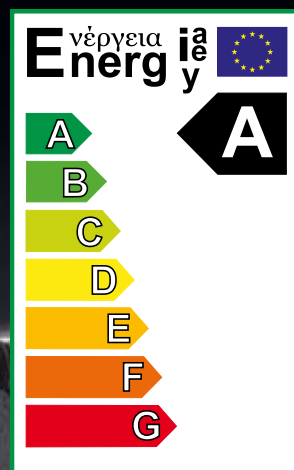


Efficiency is **affordable!**

The revolutionary heating circulator

ecocirc[®] **auto**



Efficiency at low price:

The revolutionary
ecocirc[®] **auto**.

Automatically speed controlled heating circulator with highly efficient ECM technology and proportional head control. The result is high efficiency at low cost. With the proven reliability of the spherical motor!

LAING

einfach · gut · aus prinzip

Highly efficient heating pumps

ecocirc[®] auto

Save twice. Profit twice.

Approximately 10 to 15 percent of the electricity consumption of an average household is caused by heating circulators. More efficient circulators therefore can contribute significantly to energy savings efforts.

The Ecocirc[®] auto is setting new standards here: It is the first speed controlled heating circulator with energy efficiency class A and spherical motor technology. In the design of the Ecocirc[®] auto, a lot of adjustment possibilities were skipped in exchange for a better price-performance relation, but not the high efficiency of the electronically commutated permanent magnet motor (ECM technology). The flow rate dependent differential pressure control adjusts the pump performance continuously and automatically to the requirements of the heating system: When thermostatic valves close, the pump performance is reduced to save energy and to avoid noise problems. An adjustment dial allows for matching the pump performance to the respective system.

The low initial cost of a standard circulator and the low consumption result in double savings: Economic operation and reasonable price. Efficiency at a low price. Save twice. Profit twice. With the reliability of the spherical motor.

Fields of application

The speed controlled heating circulators Ecocirc[®] auto are designed for use in hydronic heating systems.

Improved efficiency due to electronic commutation (ECM)

Model designation

Series	Connection	Pump housing material (G = cast iron)
E4auto -	25/	180 G
Pump housing length (in mm)		



Technical data

Motor design	electronically commutated shaftless spherical motor with permanent magnet technology
Max. system pressure	6 bar
Electrical supply	200 – 240 Volt, 50 / 60 Hertz
Suitable for the following liquids:	heating water VDI 2035 water/glycole mixtures*
Temperature range	-10 °C** to +95° C
Power consumption	series E4: 9 – 35 Watt series E6: 9 – 63 Watt
Protection	IP 44
Insulation class	F

* check hydraulic performance with more than 20% glycole

** non-freezing

Design

Heating circulator Ecocirc® auto



The Laing spherical motor design

The heating circulator Ecocirc® auto uses the spherical motor principle invented by Laing. The only moving part is a ball shaped rotor/impeller unit which rides on an ultra hard ceramic bearing ball. Shaft seals or a conventional bearing bushings with a shaft have been eliminated. The only self realigning bearing in the small pump market has many advantages:

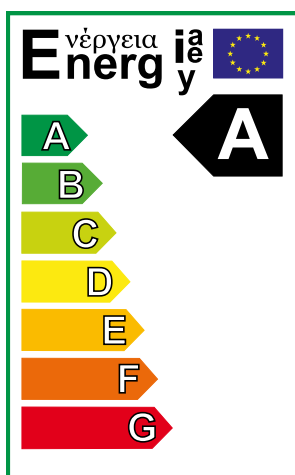
■ long term quiet operation

An increase in noise level caused by increasing bearing play can not happen with this design. Therefore the pump can be operated for many years up to the end of the built-in wear path and the noise level will stay constantly quiet throughout this time.

■ reliable and blockage free

The touching surface of the bearing on the ball is very small. The torque required for starting the pump is minimal. Laing heating circulators start reliably even after the seasonal shutdown without the need for service. The spherical motor principle does not require a manual unblocking device.

The heating circulator Ecocirc® auto combines the Laing spherical motor principle with the advantages of the energy efficient electronic commutation.



Electronic commutation results in significant energy savings with the same performance. The basis for the higher efficiency is the permanent magnet rotor. The magnetic field required in the rotor does not have to be created while incurring losses, but it is permanently there.

A microprocessor installed in the pump creates a rotating magnetic field with variable frequency in the stator coils (electronic commutation), which turns the rotor. Compared to state of the art pumps even higher rpm are possible, resulting in higher performance in a smaller package. The starting torque, too, is significantly increased.

An additional advantage of the electronically commutated spherical motor pump is that both the coils and the electronics transfer the majority of their heat into the water instead of venting it off as waste heat.

A further reduction in heat losses can be achieved by using

the optional insulating cover for the pump housing. It is made of EPP, heat resistant up to 120° C, easily recycled and therefore environmentally sound.

Compared to standard circulators, electronically commutated pumps save energy at full load, but especially when running at reduced rpm.

Electronically commutated spherical motor pumps can be speed adjusted over a very wide range:

Control

All Ecocirc® auto pumps are equipped with a control which adapts the pumps steplessly and automatically to the system requirements. When thermostatic valves close, the pump performance is reduced to save even more energy. Additional adjustment possibilities were omitted on purpose in favour of a better price-performance relation – but not the high efficiency. With this, the new Ecocirc® auto can measure up to the best.

The green LED in the transparent knob gives information about the operational status of the pump.

ecocirc® E4 auto Pump housing length 130 and 180 mm

Model	Part number	Energy efficiency class	Pump housing length	Connection	for union fittings	Pump housing material	Product category
E4auto-15/130 G	24 00 105	A	130 mm	G 1"	1/2"	Cast iron	C
E4auto-20/130 G	24 00 107	A	130 mm	G 1 1/4"	3/4"	Cast iron	C
E4auto-25/130 G	24 00 109	A	130 mm	G 1 1/2"	1"	Cast iron	C
E4auto-25/180 G	24 00 101	A	180 mm	G 1 1/2"	1"	Cast iron	C
E4auto-32/180 G	24 00 103	A	180 mm	G 2"	1 1/4"	Cast iron	C

ecocirc® E6 auto Pump housing length 130 and 180 mm

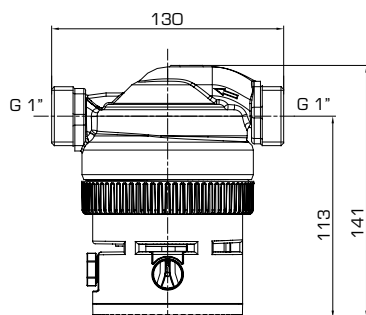
Model	Part number	Energy efficiency class	Pump housing length	Connection	for union fittings	Pump housing material	Product category
E6auto-15/130 G	24 00 106	A	130 mm	G 1"	1/2"	Cast iron	C
E6auto-20/130 G	24 00 108	A	130 mm	G 1 1/4"	3/4"	Cast iron	C
E6auto-25/130 G	24 00 110	A	130 mm	G 1 1/2"	1"	Cast iron	C
E6auto-25/180 G	24 00 102	A	180 mm	G 1 1/2"	1"	Cast iron	C
E6auto-32/180 G	24 00 104	A	180 mm	G 2"	1 1/4"	Cast iron	C

ecocirc® auto Accessories, components and spare parts

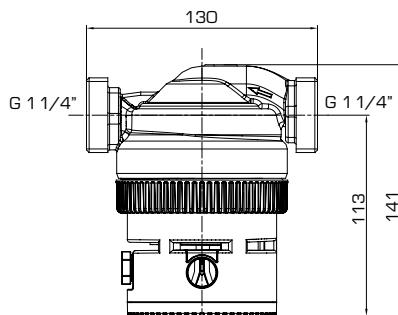
Model	Part number	Description	Product category
Union fittings			
RG 3/4"	95 00 014	2 pieces union fittings 1 1/4" female x 3/4" female	C
RG 1"	95 00 015	2 pieces union fittings 1 1/2" female x 1" female	
RG 5/4"	95 00 016	2 pieces union fittings 2" female x 1/4" female	
Replacement rotors			
R-4	95 00 602	Rotor for series E4auto, incl. gasket	C
R-6	95 00 903	Rotor for series E6auto, incl. gasket	
Others			
WD-A	96 00 001	Heat insulation capsule (EPP) for E4/E6 cast iron pump housing	C
PS-A	96 00 002	Pump combination wrench for E4/E6 pumps	

Dimensional drawings heating pumps Ecocirc® auto

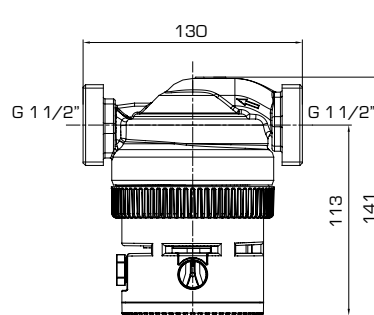
Ecocirc® auto 15-130 G



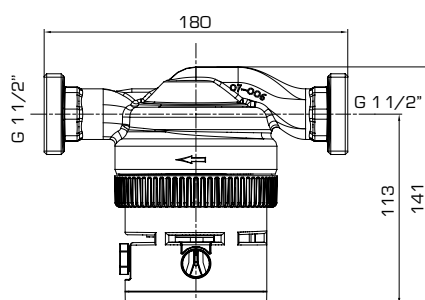
Ecocirc® auto 20-130 G



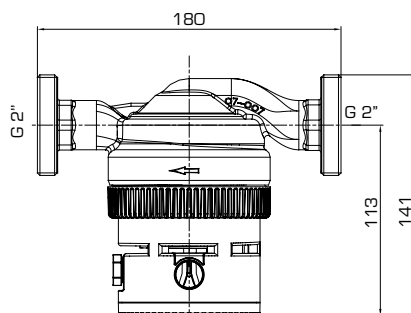
Ecocirc® auto 25-130 G



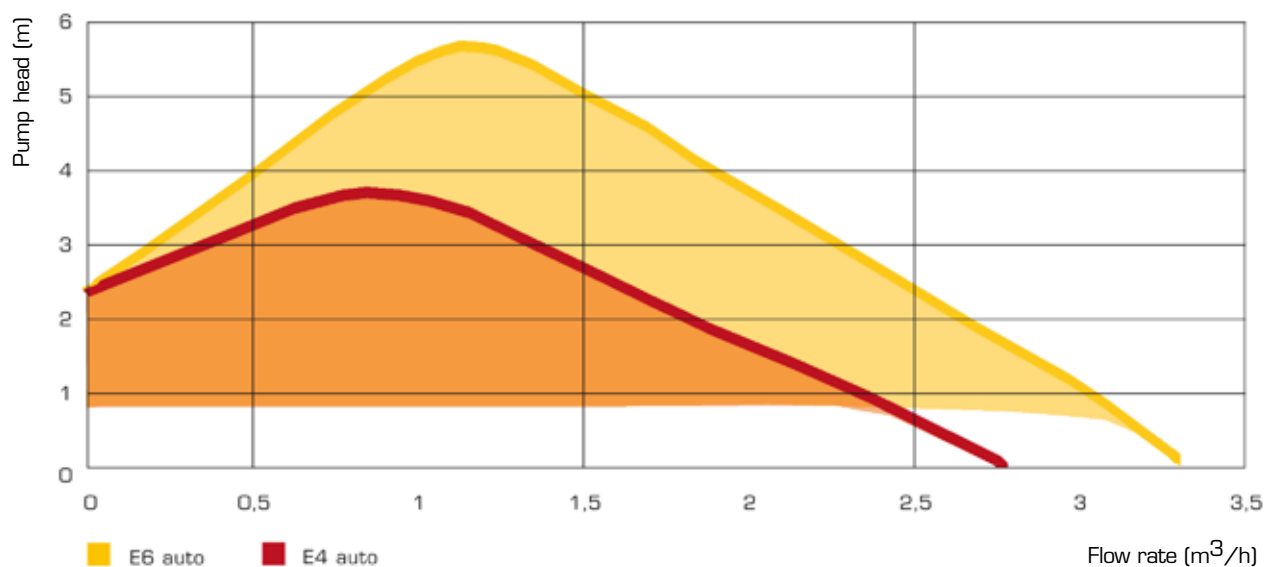
Ecocirc® auto 25-180 G



Ecocirc® auto 32-180 G



Pump curves **eco**circ® auto



21052008 Subject to change without notice.

LAING