933	-	1749/2068	1774/-	-/-	531/531S
		18.5	350	300	16xø23	16xø28	16xø34	12xø23	12xø28	16xø31	220	125	400	650	955	976	-	1774/2093	1849/-	-/-	532/532S
		22	350	300	16xø23	16xø28	16xø34	12xø23	12xø28	16xø31	220	125	400	650	955	976	-	1774/2093	1849/-	-/-	532/532S
		30	350	300	16xø23	16xø28	16xø34	12xø23	12xø28	16xø31	220	125	400	650	985	995	-	1844/2163	1929/-	-/-	533/533S
		37	350	300	16xø23	16xø28	16xø34	12xø23	12xø28	16xø31	220	125	400	690	1055	1111	-	1924/2243	1954/-	-/-	534/534S
300-350	4	90	350	300	16xø23	16xø28	16xø34	12xø23	12xø28	16xø31	190	125	400	630	1030	1078	-	1949/2248	1984/-	-/-	549/549S
		110	350	300	16xø23	16xø28	16xø34	12xø23	12xø28	16xø31	190	125	400	630	1160	1137	-	2149/2448	2149/-	-/-	550/550S
		132	350	300	16xø23	16xø28	16xø34	12xø23	12xø28	16xø31	190	125	400	630	1160	1137	-	2259/2558	2249/-	-/-	551/551S
		160	350	300	16xø23	16xø28	16xø34	12xø23	12xø28	16xø31	190	125	400	630	1160	1137	-	2259/2558	2249/-	-/-	551/551S
	30	350	300	16xø23	16xø28	16xø34	12xø23	12xø28	16xø31	190	125	400	590	925	935	-	1769/2068	1854/-	-/-	546/546S	
	6	37	350	300	16xø23	16xø28	16xø34	12xø23	12xø28	16xø31	190	125	400	630	995	1051	-	1849/2148	1879/-	-/-	547/547S
	45	350	300	16xø23	16xø28	16xø34	12xø23	12xø28	16xø31	190	125	400	630	1030	1078	-	1899/2198	1936/-	-/-	548/548S	

Pump size	Poles	P2 [kW]	Flanges							NK/NKE dimensions [mm]											Base frame code ³⁶⁾	
			DNS	DND	SS			SD			A	A2	H2	H3	H4		L ³⁶⁾					
					PN10	PN16	PN25	PN10	PN16	PN25					NK		NKE	NK		NKE		
															IE3	IE4		IE3	IE4			
300-400	4	200	350	300	16xø23	16xø28	16xø34	12xø23	12xø28	16xø31	190	110	400	630	1160	1137	-	2251/2550	2241/-	-/-	559/559S	
		220	350	300	16xø23	16xø28	16xø34	12xø23	12xø28	16xø31	190	110	400	630	1285	1274	-	2451/2750	2383/-	-/-	560/560S	
		250	350	300	16xø23	16xø28	16xø34	12xø23	12xø28	16xø31	190	110	400	630	1285	1274	-	2451/2750	2383/-	-/-	560/560S	
		280	350	300	16xø23	16xø28	16xø34	12xø23	12xø28	16xø31	190	110	400	630	1285	1274	-	2451/2750	2553/-	-/-	560/560S	
		315	350	300	16xø23	16xø28	16xø34	12xø23	12xø28	16xø31	190	110	400	630	1285	1274	-	2451/2750	2553/-	-/-	560/560S	
	6	55	350	300	16xø23	16xø28	16xø34	12xø23	12xø28	16xø31	190	110	400	630	1030	1078	-	1941/2240	1976/-	-/-	557/557S	
		75	350	300	16xø23	16xø28	16xø34	12xø23	12xø28	16xø31	190	110	400	630	1160	1137	-	2141/2440	2141/-	-/-	558/558S	
		90	350	300	16xø23	16xø28	16xø34	12xø23	12xø28	16xø31	190	110	400	630	1160	1137	-	2251/2550	2241/-	-/-	559/559S	
	350-350	4	110	400	350	16xø28	16xø31	16xø37	16xø23	16xø28	16xø34	275	125	500	740	1270	1247	-	2209/2508	2209/-	-/-	568/568S
132			400	350	16xø28	16xø31	16xø37	16xø23	16xø28	16xø34	275	125	500	740	1270	1247	-	2319/2618	2309/-	-/-	569/569S	
160			400	350	16xø28	16xø31	16xø37	16xø23	16xø28	16xø34	275	125	500	740	1270	1247	-	2319/2618	2309/-	-/-	569/569S	
185			400	350	16xø28	16xø31	16xø37	16xø23	16xø28	16xø34	275	125	500	740	1270	1247	-	2319/2618	2309/-	-/-	569/569S	
200			400	350	16xø28	16xø31	16xø37	16xø23	16xø28	16xø34	275	125	500	740	1270	1247	-	2319/2618	2309/-	-/-	569/569S	
220			400	350	16xø28	16xø31	16xø37	16xø23	16xø28	16xø34	275	125	500	740	1395	1384	-	2454/2750	2451/-	-/-	574/574S	
250			400	350	16xø28	16xø31	16xø37	16xø23	16xø28	16xø34	275	125	500	740	1395	1384	-	2454/2750	2451/-	-/-	574/574S	
280			400	350	16xø28	16xø31	16xø37	16xø23	16xø28	16xø34	275	125	500	740	1395	1384	-	2624/2920	2621/-	-/-	574/574S	
315			400	350	16xø28	16xø31	16xø37	16xø23	16xø28	16xø34	275	125	500	740	1395	1384	-	2624/2920	2621/-	-/-	574/574S	
6		30	400	350	16xø28	16xø31	16xø37	16xø23	16xø28	16xø34	275	125	500	700	1035	1045	-	1829/2128	1914/-	-/-	564/564S	
		37	400	350	16xø28	16xø31	16xø37	16xø23	16xø28	16xø34	275	125	500	740	1105	1161	-	1909/2208	1939/-	-/-	565/565S	
		45	400	350	16xø28	16xø31	16xø37	16xø23	16xø28	16xø34	275	125	500	740	1140	1188	-	1959/2258	1996/-	-/-	566/566S	
		55	400	350	16xø28	16xø31	16xø37	16xø23	16xø28	16xø34	275	125	500	740	1140	1188	-	2009/2308	2044/-	-/-	567/567S	

³⁶⁾ Pump with standard coupling/pump with spacer coupling.

Dimensional drawing, NKE Series 2000



TM1040617

Dimensions NKE Series 2000

Pump size	GS [mm]
NKE 32-130.1	179
NKE 32-130	179
NKE 32-165.1	179
NKE 32-180	179
NKE 32-205.1	205
NKE 40-130	179
NKE 40-180	179
NKE 40-220	225
NKE 40-225	225
NKE 50-130	179
NKE 50-225	225
NKE 50-280	225
NKE 50-350	261
NKE 65-130	179
NKE 65-180	179
NKE 65-225	222
NKE 65-280	239
NKE 80-180	179
NKE 80-225	222
NKE 80-280	239
NKE 80-350	267
NKE 100-180	179
NKE 100-225	222
NKE 125-180	179
NKE 125-225	222
NKE 150-225	222
NKE 200-350	269
NKE 250-315	323

18. Minimum efficiency index

Minimum efficiency index (MEI) means the dimensionless scale unit for hydraulic pump efficiency at best efficiency point (BEP), part load (PL) and overload (OL). The Commission Regulation (EU) sets efficiency requirements to MEI greater than or equal to 0.10 as from 1 January 2013 and MEI greater than or equal to 0.40 as from 1 January 2015. An indicative benchmark for best-performing water pump available on the market as from 1 January 2013 is determined in the Regulation.

- The benchmark for most efficient water pumps is MEI greater than or equal to 0.70.
- The efficiency of a pump with a trimmed impeller is usually lower than that of a pump with the full impeller diameter. The trimming of the impeller will adapt the pump to a fixed duty point, leading to reduced energy consumption. The minimum efficiency index (MEI) is based on the full impeller diameter.
- The operation of this water pump with variable duty points may be more efficient and economic when controlled, for example by using a variable-speed drive that matches the pump duty to the system.

Information on benchmark efficiency is available at <http://europump.eu/efficiencycharts>.

2-pole	
Pump size	NK MEI
32-130.1/144	0.70
32-130/142	0.70
32-165.1/177	0.70
32-180/177	0.70
32-205.1/207	0.60
40-130/142	0.70
40-180/176	0.70
40-190/206	0.70
40-220/250	0.70
40-225/246	0.70
50-130/142	0.70
50-220/221	0.70
50-225/240	0.70
50-280/262	0.70
65-130/144	0.70
65-180/172	0.70
65-210/225	0.70
65-225/242	0.70
80-180.1/177	0.70
80-180/174	0.70
80-225/225	0.70
100-180/172	0.70
100-225.1/212	0.51
100-225/238	0.70
125-180/176	0.70

4-pole	
Pump size	NK MEI
32-130.1/144	0.70
32-130/142	0.70
32-165.1/177	0.70
32-180/177	0.70
32-205.1/207	0.70
40-130/142	0.70
40-180/176	0.70
40-190/206	0.70
40-220/250	0.70
40-225/250	0.70
50-130/142	0.70
50-220/221	0.70
50-225/240	0.70
50-280/262	0.70
50-350/340-336	0.70
65-130/141	0.70
65-180/172	0.70
65-210/225	0.70
65-225/242	0.70
65-280/280	0.70
80-180/174	0.70
80-225/225	0.70
80-280/278-270	0.70
80-350/328	0.70
80-380/438	0.39
100-180/174	0.70
100-225.1/222	0.70
100-225/238	0.70
100-280/256	0.70
100-350/326	0.70
100-360/369	0.63
100-380/426	0.65
125-180/176	0.70
125-225/232	0.70
125-280/270	0.70
125-320/288	0.53
125-350/333-329	0.70
125-355/332	0.70
125-360/364	0.70
125-380/410	0.63
150-225/242	0.70
150-280/273	0.70
150-300/289	0.70
150-350.1/310	0.66
150-350/332	0.70
150-355/360-354	0.67
150-360/370-364	0.70
150-380/430	0.60
150-390/415	0.70
200-300/306	0.70
200-350/341	0.70

4-pole	
200-380/40	0.52
200-500/530	– ³⁷⁾
250-315/304-288	0.70
250-360/370	0.56
250-380/416	– ³⁷⁾
300-300/346-340	0.70
300-310/350	0.70
300-350/370	– ³⁷⁾
300-400/480	– ³⁷⁾
350-350/416-382	– ³⁷⁾

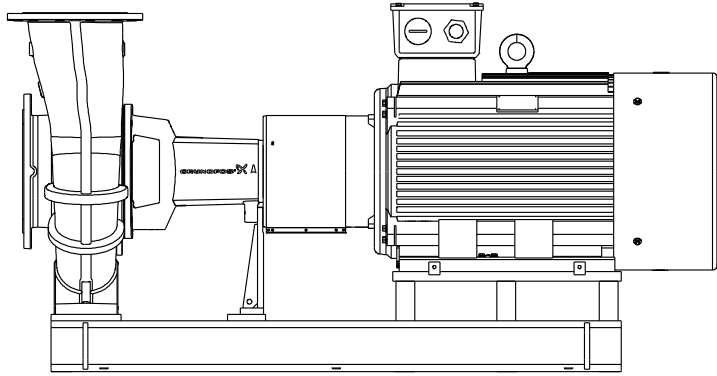
³⁷⁾ When P2 is above 150 kW, MEI is not needed.

6-pole	
Pump size	NK MEI
65-210/225	0.70
65-225/240	0.70
65-280/280	0.70
80-225/225	0.70
80-280/278-270	0.70
80-350/328	0.70
80-380/438	0.55
100-180/174	0.70
100-225.1/222	0.70
100-225/238	0.70
100-280/256	0.70
100-350/326	0.70
100-360/369	0.64
100-380/426	0.65
125-180/176	0.70
125-225/232	0.70
125-280/270	0.70
125-320/288	0.65
125-350/333-329	0.70
125-355/334	0.70
125-360/364	0.70
125-380/410	0.63
150-225/242	0.70
150-280/273	0.70
150-300/289	0.70
150-350.1/310	0.70
150-350/328-324	0.70
150-355/355-349	0.70
150-360/370-364	0.70
150-380/430	0.60
150-390/412	0.70
200-300/304	0.70
200-350/339	0.70
200-380/393	0.56
200-500/530	0.70
250-315/304-288	0.70
250-360/370	0.53
250-380/416	0.70
300-300/340	0.70
300-310/348	0.70
300-350/370	0.70
300-400/479	0.70
350-350/408-376	0.70

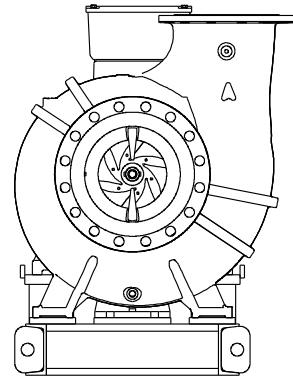
19. Base frames

NK/NKE base frame

The base frame code is stated for each pump mentioned in section NK/NKE base frames, dimensional sketches.



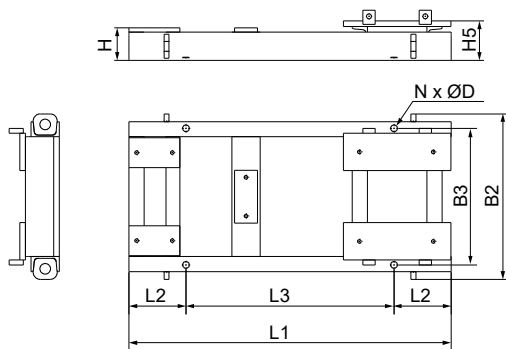
NK pump with base frame



TM1040096

NK with C-channel base frames, dimensional sketches

C-channel base frame with 4 mounting holes



TM1040593

C-channel base frame with 4 mounting holes

Base frame code	Dimensions [mm]								
	L1	L2	L3	B2	B3	H	H5	N	D
200	595	162	271	302	217	75	116	4	17
201	630	162	306	303	218	75	107	4	17
202	675	162	351	318	233	75	97	4	17
203	705	162	381	318	233	75	97	4	17
204	750	162	426	340	258	92	104	4	19
205	700	162	376	350	268	92	92	4	19
206	745	162	421	376	294	112	92	4	19
207	595	137	321	286	201	75	136	4	17
208	630	137	356	286	201	75	127	4	17
209	675	162	351	352	267	75	117	4	17
210	710	162	386	352	267	75	117	4	17
211	740	162	416	352	267	75	117	4	17
212	785	162	461	352	270	92	124	4	19
213	735	162	411	370	288	92	112	4	19
214	780	162	456	376	294	92	92	4	19
215	705	162	381	352	267	75	117	4	17
216	750	162	426	352	270	92	124	4	19
217	700	162	376	370	288	92	112	4	19
218	745	162	421	376	294	92	92	4	19
219	595	137	321	286	201	75	164	4	17
220	630	137	356	286	201	75	155	4	17
221	675	137	401	286	201	75	145	4	17
222	705	137	431	286	201	75	145	4	17
223	785	137	511	283	201	92	152	4	19
224	735	162	411	370	288	92	140	4	19
225	780	162	456	400	318	92	120	4	19
226	905	162	581	416	334	92	92	4	19
227	595	162	271	322	237	75	116	4	17
228	630	162	306	322	237	75	107	4	17
229	675	162	351	322	237	75	97	4	17
230	710	162	386	322	237	75	97	4	17
231	740	162	416	322	237	75	97	4	17
232	785	162	461	340	258	92	104	4	19
233	735	162	411	350	268	92	92	4	19
234	780	162	456	376	294	114	94	4	19
235	905	162	581	360	365	140	92	4	19

Base frame code	Dimensions [mm]								
	L1	L2	L3	B2	B3	H	H5	N	D
236	905	162	581	416	334	120	92	4	19
237	675	162	351	346	261	75	175	4	17
238	725	162	401	346	261	75	165	4	17
239	755	162	431	346	261	75	165	4	17
240	795	162	471	343	261	92	172	4	19
241	815	162	491	343	261	92	160	4	19
242	795	162	471	412	330	92	140	4	19
243	820	162	496	412	330	92	140	4	19
244	940	162	616	450	368	92	112	4	19
245	980	162	656	450	368	92	112	4	19
248	835	162	511	412	330	92	140	4	19
249	955	162	631	450	368	92	112	4	19
250	995	162	671	450	368	92	112	4	19
254	830	162	506	412	330	92	140	4	19
255	915	162	591	450	368	92	112	4	19
258	905	162	581	373	291	92	217	4	19
259	925	162	601	373	291	92	205	4	19
260	905	162	581	373	291	92	185	4	19
261	940	162	616	373	291	92	185	4	19
265	640	162	316	308	223	75	155	4	17
266	690	162	366	308	223	75	145	4	17
267	720	162	396	308	223	75	145	4	17
268	760	162	436	305	223	92	152	4	19
269	750	162	426	374	292	92	140	4	19
270	795	162	471	400	318	92	120	4	19
271	915	162	591	416	334	92	92	4	19
272	955	162	631	416	334	92	92	4	19
273	780	162	456	374	292	92	140	4	19
274	795	162	471	305	223	92	152	4	19
275	980	164	652	462	370	152	132	4	24
276	695	162	371	380	291	79	199	4	17
277	740	162	416	380	291	79	189	4	17
278	770	162	446	380	291	79	189	4	17
279	815	162	491	380	291	96	196	4	19
280	765	162	441	380	291	96	184	4	19
281	835	162	511	380	291	96	184	4	19
282	810	162	486	380	291	96	164	4	19
283	845	162	521	380	291	96	164	4	19
284	975	162	651	450	368	96	136	4	19
285	1015	162	691	450	368	96	136	6	19
293	850	162	526	380	291	79	189	4	17
294	880	162	556	380	291	79	189	4	17
295	925	162	601	380	291	96	196	4	19
296	875	162	551	380	291	96	184	4	19
297	945	162	621	380	291	96	184	4	19
298	920	162	596	380	291	96	164	4	19
299	955	162	631	380	291	96	164	4	19
302	760	162	436	415	326	79	189	4	17
303	790	162	466	415	326	79	189	4	17
304	835	162	511	415	326	96	196	4	19
305	785	162	461	415	326	96	184	4	19
306	855	162	531	415	326	96	184	4	19
307	830	162	506	415	326	96	164	4	19
308	865	162	541	415	326	96	164	4	19

Base frame code	Dimensions [mm]								
	L1	L2	L3	B2	B3	H	H5	N	D
309	955	162	631	481	399	96	136	4	19
317	880	162	556	415	326	79	189	4	17
318	925	162	601	415	326	96	196	4	19
319	875	162	551	415	326	96	184	4	19
320	945	162	621	415	326	96	184	4	19
321	920	162	596	415	326	96	164	4	19
322	955	162	631	415	326	96	164	4	19
325	875	162	551	415	326	96	234	4	19
326	920	162	596	415	326	96	214	4	19
327	955	162	631	415	326	96	214	4	19
333	675	162	351	376	291	79	179	4	17
334	725	162	401	376	291	79	169	4	17
335	755	162	431	376	291	79	169	4	17
336	795	162	471	373	291	96	176	4	19
337	815	162	491	373	291	96	164	4	19
338	795	162	471	446	364	96	144	4	19
339	915	162	591	450	368	96	116	4	19
340	955	162	631	450	368	96	116	4	19
341	980	164	652	462	370	136	136	4	24
342	940	162	616	450	368	96	116	4	19
343	980	162	656	450	368	96	116	4	19
344	1005	164	677	462	370	136	136	4	24
346	790	162	466	415	326	79	214	4	17
347	835	162	511	415	326	96	221	4	19
348	785	162	461	415	326	96	209	4	19
349	855	162	531	415	326	96	209	4	19
350	830	162	506	415	326	96	189	4	19
351	865	162	541	415	326	96	189	4	19
352	955	162	631	415	326	96	161	4	19
353	995	162	671	415	326	96	161	4	19
360	925	162	601	415	326	96	221	4	19
361	875	162	551	415	326	96	209	4	19
362	920	162	596	415	326	96	189	4	19
363	955	162	631	415	326	96	189	4	19
380	935	162	611	450	368	96	136	4	19
381	975	162	651	450	368	96	136	4	19
382	1000	164	672	500	408	136	156	4	24
386	875	162	551	415	326	96	246	4	19
387	825	162	501	415	326	96	234	4	19
388	870	162	546	415	326	96	214	4	19
389	905	162	581	415	326	96	214	4	19
390	995	162	671	415	326	96	186	4	19
404	845	162	521	520	411	100	268	4	19
405	890	162	566	520	411	100	248	4	19
406	925	162	601	520	411	100	248	4	19
412	1000	162	676	520	411	100	248	4	19
439	870	162	546	416	334	120	92	4	19
577	980	162	656	416	334	92	92	4	19
579	930	162	606	416	334	92	92	4	19
580	750	137	476	283	201	92	152	4	19
581	705	162	381	322	237	75	97	4	17
587	805	162	481	400	318	92	120	4	19
589	975	162	651	520	411	100	248	4	19
611	680	162	356	346	261	75	175	4	17

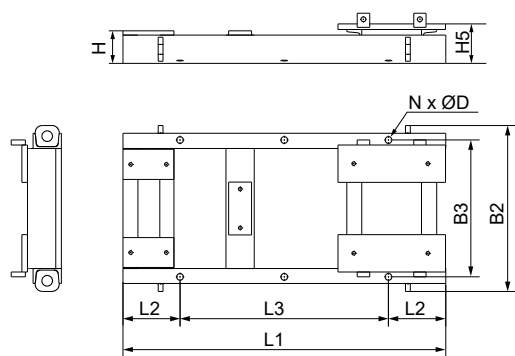
Base frame code	Dimensions [mm]								
	L1	L2	L3	B2	B3	H	H5	N	D
612	730	162	406	346	261	75	165	4	17
613	760	162	436	346	261	75	165	4	17
614	800	162	476	343	261	92	172	4	19
615	840	162	516	412	330	92	140	4	19
616	960	162	636	450	368	92	112	4	19
617	1000	162	676	450	368	92	112	4	19
619	945	162	621	416	334	92	92	4	19
625	965	162	641	441	359	112	92	4	19
627	765	162	441	343	261	92	140	4	19
630	820	162	496	370	288	92	160	4	19
631	800	162	476	412	330	92	140	4	19
673	805	162	481	343	261	96	176	4	19
674	825	162	501	343	261	96	164	4	19
675	805	162	481	412	330	96	144	4	19
683	685	162	361	346	261	79	179	4	17
684	735	162	411	346	261	79	169	4	17
685	765	162	441	346	261	79	169	4	17
678	990	162	666	450	368	96	116	4	19
200S	710	162	386	302	217	75	116	4	17
201S	740	162	416	303	218	75	107	4	17
202S	780	162	456	318	233	75	97	4	17
203S	810	162	486	318	233	75	97	4	17
204S	845	162	521	340	258	92	104	4	19
205S	795	162	471	350	268	92	92	4	19
206S	845	162	521	376	294	112	92	4	19
207S	710	137	436	286	201	75	136	4	17
208S	740	137	466	286	201	75	127	4	17
209S	780	162	456	352	267	75	117	4	17
210S	815	162	491	352	267	75	117	4	17
211S	845	162	521	352	267	75	117	4	17
212S	880	162	556	352	270	92	124	4	19
213S	830	162	506	370	288	92	112	4	19
214S	880	162	556	376	294	92	92	4	19
215S	810	162	486	352	267	75	117	4	17
216S	845	162	521	352	270	92	124	4	19
217S	795	162	471	370	288	92	112	4	19
218S	845	162	521	376	294	92	92	4	19
219S	710	137	436	286	201	75	164	4	17
220S	740	137	466	286	201	75	155	4	17
221S	780	137	506	286	201	75	145	4	17
222S	810	137	536	286	201	75	145	4	17
223S	880	137	606	283	201	92	152	4	19
224S	830	162	506	370	288	92	140	4	19
225S	880	162	556	400	318	92	120	4	19
226S	1000	162	676	416	334	92	92	4	19
227S	710	162	386	322	237	75	116	4	17
228S	740	162	416	322	237	75	107	4	17
229S	780	162	456	322	237	75	97	4	17
230S	815	162	491	322	237	75	97	4	17
231S	845	162	521	322	237	75	97	4	17
232S	880	162	556	340	258	92	104	4	19
233S	830	162	506	350	268	92	92	4	19
234S	880	162	556	376	294	114	94	4	19
235S	1000	162	676	360	265	140	92	4	19

Base frame code	Dimensions [mm]								
	L1	L2	L3	B2	B3	H	H5	N	D
236S	1000	162	676	416	334	120	92	4	19
237S	785	162	461	346	261	75	175	4	17
238S	825	162	501	346	261	75	165	4	17
239S	855	162	531	346	261	75	165	4	17
240S	895	162	571	343	261	92	172	4	19
241S	915	162	591	343	261	92	160	4	19
242S	890	162	566	412	330	92	140	4	19
243S	915	162	591	412	330	92	140	4	19
244S	1040	162	716	450	368	92	112	4	19
245S	1080	162	756	450	368	92	112	4	19
248S	930	162	606	412	330	92	140	4	19
249S	1055	162	731	450	368	92	112	4	19
250S	1095	162	771	450	368	92	112	4	19
254S	925	162	601	412	330	92	140	4	19
255S	1025	162	701	450	368	92	112	4	19
258S	1045	162	721	373	291	92	217	4	19
259S	1065	162	741	373	291	92	205	4	19
260S	1040	162	716	373	291	92	185	4	19
261S	1075	162	751	373	291	92	185	4	19
265S	790	162	466	308	223	75	155	4	17
266S	830	162	506	308	223	75	145	4	17
267S	860	162	536	308	223	75	145	4	17
268S	900	162	576	305	223	92	152	4	19
269S	885	162	561	374	292	92	140	4	19
270S	930	162	606	400	318	92	120	4	19
271S	1055	162	731	416	334	92	92	4	19
272S	1095	162	771	416	334	92	92	4	19
273S	920	162	596	374	292	92	140	4	19
274S	935	162	611	305	223	92	152	4	19
275S	1120	164	792	462	370	152	132	4	24
276S	805	162	481	380	291	79	199	4	17
277S	845	162	521	380	291	79	189	4	17
278S	875	162	551	380	291	79	189	4	17
279S	910	162	586	380	291	96	196	4	19
280S	860	162	536	380	291	96	184	4	19
281S	930	162	606	380	291	96	184	4	19
282S	910	162	586	380	291	96	164	4	19
283S	945	162	621	380	291	96	164	4	19
284S	1070	162	746	450	368	96	136	4	19
293S	995	162	671	380	291	79	189	4	17
294S	1025	162	701	380	291	79	189	4	17
295S	1060	162	736	380	291	96	196	4	19
296S	1010	162	686	380	291	96	184	4	19
297S	1080	162	756	380	291	96	184	4	19
298S	1060	162	736	380	291	96	164	4	19
299S	1095	162	771	380	291	96	164	4	19
302S	905	162	581	415	326	79	189	4	17
303S	935	162	611	415	326	79	189	4	17
304S	970	162	646	415	326	96	196	4	19
305S	920	162	596	415	326	96	184	4	19
306S	990	162	666	415	326	96	184	4	19
307S	970	162	646	415	326	96	164	4	19
308S	1005	162	681	415	326	96	164	4	19
309S	1100	162	776	481	399	96	136	4	19

Base frame code	Dimensions [mm]								
	L1	L2	L3	B2	B3	H	H5	N	D
317S	1025	162	701	415	326	79	189	4	17
318S	1060	162	736	415	326	96	196	4	19
319S	1010	162	686	415	326	96	184	4	19
320S	1080	162	756	415	326	96	184	4	19
321S	1060	162	736	415	326	96	164	4	19
322S	1095	162	771	415	326	96	164	4	19
325S	1010	162	686	415	326	96	234	4	19
326S	1060	162	736	415	326	96	214	4	19
327S	1095	162	771	415	326	96	214	4	19
333S	825	162	501	376	291	79	179	4	17
334S	865	162	541	376	291	79	169	4	17
335S	895	162	571	376	291	79	169	4	17
336S	935	162	611	373	291	96	176	4	19
337S	955	162	631	373	291	96	164	4	19
338S	930	162	606	446	364	96	144	4	19
339S	1055	162	731	450	368	96	116	4	19
340S	1095	162	771	450	368	96	116	4	19
341S	1120	164	792	462	370	136	136	4	24
342S	1080	162	756	450	368	96	116	4	19
343S	1120	162	796	450	368	96	116	4	19
344S	1145	164	817	462	370	136	136	4	24
346S	935	162	611	415	326	79	214	4	17
347S	970	162	646	415	326	96	221	4	19
348S	920	162	596	415	326	96	209	4	19
349S	990	162	666	415	326	96	209	4	19
350S	970	162	646	415	326	96	189	4	19
351S	1005	162	681	415	326	96	189	4	19
352S	1100	162	776	415	326	96	161	4	19
353S	1140	162	816	415	326	96	161	4	19
360S	1060	162	736	415	326	96	221	4	19
361S	1010	162	686	415	326	96	209	4	19
362S	1060	162	736	415	326	96	189	4	19
363S	1095	162	771	415	326	96	189	4	19
380S	1070	162	746	450	368	96	136	4	19
381S	1110	162	786	450	368	96	136	4	19
382S	1140	164	812	500	408	136	156	4	24
386S	1010	162	686	415	326	96	246	4	19
387S	960	162	636	415	326	96	234	4	19
388S	1010	162	686	415	326	96	214	4	19
389S	1045	162	721	415	326	96	214	4	19
390S	1130	162	806	415	326	96	186	4	19
404S	1020	162	696	520	411	100	268	4	19
405S	1070	162	746	520	411	100	248	4	19
406S	1105	162	781	520	411	100	248	4	19
412S	1180	162	856	520	411	100	248	4	19
439S	965	162	641	416	334	120	92	4	19
580S	845	137	571	283	201	92	152	4	19
581S	810	162	272	322	237	75	97	4	17
587S	905	162	581	400	318	92	120	4	19
611S	790	162	466	346	261	75	175	4	17
612S	830	162	506	346	261	75	165	4	17
613S	860	162	536	346	261	75	165	4	17
614S	900	162	576	343	261	92	172	4	19
615S	935	162	611	412	330	92	140	4	19

Base frame code	Dimensions [mm]								
	L1	L2	L3	B2	B3	H	H5	N	D
627S	860	162	536	370	288	92	140	4	19
630S	915	162	591	370	288	92	160	4	19
631S	890	162	566	412	330	92	140	4	19
634S	845	162	521	380	291	79	199	4	17
635S	885	162	561	380	291	79	189	4	17
636S	915	162	591	380	291	79	189	4	17
637S	950	162	626	380	291	96	196	4	19
638S	900	162	576	380	291	96	184	4	19
639S	970	162	646	380	291	96	184	4	19
640S	950	162	626	380	291	96	164	4	19
641S	985	162	661	380	291	96	164	4	19
673S	945	162	621	343	261	96	176	4	19
674S	965	162	641	343	261	96	164	4	19
675S	940	162	616	412	330	96	144	4	19
683S	835	162	511	346	261	79	179	4	17
684S	875	162	551	346	261	79	169	4	17
685S	905	162	581	346	261	79	169	4	17

C-channel base frame with 6 mounting holes



TM1040594

C-channel base frame with 6 mounting holes

Base frame code	Dimensions [mm]								
	L1	L2	L3	B2	B3	H	H5	N	D
246	1005	164	677	462	370	132	132	6	24
247	1080	164	752	505	413	156	136	6	24
251	1015	164	687	462	370	132	132	6	24
252	1080	164	752	505	413	156	136	6	24
253	1110	164	782	543	451	181	136	6	24
256	1195	166	863	544	420	250	180	6	28
257	1245	166	913	622	471	280	180	6	28
262	1025	162	701	442	360	92	157	6	19
263	1065	162	741	442	360	92	157	6	19
264	1085	164	757	500	408	132	177	6	24
286	1035	164	707	500	408	136	156	6	24
287	1100	164	772	505	413	136	136	6	24
288	1125	162	801	450	368	96	136	6	19
289	1145	164	817	500	408	136	156	6	24
290	1210	164	882	505	413	136	136	6	24
291	1235	164	907	546	454	161	136	6	24
292	1325	166	993	643	519	230	180	6	28
300	1045	162	721	450	368	96	136	6	19
301	1055	164	727	505	413	176	136	6	24

Base frame code	Dimensions [mm]								
	L1	L2	L3	B2	B3	H	H5	N	D
310	1035	162	711	481	399	96	136	6	19
311	1055	164	727	502	410	136	156	6	24
312	1120	164	792	505	413	136	136	6	24
313	1145	164	817	546	454	161	136	6	24
314	1235	166	903	643	519	230	180	6	28
315	1285	166	953	622	471	260	180	6	28
316	1335	166	1003	622	471	260	180	6	28
323	1045	162	721	481	399	96	136	6	19
324	1085	162	761	481	399	96	136	6	19
328	1045	162	721	415	326	96	186	6	19
329	1085	162	761	415	326	96	186	6	19
330	1105	164	777	502	410	136	206	6	24
331	1140	164	812	502	410	136	206	6	24
332	1170	164	842	546	454	136	186	6	24
345	1080	164	752	505	413	156	136	6	24
354	1055	164	727	502	410	136	181	6	24
355	1120	164	792	546	454	136	161	6	24
356	1145	164	817	543	451	136	136	6	24
357	1235	166	903	643	519	205	180	6	28
358	1285	166	953	622	471	235	180	6	28
359	1335	166	1003	622	471	235	180	6	28
364	1045	162	721	415	326	96	161	6	19
365	1085	162	761	415	326	96	161	6	19
366	1105	164	777	502	410	136	181	6	24
367	1140	164	812	502	410	136	181	6	24
368	1200	164	872	586	494	136	161	6	24
369	1035	162	711	520	411	100	248	6	19
370	1125	162	801	520	411	100	220	6	19
371	1165	162	841	520	411	100	220	6	19
372	1220	164	892	520	412	140	240	6	24
373	1250	164	922	520	412	140	220	6	24
374	1280	164	952	591	499	140	195	6	24
375	1305	164	977	591	499	140	195	6	24
376	1365	166	1033	687	563	180	210	6	28
377	1415	166	1083	694	570	178	178	6	28
378	1465	166	1133	694	570	178	178	6	28
379	1540	166	1208	749	625	225	190	6	28
383	1070	164	742	505	413	136	136	6	24
384	1100	164	772	543	451	161	136	6	24
385	1195	166	863	643	519	228	178	6	28
391	1035	162	711	415	326	96	186	6	19
392	1055	164	727	502	410	136	206	6	24
393	1090	164	762	502	410	136	206	6	24
394	1185	164	857	520	412	140	240	6	24
395	1165	162	841	520	411	100	255	6	19
396	1220	164	892	520	412	140	275	6	24
397	1250	164	922	520	412	140	255	6	24
398	1280	164	952	591	499	140	230	6	24
399	1305	164	977	591	499	140	230	6	24
400	1365	166	1033	637	513	180	245	6	28
401	1415	166	1083	747	623	180	215	6	28
402	1465	166	1133	747	623	180	215	6	28
403	1540	166	1208	749	625	188	188	6	28
407	1015	162	691	520	411	100	220	6	19

Base frame code	Dimensions [mm]								
	L1	L2	L3	B2	B3	H	H5	N	D
408	1055	162	731	520	411	100	220	6	19
409	1075	164	747	520	412	140	240	6	24
410	1110	164	782	520	412	140	240	6	24
411	1140	164	812	520	412	140	220	6	24
413	1035	162	711	570	461	100	248	6	19
414	1125	162	801	570	461	100	220	6	19
415	1165	162	841	570	461	100	220	6	19
416	1185	164	857	570	462	140	240	6	24
417	1220	164	892	570	462	140	240	6	24
418	1250	164	922	570	462	140	220	6	24
419	1280	164	952	570	462	140	195	6	24
420	1305	164	977	570	462	140	195	6	24
421	1365	166	1033	687	563	180	210	6	28
422	1415	166	1083	694	570	178	178	6	28
423	1465	166	1133	694	570	178	178	6	28
424	1360	164	1032	570	462	140	275	6	24
425	1390	164	1062	570	462	140	255	6	24
426	1445	164	1117	570	462	140	230	6	24
427	1505	166	1173	588	464	180	245	6	28
428	1555	166	1223	747	623	180	215	6	28
429	1605	166	1273	747	623	180	215	6	28
430	1680	166	1348	749	625	188	188	6	28
431	1790	166	1458	749	625	188	188	6	28
432	1395	164	1067	645	512	140	390	6	24
433	1455	164	1127	645	512	140	365	6	24
434	1515	166	1183	645	514	180	380	6	28
435	1560	166	1228	645	514	180	350	6	28
436	1610	166	1278	645	514	180	350	6	28
437	1685	166	1353	737	613	180	315	6	28
438	1795	166	1463	737	613	180	315	6	28
440	1030	162	706	520	411	100	248	6	19
441	1120	162	796	520	411	100	220	6	19
442	1160	162	836	520	411	100	220	6	19
443	1180	164	852	520	412	140	240	6	24
444	1215	164	887	520	412	140	240	6	24
445	1245	164	917	520	412	140	220	6	24
446	1275	164	947	591	499	140	195	6	24
450	1135	162	811	570	461	100	220	6	19
451	1175	162	851	570	461	100	220	6	19
452	1230	164	902	570	462	140	240	6	24
453	1260	164	932	570	462	140	220	6	24
454	1290	164	962	570	462	140	195	6	24
455	1315	164	987	570	462	140	195	6	24
456	1375	166	1043	687	563	180	210	6	28
457	1190	164	862	700	608	140	330	6	24
458	1245	164	917	700	608	140	310	6	24
459	1275	164	947	700	608	140	290	6	24
460	1305	164	977	700	608	140	265	6	24
461	1330	164	1002	700	608	140	265	6	24
462	1390	166	1058	737	613	180	280	6	28
463	1440	166	1108	737	613	180	250	6	28
464	1035	164	707	700	608	140	358	6	24
465	1125	164	797	700	608	140	330	6	24
466	1165	164	837	700	608	140	330	6	24

Base frame code	Dimensions [mm]								
	L1	L2	L3	B2	B3	H	H5	N	D
467	1220	164	892	700	608	140	310	6	24
468	1250	164	922	700	608	140	290	6	24
469	1280	164	952	700	608	140	265	6	24
470	1305	164	977	700	608	140	265	6	24
471	1365	166	1033	737	613	180	280	6	28
472	1415	166	1083	737	613	180	250	6	28
473	1465	166	1133	737	613	180	250	6	28
474	1540	166	1208	832	708	180	215	6	28
475	1650	166	1318	832	708	180	215	6	28
476	1045	164	717	700	608	140	358	6	24
477	1135	164	807	700	608	140	330	6	24
478	1175	164	847	700	608	140	330	6	24
479	1230	164	902	700	608	140	310	6	24
480	1260	164	932	700	608	140	290	6	24
481	1290	164	962	700	608	140	265	6	24
482	1315	164	987	700	608	140	265	6	24
483	1375	166	1043	737	613	180	280	6	28
484	1425	166	1093	737	613	180	250	6	28
485	1475	166	1143	737	613	180	250	6	28
486	1550	166	1218	832	708	180	215	6	28
487	1660	166	1328	832	708	180	215	6	28
488	1360	164	1032	700	608	140	360	6	24
489	1390	164	1062	700	608	140	340	6	24
490	1445	164	1117	700	608	140	315	6	24
491	1505	166	1173	737	613	180	330	6	28
492	1555	166	1223	737	613	180	300	6	28
493	1605	166	1273	737	613	180	300	6	28
494	1680	166	1348	737	613	180	265	6	28
495	1790	166	1458	737	613	180	265	6	28
496	1505	166	1173	737	613	180	330	6	28
497	1555	166	1223	737	613	180	300	6	28
498	1605	166	1273	737	613	180	300	6	28
499	1680	166	1348	737	613	180	265	6	28
500	1790	166	1458	737	613	180	265	6	28
503	1300	164	972	700	608	140	380	6	24
504	1340	164	1012	700	608	140	380	6	24
505	1395	164	1067	700	608	140	360	6	24
506	1425	164	1097	700	608	140	340	6	24
507	1455	164	1127	700	608	140	315	6	24
508	1480	164	1152	700	608	140	315	6	24
509	1540	166	1208	737	613	180	330	6	28
510	1590	166	1258	737	613	180	300	6	28
511	1640	166	1308	737	613	180	300	6	28
512	1365	164	1037	700	608	140	430	6	24
513	1420	164	1092	700	608	140	410	6	24
514	1445	164	1117	700	608	140	390	6	24
515	1480	164	1152	700	608	140	365	6	24
516	1505	164	1177	700	608	140	365	6	24
517	1565	166	1233	737	613	180	380	6	28
518	1610	166	1278	737	613	180	350	6	28
519	1660	166	1328	737	613	180	350	6	28
520	1735	166	1403	737	613	180	315	6	28
521	1845	166	1513	737	613	180	315	6	28
522	1350	164	1022	775	683	140	490	6	24

Base frame code	Dimensions [mm]								
	L1	L2	L3	B2	B3	H	H5	N	D
523	1405	164	1077	775	683	140	470	6	24
524	1435	164	1107	775	683	140	450	6	24
525	1490	164	1162	775	683	140	425	6	24
526	1550	166	1218	797	673	180	440	6	28
527	1600	166	1268	797	673	180	410	6	28
528	1650	166	1318	797	673	180	410	6	28
529	1725	166	1393	777	653	180	375	6	28
530	1835	166	1503	777	653	180	375	6	28
531	1435	164	1107	775	683	140	470	6	24
532	1460	164	1132	775	683	140	450	6	24
533	1520	164	1192	775	683	140	425	6	24
534	1575	166	1243	797	673	180	440	6	28
535	1625	166	1293	797	673	180	410	6	28
536	1675	166	1343	797	673	180	410	6	28
537	1750	166	1418	777	653	180	375	6	28
538	1860	166	1528	777	653	180	375	6	28
546	1485	164	1157	715	623	140	365	6	24
547	1545	166	1213	737	613	180	380	6	28
548	1595	166	1263	737	613	180	350	6	28
549	1645	166	1313	737	613	180	350	6	28
550	1720	166	1388	737	613	180	315	6	28
551	1830	166	1498	737	613	180	315	6	28
557	1645	166	1313	837	713	180	350	6	28
558	1720	166	1388	837	713	180	315	6	28
559	1830	166	1498	837	713	180	315	6	28
564	1500	164	1172	815	723	140	475	6	24
565	1560	166	1228	837	713	180	490	6	28
566	1610	166	1278	837	713	180	460	6	28
567	1660	166	1328	837	713	180	460	6	28
568	1735	166	1403	837	713	180	425	6	28
569	1845	166	1513	837	713	180	425	6	28
574	2105	166	1633	837	713	180	385	6	28
578	1005	164	677	462	370	152	132	6	24
582	1115	164	787	500	408	132	177	6	24
583	1040	164	712	500	408	136	181	6	24
584	1115	162	791	481	399	96	136	6	19
585	1136	162	812	481	399	96	136	6	19
586	1100	162	776	481	399	96	136	6	19
588	1095	162	771	442	360	92	157	6	19
590	1065	162	741	520	411	100	220	6	19
591	1105	162	781	520	411	100	220	6	19
592	1125	164	797	520	412	140	240	6	24
593	1160	164	832	520	412	140	240	6	24
594	1190	164	862	520	412	140	220	6	24
595	1185	162	861	520	411	100	255	6	19
596	1240	164	912	520	412	140	275	6	24
597	1270	164	942	520	412	140	255	6	24
598	1300	164	972	591	499	140	230	6	24
599	1325	164	997	591	499	140	230	6	24
600	1385	166	1053	637	513	180	245	6	28
601	1435	166	1103	747	623	180	215	6	28
602	1485	166	1153	747	623	180	215	6	28
603	1560	166	1228	749	625	188	188	6	28
604	1395	164	1067	570	462	140	255	6	24

Base frame code	Dimensions [mm]								
	L1	L2	L3	B2	B3	H	H5	N	D
605	1450	164	1122	570	462	140	230	6	24
606	1510	166	1178	588	464	180	245	6	28
607	1560	166	1228	747	623	180	215	6	28
608	1610	166	1278	747	623	180	215	6	28
609	1685	166	1353	749	625	188	188	6	28
610	1795	166	1463	749	625	188	188	6	28
618	1020	164	692	462	370	132	132	6	24
620	1125	162	801	520	411	100	255	6	19
621	1670	166	1338	749	625	188	188	6	28
622	1215	164	887	520	451	140	195	6	24
623	1245	164	917	520	451	140	195	6	24
625	1230	164	902	520	412	140	275	6	24
626	1260	164	932	520	412	140	255	6	24
627	1290	164	962	591	499	140	230	6	24
628	1315	164	987	591	499	140	230	6	24
629	1375	166	1043	637	513	180	245	6	28
630	1425	166	1093	747	623	180	215	6	28
631	1475	166	1143	747	623	180	215	6	28
632	1550	166	1218	749	625	188	188	6	28
649	1385	164	1057	570	462	140	275	6	24
650	1410	164	1082	570	462	140	255	6	24
651	1465	164	1137	570	462	140	230	6	24
652	1525	166	1193	588	464	180	245	6	28
653	1575	166	1243	747	623	180	215	6	28
654	1625	166	1293	747	623	180	215	6	28
658	1015	162	691	455	356	100	248	6	19
659	1105	162	781	455	356	100	220	6	19
660	1145	162	821	455	356	100	220	6	19
661	1200	164	872	459	367	140	240	6	24
662	1230	164	902	546	454	140	220	6	24
663	1260	164	932	546	454	140	195	6	24
664	1285	164	957	546	454	140	195	6	24
679	1015	164	687	462	370	136	136	6	24
680	1090	164	762	505	413	156	136	6	24
246S	1105	164	777	462	370	132	132	6	24
247S	1170	164	842	505	413	156	136	6	24
251S	1110	164	782	462	370	132	132	6	24
252S	1175	164	847	505	413	156	136	6	24
253S	1205	164	877	543	451	181	136	6	24
256S	1295	166	963	544	420	250	180	6	28
257S	1340	166	1008	622	471	280	180	6	28
262S	1165	162	841	442	360	92	157	6	19
263S	1205	162	881	442	360	92	157	6	19
264S	1220	164	892	500	408	132	177	6	24
285S	1110	162	786	450	368	96	136	6	19
286S	1130	164	802	500	408	136	156	6	24
287S	1195	164	867	505	413	136	136	6	24
288S	1220	162	896	450	368	96	136	6	19
289S	1240	164	912	500	408	136	156	6	24
290S	1305	164	977	505	413	136	136	6	24
291S	1330	164	1002	546	454	161	136	6	24
292S	1420	166	1088	643	519	230	180	6	28
300S	1180	162	856	450	368	96	136	6	19
301S	1185	164	857	505	413	176	136	6	24

Base frame code	Dimensions [mm]								
	L1	L2	L3	B2	B3	H	H5	N	D
310S	1170	162	846	481	399	96	136	6	19
311S	1190	164	862	502	410	136	156	6	24
312S	1255	164	927	505	413	136	136	6	24
313S	1280	164	952	546	454	161	136	6	24
314S	1370	166	1038	643	519	230	180	6	28
315S	1420	166	1088	622	471	260	180	6	28
316S	1470	166	1138	622	471	260	180	6	28
323S	1180	162	856	481	399	96	136	6	19
324S	1220	162	896	481	399	96	136	6	19
328S	1180	162	856	415	326	96	186	6	19
329S	1220	162	896	415	326	96	186	6	19
330S	1240	164	912	502	410	136	206	6	24
331S	1275	164	947	502	410	136	206	6	24
332S	1305	164	977	546	454	136	186	6	24
345S	1210	164	882	505	413	156	136	6	24
354S	1190	164	862	502	410	136	181	6	24
355S	1255	164	927	546	454	136	161	6	24
356S	1280	164	952	543	451	136	136	6	24
357S	1370	166	1038	643	519	205	180	6	28
358S	1420	166	1088	622	471	235	180	6	28
359S	1470	166	1138	622	471	235	180	6	28
364S	1180	162	856	415	326	96	161	6	19
365S	1220	162	896	415	326	96	161	6	19
366S	1240	164	912	502	410	136	181	6	24
367S	1275	164	947	502	410	136	181	6	24
368S	1335	164	1007	586	494	136	161	6	24
369S	1215	162	891	520	411	100	248	6	19
370S	1300	162	976	520	411	100	220	6	19
371S	1340	162	1016	520	411	100	220	6	19
372S	1395	164	1067	520	412	140	240	6	24
373S	1425	164	1097	520	412	140	220	6	24
374S	1455	164	1127	591	499	140	195	6	24
375S	1480	164	1152	591	499	140	195	6	24
376S	1540	166	1208	687	563	180	210	6	28
377S	1590	166	1258	694	570	178	178	6	28
378S	1640	166	1308	694	570	178	178	6	28
379S	1715	166	1383	749	625	225	190	6	28
383S	1205	164	877	505	413	136	136	6	24
384S	1230	164	902	543	451	161	136	6	24
385S	1335	166	1003	643	519	228	178	6	28
391S	1170	162	846	415	326	96	186	6	19
392S	1190	164	862	502	410	136	206	6	24
393S	1225	164	897	502	410	136	206	6	24
394S	1360	164	1032	520	412	140	240	6	24
395S	1340	162	1016	520	411	100	255	6	19
396S	1395	164	1067	520	412	140	275	6	24
397S	1425	164	1097	520	412	140	255	6	24
398S	1455	164	1127	591	499	140	230	6	24
399S	1480	164	1152	591	499	140	230	6	24
400S	1540	166	1208	637	513	180	245	6	28
401S	1590	166	1258	747	623	180	215	6	28
402S	1640	166	1308	747	623	180	215	6	28
403S	1715	166	1383	749	625	188	188	6	28
407S	1190	162	866	520	411	100	220	6	19

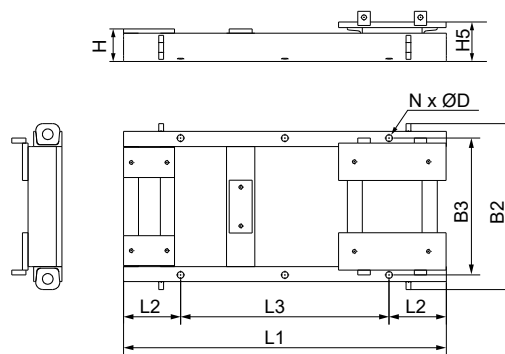
Base frame code	Dimensions [mm]								
	L1	L2	L3	B2	B3	H	H5	N	D
408S	1230	162	906	520	411	100	220	6	19
409S	1250	164	922	520	412	140	240	6	24
410S	1285	164	957	520	412	140	240	6	24
411S	1315	164	987	520	412	140	220	6	24
413S	1215	162	891	570	461	100	248	6	19
414S	1300	162	976	570	461	100	220	6	19
415S	1340	162	1016	570	461	100	220	6	19
416S	1360	164	1032	570	462	140	240	6	24
417S	1395	164	1067	570	462	140	240	6	24
418S	1425	164	1097	570	462	140	220	6	24
419S	1455	164	1127	570	462	140	195	6	24
420S	1480	164	1152	570	462	140	195	6	24
421S	1540	166	1208	687	563	180	210	6	28
422S	1590	166	1258	694	570	178	178	6	28
423S	1640	166	1308	694	570	178	178	6	28
424S	1535	164	1207	570	462	140	275	6	24
425S	1565	164	1237	570	462	140	255	6	24
426S	1620	164	1292	570	462	140	230	6	24
427S	1680	166	1348	588	464	180	245	6	28
428S	1730	166	1398	747	623	180	215	6	28
429S	1780	166	1448	747	623	180	215	6	28
430S	1855	166	1523	749	625	188	188	6	28
431S	1965	166	1633	749	625	188	188	6	28
432S	1595	164	1267	645	512	140	390	6	24
433S	1650	164	1322	645	512	140	365	6	24
434S	1710	166	1378	645	514	180	380	6	28
435S	1760	166	1428	645	514	180	350	6	28
436S	1810	166	1478	645	514	180	350	6	28
437S	1885	166	1553	737	613	180	315	6	28
438S	1995	166	1663	737	613	180	315	6	28
450S	1310	162	986	570	461	100	220	6	19
451S	1350	162	1026	570	461	100	220	6	19
452S	1405	164	1077	570	462	140	240	6	24
453S	1435	164	1107	570	462	140	220	6	24
454S	1465	164	1137	570	462	140	195	6	24
455S	1490	164	1162	570	462	140	195	6	24
456S	1550	166	1218	687	563	180	210	6	28
457S	1385	164	1057	700	608	140	330	6	24
458S	1440	164	1112	700	608	140	310	6	24
459S	1470	164	1142	700	608	140	290	6	24
460S	1500	164	1172	700	608	140	265	6	24
461S	1525	164	1197	700	608	140	265	6	24
462S	1585	166	1253	737	613	180	280	6	28
463S	1635	166	1303	737	613	180	250	6	28
464S	1215	164	887	700	608	140	358	6	24
465S	1300	164	972	700	608	140	330	6	24
466S	1340	164	1012	700	608	140	330	6	24
467S	1395	164	1067	700	608	140	310	6	24
468S	1425	164	1097	700	608	140	290	6	24
469S	1455	164	1127	700	608	140	265	6	24
470S	1480	164	1152	700	608	140	265	6	24
471S	1540	166	1208	737	613	180	280	6	28
472S	1590	166	1258	737	613	180	250	6	28
473S	1640	166	1308	737	613	180	250	6	28

Base frame code	Dimensions [mm]								
	L1	L2	L3	B2	B3	H	H5	N	D
474S	1715	166	1383	832	708	180	215	6	28
475S	1825	166	1493	832	708	180	215	6	28
476S	1225	164	897	700	608	140	358	6	24
477S	1310	164	982	700	608	140	330	6	24
478S	1350	164	1022	700	608	140	330	6	24
479S	1405	164	1077	700	608	140	310	6	24
480S	1435	164	1107	700	608	140	290	6	24
481S	1465	164	1137	700	608	140	265	6	24
482S	1490	164	1162	700	608	140	265	6	24
483S	1550	166	1218	737	613	180	280	6	28
484S	1600	166	1268	737	613	180	250	6	28
485S	1650	166	1318	737	613	180	250	6	28
486S	1725	166	1393	832	708	180	215	6	28
487S	1835	166	1503	832	708	180	215	6	28
488S	1555	164	1227	700	608	140	360	6	24
489S	1585	164	1257	700	608	140	340	6	24
490S	1640	164	1312	700	608	140	315	6	24
491S	1700	166	1368	737	613	180	330	6	28
492S	1750	166	1418	737	613	180	300	6	28
493S	1800	166	1468	737	613	180	300	6	28
494S	1875	166	1543	737	613	180	265	6	28
495S	1985	166	1653	737	613	180	265	6	28
496S	1750	166	1418	737	613	180	330	6	28
497S	1800	166	1468	737	613	180	300	6	28
498S	1850	166	1518	737	613	180	300	6	28
499S	1925	166	1593	737	613	180	265	6	28
503S	1545	164	1217	700	608	140	380	6	24
504S	1585	164	1257	700	608	140	380	6	24
505S	1640	164	1312	700	608	140	360	6	24
506S	1670	164	1342	700	608	140	340	6	24
507S	1700	164	1372	700	608	140	315	6	24
508S	1725	164	1397	700	608	140	315	6	24
509S	1785	166	1453	737	613	180	330	6	28
510S	1835	166	1503	737	613	180	300	6	28
511S	1885	166	1553	737	613	180	300	6	28
512S	1610	164	1282	700	608	140	430	6	24
513S	1665	164	1337	700	608	140	410	6	24
514S	1695	164	1367	700	608	140	390	6	24
515S	1725	164	1397	700	608	140	365	6	24
516S	1750	164	1422	700	608	140	365	6	24
517S	1810	166	1478	737	613	180	380	6	28
518S	1860	166	1528	737	613	180	350	6	28
519S	1910	166	1578	737	613	180	350	6	28
520S	1985	166	1653	737	613	180	315	6	28
522S	1595	164	1267	775	683	140	490	6	24
523S	1655	164	1327	775	683	140	470	6	24
524S	1680	164	1352	775	683	140	450	6	24
525S	1735	164	1407	775	683	140	425	6	24
526S	1795	166	1463	797	673	180	440	6	28
527S	1845	166	1513	797	673	180	410	6	28
528S	1895	166	1563	797	673	180	410	6	28
529S	1970	166	1638	777	653	180	375	6	28
531S	1730	164	1402	775	683	140	470	6	24
532S	1755	164	1427	775	683	140	450	6	24

Base frame code	Dimensions [mm]								
	L1	L2	L3	B2	B3	H	H5	N	D
533S	1815	164	1487	775	683	140	425	6	24
534S	1875	166	1543	797	673	180	440	6	28
535S	1920	166	1588	797	673	180	410	6	28
536S	1970	166	1638	797	673	180	410	6	28
546S	1730	164	1402	715	623	140	365	6	24
547S	1790	166	1458	737	613	180	380	6	28
548S	1840	166	1508	737	613	180	350	6	28
549S	1890	166	1558	737	613	180	350	6	28
550S	1965	166	1633	737	613	180	315	6	28
557S	1890	166	1558	837	713	180	350	6	28
558S	1965	166	1633	837	713	180	315	6	28
564S	1795	164	1467	815	723	140	475	6	24
565S	1855	166	1523	837	713	180	490	6	28
566S	1905	166	1573	837	713	180	460	6	28
567S	1955	166	1623	837	713	180	460	6	28
577S	1120	162	796	416	334	92	92	6	19
578S	1145	164	817	462	370	152	132	6	24
579S	1025	162	701	416	334	92	92	6	19
582S	1250	164	922	500	408	132	177	6	24
583S	1179	164	851	500	408	136	181	6	24
584S	1250	162	926	481	399	96	136	6	19
585S	1270	162	946	481	399	96	136	6	19
586S	1235	162	911	481	399	96	136	6	19
588S	1235	162	911	442	360	92	157	6	19
589S	1115	162	791	520	411	100	248	6	19
590S	1200	162	876	520	411	100	220	6	19
591S	1240	162	916	520	411	100	220	6	19
592S	1260	164	932	520	412	140	240	6	24
593S	1295	164	967	520	412	140	240	6	24
594S	1325	164	997	520	412	140	220	6	24
595S	1360	162	1036	520	411	100	255	6	19
596S	1415	164	1087	520	412	140	275	6	24
597S	1445	164	1117	520	412	140	255	6	24
598S	1475	164	1147	591	499	140	230	6	24
599S	1500	164	1172	591	499	140	230	6	24
600S	1560	166	1228	637	513	180	245	6	28
601S	1610	166	1278	747	623	180	215	6	28
602S	1660	166	1328	747	623	180	215	6	28
603S	1735	166	1403	749	625	188	188	6	28
604S	1570	164	1242	570	462	140	255	6	24
605S	1625	164	1297	570	462	140	230	6	24
606S	1685	166	1353	588	464	180	245	6	28
607S	1735	166	1403	747	623	180	215	6	28
608S	1785	166	1453	747	623	180	215	6	28
609S	1860	166	1528	749	625	188	188	6	28
610S	1970	166	1638	749	625	188	188	6	28
616S	1060	162	736	450	368	92	112	6	19
617S	1100	162	776	450	368	92	112	6	19
618S	1115	164	787	462	370	132	132	6	24
619S	1040	162	716	416	334	92	92	6	19
620S	1300	162	976	520	411	100	255	6	19
621S	1845	166	1513	749	625	188	188	6	28
622S	1355	164	1027	520	412	140	195	6	24
623S	1380	164	1052	520	412	140	195	6	24

Base frame code	Dimensions [mm]								
	L1	L2	L3	B2	B3	H	H5	N	D
625S	1405	164	1077	520	412	140	275	6	24
626S	1435	164	1107	520	412	140	255	6	24
627S	1465	164	1137	591	499	140	230	6	24
628S	1490	164	1162	591	499	140	230	6	24
629S	1550	166	1218	637	513	180	245	6	28
630S	1600	166	1268	747	623	180	215	6	28
631S	1650	166	1318	747	623	180	215	6	28
632S	1725	166	1393	749	625	188	188	6	28
642S	1050	162	726	415	326	96	234	6	19
643S	1100	162	776	415	326	96	214	6	19
644S	1135	162	811	415	326	96	214	6	19
633S	1220	162	896	415	326	96	186	6	19
645S	1260	162	936	415	326	96	186	6	19
646S	1280	164	952	502	410	136	206	6	24
647S	1315	164	987	502	410	136	206	6	24
648S	1345	164	1017	546	454	136	186	6	24

C-channel base frame with 8 mounting holes



TM1040594

C-channel base frame with 8 mounting holes

Base frame code	Dimensions [mm]								
	L1	L2	L3	B2	B3	H	H5	N	D
501	2050	166	1718	927	803	180	225	8	28
502	2290	166	1958	957	833	180	225	8	28
556	2090	166	1758	827	703	180	275	8	28
560	2095	166	1763	837	713	180	275	8	28
563	2330	166	1998	847	723	180	275	8	28
624	2055	166	1723	827	703	228	188	8	28
500S	2035	166	1703	737	613	180	265	8	28
501S	2300	166	1968	927	803	180	225	8	28
502S	2535	166	2203	957	833	180	225	8	28
521S	2095	166	1763	737	613	180	315	8	28
530S	2080	166	1748	777	653	180	375	8	28
537S	2045	166	1713	777	653	180	375	8	28
538S	2155	166	1823	777	653	180	375	8	28
551S	2075	166	1743	737	613	180	315	8	28
556S	2340	166	2008	827	703	180	275	8	28
559S	2075	166	1743	837	713	180	315	8	28
560S	2340	166	2008	837	713	180	275	8	28
563S	2575	166	2243	847	723	180	275	8	28
568S	2030	166	1698	837	713	180	425	8	28
569S	2140	166	1808	837	713	180	425	8	28
574S	2405	166	1933	837	713	180	385	8	28
624S	2230	166	1898	827	703	228	188	8	28

20. Motor data

Standard motor range

The table shows the range of standard motors currently used for NK pumps. The motors stated in section Dimensional drawings and dimensions are MMG-W motors.

IE class	Motor	Poles	P2 [kW]																														
			0.25	0.37	0.55	0.75	1.1	1.5	2.2	3	4	5.5	7.5	11	15	18.5	22	30	37	45	55	75	90	110	132	160	200	250	315	355	375		
IE3	MMG-W	2	-	-	-	-	-	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	-	-	-	-	-	-	-	-	-		
		4	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	-	-	
		6	-	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	-	-	-	-	-	-	-	-	-	
IE4	MMG-H	2	-	-	-	-	-	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	-	-	-	-	-	-	-	-	-		
		4	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	-	-	
		6	-	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	-	-	-	-	-	-	-	-	-	
	MMG-W	2	-	-	-	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	-	-	-	-	-	-	-	-	-	-	
		4	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	-	-
		6	-	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	-	-	-	-	-	-	-	-	-	

Note: Not all motor makes are available worldwide. For specific information about the motor makes available in your region, contact your Grundfos Customer Service Unit (CSU).

E-solution range

	IE class	P2 [kW]													
		0.55	0.75	1.1	1.5	2.2	3	4	5.5	7.5	11	15	18.5	22	26
Medium speed	IE5	-	-	•	•	•	•	•	•	•	•	•	•	•	•
Low speed	IE5	•	•	•	•	•	•	•	•	•	•	•	•	•	-

Electrical data, MGE motors

Electrical data for motors with built-in frequency converter.

Medium speed, 4000 RPM

Motor	Frame size	Voltage	P2 [kW]	I _{1/1} [A]
MGE	80B-IA	3 × 380-480 V	1.1	2.2 - 1.9
MGE	90SC-IA		1.5	2.9 - 2.4
MGE	90LD-IA		2.2	4.15 - 3.4
MGE	100LA-JA		3	5.8 - 4.8
MGE	112MC-JA		4	7.6 - 6.2
MGE	132SE-JA		5.5	10.3 - 8.2
MGE	132SF-JA		7.5	14.1 - 11.2
MGE	160MH-JA		11	20.3 - 16.0
MGE	160MA-K		15	26.7 - 22.0
MGE	160LB-K		18.5	33.0 - 27.8
MGE	180MC-K		22	39.2 - 31.5
MGE	180MH-K		26	43.8 - 37.6

Low speed, 2000 / 2200 RPM

Motor	Frame size	Voltage	P2 [kW]	I _{1/1} [A]
MGE	80B-IA	3 × 380-480 V	0.55	1.2 - 1.1
MGE	80C-IA		0.75	1.55 - 1.4
MGE	90SD-IA		1.1	2.2 - 1.9
MGE	90LD-IA		1.5	2.9 - 2.5
MGE	100LB-JA		2.2	4.3 - 3.6
MGE	100LD-JA		3	5.8 - 4.6
MGE	112ME-JA		4	7.7 - 6.0
MGE	132SG-JA		5.5	10.5 - 8.40
MGE	132MH-JA		7.5	14.1 - 11.1
MGE	160MD-K		11	20.2 - 16.4
MGE	160LE-K		15	26.7 - 21.8
MGE	180MF-K		18.5	33.2 - 26.9
MGE	180LG-K		22	39.2 - 31.5

Pump dimensions with other motors

The tables below show changes of pump dimensions when using other motors than MMG-W IE3 listed in section Dimensional drawings and dimensions.

L, H and H4 are pump dimension. Others are motor dimensions.

IE class	Motor
IE4	MMG-W MMG-H

Example

If a 2-pole, 0.75 kW MMG-H, class IE4, is selected, the LL dimension will be 10 mm bigger.

MMG-W IE3 to MMG-W IE4

2-pole

P2 [kW]	Motors on data pages		Other motors		L	H	H4	AG	LL	P	A	B	C	K	Weight [kg]
50 Hz	Motor	Frame size	Motor	Frame size	[mm]										
0.75	MMG-W	80M	MMG-W	80M	20.00	0.0	1	-4	-10	0.0	0.0	0.0	0.0	0.0	-3
1.1	MMG-W	80M	MMG-W	80M	20.00	0.0	1	-4	-10	0.0	0.0	0.0	0.0	0.0	-3
1.5	MMG-W	90S	MMG-W	90S	-5.00	0.0	-6	5	-3	0.0	0.0	0.0	0.0	0.0	-1
2.2	MMG-W	90L	MMG-W	90L	-10	0.0	-6	5	-3	0.0	0.0	0.0	0.0	0.0	1
3	MMG-W	100L	MMG-W	100L	-10	0.0	-4	5	-3	0.0	0.0	0.0	0.0	0.0	-2
4	MMG-W	112M	MMG-W	112M	70	0.0	3	21	21	0.0	0.0	0.0	0.0	0.0	-7
5.5	MMG-W	132S	MMG-W	132S	-20	0.0	3	21	21	0.0	0.0	0.0	0.0	0.0	-12
7.5	MMG-W	132S	MMG-W	132S	-20	0.0	3	21	21	0.0	0.0	0.0	0.0	0.0	-10
11	MMG-W	160M	MMG-W	160M	0	0.0	7	11	11	0.0	0.0	0.0	0.0	0.0	-16
15	MMG-W	160M	MMG-W	160M	0	0.0	7	11	11	0.0	0.0	0.0	0.0	0.0	-11
18.5	MMG-W	160L	MMG-W	160L	0	0.0	7	11	11	0.0	0.0	0.0	0.0	0.0	-5
22	MMG-W	180M	MMG-W	180M	25	0.0	3	11	11	0.0	0.0	0.0	0.0	0.0	-12
30	MMG-W	200L	MMG-W	200L	75	0.0	21	10	20	0.0	0.0	0.0	0.0	0.0	14
37	MMG-W	200L	MMG-W	200L	75	0.0	21	10	20	0.0	0.0	0.0	0.0	0.0	-1
45	MMG-W	225M	MMG-W	225M	90	0.0	10	10	20	0.0	0.0	0.0	0.0	0.0	2
55	MMG-W	250M	MMG-W	250M	30	0.0	51	15	35	0.0	0.0	0.0	0.0	0.0	40
75	MMG-W	280S	MMG-W	280S	37	0.0	39	13	53	0.0	0.0	0.0	0.0	0.0	30

4-pole

P2 [kW]	Motors on data pages		Other motors		L	H	H4	AG	LL	P	A	B	C	K	Weight [kg]
50 Hz	Motor	Frame size	Motor	Frame size	[mm]										
0.75	MMG-W	80M	MMG-W	80M	20	0.0	1	-4	-10	0.0	0.0	0.0	0.0	0.0	-3
1.1	MMG-W	90S	MMG-W	90S	-5	0.0	-6	5	-3	0.0	0.0	0.0	0.0	0.0	-1
1.5	MMG-W	90L	MMG-W	90L	-10	0.0	-6	5	-3	0.0	0.0	0.0	0.0	0.0	-3
2.2	MMG-W	100L	MMG-W	100L	-10	0.0	-4	5	-3	0.0	0.0	0.0	0.0	0.0	2
3	MMG-W	100L	MMG-W	100L	-10	0.0	-4	5	-3	0.0	0.0	0.0	0.0	0.0	0
4	MMG-W	112M	MMG-W	112M	0	0.0	3	21	21	0.0	0.0	0.0	0.0	0.0	1
5.5	MMG-W	132S	MMG-W	132S	-20	0.0	3	21	21	0.0	0.0	0.0	0.0	0.0	-8
7.5	MMG-W	132M	MMG-W	132M	-20	0.0	3	21	21	0.0	0.0	0.0	0.0	0.0	-11
11	MMG-W	160M	MMG-W	160M	0	0.0	7	11	11	0.0	0.0	0.0	0.0	0.0	-8
15	MMG-W	160L	MMG-W	160L	0	0.0	7	11	11	0.0	0.0	0.0	0.0	0.0	2
18.5	MMG-W	180M	MMG-W	180M	25	0.0	3	11	11	0.0	0.0	0.0	0.0	0.0	3
22	MMG-W	180L	MMG-W	180L	25	0.0	3	11	11	0.0	0.0	0.0	0.0	0.0	3
30	MMG-W	200L	MMG-W	200L	75	0.0	21	10	20	0.0	0.0	0.0	0.0	0.0	16
37	MMG-W	225S	MMG-W	225S	85	0.0	10	10	20	0.0	0.0	0.0	0.0	0.0	30
45	MMG-W	225M	MMG-W	225M	85	0.0	10	10	20	0.0	0.0	0.0	0.0	0.0	40
55	MMG-W	250M	MMG-W	250M	30	0.0	51	15	35	0.0	0.0	0.0	0.0	0.0	80
75	MMG-W	280S	MMG-W	280S	37	0.0	39	13	53	0.0	0.0	0.0	0.0	0.0	20
90	MMG-W	280M	MMG-W	280M	35	0.0	39	13	53	0.0	0.0	0.0	0.0	0.0	65
110	MMG-W	315S	MMG-W	315S	0	0.0	-23	-19	38	0.0	0.0	0.0	0.0	0.0	-45
132	MMG-W	315M	MMG-W	315M	-10	0.0	-23	-19	38	0.0	0.0	0.0	0.0	0.0	-50
160	MMG-W	315L	MMG-W	315L	-10	0.0	-23	-19	38	0.0	0.0	0.0	0.0	0.0	-30
185	MMG-W	315L	MMG-W	315L	-10	0.0	-23	-19	38	0.0	0.0	0.0	0.0	0.0	25
200	MMG-W	315L	MMG-W	315L	-10	0.0	-23	-19	38	0.0	0.0	0.0	0.0	0.0	-35
220	MMG-W	355M	MMG-W	355M	-68	0.0	-11	-13	57	0.0	0.0	0.0	0.0	0.0	-60
250	MMG-W	355M	MMG-W	355M	-68	0.0	-11	-13	57	0.0	0.0	0.0	0.0	0.0	-120
280	MMG-W	355L	MMG-W	355L	102	0.0	-11	-13	57	0.0	0.0	0.0	0.0	0.0	20
315	MMG-W	355L	MMG-W	355L	102	0.0	-11	-13	57	0.0	0.0	0.0	0.0	0.0	-50

6-pole

P2 [kW]	Motors on data pages		Other motors		L	H	H4	AG	LL	P	A	B	C	K	Weight [kg]
50 Hz	Motor	Frame size	Motor	Frame size	[mm]										
0.75	MMG-W	80M	MMG-W	80M	20	0.0	1	-4	-10	0.0	0.0	0.0	0.0	0.0	-3
1.1	MMG-W	90S	MMG-W	90S	-5	0.0	-6	5	-3	0.0	0.0	0.0	0.0	0.0	-1
1.5	MMG-W	90L	MMG-W	90L	-10	0.0	-6	5	-3	0.0	0.0	0.0	0.0	0.0	-3
2.2	MMG-W	100L	MMG-W	100L	-10	0.0	-4	5	-3	0.0	0.0	0.0	0.0	0.0	2
3	MMG-W	100L	MMG-W	100L	-10	0.0	-4	5	-3	0.0	0.0	0.0	0.0	0.0	0
4	MMG-W	112M	MMG-W	112M	0	0.0	3	21	21	0.0	0.0	0.0	0.0	0.0	1
5.5	MMG-W	132S	MMG-W	132S	-20	0.0	3	21	21	0.0	0.0	0.0	0.0	0.0	-8
7.5	MMG-W	132M	MMG-W	132M	-20	0.0	3	21	21	0.0	0.0	0.0	0.0	0.0	-11
11	MMG-W	160M	MMG-W	160M	0	0.0	7	11	11	0.0	0.0	0.0	0.0	0.0	-8
15	MMG-W	160L	MMG-W	160L	0	0.0	7	11	11	0.0	0.0	0.0	0.0	0.0	2
18.5	MMG-W	180M	MMG-W	180M	25	0.0	3	11	11	0.0	0.0	0.0	0.0	0.0	3
22	MMG-W	180L	MMG-W	180L	25	0.0	3	11	11	0.0	0.0	0.0	0.0	0.0	3
30	MMG-W	200L	MMG-W	200L	75	0.0	21	10	20	0.0	0.0	0.0	0.0	0.0	16
37	MMG-W	225S	MMG-W	225S	85	0.0	10	10	20	0.0	0.0	0.0	0.0	0.0	30
45	MMG-W	225M	MMG-W	225M	85	0.0	10	10	20	0.0	0.0	0.0	0.0	0.0	40
55	MMG-W	250M	MMG-W	250M	30	0.0	51	15	35	0.0	0.0	0.0	0.0	0.0	80
75	MMG-W	280S	MMG-W	280S	37	0.0	39	13	53	0.0	0.0	0.0	0.0	0.0	20
90	MMG-W	280M	MMG-W	280M	35	0.0	39	13	53	0.0	0.0	0.0	0.0	0.0	65

MMG-W IE3 to MMG-H IE4

2-pole

P2 [kW]	Motors on data pages		Other motors		L	H	H4	AG	LL	P	A	B	C	K	Weight [kg]
50 Hz	Motor	Frame size	Motor	Frame size	[mm]										
0.75	MMG-W	80M	MMG-H	80M	31.0	0.0	-17.0	10.0	10.0	0.0	0.0	0.0	0.0	0.0	-6.0
1.1	MMG-W	80M	MMG-H	80M	31.0	0.0	-17.0	10.0	10.0	0.0	0.0	0.0	0.0	0.0	-5.5
1.5	MMG-W	90S	MMG-H	90S	-26.0	0.0	-14.0	10.0	10.0	0.0	0.0	0.0	0.0	0.0	-8.5
2.2	MMG-W	90L	MMG-H	90L	-31.0	0.0	-14.0	10.0	10.0	0.0	0.0	0.0	0.0	0.0	-6.0
3	MMG-W	100L	MMG-H	100L	-12.0	0.0	-13.0	10.0	10.0	0.0	0.0	0.0	0.0	0.0	-6.0
4	MMG-W	112M	MMG-H	112M	-14.0	0.0	-21.0	-10.0	0.0	0.0	0.0	0.0	0.0	0.0	-20.0
5.5	MMG-W	132S	MMG-H	132S	5.0	0.0	-18.0	13.0	23.0	0.0	0.0	0.0	0.0	0.0	-26.0
7.5	MMG-W	132S	MMG-H	132S	5.0	0.0	-18.0	13.0	23.0	0.0	0.0	0.0	0.0	0.0	-25.0
11	MMG-W	160M	MMG-H	160M	-8.0	0.0	-17.0	11.0	21.0	0.0	0.0	0.0	0.0	0.5	-30.0
15	MMG-W	160M	MMG-H	160M	-8.0	0.0	-17.0	11.0	21.0	0.0	0.0	0.0	0.0	0.5	-27.0
18.5	MMG-W	160L	MMG-H	160L	-9.0	0.0	-17.0	11.0	21.0	0.0	0.0	0.0	0.0	0.5	-21.0
22	MMG-W	180M	MMG-H	180M	-25.0	0.0	-24.0	11.0	21.0	0.0	0.0	0.0	0.0	0.5	-40.0
30	MMG-W	200L	MMG-H	200L	4.0	0.0	-9.0	-20.0	50.0	0.0	0.0	0.0	0.0	0.5	42.0
37	MMG-W	200L	MMG-H	200L	4.0	0.0	-9.0	-20.0	50.0	0.0	0.0	0.0	0.0	0.5	42.0
45	MMG-W	225M	MMG-H	225M	6.0	0.0	-16.0	-20.0	50.0	0.0	0.0	0.0	0.0	0.5	44.0
55	MMG-W	250M	MMG-H	250M	-9.0	0.0	0.0	-54.0	-25.0	0.0	0.0	-38.0	0.0	0.0	40.0
75	MMG-W	280S	MMG-H	280S	-5.0	0.0	-10.0	-46.0	-17.0	0.0	0.0	0.0	0.0	0.0	-6.0

4-pole

P2 [kW]	Motors on data pages		Other motors		L	H	H4	AG	LL	P	A	B	C	K	Weight [kg]
50 Hz	Motor	Frame size	Motor	Frame size	[mm]										
0.25	MMG-W	71M	MMG-H	71M	-2.0	0.0	-15.0	3	-100.0	0.0	0.0	0.0	0.0	0.0	-6.8
0.37	MMG-W	71M	MMG-H	71M	-2.0	0.0	-15.0	3	-100.0	0.0	0.0	0.0	0.0	0.0	-6.0
0.55	MMG-W	80M	MMG-H	80M	31	0.0	-17.0	10.0	10.0	0.0	0.0	0.0	0.0	0.0	-4.0
0.75	MMG-W	80M	MMG-H	80M	31.0	0.0	-17.0	10.0	10.0	0.0	0.0	0.0	0.0	0.0	-2.0
1.1	MMG-W	90S	MMG-H	90S	-26.0	0.0	-14.0	10.0	10.0	0.0	0.0	0.0	0.0	0.0	-5.0
1.5	MMG-W	90L	MMG-H	90L	-31.0	0.0	-14.0	10.0	10.0	0.0	0.0	0.0	0.0	0.0	-8.0
2.2	MMG-W	100L	MMG-H	100L	-12.0	0.0	-13.0	10.0	10.0	0.0	0.0	0.0	0.0	0.0	-3.0
3	MMG-W	100L	MMG-H	100L	-12.0	0.0	-13.0	10.0	10.0	0.0	0.0	0.0	0.0	0.0	-5.0
4	MMG-W	112M	MMG-H	112M	-84.0	0.0	-21.0	-10.0	0.0	0.0	0.0	0.0	0.0	0.0	-14.0
5.5	MMG-W	132S	MMG-H	132S	5.0	0.0	-18.0	13.0	23.0	0.0	0.0	0.0	0.0	0.0	-16.0
7.5	MMG-W	132M	MMG-H	132M	3.0	0.0	-18.0	13.0	23.0	0.0	0.0	0.0	0.0	0.0	-8.0
11	MMG-W	160M	MMG-H	160M	-8.0	0.0	-17.0	11.0	21.0	0.0	0.0	0.0	0.0	0.5	-26.0
15	MMG-W	160L	MMG-H	160L	-9.0	0.0	-17.0	11.0	21.0	0.0	0.0	0.0	0.0	0.5	-23.0
18.5	MMG-W	180M	MMG-H	180M	-25.0	0.0	-24.0	11.0	21.0	0.0	0.0	0.0	183.0	0.5	-18.0
22	MMG-W	180L	MMG-H	180L	-22.0	0.0	-24.0	11.0	21.0	0.0	0.0	0.0	0.0	0.5	-14.0
30	MMG-W	200L	MMG-H	200L	4.0	0.0	-9.0	-20.0	50.0	0.0	0.0	0.0	0.0	0.5	36.0
37	MMG-W	225S	MMG-H	225S	6.0	0.0	-16.0	-20.0	50.0	0.0	0.0	0.0	0.0	0.5	44.0
45	MMG-W	225M	MMG-H	225M	6.0	0.0	-16.0	-20.0	50.0	0.0	0.0	0.0	0.0	0.5	68.0
55	MMG-W	250M	MMG-H	250M	-9.0	0.0	0.0	-54.0	-25.0	0.0	0.0	-38.0	0.0	0.0	62.0
75	MMG-W	280S	MMG-H	280S	-5.0	0.0	-10.0	-46.0	-17.0	0.0	0.0	0.0	0.0	0.0	14.0
90	MMG-W	280M	MMG-H	280M	-4.0	0.0	-10.0	-46.0	-17.0	0.0	0.0	0.0	0.0	0.0	48.0
110	MMG-W	315S	MMG-H	315S	11.0	0.0	-28.0	-73.0	9.0	0.0	0.0	0.0	0.0	0.0	-15.0
132	MMG-W	315M	MMG-H	315M	11.0	0.0	-28.0	-73.0	9.0	0.0	0.0	0.0	0.0	0.0	-42.0
160	MMG-W	315L	MMG-H	315L	11.0	0.0	-28.0	-73.0	9.0	0.0	0.0	-51.0	0.0	0.0	-54.0
185	MMG-W	315L	MMG-H	315L	11.0	0.0	-28.0	-73.0	9.0	0.0	0.0	-51.0	38.0	0.0	-33.0
200	MMG-W	315L	MMG-H	315L	11.0	0.0	-28.0	-73.0	9.0	0.0	0.0	-51.0	0.0	0.0	-22.0
220	MMG-W	355M	MMG-H	355M	1.0	0.0	-40.0	-45.0	43.0	0.0	0.0	0.0	0.0	0.0	37.0
250	MMG-W	355M	MMG-H	355M	1.0	0.0	-40.0	-45.0	43.0	0.0	0.0	0.0	0.0	0.0	175.0
280	MMG-W	355L	MMG-H	355L	1.0	0.0	-40.0	-45.0	43.0	0.0	0.0	-70.0	0.0	0.0	313.0
315	MMG-W	355L	MMG-H	355L	-29.0	0.0	-40.0	-45.0	43.0	0.0	0.0	-70.0	0.0	0.0	440.0

6-pole

P2 [kW]	Motors on data pages		Other motors		L	H	H4	AG	LL	P	A	B	C	K	Weight [kg]
50 Hz	Motor	Frame size	Motor	Frame size	[mm]										
0.37	MMG-W	80M	MMG-H	80M	-4.0	0.0	-17.0	10.0	10.0	0.0	0.0	0.0	0.0	0.0	-5.0
0.55	MMG-W	80M	MMG-H	80M	31	0.0	-17.0	10.0	10.0	0.0	0.0	0.0	0.0	0.0	-7.0
0.75	MMG-W	90S	MMG-H	90S	-26.0	0.0	-14.0	10.0	10.0	0.0	0.0	0.0	0.0	0.0	-9.5
1.1	MMG-W	90L	MMG-H	90L	-31.0	0.0	-14.0	10.0	10.0	0.0	0.0	0.0	0.0	0.0	-13.0
1.5	MMG-W	100L	MMG-H	100L	-12.0	0.0	-13.0	10.0	10.0	0.0	0.0	0.0	0.0	0.0	-14.0
2.2	MMG-W	112M	MMG-H	112M	-14.0	0.0	-21.0	-10.0	0.0	0.0	0.0	0.0	0.0	0.0	-17.0
3	MMG-W	132S	MMG-H	132S	5.0	0.0	-18.0	13.0	23.0	0.0	0.0	0.0	0.0	0.0	-17.0
4	MMG-W	132M	MMG-H	132M	3.0	0.0	-18.0	13.0	23.0	0.0	0.0	0.0	0.0	0.0	-15.0
5.5	MMG-W	132M	MMG-H	132M	3.0	0.0	-18.0	13.0	23.0	0.0	0.0	0.0	0.0	0.0	-14.0
7.5	MMG-W	160M	MMG-H	160M	-8.0	0.0	-17.0	11.0	21.0	0.0	0.0	0.0	0.0	0.5	3.0
11	MMG-W	160L	MMG-H	160L	-9.0	0.0	-17.0	11.0	21.0	0.0	0.0	0.0	0.0	0.5	6.0
15	MMG-W	180L	MMG-H	180L	-22.0	0.0	-24.0	11.0	21.0	0.0	0.0	0.0	0.0	0.5	34.0
18.5	MMG-W	200L	MMG-H	200L	4.0	0.0	-9.0	-20.0	50.0	0.0	0.0	0.0	0.0	0.5	59.0
22	MMG-W	200L	MMG-H	200L	4.0	0.0	-9.0	-20.0	50.0	0.0	0.0	0.0	0.0	0.5	63.0
30	MMG-W	225M	MMG-H	225M	6.0	0.0	-16.0	-20.0	50.0	0.0	0.0	0.0	0.0	0.5	72.0
37	MMG-W	250M	MMG-H	250M	-9.0	0.0	0.0	-54.0	-25.0	0.0	0.0	-38.0	0.0	0.0	66.0
45	MMG-W	280S	MMG-H	280S	-5.0	0.0	-10.0	-46.0	-17.0	0.0	0.0	0.0	0.0	0.0	62.0
55	MMG-W	280M	MMG-H	280M	-4.0	0.0	-10.0	-46.0	-17.0	0.0	0.0	0.0	0.0	0.0	-6.0
75	MMG-W	315S	MMG-H	315S	11.0	0.0	-28.0	-73.0	-11.0	0.0	0.0	0.0	0.0	0.0	-125.0
90	MMG-W	315M	MMG-H	315M	11.0	0.0	-28.0	-73.0	-291.0	0.0	0.0	0.0	0.0	0.0	-78.0

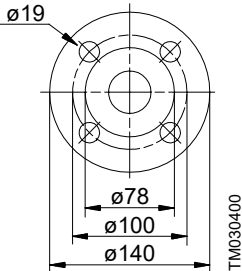
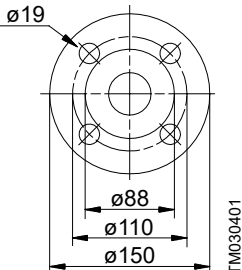
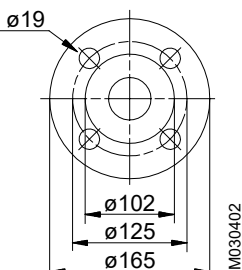
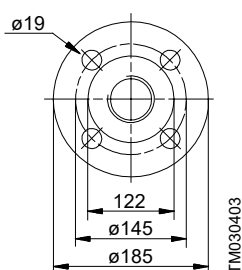
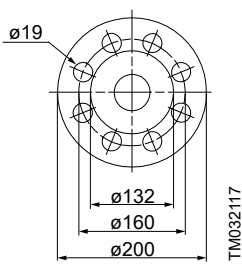
21. Accessories

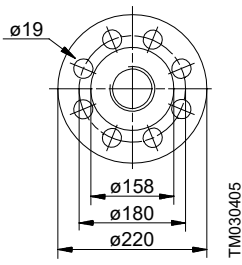
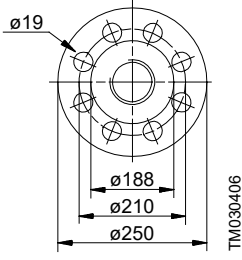
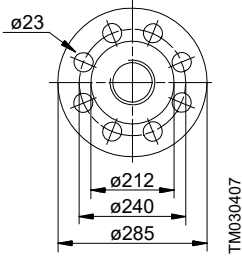
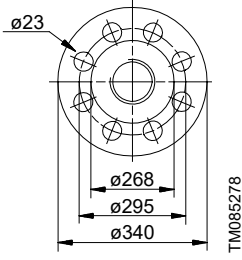
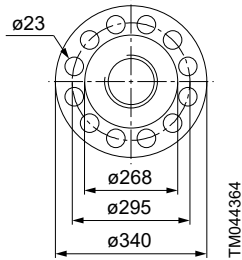
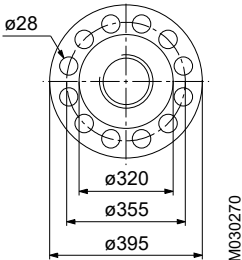
Counter-flange

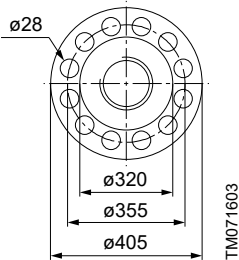
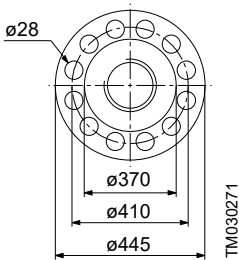
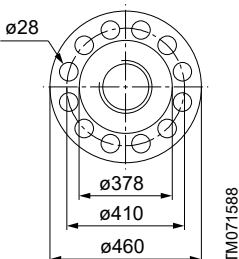
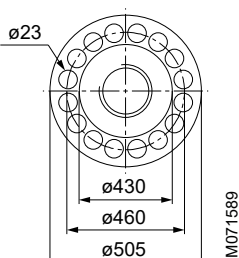
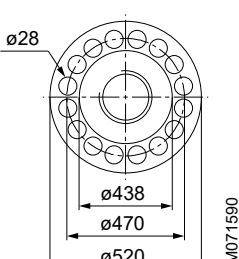
Cast iron pumps

Counter-flanges for cast iron NK, NKE pumps are made of steel.

A set consists of one counter-flange, one gasket of asbestos-free material and the requisite number of bolts and nuts.

Counter-flange	Flange size	Description	Rated pressure [bar] EN 1092-2	Pipe connection	Product number
	DN 32	Threaded	10/16	Rp 1 1/4	419901
		For welding	10/16	32 mm	419902
	DN 40	Threaded	10/16	Rp 1 1/2	429902
		For welding	10/16	40 mm	429901
	DN 50	Threaded	10/16	Rp 2	339903
		For welding	10/16	50 mm	339901
	DN 65	Threaded	10/16	Rp 2 1/2	349902
		For welding	10/16	65 mm	349904
	DN 80	Threaded	10/16	Rp 3	350540
		For welding	10/16	80 mm	350541

Counter-flange	Flange size	Description	Rated pressure [bar] EN 1092-2	Pipe connection	Product number
	DN 100	Threaded	10/16	Rp 4	369901
		For welding	10/16	100 mm	369902
	DN 125	For welding	10/16	125 mm	96414677
	DN 150	For welding	10/16	150 mm	96414676
	DN 200	For welding	10	200 mm	96413358
	DN 200	For welding	16	200 mm	96691093
	DN 250	For welding	10	250 mm	99457575

Counter-flange	Flange size	Description	Rated pressure [bar] EN 1092-2	Pipe connection	Product number
	DN 250	For welding	16	250 mm	96890361
	DN 300	For welding	10	300 mm	99457580
	DN 300	For welding	16	300 mm	96890401
	DN 350	For welding	10	350 mm	99457581
	DN 350	For welding	16	350 mm	99457633

Sensors

Grundfos vortex flow sensor, VFI ³⁸⁾	Type	Flow range [m ³ /h]	Pipe connection	O-ring		Connection type		Product number
				EPDM	FKM	Cast iron flange	Stainless steel flange	
 • Sensor tube with sensor • Sensor tube of 1.4408 and sensor of 1.4404 • 2 flanges • 5 m cable with M12 connection in one end • Quick guide	VFI 1.3-25 DN32 020 E	1.3 - 25	DN 32	•		•		97686141
	VFI 1.3-25 DN32 020 F				•	•		97686142
	VFI 1.3-25 DN32 020 E			•			•	97688297
	VFI 1.3-25 DN32 020 F				•		•	97688298
	VFI 2-40 DN40 020 E	2-40	DN 40	•		•		97686143
	VFI 2-40 DN40 020 F				•	•		97686144
	VFI 2-40 DN40 020 E			•			•	97688299
	VFI 2-40 DN40 020 F				•		•	97688300
	VFI 3.2-64 DN50 020 E	2-64	DN 50	•		•		97686145
	VFI 3.2-64 DN50 020 F				•	•		97686146
	VFI 3.2-64 DN50 020 E			•			•	97688301
	VFI 3.2-64 DN50 020 F				•		•	97688302
	VFI 5.2-104 DN65 020 E	5.2 - 104	DN 65	•		•		97686147
	VFI 5.2-104 DN65 020 F				•	•		97686148
	VFI 5.2-104 DN65 020 E			•			•	97688303
	VFI 5.2-104 DN65 020 F				•		•	97688304
	VFI 8-160 DN80 020 E	8-160	DN 80	•		•		97686149
	VFI 8-160 DN80 020 F				•	•		97686150
	VFI 8-160 DN80 020 E			•			•	97688305
	VFI 8-160 DN80 020 F				•		•	97688306
	VFI 12-240 DN100 020 E	12-240	DN 100	•		•		97686151
	VFI 12-240 DN100 020 F				•	•		97686152
	VFI 12-240 DN100 020 E			•			•	97688308
	VFI 12-240 DN100 020 F				•		•	97688309

³⁸⁾ For more information about the VFI sensor, see the "Grundfos direct sensors" data booklet, publication number 97790189.

Grundfos differential pressure sensor, DPI	Content of sensor kit	Data sheet product number ³⁹⁾	Pressure range [bar]	Product number
	1 sensor (7/16" connections), including 0.9 m screened cable	96985439	0 - 0.6	96611522
	1 original DPI bracket, for wall mounting	96985440	0 - 1.0	96611523
	1 Grundfos bracket, for mounting on motor	96985441	0 - 1.6	96611524
	screws for mounting of sensor on bracket and motor			
	3 capillary tubes, short or long	96985463	0 - 2.5	96611525
	2 fittings (1/4" - 7/16")	96985464	0 - 4.0	96611526
	5 cable clips, black	96985465	0 - 6.0	96611527
	installation and operating instructions			
	service kit instruction	96985466	0-10	96611550

³⁹⁾ Enter the product number of the data sheet into Grundfos Product Center to view data for the sensor.

Note: Select the differential pressure sensor so that the maximum pressure of the sensor is higher than the maximum differential pressure of the pump.

External Grundfos sensors

Sensor	Type	Supplier	Measuring range [bar]	Transmitter output [mA]	Power supply [VDC]	Process connection	Product number
Pressure transmitter	RPI	Grundfos	0 - 0.6	4-20	12-30	G 1/2	97748907
			0 - 1.0				97748908
			0 - 1.6				97748909
			0 - 2.5				97748910
			0 - 4.0				97748921
			0 - 6.0				97748922
			0-12				97748923
			0-16				97748924

Sensor interface, SI 001 PSU ⁴⁰⁾	Description	Product number
	Grundfos Direct Sensors™, type SI 001 PSU, is an external power supply for the VFI, DPI and other transmitters with 24 VDC supply voltage. It is used when the cable between transmitter and controller is more than (30 metres) long.	96915820

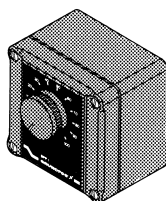
⁴⁰⁾ For more information about the PSU sensor interface, see the Installation and operating instructions "SI 001 PSU - sensor interface", publication number 96944355, or Quick guide, publication number 96944356.

Danfoss pressure sensor kit	Pressure range [bar]	Product number
- Connection: G 1/2 A (DIN 16288 - B6kt) - Electrical connection: Plug (DIN 43650)	0 - 2.5	96478188
	0-4	91072075
	0-6	91072076
	0-10	91072077
	0-16	91072078
- Pressure sensor, type MBS 3000, with 2 m screened cable - Connection: G 1/4 A (DIN 16288 - B6kt) 5 cable clips, black - Fitting instructions PT (00400212)	0 - 2.5	405159
	0-4	405160
	0-6	405161
	0-10	405162
	0-16	405163

	Type	Supplier	Measuring range	Product number
Flowmeter	SITRANS F M MAGFLO MAG 5100 W	Innomotics	1-5 m ³ /h (DN 25)	ID8285
Flowmeter	SITRANS F M MAGFLO MAG 5100 W	Innomotics	3-10 m ³ /h (DN 40)	ID8286
Flowmeter	SITRANS F M MAGFLO MAG 5100 W	Innomotics	6-30 m ³ /h (DN 65)	ID8287
Flowmeter	SITRANS F M MAGFLO MAG 5100 W	Innomotics	20-75 m ³ /h (DN 100)	ID8288
Temperature sensor	TTA (0) 25	Carlo Gavazzi	0-25 °C	96432591
Temperature sensor	TTA (-25) 25	Carlo Gavazzi	-25 to +25 °C	96430194
Temperature sensor	TTA (50) 100	Carlo Gavazzi	50-100 °C	96432592
Temperature sensor	TTA (0) 150	Carlo Gavazzi	0-150 °C	96430195
Accessory for temperature sensor. All with 1/2 RG connection.	Protecting tube Ø9 x 50 mm	Carlo Gavazzi		96430201
	Protecting tube Ø9 x 100 mm	Carlo Gavazzi		96430202
	Cutting ring bush	Carlo Gavazzi		96430203
Temperature sensor, ambient temperature	WR 52	tmg (DK: Plesner)	-50 to +50 °C	ID8295
Differential temperature sensor	ETSD	Honsberg	0-20 °C	96409362
Differential temperature sensor	ETSD	Honsberg	0-50 °C	96409363

Note: All sensors have 4-20 mA output signal.

Potentiometer



TM021630

Potentiometer for setpoint setting and start/stop of the pump.

Product	Product number
External potentiometer with cabinet for wall mounting	625468

Grundfos GO

Grundfos GO is used for wireless infrared or radio communication with the pumps.

MI 301

MI 301 is a module with built-in infrared and radio communication. Use MI 301 in conjunction with an Android or iOS-based smart devices with a Bluetooth connection. MI 301 has a rechargeable Li-ion battery and you must charge it separately.



TM053890

MI 301

Supplied with the product:

- Grundfos MI 301
- sleeve
- battery charger
- quick guide.

Product numbers

	Product number
Grundfos MI 301	98046408

Supported units

Make	Model	Operating system	MI 301
Apple	iPod touch 4G	iOS 5.0 or later	•
	iPhone 4, 4S		•
	iPod touch 5G	iOS 6.0 or later	•
	iPhone 5		•
HTC	Desire S	Android 2.3.3 or later	•
	Sensation		•
Samsung	Galaxy S II	Android 2.3.4 or later	•
	Galaxy Nexus		•
LG	Google Nexus 4	Android 4.2 or later	•

Note: Similar Android and iOS-based devices may work as well, but are not supported by Grundfos.

CIU communication interface units



TM1040612

Grundfos CIU communication interface unit

The CIU units enable communication of operating data, such as measured values and setpoints, between E-pumps and a building management system. The CIU unit incorporates a 24-240 VAC/VDC power supply module and a CIM module. It can either be mounted on a DIN rail or on a wall.

We offer the following CIU units:

Description	Fieldbus protocol	Product number
CIU 100	LonWorks for pumps	96753735
CIU 150	PROFIBUS DP	96753081
CIU 200	Modbus RTU	96753082
CIU 250 ⁴¹⁾	GSM	96787106
CIU 270 ⁴¹⁾	GRM	96898819
CIU 300	BACnet MS/TP	96893769
CIU 500	Ethernet, BACnet IP	96753894
CIU 500	Ethernet, Modbus TCP	
CIU 500	Ethernet, PROFINET IO	
CIU 500	Ethernet, GRM IP	
CIU 500	Ethernet, EtherNet/IP	
CIU 900	CIU box without CIM	99448387
CIU 901	CIU box with IO 270 only	99448389

⁴¹⁾ Antenna not included. Refer to section Antennas and battery.

For further information about data communication via CIU units and fieldbus protocols, refer to the CIU documentation available in Grundfos Product Center.

Related information

[Antennas and battery](#)

CIM communication interface modules



TM1040613

Grundfos CIM communication interface module

The CIM modules enable communication of operating data, such as measured values and setpoints, between E-pumps of up to 22 kW and a building management system. The CIM modules are add-on communication modules which are installed in the MGE terminal box.

Note: CIM modules must be installed by authorised personnel.

We offer the following CIM modules:

Product	Description	Product number
CIM 100	LonWorks for pumps	96824797
CIM 110	LonWorks for multipump	96824798
CIM 150	PROFIBUS DP	96824793
CIM 200	Modbus RTU	96824796
CIM 250 ⁴²⁾	GSM	96824795
CIM 260-EU ⁴²⁾	3G/4G cellular	99439302
CIM 260-US ⁴²⁾	3G/4G cellular	99439306
CIM 270 ⁴²⁾	GRM	96898815
CIM 280-EU ⁴²⁾	GiC/GRM 3G/4G	99439724
CIM 280-US ⁴²⁾	GiC/GRM 3G/4G	99439725
CIM 300	BACnet MS/TP	96893770
CIM 500	Ethernet, BACnet IP	98301408
CIM 500	Ethernet, Modbus TCP	
CIM 500	Ethernet, PROFINET IO	
CIM 500	Ethernet, GRM IP	
CIM 500	Ethernet, EtherNet/IP	

⁴²⁾ Antenna not included. Refer to section Antennas and battery.

For further information about data communication via CIM modules and fieldbus protocols, see the CIM documentation available in Grundfos Product Center.

Related information

[Antennas and battery](#)

Antennas and battery

Description	Product number
Antenna for roof for CIM/CIU 250/270	97631956
Antenna for desk for CIM/CIU 250/270	97631957
Antenna (rod) 3G/4G for CIM 260/280	99043061
Antenna (puc) 3G/4G for CIM 260/280	99518079
CIM 250 battery	99499908

EMC filter

EMC (electromagnetic compatibility to EN 61800-3)

Motor [kW]		Emission/immunity
2-pole	4-pole	
0.37	0.37	Emission
0.55	0.55	
0.75	0.75	
1.1	1.1	
1.5	1.5	
2.2	2.2	Immunity
3.0	3.0	
4.0	4.0	Motors fulfil the requirements for both the first and second environment.
5.5	-	
7.5	-	Emission
-	5.5	
-	7.5	The motors are category C3, corresponding to CISPR11, group 2, class A, and may be installed in industrial areas (second environment).
11	11	
15	15	If equipped with an external Grundfos EMC filter, the motors are category C2, corresponding to CISPR11, group 1, class A, and may be installed in residential areas (first environment).
18.5	18.5	
22	-	



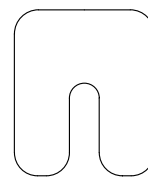
TM029198

EMC filter

The EMC filter for residential areas is available as a complete kit ready for installation.

Product	Product number
EMC filter (5.5 kW and 7.5 kW, 4-pole)	96041047
EMC filter (11-22 kW)	96478309

Shims



TM043264

Shim

Shims to adjust motor height when aligning pump and motor.

Product	Product number
Small case (180 pcs)	96659156
Large case (360 pcs)	96659157

Each case contains three types of shims:

Type 1: 55 x 50 mm (2.17 x 1.97 in), 15 mm (0.59 in) slot.

Type 2: 75 x 70 mm (2.95 x 2.76 in), 23 mm (0.91 in) slot.

Type 3: 90 x 80 mm (3.54 x 3.15 in), 32 mm (1.26 in) slot.

Each type has ten of each of three sizes: 0.02; 0.028; 0.039 inch (0.5; 0.7; 1 mm).

A large case contains 20 of each of the above-mentioned shims. Refills can be found via service.

22. Service

Some pump parts will become worn over time and need to be replaced. These parts can be ordered as service kits.

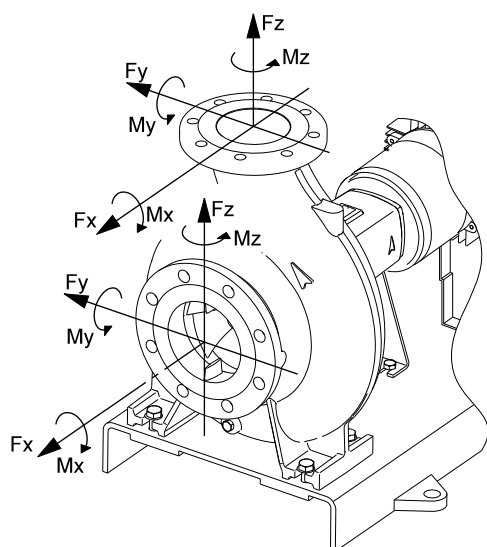
Service recommendations

To avoid unnecessary downtime, we recommend that you stock certain service parts. These service parts should be ordered together with the pump.

Information about service kits and recommended service parts can be found in the service kit catalogue.

In Grundfos Product Center, you can also search for the "Service offerings" data booklet, which gives relevant information about service issues.

23. Flange forces and torques



TM045621

Flange forces and torques

Cast iron flanges	Diameter DN	Force [N]				Torque [N-m]			
		Fy	Fz	Fx	$\Sigma F^{43)}$	My	Mz	Mx	$\Sigma M^{43)}$
Horizontal pump, X-axis, inlet port	25	245	298	263	455	210	245	315	455
	32	298	368	315	578	263	298	385	560
	40	350	438	385	683	315	368	455	665
	50	473	578	525	910	350	403	490	718
	65	595	735	648	1155	385	420	525	770
	80	718	875	788	1383	403	455	560	823
	100	945	1173	1050	1838	438	508	613	910
	125	1120	1383	1243	2170	525	665	735	1068
	150	1418	1750	1575	2643	613	718	875	1278
	200	1890	2345	2100	3658	805	928	1138	1680
	250	2700	3460	2980	5220	1260	1460	1780	2620
	300	3220	4000	3580	6260	1720	1980	2420	3560
	350	3760	4660	4180	7300	2200	2540	3100	4560
	400	4300	5320	4780	8340	2760	3180	3880	5720
	450	4840	5980	5380	9380	3400	3920	4780	7040
	500	5380	6640	5980	10420	4100	4720	5780	8520

Cast iron flanges	Diameter DN	Force [N]				Torque [N-m]			
		F _y	F _z	F _x	ΣF ⁴³⁾	M _y	M _z	M _x	ΣM ⁴³⁾
Horizontal pump, X-axis, outlet port	32	315	298	368	578	263	298	385	560
	40	385	350	438	683	315	368	455	665
	50	525	473	578	910	350	403	490	718
	65	648	595	735	1155	385	420	525	770
	80	788	718	875	1383	403	455	560	823
	100	1050	945	1173	1838	438	508	613	910
	125	1243	1120	1383	2170	525	665	735	1068
	150	1575	1418	1750	2748	613	718	875	1278
	200	2100	1890	2345	3658	805	928	1138	1680
	250	2980	2700	3340	5220	1260	1460	1780	2620
	300	3580	3220	4000	6260	1720	1980	2420	3920
	350	4180	3760	4660	7300	2200	2540	3100	4560
	400	4780	4300	5320	8340	2760	3180	3880	5720
	450	5380	5080	5980	9380	3400	3920	4780	7040
	500	5980	5380	6640	10420	4100	4720	5780	8520

⁴³⁾ ΣF and ΣM are vector sums of the forces and torques

Stainless steel flanges	Diameter DN	Force [N]				Torque [N-m]			
		F _y	F _z	F _x	ΣF ⁴⁴⁾	M _y	M _z	M _x	ΣM ⁴⁴⁾
Horizontal pump, X-axis, inlet port	25	490	595	525	910	420	490	630	910
	32	595	735	630	1155	525	595	770	1120
	40	700	875	770	1365	630	735	910	1330
	50	945	1155	1050	1820	700	805	980	1435
	65	1190	1470	1295	2310	770	840	1050	1540
	80	1435	1750	1575	2765	805	910	1120	1645
	100	1890	2345	2100	3675	875	1015	1225	1820
	125	2240	2765	2485	4340	1050	1330	1470	2135
	150	2835	3500	3150	5285	1225	1435	1750	2555
	200	3780	4690	4200	7315	1610	1855	2275	3360
	250	4725	6055	5215	9135	2205	2555	3115	4585
	300	5635	7000	6265	10955	3010	3465	4235	6230
	350	6580	8155	7315	12775	3850	4445	5425	7980
	400	7525	9310	8365	14595	4830	5565	6790	10010
	450	8470	10465	9415	16415	5950	6860	8365	12320
	500	9415	11620	10465	18235	7175	8260	10115	14910
Horizontal pump, X-axis, outlet port	32	630	595	735	1155	525	595	770	1120
	40	770	700	875	1365	630	735	910	1330
	50	1050	945	1155	1820	700	805	980	1435
	65	1295	1190	1470	2310	770	840	1050	1540
	80	1575	1435	1750	2765	805	910	1120	1645
	100	2100	1890	2345	3675	875	1015	1225	1820
	125	2485	2240	2765	4340	1050	1330	1470	2135
	150	3150	2835	3500	5495	1225	1435	1750	2555
	200	4200	3780	4690	7315	1610	1855	2275	3360
	250	5215	4725	5845	9135	2205	2555	3115	4585
	300	6265	5635	7000	10955	3010	3465	4235	6860
	350	7315	6580	8155	12775	3850	4445	5425	7980
	400	8365	7525	9310	14595	4830	5565	6790	10010
	450	9415	8890	10465	16415	5950	6860	8365	12320
	500	10465	9415	11620	18235	7175	8260	10115	14910

⁴⁴⁾ ΣF and ΣM are vector sums of the forces and torques

If not all loads reach the maximum permissible value, one of the values is allowed to exceed the normal limit. Contact Grundfos for further information.

24. Grundfos Product Center

Online search and sizing tool to help you make the right choice.

From the international view, you can select your specific country to view the product range available to you.

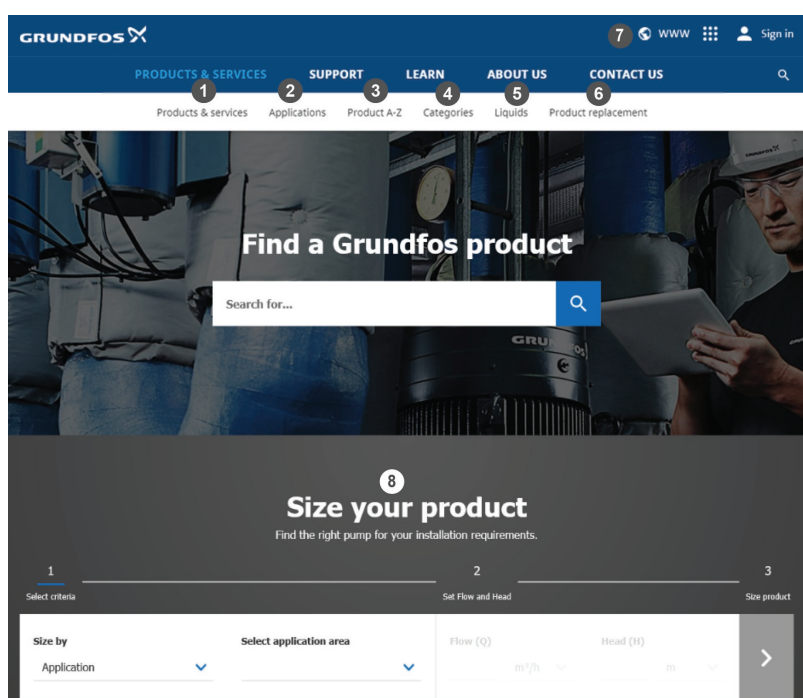
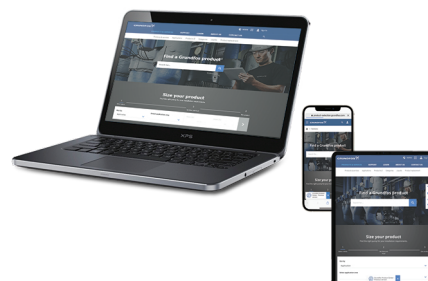
International view: <http://product-selection.grundfos.com>

All the information you need in one place

Performance curves, technical specifications, pictures, dimensional drawings, motor curves, wiring diagrams, spare parts, service kits, 3D drawings, documents, system parts. The Product Center displays any recent and saved items - including complete projects - right on the main page.

Downloads

On the product pages, you can download installation and operating instructions, data booklets, service instructions, etc., in PDF format.



When you select your country, you will see the menus below. Note that some menus may not be available depending on the country.

Example: <https://product-selection.grundfos.com/uk>

Pos.	Description
1	Products & services enables you to find products and documents by typing a product number or name into the search field.
2	Applications enables you to choose an application to see how Grundfos can help you design and optimise your system.
3	Products A-Z enables you to look through a list of all the Grundfos products.
4	Categories enables you to look for a product category.
5	Liquids enables you to find pumps designed for aggressive, flammable or other special liquids.
6	Product replacement enables you to find a suitable replacement.
7	WWW enables you to select the country, which changes the language, the available product range and the structure of the website.
8	Sizing enables you to size a product based on your application and operating conditions.

25. Document quality feedback

To provide feedback about this document, use your smart device to scan the QR code.



FEEDBACK92700011

[Click here to submit your feedback](#)

92700011	11.2025
ECM: 1437809	

GRUNDFOS Holding A/S
Poul Due Jensens Vej 7
DK-8850 Bjerringbro
Tel: +45 87 50 14 00
www.grundfos.com

