

EVOTRON SOL

WET ROTOR ELECTRONIC CIRCULATORS



in line with European Directive
ErP 2009/125/CE (formerly EuP)



TECHNICAL DATA

Operating range: from 0,4 - 2,6 m³/h with head of up to 8 metres.

Pumped liquid temperature range: from -10°C to +110°C.
(temperature peaks up to 140 °C)

Working pressure: 10 bar (1000 kPa)

Protection class: IP X4

Insulation class: F

Installation: with horizontal motor axis

Standard power input: single-phase 1 x 230 V / 50/60 Hz

Pumped liquid: Clean, free of solids and mineral oils, non-viscous, chemically neutral, with properties similar to water (glycol max 60%).

Special versions on requests: alternative voltages and/or frequencies.

GENERAL DATA

APPLICATIONS

Low energy consumption **electronic pump** for vector fluid circulation in solar panel systems.

The **EVOTRON Sol** wet rotor circulators are capable of ensuring correct operation also with high glycol percentages (concentrations up to 60 %).

ADVANTAGES

Thanks to the advanced technology employed, **the permanent magnet synchronous motor, and the frequency converter**, the new range of **EVOTRON** circulators ensures high efficiency in all applications, with significant benefits in terms of energy saving. For this reason, all the new range of **EVOTRON** circulators belongs to European Directive ErP 2009/125/CE. The circulator has a built-in electronic device that detects the changes demanded by the system and automatically adapts the circulator performance accordingly, always ensuring optimum efficiency and minimum energy consumption. Easy operation and easy to read control panel, with the display always showing the mode of operation selected. The **EVOTRON** circulator can operate in three different control modes:

- proportional pressure



3 curves

- constant pressure



3 curves

- constant number of revolutions



3 curves

Possibility of economy regime operation (automatic night-time reduction, SMART SLEEP function).

Supplied as standard with electric connector for quick connection to the electric power network.

Insulation casing supplied as standard for all the range.

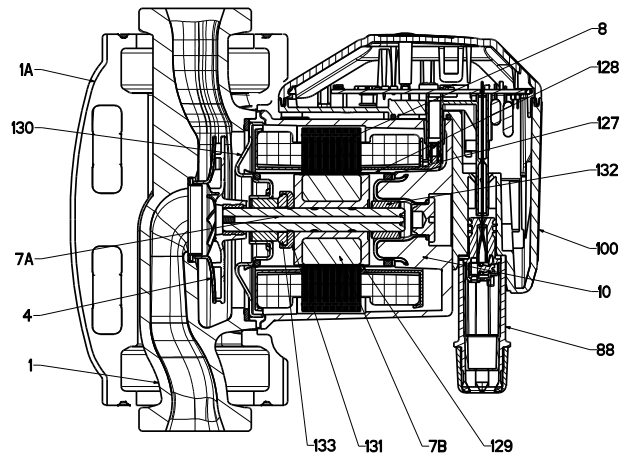


CONSTRUCTION FEATURES

Single body consisting of the cast iron hydraulic section, and the wet rotor motor. Special cataphoresis paint coating on the pump body, which guarantees resistance to the aggression of the glycol. Die-cast aluminium motor casing. Technopolymer impeller, ceramic motor shaft on graphite bearings lubricated by the pumped liquid. Stainless steel rotor liner, stator liner and closing flange. Ceramic thrust ring, silicon seal rings. The wet rotor synchronous two-pole motor is controlled by a frequency converter, and does not require overload protection.

MATERIALS

N.	PARTS	MATERIALS
1	PUMP BODY	CAST IRON
1A	THERMAL INSULATION	EXPANDED POLYPROPYLENE
4	IMPELLER	ULTRASON
7A	MOTOR SHAFT	CERAMIC
7B	ROTOR	MAGNET
8	STATOR	-
10	MOTOR CASING	DIE-CAST ALUMINIUM
88	POWER INPUT CONNECTOR	NYLON
100	ELECTRONIC BOX	POLYCARBONATE
127	SEAL RING	EPDM
128	STATOR LINER	STAINLESS STEEL
129	ROTOR LINER	STAINLESS STEEL
130	CLOSING FLANGE	STAINLESS STEEL
131	THRUST RING SUPPORT	SILICON
132	BUSHINGS	GRAPHITE
133	THRUST RING	CERAMIC



– Legend:

(example)

EVOTRON

40/130

1/2"

SOL

threaded ports electronic circulator

maximum head (dm)

centre distance (mm)

standard (no ref.)

= 1" 1/2 threaded ports

1/2"

= 1" threaded ports

Version for the Solar sector

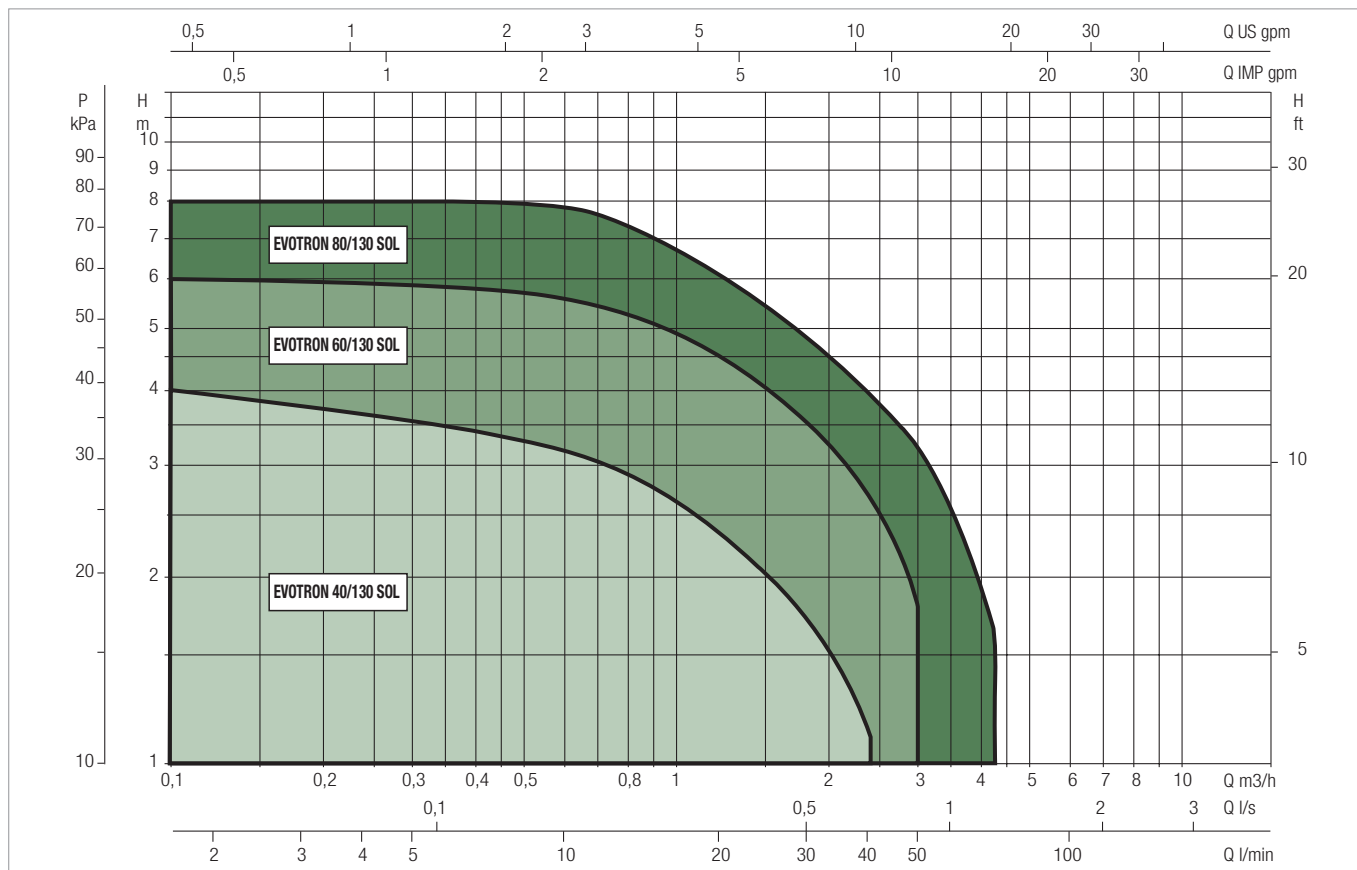
EVOTRON SOL

WET ROTOR ELECTRONIC CIRCULATORS

PERFORMANCE RANGE

The performance curves are based on kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

GRAPHIC SELECTION TABLE

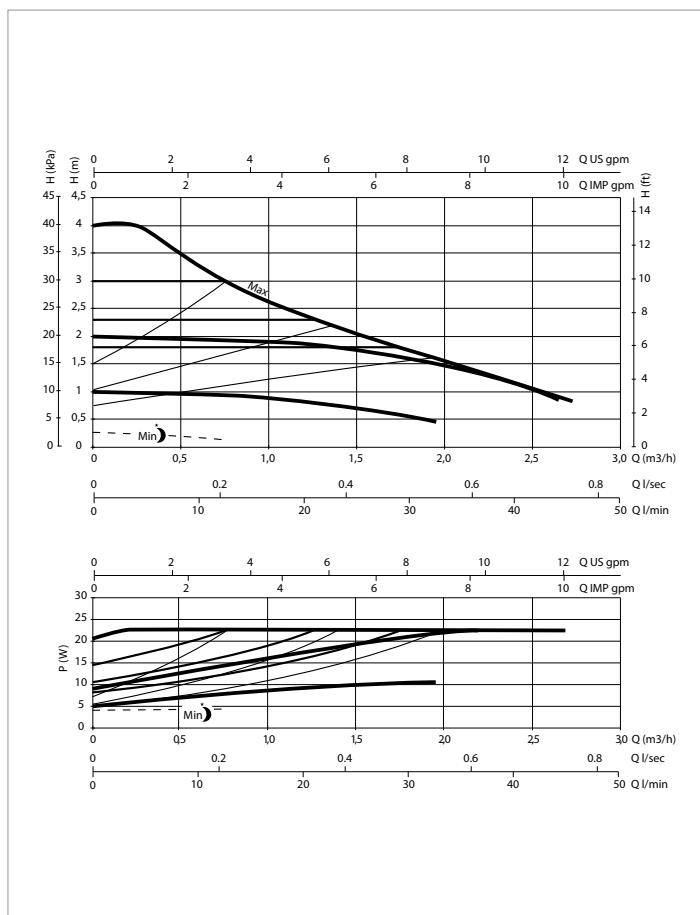
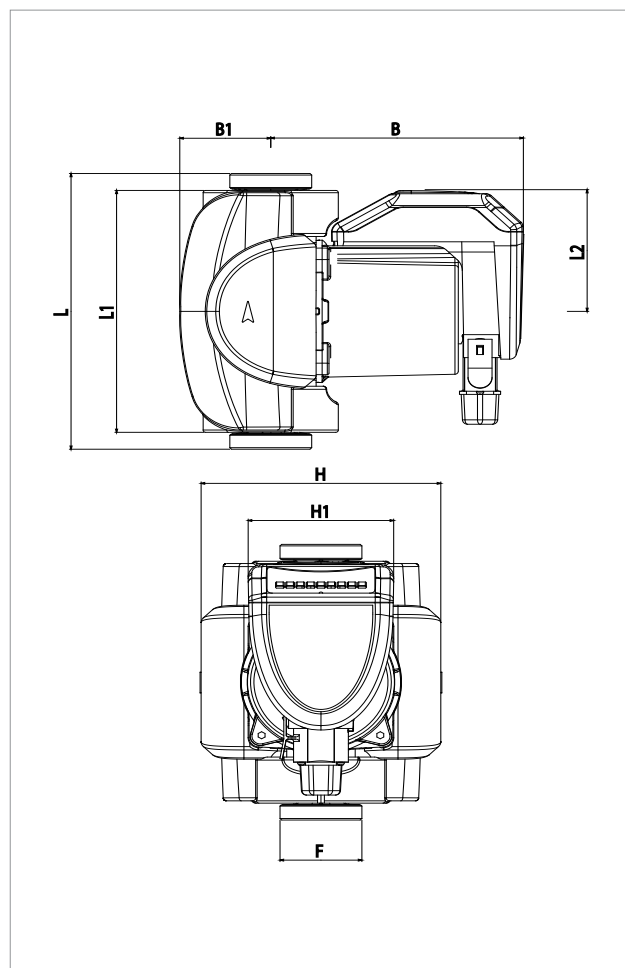


SELECTION TABLE - EVOTRON SOL

MODEL	Q=m³/h	0	0,6	1,2	1,8	2,4
	Q=l/min	0	10	20	30	40
EVOTRON 40/130 SOL	H (m)	4	3,2	2,3	1,7	1,1
EVOTRON 40/130 1/2" SOL		4	3,2	2,3	1,7	1,1
EVOTRON 40/180 SOL		4	3,2	2,3	1,7	1,1
EVOTRON 60/130 SOL		6	5,6	4,5	3,5	
EVOTRON 60/130 1/2" SOL		6	5,6	4,5	3,5	
EVOTRON 60/180 SOL		6	5,6	4,5	3,5	
EVOTRON 80/130 SOL		8	7,8	6	4,8	3,9
EVOTRON 80/130 1/2" SOL		8	7,8	6	4,8	3,9
EVOTRON 80/180 SOL		8	7,8	6	4,8	3,9

EVOTRON SOL - ELECTRONIC CIRCULATORS FOR SOLAR AND GEOTHERMAL SYSTEMS - SINGLE, WITH UNIONS

Pumped liquid temperature range: from -10°C to +110°C - Maximum operating pressure: 10 bar (1000 kPa)



The performance curves are based on kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

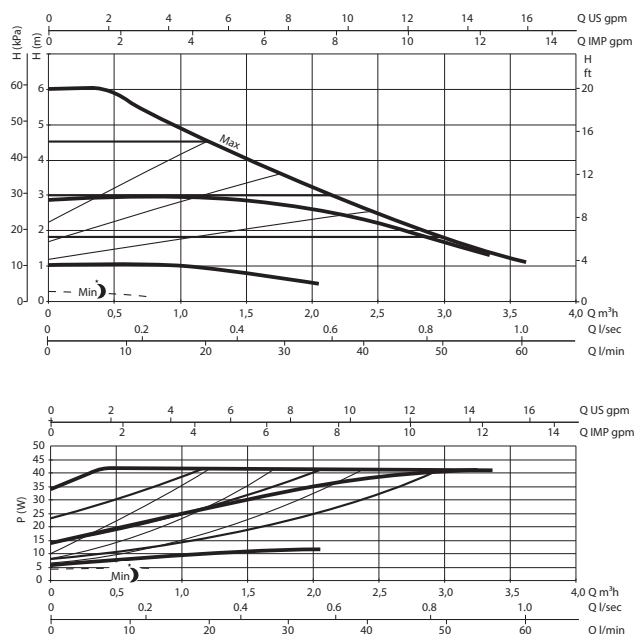
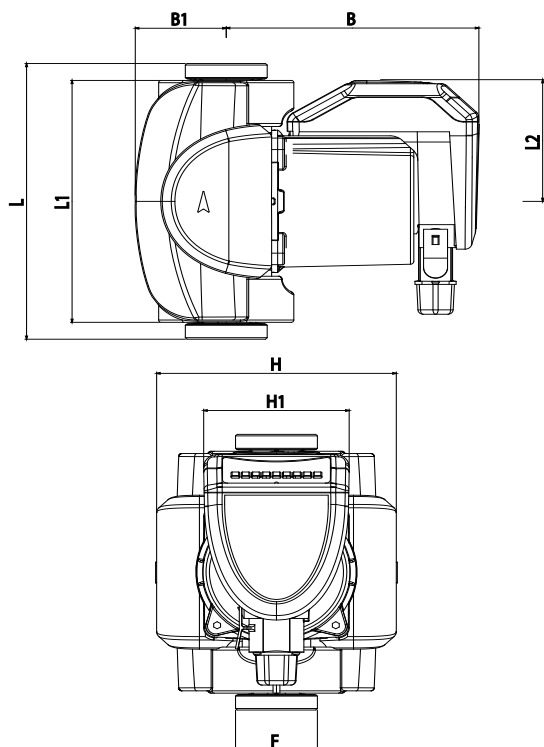
MODEL	CENTRE DISTANCE mm	PUMP CONNECTIONS	UNIONS ON REQUEST		POWER INPUT 50 Hz	P1 MAX W	In A	EEI* PART 2	MINIMUM SUCTION PRESSURE	
			BRASS	COPPER					t°	90 °
EVOTRON 40/130 SOL	130	1" ½	½" F - ¾" M - 1" F	ø 22 - ø 28	1 x 230 V ~	4 - 23	0,05 - 0,19	EEI ≤ 0,19	m.c.w.	10
EVOTRON 40/130 1/2" SOL	130	1"	-	-	1 x 230 V ~	4 - 23	0,05 - 0,19	EEI ≤ 0,20	m.c.w.	10
EVOTRON 40/180 SOL	130	1" ½	½" F - ¾" M - 1" F	ø 22 - ø 28	1 x 230 V ~	4 - 23	0,05 - 0,19	EEI ≤ 0,19	m.c.w.	10

* The parameter of reference for the more efficient circulators is EEI ≤ 0,20.

MODEL	L	L1	L2	B	B1	H	H1	F	PACKING DIMENSIONS			WEIGHT kg
									L	B	H	
EVOTRON 40/130 SOL	130	158	79,5	147,5	53	140	85	1"1/2	148	193	217	3,2
EVOTRON 40/130 1/2" SOL	130	158	79,5	147,5	53	140	85	1/2"	148	193	217	3,0
EVOTRON 40/180 SOL	130	158	79,5	147,5	53	140	85	1"1/2	148	193	217	3,3

EVOTRON SOL - ELECTRONIC CIRCULATORS FOR SOLAR AND GEOTHERMAL SYSTEMS - SINGLE, WITH UNIONS

Pumped liquid temperature range: from -10°C to +110°C - Maximum operating pressure: 10 bar (1000 kPa)



The performance curves are based on kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

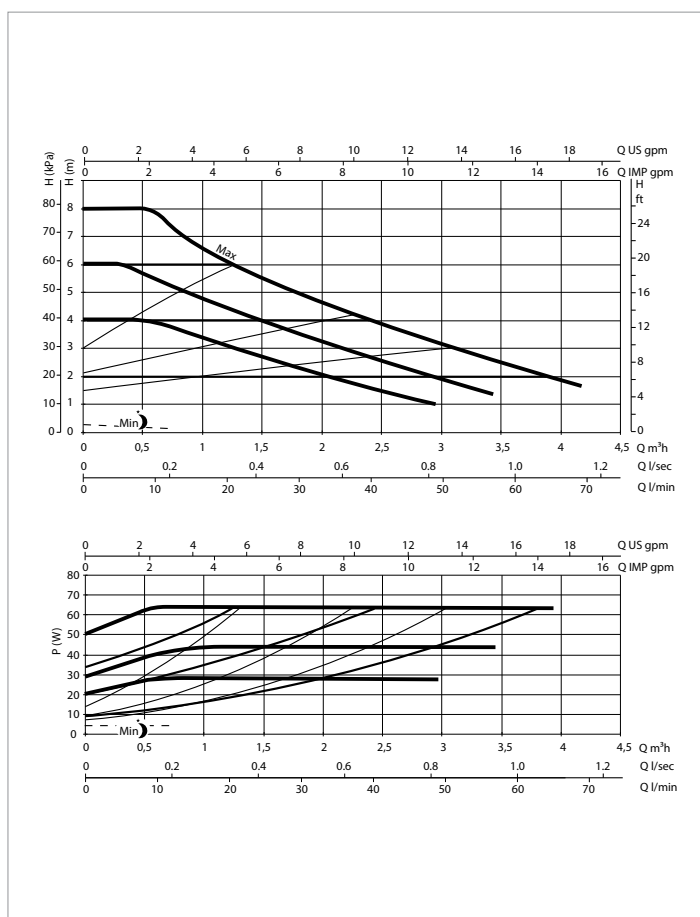
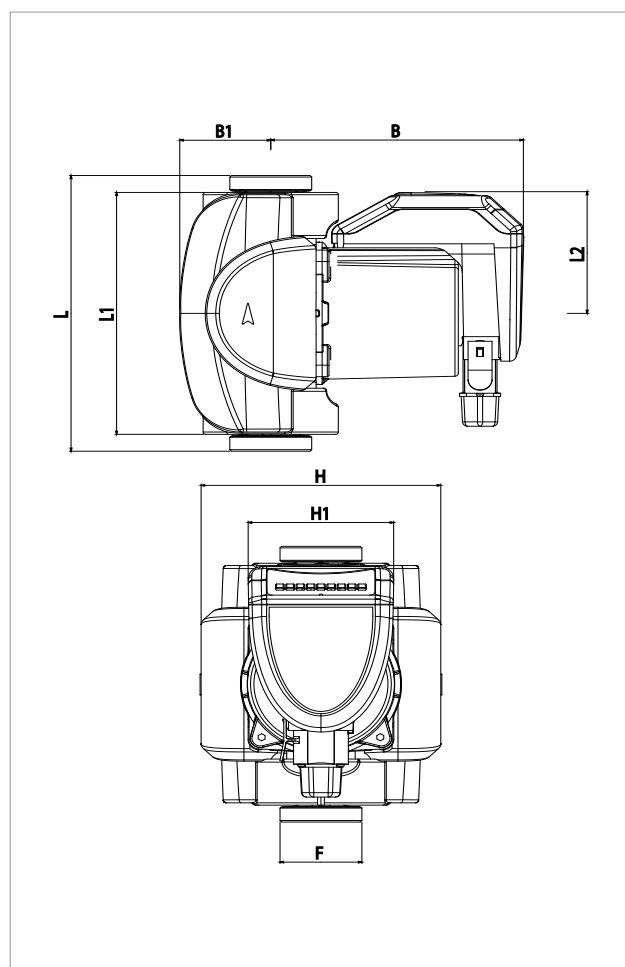
MODEL	CENTRE DISTANCE mm	PUMP CONNECTIONS	UNIONS ON REQUEST		POWER INPUT 50 Hz	P1 MAX W	In A	EEI* PART 2	MINIMUM SUCTION PRESSURE	
			BRASS	COPPER					t°	90 °
EVOTRON 60/130 SOL	130	1" ½	½" F - ¾" M - 1" F	ø 22 - ø 28	1 x 230 V ~	4 - 43	0,05 - 0,32	EEI ≤ 0,20	m.c.w.	10
EVOTRON 60/130 1/2" SOL	130	1"	-	-	1 x 230 V ~	4 - 43	0,05 - 0,37	EEI ≤ 0,21	m.c.w.	10
EVOTRON 60/180 SOL	130	1" ½	½" F - ¾" M - 1" F	ø 22 - ø 28	1 x 230 V ~	4 - 43	0,05 - 0,37	EEI ≤ 0,21	m.c.w.	10

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MODEL	L	L1	L2	B	B1	H	H1	F	PACKING DIMENSIONS			WEIGHT kg
									L	B	H	
EVOTRON 60/130 SOL	130	158	79.5	147.5	53	140	85	1/2"	148	193	217	3,2
EVOTRON 60/130 1/2" SOL	130	158	79.5	147.5	53	140	85	1/2"	148	193	217	3,0
EVOTRON 60/180 SOL	130	158	79.5	147.5	53	140	85	1"1/2	148	193	217	3,3

EVOTRON SOL - ELECTRONIC CIRCULATORS FOR SOLAR AND GEOTHERMAL SYSTEMS - SINGLE, WITH UNIONS

Pumped liquid temperature range: from -10°C to +110°C - Maximum operating pressure: 10 bar (1000 kPa)



The performance curves are based on kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

MODEL	CENTRE DISTANCE mm	PUMP CONNECTIONS	UNIONS ON REQUEST		POWER INPUT 50 Hz	P1 MAX W	In A	EEI* PART 2	MINIMUM SUCTION PRESSURE	
			BRASS	COPPER					t°	90 °
EVOTRON 80/130 SOL	130	1" ½	½" F - ¾" M - 1" F	ø 22 - ø 28	1 x 230 V ~	4 - 64	0,05 - 0,56	EEI ≤ 0,22	m.c.w.	10
EVOTRON 80/130 1/2" SOL	130	1"	-	-	1 x 230 V ~	4 - 64	0,05 - 0,56	EEI ≤ 0,23	m.c.w.	10
EVOTRON 80/180 SOL	130	1" ½	½" F - ¾" M - 1" F	ø 22 - ø 28	1 x 230 V ~	4 - 64	0,05 - 0,56	EEI ≤ 0,23	m.c.w.	10

* The parameter of reference for the more efficient circulators is EEI ≤ 0,20.

MODEL	L	L1	L2	B	B1	H	H1	F	PACKING DIMENSIONS			WEIGHT kg
									L	B	H	
EVOTRON 80/130 SOL	130	158	79.5	147.5	53	140	85	1/2"	148	193	217	3,2
EVOTRON 80/130 1/2" SOL	130	158	79.5	147.5	53	140	85	1/2"	148	193	217	3,0
EVOTRON 80/180 SOL	130	158	79.5	147.5	53	140	85	1" 1/2	148	193	217	3,3