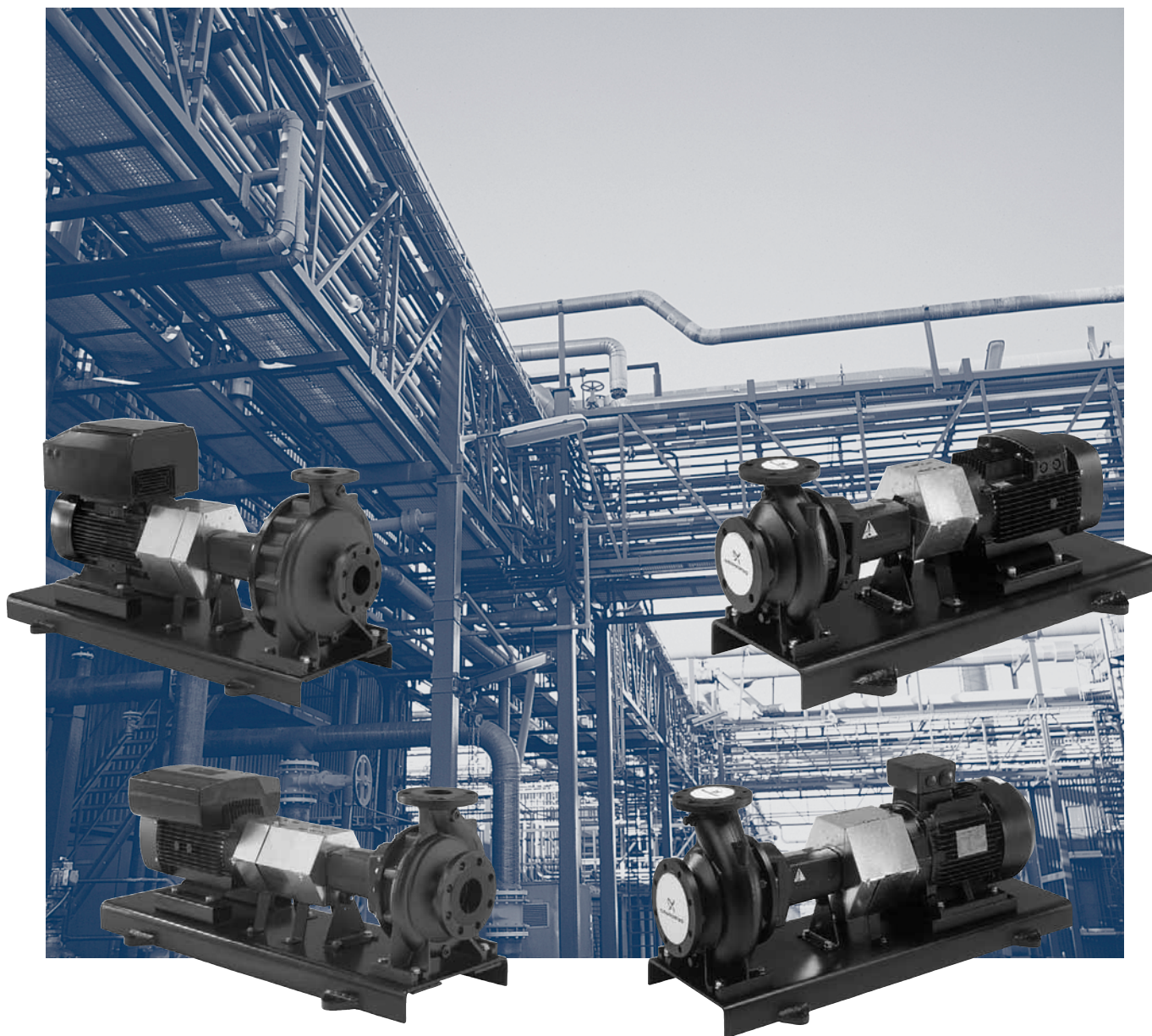


## NK, NKE

Single stage end-suction pumps according to EN 733  
50 Hz



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## Introduction

The NK series is a multi-purpose pump range suitable for a variety of different applications demanding reliable and cost-efficient supply.

NK, NKE pumps are used in four main fields of application:

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

## Water supply

Besides general water supply in municipal and industrial waterworks, the NK, NKE 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.

## Industrial pressure boosting

Pressure boosting in

- industrial washing and cleaning systems
- industrial washdown systems
- vehicle washing tunnels
- fire protection systems.

## Industrial liquid transfer

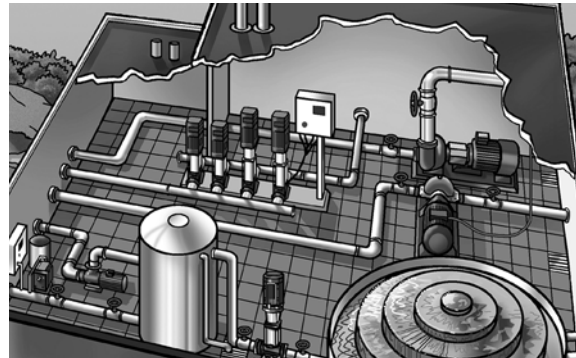
Liquid transfer in

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

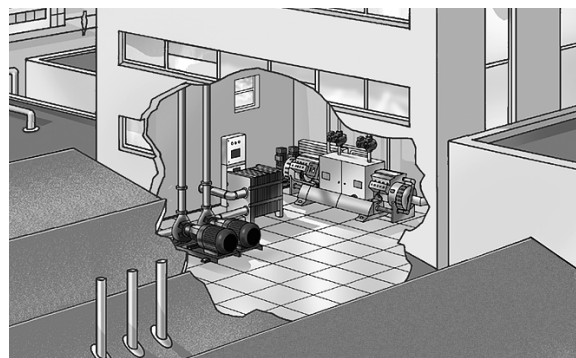
## Irrigation

Irrigation covers these applications:

- field irrigation (flooding)
- sprinkler irrigation
- drip-feed irrigation.



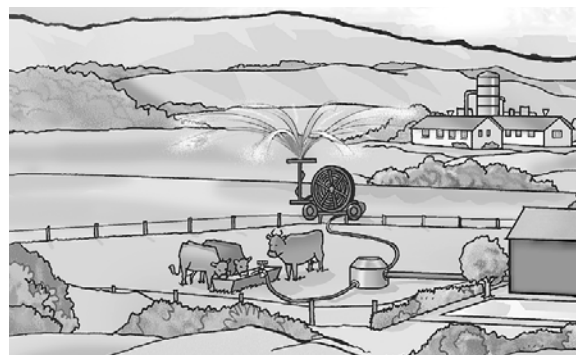
TM03 0146 4204



TM03 0147 4204



TM03 0148 4204



TM03 0149 4204

## Features and benefits

NK, NKE pumps present these features and benefits:

- The pumps are non-self-priming, single-stage, centrifugal volute pumps with axial suction port, radial discharge port and horizontal shaft.
- Suction and discharge flanges are PN 10 or PN 16 according to EN 1092-2 .
- Dimensions and rated performance are according to EN 733 (10 bar).  
However, pumps with flange dimensions up to and including DN 150 are marked PN 16 and thus suitable for 16 bar operation. See page 10.
- The 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).
- The mechanical shaft seal has dimensions according to EN 12756.
- NK, NKE pumps cover the performance range from 2 to 2000 m<sup>3</sup>/h and heads from 2 to 150 m. Motor sizes fall in the 0.37 to 315 kW range.
- Pumps with power consumption 1.1 to 22 kW are available with motors with built-in frequency converter. These pumps are called NKE.
- Pumps outside EN 733 are called "oversize"; dimensions may differ from the dimensions of similar pumps from other suppliers.
- All pumps are dynamically balanced according to ISO 1940 class 6.3.  
Impellers are hydraulically balanced.
- Pump and motor are mounted on a common, steel base frame in accordance with EN 23 661.  
All standard pumps and oversize pumps up to and including 125-250 have standard base frames.  
Oversize pumps as from 150-315 and upwards have welded base frames.
- The NK product range is available in two product series, "Standard Range" and "Premium range".  
Premium range products are available with EFF 1 motors, standard range products are EFF 2.
- The pumps are of the back pull-out design enabling removal and dismantling of the motor, coupling, bearing bracket and impeller without disturbing the pump housing or pipework. Consequently, even the largest pumps can be serviced by a single person with a crane, see fig. 1.

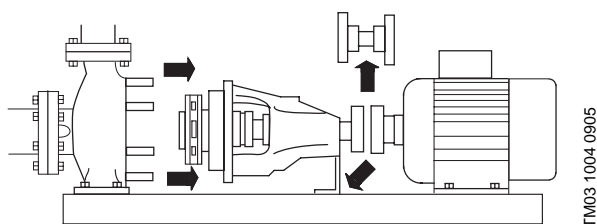


Fig. 1 Back pull-out design

## High-efficiency motors



Premium range 2- and 4-pole NK pumps with motor sizes from 1.1 to 90 kW are fitted with high-efficiency motors (EFF 1). EFF 1 is the highest efficiency class defined by CEMEP (European Committee of Manufacturers of Electrical Machines and Power Electronics).

## Pumps with electronic speed control

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

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

The pump materials of NKE pumps are the same as those of the NK pump range.

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

- constant pressure
- temperature control
- constant flow.

## Why select an NKE pump?

Select an NKE pump if

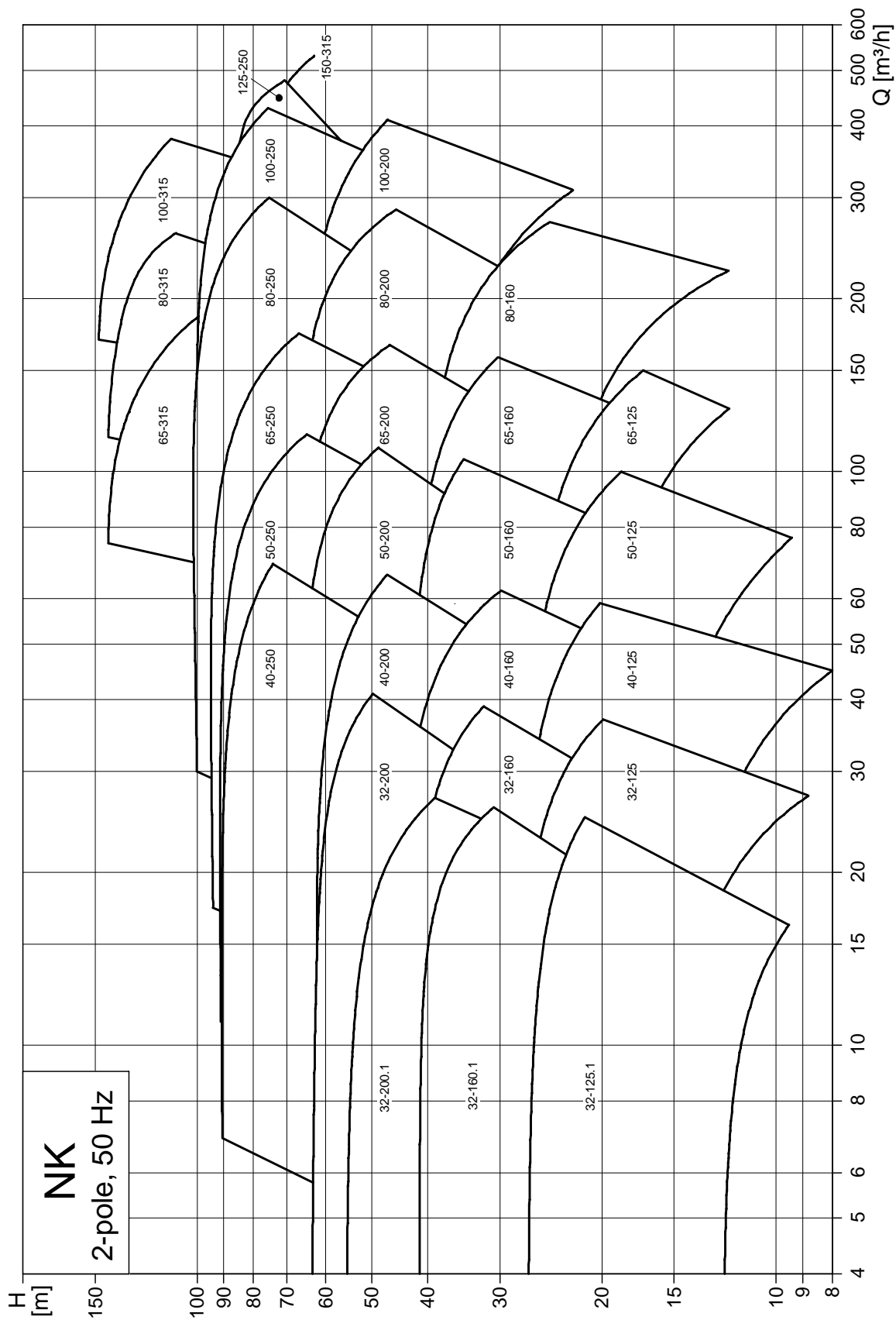
- controlled operation is required
- constant pressure is required
- communication with the pump is required.

This furthermore gives these obvious advantages:

- energy savings
- increased comfort.

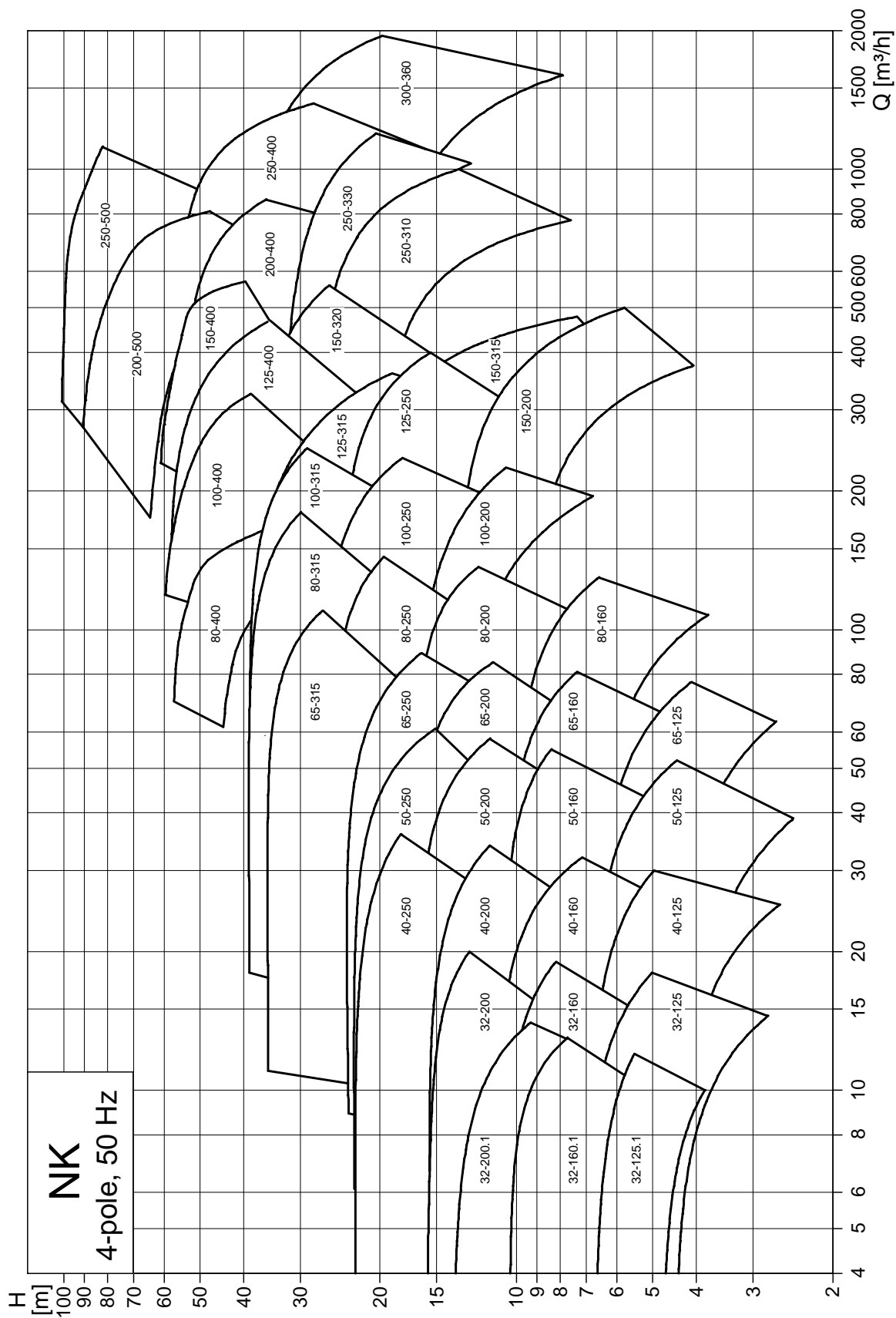
For further information on electronic speed control, see section "Speed controlled NK pumps" page 33.

## NK, NKE 2-pole



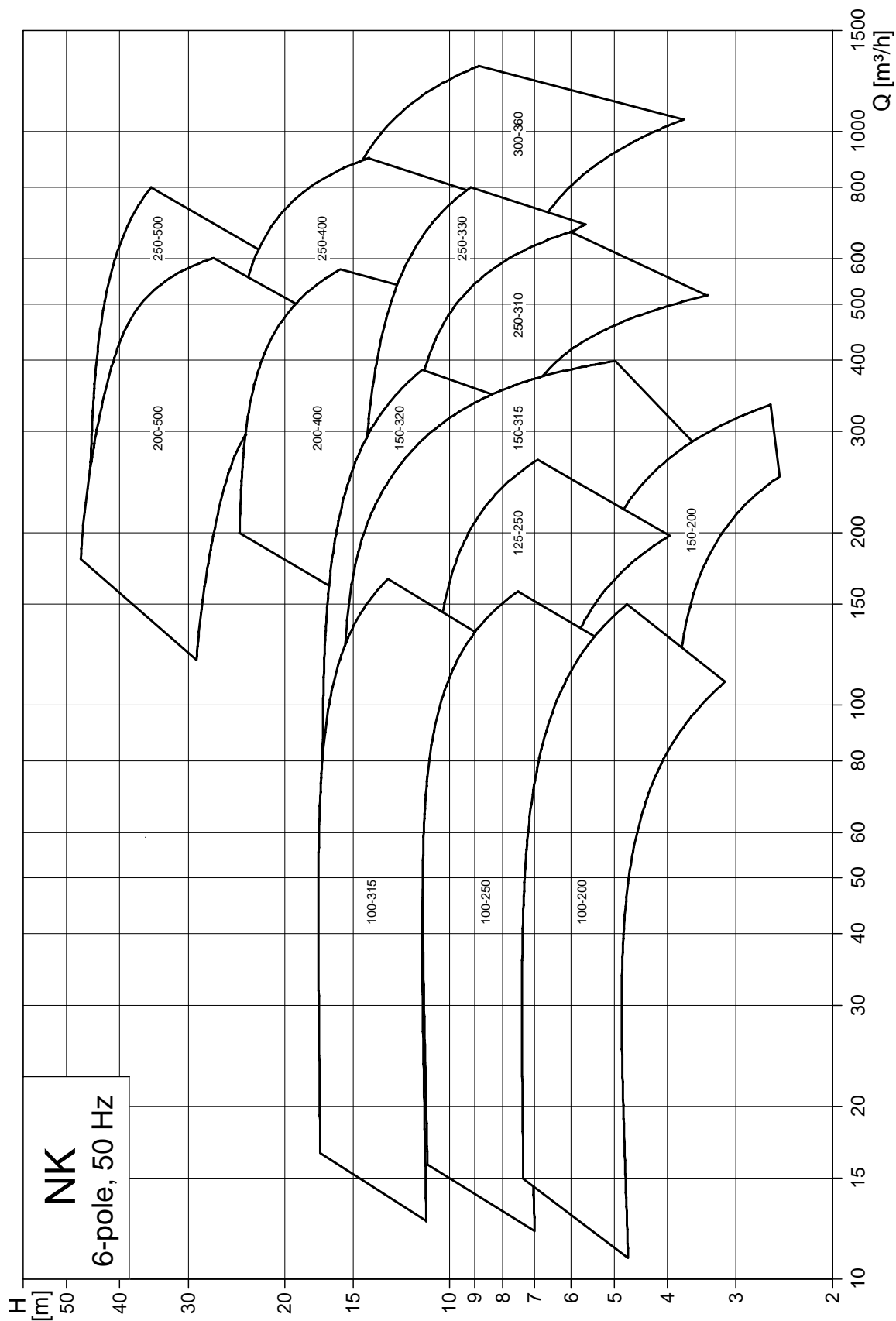
TM03 3330 0606

## NK, NKE 4-pole



TM03 3331 0606

## NK, NKE 6-pole



TM03 3332 0606



The tables on the following pages show the complete NK, NKE product range. The product range includes the pumps in WinCAPS.

The standard range has been combined on the basis of the following parameters:

- Pump housings have discharge flanges from DN 32 to DN 300.
- Impellers are made of cast iron.
- Wear rings are made of bronze (standard for NK model B).
- NK pumps are available with 2-, 4- and 6-pole motors, NKE with 2- and 4-pole motors.
- NK pumps are available with Premium range and Standard range motors.
- Motors with power rating up to and including 4 kW are available for "low voltage"; motors as from 2.2 kW are available for "high voltage".
- The three-phase E-motor range covers 2-pole 1.5 to 22 kW and 4-pole 0.75 to 22 kW.

To a great extent the pumps can be adapted to the requirements of the individual customer. For customized solutions, please contact Grundfos.

## NK, NKE 2-pole

Pump type 50 Hz, 2-pole	Model	P <sub>2</sub> [kW]	Available as E-pump	Pressure stage PN 10	Pressure stage PN 16
NK 32-125.1	B	1.1			●
		1.5	●		●
		2.2	●		●
NK 32-125	B	1.1			●
		1.5	●		●
		2.2	●		●
		3.0	●		●
NK 32-160.1	B	1.5	●		●
		2.2	●		●
		3.0	●		●
		4.0	●		●
NK 32-160	B	3.0	●		●
		4.0	●		●
		5.5	●		●
NK 32-200.1	B	3.0	●		●
		4.0	●		●
		5.5	●		●
		7.5	●		●
NK 32-200	B	4.0	●		●
		5.5	●		●
		7.5	●		●
		11	●		●
NK 40-125	B	1.5	●		●
		2.2	●		●
		3.0	●		●
		4.0	●		●
NK 40-160	B	5.5	●		●
		7.5	●		●
		11.0	●		●
NK 40-200	B	5.5	●		●
		7.5	●		●
		11.0	●		●
		15.0	●		●

Pump type 50 Hz, 2-pole	Model	P <sub>2</sub> [kW]	Available as E-pump	Pressure stage PN 10	Pressure stage PN 16
NK 40-250	B	11.0	●		●
		15.0	●		●
		18.5	●		●
		22.0	●		●
NK 50-125	B	3.0	●		●
		4.0	●		●
		5.5	●		●
		7.5	●		●
NK 50-160	B	5.5	●		●
		7.5	●		●
		11.0	●		●
NK 50-200	B	15.0	●		●
		18.5	●		●
		22.0	●		●
NK 50-250	B	15.0	●		●
		18.5	●		●
		22.0	●		●
		30.0			●
		37.0			●
NK 65-125	B	5.5	●		●
		7.5	●		●
		11.0	●		●
NK 65-160	B	7.5	●		●
		11.0	●		●
		15.0	●		●
NK 65-200	B	18.5	●		●
		22.0	●		●
		30.0			●
		37.0			●
NK 65-250	B	30.0			●
		37.0			●
		45.0			●
		55.0			●

# Product range

NK, NKE

Pump type 50 Hz, 2-pole	Model	P <sub>2</sub> [kW]	Available as E-pump	Pressure stage PN 10	Pressure stage PN 16
NK 65-315	A	37.0			●
		45.0			●
		55.0			●
NK 65-315★	A	75.0			●
		90.0			●
NK 80-160	B	15.0	●		●
		18.5	●		●
		22.0	●		●
		30.0			●
NK 80-200	B	22.0	●		●
		30.0			●
		37.0			●
		45.0			●
		55.0			●
NK 80-250	B	45.0			●
		55.0			●
		75.0			●
		90.0			●
NK 80-315	A	45.0			●
		55.0			●
NK 80-315★	A	75.0			●
		90.0			●
		110.0			●
		132.0			●
NK 100-200	B	30.0			●
		37.0			●
		45.0			●
		55.0			●
NK 100-250	B	75.0			●
		90.0			●
		110.0			●
		132.0			●
		55.0			●
NK 100-315	A	75.0			●
		90.0			●
		55.0			●
NK 100-315★	A	110.0			●
		132.0			●
		160.0			●
		200.0			●
NK 125-250	A	37.0			●
		45.0			●
		55.0			●
		75.0			●
		90.0			●

Pump type 50 Hz, 2-pole	Model	P <sub>2</sub> [kW]	Available as E-pump	Pressure stage PN 10	Pressure stage PN 16
NK 125-250★	A	110.0			●
		132.0			●
NK 150-315	A	110.0		●	
		132.0		●	
		160.0		●	

★ = oversize pump.

## NK, NKE 4-pole

Pump type 50 Hz, 4-pole	Model	P <sub>2</sub> [kW]	Available as E-pump	Pressure stage PN 10	Pressure stage PN 16
NK 32-125.1	B	0.25			●
		0.25			●
		0.37			●
NK 32-125	B	0.25			●
		0.25			●
		0.37			●
NK 32-160.1	B	0.25			●
		0.25			●
		0.37			●
NK 32-160	B	0.55			●
		0.25			●
		0.37			●
NK 32-200.1	B	0.75	●		●
		0.55			●
		0.75			●
NK 32-200	B	0.55			●
		0.75	●		●
		1.1	●		●
NK 40-125	B	0.25			●
		0.37			●
		0.55			●
NK 40-160	B	0.37			●
		0.55			●
		0.75	●		●
NK 40-200	B	1.1	●		●
		1.5	●		●
		2.2	●		●
NK 40-250	B	1.5	●		●
		2.2	●		●
		3.0	●		●
NK 50-125	B	0.37			●
		0.55			●
		0.75	●		●
NK 50-160	B	1.1	●		●
		1.5	●		●
		2.2	●		●

Pump type 50 Hz, 4-pole	Model	P <sub>2</sub> [kW]	Available as E-pump	Pressure stage PN 10	Pressure stage PN 16
NK 50-200	B	1.1	●		●
		1.5	●		●
		2.2	●		●
NK 50-250	B	3.0	●		●
		2.2	●		●
		4.0	●		●
NK 65-125	B	0.55			●
		0.75	●		●
		1.1	●		●
NK 65-160	B	0.75			●
		1.1	●		●
		1.5	●		●
NK 65-200	B	2.2	●		●
		1.5	●		●
		4.0	●		●
NK 65-250	B	3.0	●		●
		4.0	●		●
		5.5	●		●
NK 65-315	B	7.5	●		●
		5.5	●		●
		11.0	●		●
NK 80-160	B	15.0	●		●
		1.5	●		●
		2.2	●		●
NK 80-200	B	3.0	●		●
		4.0	●		●
		7.5	●		●

# Product range

NK, NKE

Pump type 50 Hz, 4-pole	Model	P <sub>2</sub> [kW]	Available as E-pump	Pressure stage PN 10	Pressure stage PN 16
NK 80-250	B	5.5	●		●
		7.5	●		●
		11.0	●		●
NK 80-315	B	11.0	●		●
		15.0	●		●
		18.5	●		●
		22.0	●		●
		30.0	●		●
NK 80-400★	A	11.0			●
		15.0			●
		18.5			●
		22.0			●
		30.0			●
NK 100-200	B	4.0	●		●
		5.5	●		●
		7.5	●		●
		11.0	●		●
NK 100-250	B	7.5	●		●
		11.0	●		●
		15.0	●		●
		18.5	●		●
NK 100-315	B	15.0	●		●
		18.5	●		●
		22.0	●		●
NK 100-400	A	15.0			●
		18.5			●
		22.0			●
		30.0			●
		37.0			●
		45.0			●
		55.0			●
75.0			●		
NK 125-250	B	11.0	●		●
		15.0	●		●
		18.5	●		●
		22.0	●		●
NK 125-315	A	11.0			●
		15.0			●
		18.5			●
		22.0			●
NK 125-315	A	22.0			●
		30.0			●

Pump type 50 Hz, 4-pole	Model	P <sub>2</sub> [kW]	Available as E-pump	Pressure stage PN 10	Pressure stage PN 16
NK 125-400	A	15.0			●
		18.5			●
		22.0			●
		30.0			●
		37.0			●
		45.0			●
		55.0			●
NK 150-200	B	7.5	●	●	
		11.0	●	●	
		15.0	●	●	
		11.0			●
NK 150-315	A	15.0			●
		18.5			●
		22.0			●
		30.0			●
		37.0			●
NK 150-320	A	45.0			●
		22.0			●
		30.0			●
		37.0			●
		45.0			●
NK 150-400	A	55.0			●
		22.0			●
		30.0			●
		37.0			●
		45.0			●
		55.0			●
NK 200-400★	A	75.0			●
		45.0			●
		55.0			●
		75.0			●
		90.0			●
NK 200-500★	A	110.0			●
		132.0			●
		110.0			●
		160.0			●
		200.0			●
		250.0			●
		NK 250-310★	A	30.0	
37.0					●
45.0					●
55.0					●
75.0					●

# Product range

NK, NKE

Pump type 50 Hz, 4-pole	Model	P <sub>2</sub> [kW]	Available as E-pump	Pressure stage PN 10	Pressure stage PN 16
NK 250-330★	A	55.0		●	
		75.0		●	
		90.0		●	
		110.0		●	
NK 250-400★	A	55.0		●	
		75.0		●	
		90.0		●	
		110.0		●	
		132.0		●	
		160.0		●	
200.0	●				
NK 250-500★	A	90.0		●	
		110.0		●	
		132.0		●	
		160.0		●	
		200.0		●	
		250.0		●	
315.0	●				
NK 300-360★	A	55.0		●	
		75.0		●	
		90.0		●	
		110.0		●	
		132.0		●	
		160.0		●	

★ = oversize pump.

## NK, NKE 6-pole

Pump type 50 Hz, 6-pole	Model	P <sub>2</sub> [kW]	Available as E-pump	Pressure stage PN 10	Pressure stage PN 16
NK 100-200	B	1.1			●
		1.5			●
		2.2			●
		3.0			●
		3.0			●
NK 100-250	B	2.2			●
		3.0			●
		4.0			●
		5.5			●
NK 100-315	B	4.0			●
		5.5			●
		7.5			●
		11.0			●
NK 150-200	B	2.2			●
		3.0			●
		4.0			●
NK 125-250	B	3.0			●
		4.0			●
		5.5			●
		7.5			●
NK 150-315	A	5.5		●	
		7.5		●	
		11.0		●	
		15.0		●	
NK 150-320	A	11.0		●	
		15.0		●	
		18.5		●	
		22.0		●	
		30.0		●	
NK 200-400★	A	18.5		●	
		22.0		●	
		30.0		●	
		37.0		●	
NK 200-500★	A	30.0		●	
		37.0		●	
		45.0		●	
		55.0		●	
		75.0		●	
NK 250-310★	A	11.0		●	
		15.0		●	
		18.5		●	
NK 250-330★	A	18.5		●	
		22.0		●	
		30.0		●	
NK 250-400★	A	18.5		●	
		22.0		●	
		30.0		●	
		37.0		●	
		55.0		●	

Pump type 50 Hz, 6-pole	Model	P <sub>2</sub> [kW]	Available as E-pump	Pressure stage PN 10	Pressure stage PN 16
NK 250-500★	A	45.0		●	
		55.0		●	
		75.0		●	
		90.0		●	
		110.0		●	
NK 300-360★	A	22.0		●	
		30.0		●	
		37.0		●	
		45.0		●	
		55.0		●	

★ = oversize pump.

## Type key

### NK, NKE

For pumps without motor, the motor data are left out, and for bare shaft pumps the coupling and motor data are left out.

### NK, model A

The example is an NK 32-160.1, 50 Hz, with a 177 mm impeller, cast iron with wear rings, BAQE shaft seal, standard coupling and a 2-pole 5.5 kW motor.

For specification of pump materials, see page 23.

Example	NK	32	-160	.1	/177	/A	W	/ BAQE	/1	/5.5	/2
Type range											
Nominal diameter of discharge port											
Nominal impeller diameter											
Reduced performance = .1											
Actual impeller diameter											
Code for materials: A = Cast iron EN-GJL-250 B = EN-GJL-250 with bronze impeller For further information on materials, see page 23											
W = Wear ring(s)											
Code for stuffing box or shaft seal, see page 18											
Coupling type: 1 = standard 2 = spacer											
Motor power in kW											
2-, 4- or 6-pole motor											



## NK, NKE, model B

Example	NK	32	-125	.1	/142	A1	-F	-A	-BAQE
Pump range									
Nominal diameter of discharge port (DN)									
Nominal impeller diameter [mm]									
Reduced performance = .1									
Actual impeller diameter [mm]									
Code for pump version (the codes may be combined <sup>1)</sup> ) A1 = Basic version with standard coupling A2 = Basic version with spacer coupling C = Pump unit without motor H = Bare shaft pump E = Pumps with certificates and reports X = Special version									
Code for pipework connection: F = DIN flange									
Code for materials: A = Cast iron EN-GJL-250 B = EN-GJL-250 with bronze impeller									
Code for shaft seal and rubber pump parts									

<sup>1)</sup> Examples of combined pump version codes:  
 A1C = Basic version with standard coupling and without motor.  
 A2E = Basic version with spacer coupling and without motor.

## Shaft seals

NK, NKE pumps are supplied with BAQE and GQQE shaft seals as standard.

### Codes for shaft seals

The positions (1) - (4) cover four pieces of information about the shaft seal:

Example	(1)	(2)	(3)	(4)
Grundfos type designation				
Material, rotating seal face				
Material, stationary seat				
Material, secondary seal and other rubber and composite parts, except the wear ring				

The following table explains the positions (1), (2), (3) and (4).

Pos	Type	Short description of seal
(1)	A	O-ring seal with fixed driver
	B	Rubber bellows seal
	G	Bellows seal, type B, with reduced seal faces
	D	O-ring seal, balanced
Pos	Type	Material
(2) and (3)		Synthetic carbons:
	A	Carbon, metal-impregnated (antimony (not approved for potable water))
	B	Carbon, synthetic resin-impregnated
	Q	Carbides: Silicon carbide
Pos	Type	Material
(4)	E	EPDM
	V	FKM
	F	FXM

## Stuffing boxes

Various types of stuffing box are available as an alternative to shaft seals. Stuffing boxes are not quite as sensitive as the shaft seals and are therefore suitable for many different applications.

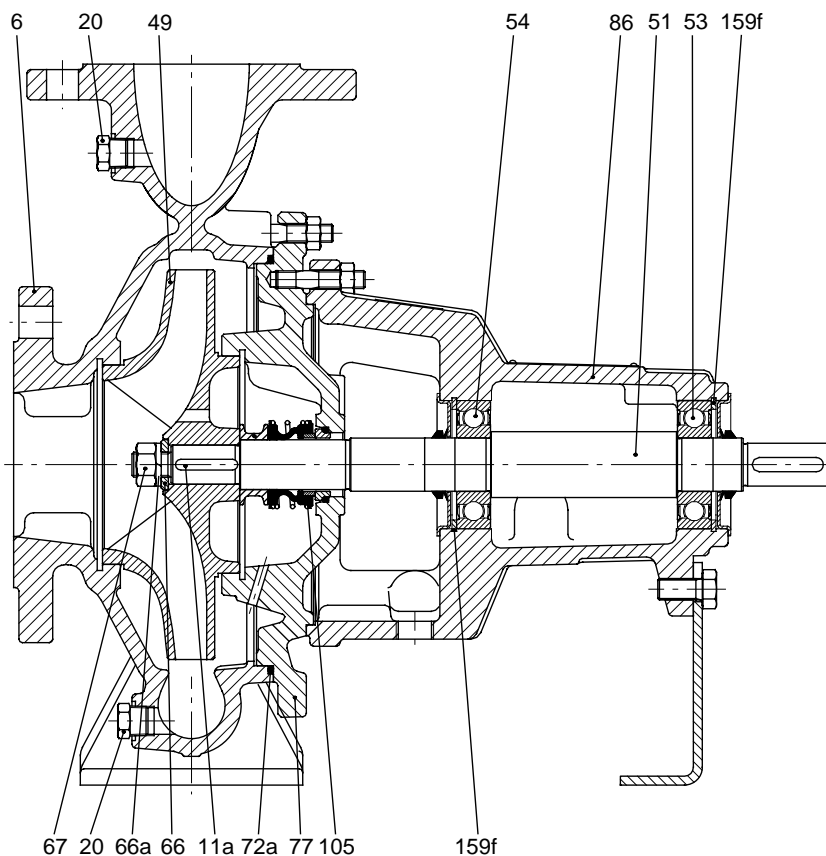
Three types of stuffing box are available for NK, NKE pumps: SNE, SNO and SNF.

### Codes for stuffing boxes

The positions 1 - 4 cover four pieces of information about the stuffing box:

Pos.	Code	Short description of stuffing box
1	S	Packing type stuffing box
Pos.	Code	Cooling method
2	N	Uncooled stuffing box
Pos.	Code	Barrier fluid
3	E	With internal barrier fluid
	F	With external barrier fluid
	O	Without barrier fluid
Pos.	Code	Materials
4	A	PTFE-impregnated fibre packing rings and EPDM o-rings in pump housing
	B	Graphite-PTFE Compound packing rings and EPDM o-ring in pump housing
	C	PTFE-impregnated fibre packing rings and FKM o-rings in pump housing
	D	Graphite-PTFE Compound packing rings and FKM o-ring in pump housing

## Sectional drawing, model B



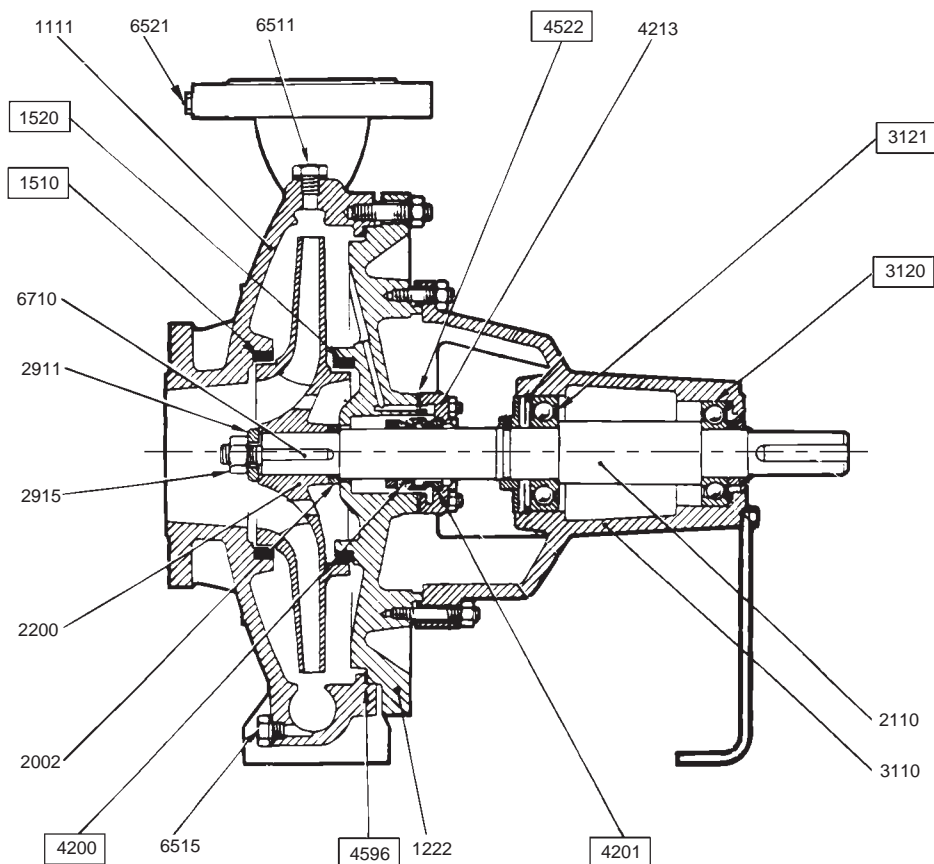
**Fig. 2** Sectional drawing NK 32-125.1; 65-250, 65-315 4-pole, 80-160; 80-315 4-pole, 100-200; 100-250, 100-315 4-pole, 125-250 4- and 6-pole, 150-200 pumps

TM01 7888 0203

## Components and material specification, model B

Pos.	Component	Cast iron version:	
		A	B
6	Pump housing	EN-GJL-250	
11a	Key	Stainless steel DIN W.-Nr. 1.4301/AISI 304	
20	Plug (drain, priming)	DIN W.-Nr. 1.1152	
49	Impeller	EN-GJL-250	G-CuSn5Zn5Pb5
51	Shaft	Stainless steel DIN W.-Nr. 1.4021/AISI 420	
53	Ball bearing	SKF - FAG - NSK	
54	Ball bearing	SKF - FAG - NSK	
66	Washer	Stainless steel DIN W.-Nr. 1.4305/AISI 303	
66a	Spring washer	Stainless steel 1.4310	
67	Nut	Stainless steel DIN W.-Nr. 1.4301/AISI 304	
72a	O-ring	O-ring EPDM or FKM	
77	Cover	EN-GJL-250	
86	Bearing bracket	EN-GJL-250	
105	Mechanical shaft seal	Burgmann mechanical seals	
159f	Retaining ring		

## Sectional drawing, model A



TM03 1009 0905

**Fig. 3** Sectional drawing NK 65-315 2-pole, 65-315 "oversize", 80-315 2-pole, 80-315 "oversize", 80-400, 100-315 2-pole, 100-315 "oversize", 100-400, 125-250 2-pole, 125-250 "oversize", 125-315, 125-400, 250-310 "oversize" pumps

### Legend:

:Recommended spare part.

Pos.	Component
1111	Pump casing
1222	Seal box
1510	Wear ring
1520	Wear ring
2002	Spacer ring
2110	Shaft
2200	Impeller

Pos.	Component
2911	Impeller washer
2915	Lock nut
3110	Bearing housing
3120	Ball bearing
3121	Ball bearing
4200	Rotary seal ring
4201	Stationary seat

Pos.	Component
4213	Cover for seal
4522	Gasket for cover
4596	Gasket for pump
6511	Priming plug
6515	Drain plug
6521	Pressure tapping plug
6710	Impeller key

## Sectional drawing "oversize", model A

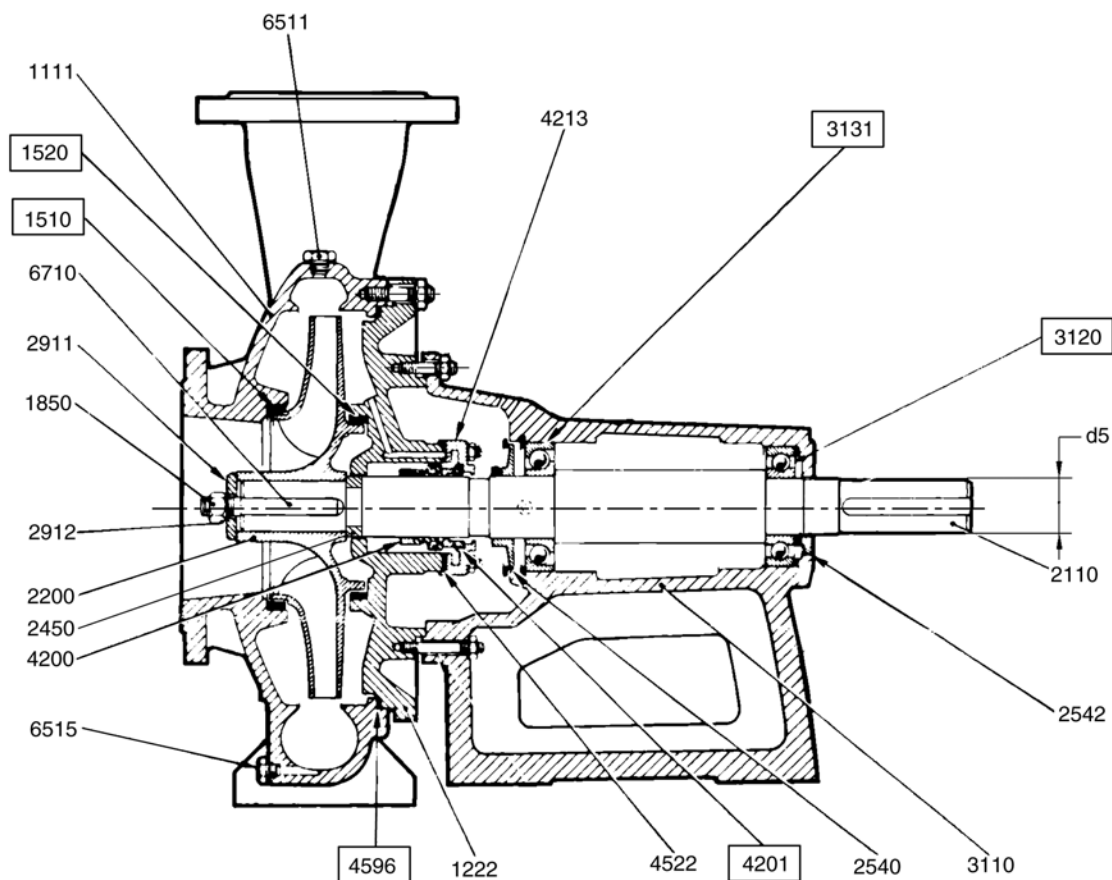


Fig. 4 Sectional drawing "Oversizes", NK 150-315, 200-500, 250-400, 250-500

### Legend:

:Recommended spare part.

Pos.	Component
1111	Pump casing
1222	Seal box
1510	Wear ring
1520	Wear ring
1850	Impeller counter nut
2110	Shaft
2200	Impeller
2450	Shaft sleeve

Pos.	Component
2540	Thrower
2542	Thrower
2911	Impeller washer
2912	Impeller nut
3110	Bearing housing
3120	Ball bearing
3131	Ball bearing
4200	Rotary seal ring

Pos.	Component
4201	Stationary seat
4213	Cover for seal
4522	Gasket for cover
4596	Gasket for pump
6511	Priming plug
6515	Drain plug
6710	Impeller key

TM00 9800 0203

## Sectional drawing "oversize", model A

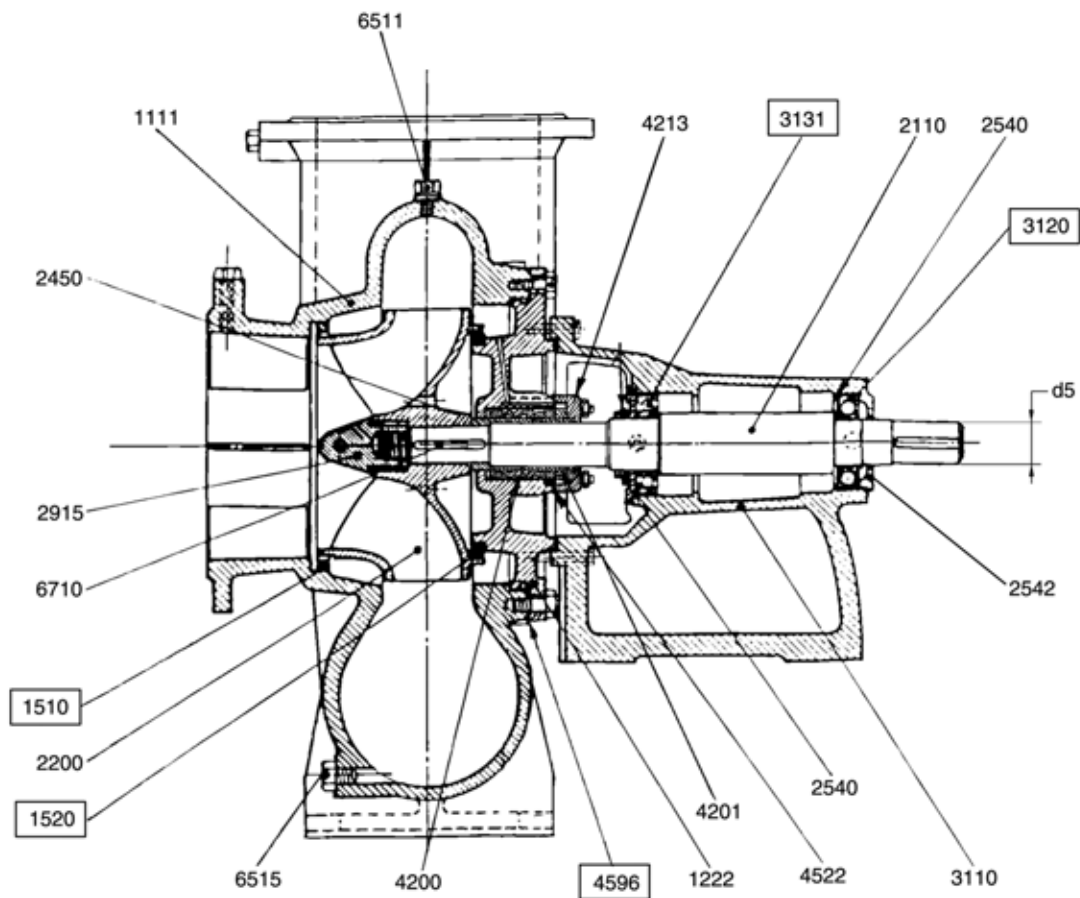


Fig. 5 Sectional drawing "Oversizes", NK 200-400, 250-330, 300-360

### Legend:

:Recommended spare part.

Pos.	Component
1111	Pump casing
1222	Seal box
1510	Wear ring
1520	Wear ring
2110	Shaft
2200	Impeller
2450	Shaft sleeve

Pos.	Component
2540	Thrower
2542	Thrower
2915	Lock nut
3110	Bearing housing
3120	Ball bearing
3131	Ball bearing
4200	Rotary seal ring

Pos.	Component
4201	Stationary seat
4213	Cover for seal
4522	Gasket for cover
4596	Gasket for pump
6511	Priming plug
6515	Drain plug
6710	Impeller key

TM01 3279 0203

## Components and material specification, model A

Pos.	Component	Cast iron version:	
		A	B Bronze impeller
1111	Pump casing		
1222	Seal box		EN-GJL-250
1510	Wear ring		
1520	Wear ring		G-CuPb10Sn
1850	Impeller counter nut	Stainless steel DIN W.-Nr. 1.4301/AISI 304	
2002	Spacer ring	Stainless steel DIN W.-Nr. 1.4021/AISI 420	
2110	Shaft	Stainless steel DIN W.-Nr. 1.4021/AISI 420	
2200	Impeller	EN-GJL-250	G-CuSn5Zn5Pb5
2450	Shaft sleeve <sup>1)</sup>	Stainless steel DIN W.-Nr. 1.4021/AISI 420	
2540	Thrower		
2542	Thrower		
2911	Impeller washer	Stainless steel DIN W.-Nr. 1.4021/AISI 420	
2912	Impeller nut		
2915	Lock nut	Stainless steel DIN W.-Nr. 1.4301/AISI 304	
3110	Bearing housing		EN-GJL-250
3120	Ball bearing		
3121	Ball bearing	DIN 625 / 628	SKF - FAG - RHP - NSK
3131	Ball bearing		
4200	Rotary seal ring		Burgmann mechanical seals
4201	Stationary seat		
4213	Cover for seal		EN-GJL-250
4522	Gasket for cover	Asbestos free gaskets DIN FA 3535 and FKM	
4596	Gasket for pump	Asbestos free gaskets DIN FA 3535 and FKM	
6511	Priming plug		
6515	Drain plug	DIN W.-Nr. 1.0037	
6521	Pressure tapping plug		
6710	Impeller key	DIN W.-Nr. 1.1181	

<sup>1)</sup> Only stuffing box or nominal shaft diameters (d5) ≥ ø48 mm.

## Mechanical construction

### Pump housing

The cast iron volute pump housing has axial suction port and radial discharge port. Flange dimensions are in accordance with EN 1092-2.

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

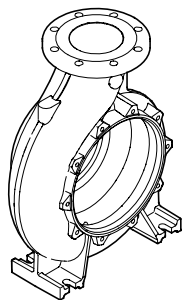


Fig. 6 NK pump housing

TM03 0232 4504

### Bearing bracket and shaft

The bearing bracket has two sturdy antifriction, lubricated-for-life bearings. However, oversize pumps with shaft diameter 55 mm have open bearings with lubricating nipples.

The bearing bracket is made of cast iron EN-GJL-250.

The shaft is made of stainless steel DIN W.-Nr. 1.4021/ AISI 420. Shaft diameter  $d_5$  is either  $\varnothing 24$ , 32, 42 or 55.

A thrower on the shaft prevents liquid from entering the bearing bracket. In stuffing box versions the shaft is protected by a stainless steel sleeve.

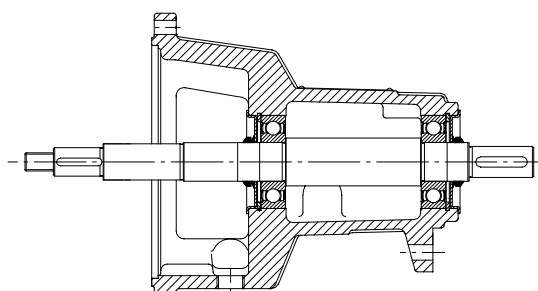


Fig. 7 Bearing bracket and shaft

TM03 0233 4504

All NK pumps are fitted with one of four 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.

### Shaft seal

The shaft seal is an unbalanced, mechanical shaft seal with dimensions to EN 12 756. Seal faces are available in a variety of combinations. The code of the standard version is BAQE or GQQE, see page 18.

For shaft seal variants other than those specified,

please contact Grundfos.

The drawings below illustrate shaft seals for NK model A.

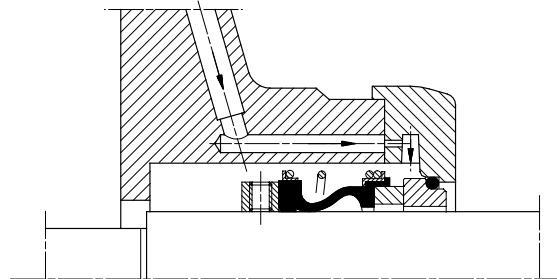


Fig. 8 Rubber bellows seal type BAQE counteracts deposits from the pumped liquid

TM02 6022 4802

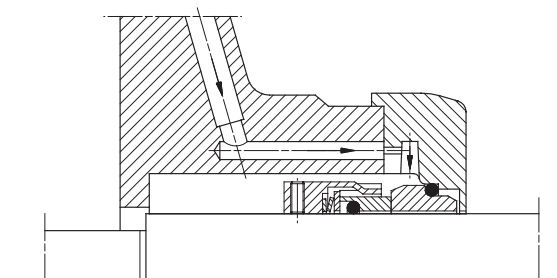


Fig. 9 Unbalanced O-ring seal type AQAE for high pressures

TM03 0267 4604

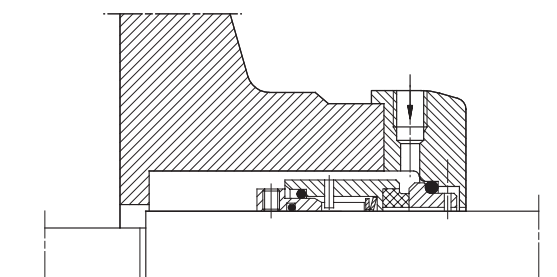


Fig. 10 Balanced O-ring seal type DAQF for high pressures and temperatures (120°C to 140°C)

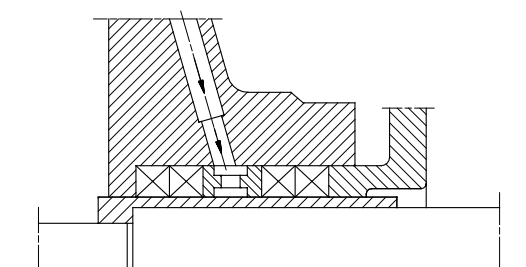
TM03 0268 4604



## Stuffing boxes

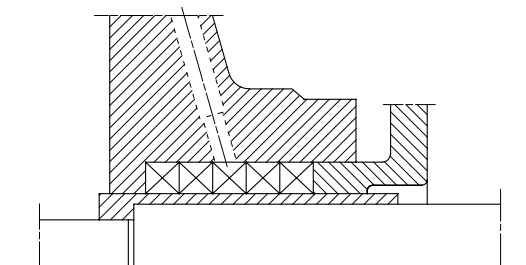
Stuffing boxes are available as pure packing rings or as packing rings with graphite seals. Stuffing box packing rings with graphite seals have proven their qualities in a wide range of applications, especially under extreme conditions, such as high pressure or high temperature, or operation with steam, gases, oils or aggressive liquids.

Braided material is effective for ensuring long service life for packing rings while protecting the shaft (sleeve) when used in pumps. In the installed state these packing rings are symmetrical, having parallel facings that rule out tilting.



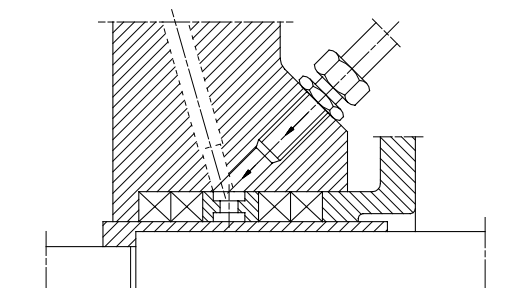
TM00 2584 0597

**Fig. 11** Uncooled stuffing box type SNE with internal barrier fluid for the pumping of clean liquids in suction operation or at inlet pressures up to 4 bar.



TM00 2585 0597

**Fig. 12** Uncooled stuffing box type SNO without internal barrier fluid for the pumping of clean liquids in suction operation or at inlet pressures over 4 bar.



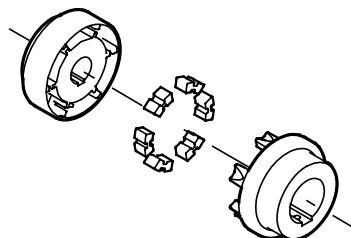
TM00 2586 0597

**Fig. 13** Uncooled stuffing box type SNF with external barrier fluid for the pumping of contaminated and malodorous liquids.

## Coupling

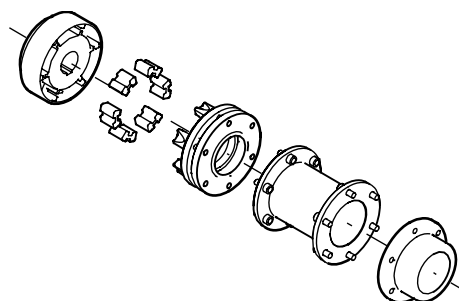
NK, NKE pumps are available with two types of coupling:

- standard coupling
- spacer coupling



TM03 0235 4504

**Fig. 14** Standard coupling



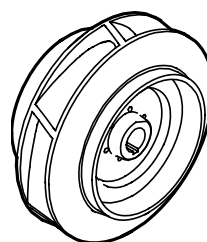
TM03 0234 4504

**Fig. 15** 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 pipework. This saves realignment of pump and motor after service.

## Impeller

The impeller is made of cast iron (bronze optional) and is a closed impeller with double-curved blades with smooth surfaces. This ensures high efficiency.



TM03 0231 4504

**Fig. 16** Impeller for an NK, NKE pump

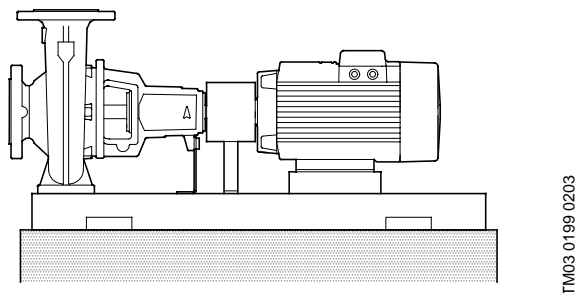
All impellers are dynamically and hydraulically balanced. The hydraulic balancing compensates for axial thrust.

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

All impellers are adapted to the duty point required by the customer.

## Base frame

Pump and motor are mounted on a common, steel base frame in accordance with EN 23 661. All standard pumps and oversize pumps up to and including 125-250 have standard base frames. Oversize pumps as from 150-315 and upwards have welded base frames.



**Fig. 17** Schematic view of NK pump-motor unit mounted on a base frame

## Surface treatment

### NK model A

All stationary cast iron parts are dip-painted with water-based, ether-epoxy no-lead paint (NCS 9000/RAL 9005). The thickness of the film is  $25 \mu\text{m} \pm 5 \mu\text{m}$ . Finally, the product is spray-painted with black water-based, ether-epoxy no-lead paint. The thickness of the dry coating is  $35 \mu\text{m} \pm 5 \mu\text{m}$ .

### NK, NKE model B

The cast iron parts of NK, NKE pumps are electro-coated.

The electrocoating process includes:

1. Alkaline cleaning
2. Pre-treatment with zinc phosphate coating
3. Cathodic electrocoating (epoxy)
4. Curing of paint film at 200-250°C.

The colour-code for the finished product is NCS 9000/RAL 9005.

For low-temperature applications at high humidity Grundfos offers NK and NKE pumps with extra surface treatment to avoid corrosion. These pumps are available on request.

## 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

## Motor

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

The tables below show the motors available for NK, NKE.

As appears from the tables you can choose between standard range with EFF 2 (efficiency 2) motors and premium range with EFF 1 (efficiency 1) motors for NK, and E-motor range for NKE.

### Standard motor range

Standard range - including EFF 2 motors			
Output P <sub>2</sub> [kW]	2-pole	4-pole	6-pole
0.25			
0.37			
0.55		MG model C	
0.75	MG model C		
1.1	MG model C EFF 2	MG model C EFF 2	
1.5			
2.2			
3.0			
4.0			
5.5			
7.5			
11.0	MMG model E EFF 2	MMG model E EFF 2	MMG model E
15.0			
18.5			
22.0			
30.0			
37.0			
45.0			
55.0	MMG model E	MMG model E	
75.0			
90.0			
110.0			
132.0			
160.0			
200.0			
250.0			
315.0			

Grey squares = these motors are not further described.

EFF 1 is the highest efficiency class according to the CEMEP efficiency classes.

**Note:** The CEMEP list of minimum requirements for high-efficiency motors covers the range from 1.1 kW to 90.0 kW, 2-pole and 4-pole motors, see bold frame. Consequently, only the motors within this range may be designated EFF 1 and EFF 2.

### Premium motor range

Premium range - including EFF 1 motors			
Output P <sub>2</sub> [kW]	2-pole	4-pole	6-pole
0.25			
0.37			
0.55		MG model C	
0.75	MG model C		
1.1	MG model D EFF 1	MG model D	
1.5			
2.2			
3.0			
4.0			
5.5			
7.5			
11.0	MMG model D EFF 1	MMG model D EFF 1	MMG model D
15.0			
18.5			
22.0			
30.0			
37.0			
45.0			
55.0	MMG model D	MMG model D	
75.0			
90.0			
110.0			
132.0			
160.0			
200.0			
250.0	Siemens	Siemens	
315.0			

Grey squares = these motors are not further described.

### E-motor range

Electronically speed controlled motors		
Output P <sub>2</sub> [kW]	2-pole	4-pole
0.75		
1.1		
1.5		
2.2		
3.0		
4.0		
5.5		
7.5		
11.0		
15.0		
18.5		
22.0		

Grey squares = these motors are not further described.

## 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 altitude

Ambient temperature must not exceed

- +40°C for EFF 2 motors
- +60°C for EFF 1 motors.

If the ambient temperature exceeds +40°C (+60°C) or if the motor is installed more than 1000 m above sea level, the rated motor output will fall due to the low density and consequent low cooling effect of the air. In such cases, it may be necessary to use an oversize motor with a higher output.

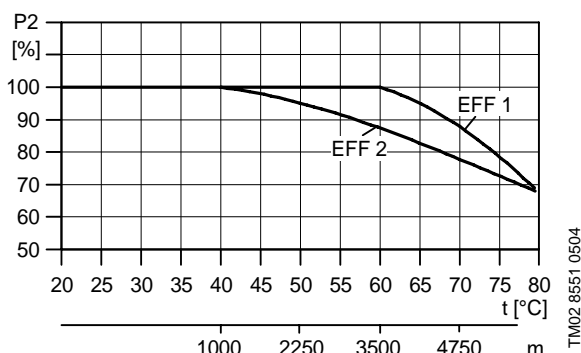


Fig. 18 Motor P2 depends on temperature/altitude

## Pumped liquids

NK pumps are suitable for pumping clean, thin, non-aggressive and non-explosive liquids, not containing any solid particles. See "List of pumped liquids", page 40.

### The effect of viscosity on centrifugal pump performance

A viscous liquid affects a centrifugal pump in several ways:

- The power consumption will be increased, i. e. a larger motor is required.
- Head, flow rate and pump efficiency will be reduced.

WinCAPS can help you select the right pump for liquids with a viscosity different from that of water.

### The effect of high density on centrifugal pump performance

A high density liquid only affects the power consumption of a centrifugal pump:

- The head, flow rate and pump efficiency will remain unchanged.
- The power consumption will increase at a ratio corresponding to the increase in density. A liquid with a specific gravity of 1.2 will thus require a 20% larger power input.
- An oversize motor will often be required.

WinCAPS can help you select the right pump for liquids with a density different from that of water.

## Liquid temperatures

The NK, NKE pump range covers the temperature range from -25°C (~-13°F) to +140°C (~+284°F). The permissible liquid temperature depends on the shaft seal type and pump type. See also the table below.

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

The maximum liquid temperature is stamped on the nameplate.

Diameter of shaft end (d5)				
24 and 32 mm	42 mm	55 mm	Shaft seal	Operating temperature
Max. pressure [bar]				
16	16	16	BAQE	0°C to +120°C
16	-	-	BQBE	0°C to +140°C
16	16	16	DAQF	0°C to +140°C
16	16	16	BQQV*	0°C to +90°C
16	16	16	BAQV*	0°C to +90°C
16	16	16	AQAE	0°C to +120°C
16	16	16	AQAV*	0°C to +90°C
16	10	10	GQQE	-25°C to +90°C
16	10	10	GQQV*	-20°C to +90°C
16	16	16	BQQE	0°C to +90°C
16	16	16	AQQE	0°C to +90°C
16	16	16	AQQV*	0°C to +90°C
16	16	16	BBQE	0°C to +120°C

\* The maximum temperature for FKM rubber is 80°C (~176°F) in liquids containing water. For non-aqueous liquids such as pure oil the seal faces of the shaft seal are the temperature limiting factor.

## EPDM

Shaft seals with EPDM 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 shaft seal.

## FKM

Shaft seals with FKM (xxxV) rubber has excellent resistance against oil and a range of chemicals.

## Carbon/silicon carbide

Shaft seals with carbon/silicon carbide (xAQx) 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 shaft seals are not suitable for liquids containing abrasive particles as the carbon parts will be worn. At temperatures below 0°C (~+32°F) corrosion inhibitors containing abrasive particles will usually be added to the pumped liquid, and xAQx seals will thus not be suitable.

## Silicon carbide/silicon carbide

Shaft seals with silicon carbide/silicon carbide (xQQx) 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 +90°C (~+194°F). At higher temperatures the reduced lubricating properties of the pumped liquid may cause noise problems and limit the life of the seal faces.

## Inlet pressure

### Maximum inlet pressure

The inlet pressure is limited by the maximum operating pressure.

#### Model A

The maximum inlet pressure appears from this table:

Inlet pressure	Max. 9 bar.
	Max. 7 bar for 400 mm impellers or bigger.

#### Model B

The actual inlet pressure + pressure when the pump is running against a closed valve must always be lower than the maximum permissible operating pressure.

### Minimum inlet pressure

The minimum inlet pressure must be according to the NPSH curve + a safety margin of at least 0.5 m ~ 1.65 feet + correction for vapour pressure. It is, however, advisable to calculate the inlet pressure if:

- 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.

## Calculation of maximum suction lift for water in open systems

To avoid cavitation, make sure that there is a minimum pressure on the suction side of the pump. The maximum suction lift "H" in metres head can be calculated as follows:

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

$p_b$  = Barometric pressure in bar.  
(Barometric pressure can be set to 1 bar).  
In closed systems,  $p_b$  indicates the system pressure in bar.

NPSH = Net Positive Suction Head in metres head.  
(To be read from the NPSH curve at the highest flow the pump will be delivering).

$H_f$  = Friction loss in suction pipe in metres head.  
(At the highest flow the pump will be delivering.)

$H_v$  = Vapour pressure in metres head.  
(To be read from the vapour pressure scale. " $H_v$ " depends on the liquid temperature " $T_m$ ").

$H_s$  = Safety margin = minimum 0.5 metres head.

If the "H" calculated is positive, the pump can operate at a suction lift of maximum "H" metres head.

If the "H" calculated is negative, an inlet pressure of minimum "H" metres head is required.

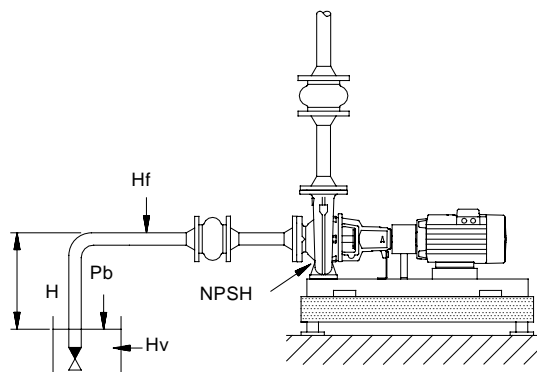


Fig. 19 Schematic view of open system with NK pump

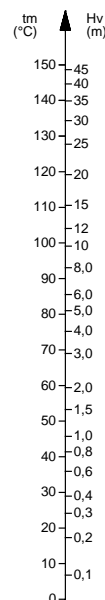


Fig. 20 Relation between liquid temperature and vapour pressure

TM02 6572 1003

TM00 3037 0798

## Piping

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

The suction and discharge 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 suction side of the pump, see Fig. 21.

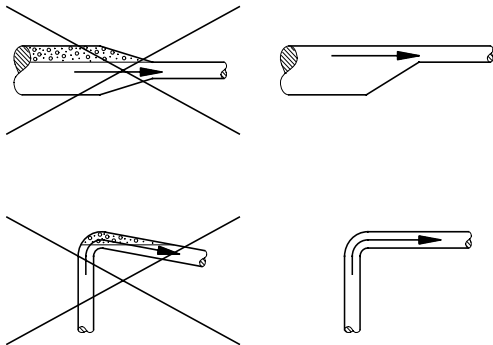


Fig. 21 Pipelines

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 the pipes are adequately supported as close to the pump as possible, both on the suction and the discharge side. The counter flanges should lie true against the pump flanges without being stressed as this will cause damage to the pump.

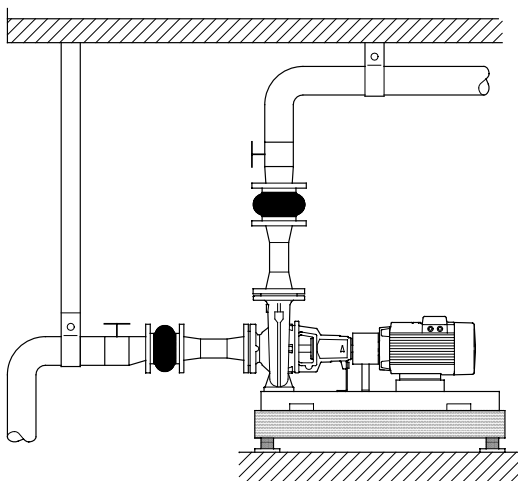


Fig. 22 Pipeline mounting

## 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 should be 1.5 times the pump weight.

The foundation should be 100 mm larger than the base frame on all four sides.

Place the pump on the foundation and fasten it. The base frame must be supported under its entire area, see Fig. 23.

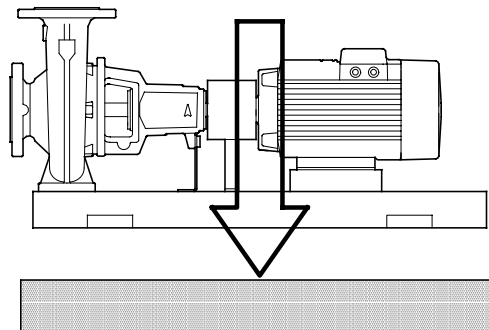


Fig. 23 Correct foundation

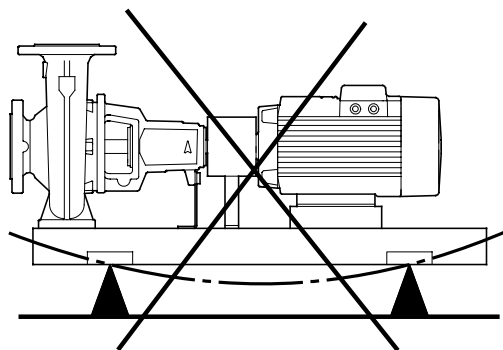


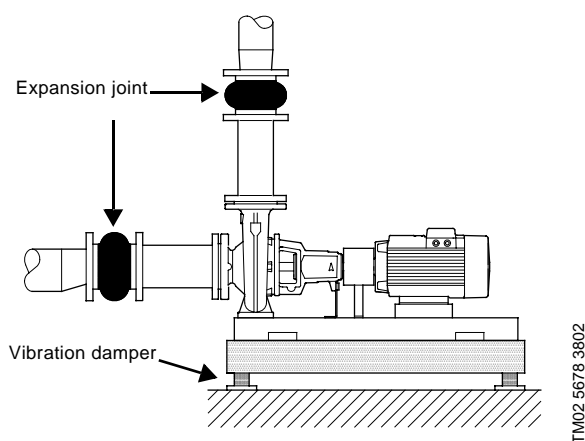
Fig. 24 Incorrect foundation

## 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 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.



**Fig. 25** NK, NKE pump with expansion joints and vibration dampers

### Vibration dampers

To prevent the transmission of vibrations to buildings, we recommend you to 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 % (suggested value is 70%).
- Which is the right damper varies from installation to installation, and a wrong damper may increase the vibration level. Vibration dampers should therefore be sized by the supplier.

### Expansion joints

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.

Install expansion joints to

- absorb expansions/contractions in the pipework caused by changing liquid temperature
- reduce mechanical strains in connection with pressure surges in the pipework
- isolate mechanical structure-borne noise in the pipework (only rubber bellows expansion joints).

**Note:** Do not install expansion joints to compensate for inaccuracies in the pipework such as centre displacement of flanges.

Fit expansion joints at a distance of minimum 1 to 1½ times the nominal flange diameter away from the pump on the suction as well as on the discharge side. This will prevent the development of turbulence in the expansion joints, resulting in better suction conditions and a minimum pressure loss on the pressure side. At high water velocities (> 5 m/s) we recommend you to install larger expansion joints corresponding to the pipework.

We always recommend expansion joints with limiting rods for flanges larger than DN 100.

### 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/removing shims under the feet of the pump or the motor.

Take care to align carefully as this will increase the working lives of the coupling, bearings and shaft seals considerably.

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



Most NK pumps are available as "E-pumps" meaning that they are fitted with Grundfos standard motors with integrated frequency converter. These pumps are called NKE.

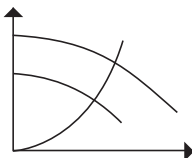
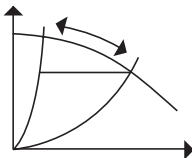
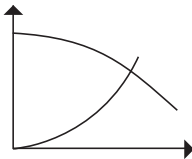
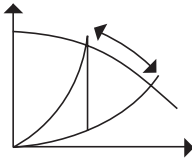
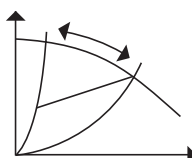
Alternatively, all NK pumps with three-phase motors can be connected to an external frequency converter.

## NKE pump applications

NKE pumps with integrated speed control enable automatic adaptation of performance to current conditions. This keeps the energy consumption at a minimum.

Depending on the nature of the application, NKE pumps offer energy-savings, increased comfort or improved processing.

The charts below show possible control modes of NKE pumps in different applications.

Control mode	Applications
<b>Constant curve</b> 	Single-pipe heating systems. Systems with three-way valves. Heating and cooling surfaces. Chiller pumps. (Sensor not required)
<b>Constant pressure</b> 	Pressure boosting systems. (Sensor required)
<b>Temperature control</b> 	Single-pipe heating systems. Systems with three-way valves. Cooling towers. Chiller pumps. Domestic hot water recirculation systems. (Sensor required)
<b>Constant flow</b> 	Heating and cooling surfaces. Cooling towers. Flow filters. (Sensor required)
<b>Proportional differential pressure (measured)</b> 	System with two-way valves. (Differential pressure sensor is located in the system)

### Constant curve

In constant curve control mode, the pump will adjust its speed to meet the required flow without using throttle valves.

In this control mode the pump can be set to operate within 12 - 100% of the maximum performance range.

A sensor is not required for this control mode.

### Constant pressure

In constant pressure control mode, the pump will adjust its speed to keep a constant pressure where the sensor is fitted.

We recommend constant pressure control mode in pressure holding systems.

A pressure sensor with an operating range close to the needed pressure is required.

### Temperature control

In the temperature control mode, the pump will adjust its speed to keep a constant temperature or a differential temperature.

We recommend this control mode in systems with three-way valves and systems without control valves.

A temperature sensor or a differential temperature sensor is required for this control mode.

### Example

In an industrial cooling system, an NKE pump continuously adapts its performance to the changing demands reflected in the differences in temperature of the liquid circulating in the cooling system. The lower the demand for cooling, the smaller the quantity of liquid circulated in the system and vice versa.

### Constant flow

In the constant flow control mode, the pump will adjust its speed to keep a constant flow irrespective of variations of the system characteristics.

We recommend this control mode in systems where a constant flow is required.

In this control mode either an electronic flowmeter or a differential pressure sensor is required.

### Proportional differential pressure (measured)

In the proportional differential pressure (measured) mode, the pump will adjust its speed to keep the differential pressure in a reference point in the system.

This control mode is recommended in large circulation systems where the NKE pump functions as a secondary pump. A differential pressure sensor is required for this control mode.

## Example

In a two-pipe heating system or an air-conditioning system with variable flow, the pressure sensor can be fitted in a reference point away from the NKE pump.

As the flow increases the NKE pump continuously adapts its speed to maintain the same differential pressure in the reference point.

## 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.

In order to achieve optimum operating economy, the pump should be selected on the basis of the following criteria:

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

Between the min. and max. performance curve NKE pumps have an infinite number of performance curves each representing a specific speed. Therefore, it may not be possible to select a duty point close to the max. curve.

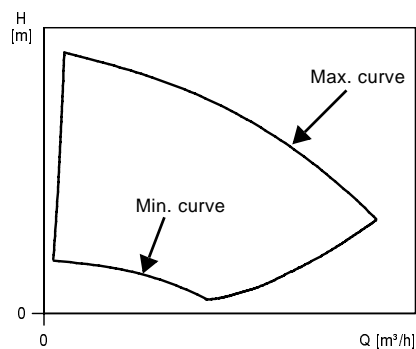


Fig. 26 Min. and max. performance curves

In situations where it is not possible to select a duty point close to the max. curve, use the affinity equations below. The head (H), the flow (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.

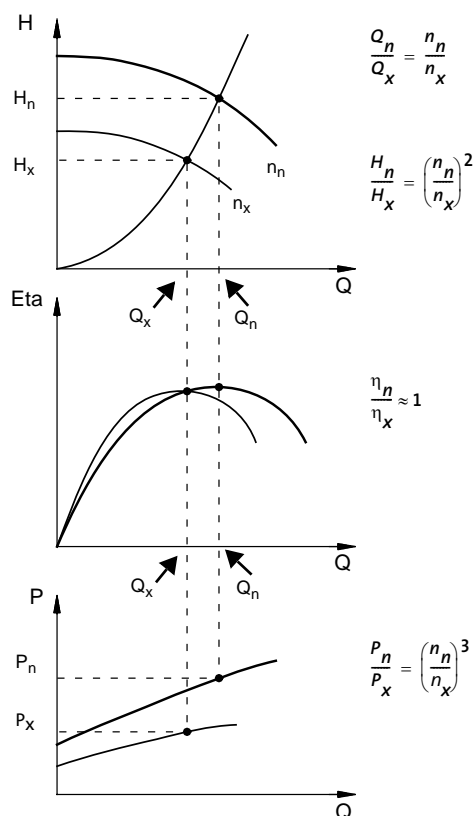


Fig. 27 Affinity equations

## Legend

- $H_n$  Rated head in metres
- $H_x$  Current head in metres
- $Q_n$  Rated flow in  $m^3/h$
- $Q_x$  Current flow in  $m^3/h$
- $n_n$  Rated motor speed in  $min^{-1}$
- $n_x$  Current motor speed in  $min^{-1}$
- $\eta_n$  Rated efficiency in %
- $\eta_x$  Current efficiency in %

## WinCAPS and WebCAPS

WinCAPS and WebCAPS are both selection programs offered by Grundfos.

The two programs make it possible to calculate a NKE pump's specific duty point and energy consumption.

When you enter the dimensions of the pump, WinCAPS and WebCAPS can calculate the exact duty point and energy consumption. For further information, see page 38.

TM00 8720 3496

## Communication with NKE pumps

Communication with NKE pumps is possible via a central building management system, remote control (Grundfos R100) or a control panel.

### Central building management system

The operator can communicate with an NKE pump even though he is not present near the pump. Communication can take place via a central building management system allowing the operator to monitor and change control modes and setpoint settings.

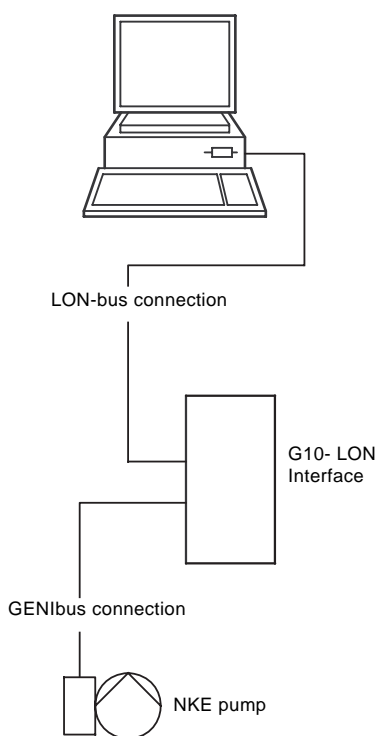


Fig. 28 Structure of a central building management system

TM02 6592 1103

### Remote control

The R100 remote control produced by Grundfos is available as an accessory.

The operator can communicate with the NKE pump by pointing the IR-signal transmitter at the control panel of the NKE pump terminal box.

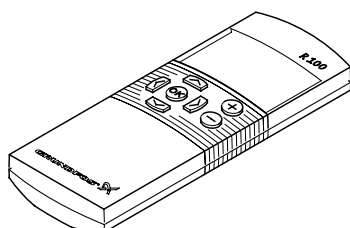


Fig. 29 R100 remote control

TM00 4498 2802

The operator can monitor and change control modes and settings of the NKE pump via the R100 display.

### Control panel

The operator can change the setpoint settings manually on the control panel of the NKE pump terminal box.

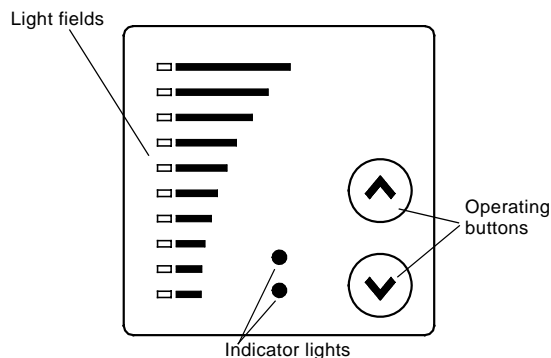


Fig. 30 Control panel of an NKE pump

TM00 7600 0404

## Communication with NKE pumps

Communication with NKE pumps is possible via a central building management system, remote control (Grundfos R100) or a control panel.

### Central building management system

The operator can communicate with an NKE pump even though he is not present near the pump. Communication can take place via a central building management system allowing the operator to monitor and change control modes and setpoint settings.

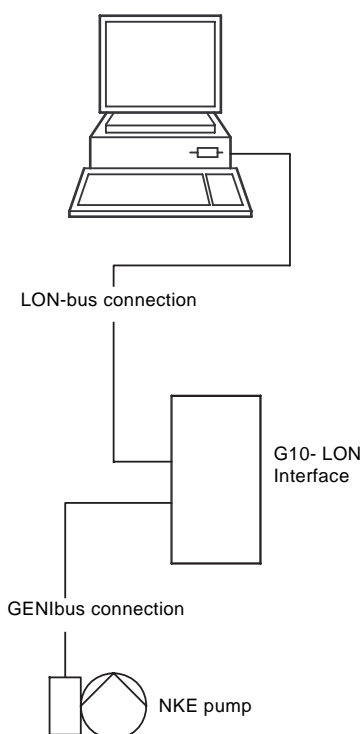


Fig. 31 Structure of a central building management system

TM02 6592 1103

### Remote control

The R100 remote control produced by Grundfos is available as an accessory.

The operator can communicate with the NKE pump by pointing the IR-signal transmitter at the control panel of the NKE pump terminal box.

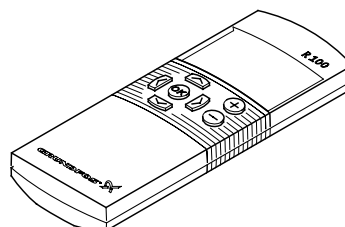


Fig. 32 R100 remote control

The operator can monitor and change control modes and settings of the NKE pump via the R100 display.

### Control panel

The operator can change the setpoint settings manually on the control panel of the NKE pump terminal box.

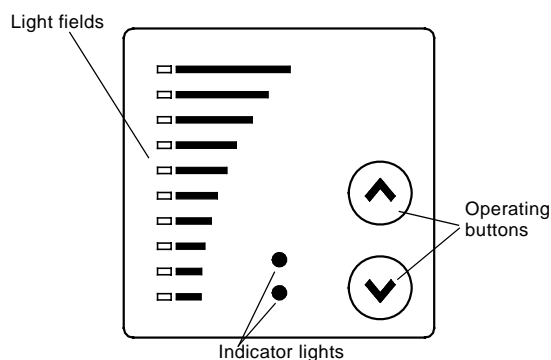


Fig. 33 Control panel of an NKE pump

TM00 4498 2802

TM00 7600 0404

## Pump size

Selection of pump size should be based on:

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

## Efficiency

If you expect the pump to always operate in the same duty point, select a pump which is operating in a duty point corresponding to the best efficiency of the pump.

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

## Material

The material variant should be selected on the basis of the liquid to be pumped, see "List of pumped liquids", page 40.

## Motor size

Selection of motor size should be based on 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, see performance curves page 56 to page 223.

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

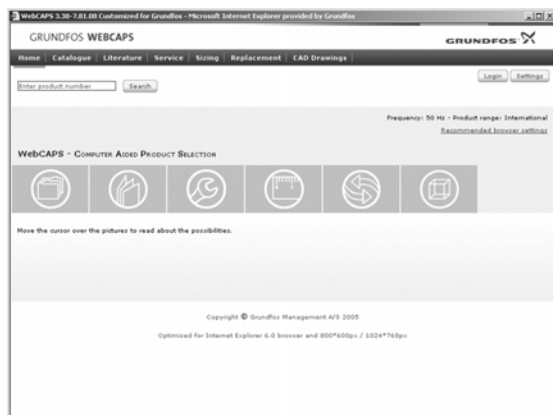
To decide the motor size, select the  $P_2$  that is nearest above the required power, and choose the motor size next to it.

When deciding the motor size, add a safety margin according to ISO 5199, see table below.

### Safety margins according to ISO 5199

Required pump power up to ... [kW]	Motor power $P_2$ [kW]
322	355
286	315
227	250
181	200
145	160
120	132
100	110
81	90
68	75
49	55
40	45
32.5	37
26	30
19	22
15.9	18.5
12.8	15
9.1	11
6.1	7.5
4.3	5.5
3.2	4
2.3	3
1.7	2.2
1.1	1.5
0.81	1.1
0.55	0.75
0.40	0.55
0.27	0.37
0.18	0.25

## WebCAPS

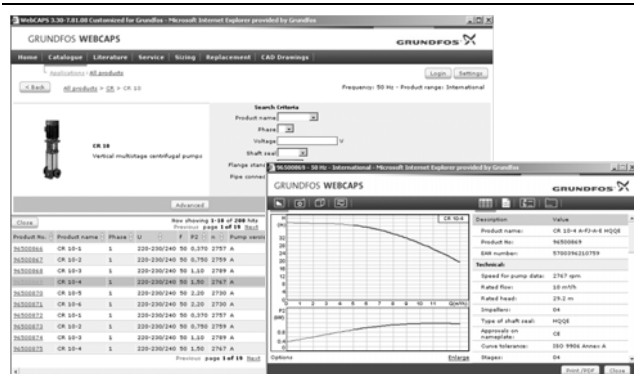


WebCAPS is a **Web**-based **Computer Aided Product Selection** program available on [www.grundfos.com](http://www.grundfos.com).

WebCAPS contains detailed information on more than 185,000 Grundfos products in more than 22 languages.

In WebCAPS, all information is divided into 6 sections:

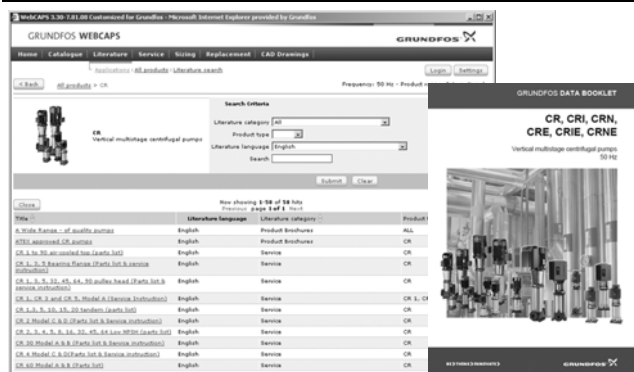
- Catalogue
- Literature
- Service
- Sizing
- Replacement
- CAD drawings.



### Catalogue

This section is based on fields of application and pump types, and contains

- technical data
- curves (QH, Eta, P1, P2, etc) which can be adapted to the density and viscosity of the pumped liquid and show the number of pumps in operation
- product photos
- dimensional drawings
- wiring diagrams
- quotation texts, etc.



### Literature

In this section you can access all the latest documents of a given pump, such as

- data booklets
- installation and operating instructions
- service documentation, such as Service kit catalogue and Service kit instructions
- quick guides
- product brochures, etc.



### Service

This section contains an easy-to-use interactive service catalogue. Here you can find and identify service parts of both existing and discontinued Grundfos pumps.

Furthermore, this section contains service videos showing you how to replace service parts.



## Sizing

This section is based on different fields of application and installation examples, and gives easy step-by-step instructions in how to

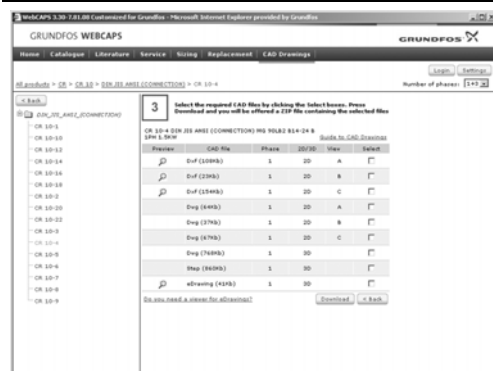
- select the most suitable and efficient pump for your installation
- carry out advanced calculations based on energy consumption, payback periods, load profiles, life cycle costs, etc.
- analyse your selected pump via the built-in life cycle cost tool
- determine the flow velocity in wastewater applications, etc.



## Replacement

In this section you find a guide to selecting and comparing replacement data of an installed pump in order to replace the pump with a more efficient Grundfos pump. The section contains replacement data of a wide range of pumps produced by other manufacturers than Grundfos.

Based on an easy step-by-step guide, you can compare Grundfos pumps with the one you have installed on your site. When you have specified the installed pump, the guide will suggest a number of Grundfos pumps which can improve both comfort and efficiency.



## CAD drawings

In this section it is possible to download 2-dimensional (2D) and 3-dimensional (3D) CAD drawings of most Grundfos pumps.

These formats are available in WebCAPS:

- 2-dimensional drawings:
- .dxf, wireframe drawings
  - .dwg, wireframe drawings.
- 3-dimensional drawings:
- .dwg, wireframe drawings (without surfaces)
  - .stp, solid drawings (with surfaces)
  - .eprt, E-drawings.

## WinCAPS



Fig. 34 WinCAPS CD-ROM

WinCAPS is a **Windows-based Computer Aided Product Selection** program containing detailed information on more than 185,000 Grundfos products in more than 22 languages.

The program contains the same features and functions as WebCAPS, but is an ideal solution if no Internet connection is available.

WinCAPS is available on CD-ROM and updated once a year.

## Pumped liquids

We recommend NK and NKE pumps for thin, clean and non-aggressive, non-explosive liquids, not containing solid particles or fibres. The liquid must not attack the pump materials chemically or mechanically.

If you pump liquids with a density and/or viscosity higher than that of water, use motors with correspondingly higher outputs, see "Pumped liquids" page 41.

The mechanical shaft seal must be suitable for the liquid.

Water in heating and ventilating systems often contains additives to prevent negative effects such as system corrosion or calcareous deposits. If you want to use the pump for such liquids and if the temperature is above 80°C, use special shaft seals to avoid crystallization/precipitation between the seal faces.

Liquid temperature: -25°C to +140°C.

For heating systems, the water quality should meet VDI 2035.

## List of pumped liquids

The list on the following pages gives an overview of liquids which may typically be pumped by NB, NBE pumps.

The list states the recommended shaft seals. Other shaft seals may be applicable, but we consider those stated in the list to be the best choices.

The list is intended as a general guide only, and it cannot replace actual testing of pumped liquids and pump materials under specific working conditions.

However, use the list with some caution as factors such as:

- concentration of the pumped liquid
- liquid temperature or
- pressure.

may affect the chemical resistance of a specific pump version.

### Legend for notes in the list:

<b>A</b>	May contain additives or impurities that may cause shaft seal problems.
<b>B</b>	The density and/or viscosity differ from that of water. Consider this when calculating motor and pump performance.
<b>C</b>	The liquid must be oxygen-free (anaerobic).
<b>D</b>	Risk of crystallization/precipitation in shaft seal.
<b>E</b>	Due to the poor lubricating properties of the liquid, dry running should be avoided.
<b>F</b>	The pumped liquid is easily ignited.
<b>G</b>	The pumped liquid is flammable.
<b>H</b>	Insoluble in water.
<b>I</b>	The shaft seal rubber parts must be replaced with FKM rubber.
<b>J</b>	Bronze impeller required.
<b>K</b>	The pump should run continuously to prevent discoloration of pool tiles.
<b>L</b>	Pump life may be reduced.



Pumped liquids	Notes	Additional information	Shaft seal	Stuffing box
<b>Water</b>				
Groundwater		<+90°C	BQQE	SNE/SNO
		>+90°C	BAQE <sup>1)</sup> BQBE	SNO
Boiler feed water		<+120°C	BAQE	SNE/SNO
		+120°C - +140°C	BQBE/DAQF	SNE
District heating water		<+120°C	BAQE	SNE/SNO
		+120°C - +140°C	BQBE/DAQF <sup>3)</sup>	SNE
Condensate		<+90°C	BQQE	SNE/SNO
		+90°C - +120°C	BAQE	SNE
		+120°C - +140°C	BQBE/DAQF <sup>3)</sup>	SNE
Softened water	C	<+90°C	BQQE	SNE/SNO
		>+90°C	BAQE	SNO
Brackish water	J, L	pH >6.5, +40°C, 1000 ppm Cl <sup>-</sup>	BQQE	SNE/SNO
Sea water	J, L	pH >6.5, +20°C, 20,000 ppm Cl <sup>-</sup>	BQQE	SNE/SNO
Swimming pool water	J, K	pH >6.5, 40°C, 150 ppm Cl <sup>-</sup>	BQQE	SNE/SNO
Cooling and cutting lubricant	A, I		BQQV	SNF <sup>2)</sup>
<b>Coolants</b>				
Ethylene glycol	B, D	+50°C, 50%	BQQE/GQQE	SNF <sup>2)</sup>
Glycerine (glycerol)	B, D	+50°C, 50%	BQQE/GQQE	SNF <sup>2)</sup>
Hydrocarbon based antifreeze	B, D, F, G, I	+50°C, 100%	BQQV/GQQV	SNF <sup>2)</sup>
Potassium acetate	B, D, C	+50°C, 50%	BQQE/GQQE	SNF
Potassium formate	B, D, C	+50°C, 50%	BQQE/GQQE	SNF
Propylene glycol	B, D		BQQE/GQQE	SNF <sup>2)</sup>
Brine-sodium chloride	B, D, C	+5°C, 30%	BQQE/GQQE	SNF
Brine-calcium chloride	B, D, C	+5°C, 30%	BQQE/GQQE	SNF
Ethyl alcohol	B, D, F, I	+70°C	BAQE	SNF <sup>2)</sup>
Methyl alcohol-cooling	B, D, F, I	+40°C	BAQE	SNF <sup>2)</sup>
<b>Fuels</b>				
Diesel oil	F, G, H, I	<+20°C, 100%	BAQV	SNF
Jet fuel	F, G, H, I	<+20°C, 100%	BAQV	SNF <sup>2)</sup>
Kerosene	F, G, H, I	<+20°C, 100%	BAQV	SNF <sup>2)</sup>
Naphta	F, G, H, I	<+20°C, 100%	BAQV	SNF <sup>2)</sup>
Petrol	F, G, H, I	<+20°C, 100%	BAQV	SNF <sup>2)</sup>
<b>Mineral oils</b>				
Crude oil	A, B, G, I	<+20°C, 100%	BQQV	SNF
Mineral lubricating oil	B, D, G		BAQV/BQQV	SNE/SNO
<b>Synthetic oils</b>				
Silicone oil	B, H		BAQE/BQQE	SNE/SNO
Synthetic lubricating oil	B, G, I, H		BAQV/BQQV	SNE/SNO
<b>Vegetable oils</b>				
Corn oil	B, I, H		BAQV/BQQV	SNE/SNO
Olive oil	B, I, H	<+80°C	BAQV/BQQV	SNE/SNO
Peanut oil	B, I, H		BAQV/BQQV	SNE/SNO
Rape seed oil	D, B, I, H		BAQV/BQQV	SNE/SNO
Soya oil	B, I, H		BAQV/BQQV	SNE/SNO
<b>Cleaning</b>				
Soap (salts of fatty acids)	A, H, (I)	<+80°C	BQQE (BQQV)	SNF
Alkaline degreasing agent	A, H, (I)	<+80°C	BQQE (BQQV)	SNF
<b>Organic solvents</b>				
Isopropyl alcohol	F, G	<+60°C	BAQE	SNF <sup>2)</sup>
Propyl alcohol	F, G	<+60°C	BAQE	SNF <sup>2)</sup>
<b>Oxidants</b>				
Hydrogen peroxide		<+40°C, <2%	BQQE	SNE/SNO <sup>2)</sup>

(Table to be continued)

Pumped liquids	Notes	Additional information	Shaft seal	Stuffing box
<b>Salts</b>				
Ammonium bicarbonate	A	<+20°C, <15%	BQQE	SNF
Calcium acetate	A, B	<+20°C, <30%	BQQE	SNF
Potassium bicarbonate	A	<+20°C, <20%	BQQE	SNF
Potassium carbonate	A	<+20°C, <20%	BQQE	SNF
Potassium permanganate	A	<+20°C, <10%	BQQE	SNF
Potassium sulfate	A	<+20°C, <20%	BQQE	SNF
Sodium acetate	A	<+20°C, <100%	BQQE	SNF
Sodium bicarbonate	A	<+20°C, <2%	BQQE	SNF
Sodium carbonate	A	<+20°C, <20%	BQQE	SNF
Sodium metasilicate	-	max. +30°C, 30%	-	SNF
Sodium nitrate	A	<+20°C, <40%	BQQE	SNF
Sodium nitrite	A	<+20°C, <40%	BQQE	SNF
Sodium phosphate (di)	A	<+100°C, <30%	BQQE	SNF
Sodium phosphate (tri)	A	<+90°C, <20%	BQQE	SNF
Sodium sulfate	A	<+20°C, <20%	BQQE	SNF
Sodium sulfite	A	<+20°C, <1%	BQQE	SNF
<b>Alkalies</b>				
Ammonium hydroxide		<+100°C, <30%	BQQE	SNF <sup>2)</sup>
Calcium hydroxide	A	<+100°C, <10%	BQQE	SNF
Potassium hydroxide	A	<+20°C, <20%	BQQE	SNF <sup>2)</sup>
Sodium hydroxide	A	<+40°C, <20%	BQQE	SNF <sup>2)</sup>

<sup>1)</sup> **Do not** use BAQE for potable water.

For potable water we recommend you to fit the pump with a BBQE shaft seal.

The BBQE shaft seal is available on request.

<sup>2)</sup> We **do not** recommend the standard stuffing box packing material for this liquid.

Please contact Grundfos for the right packing material.

<sup>3)</sup> Shaft diameters measured at the shaft end (d5) are either 24, 32, 42 or 55 mm.

BQBE shaft seal can be used for shaft end diameter (d5) 24 or 32 mm. DAQF shaft seal can be used for all four shaft diameters.

**Note:** We recommend the BQBE/DAQF shaft seal for high-temperature applications.

The BAQE/BAQV shaft seal is not suited for pumped liquids with abrasive particles as the carbon part of the seal will be worn down. We recommend you to use BQQE/BQQV in stead.

We recommend the GQQE shaft seal for cooling applications involving risk of precipitation on the seal faces.

The tables below give all electrical data for motors for NK, NKE pumps, i.e.

- standard motor range 2-, 4- and 6-pole
- premium motor range 2-, 4- and 6-pole
- E-motor range 2- and 4-pole.

## Standard motor range, 2-pole

Frame size	Voltage	P2 [kW]	I <sub>1/1</sub> [A]	η [%]	Cos φ <sub>1/1</sub>	n [min <sup>-1</sup> ]	I <sub>start</sub> I <sub>1/1</sub>
MG 80B-C	3x220-240Δ/ 380-415Y	1.1	4.5/2.6	81-81	0.81-0.75	2820-2850	5.8-6.3
MG 90SA-C		1.5	5.9/3.4	82-82	0.85-0.79	2860-2890	6.3-6.9
MG 90LA-C		2.2	8.25/4.75	84-84	0.87-0.82	2860-2890	7.0-7.6
MG 100LB-C		3.0	10.8/6.25	85-85	0.88-0.82	2880-2910	7.8-8.5
MG 112MB-C		4.0	13.8/8.0	86-86	0.90-0.87	2900-2910	8.7-9.5
MG 90LA-C	3x380-415Δ	2.2	4.75	84-84	0.87-0.82	2860-2890	7.0-7.6
MG 100LB-C		3.0	6.25	85-85	0.88-0.82	2880-2910	7.8-8.5
MG 112MB-C		4.0	8.0	86-86	0.90-0.87	2900-2910	8.7-9.5
MG 132SB-C		5.5	11.0	87.5-87.5	0.89-0.86	2890-2910	8.9-9.7
MG 132SC-C		7.5	15.2	88-88	0.87-0.81	2890-2910	9.1-9.9
MMG 160MA-E	3x380-415Δ/ 660-690Y	11.0	20.2/11.6	89.3	0.89	2930	5.6
MMG 160MB-E		15.0	26.5/15.2	91.0	0.87	2940	5.8
MMG 160L-E		18.5	32.5/18.8	91.6	0.89	2940	6.5
MMG 180M-E		22.0	39.5/22.8	91.0	0.89	2950	7.4
MMG 200LA-E		30.0	57.5/33.0	92.2	0.88	2960	7.0
MMG 200LB-E		37.0	65.0/37.5	92.0	0.89	2960	7.6
MMG 225M-E		45.0	78.0/45.0	93.5	0.89	2980	7.4
MMG 250M-E		55.0	96.5/55.5	93.0	0.90	2960	7.9
MMG 280S-E		75.0	130/75.0	94.0	0.89	2970	6.6
MMG 280M-E		90.0	154/89.0	95.0	0.90	2980	7.2
MMG 315S-E		110.0	188/108	94.0	0.90	2980	7.2
MMG 315M-E		132.0	222/128	95.0	0.90	2980	7.5
MMG 315LA-E		160.0	270/156	95.7	0.91	2980	6.0
MMG 315LB-E		200.0	330/190	95.0	0.92	2980	5.8
MMG 355M-E		250.0	435/250	95.5	0.92	2980	6.2

## Standard motor range, 4-pole

Frame size	Voltage	P2 [kW]	I <sub>1/1</sub> [A]	η [%]	Cos φ <sub>1/1</sub>	n [min <sup>-1</sup> ]	I <sub>start</sub> I <sub>1/1</sub>
MG 71B-C		0.37	1.9/1.1	71-71	0.77-0.67	1400-1420	4.0-4.4
MG 80A-C		0.55	2.6/1.5	77-77	0.79-0.70	1390-1410	4.3-4.7
MG 80B-C		0.75	3.3/1.9	78-78	0.79-0.70	1390-1410	4.3-4.7
MG 90SA-C	3x220-240Δ/ 380-415Y	1.1	5.0/2.9	78-78	0.78-0.71	1420-1440	4.3-4.7
MG 90LA-C		1.5	6.4/3.7	80-80	0.80-0.74	1420-1430	5.0-5.5
MG 100LB-C		2.2	9.2/5.3	82-82	0.80-0.73	1420-1440	5.2-5.7
MG 112MA-C		3.0	12.0/6.9	85-85	0.80-0.74	1440-1450	6.2-6.7
MG 112MB-C		4.0	15.4/8.9	86.5-87	0.82-0.76	1440-1450	6.6-7.2
MG 100 LA-D		2.2	5.3	83.5-84	0.79-0.76	1430-1440	5.4-5.9
MG 110LB-D	3x380-415Δ	3.0	6.9	85-85	0.80-0.74	1440-1450	6.2-6.7
MG 112MB-C		4.0	8.9	86.5-87	0.82-0.76	1440-1450	6.6-7.2
MG 132SC-C		5.5	12.6	87-87	0.80-0.74	1430-1450	6.3-6.9
MMG 132SB-E		7.5	14.4/8.3	89.1	0.84	1445	7.8
MMG 160MA-E		11.0	21.0/12.2	89.8	0.84	1460	7.4
MMG 160MB-E		15.0	28.5/16.4	89.4	0.85	1460	7.8
MMG 180M-E		18.5	33.5/19.4	91.2	0.86	1465	7.6
MMG 180L-E		22.0	39.0/22.6	91.4	0.86	1465	7.8
MMG 200L-E		30	53.5/31.0	91.5	0.88	1470	7.5
MMG 225S-E		37	71.0/41.0	92.0	0.89	1480	6.9
MMG 225M-E	3x380-415Δ/ 660-690Y	45	78.0/45.0	92.5	0.89	1480	7.5
MMG 250M-E		55	95.0/55.0	93.0	0.89	1480	7.5
MMG 280S-E		75	128/74.0	94.5	0.87	1480	7.4
MMG 280M-E		90	150/86.5	94.0	0.88	1480	7.5
MMG 315S-E		110	192/110	94.5	0.91	1490	7.3
MMG 315M-E		132	226/130	95.0	0.89	1490	6.7
MMG 315LA-E		160	270/156	95.0	0.89	1490	6.7
MMG 315LB-E		200	340/196	95.5	0.89	1490	5.5
MMG 355M-E		250	410/236	95.5	0.91	1490	6.4
MMG 355L-E		315	525/300	96.0	0.89	1490	6.8

## Standard motor range, 6-pole

Frame size	Voltage	P2 [kW]	I <sub>1/1</sub> [A]	η [%]	Cos φ <sub>1/1</sub>	n [min <sup>-1</sup> ]	I <sub>start</sub> I <sub>1/1</sub>
MMG 100L-E		1.5	3.7/2.14	76.3	0.77	920	4.3
MMG 112M-E	3x220-240Δ /380-415Y	2.2	5.2/3.0	81.4	0.75	950	5.0
MMG 132S-E		3.0	6.7/3.85	84.1	0.77	960	6.0
MMG 132MA-E		4.0	8.85/5.1	84.7	0.77	960	6.4
MMG 112M-E		2.2	3.0/1.73	81.4	0.75	950	5.0
MMG 132S-E		3.0	3.85/2.2	84.1	0.77	960	6.0
MMG 132MA-E		4.0	5.1/2.94	84.7	0.77	960	6.4
MMG 132MB-E		5.5	11.4/6.65	86.4	0.80	960	5.9
MMG 160M-E		7.5	16.0/9.2	87.1	0.78	960	5.8
MMG 160L-E		11	22.8/12.2	88.5	0.79	970	7.3
MMG 180L-E		15	31.5/18.2	80.5	0.67	940	5.9
MMG 200LA-E	3x380-415Δ/ 660-690Y	18.5	35.5/20.4	90.5	0.83	980	7.8
MMG 200LB-E		22	41.5/24.0	91.5	0.84	980	6.6
MMG 225M-E		30	55.0/32.0	91.5	0.85	980	7.0
MMG 250M-E		37	65.5/37.5	92.5	0.88	980	7.0
MMG 280S-E		45	79.0/45.5	92.5	0.87	990	7.3
MMG 280M-E		55	97.0/56.0	93.5	0.87	990	7.2
MMG 315S-E		75	134/77.0	94.0	0.86	990	6.3
MMG 315M-E		90	158/91.0	94.5	0.87	990	5.9
MMG 315L-E		110	192/112	95.0	0.87	990	6.0

## Premium motor range, 2-pole

Frame size	Voltage	P2 [kW]	I <sub>1/1</sub> [A]	η [%]	Cos φ <sub>1/1</sub>	n [min <sup>-1</sup> ]	I <sub>start</sub> I <sub>1/1</sub>
MG 90SA-D		1.1	4.1/2.35	84-84	0.87-0.82	2890-2910	7.4-8.0
MG 90SB-D		1.5	5.45/3.15	85.5-85.5	0.87-0.82	2890-2910	8.5-9.3
MG 90LC-D	3x220-240Δ/ 380-415Y	2.2	7.7/4.45	87.5-87.5	0.89-0.87	2890-2910	8.5-9.5
MG 100LC-D		3.0	10.9/6.3	87.5-87.5	0.87-0.82	2900-2920	8.4-9.2
MG 112MC-D		4.0	13.9/8.0	89-89	0.88-0.84	2910-2930	11.2-12.3
MG 90LC-D		2.2	4.45	87.5-87.5	0.89-0.87	2890-2910	8.5-9.5
MG 100LC-D		3.0	6.3	87.5-87.5	0.87-0.82	2900-2920	8.4-9.2
MG 112MC-D	3x380-415Δ	4.0	8.0	89-89	0.88-0.84	2910-2930	11.2-12.3
MG 132SC-D		5.5	11.2	90-90	0.88-0.84	2910-2930	10.7-11.7
MG 132SD-D		7.5	15.2	89.5-89.5	0.87-0.80	2900-2920	10.0-11.1
MMG 160MA-D		11.0	21.0/12.2	90.7	0.86	2930	7.3
MMG 160MB-D		15.0	28.0/16.2	91.6	0.86	2930	7.6
MMG 160L-D		18.5	34.5/20.0	92.0	0.86	2930	7.9
MMG 180M-D		22.0	41.0/23.6	92.5	0.87	2930	7.7
MMG 200LA-D		30.0	55.0/32.0	92.9	0.89	2945	7.8
MMG 200LB-D		37.0	68/39.5	93.6	0.89	2950	7.6
MMG 225M-D		45.0	82/47.5	94.2	0.88	2950	7.9
MMG 250M-D	3x380-415Δ/ 660-690Y	55.0	99/57	94.3	0.89	2955	7.7
MMG 280S-D		75.0	132/76	94.9	0.90	2975	7.5
MMG 280M-D		90.0	161/93	95.2	0.89	2975	7.5
MMG 315S-D		110.0	200/116	95.0	0.85	2980	7.7
MMG 315M-D		132.0	235/136	95.5	0.88	2980	6.8
MMG 315LA-D		160.0	280/162	95.9	0.90	2980	7.2
MMG 315LB-D		200.0	347/201	96.3	0.91	2980	7.8
1LA8315-2AC60		250.0	415/240	96.0	0.90	2979	7.0

## Premium motor range, 4-pole

Frame size	Voltage	P2 [kW]	I <sub>1/1</sub> [A]	η [%]	Cos φ <sub>1/1</sub>	n [min <sup>-1</sup> ]	I <sub>start</sub> I <sub>1/1</sub>
MG 90SB-D		1.1	4.7/2.7	83.8	0.78	1440	7.0
MG 90LC-D		1.5	6.2/3.6	85	0.77	1440	6.0
MG 100LB-D	3x220-240Δ/ 380-415Y	2.2	8.5/4.9	86.4	0.82	1440	6.5
MG 100LC-D		3.0	11.8/6.75	87.4	0.81	1450	6.7
MG 112MC-D		4.0	15.4/8.9	88.3	0.81	1450	7.3
MG 100LB4-D		2.2	5.35	86.4	0.77/0.7	1440	6.2/6.7
MG 100LC4-D	3x380-415Δ	3.0	7.2	87.4	0.77/0.7	1440	6.1/6.7
MG 112MC4-D		4.0	8.9	88.3	0.81/0.75	1450	7.3/8.0
MMG 132S-D		5.5	11.3/6.5	89.2	0.84	1450	7.4
MMG 132M-D		7.5	15.0/8.7	90.1	0.84	1450	7.4
MMG 160M-D		11.0	22.5/13.0	91.0	0.82	1460	6.9
MMG 160L-D		15.0	29.5/17.0	91.8	0.84	1460	7.4
MMG 180M-D		18.5	36.0/21.0	92.2	0.84	1460	7.5
MMG 180L-D		22.0	42.5/24.5	92.6	0.85	1465	7.8
MMG 200L-D		30.0	58.5/34	93.2	0.84	1465	7.0
MMG 225S-D		37.0	70.5/41	93.6	0.84	1475	7.7
MMG 225M-D	3x380-415Δ/ 660-690Y	45.0	84.5/49	93.9	0.86	1475	7.7
MMG 250M-D		55.0	107/62	94.2	0.82	1475	6.8
MMG 280S-D		75.0	140/81	94.7	0.85	1485	6.8
MMG 280M-D		90.0	168/97	95.0	0.85	1480	6.8
MMG 315S-D		110	208/120	95.1	0.85	1480	7.1
MMG 315MA-D		132	239/138	95.5	0.86	1485	7.3
MMG 315MB-D		160	288/166	95.7	0.88	1485	7.3
MMG 315L-D		200	359/208	96.0	0.89	1485	7.6
1LA8315-4AB60		250	425/245	96.0	0.88	1488	6.5
1LA8317-4AB60		315	540/312	97.0	0.88	1488	6.8

## Premium motor range, 6-pole

Frame size	Voltage	P2 [kW]	I <sub>1/1</sub> [A]	η [%]	Cos φ <sub>1/1</sub>	n [min <sup>-1</sup> ]	I <sub>start</sub> I <sub>1/1</sub>
MMG 80A-D		0.37	2.2/1.3	60	0.72	910	2.7
MMG 80B-D		0.55	3.1/1.8	67	0.67	910	2.9
MMG 90S-D		0.75	4.3/2.5	70	0.67	910	2.9
MMG 90L-D	3x220-240Δ/ 380-415Y	1.1	5.9/3.4	72	0.66	910	3.0
MMG 100L-D		1.5	7.6/4.4	72	0.71	930	3.7
MMG 112M-D		2.2	9.4/5.4	80	0.72	940	4.4
MMG 132SA-D		3.0	7.1/4.1	83.7	0.75	955	5.8
MMG 132MA-D		4.0	9.2/5.3	84.9	0.76	955	6.2
MMG 112M-D		2.2	9.4/5.4	80	0.72	940	4.4
MMG 132SA-D		3.0	7.1/4.1	83.7	0.75	955	5.8
MMG 132MA-D		4.0	9.2/5.3	84.9	0.76	955	6.2
MMG 132MB-D		5.5	12.5/7.2	85.2	0.77	955	6.2
MMG 160M-D		7.5	15.9/9.2	87.7	0.82	965	5.9
MMG 160L-D		11.0	22.5/13	89.0	0.82	965	6.1
MMG 180L-D		15.0	30/17.5	90.8	0.83	970	6.7
MMG 200LA-D		18.5	37/21.5	90.4	0.82	970	5.3
MMG 200LB-D	3x380-415Δ/ 660-690Y	22.0	44/25.5	91.0	0.82	975	5.7
MMG 225M-D		30.0	58/33.5	91.7	0.83	975	5.7
MMG 250M-D		37.0	71/41	91.9	0.84	975	7.1
MMG 280S-D		45.0	87/50	92.5	0.86	985	5.6
MMG 280M-D		55.0	106/61	92.7	0.86	985	5.6
MMG 315S-D		75.0	139/80	94.0	0.87	985	6.8
MMG 315MA-D		90.0	167/97	94.8	0.87	988	7.6
MMG 315MB-D		110	202/117	95.0	0.87	987	7.4
MMG 315L6-D		132	241/139	95.3	0.88	987	7.7

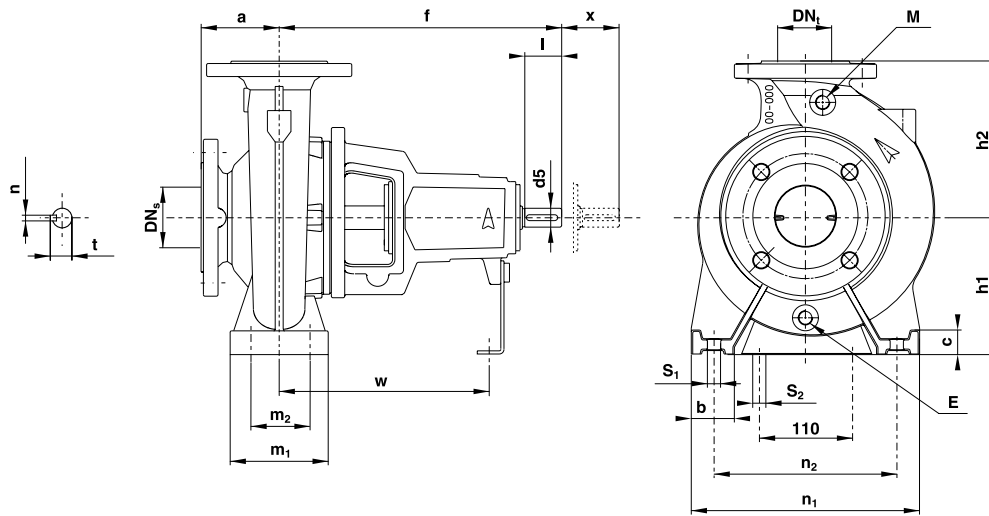
## E-motor range, 2-pole

Frame size	Voltage	P2 [kW]	I <sub>1/1</sub> [A]
MGE 90SB-D	3 x 380-480 V	1.5	3.3 - 2.7
MGE 90LC-D		2.2	4.6 - 3.8
MGE 100LC-D		3.0	6.2 - 5.0
MGE 112MC-D		4.0	8.1 - 6.6
MGE 132SC-D		5.5	11.0 - 8.8
MGE 132SD-D		7.5	15.0 - 12.0
MMGE 160M	3 x 380-415 V	11.0	21.4
MMGE 160MX		15.0	28.0
MMGE 160L		18.5	34.0
MMGE 180M		22.0	42.0

## E-motor range, 4-pole

Frame size	Voltage	P2 [kW]	I <sub>1/1</sub> [A]
MGE 90SA-D	3 x 380-480 V	0.75	1.8-1.9
MGE 90SB-D		1.1	2.5 - 2.2
MGE 90LC-D		1.5	3.3 - 2.9
MGE 100LB-D		2.2	4.6 - 3.8
MGE 112LC-D		3.0	6.2 - 5.0
MGE 112MC-D		4.0	8.1 - 6.6
MGE 132SC-D	3 x 380-415 V	5.5	11.3 - 10.5
MMGE 160M		7.5	14.7
MMGE 160M		11.0	21.7
MMGE 160L		15.0	28.5
MMGE 180M		18.5	34.7
MMGE 180L		22.0	41.0

## NK model B



TM01 9274 1600

- E** Drain plug
- M** Pressure gauge tapping

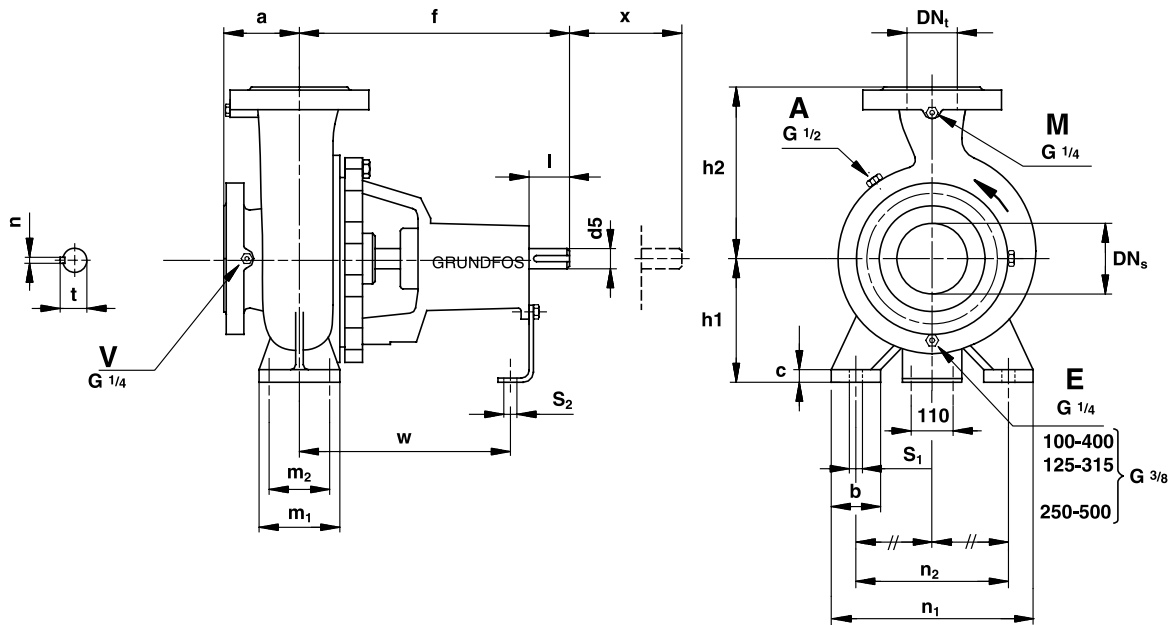
Type	Pump [mm]						Supporting feet [mm]						Shaft [mm]						Weight [kg]		
	DN <sub>s</sub>	DN <sub>t</sub>	a	f	h <sub>1</sub>	h <sub>2</sub>	b	m <sub>1</sub>	m <sub>2</sub>	n <sub>1</sub>	n <sub>2</sub>	w	S <sub>1</sub>	S <sub>2</sub>	c	d5	l	x		t	n
NK 32-125.1					112	140				190	140				14						34
NK 32-125																					34
NK 32-160.1	50	32	80	360	132	160	50	100	70			260	M12	M12		24	50	100	27	8	37
NK 32-160										240	190				18						37
NK 32-200.1					160	180															47
NK 32-200																					47
NK 40-125			80		112	140				210	160										34
NK 40-160	65	40		360	132	160	50	100	70	240	190	260	M12	M12	18	24	50	100	27	8	39
NK 40-200			100		160	180				265	212										49
NK 40-250					180	225	65	125	95	320	250				19						64
NK 50-125					132	160				240	190										34
NK 50-160	65	50	100	360	160	180	50	100	70	265	212	260	M12	M12	18	24	50	100	27	8	42
NK 50-200					160	200															56
NK 50-250					180	225	65	125	95	320	250				19						67
NK 65-125					160	180				280	212										41
NK 65-160			100	360	180	200	65	125	95	320	250	260	M12		19	24	50	100	27	8	46
NK 65-200	80	65			180	225				320	250			M12							55
NK 65-250					200	250	80	160	120	360	280	340	M16		23	32	80	140	37	10	89
NK 65-315*			125	470	225	280				400	315										177
NK 80-160				360	180	225	65	125	95	320	250	260	M12		19	24	50		27	8	55
NK 80-200	100	80	125		200	280				345	280										73
NK 80-250				470	200	280	80	160	120	400	315	340	M16		23	32	80	140	37	10	93
NK 80-315*					250	315															123
NK 100-200			125		200	280				360	280				23						83
NK 100-250	125	100	140	470	225	280	80	160	120	400	315	340	M16	M12	24	32	80	140	37	10	101
NK 100-315*					250	315				400	315				23						130
NK 125-250**	150	125	140	470	250	355	80	160	120	400	315	340	M16	M12	23	32	80	140	37	10	118
NK 150-200	200	150	160	470	280	400	100	200	150	550	450	340	M20	M12	27	32	80	140	37	10	210

\* 4-pole only

\*\* 4-pole and 6-pole



## NK model A (1)



TM01 0526-4997

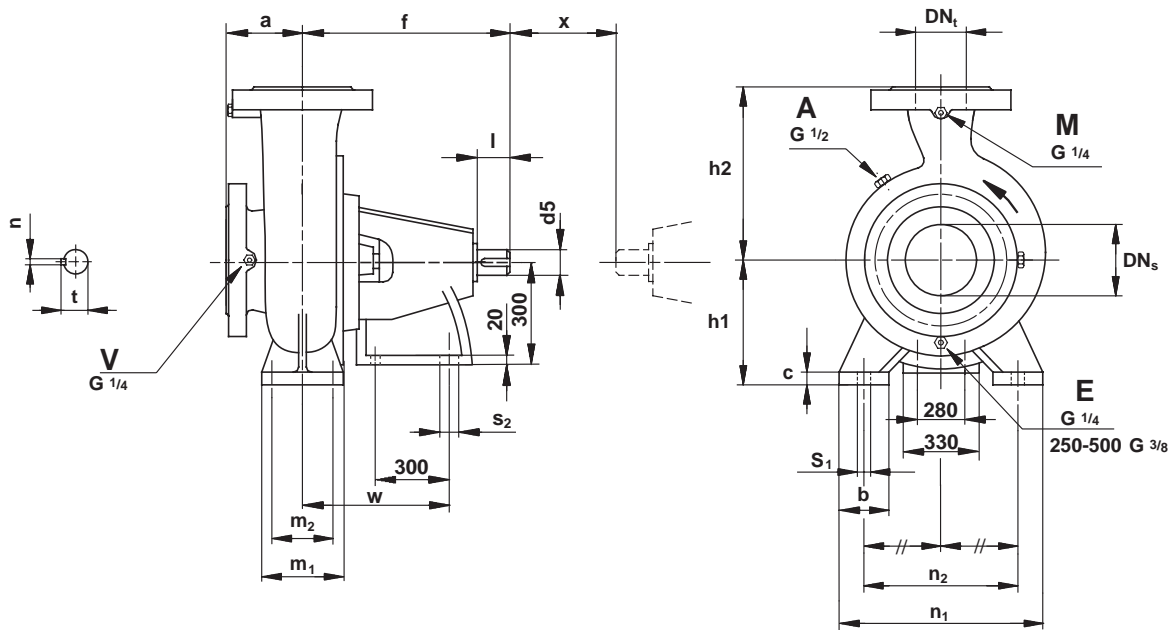
<b>A</b>	Priming plug
<b>E</b>	Drain plug
<b>M</b>	Pressure gauge tapping
<b>V</b>	Pressure/vacuum gauge tapping

Type	Pump [mm]					Supporting feet [mm]								Shaft [mm]					Weight [kg]			
	DN <sub>s</sub>	DN <sub>t</sub>	a	f	h <sub>1</sub>	h <sub>2</sub>	b	c	m <sub>1</sub>	m <sub>2</sub>	n <sub>1</sub>	n <sub>2</sub>	s <sub>1</sub>	s <sub>2</sub>	w	d5	l	t		n	x	
NK 65-315**	80	65	125	470	225	280	80	15	160	120	400	315	16	12	340	32	80	35	10	100	117	
NK 65-315*				530											370							
NK 80-315**	100	80	125	470	250	315	80	16	160	120	400	315	16	12	340	32	80	35	10	100	123	
NK 80-315*				530											370							
NK 80-400*	125			280	355					435	355				370	42	110	45	12	140	198	
NK 100-315**	125	100	140	470	250	315	80	16	160	120	400	315	16	12	340	32	80	35	10	100	130	
NK 100-315*				530											370							
NK 100-400				280	355		100	20	200	150	500	400	20	14	370	42	110	45	12	179	179	
NK 125-250**	150	125	140	470	250	355	80	16	160	120	400	315	16	12	340	32	80	35	10	100	118	
NK 125-250*				530											370							
NK 125-315				280			100	20	200	150	500	400	20	14	370	42	110	45	12	120	170	
NK 125-400				315	400																193	
NK 150-315	200	150	160	280	280	400	100	20	200	150	550	450	20	14	370	42	110	45	12	120	210	
NK 150-320				315																		450
NK 150-400				315																		450

\* Oversize

\*\* 2-pole only

## NK model A (2)

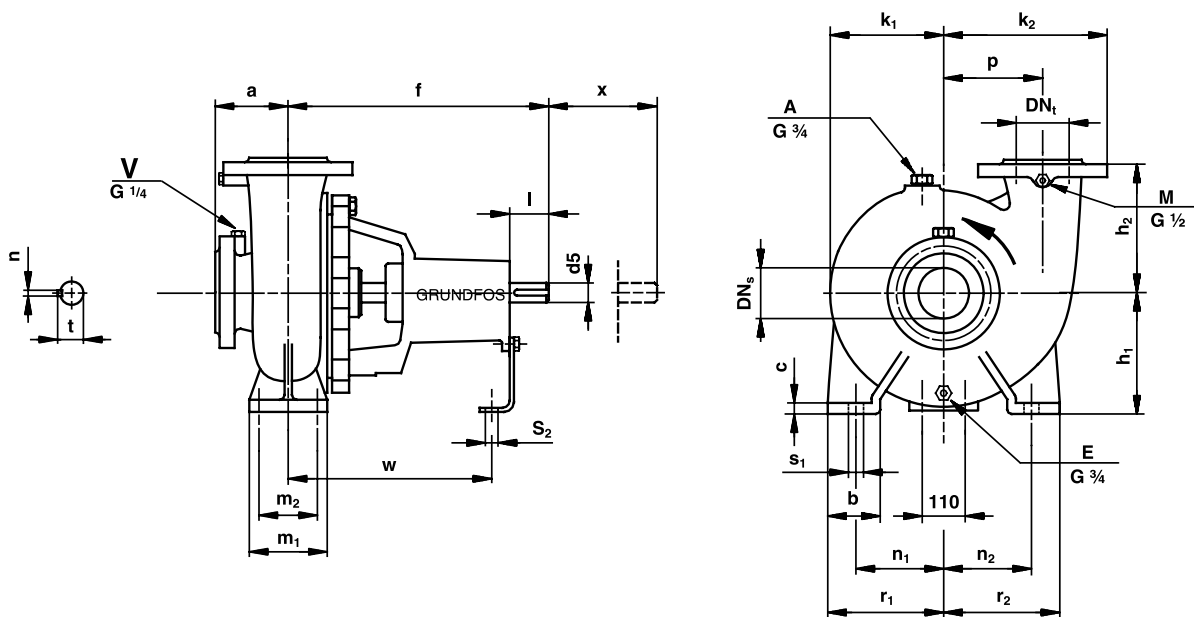


TM01 2148 3803

Type	Pump [mm]						Supporting feet [mm]								Shaft [mm]					Weight [kg]	
	$DN_s$	$DN_t$	$a$	$f$	$h_1$	$h_2$	$b$	$c$	$m_1$	$m_2$	$n_1$	$n_2$	$s_1$	$s_2$	$w$	$d5$	$l$	$t$	$n$		$x$
NK 150-315*	200	150	160	700	280	400	100	20	200	150	550	450	20	24	500	55	140	59	16	120	235
NK 200-500*	250	200	250	750	410	675	140	22	250	190	790	660	28	24	536	55	140	59	16	180	480
NK 250-400*	300	250	200	740	400	600	140	20	250	190	700	580	28	24	530	55	140	59	16	180	415
NK 250-500*			300	750	410	660					790	660									

\* Oversize

## NK model A (3)

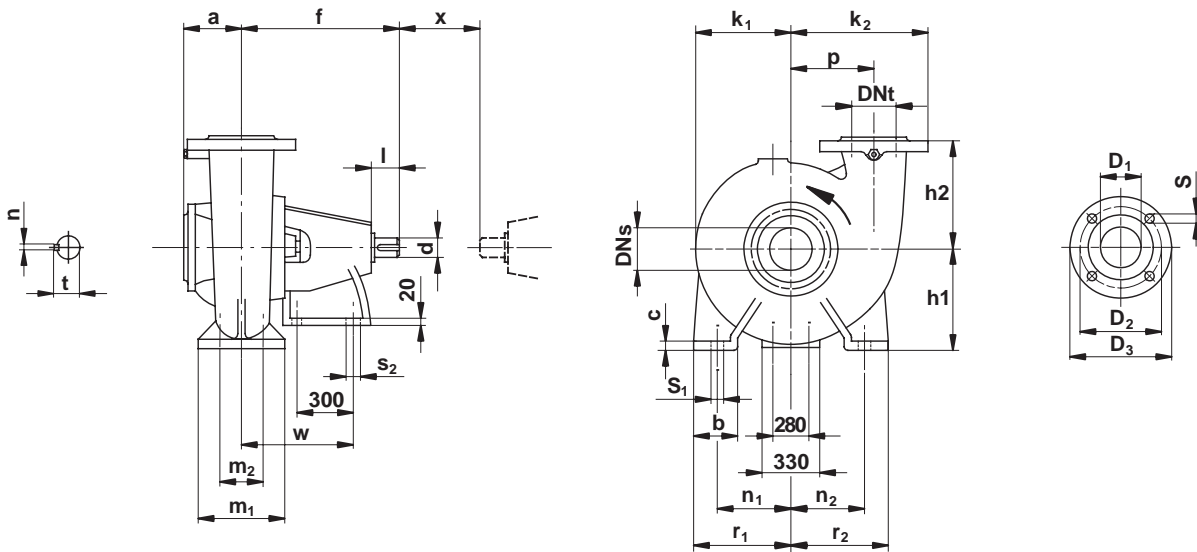


TM01 3281 3798

Type	Pump [mm]									Supporting feet [mm]								Shaft [mm]					Weight [kg]			
	$DN_s$	$DN_t$	$a$	$f$	$h_1$	$h_2$	$k_1$	$k_2$	$p$	$b$	$c$	$m_1$	$m_2$	$n_1$	$n_2$	$r_1$	$r_2$	$s_1$	$s_2$	$w$	$d5$	$l$		$t$	$n$	$x$
NK 250-310*	300	250	250	565	400	400	358	498	295	140	22	300	250	330	330	400	400	28	20	400	42	110	45	12	180	350

\* Oversize

## NK model A (4)



TM01 0527 3803

Type	Pump [mm]									Supporting feet [mm]									Shaft [mm]					Weight [kg]		
	DN <sub>s</sub>	DN <sub>t</sub>	a	f	h <sub>1</sub>	h <sub>2</sub>	k <sub>1</sub>	k <sub>2</sub>	p	b	c	m <sub>1</sub>	m <sub>2</sub>	n <sub>1</sub>	n <sub>2</sub>	r <sub>1</sub>	r <sub>2</sub>	s <sub>1</sub>	s <sub>2</sub>	w	d5	l	t		n	x
NK 200-400*	250	200	180	750	400	400	268	460	290	130	25	250	200	155	215	220	280	28	24	536	55	140	59	16	200	405
NK 250-330*	250	250	250	740	450	400	338	545	345	130	25	355	280	245	330	310	395	34	24	600	55	140	59	16	200	430
NK 300-360*	300	300	300	760	520	440	410	580	358	160	25	330	280	340	340	423	423	26	24	540	55	140	59	16	280	560

\* Oversize

## Flange dimensions

The flange dimensions are stated in mm.

	EN 1092-2 - PN 16								EN 1092-2 - PN 10			
	Nominal diameter (DN)											
		32	40	50	65	80	100	125	150	200	250	300
D <sub>1</sub>	32	40	50	65	80	100	125	150	200	250	300	
D <sub>2</sub>	100	110	125	145	160	180	210	240	295	350	400	
D <sub>3</sub>	140	150	165	185	200	220	250	285	340	395	445	
S	4 x 19	4 x 19	4 x 19	4 x 19	8 x 19	8 x 19	8 x 19	8 x 23	8 x 23	12 x 23	12 x 23	

TM02 7720 3803

## Oversize pumps

EN 733 describes only the standard types.

The NK range is extended with bigger models (oversize pumps) for higher flows and pressures.

As oversize pumps are not according to the standard, dimensions of Grundfos NK oversize pumps may differ from the dimensions of similar pumps from other suppliers.

The following many pages are divided into sections:

page 53      A brief explanation of how to read the  
curve charts, the curve conditions, etc.

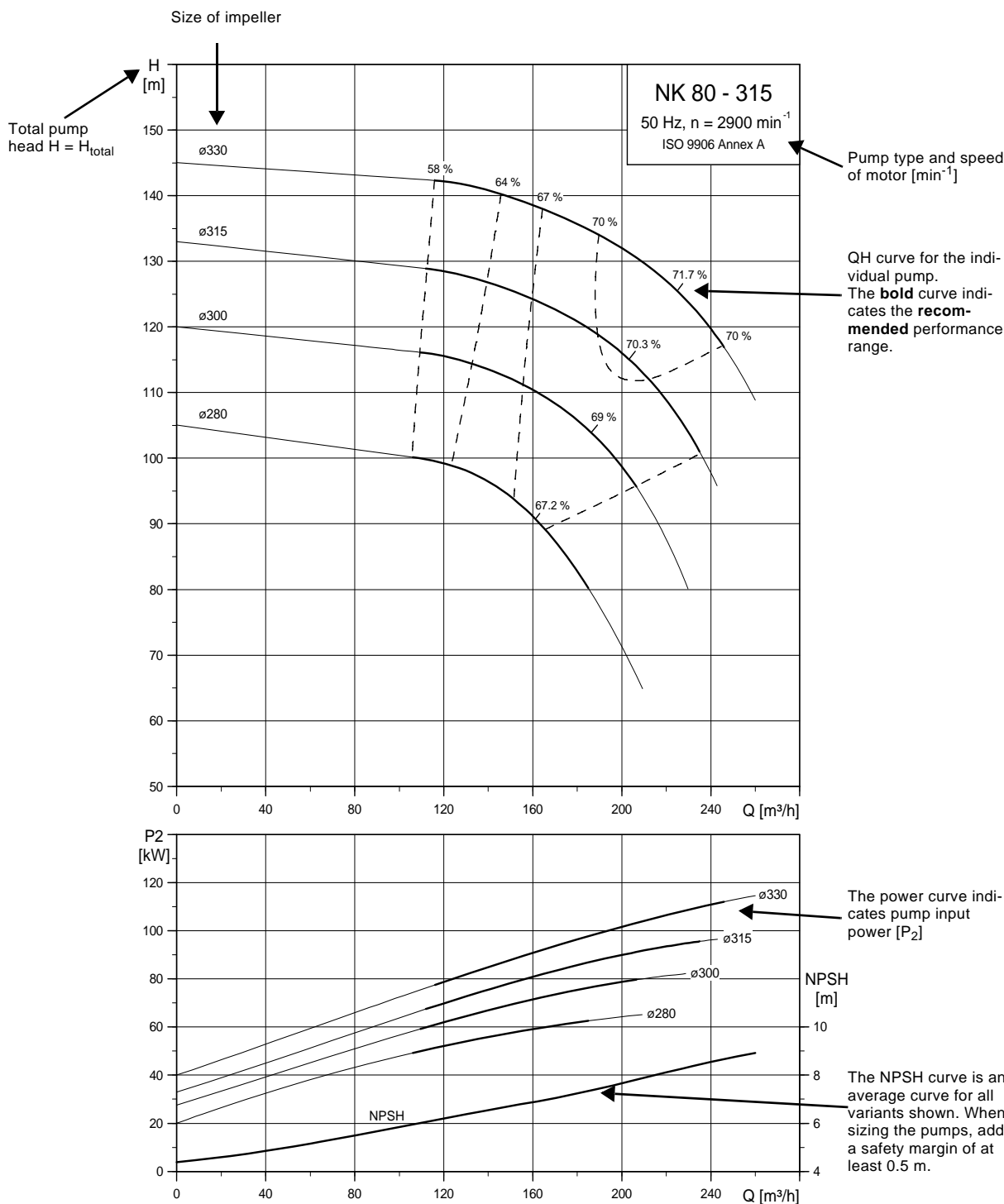
**Performance curves and technical data:**

page 56      NK, NKE 50 Hz 2-pole pumps

page 112     NK, NKE 50 Hz 4-pole pumps

page 196     NK, NKE 50 Hz 6-pole pumps

## How to read the curve charts



TM00 9319 0499

## Curve conditions

Selection of pumps

The guidelines below apply to the curves shown in the performance charts on page 56 to page 223.

- Tolerances according to: ISO 9906, Annex A.
- The curves show pump performance with different impeller diameters at the nominal speed.
- The **bold** part of the curves show the **recommended** operating range.
- The thin parts are not recommended as possible operating range here might suggest the selection of a smaller/larger pump type.
- Do not use the pumps at minimum flows below  $0.1 \times Q$  at an optimum efficiency because of the danger of overheating of the pump.
- The curves apply to the pumping of water at a temperature of +20°C and a kinematic viscosity of  $1 \text{ mm}^2/\text{s}$  (1 cSt).
- **ETA**: The dashed lines show values of the hydraulic efficiency of the pump.
- **NPSH**: The curves show average values measured under the same conditions as the performance curves.  
When dimensioning the pump, add a safety margin of at least 0.5 m.
- In case of other densities than  $1000 \text{ kg/m}^3$  the discharge pressure is proportional to the density.
- When pumping liquids with a density higher than  $1000 \text{ kg/m}^3$ , motors with correspondingly higher outputs must be used.

### Calculation of total head

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

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

---

$H_{\text{geo}}$ : Height difference between measuring points.

---

$H_{\text{stat}}$ : Differential head between suction and the discharge side of the pump.

---

$H_{\text{dyn}}$ : Calculated values based on the velocity of the pumped liquid on the suction and the discharge side of the pump.

---

## Performance tests

The requested duty point for every pump is tested according to ISO 9906, Annex A and without certification.

In case of pumps ordered with impeller diameter only (no requested duty point), the pump will be tested at a duty point which is 2/3 of the maximum flow of the published performance curve which is related to the ordered impeller diameter (according to ISO 9906, Annex A).

If the customer requires either more points on the curve to be checked or certain minimum performances or certificates, individual measurements must be made.

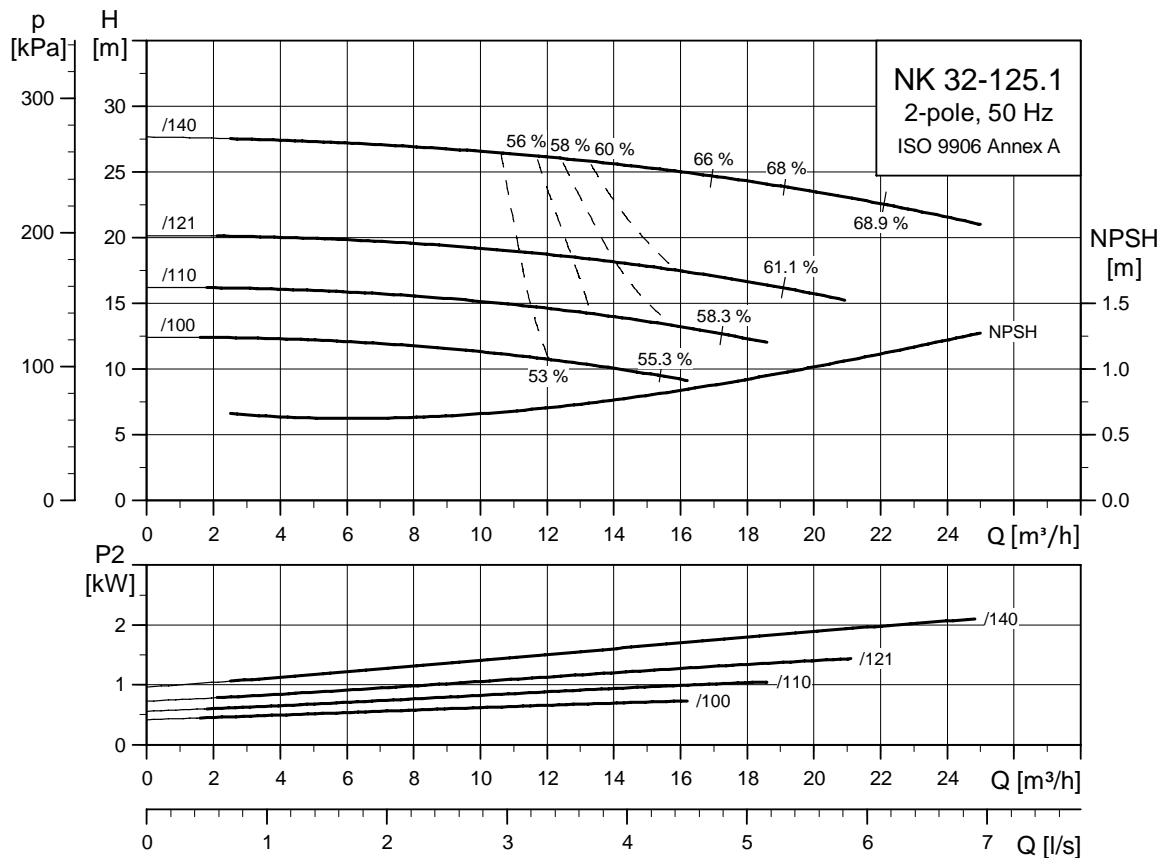
## Certificates

Certificates have to be confirmed for every order and are available on request as follows:

- Certificate for compliance with the order EN 10204 - 2.1
- Pump certificate EN 10204 - 2.2
- Works certificate EN 10204 - 2.3
- Inspection certificate EN 10204 - 3.1.B
- Inspection certificate EN 10204 - 3.1.C

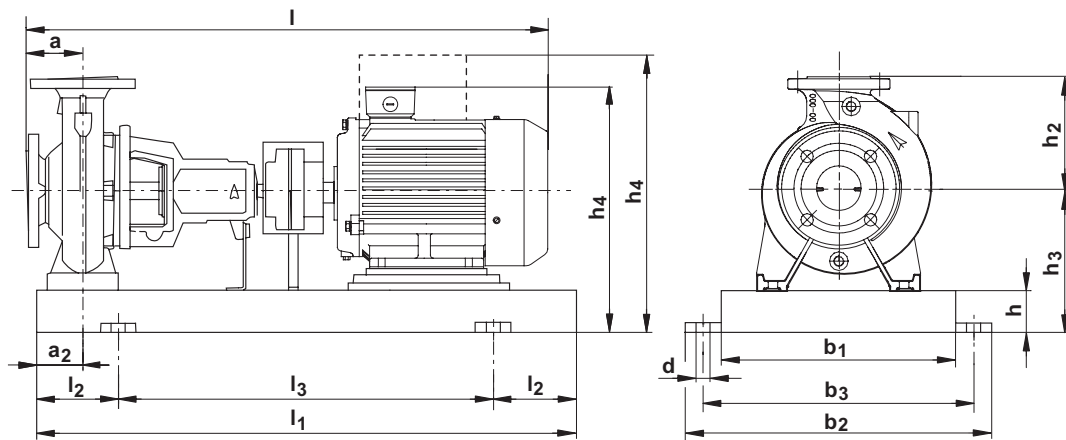


## NK, NKE 2-pole



TM03 31.06.0606





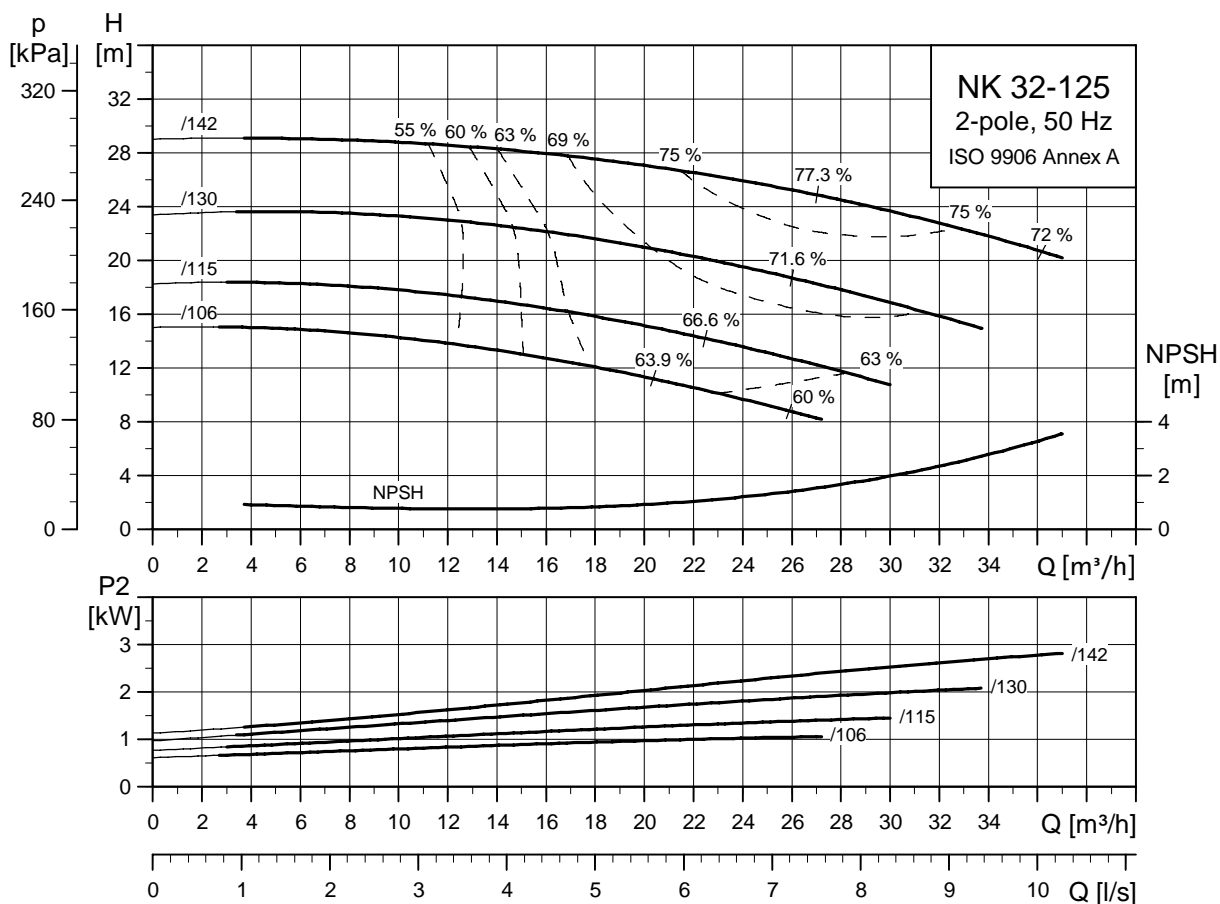
TM03 0508 0105

NK	32-125.1/100	32-125.1/110	32-125.1/121	32-125.1/140
<b>kW</b>	<b>0.75</b>	<b>1.1</b>	<b>1.5</b>	<b>2.2</b>
Standard motor range	MG 80B-C	MG 80B-C	MG 90SA-C	MG 90LA-C
Premium motor range	-	MG 90SA-D	MG 90SB-D	MG 90LC-D
E-motor range	-	-	MGE 90SB-D	MGE 90LC-D
PN [bar]	16	16	16	16
DN <sub>d</sub> [mm]	32	32	32	32
DN <sub>s</sub> [mm]	50	50	50	50
a [mm]	80	80	80	80
a <sub>2</sub> [mm]	60	60	60	60
h [mm]	65	65	65	65
h <sub>2</sub> [mm]	140	140	140	140
h <sub>3</sub> [mm]	177	177	177	177
h <sub>4</sub> <sup>1)</sup> [mm]	286/-	286/287/-	287/287/344	287/287/344
<b>Standard coupling</b>				
l <sup>1)</sup> [mm]	715/-	715/765/-	775/775/775	775/815/815
l <sub>1</sub> [mm]	800	800	800	900
l <sub>2</sub> [mm]	130	130	130	150
l <sub>3</sub> [mm]	540	540	540	600
b <sub>1</sub> [mm]	270	270	270	300
b <sub>2</sub> [mm]	360	360	360	390
b <sub>3</sub> [mm]	320	320	320	350
d [mm]	19	19	19	19
Weight <sup>1)</sup> Net [kg]	72/-	72/78/-	78/81/86	86/90/95
<b>Spacer coupling</b>				
l <sup>1)</sup> [mm]	811/-	811/861/-	871/871/871	871/911/911
l <sub>1</sub> [mm]	800	800	800	900
l <sub>2</sub> [mm]	130	130	130	150
l <sub>3</sub> [mm]	540	540	540	600
b <sub>1</sub> [mm]	270	270	270	300
b <sub>2</sub> [mm]	360	360	360	390
b <sub>3</sub> [mm]	320	320	320	350
d [mm]	19	19	19	19
Weight <sup>1)</sup> Net [kg]	74/-15/-	74/80/-	80/83/88	88/92/97

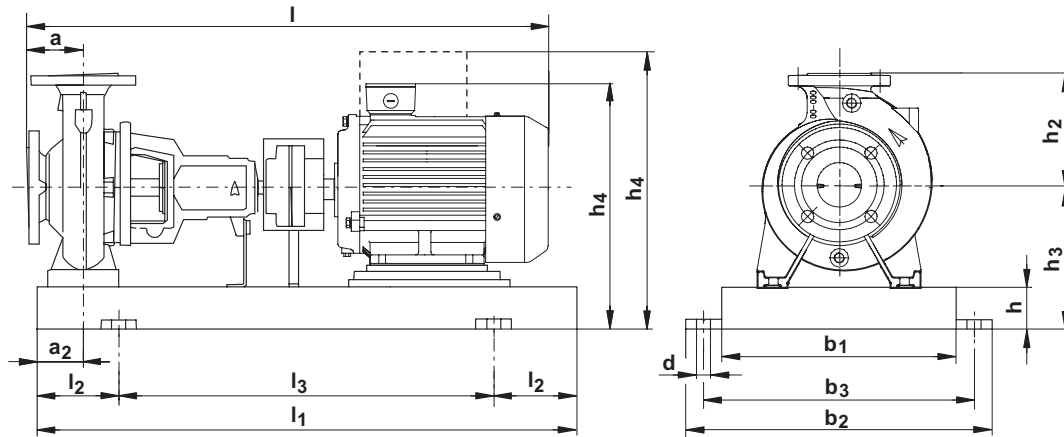
<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range

# Performance curves

NK 32-125  
2-pole



TM03 31.08.0606



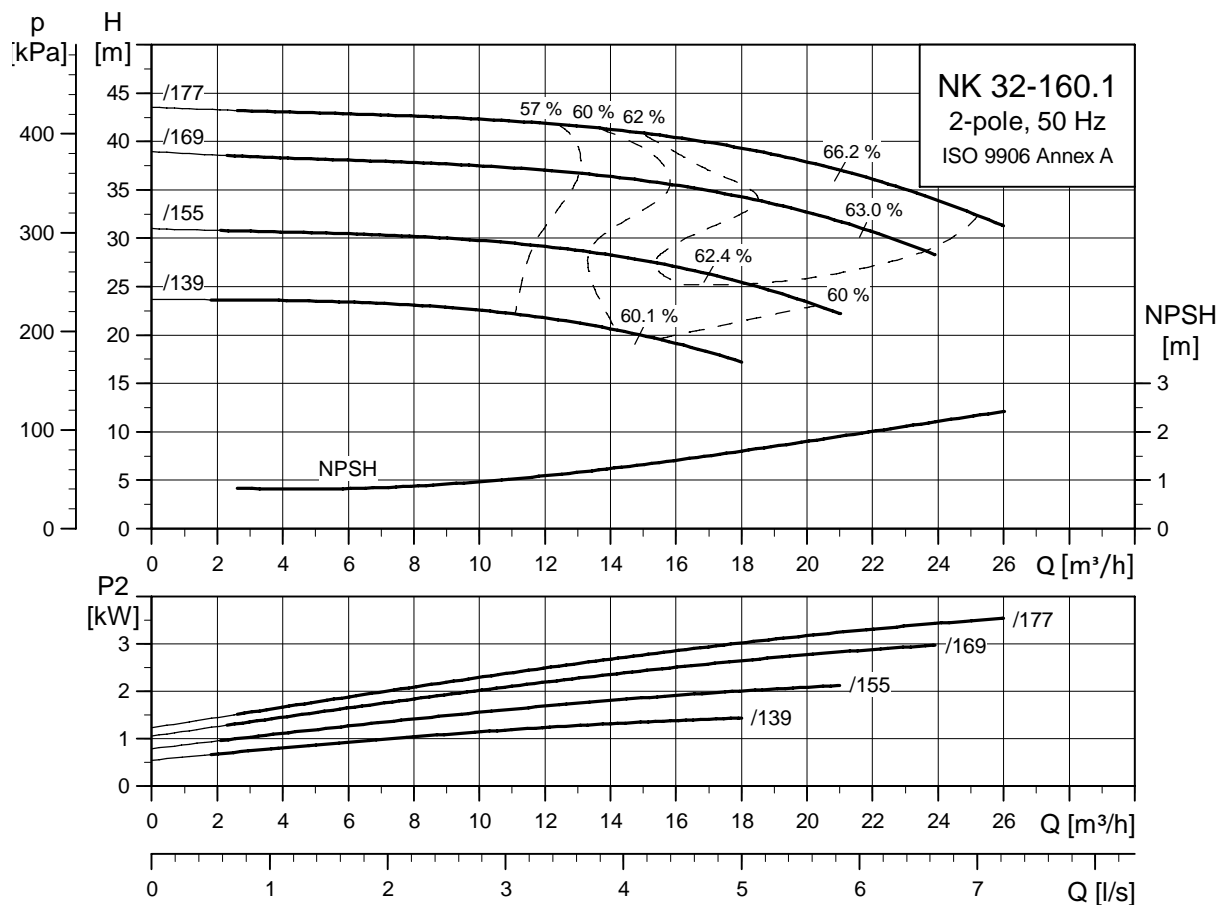
TM03 0508 0105

NK	32-125/106	32-125/115	32-125/130	32-125/142
kW	1.1	1.5	2.2	3
Standard motor range	MG 80B-C	MG 90SA-C	MG 90LA-C	MG 100LA-D
Premium motor range	MG 90SA-D	MG 90SB-D	MG 90LC-D	MG 100LC-D
E-motor range	-	MGE 90SB-D	MGE 90LC-D	MGE 100LC-D
PN [bar]	16	16	16	16
DN <sub>d</sub> [mm]	32	32	32	32
DN <sub>s</sub> [mm]	50	50	50	50
a [mm]	80	80	80	80
a <sub>2</sub> [mm]	60	60	60	60
h [mm]	65	65	65	65
h <sub>2</sub> [mm]	140	140	140	140
h <sub>3</sub> [mm]	177	177	177	177
h <sub>4</sub> <sup>1)</sup> [mm]	286/287/-	287/287/344	287/287/344	297/297/354
<b>Standard coupling</b>				
l <sup>1)</sup> [mm]	715/765/-	775/775/775	775/815/815	839/839/839
l <sub>1</sub> [mm]	800	800	900	900
l <sub>2</sub> [mm]	130	130	150	150
l <sub>3</sub> [mm]	540	540	600	600
b <sub>1</sub> [mm]	270	270	300	300
b <sub>2</sub> [mm]	360	360	390	390
b <sub>3</sub> [mm]	320	320	350	350
d [mm]	19	19	19	19
Weight <sup>1)</sup> Net [kg]	72/78/-	78/81/86	86/90/95	90/99/103
<b>Spacer coupling</b>				
l <sup>1)</sup> [mm]	811/861/-	871/871/871	871/911/911	935/935/935
l <sub>1</sub> [mm]	800	800	900	900
l <sub>2</sub> [mm]	130	130	150	150
l <sub>3</sub> [mm]	540	540	600	600
b <sub>1</sub> [mm]	270	270	300	300
b <sub>2</sub> [mm]	360	360	390	390
b <sub>3</sub> [mm]	320	320	350	350
d [mm]	19	19	19	19
Weight <sup>1)</sup> Net [kg]	74/80/-	80/83/88	88/92/97	92/101/105

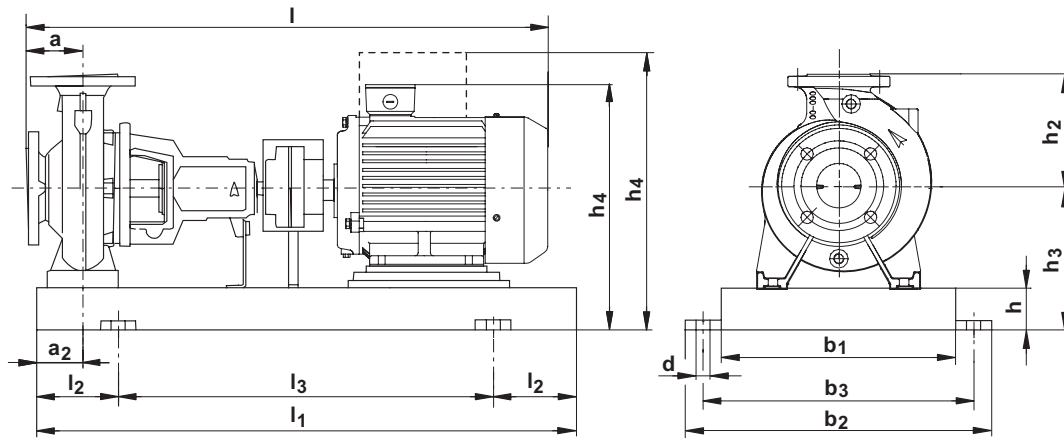
<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range

# Performance curves

NK 32-160.1  
2-pole



TM03 3107 0606



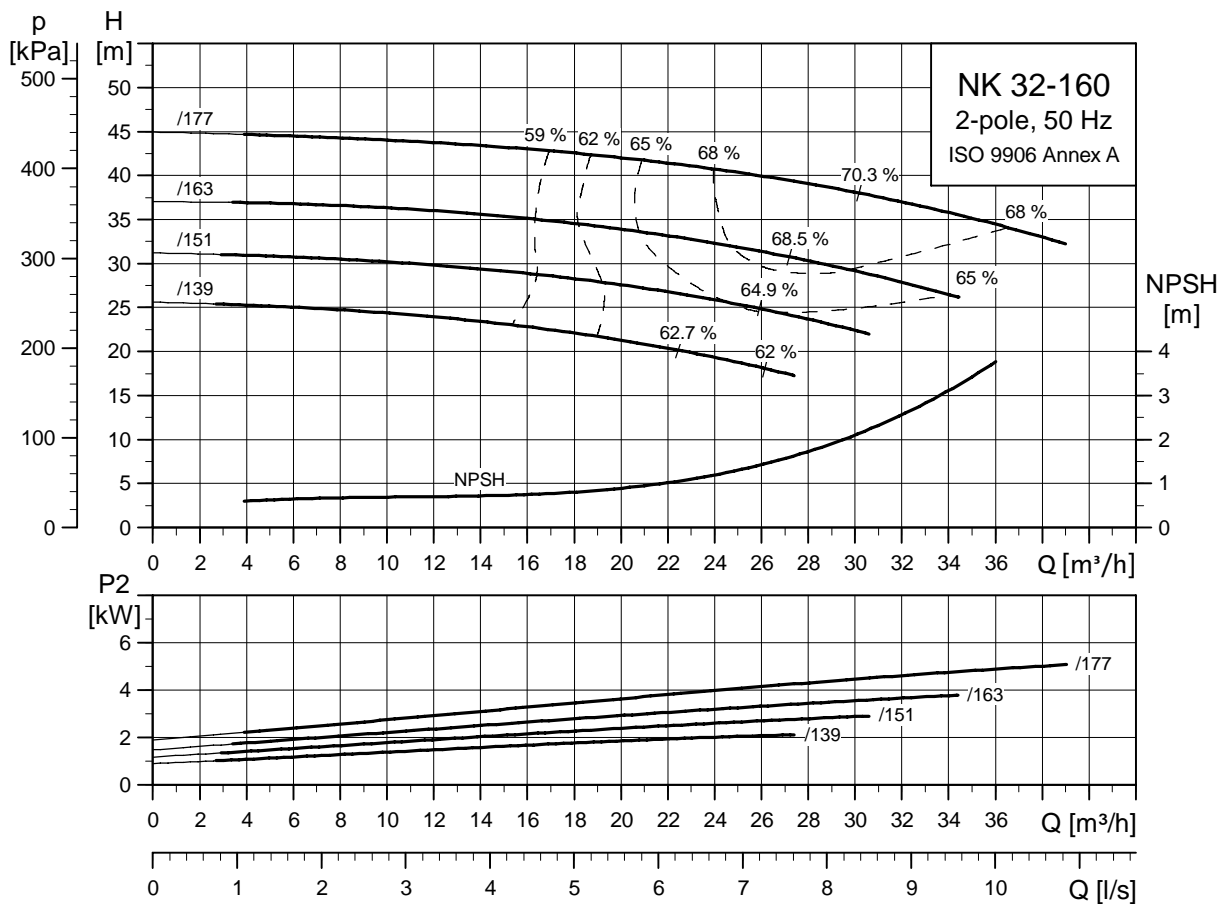
TM03 0508 0105

NK	32-160.1/139	32-160.1/155	32-160.1/169	32-160.1/177
<b>kW</b>	1.5	2.2	3	4
Standard motor range	MG 90SA-C	MG 90LA-C	MG 100LA-D	MG 112MB-C
Premium motor range	MG 90SB-D	MG 90LC-D	MG 100LC-D	MG 112MC-D
E-motor range	MGE 90SB-D	MGE 90LC-D	MGE 100LC-D	MGE 112MC-D
PN [bar]	16	16	16	16
DN <sub>d</sub> [mm]	32	32	32	32
DN <sub>s</sub> [mm]	50	50	50	50
a [mm]	80	80	80	80
a <sub>2</sub> [mm]	60	60	60	60
h [mm]	65	65	65	65
h <sub>2</sub> [mm]	160	160	160	160
h <sub>3</sub> [mm]	197	197	197	197
h <sub>4</sub> <sup>1)</sup> [mm]	307/307/364	307/307/364	317/317/374	331/331/385
<b>Standard coupling</b>				
l <sub>1</sub> <sup>1)</sup> [mm]	775/775/775	775/815/815	839/839/839	876/876/876
l <sub>1</sub> [mm]	800	900	900	900
l <sub>2</sub> [mm]	130	150	150	150
l <sub>3</sub> [mm]	540	600	600	600
b <sub>1</sub> [mm]	270	300	300	300
b <sub>2</sub> [mm]	360	390	390	390
b <sub>3</sub> [mm]	320	350	350	350
d [mm]	19	19	19	19
Weight <sup>1)</sup> Net [kg]	81/84/89	89/93/98	93/102/106	102/108/113
<b>Spacer coupling</b>				
l <sub>1</sub> <sup>1)</sup> [mm]	871/871/871	871/911/911	935/935/935	972/972/972
l <sub>1</sub> [mm]	800	900	900	900
l <sub>2</sub> [mm]	130	150	150	150
l <sub>3</sub> [mm]	540	600	600	600
b <sub>1</sub> [mm]	270	300	300	300
b <sub>2</sub> [mm]	360	390	390	390
b <sub>3</sub> [mm]	320	350	350	350
d [mm]	19	19	19	19
Weight <sup>1)</sup> Net [kg]	83/86/91	91/95/100	95/104/108	104/110/115

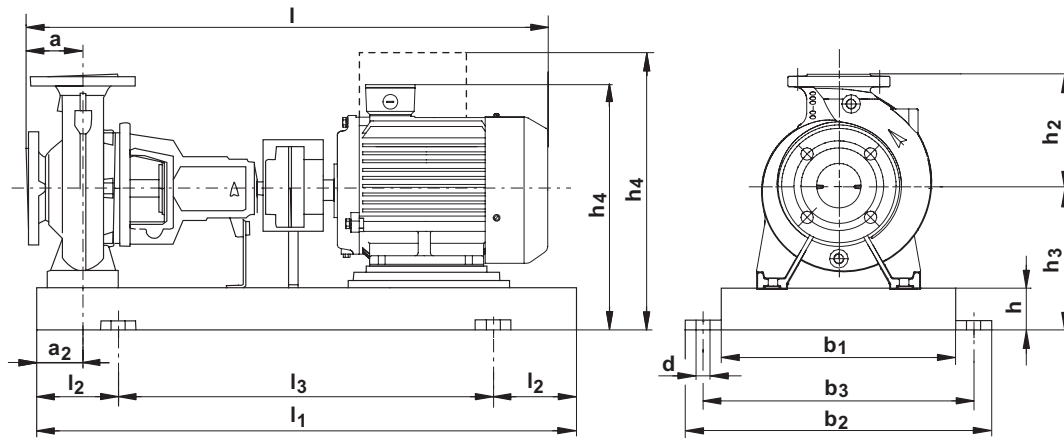
<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range

# Performance curves

NK 32-160  
2-pole



TM03 3110 0606



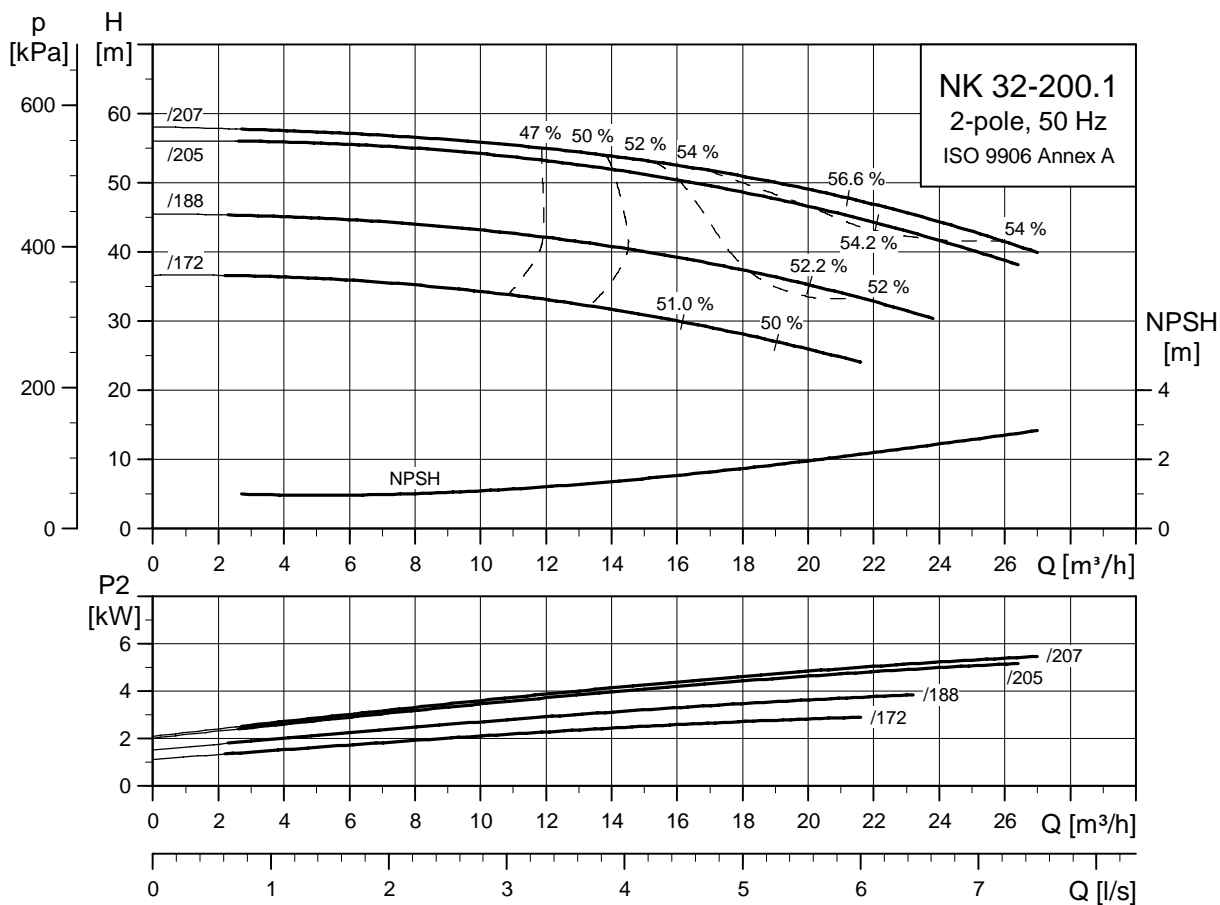
TM03 0508 0105

NK	32-160/139	32-160/151	32-160/163	32-160/177
<b>kW</b>	<b>2.2</b>	<b>3</b>	<b>4</b>	<b>5.5</b>
Standard motor range	MG 90LA-C	MG 100LA-D	MG 112MB-C	MG 132SB-C
Premium motor range	MG 90LC-D	MG 100LC-D	MG 112MC-D	MG 132SC-D
E-motor range	MGE 90LC-D	MGE 100LC-D	MGE 112MC-D	MGE 132SC-D
PN [bar]	16	16	16	16
DN <sub>d</sub> [mm]	32	32	32	32
DN <sub>s</sub> [mm]	50	50	50	50
a [mm]	80	80	80	80
a <sub>2</sub> [mm]	60	60	60	60
h [mm]	65	65	65	80
h <sub>2</sub> [mm]	160	160	160	160
h <sub>3</sub> [mm]	197	197	197	212
h <sub>4</sub> <sup>1)</sup> [mm]	307/307/364	317/317/374	331/331/385	346/346/400
<b>Standard coupling</b>				
l <sub>1</sub> <sup>1)</sup> [mm]	775/815/815	839/839/839	876/876/876	915/915/915
l <sub>1</sub> [mm]	900	900	900	1000
l <sub>2</sub> [mm]	150	150	150	170
l <sub>3</sub> [mm]	600	600	600	660
b <sub>1</sub> [mm]	300	300	300	340
b <sub>2</sub> [mm]	390	390	390	450
b <sub>3</sub> [mm]	350	350	350	400
d [mm]	19	19	19	24
Weight <sup>1)</sup> Net [kg]	89/93/98	93/102/106	102/108/113	119/122/138
<b>Spacer coupling</b>				
l <sub>1</sub> <sup>1)</sup> [mm]	871/911/911	935/935/935	972/972/972	1011/1011/1011
l <sub>1</sub> [mm]	900	900	900	1000
l <sub>2</sub> [mm]	150	150	150	170
l <sub>3</sub> [mm]	600	600	600	660
b <sub>1</sub> [mm]	300	300	300	340
b <sub>2</sub> [mm]	390	390	390	450
b <sub>3</sub> [mm]	350	350	350	400
d [mm]	19	19	19	24
Weight <sup>1)</sup> Net [kg]	91/95/100	95/104/108	104/110/115	122/125/140

<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range

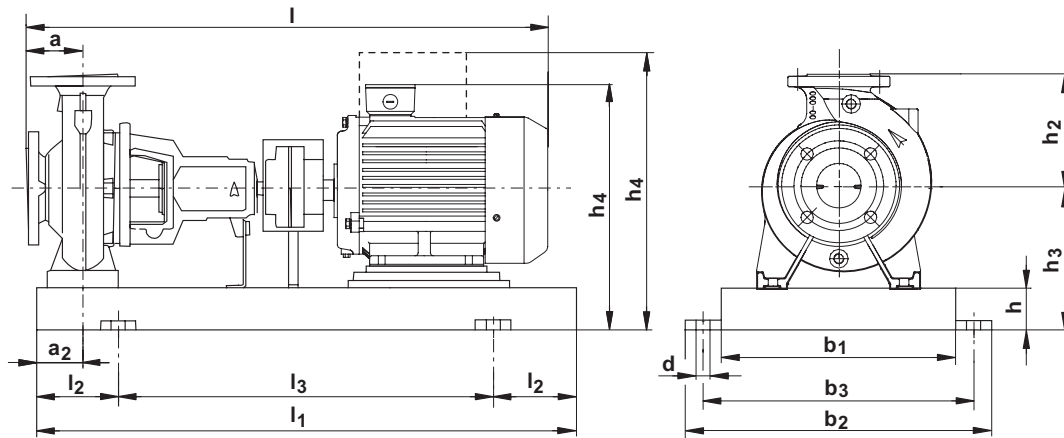
# Performance curves

NK 32-200.1  
2-pole



TM03 3108 0606





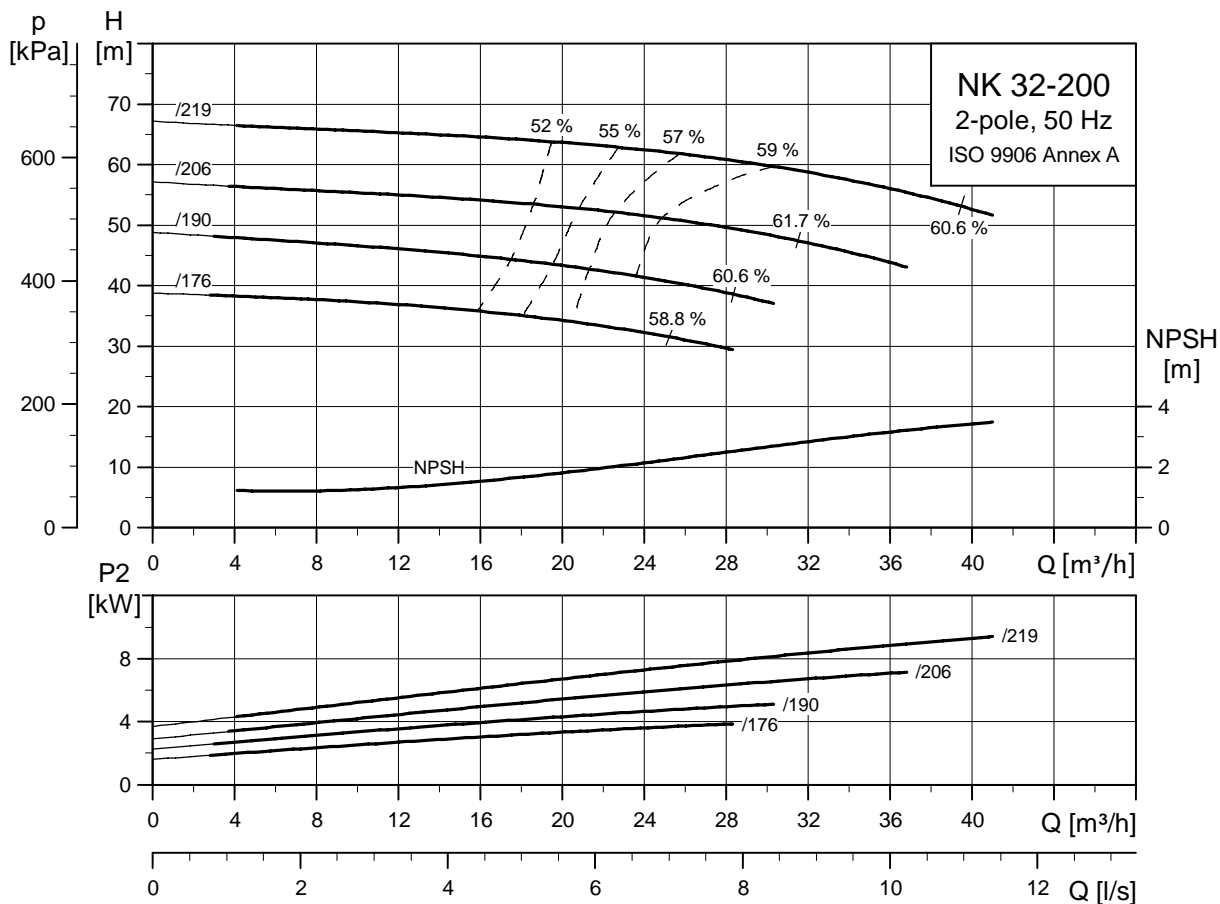
TM03 0508 0105

NK	32-200.1/172	32-200.1/188	32-200.1/205	32-200.1/207
<b>kW</b>	3	4	5.5	7.5
Standard motor range	MG 100LA-D	MG 112MB-C	MG 132SB-C	MG 132SC2-C
Premium motor range	MG 100LC-D	MG 112MC-D	MG 132SC-D	MG 132SD-D
E-motor range	MGE 100LC-D	MGE 112MC-D	MGE 132SC-D	MGE 132SD-D
PN [bar]	16	16	16	16
DN <sub>d</sub> [mm]	32	32	32	32
DN <sub>s</sub> [mm]	50	50	50	50
a [mm]	80	80	80	80
a <sub>2</sub> [mm]	60	60	60	60
h [mm]	65	65	80	80
h <sub>2</sub> [mm]	180	180	180	180
h <sub>3</sub> [mm]	225	227	242	242
h <sub>4</sub> <sup>1)</sup> [mm]	345/347/404	361/361/415	376/376/430	376/376/430
<b>Standard coupling</b>				
l <sub>1</sub> <sup>1)</sup> [mm]	839/839/839	876/876/876	915/915/915	915/915/915
l <sub>1</sub> [mm]	900	900	1000	1000
l <sub>2</sub> [mm]	150	150	170	170
l <sub>3</sub> [mm]	600	600	660	660
b <sub>1</sub> [mm]	300	300	340	340
b <sub>2</sub> [mm]	390	390	450	450
b <sub>3</sub> [mm]	350	350	400	400
d [mm]	19	19	24	24
Weight <sup>1)</sup> Net [kg]	103/112/116	112/118/123	129/132/148	132/134/143
<b>Spacer coupling</b>				
l <sub>1</sub> <sup>1)</sup> [mm]	935/935/935	972/972/972	1011/1011/1011	1011/1011/1011
l <sub>1</sub> [mm]	900	900	1000	1000
l <sub>2</sub> [mm]	150	150	170	170
l <sub>3</sub> [mm]	600	600	660	660
b <sub>1</sub> [mm]	300	300	340	340
b <sub>2</sub> [mm]	390	390	450	450
b <sub>3</sub> [mm]	350	350	400	400
d [mm]	19	19	24	24
Weight <sup>1)</sup> Net [kg]	105/114/118	114/120/125	132/135/150	135/137/145

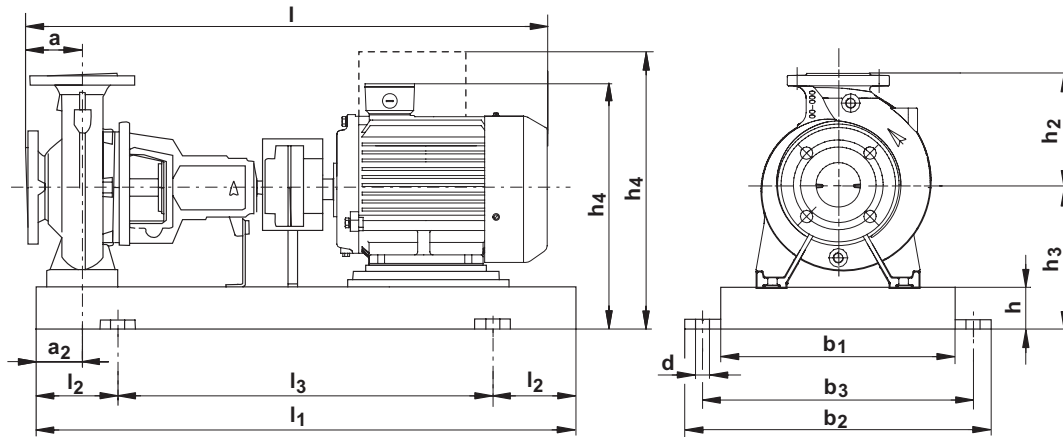
<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range

# Performance curves

NK 32-200  
2-pole



TM03 3111 0606



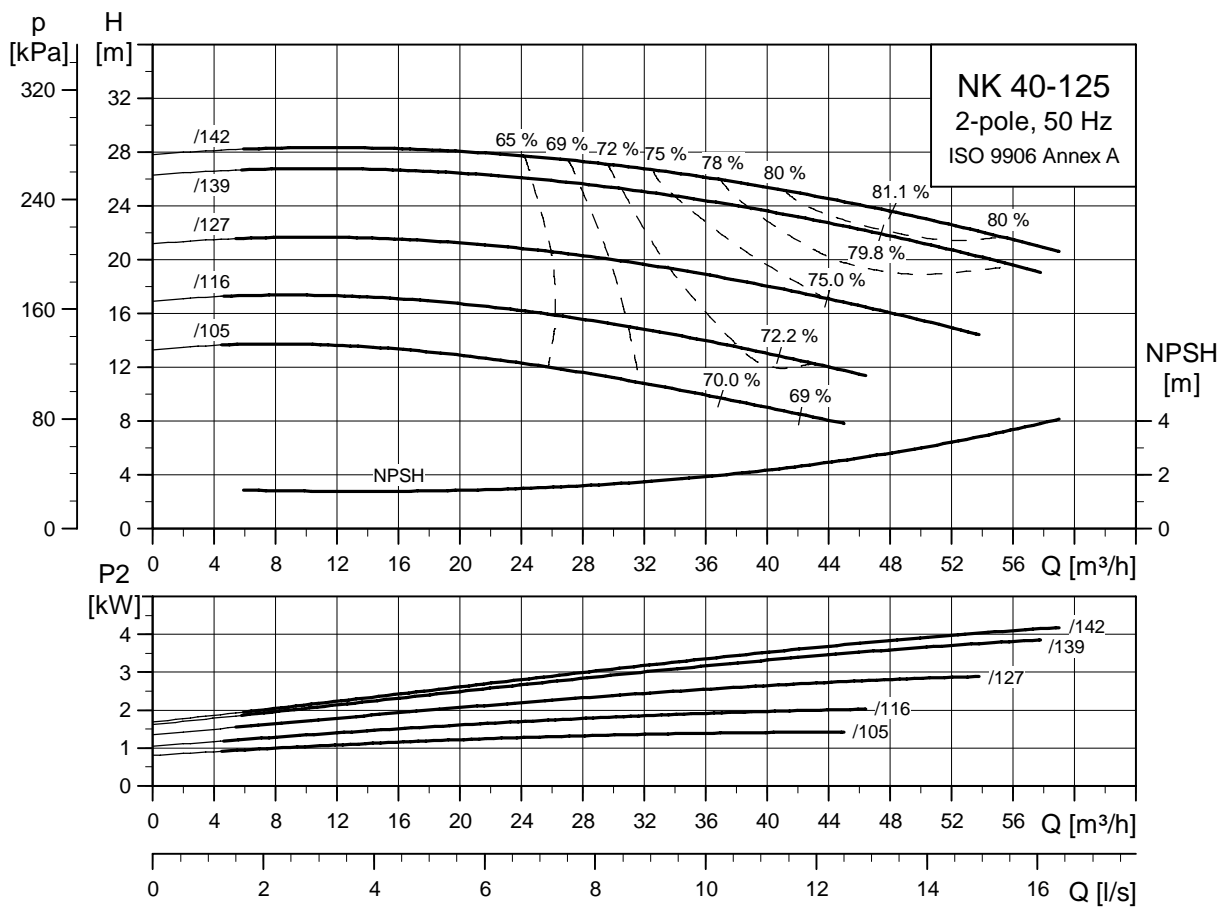
TM03 0508 0105

NK	32-200/176	32-200/190	32-200/206	32-200/219
kW	4	5.5	7.5	11
Standard motor range	MG 112MB-C	MG 132SB-C	MG 132SC2-C	MMG 160MA-E
Premium motor range	MG 112MC-D	MG 132SC-D	MG 132SD-D	MMG 160MA-D
E-motor range	MGE 112MC-D	MGE 132SC-D	MGE 132SD-D	MMGE 160M
PN [bar]	16	16	16	16
DN <sub>d</sub> [mm]	32	32	32	32
DN <sub>s</sub> [mm]	50	50	50	50
a [mm]	80	80	80	80
a <sub>2</sub> [mm]	60	60	60	60
h [mm]	65	80	80	80
h <sub>2</sub> [mm]	180	180	180	180
h <sub>3</sub> [mm]	227	242	242	240
h <sub>4</sub> <sup>1)</sup> [mm]	361/361/415	376/376/430	376/376/430	488/485/631
<b>Standard coupling</b>				
l <sup>1)</sup> [mm]	876/876/876	915/915/915	915/915/915	1052/1056/1003
l <sub>1</sub> [mm]	900	1000	1000	1120
l <sub>2</sub> [mm]	150	170	170	190
l <sub>3</sub> [mm]	600	660	660	740
b <sub>1</sub> [mm]	300	340	340	380
b <sub>2</sub> [mm]	390	450	450	490
b <sub>3</sub> [mm]	350	400	400	440
d [mm]	19	24	24	24
Weight <sup>1)</sup> Net [kg]	112/118/123	129/132/148	132/134/143	214/184/220
<b>Spacer coupling</b>				
l <sup>1)</sup> [mm]	972/972/972	1011/1011/1011	1011/1011/1011	1148/1152/1099
l <sub>1</sub> [mm]	900	1000	1000	1120
l <sub>2</sub> [mm]	150	170	170	190
l <sub>3</sub> [mm]	600	660	660	740
b <sub>1</sub> [mm]	300	340	340	380
b <sub>2</sub> [mm]	390	450	450	490
b <sub>3</sub> [mm]	350	400	400	440
d [mm]	19	24	24	24
Weight <sup>1)</sup> Net [kg]	114/120/125	132/135/150	135/137/145	217/187/223

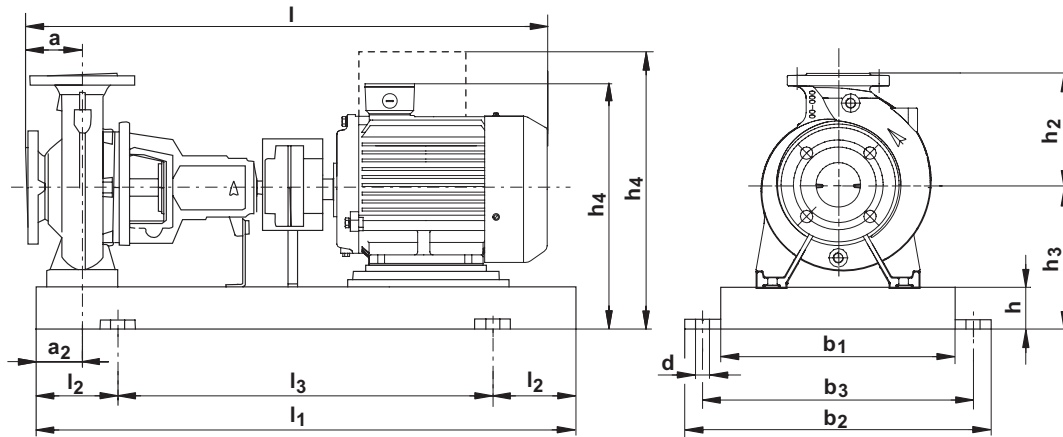
<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range

# Performance curves

NK 40-125  
2-pole



TM03 3112 0606



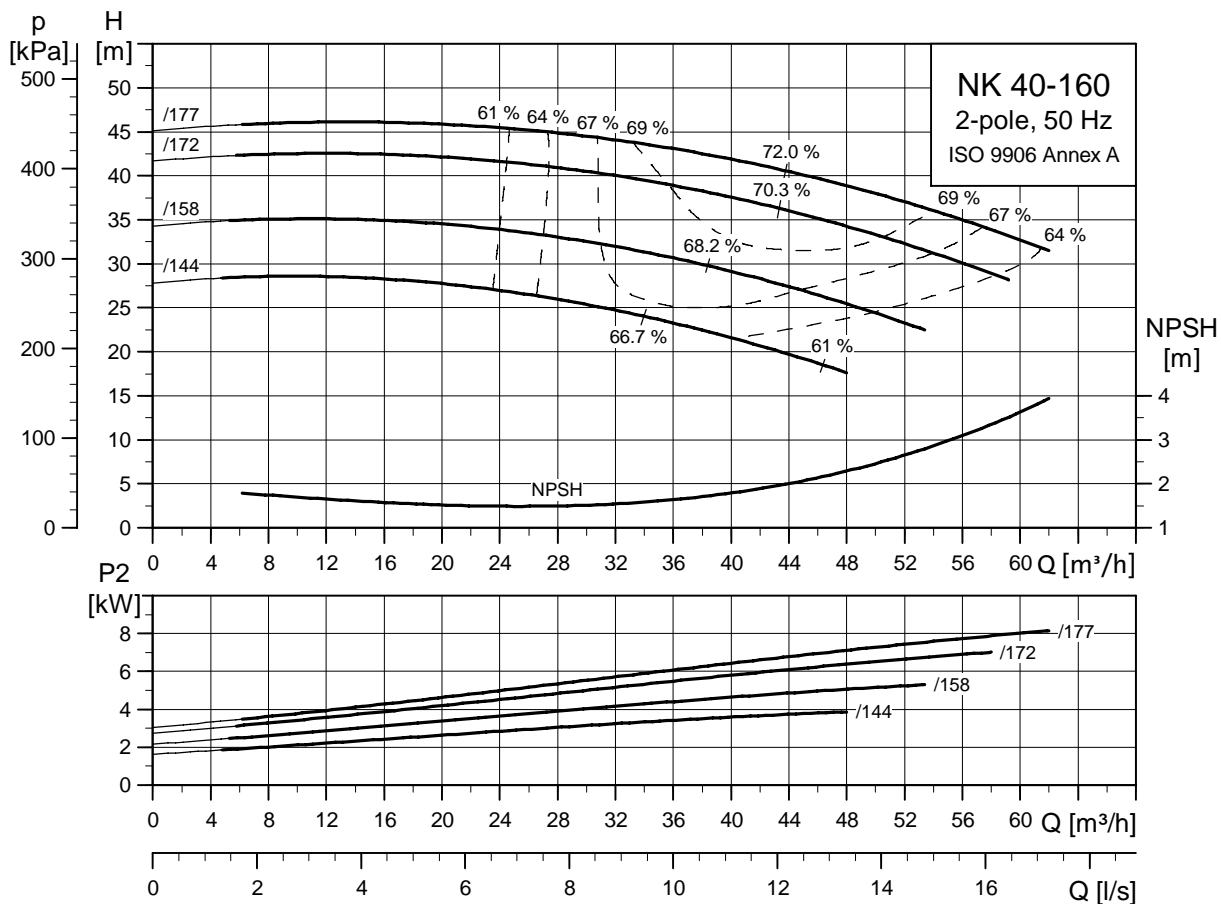
TM03 0508 0105

NK	40-125/105	40-125/116	40-125/127	40-125/139	40-125/142
kW	1.5	2.2	3	4	5.5
Standard motor range	MG 90SA-C	MG 90LA-C	MG 100LA-D	MG 112MB-C	MG 132SB-C
Premium motor range	MG 90SB-D	MG 90LC-D	MG 100LC-D	MG 112MC-D	MG 132SC-D
E-motor range	MGE 90SB-D	MGE 90LC-D	MGE 100LC-D	MGE 112MC-D	MGE 132SC-D
PN [bar]	16	16	16	16	16
DN <sub>d</sub> [mm]	40	40	40	40	40
DN <sub>s</sub> [mm]	65	65	65	65	65
a [mm]	80	80	80	80	80
a <sub>2</sub> [mm]	60	60	60	60	60
h [mm]	65	65	65	65	80
h <sub>2</sub> [mm]	140	140	140	140	140
h <sub>3</sub> [mm]	177	177	177	177	212
h <sub>4</sub> <sup>1)</sup> [mm]	287/287/344	287/287/344	297/297/354	311/311/365	346/346/400
<b>Standard coupling</b>					
l <sup>1)</sup> [mm]	775/775/775	775/815/815	839/839/839	876/876/876	915/915/915
l <sub>1</sub> [mm]	800	900	900	900	1000
l <sub>2</sub> [mm]	130	150	150	150	170
l <sub>3</sub> [mm]	540	600	600	600	660
b <sub>1</sub> [mm]	270	300	300	300	340
b <sub>2</sub> [mm]	360	390	390	390	450
b <sub>3</sub> [mm]	320	350	350	350	400
d [mm]	19	19	19	19	24
Weight <sup>1)</sup> Net [kg]	78/81/86	86/90/95	90/99/103	99/105/110	116/119/135
<b>Spacer coupling</b>					
l <sup>1)</sup> [mm]	871/871/871	871/911/911	935/935/935	972/972/972	1011/1011/1011
l <sub>1</sub> [mm]	800	900	900	900	1000
l <sub>2</sub> [mm]	130	150	150	150	170
l <sub>3</sub> [mm]	540	600	600	600	660
b <sub>1</sub> [mm]	270	300	300	300	340
b <sub>2</sub> [mm]	360	390	390	390	450
b <sub>3</sub> [mm]	320	350	350	350	400
d [mm]	19	19	19	19	24
Weight <sup>1)</sup> Net [kg]	80/83/88	88/92/97	92/101/105	101/107/112	119/122/137

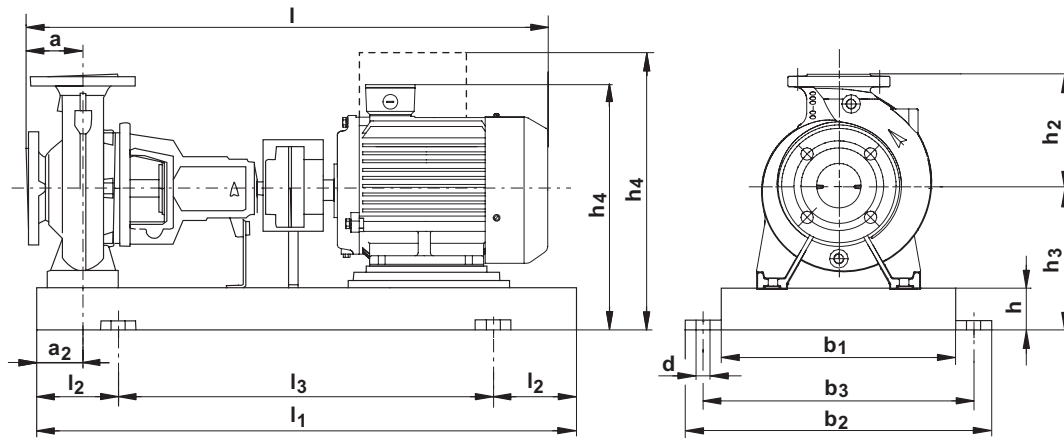
<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range

# Performance curves

NK 40-160  
2-pole



TM03 3113 0606



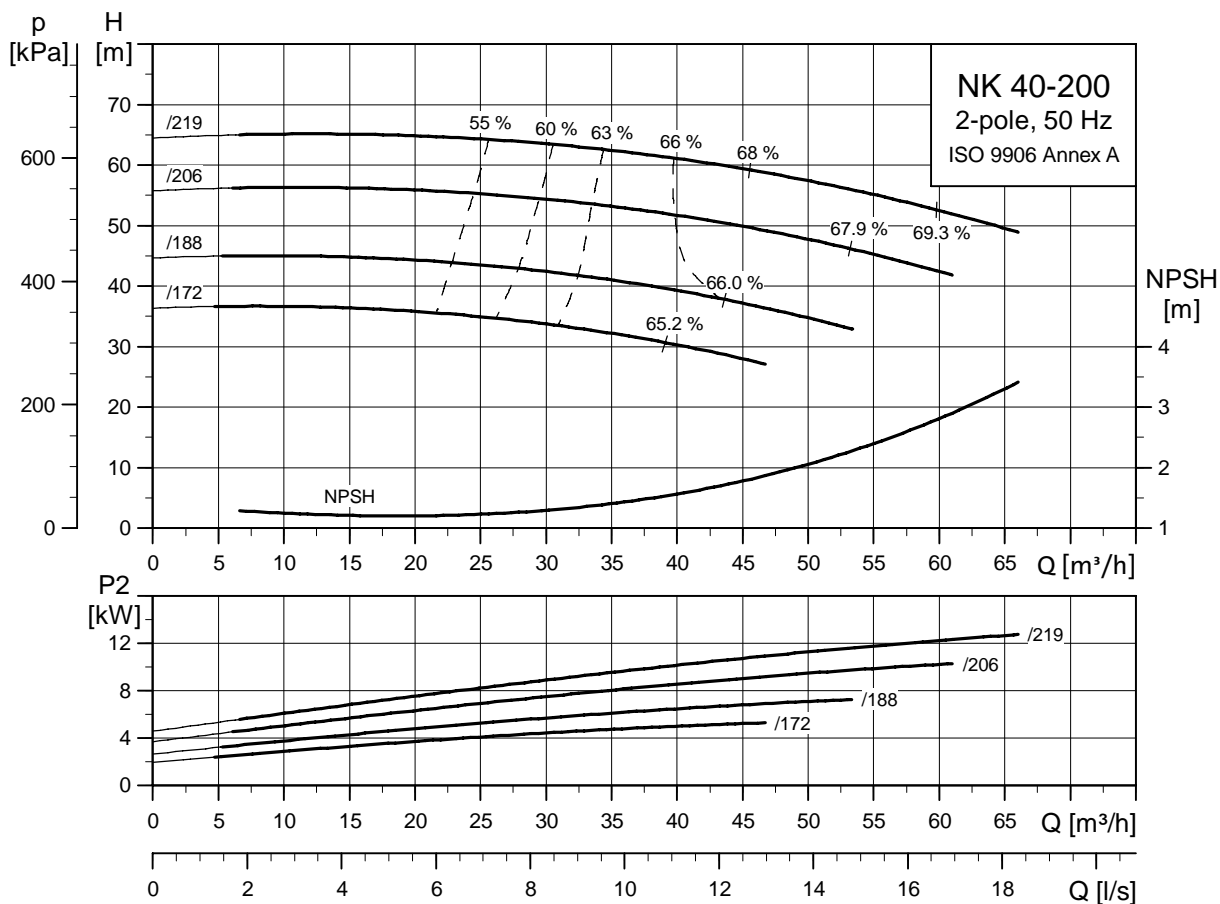
TM03 0508 0105

NK	40-160/144	40-160/158	40-160/172	40-160/177
<b>kW</b>	4	5.5	7.5	11
Standard motor range	MG 112MB-C	MG 132SB-C	MG 132SC2-C	MMG 160MA-E
Premium motor range	MG 112MC-D	MG 132SC-D	MG 132SD-D	MMG 160MA-D
E-motor range	MGE 112MC-D	MGE 132SC-D	MGE 132SD-D	MMGE 160M
PN [bar]	16	16	16	16
DN <sub>d</sub> [mm]	40	40	40	40
DN <sub>s</sub> [mm]	65	65	65	65
a [mm]	80	80	80	80
a <sub>2</sub> [mm]	60	60	60	60
h [mm]	65	80	80	80
h <sub>2</sub> [mm]	160	160	160	160
h <sub>3</sub> [mm]	197	212	212	242
h <sub>4</sub> <sup>1)</sup> [mm]	331/331/385	346/346/400	346/346/400	490/487/633
<b>Standard coupling</b>				
l <sub>1</sub> <sup>1)</sup> [mm]	876/876/876	915/915/915	915/915/915	1052/1056/1003
l <sub>1</sub> [mm]	900	1000	1000	1120
l <sub>2</sub> [mm]	150	170	170	190
l <sub>3</sub> [mm]	600	660	660	740
b <sub>1</sub> [mm]	300	340	340	380
b <sub>2</sub> [mm]	390	450	450	490
b <sub>3</sub> [mm]	350	400	400	440
d [mm]	19	24	24	24
Weight <sup>1)</sup> Net [kg]	104/110/115	121/124/140	124/126/135	206/176/212
<b>Spacer coupling</b>				
l <sub>1</sub> <sup>1)</sup> [mm]	972/972/972	1011/1011/1011	1011/1011/1011	1148/1152/1099
l <sub>1</sub> [mm]	900	1000	1000	1120
l <sub>2</sub> [mm]	150	170	170	190
l <sub>3</sub> [mm]	600	660	660	740
b <sub>1</sub> [mm]	300	340	340	380
b <sub>2</sub> [mm]	390	450	450	490
b <sub>3</sub> [mm]	350	400	400	440
d [mm]	19	24	24	24
Weight <sup>1)</sup> Net [kg]	106/112/117	124/127/142	127/129/137	209/179/215

<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range

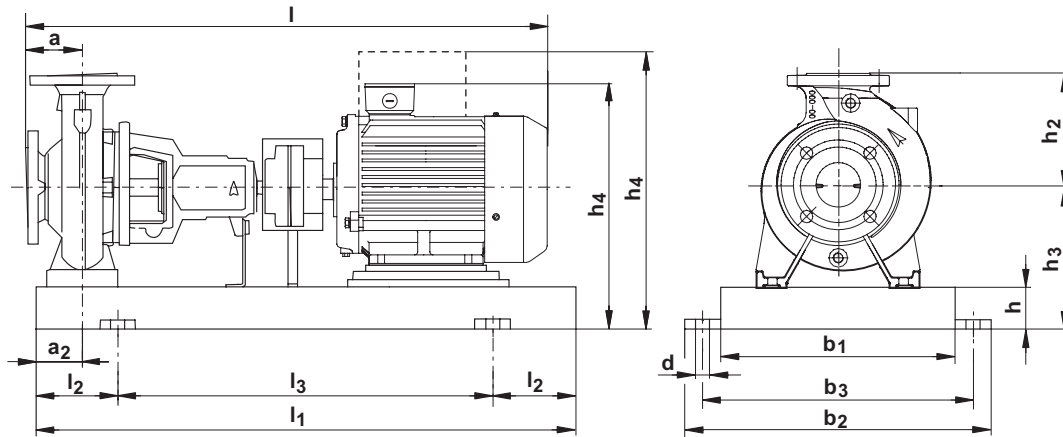
# Performance curves

NK 40-200  
2-pole



TM03 3114 C606





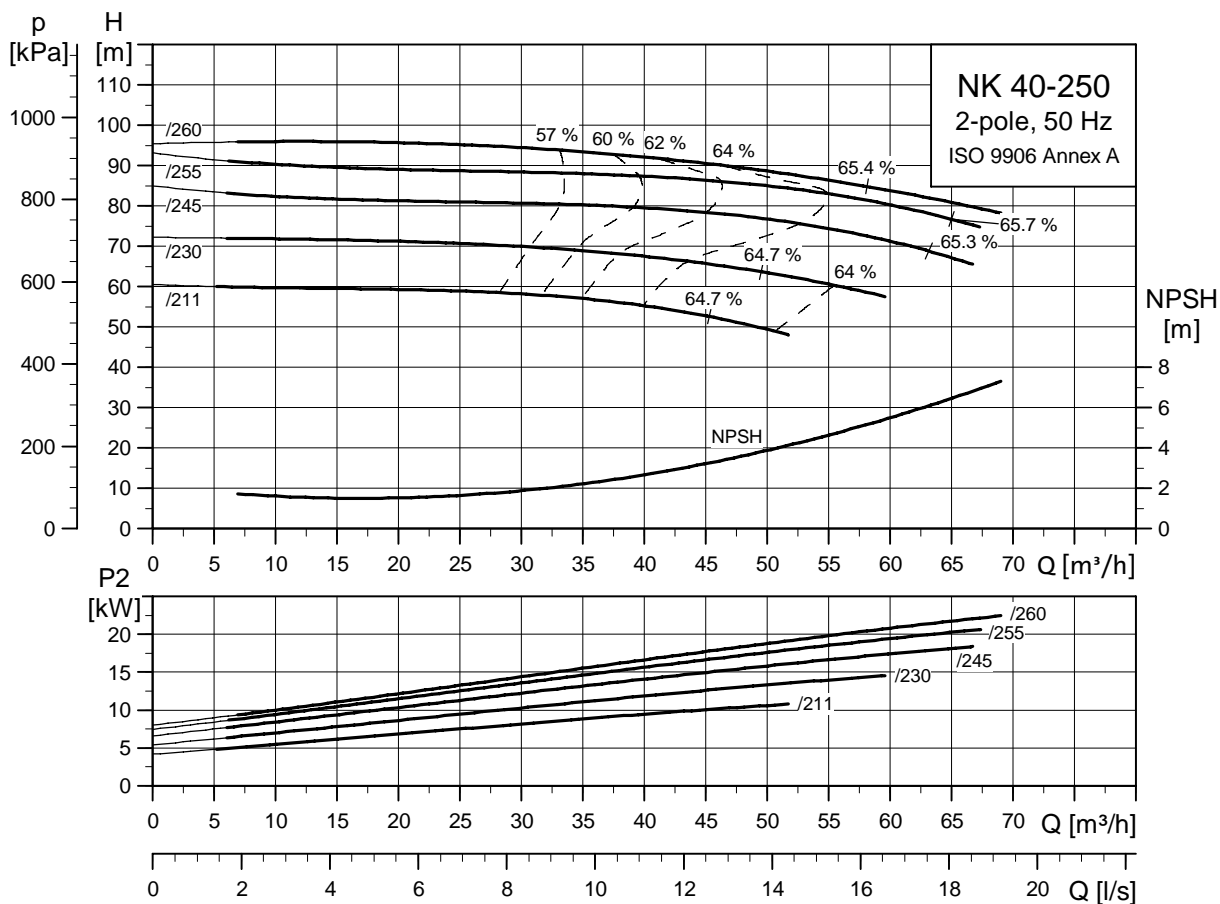
TM03 0508 0105

NK	40-200/172	40-200/188	40-200/206	40-200/219
kW	5.5	7.5	11	15
Standard motor range	MG 132SB-C	MG 132SC2-C	MMG 160MA-E	MMG 160MB-E
Premium motor range	MG 132SC-D	MG 132SD-D	MMG 160MA-D	MMG 160MB-D
E-motor range	MGE 132SC-D	MGE 132SD-D	MMGE 160M	MMGE 160MX
PN [bar]	16	16	16	16
DN <sub>d</sub> [mm]	40	40	40	40
DN <sub>s</sub> [mm]	65	65	65	65
a [mm]	100	100	100	100
a <sub>2</sub> [mm]	60	60	60	60
h [mm]	80	80	80	80
h <sub>2</sub> [mm]	180	180	180	180
h <sub>3</sub> [mm]	242	242	240	240
h <sub>4</sub> <sup>1)</sup> [mm]	376/376/430	376/376/430	488/485/631	488/485/658
<b>Standard coupling</b>				
l <sup>1)</sup> [mm]	935/935/935	935/935/935	1072/1076/1023	1072/1076/1035
l <sub>1</sub> [mm]	1000	1000	1120	1120
l <sub>2</sub> [mm]	170	170	190	190
l <sub>3</sub> [mm]	660	660	740	740
b <sub>1</sub> [mm]	340	340	380	380
b <sub>2</sub> [mm]	450	450	490	490
b <sub>3</sub> [mm]	400	400	440	440
d [mm]	24	24	24	24
Weight <sup>1)</sup> Net [kg]	131/134/150	134/136/145	216/186/222	224/197/239
<b>Spacer coupling</b>				
l <sup>1)</sup> [mm]	1031/1031/1031	1031/1031/1031	1168/1172/1119	1168/1172/1131
l <sub>1</sub> [mm]	1000	1000	1120	1120
l <sub>2</sub> [mm]	170	170	190	190
l <sub>3</sub> [mm]	660	660	740	740
b <sub>1</sub> [mm]	340	340	380	380
b <sub>2</sub> [mm]	450	450	490	490
b <sub>3</sub> [mm]	400	400	440	440
d [mm]	24	24	24	24
Weight <sup>1)</sup> Net [kg]	134/137/152	137/139/147	219/189/225	227/200/242

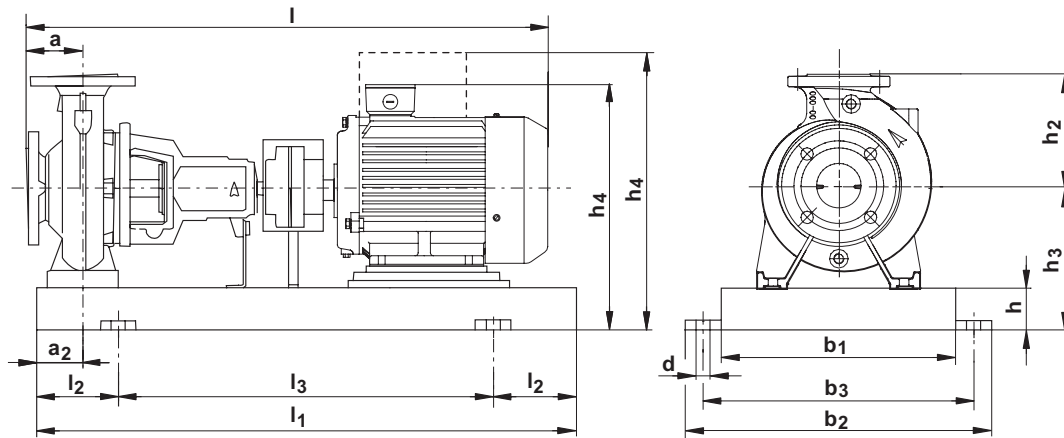
<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range.

# Performance curves

NK 40-250  
2-pole



TM03 3115 0606



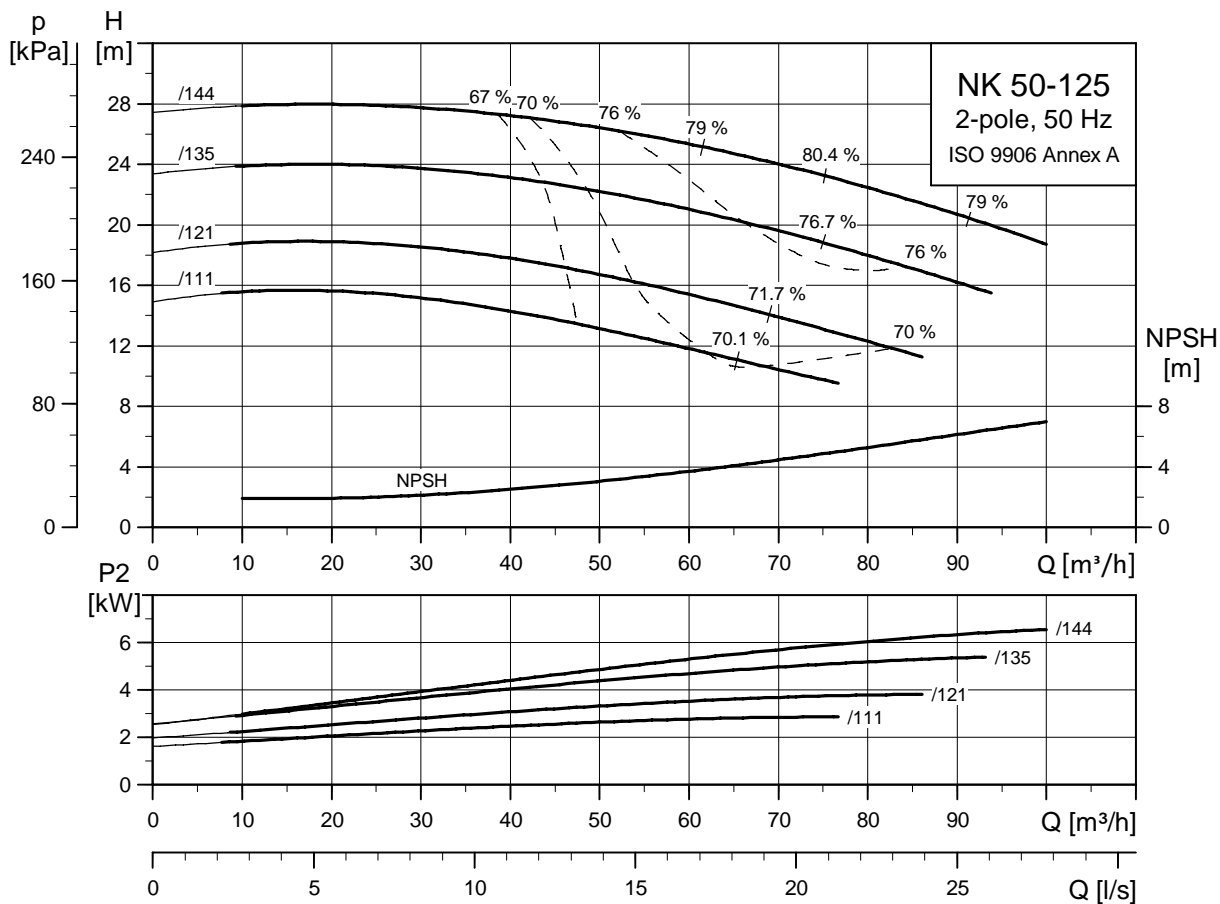
TM03 0508 0105

NK	40-250/211	40-250/230	40-250/245	40-250/255	40-250/260
<b>kW</b>	11	15	18.5	22	30
Standard motor range	MMG 160MA-E	MMG 160MB-E	MMG 160L-E	MMG 180M-E	MMG 200LA-E
Premium motor range	MMG 160MA-D	MMG 160MB-D	MMG 160L-D	MMG 180M-D	MMG 200LA-D
E-motor range	MMGE 160M	MMGE 160MX	MMGE 160L	MMGE 180M	-
PN [bar]	16	16	16	16	16
DN <sub>d</sub> [mm]	40	40	40	40	40
DN <sub>s</sub> [mm]	65	65	65	65	65
a [mm]	100	100	100	100	100
a <sub>2</sub> [mm]	75	75	75	75	75
h [mm]	80	80	80	80	100
h <sub>2</sub> [mm]	225	225	225	225	225
h <sub>3</sub> [mm]	260	260	260	260	300
h <sub>4</sub> <sup>1)</sup> [mm]	508/505/651	508/505/678	508/505/678	524/526/699	597/627/-
<b>Standard coupling</b>					
l <sub>1</sub> <sup>1)</sup> [mm]	1072/1076/1023	1072/1076/1035	1116/1121/1073	1154/1176/1099	1221/1243/-
l <sub>1</sub> [mm]	1250	1250	1250	1250	1400
l <sub>2</sub> [mm]	205	205	205	205	230
l <sub>3</sub> [mm]	840	840	840	840	940
b <sub>1</sub> [mm]	430	430	430	430	480
b <sub>2</sub> [mm]	540	540	540	540	610
b <sub>3</sub> [mm]	490	490	490	490	550
d [mm]	24	24	24	24	28
Weight <sup>1)</sup> Net [kg]	243/213/249	251/224/266	274/234/309	312/264/341	399/371/-
<b>Spacer coupling</b>					
l <sub>1</sub> <sup>1)</sup> [mm]	1168/1172/1250	1168/1172/1250	1212/1217/1250	1250/1272/1250	1317/1339/-
l <sub>1</sub> [mm]	1250	1250	1250	1250	1400
l <sub>2</sub> [mm]	205	205	205	205	230
l <sub>3</sub> [mm]	840	840	840	840	940
b <sub>1</sub> [mm]	430	430	430	430	480
b <sub>2</sub> [mm]	540	540	540	540	610
b <sub>3</sub> [mm]	490	490	490	490	550
d [mm]	24	24	24	24	28
Weight <sup>1)</sup> Net [kg]	246/216/0	254/227/0	277/237/0	315/267/0	402/374/0

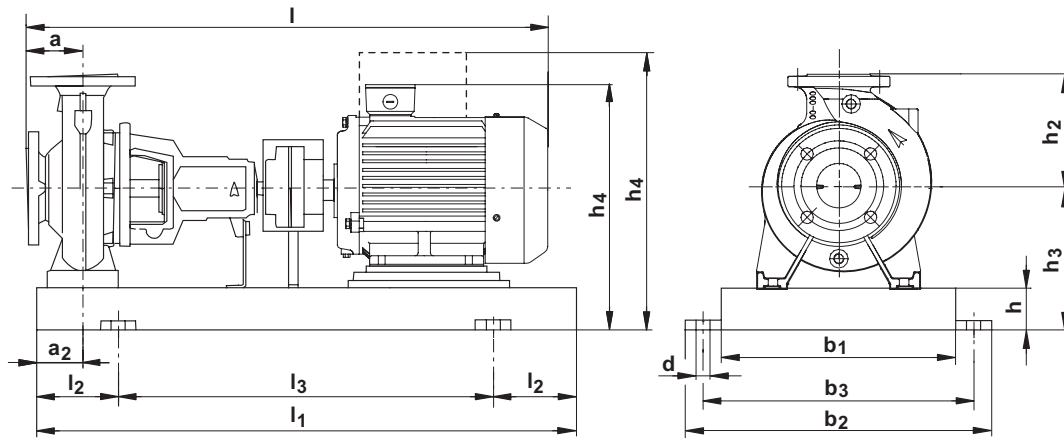
<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range.

# Performance curves

NK 50-125  
2-pole



TM03 3116 0606



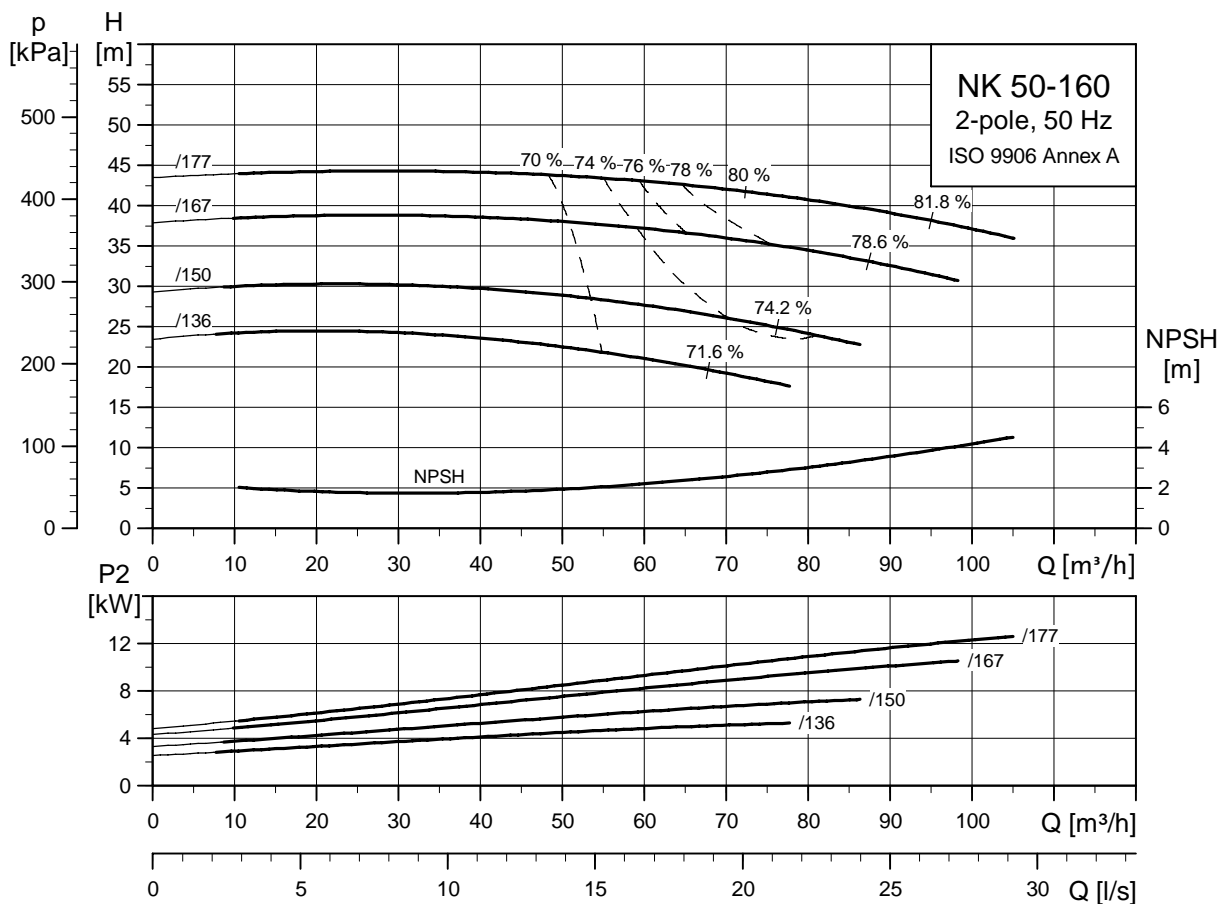
TM03 0508 0105

NK	50-125/111	50-125/121	50-125/135	50-125/144
<b>kW</b>	3	4	5.5	7.5
Standard motor range	MG 100LA-D	MG 112MB-C	MG 132SB-C	MG 132SC2-C
Premium motor range	MG 100LC-D	MG 112MC-D	MG 132SC-D	MG 132SD-D
E-motor range	MGE 100LC-D	MGE 112MC-D	MGE 132SC-D	MGE 132SD-D
PN [bar]	16	16	16	16
DN <sub>d</sub> [mm]	50	50	50	50
DN <sub>s</sub> [mm]	65	65	65	65
a [mm]	100	100	100	100
a <sub>2</sub> [mm]	60	60	60	60
h [mm]	65	65	80	80
h <sub>2</sub> [mm]	160	160	160	160
h <sub>3</sub> [mm]	197	197	212	212
h <sub>4</sub> <sup>1)</sup> [mm]	317/317/374	331/331/385	346/346/400	346/346/400
<b>Standard coupling</b>				
l <sub>1</sub> <sup>1)</sup> [mm]	859/859/859	896/896/896	935/935/935	935/935/935
l <sub>1</sub> [mm]	900	900	1000	1000
l <sub>2</sub> [mm]	150	150	170	170
l <sub>3</sub> [mm]	600	600	660	660
b <sub>1</sub> [mm]	300	300	340	340
b <sub>2</sub> [mm]	390	390	450	450
b <sub>3</sub> [mm]	350	350	400	400
d [mm]	19	19	24	24
Weight <sup>1)</sup> Net [kg]	90/99/103	99/105/110	116/119/135	119/121/130
<b>Spacer coupling</b>				
l <sub>1</sub> <sup>1)</sup> [mm]	955/955/955	992/992/992	1031/1031/1031	1031/1031/1031
l <sub>1</sub> [mm]	900	900	1000	1000
l <sub>2</sub> [mm]	150	150	170	170
l <sub>3</sub> [mm]	600	600	660	660
b <sub>1</sub> [mm]	300	300	340	340
b <sub>2</sub> [mm]	390	390	450	450
b <sub>3</sub> [mm]	350	350	400	400
d [mm]	19	19	24	24
Weight <sup>1)</sup> Net [kg]	92/101/105	101/107/112	119/122/137	122/124/132

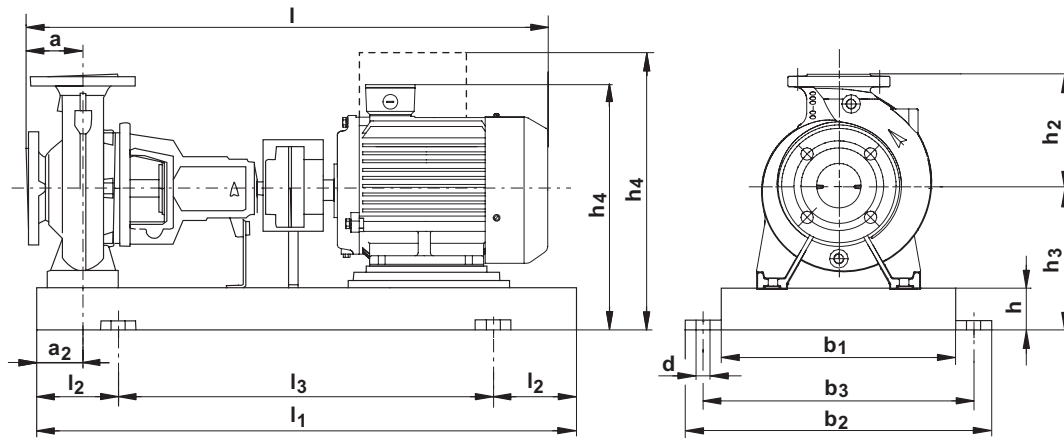
<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range

# Performance curves

NK 50-160  
2-pole



TM03 3117 0606



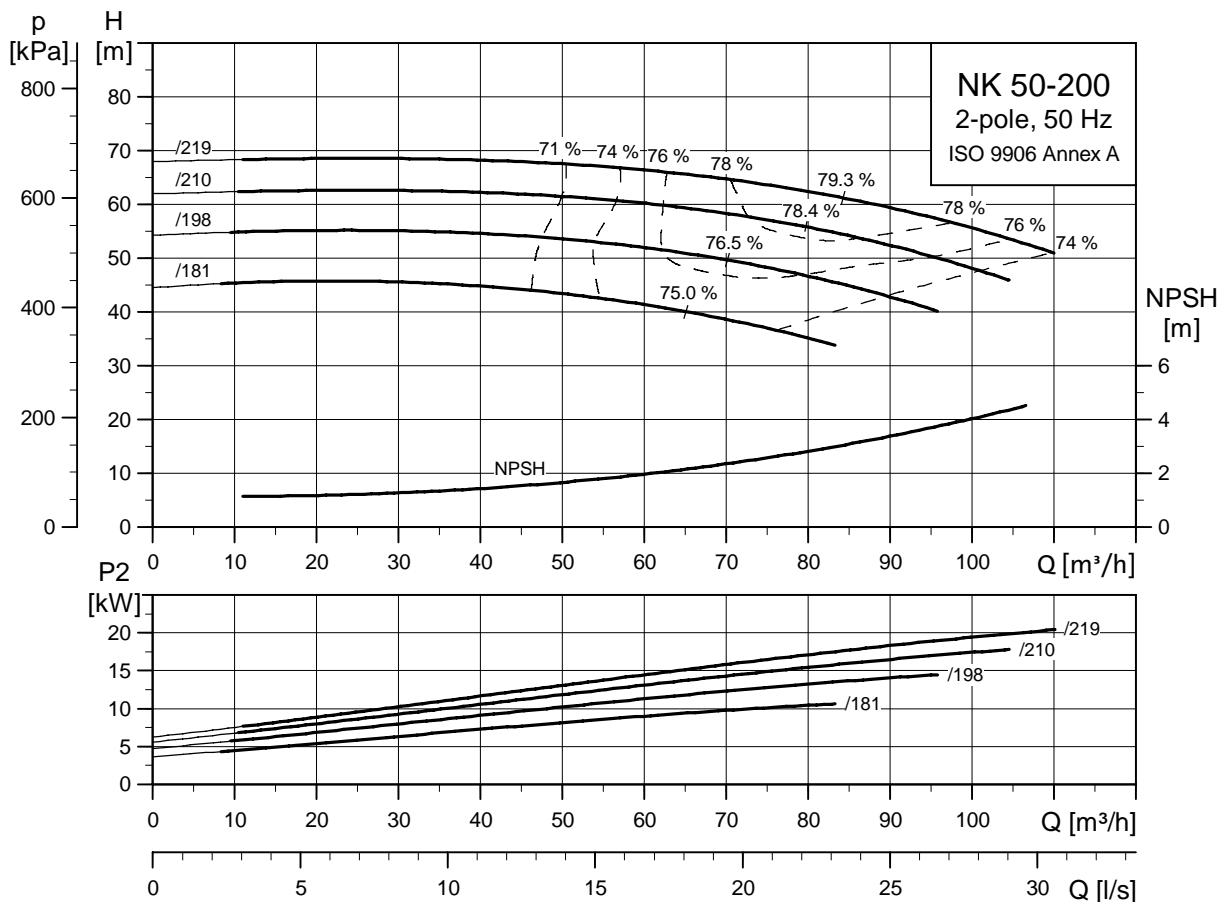
TM03 0508 0105

NK	50-160/136	50-160/150	50-160/167	50-160/177
<b>kW</b>	5.5	7.5	11	15
Standard motor range	MG 132SB-C	MG 132SC2-C	MMG 160MA-E	MMG 160MB-E
Premium motor range	MG 132SC-D	MG 132SD-D	MMG 160MA-D	MMG 160MB-D
E-motor range	MGE 132SC-D	MGE 132SD-D	MMGE 160M	MMGE 160MX
PN [bar]	16	16	16	16
DN <sub>d</sub> [mm]	50	50	50	50
DN <sub>s</sub> [mm]	65	65	65	65
a [mm]	100	100	100	100
a <sub>2</sub> [mm]	60	60	60	60
h [mm]	80	80	80	80
h <sub>2</sub> [mm]	180	180	180	180
h <sub>3</sub> [mm]	242	242	240	240
h <sub>4</sub> <sup>1)</sup> [mm]	376/376/430	376/376/430	488/485/631	488/485/658
<b>Standard coupling</b>				
l <sub>1</sub> <sup>1)</sup> [mm]	935/935/935	935/935/935	1072/1076/1023	1072/1076/1035
l <sub>1</sub> [mm]	1000	1000	1120	1120
l <sub>2</sub> [mm]	170	170	190	190
l <sub>3</sub> [mm]	660	660	740	740
b <sub>1</sub> [mm]	340	340	380	380
b <sub>2</sub> [mm]	450	450	490	490
b <sub>3</sub> [mm]	400	400	440	440
d [mm]	24	24	24	24
Weight <sup>1)</sup> Net [kg]	124/127/143	127/129/138	209/179/215	217/190/232
<b>Spacer coupling</b>				
l <sub>1</sub> <sup>1)</sup> [mm]	1031/1031/1031	1031/1031/1031	1168/1172/1119	1168/1172/1131
l <sub>1</sub> [mm]	1000	1000	1120	1120
l <sub>2</sub> [mm]	170	170	190	190
l <sub>3</sub> [mm]	660	660	740	740
b <sub>1</sub> [mm]	340	340	380	380
b <sub>2</sub> [mm]	450	450	490	490
b <sub>3</sub> [mm]	400	400	440	440
d [mm]	24	24	24	24
Weight <sup>1)</sup> Net [kg]	127/130/145	130/132/140	212/182/218	220/193/235

<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range

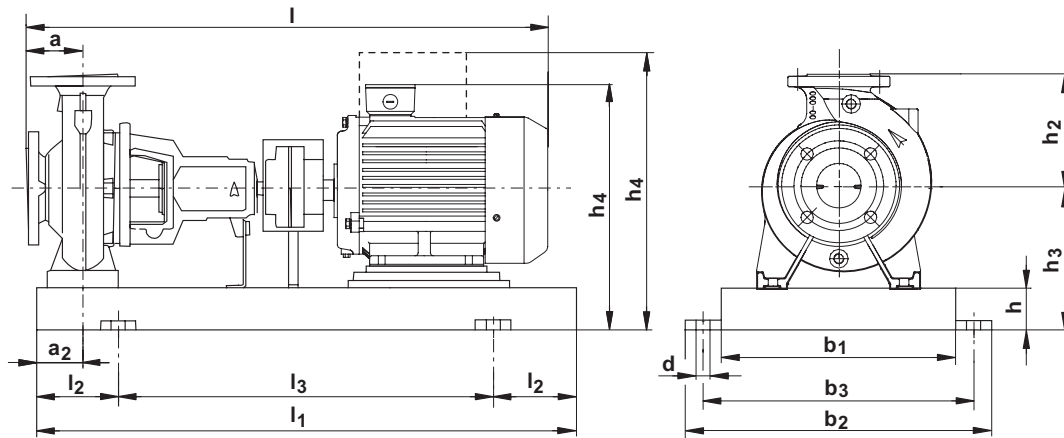
# Performance curves

NK 50-200  
2-pole



TM03 3118 0606





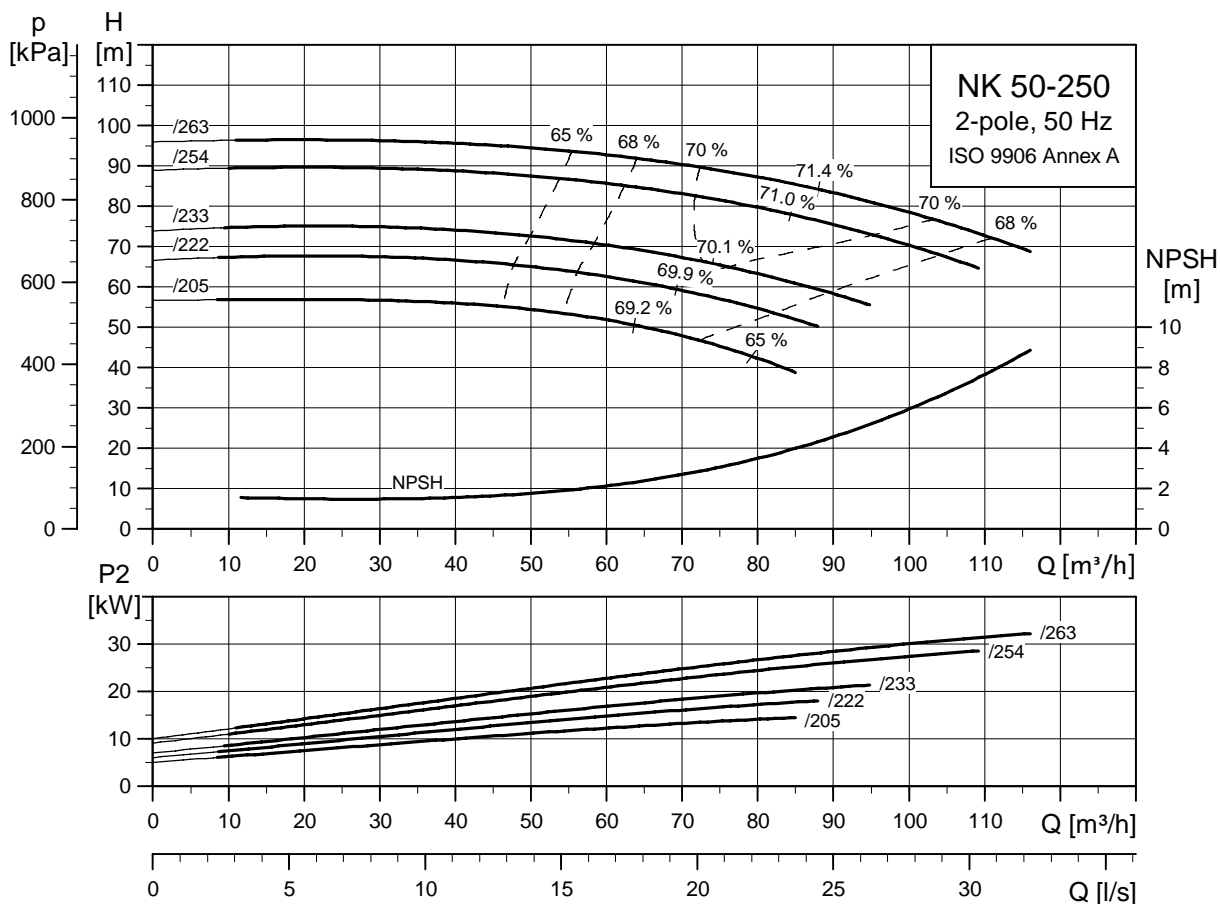
TM03 0508 0105

NK	50-200/181	50-200/198	50-200/210	50-200/219
<b>kW</b>	11	15	18.5	22
Standard motor range	MMG 160MA-E	MMG 160MB-E	MMG 160L-E	MMG 180M-E
Premium motor range	MMG 160MA-D	MMG 160MB-D	MMG 160L-D	MMG 180M-D
E-motor range	MMGE 160M	MMGE 160MX	MMGE 160L	MMGE 180M
PN [bar]	16	16	16	16
DN <sub>d</sub> [mm]	50	50	50	50
DN <sub>s</sub> [mm]	65	65	65	65
a [mm]	100	100	100	100
a <sub>2</sub> [mm]	60	60	60	60
h [mm]	80	80	80	80
h <sub>2</sub> [mm]	200	200	200	200
h <sub>3</sub> [mm]	240	240	240	260
h <sub>4</sub> <sup>1)</sup> [mm]	488/485/631	488/485/658	488/485/658	524/526/699
<b>Standard coupling</b>				
l <sub>1</sub> <sup>1)</sup> [mm]	1072/1076/1023	1072/1076/1035	1116/1121/1073	1154/1176/1099
l <sub>1</sub> [mm]	1120	1120	1120	1120
l <sub>2</sub> [mm]	190	190	190	190
l <sub>3</sub> [mm]	740	740	740	740
b <sub>1</sub> [mm]	380	380	380	380
b <sub>2</sub> [mm]	490	490	490	490
b <sub>3</sub> [mm]	440	440	440	440
d [mm]	24	24	24	24
Weight <sup>1)</sup> Net [kg]	223/193/229	231/204/246	254/214/289	292/244/321
<b>Spacer coupling</b>				
l <sub>1</sub> <sup>1)</sup> [mm]	1168/1172/1119	1168/1172/1131	1212/1217/1169	1250/1272/1195
l <sub>1</sub> [mm]	1120	1120	1120	1120
l <sub>2</sub> [mm]	190	190	190	190
l <sub>3</sub> [mm]	740	740	740	740
b <sub>1</sub> [mm]	380	380	380	380
b <sub>2</sub> [mm]	490	490	490	490
b <sub>3</sub> [mm]	440	440	440	440
d [mm]	24	24	24	24
Weight <sup>1)</sup> Net [kg]	226/196/232	234/207/249	257/217/292	295/247/324

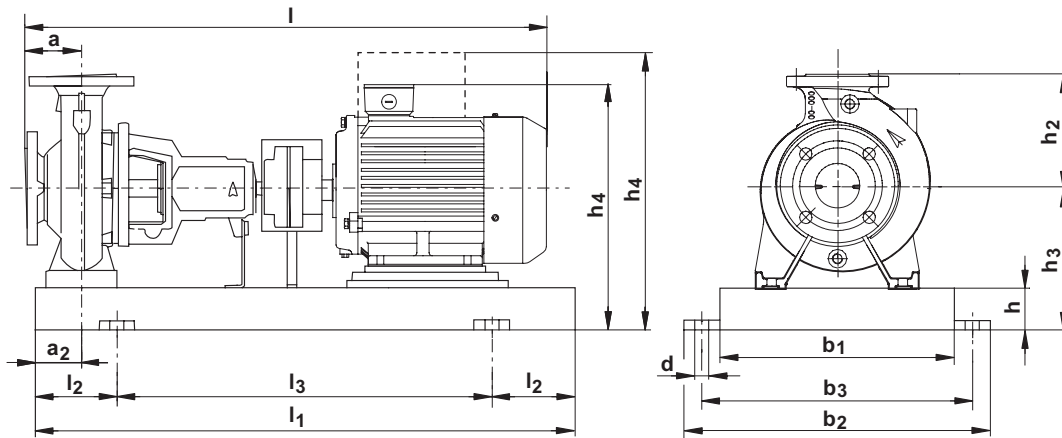
<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range

# Performance curves

NK 50-250  
2-pole



TM03 3119 0606



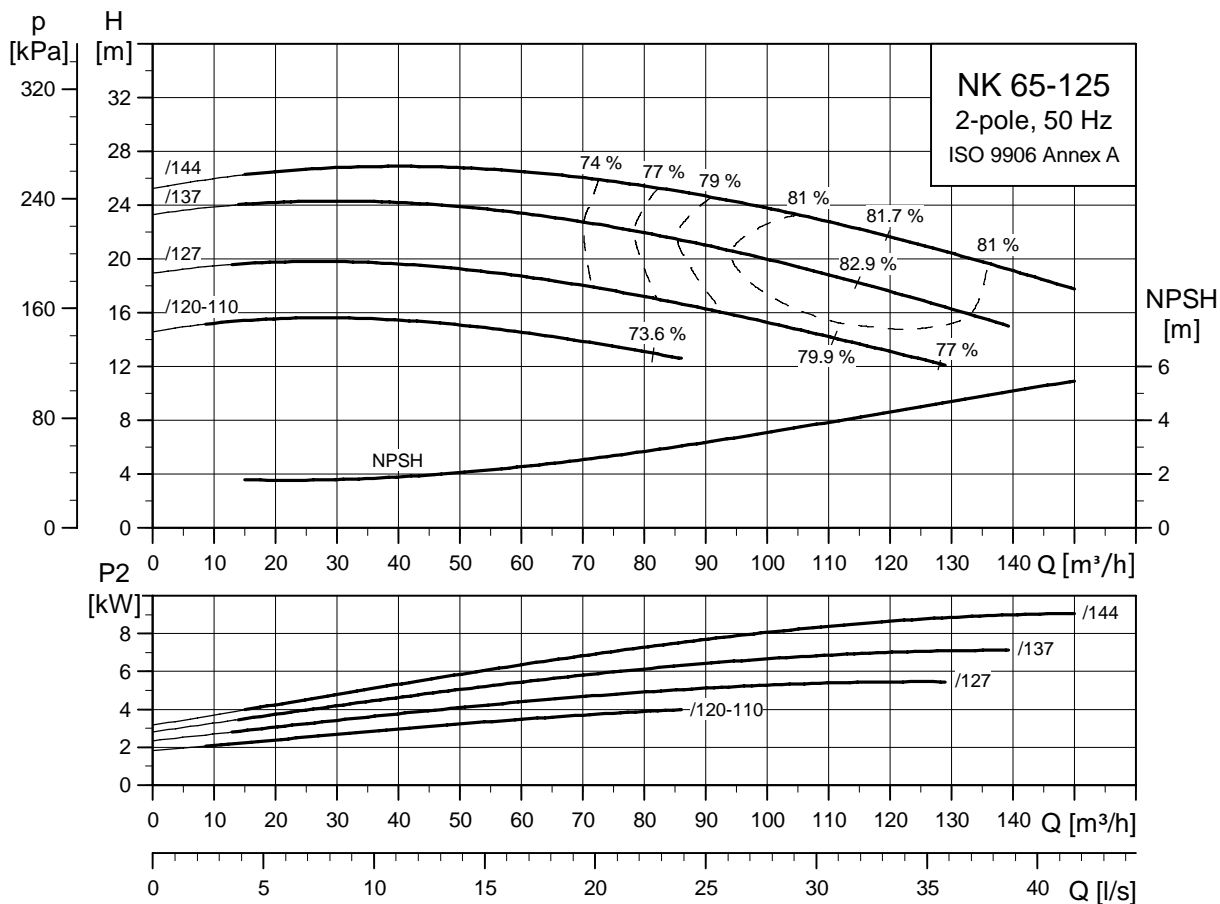
TM03 0508 0105

NK	50-250/205	50-250/222	50-250/233	50-250/254	50-250/263
kW	15	18.5	22	30	37
Standard motor range	MMG 160MB-E	MMG 160L-E	MMG 180M-E	MMG 200LA-E	MMG 200LB-E
Premium motor range	MMG 160MB-D	MMG 160L-D	MMG 180M-D	MMG 200LA-D	MMG 200LB-D
E-motor range	MMGE 160MX	MMGE 160L	MMGE 180M	-	-
PN [bar]	16	16	16	16	16
DN <sub>d</sub> [mm]	50	50	50	50	50
DN <sub>s</sub> [mm]	65	65	65	65	65
a [mm]	100	100	100	100	100
a <sub>2</sub> [mm]	75	75	75	75	75
h [mm]	80	80	80	100	100
h <sub>2</sub> [mm]	225	225	225	225	225
h <sub>3</sub> [mm]	260	260	260	300	300
h <sub>4</sub> <sup>1)</sup> [mm]	508/505/678	508/505/678	524/526/699	597/627/-	597/627/-
<b>Standard coupling</b>					
l <sub>1</sub> <sup>1)</sup> [mm]	1072/1076/1035	1116/1121/1073	1154/1176/1099	1221/1243/-	1221/1243/-
l <sub>1</sub> [mm]	1250	1250	1250	1400	1400
l <sub>2</sub> [mm]	205	205	205	230	230
l <sub>3</sub> [mm]	840	840	840	940	940
b <sub>1</sub> [mm]	430	430	430	480	480
b <sub>2</sub> [mm]	540	540	540	610	610
b <sub>3</sub> [mm]	490	490	490	550	550
d [mm]	24	24	24	28	28
Weight <sup>1)</sup> Net [kg]	254/227/269	277/237/312	315/267/344	402/374/-	424/394/-
<b>Spacer coupling</b>					
l <sub>1</sub> <sup>1)</sup> [mm]	1168/1172/1131	1212/1217/1169	1250/1272/1195	1317/1339/-	1317/1339/-
l <sub>1</sub> [mm]	1250	1250	1250	1400	1400
l <sub>2</sub> [mm]	205	205	205	230	230
l <sub>3</sub> [mm]	840	840	840	940	940
b <sub>1</sub> [mm]	430	430	430	480	480
b <sub>2</sub> [mm]	540	540	540	610	610
b <sub>3</sub> [mm]	490	490	490	550	550
d [mm]	24	24	24	28	28
Weight <sup>1)</sup> Net [kg]	257/230/272	280/240/315	318/270/347	405/377/-	427/397/-

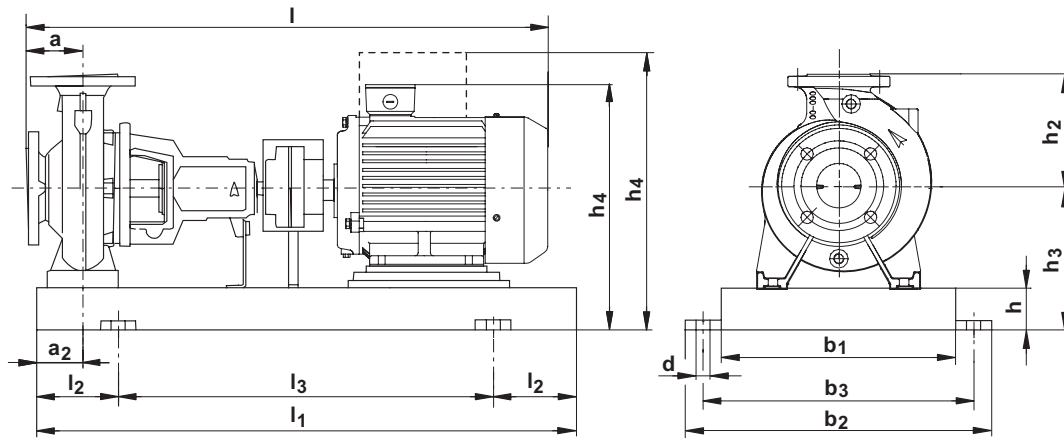
<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range

# Performance curves

NK 65-125  
2-pole



TM03 3120 0606



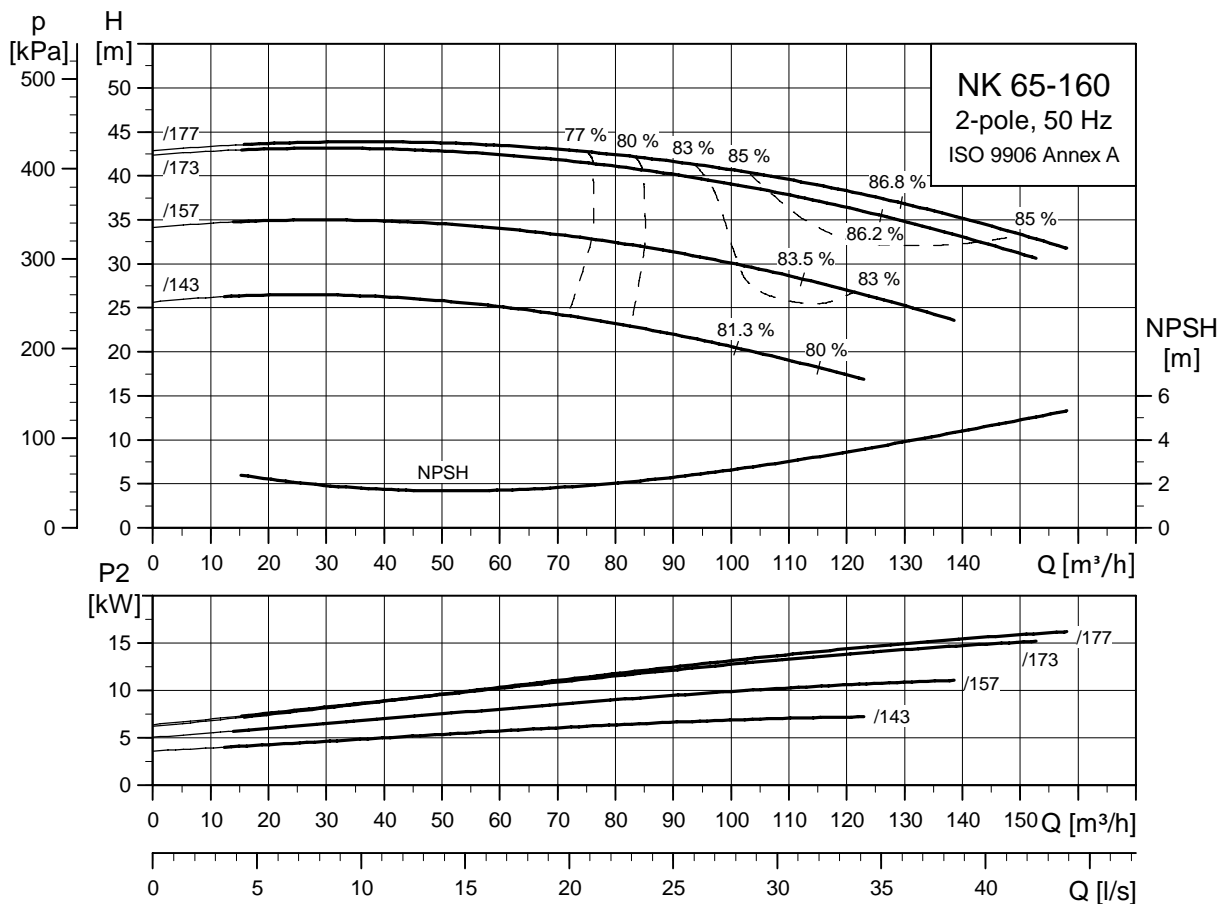
TM03 0508 0105

NK	65-125/120-110	65-125/127	65-125/137	65-125/144
<b>kW</b>	4	5.5	7.5	11
Standard motor range	MG 112MB-C	MG 132SB-C	MG 132SC2-C	MMG 160MA-E
Premium motor range	MG 112MC-D	MG 132SC-D	MG 132SD-D	MMG 160MA-D
E-motor range	MGE 112MC-D	MGE 132SC-D	MGE 132SD-D	MMGE 160M
PN [bar]	16	16	16	16
DN <sub>d</sub> [mm]	65	65	65	65
DN <sub>s</sub> [mm]	80	80	80	80
a [mm]	100	100	100	100
a <sub>2</sub> [mm]	60	60	60	60
h [mm]	80	80	80	80
h <sub>2</sub> [mm]	180	180	180	180
h <sub>3</sub> [mm]	242	242	242	240
h <sub>4</sub> <sup>1)</sup> [mm]	361/361/415	376/376/430	376/376/430	488/485/631
<b>Standard coupling</b>				
l <sub>1</sub> <sup>1)</sup> [mm]	896/896/896	935/935/935	935/935/935	1072/1076/1023
l <sub>1</sub> [mm]	1000	1000	1000	1120
l <sub>2</sub> [mm]	170	170	170	190
l <sub>3</sub> [mm]	660	660	660	740
b <sub>1</sub> [mm]	340	340	340	380
b <sub>2</sub> [mm]	450	450	450	490
b <sub>3</sub> [mm]	400	400	400	440
d [mm]	24	24	24	24
Weight <sup>1)</sup> Net [kg]	106/112/117	123/126/142	126/128/137	208/178/214
<b>Spacer coupling</b>				
l <sub>1</sub> <sup>1)</sup> [mm]	992/992/992	1031/1031/1031	1031/1031/1031	1168/1172/1119
l <sub>1</sub> [mm]	1000	1000	1000	1120
l <sub>2</sub> [mm]	170	170	170	190
l <sub>3</sub> [mm]	660	660	660	740
b <sub>1</sub> [mm]	340	340	340	380
b <sub>2</sub> [mm]	450	450	450	490
b <sub>3</sub> [mm]	400	400	400	440
d [mm]	24	24	24	24
Weight <sup>1)</sup> Net [kg]	108/114/119	126/129/144	129/131/139	211/181/217

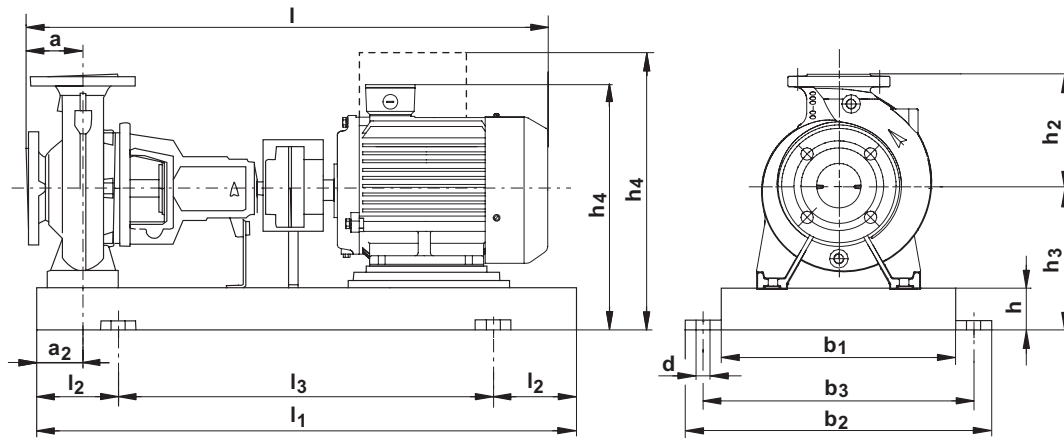
<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range

# Performance curves

NK 32-160  
2-pole



TM03 3121 0606



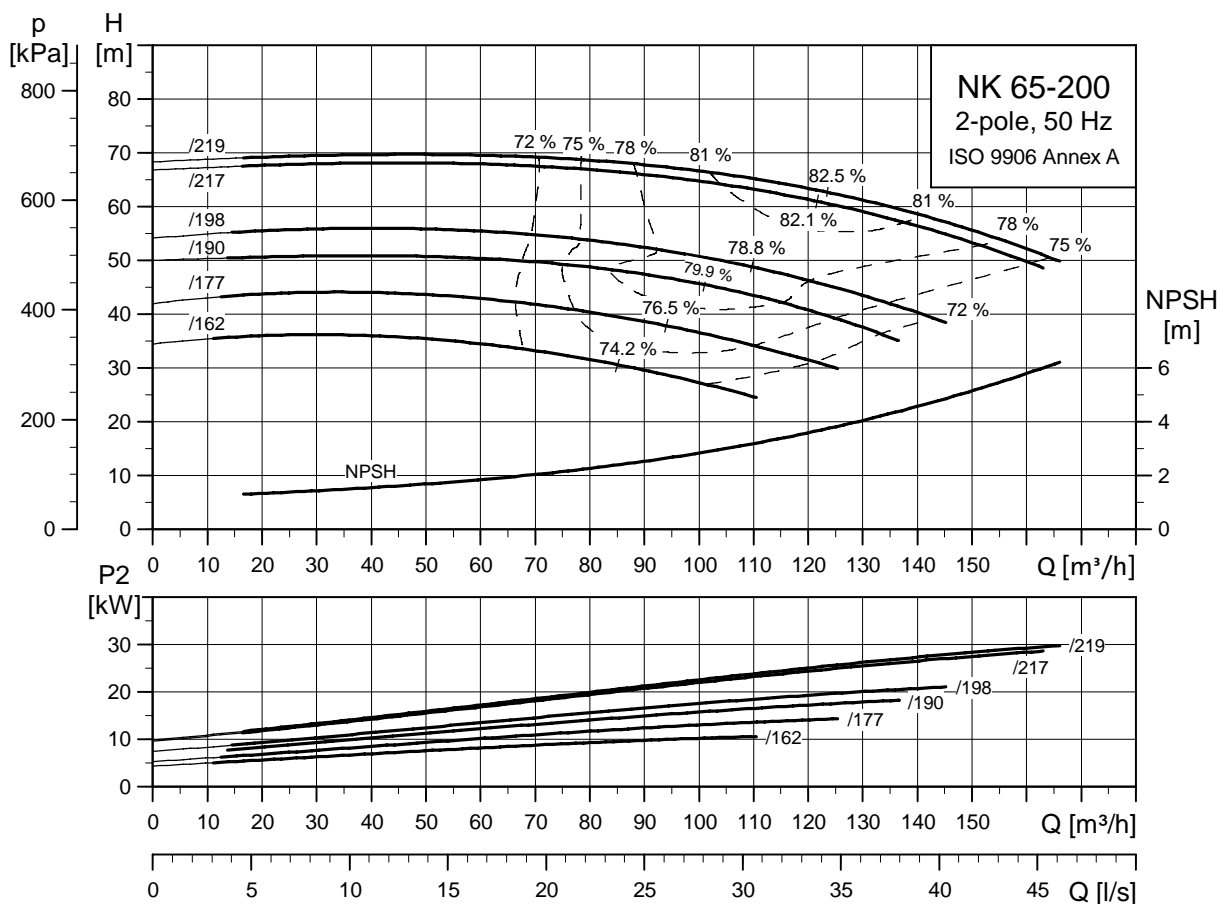
TM03 0508 0105

NK	65-160/143	65-160/157	65-160/173	65-160/177
<b>kW</b>	7.5	11	15	18.5
Standard motor range	MG 132SC2-C	MMG 160MA-E	MMG 160MB-E	MMG 160L-E
Premium motor range	MG 132SD-D	MMG 160MA-D	MMG 160MB-D	MMG 160L-D
E-motor range	MGE 132SD-D	MMGE 160M	MMGE 160MX	MMGE 160L
PN [bar]	16	16	16	16
DN <sub>d</sub> [mm]	65	65	65	65
DN <sub>s</sub> [mm]	80	80	80	80
a [mm]	100	100	100	100
a <sub>2</sub> [mm]	60	60	60	60
h [mm]	80	80	80	80
h <sub>2</sub> [mm]	200	200	200	200
h <sub>3</sub> [mm]	242	240	240	240
h <sub>4</sub> <sup>1)</sup> [mm]	376/376/430	488/485/631	488/485/658	488/485/658
<b>Standard coupling</b>				
l <sub>1</sub> <sup>1)</sup> [mm]	935/935/935	1072/1076/1023	1072/1076/1035	1116/1121/1073
l <sub>1</sub> [mm]	1000	1120	1120	1120
l <sub>2</sub> [mm]	170	190	190	190
l <sub>3</sub> [mm]	660	740	740	740
b <sub>1</sub> [mm]	340	380	380	380
b <sub>2</sub> [mm]	450	490	490	490
b <sub>3</sub> [mm]	400	440	440	440
d [mm]	24	24	24	24
Weight <sup>1)</sup> Net [kg]	131/133/142	213/183/219	221/194/236	244/204/279
<b>Spacer coupling</b>				
l <sub>1</sub> <sup>1)</sup> [mm]	1031/1031/1031	1168/1172/1119	1168/1172/1131	1212/1217/1169
l <sub>1</sub> [mm]	1000	1120	1120	1120
l <sub>2</sub> [mm]	170	190	190	190
l <sub>3</sub> [mm]	660	740	740	740
b <sub>1</sub> [mm]	340	380	380	380
b <sub>2</sub> [mm]	450	490	490	490
b <sub>3</sub> [mm]	400	440	440	440
d [mm]	24	24	24	24
Weight <sup>1)</sup> Net [kg]	134/136/144	216/186/222	224/197/239	247/207/282

<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range

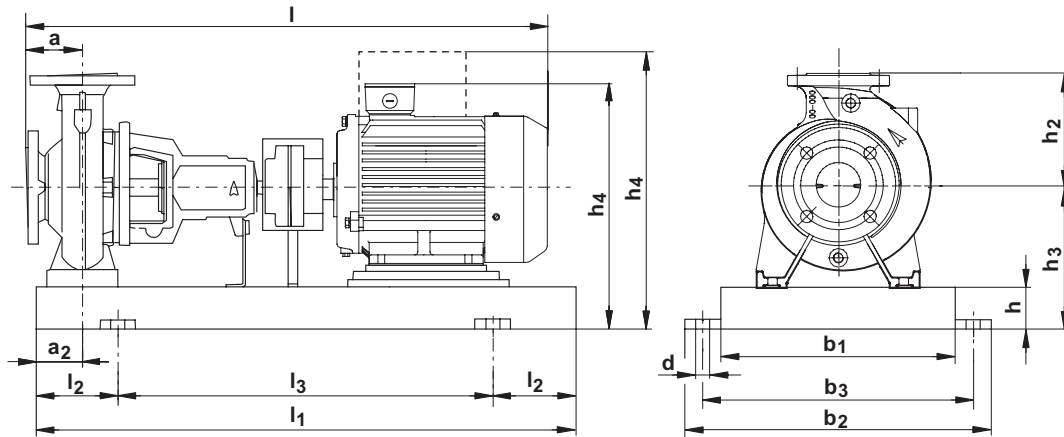
# Performance curves

NK 65-200  
2-pole



TM03 3122 0606





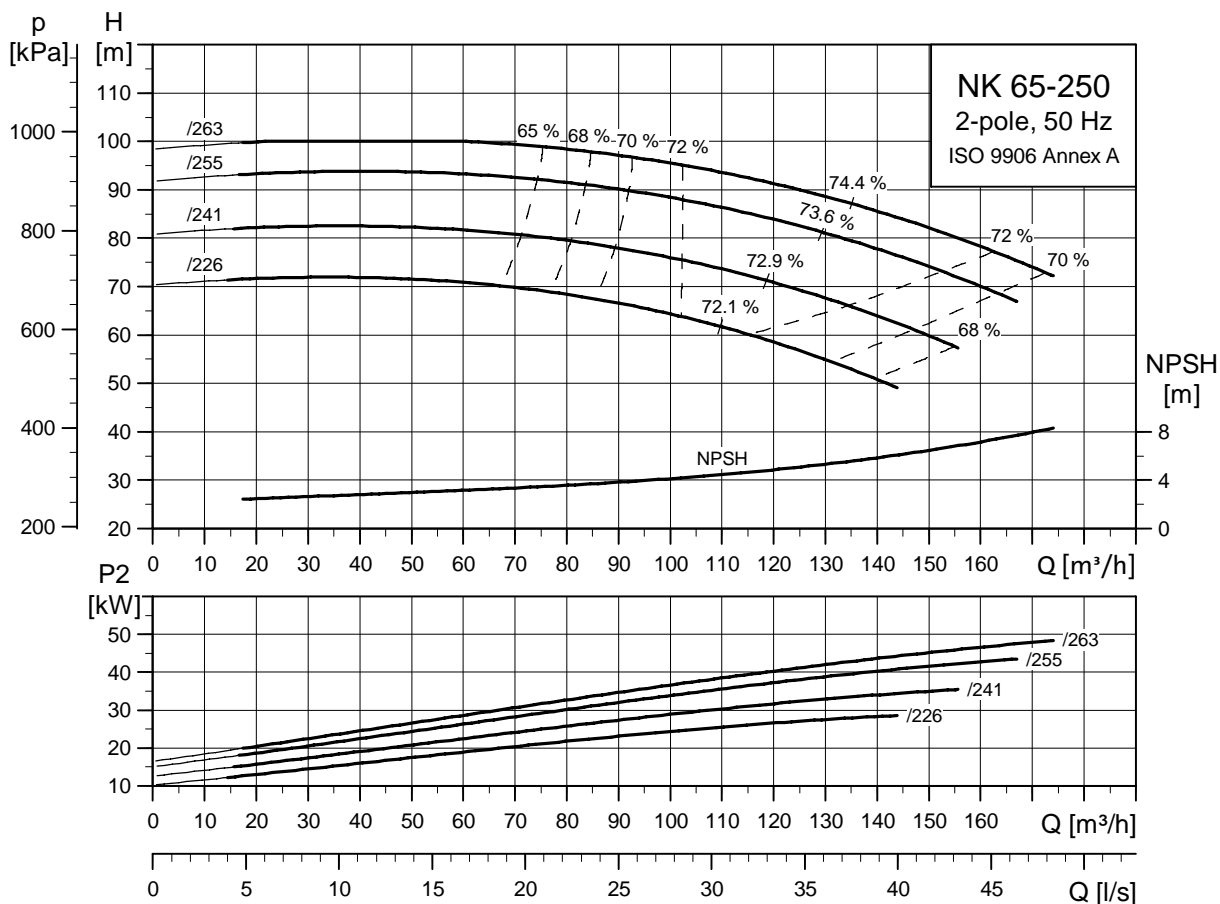
TM03 0508 0105

NK	65-200/162	65-200/177	65-200/190	65-200/198	65-200/217	65-200/219
kW	11	15	18.5	22	30	37
Standard motor range	MMG 160MA-E	MMG 160MB-E	MMG 160L-E	MMG 180M-E	MMG 200LA-E	MMG 200LB-E
Premium motor range	MMG 160MA-D	MMG 160MB-D	MMG 160L-D	MMG 180M-D	MMG 200LA-D	MMG 200LB-D
E-motor range	MMGE 160M	MMGE 160MX	MMGE 160L	MMGE 180M	-	-
PN [bar]	16	16	16	16	16	16
DN <sub>d</sub> [mm]	65	65	65	65	65	65
DN <sub>s</sub> [mm]	80	80	80	80	80	80
a [mm]	100	100	100	100	100	100
a <sub>2</sub> [mm]	75	75	75	75	75	75
h [mm]	80	80	80	80	100	100
h <sub>2</sub> [mm]	225	225	225	225	225	225
h <sub>3</sub> [mm]	260	260	260	260	300	300
h <sub>4</sub> <sup>1)</sup> [mm]	508/505/651	508/505/678	508/505/678	524/526/699	597/627/-	597/627/-
<b>Standard coupling</b>						
l <sup>1)</sup> [mm]	1072/1076/1023	1072/1076/1035	1116/1121/1073	1154/1176/1099	1221/1243/-	1221/1243/-
l <sub>1</sub> [mm]	1250	1250	1250	1250	1400	1400
l <sub>2</sub> [mm]	205	205	205	205	230	230
l <sub>3</sub> [mm]	840	840	840	840	940	940
b <sub>1</sub> [mm]	430	430	430	430	480	480
b <sub>2</sub> [mm]	540	540	540	540	610	610
b <sub>3</sub> [mm]	490	490	490	490	550	550
d [mm]	24	24	24	24	28	28
Weight <sup>1)</sup> Net [kg]	234/204/240	242/215/257	265/225/300	303/255/332	390/362/-	413/383/-
<b>Spacer coupling</b>						
l <sup>1)</sup> [mm]	1208/1212/1159	1208/1212/1171	1252/1257/1209	1290/1312/1235	1357/1379/-	1357/1379/-
l <sub>1</sub> [mm]	1250	1250	1250	1250	1400	1400
l <sub>2</sub> [mm]	205	205	205	205	230	230
l <sub>3</sub> [mm]	840	840	840	840	940	940
b <sub>1</sub> [mm]	430	430	430	430	480	480
b <sub>2</sub> [mm]	540	540	540	540	610	610
b <sub>3</sub> [mm]	490	490	490	490	550	550
d [mm]	24	24	24	24	28	28
Weight <sup>1)</sup> Net [kg]	237/207/243	245/218/260	268/228/303	307/259/336	393/365/-	415/385/-

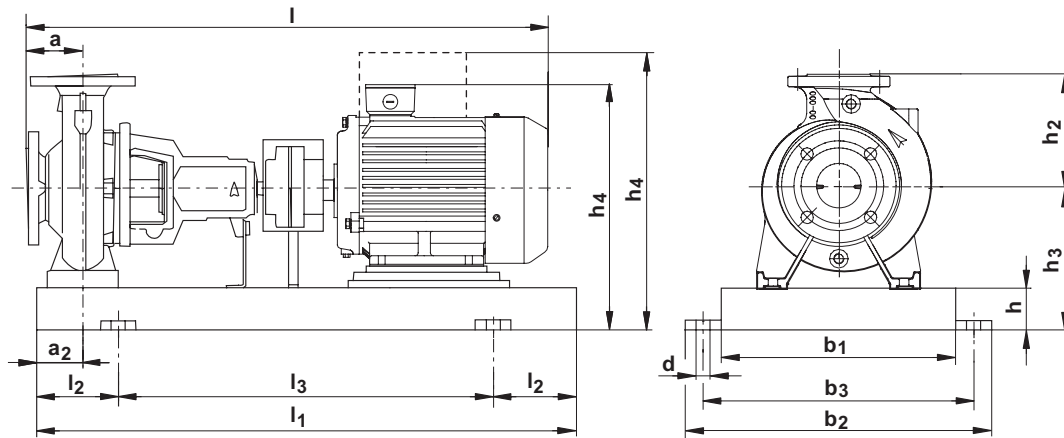
<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range.

# Performance curves

NK 65-250  
2-pole



TM03 3123 0606

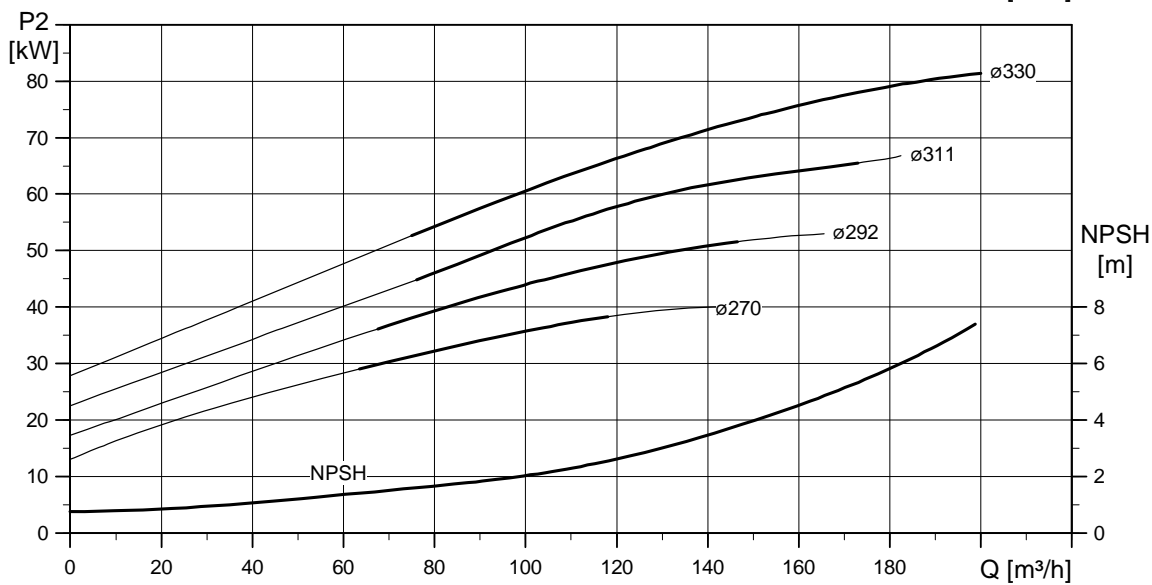
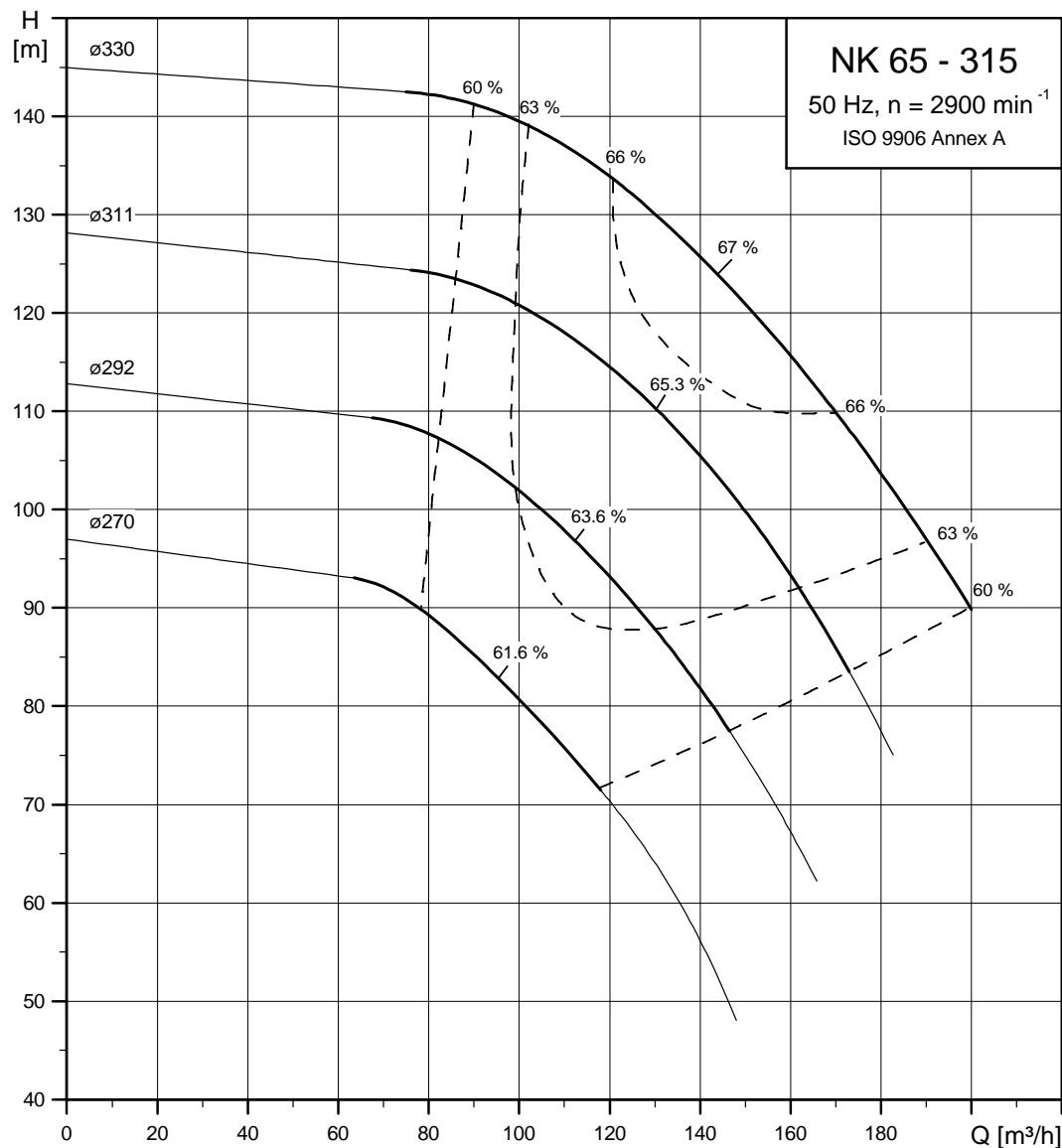


TM03 0508 0105

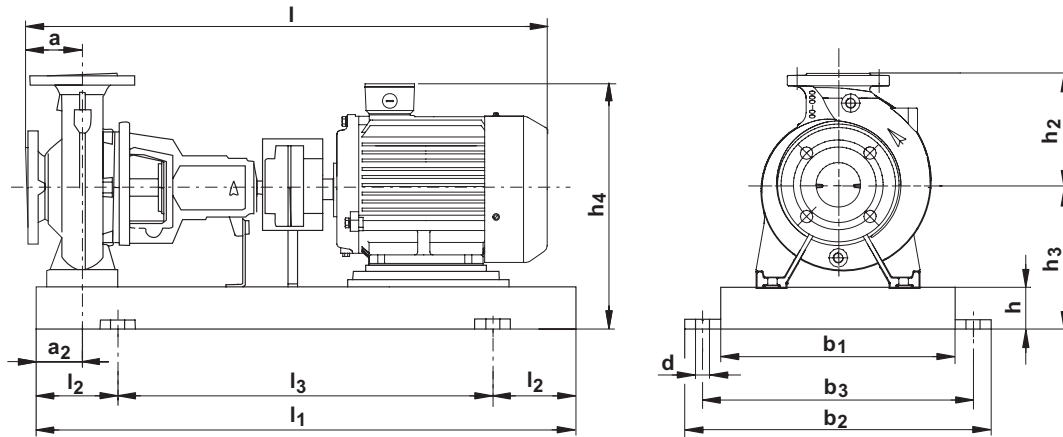
NK	0	65-250/226	65-250/241	65-250/255
kW	0	30	37	45
Standard motor range	0	MMG 200LA-E	MMG 200LB-E	MMG 225M-E
Premium motor range	0	MMG 200LA-D	MMG 200LB-D	MMG 225M-D
E-motor range	0	-	-	-
PN	[bar]	0	16	16
DN <sub>d</sub>	[mm]	0	65	65
DN <sub>s</sub>	[mm]	0	80	80
a	[mm]	0	100	100
a <sub>2</sub>	[mm]	0	90	90
h	[mm]	0	100	100
h <sub>2</sub>	[mm]	0	250	250
h <sub>3</sub>	[mm]	0	300	325
h <sub>4</sub> <sup>1)</sup>	[mm]	0	597/627/-	645/691/-
Standard coupling	0			
l <sup>1)</sup>	[mm]	0	1331/1353/-	1381/1431/-
l <sub>1</sub>	[mm]	0	1400	1400
l <sub>2</sub>	[mm]	0	230	230
l <sub>3</sub>	[mm]	0	940	940
b <sub>1</sub>	[mm]	0	480	480
b <sub>2</sub>	[mm]	0	610	610
b <sub>3</sub>	[mm]	0	550	550
d	[mm]	0	28	28
Weight <sup>1)</sup>	Net [kg]	0	424/396/-	446/416/-
Spacer coupling	0			
l <sup>1)</sup>	[mm]	0	1467/1489/-	1517/1567/-
l <sub>1</sub>	[mm]	0	1400	1400
l <sub>2</sub>	[mm]	0	230	230
l <sub>3</sub>	[mm]	0	940	940
b <sub>1</sub>	[mm]	0	480	480
b <sub>2</sub>	[mm]	0	610	610
b <sub>3</sub>	[mm]	0	550	550
d	[mm]	0	28	28
Weight <sup>1)</sup>	Net [kg]	0	428/400/-	450/420/-

<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range

<sup>2)</sup> For this pump size, see dimensional drawing NK 80-250 page 99



TM00 9320 0499



TM03 1283 1505

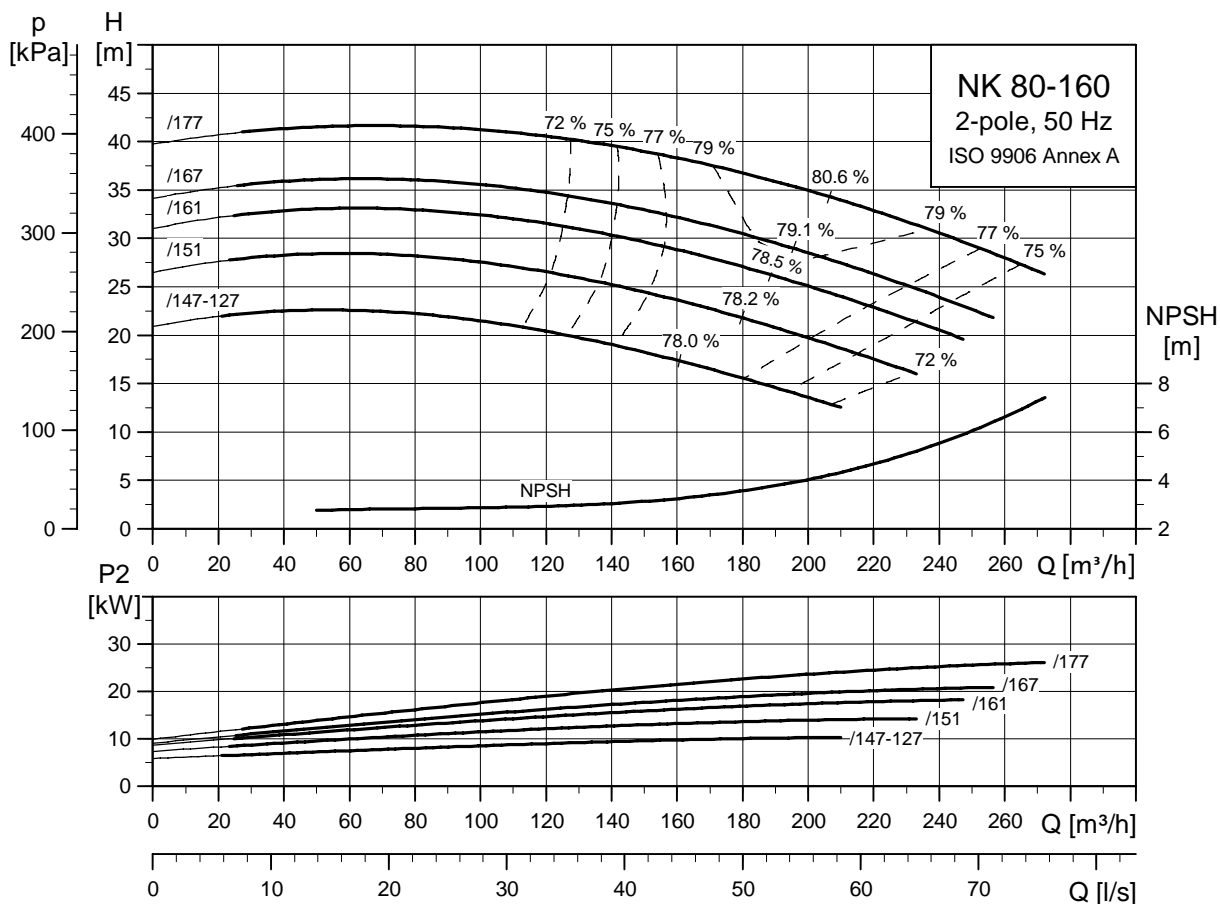
NK 65-315						
kW		37	45	55	75*	90*
Standard motor range		MMG 200LB-E	MMG 225M-E	MMG 250M-E	MMG 280S-E	MMG 280M-E
Premium motor range		MMG 200LB-D	MMG 225M-D	MMG 250M-D	MMG 280S-D	MMG 280M-D
E-motor range		-	-	-	-	-
PN	[bar]	16	16	16	16	16
DN <sub>d</sub>	[mm]	65	65	65	65	65
DN <sub>s</sub>	[mm]	80	80	80	80	80
a	[mm]	125	125	125	125	125
a <sub>2</sub>	[mm]	90	90	90	90	90
h	[mm]	100	100	100	100	100
h <sub>2</sub>	[mm]	280	280	280	280	280
h <sub>3</sub>	[mm]	325	325	350	380	380
h <sub>4</sub>	[mm]	622/652/-	645/691/-	709/735/-	766/799/-	766/799/-
<b>Standard coupling</b>						
l <sup>1)</sup>	[mm]	1356/1378/-	1406/1456/-	1509/1570/-	1602/1694/-	1653/1745/-
l <sub>1</sub>	[mm]	1400	1600	1600	1800	1800
l <sub>2</sub>	[mm]	230	270	270	300	300
l <sub>3</sub>	[mm]	940	1060	1060	1200	1200
b <sub>1</sub>	[mm]	480	530	530	600	600
b <sub>2</sub>	[mm]	610	660	660	730	730
b <sub>3</sub>	[mm]	550	600	600	670	670
d	[mm]	28	28	28	28	28
Weight <sup>1)</sup>	Net [kg]	480/450/-	573/542/-	692/640/-	803/838/-	868/898/-
<b>Spacer coupling</b>						
l <sup>1)</sup>	[mm]	1492/1514/-	1542/1592/-	1645/1706/-	1738/1830/-	1789/1881/-
l <sub>1</sub>	[mm]	1600	1600	1800	1800	1800
l <sub>2</sub>	[mm]	270	270	300	300	300
l <sub>3</sub>	[mm]	1060	1060	1200	1200	1200
b <sub>1</sub>	[mm]	530	530	600	600	600
b <sub>2</sub>	[mm]	660	660	730	730	730
b <sub>3</sub>	[mm]	600	600	670	670	670
d	[mm]	28	28	28	28	28
Weight <sup>1)</sup>	Net [kg]	494/464/-	570/539/-	713/661/-	799/834/-	864/894/-

<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range

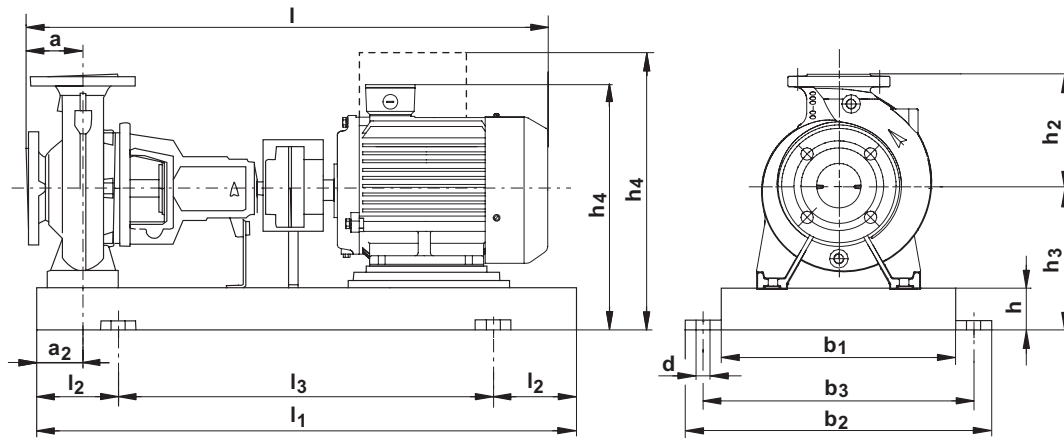
<sup>\*)</sup> Oversize

# Performance curves

NK 80-160  
2-pole



TM03 3124 0606



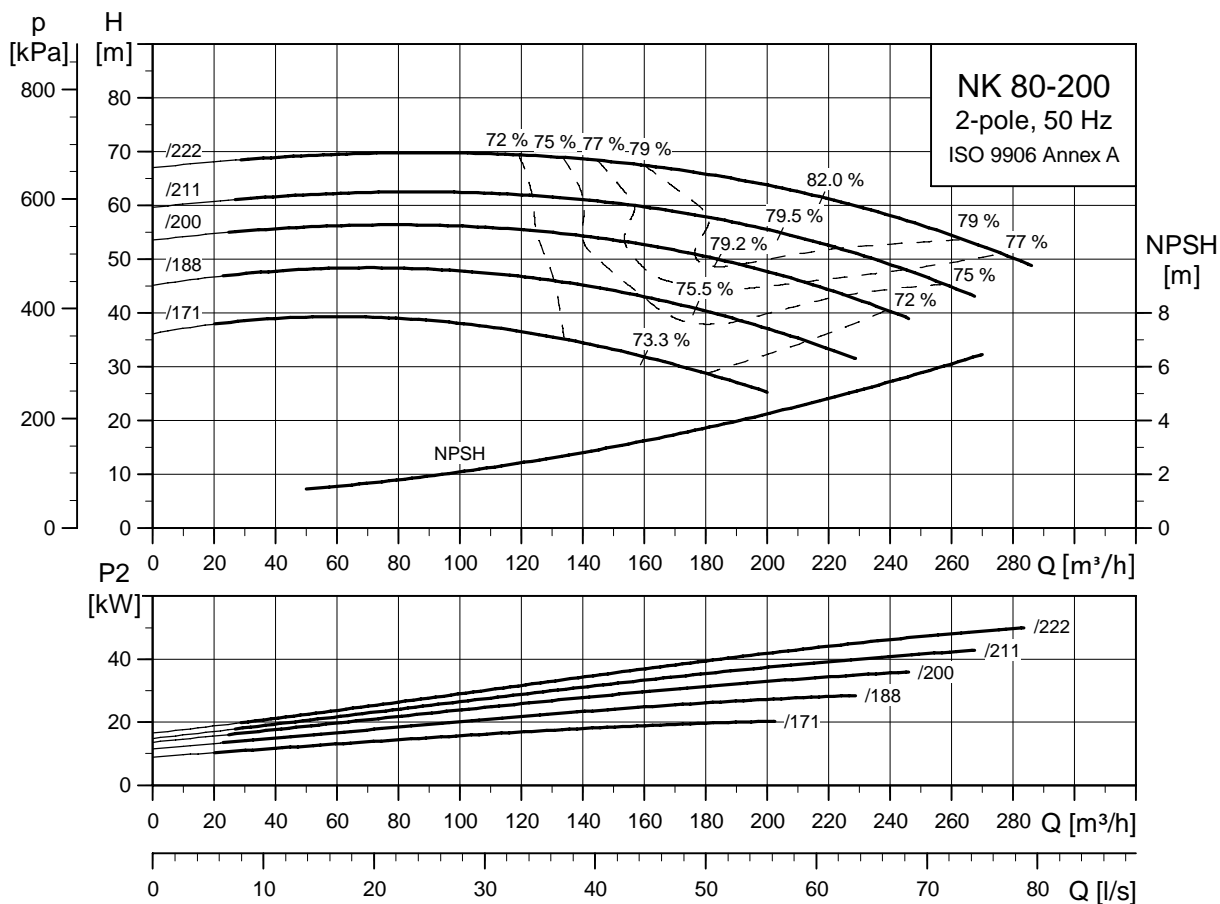
TM03 0508 0105

NK	80-160/147-127	80-160/151	80-160/161	80-160/167	80-160/177
<b>kW</b>	11	15	18.5	22	30
Standard motor range	MMG 160MA-E	MMG 160MB-E	MMG 160L-E	MMG 180M-E	MMG 200LA-E
Premium motor range	MMG 160MA-D	MMG 160MB-D	MMG 160L-D	MMG 180M-D	MMG 200LA-D
E-motor range	MMGE 160M	MMGE 160MX	MMGE 160L	MMGE 180M	-
PN [bar]	16	16	16	16	16
DN <sub>d</sub> [mm]	80	80	80	80	80
DN <sub>s</sub> [mm]	100	100	100	100	100
a [mm]	125	125	125	125	125
a <sub>2</sub> [mm]	75	75	75	75	75
h [mm]	80	80	80	80	100
h <sub>2</sub> [mm]	225	225	225	225	225
h <sub>3</sub> [mm]	260	260	260	260	300
h <sub>4</sub> <sup>1)</sup> [mm]	508/505/678	508/505/678	508/505/678	524/526/699	597/627/-
<b>Standard coupling</b>					
l <sub>1</sub> <sup>1)</sup> [mm]	1097/1101/1048	1097/1101/1060	1141/1146/1098	1179/1201/1124	1246/1268/-
l <sub>1</sub> [mm]	1250	1250	1250	1250	1400
l <sub>2</sub> [mm]	205	205	205	205	230
l <sub>3</sub> [mm]	840	840	840	840	940
b <sub>1</sub> [mm]	430	430	430	430	480
b <sub>2</sub> [mm]	540	540	540	540	610
b <sub>3</sub> [mm]	490	490	490	490	550
d [mm]	24	24	24	24	28
Weight <sup>1)</sup> Net [kg]	234/204/240	242/215/257	265/225/300	303/255/332	390/362/-
<b>Spacer coupling</b>					
l <sub>1</sub> <sup>1)</sup> [mm]	1233/1237/1184	1233/1237/1196	1277/1282/1234	1315/1337/1260	1382/1404/-
l <sub>1</sub> [mm]	1250	1250	1250	1250	1400
l <sub>2</sub> [mm]	205	205	205	205	230
l <sub>3</sub> [mm]	840	840	840	840	940
b <sub>1</sub> [mm]	430	430	430	430	480
b <sub>2</sub> [mm]	540	540	540	540	610
b <sub>3</sub> [mm]	490	490	490	490	550
d [mm]	24	24	24	24	28
Weight <sup>1)</sup> Net [kg]	237/207/243	245/218/260	268/228/303	307/259/336	393/365/-

<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range

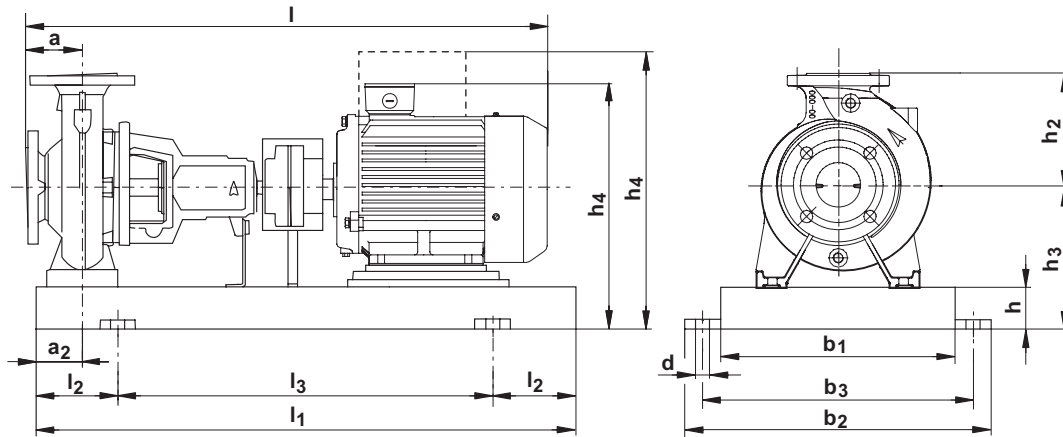
# Performance curves

NK 80-200  
2-pole



TM03 3125 0606





TM03 0508 0105

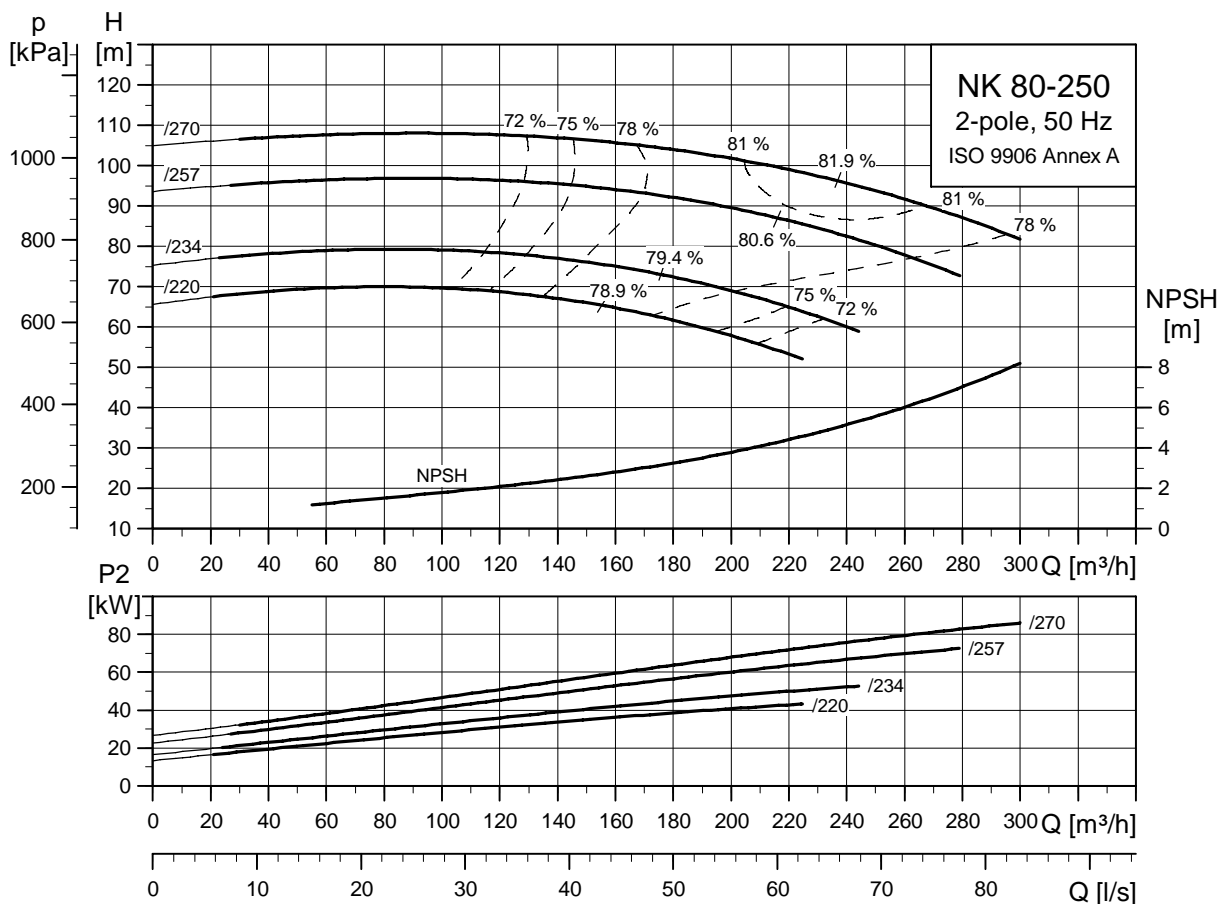
NK		80-200/171	80-200/188	80-200/200	80-200/211	80-200/222
kW		22	30	37	45	55 <sup>2)</sup>
Standard motor range		MMG 180M-E	MMG 200LA-E	MMG 200LB-E	MMG 225M-E	MMG 250M-E
Premium motor range		MMG 180M-D	MMG 200LA-D	MMG 200LB-D	MMG 225M-D	MMG 250M-D
E-motor range		MMGE 180M	-	-	-	-
PN	[bar]	16	16	16	16	16
DN <sub>d</sub>	[mm]	80	80	80	80	80
DN <sub>s</sub>	[mm]	100	100	100	100	100
a	[mm]	125	125	125	125	125
a <sub>2</sub>	[mm]	75	75	75	75	75
h	[mm]	80	100	100	100	100
h <sub>2</sub>	[mm]	250	250	250	250	250
h <sub>3</sub>	[mm]	260	300	300	330	350
h <sub>4</sub> <sup>1)</sup>	[mm]	524/526/699	597/627/-	597/627/-	650/696/-	709/735/-
<b>Standard coupling</b>						
l <sup>1)</sup>	[mm]	1289/1311/1234	1356/1378/-	1356/1378/-	1406/1456/-	1509/1570/-
l <sub>1</sub>	[mm]	1250	1400	1400	1400	1600
l <sub>2</sub>	[mm]	205	230	230	230	270
l <sub>3</sub>	[mm]	840	940	940	940	1060
b <sub>1</sub>	[mm]	430	480	480	480	530
b <sub>2</sub>	[mm]	540	610	610	610	660
b <sub>3</sub>	[mm]	490	550	550	550	600
d	[mm]	24	28	28	28	28
Weight <sup>1)</sup>	Net [kg]	322/274/351	408/380/-	430/400/-	506/475/-	641/589/-
<b>Spacer coupling</b>						
l <sup>1)</sup>	[mm]	1425/1447/1250	1492/1514/-	1492/1514/-	1542/1592/-	1645/1706/-
l <sub>1</sub>	[mm]	1250	1400	1400	1400	1600
l <sub>2</sub>	[mm]	205	230	230	230	270
l <sub>3</sub>	[mm]	840	940	940	940	1060
b <sub>1</sub>	[mm]	430	480	480	480	530
b <sub>2</sub>	[mm]	540	610	610	610	660
b <sub>3</sub>	[mm]	490	550	550	550	600
d	[mm]	24	28	28	28	28
Weight <sup>1)</sup>	Net [kg]	326/278/0	412/384/-	434/404/-	510/479/-	646/594/-

<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range

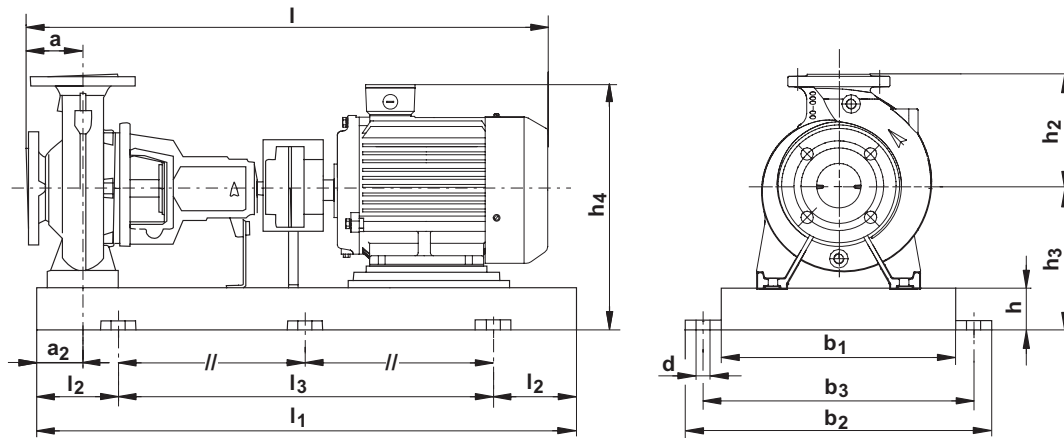
<sup>2)</sup> For these pump sizes, see dimensional drawing NK 80-250 page page 99

# Performance curves

NK 80-250  
2-pole



TM03 3126 0606

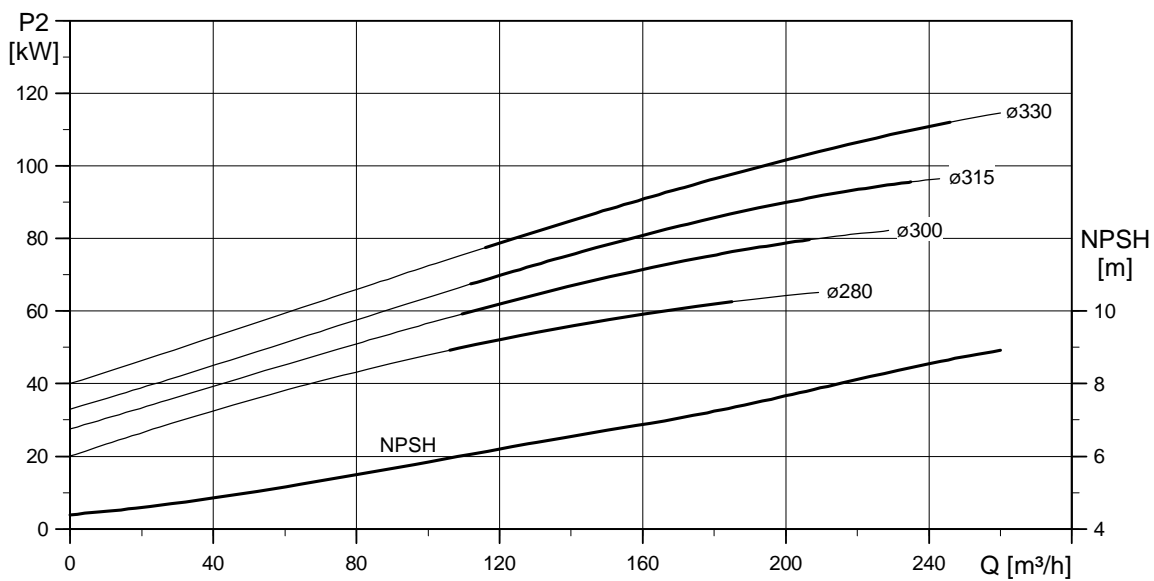
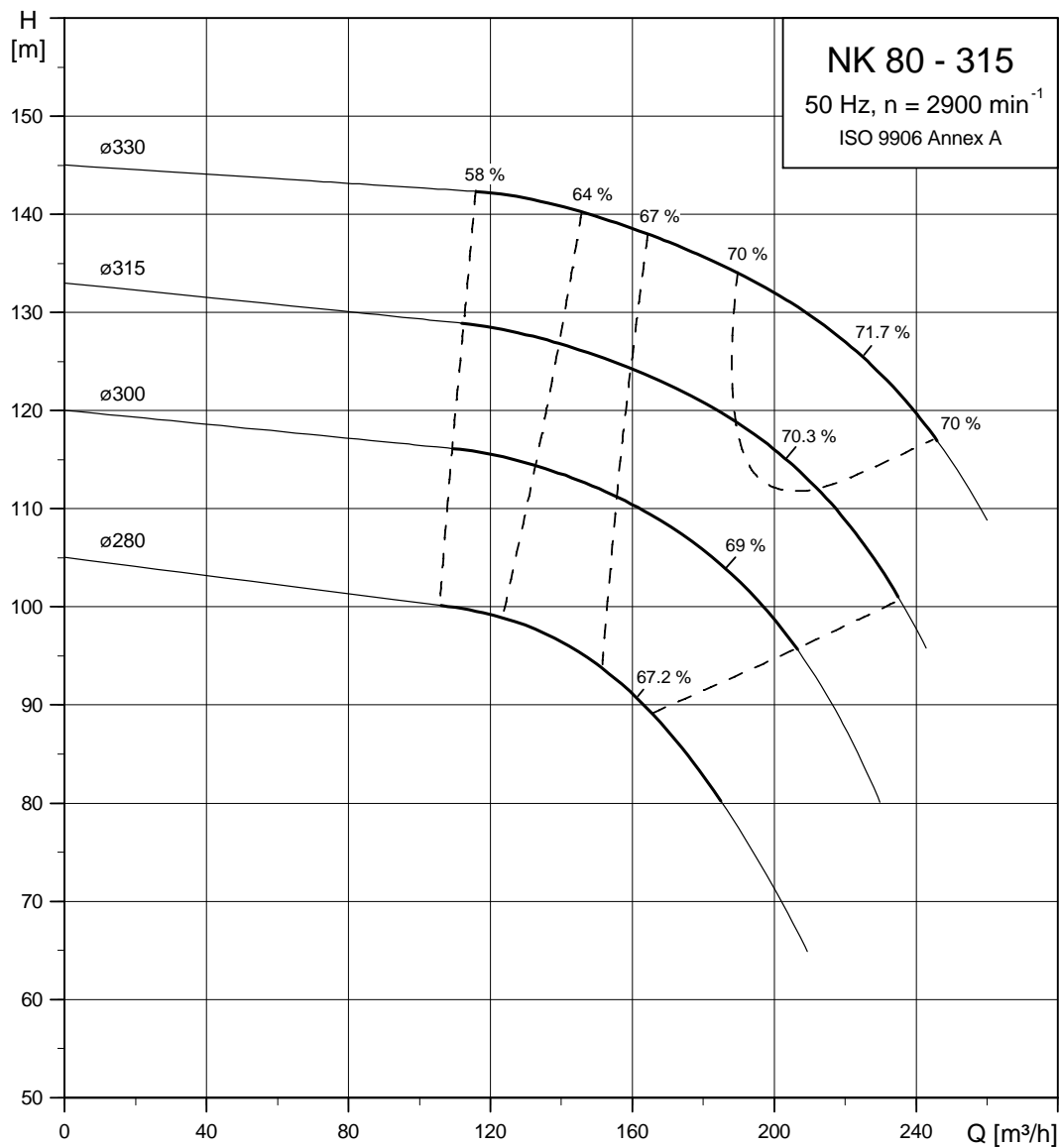


TM03 1284 1505

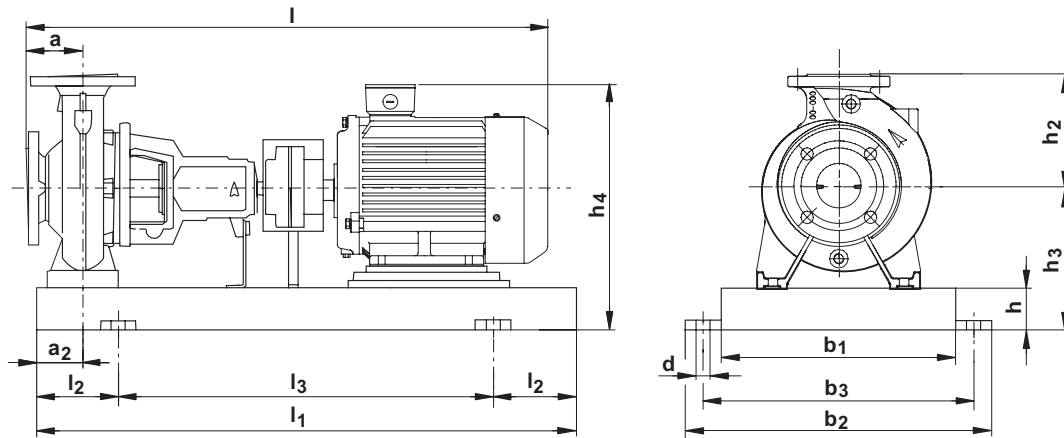
NK	80-250/220	80-250/234	80-250/257	80-250/270
kW	45 <sup>2)</sup>	55	75	90
Standard motor range	MMG 225M-E	MMG 250M-E	MMG 280S-E	MMG 280M-E
Premium motor range	MMG 225M-D	MMG 250M-D	MMG 280S-D	MMG 280M-D
E-motor range	-	-	-	-
PN [bar]	16	16	16	16
DN <sub>d</sub> [mm]	80	80	80	80
DN <sub>s</sub> [mm]	100	100	100	100
a [mm]	125	125	125	125
a <sub>2</sub> [mm]	90	90	90	90
h [mm]	100	100	100	100
h <sub>2</sub> [mm]	280	280	280	280
h <sub>3</sub> [mm]	325	350	380	380
h <sub>4</sub> <sup>1)</sup> [mm]	645/691/-	709/735/-	766/799/-	766/799/-
<b>Standard coupling</b>				
l <sup>1)</sup> [mm]	1406/1456/-	1509/1570/-	1542/1634/-	1593/1685/-
l <sub>1</sub> [mm]	1400	1600	1800	1800
l <sub>2</sub> [mm]	230	270	300	300
l <sub>3</sub> [mm]	940	1060	1200	1200
b <sub>1</sub> [mm]	480	530	600	600
b <sub>2</sub> [mm]	610	660	730	730
b <sub>3</sub> [mm]	550	600	670	670
d [mm]	28	28	28	28
Weight <sup>1)</sup> Net [kg]	526/495/-	661/609/-	749/784/-	814/844/-
<b>Spacer coupling</b>				
l <sup>1)</sup> [mm]	1542/1592/-	1645/1706/-	1678/1770/-	1729/1821/-
l <sub>1</sub> [mm]	1400	1600	1800	1800
l <sub>2</sub> [mm]	230	270	300	300
l <sub>3</sub> [mm]	940	1060	1200	1200
b <sub>1</sub> [mm]	480	530	600	600
b <sub>2</sub> [mm]	610	660	730	730
b <sub>3</sub> [mm]	550	600	670	670
d [mm]	28	28	28	28
Weight <sup>1)</sup> Net [kg]	530/499/-	666/614/-	755/790/-	820/850/-

<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range

<sup>2)</sup> For these pump sizes, see dimensional drawing NK 80-315 page 101.



TM00 9319 0499



TM03 1283 1505

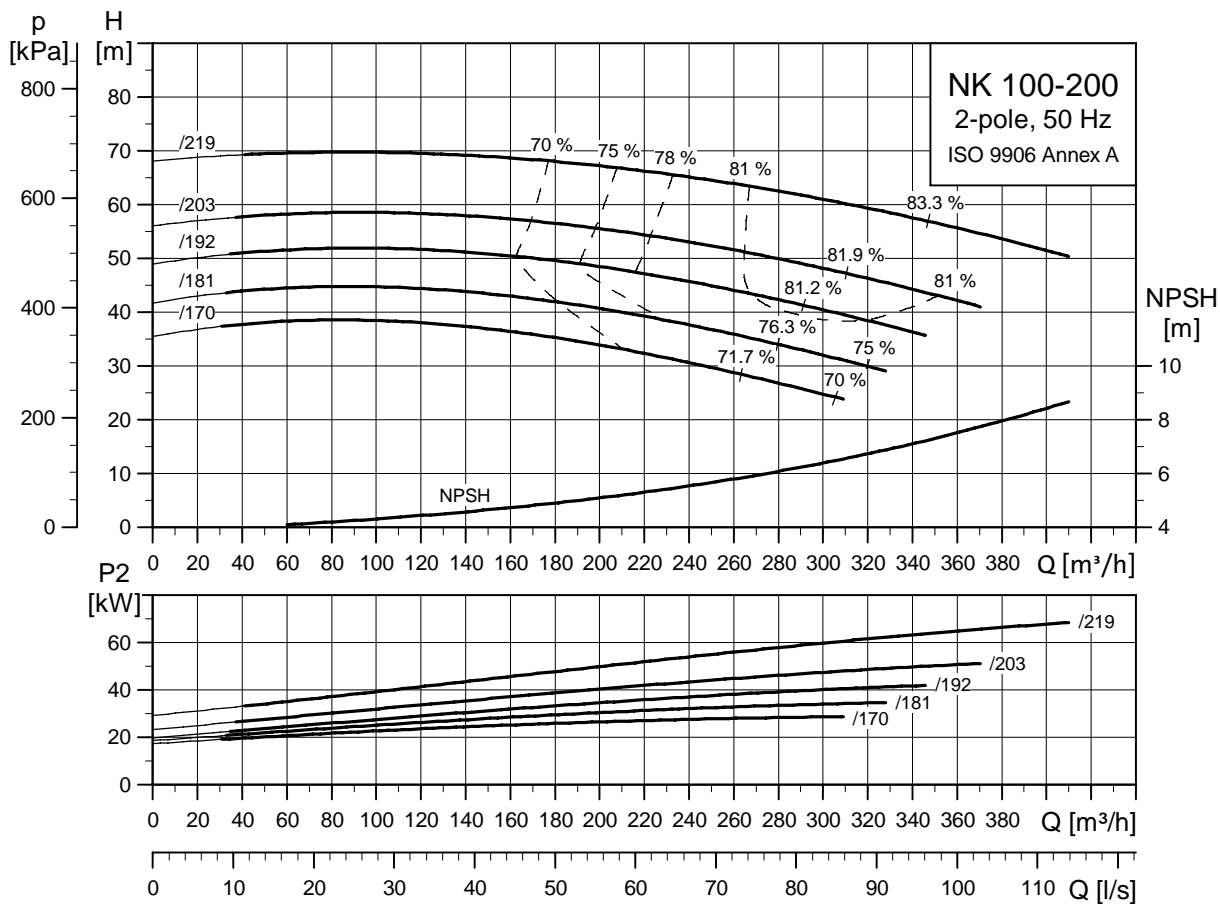
NK 80-315						
kW	45	55	75*	90*	110*	132*
Standard motor range	MMG 225M-E	MMG 250M-E	MMG 280S-E	MMG 280M-E	MMG 315S-E	MMG 315M-E
Premium motor range	MMG 225M-D	MMG 250M-D	MMG 280S-D	MMG 280M-D	MMG 315S-D	MMG 315M-D
E-motor range	-	-	-	-	-	-
PN [bar]	16	16	16	16	16	16
DN <sub>d</sub> [mm]	80	80	80	80	80	80
DN <sub>s</sub> [mm]	100	100	100	100	100	100
a [mm]	125	125	125	125	125	125
a <sub>2</sub> [mm]	90	90	90	90	90	90
h [mm]	100	100	100	100	120	120
h <sub>2</sub> [mm]	315	315	315	315	315	315
h <sub>3</sub> [mm]	350	350	380	380	435	435
h <sub>4</sub> [mm]	670/716/-	709/735/-	766/799/-	766/799/-	906/947/-	906/947/-
<b>Standard coupling</b>						
l <sup>1)</sup> [mm]	1406/1456/-	1509/1570/-	1602/1694/-	1653/1745/-	1836/1753/-	1946/1753/-
l <sub>1</sub> [mm]	1600	1600	1800	1800	2000	2000
l <sub>2</sub> [mm]	270	270	300	300	330	330
l <sub>3</sub> [mm]	1060	1060	1200	1200	1340	1340
b <sub>1</sub> [mm]	530	530	600	600	750	750
b <sub>2</sub> [mm]	660	660	730	730	910	910
b <sub>3</sub> [mm]	600	600	670	670	830	830
d [mm]	28	28	28	28	28	28
Weight <sup>1)</sup> Net [kg]	578/547/-	697/645/-	808/843/-	873/903/-	1254/951/-	1348/1111/-
<b>Spacer coupling</b>						
l <sup>1)</sup> [mm]	1542/1592/-	1645/1706/-	1738/1830/-	1789/1881/-	1972/1889/-	2082/1889/-
l <sub>1</sub> [mm]	1800	1800	1800	1800	2000	2000
l <sub>2</sub> [mm]	300	300	300	300	330	330
l <sub>3</sub> [mm]	1200	1200	1200	1200	1340	1340
b <sub>1</sub> [mm]	600	600	600	600	750	750
b <sub>2</sub> [mm]	730	730	730	730	910	910
b <sub>3</sub> [mm]	670	670	670	670	830	830
d [mm]	28	28	28	28	28	28
Weight <sup>1)</sup> Net [kg]	599/568/-	719/667/-	805/840/-	870/900/-	1251/948/-	1345/1108/-

<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range

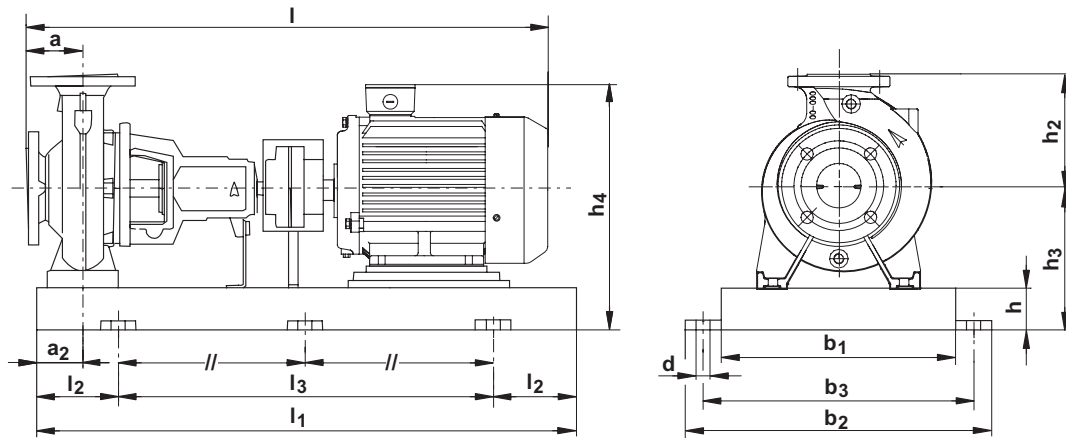
<sup>\*)</sup> Oversize

# Performance curves

NK 100-200  
2-pole



TM03 3127 0606



TM03 1284 1505

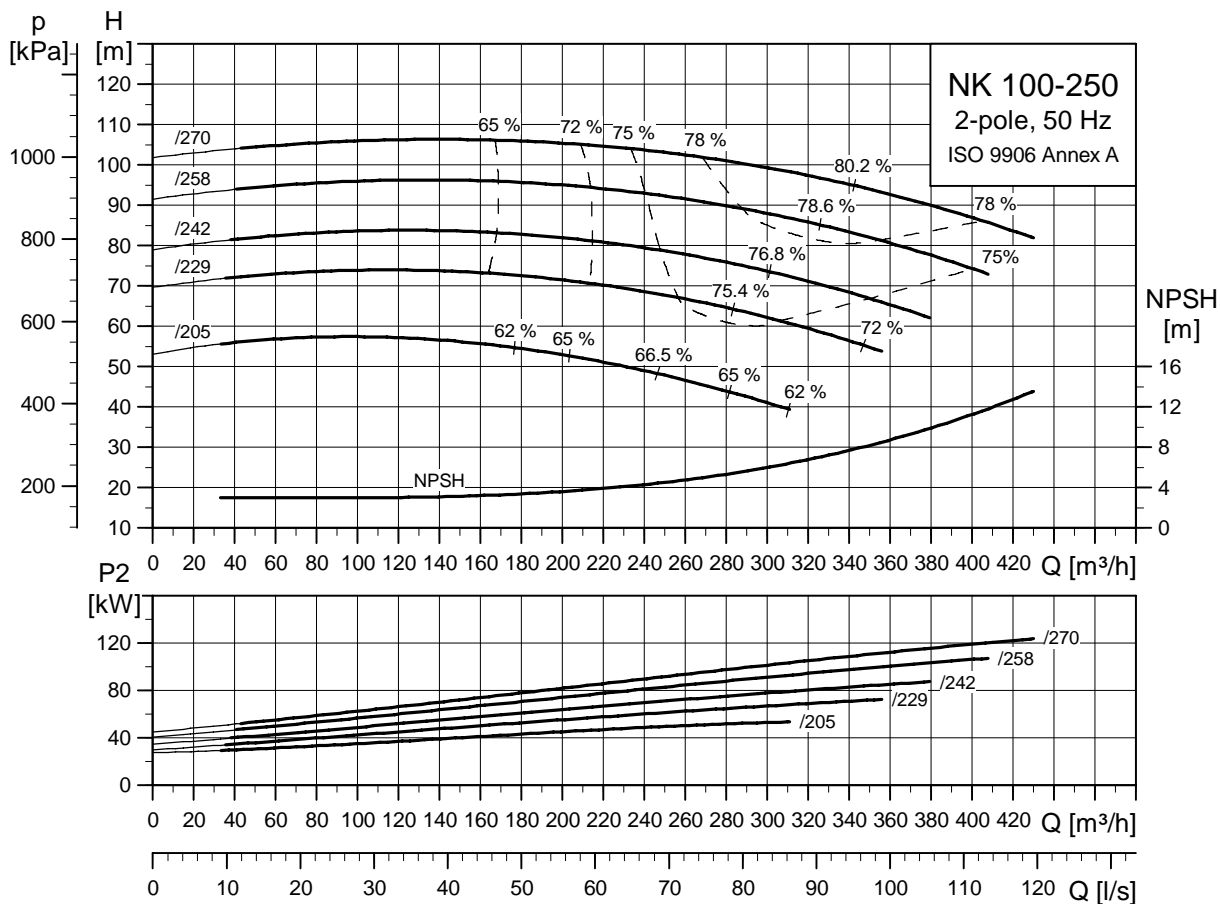
NK	100-200/170	100-200/181	100-200/192	100-200/203	100-200/219
kW	30 <sup>2)</sup>	37 <sup>2)</sup>	45 <sup>2)</sup>	55	75
Standard motor range	MMG 200LA-E	MMG 200LB-E	MMG 225M-E	MMG 250M-E	MMG 280S-E
Premium motor range	MMG 200LA-D	MMG 200LB-D	MMG 225M-D	MMG 250M-D	MMG 280S-D
E-motor range	-	-	-	-	-
PN [bar]	16	16	16	16	16
DN <sub>d</sub> [mm]	100	100	100	100	100
DN <sub>s</sub> [mm]	125	125	125	125	125
a [mm]	125	125	125	125	125
a <sub>2</sub> [mm]	90	90	90	90	90
h [mm]	100	100	100	100	100
h <sub>2</sub> [mm]	280	280	280	280	280
h <sub>3</sub> [mm]	300	300	325	350	380
h <sub>4</sub> <sup>1)</sup> [mm]	597/627/-	597/627/-	645/691/-	709/735/-	766/799/-
<b>Standard coupling</b>					
l <sup>1)</sup> [mm]	1356/1378/-	1356/1378/-	1406/1456/-	1509/1570/-	1542/1634/-
l <sub>1</sub> [mm]	1400	1400	1400	1600	1800
l <sub>2</sub> [mm]	230	230	230	270	300
l <sub>3</sub> [mm]	940	940	940	1060	1200
b <sub>1</sub> [mm]	480	480	480	530	600
b <sub>2</sub> [mm]	610	610	610	660	730
b <sub>3</sub> [mm]	550	550	550	600	670
d [mm]	28	28	28	28	28
Weight <sup>1)</sup> Net [kg]	418/390/-	440/410/-	516/485/-	651/599/-	739/774/-
<b>Spacer coupling</b>					
l <sup>1)</sup> [mm]	1492/1514/-	1492/1514/-	1542/1592/-	1645/1706/-	1678/1770/-
l <sub>1</sub> [mm]	1400	1400	1400	1600	1800
l <sub>2</sub> [mm]	230	230	230	270	300
l <sub>3</sub> [mm]	940	940	940	1060	1200
b <sub>1</sub> [mm]	480	480	480	530	600
b <sub>2</sub> [mm]	610	610	610	660	730
b <sub>3</sub> [mm]	550	550	550	600	670
d [mm]	28	28	28	28	28
Weight <sup>1)</sup> Net [kg]	422/394/-	444/414/-	520/489/-	656/604/-	745/780/-

<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range

<sup>2)</sup> For these pump sizes, see dimensional drawing NK 100-315 page 107.

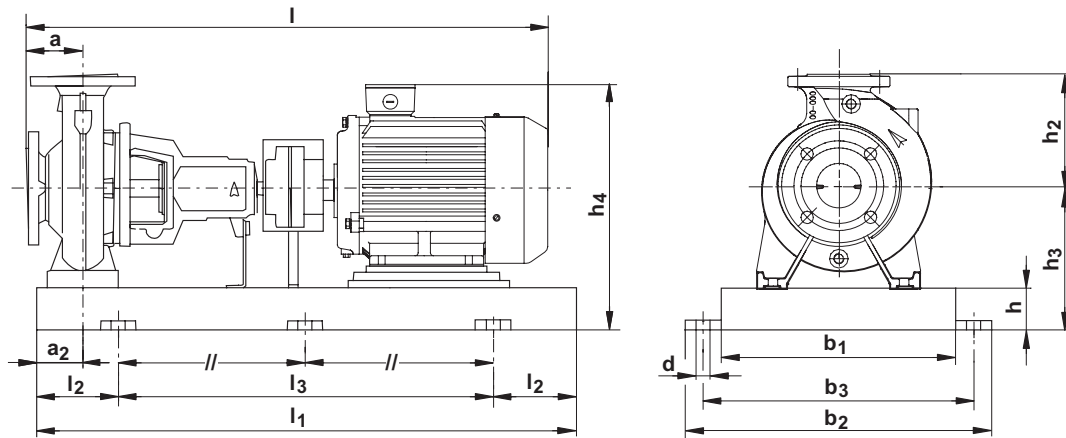
# Performance curves

NK 100-250  
2-pole



TM03 3128 0606

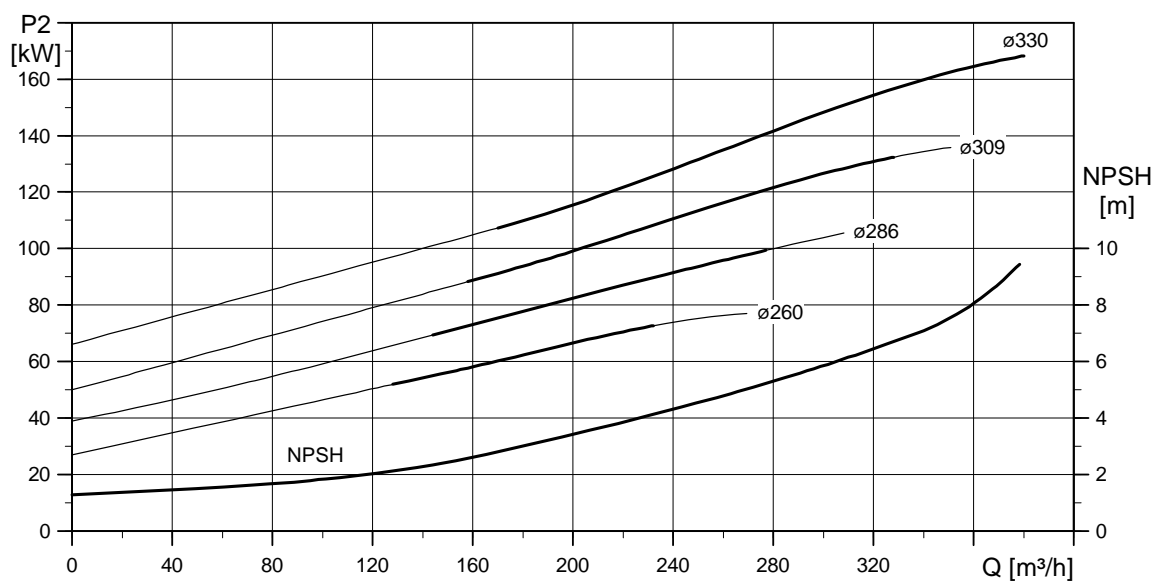
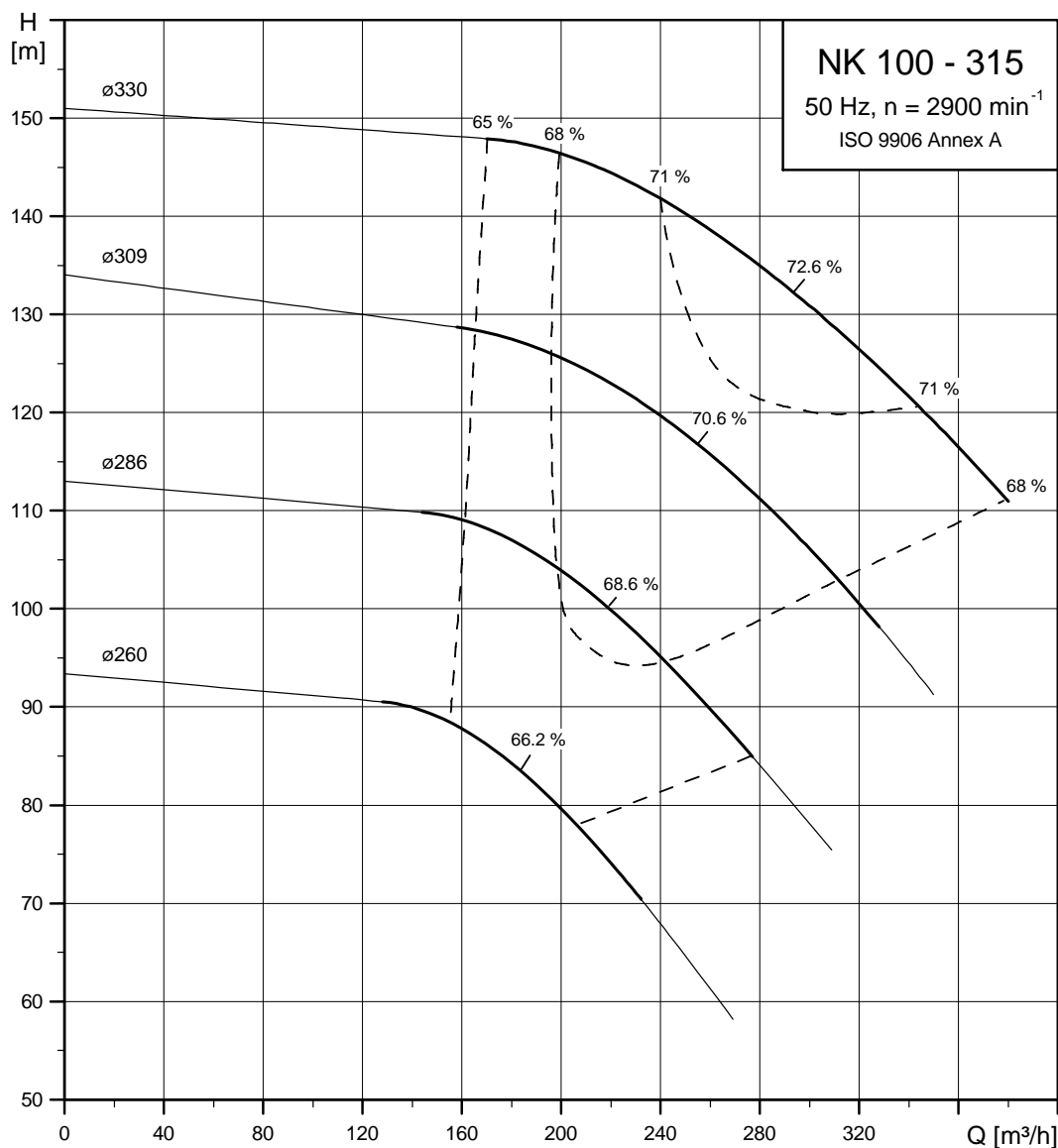




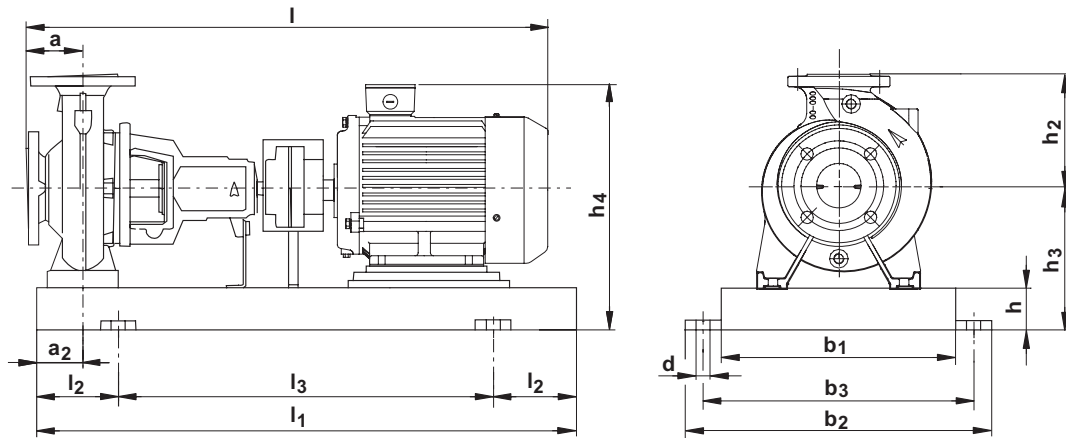
TM03 1284 1505

NK	100-250/205	100-250/229	100-250/242	100-250/258	100-250/270
kW	55	75	90	110	132
Standard motor range	MMG 250M-E	MMG 280S-E	MMG 280M-E	MMG 315S-E	MMG 315M-E
Premium motor range	MMG 250M-D	MMG 280S-D	MMG 280M-D	MMG 315S-D	MMG 315M-D
E-motor range	-	-	-	-	-
PN [bar]	16	16	16	16	16
DN <sub>d</sub> [mm]	100	100	100	100	100
DN <sub>s</sub> [mm]	125	125	125	125	125
a [mm]	140	140	140	140	140
a <sub>2</sub> [mm]	90	90	90	90	90
h [mm]	100	100	100	120	120
h <sub>2</sub> [mm]	280	280	280	280	280
h <sub>3</sub> [mm]	350	385	385	445	445
h <sub>4</sub> <sup>1)</sup> [mm]	709/735/-	771/804/-	771/804/-	916/957/-	916/957/-
<b>Standard coupling</b>					
l <sub>1</sub> <sup>1)</sup> [mm]	1524/1585/-	1557/1649/-	1608/1700/-	1791/1708/-	1901/1708/-
l <sub>1</sub> [mm]	1600	1800	1800	2000	2000
l <sub>2</sub> [mm]	270	300	300	330	330
l <sub>3</sub> [mm]	1060	1200	1200	1340	1340
b <sub>1</sub> [mm]	530	600	600	750	750
b <sub>2</sub> [mm]	660	730	730	910	910
b <sub>3</sub> [mm]	600	670	670	830	830
d [mm]	28	28	28	28	28
Weight <sup>1)</sup> Net [kg]	669/617/-	757/792/-	822/852/-	1203/898/-	1297/1058/-
<b>Spacer coupling</b>					
l <sub>1</sub> <sup>1)</sup> [mm]	1660/1721/-	1693/1785/-	1744/1836/-	1927/1844/-	2037/1844/-
l <sub>1</sub> [mm]	1600	1800	1800	2000	2000
l <sub>2</sub> [mm]	270	300	300	330	330
l <sub>3</sub> [mm]	1060	1200	1200	1340	1340
b <sub>1</sub> [mm]	530	600	600	750	750
b <sub>2</sub> [mm]	660	730	730	910	910
b <sub>3</sub> [mm]	600	670	670	830	830
d [mm]	28	28	28	28	28
Weight <sup>1)</sup> Net [kg]	674/622/-	763/798/-	828/858/-	1209/903/-	1303/1063/-

<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range



TM00 9316 0499

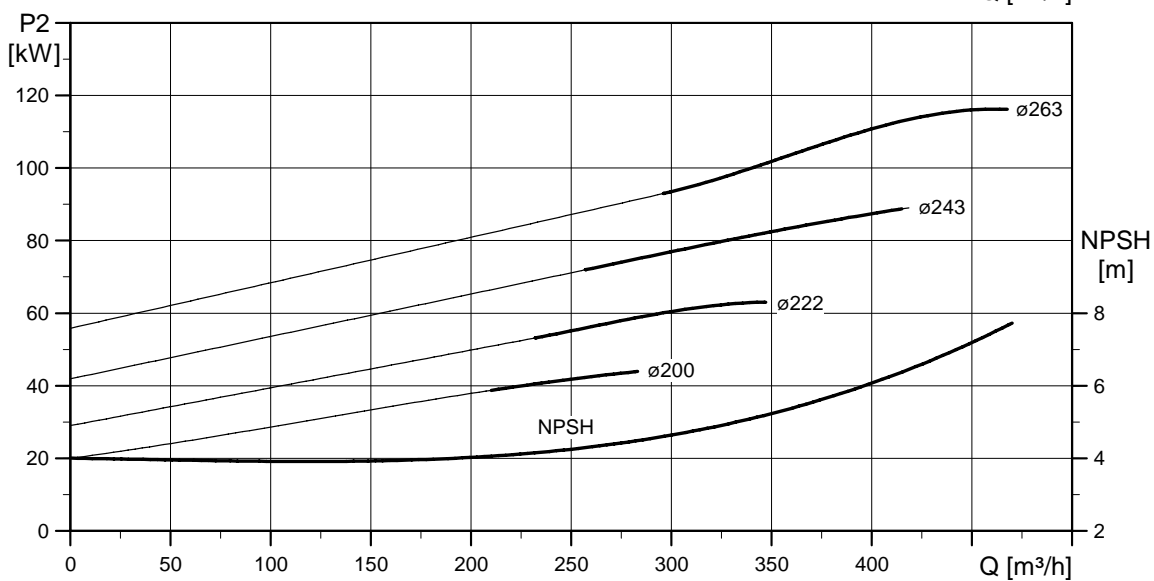
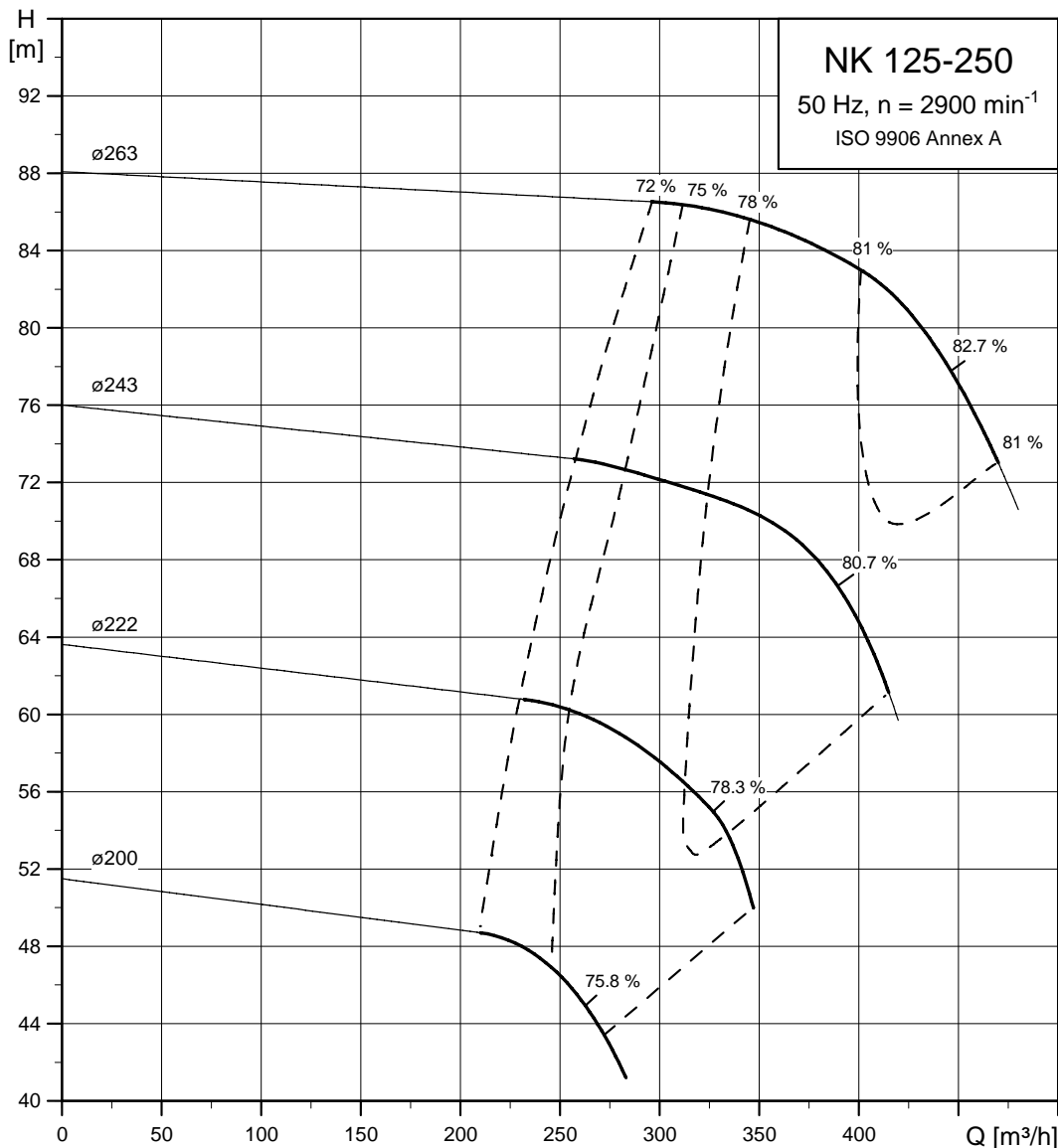


TM03 1283 1505

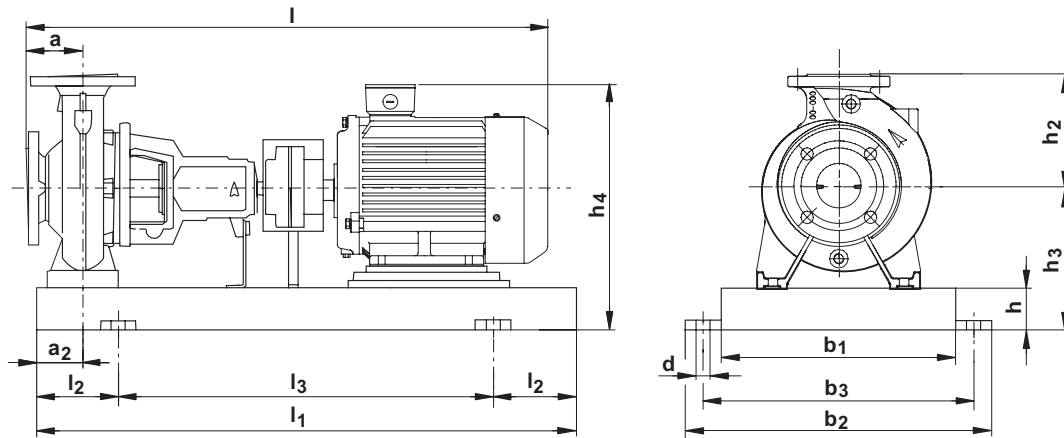
NK 100-315							
kW	55	75	90	110*	132*	160*	200*
Standard motor range	MMG 250M-E	MMG 280S-E	MMG 280M-E	MMG 315S-E	MMG 315M-E	MMG 315LA-E	MMG 315LB-E
Premium motor range	MMG 250M-D	MMG 280S-D	MMG 280M-D	MMG 315S-D	MMG 315M-D	MMG 315LA-D	MMG 315LB-D
E-motor range	-	-	-	-	-	-	-
PN [bar]	16	16	16	16	16	16	16
DN <sub>d</sub> [mm]	100	100	100	100	100	100	100
DN <sub>s</sub> [mm]	125	125	125	125	125	125	125
a [mm]	140	140	140	140	140	140	140
a <sub>2</sub> [mm]	90	90	90	90	90	90	90
h [mm]	100	100	100	120	120	120	120
h <sub>2</sub> [mm]	315	315	315	315	315	315	315
h <sub>3</sub> [mm]	350	380	380	435	435	435	435
h <sub>4</sub> [mm]	709/735/-	766/799/-	766/799/-	906/947/-	906/947/-	906/947/-	906/947/-
<b>Standard coupling</b>							
l <sup>1)</sup> [mm]	1524/1585/-	1557/1649/-	1608/1700/-	1851/1768/-	1961/1768/-	1963/1890/-	1963/1890/-
l <sub>1</sub> [mm]	1600	1800	1800	2000	2000	2000	2000
l <sub>2</sub> [mm]	270	300	300	330	330	330	330
l <sub>3</sub> [mm]	1060	1200	1200	1340	1340	1340	1340
b <sub>1</sub> [mm]	530	600	600	750	750	750	750
b <sub>2</sub> [mm]	660	730	730	910	910	910	910
b <sub>3</sub> [mm]	600	670	670	830	830	830	830
d [mm]	28	28	28	28	28	28	28
Weight <sup>1)</sup> Net [kg]	705/653/-	797/832/-	862/892/-	1264/961/-	1358/1121/-	1455/1205/-	1530/1305/-
<b>Spacer coupling</b>							
l <sup>1)</sup> [mm]	1660/1721/-	1693/1785/-	1744/1836/-	1987/1904/-	2097/1904/-	2097/2024/-	2097/2024/-
l <sub>1</sub> [mm]	1800	1800	1800	2000	2000	2000	2000
l <sub>2</sub> [mm]	300	300	300	330	330	330	330
l <sub>3</sub> [mm]	1200	1200	1200	1340	1340	1340	1340
b <sub>1</sub> [mm]	600	600	600	750	750	750	750
b <sub>2</sub> [mm]	730	730	730	910	910	910	910
b <sub>3</sub> [mm]	670	670	670	830	830	830	830
d [mm]	28	28	28	28	28	28	28
Weight <sup>1)</sup> Net [kg]	726/674/-	793/828/-	858/888/-	1260/957/-	1354/1117/-	1463/1213/-	1538/1313/-

<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range

<sup>\*)</sup> Oversize



TM00 9318 1103

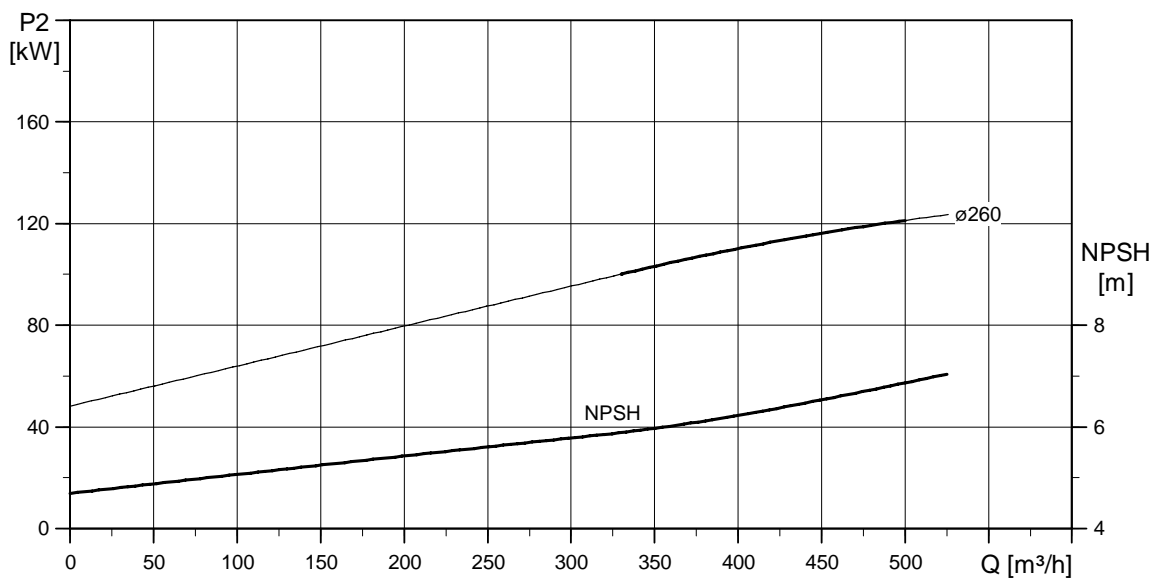
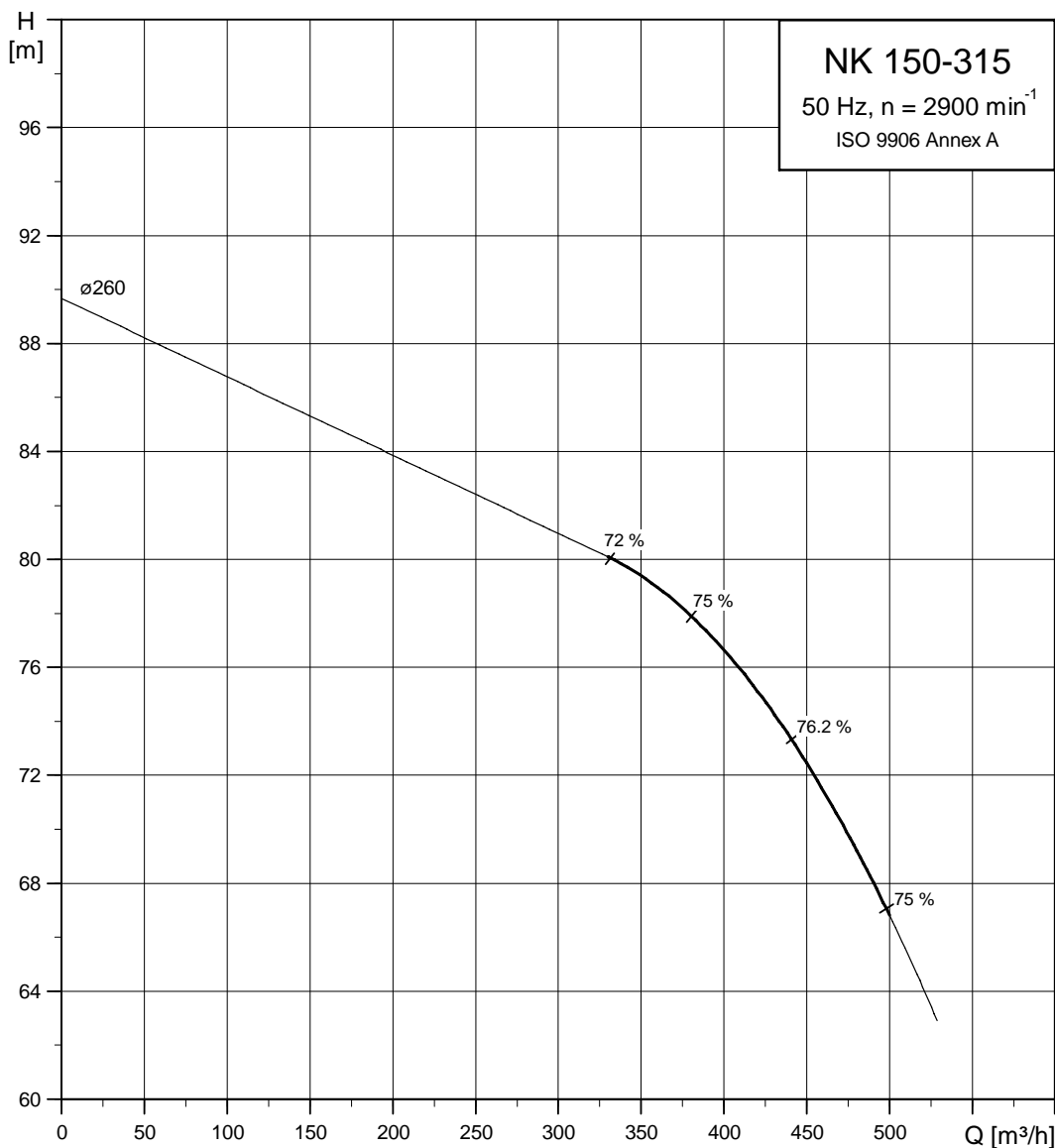


TM03 1283 1505

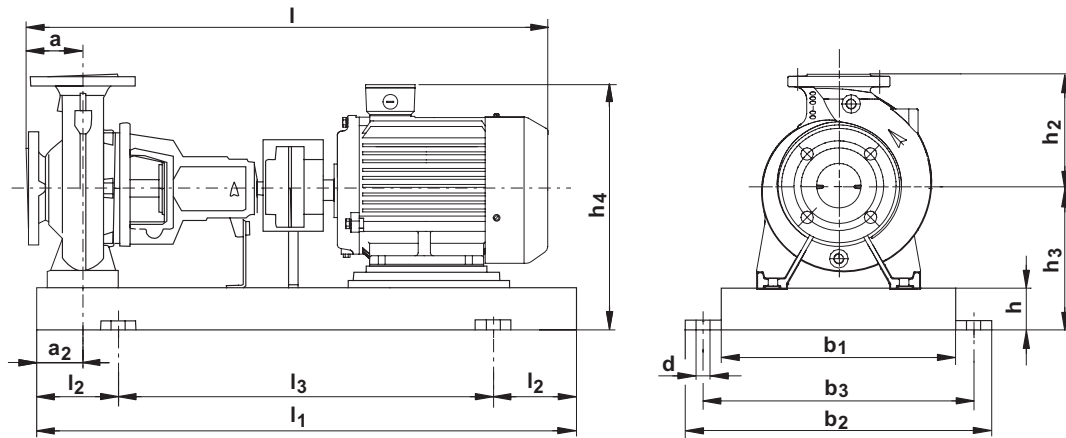
NK 125-250							
kW	37	45	55	75	90	110*	132*
Standard motor range	MMG 200LB-E	MMG 225M-E	MMG 250M-E	MMG 280S-E	MMG 280M-E	MMG 315S-E	MMG 315M-E
Premium motor range	MMG 200LB-D	MMG 225M-D	MMG 250M-D	MMG 280S-D	MMG 280M-D	MMG 315S-D	MMG 315M-D
E-motor range	-	-	-	-	-	-	-
PN [bar]	16	16	16	16	16	16	16
DN <sub>d</sub> [mm]	125	125	125	125	125	125	125
DN <sub>s</sub> [mm]	150	150	150	150	150	150	150
a [mm]	140	140	140	140	140	140	140
a <sub>2</sub> [mm]	90	90	90	90	90	90	90
h [mm]	100	100	100	100	100	120	120
h <sub>2</sub> [mm]	355	355	355	355	355	355	355
h <sub>3</sub> [mm]	350	350	350	380	380	435	435
h <sub>4</sub> [mm]	647/677/-	670/716/-	709/735/-	766/799/-	766/799/-	906/947/-	906/947/-
<b>Standard coupling</b>							
l <sup>1)</sup> [mm]	1371/1393/-	1421/1471/-	1524/1585/-	1557/1649/-	1608/1700/-	1851/1768/-	1961/1768/-
l <sub>1</sub> [mm]	1400	1600	1600	1800	1800	2000	2000
l <sub>2</sub> [mm]	230	270	270	300	300	330	330
l <sub>3</sub> [mm]	940	1060	1060	1200	1200	1340	1340
b <sub>1</sub> [mm]	480	530	530	600	600	750	750
b <sub>2</sub> [mm]	610	660	660	730	730	910	910
b <sub>3</sub> [mm]	550	600	600	670	670	830	830
d [mm]	28	28	28	28	28	28	28
Weight <sup>1)</sup> Net [kg]	481/451/-	574/543/-	693/641/-	779/814/-	850/880/-	1252/949/-	1346/1109/-
<b>Spacer coupling</b>							
l <sup>1)</sup> [mm]	1507/1529/-	1557/1607/-	1660/1721/-	1693/1785/-	1744/1836/-	1987/1904/-	2097/1904/-
l <sub>1</sub> [mm]	1600	1600	1800	1800	1800	2000	2000
l <sub>2</sub> [mm]	270	270	300	300	300	330	330
l <sub>3</sub> [mm]	1060	1060	1200	1200	1200	1340	1340
b <sub>1</sub> [mm]	530	530	600	600	600	750	750
b <sub>2</sub> [mm]	660	660	730	730	730	910	910
b <sub>3</sub> [mm]	600	600	670	670	670	830	830
d [mm]	28	28	28	28	28	28	28
Weight <sup>1)</sup> Net [kg]	495/465/-	571/540/-	715/663/-	781/816/-	846/876/-	1254/951/-	1348/1111/-

<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range.

<sup>\*)</sup> Oversize



TM00 9317 0803

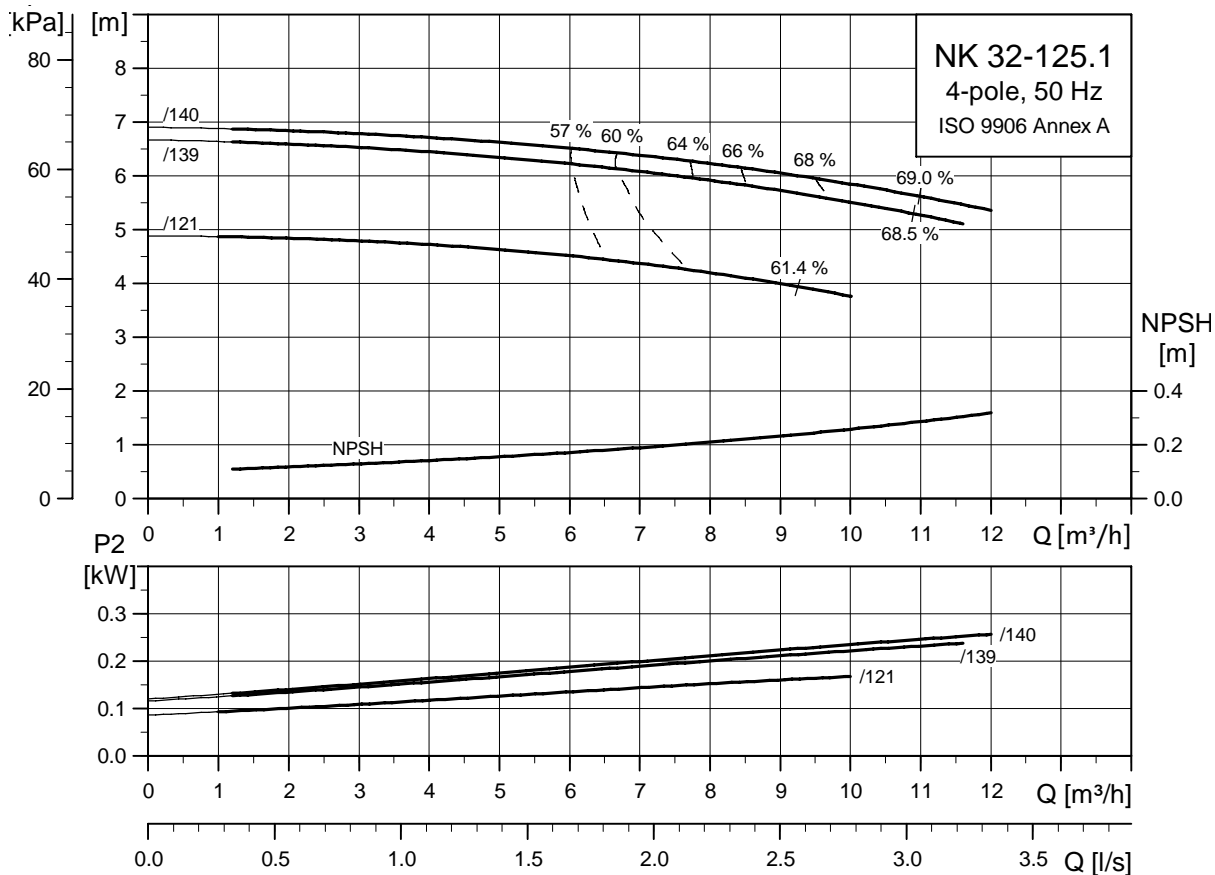


TM03 1283 1505

NK 150-315			
kW	110	132	160
Standard motor range	MMG 315S-E	MMG 315M-E	MMG 315LA-E
Premium motor range	MMG 315S-D	MMG 315M-D	MMG 315LA-D
E-motor range	-	-	-
PN [bar]	10	10	10
DN <sub>d</sub> [mm]	150	150	150
DN <sub>s</sub> [mm]	200	200	200
a [mm]	160	160	160
a <sub>2</sub> [mm]	110	110	110
h [mm]	120	120	120
h <sub>2</sub> [mm]	400	400	400
h <sub>3</sub> [mm]	435	435	435
h <sub>4</sub> [mm]	906/947/-	906/947/-	906/947/-
<b>Standard coupling</b>			
l <sup>1)</sup> [mm]	1871/1788/-	1981/1788/-	1983/1910/-
l <sub>1</sub> [mm]	2000	2000	2000
l <sub>2</sub> [mm]	330	330	330
l <sub>3</sub> [mm]	1340	1340	1340
b <sub>1</sub> [mm]	750	750	750
b <sub>2</sub> [mm]	910	910	910
b <sub>3</sub> [mm]	830	830	830
d [mm]	28	28	28
Weight <sup>1)</sup> Net [kg]	1323/1020/-	1417/1180/-	1514/1264/-
<b>Spacer coupling</b>			
l <sup>1)</sup> [mm]	2007/1924/-	2117/1924/-	2117/2044/-
l <sub>1</sub> [mm]	2000	2000	2000
l <sub>2</sub> [mm]	330	330	330
l <sub>3</sub> [mm]	1340	1340	1340
b <sub>1</sub> [mm]	750	750	750
b <sub>2</sub> [mm]	910	910	910
b <sub>3</sub> [mm]	830	830	830
d [mm]	28	28	28
Weight <sup>1)</sup> Net [kg]	1319/1016/-	1413/1176/-	1522/1272/-

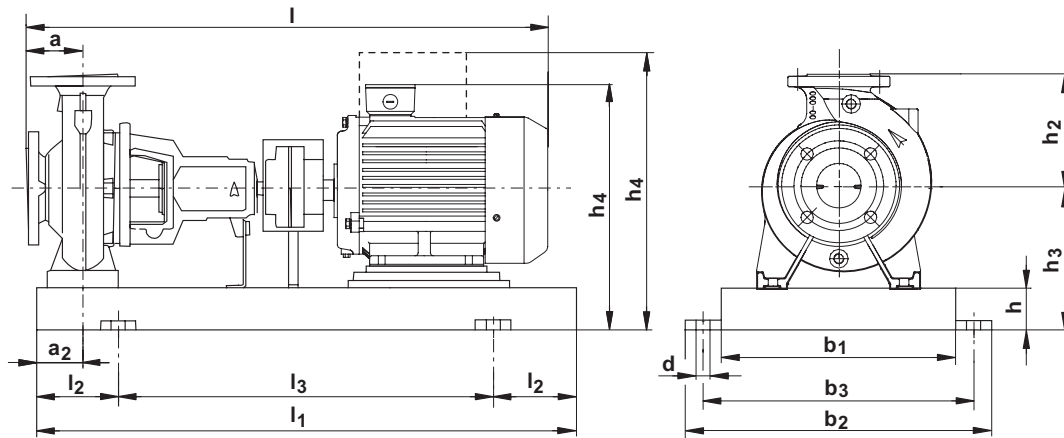
<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range

## NK, NKE 4-pole



TM03 3129 0606

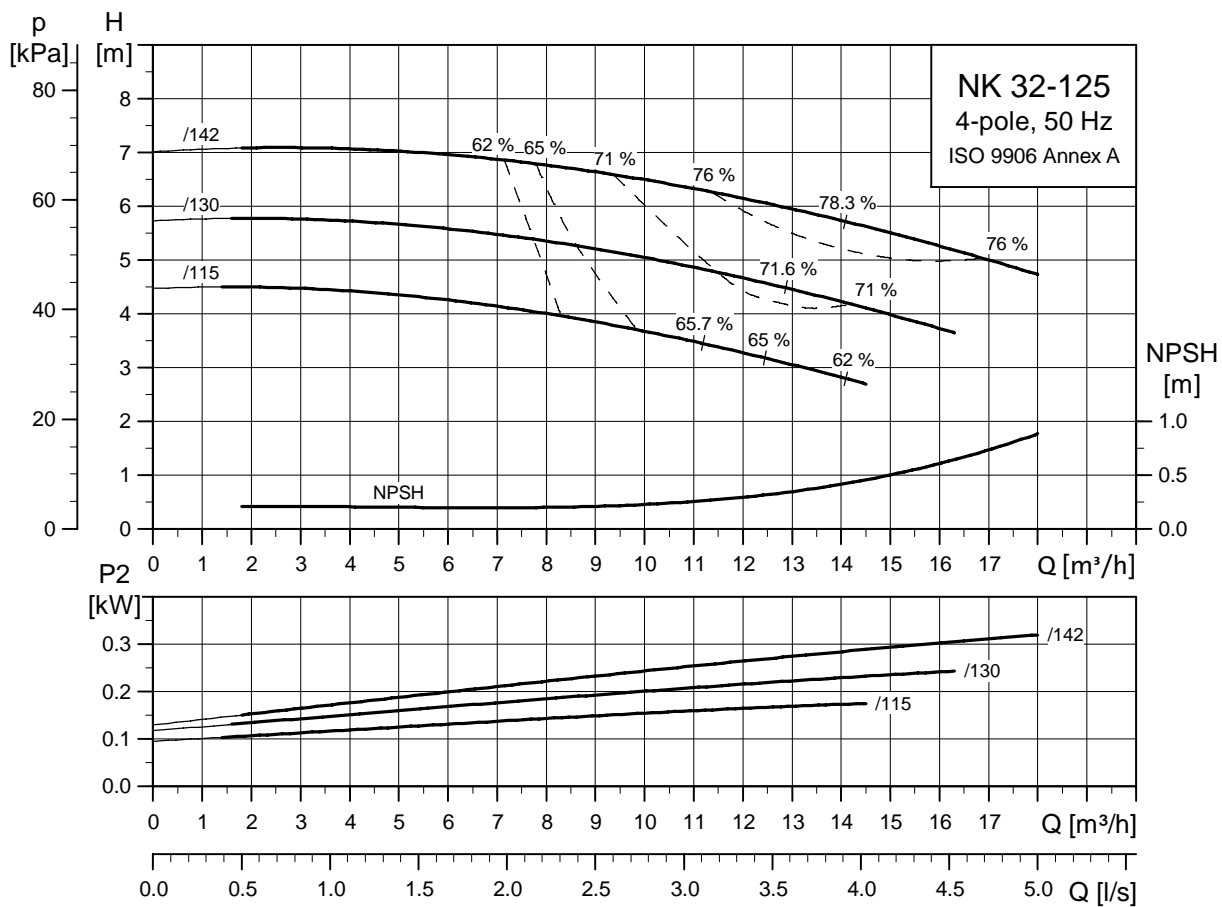




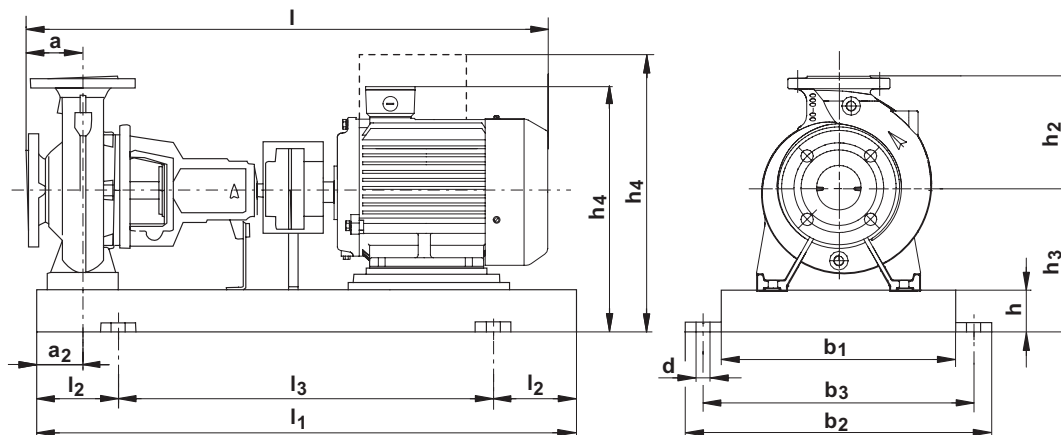
TM03 0508 0105

NK	32-125.1/121	32-125.1/139	32-125.1/140
kW	0.25	0.25	0.37
Standard motor range	MG 71B-C	MG 71B-C	MG 71B-C
Premium motor range	-	-	-
E-motor range	-	-	-
PN [bar]	16	16	16
DN <sub>d</sub> [mm]	32	32	32
DN <sub>s</sub> [mm]	50	50	50
a [mm]	80	80	80
a <sub>2</sub> [mm]	60	60	60
h [mm]	65	65	65
h <sub>2</sub> [mm]	140	140	140
h <sub>3</sub> [mm]	177	177	177
h <sub>4</sub> <sup>1)</sup> [mm]	286/-/-	286/-/-	286/-/-
<b>Standard coupling</b>			
l <sup>1)</sup> [mm]	665/-/-	665/-/-	665/-/-
l <sub>1</sub> [mm]	800	800	800
l <sub>2</sub> [mm]	130	130	130
l <sub>3</sub> [mm]	540	540	540
b <sub>1</sub> [mm]	270	270	270
b <sub>2</sub> [mm]	360	360	360
b <sub>3</sub> [mm]	320	320	320
d [mm]	19	19	19
Weight <sup>1)</sup> Net [kg]	69/-/-	69/-/-	69/-/-
<b>Spacer coupling</b>			
l <sup>1)</sup> [mm]	761/-/-	761/-/-	761/-/-
l <sub>1</sub> [mm]	800	800	800
l <sub>2</sub> [mm]	130	130	130
l <sub>3</sub> [mm]	540	540	540
b <sub>1</sub> [mm]	270	270	270
b <sub>2</sub> [mm]	360	360	360
b <sub>3</sub> [mm]	320	320	320
d [mm]	19	19	19
Weight <sup>1)</sup> Net [kg]	71/-/-	71/-/-	71/-/-

<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range



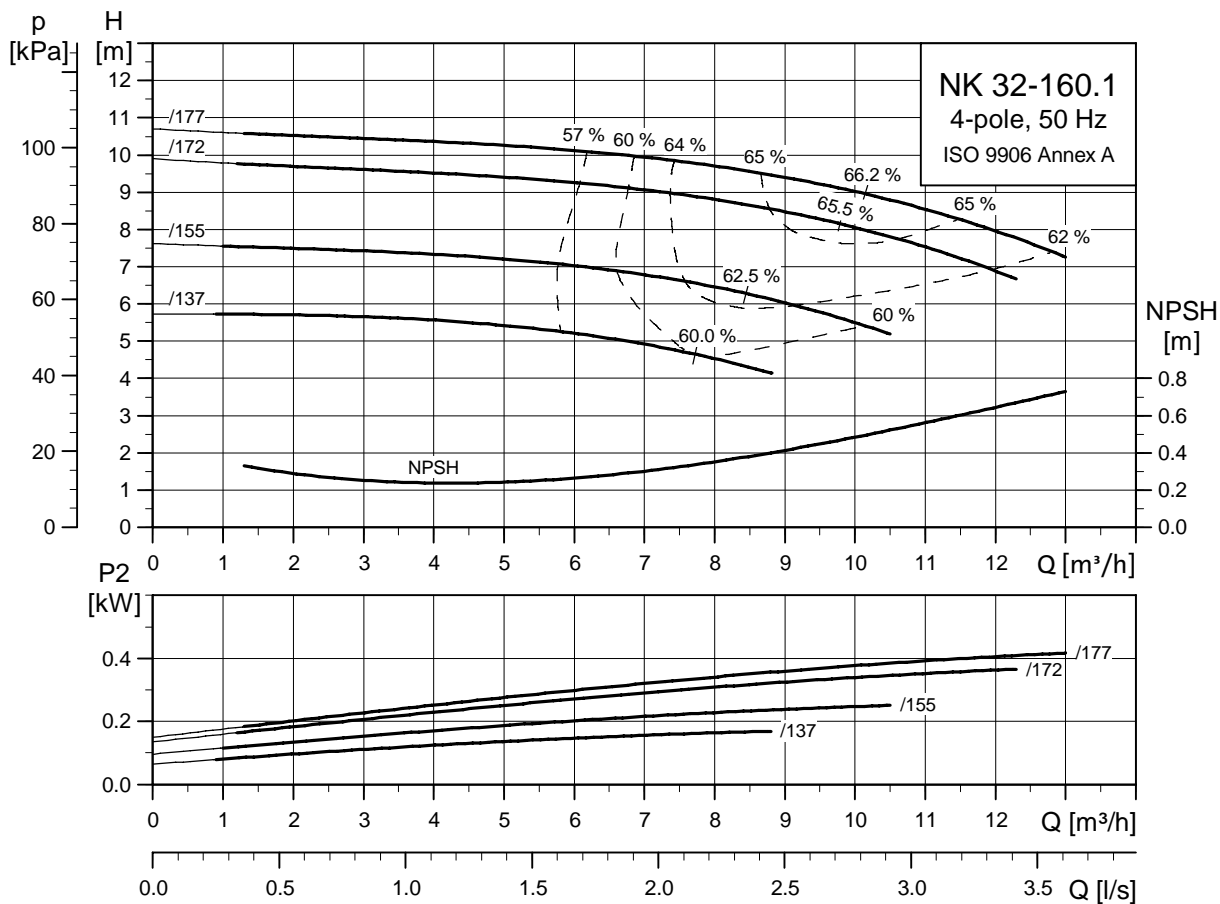
TM03 3132 0606



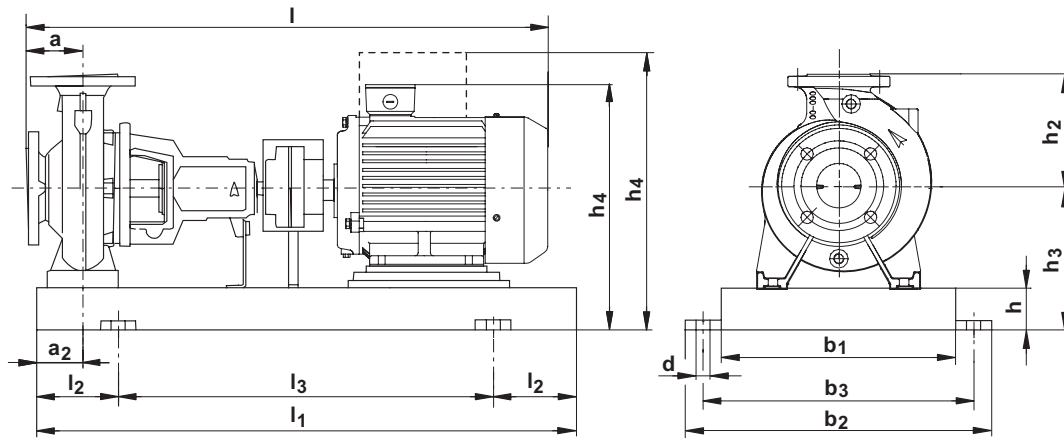
TM03 0508 0105

NK		32-125/115	32-125/130	32-125/142
kW		0.25	0.25	0.37
Standard motor range		MG 71B-C	MG 71B-C	MG 71B-C
Premium motor range		-	-	-
E-motor range		-	-	-
PN	[bar]	16	16	16
DN <sub>d</sub>	[mm]	32	32	32
DN <sub>s</sub>	[mm]	50	50	50
a	[mm]	80	80	80
a <sub>2</sub>	[mm]	60	60	60
h	[mm]	65	65	65
h <sub>2</sub>	[mm]	140	140	140
h <sub>3</sub>	[mm]	177	177	177
h <sub>4</sub> <sup>1)</sup>	[mm]	286/-/	286/-/	286/-/
<b>Standard coupling</b>				
l <sub>1</sub> <sup>1)</sup>	[mm]	665/-/	665/-/	665/-/
l <sub>1</sub>	[mm]	800	800	800
l <sub>2</sub>	[mm]	130	130	130
l <sub>3</sub>	[mm]	540	540	540
b <sub>1</sub>	[mm]	270	270	270
b <sub>2</sub>	[mm]	360	360	360
b <sub>3</sub>	[mm]	320	320	320
d	[mm]	19	19	19
Weight <sup>1)</sup>	Net [kg]	69/-/	69/-/	69/-/
<b>Spacer coupling</b>				
l <sub>1</sub> <sup>1)</sup>	[mm]	761/-/	761/-/	761/-/
l <sub>1</sub>	[mm]	800	800	800
l <sub>2</sub>	[mm]	130	130	130
l <sub>3</sub>	[mm]	540	540	540
b <sub>1</sub>	[mm]	270	270	270
b <sub>2</sub>	[mm]	360	360	360
b <sub>3</sub>	[mm]	320	320	320
d	[mm]	19	19	19
Weight <sup>1)</sup>	Net [kg]	71/-/	71/-/	71/-/

<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range



TM03 3130 0606



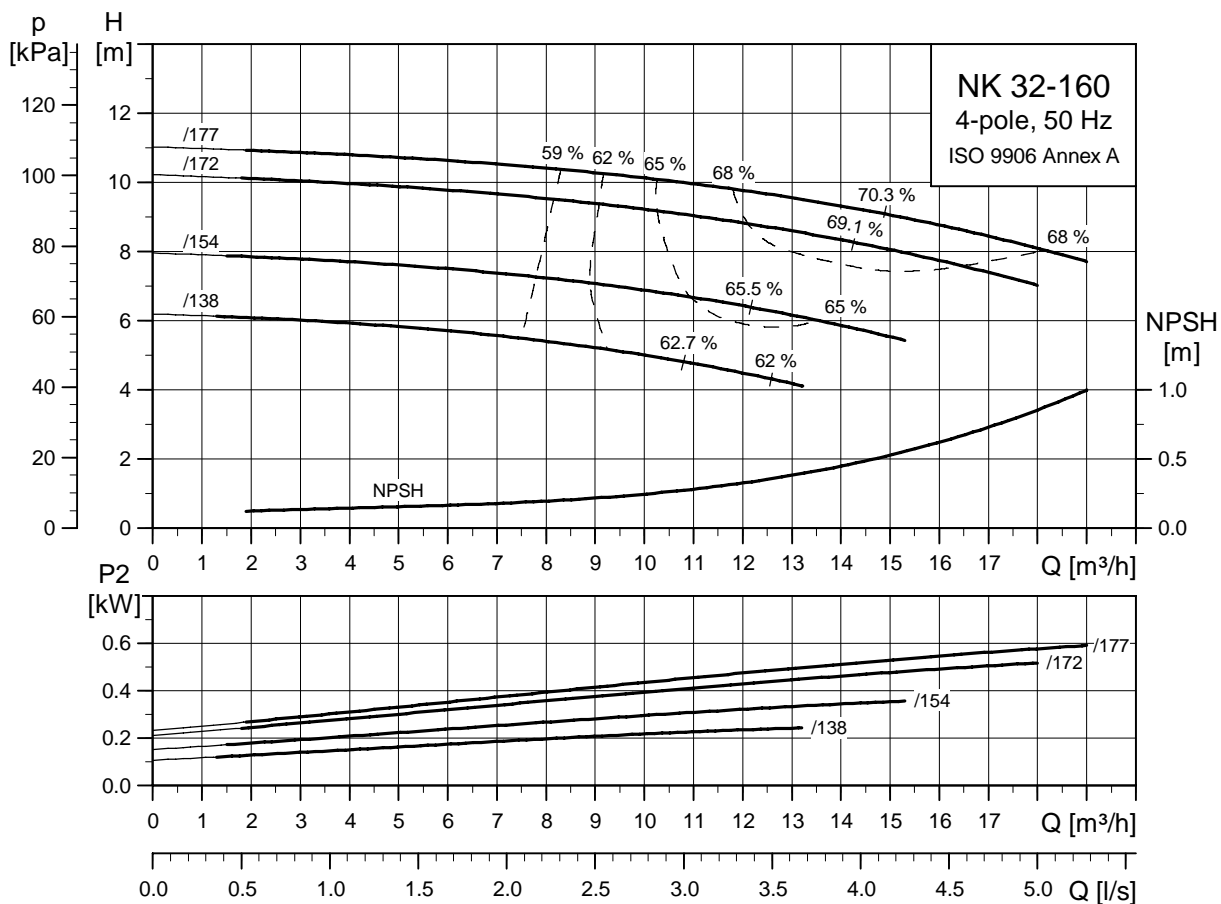
TM03 0508 0105

NK	32-160.1/137	32-160.1/155	32-160.1/172	32-160.1/177
kW	0.25	0.25	0.37	0.55
Standard motor range	MG 71B-C	MG 71B-C	MG 71B-C	MG 80A-C
Premium motor range	-	-	-	-
E-motor range	-	-	-	-
PN [bar]	16	16	16	16
DN <sub>d</sub> [mm]	32	32	32	32
DN <sub>s</sub> [mm]	50	50	50	50
a [mm]	80	80	80	80
a <sub>2</sub> [mm]	60	60	60	60
h [mm]	65	65	65	65
h <sub>2</sub> [mm]	160	160	160	160
h <sub>3</sub> [mm]	197	197	197	197
h <sub>4</sub> <sup>1)</sup> [mm]	306/-/-	306/-/-	306/-/-	306/-/-
<b>Standard coupling</b>				
l <sub>1</sub> <sup>1)</sup> [mm]	665/-/-	665/-/-	665/-/-	715/-/-
l <sub>1</sub> [mm]	800	800	800	800
l <sub>2</sub> [mm]	130	130	130	130
l <sub>3</sub> [mm]	540	540	540	540
b <sub>1</sub> [mm]	270	270	270	270
b <sub>2</sub> [mm]	360	360	360	360
b <sub>3</sub> [mm]	320	320	320	320
d [mm]	19	19	19	19
Weight <sup>1)</sup> Net [kg]	72/-/-	72/-/-	72/-/-	74/-/-
<b>Spacer coupling</b>				
l <sub>1</sub> <sup>1)</sup> [mm]	761/-/-	761/-/-	761/-/-	811/-/-
l <sub>1</sub> [mm]	800	800	800	800
l <sub>2</sub> [mm]	130	130	130	130
l <sub>3</sub> [mm]	540	540	540	540
b <sub>1</sub> [mm]	270	270	270	270
b <sub>2</sub> [mm]	360	360	360	360
b <sub>3</sub> [mm]	320	320	320	320
d [mm]	19	19	19	19
Weight <sup>1)</sup> Net [kg]	74/-/-	74/-/-	74/-/-	76/-/-

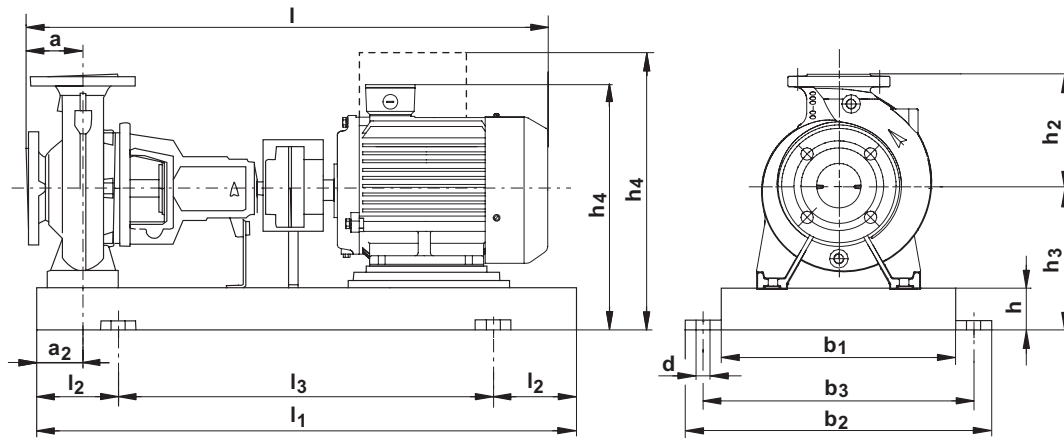
<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range

# Performance curves

NK 32-160  
4-pole



TM03 3133 0606



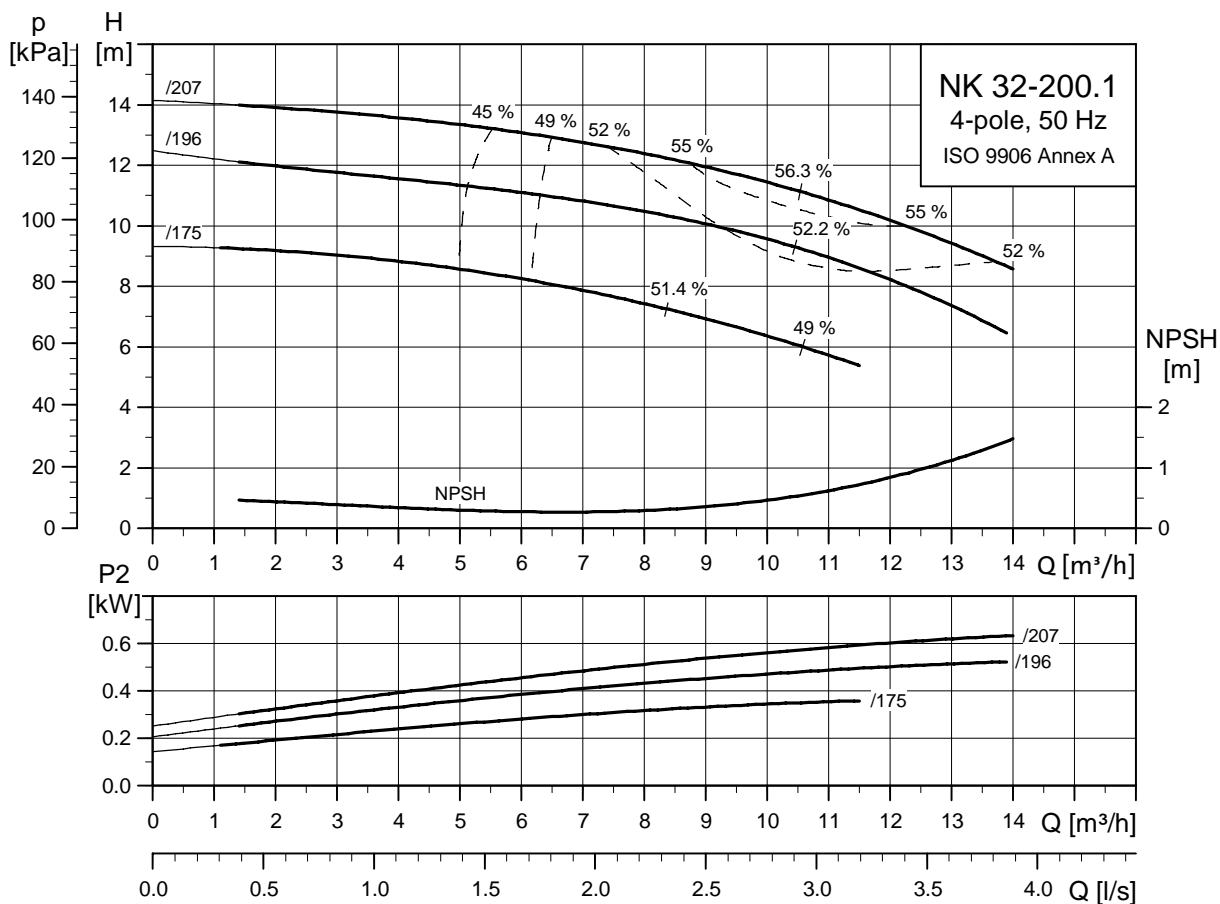
TM03 0508 0105

NK	32-160/138	32-160/154	32-160/172	32-160/177
kW	0.25	0.37	0.55	0.75
Standard motor range	MG 71B-C	MG 71B-C	MG 80A-C	MG 80B-C
Premium motor range	-	-	-	-
E-motor range	-	-	-	MGE 90SA-D
PN [bar]	16	16	16	16
DN <sub>d</sub> [mm]	32	32	32	32
DN <sub>s</sub> [mm]	50	50	50	50
a [mm]	80	80	80	80
a <sub>2</sub> [mm]	60	60	60	60
h [mm]	65	65	65	65
h <sub>2</sub> [mm]	160	160	160	160
h <sub>3</sub> [mm]	197	197	197	197
h <sub>4</sub> <sup>1)</sup> [mm]	306/-/	306/-/	306/-/	306-/364
<b>Standard coupling</b>				
l <sub>1</sub> <sup>1)</sup> [mm]	665/-/	665/-/	715/-/	715-/775
l <sub>1</sub> [mm]	800	800	800	800
l <sub>2</sub> [mm]	130	130	130	130
l <sub>3</sub> [mm]	540	540	540	540
b <sub>1</sub> [mm]	270	270	270	270
b <sub>2</sub> [mm]	360	360	360	360
b <sub>3</sub> [mm]	320	320	320	320
d [mm]	19	19	19	19
Weight <sup>1)</sup> Net [kg]	72/-/	72/-/	74/-/	75-/86
<b>Spacer coupling</b>				
l <sub>1</sub> <sup>1)</sup> [mm]	761/-/	761/-/	811/-/	811-/871
l <sub>1</sub> [mm]	800	800	800	800
l <sub>2</sub> [mm]	130	130	130	130
l <sub>3</sub> [mm]	540	540	540	540
b <sub>1</sub> [mm]	270	270	270	270
b <sub>2</sub> [mm]	360	360	360	360
b <sub>3</sub> [mm]	320	320	320	320
d [mm]	19	19	19	19
Weight <sup>1)</sup> Net [kg]	74/-/	74/-/	76/-/	77-/88

<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range

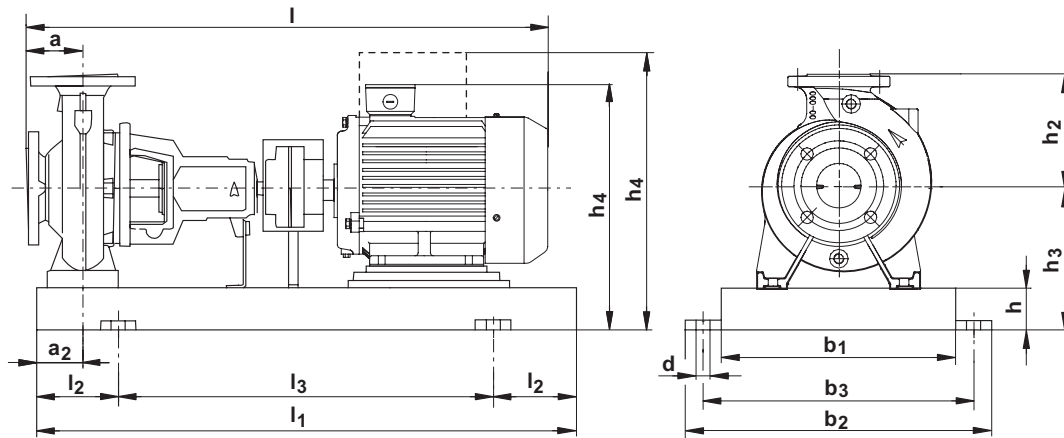
# Performance curves

NK 32-200.1  
4-pole  
ISO 9906 Annex A



TM03 3131 0606

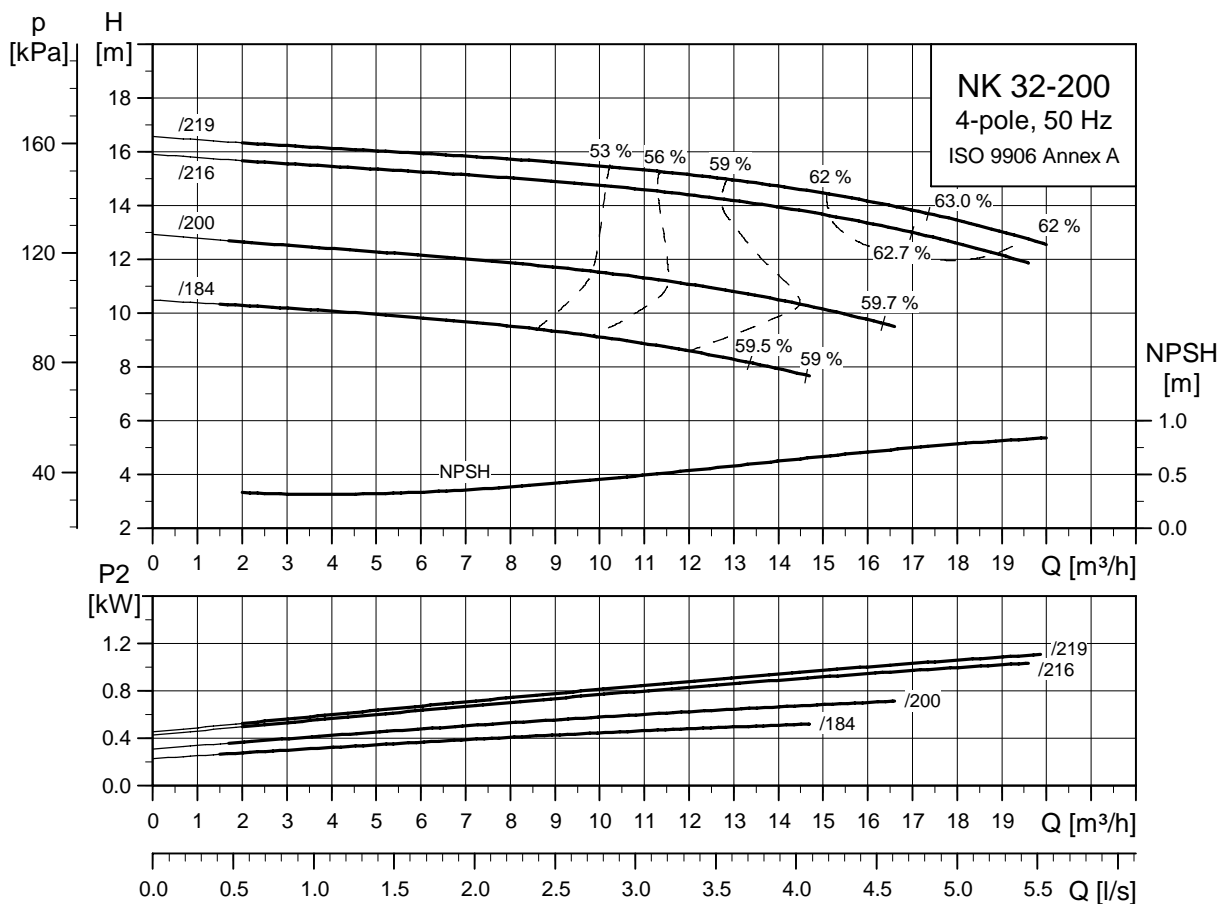




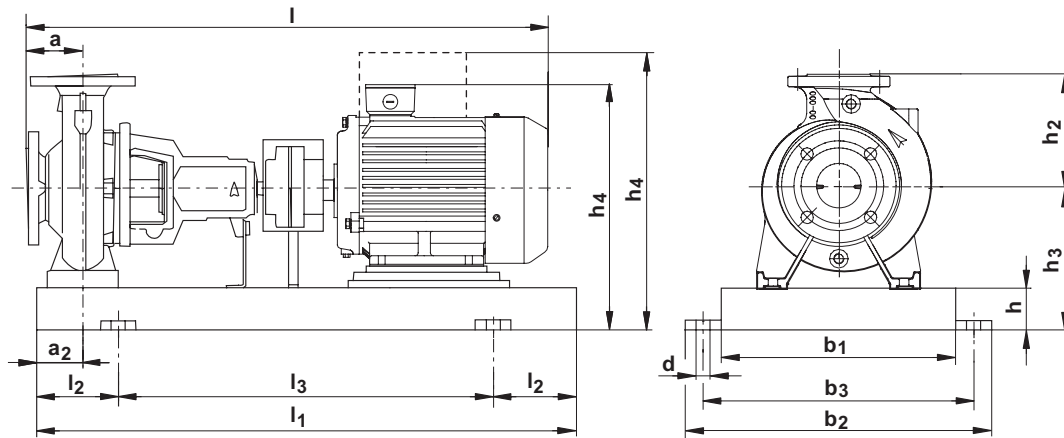
TM03 0508 0105

NK	32-200.1/175	32-200.1/196	32-200.1/207
kW	0.37	0.55	0.75
Standard motor range	MG 71B-C	MG 80A-C	MG 80B-C
Premium motor range	-	-	-
E-motor range	-	-	MGE 90SA-D
PN [bar]	16	16	16
DN <sub>d</sub> [mm]	32	32	32
DN <sub>s</sub> [mm]	50	50	50
a [mm]	80	80	80
a <sub>2</sub> [mm]	60	60	60
h [mm]	65	65	65
h <sub>2</sub> [mm]	180	180	180
h <sub>3</sub> [mm]	226	225	225
h <sub>4</sub> <sup>1)</sup> [mm]	335/-/-	334/-/-	334/-/392
<b>Standard coupling</b>			
l <sup>1)</sup> [mm]	665/-/-	715/-/-	715/-/775
l <sub>1</sub> [mm]	800	800	800
l <sub>2</sub> [mm]	130	130	130
l <sub>3</sub> [mm]	540	540	540
b <sub>1</sub> [mm]	270	270	270
b <sub>2</sub> [mm]	360	360	360
b <sub>3</sub> [mm]	320	320	320
d [mm]	19	19	19
Weight <sup>1)</sup> Net [kg]	82/-/-	84/-/-	85/-/96
<b>Spacer coupling</b>			
l <sup>1)</sup> [mm]	761/-/-	811/-/-	811/-/871
l <sub>1</sub> [mm]	800	800	800
l <sub>2</sub> [mm]	130	130	130
l <sub>3</sub> [mm]	540	540	540
b <sub>1</sub> [mm]	270	270	270
b <sub>2</sub> [mm]	360	360	360
b <sub>3</sub> [mm]	320	320	320
d [mm]	19	19	19
Weight <sup>1)</sup> Net [kg]	84/-/-	86/-/-	87/-/98

<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range



TM03 3134 0606



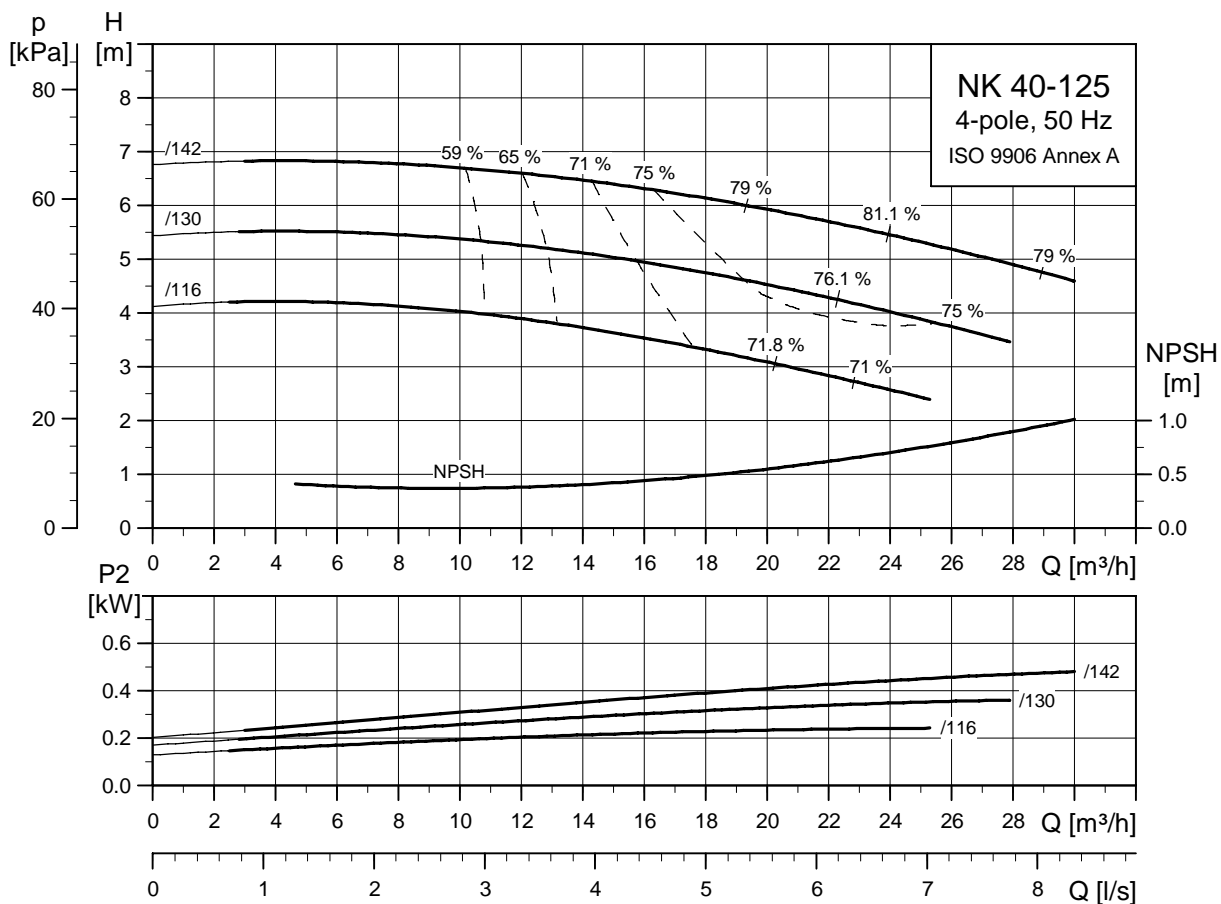
TM03 0508 0105

NK	32-200/184	32-200/200	32-200/216	32-200/219
kW	0.55	0.75	1.1	1.5
Standard motor range	MG 80A-C	MG 80B-C	MG 90SA-C	MG 90LA-C
Premium motor range	-	-	MG 90SB-D	MG 90LC-D
E-motor range	-	MGE 90SA-D	MGE 90SB-D	MGE 90LC-D
PN [bar]	16	16	16	16
DN <sub>d</sub> [mm]	32	32	32	32
DN <sub>s</sub> [mm]	50	50	50	50
a [mm]	80	80	80	80
a <sub>2</sub> [mm]	60	60	60	60
h [mm]	65	65	65	65
h <sub>2</sub> [mm]	180	180	180	180
h <sub>3</sub> [mm]	225	225	225	225
h <sub>4</sub> <sup>1)</sup> [mm]	334/-/	334/-/392	335/335/392	335/335/392
<b>Standard coupling</b>				
l <sub>1</sub> <sup>1)</sup> [mm]	715/-/	715/-/775	775/775/775	775/815/815
l <sub>1</sub> [mm]	800	800	800	900
l <sub>2</sub> [mm]	130	130	130	150
l <sub>3</sub> [mm]	540	540	540	600
b <sub>1</sub> [mm]	270	270	270	300
b <sub>2</sub> [mm]	360	360	360	390
b <sub>3</sub> [mm]	320	320	320	350
d [mm]	19	19	19	19
Weight <sup>1)</sup> Net [kg]	84/-/	85/-/96	90/74/102	97/86/108
<b>Spacer coupling</b>				
l <sub>1</sub> <sup>1)</sup> [mm]	811/-/	811/-/871	871/871/871	871/911/911
l <sub>1</sub> [mm]	800	800	800	900
l <sub>2</sub> [mm]	130	130	130	150
l <sub>3</sub> [mm]	540	540	540	600
b <sub>1</sub> [mm]	270	270	270	300
b <sub>2</sub> [mm]	360	360	360	390
b <sub>3</sub> [mm]	320	320	320	350
d [mm]	19	19	19	19
Weight <sup>1)</sup> Net [kg]	86/-/	87/-/98	92/72/104	99/88/110

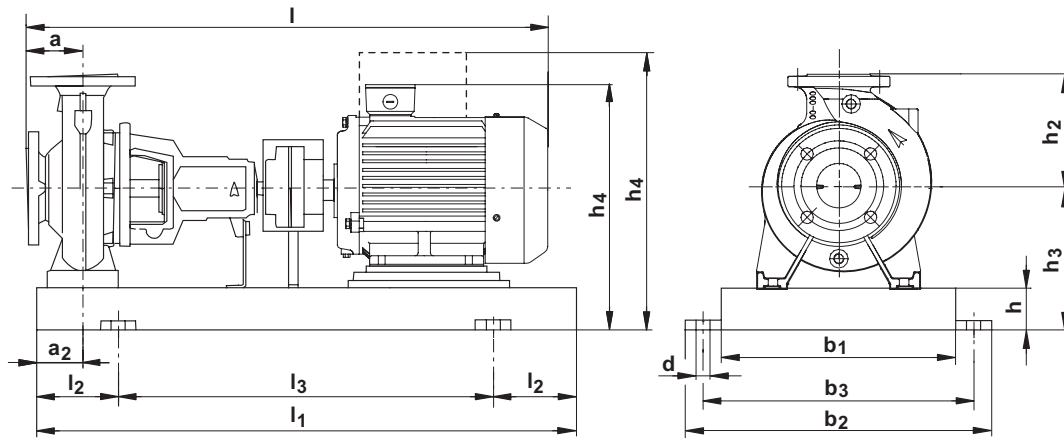
<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range

# Performance curves

NK 40-125  
4-pole  
4-pole



TM03 3135 0606



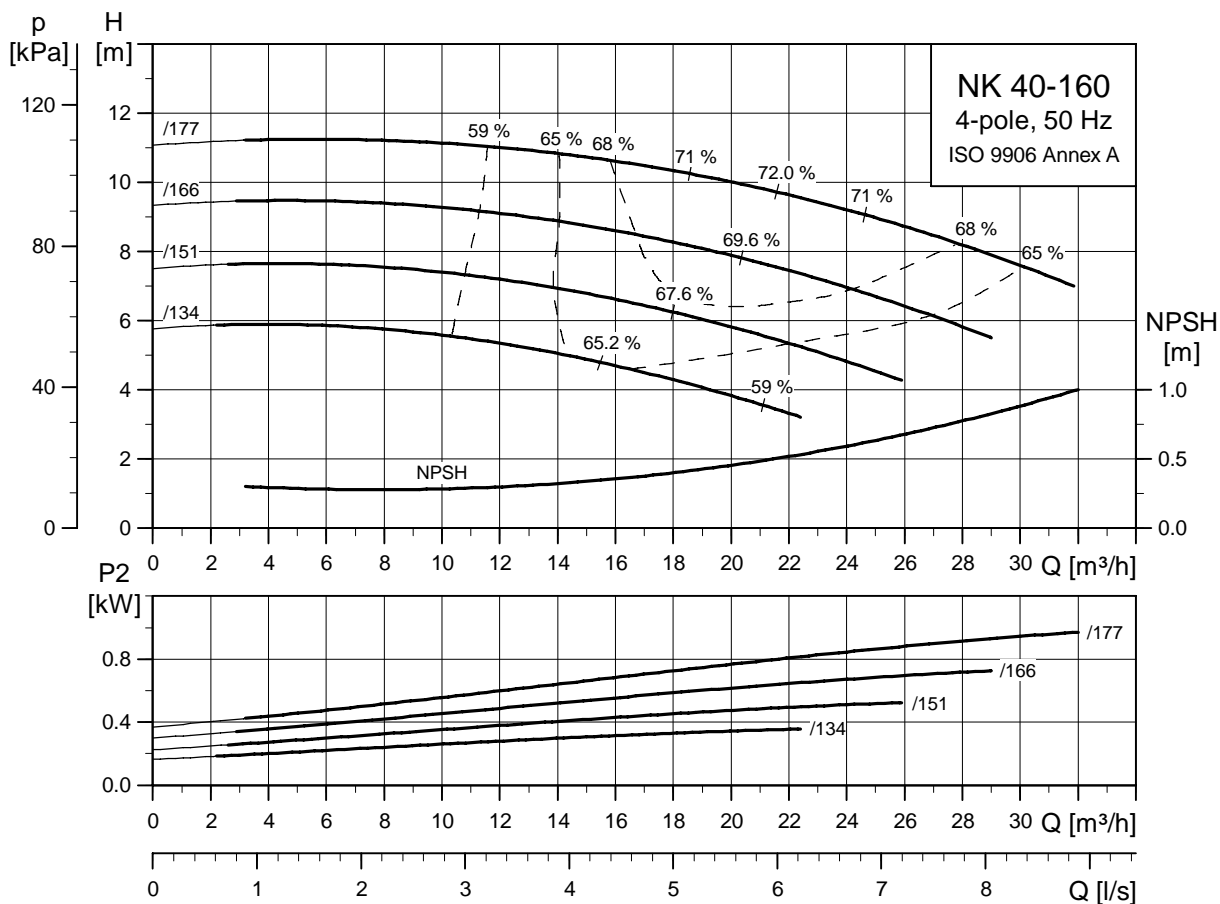
TM03 0508 0105

NK		40-125/116	40-125/130	40-125/142
kW		0.25	0.37	0.55
Standard motor range		MG 71B-C	MG 71B-C	MG 80A-C
Premium motor range		-	-	-
E-motor range		-	-	-
PN	[bar]	16	16	16
DN <sub>d</sub>	[mm]	40	40	40
DN <sub>s</sub>	[mm]	65	65	65
a	[mm]	80	80	80
a <sub>2</sub>	[mm]	60	60	60
h	[mm]	65	65	65
h <sub>2</sub>	[mm]	140	140	140
h <sub>3</sub>	[mm]	177	177	177
h <sub>4</sub> <sup>1)</sup>	[mm]	286/-/	286/-/	286/-/
<b>Standard coupling</b>				
l <sub>1</sub> <sup>1)</sup>	[mm]	665/-/	665/-/	715/-/
l <sub>1</sub>	[mm]	800	800	800
l <sub>2</sub>	[mm]	130	130	130
l <sub>3</sub>	[mm]	540	540	540
b <sub>1</sub>	[mm]	270	270	270
b <sub>2</sub>	[mm]	360	360	360
b <sub>3</sub>	[mm]	320	320	320
d	[mm]	19	19	19
Weight <sup>1)</sup>	Net [kg]	69/-/	69/-/	71/-/
<b>Spacer coupling</b>				
l <sub>1</sub> <sup>1)</sup>	[mm]	761/-/	761/-/	811/-/
l <sub>1</sub>	[mm]	800	800	800
l <sub>2</sub>	[mm]	130	130	130
l <sub>3</sub>	[mm]	540	540	540
b <sub>1</sub>	[mm]	270	270	270
b <sub>2</sub>	[mm]	360	360	360
b <sub>3</sub>	[mm]	320	320	320
d	[mm]	19	19	19
Weight <sup>1)</sup>	Net [kg]	71/-/	71/-/	73/-/

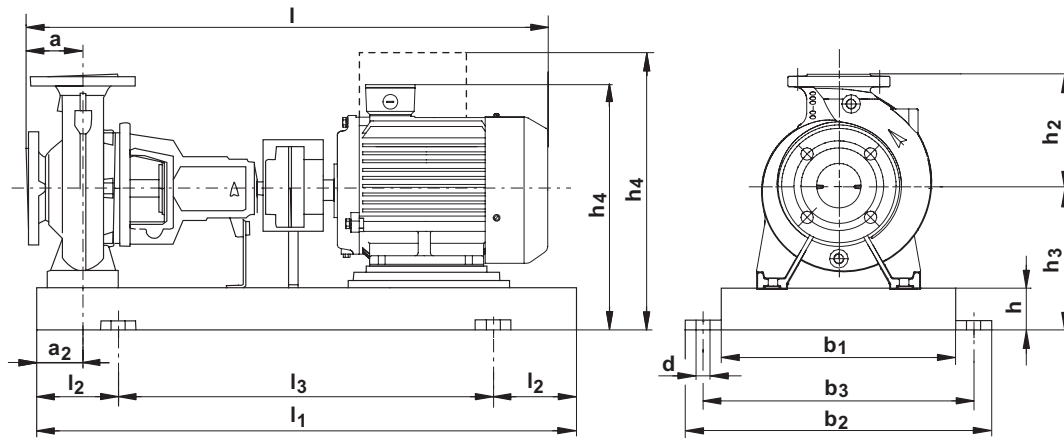
<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range

# Performance curves

NK 40-160  
4-pole



TM03 3136 0606



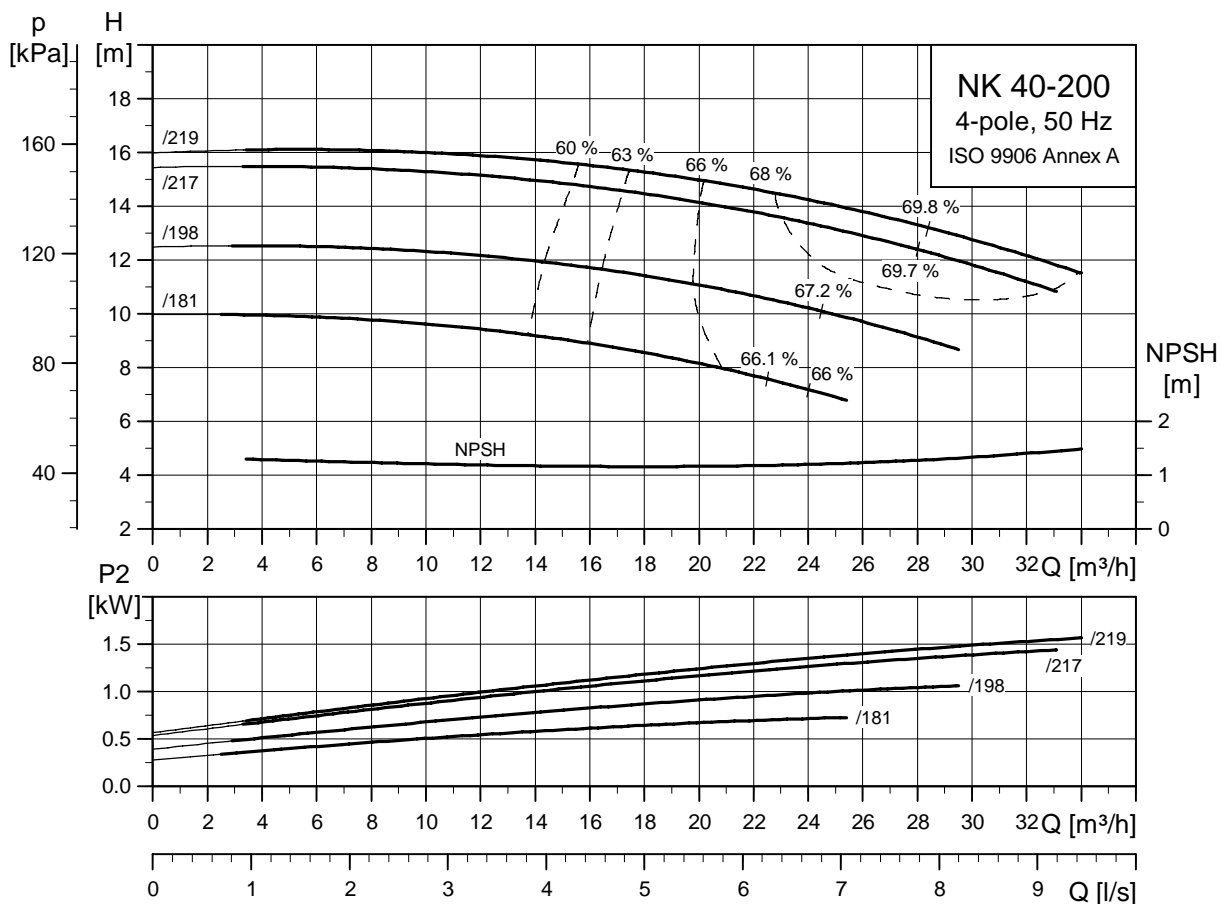
TM03 0508 0105

NK	40-160/134	40-160/151	40-160/166	40-160/177
kW	0.37	0.55	0.75	1.1
Standard motor range	MG 71B-C	MG 80A-C	MG 80B-C	MG 90SA-C
Premium motor range	-	-	-	MG 90SB-D
E-motor range	-	-	MGE 90SA-D	MGE 90SB-D
PN [bar]	16	16	16	16
DN <sub>d</sub> [mm]	40	40	40	40
DN <sub>s</sub> [mm]	65	65	65	65
a [mm]	80	80	80	80
a <sub>2</sub> [mm]	60	60	60	60
h [mm]	65	65	65	65
h <sub>2</sub> [mm]	160	160	160	160
h <sub>3</sub> [mm]	197	197	197	197
h <sub>4</sub> <sup>1)</sup> [mm]	306/-/-	306/-/-	306/-/364	307/307/364
<b>Standard coupling</b>				
l <sub>1</sub> <sup>1)</sup> [mm]	665/-/-	715/-/-	715/-/775	775/775/775
l <sub>1</sub> [mm]	800	800	800	800
l <sub>2</sub> [mm]	130	130	130	130
l <sub>3</sub> [mm]	540	540	540	540
b <sub>1</sub> [mm]	270	270	270	270
b <sub>2</sub> [mm]	360	360	360	360
b <sub>3</sub> [mm]	320	320	320	320
d [mm]	19	19	19	19
Weight <sup>1)</sup> Net [kg]	74/-/-	76/-/-	77/-/88	82/80/94
<b>Spacer coupling</b>				
l <sub>1</sub> <sup>1)</sup> [mm]	761/-/-	811/-/-	811/-/871	871/871/871
l <sub>1</sub> [mm]	800	800	800	800
l <sub>2</sub> [mm]	130	130	130	130
l <sub>3</sub> [mm]	540	540	540	540
b <sub>1</sub> [mm]	270	270	270	270
b <sub>2</sub> [mm]	360	360	360	360
b <sub>3</sub> [mm]	320	320	320	320
d [mm]	19	19	19	19
Weight <sup>1)</sup> Net [kg]	76/-/-	78/-/-	79/-/90	84/78/96

<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range

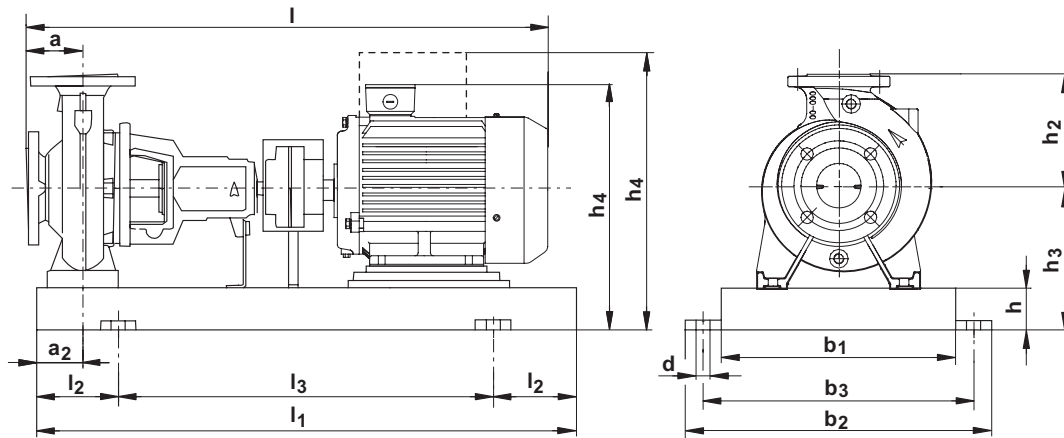
# Performance curves

NK 40-200  
4-pole



TM03 3137 0606





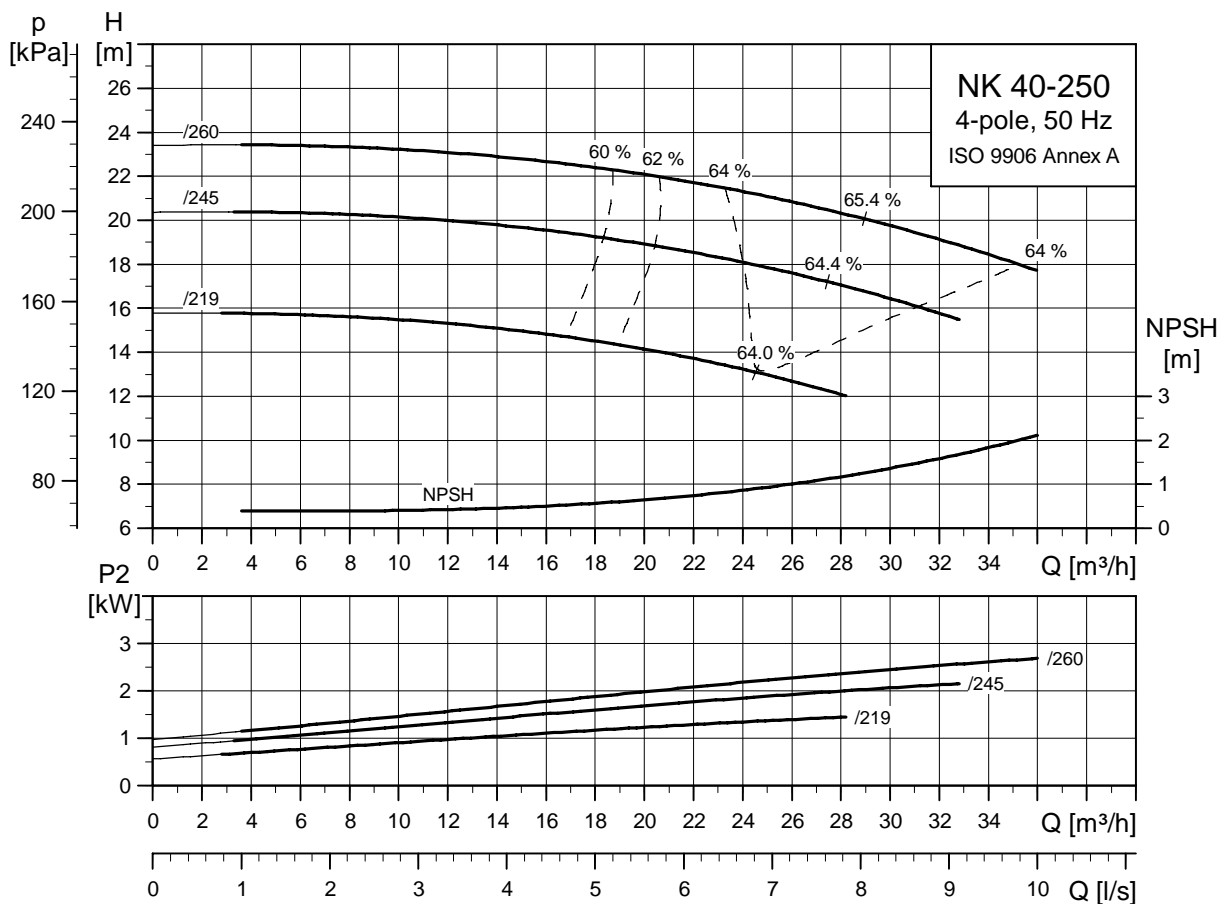
TM03 0508 0105

NK	40-200/181	40-200/198	40-200/217	40-200/219
<b>kW</b>	<b>0.75</b>	<b>1.1</b>	<b>1.5</b>	<b>2.2</b>
Standard motor range	MG 80B-C	MG 90SA-C	MG 90LA-C	MG 100LA-D
Premium motor range	-	MG 90SB-D	MG 90LC-D	MG 100LB-D
E-motor range	MGE 90SA-D	MGE 90SB-D	MGE 90LC-D	MGE 100LB-D
PN [bar]	16	16	16	16
DN <sub>d</sub> [mm]	40	40	40	40
DN <sub>s</sub> [mm]	65	65	65	65
a [mm]	100	100	100	100
a <sub>2</sub> [mm]	60	60	60	60
h [mm]	65	65	65	65
h <sub>2</sub> [mm]	180	180	180	180
h <sub>3</sub> [mm]	225	225	225	225
h <sub>4</sub> <sup>1)</sup> [mm]	334/-/392	335/335/392	335/335/392	345/345/402
<b>Standard coupling</b>				
l <sub>1</sub> <sup>1)</sup> [mm]	735/-/795	795/795/795	795/835/835	859/859/859
l <sub>1</sub> [mm]	900	900	900	900
l <sub>2</sub> [mm]	150	150	150	150
l <sub>3</sub> [mm]	600	600	600	600
b <sub>1</sub> [mm]	300	300	300	300
b <sub>2</sub> [mm]	390	390	390	390
b <sub>3</sub> [mm]	350	350	350	350
d [mm]	19	19	19	19
Weight <sup>1)</sup> Net [kg]	92/-/103	97/78/109	99/90/110	104/102/116
<b>Spacer coupling</b>				
l <sub>1</sub> <sup>1)</sup> [mm]	831/-/891	891/891/891	891/931/931	955/955/955
l <sub>1</sub> [mm]	900	900	900	900
l <sub>2</sub> [mm]	150	150	150	150
l <sub>3</sub> [mm]	600	600	600	600
b <sub>1</sub> [mm]	300	300	300	300
b <sub>2</sub> [mm]	390	390	390	390
b <sub>3</sub> [mm]	350	350	350	350
d [mm]	19	19	19	19
Weight <sup>1)</sup> Net [kg]	94/-/105	99/80/111	101/92/112	106/104/118

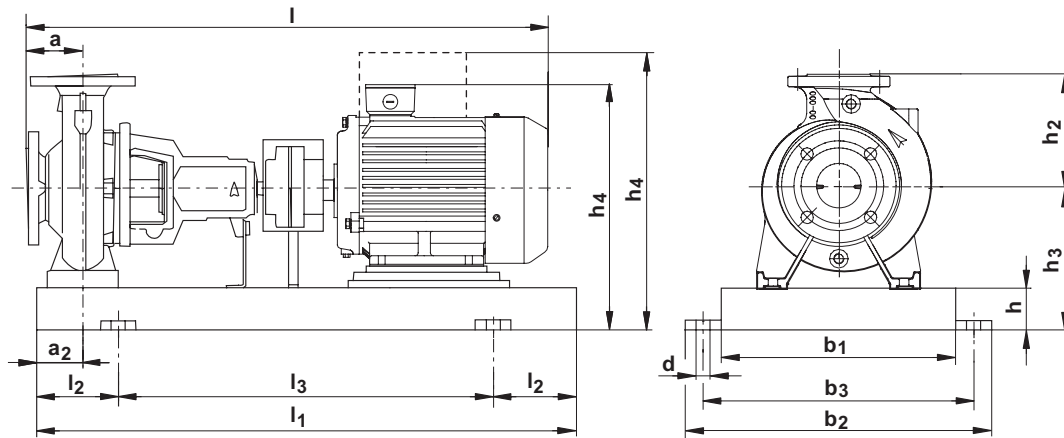
<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range

# Performance curves

NK 40-250  
4-pole



TM03 3138 0606



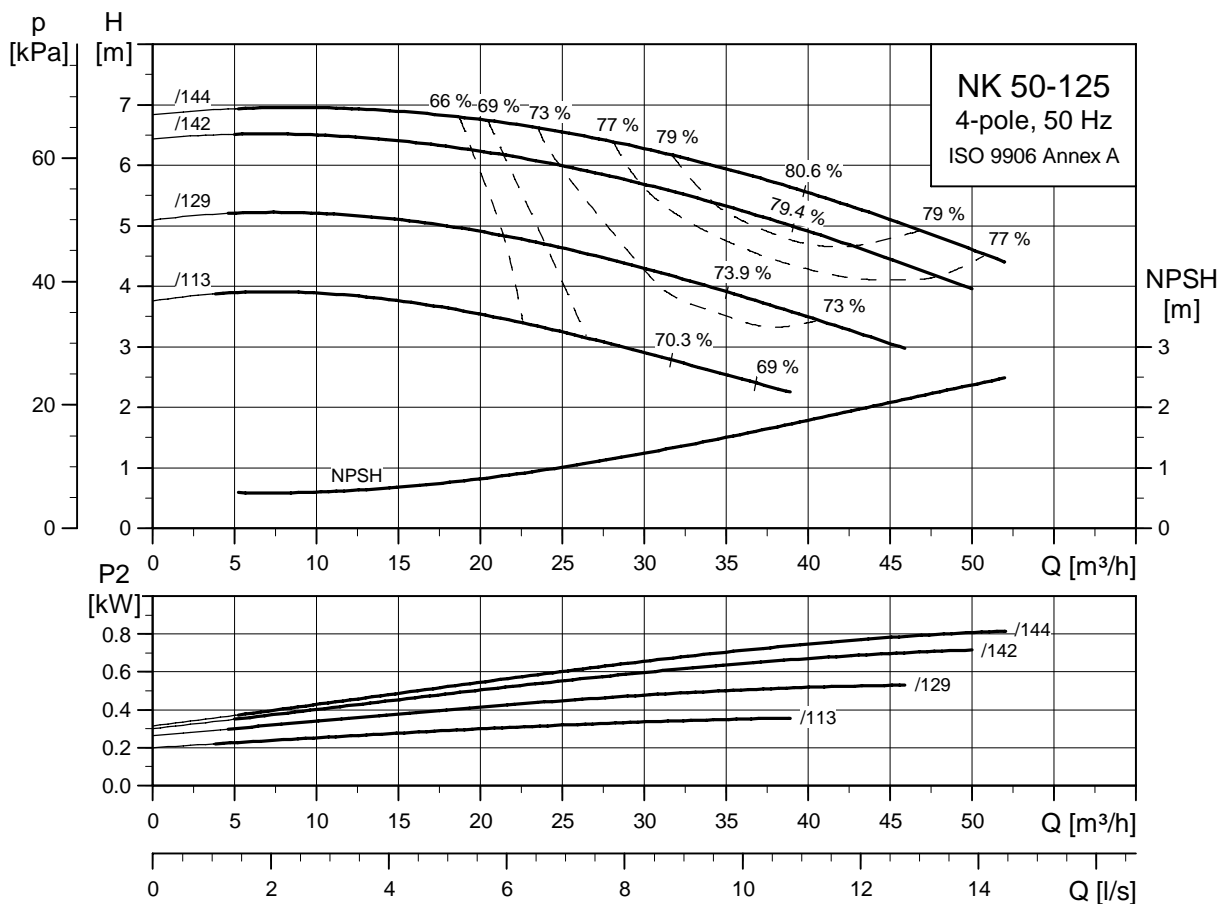
TM03 0508 0105

NK	40-250/219	40-250/245	40-250/260
<b>kW</b>	1.5	2.2	3
Standard motor range	MG 90LA-C	MG 100LA-D	MG 100LB-D
Premium motor range	MG 90LC-D	MG 100LB-D	MG 100LC-D
E-motor range	MGE 90LC-D	MGE 100LB-D	MGE 100LC-D
PN [bar]	16	16	16
DN <sub>d</sub> [mm]	40	40	40
DN <sub>s</sub> [mm]	65	65	65
a [mm]	100	100	100
a <sub>2</sub> [mm]	75	75	75
h [mm]	80	80	80
h <sub>2</sub> [mm]	225	225	225
h <sub>3</sub> [mm]	260	260	262
h <sub>4</sub> <sup>1)</sup> [mm]	370/370/427	380/380/437	382/380/437
<b>Standard coupling</b>			
l <sub>1</sub> <sup>1)</sup> [mm]	795/835/835	859/859/859	859/859/859
l <sub>1</sub> [mm]	1000	1000	1000
l <sub>2</sub> [mm]	170	170	170
l <sub>3</sub> [mm]	660	660	660
b <sub>1</sub> [mm]	340	340	340
b <sub>2</sub> [mm]	450	450	450
b <sub>3</sub> [mm]	400	400	400
d [mm]	24	24	24
Weight <sup>1)</sup> Net [kg]	124/93/135	129/112/141	135/129/143
<b>Spacer coupling</b>			
l <sub>1</sub> <sup>1)</sup> [mm]	891/931/931	955/955/955	955/955/955
l <sub>1</sub> [mm]	1000	1000	1000
l <sub>2</sub> [mm]	170	170	170
l <sub>3</sub> [mm]	660	660	660
b <sub>1</sub> [mm]	340	340	340
b <sub>2</sub> [mm]	450	450	450
b <sub>3</sub> [mm]	400	400	400
d [mm]	24	24	24
Weight <sup>1)</sup> Net [kg]	126/95/137	131/114/143	137/132/145

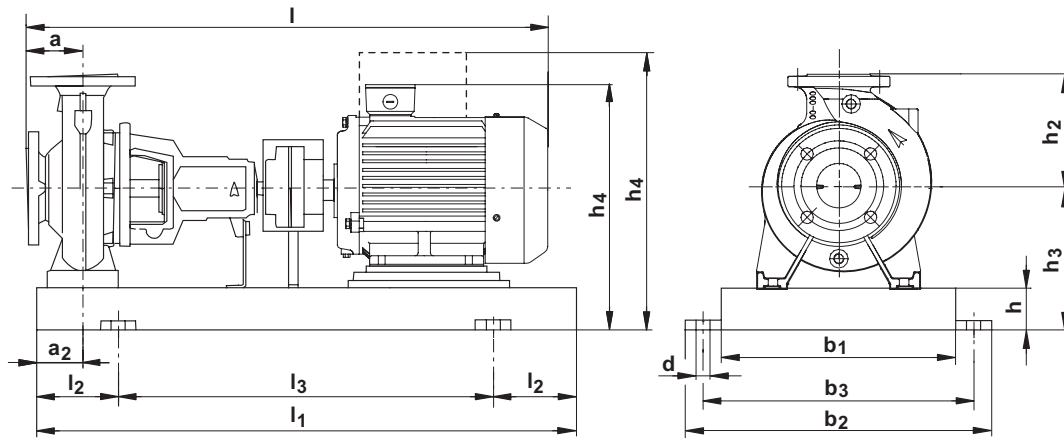
<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range

# Performance curves

NK 50-125  
4-pole



TM03 3139 0606



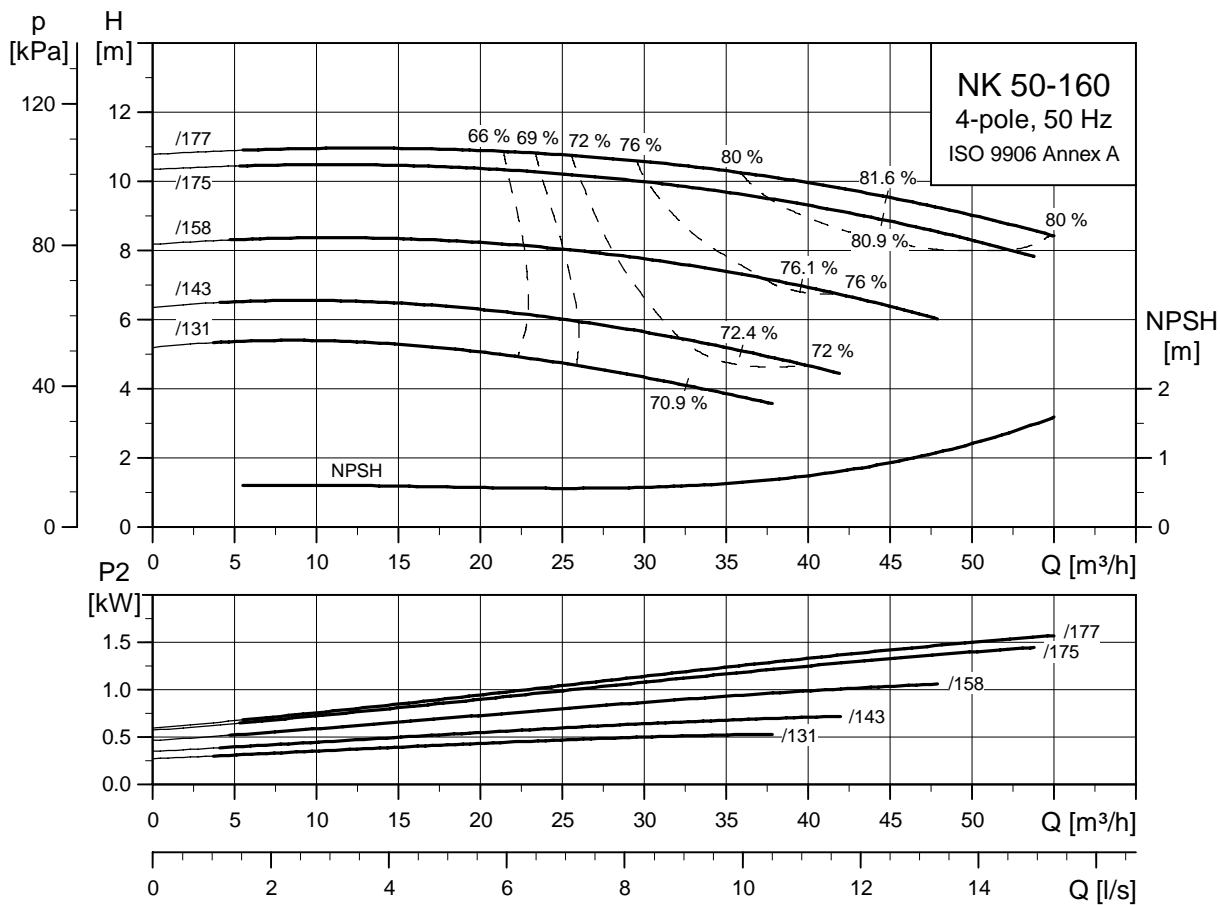
TM03 0508 0105

NK	50-125/113	50-125/129	50-125/142	50-125/144
kW	0.37	0.55	0.75	1.1
Standard motor range	MG 71B-C	MG 80A-C	MG 80B-C	MG 90SA-C
Premium motor range	-	-	-	MG 90SB-D
E-motor range	-	-	MGE 90SA-D	MGE 90SB-D
PN [bar]	16	16	16	16
DN <sub>d</sub> [mm]	50	50	50	50
DN <sub>s</sub> [mm]	65	65	65	65
a [mm]	100	100	100	100
a <sub>2</sub> [mm]	60	60	60	60
h [mm]	65	65	65	65
h <sub>2</sub> [mm]	160	160	160	160
h <sub>3</sub> [mm]	197	197	197	197
h <sub>4</sub> <sup>1)</sup> [mm]	306/-	306/-	306/-/364	307/307/364
<b>Standard coupling</b>				
l <sub>1</sub> <sup>1)</sup> [mm]	685/-	735/-	735/-/795	795/795/795
l <sub>1</sub> [mm]	800	800	800	800
l <sub>2</sub> [mm]	130	130	130	130
l <sub>3</sub> [mm]	540	540	540	540
b <sub>1</sub> [mm]	270	270	270	270
b <sub>2</sub> [mm]	360	360	360	360
b <sub>3</sub> [mm]	320	320	320	320
d [mm]	19	19	19	19
Weight <sup>1)</sup> Net [kg]	69/-	71/-	72/-/83	77/81/89
<b>Spacer coupling</b>				
l <sub>1</sub> <sup>1)</sup> [mm]	781/-	831/-	831/-/891	891/891/891
l <sub>1</sub> [mm]	800	800	800	800
l <sub>2</sub> [mm]	130	130	130	130
l <sub>3</sub> [mm]	540	540	540	540
b <sub>1</sub> [mm]	270	270	270	270
b <sub>2</sub> [mm]	360	360	360	360
b <sub>3</sub> [mm]	320	320	320	320
d [mm]	19	19	19	19
Weight <sup>1)</sup> Net [kg]	71/-	73/-	74/-/85	79/83/91

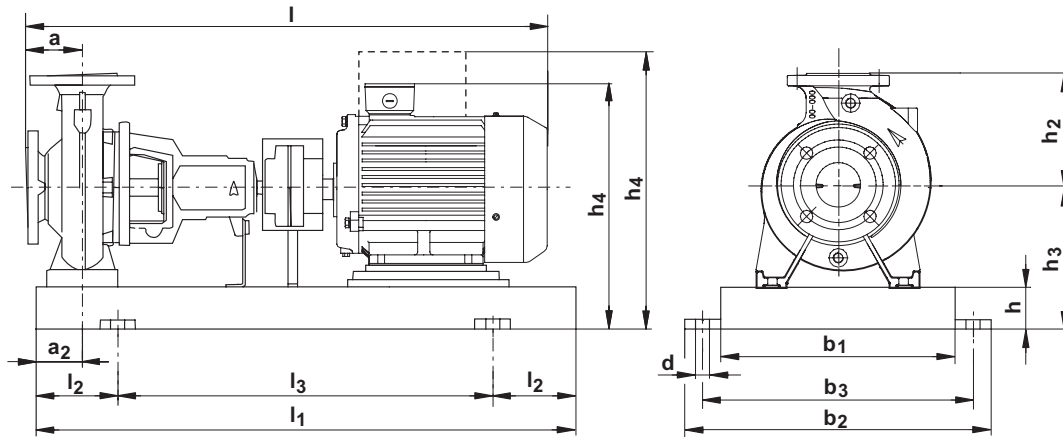
<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range

# Performance curves

NK 50-160  
4-pole



TM03 3140 0606



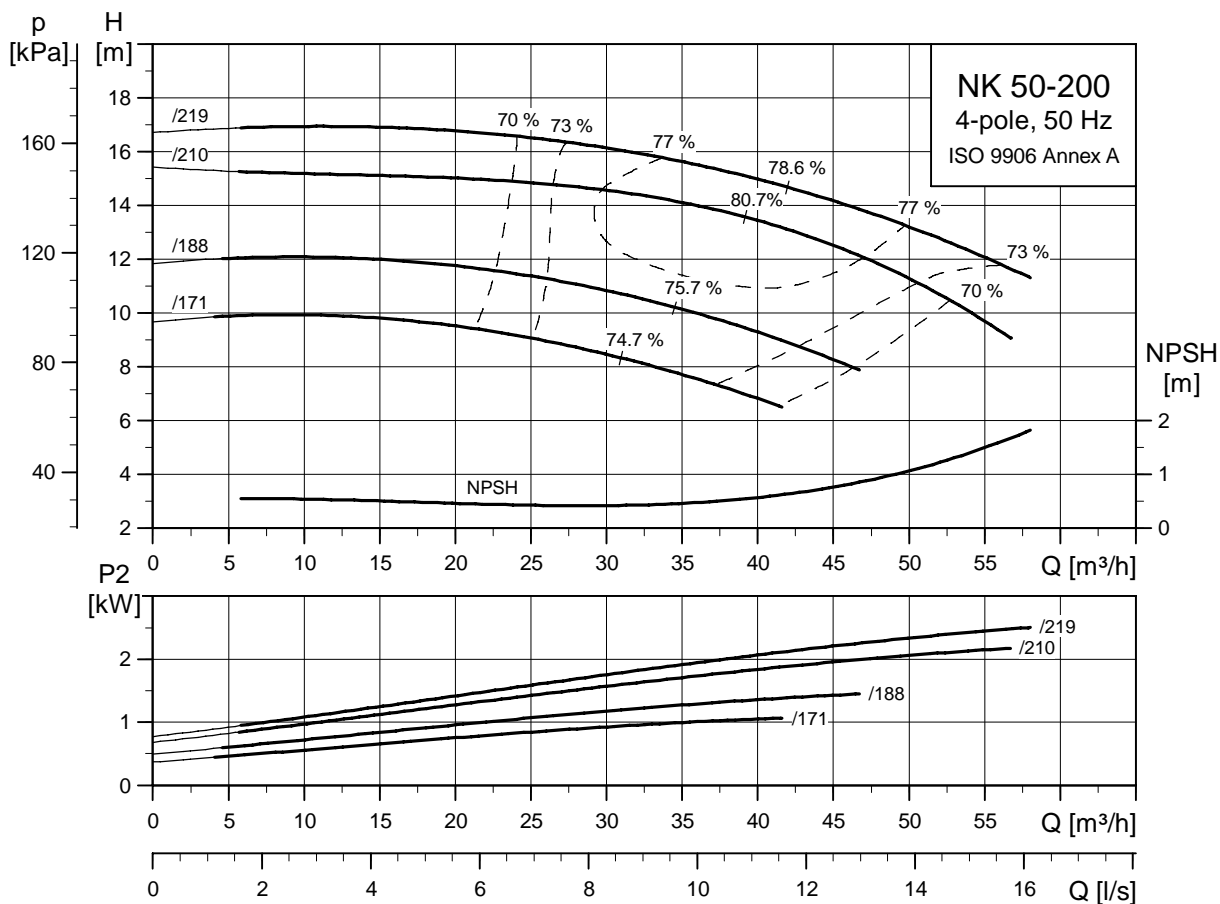
TM03 0508 0105

NK	50-160/131	50-160/143	50-160/158	50-160/175	50-160/177
kW	0.55	0.75	1.1	1.5	2.2
Standard motor range	MG 80A-C	MG 80B-C	MG 90SA-C	MG 90LA-C	MG 100LA-D
Premium motor range	-	-	MG 90SB-D	MG 90LC-D	MG 100LB-D
E-motor range	-	MGE 90SA-D	MGE 90SB-D	MGE 90LC-D	MGE 100LB-D
PN [bar]	16	16	16	16	16
DN <sub>d</sub> [mm]	50	50	50	50	50
DN <sub>s</sub> [mm]	65	65	65	65	65
a [mm]	100	100	100	100	100
a <sub>2</sub> [mm]	60	60	60	60	60
h [mm]	65	65	65	65	65
h <sub>2</sub> [mm]	180	180	180	180	180
h <sub>3</sub> [mm]	225	225	225	225	225
h <sub>4</sub> <sup>1)</sup> [mm]	334/-/	334/-/392	335/335/392	335/335/392	345/345/402
<b>Standard coupling</b>					
l <sup>1)</sup> [mm]	735/-/	735/-/795	795/795/795	795/835/835	859/859/859
l <sub>1</sub> [mm]	900	900	900	900	900
l <sub>2</sub> [mm]	150	150	150	150	150
l <sub>3</sub> [mm]	600	600	600	600	600
b <sub>1</sub> [mm]	300	300	300	300	300
b <sub>2</sub> [mm]	390	390	390	390	390
b <sub>3</sub> [mm]	350	350	350	350	350
d [mm]	19	19	19	19	19
Weight <sup>1)</sup> Net [kg]	84/-/	85/-/96	90/78/102	92/103/103	97/112/109
<b>Spacer coupling</b>					
l <sup>1)</sup> [mm]	831/-/	831/-/891	891/891/891	891/931/931	955/955/955
l <sub>1</sub> [mm]	900	900	900	900	900
l <sub>2</sub> [mm]	150	150	150	150	150
l <sub>3</sub> [mm]	600	600	600	600	600
b <sub>1</sub> [mm]	300	300	300	300	300
b <sub>2</sub> [mm]	390	390	390	390	390
b <sub>3</sub> [mm]	350	350	350	350	350
d [mm]	19	19	19	19	19
Weight <sup>1)</sup> Net [kg]	86/-/	87/-/98	92/80/104	94/105/105	99/114/111

<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range

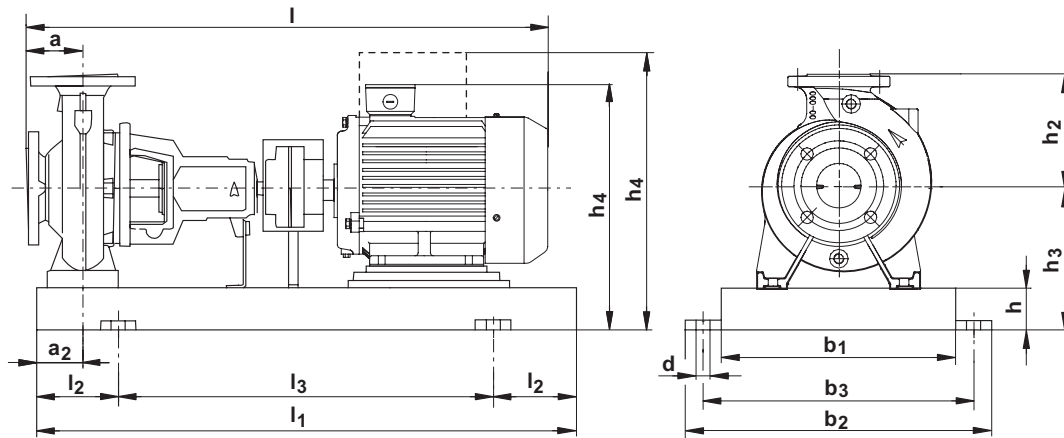
# Performance curves

NK 50-200  
4-pole



TM03 3141 0606





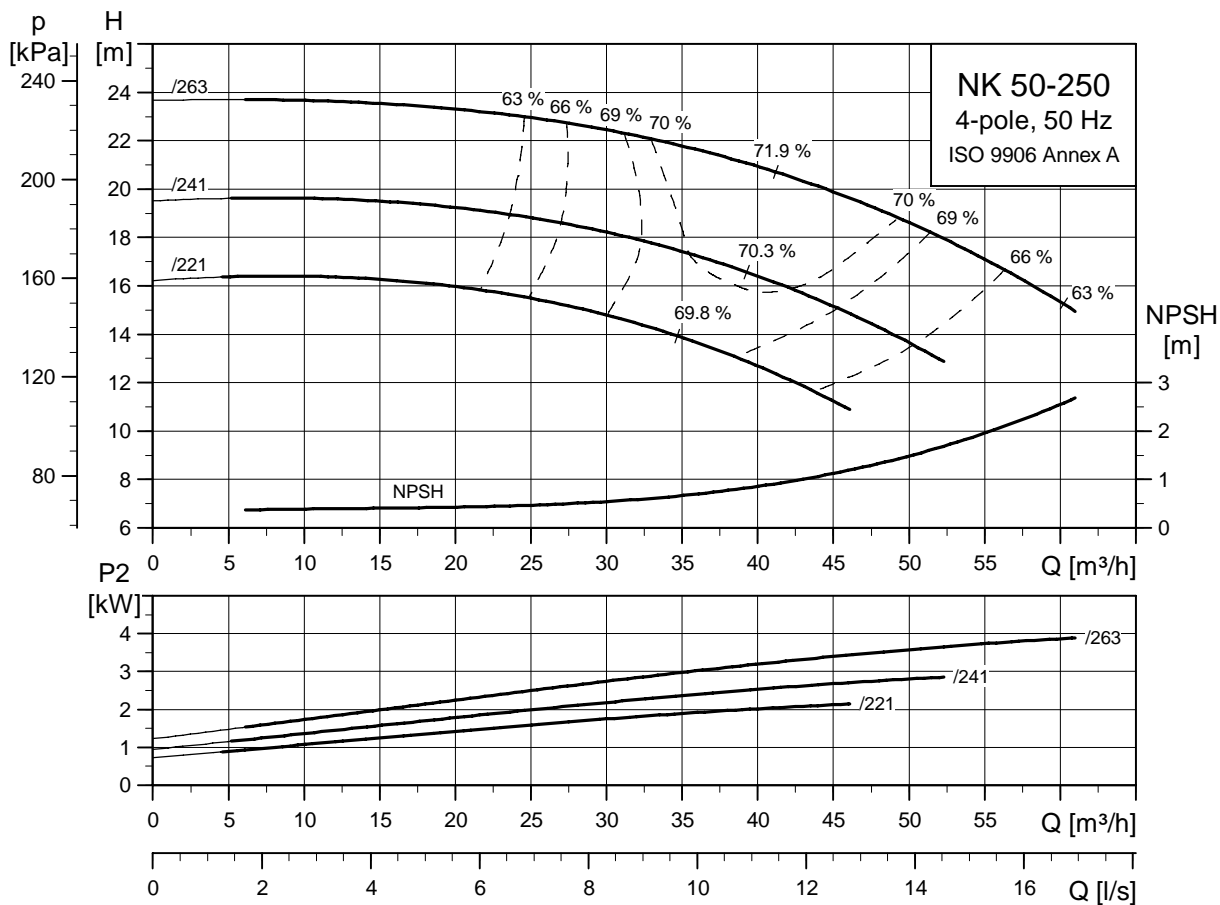
TM03 0508 0105

NK	50-200/171	50-200/188	50-200/210	50-200/219
<b>kW</b>	1.1	1.5	2.2	3
Standard motor range	MG 90SA-C	MG 90LA-C	MG 100LA-D	MG 100LB-D
Premium motor range	MG 90SB-D	MG 90LC-D	MG 100LB-D	MG 100LC-D
E-motor range	MGE 90SB-D	MGE 90LC-D	MGE 100LB-D	MGE 100LC-D
PN [bar]	16	16	16	16
DN <sub>d</sub> [mm]	50	50	50	50
DN <sub>s</sub> [mm]	65	65	65	65
a [mm]	100	100	100	100
a <sub>2</sub> [mm]	60	60	60	60
h [mm]	65	65	65	65
h <sub>2</sub> [mm]	200	200	200	200
h <sub>3</sub> [mm]	225	225	225	227
h <sub>4</sub> <sup>1)</sup> [mm]	335/335/392	335/335/392	345/345/402	347/345/402
<b>Standard coupling</b>				
l <sub>1</sub> <sup>1)</sup> [mm]	795/795/795	795/835/835	859/859/859	859/859/859
l <sub>1</sub> [mm]	900	900	900	900
l <sub>2</sub> [mm]	150	150	150	150
l <sub>3</sub> [mm]	600	600	600	600
b <sub>1</sub> [mm]	300	300	300	300
b <sub>2</sub> [mm]	390	390	390	390
b <sub>3</sub> [mm]	350	350	350	350
d [mm]	19	19	19	19
Weight <sup>1)</sup> Net [kg]	104/88/116	106/103/117	111/99/123	117/121/125
<b>Spacer coupling</b>				
l <sub>1</sub> <sup>1)</sup> [mm]	891/891/891	891/931/931	955/955/955	955/955/955
l <sub>1</sub> [mm]	900	900	900	900
l <sub>2</sub> [mm]	150	150	150	150
l <sub>3</sub> [mm]	600	600	600	600
b <sub>1</sub> [mm]	300	300	300	300
b <sub>2</sub> [mm]	390	390	390	390
b <sub>3</sub> [mm]	350	350	350	350
d [mm]	19	19	19	19
Weight <sup>1)</sup> Net [kg]	106/86/118	108/105/119	113/101/125	119/124/127

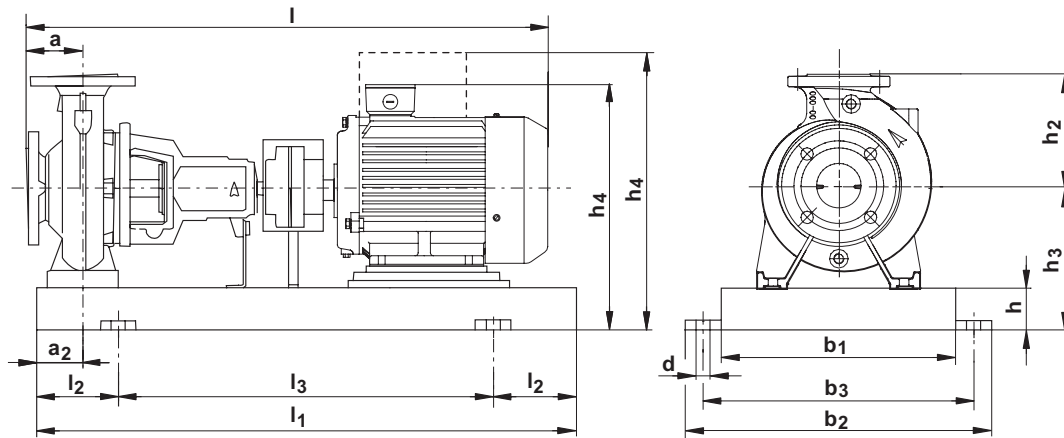
<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range

# Performance curves

NK 50-250  
4-pole



TM03142 606



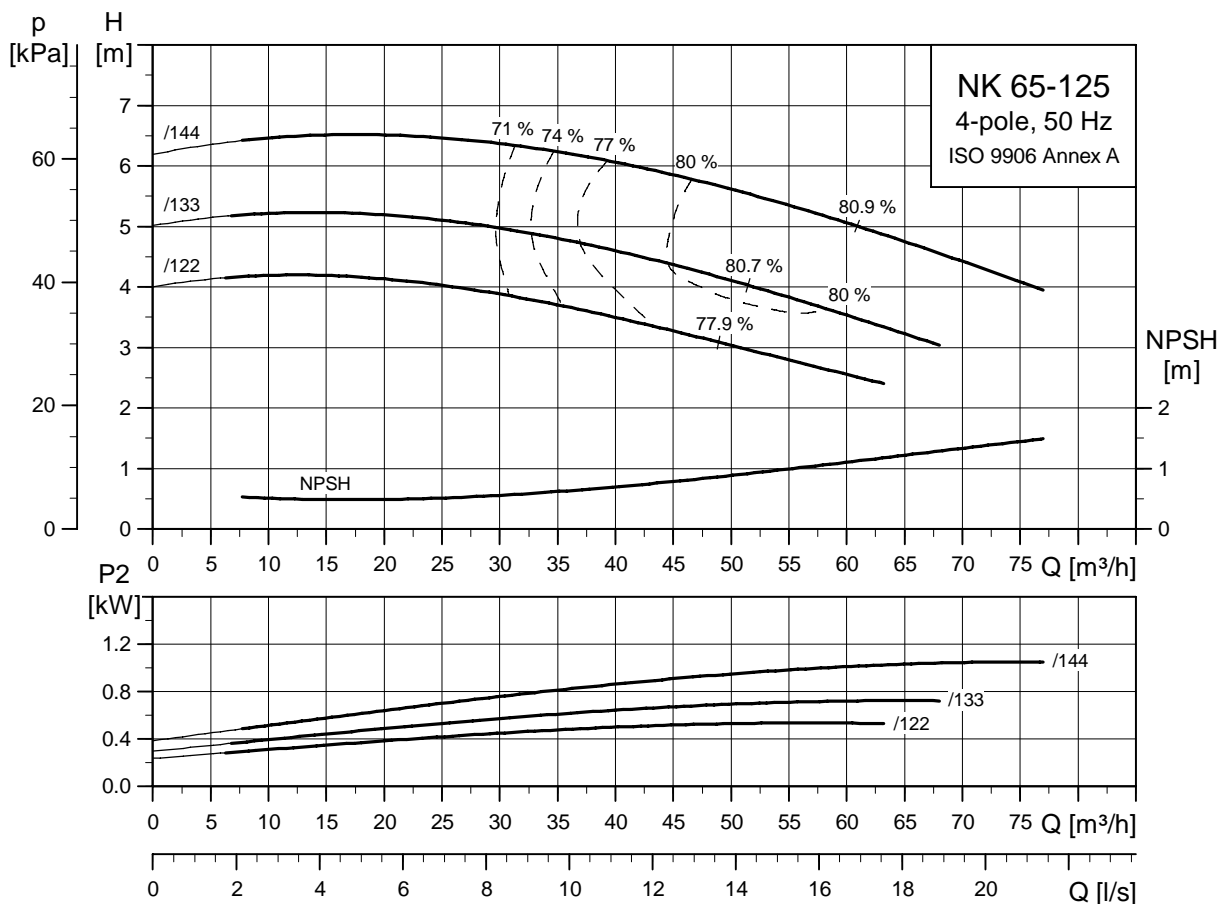
TM03 0508 0105

NK	50-250/221	50-250/241	50-250/263
<b>kW</b>	2.2	3	4
Standard motor range	MG 100LA-D	MG 100LB-D	MG 112MB-C
Premium motor range	MG 100LB-D	MG 100LC-D	MG 112MC-D
E-motor range	MGE 100LB-D	MGE 100LC-D	MGE 112MC-D
PN [bar]	16	16	16
DN <sub>d</sub> [mm]	50	50	50
DN <sub>s</sub> [mm]	65	65	65
a [mm]	100	100	100
a <sub>2</sub> [mm]	75	75	75
h [mm]	80	65	65
h <sub>2</sub> [mm]	225	225	225
h <sub>3</sub> [mm]	260	247	247
h <sub>4</sub> <sup>1)</sup> [mm]	380/380/437	367/380/437	381/381/435
<b>Standard coupling</b>			
l <sub>1</sub> <sup>1)</sup> [mm]	859/859/859	859/859/859	896/896/896
l <sub>1</sub> [mm]	1000	900	900
l <sub>2</sub> [mm]	170	150	150
l <sub>3</sub> [mm]	660	600	600
b <sub>1</sub> [mm]	340	300	300
b <sub>2</sub> [mm]	450	390	390
b <sub>3</sub> [mm]	400	350	350
d [mm]	24	19	19
Weight <sup>1)</sup> Net [kg]	132/104/144	128/131/146	133/124/148
<b>Spacer coupling</b>			
l <sub>1</sub> <sup>1)</sup> [mm]	955/955/955	955/955/955	992/992/992
l <sub>1</sub> [mm]	1000	900	900
l <sub>2</sub> [mm]	170	150	150
l <sub>3</sub> [mm]	660	600	600
b <sub>1</sub> [mm]	340	300	300
b <sub>2</sub> [mm]	450	390	390
b <sub>3</sub> [mm]	400	350	350
d [mm]	24	19	19
Weight <sup>1)</sup> Net [kg]	134/106/146	130/134/148	135/127/150

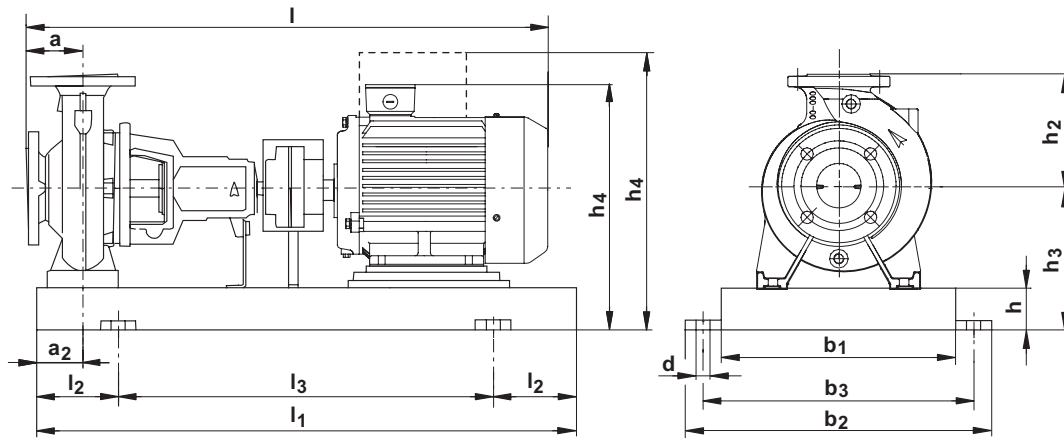
<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range

# Performance curves

NK 65-125  
4-pole



TM03 3143 0606



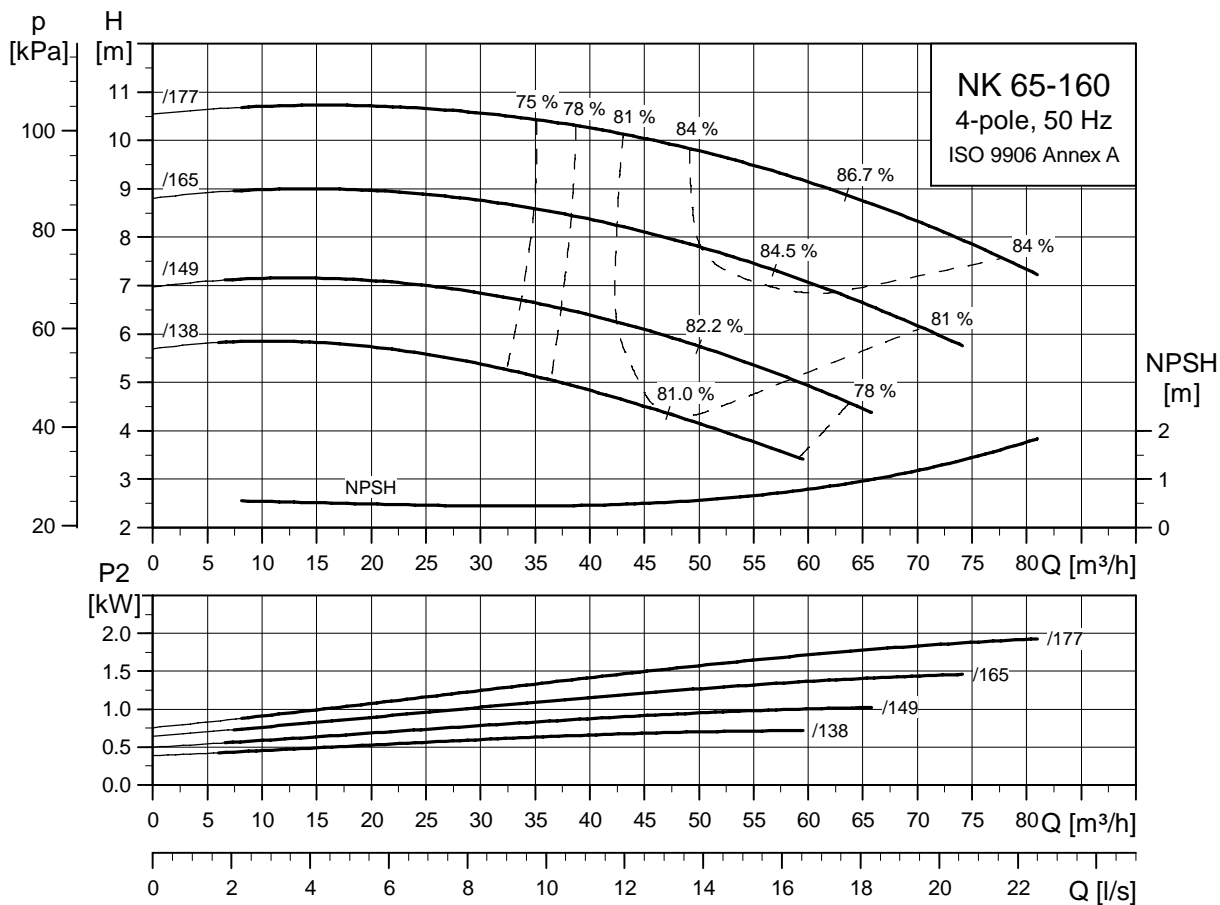
TM03 0508 0305

NK	65-125/122	65-125/133	65-125/144
kW	0.55	0.75	1.1
Standard motor range	MG 80A-C	MG 80B-C	MG 90SA-C
Premium motor range	-	-	MG 90SB-D
E-motor range	-	MGE 90SA-D	MGE 90SB-D
PN [bar]	16	16	16
DN <sub>d</sub> [mm]	65	65	65
DN <sub>s</sub> [mm]	80	80	80
a [mm]	100	100	100
a <sub>2</sub> [mm]	60	60	60
h [mm]	65	65	65
h <sub>2</sub> [mm]	180	180	180
h <sub>3</sub> [mm]	225	225	225
h <sub>4</sub> <sup>1)</sup> [mm]	334/-/	334/-/392	335/335/392
<b>Standard coupling</b>			
l <sub>1</sub> <sup>1)</sup> [mm]	735/-/	735/-/795	795/795/795
l <sub>1</sub> [mm]	900	900	900
l <sub>2</sub> [mm]	150	150	150
l <sub>3</sub> [mm]	600	600	600
b <sub>1</sub> [mm]	300	300	300
b <sub>2</sub> [mm]	390	390	390
b <sub>3</sub> [mm]	350	350	350
d [mm]	19	19	19
Weight <sup>1)</sup> Net [kg]	83/-/	84/-/95	89/86/101
<b>Spacer coupling</b>			
l <sub>1</sub> <sup>1)</sup> [mm]	831/-/	831/-/891	891/891/891
l <sub>1</sub> [mm]	900	900	900
l <sub>2</sub> [mm]	150	150	150
l <sub>3</sub> [mm]	600	600	600
b <sub>1</sub> [mm]	300	300	300
b <sub>2</sub> [mm]	390	390	390
b <sub>3</sub> [mm]	350	350	350
d [mm]	19	19	19
Weight <sup>1)</sup> Net [kg]	85/-/	86/-/97	91/88/103

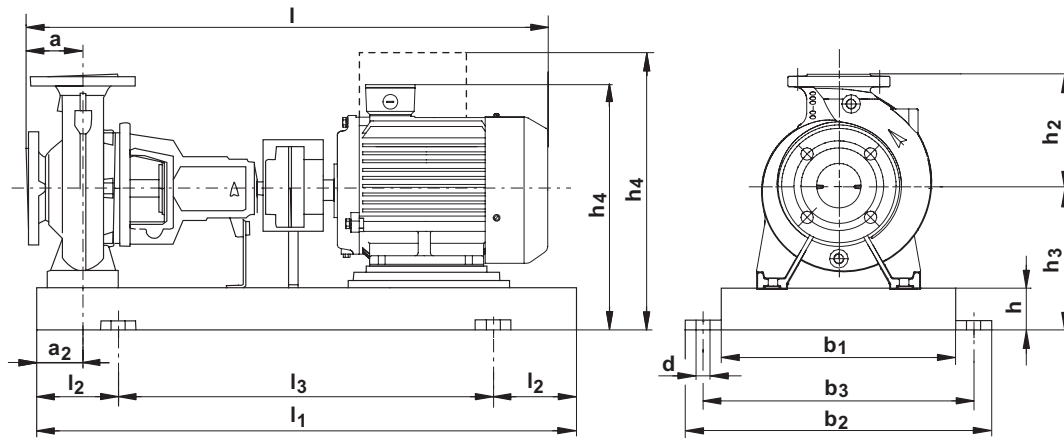
<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range

# Performance curves

NK 65-160  
4-pole



TM03 3144 0606



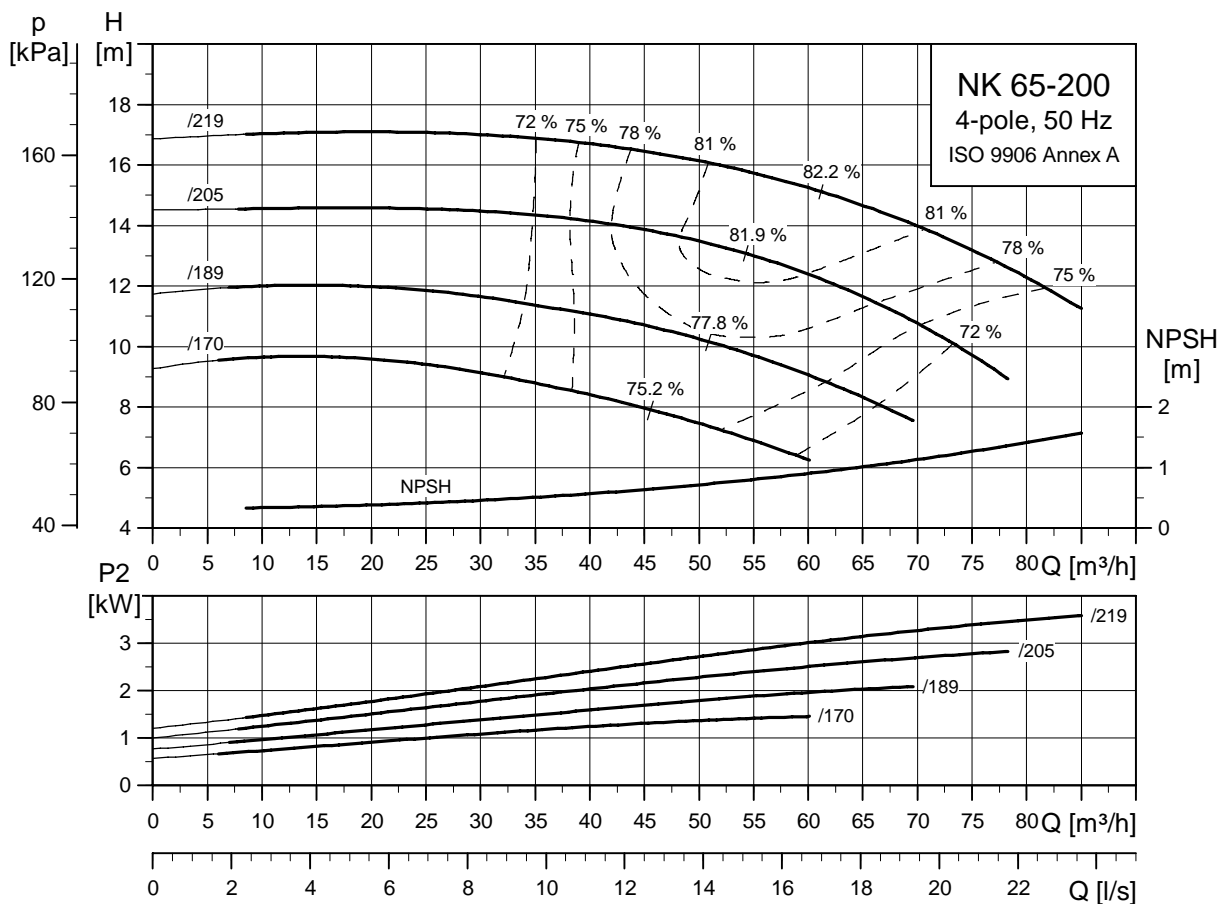
TM03 0508 0105

NK	65-160/138	65-160/149	65-160/165	65-160/177
<b>kW</b>	<b>0.75</b>	<b>1.1</b>	<b>1.5</b>	<b>2.2</b>
Standard motor range	MG 80B-C	MG 90SA-C	MG 90LA-C	MG 100LA-D
Premium motor range	-	MG 90SB-D	MG 90LC-D	MG 100LB-D
E-motor range	MGE 90SA-D	MGE 90SB-D	MGE 90LC-D	MGE 100LB-D
PN [bar]	16	16	16	16
DN <sub>d</sub> [mm]	65	65	65	65
DN <sub>s</sub> [mm]	80	80	80	80
a [mm]	100	100	100	100
a <sub>2</sub> [mm]	60	60	60	60
h [mm]	65	65	65	65
h <sub>2</sub> [mm]	200	200	200	200
h <sub>3</sub> [mm]	225	225	225	225
h <sub>4</sub> <sup>1)</sup> [mm]	334/-/392	335/335/392	335/335/392	345/345/402
<b>Standard coupling</b>				
l <sub>1</sub> <sup>1)</sup> [mm]	735/-/795	795/795/795	795/835/835	859/859/859
l <sub>1</sub> [mm]	900	900	900	900
l <sub>2</sub> [mm]	150	150	150	150
l <sub>3</sub> [mm]	600	600	600	600
b <sub>1</sub> [mm]	300	300	300	300
b <sub>2</sub> [mm]	390	390	390	390
b <sub>3</sub> [mm]	350	350	350	350
d [mm]	19	19	19	19
Weight <sup>1)</sup> Net [kg]	89/-/100	94/89/106	96/95/107	101/99/113
<b>Spacer coupling</b>				
l <sub>1</sub> <sup>1)</sup> [mm]	831/-/891	891/891/891	891/931/931	955/955/955
l <sub>1</sub> [mm]	900	900	900	900
l <sub>2</sub> [mm]	150	150	150	150
l <sub>3</sub> [mm]	600	600	600	600
b <sub>1</sub> [mm]	300	300	300	300
b <sub>2</sub> [mm]	390	390	390	390
b <sub>3</sub> [mm]	350	350	350	350
d [mm]	19	19	19	19
Weight <sup>1)</sup> Net [kg]	91/-/102	96/91/108	98/97/109	103/101/115

<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range

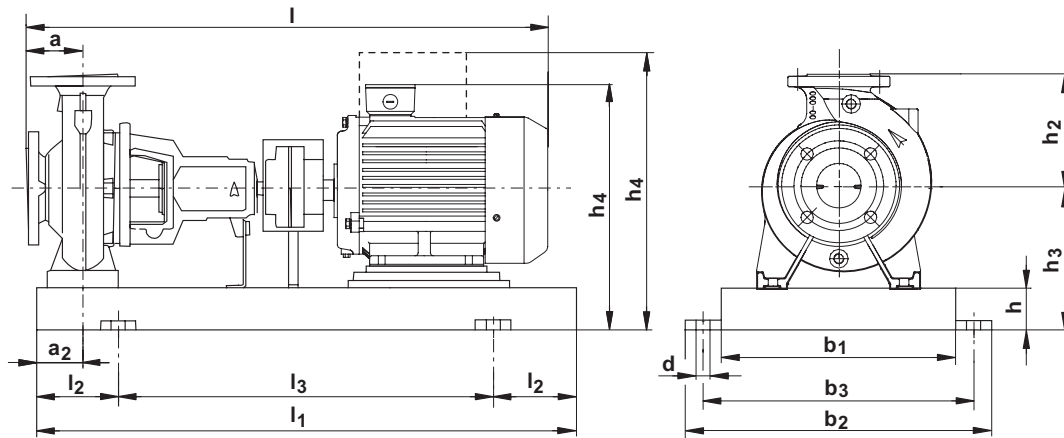
# Performance curves

NK 65-200  
4-pole



TM03 3145 0606





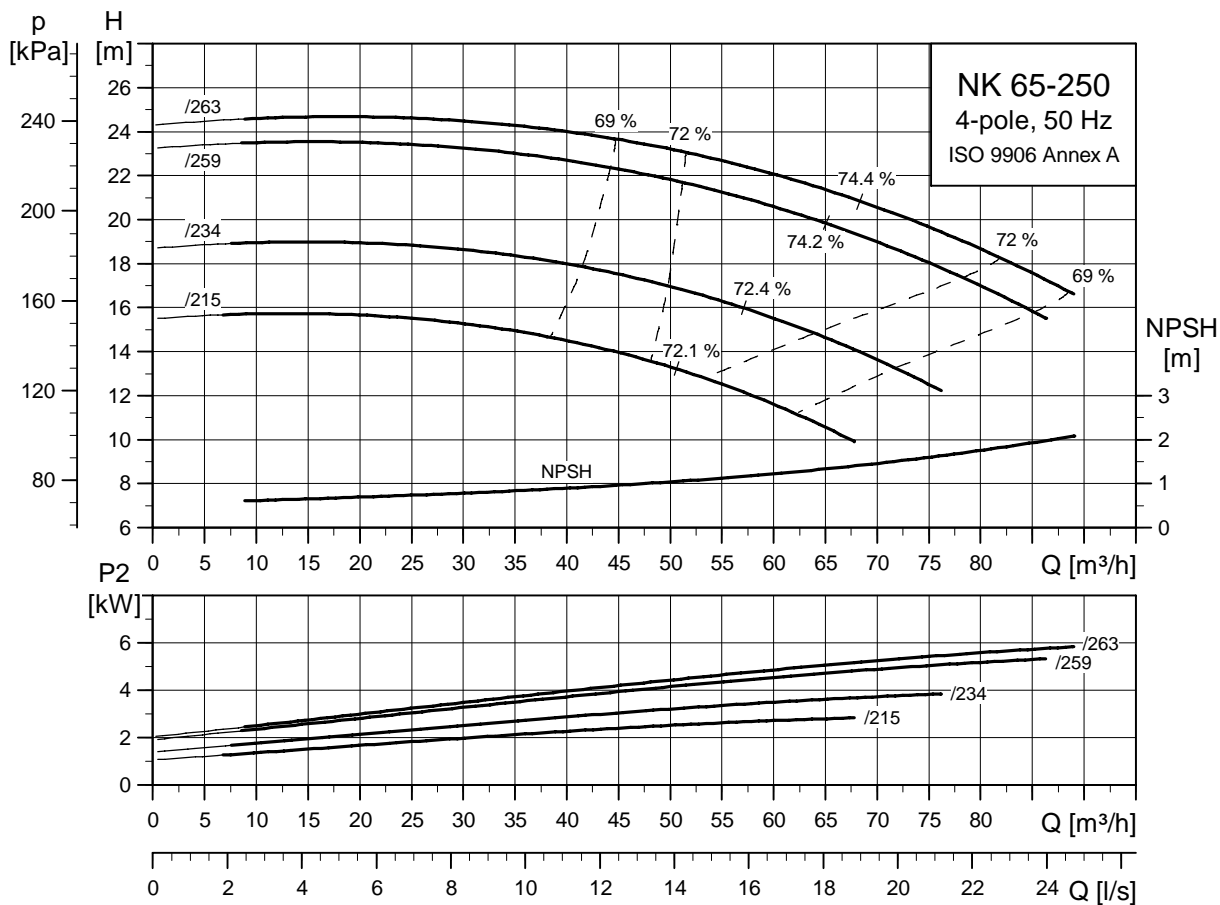
TM03 0508 0105

NK	65-200/170	65-200/189	65-200/205	65-200/219
<b>kW</b>	1.5	2.2	3	4
Standard motor range	MG 90LA-C	MG 100LA-D	MG 100LB-D	MG 112MB-C
Premium motor range	MG 90LC-D	MG 100LB-D	MG 100LC-D	MG 112MC-D
E-motor range	MGE 90LC-D	MGE 100LB-D	MGE 100LC-D	MGE 112MC-D
PN [bar]	16	16	16	16
DN <sub>d</sub> [mm]	65	65	65	65
DN <sub>s</sub> [mm]	80	80	80	80
a [mm]	100	100	100	100
a <sub>2</sub> [mm]	75	75	75	75
h [mm]	80	80	80	80
h <sub>2</sub> [mm]	225	225	225	225
h <sub>3</sub> [mm]	260	260	262	262
h <sub>4</sub> <sup>1)</sup> [mm]	370/370/427	380/380/437	382/380/437	396/396/450
<b>Standard coupling</b>				
l <sub>1</sub> <sup>1)</sup> [mm]	795/835/835	859/859/859	859/859/859	896/896/896
l <sub>1</sub> [mm]	1000	1120	1120	1120
l <sub>2</sub> [mm]	170	190	190	190
l <sub>3</sub> [mm]	660	740	740	740
b <sub>1</sub> [mm]	340	380	380	380
b <sub>2</sub> [mm]	450	490	490	490
b <sub>3</sub> [mm]	400	440	440	440
d [mm]	24	24	24	24
Weight <sup>1)</sup> Net [kg]	115/90/126	128/107/140	134/124/142	139/134/154
<b>Spacer coupling</b>				
l <sub>1</sub> <sup>1)</sup> [mm]	931/971/931	995/995/995	995/995/995	1032/1032/1032
l <sub>1</sub> [mm]	1000	1120	1120	1120
l <sub>2</sub> [mm]	170	190	190	190
l <sub>3</sub> [mm]	660	740	740	740
b <sub>1</sub> [mm]	340	380	380	380
b <sub>2</sub> [mm]	450	490	490	490
b <sub>3</sub> [mm]	400	440	440	440
d [mm]	24	24	24	24
Weight <sup>1)</sup> Net [kg]	117/92/128	130/109/142	136/127/144	141/137/156

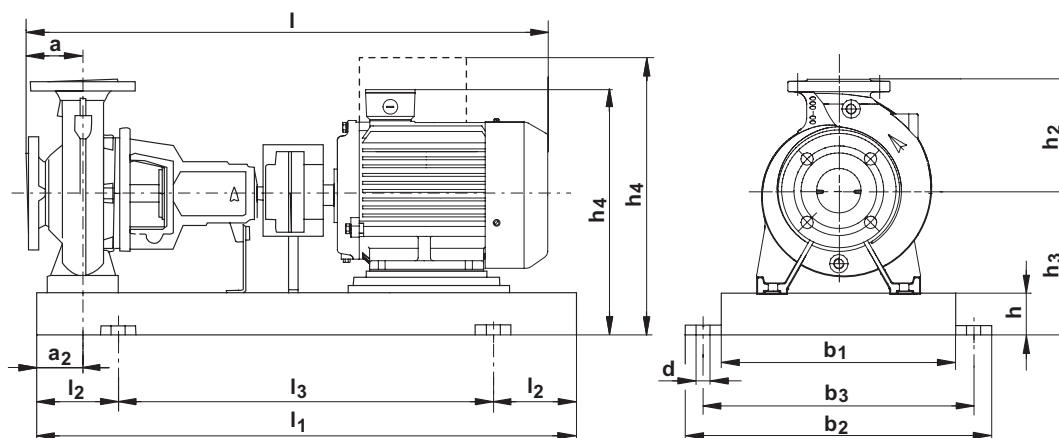
<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range

# Performance curves

NK 65-250  
4-pole



TM03 3146 0606



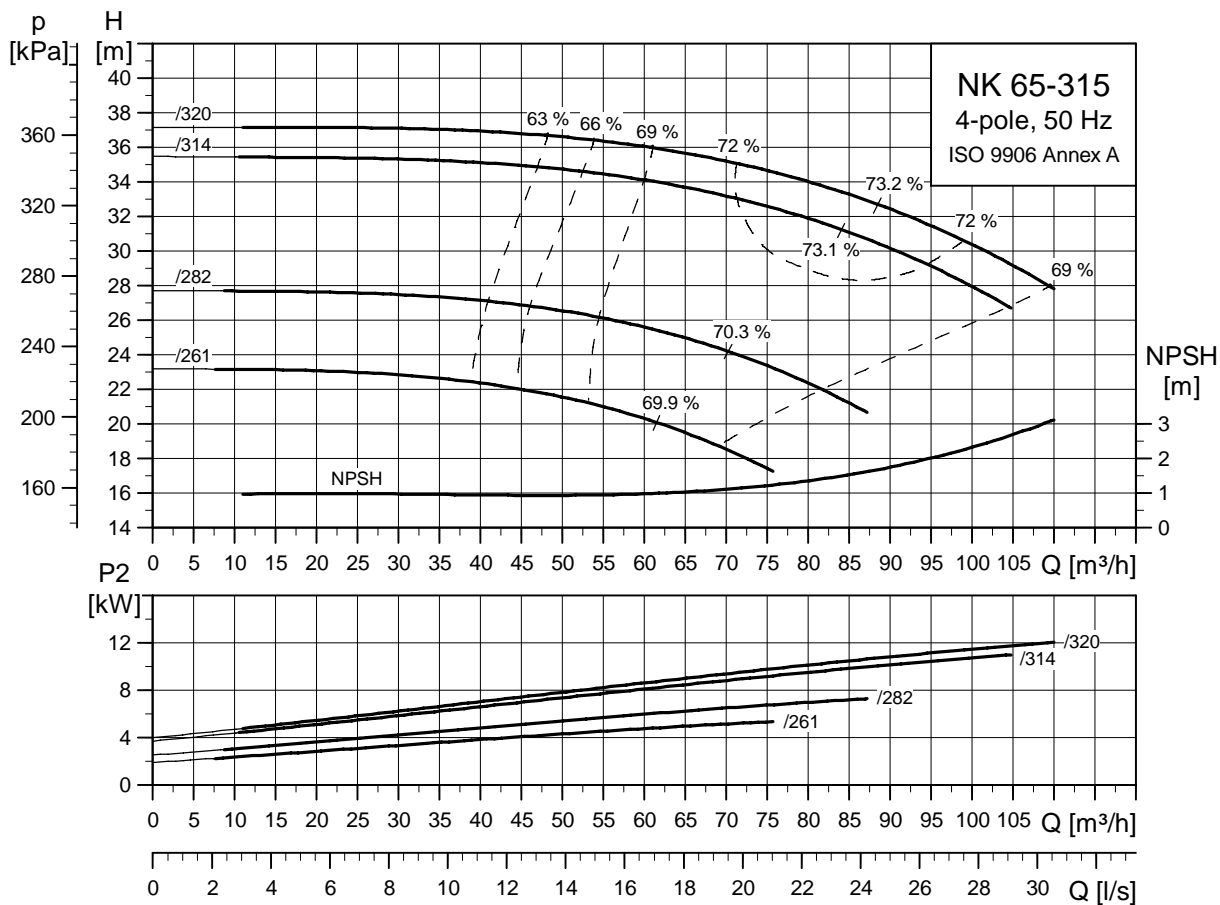
TM03 0508 0105

NK		65-250/215	65-250/234	65-250/259	65-250/263
<b>kW</b>		3	4	5.5	7.5
Standard motor range		MG 100LB-D	MG 112MB-C	MG 132SC-C	MMG 132M-E
Premium motor range		MG 100LC-D	MG 112MC-D	MMG 132S-D	MMG 132M-D
E-motor range		MGE 100LC-D	MGE 112MC-D	MGE 132SC-D	MMGE 160M
PN	[bar]	16	16	16	16
DN <sub>d</sub>	[mm]	65	65	65	65
DN <sub>s</sub>	[mm]	80	80	80	80
a	[mm]	100	100	100	100
a <sub>2</sub>	[mm]	90	90	90	90
h	[mm]	80	80	80	80
h <sub>2</sub>	[mm]	250	250	250	250
h <sub>3</sub>	[mm]	282	282	282	282
h <sub>4</sub> <sup>1)</sup>	[mm]	402/400/457	416/416/470	416/479/470	482/479/673
<b>Standard coupling</b>					
l <sub>1</sub> <sup>1)</sup>	[mm]	969/969/969	1006/1006/1006	1045/1073/1045	1037/1111/1133
l <sub>1</sub>	[mm]	1120	1120	1120	1120
l <sub>2</sub>	[mm]	190	190	190	190
l <sub>3</sub>	[mm]	740	740	740	740
b <sub>1</sub>	[mm]	380	380	380	380
b <sub>2</sub>	[mm]	490	490	490	490
b <sub>3</sub>	[mm]	440	440	440	440
d	[mm]	24	24	24	24
Weight <sup>1)</sup>	Net [kg]	169/123/176	174/119/189	181/243/199	223/214/274
<b>Spacer coupling</b>					
l <sub>1</sub> <sup>1)</sup>	[mm]	1105/1105/1105	1142/1142/1142	1181/1209/1181	1173/1247/1269
l <sub>1</sub>	[mm]	1120	1120	1120	1120
l <sub>2</sub>	[mm]	190	190	190	190
l <sub>3</sub>	[mm]	740	740	740	740
b <sub>1</sub>	[mm]	380	380	380	380
b <sub>2</sub>	[mm]	490	490	490	490
b <sub>3</sub>	[mm]	440	440	440	440
d	[mm]	24	24	24	24
Weight <sup>1)</sup>	Net [kg]	171/126/179	176/122/191	183/246/201	226/217/277

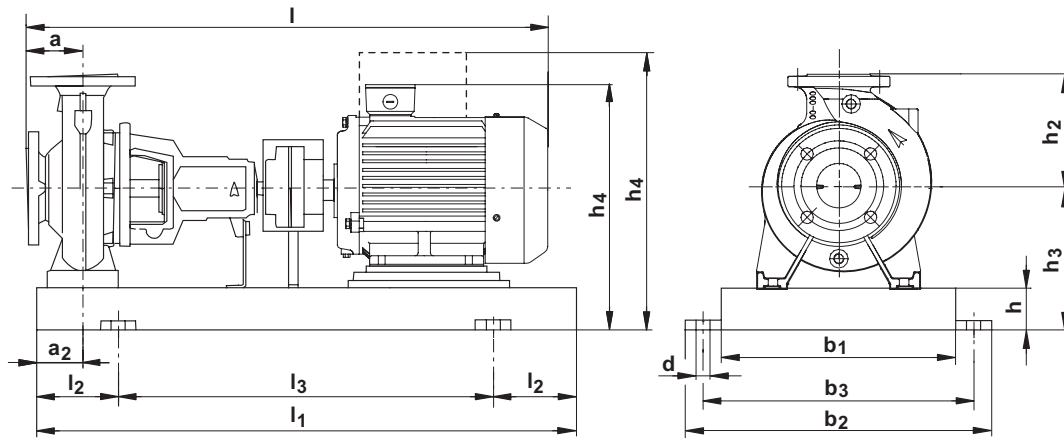
<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range

# Performance curves

NK 65-315  
4-pole



TM03 3147 0606



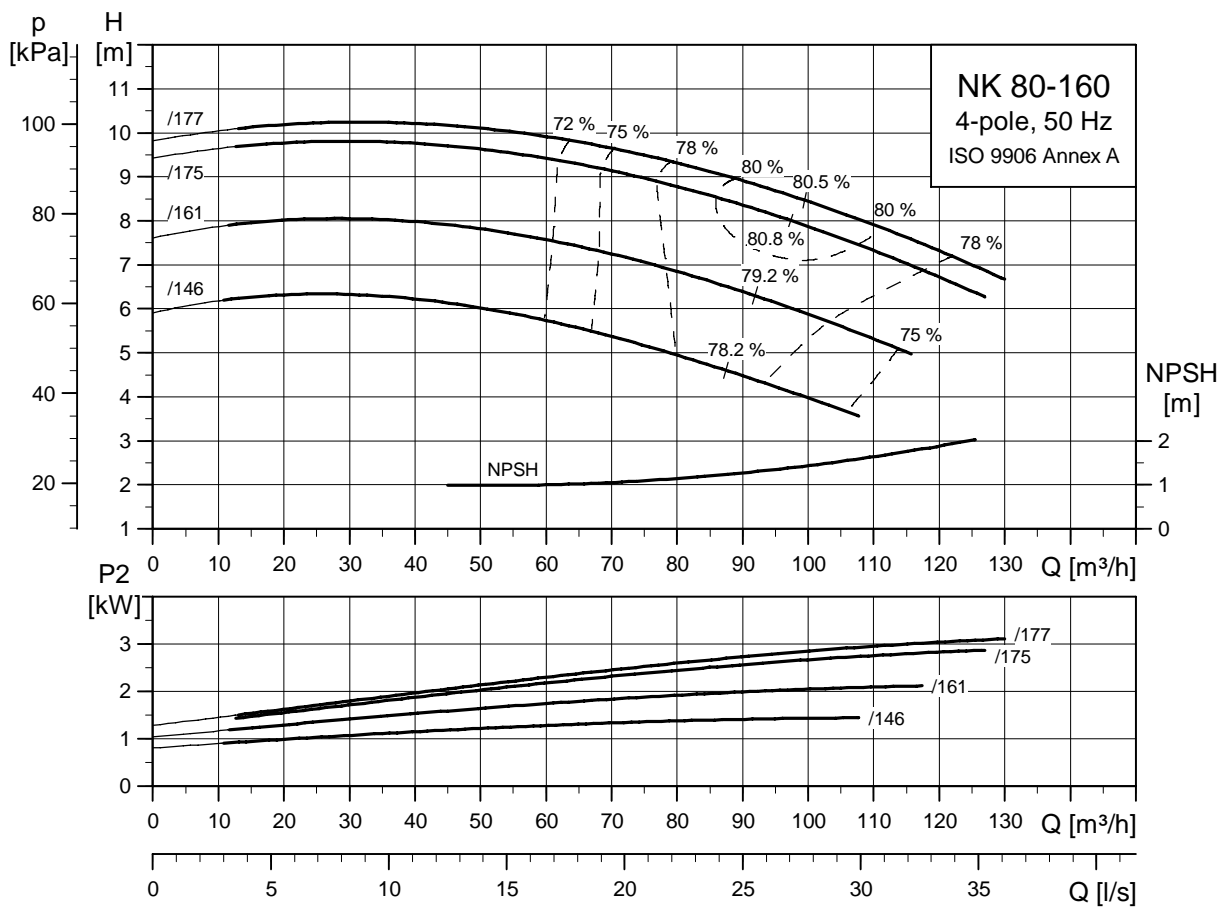
TM03 0508 0105

NK		65-315/261	65-315/282	65-315/314	65-315/320
<b>kW</b>		5.5	7.5	11	15
Standard motor range		MG 132SC-C	MMG 132M-E	MMG 160MA-E	MMG 160L-E
Premium motor range		MMG 132S-D	MMG 132M-D	MMG 160M-D	MMG 160L-D
E-motor range		MGE 132SC-D	MMGE 160M	MMGE 160M	MMGE 160L
PN	[bar]	16	16	16	16
DN <sub>d</sub>	[mm]	65	65	65	65
DN <sub>s</sub>	[mm]	80	80	80	80
a	[mm]	125	125	125	125
a <sub>2</sub>	[mm]	90	90	90	90
h	[mm]	80	80	80	80
h <sub>2</sub>	[mm]	280	280	280	280
h <sub>3</sub>	[mm]	305	305	310	310
h <sub>4</sub> <sup>1)</sup>	[mm]	439/502/493	505/502/696	558/554/701	558/574/748
<b>Standard coupling</b>					
l <sub>1</sub> <sup>1)</sup>	[mm]	1070/1098/1070	1062/1136/1158	1207/1211/1158	1251/1256/1208
l <sub>1</sub>	[mm]	1250	1250	1250	1250
l <sub>2</sub>	[mm]	205	205	205	205
l <sub>3</sub>	[mm]	840	840	840	840
b <sub>1</sub>	[mm]	430	430	430	430
b <sub>2</sub>	[mm]	540	540	540	540
b <sub>3</sub>	[mm]	490	490	490	490
d	[mm]	24	24	24	28
Weight <sup>1)</sup>	Net [kg]	204/211/222	246/224/297	294/254/297	310/422/334
<b>Spacer coupling</b>					
l <sub>1</sub> <sup>1)</sup>	[mm]	1206/1234/1206	1198/1272/1294	1343/1347/1294	1387/1392/1344
l <sub>1</sub>	[mm]	1250	1250	1250	1250
l <sub>2</sub>	[mm]	205	205	205	205
l <sub>3</sub>	[mm]	840	840	840	840
b <sub>1</sub>	[mm]	430	430	430	430
b <sub>2</sub>	[mm]	540	540	540	540
b <sub>3</sub>	[mm]	490	490	490	490
d	[mm]	24	24	24	28
Weight <sup>1)</sup>	Net [kg]	206/201/224	249/227/300	297/257/300	313/418/337

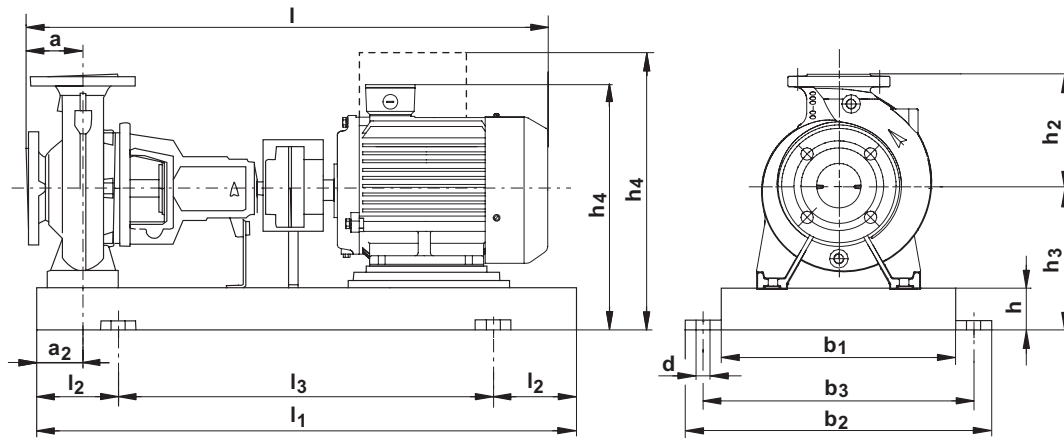
<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range

# Performance curves

NK 80-160  
4-pole



TM03 3148 0606



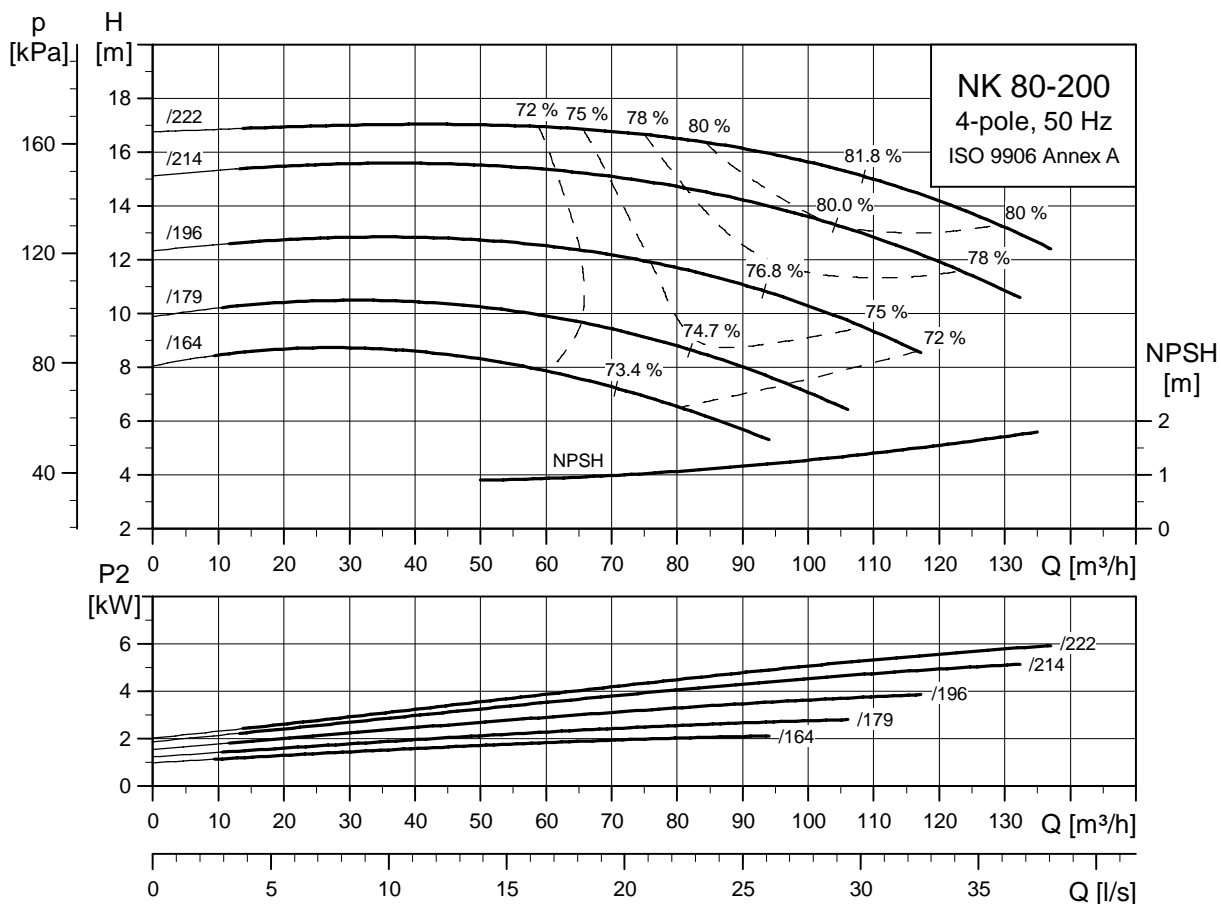
TM03 0508 0105

NK	80-160/146	80-160/161	80-160/175	80-160/177
<b>kW</b>	1.5	2.2	3	4
Standard motor range	MG 90LA-C	MG 100LA-D	MG 100LB-D	MG 112MB-C
Premium motor range	MG 90LC-D	MG 100LB-D	MG 100LC-D	MG 112MC-D
E-motor range	MGE 90LC-D	MGE 100LB-D	MGE 100LC-D	MGE 112MC-D
PN [bar]	16	16	16	16
DN <sub>d</sub> [mm]	80	80	80	80
DN <sub>s</sub> [mm]	100	100	100	100
a [mm]	125	125	125	125
a <sub>2</sub> [mm]	75	75	75	75
h [mm]	80	80	80	80
h <sub>2</sub> [mm]	225	225	225	225
h <sub>3</sub> [mm]	260	260	262	262
h <sub>4</sub> <sup>1)</sup> [mm]	370/370/427	380/380/437	382/380/437	396/396/450
<b>Standard coupling</b>				
l <sub>1</sub> <sup>1)</sup> [mm]	820/860/860	884/884/884	884/884/884	921/921/921
l <sub>1</sub> [mm]	1000	1000	1000	1000
l <sub>2</sub> [mm]	170	170	170	170
l <sub>3</sub> [mm]	660	660	660	660
b <sub>1</sub> [mm]	340	340	340	340
b <sub>2</sub> [mm]	450	450	450	450
b <sub>3</sub> [mm]	400	400	400	400
d [mm]	24	24	24	24
Weight <sup>1)</sup> Net [kg]	115/101/126	120/106/132	126/128/134	131/127/146
<b>Spacer coupling</b>				
l <sub>1</sub> <sup>1)</sup> [mm]	956/996/956	1020/1020/1020	1020/1020/1020	1057/1057/1057
l <sub>1</sub> [mm]	1000	1000	1000	1000
l <sub>2</sub> [mm]	170	170	170	170
l <sub>3</sub> [mm]	660	660	660	660
b <sub>1</sub> [mm]	340	340	340	340
b <sub>2</sub> [mm]	450	450	450	450
b <sub>3</sub> [mm]	400	400	400	400
d [mm]	24	24	24	24
Weight <sup>1)</sup> Net [kg]	117/99/128	122/108/134	128/131/136	133/130/148

<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range

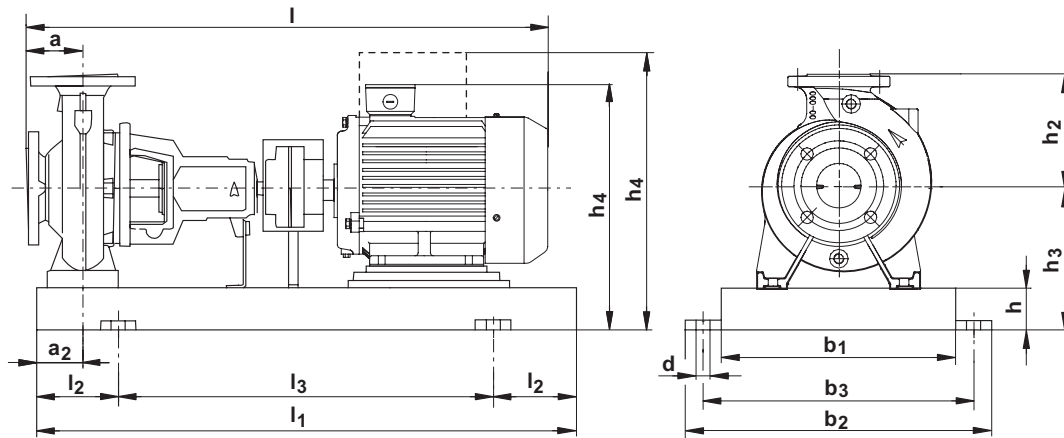
# Performance curves

NK 80-200  
4-pole



TM03 3149 0606





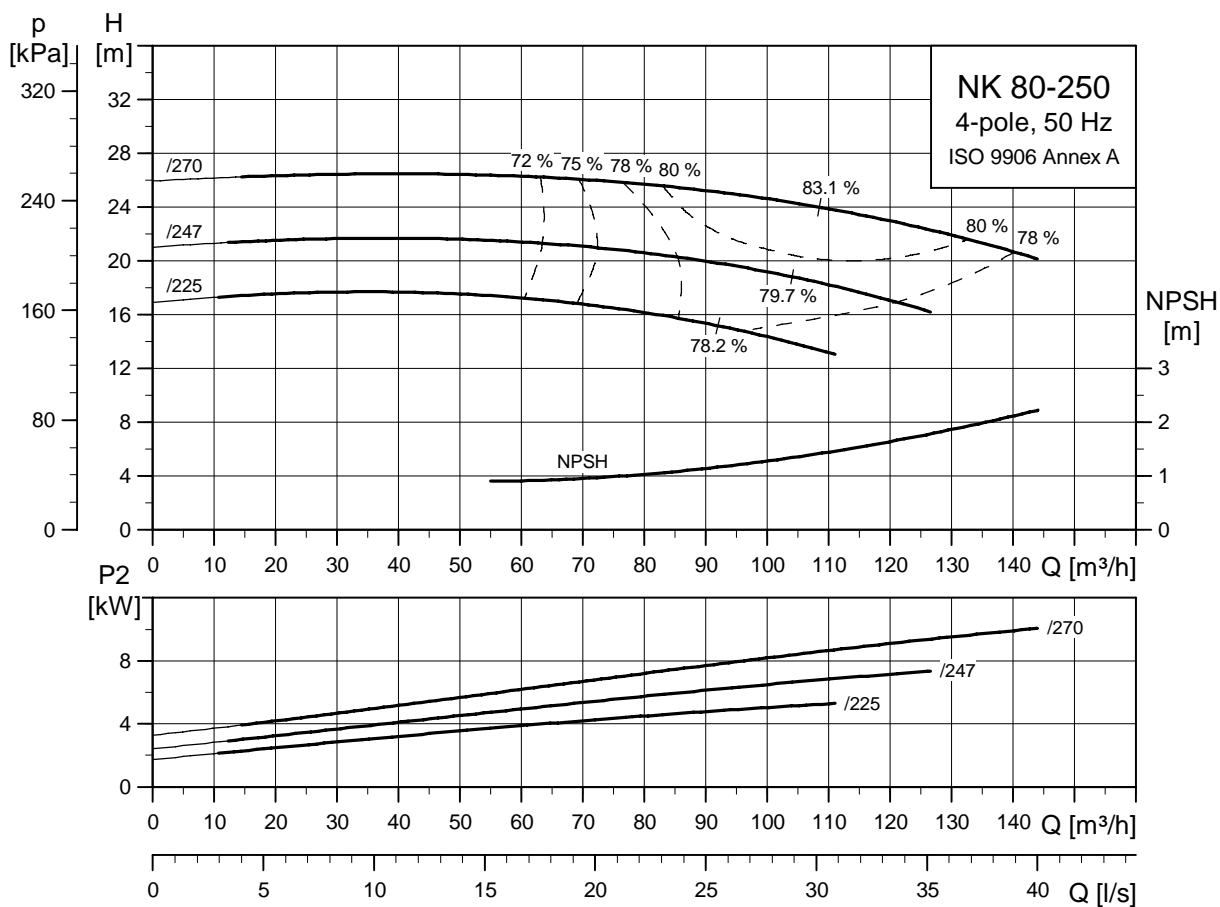
TM03 0508 0105

NK	80-200/164	80-200/179	80-200/196	80-200/214	80-200/222
kW	2.2	3	4	5.5	7.5
Standard motor range	MG 100LA-D	MG 100LB-D	MG 112MB-C	MG 132SC-C	MMG 132M-E
Premium motor range	MG 100LB-D	MG 100LC-D	MG 112MC-D	MMG 132S-D	MMG 132M-D
E-motor range	MGE 100LB-D	MGE 100LC-D	MGE 112MC-D	MGE 132SC-D	MMGE 160M
PN [bar]	16	16	16	16	16
DN <sub>d</sub> [mm]	80	80	80	80	80
DN <sub>s</sub> [mm]	100	100	100	100	100
a [mm]	125	125	125	125	125
a <sub>2</sub> [mm]	75	75	75	75	75
h [mm]	80	80	80	80	80
h <sub>2</sub> [mm]	250	250	250	250	250
h <sub>3</sub> [mm]	260	262	262	262	262
h <sub>4</sub> <sup>1)</sup> [mm]	380/380/437	382/380/437	396/396/450	396/459/450	462/459/653
<b>Standard coupling</b>					
l <sub>1</sub> <sup>1)</sup> [mm]	994/994/994	994/994/994	1031/1031/1031	1070/1098/1070	1062/1136/1158
l <sub>1</sub> [mm]	1120	1120	1120	1120	1120
l <sub>2</sub> [mm]	190	190	190	190	190
l <sub>3</sub> [mm]	740	740	740	740	740
b <sub>1</sub> [mm]	380	380	380	380	380
b <sub>2</sub> [mm]	490	490	490	490	490
b <sub>3</sub> [mm]	440	440	440	440	440
d [mm]	24	24	24	24	24
Weight <sup>1)</sup> Net [kg]	147/122/158	153/125/160	158/141/173	165/212/183	207/251/258
<b>Spacer coupling</b>					
l <sub>1</sub> <sup>1)</sup> [mm]	1130/1130/1130	1130/1130/1130	1167/1167/1167	1206/1234/1206	1198/1272/1294
l <sub>1</sub> [mm]	1120	1120	1120	1120	1120
l <sub>2</sub> [mm]	190	190	190	190	190
l <sub>3</sub> [mm]	740	740	740	740	740
b <sub>1</sub> [mm]	380	380	380	380	380
b <sub>2</sub> [mm]	490	490	490	490	490
b <sub>3</sub> [mm]	440	440	440	440	440
d [mm]	24	24	24	24	24
Weight <sup>1)</sup> Net [kg]	149/119/161	155/122/163	160/144/175	167/223/185	210/254/261

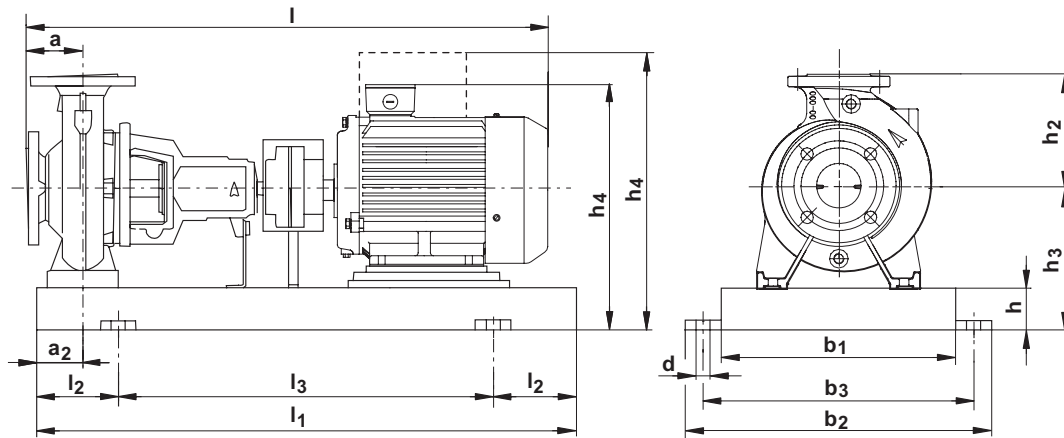
<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range

# Performance curves

NK 80-250  
4-pole



TM03 3150 0606



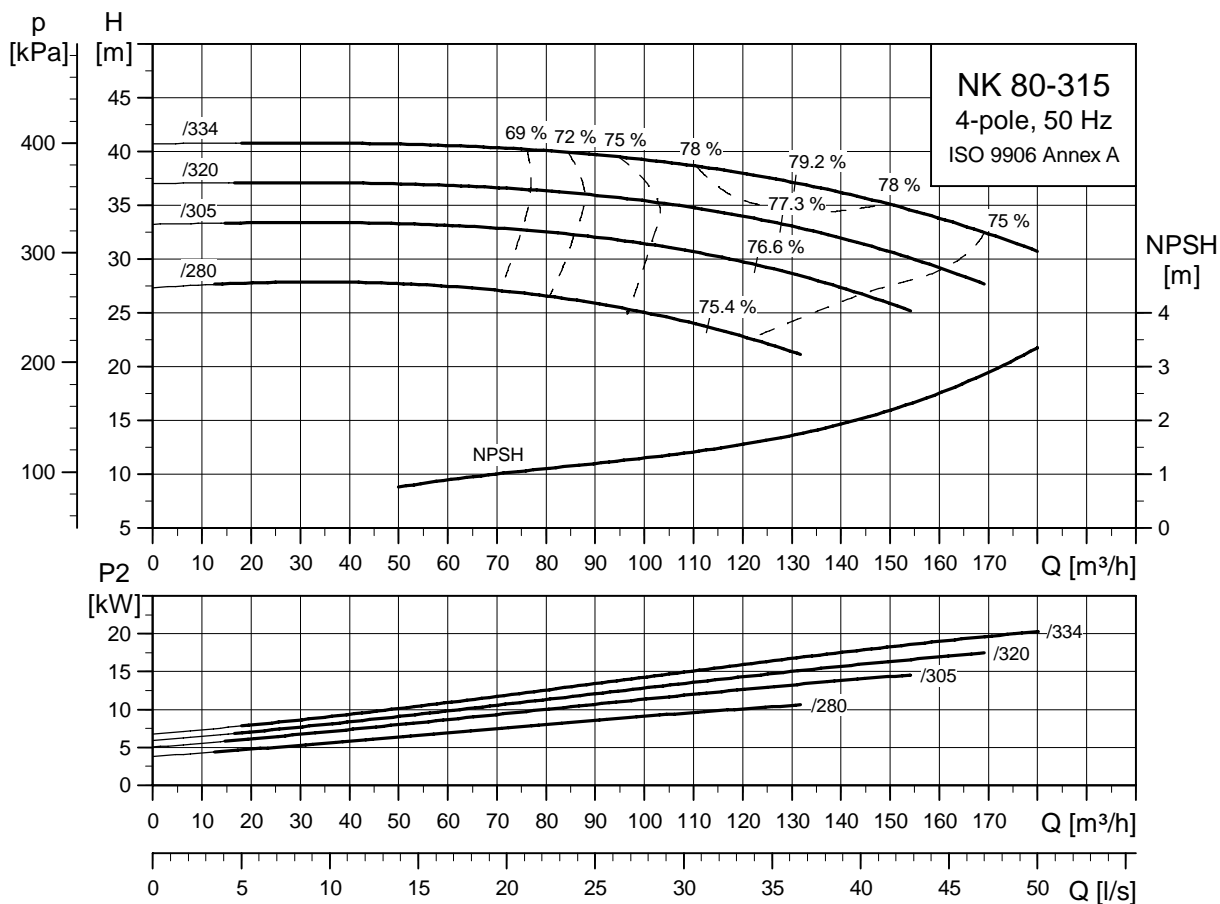
TM03 0508 0105

NK	80-250/225	80-250/247	80-250/270
kW	5.5	7.5	11
Standard motor range	MG 132SC-C	MMG 132M-E	MMG 160MA-E
Premium motor range	MMG 132S-D	MMG 132M-D	MMG 160M-D
E-motor range	MGE 132SC-D	MMGE 160M	MMGE 160M
PN [bar]	16	16	16
DN <sub>d</sub> [mm]	80	80	80
DN <sub>s</sub> [mm]	100	100	100
a [mm]	125	125	125
a <sub>2</sub> [mm]	90	90	90
h [mm]	80	80	80
h <sub>2</sub> [mm]	280	280	280
h <sub>3</sub> [mm]	282	282	280
h <sub>4</sub> <sup>1)</sup> [mm]	416/479/470	482/479/673	528/524/671
<b>Standard coupling</b>			
l <sup>1)</sup> [mm]	1070/1098/1070	1062/1136/1158	1207/1211/1158
l <sub>1</sub> [mm]	1250	1250	1250
l <sub>2</sub> [mm]	205	205	205
l <sub>3</sub> [mm]	840	840	840
b <sub>1</sub> [mm]	430	430	430
b <sub>2</sub> [mm]	540	540	540
b <sub>3</sub> [mm]	490	490	490
d [mm]	24	24	24
Weight <sup>1)</sup> Net [kg]	197/226/215	239/217/290	287/244/290
<b>Spacer coupling</b>			
l <sup>1)</sup> [mm]	1206/1234/1206	1198/1272/1294	1343/1347/1294
l <sub>1</sub> [mm]	1250	1250	1250
l <sub>2</sub> [mm]	205	205	205
l <sub>3</sub> [mm]	840	840	840
b <sub>1</sub> [mm]	430	430	430
b <sub>2</sub> [mm]	540	540	540
b <sub>3</sub> [mm]	490	490	490
d [mm]	24	24	24
Weight <sup>1)</sup> Net [kg]	199/208/217	242/220/293	290/247/293

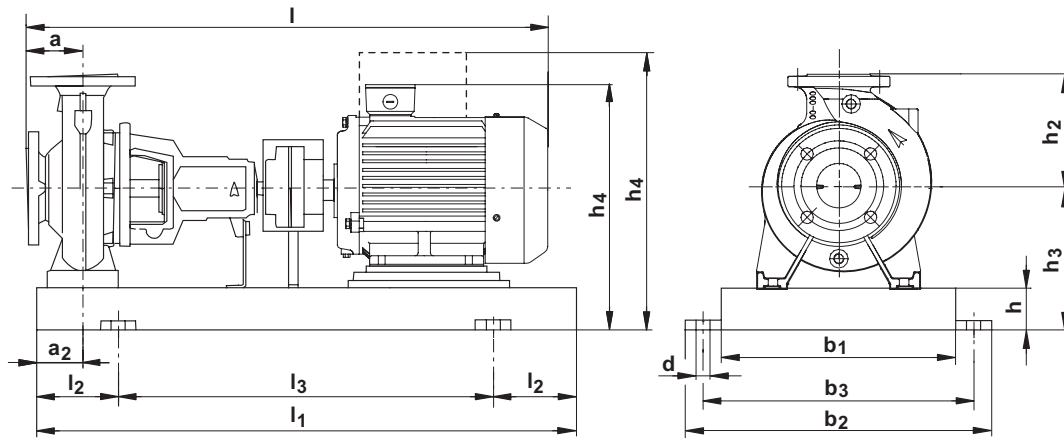
<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range

# Performance curves

NK 80-315  
4-pole



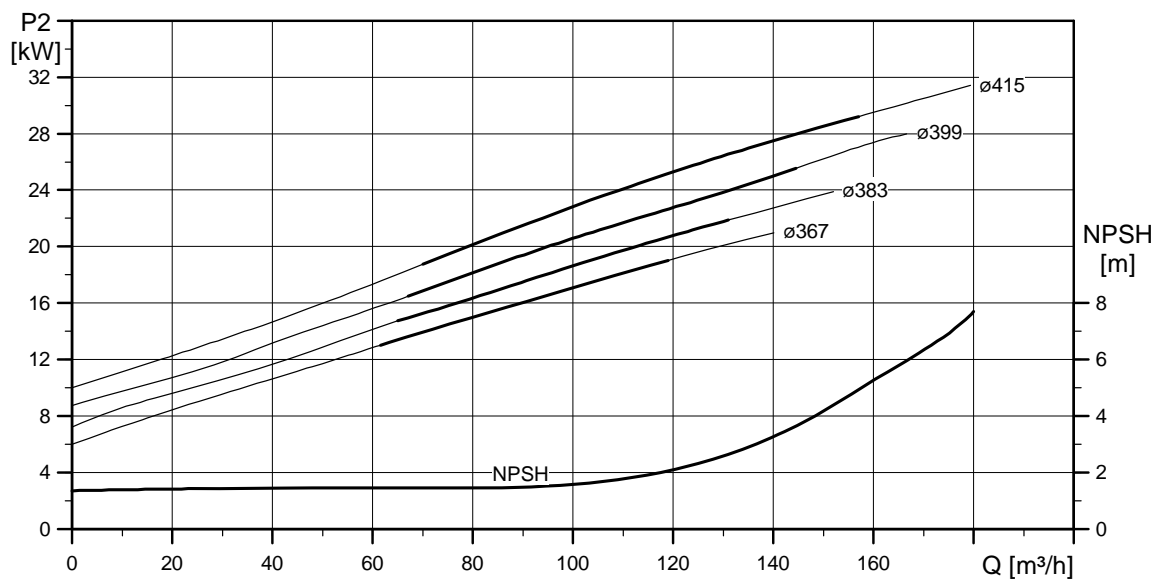
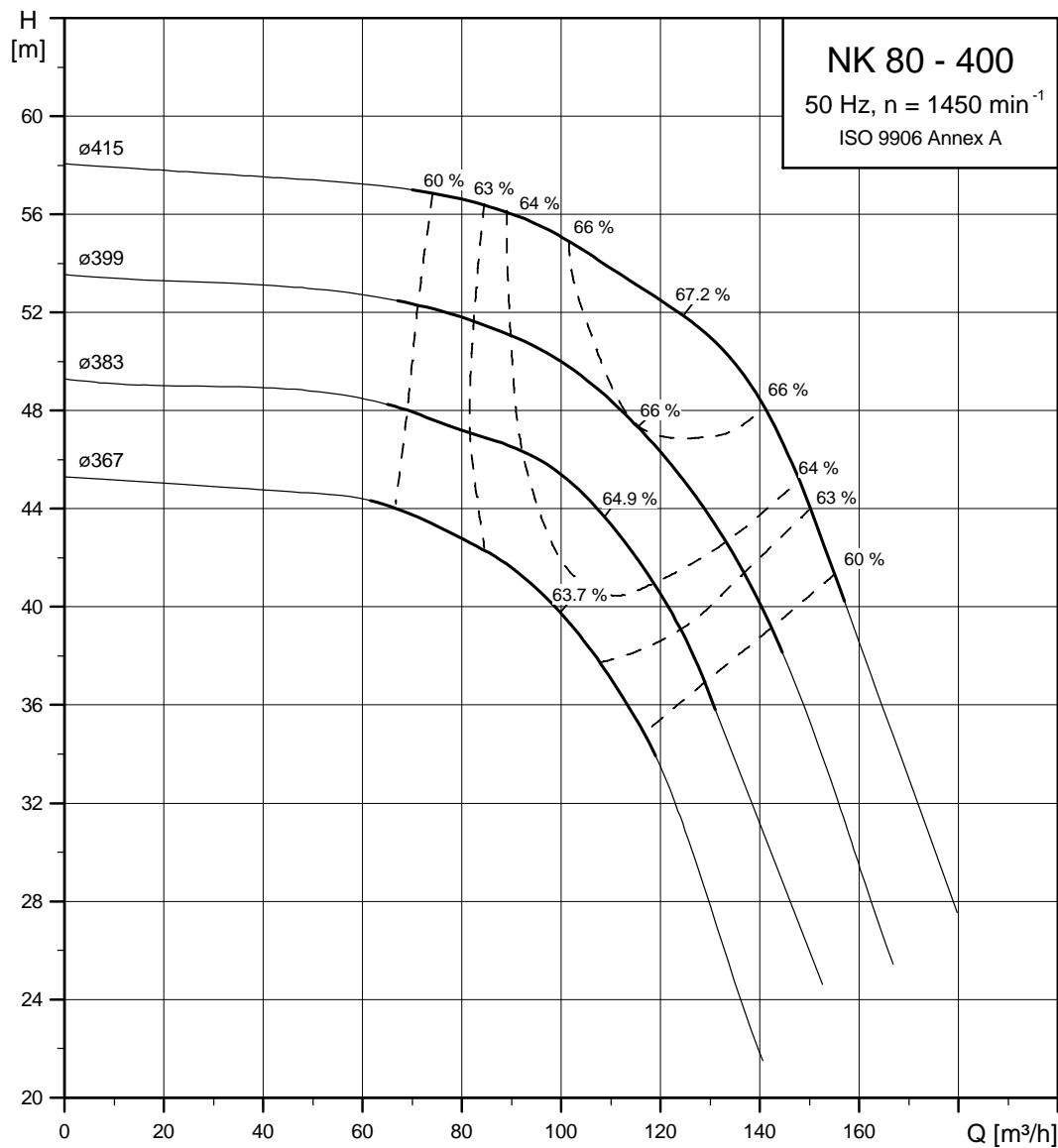
TM03 3151 0606



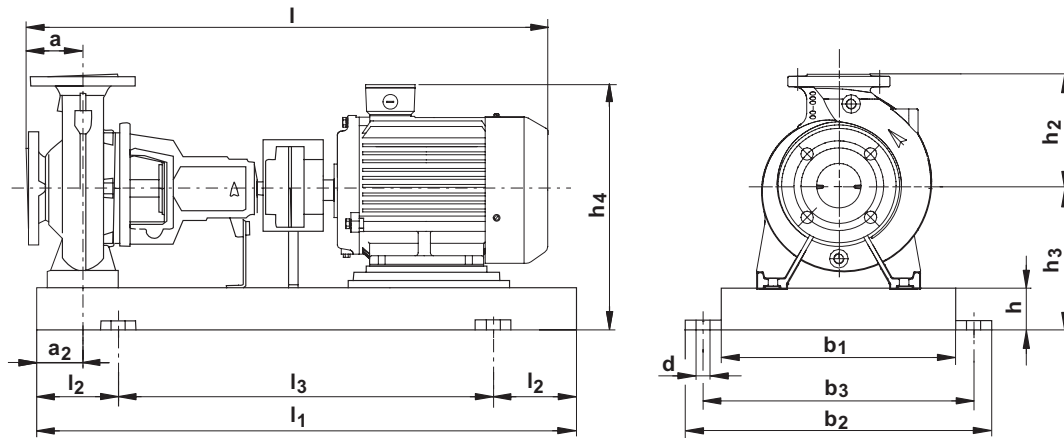
TM03 0508 0105

NK	80-315/280	80-315/305	80-315/320	80-315/334
<b>kW</b>	11	15	18.5	22
Standard motor range	MMG 160MA-E	MMG 160L-E	MMG 180M-E	MMG 180L-E
Premium motor range	MMG 160M-D	MMG 160L-D	MMG 180M-D	MMG 180L-D
E-motor range	MMGE 160M	MMGE 160L	MMGE 180M	MMGE 180M
PN [bar]	16	16	16	16
DN <sub>d</sub> [mm]	80	80	80	80
DN <sub>s</sub> [mm]	100	100	100	100
a [mm]	125	125	125	125
a <sub>2</sub> [mm]	90	90	90	90
h [mm]	80	80	100	100
h <sub>2</sub> [mm]	315	315	315	315
h <sub>3</sub> [mm]	330	330	350	350
h <sub>4</sub> <sup>1)</sup> [mm]	578/574/721	578/594/768	614/616/764	614/616/789
<b>Standard coupling</b>				
l <sub>1</sub> <sup>1)</sup> [mm]	1207/1211/1158	1251/1256/1208	1289/1311/1208	1289/1311/1234
l <sub>1</sub> [mm]	1250	1250	1400	1400
l <sub>2</sub> [mm]	205	205	230	230
l <sub>3</sub> [mm]	840	840	940	940
b <sub>1</sub> [mm]	430	430	480	480
b <sub>2</sub> [mm]	540	540	610	610
b <sub>3</sub> [mm]	490	490	550	550
d [mm]	24	24	28	28
Weight <sup>1)</sup> Net [kg]	316/265/319	332/372/356	387/480/390	415/506/420
<b>Spacer coupling</b>				
l <sub>1</sub> <sup>1)</sup> [mm]	1343/1347/1294	1387/1392/1344	1425/1447/1344	1425/1447/1370
l <sub>1</sub> [mm]	1250	1250	1400	1400
l <sub>2</sub> [mm]	205	205	230	230
l <sub>3</sub> [mm]	840	840	940	940
b <sub>1</sub> [mm]	430	430	480	480
b <sub>2</sub> [mm]	540	540	610	610
b <sub>3</sub> [mm]	490	490	550	550
d [mm]	24	24	28	28
Weight <sup>1)</sup> Net [kg]	319/268/322	335/375/359	391/494/394	418/510/424

<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range



TM00 9837 0499



TM03 1283 1505

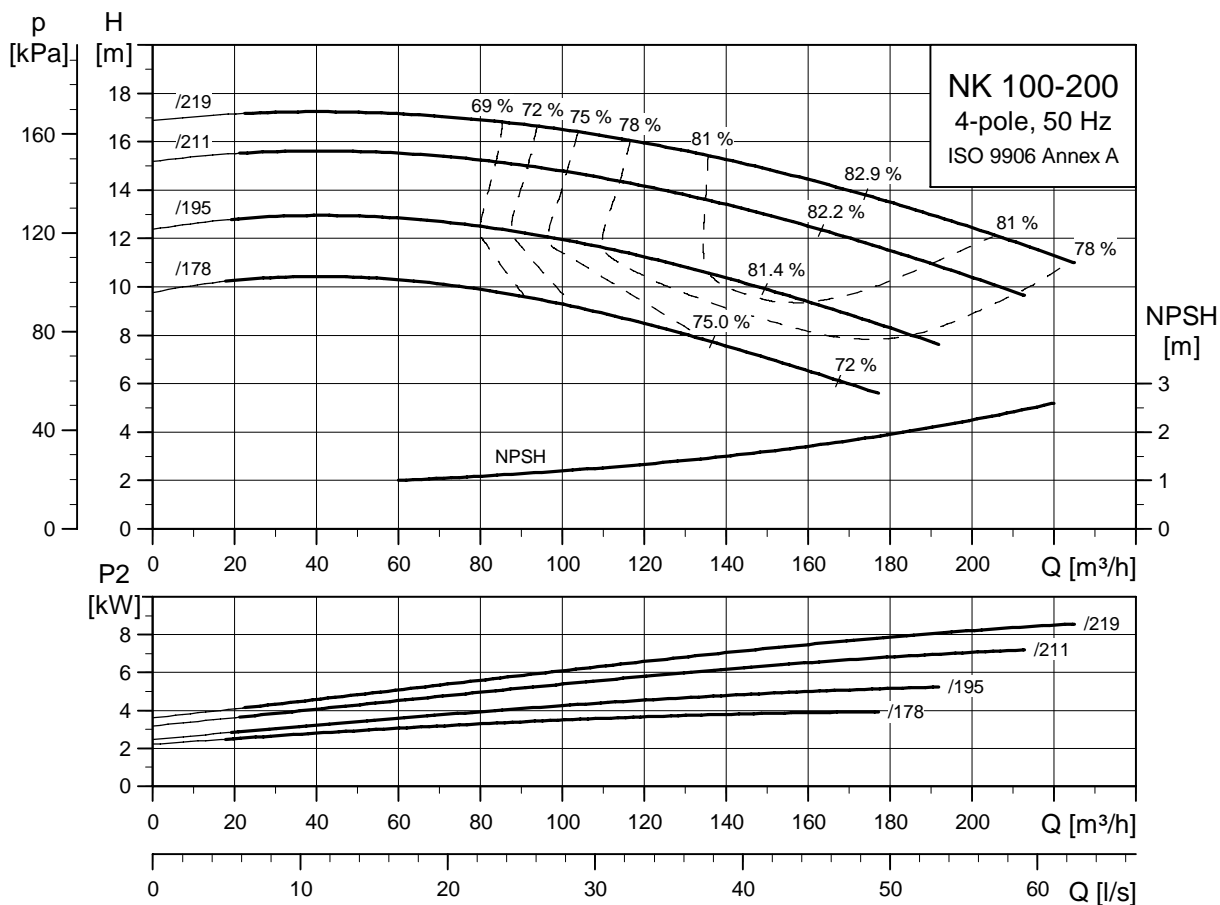
NK 80-400*						
kW	11	15	18.5	22	30	37
Standard motor range	MMG 160MA-E	MMG 160L-E	MMG 180M-E	MMG 180L-E	MMG 200L-E	MMG 225S-E
Premium motor range	MMG 160M-D	MMG 160L-D	MMG 180M-D	MMG 180L-D	MMG 200L-D	MMG 225S-D
E-motor range	-	-	-	-	-	-
PN [bar]	16	16	16	16	16	16
DN <sub>d</sub> [mm]	80	80	80	80	80	80
DN <sub>s</sub> [mm]	125	125	125	125	125	125
a [mm]	125	125	125	125	125	125
a <sub>2</sub> [mm]	90	90	90	90	90	90
h [mm]	100	100	100	100	100	100
h <sub>2</sub> [mm]	355	355	355	355	355	355
h <sub>3</sub> [mm]	380	380	380	380	380	380
h <sub>4</sub> [mm]	628/624/-	628/624/-	644/646/-	644/646/-	677/707/-	700/746/-
<b>Standard coupling</b>						
l <sup>1)</sup> [mm]	1267/1271/-	1311/1316/-	1349/1371/-	1349/1371/-	1416/1438/-	1471/1546/-
l <sub>1</sub> [mm]	1400	1400	1400	1400	1400	1600
l <sub>2</sub> [mm]	230	230	230	230	230	270
l <sub>3</sub> [mm]	940	940	940	940	940	1060
b <sub>1</sub> [mm]	480	480	480	480	480	530
b <sub>2</sub> [mm]	610	610	610	610	610	660
b <sub>3</sub> [mm]	550	550	550	550	550	600
d [mm]	28	28	28	28	28	28
Weight <sup>1)</sup> Net [kg]	413/265/-	431/402/-	466/412/-	498/526/-	556/745/-	636/810/-
<b>Spacer coupling</b>						
l <sup>1)</sup> [mm]	1403/1407/-	1447/1452/-	1485/1507/-	1485/1507/-	1552/1574/-	1607/1682/-
l <sub>1</sub> [mm]	1400	1600	1600	1600	1600	1600
l <sub>2</sub> [mm]	230	270	270	270	270	270
l <sub>3</sub> [mm]	940	1060	1060	1060	1060	1060
b <sub>1</sub> [mm]	480	530	530	530	530	530
b <sub>2</sub> [mm]	610	660	660	660	660	660
b <sub>3</sub> [mm]	550	600	600	600	600	600
d [mm]	28	28	28	28	28	28
Weight <sup>1)</sup> Net [kg]	413/268/-	446/405/-	483/415/-	510/530/-	570/739/-	634/804/-

<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range

<sup>\*)</sup> Oversize

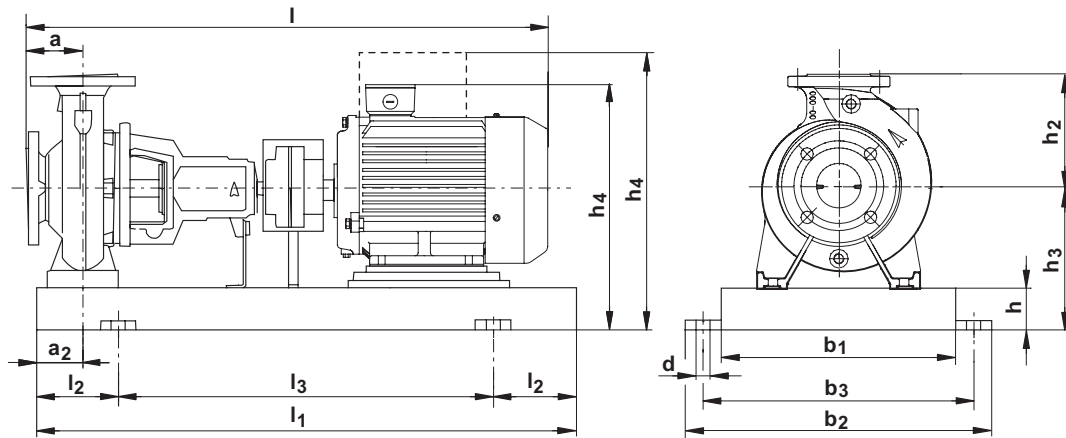
# Performance curves

NK 100-200  
4-pole



TM03 3152 0606





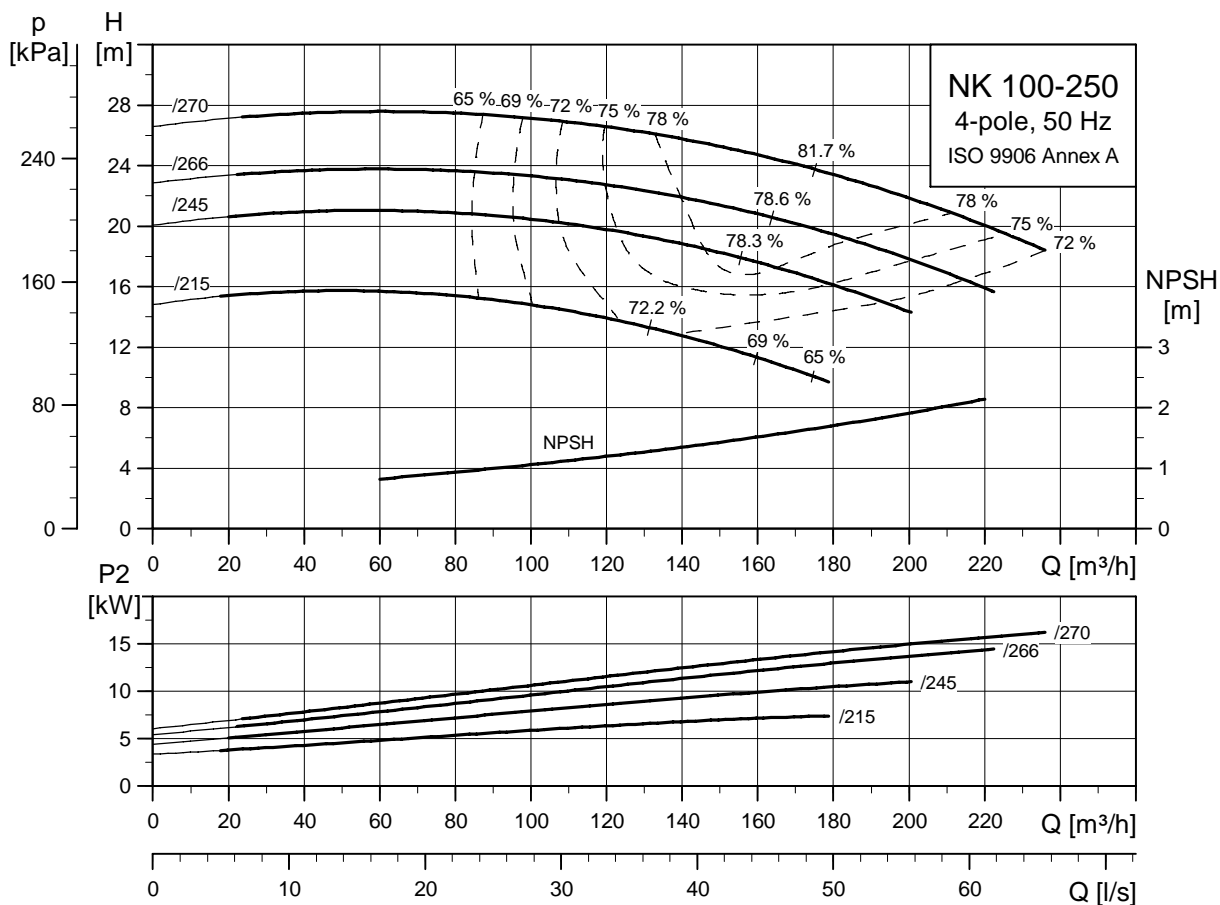
TM03 0508 0105

NK	100-200/178	100-200/195	100-200/211	100-200/219
kW	4	5.5	7.5	11
Standard motor range	MG 112MB-C	MG 132SC-C	MMG 132M-E	MMG 160MA-E
Premium motor range	MG 112MC-D	MMG 132S-D	MMG 132M-D	MMG 160M-D
E-motor range	MGE 112MC-D	MGE 132SC-D	MMGE 160M	MMGE 160M
PN [bar]	16	16	16	16
DN <sub>d</sub> [mm]	100	100	100	100
DN <sub>s</sub> [mm]	125	125	125	125
a [mm]	125	125	125	125
a <sub>2</sub> [mm]	90	90	90	90
h [mm]	80	80	80	80
h <sub>2</sub> [mm]	280	280	280	280
h <sub>3</sub> [mm]	282	282	282	280
h <sub>4</sub> <sup>1)</sup> [mm]	416/416/470	416/479/470	482/479/673	528/524/671
<b>Standard coupling</b>				
l <sup>1)</sup> [mm]	1031/1031/1031	1070/1098/1070	1062/1136/1158	1207/1211/1158
l <sub>1</sub> [mm]	1120	1120	1120	1250
l <sub>2</sub> [mm]	190	190	190	205
l <sub>3</sub> [mm]	740	740	740	840
b <sub>1</sub> [mm]	380	380	380	430
b <sub>2</sub> [mm]	490	490	490	540
b <sub>3</sub> [mm]	440	440	440	490
d [mm]	24	24	24	24
Weight <sup>1)</sup> Net [kg]	168/132/183	175/131/193	217/213/268	277/216/280
<b>Spacer coupling</b>				
l <sup>1)</sup> [mm]	1167/1167/1167	1206/1234/1206	1198/1272/1294	1343/1347/1294
l <sub>1</sub> [mm]	1120	1120	1120	1250
l <sub>2</sub> [mm]	190	190	190	205
l <sub>3</sub> [mm]	740	740	740	840
b <sub>1</sub> [mm]	380	380	380	430
b <sub>2</sub> [mm]	490	490	490	540
b <sub>3</sub> [mm]	440	440	440	490
d [mm]	24	24	24	24
Weight <sup>1)</sup> Net [kg]	170/135/185	177/134/195	220/216/271	280/219/283

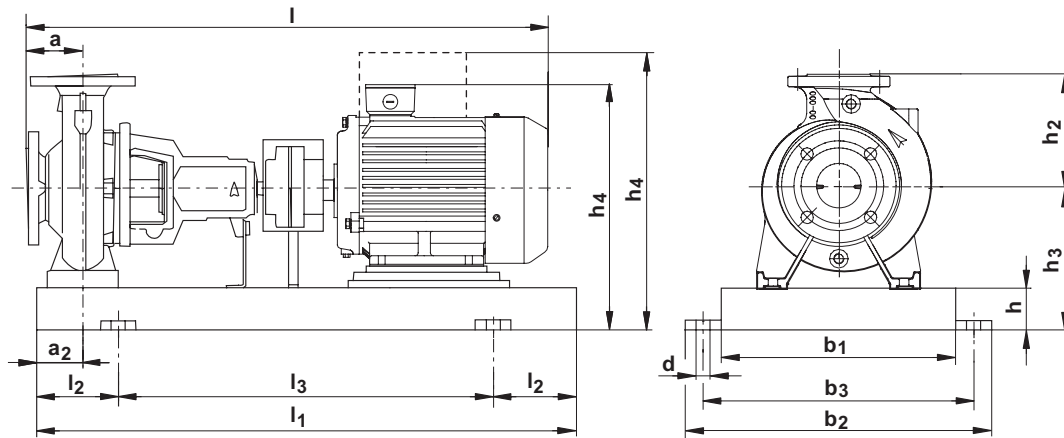
<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range

# Performance curves

NK 100-250  
4-pole



TM03 3153 0606



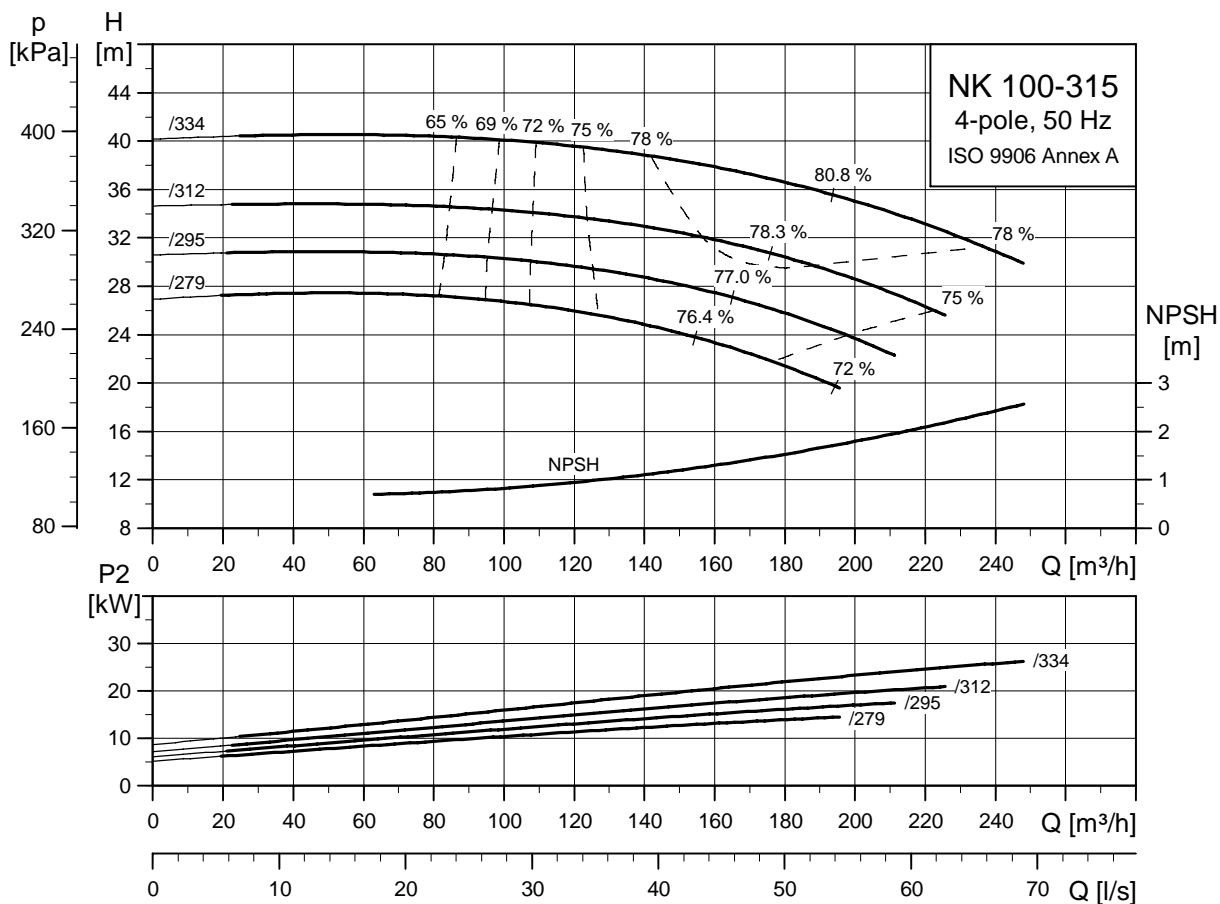
TM03 0508 0105

NK	100-250/215	100-250/245	100-250/266	100-250/270
<b>kW</b>	7.5	11	15	18.5
Standard motor range	MMG 132M-E	MMG 160MA-E	MMG 160L-E	MMG 180M-E
Premium motor range	MMG 132M-D	MMG 160M-D	MMG 160L-D	MMG 180M-D
E-motor range	MMGE 160M	MMGE 160M	MMGE 160L	MMGE 180M
PN [bar]	16	16	16	16
DN <sub>d</sub> [mm]	100	100	100	100
DN <sub>s</sub> [mm]	125	125	125	125
a [mm]	140	140	140	140
a <sub>2</sub> [mm]	90	90	90	90
h [mm]	80	80	80	100
h <sub>2</sub> [mm]	280	280	280	280
h <sub>3</sub> [mm]	305	310	310	330
h <sub>4</sub> <sup>1)</sup> [mm]	505/502/696	558/554/701	558/574/748	594/596/744
<b>Standard coupling</b>				
l <sup>1)</sup> [mm]	1077/1151/1173	1222/1226/1173	1266/1271/1223	1304/1326/1223
l <sub>1</sub> [mm]	1250	1250	1250	1400
l <sub>2</sub> [mm]	205	205	205	230
l <sub>3</sub> [mm]	840	840	840	940
b <sub>1</sub> [mm]	430	430	430	480
b <sub>2</sub> [mm]	540	540	540	610
b <sub>3</sub> [mm]	490	490	490	550
d [mm]	24	24	24	28
Weight <sup>1)</sup> Net [kg]	247/234/298	295/221/298	311/315/335	366/390/369
<b>Spacer coupling</b>				
l <sup>1)</sup> [mm]	1213/1287/1309	1358/1362/1309	1402/1407/1359	1440/1462/1359
l <sub>1</sub> [mm]	1250	1250	1250	1400
l <sub>2</sub> [mm]	205	205	205	230
l <sub>3</sub> [mm]	840	840	840	940
b <sub>1</sub> [mm]	430	430	430	480
b <sub>2</sub> [mm]	540	540	540	610
b <sub>3</sub> [mm]	490	490	490	550
d [mm]	24	24	28	28
Weight <sup>1)</sup> Net [kg]	250/237/301	298/224/301	314/312/338	370/393/373

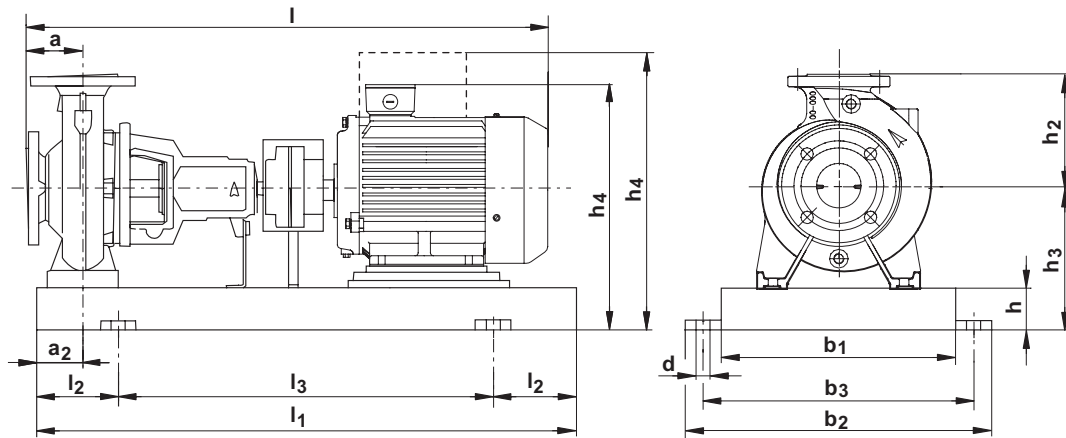
<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range

# Performance curves

NK 100-315  
4-pole



TM03 3154 0606



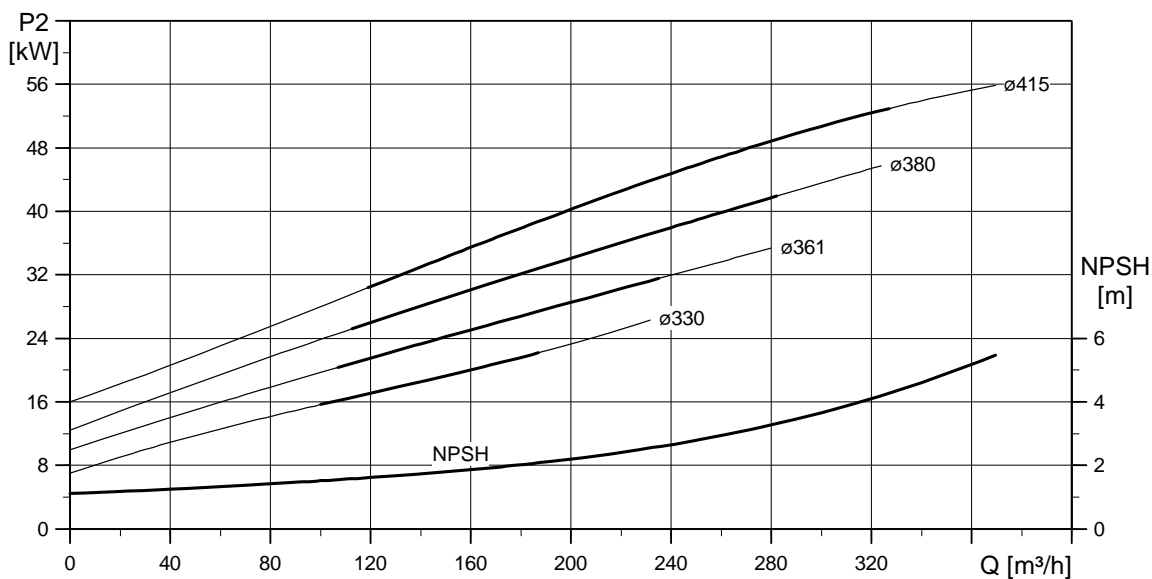
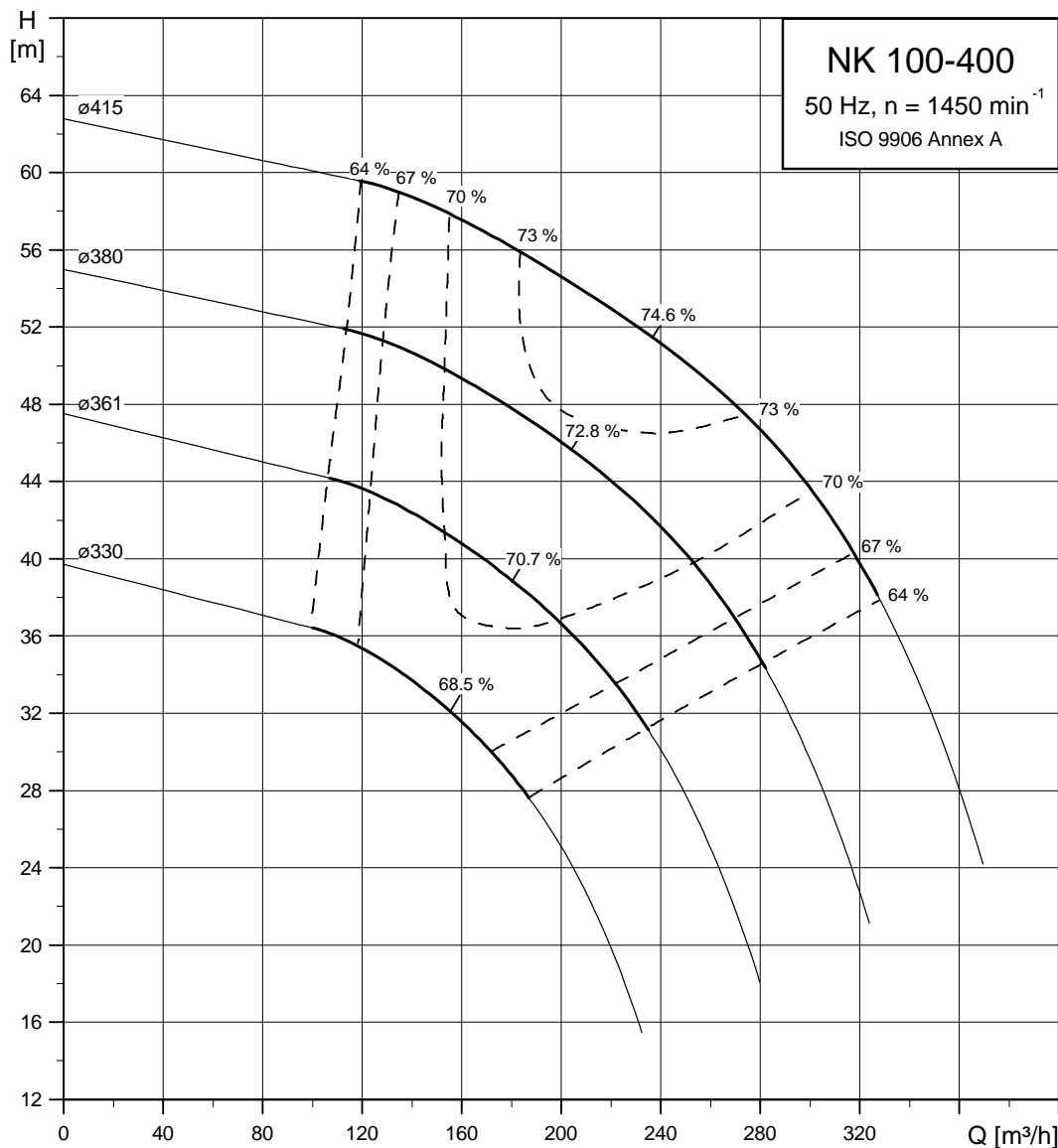
TM03 0508 0105

NK	100-315/279	100-315/295	100-315/312	100-315/334
kW	15	18.5	22	30
Standard motor range	MMG 160L-E	MMG 180M-E	MMG 180L-E	MMG 200L-E
Premium motor range	MMG 160L-D	MMG 180M-D	MMG 180L-D	MMG 200L-D
E-motor range	MMGE 160L	MMGE 180M	MMGE 180M	-
PN [bar]	16	16	16	16
DN <sub>d</sub> [mm]	100	100	100	100
DN <sub>s</sub> [mm]	125	125	125	125
a [mm]	140	140	140	140
a <sub>2</sub> [mm]	90	90	90	90
h [mm]	80	100	100	100
h <sub>2</sub> [mm]	315	315	315	315
h <sub>3</sub> [mm]	330	350	350	350
h <sub>4</sub> <sup>1)</sup> [mm]	578/594/768	614/616/764	614/616/789	647/677/-
<b>Standard coupling</b>				
l <sub>1</sub> <sup>1)</sup> [mm]	1266/1271/1223	1304/1326/1223	1304/1326/1249	1371/1393/-
l <sub>1</sub> [mm]	1250	1400	1400	1400
l <sub>2</sub> [mm]	205	230	230	230
l <sub>3</sub> [mm]	840	940	940	940
b <sub>1</sub> [mm]	430	480	480	480
b <sub>2</sub> [mm]	540	610	610	610
b <sub>3</sub> [mm]	490	550	550	550
d [mm]	24	28	28	28
Weight <sup>1)</sup> Net [kg]	340/292/364	395/424/398	422/430/427	482/578/-
<b>Spacer coupling</b>				
l <sub>1</sub> <sup>1)</sup> [mm]	1402/1407/1359	1440/1462/1359	1440/1462/1385	1507/1529/-
l <sub>1</sub> [mm]	1250	1400	1400	1400
l <sub>2</sub> [mm]	205	230	230	230
l <sub>3</sub> [mm]	840	940	940	940
b <sub>1</sub> [mm]	430	480	480	480
b <sub>2</sub> [mm]	540	610	610	610
b <sub>3</sub> [mm]	490	550	550	550
d [mm]	24	28	28	28
Weight <sup>1)</sup> Net [kg]	343/295/367	399/428/402	426/434/431	486/599/-

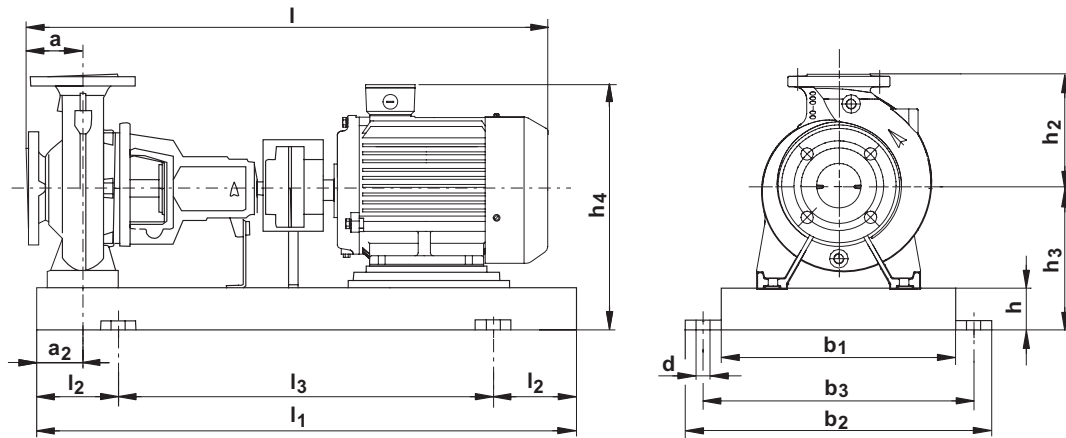
<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range

# Performance curves

NK 100-400  
4-pole



TM00 8908 0499



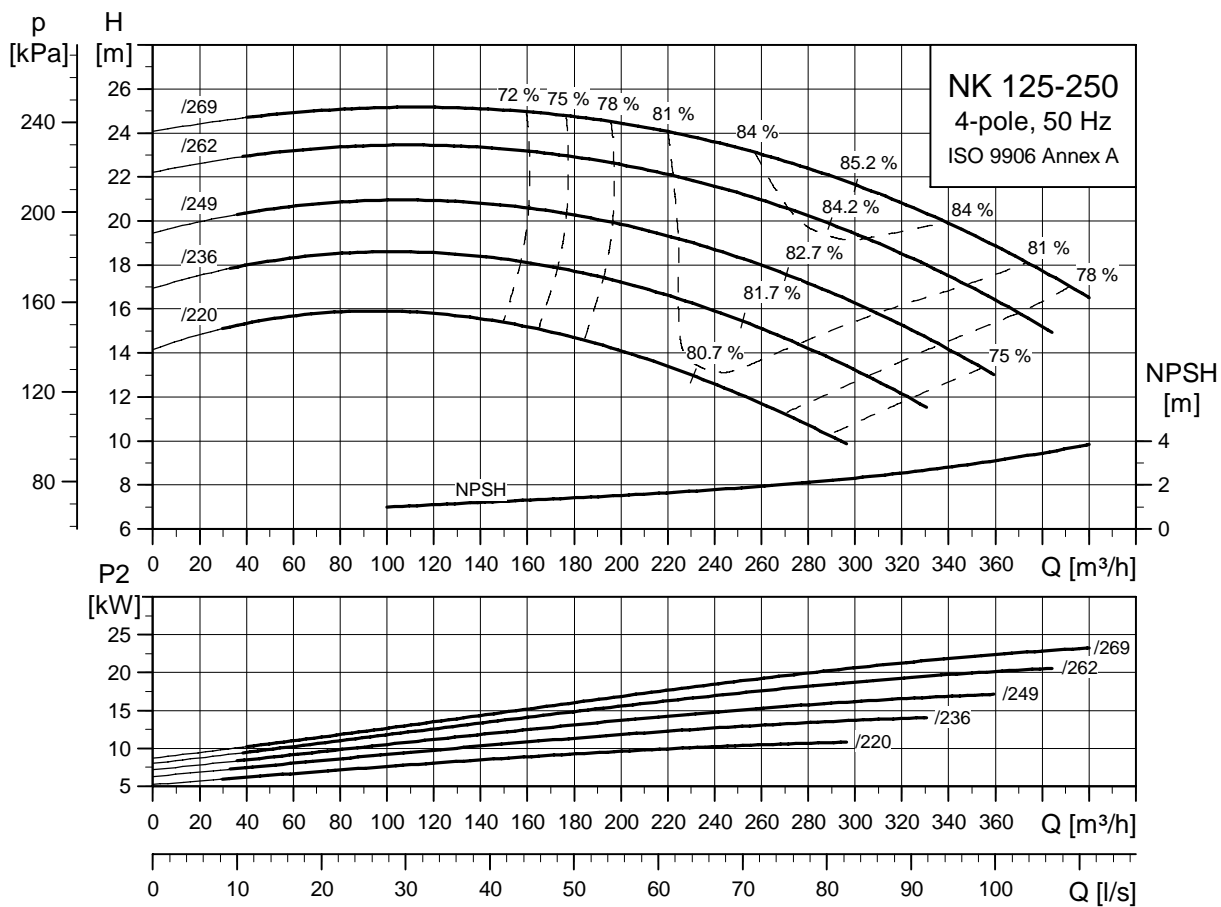
TM03 1283 1505

NK 100-400								
kW	15	18.5	22	30	37	45	55	75
Standard motor range	MMG 160L-E	MMG 180M-E	MMG 180L-E	MMG 200L-E	MMG 225S-E	MMG 225M-E	MMG 250M-E	MMG 280S-E
Premium motor range	MMG 160L-D	MMG 180M-D	MMG 180L-D	MMG 200L-D	MMG 225S-D	MMG 225M-D	MMG 250M-D	MMG 280S-D
E-motor range	-	-	-	-	-	-	-	-
PN [bar]	16	16	16	16	16	16	16	16
DN <sub>d</sub> [mm]	100	100	100	100	100	100	100	100
DN <sub>s</sub> [mm]	125	125	125	125	125	125	125	125
a [mm]	140	140	140	140	140	140	140	140
a <sub>2</sub> [mm]	110	110	110	110	110	110	110	110
h [mm]	100	100	100	100	100	100	100	100
h <sub>2</sub> [mm]	355	355	355	355	355	355	355	355
h <sub>3</sub> [mm]	380	380	380	380	380	380	380	380
h <sub>4</sub> [mm]	628/624/-	644/646/-	644/646/-	677/707/-	700/746/-	700/746/-	739/765/-	766/799/-
<b>Standard coupling</b>								
l <sup>1)</sup> [mm]	1326/1331/-	1364/1386/-	1364/1386/-	1431/1453/-	1486/1561/-	1511/1561/-	1584/1645/-	1619/1711/-
l <sub>1</sub> [mm]	1600	1600	1600	1600	1600	1600	1600	1800
l <sub>2</sub> [mm]	270	270	270	270	270	270	270	300
l <sub>3</sub> [mm]	1060	1060	1060	1060	1060	1060	1060	1200
b <sub>1</sub> [mm]	530	530	530	530	530	530	530	600
b <sub>2</sub> [mm]	660	660	660	660	660	660	660	730
b <sub>3</sub> [mm]	600	600	600	600	600	600	600	670
d [mm]	28	28	28	28	28	28	28	28
Weight <sup>1)</sup> Net [kg]	429/315/-	464/390/-	496/450/-	554/656/-	617/797/-	642/822/-	767/1209/-	869/1463/-
<b>Spacer coupling</b>								
l <sup>1)</sup> [mm]	1462/1467/-	1500/1522/-	1500/1522/-	1567/1589/-	1622/1697/-	1647/1697/-	1720/1781/-	1753/1845/-
l <sub>1</sub> [mm]	1600	1600	1600	1600	1600	1800	1800	1800
l <sub>2</sub> [mm]	270	270	270	270	270	300	300	300
l <sub>3</sub> [mm]	1060	1060	1060	1060	1060	1200	1200	1200
b <sub>1</sub> [mm]	530	530	530	530	530	600	600	600
b <sub>2</sub> [mm]	660	660	660	660	660	730	730	730
b <sub>3</sub> [mm]	600	600	600	600	600	670	670	670
d [mm]	28	28	28	28	28	28	28	28
Weight <sup>1)</sup> Net [kg]	427/318/-	464/393/-	491/454/-	551/651/-	615/793/-	663/828/-	787/1203/-	877/1455/-

<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range

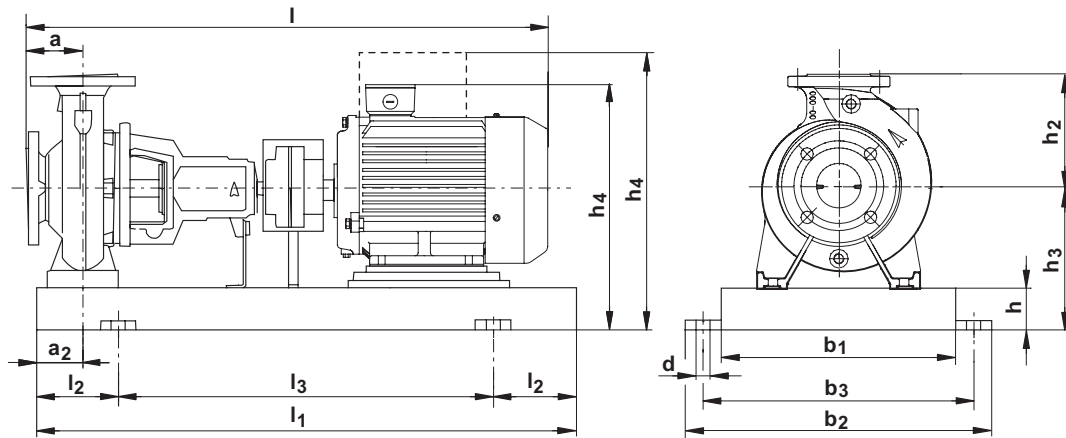
# Performance curves

NK 125-250  
4-pole



TM03 3155 0606





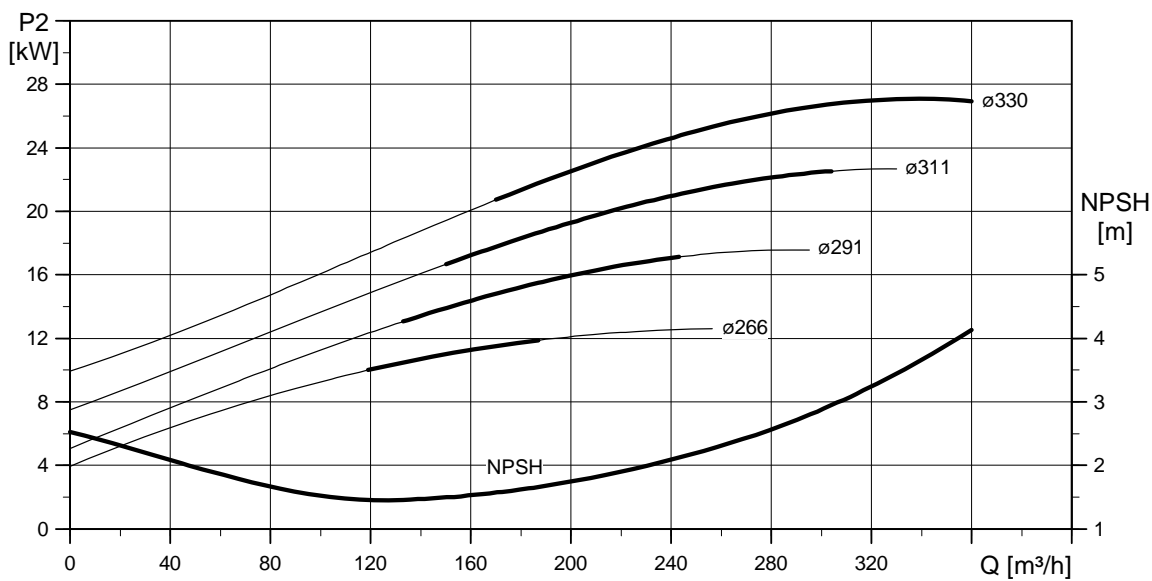
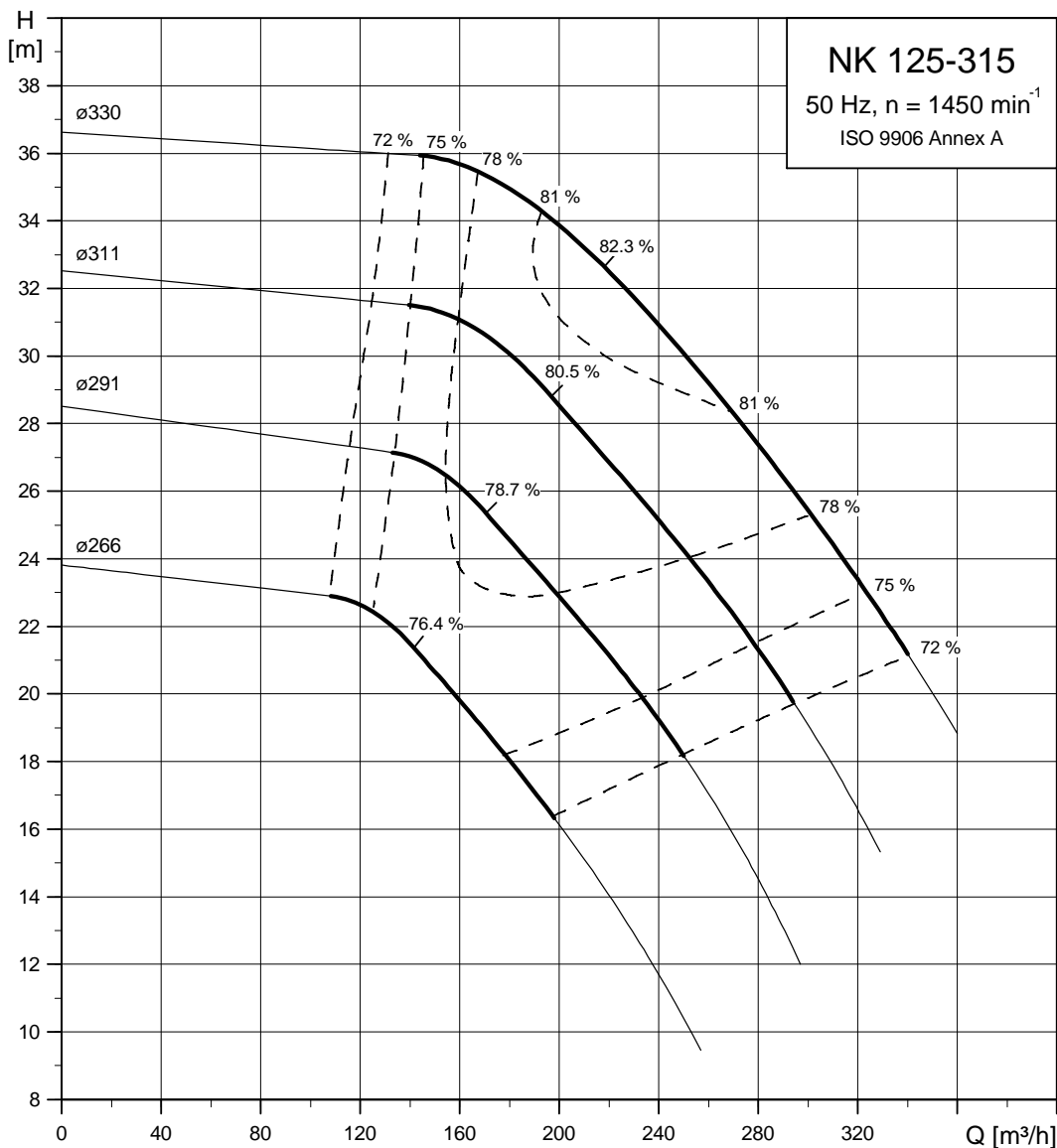
TM03 0508 0105

NK	125-250/220	25-250/236	125-250/249	125-250/262	125-250/269
<b>kW</b>	11	15	18.5	22	30
Standard motor range	MMG 160MA-E	MMG 160L-E	MMG 180M-E	MMG 180L-E	MMG 200L-E
Premium motor range	MMG 160M-D	MMG 160L-D	MMG 180M-D	MMG 180L-D	MMG 200L-D
E-motor range	MMGE 160M	MMGE 160L	MMGE 180M	MMGE 180M	-
PN [bar]	16	16	16	16	16
DN <sub>d</sub> [mm]	125	125	125	125	125
DN <sub>s</sub> [mm]	150	150	150	150	150
a [mm]	140	140	140	140	140
a <sub>2</sub> [mm]	90	90	90	90	90
h [mm]	80	80	100	100	100
h <sub>2</sub> [mm]	355	355	355	355	355
h <sub>3</sub> [mm]	330	330	350	350	350
h <sub>4</sub> <sup>1)</sup> [mm]	578/574/721	578/594/768	614/616/764	614/616/789	647/677/-
<b>Standard coupling</b>					
l <sub>1</sub> <sup>1)</sup> [mm]	1222/1226/1173	1266/1271/1223	1304/1326/1223	1304/1326/1249	1371/1393/-
l <sub>1</sub> [mm]	1250	1250	1400	1400	1400
l <sub>2</sub> [mm]	205	205	230	230	230
l <sub>3</sub> [mm]	840	840	940	940	940
b <sub>1</sub> [mm]	430	430	480	480	480
b <sub>2</sub> [mm]	540	540	610	610	610
b <sub>3</sub> [mm]	490	490	550	550	550
d [mm]	24	24	28	28	28
Weight <sup>1)</sup> Net [kg]	312/242/315	328/282/352	383/408/386	410/520/415	470/669/-
<b>Spacer coupling</b>					
l <sub>1</sub> <sup>1)</sup> [mm]	1358/1362/1309	1402/1407/1359	1440/1462/1359	1440/1462/1385	1507/1529/-
l <sub>1</sub> [mm]	1250	1250	1400	1400	1400
l <sub>2</sub> [mm]	205	205	230	230	230
l <sub>3</sub> [mm]	840	840	940	940	940
b <sub>1</sub> [mm]	430	430	480	480	480
b <sub>2</sub> [mm]	540	540	610	610	610
b <sub>3</sub> [mm]	490	490	550	550	550
d [mm]	24	24	28	28	28
Weight <sup>1)</sup> Net [kg]	315/245/318	331/285/355	387/412/390	414/516/419	474/674/-

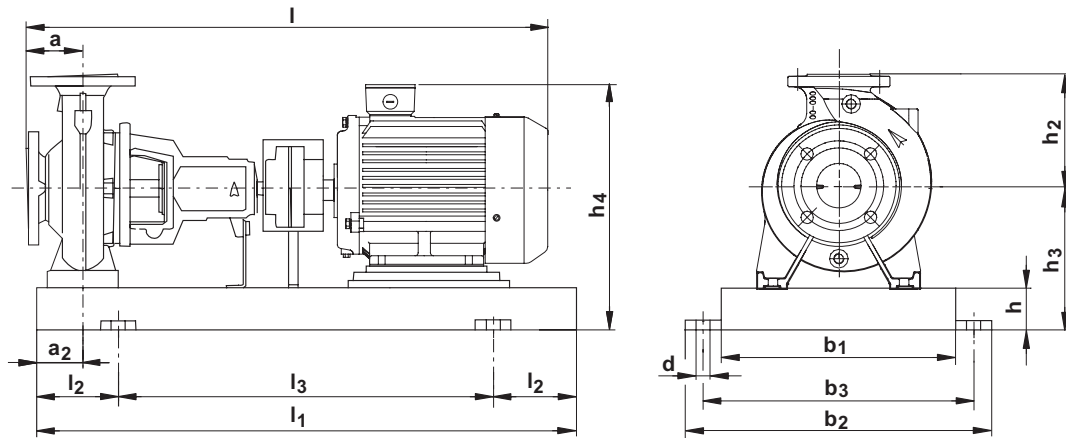
<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range

# Performance curves

NK 125-315  
4-pole



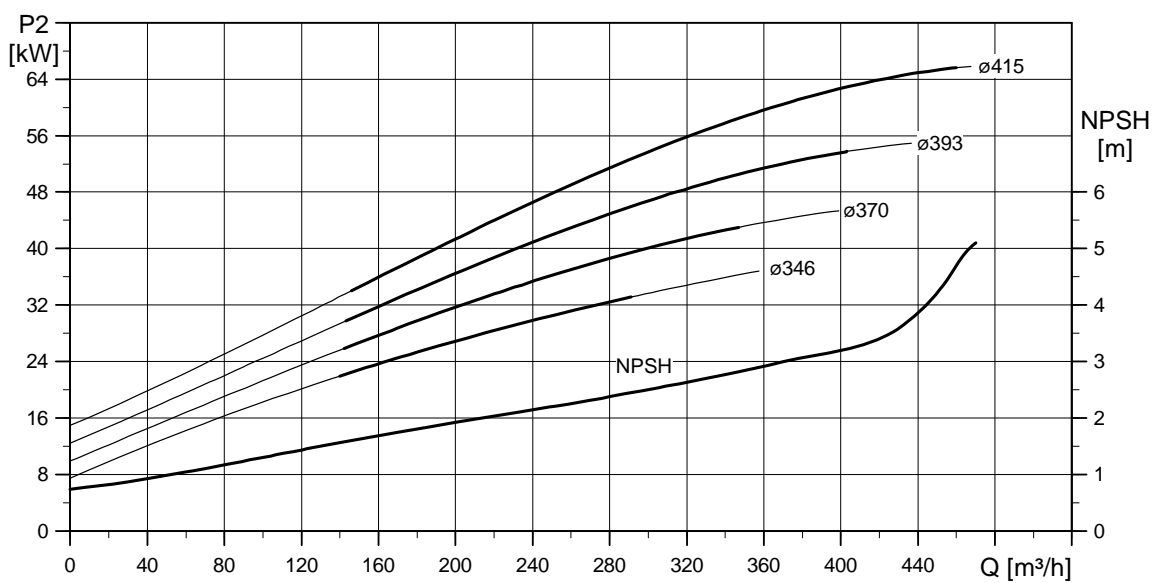
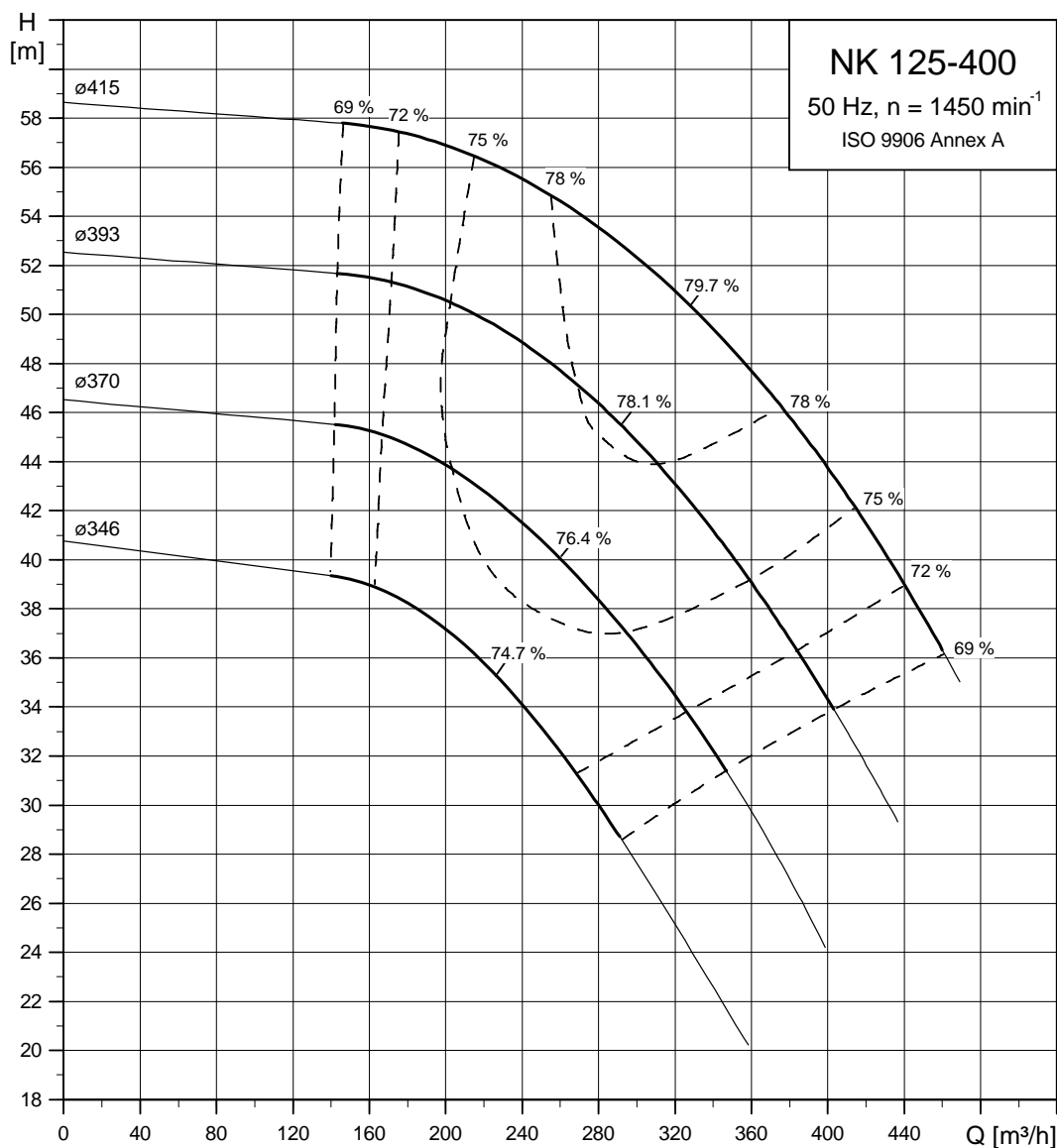
TMOO 8899 0499



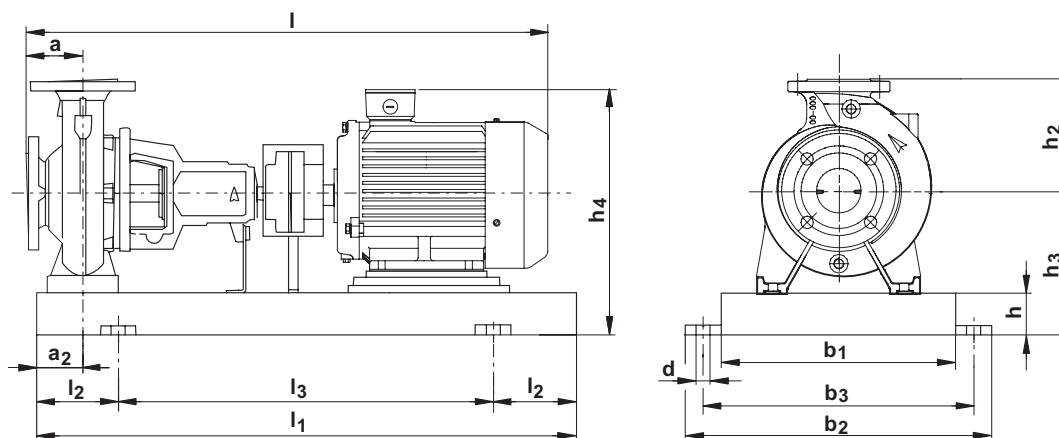
TM03 1283 1505

NK 125-315					
kW	11	15	18.5	22	30
Standard motor range	MMG 160MA-E	MMG 160L-E	MMG 180M-E	MMG 180L-E	MMG 200L-E
Premium motor range	MMG 160M-D	MMG 160L-D	MMG 180M-D	MMG 180L-D	MMG 200L-D
E-motor range	-	-	-	-	-
PN [bar]	16	16	16	16	16
DN <sub>d</sub> [mm]	125	125	125	125	125
DN <sub>s</sub> [mm]	150	150	150	150	150
a [mm]	140	140	140	140	140
a <sub>2</sub> [mm]	110	110	110	110	110
h [mm]	100	100	100	100	100
h <sub>2</sub> [mm]	355	355	355	355	355
h <sub>3</sub> [mm]	380	380	380	380	380
h <sub>4</sub> [mm]	628/624/-	628/624/-	644/646/-	644/646/-	677/707/-
<b>Standard coupling</b>					
l <sup>1)</sup> [mm]	1282/1286/-	1326/1331/-	1364/1386/-	1364/1386/-	1431/1453/-
l <sub>1</sub> [mm]	1600	1600	1600	1600	1600
l <sub>2</sub> [mm]	270	270	270	270	270
l <sub>3</sub> [mm]	1060	1060	1060	1060	1060
b <sub>1</sub> [mm]	530	530	530	530	530
b <sub>2</sub> [mm]	660	660	660	660	660
b <sub>3</sub> [mm]	600	600	600	600	600
d [mm]	28	28	28	28	28
Weight <sup>1)</sup> Net [kg]	402/254/-	420/303/-	455/444/-	487/551/-	545/705/-
<b>Spacer coupling</b>					
l <sup>1)</sup> [mm]	1418/1422/-	1462/1467/-	1500/1522/-	1500/1522/-	1567/1589/-
l <sub>1</sub> [mm]	1600	1600	1600	1600	1600
l <sub>2</sub> [mm]	270	270	270	270	270
l <sub>3</sub> [mm]	1060	1060	1060	1060	1060
b <sub>1</sub> [mm]	530	530	530	530	530
b <sub>2</sub> [mm]	660	660	660	660	660
b <sub>3</sub> [mm]	600	600	600	600	600
d [mm]	28	28	28	28	28
Weight <sup>1)</sup> Net [kg]	402/257/-	418/307/-	455/440/-	482/555/-	542/726/-

<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range



TM00 8900 0499



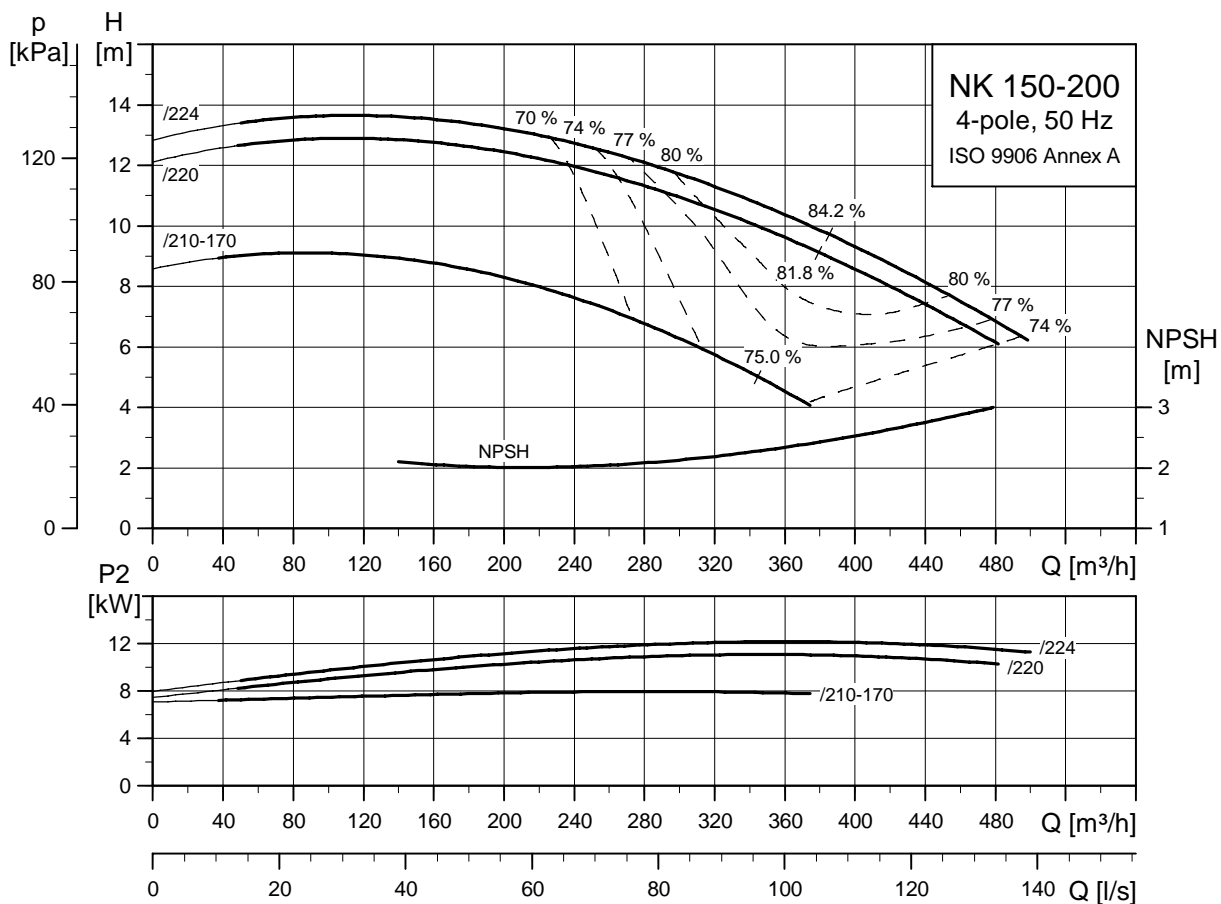
TM03 1283 1505

NK 125-400								
kW	15	18.5	22	30	37	45	55	75
Standard motor range	MMG 160L-E	MMG 180M-E	MMG 180L-E	MMG 200L-E	MMG 225S-E	MMG 225M-E	MMG 250M-E	MMG 280S-E
Premium motor range	MMG 160L-D	MMG 180M-D	MMG 180L-D	MMG 200L-D	MMG 225S-D	MMG 225M-D	MMG 250M-D	MMG 280S-D
E-motor range	-	-	-	-	-	-	-	-
PN [bar]	16	16	16	16	16	16	16	16
DN <sub>d</sub> [mm]	125	125	125	125	125	125	125	125
DN <sub>s</sub> [mm]	150	150	150	150	150	150	150	150
a [mm]	140	140	140	140	140	140	140	140
a <sub>2</sub> [mm]	110	110	110	110	110	110	110	110
h [mm]	100	100	100	100	100	100	100	100
h <sub>2</sub> [mm]	400	400	400	400	400	400	400	400
h <sub>3</sub> [mm]	415	415	415	415	415	415	415	415
h <sub>4</sub> [mm]	663/659/-	679/681/-	679/681/-	712/742/-	735/781/-	735/781/-	774/800/-	801/834/-
<b>Standard coupling</b>								
l <sup>1)</sup> [mm]	1326/1331/-	1364/1386/-	1364/1386/-	1431/1453/-	1486/1561/-	1511/1561/-	1584/1645/-	1617/1709/-
l <sub>1</sub> [mm]	1600	1600	1600	1600	1600	1600	1600	1800
l <sub>2</sub> [mm]	270	270	270	270	270	270	270	300
l <sub>3</sub> [mm]	1060	1060	1060	1060	1060	1060	1060	1200
b <sub>1</sub> [mm]	530	530	530	530	530	530	530	600
b <sub>2</sub> [mm]	660	660	660	660	660	660	660	730
b <sub>3</sub> [mm]	600	600	600	600	600	600	600	670
d [mm]	28	28	28	28	28	28	28	28
Weight <sup>1)</sup> Net [kg]	443/338/-	478/481/-	510/574/-	568/693/-	631/779/-	656/862/-	781/1264/-	883/1514/-
<b>Spacer coupling</b>								
l <sup>1)</sup> [mm]	1462/1467/-	1500/1522/-	1500/1522/-	1567/1589/-	1622/1697/-	1647/1697/-	1720/1781/-	1753/1845/-
l <sub>1</sub> [mm]	1600	1600	1600	1600	1800	1800	1800	1800
l <sub>2</sub> [mm]	270	270	270	270	300	300	300	300
l <sub>3</sub> [mm]	1060	1060	1060	1060	1200	1200	1200	1200
b <sub>1</sub> [mm]	530	530	530	530	600	600	600	600
b <sub>2</sub> [mm]	660	660	660	660	730	730	730	730
b <sub>3</sub> [mm]	600	600	600	600	670	670	670	670
d [mm]	28	28	28	28	28	28	28	28
Weight <sup>1)</sup> Net [kg]	441/342/-	478/495/-	505/571/-	565/715/-	652/781/-	677/858/-	801/1260/-	891/1522/-

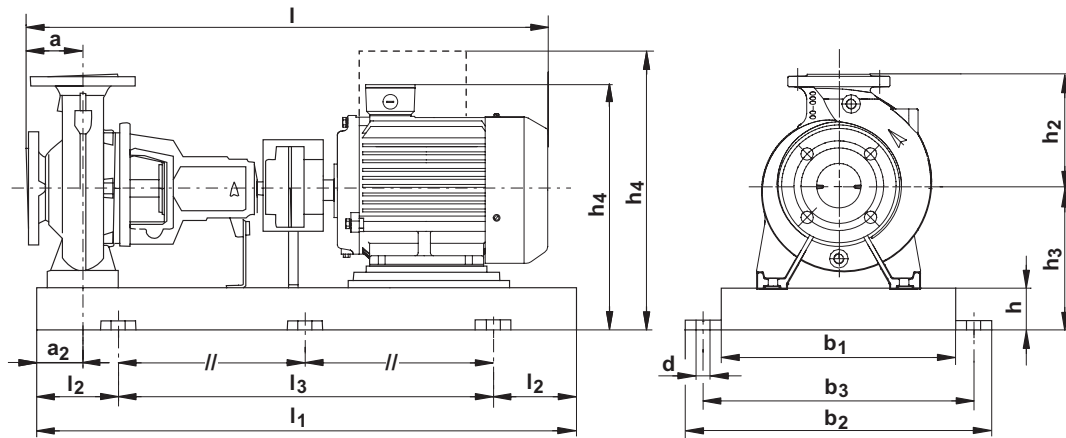
<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range

# Performance curves

NK 150-200  
4-pole



TM03 3156 0606



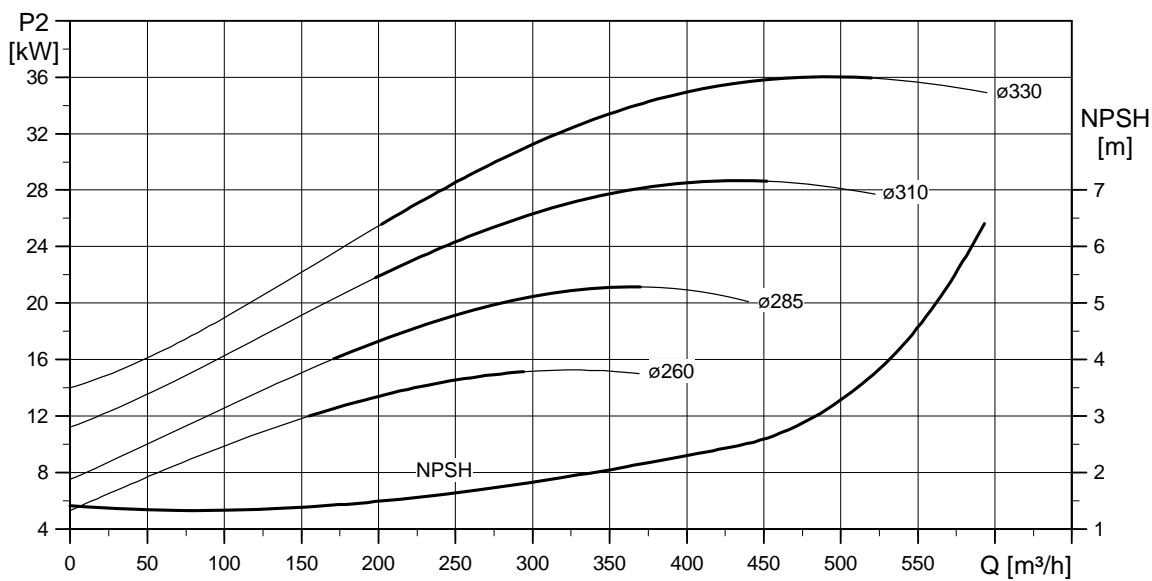
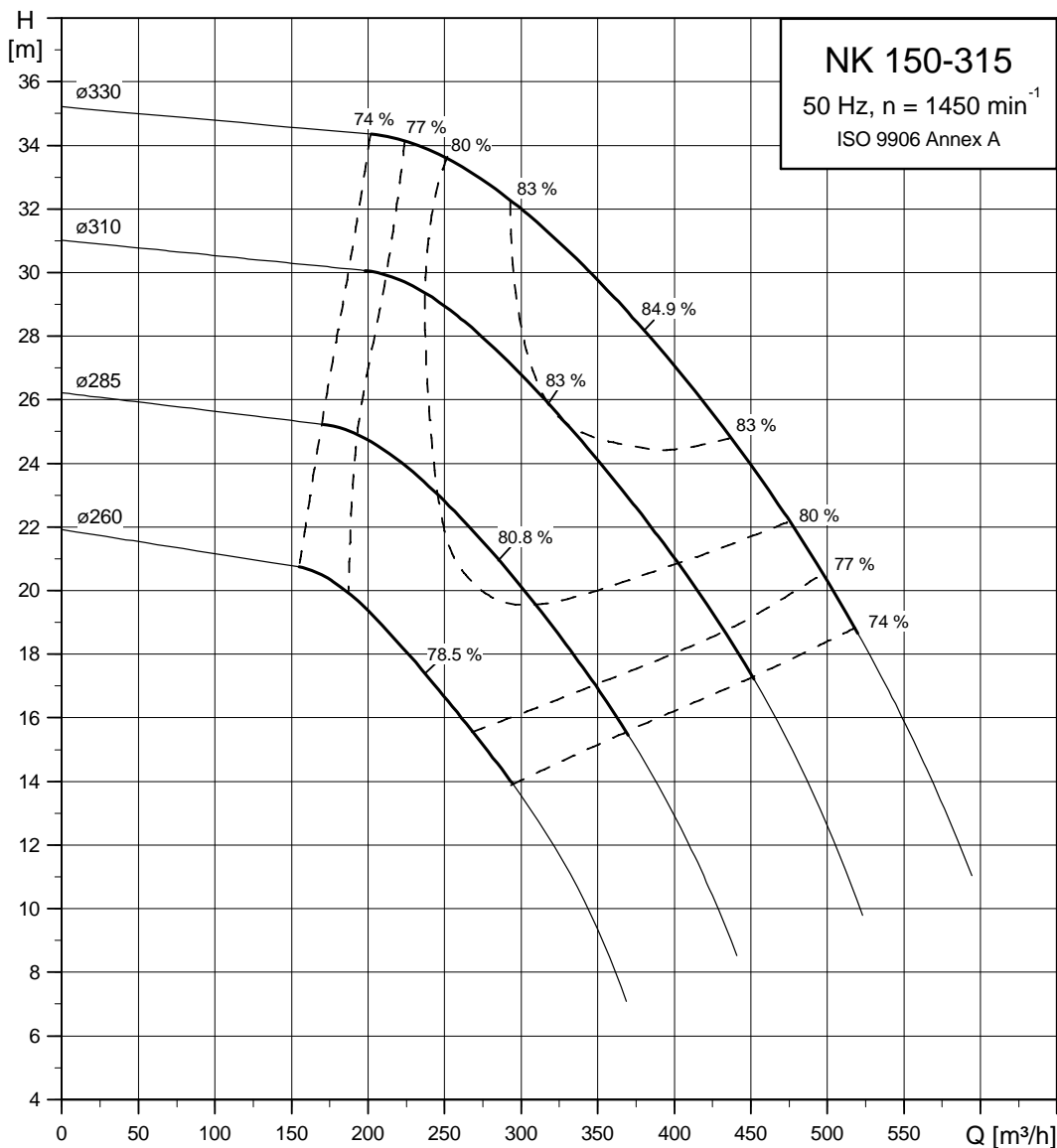
TM03 0509 0105

NK	150-200/210-170	150-200/220	150-200/224
kW	7.5	11	15
Standard motor range	MMG 132M-E	MMG 160MA-E	MMG 160L-E
Premium motor range	MMG 132M-D	MMG 160M-D	MMG 160L-D
E-motor range	MMGE 160M	MMGE 160M	MMGE 160L
PN [bar]	10	10	10
DN <sub>d</sub> [mm]	150	150	150
DN <sub>s</sub> [mm]	200	200	200
a [mm]	160	160	160
a <sub>2</sub> [mm]	110	110	110
h [mm]	100	100	100
h <sub>2</sub> [mm]	400	400	400
h <sub>3</sub> [mm]	382	380	380
h <sub>4</sub> <sup>1)</sup> [mm]	582/579/773	628/624/771	628/624/798
<b>Standard coupling</b>			
l <sub>1</sub> <sup>1)</sup> [mm]	1097/1171/1193	1242/1246/1193	1286/1291/1243
l <sub>1</sub> [mm]	1800	1800	1800
l <sub>2</sub> [mm]	300	300	300
l <sub>3</sub> [mm]	1200	1200	1200
b <sub>1</sub> [mm]	600	600	600
b <sub>2</sub> [mm]	730	730	730
b <sub>3</sub> [mm]	670	670	670
d [mm]	28	28	28
Weight <sup>1)</sup> Net [kg]	415/225/466	463/250/466	479/303/484
<b>Spacer coupling</b>			
l <sub>1</sub> <sup>1)</sup> [mm]	1233/1307/1329	1378/1382/1329	1422/1427/1379
l <sub>1</sub> [mm]	1800	1800	1800
l <sub>2</sub> [mm]	300	300	300
l <sub>3</sub> [mm]	1200	1200	1200
b <sub>1</sub> [mm]	600	600	600
b <sub>2</sub> [mm]	730	730	730
b <sub>3</sub> [mm]	670	670	670
d [mm]	28	28	28
Weight <sup>1)</sup> Net [kg]	418/222/469	466/247/469	482/307/487

<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range

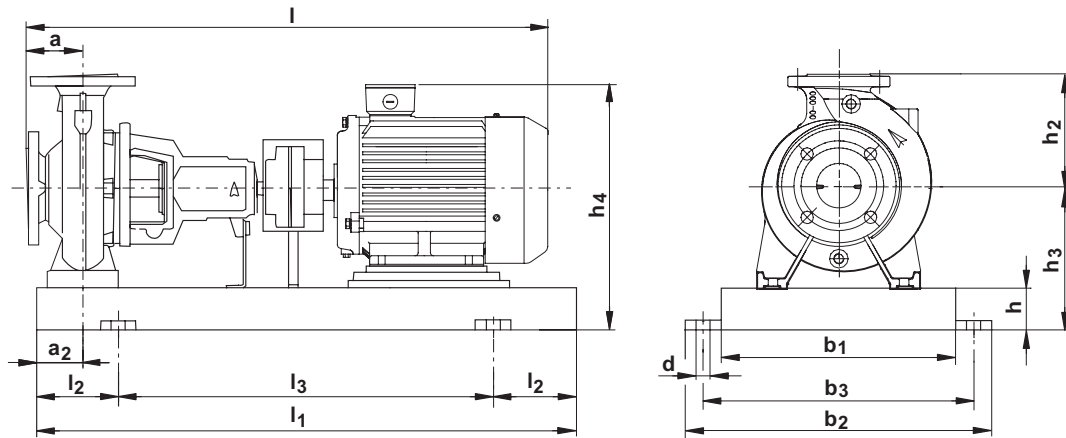
# Performance curves

NK 150-315  
4-pole



TM00 8913 0499





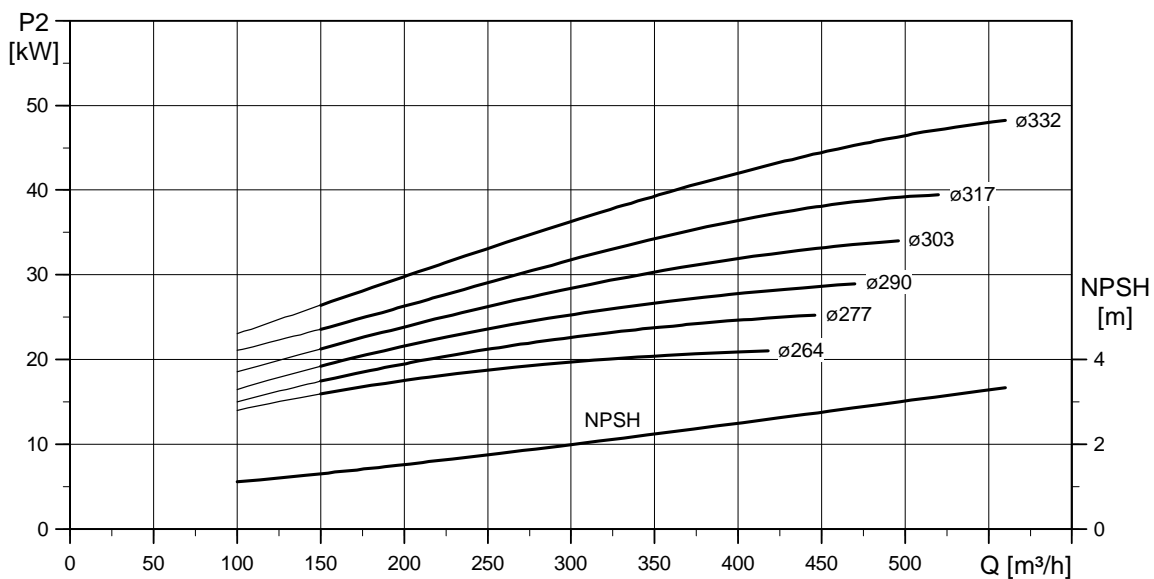
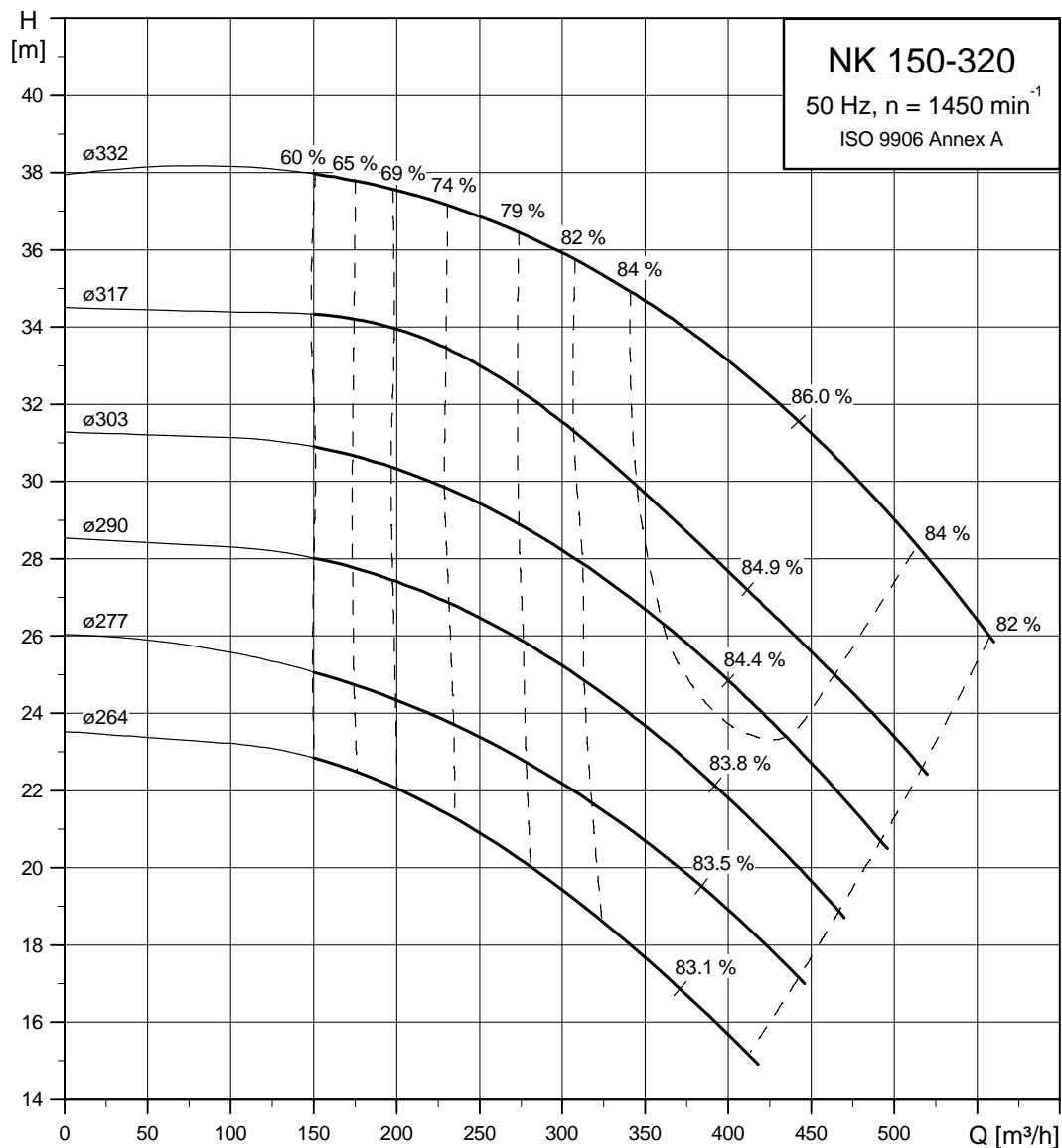
TM03 1283 1505

NK 150-315							
kW	11	15	18.5	22	30	37	45
Standard motor range	MMG 160MA-E	MMG 160L-E	MMG 180M-E	MMG 180L-E	MMG 200L-E	MMG 225S-E	MMG 225M-E
Premium motor range	MMG 160M-D	MMG 160L-D	MMG 180M-D	MMG 180L-D	MMG 200L-D	MMG 225S-D	MMG 225M-D
E-motor range	-	-	-	-	-	-	-
PN [bar]	10	10	10	10	10	10	10
DN <sub>d</sub> [mm]	150	150	150	150	150	150	150
DN <sub>s</sub> [mm]	200	200	200	200	200	200	200
a [mm]	160	160	160	160	160	160	160
a <sub>2</sub> [mm]	110	110	110	110	110	110	110
h [mm]	100	100	100	100	100	100	100
h <sub>2</sub> [mm]	400	400	400	400	400	400	400
h <sub>3</sub> [mm]	380	380	380	380	380	380	380
h <sub>4</sub> [mm]	628/624/-	628/624/-	644/646/-	644/646/-	677/707/-	700/746/-	700/746/-
Standard coupling							
l <sup>1)</sup> [mm]	1302/1306/-	1346/1351/-	1384/1406/-	1384/1406/-	1451/1473/-	1506/1581/-	1531/1581/-
l <sub>1</sub> [mm]	1600	1600	1800	1800	1800	1800	1800
l <sub>2</sub> [mm]	270	270	300	300	300	300	300
l <sub>3</sub> [mm]	1060	1060	1200	1200	1200	1200	1200
b <sub>1</sub> [mm]	530	530	600	600	600	600	600
b <sub>2</sub> [mm]	660	660	730	730	730	730	730
b <sub>3</sub> [mm]	600	600	670	670	670	670	670
d [mm]	28	28	28	28	28	28	28
Weight <sup>1)</sup> Net [kg]	442/274/-	460/322/-	518/413/-	550/500/-	608/657/-	671/803/-	696/850/-
Spacer coupling							
l <sup>1)</sup> [mm]	1438/1442/-	1482/1487/-	1520/1542/-	1520/1542/-	1587/1609/-	1642/1717/-	1667/1717/-
l <sub>1</sub> [mm]	1800	1800	1800	1800	1800	1800	1800
l <sub>2</sub> [mm]	300	300	300	300	300	300	300
l <sub>3</sub> [mm]	1200	1200	1200	1200	1200	1200	1200
b <sub>1</sub> [mm]	600	600	600	600	600	600	600
b <sub>2</sub> [mm]	730	730	730	730	730	730	730
b <sub>3</sub> [mm]	670	670	670	670	670	670	670
d [mm]	28	28	28	28	28	28	28
Weight <sup>1)</sup> Net [kg]	465/277/-	481/326/-	518/415/-	545/503/-	605/662/-	669/799/-	694/846/-

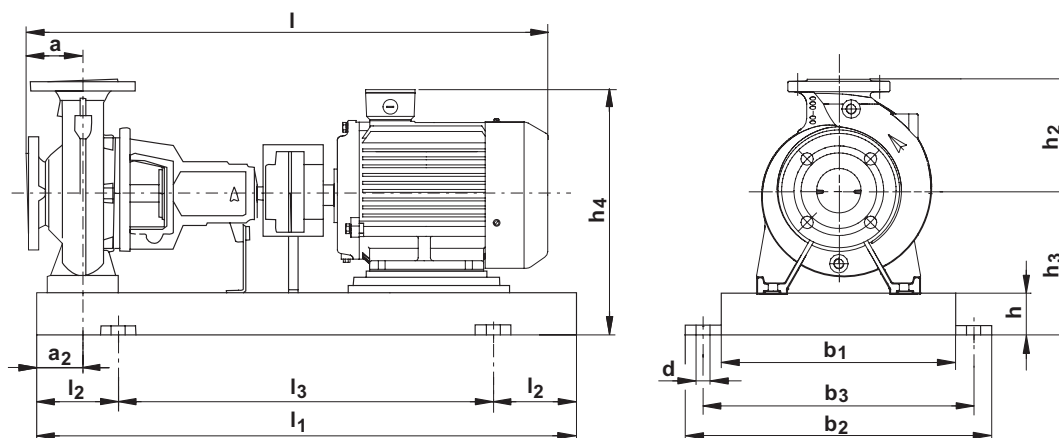
<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range

# Performance curves

NK 150-320  
4-pole



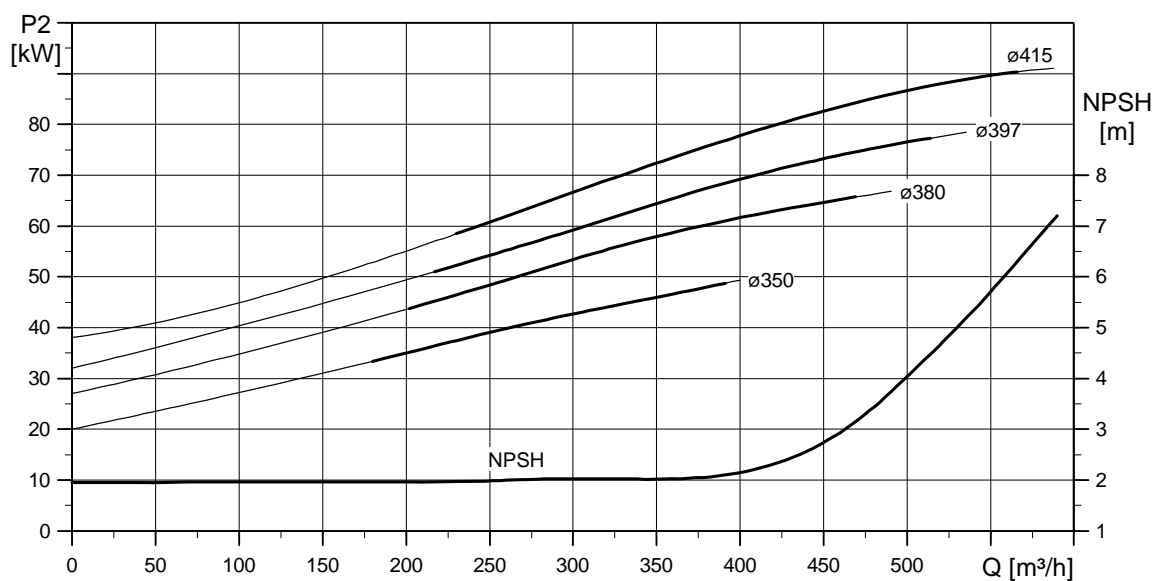
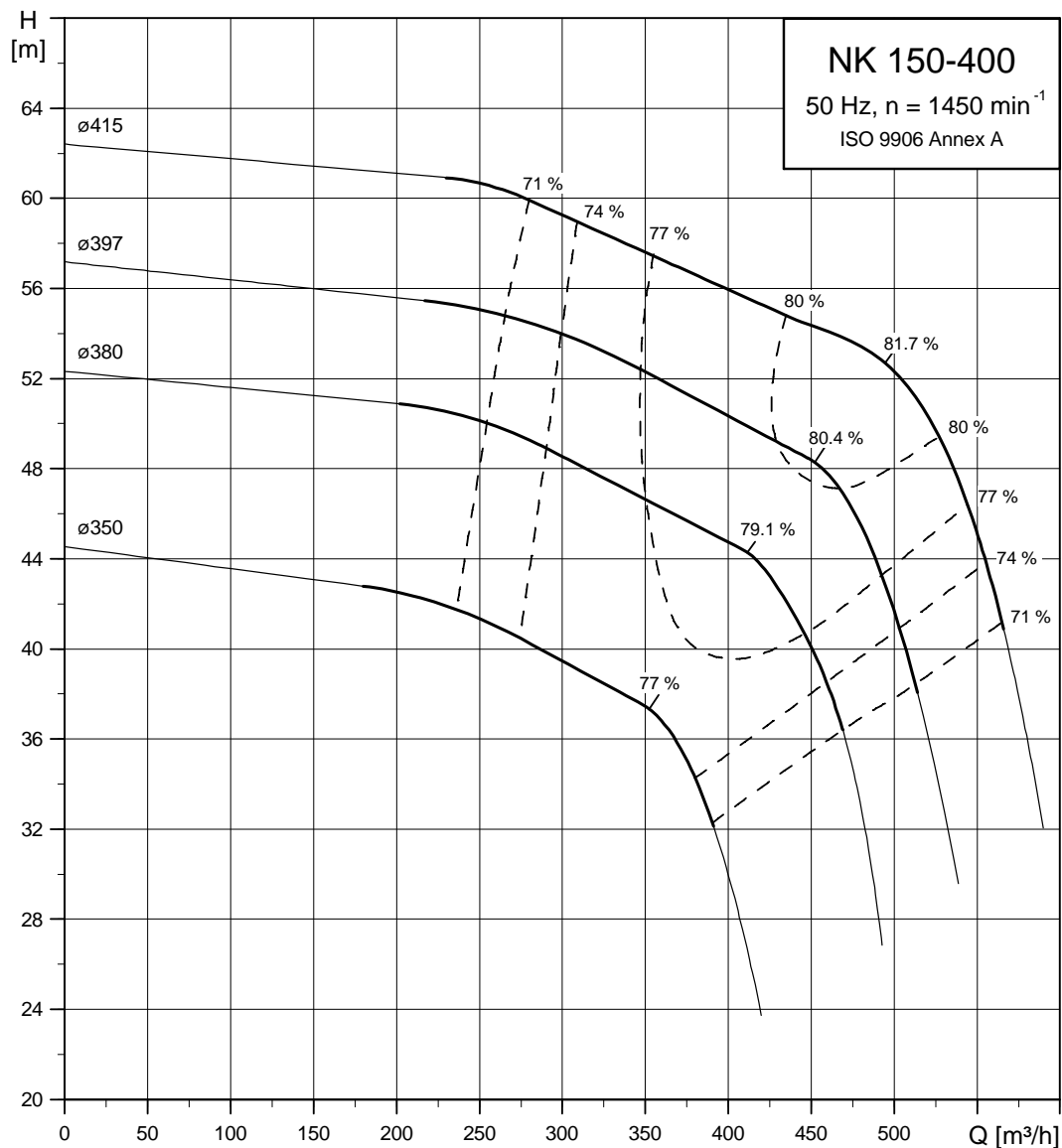
TM01 9510 1900



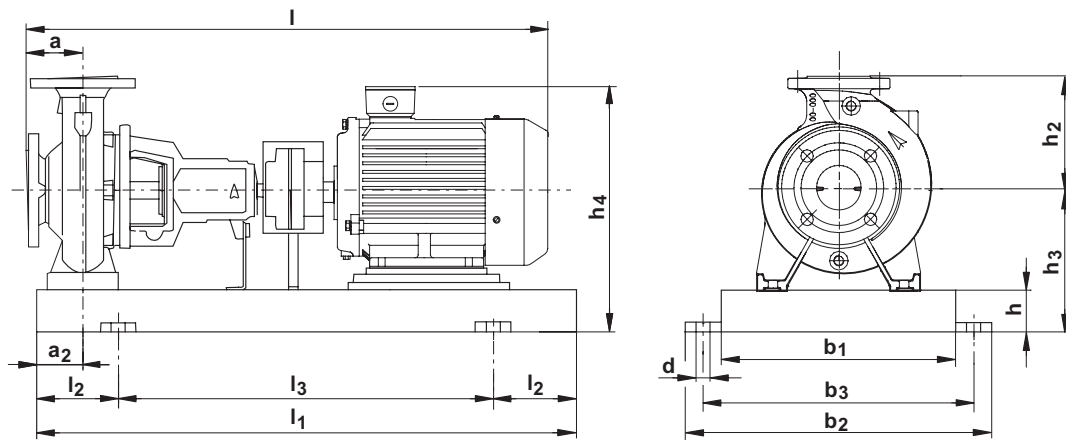
TM03 1283 1505

NK 150-320					
kW	22	30	37	45	55
Standard motor range	MMG 180L-E	MMG 200L-E	MMG 225S-E	MMG 225M-E	MMG 250M-E
Premium motor range	MMG 180L-D	MMG 200L-D	MMG 225S-D	MMG 225M-D	MMG 250M-D
E-motor range	-	-	-	-	-
PN [bar]	10	10	10	10	10
DN <sub>d</sub> [mm]	150	150	150	150	150
DN <sub>s</sub> [mm]	200	200	200	200	200
a [mm]	160	160	160	160	160
a <sub>2</sub> [mm]	110	110	110	110	110
h [mm]	100	100	100	100	100
h <sub>2</sub> [mm]	400	400	400	400	400
h <sub>3</sub> [mm]	380	380	380	380	380
h <sub>4</sub> [mm]	644/646/-	677/707/-	700/746/-	700/746/-	739/765/-
<b>Standard coupling</b>					
l <sup>1)</sup> [mm]	1384/1406/-	1451/1473/-	1506/1581/-	1531/1581/-	1604/1665/-
l <sub>1</sub> [mm]	1800	1800	1800	1800	1800
l <sub>2</sub> [mm]	300	300	300	300	300
l <sub>3</sub> [mm]	1200	1200	1200	1200	1200
b <sub>1</sub> [mm]	600	600	600	600	600
b <sub>2</sub> [mm]	730	730	730	730	730
b <sub>3</sub> [mm]	670	670	670	670	670
d [mm]	28	28	28	28	28
Weight <sup>1)</sup> Net [kg]	550/522/-	608/692/-	671/729/-	696/942/-	821/751/-
<b>Spacer coupling</b>					
l <sup>1)</sup> [mm]	1520/1542/-	1587/1609/-	1642/1717/-	1667/1717/-	1740/1801/-
l <sub>1</sub> [mm]	1800	1800	1800	1800	1800
l <sub>2</sub> [mm]	300	300	300	300	300
l <sub>3</sub> [mm]	1200	1200	1200	1200	1200
b <sub>1</sub> [mm]	600	600	600	600	600
b <sub>2</sub> [mm]	730	730	730	730	730
b <sub>3</sub> [mm]	670	670	670	670	670
d [mm]	28	28	28	28	28
Weight <sup>1)</sup> Net [kg]	545/526/-	605/713/-	669/735/-	694/938/-	818/748/-

<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range



TM01 9510 1900



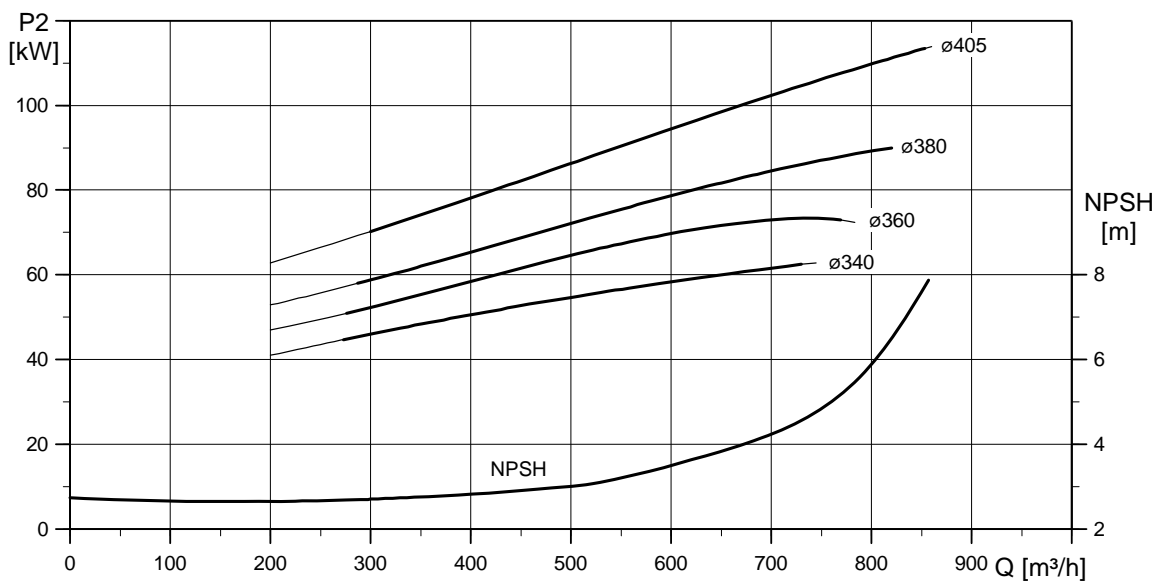
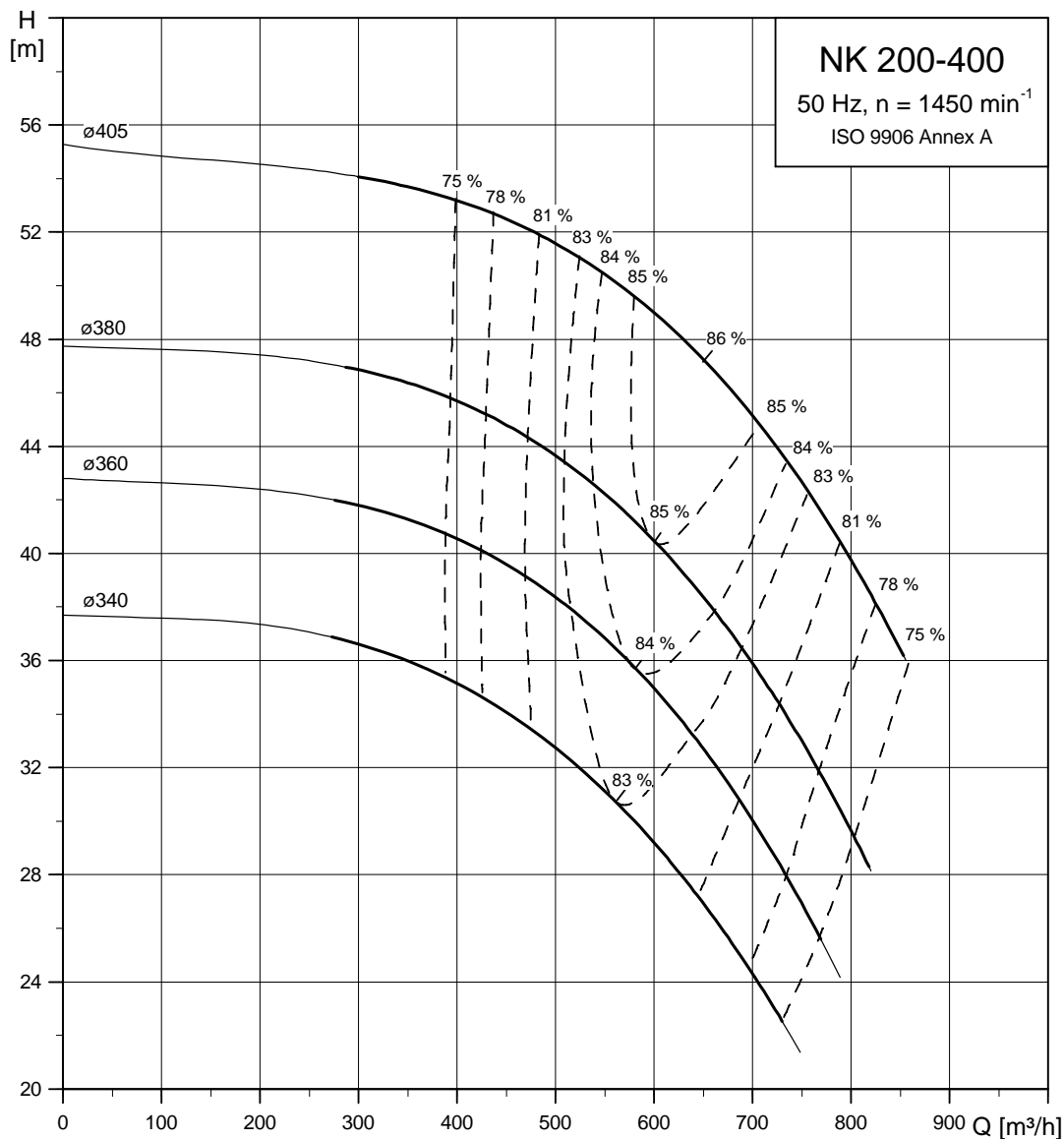
TM03 1283 1505

NK 150-400								
kW	22	30	37	45	55	75	90	110
Standard motor range	MMG 180L-E	MMG 200L-E	MMG 225S-E	MMG 225M-E	MMG 250M-E	MMG 280S-E	MMG 280M-E	MMG 315S-E
Premium motor range	MMG 180L-D	MMG 200L-D	MMG 225S-D	MMG 225M-D	MMG 250M-D	MMG 280S-D	MMG 280M-D	MMG 315S-D
E-motor range	-	-	-	-	-	-	-	-
PN [bar]	10	10	10	10	10	10	10	10
DN <sub>d</sub> [mm]	150	150	150	150	150	150	150	150
DN <sub>s</sub> [mm]	200	200	200	200	200	200	200	200
a [mm]	160	160	160	160	160	160	160	160
a <sub>2</sub> [mm]	110	110	110	110	110	110	110	110
h [mm]	100	100	100	100	100	100	120	120
h <sub>2</sub> [mm]	450	450	450	450	450	450	450	450
h <sub>3</sub> [mm]	415	415	415	415	415	415	435	435
h <sub>4</sub> [mm]	679/681/-	712/742/-	735/781/-	735/781/-	774/800/-	801/834/-	821/854/-	906/947/-
<b>Standard coupling</b>								
l <sup>1)</sup> [mm]	1384/1406/-	1451/1473/-	1506/1581/-	1531/1581/-	1604/1665/-	1639/1731/-	1690/1782/-	1900/1820/-
l <sub>1</sub> [mm]	1800	1800	1800	1800	1800	1800	2000	2000
l <sub>2</sub> [mm]	300	300	300	300	300	300	330	330
l <sub>3</sub> [mm]	1200	1200	1200	1200	1200	1200	1340	1340
b <sub>1</sub> [mm]	600	600	600	600	600	600	750	750
b <sub>2</sub> [mm]	730	730	730	730	730	730	910	910
b <sub>3</sub> [mm]	670	670	670	670	670	670	830	830
d [mm]	28	28	28	28	28	28	28	28
Weight <sup>1)</sup> Net [kg]	550/573/-	608/641/-	671/749/-	696/868/-	821/1252/-	900/1530/-	964/929/-	1335/990/-
<b>Spacer coupling</b>								
l <sup>1)</sup> [mm]	1520/1542/-	1587/1609/-	1642/1717/-	1667/1717/-	1740/1801/-	1773/1865/-	1824/1916/-	2034/1954/-
l <sub>1</sub> [mm]	1800	1800	1800	1800	1800	1800	2000	2000
l <sub>2</sub> [mm]	300	300	300	300	300	300	330	330
l <sub>3</sub> [mm]	1200	1200	1200	1200	1200	1200	1340	1340
b <sub>1</sub> [mm]	600	600	600	600	600	600	750	750
b <sub>2</sub> [mm]	730	730	730	730	730	730	910	910
b <sub>3</sub> [mm]	670	670	670	670	670	670	830	830
d [mm]	28	28	28	28	28	28	28	28
Weight <sup>1)</sup> Net [kg]	545/570/-	605/646/-	669/755/-	694/864/-	818/1254/-	908/1538/-	972/937/-	1345/1000/-

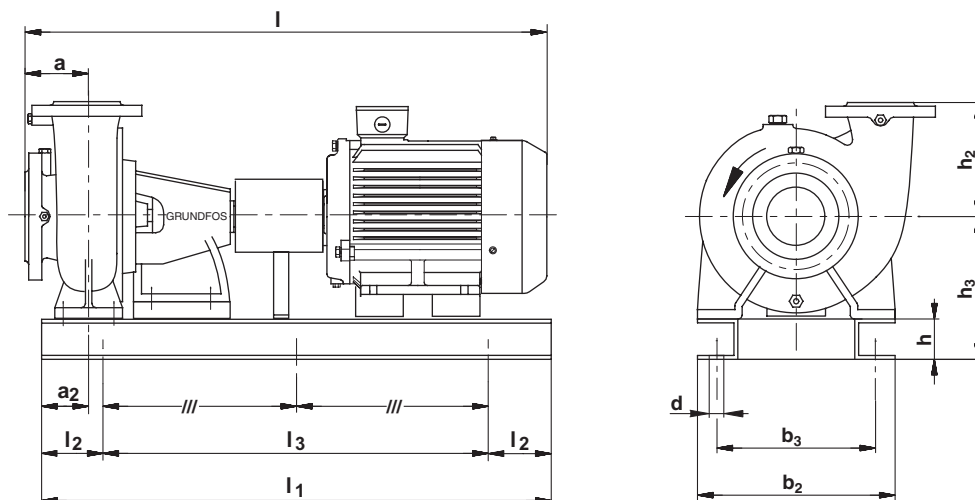
<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range

# Performance curves

NK 200-400  
4-pole



TM00 9733 0499



TM03 1279 1505

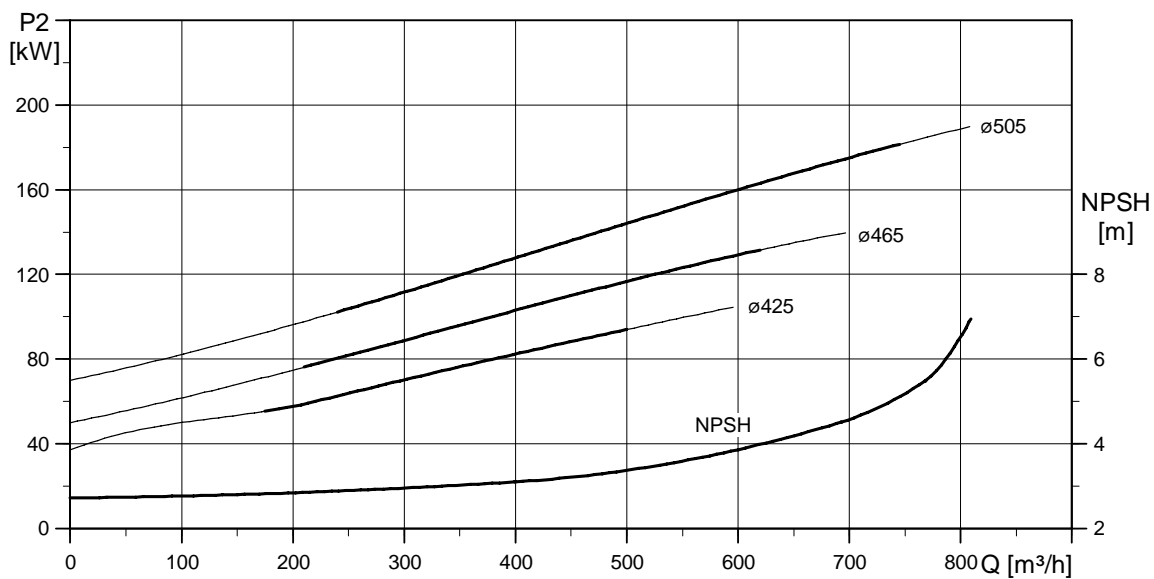
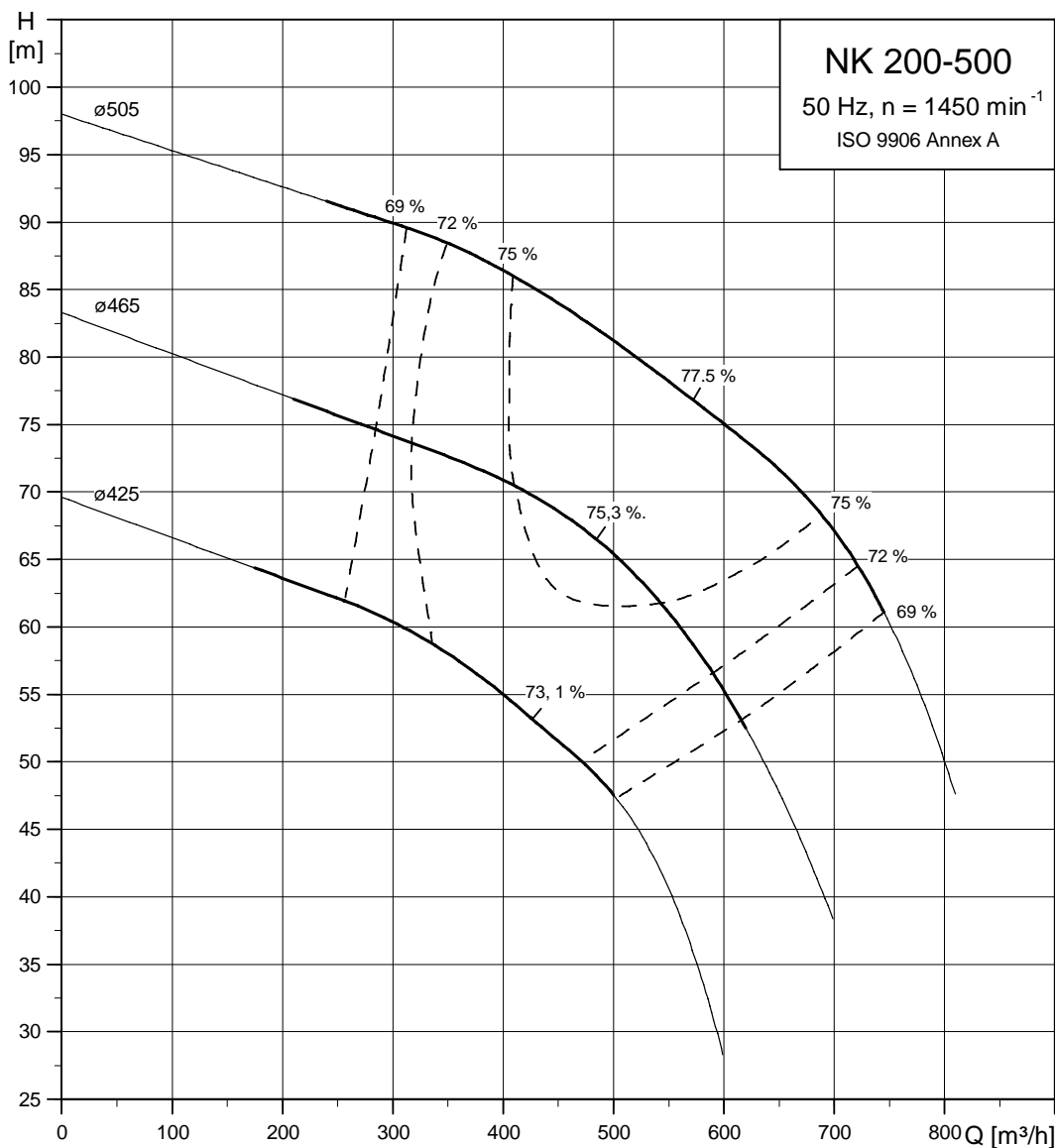
NK 200-400*						
kW	45	55	75	90	110	132
Standard motor range	MMG 225M-E	MMG 250M-E	MMG 280S-E	MMG 280M-E	MMG 315S-E	MMG 315M-E
Premium motor range	MMG 225M-D	MMG 250M-D	MMG 280S-D	MMG 280M-D	MMG 315S-D	MMG 315MA-D
E-motor range	-	-	-	-	-	-
PN [bar]	10	10	10	10	10	10
DN <sub>d</sub> [mm]	200	200	200	200	200	200
DN <sub>s</sub> [mm]	250	250	250	250	250	250
a [mm]	180	180	180	180	180	180
a <sub>2</sub> [mm]	245	255	255	255	255	255
h [mm]	160	180	180	180	180	200
h <sub>2</sub> [mm]	400	400	400	400	400	400
h <sub>3</sub> [mm]	470	490	490	490	495	515
h <sub>4</sub> [mm]	790/836/-	849/875/-	876/909/-	876/909/-	966/1007/-	986/1027/-
<b>Standard coupling</b>						
l <sup>1)</sup> [mm]	1771/1821/-	1844/1905/-	1879/1971/-	1930/2022/-	2140/2060/-	2253/2060/-
l <sub>1</sub> [mm]	1900	2000	2000	2100	2100	2200
l <sub>2</sub> [mm]	200	200	200	200	200	200
l <sub>3</sub> [mm]	1500	1600	1600	1700	1700	1800
b <sub>1</sub> [mm]	-	-	-	-	-	-
b <sub>2</sub> [mm]	680	690	715	715	750	760
b <sub>3</sub> [mm]	620	625	650	650	685	690
d [mm]	18	18	18	18	18	18
Weight <sup>1)</sup> Net [kg]	931/814/-	1080/1323/-	1151/1614/-	1202/1167/-	1583/1238/-	1761/1501/-
<b>Spacer coupling</b>						
l <sup>1)</sup> [mm]	1967/2017/-	2040/2101/-	2073/2165/-	2124/2216/-	2334/2254/-	2447/2254/-
l <sub>1</sub> [mm]	1900	2000	2000	2100	2200	2200
l <sub>2</sub> [mm]	200	200	200	200	200	200
l <sub>3</sub> [mm]	1500	1600	1600	1700	1800	1800
b <sub>1</sub> [mm]	-	-	-	-	-	-
b <sub>2</sub> [mm]	680	690	715	715	750	760
b <sub>3</sub> [mm]	620	625	650	650	685	690
d [mm]	18	18	18	18	18	18
Weight <sup>1)</sup> Net [kg]	930/820/-	1077/1319/-	1159/1622/-	1210/1175/-	1597/1252/-	1771/1511/-

<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range

<sup>\*)</sup> Oversize

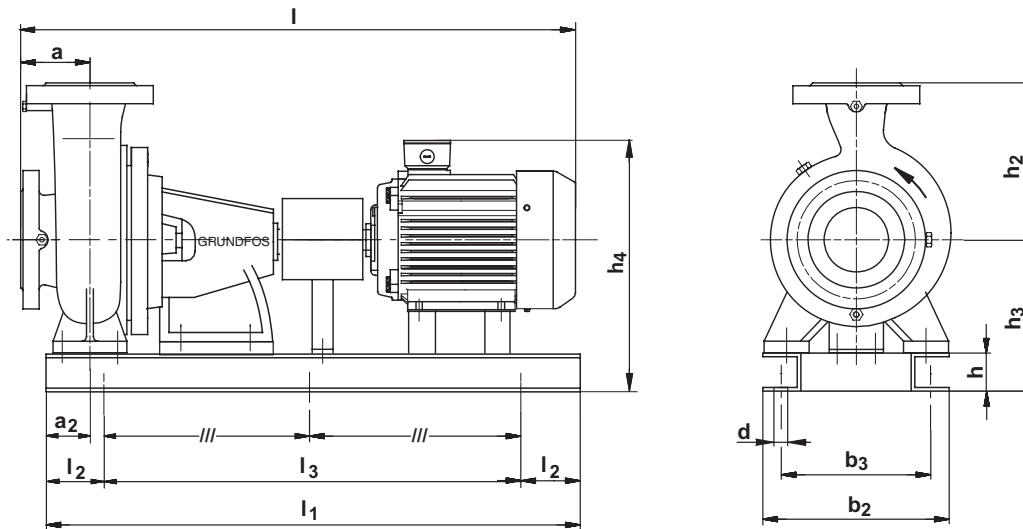
# Performance curves

NK 200-500  
4-pole



TM00 9734 1005



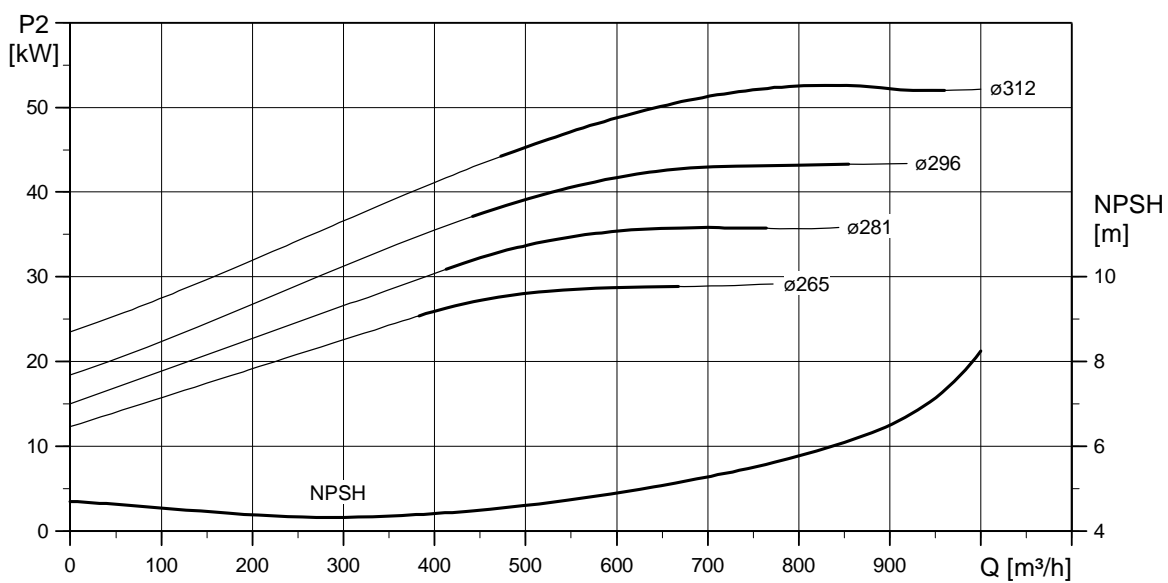
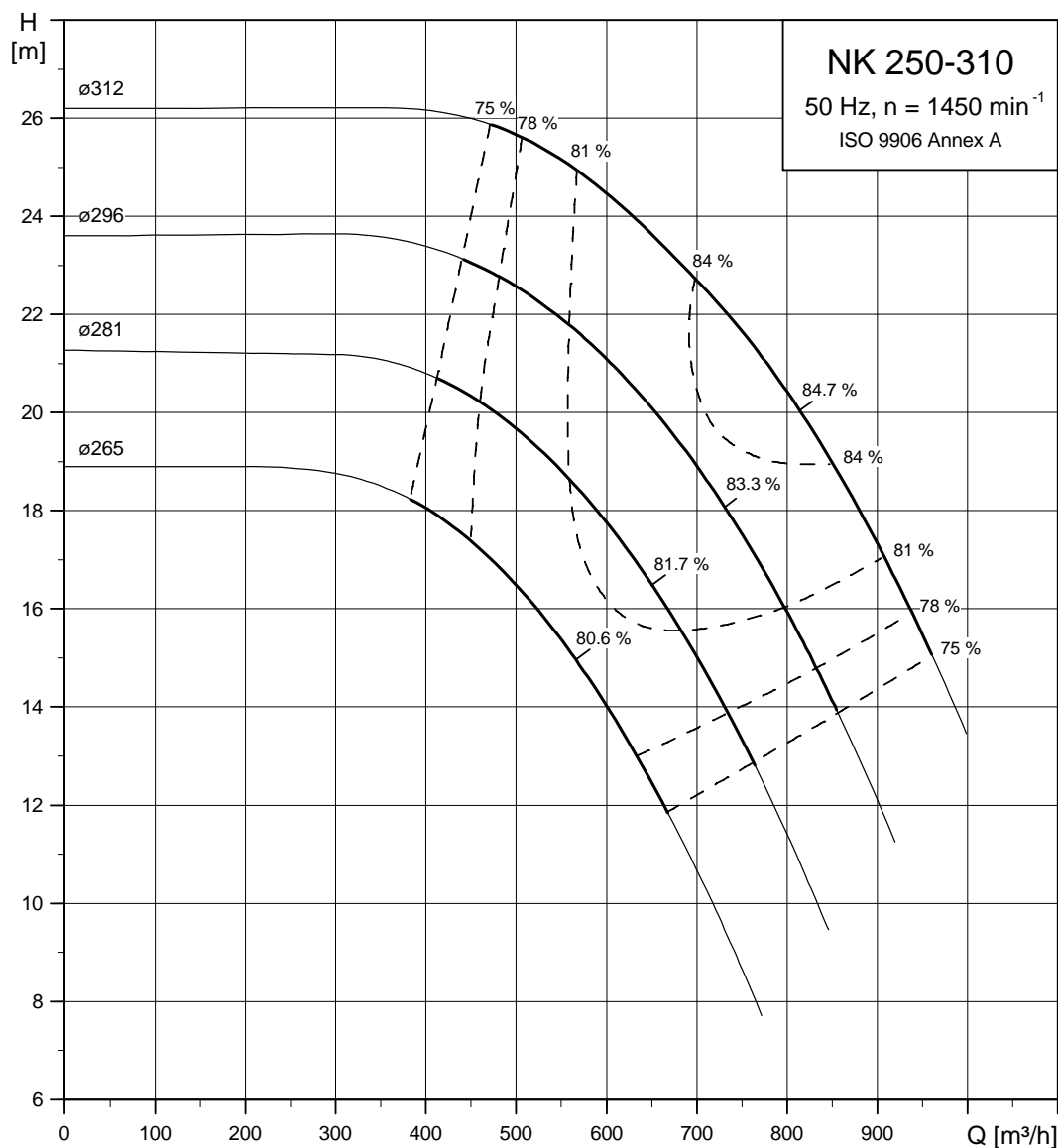


TM03 1282 1505

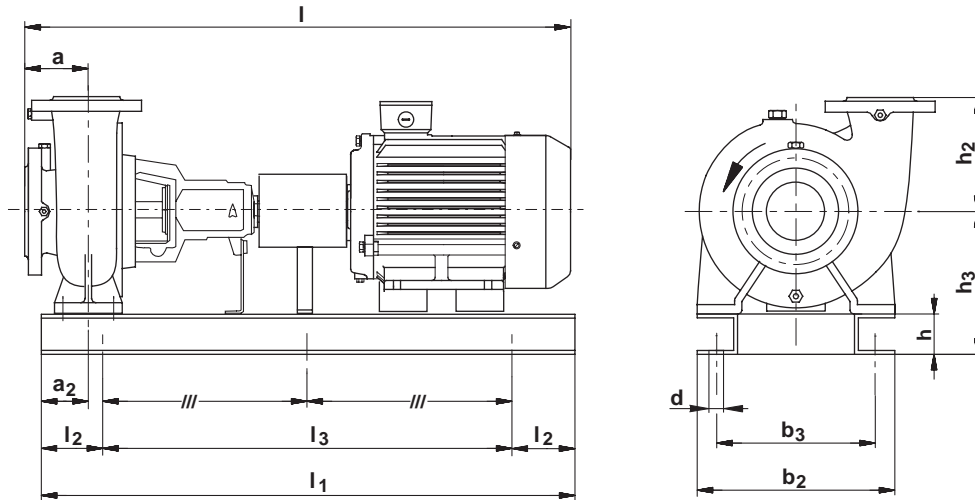
NK 200-500*								
kW	55	75	90	110	132	160	200	250
Standard motor range	MMG 250M-E	MMG 280S-E	MMG 280M-E	MMG 315S-E	MMG 315M-E	MMG 315LA-E	MMG 315LB-E	MMG 355M-E
Premium motor range	MMG 250M-D	MMG 280S-D	MMG 280M-D	MMG 315S-D	MMG 315MA-D	MMG 315MB-D	MMG 315L-D	Siemens 315
E-motor range	-	-	-	-	-	-	-	-
PN [bar]	10	10	10	10	10	10	10	10
DN <sub>d</sub> [mm]	200	200	200	200	200	200	200	200
DN <sub>s</sub> [mm]	250	250	250	250	250	250	250	250
a [mm]	250	250	250	250	250	250	250	250
a <sub>2</sub> [mm]	175	175	175	185	185	185	185	132
h [mm]	160	180	180	180	200	200	220	240
h <sub>2</sub> [mm]	675	675	675	675	675	675	675	675
h <sub>3</sub> [mm]	480	490	490	495	515	515	535	595
h <sub>4</sub> [mm]	839/865/-	876/909/-	876/909/-	966/1007/-	986/1027/-	986/1027/-	1006/1047/-	1234/1045/-
<b>Standard coupling</b>								
l <sup>1)</sup> [mm]	1914/1975/-	1949/2041/-	2000/2092/-	2210/2130/-	2323/2130/-	2323/2130/-	2323/2250/-	2522/2406/-
l <sub>1</sub> [mm]	1900	2000	2000	2100	2100	2100	2200	2400
l <sub>2</sub> [mm]	150	150	150	150	150	150	150	150
l <sub>3</sub> [mm]	1600	1700	1700	1800	1800	1800	1900	2100
b <sub>1</sub> [mm]	-	-	-	-	-	-	-	-
b <sub>2</sub> [mm]	935	945	945	945	955	955	965	975
b <sub>3</sub> [mm]	875	880	880	880	885	885	890	895
d [mm]	18	18	18	18	18	18	18	22
Weight <sup>1)</sup> Net [kg]	1162/1254/-	1258/2040/-	1304/1269/-	1694/1349/-	1864/1604/-	1949/1689/-	2068/1893/-	2467/2117/-
<b>Spacer coupling</b>								
l <sup>1)</sup> [mm]	2110/2171/-	2143/2235/-	2194/2286/-	2404/2324/-	2517/2324/-	2517/2324/-	2517/2444/-	2716/2600/-
l <sub>1</sub> [mm]	1900	2000	2000	2200	2200	2200	2200	2700
l <sub>2</sub> [mm]	150	150	150	150	150	150	150	150
l <sub>3</sub> [mm]	1600	1700	1700	1900	1900	1900	1900	2400
b <sub>1</sub> [mm]	-	-	-	-	-	-	-	-
b <sub>2</sub> [mm]	935	945	945	945	955	955	965	975
b <sub>3</sub> [mm]	875	880	880	880	885	885	890	895
d [mm]	18	18	18	18	18	18	18	22
Weight <sup>1)</sup> Net [kg]	1159/1251/-	1266/2055/-	1312/1277/-	1700/1355/-	1879/1619/-	1970/1710/-	2084/1909/-	2509/2159/-

<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range

\*) Oversize



TM01 2901 0499

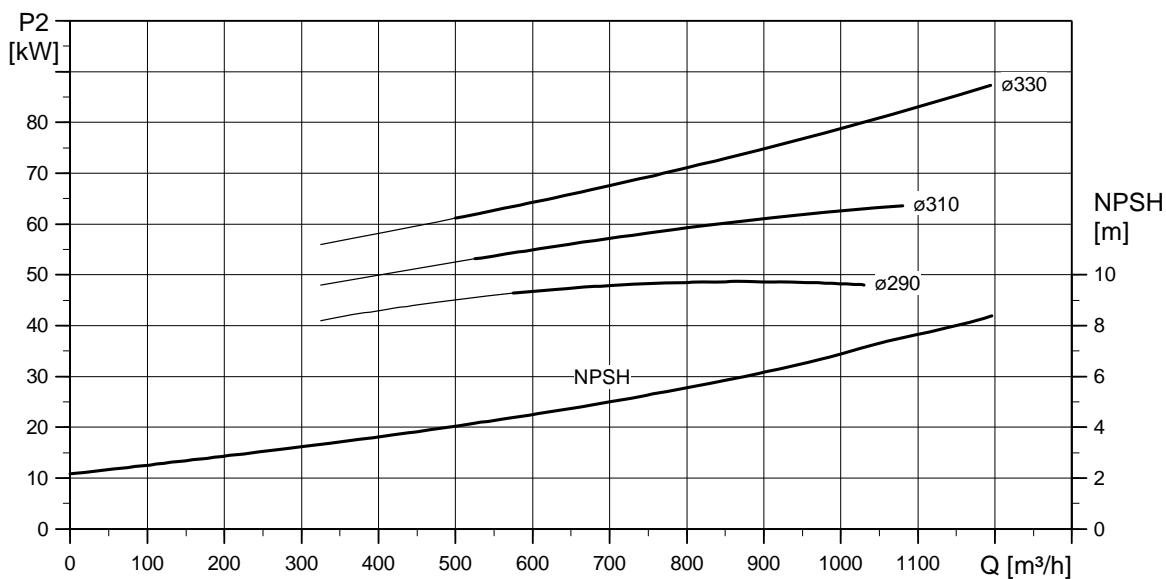
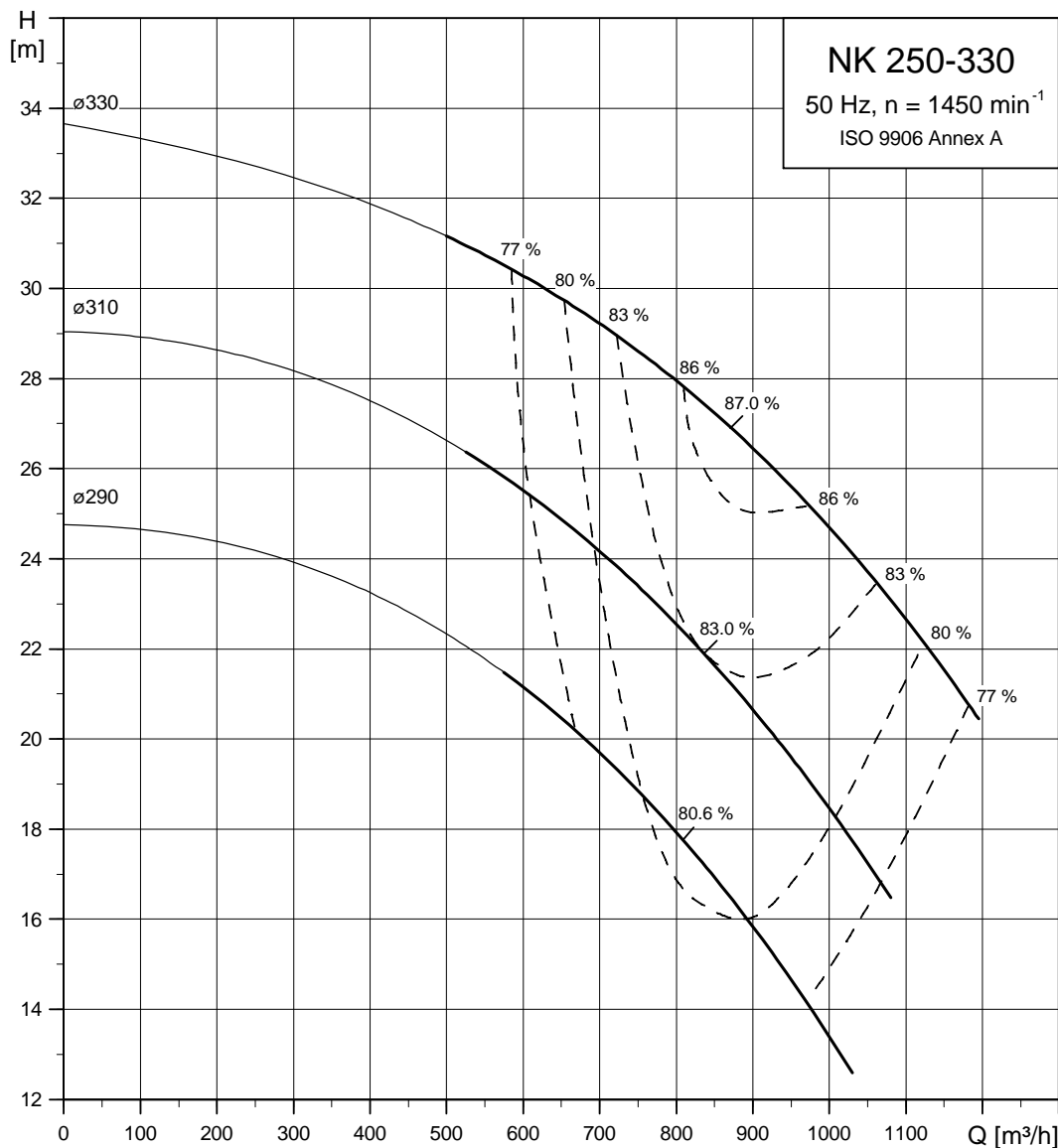


TM03 1278 1505

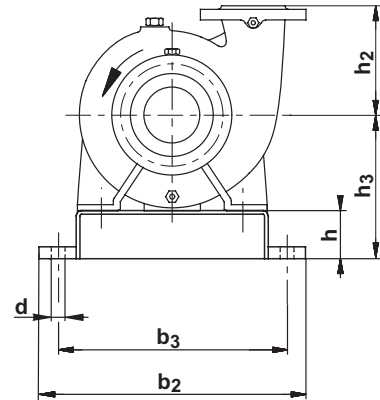
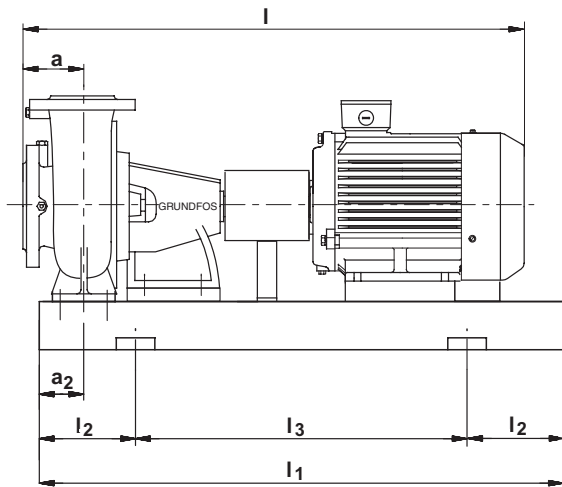
NK 250-310*						
kW		30	37	45	55	75
Standard motor range		MMG 200L-E	MMG 225S-E	MMG 225M-E	MMG 250M-E	MMG 280S-E
Premium motor range		MMG 200L-D	MMG 225S-D	MMG 225M-D	MMG 250M-D	MMG 280S-D
E-motor range		-	-	-	-	-
PN	[bar]	10	10	10	10	10
DN <sub>d</sub>	[mm]	250	250	250	250	250
DN <sub>s</sub>	[mm]	300	300	300	300	300
a	[mm]	250	250	250	250	250
a <sub>2</sub>	[mm]	195	195	195	205	205
h	[mm]	140	160	160	160	180
h <sub>2</sub>	[mm]	400	400	400	400	400
h <sub>3</sub>	[mm]	480	505	505	510	560
h <sub>4</sub>	[mm]	777/807/-	825/871/-	825/871/-	869/895/-	946/979/-
<b>Standard coupling</b>						
l <sup>1)</sup>	[mm]	1576/1598/-	1631/1706/-	1656/1706/-	1729/1790/-	1764/1856/-
l <sub>1</sub>	[mm]	1700	1700	1700	1800	1800
l <sub>2</sub>	[mm]	100	100	100	100	100
l <sub>3</sub>	[mm]	1500	1500	1500	1600	1600
b <sub>1</sub>	[mm]	-	-	-	-	-
b <sub>2</sub>	[mm]	950	950	950	950	960
b <sub>3</sub>	[mm]	885	885	885	885	890
d	[mm]	18	18	18	18	18
Weight <sup>1)</sup>	Net [kg]	781/661/-	856/808/-	881/873/-	1015/1354/-	1115/2345/-
<b>Spacer coupling</b>						
l <sup>1)</sup>	[mm]	1772/1794/-	1827/1902/-	1852/1902/-	1925/1986/-	1958/2050/-
l <sub>1</sub>	[mm]	1700	1800	1800	1900	1900
l <sub>2</sub>	[mm]	100	100	100	100	100
l <sub>3</sub>	[mm]	1500	1600	1600	1700	1700
b <sub>1</sub>	[mm]	-	-	-	-	-
b <sub>2</sub>	[mm]	950	950	950	950	960
b <sub>3</sub>	[mm]	885	885	885	885	890
d	[mm]	18	18	18	18	18
Weight <sup>1)</sup>	Net [kg]	778/666/-	863/805/-	888/870/-	1017/1358/-	1135/2366/-

<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range

<sup>\*)</sup> Oversize



TM01 2900 0499



TM03 1280 1505

NK 250-330*				
kW	55	75 <sup>3)</sup>	90 <sup>3)</sup>	110 <sup>3)</sup>
Standard motor range	MMG 250M-E	MMG 280S-E	MMG 280M-E	MMG 315S-E
Premium motor range	MMG 250M-D	MMG 280S-D	MMG 280M-D	MMG 315S-D
E-motor range	-	-	-	-
PN [bar]	10	10	10	10
DN <sub>d</sub> [mm]	250	250	250	250
DN <sub>s</sub> [mm]	250	250	250	250
a [mm]	250	250	250	250
a <sub>2</sub> [mm]	220	220	220	220
h [mm]	120	120	120	120
h <sub>2</sub> [mm]	400	400	400	400
h <sub>3</sub> [mm]	570	570	570	570
h <sub>4</sub> [mm]	929/955/-	956/989/-	956/989/-	1041/1082/-
<b>Standard coupling</b>				
l <sup>1)</sup> [mm]	1904/1965/-	1939/2031/-	1990/2082/-	2200/2120/-
l <sub>1</sub> [mm]	2000	2000	2000	2000
l <sub>2</sub> [mm]	330	330	330	330
l <sub>3</sub> [mm]	1340	1340	1340	1340
b <sub>1</sub> [mm]	750	750	750	750
b <sub>2</sub> [mm]	910	910	910	910
b <sub>3</sub> [mm]	830	830	830	830
d [mm]	28	28	28	28
Weight <sup>1)</sup> Net [kg]	1059/1346/-	1138/1114/-	1184/1149/-	1555/1210/-
<b>Spacer coupling</b>				
l <sup>1)</sup> [mm]	2100/2161/-	2133/2225/-	2184/2276/-	2394/2314/-
l <sub>1</sub> [mm]	2000	2100	2200	2200
l <sub>2</sub> [mm]	330	150	150	150
l <sub>3</sub> [mm]	1340	1800	1900	1900
b <sub>1</sub> [mm]	750	-	-	-
b <sub>2</sub> [mm]	910	850	860	860
b <sub>3</sub> [mm]	830	790	795	795
d [mm]	28	18	18	18
Weight <sup>1)</sup> Net [kg]	1056/1348/-	1267/1243/-	1340/1305/-	1713/1368/-

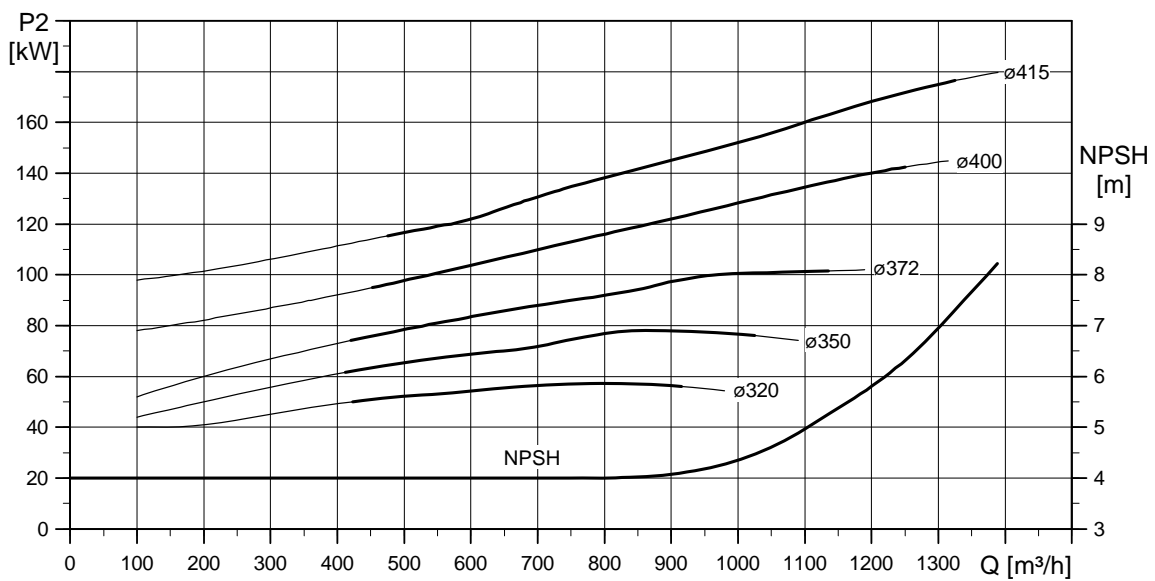
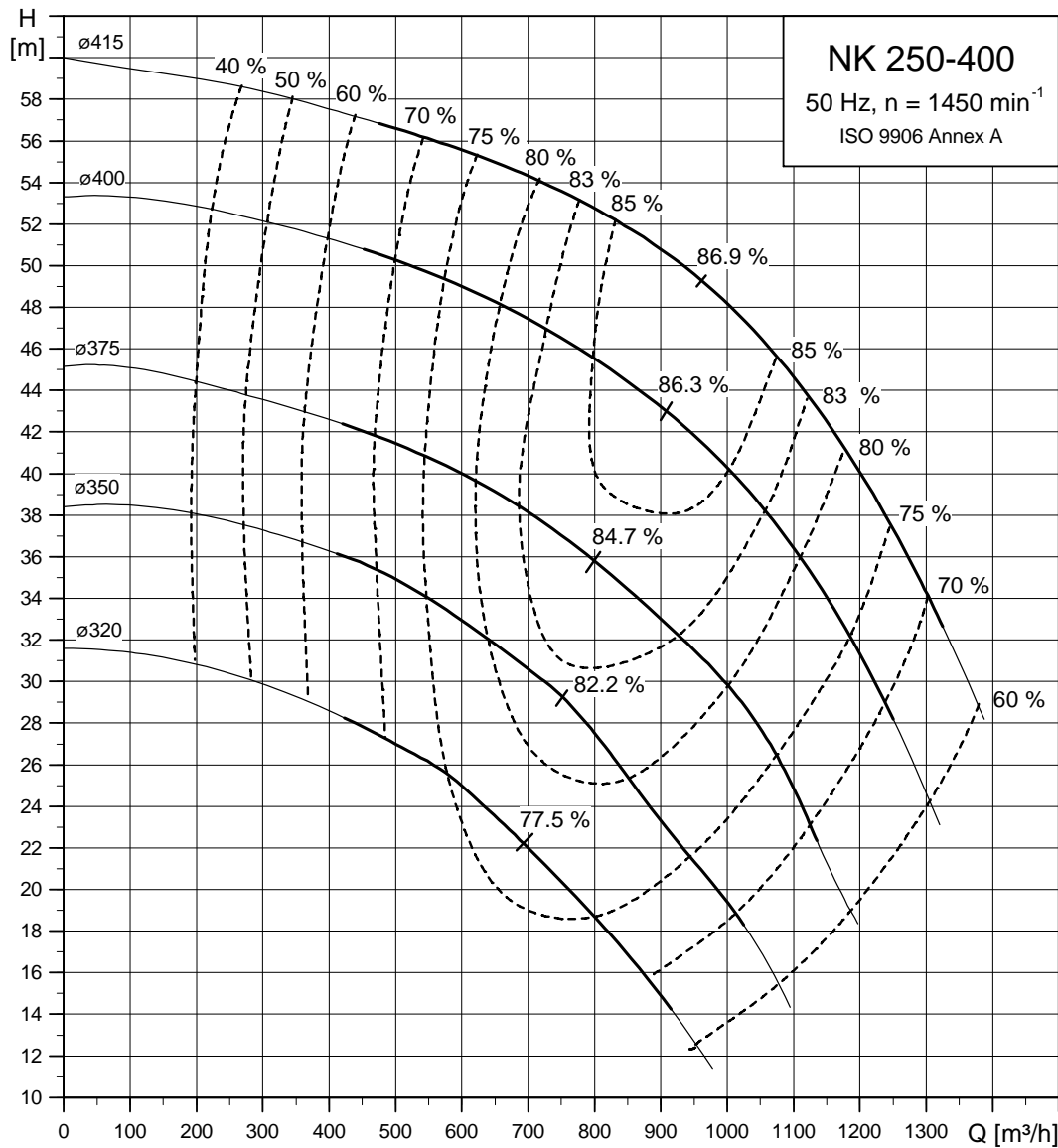
<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range

<sup>2)</sup> Oversize

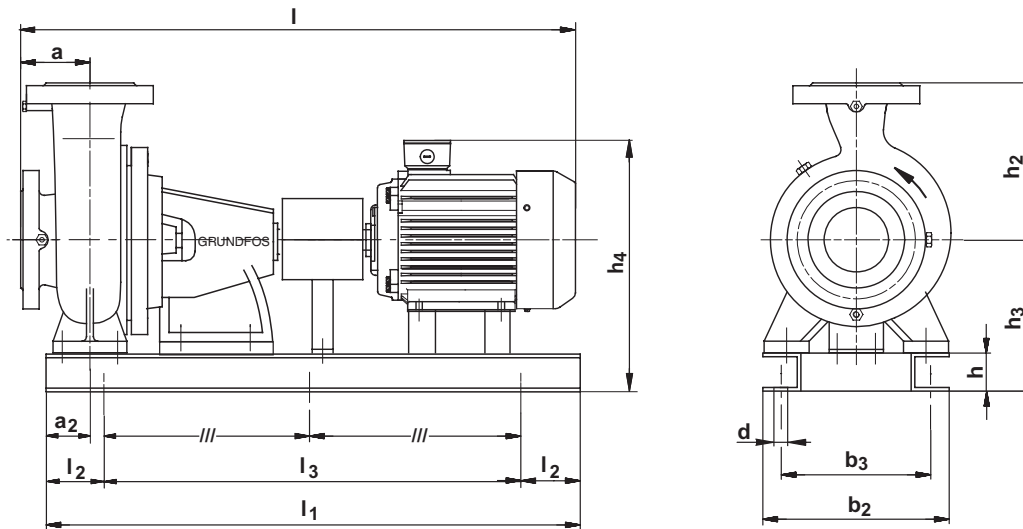
<sup>3)</sup> For these pump sizes with spacer coupling, see dimensional drawing NK 300-360 page 195

# Performance curves

NK 250-400  
4-pole



TM00 9735 0499



TM03 1282 1505

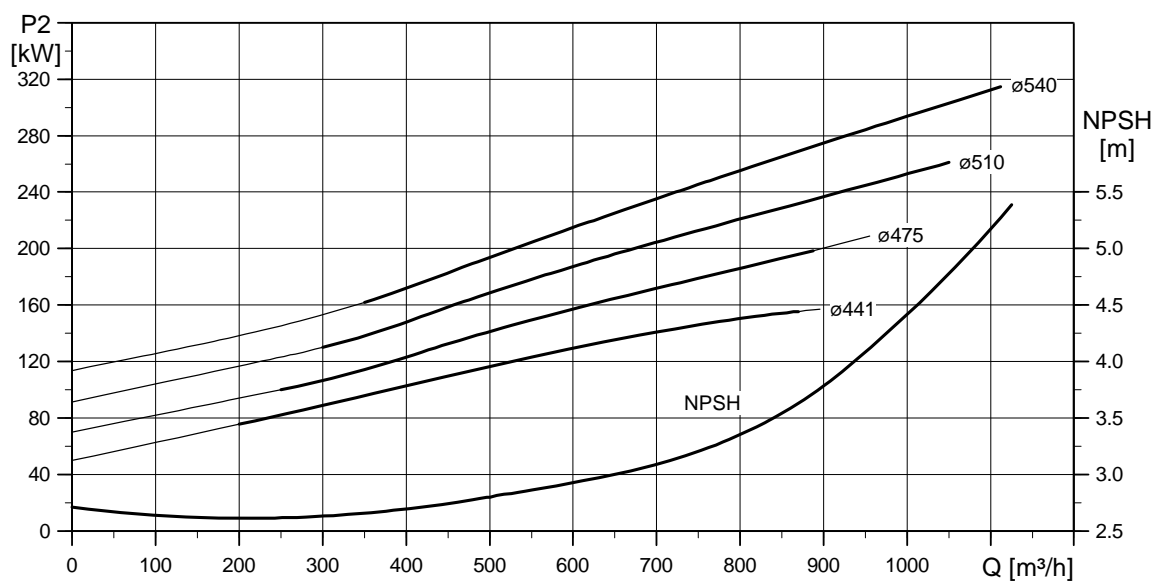
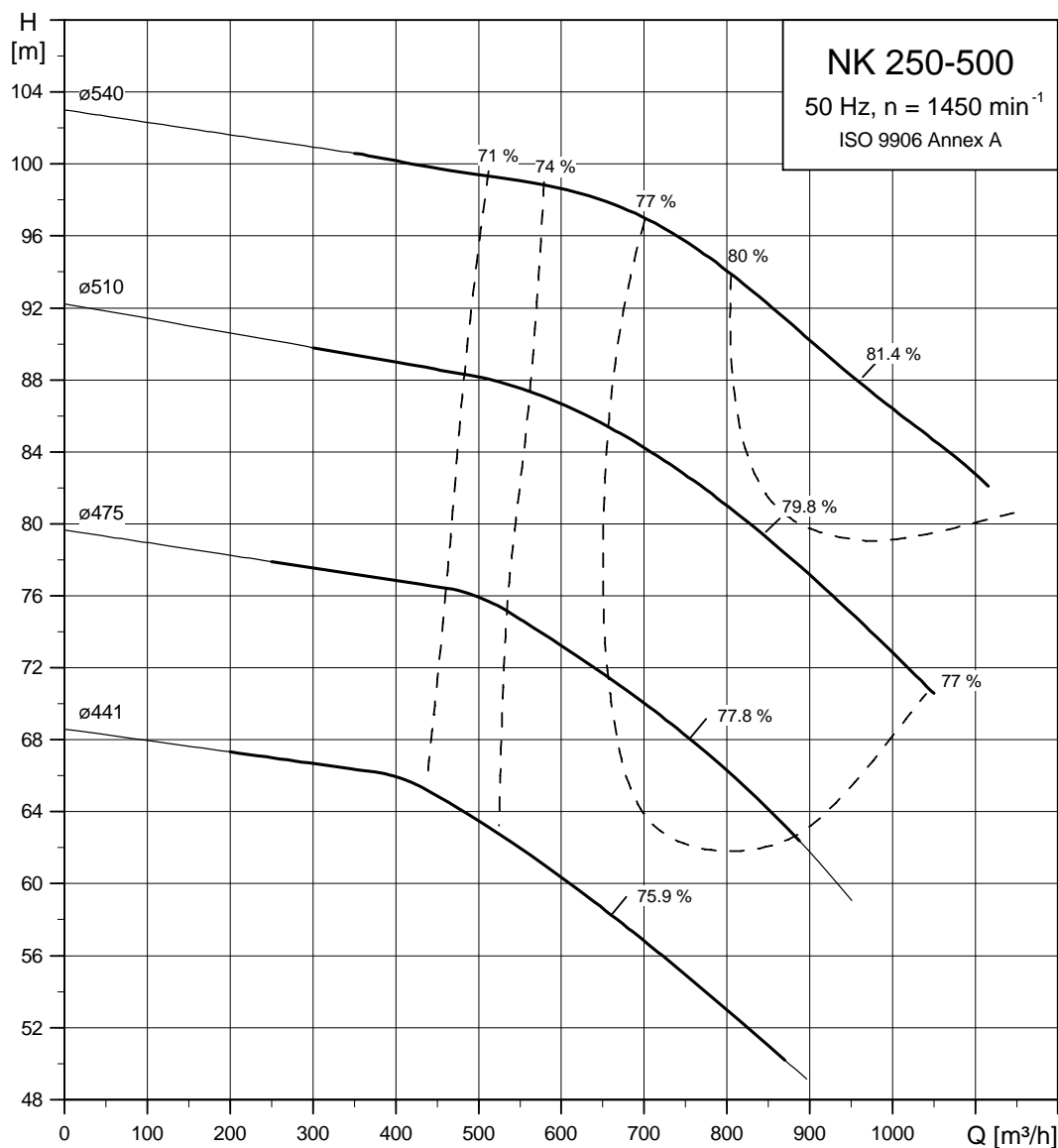
NK 250-400*							
kW	55	75	90	110	132	160	200
Standard motor range	MMG 250M-E	MMG 280S-E	MMG 280M-E	MMG 315S-E	MMG 315M-E	MMG 315LA-E	MMG 315LB-E
Premium motor range	MMG 250M-D	MMG 280S-D	MMG 280M-D	MMG 315S-D	MMG 315MA-D	MMG 315MB-D	MMG 315L-D
E-motor range	-	-	-	-	-	-	-
PN [bar]	10	10	10	10	10	10	10
DN <sub>d</sub> [mm]	250	250	250	250	250	250	250
DN <sub>s</sub> [mm]	300	300	300	300	300	300	300
a [mm]	200	200	200	200	200	200	200
a <sub>2</sub> [mm]	175	175	175	185	185	185	185
h [mm]	160	180	180	180	200	200	220
h <sub>2</sub> [mm]	600	600	600	600	600	600	600
h <sub>3</sub> [mm]	470	480	480	495	515	515	535
h <sub>4</sub> [mm]	829/855/-	866/899/-	866/899/-	966/1007/-	986/1027/-	986/1027/-	1006/1047/-
<b>Standard coupling</b>							
l <sup>1)</sup> [mm]	1854/1915/-	1889/1981/-	1940/2032/-	2150/2070/-	2263/2070/-	2263/2070/-	2263/2190/-
l <sub>1</sub> [mm]	1900	2000	2000	2100	2100	2100	2200
l <sub>2</sub> [mm]	150	150	150	150	150	150	150
l <sub>3</sub> [mm]	1600	1700	1700	1800	1800	1800	1900
b <sub>1</sub> [mm]	-	-	-	-	-	-	-
b <sub>2</sub> [mm]	850	860	860	860	870	870	880
b <sub>3</sub> [mm]	790	795	795	796	800	800	805
d [mm]	18	18	18	18	18	18	18
Weight <sup>1)</sup> Net [kg]	1090/1417/-	1179/1155/-	1225/1190/-	1611/1266/-	1784/1524/-	1869/1609/-	1995/1820/-
<b>Spacer coupling</b>							
l <sup>1)</sup> [mm]	2050/2111/-	2083/2175/-	2134/2226/-	2344/2264/-	2457/2264/-	2457/2264/-	2457/2384/-
l <sub>1</sub> [mm]	1900	2000	2000	2100	2100	2100	2200
l <sub>2</sub> [mm]	150	150	150	150	150	150	150
l <sub>3</sub> [mm]	1600	1700	1700	1800	1800	1800	1900
b <sub>1</sub> [mm]	-	-	-	-	-	-	-
b <sub>2</sub> [mm]	850	860	860	860	870	870	880
b <sub>3</sub> [mm]	790	795	795	796	800	800	805
d [mm]	18	18	18	18	18	18	18
Weight <sup>1)</sup> Net [kg]	1087/1413/-	1187/1163/-	1233/1198/-	1621/1276/-	1794/1534/-	1885/1625/-	2011/1836/-

<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range

<sup>\*)</sup> Oversize

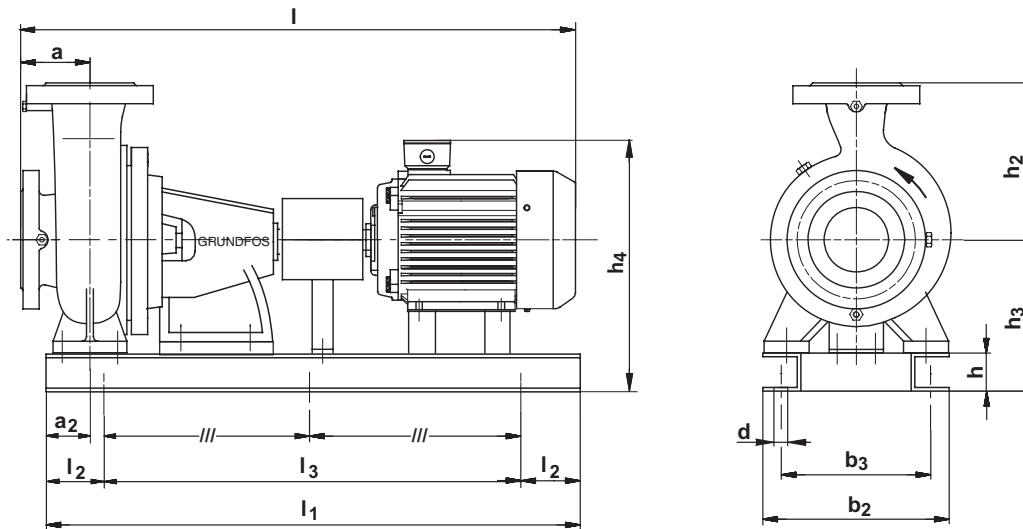
# Performance curves

NK 250-500  
4-pole



TM00 9736 0499



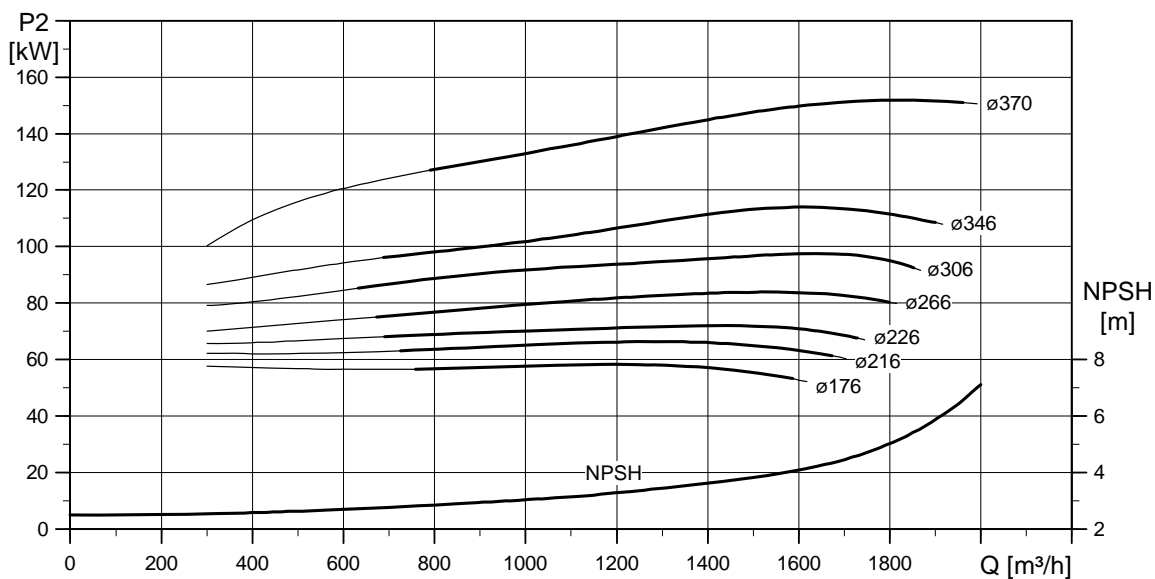
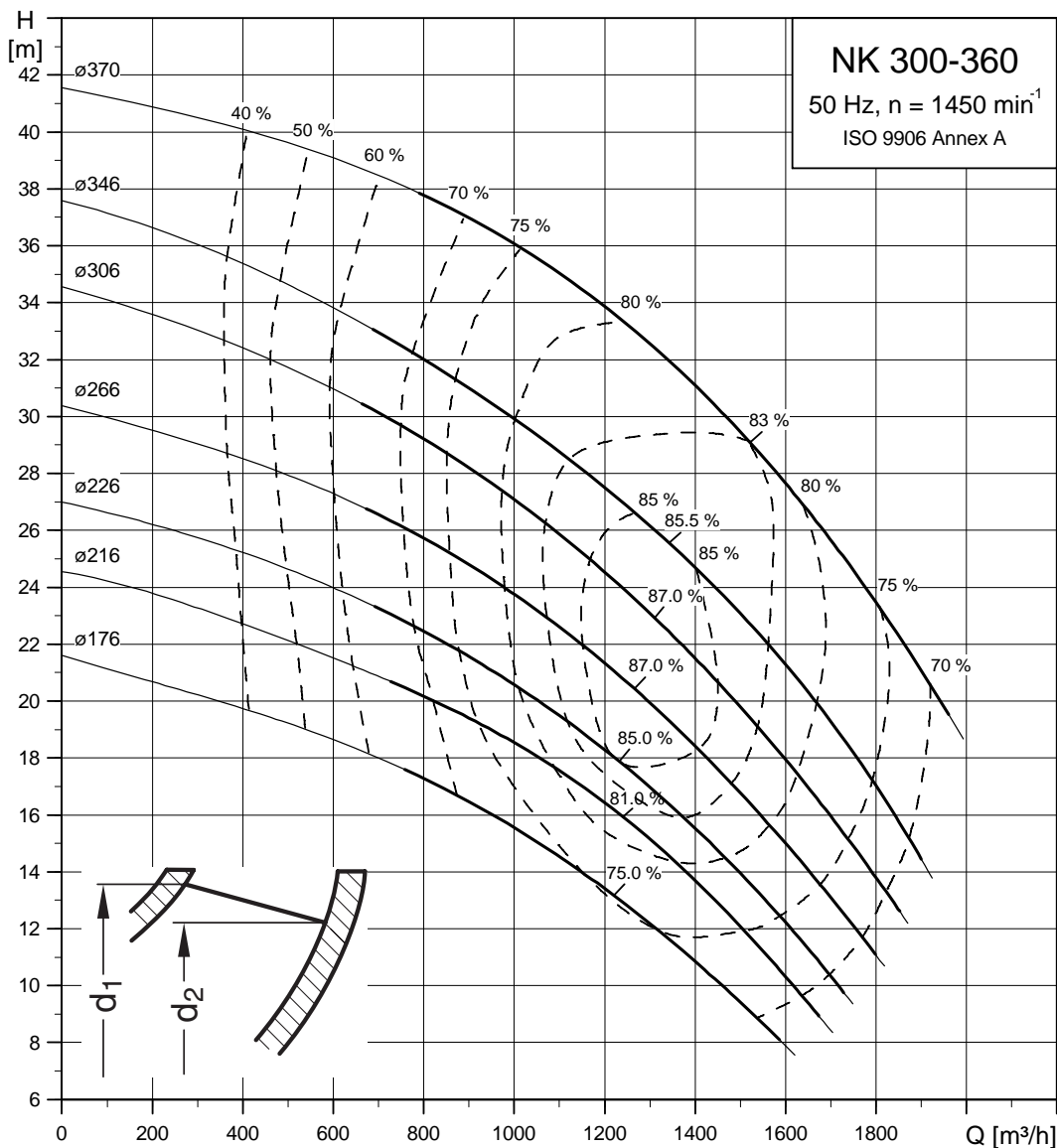


TM03 1282 1505

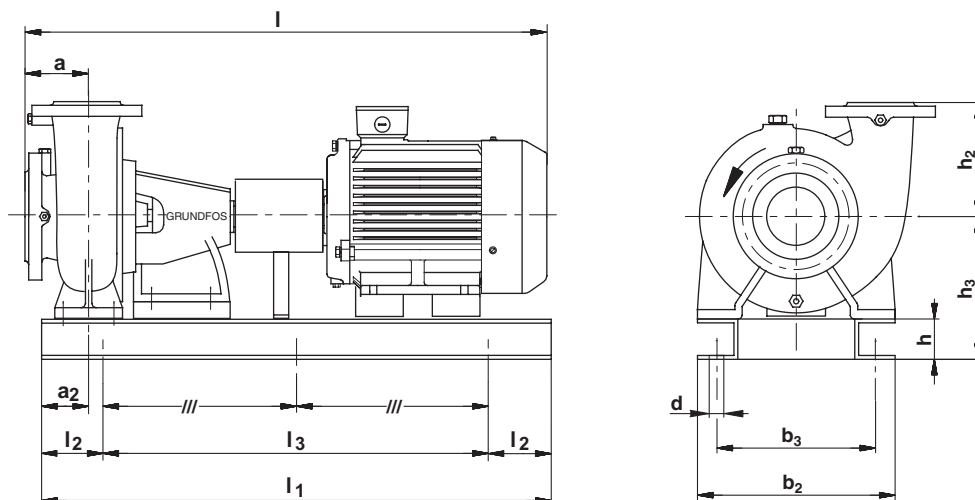
NK 250-500*							
kW	90	110	132	160	200	250	315
Standard motor range	MMG 280M-E	MMG 315S-E	MMG 315M-E	MMG 315LA-E	MMG 315LB-E	MMG 355M-E	MMG 355L-E
Premium motor range	MMG 280M-D	MMG 315S-D	MMG 315MA-D	MMG 315MB-D	MMG 315L-D	Siemens 315	Siemens 315
E-motor range	-	-	-	-	-	-	-
PN [bar]	10	10	10	10	10	10	10
DN <sub>d</sub> [mm]	250	250	250	250	250	250	250
DN <sub>s</sub> [mm]	300	300	300	300	300	300	300
a [mm]	300	300	300	300	300	300	300
a <sub>2</sub> [mm]	175	185	185	185	185	132	134
h [mm]	180	180	200	200	220	240	240
h <sub>2</sub> [mm]	660	660	660	660	660	660	660
h <sub>3</sub> [mm]	490	495	515	515	535	615	615
h <sub>4</sub> [mm]	876/909/-	966/1007/-	986/1027/-	986/1027/-	1006/1047/-	1254/1045/-	1254/1045/-
<b>Standard coupling</b>							
l <sup>1)</sup> [mm]	2050/2142/-	2260/2180/-	2373/2180/-	2373/2180/-	2373/2300/-	2572/2456/-	2542/2456/-
l <sub>1</sub> [mm]	2000	2100	2100	2100	2200	2400	2400
l <sub>2</sub> [mm]	150	150	150	150	150	150	150
l <sub>3</sub> [mm]	1700	1800	1800	1800	1900	2100	2100
b <sub>1</sub> [mm]	-	-	-	-	-	-	-
b <sub>2</sub> [mm]	945	945	955	955	965	985	985
b <sub>3</sub> [mm]	880	880	885	885	890	900	900
d [mm]	18	18	18	18	18	22	22
Weight <sup>1)</sup> Net [kg]	1331/1296/-	1721/1376/-	1891/1631/-	1976/1716/-	2095/1920/-	2491/2141/-	2741/2341/-
<b>Spacer coupling</b>							
l <sup>1)</sup> [mm]	2244/2336/-	2454/2374/-	2567/2374/-	2567/2374/-	2567/2494/-	2766/2650/-	2736/2650/-
l <sub>1</sub> [mm]	2000	2100	2100	2100	2200	2600	2600
l <sub>2</sub> [mm]	150	150	150	150	150	150	150
l <sub>3</sub> [mm]	1700	1800	1800	1800	1900	2300	2300
b <sub>1</sub> [mm]	-	-	-	-	-	-	-
b <sub>2</sub> [mm]	945	945	955	955	965	985	985
b <sub>3</sub> [mm]	880	880	885	885	890	900	900
d [mm]	18	18	18	18	18	22	22
Weight <sup>1)</sup> Net [kg]	1339/1304/-	1731/1386/-	1901/1641/-	1992/1732/-	2111/1936/-	2517/2167/-	2767/2367/-

<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range

<sup>\*)</sup> Oversize



TM01 1715 0499 - TM01 4547 0499



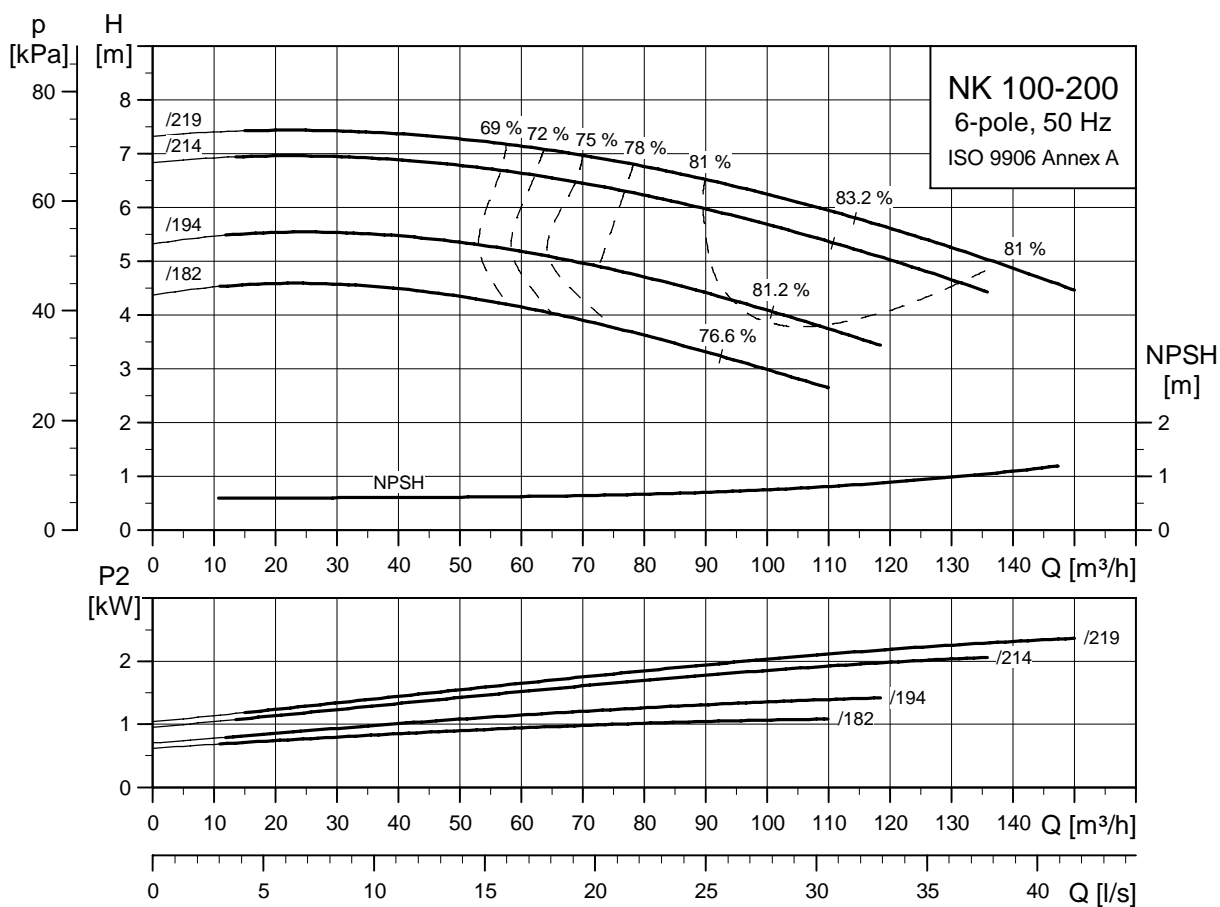
TM03 1279 1505

NK 300-360*						
kW	55	75	90	110	132	160
Standard motor range	MMG 250M-E	MMG 280S-E	MMG 280M-E	MMG 315S-E	MMG 315M-E	MMG 315LA-E
Premium motor range	MMG 250M-D	MMG 280S-D	MMG 280M-D	MMG 315S-D	MMG 315MA-D	MMG 315MB-D
E-motor range	-	-	-	-	-	-
PN [bar]	10	10	10	10	10	10
DN <sub>d</sub> [mm]	300	300	300	300	300	300
DN <sub>s</sub> [mm]	300	300	300	300	300	300
a [mm]	300	300	300	300	300	300
a <sub>2</sub> [mm]	180	180	180	180	180	180
h [mm]	180	180	180	180	180	180
h <sub>2</sub> [mm]	440	440	440	440	440	440
h <sub>3</sub> [mm]	700	700	700	700	700	700
h <sub>4</sub> [mm]	1059/1085/-	1086/1119/-	1086/1119/-	1171/1212/-	1171/1212/-	1171/1212/-
<b>Standard coupling</b>						
l <sup>1)</sup> [mm]	1974/2035/-	2009/2101/-	2060/2152/-	2270/2190/-	2383/2190/-	2383/2190/-
l <sub>1</sub> [mm]	2200	2300	2300	2400	2400	2400
l <sub>2</sub> [mm]	150	150	150	150	150	150
l <sub>3</sub> [mm]	1900	2000	2000	2100	2100	2100
b <sub>1</sub> [mm]	-	-	-	-	-	-
b <sub>2</sub> [mm]	860	860	860	860	860	860
b <sub>3</sub> [mm]	796	795	795	795	795	795
d [mm]	22	22	22	22	22	22
Weight <sup>1)</sup> Net [kg]	1378/1348/-	1465/1441/-	1511/1476/-	1928/1583/-	2083/1823/-	2168/1907/-
<b>Spacer coupling</b>						
l <sup>1)</sup> [mm]	2250/2311/-	2283/2375/-	2334/2426/-	2544/2464/-	2657/2464/-	2657/2464/-
l <sub>1</sub> [mm]	2200	2300	2300	2400	2400	2400
l <sub>2</sub> [mm]	150	150	150	150	150	150
l <sub>3</sub> [mm]	1900	2000	2000	2100	2100	2100
b <sub>1</sub> [mm]	-	-	-	-	-	-
b <sub>2</sub> [mm]	860	860	860	860	860	860
b <sub>3</sub> [mm]	796	795	795	795	795	795
d [mm]	22	22	22	22	22	22
Weight <sup>1)</sup> Net [kg]	1400/1345/-	1492/1468/-	1538/1503/-	1949/1604/-	2104/1844/-	2183/1923/-

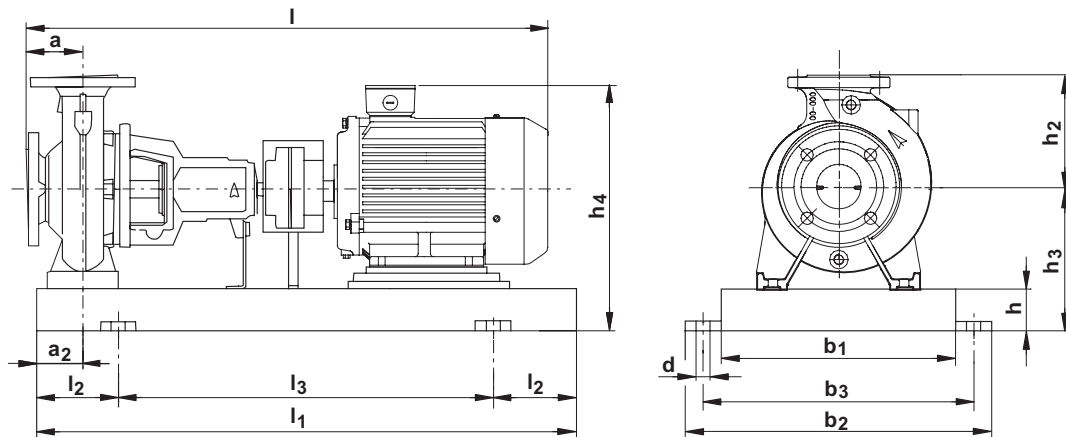
<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range

<sup>\*)</sup> Oversize

## NK, NKE 6-pole



TM03 3157 0606



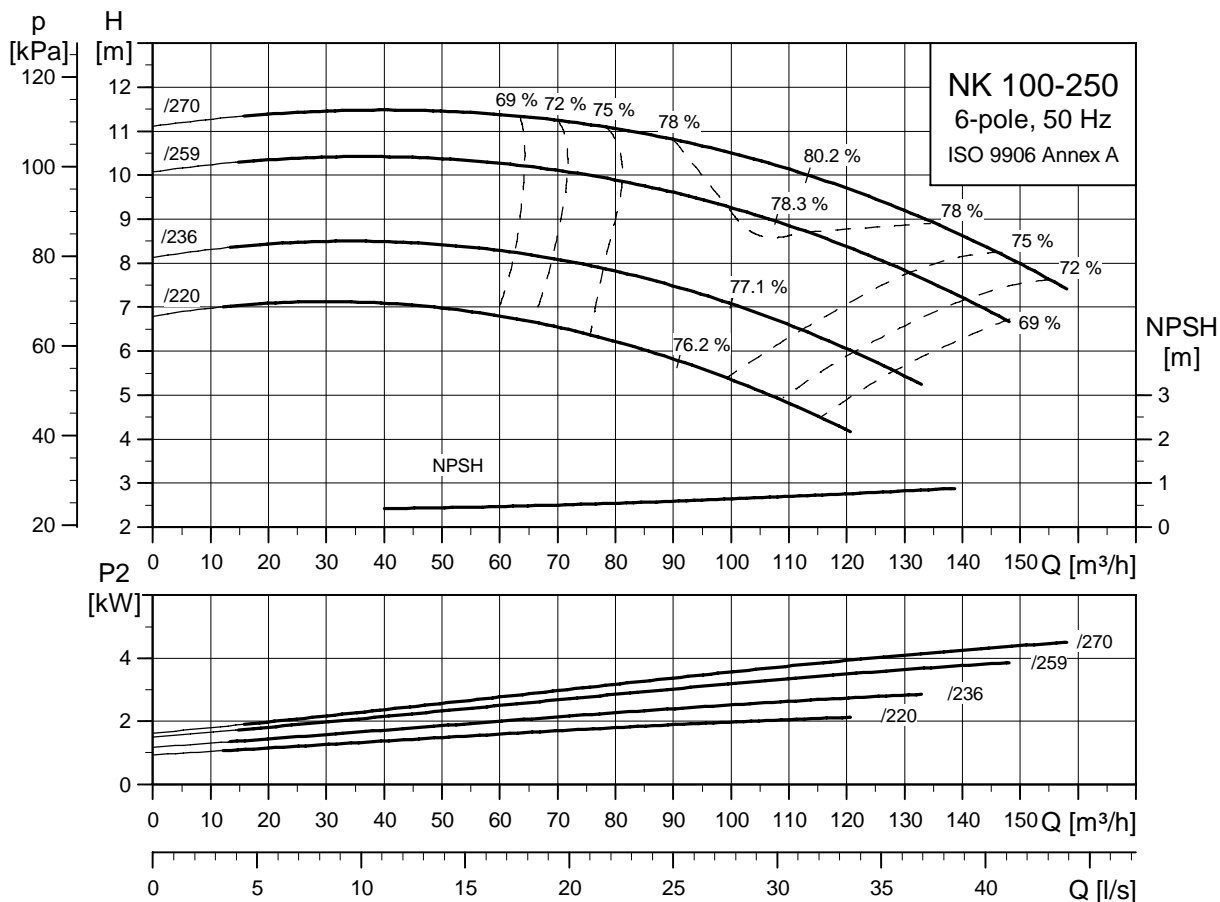
TM03 1283 1505

NK	100-200/182	100-200/194	100-200/214	100-200/219
kW	1.1	1.5	2.2	3
Standard motor range	MMG 90L-E	MMG 100L-E	MMG 112M-E	MMG 132S-E
Premium motor range	MMG 90L-D	MMG 100L-D	MMG 112M-D	MMG 132SA-D
E-motor range	-	-	-	-
PN [bar]	16	16	16	16
DN <sub>d</sub> [mm]	100	100	100	100
DN <sub>s</sub> [mm]	125	125	125	125
a [mm]	125	125	125	125
a <sub>2</sub> [mm]	90	90	90	90
h [mm]	80	80	80	80
h <sub>2</sub> [mm]	280	280	280	280
h <sub>3</sub> [mm]	280	280	282	282
h <sub>4</sub> <sup>1)</sup> [mm]	430/425/-	440/435/-	462/453/-	482/479/-
<b>Standard coupling</b>				
l <sup>1)</sup> [mm]	912/963/-	976/965/-	990/987/-	1062/1049/-
l <sub>1</sub> [mm]	1120	1120	1120	1120
l <sub>2</sub> [mm]	190	190	190	190
l <sub>3</sub> [mm]	740	740	740	740
b <sub>1</sub> [mm]	380	380	380	380
b <sub>2</sub> [mm]	490	490	490	490
b <sub>3</sub> [mm]	440	440	440	440
d [mm]	24	24	24	24
Weight <sup>1)</sup> Net [kg]	154/136/-	167/153/-	180/161/-	202/179/-
<b>Spacer coupling</b>				
l <sup>1)</sup> [mm]	1048/1077/-	1112/1101/-	1126/1123/-	1198/1185/-
l <sub>1</sub> [mm]	1120	1120	1120	1250
l <sub>2</sub> [mm]	190	190	190	205
l <sub>3</sub> [mm]	740	740	740	840
b <sub>1</sub> [mm]	380	380	380	430
b <sub>2</sub> [mm]	490	490	490	540
b <sub>3</sub> [mm]	440	440	440	490
d [mm]	24	24	24	24
Weight <sup>1)</sup> Net [kg]	157/138/-	170/155/-	183/164/-	217/194/-

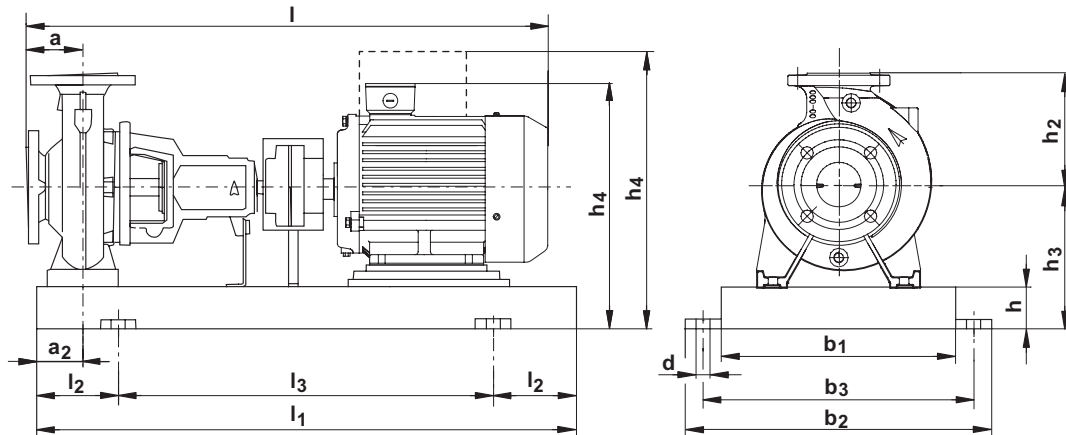
<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range

# Performance curves

NK 100-250  
6-pole



TM03 3158 0606



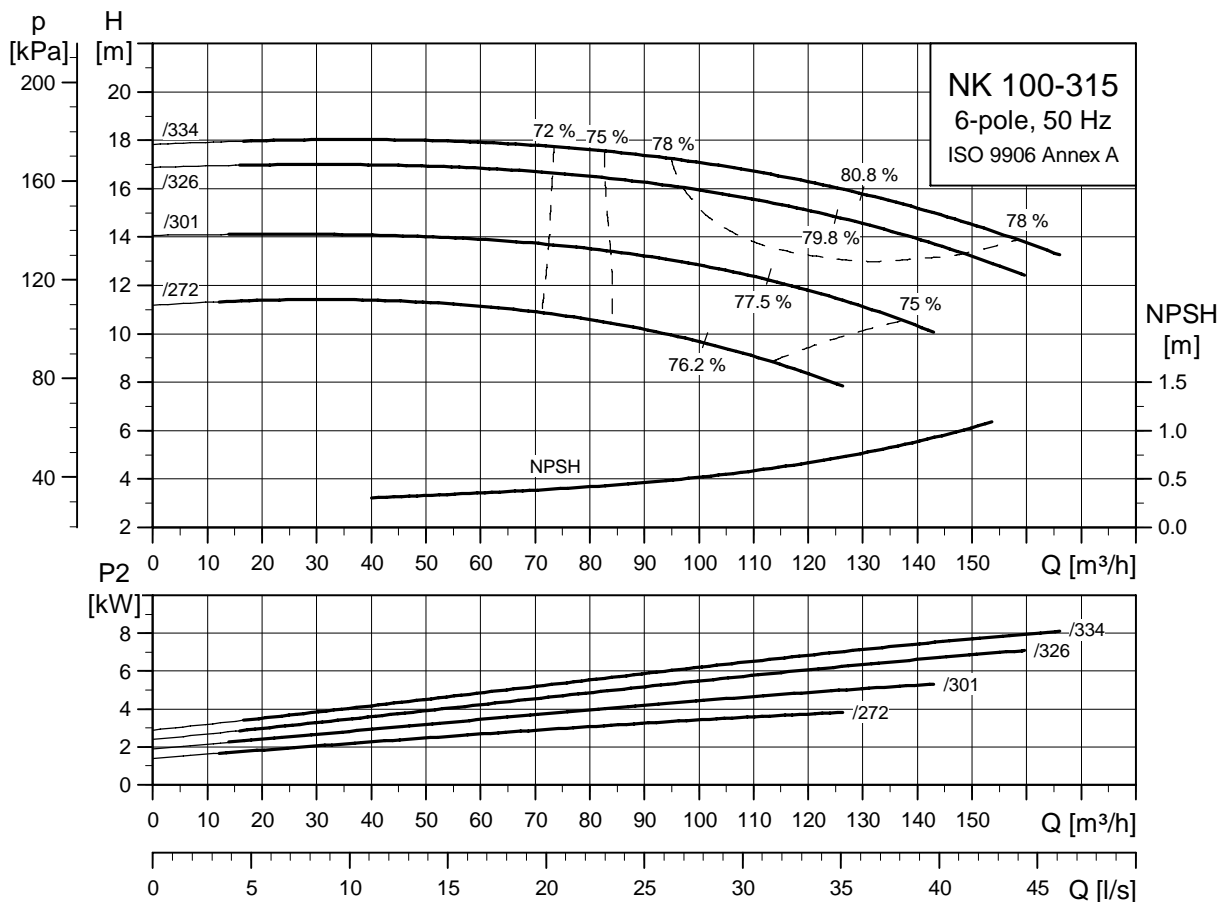
TM03 0508 0105

NK	100-250/236	100-250/259	100-250/270
kW	3	4	5.5
Standard motor range	MG 132SC-C	MMG 132M-E	MMG 132M-E
Premium motor range	MMG 132S-D	MMG 132M-D	MMG 132M-D
E-motor range	MGE 132SC-C	MMGE 160M	MMGE 160M
PN [bar]	16	16	16
DN <sub>d</sub> [mm]	100	100	100
DN <sub>s</sub> [mm]	125	125	125
a [mm]	140	140	140
a <sub>2</sub> [mm]	90	90	90
h [mm]	80	80	80
h <sub>2</sub> [mm]	280	280	280
h <sub>3</sub> [mm]	305	305	305
h <sub>4</sub> <sup>1)</sup> [mm]	439/502/493	505/502/696	505/502/696
<b>Standard coupling</b>			
l <sub>1</sub> <sup>1)</sup> [mm]	1085/1113/1185	1077/1151/1173	1077/1151/1173
l <sub>1</sub> [mm]	1250	1250	1250
l <sub>2</sub> [mm]	205	205	205
l <sub>3</sub> [mm]	840	840	840
b <sub>1</sub> [mm]	430	430	430
b <sub>2</sub> [mm]	540	540	540
b <sub>3</sub> [mm]	490	490	490
d [mm]	24	24	24
Weight <sup>1)</sup> Net [kg]	205/148/223	247/234/298	247/234/298
<b>Spacer coupling</b>			
l <sub>1</sub> <sup>1)</sup> [mm]	1221/1249/1221	1213/1287/1309	1213/1287/1309
l <sub>1</sub> [mm]	1250	1250	1250
l <sub>2</sub> [mm]	205	205	205
l <sub>3</sub> [mm]	840	840	840
b <sub>1</sub> [mm]	430	430	430
b <sub>2</sub> [mm]	540	540	540
b <sub>3</sub> [mm]	490	490	490
d [mm]	24	24	24
Weight <sup>1)</sup> Net [kg]	207/151/225	250/237/301	250/237/301

<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range

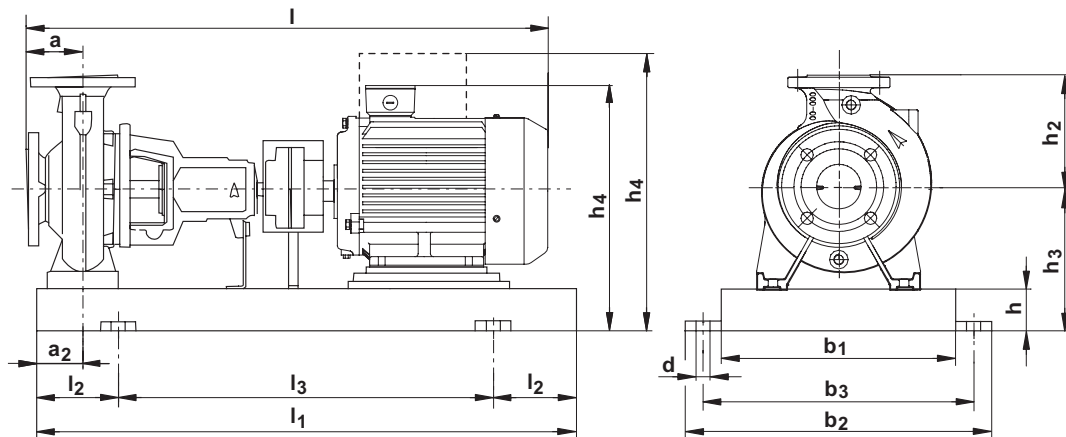
# Performance curves

NK 100-315  
6-pole



TM03 3159 0606





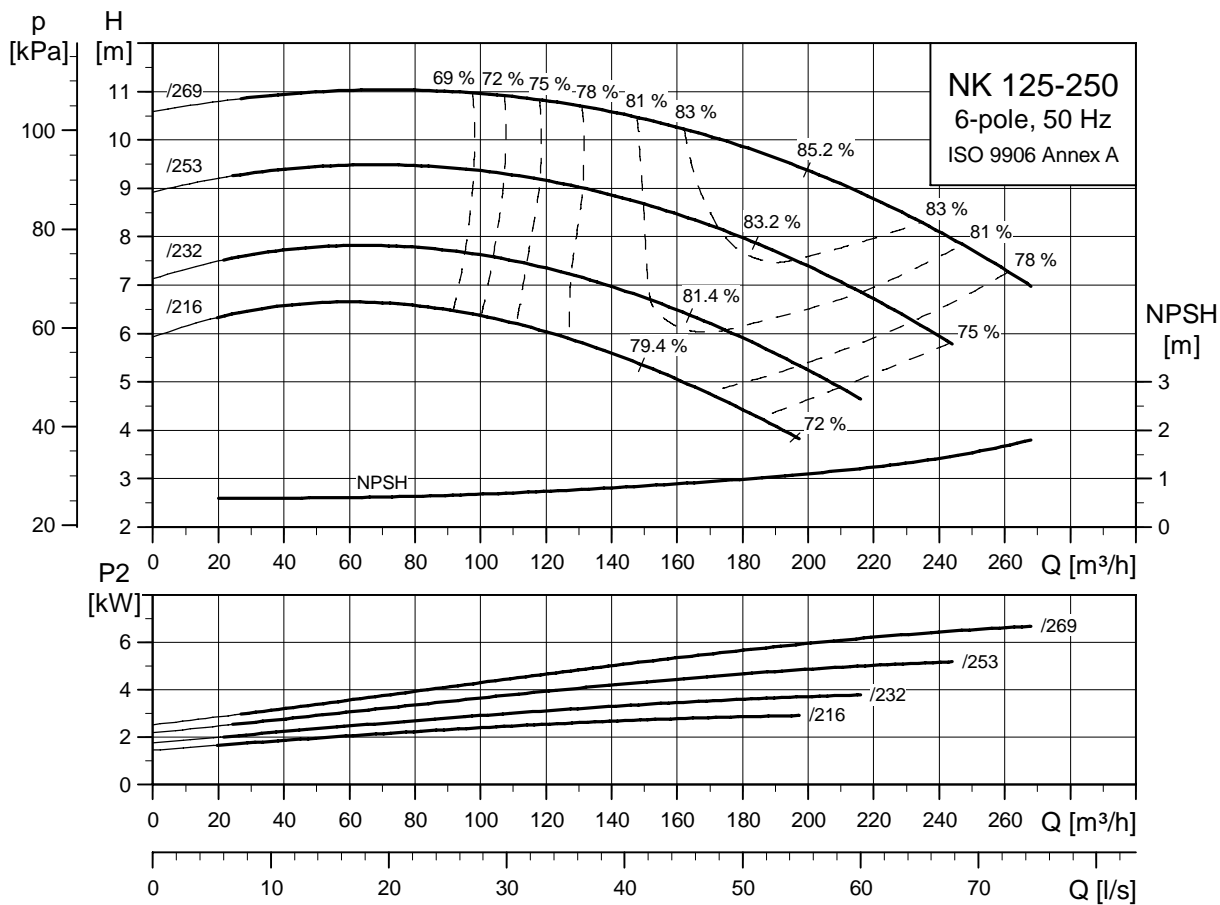
TM03 0508 0105

NK	100-315/326	100-315/334
kW	7.5	11
Standard motor range	MMG 160MA-E	MMG 160L-E
Premium motor range	MMG 160M-D	MMG 160L-D
E-motor range	MMGE 160M	MMGE 160L
PN [bar]	16	16
DN <sub>d</sub> [mm]	100	100
DN <sub>s</sub> [mm]	125	125
a [mm]	140	140
a <sub>2</sub> [mm]	90	90
h [mm]	80	80
h <sub>2</sub> [mm]	315	315
h <sub>3</sub> [mm]	330	330
h <sub>4</sub> <sup>1)</sup> [mm]	578/574/721	578/594/768
<b>Standard coupling</b>		
l <sup>1)</sup> [mm]	1222/1226/1173	1266/1271/1223
l <sub>1</sub> [mm]	1250	1250
l <sub>2</sub> [mm]	205	205
l <sub>3</sub> [mm]	840	840
b <sub>1</sub> [mm]	430	430
b <sub>2</sub> [mm]	540	540
b <sub>3</sub> [mm]	490	490
d [mm]	24	24
Weight <sup>1)</sup> Net [kg]	324/242/327	340/292/364
<b>Spacer coupling</b>		
l <sup>1)</sup> [mm]	1358/1362/1309	1402/1407/1359
l <sub>1</sub> [mm]	1250	1250
l <sub>2</sub> [mm]	205	205
l <sub>3</sub> [mm]	840	840
b <sub>1</sub> [mm]	430	430
b <sub>2</sub> [mm]	540	540
b <sub>3</sub> [mm]	490	490
d [mm]	24	24
Weight <sup>1)</sup> Net [kg]	327/245/330	343/295/367

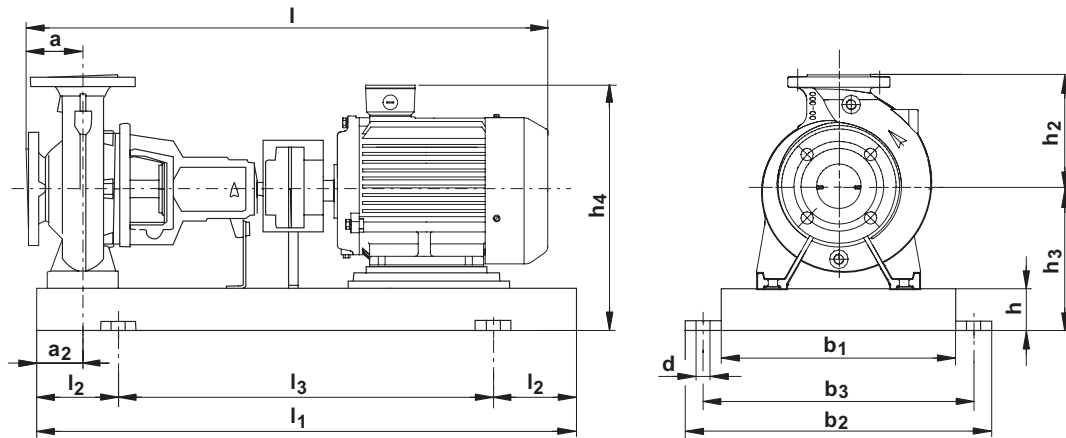
<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range

# Performance curves

NK 125-250  
6-pole



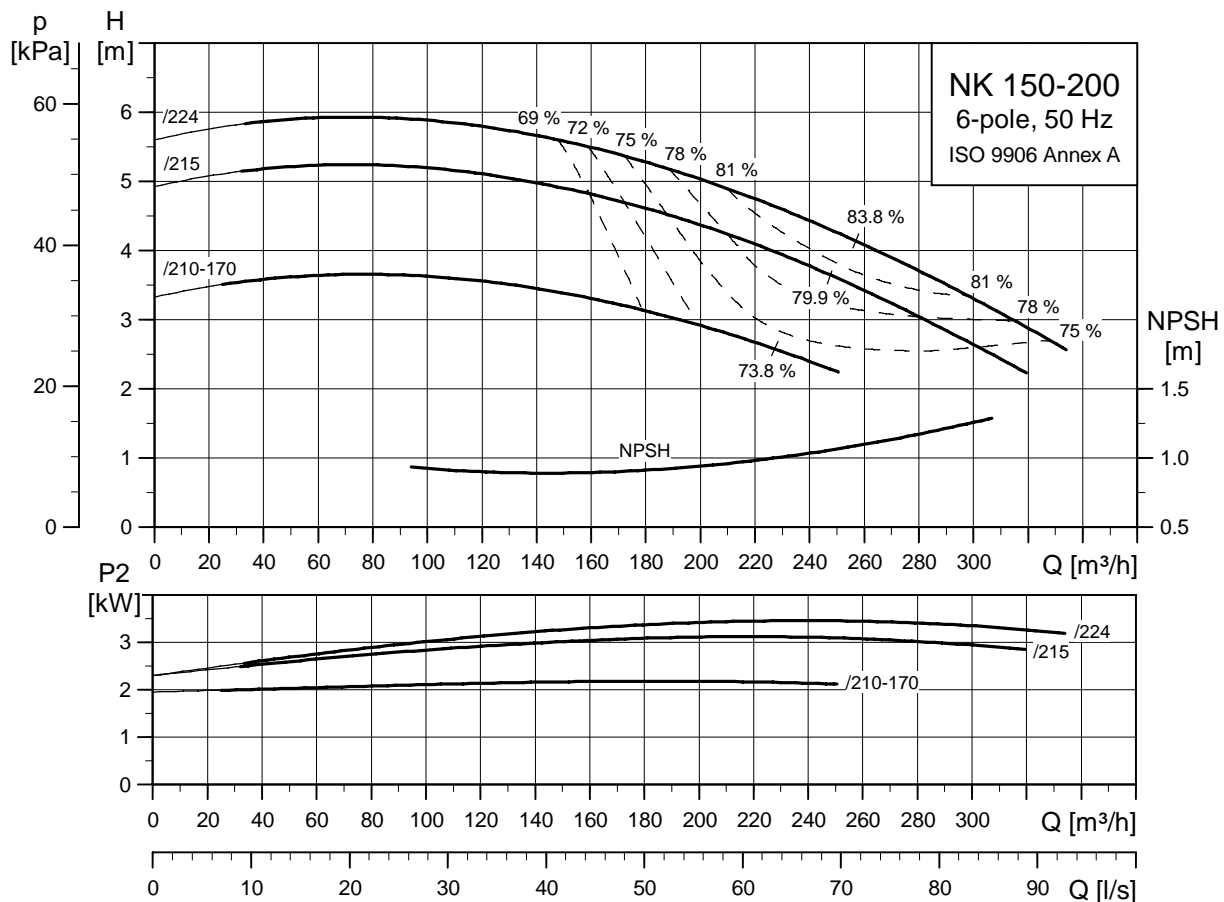
TM03 3160 0606



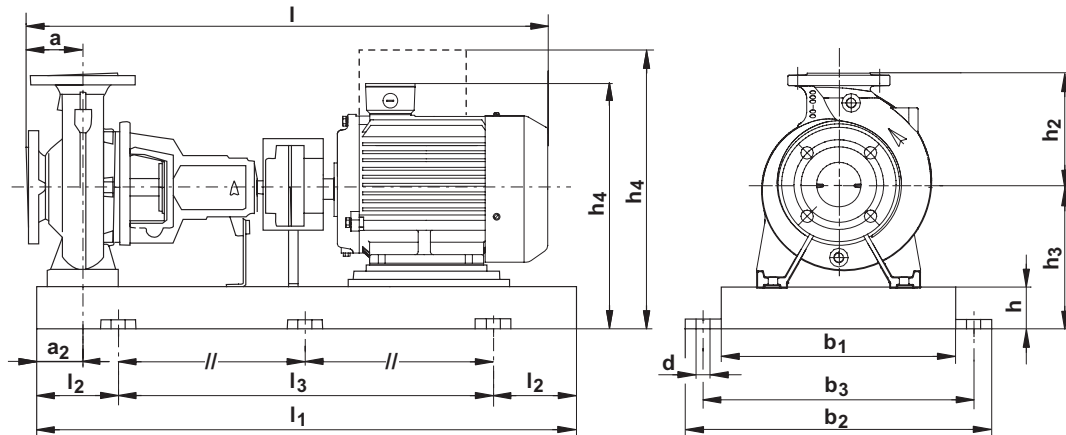
TM03 1283 1505.

NK	125-250/232	125-250/253	125-250/269
kW	4	5.5	7.5
Standard motor range	MMG 132MA-E	MMG 132MB-E	MMG 160M-E
Premium motor range	MMG 132MA-D	MMG 132MB-D	MMG 160M-D
E-motor range	-	-	-
PN [bar]	16	16	16
DN <sub>d</sub> [mm]	125	125	125
DN <sub>s</sub> [mm]	150	150	150
a [mm]	140	140	140
a <sub>2</sub> [mm]	90	90	90
h [mm]	80	80	80
h <sub>2</sub> [mm]	355	355	355
h <sub>3</sub> [mm]	332	332	330
h <sub>4</sub> <sup>1)</sup> [mm]	532/529/-	532/529/-	578/575/-
<b>Standard coupling</b>			
l <sup>1)</sup> [mm]	1115/1102/-	1115/1102/-	1222/1226/-
l <sub>1</sub> [mm]	1250	1250	1250
l <sub>2</sub> [mm]	205	205	205
l <sub>3</sub> [mm]	840	840	840
b <sub>1</sub> [mm]	430	430	430
b <sub>2</sub> [mm]	540	540	540
b <sub>3</sub> [mm]	490	490	490
d [mm]	24	24	24
Weight <sup>1)</sup> Net [kg]	259/232/-	267/237/-	305/266/-
<b>Spacer coupling</b>			
l <sup>1)</sup> [mm]	1251/1238/-	1251/1238/-	1358/1362/-
l <sub>1</sub> [mm]	1250	1250	1250
l <sub>2</sub> [mm]	205	205	205
l <sub>3</sub> [mm]	840	840	840
b <sub>1</sub> [mm]	430	430	430
b <sub>2</sub> [mm]	540	540	540
b <sub>3</sub> [mm]	490	490	490
d [mm]	24	24	24
Weight <sup>1)</sup> Net [kg]	262/235/-	270/240/-	308/269/-

<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range



TMD03 3161 0606



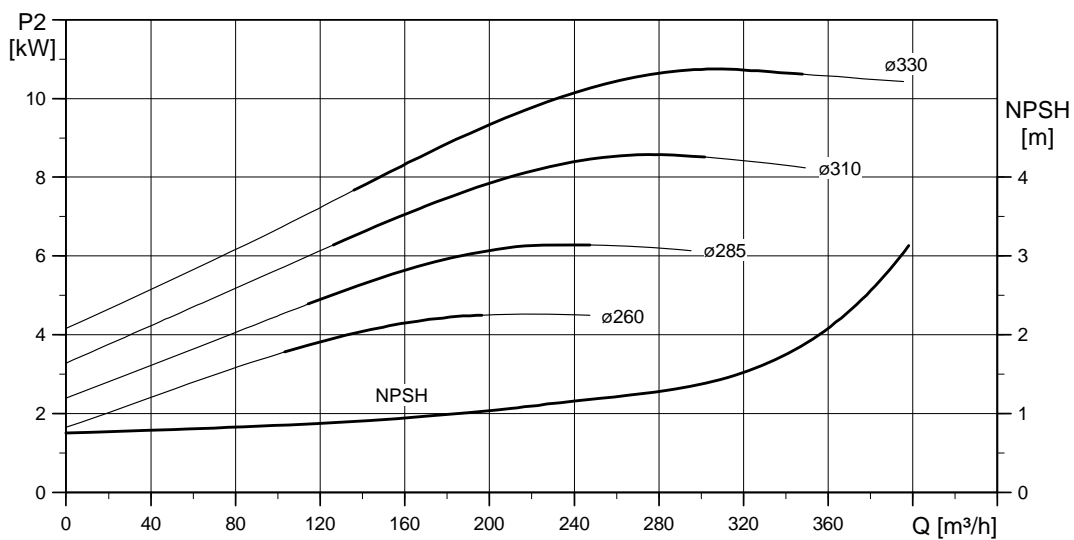
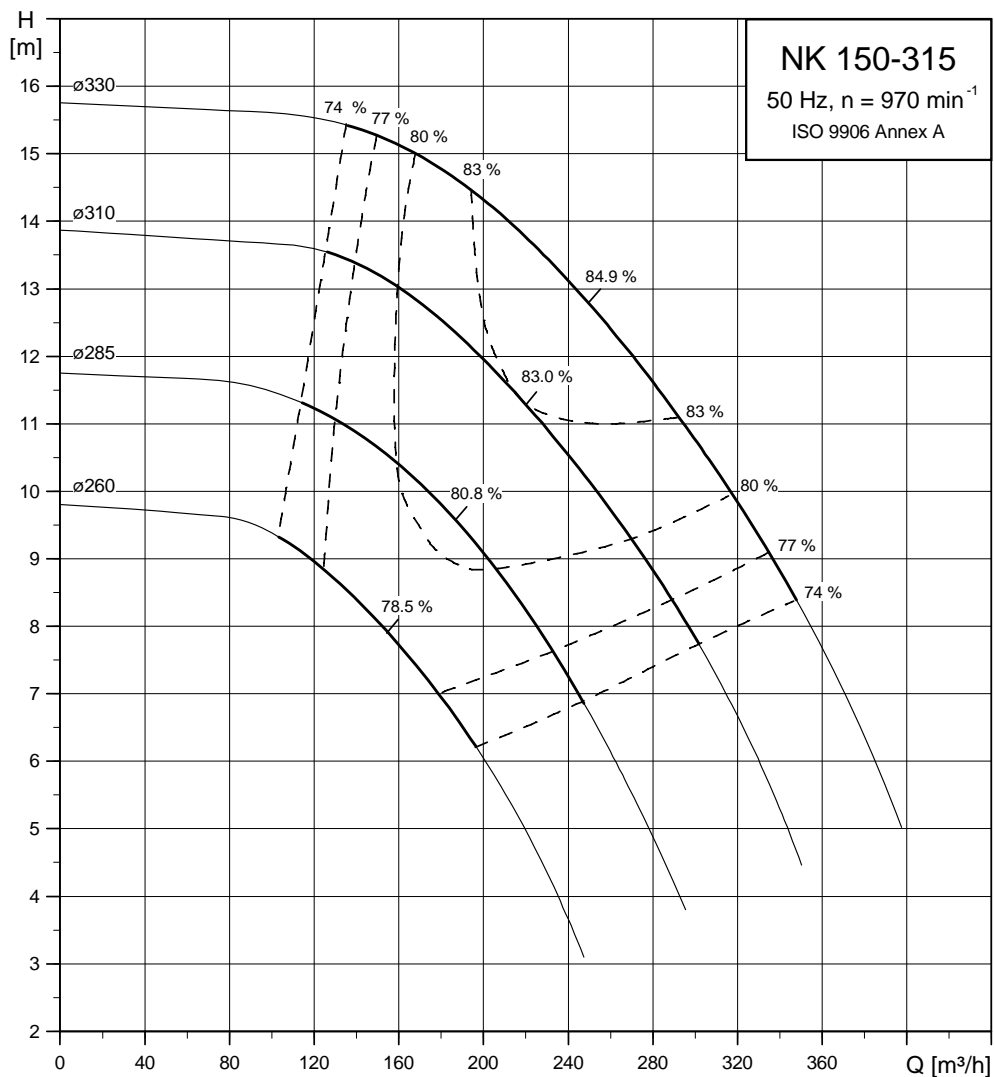
TM03 0509 0105

NK		150-200/215	150-200/224
kW		3	4
Standard motor range		MG 132SC-C	MMG 132M-E
Premium motor range		MMG 132S-D	MMG 132M-D
E-motor range		MGE 132SC-D	MMGE 160M
PN	[bar]	10	10
DN <sub>d</sub>	[mm]	150	150
DN <sub>s</sub>	[mm]	200	200
a	[mm]	160	160
a <sub>2</sub>	[mm]	110	110
h	[mm]	100	100
h <sub>2</sub>	[mm]	400	400
h <sub>3</sub>	[mm]	382	382
h <sub>4</sub> <sup>1)</sup>	[mm]	516/579/570	582/579/773
<b>Standard coupling</b>			
l <sup>1)</sup>	[mm]	1105/1133/1105	1097/1171/1193
l <sub>1</sub>	[mm]	1800	1800
l <sub>2</sub>	[mm]	300	300
l <sub>3</sub>	[mm]	1200	1200
b <sub>1</sub>	[mm]	600	600
b <sub>2</sub>	[mm]	730	730
b <sub>3</sub>	[mm]	670	670
d	[mm]	28	28
Weight <sup>1)</sup>	Net [kg]	373/217/391	415/225/466
<b>Spacer coupling</b>			
l <sup>1)</sup>	[mm]	1241/1269/1241	1233/1307/1329
l <sub>1</sub>	[mm]	1800	1800
l <sub>2</sub>	[mm]	300	300
l <sub>3</sub>	[mm]	1200	1200
b <sub>1</sub>	[mm]	600	600
b <sub>2</sub>	[mm]	730	730
b <sub>3</sub>	[mm]	670	670
d	[mm]	28	28
Weight <sup>1)</sup>	Net [kg]	375/214/393	418/222/469

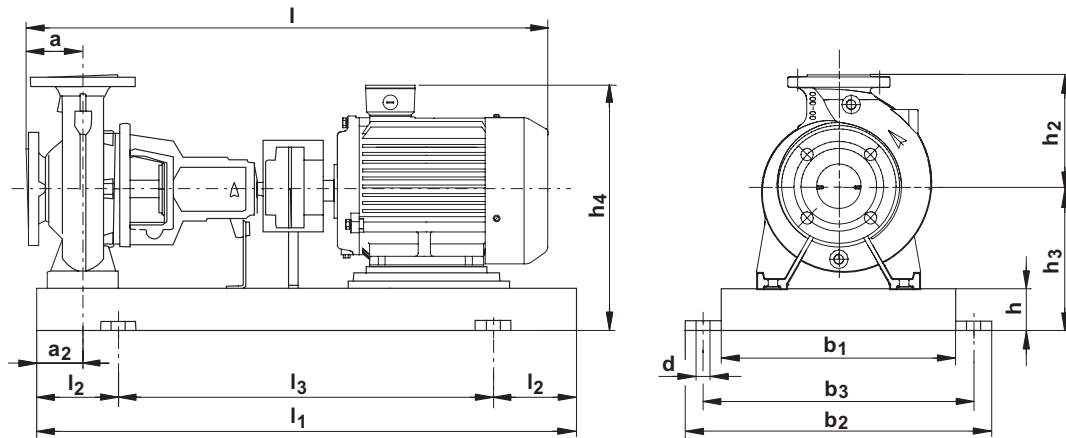
<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range

# Performance curves

NK 150-315  
6-pole



TM01 2893 0499



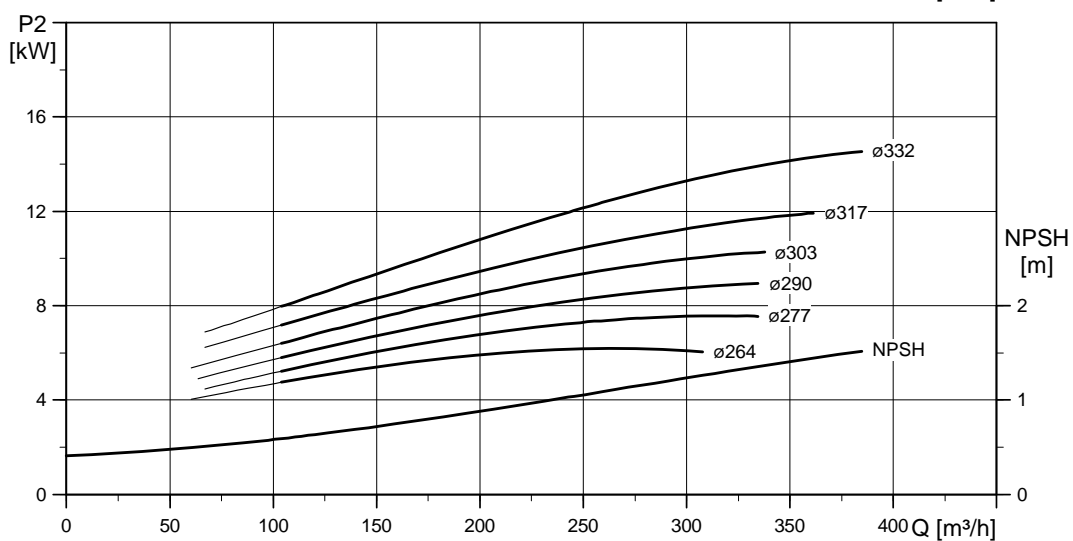
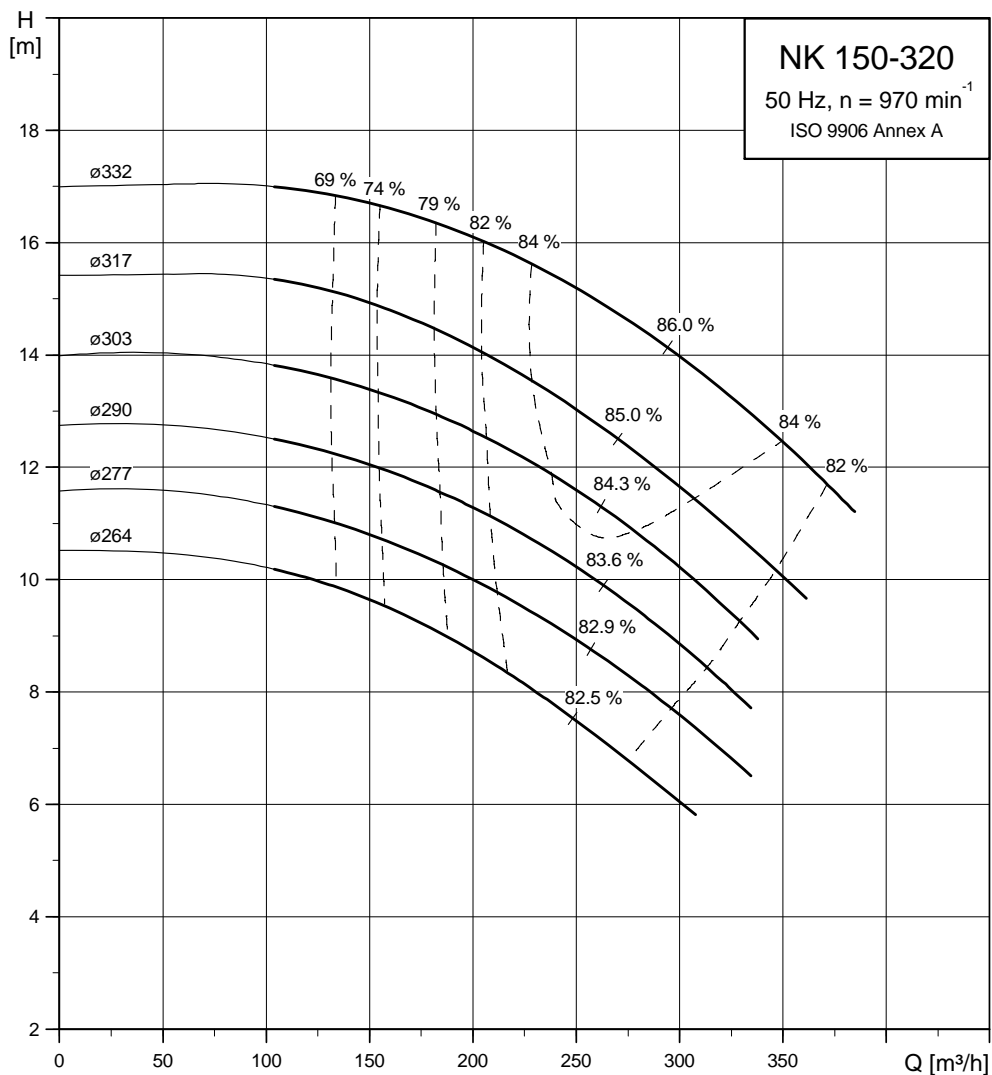
TM03 1283 1505

NK 150-315				
kW	5.5	7.5	11	15
Standard motor range	MMG 132MB-E	MMG 160M-E	MMG 160L-E	MMG 180L-E
Premium motor range	MMG 132MB-D	MMG 160M-D	MMG 160L-D	MMG 180L-D
E-motor range	-	-	-	-
PN [bar]	10	10	10	10
DN <sub>d</sub> [mm]	150	150	150	150
DN <sub>s</sub> [mm]	200	200	200	200
a [mm]	160	160	160	160
a <sub>2</sub> [mm]	110	110	110	110
h [mm]	100	100	100	100
h <sub>2</sub> [mm]	400	400	400	400
h <sub>3</sub> [mm]	380	380	380	380
h <sub>4</sub> [mm]	580/577/-	628/625/-	628/625/-	644/646/-
Standard coupling				
l <sup>1)</sup> [mm]	1195/1182/-	1302/1306/-	1346/1351/-	1384/1406/-
l <sub>1</sub> [mm]	1600	1600	1600	1800
l <sub>2</sub> [mm]	270	270	270	300
l <sub>3</sub> [mm]	1060	1060	1060	1200
b <sub>1</sub> [mm]	530	530	530	600
b <sub>2</sub> [mm]	660	660	660	730
b <sub>3</sub> [mm]	600	600	600	670
d [mm]	28	28	28	28
Weight <sup>1)</sup> Net [kg]	394/364/-	432/393/-	460/415/-	527/473/-
Spacer coupling				
l <sup>1)</sup> [mm]	1331/1318/-	1438/1442/-	1482/1487/-	1520/1542/-
l <sub>1</sub> [mm]	1600	1600	1600	1800
l <sub>2</sub> [mm]	270	270	270	300
l <sub>3</sub> [mm]	1060	1060	1060	1200
b <sub>1</sub> [mm]	530	530	530	600
b <sub>2</sub> [mm]	660	660	660	730
b <sub>3</sub> [mm]	600	600	600	670
d [mm]	28	28	28	28
Weight <sup>1)</sup> Net [kg]	397/367/-	435/396/-	458/413/-	522/468/-

<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range

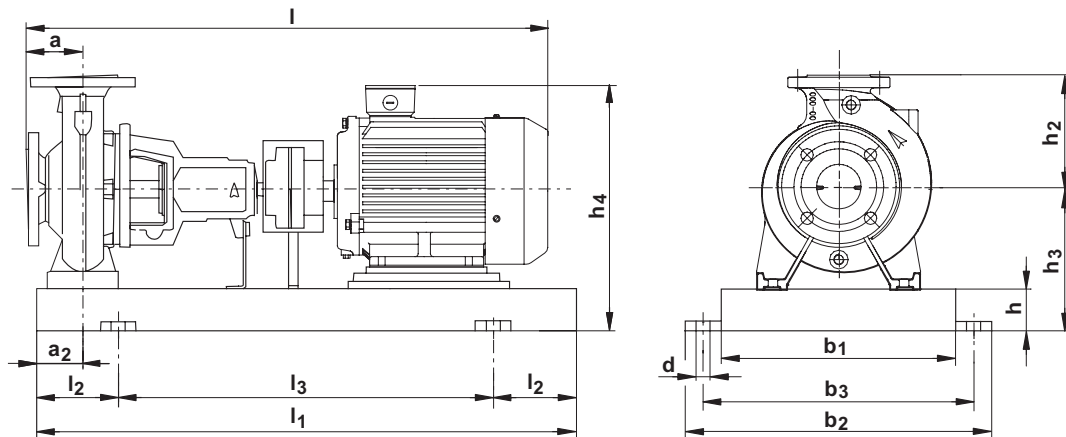
# Performance curves

NK 150-320  
6-pole



TM01 9659 2400





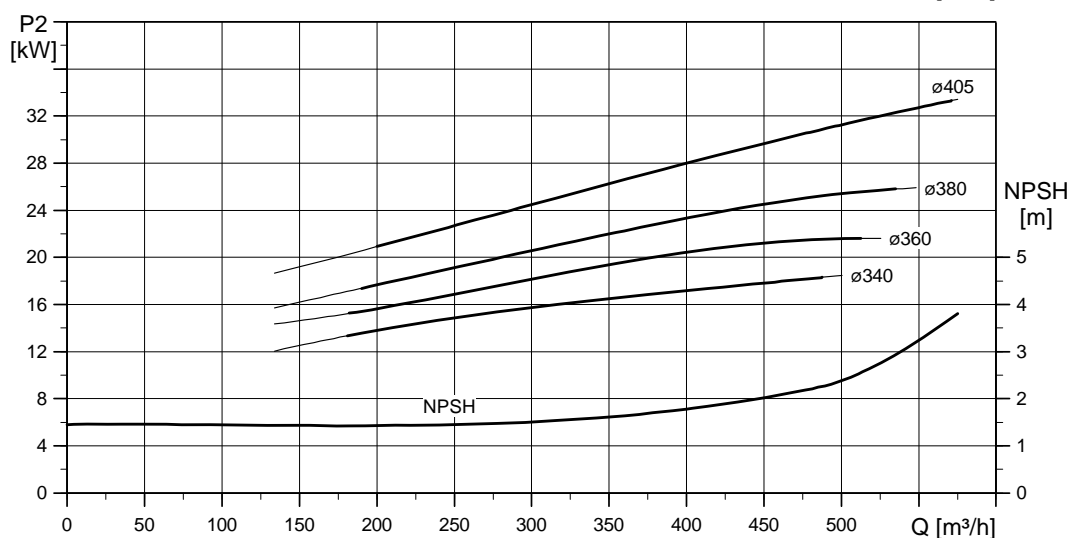
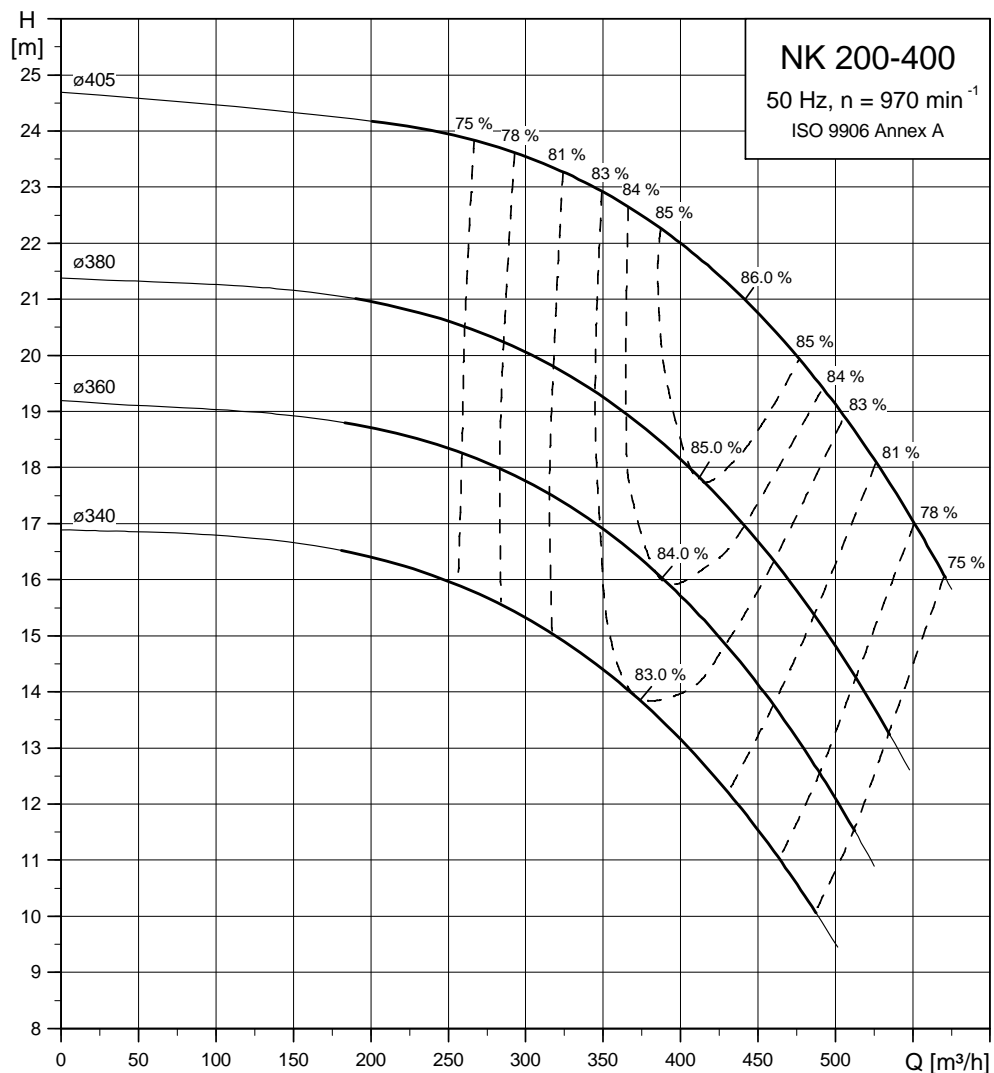
TM03 1283 1505

NK 150-320					
kW	11	15	18.5	22	30
Standard motor range	MMG 160L-E	MMG 180L-E	MMG 200LA-E	MMG 200LB-E	MMG 225M-E
Premium motor range	MMG 160L-D	MMG 180L-D	MMG 200LA-D	MMG 200LB-D	MMG 225M-D
E-motor range	-	-	-	-	-
PN [bar]	10	10	10	10	10
DN <sub>d</sub> [mm]	150	150	150	150	150
DN <sub>s</sub> [mm]	200	200	200	200	200
a [mm]	160	160	160	160	160
a <sub>2</sub> [mm]	110	110	110	110	110
h [mm]	100	100	100	100	100
h <sub>2</sub> [mm]	400	400	400	400	400
h <sub>3</sub> [mm]	380	380	380	380	380
h <sub>4</sub> [mm]	628/625/-	644/646/-	677/707/-	677/707/-	700/746/-
<b>Standard coupling</b>					
l <sup>1)</sup> [mm]	1346/1351/-	1384/1406/-	1451/1473/-	1451/1473/-	1531/1582/-
l <sub>1</sub> [mm]	1600	1800	1800	1800	1800
l <sub>2</sub> [mm]	270	300	300	300	300
l <sub>3</sub> [mm]	1060	1200	1200	1200	1200
b <sub>1</sub> [mm]	530	600	600	600	600
b <sub>2</sub> [mm]	660	730	730	730	730
b <sub>3</sub> [mm]	600	670	670	670	670
d [mm]	28	28	28	28	28
Weight <sup>1)</sup> Net [kg]	460/415/-	527/473/-	576/553/-	591/563/-	642/636/-
<b>Spacer coupling</b>					
l <sup>1)</sup> [mm]	1482/1487/-	1520/1542/-	1587/1609/-	1587/1609/-	1667/1718/-
l <sub>1</sub> [mm]	1600	1800	1800	1800	1800
l <sub>2</sub> [mm]	270	300	300	300	300
l <sub>3</sub> [mm]	1060	1200	1200	1200	1200
b <sub>1</sub> [mm]	530	600	600	600	600
b <sub>2</sub> [mm]	660	730	730	730	730
b <sub>3</sub> [mm]	600	670	670	670	670
d [mm]	28	28	28	28	28
Weight <sup>1)</sup> Net [kg]	458/413/-	522/468/-	573/550/-	588/560/-	640/634/-

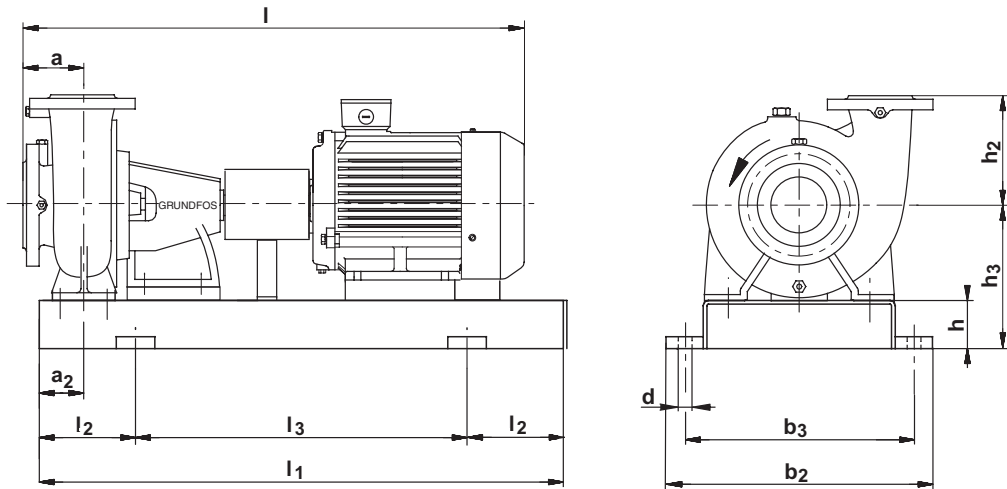
<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range

# Performance curves

NK 200-400  
6-pole



TM01 2894 0499



TM03 1280 1505

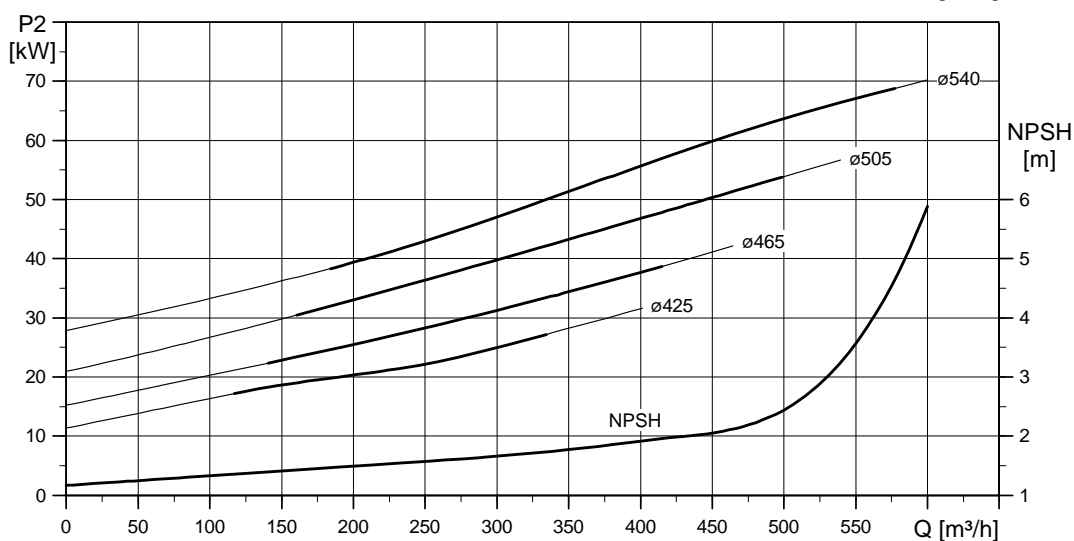
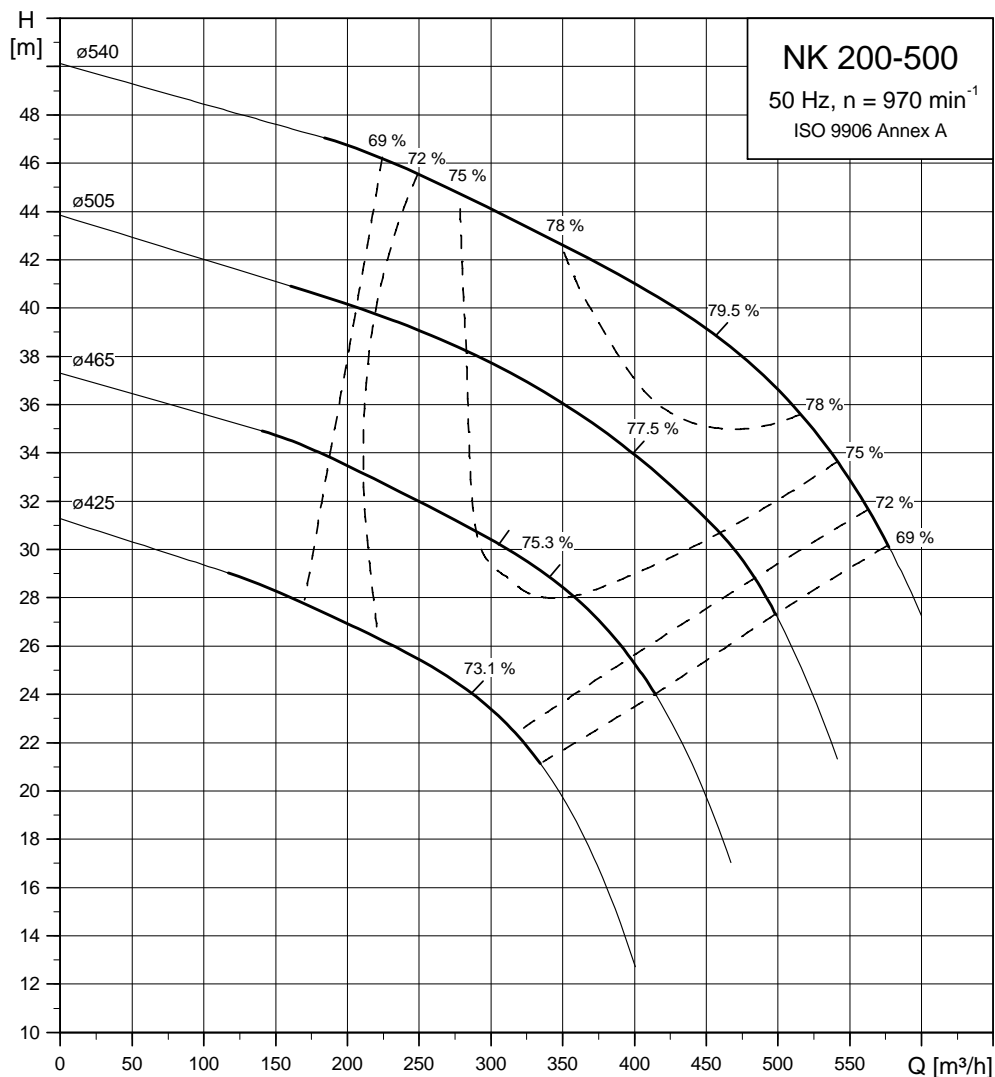
NK 200-400*				
kW	18.5	22	30	37
Standard motor range	MMG 200LA-E	MMG 200LB-E	MMG 225M-E	MMG 250M-E
Premium motor range	MMG 200LA-D	MMG 200LB-D	MMG 225M-D	MMG 250M-D
E-motor range	-	-	-	-
PN [bar]	10	10	10	10
DN <sub>d</sub> [mm]	200	200	200	200
DN <sub>s</sub> [mm]	250	250	250	250
a [mm]	180	180	180	180
a <sub>2</sub> [mm]	200	200	245	255
h [mm]	100	100	160	180
h <sub>2</sub> [mm]	400	400	400	400
h <sub>3</sub> [mm]	500	500	500	500
h <sub>4</sub> [mm]	797/827/-	797/827/-	820/866/-	859/885/-
<b>Standard coupling</b>				
l <sup>1)</sup> [mm]	1691/1713/-	1691/1713/-	1771/1822/-	1844/1906/-
l <sub>1</sub> [mm]	1800	1800	1800	1800
l <sub>2</sub> [mm]	300	300	300	300
l <sub>3</sub> [mm]	1200	1200	1200	1200
b <sub>1</sub> [mm]	600	600	600	600
b <sub>2</sub> [mm]	730	730	730	730
b <sub>3</sub> [mm]	670	670	670	670
d [mm]	28	28	28	28
Weight <sup>1)</sup> Net [kg]	771/748/-	786/758/-	837/831/-	935/927/-
<b>Spacer coupling</b>				
l <sup>1)</sup> [mm]	1887/1909/-	1887/1909/-	1967/2018/-	2040/2102/-
l <sub>1</sub> [mm]	1800	1800	2000	2000
l <sub>2</sub> [mm]	300	300	330	330
l <sub>3</sub> [mm]	1200	1200	1340	1340
b <sub>1</sub> [mm]	600	600	750	750
b <sub>2</sub> [mm]	730	730	910	910
b <sub>3</sub> [mm]	670	670	830	830
d [mm]	28	28	28	28
Weight <sup>1)</sup> Net [kg]	769/746/-	784/756/-	854/848/-	949/941/-

<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range

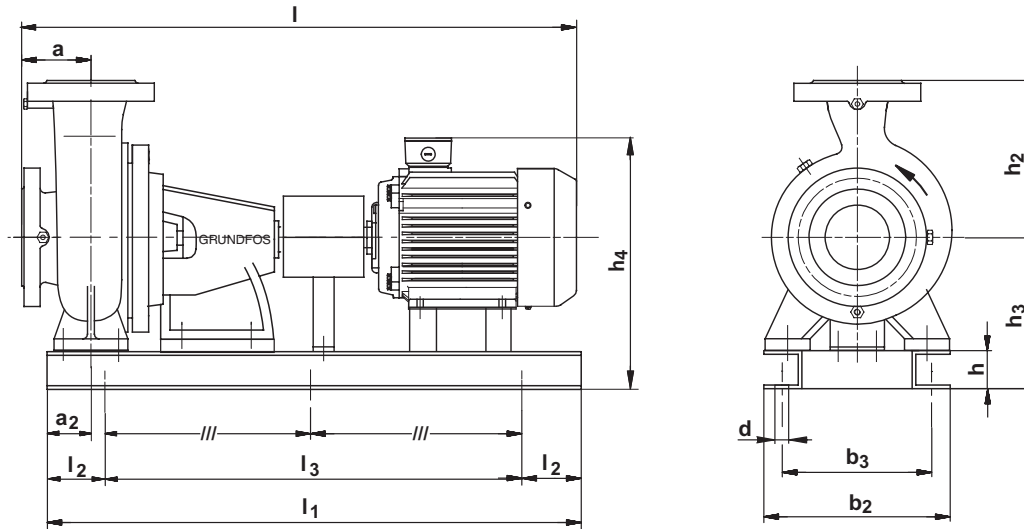
<sup>\*)</sup> Oversize

# Performance curves

NK 200-500  
6-pole



TM01 2895 0499

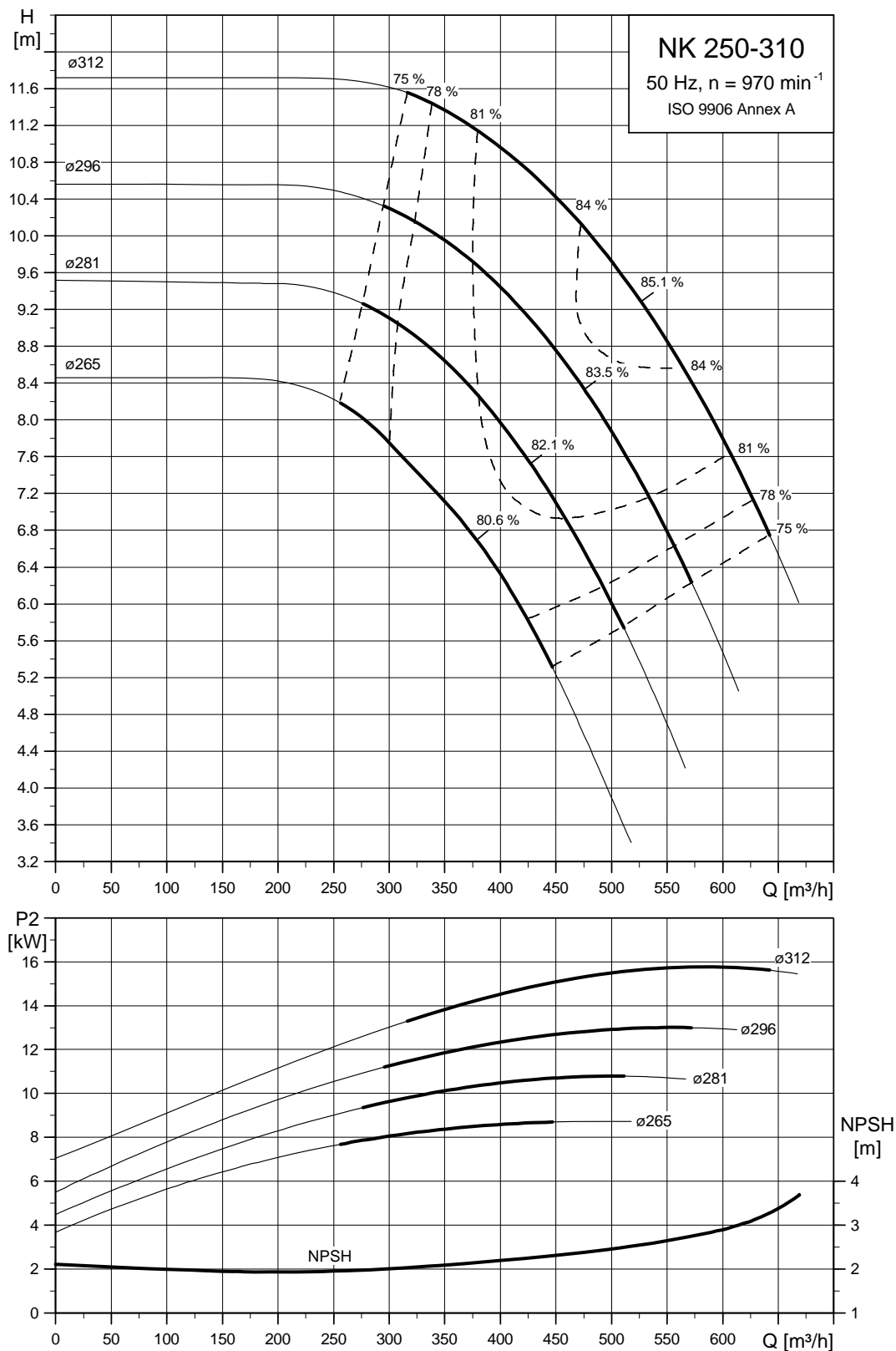


TM03 1282 1505

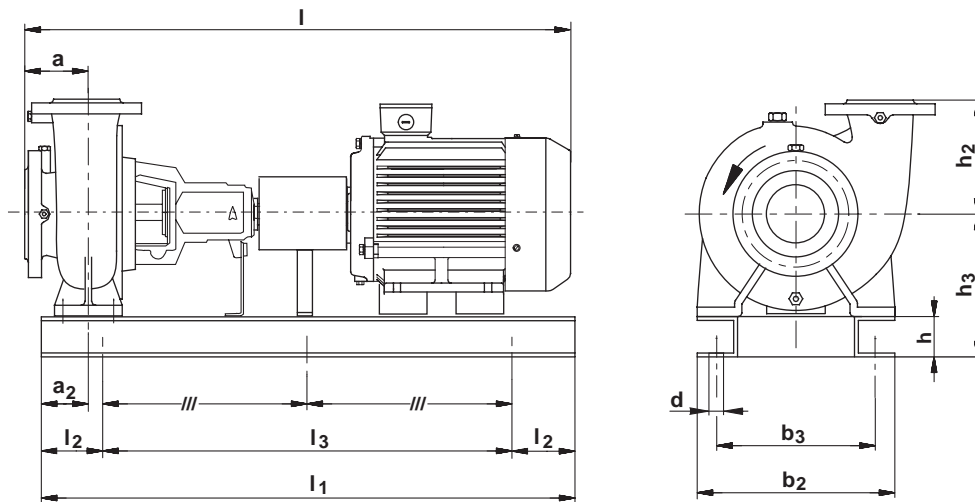
NK 200-500*					
kW	30	37	45	55	75
Standard motor range	MMG 225M-E	MMG 250M-E	MMG 280S-E	MMG 280M-E	MMG 315S-E
Premium motor range	MMG 225M-D	MMG 250M-D	MMG 280S-D	MMG 280M-D	MMG 315S-D
E-motor range	-	-	-	-	-
PN [bar]	10	10	10	10	10
DN <sub>d</sub> [mm]	200	200	200	200	200
DN <sub>s</sub> [mm]	250	250	250	250	250
a [mm]	250	250	250	250	250
a <sub>2</sub> [mm]	175	175	175	175	175
h [mm]	160	160	180	180	180
h <sub>2</sub> [mm]	675	675	675	675	675
h <sub>3</sub> [mm]	480	480	480	480	495
h <sub>4</sub> [mm]	800/846/-	839/865/-	866/899/-	866/899/-	966/1007/-
Standard coupling					
l <sup>1)</sup> [mm]	1841/1892/-	1914/1976/-	1949/2042/-	2000/2093/-	2210/2130/-
l <sub>1</sub> [mm]	1900	1900	2000	2000	2000
l <sub>2</sub> [mm]	150	150	150	150	150
l <sub>3</sub> [mm]	1600	1600	1700	1700	1700
b <sub>1</sub> [mm]	-	-	-	-	-
b <sub>2</sub> [mm]	945	945	945	945	945
b <sub>3</sub> [mm]	885	885	885	885	880
d [mm]	18	18	18	18	18
Weight <sup>1)</sup> Net [kg]	984/978/-	1082/1074/-	1206/1148/-	1274/1203/-	1696/1324/-
Spacer coupling					
l <sup>1)</sup> [mm]	2037/2088/-	2110/2172/-	2143/2236/-	2194/2287/-	2404/2324/-
l <sub>1</sub> [mm]	2000	2100	2100	2100	2100
l <sub>2</sub> [mm]	150	150	150	150	150
l <sub>3</sub> [mm]	1700	1800	1800	1800	1800
b <sub>1</sub> [mm]	-	-	-	-	-
b <sub>2</sub> [mm]	945	945	945	945	945
b <sub>3</sub> [mm]	885	885	885	885	880
d [mm]	18	18	18	18	18
Weight <sup>1)</sup> Net [kg]	983/977/-	1089/1081/-	1225/1167/-	1293/1222/-	1723/1351/-

<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range

<sup>\*)</sup> Oversize



TM01 2896 0499

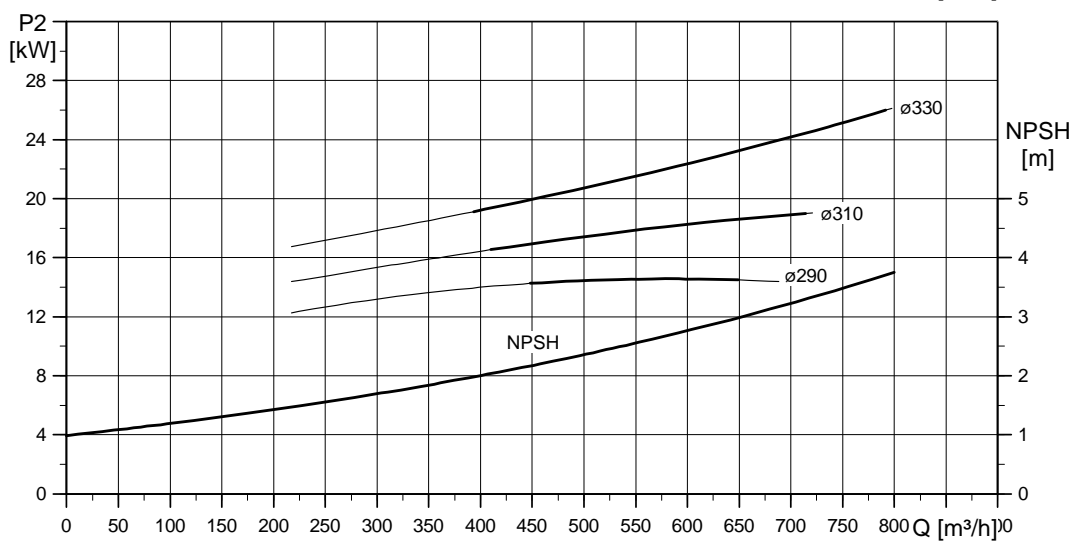
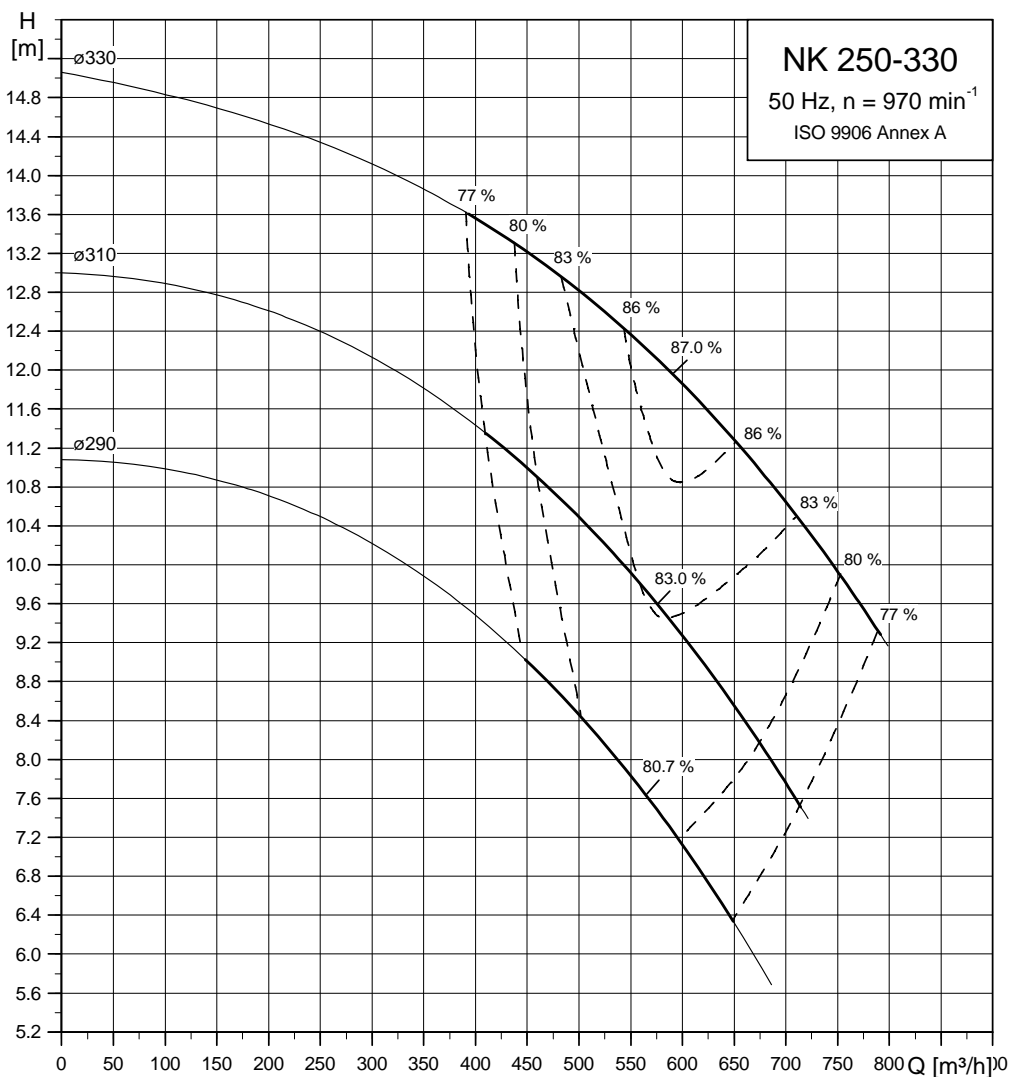


TM03 1278 1505

NK 250-310*			
kW	11	15	18.5
Standard motor range	MMG 160L-E	MMG 180L-E	MMG 200LA-E
Premium motor range	MMG 160L-D	MMG 180L-D	MMG 200LA-D
E-motor range	-	-	-
PN [bar]	10	10	10
DN <sub>d</sub> [mm]	250	250	250
DN <sub>s</sub> [mm]	300	300	300
a [mm]	250	250	250
a <sub>2</sub> [mm]	200	200	200
h [mm]	140	140	140
h <sub>2</sub> [mm]	400	400	400
h <sub>3</sub> [mm]	480	480	480
h <sub>4</sub> [mm]	728/725/-	744/746/-	777/807/-
<b>Standard coupling</b>			
l <sup>1)</sup> [mm]	1471/1476/-	1509/1531/-	1576/1598/-
l <sub>1</sub> [mm]	1700	1700	1700
l <sub>2</sub> [mm]	150	150	150
l <sub>3</sub> [mm]	1400	1400	1400
b <sub>1</sub> [mm]	-	-	-
b <sub>2</sub> [mm]	950	950	950
b <sub>3</sub> [mm]	890	890	890
d [mm]	18	18	18
Weight <sup>1)</sup> Net [kg]	656/611/-	699/645/-	748/725/-
<b>Spacer coupling</b>			
l <sup>1)</sup> [mm]	1667/1672/-	1705/1727/-	1772/1794/-
l <sub>1</sub> [mm]	1700	1700	1800
l <sub>2</sub> [mm]	150	150	150
l <sub>3</sub> [mm]	1400	1400	1500
b <sub>1</sub> [mm]	-	-	-
b <sub>2</sub> [mm]	950	950	950
b <sub>3</sub> [mm]	890	890	890
d [mm]	18	18	18
Weight <sup>1)</sup> Net [kg]	654/609/-	695/641/-	756/733/-

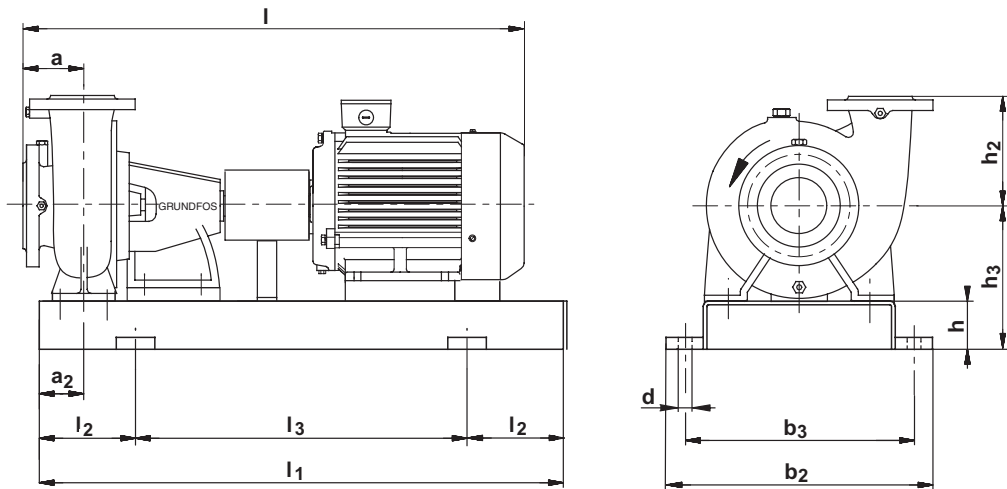
<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range

<sup>\*)</sup> Oversize



TM01 2897 0499





TM03 1280 1505

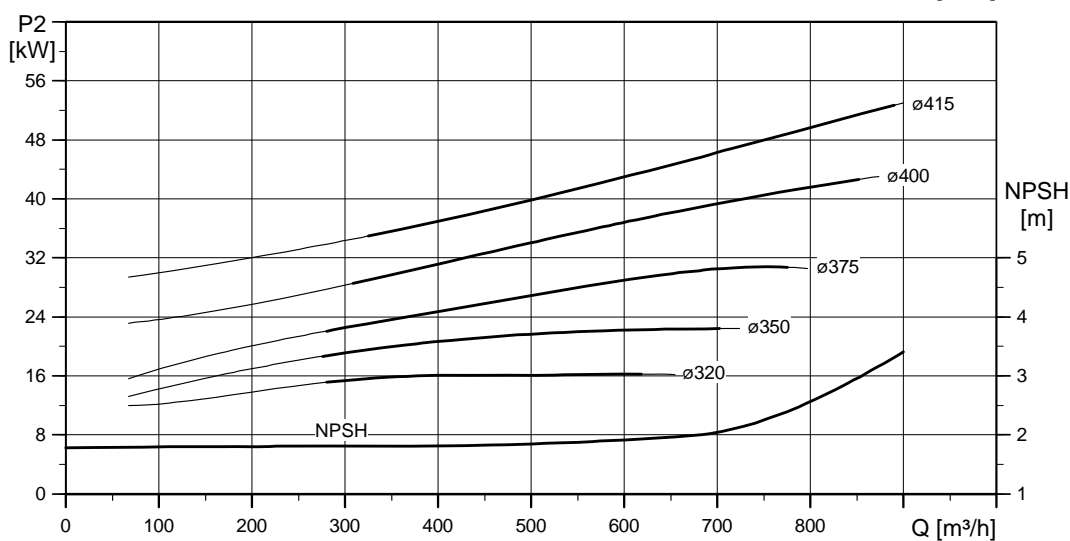
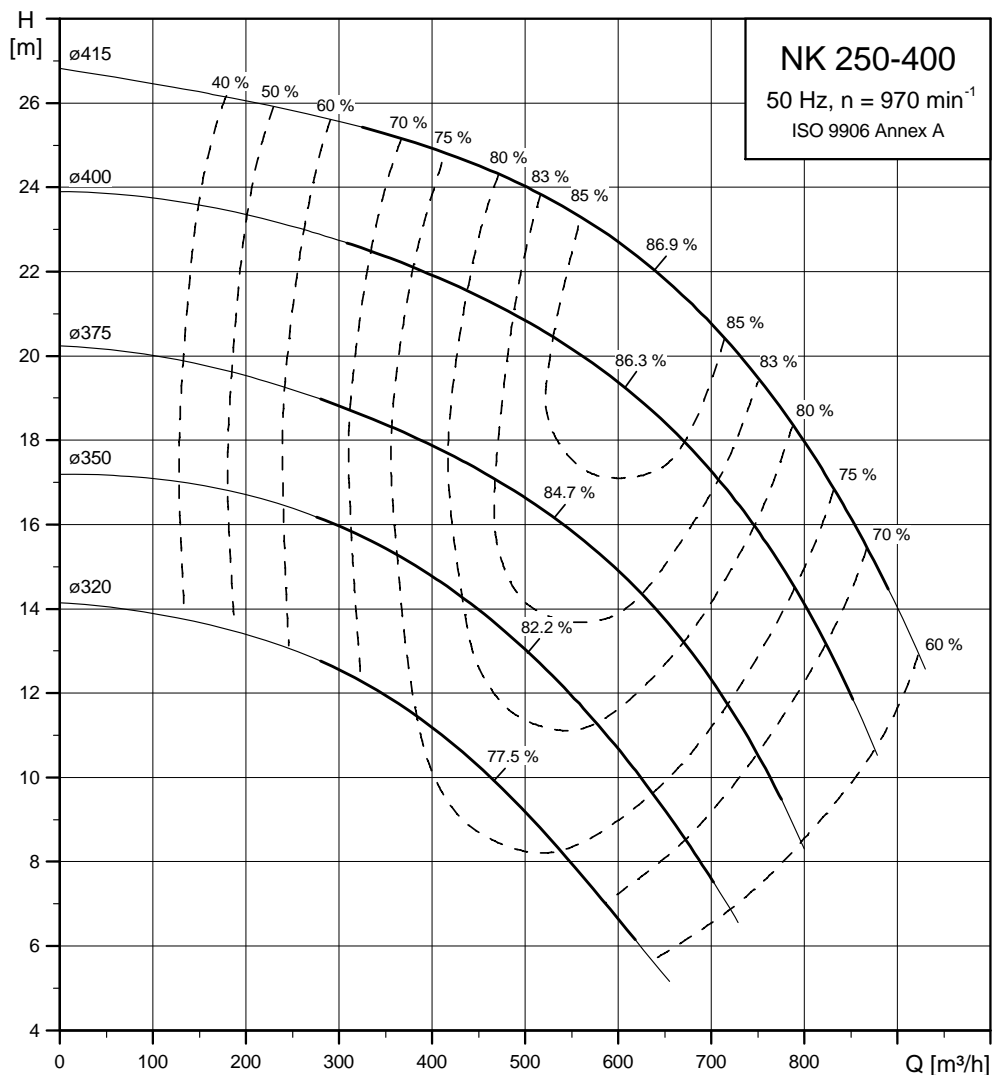
NK 250-330*				
kW		18.5	22	30
Standard motor range		MMG 200LA-E	MMG 200LB-E	MMG 225M-E
Premium motor range		MMG 200LA-D	MMG 200LB-D	MMG 225M-D
E-motor range		-	-	-
PN	[bar]	10	10	10
DN <sub>d</sub>	[mm]	250	250	250
DN <sub>s</sub>	[mm]	250	250	250
a	[mm]	250	250	250
a <sub>2</sub>	[mm]	225	225	225
h	[mm]	120	120	120
h <sub>2</sub>	[mm]	400	400	400
h <sub>3</sub>	[mm]	570	570	570
h <sub>4</sub>	[mm]	867/897/-	867/897/-	890/936/-
Standard coupling				
l <sup>1)</sup>	[mm]	1751/1773/-	1751/1773/-	1831/1882/-
l <sub>1</sub>	[mm]	2000	2000	2000
l <sub>2</sub>	[mm]	330	330	330
l <sub>3</sub>	[mm]	1340	1340	1340
b <sub>1</sub>	[mm]	750	750	750
b <sub>2</sub>	[mm]	910	910	910
b <sub>3</sub>	[mm]	830	830	830
d	[mm]	28	28	28
Weight <sup>1)</sup>	Net [kg]	814/791/-	829/801/-	880/874/-
Spacer coupling				
l <sup>1)</sup>	[mm]	1947/1969/-	1947/1969/-	2027/2078/-
l <sub>1</sub>	[mm]	2000	2000	2000
l <sub>2</sub>	[mm]	330	330	330
l <sub>3</sub>	[mm]	1340	1340	1340
b <sub>1</sub>	[mm]	750	750	750
b <sub>2</sub>	[mm]	910	910	910
b <sub>3</sub>	[mm]	830	830	830
d	[mm]	28	28	28
Weight <sup>1)</sup>	Net [kg]	812/789/-	827/799/-	879/873/-

<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range

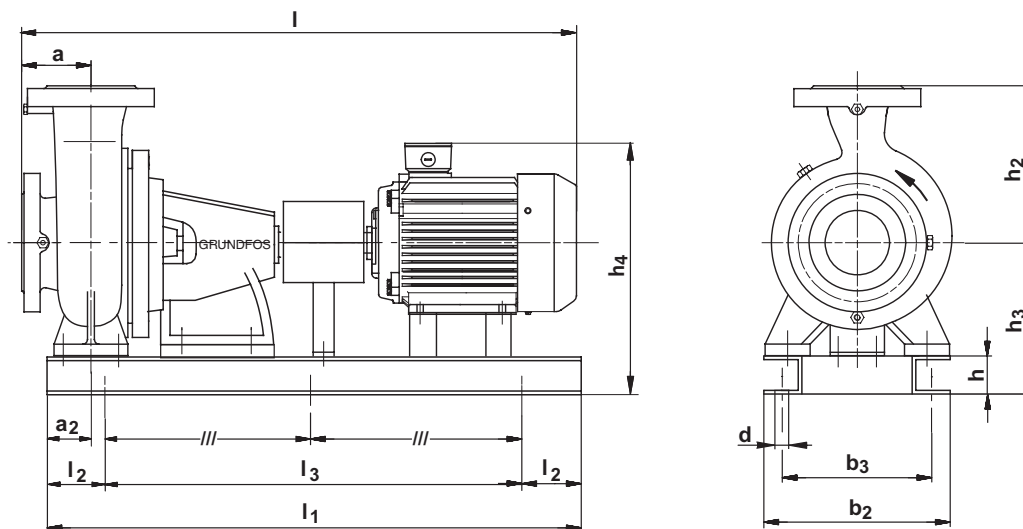
<sup>\*)</sup> Oversize

# Performance curves

NK 250-400  
6-pole



TM01 2898 0499



TM03 1282 1505

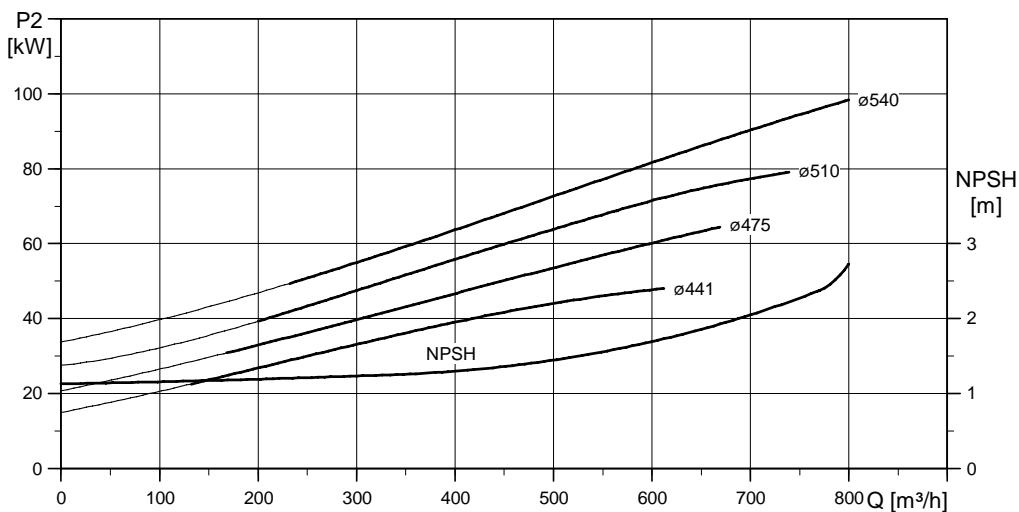
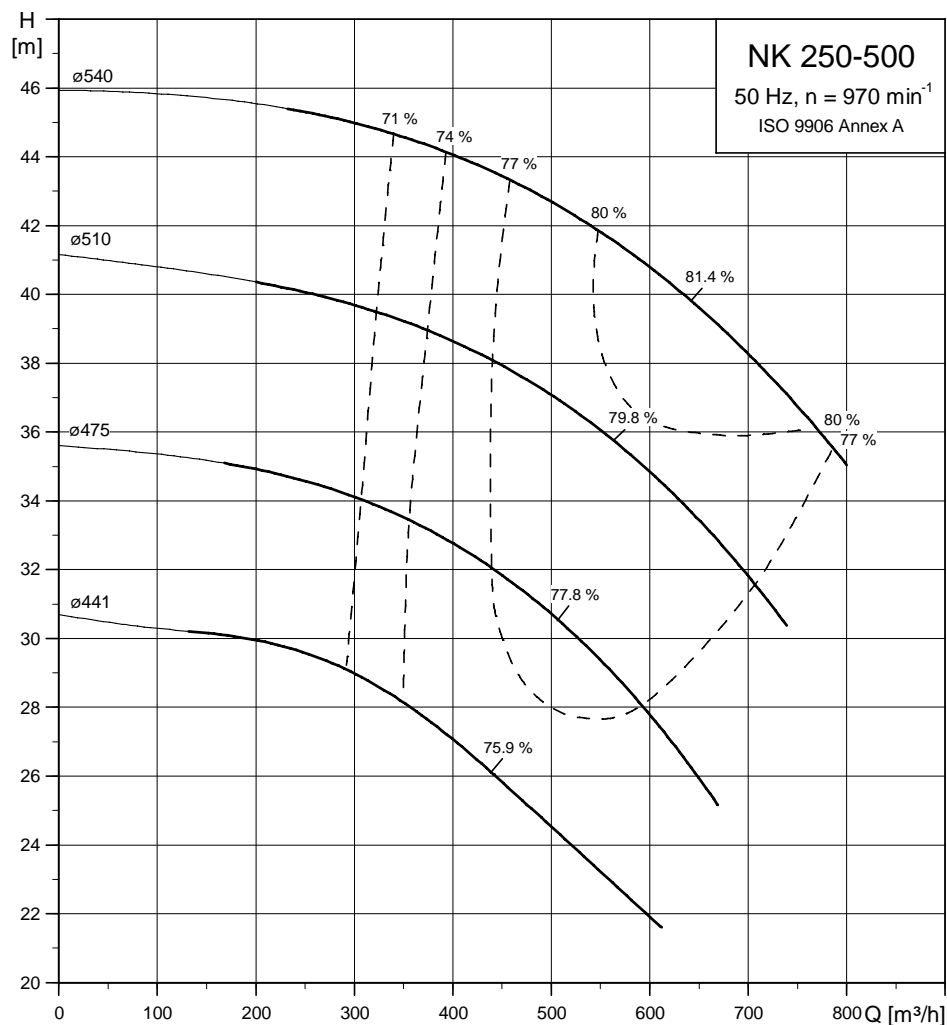
NK 250-400*						
kW	18.5	22	30	37	45	55
Standard motor range	MMG 200LA-E	MMG 200LB-E	MMG 225M-E	MMG 250M-E	MMG 280S-E	MMG 280M-E
Premium motor range	MMG 200LA-D	MMG 200LB-D	MMG 225M-D	MMG 250M-D	MMG 280S-D	MMG 280M-D
E-motor range	-	-	-	-	-	-
PN [bar]	10	10	10	10	10	10
DN <sub>d</sub> [mm]	250	250	250	250	250	250
DN <sub>s</sub> [mm]	300	300	300	300	300	300
a [mm]	200	200	200	200	200	200
a <sub>2</sub> [mm]	175	175	175	175	175	175
h [mm]	160	160	160	180	180	180
h <sub>2</sub> [mm]	600	600	600	600	600	600
h <sub>3</sub> [mm]	470	470	470	470	480	480
h <sub>4</sub> [mm]	767/797/-	767/797/-	790/836/-	829/855/-	866/899/-	866/899/-
<b>Standard coupling</b>						
l <sup>1)</sup> [mm]	1701/1723/-	1701/1723/-	1781/1832/-	1854/1916/-	1889/1982/-	1940/2032.5/-
l <sub>1</sub> [mm]	1800	1800	1800	1900	1900	2000
l <sub>2</sub> [mm]	150	150	150	150	150	150
l <sub>3</sub> [mm]	1500	1500	1500	1600	1600	1700
b <sub>1</sub> [mm]	-	-	-	-	-	-
b <sub>2</sub> [mm]	850	850	850	850	860	860
b <sub>3</sub> [mm]	790	790	790	790	795	795
d [mm]	18	18	18	18	18	18
Weight <sup>1)</sup> Net [kg]	836/813/-	851/823/-	902/896/-	1009/1001/-	1241/1183/-	1211/1140/-
<b>Spacer coupling</b>						
l <sup>1)</sup> [mm]	1897/1919/-	1897/1919/-	1977/2028/-	2050/2112/-	2083/2176/-	2134/2227/-
l <sub>1</sub> [mm]	1900	1900	2000	2100	2100	2100
l <sub>2</sub> [mm]	150	150	150	150	150	150
l <sub>3</sub> [mm]	1600	1600	1700	1800	1800	1800
b <sub>1</sub> [mm]	-	-	-	-	-	-
b <sub>2</sub> [mm]	850	850	850	850	860	860
b <sub>3</sub> [mm]	790	790	790	790	795	795
d [mm]	18	18	18	18	18	18
Weight <sup>1)</sup> Net [kg]	843/820/-	858/830/-	912/906/-	1080/1072/-	1287/1229/-	1355/1284/-

<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range

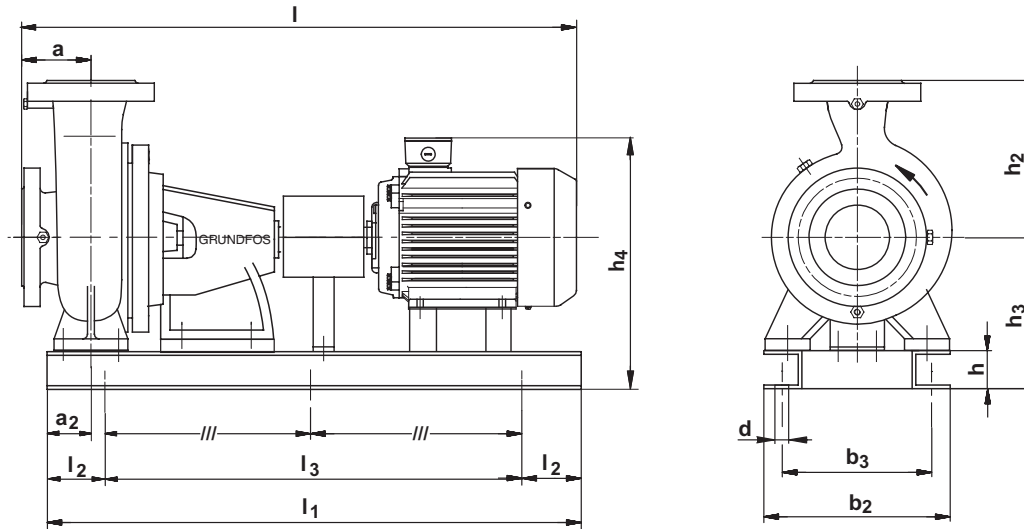
<sup>\*)</sup> Oversize

# Performance curves

NK 250-500  
6-pole



TM01 2899 3102



TM03 1282 1505

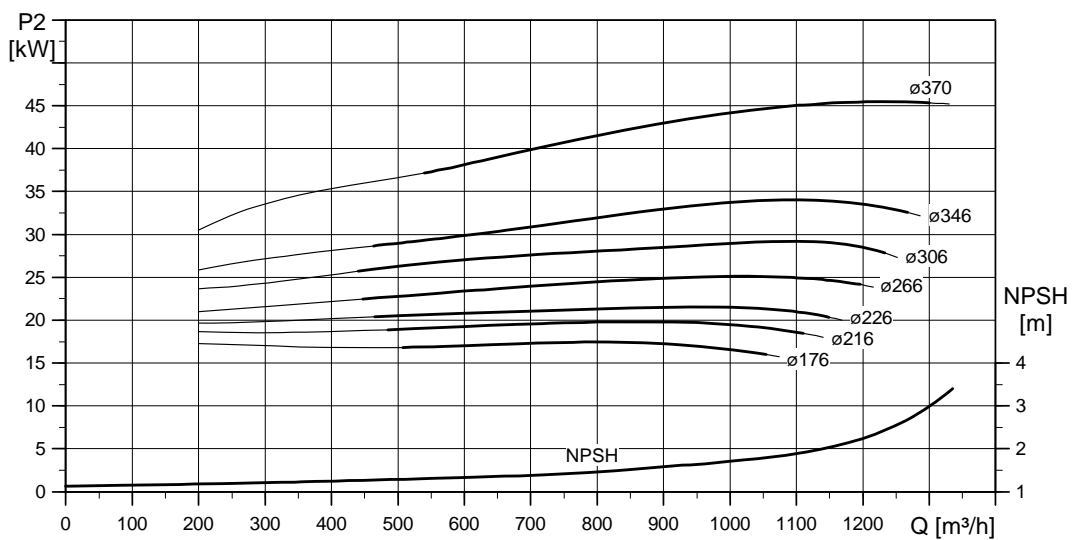
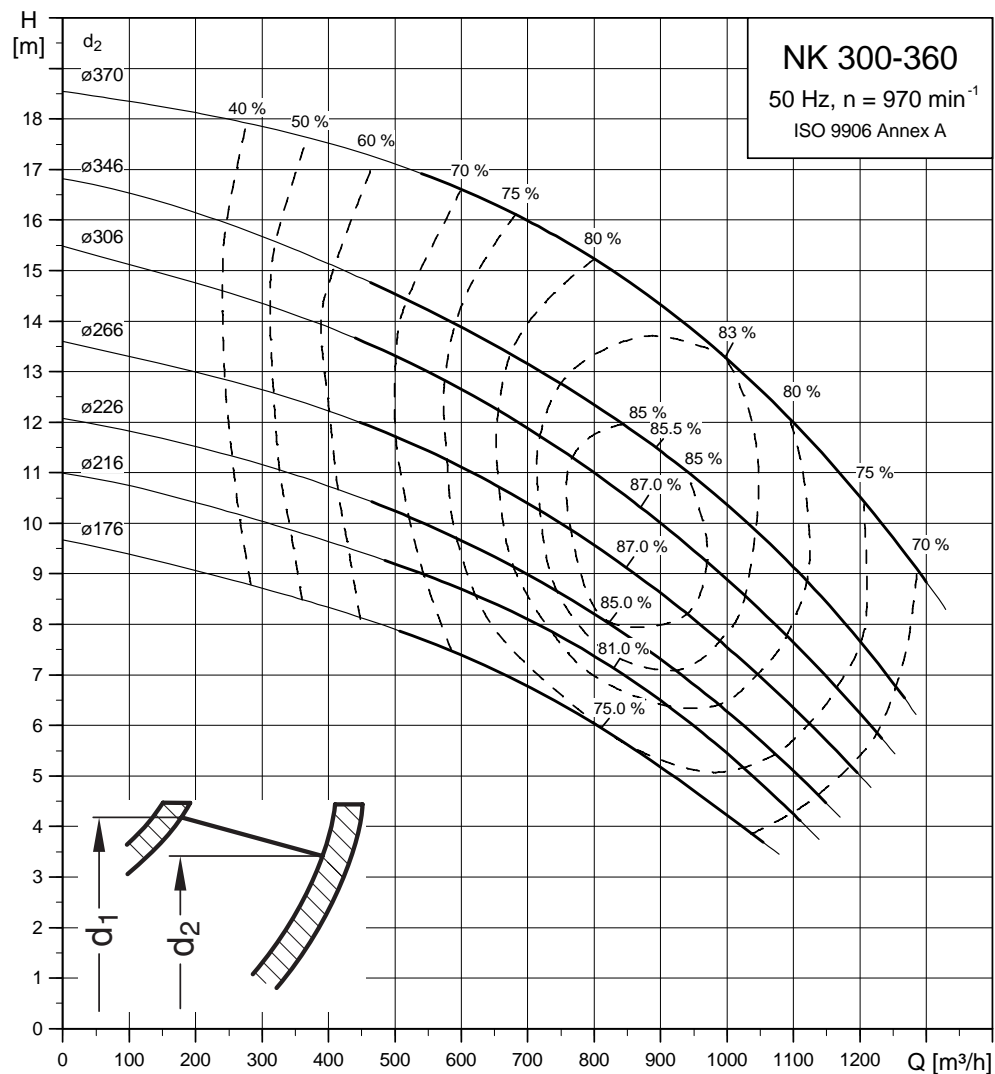
NK 250-500*					
kW	45	55	75	90	110
Standard motor range	MMG 280S-E	MMG 280M-E	MMG 315S-E	MMG 315M-E	MMG 315LA-E
Premium motor range	MMG 280S-D	MMG 280M-D	MMG 315S-D	MMG 315MA-D	MMG 315MB-D
E-motor range	-	-	-	-	-
PN [bar]	10	10	10	10	10
DN <sub>d</sub> [mm]	250	250	250	250	250
DN <sub>s</sub> [mm]	300	300	300	300	300
a [mm]	300	300	300	300	300
a <sub>2</sub> [mm]	175	175	175	185	185
h [mm]	180	180	180	180	200
h <sub>2</sub> [mm]	660	660	660	660	660
h <sub>3</sub> [mm]	490	490	495	515	515
h <sub>4</sub> [mm]	876/909/-	876/909/-	966/1007/-	986/1027/-	986/1027/-
<b>Standard coupling</b>					
l <sup>1)</sup> [mm]	1999/2092/-	2050/2143/-	2260/2180/-	2373/2180/-	2373/2180/-
l <sub>1</sub> [mm]	2000	2000	2200	2200	2200
l <sub>2</sub> [mm]	150	150	150	150	150
l <sub>3</sub> [mm]	1700	1700	1900	1900	1900
b <sub>1</sub> [mm]	-	-	-	-	-
b <sub>2</sub> [mm]	945	945	945	955	955
b <sub>3</sub> [mm]	880	880	880	885	885
d [mm]	18	18	18	18	18
Weight <sup>1)</sup> Net [kg]	1249/1191/-	1317/1246/-	1744/1372/-	1826/1566/-	1891/1641/-
<b>Spacer coupling</b>					
l <sup>1)</sup> [mm]	2193/2286/-	2244/2337/-	2454/2374/-	2567/2374/-	2567/2374/-
l <sub>1</sub> [mm]	2200	2200	2400	2400	2400
l <sub>2</sub> [mm]	150	150	150	150	150
l <sub>3</sub> [mm]	1900	1900	2100	2100	2100
b <sub>1</sub> [mm]	-	-	-	-	-
b <sub>2</sub> [mm]	945	945	955	955	955
b <sub>3</sub> [mm]	880	880	885	885	885
d [mm]	18	18	18	18	18
Weight <sup>1)</sup> Net [kg]	1272/1214/-	1340/1269/-	1769/1397/-	1846/1586/-	1916/1666/-

<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range

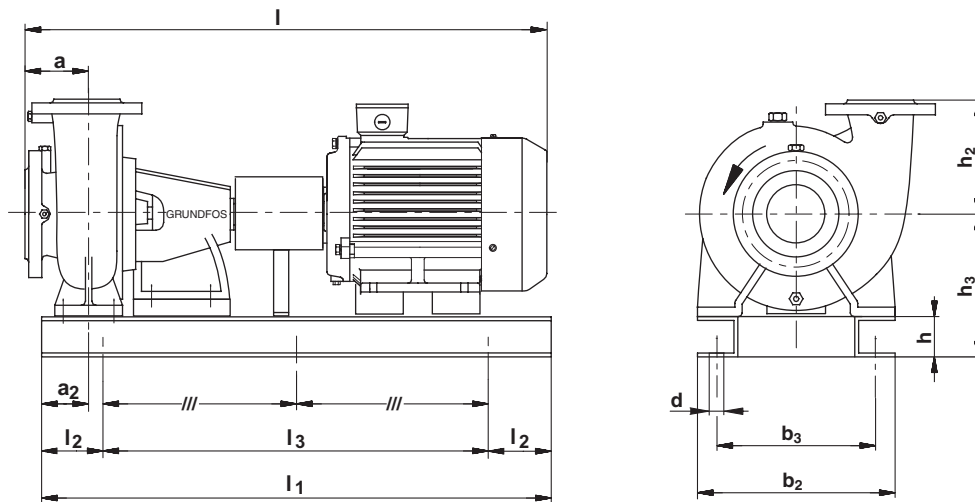
<sup>\*)</sup> Oversize

# Performance curves

NK 300-360  
6-pole



TM01 1717 0499



TM03 1279 1505

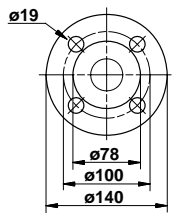
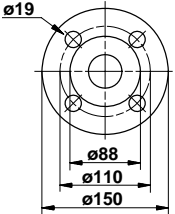
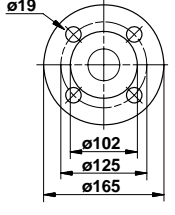
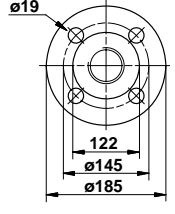
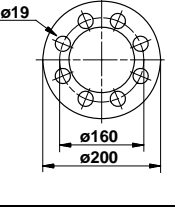
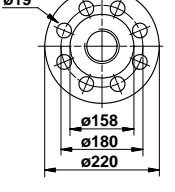
NK 300-360*					
kW	22	30	37	45	55
Standard motor range	MMG 200LB-E	MMG 225M-E	MMG 250M-E	MMG 280S-E	MMG 280M-E
Premium motor range	MMG 200LB-D	MMG 225M-D	MMG 250M-D	MMG 280S-D	MMG 280M-D
E-motor range	-	-	-	-	-
PN [bar]	10	10	10	10	10
DN <sub>d</sub> [mm]	300	300	300	300	300
DN <sub>s</sub> [mm]	300	300	300	300	300
a [mm]	300	300	300	300	300
a <sub>2</sub> [mm]	180	180	180	180	180
h [mm]	180	180	180	180	180
h <sub>2</sub> [mm]	440	440	440	440	440
h <sub>3</sub> [mm]	700	700	700	700	700
h <sub>4</sub> [mm]	997/1027/-	1020/1066/-	1059/1085/-	1086/1119/-	1086/1119/-
Standard coupling					
l <sup>1)</sup> [mm]	1821/1843/-	1901/1952/-	1974/2036/-	2009/2102/-	2060/2153/-
l <sub>1</sub> [mm]	1800	1900	1900	2000	2000
l <sub>2</sub> [mm]	150	150	150	150	150
l <sub>3</sub> [mm]	1500	1600	1600	1700	1700
b <sub>1</sub> [mm]	-	-	-	-	-
b <sub>2</sub> [mm]	860	860	860	860	860
b <sub>3</sub> [mm]	795	795	795	795	795
d [mm]	18	18	18	18	18
Weight <sup>1)</sup> Net [kg]	1108/1080/-	1164/1158/-	1262/1254/-	1288/1230/-	1356/1285/-
Spacer coupling					
l <sup>1)</sup> [mm]	2097/2119/-	2177/2228/-	2250/2312/-	2283/2376/-	2334/2427/-
l <sub>1</sub> [mm]	2000	2100	2100	2100	2200
l <sub>2</sub> [mm]	150	150	150	150	150
l <sub>3</sub> [mm]	1700	1800	1800	1800	1900
b <sub>1</sub> [mm]	-	-	-	-	-
b <sub>2</sub> [mm]	860	860	860	860	860
b <sub>3</sub> [mm]	795	795	795	795	795
d [mm]	18	18	18	18	18
Weight <sup>1)</sup> Net [kg]	1044/1016/-	1228/1222/-	1320/1312/-	1450/1392/-	1474/1403/-

<sup>1)</sup> Dimension of pump with standard range motor/premium range motor/E-motor range

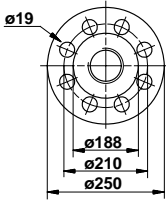
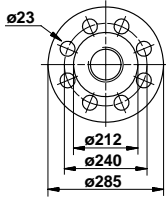
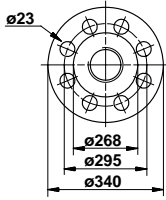
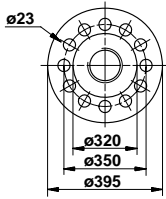
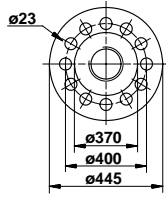
<sup>\*)</sup> Oversize.

## Counter flanges

Flange kits consist of one steel flange, one gasket of asbestos-free material, and the requisite number of bolts.

Counter flange	Flange size	Description	Rated pressure	Pipework connection	Product number	
	TM03 0400 5004	DN 32	Threaded	16 bar, EN 1092-2	Rp 1¼	419901
			For welding	16 bar, EN 1092-2	32 mm	419902
	TM03 0401 5004	DN 40	Threaded	16 bar, EN 1092-2	Rp 1½	429902
			For welding	16 bar, EN 1092-2	40 mm	429901
	TM03 0402 5004	DN 50	Threaded	16 bar, EN 1092-2	Rp 2	339903
	TM03 0403 5004	DN 65	Threaded	16 bar, EN 1092-2	Rp 2½	349902
			For welding	16 bar, EN 1092-2	65 mm	349904
	TM03 0404 5004	DN 80	Threaded	16 bar, EN 1092-2	Rp 3	350540
			For welding	16 bar, EN 1092-2	80 mm	350541
	TM03 0405 5004	DN 100	Threaded	16 bar, EN 1092-2	Rp 4	369901
			For welding	16 bar, EN 1092-2	100 mm	369902



Counter flange	Flange size	Description	Rated pressure	Pipework connection	Product number
	DN 125	For welding	16 bar, EN 1092-2	125 mm	96414677
	DN 150	For welding	16 bar, EN 1092-2	150 mm	96414676
	DN 200	For welding	10 bar, EN 1092-2	200 mm	96413358
	DN 250	For welding	10 bar, EN 1092-2	250 mm	-
	DN 300	For welding	10 bar, EN 1092-2	300 mm	-

## Sensors

Accessory	Type	Supplier	Measuring range	Product number
Flowmeter	SITRANS F M MAGFLO MAG 5100 W	Siemens	1 - 5 m <sup>3</sup> /h (DN 25)	ID8285
Flowmeter	SITRANS F M MAGFLO MAG 5100 W	Siemens	3 - 10 m <sup>3</sup> /h (DN 40)	ID8286
Flowmeter	SITRANS F M MAGFLO MAG 5100 W	Siemens	6 - 30 m <sup>3</sup> /h (DN 65)	ID8287
Flowmeter	SITRANS F M MAGFLO MAG 5100 W	Siemens	20 - 75 m <sup>3</sup> /h (DN 100)	ID8288
Temperature sensor	TTA (0) 25	Carlo Gavazzi	0°C to +25°C	96432591
Temperature sensor	TTA (-25) 25	Carlo Gavazzi	-25°C to +25°C	96430194
Temperature sensor	TTA (50) 100	Carlo Gavazzi	50°C to +100°C	96432592
Temperature sensor	TTA (0) 150	Carlo Gavazzi	0°C to +150°C	96430195
Accessory for temperature sensor. All with ½ 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°C to +50°C	ID8295
Differential temperature sensor	ETSD	Honsberg	0°C to +20°C	96409362
Differential temperature sensor	ETSD	Honsberg	0°C to +50°C	96409363

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

## Sensors for boosting applications

Danfoss pressure sensor kit	Pressure range	Product number
<ul style="list-style-type: none"> <li>• Connection: G ½ A (DIN 16288 - B6kt)</li> <li>• Electrical connection: plug (DIN 43650)</li> </ul>	0 - 2.5 bar	96478188
	0 - 4 bar	91072075
	0 - 6 bar	91072076
	0 - 10 bar	91072077
	0 - 16 bar	91072078
<ul style="list-style-type: none"> <li>• Pressure sensor type MBS 3000, with 2 m screened cable</li> <li>• Connection: G ¼ A (DIN 16288 - B6kt)</li> <li>• 5 cable clips (black)</li> <li>• Fitting instructions PT (00400212)</li> </ul>	0 - 2.5 bar	405159
	0 - 4 bar	405160
	0 - 6 bar	405161
	0 - 10 bar	405162
	0 - 16 bar	405163

## Sensors for circulation applications

Grundfos differential pressure sensor, DPI	Pressure range	Product number
<ul style="list-style-type: none"> <li>• 1 sensor incl. 0.9 m screened cable (7/16" connections)</li> <li>• 1 original DPI bracket (for wall mounting)</li> <li>• 1 Grundfos bracket (for mounting on motor)</li> <li>• 2 M4 screws for mounting of sensor on bracket</li> <li>• 1 M6 screw (self-cutting) for mounting on MGE 90/100</li> <li>• 1 M8 screw (self-cutting) for mounting on MGE 112/132</li> <li>• 3 capillary tubes (short/long)</li> <li>• 2 fittings (1/4" - 7/16")</li> <li>• 5 cable clips (black)</li> <li>• Installation and operating instructions</li> <li>• Service kit instruction</li> </ul>	0 - 0.6 bar	96611522
	0 - 1.0 bar	96611523
	0 - 1.6 bar	96611524
	0 - 2.5 bar	96611525
	0 - 4.0 bar	96611526
	0 - 6.0 bar	96611527
	0 - 10 bar	96611550

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

## Potentiometer

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

Product	Product number
External potentiometer with cabinet for wall mounting.	625468

## R100

R100 is used for wireless communication. The communication takes place by means of infrared light.

Product	Product number
R100	625333

## G10-LON interface

The G10-LON interface is used for data transmission between a Locally Operating Network (LON) and electronically controlled Grundfos pumps applying the Grundfos bus-protocol GENibus.

Product	Product number
G10-LON interface	00605726

<b>V7124471</b> 0406	<b>GB</b>
Repl. V7124471 1205	

Subject to alterations.