

Submersible pumps in stainless steel

-  Sewage water
-  Domestic use
-  Civil use
-  Industrial use



PERFORMANCE RANGE

- Flow rate up to **850 l/min** (51 m³/h)
- Head up to **17 m**

APPLICATION LIMITS

- **5 m** maximum immersion depth
- Maximum liquid temperature **+40 °C**
- Passage of suspended solids up to **Ø 50 mm**
- Minimum immersion depth for continuous service:
 - **290 mm** foe BC 10/50-MF
 - **330 mm** foe BC 15/50-MF
 - **360 mm** foe BC 20/50-MF

CONSTRUCTION AND SAFETY STANDARDS

- **10 m** long power cable
- Float switch for single-phase versions

EN 60335-1
IEC 60335-1
CEI 61-150

EN 60034-1
IEC 60034-1
CEI 2-3



CERTIFICATIONS

Company with management system
certified DNV ISO 9001: QUALITY



INSTALLATION AND USE

BC-MF submersible pumps are recommended for draining **dirty and sewage water** in domestic, civil and industrial applications. They come equipped with a **DOUBLE-CHANNEL** impeller and are capable of pumping liquids containing short fibred suspended solids up to Ø 50 mm. They are ideal for pumping sewage, waste water, surface water and water mixed with mud in locations such as blocks of flats and detached house.

These pumps distinguish themselves for their reliability, which can be best appreciated under automatic operating conditions in fixed installations.

PATENTS - TRADE MARKS - MODELS

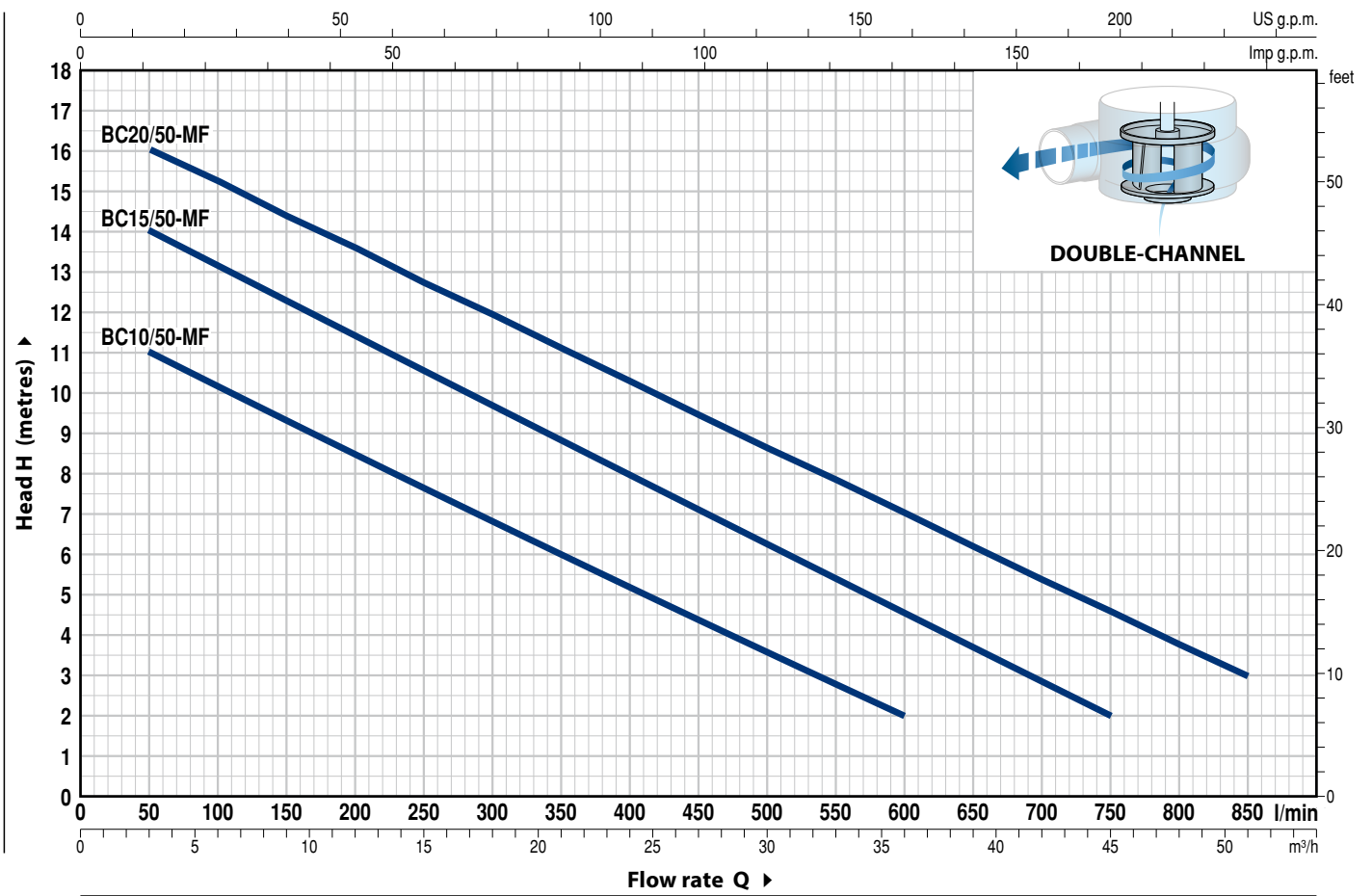
- Patent n. EP2313658
- Patent n. IT0001428923

OPTIONS AVAILABLE ON REQUEST

- Single-phase pumps without float switch
- Other voltages or 60 Hz frequency

CHARACTERISTIC CURVES AND PERFORMANCE DATA

50 Hz n= 2900 min⁻¹



| MODEL | | POWER (P ₂) | | Q | Flow rate | | | | | | | | | | | | | | |
|--------------|-------------|-------------------------|-----|----------|-------------------|----|------|------|-----|------|-----|-----|-----|-----|-----|----|--|--|--|
| Single-phase | Three-phase | kW | HP | | m ³ /h | 0 | 3 | 6 | 12 | 18 | 24 | 30 | 36 | 42 | 45 | 51 | | | |
| | | | | l/min | 0 | 50 | 100 | 200 | 300 | 400 | 500 | 600 | 700 | 750 | 850 | | | | |
| BCm 10/50-MF | BC 10/50-MF | 0.75 | 1 | H metres | 12 | 11 | 10 | 8.5 | 7 | 5 | 3.6 | 2 | | | | | | | |
| BCm 15/50-MF | BC 15/50-MF | 1.1 | 1.5 | | 15 | 14 | 13 | 11.5 | 9.7 | 8 | 6.3 | 4.6 | 2.9 | 2 | | | | | |
| BCm 20/50-MF | BC 20/50-MF | 1.5 | 2 | | 17 | 16 | 15.3 | 13.5 | 12 | 10.3 | 8.6 | 7.0 | 5.3 | 4.5 | 3 | | | | |

Q = Flow rate H = Total manometric head

Tolerance of characteristic curves in compliance with EN ISO 9906 Grade 3B.

POS. COMPONENT CONSTRUCTION CHARACTERISTICS

| | | |
|---|---------------------------|--|
| 1 | PUMP BODY | Precision cast stainless steel AISI 316L with threaded port in compliance with ISO 228/1 |
| 2 | BASE | Stainless steel AISI 304 |
| 3 | IMPELLER | Precision cast stainless steel AISI 304 DOUBLE-CHANNEL type. The double-channel impeller produces excellent performance and high energy efficiency, developing higher pressure and ensuring the pumping of solids up to 50 mm in diameter. Definitely the most highly performing solution for draining wastewater. |
| 4 | MOTOR CASING | Stainless steel AISI 304 |
| 5 | MOTOR CASING PLATE | Stainless steel AISI 304 for BC 10/50-MF Cast iron with an Epoxy Electro Coating treatment for BC 15/50-MF, BC 20/50-MF |
| 6 | MOTOR SHAFT | Stainless steel AISI 316L |

7 DOUBLE MECHANICAL SEAL IN OIL CHAMBER

| Seal Model | Shaft Diameter | Position | Materials | | |
|-------------|----------------|------------|-----------------|-----------------|-----------|
| | | | Stationary ring | Rotational ring | Elastomer |
| MG1-14D SIC | Ø 14 mm | Motor side | Silicon carbide | Graphite | NBR |
| | | Pump side | Silicon carbide | Silicon carbide | NBR |

Double mechanical seal in oil chamber, with silicon carbide chute slides for a greater resistance to abrasion and wear and for a longer life of the pump.

8 BEARINGS

| Pump | Model |
|----------------------------|-------------------------|
| BC 10/50-MF | 6203 ZZ / 6203 ZZ |
| BC 15/50-MF BC 20/50-MF | 6303 2RS - C3 / 6203 ZZ |

9 CAPACITOR

EN 60252-1/A1  

(only for single-phase versions)

10 ELECTRIC MOTOR

Electric motors produced to a high quality standard, subjected to the most rigorous checks to ensure excellent insulation. The impregnation of the winding, achieved with high quality resins, is followed by treatment in an oven for up to eight hours, thus ensuring the long working life of the motor.

BCm-MF: single-phase 230 V - 50 Hz
with thermal overload protector incorporated into the winding

BC-MF: three-phase 400 V - 50 Hz

- Insulation: class F
- Protection: IP X8

11 POWER CABLE

Power cable encapsulated in epoxy resin both in the area of the grommets and at the point where the wires exit the sheath, resulting in an absolute insulation from moisture and water infiltration.

H07 RN-F" type
(with Schuko plug for single-phase versions only)

Standard length 10 metres

12 EXTERNAL FLOAT SWITCH

(only for single-phase versions)

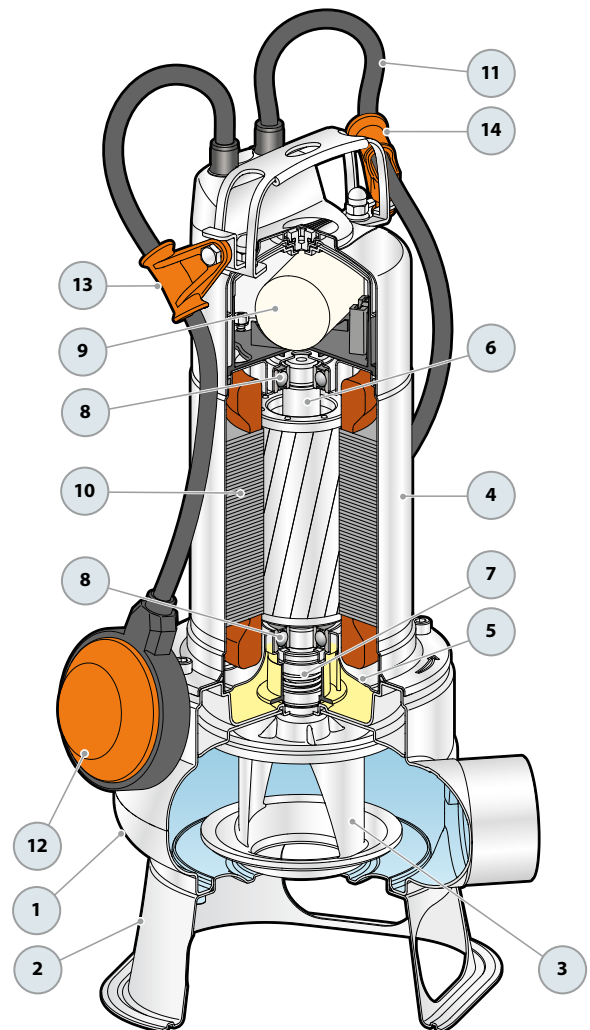
13 TILTING DEVICE FOR THE FLOAT CABLE

(only for single-phase versions)

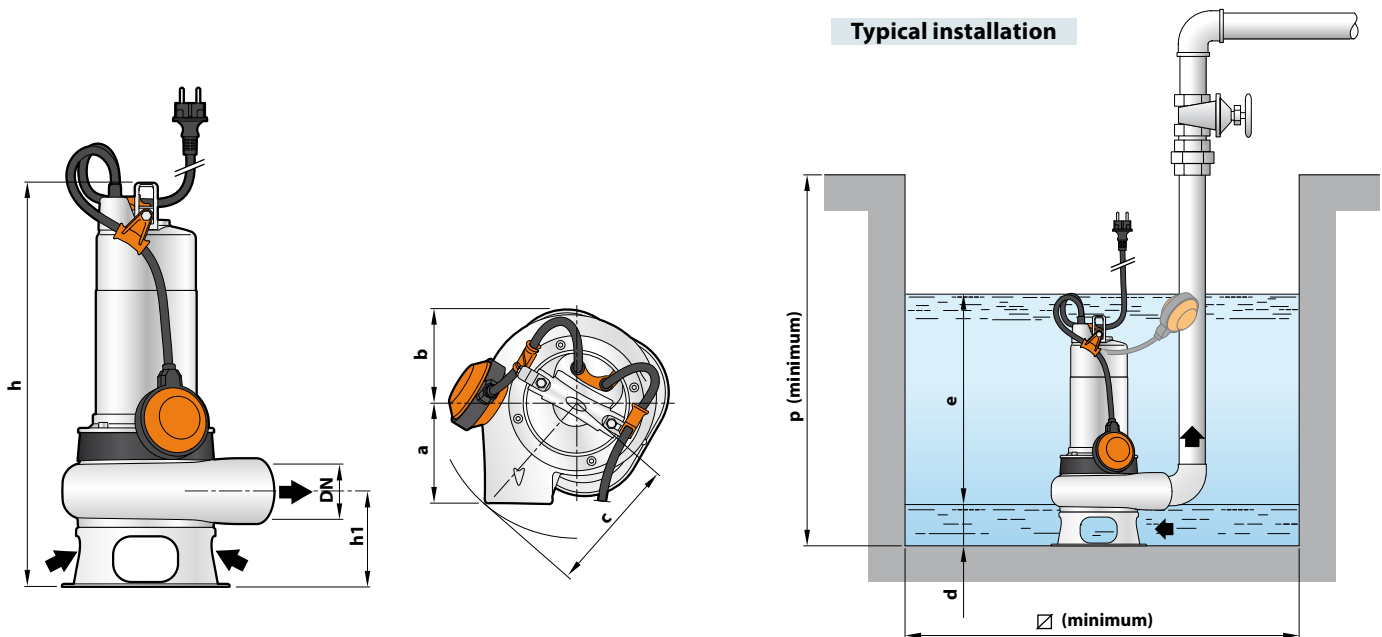
Patent n. IT0001428923

14 TEAR-PROOF DEVICE FOR THE POWER CABLE

Patent n. EP2313658



DIMENSIONS AND WEIGHT



| MODEL | | PORT DN | Passage of solids | DIMENSIONS mm | | | | | | | | | kg | |
|--------------|-------------|------------|----------------------|---------------|----|-----|-----|-----|----|----------|-----|-----|------|------|
| Single-phase | Three-phase | | | a | b | c | h | h1 | d | e | p | Ø | 1~ | 3~ |
| BCm 10/50-MF | BC 10/50-MF | 2" | Ø 50 mm | 102 | 95 | 145 | 450 | 107 | 60 | variable | 500 | 500 | 15.2 | 14.0 |
| BCm 15/50-MF | BC 15/50-MF | | | | | | 483 | | | | | | 17.8 | 16.2 |
| BCm 20/50-MF | BC 20/50-MF | | | | | | 513 | | | | | | 20.0 | 17.8 |

ABSORPTION

| MODEL | VOLTAGE | |
|--------------|--------------|-------|
| | Single-phase | 230 V |
| BCm 10/50-MF | 5.5 A | 5.4 A |
| BCm 15/50-MF | 8.0 A | 7.8 A |
| BCm 20/50-MF | 10.0 A | 9.8 A |

| MODEL | VOLTAGE | | | |
|-------------|-------------|-------|-------|-------|
| | Three-phase | 230 V | 400 V | 240 V |
| BC 10/50-MF | 3.8 A | 3.6 A | 2.2 A | 2.1 A |
| BC 15/50-MF | 5.3 A | 5.1 A | 3.1 A | 2.9 A |
| BC 20/50-MF | 6.7 A | 6.5 A | 3.9 A | 3.7 A |

CAPACITORS

| MODEL | CAPACITANCE |
|--------------|------------------|
| Single-phase | (230 V or 240 V) |
| BCm 10/50-MF | 25 µF 450 VL |
| BCm 15/50-MF | 35 µF 450 VL |
| BCm 20/50-MF | 35 µF 450 VL |

PALLETIZATION

| MODEL | | GROUPAGE | CONTAINER |
|--------------|-------------|----------|-----------|
| Monofase | Three-phase | n. pumps | n. pumps |
| BCm 10/50-MF | BC 10/50-MF | 45 | 60 |
| BCm 15/50-MF | BC 15/50-MF | 30 | 45 |
| BCm 20/50-MF | BC 20/50-MF | 30 | 45 |

SEWAGE LIFTING SYSTEM VX-MF – BC-MF

HORIZONTAL DELIVERY VERSION WITH ¾" GUIDE TUBES

| | | |
|----------------------------------|-----------------|--------------|
| For VX /35-MF | Cod. ASSPVX35ST | DN 2" |
| For VX /50-MF , BC /50-MF | Cod. ASSPVX50ST | DN 2" |

Kit consisting of:

- 1) footing connection
- 2) slide guide with ring nut and seal
- 3) support for the guide tubes



VERTICAL DELIVERY VERSION WITH ¾" GUIDE TUBES

| | | |
|---------------------------------|------------------|---------------|
| For VX /35-MF | Cod. ASSPVX35STV | DN 2½" |
| For VX /50-MF, BC /50-MF | Cod. ASSPVX50STV | DN 2½" |

Kit consisting of:

- 1) footing connection complete with counterflange
- 2) slide guide with ring nut and seal
- 3) support for the guide tubes



ACCESSORIES CAN BE ORDERED

SLIDE GUIDE (also to be ordered separately)

| | |
|----------------------------------|---------------|
| For VX /35-MF | Cod. ASSFL005 |
| For VX /50-MF , BC /50-MF | Cod. ASSFL006 |

Complete with ring nut and seal



INTERMEDIATE SUPPORT (on request)

| | |
|----------------------|--------------------|
| For guide tubes Ø ¾" | Cod. 859SV340INTFA |
|----------------------|--------------------|

In order to ensure stability, insert the intermediate support every 2 metres



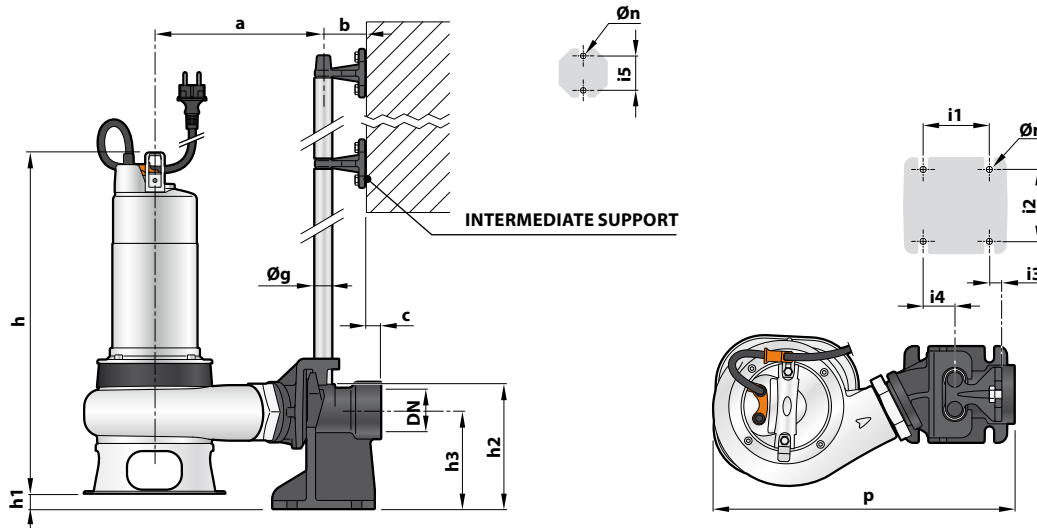
GUIDE TUBES (AISI 304 stainless steel)

| | |
|-----------------|-----------------|
| Guide tube Ø ¾" | Cod. 54SARTG005 |
|-----------------|-----------------|

Maximum length of the tube plank: 6 metres

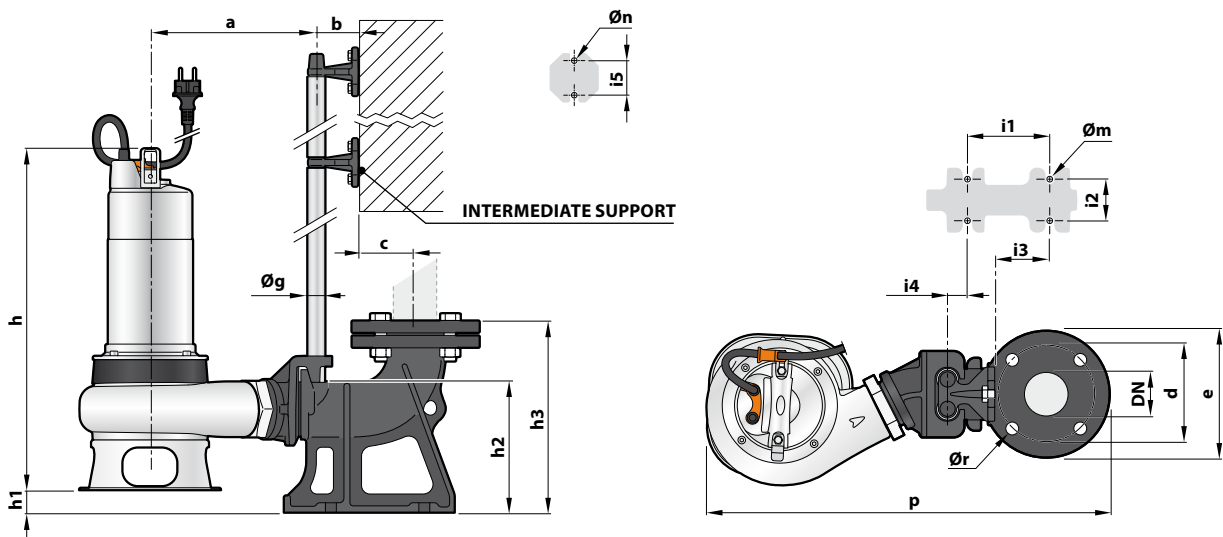


DIMENSIONS (Horizontal delivery version)



| MODEL | | Passage of solids mm | PORT DN | DIMENSIONS mm | | | | | | | | | | | | | | | |
|---------------|--------------|-------------------------|------------|---------------|----|----|---|-----|----|-----|-----|----|----|----|----|----|----|----|----|
| Single-phase | Three-phase | | | a | b | c | p | h | h1 | h2 | h3 | i1 | i2 | i3 | i4 | i5 | Øg | Øm | Øn |
| VXm 8/35 -MF | VX 8/35 -MF | 40 | 2" | 222 | | | | 424 | 25 | | | | | | | | | | |
| VXm 10/35 -MF | VX 10/35 -MF | | | | | | | 439 | | | | | | | | | | | |
| VXm 15/35 -MF | VX 15/35 -MF | | | | | | | 472 | | | | | | | | | | | |
| VXm 20/35 -MF | VX 20/35 -MF | | | | | | | 502 | | | | | | | | | | | |
| VXm 8/50 -MF | VX 8/50 -MF | | | | | | | 435 | | | | | | | | | | | |
| VXm 10/50 -MF | VX 10/50 -MF | 50 | 2" | 226 | 61 | 17 | | 450 | 23 | 165 | 130 | 85 | 94 | 16 | 40 | 50 | ¾" | 12 | 11 |
| VXm 15/50 -MF | VX 15/50 -MF | | | | | | | 483 | | | | | | | | | | | |
| VXm 20/50 -MF | VX 20/50 -MF | | | | | | | 513 | | | | | | | | | | | |
| BCm 10/50 -MF | BC 10/50 -MF | | | | | | | 450 | | | | | | | | | | | |
| BCm 15/50 -MF | BC 15/50 -MF | | | | | | | 483 | | | | | | | | | | | |
| BCm 20/50 -MF | BC 20/50 -MF | 513 | | | | | | | | | | | | | | | | | |

DIMENSIONS (Vertical delivery version)



| MODEL | | Passage of solids mm | PORT DN | DIMENSIONS mm | | | | | | | | | | | | | | | | | |
|---------------|--------------|-------------------------|------------|---------------|----|----|-----|-----|-----|----|-----|-----|-----|----|----|----|----|----|----|----|----|
| Single-phase | Three-phase | | | a | b | c | d | e | p | h | h1 | h2 | h3 | i1 | i2 | i3 | i4 | i5 | Øg | Øm | Øn |
| VXm 8/35 -MF | VX 8/35 -MF | 40 | 2½" | 215 | | | | | 424 | 23 | | | | | | | | | | | |
| VXm 10/35 -MF | VX 10/35 -MF | | | | | | | | 439 | | | | | | | | | | | | |
| VXm 15/35 -MF | VX 15/35 -MF | | | | | | | | 472 | | | | | | | | | | | | |
| VXm 20/35 -MF | VX 20/35 -MF | | | | | | | | 502 | | | | | | | | | | | | |
| VXm 8/50 -MF | VX 8/50 -MF | | | | | | | | 435 | | | | | | | | | | | | |
| VXm 10/50 -MF | VX 10/50 -MF | 50 | 2½" | 217 | 61 | 52 | 125 | 165 | 450 | 21 | 164 | 215 | 120 | 72 | 62 | 3 | 50 | ¾" | 14 | 11 | 18 |
| VXm 15/50 -MF | VX 15/50 -MF | | | | | | | | 483 | | | | | | | | | | | | |
| VXm 20/50 -MF | VX 20/50 -MF | | | | | | | | 507 | | | | | | | | | | | | |
| BCm 10/50 -MF | BC 10/50 -MF | | | | | | | | 450 | | | | | | | | | | | | |
| BCm 15/50 -MF | BC 15/50 -MF | | | | | | | | 483 | | | | | | | | | | | | |
| BCm 20/50 -MF | BC 20/50 -MF | 513 | | | | | | | | | | | | | | | | | | | |