



THE EASY CHOICE

EUP READY PRODUCTS AND SETUP



THE WAY TO A SUSTAINABLE FUTURE

WHY WAIT WHEN YOU CAN BE READY NOW

EU has taken action on the climate challenge: In August 2015 the EUP/ErP Directive on glandless circulators integrated in products will come into effect. This will set radical new requirements for energy efficiency in pumps used in your boiler, solar and heat pump systems.

But there is no need to wait for energy efficient OEM circulators to become available. Grundfos HVAC OEM high efficiency circulator pumps already meet all the new ecodesign requirements.

What's more, we have the needed setup and capacity. Our design and tooling departments as well as the production lines are ready to accommodate your projects and deliver large volumes of EUP ready circulators for your systems.

DID YOU KNOW?

- Pumps currently consume 12% of global electrical power.
- Integrated circulators constitute the biggest savings potential of all circulator types.
- If all integrated circulators in the EU are replaced by new energy efficient ones, we can save 17 billion kWh and 7 million tonnes CO₂ annually by 2020.
- This is the equivalent to 10 million people's annual residential electricity consumption – or all the people living in Berlin, Cologne, Paris and Rome.

Source: AEA Technology Report, November 2008
Grundfos calculations

10 MILLION PEOPLE ...USE A LOT OF ELECTRICITY

BY INTRODUCING TOUGHER ENERGY EFFICIENCY REQUIREMENTS FOR INTEGRATED CIRCULATORS, EU AIMS TO SAVE ELECTRICAL POWER CORRESPONDING TO 10 MILLION PEOPLE'S ANNUAL RESIDENTIAL CONSUMPTION



WHAT IS THE EUP/ErP DIRECTIVE?

The EUP/ErP Directive, Lot 11 (Commission Regulation (EC) no 641/2009) establishes binding ecodesign requirements for integrated circulators produced and sold in the EU after

[1 August 2015.]

From this date standard circulators will not meet the requirements – energy efficient circulators will be the only choice.

WHAT ARE THE ESSENTIALS?

- Glandless circulators integrated in products shall have an energy efficiency index (EEI) of not more than 0.23 (the benchmark level is 0.20).
- Integrated pumps will be measured differently from standalone pumps due to the various integrated functions in the many customised hydraulic solutions on the market.
- All circulators integrated in products which generate and/or transfer heat, and all types of media, are included. This means that not only heating systems but also solar thermal and heat pump systems will be affected by the EUP/ErP Directive.
- Spare pumps for systems sold before August 2015 are allowed until 2020.
- Conformity with EU regulations will be governed through mandatory CE Marking.

WHAT ARE THE IMPLICATIONS FOR YOU?

High efficiency variable speed circulators will be a MUST when integrated in appliances from 2015. In fact, only a minority of pumps and hydraulic systems sold today comply with the coming energy efficiency requirements. This means that investment in new product development and production lines as well as adaptation of tooling, test and production equipment represent a huge challenge for the pump industry.

As circulators are an integral part of your systems, you need to consider how your pump supplier is equipped to handle this challenge in good time before the 2015 deadline.

CHECK THIS DOES MY PUMP SUPPLIER HAVE

- ✓ a large installed base of high efficiency circulators that have been tried and tested in real-life applications for many years?
 - ✓ a complete EUP ready portfolio that fits into my existing boiler, solar or heat pump systems?
 - ✓ EUP ready products that offer hydraulic backward compatibility?
 - ✓ fully functional and tested production lines for EUP ready circulators?
 - ✓ the capacity to produce and supply EUP ready products in high volumes, in the best quality and on a global basis?
- If you ask us – you get a BIG YES to all your questions.

WHY MAKE IT COMPLICATED, WHEN IT CAN BE EASY.
CHOOSE GRUNDFOS!



AN EASY FIT

EUP READY



SAME DIMENSIONS

One of our top priorities has been easy integration of EUP ready circulators in your boiler, solar and heat pump systems to make sure the transition runs smoothly and affects your business as little as possible. That is why the dimensions of our EUP ready products match those of our existing products.

With the same pump dimensions of existing and new Grundfos OEM circulators you do not have to redesign your platform to make space for a different-sized pump. You can completely avoid the time- and cost-consuming activities of redesigning and moving auxiliary components around in the system and change your production processes and validation procedures accordingly. Grundfos OEM circulators guarantee you an easy fit.

FULL BACKWARD COMPATIBILITY

The significance of hydraulic backward compatibility is often overlooked or underestimated during new product development and design. But not at Grundfos. With more than 80 standard and customised hydraulic platforms in our existing portfolio – and many new innovative solutions on the way – hydraulic backward compatibility is very important to you and to us.

Because we do not need to make substantial modifications to the vast number of existing platforms to meet the EUP requirements, we will be able to deliver EUP ready solutions rapidly and in large volumes before and after the transition in 2015. With a Grundfos HVAC OEM solution inside, you can upgrade your system without any hassle and be EUP ready with your circulator pump already now.

START SAVING TIME, HASSLE, ENERGY AND MONEY NOW.

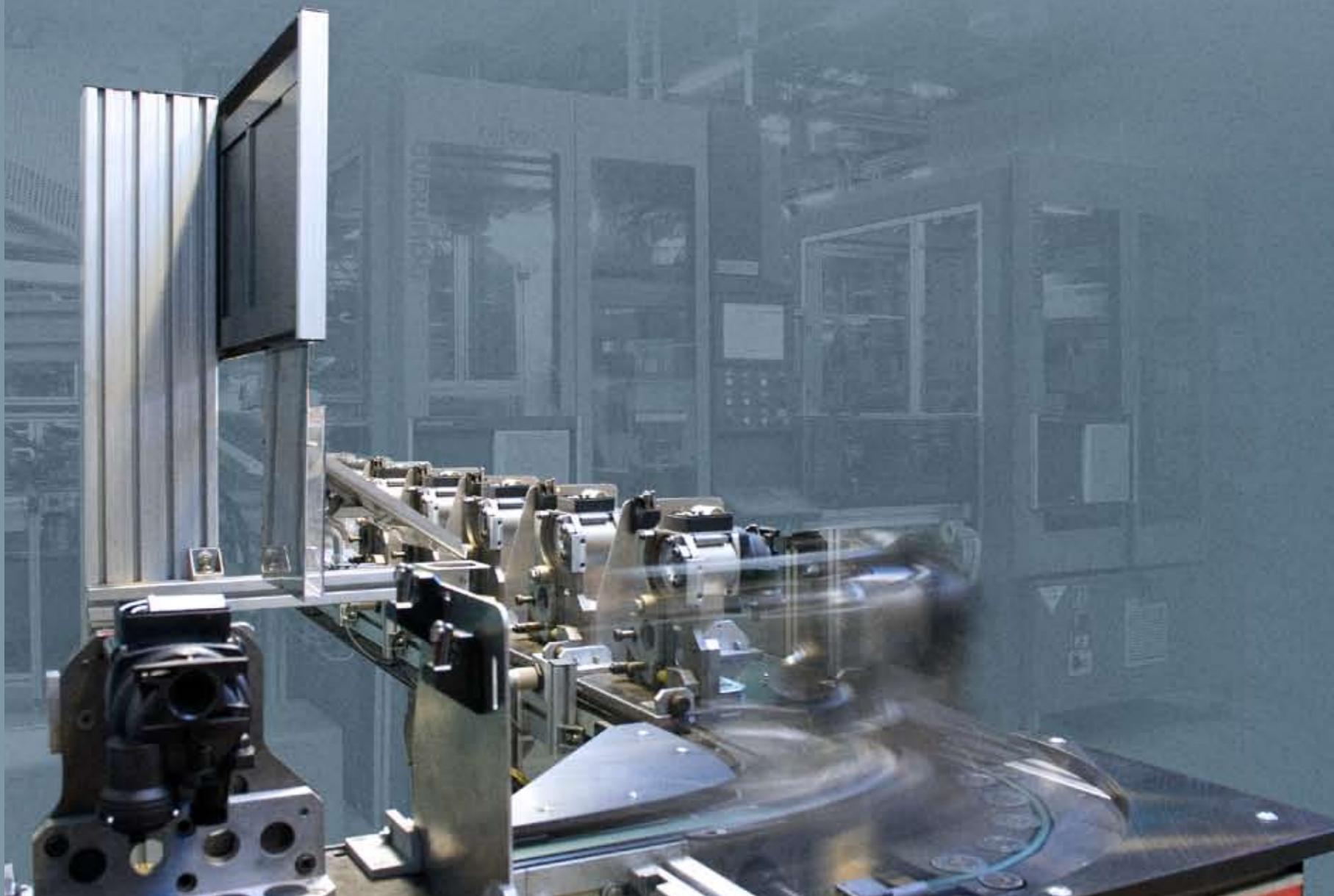
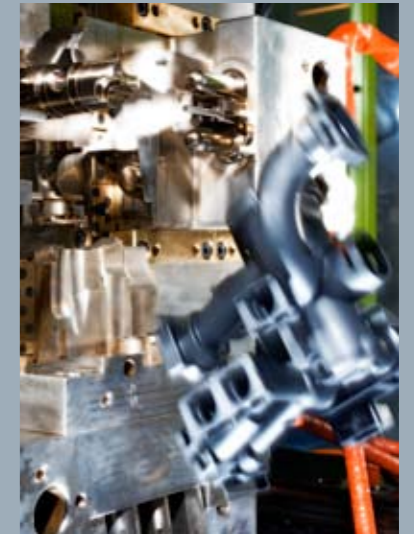
SAME PUMP
DIMENSIONS

HYDRAULIC
BACKWARD
COMPATIBILITY

WELL-KNOWN
GRUNDFOS
QUALITY

UNMATCHED
RELIABILITY

EVERYTHING LINED UP FOR YOU



THE FAST AND SAFE WAY

Another ultimate goal of our EuP ready strategy has been to provide you with a portfolio of EuP ready OEM circulators with the well-known Grundfos trademarks: high quality, unmatched reliability, low noise and the ability to deliver large volumes.

By using existing 'building blocks' in design, component production and assembly, which have been tested and validated through years of experience and trouble-free field operation, we can ensure that you get a professional setup you can rely on.

Here are some reasons to why we have the capacity and setup to meet your future requirements and the ability to move fast:

- we use existing components in well-known materials to minimise validation of new components, production processes and equipment
- we use existing assembly equipment, enabling us to manufacture EuP ready products in vast quantities.



GRUNDFOS UPM2

HIGH EFFICIENCY ECM CIRCULATORS FOR INTEGRATED HEATING APPLICATIONS

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
- Controlled via PWM signal



GRUNDFOS MAGNA SOLAR

HIGH EFFICIENCY ECM CIRCULATORS FOR SOLAR THERMAL SYSTEMS

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
- Controlled via PWM signal

GRUNDFOS UPM GEO

HIGH EFFICIENCY ECM CIRCULATORS FOR GEOTHERMAL HEAT PUMPS

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
- Controlled via PWM signal



GRUNDFOS SOLAR PM2

HIGH EFFICIENCY ECM CIRCULATORS FOR SOLAR THERMAL SYSTEMS

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
- Controlled via PWM signal



GRUNDFOS MAGNA GEO

HIGH EFFICIENCY ECM CIRCULATORS FOR GEOTHERMAL HEAT PUMPS

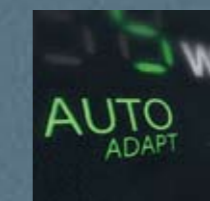
PERFORMANCE

- 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
- Controlled via PWM or 0-10 VDC signal



GRUNDFOS ALPHA2

SELF-REGULATING HIGH EFFICIENCY ECM CIRCULATORS FOR STANDALONE HEATING APPLICATIONS



Ecodesign requirements for stand-alone circulators come into effect on 1 January 2013.

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
- Controlled via AUTOADAPT

THE EASY CHOICE

On 1 August 2015 the EuP/ErP Directive on glandless circulators integrated in products will come into effect. This will set radical new requirements for energy efficiency in pumps used in boiler, solar and heat pump systems.

As a manufacturer of HVAC systems it is important that you make your partnership choice already now, ensuring that your pump supplier is fit for the challenge and capable of meeting the 2015 deadline.

There is no need to wait for new energy efficient technology to become available. Grundfos OEM circulators already meet all the 2015 requirements. We deliver insight into our EuP ready platforms: GRUNDFOS UPM2, GRUNDFOS UPM GEO, GRUNDFOS MAGNA GEO, GRUNDFOS MAGNA SOLAR, GRUNDFOS SOLAR PM2, GRUNDFOS ALPHA2.

It is not just about the actual pumps. It is about innovative design, setup and capacity, too. Basically, all the things that make it easy – and safe – for our customers.

We have made it easy for you in a lot of ways:

- same dimensions of existing pumps and EuP ready pumps for an easy fit in your existing platform
- hydraulic backward compatibility in your existing platform
- fully functional and tested production lines for EuP products
- the well-known Grundfos quality, reliability and durability.

WE ARE READY. ARE YOU?



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