



**ALSO AVAILABLE FROM GRUNDFOS...**

## Overview catalogues including:



## Detailed product information including:

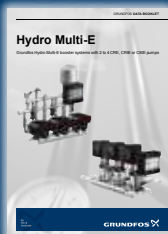
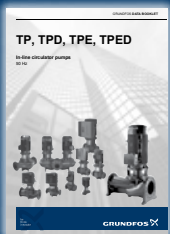
### Product brochures

Overview product brochures with key features, benefits and technical data to aid model selection.



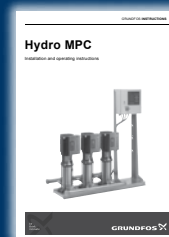
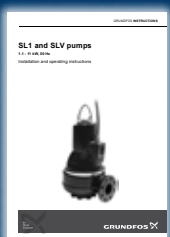
### Technical data books

Detailed product technical data books with full curve and specification data, typically 200+ pages



### Product manuals

Manuals supplying information about installation, operation and maintenance



For more information see [www.grundfos.co.uk](http://www.grundfos.co.uk) and the Grundfos Product Center or contact us by phone 01525 850000 or by email [grundfos-uk@sales.grundfos.com](mailto:grundfos-uk@sales.grundfos.com)



## WHO WE ARE AND WHAT WE DO:

Grundfos Pumps Ltd are a UK leader in the supply of pumps and pump systems for domestic, commercial building services and process industry applications, as well as being a major supplier to the water supply and treatment industries and provider of packaged fire sets.

We are part of the Grundfos Group that employ 19,000 people in sales and production roles in 83 companies worldwide. Founded in Denmark in 1945, the Group now has an annual turnover of £3 billion and produces 17 million pumps per year.

As only the second sales company to be set up outside of Denmark, we have been in the UK since 1964, and moved to our current premises in Leighton Buzzard in 1972. We employ 200+ staff who are engaged in supporting the sales and marketing effort and who geographically cover the UK and Northern Ireland.

Our business head office is in Leighton Buzzard with regional sales offices located in Leigh, Birmingham and Livingston in Scotland.

We work very closely with the UK based subsidiary company Grundfos Manufacturing, who are based in Sunderland.

### Efficient, sustainable products

At Grundfos we constantly strive to make our products more user-friendly and reliable as well as focussing on their energy-saving potential and efficiency. This is so that both users and the environment can benefit from their improvement.

Grundfos pumps are equipped with ultramodern electronics, allowing them to regulate their output according to the system needs. This not only ensures convenience for the user, but also saves a great deal of energy.

### Research and development

In order to maintain its leading position, Grundfos places a great deal of emphasis on customer feedback and research for product development; this means customers are consulted when new products are being developed or when established products are being improved.

In-house research and development makes use of the latest technology within the pump industry, as does collaborating with universities and higher education institutions in search of new and better solutions for the design and function of the products.

### Corporate values

The Grundfos Group has strong corporate values. These include sustainability, openness, trustworthiness, responsibility, and also on partnership with clients, suppliers and the whole of society around us, with a focus on humanity that concerns our own employees as well as the many millions who benefit from water that is procured, utilised and removed as wastewater with the help of Grundfos pumps.

# SEE YOU ON-LINE

With a loyal following of new, and more importantly, returning visitors each month the Grundfos website is a popular communication hub for those seeking information on new and/or replacement pump solutions.

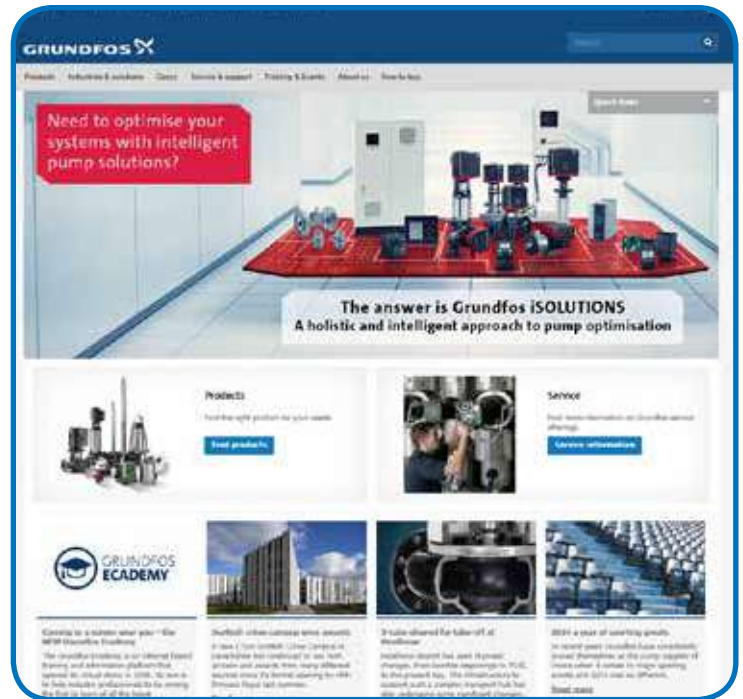
There are many good reasons for this popularity, including that it is now easier to find a specific product, locate support data as well as there being a quick link to a wide range of campaign specific sites.

Not surprisingly - as it is estimated that pumps consume 10% of the world's electricity consumption - there is a major emphasis on the significant amounts of energy that can be saved simply by fitting the correct pumps. The Meet the energy challenge NOW section of the web site will give a lot of information on pump selection as well as where and how energy can be saved. There is also the opportunity to sign up for eNewsletters and to view a range of information and movies.

In addition there is a section towards the bottom of the home page that provides information on case stories, product updates, industry news and other relevant updates all of which mainly relate to the UK market. This communication hub - that is updated regularly - has become one of the most popular areas of the site.

But it doesn't end there, by accessing [www.grundfos.co.uk](http://www.grundfos.co.uk) you can also be among the first people to find out about product innovations, get access to a range of literature and pump selection tools, as well as getting access to background information such as the Grundfos approach to the environment.

So pay a visit and see for yourself why visitor numbers are continuing to increase and then save the Grundfos site as one of your 'favourites'. We think you'll be glad you did.



# JOIN THE GRUNDFOS ACADEMY

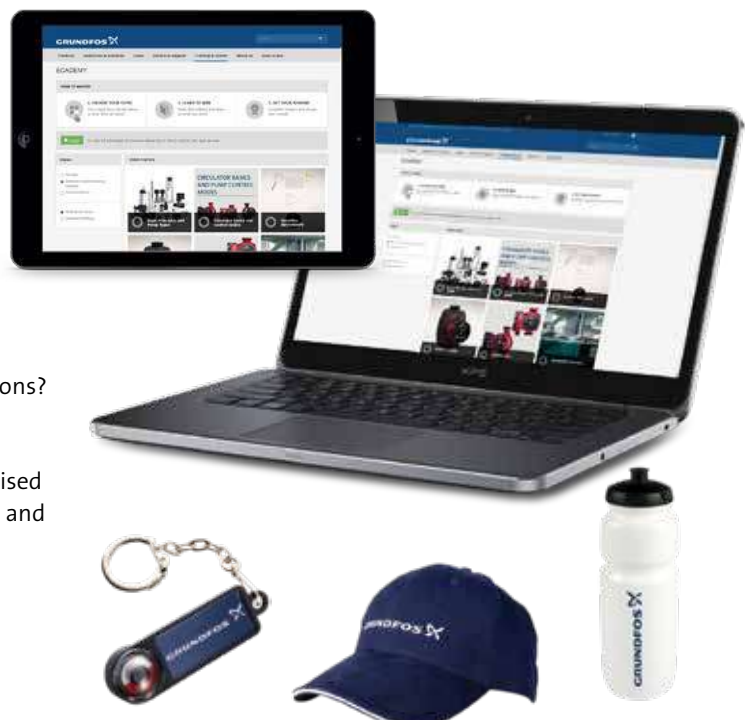


## GRUNDFOS ACADEMY

Want to learn more about pumps, pump theory and applications?

The Grundfos Academy is an online educational platform for installers, fitters, engineers and merchant counter staff. Optimised into "bite-sized" modules and reformatted for use with tablets and smartphones, learning on the go has never been easier.

Find out more by visiting [www.grundfos.co.uk/ecademy](http://www.grundfos.co.uk/ecademy)





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## Key by business sector

Domestic buildings services	D
Light commercial buildings services	LC
Commercial buildings services	C
Fire protection	F
Industrial solutions	I
Water supply	WS
Waste water	WW
Dosing and disinfection	DD
Controls and ancillary items	CA

Product	Page	Key	Application													
			Heating systems	Hot water service systems	Cooling and air conditioning systems	Industrial applications	Pressure boosting and liquid transfer	Groundwater supplies	Water supply	Wastewater	Environmental applications	Dosing and Disinfection	Renewable-energy systems	Fire Protection	Motors, controls and ancillary items	
ALPHA1	8	D/LC	●													
ALPHA1 N	9	D		●												
ALPHA3	8	D/LC	●													
AMD, AMG, AFG	32	WW				●				●						
BM	24	I				●	●									
BMS	24	I				●	●									
CIU/CIM	39	CA														●
CM BYE-PAC	12	D/LC					●									
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CMB	12	D/LC					●		●							
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CM-SP	27	WS					●		●							
COMFORT PM	9	D		●	●											
Conex® DIA, DIS	37	DD				●			●	●	●	●				
Conex® DIA-G, DIS-G	37	DD				●			●	●	●	●				
CONLIFT	10	D/LC			●											
Control Panels	38	CA														●
CR, CRI, CRN	22	I/C			●	●	●		●		●					
CR, CRN High pressure	23	I/C			●	●	●									
CRE, CRIE, CRNE	22	I/C			●	●	●		●		●					
CRT - Titanium	23	I				●	●				●					
CUE	38	CA														●
DDA, DDC, DDE	34	DD				●			●	●	●	●				
DDI, DME	34	DD				●			●	●	●	●				
Degassing equipment	19	C	●		●											
DMX	35	DD				●			●	●	●	●				
DMH	35	DD				●			●	●	●	●				
Domestic FireSAFE	20	D/C/F														●
DP, EF	30	C/I/WW								●						
Expansion vessels	40	CA														●
FireSAFE	20	D/C/F														●
FM/UL fire sets	21	C/I/F														●

- = main application area
- = other applications that the product can be used in

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Grundfos GO Remote	39	CA													●
High Hazard Fire Sets	21	C/I/F												●	
Home Booster	11	D/LC					●		●						
Hydrant and Wet Risers	21	C/I/F												●	
Hydro GTI	17	LC/C/I					●		●						
Hydro MPC-E	18	C/I				●	●		●						
Hydro Multi-E	18	LC/C/I				●	●		●						
JP5	27	WS					●		●						
MAGNA1(D)	14	D/LC/C	●		●								●		
MAGNA3(D)	14	D/LC/C	●		●								●		
MAX-E BOOST	17	D/LC					●		●						
MP 204, CU 300, CU 301	38	CA					●								●
MQ	11	I					●		●						
MTA	24	I			●										
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MTR,SPKE	24	I			●	●	●								
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Ordinary hazard fire sets	20	C/I/F												●	
OXIPERM	37	DD				●			●	●			●		
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Package pump houses	21	C/I/F												●	
PM	40	CA													●
POLYDOS	35	DD				●			●	●	●	●			
Pressurisation sets	18	LC/C	●		●										
PS. R	32	WW								●					
S Pumps	31	WW				●				●					
SCALA2	11	D/LC					●		●						
SB/SBA	27	WS							●						
SE1/SEV	31	WW								●					
SEG	30	WW								●					
SELCOPERM	36	DD				●			●	●		●			

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Sensors	39	CA													●
Shower Pumps	13	D				●									
SL1 and SLV	30	WW				●				●					
SOLOLIFT2	13	D/LC								●					
SP A, SP, SP-G	28	WS					●	●							
SQ, SQE	28	WS					●	●							
SQE-NE, SP-NE	28	WS									●				
SQFlex	29	WS											●		
SRP Pumps	33	WW				●				●					
TP(D)	15	LC/C/I	●		●				●						
TPE(D) Series 1000 and 2000	15	C/I	●		●				●						
TPE2(D)/TPE3(D)	15	C/I	●		●				●						
Unilift CC, KP, AP	13	D/WW								●					
UPA 15-90 N	10	D/LC					●								
UPS 15-50 N	9	D/LC		●											
UPS3 15-50/65	8	D/LC	●												
UPS2 25-80 and 32-80	14	D/LC	●												
Vaccuperm	36	DD				●		●	●		●				

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### Warranty

All Grundfos pumps are warranted for 24 months from installation or 30 months from manufacture; whichever is the sooner, unless otherwise stated.

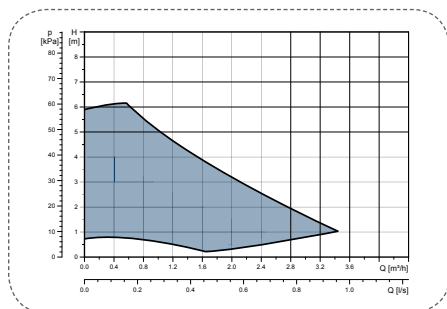
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# DOMESTIC BUILDING SERVICES



## ALPHA3 15-50/60 Model B

Top of the range, high efficiency domestic circulator.



### Technical data

Flow, Q:	max. 3.4m <sup>3</sup> /h
Head, H:	max. 6 m
Liquid temp.:	+2 °C to +110 °C
Max. system. pressure:	10 bar.
Port to Port:	130mm
EEl:	≤ 0.17

### Applications

Generally for use with central heating circuits in homes with up to 5 bedrooms, with <30kW boiler. Ideal for new build and system refurbishments.

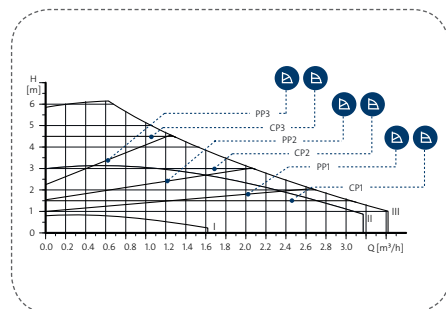
### Features

- EEl ≤ 0.17
- With integrated two-way Bluetooth communication via the Grundfos GO REMOTE app
- Fast, accurate, wireless hydronic balancing via Grundfos GO BALANCE app
- Antiblock start up and ceramic shaft for long life
- Energy Efficiency Index (EEl) ≤ 0.17
- Combined 15-50/60 in one pump
- ALPHA plug for easy wiring
- LED display showing power on, electrical usage, flow rate
- Heat/noise insulation shells included
- 5 year warranty
- Fixed speed modes
- Proportional (PP) modes
- Underfloor (CP) modes
- AUTOADAPT mode for optimal efficiency
- 130mm port to port



## ALPHA1 15-50/60

High efficiency domestic circulator



### Technical data

Flow, Q:	max. 3.4m <sup>3</sup> /h
Head, H:	max. 6 m
Liquid temp.:	+2 °C to +110 °C
Max. system. pressure:	10 bar.
Port to Port:	130mm
EEl:	≤ 0.17

### Applications

ALPHA1 has a special constant pressure mode for underfloor heating and single pipe heating systems. Typical use – up to 5 bedroom house <30kW boiler.

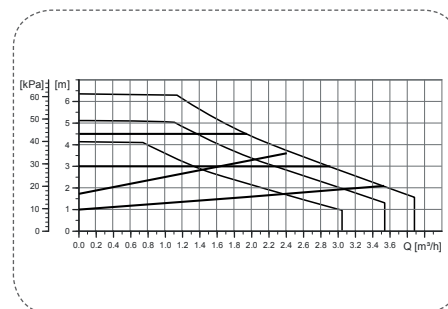
### Features

- EEl ≤ 0.17
- 130mm port to port
- ALPHA Plug for ease of wiring
- One touch operation for simple set up
- 3 fixed speed modes
- Suitable for underfloor heating
- Proportional (PP) modes
- Underfloor (CP) modes
- Quiet Operation – minimal system & valve noise
- Heat/noise insulation shells included
- 5 year warranty
- Combined 15-50/60 in one pump



## UPS3 15-50/65

The new UPS3 improves on efficiency, head, diagnostics and fitting time.



### Technical data

Flow, Q:	max. 3.8m <sup>3</sup> /h
Head, H:	max. 6.5 m
Liquid temp.:	+2 °C to +95 °C
Max. system. pressure:	10 bar.
Port to Port:	130mm
EEl:	≤ 0.20

### Applications

With just one model the UPS3 can be used to replace previous UPS & UPS2 models up to 6m. For replacing the pump inside a boiler refer to the Grundfos GO REPLACE app to identify suitability.

### Features

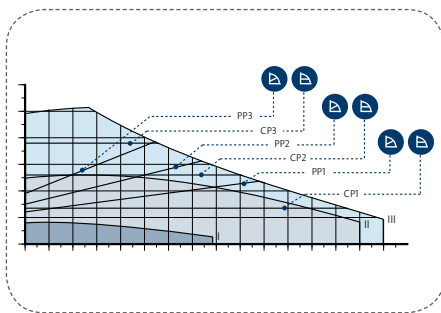
- EEl ≤ 0.20
- 130mm port to port
- One model for up to 6.5m head
- Backward compatible with older Grundfos circulator housings
- LED fault reporting
- Anti-blocking port
- For properties up to 5 bedrooms
- 3 fixed speed modes
- Proportional (PP) modes
- Underfloor (CP) modes
- 5 year warranty





### ALPHA1 N

ALPHA1 N is a high efficiency variable speed, stainless steel secondary hot water circulator.



#### Technical data

Flow, Q:	max. 2.5m <sup>3</sup> /h
Head, H:	max. 5 m
Liquid temp.:	+2 °C to +110 °C
Max. system. pressure:	10 bar.
Port to Port:	130mm
EEl:	≤ 0.20

#### Applications

Advanced energy efficient secondary hot water circulator, ensures hot water is available on demand throughout the system.

#### Features

- Energy Efficiency Index EEl ≤0.20
- Automatic variable speed and traditional fixed speed operation.
- Display shows power on and electrical usage
- Quiet operation, minimal system and valve noise
- Unique 'Plug and Pump' electrical connection.
- 130mm port to port
- WRAS approved



### UPS 15-50 N

Standard efficiency secondary hot water circulator pump.

#### Technical data

Flow, Q:	max. 3.0m <sup>3</sup> /h
Head, H:	max. 4 m
Liquid temp.:	+2 °C to +110 °C
Max. system. pressure:	10 bar.
Port to Port:	130mm

#### Applications

For secondary hot water distribution to circulate water in the system to ensure hot water is available throughout the system.

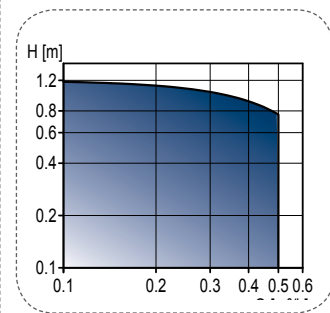
#### Features

- Quiet operation
- Highest quality engineering and corrosion free materials for long life expectancy
- WRAS approved.
- 



### COMFORT PM

Advanced secondary hot water circulator pump with temperature sensing.



#### Technical data

Flow, Q:	max. 0.5 m <sup>3</sup> /h
Head, H:	max. 1.2 m
Liquid temp.:	+2 °C to +95 °C
Max. system. pressure:	10 bar.

#### Applications

For circulation of water in

- Domestic hot water systems
- Heating systems
- Cooling systems.

#### Features

- 4 models available
- Head removal for ease of maintenance
- Quiet operation
- 2 models with energy saving feature AUTOADAPT - where the pump analyses the system demands to find the optimum setting
- Highest quality engineering and corrosion free materials for long life expectancy
- 15-14 B PM GB & 15-14 BA PM GB port to port 80mm
- 15-14 BX PM GB & BXA PM GB port to port 140mm
- WRAS approved components



## CONLIFT

Condensate removal units (2 model variants available).

### Technical data

Flow, Q:	max. 588 l/h
Head, H:	max. 5.7 m
Liquid temp.:	max. +50 °C (+90 °C for 5 minutes)
pH:	min. 2.5
Tank volume:	2.65 l.
Effective volume:	0.9 l.

### Applications

Removal of condensate from

- boilers
- air-conditioning units
- cooling and refrigeration systems
- air dehumidifiers
- evaporators

in domestic and light commercial situations.

### Features (vary by model)

- Boiler PRV discharge compatible
- Base standing or wall hung for flexibility of installation
- Unique design ensures low-noise operation
- Easy access enabling efficient cleaning
- Flexible pipework connection
- Inlet adaptor and hose included

Alarm PCB and Neutralisation Box available to upgrade units.



## UPA 15-90 N

Single tap / appliance home booster pump.

### Technical data

Flow, Q:	max. 1.4m <sup>3</sup> /h
Head, H:	max. 8.5 m
Liquid temp.:	+70 °C
Max. system. pressure:	6 bar.
Port to Port:	160mm

### Applications

The UPA 15-90 is designed for pressure boosting of domestic water in domestic properties.

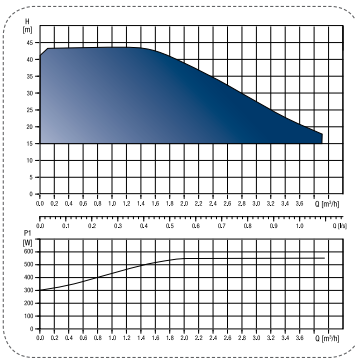
### Features

- Automatic or manual operation
- Typically adds between 0.5 bar and 0.75 bar of pressure to the inlet pressure at the pump
- Suitable for water temperatures up to 70 °C
- Low noise level
- The pump incorporates a flow switch which starts and stops the pump according to flow when a tap is opened or closed
- Pump can be set to 'Manual', 'Automatic' or 'Off'
- The pump is supplied with a 1.5 metre flying lead for connection to a 3A fused switched spur.



## SCALA2

Compact Whole House Water Pressure Booster.



### Technical data

Max. ambient temp.:	55°C
Max. liquid temp.	45°C
Max. system pressure	10 bar
IP rating	X4D
Floors	Max. 3
Outlets	Max. 8
Weight	10 kg
Connection size	G 1"
Max. current	2.8 A

### Applications

One model handles all boosting needs in residential buildings with up to 3 floors and 8 outlets (ie taps, washing machine, shower, toilets).

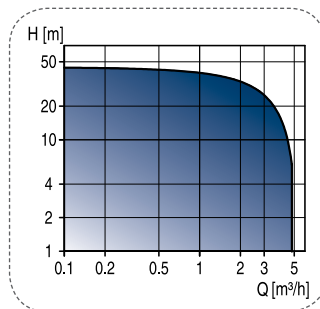
### Features

- WRAS – whole product approved
- Low noise – 47dB(A) one of the quietest boosters in it's class
- Perfect water pressure in all outlets at all times
- Fast & Easy Installation - all in one unit
- Easy to Operate – user friendly control panel
- Compact design – fits inside a kitchen cupboard
- Affordable – great value for money



## MQ

Multistage centrifugal self-priming pumps.



### Technical data

Flow, Q:	max. 3.8 m³/h
Head, H:	max. 48 m
Liquid temp.:	0°C to +44°C
Max. system. pressure:	7.5 bar.

### Applications

Suitable for liquid transfer in

- Small or large family houses
- Weekend cottages
- Farms
- Greenhouses.

### Features

- All-in-one pressure booster unit
- Compact design
- Easy to install, maintenance-free
- Easy to operate
- Self-priming
- Dry-running protection with automatic reset
- Low-noise.



## HOME BOOSTER

Packaged booster set.

### Technical data

Flow, Q:	0.5 l/s
Pressure:	3.5 & 4.5 bar
Liquid temp.:	+20°C
Tank volume:	180 litres
Electrical supply:	240V 1ph 50Hz

### Applications

The Grundfos Home Booster is a self-contained cold water booster set, designed for domestic properties where the existing mains water supply is insufficient to meet the demand requirements of pressurised hot and cold water systems. The Home Booster is suitable for most domestic properties with one or two standard bathrooms with standard fittings, or ensuite, and cloakroom, plus other normal household appliances. An additional slave tank is available for larger property installations.

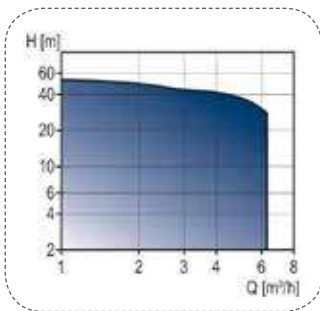
### Features

- Compact and cost-effective solution
- High quality stainless steel pump
- PM2 Pressure Manager on/off controller
- WRAS approved components
- The unit features an integral 180 litre storage tank with Type AB air gap, in accordance with Water Byelaws regulations.



## CMB

Pressure manager booster systems.



### Technical data

Flow, Q:	max. 6 m <sup>3</sup> /h
Head, H:	max. 75 m
Liquid temp.:	0°C to +60°C
Max. system. pressure:	10 bar.
Electrical supply:	240V 1ph 50Hz

### Applications

- Boosting to pressurised hot and cold water systems in domestic and light commercial premises
- Irrigation systems with above ground storage tank.

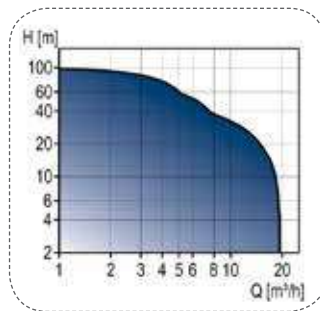
### Features

- Compact design
- Wide range of flows and pressures
- Low noise for quiet operation
- All single phase options can be used in domestic environments
- Integral controls and motor/dry run protection
- With PM2 automatic stop/start controller
- Stainless steel pump with WRAS approval
- Self-priming CMB option available.



## CMBE

Frequency controlled booster systems.



### Technical data

Flow, Q:	max. 18 m <sup>3</sup> /h
Head, H:	max. 100m
Liquid temp.:	0°C to +60°C
Max. system. pressure:	10 bar.

### Applications

- Boosting to pressurised hot and cold water systems in domestic and light commercial premises.
- Irrigation systems with above ground storage tank.

### Features

- Compact design
- Wide range of flows and pressures
- Low noise for quiet operation
- All single phase options can be used in domestic environments
- Integral controls and motor/dry run protection
- Energy saving variable speed operation
- Compatible with Grundfos GO remote control
- Stainless steel pump with WRAS approval.



## CM BYE-PAC

Packaged booster sets.

### Technical data

Flow, Q:	max. 1.4 l/s
Liquid temp.:	0°C to +40°C
Max. system. pressure:	4 bar.

### Applications

Typical applications include:

- Boosting to pressurised hot and cold water systems in domestic and commercial premises
- Irrigation systems
- Water transfer applications

### Features

- Compact design with inclusive 50 or 100 Gallon tank
- Wide range of flows and pressures available
- Low noise for quiet operation
- Sets are available for single phase 240V and three phase 415V operation
- Integral controls and motor/dry run protection
- Includes PM2 Pressure Manager automatic stop/start controller
- Break tank
- Stainless steel pump with WRAS approval.



## GRUNDFOS SHOWER PUMPS

Shower booster pumps.

### Applications

Grundfos are a specialist shower pump manufacturer who offer a wide selection of pumps that are designed to boost the water pressure to a shower or bathroom fittings. There are a total of 5 models that are available in various bar ratings from 1.5 bar up to 6 bar.

So whether you require twin or single impeller, brass or composite, universal head or positive head operation – Grundfos have the ideal pump for you.

### Features (vary by model)

- WRAS – whole product approved
- Compact design
- Easy to install
- Integral controls
- Anti vibration feet
- Continuously rated pump
- Available in both positive and negative head

### Also available

Surrey & York flanges - designed to provide an independent hot water supply, reduce air surging noise and temperature variations.



## SOLOLIFT2

Domestic macerator (5 model variants available).

### Applications

This family can be used in a wide variety of applications: where there is a requirement for an extra bathroom, a basement installation, adding facilities in hotels and guest houses or during renovation of offices and other commercial buildings.

The WC-1 is the standard model for handling wastewater from a toilet and one other appliance such as a washbasin.

The WC-3 adds two more inlet options and the capacity to handle wastewater from a shower and/or a bidet, whilst the CWC-3 has the same functionality but is optimised to work with wall hung toilets.

Where only water handling is required the compact D-2 offers two inlets and is suitable for washbasin, bidet or shower applications.

Where greater volumes, higher temperature water (40°C to 90°C) or brine needs to be handled (i.e. washing machines/dishwashers/water softeners), a C-3 model, with three inlets and a larger tank will meet this requirement.

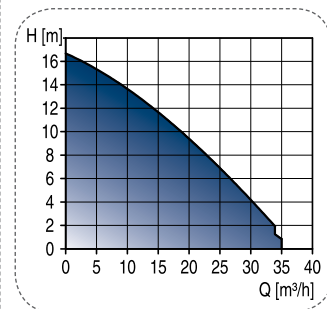
### Features

- Self-clean design and 'no more dirty hands' makes for easy servicing
- High torque, hardened steel cutter
- Unique sloping design of the tank floor pan reduces the possibility of sedimentation or clogging in the unit.
- Choice of inlet and outlet options
- Segregated controls compartment and external deblocking port
- Powerful quiet motor
- Thermal overload switch.



## UNILIFT CC, KP, AP12, AP35/50, AP35B/50B

Submersible drainage pumps.



### Technical data

Flow, Q:	max. 35 m <sup>3</sup> /day
Head, H:	max. 18 m
Liquid temp.:	0°C to +55°C

### Applications

The pumps are suitable for:

- Drainage of flooded cellars
- Pumping of household greywater
- Groundwater lowering
- Emptying of swimming-pools and excavations
- Drainage of drain wells
- Emptying of tanks and reservoirs.
- Domestic wastewater with toilet discharge\*.

### Features

- Simple installation
- Service and maintenance free
- AP35B and AP50B are suitable for installation on auto-coupling.
- Unilift CC models offer dual outlet (horizontal and vertical) .

\*AP50 and AP50B only

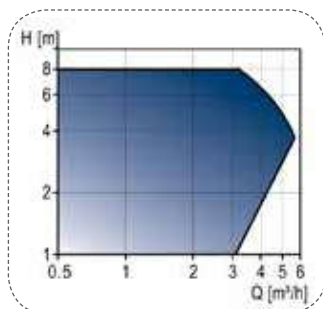


# COMMERCIAL BUILDING SERVICES



## UPS2 25-80 and 32-80

Replacement light commercial heating circulator pumps up to 8m head.



### Technical data

Flow, Q:	max. 5.7 m <sup>3</sup> /h
Head, H:	max. 8 m
Liquid temp.:	+2°C to +95°C
Max. system. pressure:	10 bar.
EEL:	≤ 0.23

### Applications

Circulation of water in large domestic and light commercial applications including:

- Heating systems

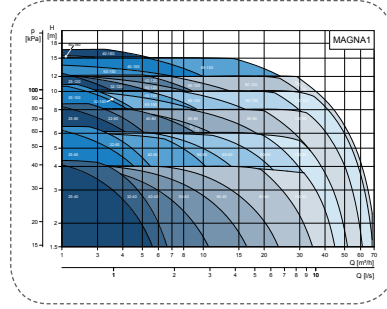
### Features

- Energy efficient circulator
- Compact dimensions
- ALPHA plug for ease of wiring
- 3 fixed speeds
- Proportional pressure control.



## MAGNA1

Light commercial / commercial heating circulator pumps, single or twin (D).



### Technical data

Flow, Q:	max. 68.5 m <sup>3</sup> /h
Head, H:	max. 18 m
Liquid temp.:	-10°C to +110°C
Max. system. pressure:	6/10 bar.
EEL:	≤ 0.23

### Applications

The MAGNA1 has been designed for circulating liquids in a wide range of light commercial and commercial applications including:

- Heating systems
- Air conditioning and cooling systems
- Domestic water systems\*
- Ground-source heat pump systems
- Solar heating systems.

### Features

- Low energy consumption, with an EuP EEL rating that exceeds 2015 requirements
- Proportional pressure control.
- Constant curve
- Constant speed duty
- 9 possible pump settings
- Easy installation
- Low noise
- Permanent magnet motor
- Handles liquid temperature range of -10°C to 110°C
- Max 10 bar system pressure (PN10)
- Max flow 70 m<sup>3</sup>/h, max head 18m
- Twin headed versions available (max flow 140 m<sup>3</sup>/h)

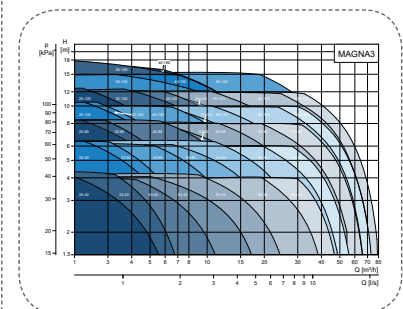
### Plus new to MAGNA1 Model C

- Fault relay
- Digital input (stop/start)
- Wireless multipump function with time based alteration on twin head versions



## MAGNA3(D)

Advanced commercial heating circulator pumps, single or twin (D).



### Technical data

Flow, Q:	max. 76.6 m <sup>3</sup> /h
Head, H:	max. 18 m
Liquid temp.:	-10°C to +110°C
Max. system. pressure:	6/10/16 bar.
EEL:	≤ 0.17

### Applications

The MAGNA3(D) has been designed for circulating liquids in a wide range of commercial applications including:

- Heating systems
- Air conditioning and cooling systems
- Domestic water systems\*
- Ground-source heat pump systems
- Solar heating systems.

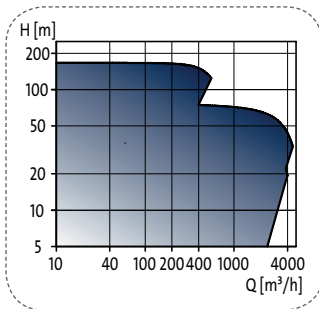
### Features

- Energy efficient circulator
- Quiet operation
- Permanent magnet motor
- Proportional pressure control
- Constant pressure control
- Constant curve/constant speed duty
- In-built Heat Energy Measurement
- Night set back
- Compatible with Grundfos GO remote
- AUTOADAPT – finds the optimum setting
- FLOWLIMIT - limits maximum flow
- FLOWADAPT – offers the combined benefits of AUTOADAPT and FLOWLIMIT
- Available in \*stainless steel.



### TP(D)

Commercial/industrial close coupled in-line circulator pumps.



#### Technical data

Flow, Q:	max. 4600 m <sup>3</sup> /h
Head, H:	max. 170 m
Liquid temp.:	-25°C to +150°C
Max. system. pressure:	25 bar.

#### Applications

In-line pump for use in

- Heating systems
- Cooling systems
- District heating plants
- District cooling plants
- Industrial cooling
- Industrial processes
- Water supply systems.

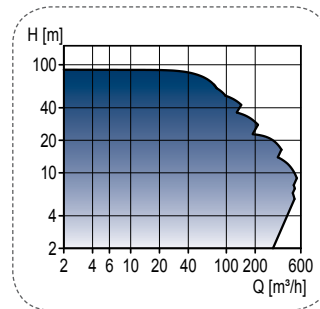
#### Features

- Compact design
- Wide range
- Standard IE3 motor (IE4 motor up to 45 kW)
- Service-friendly
- Various types of shaft seals depending on liquid, temperature and pressure
- Cast iron, stainless steel or bronze impeller (depending on model)
- Bronze pump housing option.



### TPE(D) SERIES 1000 and 2000

Single-stage, centrifugal pumps - electronically controlled.



#### Technical data

Flow, Q:	max. 550 m <sup>3</sup> /h
Head, H:	max. 90 m
Liquid temp.:	-25°C to +140°C
Max. system. pressure:	16 bar.

#### Applications

In-line pump for use in

- Heating systems
- Cooling systems
- District heating plants
- District cooling plants
- Industrial cooling
- Industrial processes
- Water supply systems.

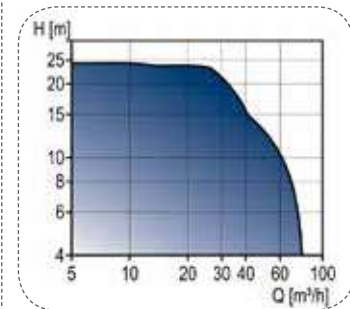
#### Features

- Low-energy
- Adapts to existing operating conditions
- Simple installation
- Field bus connectivity
- Compatible with Grundfos GO remote control
- Series 2000 includes differential pressure transducer
- Built-in alternation/standby function on twin head versions (Series 2000 model only).



### TPE2(D)/TPE3(D)

Single-stage, centrifugal pumps - electronically controlled.



#### Technical data

Flow, Q:	max. 80 m <sup>3</sup> /h
Head, H:	max. 25 m
Liquid temp.:	-25°C to +120°C
Max. system. pressure:	16 bar.

#### Applications

In-line pump for use in

- Heating systems
- Cooling systems
- District energy systems.

#### Features

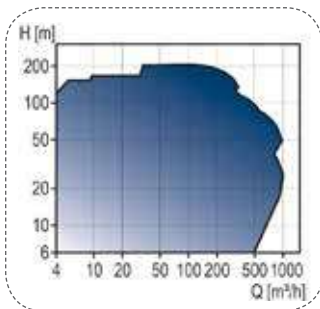
- Low-energy consumption
- Fitted with motors equivalent to IE4
- Compatible with Grundfos GO remote control
- Intelligent communication to BMS
- Cast iron as standard. Stainless steel for single pumps up to DN65
- FLOWADAPT and other intelligent control modes ensure energy savings, easy commissioning, elimination of pump throttling valve and much more (TPE3 only)
- Built-in heat energy meters allow you to continuously monitor flow and heat energy consumption\* (TPE3 only).
- Integrated  $\Delta T$  control saving the costs of a temperature sensor (TPE3 only).

\*Accuracy of flow estimation is +/-10% of max flow - not suitable for billing purposes.



## NB, NBG

Single-stage standard bloc pumps according to EN 733, ISO 2858 and ISO 5199.



### Technical data

Flow, Q:	max. 1000 m <sup>3</sup> /h
Head, H:	max. 216 m
Liquid temp.:	-25°C to +140°C
Max. system. pressure	25 bar.

### Applications

Standard bloc pumps for use in

- District heating plants
- Heating systems for blocks of flats
- Air-conditioning systems
- Cooling systems
- Washdown systems
- Other industrial systems.

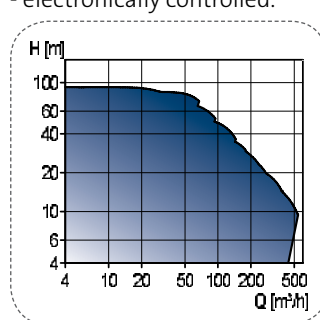
### Features

- Standard dimensions according to EN and ISO standards
- Compact design
- Flexible pump range
- EN 12756 shaft seal
- Various shaft seals options
- Cast iron, bronze or stainless steel impeller options
- Cast iron or stainless steel pump housing options.



## NBE, NBGE

Single-stage standard bloc pumps according to EN 733, ISO 2858 and ISO 5199 - electronically controlled.



### Technical data

Flow, Q:	max. 550 m <sup>3</sup> /h
Head, H:	max. 100 m
Liquid temp.:	-5°C to +140°C
Max. system. pressure:	25 bar.

### Applications

Standard bloc pumps for use in

- District heating plants
- Heating systems for blocks of flats
- Air-conditioning systems
- Cooling systems
- Washdown systems
- Other industrial systems.

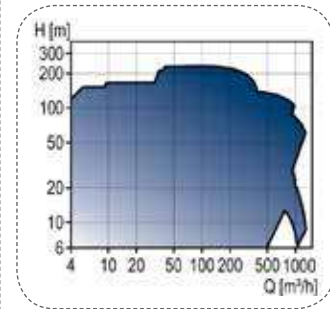
### Features

- Low energy
- Standard dimensions according to EN and ISO standards
- Compact design
- Flexible pump range
- Compatible with Grundfos GO remote control
- EN 12756 shaft seal
- Various shaft seals options
- Cast iron, bronze or stainless steel impeller options
- Cast iron or stainless steel pump housing options.



## NK, NKG

Single-stage standard long coupled pumps according to EN 733, ISO 2858 and ISO 5199.



### Technical data

Flow, Q:	max. 1170 m <sup>3</sup> /h
Head, H:	max. 216 m
Liquid temp.:	-25°C to +140°C
Max. system. pressure:	25 bar.

### Applications

Standard long coupled pumps for use in

- District heating plants
- Water supply systems
- Air-conditioning systems
- Cooling systems
- Washdown systems
- Fire fighting systems
- Other industrial systems.

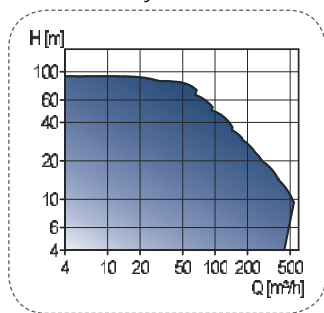
### Features

- Low energy
- Standard dimensions according to EN or ISO standards
- Wide range
- Robust design
- EN 12756 shaft seal
- Various shaft seals options
- Cast iron, bronze or stainless steel impeller options
- Cast iron or stainless steel pump housing options.



## NKE, NKGE

Single-stage standard long-coupled pumps according to EN 733, ISO 2858 and ISO 5199 - electronically controlled.



### Technical data

Flow, Q:	max. 550 m³/h
Head, H:	max. 100 m
Liquid temp.:	-25°C to +140°C
Max. system. pressure	25 bar.

### Applications

Standard long coupled pumps for use in

- District heating plants
- Water supply systems
- Air-conditioning systems
- Cooling systems
- Washdown systems
- Other industrial systems.

### Features

- Standard dimensions according to EN and ISO standards
- Wide range
- Robust design
- Compatible with Grundfos GO remote control
- EN 12756 shaft seal
- Various shaft seals options
- Cast Iron, bronze or stainless steel impeller options
- Cast iron or stainless steel pump housing options.



## MAX-E BOOST

Large domestic, light commercial booster system.

### Technical data

Flow, Q:	1.5 l/s
Max. system. pressure:	4.0 bar.
Liquid temp.:	+20°C
Electrical supply:	240V 1ph 50Hz

### Applications

Cold water pressure boosting for large domestic properties with two or more bathrooms or installations with high flow outlet fittings.

### Features

- Packaged booster set with integral controls
- Variable speed operation for constant pressure
- Factory commissioned to 3.0 bar, capacity 1.9 l/s
- WRAS approved pump and pressure vessel
- Control panel with indicator lights
- Single phase supply
- Supplied with anti vibration mountings
- Compatible with Grundfos GO remote control
- Supplied with low level float switch.



## HYDRO GTI

Light commercial booster system with integrated tank.

### Technical data

Flow, Q:	max. 14.4 m³/h
Head, H:	max. 12.7 m
Liquid temp.:	0°C to +15°C
Max. system. pressure:	10 bar.

### Applications

- Light commercial/commercial applications
- Potable water
- Wash-down systems
- Irrigation systems.

N.B. Sets are suitable for use in both new and retrofit applications.

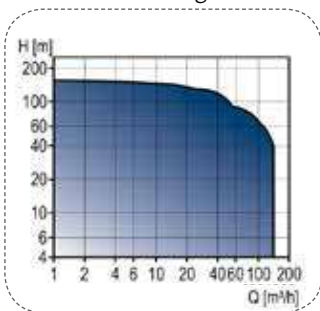
### Features

- Integral 60l tank reduces installation requirements
- Easy to install constant pressure (variable speed only)
- Low energy consumption
- Plug-and-pump solution
- 1 or 2 pumps
- Fixed or variable speed control
- Soft fill
- Compatible with Grundfos GO remote control
- Field bus connectivity with GTI E version
- Suitable for CAT5 applications
- WRAS approved product.



## HYDRO MULTI-E

Multi master turnkey booster system with CME or CRE pumps for pressure boosting of water in buildings.



### Technical data

Flow, Q:	max. 140 m <sup>3</sup> /h
Head, H:	max. 155 m
Liquid temp.:	0°C to +60°C
Max. system. pressure:	10/16 bar.

### Applications

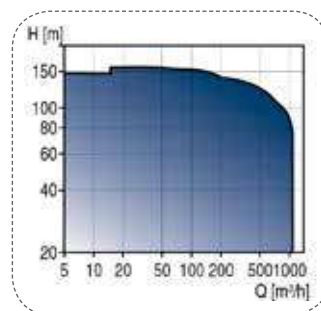
- Light commercial/commercial applications
- Industrial applications.

### Features

- Integral easy to use controls with large display
- Energy-optimised control
- 2-4 pumps in cascade
- Easy installation
- Plug and pump solution no extra programming or cabling required
- Data communication
- Perfect constant pressure
- Reduced noise level
- Space-saving installation - no need for control cabinets
- Compatible with Grundfos GO remote control
- WRAS approved product
- Multi master control system
- No single point of failure.

## HYDRO MPC-E

Turnkey booster system with CR(I)(E) pumps for transfer and pressure boosting of water.



### Technical data

Flow, Q:	max. 1080 m <sup>3</sup> /h
Head, H:	max. 155 m
Liquid temp.:	0°C to +60°C
Max. system. pressure	16 bar.

### Applications

- Commercial buildings
- Water supply systems
- Irrigation systems
- Industrial plants.

### Features

- Fully flexible control system
- Low energy consumption
- 2-6 pumps in cascade
- Easy installation
- Plug and pump solution no extra programming or cabling required
- Large user-friendly display
- Energy-optimised control
- Data communication
- Perfect constant pressure
- Application-optimised software
- Custom built solutions available
- Reduced noise level
- Space-saving installation – no need for control cabinets
- WRAS approved product.

## Pressurisation Sets\*

To maintain the required water pressure in sealed heating and cooling systems.

### Technical data

Max. system. pressure:	+85°C
Relative humidity:	95% non-condensing
Fluid category protection:	CAT 5 AB Weir Overflow Air Gap
Electrical Requirements:	230V, 50Hz, 1 Phase

### Applications

- Residential, commercial and industrial heating systems
- Residential, commercial and industrial cooling systems.

### Features (standard)

- MODBUS communication output
- Simple, security coded user interface
- Event logging
- Low water sensor
- Durable powder coated enclosure
- Long life, gun metal pump casings
- Reliable continuously rated pump(s).





### Degassing Equipment\*

To remove dissolved gasses from sealed chilled and heating systems.

#### Technical data

Max. temperature at the point of connection:	+70°C
Relative humidity:	95% non-condensing
Fluid category protection:	CAT 5 AB Weir Overflow Air Gap
Electrical Requirements:	230V, 50Hz, 1 Phase

#### Applications

- Large commercial sealed chilled systems
- Large commercial sealed heating systems.

#### Features

- Multi code access for security
- Event logging
- Self Diagnostics
- Simple control programming
- Powder coated enclosure.

# ENGINEERED FOR ENGINEERS

The Grundfos for Engineers Hub was specifically designed to keep all engineering partners with an interest in pump technology informed about the latest developments in the industry, as well as briefed on the wider subject of fully integrated pump systems.

One interesting aspect of this engineering hub allows visitors the opportunity to see and hear from many Grundfos product specialists who discuss a number of industry related topics.

The range of topics discussed is broad and covers areas such as heating systems and boiler feed; iSOLUTIONS – the Grundfos total systems approach – that offers the opportunity to make a significant impact on overall system efficiency; sensors are also in the spotlight as a topic as is the fact that through differential pressure, they can help reduce costs. This means there will be something just for you whether you are an engineer working within commercial building services, process industry applications or in water supply and/or treatment industries.

In addition to these interesting insights there are also a range of technical White Papers, case stories and access to engineering tools that will all help to keep you informed and up to date.

This is only a part of the wide range of information that is available at the touch of a button; check it out for yourself by visiting [www.grundfos.co.uk/engineers](http://www.grundfos.co.uk/engineers)



## Something else

The new Grundfos UK twitter page keeps industrial professionals working with pump solutions up-to-date.

Follow [@Grundfos\\_UK](https://twitter.com/Grundfos_UK) to get relevant industry news, events, case stories and much more.



\*These are just part of a much wider range of pressurisation, degassing and debris and air separation equipment. Please speak to your sales office for further information.

# FIRE PROTECTION



## Domestic FireSAFE

The Grundfos FireSAFE Domestic Range provides a compact, consumer and installer friendly response to the growing demand for domestic fire suppression systems and recent related legislative changes.

### Applications

The Grundfos FireSAFE Domestic Range can be used in a variety of domestic installations including:

- Apartments
- Houses (up to 4 storeys)
- Homes with multiple occupancy
- Sheltered accommodation
- Student accommodation
- Single room protection
- Small hotels\*
- Care homes\*

\*Subject to sizing calculations. A range of larger FireSAFE Residential products is also available.

### Features

- Simple to install and commission.
- Compact, unobtrusive footprint.
- Minimal maintenance design.
- Reliable, quiet Grundfos pumps.
- Advanced system controller.
- Automatic top up and self test.
- Digital contacts for remote monitoring.
- Digital inputs for tank low water switch and external flow activation switch (not supplied).
- Power output for external switches, simplifying wiring.



## FireSAFE

FireSAFE is a small compact and economical fire pump package, designed to operate within both sprinkler and water-misting applications. FireSAFE units are suitable for applications from 0-800 l/min and where pressures of 1-18 bar are required. Smaller units are available.

### Applications

This product is used in premises that have insufficient mains pressure to deliver water to their fire system.

Domestic:

- Individual flats and houses

Residential:

- Homes of multiple occupancy
- Care homes
- Sheltered accommodation
- Student accommodation
- Small hotels

Watermist:

- Industrial kitchens
- Hotels and residential properties
- Document storage
- Data centres.

### Features

- FireSAFE is a compact solution offering simple plug 'n' play installation
- A monthly self-test increases the lifespan of the equipment
- All wetted parts are provided to a minimum of 304 stainless steel
- Fail safe feature ensures you have the peace of mind that the equipment is working as intended.



## Ordinary Hazard Fire Sets

Ordinary Hazard pumps are used within sprinkler installations to protect smaller commercial and industrial properties from the effects of fire. Predominantly the units are designed to predefined duty parameters, but this may be revised to suit local site demands. The units meet the latest LPCB requirements and are red book listed.

### Applications

Within the UK, each building is given a designation that is defined by a number of criteria and given a hazard category.

**OH1:** Typically: large schools and offices, hospitals, hotels, restaurants, libraries, dairies, cement works, sheet metal producers and abattoirs.

**OH2:** Typically: museums, bakeries, breweries, photographic labs and car workshops.

**OH3:** Typically: shopping centres, supermarkets, industrial processes and buildings with a highly combustible load.

### Features

- All products are LPCB listed and approved to BSEN12845
- Full range of end-suction pumps available to suit requirements of Table 16 in BS EN12845
- All pumps are fitted with an orifice plate as standard
- A wide selection of options and accessories are available.



## High Hazard Fire Sets

High hazard pumps are used in sprinkler installations to protect commercial and industrial properties deemed as highly combustible from the effects of fire. Every system is designed specifically for each individual site requirement. The units have LPCB approval to the latest standards and are red book listed.

### Applications

Within the UK, each building is given a designation that is defined by a number of criteria and given a hazard category.

**OH1:** Typically: large schools and offices, hospitals, hotels, restaurants, libraries, dairies, cement works, sheet metal producers and abattoirs.

**OH2:** Typically: museums, bakeries, breweries, photographic labs and car workshops.

**OH3:** Typically: shopping centres, supermarkets, industrial processes and buildings with a highly combustible load.

**HH:** Typical high hazard applications are storage and distribution facilities, areas where chemicals exist and high rise buildings over 45m.

### Features

- All products are LPCB listed and approved to BSEN12845
- Extensive range of end-suction pumps available to suit requirements
- All pumps are tailored via impellers/orifice plates to suit the individual site requirements
- A wide selection of options and accessories are available.



## FM/UL Fire Sets

Factory Mutual (FM) and/or Underwriting Laboratories (UL) pumps are used within sprinkler installations to protect a wide range of properties from the effects of fire. Units are compliant to the latest National Fire Protection Association (NFPA20) requirements and annexes.

### Applications

- Offices
- Hospitals
- Warehouses
- High rise buildings
- Museums
- Shopping centres
- Supermarkets
- Large commercial units
- Industrial premises
- Industrial processes
- Oil rigs.

### Features

- Extensive range of FM/UL
- Control panel allows easy to use operation
- Downloadable pump operation logs
- All components within the pumps are independently approved and tested
- Pumps can be produced in higher grade materials for specific pumped liquids
- A wide selection of options and accessories are available.



## Hydrants and Wet Risers

Hydrant or Wet Riser pumps are used in installations to provide water to outlet points within a building or around a site. This means the fire brigade will have access to water remotely. Hydrant or Wet Riser pump sets are built in accordance to either BS5306:Part 1, or the more recently BS9990 standard.

### Applications

- Warehousing and distribution
- Air force and army bases
- High rise buildings
- Commercial properties
- Industrial applications.

### Features

- Wide range of end-suction pumps available to suit requirements
- Pumps are engineered, built and tested in the UK
- As solutions are engineered in locally, ensures individual site requirements can be met.
- A wide selection of options and accessories are available.



## Package Pump Houses

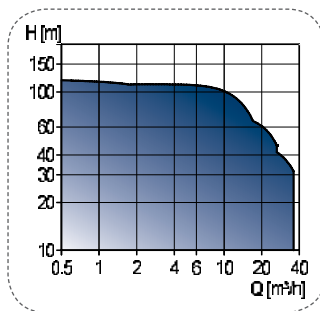
Packaged pump houses are an engineered-to-order solution, which are constructed, pre-wired and tested to individual site requirements prior to despatch. They can be built fully compliant to any known fire standard and can cater for virtually any quantity of pumps required. They are designed and fitted with a choice of components from bona fide suppliers to ensure a robust yet cost effective solution.

# INDUSTRIAL SOLUTIONS



## CM, CME

Multistage centrifugal pumps.



### Technical data

Flow, Q:	max. 36 m <sup>3</sup> /h
Head, H:	max. 130 m
Liquid temp.:	-30°C to +120°C
Max. system. pressure:	16 bar.

### Applications

- Washing and cleaning
- Water treatment
- Temperature control
- Pressure boosting.

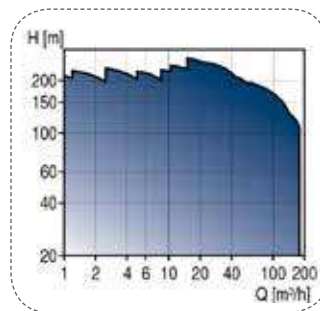
### Features

- Compact and modular design
- Very low noise level down to 50 dB(A)
- Customised products
- Built in or stand alone options
- Variable speed drive option
- Compatible with Grundfos GO remote control.



## CR, CRI, CRN

Multistage centrifugal pumps.



### Technical data

Flow, Q:	max. 180 m <sup>3</sup> /h
Head, H:	max. 330 m
Liquid temp.:	-40°C to +180°C
Max. system. pressure:	33 bar.

### Applications

The original multistage in-line pumps for use in

- Washing systems
- Cooling and air-conditioning systems
- Water supply systems
- Water treatment systems
- Fire fighting systems
- Industrial processes
- Boiler feeding systems.

### Features

- Reliability
- High efficiency
- In-line design
- Extensive range
- Service-friendly
- Space-saving
- Superior dry-running protection
- Suitable for slightly aggressive liquids.

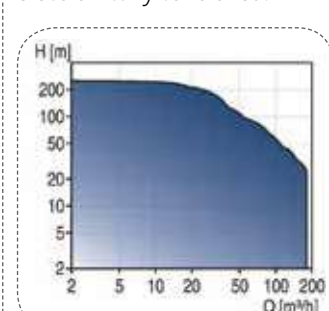
### Materials

- CR – Cast iron and 304 st steel wetted parts as standard
- CRI – 304 st steel wetted parts as standard
- CRN – 316 st steel wetted parts as standard.



## CRE, CRIE, CRNE

Multistage centrifugal pumps - electronically controlled.



### Technical data

Flow, Q:	max. 180 m <sup>3</sup> /h
Head, H:	max. 250 m
Liquid temp.:	-40°C to +180°C
Max. system. pressure:	33 bar.

### Applications

The original multistage in-line pumps for use in

- Washing systems
- Cooling and air-conditioning systems
- Water supply systems
- Water treatment systems
- Fire fighting systems
- Industrial processes
- Boiler feeding systems.

### Features

- Extensive range
- High efficiency and reliability
- In-line design
- Service-friendly
- Space-saving
- Superior dry-running protection
- Compatible with Grundfos GO remote control.

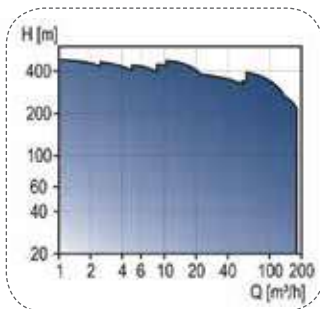
### Materials

- CRE – Cast iron and 304 st steel wetted parts as standard
- CRIE – 304 st steel wetted parts as standard
- CRNE – 316 st steel wetted parts as standard.



## CR, CRN High Pressure

Multistage centrifugal pumps.



### Technical data

Flow, Q:	max. 180 m <sup>3</sup> /h
Head, H:	max. 480 m
Liquid temp.:	-30°C to +120°C
Max. system. pressure:	50 bar.

### Applications

- Washing systems
- Water treatment systems
- Industrial plants
- Boiler feeding systems.

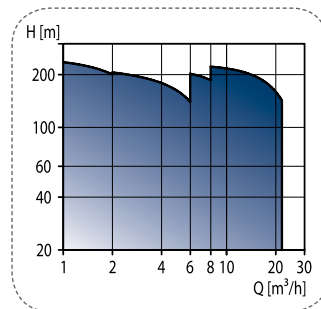
### Features

- Reliability
- High pressures
- Service friendly
- Space-saving
- Suitable for slightly aggressive liquids
- Single pump solution enabling high pressure.



## CRT, CRTE - Titanium

Multistage centrifugal pumps.



### Technical data

Flow, Q:	max. 22 m <sup>3</sup> /h
Head, H:	max. 250 m
Liquid temp.:	-20°C to +120°C
Max. system. pressure:	25 bar.

### Applications

- Suitable for liquid transfer in
- Process water systems
  - Washing in cleaning systems
  - Sea water systems
  - Pumping of acids and alkalis
  - Ultra filtration systems
  - Reverse osmosis systems
  - Swimming baths.

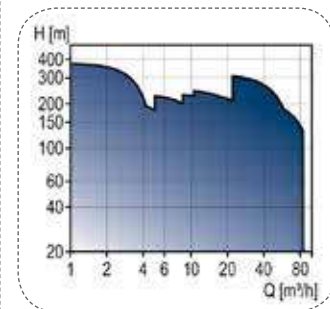
### Features

- High corrosion resistance
- Reliability
- High efficiency
- Service-friendly
- Space-saving.



## MTR, MTH, SPK

Multistage centrifugal immersible pumps.



### Technical data

Flow, Q:	max. 85 m <sup>3</sup> /h
Head, H:	max. 330 m
Liquid temp.:	-10°C to +120°C
Max. system. pressure:	25 bar.

### Applications

- Machine tool
- Washing component machines
- Chiller units
- Industrial washing machines
- Filter and conveyor systems
- Temperature control
- Boiler feed
- General pressure boosting.

### Features

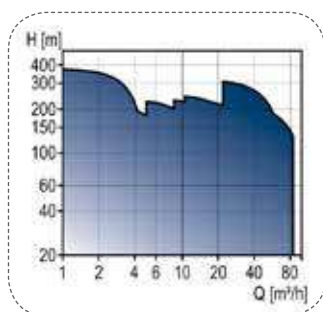
- Flexible installation length
- Wide range
- Reliability
- Service-friendly
- Simple installation
- Space-saving
- High efficiency.





### MTRE, SPKE

Multistage centrifugal immersible pumps - electronically controlled.



#### Technical data

Flow, Q: max. 85 m<sup>3</sup>/h  
 Head, H: max. 380 m  
 Liquid temp.: -10°C to +120°C  
 Max. system. pressure: 25 bar.

#### Applications

- Machine tools
- Components washing machines
- Chiller units
- Industrial washing machines
- Filter and conveyor systems
- Temperature Control
- Boiler feed
- General pressure boosting.

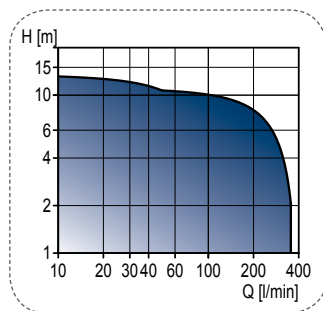
#### Features

- Wide range
- Reliability
- Service-friendly
- Simple installation
- Space saving
- High efficiency
- Many control facilities
- Compatible with Grundfos GO remote control.



### MTA

Single-stage coolant pump.



#### Technical data

Flow, Q: max. 420 l/min  
 Head, H: max. 19 m  
 Liquid temp.: 0°C to +60°C

#### Applications

- Machine tools
- Filter and conveyor systems.

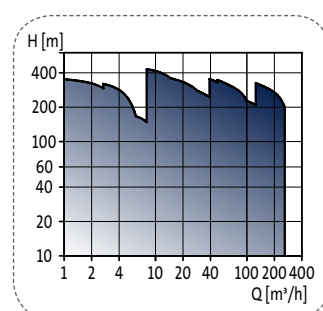
#### Features

- High efficiency motor and hydraulics
- Wide range
- Flexible installation length
- Reliability
- No shaft seal
- Semi-open impeller
- Easy installation.



### BM

4", 6", 8" booster modules.



#### Technical data

Flow, Q: max. 265 m<sup>3</sup>/h  
 Head, H: max. 440 m  
 Liquid temp.: 0°C to +40°C  
 Max. system. pressure: 80 bar.

#### Applications

- The booster modules are suitable for pressure boosting in
- Reverse osmosis systems
- Water supply systems
- Water treatment systems
- Industrial plants.

#### Features

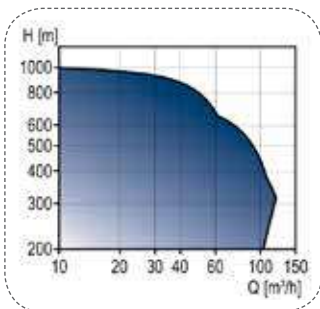
- Various material versions
- Low-noise
- Service friendly
- Simple installation
- Modular design
- Compact design
- Leakage free.

# GRUNDFOS iSOLUTIONS - PUMPS AND SYSTEM IN HARMONY



## BMS

High-pressure booster systems.



## Technical data

Flow, Q:	max. 120 m <sup>3</sup> /h
Head, H:	max. 820 m
Liquid temp.:	0°C to +40°C
Max. system. pressure:	82 bar.

## Applications

- Reverse osmosis systems
- Water supply systems
- Water treatment systems
- Industrial plants.

## Features

- High-pressure/high-flow
- Low-energy consumption
- Simple installation
- Compact design
- Small footprint
- Low weight
- VFD self-test at startup
- Overload protection.

Pumps are big energy consumers that currently account for 10% of global electricity and many are needlessly inefficient. Today by focussing on changing to high efficiency pumps that incorporate advanced motor technology, an average pump's energy consumption can be reduced by up to 60%.

Efficiencies are a function of good pump design and not purely a standalone benefit so it is important to understand the true value of pump efficiency. This means that to achieve the highest overall efficiency the complete installation needs to be examined in terms of the entire system, as opposed to just viewing the pump in isolation and being able to deliver real energy savings with a short return on investment, of less than 2 years is now reality.



By thinking beyond the pump and taking the entire pumping system into account it is possible to optimise the way pumps, drives, controls & protection, measurement and communication units work together as part of one system. A manufacturer like Grundfos, can incorporate specific demands with our application expertise, take these requirements, and translate them into state-of-the-art pump intelligence - for any application. This approach that is both integral as well as encompassing the integrity of the entire system and is called Grundfos iSOLUTIONS.

The need to optimise and control speed is something that will continue to gain in importance within areas such as building services, industry and wastewater applications and therefore the ability for systems to become increasingly synchronised, will also continuous to play a more significant role.

# CONNECT TO OPTIMISE SYSTEM PERFORMANCE

## GRUNDFOS iSOLUTIONS



PUMP CLOUD SERVICES

CONTROLS &  
PROTECTION

PUMPS

DRIVES

MEASUREMENT

COMMUNICATION  
UNITS

# INTELLIGENT PUMP SOLUTIONS ON DEMAND

## JOIN THE FIGHT FOR INTELLIGENT PUMP SOLUTIONS

The Grundfos iSOLUTIONS range comprises pumps, sensors and controls that incorporate intelligent operation to deliver outstanding reliability and energy efficiency. Innovations include variable speed motors that exceed IE4 efficiency standards, remote monitoring to aid maintenance and smartphone setup to speed commissioning.

For more information visit [www.grundfos.co.uk/isolutions](http://www.grundfos.co.uk/isolutions)

be  
think  
innovate

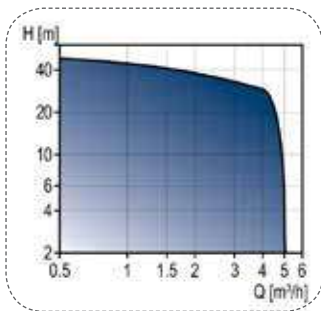
GRUNDFOS 

# WATER SUPPLY



## JP5

Self-priming jet pumps and boosters.



### Technical data

Flow, Q:	max. 5 m³/h
Head, H:	max. 50 m
Liquid temp.:	0°C to +40°C
Suction lift:	max. 7 m
Max. system. pressure:	6 bar.

### Applications

Suitable for liquid transfer in

- Households
- Gardens
- Hobby activities
- Agriculture
- Horticulture
- Small industries.

### Features

- Self-priming
- Stable operation even in case of air pockets in the liquid
- Automatic start/stop when equipped with a Pressure manager
- Booster sets for small-scale water supply
- WRAS approved product.



## CM - SP

Self-priming multistage centrifugal pumps.

### Technical data

Flow, Q:	max. 6.5 m³/h
Head, H:	max. 65 m
Liquid temp.:	0°C to +60°C
Suction lift:	max. 8 m
Max. system. pressure:	16 bar.

### Applications

- Water treatment
- Domestic pressure boosting
- Water supply for agriculture
- transfer and pressure boosting in rain water applications.

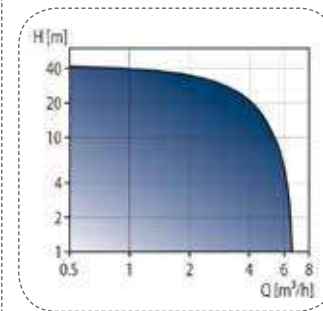
### Features

- Compact design
- Low noise for quiet operation
- Stainless steel pump has WRAS approval.



## SB, SBA

Submersible pumps.



### Technical data

Flow, Q:	max. 6.6 m³/h
Head, H:	max. 43 m
Liquid temp.:	0°C to +40°C

### Applications

The SB and SBA are submersible booster pumps for the pumping of clean water. They are especially suitable for rainwater applications.

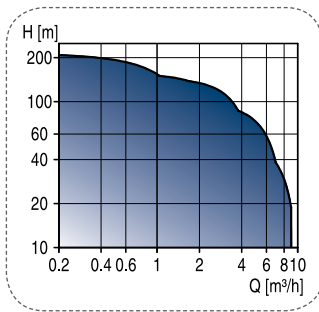
### Features

- Integrated protection.
- Floating suction strainer - the model with floating suction strainer always draws the water from just below the water surface where the water is clean and free from solid particles.
- Noiseless operation
- High reliability.



### SQ, SQE

3" submersible pumps.



#### Technical data

Flow, Q: max. 9 m<sup>3</sup>/h  
 Head, H: max. 210 m  
 Liquid temp.: 0°C to +40°C  
 Installation depth: max. 150 m

#### Applications

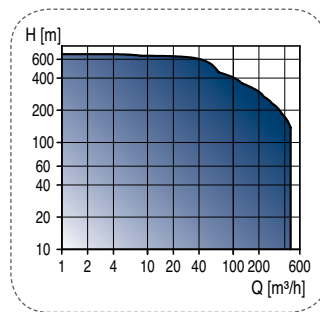
- Domestic water supply systems
- Groundwater supply to waterworks
- Irrigation in horticulture and agriculture
- Groundwater lowering
- Industrial applications.

#### Features

- Integrated dry-running protection
- Soft start
- Over and undervoltage protection
- High efficiency.

### SPA, SP, SP-G

4", 6", 8", 10", 12" submersible pumps.



#### Technical data

Flow, Q: max. 470 m<sup>3</sup>/h  
 Head, H: max. 670 m  
 Liquid temp.: 0°C to +40°C  
 Installation depth: max. 600 m

#### Applications

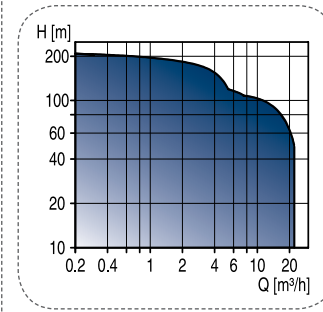
- Groundwater supply to waterworks
- Irrigation in horticulture and agriculture
- Groundwater lowering
- Pressure boosting
- Industrial applications.

#### Features

- High efficiency
- Long service life as all components are stainless steel.
- Motor protection via CUE or MP 204
- Compatible with Grundfos GO remote control.

### SQE-NE, SP-NE

Remediation and sampling pumps.



#### Technical data

Flow, Q: max. 22 m<sup>3</sup>/h  
 Head, H: max. 215 m  
 Liquid temp.: 0°C to +40°C  
 Installation depth: max. 150 m (SQE)  
 max. 600 m (SP-NE)

#### Applications

The pumps are suitable for

- Pumping up contaminated groundwater
- Sampling
- Remedial pumping.

#### Features

##### SQE-NE

- Integrated dry-running protection
- Soft start
- Over and undervoltage protection
- High efficiency.

##### SP-NE

- High efficiency
- Long service life as all components are stainless steel
- Motor protection via CUE or MP 204.

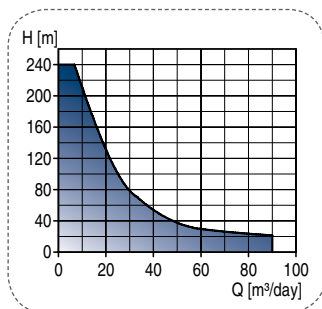


# ENVIRONMENTALLY SPEAKING



## SQ FLEX

Renewable-energy based water supply systems.



### Technical data

Flow, Q:	max. 90 m <sup>3</sup> /day
Head, H:	max. 120 m
Liquid temp.:	0°C to +40°C
Voltage supply:	30-300 VDC or 1x90-240V, 50/60 Hz
Installation depth:	max. 150 m

### Applications

The SQ FLEX systems are suitable for remote locations, such as:

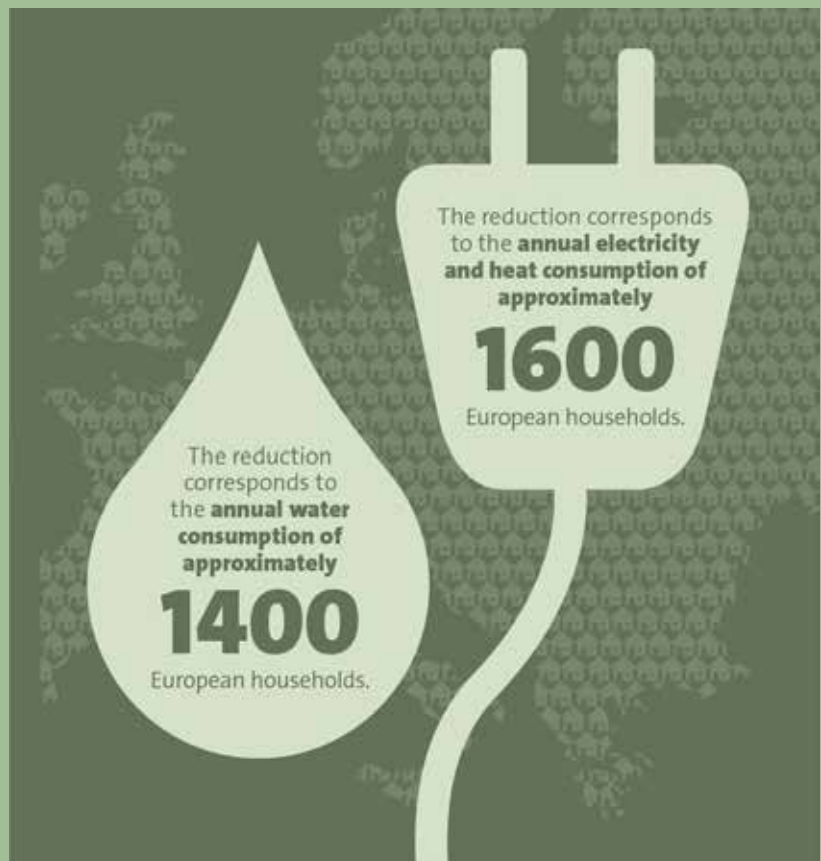
- Villages, schools, hospitals, small-family houses
- Farms and irrigation of greenhouses
- Game parks and game farms
- Conservation areas.

### Features

- Energy supply: Solar modules, wind turbine, generator or batteries
- Simple installation
- Reliable water supply
- Virtually no maintenance
- Expansion possibilities
- Cost-efficient pumping
- Dry-running protection.

As a global organisation, we fully understand and accept our environmental responsibility and have consciously chosen to place as little additional strain on the Earth's already scarce resources as possible. An example of this is in 2009 when Grundfos decided to optimise its energy processes wherever possible. The Grundfos Group simultaneously pledged to never emit more CO<sub>2</sub> than we had the year before.

We made 2008 the basis for future maximum CO<sub>2</sub> emissions as this is the first year in which we had a reliable set of data to work with. Based on these 2008 results, this means that Grundfos must never again emit more than 124,000 tons CO<sub>2</sub> per year, irrespective of future growth rates.



*See above for our footprint reduction targets for water and energy usage*

Grundfos produce an annual Sustainability Report that documents our overall approach to the environment and looks at specific ambitions, lists targets and explains activities. To view this report and find out more about our response to sustainability, please visit [www.grundfos.co.uk](http://www.grundfos.co.uk). In another recent development Grundfos, have formulated a specific view on how to make an environmental difference in response to climate changes in our climate White Paper.

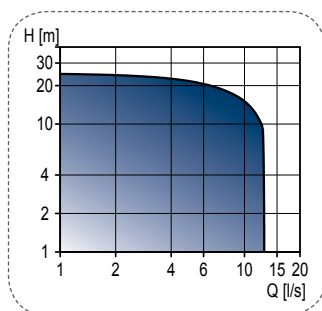
This White Paper presents Grundfos' response to the challenge of climate change. It explains the framework we employ to tackle this global issue and grow our business at the same time. However this white paper is not an action plan. The purpose is not to provide detailed instructions on how Grundfos will address climatic changes; rather the aim is to set the overall direction for future climate related initiatives at Grundfos. This report can also be viewed on line.

# WASTEWATER



## DP, EF

Drainage and effluent pumps.



### Technical data

Flow, Q:	max. 12.8 l/s (46 m <sup>3</sup> /h)
Head, H:	max. 25 m
Liquid temp.:	0°C to +40°C
Discharge diameter:	Rp 2 to DN 65

### Applications

- Drainage (DP)
- Effluent (EF)
- Wastewater
- Process water.

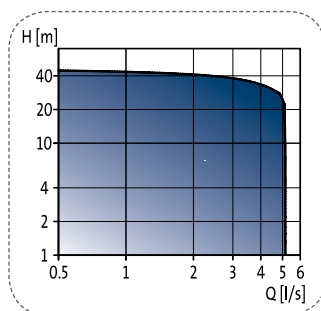
### Features

- Cable plug connection
- Flexible pipe and cable plug connections
- Unique clamp connection
- Single-channel and vortex impellers
- Solids passage up to 65mm
- Unique cartridge shaft seal
- Modular design
- Minimum downtime
- Control and protection system options
- Motor operation control options
- AUTOADAPT function (optional).



## SEG

Grinder pumps.



### Technical data

Flow, Q:	max. 5 l/s
Head, H:	max. 47 m
Liquid temp.:	0°C to +40°C

### Applications

The pumps are suitable for the pumping of wastewater and sewage through pipes of 40mm in diameter and upwards.

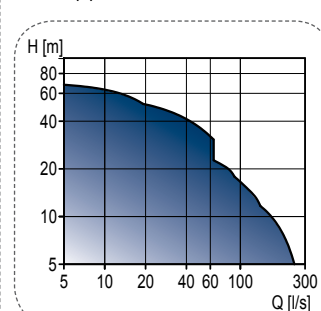
### Features

- Service-friendly
- Installation on foot or auto-coupling
- Continuous operation with fully submerged pump
- Built-in motor protection
- SmartTrim
- Improved grinder system
- Totally sealed cable plug
- Wide range of accessories
- Monitoring and control of one or several pumps
- AUTOADAPT function (optional).



## SL1/SLV

Heavy duty submersible pumps, for wet well applications.



### Technical data

Flow, Q:	max. 270 l/s (1080 m <sup>3</sup> /h)
Head, H:	max. 70 m
Free passage:	50 mm to 160 mm
Discharge diameter:	DN 65 to DN 300.

### Applications

- Drainage water and surface water
- Domestic and municipal wastewater
- Industrial wastewater
- Process and cooling water.
- Pumping stations.

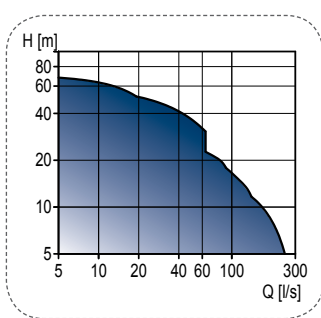
### Features

- Service friendly (smartdesign)
- Reliable and energy efficient (Grundfos Blueflux®)
- S-tube or SuperVortex impellers.
- Control and protection system options
- Motor control options
- Built-in sensors for pump monitoring
- Various cast stainless-steel versions available
- AUTOADAPT function (optional).



## SE1/SEV

Heavy duty submersible pumps for dry or wet well applications.



### Technical data

Flow, Q:	max. 270 l/s (1080 m <sup>3</sup> /h)
Head, H:	70 m
Free passage:	50 mm to 160 mm
Discharge dia.:	DN 65 to DN 300.

### Applications

- Drainage water and surface water
- Domestic and municipal wastewater
- Industrial wastewater
- Process and cooling water
- Pumping stations.

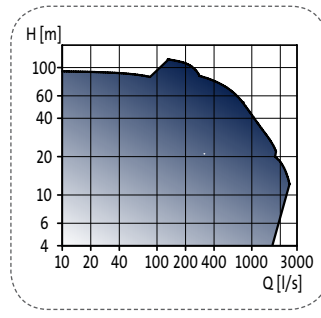
### Features

- Service friendly (smartdesign)
- Reliable and energy efficient (Grundfos Blueflux®)
- S-tube or SuperVortex impellers.
- Control and protection system options
- Motor control
- Built-in sensors for pump monitoring (optional)
- AUTOADAPT function (optional)
- Various cast stainless-steel versions available.



## S Pumps

Supervortex pumps, single or multi-channel impeller pumps.



### Technical data

Flow, Q:	max. 2500 l/s
Head, H:	max. 116 m
Liquid temp.:	0°C to +40°C
Discharge dia.:	DN 80 to DN 500
Particle size:	max ø145mm

### Applications

The pumps are suitable for:

- Transfer of wastewater
- Transfer of raw water
- Pumping of sludge-containing water
- Pumping of industrial effluent.

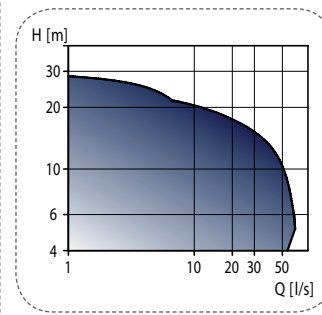
### Features

- Wide range
- SmartTrim
- Operation with/without cooling jacket
- Submerged or dry installation
- Different types of impeller options
- Built-in motor protection
- Control and protection system options
- External cooling water
- External seal flush system
- Optional Sensors for monitoring of pump conditions.



## MULTILIFT

Complete lifting station solution.



### Technical data

Flow, Q:	max. 60 l/s (216m <sup>3</sup> /h), recom. 31 l/s (110 m <sup>3</sup> /h)
Head, H:	max. 29 m
Liquid temp.:	0°C to +40°C
Discharge dia.:	DN 80 to DN 100

### Applications

- Small or large family houses
- Weekend cottages and summer houses
- Restaurants and small hotels
- Sewage systems in the open country
- Percolation systems.

### Features

- Ready for installation
- Flexible pipe and cable plug connections
- Unique clamp assembly system
- Single-channel and vortex impellers
- Solids passage up to 100mm
- Low risk of clogging
- Minimum downtime
- Low operating costs
- Liquidless motor cooling
- Unique cartridge shaft seal
- Modular design.



## PS. R

Small pumping stations.

### Technical data

Diameter:	ø400, ø 600, ø 800 and ø 1000
Depth:	from 0.5 - 3.0 m
Outlet pipe size:	DN 40, DN 50, and DN 65
Liquid temp:	max. 40°C

### Applications

- Drainage
- Effluent/rainwater/surface water
- Waste water.

### Features

- Made of PEHD, pipes and valves made of PE or stainless steel
- Modular flexibility
- Corrosion-free materials
- Increased sump volume prevents push up
- Easy installation
- Sturdy design
- Inlet holes drilled on site
- Design of sump limits sludge and odour problems
- Various pump and control options.



## AMD, AMG, AFG

Mixers and flowmakers.

### Technical data

Liquid temp.:	+5°C to +40°C
pH value:	4 to 10
Axial thrust:	160 to 3931 N
Max. dynamic viscosity:	500 mPa s
Max. density:	1060 kg/m <sup>3</sup>
Max. installation depth:	20 m
Propeller diameter:	180-2600 mm
Rotation speed:	22-400 min <sup>-1</sup>

### Applications

The mixers and flowmakers are designed for mixing, i.e. homogenisation and suspension, of liquids in

- Municipal wastewater treatment systems
- Industrial processes
- Sludge treatment systems
- Agriculture
- Biogas plant.

### Features

- Angular contact bearings (roller bearings)
- Easy to maintain and service without use of special tools
- Electronic leak sensor in gearbox/ shaft seal housing
- Shaft seal protected against abrasive materials
- Self-cleaning stainless steel or polyamide propellers
- Mixers and flowmakers are equipped with propellers made of stainless steel or composite material.

# IN THE PALM OF YOUR HAND

The Grundfos Product Center is an online search and sizing tool that helps you choose the right pump for a new installation, as a replacement or it can help you find information about pumps you already have. In the Product Center, you can size pumps, browse the Grundfos product catalogue, find appropriate replacement pumps, or find pumps for handling specific liquids. As the definitive product search system for all of Grundfos, the Product Center covers every sector we serve, including domestic and commercial building services, the water supply industry, wastewater management, industry and OEM solutions.

Once you've arrived at a pump's product page, you'll find all data relating to the product in question. The top panel of the product page is where you'll find:

- performance curves with adjustable curve settings
- a picture of the pump
- dimensional drawings
- a motor curve
- wiring diagrams
- available spare parts and service kits
- any available 3D drawings.



This provides an exhaustive picture of the pump, its design and its capabilities. The bottom panel of the product page details the pump's technical specifications and provides access to a quotation text, any available videos, downloadable supporting documents, available CAD drawings and system parts.

Once you have located the pump you want, you'll find pump-specific documentation, CAD drawings, spare parts and service kits, and instructional videos – all on the pump's product page.

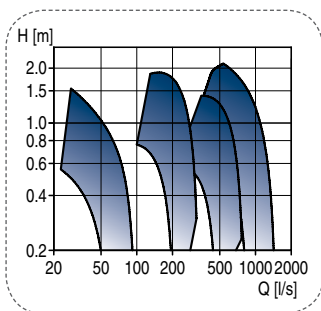
Find out the many features, options and benefits that the new hub can deliver by simply visiting [www.grundfos.co.uk](http://www.grundfos.co.uk) and click on the Product Center link – while you're there why not sign up as a registered Grundfos Product Center user. Because as a registered user, you will get access to recent searches, products and other items, and the ability to save items for future reference – including entire projects 24/7.

Which all means the new Grundfos Product Center is open for business whenever you need it.



## SRP

Submersible re-circulation pumps.



## Technical data

Flow, Q:	max. 1430 l/s (5130m <sup>3</sup> /h)
Head, H:	max. 2.1 m
Liquid temp.:	5°C to +40°C
Column pipe diameter:	DN300, DN500 & DN800

## Applications

The pumps are suitable for

- Transfer of raw water
- Re-circulation of sludge within sewage treatment plants
- Storm water pumping
- Irrigation
- Industrial applications.

## Features

- High efficiency stainless steel propeller
- Totally submerged installations
- Built-in motor protection
- Flexibility of installation
- Control and protection system options.



# DOSING AND DISINFECTION



## DDA, DDC, DDE

Digital diaphragm dosing pumps..

### Technical data

Capacity, Q:	max. 30 l/h
Pressure, p:	max. 16 bar
Liquid temp.:	max. +45 °C

### Applications

State-of-the art technology with many unrivalled features. Used where optimum accuracy and control is necessary within basic simple applications including;

- Drinking water treatment
- Waste water treatment
- Pulp and paper industry
- Textile industry
- Cleaning water treatment
- Food and beverage industry, dairies
- Cooling tower water treatment
- Low-pressure boiler feed water treatment.

### Features

- Up to 3000:1 accurate turndown
- Precise capacity setting in ml or l
- Easy to program with click wheel
- Display can be moved into 3 positions
- Large bright LCD red/amber/green traffic light display (DDA and DDC models)
- Suitable for surface or wall mounting
- Manual/pulse/4-20 mA control
- Batch or real time timer control
- Easy calibration
- Smooth pulse output
- Fieldbus communications, Profibus
- Flow measurement.



## DOSING TANK SETS

Cylindrical polyethylene tanks and bunds, dosing accessories for self-assembly

### Technical data

Capacity, Q:	40, 60, 100, 200, 300, 500 and 1000 litre
Material:	LLDPE, UV stabilised
Colour:	white or black
Liquid temp.:	-20 to +45°C

### Applications

- Pulp and paper industry
- Industrial water and waste water treatment
- Cooling tower and boiler dosing
- Textile industry.

### Features

- Fast, easy assembly. Direct mounting of SMART pump with pre-drilled holes
- Grundfos accessories screw into place
- Riser support for electric mixer
- Lockable lid
- Cable tidy
- Strong, high wall thickness
- Accessories include suction lines, electric mixer, hand mixer, vent valve, drain valve, suction lances with/without level control, floor mounting brackets.



## DDI, DME

Digital dosing pumps.

### Technical data

Capacity, Q:	max. 940 l/h
Pressure, p:	max. 10 bar
Liquid temp.:	max. +50 °C

### Applications

Injection of chemicals in water and wastewater treatment systems, washing systems, swimming pools and process plants.

### Features

- Precise capacity setting directly in l or l
- Full diaphragm control
- Stroke speed or frequency capacity control
- Operation panel with display and one-touch buttons
- Front or side fitted operation panel
- Manual/pulse control
- Control panel lock
- 4-20 mA control
- Pulse/timer based batch control
- Anti-cavitation function
- Easy calibration function
- Fieldbus communication module (optional)
- Leakage sensor.



## DMX

Motor-driven diaphragm dosing pumps.

### Technical data

Capacity, Q:	max. 4,000 l/h (pump with two heads: 2 x 4,000 l/h)
Pressure, p:	max. 10 bar
Liquid temp.:	max. 50 °C.

### Applications

- Drinking-water treatment
- Wastewater treatment (settlement/sludge treatment)
- Pulp and paper industry
- Textile industry
- Industrial water and wastewater treatment
- Cooling tower.

### Features

- Robust design
- Stroke-length adjustment
- Pulse control (control variant AR)
- Analog control (control variant AR)
- Level input from storage tank (control variant AR)
- Motor frequency control
- Available with ATEX approval (DMX 226).



## DMH

Hydraulic piston diaphragm dosing pumps.

### Technical data

Capacity, Q:	max. 1,500 l/h (pump with two heads: 2 x 1500 l/h)
Pressure, p:	max. 200 bar
Liquid temp.:	max. 90 °C.

### Applications

- Oil refinery industry
- Heavy-duty applications
- Pulp/paper and textile industries
- Cooling tower, power plants
- Industrial water and wastewater treatment.

### Features

- Designed for heavy-duty operation
- Stroke-length adjustment
- Long life time due to piston diaphragm technology
- Full PTFE diaphragm
- Available with API 675 approval
- Available with ATEX approval
- Servo motor for stroke-length adjustment
- Frequency controlled motor.



## POLYDOS

Preparation systems for dry material and liquid polymers.

### Technical data

Standardised and customised installations	
Preparation capacity:	max. 11,000 l/h
Viscosity of prepared solution:	max. 2,500 mPa s.

### Applications

Preparation of polymers, lime, activated carbon, aluminium sulphate, etc. for water, wastewater and sludge treatment.

### Features

- Polydos: one, two or three-chamber units for handling, preparation and dosing of dry and liquid polymers and other material.
- Includes dry and liquid material feeding system.
- Fully automatic systems with PLC control.
- Graphic display with multilingual user interface.
- Preparation and ripening chamber with electric agitators (optional for the dosing chamber).
- Ultrasonic sensor for continuous level control.
- Water apparatus with shut-off valve, solenoid valve (24 VDC), pressure reducing valve and contact water meter.



## VACCUPERM

Full-vacuum chlorine gas dosing systems for disinfection.

### Technical data

VGB: max. 2 kg/h  
 VGA: max. 10 kg/h  
 VGS: max. 200 kg/h.

### Applications

- Drinking-water treatment (municipal waterworks)
- Treatment of industrial wastewater
- Water treatment in public swimming pools.

### Features

- Reliable full-vacuum systems
- Approved disinfection method complying with WHO drinking water guidelines
- Systems for direct installation on chlorine gas cylinders or drums or for installation in header lines
- Fully automated systems (wall- or floor-mounted)
- Precise regulation and dosing of gaseous chlorine simple handling and user-friendly design
- Complete range of accessories available on request: injectors, automatic changeover units, evaporators, liquid traps.



## SELCOPERM

Electro-chlorination systems for disinfection.

### Technical data

Capacity: max. 2000 g/h (higher capacities on request)

Water consumption: 125-150 l per kg of prepared chlorine

Salt consumption: approx. 3 to 3.5 kg per kg of prepared chlorine

Power consumption: approx. 4.5 - 5.5 kWh per kg of prepared chlorine.

### Applications

- Water treatment in municipal waterworks and with independent water suppliers
- Treatment of industrial wastewater
- Treatment of industrial process water, and water in cooling towers
- Water treatment in public swimming baths, hotel pools and therapy pools.

### Features

- Turn-key systems
- Only water, common salt and electricity are needed for the Selcoperm electrolysis method
- Fresh disinfectant solution (hypochlorite) is always available
- Simple handling and user-friendly design
- Approved disinfection method complying with WHO drinking water guidelines and many local regulations
- Low maintenance and long service life due to robust components.



## OXIPERM PRO

Chlorine dioxide preparation and dosing systems for disinfection.

### Technical data

Model OCD-162:

- Capacity: max. 60 g/h
- Concentration of chemicals:
  - HCl: 9% by weight
  - NaClO<sub>2</sub>: 7.5% by weight

### Applications

- Water treatment in waterworks, hotels, hospitals, retirement homes, sports facilities, shower facilities
- Combating prophylaxis of Legionella
- Treatment of industrial process water, washing water and cooling circuit water
- Treatment of brewing water
- Disinfection in bottle wash systems, rinsers, CIP systems
- Disinfection in dairies (condenser vapour, pasteurisation).

### Features

- Compact system to be installed in confined spaces
- Ergonomic design. Operation and maintenance are performed from the front
- On-site preparation of the disinfectant chlorine dioxide
- Optional with chlorine dioxide control
- Simple assembly and start up. The system can be connected and put into operation without interrupting the building's water supply
- Complete chemical reaction within a minimum of time
- Low operating costs and low consumption of chemicals.



## OXIPERM

Chlorine dioxide preparation and dosing systems for disinfection.

### Technical data

Model OCD-164:

- Hydrochloric acid/sodium chlorite method with diluted chemicals:
  - HCl: 9% by weight
  - NaClO<sub>2</sub>: 7.5% by weight
- Capacity: 30 - 2000 g/h

Model OCC-164:

- Hydrochloric acid/sodium chlorite method with concentrated chemicals:
  - HCl: 33% by weight
  - NaClO<sub>2</sub>: 24.5% by weight
- Capacity: max. 10 kg/h

Model OCG-166:

- Chlorine gas/sodium chlorite method:
  - NaClO<sub>2</sub>: 24.5% by weight
  - Cl<sub>2</sub>: 3 g/l
- Capacity: max. 10 kg/h

### Applications

- Water treatment in waterworks, hotels, hospitals, retirement homes, sports facilities
- Combating Prophylaxis of Legionella
- Treatment of industrial process water, washing water and cooling circuit water
- Disinfection in bottle wash systems, rinsers, CIP systems
- Disinfection in dairies (condenser vapour, pasteurisation).

### Features

- On-site preparation of chlorine dioxide
- Ergonomic design
- Optimum process monitoring
- Innovative dosing and calibration technology
- Complete chemical reaction within a minimum of time
- Low consumption of chemicals
- Easy maintenance.



## Conex® DIA, DIS

Measurement and control systems for dosing instrumentation.

### Technical data

Amplifier parameters:

- Conex® DIA-1: Cl<sub>2</sub>, ClO<sub>2</sub>, O<sub>3</sub>, PAA, H<sub>2</sub>O<sub>2</sub>, pH or redox (ORP)
- Conex® DIA-2: parameter 1: Cl<sub>2</sub>, ClO<sub>2</sub>, O<sub>3</sub> or H<sub>2</sub>O<sub>2</sub>. parameter 2: pH
- Conex® DIA-2Q: parameter 1: Cl<sub>2</sub>, ClO<sub>2</sub>, O<sub>3</sub>, PAA or H<sub>2</sub>O<sub>2</sub> parameter 2: pH or redox (ORP)
- Conex® DIS-C: conductivity (inductive or conductive probes)
- Conex® DIS-PR: pH or redox (ORP)
- Conex® DIS-D: Cl<sub>2</sub>, ClO<sub>2</sub> or O<sub>3</sub>

### Applications

Instrumentation in disinfection processes:

- Drinking water
- Industrial water
- Wastewater (only effluent)
- Pool water.

### Features

- User-friendly plain-text menu and operator prompting.
- Device calibration feature with plausibility check prevents errors.
- Multilingual menu.
- Self-monitoring feature ensures excellent water quality at all times.
- Compensation for disturbance factors ensures precise measurement which reduces chemical consumption.
- Available as a preassembled system.



## Conex® DIA-G, DIS-G

Gas warning systems.

### Technical data

Conex® DIA-G: intelligent, membrane-covered gas sensors with integrated RAM for challenging measuring tasks. Sensor type, production number, manufacturing date and slope are stored in the memory. Gas warning system for Cl<sub>2</sub>, ClO<sub>2</sub>, O<sub>3</sub> (amperometric and potentiostatic probes) and NH<sub>3</sub>, HCl (potentiostatic probes).

Conex® DIS-G: rugged, low-budget gas sensors for dry rooms. Gas warning system for Cl<sub>2</sub>, ClO<sub>2</sub>, O<sub>3</sub> (amperometric probes).

### Applications

- Gas dosing installations
- Monitoring of gas storage rooms.

### Features

- Capable of monitoring two different gas storage rooms or two different gases at the same time.
- Simultaneous measurement and display of two measuring parameters
- Optimum safety
- Very short response time
- Long and maintenance-free sensor service life
- Automatic sensor recognition and autocalibration
- Separate sensor interface for
- Conex® DIA-G for each potentiostatic sensor
- Internal CAN-bus for the connection of potentiostatic sensors
- Optional acoustic and visual alarm device.

# CONTROLS AND ANCILLARY ITEMS



## CUE

Frequency converters for three-phase pumps.

### Technical data

Mains voltage:

1 x 200-240 V

2 x 200-240 V

3 x 380-500 V

3 x 525-600 V

3 x 575-690 V

### Applications

Adjustment of the pump performance to the demand. Together with sensors, the CUE offers these control modes:

- proportional differential pressure
- constant differential pressure
- constant pressure
- constant pressure with stop function
- constant level
- constant level with stop function
- constant flow rate
- constant temperature

The CUE can also be controlled by an external signal or via GENibus.

### Features

- Adjustment of the pump performance to the demand, thus saving energy
- Easy installation, as the CUE is designed for GRUNDFOS pumps
- Short-circuit-protected output; no motor-protective circuit breaker required
- Fault indication via display and a relay, if fitted
- External setpoint influence via three programmable inputs
- Compatible with CIU communication devices.



## Control Panels

Bespoke control panels standalone or integrated installation.

### Technical data

- Built to current European manufacturing standards
- IP54 minimum enclosures
- CAD drawings available
- RAL 7032/5 standard panel finish.

### Applications

Suitable for pump and system control in

- Building Management Systems
- Cold water boosting
- Fire Protection
- Waste Water management.

### Features

- All internal equipment to IP2X as standard
- Door interlocked isolators and low voltage control circuits as standard
- Traffolyte/Gravoply engraved labels
- All cables identified by colour coded idents
- Factory acceptance testing on all products
- Electrical schematic and GA drawings supplied with units
- Electrical safety test certificates supplied.



## MP 204. CU 300, CU 301

Control and monitoring units.

### Applications

- Monitoring and protection of pump installations.

### Features

- Protection against dry running and too high motor temperature
- Constant monitoring of pump energy consumption
- Connection to large control systems via BUS-communication
- Connection of sensors enabling control based on sensor signals
- Wireless remote control via Grundfos GO remote.





## Sensors

VFS - Vortex flow sensors for liquids  
 RPS, DPS - Relative and differential pressure sensors for liquids.

### Technical data

VFS flow, Q:	1-400 l/min
Range:	0-10 bar. (RPS) 0-6 bar. (DPS)
Power supply:	5 VDC PELV
Output signal:	0.5-3.5 V (VFS/ RPS) 0.5-4.5 V (DPS)
Liquid temp.:	0 to +100 °C
Measuring technology:	MEMS.

### Applications

- VFS
- Thermal management in solar heating systems
  - Calorimetric capability - for solar heat pumps
  - Industrial process flow control
  - Cooling and temperature control for e.g. manifold systems
  - Floor/radiant heating and valve systems.

### RPS/DPS

- Domestic hot-water systems
- Central heating systems
- Dry-running protection in solar systems and boilers
- Surveillance of filter efficiency
- Pressure control for manifold systems.

### Features

- Suitable for wet, aggressive liquids
- Ratiometric output for dedicated controls
- WRAS approved product.



## CIU/CIM

Fieldbus communication interfaces.

### Technical data

The CIM/CIU interfaces enable the connection of Grundfos electronic products to standard fieldbus networks. CIM can be installed as an add-on module in many E-pumps and CU 323 / 352 / 354 / 362; for other products, use the CIU box with internal power supply.

### Applications

- Heating systems
- Cooling systems
- Booster systems
- Industrial processes
- Water supply systems
- Wastewater pumping systems
- Dosing and disinfection.

The following product ranges are

- supported:
- MAGNA/UPE series
- CRE/CRNE/CRIE, MTRE, CME, NBE/NKE, TPE Series 1000/2000, CUE
- Hydro MPC / Control MPC / Multi-E
- MP 204\*
- Dedicated Controls\*
- SEG AUTOADAPT\*
- DDA Dosing\*

\*= Not supported by all CIM/CIU types.

### Features

- Available with GENiBus, BACnet MS/TP, LON, Modbus RTU, PROFIBUS DP, COMLI, GSM\*/GPRS\*\* and Ethernet for PROFINET IO, Modbus TCP and BACnet IP
- Modular design
- Based on standard functional profiles.

\*text messaging

\*\*web based remote monitoring.



## Grundfos GO Remote

The Grundfos GO remote offers intuitive mobile handheld remote pump control.

### Technical data

- Grundfos MI 202 and MI 204 for iPod and iPhone
- Grundfos MI 301 for Android.
- Pump communication: IR and radio.

### Applications

Wireless communication with Grundfos products for status information and control. The following Grundfos product families are supported:

- ALPHA3 Model B
- MAGNA
- UPE
- CRE, CRIE, CRNE, CME
- MTRE, SPKE, CRKE
- TPE, TPED
- NBE, NKE
- Hydro Multi-E
- SEG (AUTOADAPT)
- CU 300
- CU 301
- IO 351
- MP 204
- CU3.

### Features

- Intuitive user interface with context related help
- Product dashboard for quick overview
- Quick pump setup, monitoring and fault finding
- Installation report in PDF format
- Easy access to product info
- Find replacement pump
- Product catalogue
- Service parts
- Service videos.



## EXPANSION VESSELS

Diaphragm, bladder and diaphragm-type expansion tanks.

### Technical data

Tank size: 8-5000 l  
 Liquid temp.: +90 °C  
 Max. system. pressure: 16 bar.

### Applications

- Water supply systems in housing
- Booster systems in housing
- Agriculture/horticulture
- Industrial systems
- Domestic, commercial and industrial heating and chilled-water systems.

### Features

- Optimal water supply
- Reduced number of pump starts
- Ideal for drinking water
- WRAS approved product.



## PM

Pressure manager - for automatic start/stop of pumps.

### Technical data

Max. system. pressure: 10 bar.  
 Liquid temp.: 0 °C to +55 °C.

### Applications

PM 1 and PM 2 pressure managers are designed for automatic start/stop control of Grundfos pumps and other water supply pumps

- Single-family houses
- Blocks of flats
- Summer houses and holiday cottages
- Horticulture and gardening
- Agriculture
- Rain water applications.

### Features

- User-friendly interface
- Free position in installation
- Flexible power supply
- In-built safety features
- WRAS approved product.

# ENERGY SOLUTIONS

At Grundfos great opportunity for saving energy can be achieved by reviewing pump products and installations. This is because most currently installed pumps are larger than necessary for the job at hand, often using 60% more energy than they should.

Working out the efficiency of your pumping solutions is complex this is why at Grundfos we have developed a range of tools that can accurately assess your current pump system performance and make recommendations about what steps you can take to optimise your pump plant equipment and add value to your business.

So whether your priority is cost reduction, CO<sub>2</sub> reduction, return on investment, water usage reduction or you simply wish us to advise you on your current installations - we can provide the expertise to deliver results.



## Which assessment is right for you?

Grundfos offers two levels of energy efficiency assessment, Energy Check and Pump Audit, both of which involve a few easy steps to reach recommendations that are bespoke to you.



### – the check you can bank on:

If you want an assessment of the typical savings that can be made by upgrading to high efficiency pumps, one of our specially trained energy team will undertake a survey to assess all your installed pump equipment against current and future system demands.

This may be via a site survey or information you provide to us.

We will then produce a comprehensive report that documents suggested changes and the potential energy savings that they offer, along with information on the initial investment needed, complete lifecycle cost, return on investment and CO<sub>2</sub> saving.



### – enhanced detail on complex and long legacy systems:

If you would like a more comprehensive assessment of your pump system's energy efficiency and the savings that could be made a Pump Audit may be appropriate. In addition to the Energy Check, this includes

using instrumentation to test your system and measuring efficiency using a variety of tools. Due to the extensive nature of the Pump Audit these are chargeable but refundable against future pump purchases.

# SERVICE

At Grundfos, we offer clients a dedicated team of pump maintenance specialists who are committed to delivering service excellence, with any manufacturer's pump.

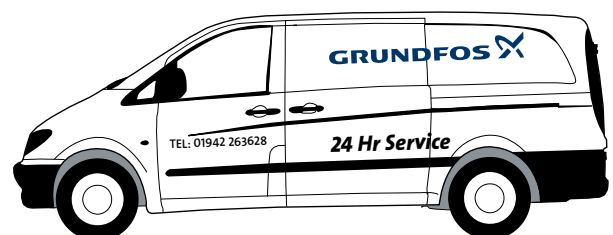
With a service engineering team that covers all of the UK 24/7, our expert personnel have undergone extensive product, application and controls training. Engineers are qualified to make system and service recommendations, as well as holding CSTS cards. Trained to IOSH/NEBOSH standards, engineers can undertake detailed risk assessments, method statements and the production of detailed engineers reports via a state of the art service management system.

Our service offerings include:

- Commissioning
- Repairs
- Service agreements
- Workshop repairs
- Energy analysis/audits
- GRM solution management
- Fire service.



For more information about Grundfos Service please visit [www.grundfos.co.uk/service](http://www.grundfos.co.uk/service) or contact us by phone 01942 263628 or by email [grundfos-uk@sales.grundfos.com](mailto:grundfos-uk@sales.grundfos.com).



**Pump service – we've got it covered**

# GRUNDFOS PRODUCT CENTER

The online product selection tool

The Grundfos Product Center is an online search and sizing tool that helps you choose the right pump for a new or existing installation and replaces Grundfos WEBCAPS and WINCAPS.

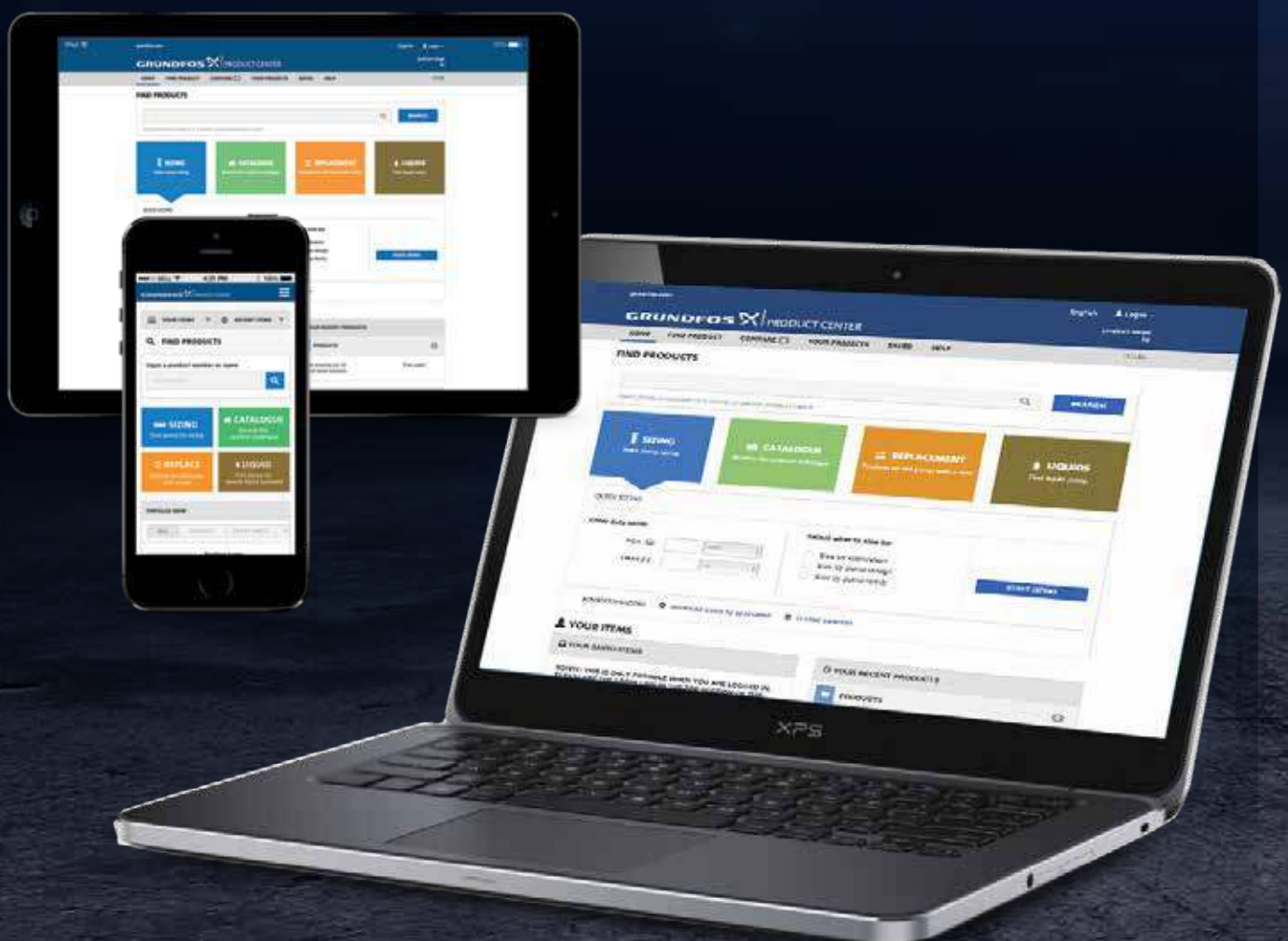
In the Product Center, you can size pumps, browse the Grundfos product catalogue, find appropriate replacement pumps, or find pumps for handling specific liquids. As the definitive product search system for all of Grundfos, the Grundfos Product Center covers every sector we serve, including domestic and commercial building services, the water supply industry, wastewater management, industry and OEM solutions. **To find out more about the Grundfos Product Center visit [www.grundfos.co.uk/gpc](http://www.grundfos.co.uk/gpc)**

**Sizing** Enter your system requirements for pump recommendations, including life cycle cost calculations.

**Catalogue** For each pump in our product catalogue the Grundfos Product Center gives you all the information you need – including pump curves, technical specs, CAD drawings, available spare parts, installer guides, videos and other support materials – all in one place on the pump's product page.

**Replacement** Instant replacement recommendations by just entering the make and model of your old pump.

**Liquids** A drop-down box makes it easy to select the liquid/medium that you wish to pump.





# PICK THE RIGHT TEAM

We hope you found this latest version of the **GRUNDFOS PRODUCT OVERVIEW CATALOGUE** informative. The catalogue contains

information on our most popular pump ranges, in one easy to read brochure. In this edition

you can see our three new ground breaking domestic circulators - The **ALPHA3**, **ALPHA 1** and **UPS3**.



**Top of the range** is the new state of the art **ALPHA3 (MODEL B) 15-50/60** which redefines what a small circulator can do, offering built in two-way data communication via Bluetooth directly with the GO REMOTE app (for commissioning) and the GO BALANCE app (for hydronic balancing).

**The mid-range option** is the compact high efficiency **ALPHA1 15-50/60** (replacing the ALPHA2 L) with market leading energy efficiency rating of  $EEL \leq 0.17$ , robust start up function, improved hydraulics and additional constant & proportional pressure curves. There is also a new ALPHA1 15-50 N variant available for secondary hot water.

**The STAR PLAYER** of the team is the **UPS3 15-65** which replaces the UPS2. Based on proven technology used in millions of boilers, the more compact UPS3 has improved efficiency  $EEL \leq 0.20$  (versus UPS2  $EEL \leq 0.23$ ), manual unblocking and robust start-up, extra performance up to 6.5m head, Constant Pressure (CP) modes for underfloor heating, a new external plug, alarm indication and the pump head is compatible with previous UPS 15-xx series and ALPHA2 L bases. The versatile UPS3 can also be used to replace many of the pumps inside a boiler. Use the **Grundfos GO REPLACE app** to identify whether the UPS3 is a suitable replacement for an internal pump.

Please turn to page 8 to find out more about these leading-edge circulators.

## NEW SMART PHONE APPS FOR DOMESTIC CIRCULATORS



### GO REPLACE - for use with UPS3

To see if the UPS3 can be used to replace a pump (whether inside or outside a boiler) simply scan the old pump and follow the instructions, in seconds you will have the answer.



### GO BALANCE - for use with ALPHA3

In a balanced system heat reaches all rooms, in addition noise and energy costs are reduced. Follow the instructions on the app to wirelessly hydraulically balance a heating system. The earlier ALPHA3 Model A requires an ALPHA Reader, whereas the latest Model B operates without the need for a reader (the ALPHA Reader can be used with Model B as a range extender if needed).



### GO REMOTE – for use with ALPHA3 (& MAGNA3)

The app delivers an easy and reliable remote-control tool for installers for commissioning and maintenance – providing fast and simple, set up, control and monitoring of the pump.





**GRUNDFOS PUMPS LIMITED**

Grovebury Road  
Leighton Buzzard  
Beds LU7 4TL

Tel: +44 (0)1525 850000  
Email: [grundfos-uk@sales.grundfos.com](mailto:grundfos-uk@sales.grundfos.com)  
[www.grundfos.co.uk](http://www.grundfos.co.uk)