STAIRS

SB,SBI,SBN 1,3,5,10,15,20,32,45,64,90,120,150 series

Vertical Multistage Centrifugal In-line Pumps

50Hz

STAIRS INDUSTRIAL CO., LTD.

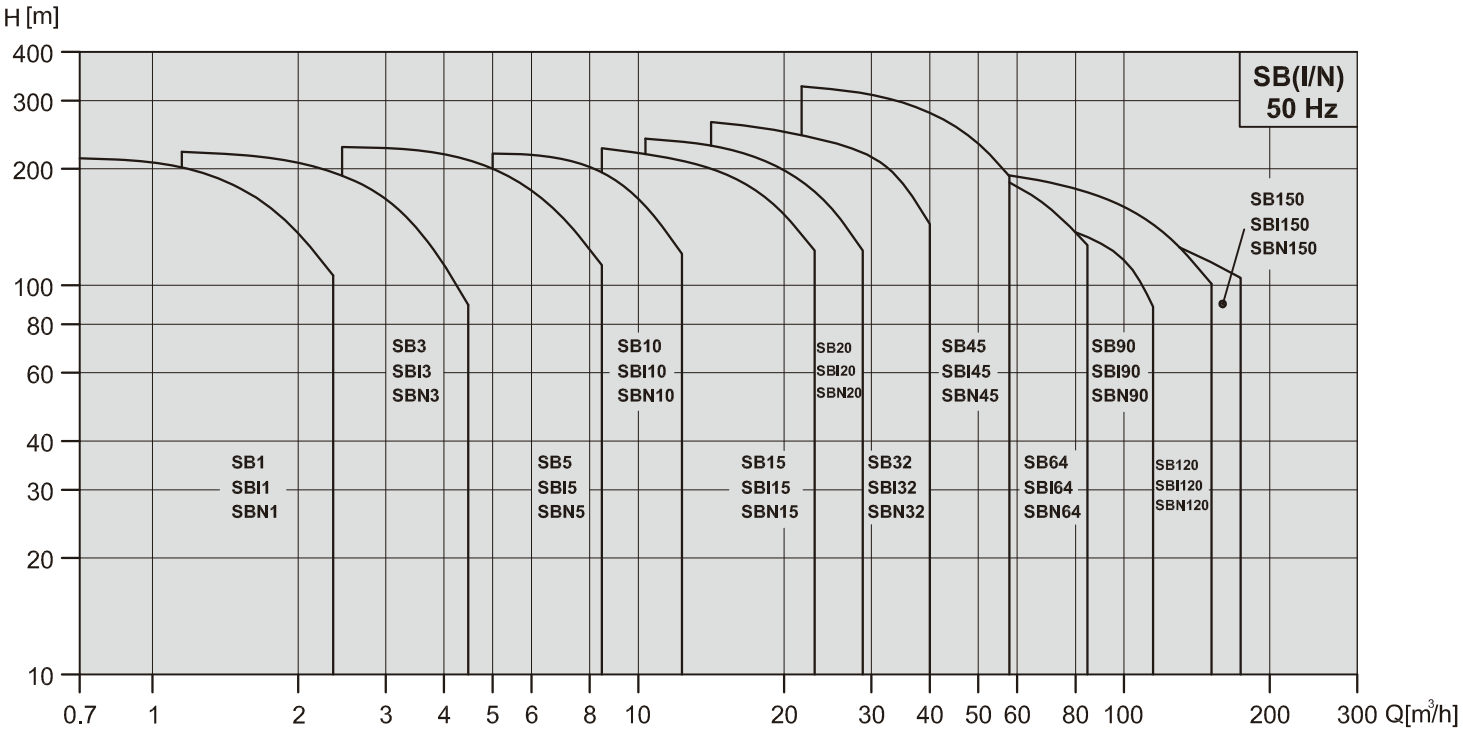
Contents

Vertical Multistage Centrifugal In-line Pumps

STAIRS

STAIRS

SB, SBI, SBN Series
Performance range 50 Hz



Product data

Vertical Multistage Centrifugal In-line Pumps

STAIRS

Range	SB, SBI, SBN					
	1	3	5	10	15	20
50Hz						
Nominal flow 〔m^3/h〕	1.8	3	5.7	10	17	21
Flow range 〔m^3/h〕	0.7-2.4	1.2-4.5	2.5-8.5	5-13	8.5-23.5	10.5-29
Max. pressure 〔bar〕	21.5	23	24	21.5	23	24.3
Fluid temperature 〔°C〕	-15 to +120					
Motor power 〔kW〕	0.37-2.2	0.37-3	0.37-5.5	0.37-7.5	1.1-15	1.1-18.5
Version						
SB: Cast iron and stainless steel EN 1.4301/AISI 304	●	●	●	●	●	●
SBI: Stainless steel EN 1.4301/AISI 304	●	●	●	●	●	●
SBN: Stainless steel EN 1.4401/AISI 316	●	●	●	●	●	●
Motor						
Mains connection 1~〔V/Hz〕 (Permissible voltage tolerance ± 10%)	0.37-2.2 kW 220-240 V					
Mains connection 3~〔V/Hz〕 (Permissible voltage tolerance ± 10%)	0.37-2.2 kW 220-240 V / 380-415 V 3 - 22 kW 220-240 V / 380-415 V 3 - 22 kW 380-415 V / 660-720 V					
Insulation class	F					
Enclosure class	IP 55					
Ambient temperature	50° C					
SB, SBI, SBN Pipe Connection						
Flange	DN 25 / DN 32	DN 25 / DN 32	DN 25 / DN 32	DN 40	DN 50	DN 50
Oval Flange	RP 1"	RP 1"	RP 1 ¼"	RP 1 ½ "	RP 2 "	RP 2 "
SBI, SBN Pipe Connection						
Victaulic-connections	R $1^1/_4$	R $1^1/_4$	R $1^1/_4$	R 2	R 2	R 2
Mechanical Seals						
SiC/SiC	Standard					
Seals						
EPDM	Standard					
Viton						

* Flange standards : Refer to dimensional drawings

50Hz

Range	SB, SBI, SBN					
	32	45	64	90	120	150
50Hz						
Nominal flow 〔m^3/h〕	30	45	64	90	120	150
Flow range 〔m^3/h〕	15-40	22-58	30-85	45-120	60-160	75-180
Max. pressure 〔bar〕	27.5	33	21.8	20	20.4	18.7
Fluid temperature 〔°C〕	-15 to +120					
Motor power 〔kW〕	1.5-30	3-45	4-45	5.5-45	11-75	11-75
Version						
SB: Cast iron and stainless steel EN 1.4301/AISI 304	●	●	●	●	●	●
SBI: Stainless steel EN 1.4301/AISI 304	●	●	●	●	●	●
SBN: Stainless steel EN 1.4401/AISI 316	●	●	●	●	●	●
Motor						
Mains connection 1~〔V/Hz〕 (Permissible voltage tolerance ± 10%)	0.37-2.2 kW 220-240 V					
Mains connection 3~〔V/Hz〕 (Permissible voltage tolerance ± 10%)	0.37-2.2 kW 220-240 V / 380-415 V 3 - 22 kW 220-240 V / 380-415 V 3 - 22 kW 380-415 V / 660-720 V 30 - 75 kW 380-415 V / 660-720 V					
Insulation class	F					
Enclosure class	IP 55					
Ambient temperature	50 °C					
SB, SBI, SBN Pipe Connection						
Flange	DN 65	DN 80	DN100	DN100	DN125	DN125
SBI, SBN Pipe Connection						
Victaulic-connections	N/A	N/A	N/A	N/A	N/A	N/A
Mechanical Seals						
SiC/SiC	Standard					
Seals						
EPDM	Standard				0.37kW-45kW	
Viton					55kW-75kW	

* Flange standards : Refer to dimensional drawings

STAIRS

Pump

The SB, SBI and SBN pumps are non-self priming vertical multistage pump of in-line design, flange or with Victaulic coupling with equally sized suction and discharge ports. Stage construction with stainless steel impellers, chambers and pressure casing. Pump stub shaft and motor shaft of the IEC-standards motor are directly close coupled. All pumps are equipped with a cartridge type mechanical seal for easy maintenance.

SB, SBI and SBN pumps have different pump sizes and various numbers of stages to provide the flow and the pressure required.

Applications

WATER SUPPLY AND PRESSURE BOOSTING

Pressure boosting in buildings, hotels, residential complexes
Pressure booster stations, supply of water networks
Pressure boosting for industrial water supply

IRRIGATION AND AGRICULTURE

Greenhouses
Sprinkler irrigation
Field irrigation (flooding)

LIGHT INDUSTRY

Washing and cleaning systems
Car washing facilities
Fire fighting systems
Process water systems
Machine tools (cooling lubricants)

WATER TREATMENT

Water softeners and de-mineralization
Reverse Osmosis systems
Distillation systems
Filtration
Ultra-filtration systems

HEATING, VENTILATION AND AIR-CONDITIONING

Boilers
Induction heating
Heat exchangers
Refrigerators
Cooling towers and systems
Temperature control systems

Identification Code

SB - 10 - 5 - 1 - S QQ E

- Shaftseal
  - S= Cartridge Type
  - Q= Silicon carbide
  - U= Tungsten carbide
  - B= Carbon
  - E= EPDM
  - V= Viton
- Number of small impeller
- Number of stages
- Flow rate in m^3/h
- Type range (SB / SBI / SBN)

Pump nameplate information

Type	①				
Model	②				
f	③	Hz	P2	④	kW
n	⑤	min^{-1}	H_{max}	⑥	m
Q	⑦	m^3/h	H	⑧	m
p_{max}/t_{max}	⑨		bar/°C		⑩
Serial No.	⑪				

CE

① Pump Type - Seal Type
② Pump Model
③ Frequency
④ Rated Power
⑤ Speed
⑥ Maximum Head
⑦ Capacity
⑧ Head Range
⑨ Max. Operating Pressure / Max. temperature
⑩ Rotating Direction
⑪ Serial number

Motor nameplate information

STAIRS

① INDUCTION MOTOR CE

TYPE	②		FR. ③	POLES 2	IEC 60034
OUTPUT	④ HP	kW	RATING CONT.	INS. ⑤	IP ⑥
⑦ Hz	Δ ⑧	V	⑨ A	E.F.F.% ⑩	
	Y	V	A	rpm ⑪	
BEARINGS	⑫			WEIGHT	kg
SER.NO.	⑬			DATE	

① Phase
② Motor Model
③ Frame
④ Rated Power
⑤ Insulation
⑥ International Protection
⑦ Frequency
⑧ Voltage
⑨ Ampere
⑩ Efficiency
⑪ Revolutions Per Minute
⑫ Bearing type
⑬ Serial number

Mechanical Seal

Standard Cartridge type mechanical seal made of Silicon Carbide/Silicon Carbide/EPDM or Viton. Based on the type of application, alternative materials are available for the seal and the elastomers. The cartridge type mechanical seal can be replaced in minutes without special tools and without dismantling the pump.

List of Materials

Q : Silicon carbide	E : EPDM
U : Tungsten carbide	V : Viton
B : Carbon	

Type of Seal

Seal Type	SB/SBI/SBN		
	1/3/5/10/15/20 /32/45/64/90	120/150	
		0.5-60HP	75-100HP
Mechanical Seals			
S: O-ring seal Cartridge type	●	●	
B: Rubber bellows seal Cartridge type			●
QQ	●	●	●
UU	Optional	Optional	
QB	Optional	Optional	
UB	Optional	Optional	
Seals			
E	●	●	●
V	Optional	Optional	Optional

Minimum inlet pressure - NPSHA

Calculation of the inlet pressure "H" is recommended in these situations:

- The liquid temperature is high.
- The flow is significantly higher than the rated flow.
- Water is drawn from depths.
- Water is drawn through long pipes.
- Inlet conditions are poor.

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

$H = P_b - NPSHR - H_f - H_v - H_s$

P_b = Barometric pressure in feet absolute. (Barometric pressure can be set to 33.9 feet. At sea level. In closed systems, pb indicates system pressure in feet.)

NPSHR = Net Positive Suction Head Required in feet. (To be read from the NPSHR curve at the highest flow the pump will be delivering).

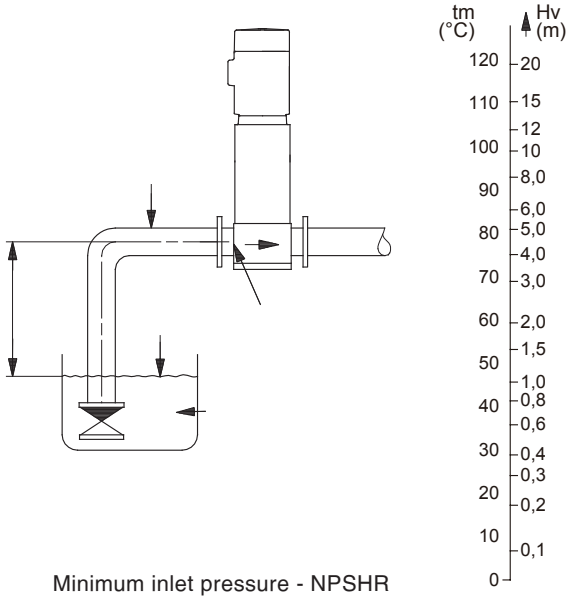
H_f = Friction loss in suction pipe in feet. (At the highest flow the pump will be delivering.)

H_v = Vapor pressure in feet. (To be read from the vapor pressure scale. "H_v" depends on the liquid temperature "T_m").

H_s = Safety margin = minimum 2.0 feet.

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

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



Minimum inlet pressure - NPSHR

Note: In order to avoid cavitation **never**, select a pump whose duty point lies too far to the right on the NPSHR curve.

Always check the NPSHR value of the pump at the highest possible flow.

Motor

- Squirrel cage in short circuit, aluminum casing up to 22 kW, totally enclosed, fan-cooled, 2-pole standard motor.
- Electrical data
  - ◎ Enclosure class: IP55
  - ◎ Insulation class: F
- The motors have efficiency values that fall within the range normally referred to as high efficiency.
- Ambient temperature: Max. +50°C

Motor Data 50Hz

Motor Type					Nominal current in [A]				
Pole	HP	kW	Flange	Frame	1Ø	3Ø		3Ø	
					220-240V	△220-240V	Y 380-415V	△380-415V	Y 660-720V
2	0.5	0.37	B14	71A	2.5 - 2.5	1.7 - 1.9	1.0 - 1.1	-----	-----
	0.75	0.55		71B	4.0 - 3.5	2.6 - 2.9	1.5 - 1.7	-----	-----
	1.0	0.75		80A	5.1 - 4.1	3.4 - 3.4	2.0 - 2.0	-----	-----
	1.5	1.1		80B	8.0 - 6.9	4.8 - 5.0	2.8 - 2.9	-----	-----
	2.0	1.5		90S	9.5 - 8.9	6.2 - 6.6	3.6 - 3.8	-----	-----
	3.0	2.2		90L	13.4 - 12.7	8.8 - 9.4	5.1 - 5.4	-----	-----
	4.0	3.0		100L	-----	11.8 - 12.3	6.8 - 7.1	6.8 - 6.9	3.9 - 4.0
	5.5	4.0		112M	-----	15.1 - 15.2	8.7 - 8.8	8.7 - 8.3	5.0 - 4.8
	7.5	5.5	B5	132S	-----	18.7 - 18.0	10.8 - 10.4	10.9 - 10.8	6.3 - 6.2
	10	7.5		132S	-----	25.5 - 24.9	14.7 - 14.4	14.9 - 14.8	8.6 - 8.5
	15	11		160M	-----	38.8 - 39.1	22.4 - 22.6	22.9 - 23.8	13.2 - 13.7
	20	15		160M	-----	49.3 - 46.5	28.5 - 26.9	24.9 - 29.0	16.9 - 16.7
	25	18.5		160L	-----	60.2 - 55.4	34.8 - 32.0	35.2 - 33.5	20.3 - 19.3
	30	22		180M	-----	71.3 - 67.5	41.2 - 39.0	41.3 - 39.6	23.8 - 22.8
	40	30		200L	-----	-----	-----	55.4 - 50.7	31.9 - 29.2
	50	37		200L	-----	-----	-----	67.7 - 62.0	39.0 - 35.7
	60	45		225M	-----	-----	-----	82.3 - 75.4	47.4 - 43.4
	75	55		250M	-----	-----	-----	101 - 92.5	58.2 - 53.3
	100	75		280S	-----	-----	-----	134 - 123	77.2 - 70.7

Maximum inlet pressure

The following table shows the maximum permissible inlet pressure. However, the current inlet pressure + the pressure against a closed valve must always be lower than the maximum permissible operating pressure.
If the maximum permissible operating pressure is exceeded, the bearing in the motor may be damaged and the life of the shaft seal reduced.

＊Rule to follow：The inlet pressure+ the pressure against a closed valve < Max. Operating pressure.

50Hz

Pump type	Flange & PJE				Oval Flange		
	Stages	Max. Operating Pressure	Stages	Max. Inlet Pressures	Stages	Max. Operating Pressure	Max. Inlet Pressures
SB(I/N) 1	2 - 36	25 bar	2 - 36	10 bar	2 - 23	16 bar	10 bar
SB(I/N) 3	2 - 36	25 bar	2 - 29	10 bar	2 - 23	16 bar	10 bar
			31 - 36	15 bar	-	-	-
SB(I/N) 5	2 - 36	25 bar	2 - 16	10 bar	2 - 22	16 bar	10 bar
			18 - 36	15 bar	-	-	-
SB(I/N) 10	1 - 16	16 bar	1 - 6	8 bar	1 - 16	16 bar	8 bar
	17 - 22	25 bar	7 - 22	10 bar	-	-	-
SB(I/N) 15	1 - 10	16 bar	1 - 3	8 bar	1 - 7	10 bar	8 bar
	12 - 17	25 bar	4 - 17	10 bar	-	-	-
SB(I/N) 20	1 - 10	16 bar	1 - 3	8 bar	1 - 7	10 bar	8 bar
	12 - 17	25 bar	4 - 17	10 bar	-	-	-
SB(I/N) 32	(1-1) - 7	16 bar	(1-1) - 4	4 bar			
	(8-2) - 14	30 bar	(5-2) - 10	10 bar			
			(11-2) - 14	15 bar			
SB(I/N) 45	(1-1) - 5	16 bar	(1-1) - 2	4 bar			
	(6-2) - 11	30 bar	(3-2) - 5	10 bar			
	(12-2) - (13-2)	33 bar	(6-2) - (13-2)	15 bar			
SB(I/N) 64	(1-1) - 5	16 bar	(1-1) - (2-2)	4 bar			
	(6-2) - (8-1)	30 bar	(2-1) - (4-2)	10 bar			
			(4-1) - (8-1)	15 bar			
SB(I/N) 90	(1-1) - 4	16 bar	(1-1) - 1	4 bar			
	(5-2) - 6	30 bar	(2-1) - (3-2)	10 bar			
			3 - 6	15 bar			
SB(I/N) 120	1 - 7	30 bar	1 - (2-1)	10 bar			
			2 - (5-1)	15 bar			
			(6-1) - 7	20 bar			
SB(I/N) 150	(1-1) - 6	30 bar	(1-1) - 1	10 bar			
			(2-1) - (4-2)	15 bar			
			(5-2) - 6	20 bar			

Example of operating and inlet pressures

The values for operating and inlet pressures shown in the tables must not be considered individually but must always be compared, see the following examples:

Example 1:

The following pump type has been selected: SB 3-29
Max. operating pressure: 25 bar
Max. inlet pressure: 10 bar
Discharge pressure against a closed valve: 18.6 bar , (see p.18)
This pump is not allowed to start at an inlet pressure of 10 bar , but at an inlet pressure of 25 bar - 18.6 bar = 6.4 bar.

Example 2:

The following pump type has been selected:SB 10-2
Maximum operating pressure: 16 bar.
Maximum inlet pressure: 8 bar.
Discharge pressure against a closed valve: 2 bar. (See p.26)
This pump is allowed to start at an inlet pressure of 8 bar, as the discharge pressure against a closed valve is only 2 bar, which results in an operating pressure of 8 bar + 2 bar = 10 bar.
On the contrary, the maximum operating pressure of this pump is limited to 16 bar as a higher operating pressure will require an inlet pressure of more than 8 bar.

STAIRS

Pumped Liquids

SB (I, N) pumps can handle a wide variety of liquids, each with its own characteristic.

SB(I)

Non-corrosive liquids

For fluid transfer, circulation and pressure boosting of cold or hot clean water.

SBN

Industrial liquids

Light acids

The fluids covered in the list are not complete. Data on the application limits of different pump materials when handling any of the listed fluids are considered to be the best choices. However, the table is intended as a general guide only, and cannot replace actual testing of the pumped fluids and pump materials under specific working conditions.

When choosing the pump version, sufficient attention should be given to the flow medium, such as density, solidification point, viscosity as well as ex-protection requirement. The limits of applicability of the pumps, based on pressure and temperature must also be considered.

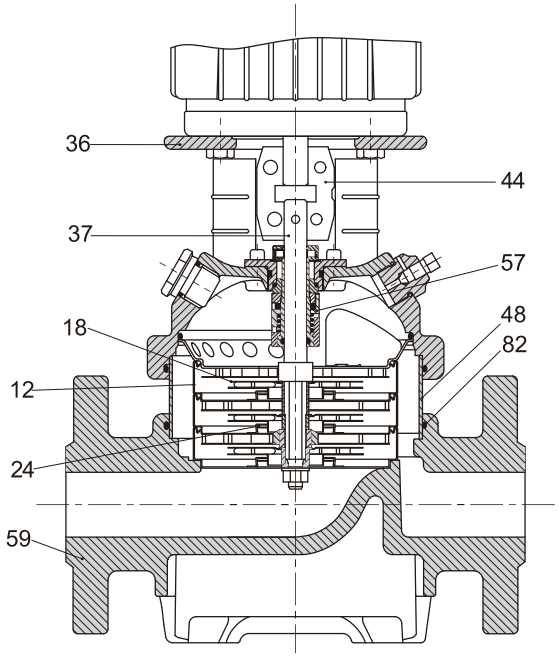
● Recommended

Pumped fluid	"Fluid Concentration, temperature"	SB (I)		SBN	
		EPDM	Viton	EPDM	Viton
Acetic acid anhydride	25°C			●	
Alkaline cleaner		●			
Aluminium sulphate	10%, 25°C				●
Ammonia water (A. hydroxide)	20%, 40°C	●			
Ammonia hydrogen carbonate	10%, 40°C	●		●	
Benzoic acid	10%, 90°C				●
Boric acid	Unsaturated solution, 60°C				●
Butanol	60°C	●			
Calcium acetate	30%, 50°C	●			
Calcium hydroxide	Saturated solution, 50°C	●			
Chromic acid	1%, 20°C				●
Condensate	90°C	●			
Copper sulphate	Unsaturated solution, 60°C				●
Deionic (fully desalinated water)	50°C			●	
Ethanol	100%, 20°C	●			
Ehylene glycol/Diethylene glycol	40%, 70°C	●	●	●	●
Fixer	25°C				●
Formic acid	5%, 20°C			●	

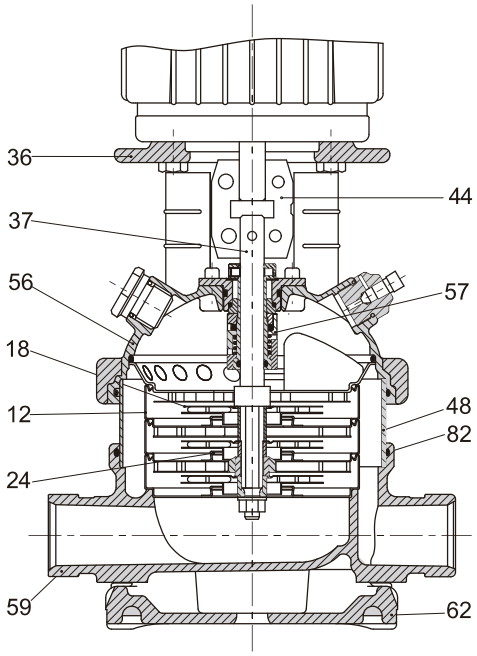
STAIRS

Pumped fluid	"Fluid Concentration, temperature"	SB (I)		SBN	
		EPDM	Viton	EPDM	Viton
Fruit juice	50°C				●
Glycerine	50%, 50°C	●			
Heating oil (Light)		●			●
Hydraulic oil	100%, 100°C		●		
Isopropanol		●			
Lactic acid	10%, 20°C				●
Linoleic acid	100%, 20°C	●			
Linseed oil	60°C		●		
Liqueur	60°C				●
Maize oil	80°C		●		
Maleic acid	50%, 50°C				●
Methanol	100%, 20°C	●			
Motor oil	100%, 80°C	●			
Oil-water-mixture	100°C		●		
Oxalic acid	1%, 20°C			●	
Peanut oil	100%, 80°C		●		
Phosphoric acid	20%, 20°C			●	
Polyglycols	90°C		●		●
Polyethylene glycols	40%, 70°C	●			
Potassium carbonate	10%, 60°C	●			
Potassium hydrogen carbonate	10%, 60°C	●			
Potassium permanganate	5%, 20°C			●	
Potassium sulphate	Unsaturated solution, 80°C			●	
Rapeseed oil	100%, 80°C		●		
Silicone oil	100%		●		
Sodium carbonate	10%, 60°C			●	
Sodium hydroxide	25%, 50°C			●	
Sodium nitrate	Unsaturated solution, 80°C			●	
Sodium phosphate	5%, 100°C			●	
Sodium sulphate	10%, 60°C			●	
Sulphuric acid	5%, 25°C				●
Water					
Swimming pool water	35°C	● SBI		●	
Deionic	50°C			●	
Distilled water	50°C			●	
Decarbonated water				●	
Soft water				●	
Heating water				●	
Boiler water				●	
Pure water				●	
Rinsing water		● SBI		●	

SB-1,3,5,10,15,20



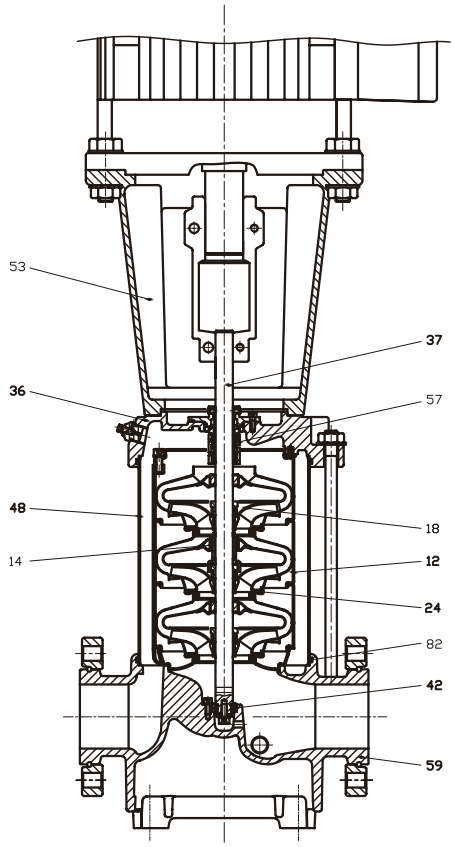
SBI(N)-1,3,5,10,15,20



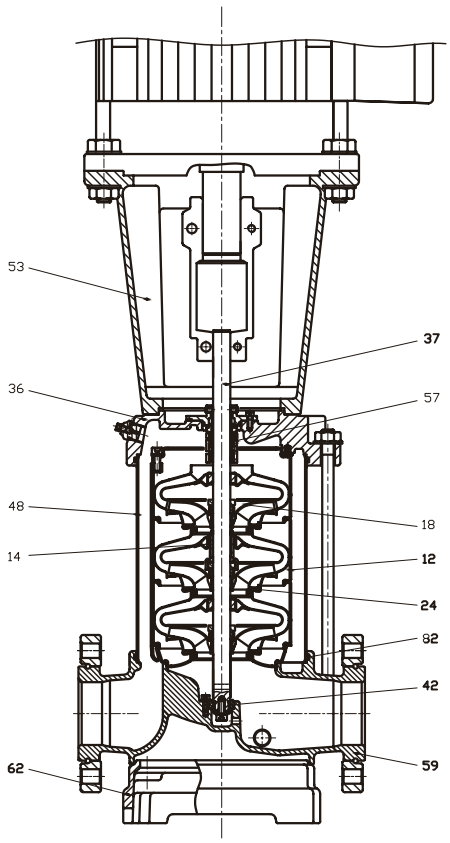
CONSTRUCTION

Pos.	Name	Material	SB 1,3,5,10,15,20		SBI 1,3,5,10,15,20		SBN 1,3,5,10,15,20	
			Standard		Standard		Standard	
			Europe	USA	Europe	USA	Europe	USA
36	Pump head	Cast Iron	EN-GJL-200	ASTM 25B	EN-GJS-450-10	ASTM 65-45-12	EN-GJS-450-10	ASTM 65-45-12
56	Pump head cover	Stainless steel	N/A		1.4301	AISI 304	1.4401	AISI 316
18	Impeller	Stainless steel	1.4301	AISI 304	1.4301	AISI 304	1.4401	AISI 316
37	Shaft	Stainless steel	1.4057	AISI 431	1.4057	AISI 431	1.4401	AISI 316
48	Outer Sleeve	Stainless steel	1.4301	AISI 304	1.4301	AISI 304	1.4401	AISI 316
82	O-ring for outer sleeve	EPDM						
12	Chamber	Stainless steel	1.4301	AISI 304	1.4301	AISI 304	1.4401	AISI 316
24	Neck ring	PTFE						
59	Base	Cast Iron	EN-GJL-200	ASTM 25B	N/A			
	Base	Stainless steel	N/A		1.4301	AISI 304	1.4401	AISI 316
62	Base plate	Cast Iron	N/A		EN-GJL-200	ASTM 25B	EN-GJL-200	ASTM 25B
44	Coupling	Fe-Cu-C	SINT C11	MPIF FC0525	SINT C11	MPIF FC0525	SINT C11	MPIF FC0525
57	Mechanical seal	Cartridge type						

SB-32,45,64,90



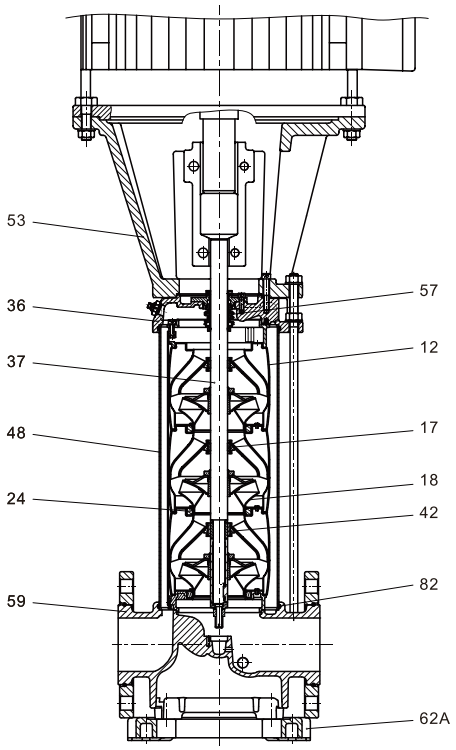
SBI(N)-32,45,64,90



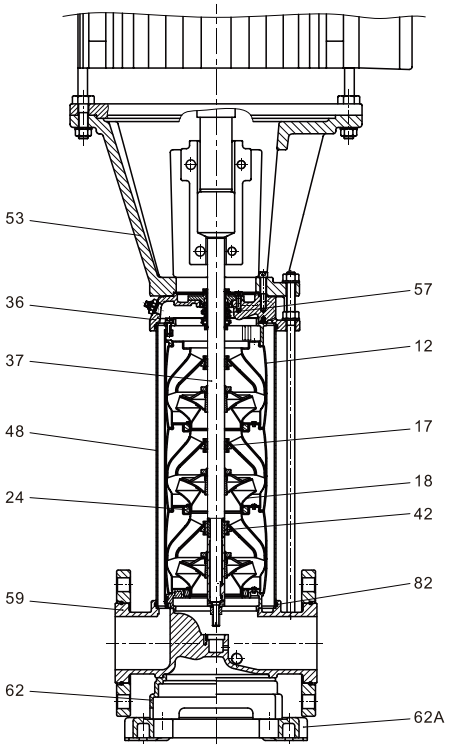
CONSTRUCTION

Pos.	Name	Material	SB 32, 45, 64, 90		SBI 32, 45, 64, 90		SBN 32, 45, 64, 90	
			Standard		Standard		Standard	
			Europe	USA	Europe	USA	Europe	USA
36	Pump head	Cast Iron	EN-GJL-250	ASTM 35B				
		Stainless steel			1.4301	AISI 304	1.4401	AISI 316
53	Motor Bracket	Cast Iron	EN-GJL-250	ASTM 35B	EN-GJL-250	ASTM 35B	EN-GJL-250	ASTM 35B
18	Impeller	Stainless steel	1.4301	AISI 304	1.4301	AISI 304	1.4401	AISI 316
37	Shaft	Stainless steel	1.4057	AISI 431	1.4057	AISI 431	1.4401	AISI 316
48	Outer Sleeve	Stainless steel	1.4301	AISI 304	1.4301	AISI 304	1.4401	AISI 316
82	O-ring for outer sleeve	EPDM						
12	Chamber	Stainless steel	1.4301	AISI 304	1.4301	AISI 304	1.4401	AISI 316
24	Neck ring	Carbon Fiber + POB + PTFE						
59	Base	Cast Iron	EN-GJL-250	ASTM 35B	N/A			
	Base	Stainless steel	N/A		1.4301	AISI 304	1.4401	AISI 316
62	Base plate	Cast Iron	N/A		EN-GJL-250	ASTM 35B	EN-GJL-250	ASTM 35B
57	Mechanical seal	Cartridge type						
14	Bearing ring		Bronze				POB+Graphite+PTFE	
42	Bottom bearing ring	Tungsten carbide/ Tungsten carbide						

SB-120,150



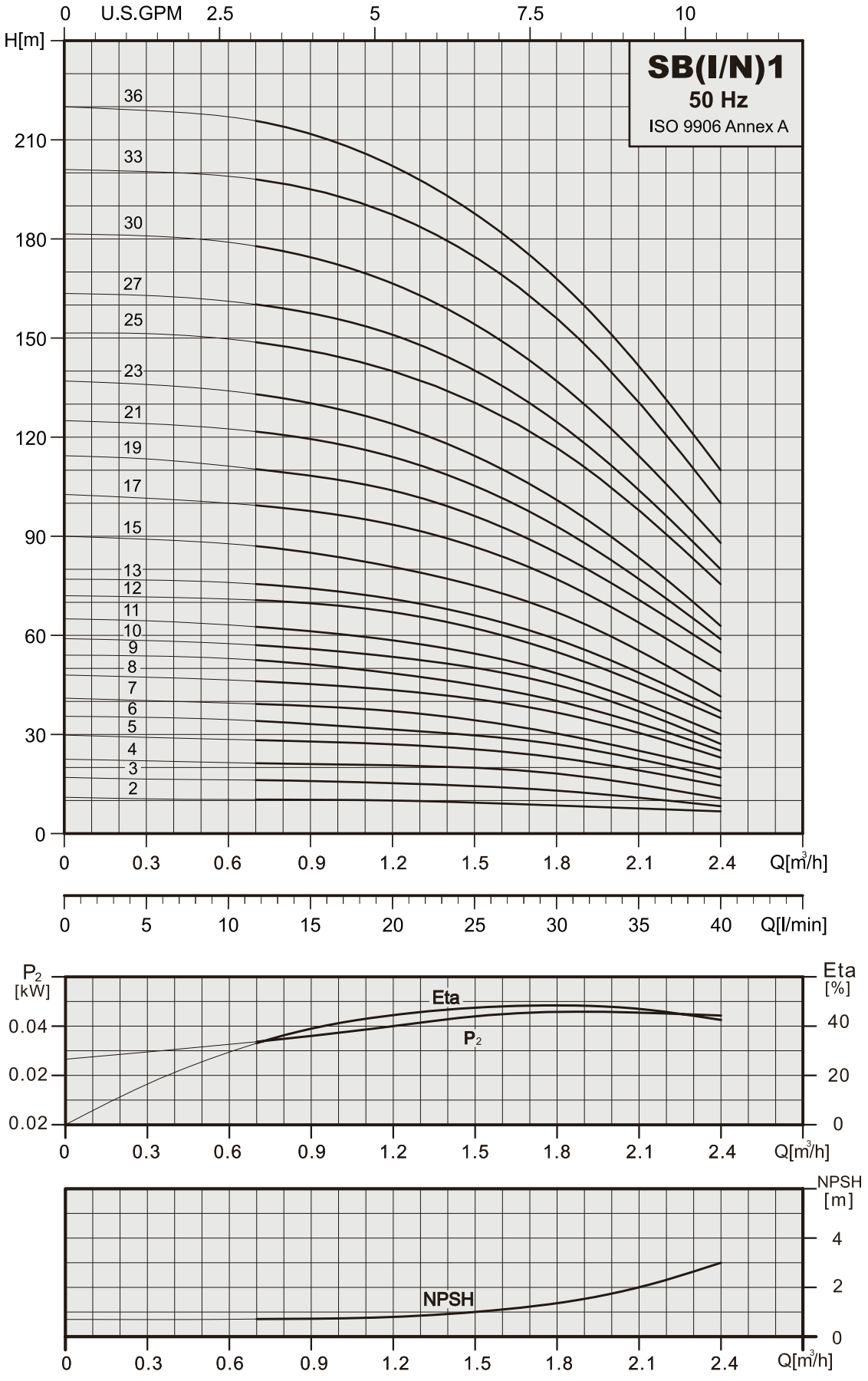
SBI/N-120,150



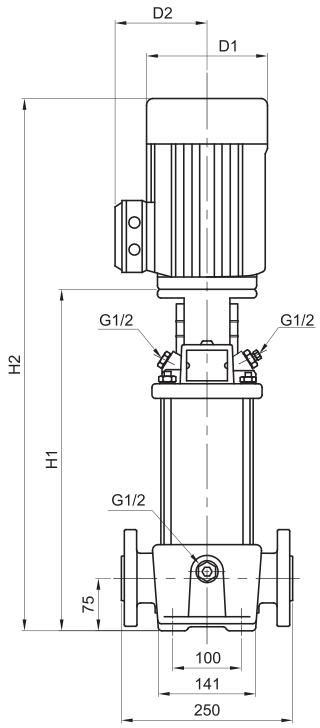
CONSTRUCTION

Pos.	Name	Material	SB 120, 150		SBI 120, 150		SBN 120, 150	
			Standard		Standard		Standard	
			Europe	USA	Europe	USA	Europe	USA
36	Pump head	Cast Iron	EN-GJL-250	ASTM 35B	N/A			
		Stainless steel	N/A		1.4301	AISI 304	1.4401	AISI 316
53	Motor bracket (15HP~60HP)	Cast Iron	EN-GJL-250	ASTM 35B	EN-GJL-250	ASTM 35B	EN-GJL-250	ASTM 35B
	Motor bracket (75HP~100HP)	Cast Iron	EN-GJS-450-10	ASTM 65-45-12	EN-GJS-450-10	ASTM 65-45-12	EN-GJS-450-10	ASTM 65-45-12
17	bearing ring	PTFE						
18	Impeller	Stainless steel	1.4301	AISI 304	1.4301	AISI 304	1.4401	AISI 316
37	Shaft	Stainless steel	1.4057	AISI 431	1.4057	AISI 431	1.4401	AISI 316
48	Outer sleeve	Stainless steel	1.4301	AISI 304	1.4301	AISI 304	1.4401	AISI 316
82	O-ring for outer sleeve	EPDM						
12	Chamber	Stainless steel	1.4301	AISI 304	1.4301	AISI 304	1.4401	AISI 316
24	Neck ring	PTFE						
59	Base	Cast Iron	EN-GJL-250	ASTM 35B	N/A			
		Stainless steel	N/A		1.4301	AISI 304	1.4401	AISI 316
62	Base plate	Cast Iron	N/A		EN-GJS-450-10	ASTM 65-45-12	EN-GJS-450-10	ASTM 65-45-12
62A	Base plate	Cast Iron	EN-GJS-450-10	ASTM 65-45-12	EN-GJS-450-10	ASTM 65-45-12	EN-GJS-450-10	ASTM 65-45-12
57	Mechanical seal	Cartridge type						
42	Bottom bearing ring	SiC / SiC						

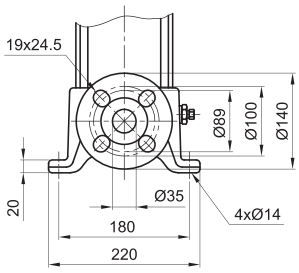
SB, SBI, SBN 1


SB(I/N)1
50 Hz
ISO 9906 Annex A
0 U.S.GPM 2.5 5 7.5 10
H[m]
36
33
30
27
25
23
21
19
17
15
13
12
11
10
9
8
7
6
5
4
3
2
210
180
150
120
90
60
30
0
0 0.3 0.6 0.9 1.2 1.5 1.8 2.1 2.4 Q[m³/h]
0 5 10 15 20 25 30 35 40 Q[l/min]
P2 [kW]
0.04
0.02
0.02
Eta
P2
Eta [%]
40
20
0
0 0.3 0.6 0.9 1.2 1.5 1.8 2.1 2.4 Q[m³/h]
NPSH
NPSH [m]
4
2
0
0 0.3 0.6 0.9 1.2 1.5 1.8 2.1 2.4 Q[m³/h]

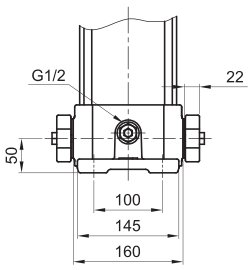
SB 1

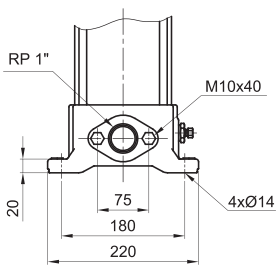


Flange(DIN) PN 25 / DN25/32
Flange(ANSI) Class300 / 1"/1¼"
Flange(JIS) 20K / 25A/32A



Oval
Stages 1-2 ~ 1-23



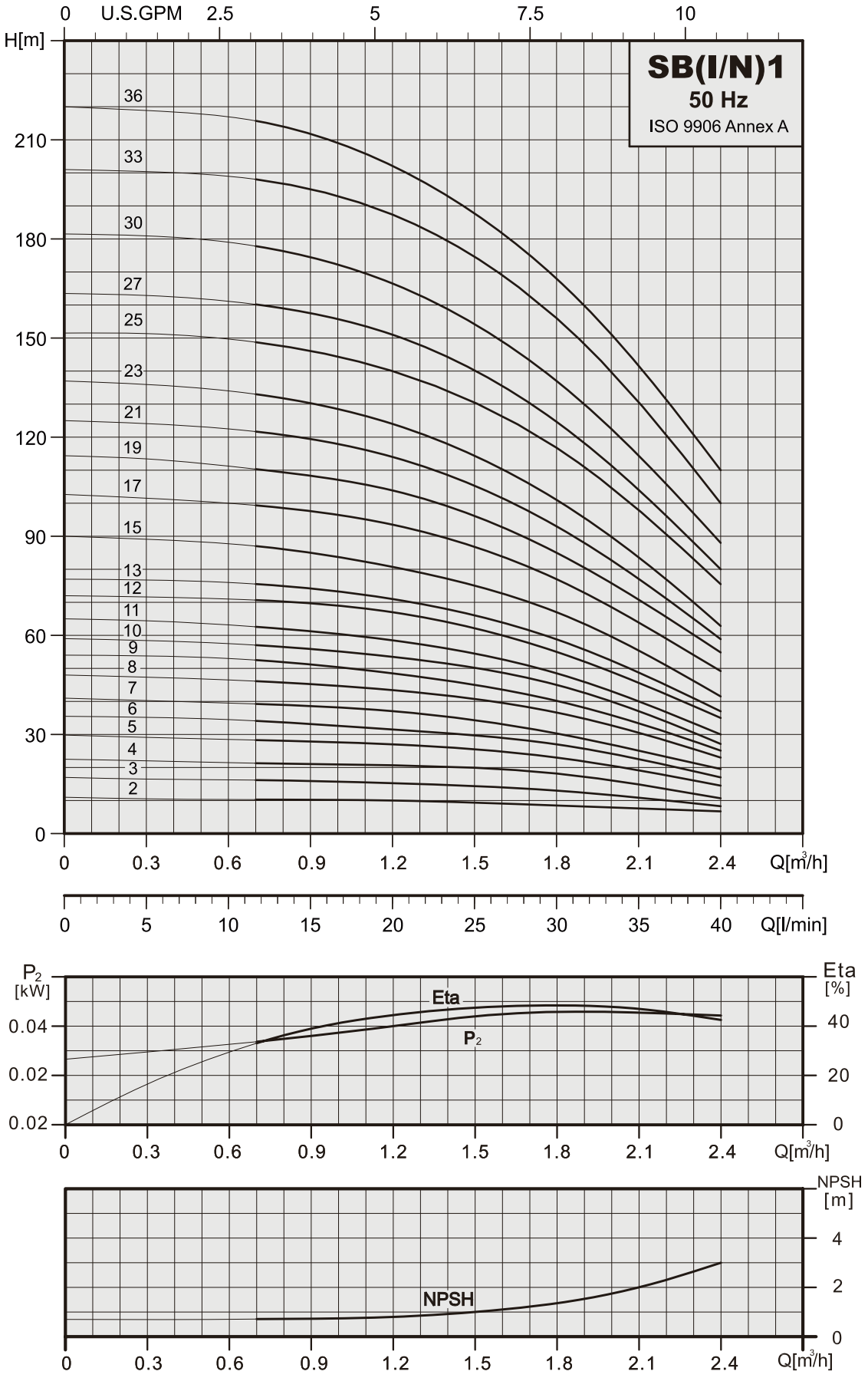


SB 1

50Hz	Motor		Nominal current [A]			Dimension[mm]						Net weight [kg]	
	P2		1ø	3ø		DIN flange		OVAL		D1	D2	DIN flange	OVAL
Pump type	[kW]	[HP]	220-240V	△220-240V	Y380-415V	H1	H2	H1	H2				
SB1-2	0.37	0.5	2.5 - 2.5	1.7 - 1.9	1.0 - 1.1	279	474	254	449	141	115	23.4	19.3
SB1-3	0.37	0.5	2.5 - 2.5	1.7 - 1.9	1.0 - 1.1	279	474	254	449	141	115	23.4	19.3
SB1-4	0.37	0.5	2.5 - 2.5	1.7 - 1.9	1.0 - 1.1	297	492	272	467	141	115	23.8	19.7
SB1-5	0.37	0.5	2.5 - 2.5	1.7 - 1.9	1.0 - 1.1	315	510	290	485	141	115	24.2	20.1
SB1-6	0.37	0.5	2.5 - 2.5	1.7 - 1.9	1.0 - 1.1	333	528	308	503	141	115	24.5	20.4
SB1-7	0.37	0.5	2.5 - 2.5	1.7 - 1.9	1.0 - 1.1	351	546	326	521	141	115	24.9	20.8
SB1-8	0.55	0.75	4.0 - 3.5	2.6 - 2.9	1.5 - 1.7	369	564	344	539	141	115	25.8	21.7
SB1-9	0.55	0.75	4.0 - 3.5	2.6 - 2.9	1.5 - 1.7	387	582	362	557	141	115	26.1	22.0
SB1-10	0.55	0.75	4.0 - 3.5	2.6 - 2.9	1.5 - 1.7	405	600	380	575	141	115	26.5	22.4
SB1-11	0.55	0.75	4.0 - 3.5	2.6 - 2.9	1.5 - 1.7	423	618	398	593	141	115	26.9	22.8
SB1-12	0.75	1.0	5.1 - 4.1	3.4 - 3.4	2.0 - 2.0	447	682	422	657	141	115	29.4	25.3
SB1-13	0.75	1.0	5.1 - 4.1	3.4 - 3.4	2.0 - 2.0	465	700	440	675	141	115	29.8	25.7
SB1-15	0.75	1.0	5.1 - 4.1	3.4 - 3.4	2.0 - 2.0	501	736	476	711	141	115	30.5	26.4
SB1-17	1.1	1.5	8.0 - 6.9	4.8 - 5.0	2.8 - 2.9	537	826	512	801	177	141	37.9	33.8
SB1-19	1.1	1.5	8.0 - 6.9	4.8 - 5.0	2.8 - 2.9	573	862	548	837	177	141	38.7	34.6
SB1-21	1.1	1.5	8.0 - 6.9	4.8 - 5.0	2.8 - 2.9	609	898	584	873	177	141	39.4	35.3
SB1-23	1.1	1.5	8.0 - 6.9	4.8 - 5.0	2.8 - 2.9	645	934	620	909	177	141	40.2	36.1
SB1-25	1.5	2.0	9.5 - 8.9	6.2 - 6.6	3.6 - 3.8	697	992	—	—	177	141	45.0	—
SB1-27	1.5	2.0	9.5 - 8.9	6.2 - 6.6	3.6 - 3.8	733	1028	—	—	177	141	45.8	—
SB1-30	1.5	2.0	9.5 - 8.9	6.2 - 6.6	3.6 - 3.8	787	1082	—	—	177	141	46.9	—
SB1-33	2.2	3.0	13.4 - 12.7	8.8 - 9.4	5.1 - 5.4	841	1136	—	—	177	141	49.9	—
SB1-36	2.2	3.0	13.4 - 12.7	8.8 - 9.4	5.1 - 5.4	895	1190	—	—	177	141	51.0	—

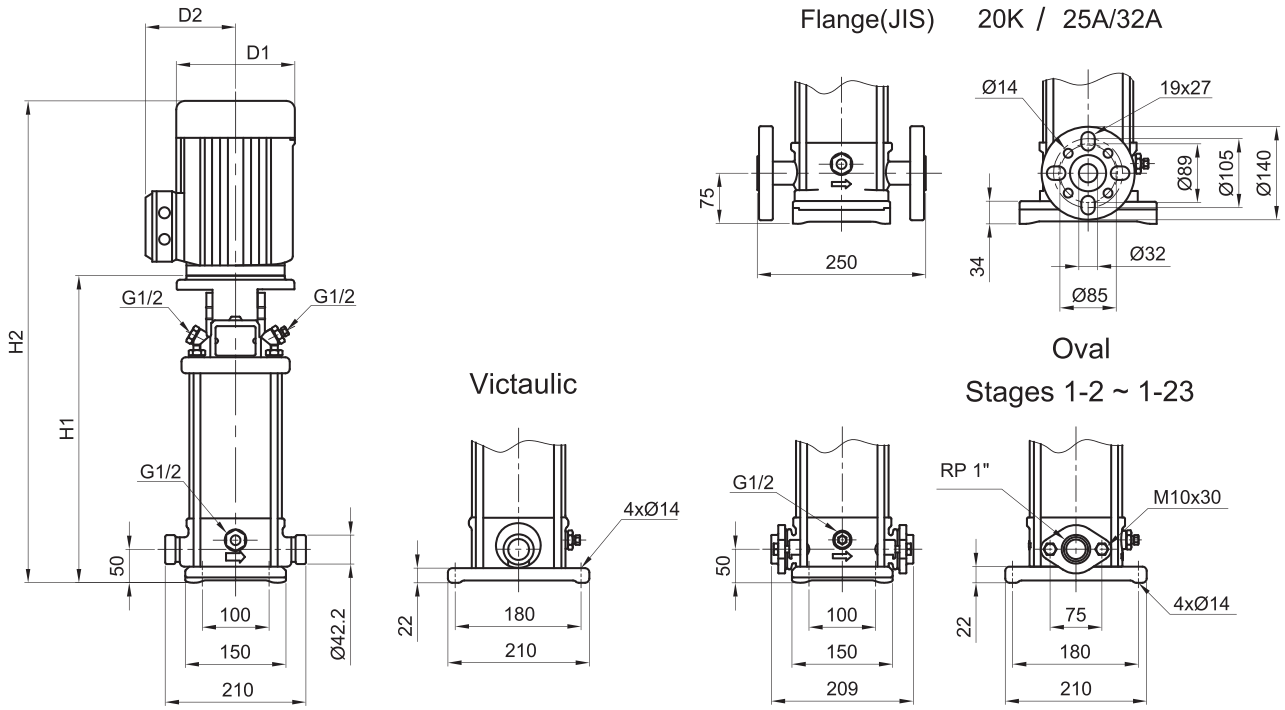
STAIRS

SB, SBI, SBN 1



SBI / SBN 1

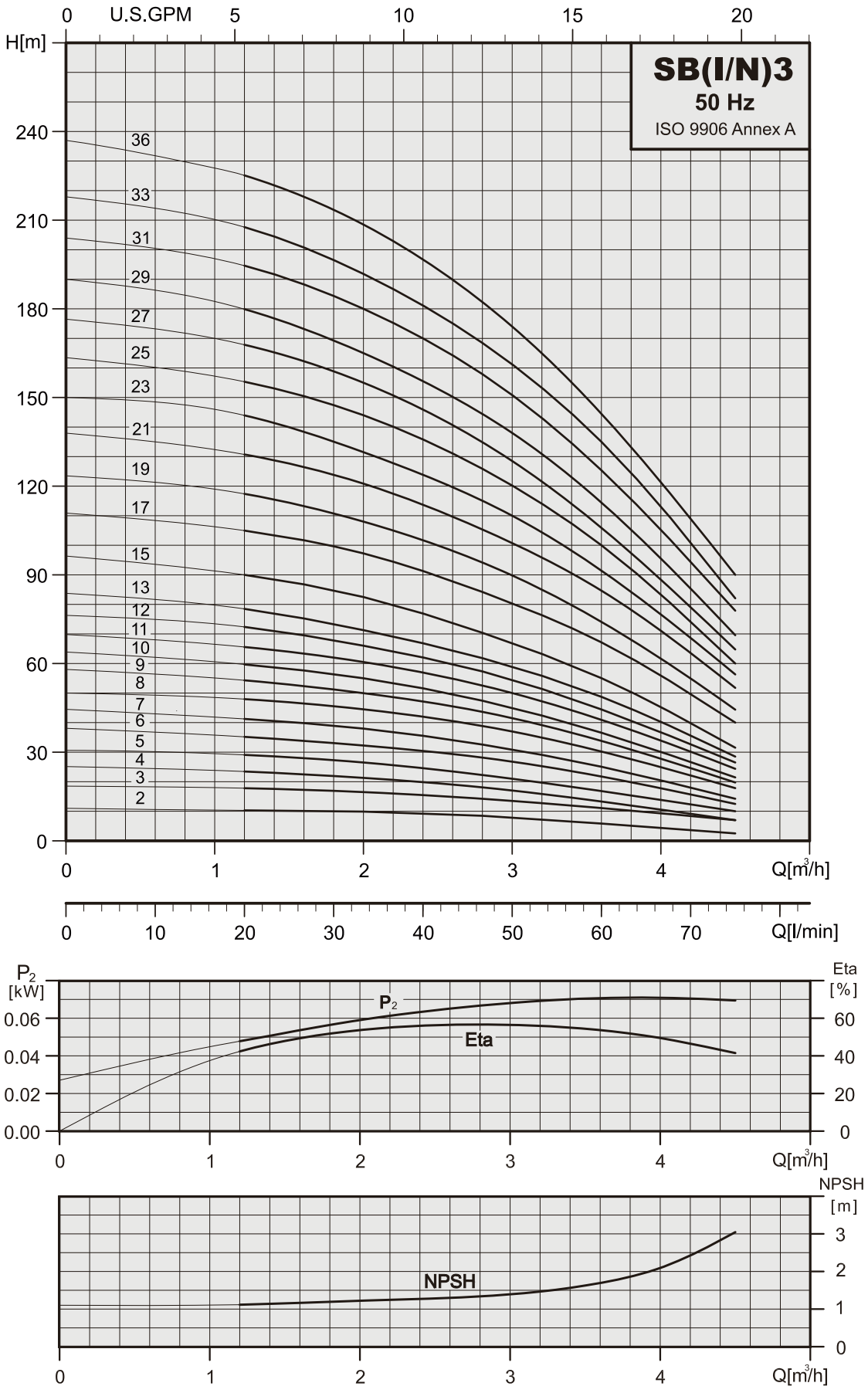
Flange(DIN) PN 25 / DN25/32
Flange(ANSI) Class300 / 1"/1¼"
Flange(JIS) 20K / 25A/32A



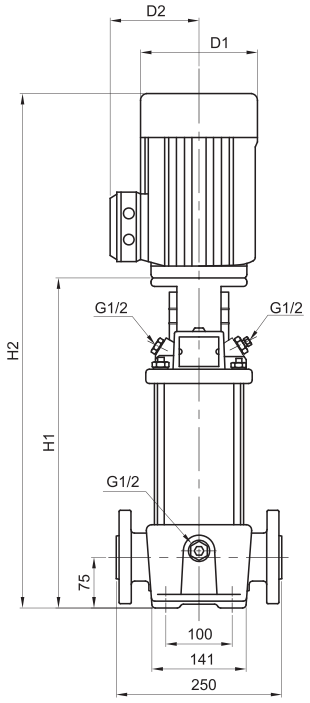
SBI ,SBN 1

50Hz	Motor		Nominal current [A]			Dimension[mm]								Net weight [kg]		
	P2		1ø	3ø		Vactaulic		DIN flange		OVAL						
Pump type	[kW]	[HP]	220-240V	△220-240V	Y380-415V	H1	H2	H1	H2	H1	H2	D1	D2	Vactaulic	DIN flange	OVAL
SB(I/N)1-2	0.37	0.5	2.5 - 2.5	1.7 - 1.9	1.0 - 1.1	257	452	282	477	257	452	141	115	19.3	20.2	17.1
SB(I/N)1-3	0.37	0.5	2.5 - 2.5	1.7 - 1.9	1.0 - 1.1	257	452	282	477	257	452	141	115	19.3	20.3	17.1
SB(I/N)1-4	0.37	0.5	2.5 - 2.5	1.7 - 1.9	1.0 - 1.1	275	470	300	495	275	470	141	115	19.7	20.6	17.5
SB(I/N)1-5	0.37	0.5	2.5 - 2.5	1.7 - 1.9	1.0 - 1.1	293	488	318	513	293	488	141	115	20.1	21.0	17.9
SB(I/N)1-6	0.37	0.5	2.5 - 2.5	1.7 - 1.9	1.0 - 1.1	311	506	336	531	311	506	141	115	20.4	21.4	18.2
SB(I/N)1-7	0.37	0.5	2.5 - 2.5	1.7 - 1.9	1.0 - 1.1	329	524	354	549	329	524	141	115	20.8	21.7	18.6
SB(I/N)1-8	0.55	0.75	4.0 - 3.5	2.6 - 2.9	1.5 - 1.7	347	542	372	567	347	542	141	115	21.7	22.6	19.5
SB(I/N)1-9	0.55	0.75	4.0 - 3.5	2.6 - 2.9	1.5 - 1.7	365	560	390	585	365	560	141	115	22.0	23.0	19.8
SB(I/N)1-10	0.55	0.75	4.0 - 3.5	2.6 - 2.9	1.5 - 1.7	383	578	408	603	383	578	141	115	22.4	23.3	20.2
SB(I/N)1-11	0.55	0.75	4.0 - 3.5	2.6 - 2.9	1.5 - 1.7	401	596	426	621	401	596	141	115	22.8	23.7	20.6
SB(I/N)1-12	0.75	1.0	5.1 - 4.1	3.4 - 3.4	2.0 - 2.0	425	660	450	685	425	660	141	115	25.2	26.1	23.0
SB(I/N)1-13	0.75	1.0	5.1 - 4.1	3.4 - 3.4	2.0 - 2.0	443	678	468	703	443	678	141	115	25.6	26.5	23.4
SB(I/N)1-15	0.75	1.0	5.1 - 4.1	3.4 - 3.4	2.0 - 2.0	479	714	504	739	479	714	141	115	26.3	27.2	24.1
SB(I/N)1-17	1.1	1.5	8.0 - 6.9	4.8 - 5.0	2.8 - 2.9	515	804	540	829	515	804	177	141	33.7	34.7	31.6
SB(I/N)1-19	1.1	1.5	8.0 - 6.9	4.8 - 5.0	2.8 - 2.9	551	840	576	865	551	840	177	141	34.4	35.4	32.3
SB(I/N)1-21	1.1	1.5	8.0 - 6.9	4.8 - 5.0	2.8 - 2.9	587	876	612	901	587	876	177	141	35.2	36.2	33.1
SB(I/N)1-23	1.1	1.5	8.0 - 6.9	4.8 - 5.0	2.8 - 2.9	623	912	648	937	623	912	177	141	35.9	36.9	33.8
SB(I/N)1-25	1.5	2.0	9.5 - 8.9	6.2 - 6.6	3.6 - 3.8	675	970	700	995	—	—	177	141	40.8	41.8	—
SB(I/N)1-27	1.5	2.0	9.5 - 8.9	6.2 - 6.6	3.6 - 3.8	711	1006	736	1031	—	—	177	141	41.6	42.5	—
SB(I/N)1-30	1.5	2.0	9.5 - 8.9	6.2 - 6.6	3.6 - 3.8	765	1060	790	1085	—	—	177	141	42.7	43.6	—
SB(I/N)1-33	2.2	3.0	13.4 - 12.7	8.8 - 9.4	5.1 - 5.4	819	1114	844	1139	—	—	177	141	45.6	46.6	—
SB(I/N)1-36	2.2	3.0	13.4 - 12.7	8.8 - 9.4	5.1 - 5.4	873	1168	898	1193	—	—	177	141	46.7	47.7	—

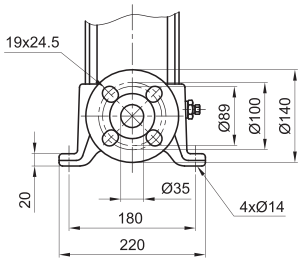
SB, SBI, SBN 3


SB(I/N)3
50 Hz
ISO 9906 Annex A
U.S.GPM
H[m]
Q[m³/h]
Q[l/min]
P2 [kW]
Eta [%]
NPSH [m]
36
33
31
29
27
25
23
21
19
17
15
13
12
11
10
9
8
7
6
5
4
3
2

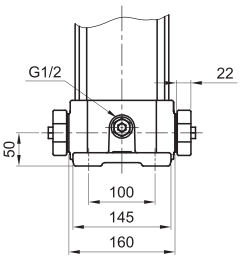
SB 3

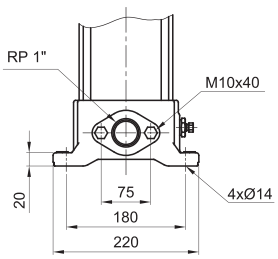


Flange(DIN) PN 25 / DN25/32
Flange(ANSI) Class300 / 1"/1¼"
Flange(JIS) 20K / 25A/32A



Oval
Stages 3-2 ~ 3-23

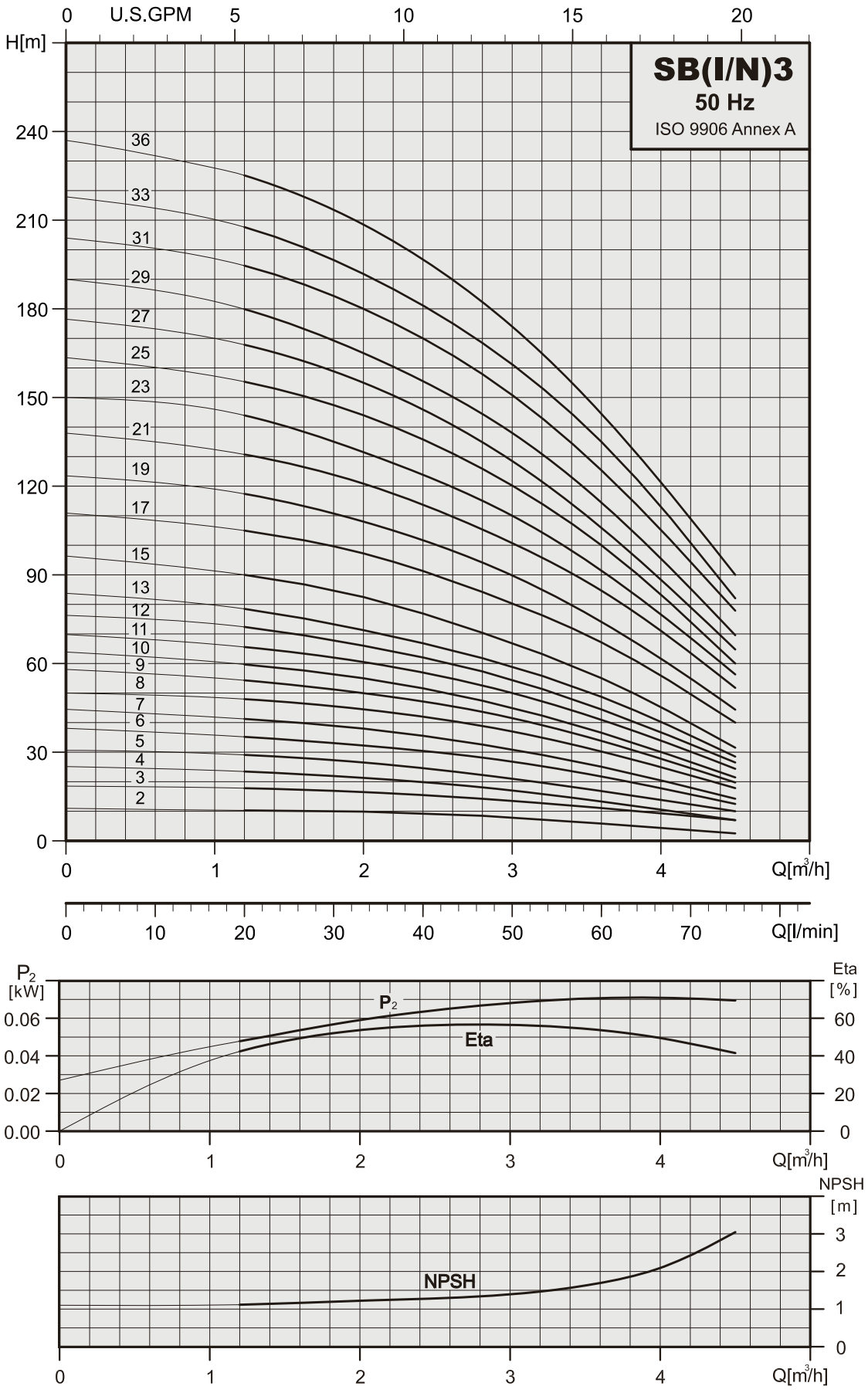




SB 3

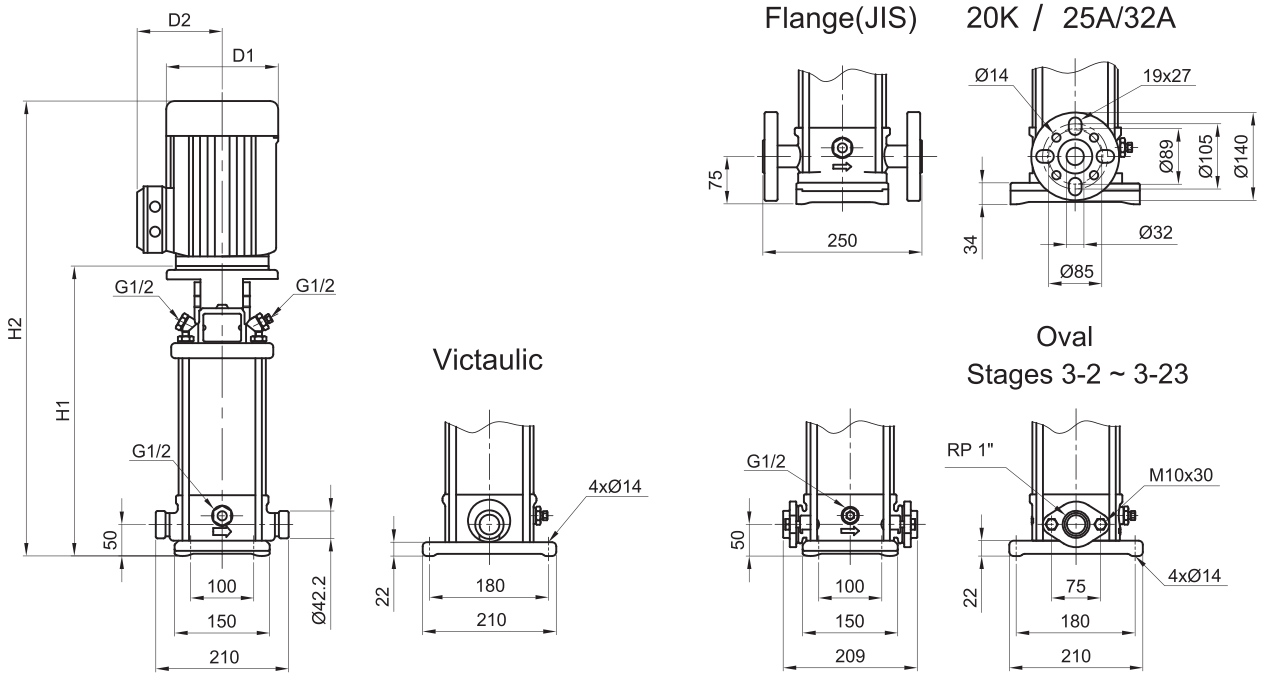
50Hz	Motor		Nominal current [A]					Dimension[mm]						Net weight [kg]	
	P_2		1ø	3ø		3ø		DIN flange		OVAL				DIN	
Pump type	[kW]	[HP]	220-240V	△220-240V	Y380-415V	△380-415V	Y660-720V	H1	H2	H1	H2	D1	D2	flange	OVAL
SB 3-2	0.37	0.5	2.5 - 2.5	1.7 - 1.9	1.0 - 1.1	—	—	279	474	254	449	141	115	23.4	19.3
SB 3-3	0.37	0.5	2.5 - 2.5	1.7 - 1.9	1.0 - 1.1	—	—	279	474	254	449	141	115	23.4	19.3
SB 3-4	0.37	0.5	2.5 - 2.5	1.7 - 1.9	1.0 - 1.1	—	—	297	492	272	467	141	115	23.8	19.7
SB 3-5	0.37	0.5	2.5 - 2.5	1.7 - 1.9	1.0 - 1.1	—	—	315	510	290	485	141	115	24.2	20.1
SB 3-6	0.55	0.75	4.0 - 3.5	2.6 - 2.9	1.5 - 1.7	—	—	333	528	308	503	141	115	25.0	20.9
SB 3-7	0.55	0.75	4.0 - 3.5	2.6 - 2.9	1.5 - 1.7	—	—	351	546	326	521	141	115	25.4	21.3
SB 3-8	0.75	1.0	5.1 - 4.1	3.4 - 3.4	2.0 - 2.0	—	—	375	610	350	585	141	115	27.9	23.8
SB 3-9	0.75	1.0	5.1 - 4.1	3.4 - 3.4	2.0 - 2.0	—	—	393	628	368	603	141	115	28.3	24.2
SB 3-10	0.75	1.0	5.1 - 4.1	3.4 - 3.4	2.0 - 2.0	—	—	411	646	386	621	141	115	28.7	24.6
SB 3-11	1.1	1.5	8.0 - 6.9	4.8 - 5.0	2.8 - 2.9	—	—	429	718	404	693	177	141	35.8	31.7
SB 3-12	1.1	1.5	8.0 - 6.9	4.8 - 5.0	2.8 - 2.9	—	—	447	736	422	711	177	141	36.1	32.0
SB 3-13	1.1	1.5	8.0 - 6.9	4.8 - 5.0	2.8 - 2.9	—	—	465	754	440	729	177	141	36.5	32.4
SB-3-15	1.1	1.5	8.0 - 6.9	4.8 - 5.0	2.8 - 2.9	—	—	501	790	476	765	177	141	37.2	33.1
SB-3-17	1.5	2.0	9.5 - 8.9	6.2 - 6.6	3.6 - 3.8	—	—	553	848	528	823	177	141	42.0	37.9
SB-3-19	1.5	2.0	9.5 - 8.9	6.2 - 6.6	3.6 - 3.8	—	—	589	884	564	859	177	141	42.8	38.7
SB-3-21	2.2	3.0	13.4 - 12.7	8.8 - 9.4	5.1 - 5.4	—	—	625	920	600	895	177	141	45.3	41.2
SB-3-23	2.2	3.0	13.4 - 12.7	8.8 - 9.4	5.1 - 5.4	—	—	661	956	636	931	177	141	46.1	42.0
SB-3-25	2.2	3.0	13.4 - 12.7	8.8 - 9.4	5.1 - 5.4	—	—	697	992	—	—	177	141	46.8	—
SB-3-27	2.2	3.0	13.4 - 12.7	8.8 - 9.4	5.1 - 5.4	—	—	733	1028	—	—	177	141	47.6	—
SB-3-29	2.2	3.0	13.4 - 12.7	8.8 - 9.4	5.1 - 5.4	—	—	769	1064	—	—	177	141	48.3	—
SB-3-31	3.0	4.0	—	11.8 - 12.3	6.8 - 7.1	6.8 - 6.9	3.9 - 4.0	809	1125	—	—	197	147	58.0	—
SB-3-33	3.0	4.0	—	11.8 - 12.3	6.8 - 7.1	6.8 - 6.9	3.9 - 4.0	845	1161	—	—	197	147	58.8	—
SB-3-36	3.0	4.0	—	11.8 - 12.3	6.8 - 7.1	6.8 - 6.9	3.9 - 4.0	899	1215	—	—	197	147	59.9	—

SB, SBI, SBN 3


SB(I/N)3
50 Hz
ISO 9906 Annex A
H[m]
U.S.GPM
Q[m³/h]
Q[l/min]
P2 [kW]
Eta [%]
NPSH [m]

SBI / SBN 3

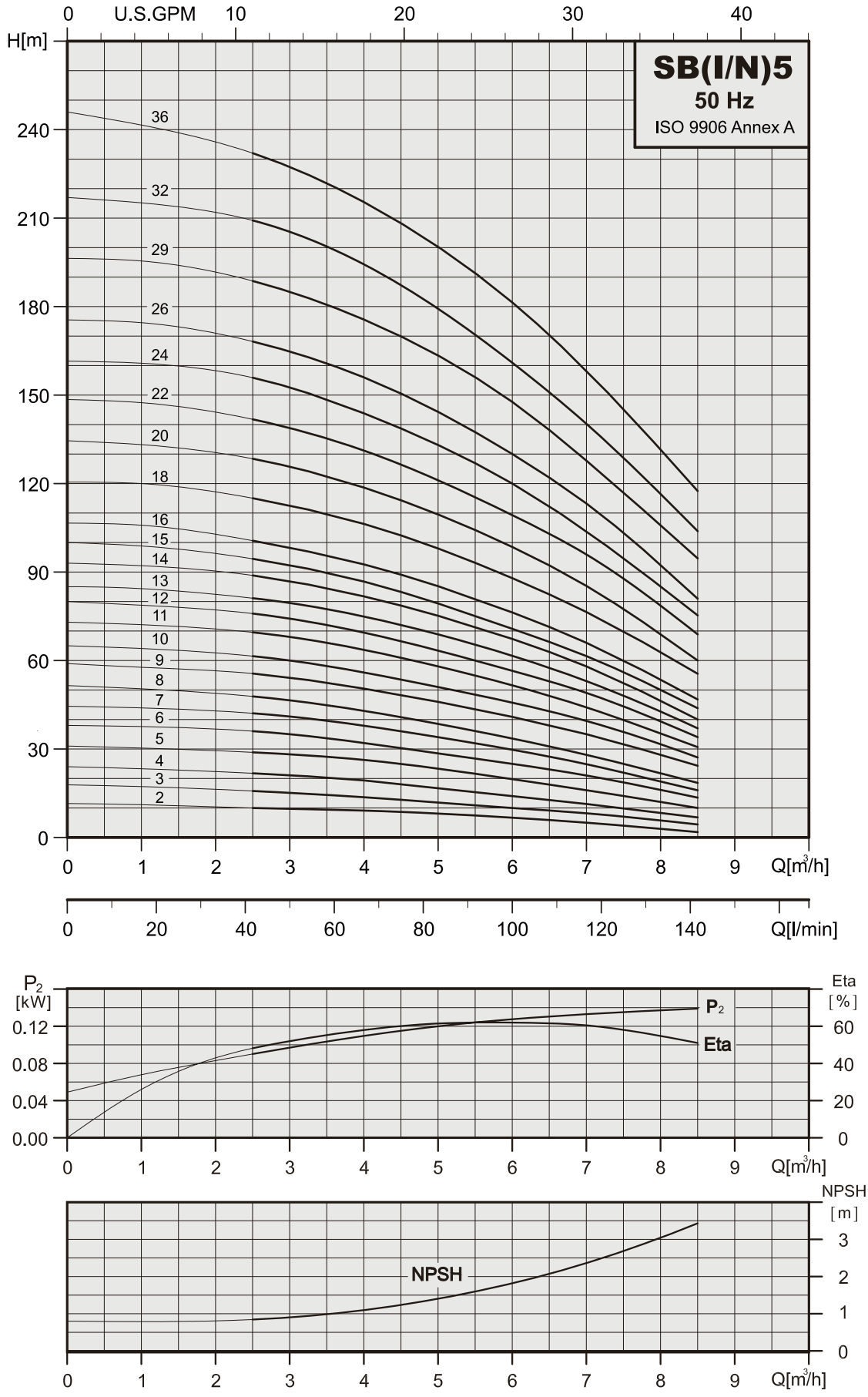
Flange(DIN) PN 25 / DN25/32
Flange(ANSI) Class300 / 1"/1¼"
Flange(JIS) 20K / 25A/32A



SBI ,SBN 3

50Hz	Motor		Nominal current [A]					Dimension[mm]								Net weight[kg]		
	P_2		1ø	3ø		3ø		Vactaulic		DIN flange		OVAL						
Pump type	[kW]	[HP]	220-240V	△220-240V	Y380-415V	△380-415V	Y660-720V	H1	H2	H1	H2	H1	H2	D1	D2	Vactaulic	DIN flange	OVAL
SBI(N)3-2	0.37	0.5	2.5 - 2.5	1.7 - 1.9	1.0 - 1.1	—	—	257	452	282	477	257	452	141	115	19.3	20.2	17.1
SBI(N)3-3	0.37	0.5	2.5 - 2.5	1.7 - 1.9	1.0 - 1.1	—	—	257	452	282	477	257	452	141	115	19.3	20.3	17.1
SBI(N)3-4	0.37	0.5	2.5 - 2.5	1.7 - 1.9	1.0 - 1.1	—	—	275	470	300	495	275	470	141	115	19.7	20.6	17.5
SBI(N)3-5	0.37	0.5	2.5 - 2.5	1.7 - 1.9	1.0 - 1.1	—	—	293	488	318	513	293	488	141	115	20.1	21.0	17.9
SBI(N)3-6	0.55	0.75	4.0 - 3.5	2.6 - 2.9	1.5 - 1.7	—	—	311	506	336	531	311	506	141	115	20.9	21.9	18.7
SBI(N)3-7	0.55	0.75	4.0 - 3.5	2.6 - 2.9	1.5 - 1.7	—	—	329	524	354	549	329	524	141	115	21.3	22.2	19.1
SBI(N)3-8	0.75	1.0	5.1 - 4.1	3.4 - 3.4	2.0 - 2.0	—	—	353	588	378	613	353	588	141	115	23.7	24.6	21.5
SBI(N)3-9	0.75	1.0	5.1 - 4.1	3.4 - 3.4	2.0 - 2.0	—	—	371	606	396	631	371	606	141	115	24.0	25.0	21.9
SBI(N)3-10	0.75	1.0	5.1 - 4.1	3.4 - 3.4	2.0 - 2.0	—	—	389	624	414	649	389	624	141	115	24.4	25.4	22.2
SBI(N)3-11	1.1	1.5	8.0 - 6.9	4.8 - 5.0	2.8 - 2.9	—	—	407	696	432	721	407	696	177	141	31.5	32.5	29.4
SBI(N)3-12	1.1	1.5	8.0 - 6.9	4.8 - 5.0	2.8 - 2.9	—	—	425	714	450	739	425	714	177	141	31.9	32.8	29.7
SBI(N)3-13	1.1	1.5	8.0 - 6.9	4.8 - 5.0	2.8 - 2.9	—	—	443	732	468	757	443	732	177	141	32.3	33.2	30.1
SBI(N)3-15	1.1	1.5	8.0 - 6.9	4.8 - 5.0	2.8 - 2.9	—	—	479	768	504	793	479	768	177	141	33.0	33.9	30.8
SBI(N)3-17	1.5	2.0	9.5 - 8.9	6.2 - 6.6	3.6 - 3.8	—	—	531	826	556	851	531	826	177	141	37.9	38.8	35.7
SBI(N)3-19	1.5	2.0	9.5 - 8.9	6.2 - 6.6	3.6 - 3.8	—	—	567	862	592	887	567	862	177	141	38.6	39.5	36.4
SBI(N)3-21	2.2	3.0	13.4 - 12.7	8.8 - 9.4	5.1 - 5.4	—	—	603	898	628	923	603	898	177	141	41.2	42.1	39.0
SBI(N)3-23	2.2	3.0	13.4 - 12.7	8.8 - 9.4	5.1 - 5.4	—	—	639	934	664	959	639	934	177	141	41.9	42.9	39.8
SBI(N)3-25	2.2	3.0	13.4 - 12.7	8.8 - 9.4	5.1 - 5.4	—	—	675	970	700	995	—	—	177	141	42.6	43.6	—
SBI(N)3-27	2.2	3.0	13.4 - 12.7	8.8 - 9.4	5.1 - 5.4	—	—	711	1006	736	1031	—	—	177	141	43.4	44.3	—
SBI(N)3-29	2.2	3.0	13.4 - 12.7	8.8 - 9.4	5.1 - 5.4	—	—	747	1042	772	1067	—	—	177	141	44.1	45.1	—
SBI(N)3-31	3.0	4.0	—	11.8 - 12.3	6.8 - 7.1	6.8 - 6.9	3.9 - 4.0	787	1103	812	1128	—	—	197	147	53.4	54.4	—
SBI(N)3-33	3.0	4.0	—	11.8 - 12.3	6.8 - 7.1	6.8 - 6.9	3.9 - 4.0	823	1139	848	1164	—	—	197	147	54.2	55.1	—
SBI(N)3-36	3.0	4.0	—	11.8 - 12.3	6.8 - 7.1	6.8 - 6.9	3.9 - 4.0	877	1193	902	1218	—	—	197	147	55.3	56.2	—

SB, SBI, SBN 5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50 Hz
ISO 9906 Annex A
H[m]
U.S.GPM
Q[m³/h]
Q[l/min]
P2 [kW]
Eta [%]
NPSH [m]
36
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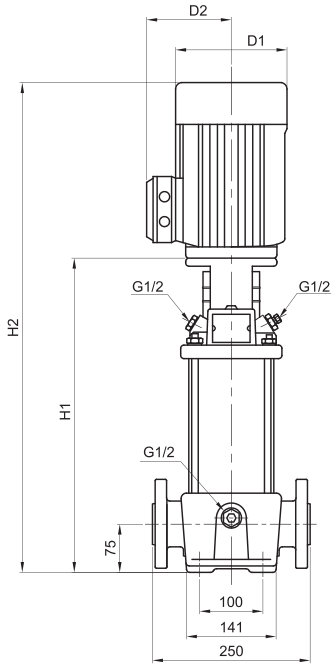
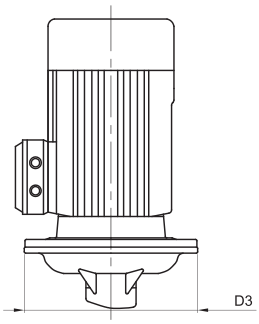
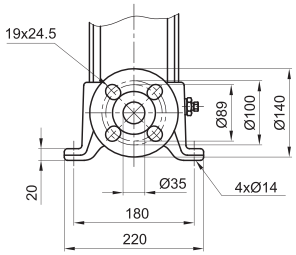
SB 5

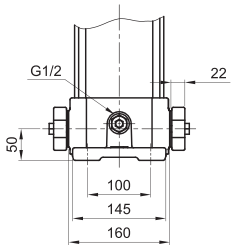


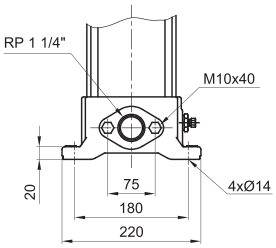


Flange(DIN) PN 25 / DN25/32
Flange(ANSI) Class300 / 1"/1¼"
Flange(JIS) 20K / 25A/32A



Oval
Stages 5-2 ~ 5-22

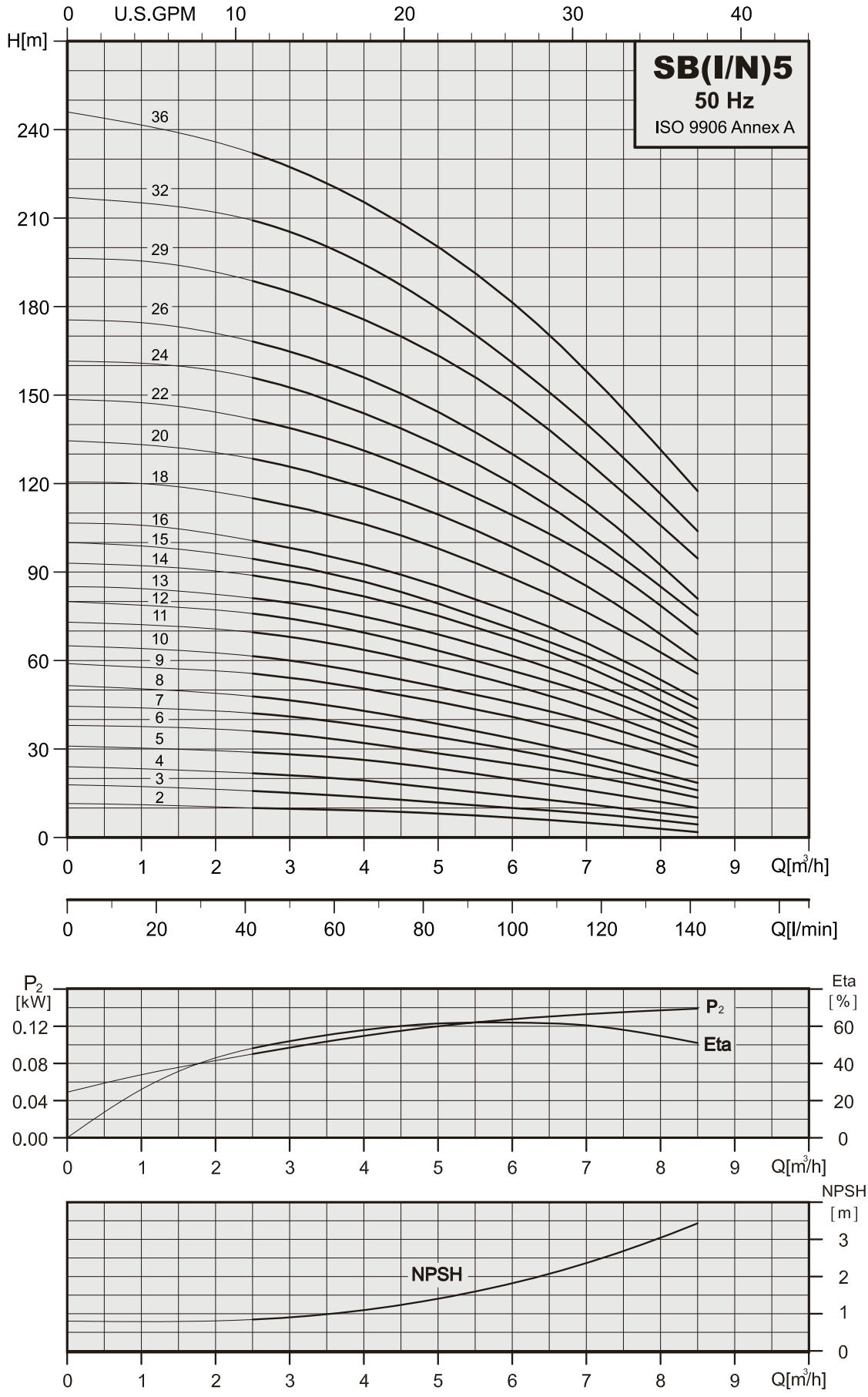




SB 5

50Hz	Motor		Nominal current [A]					Dimension[mm]							Net weight [kg]	
	P_2		1ø	3ø		3ø		DIN flange		OVAL					DIN	
Pump type	[kW]	[HP]	220-240V	△220-240V	Y380-415V	△380-415V	Y660-720V	H1	H2	H1	H2	D1	D2	D3	flange	OVAL
SB5-2	0.37	0.5	2.5 - 2.5	1.7 - 1.9	1.0 - 1.1	—	—	279	474	254	449	141	115	—	23.3	19.0
SB5-3	0.55	0.75	4.0 - 3.5	2.6 - 2.9	1.5 - 1.7	—	—	306	501	281	476	141	115	—	24.2	19.9
SB5-4	0.55	0.75	4.0 - 3.5	2.6 - 2.9	1.5 - 1.7	—	—	333	528	308	503	141	115	—	24.8	20.5
SB5-5	0.75	1.0	5.1 - 4.1	3.4 - 3.4	2.0 - 2.0	—	—	366	601	341	576	141	115	—	27.4	23.1
SB5-6	1.1	1.5	8.0 - 6.9	4.8 - 5.0	2.8 - 2.9	—	—	393	682	368	657	177	141	—	34.7	30.4
SB5-7	1.1	1.5	8.0 - 6.9	4.8 - 5.0	2.8 - 2.9	—	—	420	709	395	684	177	141	—	35.2	30.9
SB5-8	1.1	1.5	8.0 - 6.9	4.8 - 5.0	2.8 - 2.9	—	—	447	736	422	711	177	141	—	35.7	31.4
SB5-9	1.5	2.0	9.5 - 8.9	6.2 - 6.6	3.6 - 3.8	—	—	490	785	465	760	177	141	—	40.3	36.0
SB5-10	1.5	2.0	9.5 - 8.9	6.2 - 6.6	3.6 - 3.8	—	—	517	812	492	787	177	141	—	40.9	36.6
SB5-11	2.2	3.0	13.4 - 12.7	8.8 - 9.4	5.1 - 5.4	—	—	544	839	519	814	177	141	—	43.2	38.9
SB5-12	2.2	3.0	13.4 - 12.7	8.8 - 9.4	5.1 - 5.4	—	—	571	866	546	841	177	141	—	43.7	39.4
SB5-13	2.2	3.0	13.4 - 12.7	8.8 - 9.4	5.1 - 5.4	—	—	598	893	573	868	177	141	—	44.2	39.9
SB5-14	2.2	3.0	13.4 - 12.7	8.8 - 9.4	5.1 - 5.4	—	—	625	920	600	895	177	141	—	44.8	40.5
SB5-15	2.2	3.0	13.4 - 12.7	8.8 - 9.4	5.1 - 5.4	—	—	652	947	627	922	177	141	—	45.2	40.9
SB5-16	2.2	3.0	13.4 - 12.7	8.8 - 9.4	5.1 - 5.4	—	—	679	974	654	949	177	141	—	45.8	41.5
SB5-18	3.0	4.0	—	11.8 - 12.3	6.8 - 7.1	6.8 - 6.9	3.9 - 4.0	737	1053	712	1028	197	147	—	55.7	51.4
SB5-20	3.0	4.0	—	11.8 - 12.3	6.8 - 7.1	6.8 - 6.9	3.9 - 4.0	791	1107	766	1082	197	147	—	56.9	52.6
SB5-22	4.0	5.5	—	15.1 - 15.2	8.7 - 8.8	8.7 - 8.3	5.0 - 4.8	845	1171	820	1146	220	161	—	61.8	57.5
SB5-24	4.0	5.5	—	15.1 - 15.2	8.7 - 8.8	8.7 - 8.3	5.0 - 4.8	899	1225	—	—	220	161	—	62.8	—
SB5-26	4.0	5.5	—	15.1 - 15.2	8.7 - 8.8	8.7 - 8.3	5.0 - 4.8	953	1279	—	—	220	161	—	64.7	—
SB5-29	4.0	5.5	—	15.1 - 15.2	8.7 - 8.8	8.7 - 8.3	5.0 - 4.8	1034	1360	—	—	220	161	—	66.6	—
SB5-32	5.5	7.5	—	18.7 - 18.0	10.8 - 10.4	10.9 - 10.8	6.3 - 6.2	1145	1507	—	—	235	197	300	89.4	—
SB5-36	5.5	7.5	—	18.7 - 18.0	10.8 - 10.4	10.9 - 10.8	6.3 - 6.2	1253	1615	—	—	235	197	300	91.9	—

SB, SBI, SBN 5


SB(I/N)5
50 Hz
ISO 9906 Annex A
H[m]
U.S.GPM
Q[m³/h]
Q[l/min]
P2 [kW]
Eta [%]
NPSH [m]
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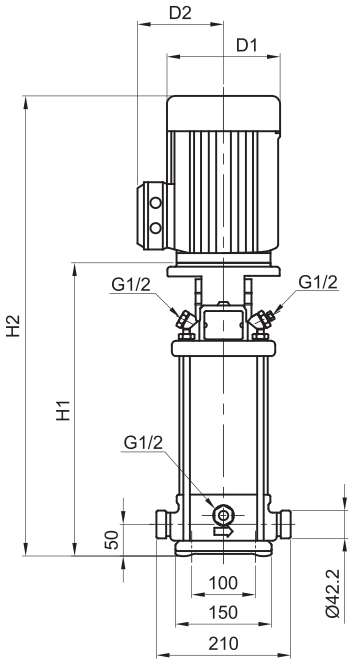
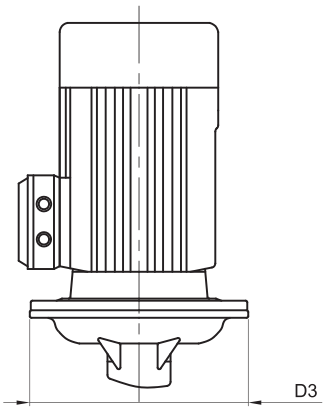
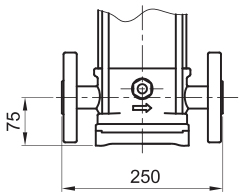
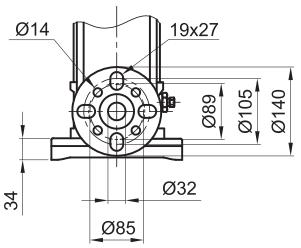
SBI / SBN 5



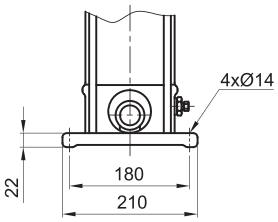


Flange(DIN) PN 25 / DN25/32
Flange(ANSI) Class300 / 1"/1¼"
Flange(JIS) 20K / 25A/32A

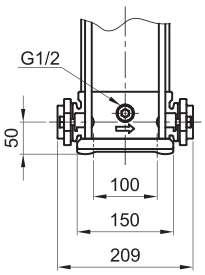


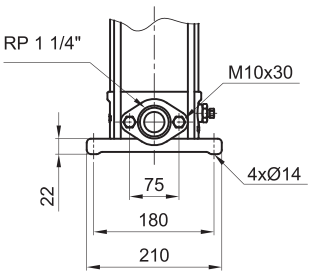


Victaulic



Oval
Stages 5-2 ~ 5-22

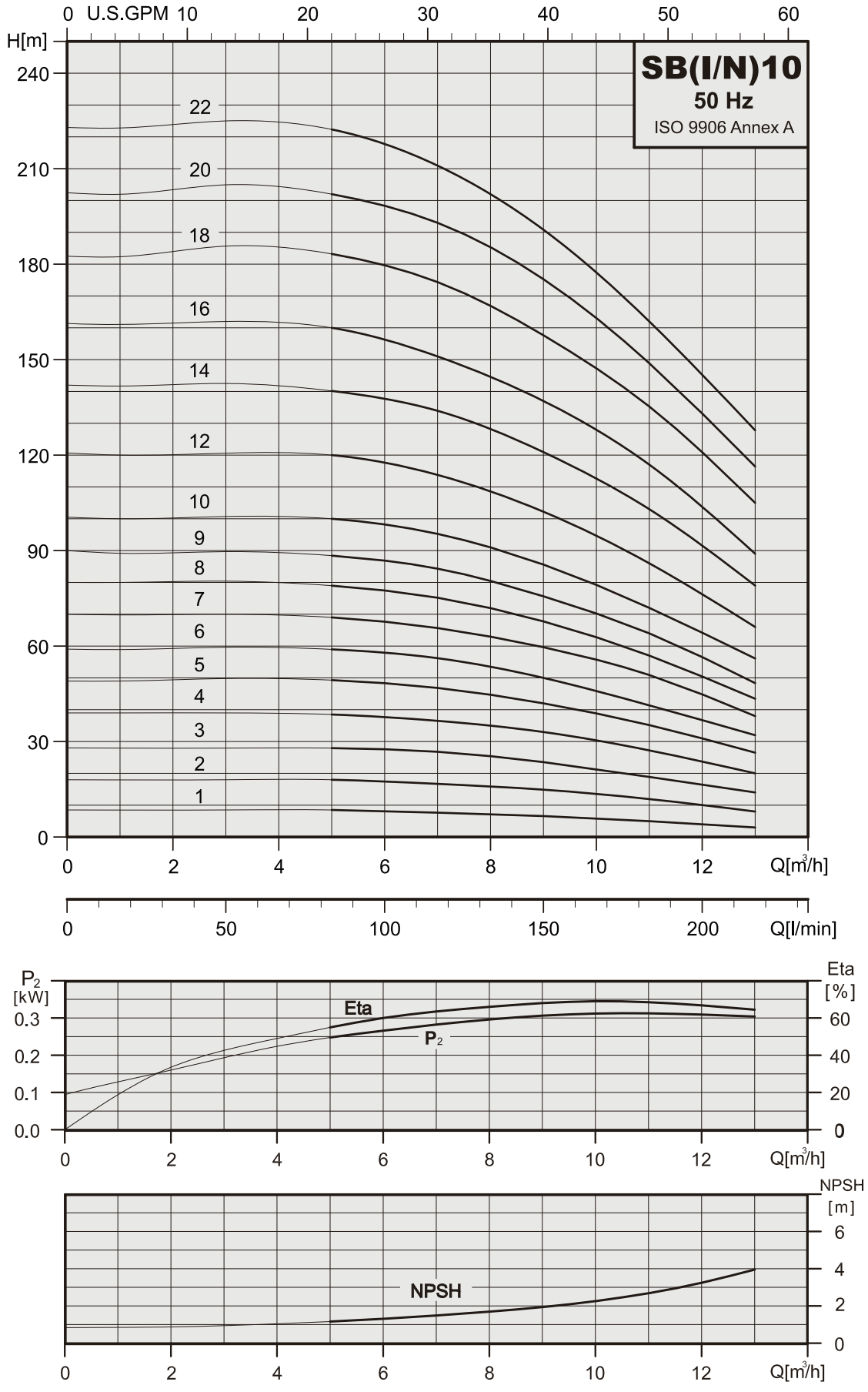




SBI ,SBN 5

50Hz	Motor		Nominal current [A]					Dimension[mm]									Net weight[kg]		
	P_2		1ø	3ø		3ø		Vactaulic		DIN flange		OVAL							
Pump type	[kW]	[HP]	220-240V	△220-240V	Y380-415V	△380-415V	Y660-720V	H1	H2	H1	H2	H1	H2	D1	D2	D3	Vactaulic	DIN flange	OVAL
SB(I/N)5-2	0.37	0.5	2.5 - 2.5	1.7 - 1.9	1.0 - 1.1	—	—	257	452	282	477	257	452	141	115	—	19.2	20.1	16.9
SB(I/N)5-3	0.55	0.75	4.0 - 3.5	2.6 - 2.9	1.5 - 1.7	—	—	284	479	309	504	284	479	141	115	—	20.3	21.2	18.0
SB(I/N)5-4	0.55	0.75	4.0 - 3.5	2.6 - 2.9	1.5 - 1.7	—	—	311	506	336	531	311	506	141	115	—	20.8	21.8	18.6
SB(I/N)5-5	0.75	1.0	5.1 - 4.1	3.4 - 3.4	2.0 - 2.0	—	—	344	579	369	604	344	579	141	115	—	23.4	24.3	21.1
SB(I/N)5-6	1.1	1.5	8.0 - 6.9	4.8 - 5.0	2.8 - 2.9	—	—	371	660	396	685	371	660	177	141	—	30.7	31.6	28.4
SB(I/N)5-7	1.1	1.5	8.0 - 6.9	4.8 - 5.0	2.8 - 2.9	—	—	398	687	423	712	398	687	177	141	—	31.2	32.1	28.9
SB(I/N)5-8	1.1	1.5	8.0 - 6.9	4.8 - 5.0	2.8 - 2.9	—	—	425	714	450	739	425	714	177	141	—	31.7	32.7	29.5
SB(I/N)5-9	1.5	2.0	9.5 - 8.9	6.2 - 6.6	3.6 - 3.8	—	—	468	763	493	788	468	763	177	141	—	36.4	37.4	34.2
SB(I/N)5-10	1.5	2.0	9.5 - 8.9	6.2 - 6.6	3.6 - 3.8	—	—	495	790	520	815	495	790	177	141	—	37.0	37.9	34.7
SB(I/N)5-11	2.2	3.0	13.4 - 12.7	8.8 - 9.4	5.1 - 5.4	—	—	522	817	547	842	522	817	177	141	—	39.3	40.3	37.0
SB(I/N)5-12	2.2	3.0	13.4 - 12.7	8.8 - 9.4	5.1 - 5.4	—	—	549	844	574	869	549	844	177	141	—	39.9	40.8	37.6
SB(I/N)5-13	2.2	3.0	13.4 - 12.7	8.8 - 9.4	5.1 - 5.4	—	—	576	871	601	896	576	871	177	141	—	40.4	41.4	38.1
SB(I/N)5-14	2.2	3.0	13.4 - 12.7	8.8 - 9.4	5.1 - 5.4	—	—	603	898	628	923	603	898	177	141	—	41.0	41.9	38.7
SB(I/N)5-15	2.2	3.0	13.4 - 12.7	8.8 - 9.4	5.1 - 5.4	—	—	630	925	655	950	630	925	177	141	—	41.5	42.5	39.2
SB(I/N)5-16	2.2	3.0	13.4 - 12.7	8.8 - 9.4	5.1 - 5.4	—	—	657	952	682	977	657	952	177	141	—	42.1	43.0	39.8
SB(I/N)5-18	3.0	4.0	—	11.8 - 12.3	6.8 - 7.1	6.8 - 6.9	3.9 - 4.0	715	1031	740	1056	715	1031	197	147	—	51.7	52.7	49.5
SB(I/N)5-20	3.0	4.0	—	11.8 - 12.3	6.8 - 7.1	6.8 - 6.9	3.9 - 4.0	769	1085	794	1110	769	1085	197	147	—	53.0	53.9	50.7
SB(I/N)5-22	4.0	5.5	—	15.1 - 15.2	8.7 - 8.8	8.7 - 8.3	5.0 - 4.8	823	1149	848	1174	823	1149	220	161	—	57.8	58.8	55.6
SB(I/N)5-24	4.0	5.5	—	15.1 - 15.2	8.7 - 8.8	8.7 - 8.3	5.0 - 4.8	877	1203	902	1228	—	—	220	161	—	58.9	59.8	—
SB(I/N)5-26	4.0	5.5	—	15.1 - 15.2	8.7 - 8.8	8.7 - 8.3	5.0 - 4.8	931	1257	956	1282	—	—	220	161	—	60.0	61.9	—
SB(I/N)5-29	4.0	5.5	—	15.1 - 15.2	8.7 - 8.8	8.7 - 8.3	5.0 - 4.8	1012	1338	1037	1363	—	—	220	161	—	61.7	62.6	—
SB(I/N)5-32	5.5	7.5	—	18.7 - 18.0	10.8 - 10.4	10.9 - 10.8	6.3 - 6.2	1123	1485	1148	1510	—	—	235	197	300	84.2	85.1	—
SB(I/N)5-36	5.5	7.5	—	18.7 - 18.0	10.8 - 10.4	10.9 - 10.8	6.3 - 6.2	1231	1593	1256	1618	—	—	235	197	300	86.4	87.4	—

SB, SBI, SBN 10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240
210
180
150
120
90
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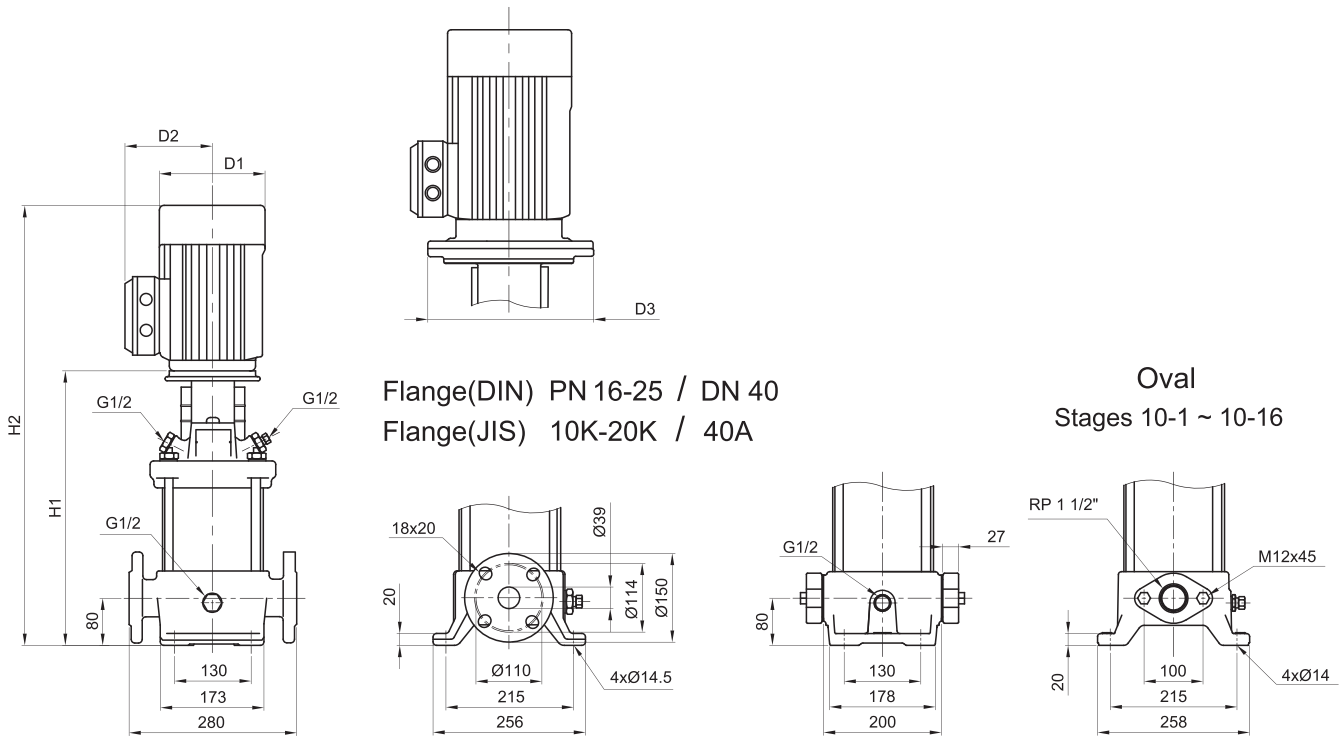
30
0
SB(I/N)10
50 Hz
ISO 9906 Annex A
22
20
18
16
14
12
10
9
8
7
6
5
4
3
2
1
0 2 4 6 8 10 12 Q[m³/h]
0 50 100 150 200 Q[l/min]
P2 [kW]
0.3
0.2
0.1
0.0
Eta
P2
Eta [%]
60
40
20
0
0 2 4 6 8 10 12 Q[m³/h]
NPSH [m]
6
4
2
0
NPSH
0 2 4 6 8 10 12 Q[m³/h]

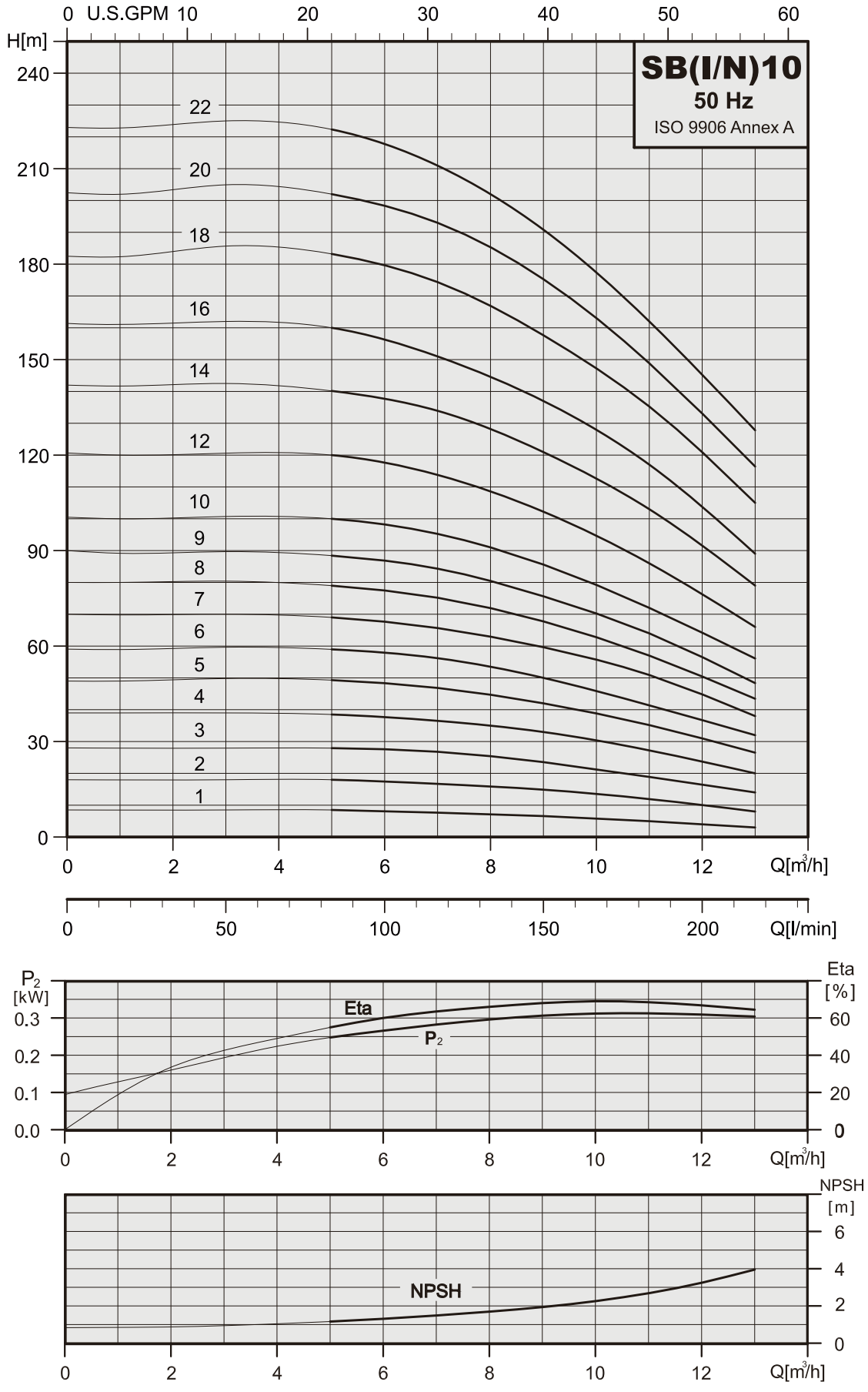
SB 10



SB 10

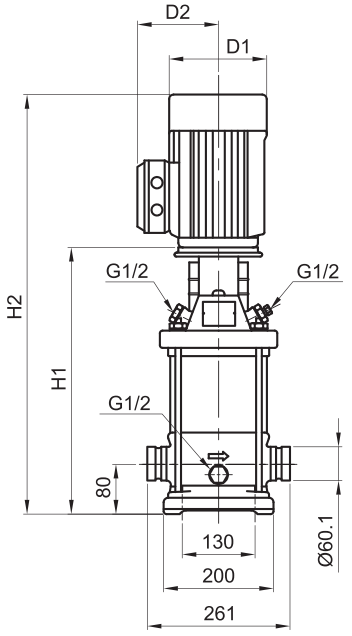
50Hz	Motor		Nominal current [A]					Dimension[mm]							Net weight [kg]	
	P_2		1ø	3ø		3ø		DIN flange		OVAL						
Pump type	[kW]	[HP]	220-240V	△220-240V	Y380-415V	△380-415V	Y660-720V	H1	H2	H1	H2	D1	D2	D3	DIN flange	OVAL
SB10-1	0.37	0.5	2.5 - 2.5	1.7 - 1.9	1.0 - 1.1	—	—	343	538	343	538	141	115	—	35.9	32.5
SB10-2	0.75	1.0	5.1 - 4.1	3.4 - 3.4	2.0 - 2.0	—	—	347	582	347	582	141	115	—	38.2	34.8
SB10-3	1.1	1.5	8.0 - 6.9	4.8 - 5.0	2.8 - 2.9	—	—	377	666	377	666	177	141	—	45.9	42.5
SB10-4	1.5	2.0	9.5 - 8.9	6.2 - 6.6	3.6 - 3.8	—	—	423	718	423	718	177	141	—	51.1	47.7
SB10-5	2.2	3.0	13.4 - 12.7	8.8 - 9.4	5.1 - 5.4	—	—	453	748	453	748	177	141	—	53.9	50.5
SB10-6	2.2	3.0	13.4 - 12.7	8.8 - 9.4	5.1 - 5.4	—	—	483	778	483	778	177	141	—	55.0	51.6
SB10-7	3.0	4.0	—	11.8 - 12.3	6.8 - 7.1	6.8 - 6.9	3.9 - 4.0	518	834	518	834	197	147	—	65.2	61.8
SB10-8	3.0	4.0	—	11.8 - 12.3	6.8 - 7.1	6.8 - 6.9	3.9 - 4.0	548	864	548	864	197	147	—	66.1	62.7
SB10-9	3.0	4.0	—	11.8 - 12.3	6.8 - 7.1	6.8 - 6.9	3.9 - 4.0	578	894	578	894	197	147	—	67.3	63.9
SB10-10	4.0	5.5	—	15.1 - 15.2	8.7 - 8.8	8.7 - 8.3	5.0 - 4.8	608	934	608	934	220	161	—	72.3	68.9
SB10-12	4.0	5.5	—	15.1 - 15.2	8.7 - 8.8	8.7 - 8.3	5.0 - 4.8	668	994	668	994	220	161	—	74.4	71.0
SB10-14	5.5	7.5	—	18.7 - 18.0	10.8 - 10.4	10.9 - 10.8	6.3 - 6.2	760	1122	760	1122	235	197	300	103.4	100.0
SB10-16	5.5	7.5	—	18.7 - 18.0	10.8 - 10.4	10.9 - 10.8	6.3 - 6.2	820	1182	820	1182	235	197	300	105.5	102.1
SB10-18	7.5	10	—	25.5 - 24.9	14.7 - 14.4	14.9 - 14.8	8.6 - 8.5	880	1285	—	—	235	197	300	112.5	—
SB10-20	7.5	10	—	25.5 - 24.9	14.7 - 14.4	14.9 - 14.8	8.6 - 8.5	940	1345	—	—	235	197	300	115.6	—
SB10-22	7.5	10	—	25.5 - 24.9	14.7 - 14.4	14.9 - 14.8	8.6 - 8.5	1000	1405	—	—	235	197	300	117.7	—

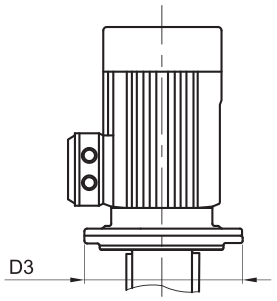
SB, SBI, SBN 10

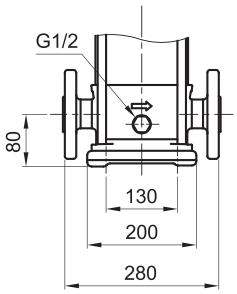

SB(I/N)10
50 Hz
ISO 9906 Annex A
0 U.S.GPM 10 20 30 40 50 60
H[m]
240
210
180
150
120
90
60
30
0
22
20
18
16
14
12
10
9
8
7
6
5
4
3
2
1
0 2 4 6 8 10 12 Q[m³/h]
0 50 100 150 200 Q[l/min]
P2 [kW]
0.3
0.2
0.1
0.0
Eta
P2
Eta [%]
60
40
20
0
0 2 4 6 8 10 12 Q[m³/h]
NPSH [m]
6
4
2
0
NPSH
0 2 4 6 8 10 12 Q[m³/h]

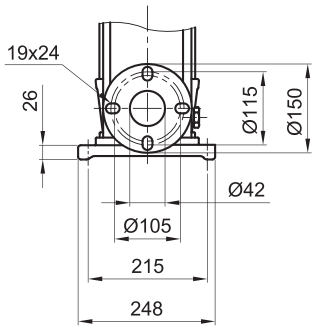
SBI / SBN 10

Flange(DIN) PN 16-25 / DN40
Flange(ANSI) Class150-300 / 1 ½"
Flange(JIS) 10K-20K / 40A

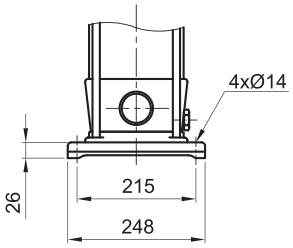




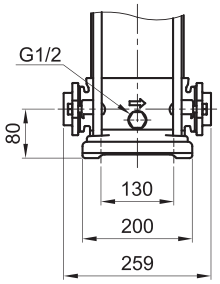


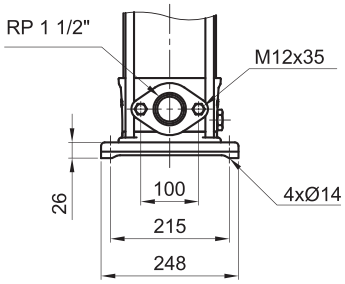


Victaulic



Oval
Stages 10-1 ~ 10-16

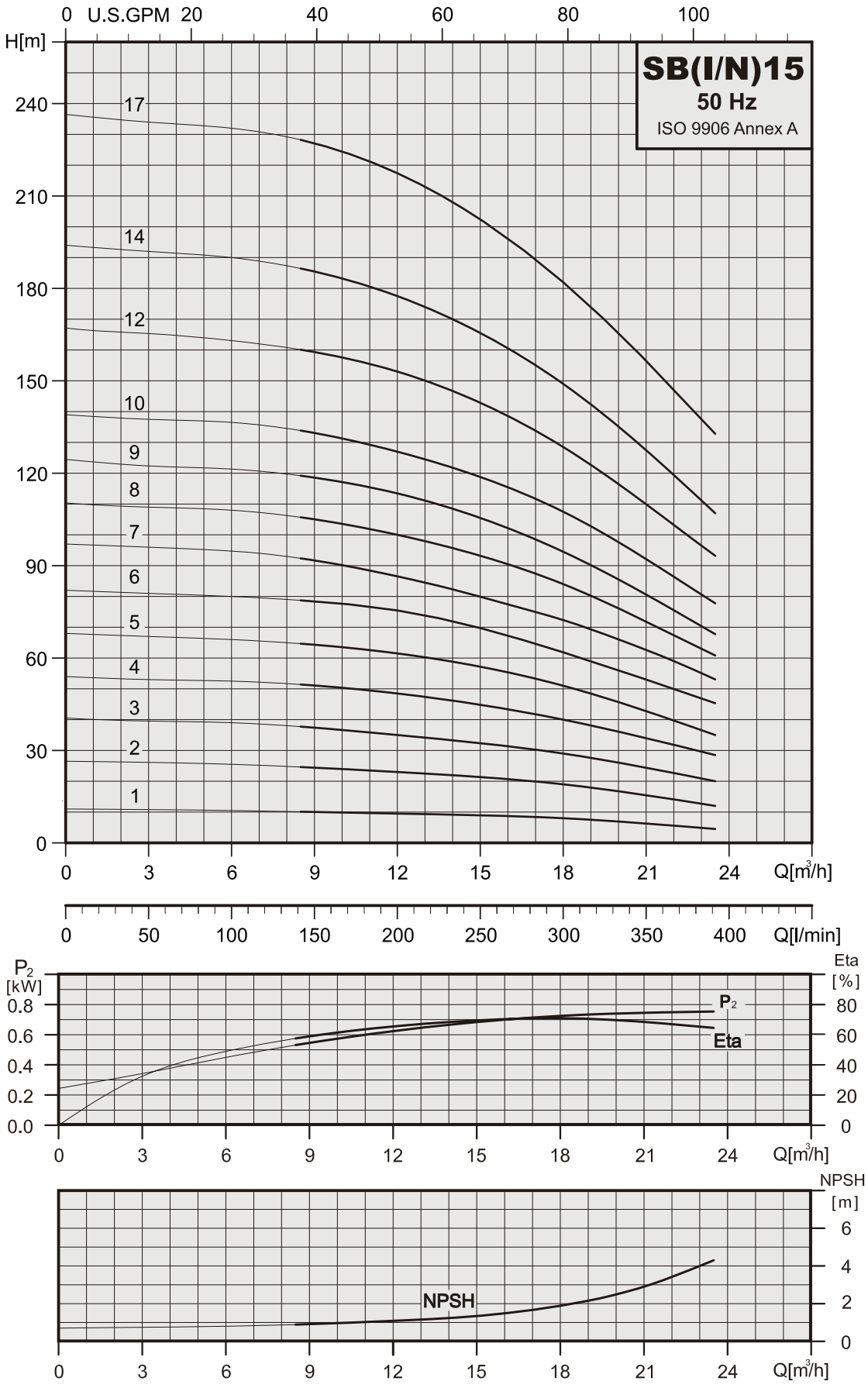




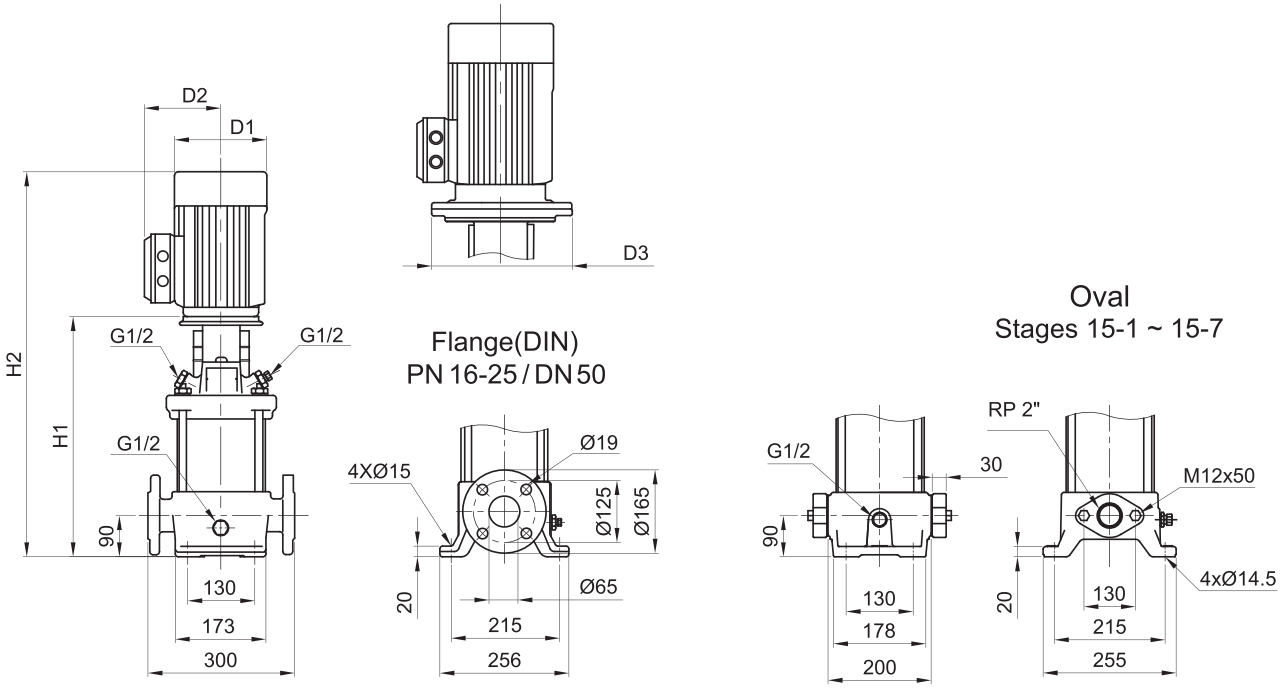
SBI ,SBN 10

50Hz	Motor		Nominal current [A]					Dimension[mm]									Net weight [kg]		
	P_2		1ø	3ø		3ø		Vactaulic		DIN flange		OVAL							
Pump type	[kW]	[HP]	220-240V	△220-240V	Y380-415V	△380-415V	Y660-720V	H1	H2	H1	H2	H1	H2	D1	D2	D3	Vactaulic	DIN flange	OVAL
SB(I/N)10-1	0.37	0.5	2.5 - 2.5	1.7 - 1.9	1.0 - 1.1	—	—	353	548	353	548	353	548	141	115	—	31.6	31.4	29.9
SB(I/N)10-2	0.75	1.0	5.1 - 4.1	3.4 - 3.4	2.0 - 2.0	—	—	357	592	357	592	357	592	141	115	—	34.3	34.2	32.7
SB(I/N)10-3	1.1	1.5	8.0 - 6.9	4.8 - 5.0	2.8 - 2.9	—	—	387	676	387	676	387	676	177	141	—	42.0	36.3	34.8
SB(I/N)10-4	1.5	2.0	9.5 - 8.9	6.2 - 6.6	3.6 - 3.8	—	—	433	728	433	728	433	728	177	141	—	47.1	46.0	44.5
SB(I/N)10-5	2.2	3.0	13.4 - 12.7	8.8 - 9.4	5.1 - 5.4	—	—	463	758	463	758	463	758	177	141	—	50.0	49.8	48.3
SB(I/N)10-6	2.2	3.0	13.4 - 12.7	8.8 - 9.4	5.1 - 5.4	—	—	493	788	493	788	493	788	177	141	—	51.0	50.8	49.3
SB(I/N)10-7	3.0	4.0	—	11.8 - 12.3	6.8 - 7.1	6.8 - 6.9	3.9 - 4.0	528	844	528	844	528	844	197	147	—	60.5	60.3	58.8
SB(I/N)10-8	3.0	4.0	—	11.8 - 12.3	6.8 - 7.1	6.8 - 6.9	3.9 - 4.0	558	874	558	874	558	874	197	147	—	61.5	61.4	59.9
SB(I/N)10-9	3.0	4.0	—	11.8 - 12.3	6.8 - 7.1	6.8 - 6.9	3.9 - 4.0	588	904	588	904	588	904	197	147	—	62.5	62.4	60.9
SB(I/N)10-10	4.0	5.5	—	15.1 - 15.2	8.7 - 8.8	8.7 - 8.3	5.0 - 4.8	618	944	618	944	618	944	220	161	—	67.6	67.4	65.9
SB(I/N)10-12	4.0	5.5	—	15.1 - 15.2	8.7 - 8.8	8.7 - 8.3	5.0 - 4.8	678	1004	678	1004	678	1004	220	161	—	69.6	69.5	68.0
SB(I/N)10-14	5.5	7.5	—	18.7 - 18.0	10.8 - 10.4	10.9 - 10.8	6.3 - 6.2	770	1132	770	1132	770	1132	235	197	300	99.7	99.6	98.1
SB(I/N)10-16	5.5	7.5	—	18.7 - 18.0	10.8 - 10.4	10.9 - 10.8	6.3 - 6.2	830	1192	830	1192	830	1192	235	197	300	101.8	101.7	100.2
SB(I/N)10-18	7.5	10	—	25.5 - 24.9	14.7 - 14.4	14.9 - 14.8	8.6 - 8.5	890	1295	890	1295	—	—	235	197	300	109.8	111.7	—
SB(I/N)10-20	7.5	10	—	25.5 - 24.9	14.7 - 14.4	14.9 - 14.8	8.6 - 8.5	950	1355	950	1355	—	—	235	197	300	111.9	113.8	—
SB(I/N)10-22	7.5	10	—	25.5 - 24.9	14.7 - 14.4	14.9 - 14.8	8.6 - 8.5	1010	1415	1010	1415	—	—	235	197	300	114.0	114.9	—

SB, SBI, SBN 15


SB(I/N)15
50 Hz
ISO 9906 Annex A
0 U.S.GPM 20 40 60 80 100
H[m]
240
210
180
150
120
90
60
30
0
17
14
12
10
9
8
7
6
5
4
3
2
1
0 3 6 9 12 15 18 21 24 Q[m³/h]
0 50 100 150 200 250 300 350 400 Q[l/min]
P2 [kW]
0.8
0.6
0.4
0.2
0.0
Eta [%]
80
60
40
20
0
P2
Eta
0 3 6 9 12 15 18 21 24 Q[m³/h]
NPSH [m]
6
4
2
0
NPSH
0 3 6 9 12 15 18 21 24 Q[m³/h]

SB 15

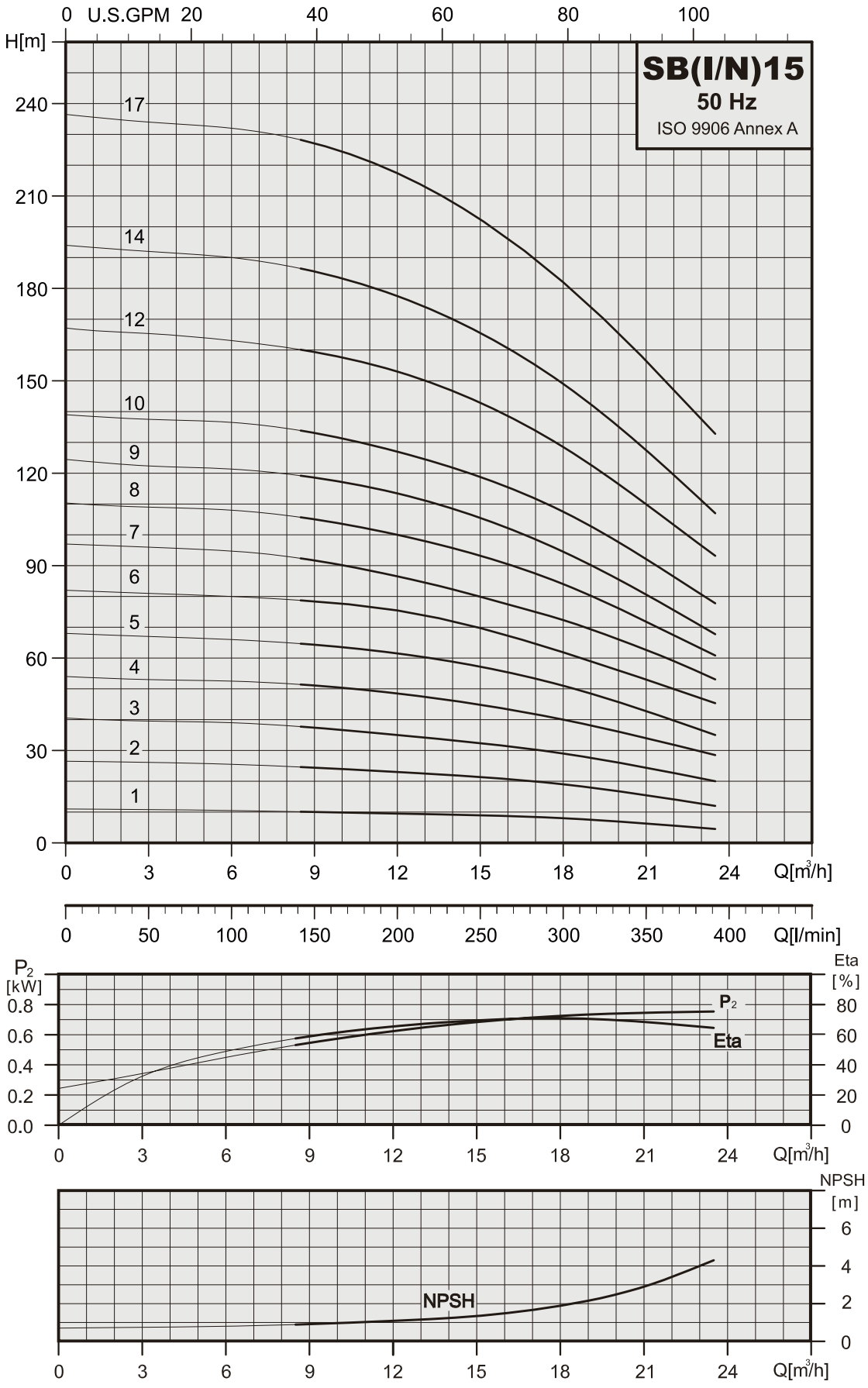


SB 15

50Hz	Motor		Nominal current [A]					Dimension[mm]							Net weight [kg]	
	P_2		1ø	3ø		3ø		DIN flange		OVAL					DIN	
Pump type	[kW]	[HP]	220-240V	△220-240V	Y380-415V	△380-415V	Y660-720V	H1	H2	H1	H2	D1	D2	D3	flange	OVAL
SB15-1	1.1	1.5	8.0 - 6.9	4.8 - 5.0	2.8 - 2.9	—	—	400	689	400	689	177	141	—	49.4	47.8
SB15-2	2.2	3.0	13.4 - 12.7	8.8 - 9.4	5.1 - 5.4	—	—	415	710	415	710	177	141	—	55.7	54.0
SB15-3	3.0	4.0	—	11.8 - 12.3	6.8 - 7.1	6.8 - 6.9	3.9 - 4.0	465	781	465	781	197	147	—	66.3	64.7
SB15-4	4.0	5.5	—	15.1 - 15.2	8.7 - 8.8	8.7 - 8.3	5.0 - 4.8	510	836	510	836	220	161	—	71.7	70.1
SB15-5	4.0	5.5	—	15.1 - 15.2	8.7 - 8.8	8.7 - 8.3	5.0 - 4.8	555	881	555	881	220	161	—	73.2	71.6
SB15-6	5.5	7.5	—	18.7 - 18.0	10.8 - 10.4	10.9 - 10.8	6.3 - 6.2	632	994	632	994	235	197	300	101.6	100.0
SB15-7	5.5	7.5	—	18.7 - 18.0	10.8 - 10.4	10.9 - 10.8	6.3 - 6.2	677	1039	677	1039	235	197	300	103.1	101.5
SB15-8	7.5	10	—	25.5 - 24.9	14.7 - 14.4	14.9 - 14.8	8.6 - 8.5	722	1127	—	—	235	197	300	110.7	—
SB15-9	7.5	10	—	25.5 - 24.9	14.7 - 14.4	14.9 - 14.8	8.6 - 8.5	767	1172	—	—	235	197	300	112.2	—
SB15-10	11.0	15	—	38.8 - 39.1	22.4 - 22.6	22.9 - 23.8	13.2 - 13.7	889	1334	—	—	269	215	350	145.5	—
SB15-12	11.0	15	—	38.8 - 39.1	22.4 - 22.6	22.9 - 23.8	13.2 - 13.7	979	1424	—	—	269	215	350	148.5	—
SB15-14	11.0	15	—	38.8 - 39.1	22.4 - 22.6	22.9 - 23.8	13.2 - 13.7	1069	1514	—	—	269	215	350	151.8	—
SB15-17	15.0	20	—	49.3 - 46.5	28.5 - 26.9	24.9 - 29.0	16.9 - 16.7	1204	1694	—	—	269	215	350	167.5	—

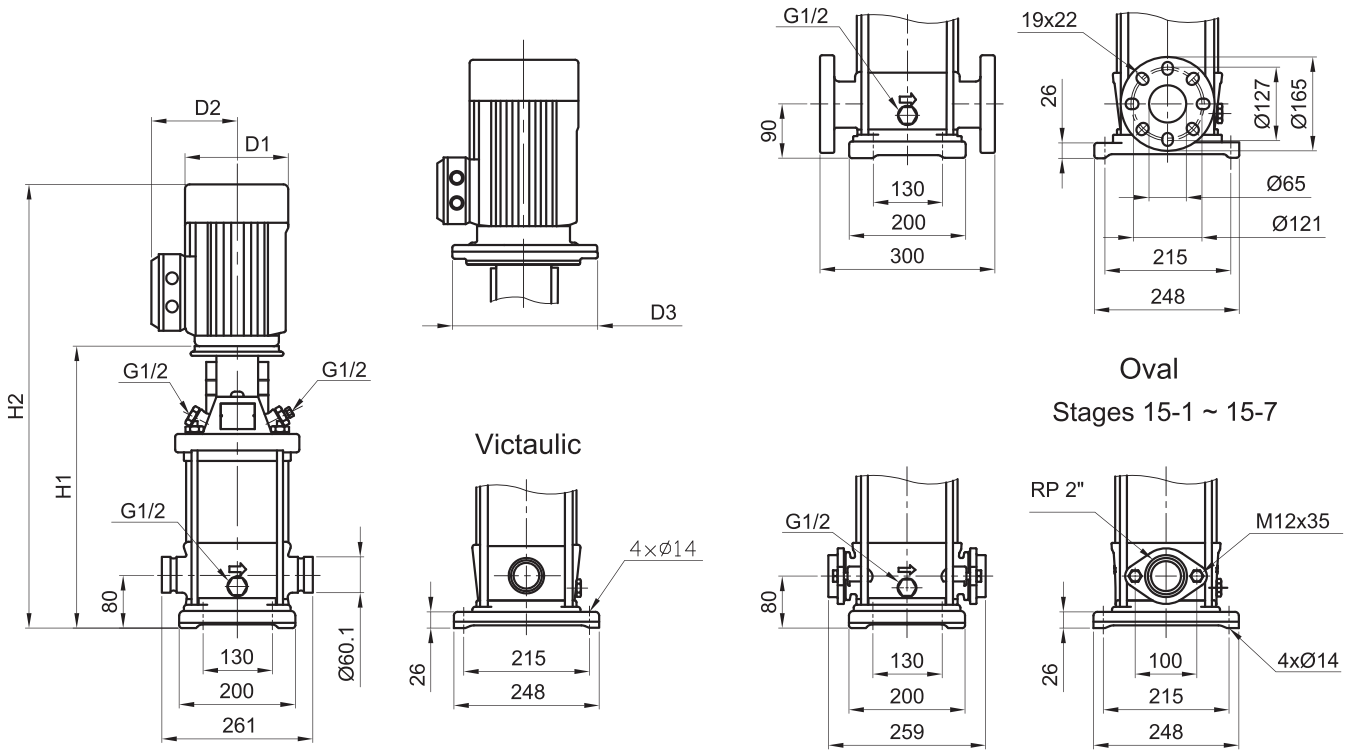
STAIRS

SB, SBI, SBN 15



SBI / SBN 15

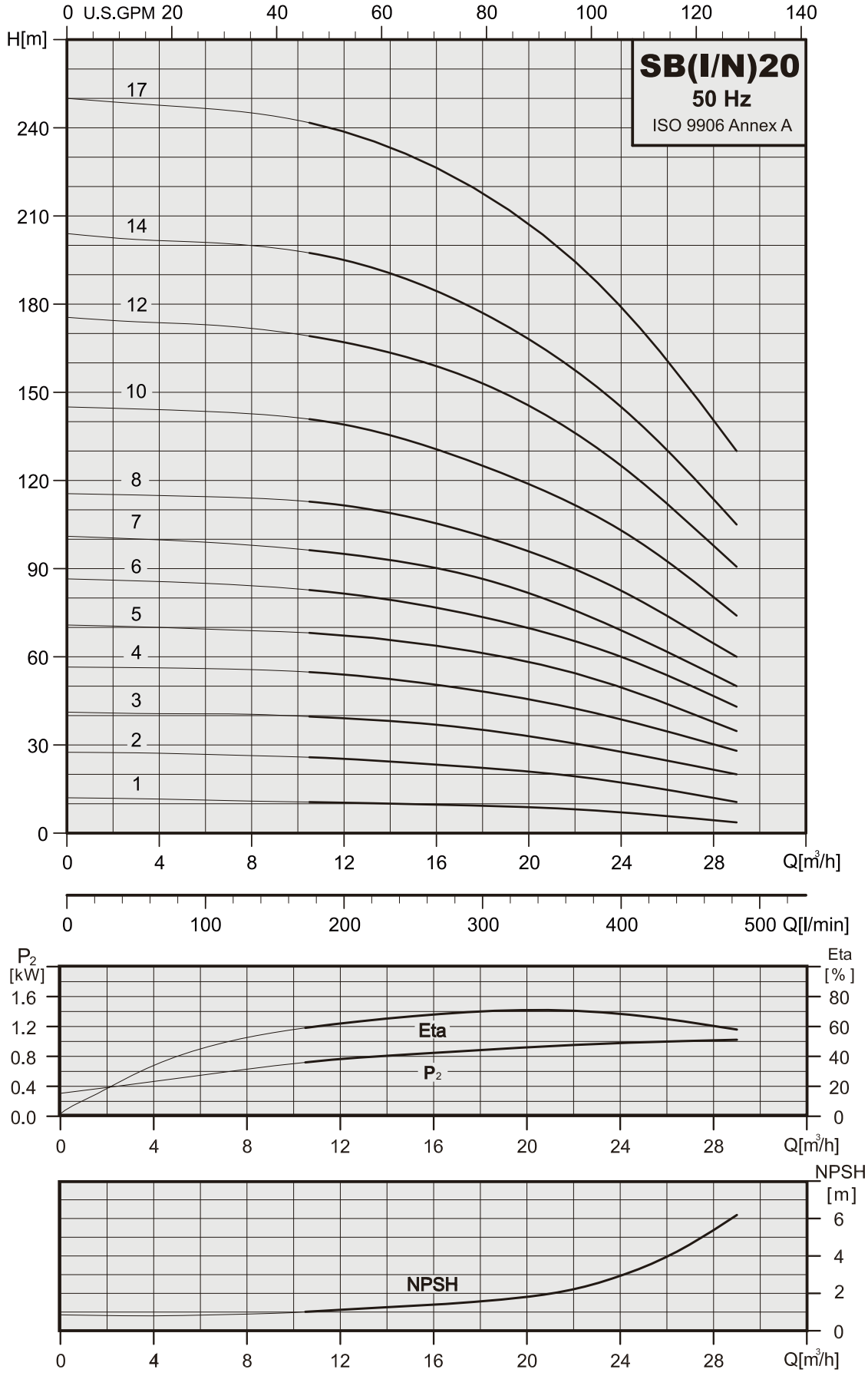
Flange(DIN) PN 16-25 / DN50
Flange(ANSI) Class150-300 / 2"
Flange(JIS) 10K-20K / 50A



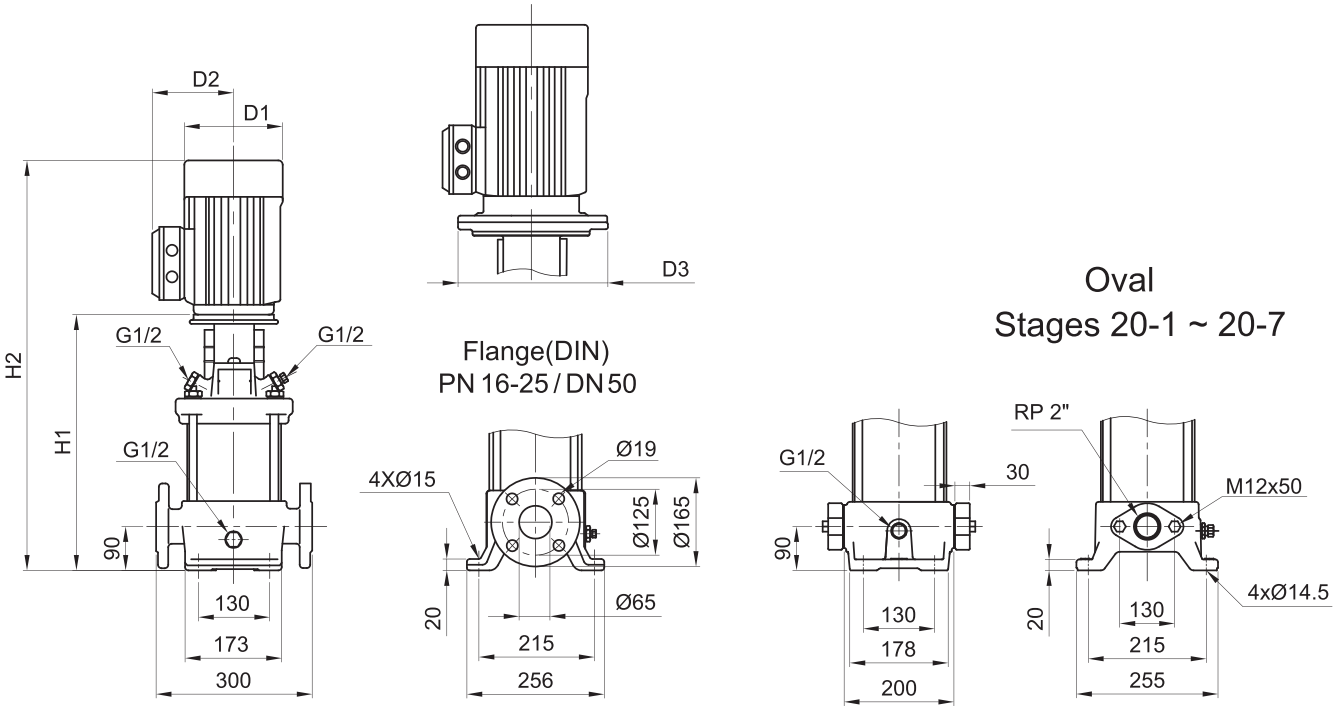
SBI ,SBN 15

50Hz	Motor		Nominal current [A]					Dimension[mm]									Net weight[kg]		
	P_2		1ø	3ø		3ø		Vactaulic		DIN flange		OVAL							
Pump type	[kW]	[HP]	220-240V	△220-240V	Y380-415V	△380-415V	Y660-720V	H1	H2	H1	H2	H1	H2	D1	D2	D3	Vactaulic	DIN flange	OVAL
SB(I/N)15-1	1.1	1.5	8.0 - 6.9	4.8 - 5.0	2.8 - 2.9	—	—	387	676	397	686	387	676	177	141	—	41.6	42.2	38.6
SB(I/N)15-2	2.2	3.0	13.4 - 12.7	8.8 - 9.4	5.1 - 5.4	—	—	403	698	413	708	403	698	177	141	—	47.7	48.3	44.7
SB(I/N)15-3	3.0	4.0	—	11.8 - 12.3	6.8 - 7.1	6.8 - 6.9	3.9 - 4.0	453	769	463	779	453	769	197	147	—	57.5	58.1	54.5
SB(I/N)15-4	4.0	5.5	—	15.1 - 15.2	8.7 - 8.8	8.7 - 8.3	5.0 - 4.8	498	824	508	834	498	824	220	161	—	63.0	63.6	60.0
SB(I/N)15-5	4.0	5.5	—	15.1 - 15.2	8.7 - 8.8	8.7 - 8.3	5.0 - 4.8	543	869	553	879	543	869	220	161	—	64.4	65.0	61.4
SB(I/N)15-6	5.5	7.5	—	18.7 - 18.0	10.8 - 10.4	10.9 - 10.8	6.3 - 6.2	620	982	630	992	620	982	235	197	300	93.9	94.6	91.0
SB(I/N)15-7	5.5	7.5	—	18.7 - 18.0	10.8 - 10.4	10.9 - 10.8	6.3 - 6.2	665	1027	675	1037	665	1027	235	197	300	95.4	96.0	92.4
SB(I/N)15-8	7.5	10	—	25.5 - 24.9	14.7 - 14.4	14.9 - 14.8	8.6 - 8.5	710	1115	720	1125	—	—	235	197	300	103.0	106.6	—
SB(I/N)15-9	7.5	10	—	25.5 - 24.9	14.7 - 14.4	14.9 - 14.8	8.6 - 8.5	755	1160	765	1170	—	—	235	197	300	104.5	105.1	—
SB(I/N)15-10	11.0	15	—	38.8 - 39.1	22.4 - 22.6	22.9 - 23.8	13.2 - 13.7	877	1322	887	1332	—	—	269	215	350	138.2	138.8	—
SB(I/N)15-12	11.0	15	—	38.8 - 39.1	22.4 - 22.6	22.9 - 23.8	13.2 - 13.7	967	1412	977	1422	—	—	269	215	350	141.0	141.7	—
SB(I/N)15-14	11.0	15	—	38.8 - 39.1	22.4 - 22.6	22.9 - 23.8	13.2 - 13.7	1057	1502	1067	1512	—	—	269	215	350	144.0	144.6	—
SB(I/N)15-17	15.0	20	—	49.3 - 46.5	28.5 - 26.9	24.9 - 29.0	16.9 - 16.7	1192	1682	1202	1692	—	—	269	215	350	158.9	159.5	—

SB, SBI, SBN 20


SB(I/N)20
50 Hz
ISO 9906 Annex A
0 U.S.GPM 20 40 60 80 100 120 140
H[m]
17
14
12
10
8
7
6
5
4
3
2
1
0 4 8 12 16 20 24 28 Q[m³/h]
0 100 200 300 400 500 Q[l/min]
P2 [kW]
Eta [%]
Eta
P2
0.0 0.4 0.8 1.2 1.6
0 20 40 60 80
0 4 8 12 16 20 24 28 Q[m³/h]
NPSH [m]
NPSH
0 2 4 6
0 4 8 12 16 20 24 28 Q[m³/h]

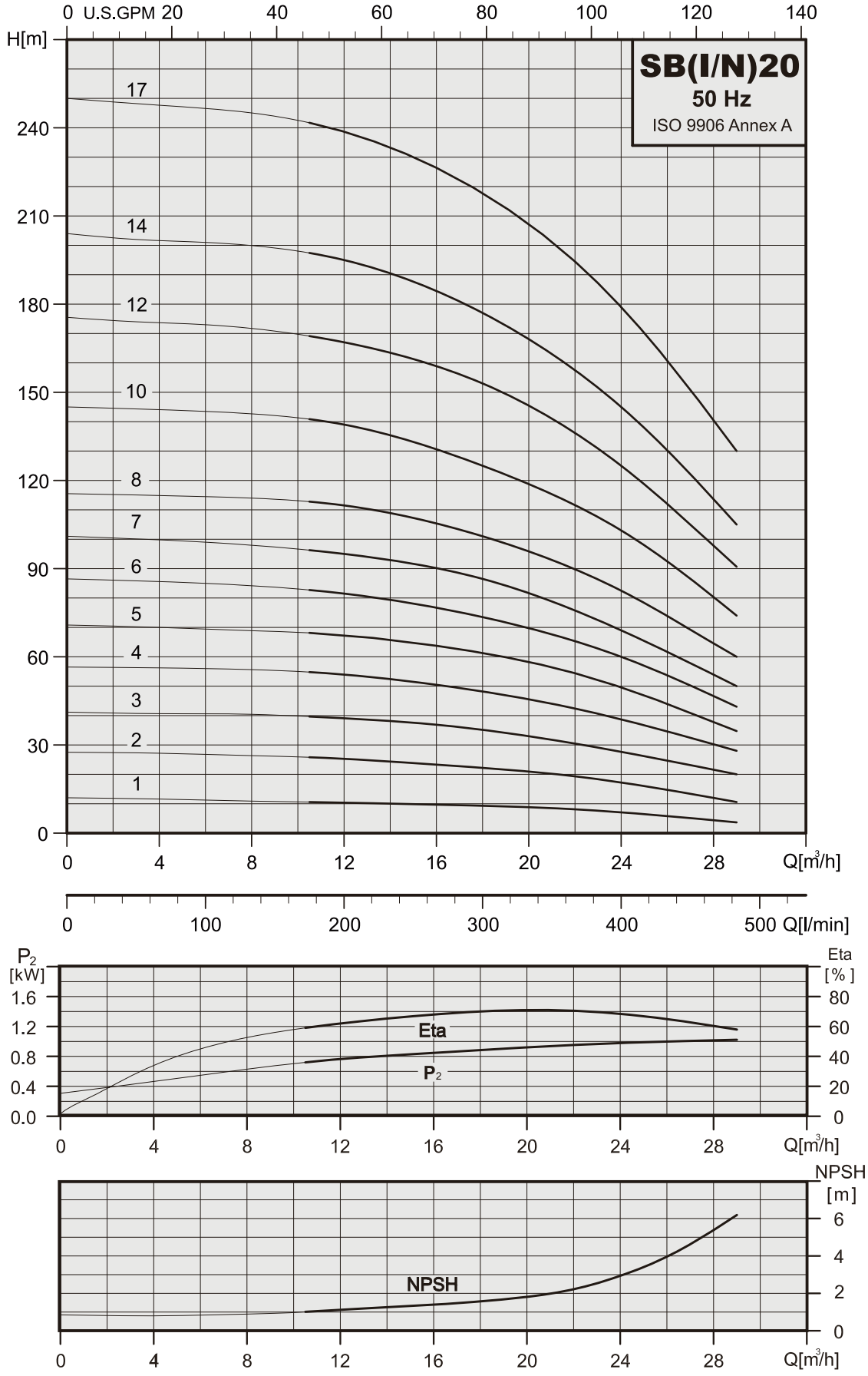
SB 20



SB 20

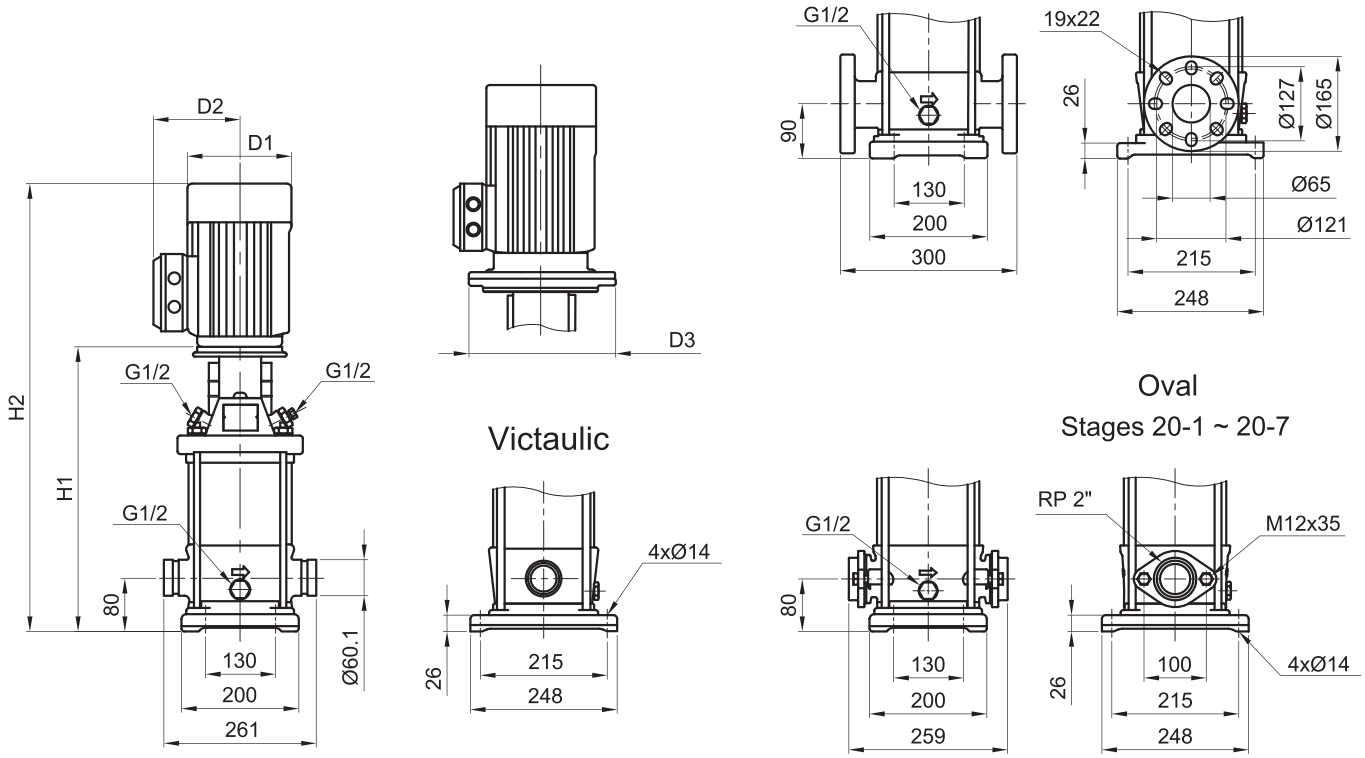
50Hz	Motor		Nominal current [A]					Dimension[mm]							Net weight [kg]	
	P_2		1ø	3ø		3ø		DIN flange		OVAL					DIN flange	OVAL
Pump type	[kW]	[HP]	220-240V	△220-240V	Y380-415V	△380-415V	Y660-720V	H1	H2	H1	H2	D1	D2	D3		
SB20-1	1.1	1.5	8.0 - 6.9	4.8 - 5.0	2.8 - 2.9	—	—	400	689	400	689	177	141	—	49.5	47.9
SB20-2	2.2	3.0	13.4 - 12.7	8.8 - 9.4	5.1 - 5.4	—	—	415	710	415	710	177	141	—	55.7	54.0
SB20-3	4.0	5.5	—	15.1 - 15.2	8.7 - 8.8	8.7 - 8.3	5.0 - 4.8	465	791	465	791	220	161	—	70.3	68.7
SB20-4	5.5	7.5	—	18.7 - 18.0	10.8 - 10.4	10.9 - 10.8	6.3 - 6.2	542	904	542	904	235	197	300	98.7	97.1
SB20-5	5.5	7.5	—	18.7 - 18.0	10.8 - 10.4	10.9 - 10.8	6.3 - 6.2	587	949	587	949	235	197	300	100.1	98.5
SB20-6	7.5	10	—	25.5 - 24.9	14.7 - 14.4	14.9 - 14.8	8.6 - 8.5	632	1037	632	1037	235	197	300	107.5	105.9
SB20-7	7.5	10	—	25.5 - 24.9	14.7 - 14.4	14.9 - 14.8	8.6 - 8.5	677	1082	677	1082	235	197	300	109.0	107.4
SB20-8	11.0	15	—	38.8 - 39.1	22.4 - 22.6	22.9 - 23.8	13.2 - 13.7	799	1244	—	—	269	215	350	142.6	—
SB20-10	11.0	15	—	38.8 - 39.1	22.4 - 22.6	22.9 - 23.8	13.2 - 13.7	889	1334	—	—	269	215	350	145.5	—
SB20-12	15.0	20	—	49.3 - 46.5	28.5 - 26.9	24.9 - 29.0	16.9 - 16.7	979	1469	—	—	269	215	350	159.1	—
SB20-14	15.0	20	—	49.3 - 46.5	28.5 - 26.9	24.9 - 29.0	16.9 - 16.7	1069	1559	—	—	269	215	350	162.0	—
SB20-17	18.5	25	—	60.2 - 55.4	34.8 - 32.0	35.2 - 33.5	20.3 - 19.3	1204	1744	—	—	318	241	350	199.4	—

SB, SBI, SBN 20


SB(I/N)20
50 Hz
ISO 9906 Annex A
0 U.S.GPM 20 40 60 80 100 120 140
H[m]
17
14
12
10
8
7
6
5
4
3
2
1
0 4 8 12 16 20 24 28 Q[m³/h]
0 100 200 300 400 500 Q[l/min]
P2 [kW]
Eta [%]
Eta
P2
0.0 0.4 0.8 1.2 1.6
0 20 40 60 80
0 4 8 12 16 20 24 28 Q[m³/h]
NPSH [m]
NPSH
0 2 4 6
0 4 8 12 16 20 24 28 Q[m³/h]

SBI / SBN 20

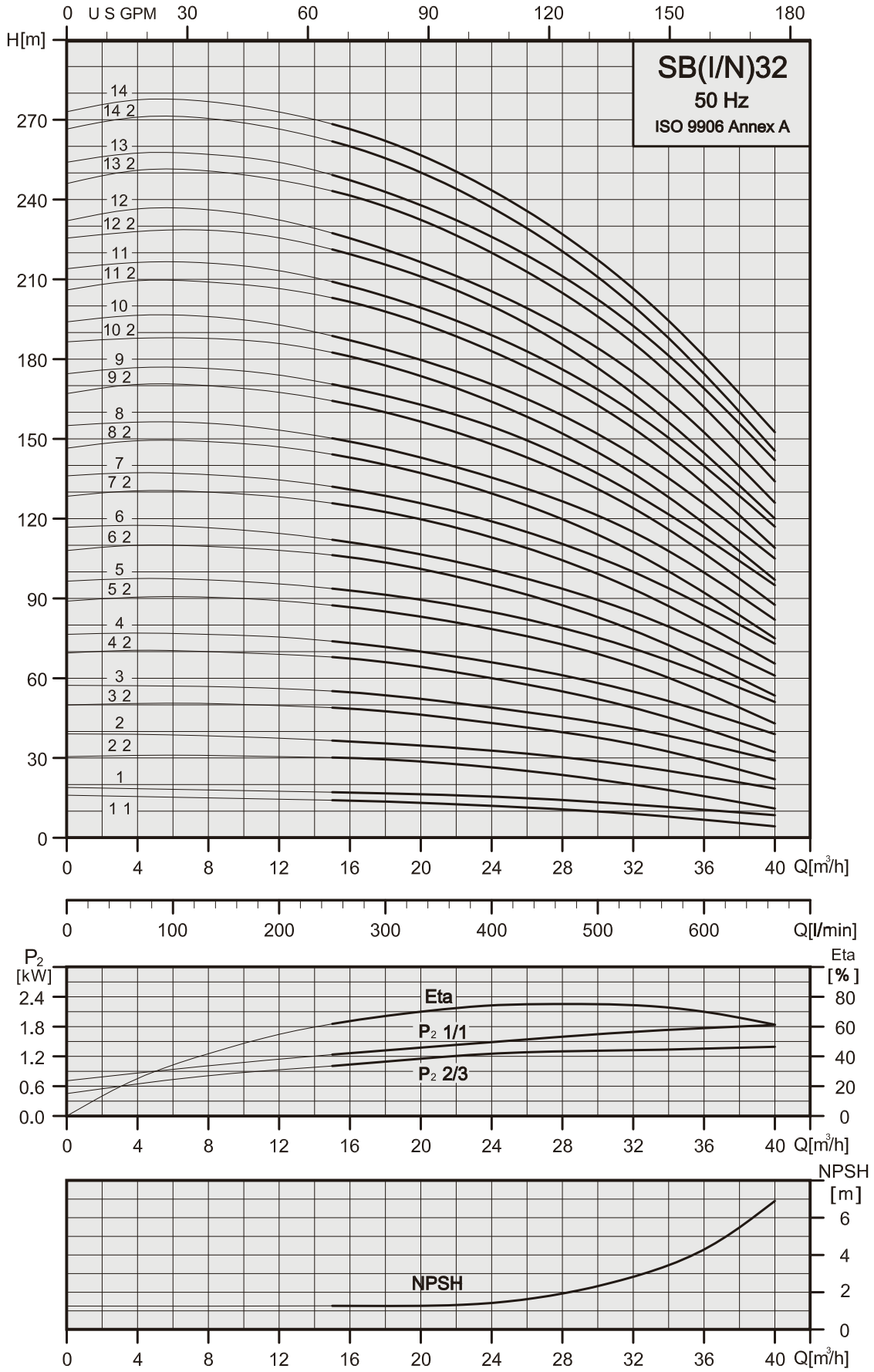
Flange(DIN) PN 16-25 / DN50
Flange(ANSI) Class150-300 / 2"
Flange(JIS) 10K-20K / 50A



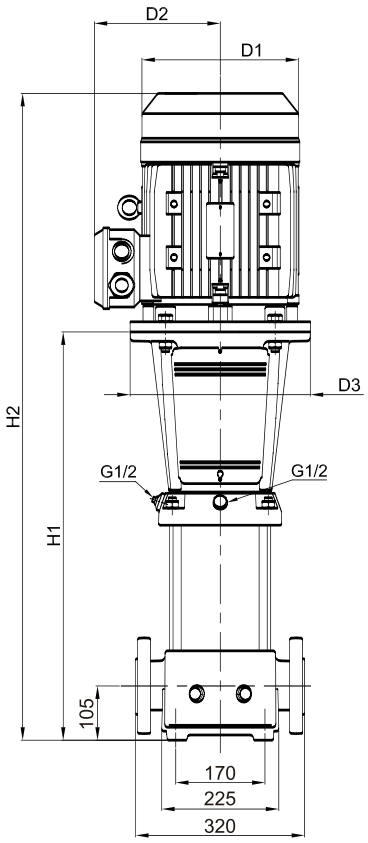
SBI ,SBN 20

50Hz	Motor		Nominal current [A]					Dimension[mm]									Net weight[kg]		
	P_2		1ø	3ø		3ø		Vactaulic		DIN flange		OVAL							
Pump type	[kW]	[HP]	220-240V	△220-240V	Y380-415V	△380-415V	Y380-415V	H1	H2	H1	H2	H1	H2	D1	D2	D3	Vactaulic	DIN flange	OVAL
SBI(N)20-1	1.1	1.5	8.0 - 6.9	4.8 - 5.0	2.8 - 2.9	—	—	387	676	397	686	387	676	177	141	—	42.6	42.2	38.6
SBI(N)20-2	2.2	3.0	13.4 - 12.7	8.8 - 9.4	5.1 - 5.4	—	—	403	698	413	708	403	698	177	141	—	47.7	48.3	44.7
SBI(N)20-3	4.0	5.5	—	15.1 - 15.2	8.7 - 8.8	8.7 - 8.3	5.0 - 4.8	453	779	463	789	453	779	220	161	—	61.5	62.2	58.6
SBI(N)20-4	5.5	7.5	—	18.7 - 18.0	10.8 - 10.4	10.9 - 10.8	6.3 - 6.2	530	892	540	902	530	892	235	197	300	91.0	91.6	88.0
SBI(N)20-5	5.5	7.5	—	18.7 - 18.0	10.8 - 10.4	10.9 - 10.8	6.3 - 6.2	575	937	585	947	575	937	235	197	300	92.5	93.1	89.5
SBI(N)20-6	7.5	10	—	25.5 - 24.9	14.7 - 14.4	14.9 - 14.8	8.6 - 8.5	620	1025	630	1035	620	1025	235	197	300	99.8	100.5	96.9
SBI(N)20-7	7.5	10	—	25.5 - 24.9	14.7 - 14.4	14.9 - 14.8	8.6 - 8.5	665	1070	675	1080	665	1070	235	197	300	101.3	101.9	98.3
SBI(N)20-8	11.0	15	—	38.8 - 39.1	22.4 - 22.6	22.9 - 23.8	13.2 - 13.7	787	1232	797	1242	—	—	269	215	350	135.2	135.8	—
SBI(N)20-10	11.0	15	—	38.8 - 39.1	22.4 - 22.6	22.9 - 23.8	13.2 - 13.7	877	1322	887	1332	—	—	269	215	350	138.2	138.8	—
SBI(N)20-12	15.0	20	—	49.3 - 46.5	28.5 - 26.9	24.9 - 29.0	16.9 - 16.7	967	1457	977	1467	—	—	269	215	350	151.7	152.3	—
SBI(N)20-14	15.0	20	—	49.3 - 46.5	28.5 - 26.9	24.9 - 29.0	16.9 - 16.7	1057	1547	1067	1557	—	—	269	215	350	154.6	155.2	—
SBI(N)20-17	18.5	25	—	60.2 - 55.4	34.8 - 32.0	35.2 - 33.5	20.3 - 19.3	1192	1732	1202	1742	—	—	318	241	350	191.8	192.4	—

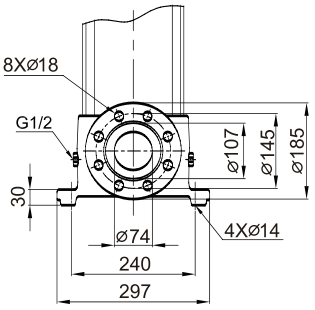
SB, SBI, SBN 32


SB(I/N)32
50 Hz
ISO 9906 Annex A
0 U S GPM 30 60 90 120 150 180
H[m]
0 4 8 12 16 20 24 28 32 36 40 Q[m³/h]
0 100 200 300 400 500 600 Q[l/min]
P2 [kW]
Eta [%]
Eta
P2 1/1
P2 2/3
NPSH [m]
NPSH

SB 32



Flange(DIN)
PN16-25-40 / DN65

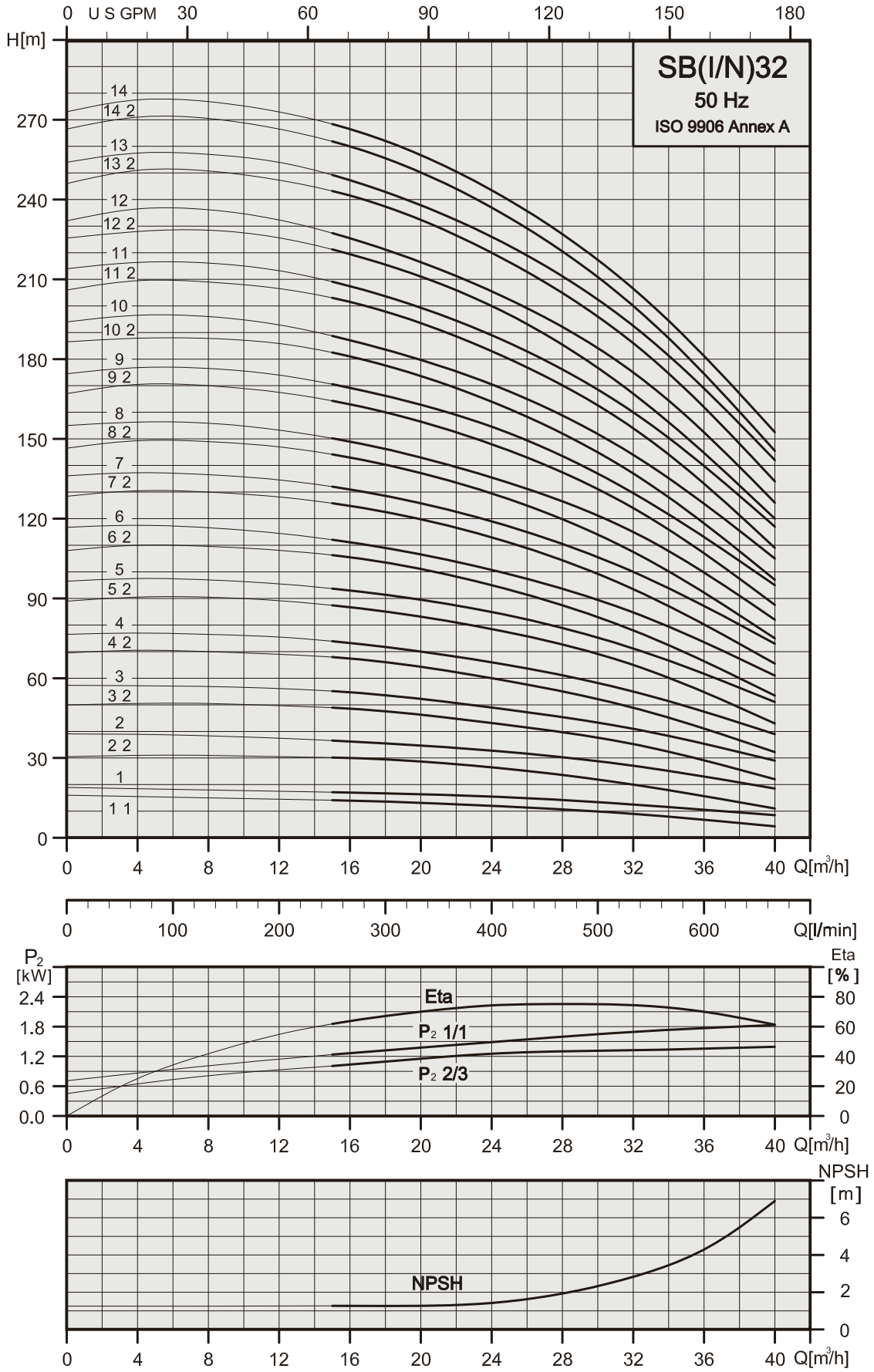


SB 32

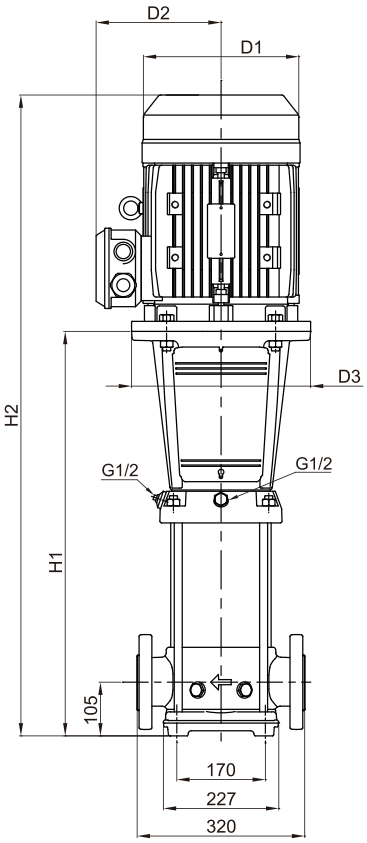
50Hz	Motor		Nominal current [A]					Dimension[mm]					Net weight [kg]
	P_2		1ø	3ø		3ø		DIN flange					
Pump type	[kW]	[HP]	220-240V	△220-240V	Y380-415V	△380-415V	Y660-720V	H1	H2	D1	D2	D3	DIN flange
SB 32-1-1	1.5	2	6.2 - 6.6	9.5 - 8.9	3.6 - 3.8	—	—	504	799	177	141	280	72.5
SB 32-1	2.2	3	13.4 - 12.7	8.8 - 9.4	5.1 - 5.4	—	—	504	799	177	141	280	74.3
SB 32-2-2	3	4	—	11.8 - 12.3	6.8 - 7.1	6.8 - 6.9	3.9 - 4.0	574	890	197	147	280	85.6
SB 32-2	4	5.5	—	15.1 - 15.2	8.7 - 8.8	8.7 - 8.3	5.0 - 4.8	574	900	220	161	280	89.6
SB 32-3-2	5.5	5.5	—	18.7 - 18.0	10.8 - 10.4	10.9 - 10.8	6.3 - 6.2	644	1006	235	197	300	109.5
SB 32-3	5.5	7.5	—	18.7 - 18.0	10.8 - 10.4	10.9 - 10.8	6.3 - 6.2	644	1006	235	197	300	109.5
SB 32-4-2	7.5	10	—	25.5 - 24.9	14.7 - 14.4	14.9 - 14.8	8.6 - 8.5	714	1119	235	197	300	118.4
SB 32-4	7.5	10	—	25.5 - 24.9	14.7 - 14.4	14.9 - 14.8	8.6 - 8.5	714	1119	235	197	300	118.4
SB 32-5-2	11	15	—	38.8 - 39.1	22.4 - 22.6	22.9 - 23.8	13.2 - 13.7	894	1339	269	215	350	158.8
SB 32-5	11	15	—	38.8 - 39.1	22.4 - 22.6	22.9 - 23.8	13.2 - 13.7	894	1339	269	215	350	158.8
SB 32-6-2	11	15	—	38.8 - 39.1	22.4 - 22.6	22.9 - 23.8	13.2 - 13.7	964	1409	269	215	350	161.8
SB 32-6	11	15	—	38.8 - 39.1	22.4 - 22.6	22.9 - 23.8	13.2 - 13.7	964	1409	269	215	350	161.8
SB 32-7-2	15	20	—	49.3 - 46.5	28.5 - 26.9	24.9 - 29.0	16.9 - 16.7	1034	1524	269	215	350	175.5
SB 32-7	15	20	—	49.3 - 46.5	28.5 - 26.9	24.9 - 29.0	16.9 - 16.7	1034	1524	269	215	350	175.5
SB 32-8-2	15	20	—	49.3 - 46.5	28.5 - 26.9	24.9 - 29.0	16.9 - 16.7	1104	1594	269	215	350	178.6
SB 32-8	15	20	—	49.3 - 46.5	28.5 - 26.9	24.9 - 29.0	16.9 - 16.7	1104	1594	269	215	350	178.6
SB 32-9-2	18.5	25	—	60.2 - 55.4	34.8 - 32.0	35.2 - 33.5	20.3 - 19.3	1174	1714	318	241	350	214.6
SB 32-9	18.5	25	—	60.2 - 55.4	34.8 - 32.0	35.2 - 33.5	20.3 - 19.3	1174	1714	318	241	350	214.6
SB 32-10-2	18.5	25	—	60.2 - 55.4	34.8 - 32.0	35.2 - 33.5	20.3 - 19.3	1244	1784	318	241	350	217.7
SB 32-10	18.5	25	—	60.2 - 55.4	34.8 - 32.0	35.2 - 33.5	20.3 - 19.3	1244	1784	318	241	350	217.7
SB 32-11-2	22	30	—	71.3 - 67.5	41.2 - 39.0	41.3 - 39.6	23.8 - 22.8	1314	1854	318	241	350	232.8
SB 32-11	22	30	—	71.3 - 67.5	41.2 - 39.0	41.3 - 39.6	23.8 - 22.8	1314	1854	318	241	350	232.8
SB 32-12-2	22	30	—	71.3 - 67.5	41.2 - 39.0	41.3 - 39.6	23.8 - 22.8	1384	1924	318	241	350	234.8
SB 32-12	22	30	—	71.3 - 67.5	41.2 - 39.0	41.3 - 39.6	23.8 - 22.8	1384	1924	318	241	350	234.8
SB 32-13-2	30	40	—	—	—	55.4 - 50.7	31.9 - 29.2	1454	2114	390	295	400	341.2
SB 32-13	30	40	—	—	—	55.4 - 50.7	31.9 - 29.2	1454	2114	390	295	400	341.2
SB 32-14-2	30	40	—	—	—	55.4 - 50.7	31.9 - 29.2	1524	2184	390	295	400	344.3
SB 32-14	30	40	—	—	—	55.4 - 50.7	31.9 - 29.2	1524	2184	390	295	400	344.3

STAIRS

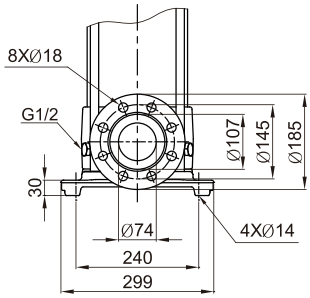
SB, SBI, SBN 32



SBI / SBN 32



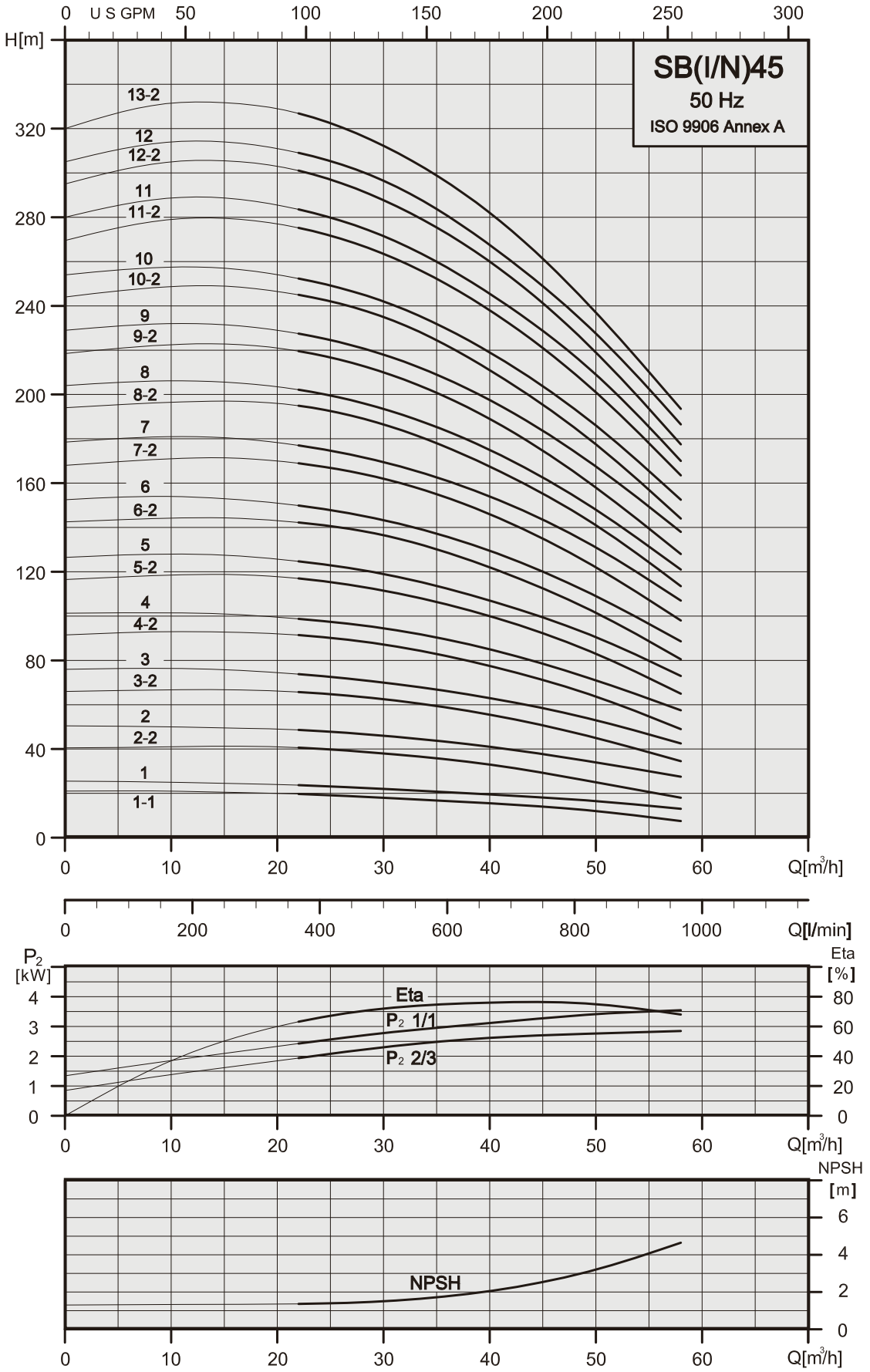
Flange(DIN)
PN16-25-40 / DN65



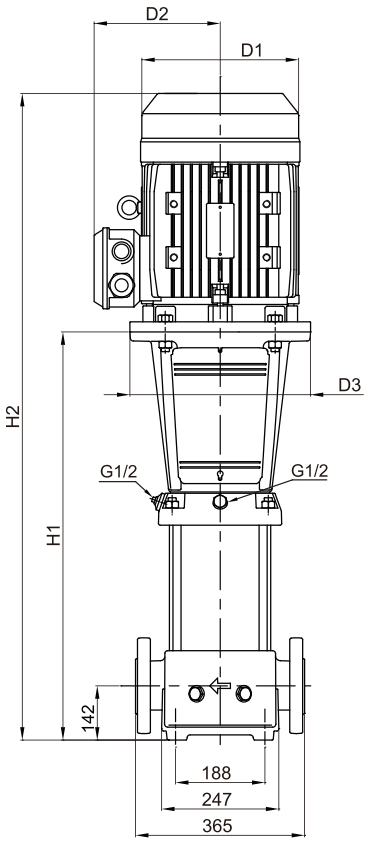
SBI ,SBN 32

50Hz	Motor		Nominal current [A]					Dimension[mm]					Net weight [kg]
	P_2		1ø	3ø		3ø		DIN flange					
Pump type	[kW]	[HP]	220-240V	△220-240V	Y380-415V	△380-415V	Y660-720V	H1	H2	D1	D2	D3	DIN flange
SBI(N) 32-1-1	1.5	2.0	6.2 - 6.6	9.5 - 8.9	3.6 - 3.8	—	—	504	799	177	141	280	67.5
SBI(N) 32-1	2.2	3.0	13.4 - 12.7	8.8 - 9.4	5.1 - 5.4	—	—	504	799	177	141	280	69.3
SBI(N) 32-2-2	3	4.0	—	11.8 - 12.3	6.8 - 7.1	6.8 - 6.9	3.9 - 4.0	574	890	197	147	280	80.5
SBI(N) 32-2	4	5.5	—	15.1 - 15.2	8.7 - 8.8	8.7 - 8.3	5.0 - 4.8	574	900	220	161	280	84.5
SBI(N) 32-3-2	5.5	5.5	—	18.7 - 18.0	10.8 - 10.4	10.9 - 10.8	6.3 - 6.2	644	1006	235	197	300	104.4
SBI(N) 32-3	5.5	7.5	—	18.7 - 18.0	10.8 - 10.4	10.9 - 10.8	6.3 - 6.2	644	1006	235	197	300	104.4
SBI(N) 32-4-2	7.5	10	—	25.5 - 24.9	14.7 - 14.4	14.9 - 14.8	8.6 - 8.5	714	1119	235	197	300	113.5
SBI(N) 32-4	7.5	10	—	25.5 - 24.9	14.7 - 14.4	14.9 - 14.8	8.6 - 8.5	714	1119	235	197	300	113.5
SBI(N) 32-5-2	11	15	—	38.8 - 39.1	22.4 - 22.6	22.9 - 23.8	13.2 - 13.7	894	1339	269	215	350	153.8
SBI(N) 32-5	11	15	—	38.8 - 39.1	22.4 - 22.6	22.9 - 23.8	13.2 - 13.7	894	1339	269	215	350	153.8
SBI(N) 32-6-2	11	15	—	38.8 - 39.1	22.4 - 22.6	22.9 - 23.8	13.2 - 13.7	964	1409	269	215	350	156.9
SBI(N) 32-6	11	15	—	38.8 - 39.1	22.4 - 22.6	22.9 - 23.8	13.2 - 13.7	964	1409	269	215	350	156.9
SBI(N) 32-7-2	15	20	—	49.3 - 46.5	28.5 - 26.9	24.9 - 29.0	16.9 - 16.7	1034	1524	269	215	350	170.6
SBI(N) 32-7	15	20	—	49.3 - 46.5	28.5 - 26.9	24.9 - 29.0	16.9 - 16.7	1034	1524	269	215	350	170.6
SBI(N) 32-8-2	15	20	—	49.3 - 46.5	28.5 - 26.9	24.9 - 29.0	16.9 - 16.7	1104	1594	269	215	350	173.9
SBI(N) 32-8	15	20	—	49.3 - 46.5	28.5 - 26.9	24.9 - 29.0	16.9 - 16.7	1104	1594	269	215	350	173.9
SBI(N) 32-9-2	18.5	25	—	60.2 - 55.4	34.8 - 32.0	35.2 - 33.5	20.3 - 19.3	1174	1714	318	241	350	201.6
SBI(N) 32-9	18.5	25	—	60.2 - 55.4	34.8 - 32.0	35.2 - 33.5	20.3 - 19.3	1174	1714	318	241	350	201.6
SBI(N) 32-10-2	18.5	25	—	60.2 - 55.4	34.8 - 32.0	35.2 - 33.5	20.3 - 19.3	1244	1784	318	241	350	204.2
SBI(N) 32-10	18.5	25	—	60.2 - 55.4	34.8 - 32.0	35.2 - 33.5	20.3 - 19.3	1244	1784	318	241	350	204.2
SBI(N) 32-11-2	22	30	—	71.3 - 67.5	41.2 - 39.0	41.3 - 39.6	23.8 - 22.8	1314	1854	318	241	350	227.6
SBI(N) 32-11	22	30	—	71.3 - 67.5	41.2 - 39.0	41.3 - 39.6	23.8 - 22.8	1314	1854	318	241	350	227.6
SBI(N) 32-12-2	22	30	—	71.3 - 67.5	41.2 - 39.0	41.3 - 39.6	23.8 - 22.8	1384	1924	318	241	350	230.3
SBI(N) 32-12	22	30	—	71.3 - 67.5	41.2 - 39.0	41.3 - 39.6	23.8 - 22.8	1384	1924	318	241	350	230.3
SBI(N) 32-13-2	30	40	—	—	—	55.4 - 50.7	31.9 - 29.2	1454	2114	390	295	400	336.6
SBI(N) 32-13	30	40	—	—	—	55.4 - 50.7	31.9 - 29.2	1454	2114	390	295	400	336.6
SBI(N) 32-14-2	30	40	—	—	—	55.4 - 50.7	31.9 - 29.2	1524	2184	390	295	400	339.3
SBI(N) 32-14	30	40	—	—	—	55.4 - 50.7	31.9 - 29.2	1524	2184	390	295	400	339.3

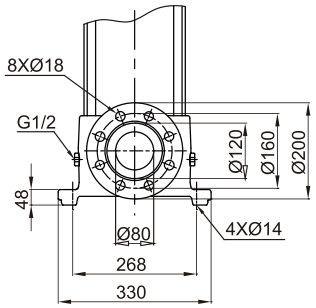
SB, SBI, SBN 45


SB(I/N)45
50 Hz
ISO 9906 Annex A
0 U S GPM 50 100 150 200 250 300
H[m]
320
280
240
200
160
120
80
40
0
13-2
12
12-2
11
11-2
10
10-2
9
9-2
8
8-2
7
7-2
6
6-2
5
5-2
4
4-2
3
3-2
2
2-2
1
1-1
0 10 20 30 40 50 60 Q[m³/h]
0 200 400 600 800 1000 Q[l/min]
P2 [kW]
Eta [%]
Eta
P2 1/1
P2 2/3
NPSH [m]
NPSH

SB 45



Flange(DIN)
PN16-25-40 / DN80

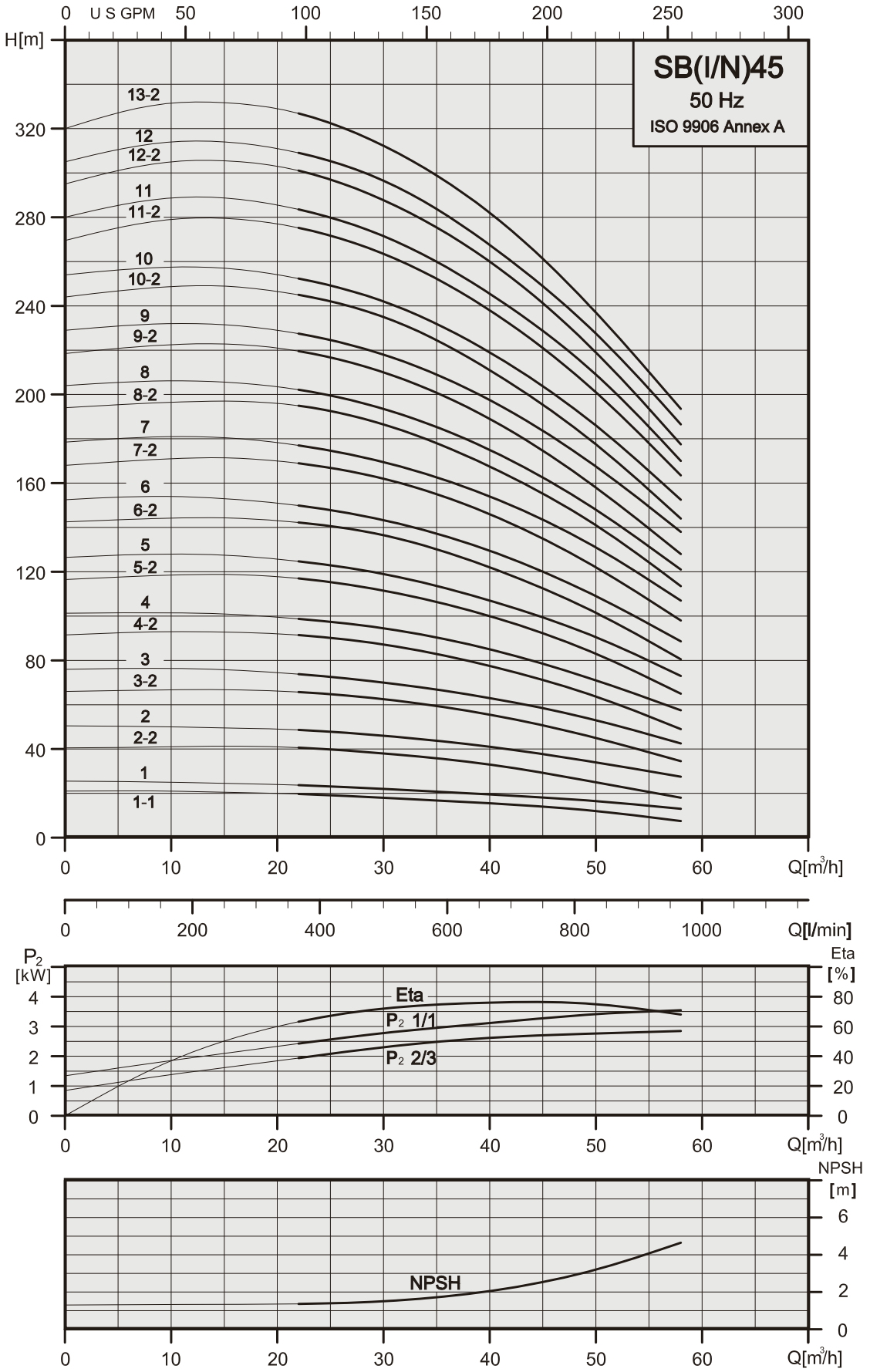


SB 45

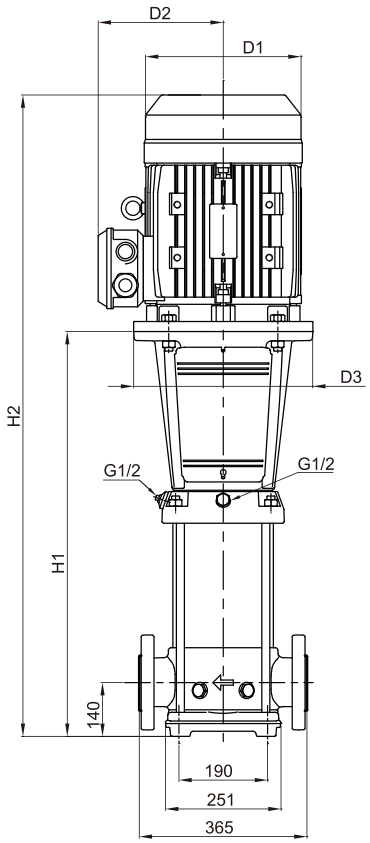
50Hz	Motor		Nominal current [A]				Dimension[mm]					Net weight [kg]
	P_2		3ø		3ø		DIN flange					
Pump type	[kW]	[HP]	△220-240V	Y380-415V	△380-415V	Y660-720V	H1	H2	D1	D2	D3	DIN flange
SB 45-1-1	3	4	11.8 - 12.3	6.8 - 7.1	6.8 - 6.9	3.9 - 4.0	561	877	197	147	280	93.1
SB 45-1	4	5.5	15.1 - 15.2	8.7 - 8.8	8.7 - 8.3	5.0 - 4.8	561	887	220	161	280	97.1
SB 45-2-2	5.5	7.5	18.7 - 18.0	10.8 - 10.4	10.9 - 10.8	6.3 - 6.2	641	1003	235	197	300	117.6
SB 45-2	7.5	10	25.5 - 24.9	14.7 - 14.4	14.9 - 14.8	8.6 - 8.5	641	1046	235	197	300	123.5
SB 45-3-2	11	15	38.8 - 39.1	22.4 - 22.6	22.9 - 23.8	13.2 - 13.7	831	1276	269	215	350	164.5
SB 45-3	11	15	38.8 - 39.1	22.4 - 22.6	22.9 - 23.8	13.2 - 13.7	831	1276	269	215	350	164.5
SB 45-4-2	15	20	49.3 - 46.5	28.5 - 26.9	24.9 - 29.0	16.9 - 16.7	911	1401	269	215	350	178.9
SB 45-4	15	20	49.3 - 46.5	28.5 - 26.9	24.9 - 29.0	16.9 - 16.7	911	1401	269	215	350	178.9
SB 45-5-2	18.5	25	60.2 - 55.4	34.8 - 32.0	35.2 - 33.5	20.3 - 19.3	991	1531	318	241	350	215.6
SB 45-5	18.5	25	60.2 - 55.4	34.8 - 32.0	35.2 - 33.5	20.3 - 19.3	991	1531	318	241	350	215.6
SB 45-6-2	22	30	71.3 - 67.5	41.2 - 39.0	41.3 - 39.6	23.8 - 22.8	1071	1611	318	241	350	231.1
SB 45-6	22	30	71.3 - 67.5	41.2 - 39.0	41.3 - 39.6	23.8 - 22.8	1071	1611	318	241	350	231.1
SB 45-7-2	30	40	—	—	55.4 - 50.7	31.9 - 29.2	1151	1811	390	295	400	359.5
SB 45-7	30	40	—	—	55.4 - 50.7	31.9 - 29.2	1151	1811	390	295	400	359.5
SB 45-8-2	30	40	—	—	55.4 - 50.7	31.9 - 29.2	1231	1891	390	295	400	343.2
SB 45-8	30	40	—	—	55.4 - 50.7	31.9 - 29.2	1231	1891	390	295	400	343.2
SB 45-9-2	30	40	—	—	55.4 - 50.7	31.9 - 29.2	1311	1971	390	295	400	347.0
SB 45-9	37	50	—	—	67.7 - 62.0	39.0 - 35.7	1311	1971	390	295	400	365.0
SB 45-10-2	37	50	—	—	67.7 - 62.0	39.0 - 35.7	1391	2051	390	295	400	368.7
SB 45-10	37	50	—	—	67.7 - 62.0	39.0 - 35.7	1391	2051	390	295	400	368.7
SB 45-11-2	45	60	—	—	82.3 - 75.4	47.4 - 43.4	1471	2161	446	325	450	448.5
SB 45-11	45	60	—	—	82.3 - 75.4	47.4 - 43.4	1471	2161	446	325	450	448.5
SB 45-12-2	45	60	—	—	82.3 - 75.4	47.4 - 43.4	1551	2241	446	325	450	452.5
SB 45-12	45	60	—	—	82.3 - 75.4	47.4 - 43.4	1551	2241	446	325	450	452.5
SB 45-13-2	45	60	—	—	82.3 - 75.4	47.4 - 43.4	1631	2321	446	325	450	455.9

STAIRS

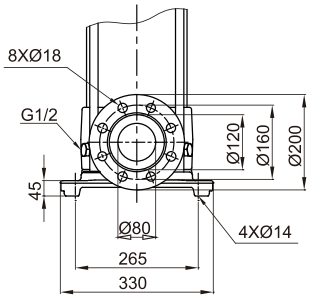
SB, SBI, SBN 45



SBI / SBN 45



Flange(DIN)
PN16-25-40 / DN80

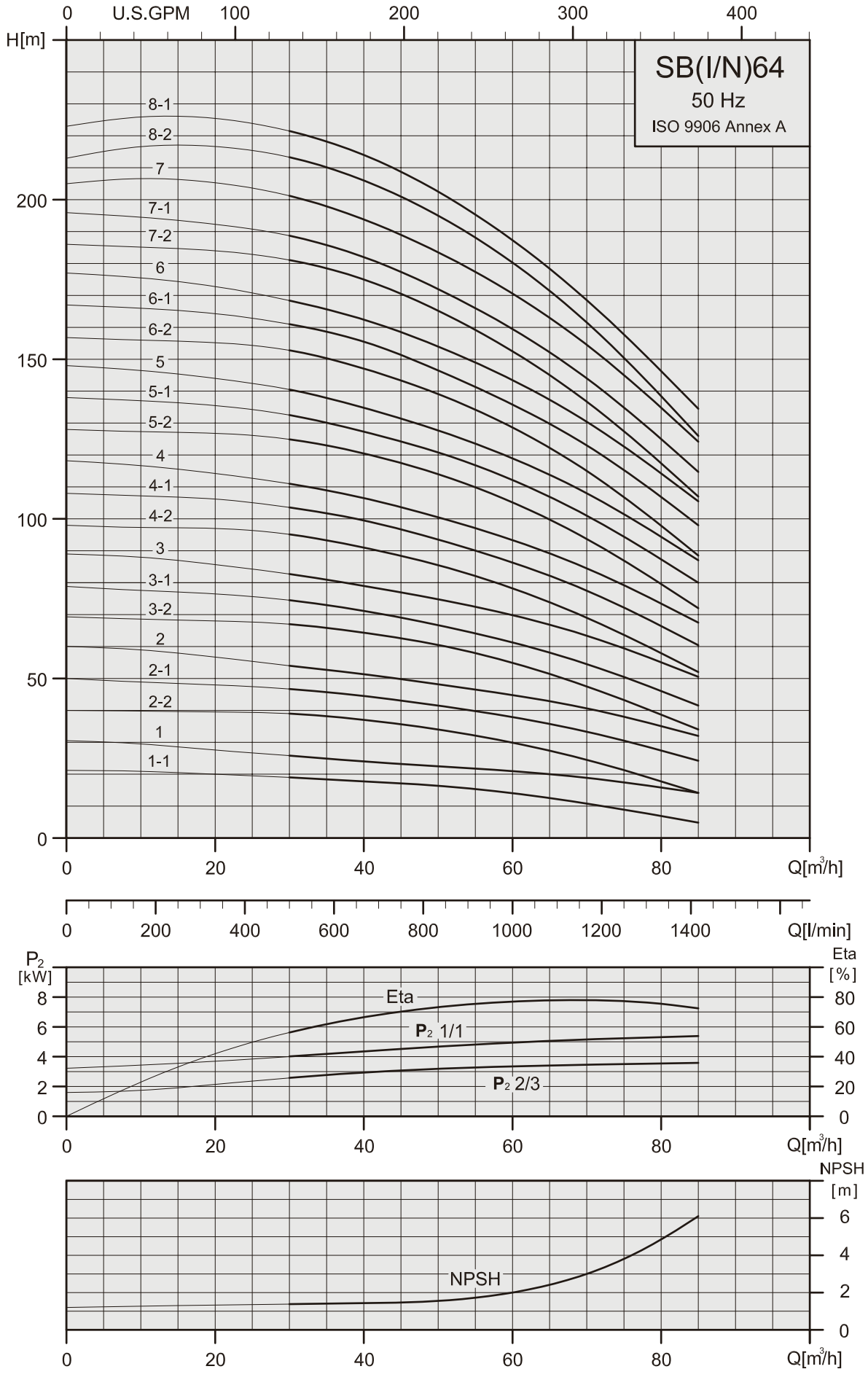


SBI ,SBN 45

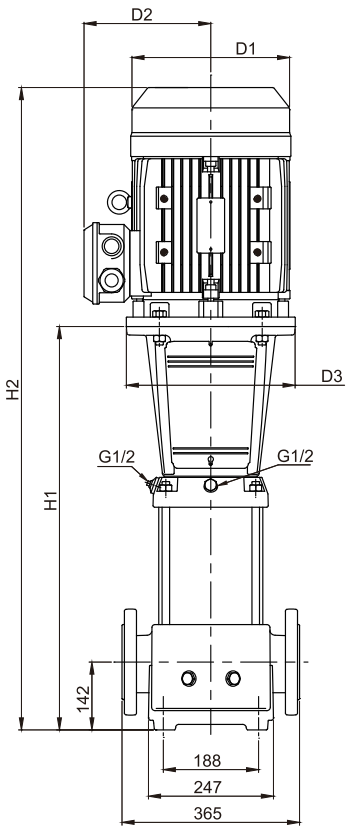
50Hz	Motor		Nominal current [A]				Dimension[mm]					Net weight [kg]
	P_2		3ø		3ø		DIN flange					
Pump type	[kW]	[HP]	△220-240V	Y380-415V	△380-415V	Y660-720V	H1	H2	D1	D2	D3	DIN flange
SBI(N) 45-1-1	3	4	11.8 - 12.3	6.8 - 7.1	6.8 - 6.9	3.9 - 4.0	559	875	197	147	280	84.2
SBI(N) 45-1	4	5.5	15.1 - 15.2	8.7 - 8.8	8.7 - 8.3	5.0 - 4.8	559	885	220	161	280	88.3
SBI(N) 45-2-2	5.5	7.5	18.7 - 18.0	10.8 - 10.4	10.9 - 10.8	6.3 - 6.2	639	1001	235	197	300	108.8
SBI(N) 45-2	7.5	10	25.5 - 24.9	14.7 - 14.4	14.9 - 14.8	8.6 - 8.5	639	1044	235	197	300	114.7
SBI(N) 45-3-2	11	15	38.8 - 39.1	22.4 - 22.6	22.9 - 23.8	13.2 - 13.7	829	1274	269	215	350	155.7
SBI(N) 45-3	11	15	38.8 - 39.1	22.4 - 22.6	22.9 - 23.8	13.2 - 13.7	829	1274	269	215	350	155.7
SBI(N) 45-4-2	15	20	49.3 - 46.5	28.5 - 26.9	24.9 - 29.0	16.9 - 16.7	909	1399	269	215	350	170.1
SBI(N) 45-4	15	20	49.3 - 46.5	28.5 - 26.9	24.9 - 29.0	16.9 - 16.7	909	1399	269	215	350	170.1
SBI(N) 45-5-2	18.5	25	60.2 - 55.4	34.8 - 32.0	35.2 - 33.5	20.3 - 19.3	989	1529	318	241	350	198.8
SBI(N) 45-5	18.5	25	60.2 - 55.4	34.8 - 32.0	35.2 - 33.5	20.3 - 19.3	989	1529	318	241	350	198.8
SBI(N) 45-6-2	22	30	71.3 - 67.5	41.2 - 39.0	41.3 - 39.6	23.8 - 22.8	1069	1609	318	241	350	223.3
SBI(N) 45-6	22	30	71.3 - 67.5	41.2 - 39.0	41.3 - 39.6	23.8 - 22.8	1069	1609	318	241	350	223.3
SBI(N) 45-7-2	30	40	—	—	55.4 - 50.7	31.9 - 29.2	1149	1809	390	295	400	330.7
SBI(N) 45-7	30	40	—	—	55.4 - 50.7	31.9 - 29.2	1149	1809	390	295	400	330.7
SBI(N) 45-8-2	30	40	—	—	55.4 - 50.7	31.9 - 29.2	1229	1889	390	295	400	334.5
SBI(N) 45-8	30	40	—	—	55.4 - 50.7	31.9 - 29.2	1229	1889	390	295	400	334.5
SBI(N) 45-9-2	30	40	—	—	55.4 - 50.7	31.9 - 29.2	1309	1969	390	295	400	338.2
SBI(N) 45-9	37	50	—	—	67.7 - 62.0	39.0 -35.7	1309	1969	390	295	400	356.2
SBI(N) 45-10-2	37	50	—	—	67.7 - 62.0	39.0 -35.7	1389	2049	390	295	400	359.9
SBI(N) 45-10	37	50	—	—	67.7 - 62.0	39.0 -35.7	1389	2049	390	295	400	359.9
SBI(N) 45-11-2	45	60	—	—	82.3 - 75.4	47.4 - 43.4	1469	2159	446	325	450	439.7
SBI(N) 45-11	45	60	—	—	82.3 - 75.4	47.4 - 43.4	1469	2159	446	325	450	439.7
SBI(N) 45-12-2	45	60	—	—	82.3 - 75.4	47.4 - 43.4	1549	2239	446	325	450	443.4
SBI(N) 45-12	45	60	—	—	82.3 - 75.4	47.4 - 43.4	1549	2239	446	325	450	443.4
SBI(N) 45-13-2	45	60	—	—	82.3 - 75.4	47.4 - 43.4	1629	2319	446	325	450	447.1

STAIRS

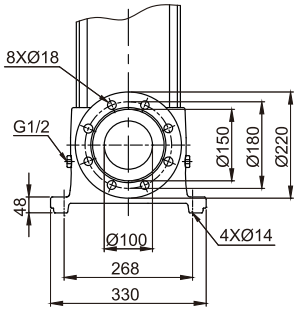
SB, SBI, SBN 64



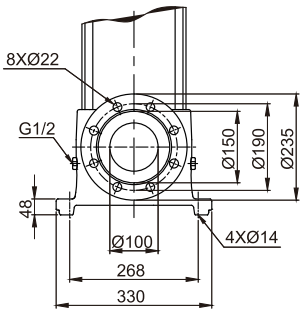
SB 64



Flange(DIN)
PN16 / DN100



Flange(DIN)
PN25-40 / DN100

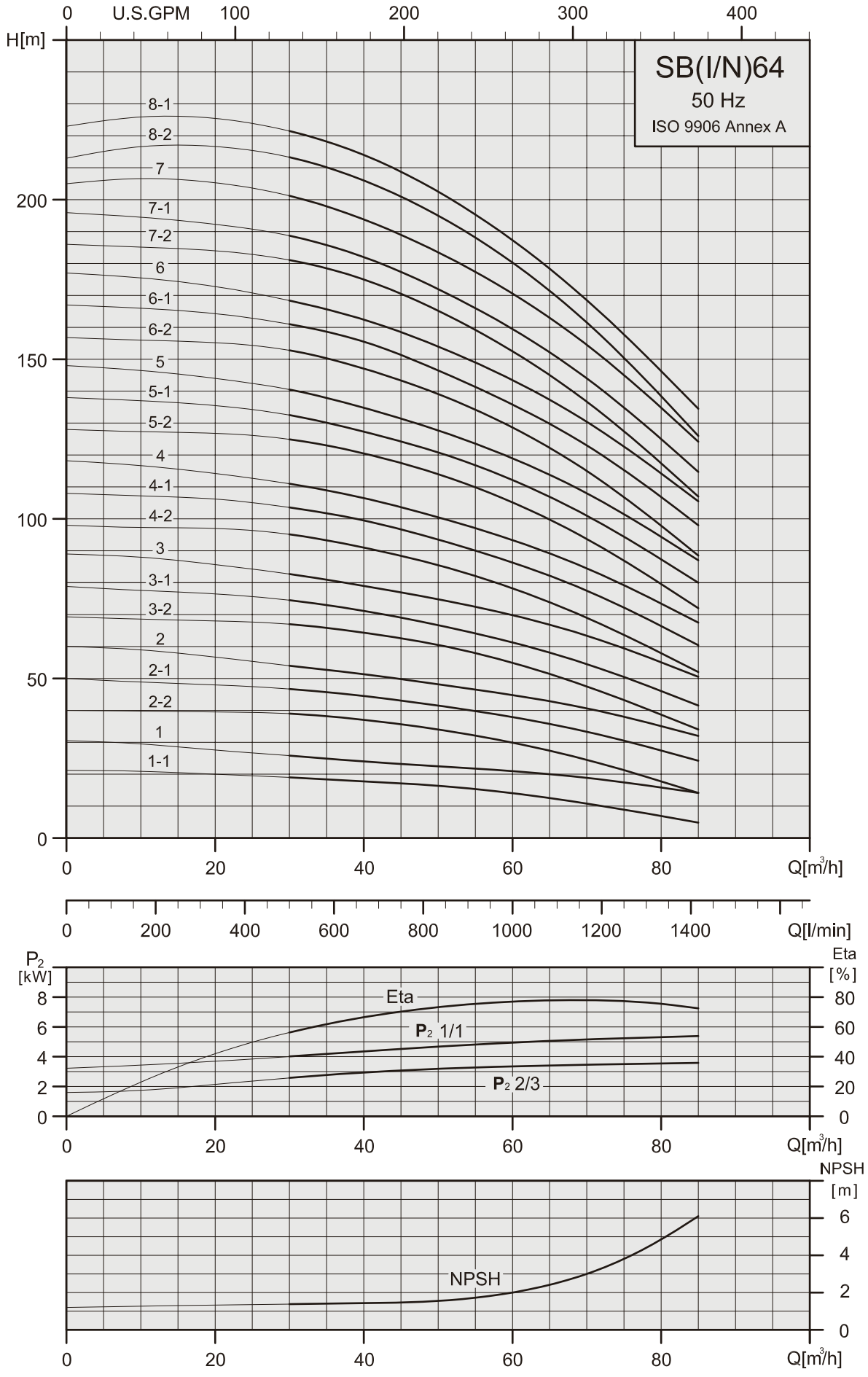


SB 64

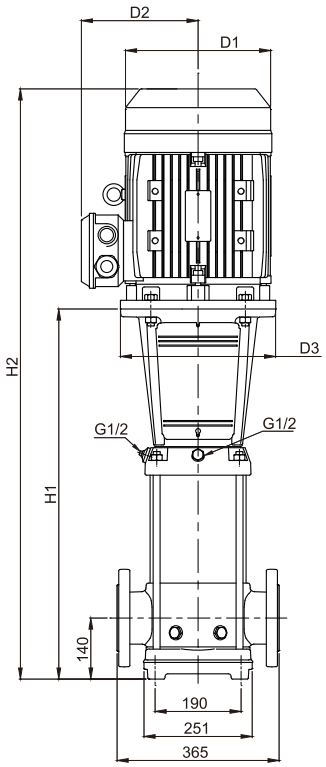
50Hz	Motor		Nominal current [A]				Dimension[mm]					Net weight [kg]
	P_2		3ø		3ø		DIN flange					
Pump type	[kW]	[HP]	△220-240V	Y380-415V	△380-415V	Y660-720V	H1	H2	D1	D2	D3	DIN flange
SB 64-1-1	4	5.5	15.1 - 15.2	8.7 - 8.8	8.7 - 8.3	5.0 - 4.8	563	889	220	161	280	90.9
SB 64-1	5.5	7.5	18.7 - 18.0	10.8 - 10.4	10.9 - 10.8	6.3 - 6.2	563	925	235	197	300	107.6
SB 64-2-2	7.5	10	25.5 - 24.9	14.7 - 14.4	14.9 - 14.8	8.6 - 8.5	646	1051	235	197	300	117.6
SB 64-2-1	11	15	38.8 - 39.1	22.4 - 22.6	22.9 - 23.8	13.2 - 13.7	756	1201	269	215	350	154.8
SB 64-2	11	15	38.8 - 39.1	22.4 - 22.6	22.9 - 23.8	13.2 - 13.7	756	1201	269	215	350	154.8
SB 64-3-2	15	20	49.3 - 46.5	28.5 - 26.9	24.9 - 29.0	16.9 - 16.7	838	1328	269	215	350	170.0
SB 64-3-1	15	20	49.3 - 46.5	28.5 - 26.9	24.9 - 29.0	16.9 - 16.7	838	1328	269	215	350	170.0
SB 64-3	18.5	25	60.2 - 55.4	34.8 - 32.0	35.2 - 33.5	20.3 - 19.3	838	1378	318	241	350	202.9
SB 64-4-2	18.5	25	60.2 - 55.4	34.8 - 32.0	35.2 - 33.5	20.3 - 19.3	921	1461	318	241	350	206.9
SB 64-4-1	22	30	71.3 - 67.5	41.2 - 39.0	41.3 - 39.6	23.8 - 22.8	921	1461	318	241	350	219.7
SB 64-4	22	30	71.3 - 67.5	41.2 - 39.0	41.3 - 39.6	23.8 - 22.8	921	1461	318	241	350	219.7
SB 64-5-2	30	40	—	—	55.4 - 50.7	31.9 - 29.2	1003	1663	390	295	400	327.3
SB 64-5-1	30	40	—	—	55.4 - 50.7	31.9 - 29.2	1003	1663	390	295	400	327.3
SB 64-5	30	40	—	—	55.4 - 50.7	31.9 - 29.2	1003	1663	390	295	400	327.3
SB 64-6-2	30	40	—	—	55.4 - 50.7	31.9 - 29.2	1086	1746	390	295	400	331.2
SB 64-6-1	37	50	—	—	67.7 - 62.0	39.0 - 35.7	1086	1746	390	295	400	349.2
SB 64-6	37	50	—	—	67.7 - 62.0	39.0 - 35.7	1086	1746	390	295	400	349.2
SB 64-7-2	37	50	—	—	67.7 - 62.0	39.0 - 35.7	1168	1828	390	295	400	353.3
SB 64-7-1	37	50	—	—	67.7 - 62.0	39.0 - 35.7	1168	1828	390	295	400	353.3
SB 64-7	45	60	—	—	82.3 - 75.4	47.4 - 43.4	1172	1862	446	325	450	429.4
SB 64-8-2	45	60	—	—	82.3 - 75.4	47.4 - 43.4	1255	1945	446	325	450	433.5
SB 64-8-1	45	60	—	—	82.3 - 75.4	47.4 - 43.4	1255	1945	446	325	450	433.5

STAIRS

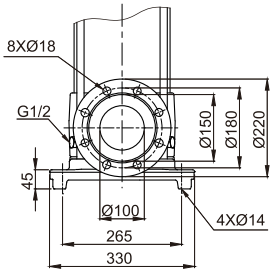
SB, SBI, SBN 64



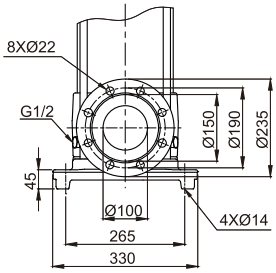
SBI / SBN 64



Flange(DIN)
PN16 / DN100



Flange(DIN)
PN25-40 / DN100

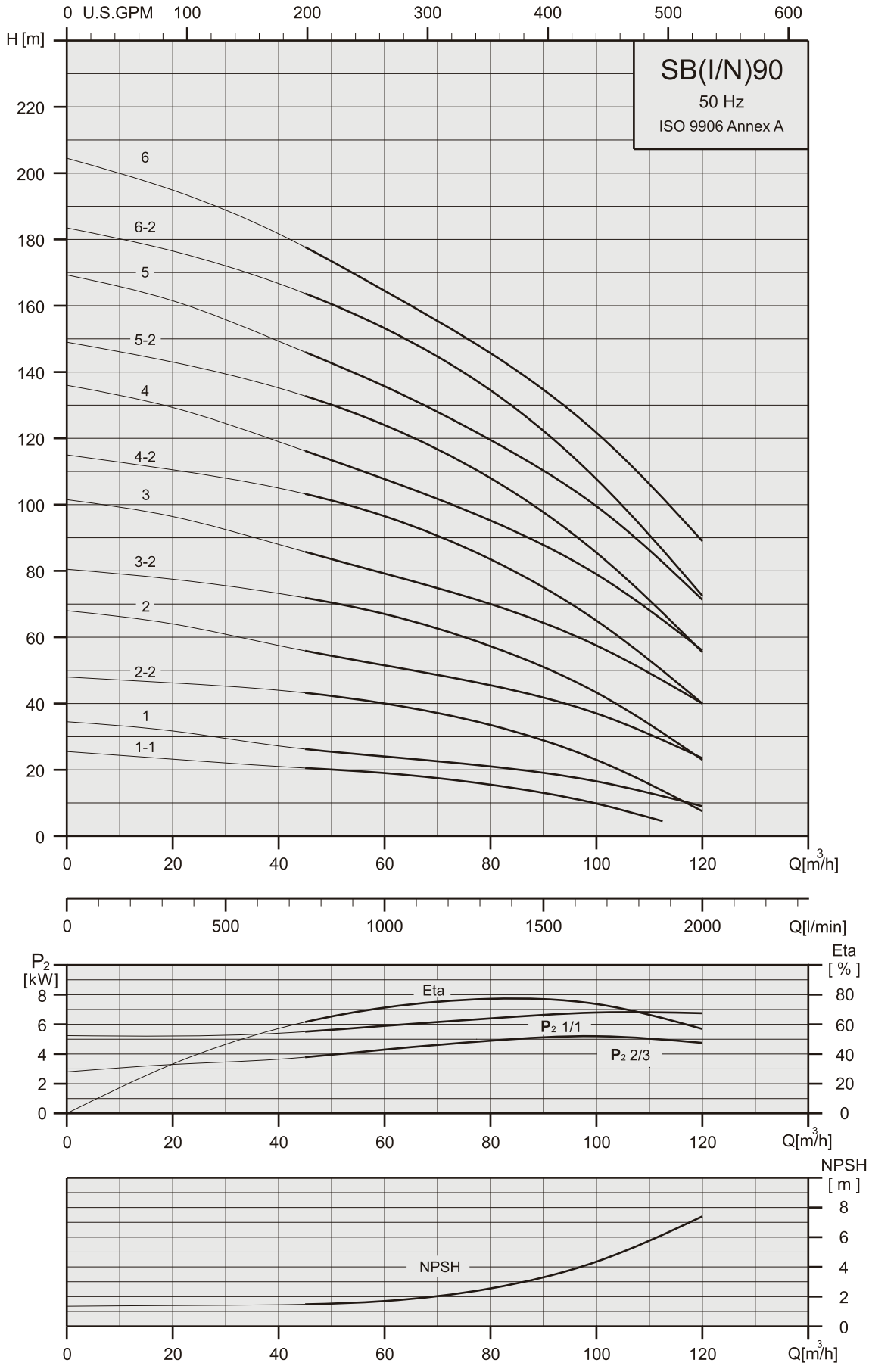


SBI ,SBN 64

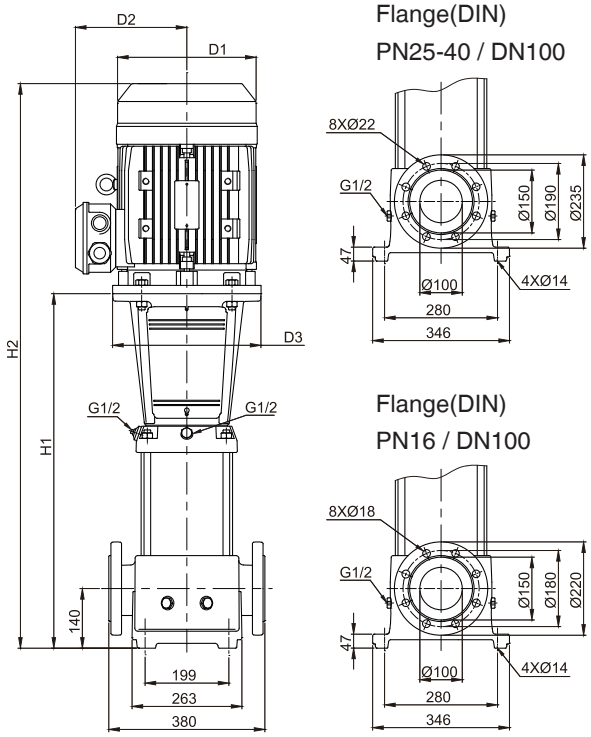
50Hz	Motor		Nominal current [A]				Dimension[mm]					Net weight [kg]
	P_2		3ø		3ø		DIN flange					
Pump type	[kW]	[HP]	△220-240V	Y380-415V	△380-415V	Y660-720V	H1	H2	D1	D2	D3	DIN flange
SBI(N) 64-1-1	4	5.5	15.1 - 15.2	8.7 - 8.8	8.7 - 8.3	5.0 - 4.8	563	889	220	161	280	83.8
SBI(N) 64-1	5.5	7.5	18.7 - 18.0	10.8 - 10.4	10.9 - 10.8	6.3 - 6.2	563	925	235	197	300	100.6
SBI(N) 64-2-2	7.5	10	25.5 - 24.9	14.7 - 14.4	14.9 - 14.8	8.6 - 8.5	646	1051	235	197	300	110.6
SBI(N) 64-2-1	11	15	38.8 - 39.1	22.4 - 22.6	22.9 - 23.8	13.2 - 13.7	756	1201	269	215	350	147.8
SBI(N) 64-2	11	15	38.8 - 39.1	22.4 - 22.6	22.9 - 23.8	13.2 - 13.7	756	1201	269	215	350	147.8
SBI(N) 64-3-2	15	20	49.3 - 46.5	28.5 - 26.9	24.9 - 29.0	16.9 - 16.7	838	1328	269	215	350	162.5
SBI(N) 64-3-1	15	20	49.3 - 46.5	28.5 - 26.9	24.9 - 29.0	16.9 - 16.7	838	1328	269	215	350	162.5
SBI(N) 64-3	18.5	25	60.2 - 55.4	34.8 - 32.0	35.2 - 33.5	20.3 - 19.3	838	1378	318	241	350	195.4
SBI(N) 64-4-2	18.5	25	60.2 - 55.4	34.8 - 32.0	35.2 - 33.5	20.3 - 19.3	921	1461	318	241	350	199.4
SBI(N) 64-4-1	22	30	71.3 - 67.5	41.2 - 39.0	41.3 - 39.6	23.8 - 22.8	921	1461	318	241	350	212.4
SBI(N) 64-4	22	30	71.3 - 67.5	41.2 - 39.0	41.3 - 39.6	23.8 - 22.8	921	1461	318	241	350	212.4
SBI(N) 64-5-2	30	40	—	—	55.4 - 50.7	31.9 - 29.2	1003	1663	390	295	400	319.7
SBI(N) 64-5-1	30	40	—	—	55.4 - 50.7	31.9 - 29.2	1003	1663	390	295	400	319.7
SBI(N) 64-5	30	40	—	—	55.4 - 50.7	31.9 - 29.2	1003	1663	390	295	400	319.7
SBI(N) 64-6-2	30	40	—	—	55.4 - 50.7	31.9 - 29.2	1086	1746	390	295	400	323.7
SBI(N) 64-6-1	37	50	—	—	67.7 - 62.0	39.0 - 35.7	1086	1746	390	295	400	341.7
SBI(N) 64-6	37	50	—	—	67.7 - 62.0	39.0 - 35.7	1086	1746	390	295	400	341.7
SBI(N) 64-7-2	37	50	—	—	67.7 - 62.0	39.0 - 35.7	1168	1828	390	295	400	345.7
SBI(N) 64-7-1	37	50	—	—	67.7 - 62.0	39.0 - 35.7	1168	1828	390	295	400	345.7
SBI(N) 64-7	45	60	—	—	82.3 - 75.4	47.4 - 43.4	1172	1862	446	325	450	421.8
SBI(N) 64-8-2	45	60	—	—	82.3 - 75.4	47.4 - 43.4	1255	1945	446	325	450	426.0
SBI(N) 64-8-1	45	60	—	—	82.3 - 75.4	47.4 - 43.4	1255	1945	446	325	450	426.0

STAIRS

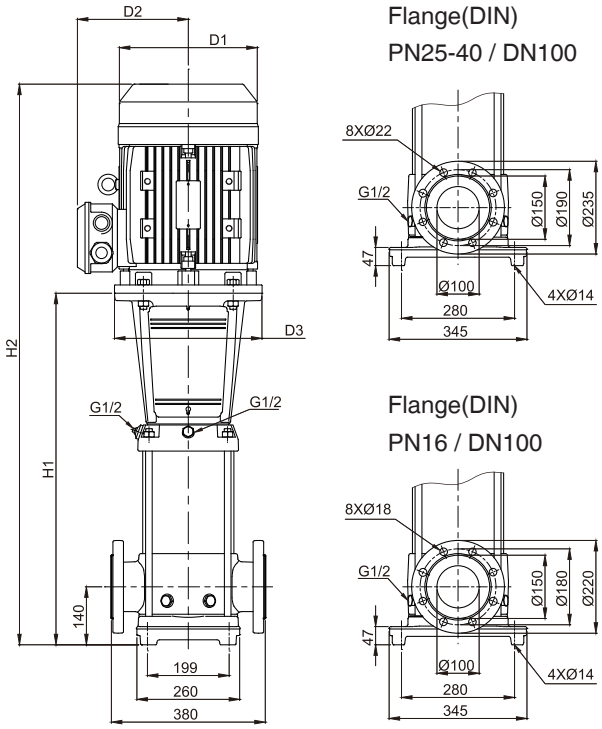
SB, SBI, SBN 90



SB 90



SBI / SBN 90



SB 90

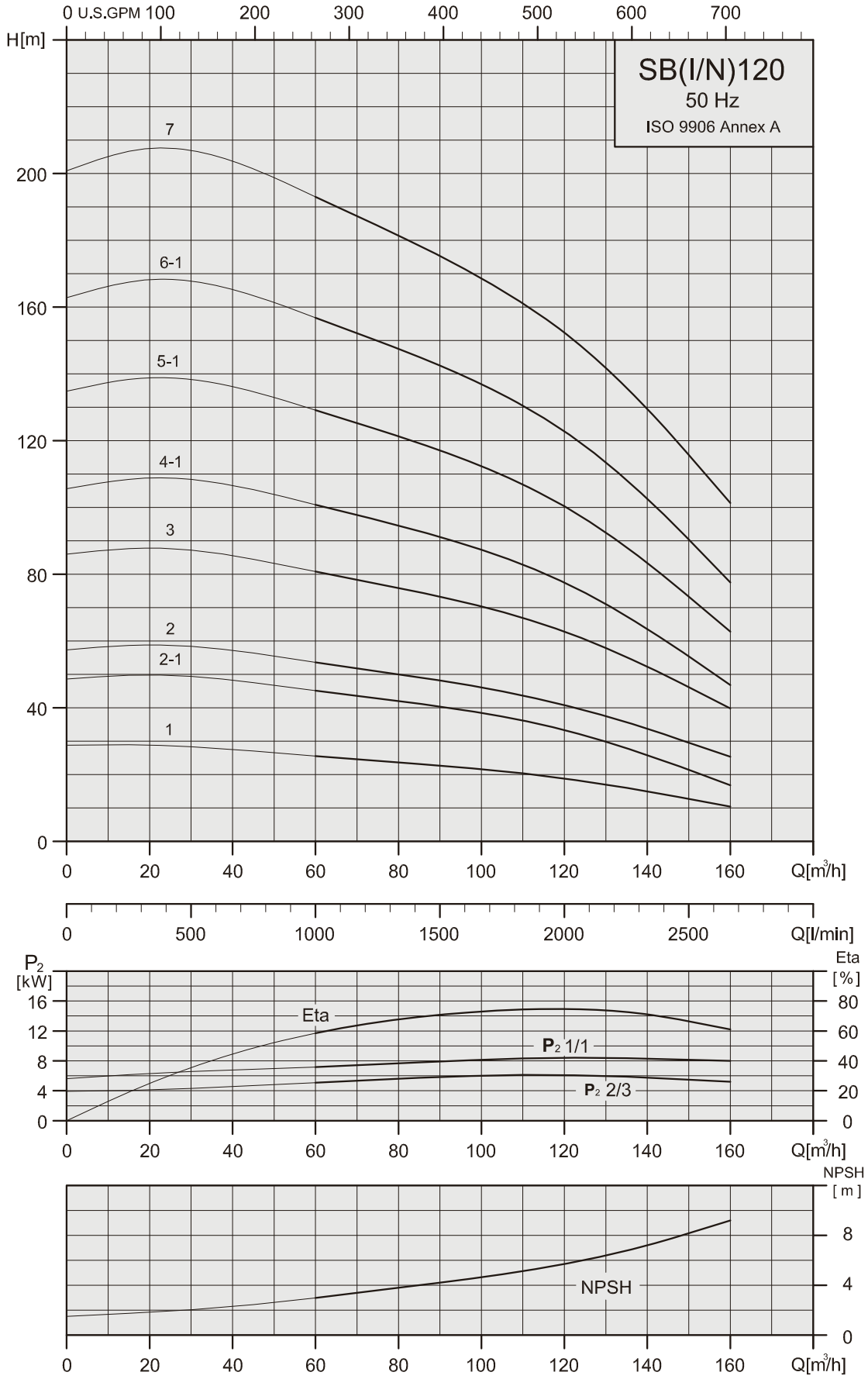
50Hz	Motor P_2		Nominal current [A] 3ø		3ø		Dimension[mm] DIN flange					Net weight [kg]
Pump type	[kW]	[HP]	△220-240V	Y380-415V	△380-415V	Y660-720V	H1	H2	D1	D2	D3	DIN flange
SB 90-1-1	5.5	7.5	18.7 - 18.0	10.8 - 10.4	10.9 - 10.8	6.3 - 6.2	572	934	235	197	300	115.0
SB 90-1	7.5	10	25.5 - 24.9	14.7 - 14.4	14.9 - 14.8	8.6 - 8.5	572	977	235	197	300	120.9
SB 90-2-2	11	15	38.8 - 39.1	22.4 - 22.6	22.9 - 23.8	13.2 - 13.7	774	1219	269	215	350	163.5
SB 90-2	15	20	49.3 - 46.5	28.5 - 26.9	24.9 - 29.0	16.9 - 16.7	774	1264	269	215	350	174.1
SB 90-3-2	18.5	25	60.2 - 55.4	34.8 - 32.0	35.2 - 33.5	20.3 - 19.3	866	1406	318	241	350	212.2
SB 90-3	22	30	71.3 - 67.5	41.2 - 39.0	41.3 - 39.6	23.8 - 22.8	866	1406	318	241	350	225.0
SB 90-4-2	30	40	—	—	55.4 - 50.7	31.9 - 29.2	958	1618	390	295	400	333.9
SB 90-4	30	40	—	—	55.4 - 50.7	31.9 - 29.2	958	1618	390	295	400	333.9
SB 90-5-2	37	50	—	—	67.7 - 62.0	39.0 -35.7	1050	1710	390	295	400	356.6
SB 90-5	37	50	—	—	67.7 - 62.0	39.0 -35.7	1050	1710	390	295	400	356.6
SB 90-6-2	45	60	—	—	82.3 - 75.4	47.4 - 43.4	1142	1832	446	325	450	437.9
SB 90-6	45	60	—	—	82.3 - 75.4	47.4 - 43.4	1142	1832	446	325	450	437.9

SBI ,SBN 90

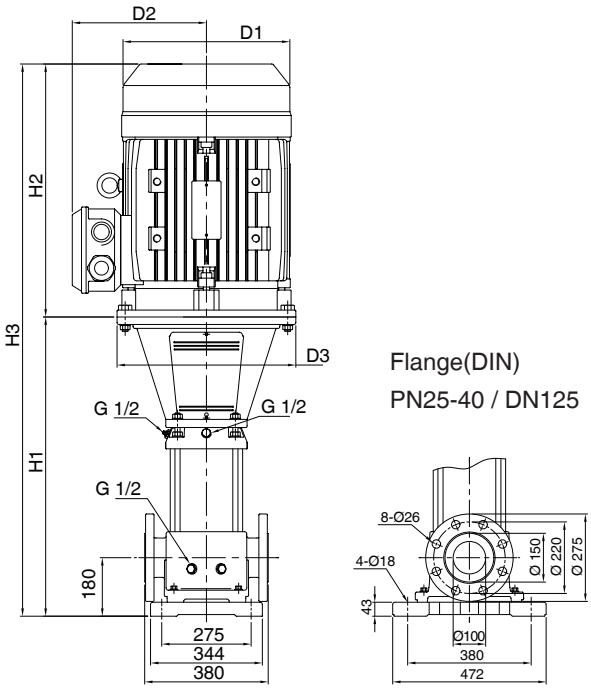
50Hz	Motor P_2		Nominal current [A] 3ø		3ø		Dimension[mm] DIN flange					Net weight [kg]
Pump type	[kW]	[HP]	△220-240V	Y380-415V	△380-415V	Y660-720V	H1	H2	D1	D2	D3	DIN flange
SBI(N) 90-1-1	5.5	7.5	18.7 - 18.0	10.8 - 10.4	10.9 - 10.8	6.3 - 6.2	576	938	235	197	300	111.4
SBI(N) 90-1	7.5	10	25.5 - 24.9	14.7 - 14.4	14.9 - 14.8	8.6 - 8.5	576	981	235	197	300	117.3
SBI(N) 90-2-2	11	15	38.8 - 39.1	22.4 - 22.6	22.9 - 23.8	13.2 - 13.7	778	1223	269	215	350	159.7
SBI(N) 90-2	15	20	49.3 - 46.5	28.5 - 26.9	24.9 - 29.0	16.9 - 16.7	778	1268	269	215	350	170.3
SBI(N) 90-3-2	18.5	25	60.2 - 55.4	34.8 - 32.0	35.2 - 33.5	20.3 - 19.3	870	1410	318	241	350	208.4
SBI(N) 90-3	22	30	71.3 - 67.5	41.2 - 39.0	41.3 - 39.6	23.8 - 22.8	870	1410	318	241	350	221.2
SBI(N) 90-4-2	30	40	—	—	55.4 - 50.7	31.9 - 29.2	962	1622	390	295	400	329.9
SBI(N) 90-4	30	40	—	—	55.4 - 50.7	31.9 - 29.2	962	1622	390	295	400	329.9
SBI(N) 90-5-2	37	50	—	—	67.7 - 62.0	39.0 -35.7	1054	1714	390	295	400	355.0
SBI(N) 90-5	37	50	—	—	67.7 - 62.0	39.0 -35.7	1054	1714	390	295	400	355.0
SBI(N) 90-6-2	45	60	—	—	82.3 - 75.4	47.4 - 43.4	1146	1836	446	325	450	436.1
SBI(N) 90-6	45	60	—	—	82.3 - 75.4	47.4 - 43.4	1146	1836	446	325	450	436.1

STAIRS

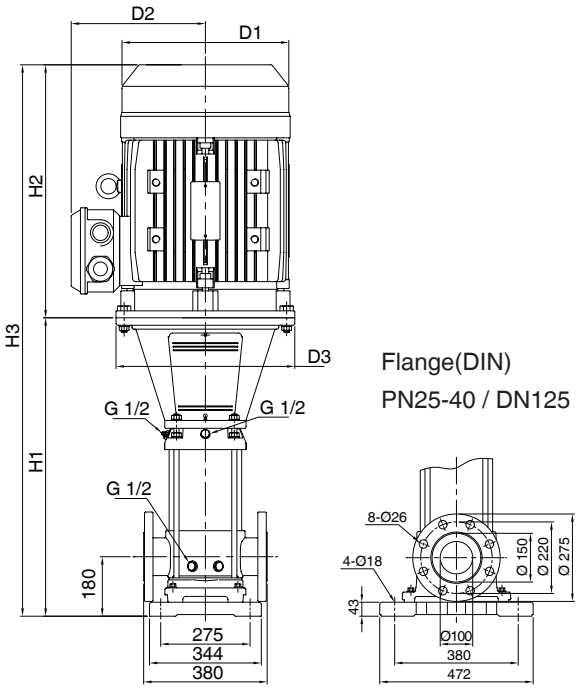
SB, SBI, SBN 120



SB 120



SBI / SBN 120



SB 120

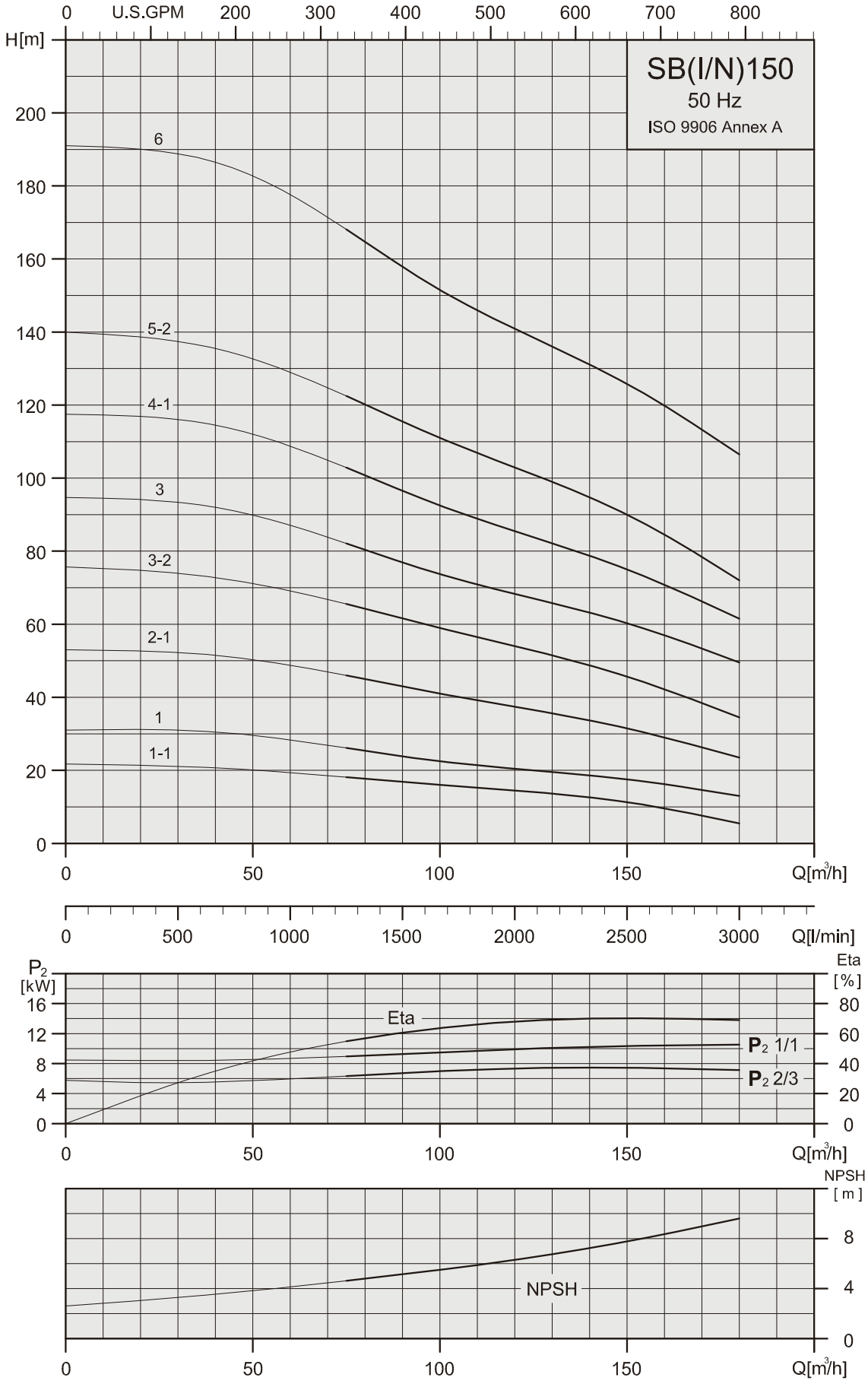
50Hz	Motor		Nominal current [A]				Dimension[mm]						Net weight [kg]
	P_2		3ø		3ø		DIN flange						
Pump type	[kW]	[HP]	△220-240V	Y380-415V	△380-415V	Y660-720V	H1	H2	H3	D1	D2	D3	DIN flange
SB 120-1	11	15	38.8 - 39.1	22.4 - 22.6	22.9 - 23.8	13.2 - 13.7	834	445	1279	269	215	350	195.6
SB 120-2-1	18.5	25	60.2 - 55.4	34.8 - 32.0	35.2 - 33.5	20.3 - 19.3	990	540	1530	318	241	350	249.1
SB 120-2	22	30	71.3 - 67.5	41.2 - 39.0	41.3 - 39.6	23.8 - 22.8	990	540	1530	318	241	350	265.8
SB 120-3	30	40	—	—	55.4 - 50.7	31.9 - 29.2	1145	660	1805	390	295	400	375.5
SB 120-4-1	37	50	—	—	67.7 - 62.0	39.0 - 35.7	1301	660	1961	390	295	400	403.5
SB 120-5-1	45	60	—	—	82.3 - 75.4	47.4 - 43.4	1460	690	2150	446	325	450	489.6
SB 120-6-1	55	75	—	—	101 - 92.5	58.2 - 53.3	1642	770	2412	485	355	550	619.8
SB 120-7	75	100	—	—	134 - 123	77.2 - 70.7	1797	845	2642	550	410	550	746.4

SBI ,SBN 120

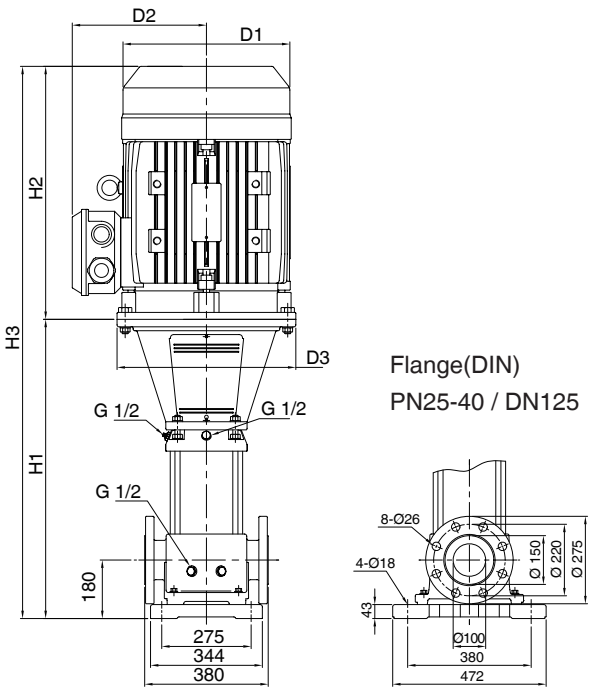
50Hz	Motor		Nominal current [A]				Dimension[mm]						Net weight [kg]
	P_2		3ø		3ø		DIN flange						
Pump type	[kW]	[HP]	△220-240V	Y380-415V	△380-415V	Y660-720V	H1	H2	H3	D1	D2	D3	DIN flange
SBI(N) 120-1	11	15	38.8 - 39.1	22.4 - 22.6	22.9 - 23.8	13.2 - 13.7	837	445	1282	329	215	350	179.8
SBI(N) 120-2-1	18.5	25	60.2 - 55.4	34.8 - 32.0	35.2 - 33.5	20.3 - 19.3	993	540	1533	318	241	350	233.5
SBI(N) 120-2	22	30	71.3 - 67.5	41.2 - 39.0	41.3 - 39.6	23.8 - 22.8	993	540	1533	318	241	350	250.1
SBI(N) 120-3	30	40	—	—	55.4 - 50.7	31.9 - 29.2	1149	660	1809	390	295	400	359.9
SBI(N) 120-4-1	37	50	—	—	67.7 - 62.0	39.0 - 35.7	1304	660	1964	390	295	400	388.1
SBI(N) 120-5-1	45	60	—	—	82.3 - 75.4	47.4 - 43.4	1463	690	2153	446	325	450	474.3
SBI(N) 120-6-1	55	75	—	—	101 - 92.5	58.2 - 53.3	1645	770	2415	485	355	550	604.8
SBI(N) 120-7	75	100	—	—	134 - 123	77.2 - 70.7	1800	845	2645	550	410	550	731.5

STAIRS

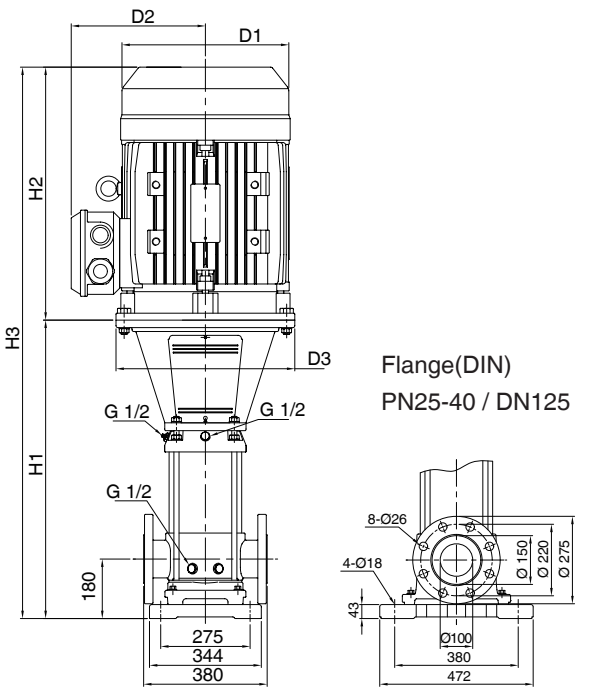
SB, SBI, SBN 150



SB 150



SBI / SBN 150



SB 150

50Hz	Motor		Nominal current [A]				Dimension[mm]						Net weight [kg]
	P_2		3ø		3ø		DIN flange						
Pump type	[kW]	[HP]	△220-240V	Y380-415V	△380-415V	Y660-720V	H1	H2	H3	D1	D2	D3	DIN flange
SB 150-1-1	11	15	38.8 - 39.1	22.4 - 22.6	22.9 - 23.8	13.2 - 13.7	834	445	1279	269	215	350	195.5
SB 150-1	15	20	60.2 - 55.4	34.8 - 32.0	35.2 - 33.5	20.3 - 19.3	834	490	1324	269	215	350	206.1
SB 150-2-1	22	30	71.3 - 67.5	41.2 - 39.0	41.3 - 39.6	23.8 - 22.8	990	540	1530	318	241	350	261.8
SB 150-3-2	30	40	—	—	55.4 - 50.7	31.9 -29.2	1145	660	1805	390	295	400	375.3
SB 150-3	37	50	—	—	67.7 - 62.0	39.0 - 35.7	1145	660	1805	390	295	400	393.4
SB 150-4-1	45	60	—	—	82.3 - 75.4	47.4 - 43.4	1305	690	1995	446	325	450	479.4
SB 150-5-2	55	75	—	—	101 - 92.5	58.2 - 53.3	1486	770	2256	485	355	550	609.7
SB 150-6	75	100	—	—	134 - 123	77.2 - 70.7	1642	845	2487	550	410	550	736.0

SBI ,SBN 150

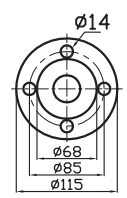
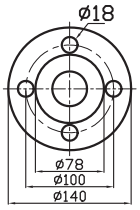
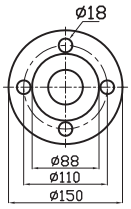
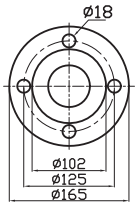
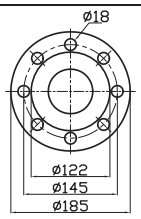
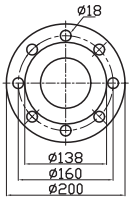
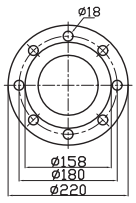
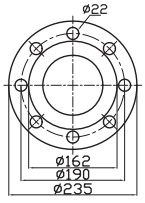
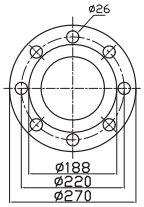
50Hz	Motor		Nominal current [A]				Dimension[mm]						Net weight [kg]
	P_2		3ø		3ø		DIN flange						
Pump type	[kW]	[HP]	△220-240V	Y380-415V	△380-415V	Y660-720V	H1	H2	H3	D1	D2	D3	DIN flange
SBI(N) 150-1-1	11	15	38.8 - 39.1	22.4 - 22.6	22.9 - 23.8	13.2 - 13.7	837	445	1282	269	215	350	179.2
SBI(N) 150-1	15	20	60.2 - 55.4	34.8 - 32.0	35.2 - 33.5	20.3 - 19.3	837	490	1327	269	215	350	189.8
SBI(N) 150-2-1	22	30	71.3 - 67.5	41.2 - 39.0	41.3 - 39.6	23.8 - 22.8	993	540	1533	318	241	350	245.6
SBI(N) 150-3-2	30	40	—	—	55.4 - 50.7	31.9 -29.2	1148	660	1808	390	295	400	359.2
SBI(N) 150-3	37	50	—	—	67.7 - 62.0	39.0 - 35.7	1148	660	1808	390	295	400	377.2
SBI(N) 150-4-1	45	60	—	—	82.3 - 75.4	47.4 - 43.4	1308	690	1998	446	325	450	463.4
SBI(N) 150-5-2	55	75	—	—	101 - 92.5	58.2 - 53.3	1489	770	2259	485	355	550	595.8
SBI(N) 150-6	75	100	—	—	134 - 123	77.2 - 70.7	1645	845	2490	550	410	550	720.5

Pipework connections

For pipework connection, various sets of counter flanges and couplings are available.

Counter flanges for SB(I/N)

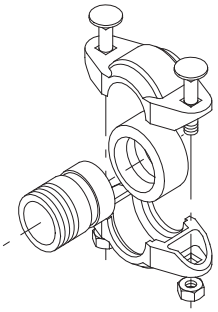
A set consists of one counter flange, one gasket, bolts, nuts, washers

Counter flange	Pump type	Nominal Rated Diameter	Description	Rated Pressure	Pipework connection
 DN 25 / PN25-40  DN 32 / PN25-40	SB(I/N) 1 SB(I/N) 3 SB(I/N) 5	DN 25	Threaded	25-40 bar	RP 1”
		DN 32	Threaded	25-40 bar	RP 11/4”
	SB(I/N) 10	DN 40	Threaded	25-40 bar	Rp 1 1/2”
	SB(I/N) 15 SB(I/N) 20	DN 50	Threaded	25-40 bar	Rp 2”
	SB(I/N) 32	DN 65	Threaded	25-40 bar	Rp 2 1/2”
	SB(I/N) 45	DN 80	Threaded	25-40 bar	Rp 3”
 DN 100/ PN16  DN 100 / PN25-40	SB(I/N) 64 SB(I/N) 90	DN 100	Threaded	16 bar	Rp 4”
		DN 100	Threaded	25-40 bar	Rp 4”
	SB(I/N) 120 SB(I/N) 150	DN 125	Threaded	25-40 bar	Rp 5”

The material of counter is in Steel(S45C), SS 304 and SS 316 available.

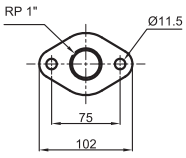
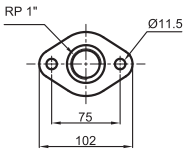
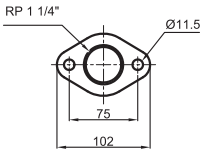
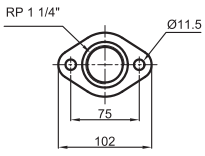
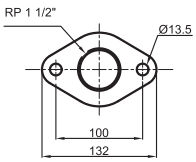
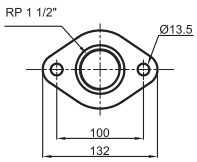
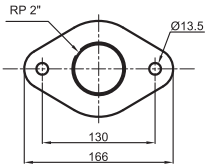
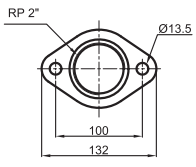
PJE couplings for SBI(N)

A set consists of two coupling halves, one gasket, one pipe stud(threaded), bolts and nuts

Victaulic-connections	Pump type	Coupling & pipe stud	Max Pressure	Description	Rubber	Pipework connection
	SBI 1 / 3 / 5	304 SS	80 bar	Threaded	EPDM	R 1 1/4"
	SBN 1 / 3 / 5	316 SS				
	SBI 10 / 15 / 20	304 SS	70 bar	Threaded	EPDM	R 2"
	SBN 10 / 15 / 20	316 SS				

Oval flanges for SB(I/N)

A set consists of one OVAL flange, one gasket, two bolts

Counter flange		Description	Max Pressure	Gasket	Pipework connection
 SB 1 . 3	 SB (I / N) 1 . 3	Threaded	16 bar	Non Asbestos	RP 1"
 SB 5	 SB (I / N) 5	Threaded	16 bar	Non Asbestos	RP 1 1/4"
 SB 10	 SB (I / N) 10	Threaded	16 bar	Non Asbestos	RP 1 1/2"
 SB 15 . 20	 SB (I / N) 15 . 20	Threaded	10 bar	Non Asbestos	RP 2"

The material of counter is in Steel(S45C), SS 304 and SS 316 available.

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