

Function

The PCE 755 recirculation pump was conceived for hot water based heating systems and alike systems with ever-changing flow rates.

The pump consists of an hydraulic system, a wet rotor motor with permanent magnet rotor and an electronic adjustment module with integrated frequency converter.

The new PCE 755 circulator was designed to significantly reduce the consumption of energy, looking beyond the current class A.

Technical data

Energy class:	A
EEl:	< 0.23
Fluid temperature:	2 ÷ 95 °C
Room temperature:	0 ÷ 40 °C
Max. pressure:	6 bar
Sound pressure:	≤ 33 dB (A)
Max. quantity of glycol:	20 %
Threaded connections:	ISO 228 G 1"1/2
Working fluids:	water in compliance with UNI 8065:2019

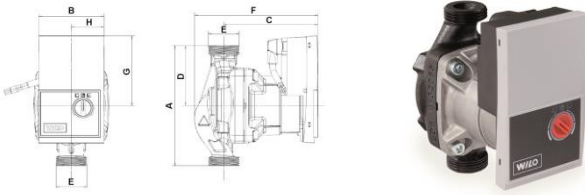
Motor characteristics

Number of turns:	Variable
Power supply:	230 V (-15%;+10%)
Frequency:	50/60 Hz
Electromagnetic compatibility:	EN 61800-3
Emission of electromagnetic disturbances:	EN 61000-6-3 / EN 61000-6-4
Interference immunity:	EN 61000-6-1 / EN 61000-6-2
Degree of protection:	IP X40D
Insulation class:	F
Wiring:	Cable with phase, neutral and ground

Dimensional Drawings

PCE 755

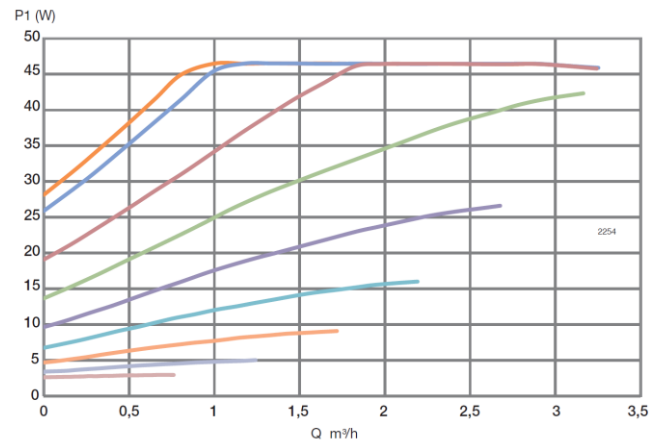
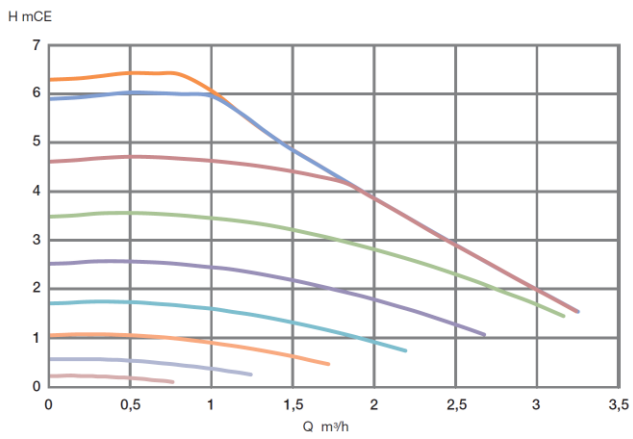
Electronic circulation pump with 25/60 synchronous motor, interaxis 130 mm.



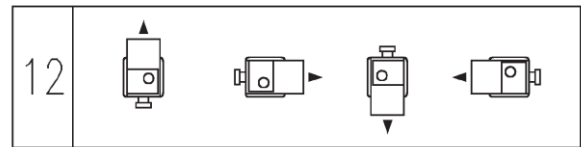
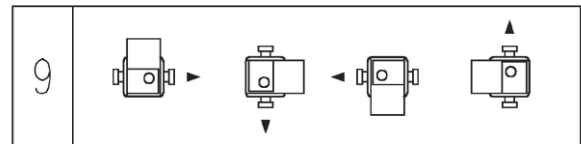
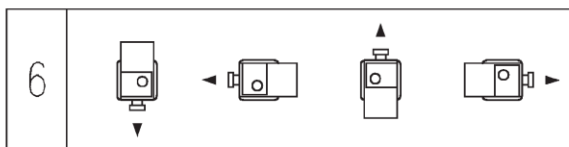
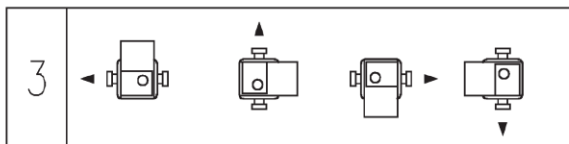
Code	Size	A	B	C	D
69011560	25/60-INT 130mm	130	71	102	65

Code	Size	E	F	G	H
69011560	25/60-INT 130mm	G1"	134	75.5	35.5

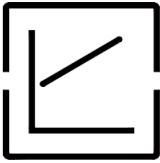
Characteristic Curves



Installation

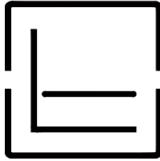


Programmes



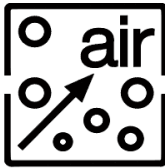
Variable differential pressure (Δp-v):

The delivery value of differential pressure is increased linearly between ½ H e H within the allowed flow rate field (fig. 3a). The differential pressure generated by the pump is adjusted according to the set delivery value. This adjustment mode is particularly suitable for heating systems with radiators, because it reduces the flow noise of the thermostatic valves.



Constant differential pressure (Δp-c):



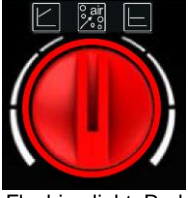
The delivery value of differential pressure H is constantly kept to the set delivery value - within the allowed flow rate field - until the maximum characteristic curve (fig. 3b). This adjustment mode is recommended for floor heating systems or old systems with large pipings, as well as for all applications without variable characteristic curves, such as feedwater pumps for boilers.



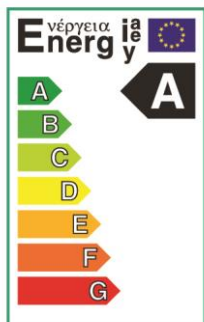
Vent function:

Fill and drain the system properly. Should direct ventilation of the rotor compartment be required, it is possible to start the vent function manually. Turn the control button to the centre, i.e. to the vent symbol; the vent function will activate after 3 seconds. The vent function takes 10 minutes and is shown by the quick flashing of the green LED. The vent function may cause some noise. The process can be interrupted at any time by turning the button. After 10 minutes the pump stops and automatically turns to the Δp-c max mode.

If Δp-c max is not the desired programme, it is necessary to set the adjustment mode and the prevalence.

	Meaning	Operational status	Cause	Remedy
 LED Light on. Green	Pump on	The pump operates according to the settings	Normal operation	
 Flashing light. Green	The pump operates in vent mode for 10 min. After that, it is necessary to set the desired power	Normal operation		
Flashing green/red light	The pump is ready but not turning	The pump starts turning autonomously once the error is resolved	1. Undervoltage U<160 V or overvoltage U>253 V 2. Overtemperature of the module Motor temperature is too high	1. Check the power supply 195 V < U < 253 V 2. Check fluid and room temperature
 Flashing light. Red	Pump out of service	The pump is off (blocked)	The pump does not restart autonomously	Change the pump
LED off	No voltage	No voltage to the electronic components	1. The pump is not connected to power supply 2. Defective LED 3. Defective electronics	1. Check if the cable is connected 2. Check if the pump is operating 3. Change the pump.

Energy saving and topmost reduction of consumption



The PCE 755 is beyond Class A, it is a groundbreaking product which already complies with EC regulation 641/2009, imposing a drastic reduction of energy consumption for the sake of the environment.

The PCE 755 has an Energy Efficiency Index (EEI) < 0,23.

The consumption of electricity is further reduced through the possibility of proportional adjustment of pressure: when the system's request for heat decreases (lower flow rate), the pump reduces the pressure level (prevalence) proportionally.

Item Specifications

PCE 755

25-60 permanent magnet circulation pump, energy class A. Working fluids: water and glycol solutions; max. percentage of glycol 20%. Max. working pressure 6 bar. Max. fluid temperature 95°C. Max. depth 90mm.



Luxor S.p.A.

Sede amministrativa, stabilimento e uffici commerciali:

Administrative office, factory and commercial office:

Tel.: 030-9961161 – Fax: 030-9961165

info@luxor.it – www.luxor.it

via Madonnina, 94 – 25018 Montichiari - (BS) Italy

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