

# EVOSTA 2 EVOSTA 3

ELECTRONIC CIRCULATORS  
FOR HEATING AND COOLING SYSTEMS





# EVOSTA 2

WET ROTOR ELECTRONIC CIRCULATORS



in line with European Directive  
ErP 2009/125/EC (formerly EuP) of 2015

### APPLICATIONS

Low energy consumption electronic pump for water circulation in all types of domestic heating and cooling systems.

### ADVANTAGES

The new range of **EVOSTA 2** circulators by SACI PUMPS combines the strength of an mechanical circulator with the benefits of the electronic circulator. Thanks to the permanent magnet synchronous motor, the frequency converter and the energy efficiency of  $EEL \leq 0.18$ , as well as the protection class IPX5 and the integrated bleeding plug, the **EVOSTA 2** family ranks as one of the best products in the category in terms of performance and reliability. The range of **EVOSTA 2** circulators is the perfect replacement for old three-speed circulators due to its compact size and all-round performance. The product is also extremely user-friendly, with a single button for sequential setting and direct access to the motor shaft for unlocking it when necessary.

### CONSTRUCTION FEATURES

Cast iron pump body with cataphoresis paint coating and wet rotor motor. Steel motor casing, technopolymer impeller. Ceramic motor shaft on ceramic bushings lubricated by the pumped liquid. Stainless steel rotor liner, stator liner and closing flange. Graphite thrust ring. EPDM seal ring and brass bleeding plug. Thanks to the internal protection of the motor, the pump does not require any overload protection.

### CONTROL PANEL

The settings of the **EVOSTA 2**, **EVOSTA 3** circulators can be modified in the control panel on the facia of the pump device. The pumps have nine settings that can be selected scrolling the **MODE** button. Three LED lights on the facia show the current setting.

**EVOSTA 3** circulator has a display showing the following data:

- Head of the selected curve
- Instantaneous power consumption in Watts.
- Instantaneous head in m
- Instantaneous flow rate in m³/h

### TECHNICAL DATA

**Operating range:** 0,4-3,6 m³/h with head up to 6,9 metres.  
**Pumped liquid temperature range:** from -10 °C to +110°C  
**Working pressure:** 10 bar (1000 kPa)  
**Protection class:** IPX5  
**Insulation class:** F  
**Installation:** with horizontal motor axis  
**Standard power input::** single-phase 1x230 V~ 50/60 Hz  
**Pumped liquid** Clean, free of solids and mineral oils, non-viscous, chemically neutral, with properties similar to water (glycol max 30%).

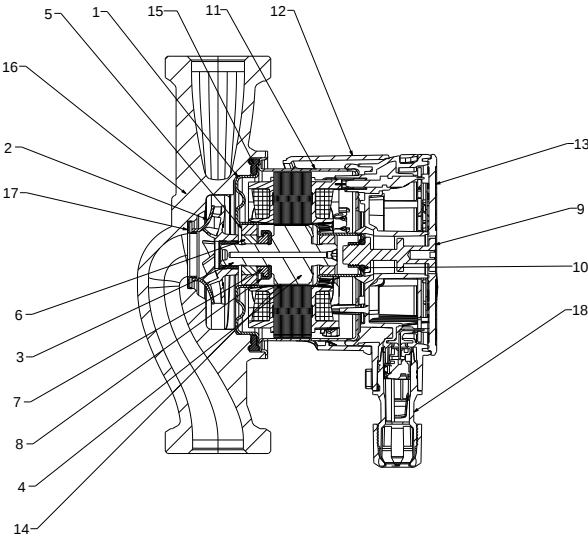


# EVOSTA 2

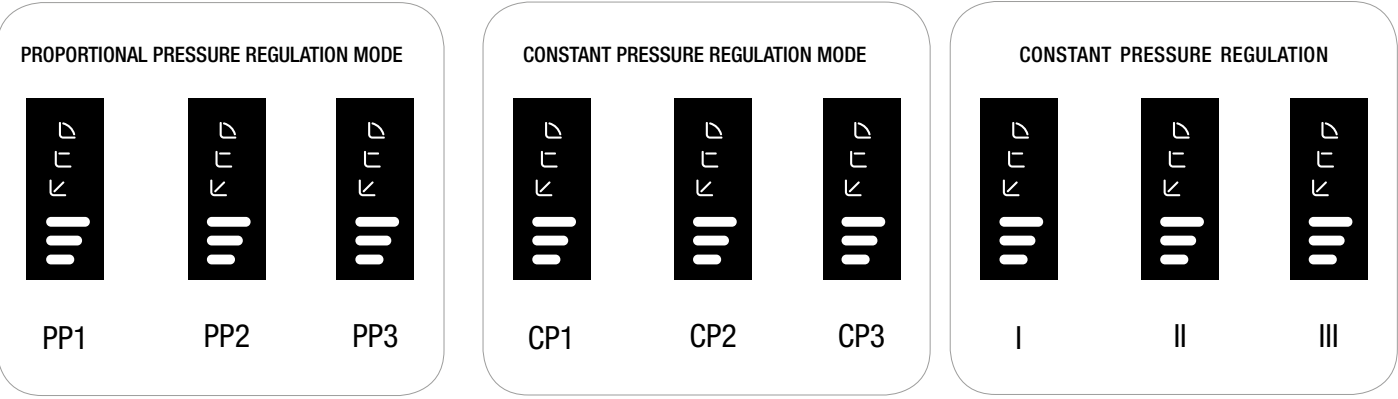
WET ROTOR ELECTRONIC CIRCULATORS

### MATERIALS

| N. | PARTS            | MATERIALS                        |
|----|------------------|----------------------------------|
| 1  | ROTOR CAN FLANGE | AISI 316                         |
| 2  | IMPELLER         | ULTRASON                         |
| 3  | SHAFT            | ALUMINA                          |
| 4  | ROTOR            | Fe                               |
| 5  | BEARING HOUSING  | BRASS                            |
| 6  | BEARING          | ALUMINA                          |
| 7  | AXIAL BEARING    | GRAPHITE                         |
| 8  | AXIAL HOUSING    | EPDM                             |
| 9  | PLUG             | BRASS                            |
| 10 | O-ring           | EPDM                             |
| 11 | STATOR HOUSING   | AISI 304                         |
| 12 | ENCLOUSER SHELL  | POLYCARBONATE                    |
| 13 | ENCLOUSER        | POLYCARBONATE                    |
| 14 | ROTOR SLEEV      | AISI 304                         |
| 15 | SEAL             | EPDM                             |
| 16 | PUMP HOUSING     | CAST IRON - BRONZE (SAN VERSION) |
| 17 | NECK RING        | AISI 304                         |
| 18 | CONNECTOR        | POLYCARBONATE                    |



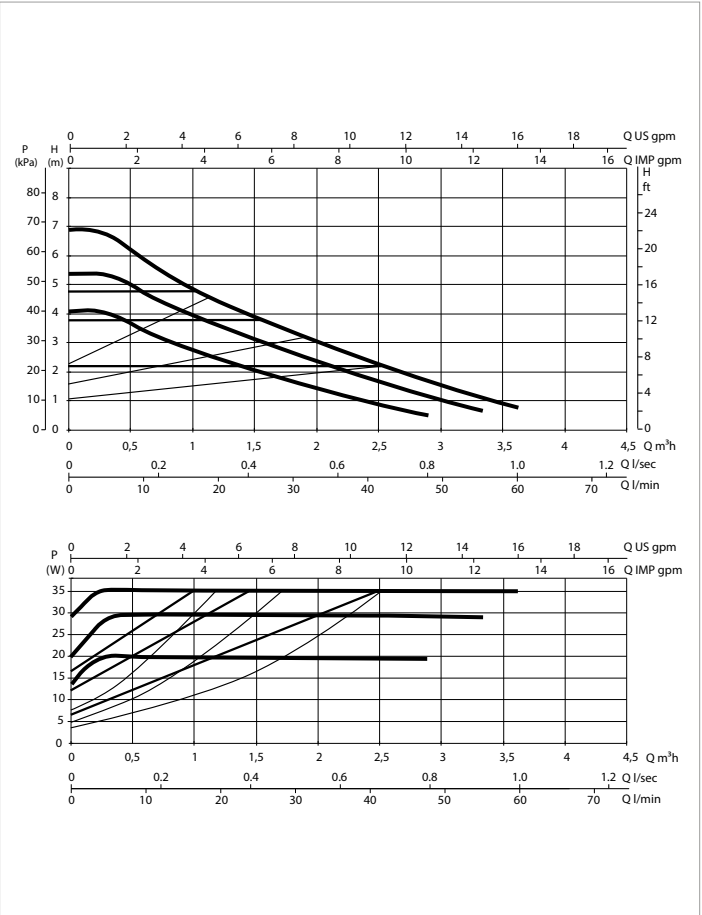
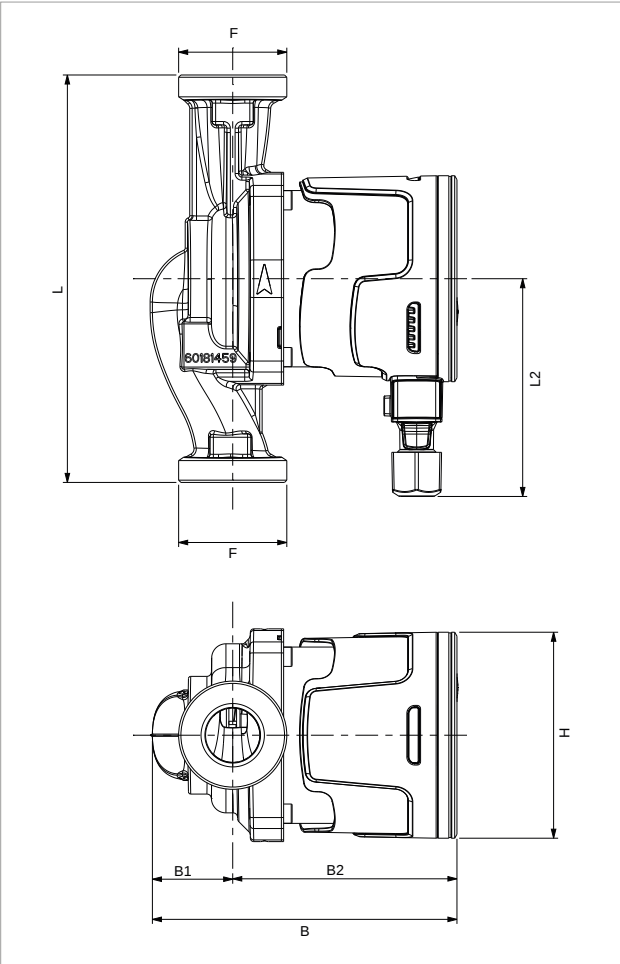
### REGULATION MODE



| Model Number (example)                     | EVOSTA                       | 40/70 | 130 | X |
|--------------------------------------------|------------------------------|-------|-----|---|
| Threaded connections electronic circulator |                              |       |     |   |
| Maximum head range (dm)                    |                              |       |     |   |
| Centre distance (mm)                       |                              |       |     |   |
| Standard (no ref.)                         | = 1" ½ threaded connections  |       |     |   |
|                                            | ½" = 1" threaded connections |       |     |   |
|                                            | X = 2" threaded connections  |       |     |   |

EVOSTA 2 - ELECTRONIC CIRCULATORS FOR DOMESTIC HEATING AND COOLING SYSTEMS - SINGLE, WITH UNIONS

Pumped liquid temperature range: from -10 °C to +110 °C - Maximum operating pressure: 10 bar (1000 kPa)



The performance curves are based on kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

| MODEL                   | Q=m³h    | 0,0 | 0,3 | 0,6 | 0,9 | 1,8 | 2,4 | 3,0 | 3,6 |
|-------------------------|----------|-----|-----|-----|-----|-----|-----|-----|-----|
|                         | Q=l/min  | 0   | 5   | 10  | 15  | 30  | 40  | 50  | 60  |
| EVOSTA 2 40-70/130 1"   | H<br>(m) | 6,9 | 6,9 | 5,8 | 5,1 | 3,4 | 2,4 | 1,6 | 0,8 |
| EVOSTA 2 40-70/130 1/2" |          | 6,9 | 6,9 | 5,8 | 5,1 | 3,4 | 2,4 | 1,6 | 0,8 |
| EVOSTA 2 40-70/180 1"   |          | 6,9 | 6,9 | 5,8 | 5,1 | 3,4 | 2,4 | 1,6 | 0,8 |

| MODEL                   | CENTRE DISTANCE<br>mm | PUMP CONNECTIONS        | POWER INPUT<br>50 Hz | P1 MAX<br>W | In<br>A      | EEI* | MINIMUM SUCTION PRESSURE |      |
|-------------------------|-----------------------|-------------------------|----------------------|-------------|--------------|------|--------------------------|------|
|                         |                       |                         |                      |             |              |      | t°                       | 90 ° |
| EVOSTA 2 40-70/130 1"   | 130                   | DN25 THREADED ( G 1" ½) | 1x230 V ~            | 35          | 0,043 - 0,32 | 0,18 | m.c.a.                   | 10   |
| EVOSTA 2 40-70/130 1/2" | 130                   | DN15 THREADED ( G 1")   | 1x230 V ~            | 35          | 0,043 - 0,32 | 0,18 | m.c.a.                   | 10   |
| EVOSTA 2 40-70/180 1"   | 180                   | DN25 THREADED ( G 1" ½) | 1x230 V ~            | 35          | 0,043 - 0,32 | 0,18 | m.c.a.                   | 10   |

The parameter of reference for the more efficient circulators is EEI ≤ 0,18

| MODEL                   | L   | L1 | B     | B1   | B2   | H  | F    | PACKING DIMENSIONS |    |     | VOLUME<br>m³ | WEIGHT<br>kg |
|-------------------------|-----|----|-------|------|------|----|------|--------------------|----|-----|--------------|--------------|
|                         |     |    |       |      |      |    |      | L                  | B  | H   |              |              |
| EVOSTA 2 40-70/130 1"   | 130 | 96 | 134.6 | 35.5 | 99.1 | 91 | 1" ½ | 142                | 99 | 150 | 0,0021       | 2,02         |
| EVOSTA 2 40-70/130 1/2" | 130 | 96 | 134.6 | 35.5 | 99.1 | 91 | 1    | 142                | 99 | 150 | 0,0021       | 1,86         |
| EVOSTA 2 40-70/180 1"   | 180 | 96 | 134.6 | 35.5 | 99.1 | 91 | 1" ½ | 192                | 99 | 150 | 0,0028       | 2,19         |



EVOSTA 3

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APPLICATIONS

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ADVANTAGES

The new range of **EVOSTA 3** circulators by SACI PUMPS combines the strength of an mechanical circulator with the benefits of the electronic circulator. Thanks to the permanent magnet synchronous motor, the frequency converter and the energy efficiency of  $EEI \leq 0.19$ , as well as the protection class IPX5 and the integrated bleeding plug, the **EVOSTA 3** family ranks as one of the best products in the category in terms of performance and reliability. The range of **EVOSTA 3** circulators is the perfect replacement for old three-speed circulators due to its compact size and all-round performance. The product is also extremely user-friendly, with a single button for sequential setting and direct access to the motor shaft for unlocking it when necessary. **EVOSTA 3** version has a display t showing the instantaneous flow rate, the instantaneous head and the instantaneous power consumption in Watts. **EVOSTA 3** version also offers the new function of automatic degassing.

CONSTRUCTION FEATURES

Cast iron pump body with cataphoresis paint coating and wet rotor motor. Steel motor casing, technopolymer impeller. Ceramic motor shaft on ceramic bushings lubricated by the pumped liquid. Stainless steel rotor liner, stator liner and closing flange. Graphite thrust ring. EPDM seal ring and brass bleeding plug. Thanks to the internal protection of the motor, the pump does not require any overload protection.

CONTROL PANEL

The settings of the **EVOSTA 2**, **EVOSTA 3** circulators can be modified in the control panel on the facia of the pump device. The pumps have nine settings that can be selected scrolling the **MODE** button. Three LED lights on the facia show the current setting.

**EVOSTA 3** circulator has a display showing the following data:

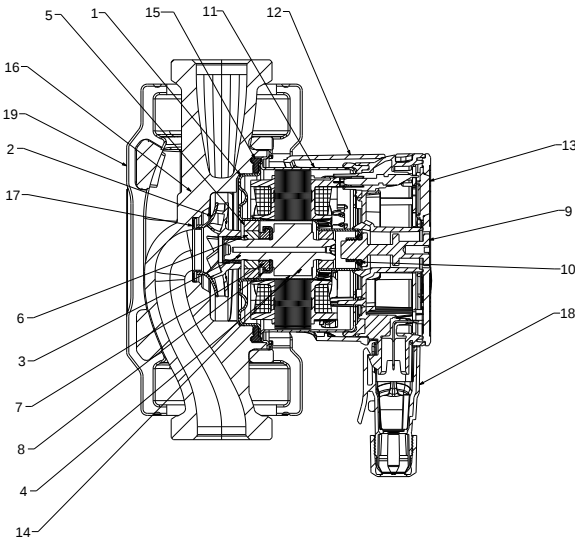
- Head of the selected curve
- Instantaneous power consumption in Watts.
- Instantaneous head in m
- Instantaneous flow rate in m³/h

EVOSTA 3

WET ROTOR ELECTRONIC CIRCULATORS

MATERIALS

| N° | PARTS            | MATERIALS     |
|----|------------------|---------------|
| 1  | ROTOR CAN FLANGE | AISI 316      |
| 2  | IMPELLER         | ULTRASON      |
| 3  | SHAFT            | ALUMINA       |
| 4  | ROTOR            | Fe            |
| 5  | BEARING HOUSING  | BRASS         |
| 6  | BEARING          | ALUMINA       |
| 7  | AXIAL BEARING    | GRAPHITE      |
| 8  | AXIAL HOUSING    | EPDM          |
| 9  | PLUG             | BRASS         |
| 10 | O-ring           | EPDM          |
| 11 | STATOR HOUSING   | AISI 304      |
| 12 | ENCLOUSER SHELL  | POLYCARBONATE |
| 13 | ENCLOUSER        | POLYCARBONATE |
| 14 | ROTOR SLEEVE     | AISI 304      |
| 15 | SEAL             | EPDM          |
| 16 | PUMP HOUSING     | CAST IRON     |
| 17 | NECK RING        | AISI 304      |
| 18 | CONNECTOR        | POLYCARBONATE |
| 19 | INSULATION SHELL | PPE           |



REGULATION MODES

PROPORTIONAL PRESSURE REGULATION MODE



PP1

PP2

PP3

CONSTANT PRESSURE REGULATION MODE



CP1

CP2

CP3

FIXED CURVE REGULATION MODE



I

II

III

Model Number  
(example)

Threaded connections electronic circulator

Maximum head range (dm)

Centre distance (mm)

Standard (no ref.) = 1" ½ threaded connections

½" = 1" threaded connections

X = 2" threaded connections

EVOSTA

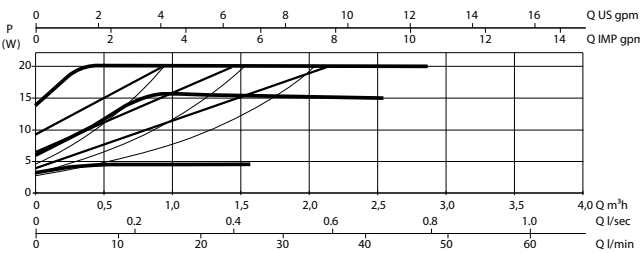
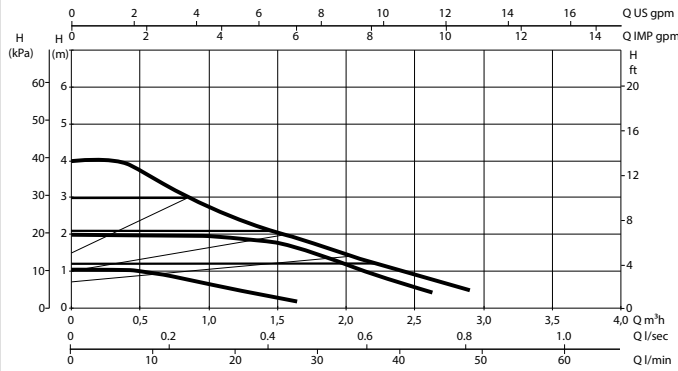
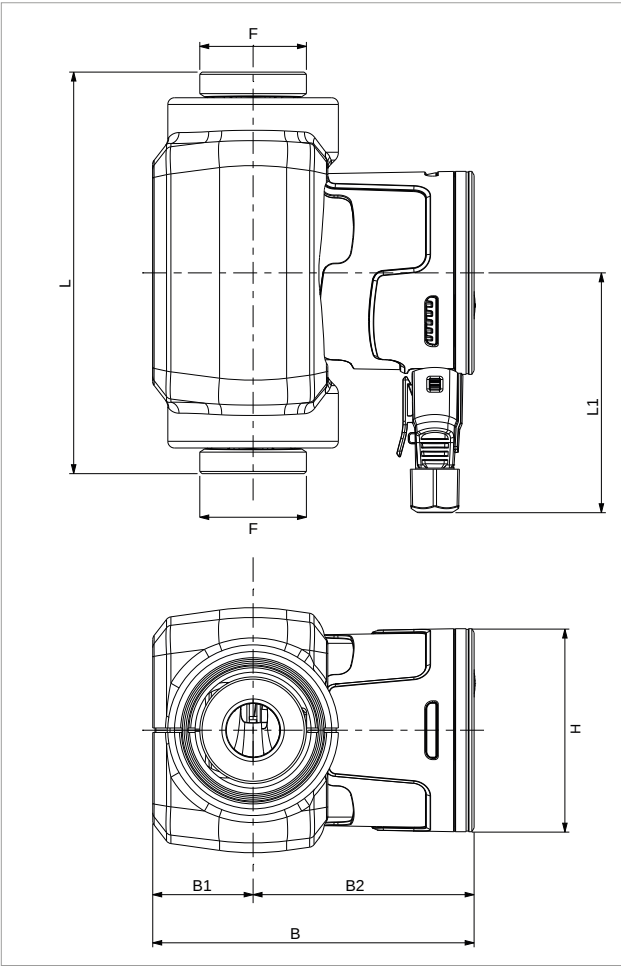
40/70

130

X

EVOSTA 3 - ELECTRONIC CIRCULATORS FOR DOMESTIC HEATING AND COOLING SYSTEMS - SINGLE, WITH UNIONS

Pumped liquid temperature range: from -10 °C to +110 °C - Maximum operating pressure: 10 bar (1000 kPa)



The performance curves are based on kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

| MODEL              | Q=m³h    | 0   | 6   | 10  | 15  | 20  | 30  | 35  | 48  |
|--------------------|----------|-----|-----|-----|-----|-----|-----|-----|-----|
|                    | Q=l/min  | 0   | 0,4 | 0,6 | 0,9 | 1,2 | 1,8 | 2,1 | 2,9 |
| EVOSTA 3 40/130 1" | H<br>(m) | 4,0 | 4,0 | 3,5 | 2,9 | 2,5 | 1,7 | 1,3 | 0,5 |
| EVOSTA 3 40/180 1" |          | 4,0 | 4,0 | 3,5 | 2,9 | 2,5 | 1,7 | 1,3 | 0,5 |

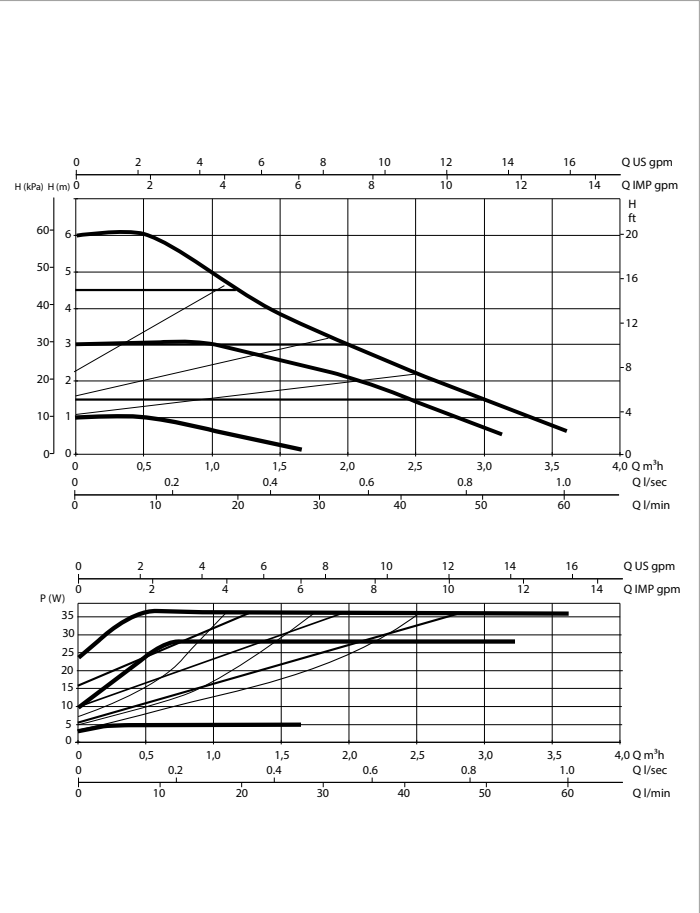
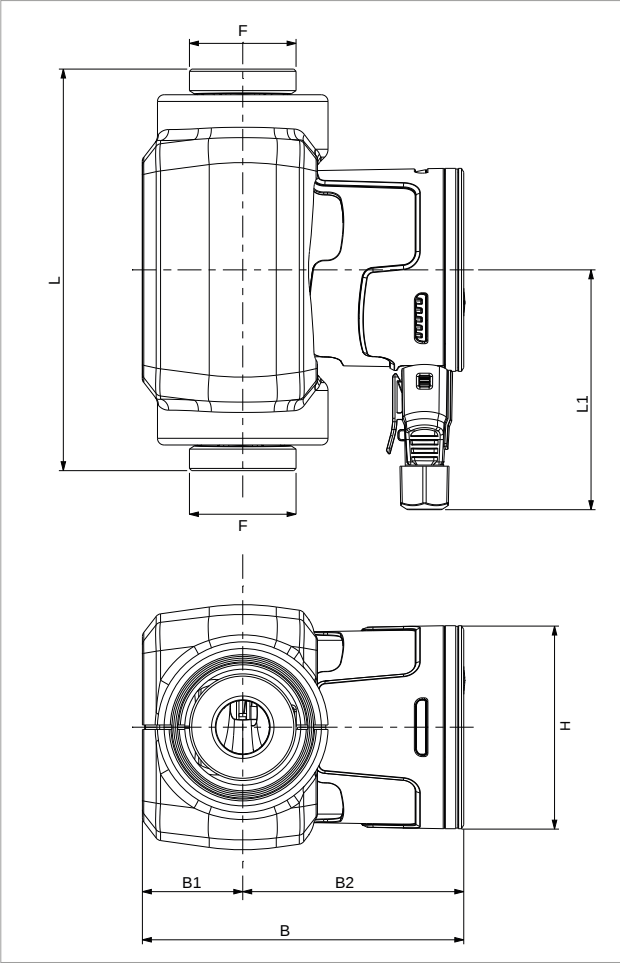
| MODEL              | CENTRE DISTANCE<br>mm | PUMP CONNECTIONS        | POWER INPUT<br>50 Hz | P1 MAX<br>W | In<br>A      | EEI* | MINIMUM SUCTION PRESSURE |      |
|--------------------|-----------------------|-------------------------|----------------------|-------------|--------------|------|--------------------------|------|
|                    |                       |                         |                      |             |              |      | t°                       | 90 ° |
| EVOSTA 3 40/130 1" | 130                   | DN25 THREADED ( G 1" ½) | 1x230 V ~            | 20          | 0,034 - 0,18 | 0,17 | m.c.a.                   | 10   |
| EVOSTA 3 40/180 1" | 180                   | DN25 THREADED ( G 1" ½) | 1x230 V ~            | 20          | 0,034 - 0,18 | 0,17 | m.c.a.                   | 10   |

\*The parameter of reference for the more efficient circulators is EEI ≤ 0,19

| MODEL              | L   | L1    | B     | B1 | B2   | H  | F    | PACKING DIMENSIONS |       |     | VOLUME<br>m³ | WEIGHT<br>kg |
|--------------------|-----|-------|-------|----|------|----|------|--------------------|-------|-----|--------------|--------------|
|                    |     |       |       |    |      |    |      | L                  | B     | H   |              |              |
| EVOSTA 3 40/130 1" | 130 | 107,5 | 144,1 | 45 | 99,1 | 91 | 1" ½ | 192                | 113,5 | 155 | 0,0034       | 2,05         |
| EVOSTA 3 40/180 1" | 180 | 107,5 | 144,1 | 45 | 99,1 | 91 | 1" ½ | 192                | 113,5 | 155 | 0,0034       | 2,22         |

EVOSTA 3 - ELECTRONIC CIRCULATORS FOR DOMESTIC HEATING AND COOLING SYSTEMS - SINGLE, WITH UNIONS

Pumped liquid temperature range: from -10 °C to +110 °C - Maximum operating pressure: 10 bar (1000 kPa)



The performance curves are based on kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

| MODEL                   | Q=m³h    | 0   | 0,6 | 1,2 | 1,5 | 2,1 | 2,4 | 3,0 | 3,6 |
|-------------------------|----------|-----|-----|-----|-----|-----|-----|-----|-----|
|                         | Q=l/min  | 0   | 9   | 20  | 25  | 35  | 40  | 50  | 60  |
| EVOSTA 3 60/130 1"      | H<br>(m) | 6,0 | 6,0 | 4,4 | 3,8 | 2,8 | 2,3 | 1,5 | 0,7 |
| EVOSTA 3 60/180 1"      |          | 6,0 | 6,0 | 4,4 | 3,8 | 2,8 | 2,3 | 1,5 | 0,7 |
| EVOSTA 3 60/180X 1" 1/4 |          | 6,0 | 6,0 | 4,4 | 3,8 | 2,8 | 2,3 | 1,5 | 0,7 |

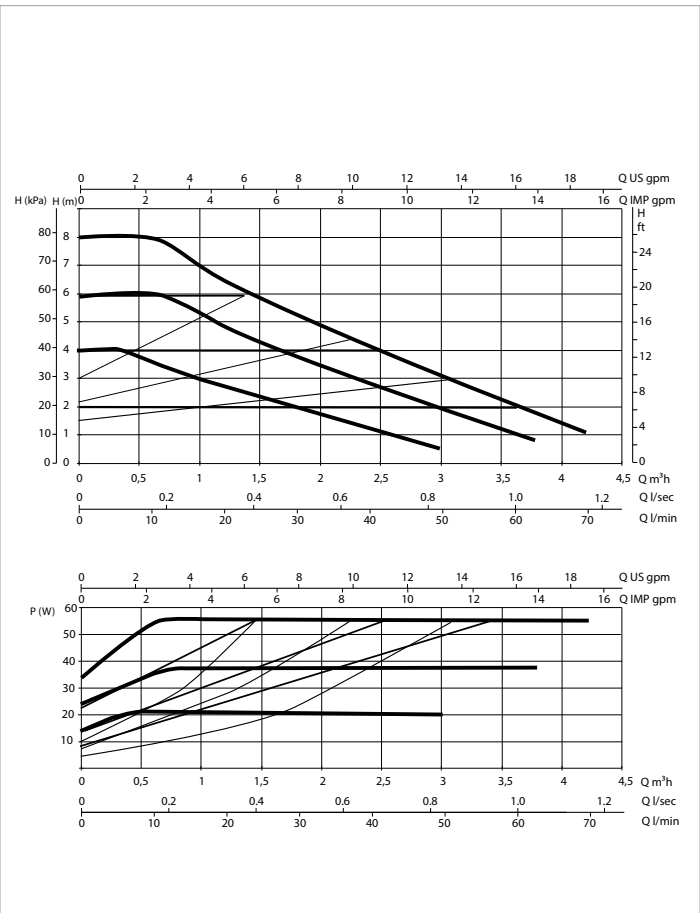
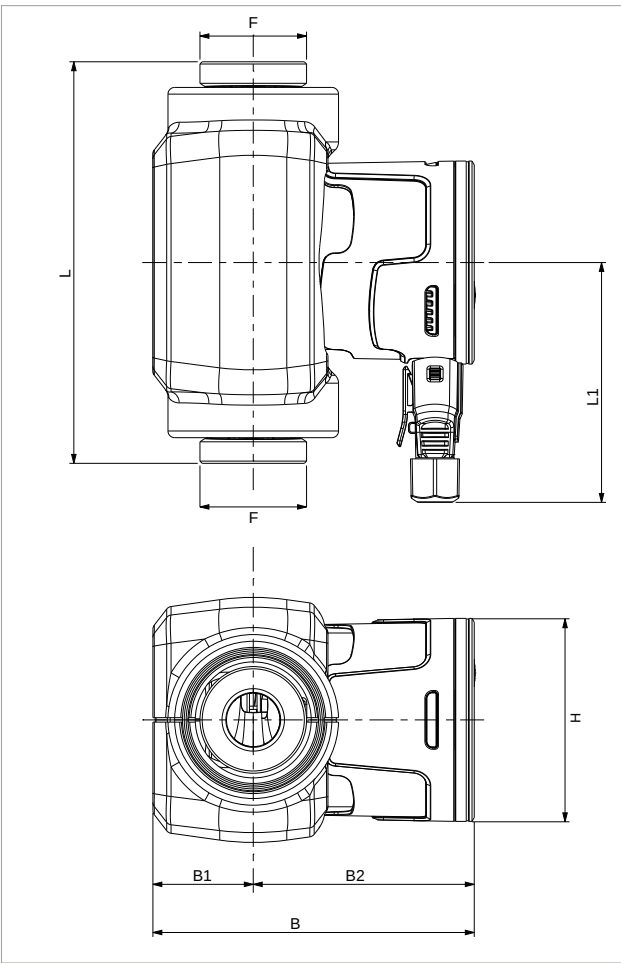
| MODEL                   | CENTRE DISTANCE<br>mm | PUMP CONNECTIONS       | POWER INPUT<br>50 Hz | P1 MAX<br>W | In<br>A      | EEI* | MINIMUM SUCTION PRESSURE |      |
|-------------------------|-----------------------|------------------------|----------------------|-------------|--------------|------|--------------------------|------|
|                         |                       |                        |                      |             |              |      | t°                       | 90 ° |
| EVOSTA 3 60/130 1"      | 130                   | DN25 THREADED (G 1" ½) | 1x230 V ~            | 35          | 0,042 - 0,33 | 0,18 | m.c.a.                   | 10   |
| EVOSTA 3 60/180 1"      | 180                   | DN25 THREADED (G 1" ½) | 1x230 V ~            | 35          | 0,042 - 0,33 | 0,18 | m.c.a.                   | 10   |
| EVOSTA 3 60/180X 1" 1/4 | 180                   | DN30 THREADED (G 2")   | 1x230 V ~            | 35          | 0,042 - 0,33 | 0,18 | m.c.a.                   | 10   |

\*The parameter of reference for the more efficient circulators is EEI ≤ 0,19

| MODEL                   | L   | L1    | B     | B1 | B2   | H  | F    | PACKING DIMENSIONS |       |     | VOLUME<br>m³ | WEIGHT<br>kg |
|-------------------------|-----|-------|-------|----|------|----|------|--------------------|-------|-----|--------------|--------------|
|                         |     |       |       |    |      |    |      | L                  | B     | H   |              |              |
| EVOSTA 3 60/130 1"      | 130 | 107,5 | 144,1 | 45 | 99,1 | 91 | 1" ½ | 192                | 113,5 | 155 | 0,0034       | 2,05         |
| EVOSTA 3 60/180 1"      | 180 | 107,5 | 144,1 | 45 | 99,1 | 91 | 1" ½ | 192                | 113,5 | 155 | 0,0034       | 2,22         |
| EVOSTA 3 60/180X 1" 1/4 | 180 | 107,5 | 144,1 | 45 | 99,1 | 91 | 2"   | 192                | 113,5 | 155 | 0,0034       | 2,38         |

EVOSTA 3 - ELECTRONIC CIRCULATORS FOR DOMESTIC HEATING AND COOLING SYSTEMS - SINGLE, WITH UNIONS

Pumped liquid temperature range: from -10 °C to +110 °C - Maximum operating pressure: 10 bar (1000 kPa)



The performance curves are based on kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

| MODEL                   | Q=m³h    | 0   | 0,6 | 0,9 | 1,2 | 2,7 | 3,3 | 3,9 | 4,2 |
|-------------------------|----------|-----|-----|-----|-----|-----|-----|-----|-----|
|                         | Q=l/min  | 0   | 10  | 15  | 20  | 45  | 55  | 65  | 70  |
| EVOSTA 3 80/130 1"      | H<br>(m) | 8,0 | 8,0 | 7,2 | 6,5 | 3,7 | 2,6 | 1,6 | 1,0 |
| EVOSTA 3 80/180 1"      |          | 8,0 | 8,0 | 7,2 | 6,5 | 3,7 | 2,6 | 1,6 | 1,0 |
| EVOSTA 3 80/180X 1" 1/4 |          | 8,0 | 8,0 | 7,2 | 6,5 | 3,7 | 2,6 | 1,6 | 1,0 |

| MODEL                   | CENTRE DISTANCE<br>mm | PUMP CONNECTIONS       | POWER INPUT<br>50 Hz | P1 MAX<br>W | In<br>A      | EEI* | MINIMUM SUCTION PRESSURE |      |
|-------------------------|-----------------------|------------------------|----------------------|-------------|--------------|------|--------------------------|------|
|                         |                       |                        |                      |             |              |      | t°                       | 90 ° |
| EVOSTA 3 80/130 1"      | 130                   | DN25 THREADED (G 1" ½) | 1x230 V ~            | 55          | 0,053 - 0,47 | 0,19 | m.c.a.                   | 10   |
| EVOSTA 3 80/180 1"      | 180                   | DN25 THREADED (G 1" ½) | 1x230 V ~            | 55          | 0,053 - 0,47 | 0,19 | m.c.a.                   | 10   |
| EVOSTA 3 80/180X 1" 1/4 | 180                   | DN30 THREADED (G 2")   | 1x230 V ~            | 55          | 0,053 - 0,47 | 0,19 | m.c.a.                   | 10   |

\*The parameter of reference for the more efficient circulators is EEI ≤ 0,19

| MODEL                   | L   | L1    | B     | B1 | B2   | H  | F    | PACKING DIMENSIONS |       |     | VOLUME<br>m³ | WEIGHT<br>kg |
|-------------------------|-----|-------|-------|----|------|----|------|--------------------|-------|-----|--------------|--------------|
|                         |     |       |       |    |      |    |      | L                  | B     | H   |              |              |
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| EVOSTA 3 80/180X 1" 1/4 | 180 | 107,5 | 144,1 | 45 | 99,1 | 91 | 2"   | 192                | 113,5 | 155 | 0,0034       | 2,38         |