

# EVOPLUS SMALL / EVOPLUS SMALL SAN

WET ROTOR ELECTRONIC CIRCULATORS



D CONNECT



EVOPLUS SMALL



EVOPLUS SMALL SAN

## TECHNICAL DATA

**Operating range:** from 2 a 12 m<sup>3</sup>/h with head of up to 11 metres.  
**Pumped liquid temperature range:** from -10 °C to +110 °C.  
**Pumped liquid:** clean, free of solids and mineral oils, non-viscous, chemically neutral, with properties similar to water. (glycol max 30%).  
**Maximum operating pressure:** 16 bar (1600 kPa).  
**Standard flanges:** DN 32, DN 40 PN 6 / PN 10 / PN 16 (4 holes).  
**Maximum ambient temperature:** + 40 °C.  
**Minimum suction pressure:** the values are shown in the corresponding tables.  
**Accessories:** ½" F, ¾" F, 1" F, 1" ¼ F, 1" ¼ M union connectors. DN 32 PN 10 and DN 40 PN 10 threaded counter flanges.  
**Electromagnetic compatibility:** EVOPLUS circulator comply with EN 61800-3 standard, category C2, as far as electromagnetic compatibility.  
**Electromagnetic emissions:** Residential environment (containment measures might be required in some cases).  
**Conducted emissions:** Residential environment (containment measures might be required in some cases).  
**Circulator protection class:** IP 44.  
**Insulation class:** F.  
**Standard voltage:** single-phase 220-240 V, 50/60 Hz.  
**Sound pressure values:** ≤ 33 dB(A).  
Product compliant with European Standards EN 61800-3 – EN 60335-1 – EN 60335-2-51

## APPLICATIONS

EVOPLUS circulation electronic pumps can be used in heating, ventilation, and air conditioning systems for residential and commercial buildings, like:

- Large residential buildings
- Condominiums and small apartment buildings
- Homes
- Real estate buildings
- Private and public hospitals
- Schools
- Office buildings

Single version available, with 1 ½" e 2" threaded ports, and with DN 32 and DN 40, PN 6 / PN 10 / PN 16 flanged ports.

Twin version available with DN 32 and DN 40, PN 6 / PN 10 / PN 16 flanged pump body.

Special version available with bronze pump body for the recirculation of sanitary water.

Possibility of 0-10 V or PWM external signal control, and connection to ModBus management systems (LonBus with appropriate additional communication module), with the use of the optional Multifunction module (supplied as standard for the twin version). **You can remotely control the single version thanks to the Dconnect service** (with Dconnect box supplied separately).

## HEATING SYSTEM APPLICATIONS

The heating required for the different applications varies significantly during day and night, due to the external temperature, or the degree of occupancy inside the areas. To the above, one must add the different needs of the various environments, and the opening or closing of the various circuit branches of complex systems. Electronic wet rotor pumps ensure at all times, and virtually in all correctly sized systems, a sufficient level of energy, together with a quieter operation, and more comfort, together with an important reduction of operating costs.

## AIR CONDITIONING APPLICATIONS

Unlike conventional electronic pumps, EVOPLUS electronic circulators can be used also in air conditioning systems where the temperature of the pumped liquid is lower than the room temperature. In these conditions, condensation tends to form on the outer surface of the circulator, which however does not affect the operation of the electronic and the mechanical components. The unit is designed and sized in such a way that it allows condensation to drain without damage to the construction components.

## SANITARY RECIRCULATION APPLICATIONS

The SAN version, with bronze pump body, was specifically developed for the recirculation of sanitary water. With the constant temperature mode of operation, the temperature inside the recirculation piping is controlled without the need for thermostat valves, therefore optimizing comfort.

## CONSTRUCTION FEATURES

Monobloc circulation pump consisting of the cast iron hydraulic section, and the wet rotor synchronous motor. Aluminium motor casing. Scroll type pump body featuring high hydraulic efficiency thanks to highly precise design and smooth internal surfaces. In-line suction and delivery ports. The single version is supplied as standard with insulating casing, to avoid heat dispersion and/or the formation of condensation on the pump body. For the twin version, the insulation must be provided by the installer. In any case, pay attention not to obstruct the condensation drainage ducts, to avoid impairing the operation of the circulator. The EVOPLUS circulators for small collective systems are connected to the power input line using a practical connector with plug supplied as standard, which makes the operation quick and easy. Technopolymer impeller, aluminium motor shaft on graphite bushings lubricated by the pumped liquid. Stainless steel rotor protection liner. Ceramic thrust ring, ethylene-propylene seal rings and carbon fibre composite stator liner. Asynchronous motor with permanent magnet rotor. The twin version features an automatic swing check valve incorporated in the delivery port, to avoid water recirculating through the unit when this is not running; in addition, a blank flange is also supplied as standard, to allow either of the two motors to be removed for servicing. PN 16 standard pump body execution, flanged with 4 holes, compatible with PN 6 / PN 10 / PN 16 counter flanges, to ensure the interchangeability of the pumps in existing systems.

# DCONNECT SERVICE

## REMOTE CONTROL FOR ELECTRONIC RESIDENTIAL AND COMMERCIAL SYSTEMS

The Dconnect service offers simple and intuitive remote control of your installation, without the need of a server or specialist personnel.

**With Dconnect, you can remotely manage your installations as if you were right in front of them.**

Thanks to the system operation charts, you will also be able to optimise operation. You will also receive prompt notifications of any system faults.

### THE CONNECTIVITY SERVICE ALLOWS YOU TO:

#### EASILY MONITOR YOUR SYSTEMS

The installations with green status are OK, while the orange ones need attention, and the red ones are experiencing problems

The screenshot shows the 'Installation list' section of the DCONNECT service. It features a grid of eight installation cards, each with a computer monitor icon and a status indicator. The status indicators are green checkmarks, indicating that all installations are currently OK. The installations listed are:

- Impianto di pressurizzazione via Cairoli Pisa (STATUS ✓)
- Condominio Cancelli Palala (STATUS ⚠)
- Condominio Pero Livorno (STATUS ✓)
- Condominio Nicolai Firenze (STATUS ✓)
- Officine Arnoldi Pressurizzazione (STATUS ✓)
- Officine Arnoldi Riscaldamento (STATUS ✓)
- Officine Arnoldi Acqua Calda Sanitaria (STATUS ✓)
- Officine Arnoldi gruppi frigo (STATUS ✓)

### TAKE ANY NECESSARY ACTIONS AS IF YOU WERE RIGHT IN THE PUMP ROOM

Using the internet site or the APPs, you will be able to easily and quickly control your systems.

The screenshot shows the detailed control interface for an EVOPLUS SMALL pump. It includes a product image, technical specifications, and a real-time status dashboard. The status dashboard is organized into a grid of monitoring cards:

- SYSTEM ERROR STATUS:** System OK (indicated by a green checkmark)
- HEAD:** 1.2 m
- PUMP STATUS:** Run (indicated by a green checkmark)
- ESTIMATED FLOW:** 0.8 m<sup>3</sup>/h
- POWER:** 9 W
- RPM:** 1510 rpm
- CURRENT:** 110 mA
- RUN TIME PUMP:** - h
- BOARD TEMPERATURE:** - °C
- LIQUID TEMPERATURE:** - °C
- LIQUID TEMPERATURE 2:** - °C
- HEATSINK TEMPERATURE:** - °C
- LINE VOLTAGE:** 228 V

# DCONNECT SERVICE

## REMOTE CONTROL FOR ELECTRONIC RESIDENTIAL AND COMMERCIAL SYSTEMS

In order to use the Dconnect service, registration and connected products are required.

Connect to the website: <https://dconnect.dabpumps.com>, using Internet Browsers such as Microsoft Edge or Google Chrome.

The Android and iOS Dconnect APPs can be downloaded from the relevant Stores:



### REMOTE ALARMS

In case of alarm, the Dconnect service will promptly send you a notification, so that you can check what is happening and organise a visit to the system before the issue becomes an emergency for your customer.

### WHAT PRODUCTS CAN YOU MANAGE USING THE DCONNECT SERVICE?

MCE/P, MCE/C, ADAC, Active driver Plus, Ebox, Evoplus, Esybox, Esybox mini, Esybox Diver, Dtron 3.

### WHAT DO YOU NEED TO USE THE SERVICE?

1. DConnect Box
2. Cables for the connection of the DConnect Box / Dconnect Box 2 to the products to control
3. One or more compatible products
4. An internet connection in the system to control

For more information visit: [internetofpumps.com](http://internetofpumps.com)

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WET ROTOR ELECTRONIC CIRCULATORS

## EVOPLUS CONSTRUCTION CHARACTERISTICS FOR SMALL COLLECTIVE SYSTEMS (ELECTRONIC DEVICE).

EVOPLUS circulators are controlled by a latest generation NPT technology IGBT device, for better efficiency and strength. The specific features are:

- Sensorless motor control
- Sine-wave PWM modulation
- High carrier frequency, to eliminate all audio band noise
- dedicated 32 bit processor
- Optimised "space vector" algorithm

An intuitive and functional user interface guarantees ease of calibration by all users. The easy to read OLED display on the control panel, 4 simple navigation keys, an in-line cascade menu featuring the latest mobile technology trends, and a wide range of functions, mean that EVOPLUS circulators are truly revolutionary products. A reliable and sturdy construction, together with a modern and innovative design, complete the product, also in terms of aesthetic value. This range is ready for the following remote commands through expansion modules:

### Base Module

- Economy mode
- Circulator start/stop
- Presence/absence of system alarms
- Pump in operation notification

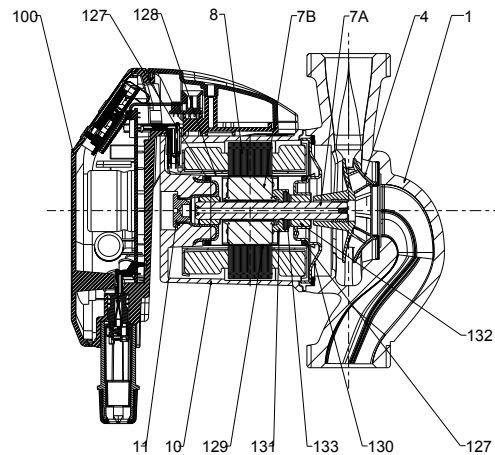
### Multifunction Module\*

- 2 x 0-10 V analogue signals
- 1 PWM signal
- 1  $\Delta T$  analogue signal from temperature sensor
- Connection to ModBus system management devices
- Optional LonBus with appropriate module
- Presence/absence of system alarms
- Pump in operation notification

\* Inputs available only if the associated function is active

## MATERIALS

N.	PARTS	MATERIALS
1	PUMP BODY	CAST IRON 250 UNI ISO 185 - CTF BRONZE (for the SAN version)
4	IMPELLER	TECHNOPOLYMER
7A	MOTOR SHAFT	ALLUMINA
7B	ROTOR	STAINLESS STEEL LINER
8	STATOR	-
10	MOTOR CASING	DIE-CAST ALUMINIUM
127	SEAL RING	EPDM RUBBER
128	STATOR LINER	STAINLESS STEEL
130	CLOSING FLANGE	STAINLESS STEEL
131	THRUST RING SUPPORT	EPDM RUBBER
132	BUSHINGS	GRAPHITE



### - Legend: (example)

