

# High-pressure pumps

## Series HP49





# General

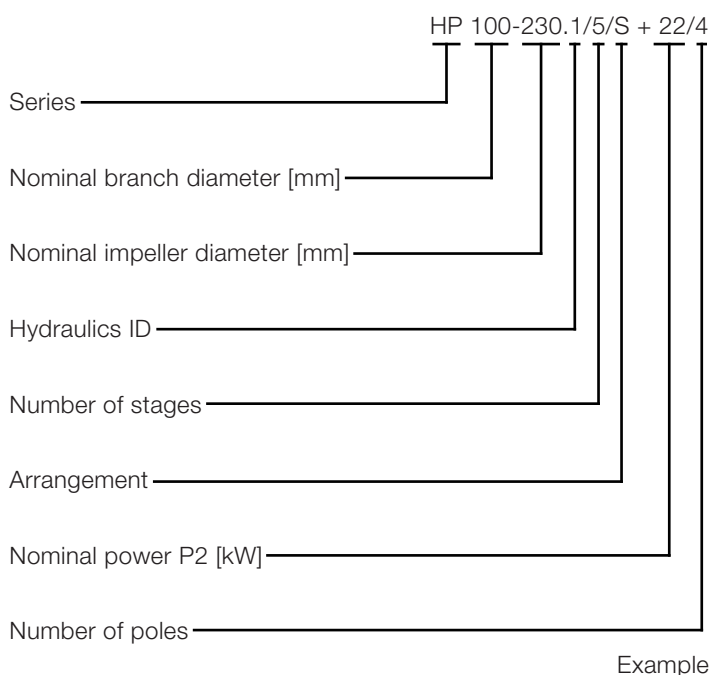
## Description / Application

Multi-stage high pressure pumps for water supply, irrigation and industrial applications, for hot and cold water circulation, fire fighting, boiler feed and pressure boosting installations. Suitable for all clean or slightly dirty non-corrosive liquids (e.g. water, oil, etc.) up to a viscosity of 150 mm<sup>2</sup>/s (cSt).

## Operating range

Nominal branch diameter DN	100-200
Capacity Q	up to 550 m <sup>3</sup> /h
Head H	up to 400 m
Operating pressure p	up to 40 bar
Liquid temperature t	-20°C up to +140°C
Speed n	up to 3600 rpm

## Designation



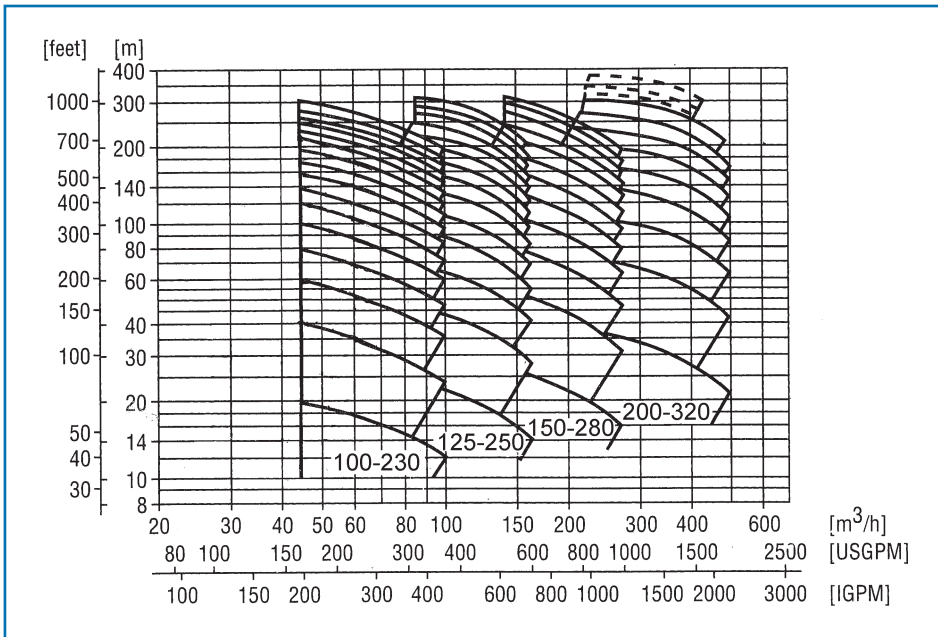
## Product advantages

- Numerous horizontal and vertical models for an efficient building design.
- Flexible arrangement of suction- and delivery branch.
- Numerous hydraulic units per model size guarantee a design at the optimal operating point.
- High efficiencies, absolutely stable and steep characteristic curve owing to optimized hydraulics.
- Optimal adaptability to the medium to be pumped owing to a variety of material and sealing versions.
- Pump shaft protected along its entire length by means of impeller hubs and sleeves.
- Detachable stuffing box gland simplifies replacement of the packing.
- Fitting of standard mechanical seals instead of gland packing, without additional work on the casing elements.
- Balancing of the axial thrust by means of balancing piston (at high pressure).

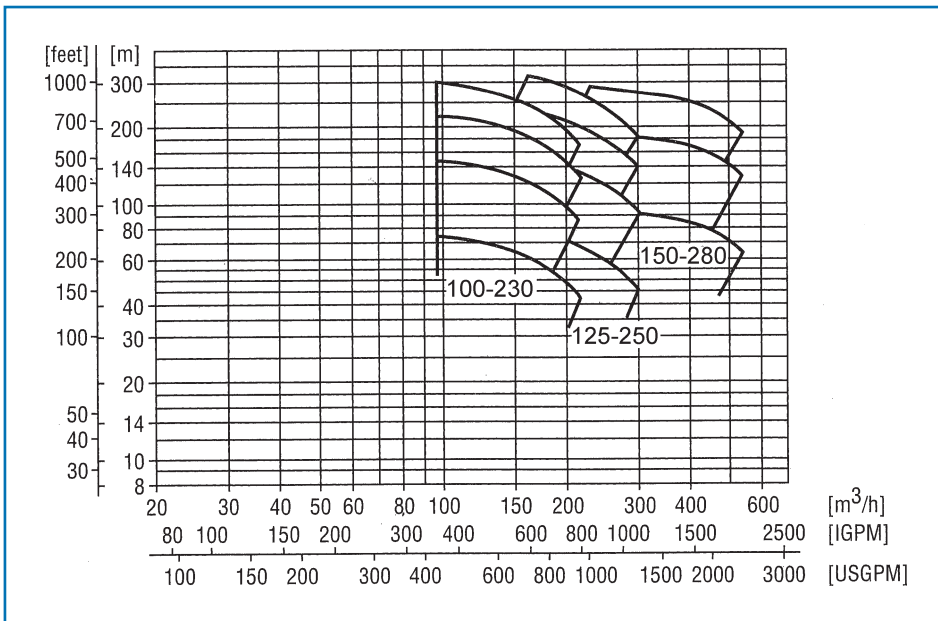
# Selection chart

This chart allows a provisional selection of the pump type most suitable for a given set of operating conditions. In certain cases it may be possible to use the next smaller pump type and this possibility should be included in the final selection. For an exact pump selection our individual characteristic curves as well as our pump selection software WinPump are available.

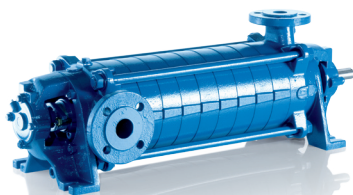
Speed 1450 rpm



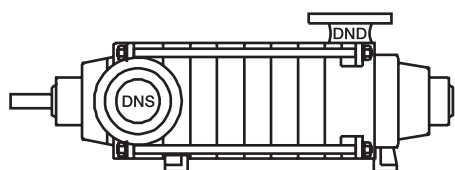
Speed 2900 rpm



# Arrangements

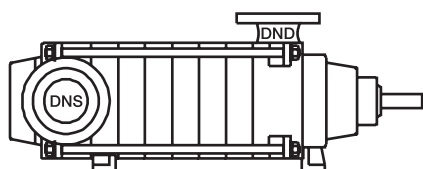


## Arrangement A1 and E1



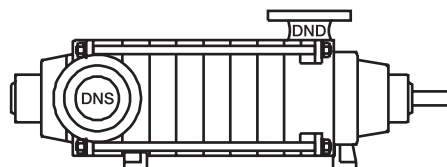
Pump arranged horizontally. Radial suction and delivery connections. On the suction and delivery sides, shaft mounted in grease lubricated ball bearings outside the pump body. Drive on suction side with anti-clockwise rotation, seen from drive end. Pump and motor mounted on a common base plate, connected by a flexible coupling.

## Arrangement A2 and E2



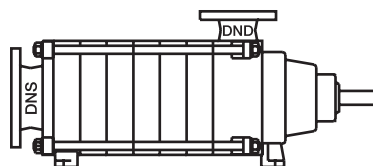
Pump arranged horizontally. Radial suction and delivery connections. On delivery side, shaft mounted outside the pump body in grease lubricated ball bearings, and on suction side rotating in a sleeve bearing lubricated by the pumped medium. Drive on delivery side with clockwise rotation, seen from drive end. Pump and motor mounted on a common base plate, connected by a flexible coupling.

## Arrangement A3 and E3



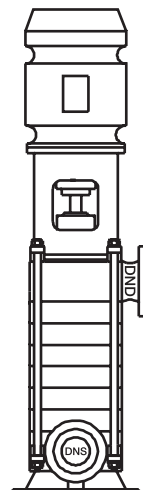
Pump arranged horizontally. Radial suction and delivery connections. On the suction and delivery sides, shaft mounted in grease lubricated ball bearings outside the pump body. Drive on delivery side with clockwise rotation, seen from drive end. Pump and motor mounted on a common base plate, connected by a flexible coupling.

## Arrangement AX



Pump arranged horizontally. Axial suction connection, radial delivery connection. On delivery side, shaft mounted outside the pump body in grease lubricated ball bearings, and on suction side rotating in a sleeve bearing situated within the suction branch lubricated by the pumped medium. Drive on delivery side with clockwise rotation, seen from drive end. Pump and motor mounted on a common base plate, connected by a flexible coupling. Particularly favourable flow pattern towards the first stage impeller and consequently better suction performance.

## Arrangement S



Pump arranged vertically. Radial suction and delivery connections. On the suction side, shaft mounted in a sleeve bearing lubricated by the pumped medium, and on the delivery side mounted in grease lubricated ball bearings. Drive on delivery side with clockwise rotation, seen from drive end. Pump and motor connected via a flexible coupling. Particularly space-saving, easy-to-install design.

# Technical details

## Constuction

Multi-stage ring section pump of robust construction with extra large shaft section for vibration-free running. For high output pressures additional axial thrust balancing is provided by a balancing piston mounted on pump shaft. All wearing parts are renewable without additional work on the casing parts. Shaft sealing either with gland packing or mechanical seal. Bearing housings are protected against the ingress of spray water by means of lip seals. Under difficult suction conditions (low NPSH-available), the pump can be provided with an axial inlet for cavitation-reducing flow entry pattern into the first stage impeller.

## Impellers

At least two types of impellers with matching diffuser are available for each pump frame. Therefore operation within the range of optimum efficiency is possible for the required output conditions. If an abrasive medium is being pumped, the slip face and hub section of the impeller can be protected by renewable rings / bushes in wear resistant materials.

## Shaft and bearings

In all the pumps the shaft is protected against wear and corrosion over its entire length by shaft wear sleeves, especially in the area of the shaft seal (gland packing or mechanical seal) and the sleeve bearings in arrangement AX and S. In case of pumps in arrangement A1 and A2, the shaft is mounted outside the pump body in grease lubricated ball bearings (a radial deep groove ball bearing on the suction side and a fixed bearing with paired angular contact ball bearings on the delivery side).

On arrangement A2, AX and S, the shaft is carried in a shielded sleeve bearing lubricated by the pumped medium on the suction side and, on the delivery side, by grease lubricated angular contact ball bearings. All rolling bearings are protected by lip seals.

## Shaft sealing

In the standard version the shaft is sealed by gland packing. The packing rings form a seal with a renewable shaft sleeve which protects the shaft against wear. Mechanical seals acc. to DIN 24960 can be fitted (also retro-fitted). According to requirements following mechanical seals may be used:

- single acting unbalanced mechanical seal
  - single acting balanced mechanical seal
  - double acting mechanical seal in tandem arrangement
  - double acting mechanical seal in back-to-back arrangement
- Mechanical seals are always mounted on a shaft wear sleeve in stainless steel.

## Axial thrust compensation

In pumps with a small number of stages the ball bearings (fixed bearings) absorb the axial thrust. In pumps with a larger number of stages, the axial thrust is equalised by means of a balancing piston mounted on the shaft in the area of the delivery housing.

Pump type	Balance piston as per number of stages at speed					
	970	1150	1450	1750	2900	3500
100-230	9	7	5	4	1	1
125-250	-	11	6	5	2	1
150-280	-	8	6	4	2	1
200-320	11	7	5	3	-	-

## Slip faces

In order to prevent wear in the slip face and hub area as far as possible interchangeable wear-resisting casing rings and neck bushes are fitted in the housing. The slip faces of the impellers can also be protected by renewable slip rings.

## Coupling

Connection between pump and IEC standard motor by flexible coupling N-Eupex, type B.

## Drive

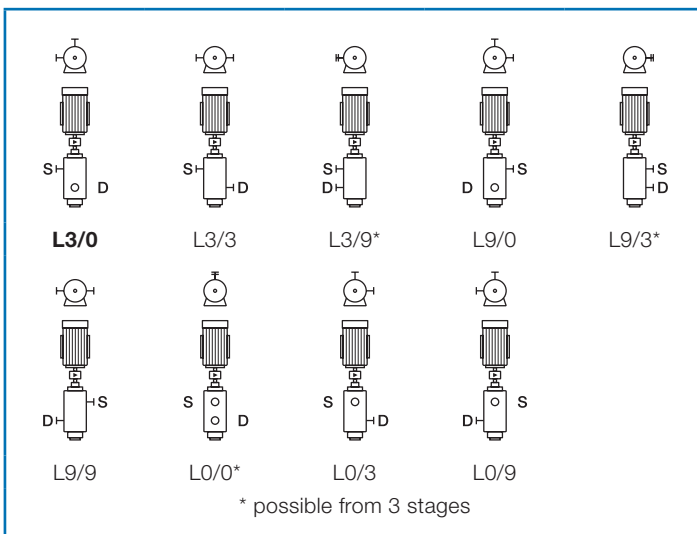
- In case of horizontal arrangement by IEC standard motor in form B3 with supporting feet.
- In case of vertical arrangement by IEC standard motor in form V1, with flange connection according to DIN 42948.

# Technical details

## Branch position

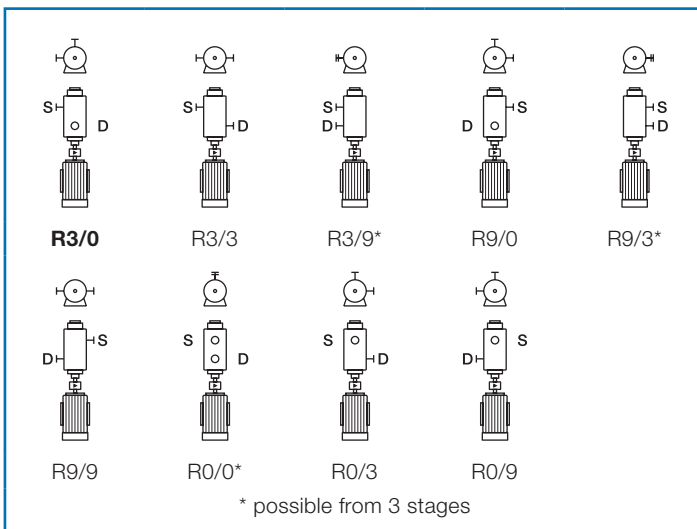
### Arrangement A1 and E1, horizontal (standard)

- Drive at suction side.
- Rotation direction of pump shaft is anti-clockwise, seen from drive end.
- Branch position by standard arrangement L3/0.
- Suction and delivery branch to same direction is possible from 3 stages or more.



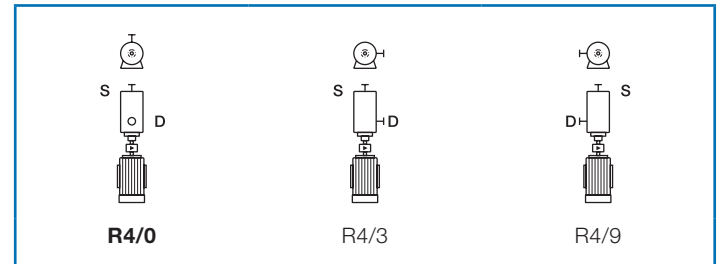
### Arrangement A2, E2, A3 and E3, horizontal

- Drive at delivery side.
- Rotation direction of pump shaft is clockwise, seen from drive end.
- Branch position by standard arrangement R3/0.
- Suction and delivery branch to same direction is possible from 3 stages or more.



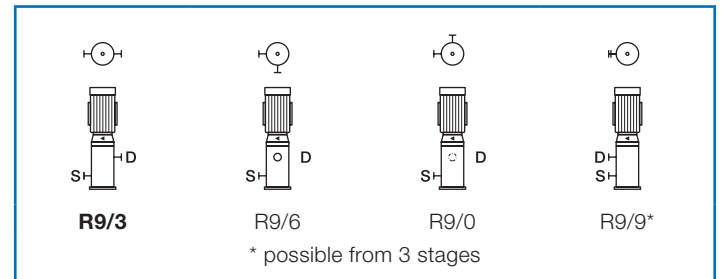
### Arrangement AX, horizontal

- Drive at delivery side.
- Rotation direction of pump shaft is clockwise, seen from drive end.
- Branch position by standard arrangement R4/0.



### Arrangement S, vertical

- Drive at delivery side.
- Rotation direction of pump shaft is clockwise, seen from drive end.
- Branch position by standard arrangement R9/3.
- Suction and delivery branch to same direction is possible from 3 stages or more.



# Range of application

## Maximum number of stages and nominal motor power

Pump type	Stages at speed				Nominal motor power [kW] at speed			
	1450	1750	2900	3500	1450	1750	2900	3500
100-230	16	16	5	4	117 (95)	141 (115)	235 (190)	274 (229)
125-250	14	14	5	4	169 (136)	201 (164)	338 (272)	328 (328)
150-280	11	11	4	3	322 (248)	387 (299)	645 (496)	645 (496)
200-320	12	7	-	-	535 (409)	642 (494)	-	-

Values in () are valid for arrangement AX.

## Maximum permissible pump end pressure

Pump type	Arrangement	Max. permissible pump end pressure in bar at casing material		
		EN-GJL-250	EN-GJS-600-3	CuAl10Fe5Ni-C
100-230	A1, A2, A3, S	33	40	40
	AX	25	40	40
125-250	A1, A2, A3, S	33	40	40
	AX	25	40	40
150-280	A1, A2, A3, S	38	40	40
	AX	25	40	40
200-320	A1, A2, A3, S	40	40	40
	AX	25	40	40

Pump end pressure = suction pressure + pump delivery head at zero capacity.

Other casing materials (e.g. stainless steel) on request.

## Shaft sealing

Shaft seal	Max. operating temperature	Max. permissible pump end pressure
Gland packing	-20°C up to +110°C	40 bar
Mechanical seal, unbalanced (hard metal/carbon)	-20°C up to +140°C	10 bar
Mechanical seal, unbalanced (hard metal/hard metal)	-20°C up to +80°C	10 bar
Mechanical seal, balanced (hard metal/carbon)	-20°C up to +140°C	40 bar
Mechanical seal, balanced (hard metal/hard metal)	-20°C up to +80°C	40 bar

Operating conditions	suction side mechanical seal		delivery side mechanical seal	
	unbalanced	balanced	unbalanced	balanced
<b>Pump without axial balance piston</b>				
Suction pressure up to 10 bar	end pressure up to 10 bar	■	■	
	end pressure more than 10 bar		■	■
Suction pressure more than 10 bar		■		■
<b>Pump with axial balance piston</b>				
Suction pressure up to 10 bar	■		■	
Suction pressure more than 10 bar		■		■

## Velocities in pipes and fittings

In order to reduce noise levels and friction in suction and discharge pipes caused by excessive flow we recommend the following values:

- 2 m/s max. in suction piping
- 3 m/s approx. in discharge piping



# Materials

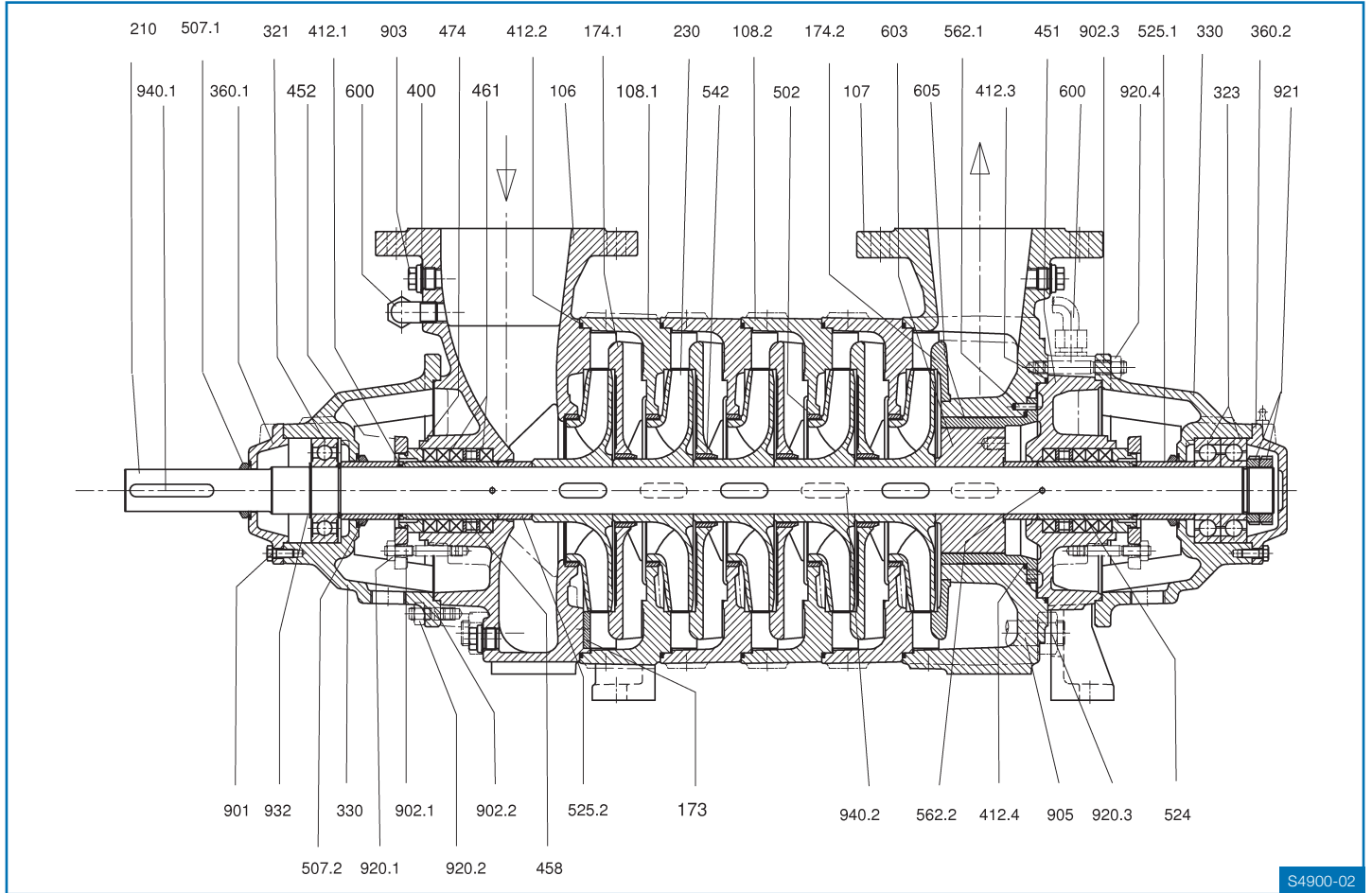
The standard materials of construction for the main pump components are shown below together with details of alternative materials available. We reserve the right to change material specification without notice. Special materials (e.g. stainless steel) upon request.

Part	Description	Material combination			
		A			D
106	Suction casing	EN-GJL-250	EN-JL 1040	CuAl10Fe5Ni-C	CCC333G
107	Delivery casing	EN-GJL-250	EN-JL 1040	CuAl10Fe5Ni-C	CCC333G
108	Interstage casing	EN-GJL-250	EN-JL 1040	CuAl10Fe5Ni-C	CCC333G
174	Diffuser insert	EN-GJL-200	EN-JL 1030	CuSn10-C	CC480K
181	Pump base	EN-GJL-200	EN-JL 1030	EN-GJL-200	EN-JL 1030
210	Shaft	X20Cr13	1.4021	X5CrNiMo17-12-2	1.4401
230	Impeller	EN-GJL-200	EN-JL 1030	CuSn10-C	CC480K
330	Bearing housing	EN-GJL-200	EN-JL 1030	EN-GJL-200	EN-JL 1030
341	Motor stool	EN-GJL-200	EN-JL 1030	EN-GJL-200	EN-JL 1030
360	Bearing cover	EN-GJL-200	EN-JL 1030	EN-GJL-200	EN-JL 1030
451	Gland housing	EN-GJL-250	EN-JL 1040	CuAl10Fe5Ni-C	CCC333G
452	Gland	EN-GJL-200	EN-JL 1030	CuSn10-C	CC480K
458	Lantern ring	EN-GJL-200	EN-JL 1030	CuSn10-C	CC480K
471	Bearing cover plate	EN-GJL-200	EN-JL 1030	CuSn10-C	CC480K
471	Seal cover plate	EN-GJL-200	EN-JL 1030	CuSn10-C	CC480K
474	Compression ring	X20Cr13	1.4021	X5CrNiMo17-12-2	1.4401
502	Casing wear ring	CuSn12-C	CC483K	CuSn12-C	CC483K
503	Impeller wear ring	-	-	GX5CrNiMoNb19-11-2	1.4581
524	Shaft sleeve	-	-	GX5CrNiMoNb19-11-2	1.4581
524	Shaft sleeve	X20Cr13	1.4021	X5CrNiMo17-12-2	1.4401
525	Distance sleeve	X8CrNiS18-9	1.4305	X5CrNiMo17-12-2	1.4401
542	Neck bush	CuSn12-C	CC483K	CuSn12-C	CC483K
545	Bearing bush	CuSn7Pb15-C	CC496K	CuSn7Pb15-C	CC496K

# Cross section and parts list

## Arrangement A1

### Cross section



### Parts list

Part	Description
106	Suction casing
107	Delivery casing
108.1	Interstage casing with foot
108.2	Interstage casing
173	Diffuser plate (200-320)
174.1	Diffuser insert
174.2	Diffuser insert
210	Shaft
230	Impeller
321	Grooved ball bearing
323	Thrust ball bearing
330	Bearing housing
360.1	Bearing cover
360.2	Bearing cover
400	Gasket
412.1	O-Ring
412.2	O-Ring
412.3	O-Ring

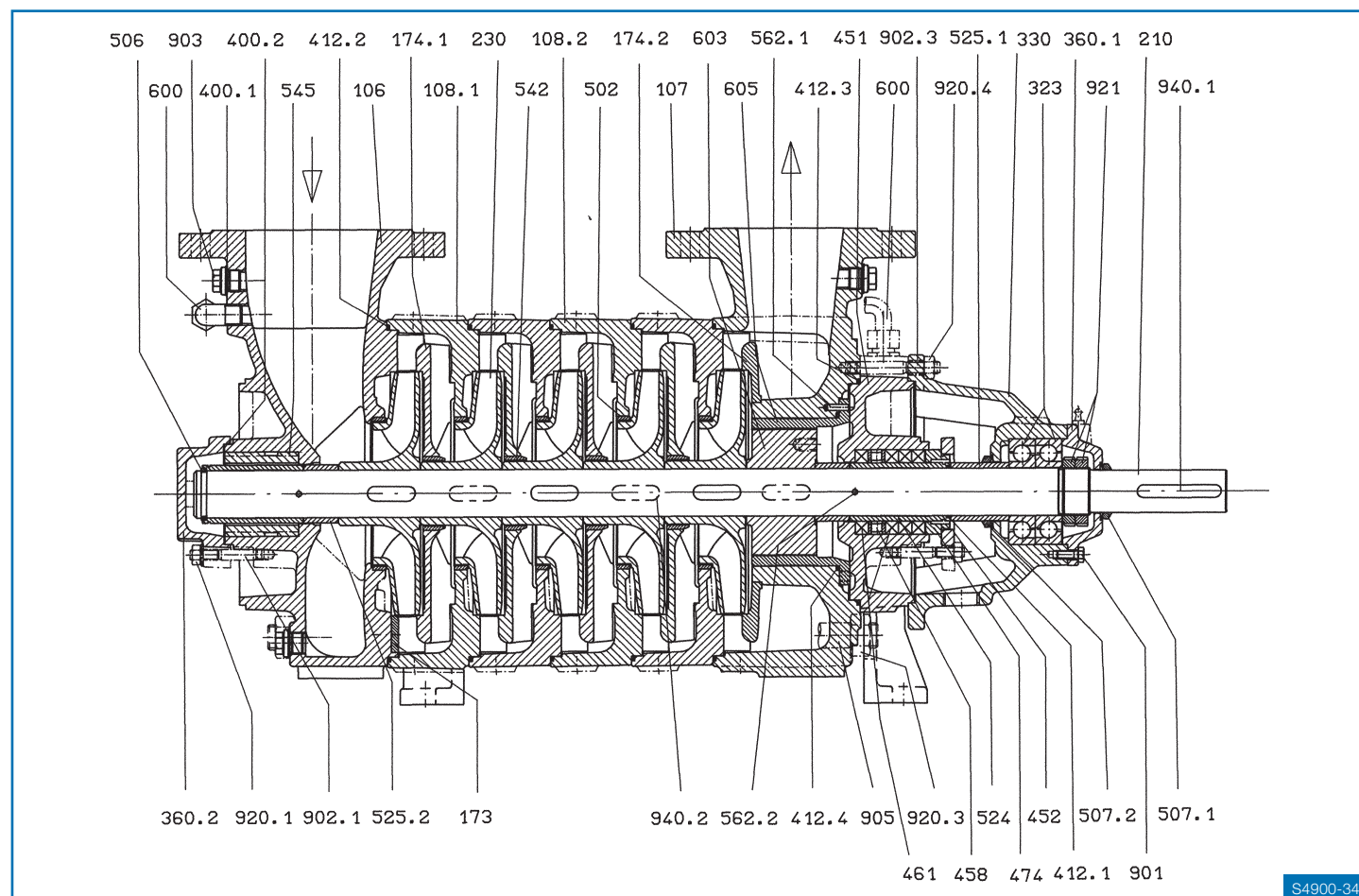
Part	Description
412.4	O-Ring
451	Gland housing
452	Gland
458	Lantern ring
461	Gland packing
474	Compression ring
502	Casing wear ring
507.1	Thrower ring
507.2	Thrower ring
524	Shaft sleeve
525.1	Distance sleeve
525.2	Distance sleeve
542	Neck bush
562.1	Dowel pin
562.2	Dowel pin
600	Axial balance pipe
603	Axial balance piston
605	Axial balance bush

Part	Description
901	Hexagon set screw
902.1	Stud
902.2	Stud
902.3	Stud
903	Plug
905	Tie bolt
920.1	Hexagon nut
920.2	Hexagon nut
920.3	Hexagon nut
920.4	Hexagon nut
921	Shaft locking nut
932	Circlip
940.1	Key
940.2	Key

# Cross section and parts list

## Arrangement A2

### Cross section



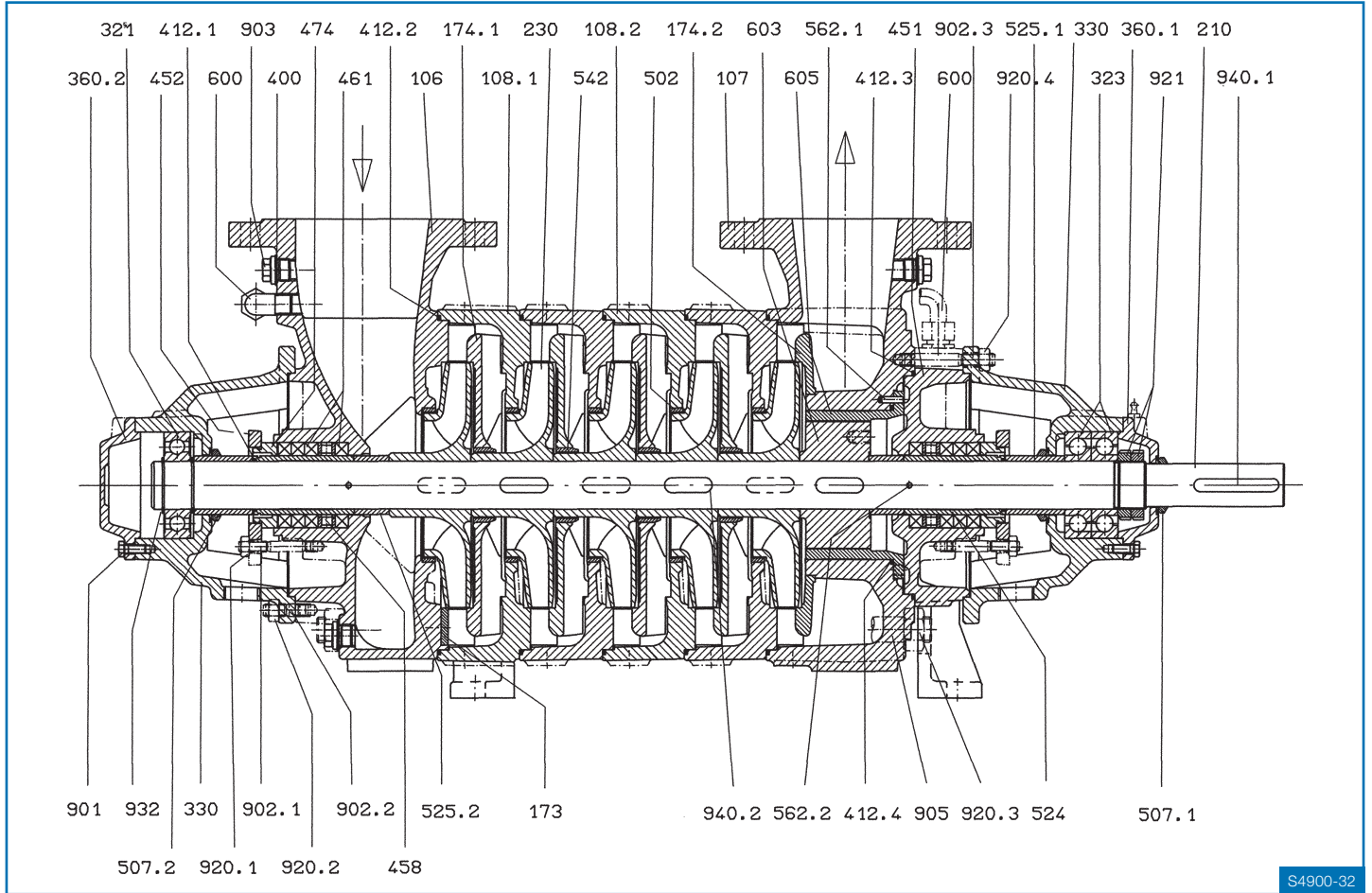
### Parts list

Part	Description	Part	Description	Part	Description
106	Suction casing	412.4	O-Ring	603	Axial balance piston
107	Delivery casing	451	Gland housing	605	Axial balance bush
108.1	Interstage casing with foot	452	Gland	901	Hexagon set screw
108.2	Interstage casing	458	Lantern ring	902.1	Stud
173	Diffuser plate (200-320)	461	Gland packing	902.3	Stud
174.1	Diffuser insert	474	Compression ring	903	Plug
174.2	Diffuser insert	502	Casing wear ring	905	Tie bolt
210	Shaft	506	Locating ring	920.1	Hexagon nut
230	Impeller	507.1	Thrower ring	920.3	Hexagon nut
323	Thrust ball bearing	507.2	Thrower ring	920.4	Hexagon nut
330	Bearing housing	524	Shaft sleeve	921	Shaft locking nut
360.1	Bearing cover	525.1	Distance sleeve	940.1	Key
360.2	Bearing cover	525.2	Distance sleeve	940.2	Key
400.1	Gasket	542	Neck bush		
400.2	Gasket	545	Bearing bush		
412.1	O-Ring	562.1	Dowel pin		
412.2	O-Ring	562.2	Dowel pin		
412.3	O-Ring	600	Axial balance pipe		

# Cross section and parts list

## Arrangement A3

### Cross section



S4900-32

### Parts list

Part	Description
106	Suction casing
107	Delivery casing
108.1	Interstage casing with foot
108.2	Interstage casing
173	Diffuser plate (200-320)
174.1	Diffuser insert
174.2	Diffuser insert
210	Shaft
230	Impeller
321	Grooved ball bearing
323	Thrust ball bearing
330	Bearing housing
360.1	Bearing cover
360.2	Bearing cover
400	Gasket
412.1	O-Ring
412.2	O-Ring
412.3	O-Ring

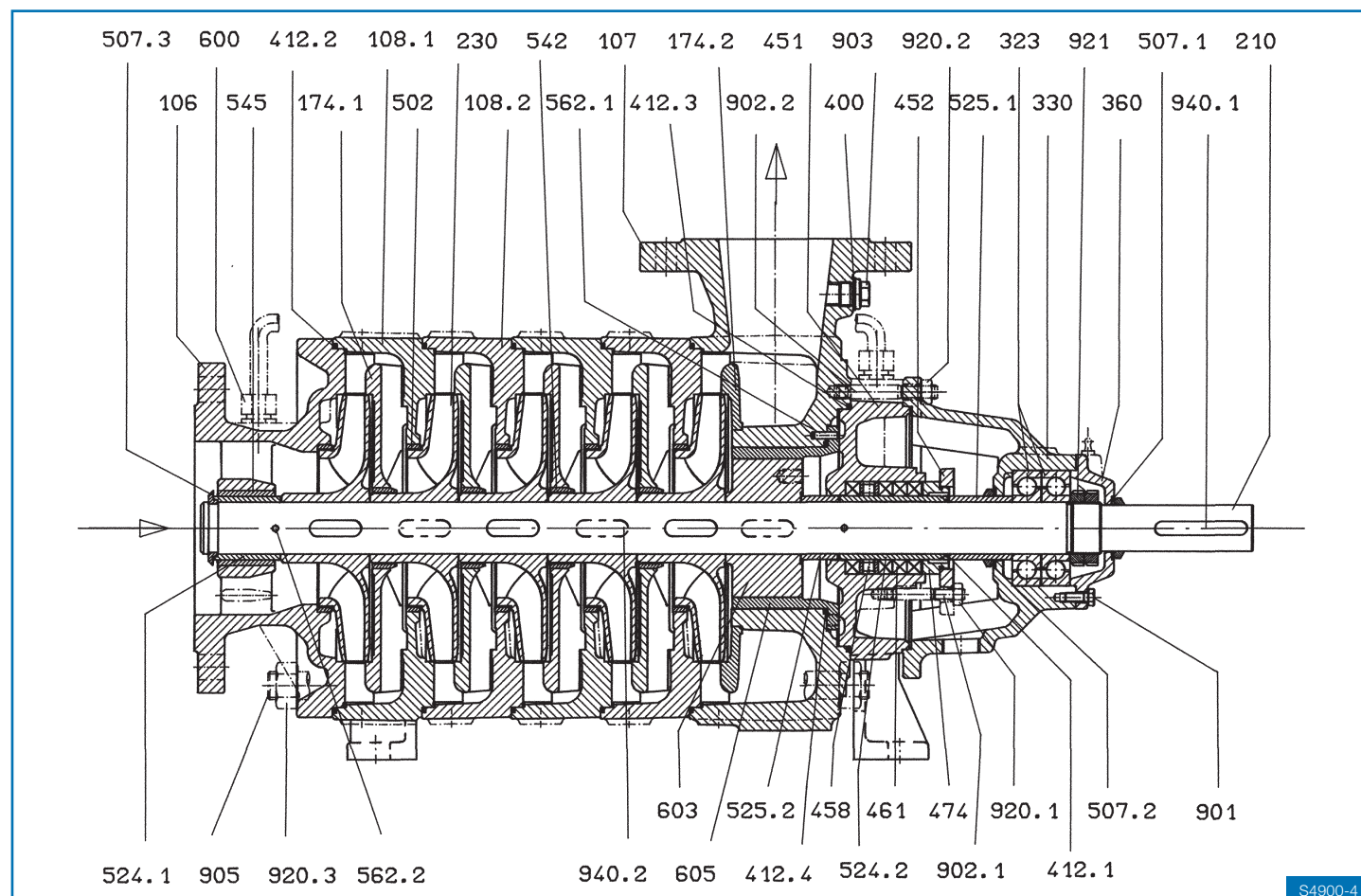
Part	Description
412.4	O-Ring
451	Gland housing
452	Gland
458	Lantern ring
461	Gland packing
474	Compression ring
502	Casing wear ring
507.1	Thrower ring
507.2	Thrower ring
524	Shaft sleeve
525.1	Distance sleeve
525.2	Distance sleeve
542	Neck bush
562.1	Dowel pin
562.2	Dowel pin
600	Axial balance pipe
603	Axial balance piston
605	Axial balance bush

Part	Description
901	Hexagon set screw
902.1	Stud
902.2	Stud
902.3	Stud
903	Plug
905	Tie bolt
920.1	Hexagon nut
920.2	Hexagon nut
920.3	Hexagon nut
920.4	Hexagon nut
921	Shaft locking nut
932	Circlip
940.1	Key
940.2	Key

# Cross section and parts list

## Arrangement AX

### Cross section



S4900-4

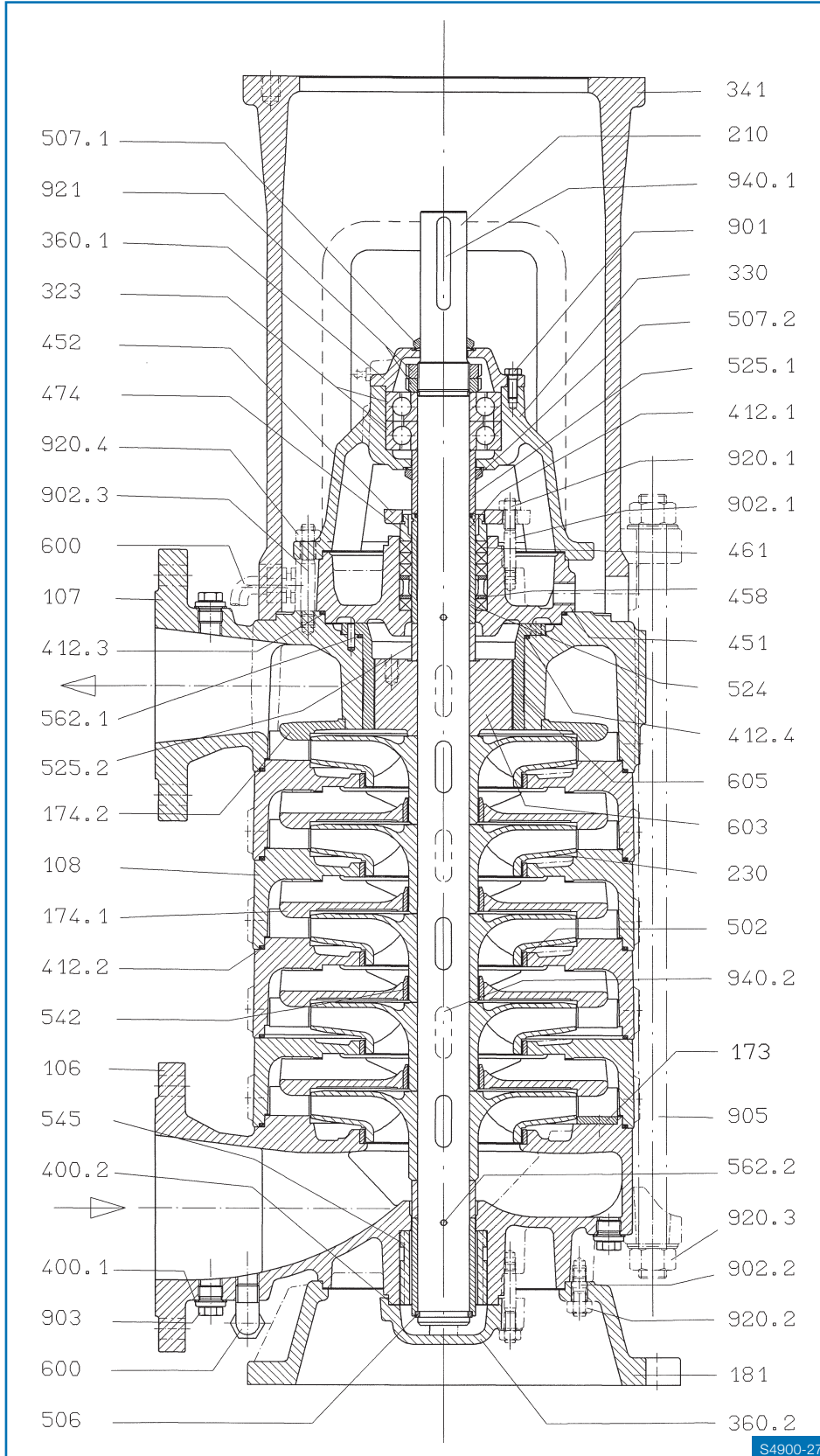
### Parts list

Part	Description	Part	Description	Part	Description
106	Suction casing	458	Lantern ring	901	Hexagon set screw
107	Delivery casing	461	Gland packing	902.1	Stud
108.1	Interstage casing with foot	474	Compression ring	902.2	Stud
108.2	Interstage casing	502	Casing wear ring	903	Plug
174.1	Diffuser insert	507.1	Thrower ring	905	Tie bolt
174.2	Diffuser insert	507.2	Thrower ring	920.1	Hexagon nut
210	Shaft	507.3	Thrower ring	920.2	Hexagon nut
230	Impeller	524.1	Shaft sleeve	920.3	Hexagon nut
323	Thrust ball bearing	524.2	Shaft sleeve	921	Shaft locking nut
330	Bearing housing	525.1	Distance sleeve	940.1	Key
360	Bearing cover	525.2	Distance sleeve	940.2	Key
400	Gasket	542	Neck bush		
412.1	O-Ring	545	Bearing bush		
412.2	O-Ring	562.1	Dowel pin		
412.3	O-Ring	562.2	Dowel pin		
412.4	O-Ring	600	Axial balance pipe		
451	Gland housing	603	Axial balance piston		
452	Gland	605	Axial balance bush		

# Cross section and parts list

## Arrangement S

### Cross section



### Parts list

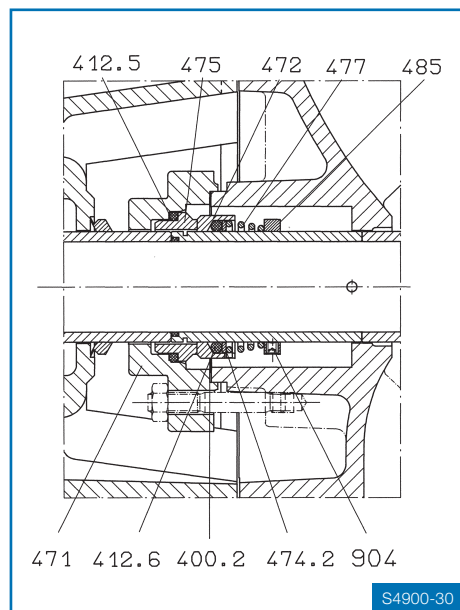
Part	Description
106	Suction casing
107	Delivery casing
108	Interstage casing
173	Diffuser plate (200-320)
174.1	Diffuser insert
174.2	Diffuser insert
181	Pump base
210	Shaft
230	Impeller
323	Thrust ball bearing
330	Bearing housing
341	Motor stool
360.1	Bearing cover
360.2	Bearing cover
400.1	Gasket
400.2	Gasket
412.1	O-Ring
412.2	O-Ring
412.3	O-Ring
412.4	O-Ring
451	Gland housing
452	Gland
458	Lantern ring
461	Gland packing
474	Compression ring
502	Casing wear ring
506	Locating ring
507.1	Thrower ring
507.2	Thrower ring
524	Shaft sleeve
525.1	Distance sleeve
525.2	Distance sleeve
542	Neck bush
545	Bearing bush
562.1	Dowel pin
562.2	Dowel pin
600	Axial balance pipe
603	Axial balance piston
605	Axial balance bush
901	Hexagon set screw
902.1	Stud
902.2	Stud
902.3	Stud
903	Plug
905	Tie bolt
920.1	Hexagon nut
920.2	Hexagon nut
920.3	Hexagon nut
920.4	Hexagon nut
921	Shaft locking nut
940.1	Key
940.2	Key

# Cross section and parts list

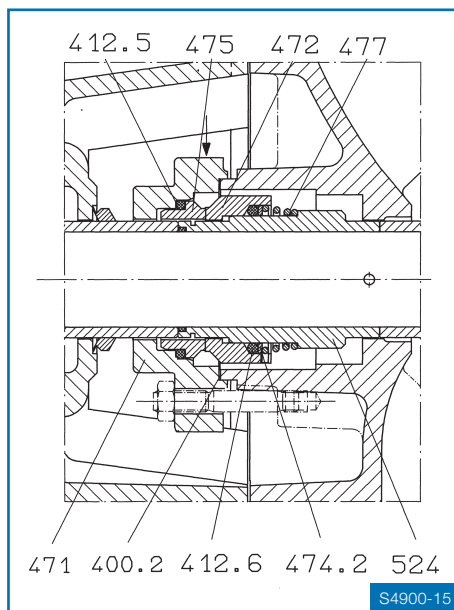
## Details

### Cross section

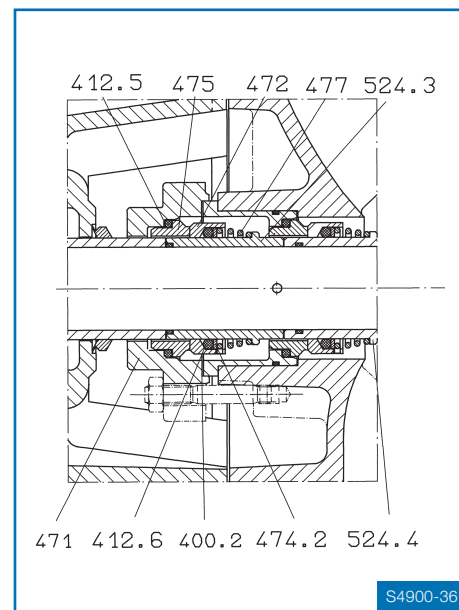
Non balanced mechanical seal



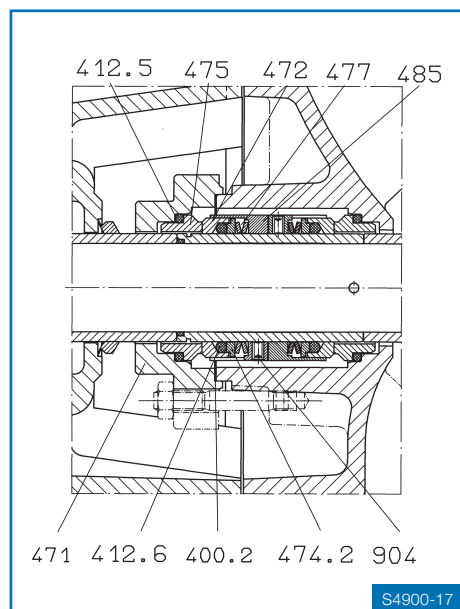
Balanced mechanical seal



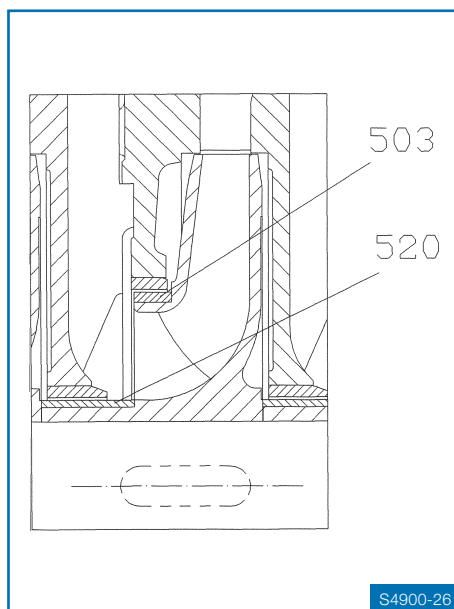
Mechanical seal in tandem arrangement



Back-to-back double-acting mechanical seal



Impeller wear ring and protection sleeve



### Parts list

Part	Description
400.2	Gasket
412.5	O-Ring
412.6	O-Ring
471	Seal cover plate
472	Rotating seal face
474.2	Compression ring
475	Stationary seal
477	Spring
485	Drive collar
503	Impeller wear ring
520	Protection sleeve
524	Shaft sleeve
524.3	Shaft sleeve
524.4	Shaft sleeve
904	Grub screw

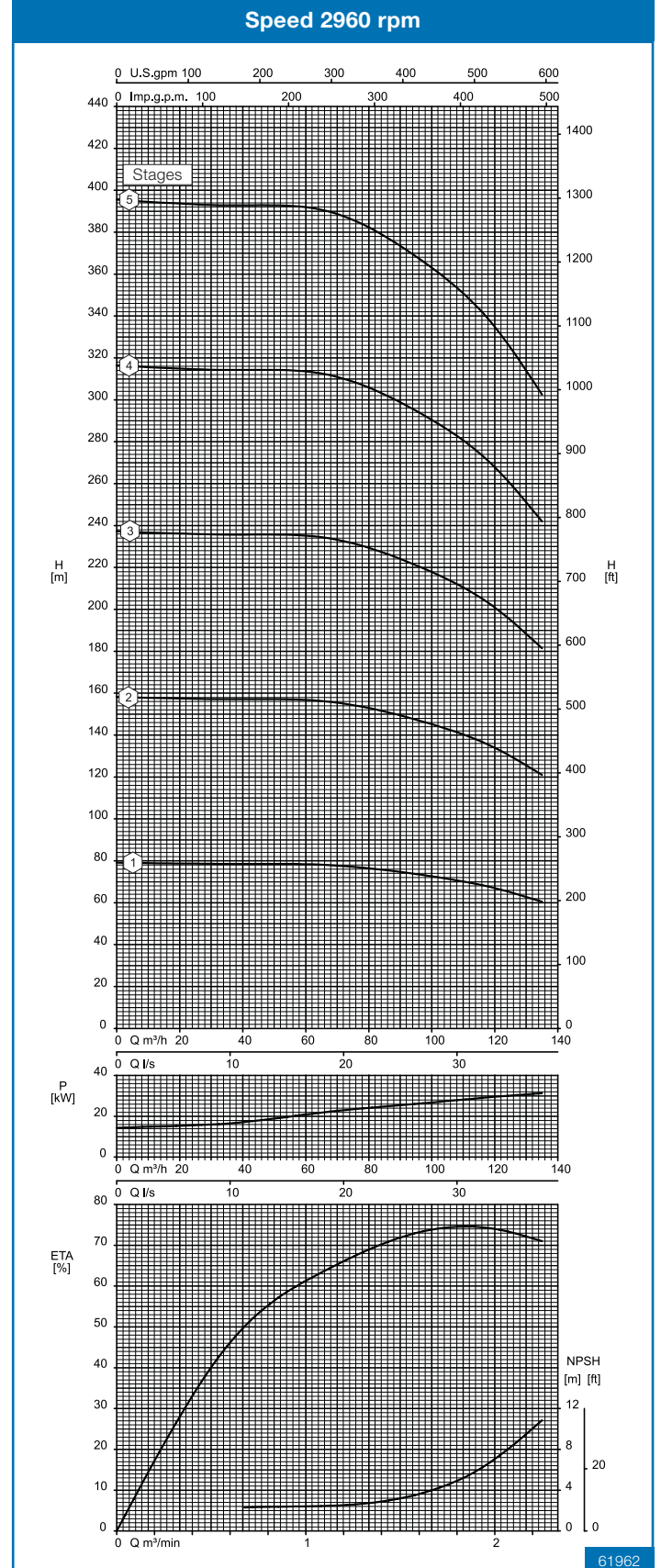
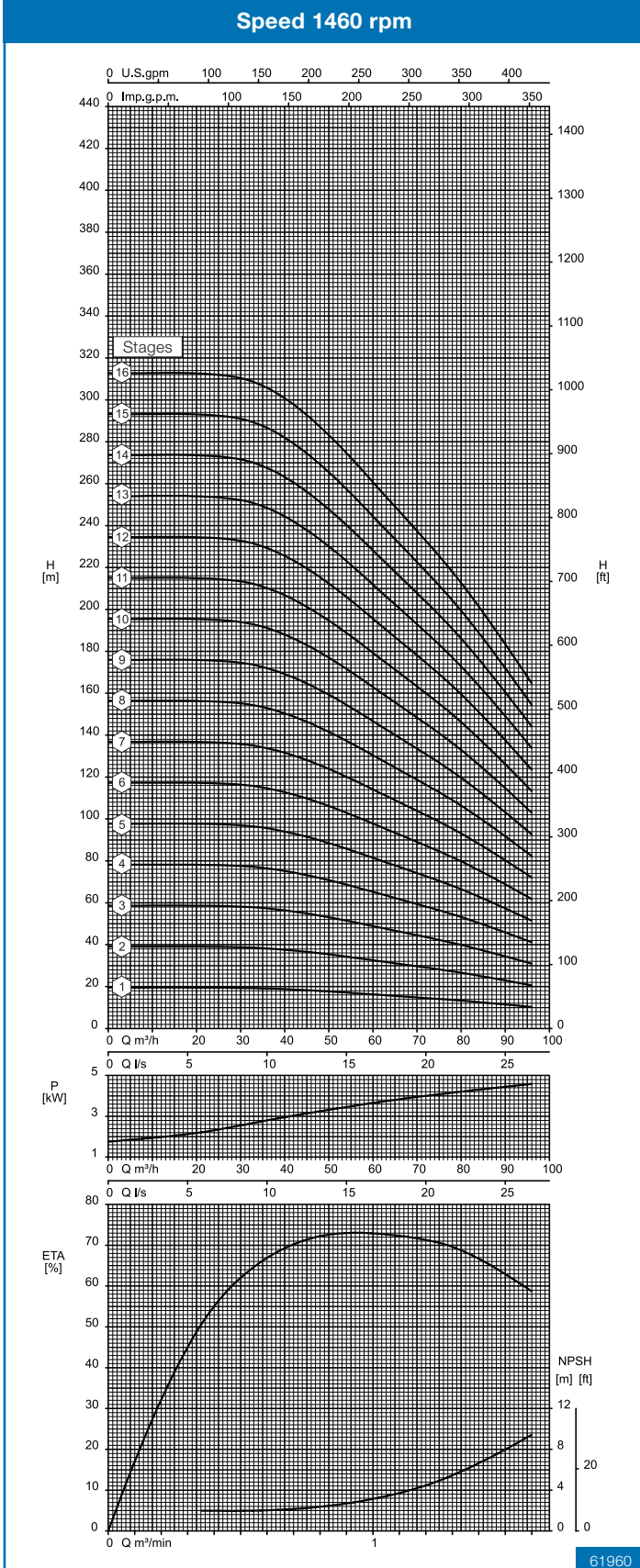
# Performance curve

## Frequency 50 Hz

### Type 100-230.1

#### Notes to performance curves

- Curves valid according to DIN EN ISO 9906/2B.
- Power data refers to clean water, density 1 kg/dm<sup>3</sup>, viscosity 1 mm<sup>2</sup>/s.
- All duty points between the individual stage characteristics can be achieved by adapting the impeller diameters.





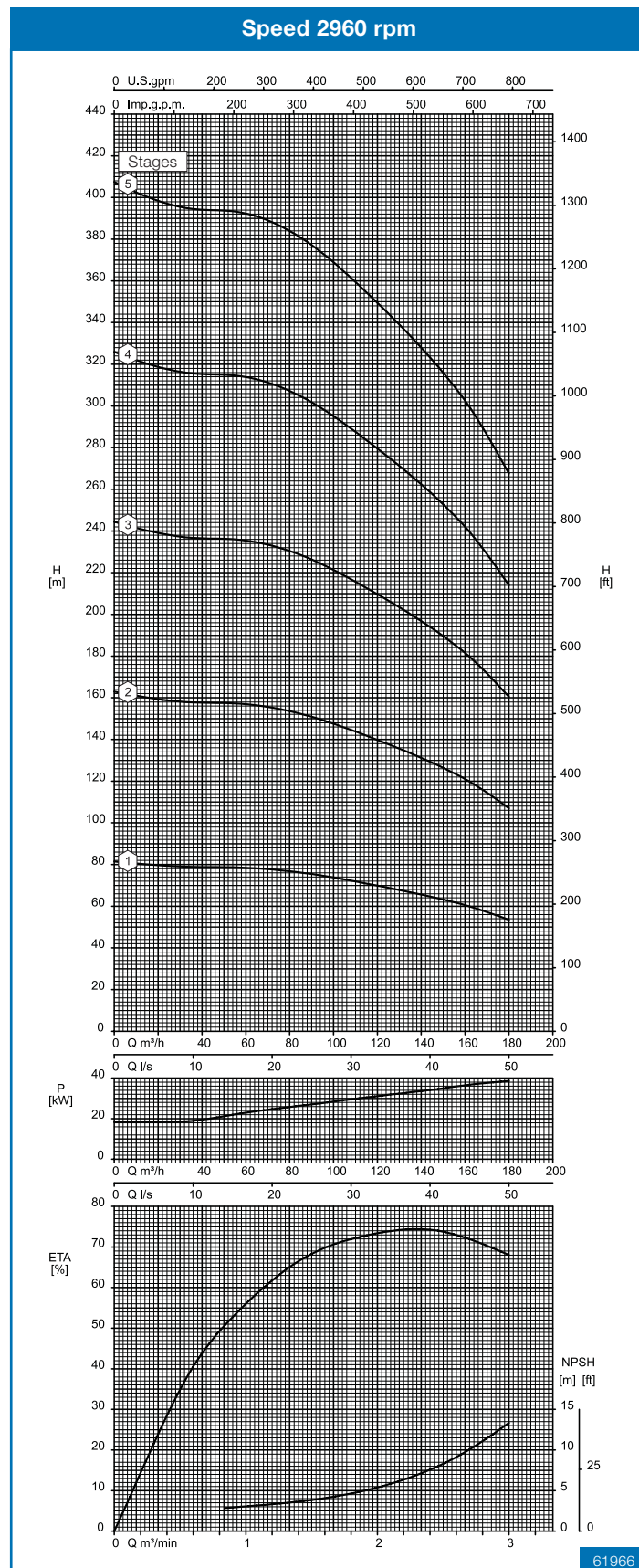
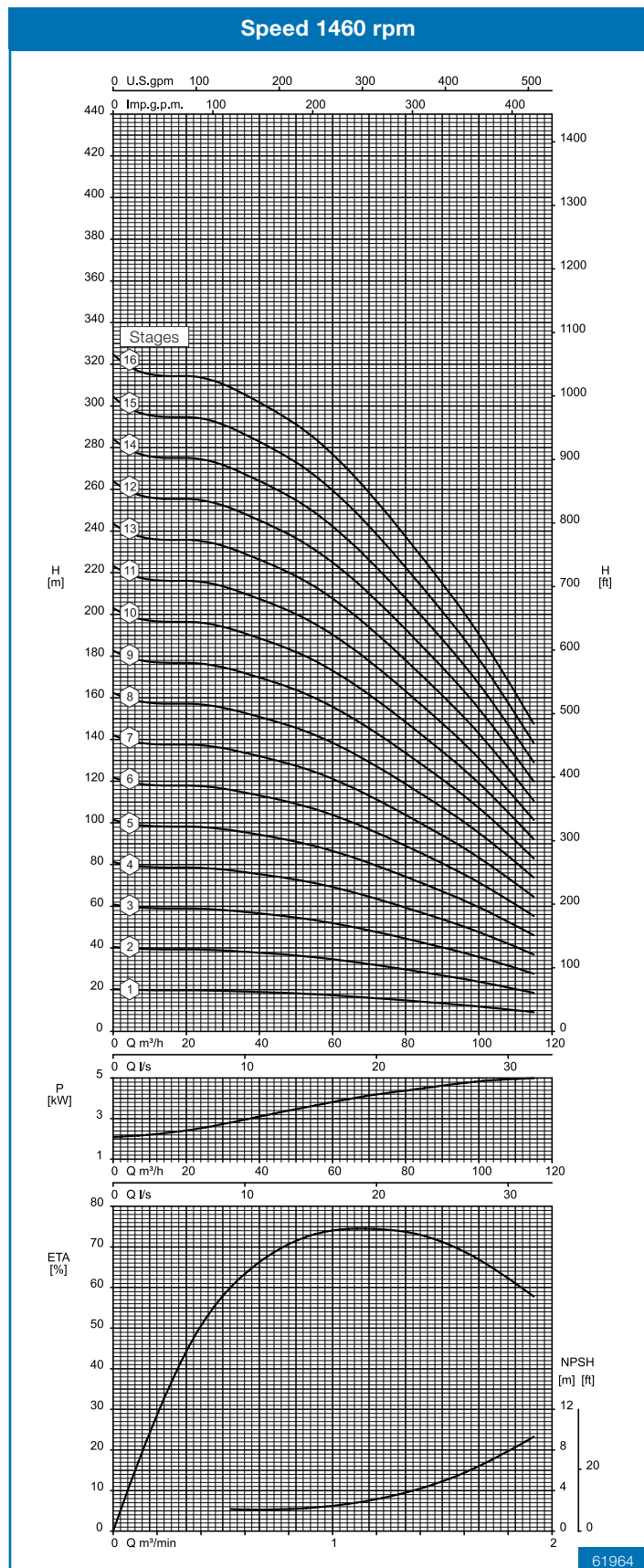
# Performance curve

## Frequency 50 Hz

### Type 100-230.2

#### Notes to performance curves

- Curves valid according to DIN EN ISO 9906/2B.
- Power data refers to clean water, density 1 kg/dm<sup>3</sup>, viscosity 1 mm<sup>2</sup>/s.
- All duty points between the individual stage characteristics can be achieved by adapting the impeller diameters.



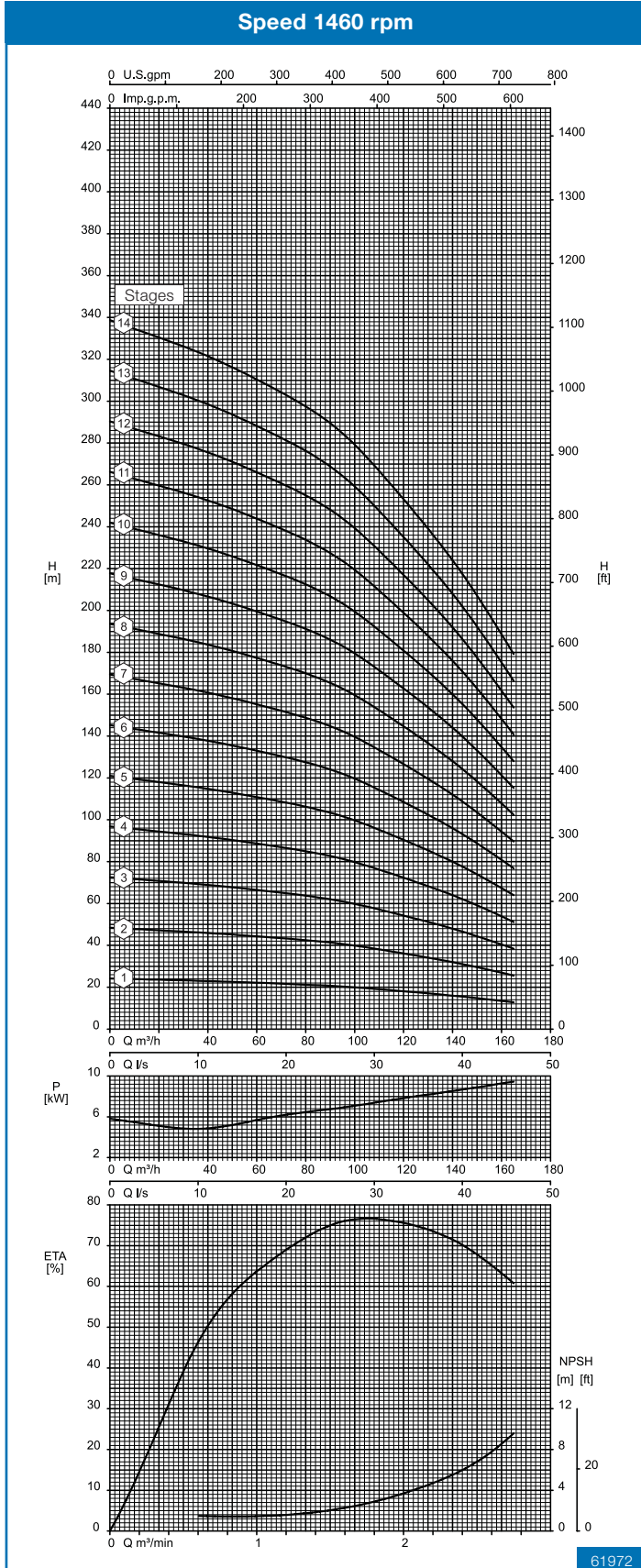
# Performance curve

## Frequency 50 Hz

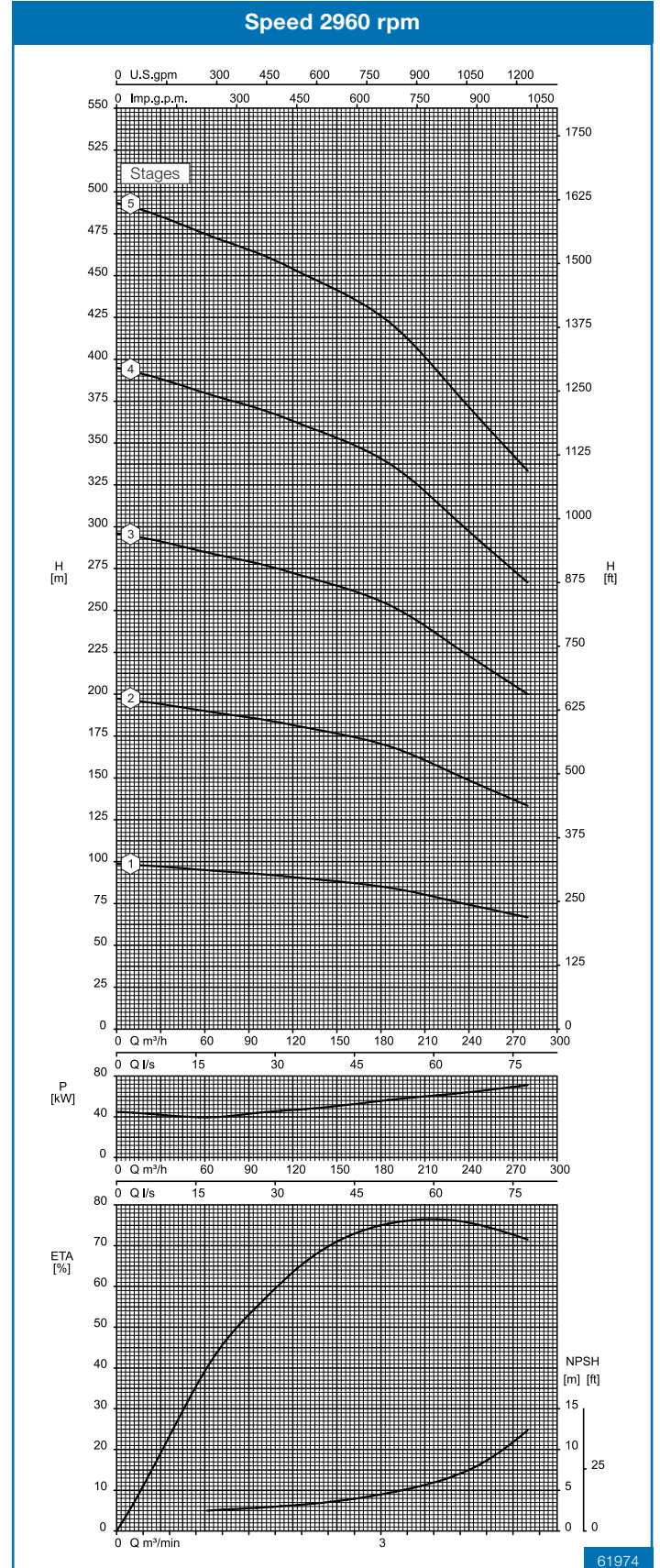
### Type 125-250.1

#### Notes to performance curves

- Curves valid according to DIN EN ISO 9906/2B.
- Power data refers to clean water, density 1 kg/dm<sup>3</sup>, viscosity 1 mm<sup>2</sup>/s.
- All duty points between the individual stage characteristics can be achieved by adapting the impeller diameters.



61972



61974

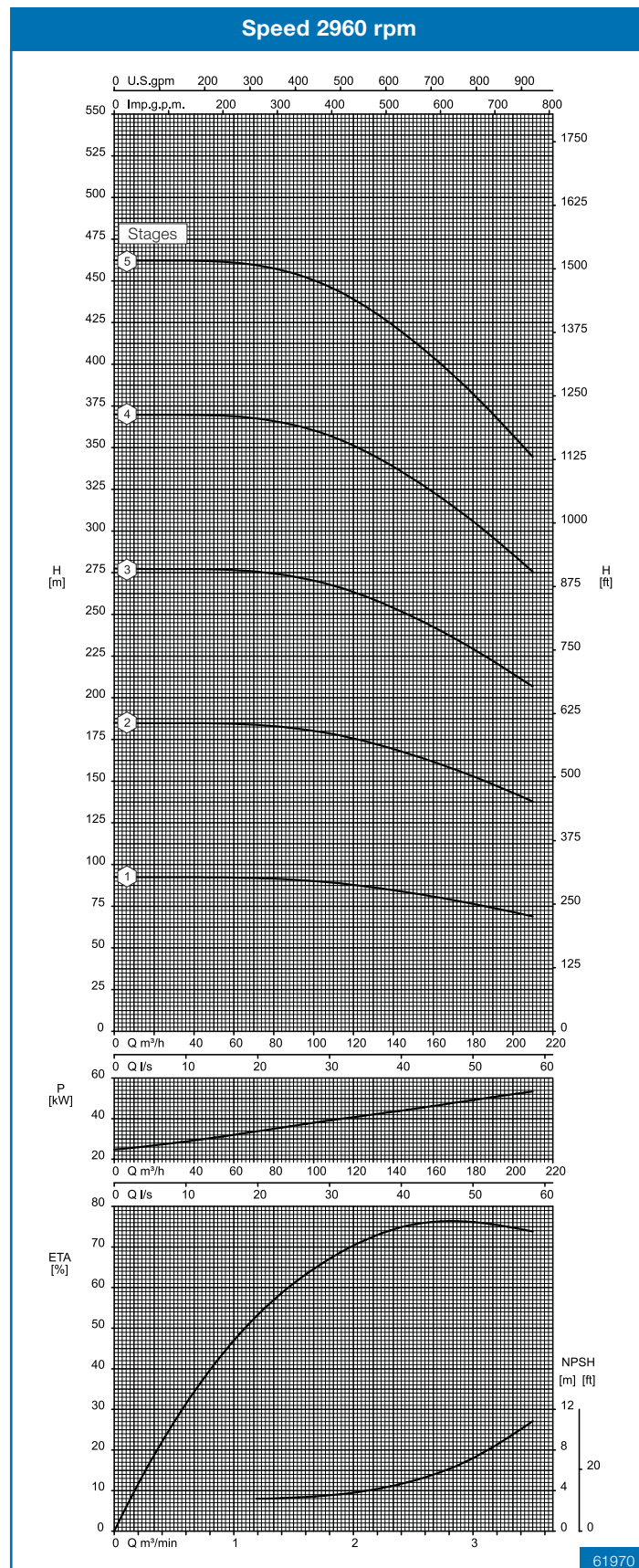
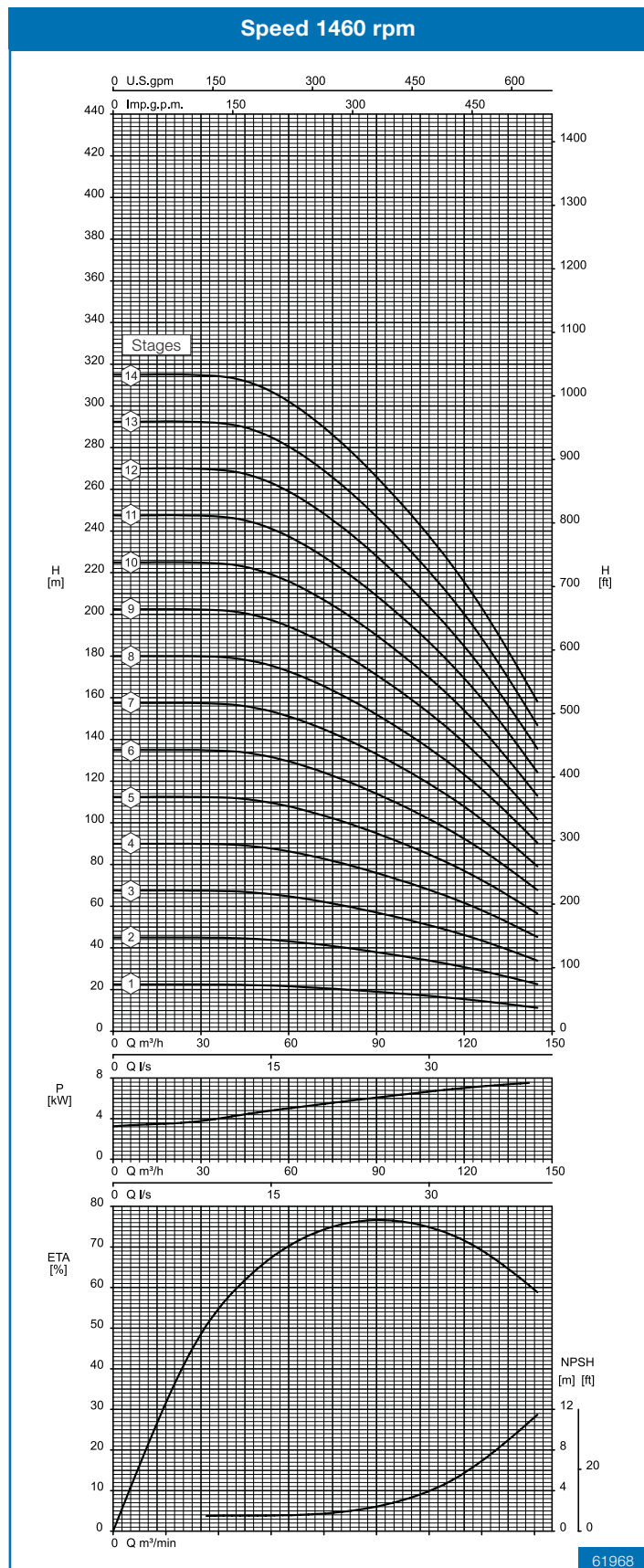
# Performance curve

## Frequency 50 Hz

### Type 125-250.2

#### Notes to performance curves

- Curves valid according to DIN EN ISO 9906/2B.
- Power data refers to clean water, density 1 kg/dm<sup>3</sup>, viscosity 1 mm<sup>2</sup>/s.
- All duty points between the individual stage characteristics can be achieved by adapting the impeller diameters.



# Performance curve

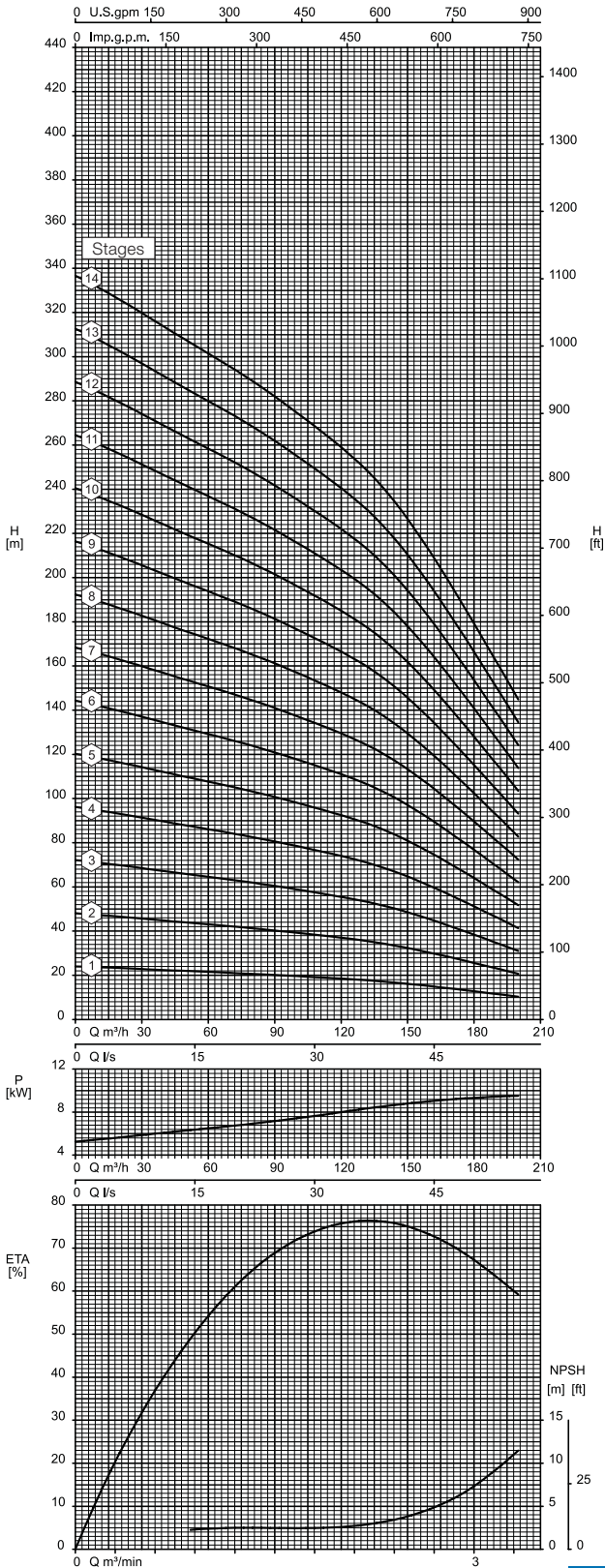
## Frequency 50 Hz

### Type 125-250.3

#### Notes to performance curves

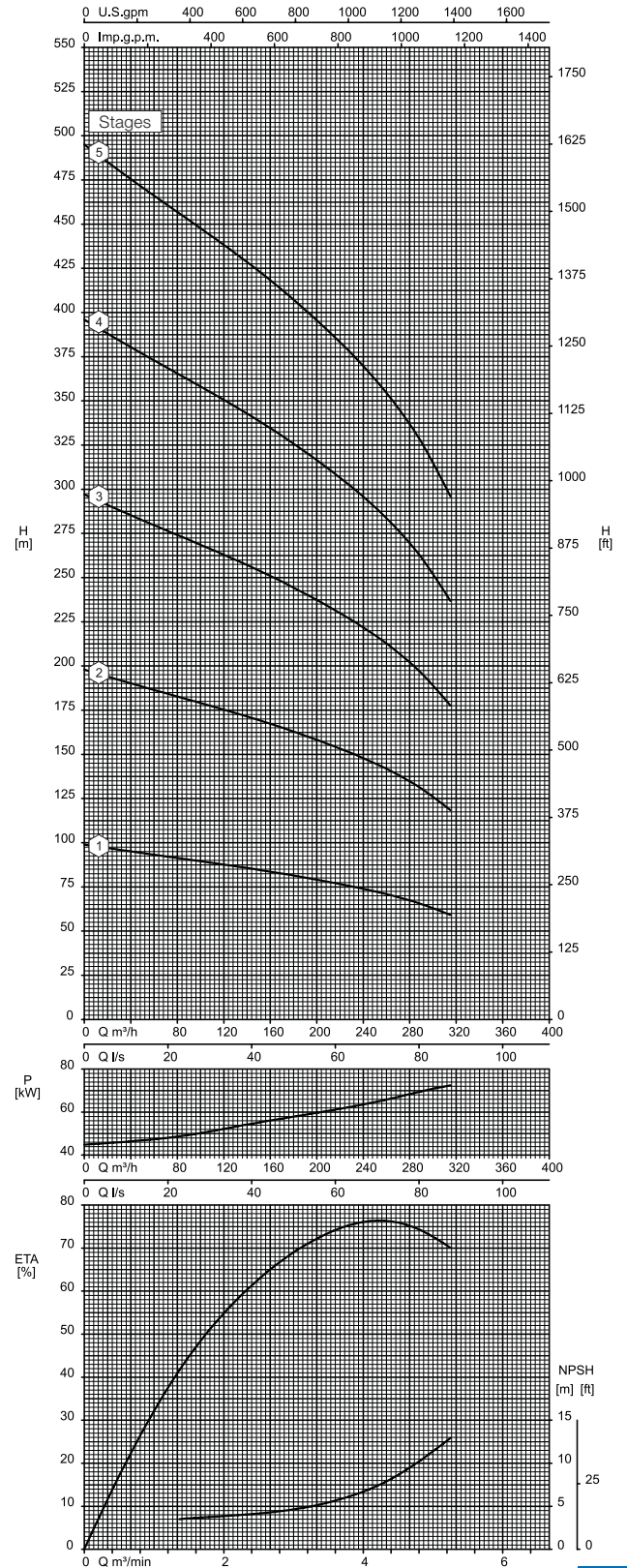
- Curves valid according to DIN EN ISO 9906/2B.
- Power data refers to clean water, density 1 kg/dm<sup>3</sup>, viscosity 1 mm<sup>2</sup>/s.
- All duty points between the individual stage characteristics can be achieved by adapting the impeller diameters.

Speed 1460 rpm



61976

Speed 2960 rpm



61978

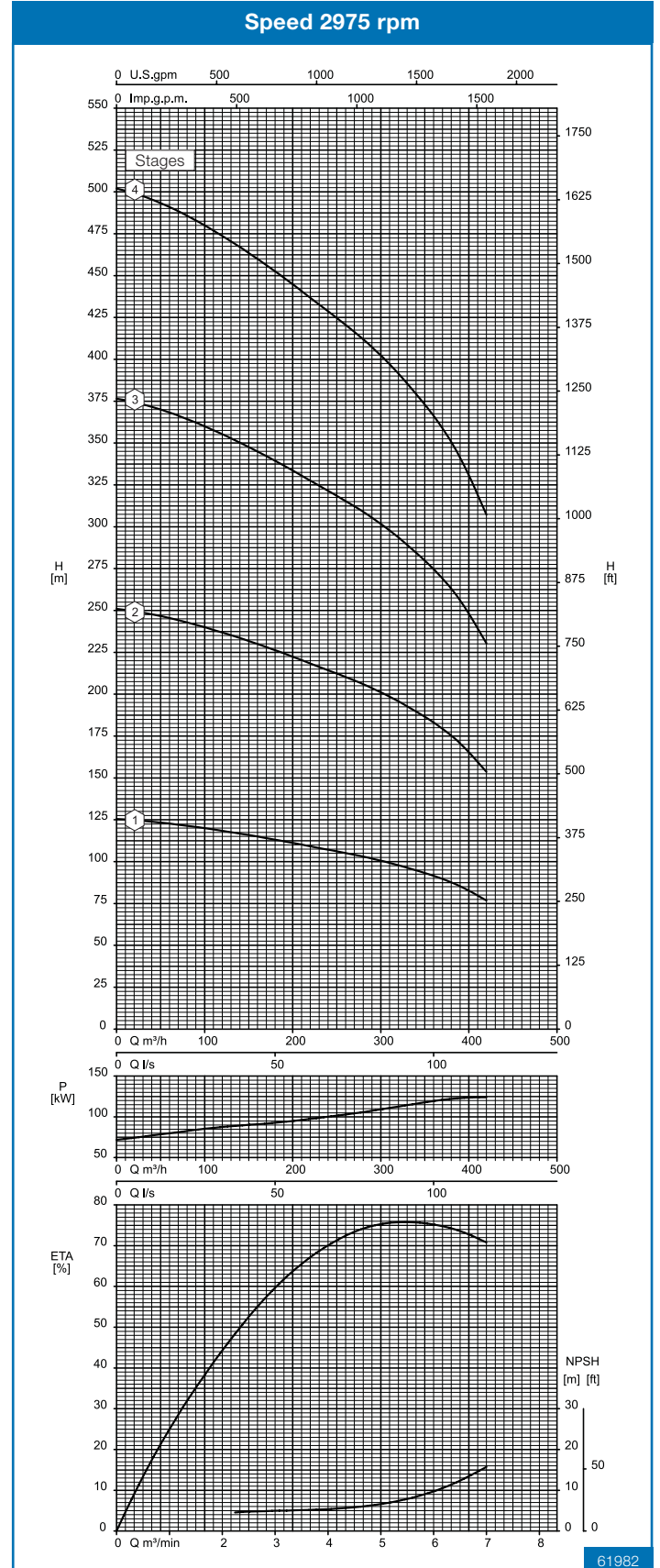
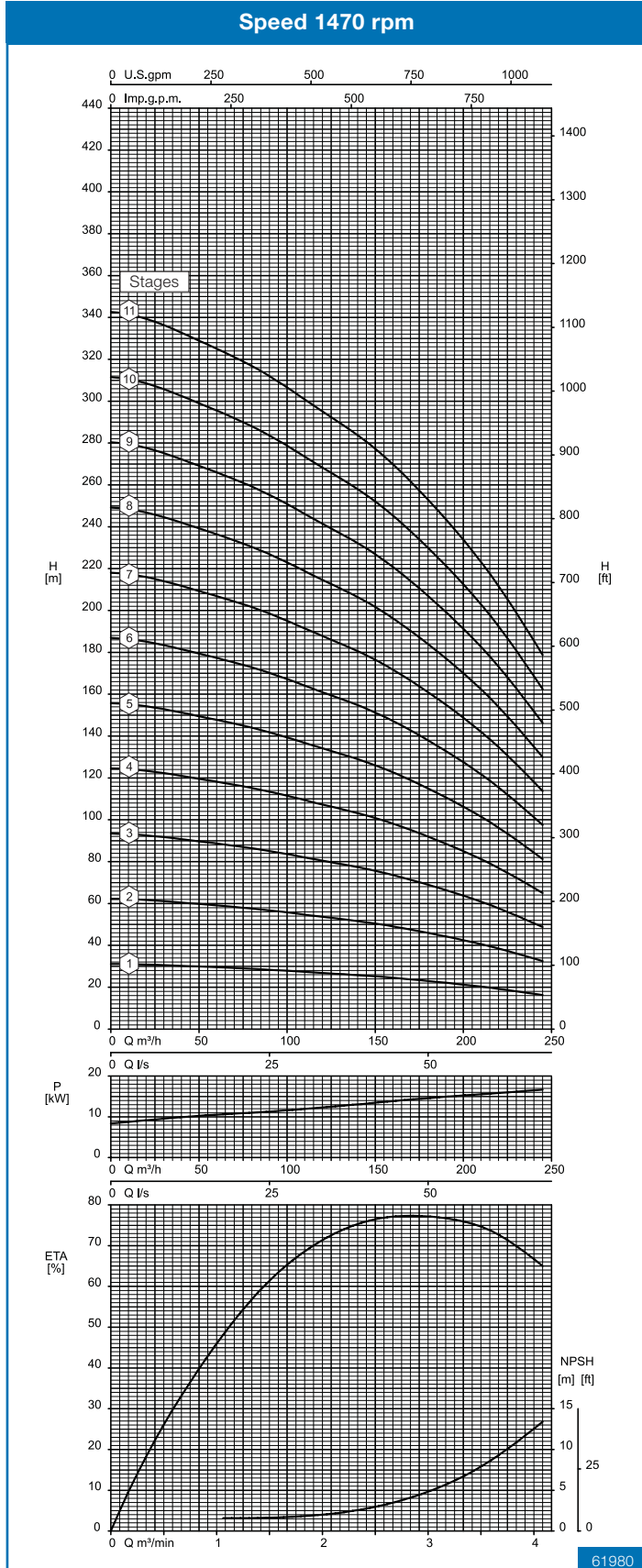
# Performance curve

## Frequency 50 Hz

### Type 150-280.1

#### Notes to performance curves

- Curves valid according to DIN EN ISO 9906/2B.
- Power data refers to clean water, density 1 kg/dm<sup>3</sup>, viscosity 1 mm<sup>2</sup>/s.
- All duty points between the individual stage characteristics can be achieved by adapting the impeller diameters.



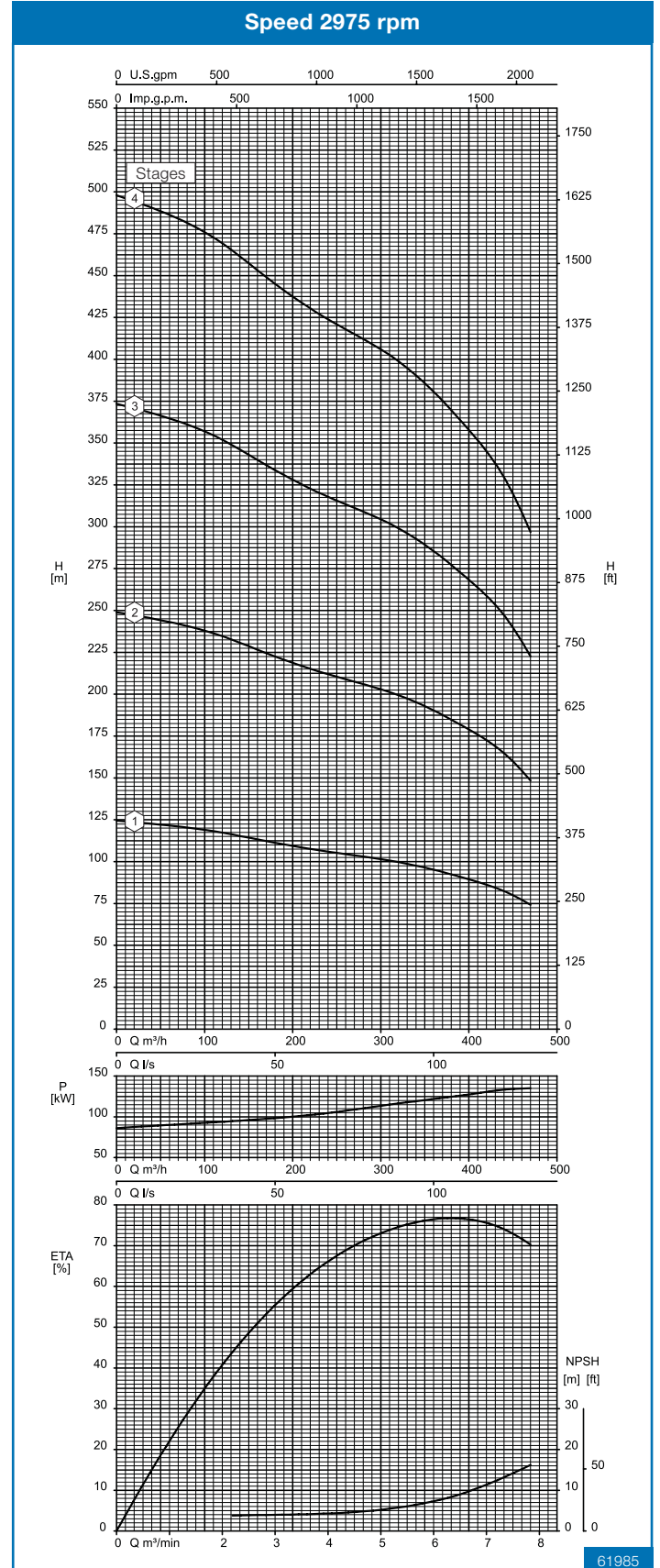
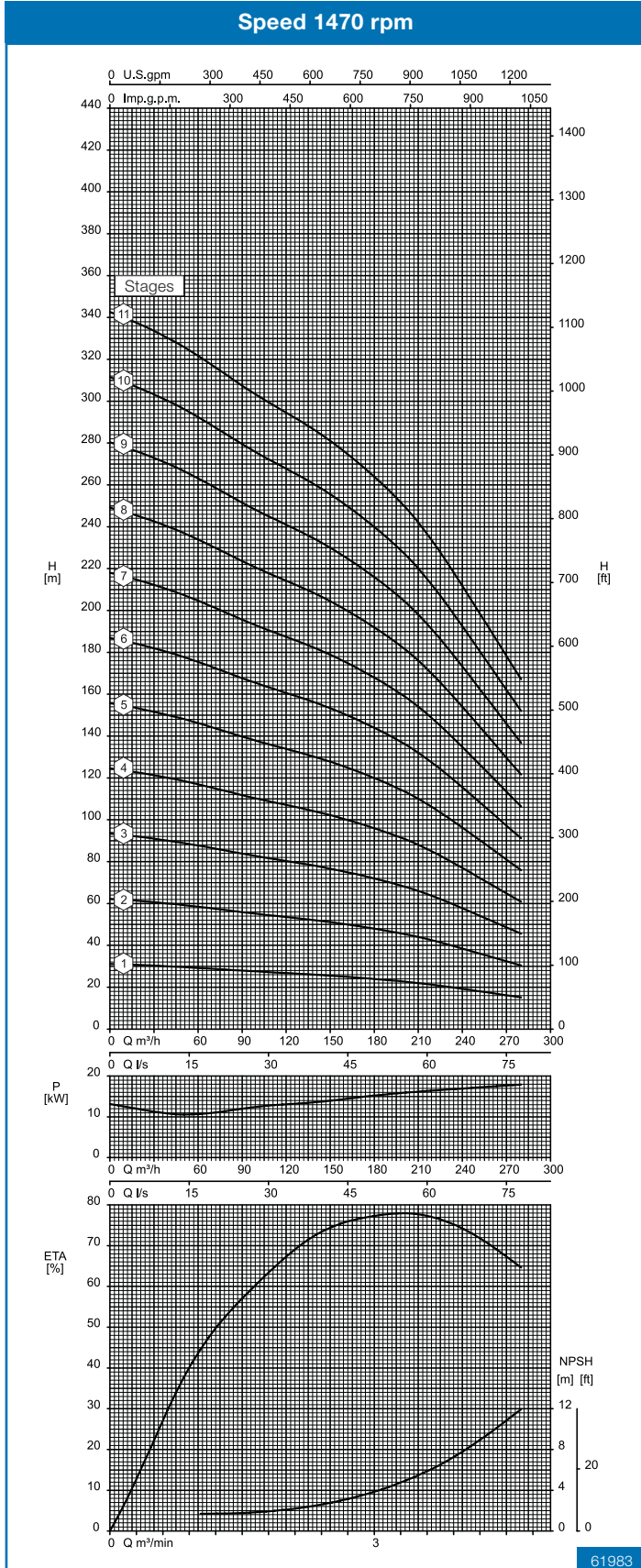
# Performance curve

## Frequency 50 Hz

### Type 150-280.2

#### Notes to performance curves

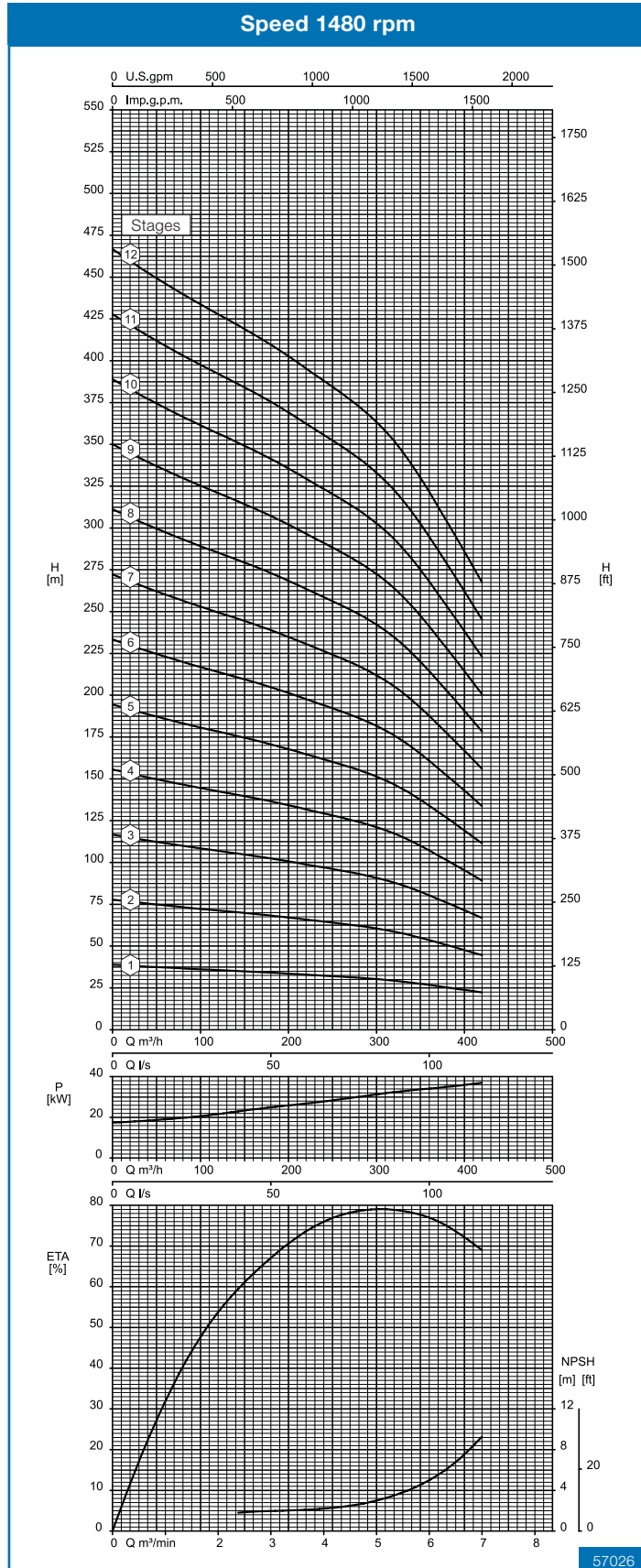
- Curves valid according to DIN EN ISO 9906/2B.
- Power data refers to clean water, density 1 kg/dm<sup>3</sup>, viscosity 1 mm<sup>2</sup>/s.
- All duty points between the individual stage characteristics can be achieved by adapting the impeller diameters.



# Performance curve

## Frequency 50 Hz

### Type 200-320.1



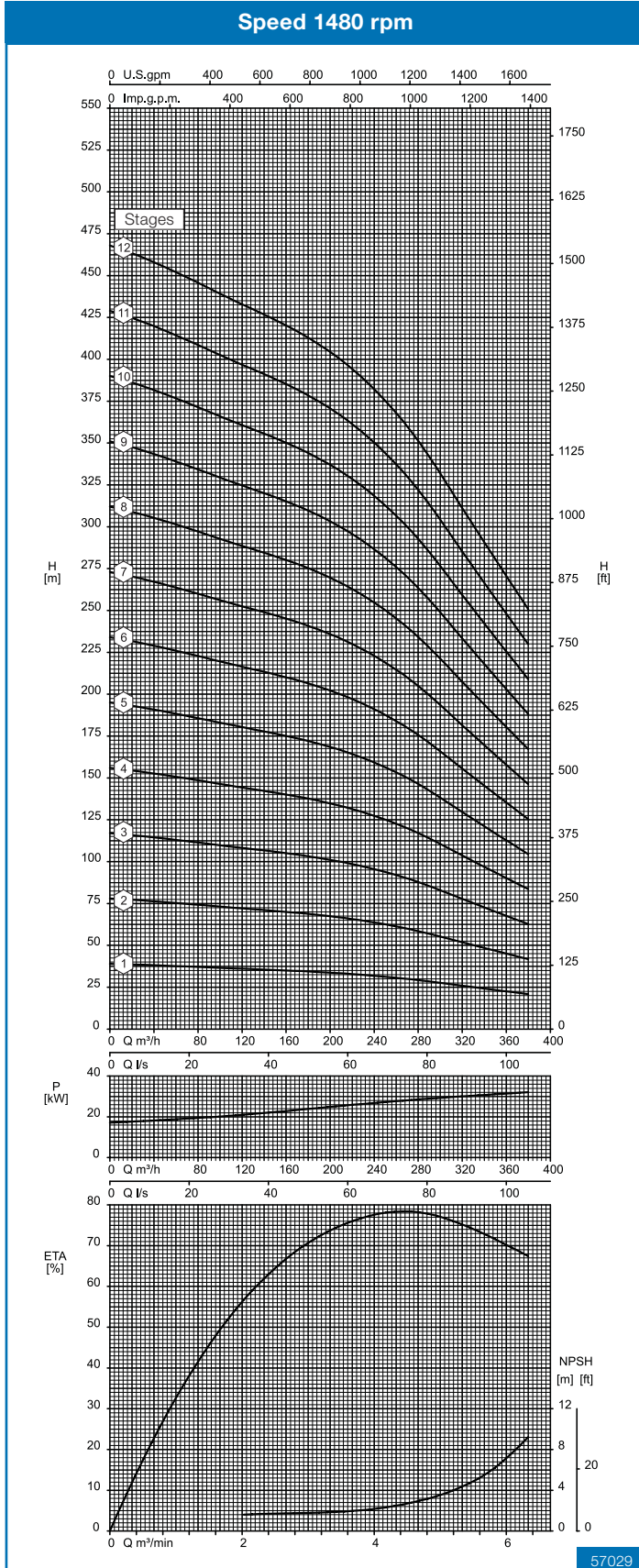
**Notes to performance curves**

- Curves valid according to DIN EN ISO 9906/2B.
- Power data refers to clean water, density 1 kg/dm³, viscosity 1 mm²/s.
- All duty points between the individual stage characteristics can be achieved by adapting the impeller diameters.

# Performance curve

## Frequency 50 Hz

### Type 200-320.2



**Notes to performance curves**

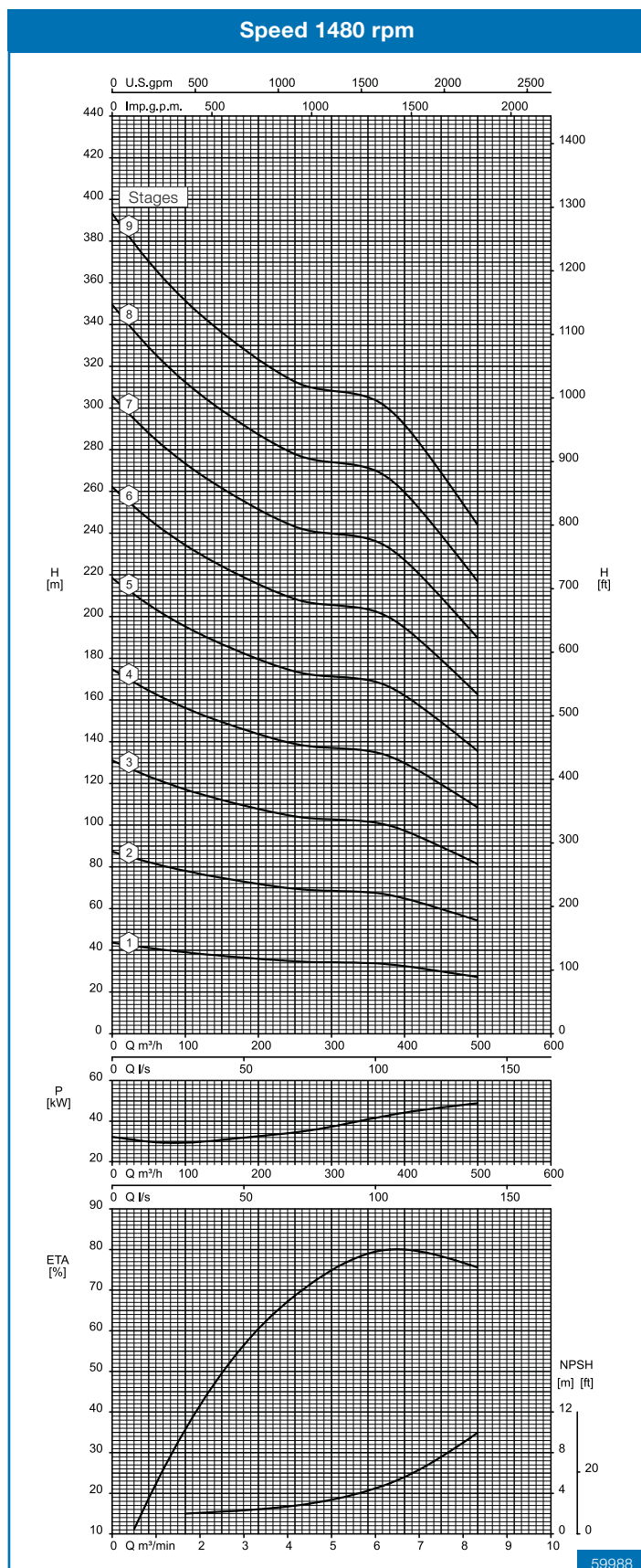
- Curves valid according to DIN EN ISO 9906/2B.
- Power data refers to clean water, density 1 kg/dm³, viscosity 1 mm²/s.
- All duty points between the individual stage characteristics can be achieved by adapting the impeller diameters.



# Performance curve

## Frequency 50 Hz

### Type 200-320.3



#### Notes to performance curves

- Curves valid according to DIN EN ISO 9906/2B.
- Power data refers to clean water, density 1 kg/dm<sup>3</sup>, viscosity 1 mm<sup>2</sup>/s.
- All duty points between the individual stage characteristics can be achieved by adapting the impeller diameters.

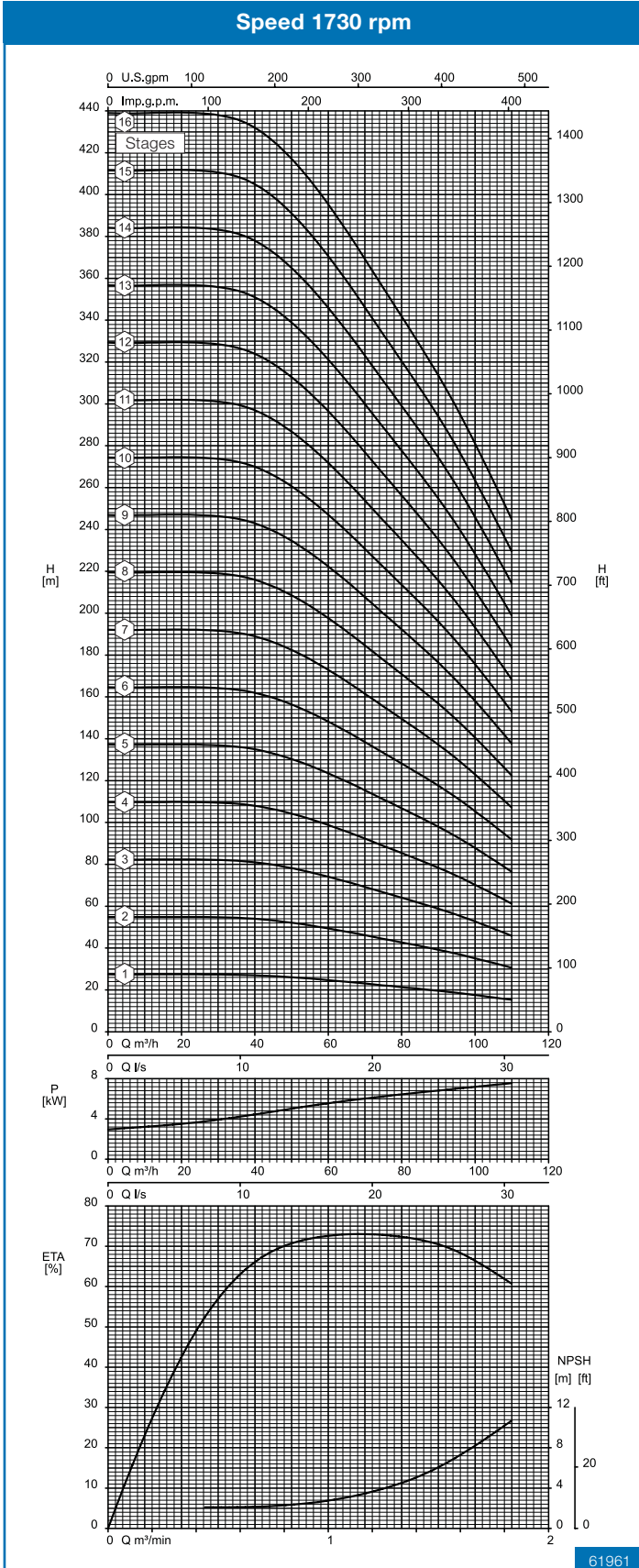
# Performance curve

## Frequency 60 Hz

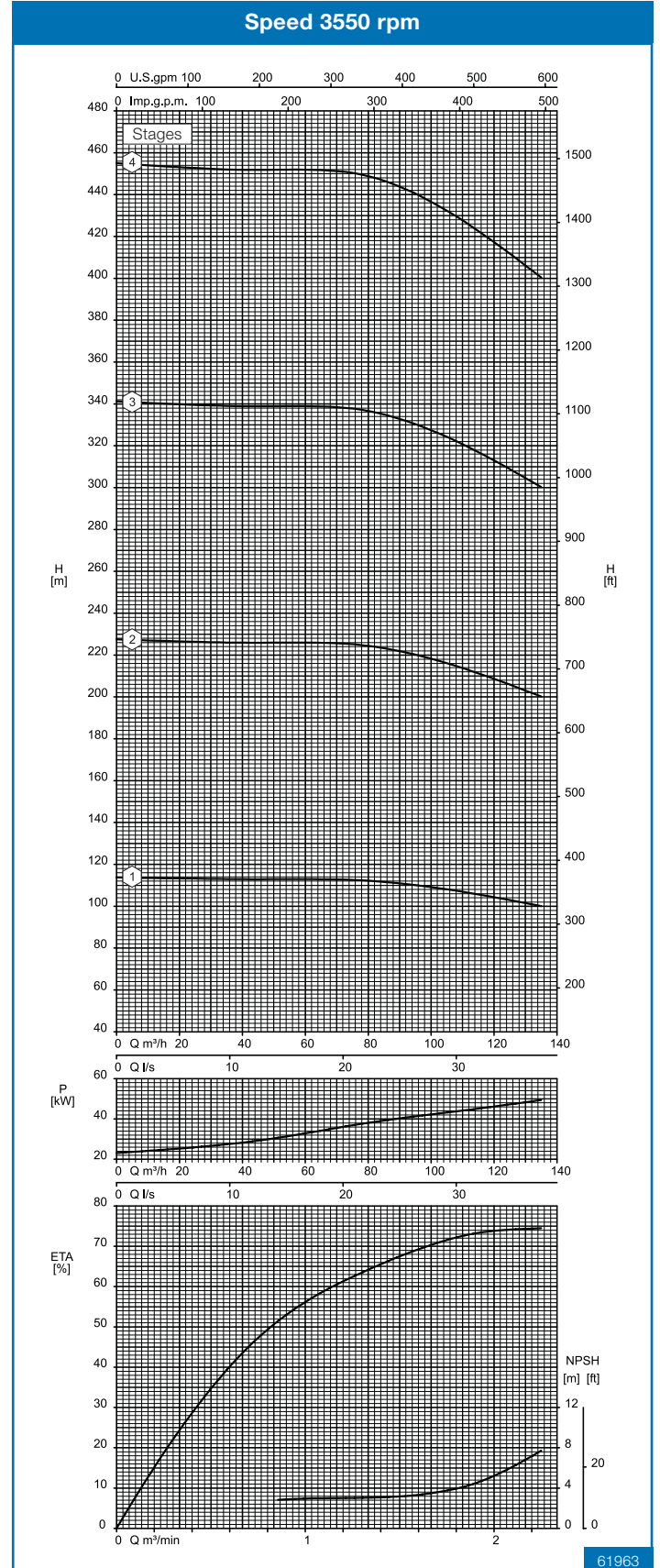
### Type 100-230.1

#### Notes to performance curves

- Curves valid according to DIN EN ISO 9906/2B.
- Power data refers to clean water, density 1 kg/dm<sup>3</sup>, viscosity 1 mm<sup>2</sup>/s.
- All duty points between the individual stage characteristics can be achieved by adapting the impeller diameters.



61961



61963

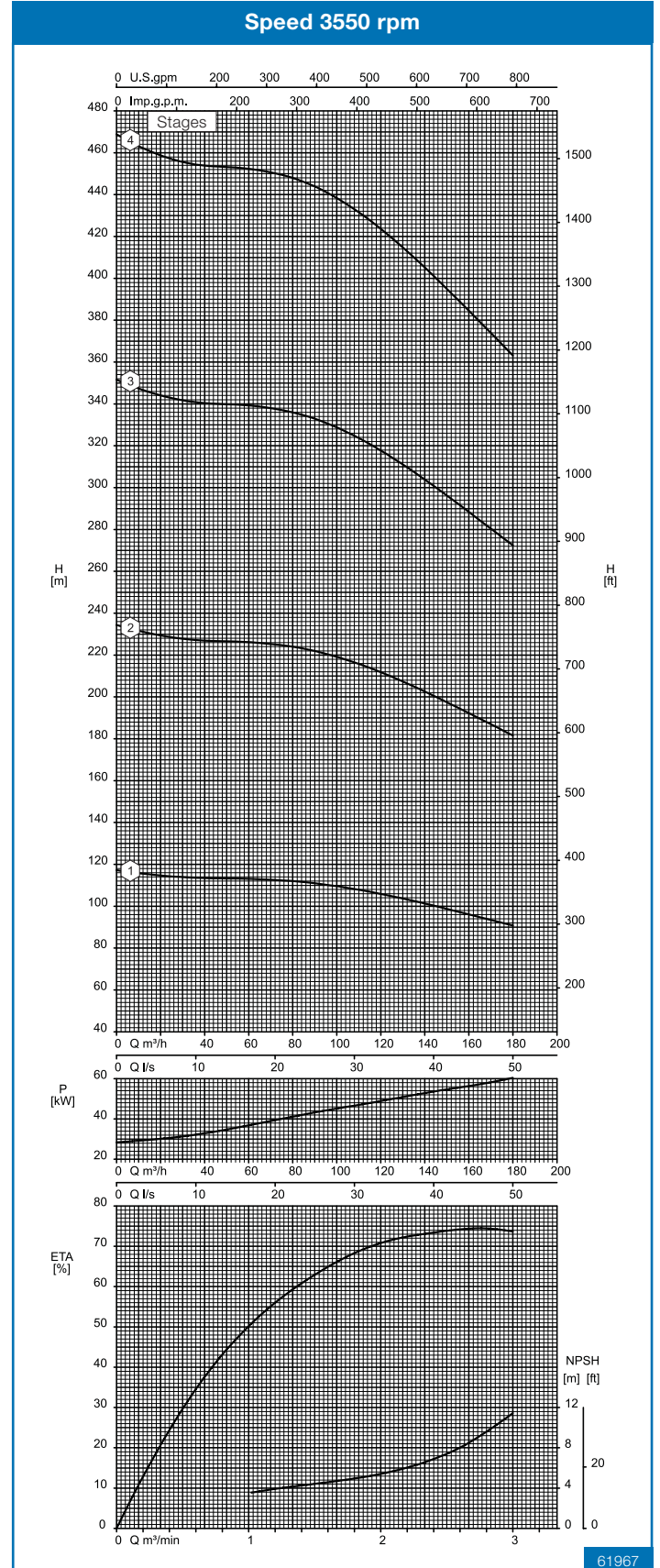
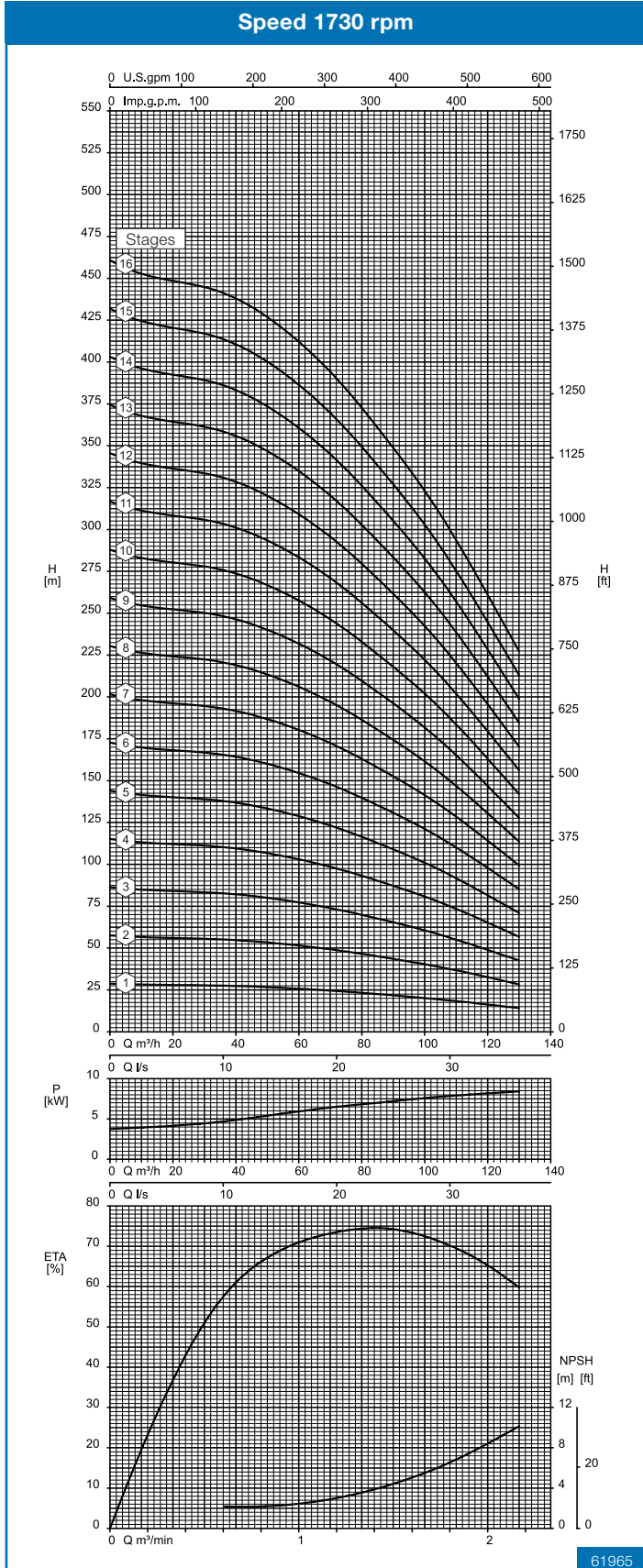
# Performance curve

## Frequency 60 Hz

### Type 100-230.2

#### Notes to performance curves

- Curves valid according to DIN EN ISO 9906/2B.
- Power data refers to clean water, density 1 kg/dm<sup>3</sup>, viscosity 1 mm<sup>2</sup>/s.
- All duty points between the individual stage characteristics can be achieved by adapting the impeller diameters.



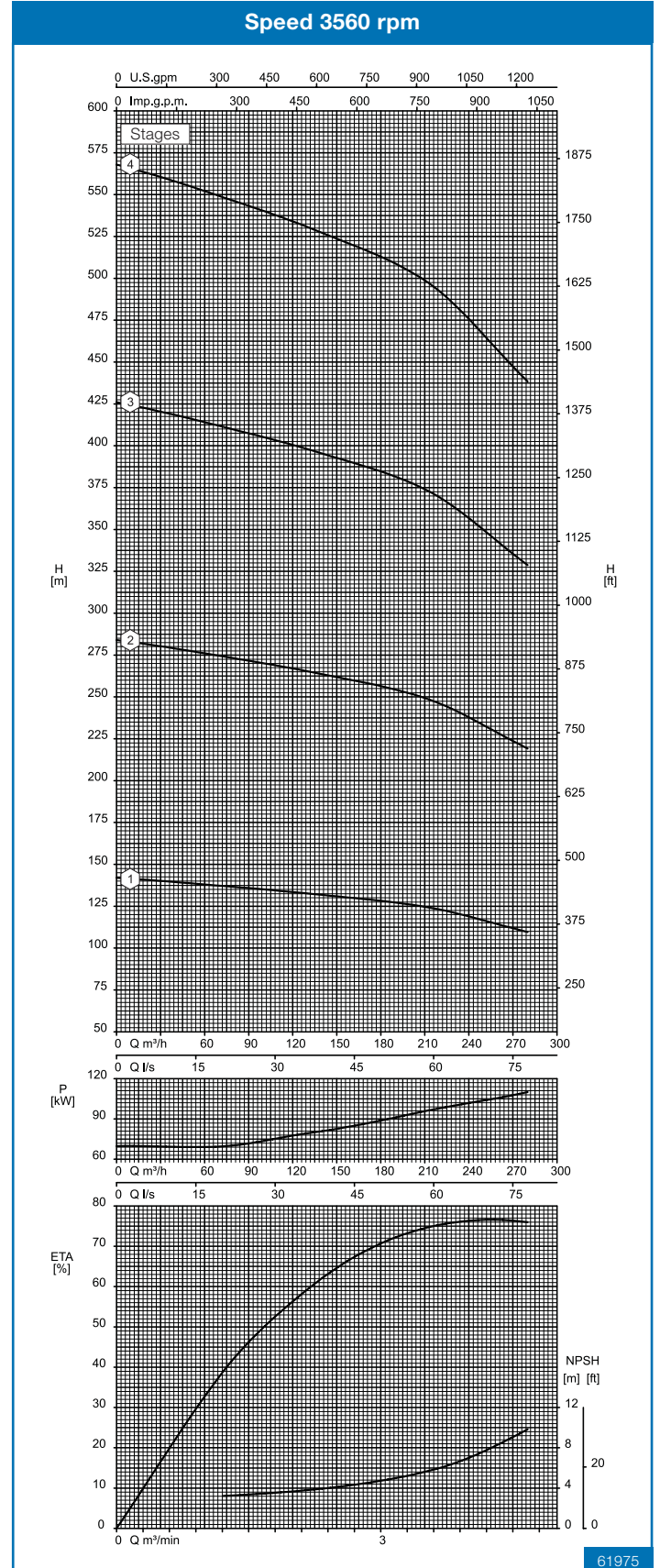
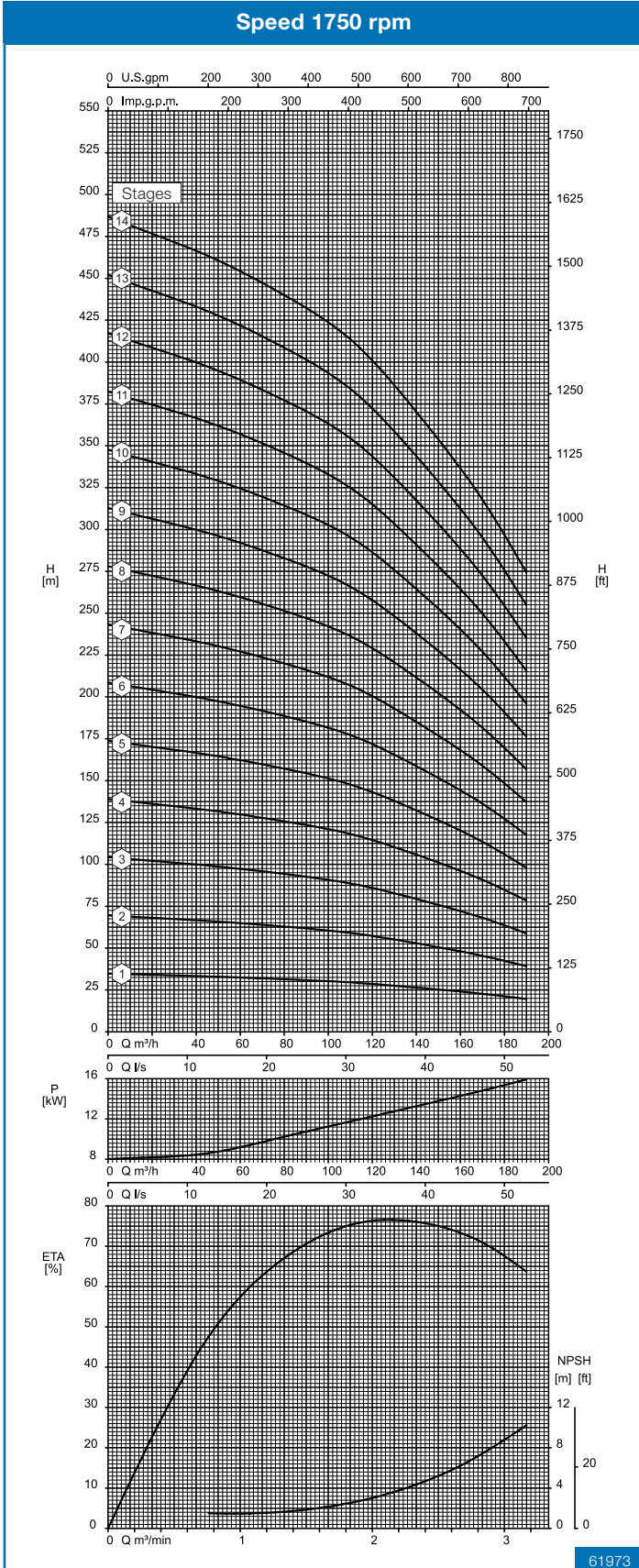
# Performance curve

## Frequency 60 Hz

### Type 125-250.1

#### Notes to performance curves

- Curves valid according to DIN EN ISO 9906/2B.
- Power data refers to clean water, density 1 kg/dm<sup>3</sup>, viscosity 1 mm<sup>2</sup>/s.
- All duty points between the individual stage characteristics can be achieved by adapting the impeller diameters.



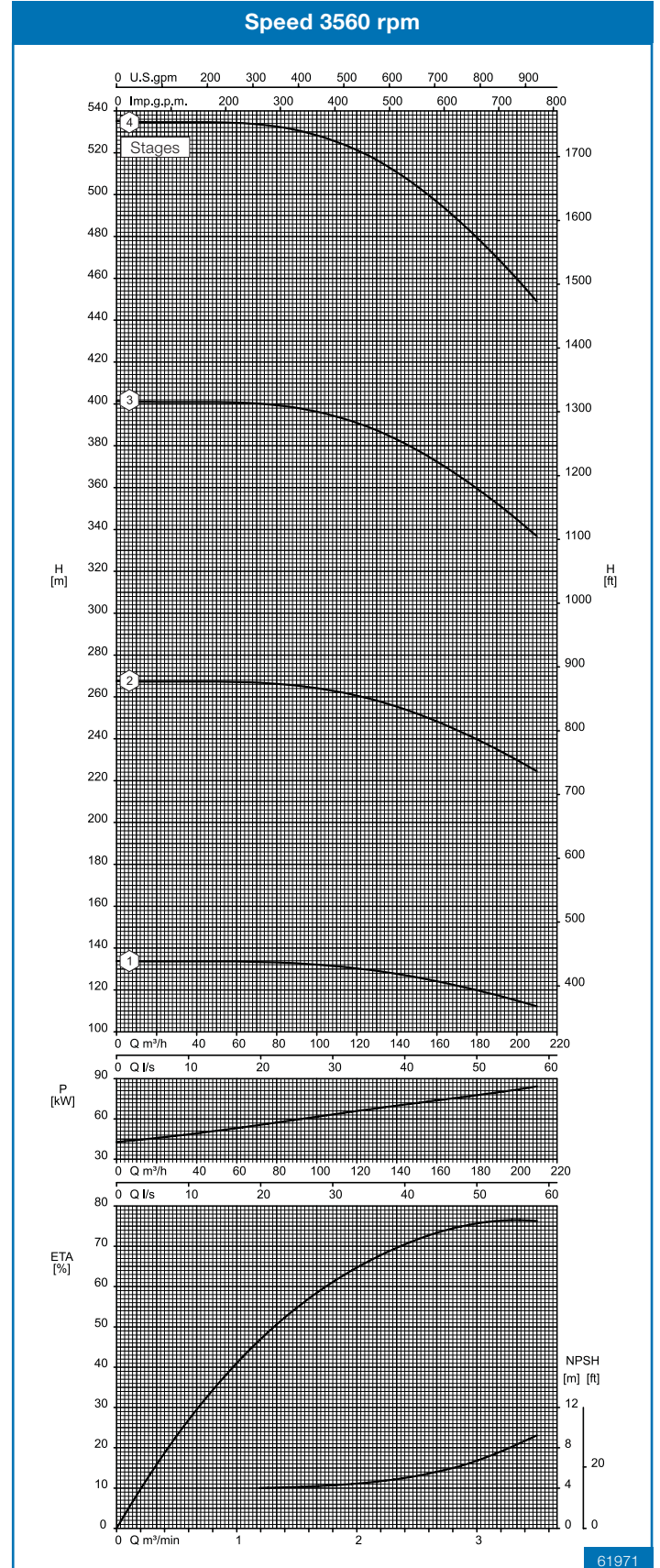
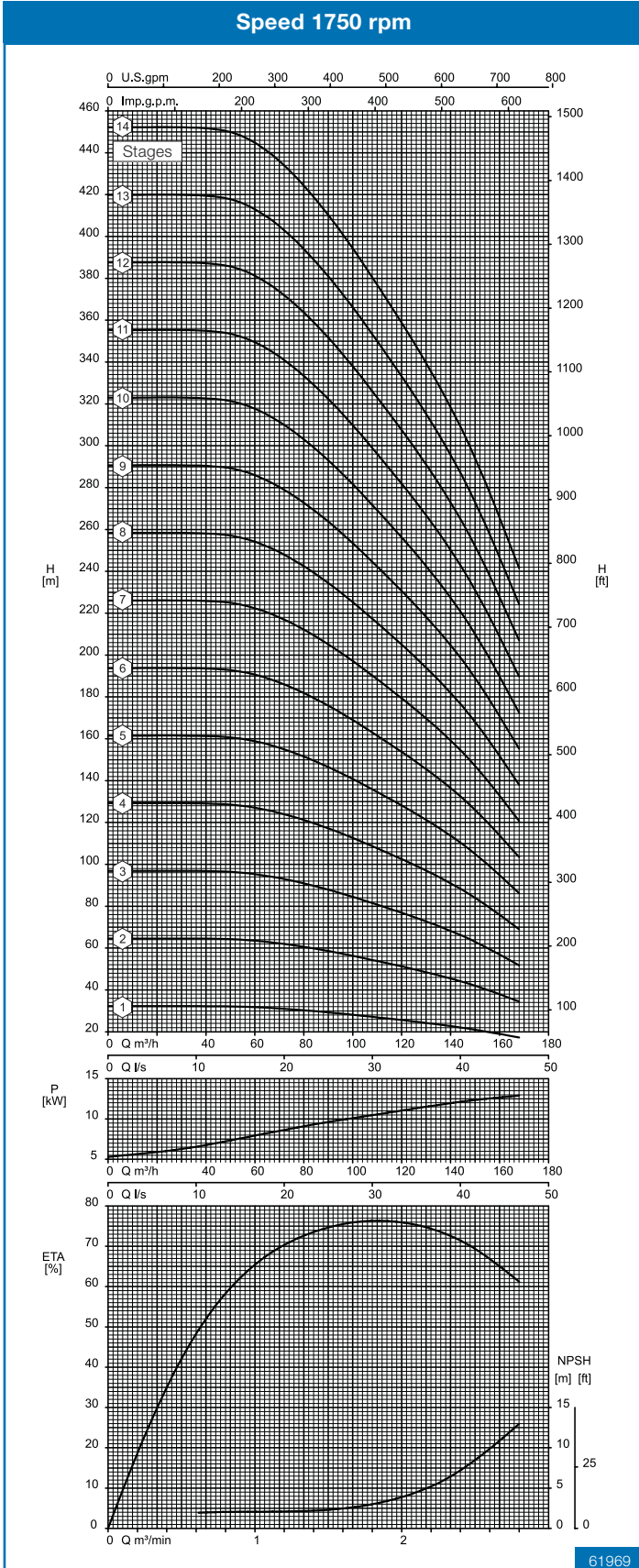
# Performance curve

## Frequency 60 Hz

### Type 125-250.2

#### Notes to performance curves

- Curves valid according to DIN EN ISO 9906/2B.
- Power data refers to clean water, density 1 kg/dm<sup>3</sup>, viscosity 1 mm<sup>2</sup>/s.
- All duty points between the individual stage characteristics can be achieved by adapting the impeller diameters.



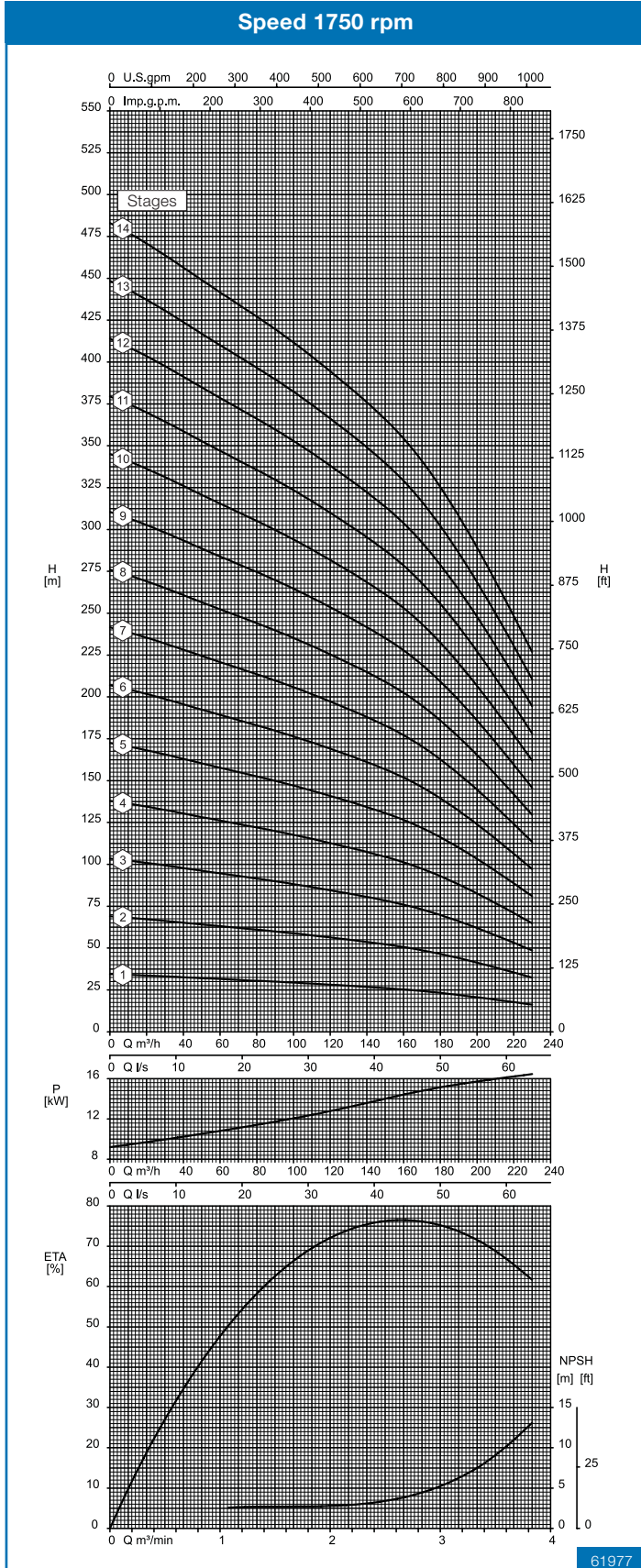
# Performance curve

## Frequency 60 Hz

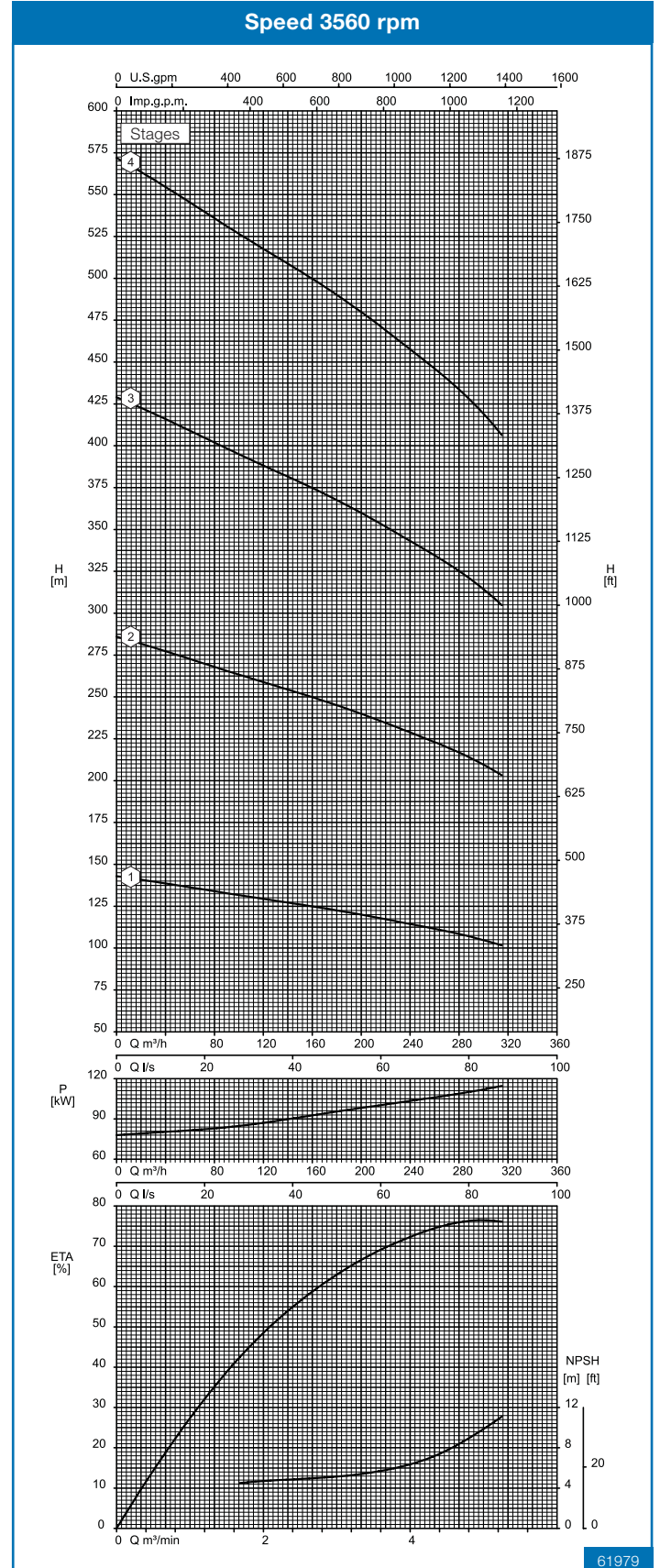
### Type 125-250.3

#### Notes to performance curves

- Curves valid according to DIN EN ISO 9906/2B.
- Power data refers to clean water, density 1 kg/dm<sup>3</sup>, viscosity 1 mm<sup>2</sup>/s.
- All duty points between the individual stage characteristics can be achieved by adapting the impeller diameters.



61977

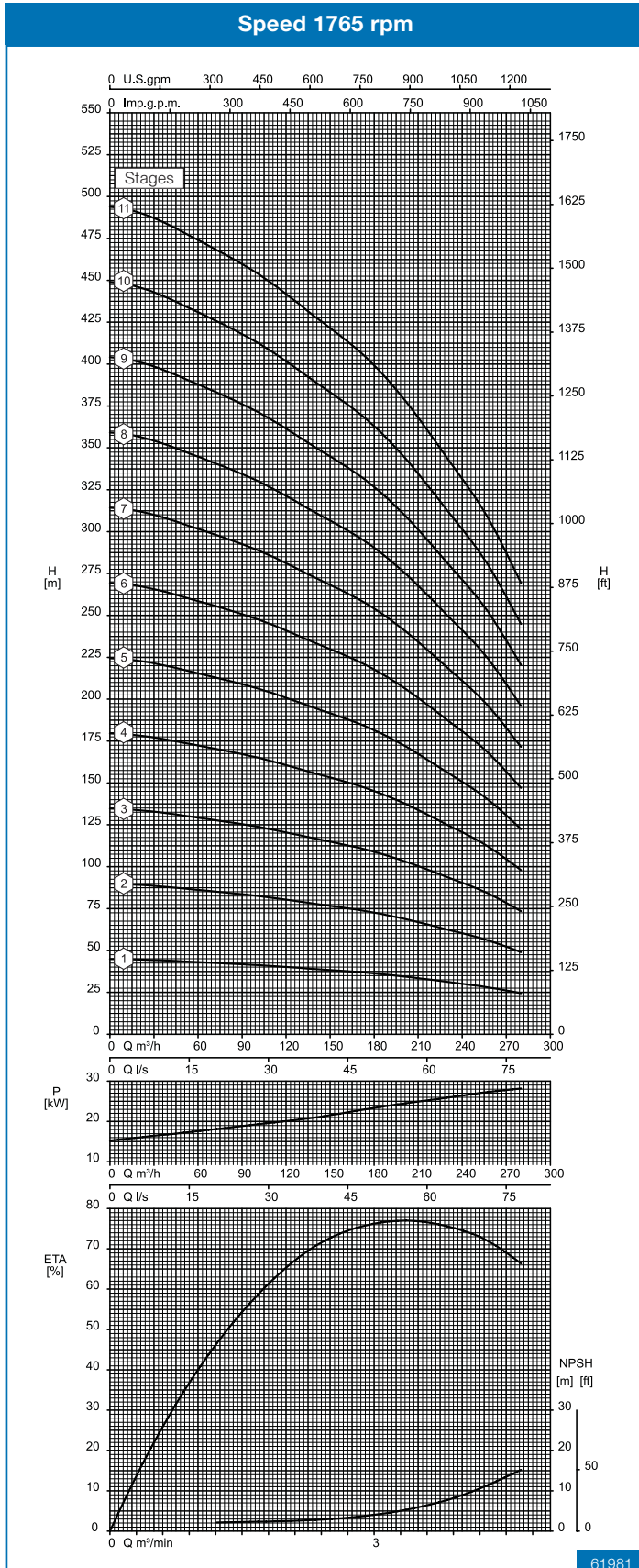


61979

# Performance curve

## Frequency 60 Hz

### Type 150-280.1



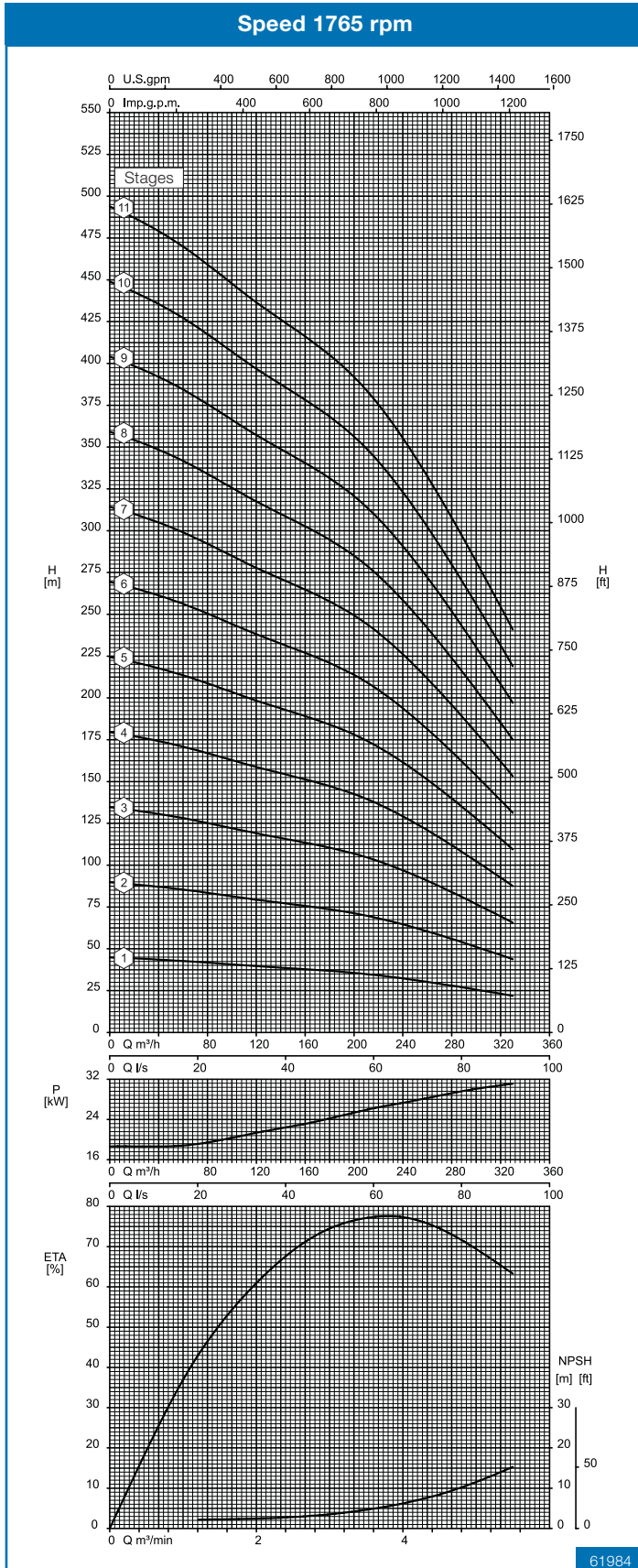
#### Notes to performance curves

- Curves valid according to DIN EN ISO 9906/2B.
- Power data refers to clean water, density 1 kg/dm<sup>3</sup>, viscosity 1 mm<sup>2</sup>/s.
- All duty points between the individual stage characteristics can be achieved by adapting the impeller diameters.

# Performance curve

## Frequency 60 Hz

### Type 150-280.2



**Notes to performance curves**

- Curves valid according to DIN EN ISO 9906/2B.
- Power data refers to clean water, density 1 kg/dm³, viscosity 1 mm²/s.
- All duty points between the individual stage characteristics can be achieved by adapting the impeller diameters.



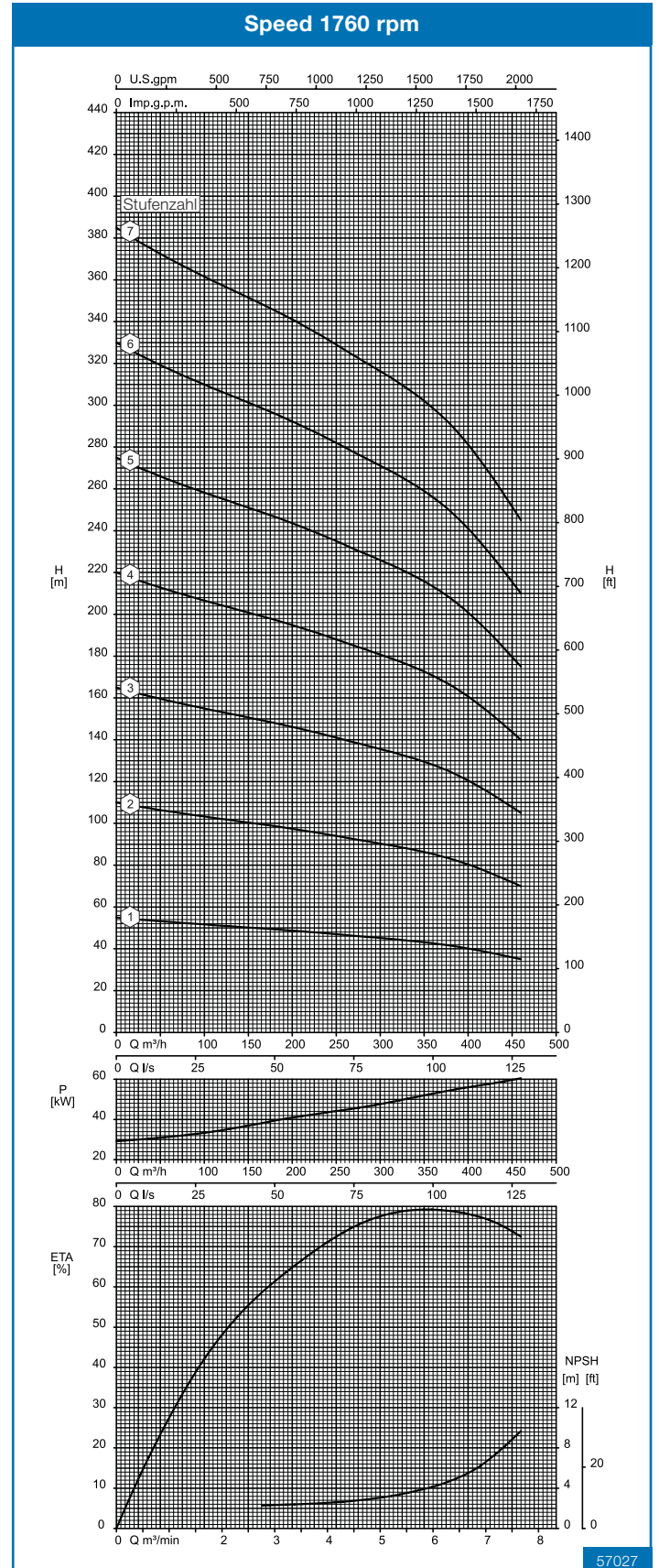
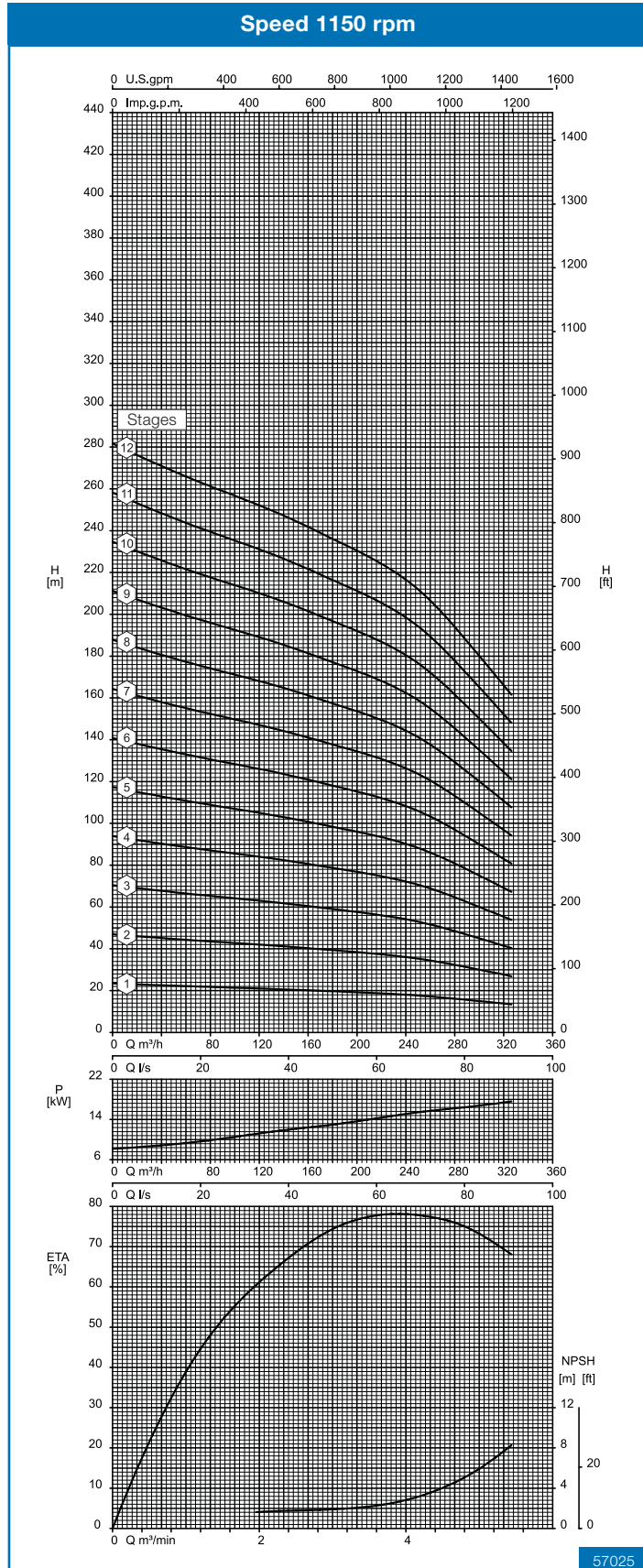
# Performance curve

## Frequency 60 Hz

### Type 200-320.1

#### Notes to performance curves

- Curves valid according to DIN EN ISO 9906/2B.
- Power data refers to clean water, density 1 kg/dm<sup>3</sup>, viscosity 1 mm<sup>2</sup>/s.
- All duty points between the individual stage characteristics can be achieved by adapting the impeller diameters.



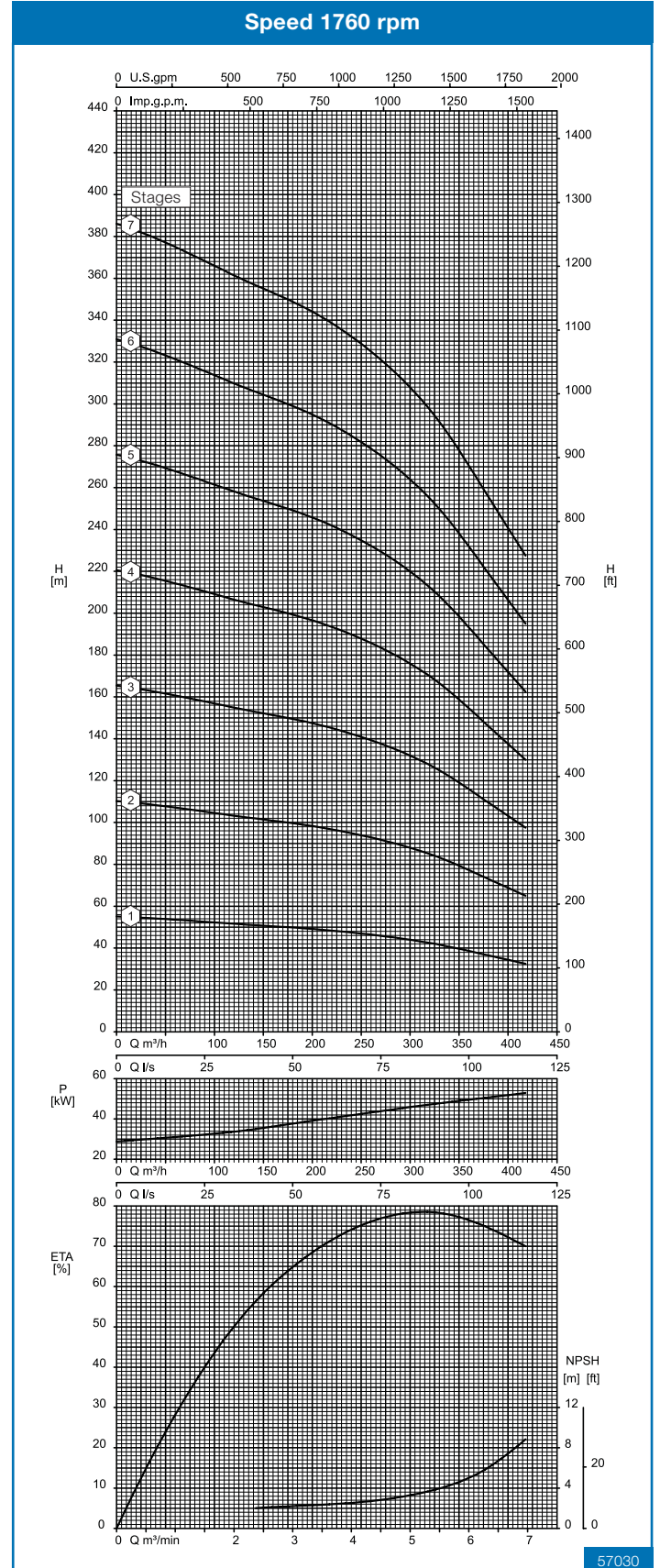
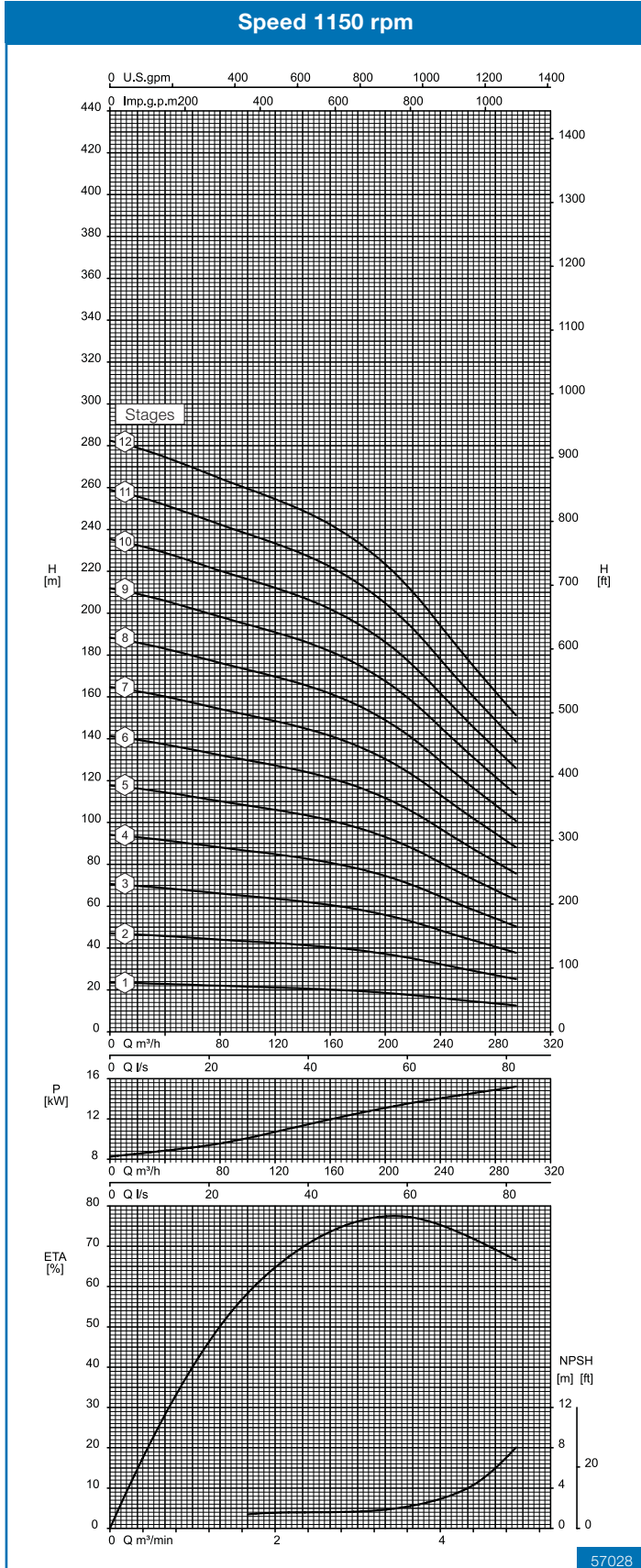
# Performance curve

## Frequency 60 Hz

### Type 200-320.2

#### Notes to performance curves

- Curves valid according to DIN EN ISO 9906/2B.
- Power data refers to clean water, density 1 kg/dm<sup>3</sup>, viscosity 1 mm<sup>2</sup>/s.
- All duty points between the individual stage characteristics can be achieved by adapting the impeller diameters.



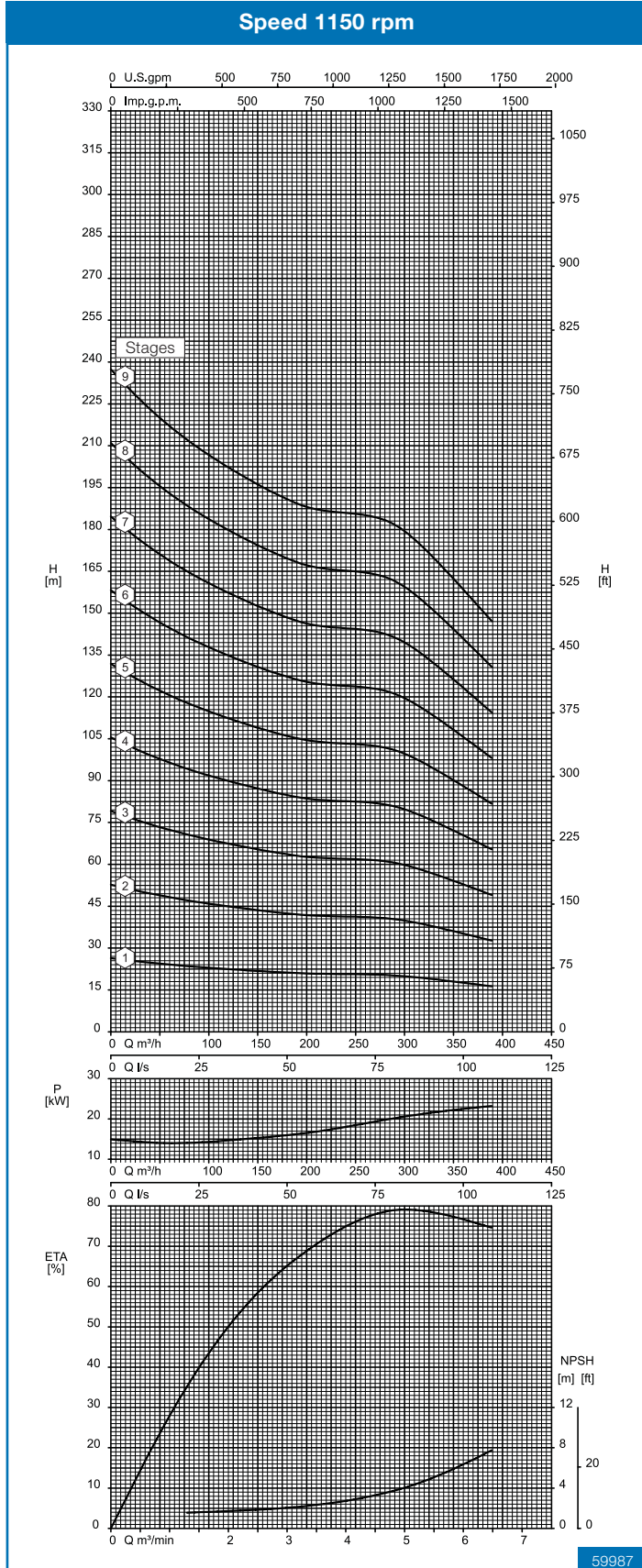
# Performance curve

## Frequency 60 Hz

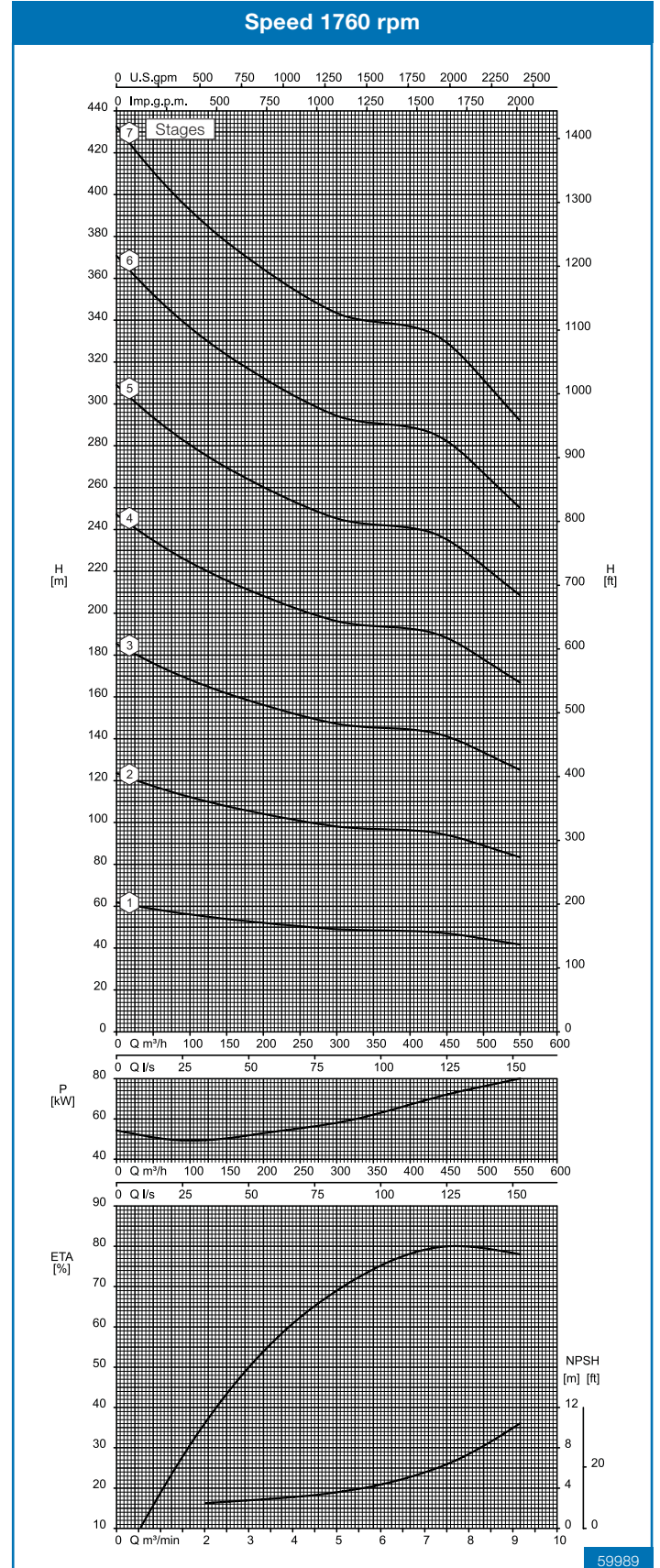
### Type 200-320.3

#### Notes to performance curves

- Curves valid according to DIN EN ISO 9906/2B.
- Power data refers to clean water, density 1 kg/dm<sup>3</sup>, viscosity 1 mm<sup>2</sup>/s.
- All duty points between the individual stage characteristics can be achieved by adapting the impeller diameters.



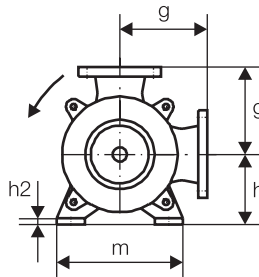
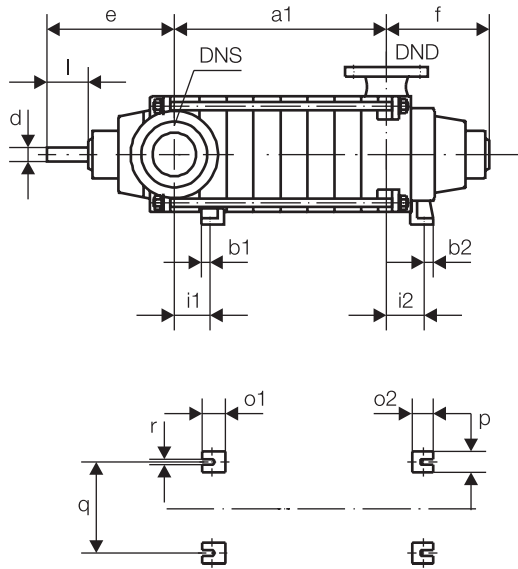
59987



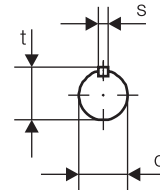
59989

# Dimensions

## Arrangement A1



Shaft end according to DIN 748/1  
Key DIN 6885/1



**Connections**

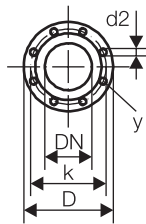
- Manometer connection R1/2"
- Gland leakage R1"
- Drain R1/2", type 200-320 R3/4"

**Drive**

- Drive at suction side
- Rotation direction of pump shaft is anti-clockwise, seen from drive end

**Suction and discharge connection**

Flange connections according to EN 1092-2, PN10-40.



y = Number of bores

DN	PN	D	k	d2	y
100	10-16	220	180	18	8
100	25-40	235	190	22	8
125	10-16	250	210	18	8
125	25-40	270	220	26	8
150	10-16	285	240	22	8
150	25-40	300	250	26	8

DN	PN	D	k	d2	y
200	10	340	295	22	8
200	16	340	295	22	12
200	25	360	310	26	12
200	40	375	320	30	12
250	10	395	350	22	12
250	16	405	355	26	12

Dimension »a1« for number of stages

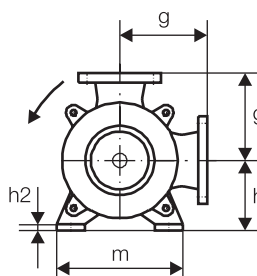
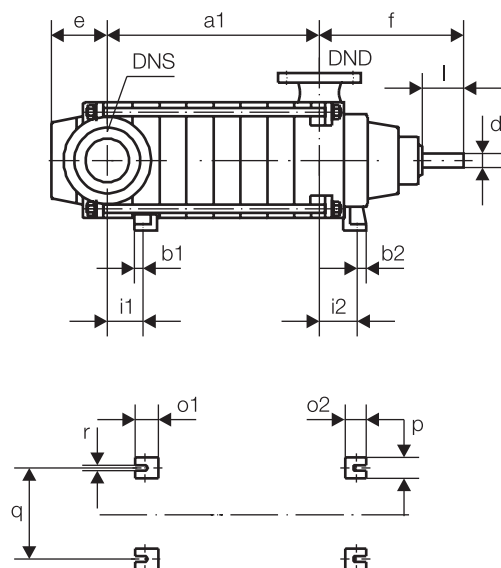
Type	DNS	DND	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
100-230	125	100	144	221	298	375	452	529	606	683	760	837	914	991	1068	1145	1222	1299
125-250	150	125	180	270	360	450	540	630	720	810	900	990	1080	1170	1260	1350		
150-280	200	150	194	309	424	539	654	769	884	999	1114	1229	1344					
200-320	250	200	239	379	519	659	799	939	1079	1219	1359	1499	1639	1779				

Type	e	f	g	h	h2	i1	i2	o1	o2	b1	b2	m	q	p	r	Shaft end			
																l	d	t	s
100-230	364	293	250	200	18	102 (26)	108	65 (80)	65	25 (40)	25	360	280	80	19	110	40	43	12
125-250	390	327	300	225	20	135 (37)	125	70 (80)	70	30 (40)	30	390	300	90	23	110	45	48,5	14
150-280	435	376	350	280	25	140 (20)	148	100 (120)	100	45 (60)	45	470	360	110	23	110	55	59	16
200-320	514	451	400	315	35	174 (19)	204	130 (150)	130	55 (75)	55	590	440	150	34	140	65	69	18

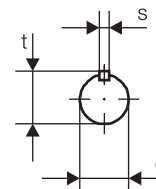
Dimensions in () are valid for single-stage pumps.

# Dimensions

## Arrangement A2



Shaft end according to DIN 748/1  
Key DIN 6885/1



### Connections

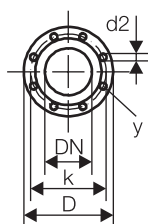
- Manometer connection R1/2"
- Gland leakage R1"
- Drain R1/2", type 200-320 R3/4"

### Drive

- Drive at delivery side
- Rotation direction of pump shaft is clockwise, seen from drive end

### Suction and discharge connection

Flange connections according to EN 1092-2, PN10-40.



y = Number of bores

DN	PN	D	k	d2	y
100	10-16	220	180	18	8
100	25-40	235	190	22	8
125	10-16	250	210	18	8
125	25-40	270	220	26	8
150	10-16	285	240	22	8
150	25-40	300	250	26	8

DN	PN	D	k	d2	y
200	10	340	295	22	8
200	16	340	295	22	12
200	25	360	310	26	12
200	40	375	320	30	12
250	10	395	350	22	12
250	16	405	355	26	12

Dimension »a1« for number of stages

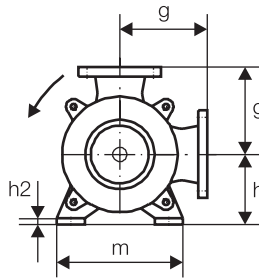
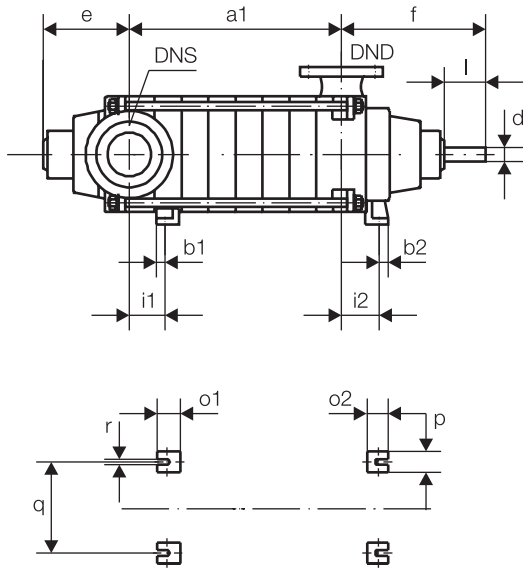
Type	DNS	DND	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
100-230	125	100	144	221	298	375	452	529	606	683	760	837	914	991	1068	1145	1222	1299
125-250	150	125	180	270	360	450	540	630	720	810	900	990	1080	1170	1260	1350		
150-280	200	150	194	309	424	539	654	769	884	999	1114	1229	1344					
200-320	250	200	239	379	519	659	799	939	1079	1219	1359	1499	1639	1779				

Type	e	f	g	h	h2	i1	i2	o1	o2	b1	b2	m	q	p	r	Shaft end			
																l	d	t	s
100-230	128	411	250	200	18	102 (26)	108	65 (80)	65	25 (40)	25	360	280	80	19	110	40	43	12
125-250	150	446	300	225	20	135 (37)	125	70 (80)	70	30 (40)	30	390	300	90	23	110	45	48,5	14
150-280	176	495	350	280	25	140 (20)	148	100 (120)	100	45 (60)	45	470	360	110	23	110	55	59	16
200-320	206	599	400	315	35	174 (19)	204	130 (150)	130	55 (75)	55	590	440	150	34	140	65	69	18

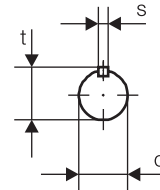
Dimensions in () are valid for single-stage pumps.

# Dimensions

## Arrangement A3



Shaft end according to DIN 748/1  
Key DIN 6885/1



**Connections**

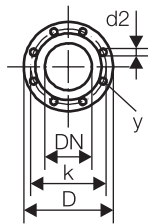
- Manometer connection R1/2"
- Gland leakage R1"
- Drain R1/2", type 200-320 R3/4"

**Drive**

- Drive at delivery side
- Rotation direction of pump shaft is clockwise, seen from drive end

**Suction and discharge connection**

Flange connections according to EN 1092-2, PN10-40.



y = Number of bores

DN	PN	D	k	d2	y
100	10-16	220	180	18	8
100	25-40	235	190	22	8
125	10-16	250	210	18	8
125	25-40	270	220	26	8
150	10-16	285	240	22	8
150	25-40	300	250	26	8

DN	PN	D	k	d2	y
200	10	340	295	22	8
200	16	340	295	22	12
200	25	360	310	26	12
200	40	375	320	30	12
250	10	395	350	22	12
250	16	405	355	26	12

Dimension »a1« for number of stages

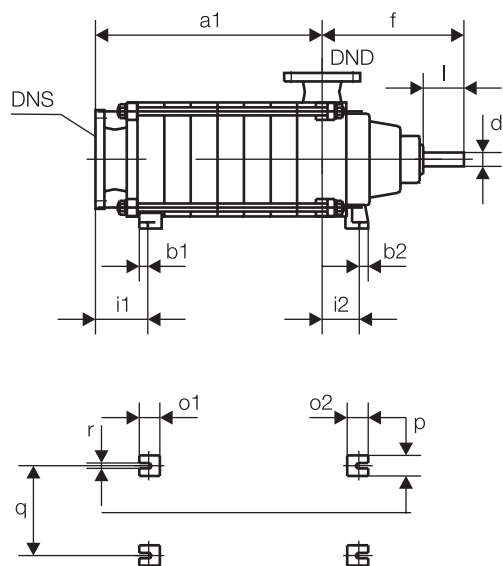
Type	DN <sub>S</sub>	DN <sub>D</sub>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
100-230	125	100	144	221	298	375	452	529	606	683	760	837	914	991	1068	1145	1222	1299
125-250	150	125	180	270	360	450	540	630	720	810	900	990	1080	1170	1260	1350		
150-280	200	150	194	309	424	539	654	769	884	999	1114	1229	1344					
200-320	250	200	239	379	519	659	799	939	1079	1219	1359	1499	1639	1779				

Type	e	f	g	h	h2	i1	i2	o1	o2	b1	b2	m	q	p	r	Shaft end			
																l	d	t	s
100-230	246	411	250	200	18	102 (26)	108	65 (80)	65	25 (40)	25	360	280	80	19	110	40	43	12
125-250	271	446	300	225	20	135 (37)	125	70 (80)	70	30 (40)	30	390	300	90	23	110	45	48,5	14
150-280	316	495	350	280	25	140 (20)	148	100 (120)	100	45 (60)	45	470	360	110	23	110	55	59	16
200-320	366	599	400	315	35	174 (19)	204	130 (150)	130	55 (75)	55	590	440	150	34	140	65	69	18

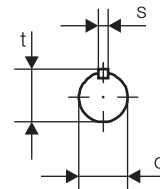
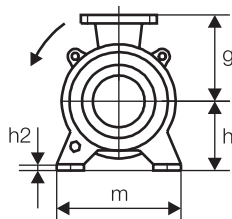
Dimensions in () are valid for single-stage pumps.

# Dimensions

## Arrangement AX



Shaft end according to DIN 748/1  
Key DIN 6885/1



### Connections

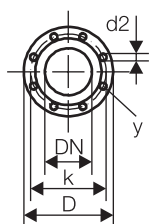
- Manometer connection R1/2"
- Gland leakage R1"
- Drain R1/2", type 200-320 R3/4"

### Drive

- Drive at delivery side
- Rotation direction of pump shaft is clockwise, seen from drive end

### Suction and discharge connection

Flange connections according to EN 1092-2, PN10-40.



y = Number of bores

DN	PN	D	k	d2	y
100	10-16	220	180	18	8
100	25-40	235	190	22	8
125	10-16	250	210	18	8
125	25-40	270	220	26	8
150	10-16	285	240	22	8
150	25-40	300	250	26	8

DN	PN	D	k	d2	y
200	10	340	295	22	8
200	16	340	295	22	12
200	25	360	310	26	12
200	40	375	320	30	12
250	10	395	350	22	12
250	16	405	355	26	12

### Dimension »a1« for number of stages

Type	DNS	DND	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
100-230	125	100	194	271	348	425	502	579	656	733	810	887	964	1041	1118	1195	1272	1349
125-250	150	125	258	348	438	528	618	708	798	888	978	1068	1158	1248	1338	1428		
150-280	200	150	294	409	524	639	754	869	984	1099	1214	1329	1444					
200-320	250	200	345	485	625	765	905	1045	1185	1325	1465	1605	1745	1885				

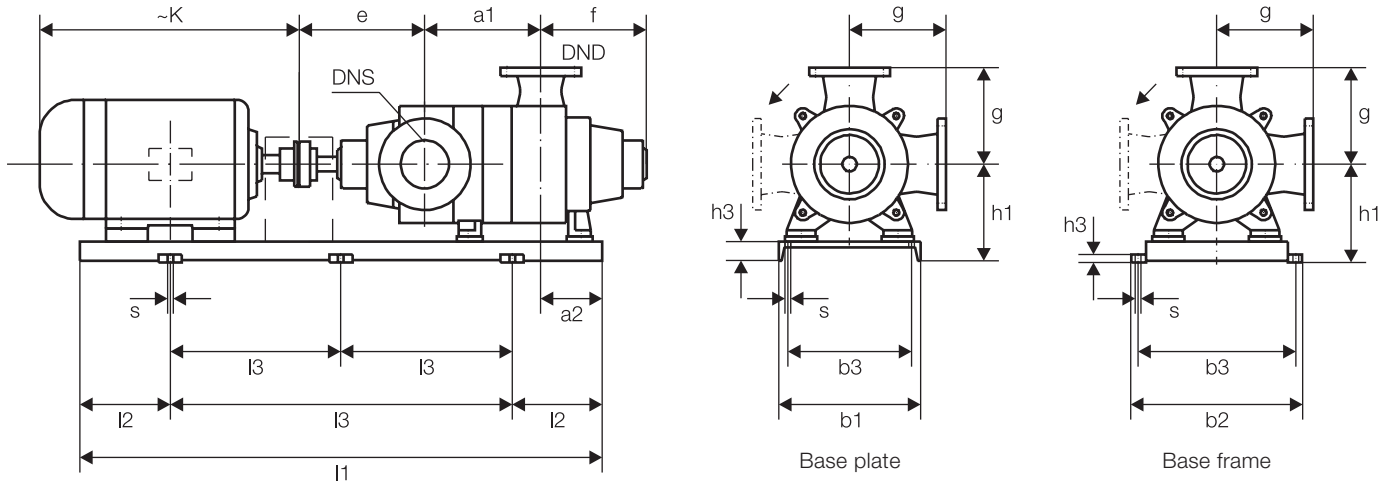
Type	f	g	h	h2	i1	i2	o1	o2	b1	b2	m	q	p	r
100-230	411	250	200	18	152 (203)	108	65 (80)	65	25 (40)	25	360	280	80	19
125-250	446	300	225	20	213 (258)	125	70 (80)	70	30 (40)	30	390	300	90	23
150-280	495	350	280	25	240 (302)	148	100 (120)	100	45 (60)	45	470	360	110	23
200-320	599	400	315	35	280 (368)	204	130 (150)	130	55 (75)	55	590	440	150	34

Shaft end			
l	d	t	s
110	40	43	12
110	45	48,5	14
110	55	59	16
140	65	69	18

Dimensions in () are valid for single-stage pumps.

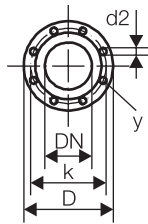
# Dimensions

## Arrangement E1



**Suction and discharge connection**

Flange connections according to EN 1092-2, PN10-40.



y = Number of bores

DN	PN	D	k	d2	y
100	10-16	220	180	18	8
100	25-40	235	190	22	8
125	10-16	250	210	18	8
125	25-40	270	220	26	8
150	10-16	285	240	22	8
150	25-40	300	250	26	8

DN	PN	D	k	d2	y
200	10	340	295	22	8
200	16	340	295	22	12
200	25	360	310	26	12
200	40	375	320	30	12
250	10	395	350	22	12
250	16	405	355	26	12

Type	Stages	Motor size	Poles	Code	DNS	DND	l1	l2	l3	a2	f	a1	e	~K
							b1	b2	b3	h3	h1	g	s	
100-230	1	100L		HN165N	125	100	1200	20	1160	198	293	144	364	403
							400	-	320	110	310	250	18	
100-230	1	112M		HN166N	125	100	1200	20	1160	198	293	144	364	403
							400	-	320	110	310	250	18	
100-230	1	132S		HN167N	125	100	1200	20	1160	198	293	144	364	473
							400	-	320	110	310	250	18	
100-230	1	132M		HN168N	125	100	1200	20	1160	198	293	144	364	528
							400	-	320	110	310	250	18	
100-230	1	200L		HN169	125	100	1400	20	1360	198	293	144	364	805
							400	-	320	110	310	250	18	
100-230	1	225M	2	HU170	125	100	1420	240	940	168	293	144	364	875
							-	580	540	25	300	250	18	
100-230	2	132M		HN100N	125	100	1300	20	1260	198	293	221	364	528
							400	-	320	110	310	250	18	
100-230	2	160M		HN101	125	100	1400	20	1360	198	293	221	364	650
							400	-	320	110	310	250	18	
100-230	2	160L		HN102	125	100	1400	20	1360	198	293	221	364	680
							400	-	320	110	310	250	18	
100-230	2	225M	2	HU174	125	100	1420	240	940	168	293	221	364	875
							-	580	540	25	300	250	18	
100-230	2	250M	2	HU151	125	100	1620	280	1060	168	293	221	364	995
							-	630	590	25	330	250	18	
100-230	2	280S	2	HU152	125	100	1620	280	1060	168	293	221	364	1080
							-	700	660	25	360	250	18	



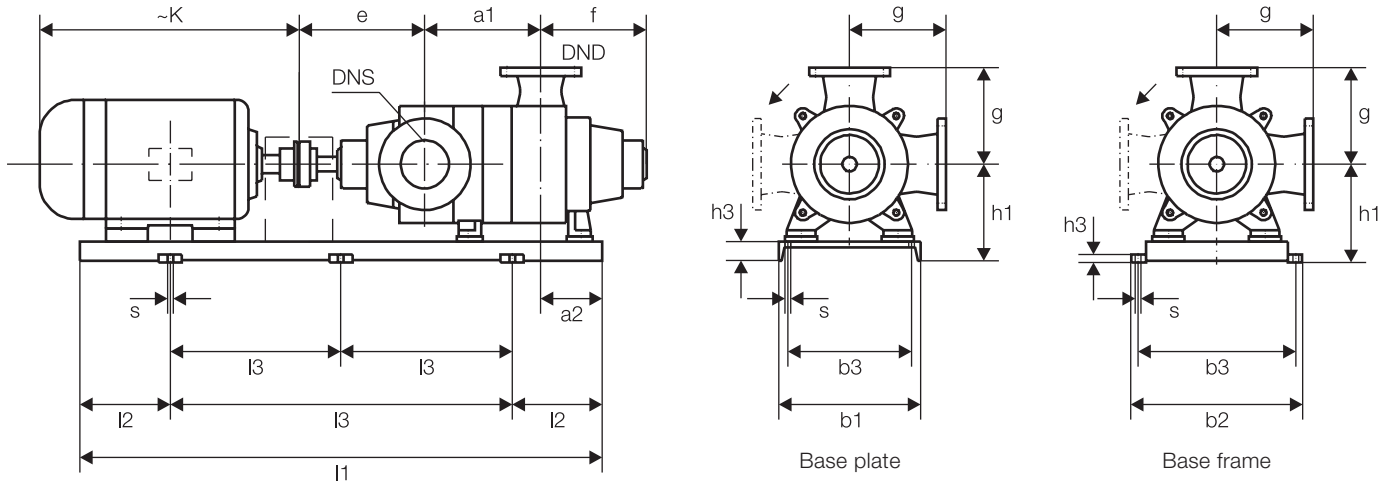
# Dimensions

## Arrangement E1

Type	Stages	Motor size	Poles	Code	DNS	DND	I1	I2	I3	a2	f	a1	e	~K
							b1	b2	b3	h3	h1	g	s	
100-230	2	280M	2	HU153	125	100	1620	280	1060	168	293	221	364	1130
							-	700	660	25	360	250	18	
100-230	3	160M		HN103	125	100	1500	20	1460	198	293	298	364	650
							400	-	320	110	310	250	18	
100-230	3	160L		HN104	125	100	1500	20	1460	198	293	298	364	680
							400	-	320	110	310	250	18	
100-230	3	180M		HN105	125	100	1500	20	1460	198	293	298	364	715
							400	-	320	110	310	250	18	
100-230	3	200L		HN178	125	100	1600	20	1560	198	293	955	364	805
							400	-	320	110	310	250	18	
100-230	3	280S	2	HU154	125	100	1820	310	1200	168	293	298	364	1080
							-	700	660	25	360	250	18	
100-230	3	280M	2	HU155	125	100	1820	310	1200	168	293	298	364	1130
							-	700	660	25	360	250	18	
100-230	3	315S	2	HU156	125	100	1820	310	1200	168	293	298	364	1175
							-	770	730	25	395	250	18	
100-230	3	315M	2	HU157	125	100	1820	310	1200	168	293	298	364	1220
							-	770	730	25	295	250	18	
100-230	4	160L		HN106	125	100	1600	20	1560	198	293	375	364	680
							400	-	320	110	310	250	18	
100-230	4	180M		HN107	125	100	1600	20	1560	198	293	375	364	715
							400	-	320	110	310	250	18	
100-230	4	180L		HN108	125	100	1600	20	1560	198	293	375	364	755
							400	-	320	110	310	250	18	
100-230	4	200L		HN109	125	100	1600	20	1560	198	293	375	364	805
							400	-	320	110	310	250	18	
100-230	4	280M	2	HU177	125	100	1820	310	1200	168	293	375	364	1130
							-	700	660	25	360	250	18	
100-230	4	315S	2	HU158	125	100	1820	310	1200	168	293	375	364	1175
							-	770	730	25	395	250	18	
100-230	4	315M	2	HU159	125	100	2020	330	680	168	293	375	364	1220
							-	770	730	25	420	250	18	
100-230	4	315L	2	HU173	125	100	2020	330	680	168	293	375	364	1345
							-	770	730	25	420	250	18	
100-230	5	180M		HN110	125	100	1700	20	1660	198	293	452	364	715
							400	-	320	110	310	250	18	
100-230	5	180L		HN111	125	100	1700	20	1660	198	293	452	364	755
							400	-	320	110	310	250	18	
100-230	5	200L		HU112	125	100	1620	280	1060	168	293	452	364	805
							-	530	490	25	280	250	18	
100-230	5	225M	4	HU175	125	100	1820	310	1200	168	293	452	364	865
							-	580	540	25	300	250	18	
100-230	5	315M	2	HU160	125	100	2020	330	680	168	293	452	364	1220
							-	770	730	25	420	250	18	
100-230	5	315L	2	HU161	125	100	2020	330	680	168	293	452	364	1345
							-	770	730	25	420	250	18	
100-230	6	180L		HN113	125	100	1800	20	1760	198	293	529	364	755
							400	-	320	110	310	250	18	
100-230	6	200L		HU114	125	100	1820	310	1200	168	293	529	364	805
							-	530	490	25	280	250	18	

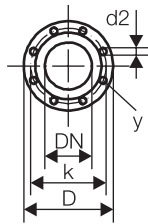
# Dimensions

## Arrangement E1



**Suction and discharge connection**

Flange connections according to EN 1092-2, PN10-40.



y = Number of bores

DN	PN	D	k	d2	y
100	10-16	220	180	18	8
100	25-40	235	190	22	8
125	10-16	250	210	18	8
125	25-40	270	220	26	8
150	10-16	285	240	22	8
150	25-40	300	250	26	8

DN	PN	D	k	d2	y
200	10	340	295	22	8
200	16	340	295	22	12
200	25	360	310	26	12
200	40	375	320	30	12
250	10	395	350	22	12
250	16	405	355	26	12

Type	Stages	Motor size	Poles	Code	DNS	DND	l1	l2	l3	a2	f	a1	e	~K
							b1	b2	b3	h3	h1	g	s	
100-230	6	225S	4	HU115	125	100	1820	310	1200	168	293	529	364	835
							-	580	540	25	300	250	18	
100-230	6	225M	4	HU179	125	100	1820	310	1200	168	293	529	364	865
							-	580	540	25	300	250	18	
100-230	6	315L	2	HU172	125	100	2220	330	780	168	293	529	364	1345
							-	770	730	25	420	250	18	
100-230	7	200L		HU116	125	100	1820	310	1200	168	293	606	364	805
							-	530	490	25	280	250	18	
100-230	7	225S	4	HU117	125	100	1820	310	1200	168	293	606	364	835
							-	580	540	25	300	250	18	
100-230	7	225M	4	HU118	125	100	2020	330	680	168	293	606	364	865
							-	580	540	25	315	250	18	
100-230	8	200L		HU119	125	100	2020	330	680	168	293	683	364	805
							-	530	490	25	285	250	18	
100-230	8	225S	4	HU120	125	100	2020	330	680	168	293	683	364	835
							-	580	540	25	315	250	18	
100-230	8	225M	4	HU121	125	100	2020	330	680	168	293	683	364	865
							-	580	540	25	315	250	18	
100-230	9	200L		HU122	125	100	2020	330	680	168	293	760	364	805
							-	530	490	25	285	250	18	
100-230	9	225S	4	HU123	125	100	2020	330	680	168	293	760	364	835
							-	580	540	25	315	250	18	
100-230	9	225M	4	HU124	125	100	2020	330	680	168	293	760	364	865
							-	580	540	25	315	250	18	

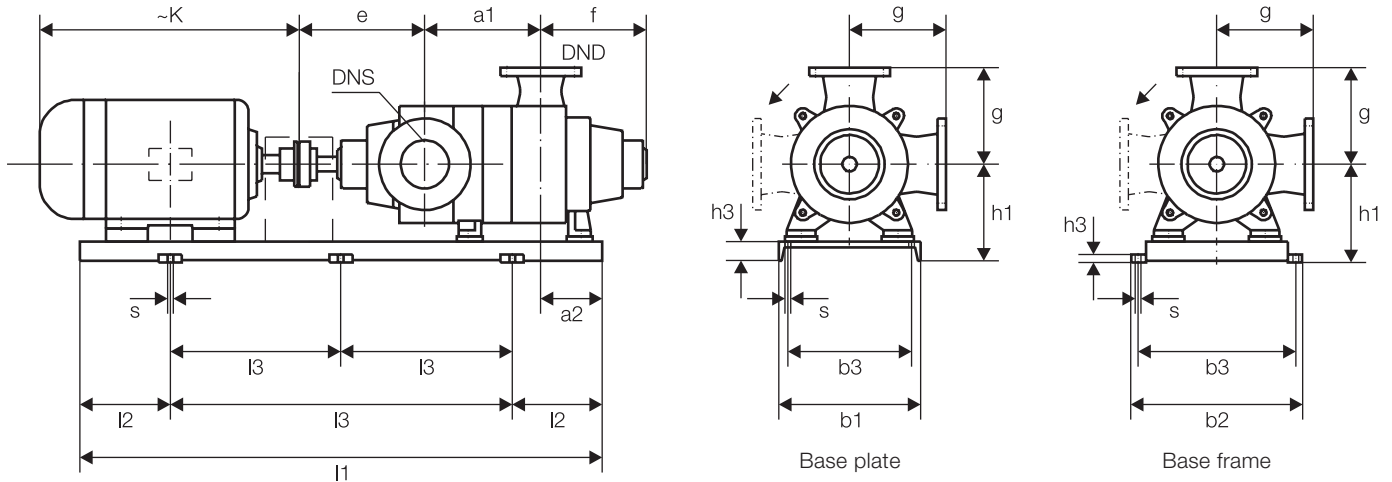
# Dimensions

## Arrangement E1

Type	Stages	Motor size	Poles	Code	DNS	DND	I1	I2	I3	a2	f	a1	e	~K
							b1	b2	b3	h3	h1	g	s	
100-230	9	250M	4	HU125	125	100	2020	330	780	168	293	760	364	955
							-	630	590	25	345	250	18	
100-230	10	200L		HU126	125	100	2020	330	680	168	293	837	364	805
							-	530	490	25	285	250	18	
100-230	10	225S	4	HU127	125	100	2220	330	780	168	293	837	364	835
							-	580	540	25	315	250	18	
100-230	10	225M	4	HU128	125	100	2220	330	780	168	293	837	364	865
							-	580	540	25	315	250	18	
100-230	10	250M	4	HU129	125	100	2220	330	780	168	293	837	364	955
							-	630	590	25	345	250	18	
100-230	11	225S	4	HU130	125	100	2220	330	780	168	293	914	364	835
							-	540	540	25	315	250	18	
100-230	11	225M	4	HU131	125	100	2220	330	780	168	293	914	364	865
							-	580	540	25	315	250	18	
100-230	11	250M	4	HU132	125	100	2220	330	780	168	293	914	364	955
							-	630	590	25	345	250	18	
100-230	11	280S	4	HU133	125	100	2420	330	880	168	293	914	364	1100
							-	700	660	25	385	250	18	
100-230	12	225S	4	HU134	125	100	2220	330	780	168	293	991	364	835
							-	580	540	25	315	250	18	
100-230	12	225M	4	HU135	125	100	2220	330	780	168	293	991	364	865
							-	580	540	25	315	250	18	
100-230	12	250M	4	HU136	125	100	2420	330	880	168	293	991	364	955
							-	630	590	25	345	250	18	
100-230	12	280S	4	HU137	125	100	2420	330	880	168	293	991	364	1100
							-	700	660	25	385	250	18	
100-230	13	225M	4	HU138	125	100	2420	330	880	168	293	1068	364	865
							-	580	540	25	315	250	18	
100-230	13	250M	4	HU139	125	100	2420	330	880	168	293	1068	364	955
							-	630	590	25	345	250	18	
100-230	13	280S	4	HU140	125	100	2420	330	880	168	293	1068	364	1100
							-	700	660	25	385	250	18	
100-230	14	225M	4	HU141	125	100	2420	330	880	168	293	1145	364	865
							-	580	540	25	315	250	18	
100-230	14	250M	4	HU142	125	100	2620	330	980	168	293	1145	364	955
							-	630	590	25	345	250	18	
100-230	14	280S	4	HU143	125	100	2620	330	980	168	293	1145	364	1100
							-	700	660	25	375	250	18	
100-230	15	250M	4	HU144	125	100	2620	330	980	168	293	1222	364	955
							-	630	590	25	345	250	18	
100-230	15	280S	4	HU145	125	100	2620	330	980	168	293	1222	364	1100
							-	700	660	25	375	250	18	
100-230	15	280M	4	HU146	125	100	2620	330	980	168	293	1222	364	1145
							-	700	660	25	375	250	18	
100-230	16	250M	4	HU147	125	100	2620	330	980	168	293	1299	364	955
							-	630	590	25	345	250	18	
100-230	16	280S	4	HU148	125	100	2620	330	980	168	293	1299	364	1100
							-	700	660	40	442	250	18	
100-230	16	280M	4	HU149	125	100	2670	330	1005	168	293	1299	364	1145
							-	700	660	40	442	250	18	

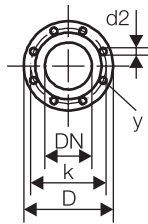
# Dimensions

## Arrangement E1



**Suction and discharge connection**

Flange connections according to EN 1092-2, PN10-40.



y = Number of bores

DN	PN	D	k	d2	y
100	10-16	220	180	18	8
100	25-40	235	190	22	8
125	10-16	250	210	18	8
125	25-40	270	220	26	8
150	10-16	285	240	22	8
150	25-40	300	250	26	8

DN	PN	D	k	d2	y
200	10	340	295	22	8
200	16	340	295	22	12
200	25	360	310	26	12
200	40	375	320	30	12
250	10	395	350	22	12
250	16	405	355	26	12

Type	Stages	Motor size	Poles	Code	DNS	DND	l1	l2	l3	a2	f	a1	e	~K
							b1	b2	b3	h3	h1	g	s	
100-230	16	315S	4	HU150	125	100	2720	330	1030	168	293	1299	364	1215
							-	790	750	40	477	250	26	
125-250	1	112M		HN275N	150	125	1200	20	1160	220	327	180	390	403
							400	-	320	110	335	300	18	
125-250	1	132S		HN276N	150	125	1300	20	1260	220	327	180	390	473
							400	-	320	110	335	300	18	
125-250	1	132M		HN277N	150	125	1300	20	1260	220	327	180	390	528
							400	-	320	110	335	300	18	
125-250	1	160M		HN278N	150	125	1500	20	1460	220	327	180	390	650
							400	-	320	110	335	300	18	
125-250	1	160L		HN279N	150	125	1500	20	1460	220	327	180	390	680
							400	-	320	110	335	300	18	
125-250	1	200L		HN280	150	125	1500	20	1460	220	327	180	390	805
							400	-	320	110	335	300	18	
125-250	1	225M	2	HU281	150	125	1420	240	940	190	327	180	390	875
							-	580	540	25	305	300	18	
125-250	1	250M	2	HU282	150	125	1620	280	1060	190	327	180	390	995
							-	630	590	25	325	300	18	
125-250	1	280S	2	HU283	150	125	1620	280	1060	190	327	180	390	1080
							-	700	660	25	360	300	18	
125-250	2	132M		HN200N	150	125	1400	20	1360	220	327	270	390	528
							400	-	320	110	335	300	18	
125-250	2	160M		HN201N	150	125	1600	20	1560	220	327	127	390	650
							400	-	320	110	335	300	18	

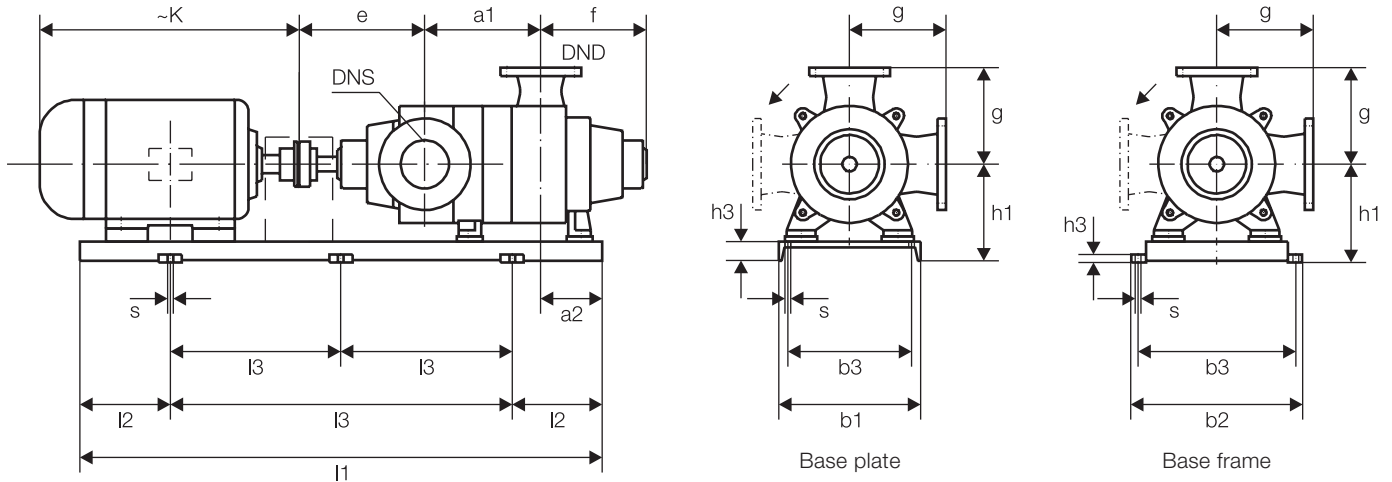
# Dimensions

## Arrangement E1

Type	Stages	Motor size	Poles	Code	DNS	DND	I1	I2	I3	a2	f	a1	e	~K
							b1	b2	b3	h3	h1	g	s	
125-250	2	160L		HN202N	150	125	1600	20	1560	220	327	270	390	680
							400	-	320	110	335	300	18	
125-250	2	180M		HN203N	150	125	1600	20	1560	220	327	270	390	715
							400	-	320	110	335	300	18	
125-250	2	180L		HN267N	150	125	1600	20	1560	220	327	270	390	755
							400	-	320	110	335	300	18	
125-250	2	200L		HU295	150	125	1620	280	1060	190	327	270	390	805
							-	530	490	25	300	300	18	
125-250	2	225S	4	HU253	150	125	1620	280	1060	190	327	270	390	835
							-	630	590	25	300	300	18	
125-250	2	250M	2	HU255	150	125	1620	280	1060	190	327	270	390	995
							-	630	590	25	325	300	18	
125-250	2	280S	2	HU256	150	125	1820	310	1200	190	327	270	390	1080
							-	700	660	25	360	300	18	
125-250	2	280M	2	HU257	150	125	1820	310	1200	190	327	270	390	1130
							-	700	660	25	360	300	18	
125-250	2	315S	2	HU258	150	125	1820	310	1200	190	327	270	390	1175
							-	770	730	25	395	300	18	
125-250	2	315M	2	HU259	150	125	1820	310	1200	190	327	270	390	1220
							-	770	730	25	395	300	18	
125-250	3	160L		HN204N	150	125	1700	20	1660	220	327	360	390	680
							400	-	320	110	335	300	18	
125-250	3	180M		HN205N	150	125	1700	20	1660	220	327	360	390	715
							400	-	320	110	335	300	18	
125-250	3	180L		HN206N	150	125	1700	20	1660	220	327	360	390	755
							400	-	320	110	335	300	18	
125-250	3	200L		HU207	150	125	1620	280	1060	190	327	360	390	805
							-	530	490	25	300	300	18	
125-250	3	225S	4	HU208	150	125	1620	280	1060	190	327	360	390	835
							-	580	540	25	305	300	18	
125-250	3	280M	2	HU260	150	125	1820	310	1200	190	327	360	390	1130
							-	700	660	25	360	300	18	
125-250	3	315S	2	HU261	150	125	1820	310	1200	190	327	360	390	1175
							-	770	730	25	395	300	18	
125-250	3	315M	2	HU262	150	125	2020	330	680	190	327	360	390	1220
							-	770	730	25	420	300	18	
125-250	3	315L	2	HU263	150	125	2020	330	680	190	327	360	390	1345
							-	770	730	25	420	300	18	
125-250	4	180M		HN209N	150	125	1800	20	1760	220	327	450	390	715
							400	-	320	110	335	300	18	
125-250	4	180L		HN210N	150	125	1800	20	1760	220	327	450	390	755
							400	-	320	110	335	300	18	
125-250	4	200L		HU211	150	125	1820	310	1200	190	327	450	390	805
							-	530	490	25	300	300	18	
125-250	4	225S	4	HU212	150	125	1820	310	1200	190	327	450	390	835
							-	580	540	25	305	300	18	
125-250	4	225M	4	HU213	150	125	1820	310	1200	190	327	450	390	865
							-	580	540	25	305	300	18	
125-250	4	250M	4	HU284	150	125	1820	310	1200	190	327	450	390	955
							-	630	590	25	330	300	18	

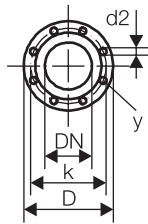
# Dimensions

## Arrangement E1



**Suction and discharge connection**

Flange connections according to EN 1092-2, PN10-40.



y = Number of bores

DN	PN	D	k	d2	y
100	10-16	220	180	18	8
100	25-40	235	190	22	8
125	10-16	250	210	18	8
125	25-40	270	220	26	8
150	10-16	285	240	22	8
150	25-40	300	250	26	8

DN	PN	D	k	d2	y
200	10	340	295	22	8
200	16	340	295	22	12
200	25	360	310	26	12
200	40	375	320	30	12
250	10	395	350	22	12
250	16	405	355	26	12

Type	Stages	Motor size	Poles	Code	DNS	DND	l1	l2	l3	a2	f	a1	e	~K
							b1	b2	b3	h3	h1	g	s	
125-250	4	315S	2	HU265	150	125	2020	330	680	190	327	450	390	1175
							-	770	730	25	420	300	18	
125-250	4	315M	2	HU266	150	125	2020	330	680	190	327	450	390	1220
							-	770	730	25	420	300	18	
125-250	5	180L		HN214N	150	125	1900	20	1860	220	327	540	390	755
							400	-	320	110	335	300	18	
125-250	5	200L		HU215	150	125	1820	310	1200	190	327	540	390	805
							-	530	490	25	300	300	18	
125-250	5	225S	4	HU216	150	125	1820	310	1200	190	327	540	390	835
							-	580	540	25	305	300	18	
125-250	5	225M	4	HU217	150	125	1820	310	1200	190	327	540	390	865
							-	580	540	25	305	300	18	
125-250	5	250M	4	HU218	150	125	2020	330	680	190	327	540	390	955
							-	630	590	25	340	300	18	
125-250	5	315M	2	HU270	150	125	2220	330	780	190	327	540	390	1220
							-	770	730	25	420	300	18	
125-250	6	200L		HU219	150	125	2020	330	680	190	327	630	390	805
							-	530	490	25	305	300	18	
125-250	6	225S	4	HU220	150	125	2020	330	680	190	327	630	390	835
							-	580	540	25	320	300	18	
125-250	6	225M	4	HU221	150	125	2020	330	680	190	327	630	390	865
							-	580	540	25	320	300	18	
125-250	6	250M	4	HU222	150	125	2020	330	680	190	327	630	390	955
							-	630	590	25	340	300	18	

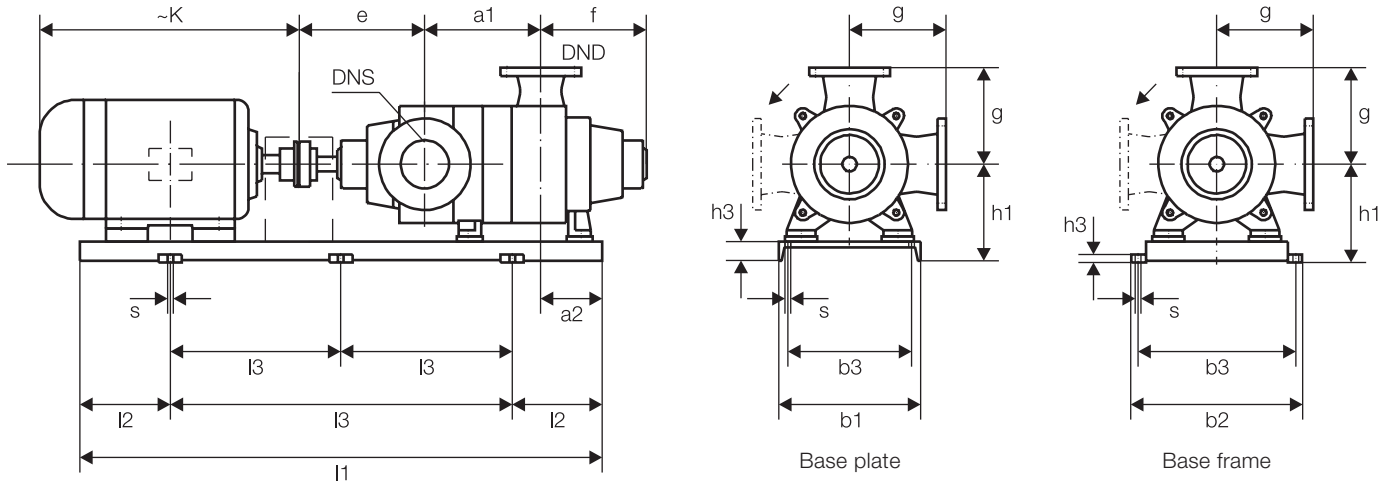
# Dimensions

## Arrangement E1

Type	Stages	Motor size	Poles	Code	DNS	DND	I1	I2	I3	a2	f	a1	e	~K
							b1	b2	b3	h3	h1	g	s	
125-250	6	280S	4	HU223	150	125	2020	330	680	190	327	630	390	1100
							-	700	660	25	375	300	18	
125-250	6	315L	4	HU274	150	125	2420	330	880	190	327	630	390	1376
							-	770	730	25	427	300	18	
125-250	7	200L		HU224	150	125	2020	330	680	190	327	720	390	805
							-	530	490	25	305	300	18	
125-250	7	225S	4	HU225	150	125	2020	330	680	190	327	720	390	835
							-	580	540	25	320	300	18	
125-250	7	225M	4	HU226	150	125	2020	330	680	190	327	720	390	865
							-	580	540	25	320	300	18	
125-250	7	250M	4	HU227	150	125	2220	330	780	190	327	720	390	955
							-	630	590	25	340	300	18	
125-250	7	280S	4	HU228	150	125	2220	330	780	190	327	720	390	1100
							-	700	660	25	375	300	18	
125-250	8	225S	4	HU229	150	125	2220	330	780	190	327	810	390	835
							-	580	540	25	320	300	18	
125-250	8	225M	4	HU230	150	125	2220	330	780	190	327	810	390	865
							-	580	540	25	320	300	18	
125-250	8	250M	4	HU231	150	125	2220	330	780	190	327	810	390	955
							-	630	590	25	340	300	18	
125-250	8	280S	4	HU232	150	125	2220	330	780	190	327	810	390	1100
							-	700	660	25	375	300	18	
125-250	8	280M	4	HU233	150	125	2420	330	880	190	327	810	390	1145
							-	700	660	25	385	300	18	
125-250	9	225S	4	HU234	150	125	2220	330	780	190	327	900	390	835
							-	580	540	25	320	300	18	
125-250	9	225M	4	HU235	150	125	2220	330	780	190	327	900	390	865
							-	580	540	25	320	300	18	
125-250	9	250M	4	HU236	150	125	2420	330	880	190	327	900	390	955
							-	630	590	25	340	300	18	
125-250	9	280S	4	HU237	150	125	2420	330	880	190	327	900	390	1100
							-	700	660	25	385	300	18	
125-250	9	280M	4	HU238	150	125	2420	330	880	190	327	900	390	1145
							-	700	660	25	385	300	18	
125-250	10	225M	4	HU239	150	125	2420	330	880	190	327	990	390	865
							-	580	540	25	320	300	18	
125-250	10	250M	4	HU240	150	125	2420	330	880	190	327	990	390	955
							-	630	590	25	340	300	18	
125-250	10	280S	4	HU241	150	125	2420	330	880	190	327	990	390	1100
							-	700	660	25	385	300	18	
125-250	10	280M	4	HU242	150	125	2620	330	980	190	327	990	390	1145
							-	700	660	25	375	300	18	
125-250	10	315S	4	HU243	150	125	2620	330	980	190	327	990	390	1215
							-	770	730	25	420	300	18	
125-250	11	225M	4	HU244	150	125	2420	330	880	190	327	1080	390	865
							-	580	540	25	320	300	18	
125-250	11	250M	4	HU245	150	125	2420	330	880	190	327	1080	390	955
							-	630	590	25	340	300	18	
125-250	11	280S	4	HU246	150	125	2620	330	980	190	327	1080	390	1100
							-	700	660	25	375	300	18	

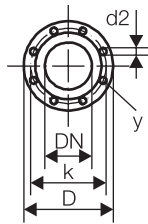
# Dimensions

## Arrangement E1



**Suction and discharge connection**

Flange connections according to EN 1092-2, PN10-40.



y = Number of bores

DN	PN	D	k	d2	y
100	10-16	220	180	18	8
100	25-40	235	190	22	8
125	10-16	250	210	18	8
125	25-40	270	220	26	8
150	10-16	285	240	22	8
150	25-40	300	250	26	8

DN	PN	D	k	d2	y
200	10	340	295	22	8
200	16	340	295	22	12
200	25	360	310	26	12
200	40	375	320	30	12
250	10	395	350	22	12
250	16	405	355	26	12

Type	Stages	Motor size	Poles	Code	DNS	DND	l1	l2	l3	a2	f	a1	e	~K
							b1	b2	b3	h3	h1	g	s	
125-250	11	280M	4	HU247	150	125	2620	330	980	190	327	1080	390	1145
							-	700	600	25	375	300	18	
125-250	11	315S	4	HU248	150	125	2620	330	980	190	327	1080	390	1215
							-	770	730	25	420	300	18	
125-250	12	250M	4	HU249	150	125	2620	330	980	190	327	1170	390	955
							-	630	590	25	340	300	18	
125-250	12	280S	4	HU250	150	125	2620	330	980	190	327	1170	390	1100
							-	700	660	25	375	300	18	
125-250	12	280M	4	HU251	150	125	2620	330	980	190	327	1170	390	1145
							-	700	660	25	375	300	18	
125-250	12	315S	4	HU252	150	125	2640	330	990	190	327	1170	390	1215
							-	790	750	40	477	300	26	
125-250	13	250M	4	HU290	150	125	2620	330	980	190	327	1260	390	955
							-	690	590	25	340	300	18	
125-250	13	280S	4	HU291	150	125	2620	330	980	190	327	1266	390	1100
							-	730	690	40	442	300	26	
125-250	13	280M	4	HU287	150	125	2680	330	1010	190	327	1260	390	1145
							-	730	690	40	442	300	26	
125-250	13	315S	4	HU285	150	125	2750	330	1045	190	327	1260	390	1215
							-	790	750	40	477	300	26	
125-250	13	315M	4	HU293	150	125	2800	330	1070	190	327	1260	390	1250
							-	790	750	40	477	300	26	
125-250	14	280S	4	HU292	150	125	2720	330	1030	190	327	1350	390	1100
							-	730	690	40	442	300	26	



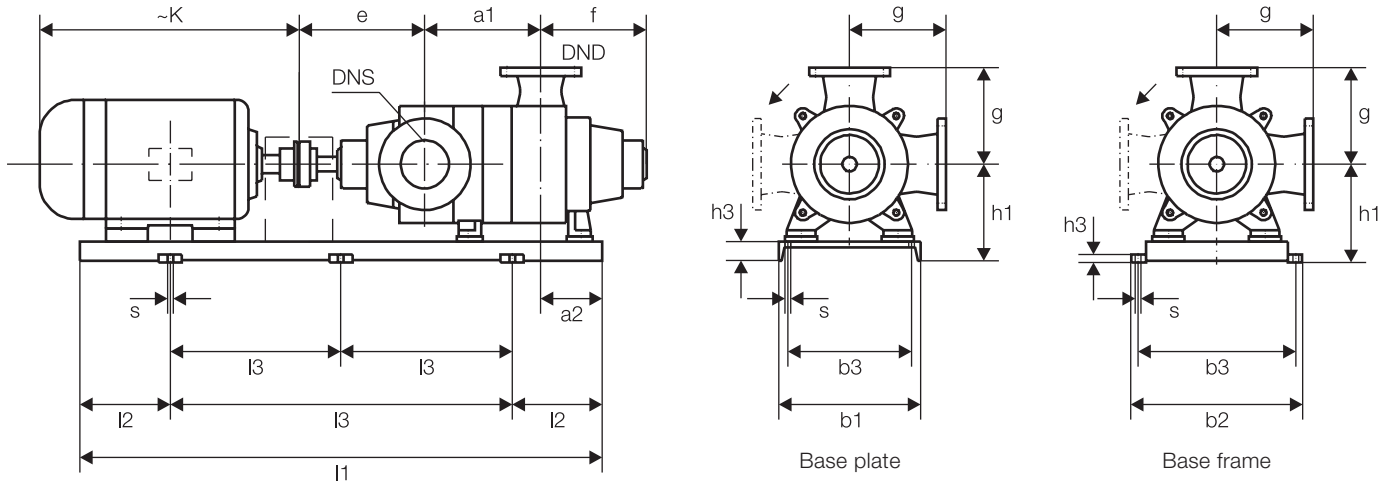
# Dimensions

## Arrangement E1

Type	Stages	Motor size	Poles	Code	DNS	DND	I1	I2	I3	a2	f	a1	e	~K
							b1	b2	b3	h3	h1	g	s	
125-250	14	280M	4	HU288	150	125	2780	330	1060	190	327	1350	390	1145
							-	730	690	40	442	300	26	
125-250	14	315S	4	HU286	150	125	2830	330	1085	190	327	1350	390	1215
							-	790	750	40	477	300	26	
125-250	14	315M	4	HU294	150	125	2900	330	1120	190	327	1350	390	1250
							-	790	750	40	477	300	26	
150-280	1	160L		HU300	200	150	1420	240	940	228	376	194	435	680
							-	580	540	25	360	350	18	
150-280	1	180M		HU301	200	150	1420	240	940	228	376	194	435	715
							-	580	540	25	360	350	18	
150-280	1	180L		HU302	200	150	1620	280	1060	228	376	194	435	755
							-	580	540	25	360	350	18	
150-280	1	315S	2	HU330	200	150	1820	310	1200	228	376	194	435	1175
							-	770	730	25	395	350	18	
150-280	1	315M	2	HU331	200	150	1820	310	1200	228	376	194	435	1220
							-	770	730	25	395	350	18	
150-280	2	200L		HU303	200	150	1620	280	1060	228	376	309	435	805
							-	580	754	25	360	350	18	
150-280	2	225S	4	HU304	200	150	1820	310	1200	228	376	309	435	835
							-	580	540	25	360	350	18	
150-280	2	225M	4	HU305	200	150	1820	310	1200	228	376	309	435	865
							-	580	540	25	360	350	18	
150-280	2	280S	4	HU342	200	150	1820	310	1200	228	376	309	435	1100
							-	700	660	25	365	350	18	
150-280	3	225M	4	HU306	200	150	1820	310	1200	228	376	424	435	865
							-	580	540	25	360	350	18	
150-280	3	250M	4	HU307	200	150	2020	330	680	228	376	424	435	955
							-	630	590	25	375	350	18	
150-280	3	280S	4	HU308	200	150	2020	330	680	228	376	424	435	1100
							-	700	660	25	375	350	18	
150-280	4	250M	4	HU309	200	150	2020	330	680	228	376	539	435	955
							-	630	590	25	375	350	18	
150-280	4	280S	4	HU310	200	150	2020	330	680	228	376	539	435	1100
							-	700	660	25	375	350	18	
150-280	4	280M	4	HU311	200	150	2220	330	780	228	376	539	435	1145
							-	700	660	25	375	350	18	
150-280	5	280S	4	HU312	200	150	2220	330	780	228	376	654	435	1100
							-	700	660	25	375	350	18	
150-280	5	280M	4	HU313	200	150	2220	330	780	228	376	654	435	1145
							-	700	660	25	375	350	18	
150-280	5	315S	4	HU314	200	150	2220	330	780	228	376	654	435	1215
							-	770	730	25	420	350	18	
150-280	6	280M	4	HU315	200	150	2420	330	880	228	376	769	435	1145
							-	700	660	25	385	350	18	
150-280	6	315S	4	HU316	200	150	2420	330	880	228	376	769	435	1215
							-	770	730	25	420	350	18	
150-280	6	315M	4	HU317	200	150	2420	330	880	228	376	769	435	1250
							-	770	730	25	420	350	18	
150-280	7	315S	4	HU318	200	150	2620	330	980	228	376	884	435	1215
							-	770	730	25	420	350	18	

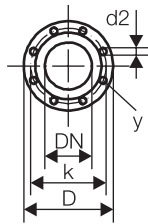
# Dimensions

## Arrangement E1



**Suction and discharge connection**

Flange connections according to EN 1092-2, PN10-40.



y = Number of bores

DN	PN	D	k	d2	y
100	10-16	220	180	18	8
100	25-40	235	190	22	8
125	10-16	250	210	18	8
125	25-40	270	220	26	8
150	10-16	285	240	22	8
150	25-40	300	250	26	8

DN	PN	D	k	d2	y
200	10	340	295	22	8
200	16	340	295	22	12
200	25	360	310	26	12
200	40	375	320	30	12
250	10	395	350	22	12
250	16	405	355	26	12

Type	Stages	Motor size	Poles	Code	DNS	DND	l1	l2	l3	a2	f	a1	e	~K
							b1	b2	b3	h3	h1	g	s	
150-280	7	315M	4	HU319	200	150	2620	330	980	228	376	884	435	1250
							-	770	730	25	420	350	18	
150-280	8	315M	4	HU320	200	150	2620	330	980	228	376	999	435	1250
							-	770	730	25	420	350	18	
150-280	8	315L	4	HU321	200	150	2700	300	1050	223	376	999	435	1376
							-	800	760	40	478	350	28	
150-280	9	315M	4	HU322	200	150	2720	330	1030	228	376	1114	435	1250
							-	790	750	40	477	350	26	
150-280	10	315M	4	HU324	200	150	2840	330	1090	228	376	1229	435	1250
							-	790	750	40	477	350	26	
150-280	11	315M	4	HU327	200	150	2950	330	1145	228	376	1344	435	1250
							-	790	750	40	477	350	26	
200-320	1	200L	4	HU400	250	200	1700	300	1100	294	451	239	514	805
							-	730	690	40	477	400	26	
200-320	1	225S	4	HU401	250	200	1700	300	1100	294	451	239	514	835
							-	730	690	40	477	400	26	
200-320	1	225M	4	HU402	250	200	1800	300	1200	294	451	239	514	865
							-	730	690	40	477	400	26	
200-320	2	250M	4	HU403	250	200	2000	330	1340	294	451	379	514	955
							-	730	690	40	477	400	26	
200-320	2	280S	4	HU404	250	200	2000	330	1340	294	451	379	514	1100
							-	730	690	40	477	400	26	
200-320	2	280M	4	HU405	250	200	2100	330	720	294	451	379	514	1145
							-	730	690	40	477	400	26	

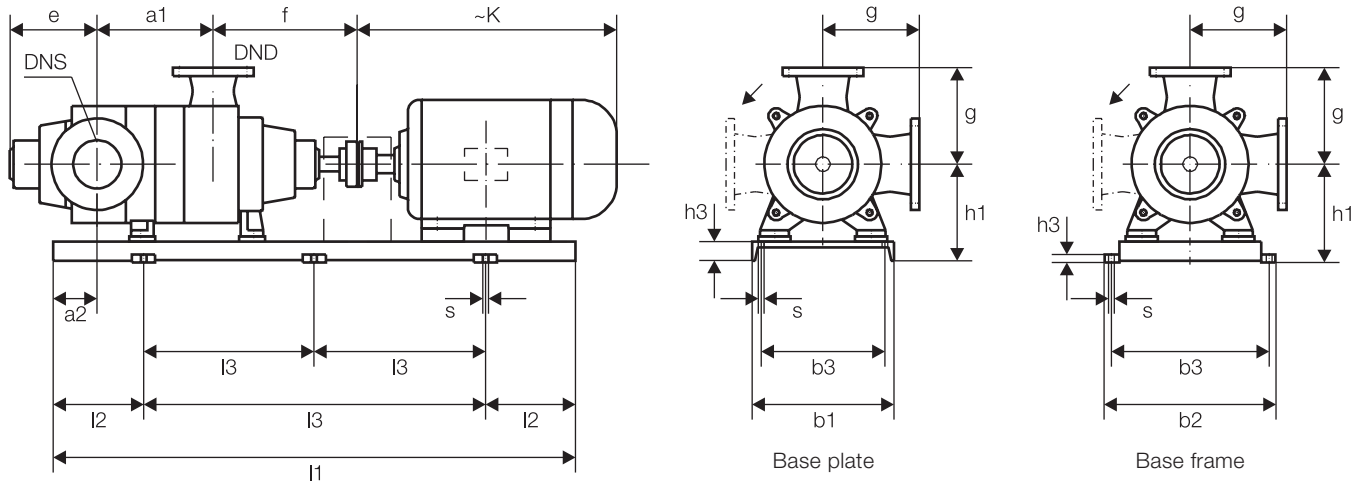
# Dimensions

## Arrangement E1

Type	Stages	Motor size	Poles	Code	DNS	DND	I1	I2	I3	a2	f	a1	e	~K
							b1	b2	b3	h3	h1	g	s	
200-320	3	280S	4	HU406	250	200	2200	330	770	294	451	519	514	1100
							-	730	690	40	477	400	26	
200-320	3	280M	4	HU407	250	200	2200	330	770	294	451	519	514	1145
							-	730	690	40	477	400	26	
200-320	3	315S	4	HU408	250	200	2200	330	770	294	451	519	514	1215
							-	790	750	40	477	400	26	
200-320	3	315M	4	HU409	250	200	2300	330	820	294	451	519	514	1250
							-	790	750	40	477	400	26	
200-320	4	280M	4	HU410	250	200	2300	330	820	294	451	659	514	1145
							-	730	690	40	477	400	26	
200-320	4	315S	4	HU411	250	200	2400	330	870	294	451	659	514	1215
							-	790	750	40	477	400	26	
200-320	4	315M	4	HU412	250	200	2400	330	870	294	451	659	514	1250
							-	790	750	40	477	400	26	
200-320	4	315L	4	HU413	250	200	2500	330	920	294	451	659	514	1376
							-	790	750	40	477	400	26	
200-320	5	315S	4	HU414	250	200	2500	330	920	294	451	799	514	1215
							-	790	750	40	477	400	26	
200-320	5	315M	4	HU415	250	200	2550	330	945	294	451	799	514	1250
							-	790	750	40	477	400	26	
200-320	5	315L	4	HU416	250	200	2600	330	970	294	451	799	514	1376
							-	790	750	40	477	400	26	
200-320	6	315S	4	HU418	250	200	2650	330	995	294	451	939	514	1215
							-	790	750	40	477	400	26	
200-320	6	315M	4	HU419	250	200	2700	330	1020	294	451	939	514	1250
							-	790	750	40	477	400	26	
200-320	6	315L	4	HU423	250	200	2760	330	1050	294	451	939	514	1376
							-	790	750	40	477	400	26	
200-320	7	315M	4	HU425	250	200	2850	330	1095	294	451	1079	514	1250
							-	790	750	40	477	400	26	
200-320	7	315L	4	HU426	250	200	2900	330	1120	294	451	1079	514	1376
							-	790	750	40	477	400	26	
200-320	8	315M	4	HU429	250	200	3000	330	1170	294	451	1219	514	1250
							-	790	750	40	477	400	26	
200-320	8	315L	4	HU430	250	200	3050	330	1195	294	451	1219	514	1376
							-	790	750	40	477	400	26	
200-320	9	315L	4	HU434	250	200	3150	330	1245	294	451	1359	514	1376
							-	790	750	40	477	400	26	
200-320	10	315L	4	HU439	250	200	3300	330	1320	294	451	1359	514	1376
							-	790	750	40	477	400	26	
200-320	11	315L	4	HU445	250	200	3450	330	1395	294	451	1639	514	1376
							-	790	750	40	477	400	26	
200-320	12	315L	4	HU451	250	200	3600	330	1470	294	451	1779	514	1376
							-	790	750	40	477	400	26	

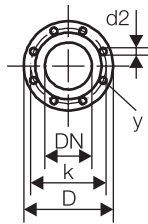
# Dimensions

## Arrangement E2, E3



**Suction and discharge connection**

Flange connections according to EN 1092-2, PN10-40.



y = Number of bores

DN	PN	D	k	d2	y
100	10-16	220	180	18	8
100	25-40	235	190	22	8
125	10-16	250	210	18	8
125	25-40	270	220	26	8
150	10-16	285	240	22	8
150	25-40	300	250	26	8

DN	PN	D	k	d2	y
200	10	340	295	22	8
200	16	340	295	22	12
200	25	360	310	26	12
200	40	375	320	30	12
250	10	395	350	22	12
250	16	405	355	26	12

Type	Stages	Motor size	Poles	Code	DNS	DND	l1	l2	l3	a2	f	a1	e	~K
							b1	b2	b3	h3	h1	g	s	
100-230	1	100L		HN165/2N	125	100	1100	20	1060	90	411	144	246	403
							400	-	320	110	310	250	18	
100-230	1	112M		HN166/2N	125	100	1100	20	1060	90	411	144	246	403
							400	-	320	110	310	250	18	
100-230	1	132S		HN167/2N	125	100	1100	20	1060	90	411	144	246	473
							400	-	320	110	310	250	18	
100-230	1	132M		HN168/2N	125	100	1100	20	1060	90	411	144	246	528
							400	-	320	110	310	250	18	
100-230	1	200L		HN169/2	125	100	1400	20	1360	90	411	144	246	805
							400	-	320	110	310	250	18	
100-230	1	225M	2	HU170/2	125	100	1270	215	840	68	411	144	246	875
							-	580	540	25	300	250	18	
100-230	2	132M		HN100/2N	125	100	1200	20	1160	78	411	221	246	528
							400	-	320	110	310	250	18	
100-230	2	160M		HN101/2	125	100	1300	20	1260	78	411	221	246	650
							400	-	320	110	310	250	18	
100-230	2	160L		HN102/2	125	100	1300	20	1260	78	411	221	246	680
							400	-	320	110	310	250	18	
100-230	2	225M	2	HU174/2	125	100	1420	240	940	78	411	221	246	875
							-	580	540	25	300	250	18	
100-230	2	250M	2	HU151/2	125	100	1620	280	1060	78	411	221	246	995
							-	630	590	25	330	250	18	
100-230	2	280S	2	HU152/2	125	100	1620	280	1060	78	411	221	246	1080
							-	700	660	25	360	250	18	

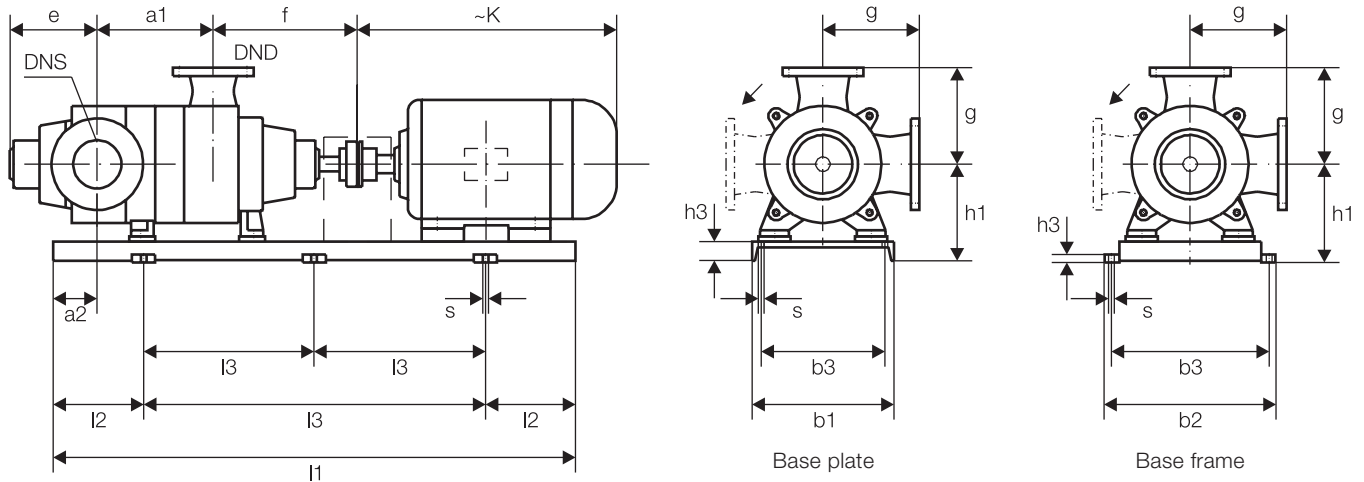
# Dimensions

## Arrangement E2, E3

Type	Stages	Motor size	Poles	Code	DNS	DND	I1	I2	I3	a2	f	a1	e	~K
							b1	b2	b3	h3	h1	g	s	
100-230	2	280M	2	HU153/2	125	100	1620	280	1060	78	411	221	246	1130
							-	700	660	25	360	250	18	
100-230	3	160M		HN103/2	125	100	1400	20	1360	78	411	298	246	650
							400	-	320	110	310	250	18	
100-230	3	160L		HN104/2	125	100	1400	20	1360	78	411	298	246	680
							400	-	320	110	310	250	18	
100-230	3	180M		HN105/2	125	100	1400	20	1360	78	411	298	246	715
							400	-	320	110	310	250	18	
100-230	3	180L		HN171/2	125	100	1400	20	1360	78	411	298	246	755
							400	-	320	110	310	250	18	
100-230	3	280S	2	HU154/2	125	100	1620	280	1060	78	411	298	246	1080
							-	700	660	25	360	250	18	
100-230	3	280M	2	HU155/2	125	100	1620	280	1060	78	411	298	246	1130
							-	700	660	25	360	250	18	
100-230	3	315S	2	HU156/2	125	100	1820	310	1200	78	411	298	246	1175
							-	780	730	25	395	250	18	
100-230	3	315M	2	HU157/2	125	100	1820	310	1200	78	411	298	246	1220
							-	780	730	25	395	250	18	
100-230	4	160L		HN106/2	125	100	1500	20	1460	78	411	375	246	680
							400	-	320	110	310	250	18	
100-230	4	180M		HN107/2	125	100	1500	20	1460	78	411	375	246	715
							400	-	320	110	310	250	18	
100-230	4	180L		HN108/2	125	100	1500	20	1460	78	411	375	246	755
							400	-	320	110	310	250	18	
100-230	4	200L		HN109/2	125	100	1600	20	1560	78	411	375	246	805
							400	-	320	110	310	250	18	
100-230	4	280S	2	HU163/2	125	100	1820	310	1200	78	411	375	246	1080
							-	700	660	25	360	250	18	
100-230	4	280M	2	HU177/2	125	100	1820	310	1200	78	411	375	246	1130
							-	700	660	25	360	250	18	
100-230	4	315S	2	HU158/2	125	100	1820	310	1200	78	411	375	246	1175
							-	780	730	25	395	250	18	
100-230	4	315M	2	HU159/2	125	100	1820	310	1200	78	411	375	246	1220
							-	780	730	25	395	250	18	
100-230	4	315L	2	HU173/2	125	100	1820	310	1200	78	411	375	246	1345
							-	780	730	25	395	250	18	
100-230	5	180M		HN110/2	125	100	1600	20	1560	78	411	452	246	715
							400	-	320	110	310	250	18	
100-230	5	180L		HN111/2	125	100	1600	20	1560	78	411	452	246	755
							400	-	320	110	310	250	18	
100-230	5	200L		HN112/2	125	100	1600	20	1560	78	411	452	246	805
							400	-	320	110	310	250	18	
100-230	5	315M	2	HU160/2	125	100	2020	330	680	78	411	452	246	1220
							-	780	730	25	420	250	18	
100-230	5	315L	2	HU161/2	125	100	2020	330	680	78	411	452	246	1345
							-	780	730	25	420	250	18	
100-230	6	180L		HN113/2	125	100	1700	20	1660	78	411	529	246	755
							400	-	320	110	310	250	18	
100-230	6	200L		HN114/2	125	100	1700	20	1660	78	411	529	246	805
							400	-	320	110	310	250	18	

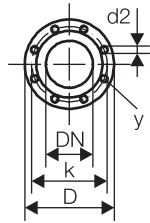
# Dimensions

## Arrangement E2, E3



**Suction and discharge connection**

Flange connections according to EN 1092-2, PN10-40.



y = Number of bores

DN	PN	D	k	d2	y
100	10-16	220	180	18	8
100	25-40	235	190	22	8
125	10-16	250	210	18	8
125	25-40	270	220	26	8
150	10-16	285	240	22	8
150	25-40	300	250	26	8

DN	PN	D	k	d2	y
200	10	340	295	22	8
200	16	340	295	22	12
200	25	360	310	26	12
200	40	375	320	30	12
250	10	395	350	22	12
250	16	405	355	26	12

Type	Stages	Motor size	Poles	Code	DNS	DND	l1	l2	l3	a2	f	a1	e	~K
							b1	b2	b3	h3	h1	g	s	
100-230	6	225S	4	HU115/2	125	100	1820	310	1200	78	411	529	246	835
							-	580	540	25	300	250	18	
100-230	7	200L		HN116/2	125	100	1800	20	1760	78	411	606	246	805
							400	-	320	110	310	250	18	
100-230	7	225S	4	HU117/2	125	100	1820	310	1200	78	411	606	246	835
							-	580	540	25	300	250	18	
100-230	7	225M	4	HU118/2	125	100	1820	310	1200	78	411	606	246	865
							-	580	540	25	300	250	18	
100-230	8	200L		HU119/2	125	100	1820	310	1200	78	411	683	246	805
							-	530	490	25	280	250	18	
100-230	8	225S	4	HU120/2	125	100	1820	310	1200	78	411	683	246	835
							-	580	540	25	300	250	18	
100-230	8	225M	4	HU121/2	125	100	2020	330	680	78	411	683	246	865
							-	580	540	25	315	250	18	
100-230	9	200L		HU122/2	125	100	2020	330	680	78	411	760	246	805
							-	530	490	25	285	250	18	
100-230	9	225S	4	HU123/2	125	100	2020	330	680	78	411	760	246	835
							-	580	540	25	315	250	18	
100-230	9	225M	4	HU124/2	125	100	2020	330	680	78	411	760	246	865
							-	580	540	25	315	250	18	
100-230	9	250M	4	HU125/2	125	100	2020	330	680	78	411	760	246	955
							-	630	590	25	345	250	18	
100-230	10	200L		HU126/2	125	100	2020	330	680	78	411	837	246	805
							-	530	490	25	285	250	18	

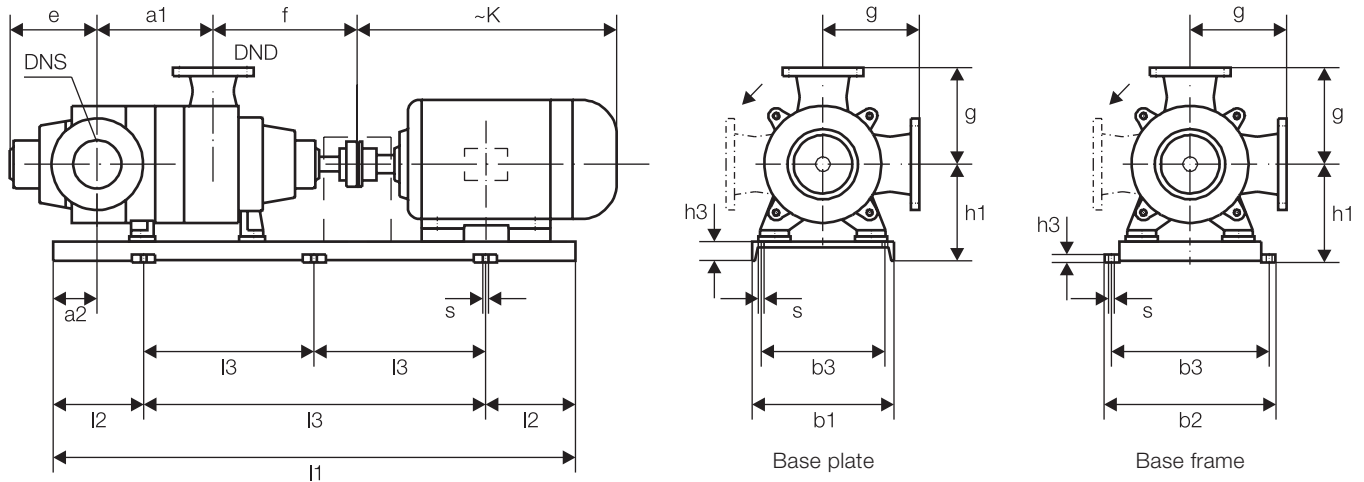
# Dimensions

## Arrangement E2, E3

Type	Stages	Motor size	Poles	Code	DNS	DND	l1	l2	l3	a2	f	a1	e	~K
							b1	b2	b3	h3	h1	g	s	
100-230	10	225S	4	HU127/2	125	100	2020	330	680	78	411	837	246	835
							-	580	540	25	315	250	18	
100-230	10	225M	4	HU128/2	125	100	2020	330	680	78	411	837	246	865
							-	580	540	25	315	250	18	
100-230	10	250M	4	HU129/2	125	100	2220	330	780	78	411	837	246	955
							-	630	590	25	345	250	18	
100-230	11	225S	4	HU130/2	125	100	2220	330	780	78	411	914	246	835
							-	580	540	25	315	250	18	
100-230	11	225M	4	HU131/2	125	100	2220	330	780	78	411	914	246	865
							-	580	540	25	315	250	18	
100-230	11	250M	4	HU132/2	125	100	2220	330	780	78	411	914	246	955
							-	630	590	25	345	250	18	
100-230	11	280S	4	HU133/2	125	100	2220	330	780	78	411	914	246	1100
							-	700	660	25	375	250	18	
100-230	12	225S	4	HU134/2	125	100	2220	330	780	78	411	991	246	835
							-	580	540	25	315	250	18	
100-230	12	225M	4	HU135/2	125	100	2220	330	780	78	411	991	246	865
							-	580	540	25	315	250	18	
100-230	12	250M	4	HU136/2	125	100	2220	330	780	78	411	991	246	955
							-	630	590	25	345	250	18	
100-230	12	280S	4	HU137/2	125	100	2420	330	880	78	411	991	246	1100
							-	700	660	25	385	250	18	
100-230	13	225M	4	HU138/2	125	100	2420	330	880	78	411	1068	246	865
							-	580	540	25	315	250	18	
100-230	13	250M	4	HU139/2	125	100	2420	330	880	78	411	1068	246	955
							-	630	590	25	345	250	18	
100-230	13	280S	4	HU140/2	125	100	2420	330	880	78	411	1068	246	1100
							-	700	660	25	385	250	18	
100-230	14	225M	4	HU141/2	125	100	2420	330	880	78	411	1145	246	865
							-	580	540	25	315	250	18	
100-230	14	250M	4	HU142/2	125	100	2420	330	880	78	411	1145	246	955
							-	630	590	25	345	250	18	
100-230	14	280S	4	HU143/2	125	100	2420	330	880	78	411	1145	246	1100
							-	700	660	25	385	250	18	
100-230	15	250M	4	HU144/2	125	100	2620	330	980	78	411	1222	246	955
							-	630	590	25	345	250	18	
100-230	15	280S	4	HU145/2	125	100	2620	330	980	78	411	1222	246	1100
							-	700	660	25	375	250	18	
100-230	15	280M	4	HU146/2	125	100	2620	330	980	78	411	1222	246	1145
							-	700	660	25	375	250	18	
100-230	16	250M	4	HU147/2	125	100	2620	330	980	78	411	1299	246	955
							-	630	590	25	345	250	18	
100-230	16	280S	4	HU148/2	125	100	2600	330	970	78	411	1299	246	1100
							-	700	660	40	442	250	18	
100-230	16	280M	4	HU149/2	125	100	2620	330	980	78	411	1299	246	1145
							-	700	660	40	442	250	18	
100-230	16	315S	4	HU150/2	125	100	2670	330	1005	78	411	1299	246	1215
							-	790	750	40	477	250	26	
125-250	1	112M		HN275/2N	150	125	1100	20	1060	55	446	180	271	403
							400	-	320	110	335	300	18	

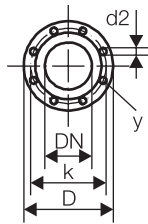
# Dimensions

## Arrangement E2, E3



**Suction and discharge connection**

Flange connections according to EN 1092-2, PN10-40.



y = Number of bores

DN	PN	D	k	d2	y
100	10-16	220	180	18	8
100	25-40	235	190	22	8
125	10-16	250	210	18	8
125	25-40	270	220	26	8
150	10-16	285	240	22	8
150	25-40	300	250	26	8

DN	PN	D	k	d2	y
200	10	340	295	22	8
200	16	340	295	22	12
200	25	360	310	26	12
200	40	375	320	30	12
250	10	395	350	22	12
250	16	405	355	26	12

Type	Stages	Motor size	Poles	Code	DNS	DND	l1	l2	l3	a2	f	a1	e	~K
							b1	b2	b3	h3	h1	g	s	
125-250	1	132S		HN276/2N	150	125	1200	20	1160	55	446	180	271	473
							400	-	320	110	335	300	18	
125-250	1	132M		HN277/2N	150	125	1200	20	1160	55	446	180	271	528
							400	-	320	110	335	300	18	
125-250	1	160M		HN278/2N	150	125	1400	20	1360	55	446	180	271	650
							400	-	320	110	335	300	18	
125-250	1	160L		HN279/2N	150	125	1400	20	1360	55	446	180	271	680
							400	-	320	110	335	300	18	
125-250	1	200L		HN280/2	150	125	1400	20	1360	55	446	180	271	805
							400	-	320	110	335	300	18	
125-250	1	225M	2	HU281/2	150	125	1420	240	940	100	446	180	271	875
							-	580	540	25	305	300	18	
125-250	1	250M	2	HU282/2	150	125	1620	280	1060	100	446	180	271	995
							-	630	590	25	325	300	18	
125-250	1	280S	2	HU283/2	150	125	1620	280	1060	100	446	180	271	1080
							-	700	660	25	360	300	18	
125-250	2	132M		HN200/2N	150	125	1200	20	1160	55	446	270	271	528
							400	-	320	110	313	300	18	
125-250	2	160M		HN201/2N	150	125	1500	20	1460	55	446	270	271	650
							400	-	320	110	335	300	18	
125-250	2	160L		HN202/2N	150	125	1500	20	1460	55	446	270	271	680
							400	-	320	110	335	300	18	
125-250	2	180M		HN203/2N	150	125	1500	20	1460	55	446	270	271	715
							400	-	320	110	335	300	18	



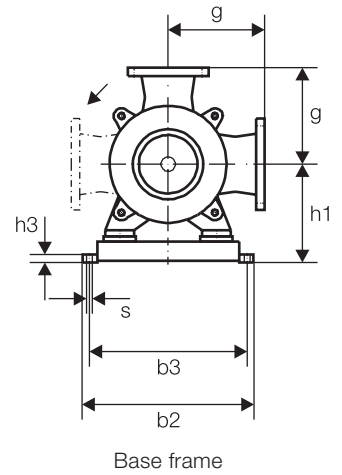
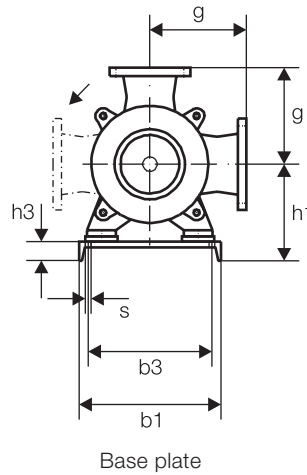
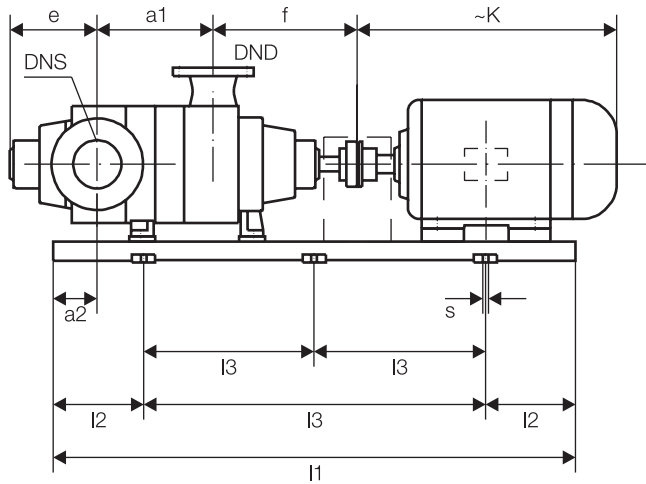
# Dimensions

## Arrangement E2, E3

Type	Stages	Motor size	Poles	Code	DNS	DND	I1	I2	I3	a2	f	a1	e	~K
							b1	b2	b3	h3	h1	g	s	
125-250	2	250M	2	HU255/2	150	125	1620	280	1060	100	446	270	271	995
							-	630	590	25	325	300	18	
125-250	2	280S	2	HU256/2	150	125	1620	280	1060	100	446	270	271	1080
							-	700	660	25	360	300	18	
125-250	2	280M	2	HU257/2	150	125	1820	310	1200	100	446	270	271	1130
							-	700	660	25	360	300	18	
125-250	2	315S	2	HU258/2	150	125	1820	310	1200	100	446	270	271	1175
							-	780	730	25	395	300	18	
125-250	2	315M	2	HU259/2	150	125	1820	310	1200	100	446	270	271	1220
							-	780	730	25	395	300	18	
125-250	3	160L		HN204/2N	150	125	1600	20	1560	55	446	360	271	680
							400	-	320	110	335	300	18	
125-250	3	180M		HN205/2N	150	125	1600	20	1560	55	446	360	271	715
							400	-	320	110	335	300	18	
125-250	3	180L		HN206/2N	150	125	1600	20	1560	55	446	360	271	755
							400	-	320	110	335	300	18	
125-250	3	200L		HU207/2	150	125	1620	280	1060	100	446	360	271	805
							-	530	490	25	300	300	18	
125-250	3	225S	4	HU208/2	150	125	1620	280	1060	100	446	360	271	835
							-	580	540	25	305	300	18	
125-250	3	280M	2	HU260/2	150	125	1820	310	1200	100	446	360	271	1130
							-	700	660	25	360	300	18	
125-250	3	315S	2	HU261/2	150	125	1820	310	1200	100	446	360	271	1175
							-	780	730	25	395	300	18	
125-250	3	315M	2	HU262/2	150	125	1820	310	1200	100	446	360	271	1220
							-	780	730	25	395	300	18	
125-250	3	315L	2	HU263/2	150	125	2020	330	1360	100	446	360	271	1345
							-	780	730	25	420	300	18	
125-250	4	180M		HN209/2N	150	125	1700	20	1660	55	446	450	271	715
							400	-	320	110	335	300	18	
125-250	4	180L		HN210/2N	150	125	1700	20	1660	55	446	450	271	755
							400	-	320	110	335	300	18	
125-250	4	200L		HU211/2	150	125	1620	280	1060	100	446	450	271	805
							-	530	490	25	300	300	18	
125-250	4	225S	4	HU212/2	150	125	1820	310	1200	100	446	450	271	835
							-	580	540	25	305	300	18	
125-250	4	225M	4	HU213/2	150	125	1820	310	1200	100	446	450	271	865
							-	580	540	25	305	300	18	
125-250	4	315S	2	HU265/2	150	125	2020	330	680	100	446	450	271	1175
							-	780	730	25	420	300	18	
125-250	4	315M	2	HU266/2	150	125	2020	330	680	100	446	450	271	1220
							-	780	730	25	420	300	18	
125-250	5	180L		HN214/2N	150	125	1800	20	1760	55	446	540	271	755
							400	-	320	110	335	300	18	
125-250	5	200L		HU215/2	150	125	1820	310	1200	100	446	540	271	805
							-	530	490	25	300	300	18	
125-250	5	225S	4	HU216/2	150	125	1820	310	1200	100	446	540	271	835
							-	580	540	25	305	300	18	
125-250	5	225M	4	HU217/2	150	125	1820	310	1200	100	446	540	271	865
							-	580	540	25	305	300	18	

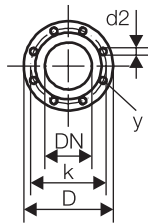
# Dimensions

## Arrangement E2, E3



**Suction and discharge connection**

Flange connections according to EN 1092-2, PN10-40.



y = Number of bores

DN	PN	D	k	d2	y
100	10-16	220	180	18	8
100	25-40	235	190	22	8
125	10-16	250	210	18	8
125	25-40	270	220	26	8
150	10-16	285	240	22	8
150	25-40	300	250	26	8

DN	PN	D	k	d2	y
200	10	340	295	22	8
200	16	340	295	22	12
200	25	360	310	26	12
200	40	375	320	30	12
250	10	395	350	22	12
250	16	405	355	26	12

Type	Stages	Motor size	Poles	Code	DNS	DND	l1	l2	l3	a2	f	a1	e	~K
							b1	b2	b3	h3	h1	g	s	
125-250	5	250M	4	HU218/2	150	125	1820	310	1200	100	446	540	271	955
							-	630	590	25	325	300	18	
125-250	5	315M	2	HU270/2	150	125	2020	330	680	100	446	540	271	1220
							-	780	730	25	420	300	18	
125-250	6	200L		HU219/2	150	125	1820	310	1200	100	446	630	271	805
							-	530	490	25	300	300	18	
125-250	6	225S	4	HU220/2	150	125	1820	310	1200	100	446	630	271	835
							-	580	540	25	305	300	18	
125-250	6	225M	4	HU221/2	150	125	2020	330	680	100	446	630	271	865
							-	580	540	25	320	300	18	
125-250	6	250M	4	HU222/2	150	125	2020	330	680	100	446	630	271	955
							-	630	590	25	340	300	18	
125-250	6	280S	4	HU223/2	150	125	2020	330	680	100	446	630	271	1100
							-	700	660	25	375	300	18	
125-250	7	200L		HU224/2	150	125	2020	330	680	100	446	720	271	805
							-	530	490	25	305	300	18	
125-250	7	225S	4	HU225/2	150	125	2020	330	680	100	446	720	271	835
							-	580	540	25	320	300	18	
125-250	7	225M	4	HU226/2	150	125	2020	330	680	100	446	720	271	865
							-	580	540	25	320	300	18	
125-250	7	250M	4	HU227/2	150	125	2020	330	680	100	446	720	271	955
							-	630	590	25	340	300	18	
125-250	7	280S	4	HU228/2	150	125	2020	330	780	100	446	720	271	1100
							-	700	660	25	375	300	18	

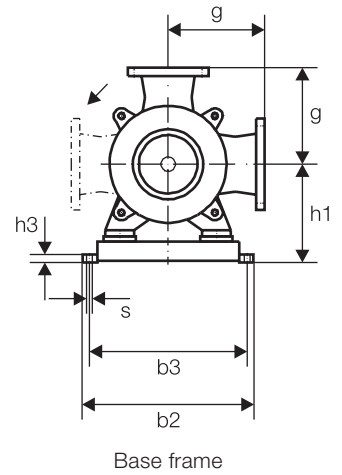
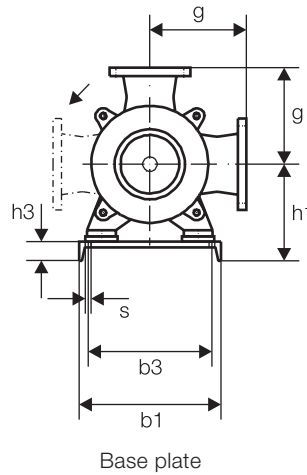
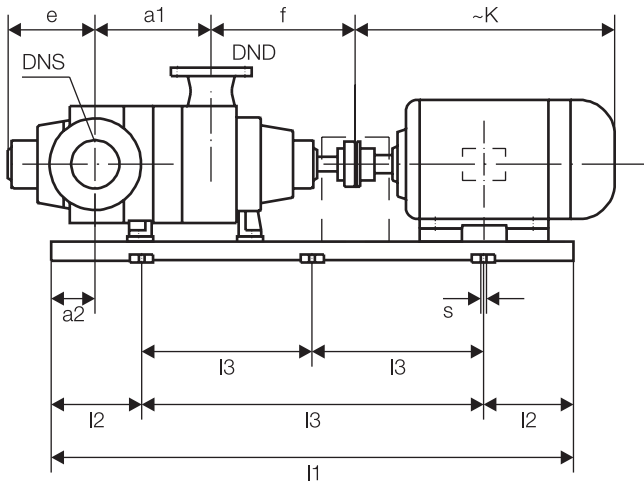
# Dimensions

## Arrangement E2, E3

Type	Stages	Motor size	Poles	Code	DNS	DND	I1	I2	I3	a2	f	a1	e	~K
							b1	b2	b3	h3	h1	g	s	
125-250	8	225S	4	HU229/2	150	125	2020	330	680	100	446	810	271	835
							-	580	540	25	320	300	18	
125-250	8	225M	4	HU230/2	150	125	2220	330	780	100	446	810	271	865
							-	580	540	25	320	300	18	
125-250	8	250M	4	HU231/2	150	125	2220	330	780	100	446	810	271	955
							-	630	590	25	340	300	18	
125-250	8	280S	4	HU232/2	150	125	2220	330	780	100	446	810	271	1100
							-	700	660	25	375	300	18	
125-250	8	280M	4	HU233/2	150	125	2220	330	780	100	446	810	271	1145
							-	700	660	25	375	300	18	
125-250	9	225S	4	HU234/2	150	125	2220	330	780	100	446	900	271	835
							-	580	540	25	320	300	18	
125-250	9	225M	4	HU235/2	150	125	2220	330	780	100	446	900	271	865
							-	580	540	25	320	300	18	
125-250	9	250M	4	HU236/2	150	125	2220	330	780	100	446	900	271	955
							-	630	590	25	340	300	18	
125-250	9	280S	4	HU237/2	150	125	2220	330	780	100	446	900	271	1100
							-	700	660	25	375	300	18	
125-250	9	280M	4	HU238/2	150	125	2420	330	880	100	446	900	271	1145
							-	700	660	25	385	300	18	
125-250	10	225M	4	HU239/2	150	125	2220	330	780	100	446	990	271	865
							-	580	540	25	320	300	18	
125-250	10	250M	4	HU240/2	150	125	2420	330	880	100	446	990	271	955
							-	630	590	25	340	300	18	
125-250	10	280S	4	HU241/2	150	125	2420	330	880	100	446	990	271	1100
							-	700	660	25	385	300	18	
125-250	10	280M	4	HU242/2	150	125	2420	330	880	100	446	880	271	1145
							-	700	660	25	385	300	18	
125-250	10	315S	4	HU243/2	150	125	2420	330	880	100	446	990	271	1215
							-	780	730	25	420	300	18	
125-250	11	225M	4	HU244/2	150	125	2420	330	880	100	446	1080	271	865
							-	580	540	25	320	300	18	
125-250	11	250M	4	HU245/2	150	125	2420	330	880	100	446	1080	271	955
							-	630	590	25	340	300	18	
125-250	11	280S	4	HU246/2	150	125	2420	330	880	100	446	1080	271	1100
							-	700	660	25	385	300	18	
125-250	11	280M	4	HU247/2	150	125	2620	330	980	100	446	1080	271	1145
							-	700	660	25	375	300	18	
125-250	11	315S	4	HU248/2	150	125	2620	330	980	100	446	1080	271	1215
							-	780	730	25	420	300	18	
125-250	12	250M	4	HU249/2	150	125	2620	330	980	100	446	1170	271	955
							-	630	590	25	340	300	18	
125-250	12	280S	4	HU250/2	150	125	2620	330	980	100	446	1170	271	1100
							-	700	660	25	375	300	18	
125-250	12	280M	4	HU251/2	150	125	2620	330	980	100	446	1170	271	1145
							-	700	660	25	375	300	18	
125-250	12	315S	4	HU252/2	150	125	2620	330	980	100	446	1170	271	1215
							-	790	750	40	477	300	26	
125-250	13	250M	4	HU290/2	150	125	2620	330	980	100	446	1260	271	955
							-	630	590	25	340	300	18	

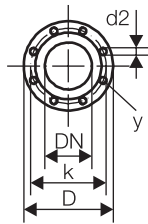
# Dimensions

## Arrangement E2, E3



**Suction and discharge connection**

Flange connections according to EN 1092-2, PN10-40.



y = Number of bores

DN	PN	D	k	d2	y
100	10-16	220	180	18	8
100	25-40	235	190	22	8
125	10-16	250	210	18	8
125	25-40	270	220	26	8
150	10-16	285	240	22	8
150	25-40	300	250	26	8

DN	PN	D	k	d2	y
200	10	340	295	22	8
200	16	340	295	22	12
200	25	360	310	26	12
200	40	375	320	30	12
250	10	395	350	22	12
250	16	405	355	26	12

Type	Stages	Motor size	Poles	Code	DNS	DND	l1	l2	l3	a2	f	a1	e	~K
							b1	b2	b3	h3	h1	g	s	
125-250	13	280S	4	HU291/2	150	125	2620	330	980	100	446	1260	271	1100
							-	700	660	25	375	300	18	
125-250	13	280M	4	HU287/2	150	125	2660	330	1000	100	446	1260	271	1145
							-	730	690	40	442	300	26	
125-250	13	315S	4	HU285/2	150	125	2700	330	1020	100	446	1260	271	1215
							-	790	750	40	477	300	26	
125-250	13	315M	4	HU293/2	150	125	2750	330	1045	100	446	1260	271	1250
							-	790	750	40	477	300	R14	
125-250	14	280S	4	HU292/2	150	125	2700	330	1020	100	446	1350	271	1100
							-	730	690	40	442	300	26	
125-250	14	280M	4	HU288/2	150	125	2740	330	1020	100	446	1350	271	1145
							-	730	690	40	442	300	26	
125-250	14	315S	4	HU286/2	150	125	2800	330	1070	100	446	1350	271	1215
							-	790	750	40	477	300	26	
125-250	14	315M	4	HU294/2	150	125	2850	330	1095	100	446	1350	271	1250
							-	790	750	40	477	300	R14	
150-280	1	160L		HU300/2	200	150	1420	240	940	110	495	194	316	680
							-	580	540	25	360	350	18	
150-280	1	180M		HU301/2	200	150	1420	240	940	110	495	194	316	715
							-	590	540	25	360	350	18	
150-280	1	180L		HU302/2	200	150	1420	240	940	110	495	194	316	755
							-	580	540	25	360	350	18	
150-280	1	280S	2	HU344/2	200	150	1620	280	1060	110	495	194	316	1080
							-	700	660	25	365	350	18	

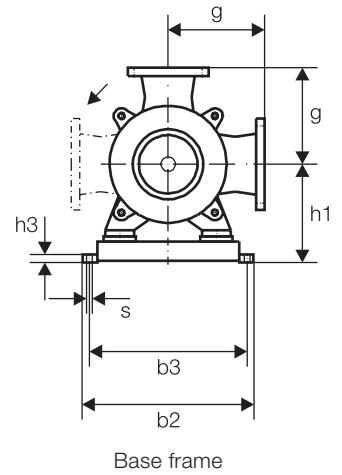
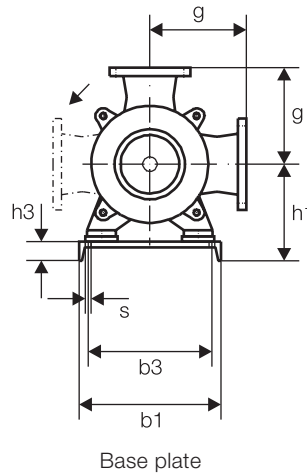
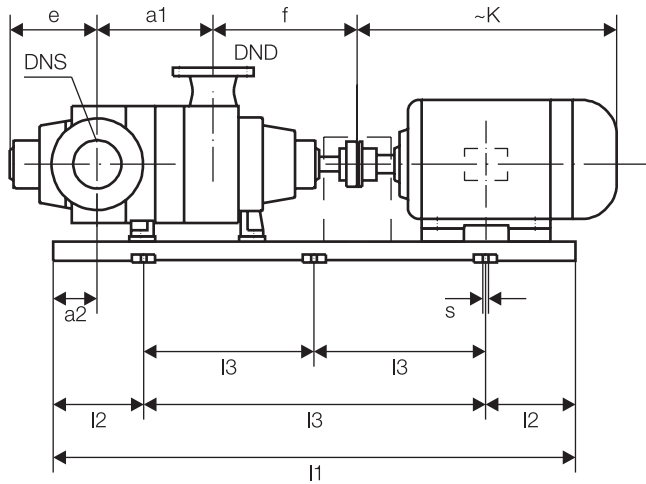
# Dimensions

## Arrangement E2, E3

Type	Stages	Motor size	Poles	Code	DNS	DND	l1	l2	l3	a2	f	a1	e	~K
							b1	b2	b3	h3	h1	g	s	
150-280	1	315S	2	HU330/2	200	150	1820	310	1200	110	495	194	316	1175
							-	780	730	25	395	350	18	
150-280	1	315M	2	HU331/2	200	150	1820	310	1200	110	495	194	316	1220
							-	780	730	25	395	350	18	
150-280	2	200L		HU303/2	200	150	1620	280	1060	110	495	309	316	805
							-	580	540	25	360	350	18	
150-280	2	225S	4	HU304/2	200	150	1620	280	1060	110	495	309	316	835
							-	590	540	25	360	350	18	
150-280	2	225M	4	HU305/2	200	150	1620	280	1060	110	495	309	316	865
							-	580	540	25	360	350	18	
150-280	3	225M	4	HU306/2	200	150	1820	310	1200	110	495	424	316	865
							-	580	540	25	360	350	18	
150-280	3	250M	4	HU307/2	200	150	1820	310	1200	110	495	424	316	955
							-	630	590	25	360	350	18	
150-280	3	280S	4	HU308/2	200	150	1820	310	1200	110	495	424	316	1100
							-	700	660	25	360	350	18	
150-280	4	250M	4	HU309/2	200	150	2020	330	680	110	495	539	316	955
							-	630	590	25	375	350	18	
150-280	4	280S	4	HU310/2	200	150	2020	330	680	110	495	539	316	1100
							-	700	660	25	375	350	18	
150-280	4	280M	4	HU311/2	200	150	2020	330	680	110	495	539	316	1145
							-	700	660	25	375	350	18	
150-280	5	280S	4	HU312/2	200	150	2220	330	780	110	495	654	316	1100
							-	700	660	25	375	350	18	
150-280	5	280M	4	HU313/2	200	150	2220	330	780	110	495	654	316	1145
							-	700	660	25	375	350	18	
150-280	5	315S	4	HU314/2	200	150	2220	330	780	110	495	654	316	1215
							-	780	730	25	420	350	18	
150-280	6	280M	4	HU315/2	200	150	2220	330	780	110	495	769	316	1145
							-	700	660	25	375	350	18	
150-280	6	315S	4	HU316/2	200	150	2420	330	880	110	495	769	316	1215
							-	780	730	25	420	350	18	
150-280	6	315M	4	HU317/2	200	150	2420	330	880	110	495	769	316	1250
							-	780	730	25	420	350	18	
150-280	7	315S	4	HU318/2	200	150	2420	330	880	110	495	884	316	1215
							-	780	730	25	420	350	18	
150-280	7	315M	4	HU319/2	200	150	2420	330	880	110	495	884	316	1250
							-	780	730	25	420	350	18	
150-280	8	315S	4	HU339/2	200	150	2620	330	980	110	495	999	316	1215
							-	780	730	25	420	350	18	
150-280	8	315M	4	HU320/2	200	150	2620	330	980	110	495	999	316	1250
							-	780	730	25	420	350	18	
150-280	9	315M	4	HU322/2	200	150	2660	330	1000	110	495	1114	316	1250
							-	790	750	40	477	350	26	
150-280	9	315L	4	HU323/2	200	150	2720	330	1030	110	495	1114	316	1376
							-	790	750	40	477	350	R14	
150-280	10	315M	4	HU324/2	200	150	2780	330	1060	110	495	1229	316	1250
							-	790	750	40	477	350	26	
150-280	10	315L	4	HU325/2	200	150	2820	330	1080	110	495	1229	316	1376
							-	790	750	40	482	350	28	

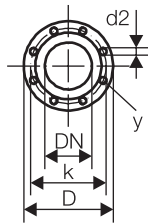
# Dimensions

## Arrangement E2, E3



**Suction and discharge connection**

Flange connections according to EN 1092-2, PN10-40.



y = Number of bores

DN	PN	D	k	d2	y
100	10-16	220	180	18	8
100	25-40	235	190	22	8
125	10-16	250	210	18	8
125	25-40	270	220	26	8
150	10-16	285	240	22	8
150	25-40	300	250	26	8

DN	PN	D	k	d2	y
200	10	340	295	22	8
200	16	340	295	22	12
200	25	360	310	26	12
200	40	375	320	30	12
250	10	395	350	22	12
250	16	405	355	26	12

Type	Stages	Motor size	Poles	Code	DNS	DND	l1	l2	l3	a2	f	a1	e	~K
							b1	b2	b3	h3	h1	g	s	
150-280	11	315M	4	HU327/2	200	150	2900	330	1120	110	495	1344	316	1250
							-	790	750	40	477	350	26	
150-280	11	315L	4	HU328/2	200	150	2950	330	1145	110	495	1344	316	1376
							-	790	750	40	477	350	R14	
200-320	1	200L		HU400/2	250	200	1600	300	1000	90	599	239	366	805
							-	730	690	40	477	400	26	
200-320	1	225S	4	HU401/2	250	200	1600	300	1000	90	599	239	366	835
							-	730	690	40	477	400	26	
200-320	1	225M	4	HU402/2	250	200	1700	300	1100	90	599	239	366	865
							-	730	690	40	477	400	26	
200-320	2	250M	4	HU403/2	250	200	1900	300	1300	90	599	379	366	955
							-	730	690	40	477	400	26	
200-320	2	280S	4	HU404/2	250	200	1900	300	1300	90	599	379	366	1100
							-	730	690	40	477	400	26	
200-320	2	280M	4	HU405/2	250	200	1900	300	1300	90	599	379	366	1145
							-	730	690	40	477	400	26	
200-320	3	280S	4	HU406/2	250	200	2100	330	720	90	599	519	366	1100
							-	730	690	40	477	400	26	
200-320	3	280M	4	HU407/2	250	200	2100	330	720	90	599	519	366	1145
							-	730	690	40	477	400	26	
200-320	3	315S	4	HU408/2	250	200	2100	330	720	90	599	519	366	1215
							-	790	750	40	477	400	26	
200-320	3	315M	4	HU409/2	250	200	2160	330	750	90	599	519	366	1250
							-	790	750	40	477	400	26	

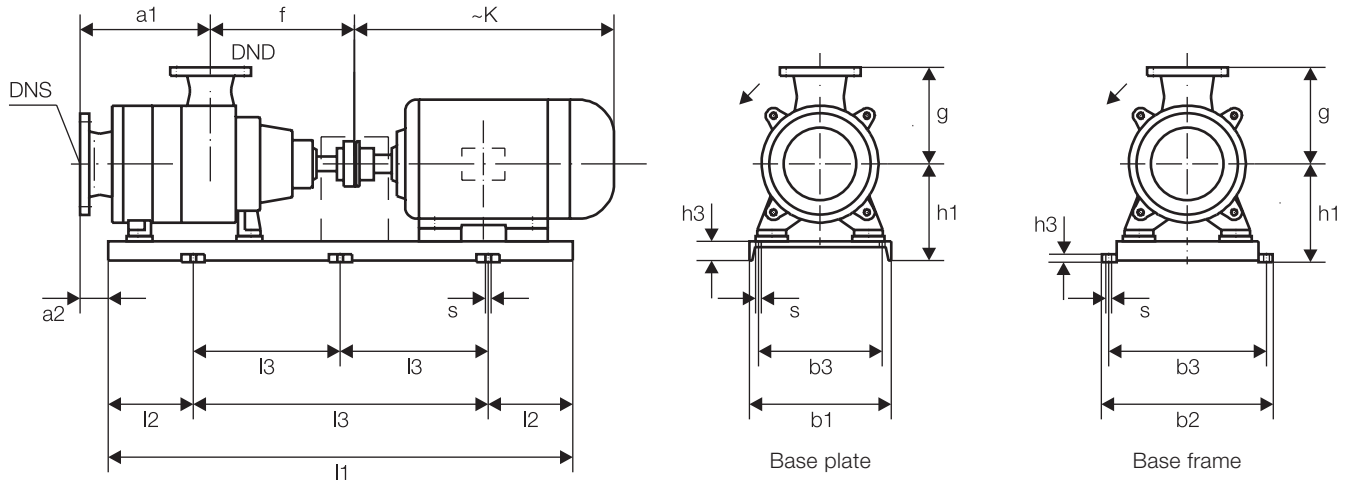
# Dimensions

## Arrangement E2, E3

Type	Stages	Motor size	Poles	Code	DNS	DND	l1	l2	l3	a2	f	a1	e	~K
							b1	b2	b3	h3	h1	g	s	
200-320	4	280M	4	HU410/2	250	200	2240	330	790	90	599	659	366	1145
							-	730	690	40	477	400	26	
200-320	4	315S	4	HU411/2	250	200	2240	330	790	90	599	659	366	1215
							-	790	750	40	477	400	26	
200-320	4	315M	4	HU412/2	250	200	2300	330	820	90	599	659	366	1250
							-	790	750	40	477	400	26	
200-320	4	315L	4	HU413/2	250	200	2360	330	850	90	599	659	366	1376
							-	790	750	40	477	400	26	
200-320	5	315S	4	HU414/2	250	200	2380	330	860	90	599	799	366	1215
							-	790	750	40	477	400	26	
200-320	5	315M	4	HU415/2	250	200	2440	330	890	90	599	799	366	1250
							-	790	750	40	477	400	26	
200-320	5	315L	4	HU416/2	250	200	2500	330	920	90	599	799	366	1376
							-	790	750	40	477	400	26	
200-320	6	315S	4	HU418/2	250	200	2520	330	930	90	599	939	366	1215
							-	790	750	40	477	400	26	
200-320	6	315M	4	HU419/2	250	200	2580	330	960	90	599	939	366	1250
							-	790	750	40	477	400	26	
200-320	6	315L	4	HU423/2	250	200	2640	330	990	90	599	939	366	1376
							-	790	750	40	477	400	26	
200-320	7	315M	4	HU425/2	250	200	2720	330	1030	90	599	1079	366	1250
							-	790	750	40	477	400	26	
200-320	7	315L	4	HU426/2	250	200	2780	330	1060	90	599	1079	366	1376
							-	790	750	40	477	400	26	
200-320	8	315M	4	HU429/2	250	200	2860	330	1100	90	599	1219	366	1250
							-	790	750	40	477	400	26	
200-320	8	315L	4	HU430/2	250	200	2920	330	1130	90	599	1219	366	1376
							-	790	750	40	477	400	26	
200-320	9	315L	4	HU434/2	250	200	3060	330	1200	90	599	1359	366	1376
							-	790	750	40	477	400	26	
200-320	10	315L	4	HU439/2	250	200	3200	330	1270	90	599	1499	366	1376
							-	790	750	40	477	400	26	
200-320	11	315L	4	HU445/2	250	200	3340	330	1340	90	599	1639	366	1376
							-	790	750	40	477	400	26	
200-320	12	315L	4	HU451/2	250	200	3480	330	1410	90	599	1779	366	1376
							-	790	750	40	477	400	26	

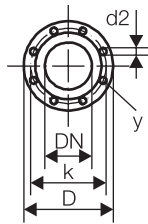
# Dimensions

## Arrangement EX



**Suction and discharge connection**

Flange connections according to EN 1092-2, PN10-40.



DN	PN	D	k	d2	y
100	10-16	220	180	18	8
100	25-40	235	190	22	8
125	10-16	250	210	18	8
125	25-40	270	220	26	8
150	10-16	285	240	22	8
150	25-40	300	250	26	8

DN	PN	D	k	d2	y
200	10	340	295	22	8
200	16	340	295	22	12
200	25	360	310	26	12
200	40	375	320	30	12
250	10	395	350	22	12
250	16	405	355	26	12

y = Number of bores

Type	Stages	Motor size	Poles	Code	DNS	DND	l1	l2	l3	a2	f	a1	~K
							b1	b2	b3	h3	h1	g	s
100-230	2	132M		HN100/1N	125	100	1100	20	1060	62	411	271	525
							400	-	320	110	310	250	18
100-230	2	160M		HN101/1	125	100	1200	20	1160	62	411	271	645
							400	-	320	110	310	250	18
100-230	2	160L		HN102/1	125	100	1200	20	1160	62	411	271	675
							400	-	320	110	310	250	18
100-230	2	225M	2	HU162/1	125	100	1270	215	840	92	411	271	870
							-	580	540	25	300	250	18
100-230	2	250M	2	HU151/1	125	100	1420	240	940	92	411	271	990
							-	630	590	25	330	250	18
100-230	2	280S	2	HU152/1	125	100	1420	240	940	92	411	271	1075
							-	700	660	25	360	250	18
100-230	2	280M	2	HU153/1	125	100	1420	240	940	92	411	271	1125
							-	700	660	25	360	250	18
100-230	3	160M		HN103/1	125	100	1300	20	1260	62	411	348	645
							400	-	320	110	310	250	18
100-230	3	160L		HN104/1	125	100	1300	20	1260	62	411	348	675
							400	-	320	110	310	250	18
100-230	3	180M		HN105/1	125	100	1300	20	1260	62	411	348	710
							400	-	320	110	310	250	18
100-230	3	180L		HN171/1	125	100	1400	20	1360	62	411	348	750
							400	-	320	110	310	250	18
100-230	3	280S	2	HU154/1	125	100	1620	280	1060	92	411	348	1075
							-	700	660	25	360	250	18



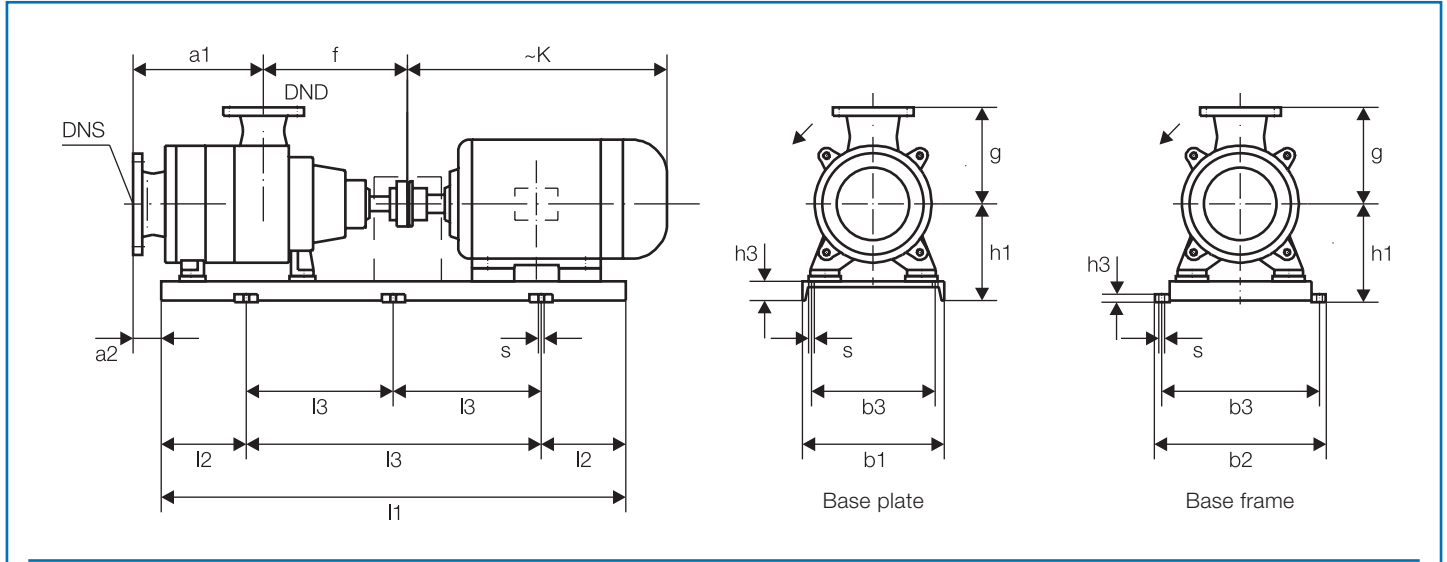
# Dimensions

## Arrangement EX

Type	Stages	Motor size	Poles	Code	DNS	DND	I1	I2	I3	a2	f	a1	~K
							b1	b2	b3	h3	h1	g	s
100-230	3	280M	2	HU155/1	125	100	1620	280	1060	92	411	348	1125
							-	700	660	25	360	250	18
100-230	3	315S	2	HU156/1	125	100	1620	280	1060	92	411	348	1170
							-	770	730	25	395	250	18
100-230	3	315M	2	HU157/1	125	100	1620	280	1060	92	411	348	1215
							-	770	730	25	395	250	18
100-230	4	160L		HN106/1	125	100	1400	20	1360	62	411	425	675
							400	-	320	110	310	250	18
100-230	4	180M		HN107/1	125	100	1400	20	1360	62	411	425	710
							400	-	320	110	310	250	18
100-230	4	180L		HN108/1	125	100	1400	20	1360	62	411	425	750
							400	-	320	110	310	250	18
100-230	4	200L		HN109/1	125	100	1500	20	1460	62	411	425	800
							400	-	320	110	310	250	18
100-230	4	315S	2	HU158/1	125	100	1620	280	1060	92	411	425	1170
							-	770	730	25	395	250	18
100-230	4	315M	2	HU159/1	125	100	1820	310	1200	92	411	425	1215
							-	770	730	25	395	250	18
100-230	5	160L		HN176/1	125	100	1500	20	1460	62	411	502	675
							400	-	320	110	310	250	18
100-230	5	180M		HN110/1	125	100	1500	20	1460	62	411	502	710
							400	-	320	110	310	250	18
100-230	5	180L		HN111/1	125	100	1500	20	1460	62	411	502	750
							400	-	320	110	310	250	18
100-230	5	200L		HN112/2	125	100	1600	20	1560	62	411	502	800
							400	-	320	110	310	250	18
100-230	5	315M	2	HU160/1	125	100	1820	310	1200	92	411	502	1215
							-	770	730	25	395	250	18
100-230	5	315L	2	HU161/1	125	100	1820	310	1200	92	411	502	1370
							-	770	730	25	395	250	18
100-230	6	180L		HN113/1	125	100	1600	20	1560	62	411	579	750
							400	-	320	110	310	250	18
100-230	6	200L		HN114/1	125	100	1600	20	1560	62	411	579	800
							400	-	320	110	310	250	18
100-230	6	225S	4	HN115/1	125	100	1620	280	1060	92	411	579	830
							-	580	540	25	300	250	18
100-230	6	250M	4	HN181/1	125	100	1820	310	1200	92	411	579	950
							-	630	590	25	330	250	18
100-230	7	200L		HU116/1	125	100	1620	280	1060	92	411	656	800
							-	530	490	25	280	250	18
100-230	7	225S	4	HU117/1	125	100	1620	280	1060	92	411	656	830
							-	580	540	25	300	250	18
100-230	7	225M	4	HU118/1	125	100	1820	310	1200	92	411	656	860
							-	580	540	25	300	250	18
100-230	8	200L		HU119/1	125	100	1820	310	1200	92	411	733	800
							-	530	490	25	280	250	18
100-230	8	225S	4	HU120/1	125	100	1820	310	1200	92	411	733	830
							-	580	540	25	300	250	18
100-230	8	225M	4	HU121/1	125	100	1820	310	1200	92	411	733	860
							-	580	540	25	300	250	18

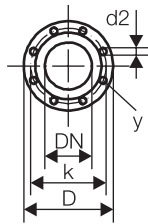
# Dimensions

## Arrangement EX



**Suction and discharge connection**

Flange connections according to EN 1092-2, PN10-40.



DN	PN	D	k	d2	y
100	10-16	220	180	18	8
100	25-40	235	190	22	8
125	10-16	250	210	18	8
125	25-40	270	220	26	8
150	10-16	285	240	22	8
150	25-40	300	250	26	8

DN	PN	D	k	d2	y
200	10	340	295	22	8
200	16	340	295	22	12
200	25	360	310	26	12
200	40	375	320	30	12
250	10	395	350	22	12
250	16	405	355	26	12

y = Number of bores

Type	Stages	Motor size	Poles	Code	DNS	DND	l1	l2	l3	a2	f	a1	~K
							b1	b2	b3	h3	h1	g	s
100-230	9	200L		HU122/1	125	100	1820	310	1200	92	411	810	800
							-	530	490	25	280	250	18
100-230	9	225S	4	HU123/1	125	100	1820	310	1200	92	411	810	830
							-	580	540	25	300	250	18
100-230	9	225M	4	HU124/1	125	100	1820	310	1200	92	411	810	860
							-	580	540	25	300	250	18
100-230	9	250M	4	HU125/1	125	100	2020	330	680	92	411	810	950
							-	630	590	25	345	250	18
100-230	10	200L		HU126/1	125	100	1820	310	1200	92	411	887	800
							-	530	490	25	280	250	18
100-230	10	225S	4	HU127/1	125	100	2020	330	680	92	411	887	830
							-	580	540	25	315	250	18
100-230	10	225M	4	HU128/1	125	100	2020	330	680	92	411	887	860
							-	580	540	25	315	250	18
100-230	10	250M	4	HU129/1	125	100	2020	330	680	92	411	887	950
							-	630	590	25	345	250	18
100-230	11	225S	4	HU130/1	125	100	2020	330	680	92	411	964	830
							-	580	540	25	315	250	18
100-230	11	225M	4	HU131/1	125	100	2020	330	680	92	411	964	860
							-	580	540	25	315	250	18
100-230	11	250M	4	HU132/1	125	100	2220	330	780	92	411	964	950
							-	630	540	25	345	250	18
100-230	11	280S	4	HU133/1	125	100	2220	330	780	92	411	964	1095
							-	700	660	25	375	250	18

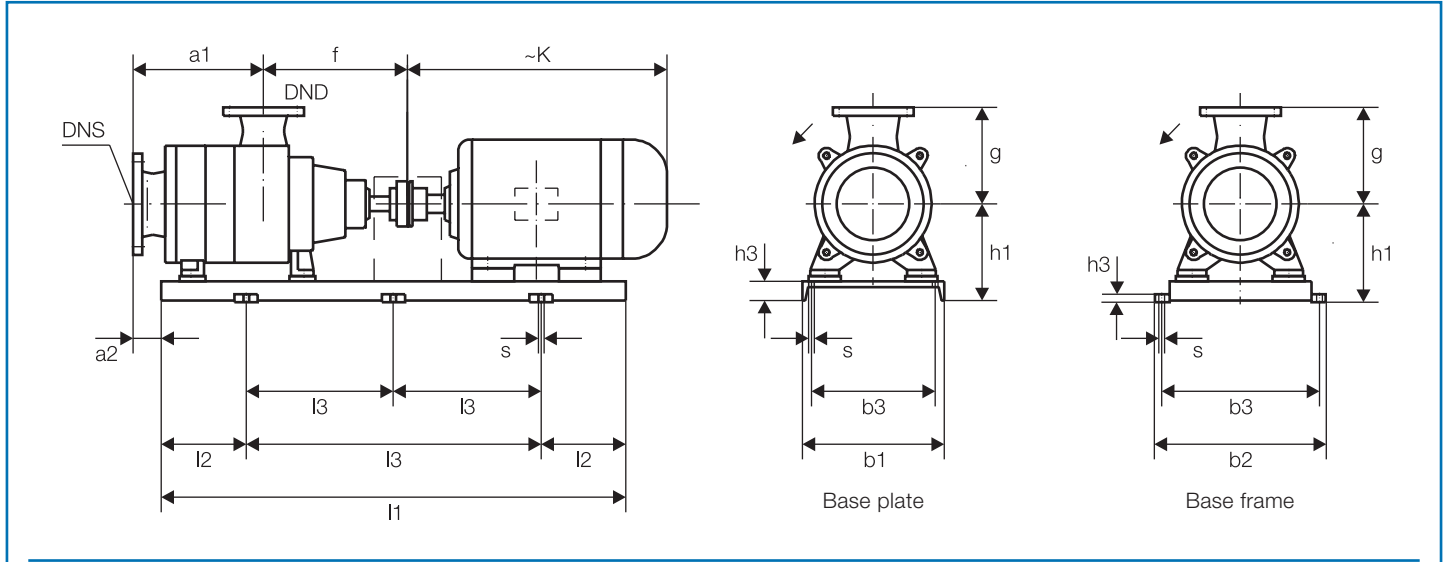
# Dimensions

## Arrangement EX

Type	Stages	Motor size	Poles	Code	DNS	DND	I1	I2	I3	a2	f	a1	~K
							b1	b2	b3	h3	h1	g	s
100-230	12	225S	4	HU134/1	125	100	2220	330	780	92	411	1041	830
							-	580	540	25	315	250	18
100-230	12	225M	4	HU135/1	125	100	2220	330	780	92	411	1041	860
							-	580	540	25	315	250	18
100-230	12	250M	4	HU136/1	125	100	2220	330	780	92	411	1041	950
							-	630	590	25	345	250	18
100-230	12	280S	4	HU137/1	125	100	2220	330	780	92	411	1041	1095
							-	700	660	25	375	250	18
100-230	13	225M	4	HU138/1	125	100	2220	330	780	92	411	1118	860
							-	580	540	25	315	250	18
100-230	13	250M	4	HU139/1	125	100	2220	330	780	92	411	1118	950
							-	630	590	25	345	250	18
100-230	13	280S	4	HU140/1	125	100	2420	330	880	92	411	1118	1095
							-	700	660	25	385	250	18
100-230	14	225M	4	HU141/1	125	100	2220	330	780	92	411	1195	860
							-	580	540	25	315	250	18
100-230	14	250M	4	HU142/1	125	100	2420	330	880	92	411	1195	950
							-	630	590	25	345	250	18
100-230	14	280S	4	HU143/1	125	100	2420	330	880	92	411	1195	1095
							-	700	660	25	385	250	18
100-230	15	250M	4	HU144/1	125	100	2420	330	880	92	411	1272	950
							-	630	590	25	345	250	18
100-230	15	280S	4	HU145/1	125	100	2420	330	880	92	411	1272	1095
							-	700	660	25	385	250	18
100-230	15	280M	4	HU146/1	125	100	2420	330	880	92	411	1272	1140
							-	700	660	25	375	250	18
100-230	16	250M	4	HU147/1	125	100	2420	330	880	92	411	1349	950
							-	630	590	25	345	250	18
100-230	16	280S	4	HU148/1	125	100	2620	330	980	92	411	1349	1095
							-	700	660	25	375	250	18
100-230	16	280M	4	HU149/1	125	100	2620	330	980	92	411	1349	1140
							-	700	660	25	375	250	18
100-230	16	315S	4	HU150/1	125	100	2620	330	980	92	411	1349	1210
							-	770	730	25	420	250	18
125-250	1	160M		HN278/1N	150	125	1300	20	1260	148	446	258	645
							400	-	320	110	335	300	18
125-250	2	180M		HN203/1N	150	125	1400	20	1360	148	446	348	710
							400	-	320	110	335	300	18
125-250	3	180M		HN205/1N	150	125	1500	20	1460	148	446	438	710
							400	-	320	110	335	300	18
125-250	3	180L		HN206/1N	150	125	1500	20	1460	148	446	438	750
							400	-	320	110	335	300	18
125-250	3	200L		HU207/1	150	125	1420	240	940	148	446	438	800
							-	530	490	25	300	300	18
125-250	3	225S	4	HU208/1	150	125	1420	240	940	148	446	438	830
							-	580	540	25	305	300	18
125-250	3	315M	2	HU262/1	150	125	1820	310	1200	148	446	438	1215
							-	770	730	25	400	300	18
125-250	3	315L	2	HU263/1	150	125	1820	310	1200	147	446	438	1370
							-	770	730	25	405	300	18

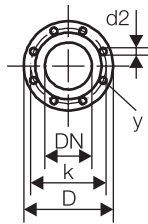
# Dimensions

## Arrangement EX



**Suction and discharge connection**

Flange connections according to EN 1092-2, PN10-40.



y = Number of bores

DN	PN	D	k	d2	y
100	10-16	220	180	18	8
100	25-40	235	190	22	8
125	10-16	250	210	18	8
125	25-40	270	220	26	8
150	10-16	285	240	22	8
150	25-40	300	250	26	8

DN	PN	D	k	d2	y
200	10	340	295	22	8
200	16	340	295	22	12
200	25	360	310	26	12
200	40	375	320	30	12
250	10	395	350	22	12
250	16	405	355	26	12

Type	Stages	Motor size	Poles	Code	DNS	DND	l1	l2	l3	a2	f	a1	~K
							b1	b2	b3	h3	h1	g	s
125-250	4	200L		HU211/1	150	125	1620	280	1060	148	446	528	800
							-	530	490	25	300	300	18
125-250	4	225S	4	HU212/1	150	125	1620	280	1060	148	446	528	830
							-	580	540	25	305	300	18
125-250	4	225M	4	HU213/1	150	125	1620	280	1060	148	446	528	860
							-	580	540	25	305	300	18
125-250	4	250M	4	HU284/1	150	125	1620	280	1060	147	446	528	950
							-	630	590	25	325	300	18
125-250	5	225S	4	HU216/1	150	125	1620	280	1060	148	446	618	830
							-	580	540	25	305	300	18
125-250	5	250M	4	HU218/1	150	125	1820	310	1200	148	446	618	950
							-	630	590	25	325	300	18
125-250	5	280S	4	HU218.1/1	150	125	1820	310	1200	153	446	618	1095
							-	700	660	25	365	300	18
125-250	6	250M	4	HU222/1	150	125	1820	310	1200	148	446	708	950
							-	630	590	25	325	300	18
125-250	7	250M	4	HU227/1	150	125	2020	330	680	148	446	798	950
							-	630	590	25	340	300	18
125-250	7	280S	4	HU228/1	150	125	2020	330	680	148	446	798	1095
							-	700	660	25	375	300	18
125-250	8	280S	4	HU297/1	150	125	2220	330	780	148	446	888	1095
							-	700	660	25	375	300	18
125-250	8	280M	4	HU233/1	150	125	2020	330	680	148	446	888	1140
							-	700	660	25	375	300	18

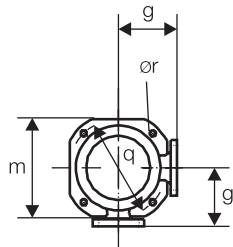
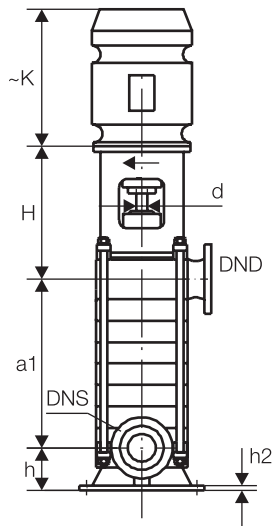
# Dimensions

## Arrangement EX

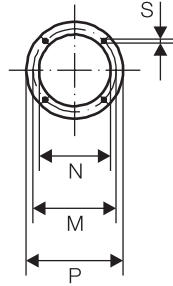
Type	Stages	Motor size	Poles	Code	DNS	DND	I1	I2	I3	a2	f	a1	~K
							b1	b2	b3	h3	h1	g	s
125-250	9	280M	4	HU238/1	150	125	2220	330	780	148	446	978	1140
							-	700	660	25	375	300	18
125-250	10	280M	4	HU242/1	150	125	2220	330	780	148	446	1068	1140
							-	700	660	25	385	300	18
125-250	10	315S	4	HU243/1	150	125	2420	330	880	148	446	1068	1210
							-	770	730	25	425	300	18
125-250	11	315M	4	HU269/1	150	125	2420	330	880	148	446	1158	1245
							-	770	730	25	425	300	18
125-250	12	315M	4	HU268/1	150	125	2620	330	980	148	446	1248	1245
							-	770	730	25	425	300	18
150-280	3	225M	4	HU306/1	200	150	1620	280	1060	160	495	524	860
							-	630	590	25	360	350	18
150-280	3	250M	4	HU307/1	200	150	1620	280	1060	160	495	524	950
							-	630	590	25	365	350	18
150-280	3	280M	4	HU348/1	200	150	1820	310	1200	170	495	524	1140
							-	700	660	25	360	350	18
150-280	4	280S	4	HU310/1	200	150	1820	310	1200	160	495	639	1095
							-	700	660	25	360	350	18
150-280	6	315S	4	HU316/1	200	150	2220	330	780	161	495	869	1210
							-	770	730	25	420	350	18
200-320	2	250M	4	HU403/1	250	200	1800	250	650	190	599	485	950
							-	770	730	25	482	400	18
200-320	2	280S	4	HU404/1	250	200	1800	330	1140	190	599	485	1095
							-	780	740	40	482	400	28
200-320	2	280M	4	HU405/1	250	200	1800	250	650	190	599	485	1140
							-	770	730	25	482	400	18
200-320	2	315S	4	HU463/1	250	200	1800	250	650	190	599	485	1210
							-	770	730	25	482	400	18
200-320	2	315M	4	HU464/1	250	200	2000	300	700	190	599	485	1245
							-	770	730	25	482	400	18
200-320	3	280M	4	HU407/1	250	200	2000	330	1340	190	599	625	1140
							-	780	740	40	482	400	28
200-320	3	315S	4	HU408/1	250	200	2000	300	700	190	599	625	1210
							-	800	760	40	482	400	28
200-320	3	315M	4	HU409/1	250	200	2000	300	700	190	599	625	1245
							-	800	760	40	482	400	28
200-320	3	315L	4	HU422/1	250	200	2000	200	800	190	599	625	1245
							-	780	740	40	478	400	28
200-320	4	315S	4	HU411/1	250	200	2060	330	700	190	599	765	1210
							-	790	750	40	477	400	28
200-320	4	315M	4	HU412/1	250	200	2220	300	800	190	599	765	1245
							-	800	760	40	482	400	28
200-320	4	315L	4	HU413/1	250	200	2160	200	880	190	599	765	1245
							-	780	740	40	482	400	28

# Dimensions

## Arrangement S

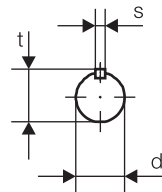


Motor bearing stool flange  
DIN 42948



z = Number of bores

Shaft end according to DIN 748/1  
Key DIN 6885/1



**Connections**

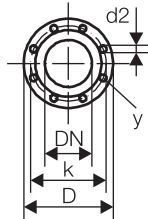
- Manometer connection R1/2"
- Gland leakage R1/2"
- Drain R1/2", type 200-320 R3/4"

**Drive**

- Drive at delivery side
- Rotation direction of pump shaft is clockwise, seen from drive end

**Suction and discharge connection**

Flange connections according to EN 1092-2, PN10-40.



y = Number of bores

DN	PN	D	k	d2	y
100	10-16	220	180	18	8
100	25-40	235	190	22	8
125	10-16	250	210	18	8
125	25-40	270	220	26	8
150	10-16	285	240	22	8
150	25-40	300	250	26	8

DN	PN	D	k	d2	y
200	10	340	295	22	8
200	16	340	295	22	12
200	25	360	310	26	12
200	40	375	320	30	12
250	10	395	350	22	12
250	16	405	355	26	12

**Dimension »a1« for number of stages**

Type	DNS	DND	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
100-230	125	100	144	221	298	375	452	529	606	683	760	837	914	991	1068	1145	1222	1299
125-250	150	125	180	270	360	450	540	630	720	810	900	990	1080	1170	1260	1350		
150-280	200	150	194	309	424	539	654	769	884	999	1114	1229	1344					
200-320	250	200	239	379	519	659	799	939	1079	1219	1359	1499	1639	1779				

Type	h	h2	m	g	q	r	d	t	s	Flange	P	M	N	H	S	z
100-230	155	26	340	250	370	18	40	43	12	250	250	215	180	477	M 12	4
										300	300	265	230	497	M 12	4
										350	350	300	250	527	M 16	4
										400	400	350	300	527	M 16	4
										450A	450	400	350	527	Ø 18	8
										450B	450	400	350	557	Ø 18	8
										550	550	500	450	557	Ø 18	8
										660A	660	600	550	557	Ø 23	8
660B	660	600	550	587	Ø 23	8										

# Dimensions

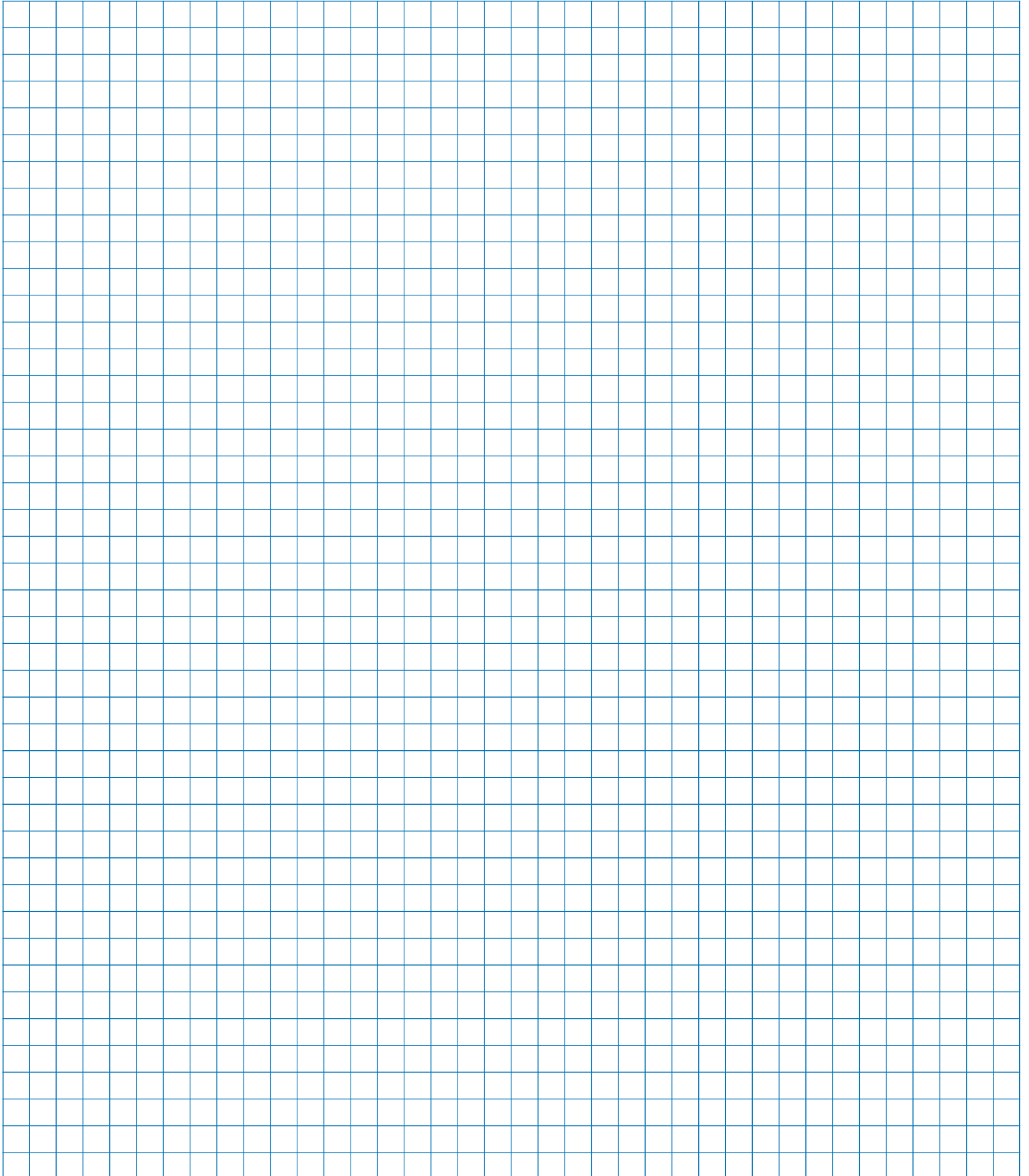
## Arrangement S

Type	h	h2	m	g	q	r	d	t	s	Flange	P	M	N	H	S	z
125-250	180	28	410	300	435	22	45	48,5	14	350	350	300	250	561	M 16	4
										400	400	350	300	561	M 16	4
										450A	450	400	350	561	Ø 18	8
										450B	450	400	350	591	Ø 18	8
										550	550	500	450	591	Ø 18	8
										660A	660	600	550	591	Ø 23	8
										660B	660	600	550	621	Ø 23	8
150-280	225	30	460	350	500	26	55	59	16	350	350	300	250	609	M 16	4
										400	400	350	300	609	M 16	4
										450B	450	400	350	639	M 16	8
										550	550	500	450	639	Ø 18	8
										660A	660	600	550	639	M 20	8
										660B	660	600	550	669	M 20	8
200-320	265	35	580	400	620	34	65	69	18	450B	450	400	350	743	M 16	8
										550	550	500	450	743	M 16	8
										660B	660	600	550	773	Ø 23	8
										800	800	740	680	773	Ø 23	8
										900	900	840	780	773	Ø 23	8
										1000	1000	940	880	813	Ø 28	8

Nominal motor power [kW]		Motor size	Flange		Motor length ~K
1450 rpm	2900 rpm		1450 rpm	2900 rpm	
2,2 / 3	3	100L	250	250	330
4	4	112M	250	250	350
5,5	5,5 / 7,5	132S	300	300	390
7,5	-	132M	300	-	430
11	11 / 15	160M	350	350	530
15	18,5	160L	350	350	570
18,5	22	180M	350	350	600
22	-	180L	350	-	640
30	30 / 37	200L	400	400	700
37	-	225S	450B	-	730
45	45	225M	450B	450A	730
55	55	250M	550	550	810
75	75	280S	550	550	960
90	90	280M	550	550	1010
110	110	315S	660B	660A	1050
132	132	315M	660B	660A	1100
160 / 200	160 / 200	315L	660B	660A	1210

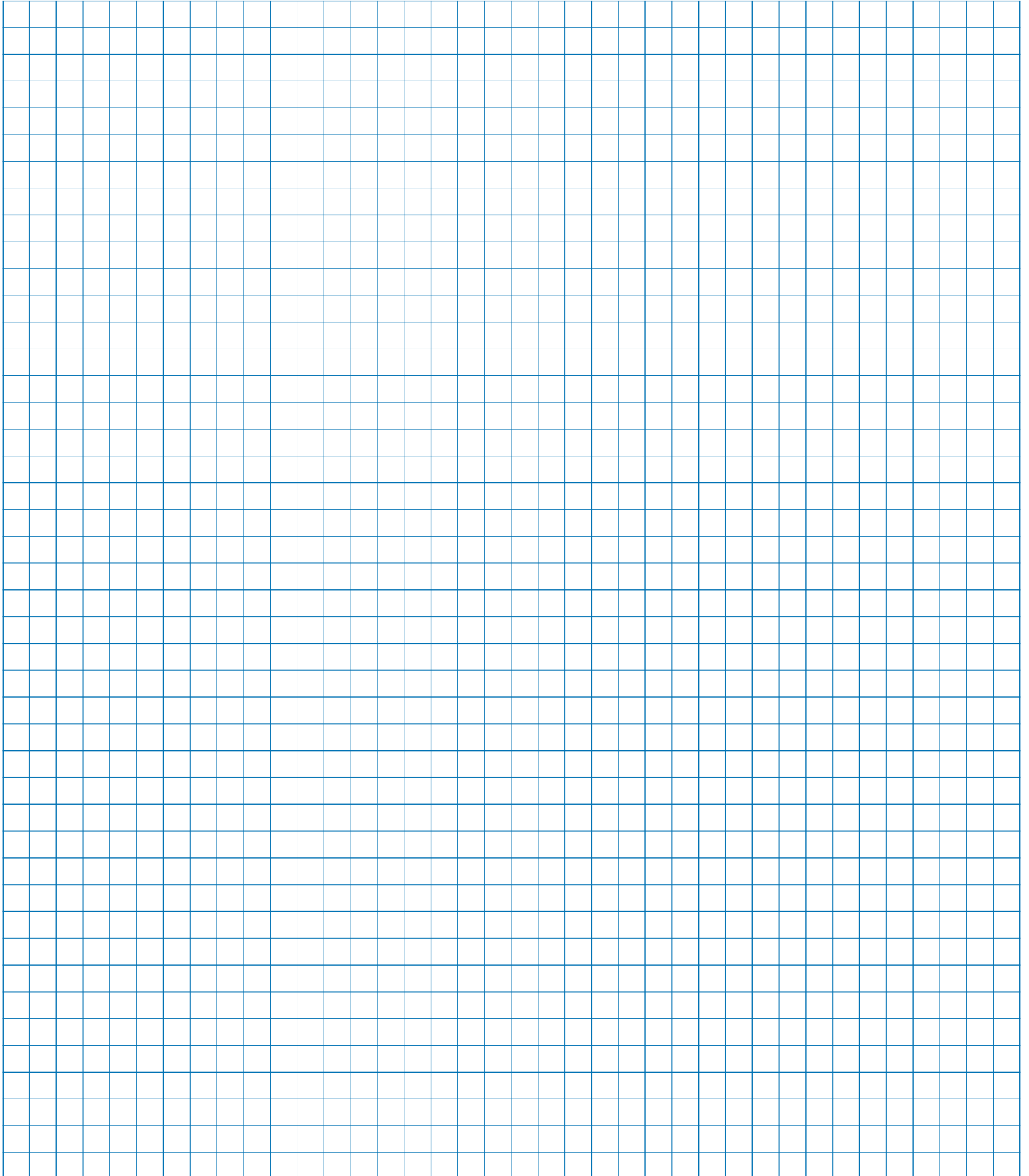
Dimension valid for 3-phase IEC standard motors, enclosure IP 55.

# For your notes

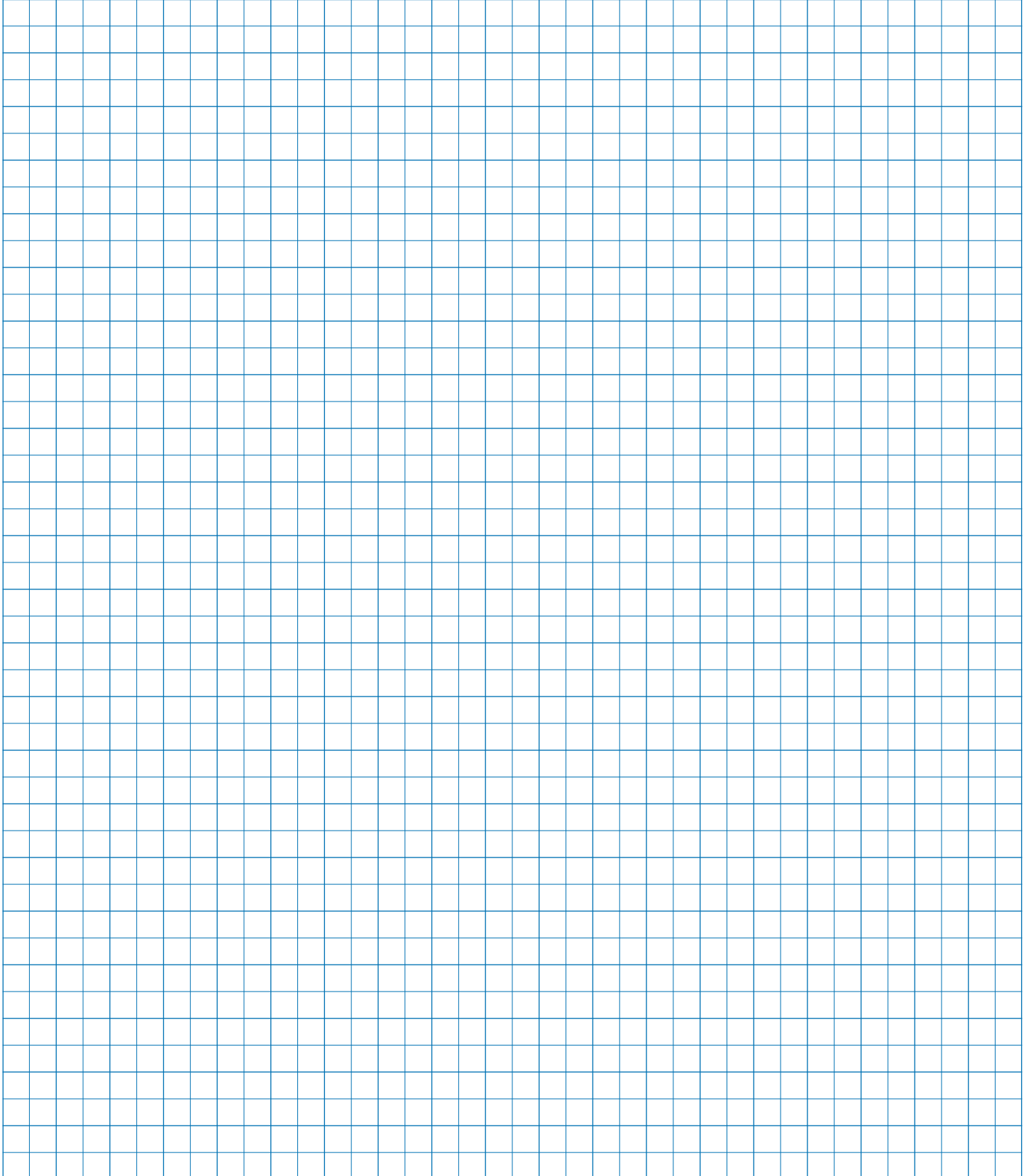




# For your notes



# For your notes





## Close to our customers

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