



# Product Portfolio

LOWARA PROVIDING PUMPING PRODUCTS AND SYSTEMS

 **LOWARA**  
a xylem brand

# Our Vision & Values.

Our vision and values provide the foundation for how we want to grow as a company as well as the inspiration for how we want to behave as industry leaders and ethical corporate citizens.

## Our vision is simple.

We devote our technology, time and talent to advance the smarter use of water.

We look to a future where global water issues do not exist.



## Our work

Water is essential to life. And our life's work is water. We transport it to places it needs to go, we treat it to make it clean, and we test it to ensure its quality. We focus on the world's most critical water challenges.

## Our customers

Our customers are partners. They are the reason we succeed. We work to anticipate their needs with our broad product offerings and our applications expertise.

## Our employees

Our employees are inspired to make a difference through innovation and influence. By focusing on water, we are dedicated to improving people's lives.

## Our shareowners

Our shareowners expect us to create value. We strive to reward their confidence in us.

## Our values

### Respect

for each other, for diversity of people and opinions, for the environment.

### Our customers

for our words and actions, for customer satisfaction, for giving back to our communities.

### Our employees

for acting ethically, for doing what we say we'll do, for having the courage to communicate with candor.

### Our shareowners

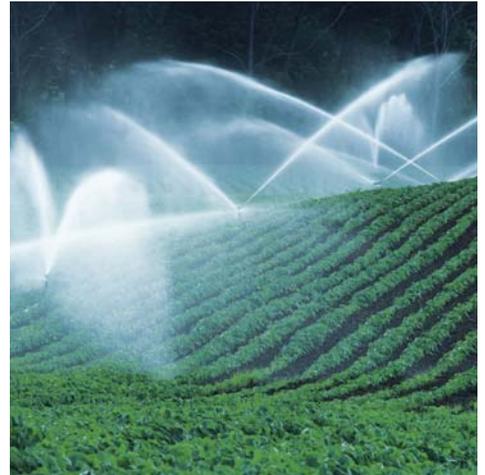
for thinking beyond boundaries, for anticipating tomorrow's challenges, for unlocking growth potential.



# 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 for more than 30 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.



CIBSE  
PATRONS



ISO 9001 - Cert. n. 0149/5



# Lowara UK.

From its base in the UK, Lowara UK a Xylem brand maintains the high standards of innovation, manufacture and service on which the company's reputation was built.

Our product range includes some of the best known and respected brands in the industry - Lowara, Bell & Gossett, Vogel Pumpen and Goulds Water Technology. The range is recognised for its adaptability and versatility a distinguishing feature of the Xylem portfolio.

We are committed to the introduction of new products and extensions to existing ranges. 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 enhancing Lowara's innovation capabilities.



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## HISTORY

The Lowara UK operation started as a joint venture in 1984. In 1986 Lowara was subsequently purchased by Goulds Pumps Inc. of Seneca Falls, USA. The purchase in 1997 of Goulds Pumps Inc. by ITT Industries made Lowara UK Limited part of the world's largest pump manufacturing group. In 2011 Xylem completed its spinoff from ITT Corporation, and began a new chapter as a leading global water technology company.

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## STOCK

Lowara holds a comprehensive stock thus enabling a fast and efficient response to customer's needs.

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## SALES

Sales of the complete product range are carried out by a technically trained staff of engineers who provide assistance from initial pump selection to aftersales on-line technical support. Assisted by a comprehensive stock holding the Lowara UK operation can offer quick response to customers' needs and with the added advantage of holding a number of ranges in component form can offer a diverse combination of product types.

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## SERVICE

After sales support is given by a trained team of service engineers who can offer product testing on-site or in-house repair of any brand of product, commissioning, and an overall service package can be covered by a service contract.

# Lowara UK stock holding.

Due to customer feedback and to enable a fast, flexible and efficient reaction to customers' needs, Lowara UK has recently increased its stock holding of pumps, spares and variable speed drives.

With a warehouse area of over 1800 square metres and stock valued at £2.1 million. The Lowara UK operation can provide a quick response to customer's needs offering an extensive range of pumps and spares.

UK next day delivery is available for all orders received before 3.30pm from UK stock items.

Items not in stock from our 2000+ product lines can be shipped direct from any of our European warehouses.

Lowara UK can offer the following:-

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Increased stock holding facility.

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Fast and efficient delivery.

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Friendly personal service.

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Professional technical advice.

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Same day delivery available.

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Full inspection, repair and test facilities.

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High quality products.

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Competitive prices.

# Lowara UK extranet.

The Lowara UK Extranet is now online and has the following features:-

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Live up to date stock check

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Spares (drawings/part numbers/prices)

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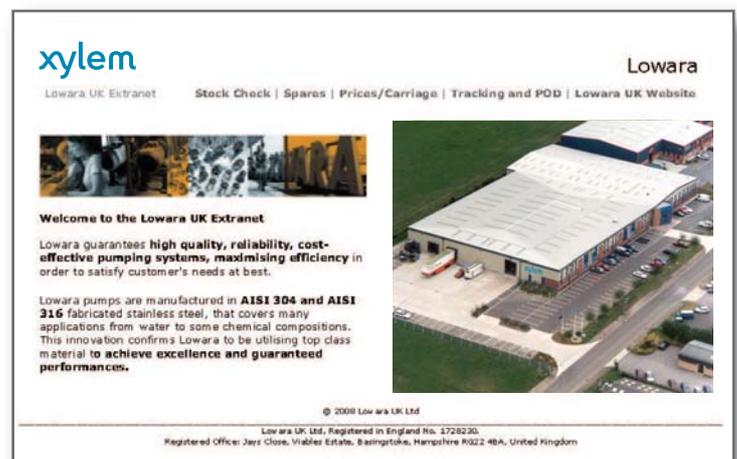
UK Price List (PDF)

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Carriage prices

6 Order tracking and proof of delivery

For log on and password details please contact our sales office on 01297 630230  
[www.lowara.com/uk](http://www.lowara.com/uk)



# Lowara Loop 4U and Xylect.

Pump selection programmes 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. It can support you with the following features:

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Delivery flow calculation according EN 12056.

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Pressure loss calculation for different piping systems.

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Pump dimensioning for the requested data in consideration of medium properties like temperature, density and viscosity. (extensive media data base included).

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Configuration of the pump design and the desired accessory.

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Comparison of economy and lifecycle cost.

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Documentation like product description, data sheet, characteristic curve, dimension- and sectional drawing.

So your planning work will be simplified and quicker. The included comparisons of economy and lifecycle cost allows you to find the optimal solution for each application.

Data output and export is possible in the following formats:

- PDF
- XML
- CEF (ASCII)

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Easy creation of tender specifications.

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Update via internet is possible.

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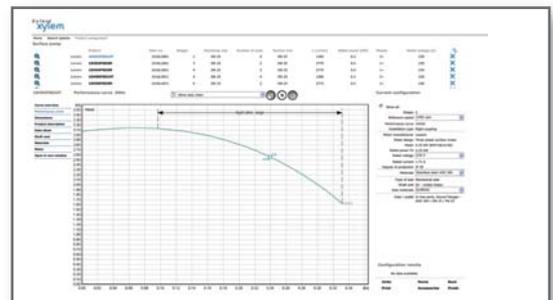
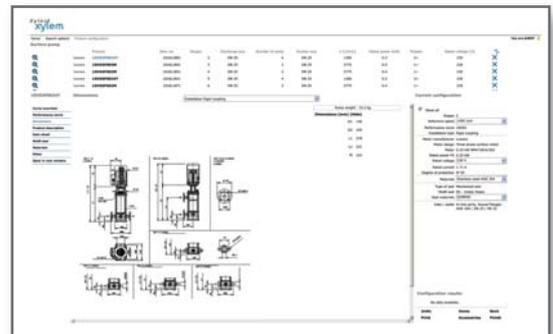
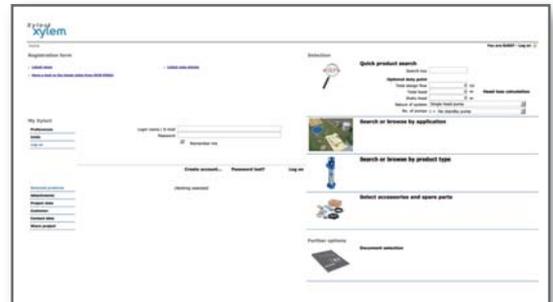
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Please contact us if you need our selection program or go online for the xylect programme on [www.xylect.com](http://www.xylect.com)



# Lowara Service Department.

## ON SITE SERVICES

Variable & fixed speed booster set commissioning.

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Energy Audits.

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Pressurisation set commissioning.

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All makes of pumps inspected and repaired.

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Service/maintenance agreements available and tailored to your requirements.

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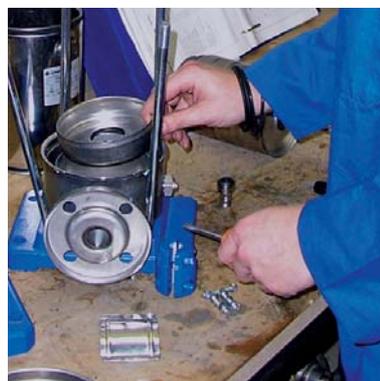
Laser alignment.

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Vibration monitoring.

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Energy saving audits and retrofitting available to save you money.



## IN HOUSE SERVICE FACILITIES

All makes of pumps inspected and repaired.

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Qualified, rapid and cost effective repair.

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Hydrovar VSD servicing available.

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Clean water pump performance and witness testing available.

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Periodic refurbishment and servicing.

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All Lowara pump modifications available.

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AC motor rewinds and modifications available.



# End suction centrifugal pumps.

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 ranges there are products that have complex seal arrangements.



## CO Series

Open impeller pumps  
(316 s/st)

Capacities to 54m<sup>3</sup>/h

Head to 24 metres

Powers to 3kW



## CEA-CA (AISI 304 s/st)

## CEAN - CAN Series

(AISI 316 s/st)

**Closed impeller pumps**

Capacities to 31m<sup>3</sup>/h

Head to 62 metres

Powers to 3kW



## FHE-FHS Series

Cast iron pumps

Capacities to 700m<sup>3</sup>/h

Head to 100 metres

Powers to 132kW



## BG Series

Self priming pumps

Capacities to 4.2m<sup>3</sup>/h

Head to 53 metres

Powers from 0.37 to

1.1kW

Lifts to 8 metres



## SHE-SHS-SHF Series

316 Stainless  
steel pumps

Capacities to 240m<sup>3</sup>/h

Head to 110 metres

Powers to 75kW



## HM-HMS Series

Horizontal multi-stage  
pumps

Capacities to 7.2m<sup>3</sup>/h

Head to 60 metres

Powers to 0.9kW



## SHO Series

Open impeller  
stainless steel pumps

Capacities to 56m<sup>3</sup>/h

Head to 50 metres

Powers to 11kW



### P-PB Series

Peripheral pumps

Capacities to 3.72m<sup>3</sup>/h

Head to 82 metres

Powers to 1.1kW



### SP Series

Self priming pumps

Capacities to 2.75m<sup>3</sup>/h

Head to 49 metres

Powers to 0.55 and  
0.75kW

Lifts to 7 metres



### MAGNAFLOW 440

Whirlpool and Spa pumps

Capacities to 35m<sup>3</sup>/h

Head to 13 metres

Powers to 1.5kW



### JET Series

Cast iron self  
priming pumps

Capacities to 4m<sup>3</sup>/h

Head to 48 metres

Powers to 1.1kW



### J/AV Series

Plastic self priming  
and swimming pool  
pumps

Capacities to 32m<sup>3</sup>/h

Head to 19 metres

Powers to 1.5kW



### AG Series

Plastic self priming and  
swimming pool pumps

Capacities to 17m<sup>3</sup>/h

Head to 13 metres

Powers to 0.55kW



### BLOCK PRESSURE SETS

Pre-assembled sets  
for use with the  
Lowara range of  
end suction pumps



### 3200 - DB Series

Magnetic drive pumps

Capacities to 48m<sup>3</sup>/h  
Head to 60 metres  
Powers to 5.5kW  
Available in Polypropylene or PVDF



### L Series

Horizontal single stage volute casing pump

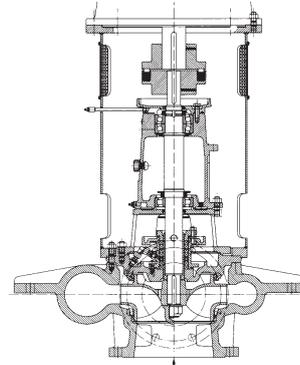
Capacities to 600m<sup>3</sup>/h  
Head to 100 metres  
Temp 140°C  
Size DN 32-150



### LSN Series

ISO process pumps

Capacities to 450m<sup>3</sup>/h  
Head to 150 metres  
Temp -40°C to +180°C



### LSV Series

Vertical single stage pump with closed impeller for dry pit installation

Capacities to 3600m<sup>3</sup>/h  
Head to 100 metres  
Temp to 140°C  
Size DN 150-600



### LSB Series

Close coupled ISO process pumps

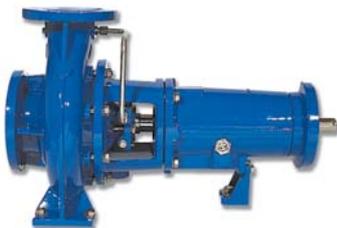
Capacities to 450m<sup>3</sup>/h  
Head to 150 metres  
Temp -40°C to +140°C



### LT Series

Vertical single stage pump with closed impeller in vertical line shaft version for wet or dry installation

Capacities to 3000m<sup>3</sup>/h  
Head to 100 metres  
Max temp to 80°C  
Size dn150-300  
Installation length up to 6 m



### FHF Series

Frame mounted end suction pumps

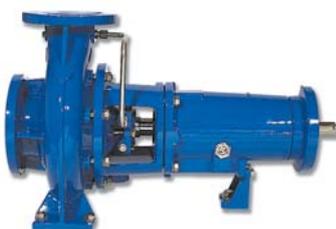
Capacities to 650m<sup>3</sup>/h  
Head to 100 metres  
Max temp to 140°C



### ICV Series

Vertical single stage pump with closed impeller

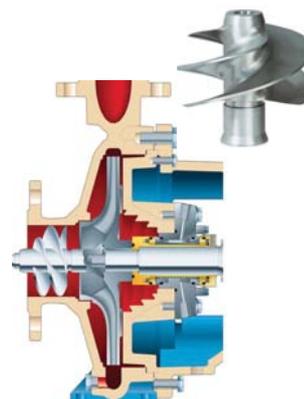
Capacities to 450m<sup>3</sup>/h  
Head to 150 metres  
Temp to 180°C  
Size DN 25-150



### LS / LC / LCP Series

Horizontal single stage end suction pump with closed impeller and oil lubricated bearing frame

Capacities to 4600m<sup>3</sup>/h  
Head to 100 metres  
Temp 180°C  
Size DN 150-600



### Inducer

The Universal Inducer enables a safe and reliable operation with low NPSH values, the handling of liquids close to the boiling point and the handling of fluids containing entrained gas.

Model:  
LSNI, ICPI, ICVI, MPAI,  
CNY, CAY  
Size 40-500mm

# In-line centrifugal pumps.

The in-line centrifugal range includes models ranging from glandless variable speed, glandless and glanded pumps. The units are suited for many applications including heating, air conditioning systems and hot water. The range currently available includes pumps from 1" to 16" discharge size.



**TLCB Series**

Residential hot water secondary circulation.  
Capacities to 5m<sup>3</sup>/h.  
Head to 6 metres.  
Temp -10°C to +110°C.  
Max Pressure 10 bar.



**TLCHB Series**

Circulation of secondary hot water in high flow/high head installations.  
Capacities to 12m<sup>3</sup>/h.  
Head to 12 metres.  
Temp -10°C to +110°C.  
Max Pressure 10 bar.



## ECOCIRC Series

High efficiency energy saving variable speed circulators suitable for stand alone and boiler OEM applications.

ErP ready to 2015 standards.  
Capacities to 3 m<sup>3</sup>/h  
Head to 6 m  
Maximum pressure 10 bar  
Temp -10°C to +110°C

## AFLC - AFLCG Series

Variable speed circulators for light and commercial systems.

Capacities to 60m<sup>3</sup>/h.  
Head to 12 metres.  
Temp +15°C to +110°C\*  
\*(Varies with models)



## FC Series

In-line circulator pumps

Capacities to 330m<sup>3</sup>/h  
Head to 89 metres  
Powers to 22kW  
Temp -10°C to +130°C\*  
\*(S version -20°C to +140°C)



Larger Commercial range up to 400mm.  
Single and twin head in line circulator pumps.

Capacities to 1800m<sup>3</sup>/h  
Head to 80 metres  
Powers to 320kW  
Max temp to -35°C to +180°C.  
Material options:  
Cast Iron, Bronze and  
Stainless steel.  
Internal, external, double seal  
options available.



## FCT Series

Twin in-line circulator pumps

Capacities to 330m<sup>3</sup>/h  
Head to 89 metres  
Powers to 22kW  
Temp -10°C to +130°C\*  
\*(S version -20°C to +140°C)



\*FCS - \*FCE - \*FCT pump series shown fitted with the new HYDROVAR® VariableSpeed Drives. For more information on the HYDROVAR® please see page 22.

# Multistage pumps.

Lowara has an extensive range of multistage products that start with the Lowara e-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 High Pressure e-SV system and a multi-outlet pump used in fire set applications.



## e-SV Series

Vertical multistage pumps with high efficiency motors

Capacities to 160m<sup>3</sup>/h

Head to 330 metres

Powers to 55kW

Temp -30°C to +120°C\*

\*(150°C and 180°C versions available on request)

Pumps available with:- various flange arrangements. 2 or 4 pole motor speeds, N Series available in 316 st. steel

\*e-SV pump shown fitted with the new HYDROVAR® Variable Speed Drives. For more information on the HYDROVAR® please see page 22.

**WRAS**  
APPROVED  
PRODUCT



## High Pressure e-SV Series

In-series multistage pumps

Capacities to 150m<sup>3</sup>/h

Maximum working pressure 45 bar



## SVI Series

Immersible vertical multistage pumps

Capacities to 72m<sup>3</sup>/h

Head to 247 metres

Powers to 22kW

Temp -10°C to +90°C





### TDB-TDV Series

Vertical multistage pumps

Capacities to 340m<sup>3</sup>/h

Head to 500 metres

Max temp to 140°C

Bronze impeller version available

Pump also available in 316 Stainless Steel.

### MPE Series

Horizontal multistage pump with bearings on both ends.  
Thrust balancing and seal pressure reduction by balancing drum

Capacities to 300m<sup>3</sup>/h

Head to 850 metres

Max temp to 140°C

Size DN 125



### PVa Series

Vertical multistage pump with closed, radial type impellers

Capacities to 850m<sup>3</sup>/h

Head to 300 metres

Max temp to 140°C

Size DN 80-200



### MP, MPA Series

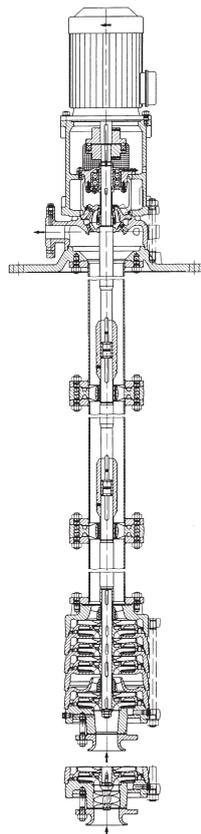
Horizontal multistage pumps

Capacities to 340m<sup>3</sup>/h

Head to 500 metres

Max temp to 140°C

Powers to 355kW



### MPVS Series

Vertical multistage wet pit pumps

Capacities to 340m<sup>3</sup>/h

Head to 500 metres

Max temp to 140°C

Installation length up to 4m



### PT Series

Vertical multistage pumps

Capacities to 2000m<sup>3</sup>/h

Head to 300 metres

Max temp to 100°C

Installation length up to 10m

# Submersible drainage and sewage pumps.

Submersible pumps available cover small and medium sized applications with pump discharge sizes ranging to 12". The products are suited to applications such as cellar drainage through to industrial liquid transfer.

The main application of the larger sized units is pumping of sewage. The range also includes a 316 stainless steel and bronze unit which are suited to chemical transfer and sea water transfer applications respectively.

## DOC Series

Cellar drainage pumps standard or tube float switch available

Capacities to 14m<sup>3</sup>/h

Head to 11 metres

Powers to 0.55kW

Solids from 10mm or 20mm

Low suction collar option allows water removal to a depth of 3mm.



## DOMO Series

Drainage/wastewater pumps standard or tube float switch available

Capacities to 40m<sup>3</sup>/h

Head to 14.5 metres

Powers to 1.5kW

Solids to 50mm



## DIWA Series

De-watering pumps

Capacities to 25m<sup>3</sup>/h

Head to 21 metres

Powers to 1.5kW



## DOMO GRI Series

Drainage/wastewater pumps

Capacities to 6.6m<sup>3</sup>/h

Head to 25 metres

Powers to 1.1kW

with grinder device



## DN Series

Drainage/wastewater pumps standard and tube float switch available

Capacities to 17m<sup>3</sup>/h

Head to 20 metres

Powers to 0.75kW

Solids to 5mm

## DL Series

Wastewater/sewage pumps with single channel impeller

Capacities to 42m<sup>3</sup>/h

Head to 21 metres

Powers to 1.5kW

Solids to 50mm



## READY Series

Contractor drainage pumps

Capacities to 18m<sup>3</sup>/h

Head to 14 metres

Powers to 0.9kW

Solids to 7mm





## PACKAGED PUMPING STATION TOPS Series

Corrosion resistant tanks, suitable for sewage. Comprehensive range of chamber sizes. Single, dual and free standing options available. Control panels available, contact your local sales office.



## BOX Series

Prefabricated lifting stations

Minibox, Micro 4, Micro 6, Micro 6+6, Micro 10

## AquaCharge

Rechargeable portable water pump

Pumps up to 750 litres of water on a single charge.

Durable and fully submersible.

Charge Time  
Approximately 12 hours

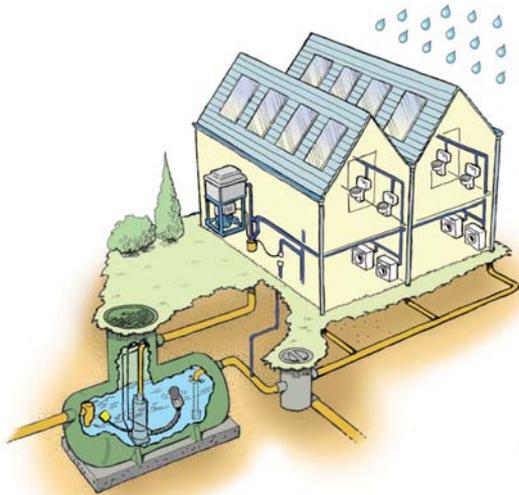


## SOS Floodkit

For flooded basements and garages

Pump Type DOC3 with 10 metres of cable.

Can be used in or outside of the box.



## Rainwater Harvesting

Storage tanks and pumping systems include:

Underground rainwater collection tank Scuba Rainwater pump together with inlet flow calmer, overflow trap, underground filter, 1/2" top-up device with type AA air gap.

Larger twin pump versions available with pressure vessel.

## GLS-GLV Series

Waste water/sewage pumps in cast iron with single channel or vortex impeller

Capacities to 244m<sup>3</sup>/h

Head to 41 metres

Powers to 7,4 kW

Solids to 100mm

Motors 2-4 poles



## FDLT Series

Drainage/wastewater

Capacities to 16m<sup>3</sup>/h

Head to 46 metres

Powers to 4,9 kW

Discharge sizes to 40 mm

Max. permissible solids to 6mm



# Submersible borehole pumps.

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



**L6W-L8W-  
L10W-L12W  
Series  
Rewindable  
motors**

Motors Powers to  
400kW



**Water and oil filled  
4"submersible motor  
Series**

Powers to 7.5 kW



**SC SERIES  
5" dia.  
submersible  
pumps**

Capacities to 7.5m<sup>3</sup>/h  
Head to 80 metres  
Powers to 1.1kW  
Available with  
float switch



**Z6-ZN6 series  
6" dia.  
borehole  
pumps**

Capacities to 78m<sup>3</sup>/h  
Head to 700 metres  
Powers to 55kW



**Z8-Z10-Z12 SERIES  
8"-10"-12" dia.  
borehole pumps**

Capacities to 520m<sup>3</sup>/h  
Head to 550 metres  
Powers to 350kW



**Cooling shrouds and  
pressure shrouds.**



**GS SERIES  
4" dia.  
borehole  
pumps**

Capacities to 21m<sup>3</sup>/h  
Head to 340 metres  
Powers to 7.5kW

# Pressurisation and Booster sets.

Wide range of 2 - 8 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.



## RESVARI - Variable speed RESFIX - Fixed speed Booster Sets for domestic dwellings

Booster sets sized to overcome low water pressure in a domestic dwelling. The Lowara Booster set will ensure water pressure for both hot and cold water supplies meeting the most demanding requirements.

\*Extra water storage units on request.



## PREFIX BETA MK2 Packaged pressurisation set (enclosed)

Automatic make-up units for sealed heating and chilled water systems. Microprocessor single or twin unit. 2.8 or 5.5 Bar versions available.



## PREFIX ALPHA Packaged pressurisation set (open frame)

Automatic make-up units for sealed heating and chilled water systems. Single and Twin pump options. 2.8 or 5.5 Bar versions available.



## Lowara Servitec 30 Vacuum spray de-aeration system

Lowara Servitec automatically eliminates air from heating and chilled water systems in a quick and efficient manner.

## Block Unit Series

Small Pressure Booster Set, complete with pump, expansion tank, pressure switch, gauge and connectors.

Flow rate up to 6 m<sup>3</sup>/h.

Power up to 1.1 kW.



### MINI V Variable Speed TKS/HM Booster Set

Lowara Booster set complete with 250 Litre Break Tank - suitable for boosting cold water fitted with the Teknospeed energy saving variable speed drive.



### MINI F Fixed Speed HM Booster Set

Lowara Booster set complete with 250 Litre Break Tank - suitable for boosting cold water.



Special booster sets and larger performance boosters can be built to suit specific requirements - please contact the sales office.

## HYDROQUENCH 3000 Packaged sprinkler sets

Automatic sprinkler sets for domestic and residential applications  
Designed to comply with specification EN 12259-12 & BS 9251

Flow range 0 - 400 l/m

Pressure range 1 - 6 Bar



CEAM version

SV version





### GHV Series

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

Flow rate up to 640 m<sup>3</sup>/h.

Power up to 8 x 45 kW



### GXS Series

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

Flow rate up to 58 m<sup>3</sup>/h.

Power up to 2 x 1.5 kW.

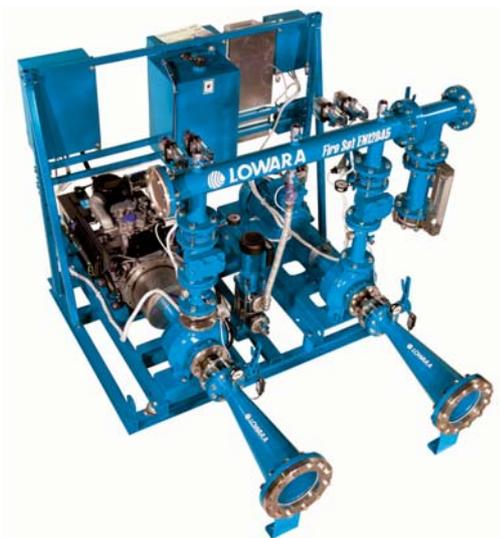


### GMD-GS Series

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

Flow rate up to 630 m<sup>3</sup>/h.

Power up to 4 x 55 kW.



### Fire Fighting Booster Sets according to EN12845

This product line has been specifically designed for fire fighting systems according to the European Standard EN12845 (fixed fighting systems - automatic sprinkler systems - design, installation and maintenance).

Each fire set is fitted with Lowara pumps. Manifold in painted steel pipe with anchor bolts to fix to a wall or floor.



### GTKS Series

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 e-SV series electric pumps.

Flow rate up to 52 m<sup>3</sup>/h.

Power up to 2 x 1.1 kW



# Variable speed drives ... Teknospeed

Series of Variable Speed Electric Pumps and Pressure Booster.

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 52m<sup>3</sup>/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 65°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 - 525 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 byTUEV 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.

Features:

Sizes available 1.1 - 45 kW.

Extension up to 525 kW with Hydrovar Smart.

Shuts off 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.

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%.

Error Log with Time and date stamp.

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

## Typical examples of application

Maintaining a constant pressure, as in water boosting or irrigation.

Maintains a constant flow, as in water supply.

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.

## Energy savings

Energy saving is a large issue within the heating and ventilation 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.

## Typical energy savings

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

CAPACITY m³/h	POWER USED		POWER SAVED kW	LENGTH OF TIME h	TOTAL kWh
	CONSTANT SPEED kW	VARIABLE SPEED 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**



## 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.

## 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 1.1kW to 525kW.

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 microprocess or, using a included ModBus interface.

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

The Aquontroller was specially designed for pump systems in residential buildings, it offers constant water pressure independent of the required flow. The Aquontroller operates the pump smoothly for an extended life. The resultant energy savings are the result of the precise control on demand. Suitable for use with 230 volt single-phase motors.

Available in two sizes.



## Aquada UV

The benefits of Ultraviolet Disinfection, enhances overall water safety, no harmful chemicals or by-products, no affect on taste and water quality, simple to install with low maintenance and economical.

Available in five sizes up to 28 m<sup>3</sup>/h, please contact your local sales office for complete size range.



# Vessels, motors and accessories.



## Cable

Cable stocked

## Control Boxes

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

## Lowara Motors

Environmentally friendly and efficiency increased replacement motors are available for the complete range of pumps supplied. Other features include:-

- Noise level reductions.
- User friendly wiring.
- Overload protection in the terminal box.
- Protection against humidity.



## Braze Plate Heat Exchangers

Threads from 3/4" to 2"  
Sizes up to 140kW



## Pressure vessels horizontal and vertical diaphragm

Sizes to 5000 litre.  
Pressure to 10 bar (other pressure options available up to 40 bar).  
Products available with WRC approved materials.



## 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.
- Float switches.
- Flow switches.
- Direct on line starter.
- Non return valves, strainer and hosedails.
- 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 available Genyo 8A and Genyo 16A
- Maximum current 16A
- Maximum pressure 10 bar.
- IP 65 protection.
- Delivery up to 170 l/min (10m<sup>3</sup>/h).
- Maximum liquid temperature 60°C.
- Low friction loss.



## Triple Duty Valves

Anti-slam check valve, calibrated balancing valve and isolating valve. Sizes from 65mm to 400mm.

## Suction Diffusers

Provides idea flow conditions for the pump: built in start up strainer, saves space. Sizes from 65mm to 250mm.



# Seminars, training and new product launches.

## LOWARA TRAINING CENTRE LTC



### 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.

### Lowara CPD presentations CIBSE accredited courses

One or two hour CPD seminars, at the clients premises, half and full day training can be arranged at company HQ in Axminster, Devon or at any location in the UK. All courses cover the pumps, systems and variable speed drives. Lowara also offer HVAC application training, all are taught by experts in the field and comprehensive course notes are provided.

### 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.

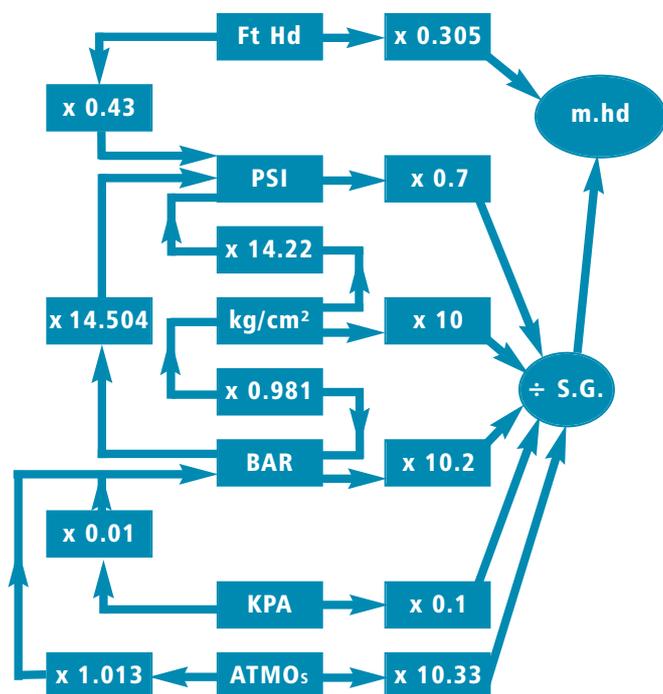
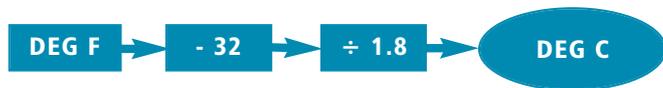
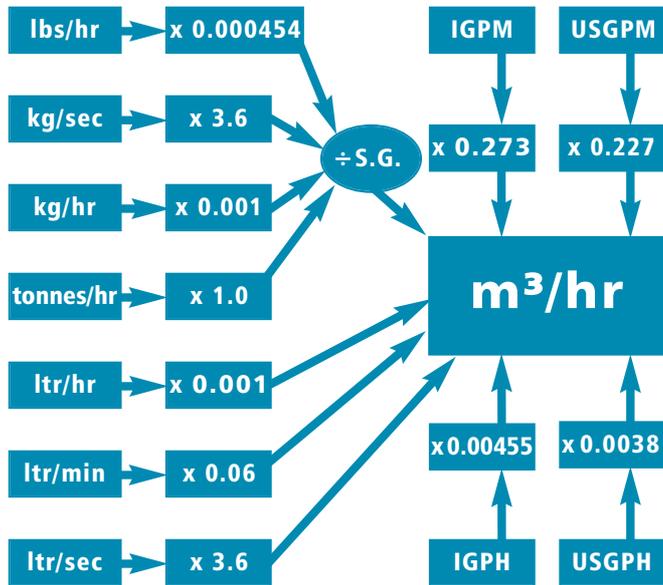
### Exhibitions

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 products, services and a complete calendar for training events and exhibitions please visit our web site [www.lowara.co.uk](http://www.lowara.co.uk)



# Calculation and conversion charts.



## Conversions

To convert to litres/sec.

IGPM	x 0.0757
m <sup>3</sup> /hr	x 0.278
m <sup>3</sup> /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 m<sup>3</sup>/hr

IGPM	x 0.273
Litres/sec	x 3.60
Litres/min	x 0.06
Metric tonnes/hr	x 1 ÷ S.G.
m <sup>3</sup> /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/cm <sup>2</sup>	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/m <sup>2</sup> (KPa)	x 0.102 ÷ S.G.
Bar	x 10.2 ÷ S.G.

## Power Conversions

To convert to kilowatts

Horse power	x 0.746
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To convert to HP

Kilowatts	÷ 0.746
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kW =

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

BHP =

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

# About Xylem Applied Water Systems

Xylem's Applied Water Systems is known for its systems and applications expertise across the building services, general industrial, food and beverage, marine and agricultural markets. Serving the global marketplace with its leading portfolio of innovative and energy-efficient products and brands, AWS delivers on the challenge to solve the world's most critical water issues. For more information on AWS, please visit <http://www.xylemapplicdwater.com>

## Xylem

Xylem /'zīləm/

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

We're 12,000 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 re-used 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).

[www.xyleminc.com](http://www.xyleminc.com)



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