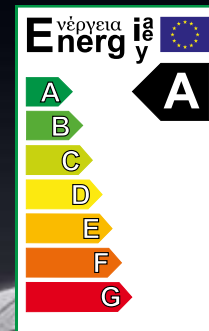


Efficiency is **affordable!**

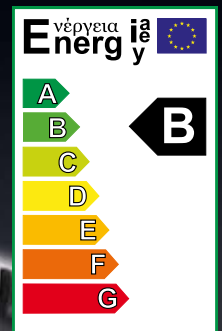
The revolutionary heating circulator
ecocirc[®] vario



Ecocirc E4vario



Ecocirc E6vario



Efficiency at low price:

The revolutionary **ecocirc**[®] vario. With efficient electronically commutated permanent magnet technology. This means high efficiency for the price of a standard circulator. With the reliability of the spherical motor!

LAING

simply the best · by design

Heating circulator ecocirc[®] vario

Save twice. Profit twice.

Approximately 10 to 15 percent of the electricity consumption of an average household is caused by heating circulators. The overwhelming majority of these consists of single speed standard circulators. More efficient circulators therefore can contribute significantly to energy savings efforts.

With extremely low energy consumption the Ecocirc[®] vario sets a new standard. The heating circulator Ecocirc[®] vario is a pump without automatic adaptation, but with efficient electronically commutated permanent magnet technology. This means high efficiency for the price of a standard circulator.

Laing
Spherical Motor Design:
**Save twice,
profit twice!**

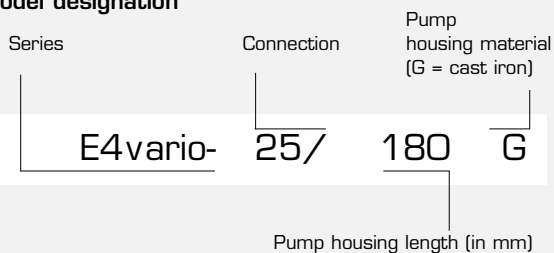
The low initial cost of a standard circulator and the low consumption result in double savings: Economic operation and reasonable price. Efficiency at a low price. Save twice. Profit twice. With the reliability of the spherical motor.

Fields of application

Hydronic heating systems, heat pumps, air conditioners, solar thermal systems, cooling loops in closed systems and industrial applications.



Model designation



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:	water, 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



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.

Improved efficiency due to electronic commutation (ECM)

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.

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:

Stepless speed control

All Ecocirc® vario heating circulators can be speed controlled over a very wide range to adjust them to the requirements of the system. While corresponding to standard circulators at full speed, at lower setting they are ideally suited for modern heating systems in which only a fraction of the circulating power of today's pumps is required. Setting the appropriate performance is facilitated by 7 reference points on the dial of the speed adjuster knob.

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



Design

Heating circulator Ecocirc® vario



The Laing spherical motor design

The heating circulator Ecocirc vario 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

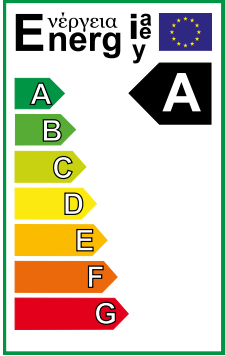
- An increase in noise level caused by increasing bearing play can not happen with this design. Therefore the pump can be operated for many years up to the end of the built-in wear path and the noise level will stay constantly quiet throughout this time.

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.

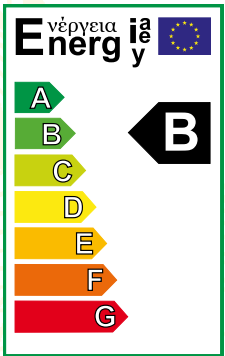
The heating circulator Ecocirc® vario combines the Laing spherical motor principle with the advantages of the energy efficient electronic commutation.

ecocirc® E4vario 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
E4vario-15/130 G	24 00 005	A	130 mm	1" male	1/2"	Cast iron	C
E4vario-20/130 G	24 00 007	A	130 mm	1 1/4" male	3/4"	Cast iron	C
E4vario-25/130 G	24 00 009	A	130 mm	1 1/2" male	1"	Cast iron	C
E4vario-25/180 G	24 00 001	A	180 mm	1 1/2" male	1"	Cast iron	C
E4vario-32/180 G	24 00 003	A	180 mm	2" male	1 1/4"	Cast iron	C

ecocirc® E6vario Pump housing length 130 and 180 mm



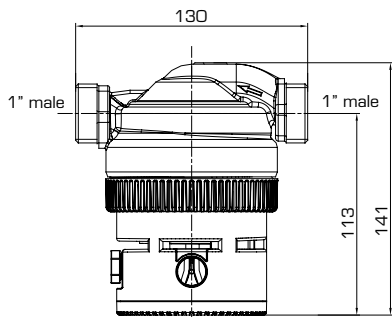
Model	Part number	Energy efficiency class	Pump housing length	Connection	for union fittings	Pump housing material	Product category
E6vario-15/130 G	24 00 006	B	130 mm	1" male	1/2"	Cast iron	C
E6vario-20/130 G	24 00 008	B	130 mm	1 1/4" male	3/4"	Cast iron	C
E6vario-25/130 G	24 00 010	B	130 mm	1 1/2" male	1"	Cast iron	C
E6vario-25/180 G	24 00 002	B	180 mm	1 1/2" male	1"	Cast iron	C
E6vario-32/180 G	24 00 004	B	180 mm	2" male	1 1/4"	Cast iron	C

ecocirc® vario Accessories, components and spare parts

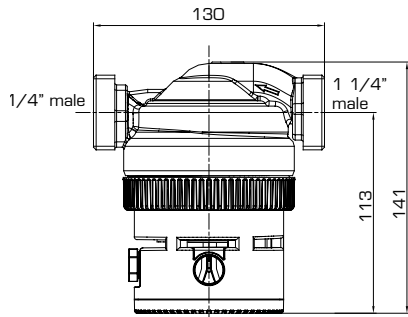
Model	Part number	Description	Product category
Union fittings			
RG 3/4"	95 00 014	2 pieces union fittings 1 1/4" female x 3/4" female	C
RG 1"	95 00 015	2 pieces union fittings 1 1/2" female x 1" female	
RG 5/4"	95 00 016	2 pieces union fittings 2" female x 1/4" female	
Replacement rotors			
R-4	95 00 602	Rotor for series E4vario, incl. gasket	C
R-6	95 00 903	Rotor for series E6vario, 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 circulator Ecocirc® vario

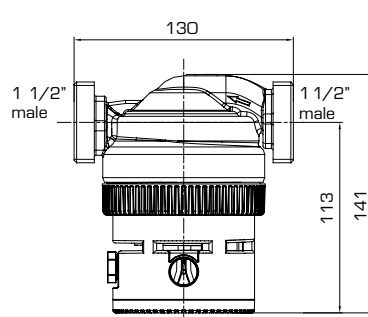
Ecocirc® vario 15-130 G



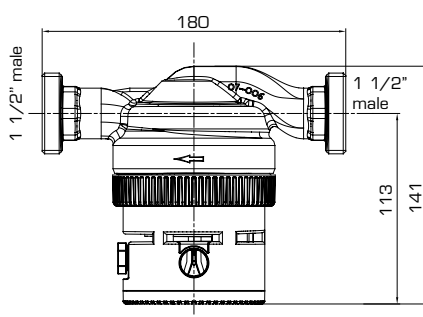
Ecocirc® vario 20-130 G



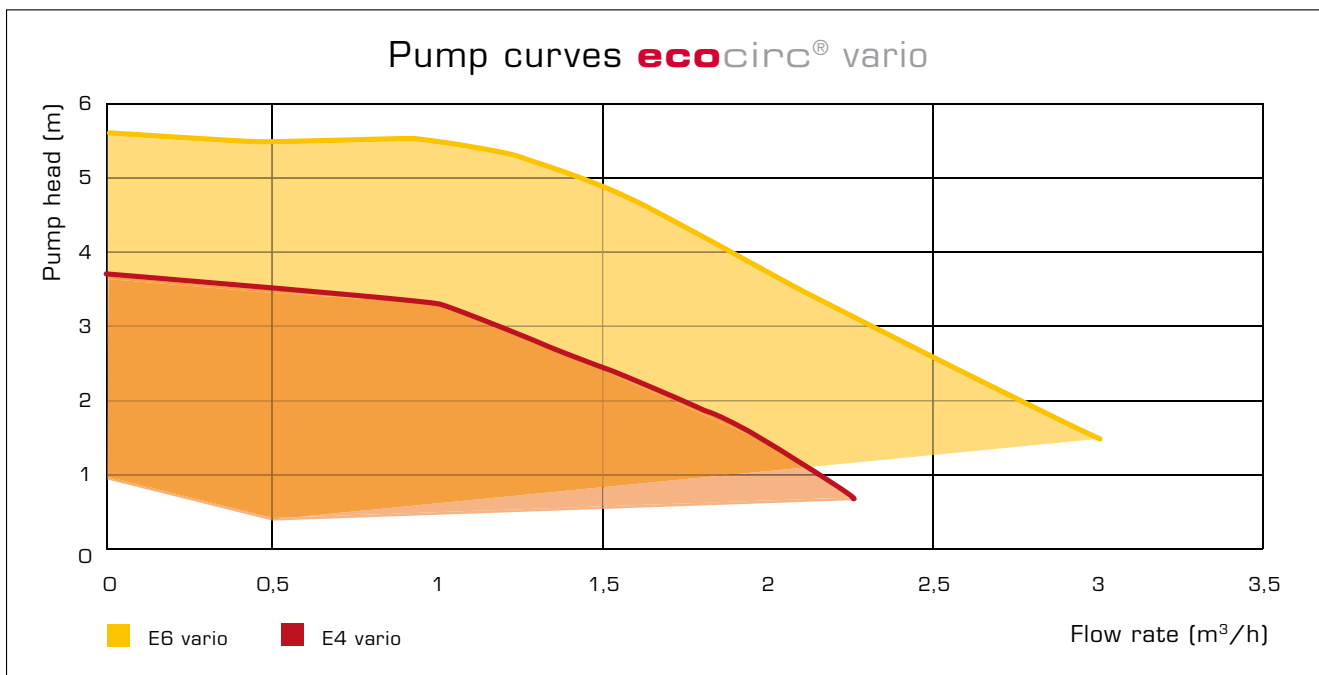
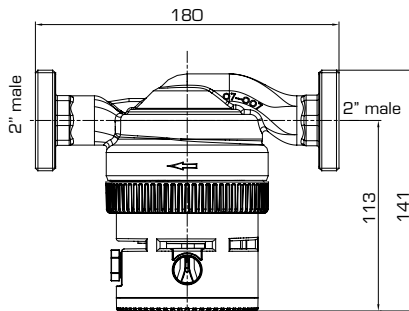
Ecocirc® vario 25-130 G



Ecocirc® vario 25-180 G



Ecocirc® vario 32-180 G



19022008 Subject to change without notice.

