

Electronic circulator for heating systems

P329 ES2 25-70/130

/ Description

Electronic circulator ES2 70 is a wet rotor high efficiency circulator, driven by a permanent magnets synchronous motor (PM motor) controlled by an on board inverter. The motor is protected against overload thanks to a thermal protection and an automatic electronic release function of the rotor. No external protection is required. Operated by selector technology. LED user interface.

/ Fields of application

Hot-water heating systems of all kinds, in domestic and commercial buildings.

/ Energy efficiency index

IEE \leq 0,21 - Part 2*

/ Features and advantages

- Very high degrees of efficiency due to permanent magnets motor
- Compact design: the smallest available on the market
- A LED provides information about the operation status of the circulator
- Electronic controls allow to set advanced features and load adjustment capacity Δp -c (constant differential pressure) and Δp -v (proportional differential pressure)
- Min-Max mode: allows to set the exact working point across the range
- The pump housing is cataphoresis treated (KTL) and resistant to corrosion



/ Pumped liquids

- Water for heating according to VDI 2035
- Mixtures of water and glycol with glycol percentages not greater than 30%
- Clean liquids, not aggressive and not explosive, not containing solid particles, fibers or mineral oils.

/ Pump technical data

Ambient temperature:	from +2°C to +40°C
Allowed liquid temperature**:	from +2°C to +95°C
Temperature range at max. ambient temperature:	of 30°C = +30°C to +95°C of 35°C = +35°C to +90°C of 40°C = +40°C to +70°C
Operating pressure:	Max 0.6 MPa (6 bar)
Minimum pressure on the intake opening:	0.03 MPa (0.3 bar) at 50°C 0.10 MPa (1.0 bar) at 95°C
Maximum relative humidity:	\leq 95%
Sound pressure level:	< 43 dB(A)
Low Voltage directive (2006/95/CE):	Standard used: EN 62233, EN 60335-1 and EN 60335-2-51
EMC Directive (2004/108/CE):	Standard used: EN 61000-3-2 and EN 61000-3-3, EN 55014-1 and EN 55014-2
Ecodesign Directive (2009/125/CE):	Standard used: EN 16297-1 and EN 16297-2

* The benchmark for most efficient circulators is EEI \leq 0,20.

** To avoid condensation in the motor and electronics the temperature of the pumped liquid must always be greater than the ambient temperature.

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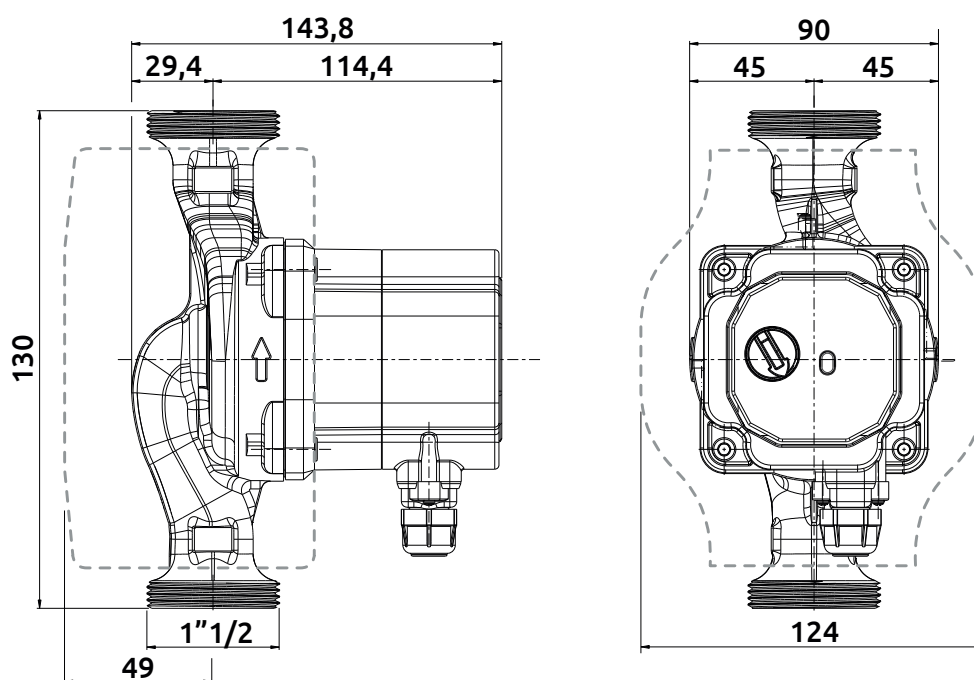
/ Materials

Pump housing:	Cast iron EN-GJL-200 with cataphoretic coating (KTL)
Impeller:	Composite
Shaft:	Ceramic
Bearing:	Carbon
Thrust bearing:	Ceramic
Rotor can:	Composite

/ Motor technical data

Power supply:	1x230 V (±10%); Frequency: 50/60 Hz
Electrical connection:	Pull resistant cable clamp PG11
Input power (P_i):	Min 3W, Max 56W
Input current (I_i):	Min 0.03A, Max 0.44A
Insulation class:	H
Protection class:	IP44
Appliance class:	II

/ Dimensions



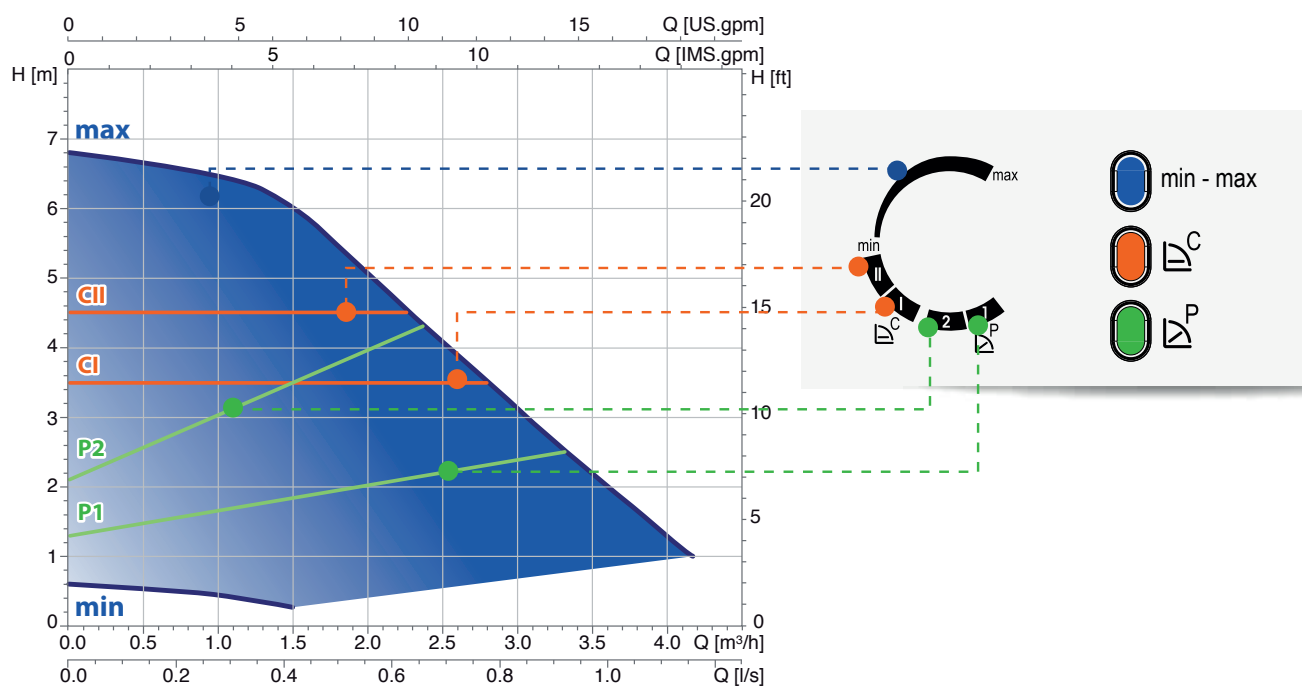
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/ Performance curves and pump settings

Turn the regulator to select the desired operating curve

- nr. 2 proportional-pressure curves (P1,P2)
- nr. 2 constant-pressure curves (CI, CII)
- min-max mode – Fixed speed



/ Certifications

- CE marking
- VDE GS marking