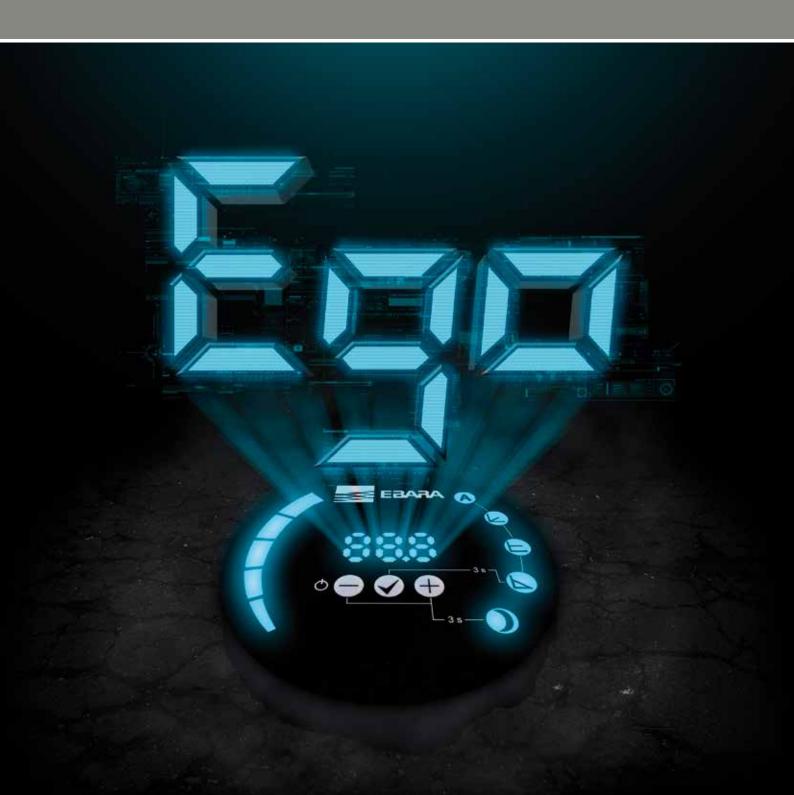


# Ego HIGH PERFORMANCE ELECTRONIC CIRCULATORS





### HIGH PERFORMANCE ELECTRONIC CIRCULATORS

in cast iron with cataphoresis coating



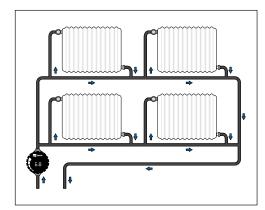
#### **GENERAL FEATURES**

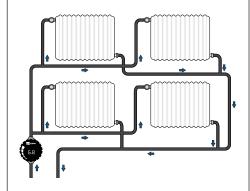
"Ego" is a cutting-edge range of electronic circulators that fully comply with European Directive ErP 2009/125/CE.

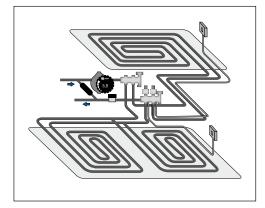
All Ego circulators feature the **ECM technology (electronically commuted motor with rotor equipped with permanent magnets)**, that enables automatic and continuous regulation of the pump (flow rate/head) depending on the actual requirements of the system, ensuring important energy savings.

#### **APPLICATIONS**

Ego circulators are specifically designed for heating systems and circulation of liquids in air-conditioning systems.







#### **Heating systems**

The pumps are suitable for single-pipe systems, two-pipe systems, underfloor heating systems and mixing loops of great installations. All Ego circulators automatically and autonomously control the differential pressure, adjusting pump performance in accordance with heating requirements.

#### **Air-conditioning systems**

Please refer to the minimum allowed temperatures of every product range to see how to use the Ego pumps. Some models are suitable for circulation at temperatures below 0°C (they are, therefore, particularly recommended for air-conditioning and/or refrigeration systems).

#### **CONSTRUCTION**

All Ego pumps are wet-rotor type; therefore, the pump and the motor make up a single unit with no mechanical seal; rotor bearings are lubricated directly by the pumped liquid. One of the most important features of Ego circulators is **the rotor can**, made of **a single part in AISI 316 stainless steel without welding points**: this solution, present on all Ego models, ensures hermetic, stable and reliable separation of the stator from the parts that come into contact with the liquid.

Other design features common to all Ego models are the following:

- Rotor in material resistant to corrosion
- Pump body in cataphoresis treated cast iron
- Low-friction bearings with consequent low noise emissions and reduced power consumption

For details on materials used please refer to the technical data sheets of every model.



## HIGH PERFORMANCE ELECTRONIC CIRCULATORS

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#### **PUMPED LIQUIDS**

Ego circulators are suitable for the circulation of:

- clean, non-aggressive and non-explosive, free of solid particles or fibres (in compliance with VDI 2035)
- water/glycol mixtures

#### Liquid viscosity

During pump selection phase, one of the most important criteria is liquid viscosity that affects (reduces) the maximum performance of the circulator. In particular, when using water/glycol mixtures with concentrations higher than 20%, the final viscosity should be verified carefully, as it represents the criteria for selecting the most suitable circulator (contact our technical support centre for further information).

Hydraulic performance and all main technical data given in this catalogue refer to liquids with viscosity of 1mm<sup>2</sup>/s at 18°C.

#### Liquid and room temperature

Allowed fluid temperature range:

- Mod. Ego small (mod. Ego -/40, -/60, -/80): from +5 to +95 °C
- Mod. Ego medium (mod. Ego Easy –60, -80, -100):
   from +2 to +110 °C
- Mod. Ego large (mod. Ego slim 40, 50 Ego 50, 65, 80, 100): from -10 to +110 °C

Room temperature allowed ranges from 0 to 40°C, with relative air humidity below 95%. In the event of use with fluids at low temperature, room temperature should always be lower than liquid temperature to prevent condesate from building up on stator casing.

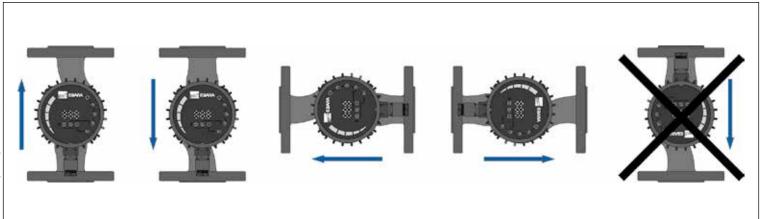
#### Input pressure

In order to avoid noise, cavitation phenomena and damaging the bearing, it is essential to ensure a minimum pressure at suction inlet at all times (check the manuals of every model to see the minimum pressure values in relation to fluid temperature).

#### Maximum operating pressure

The maximum operating pressure for all **Ego models is 1 MPa (10 bar) – PN10.** 

#### **ASSEMBLY POSITION**



All Ego circulators should be installed with the **motor shaft in full horizontal position**, as shown in the figure above (example valid for all models). **The power cord should never be positioned upwards** (it may facilitate water inflow into the terminal box): in these cases, you should rotate the electronic unit or pump's body (please refer to the manual).



## HIGH PERFORMANCE ELECTRONIC CIRCULATORS

in cast iron with cataphoresis coating

#### **ELECTRICAL FEATURES AND REGULATION**

All Ego models are equipped with synchronous motor with rotor with permanent magnets and built-in frequency converter (ECM technology); the electronic board measures the current consumption and calculates the instant pressure and flow rate to ensure continuous adjustment of hydraulic performance. If the requested flow rate drops (usually when system valves close), the frequency converter automatically reduces the number of revolutions and, therefore, the power consumption. Variations may reach to 1/5 of maximum pump capacity.

Therefore, this technology ensures:

- · Continuous adjustment of performance in accordance with the actual requirements of the system
- High efficiency
- . Great starting torque (automatic release even after long periods of inactivity)
- Complete motor protection

#### Supplied voltage

The supplied voltage for all Ego models is 1~230V - 50/60 Hz

#### **Control modes**

The built-in electronic board enables, depending on the model, various control modes such as:

- · Automatic regulation
- △P-v Proportional pressure
- $\Delta$ P-c Constant pressure
- Constant speed
- Current limit control
- Power limit control

(Please refer to the data sheets of every model to check the available control modes).



## HIGH PERFORMANCE ELECTRONIC CIRCULATORS

in cast iron with cataphoresis coating

#### **CONNECTIONS AND REMOTE CONTROL**

Depending on the models, the following additional connections are available:

#### a) Analog external regulation (contact 0-10V)

The external contact 0-10V can be used in various modes:

- in "constant speed" regulation mode, the external contact 0-10V enables switching from a constant curve to another, according to the value of the input signal.
- in "proportional pressure" regulation mode, the external contact 0-10V enables switching from a variable curve to another, according to the value of the input signal.

With signals below 1V, the circulator enters stand-by mode.

#### b) Control from PC (Ethernet connection)

Some Ego models can be fully programmed and controlled remotely via the PC, using an Ethernet connection. The connections modes are 2:

- Direct connection "circulator PC" (with CROSS-OVER type cable) Fig. 1
- Network connection via router (with PATCH cable) Fig. 2



Once you have completed the Ethernet connection, you can access the circulator using any internet browser (Chrome, Internet Explorer, Firefox, etc.) typing in the IP address of the pump, indicated in the manual. Once you have completed the connection to the PC, various video pages enable you to fully program the circulator, the digital inputs, the relays etc. and also to display the instant operating parameters, the power consumption and the errors.

### c) Remote control via Modbus

Some models include an RS-485 connection for communication via Modbus RTU protocol.

### d) Digital inputs and output relays

Some models are equipped with digital inputs and output relays for:

- Switch-on and remote regulation
- Tandem operation (twin)
- Stand-by signals, operation, errors etc.



## HIGH PERFORMANCE ELECTRONIC CIRCULATORS

in cast iron with cataphoresis coating

#### **ENERGY LABEL**

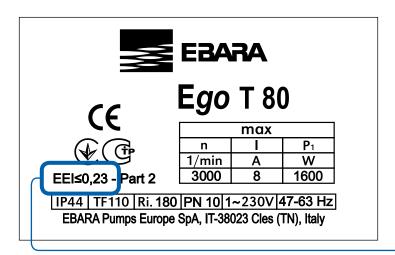
All Ego models comply with European Directive ErP 2009/125/CE.

With regard to wet-rotor circulators, the reference parameter is the EEI index (Energy Efficiency Index), that identifies the total performance of the pump on a decreasing gradient (or, to the lowest EEI values corresponds a better pump performance).

The due dates provided by the Directive are the following:

- 1st step: starting from 01/01/2013 are allowed only circulators with EEI ≤ 0,27 (except circulators integrated and for sanitary water)
- 2nd step: starting from 01/08/2015 are allowed only circulators with EEI ≤ 0.23 (except circulators for sanitary water)
- 3<sup>rd</sup> step: starting from 01/01/2020 also the circulators on substitution of circulators integrated will have to be EEI ≤ 0,23 (except circulators for sanitary water)

The technical data sheets of the products indicate the EEI index for every model (value also specified on product nameplate in compliance with specific regulations).



**EXAMPLE OF NAMEPLATE WITH EEI INDEX** 



### HIGH PERFORMANCE ELECTRONIC CIRCULATORS

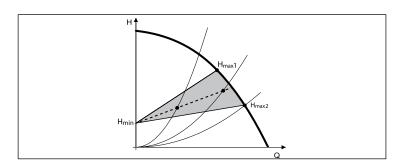
in cast iron with cataphoresis coating

#### **CONTROL MODE**

Below are described all control modes available within the Ego range. Depending on the model, control modes may be available entirely or partly. Therefore, please refer to the data sheets of every model to check the available control modes.

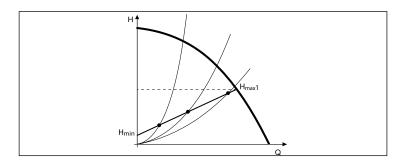
### a) AUTO (factory setting, where provided)

In this mode the pump automatically adjusts hydraulic performance according to the actual requirements of the system, measuring the optimal H/Q point permanently. The AUTO mode is a form of proportional pressure regulation in which the curves have a fixed origin ( $H_{\text{min}}$ ); the circulator will work according to system requirements in any point of the area highlighted in the figure, where both  $H_{\text{min}}$  and  $H_{\text{max1}}$  as well as  $H_{\text{max2}}$  are factory settings. This operating mode is suitable for most applications and ensures high energy savings.



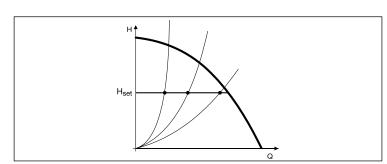
#### b) Proportional pressure (∆p-v)

In this mode, the pump automatically adjusts the pressure depending on the flow rate requested by the system, varying it linearly from a minimum to a maximum value. In practice: when the flow rate requested increases, the differential pressure generated by the pump is increased as well, and vice versa. This adjustment is recommended for systems with high pressure drops. For smaller models, the work curves ( $H_{\text{min}}$ – $H_{\text{max}}$ ) are preset, while for greater models they can be set within a wide range.



#### c) Constant pressure (△P-c)

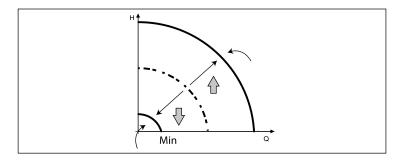
In this mode **the pump head is maintained constant** (equal to the value set by the user) **regardless of the flow rate.** This mode, **recommended in systems with reduced pressure drops,** is available starting from medium sizes and enables selecting the desired pressure H<sub>set</sub> (in metres) within a wide range.



#### d) Constant speed

In this mode the pump works according to a steay curve like a common pump without regulation.

You can set various speeds or different constant work curves. In smaller models, the available curves are preset, while in greater models they can be set within a wide range (by setting the desired rotation speed in *rpm*).

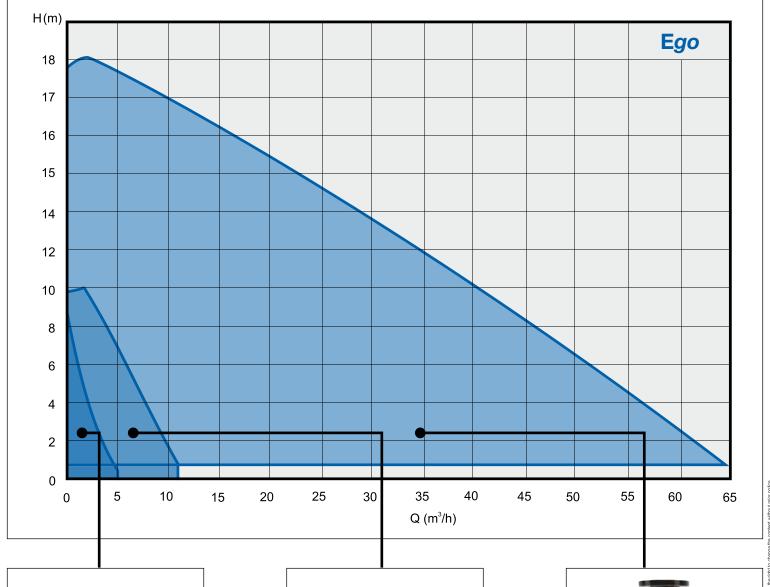




## HIGH PERFORMANCE ELECTRONIC CIRCULATORS

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### **PERFORMANCE RANGE**





THREADED CIRCULATORS
Ego (T) (ER) -/40, -/60, -/80



THREADED/FLANGED CIRCULATORS
Ego easy (T) (C) -60, -80, -100



FLANGED CIRCULATORS

Ego (T) (C) 50, 65, 80, 100 Ego (T) (C) slim 40, 50

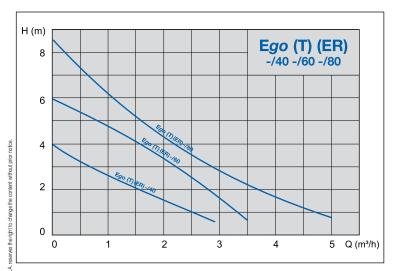


## THREADED CIRCULATORS

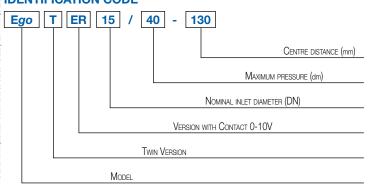
Ego (T) (ER) -/40, -/60, -/80, single and twin







## **IDENTIFICATION CODE**



High performance wet-rotor circulation pump with threaded connection, motor with permanent magnets and built-in electronic controller.

#### **APPLICATIONS**

Residential heating and air-conditioning systems.

#### **FEATURES**

- Minimum power consumption only 5W
- Built-in frequency converter
- Two operating modes ("ΔP-v" and "constant speed")
- Automatic venting function
- High input torque (with consequent automatic release of the rotor)
- Easy installation and adjustment by means of a single LED button
- 0-10V contact (optional, see versions "ER")

#### **PUMP TECHNICAL DATA**

- Liquid temperature: +5 ÷ +95 °C
- Room temperature: 0 ÷ +40 °C
- Relative air humidity: ≤ 95%
- Allowed fluids: clean, non aggresive and not flammable, free of solid particles or fibres
- Maximum pressure: 10 bar
- Minimum suction pressure:
  - 0,05 bar at 50 °C
  - 0,4 bar at 80 °C
  - 1,1 bar at 110 °C
- Maximum amount of glycol: 20%\*
- Threaded inlets: G 1" 1 1/2" 2" (in accordance with ISO 228)
- Protection degree: IP44

### **MOTOR TECHNICAL DATA**

- Type: synchronous with permanent magnets
- Motor speed: variable
- Supply voltage: 1~230V
- Frequency: 50/60 Hz
- Insulation class: F

<sup>\*</sup> For greater amounts please check the final viscosity and the conditions of use

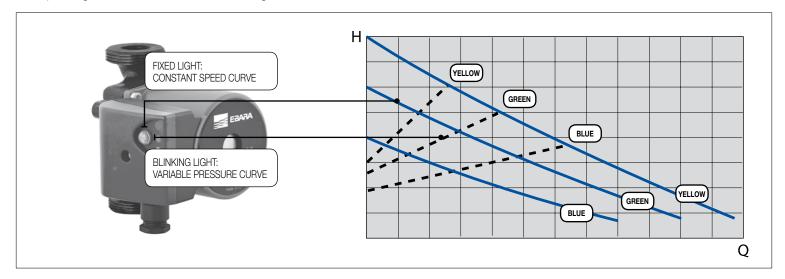


### THREADED CIRCULATORS

Ego (T) (ER) -/40, -/60, -/80, single and twin

#### **OPERATING MODES**

Two operating modes that can be selected using the LED button located on terminal box:



#### • ΔP-v Proportional pressure (factory setting)

The circulators of this range can work in variable pressure **mode on 3 preset curves.** When this operating mode is enabled **the LED button blinks**, with a frequency that varies according to instant flow rate. **The colour of the LED identifies the selected curve** ("blue" indicates the lowest curve, "green" the intermediate curve, while "yellow" indicates the highest curve); to switch from one curve to another just press the button briefly.

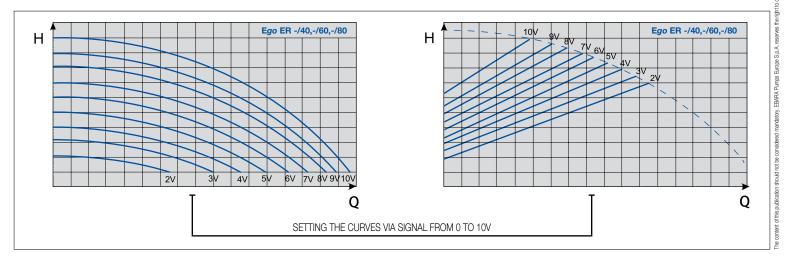
From variable pressure modes (LED blinking) you can switch to constant speed mode (LED light steadily lit) keeping the LED button pressed for at least 5 seconds.

#### Constant speed

The circulators of this range can work at constant speed **on 3 preset curves.** In this case, the pump works as a usual pump without regulation and the power consumption remains constant. When this mode is active **the LED remains steadily lit;** in this case the colour of the LED **indicates the selected curve** ("blue" the lowest curve, "green" the intermediate curve, and "yellow" the highest curve). To switch from one curve to another, briefly press the button to return to variable pressure mode, select the desired curve (indicated by the colour of the LED) and then press and hold down the button.

#### VERSIONS WITH ANALOG REGULATION 0-10V (mod. Ego ER -/40, -/60, -/80)

The special versions **Ego ER**, equipped with 0-10V contact inside the terminal box, enable setting the desired work curve remotely (both the fixed speed and the variable differential pressure). In this case, as shown in the diagrams below, the work curves are more numerous.

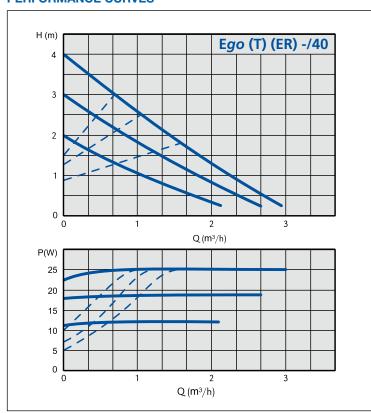


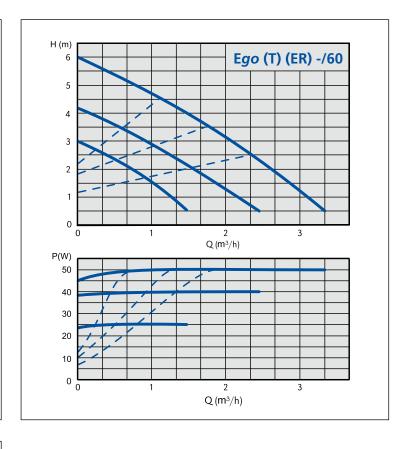


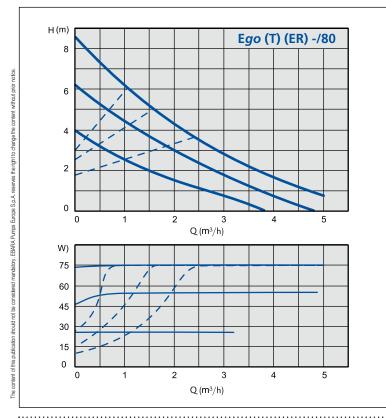
## THREADED CIRCULATORS

Ego (T) (ER) -/40, -/60, -/80, single and twin

### **PERFORMANCE CURVES**





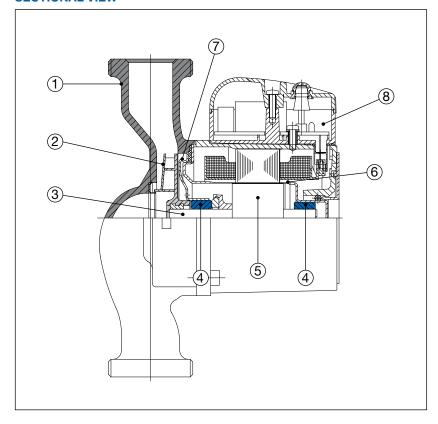




## THREADED CIRCULATORS

Ego (T) (ER) -/40, -/60, -/80, single and twin

## **SECTIONAL VIEW**



### **TABLE OF MATERIALS**

| Ref. | Part             | Material                            |
|------|------------------|-------------------------------------|
| 1    | Pump body        | Cast iron with cataphoresis coating |
| 2    | Impeller         | Technopolymer                       |
| 3    | Shaft            | Ceramic                             |
| 4    | Bearings         | Ceramic                             |
| 5    | Rotor            | Rivestito in acciaio INOX           |
| 6    | Rotor can        | AISI 316 Stainless Steel            |
| 7    | Bearing plate    | AISI 316 Stainless Steel            |
| 8    | Electronic board | -                                   |

## **TECHNICAL FEATURES - single**

|                    | •                                |                 |               |   |   |                |
|--------------------|----------------------------------|-----------------|---------------|---|---|----------------|
| Model              | EEI<br>(energy efficiency index) | Pipe connection | Inlet fitting | Power P <sub>1</sub> [W]<br>P <sub>min</sub> - P <sub>max</sub> | Current consumption [A] I <sub>min</sub> - I <sub>max</sub> | Weight<br>[kg] |
| Ego (ER) 15/40-130 | ≤ 0,20                           | G1              | Rp 1/2        | 5 ÷ 25  | 0,05 ÷ 0,2  | 1,9            |
| Ego (ER) 25/40-130 | ≤ 0,20                           | G1½             | Rp 1"         | 5 ÷ 25  | 0,05 ÷ 0,2  | 2,1            |
| Ego (ER) 15/60-130 | ≤ 0,22                           | G1              | Rp ½          | 7 ÷ 50  | $0.05 \div 0.4$   | 1,9            |
| Ego (ER) 25/60-130 | ≤ 0,22                           | G1½             | Rp 1"         | 7 ÷ 50  | $0.05 \div 0.4$   | 2,1            |
| Ego (ER) 25/80-130 | ≤ 0,23                           | G1½             | Rp 1"         | 7 ÷ 75  | $0.05 \div 0.6$   | 2,1            |
| Ego (ER) 25/40-180 | ≤ 0,20                           | G1½             | Rp 1"         | 5 ÷ 25  | 0,05 ÷ 0,2  | 2,4            |
| Ego (ER) 32/40-180 | ≤ 0,20                           | G2              | Rp 1"1/4      | 5 ÷ 25  | $0,05 \div 0,2$   | 2,5            |
| Ego (ER) 25/60-180 | ≤ 0,22                           | G1½             | Řp 1"         | 7 ÷ 50  | 0,05 ÷ 0,4  | 2,4            |
| Ego (ER) 32/60-180 | ≤ 0,22                           | G2              | Rp 1"1/4      | 7 ÷ 50  | 0,05 ÷ 0,4  | 2,5            |
| Ego (ER) 25/80-180 | ≤ 0,23                           | G1½             | Řp 1"         | 7 ÷ 75  | 0,05 ÷ 0,6  | 2,4            |
| Fgo (FR) 32/80-180 | < 0.23                           | G2              | Rn 1"1/4      | 7 ÷ 75  | 0.05 ± 0.6  | 2.5            |

### **TECHNICAL FEATURES - twin**

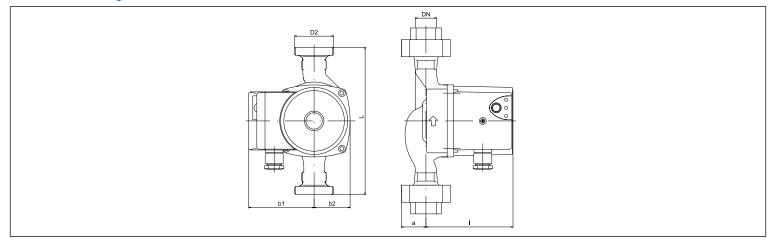
| Model           | EEI<br>(energy efficiency index) | Pipe connection | Inlet fitting | Power P <sub>1</sub> [W]<br>P <sub>min</sub> - P <sub>max</sub> | Current consumption [A] I <sub>min</sub> - I <sub>max</sub> | Weight<br>[kg] |
|-----------------|----------------------------------|-----------------|---------------|---|---|----------------|
| Ego T 25/60-180 | ≤ 0,22                           | G1½             | Rp 1"         | 7 ÷ 50  | 0,05 ÷ 0,4  | 5,5            |
| Ego T 32/60-180 | ≤ 0,22                           | G2              | Rp 1"1/4      | 7 ÷ 50  | $0.05 \div 0.4$   | 5,5            |
| Ego T 25/80-180 | ≤ 0,23                           | G1½             | Řp 1"         | 7 ÷ 75  | $0.05 \div 0.6$   | 5,7            |
| Ego T 32/80-180 | ≤ 0,23                           | G2              | Rp 1"1/4      | 7 ÷ 75  | $0.05 \div 0.6$   | 5,7            |



## THREADED CIRCULATORS

Ego -/40, -/60, -/80

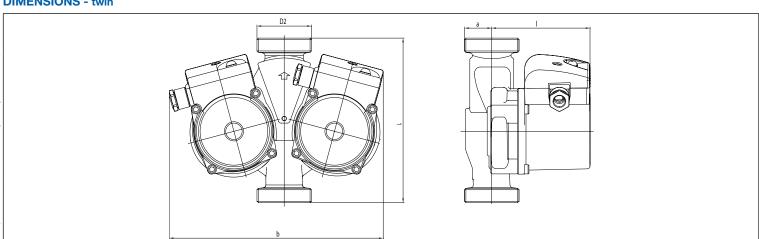
## **DIMENSIONS** - single



### **TABLE OF DIMENSIONS - single**

| Model              |     | Dimensions [mm] |    |    |     |    |       |  |  |  |  |  |
|--------------------|-----|-----------------|----|----|-----|----|-------|--|--|--|--|--|
| Model              | L   | DN              | b1 | b2 | 1   | а  | D2    |  |  |  |  |  |
| Ego (ER) 15/40-130 | 130 | 15              | 80 | 48 | 108 | 27 | 1"    |  |  |  |  |  |
| Ego (ER) 25/40-130 | 130 | 25              | 80 | 48 | 108 | 32 | 1"1/2 |  |  |  |  |  |
| Ego (ER) 15/60-130 | 130 | 15              | 80 | 48 | 108 | 27 | 1"    |  |  |  |  |  |
| Ego (ER) 25/60-130 | 130 | 25              | 80 | 48 | 108 | 32 | 1"½   |  |  |  |  |  |
| Ego (ER) 25/80-130 | 130 | 25              | 80 | 48 | 108 | 32 | 1"½   |  |  |  |  |  |
| Ego (ER) 25/40-180 | 180 | 25              | 80 | 48 | 108 | 32 | 1"½   |  |  |  |  |  |
| Ego (ER) 32/40-180 | 180 | 32              | 80 | 48 | 108 | 40 | 2"    |  |  |  |  |  |
| Ego (ER) 25/60-180 | 180 | 25              | 80 | 48 | 108 | 32 | 1"½   |  |  |  |  |  |
| Ego (ER) 32/60-180 | 180 | 32              | 80 | 48 | 108 | 40 | 2"    |  |  |  |  |  |
| Ego (ER) 25/80-180 | 180 | 25              | 80 | 48 | 108 | 32 | 1"½   |  |  |  |  |  |
| Ego (ER) 32/80-180 | 180 | 32              | 80 | 48 | 108 | 40 | 2"    |  |  |  |  |  |

### **DIMENSIONS** - twin



## **TABLE OF DIMENSIONS - twin**

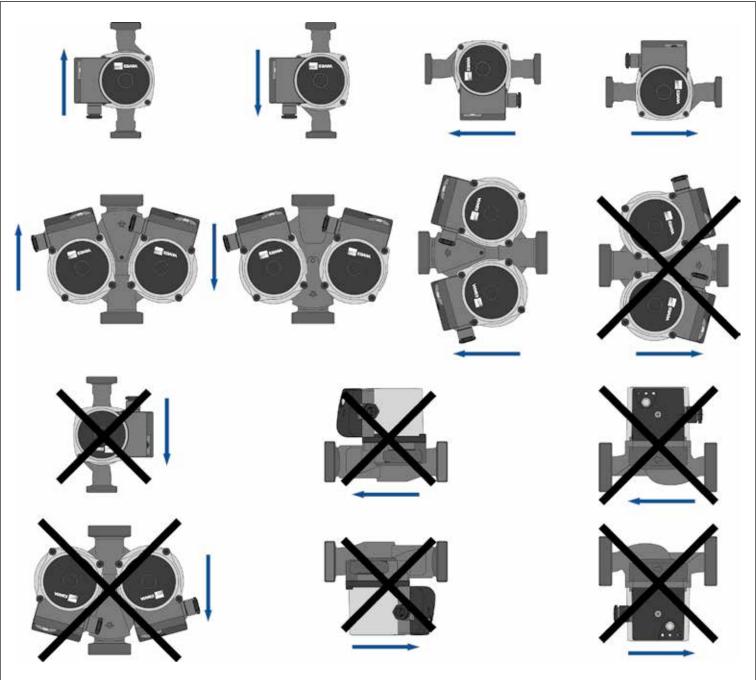
| Model           | Dimensions [mm] |    |     |       |      |     |  |  |  |  |  |
|-----------------|-----------------|----|-----|-------|------|-----|--|--|--|--|--|
| Model           | L               | DN | b   | 1     | a    | D2  |  |  |  |  |  |
| Ego T 25/80-180 | 180             | 25 | 234 | 107,2 | 29,8 | 1"½ |  |  |  |  |  |
| Ego T 32/80-180 | 180             | 32 | 234 | 107,2 | 29,8 | 2"  |  |  |  |  |  |
| Ego T 25/60-180 | 180             | 25 | 234 | 107,2 | 29,8 | 1"½ |  |  |  |  |  |
| Ego T 32/60-180 | 180             | 32 | 234 | 107,2 | 29,8 | 2"  |  |  |  |  |  |



## THREADED CIRCULATORS

Ego -/40, -/60, -/80

## **ASSEMBLY POSITION**





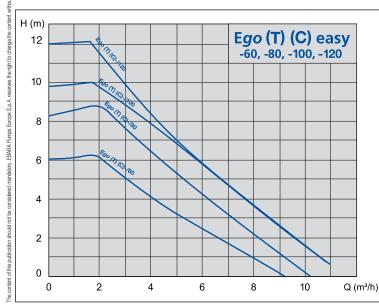
## THREADED/FLANGED CIRCULATORS

Ego (T) (C) easy -60, -80, -100, -120 single and twin









High performance wet rotor circulation pump with threaded or flanged connection, motor with permanent magnets and built-in electronic controller.

#### **APPLICATION**

Residential and industrial heating and air-conditioning systems.

#### **FEATURES**

- Built-in frequency converter
- Multiple operating modes
- Numeric and graphical display for easy setup and visualisation of parameters
- Automatic venting function
- Built-in overload safety device
- High input torque (with consequent automatic release of the rotor)
- Optional communication module (with Ethernet port, 0-10V contact, digital inputs etc.)

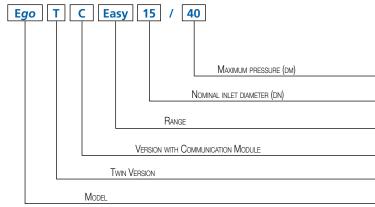
#### **PUMP TECHNICAL DATA**

- Liquid temperature: +2 ÷ +110 °C
- Room temperature: 0 ÷ +40 °C
- Relative air humidity: ≤ 95%
- Allowed fluids: clean, non aggresive and not flammable, free of solid particles or fibres
- Maximum pressure: 10 bar
- Minimum suction pressure:
  - 0,05 bar to 50 °C
  - 0,8 bar to 80 °C
  - 1,4 bar to 110 °C
- Maximum amount of glycol: 20%\*
- Threaded inlets: G 1 1/2" 2" (in accordance with ISO 228)
- Flanged inlets: from DN 32 to DN 50
- Protection degree: IP44

#### **MOTOR TECHNICAL DATA**

- Type: synchronous with permanent magnets
- Motor speed: variable
- Supply voltage: 1~230V
- Frequency: 50/60 Hz
- Insulation class: F
- \* For greater amounts please check the final viscosity and the conditions of use.

### **IDENTIFICATION CODE**



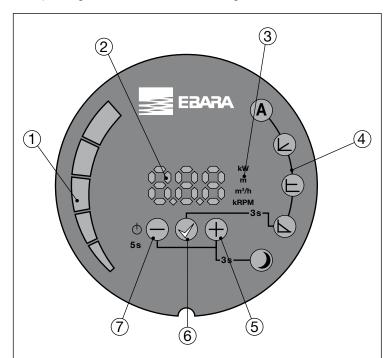


### THREADED/FLANGED CIRCULATORS

Ego (T) (C) easy -60, -80, -100, -120 single and twin

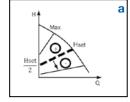
#### **OPERATING MODES**

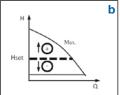
The operating modes can be selected using the buttons located on the rear panel:

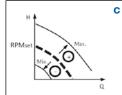


#### **KEY**

- 1 Segment display
- 2 Numeric display
- 3 Display of selected parameter
- 4 Display of selected mode
- 5 Selection key
- 6 Confirmation key
- 7 Selection key









#### **AUTO mode (factory setting)**

The circulator automatically adjusts the hydraulic performance depending on the actual requirements of the system, continuously measuring the optimal H/Q point. This operating mode is suitable for most applications and ensures high energy savings.



## Proportional pressure ( $\Delta P$ -v) - fig. a

The circulator adjusts the pump head depending on the flow rate, varying the latter linearly from a maximum value (Hset) to a minimum value (equal to  $H_{set}/2$ ). The pressure value (Hset) is set via buttons  $\bigoplus$  and  $\bigoplus$  and is expressed in metres; the minimum value is automatically calculated by the circulator.



#### Constant pressure ( $\Delta P$ -c) - fig. b

The circulators maintains the pump head constant when the flow rates varies. The value of the pressure (H<sub>set</sub>) is set via buttons  $\bigoplus$  and  $\bigoplus$  and is expressed in metres.



### Constant speed - fig. c

The circulators operates according to a constant curve set via buttons (+) and (-) (by selecting the rotation speed in "rpm").



#### Night mode

Night mode can be activated in combination with any of the operating modes listed above, and allows the circulator to operate at a minimum curve (therefore with very low consumption) when it detects a decrease in liquid temperature of 15-20 ° C. When temperature rises, it automatically returns to normal operating curve (according to the selected mode).



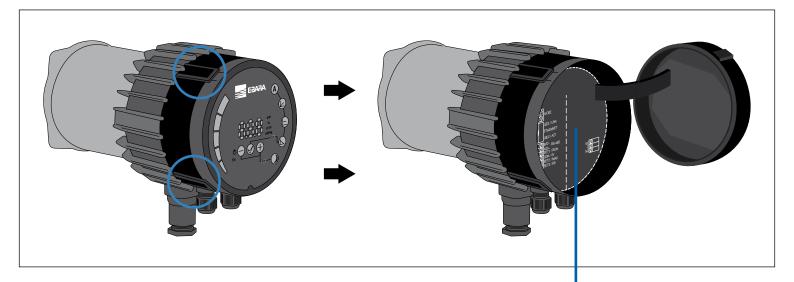
## THREADED/FLANGED CIRCULATORS

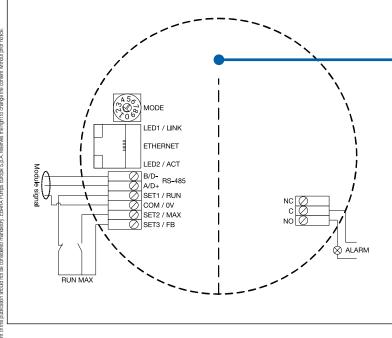
Ego (T) (C) easy -60, -80, -100, -120 single and twin

#### **COMMUNICATION MODULE**

Versions **Ego T C easy** are equipped with an additional communication module which can be accessed by opening the rear display panel. The communication module is also available as an optional accessory. It is compatible with all standard models Ego easy. The module enables running a wide range of applications remotely:

- Access via Ethernet
- Remote On/Off
- Analog control 0-10V
- Modbus RTU
- Alarm/state relay



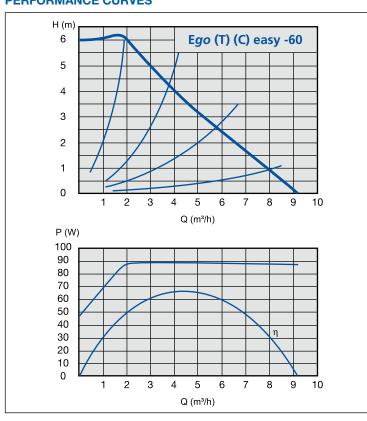


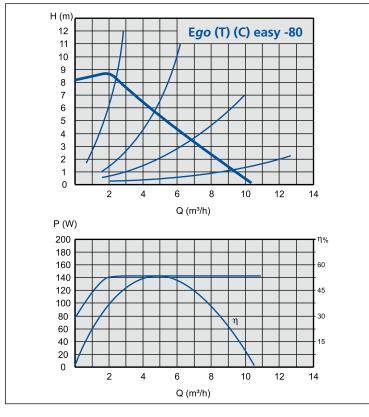


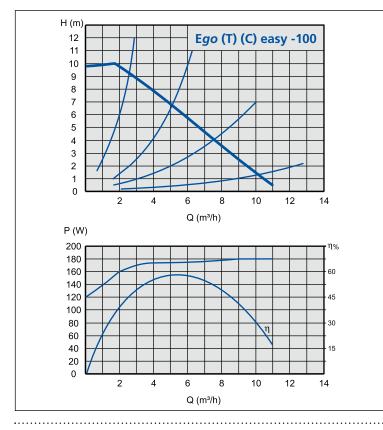
## THREADED/FLANGED CIRCULATORS

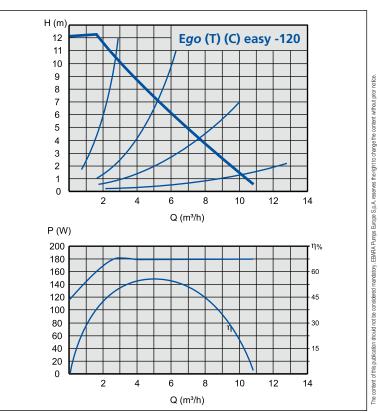
Ego (T) (C) easy -60, -80, -100, -120 single and twin

#### **PERFORMANCE CURVES**







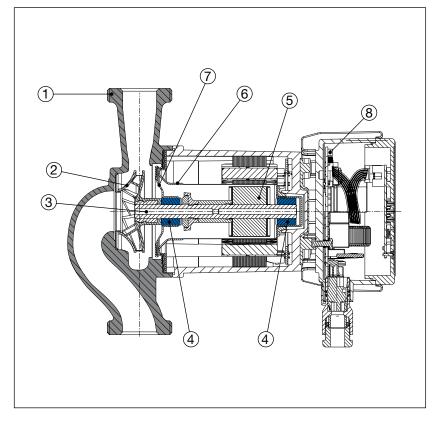




## THREADED/FLANGED CIRCULATORS

Ego (T) (C) easy -60, -80, -100, -120 single and twin

### **SECTIONAL VIEW**



### **TABLE OF MATERIALS**

| Ref. | Part             | Material                            |
|------|------------------|-------------------------------------|
| 1    | Pump body        | Cast iron with cataphoresis coating |
| 2    | Impeller         | Technopolymer                       |
| 3    | Shaft            | Stainless steel                     |
| 4    | Bearings         | Graphite                            |
| 5    | Rotor            | Coated in stainless steel           |
| 6    | Rotor can        | AISI 316 Stainless Steel            |
| 7    | Bearing plate    | AISI 316 Stainless Steel            |
| 8    | Electronic board | -                                   |

## **TECHNICAL FEATURES - single**

| Model            | EEI (energy efficiency index) | Pipe connection | Inlet fitting | Power P <sub>1</sub> [W]<br>P <sub>min</sub> - P <sub>max</sub> | Current consumption [A] I <sub>min</sub> - I <sub>max</sub> | Weight<br>[kg] |
|------------------|-------------------------------|-----------------|---------------|---|---|----------------|
| Ego easy 25-60   | ≤ 0,21                        | G1"½            | Rp 1"         | 10 ÷ 90   | 0,1 ÷ 0,75  | 4,0            |
| Ego easy 32-60   | ≤ 0,21                        | G2"             | Rp 1"1/4      | 10 ÷ 90   | $0,1 \div 0,75$   | 4,1            |
| Ego easy 25-80   | ≤ 0,21                        | G1"½            | Řp 1"         | 10 ÷ 140  | 0,1 ÷ 1,15  | 4,0            |
| Ego easy 32-80   | ≤ 0,21                        | G2"             | Rp 1"1/4      | 10 ÷ 140  | 0,1 ÷ 1,15  | 4,1            |
| Ego easy 25-100  | ≤ 0,21                        | G1"½            | Řp 1"         | 10 ÷ 180  | 0,1 ÷ 1,5   | 4,0            |
| Ego easy 32-100  | ≤ 0,21                        | G2"             | Rp 1"¼        | 10 ÷ 180  | 0,1 ÷ 1,5   | 4,1            |
| Ego easy 25-120  | ≤ 0,22                        | G1"½            | Rp 1"½        | 10 ÷ 180  | 0,1 ÷ 1,5   | 4,0            |
| Ego easy 32-120  | ≤ 0,22                        | G2"             | Rp 2"         | 10 ÷ 180  | 0,1 ÷ 1,5   | 4,1            |
| Ego easy 32-100F | ≤ 0,21                        | DN 32           | -             | 10 ÷ 180  | 0,1 ÷ 1,5   | 7,4            |
| Ego easy 40-100F | ≤ 0,21                        | DN 40           | -             | 10 ÷ 180  | 0,1 ÷ 1,5   | 8,5            |
| Ego easy 50-100F | ≤ 0,21                        | DN 50           | -             | 10 ÷ 180  | 0,1 ÷ 1,5   | 9,8            |

### **TECHNICAL FEATURES - twin**

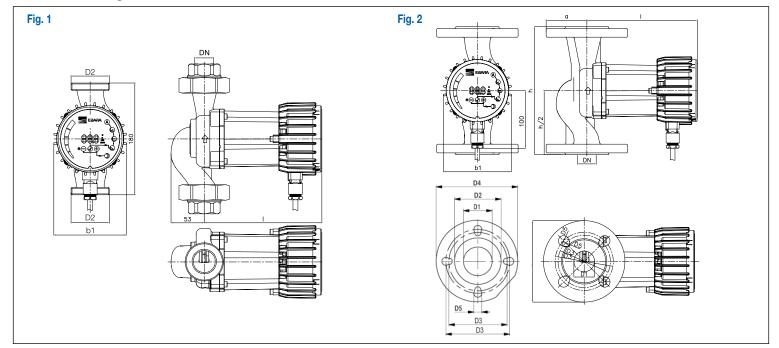
| Model                | EEI (energy efficiency index) | Pipe connection | Inlet fitting | Power P <sub>1</sub> [W]<br>P <sub>min</sub> - P <sub>max</sub> | Current consumption [A] I <sub>min</sub> - I <sub>max</sub> | Weight<br>[kg] |
|----------------------|-------------------------------|-----------------|---------------|---|---|----------------|
| Ego T C easy 32-60   | ≤ 0,21                        | G 2"            | Rp 1"¼        | 10 ÷ 90   | 0,1 ÷ 0,75  | 8,2            |
| Ego T C easy 32-80   | ≤ 0,21                        | G 2"            | Rp 1"1/4      | 10 ÷ 140  | 0,1 ÷ 1,15  | 8,2            |
| Ego T C easy 32-100  | ≤ 0,21                        | G 2"            | Rp 1"1/4      | 10 ÷ 180  | 0,1 ÷ 1,50  | 8,2            |
| Ego T C easy 40-100F | ≤ 0,21                        | DN 40           | -             | 10 ÷ 180  | 0,1 ÷ 1,50  | 11,0           |



## THREADED/FLANGED CIRCULATORS

Ego (T) (C) easy -60, -80, -100, -120 single and twin

## **DIMENSIONS** - single



## **TABLE OF DIMENSIONS - single**

| Def    | Model            | Dime |    |     |            |      |    | nensions [mm] |         |     |            |             |
|--------|------------------|------|----|-----|------------|------|----|---------------|---------|-----|------------|-------------|
| Ref.   | Model            | h    | DN | b1  |            | a    | D1 | D2            | D3      | D4  | <b>D</b> 5 | n. of holes |
|        | Ego easy 25-60   | 180  | 25 | 117 | 190 (222)* | -    | -  | 1"1/2         | -       | -   | -          | -           |
|        | Ego easy 32-60   | 180  | 32 | 117 | 190 (222)* | -    | -  | 2"            | -       | -   | -          | -           |
|        | Ego easy 25-80   | 180  | 25 | 117 | 190 (222)* | -    | -  | 1"1/2         | -       | -   | -          | -           |
| Eia 1  | Ego easy 32-80   | 180  | 32 | 117 | 190 (222)* | -    | -  | 2"            | -       | -   | -          | -           |
| Fig. 1 | Ego easy 25-100  | 180  | 25 | 117 | 190 (222)* | -    | -  | 1"1/2         | -       | -   | -          | -           |
|        | Ego easy 32-100  | 180  | 32 | 117 | 190 (222)* | -    | 1  | 2"            | -       | -   | -          | -           |
|        | Ego easy 25-120  | 180  | 25 | 117 | 190 (222)* | -    | -  | 1"1/2         | -       | -   | -          | -           |
|        | Ego easy 32-120  | 180  | 32 | 117 | 190 (222)* | -    | -  | 2"            | -       | -   | -          | -           |
|        | Ego easy 32-100F | 220  | 32 | 117 | 190 (222)* | 70   | 32 | 74            | 90/100  | 140 | 14/18      | 4           |
| Fig. 2 | Ego easy 40-100F | 220  | 40 | 117 | 190 (222)* | 75   | 40 | 80            | 100/110 | 150 | 14/19      | 4           |
|        | Ego easy 50-100F | 240  | 50 | 117 | 190 (222)* | 82.5 | 50 | 90            | 110/125 | 165 | 14/19      | 4           |

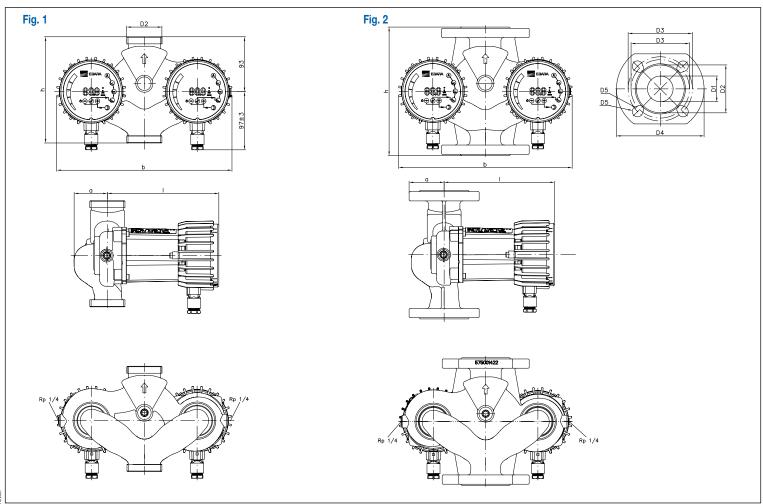
<sup>\*</sup> Dimensions in bracket are referred to Ego easy with communication module



## THREADED/FLANGED CIRCULATORS

Ego (T) (C) easy -60, -80, -100, -120 single and twin

### **DIMENSIONS** - twin



### **DIMENSIONS** - twin

|        |                      |     |    |     |     | Di | mensions [m | ım] |            |     |            |             |
|--------|----------------------|-----|----|-----|-----|----|-------------|-----|------------|-----|------------|-------------|
| Ref.   | Model                | h   | DN | b   | 1   | a  | D1          | D2  | <b>D</b> 3 | D4  | <b>D</b> 5 | n. of holes |
| 3      | Ego T C easy 32-60   | 180 | 32 | 297 | 222 | 56 | -           | 2"  | -          | -   | -          | -           |
| Fig. 1 | Ego T C easy 32-80   | 180 | 32 | 297 | 222 | 56 | -           | 2"  | -          | -   | -          | -           |
| 8      | Ego T C easy 32-100  | 180 | 32 | 297 | 222 | 56 | -           | 2"  | -          | -   | -          | -           |
| Fig 2  | Ego T C easy 40-100F | 220 | 40 | 297 | 222 | 75 | 40          | 80  | 100/110    | 150 | 14/19      | 4           |

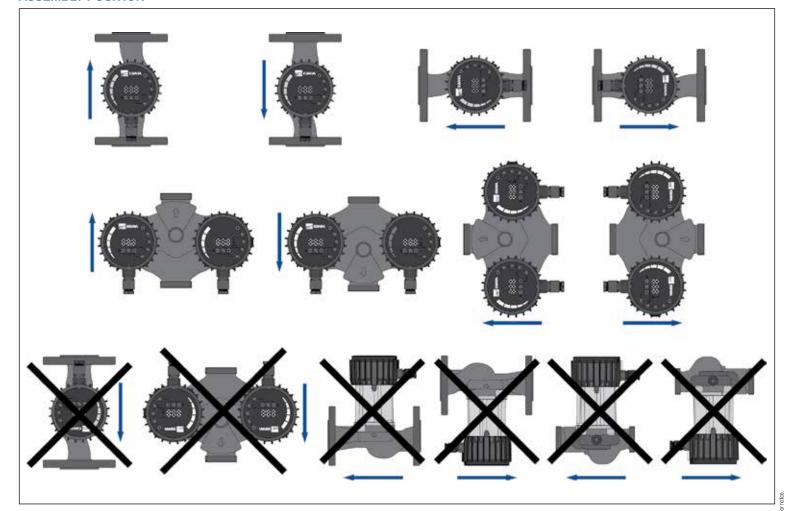
<sup>\*</sup> Communication module is supplied on twin standard version



## THREADED/FLANGED CIRCULATORS

Ego (T) (C) easy -60, -80, -100, -120 single and twin

## **ASSEMBLY POSITION**



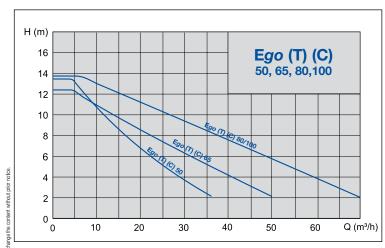


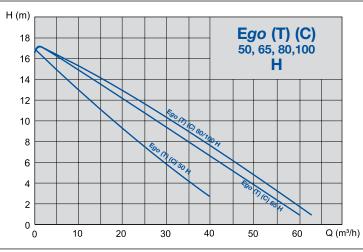
## **FLANGED CIRCULATORS**

Ego (T) (C) 50, 65, 80, 100, (H), single and twin









High performance wet rotor circulation pump with flanged connection, motor with permanent magnets and built-in electronic controller.

#### **APPLICATIONS**

Residential and industrial heating and air-conditioning systems.

#### **FEATURES**

- Built-in frequency converter
- Multiple operating modes
- Numeric and graphical display for easy setup and visualisation of parameters
- Automatic venting function
- Built-in overload safety device
- High input torque (with consequent automatic release of the rotor)
- Ethernet connection, digital inputs and relays included (standard)
- Optional version with built-in communication module (with Modbus, contact 0-10V etc.)

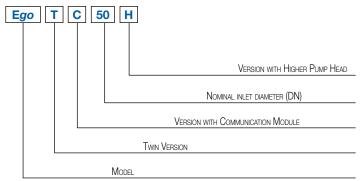
#### **PUMP TECHNICAL DATA**

- Liquid temperature: -10 ÷ +110 °C
- Room temperature: 0 ÷ +40 °C
- Relative air humidity: ≤ 95%
- Allowed fluids: clean, non aggresive and not flammable, free of solid particles or fibres
- Maximum pressure: 10 bar
- Minimum suction pressure:
  - 0,3 bar to 50 °C
  - 1,1 bar to 80 °C
  - 1,6 bar to 110 °C
- Maximum amount of glycol: 20%\*
- Flanged inlets: from DN 40 to DN 100
- Protection degree: IP44

#### **MOTOR TECHNICAL DATA**

- Type: synchronous with permanent magnets
- Motor speed: variable
- Supply voltage: 1~230V
- Frequency: 50/60 Hz
- · Insulation class: F

#### **IDENTIFICATION CODE**



<sup>\*</sup> For greater amounts please check the final viscosity and the conditions of use.

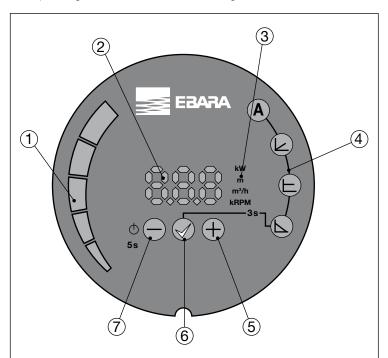


## **FLANGED CIRCULATORS**

Ego (T) (C) 50, 65, 80, 100, (H), single and twin

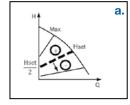
#### **OPERATING MODES**

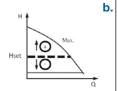
The operating modes can be selected using the buttons located on the rear panel:

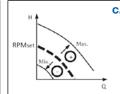


#### **KEY**

- 1 Segment display
- 2 Numeric display
- 3 Display of selected parameter
- 4 Display of selected mode
- 5 Selection key
- 6 Confirmation key
- 7 Selection key









#### **AUTO mode (factory setting)**

The circulator automatically adjusts the hydraulic performance depending on the actual requirements of the system, continuously measuring the optimal H/Q point. This operating mode is suitable for most applications and ensures high energy savings.



### Proportional pressure ( $\Delta P$ -v) - fig. a

The circulator adjusts the pump head depending on the flow rate, varying the latter linearly from a maximum value (Hset) to a minimum value (equal to  $H_{set}/2$ ). The pressure value (Hset) is set via buttons  $\bigoplus$  and  $\bigoplus$  and is expressed in metres; the minimum value is automatically calculated by the circulator.



#### Constant pressure ( $\Delta P$ -c) - fig. b

The circulators maintains the pump head constant when the flow rates varies. The value of the pressure (H<sub>set</sub>) is set via buttons  $\bigoplus$  and  $\bigoplus$  and is expressed in metres.



### Constant speed - fig. c

The circulators operates according to a constant curve set via buttons (+) and (-) (by selecting the rotation speed in "rpm").

### **REMOTE CONTROL**

#### Standard configuration

The standard configuration of circulators Ego (T) provides:

- Ethernet connection for control via PC
- Digital inputs
- Output relay

#### **Upon request**

Upon request, the "Ego C" version equipped with an additional communication module is available. It includes the following:

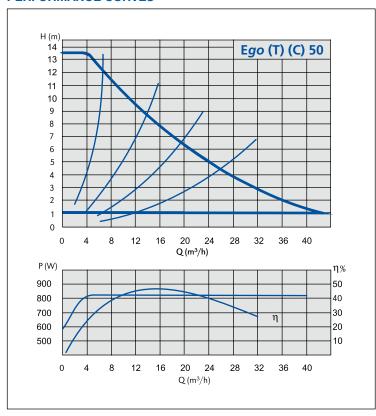
- Analog control 0-10V
- Modbus RTU

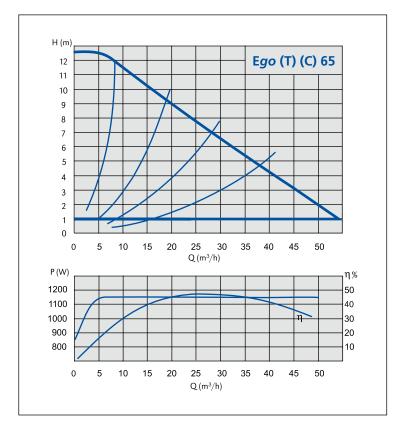


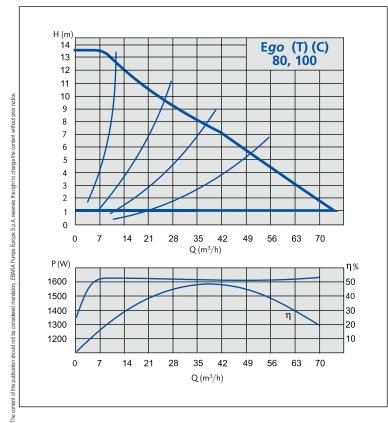
## **FLANGED CIRCULATORS**

Ego (T) (C) 50, 65, 80, 100, (H), single and twin

#### **PERFORMANCE CURVES**





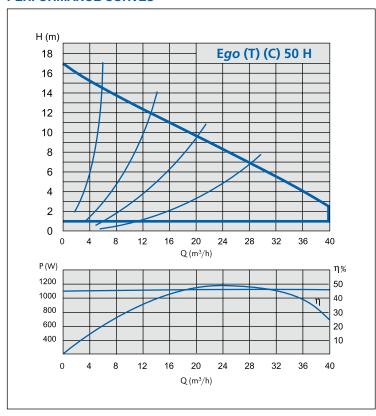


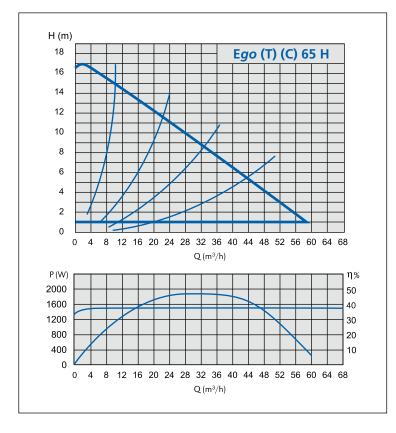


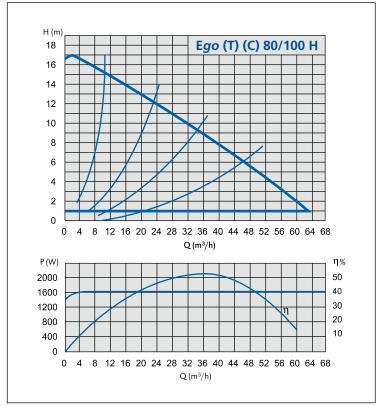
## **FLANGED CIRCULATORS**

Ego (T) (C) 50, 65, 80, 100, (H), single and twin

#### **PERFORMANCE CURVES**





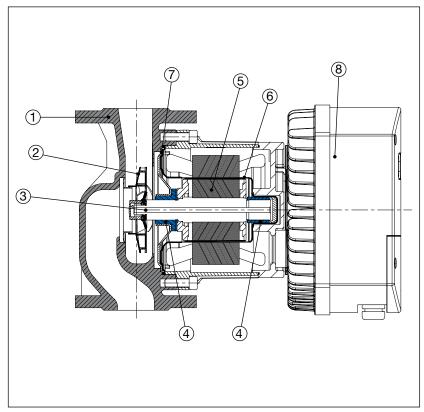




## **FLANGED CIRCULATORS**

Ego (T) (C) 50, 65, 80, 100, (H), single and twin

#### **SECTIONAL VIEW**



#### **TABLE OF MATERIALS**

| Ref. | Part             | Material                           |
|------|------------------|------------------------------------|
| 1    | Pump body        | Cast iron with cataphoresis coated |
| 2    | Impeller         | Stainless steel                    |
| 3    | Shaft            | Stainless steel                    |
| 4    | Bearings         | Graphite                           |
| 5    | Rotor            | Coated in stainless steel          |
| 6    | Rotor can        | AISI 316 Stainless Steel           |
| 7    | Bearing plate    | AISI 316 Stainless Steel           |
| 8    | Electronic board | -                                  |

### **TECHNICAL FEATURES - single**

| Model                | EEI<br>(energy efficiency index) | Pipe connection | Power P1 [W]<br>P <sub>min</sub> - P <sub>max</sub> | Current consumption [A] I <sub>min</sub> - I <sub>max</sub> | Weight<br>[kg] |
|----------------------|----------------------------------|-----------------|---|---|----------------|
| Ego 40 H             | ≤ 0,27                           | DN40            | 20-500  | 2,2   | 24,3           |
| Ego 40 H<br>Ego 50 * | ≤ 0,26                           | DN50            | 26-800  | 3,5   | 31,0           |
| Ego 50 H<br>Ego 65   | ≤ 0,26                           | DN50            | 20-1100   | 4,8   | 30,0           |
| Ego 65               | ≤ 0,23                           | DN65            | 38-1100   | 4,8   | 36,0           |
| Ego 65 H             | ≤ 0,25                           | DN65            | 20-1500   | 6,7   | 39,0           |
| Ego 80               | ≤ 0,23                           | DN80            | 45-1600   | 6,9   | 42,0           |
| Ego 80 H             | ≤ 0,24                           | DN80            | 20-1600   | 7,3   | 41,0           |
| Ego 100              | ≤ 0,23                           | DN100           | 45-1600   | 6,9   | 46,0           |
| Ego 100 H            | ≤ 0,24                           | DN100           | 20-1600   | 7,2   | 45,0           |

<sup>\*</sup> During 2015 it will be substituted by Ego slim 50-120

### **TECHNICAL FEATURES - twin**

| Model      | EEI<br>(energy efficiency index) | Pipe connection | Power P1 [W]<br>P <sub>min</sub> - P <sub>max</sub> | Current consumption [A] | Weight<br>[kg] |
|------------|----------------------------------|-----------------|---|-------------------------|----------------|
| Ego T 40 H | ≤ 0,27                           | DN40            | 20-500  | 2,2                     | 47,0           |
| Ego T 50 * | ≤ 0,26                           | DN50            | 26-800  | 3,5                     | 60,0           |
| Ego T 50 H | ≤ 0,26                           | DN50            | 20-1100   | 4,8                     | 60,0           |
| Ego T 65   | ≤ 0,23                           | DN65            | 38-1100   | 4,8                     | 66,0           |
| Ego T 65 H | ≤ 0,25                           | DN65            | 20-1500   | 6,7                     | 74,0           |
| Ego T 80   | ≤ 0,23                           | DN80            | 45-1600   | 6,9                     | 77,0           |
| Fao T 80 H | < 0.24                           | DN80            | 20-1600   | 7.3                     | 77.0           |

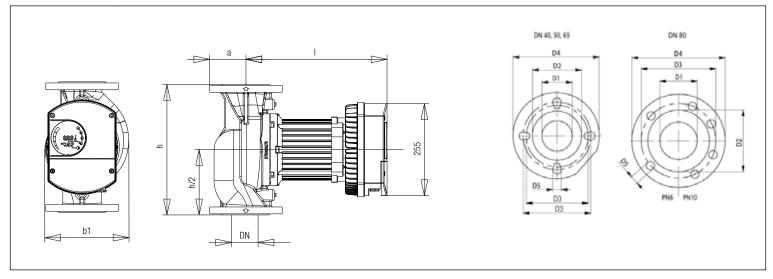
<sup>\*</sup> During 2015 it will be substituted by Ego (TC) slim 50-120 Models Ego (T) 40 have been substituted by Ego (T)(C) slim 40-120



## **FLANGED CIRCULATORS**

Ego (T) (C) 50, 65, 80, 100, (H), single and twin

### **DIMENSIONS** - single



### **TABLE OF DIMENSIONS - single**

| Model     |     |     |    |     |     | Dimensi | ons [mm] |     |     |         |     |            | n of holos  |
|-----------|-----|-----|----|-----|-----|---------|----------|-----|-----|---------|-----|------------|-------------|
| Model     | DN  | b1  | b4 | 1   | h   | h1      | a        | D1  | D2  | D3      | D4  | <b>D</b> 5 | n. of holes |
| Ego 40 H  | 40  | 198 | -  | 355 | 250 | -       | 65       | 40  | 80  | 100/110 | 150 | 14/19      | 4           |
| Ego 50 *  | 50  | 200 | -  | 355 | 280 | -       | 70       | 50  | 90  | 100/125 | 165 | 14/19      | 4           |
| Ego 50 H  | 50  | 200 | -  | 355 | 280 | -       | 70       | 50  | 90  | 100/125 | 165 | 14/19      | 4           |
| Ego 65    | 65  | 222 | -  | 369 | 340 | -       | 80       | 65  | 110 | 130/145 | 185 | 14/19      | 4           |
| Ego 65 H  | 65  | 222 | -  | 403 | 340 | -       | 80       | 65  | 110 | 130/145 | 185 | 14/19      | 4           |
| Ego 80    | 80  | 230 | -  | 403 | 360 | -       | 100      | 80  | 128 | 160     | 200 | 19         | 8           |
| Ego 80 H  | 80  | 230 | -  | 403 | 360 | -       | 100      | 80  | 128 | 160     | 200 | 19         | 8           |
| Ego 100   | 100 | 230 | -  | 403 | 360 | -       | 110      | 100 | -   | 180     | 220 | 19         | 8           |
| Ego 100 H | 100 | 230 | -  | 403 | 360 | -       | 110      | 100 | 140 | 180     | 220 | 19         | 8           |

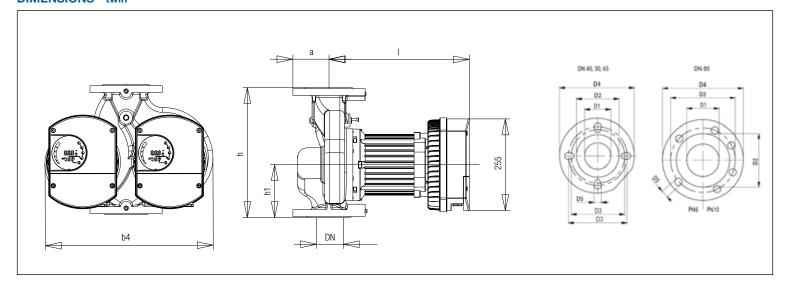
<sup>\*</sup> During 2015 it will be substituted by Ego slim 50-120



## **FLANGED CIRCULATORS**

Ego (T) (C) 50, 65, 80, 100, (H), single and twin

### **DIMENSIONS** - twin



#### **TABLE OF DIMENSIONS - twin**

| Model      |    |    |     |     |     | Dimensi | ons [mm] |    |     |         |     |            | n. of holes |
|------------|----|----|-----|-----|-----|---------|----------|----|-----|---------|-----|------------|-------------|
| Model      | DN | b1 | b4  | I   | h   | h1      | a        | D1 | D2  | D3      | D4  | <b>D</b> 5 | n. or notes |
| Ego T 40 H | 40 | -  | 403 | 355 | 250 | 110     | 65       | 40 | 80  | 100/110 | 150 | 14/19      | 4           |
| Ego T 50*  | 50 | -  | 403 | 355 | 280 | 121     | 70       | 50 | 90  | 100/125 | 165 | 14/19      | 4           |
| Ego T 50 H | 50 | -  | 403 | 355 | 280 | 121     | 70       | 50 | 90  | 100/125 | 165 | 14/19      | 4           |
| Ego T 65   | 65 | -  | 452 | 369 | 340 | 141     | 80       | 65 | 110 | 130/145 | 185 | 14/19      | 4           |
| Ego T 65 H | 65 | -  | 452 | 403 | 340 | 141     | 80       | 65 | 110 | 130/145 | 185 | 14/19      | 4           |
| Ego T 80   | 80 | -  | 462 | 403 | 360 | 146     | 100      | 80 | 128 | 160     | 200 | 19         | 8           |
| Ego T 80 H | 80 | -  | 462 | 403 | 360 | 146     | 100      | 80 | 128 | 160     | 200 | 19         | 8           |

<sup>\*</sup> During 2015 it will be substituted by Ego TC slim 50-120



## **FLANGED CIRCULATORS**

Ego (T) (C) 50, 65, 80, 100, (H), single and twin

### **ASSEMBLY POSITION**





## **FLANGED CIRCULATORS**

Ego (T) (C) slim 40, 50



High performance wet rotor circulation pump with flanged or threaded connection, motor with permanent magnets and built-in electronic controller.

### **APPLICATIONS**

Residential and industrial heating and air-conditioning systems.

#### **FEATURES**

- Built-in frequency converter
- Multiple operating modes
- Numeric and graphical display for easy setup and visualisation of parameters
- Automatic venting function
- Built-in overload safety device
- High input torque (with consequent automatic release of the rotor)
- Optional version with built-in communication module (with Modbus, contact 0-10V etc.)

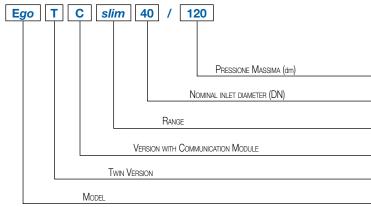
#### **PUMP TECHNICAL DATA**

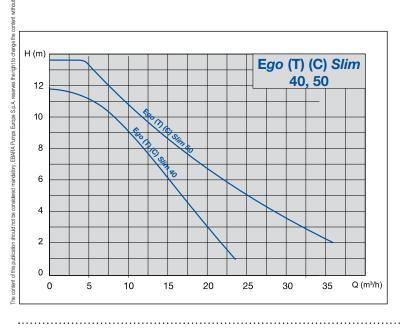
- Liquid temperature: -10 ÷ +110 °C
- Room temperature: 0 ÷ +40 °C
- Relative air humidity: ≤ 95%
- Allowed fluids: clean, non aggresive and not flammable, free of solid particles or fibres
- Maximum pressure: 10 bar
- Minimum suction pressure:
  - 0,05 bar to 50 °C
  - 0,8 bar to 80 °C
  - 1,4 bar to 110 °C
- Maximum amount of glycol: 20%\*
- Threaded inlets:: G 1 ½" 2" (according to ISO 228)
- Flanged inlets: from DN 32 to DN 50
- Protection degree: IP44

#### **MOTOR TECHNICAL DATA**

- Type: synchronous with permanent magnets
- Motor speed: variable
- Supply voltage: 1~230V
- Frequency: 50/60 Hz
- Insulation class: F

### SIGLA IDENTIFICATIVA





 $<sup>^{\</sup>star}$  For greater amounts please check the final viscosity and the conditions of use.

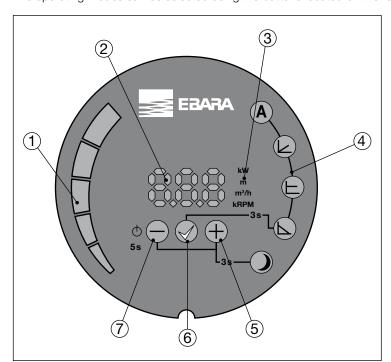


## **FLANGED CIRCULATORS**

Ego (T) (C) slim 40, 50

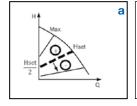
#### **OPERATING MODES**

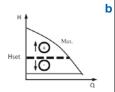
The operating modes can be selected using the buttons located on the rear panel:

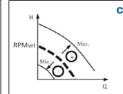


#### **KEY**

- 1 Segment display
- 2 Numeric display
- 3 Display of selected parameter
- 4 Display of selected mode
- 5 Selection key
- 6 Confirmation key
- 7 Selection key









#### **AUTO mode (factory setting)**

The circulator automatically adjusts the hydraulic performance depending on the actual requirements of the system, continuously measuring the optimal H/Q point. This operating mode is suitable for most applications and ensures high energy savings.



### Proportional pressure ( $\Delta P$ -v) - fig. a

The circulator adjusts the pump head depending on the flow rate, varying the latter linearly from a maximum value (Hset) to a minimum value (equal to  $H_{set}/2$ ). The pressure value (Hset) is set via buttons  $\bigoplus$  and  $\bigoplus$  and is expressed in metres; the minimum value is automatically calculated by the circulator.



#### Constant pressure (\Delta P-c) - fig. b

The circulators maintains the pump head constant when the flow rates varies. The value of the pressure (H<sub>set</sub>) is set via buttons  $\bigoplus$  and  $\bigoplus$  and is expressed in metres.



### Constant speed - fig. c

The circulators operates according to a constant curve set via buttons  $\oplus$  and  $\bigcirc$  (by selecting the rotation speed in "rpm").



#### Night mode

Night mode can be activated in combination with any of the operating modes listed above, and allows the circulator to operate at a minimum curve (therefore with very low consumption) when it detects a decrease in liquid temperature of 15-20 ° C. When temperature rises, it automatically returns to normal operating curve (according to the selected mode).



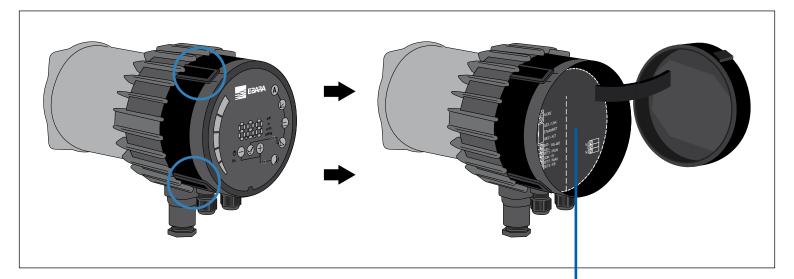
## **FLANGED CIRCULATORS**

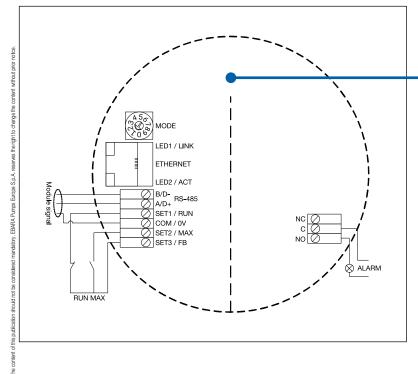
Ego (T) (C) slim 40, 50

## **COMMUNICATION MODULE ("Ego slim C" versions)**

**Ego T C slim** twin versions are equipped with an additional communication module which can be accessed by opening the rear display panel. The communication module is also available as an optional accessory. It is compatible with all standard models Ego easy. The module enables running a wide range of applications remotely:

- Access via Ethernet
- Remote On/Off
- Analog control 0-10V
- Modbus RTU
- Alarm/state relay



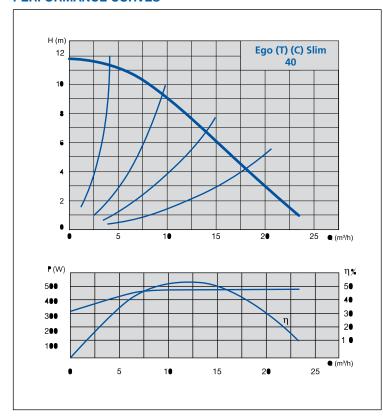


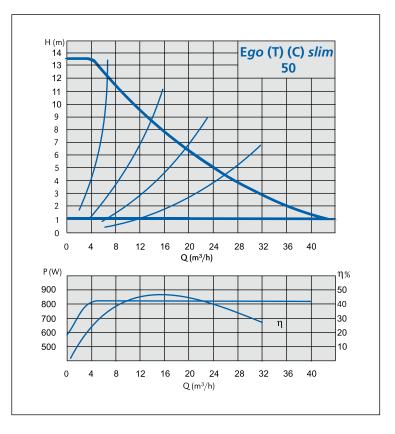


## **FLANGED CIRCULATORS**

Ego (T) (C) slim 40, 50

### **PERFORMANCE CURVES**



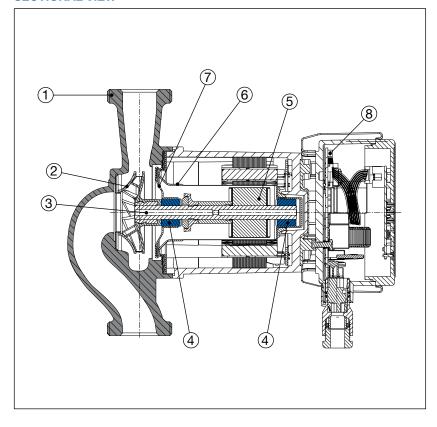




## **FLANGED CIRCULATORS**

Ego (T) (C) slim 40, 50

## **SECTIONAL VIEW**



### **TABLE OF MATERIALS**

| Ref. | Part             | Material                            |
|------|------------------|-------------------------------------|
| 1    | Pump body        | Cast iron with cataphoresis coating |
| 2    | Impeller         | Technopolymer                       |
| 3    | Shaft            | Stainless steel                     |
| 4    | Bearings         | Graphite                            |
| 5    | Rotor            | Coated in stainless steel           |
| 6    | Rotor can        | AISI 316 Stainless Steel            |
| 7    | Bearing plate    | AISI 316 Stainless Steel            |
| 8    | Electronic board | -                                   |

## **TECHNICAL FEATURES - single**

| Model           | EEI (energy efficiency index) | Pipe connection | Power P1 [W]<br>P <sub>min</sub> - P <sub>max</sub> | Current consumption [A] I <sub>min</sub> - I <sub>max</sub> | Weight<br>[kg] |
|-----------------|-------------------------------|-----------------|---|---|----------------|
| Ego slim 40-120 | ≤ 0,21                        | DN 40           | 25 - 480  | 2,6 - 3,8   | 15,5           |
| Ego slim 50-120 | ≤ 0.21                        | DN 50           | 25 - 800  | -   | 20.1           |

## **TECHNICAL FEATURES - twin**

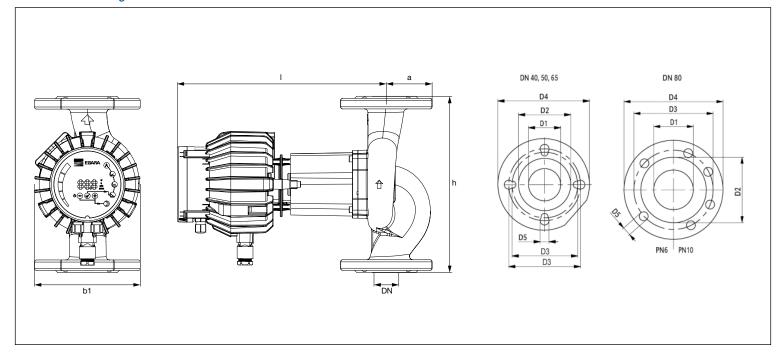
| Model              | EEI (energy efficiency index) | Pipe connection | Power P1 [W]<br>P <sub>min</sub> - P <sub>max</sub> | Current consumption [A] I <sub>min</sub> - I <sub>max</sub> | Weight<br>[kg] |
|--------------------|-------------------------------|-----------------|---|---|----------------|
| Ego TC slim 40-120 | ≤ 0,21                        | DN 40           | 25 - 480  | 2,6 - 3,8   | 29             |
| Fgo TC slim 50-120 | < 0.21                        | DN 50           | 25 - 800  | _   | 39.5           |



## **FLANGED CIRCULATORS**

Ego (T) (C) slim 40, 50

## **DIMENSIONS** - single



## **TABLE OF DIMENSIONS - single**

| Medel           |    | Dimensions [mm] |            |     |    |    |    |         |     |            |             |  |  |  |
|-----------------|----|-----------------|------------|-----|----|----|----|---------|-----|------------|-------------|--|--|--|
| Model           | DN | b1              | 1          | h   | а  | D1 | D2 | D3      | D4  | <b>D</b> 5 | n. of holes |  |  |  |
| Ego slim 40-120 | 40 | 146             | 260 (292)* | 250 | 65 | 40 | 80 | 110/110 | 150 | 14/19      | 4           |  |  |  |
| Ego slim 50-120 | 50 | 146             | 260 (292)* | 280 |    | 50 | 90 | 100/125 | 165 | 14/19      | 4           |  |  |  |

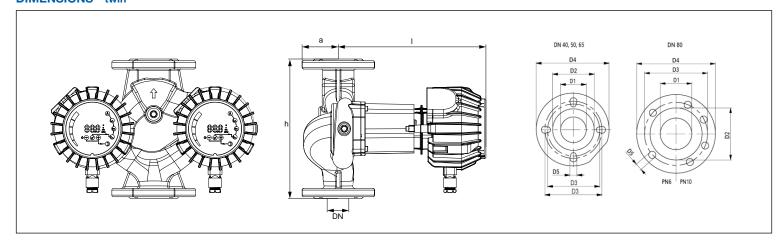
<sup>\*</sup> Dimensions in bracket are referred to circulator with communication module



## **FLANGED CIRCULATORS**

Ego (T) (C) slim 40, 50

### **DIMENSIONS** - twin



### **DIMENSIONS** - twin

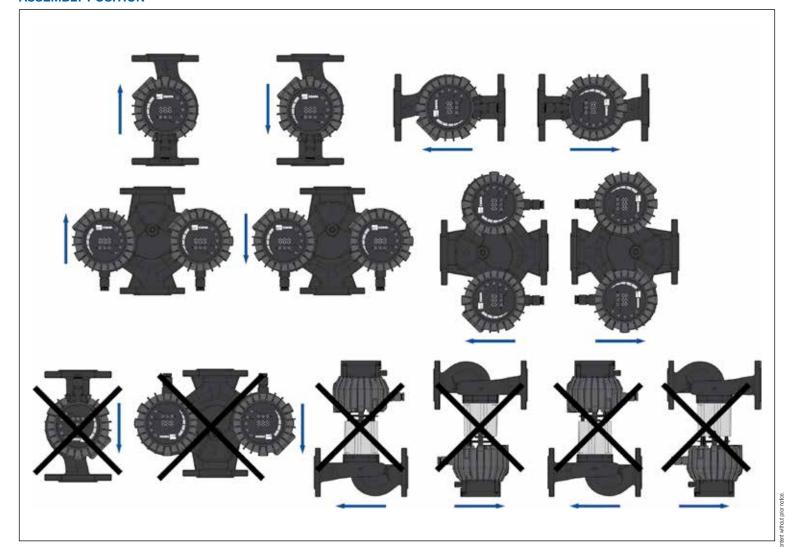
| Madal              |    | Dimensions [mm] |     |    |    |    |         |     |            |             |  |  |  |
|--------------------|----|-----------------|-----|----|----|----|---------|-----|------------|-------------|--|--|--|
| Model              | DN | 1               | h   | а  | D1 | D2 | D3      | D4  | <b>D</b> 5 | n. of holes |  |  |  |
| Ego TC slim 40-120 | 40 | 292             | 250 | 65 | 40 | 80 | 110/110 | 150 | 14/19      | 4           |  |  |  |
| Fao TC slim 50-120 | 50 | 202             | 280 | _  | 50 | QΩ | 100/125 | 165 | 1//10      | 1           |  |  |  |



## **FLANGED CIRCULATORS**

Ego (T) (C) slim 40, 50

### **ASSEMBLY POSITION**





## **COMPARISON WITH COMPETITORS**

for small plants

### **COMPARISON WITH COMPETITORS - THREADED CIRCULATORS**

| EB         | ARA           |                  | DAB         |                    |             | GRUN        | IDFOS                    |           |                            | WILO       |          |
|------------|---------------|------------------|-------------|--------------------|-------------|-------------|--------------------------|-----------|----------------------------|------------|----------|
|            |               | Electr           | onics       | 3 speed            |             | Electronics | nics 3 speed Electronics |           |                            | onics      | 3 speed  |
| Code       | Model         | Evosta           | Evotron     | VA                 | Alpha2 (2L) | Upe         | Alpha +<br>Alpha Pro     | Ups       | Yonos Pico<br>Stratos Pico | Star-E     | Star-RS  |
| 1576000000 | Ego 15/40-130 | 40-70/130 (1/2") | 40/130 (½") | 35 (55)/130 (1/2") | 15-40       | 15-40 130   | 15-40 130                | -         | 15/1-4-130                 | -          | 15/4-130 |
| 1576000001 | Ego 25/40-130 | 40-70/130        | 40/130      | 35 (55)/130        | 25-40 130   | 25-40 130   | 25-40 130                | 25-40 130 | 25/1-4-130                 | 25/1-3-130 | -        |
| 1576000002 | Ego 15/60-130 | 40-70/130 (1/2") | 60/130 (½") | 65/130 (1/2")      | 15-60       | 15-60 130   | 15-60 130                | -         | 15/1-6-130                 | 15/1-5     | 15/6-130 |
| 1576000003 | Ego 25/60-130 | 40-70/130        | 60/130      | 65/130             | 25-60       | 25-60 130   | 25-60 130                | -         | 25/1-6-130                 | 25/1-5-130 | 25/4-130 |
| 1576000004 | Ego 25/80-130 | -                | 80/130      | -                  | -           | -           | -                        | -         | -                          | -          | -        |
| 1576000005 | Ego 25/40-180 | 40-70/180        | 40/180      | 35 (55)/180        | 25-40 180   | 25-40 180   | 25-40 180                | 25-40 180 | 25/1-4                     | 25/1-3     | 25/2     |
| 1576000006 | Ego 32/40-180 | -                | 40/180 X    | 35 (55)/180 X      | 32-40       | 32-40 180   | 32-40 180                | 32-40 180 | 30/1-4                     | 30/1-3     | 30/2     |
| 1576000007 | Ego 25/60-180 | 40-70/180        | 60/180      | 65/180             | 25-60 180   | 25-60 180   | 25-60 180                | 25-60 180 | 25/1-6                     | 25/1-5     | 25/4     |
| 1576000008 | Ego 32/60-180 | -                | 60/180 X    | 65/180 X           | 32-60       | 32-60 180   | 32-60 180                | 32-60 180 | 30/1-6                     | 30/1-5     | 30/6     |
| 1576000009 | Ego 25/80-180 | -                | 80/180      | -                  | -           | 25-80 180   | -                        | 25-80 180 | -                          | -          | -        |
| 1576000010 | Ego 32/80-180 | -                | 80/180 X    | -                  | -           | 32-80 180   | -                        | 32-80 180 | -                          | -          | -        |

| E          | BARA          |            | LOWARA   |         |                 | CALPEDA   |           |             | SALMSON     |           |
|------------|---------------|------------|----------|---------|-----------------|-----------|-----------|-------------|-------------|-----------|
|            |               | Electi     | ronics   | 3 speed | Electronics 3 s |           | 3 speed   | Electr      | Electronics |           |
| Code       | Model         | EA(+), EV+ | ECOCIRC  | TLC     | NC3             | NCE EI    | NC3       | Siriux Home | Siriux Jr   | NYĽ/NXL   |
| 1576000000 | Ego 15/40-130 | 15-4/130   | 15-4/130 | 15-2,5  | 15-40/130       | -         | 15-40/130 | 40-15/130   | 3m-130      | NYL 33-15 |
| 1576000001 | Ego 25/40-130 | 25-4/130   | 25-4/130 | 25-4    | 25-40/130       | -         | 25-40/130 | -           | -           | NYL 33-25 |
| 1576000002 | Ego 15/60-130 | 15-6/130   | 15-6/130 | 25-6    | 15/60-130       | 15-60/130 | 15-60/130 | 60-25/130   | 5m-130      | NYL 53-15 |
| 1576000003 | Ego 25/60-130 | 25-6/130   | 25-6/130 | 15-6    | 25-60/130       | 25-60/130 | 25-60/130 | -           | -           | NYL 53-25 |
| 1576000004 | Ego 25/80-130 | -          | -        | -       | -               | -         | -         | -           | -           | -         |
| 1576000005 | Ego 25/40-180 | 25-4/180   | 25-4/180 | 25-4L   | 25-40/180       | -         | 25-40/180 | 40-25/180   | 3m          | NXL 33-25 |
| 1576000006 | Ego 32/40-180 | 32-4/180   | 32-4/180 | 32-4L   | 32-40/180       | -         | -         | 40-32/180   | -           | -         |
| 1576000007 | Ego 25/60-180 | 25-6/180   | 25-6/180 | 25-6L   | 25-60/180       | 25-60/180 | 25-60/180 | 60-25/180   | 5m          | NXL 53-25 |
| 1576000008 | Ego 32/60-180 | 32-6/180   | 32-6/180 | 32-6L   | 32-60/180       | 32-60/180 | 32-60/180 | 60-32/180   | -           | -         |
| 1576000009 | Ego 25/80-180 | -          | -        | 25-7L   | 25/70-180       | -         | -         | -           | -           | -         |
| 1576000010 | Ego 32/80-180 | -          | -        | 32-7L   | 32/70-180       | -         | 32-70/180 | -           | -           | -         |



## COMPARAZIONE CIRCOLATORI FILETTATI/FLANGIATI

for medium/industrial plants

### **COMPARISON WITH COMPETITORS - THREADED/FLANGED CIRCULATORS**

| E           | BARA               | D                  | AB               |            | GRUNDFOS   |               | WILO                             |         |
|-------------|--------------------|--------------------|------------------|------------|------------|---------------|----------------------------------|---------|
|             |                    | <b>Electronics</b> | 3 speed          | Electro    |            | 3 speed       | Electronics                      | 3 speed |
| Code        | Model              | EVOPLUS            | ·                | Magna 1    | Magna 3    | ÚPS           |                                  | TÓP S   |
| 1576000063  | Ego easy 25-60     | 60/180 M           | A 50/180 M       | 25-60      | -          | UPS 25-55 180 | STRATOS 25/1-6                   | 25/5    |
| 1576000064  | Ego easy 32-60     | 60/180 XM          | A 50/180 XM      | 32-60      | -          | UPS 32-55 180 | STRATOS 30/1-6                   | 30/5    |
| 1576000061  | Ego easy 25-80     | 80/180 M           | A 80/180 M       | 25-80      | -          | UPS 25-80 180 | STRATOS 25/1-8 TOP-E 25/1-7      | 25/7    |
| 1576000062  | Ego easy 32-80     | 80/180 XM          | A 80/180 XM      | 32-80      | -          | UPS 32-80 180 | STRATOS 30/1-8                   | 30/7    |
| 1576000011  | Ego easy 25-100    | 110/180 M          | A 110/180 M      | 25-100     | -          | -             | -                                | -       |
| 1576000012  | Ego easy 32-100    | 110/180 XM         | A 110/180 XM     | 32-100     | -          | -             | STRATOS 30/1-10                  | 30/1-10 |
| 1576000092  | Ego easy 25-120    | 110/180 M          | A 110/180 M      | -          | -          | -             | -                                | -       |
| 1576000093  | Ego easy 32-120    | 110/180 XM         | A 110/180 XM     | -          | -          | -             | STRATOS 30/1-10                  | 30/1-10 |
| 1576000013  | Ego easy 32-100 F  | B 110/220.32 M     | -                | 32-100 F   | -          | UPS 32-100 F  | STRATOS 32/1-10                  | -       |
| 1576000014  | Ego easy 40-100 F  | B 110/250.40 M     | B 110/250.40 M   | -          | -          | -             | STRATOS 40/1-10 TOP-E 40/1-10    | 40/10   |
| 1576000016  | Ego easy 50-100 F  | -                  | -                | -          | -          | -             | -                                | -       |
| 1576000015A | Ego slim 40-120    | B 120/250.40 M     | BPH 120/250.40 M | 40-120 F   | 40-120 F   | 40-120 F      | STRATOS 40/1-12 TOP-E 40/1-10    | 40/10   |
| 1576000017A | Ego slim 50-120    | B 120/280.50 M     | BPH 120/280.50 M | 50-120 F   | 50-120 F   | 50-120 F      | STRATOS 50/1-12 TOP-E 50/1-10    | 50/10   |
| 1576000017  | Ego 50             | B 120/280.50 M     | BPH 120/280.50 M | 50-120 F   | 50-120 F   | 50-120 F      | STRATOS 50/1-12 TOP-E 50/1-10    | 50/10   |
| 1576000018  | Ego 65             | B 120/340.65 M     | BPH 120/340.65 T | 65-120 F   | 65-120 F   |               | STRATOS 65/1-12 TOP-E 65/1-10    | 65/13   |
| 1576000019  | Ego 80             | B 120/360.80 M     | BPH 120/360.80 T | 80-120 F   | 80-120 F   | 80-120 F      | STRATOS 80/1-12 TOP-E 80/1-10    | 80/10   |
| 1576000020  | Ego 100            | B 120/450.100 M    | -                | 100-120 F  | 100-120 F  | 100-120 F     | STRATOS 100/1-12                 | 100/10  |
| 1576000100  | Ego TC slim 40-120 | D 120/250.40 M     | DPH 120/250.40 M | D 40-120 F | D 40-120 F | D 40-120 F    | STRATOS D 40/1-12 TOP-ED 40/1-10 | D 40/10 |
| 1576000022A | Ego TC slim 50-120 | ,                  | DPH 120/280.50 M | D 50-120 F | D 50-120 F | D 50-120 F    | STRATOS D 50/1-12 TOP-ED 50/1-10 | D 50/10 |
| 1576000022  | Ego T 50           | D 120/200100 111   | DPH 120/280.50 M | D 50-120 F | D 50-120 F | D 50-120 F    | STRATOS D 50/1-12 TOP-ED 50/1-10 | D 50/10 |
| 1576000023  | Ego T 65           | D 120/340.65 M     | DPH 120/340.65 T | D 65-120 F | D 65-120 F | D 65-120 F    | STRATOS D 65/1-12 TOP-ED 65/1-10 | D 65/13 |
| 1576000024  | Ego T 80           | D 120/360.80 M     | DPH 120/360.80 T | D 80-120 F | D 80-120 F | D 80-120 F    | STRATOS D 80/1-12 TOP-ED 80/1-10 | D 80/10 |

| EBARA       |                    | LOWARA      |                          | CALPEDA           |                 |
|-------------|--------------------|-------------|--------------------------|-------------------|-----------------|
|             |                    | Electronics | Not Electronics          | Electronics       | Not Electronics |
| Code        | Model              |             |                          |                   |                 |
| 1576000063  | Ego easy 25-60     | ATC 25-40   | TLC H 25-7L              | NCE H 25/60-180   | -               |
| 1576000064  | Ego easy 32-60     | ATC 32-40   | TLC H 32-7L              | NCE H 32/60-180   | -               |
| 1576000061  | Ego easy 25-80     | ATC 25-60   | TLC H 25-8L TLC H 25-10L | NCE H 25/80-180   | -               |
| 1576000062  | Ego easy 32-80     | ATC 32-60   | TLC H 32-8L              | NCE H 32/80-180   | NC3 32-80/180   |
| 1576000011  | Ego easy 25-100    | -           | -                        | NCE H 25/100-180  | -               |
| 1576000012  | Ego easy 32-100    | ATC 32-90   | TLC H 32-10L             | NCE H 32/100-180  | NC3 32-85/180   |
| 1576000092  | Ego easy 25-120    | -           | -                        | NCE H 25/120-180  | -               |
| 1576000093  | Ego easy 32-120    | ATC 32-90   | TLC H 32-10L             | NCE H 32/120-180  | NC3 32-120/180  |
| 1576000013  | Ego easy 32-100 F  | -           | -                        | NCE H 32F - 100   | -               |
| 1576000014  | Ego easy 40-100 F  | -           | -                        | NCE H 40F - 100   | - '             |
| 1576000016  | Ego easy 50-100 F  | -           | -                        | NCE H 50F - 100   | - :             |
| 1576000015A | Ego slim 40-120    | AFC 40-80   | FLC 40-10                | NCE G 40F - 120   | NC 40-120/250   |
| 1576000017A | Ego slim 50-120    | AFC 50-80   | FLC 50-13                | NCE G 50F - 130   | NC 50-120/280   |
| 1576000017  | Ego 50             | AFC 50-80   | FLC 50-13                | NCE G 50F - 130   | NC 50-120/280   |
| 1576000018  | Ego 65             | -           | FLC 65-12                | NCE G 65F - 130   | NC 65-120/340   |
| 1576000019  | Ego 80             | -           | FLC 80-8                 | NCE G 80F - 130   | NC 80-120/360   |
| 1576000020  | Ego 100            | -           | -                        | NCE G 100F - 130  | - :             |
| 1576000021A | Ego TC slim 40-120 | AFCG 40-80  | -                        | NCED G 40F - 130  | NCD 40-120/250  |
| 1576000022A | Ego TC slim 50-120 | AFCG 50-80  | -                        | NCED G 50F - 130  | NCD 50-120/280  |
| 1576000022  | Ego T 50           | AFCG 50-80  | -                        | NCED G 65F - 130  | NCD 65-120/340  |
| 1576000023  | Ego T 65           | -           | FLCG 65-12               | NCED G 80F - 130  | NCD 80-120/360  |
| 1576000024  | Ego T 80           | AFCG 80-90  | -                        | NCED G 100F - 130 | _               |

## **EBARA Pumps Europe network**

#### **HEAD OFFICE**

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Technical Customer Service (TCS): e-mail: tcs@ebaraeurope.com Phone +39 0444 706869/902/923/833

Marketing & Marketing Communication: e-mail: marketing@ebaraeurope.com

#### ITALIAN SALES NETWORK

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