The EEI of MAGNA1 meets and exceeds the requirements of the EuP 2015 legislation.

MAGNA1
HIGH EFFICIENCY MADE SIMPLE

The MAGNA1 is a cost-efficient yet high-performing circulator. The reliable pump complies with the strict EuP requirements but features only what is important for its core function. This means this pump can offer the perfect solution in a refurbishment situation where the well-known UPS has been used to fulfil basic circulator needs.

The MAGNA1 pump is designed for circulating liquids in:

- Heating
- Cooling
- Domestic hot water
- Ground source heat pump systems

MAGNA1 features

- Simple installation
- Low energy consumption – all MAGNA1 pumps comply with EuP 2013 and 2015 requirements
- Nine possible pump settings
- Low noise level
- Minimal maintenance and long life
- Range is also available for a maximum system pressure of 16 bar (PN16)

TECHNICAL DATA

Max. head:	18 m
Max. flow:	70 m³/h
Max. power:	1550 W
Connections:	G1½ to DN100
Liquid temperature:	-10° C to +110° C
Ambient temperature:	0° C to +40° C
Nominal system pressure:	6/10/16 bar
Stainless steel pump house:	25-40 to 65-100

Curve Options and Control Modes

Feature	MAGNA3	MAGNA	MAGNA1	UPS
AUTO*ADAPT*	✓	✓	X	X
FLOW*ADAPT*	✓	X	X	X
FLOW*LIMIT*	✓	X	X	X
Proportional Pressure	✓	✓	✓	X
Constant Pressure	✓	✓	✓	X
Fixed Pump Speeds	✓	✓	✓	✓
Automatic Night Setback	✓	✓	X	X

Multi-pump Control Modes

Feature	MAGNA3	MAGNA	MAGNA1	UPS
Alternating operation	✓	✓	X	X
Back-up operation	✓	✓	X	X
Cascade operation	✓	X	X	X

MAGNA1
KEY FEATURES

Insulation shell

- Insulation shell are available for AIR-con as an accessory.

Constant speed mode

- Three constant speed modes for constant flow applications

Button for easy control mode selection

Proportional pressure mode

Constant pressure mode

Durable

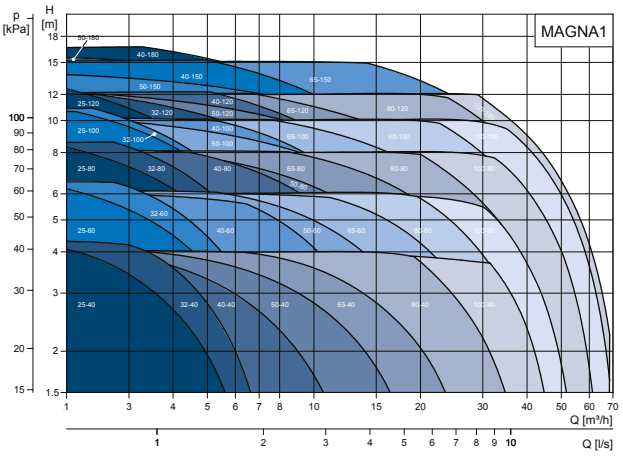
- No external motor protection required

Wide temperature range

- Wide temperature range where the liquid temperature and the ambient temperature are independent of each other

PERFORMANCE CURVES

With a wide range of different single and twin head options covering even more duties, specifying HVAC applications has never been easier. The extended range offers a maximum head of 18m and maximum flow of 70m³/h (140 m³/h for twin head models), and a 6 to 16 bar system pressure.



OVERVIEW OF CONTROL MODES

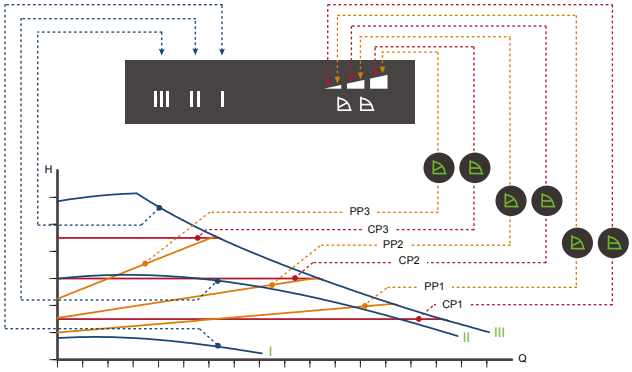


Fig. 1 Pump setting in relation to pump performance

Setting	Pump curve	Function
PP1	Lowest curve	**Proportional Pressure** The pump duty point will move up and down the proportional pressure curve as the system heating demand changes with time. When the heating demand is rising the pump flow and head will increase as the heating system valves open. When the heating demand is falling the pump flow and pressure will decrease as the heating system valves close.
PP2	Intermediate curve	
PP3	Highest curve	
CP1	Lowest curve	**Constant Pressure** The pump duty point will move along the constant pressure curve as the system heating demand changes with time. When the heating demand is rising the pump flow will increase as the heating system valves open. When the heating demand is falling the pump flow will decrease as the heating system valves close.
CP2	Intermediate curve	
CP3	Highest curve	
III	Speed III	In speed III, the pump is set to run on the max. curve under all operating conditions. Quick venting of the pump can be obtained by setting the pump to speed III for a short period.
II	Speed II	In speed II, the pump is set to run on the intermediate curve under all operating conditions.
I	Speed I	In speed I, the pump is set to run on the min. curve under all operating conditions.

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