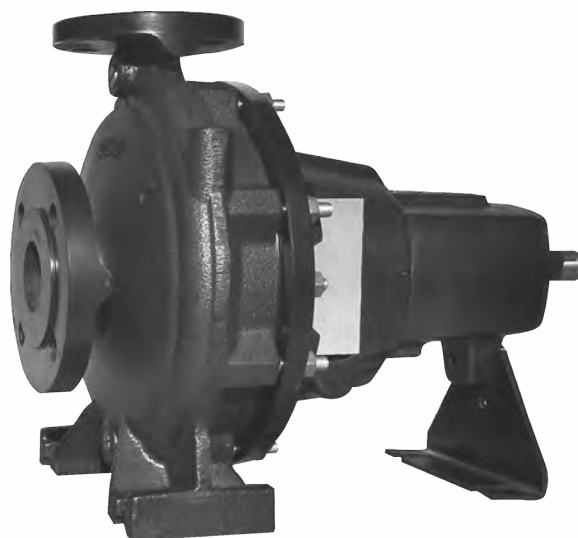


# SNK PUMPS

SINGLE-STAGE END-SUCTION PUMPS 50 HZ



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## APPLICATION

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### INTRODUCTION

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

SNK pumps are used in four main fields of application :

- Water supply
- Industrial pressure boosting
- Industrial liquid transfer
- Irrigation.

### WATER SUPPLY

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

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

### INDUSTRIAL PRESSURE BOOSTING

Pressure boosting in

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

### INDUSTRIAL LIQUID TRANSFER

Liquid transfer in

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

### IRRIGATION

Irrigation covers these applications:

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

## FEATURES AND BENEFITS

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### FEATURES AND BENEFITS

SNK pumps present these features and benefits:

- The pumps are non-self-priming, single-stage, centrifugal volute pumps with axial suction port, radial discharge port and horizontal shaft.
- Suction and discharge flanges are PN 10 or PN 16 according to EN 1092-2 .
- Dimensions and rated performance are according to EN 733 (10 bar).  
However, pumps with flange dimensions up to and including DN 150 are marked PN 16 and thus suitable for 16 bar operation.
- The pump is long-coupled with a totally enclosed fan-cooled standard motor with main dimensions to IEC and DIN standards.
- The mechanical shaft seal has dimensions according to EN 12756.
- SNK pumps cover the performance range from 2 to 300 m<sup>3</sup>/h and heads from 3 to 115 m. Motor sizes fall in the 0.37 to 110 kW range.
- All pumps are dynamically balanced according to ISO 1940 class 6.3. Impellers are hydraulically balanced.
- Pump and motor are mounted on a common, steel base frame in accordance with EN 23661.
- The pumps are of the back pull-out design enabling removal and dismantling of the motor, coupling, bearing bracket and impeller without disturbing the pump housing or pipework. Consequently, even the largest pumps can be serviced by a single person with a crane, see fig. 1.

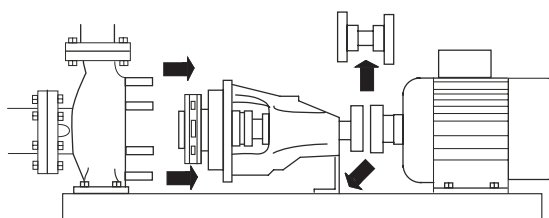


Fig. 1 Back pull-out design



## PRODUCT RANGE

The tables on the following pages show the complete SNK product range. The standard range has been combined on the basis of the following parameters:

- Pump housings have discharge flanges from DN 32 to DN 125.
- Impellers are made of fabricated stainless steel or cast iron according to our product range.
- Wear rings are made of nbr+pps (for fab.ss impellers) or bronze (for cast iron impellers).
- SNK pumps are available with 2 & 4 pole motors.

### SNK 50 Hz, 2-pole

Pump type 50Hz, 2-pole	Model A	Model B	Pressure stage PN 16	P <sub>2</sub> [HP/kW]
32-160.1	*		*	2.0/1.5
	*		*	3.0/2.2
	*		*	4.0/3.0
32-160	*		*	3.0/2.2
	*		*	4.0/3.0
	*		*	5.5/4.0
32-200	*		*	7.5/5.5
	*		*	5.5/4.0
	*		*	7.5/5.5
32-250	*		*	5.5/4.0
	*		*	7.5/5.5
	*		*	10.0/7.5
40-125	*		*	15.0/11.0
	*		*	2.0/1.5
	*		*	3.0/2.2
40-160	*		*	4.0/3.0
	*		*	5.5/4.0
	*		*	7.5/5.5
40-200	*		*	10.0/7.5
	*		*	7.5/5.5
	*		*	10.0/7.5
40-250	*		*	15.0/11.0
	*		*	20.0/15.0
	*		*	20.0/15.0
50-125	*		*	20.0/15.0
	*		*	25.0/18.5
	*		*	30.0/22.0
50-160	*		*	4.0/3.0
	*		*	5.5/4.0
	*		*	7.5/5.5
50-200	*		*	10.0/7.5
	*		*	7.5/5.5
	*		*	10.0/7.5
50-250	*		*	15.0/11.0
	*		*	20.0/15.0
	*		*	20.0/15.0

Pump type 50Hz, 2-pole	Model A	Model B	Pressure stage PN 16	P <sub>2</sub> [HP/kW]
65-125	*		*	5.5/4.0
	*		*	7.5/5.5
	*		*	10.0/7.5
65-160	*		*	15.0/11.0
	*		*	10.0/7.5
	*		*	15.0/11.0
65-200	*		*	20.0/15.0
	*		*	25.0/18.5
	*		*	25.0/18.5
65-250	*		*	30.0/22.0
	*		*	40.0/30.0
	*		*	40.0/30.0
80-160	*		*	50.0/37.0
	*		*	60.0/45.0
	*		*	15.0/11.0
80-200	*		*	20.0/15.0
	*		*	25.0/18.5
	*		*	30.0/22.0
80-250	*		*	30.0/22.0
	*		*	40.0/30.0
	*		*	50.0/37.0
80-315	*		*	60.0/45.0
	*		*	75.0/55.0
	*		*	60.0/45.0
100-200	*		*	75.0/55.0
	*		*	100.0/75.0
	*		*	120.0/90.0
100-315	*		*	120.0/90.0
	*		*	150.0/110.0
	*		*	180.0/132.0

Note :- \* mark is indicated to availability of Product range.  
see page 6 for information of model A and model B.  
SHAKTI provides in stainless steel pumps as per customer requirement.

## PRODUCT RANGE

### SNK, 50 Hz, 4-pole

Pump type 50Hz, 4-pole	Model A	Model B	Pressure stage PN 16	P <sub>2</sub> [HP/kW]
32-160.1	*		*	0.5/0.37
32-160	*		*	0.75/0.55
32-200	*		*	1.0/0.75
	*		*	1.5/1.1
40-125	*			0.3/0.25
	*			0.5/0.37
	*	*	*	0.75/0.55
40-160	*		*	1.0/0.75
40-200	*		*	1.5/1.1
	*		*	2.0/1.5
40-250	*			3.0/2.2
	*	*	*	4.0/3.0
50-125	*		*	0.75/0.55
	*		*	1.0/0.75
50-160	*		*	1.5/1.1
	*		*	2.0/1.5
	*		*	3.0/2.2
50-200	*		*	3.0/2.2
	*		*	4.0/3.0
50-250		*	*	5.5/4.0
65-125	*		*	1.0/0.75
	*		*	1.5/1.1
65-160	*		*	1.5/1.1
	*		*	2.0/1.5
	*		*	3.0/2.2
65-200	*		*	2.0/1.5
	*		*	3.0/2.2
	*		*	4.0/3.0
	*		*	5.5/4.0
65-250		*	*	4.0/3.0
		*	*	5.5/4.0
		*	*	7.5/5.5
		*	*	10.0/7.5
65-315		*	*	7.5/5.5
		*	*	10.0/7.5
		*	*	15.0/11.0
		*	*	20.0/15.0

Pump type 50Hz, 4-pole	Model A	Model B	Pressure stage PN 16	P <sub>2</sub> [HP/kW]
80-160		*	*	2.0/1.5
		*	*	3.0/2.2
		*	*	5.5/4.0
80-200		*	*	3.0/2.2
		*	*	4.0/3.0
		*	*	5.5/4.0
		*	*	7.5/5.5
80-250		*	*	7.5/5.5
		*	*	10.0/7.5
		*	*	15.0/11.0
80-315		*	*	15.0/11.0
		*	*	20.0/15.0
		*	*	25.0/18.5
		*	*	30.0/22.0
80-400		*	*	25.0/18.5
		*	*	30.0/22.0
		*	*	40.0/30.0
		*	*	50.0/37.0
		*	*	60.0/45.0
		*	*	
100-200		*	*	5.5/4.0
		*	*	7.5/5.5
		*	*	10.0/7.5
100-250		*	*	15.0/11.0
		*	*	20.0/15.0
		*	*	
100-315		*	*	20.0/15.0
		*	*	25.0/18.5
		*	*	30.0/22.0
		*	*	40.0/30.0
125-400		*	*	50.0/37.0
		*	*	60.0/45.0
		*	*	75.0/55.0
		*	*	100.0/75.0
		*	*	120.0/90.0
		*	*	
125-500		*	*	75.0/55.0
		*	*	100.0/75.0
		*	*	120.0/90.0
		*	*	135.0/110.0
		*	*	175.0/132.0
		*	*	215.0/160.0

Note :- \* mark is indicated to availability of Product range.  
see page 6 for information of model A and model B.  
SHAKTI provides in stainless steel pumps as per customer requirement.

## IDENTIFICATION

### TYPE KEY

#### SNK

Example	SNK	32	-160	.1	/142	A	-F	-A	-BAQE
Type range									
Nominal diameter of discharge port (DN)									
Nominal impeller diameter [mm]									
Reduced performance = .1									
Actual impeller diameter [mm]									
Code for pump version (the codes may be combined):									
A = Bare shaft pump									
B = Pump with motor									
Code for pipework connection:									
F = DIN flange									
Code for materials:									
A = Pump housing cast iron with ss impeller									
B = Pump housing cast iron with cast iron impeller (optional bronze)									
Code for mechanical shaft seal and rubber pump parts									

### MECHANICAL SHAFT SEALS

SNK pumps are available as standard with BAQE and GQQE shaft seals. Other shaft seal variants are available on request.

#### Codes for mechanical shaft seal

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

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

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

## CONSTRUCTION

### SNK SECTIONAL VIEW AND MATERIAL SPECIFICATION

#### MODEL A

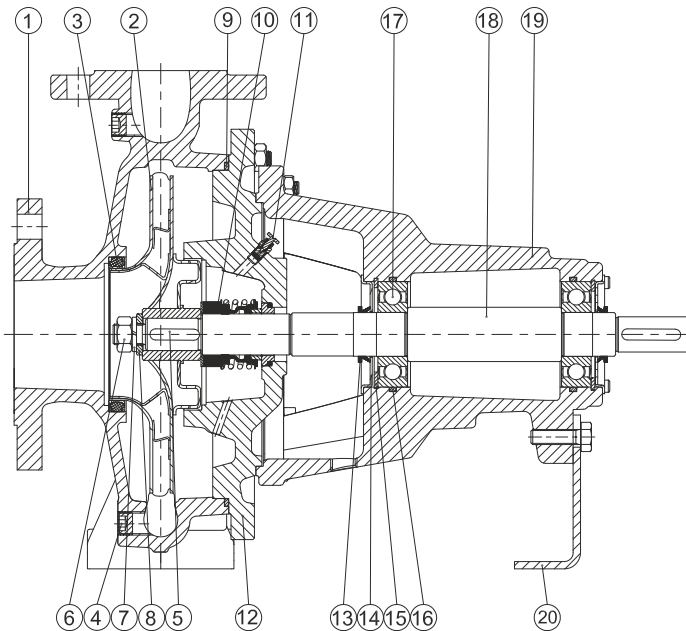


Fig.- 2 Sectional view

#### Material specification SNK Model A

POS.	Component	Material
1	Pump housing	CAST IRON
2	Impeller	AISI SS 304
3	neckring	NBR+PPS
4	Priming/drain plug	M.S.
5	Key	AISI SS 304
6	Nut	AISI SS 304
7	Spring washer	AISI SS 304
8	Washer	AISI SS 304
9	O ring	NBR
10	Mechanical shaft seal	BAQE
11	Air vent plug	BRONZE
12	Bearing bracket cover	CAST IRON
13	Seal Ring	NBR
14	Bearing cover	AISI SS 304
15	Circlip	STD.
16	O ring	NBR
17	Bearing	STD.
18	Pump shaft	AISI SS 420
19	Bearing bracket	CAST IRON
20	Foot	M.S.

#### MODEL B

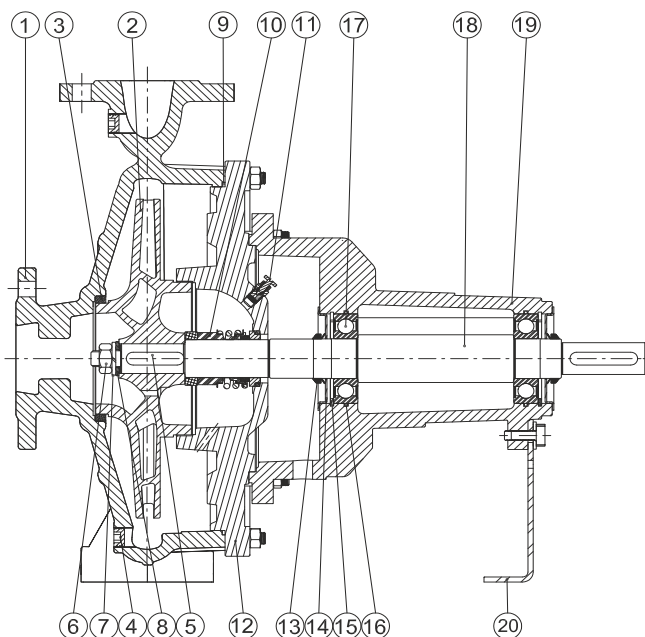


Fig.- 3 Sectional view

#### Material specification SNK Model B

POS.	Component	Material
1	Pump housing	CAST IRON
2	Impeller	CAST IRON/BRONZE
3	neckring	BRONZE
4	Priming/drain plug	M.S.
5	Key	AISI SS 304
6	Nut	AISI SS 304
7	Spring washer	AISI SS 304
8	Washer	AISI SS 304
9	O ring	NBR
10	Mechanical shaft seal	BAQE
11	Air vent plug	BRONZE
12	Bearing bracket cover	CAST IRON
13	Seal Ring	NBR
14	Bearing cover	AISI SS 304
15	Circlip	STD.
16	O ring	NBR
17	Bearing	STD.
18	Pump shaft	AISI SS 420
19	Bearing bracket	CAST IRON
20	Foot	M.S.

## CONSTRUCTION

### MECHANICAL CONSTRUCTION

#### Pump Housing

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

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

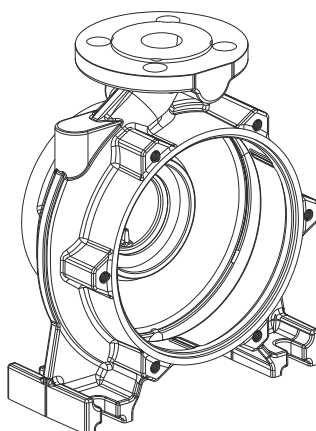


Fig.- 4 Pump housing cast iron and fabricated ss

#### Bearing bracket and shaft

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

The bearing bracket is made of cast iron

The shaft is made of stainless steel AISI SS 420. Shaft diameter d5 is either  $\varnothing 24$ , 32, 45 .

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

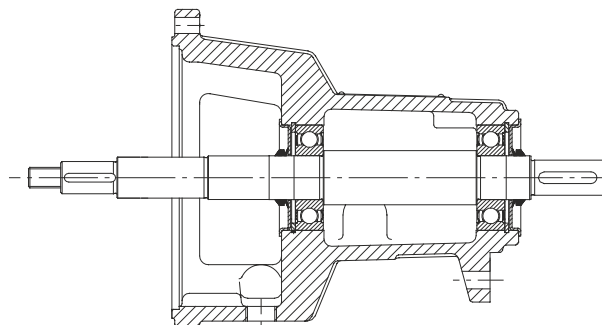


Fig.- 5 Bearing bracket and shaft

All SNK pumps are fitted with one of four shaft, shaft seal and bearing sizes.

As the bearings and shafts are large, the SNK pumps can be driven by a belt drive or a diesel engine, if required.

## CONSTRUCTION

### Shaft seal

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

### Coupling

Main function of coupling is to connect the pump to the motor for efficient transfer of power. they also help accommodate for misalignment, making it easier to service the pump. we are use standard and flexible type coupling for snk pump.

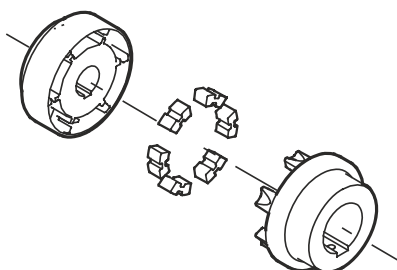


Fig.- 6

### Impeller

The impeller is made of fabricated stainless steel, cast iron (bronze option) is a closed impeller with double-curved blades with smooth surfaces. This ensures high efficiency.

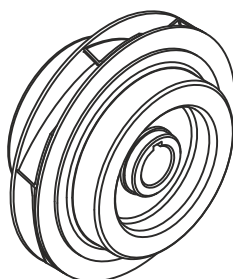


Fig.- 7 Impeller for an SNK pump

All impellers are dynamically and hydraulically balanced. The hydraulic balancing compensates for axial thrust. The direction of rotation of the impeller is clockwise when viewed from the motor. All impellers are adapted to the duty point required by the customer.

### Base Frame

Pump and motor are mounted on a common, steel base frame in accordance with EN 23 661.

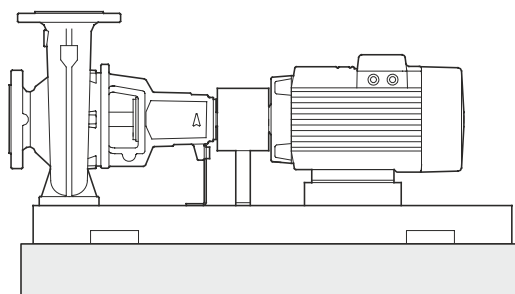


Fig.- 8 Schematic view of SNK pump-motor unit mounted on a base frame

## CONSTRUCTION

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### Surface treatment

All stationary cast iron parts dip in CED coating process. Cathodic electrode position (ced) is an electro-chemical Process in which an object is submerged in a water based lacquer under the influence of an electric field, typically, this CED coatings are free of heavy metals(i.e. lead ) and are black (similar to RAL 9005). the thickness of the coating that remains on the part depends on part geometry, but is generally  $25\mu\text{m} \pm 5\mu\text{m}$ .

Cast iron parts producing a surface that is resistant to both corrosion and negative effects of acidic/basic solvent.

### Test pressure

Pressure testing of the pump housing was made with  $+20^{\circ}\text{C}$  ( $\sim +68^{\circ}\text{F}$ ) water containing corrosion inhibitor.

Pressure Stage	Operating Pressure		Test pressure	
	Bar	Mpa	Bar	Mpa
PN 10	10	1.0	15	1.5
PN 16	16	1.6	24	2.4

## OPERATING CONDITIONS

### Pump location

The pump is designed for installation in a non-aggressive and non-explosive atmosphere. The relative air humidity must not exceed 95%.

### Ambient temperature and altitude

The ambient temperature and the installation altitude are important factors for the motor life, as they affect the life of the bearings and the insulation system. The installation altitude is the height of the installation site above sea level. If the ambient temperature exceeds the recommended maximum ambient temperature or maximum altitude above sea level, see fig. 9, the motor must not be fully loaded due to the low density and consequently low cooling effect of the air. In such cases, it may be necessary to use a motor with a higher output.

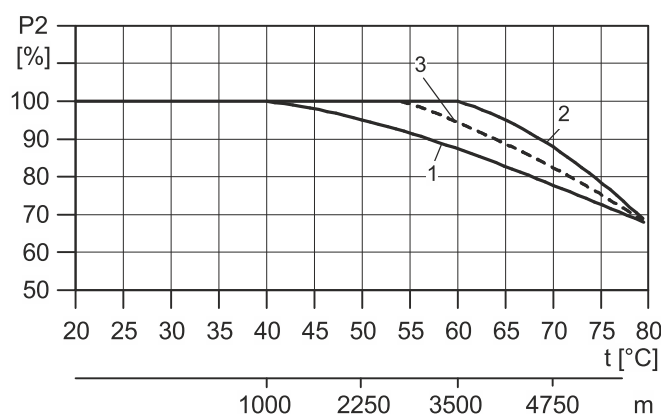


Fig.- 9 Maximum motor output in relation to ambient temperature and altitude

### Example:

A pump with a 2.2 kW IE3 SMG motor: If the pump is installed 4750 m above sea level, the motor must not be loaded more than 88 % of rated output. At an ambient temperature of 70 °C, the motor must not be loaded more than 88 % of rated output. If the pump is installed 4750 m above sea level at an ambient temperature of 70 °C, the motor must not be loaded more than 88 % x 88 % equal to 77.4 % of the rated output.

### Pumped liquid

SNK pumps are suitable for pumping clean, thin, nonaggressive and non-explosive liquids, not containing any solid particles

### The effect of viscosity on centrifugal pump performance

A viscous liquid affects a centrifugal pump in several ways.

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

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

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

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

Shakti can help you select the right pump for liquids with viscosity/density different from those of water.



## OPERATING CONDITIONS

### Liquid temperatures

The SNK pump range covers the temperature range from  $-25^{\circ}\text{C}$  ( $\sim -13^{\circ}\text{F}$ ) to  $+140^{\circ}\text{C}$  ( $\sim +284^{\circ}\text{F}$ ). The permissible liquid temperature depends on the mechanical shaft seal type and pump type. See also table below.

**Relationship between mechanical shaft seals and temperature**

Mechanical shaft seal	Operating temperature	Maximum operating pressure [bar]
BAQE	$0^{\circ}\text{C}$ to $+120^{\circ}\text{C}$	16 bar
GQQE	$-25^{\circ}\text{C}$ to $+90^{\circ}\text{C}$	16 bar
BQBE	$0^{\circ}\text{C}$ to $+140^{\circ}\text{C}$	16 bar
BQQE	$-25^{\circ}\text{C}$ to $+90^{\circ}\text{C}$	16 bar
BQQV <sup>1)</sup>	$0^{\circ}\text{C}$ to $+90^{\circ}\text{C}$	16 bar
BBQE	$0^{\circ}\text{C}$ to $+120^{\circ}\text{C}$	16 bar
BAQV <sup>1)</sup>	$0^{\circ}\text{C}$ to $+90^{\circ}\text{C}$	16 bar
GQQV <sup>1)</sup>	$-20^{\circ}\text{C}$ to $+90^{\circ}\text{C}$	16 bar

BAQE and GQQE are standard shaft seals.

The remaining shaft seal combinations in the list are available for custom built pumps.

- 1) The maximum temperature for FKM rubber is  $80^{\circ}\text{C}$  ( $\sim 176^{\circ}\text{F}$ ) in liquids containing water. For liquids not containing water, such as pure oil, the seal faces of the mechanical shaft seal are the temperature limiting factor.

### EPDM

Mechanical shaft seals with EPDM are primarily suitable for water. If the water contains oil or if chemicals or other liquids than water are pumped, you may have to replace the rubber parts of the mechanical shaft seal.

### FKM

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

### Carbon/silicon carbide

Mechanical shaft seals with carbon/silicon carbide (xAQx) seal faces have a wide range of applications and are especially suitable if there is risk of dry running and/or if the temperature is high. These mechanical shaft seals are not suitable for liquids containing abrasive particles as the carbon parts will be worn. At temperatures below  $0^{\circ}\text{C}$  ( $\sim +32^{\circ}\text{F}$ ) corrosion inhibitors containing abrasive particles will usually be added to the pumped liquid, and xAQx seals will thus not be suitable.

### Silicon carbide/silicon carbide

Mechanical shaft seals with silicon carbide/silicon carbide (xQQx) seal faces also have a very wide range of applications. These seals are very resistant to abrasive particles and well suited at liquid temperatures up to  $+90^{\circ}\text{C}$  ( $\sim +194^{\circ}\text{F}$ ). At higher temperatures the reduced lubricating properties of the pumped liquid may cause noise problems and limit the life of the seal faces.

## OPERATING CONDITIONS

### INLET PRESSURE

#### Maximum inlet pressure

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

#### Minimum inlet pressure

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

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

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

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

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

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

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

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

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

$H_s$  = Safety margin = minimum 0.5 metres head. If the "H" calculated is positive, the pump can operate at a suction lift of maximum "H" metres head.

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

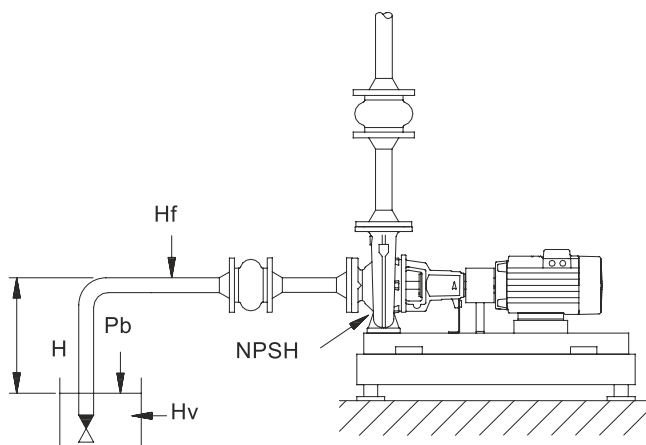


Fig.- 10 Schematic view of open system with SNK pump

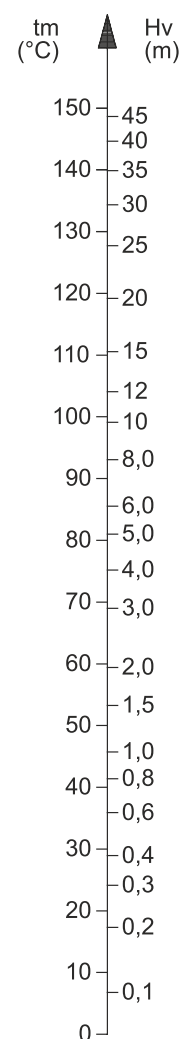


Fig.- 11 Relation between liquid temperature and vapour pressure

## INSTALLATION AND OPERATION

### Piping

When installing the pipes, make sure that the pump housing is not stressed by the pipework. The suction and discharge pipes must be of an adequate size, taking the pump inlet pressure into account. Install the pipes so that air locks are avoided, especially on the suction side of the pump, see Fig. 12.

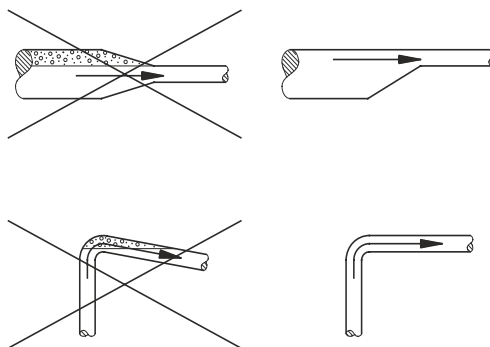


Fig.- 12 Pipeline

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

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

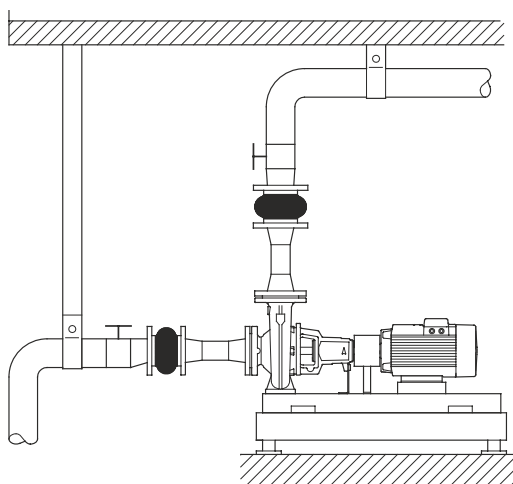


Fig.- 13 Pipeline mounting

### Foundation

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

The foundation should be 100 mm larger than the base frame on all four sides. Place the pump on the foundation and fasten it.

The base frame must be supported under its entire area, see Fig. 14.

## INSTALLATION AND OPERATION

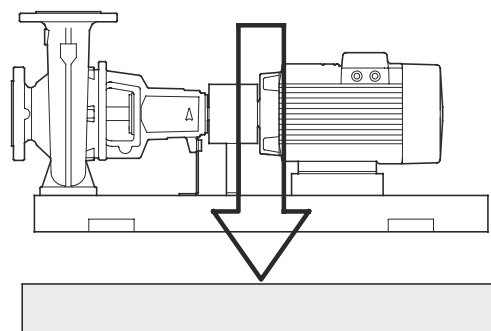


Fig.- 14 Correct foundation

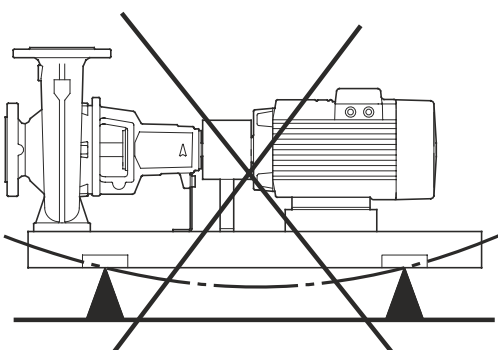


Fig.- 15 Incorrect foundation

## ELIMINATION OF NOISE AND VIBRATIONS

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

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

Elimination of noise and vibrations is best achieved by means of vibration dampers and expansion joints.

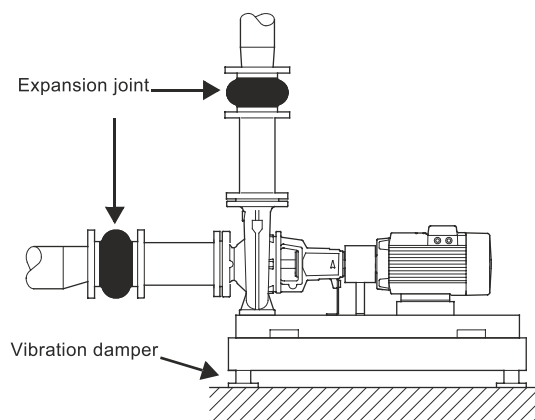


Fig.- 16 SNK pump with expansion joints and vibration dampers

## INSTALLATION AND OPERATION

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### Vibration dampers

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

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

- forces transmitted through the damper
- motor speed considering speed control, if any
- required dampening in % (suggested value is 70%). Which is the right damper varies from installation to installation, and a wrong damper may increase the vibration level. Vibration dampers should therefore be sized by the supplier.

### Expansion joints

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

Install expansion joints to

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

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

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

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

## ALIGNMENT

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

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

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

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

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

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

## SELECTION OF PRODUCT

### Pump Size

Selection of pump size should be based on:

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

### Efficiency

If you expect the pump to always operate in the same duty point, select a pump which is operating in a duty point corresponding to the best efficiency of the pump. In case of controlled operation or varying consumption, select a pump whose best efficiency falls within the duty range covering the greater part of the duty time.

### Material

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

### Motor size

Selection of motor size should be based on the power required to achieve the duty point of the chosen pump. This information can be found in the power chart below each performance chart, see performance curves page 56 to page 223. Find the power curve corresponding to the required QH-value (or interpolate between curves). To decide the motor size, select the P2 that is nearest above the required power, and choose the motor size next to it. When deciding the motor size, add a safety margin according to ISO 5199, see table below.

### Safety margins according to ISO 5199

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

## PUMPED LIQUIDS

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### PUMPED LIQUIDS

#### Maximum inlet pressure

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

If you pump liquids with a density and/or viscosity higher than that of water, use motors with correspondingly higher outputs, see "Pumped liquids" page 17-18.

The mechanical shaft seal must be suitable for the liquid.

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

Liquid temperature: -25 °C to +140 °C.

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

#### List of pumped liquids

The list on the following pages gives an overview of liquids which may typically be pumped by SNK pump.

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

The list is intended as a general guide only, and it can-not replace actual testing of pumped liquids and pump materials under specific working conditions. However, use the list with some caution as factors such as:

- Concentration of the pumped liquid
- liquid temperature
- Pressure

may affect the chemical resistance of a specific pump version.

#### Legend for notes in the list:

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

## PUMPED LIQUIDS

Pumped liquids	Notes	Additional information	Shaft seal
<b>Water</b>			
Groundwater		<+90°C	BQQE
		>+90°C	BAQE <sup>1)</sup> BQBE
Boiler feed water		<+120°C	BAQE
		+120°C - +140°C	BQBE
District heating water		<+120°C	BAQE
		+120°C - +140°C	BQBE
Condensate		<+90°C	BQQE
		+90°C - +120°C	BAQE
		+120°C - +140°C	BQBE
Softened water	C	<+90°C	BQQE
		>+90°C	BAQE
Brackish water	J, L	pH >6.5, +40°C, 1000 ppm Cl <sup>-</sup>	BQQE
Sea water	J, L	pH >6.5, +20°C, 20000 ppm Cl <sup>-</sup>	BQQE
Swimming pool water	J, K	pH>6.5, 40°C, 150 ppm Cl <sup>-</sup>	BQQE
Cooling and cutting lubricant	A, I		BQQV
<b>Coolants</b>			
Ethylene glycol	B, D	+50°C, 50%	BQQE/GQQE
Glycerine (glycerol)	B, D	+50°C, 50%	BQQE/GQQE
Hydrocarbon based antifreeze	B, D, F, G, I	+50°C, 100%	BQQV/GQQV
Potassium acetate	B, D, C	+50°C, 50%	BQQE/GQQE
Potassium formate	B, D, C	+50°C, 50%	BQQE/GQQE
Propylene glycol	B, D		BQQE/GQQE
Brine-sodium chloride	B, D, C	+5°C, 30%	BQQE/GQQE
Brine-calcium chloride	B, D, C	+5°C, 30%	BQQE/GQQE
Ethyl alcohol	B, D, F, I	+70°C	BAQE
Methyl alcohol-cooling	B, D, F, I	+40°C	BAQE
<b>Fuels</b>			
Diesel oil	F, G, H, I	<+20°C, 100%	BAQV
Jet fuel	F, G, H, I	<+20°C, 100%	BAQV
Kerosene	F, G, H, I	<+20°C, 100%	BAQV
Naphta	F, G, H, I	<+20°C, 100%	BAQV
Petrol	F, G, H, I	<+20°C, 100%	BAQV
<b>Mineral oils</b>			
Crude oil	A, B, G, I	<+20°C, 100%	BQQV
Mineral lubricating oil	B, D, G		BAQV/BQQV
<b>Synthetic oils</b>			
Silicone oil	B, H		BAQE/BQQE
Synthetic lubricating oil	B, G, I, H		BAQV/BQQV



## PUMPED LIQUIDS

Pumped liquids	Notes	Additional information	Shaft seal
<b>Vegetable oils</b>			
Corn oil	B, I, H		BAQV/BQQV
Olive oil	B, I, H	<+80°C	BAQV/BQQV
Peanut oil	B, I, H		BAQV/BQQV
Rape seed oil	D, B, I, H		BAQV/BQQV
Soya oil	B, I, H		BAQV/BQQV
<b>Cleaning</b>			
Soap (salts of fatty acids)	A, H, (I)	<+80°C	BQQE (BQQV)
Alkaline degreasing agent	A, H, (I)	<+80°C	BQQE (BQQV)
<b>Organic solvents</b>			
Isopropyl alcohol	F, G	<+60°C	BAQE
Propyl alcohol	F, G	<+60°C	BAQE
<b>Oxidants</b>			
Hydrogen peroxide		<+40°C, <2%	BQQE
<b>Salts</b>			
Ammonium bicarbonate	A	<+20°C, <15%	BQQE
Calcium acetate	A, B	<+20°C, <30%	BQQE
Potassium bicarbonate	A	<+20°C, <20%	BQQE
Potassium carbonate	A	<+20°C, <20%	BQQE
Potassium permanganate	A	<+20°C, <10%	BQQE
Potassium sulfate	A	<+20°C, <20%	BQQE
Sodium acetate	A	<+20°C, <100%	BQQE
Sodium bicarbonate	A	<+20°C, <2%	BQQE
Sodium carbonate	A	<+20°C, <20%	BQQE
Sodium metasilicate	–	max. +30°C, 30%	-
Sodium nitrate	A	<+20°C, <40%	BQQE
Sodium nitrite	A	<+20°C, <40%	BQQE
Sodium phosphate (di)	A	<+100°C, <30%	BQQE
Sodium phosphate (tri)	A	<+90°C, <20%	BQQE
Sodium sulfate	A	<+20°C, <20%	BQQE
Sodium sulfite	A	<+20°C, <1%	BQQE
<b>Alkalies</b>			
Ammonium hydroxide		<+100°C, <30%	BQQE
Calcium hydroxide	A	<+100°C, <10%	BQQE
Potassium hydroxide	A	<+20°C, <20%	BQQE
Sodium hydroxide	A	<+40°C, <20%	BQQE

1) Do not use BAQE for potable water. For potable water we recommend you to fit the pump with a BBQE shaft seal. The BBQE shaft seal is available on request.

Note: We recommend the BQBE mechanical shaft seal for high-temperature applications.

The BAQE/BAQV mechanical shaft seal is not suited for pumped liquids with abrasive particles as the carbon part of the seal will be worn down. We recommend you to use BQQE/BQQV in stead. We recommend the GQQE mechanical shaft seal for cooling applications involving risk of precipitation on the seal faces.

## ELECTRICAL DATA

### ELECTRICAL DATA, MAINS-OPERATED MOTORS

#### SNK Motor range, 2-pole

2-pole motors 50Hz, 3X 415V

FRAME SIZE	OUTPUT P <sub>2</sub>		RATED CURRENT	POWER FACTOR COS Ø AT % LOAD			EFFICIENCY [IE3]			RATED SPEED n
	HP	kW		50%	75%	100%	50%	75%	100%	
SMG 90	2	1.5	3.6	0.67	0.69	0.71	77	79	81	2915
SMG 90	3	2.2	4.5	0.77	0.79	0.81	82	84	86	2915
SMG 100	4	3	5.7	0.83	0.85	0.87	83	85	87	2905
SMG 100	5.5	4	7.6	0.82	0.84	0.86	83	85	87	2941
SMG 132	7.5	5.5	10.8	0.76	0.78	0.80	84	86	88	2938
SMG 132	10	7.5	14.7	0.76	0.78	0.80	85	87	89	2931
SMMG 160	15	11	20.5	0.78	0.80	0.82	87	89	91	2960
SMMG 160	20	15	27.2	0.80	0.82	0.84	88	90	92	2960
SMMG 160	25	18.5	32.3	0.82	0.84	0.86	89	91	93	2946
SMMG 180	30	22	40	0.86	0.88	0.90	89	91	93	2935
SMMG 200	40	30	49	0.87	0.89	0.91	89	91	93	2950
SMMG 200	50	37	60.5	0.87	0.89	0.91	90	92	94	2955
SMMG 225	60	45	73	0.86	0.90	0.91	93	94	94	2960
SMMG 250	75	55	89	0.86	0.90	0.91	93	94	95	2960
SMMG 280	100	75	121.5	0.86	0.90	0.91	94	95	95	2965
SMMG 280	120	90	145	0.84	0.89	0.91	94	95	95	2965
SMMG 315	150	110	177	0.86	0.90	0.91	94	95	95	2975

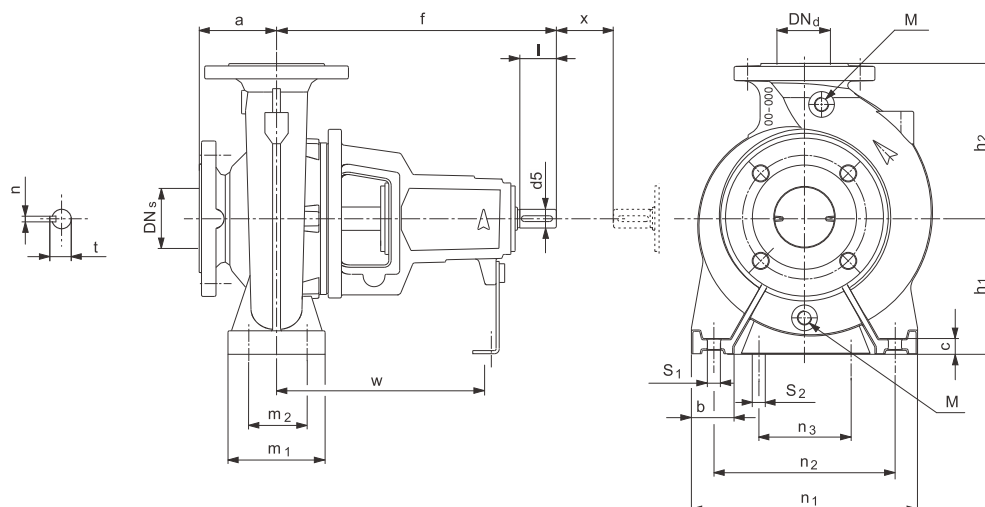
#### SNK Motor range, 4-pole

4-pole motors 50Hz, 3X 415V

FRAME SIZE	OUTPUT P <sub>2</sub>		RATED CURRENT	POWER FACTOR COS Ø AT % LOAD			EFFICIENCY [IE3]			RATED SPEED n
	HP	kW		50%	75%	100%	50%	75%	100%	
SMG 71	0.5	0.37	1	0.50	0.63	0.71	68	73	73	1420
SMG 80	0.75	0.55	1.3	0.53	0.60	0.75	74	78	78	1430
SMG 80	1	0.75	1.6	0.64	0.75	0.79	78	83	83	1430
SMG 90	1.5	1.1	2.3	0.64	0.75	0.79	82	84	84	1430
SMG 90	2	1.5	3.1	0.64	0.75	0.79	83	85	85	1435
SMG 100	3	2.2	4.3	0.67	0.78	0.82	84	87	87	1440
SMG 112	5	3.7	7.5	0.60	0.69	0.78	86	88	88	1450
SMG 132	7.5	5.5	10.5	0.65	0.76	0.81	87	90	90	1455
SMMG 160	15	11	19.8	0.72	0.80	0.85	90	91	91	1460
SMMG 180	30	22	38.5	0.73	0.81	0.85	92	93	93	1465

## BARE SHAFT PUMPS

### SNK Model



**M** Drain Plug and Priming Plug

Type	Pump [mm]						Supporting feet [mm]							Shaft [mm]								Weight [kg]									
	DN <sub>s</sub>	DN <sub>d</sub>	a	f	h <sub>1</sub>	h <sub>2</sub>	b	m <sub>1</sub>	m <sub>2</sub>	n <sub>1</sub>	n <sub>2</sub>	n <sub>3</sub>	w	s <sub>1</sub>	s <sub>2</sub>	d5	l	X	t	n											
SNK 32-160.1	50	32	80	360	132	160	50	100	70	240	190		260	M12	M12	24	50	100	27	8	37										
SNK 32-160					160	180															47										
SNK 32-200					180	225															65	125	95	320	250	47					
SNK 32-250					112	140															210	160	34								
SNK 40-125	65	40	80	360	132	160	50	100	70	240	190		260	M12	M12	24	50	100	27	8	39										
SNK 40-160					160	180															265	212	49								
SNK 40-200					180	225															65	125	95	320	250	64					
SNK 40-250					132	160															240	190	34								
SNK 50-125	65	50	100	360	160	180	50	100	70	265	212		260	M12	M12	24	50	100	27	8	42										
SNK 50-160					160	200															56										
SNK 50-200					180	225															65	125	95	320	250	67					
SNK 50-250					160	180															280	212	41								
SNK 65-125	80	65	100	360	180	225	65	125	95	320	250	110	260	M12	M12	24	50	100	27	8	46										
SNK 65-160					200	250															360	280	55								
SNK 65-200					225	280															80	160	120	400	315	89					
SNK 65-250					125	470															225	280	340	M16	32	80	140	37	10	177	
SNK 65-315			125	470	225	280	80	160	120	400	315		340	M16		32	80	140	37	10	177										
SNK 80-160	100	80	125	470	180	225	65	125	95	320	250		260	M12		24	50		27	8	55										
SNK 80-200					250	345															280	73									
SNK 80-250					200	280															400	315	340		M12	32	80	140	37	10	93
SNK 80-315					250	315															80	160	120	M16							123
SNK 80-400			530	280	355					435	355		370			42	110		45	12	203										
SNK 100-200	125	100	125	200	280	80	160	120	360	280			340	M16	M12	32	80	140	37	10	83										
SNK 100-250			140	225	400																315	101									
SNK 100-315			250	315																		130									
SNK125-400	150	125	140	530	315	400	100	200	150	500	400		370	M20	M14	42	110	120	45	12	193										
SNK125-500			180	670	400	500	125			625	500	140	500			M16	60	100	180	64	18	502									

## CURVE CHARTS

### HOW TO READ THE CURVE CHARTS

The following many pages are divided into sections: pages 22 A brief explanation of curve conditions and how to read the curve charts, etc.

Performance curves and technical data:

Page 23 SNK 50 Hz 2-pole pumps,

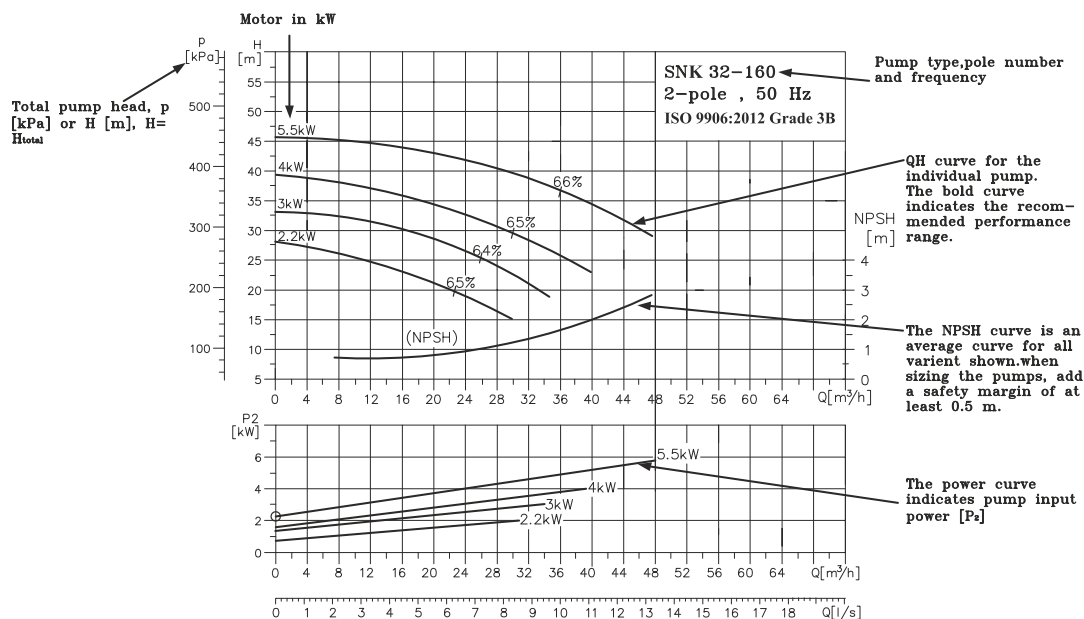
Page 65 SNK 50 Hz 4-pole pumps

### Curve Conditions

#### Selection of pumps

The guidelines below apply to the curves shown in the performance charts on page 23 to page 104.

- Tolerances according to: ISO 9906:2012 Grade 3B.
- The curves show pump performance with different impeller diameters at the nominal speed.
- The bold part of the curves show the recommended operating range.
- The thin parts are not recommended as possible operating range here might suggest the selection of a smaller/larger pump type.
- Do not use the pumps at minimum flows below  $0.1 \times Q$  at an optimum efficiency because of the danger of overheating of the pump.
- The curves apply to the pumping of water at a temperature of  $+20^\circ\text{C}$  and a kinematic viscosity of  $1\text{mm}^2/\text{s}$  ( $1\text{cSt}$ ).
- NPSH : The curves show average values measured under the same conditions as the performance curves. When dimensioning the pump, add a safety margin of at least  $0.5\text{ m}$ .
- In case of other densities than  $1000\text{ kg/m}^3$  the discharge pressure is proportional to the density.
- When pumping liquids with a density higher than  $1000\text{ kg/m}^3$ , motors with correspondingly higher outputs must be used.



#### Calculation of total head

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

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

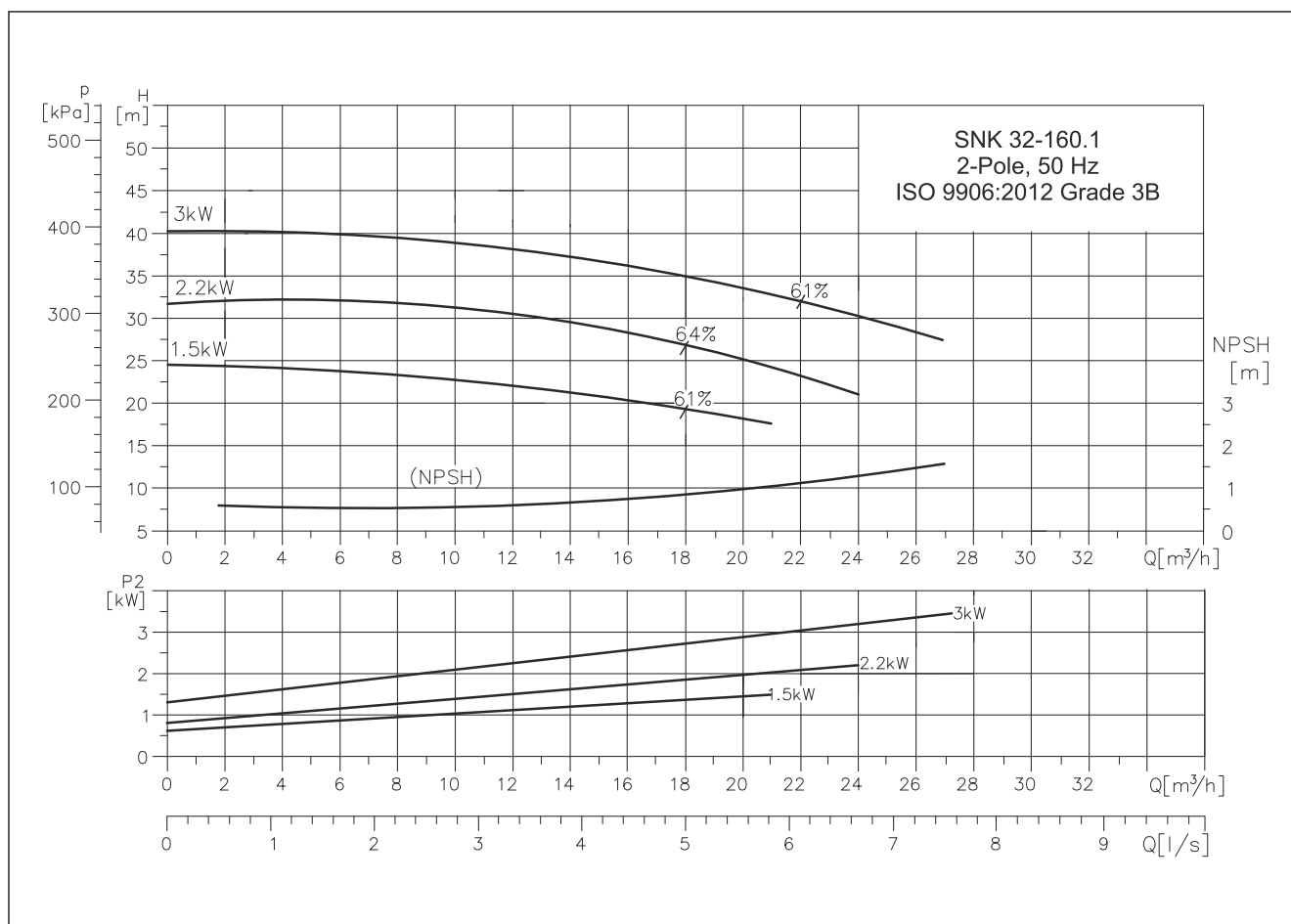
$H_{\text{geo}}$  : Height difference between measuring points.

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

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

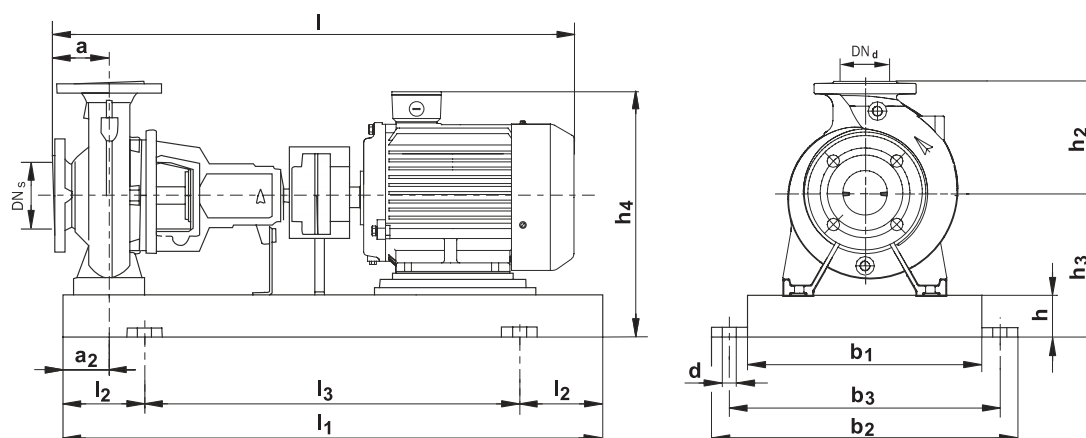
## PERFORMANCE CURVE

### SNK 32-160.1 (2 POLE)



## PERFORMANCE TABLE

### SNK 32-160.1 (2 POLE)



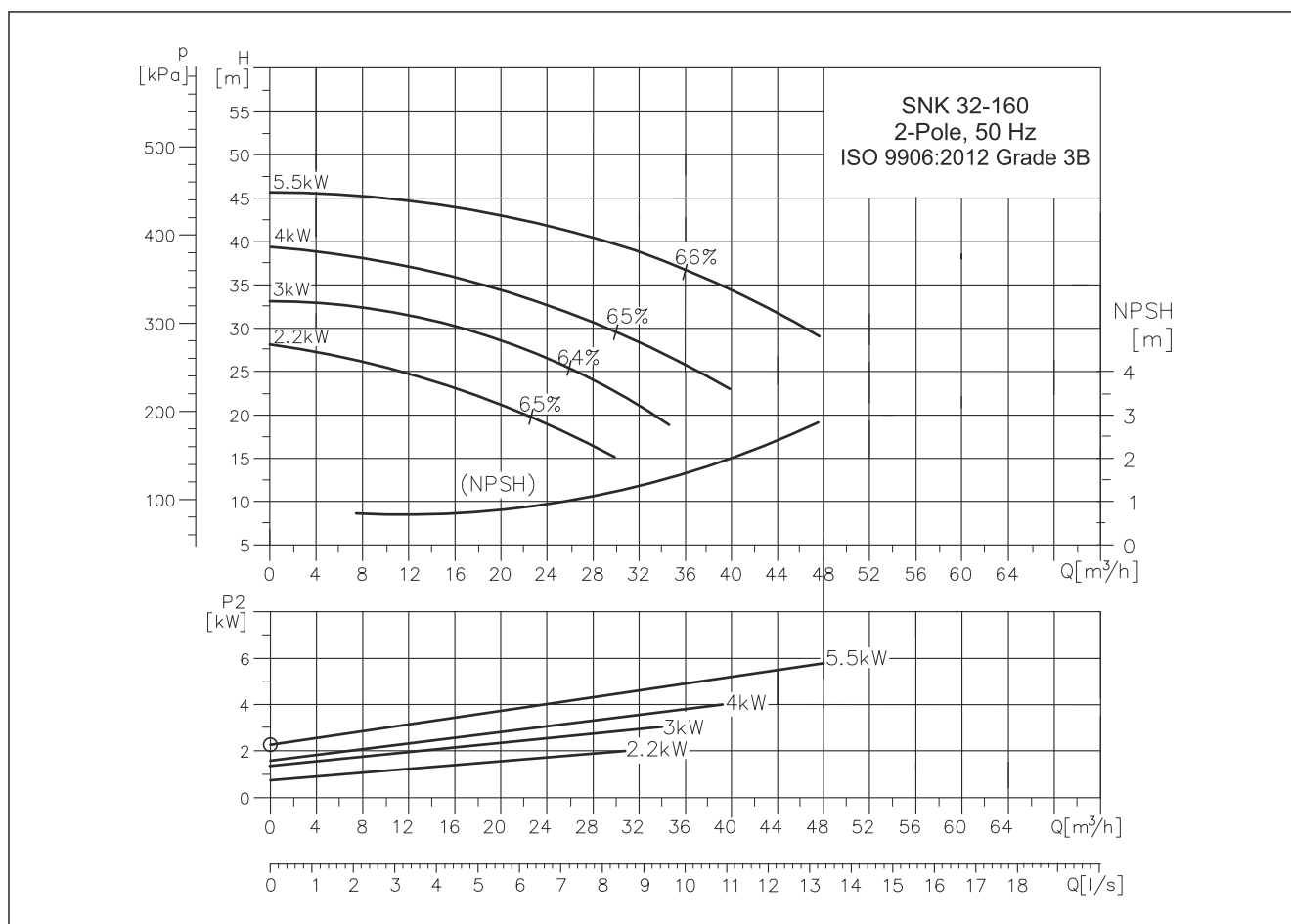
#### Recommended suction x delivery pipe size :

[kW / H.P.] 1.5/2.0	:	50 x 40 mm
[kW / H.P.] 2.2/3.0	:	50 x 40 mm
[kW / H.P.] 3.0/4.0	:	50 x 40 mm

Pump Type		32-160.1		
Motor Frame		SMG 90	SMG 90	SMG 100
[kW/HP]		1.5/2.0	2.2/3.0	3.0/4.0
PN	[bar]	16	16	16
DN <sub>d</sub>	[mm]	32	32	32
DN <sub>s</sub>	[mm]	50	50	50
a	[mm]	80	80	80
a <sub>2</sub>	[mm]	60	60	60
h	[mm]	65	65	65
h <sub>2</sub>	[mm]	160	160	160
h <sub>3</sub>	[mm]	197	197	197
h <sub>4</sub>	[mm]	338	353	367
l	[mm]	775	775	839
l <sub>1</sub>	[mm]	800	900	900
l <sub>2</sub>	[mm]	130	150	150
l <sub>3</sub>	[mm]	540	600	600
b <sub>1</sub>	[mm]	270	300	300
b <sub>2</sub>	[mm]	360	390	390
b <sub>3</sub>	[mm]	320	350	350
d	[mm]	19	19	19
Weight	Net [kg]	85	93	96

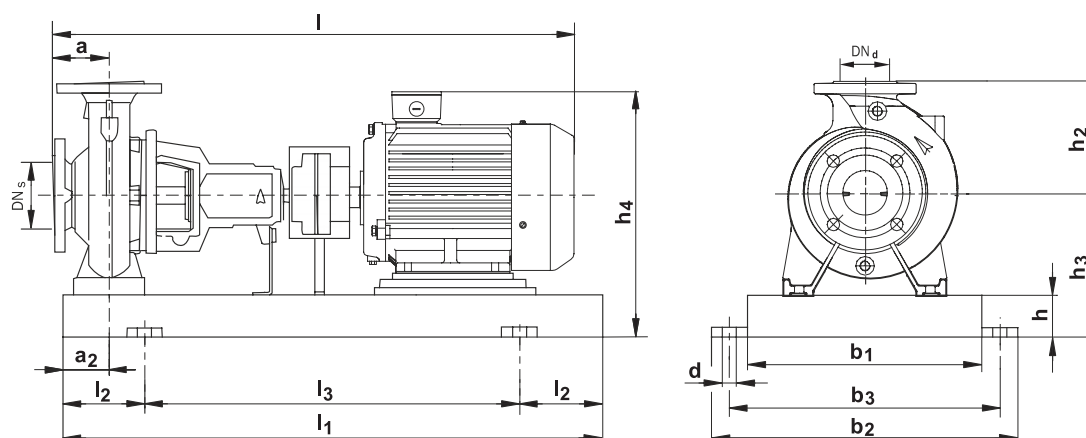
## PERFORMANCE CURVE

### SNK 32-160 (2 POLE)



## PERFORMANCE TABLE

### SNK 32-160 (2 POLE)



#### Recommended suction x delivery pipe size :

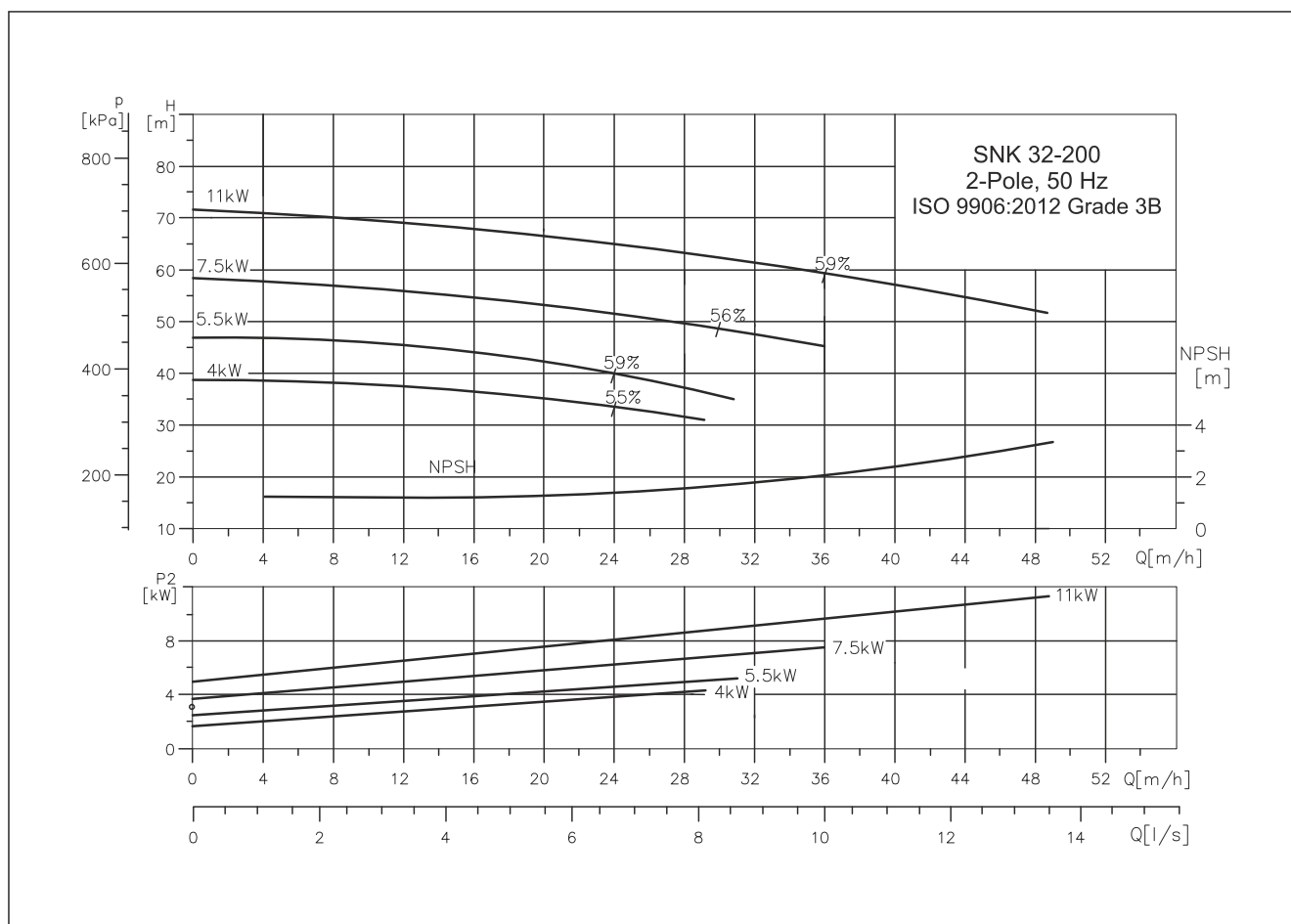
[kW / H.P.] 2.2/3.0	:	50 x 50 mm
[kW / H.P.] 3.0/4.0	:	50 x 50 mm
[kW / H.P.] 4.0/5.5	:	50 x 50 mm
[kW / H.P.] 5.5/7.5	:	50 x 50 mm

Pump Type		32-160			
Motor Frame		SMG 90	SMG 100	SMG 100	SMG 132
[kW/HP]		2.2/3.0	3.0/4.0	4.0/5.5	5.5/7.5
PN	[bar]	16	16	16	16
DN <sub>d</sub>	[mm]	32	32	32	32
DN <sub>s</sub>	[mm]	50	50	50	50
a	[mm]	80	80	80	80
a <sub>2</sub>	[mm]	60	60	60	60
h	[mm]	65	65	65	80
h <sub>2</sub>	[mm]	160	160	160	160
h <sub>3</sub>	[mm]	197	197	197	212
h <sub>4</sub>	[mm]	353	367	367	344
l	[mm]	775	839	876	915
l <sub>1</sub>	[mm]	900	900	900	1000
l <sub>2</sub>	[mm]	150	150	150	170
l <sub>3</sub>	[mm]	600	600	600	660
b <sub>1</sub>	[mm]	300	300	300	340
b <sub>2</sub>	[mm]	390	390	390	450
b <sub>3</sub>	[mm]	350	350	350	400
d	[mm]	19	19	19	24
Weight	Net [kg]	93	96	102	121



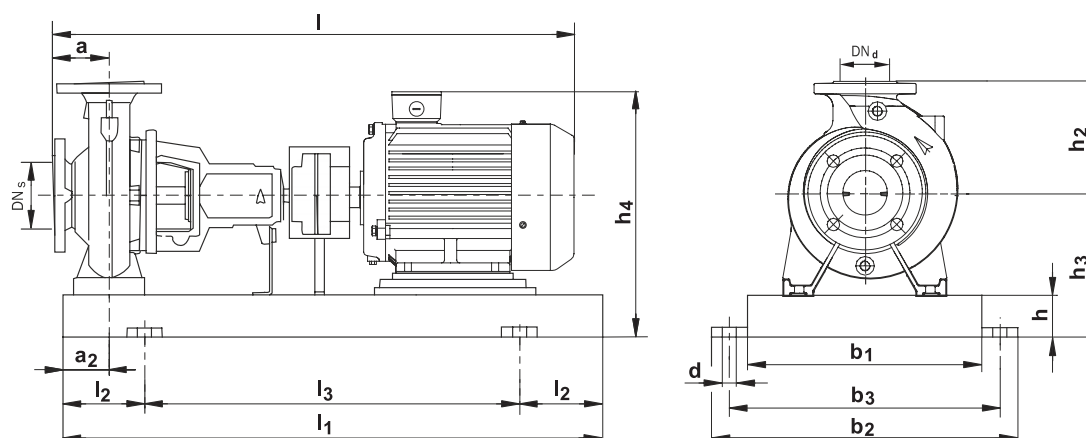
## PERFORMANCE CURVE

### SNK 32-200 (2 POLE)



## PERFORMANCE TABLE

### SNK 32-200 (2 POLE)



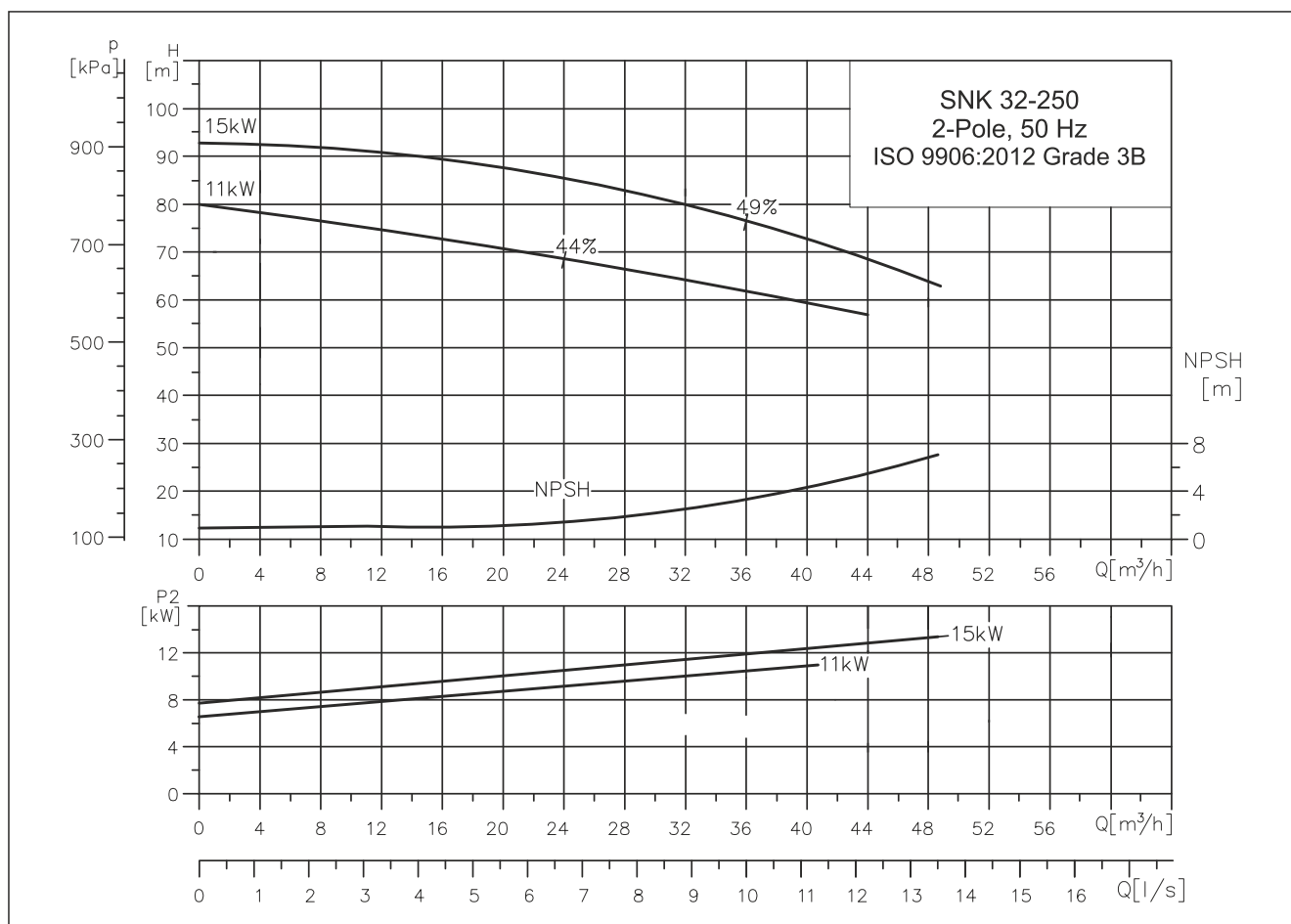
#### Recommended suction x delivery pipe size :

[kW / H.P.] 4.0/5.5	:	50 x 40 mm
[kW / H.P.] 5.5/7.5	:	50 x 40 mm
[kW / H.P.] 7.5/10.0	:	50 x 40 mm
[kW / H.P.] 11.0/15.0	:	50 x 50 mm

Pump Type		32-200			
Motor Frame		SMG 100	SMG 132	SMG 132	SMMG 160
[kW/HP]		4.0/5.5	5.5/7.5	7.5/10.0	11.0/15.0
PN	[bar]	16	16	16	16
DN <sub>d</sub>	[mm]	32	32	32	32
DN <sub>s</sub>	[mm]	50	50	50	50
a	[mm]	80	80	80	80
a <sub>2</sub>	[mm]	60	60	60	60
h	[mm]	65	80	80	80
h <sub>2</sub>	[mm]	180	180	180	180
h <sub>3</sub>	[mm]	225	242	242	240
h <sub>4</sub>	[mm]	395	372	372	473
l	[mm]	876	915	915	1052
l <sub>1</sub>	[mm]	900	1000	1000	1120
l <sub>2</sub>	[mm]	150	170	170	190
l <sub>3</sub>	[mm]	600	660	660	740
b <sub>1</sub>	[mm]	300	340	340	380
b <sub>2</sub>	[mm]	390	450	450	490
b <sub>3</sub>	[mm]	350	400	400	440
d	[mm]	19	24	24	24
Weight	Net [kg]	114	127	130	218

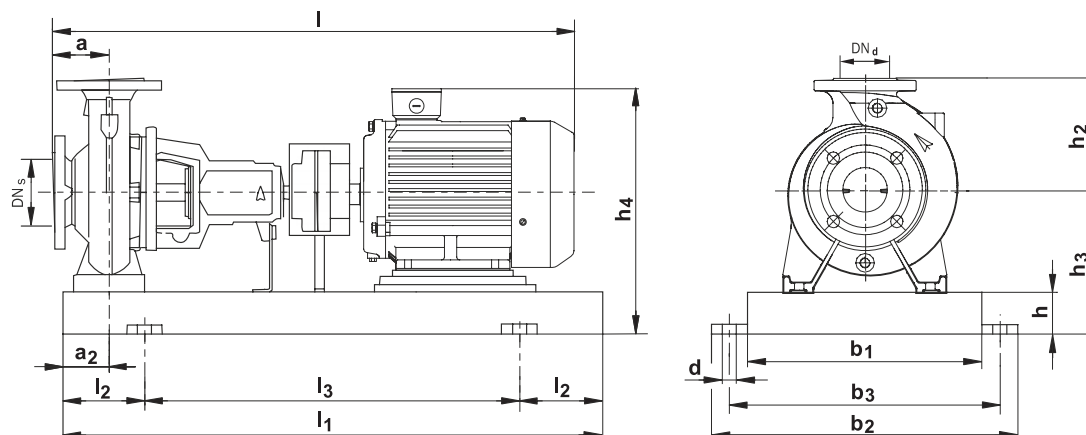
## PERFORMANCE CURVE

### SNK 32-250 (2 POLE)



## PERFORMANCE TABLE

### SNK 32-250 (2 POLE)



#### Recommended suction x delivery pipe size :

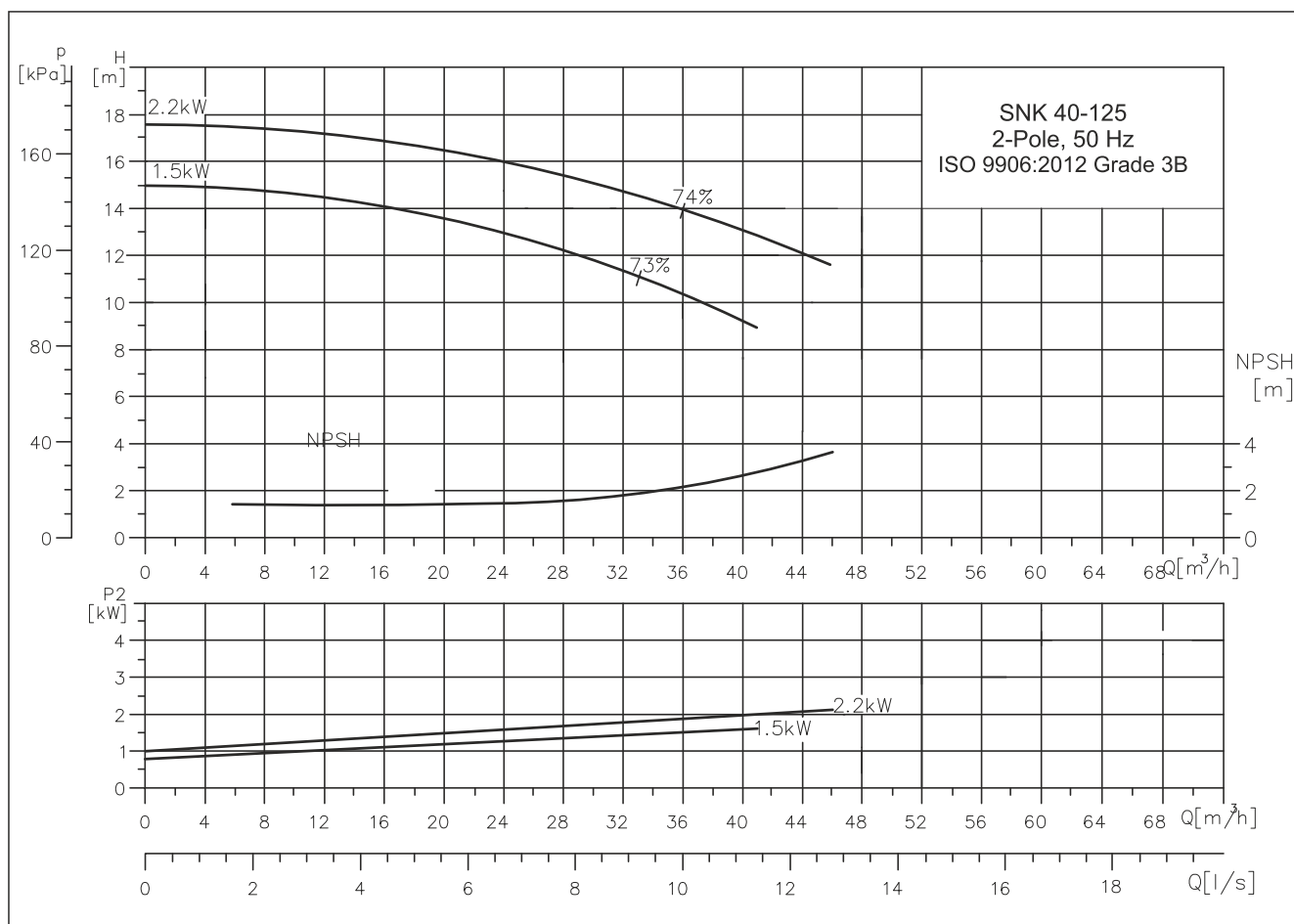
[kW / H.P.] 11.0/15.0 : 50 x 50 mm

[kW / H.P.] 15.0/20.0 : 50 x 50 mm

Pump Type		32-250	
Motor Frame		SMMG 160	SMMG 160
[kW/HP]		11.0/15.0	15.0/20.0
PN	[bar]	16	16
DN <sub>d</sub>	[mm]	32	32
DN <sub>s</sub>	[mm]	50	50
a	[mm]	100	100
a <sub>2</sub>	[mm]	75	75
h	[mm]	80	80
h <sub>2</sub>	[mm]	225	225
h <sub>3</sub>	[mm]	260	260
h <sub>4</sub>	[mm]	493	493
l	[mm]	1052	1052
l <sub>1</sub>	[mm]	1120	1120
l <sub>2</sub>	[mm]	190	190
l <sub>3</sub>	[mm]	740	740
b <sub>1</sub>	[mm]	380	380
b <sub>2</sub>	[mm]	490	490
b <sub>3</sub>	[mm]	440	440
d	[mm]	24	24
Weight	Net [kg]	213	216

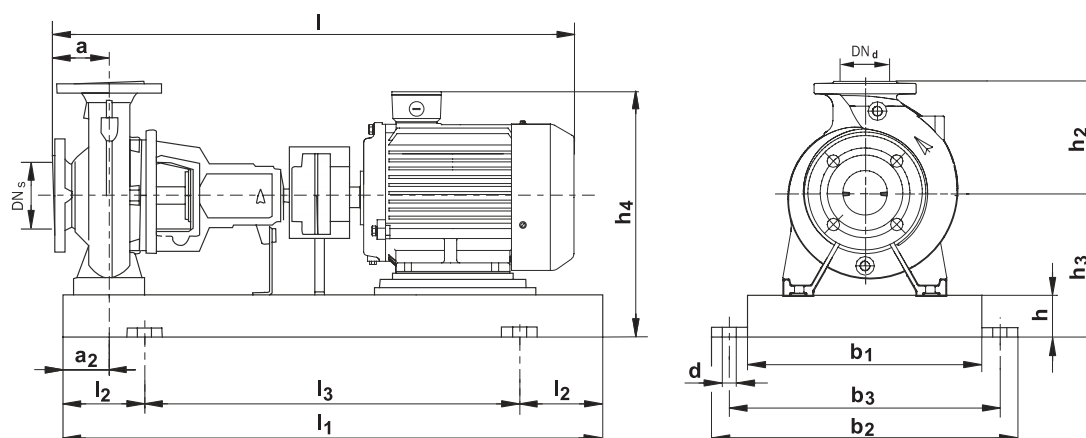
## PERFORMANCE CURVE

### SNK 40-125 (2 POLE)



## PERFORMANCE TABLE

### SNK 40-125 (2 POLE)



#### Recommended suction x delivery pipe size :

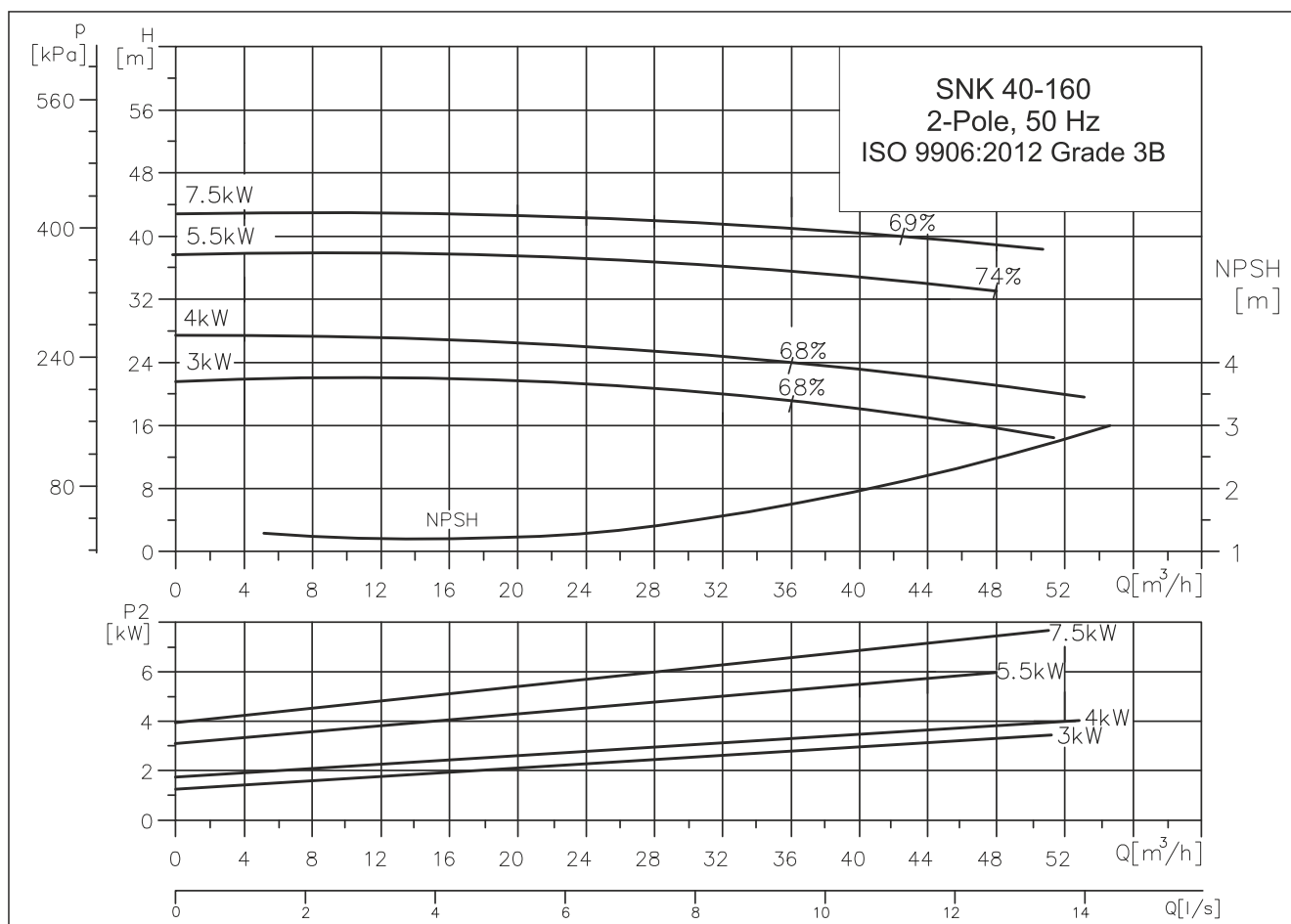
[kW / H.P.] 1.5/2.0 : 65 x 65 mm

[kW / H.P.] 2.2/3.0 : 65 x 65 mm

Pump Type		40-125	
Motor Frame		SMG 90	SMG 90
[kW/HP]		1.5/2.0	2.2/3.0
PN	[bar]	16	16
DN <sub>d</sub>	[mm]	40	40
DN <sub>s</sub>	[mm]	65	65
a	[mm]	80	80
a <sub>2</sub>	[mm]	60	60
h	[mm]	65	65
h <sub>2</sub>	[mm]	140	140
h <sub>3</sub>	[mm]	177	177
h <sub>4</sub>	[mm]	318	333
l	[mm]	775	775
l <sub>1</sub>	[mm]	800	900
l <sub>2</sub>	[mm]	130	150
l <sub>3</sub>	[mm]	540	600
b <sub>1</sub>	[mm]	270	300
b <sub>2</sub>	[mm]	360	390
b <sub>3</sub>	[mm]	320	350
d	[mm]	19	19
Weight	Net [kg]	77	85

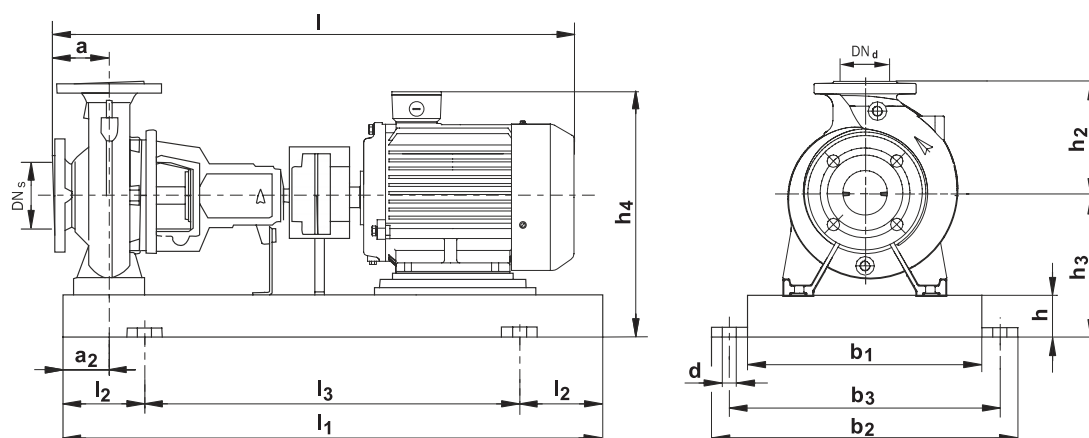
## PERFORMANCE CURVE

### SNK 40-160 (2 POLE)



## PERFORMANCE TABLE

### SNK 40-160 (2 POLE)



#### Recommended suction x delivery pipe size :

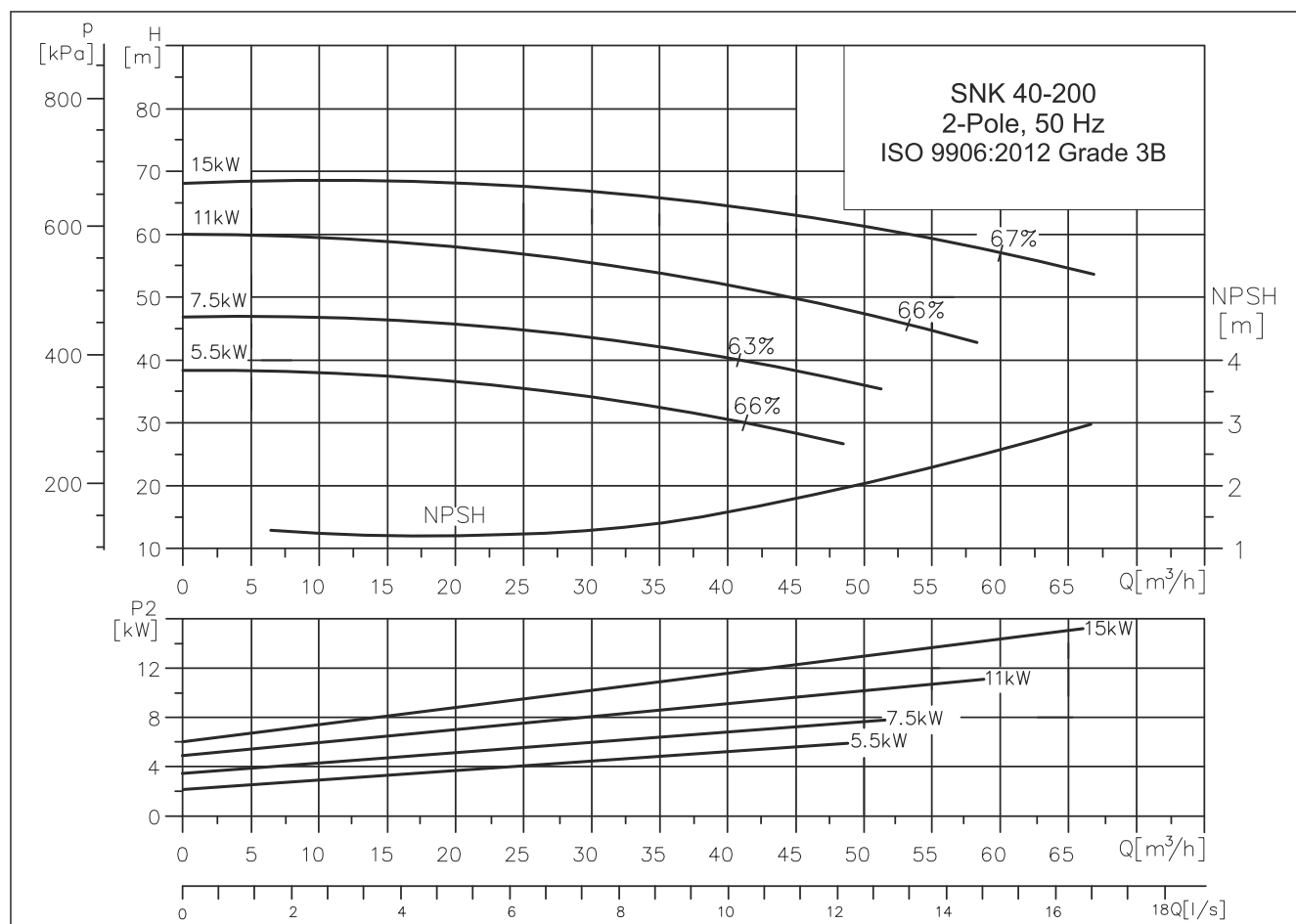
[kW / H.P.] 3.0/4.	:	80 x 65 mm
[kW / H.P.] 4.0/5.5	:	80 x 65 mm
[kW / H.P.] 5.5/7.5	:	65 x 50 mm
[kW / H.P.] 7.5/10.0	:	65 x 50 mm

Pump Type		40-160			
Motor Frame		SMG 100	SMG 100	SMG 132	SMG 132
[kW/HP]		3.0/4.0	4.0/5.5	5.5/7.5	7.5/10.0
PN	[bar]	16	16	16	16
DN <sub>d</sub>	[mm]	40	40	40	40
DN <sub>s</sub>	[mm]	65	65	65	65
a	[mm]	80	80	80	80
a <sub>2</sub>	[mm]	60	60	60	60
h	[mm]	65	65	80	80
h <sub>2</sub>	[mm]	160	160	160	160
h <sub>3</sub>	[mm]	197	197	212	212
h <sub>4</sub>	[mm]	367	367	344	344
l	[mm]	876	876	915	915
l <sub>1</sub>	[mm]	900	900	1000	1000
l <sub>2</sub>	[mm]	150	150	170	170
l <sub>3</sub>	[mm]	600	600	660	660
b <sub>1</sub>	[mm]	300	300	340	340
b <sub>2</sub>	[mm]	390	390	450	450
b <sub>3</sub>	[mm]	350	350	400	400
d	[mm]	19	19	24	24
Weight	Net [kg]	102	103	120	122



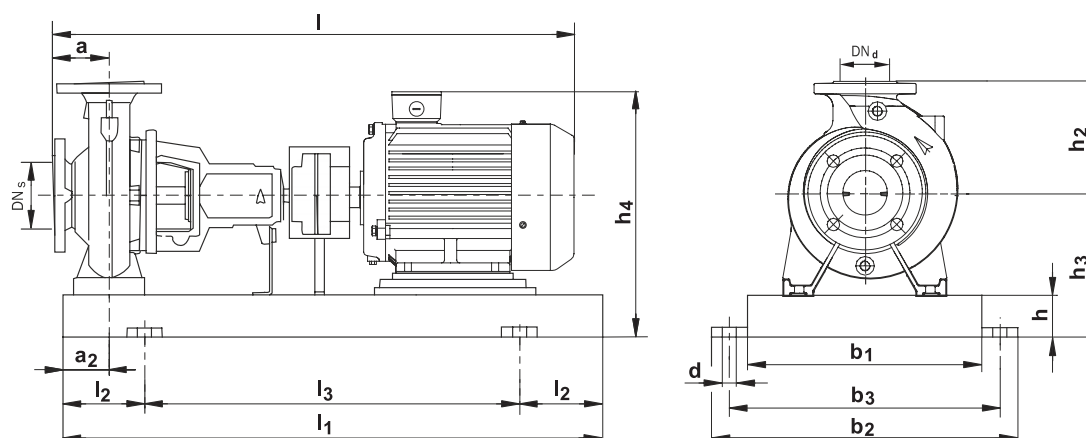
## PERFORMANCE CURVE

### SNK 40-200 (2 POLE)



## PERFORMANCE TABLE

### SNK 40-200 (2 POLE)



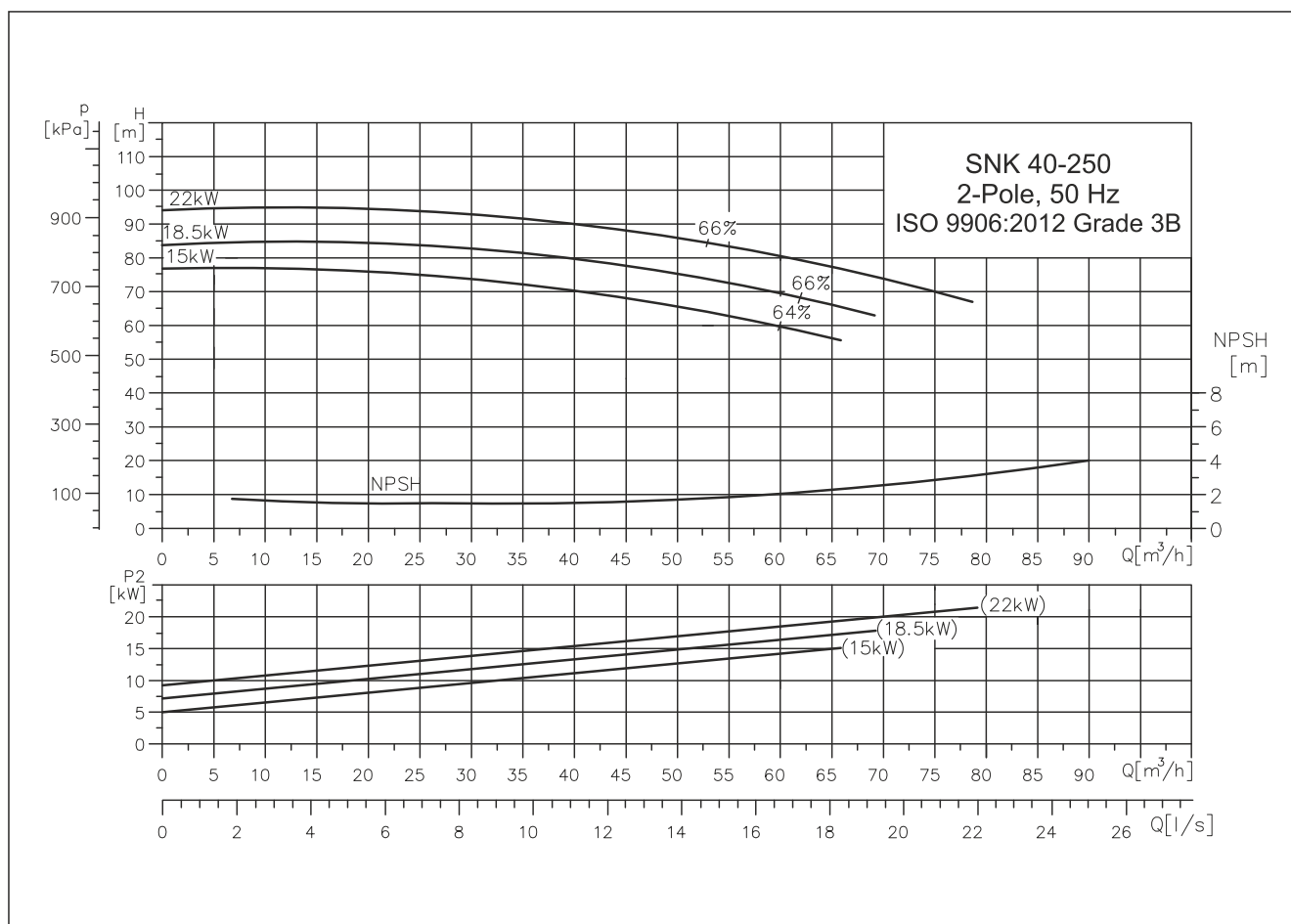
#### Recommended suction x delivery pipe size :

[kW / H.P.] 5.5/7.5	:	65 x 50 mm
[kW / H.P.] 7.5/10.0	:	65 x 50 mm
[kW / H.P.] 11.0/15.0	:	65 x 50 mm
[kW / H.P.] 15.0/20.0	:	65 x 50 mm

Pump Type		40-200			
Motor Frame		SMG 132	SMG 132	SMMG 160	SMMG 160
[kW/HP]		5.5/7.5	7.5/10.0	11.0/15.0	15.0/20.0
PN	[bar]	16	16	16	16
DN <sub>d</sub>	[mm]	40	40	40	40
DN <sub>s</sub>	[mm]	65	65	65	65
a	[mm]	100	100	100	100
a <sub>2</sub>	[mm]	60	60	60	60
h	[mm]	80	80	80	80
h <sub>2</sub>	[mm]	180	180	180	180
h <sub>3</sub>	[mm]	242	242	240	240
h <sub>4</sub>	[mm]	374	374	473	473
l	[mm]	935	935	1072	1072
l <sub>1</sub>	[mm]	1000	1000	1120	1120
l <sub>2</sub>	[mm]	170	170	190	190
l <sub>3</sub>	[mm]	660	660	740	740
b <sub>1</sub>	[mm]	340	340	380	380
b <sub>2</sub>	[mm]	450	450	490	490
b <sub>3</sub>	[mm]	400	400	440	440
d	[mm]	24	24	24	24
Weight	Net [kg]	130	132	217	223

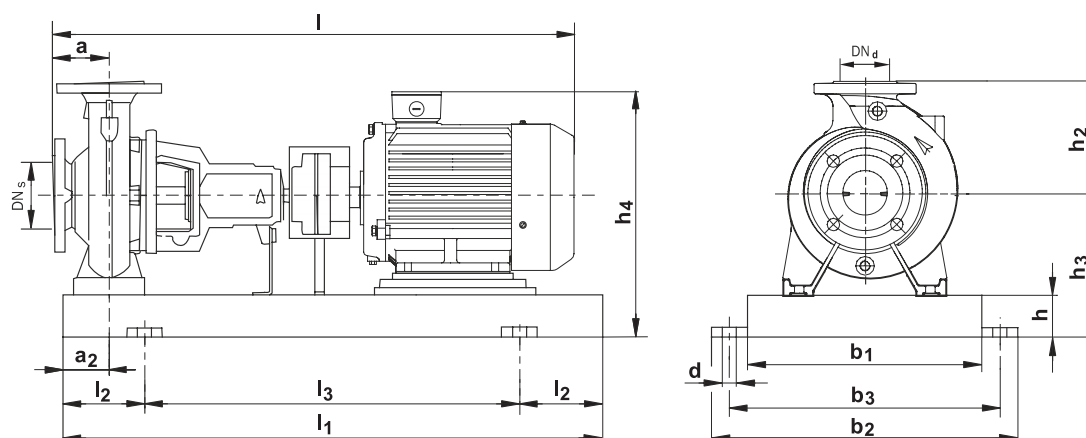
## PERFORMANCE CURVE

### SNK 40-250 (2 POLE)



## PERFORMANCE TABLE

### SNK 40-250 (2 POLE)



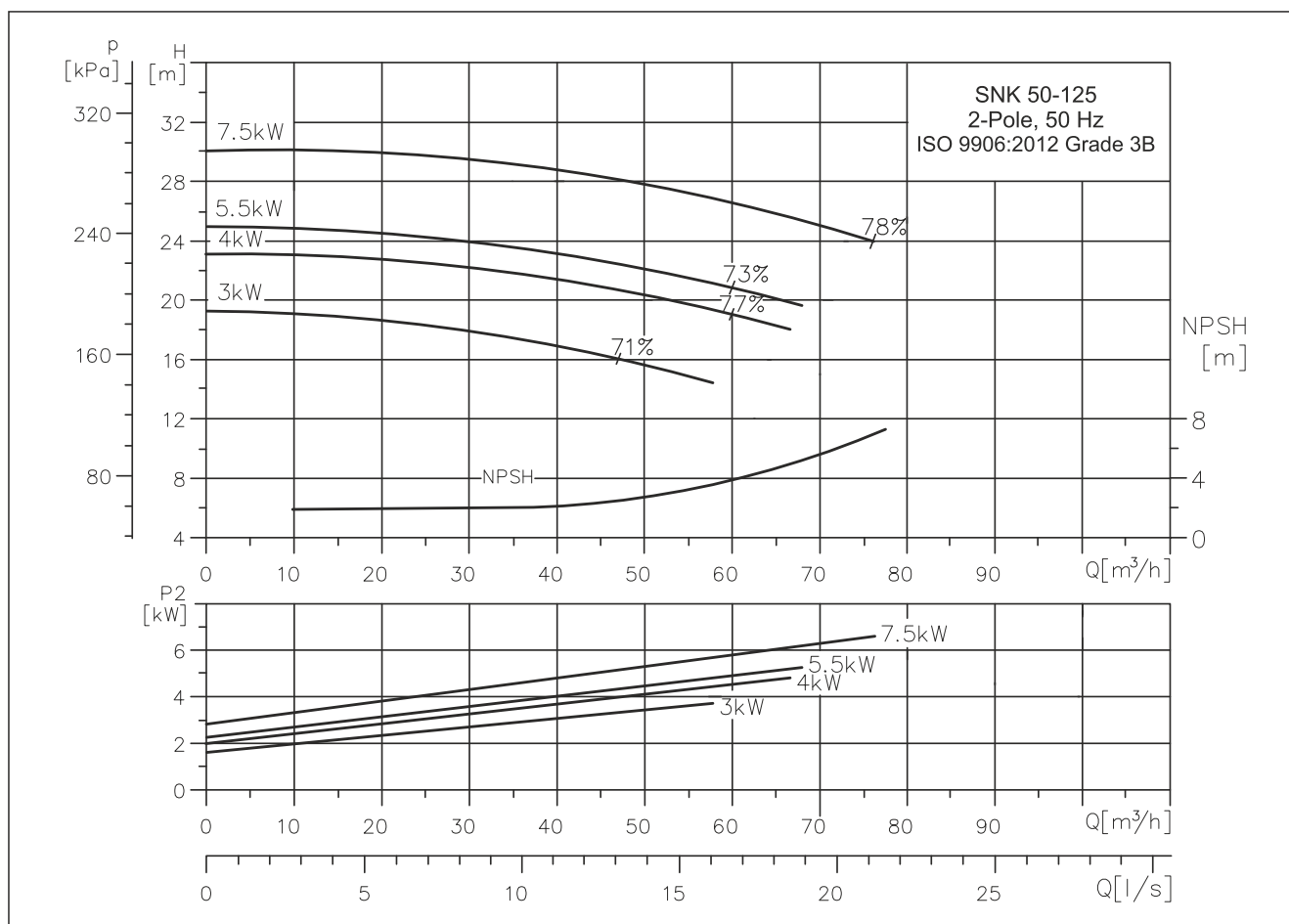
#### Recommended suction x delivery pipe size :

[kW / H.P.] 15.0/20.0 : 65 x 50 mm  
[kW / H.P.] 18.5/25.0 : 65 x 50 mm  
[kW / H.P.] 22.0/30.0 : 65 x 65 mm

Pump Type		40-250		
Motor Frame		SMMG 160	SMMG 160	SMMG 180
[kW/HP]		15.0/20.0	18.5/25.0	22.0/30.0
PN	[bar]	16	16	16
DN <sub>d</sub>	[mm]	40	40	40
DN <sub>s</sub>	[mm]	65	65	65
a	[mm]	100	100	100
a <sub>2</sub>	[mm]	75	75	75
h	[mm]	80	80	80
h <sub>2</sub>	[mm]	225	225	225
h <sub>3</sub>	[mm]	260	260	260
h <sub>4</sub>	[mm]	493	493	496
l	[mm]	1072	1116	1154
l <sub>1</sub>	[mm]	1250	1250	1250
l <sub>2</sub>	[mm]	205	205	205
l <sub>3</sub>	[mm]	840	840	840
b <sub>1</sub>	[mm]	430	430	430
b <sub>2</sub>	[mm]	540	540	540
b <sub>3</sub>	[mm]	490	490	490
d	[mm]	24	24	24
Weight	Net [kg]	242	249	276

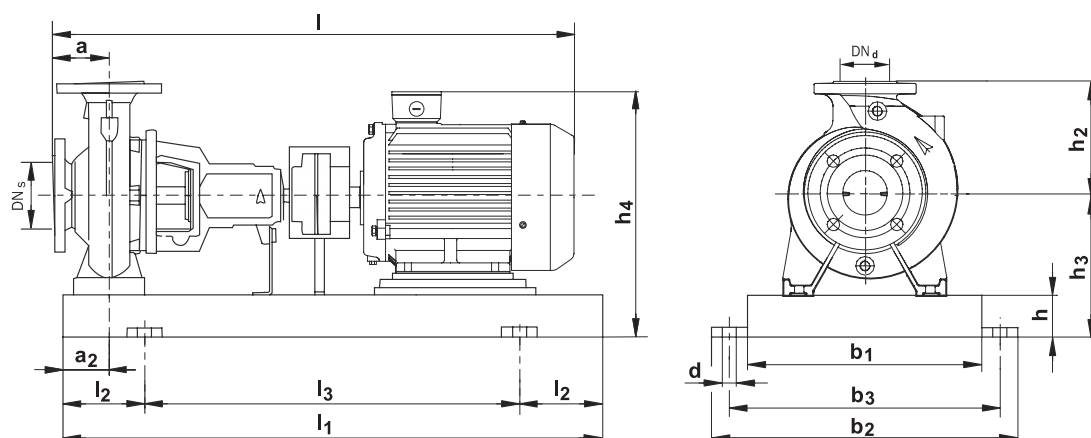
## PERFORMANCE CURVE

### SNK 50-125 (2 POLE)



## PERFORMANCE TABLE

### SNK 50-125 (2 POLE)



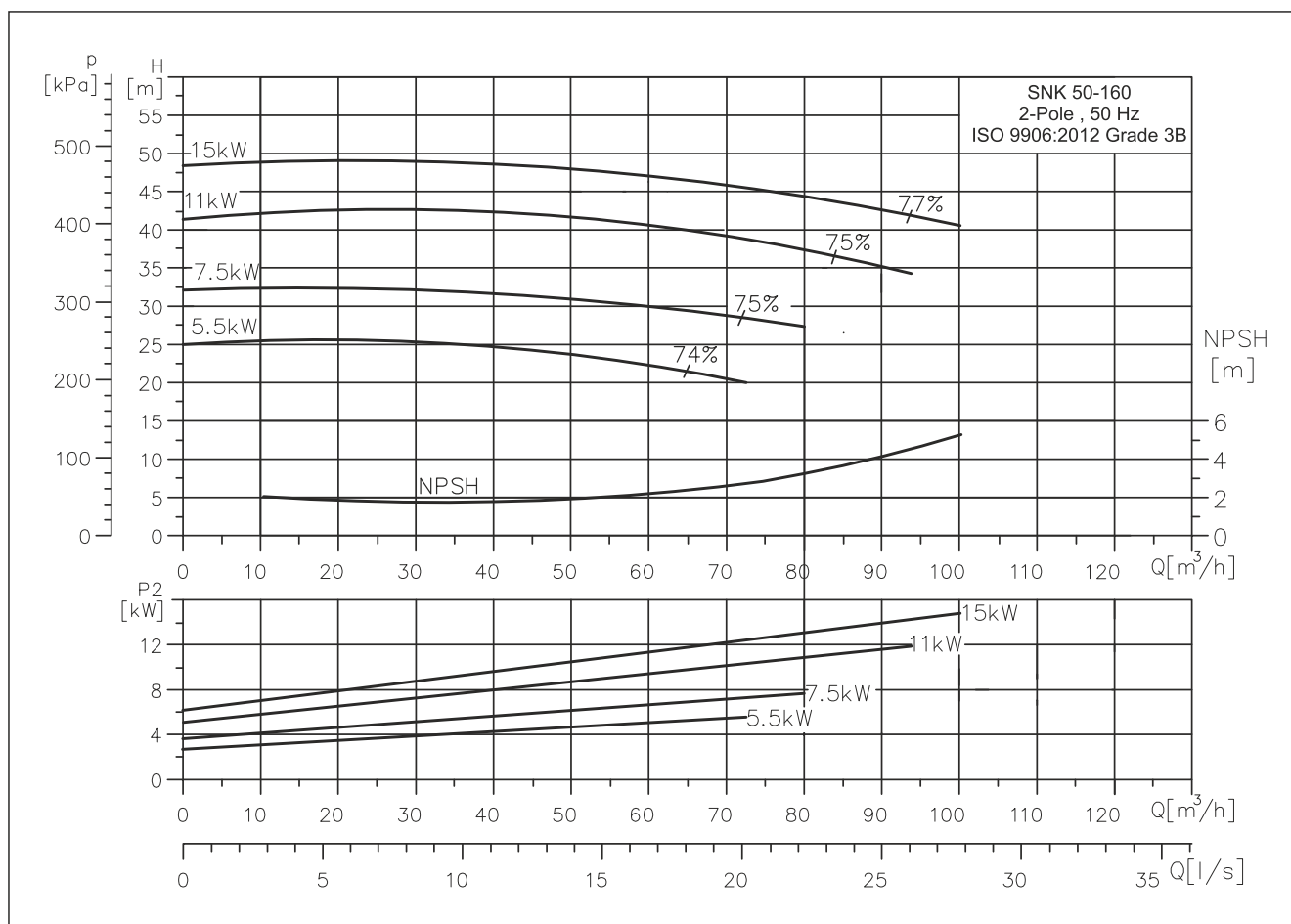
#### Recommended suction x delivery pipe size :

[kW / H.P.] 3.0/4.0	:	80 x 65 mm
[kW / H.P.] 4.0/5.5	:	80 x 65 mm
[kW / H.P.] 5.5/7.5	:	80 x 65 mm
[kW / H.P.] 7.5/10.0	:	80 x 65 mm

Pump Type		50-125			
Motor Frame		SMG 100	SMG 100	SMG 132	SMG 132
[kW/HP]		3.0/4.0	4.0/5.5	5.5/7.5	7.5/10.0
PN	[bar]	16	16	16	16
DN <sub>d</sub>	[mm]	50	50	50	50
DN <sub>s</sub>	[mm]	65	65	65	65
a	[mm]	100	100	100	100
a <sub>2</sub>	[mm]	60	60	60	60
h	[mm]	65	65	80	80
h <sub>2</sub>	[mm]	160	160	160	160
h <sub>3</sub>	[mm]	197	197	212	212
h <sub>4</sub>	[mm]	367	367	344	344
l	[mm]	859	896	935	935
l <sub>1</sub>	[mm]	900	900	1000	1000
l <sub>2</sub>	[mm]	150	150	170	170
l <sub>3</sub>	[mm]	600	600	660	660
b <sub>1</sub>	[mm]	300	300	340	340
b <sub>2</sub>	[mm]	390	390	450	450
b <sub>3</sub>	[mm]	350	350	400	400
d	[mm]	19	19	24	24
Weight	Net [kg]	92	98	115	118

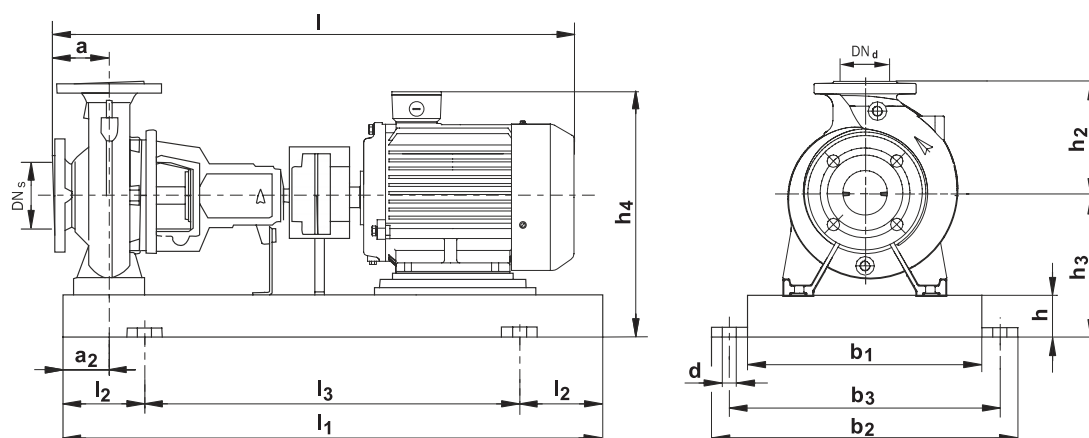
## PERFORMANCE CURVE

### SNK 50-160 (2 POLE)



## PERFORMANCE TABLE

### SNK 50-160 (2 POLE)



#### Recommended suction x delivery pipe size :

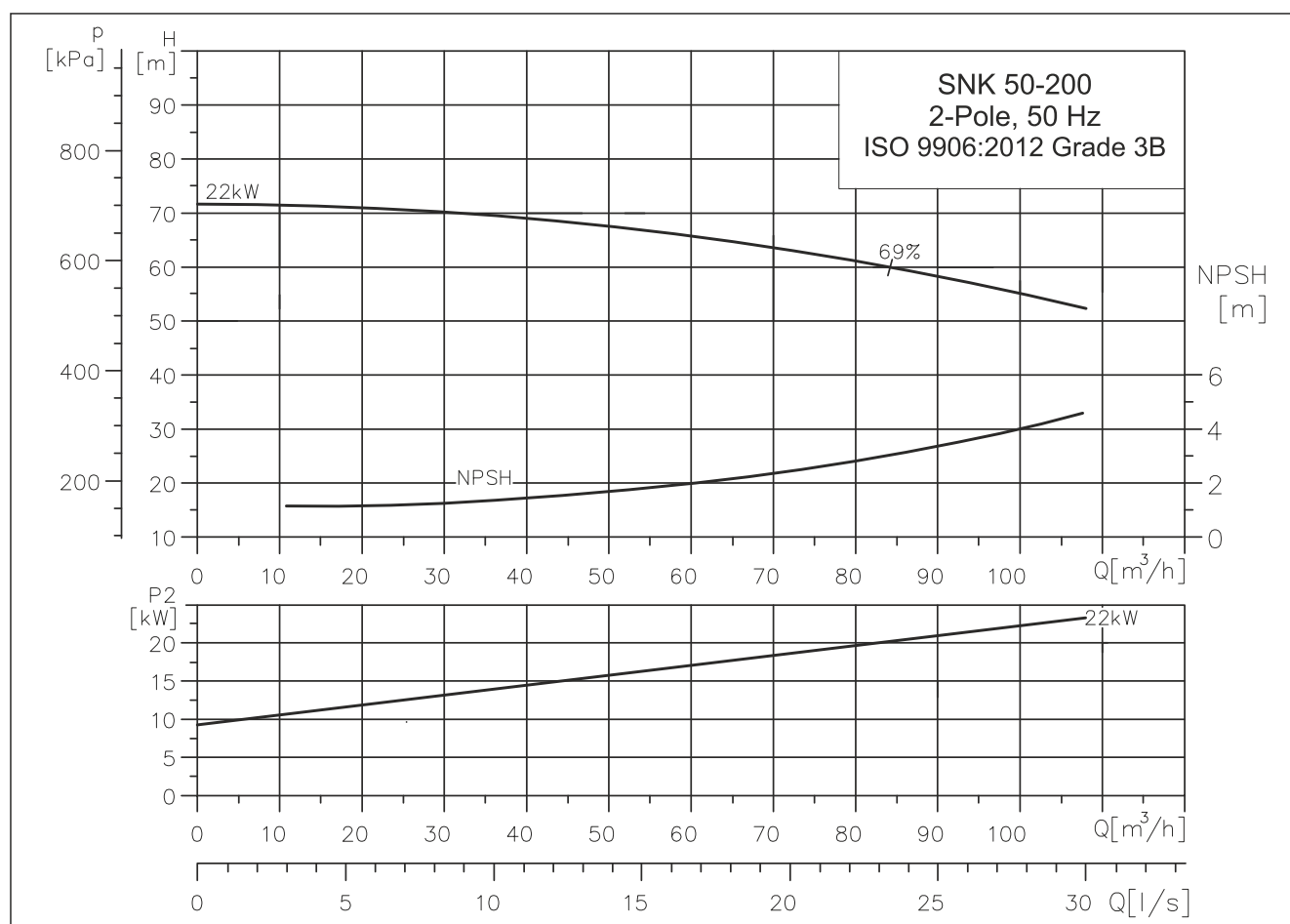
[kW / H.P.] 5.5/7.5	:	80 x 65 mm
[kW / H.P.] 7.5/10.0	:	80 x 65 mm
[kW / H.P.] 11.0/15.0	:	80 x 65 mm
[kW / H.P.] 15.0/20.0	:	80 x 65 mm

Pump Type		50-160			
Motor Frame		SMG 132	SMG 132	SMMG 160	SMMG 160
[kW/HP]		5.5/7.5	7.5/10.0	11.0/15.0	15.0/20.0
PN	[bar]	16	16	16	16
DN <sub>d</sub>	[mm]	50	50	50	50
DN <sub>s</sub>	[mm]	65	65	65	65
a	[mm]	100	100	100	100
a <sub>2</sub>	[mm]	60	60	60	60
h	[mm]	80	80	80	80
h <sub>2</sub>	[mm]	180	180	180	180
h <sub>3</sub>	[mm]	242	242	240	240
h <sub>4</sub>	[mm]	374	374	473	473
l	[mm]	935	935	1072	1072
l <sub>1</sub>	[mm]	1000	1000	1120	1120
l <sub>2</sub>	[mm]	170	170	190	190
l <sub>3</sub>	[mm]	660	660	740	740
b <sub>1</sub>	[mm]	340	340	380	380
b <sub>2</sub>	[mm]	450	450	490	490
b <sub>3</sub>	[mm]	400	400	440	440
d	[mm]	24	24	24	24
Weight	Net [kg]	124	127	209	217



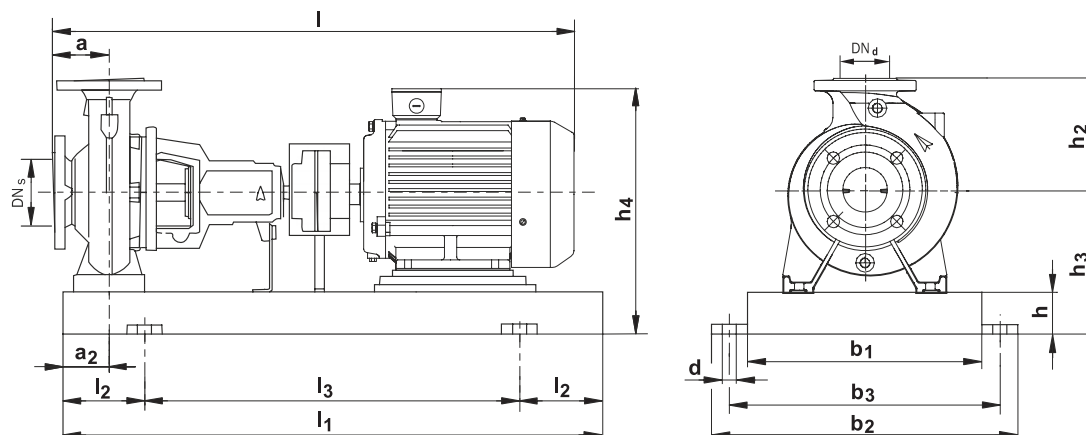
## PERFORMANCE CURVE

### SNK 50-200 (2 POLE)



## PERFORMANCE TABLE

### SNK 50-200 (2 POLE)



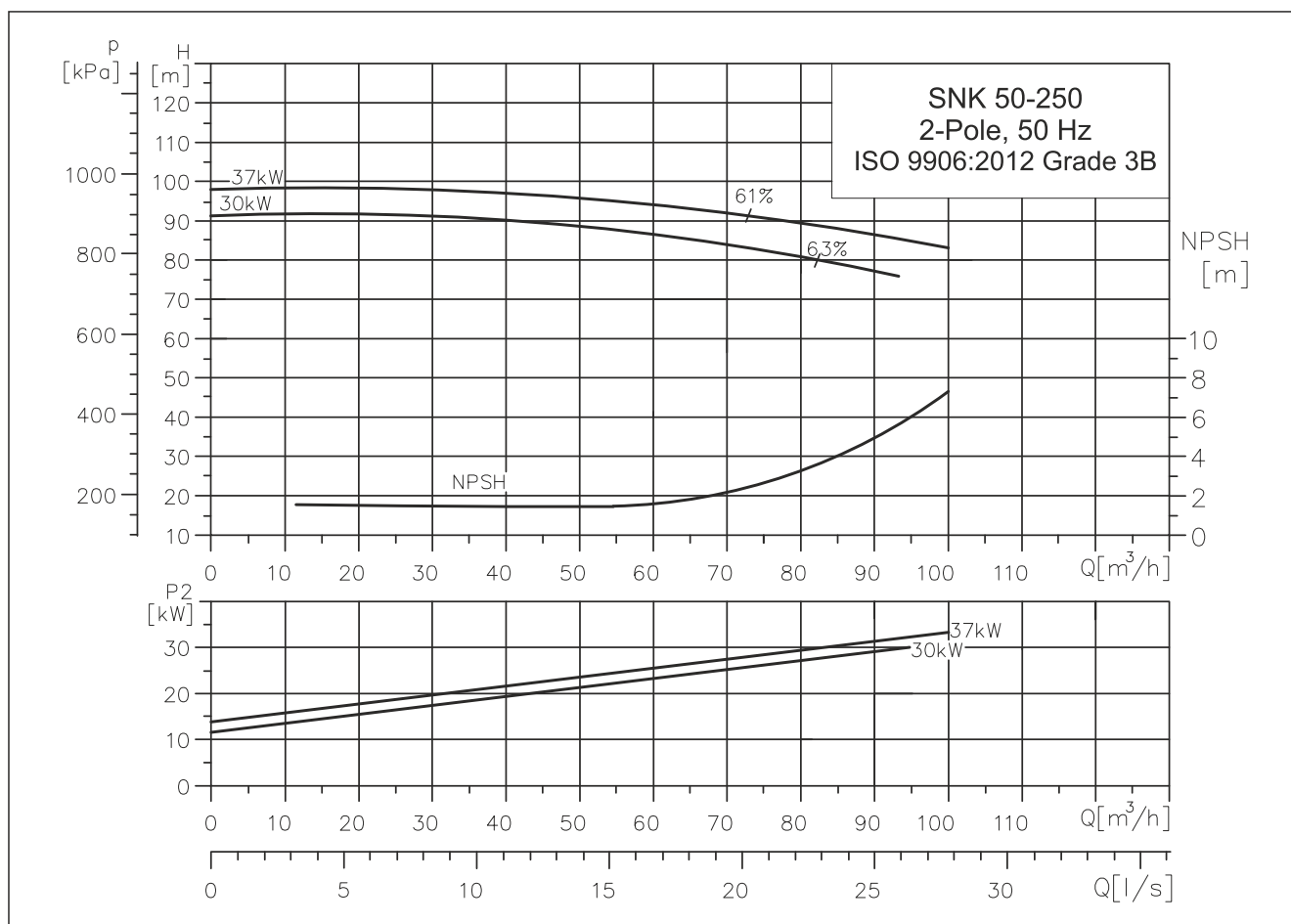
Recommended suction x delivery pipe size :

[kW / H.P.] 22.0/30.0 : 80 x 65 mm

Pump Type		50-200
Motor Frame		SMMG 180
[kW/HP]		22.0/30.0
PN	[bar]	16
DN <sub>d</sub>	[mm]	50
DN <sub>s</sub>	[mm]	65
a	[mm]	100
a <sub>2</sub>	[mm]	60
h	[mm]	80
h <sub>2</sub>	[mm]	200
h <sub>3</sub>	[mm]	260
h <sub>4</sub>	[mm]	496
l	[mm]	1154
l <sub>1</sub>	[mm]	1120
l <sub>2</sub>	[mm]	190
l <sub>3</sub>	[mm]	740
b <sub>1</sub>	[mm]	380
b <sub>2</sub>	[mm]	490
b <sub>3</sub>	[mm]	440
d	[mm]	24
Weight	Net [kg]	292

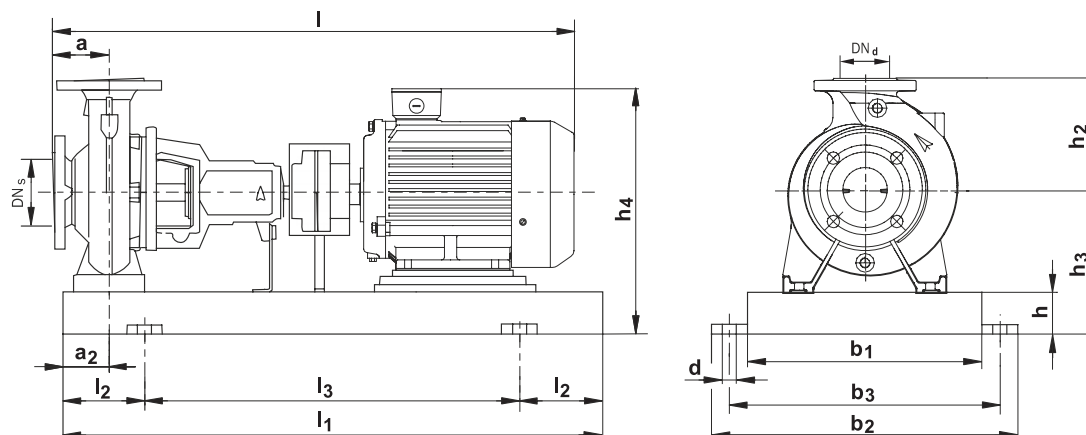
## PERFORMANCE CURVE

### SNK 50-250 (2 POLE)



## PERFORMANCE TABLE

### SNK 50-250 (2 POLE)



#### Recommended suction x delivery pipe size :

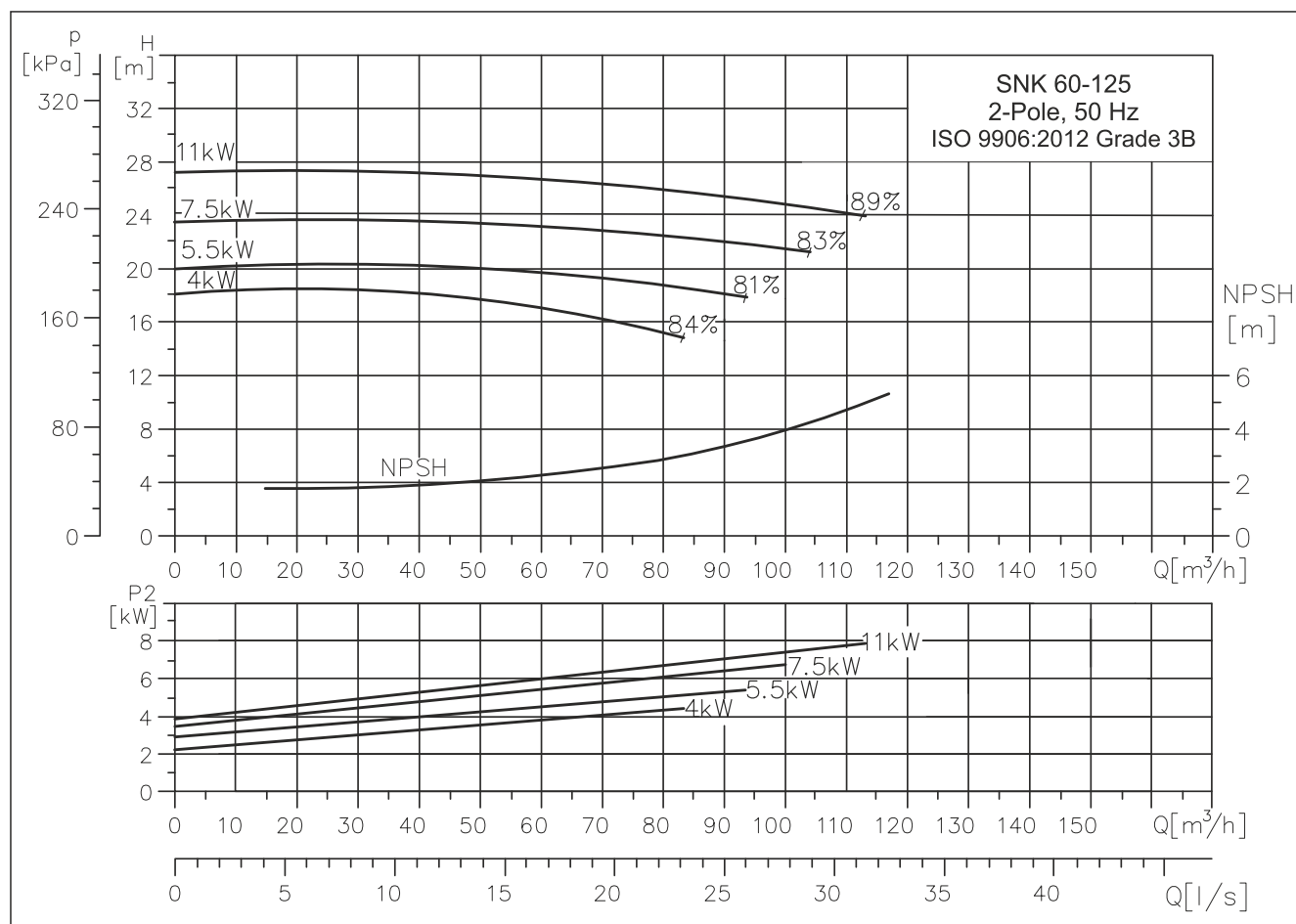
[kW / H.P.] 30.0/40.0 : 80 x 80 mm

[kW / H.P.] 37.0/50.0 : 100 x 65 mm

Pump Type		50-250/115	65-125/122
Motor Frame		SMMG 200	SMMG 200
[kW/HP]		30.0/40.0	37.0/50.0
PN	[bar]	16	16
DN <sub>d</sub>	[mm]	50	50
DN <sub>s</sub>	[mm]	65	65
a	[mm]	100	100
a <sub>2</sub>	[mm]	75	75
h	[mm]	100	100
h <sub>2</sub>	[mm]	225	225
h <sub>3</sub>	[mm]	300	300
h <sub>4</sub>	[mm]	576	576
l	[mm]	1221	1221
l <sub>1</sub>	[mm]	1400	1400
l <sub>2</sub>	[mm]	230	230
l <sub>3</sub>	[mm]	940	940
b <sub>1</sub>	[mm]	480	480
b <sub>2</sub>	[mm]	610	610
b <sub>3</sub>	[mm]	550	550
d	[mm]	28	28
Weight	Net [kg]	405	426

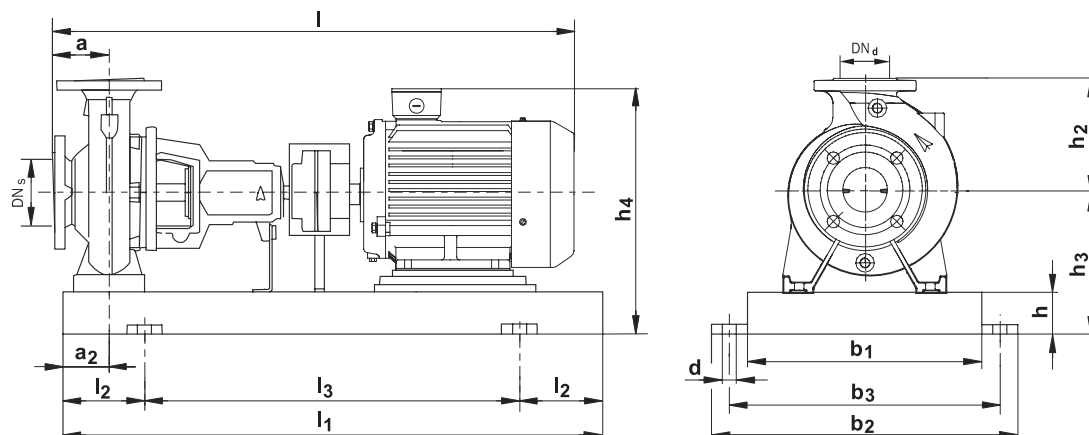
## PERFORMANCE CURVE

### SNK 65-125 (2 POLE)



## PERFORMANCE TABLE

### SNK 65-125 (2 POLE)



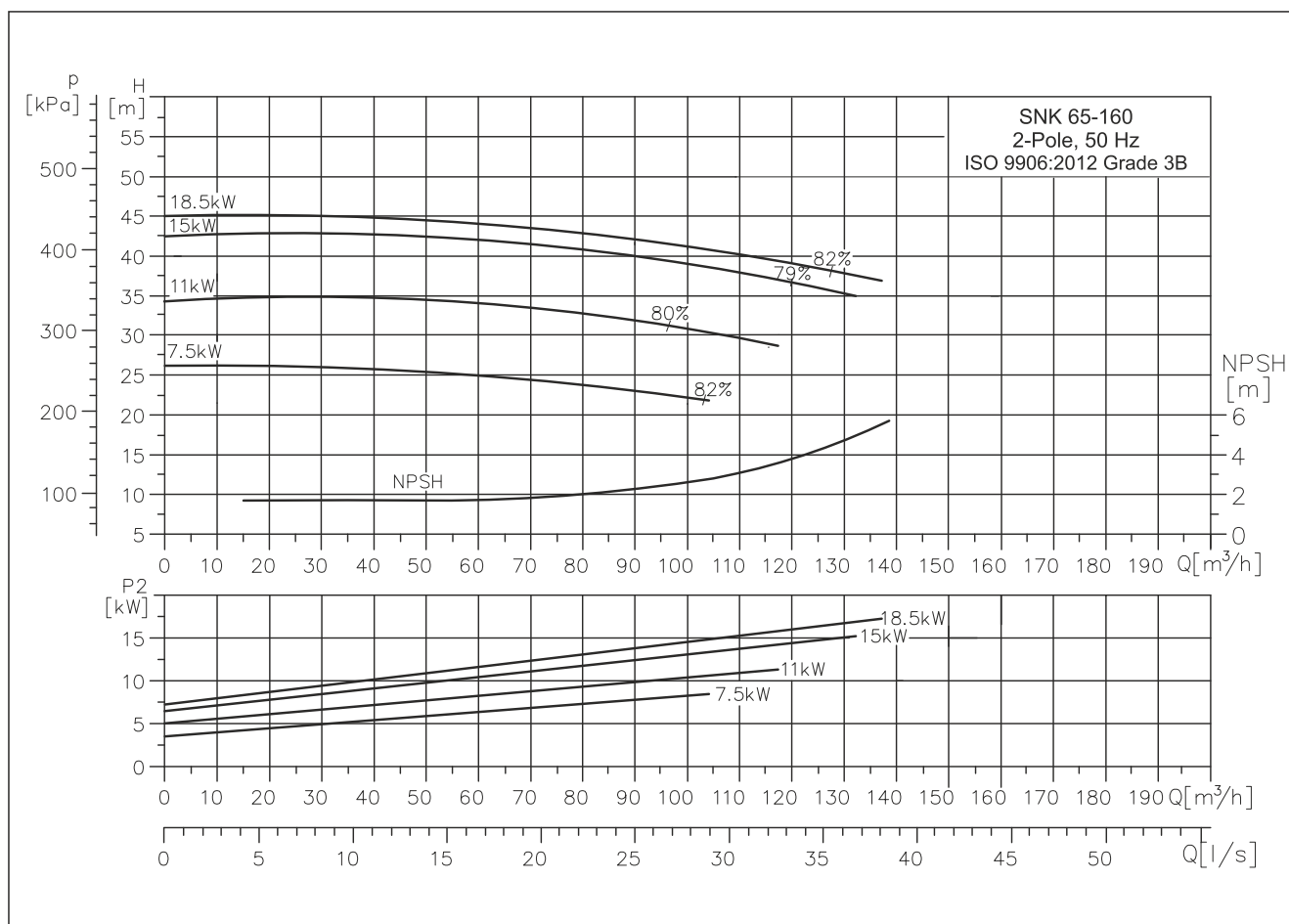
#### Recommended suction x delivery pipe size :

[kW / H.P.] 4.0/5.5	:	100 x 80 mm
[kW / H.P.] 5.5/7.5	:	100 x 80 mm
[kW / H.P.] 7.5/10.0	:	100 x 80 mm
[kW / H.P.] 11.0/15.0	:	100 x 80 mm

Pump Type		65-125/115	65-125/122	65-125/135	65-125/144
Motor Frame		SMG 100	SMG 132	SMG 132	SMMG 160
[kW/HP]		4.0/5.5	5.5/7.5	7.5/10.0	11.0/15.0
PN	[bar]	16	16	16	16
DN <sub>d</sub>	[mm]	65	65	65	65
DN <sub>s</sub>	[mm]	95	95	95	95
a	[mm]	100	100	100	100
a <sub>2</sub>	[mm]	60	60	60	60
h	[mm]	80	80	80	80
h <sub>2</sub>	[mm]	180	180	180	180
h <sub>3</sub>	[mm]	240	242	242	240
h <sub>4</sub>	[mm]	410	374	374	473
l	[mm]	896	935	935	1072
l <sub>1</sub>	[mm]	1000	1000	1000	1120
l <sub>2</sub>	[mm]	170	170	170	190
l <sub>3</sub>	[mm]	660	660	660	740
b <sub>1</sub>	[mm]	340	340	340	380
b <sub>2</sub>	[mm]	450	450	450	490
b <sub>3</sub>	[mm]	400	400	400	440
d	[mm]	24	24	24	24
Weight	Net [kg]	106	123	126	208

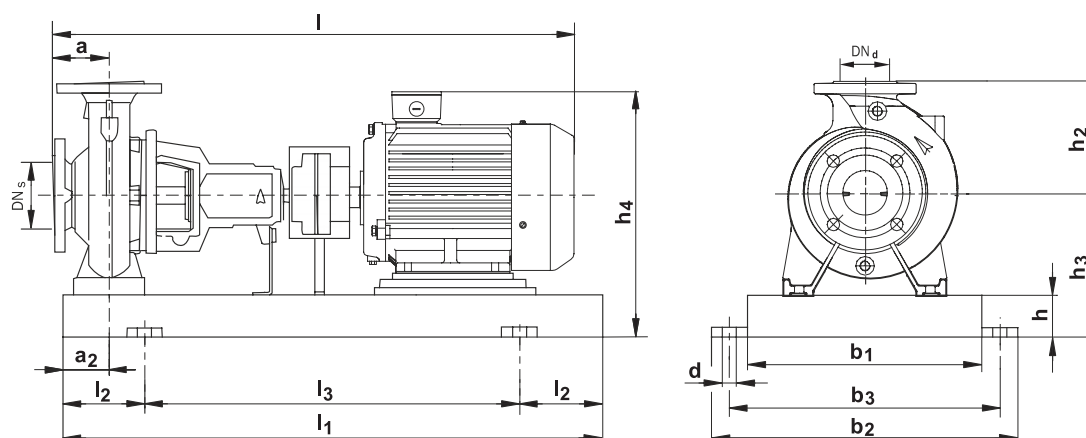
## PERFORMANCE CURVE

### SNK 65-160 (2 POLE)



## PERFORMANCE TABLE

### SNK 65-160 (2 POLE)



#### Recommended suction x delivery pipe size :

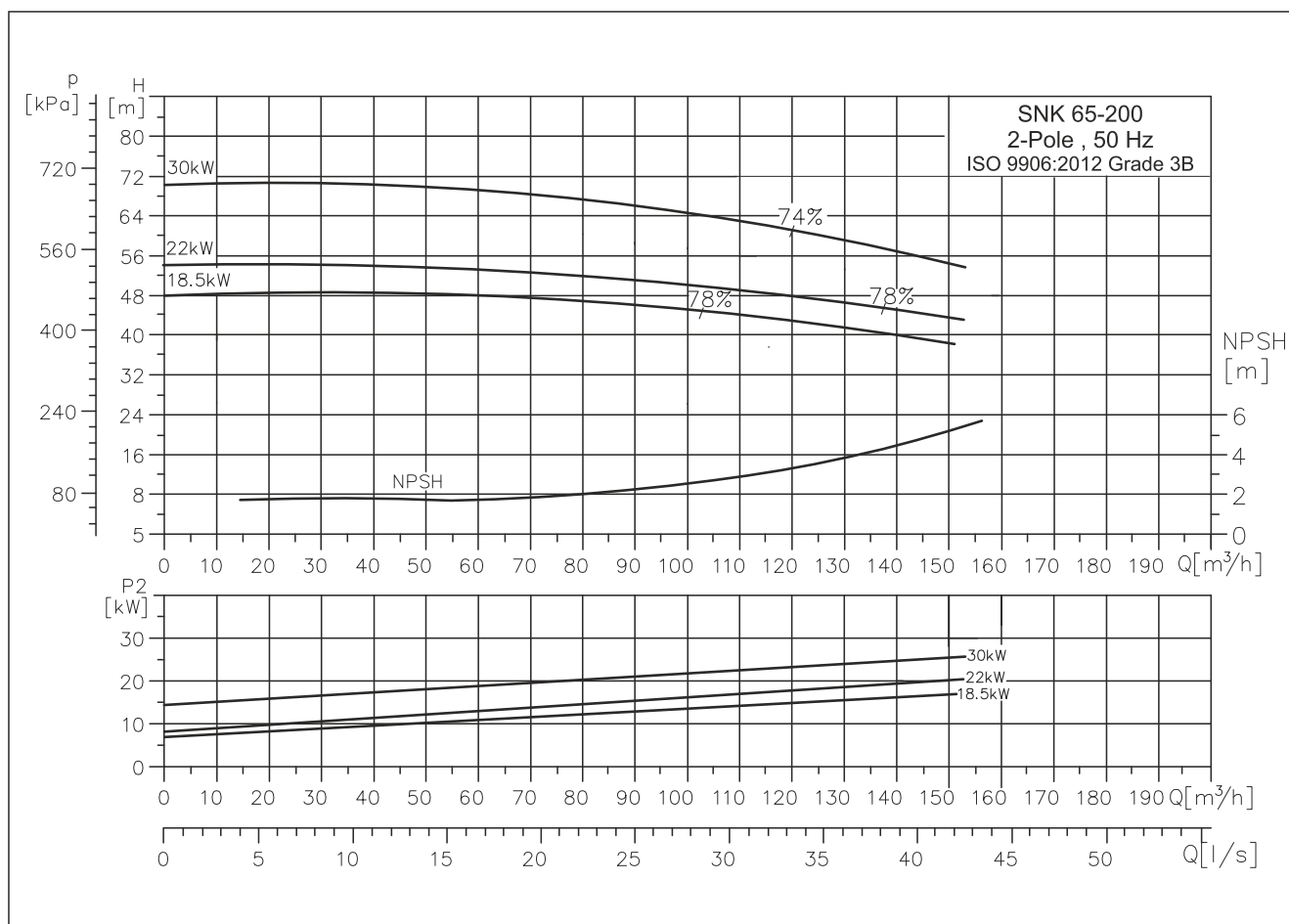
[kW / H.P.] 7.5/10.0	:	100 x 80 mm
[kW / H.P.] 11.0/15.0	:	100 x 80 mm
[kW / H.P.] 15.0/20.0	:	100 x 80 mm
[kW / H.P.] 18.5/25.0	:	100 x 80 mm

Pump Type		65-160/139	65-160/157	65-160/17	65-160/177
Motor Frame		SMG 132	SMMG 160	SMMG 160	SMMG 160
[kW/HP]		7.5/10.0	11.0/15.0	15.0/20.0	18.5/25.0
PN	[bar]	16	16	16	16
DN <sub>d</sub>	[mm]	65	65	65	65
DN <sub>s</sub>	[mm]	95	95	95	95
a	[mm]	100	100	100	100
a <sub>2</sub>	[mm]	60	60	60	60
h	[mm]	80	80	80	80
h <sub>2</sub>	[mm]	200	200	200	200
h <sub>3</sub>	[mm]	242	240	240	240
h <sub>4</sub>	[mm]	378	488	488	488
l	[mm]	935	1072	1072	1116
l <sub>1</sub>	[mm]	1000	1120	1120	1120
l <sub>2</sub>	[mm]	170	190	190	190
l <sub>3</sub>	[mm]	660	740	740	740
b <sub>1</sub>	[mm]	340	380	380	380
b <sub>2</sub>	[mm]	450	490	490	490
b <sub>3</sub>	[mm]	400	440	440	440
d	[mm]	24	24	24	24
Weight	Net [kg]	131	213	221	244



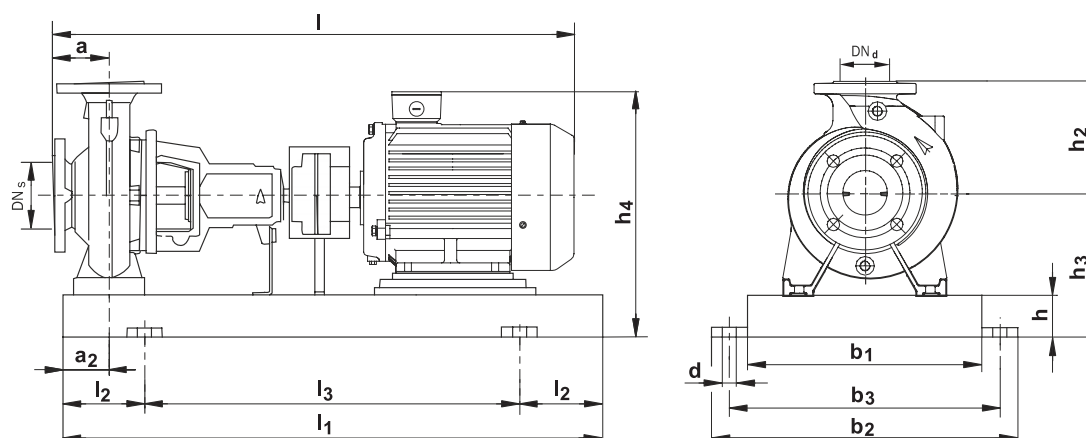
## PERFORMANCE CURVE

### SNK 65-200 (2 POLE)



## PERFORMANCE TABLE

### SNK 65-200 (2 POLE)



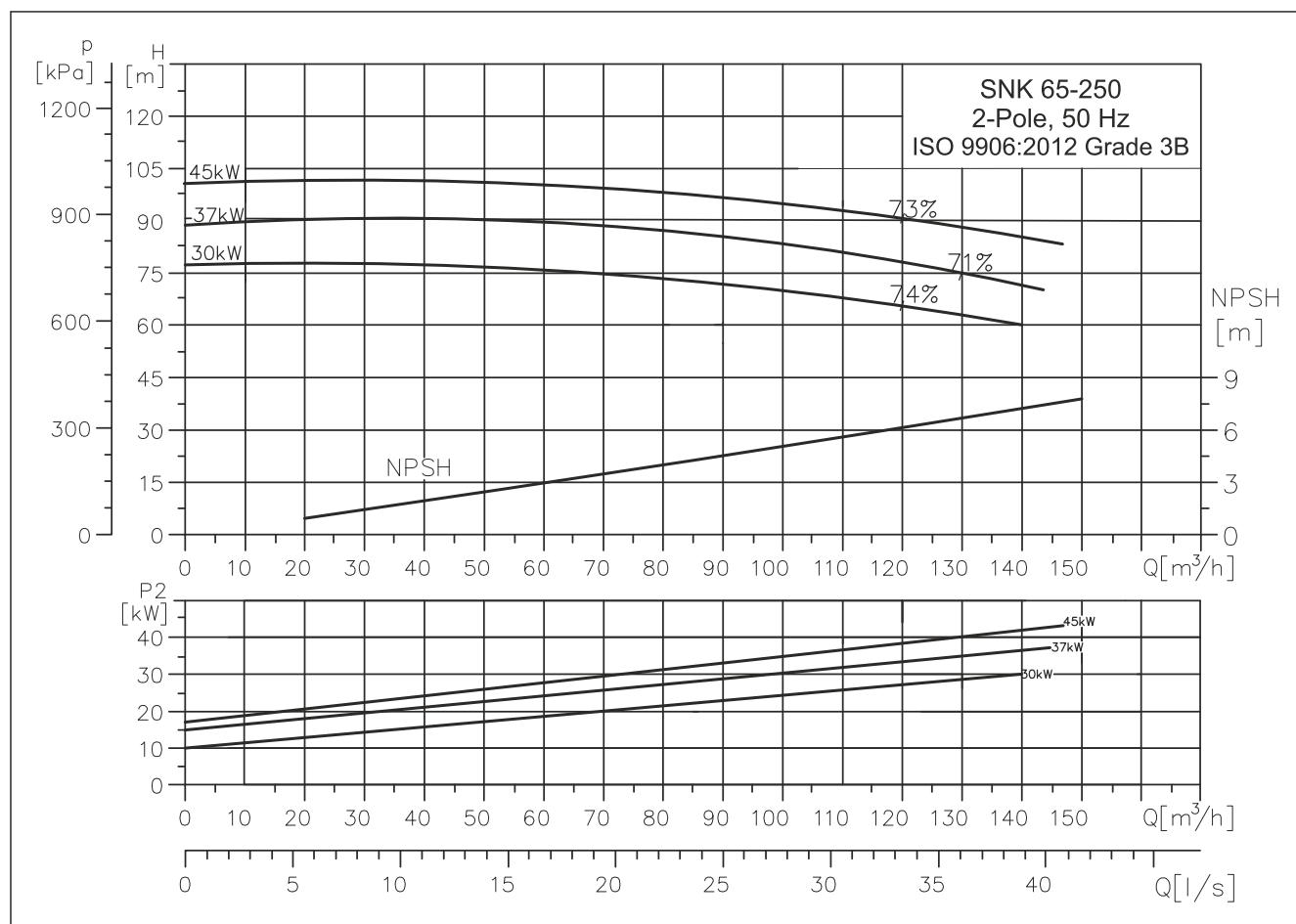
#### Recommended suction x delivery pipe size :

[kW / H.P.] 18.5/25.0 : 100 x 100 mm  
[kW / H.P.] 22.0/30.0 : 100 x 100 mm  
[kW / H.P.] 30.0/40.0 : 100 x 100 mm

Pump Type		65-200/185	65-200/195	65-200/217
Motor Frame		SMMG 160	SMMG 180	SMMG 200
[kW/HP]		18.5/25.0	22.0/30.0	30.0/40.0
PN	[bar]	16	16	16
DN <sub>d</sub>	[mm]	65	65	65
DN <sub>s</sub>	[mm]	90	90	90
a	[mm]	100	100	100
a <sub>2</sub>	[mm]	75	75	75
h	[mm]	80	80	80
h <sub>2</sub>	[mm]	225	225	225
h <sub>3</sub>	[mm]	260	260	300
h <sub>4</sub>	[mm]	493	496	536
l	[mm]	1116	1154	1221
l <sub>1</sub>	[mm]	1250	1250	1400
l <sub>2</sub>	[mm]	205	205	230
l <sub>3</sub>	[mm]	840	840	940
b <sub>1</sub>	[mm]	430	430	480
b <sub>2</sub>	[mm]	540	540	610
b <sub>3</sub>	[mm]	490	490	550
d	[mm]	24	24	28
Weight	Net [kg]	265	303	413

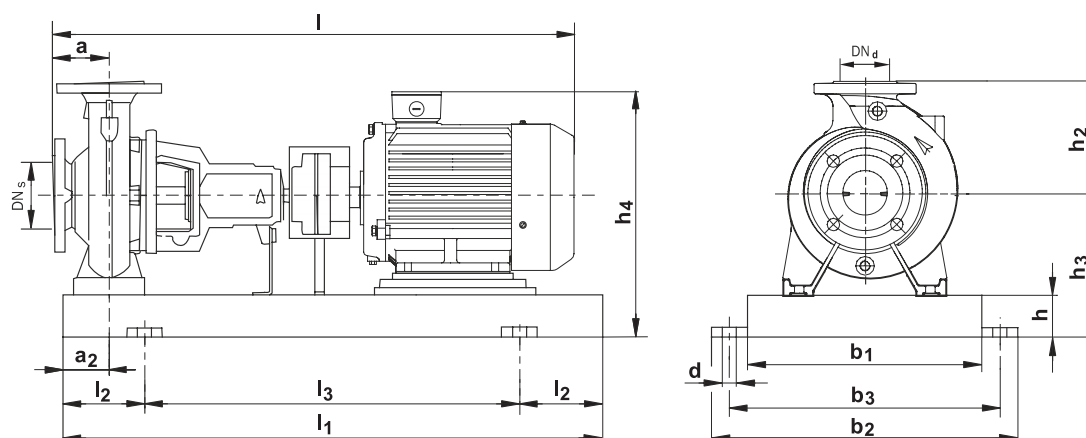
## PERFORMANCE TABLE

### SNK 65-250 (2 POLE)



## PERFORMANCE TABLE

### SNK 65-250 (2 POLE)



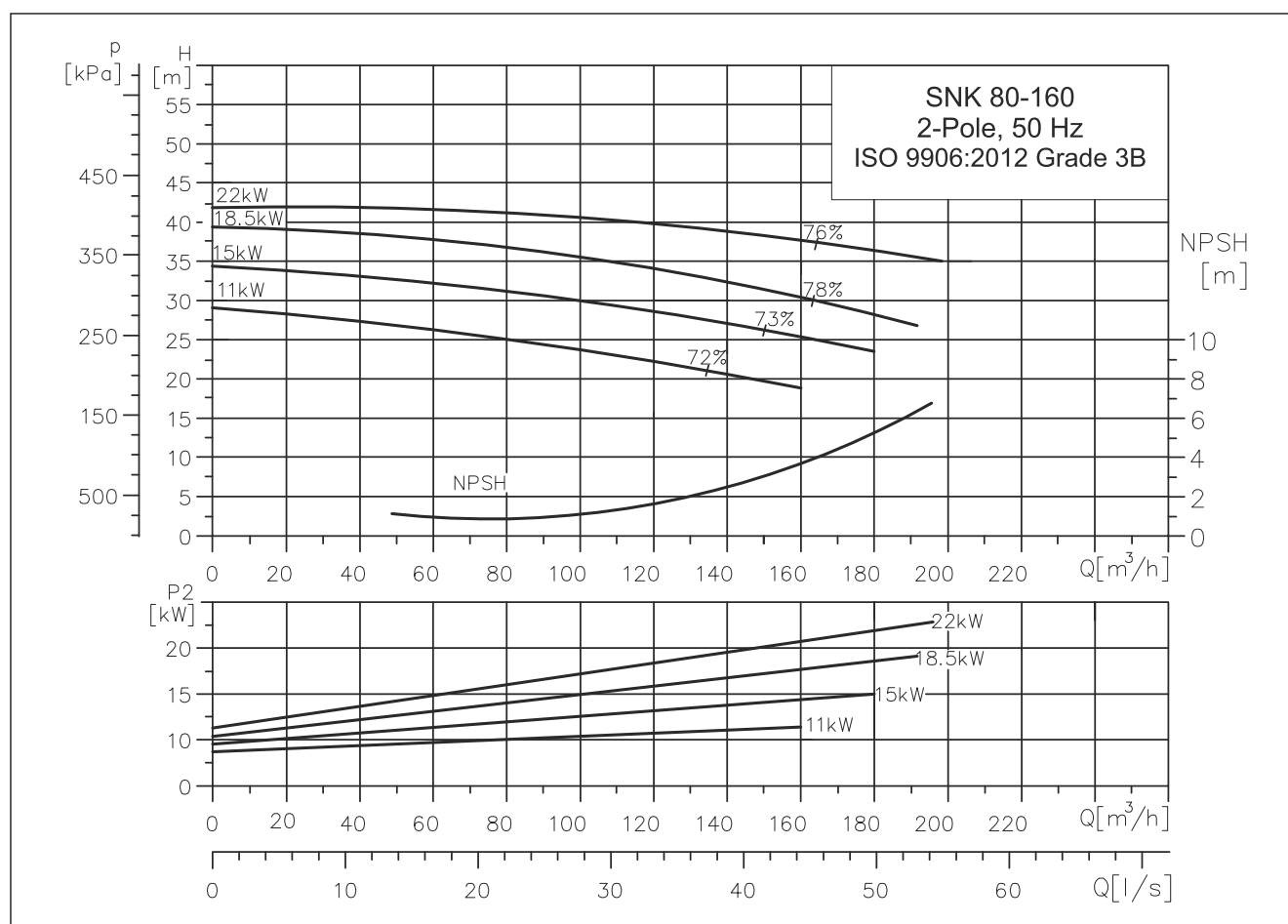
#### Recommended suction x delivery pipe size :

[kW / H.P.] 30.0/40.0	: 100 x 80 mm
[kW / H.P.] 37.0/50.0	: 100 x 80 mm
[kW / H.P.] 45.0/60.0	: 100 x 80 mm

Pump Type		65-250/230	65-250/250	65-250/260
Motor Frame		SMMG 200	SMMG 200	SMMG 225
[kW/HP]		30.0/40.0	37.0/45.0	45.0/60.0
PN	[bar]	16	16	16
DN <sub>d</sub>	[mm]	65	65	65
DN <sub>s</sub>	[mm]	80	80	80
a	[mm]	100	100	100
a <sub>2</sub>	[mm]	90	90	90
h	[mm]	100	100	100
h <sub>2</sub>	[mm]	250	250	250
h <sub>3</sub>	[mm]	300	300	325
h <sub>4</sub>	[mm]	576	576	597
l	[mm]	1331	1331	1381
l <sub>1</sub>	[mm]	1400	1400	1400
l <sub>2</sub>	[mm]	230	230	230
l <sub>3</sub>	[mm]	940	940	940
b <sub>1</sub>	[mm]	480	480	480
b <sub>2</sub>	[mm]	610	610	610
b <sub>3</sub>	[mm]	550	550	550
d	[mm]	28	28	28
Weight	Net [kg]	425	445	520

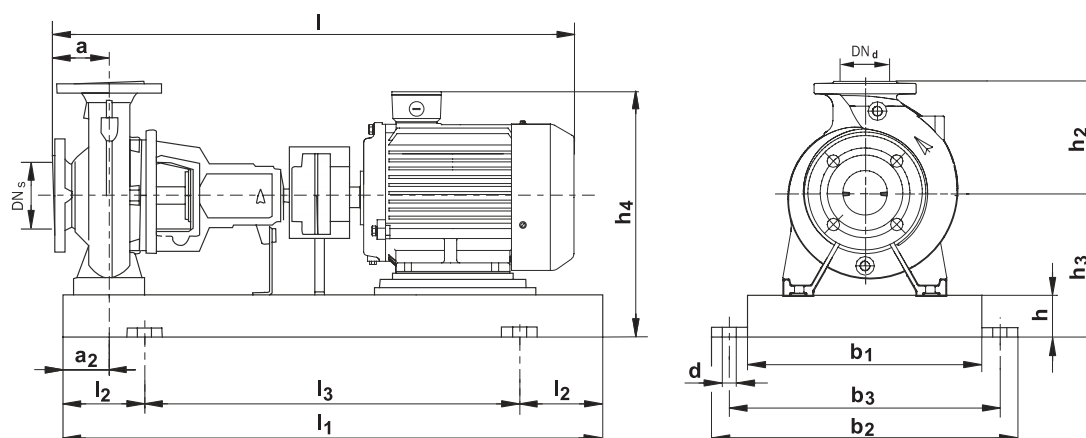
## PERFORMANCE CURVE

### SNK 80-160 (2 POLE)



## PERFORMANCE TABLE

### SNK 80-160 (2 POLE)



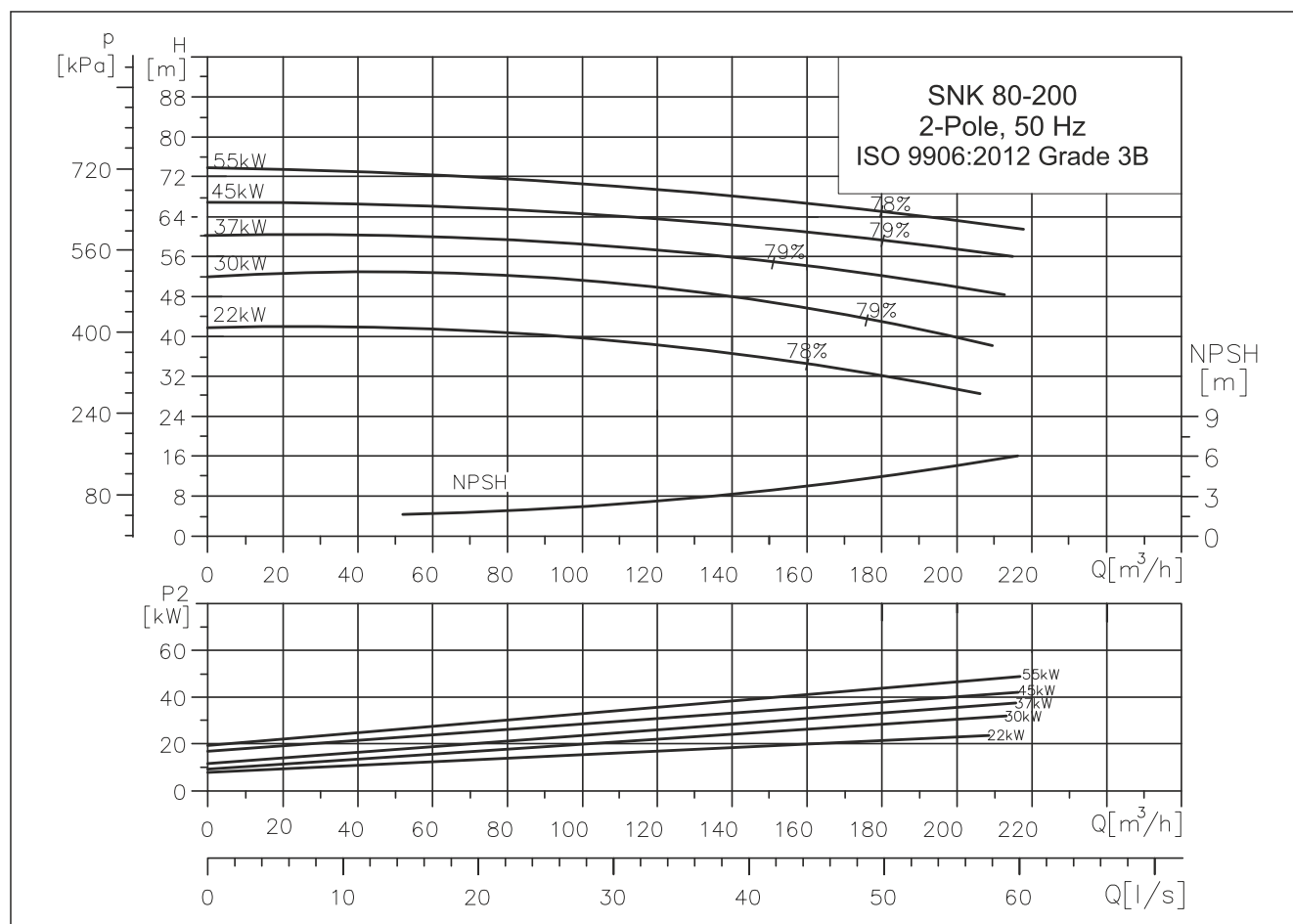
#### Recommended suction x delivery pipe size :

[kW / H.P.] 11.0/15.0	:	125 x 100 mm
[kW / H.P.] 15.0/20.0	:	125 x 100 mm
[kW / H.P.] 18.5/25.0	:	125 x 100 mm
[kW / H.P.] 22.0/30.0	:	125 x 100 mm

Pump Type		80-160/147	80-160/158	80-160/165	80-160/174
Motor Frame		SMMG 160	SMMG 160	SMMG 160	SMMG 180
[kW/HP]		11.0/15.0	15.0/20.0	18.5/25.0	22.0/30.0
PN	[bar]	16	16	16	16
DN <sub>d</sub>	[mm]	80	80	80	80
DN <sub>s</sub>	[mm]	100	100	100	100
a	[mm]	125	125	125	125
a <sub>2</sub>	[mm]	75	75	75	75
h	[mm]	80	80	80	80
h <sub>2</sub>	[mm]	225	225	225	225
h <sub>3</sub>	[mm]	260	260	260	260
h <sub>4</sub>	[mm]	493	493	493	496
l	[mm]	1097	1097	1141	1179
l <sub>1</sub>	[mm]	1250	1250	1250	1250
l <sub>2</sub>	[mm]	205	205	205	205
l <sub>3</sub>	[mm]	840	840	840	840
b <sub>1</sub>	[mm]	430	430	430	430
b <sub>2</sub>	[mm]	540	540	540	540
b <sub>3</sub>	[mm]	490	490	490	490
d	[mm]	24	24	24	24
Weight	Net [kg]	234	242	265	303

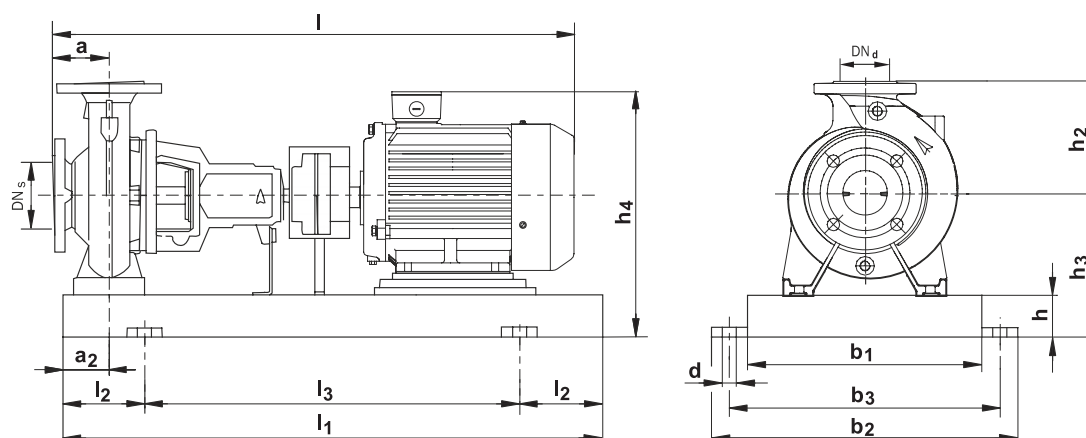
## PERFORMANCE TABLE

### SNK 80-200 (2 POLE)



## PERFORMANCE CURVE

### SNK 80-200 (2 POLE)



#### Recommended suction x delivery pipe size :

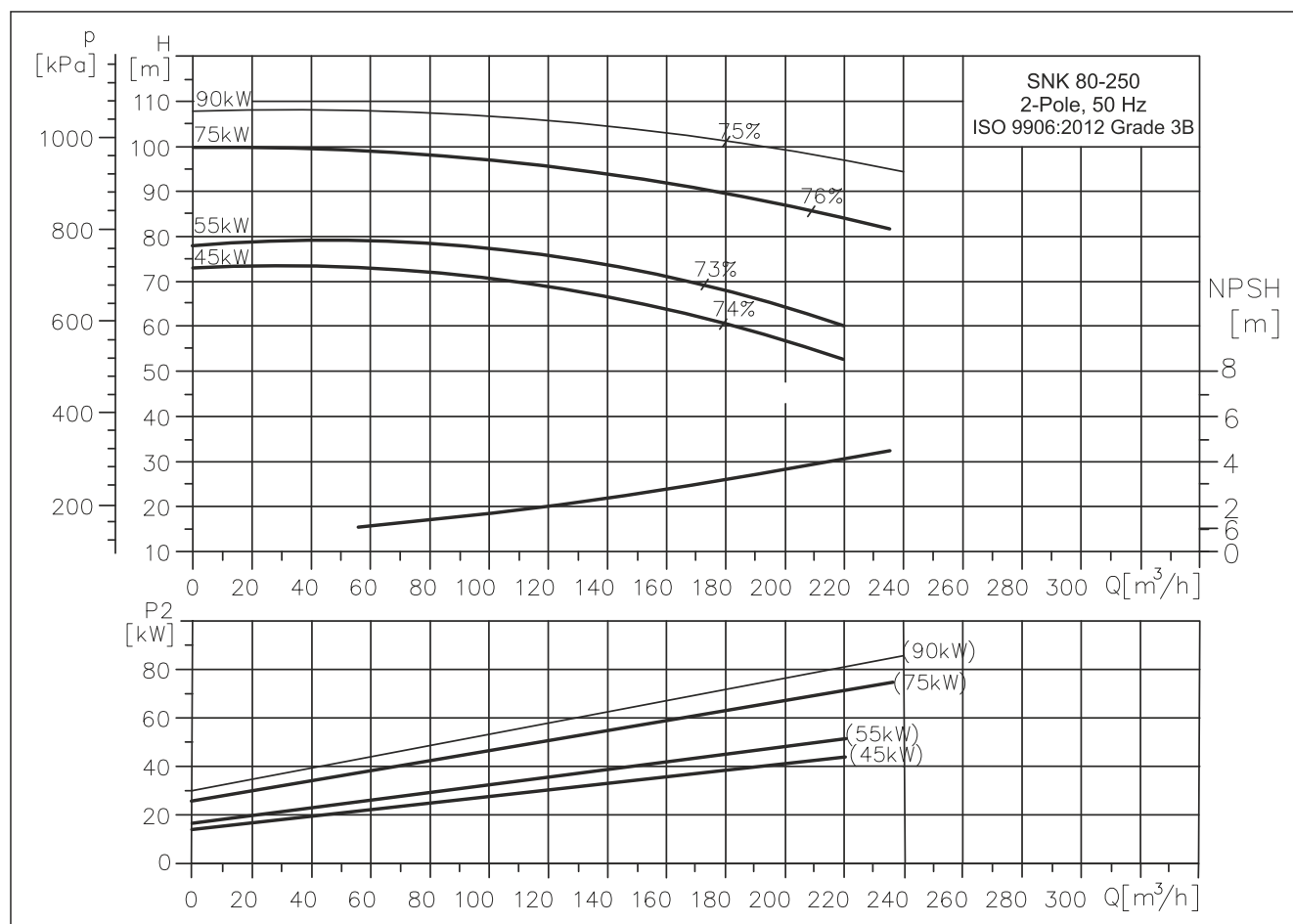
[kW / H.P.] 22.0/30.0	: 150 x 125 mm
[kW / H.P.] 30.0/40.0	: 150 x 125 mm
[kW / H.P.] 37.0/50.0	: 150 x 125 mm
[kW / H.P.] 45.0/60.0	: 150 x 125 mm
[kW / H.P.] 55.0/75.0	: 150 x 125 mm

Pump Type		80-200/175	80-200/192	80-200/205	80-200/214	80-200/224
Motor Frame		SMMG 180	SMMG 200	SMMG 200	SMMG 225	SMMG 250
[kW/HP]		22.0/30.0	30.0/40.0	37.0/50.0	45.0/60.0	55.0/75.0
PN	[bar]	16	16	16	16	16
DN <sub>d</sub>	[mm]	80	80	80	80	80
DN <sub>s</sub>	[mm]	100	100	100	100	100
a	[mm]	125	125	125	125	125
a <sub>2</sub>	[mm]	75	75	75	75	75
h	[mm]	80	100	100	100	100
h <sub>2</sub>	[mm]	250	250	250	250	250
h <sub>3</sub>	[mm]	260	300	300	330	350
h <sub>4</sub>	[mm]	496	576	576	637	669
l	[mm]	1289	1356	1356	1406	1509
l <sub>1</sub>	[mm]	1250	1400	1400	1400	1600
l <sub>2</sub>	[mm]	205	230	230	230	270
l <sub>3</sub>	[mm]	840	940	940	940	1060
b <sub>1</sub>	[mm]	430	480	480	480	530
b <sub>2</sub>	[mm]	540	610	610	610	660
b <sub>3</sub>	[mm]	490	550	550	550	600
d	[mm]	24	28	28	28	28
Weight	Net [kg]	322	408	430	506	641



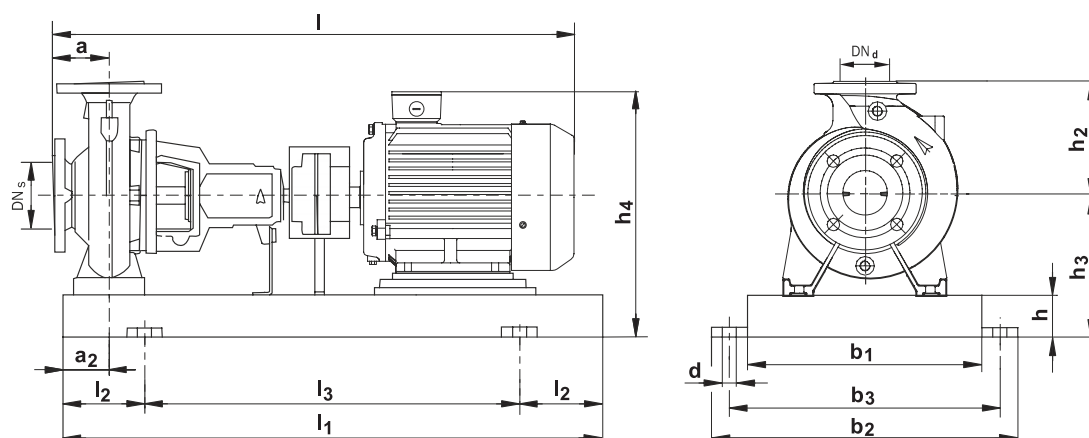
## PERFORMANCE CURVE

### SNK 80-250 (2 POLE)



## PERFORMANCE CURVE

### SNK 80-250 (2 POLE)



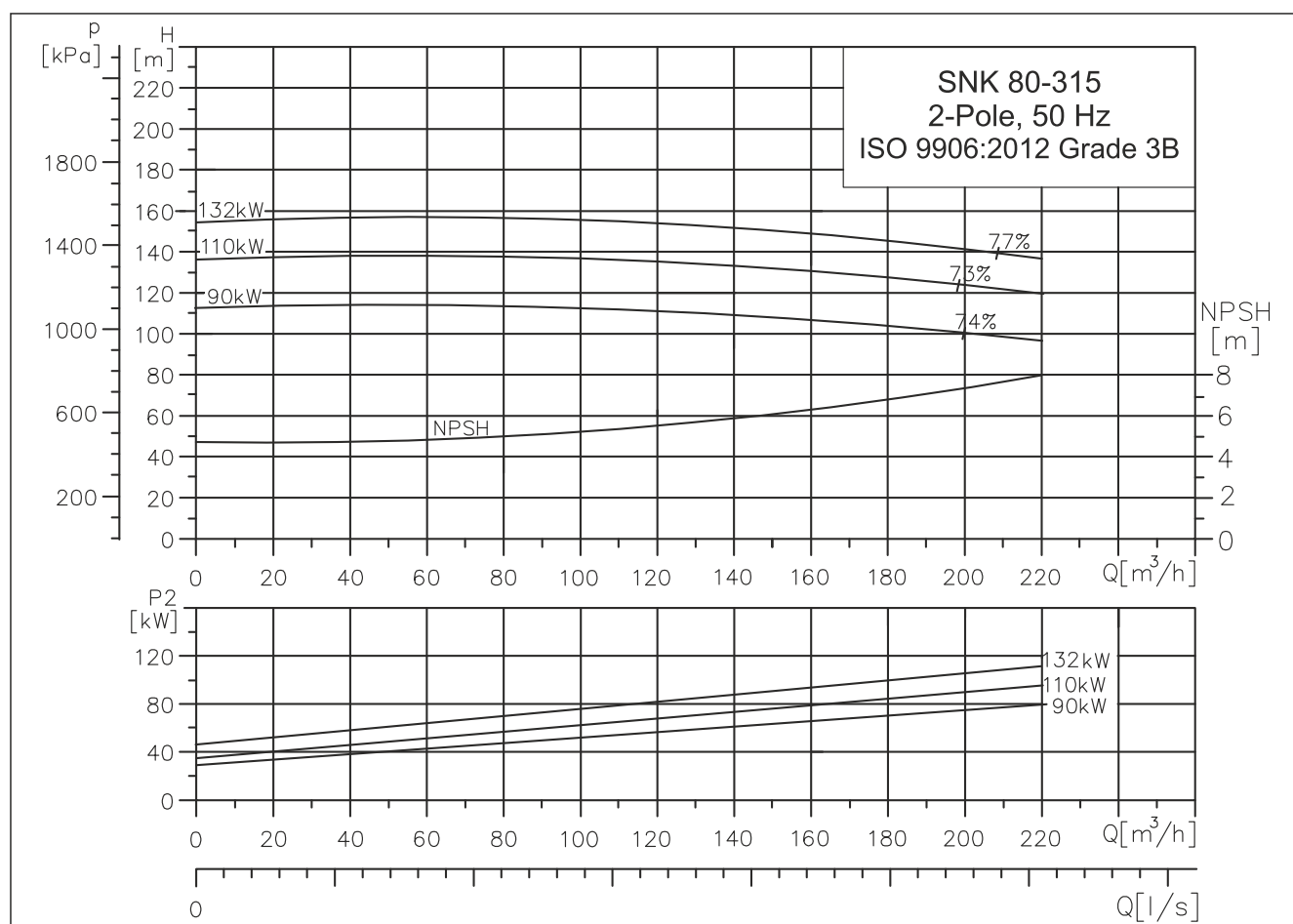
#### Recommended suction x delivery pipe size :

[kW / H.P.] 45.0/60.0	: 150 x 125 mm
[kW / H.P.] 55.0/75.0	: 150 x 125 mm
[kW / H.P.] 75.0/100.0	: 150 x 125 mm
[kW / H.P.] 90.0/120.0	: 150 x 125 mm

Pump Type		80-250/225	80-250/234	80-250/265	80-250/274
Motor Frame		SMMG 225	SMMG 250	SMMG 280	SMMG 280
[kW/HP]		45.0/60.0	55.0/75.0	75.0/100.0	90.0/120.0
PN	[bar]	16	16	16	16
DN <sub>d</sub>	[mm]	80	80	80	80
DN <sub>s</sub>	[mm]	100	100	100	100
a	[mm]	125	125	125	125
a <sub>2</sub>	[mm]	90	90	90	90
h	[mm]	100	100	100	100
h <sub>2</sub>	[mm]	280	280	280	280
h <sub>3</sub>	[mm]	325	350	380	380
h <sub>4</sub>	[mm]	622	669	806	806
l	[mm]	1406	1509	1542	1593
l <sub>1</sub>	[mm]	1400	1600	1800	1800
l <sub>2</sub>	[mm]	230	270	300	300
l <sub>3</sub>	[mm]	940	1060	1200	1200
b <sub>1</sub>	[mm]	480	530	600	600
b <sub>2</sub>	[mm]	610	660	730	730
b <sub>3</sub>	[mm]	550	600	670	670
d	[mm]	28	28	28	28
Weight	Net [kg]	526	661	749	814

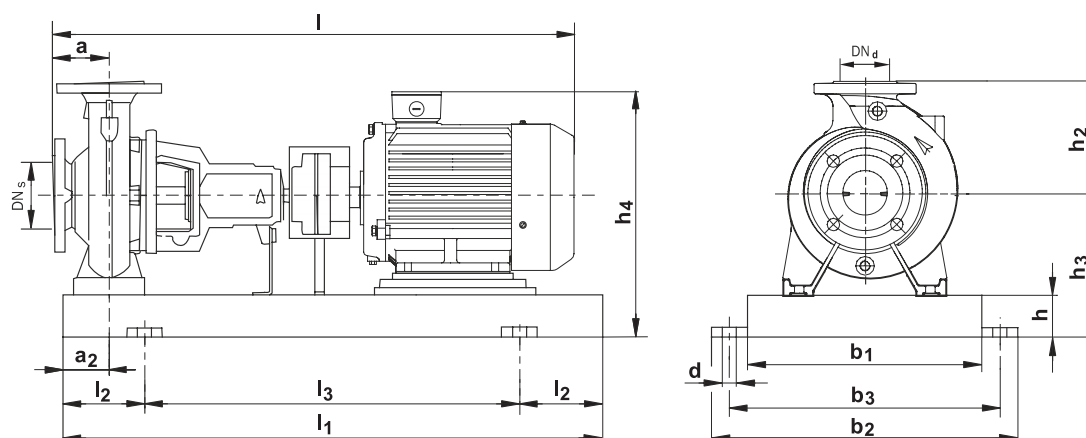
## PERFORMANCE CURVE

### SNK 80-315 (2 POLE)



## PERFORMANCE CURVE

### SNK 80-315 (2 POLE)



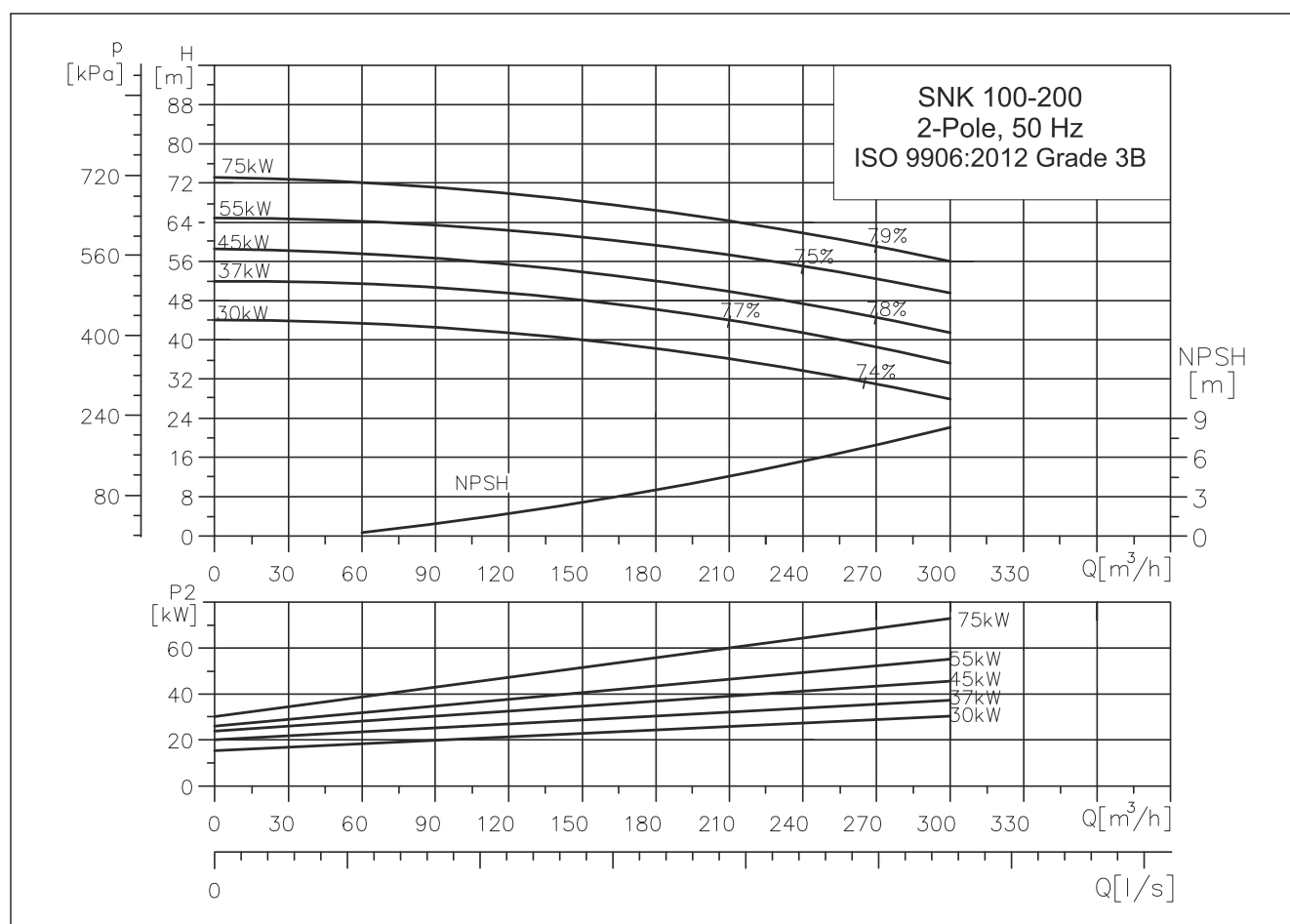
#### Recommended suction x delivery pipe size :

[kW / H.P.] 90.0/120.0 : 150 x 125 mm  
[kW / H.P.] 110.0/150.0 : 150 x 125 mm  
[kW / H.P.] 132.0/180.0 : 150 x 125 mm

Pump Type		80-315/280	80-315/305	80-315/320
Motor frame		SMMG 280M	SMMG 315M	SMMG 315S
[kW/HP]		90.0/120.0	110.0/150.0	132.0/180.0
PN	[bar]	16	16	16
DN <sub>d</sub>	[mm]	80	80	80
DN <sub>s</sub>	[mm]	100	100	100
a	[mm]	125	125	125
a <sub>2</sub>	[mm]	90	90	90
h	[mm]	100	120	120
h <sub>2</sub>	[mm]	315	315	315
h <sub>3</sub>	[mm]	380	435	435
h <sub>4</sub>	[mm]	766	906	906
l	[mm]	1653	1836	1946
l <sub>1</sub>	[mm]	1800	2000	2000
l <sub>2</sub>	[mm]	300	330	330
l <sub>3</sub>	[mm]	1200	1340	1340
b <sub>1</sub>	[mm]	600	750	750
b <sub>2</sub>	[mm]	730	910	910
b <sub>3</sub>	[mm]	670	830	830
d	[mm]	28	28	28
Weight	Net[Kg]	873	1254	1348

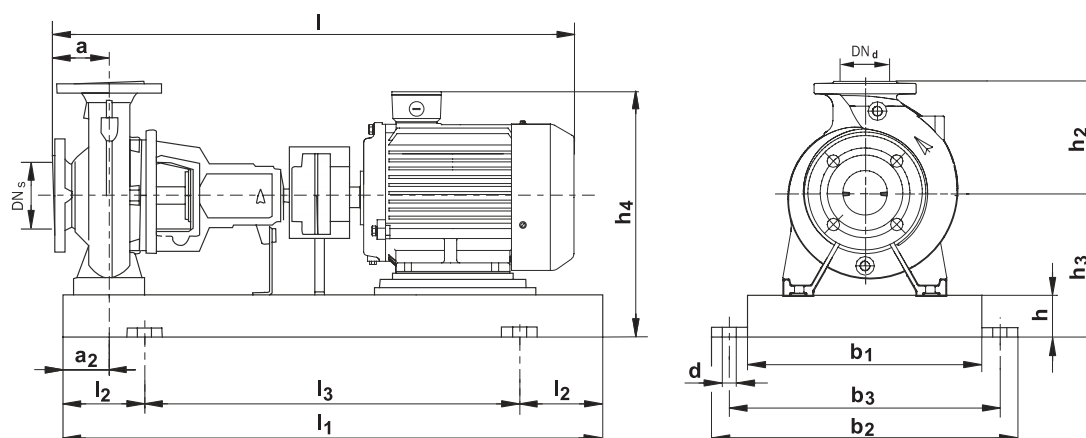
## PERFORMANCE CURVE

### SNK 100-200 (2 POLE)



## PERFORMANCE CURVE

### SNK 100-200 (2 POLE)



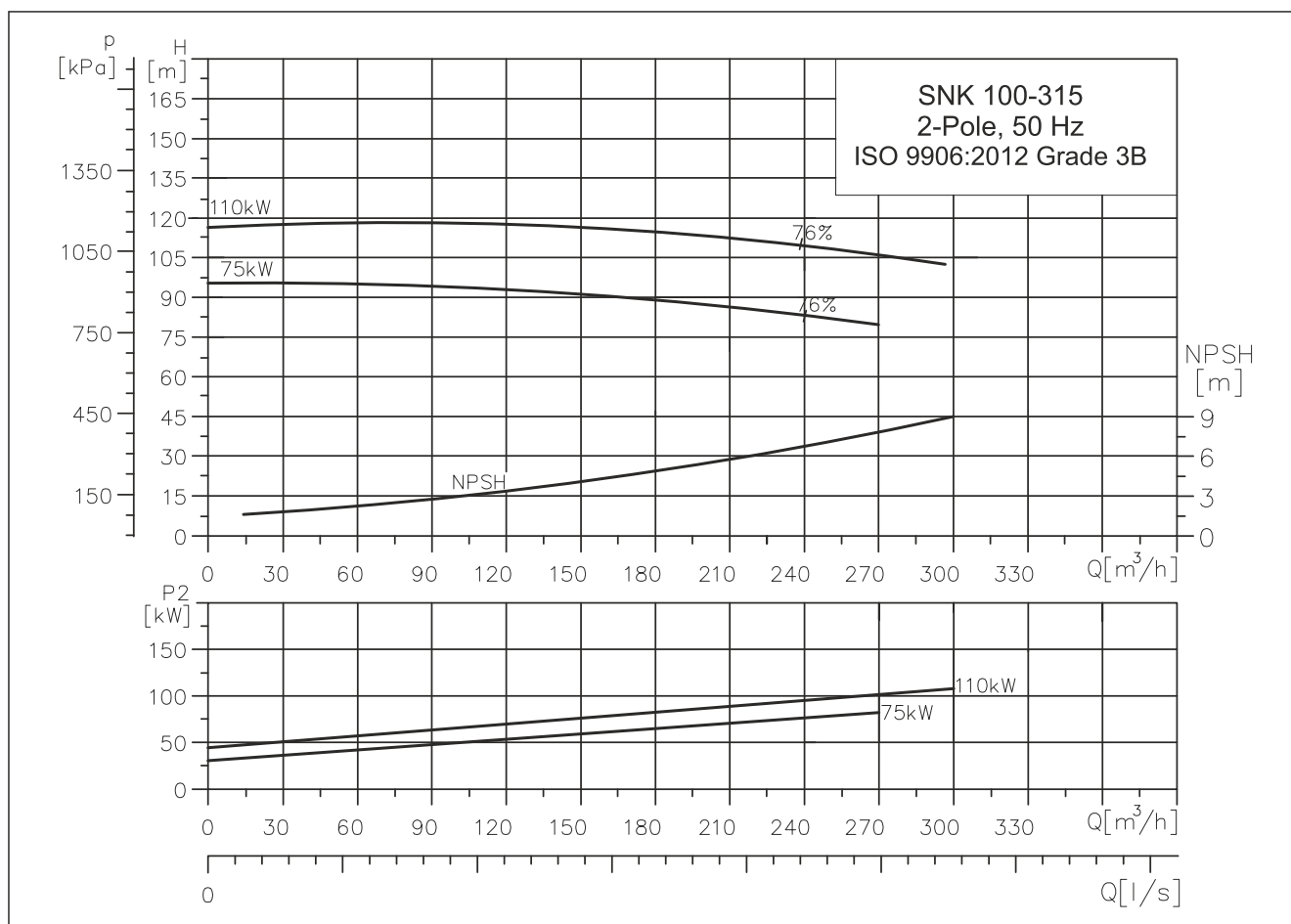
#### Recommended suction x delivery pipe size :

[kW / H.P.] 30.0/40.0	: 150 x 125 mm
[kW / H.P.] 37.0/50.0	: 150 x 125 mm
[kW / H.P.] 45.0/60.0	: 150 x 125 mm
[kW / H.P.] 55.0/75.0	: 150 x 125 mm
[kW / H.P.] 75.0/100.0	: 150 x 125 mm

Pump Type		100-200/180	100-200/190	100-200/200	100-200/210	100-200/219
Motor Frame		SMMG 200	SMMG 200	SMMG 225	SMMG 250	SMMG 280
[kW/HP]		30.0/40.0	37.0/50.0	45.0/60.0	55.0/75.0	75.0/100.0
PN	[bar]	16	16	16	16	16
DN <sub>d</sub>	[mm]	100	100	100	100	100
DN <sub>s</sub>	[mm]	125	125	125	125	125
a	[mm]	125	125	125	125	125
a <sub>2</sub>	[mm]	90	90	90	90	90
h	[mm]	100	100	100	100	100
h <sub>2</sub>	[mm]	280	280	280	280	280
h <sub>3</sub>	[mm]	300	300	325	350	380
h <sub>4</sub>	[mm]	576	576	622	669	806
l	[mm]	1356	1356	1406	1509	1542
l <sub>1</sub>	[mm]	1400	1400	1400	1600	1800
l <sub>2</sub>	[mm]	230	230	230	270	300
l <sub>3</sub>	[mm]	940	940	940	1060	1200
b <sub>1</sub>	[mm]	480	480	480	530	600
b <sub>2</sub>	[mm]	610	610	610	660	730
b <sub>3</sub>	[mm]	550	550	550	600	670
d	[mm]	28	28	28	28	28
Weight	Net [kg]	418	440	516	651	739

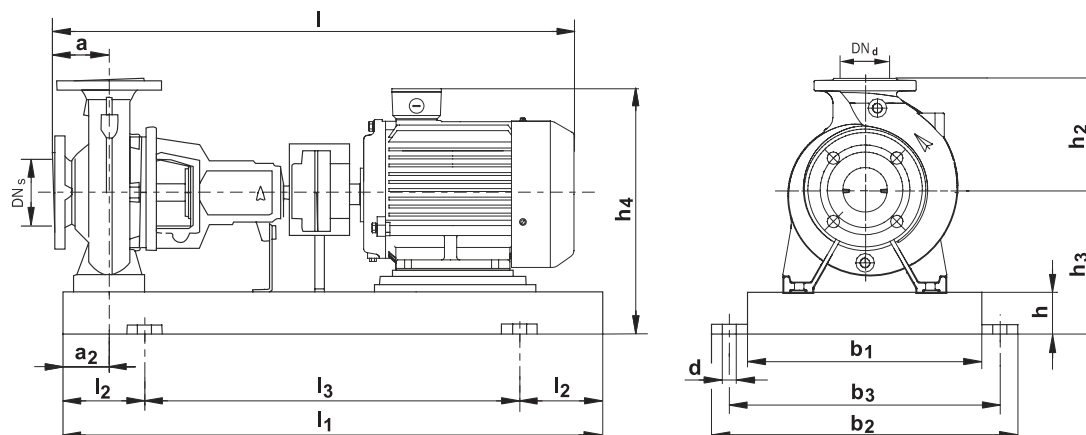
## PERFORMANCE CURVE

### SNK 100-315 (2 POLE)



## PERFORMANCE CURVE

### SNK 100-315 (2 POLE)



#### Recommended suction x delivery pipe size :

[kW / H.P.] 75.0/110.0 : 150 x 125 mm

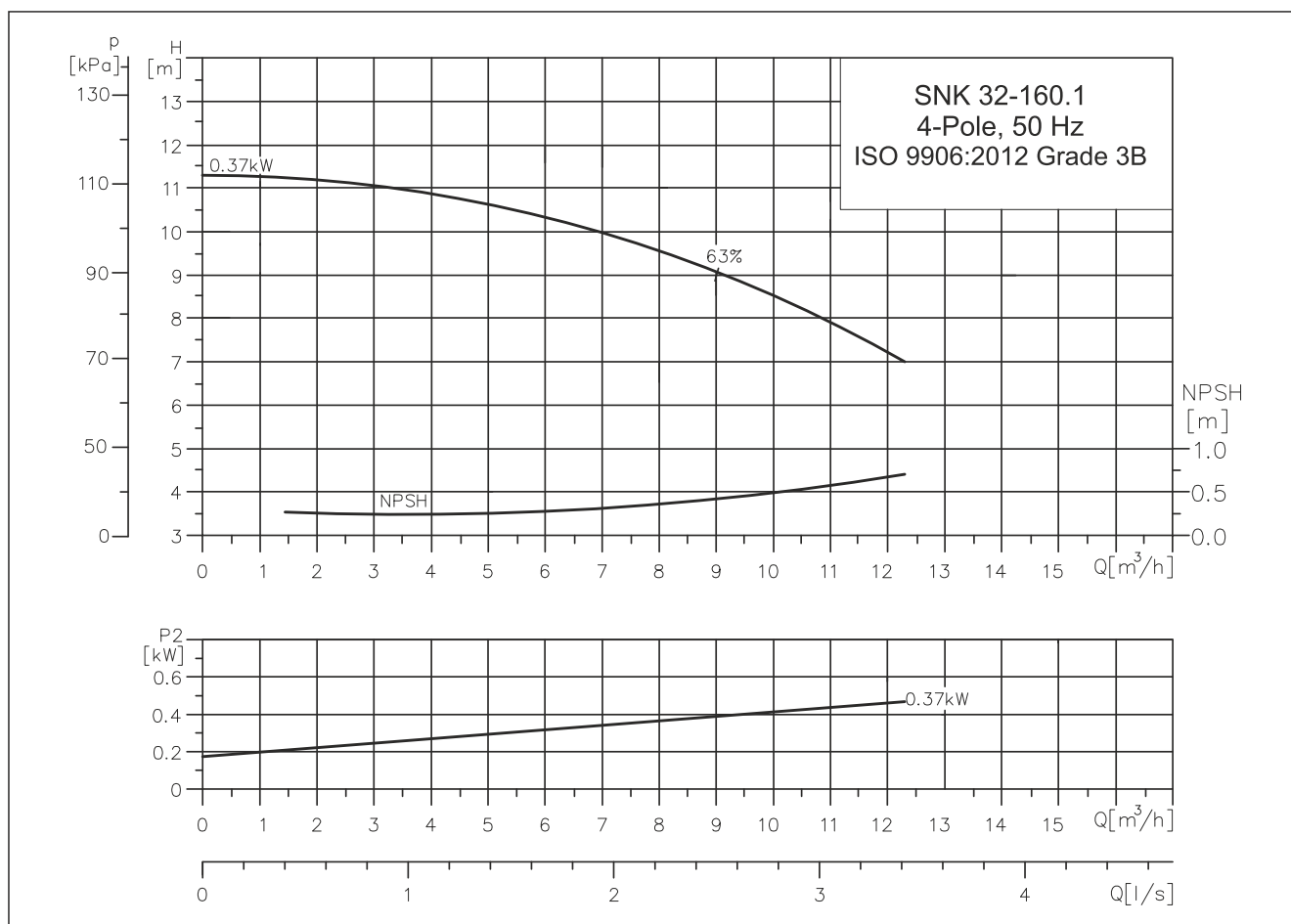
[kW / H.P.] 110.0/150.0 : 150 x 125 mm

Pump Type		100-315/260	100-315/286
Motor Frame		SMMG 280	SMMG 315
[kW/HP]		75.0/100.0	110.0/150.0
PN	[bar]	16	16
DN <sub>d</sub>	[mm]	100	100
DN <sub>s</sub>	[mm]	125	125
a	[mm]	140	140
a <sub>2</sub>	[mm]	90	90
h	[mm]	100	120
h <sub>2</sub>	[mm]	315	315
h <sub>3</sub>	[mm]	38	435
h <sub>4</sub>	[mm]	806	887
l	[mm]	1557	1608
l <sub>1</sub>	[mm]	1800	2000
l <sub>2</sub>	[mm]	300	330
l <sub>3</sub>	[mm]	1200	1340
b <sub>1</sub>	[mm]	600	750
b <sub>2</sub>	[mm]	730	910
b <sub>3</sub>	[mm]	670	830
d	[mm]	28	28
Weight	Net [kg]	797	862



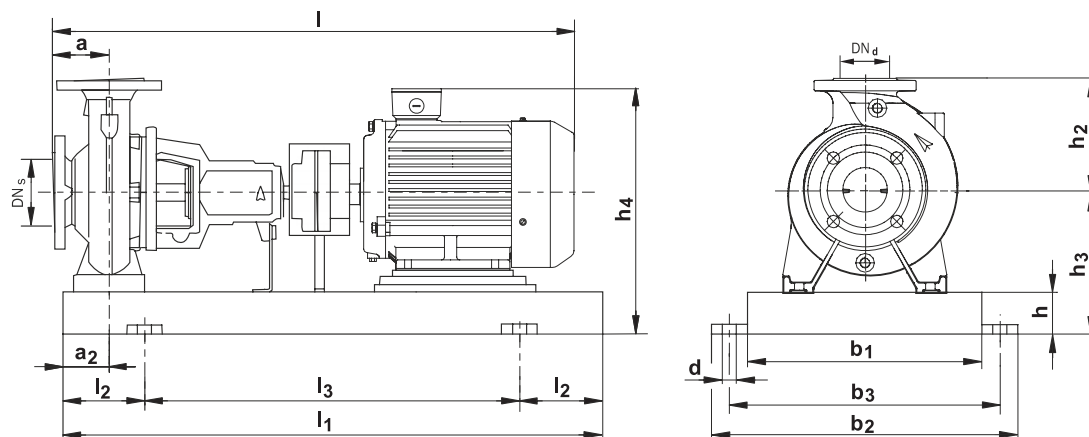
## PERFORMANCE CURVE

### SNK 32-160.1 (4 POLE)



## PERFORMANCE TABLE

### SNK 32-160.1 (4 POLE)



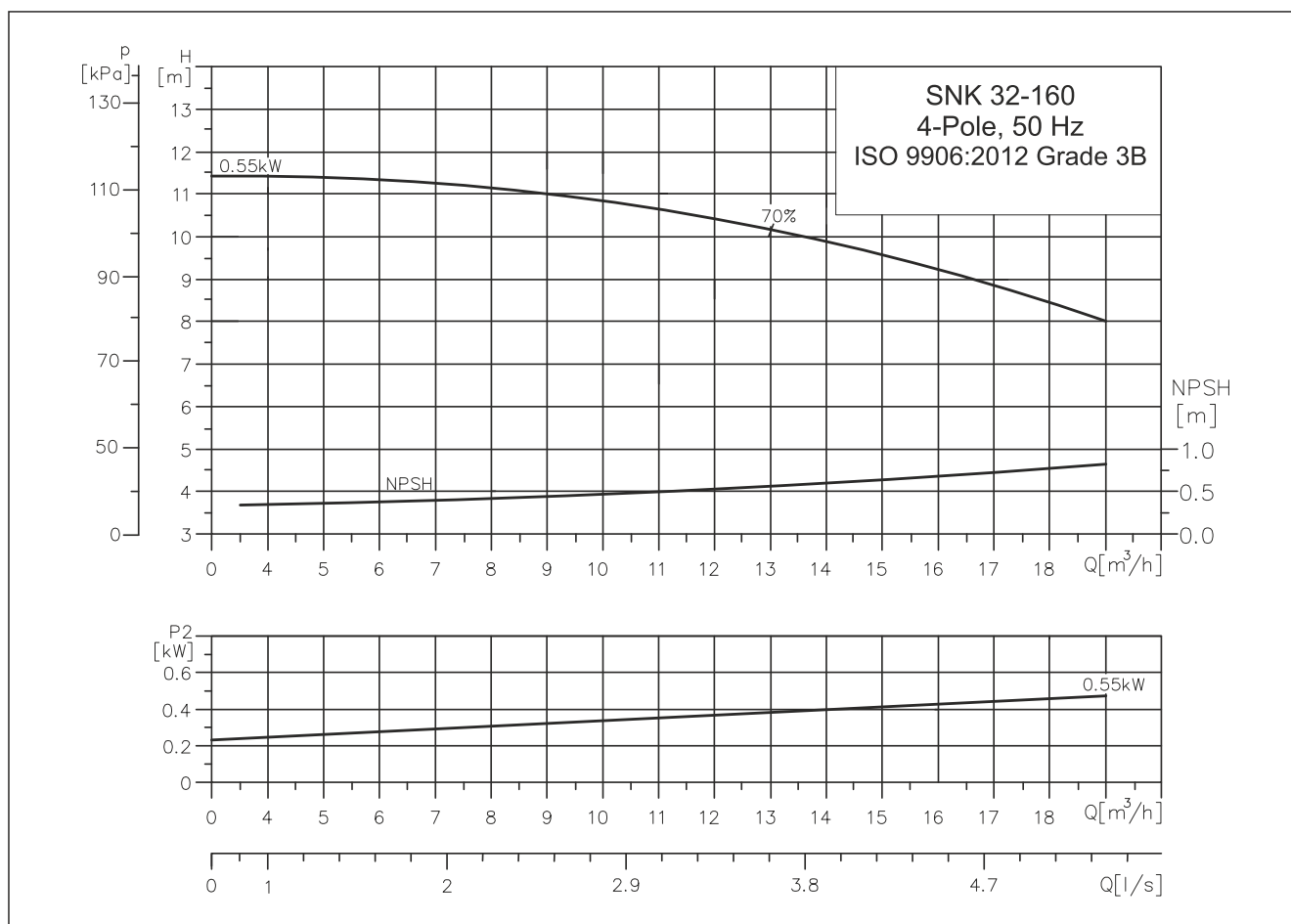
Recommended suction x delivery pipe size :

[kW / H.P.] 0.37/0.5 : 50 x 40 mm

Pump Type		32-160.1
Motor Frame		SMG 71
[kW/HP]		0.37/0.5
PN	[bar]	16
DN <sub>d</sub>	[mm]	32
DN <sub>s</sub>	[mm]	50
a	[mm]	80
a <sub>2</sub>	[mm]	60
h	[mm]	65
h <sub>2</sub>	[mm]	160
h <sub>3</sub>	[mm]	197
h <sub>4</sub>	[mm]	304
l	[mm]	665
l <sub>1</sub>	[mm]	800
l <sub>2</sub>	[mm]	130
l <sub>3</sub>	[mm]	540
b <sub>1</sub>	[mm]	270
b <sub>2</sub>	[mm]	360
b <sub>3</sub>	[mm]	320
d	[mm]	19
Weight	Net [kg]	72

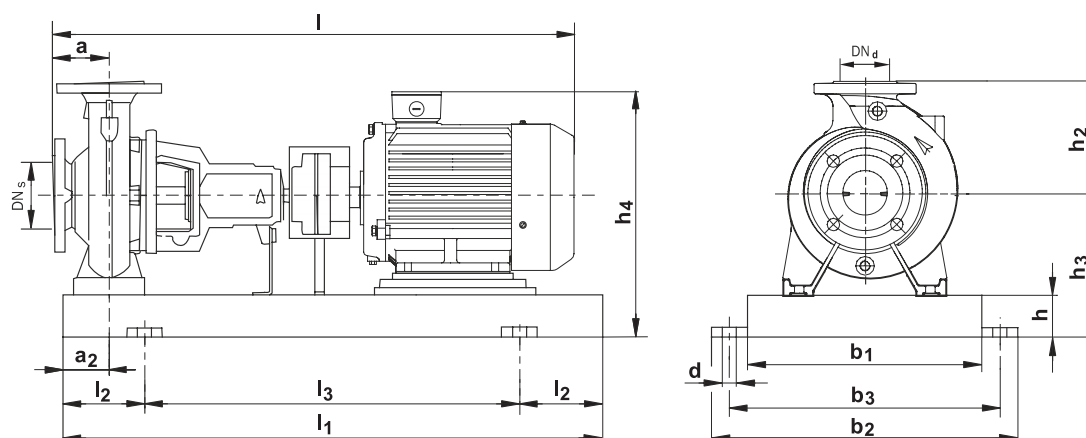
## PERFORMANCE CURVE

### SNK 32-160 (4 POLE)



## PERFORMANCE TABLE

### SNK 32-160 (4 POLE)



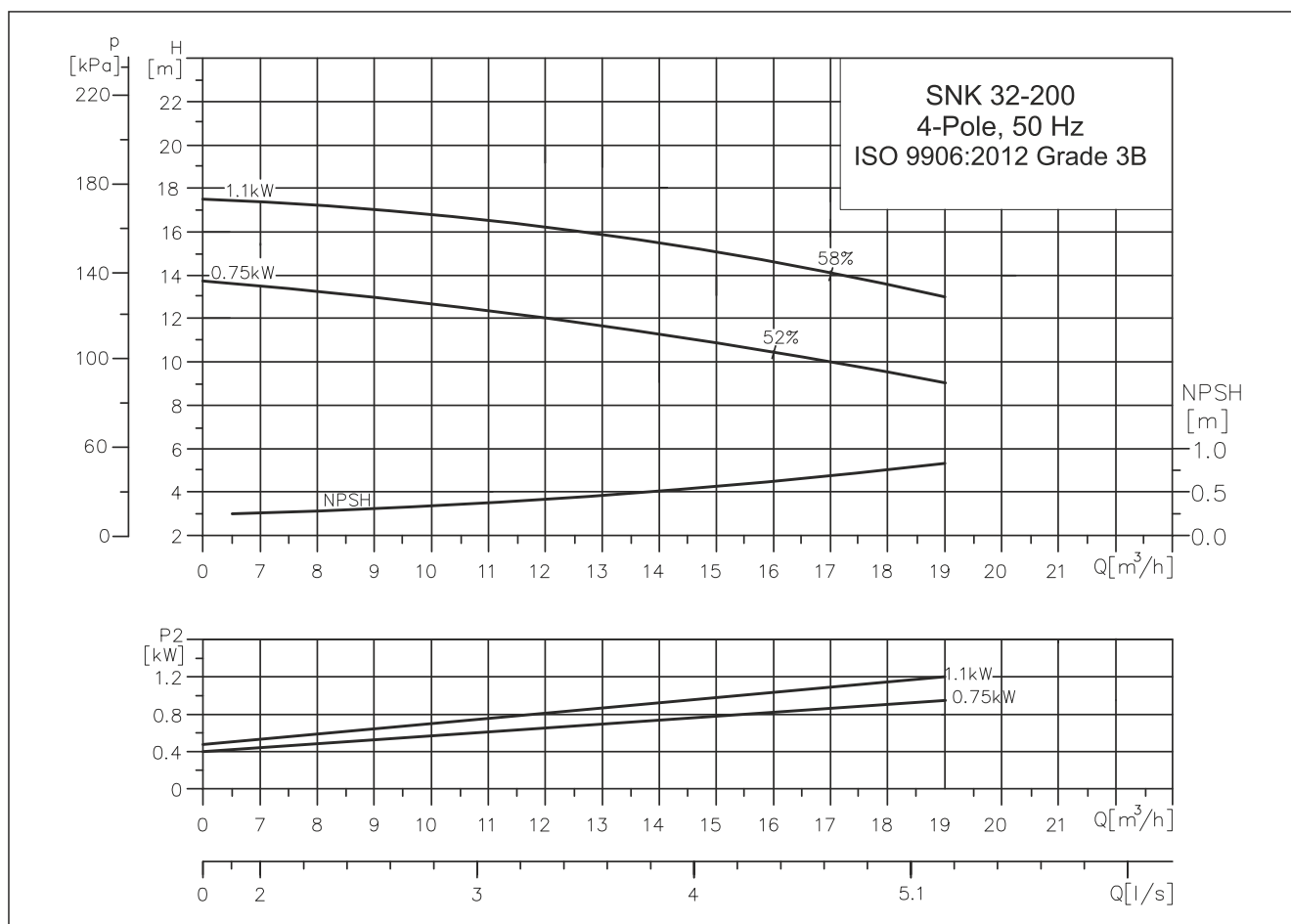
Recommended suction x delivery pipe size :

[kW / H.P.] 0.55/0.75 : 50 x 50 mm

Pump Type		32-160
Motor Frame		SMG 80
[kW/HP]		0.55/0.75
PN	[bar]	16
DN <sub>d</sub>	[mm]	32
DN <sub>s</sub>	[mm]	50
a	[mm]	80
a <sub>2</sub>	[mm]	60
h	[mm]	65
h <sub>2</sub>	[mm]	160
h <sub>3</sub>	[mm]	197
h <sub>4</sub>	[mm]	322
l	[mm]	715
l <sub>1</sub>	[mm]	800
l <sub>2</sub>	[mm]	130
l <sub>3</sub>	[mm]	540
b <sub>1</sub>	[mm]	270
b <sub>2</sub>	[mm]	360
b <sub>3</sub>	[mm]	320
d	[mm]	19
Weight	Net [kg]	74

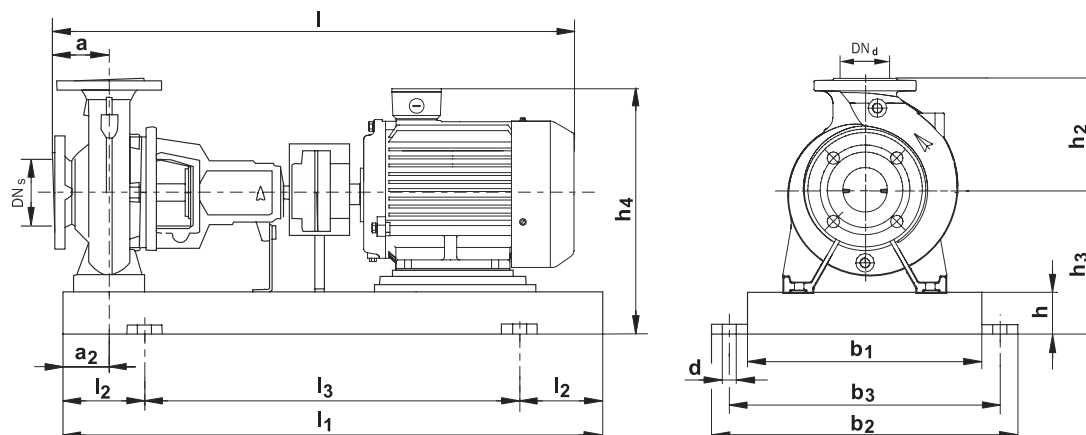
## PERFORMANCE CURVE

### SNK 32-200 (4 POLE)



## PERFORMANCE TABLE

### SNK 32-200 (4 POLE)



#### Recommended suction x delivery pipe size :

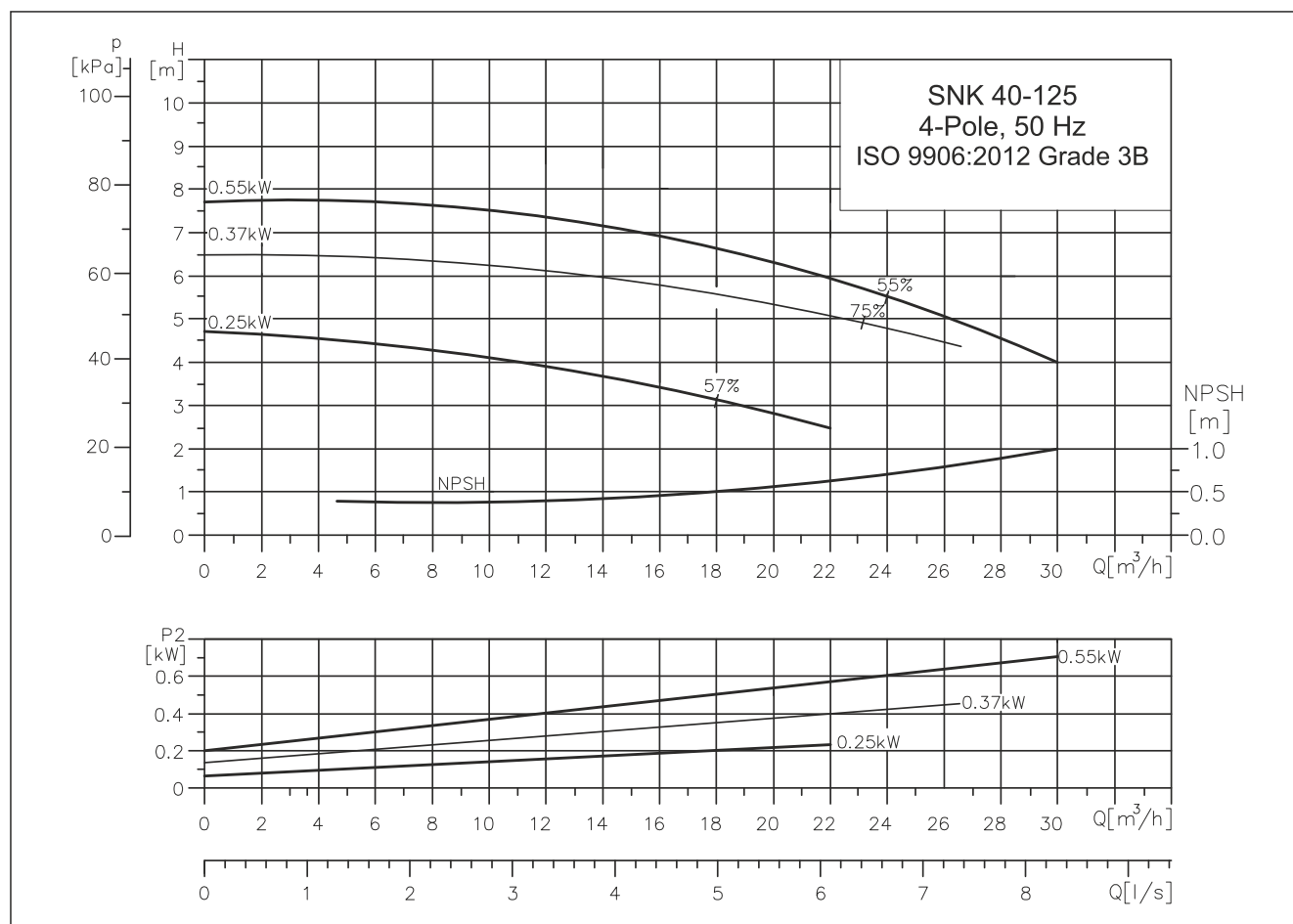
[kW / H.P.] 0.75/1.0 : 50 x 50 mm

[kW / H.P.] 1.1/1.5 : 50 x 50 mm

Pump Type		32-200	
Motor Frame		SMG 80	SMG 90
[kW/HP]		0.75/1.0	1.1/1.5
PN	[bar]	16	16
DN <sub>d</sub>	[mm]	32	32
DN <sub>s</sub>	[mm]	50	50
a	[mm]	80	80
a <sub>2</sub>	[mm]	60	60
h	[mm]	65	65
h <sub>2</sub>	[mm]	180	180
h <sub>3</sub>	[mm]	225	225
h <sub>4</sub>	[mm]	350	358
l	[mm]	715	775
l <sub>1</sub>	[mm]	800	800
l <sub>2</sub>	[mm]	130	130
l <sub>3</sub>	[mm]	540	540
b <sub>1</sub>	[mm]	270	270
b <sub>2</sub>	[mm]	360	360
b <sub>3</sub>	[mm]	320	320
d	[mm]	19	19
Weight	Net [kg]	85	90

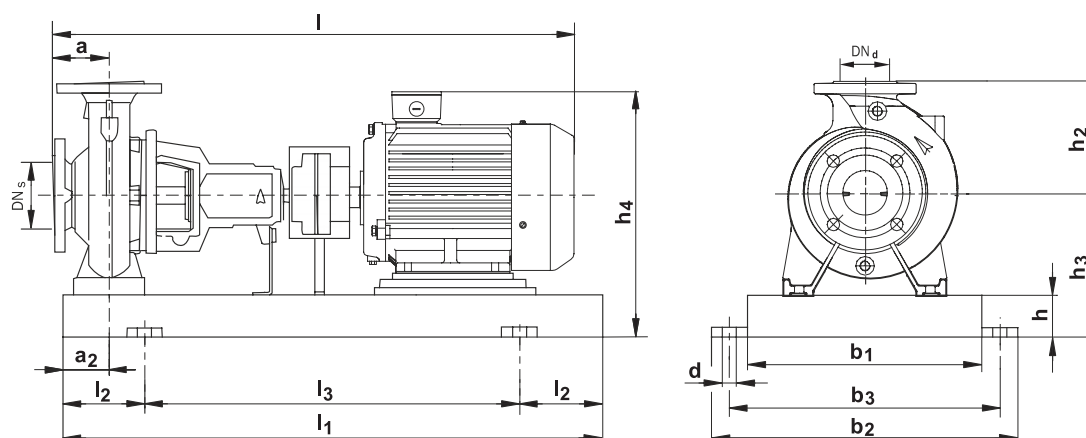
## PERFORMANCE CURVE

### SNK 40-125 (4 POLE)



## PERFORMANCE TABLE

### SNK 40-125 (4 POLE)



#### Recommended suction x delivery pipe size :

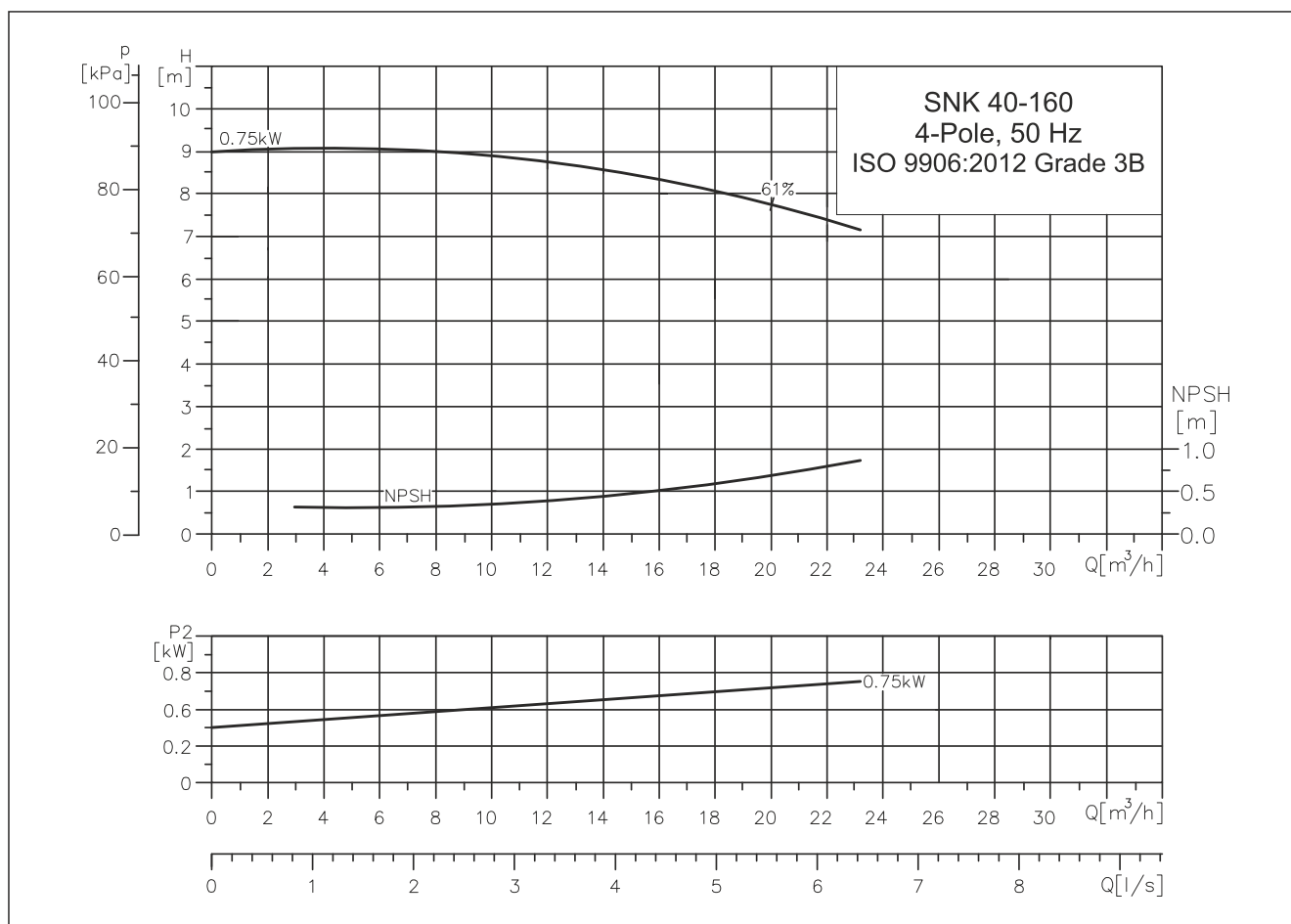
[kW / H.P.] 0.25/0.30	:	65 x 65 mm
[kW / H.P.] 0.37/0.50	:	65 x 65 mm
[kW / H.P.] 0.55/0.75	:	65 x 65 mm

Pump Type		40-125		
Motor Frame		SMG 71	SMG 71	SMG 80
[kW/HP]		0.25/0.30	0.37/0.50	0.55/0.75
PN	[bar]	16	16	16
DN <sub>d</sub>	[mm]	40	40	40
DN <sub>s</sub>	[mm]	65	65	65
a	[mm]	80	80	80
a <sub>2</sub>	[mm]	60	60	60
h	[mm]	65	65	65
h <sub>2</sub>	[mm]	140	140	140
h <sub>3</sub>	[mm]	177	177	177
h <sub>4</sub>	[mm]	284	284	302
l	[mm]	665	665	715
l <sub>1</sub>	[mm]	800	800	800
l <sub>2</sub>	[mm]	130	130	130
l <sub>3</sub>	[mm]	540	540	540
b <sub>1</sub>	[mm]	270	270	270
b <sub>2</sub>	[mm]	360	360	360
b <sub>3</sub>	[mm]	320	320	320
d	[mm]	19	19	19
Weight	Net [kg]	69	69	71



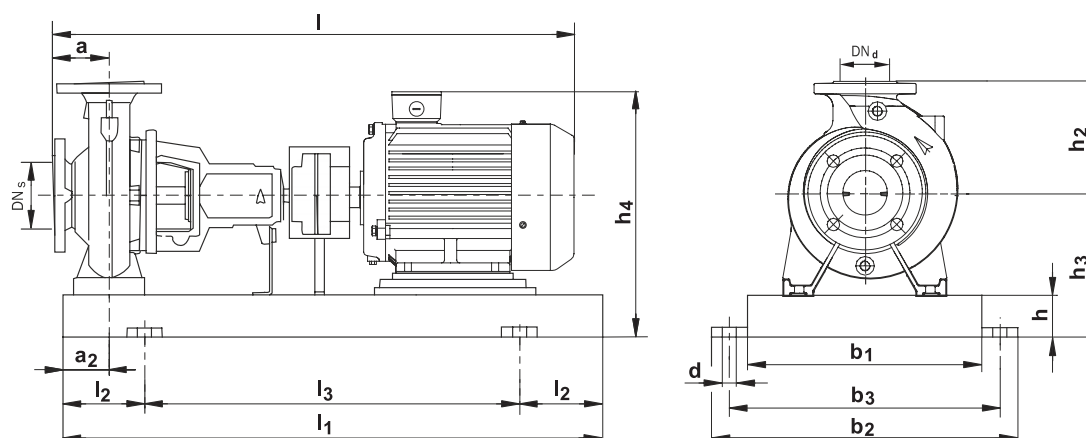
## PERFORMANCE CURVE

### SNK 40-160 (4 POLE)



## PERFORMANCE TABLE

### SNK 40-160 (4 POLE)



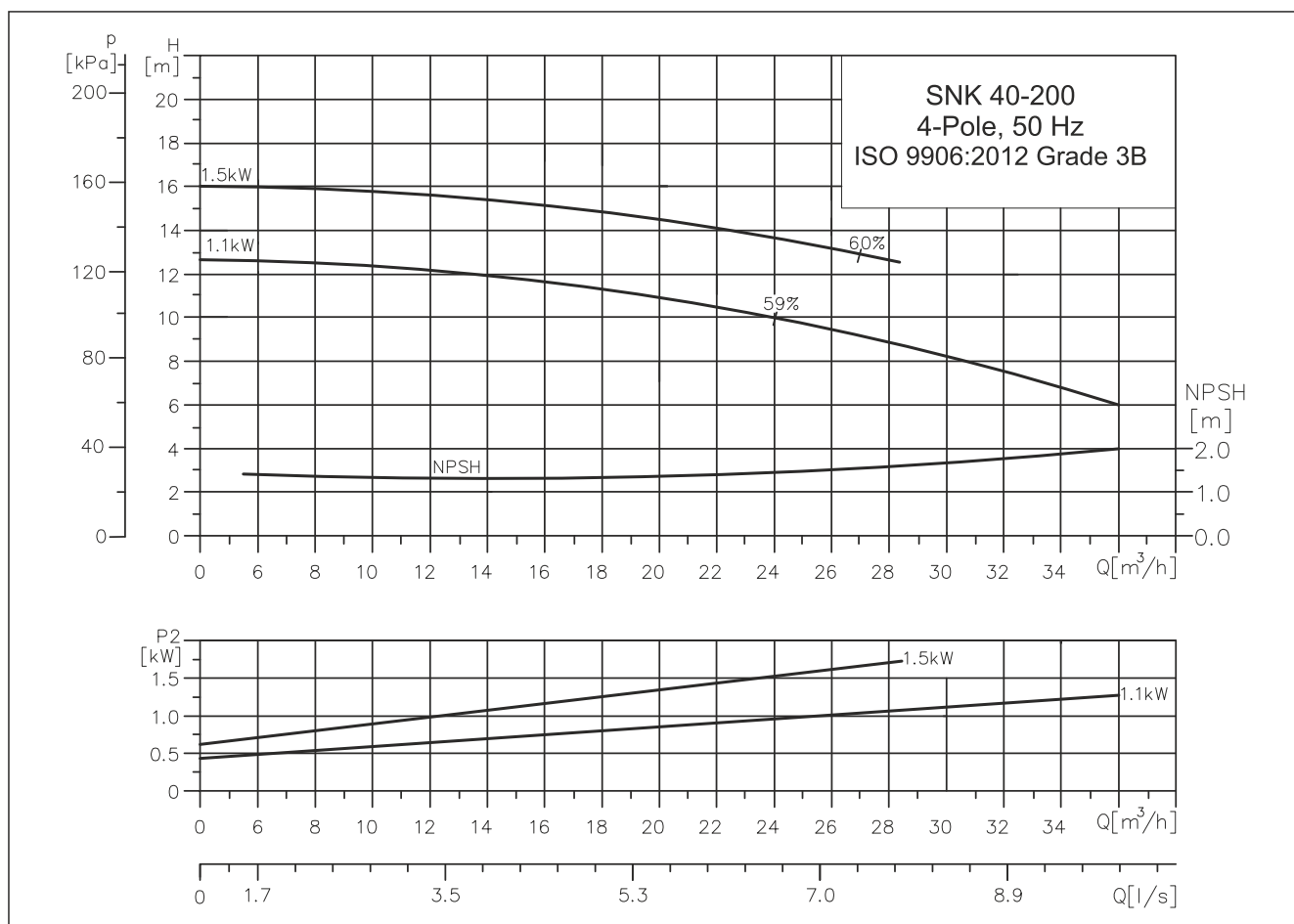
Recommended suction x delivery pipe size :

[kW / H.P.] 0.75/1.0 : 65 x 50 mm

Pump Type		40-160
Motor Frame		SMG 80
[kW/HP]		0.75/1.0
PN	[bar]	16
DN <sub>d</sub>	[mm]	40
DN <sub>s</sub>	[mm]	65
a	[mm]	80
a <sub>2</sub>	[mm]	60
h	[mm]	65
h <sub>2</sub>	[mm]	160
h <sub>3</sub>	[mm]	197
h <sub>4</sub>	[mm]	322
l	[mm]	715
l <sub>1</sub>	[mm]	800
l <sub>2</sub>	[mm]	130
l <sub>3</sub>	[mm]	540
b <sub>1</sub>	[mm]	270
b <sub>2</sub>	[mm]	360
b <sub>3</sub>	[mm]	320
d	[mm]	19
Weight	Net [kg]	77

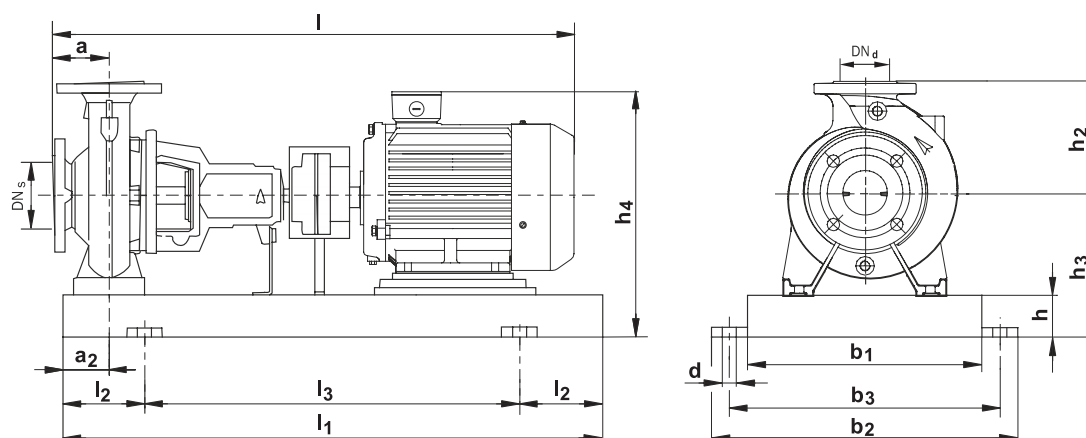
## PERFORMANCE CURVE

### SNK 40-200 (4 POLE)



## PERFORMANCE TABLE

### SNK 40-200 (4 POLE)



#### Recommended suction x delivery pipe size :

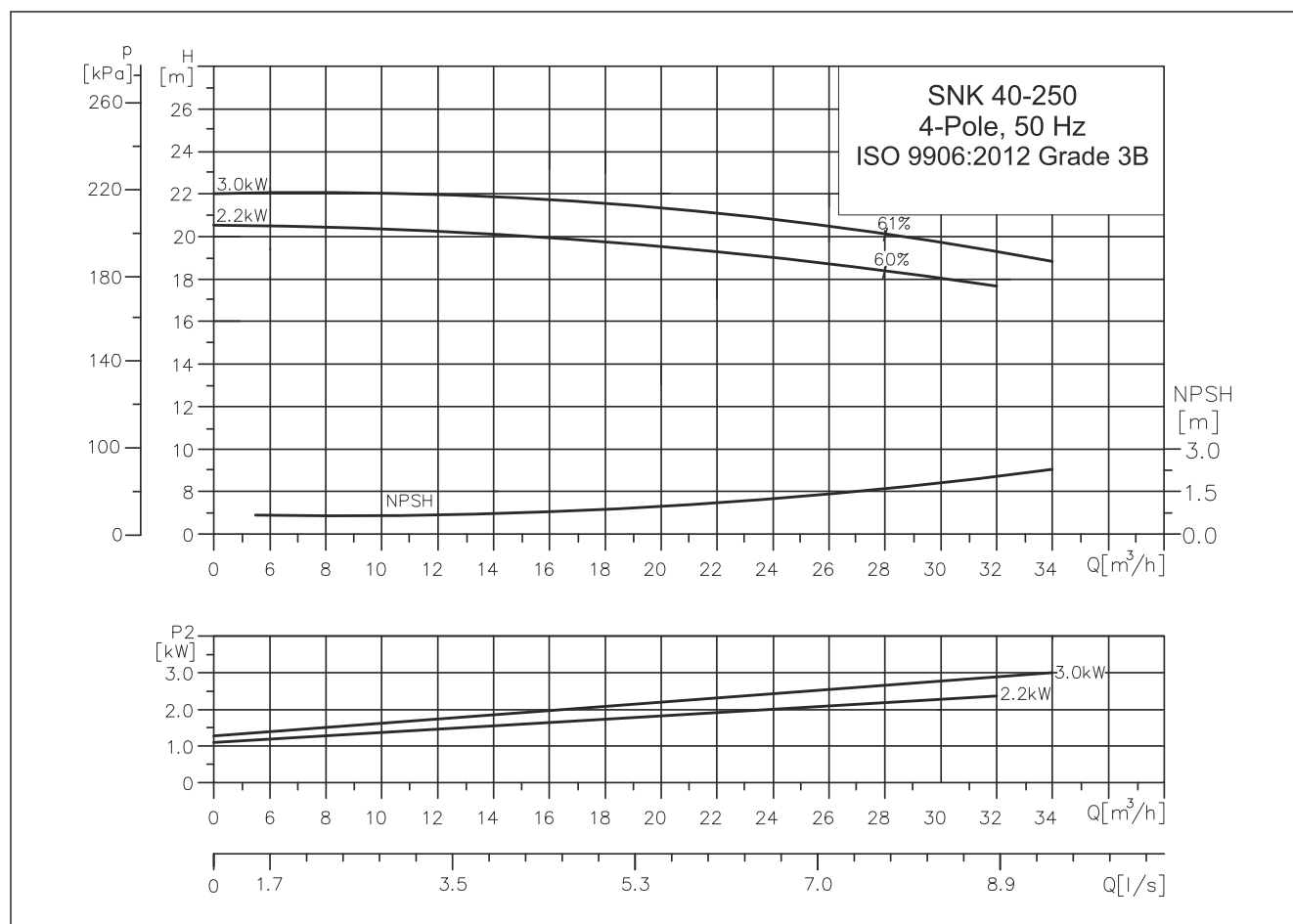
[kW / H.P.] 1.1/1.5 : 65 x 65 mm

[kW / H.P.] 1.5/2.0 : 65 x 65 mm

Pump Type		40-200	
Motor Frame		SMG 90	SMG 90
[kW/HP]		1.1/1.5	1.5/2.0
PN	[bar]	16	16
DN <sub>d</sub>	[mm]	40	40
DN <sub>s</sub>	[mm]	65	65
a	[mm]	100	100
a <sub>2</sub>	[mm]	60	60
h	[mm]	65	65
h <sub>2</sub>	[mm]	180	180
h <sub>3</sub>	[mm]	225	225
h <sub>4</sub>	[mm]	358	358
l	[mm]	795	795
l <sub>1</sub>	[mm]	900	900
l <sub>2</sub>	[mm]	150	150
l <sub>3</sub>	[mm]	600	600
b <sub>1</sub>	[mm]	300	300
b <sub>2</sub>	[mm]	390	390
b <sub>3</sub>	[mm]	350	350
d	[mm]	19	19
Weight	Net [kg]	97	99

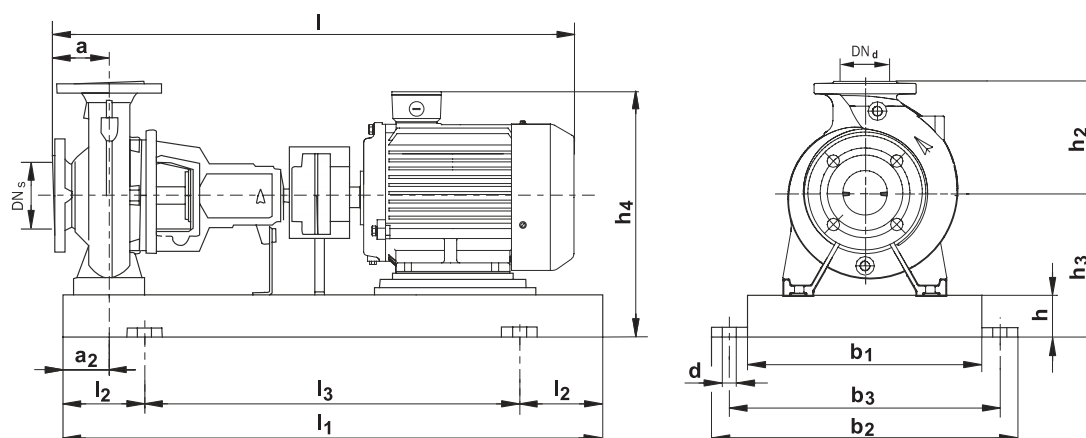
## PERFORMANCE CURVE

### SNK 40-250 (4 POLE)



## PERFORMANCE TABLE

### SNK 40-250 (4 POLE)



#### Recommended suction x delivery pipe size :

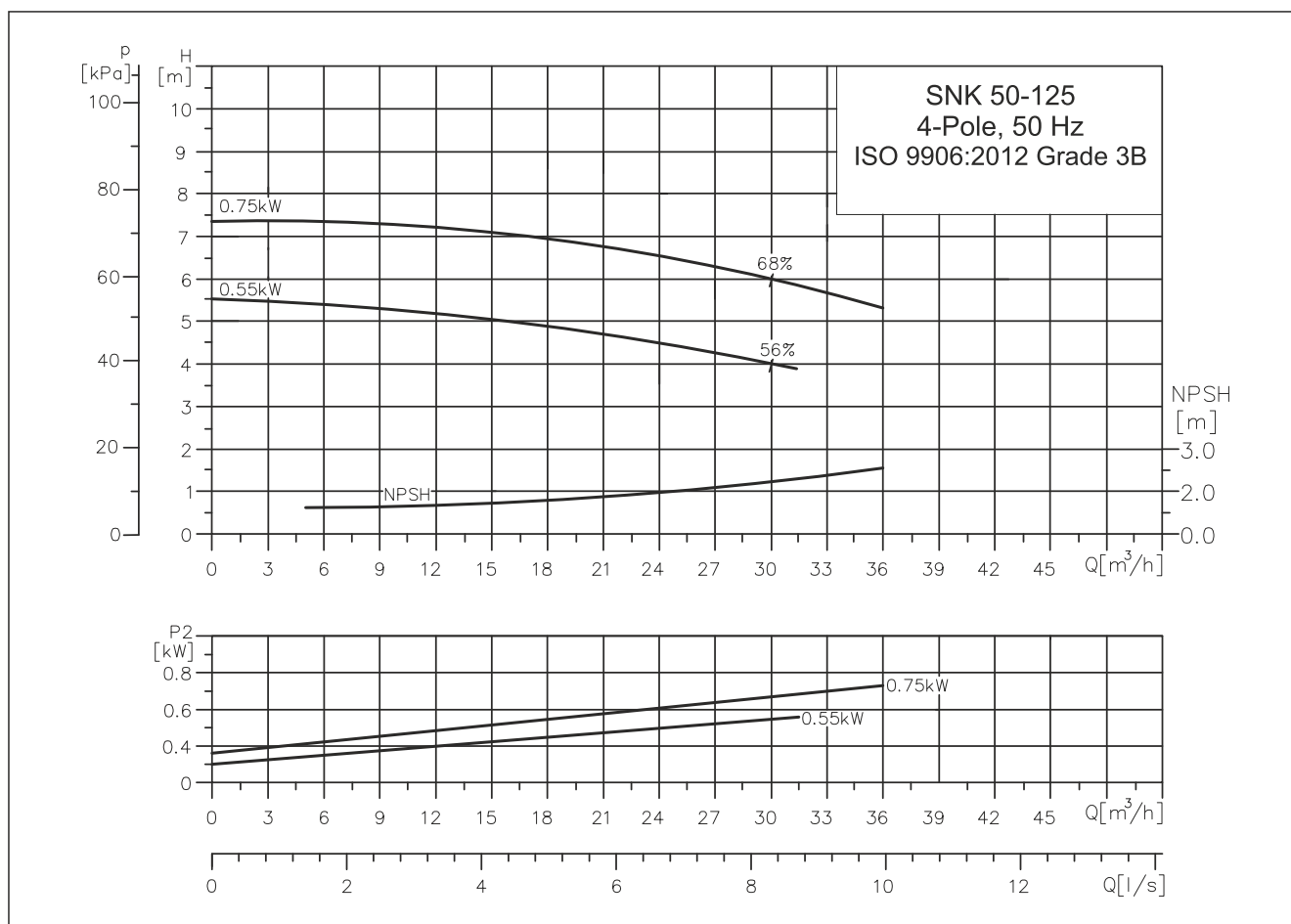
[kW / H.P.] 2.2/3.0 : 65 x 50 mm

[kW / H.P.] 3.0/4.0 : 65 x 50 mm

Pump Type		40-250	
Motor Frame		SMG 100	SMG 100
[kW/HP]		2.2/3.0	3.0/4.0
PN	[bar]	16	16
DN <sub>d</sub>	[mm]	40	40
DN <sub>s</sub>	[mm]	65	65
a	[mm]	100	100
a <sub>2</sub>	[mm]	75	75
h	[mm]	80	80
h <sub>2</sub>	[mm]	225	225
h <sub>3</sub>	[mm]	260	260
h <sub>4</sub>	[mm]	413	413
l	[mm]	859	859
l <sub>1</sub>	[mm]	1000	1000
l <sub>2</sub>	[mm]	170	170
l <sub>3</sub>	[mm]	660	660
b <sub>1</sub>	[mm]	340	340
b <sub>2</sub>	[mm]	450	450
b <sub>3</sub>	[mm]	400	400
d	[mm]	24	24
Weight	Net [kg]	129	135

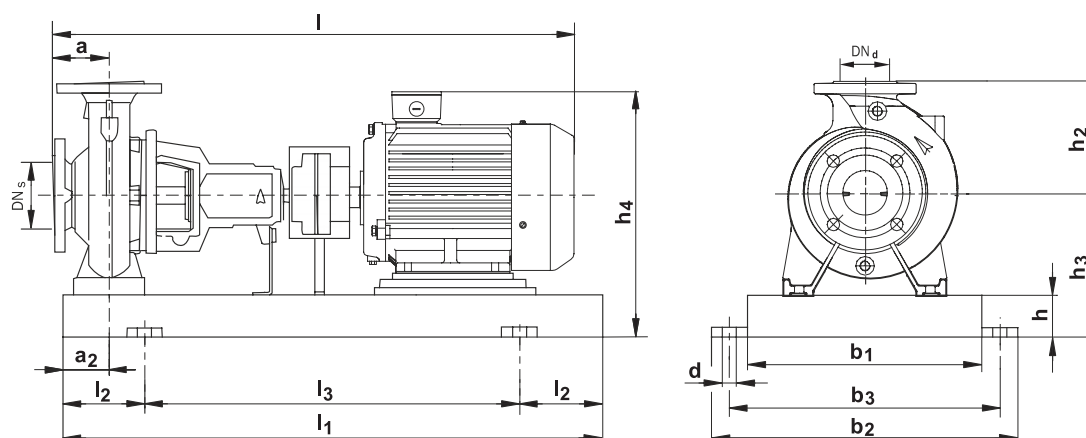
## PERFORMANCE CURVE

### SNK 50-125 (4 POLE)



## PERFORMANCE TABLE

### SNK 50-125 (4 POLE)



#### Recommended suction x delivery pipe size :

[kW / H.P.] 0.55/0.75 : 80 x 80 mm

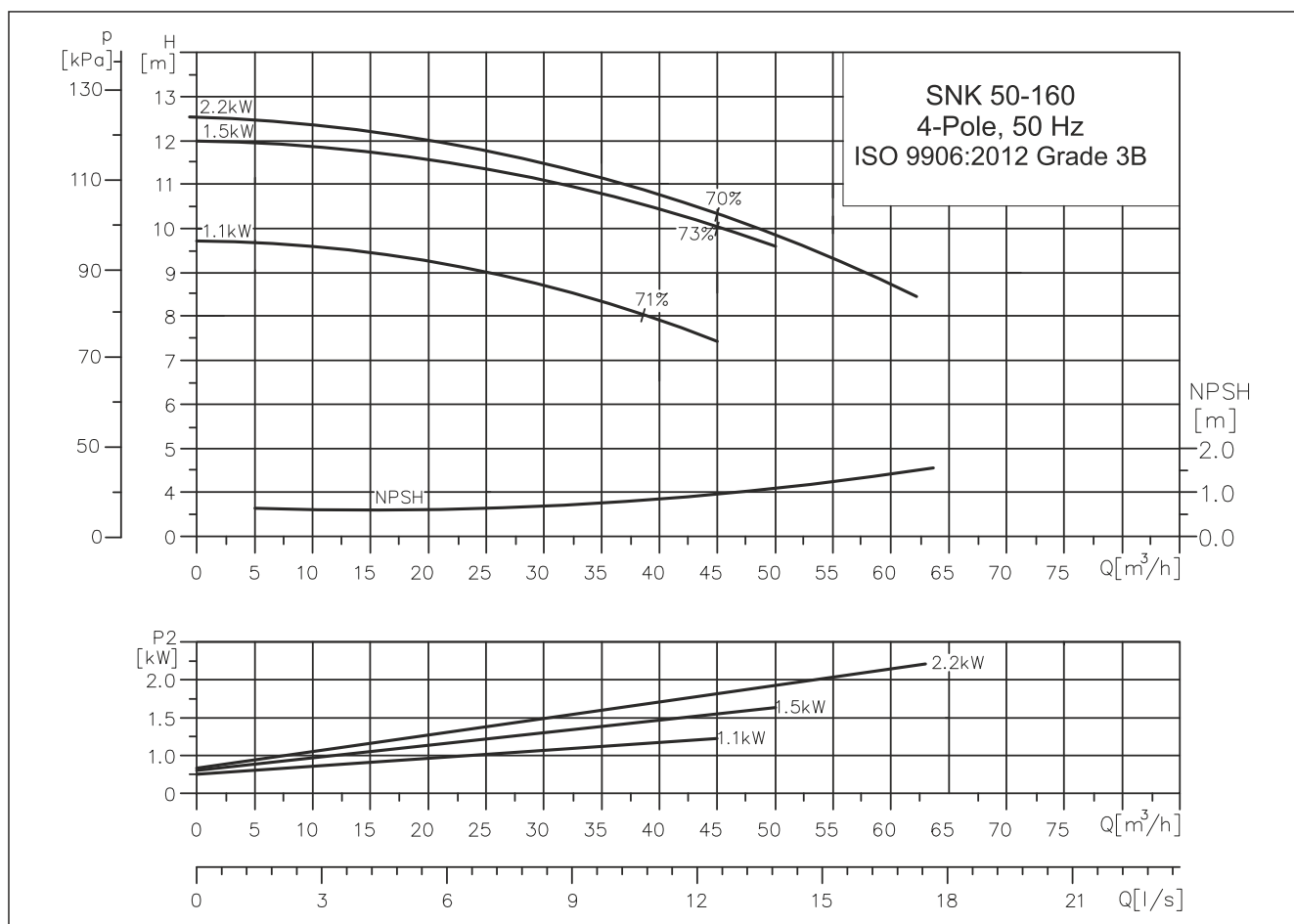
[kW / H.P.] 0.75/1.0 : 80 x 65 mm

Pump Type		50-125	
Motor Frame		SMG 80	SMG 80
[kW/HP]		0.55/0.75	0.75/1.0
PN	[bar]	16	16
DN <sub>d</sub>	[mm]	50	50
DN <sub>s</sub>	[mm]	65	65
a	[mm]	100	100
a <sub>2</sub>	[mm]	60	60
h	[mm]	65	65
h <sub>2</sub>	[mm]	160	160
h <sub>3</sub>	[mm]	197	197
h <sub>4</sub>	[mm]	322	322
l	[mm]	735	735
l <sub>1</sub>	[mm]	800	800
l <sub>2</sub>	[mm]	130	130
l <sub>3</sub>	[mm]	540	540
b <sub>1</sub>	[mm]	270	270
b <sub>2</sub>	[mm]	360	360
b <sub>3</sub>	[mm]	320	320
d	[mm]	19	19
Weight	Net [kg]	71	72



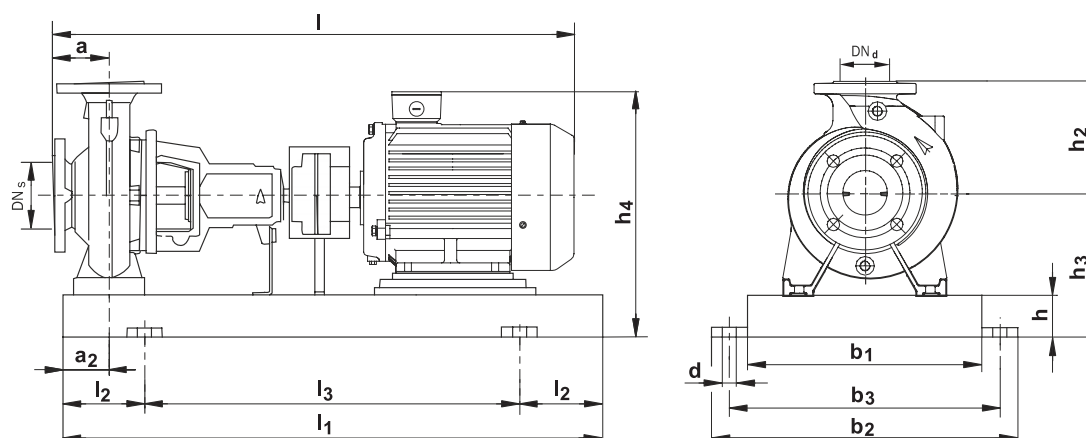
## PERFORMANCE CURVE

### SNK 50-160 (4 POLE)



## PERFORMANCE TABLE

### SNK 50-160 (4 POLE)



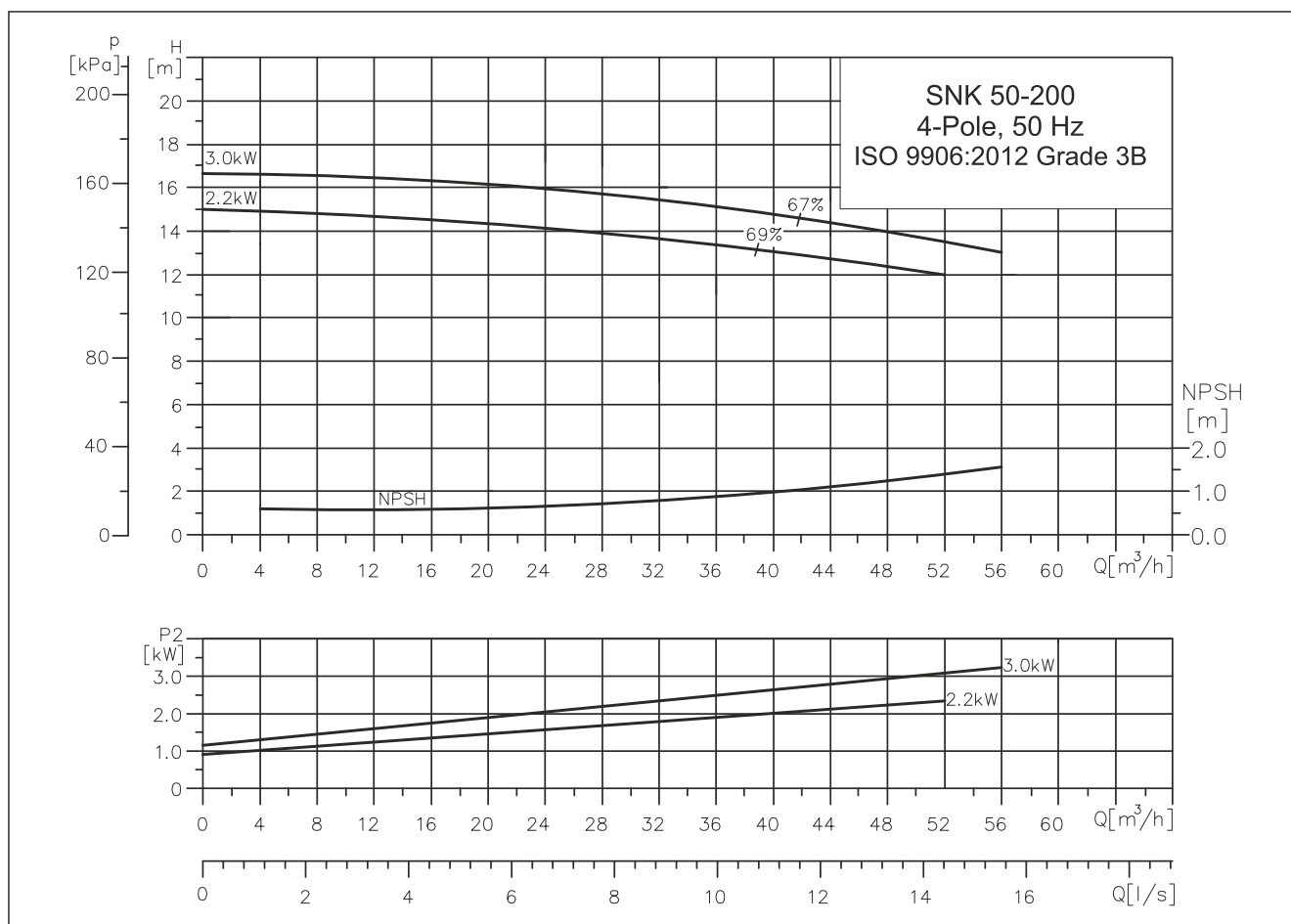
#### Recommended suction x delivery pipe size :

[kW / H.P.] 1.1/1.5	:	80 x 65 mm
[kW / H.P.] 1.5/2.0	:	80 x 65 mm
[kW / H.P.] 2.2/3.0	:	80 x 80 mm

Pump Type		50-160		
Motor Frame		SMG 90	SMG 90	SMG 100
[kW/HP]		1.1/1.5	1.5/2.0	2.2/3.0
PN	[bar]	16	16	16
DN <sub>d</sub>	[mm]	50	50	50
DN <sub>s</sub>	[mm]	65	65	65
a	[mm]	100	100	100
a <sub>2</sub>	[mm]	60	60	60
h	[mm]	65	65	65
h <sub>2</sub>	[mm]	180	180	180
h <sub>3</sub>	[mm]	225	225	225
h <sub>4</sub>	[mm]	358	358	378
l	[mm]	795	795	859
l <sub>1</sub>	[mm]	900	900	900
l <sub>2</sub>	[mm]	150	150	150
l <sub>3</sub>	[mm]	600	600	600
b <sub>1</sub>	[mm]	300	300	300
b <sub>2</sub>	[mm]	390	390	390
b <sub>3</sub>	[mm]	350	350	350
d	[mm]	19	19	19
Weight	Net [kg]	90	92	97

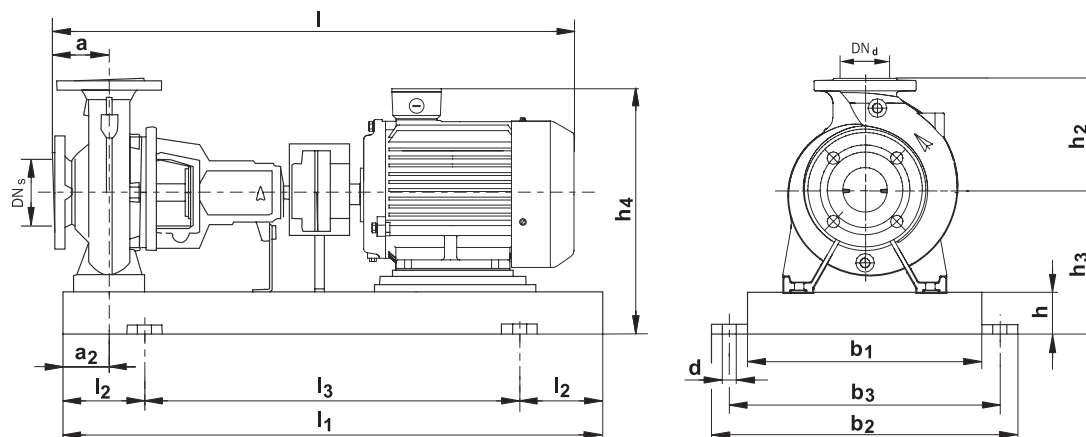
## PERFORMANCE CURVE

### SNK 50-200 (4 POLE)



## PERFORMANCE TABLE

### SNK 50-200 (4 POLE)



#### Recommended suction x delivery pipe size :

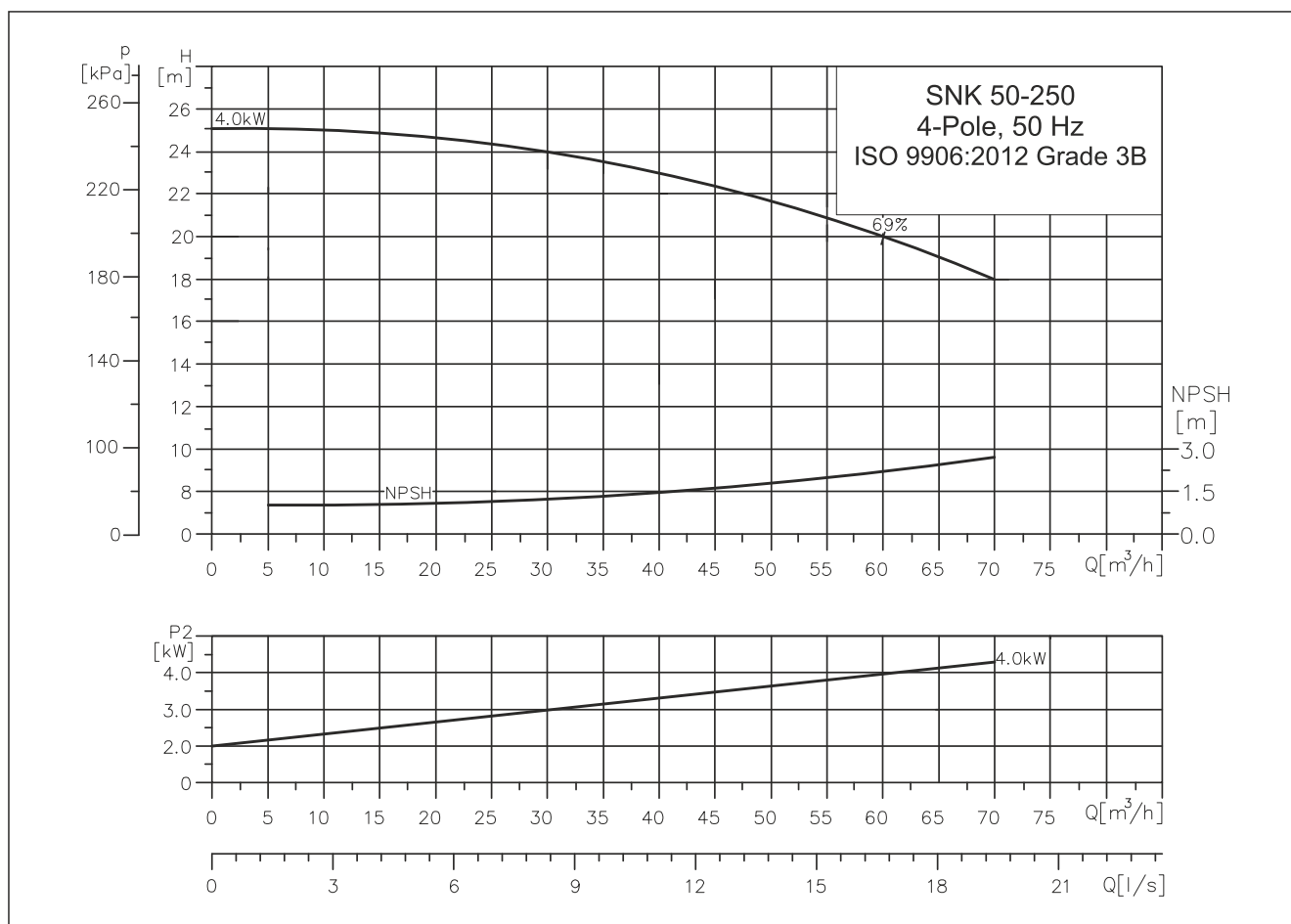
[kW / H.P.] 2.2/3.0 : 65 x 65 mm

[kW / H.P.] 3.0/4.0 : 65 x 65 mm

Pump Type		50-200	
Motor Frame		SMG 100	SMG 100
[kW/HP]		2.2/3.0	3.0/4.0
PN	[bar]	16	16
DN <sub>d</sub>	[mm]	50	50
DN <sub>s</sub>	[mm]	65	65
a	[mm]	100	100
a <sub>2</sub>	[mm]	60	60
h	[mm]	65	65
h <sub>2</sub>	[mm]	200	200
h <sub>3</sub>	[mm]	225	225
h <sub>4</sub>	[mm]	378	378
l	[mm]	859	859
l <sub>1</sub>	[mm]	900	900
l <sub>2</sub>	[mm]	150	150
l <sub>3</sub>	[mm]	600	600
b <sub>1</sub>	[mm]	300	300
b <sub>2</sub>	[mm]	390	390
b <sub>3</sub>	[mm]	350	350
d	[mm]	19	19
Weight	Net [kg]	111	117

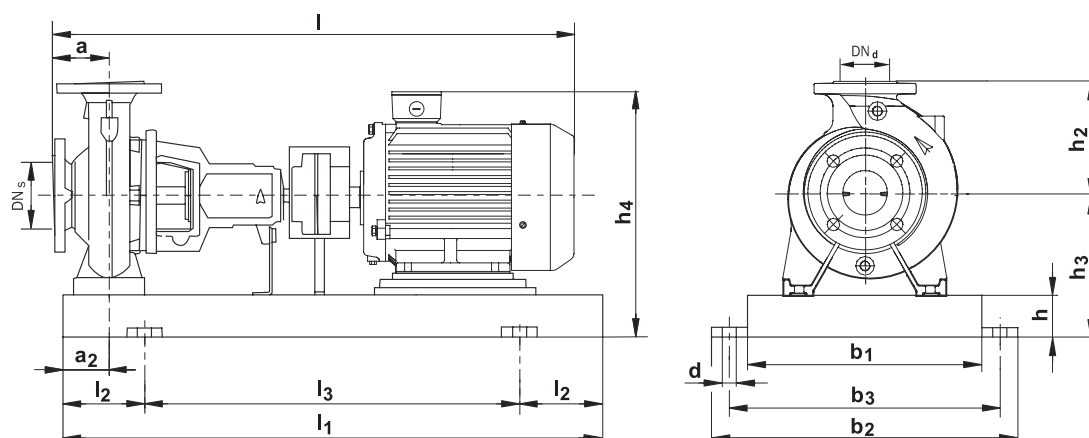
## PERFORMANCE CURVE

### SNK 50-250 (4 POLE)



## PERFORMANCE TABLE

### SNK 50-250 (4 POLE)



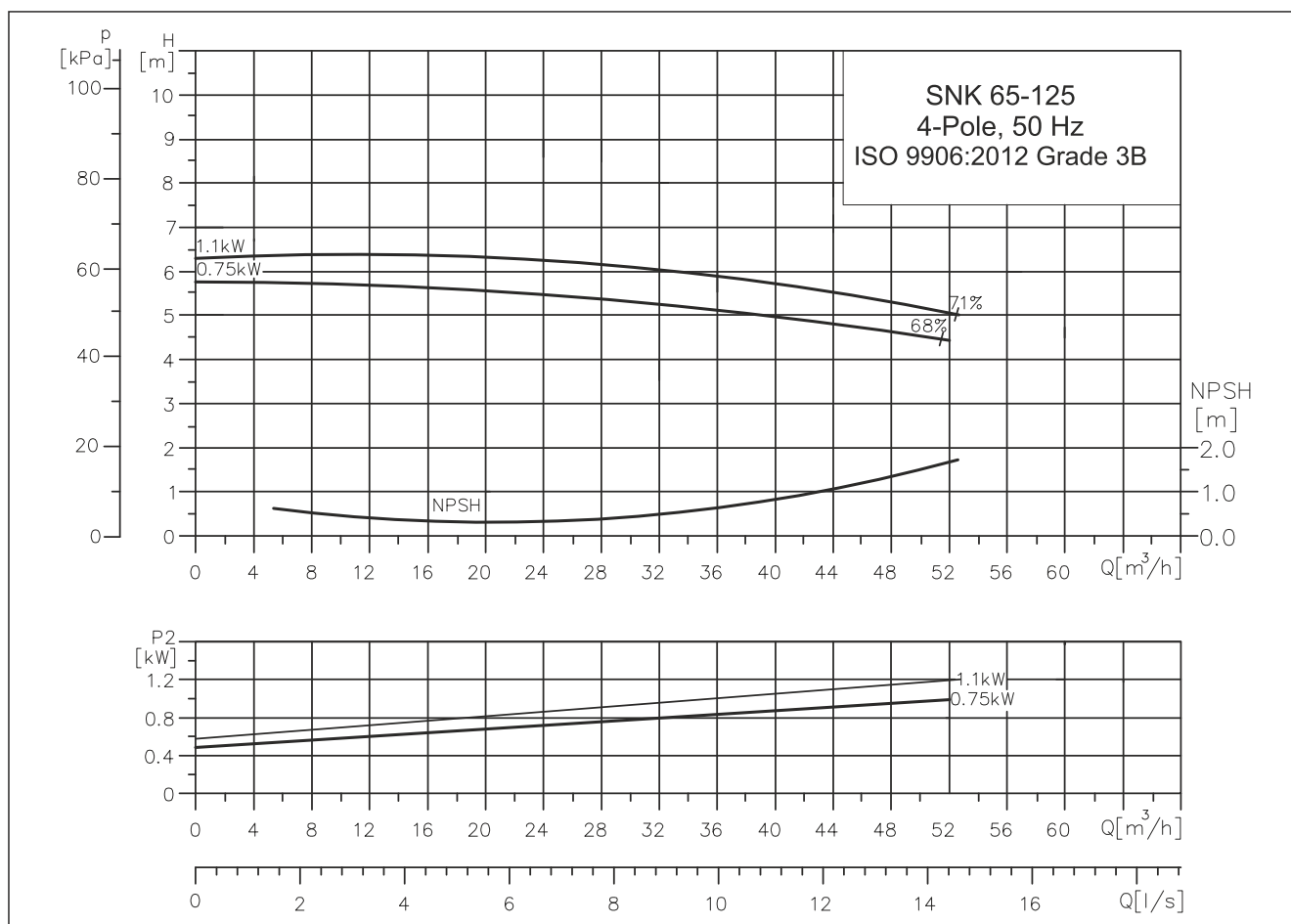
Recommended suction x delivery pipe size :

[kW / H.P.] 4.0/5.5 : 65 x 65 mm

Pump Type		50-250
Motor Frame		SMG 112
[kW/HP]		4.0/5.5
PN	[bar]	16
DN <sub>d</sub>	[mm]	50
DN <sub>s</sub>	[mm]	65
a	[mm]	100
a <sub>2</sub>	[mm]	75
h	[mm]	65
h <sub>2</sub>	[mm]	225
h <sub>3</sub>	[mm]	247
h <sub>4</sub>	[mm]	415
l	[mm]	896
l <sub>1</sub>	[mm]	900
l <sub>2</sub>	[mm]	150
l <sub>3</sub>	[mm]	600
b <sub>1</sub>	[mm]	300
b <sub>2</sub>	[mm]	390
b <sub>3</sub>	[mm]	350
d	[mm]	19
Weight	Net [kg]	133

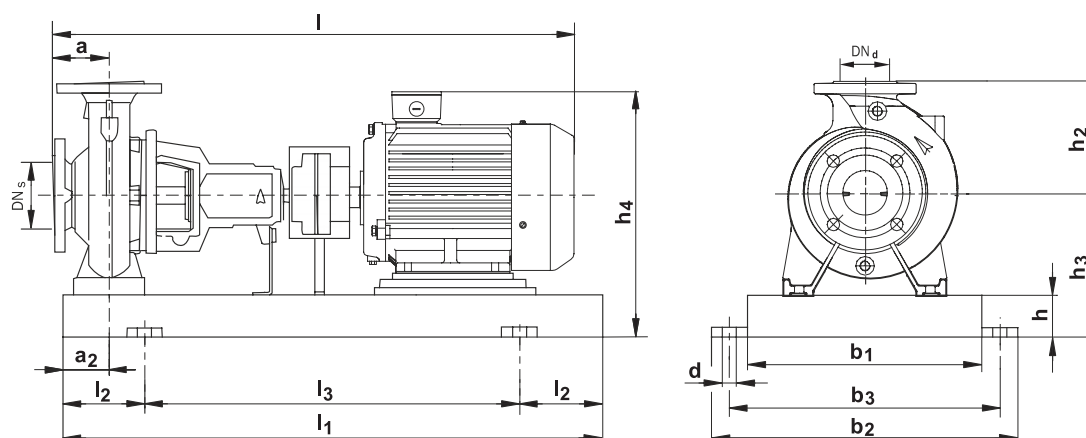
## PERFORMANCE CURVE

### SNK 65-125 (4 POLE)



## PERFORMANCE TABLE

### SNK 65-125 (4 POLE)



#### Recommended suction x delivery pipe size :

[kW / H.P.] 0.75/1.0 : 100 x 80 mm

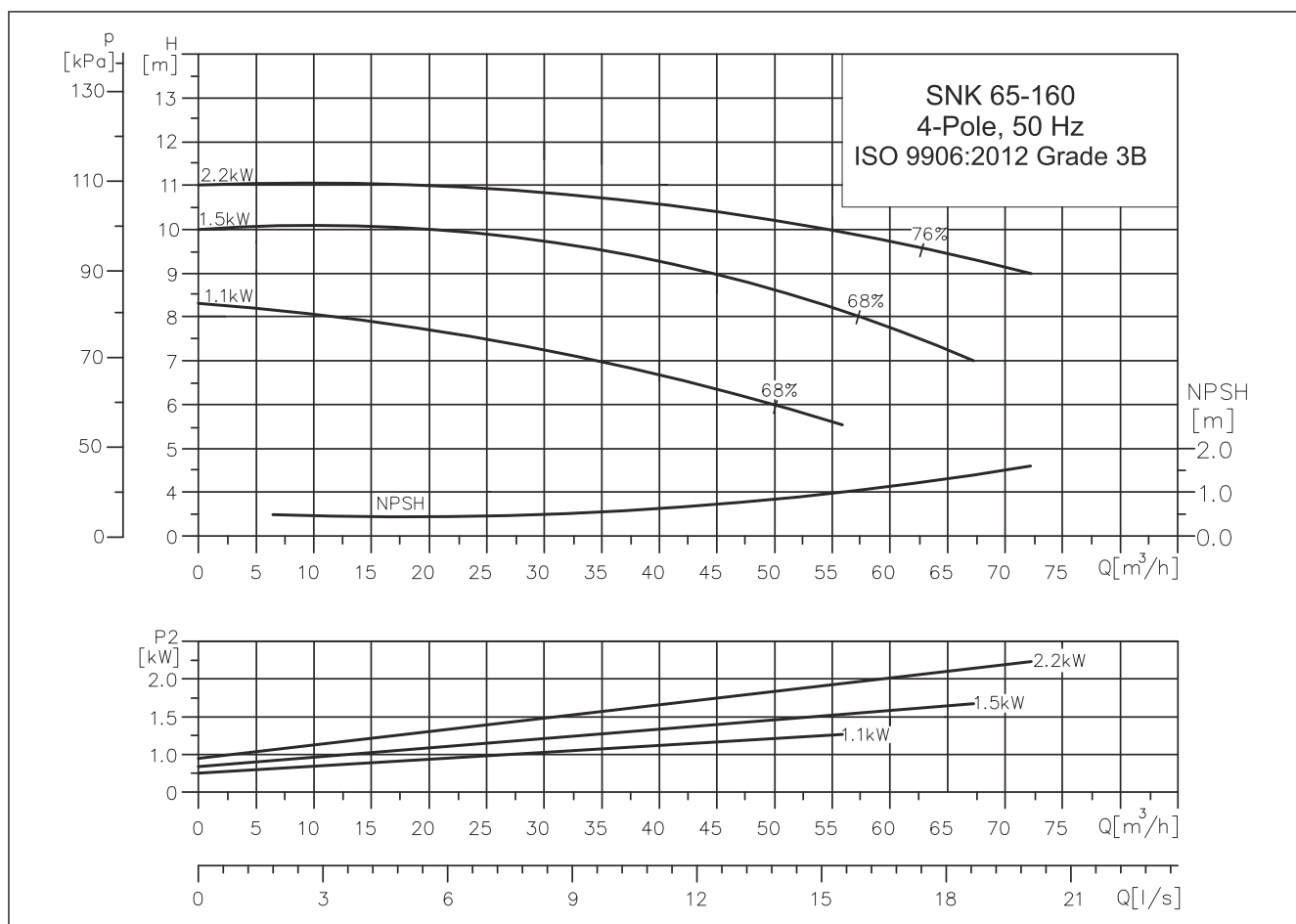
[kW / H.P.] 1.1/1.5 : 80 x 80 mm

Pump Type		65-125/132	65-125/144
Motor Frame		SMG 80	SMG 90
[kW/HP]		0.75/1.1	1.1/1.5
PN	[bar]	16	16
DN <sub>d</sub>	[mm]	65	65
DN <sub>s</sub>	[mm]	95	95
a	[mm]	100	100
a <sub>2</sub>	[mm]	60	60
h	[mm]	65	65
h <sub>2</sub>	[mm]	180	180
h <sub>3</sub>	[mm]	225	225
h <sub>4</sub>	[mm]	350	358
l	[mm]	735	795
l <sub>1</sub>	[mm]	900	900
l <sub>2</sub>	[mm]	150	150
l <sub>3</sub>	[mm]	600	600
b <sub>1</sub>	[mm]	300	300
b <sub>2</sub>	[mm]	390	390
b <sub>3</sub>	[mm]	350	350
d	[mm]	19	19
Weight	Net [kg]	84	89



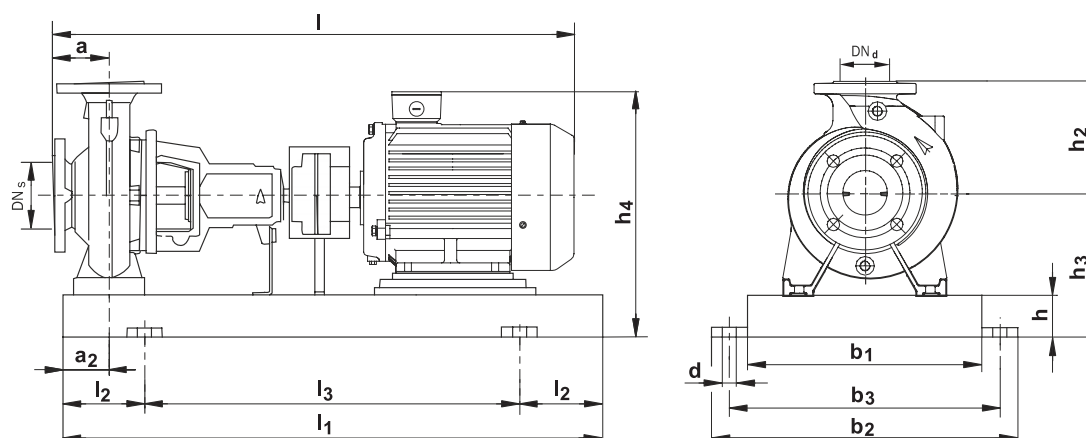
## PERFORMANCE CURVE

### SNK 65-160 (4 POLE)



## PERFORMANCE TABLE

### SNK 65-160 (4 POLE)



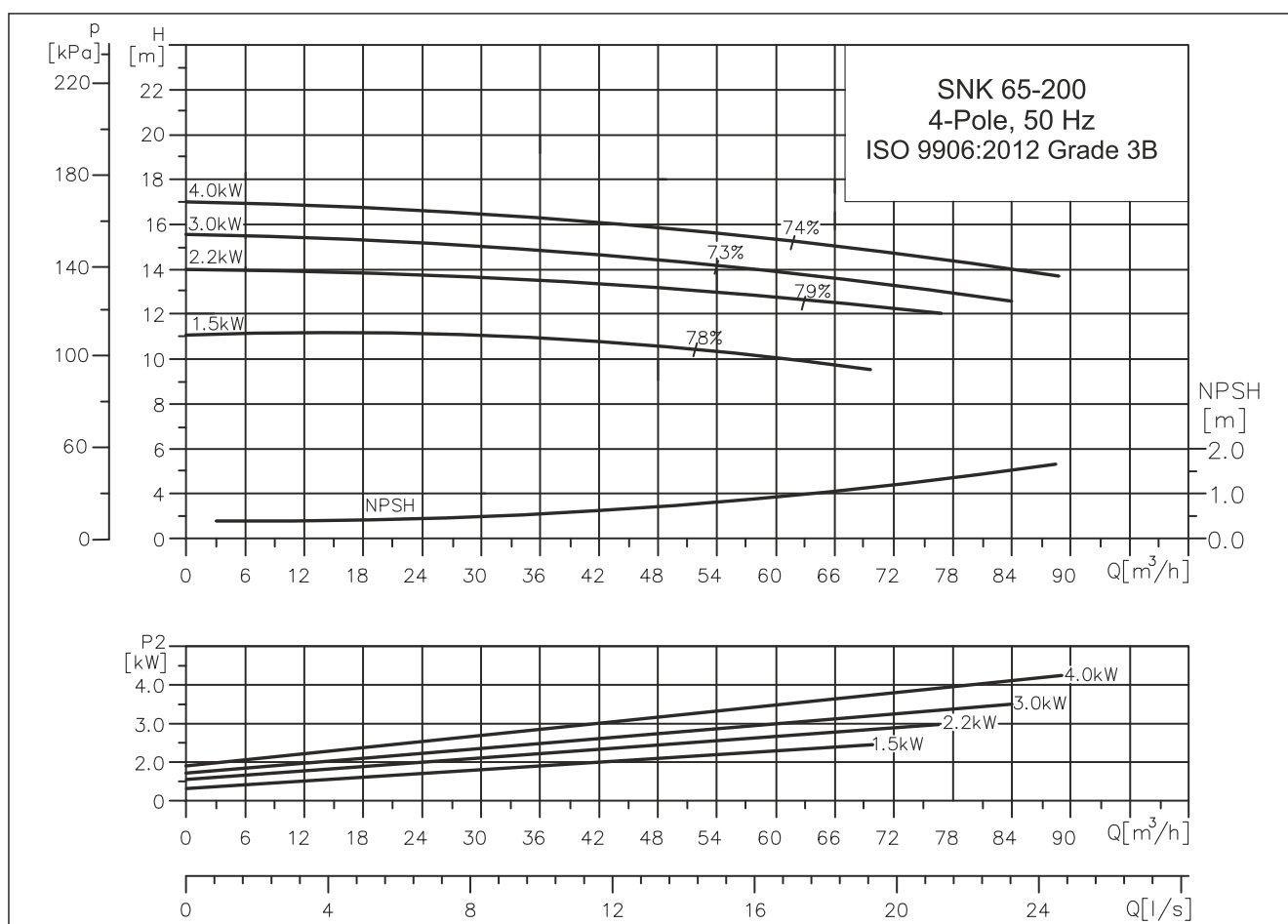
#### Recommended suction x delivery pipe size :

[kW / H.P.] 1.1/1.5	:	80 x 80 mm
[kW / H.P.] 1.5/2.0	:	100 x 80 mm
[kW / H.P.] 2.2/3.0	:	100 x 80 mm

Pump Type		65-160/149	65-160/165	65-160/177
Motor Frame		SMG 90	SMG 90	SMG 100
[kW/HP]		1.1/1.5	1.5/2.0	2.2/3.0
PN	[bar]	16	16	16
DN <sub>d</sub>	[mm]	65	65	65
DN <sub>s</sub>	[mm]	95	95	95
a	[mm]	100	100	100
a <sub>2</sub>	[mm]	60	60	60
h	[mm]	65	65	65
h <sub>2</sub>	[mm]	200	200	200
h <sub>3</sub>	[mm]	225	225	225
h <sub>4</sub>	[mm]	358	358	378
l	[mm]	795	795	859
l <sub>1</sub>	[mm]	900	900	900
l <sub>2</sub>	[mm]	150	150	150
l <sub>3</sub>	[mm]	600	600	600
b <sub>1</sub>	[mm]	300	300	300
b <sub>2</sub>	[mm]	390	390	390
b <sub>3</sub>	[mm]	350	350	350
d	[mm]	19	19	19
Weight	Net [kg]	94	96	101

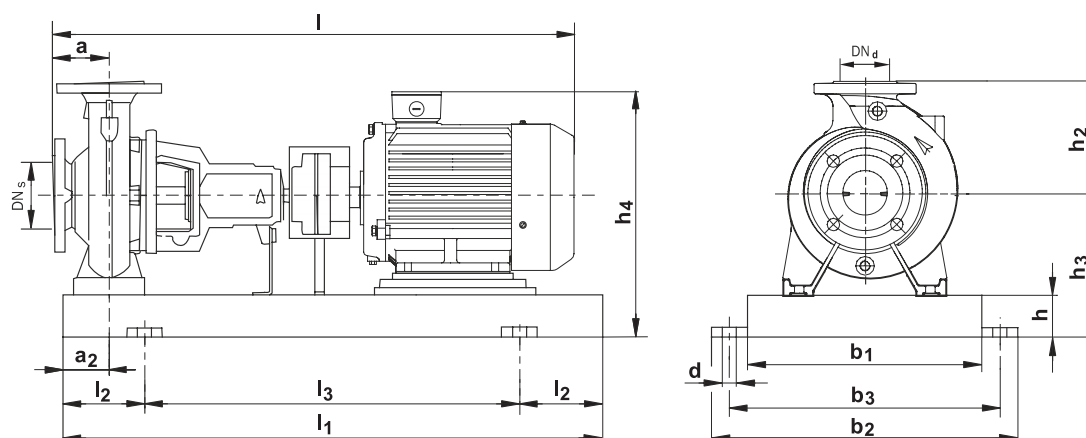
## PERFORMANCE CURVE

### SNK 65-200 (4 POLE)



## PERFORMANCE TABLE

### SNK 65-200 (4 POLE)



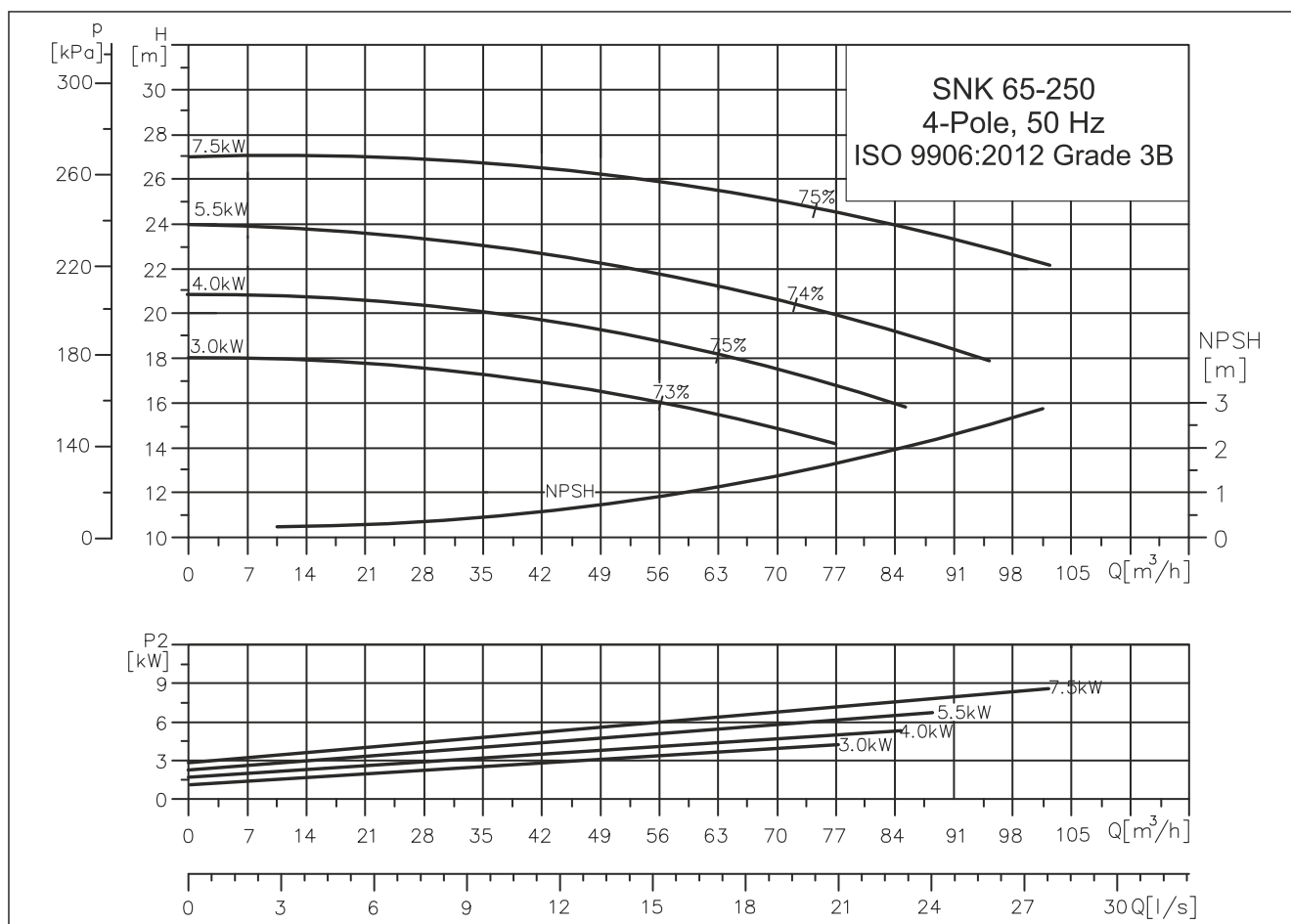
#### Recommended suction x delivery pipe size :

[kW / H.P.] 1.5/2.0	:	100 x 80 mm
[kW / H.P.] 2.2/3.0	:	100 x 80 mm
[kW / H.P.] 3.0/4.0	:	100 x 80 mm
[kW / H.P.] 4.0/5.5	:	100 x 80 mm

Pump Type		65-200/170	65-200/190	65-200/205	65-200/219
Motor frame		SMMG 90	SMMG100	SMMG 100	SMMG112
[kW/HP]		1.5/2	2.2/3	3.0/4.0	4.0/5.5
PN	[bar]	16	16	16	16
DN <sub>d</sub>	[mm]	65	65	65	65
DN <sub>s</sub>	[mm]	80	80	90	90
a	[mm]	100	100	100	100
a <sub>2</sub>	[mm]	75	75	75	75
h	[mm]	80	80	80	80
h <sub>2</sub>	[mm]	225	225	225	225
h <sub>3</sub>	[mm]	260	260	262	262
h <sub>4</sub>	[mm]	370	415	415	430
l	[mm]	795	859	859	896
l <sub>1</sub>	[mm]	1000	1120	1120	1120
l <sub>2</sub>	[mm]	170	190	190	190
l <sub>3</sub>	[mm]	660	740	740	740
b <sub>1</sub>	[mm]	340	380	380	380
b <sub>2</sub>	[mm]	450	490	490	490
b <sub>3</sub>	[mm]	400	440	440	440
d	[mm]	24	24	24	24
Weight	Net[Kg]	115	128	134	139

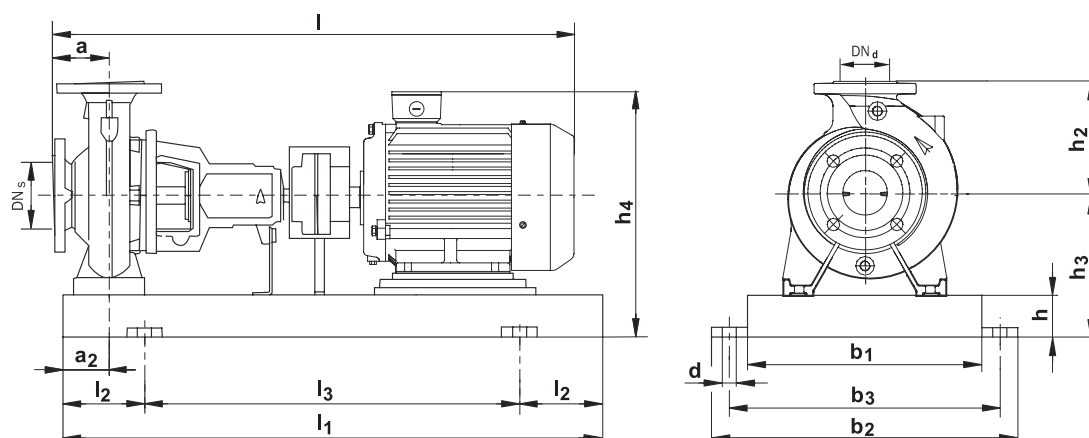
## PERFORMANCE CURVE

### SNK 65-250 (4 POLE)



## PERFORMANCE TABLE

### SNK 65-250 (4 POLE)



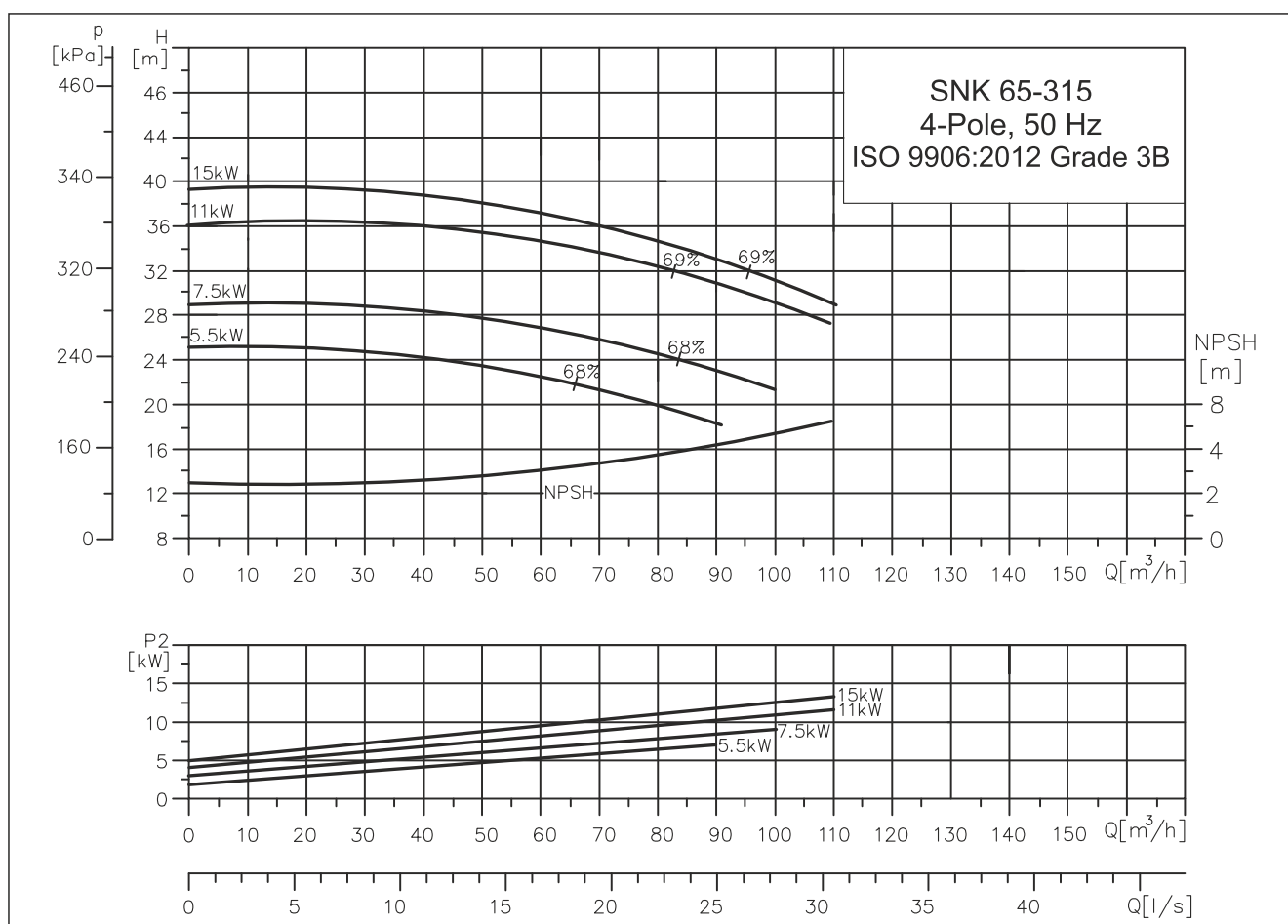
#### Recommended suction x delivery pipe size :

[kW / H.P.] 3.0/4.0	:	100 x 80 mm
[kW / H.P.] 4.0/5.5	:	100 x 80 mm
[kW / H.P.] 5.5/7.5	:	100 x 80 mm
[kW / H.P.] 7.5/10.0	:	100 x 80 mm

Pump Type	65-250/215	65-250/232	65-250/254	65-250/270
Motor frame	SMMG 112M	SMMG 112M	SMMG 132M	SMMG 132M
[kW/HP]	3.0/4.0	4.0/5.5	5.5/7.5	7.5/10.0
PN [bar]	16	16	16	16
DN <sub>d</sub> [mm]	65	65	65	65
DN <sub>s</sub> [mm]	80	80	80	80
a [mm]	100	100	100	100
a <sub>2</sub> [mm]	90	90	90	90
h [mm]	80	80	80	80
h <sub>2</sub> [mm]	250	250	250	250
h <sub>3</sub> [mm]	282	282	282	282
h <sub>4</sub> [mm]	402	416	467	482
l [mm]	969	1006	1045	1037
l <sub>1</sub> [mm]	1120	1120	1120	1120
l <sub>2</sub> [mm]	190	190	190	190
l <sub>3</sub> [mm]	740	740	740	740
b <sub>1</sub> [mm]	380	380	380	380
b <sub>2</sub> [mm]	490	490	490	490
b <sub>3</sub> [mm]	440	440	440	440
d [mm]	24	24	24	24
Weight Net[Kg]	169	174	181	223

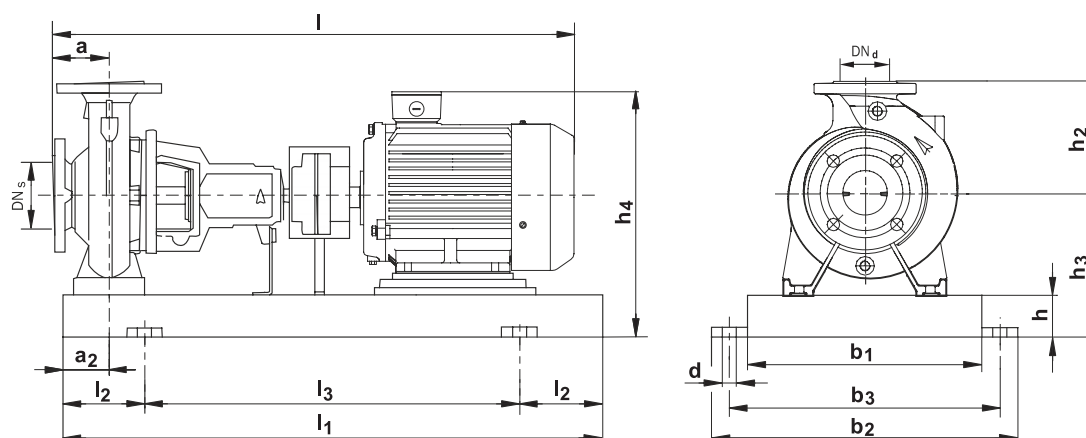
## PERFORMANCE CURVE

### SNK 65-315 (4 POLE)



## PERFORMANCE TABLE

### SNK 65-315 (4 POLE)



#### Recommended suction x delivery pipe size :

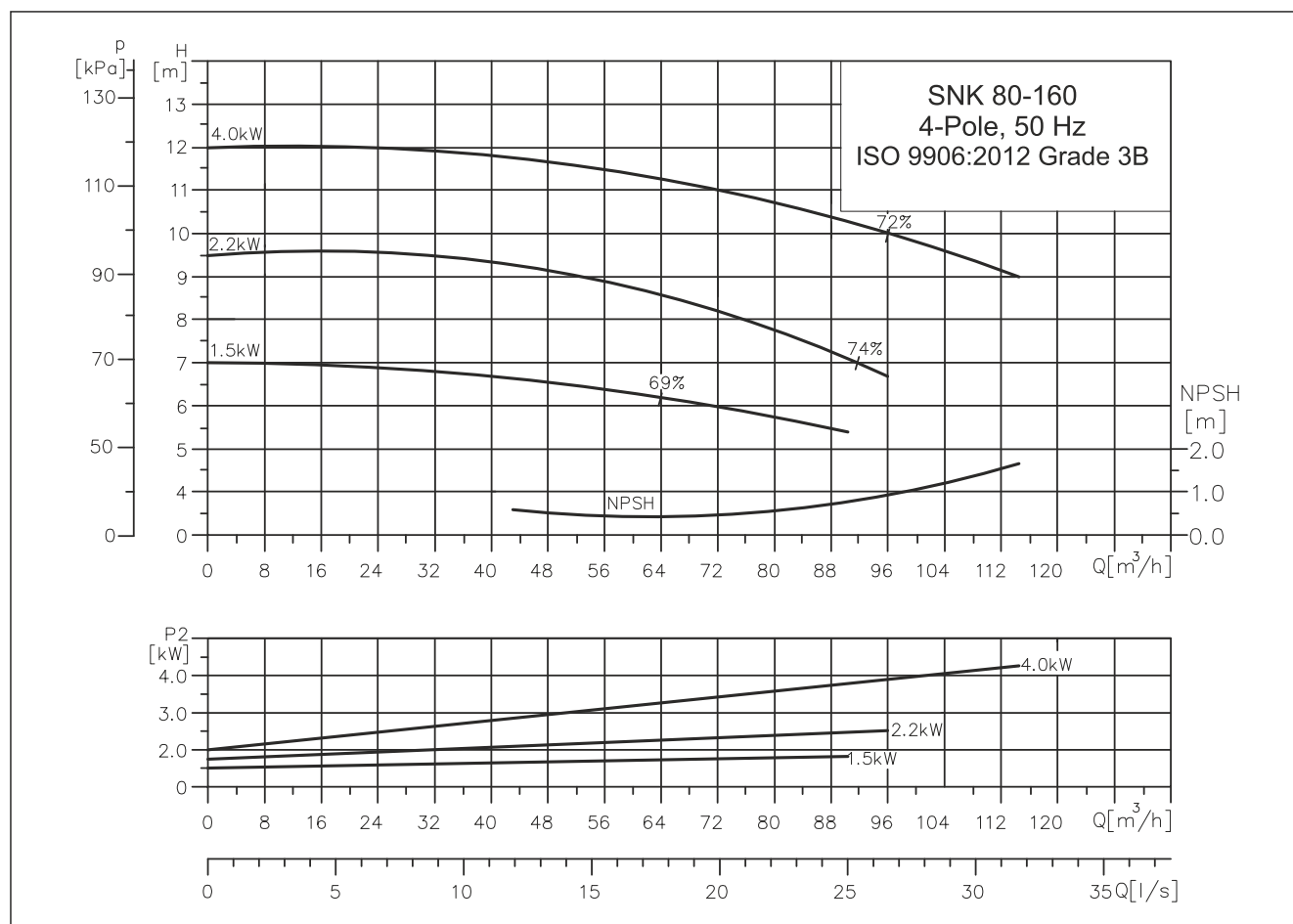
[kW / H.P.] 5.5/7.5	: 100 x 80 mm
[kW / H.P.] 7.5/10.0	: 100 x 80 mm
[kW / H.P.] 11.0/15.0	: 100 x 80 mm
[kW / H.P.] 15.0/20.0	: 100 x 80 mm

Pump Type	65-315/261	65-315/282	65-315/314	65-315/320
Motor frame	SMMG 132S	SMMG 132M	SMMG 160	SMMG 160
[kW/HP]	5.5/7.5	7.5/10	11.0/15.0	15.0/20.0
PN [bar]	16	16	16	16
DN <sub>d</sub> [mm]	65	65	65	65
DN <sub>s</sub> [mm]	80	80	80	80
a [mm]	125	125	125	125
a <sub>2</sub> [mm]	90	90	90	90
h [mm]	80	80	80	80
h <sub>2</sub> [mm]	280	280	280	280
h <sub>3</sub> [mm]	305	305	310	310
h <sub>4</sub> [mm]	439	505	558	558
l [mm]	1070	1062	1207	1251
l <sub>1</sub> [mm]	1250	1250	1250	1250
l <sub>2</sub> [mm]	205	205	205	205
l <sub>3</sub> [mm]	840	840	840	840
b <sub>1</sub> [mm]	430	430	430	430
b <sub>2</sub> [mm]	540	540	540	540
b <sub>3</sub> [mm]	490	490	490	490
d [mm]	24	24	24	28
Weight Net[Kg]	204	246	294	310



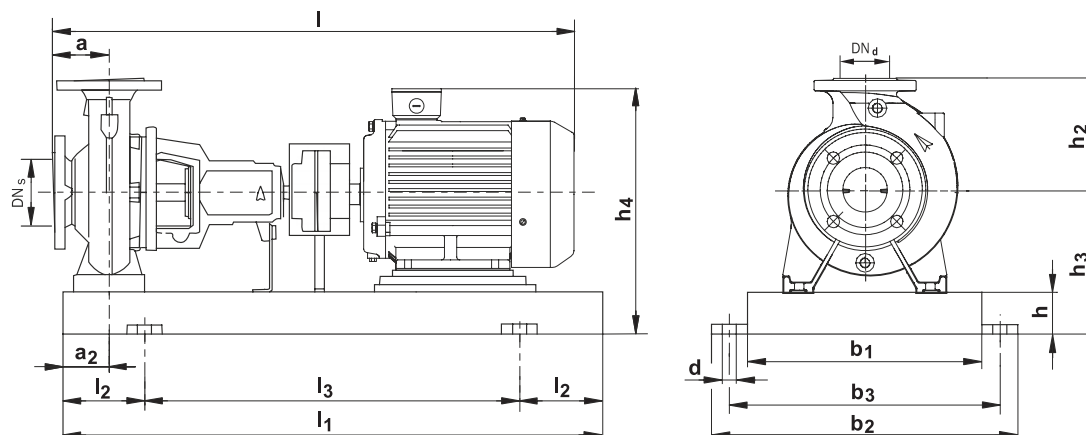
## PERFORMANCE CURVE

### SNK 80-160 (4 POLE)



## PERFORMANCE TABLE

### SNK 80-160 (4 POLE)



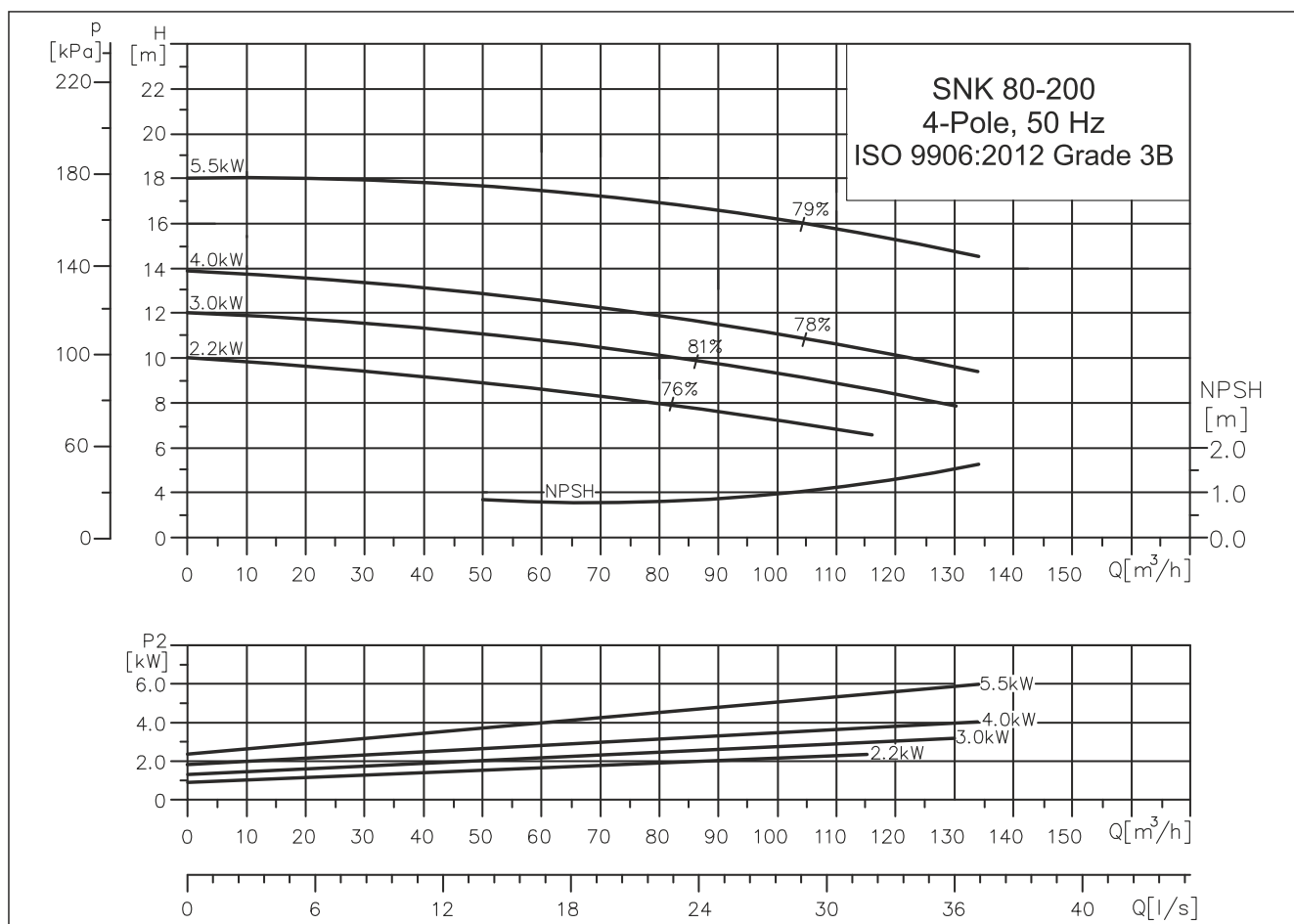
#### Recommended suction x delivery pipe size :

[kW / H.P.] 1.5/2.0	:	125 x 125 mm
[kW / H.P.] 2.2/3.0	:	125 x 100 mm
[kW / H.P.] 4.0/5.5	:	125 x 100 mm

Pump Type		80-160/147	80-160/163	80-160/177
Motor Frame		SMG 90	SMG 100	SMG 112
[kW/HP]		1.5/2.0	2.2/3.0	4.0/5.5
PN	[bar]	16	16	16
DN <sub>d</sub>	[mm]	80	80	80
DN <sub>s</sub>	[mm]	100	100	100
a	[mm]	125	125	125
a <sub>2</sub>	[mm]	75	75	75
h	[mm]	80	80	80
h <sub>2</sub>	[mm]	225	225	225
h <sub>3</sub>	[mm]	260	260	262
h <sub>4</sub>	[mm]	393	413	430
l	[mm]	820	884	921
l <sub>1</sub>	[mm]	1000	1000	1000
l <sub>2</sub>	[mm]	170	170	170
l <sub>3</sub>	[mm]	660	660	660
b <sub>1</sub>	[mm]	340	340	340
b <sub>2</sub>	[mm]	450	450	450
b <sub>3</sub>	[mm]	400	400	400
d	[mm]	24	24	24
Weight	Net [kg]	115	120	131

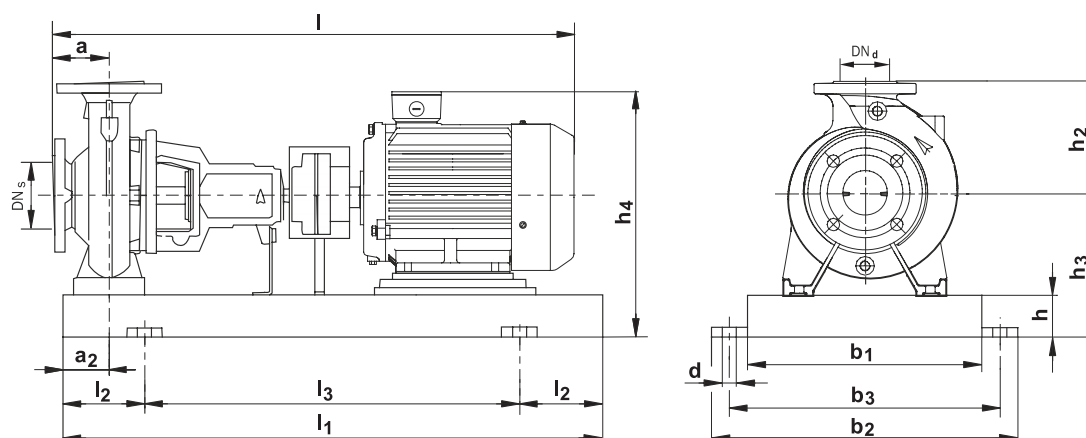
## PERFORMANCE CURVE

### SNK 80-200 (4 POLE)



## PERFORMANCE TABLE

### SNK 80-200 (4 POLE)



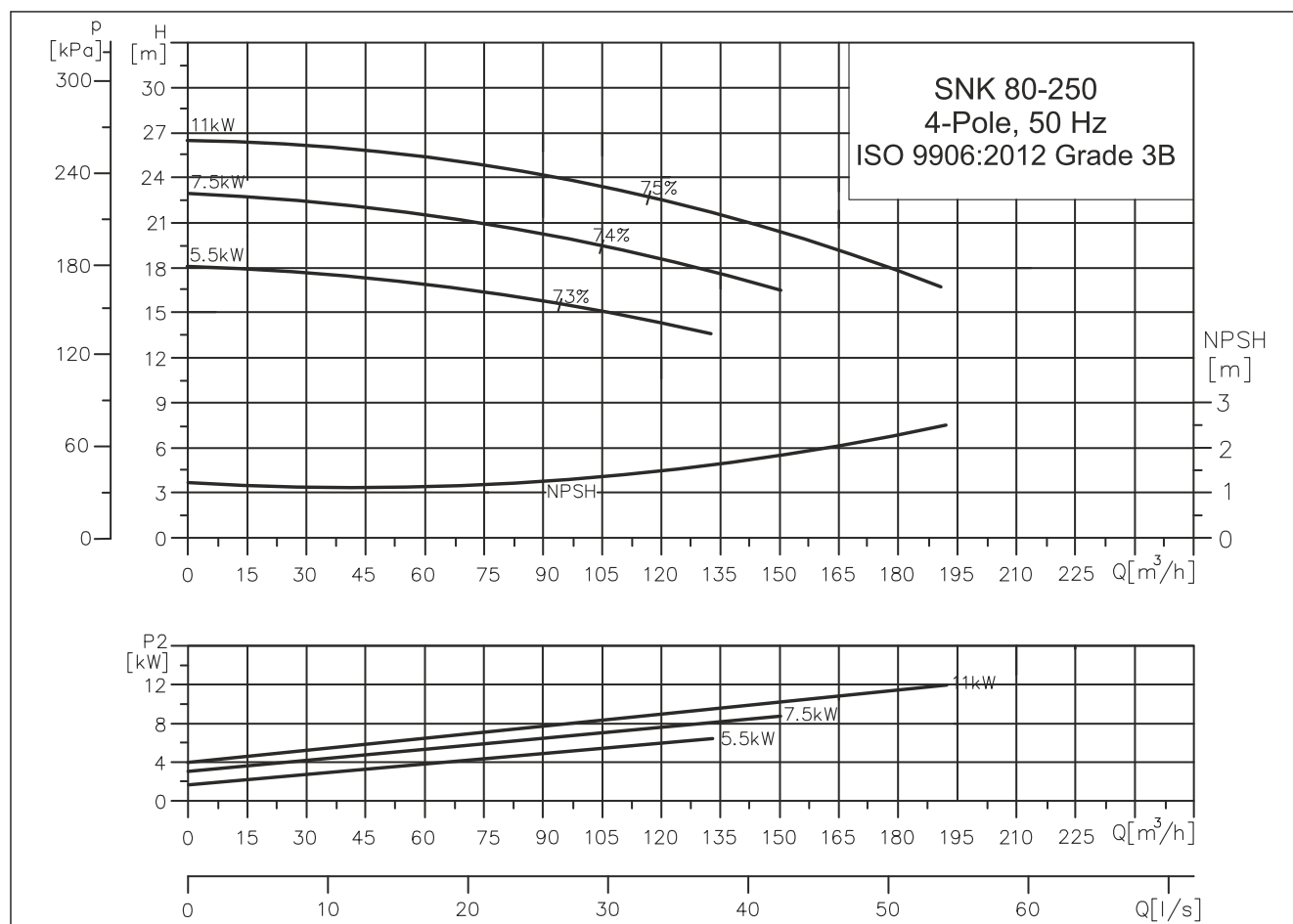
#### Recommended suction x delivery pipe size :

[kW / H.P.] 2.2/3.0	:	150 x 125 mm
[kW / H.P.] 3.0/4.0	:	150 x 125 mm
[kW / H.P.] 4.0/5.5	:	150 x 125 mm
[kW / H.P.] 5.5/7.5	:	125 x 100 mm

Pump Type		80-200/164	80-200/180	80-200/196	80-200/219
Motor frame		SMMG 100L	SMMG 112M	SMMG 112M	SMMG 132
[kW/HP]		2.2/3	3.0/4.0	4.0/5.5	5.5/7.5
PN	[bar]	16	16	16	16
DN <sub>d</sub>	[mm]	80	80	80	80
DN <sub>s</sub>	[mm]	100	100	100	100
a	[mm]	125	125	125	125
a <sub>2</sub>	[mm]	75	75	75	75
h	[mm]	80	80	80	80
h <sub>2</sub>	[mm]	250	250	250	250
h <sub>3</sub>	[mm]	260	262	262	262
h <sub>4</sub>	[mm]	380	382	396	447
l	[mm]	994	994	1031	1070
l <sub>1</sub>	[mm]	1120	1120	1120	1120
l <sub>2</sub>	[mm]	190	190	190	190
l <sub>3</sub>	[mm]	740	740	740	740
b <sub>1</sub>	[mm]	380	380	380	380
b <sub>2</sub>	[mm]	490	490	490	490
b <sub>3</sub>	[mm]	440	440	440	440
d	[mm]	24	24	24	24
Weight	Net[Kg]	147	153	158	165

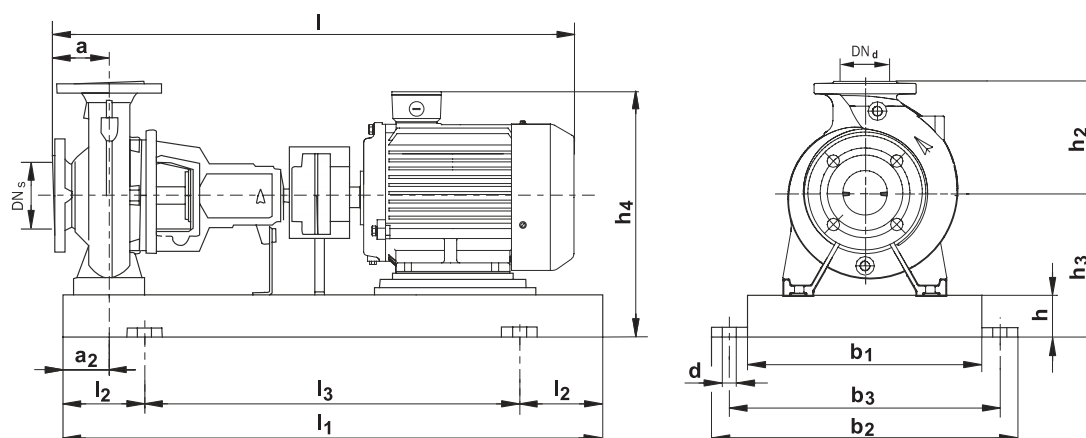
## PERFORMANCE CURVE

### SNK 80-250 (4 POLE)



## PERFORMANCE TABLE

### SNK 80-250 (4 POLE)



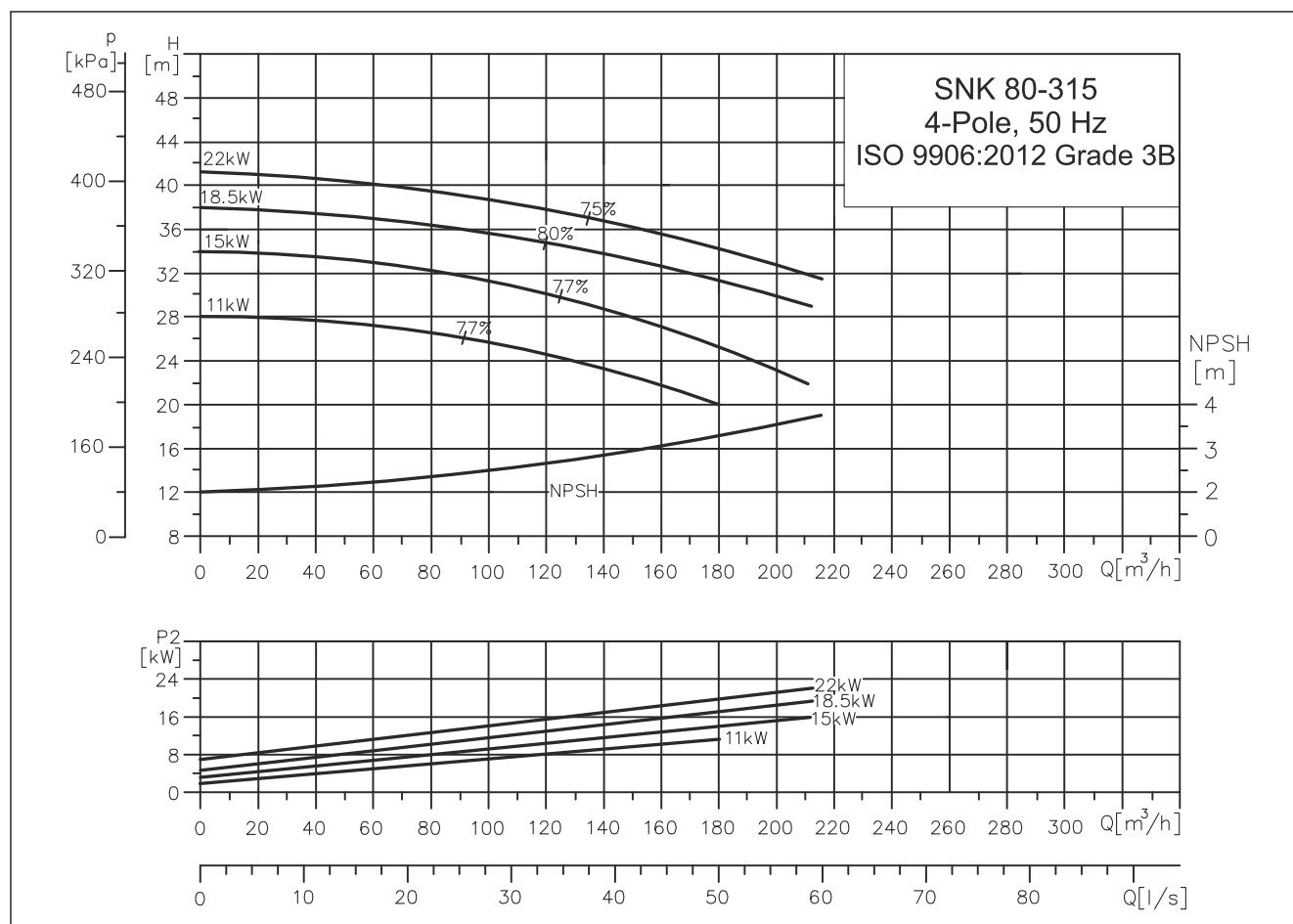
#### Recommended suction x delivery pipe size :

[kW / H.P.] 5.5/7.5	:	125 x 100 mm
[kW / H.P.] 7.5/10.0	:	125 x 100 mm
[kW / H.P.] 11.0/15.0	:	150 x 125 mm

Pump Type		80-250/225	80-250/250	80-250/274
Motor frame		SMMG 132	SMMG 132	SMMG 160
[kW/HP]		5.5/7.5	7.5/10	11.0/15.0
PN	[bar]	16	16	16
DN <sub>d</sub>	[mm]	80	80	80
DN <sub>s</sub>	[mm]	100	100	100
a	[mm]	125	125	125
a <sub>2</sub>	[mm]	90	90	90
h	[mm]	80	80	80
h <sub>2</sub>	[mm]	280	280	280
h <sub>3</sub>	[mm]	282	282	280
h <sub>4</sub>	[mm]	416	482	528
l	[mm]	1070	1062	1207
l <sub>1</sub>	[mm]	1250	1250	1250
l <sub>2</sub>	[mm]	205	205	205
l <sub>3</sub>	[mm]	840	840	840
b <sub>1</sub>	[mm]	430	430	430
b <sub>2</sub>	[mm]	540	540	540
b <sub>3</sub>	[mm]	490	490	490
d	[mm]	24	24	24
Weight	Net[Kg]	197	239	287

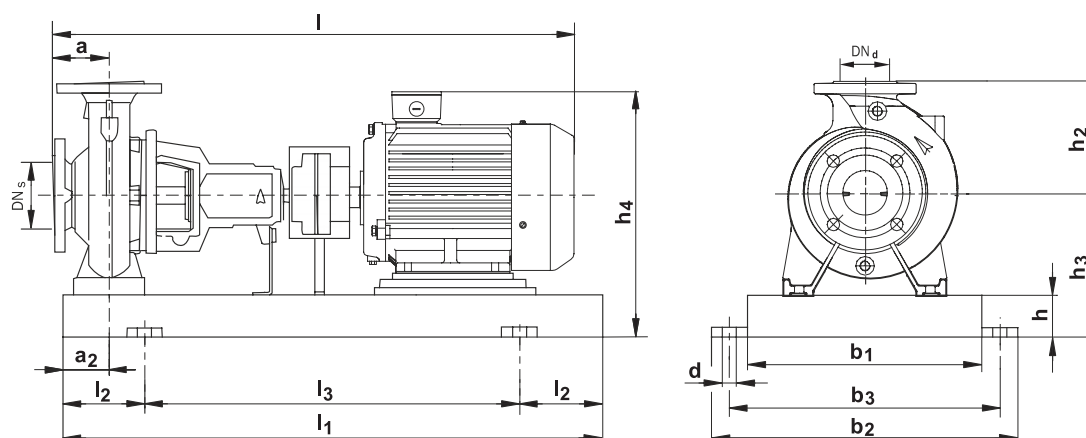
## PERFORMANCE CURVE

### SNK 80-315 (4 POLE)



## PERFORMANCE TABLE

### SNK 80-315 (4 POLE)



#### Recommended suction x delivery pipe size :

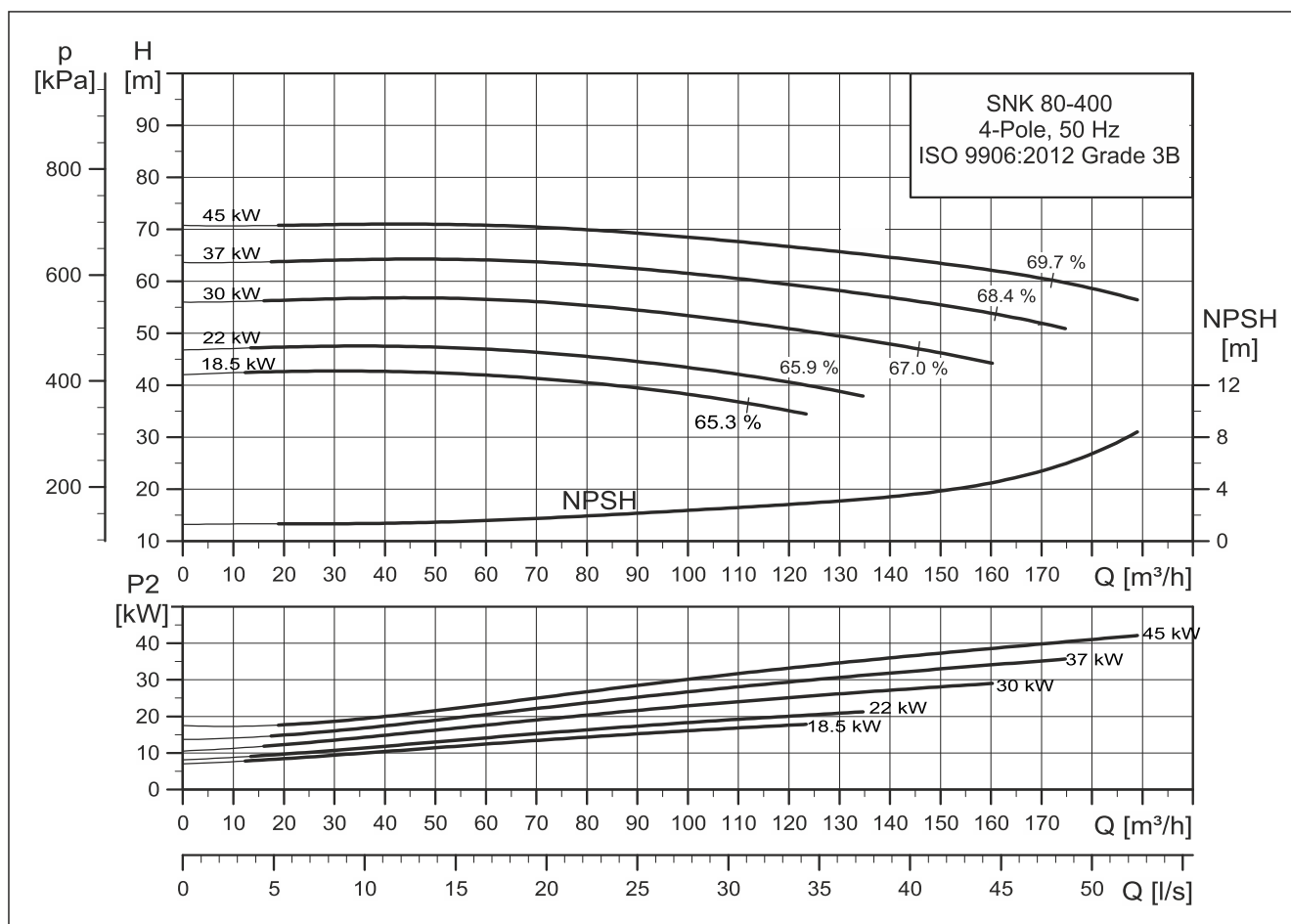
[kW / H.P.] 11.0/15.0	:	150 x 125 mm
[kW / H.P.] 15.0/20.0	:	150 x 125 mm
[kW / H.P.] 18.5/25.0	:	150 x 125 mm
[kW / H.P.] 22.0/30.0	:	150 x 125 mm

Pump Type		80-315/280	80-315/305	80-315/320	80-315/334
Motor frame		SMMG 160	SMMG 160	SMMG 180M	SMMG 180L
[kW/HP]		11.0/15.0	15.0/20.0	18.5/25.0	22.0/30.0
PN	[bar]	16	16	16	16
Dn <sub>d</sub>	[mm]	80	80	80	80
Dn <sub>s</sub>	[mm]	100	100	100	100
a	[mm]	125	125	125	125
a <sub>2</sub>	[mm]	90	90	90	90
h	[mm]	80	80	80	80
h <sub>2</sub>	[mm]	315	315	315	315
h <sub>3</sub>	[mm]	330	330	330	330
h <sub>4</sub>	[mm]	578	578	614	614
l	[mm]	1207	1251	1289	1289
l <sub>1</sub>	[mm]	1250	1250	1400	1400
l <sub>2</sub>	[mm]	205	205	230	230
l <sub>3</sub>	[mm]	840	840	940	940
b <sub>1</sub>	[mm]	430	430	480	480
b <sub>2</sub>	[mm]	540	540	610	610
b <sub>3</sub>	[mm]	490	490	550	550
d	[mm]	24	24	28	28
Weight	Net[Kg]	316	332	387	415



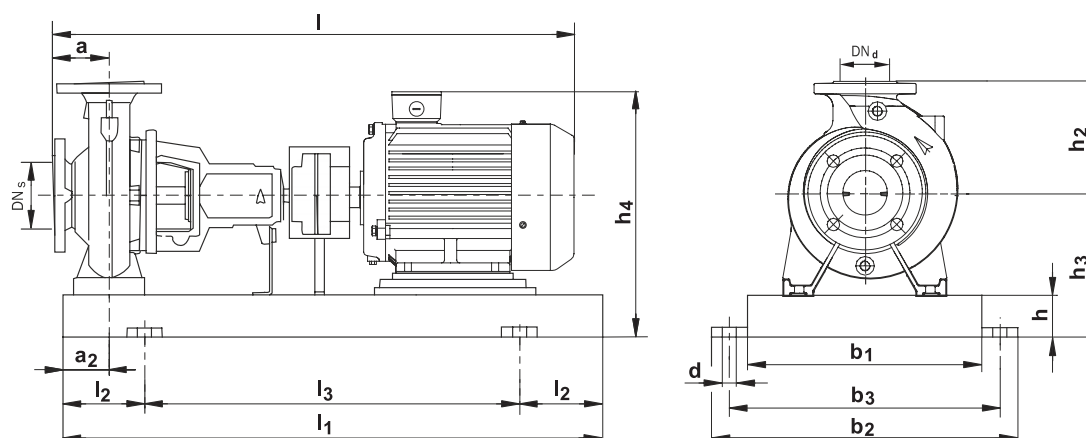
## PERFORMANCE CURVE

### SNK 80-400 (4 POLE)



## PERFORMANCE TABLE

### SNK 80-400 (4 POLE)



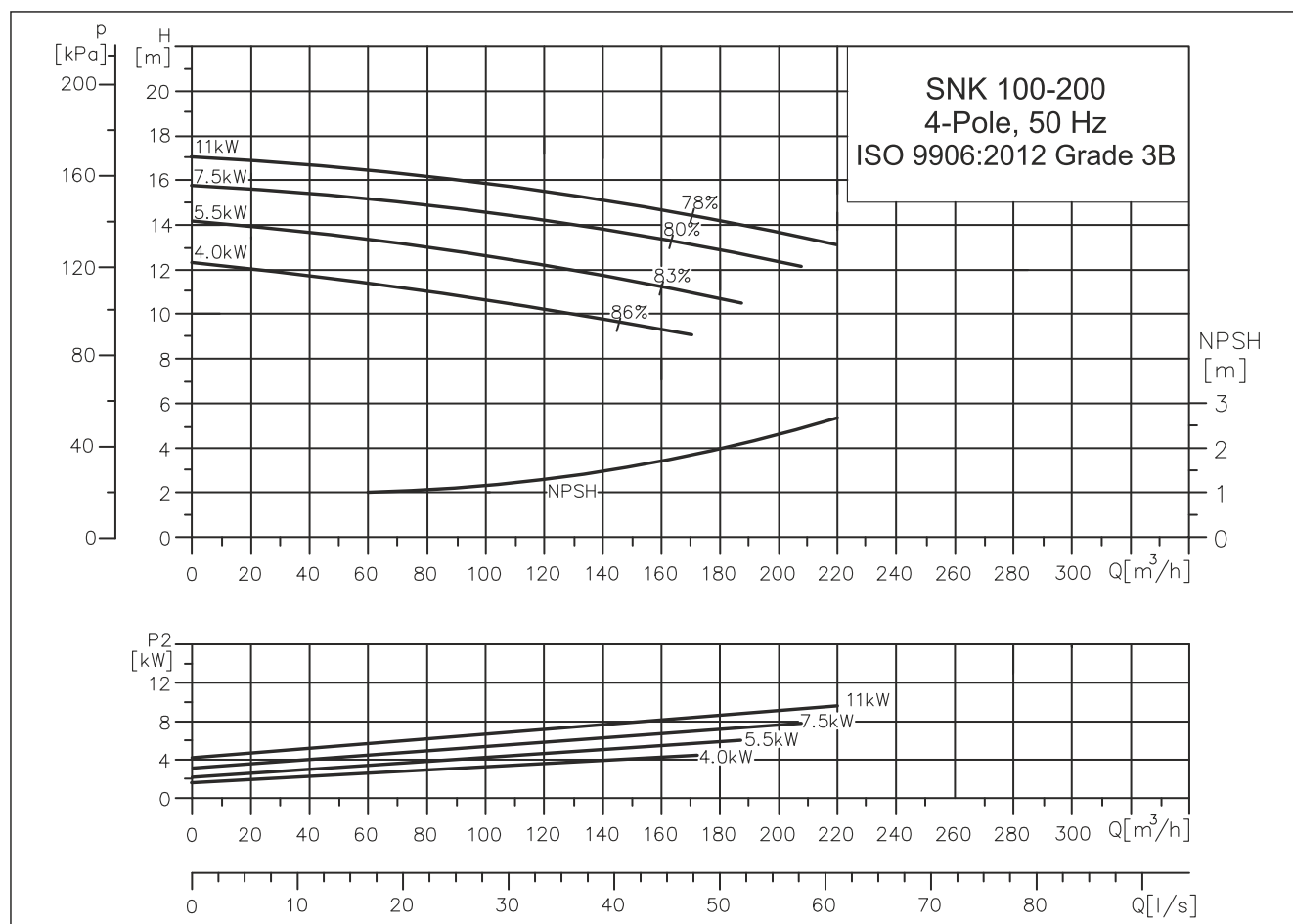
#### Recommended suction x delivery pipe size :

[kW / H.P.] 18.5/25.0	: 125 x 125 mm
[kW / H.P.] 22.0/30.0	: 125 x 125 mm
[kW / H.P.] 30.0/40.0	: 125 x 125 mm
[kW / H.P.] 37.0/50.0	: 125 x 125 mm
[kW / H.P.] 45.0/60.0	: 125 x 125 mm

Pump Type		80-400/347	80-400/365	80-400/397	80-400/419	80-400/438
Motor frame		SMMG 180M	SMMG 180L	SMMG 200	SMMG 200	SMMG 225
[kW/HP]		18.5/25.0	22.0/30.0	30.0/40.0	37.0/50.0	45.0/60.0
PN	[bar]	16	16	16	16	16
Dn <sub>d</sub>	[mm]	80	80	80	80	80
Dn <sub>s</sub>	[mm]	100	100	100	100	100
a	[mm]	125	125	125	125	125
a <sub>2</sub>	[mm]	90	90	90	90	90
h	[mm]	100	100	100	100	100
h <sub>2</sub>	[mm]	355	355	355	355	355
h <sub>3</sub>	[mm]	380	380	380	380	380
h <sub>4</sub>	[mm]	616	616	656	677	677
l	[mm]	1373	1373	1440	1515	1515
l <sub>1</sub>	[mm]	1400	1400	1400	1600	1600
l <sub>2</sub>	[mm]	230	230	230	270	270
l <sub>3</sub>	[mm]	940	940	940	1060	1060
b <sub>1</sub>	[mm]	480	480	480	530	530
b <sub>2</sub>	[mm]	610	610	610	660	660
b <sub>3</sub>	[mm]	550	550	550	600	600
d	[mm]	28	28	28	28	28
Weight	Net[Kg]	499	519	574	690	730

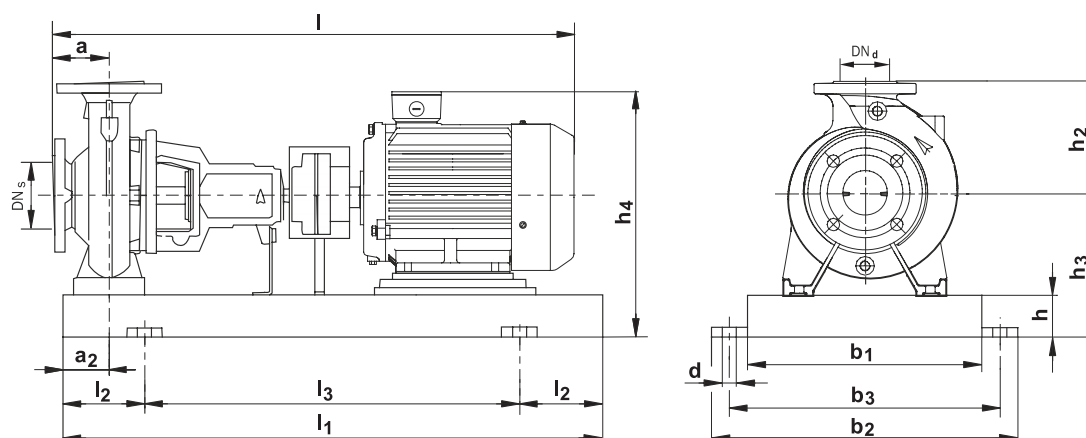
## PERFORMANCE TABLE

### SNK 100-200 (4 POLE)



## PERFORMANCE TABLE

### SNK 100-200 (4 POLE)



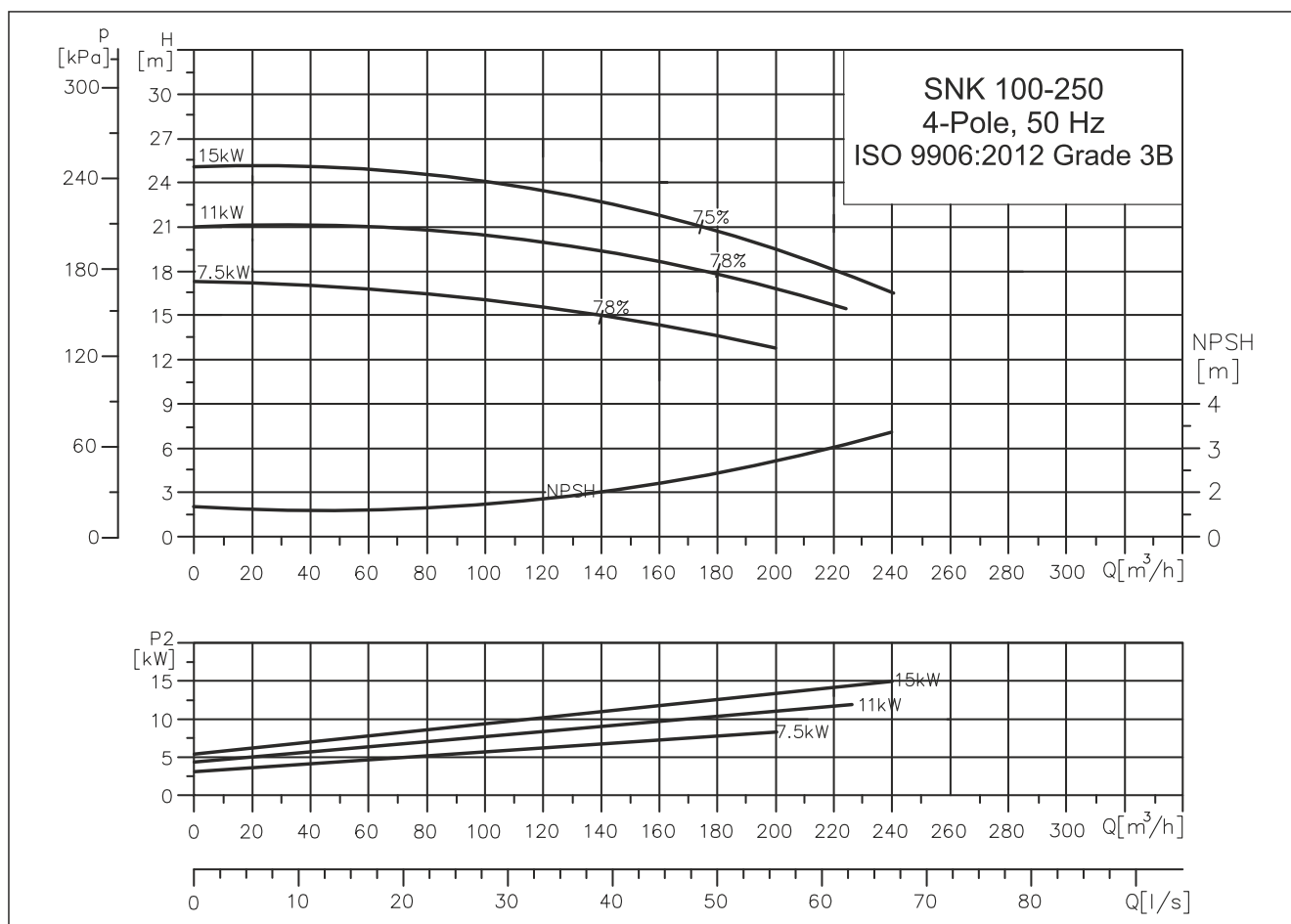
#### Recommended suction x delivery pipe size :

[kW / H.P.] 4.0/5.5	:	150 x 125 mm
[kW / H.P.] 5.5/7.5	:	150 x 125 mm
[kW / H.P.] 7.5/10.0	:	150 x 125 mm
[kW / H.P.] 11.0/15.0	:	150 x 125 mm

Pump Type		100-200/180	100-200/195	100-200/210	100-200/219
Motor frame		SMMG 112M	SMMG 132S	SMMG 132M	SMMG 160
[kW/HP]		4.0/5.5	5.5/7.5	7.5/10.0	11.0/15.0
PN	[bar]	16	16	16	16
DN <sub>d</sub>	[mm]	100	100	100	100
DN <sub>s</sub>	[mm]	125	125	125	125
a	[mm]	125	125	125	125
a <sub>2</sub>	[mm]	90	90	90	90
h	[mm]	80	80	80	80
h <sub>2</sub>	[mm]	280	280	280	280
h <sub>3</sub>	[mm]	282	282	282	280
h <sub>4</sub>	[mm]	416	416	482	496
l	[mm]	1031	1070	1062	1207
l <sub>1</sub>	[mm]	1120	1120	1120	1250
l <sub>2</sub>	[mm]	190	190	190	205
l <sub>3</sub>	[mm]	740	740	740	840
b <sub>1</sub>	[mm]	380	380	380	430
b <sub>2</sub>	[mm]	490	490	490	540
b <sub>3</sub>	[mm]	440	440	440	490
d	[mm]	24	24	24	24
Weight	Net[Kg]	168	175	217	277

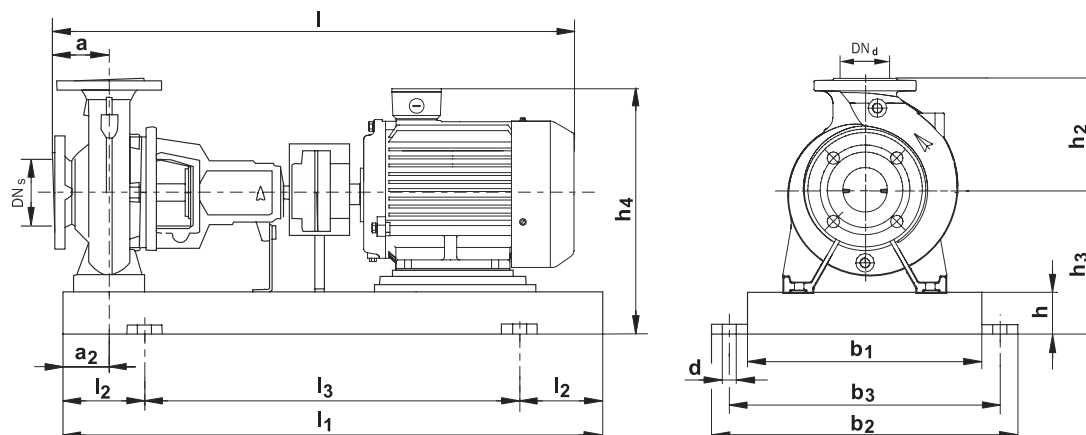
## PERFORMANCE TABLE

### SNK 100-250 (4 POLE)



## PERFORMANCE TABLE

### SNK 100-250 (4 POLE)



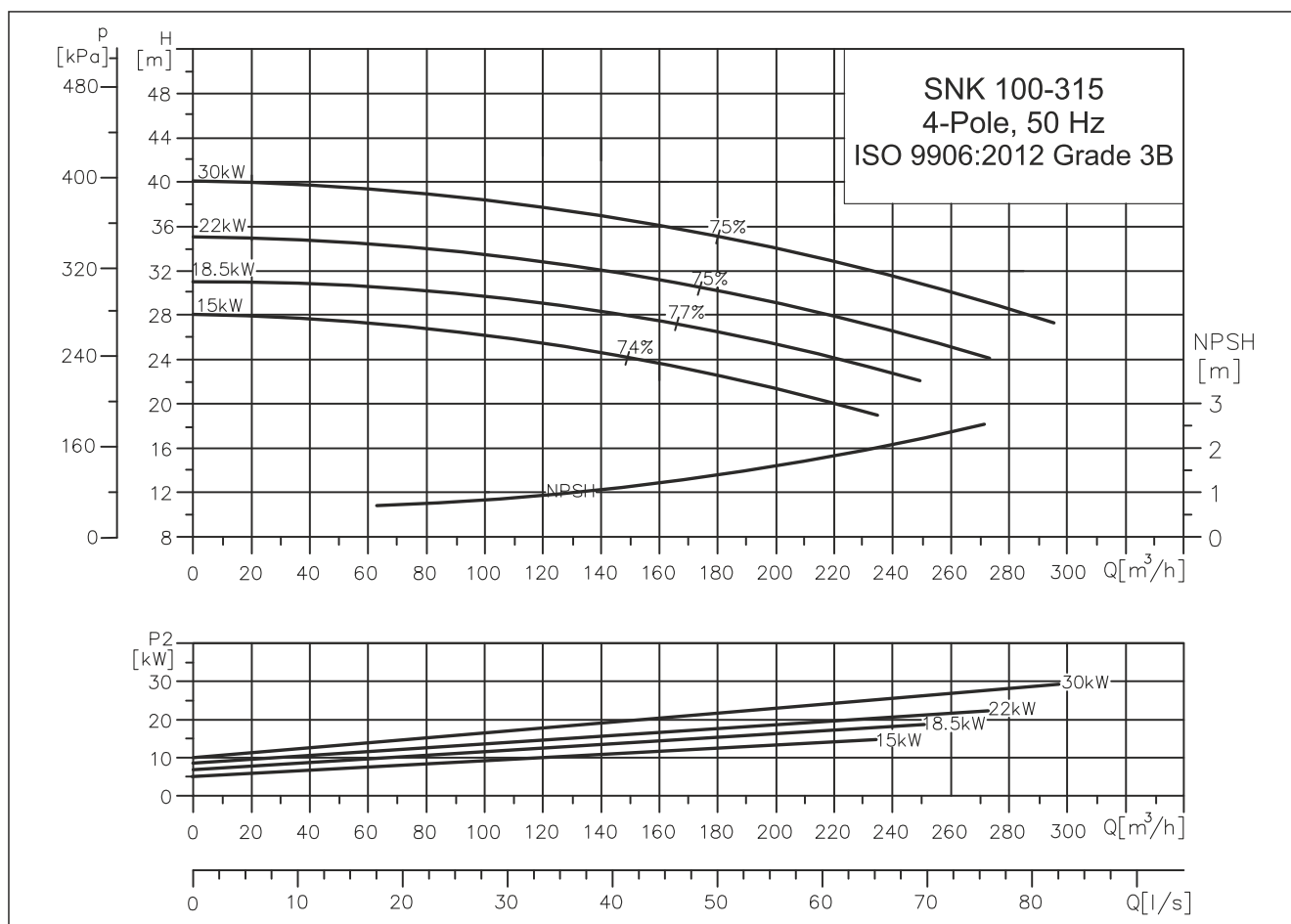
#### Recommended suction x delivery pipe size :

[kW / H.P.] 7.5/10.0	:	150 x 125 mm
[kW / H.P.] 11.0/15.0	:	150 x 125 mm
[kW / H.P.] 15.0/20.0	:	150 x 125 mm

Pump Type		100-250/216	100-250/245	100-250/274
Motor frame		SMMG 132M	SMMG 160	SMMG 160
[kW/HP]		7.5/10	11.0/15.0	15.0/20.0
PN	[bar]	16	16	16
Dn <sub>d</sub>	[mm]	100	100	100
Dn <sub>s</sub>	[mm]	125	125	125
a	[mm]	140	140	140
a <sub>2</sub>	[mm]	90	90	90
h	[mm]	80	80	80
h <sub>2</sub>	[mm]	280	280	280
h <sub>3</sub>	[mm]	305	310	310
h <sub>4</sub>	[mm]	505	558	558
l	[mm]	1077	1222	1266
l <sub>1</sub>	[mm]	1250	1250	1250
l <sub>2</sub>	[mm]	205	205	205
l <sub>3</sub>	[mm]	840	840	840
b <sub>1</sub>	[mm]	430	430	430
b <sub>2</sub>	[mm]	540	540	540
b <sub>3</sub>	[mm]	490	490	490
d	[mm]	24	24	24
Weight	Net[Kg]	247	295	311

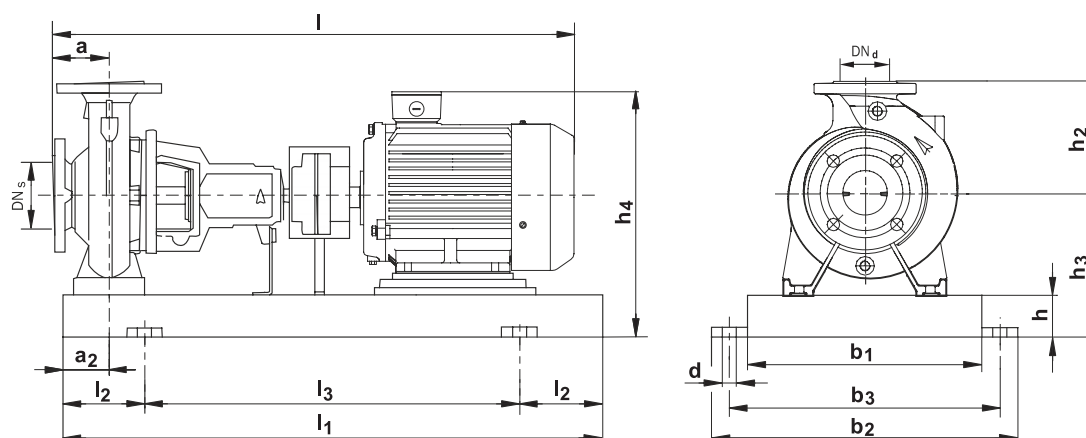
## PERFORMANCE TABLE

### SNK 100-315 (4 POLE)



## PERFORMANCE TABLE

### SNK 100-315 (4 POLE)



#### Recommended suction x delivery pipe size :

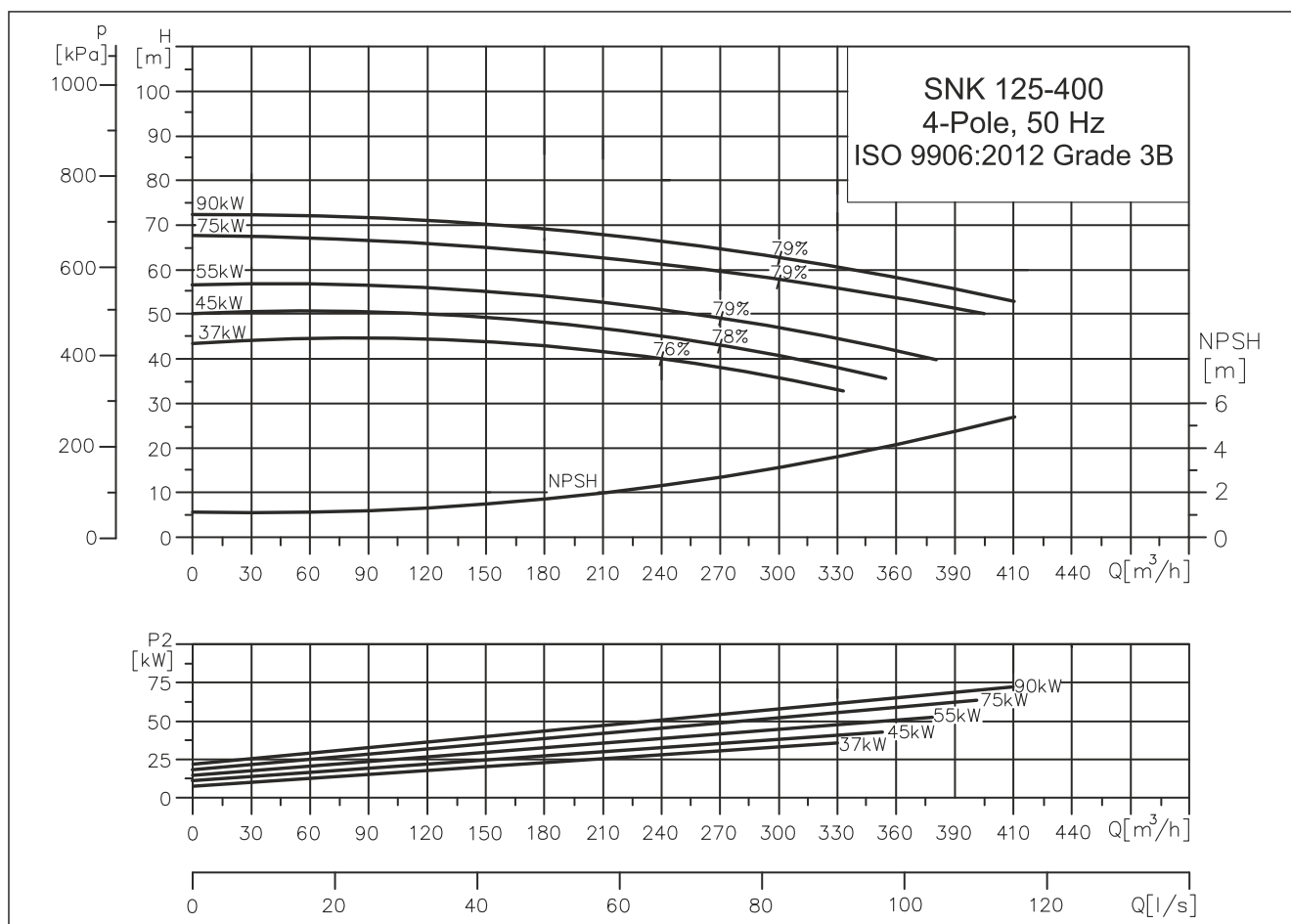
[kW / H.P.] 15.0/20.0	: 150 x 125 mm
[kW / H.P.] 18.5/25.0	: 150 x 125 mm
[kW / H.P.] 22.0/30.0	: 150 x 125 mm
[kW / H.P.] 30.0/40.0	: 150 x 125 mm

Pump Type	100-315/280	100-315/295	100-315/312	100-315/334
Motor frame	SMMG 160	SMMG 180M	SMMG 160	SMMG 200L
[kW/HP]	15.0/20.0	18.5/25.0	22.0/30.0	30.0/40.0
PN [bar]	16	16	16	16
DN <sub>d</sub> [mm]	100	100	100	100
DN <sub>s</sub> [mm]	125	125	125	125
a [mm]	140	140	140	140
a <sub>2</sub> [mm]	90	90	90	90
h [mm]	80	100	100	100
h <sub>2</sub> [mm]	315	315	315	315
h <sub>3</sub> [mm]	330	350	350	350
h <sub>4</sub> [mm]	578	614	586	647
l [mm]	1266	1304	1304	1371
l <sub>1</sub> [mm]	1250	1400	1400	1400
l <sub>2</sub> [mm]	205	230	230	230
l <sub>3</sub> [mm]	840	940	940	940
b <sub>1</sub> [mm]	430	480	480	480
b <sub>2</sub> [mm]	540	610	610	610
b <sub>3</sub> [mm]	490	550	550	550
d [mm]	24	28	28	28
Weight Net[Kg]	340	395	422	482



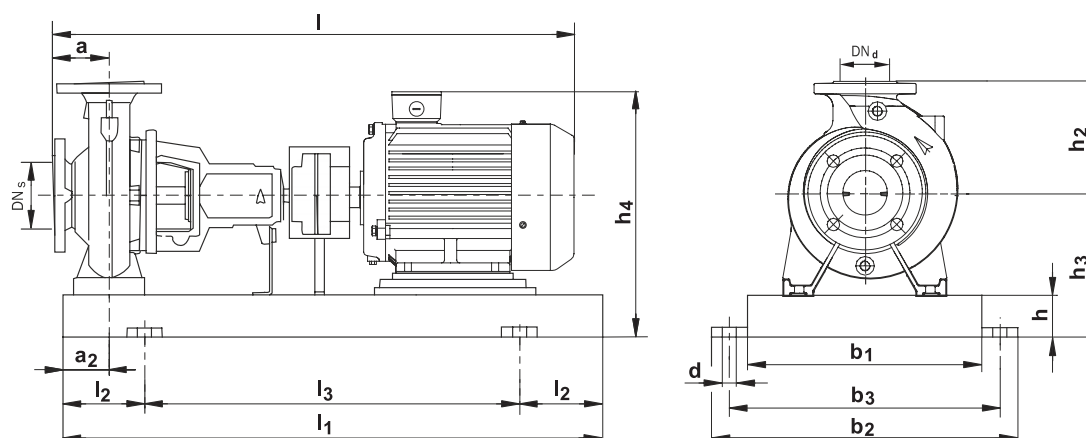
## PERFORMANCE TABLE

### SNK 125-400 (4 POLE)



## PERFORMANCE TABLE

### SNK 125-400 (4 POLE)



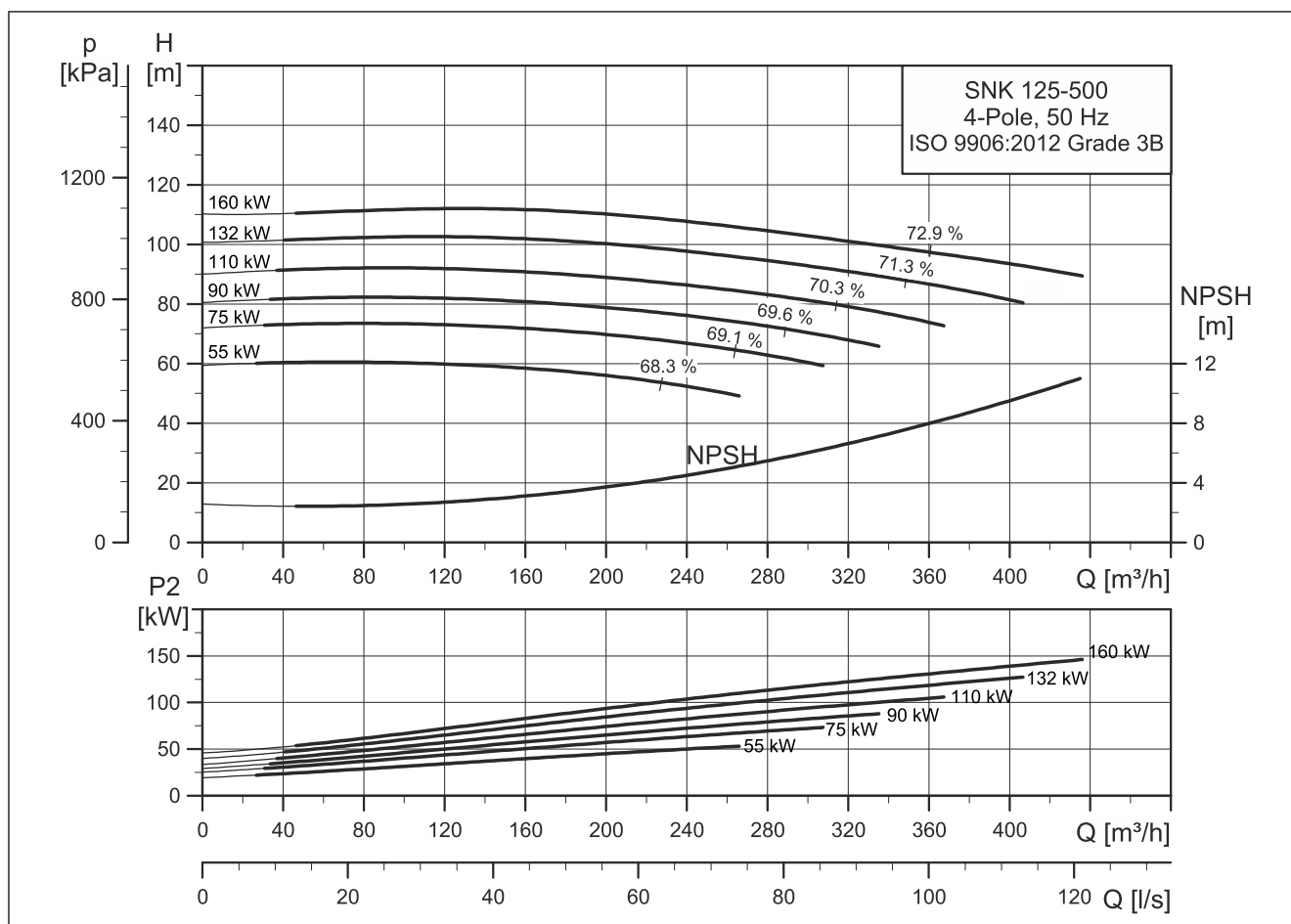
#### Recommended suction x delivery pipe size :

[kW / H.P.] 37.0/50.0	: 150 x 125 mm
[kW / H.P.] 45.0/60.0	: 150 x 125 mm
[kW / H.P.] 55.0/75.0	: 150 x 125 mm
[kW / H.P.] 75.0/100.0	: 150 x 125 mm
[kW / H.P.] 90.0/120.0	: 150 x 125 mm

Pump Type		125-400/345	125-400/368	125-400/392	125-400/434	125-400/438
Motor frame		SMMG 225S	SMMG 225M	SMMG 250M	SMMG 280S	SMMG 280M
[kW/HP]		37/50	45/60	55/75	75/100	90/120
PN	[bar]	16	16	16	16	16
DN <sub>d</sub>	[mm]	125	125	125	125	125
DN <sub>s</sub>	[mm]	150	150	150	150	150
a	[mm]	140	140	140	140	140
a <sub>2</sub>	[mm]	110	110	110	110	110
h	[mm]	100	100	100	100	100
h <sub>2</sub>	[mm]	400	400	400	400	400
h <sub>3</sub>	[mm]	415	415	415	415	415
h <sub>4</sub>	[mm]	735	735	774	801	801
l	[mm]	1486	1511	1584	1617	1617
l <sub>1</sub>	[mm]	1600	1600	1600	1800	1800
l <sub>2</sub>	[mm]	270	270	270	300	300
l <sub>3</sub>	[mm]	1060	1060	1060	1200	1200
b <sub>1</sub>	[mm]	530	530	530	600	600
b <sub>2</sub>	[mm]	660	660	660	730	730
b <sub>3</sub>	[mm]	600	600	600	670	670
d	[mm]	28	28	28	28	28
Weight	Net[Kg]	631	656	781	883	920

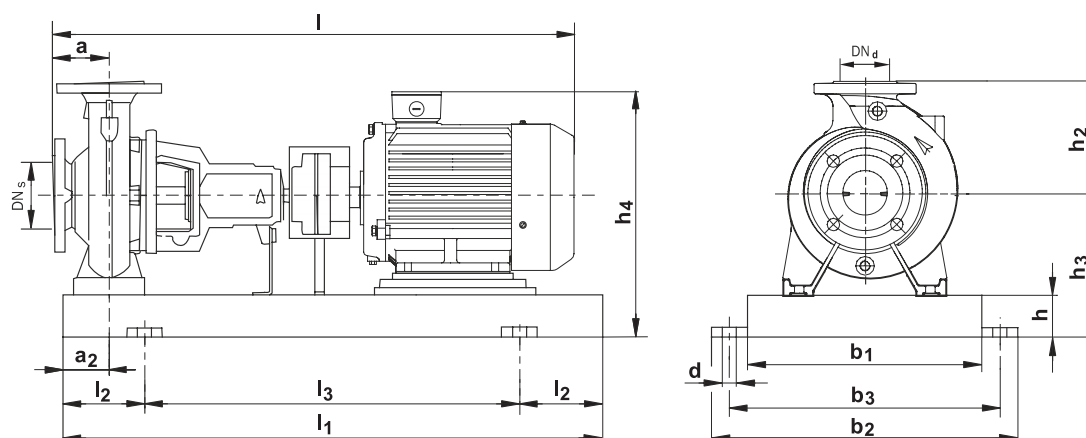
## PERFORMANCE TABLE

### SNK 125-500 (4 POLE)



## PERFORMANCE TABLE

### SNK 125-500 (4 POLE)



#### Recommended suction x delivery pipe size :

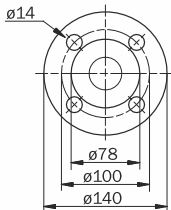
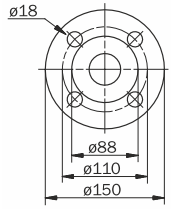
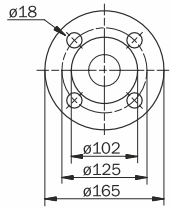
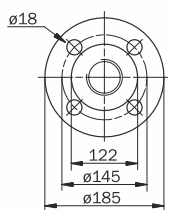
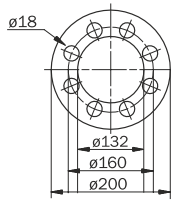
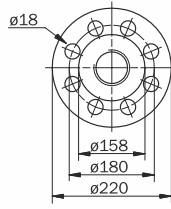
[kW / H.P.] 55.0/75.0 : 150 x 150 mm  
 [kW / H.P.] 75.0/100.0 : 150 x 150 mm  
 [kW / H.P.] 90.0/120.0 : 150 x 150 mm  
 [kW / H.P.] 110.0/135.0 : 150 x 150 mm  
 [kW / H.P.] 132.0/175.0 : 150 x 150 mm  
 [kW / H.P.] 160.0/215.0 : 150 x 150 mm

Pump Type	125-500/406	125-500/447	125-500/473	125-500/500	125-500/526	125-500/548
Motor frame	SMMG 250M	SMMG 280S	SMMG 280M	SMMG 315S	SMMG 315MA	SMMG 315MB
[kW/HP]	55.0/75.0	75.0/100.0	90.0/120.0	110.0/135.0	132.0/175.0	160.0/215.0
PN [bar]	16	16	16	16	16	16
DN <sub>d</sub> [mm]	150	150	150	150	150	150
DN <sub>s</sub> [mm]	125	125	125	125	125	125
a [mm]	180	180	180	180	180	180
a <sub>2</sub> [mm]	110	110	110	110	110	110
h [mm]	130	130	130	130	130	130
h <sub>2</sub> [mm]	500	500	500	500	500	500
h <sub>3</sub> [mm]	530	530	530	530	530	530
h <sub>4</sub> [mm]	922	962	962	1025	1025	1025
l [mm]	1811	1814	1924	1956	2116	2116
l <sub>1</sub> [mm]	2000	2000	2000	2000	2000	2000
l <sub>2</sub> [mm]	330	330	330	330	330	330
l <sub>3</sub> [mm]	1340	1340	1340	1340	1340	1340
b <sub>1</sub> [mm]	750	750	750	750	750	750
b <sub>2</sub> [mm]	890	890	890	890	890	890
b <sub>3</sub> [mm]	830	830	830	830	830	830
d [mm]	28	28	28	28	28	28
Weight Net[Kg]	1366	1477	1581	1715	1874	2010

## ACCESSORIES

### Counter flanges

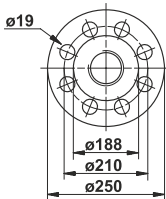
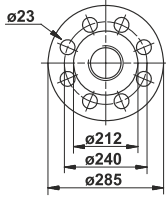
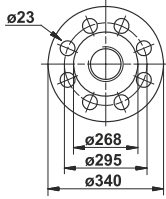
Counter flange kits consist of one steel flange, one gasket of asbestos-free material, and the requisite number of screws.

Counter flange	Flange s	Description	Rated pressure	Pipework connection
	DN 32	Threaded	16 bar, EN 1092-2	Rp 1¼
		For welding	16 bar, EN 1092-2	32 mm
	DN 40	Threaded	16 bar, EN 1092-2	Rp 1½
		For welding	16 bar, EN 1092-2	40 mm
	DN 50	Threaded	16 bar, EN 1092-2	Rp 2
	DN 65	Threaded	16 bar, EN 1092-2	Rp 2½
		For welding	16 bar, EN 1092-2	65 mm
	DN 80	Threaded	16 bar, EN 1092-2	Rp 3
		For welding	16 bar, EN 1092-2	80 mm
	DN 100	Threaded	16 bar, EN 1092-2	Rp 4
		For welding	16 bar, EN 1092-2	100 mm

## ACCESSORIES

### Counter flanges

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

Counter flange	Flange s	Description	Rated pressure	Pipework connection
	DN 125	For welding	16 bar, EN 1092-2	125 mm
	DN 150	For welding	16 bar, EN 1092-2	150 mm
	DN 200	For welding	10 bar, EN 1092-2	200 mm



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