



# Product Portfolio

LOWARA PROVIDING PUMPING PRODUCTS AND SYSTEMS

## Lowara's values...

Lowara shares certain fundamental objectives with its customers: creating new products, perfecting quality and improving processes.

Therefore Lowara's values are centred on its customers. The Lowara people work in teams, since having common objectives is the best way to attain excellence in production and distribution. In its relationship with co-workers, customers and the outside world in general, Lowara consistently refers to its values: respect for people and the environment, quality of life, innovation, excellence, integrity and the pride of belonging to the team.

# Lowara pumps...



Lowara is committed to studying, developing, manufacturing and distributing pumps and pumping systems for water technology applications.

Founded in 1968 and based in Montecchio Maggiore, near Vicenza in Italy, Lowara has been serving customers and users of hydraulic pumps in various sectors over 40 years.

Water is the principle element of life and the common denominator of all applications where Lowara pumps are used.

Lowara pumps are made in fabricated stainless steel, which keeps the water free of contamination.

The laser welding technology creates pumps that are resistant to aggressive chemicals and guarantees that the production process respects the natural environment.

Advanced pump control and regulation systems ensure the safe, reliable and economic use of water.



## Our mission.

We will provide efficient and reliable products, services and solutions for the water supply and water pumping needs in the residential, irrigation, building services and commercial markets worldwide, in order to maximize value for our customers, co-workers and shareholders.

## Innovation for quality.

Innovation has always been one of Lowara's distinctive characteristics, as the offer of quality needs to be maintained and developed over time. Lowara invests economic, human and technological resources in training and research in order to ensure continuous improvements of its products and processes. As a member of Xylem, Lowara also shares the most advanced research, design and industrial engineering skills with other Group Companies. This wealth of knowledge enhanced Lowara's innovation capabilities.



## Applications.

Lowara offers a complete range of pumps for residential, agriculture and industrial applications.

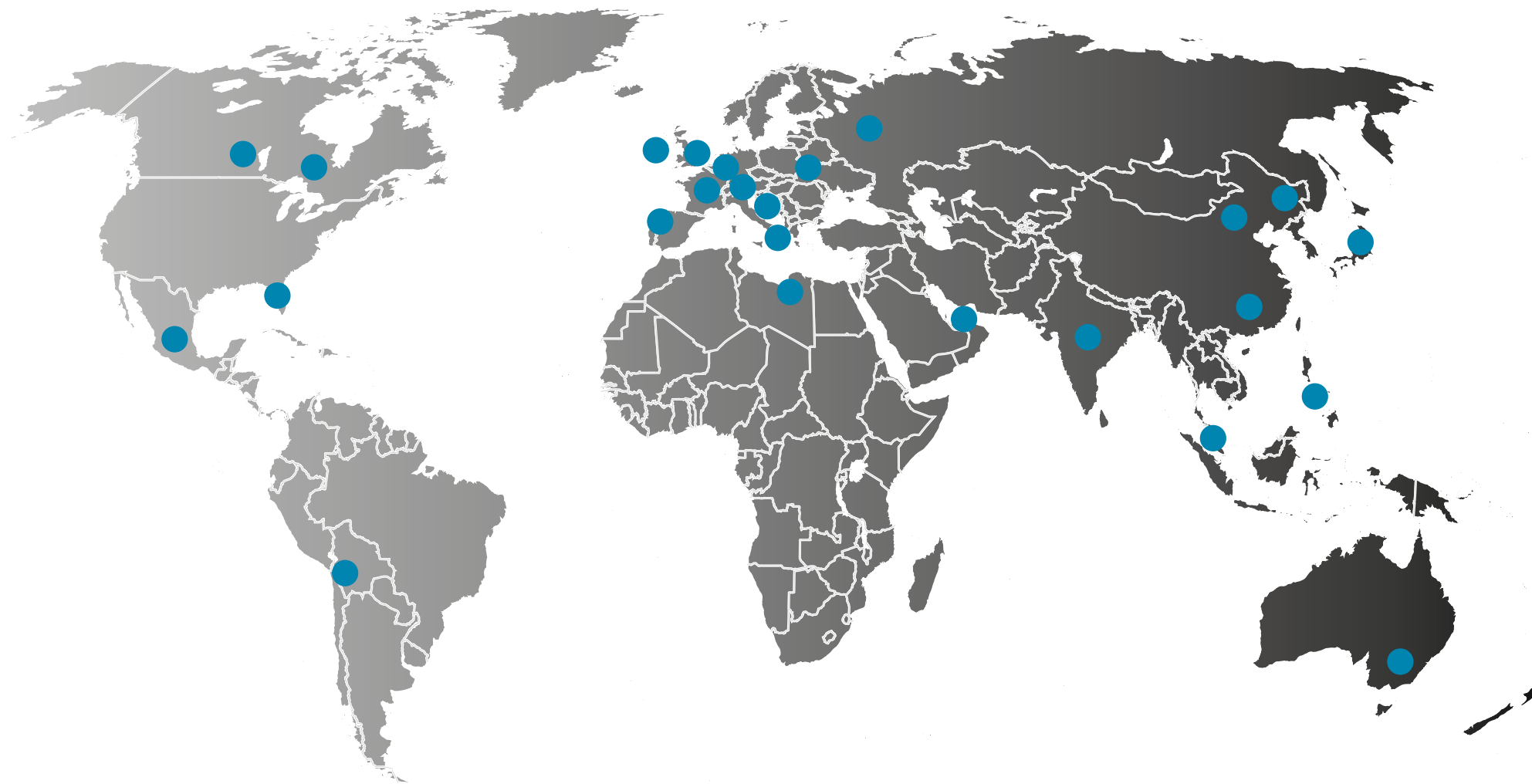
For residential service, Lowara produces pumps for pressurisation, conditioning, fire-fighting systems, lifting stations and dewatering.

For irrigation, Lowara produces pumps for agriculture applications, irrigation of gardens and parks.

For industrial applications, Lowara is committed on drinking water process, on water treatment, industrial washing equipment and machine tool cooling.



## Global Organisation.



## The Lowara World.

Lowara is a leader in the European residential and commercial pump market. It is part of Xylem, the world's largest producer of pumps and complementary products for water and industrial fluid applications.

Xylem is a leading global water technology company which was founded in November 2011 after the spin off of ITT.



Global distribution.

Lowara serves the global market directly or through the distribution network of other companies. Lowara operates its own branches throughout Europe and is capable of reaching every market in the world from its distribution centre in Montecchio Maggiore. Lowara’s services organisation guarantees its customers consultancy, assistance, accurate and timely information along the entire distribution chain.



Italy



Netherlands



Austria



Portugal



Germany



United Kingdom



France



Poland



Ireland



Pump selection guide.

Lowara is widely recognised as being one of the most innovative companies in the sector of hydraulic pumps and control and water handling systems. Lowara’s concept of competitiveness involves developing top quality and extremely reliable products at competitive prices, hence optimising the level of customer satisfaction and service. This pump selection guide is designed to help you find and specify the best pump for your service.

LOOP4U & Xylect.

A pump selection programme which assists in the correct selection of pumps within the Lowara range. With LOOP4U as client version and Xylect as web based version, the user has a very powerful tool that will assist in the work greatly, ensuring the selections made both from a technical and commercial aspect, are correct and more importantly meet the customers needs.



Applications.

|   | PUBLIC UTILITIES<br>(MUNI) | RESIDENTIAL<br>BUILDING SERVICES | COMMERCIAL<br>BUILDING SERVICES | INDUSTRY | AGRICULTURE |
|---|----------------------------|----------------------------------|---------------------------------|----------|-------------|
| <b>END SUCTION CENTRIFUGAL PUMPS</b>                    |                            |                                  |                                 |          |             |
| CEA-CEAN Series   |                            |                                  |                                 |          |             |
| SP Series   |                            |                                  |                                 |          |             |
| BG Series   |                            |                                  |                                 |          |             |
| JEC-AG Series   |                            |                                  |                                 |          |             |
| P-PB-PK Series  |                            |                                  |                                 |          |             |
| FHE-FHS Series  |                            |                                  |                                 |          |             |
| FHF Series  |                            |                                  |                                 |          |             |
| CO -CO F-SHO Series                                     |                            |                                  |                                 |          |             |
| SHE-SHS-SHF Series                                      |                            |                                  |                                 |          |             |
| <b>CLOSE COUPLED IN-LINE PUMPS</b>                      |                            |                                  |                                 |          |             |
| ecocirc XL e XLplus Series                              |                            |                                  |                                 |          |             |
| ecocirc PREMIUM Series                                  |                            |                                  |                                 |          |             |
| ecocirc Series  |                            |                                  |                                 |          |             |
| ecocirc PRO Series                                      |                            |                                  |                                 |          |             |
| TLCB-TLCHB Series                                       |                            |                                  |                                 |          |             |
| TLC-TLCH Series   |                            |                                  |                                 |          |             |
| FLC-EFLC Series   |                            |                                  |                                 |          |             |
| FCT Series  |                            |                                  |                                 |          |             |
| <b>MULTISTAGE</b>                                       |                            |                                  |                                 |          |             |
| e-HM™ Series  |                            |                                  |                                 |          |             |
| VM Series   |                            |                                  |                                 |          |             |
| e-SV™ 1-125 Series                                      |                            |                                  |                                 |          |             |
| TDB-TDV Series  |                            |                                  |                                 |          |             |
| SVI Series  |                            |                                  |                                 |          |             |
| <b>SUBMERSIBLE, DRAINAGE &amp; SEWAGE PUMPS</b>         |                            |                                  |                                 |          |             |
| DOC Series  |                            |                                  |                                 |          |             |
| DOMO Series   |                            |                                  |                                 |          |             |
| DOMO GRI Series   |                            |                                  |                                 |          |             |
| DIWA Series   |                            |                                  |                                 |          |             |
| DN Series   |                            |                                  |                                 |          |             |
| DL Series   |                            |                                  |                                 |          |             |
| GLS-GLV Series  |                            |                                  |                                 |          |             |
| Minibox, Midibox, Singlebox Plus, Doublebox Plus Series |                            |                                  |                                 |          |             |
| Maxibox Plus  |                            |                                  |                                 |          |             |
| <b>BOREHOLE</b>   |                            |                                  |                                 |          |             |
| GS Series   |                            |                                  |                                 |          |             |
| SCUBA Series  |                            |                                  |                                 |          |             |
| Z6 Series   |                            |                                  |                                 |          |             |
| Z8-Z10-Z12 Series                                       |                            |                                  |                                 |          |             |
| 40S-L4C Motors  |                            |                                  |                                 |          |             |
| L6C-L6W Motors  |                            |                                  |                                 |          |             |
| L8W-L10W-L12W Motors                                    |                            |                                  |                                 |          |             |
| <b>BOOSTER SETS</b>                                     |                            |                                  |                                 |          |             |
| Block Pressure Set                                      |                            |                                  |                                 |          |             |
| GXS Series  |                            |                                  |                                 |          |             |
| GMD Series  |                            |                                  |                                 |          |             |
| GTKS Series   |                            |                                  |                                 |          |             |
| GHV Series  |                            |                                  |                                 |          |             |
| GEM Fire Fighting Systems EN 12845                      |                            |                                  |                                 |          |             |
| GS Series   |                            |                                  |                                 |          |             |
| GV Series   |                            |                                  |                                 |          |             |
| <b>VARIABLE SPEED CONTROLS</b>                          |                            |                                  |                                 |          |             |
| Teknospeed  |                            |                                  |                                 |          |             |
| HYDROVAR™   |                            |                                  |                                 |          |             |
| HYDROVAR™ Retro-Fitting                                 |                            |                                  |                                 |          |             |
| HYDROVAR™ Smart   |                            |                                  |                                 |          |             |
| HYDROVAR™ Watercooled                                   |                            |                                  |                                 |          |             |
| Aquontroller  |                            |                                  |                                 |          |             |
| <b>ACCESSORIES</b>                                      |                            |                                  |                                 |          |             |
| Genyo, Vessels, Motors, Float switches                  |                            |                                  |                                 |          |             |
| Filters, Softners*, Dosing Pumps*                       |                            |                                  |                                 |          |             |
| Control Boxes   |                            |                                  |                                 |          |             |

\* Sold in Italy Only

# End suction centrifugal pumps.



FHE-FHS SERIES  
cast iron pumps  
acc to EN 733

|                  | 50 Hz    | 60 Hz    |
|------------------|----------|----------|
| Capacities up to | 600 m³/h | 670 m³/h |
| Head up to       | 100 m    | 100 m    |
| Powers up to     | 55 kW    | 55 kW    |



SHO SERIES  
open impeller  
pumps (AISI 316)

|                | 50 Hz   |
|----------------|---------|
| Capacity up to | 53 m³/h |
| Head up to     | 50 m    |
| Power up to    | 11 kW   |



CEA-CEAN SERIES  
closed impeller  
pumps (AISI 316)

|                | 50 Hz   | 60 Hz   |
|----------------|---------|---------|
| Capacity up to | 31 m³/h | 32 m³/h |
| Head up to     | 62 m    | 46 m    |
| Power up to    | 3 kW    | 3 kW    |



SHE-SHS-SHF  
SERIES  
stainless steel  
pumps acc to  
EN 733 (AISI 316)

|                | 50 Hz    | 60 Hz    |
|----------------|----------|----------|
| Capacity up to | 240 m³/h | 240 m³/h |
| Head up to     | 110 m    | 120 m    |
| Power up to    | 75 kW    | 75 kW    |

The centrifugal range is the largest available within the Lowara portfolio and covers a multitude of applications. The products available range from the smallest P range used for small transfer schemes through to a comprehensive range of multistage products giving various material options. Within the range there are products that have complex seal arrangements.



CO SERIES  
open impeller  
stainless steel  
pumps (AISI 316)

|                | 50 Hz   | 60 Hz   |
|----------------|---------|---------|
| Capacity up to | 54 m³/h | 54 m³/h |
| Head up to     | 24 m    | 24 m    |
| Power up to    | 3 kW    | 3 kW    |



BG SERIES  
self priming pumps

|                 | 50 Hz    |
|-----------------|----------|
| Capacity up to  | 4.2 m³/h |
| Head up to      | 53 m     |
| Suction head to | 8 m      |
| Power up to     | 1,1 kW   |



FHF SERIES  
frame mounted  
cst iron pumps

|                | 50 Hz    | 60 Hz    |
|----------------|----------|----------|
| Capacity up to | 700 m³/h | 750 m³/h |
| Head up to     | 100 m    | 100 m    |
| Power up to    | 132 kW   | 90 kW    |



AG SERIES  
plastic self priming  
and swimming  
pool pumps

|                  | 50 Hz   |
|------------------|---------|
| Capacities up to | 17m³/h  |
| Head up to       | 13 m    |
| Powers up to     | 0.55 kW |



J SERIES  
plastic self priming  
and swimming  
pool pumps

|                  | 50 Hz   |
|------------------|---------|
| Capacities up to | 32 m³/h |
| Head up to       | 19 m    |
| Powers up to     | 1.5 kW  |



BLOCK  
PRESSURE  
SETS

50 Hz and 60 Hz  
Pre-assembled sets  
for use with the  
Lowara range of  
end suction pumps



P-PSA-PK SERIES  
peripheral pumps

|                  | 50 Hz     | 60 Hz    |
|------------------|-----------|----------|
| Capacities up to | 3.72 m³/h | 3.9 m³/h |
| Head up to       | 82 m      | 83 m     |
| Powers up to     | 1,1 kW    | 1,1 kW   |



SP SERIES  
self priming pumps

|                  | 50 Hz     | 60 Hz    |
|------------------|-----------|----------|
| Capacities up to | 2.75 m³/h | 2.7 m³/h |
| Head up to       | 49 m      | 46 m     |
| Powers up to     | 0.75 kW   | 0.75 kW  |
| Suction head to  | 7 m       | 7 m      |



# Circulators.

High efficiency circulators range for many applications including heating, air conditioning systems and hot water.

ecocirc SERIES XL and XLplus high efficiency wet rotor circulators



Capacities up to 60 m³/h  
Head up to 12 m  
Maximum pressure 10 bar  
Temp -10°C a +110°C

ecocirc PREMIUM SERIES high efficiency wet rotor circulators



Capacities up to 3,2 m³/h  
Head up to 6 m  
Maximum pressure 10 bar  
Temp -10°C a +110°C

ecocirc PRO SERIES wet rotor circulators for sanitary systems



Capacities up to 1 m³/h  
Head up to 3 m  
Maximum pressure 10 bar  
Temp +2°C a +65°C

TLC-TLCH\* SERIES wet rotor circulators



Capacities up to 12 m³/h  
Head up to 12 m  
Maximum pressure 10 bar  
Temp -10°C a +110°C

ecocirc SERIES high efficiency wet rotor circulators



Capacities up to 3,2 m³/h  
Head up to 12 m  
Maximum pressure 10 bar  
Temp -10°C a +110°C

TLCB-TLCHB SERIES Wet rotor circulators



Capacities up to 12 m³/h  
Head up to 12 m  
Maximum pressure 10 bar  
Temp -10°C a +65°C

FLC - EFLC\* SERIES wet rotor circulators



Capacities up to 80 m³/h  
Head up to 20 m  
Maximum pressure 10 bar  
Temp -15°C a +120°C

# In-line series.

In-line centrifugal pumps with cast iron pump body, AISI 316L stainless steel impeller entirely welded using laser technology. Available in the single and twin versions. Suitable for handling hot or cold moderately aggressive liquids.

FCE SERIES closed coupled in-line pumps



Capacities up to 190 m³/h  
Head up to 89 m  
Powers up to 18,5 kW  
Temp -10°C to +130°C

FCTE SERIES close coupled twin in-line pumps



Capacity up to 340 m³/h  
Head up to 89 m  
Power up to 22 kW  
Temp -10°C to +130°C

FCS SERIES in-line circulator pumps



Capacities up to 330 m³/h  
Head up to 89 m  
Powers up to 22 kW  
Temp -10°C to +140°C

FCTS SERIES twin in-line pumps



Capacities up to 560 m³/h  
Head up to 89 m  
Powers up to 22 kW  
Max temp to -10°C to +140°C

# Multi-stage pumps.

Lowara has an extensive range of multi-stage products that start with the Lowara SV standard product through to the TDB range which are available in various materials including stainless steel, bronze and various iron options. Unique products within this range include the DPS system and a multi-outlet pump used in fire set applications.



e-SV™ SERIES  
vertical multistage pumps

The range of pumps features 11 models and can be specially configured for a wide range of applications.

|                |  |
|----------------|--|
| Capacity up to | 160 m³/h   |
| Head up to     | 330 m  |
| Power up to    | 55 kW  |
| Temp           | -30°C to +120°C (high temp versions up to 180°C) |

|                |  |
|----------------|--|
| Capacity up to | 160 m³/h   |
| Head up to     | 280 m  |
| Power up to    | 55 kW  |
| Temp           | -30°C to +120°C (high temp versions up to 180°C) |



SVI SERIES  
immersible vertical multistage pumps

|                |                |          |
|----------------|----------------|----------|
| Capacity up to | 160 m³/h       | 160 m³/h |
| Head up to     | 330 m          | 280 m    |
| Power up to    | 55 kW          | 55 kW    |
| Temp           | -10°C to +90°C |          |



e-HM™ SERIES  
horizontal multistage pumps

|                |         |
|----------------|---------|
| Capacity up to | 29 m³/h |
| Head up to     | 160 m   |
| Power up to    | 5,5 kW  |



VM SERIES  
High efficiency close-coupled vertical multistage pumps equipped with non-standard Lowara motors

|                |             |         |
|----------------|-------------|---------|
| Capacity up to | 14 m³/h     | 17 m³/h |
| Head up to     | 98 m        | 106 m   |
| Power up to    | 3 kW        | 4 kW    |
| Max temp to    | up to +90°C |         |



TDB-TDV SERIES  
vertical multi-stage pumps

|                |              |                  |
|----------------|--------------|------------------|
| Capacity up to | 340 m³/h     | 60 Hz on request |
| Head up to     | 500 m        |                  |
| Power up to    | 355 kW       |                  |
| Temp           | up to +140°C |                  |

# Drainage and sewage submersible pumps.



DOMO GRI SERIES  
sewage pump with grinder device

|                |          |          |
|----------------|----------|----------|
| Capacity up to | 6,6 m³/h | 6,6 m³/h |
| Head up to     | 25 m     | 29 m     |
| Power up to    | 1,1 kW   | 1,1 kW   |



DOMO SERIES  
wastewater/ sewage pumps

|                |         |         |
|----------------|---------|---------|
| Capacity up to | 40 m³/h | 40 m³/h |
| Head up to     | 14,5 m  | 14,5 m  |
| Power up to    | 1,5 kW  | 1,5 kW  |
| Solids up to   | 50 mm   |         |



DIWA SERIES  
drainage pumps

|                |         |         |
|----------------|---------|---------|
| Capacity up to | 25 m³/h | 25 m³/h |
| Head up to     | 21 m    | 20 m    |
| Power up to    | 1,5 kW  | 1,5 kW  |
| Solids up to   | 8 mm    |         |



GDOC SERIES  
cellar drainage pumps

|                |         |         |
|----------------|---------|---------|
| Capacity up to | 14 m³/h | 14 m³/h |
| Head up to     | 11 m    | 11 m    |
| Power up to    | 0,55 kW | 0,55 kW |
| Solids up to   | 20 mm   |         |

The Lowara submersible pumps range is suited for a wide variety of applications such as, for example, drainage of residential sump pits, sewage pumping, emptying of sumps, septic tanks and wastewater discharge tanks.



DIWA SERIES  
drainage pumps

|                |         |         |
|----------------|---------|---------|
| Capacity up to | 25 m³/h | 25 m³/h |
| Head up to     | 21 m    | 20 m    |
| Power up to    | 1,5 kW  | 1,5 kW  |
| Solids up to   | 8 mm    |         |



DL SERIES  
wastewater/ sewage pumps

|                |         |         |
|----------------|---------|---------|
| Capacity up to | 42 m³/h | 42 m³/h |
| Head up to     | 21 m    | 22 m    |
| Power up to    | 1,5 kW  | 1,5 kW  |
| Solids up to   | 50 mm   |         |



GLS-GLV SERIES  
wastewater/sewage pumps in cast iron with single cannell or vortex impeller

|                  |                |
|------------------|----------------|
| Capacities up to | 244 m³/h       |
| Head up to       | 41 m           |
| Powers up to     | 7,4 kW         |
| Solids up to     | 100 mm         |
| Motors           | 2-4 poles      |
| Temp             | -10°C to +90°C |



BOX SERIES  
prefabricated lifting stations

1. Minibox
2. Midibox
3. Singlebox Plus
4. Doublebox Plus
5. Maxibox Plus




# Submersible borehole pumps.



Water and oil filled 4" submersible motors series

|        |        |
|--------|--------|
| 50 Hz  | 60 Hz  |
| 7,5 kW | 7,5 kW |



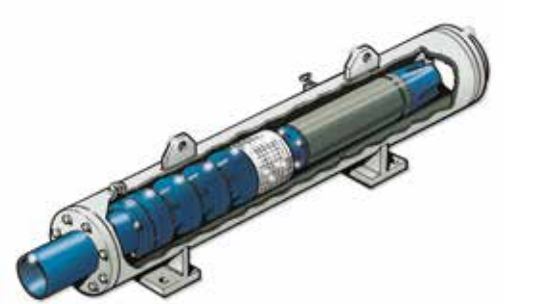
Z8-Z10-Z12 SERIES  
8"-10"-12" borehole pumps

|                    |          |
|--------------------|----------|
| 50 Hz              | 60 Hz    |
| 520 m³/h           | 480 m³/h |
| Head up to 550 m   | 550 m    |
| Power up to 350 kW | 350 kW   |



Z6 SERIES  
6" borehole pumps

|                   |         |
|-------------------|---------|
| 50 Hz             | 60 Hz   |
| 78 m³/h           | 90 m³/h |
| Head up to 700 m  | 700 m   |
| Power up to 55 kW | 55 kW   |



The Lowara borehole range offers products ranging in pump diameters from 4" to 12". Various material options are available including cast iron and various grades of stainless steel. In addition to the products shown, Lowara can offer alternative mounting options of this range including cooling shrouds and pressure shrouds.




L6W-L8WL10W-L12W SERIES  
Rewindable motors

|        |        |
|--------|--------|
| 50 Hz  | 60 Hz  |
| 300 kW | 300 kW |



SCUBA SERIES  
5" submersible pumps

|                    |          |
|--------------------|----------|
| 50 Hz              | 60 Hz    |
| 7,5 m³/h           | 7,5 m³/h |
| Head up to 80 m    | 75 m     |
| Power up to 1,1 kW | 1,1 kW   |




GS SERIES  
4" borehole pumps

|                    |         |
|--------------------|---------|
| 50 Hz              | 60 Hz   |
| 21 m³/h            | 22 m³/h |
| Head up to 340 m   | 300 m   |
| Power up to 7,5 kW | 7,5 kW  |

# Booster sets.

GXS SERIES SETS

Single-phase power supply, fixed speed and pressure switch control. For BG, CA, CEA, HM and SV series electric pumps.



|                 |            |
|-----------------|------------|
| Flow rate up to | 28 m³/h    |
| Power up to     | 2 x 1.5 kW |

GMD SERIES SETS


Three-phase power supply, fixed speed and pressure switch control. For BG, CA, CEA, HM and SV series electric pumps.



|             |          |
|-------------|----------|
| Flow up to  | 400 m³/h |
| Power up to | 2 x 4 kW |

GTKS SERIES SETS

Single-phase power supply, variable speed and control by pressure transducers and Teknospeed electronic speed controllers integrated with the motor. For BG, CA, CEA, HM and SV series electric pumps.



|             |            |
|-------------|------------|
| Flow up to  | 16 m³/h    |
| Power up to | 2 x 1.1 kW |

FIRE FIGHTING SYSTEMS EN 12845 GEM SERIES

Fire pump package manufactured in accordance to EN 12845. Max. power size for service pump 132kW. Manifold in painted steel pipe with anchor bolts to fix to a wall or floor.




Wide range of 2, 3 or 4 pump units controlled by pressure switches or pressure transmitter, with constant or variable speed. The Lowara range of automatic booster units is designed to supply water to intermittent and variable demand users, employing centrifugal electric pumps controlled by an electric panel.

Available at 60 Hz on request.

GHV SERIES SETS

Single-phase or three-phase power supply, variable speed and control by pressure transducers and HYDROVAR™ electronic speed controllers mounted on the motor. For SV series electric pumps.



|             |          |
|-------------|----------|
| Flow up to  | 640 m³/h |
| Head up to  | 160 m    |
| Power up to | 22 kW    |

GS SERIES SETS

Fixed speed booster sets, two and three pumps eSV and FH/SH series.



|             |          |
|-------------|----------|
| Flow up to  | 480 m³/h |
| Head up to  | 160 m    |
| Power up to | 37 kW    |

GV SERIES SETS

Variable speed booster sets up to four pumps eSV series.



|             |          |
|-------------|----------|
| Flow up to  | 640 m³/h |
| Head up to  | 160 m    |
| Power up to | 37 kW    |



# Variable speed drives... Teknospeed.

## Series of Variable Speed Electric Pumps and Pressure Booster Units.

The single-phase Teknospeed variable speed electric pumps and pressure booster units are designed for residential applications as they provide all the comfort and advantages of constant pressure in the home. The Teknospeed series comprises a frequency converter integrated into the pump which adjusts motor speed so as to constantly provide users with the same pressure, even when demand for water changes. The main applications for which the Teknospeed series offers elevated comfort and benefits are: home pressurisation, irrigation, greenhouses, light industry, fountains and creative water displays.



The range features a large number of models and pump types.

Horizontal and vertical pumps:  
TKS/HMZ, TKS/BG, TKS/CA-CEA, TK/SV.  
Single pump or two-pump pressure booster units:  
GTKS20/HMZ, GTKS20/CA, GTKS20/SV

## Specifications.

|  |
|--|
| Delivery: up to 16m³/h                 |
| Head: up to 75m                        |
| Power supply: single-phase 50 and 60Hz |
| Power: from 0.3kW up to 1.1kW          |
| Temperature of pumped liquid: to 80°C  |

## Applications.

|                                 |
|---------------------------------|
| Water distribution              |
| Industrial washing equipment    |
| Pressure boosting               |
| Irrigation                      |
| Water treatment                 |
| H.V.A.C.                        |
| Cooling and chiller accessories |



# Variable speed drives... HYDROVAR™.

## HYDROVAR™ – the intelligent and user friendly speed controller for pumps!

HYDROVAR™ is a pump or wall-mounted variable speed, microprocessor based system controller, and was the world's first of its type to manage motor speed and match pump performance to a range of hot and cold water applications. Due to the unique modular design the HYDROVAR™ unit can be mounted or retrofitted to any existing centrifugal pump which has a standard IEC motor. This is the long-awaited solution for high-level installations requiring failsafe systems with a superior range of features, while its modularity also provides a cost-effective solution for low-level, reduced feature demands. The HYDROVAR™ needs no additional master control and enables virtually any configuration of pumps: up to 8 master drives or a mix of master and slave drives. The units are available in powers from 1,1 - 22 kW. The HYDROVAR™ does much more than just change the motor speed. It truly manages your pump performance to match a wide range of system conditions, allowing energy savings up to 70% (approved by TUEV Austria)\*.

\* Tests carried out by TUEV Austria (Austrian testing authority) on 5 March 2005 based on comparative tables and data on intake performance at identical flow.



The HYDROVAR™ eliminates the need for.

Expensive additional master control panels and circuitry

System control valves

Large pressure vessels

## Benefits.

Sizes available 1,1 - 22 kW

Extension up to 315 kW by using the external Hydrovar Smart controller

Shut down at zero demand

Easy to integrate into BMS systems - ModBus communication included as standard

Can be mounted directly on any standard IEC motors

Included 2 line LCD display

Enclosure IP 55 protection

Up to 8 HYDROVAR™ pumps can be connected to one system

Available in 3 different levels (Master/Single/Basic) to offer the right solution for system requirement

2 sensor inputs for implementing of two actual value signals within one system (min/max, difference) or for a second sensor for safety reasons (Master Inverter)

Different types of sensors supported (4-20mA, 0-20mA, 0-10Vdc, 2-10Vdc)

Energy savings up to 70% achievable

Error Log with Time and date stamp

Extended manual control mode with different fixed speed valued selectable via external contact

Typical examples of application.

Maintaining a constant pressure, as in water boosting or irrigation

Maintains a constant flow, as in filter and water supply applications

Compensating for losses in a system (following a system curve), as in heating systems

Control of pump performance by temperature sensors

Emptying or filling tanks by level probes

Control of boiler feed water

Cascade control capability by combining different executions (Master/Basics) of the modular HYDROVAR™ family

Energy savings.  
Energy saving is a large issue within the heating and ventilating market and within the Lowara product portfolio we can offer a variable speed drive, the HYDROVAR™. A unique parameter gives the HYDROVAR™ an added advantage. This parameter allows the pump to follow a system curve, the minimum system head is set together with the maximum and the pump will then operate between these two points.

This option has been specifically developed for use in the heating industry as it allows the user to save up to 70% energy costs over a fixed speed pump. Due to the energy saving capabilities of the HYDROVAR™ the unit has achieved the high requirements set by the Energy Saving Trust to allow Lowara to promote the HYDROVAR™ product.

**HYDROVAR™ booster sets.**  
The HYDROVAR™ allows up to 8 units to be interfaced together which offers the user ultimate flexibility. The pumps have an automatic cyclic changeover facility and in the case of failure the remaining pump/s take up the duty. The HYDROVAR™ utilises a 4 - 20A signal to regulate the motor speed in order to meet the system requirements. By controlling the pump in this way the user can make substantial savings in comparison to conventionally controlled systems.



Typical energy savings.

Pump Type: In-line FCE 80 - 200/110 at a head of 25 metres

| CAPACITY<br>m³/h     | POWER USED           |                      | POWER SAVED<br>kW | LENGTH OF TIME<br>h | TOTAL<br>kWh |
|----------------------|----------------------|----------------------|-------------------|---------------------|--------------|
|                      | CONSTANT SPEED<br>kW | VARIABLE SPEED<br>kW |                   |                     |              |
| 40                   | 7,13                 | 4,95                 | 2,18              | 2.190               | 4.774        |
| 60                   | 8,17                 | 6,29                 | 1,88              | 4.380               | 8.234        |
| 90                   | 9,81                 | 9,43                 | 0,38              | 2.190               | 832          |
| TOTAL ENERGY SAVINGS |                      |                      |                   |                     | 13.840       |

Retro-fitting.

The HYDROVAR™ speed controller can be mounted or retro-fitted to any existing centrifugal pump manufacturer's unit, which has a standard IEC motor. The units are available in powers from 1.1-22 kW. The units can be mounted directly on to the pump motor (horizontal or vertical) or can be wall mounted. The

HYDROVAR™ can also be connected by cable to another control system with microprocessor, using the RS-485 database located on the main terminal board under the cover. This enables the HYDROVAR™ system to send information about the system conditions to an external unit, and to be controlled from a distance.



HYDROVAR™ Smart.

The HYDROVAR™ Smart device includes all control functions of a HYDROVAR™ and can be combined with all standard frequency converters, regardless of the power range and the available supply voltage range. The inbuilt microprocessor manages all pump specific control requirements including cascading of up to 4 drives in multipump systems. The patented HYDROVAR™ controller ensures an immediate stop of the pump at zero demand.

Advantages.

Patented HYDROVAR™ Control System.

Integrated multi pump controller.

No external power supply required (24V AC/DC output of the VFD can be used).

Enclosure IP55 for panel or wall mounting.

Suitable for combination with all standard frequency converters.

No limitation of the power range.

HYDROVAR™ controlled variable speed drive for any supply voltage range possible.

RS485 interface input included as standard.

HYDROVAR™ Watercooled for low power boosting systems.

As the name implies the unit utilises the water pumped through it to cool the internal electronics and its unique design has been developed for use within residential applications. The HYDROVAR™ Watercooled variable speed drive will be supplied along with a pump and will protect the unit from dry running, overheating, short circuit and over-current and due to the soft start/stop operation protect the system from water hammer. The HYDROVAR™ Watercooled is an important part of the HYDROVAR™ product family to complete the product portfolio on the low power end and continue to offer its users a reliable variable speed drive solution.



Aquontroller 230 VAC drive for single phase motors.

The Aquontroller is specially designed for maintaining constant pressure independent of flow for maximum comfort. Energy savings are the result of the precise speed control. Top quality components guarantee high reliability and a trouble-free life. The inverter has inbuilt protection against various and electrical faults. Smooth operation and soft starting ensure silent running and an extended pump life. With pipe or wall mounted versions, the quick set up means easy installation.





# Vessels and accessories.



## Pressure Vessels.

- Sizes to 5000 litre
- Horizontal and vertical
- Pressure to 10bar
- Temperature to 99°C
- Products available with WRc approved materials



## Control Boxes.

A range of control boxes suitable for use with both submersible and surface pumps.

## Accessories.

An extensive range of accessories is available to complement the pump range illustrated in this brochure. This includes:

- Pressure switches
- Pressure gauges
- 5 way connector
- Flexible connector
- Genyo
- Float switches
- Flow switches
- Direct on line starter
- Non return valves, strainers and hosetails.
- Water softners
- Filters
- Dosing Pumps



## Genyo.

The Genyo is designed to replace traditional pressure boosting systems in domestic applications; it offers the advantages of smaller overall dimensions and no maintenance is required. Genyo provides the electric pump with adequate protection against dry running.

- Two models: Genyo 8A and Genyo 16A
- Maximum current 16 A
- Maximum pressure 10 bar
- IP 65 protection
- Delivery up to 170 l/min (10 m³/h).
- Maximum liquid temperature 60°C
- Low friction loss



# Seminars, training and new product launches.



LTC - in-house training, seminars, and new product launches. With our Lowara Training Centre we provide a learning environment that promotes the transfer of new skills and knowledge to the work setting through both classroom and technology-based instruction. Our training team comprises experienced individuals throughout the organisation who have expert knowledge of our products, markets and services. We are available to assist you and your organisation to meet your training needs.

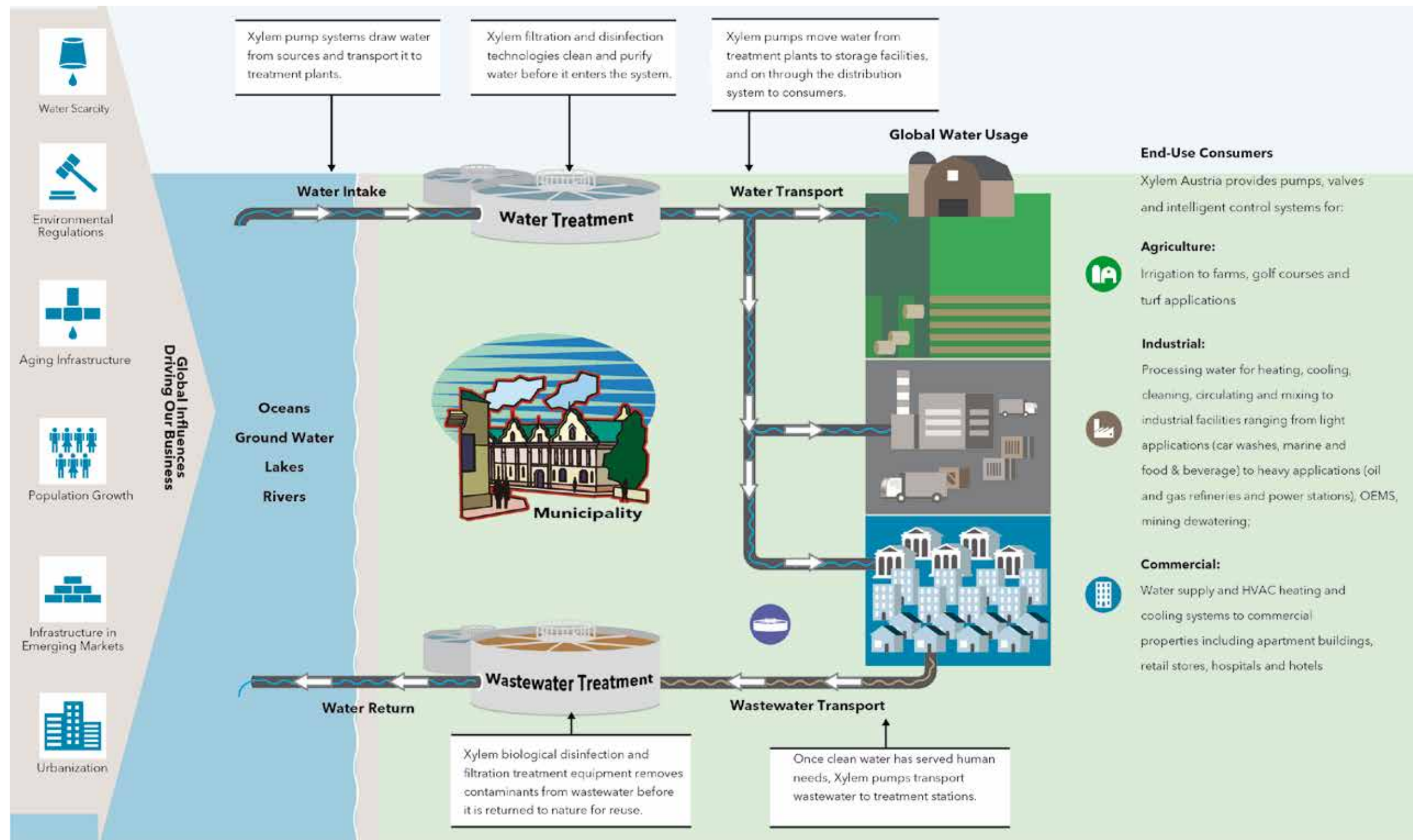
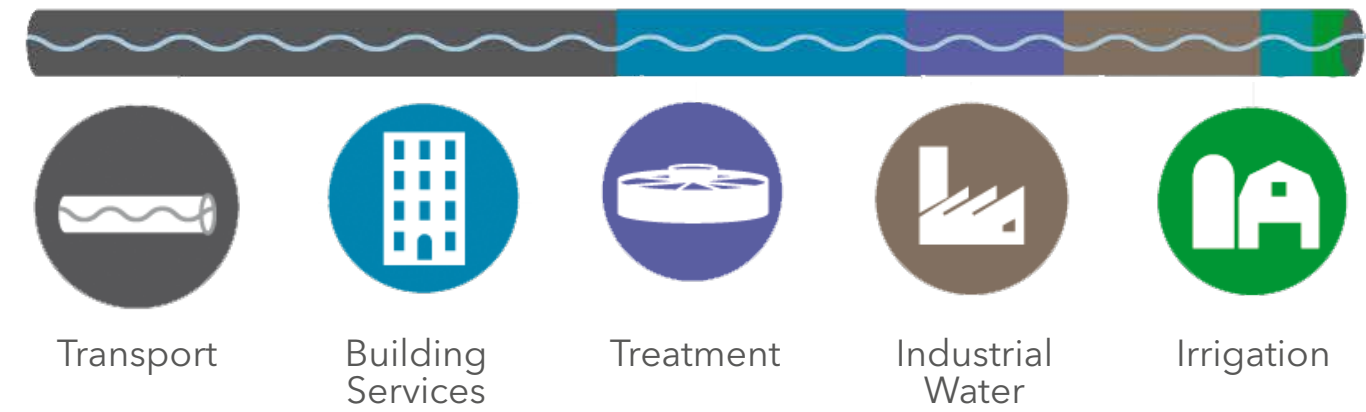
HYDROVAR™ and Teknospeed demonstration units. Energy saving has become an important issue with a large number of market sectors. For many years Lowara have been demonstrating the benefits of the HYDROVAR™ energy control system, and since the launch of the new Teknospeed a number of small Teknospeed demonstration units are also now available.

## Exhibitions.

Lowara is a regular contributor to industry exhibitions and conferences the world over. We also believe that it is important that our customers fully understand the Lowara experience, which is why we host a series of exhibitions and trade shows. Working together with our customers we can also assist in supplying exhibition pumps, posters etc. or actually help them organise the show; a true partnership. For up to date news on product and services please visit our web site [www.lowara.com](http://www.lowara.com)



Delivering innovative technologies that touch every part of the water cycle with a single goal in mind: enable sustainable use of water everywhere.



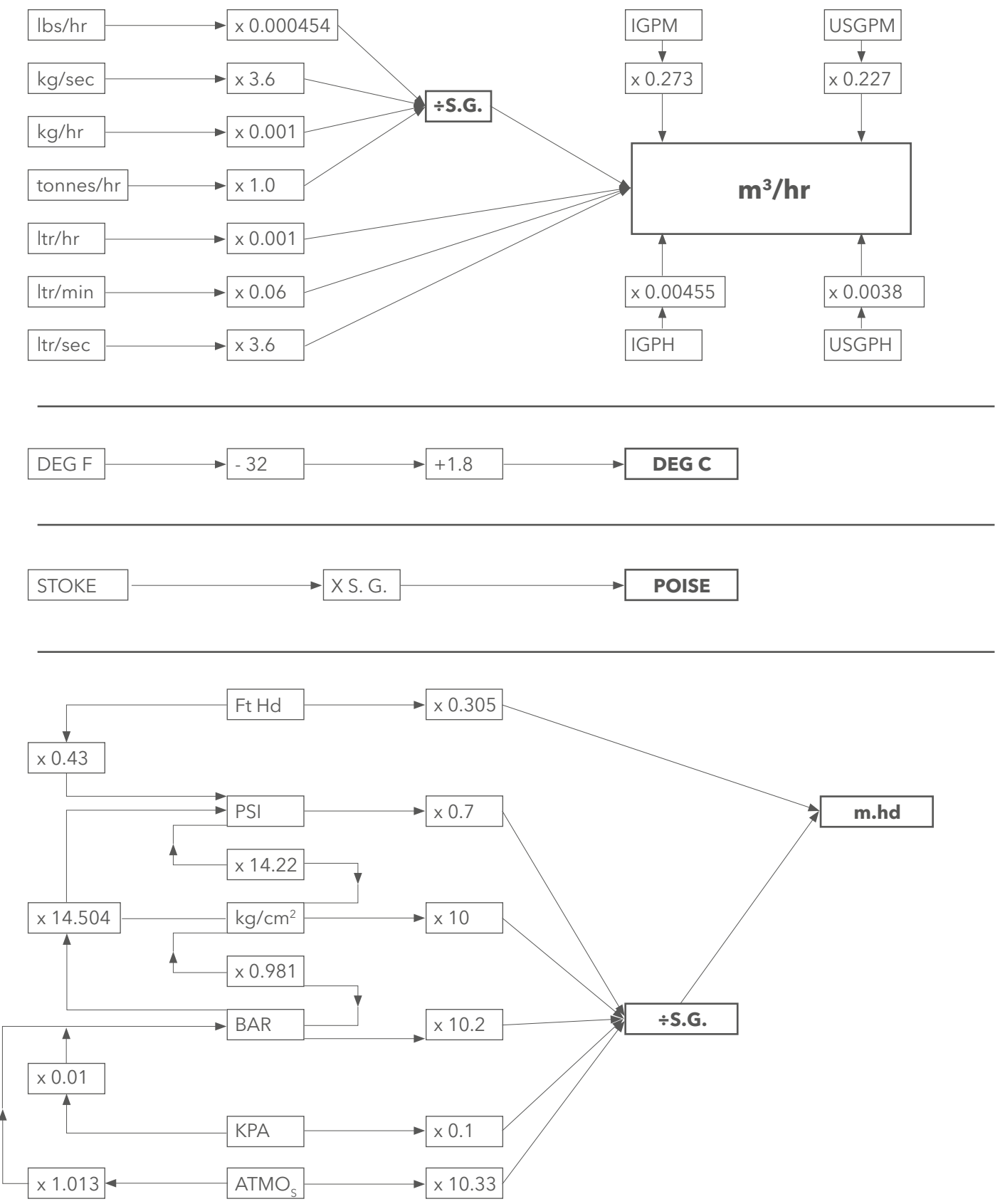


Solutions for any  
Application.





# Calculation and conversion charts.



## Conversions.

To convert to litres/sec.

|                    |                   |
|--------------------|-------------------|
| IGPM               | x 0.0757          |
| m³ /hr             | x 0.278           |
| m³ /min            | x 16.68           |
| Metric tonnes/hr   | x 0.278 ÷ S.G.    |
| Litres/min         | x 0.0167          |
| Kilogrammes/hr     | x 0.000278 ÷ S.G. |
| USGPM              | x 0.063           |
| Cubic feet/sec     | x 28.3            |
| Cubic feet/min     | x 0.47            |
| British tons/hr    | x 0.282 ÷ S.G.    |
| British barrels/hr | x 0.453           |

To convert to m³/hr.

|                    |                |
|--------------------|----------------|
| IGPM               | x 0.273        |
| Litres/sec         | x 3.60         |
| Litres/min         | x 0.06         |
| Metric tonnes/hr   | x 1 ÷ S.G.     |
| m³/min             | x 60           |
| Kilogrammes/hr     | x 0.001 ÷ S.G. |
| Kilogrammes/sec    | x 3.6 ÷ S.G.   |
| USGPM              | x 0.227        |
| Cubic feet/sec     | x 102.0        |
| Cubic feet/min     | x 1.7          |
| British tons/hr    | x 1.015 ÷ S.G. |
| British barrels/hr | x 0.163        |

## Pumping Head Conversions.

To convert to metres.

|             |                 |
|-------------|-----------------|
| Feet        | x 0.305         |
| kg/cm²      | x 10 ÷ S.G.     |
| PSI         | x 0.704 ÷ S.G.  |
| Inches Hg   | x 0.345 ÷ S.G.  |
| cm Hg       | x 0.1362 ÷ S.G. |
| Atmospheres | x 10.35 ÷ S.G.  |
| KN/m² (KPa) | x 0.102 ÷ S.G.  |
| Bar         | x 10.2 ÷ S.G.   |

## Power Conversions.

To convert to kilowatts.

Horse power x 0.746

To convert to HP.

Kilowatts x 1.341

kW = 
$$\frac{m^3 / hr \times \text{Total head in metres} \times S.G.}{367.87 \times \text{Pump Efficiency}}$$

BHP = 
$$\frac{IMP.GPM \times \text{Total head in Ft} \times S.G. \times 10}{33,000 \times \text{Pump Efficiency}}$$





# Xylem |'zīləm|

- 1) The tissue in plants that brings water upward from the roots;
- 2) a leading global water technology company.

We're approximately 12,900 people unified in a common purpose: creating innovative solutions to meet our world's water needs. Developing new technologies that will improve the way water is used, conserved, and reused in the future is central to our work. We move, treat, analyze, and return water to the environment, and we help people use water efficiently, in their homes, buildings, factories and farms. In more than 150 countries, we have strong, long-standing relationships with customers who know us for our powerful combination of leading product brands and applications expertise, backed by a legacy of innovation.

**For more information on how Xylem can help you, go to [xyleminc.com](http://xyleminc.com).**



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cod. 191000021 - P02/14