



ITT

Lowara

Product Portfolio



Engineered for life



ITT

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.

Engineered for life

Lowara pumps... engineered for life

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 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...

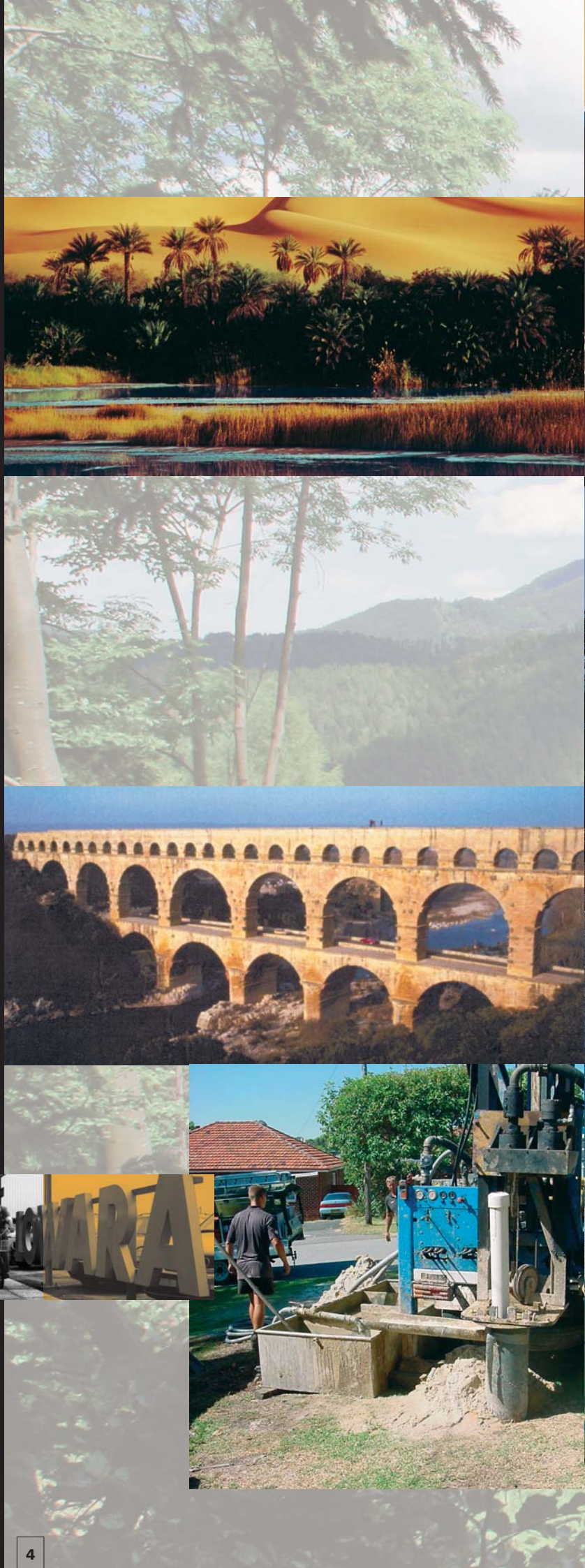
We will provide efficient and reliable products, services and solutions for the water supply and water pumping needs in the residential, irrigation, building services and commercial markets worldwide, in order to maximize value for our customers, co-workers and shareholders.

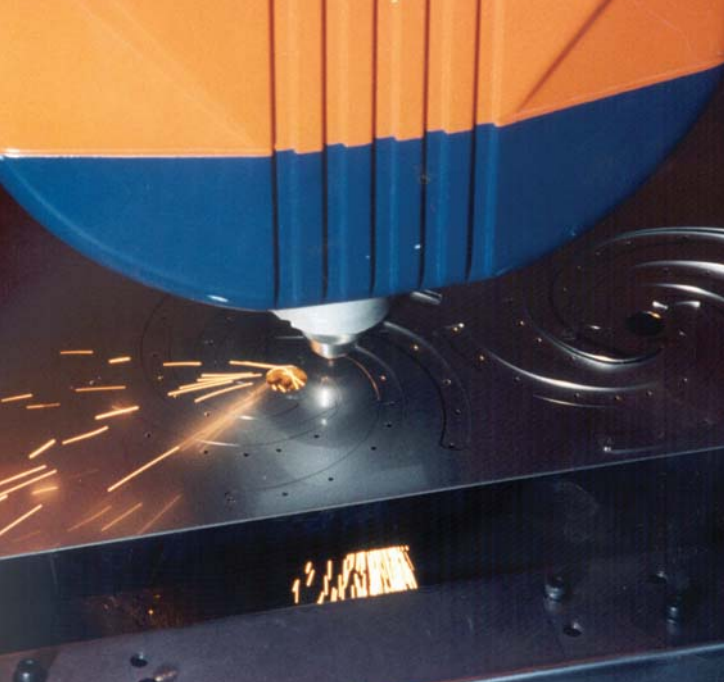
Innovation for quality...

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 ITT, 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.



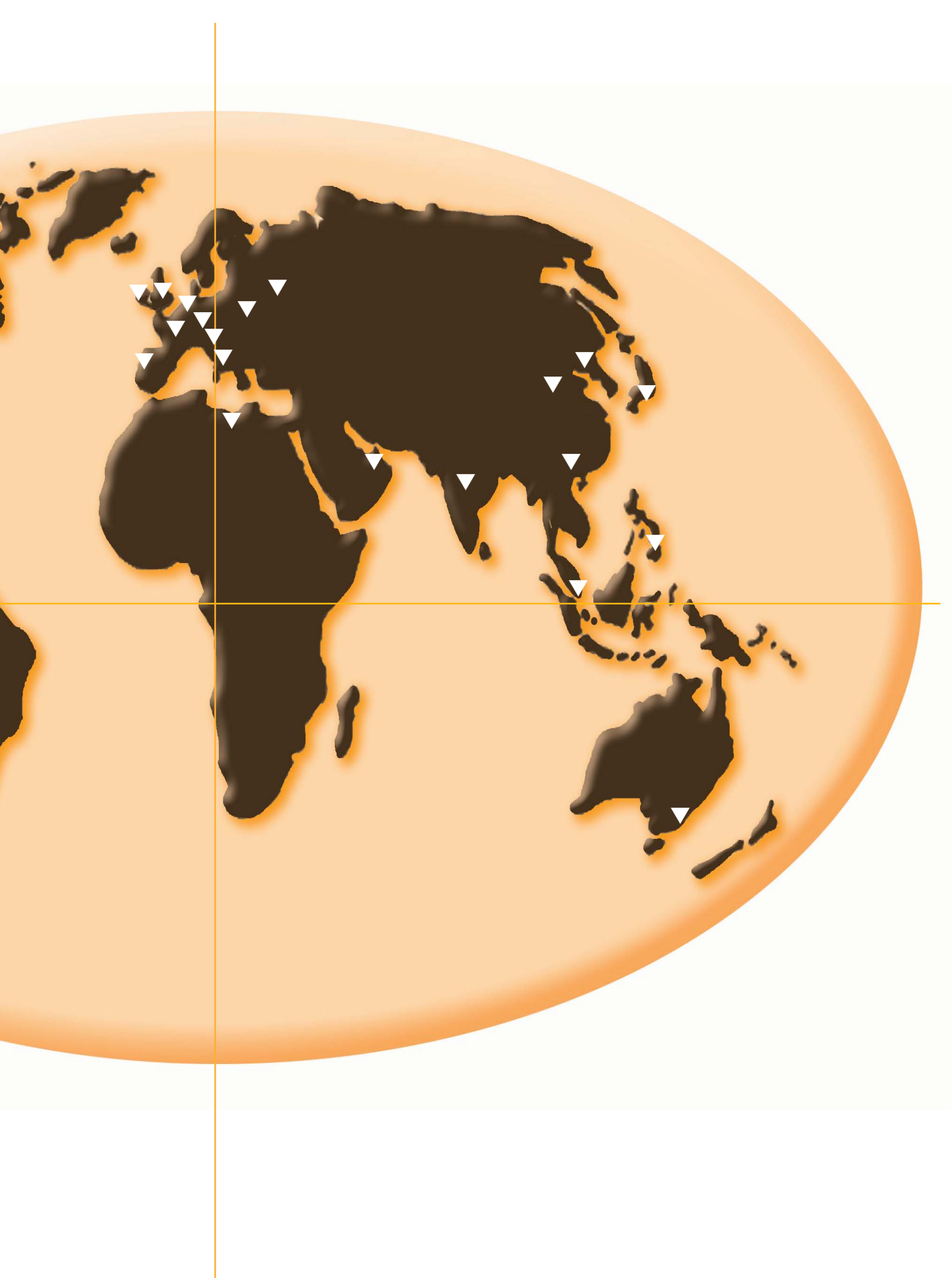
The Lowara World...

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

ITT is a global multi-industrial company active in fluid technology, defense systems, components for the automotive industry, connectors and switches for information systems and telecommunications.

▼ ITT Residential and Commercial Water Group *Facilities and Offices*





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.

LOWARA HEADQUARTERS ITALY



PUMPENFABRIK ERNST VOGEL



LOWARA DEUTSCHLAND





**LOWARA
FRANCE**

**LOWARA
IRELAND**



**LOWARA
NEDERLAND**

**LOWARA
PORTUGAL**



**LOWARA
UK**

**LOWARA - VOGEL
POLAND**



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 the 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.

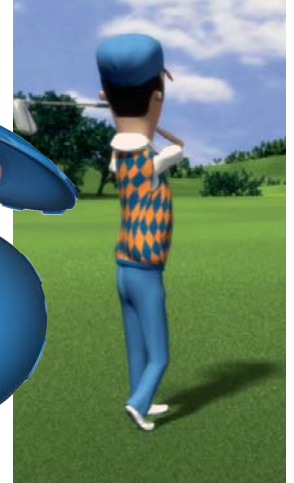
LOOP4U...

A pump selection programme which assists in the correct selection of pumps within the Lowara range. With LOOP4U 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...

		RESIDENTIAL	COMMERCIAL-LIGHT INDUSTRY	BUILDING SERVICES	IRRIGATION
END SUCTION CENTRIFUGAL PUMPS	HM-HMS Series	●		●	●
	CEA-CEAN Series	●	●	●	
	CA-CAN Series	●	●	●	●
	SP Series	●			
	BG Series	●			●
	JEC-AG Series	●	●	●	
	P-PB-PK Series	●	●	●	
	FHE-FHS Series	●	●	●	●
	FHF Series		●	●	●
	CO-COF-SHO Series		●		
	SHE-SHS-SHF Series		●	●	●
CLOSE COUPLED IN-LINE PUMPS					
	TCR Residential Circulators	●	●	●	
	ETCR Electronic Residential Circulators	●		●	
	TCB Sanitary		●	●	
	TC-FC Residential Circulators	●		●	
	TCR Residential Circulators	●		●	
	ATC-AFC-ATCR Series	●		●	
	FCE-FCS Series		●	●	●
	FCT Series		●	●	●
MULTI-STAGE					
	SV 2-16 Series	●	●	●	●
	SV 33-92 Series		●	●	●
	SVN 2-92, 316 Stainless Steel Series		●	●	
	DPS Series		●	●	
	TDB-TDV Series		●	●	●
	SVI Series		●		



		RESIDENTIAL	COMMERCIAL-LIGHT INDUSTRY	BUILDING SERVICES	IRRIGATION
SUBMERSIBLE, DRAINAGE & SEWAGE PUMPS	DOC Series	●	●	●	
	DOMO Series	●	●	●	
	DOMO GRI Series	●	●	●	
	DIWA Series	●	●	●	
	DN Series	●	●	●	
	DIGGER Series		●	●	
	DL-DLC-DLS-DLV-DLG Series	●	●	●	
	Depurbox Series	●	●	●	
	Mini-Single-Double Box Series	●	●	●	
BOREHOLE	GS Series	●	●	●	
	SCUBA Series	●	●		●
	Z6 Series		●	●	●
	Z8 Series		●		●
	S10-12 Series		●		●
	40S-L4C Motors	●	●	●	●
	L6C Motors		●	●	●
	L6W-L8W-L10W-L12W Motors		●	●	●
BOOSTER SETS	Block Pressure Set	●		●	
	GXS Series		●		
	GMD Series		●	●	●
	GTKS Series	●	●	●	
	GHV Series	●	●	●	●
	GEN Fire Fighting Systems EN 12845			●	
VARIABLE SPEED CONTROLS	Teknospeed	●	●	●	
	HYDROVAR®	●	●	●	●
	Hydrovar Retro-Fitting		●	●	●
	Hydrovar Sensorless		●	●	
	Hydrovar Watercooled	●			
ACCESSORIES	Genyo, Vessels, Motors, Float switches	●	●	●	●
	Filters, Softners*, Dosing Pumps*	●	●	●	
	Control Boxes	●	●	●	●

* Sold in Italy Only

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 range there are products that have complex seal arrangements.



**FHE-FHS
SERIES**
cast iron
pumps

Capacities to 700m³/h
Head to 100 metres
Powers to 55kW



**SHE-SHS-SHF
SERIES**
316 stainless
steel pumps

Capacities to 240m³/h
Head to 110 metres
Powers to 75kW



SHO SERIES
open impeller stainless
steel pumps

Capacities to 53m³/h
Head to 50 metres
Powers to 11kW



CO SERIES
open impeller
pumps (316 s/st)

Capacities to 54m³/h
Head to 24 metres
Powers to 3kW



**CEA-CEAN-
CA-CAN SERIES**
closed impeller
pumps
(AISI 316 s/st)

Capacities to 31m³/h
Head to 62 metres
Powers to 3kW



BG SERIES
self priming pumps

Capacities to 4.2m³/h
Head to 53 metres
Powers from 0.37 to
1.1kW
Lifts to 8 metres



P-PB-PK SERIES

Peripheral pumps

Capacities to 3.72m³/h

Head to 82 metres

Powers to 1.1kW



AG SERIES

plastic self priming and swimming pool pumps

Capacities to 17m³/h

Head to 13 metres

Powers to 0.55kW



J SERIES

plastic self priming and swimming pool pumps

Capacities to 32m³/h

Head to 19 metres

Powers to 1.5kW



BLOCK PRESSURE SETS

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

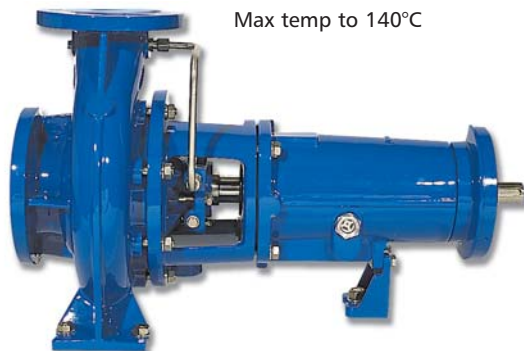
FHF SERIES

frame mounted end suction pumps

Capacities to 650m³/h

Head to 100 metres

Max temp to 140°C



HM-HMS SERIES

horizontal multi-stage pumps

Capacities to 7.2m³/h

Head to 60 metres

Powers to 0.9kW



SP SERIES

self priming pumps

Capacities to 2.75m³/h

Head to 49 metres

Powers to 0.55 and 0.75kW

Lifts to 7 metres

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 6" discharge size.



TCR TCB-TCS TC-FC ETCR ETC-EFC SERIES in-line circulator pumps

Capacities to 70m³/h

Head to 20 metres

Powers to 3kW

Temp -20°C to +130°C



ATC-AFC SERIES High efficiency "A class" vari- able speed circulators

Execution: Single and Twin

Capacities: up to 107 m³/h (Twin)

Head: up to 13 m

Maximum pressure: 10 bar

Temp: from -10 °C to 110 °C

FCT SERIES twin in-line circulator pumps

Capacities to 330m³/h

Head to 89 metres

Powers to 22kW

Max temp to 140°C



ATCR SERIES High efficiency "A class" variable speed circulators

Capacities: up to 2,5 m³/h

Head: up to 5 m

Maximum pressure: 10 bar

Temp: from +2 °C to 110 °C



FCE SERIES in-line circulator pumps

Capacities to 330m³/h

Head to 89 metres

Powers to 22kW

Temp -10°C to +130°C

FCS SERIES in-line circulator pumps

Capacities to 330m³/h

Head to 89 metres

Powers to 22kW

Temp -20°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.



SV & SVN SERIES vertical multi-stage pumps

Capacities to 120m³/h
Head to 330 metres
Powers to 45kW
Temp -30°C to +120°C

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

SVI SERIES immersion vertical multi-stage pumps

Capacities to 72m³/h
Head to 247 metres
Powers to 22kW
Temp -10°C to +90°C



TDB-TDV SERIES vertical multi-stage pumps

Capacities to 340m³/h
Head over 500 metres
Max temp to 140°C

DPS SERIES in-series multi-stage pumps

Capacities to 72m³/h
Maximum working pressure 40 bar
Powers to 22kW



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.

DOMO GRI SERIES drainage/wastewater pumps

Capacities to 6.6m³/h
Head to 25 metres
Powers 1.1kW
with grinder device



DOC SERIES cellar drainage pumps

*standard or tube
float switch available*
Capacities to 14m³/h
Head to 11 metres
Powers to 0.55kW
Solids to 20mm



DOMO SERIES drainage/wastewater pumps

*standard or tube float
switch available*

Capacities to 40m³/h
Head to 14.5 metres
Powers to 1.5kW
Solids to 50mm



DIGGER SERIES contractor drainage pumps

Capacities to 18m³/h
Head to 14 metres
Powers to 0.75kW
Solids to 7mm



DIWA SERIES de-watering pumps

Capacities to 25m³/h
Head to 21 metres
Powers to 1.5kW



DN SERIES drainage/wastewater pumps

Capacities to 17m³/h
Head to 20 metres
Powers to 0.75kW
Solids to 5mm





DL-DLC-DLS-DLV SERIES wastewater/sewage pumps in cast iron with single channel or vortex impeller

Capacities to 1500 m³/h

Head to 82 metres

Powers to 70,6 kW

Discharge size to DN 250

Max permissible solids to 125 mm

Motors 2-4-6-8 poles



DLG SERIES drainage/ wastewater pumps

Capacities to 15 m³/h

Head to 52 metres

Powers to 5,1 kW

Discharge size to DN 50

Max permissible solids to 6 mm

Motors 2 or 4 poles.



BOX SERIES prefabricated lifting stations

1. Mini box
2. Single box
3. Double box



DEPURBOX SERIES Domestic sewage treatment systems.

Extremely high purification
efficiency, for safe discharge
into surface waters or ground.
High resistant and compact
system.

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.



Water and oil filled 4" submersible motors series

Powers to 7,5 kW



L6W-L8W- L10W-L12W SERIES Rewindable motors

Powers to 300 kW



S10-S12 SERIES 10"-12" dia. borehole pumps

Capacities to 550m³/h

Head to 340 metres

Powers to 400kW



Z6-ZN6 SERIES 6" dia. borehole pumps

Capacities to 78m³/h

Head to 700 metres

Powers to 55kW



SCUBA SERIES 5" dia. submersible pumps

Capacities to 7.5m³/h

Head to 80 metres

Powers to 1.1kW

Available with
float switch

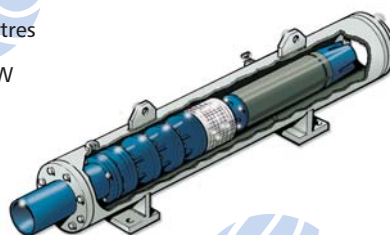


Z8-ZR8 SERIES 8" dia. borehole pumps

Capacities to 180m³/h

Head to 550 metres

Powers to 185kW



Cooling shrouds and pressure shrouds



GS SERIES 4" dia. borehole pumps

Capacities to 21m³/h

Head to 340 metres

Powers to 7.5kW

Booster sets ...

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.



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 rate up to 400 m³/h.

Power up to 4 x 45 kW.



GTS 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 rate up to 16 m³/h.

Power up to 2 x 1.1 kW

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 rate up to 400 m³/h.

Power up to 4 x 45 kW



FIRE FIGHTING SYSTEMS EN 12845

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.





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:

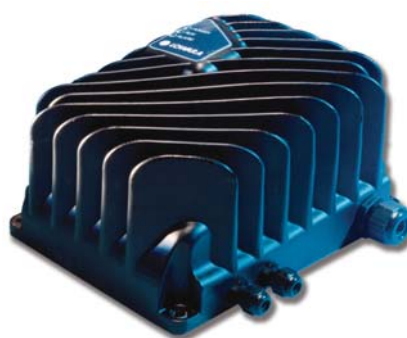
GTKS20/HMZ, GTKS20/CA, GTKS20/SV

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 design the HYDROVAR® unit can be mounted or retrofitted to any existing centrifugal pump which has a standard IEC motor.

Up to 8 HYDROVAR® controllers can be linked together.

The units are available in powers from 1,1 - 45 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% /TUV approved)*

* Tests carried out by TUV Österreich (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 - 45 kW.
- Extension up to 315 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 valued selectable via external contact.
- IRRISTORM - Link to enable HYDROVAR® to communicate with golf sprinkler software.

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 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 ITT Lowara to promote the HYDROVAR® product.

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

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.

TOTAL ENERGY SAVINGS

13.840



HYDROVAR® booster sets

The HYDROVAR® allows up to 4 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.

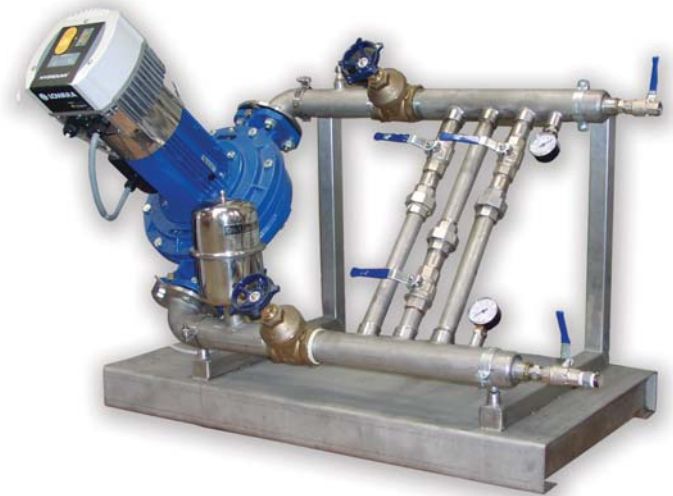
Retro-fitting

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 1.1– 45 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.



Welcome to the new generation of Hydrovar Sensorless

The use of Hydrovar Sensorless control device is especially economical with re-circulation systems for example heating and refrigeration systems. Here, the pump pressure is required largely to overcome the system pipe work friction decreasing dramatically, resulting in a system curve. The Hydrovar Sensorless is able to operate according to such a curve; the required power in partial load operation can be reduced by up to 70% as compared to a fixed speed pump. Additional control devices or flow measurement devices are not required for this, as the installed pump's output is calculated by the Hydrovar Sensorless control device.



Hydrovar Watercooled

A new version of the ever popular Hydrovar has been launched, Hydrovar Watercooled . 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.

It is foreseen that the Hydrovar Watercooled will become an important part of the HYDROVAR® product family and continue to offer its users a reliable variable speed drive solution.

Vessels, motors and accessories ...

Lowara SM 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.



Pressure Vessels

- Sizes to 5000 litre
- Horizontal and vertical
- Pressure to 10bar
- Temperature to 99°C.
- 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.
- Genyo.
- Float switches.
- Flow switches.
- Direct on line starter.
- Non return valves, strainers and hosedails.
- 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 (10m³/h).
- Maximum liquid temperature 60°C.
- Low friction loss.



Control Boxes

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



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 ITT 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.

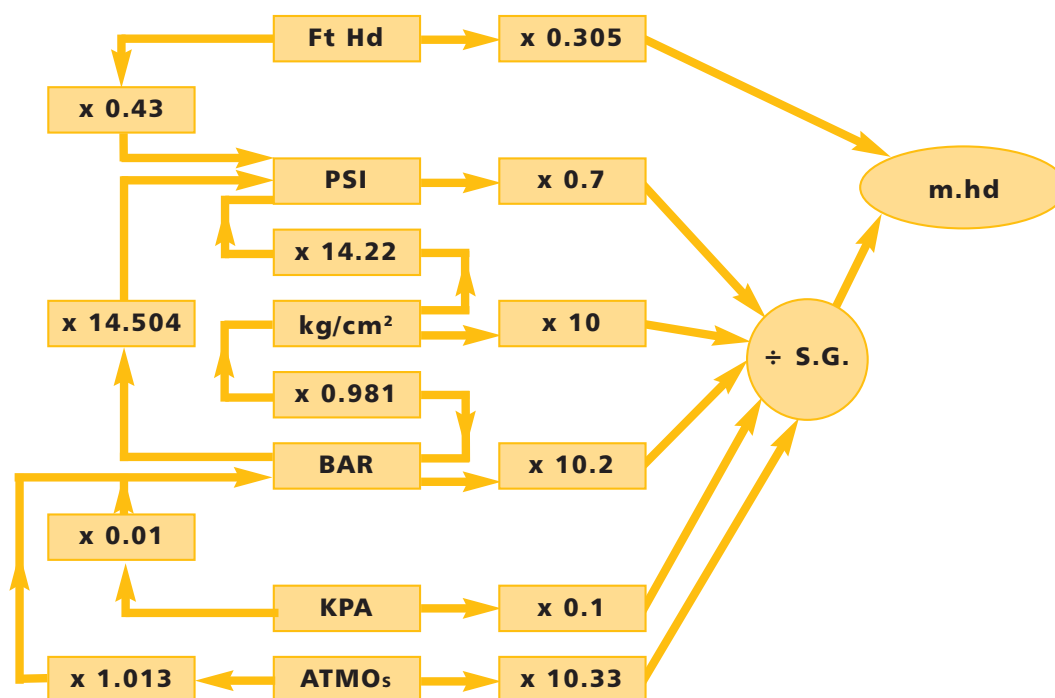
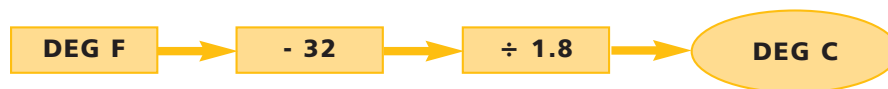
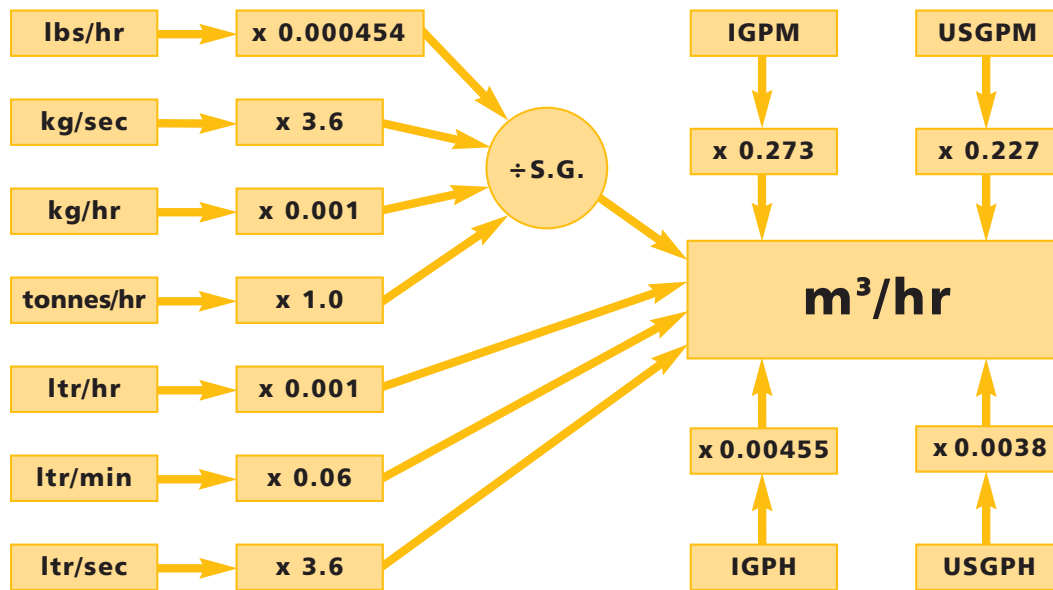
We also believe that it is important that our customers fully understand the Lowara experience, which is why we host a series of exhibitions and trade shows.

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**



Calculation and conversion charts...



Conversions

To convert to litres/sec.

IGPM	x 0.0757
m ³ /hr	x 0.278
m ³ /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.
m ³ /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 ²	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 ² (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	x 1.341
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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 =

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



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