

**SBN****motralec**

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## Dual-channel closed impeller

### General characteristics

- Dual-channel closed impeller
- 18,5 ÷ 37,0 kW motor power
- 4 / 6 poles
- DN150 ÷ DN300 delivery port
- 90 ÷ 140 mm free passage

### Electromechanical assembly

Electromechanical assembly in GJL-250 cast iron, for submerged operation. Seal set comprising 2 (two) opposing silicon carbide mechanical seals in inspectable oil sump. Ecological dry motor. Separate pump body. Series not available in explosion-proof version.

### Applications

Designed for heavy-duty professional applications, they are used in civil and industrial wastewater treatment plants. Lifting sewage, pumping industrial sludges and rainwater containing solids, and recycling raw or activated sludges and biological liquids. This series is prefitted for installation of the ZENIT cooling system for dry or semi-submerged installation.

### Construction materials

|                                  |   |
|----------------------------------|---|
| Case                             | Cast Iron EN-GJL 250                        |
| Impeller                         | Cast iron EN-GJL-250                        |
| Nuts and bolts                   | Stainless Steel - Class A2-70               |
| Standard gasket                  | Rubber - NBR                                |
| Shaft                            | Stainless Steel - AISI 420                  |
| Cooling jacket                   | Carbon Steel - Fe360 ÷ Fe370                |
| Set of standard mechanical seals | Two Silicon carbide mechanical seals (2SiC) |

### operating limits

|                               |                      |
|-------------------------------|----------------------|
| Maximum operating temperature | 40 °C                |
| PH of treated fluid           | 6 to 10 pH           |
| Viscosity of treated fluid    | 1 mm <sup>2</sup> /s |
| Maximum immersion depth       | 20 m                 |
| Density of treated fluid      | 1 Kg/dm <sup>3</sup> |
| Maximum acoustic pressure     | 70 dB                |
| max starts per hour           | 10                   |



**Cooling by means of process liquid**

The rear of the impeller is specially shaped to convey some of the process liquid into the cavity between the body and the jacket to cool the motor. Once the cavity is full, the liquid is drawn into the pump body along a special pipe and then expelled.



**Cable Gland**

Cable gland system to guarantee perfect water-tightness. The universal thread ring-nut can be removed to fix a rigid or flexible duct to the cable gland to protect the power supply cable



**Sensor**

Sensor for detecting water in the mechanical seal oil chamber. Connected to an electrical panel, the sensor provides immediate warning of wear on the first mechanical seal, preventing possible damage to the motor



**Mechanical seals**

Two mechanical seals in silicon carbide (2SiC)



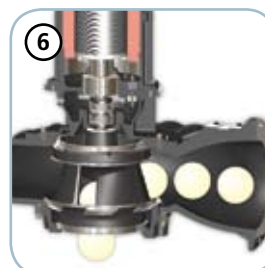
**Oil sump**

Large oil sump to guarantee longer mechanical seal lifetime



**Drive shaft**

Impeller connected to the drive shaft by means of tapered coupling



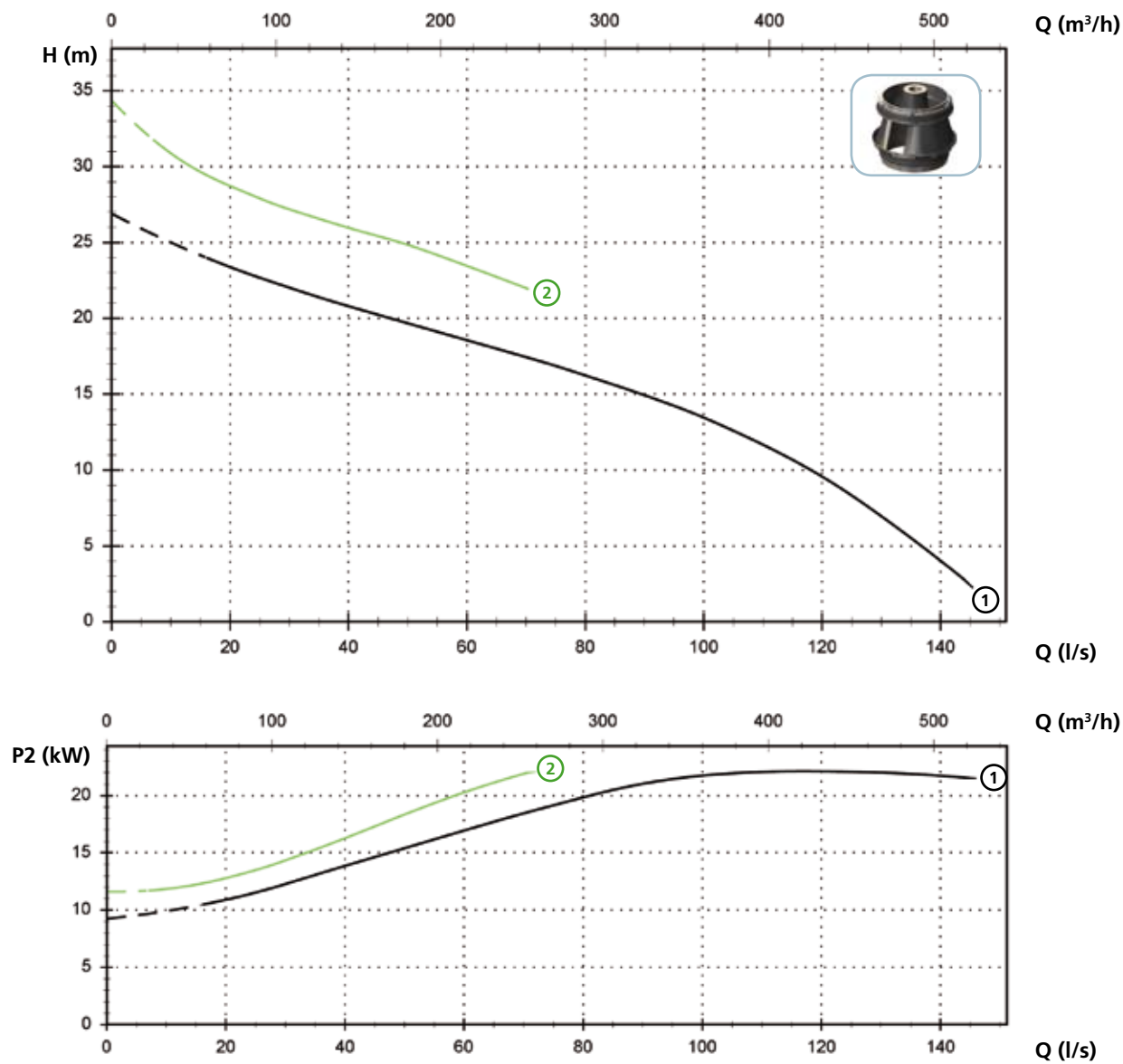
**Free passage**

Ample free passage allowing the expulsion of solids and preventing fouling of the impeller

# SBN

## Models with horizontal DN150 PN10-16 flanged delivery port - 4 poles

### Performances



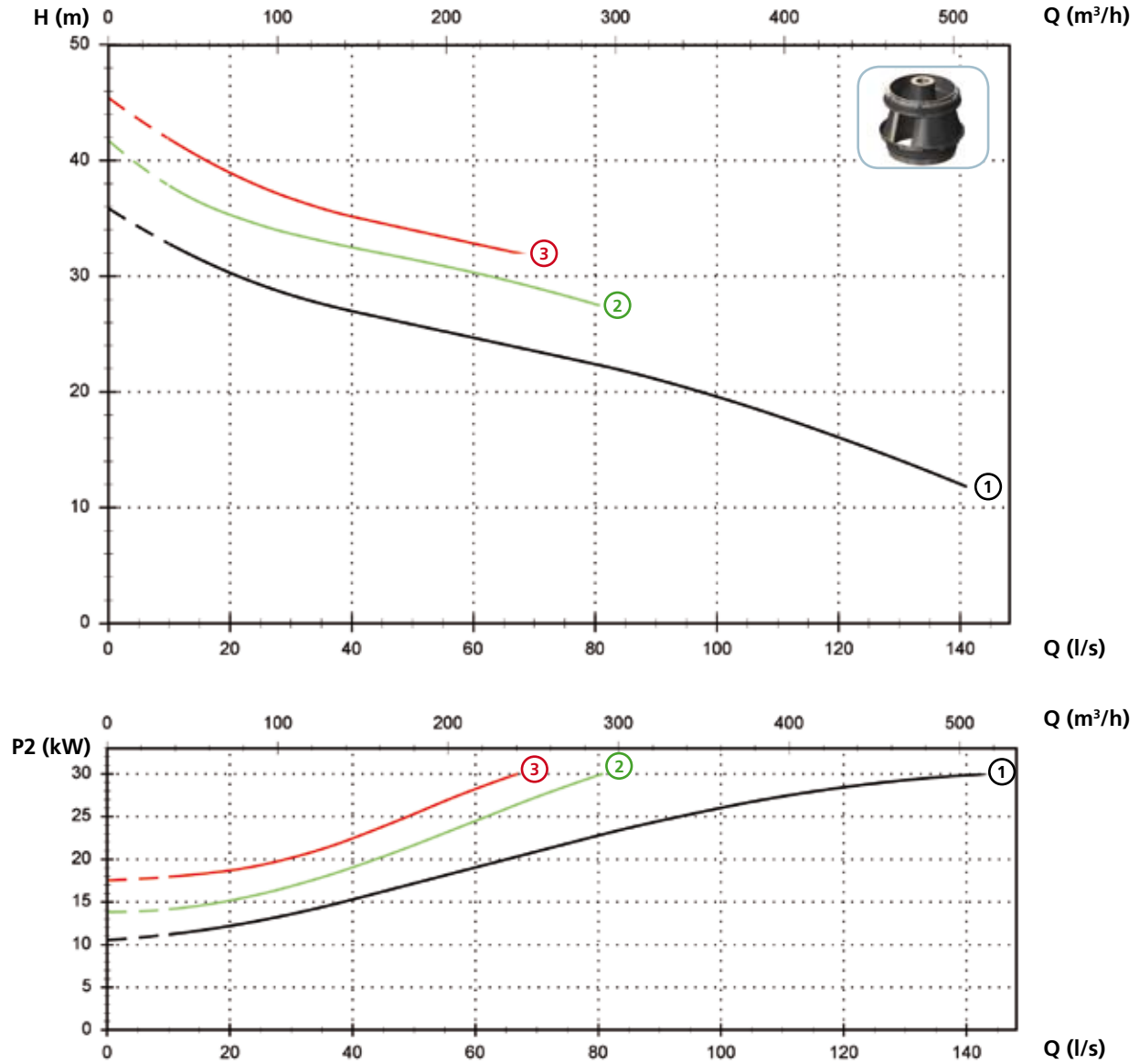
### Technical data

|                          | V   | Phases | P1 (kW) | P2 (kW) | A    | Rpm  | Ø             | Cable (*) | Free passage |
|--------------------------|-----|--------|---------|---------|------|------|---------------|-----------|--------------|
| ① SBN 3000/4/150 A1LT/50 | 400 | 3      | 25.3    | 22      | 43.5 | 1450 | DN150 PN10-16 | A         | 90 mm        |
| ② SBN 3000/4/150 F1LT/50 | 400 | 3      | 25.3    | 22      | 43.5 | 1450 | DN150 PN10-16 | A         | 90 mm        |

(\*) A = H07RN-F 4G6 + H07RN-F 4G6 + H07RN-F 4G1.5 - 10 m

**Models with horizontal DN150 PN10-16 flanged delivery port - 4 poles**

**Performances**



**Technical data**

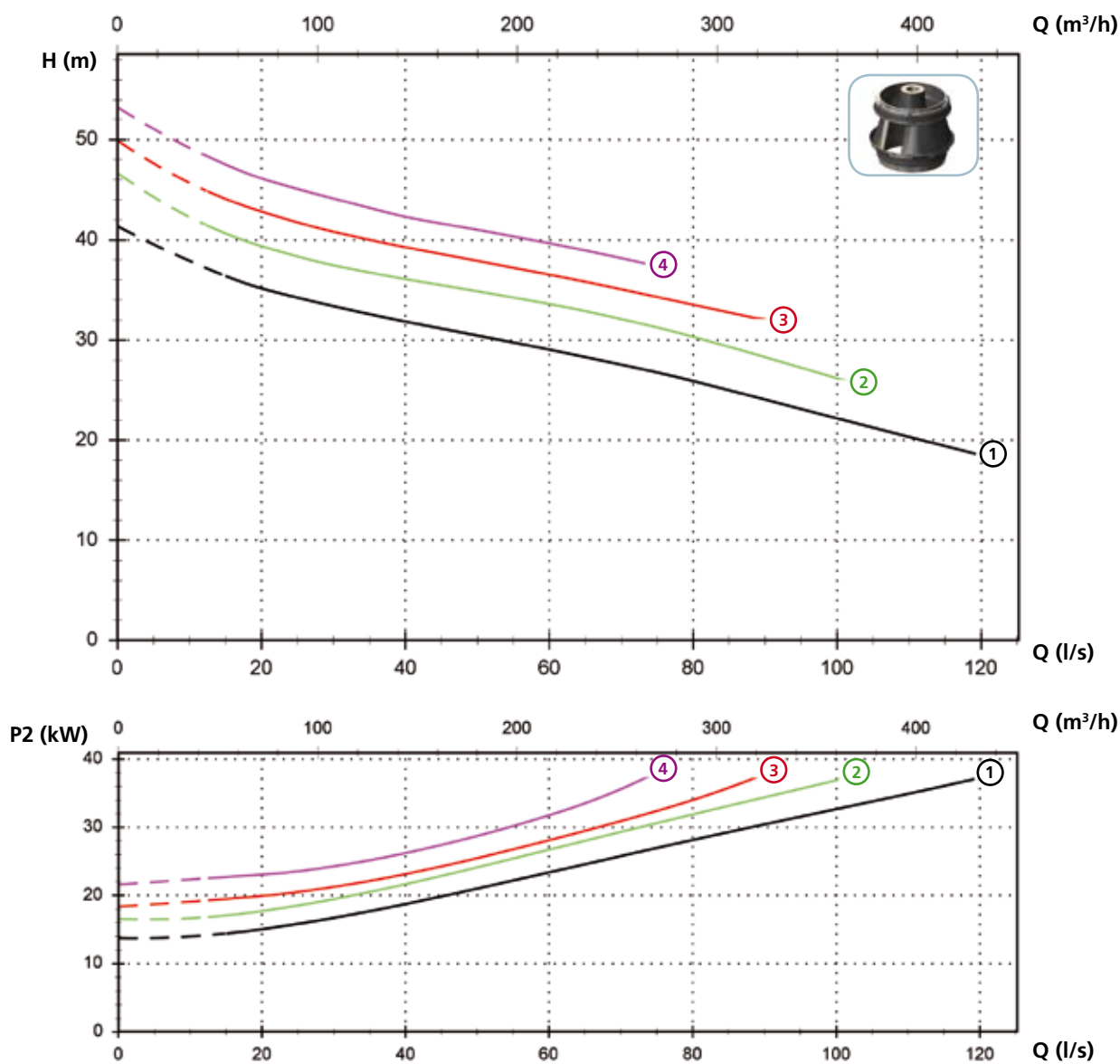
|                          | V   | Phases | P1 (kW) | P2 (kW) | A  | Rpm  | Ø             | Cable (*) | Free passage |
|--------------------------|-----|--------|---------|---------|----|------|---------------|-----------|--------------|
| ① SBN 4000/4/150 A1LT/50 | 400 | 3      | 35.9    | 30      | 61 | 1450 | DN150 PN10-16 | A         | 90 mm        |
| ② SBN 4000/4/150 F1LT/50 | 400 | 3      | 35.9    | 30      | 61 | 1450 | DN150 PN10-16 | A         | 90 mm        |
| ③ SBN 4000/4/150 G1LT/50 | 400 | 3      | 35.9    | 30      | 61 | 1450 | DN150 PN10-16 | A         | 90 mm        |

(\*) A = H07RN-F 4G10 + H07RN-F 4G10 + H07RN-F 4G1.5 - 10 m

# SBN

## Models with horizontal DN150 PN10-16 flanged delivery port - 4 poles

### Performances



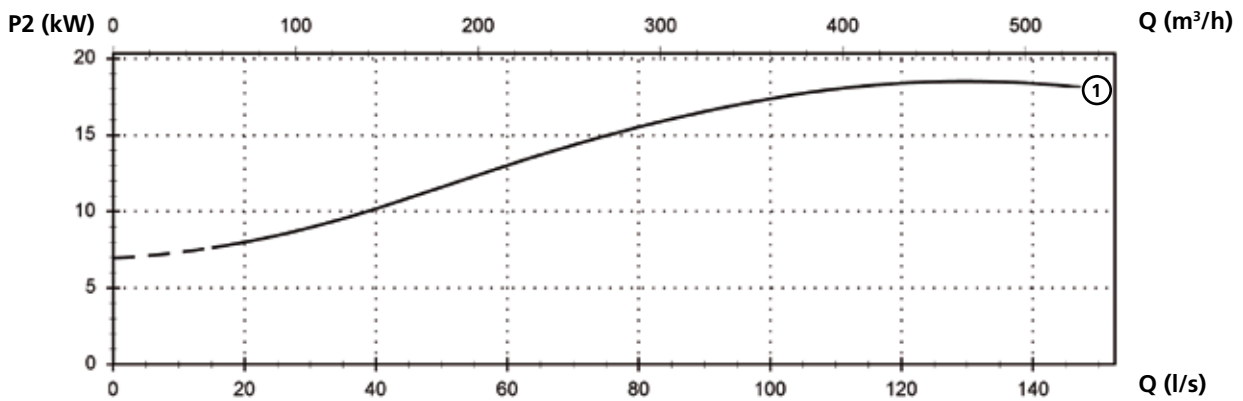
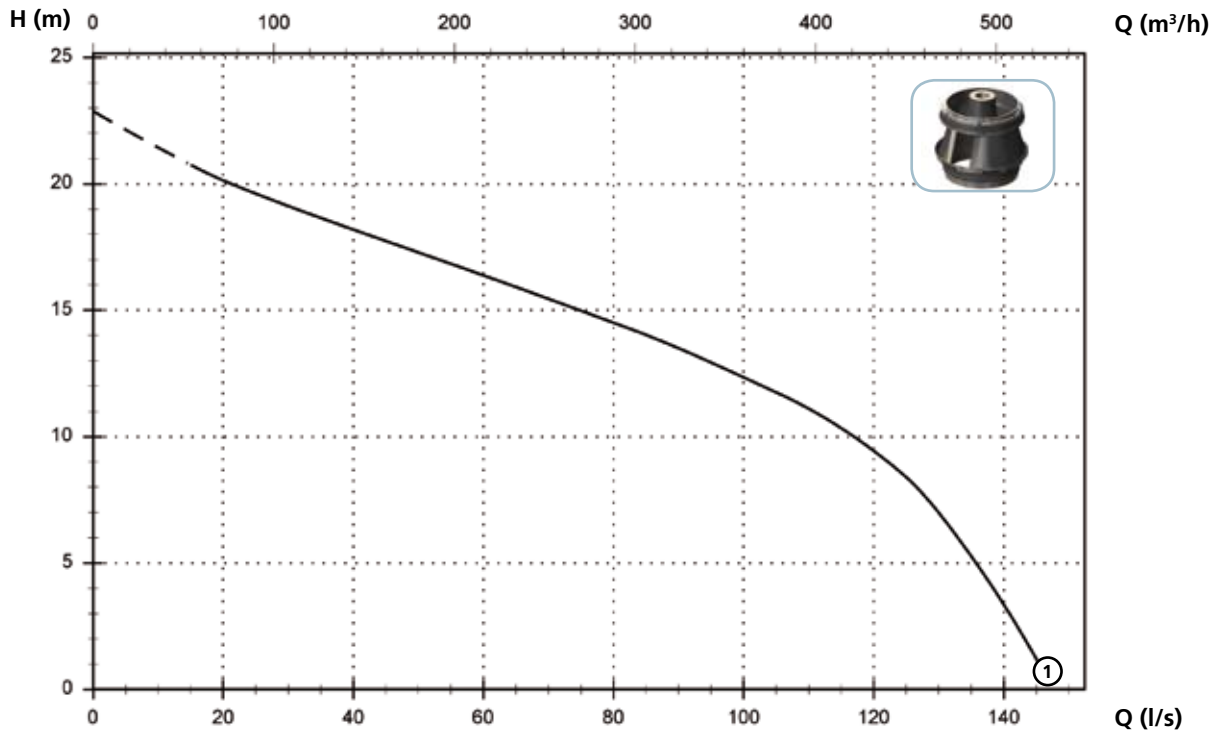
### Technical data

|                          | V   | Phases | P1 (kW) | P2 (kW) | A  | Rpm  | Ø             | Cable (*) | Free passage |
|--------------------------|-----|--------|---------|---------|----|------|---------------|-----------|--------------|
| ① SBN 5000/4/150 A1LT/50 | 400 | 3      | 45.8    | 37      | 76 | 1450 | DN150 PN10-16 | A         | 90 mm        |
| ② SBN 5000/4/150 F1LT/50 | 400 | 3      | 45.8    | 37      | 76 | 1450 | DN150 PN10-16 | A         | 90 mm        |
| ③ SBN 5000/4/150 G1LT/50 | 400 | 3      | 45.8    | 37      | 76 | 1450 | DN150 PN10-16 | A         | 90 mm        |
| ④ SBN 5000/4/150 H1LT/50 | 400 | 3      | 45.8    | 37      | 76 | 1450 | DN150 PN10-16 | A         | 90 mm        |

(\*) A = H07RN-F 4G10 + H07RN-F 4G10 + H07RN-F 4G1.5 - 10 m

**Models with horizontal DN150 PN10-16 flanged delivery port - 6 poles**

**Performances**



**Technical data**

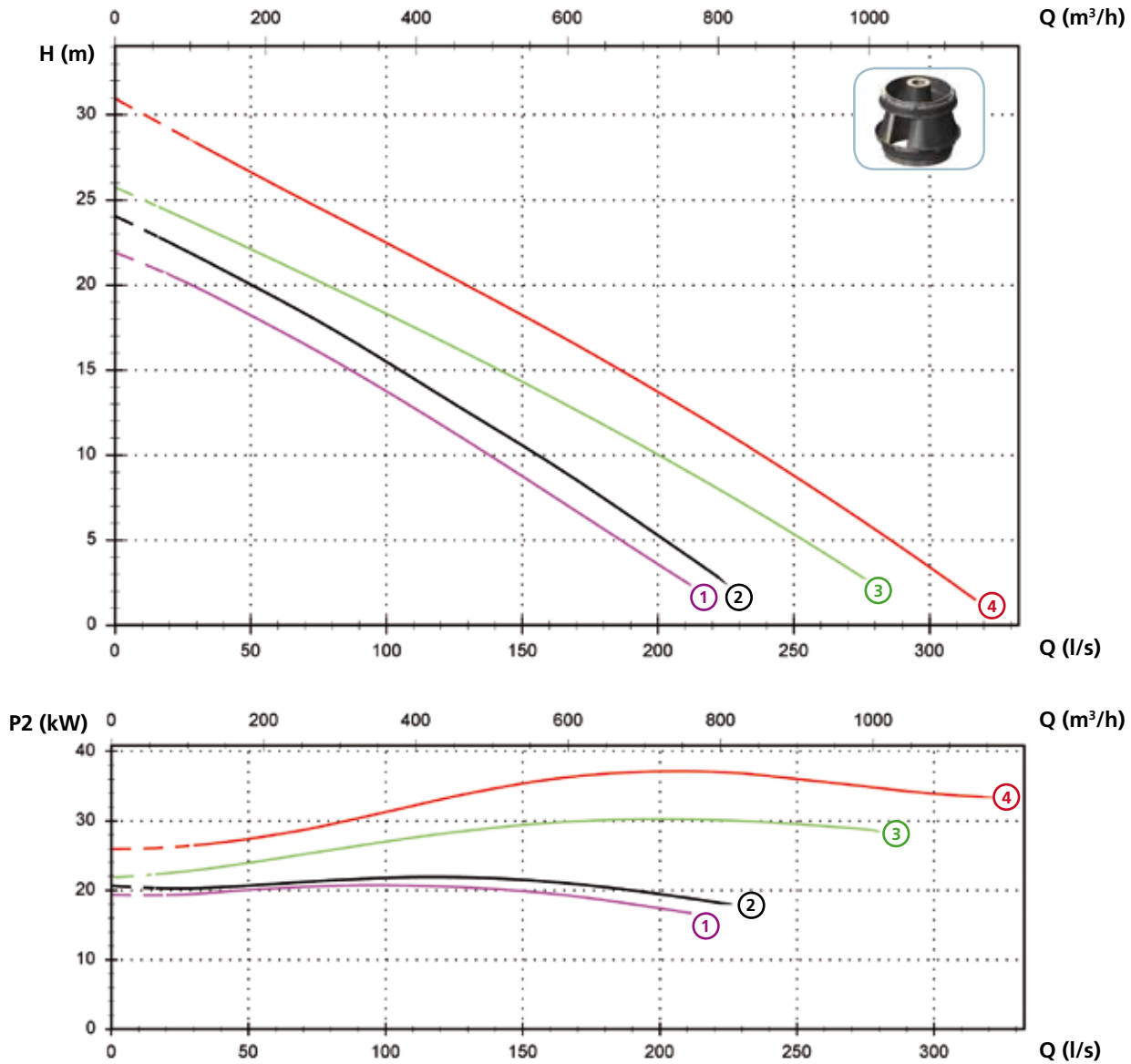
|                          | V   | Phases | P1 (kW) | P2 (kW) | A  | Rpm | Ø             | Cable (*) | Free passage |
|--------------------------|-----|--------|---------|---------|----|-----|---------------|-----------|--------------|
| ① SBN 2500/6/150 A1LT/50 | 400 | 3      | 23.0    | 18.5    | 40 | 960 | DN150 PN10-16 | A         | 90 mm        |

(\*) A = H07RN-F 4G6 + H07RN-F 4G6 + H07RN-F 4G1.5 - 10 m

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## Models with horizontal DN200 PN10 flanged delivery port - 4 poles

### Performances



### Technical data

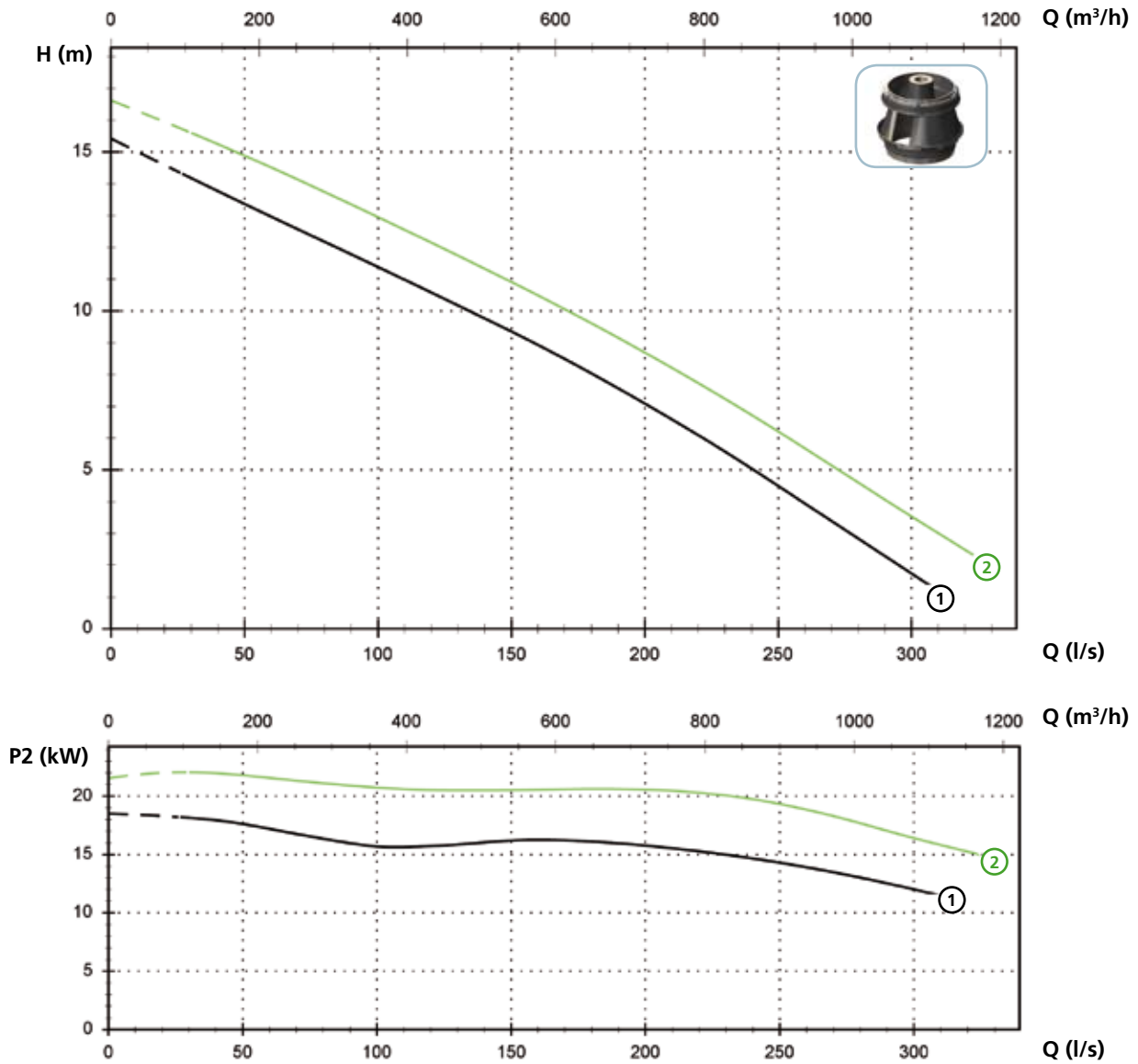
|                          | V   | Phases | P1 (kW) | P2 (kW) | A    | Rpm  | Ø          | Cable (*) | Free passage |
|--------------------------|-----|--------|---------|---------|------|------|------------|-----------|--------------|
| ① SBN 3000/4/200 A1LT/50 | 400 | 3      | 25.3    | 22      | 43.5 | 1450 | DN200 PN10 | A         | 105x140 mm   |
| ② SBN 3000/4/200 B1LT/50 | 400 | 3      | 23.8    | 22      | 41   | 1450 | DN200 PN10 | A         | 105x140 mm   |
| ③ SBN 4000/4/200 A1LT/50 | 400 | 3      | 35.9    | 30      | 61   | 1450 | DN200 PN10 | B         | 105x140 mm   |
| ④ SBN 5000/4/200 A1LT/50 | 400 | 3      | 45.8    | 37      | 76   | 1450 | DN200 PN10 | B         | 105x140 mm   |

(\*) A = H07RN-F 4G6 + H07RN-F 4G6 + H07RN-F 4G1.5 - 10 m  
 B = H07RN-F 4G10 + H07RN-F 4G10 + H07RN-F 4G1.5 - 10 m



**Models with horizontal DN250 PN10 flanged delivery port - 6 poles**

**Performances**



**Technical data**

|                          | V   | Phases | P1 (kW) | P2 (kW) | A  | Rpm | Ø          | Cable (*) | Free passage |
|--------------------------|-----|--------|---------|---------|----|-----|------------|-----------|--------------|
| ① SBN 2500/6/250 A2LT/50 | 400 | 3      | 23.0    | 18.5    | 40 | 960 | DN250 PN10 | A         | 130 mm       |
| ② SBN 3000/6/250 A2LT/50 | 400 | 3      | 26.1    | 22      | 46 | 960 | DN250 PN10 | A         | 130 mm       |

(\*) A = H07RN-F 4G6 + H07RN-F 4G6 + H07RN-F 4G1.5 - 10 m

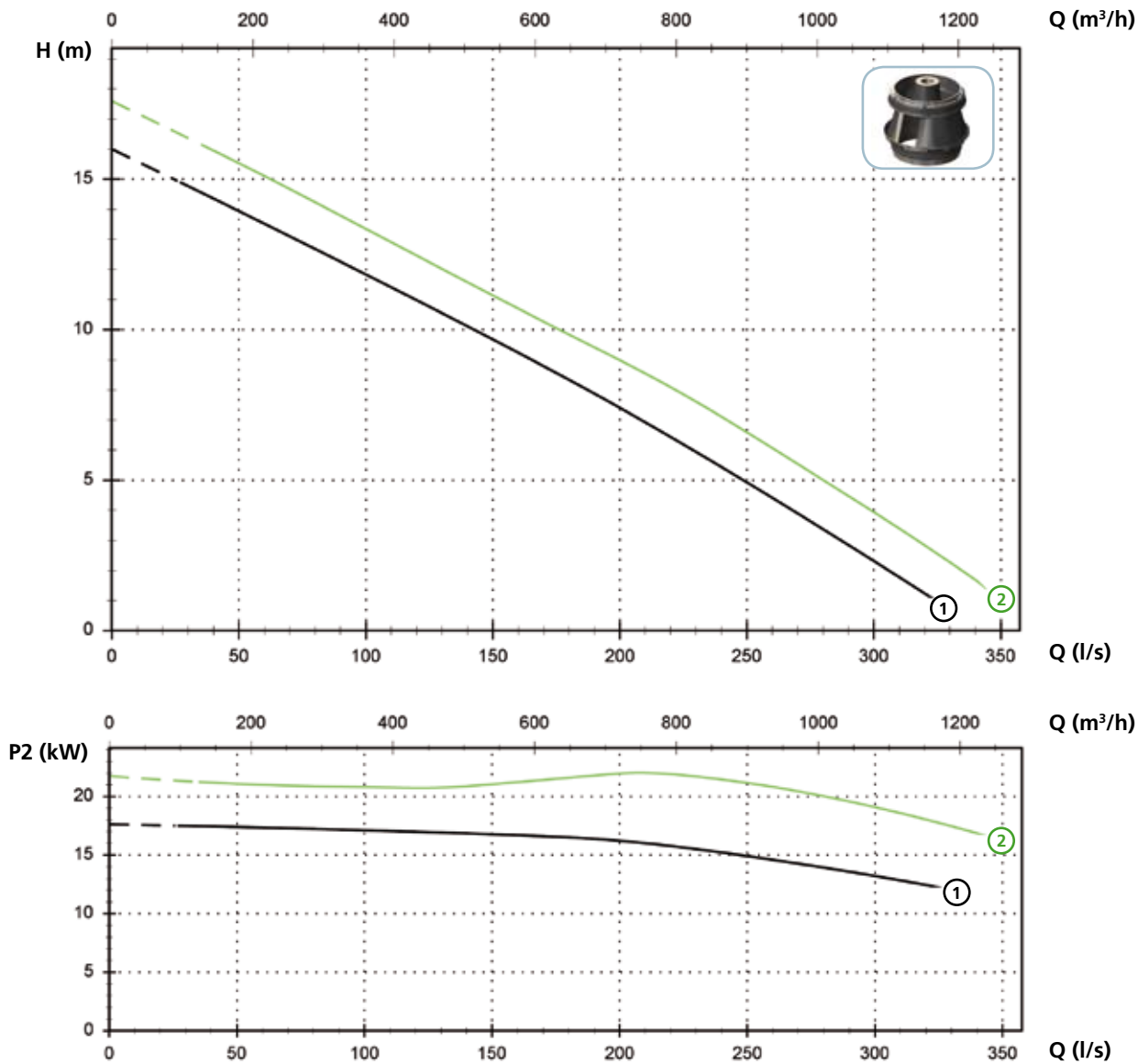




# SBN

## Models with horizontal DN300 PN10 flanged delivery port - 6 poles

### Performances



### Technical data

|                          | V   | Phases | P1 (kW) | P2 (kW) | A  | Rpm | Ø          | Cable (*) | Free passage |
|--------------------------|-----|--------|---------|---------|----|-----|------------|-----------|--------------|
| ① SBN 2500/6/300 A1LT/50 | 400 | 3      | 23.0    | 18.5    | 40 | 960 | DN300 PN10 | A         | 130 mm       |
| ② SBN 3000/6/300 A1LT/50 | 400 | 3      | 26.1    | 22      | 46 | 960 | DN300 PN10 | A         | 130 mm       |

(\*) A = H07RN-F 4G6 + H07RN-F 4G6 + H07RN-F 4G1.5 - 10 m

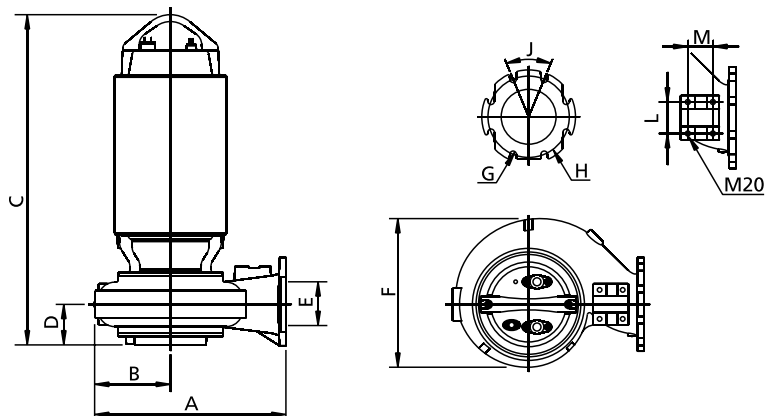
**Versions available**

(Key to versions on page 15)

|                        | Electrical variants |   |        |             |                  |                       |             |                  |                       |        |        |             |        | Cooling          |   | Mechanical seals |      |      |       |        |
|------------------------|---------------------|---|--------|-------------|------------------|-----------------------|-------------|------------------|-----------------------|--------|--------|-------------|--------|------------------|---|------------------|------|------|-------|--------|
|                        | N<br>A<br>E         | T | T<br>C | T<br>C<br>D | T<br>C<br>D<br>T | T<br>C<br>D<br>G<br>T | T<br>C<br>G | T<br>C<br>S<br>T | T<br>C<br>S<br>G<br>T | T<br>S | T<br>R | T<br>R<br>G | F<br>T | C<br>G<br>F<br>T | N | CC               | 2SIC | SICM | SICAL | 2SICAL |
| SBN 3000/4/150 A1LT/50 |                     |   |        |             |                  |                       |             |                  |                       | ●      |        |             |        |                  | ● | ●                | ●    |      |       |        |
| SBN 3000/4/150 F1LT/50 |                     |   |        |             |                  |                       |             |                  |                       | ●      |        |             |        |                  | ● | ●                | ●    |      |       |        |
| SBN 4000/4/150 A1LT/50 |                     |   |        |             |                  |                       |             |                  |                       | ●      |        |             |        |                  | ● | ●                | ●    |      |       |        |
| SBN 4000/4/150 F1LT/50 |                     |   |        |             |                  |                       |             |                  |                       | ●      |        |             |        |                  | ● | ●                | ●    |      |       |        |
| SBN 4000/4/150 G1LT/50 |                     |   |        |             |                  |                       |             |                  |                       | ●      |        |             |        |                  | ● | ●                | ●    |      |       |        |
| SBN 5000/4/150 A1LT/50 |                     |   |        |             |                  |                       |             |                  |                       | ●      |        |             |        |                  | ● | ●                | ●    |      |       |        |
| SBN 5000/4/150 F1LT/50 |                     |   |        |             |                  |                       |             |                  |                       | ●      |        |             |        |                  | ● | ●                | ●    |      |       |        |
| SBN 5000/4/150 G1LT/50 |                     |   |        |             |                  |                       |             |                  |                       | ●      |        |             |        |                  | ● | ●                | ●    |      |       |        |
| SBN 5000/4/150 H1LT/50 |                     |   |        |             |                  |                       |             |                  |                       | ●      |        |             |        |                  | ● | ●                | ●    |      |       |        |
| SBN 2500/6/150 A1LT/50 |                     |   |        |             |                  |                       |             |                  |                       | ●      |        |             |        |                  | ● | ●                | ●    |      |       |        |
| SBN 3000/4/200 A1LT/50 |                     |   |        |             |                  |                       |             |                  |                       | ●      |        |             |        |                  | ● | ●                | ●    |      |       |        |
| SBN 3000/4/200 B1LT/50 |                     |   |        |             |                  |                       |             |                  |                       | ●      |        |             |        |                  | ● | ●                | ●    |      |       |        |
| SBN 4000/4/200 A1LT/50 |                     |   |        |             |                  |                       |             |                  |                       | ●      |        |             |        |                  | ● | ●                | ●    |      |       |        |
| SBN 5000/4/200 A1LT/50 |                     |   |        |             |                  |                       |             |                  |                       | ●      |        |             |        |                  | ● | ●                | ●    |      |       |        |
| SBN 3000/4/250 A1LT/50 |                     |   |        |             |                  |                       |             |                  |                       | ●      |        |             |        |                  | ● | ●                | ●    |      |       |        |
| SBN 4000/4/250 A1LT/50 |                     |   |        |             |                  |                       |             |                  |                       | ●      |        |             |        |                  | ● | ●                | ●    |      |       |        |
| SBN 5000/4/250 A1LT/50 |                     |   |        |             |                  |                       |             |                  |                       | ●      |        |             |        |                  | ● | ●                | ●    |      |       |        |
| SBN 5000/4/250 B1LT/50 |                     |   |        |             |                  |                       |             |                  |                       | ●      |        |             |        |                  | ● | ●                | ●    |      |       |        |
| SBN 2500/6/250 A2LT/50 |                     |   |        |             |                  |                       |             |                  |                       | ●      |        |             |        |                  | ● | ●                | ●    |      |       |        |
| SBN 3000/6/250 A2LT/50 |                     |   |        |             |                  |                       |             |                  |                       | ●      |        |             |        |                  | ● | ●                | ●    |      |       |        |
| SBN 2500/6/300 A1LT/50 |                     |   |        |             |                  |                       |             |                  |                       | ●      |        |             |        |                  | ● | ●                | ●    |      |       |        |
| SBN 3000/6/300 A1LT/50 |                     |   |        |             |                  |                       |             |                  |                       | ●      |        |             |        |                  | ● | ●                | ●    |      |       |        |

# SBN

## Overall dimensions and weights

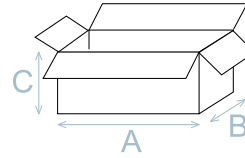


|                        | A   | B   | C    | D   | E   | F   | G  | H   | J   | L   | M  | kg  |
|------------------------|-----|-----|------|-----|-----|-----|----|-----|-----|-----|----|-----|
| SBN 3000/4/150 A1LT/50 | 695 | 265 | 1155 | 130 | 150 | 520 | 24 | 240 | 45° | 109 | 79 | 385 |
| SBN 3000/4/150 F1LT/50 | 695 | 265 | 1155 | 130 | 150 | 520 | 24 | 240 | 45° | 109 | 79 | 385 |
| SBN 4000/4/150 A1LT/50 | 695 | 265 | 1155 | 130 | 150 | 520 | 24 | 240 | 45° | 109 | 79 | 410 |
| SBN 4000/4/150 F1LT/50 | 695 | 265 | 1155 | 130 | 150 | 520 | 24 | 240 | 45° | 109 | 79 | 410 |
| SBN 4000/4/150 G1LT/50 | 695 | 265 | 1155 | 130 | 150 | 520 | 24 | 240 | 45° | 109 | 79 | 410 |
| SBN 5000/4/150 A1LT/50 | 695 | 265 | 1155 | 130 | 150 | 520 | 24 | 240 | 45° | 109 | 79 | 423 |
| SBN 5000/4/150 F1LT/50 | 695 | 265 | 1155 | 130 | 150 | 520 | 24 | 240 | 45° | 109 | 79 | 423 |
| SBN 5000/4/150 G1LT/50 | 695 | 265 | 1155 | 130 | 150 | 520 | 24 | 240 | 45° | 109 | 79 | 480 |
| SBN 5000/4/150 H1LT/50 | 695 | 265 | 1155 | 130 | 150 | 520 | 24 | 240 | 45° | 109 | 79 | 423 |
| SBN 2500/6/150 A1LT/50 | 695 | 265 | 1155 | 130 | 150 | 520 | 24 | 240 | 45° | 109 | 79 | 410 |
| SBN 3000/4/200 A1LT/50 | 695 | 275 | 1205 | 150 | 200 | 540 | 24 | 295 | 45° | 109 | 79 | 385 |
| SBN 3000/4/200 B1LT/50 | 695 | 275 | 1205 | 150 | 200 | 540 | 24 | 295 | 45° | 109 | 79 | 385 |
| SBN 4000/4/200 A1LT/50 | 695 | 275 | 1205 | 155 | 200 | 540 | 24 | 295 | 45° | 109 | 79 | 410 |
| SBN 5000/4/200 A1LT/50 | 695 | 275 | 1205 | 150 | 200 | 540 | 24 | 295 | 45° | 109 | 79 | 423 |
| SBN 3000/4/250 A1LT/50 | 785 | 310 | 1200 | 150 | 250 | 610 | 24 | 350 | 30° | 109 | 79 | 393 |
| SBN 4000/4/250 A1LT/50 | 785 | 310 | 1205 | 155 | 250 | 610 | 24 | 350 | 30° | 109 | 79 | 418 |
| SBN 5000/4/250 A1LT/50 | 785 | 310 | 1205 | 155 | 250 | 610 | 24 | 350 | 30° | 109 | 79 | 431 |
| SBN 5000/4/250 B1LT/50 | 785 | 310 | 1205 | 155 | 250 | 610 | 24 | 350 | 30° | 109 | 79 | 520 |
| SBN 2500/6/250 A2LT/50 | 880 | 370 | 1275 | 195 | 250 | 735 | 24 | 350 | 30° | 109 | 79 | 470 |
| SBN 3000/6/250 A2LT/50 | 880 | 370 | 1275 | 195 | 250 | 735 | 24 | 350 | 30° | 109 | 79 | 480 |
| SBN 2500/6/300 A1LT/50 | 940 | 400 | 1275 | 200 | 300 | 790 | 24 | 400 | 30° | 109 | 79 | 520 |
| SBN 3000/6/300 A1LT/50 | 940 | 400 | 1275 | 200 | 300 | 790 | 24 | 400 | 30° | 109 | 79 | 540 |

Measurements in mm

**Packaging dimension**

|                        | A    | B    | C    |
|------------------------|------|------|------|
| SBN 3000/4/150 A1LT/50 | 1080 | 1245 | 1135 |
| SBN 3000/4/150 F1LT/50 | 1080 | 1245 | 1135 |
| SBN 4000/4/150 A1LT/50 | 1080 | 1245 | 1135 |
| SBN 4000/4/150 F1LT/50 | 1080 | 1245 | 1135 |
| SBN 4000/4/150 G1LT/50 | 1080 | 1245 | 1135 |
| SBN 5000/4/150 A1LT/50 | 1080 | 1245 | 1135 |
| SBN 5000/4/150 F1LT/50 | 1080 | 1245 | 1135 |
| SBN 5000/4/150 G1LT/50 | 1080 | 1245 | 1135 |
| SBN 5000/4/150 H1LT/50 | 1080 | 1245 | 1135 |
| SBN 2500/6/150 A1LT/50 | 1080 | 1245 | 1135 |
| SBN 3000/4/200 A1LT/50 | 1080 | 1245 | 1135 |
| SBN 3000/4/200 B1LT/50 | 1080 | 1245 | 1135 |
| SBN 4000/4/200 A1LT/50 | 1080 | 1245 | 1135 |
| SBN 5000/4/200 A1LT/50 | 1080 | 1245 | 1135 |
| SBN 3000/4/250 A1LT/50 | 1080 | 1245 | 1135 |
| SBN 4000/4/250 A1LT/50 | 1080 | 1245 | 1135 |
| SBN 5000/4/250 A1LT/50 | 1080 | 1245 | 1135 |
| SBN 5000/4/250 B1LT/50 | 1080 | 1245 | 1135 |
| SBN 2500/6/250 A2LT/50 | 1080 | 1245 | 1135 |
| SBN 3000/6/250 A2LT/50 | 1080 | 1245 | 1135 |
| SBN 2500/6/300 A1LT/50 | 1080 | 1245 | 1135 |
| SBN 3000/6/300 A1LT/50 | 1080 | 1245 | 1135 |



Dimension in mm

**Installations available**

