

BE > THINK > INNOVATE >

Being responsible is our foundation
Thinking ahead makes it possible
Innovation is the essence

GRUNDFOS HVAC OEM



THE EUP READY RANGE

HVAC OEM CIRCULATOR PLATFORMS FOR BOILER/HEATING, HEAT PUMP,
SOLAR THERMAL, SANITARY HOT WATER AND MICRO CHP SYSTEMS



GRUNDFOS Holding A/S
Poul Due Jensens Vej 7
DK-8850 Bjerringbro
Tel: +45 87 50 14 00

www.grundfos.com/hvacoem

The name Grundfos, the Grundfos logo, and the payoff Be–Think–Innovate are registered trademarks owned by Grundfos Holding A/S or Grundfos A/S, Denmark. All rights reserved worldwide.



0311 \ HVAC OEM \ 10155 \

BE > THINK > INNOVATE >





LOOK OUT FOR THE EuP READY LABEL

The EuP/ErP Directive establishes binding ecodesign requirements for integrated circulator pumps produced and sold in the EU after

[1 August 2015]

The circulators presented in the following pages meet the 2015 requirements already now. This means that you have the opportunity to be ready in good time.

You can single Grundfos' EuP ready pump solutions out by the EuP ready label. It is your guarantee for compliance with the energy efficiency requirements and superior Grundfos pump technology.

On request, you can carry the EuP ready label on your boiler, solar thermal or heat pump systems to indicate to your customers that the pump inside meets EU's requirements for energy efficiency.

Dear customers and partners

Welcome to the Grundfos HVAC OEM range of EuP ready circulator pumps.

The demand for high efficiency HVAC solutions is ever increasing, and the environmental benefits of renewable energy technologies widely recognised all over the world. Before long the HVAC industry must comply with EU's ecodesign requirements for energy-using and energy-related products. For most HVAC manufacturers, the transformation process has already begun.

The easy choice

Grundfos HVAC OEM is the easy choice. We know that you have to consider not only the circulator pump in your boiler, solar thermal or heat pump systems – but also all other components. When everything else might be resource-demanding and time-consuming, we want integration of EuP ready circulator pumps in your existing as well as new platforms to be simple and easy. That is why our EuP ready products and production setup are ready well before the 2015 deadline.

The safe choice

Grundfos HVAC OEM is also the safe choice. Because making reliable and robust electronic pump solutions in high volumes, which meet the special conditions of the HVAC market, requires many years of experience and knowledge. Don't let anyone tell you otherwise!

We were the first to mass-produce reliable E-pumps in high volumes for integration in boilers. Since the production of the first E-pump in 1997, we have sold more than 6 million electronically-controlled OEM circulator pumps for HVAC applications. Through our consistent supply of premium quality and reliable E-solutions we have accumulated a high degree of knowledge and experience which we transfer to your Grundfos solution.

Take a closer look at our EuP ready range – in future E-pumps will be the only choice anyway.

Enjoy!

HIGH EFFICIENCY ECM CIRCULATOR PUMPS

- UPM2** For heating applications
- UPM GEO** For primary circuits of geothermal heat pumps
- MAGNA GEO** For primary circuits of geothermal heat pumps
- MAGNA SOLAR** For primary circuits of solar thermal systems
- SOLAR PM2** For primary circuits of solar thermal systems
- ALPHA 2** Self-regulating high efficiency circulator for heating applications

GRUNDFOS UPM2

HIGH EFFICIENCY ECM CIRCULATORS FOR INTEGRATED HEATING APPLICATIONS

The UPM2 is designed to substitute the UPS – the world's most successful circulator range for integration in heating appliances. UPM2 offers hydraulic backward compatibility with existing platforms and covers a very broad range of operation, even down to low meter heads. UPM2 is available in many variants to meet your exact performance requirements.



TO BE INSTALLED INSIDE



BOILERS **HEAT PUMPS** **SANITARY HOT WATER** **MICRO CHP**

PERFORMANCE

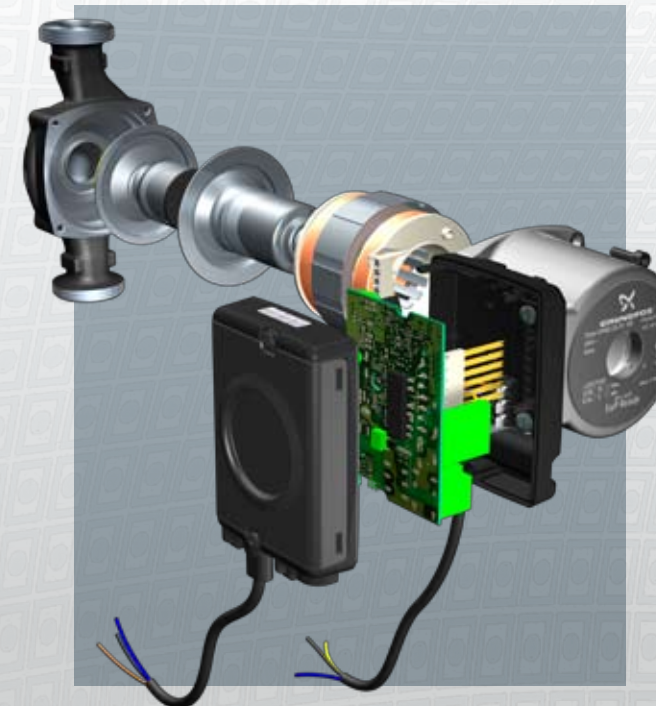
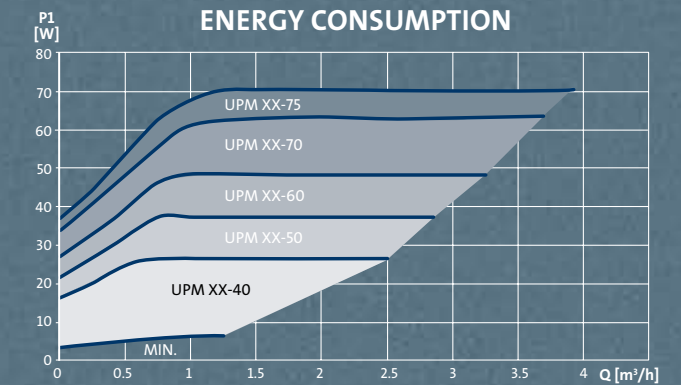
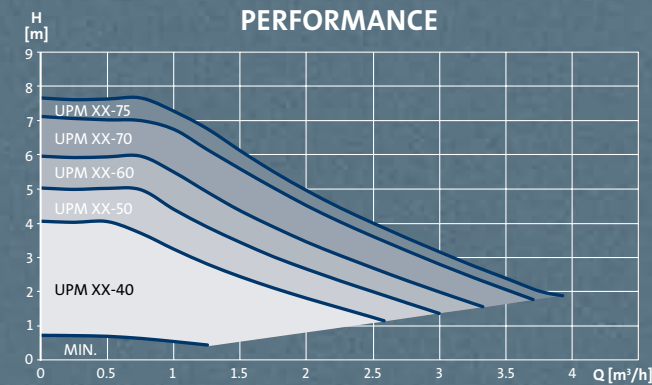
- Head up to 7.5 m
- Flow up to 3.5 m³/h
- Power P1 up to 70 W
- Power supply 1 x 230VAC 50/60 Hz
- Medium temperature +2...+95°C

FEATURES & BENEFITS

- Remote speed controlled high efficiency ECM pump with permanent magnet rotor and frequency converter
- Cost optimised and high availability – use of existing mass production facilities
- High reliability – use of existing components and well-known materials to minimise validation of new components, production processes and equipment
- Energy optimised by improved hydraulic efficiency
- Fits in existing boiler ranges – no expanded space requirements, possible use of existing pump housings and electrical compatibility with existing PWM controllers
- No ambient temperature constraints (EN60335)
- Controlled via digital PWM signal
- PWM feedback signal to system control: power consumption or flow estimation and various alarms such as under-voltage warning, under-voltage stop, locked rotor and confirmation of standby mode

ENERGY SAVINGS

- Uses up to **80% LESS** electrical power compared to standard **constant speed** pumps
- Uses up to **60% LESS** electrical power compared to standard **speed controlled** pumps



AVAILABLE VERSIONS

WITH DIFFERENT HOUSINGS

UPM2 XX-75	P1 max= 70 W
UPM2 XX-70	P1 max= 63 W
UPM2 XX-60	P1 max= 48 W
UPM2 XX-50	P1 max= 37 W
UPM2 XX-40	P1 max= 26 W

GRUNDFOS UPM GEO



ENERGY SAVINGS

- Uses up to **80% LESS** electrical power compared to standard **constant speed** pumps
- Uses up to **60% LESS** electrical power compared to standard **speed controlled** pumps



FEATURES & BENEFITS

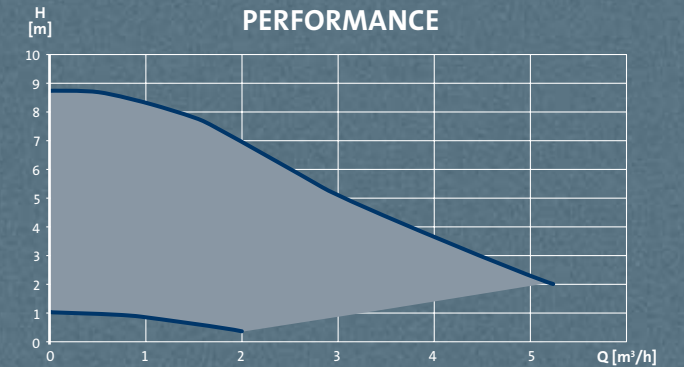
- Remote speed controlled high efficiency ECM pump with permanent magnet rotor and frequency converter
- High reliability – use of existing components and well-known materials to minimise validation of new components, production processes and equipment
- Improved motor technology and hydraulics, resulting in high pump efficiency
- Especially optimised for geothermal heat pumps in terms of performance and robustness
- Fit for cold antifreeze media containing glycol or ethanol
- Fit for condensing environments: electronics separated from motor, motor protected against condensed water by drain holes and double-coated wiring
- Cataphoretically coated cast iron housing
- Controlled via PWM signal
- PWM feedback signal to system control: power consumption or flow estimation and various alarms such as under-voltage warning, under-voltage stop, locked rotor and confirmation of standby mode

TO BE INSTALLED INSIDE

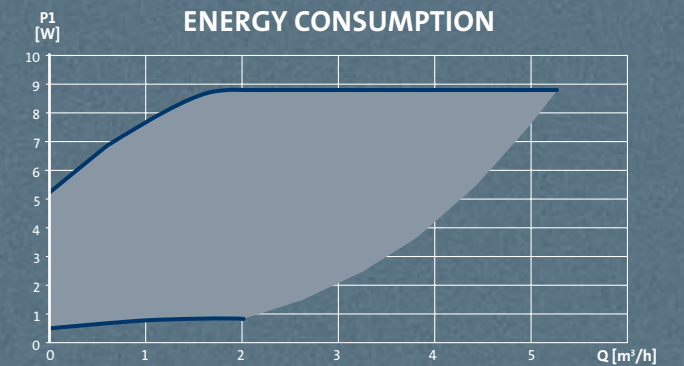


HEAT
PUMPS

PERFORMANCE



ENERGY CONSUMPTION



PERFORMANCE

Head up to 8.5 m

Flow up to 5 m³/h

Power P1 up to 87 W

Power supply 1 x 230VAC 50/60 Hz

Medium temperature -10...+95°C

AVAILABLE VERSIONS WITH DIFFERENT HOUSINGS

UPM GEO 25-85 PWM 130 mm

UPM GEO 25-85 PWM 180 mm

HIGH EFFICIENCY ECM CIRCULATORS FOR GEOTHERMAL HEAT PUMPS

The Grundfos UPM GEO is optimised for operation in condensing environments such as the ground side of a geothermal heat pump.

UPM GEO offers a broad range of operation that makes it suitable for up to 10 kW heat pumps. Also, it is fit for cold antifreeze media such as glycol and ethanol mixtures.

GRUNDFOS MAGNA GEO

HIGH EFFICIENCY ECM CIRCULATORS FOR GEOTHERMAL HEAT PUMPS

The Grundfos MAGNA GEO is developed for condensing environments such as the ground side of a geothermal heat pump.

MAGNA GEO offers a broad range of operation that makes it suitable for up to 16 kW heat pumps. It can be controlled either by PWM or 0-10 VDC signal.



PERFORMANCE

- Head up to 10.5 m
- Flow up to 12 m³/h
- Power P1 up to 185 W
- Power supply 1 x 230VAC 50/60 Hz
- Medium temperature -10...+95/110°C

TO BE INSTALLED INSIDE



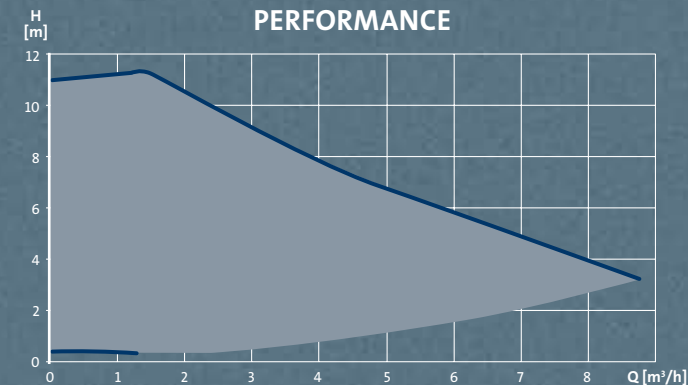
HEAT
PUMPS

FEATURES & BENEFITS

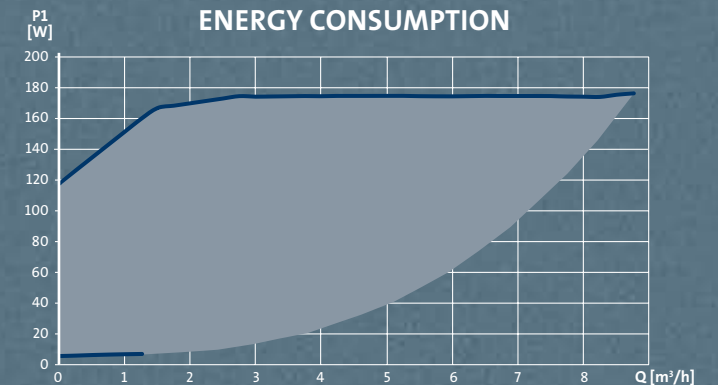
- Remote speed controlled high efficiency ECM pump with permanent magnet rotor and frequency converter
- High reliability – use of existing components and well-known materials to minimise validation of new components, production processes and equipment
- Especially optimised for geothermal heat pumps in terms of performance and robustness
- Fit for cold antifreeze media containing glycol or ethanol
- Fit for condensing environments: electronics separated from motor by thermal barrier and GORE-TEX® membrane valve, motor protected against condensed water by drain holes and double-coated wiring
- Cataphoretically coated cast iron housing
- ALPHA plug connector for power supply
- MOLEX MINIFIT plug connector for communication signal

- Controlled via digital low voltage PWM signal or 0-10 VDC signal without additional module
- PWM feedback signal to system control: power consumption and various alarms such as under-voltage warning, under-voltage stop, locked rotor, internal failure and confirmation of standby mode

PERFORMANCE



ENERGY CONSUMPTION



AVAILABLE VERSIONS

- MAGNA GEO 25-100 PWM
- MAGNA GEO 25-100 VDC
- MAGNA GEO 32-100 PWM
- MAGNA GEO 32-100 VDC

ENERGY SAVINGS

- Uses up to **80% LESS** electrical power compared to standard **constant speed** pumps
- Uses up to **60% LESS** electrical power compared to standard **speed controlled** pumps



GRUNDFOS MAGNA SOLAR

HIGH EFFICIENCY ECM CIRCULATORS FOR SOLAR THERMAL SYSTEMS

The Grundfos MAGNA SOLAR is optimised for primary circuits of larger solar thermal systems.

MAGNA SOLAR is fit for water as well as for water glycol mixtures and is controlled by PWM signal.



FEATURES & BENEFITS

- Remote speed controlled high efficiency ECM pump with permanent magnet rotor and frequency converter
- High reliability – use of existing components and well-known materials to minimise validation of new components, production processes and equipment
- Fit for cold antifreeze media containing glycol or ethanol
- Fit for condensing environments: electronics separated from motor by thermal barrier and GORE-TEX® membrane valve, motor protected against condensed water by drain holes and double-coated wiring
- Cataphoretically coated cast iron housing
- ALPHA plug connector for power supply
- MOLEX MINIFIT plug connector for communication signal
- Controlled via PWM signal
- PWM feedback signal to system control: power consumption and various alarms such as under-voltage warning, under-voltage stop, locked rotor, internal failure and confirmation of standby mode

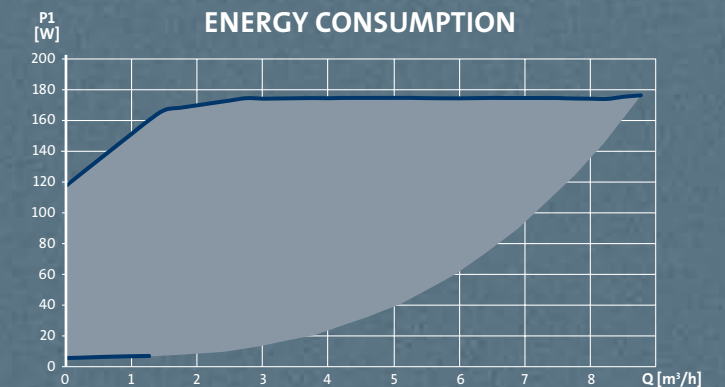
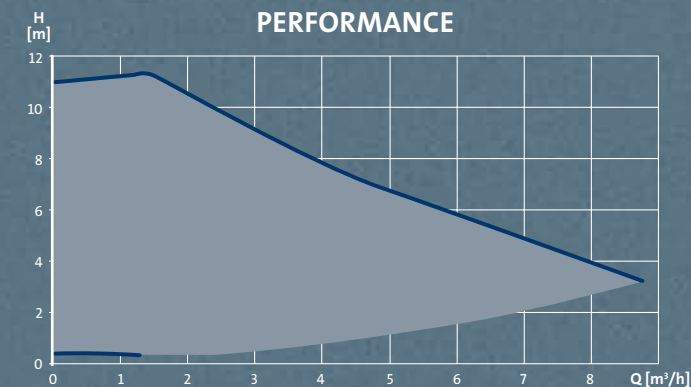
PERFORMANCE

- Head up to 10.5 m
- Flow up to 12 m³/h
- Power P1 up to 185 W
- Power supply 1 x 230VAC 50/60 Hz
- Medium temperature -10...+95/110°C

TO BE INSTALLED INSIDE



SOLAR
THERMAL



AVAILABLE VERSIONS

- MAGNA SOLAR 25-100 PWM
- MAGNA SOLAR 32-100 PWM

ENERGY SAVINGS

- Uses up to **80% LESS** electrical power compared to standard **constant speed** pumps
- Uses up to **60% LESS** electrical power compared to standard **speed controlled** pumps

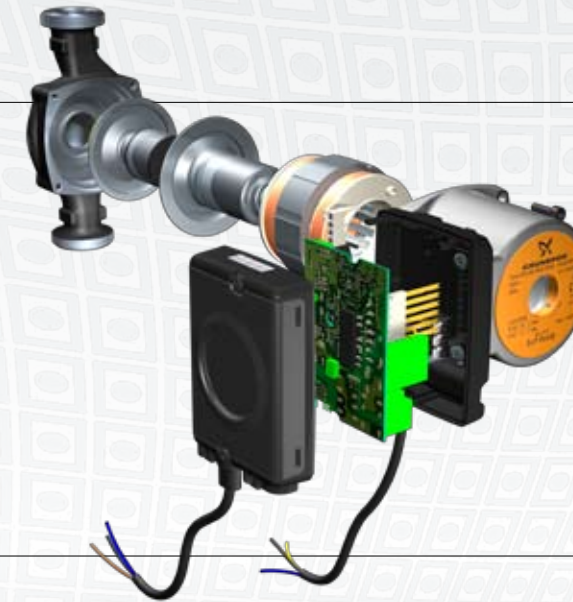


GRUNDFOS SOLAR PM2



ENERGY SAVINGS

- Uses up to **80% LESS** electrical power compared to standard **constant speed** pumps
- Uses up to **60% LESS** electrical power compared to standard **speed controlled** pumps



FEATURES & BENEFITS

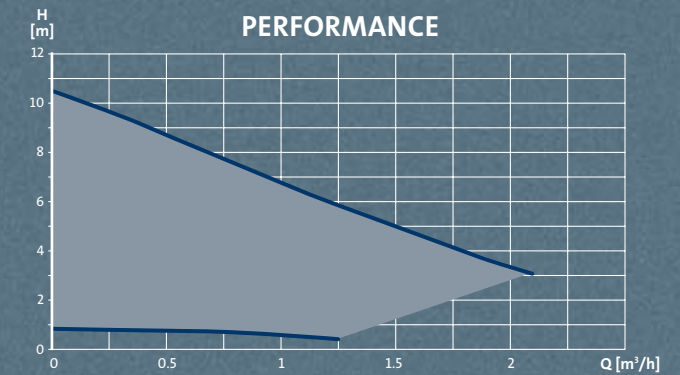
- Remote speed controlled high efficiency ECM pump with permanent magnet rotor and frequency converter
- High reliability – use of existing components and well-known materials to minimise validation of new components, production processes and equipment
- Improved motor technology and hydraulics, resulting in high pump efficiency
- Optimised to match flow systems with reduced flow
- Fit for hot and cold antifreeze media containing glycol
- Motor protected against condensed water by drain holes
- Cataphoretically coated cast iron housing
- Controlled via PWM signal
- PWM feedback signal to system control: power consumption or flow estimation and various alarms such as under-voltage warning, under-voltage stop, locked rotor and confirmation of standby mode

TO BE INSTALLED INSIDE

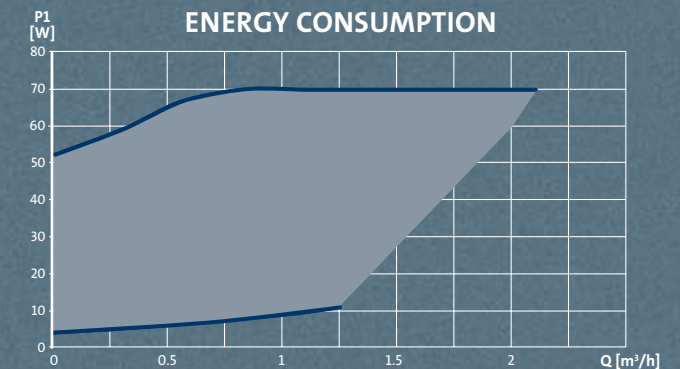


SOLAR
THERMAL

PERFORMANCE



ENERGY CONSUMPTION



PERFORMANCE

Head up to 10.5 m

Flow up to 2 m³/h

Power P1 up to 70 W

Power supply 1 x 230VAC 50/60 Hz

Medium temperature +2...+95°C

AVAILABLE VERSIONS

SOLAR PM2 xx-105

P1 max= 70 W

The SOLAR PM2 programme is under development. More versions will be launched during 2011.

HIGH EFFICIENCY ECM CIRCULATORS FOR SOLAR THERMAL SYSTEMS

The Grundfos SOLAR PM2 is energy optimised for solar thermal charging in systems with very small flow demands. It is fit for water as well as for water glycol mixtures and is controlled by PWM signal.

GRUNDFOS ALPHA2

SELF-REGULATING HIGH EFFICIENCY ECM CIRCULATORS FOR STANDALONE HEATING APPLICATIONS

ALPHA2 is a complete range of standalone* circulators. More than 2 million ALPHA2s have rolled off our production lines since its introduction in 2007.

The ALPHA2 comes equipped with the unique Grundfos AUTOADAPT function, which automatically balances optimum comfort with minimum power consumption.



FEATURES & BENEFITS

- AUTOADAPT – automatic and continuous detection of optimal duty point
- Integrated differential pressure control – two proportional and two constant pressure settings
- Three fixed speed settings
- LED display showing actual power consumption (P1) in Watt
- Automatic night setback function
- High safety – built-in electrical and thermal protection of the pump
- Deblocking function – high starting torque
- Compact design with control integrated in pump
- Many variants – fits existing pump housings

* Ecodesign requirements for standalone circulators come into effect on 1 January 2013.

ENERGY SAVINGS

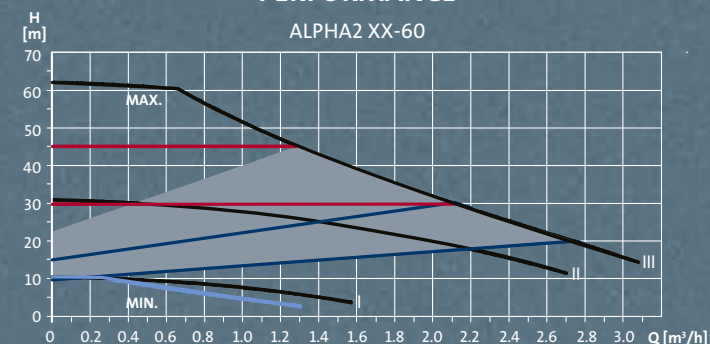
- Uses up to **80% LESS** electrical power compared to standard **constant speed** pumps
- Uses up to **60% LESS** electrical power compared to standard **speed controlled** pumps

TO BE INSTALLED INSIDE



CENTRAL HEATING
SYSTEM

PERFORMANCE



- AUTOADAPT operation area
- Speed I, II, III
- Proportional pressure curves
- Constant pressure curves

PERFORMANCE

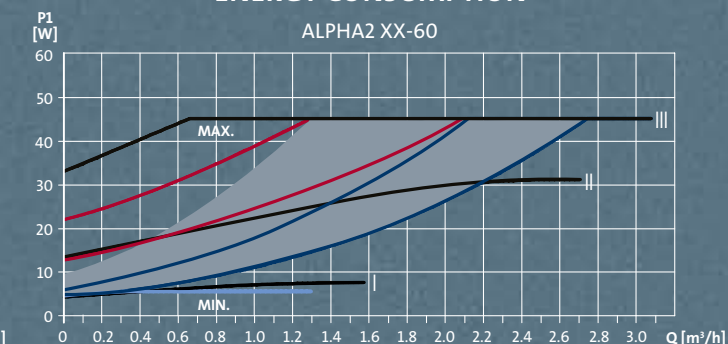
Head up to 4, 5 or 6 m
Flow up to 3 m³/h
Power P1 up to 22, 32 or 45 W
Power supply 1 x 230VAC 50/60 Hz
Medium temperature +2...+110°C

AVAILABLE VERSIONS WITH DIFFERENT HOUSINGS

ALPHA2 xx-40	ALPHA2L xx-40*
ALPHA2 xx-50	ALPHA2L xx-60*
ALPHA2 xx-60	

* Limited edition without AUTOADAPT, power consumption display and automatic night setback

ENERGY CONSUMPTION



ENJOY BIGGER SAVINGS IN BIGGER COMFORT

With AUTOADAPT your customers get:

- demand-controlled operations
- optimum comfort
- energy savings
- reduced CO₂ emissions

AUTOADAPT in brief

AUTOADAPT analyses system demands and then automatically and continuously adjusts ALPHA2's performance to match it.

ALPHA2 can run on as little as 5 watts.

With ALPHA2 there is no guessing, your customers can see its efficiency in action. Its bright LED display always tells exactly how much energy the pump is using.