



ITT

Lowara



## Pump technology for Building Services

Pumps for water supply, heating, pressure boosting, drainage and sewage applications



*Engineered for life*



# ITT

## Your trusted partner

### The professionals in pump technology across all building services

ITT Lowara is a leading supplier of pump technology to the building services industry. Thousands of commercial and residential applications rely on our pumps, day in day out.

As part of the ITT Corporation, ITT Lowara is globally recognised for its quality in pumping products and services, from consultation to implementation.

This brochure will give you an overview of our specialized pumps for clean water supply, distribution, pressure boosting, HVAC and sewage.

Please contact us for detailed technical specifications and quality standards.



# Lowara

Contents

Page

## Commercial

### HVAC

FH Series	5
FC - FCT Series	5
VSX Series	5

### Water Supply

GXS and GMD Series	6
GTKS Series	6
SV Series	7
GHV Booster Series	7
FHF Series	7

### Waste Water

Doublebox Series	8
DL, DLC, DLS, DLV and DLG Series	9
DOC, DIWA DOMO and DN Series	9

### Fire-Fighting

GEN Series with Multistage vertical pumps SV Series	10
GEN Series with End suction pumps FHF and SHF Series	11
GEN Series with Diesel Engine pumps DFHFE and DSHFE Series	11
A-C Fire Pump Sets	11

### Variable speed control

HYDROVAR®	12
-----------	----

## Residential

### HVAC

TCR, TC and FC Series	15
TCB and TCS Series	15
ETC, EFC and ETCR Series	15
ATC, AFC and ATCR Series	15

### Water Supply

BG, HM, CA and CEA Series	16
HVW and TKS Series	17
Genyo Series	17
SCUBA and GS Series	17

### Waste Water

DOC, DIWA DOMO and DN Series	19
Singlebox Series	19



# ITT

## Lowara

### ITT Lowara Building Services global solutions around the world

- University of Venice - Italy (1)
- Emirates Hotel and Office Tower - UAE (4)
- New Gasometer Town - Austria
- Houses of Parliament - England
- Revenue House - Singapore
- Palacio Sottomayor - Portugal
- Acropolis - Greece (7)
- Uni-Tower - Germany (2)
- University of Bristol - England (6)
- 'Birds Nest' Olympic Stadium - China (9)
- World Tower apartment block - Australia
- The Ritz Hotel Moscow - Russia (3)
- King Abdul Aziz Endowment Project - Saudi Arabia
- Tropical disease hospital - Portugal (8)
- Vienna Hilton - Austria (5)
- Suncorp Stadium - Australia



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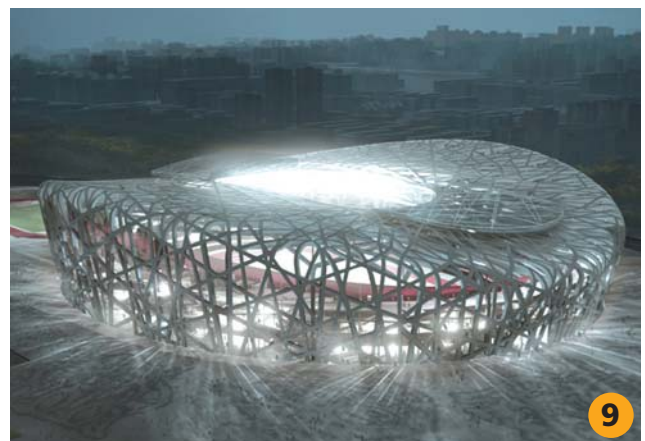
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# ITT

## Climate control for business

### Heating pumps for new systems, replacements and upgrades

ITT Lowara has made it simple for you to select pumps for new heating and air-conditioning systems, replacements and upgrades in commercial environments. Our HVAC pumps give you flexibility, with flanged or threaded connector options and single or twin pumps with fixed or variable speeds.

Four out of five pumps today are installed in existing heating systems, replacing old, defective or technically obsolete pumps. Compatibility is essential, and you can use ITT Lowara to replace traditional pumps and products of the same type.

Whether it's a new system or an upgrade, you are assured of reliable climate distribution in small or large systems.

## Lowara



**FH Series**

The FH centrifugal electric pumps have a cast iron pump body and AISI 316L stainless steel, laser-technology welded impeller. Suitable for pumping hot and cold, moderately aggressive liquids, the FH series is EN 733 - DIN 24255 compliant.

Capacities: up to 700 m<sup>3</sup>/h  
 Head: to 100 m  
 Power: to 55 kW


**FC - FCT Series**

The FC and FCT in-line centrifugal pumps come in single and twin versions, suitable for handling hot or cold moderately aggressive liquids. They have a cast iron pump body, with an AISI 316L stainless steel impeller entirely welded using laser technology (for models with 40, 50 and 65 nominal port diameter).

Capacities: up to 330 m<sup>3</sup>/h  
 Head: to 89 m  
 Power: to 22 kW  
 Max. temperature 140 °C

**VSX Series**

The VSX is a new series of split-case pumps with several features never before offered in the HVAC industry. The VSX Series is manufactured by Bell & Gossett. The pumps are designed to provide unparalleled performance and reliability over a wide range of applications.

Multiple suction and discharge flange configurations maximize piping possibilities and can reduce the overall equipment footprints by up to 40%. The VSX connection options include the VSC model (top suction and top discharge flanges), VSCS model (side suction and top discharge flanges) and the VSH (side suction and side-discharge flanges).



Capacities: from 110 to 3400 m<sup>3</sup>/h  
 Head: from 9 to 130 m  
 Working Pressures of 12 and 20 bar  
 ANSI Flange Ratings of 55 and 110 Kg  
 Temperature from -15 to 150 °C  
 Internally Self-Flushing Mechanical Seals  
 ANSI / OSHA coupling guard  
 Alignment-friendly, variable speed capable coupling  
 One-piece unitized mechanical seal to simplify servicing  
 Maintenance-free bearings



# ITT

## Constantly perfect pressure

### Pressure booster sets for reliable water supply

ITT Lowara has the solution whenever you need to supply water at high pressure, such as in tall buildings, complex piping networks, industrial processes or fire-fighting systems. Our pressure booster sets are the answer. You have the choice of models, materials and types of regulation to create the perfect system for each application.



## Lowara

### GXS and GMD Series

These reliable pressure booster sets are ideally suited for use in water supply systems with an intermittent or variable demand. They are composed of two horizontal centrifugal pumps that feed larger pressurized vessels by means of a pressure switch. They are of compact construction and fixed speed, and start and stop with the flow demand.

Capacities: 28 to 36 m<sup>3</sup>/h  
Head: 120 m  
Power supply: three and single-phase 50 Hz  
Power: from 1.5 kW to 4 kW  
Maximum operating pressure: 16 bar  
Temperature range: from -20 °C to 40 °C



### GTKS Series

This range of single or two pressure booster units incorporates pressure transducers and Teknospeed electronic speed controllers to adjust motor speed and provide constant pressure control when water demand changes. With single-phase power supply, the sets complement our BG, CA, CEA, HM and SV series electrical pumps for water distribution - and niche commercial markets such as industrial washing and water treatment.

Capacities: up to 16 m<sup>3</sup>/h  
Head: up to 100 m  
Power supply: single-phase 50 Hz  
Power: from 0,37 kW up to 1,1 kW  
Maximum operating pressure: 10 bar  
Temperature range: from -20 °C to 40 °C




**SV Series**

The highly reliable and technologically advanced SV multipurpose pumps will satisfy the needs of a wide variety of applications, from water distribution and HVAC to swimming pools and aggressive liquids. The many different construction designs make SV the flexible choice.

Capacities: up to 120 m<sup>3</sup>/h  
 Head: up to 330 m  
 Power: to 45 kW  
 Temperature range: from -30 °C to 120 °C

**GHV Booster Series**

The GHV series of variable speed water booster sets for industrial and building applications features models with 1 to 4 pumps. They are available in a variety of material configurations to suit the specific requirements of different applications, and a popular choice in municipal buildings, hospitals and schools.

Capacities: up to 400 m<sup>3</sup>/h  
 Power: up to 4 x 45 kW


**FHF Series**

The FHF Series of centrifugal electric pumps have a cast iron pump body and AISI 316L stainless steel, laser-technology welded impeller. They are suitable for pumping hot and cold, moderately aggressive liquids in a wide range of applications.

Capacities: up to 650 m<sup>3</sup>/h  
 Head: up to 100 m  
 Max. temperature 140 °C



# ITT

## Trouble-free drainage at every level

### Pumps for drainage and pumping of dirty water

It's a dirty job, but it's essential when you need to move unclean or solid-laden water – even under extreme conditions. Your choice of ITT Lowara pumps is designed to cope with the various needs for wastewater and sewage within commercial buildings in support or place of gravity-fed systems.

They are available in different versions for fixed or portable use, with dry, submersible or tank installation, plus non-clog and various impeller operations.

## Lowara

### Doublebox Series

This series is the ideal solution when domestic wastewater must be delivered to sewer mains located at a higher level, or where gravity drainage is not possible. The prefabricated lifting stations house two DOMO or DL pumps and collect effluent without any need for initial treatment.





### DL, DLC, DLS, DLV and DLG Series

The DL series of submersible pumps loves the dirty jobs that are found in many industrial and domestic environments, such as sewers. The series is designed to handle sewage, liquids, wastewater and industrial sludge, as well as the draining of flooded excavations and marshy ground.

The DLG is made of sturdy cast iron and features an open impeller with grinder assembly, which deals with sewage and suspended filaments thanks to the cutting process. It is a sister pump to the DLC (channel impeller), DLV (vortex impeller) and DLS (self-cleaning impeller) pumps to provide customers with a suite of liquid and wastewater management solutions.

#### DL Range

Capacities: to 1500m<sup>3</sup>/h  
 Head: to 82 m  
 Powers: to 70,6 kW  
 Discharge size: to DN250  
 Max solids: to 125 mm



### DOC, DIWA, DOMO and DN Series

The DOC is a lightweight submersible pump that features an optional device for the low suction of residual water down to a height of 3 mm. It is ideal for portable use wherever flooding or leakage of water occurs, or in a fixed position in septic tanks or residential drainage sumps. It can pass solids of up to 10 mm and is equipped with a float switch.

The same performance is also offered by the DIWA Series electric pumps equipped with a surface scraper blade to ensure the maximum resistance to abrasion; and the DOMO Series with twin-channel or Vortex impeller options.

#### DOC, DIWA, DOMO and DN

Capacities: to 40 m<sup>3</sup>/h  
 Head: to 21 m  
 Power: to 1,5 kW  
 Solids: to 50mm



# ITT

## The power to fight fire

### Booster sets for fire-fighting and sprinkler systems

Your priority in fire safety is to select pumps that conform to the European fire-fighting standard, EN 12845 for automatic sprinkler systems and NFPA codes and standards in North America. The standard specifies requirements and gives recommendations for the design, installation and maintenance of fixed fire sprinkler systems in buildings and industrial plants.

Our pumps feature options including self-test mechanisms, electric or diesel power and recirculation devices to offer the most reliable and powerful delivery to prevent and put out fire. You enjoy peace of mind.

## Lowara

### GEN Series

with Multistage vertical pumps SV Series

The range of EN 12845 series fire-fighting booster sets includes models with 1 or 2 electric service pumps and some with jockey pumps for adapting to the specific requirements of each application. All metal parts in contact with liquids are stainless steel. Supplied with EFF1 surface motors as standard.

Capacities: 240 m<sup>3</sup>/h  
Head: 150 m





**GEN Series**  
with End suction pumps FHF and SHF Series

The FHF range of the GEN booster sets features a cast iron pump body and stainless steel shaft. The SHF range has a stainless steel body and shaft. These horizontal centrifugal pumps have many size options. Supplied with EFF1 surface motors as standard.

**FHF Series**  
Capacities: 1300 m<sup>3</sup>/h  
Head: 100 m

**SHF Series**  
Capacities: 440 m<sup>3</sup>/h  
Head: 100 m

**GEN Series**  
with Diesel Engine pumps DFHFE and DSHFE Series

The diesel range of the GEN booster sets features a diesel engine with coupling to the service pump, floor or wall mounted fuel tank and floor on on-board batteries to ensure reliable operation in the event of building power failure.

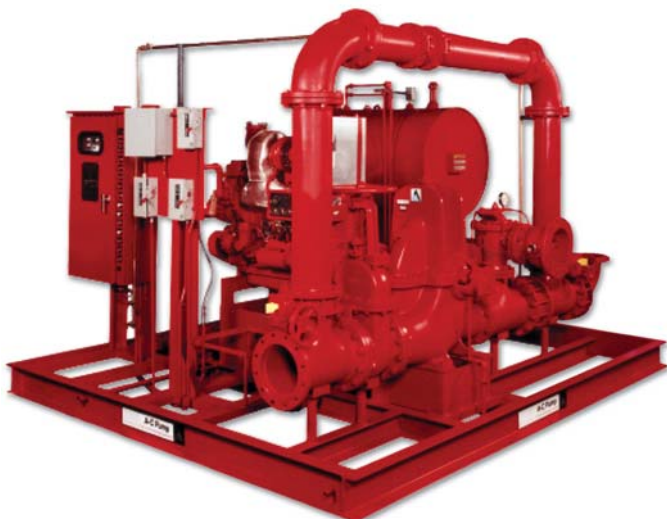
**DFHFE Series**  
Capacities: 1300 m<sup>3</sup>/h  
Head: 100 m

**DSHFE Series**  
Capacities: 440 m<sup>3</sup>/h  
Head: 100 m



**A-C Fire Pump Systems and Skid Packages**

The A-C range of custom-built fire pump systems including prefabricated packages and house units that meet every fire protection need. Products include in-line pumps, end suction, vertical turbine, jockey pumps and three Split Case series. A-C Fire Pump Systems are designed in accordance with NFPA 20.





# ITT

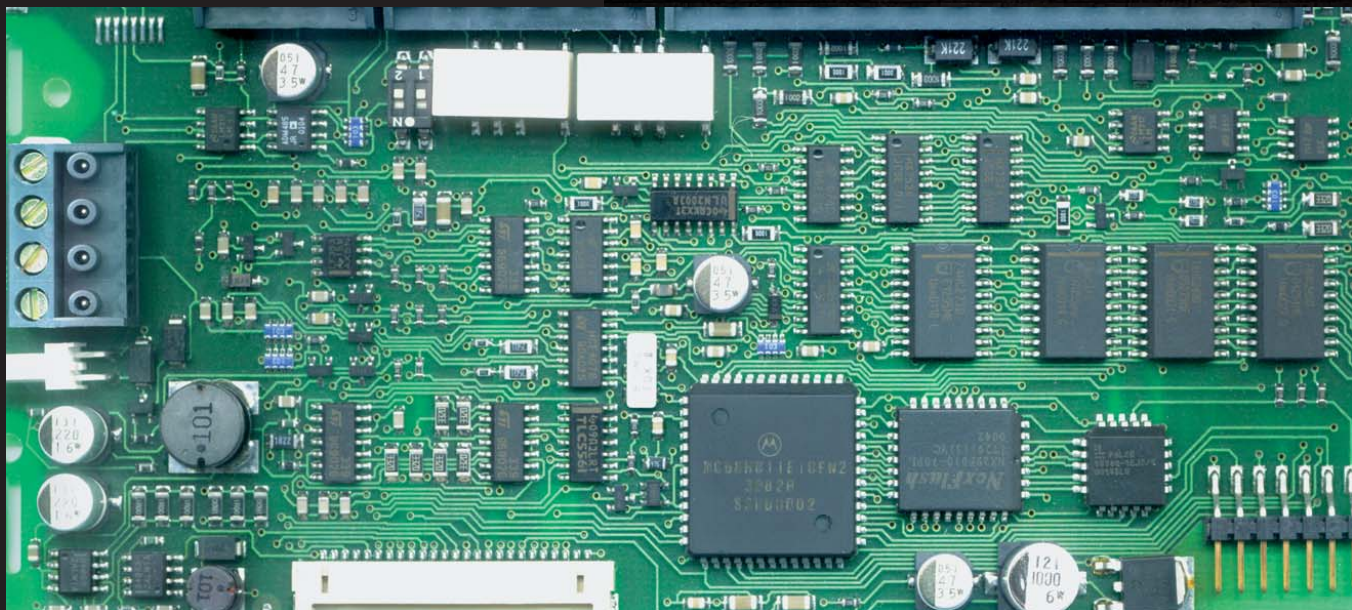
## Intelligent pump control

### The HYDROVAR® variable speed control system

HYDROVAR® will save you money and the environment by making pump operation more efficient. Pumps in most HVAC and water supply systems have a constant rpm and will deliver peak power even when not required. HYDROVAR® is a frequency converter, controlled by a microprocessor, that can be installed or retrofit directly on almost all standard, three-phase motors.

HYDROVAR® will regulate the power of each pump exactly to pressure, temperature, delivery, operating time and any other parameter necessary. HYDROVAR® also offers guaranteed protection against excessively high or low pressure, overload, short-circuit and over-heating.

# Lowara



## Introducing HYDROVAR® Sensorless

The HYDROVAR® sensorless control device is especially economical with re-circulation systems, such as heating and refrigeration systems.

It operates according to a system curve which results from friction in the pipework. The required power in partial load operation can be reduced by up to 70% compared to a fixed speed pump. You do not require additional control devices or flow measurement devices as the installed pump's output is calculated by the HYDROVAR® sensorless control device.



## The latest generation HYDROVAR®

The new generation HYDROVAR® is your perfect solution for high-level installations requiring failsafe systems with a superior range of features. Its unique modular design 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.

Modularity also offers a cost-effective solution for low-level, reduced feature demands. Among its advantages are:

- More flexibility and cost savings. Pay only for what you really need with basic, master and multicontroller versions.
- Easy integration into BMS systems. Modbus communication is included as standard.
- Improved software structure and illuminated display for easy handling and programming – even in difficult installations.
- Retrofitting is possible on all existing standard asynchronous motors, which are suitable for VFD operation.
- Constant system pressure in water supply and booster stations. Control along the system curve for circulation pumps for the HVAC markets.
- Longer maintenance intervals because of less stress to pumps and motors.



**Hydrovar Energy Calculator link**

<http://www.lowara.com/products/conversions.php>



# ITT

## Climate comfort for the home

Heating and cooling pumps for new systems, replacements and upgrades

A massive 80% of pumps commissioned today in the residential market are installed in existing heating systems to replace old, defective or technically obsolete pumps.

You can use ITT Lowara heating pumps to replace traditional pumps and products of the same type of production, since they come with flanged or threaded connectors and as single or twin pumps with fixed or variable speed.





### TCR, TC and FC Series

The TCR, TC and FC circulation pumps are perfect for water circulation in heating, air-conditioning and storage systems. The options include single and twin wet rotor circulators and fixed and variable speeds. The dimensions, connections and powers all correspond to market standards for simple integration in existing systems and the replacement of most pumps and products in use today.



### TCB and TCS Series

The TCB and TCS Series are designed to circulate sanitary hot water at a maximum temperature of 60°C, ideal for the bathroom or kitchen. Constructed in bronze (TCB) or stainless steel (TCS), these pumps are provided with reliable protection against corrosion.



### ETC and ETCR Series

In the ET-prefixed series of heating pumps offer silent running as well as power savings. The regulation of running speed is performed automatically depending on load. This can eliminate the sometimes annoying sound of water flowing through heating systems and provides significant reductions in power consumption.

### TCR, TCB-TCS, TC-FC, ETCR, ETC-EFC Series

Capacities: to 70 m<sup>3</sup>/h  
Head: to 20 metres  
Powers: to 3kW



### ATC-AFC and ATCR Series

High efficiency "A class" variable speed circulators realized with synchronous permanent magnet ECM (Electronically Commuted Motor) motor controlled by a frequency converter, suitable for every kind of heating and air conditioning, particularly suggested for systems extensions or renewal with energy efficiency increase.

Advantages includes energy savings, application flexibility, noise reduction, reliability and user friendly setting and operation.

#### ATC-AFC Series

Execution: Single and Twin  
Capacities: up to 107 m<sup>3</sup>/h (Twin)  
Head: up to 13 m  
Maximum pressure: 10 bar  
Temp: from -10 °C to 110 °C



#### ATCR Series

Capacities: up to 2,5 m<sup>3</sup>/h  
Head: up to 5 m  
Maximum pressure: 10 bar  
Temp: from +2 °C to 110 °C



# ITT

## Managing water to your home

### Pumps for water supply in homes and gardens

Drinking water is an expensive commodity. Many gardeners, farmers and home owners not only use municipal water but are making increasing use of alternative water supplies, such as wells, streams or rain water to irrigate their lawns and gardens, feed their washing machines or flush their toilets.

ITT Lowara provides you with a complete range of single-stage and multi-stage horizontal and vertical centrifugal pumps for residential water supply irrespective of water source.

## Lowara

### BG, HM, CA and CEA Series

Lowara horizontal centrifugal pumps offer reliable protection against corrosion, with a casing in stainless steel and impellers in stainless steel or synthetic materials. They can also be used for pumping drinking water. Equipped with a pressure switch and container with diaphragm, these pumps provide instant water delivery wherever they're used.

### BG, HM, CA and CEA Series

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

Head: up to 62 m

Powers: to 3kW





## HVV and TKS Series

The HVV (HYDROVAR® watercooled) and TKS (Teknospeed) Series deliver residential water at a constant pressure up to the maximum delivery value, even when demand changes. They feature a pump, a container with a diaphragm, and a pressure control housed in an easy-to-install, compact-sized unit.

### HVV Series

Capacities: up to 10 m<sup>3</sup>/h  
 Head: up to 75 m  
 Max. operating pressure: 10 bar  
 Temperature range: to 40 °C

### TKS Series

Capacities: up to 16 m<sup>3</sup>/h  
 Head: up to 75 m  
 Max. operating pressure: 10 bar  
 Temperature range: to 80 °C



## Genyo

The Genyo is designed to replace traditional pressure boosting systems in domestic applications. 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 (10m<sup>3</sup>/h).
- Maximum liquid temperature 60°C.
- Low friction loss.

## SCUBA Series

The SCUBA Series electric multistage pumps are ideal for use in rainwater collection tanks or shallow discharge tanks with diameters of at least 5". The submersible motor is mounted directly on the pump and cooled by the pumped liquid. SCUBA series multistage submersible pumps enable rainwater to be used to irrigate lawns and gardens, in washing machines, and to flush toilets.

Capacities: up to 7,5 m<sup>3</sup>/h  
 Head: to 80 m  
 Maximum immersion depth: 20 m  
 Temperature range: to 40 °C



## GS Series

Multi-stage centrifugal submersible pumps for clean water in 4" wells. High content of AISI 304 stainless steel. The floating impellers ensure excellent resistance to wear. Can also operate in a horizontal position.

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





# ITT

## Dealing with waste water

### Pumps for drainage and pumping dirty water

ITT Lowara pumps are needed whenever dirty and solid-laden water in the home is produced beneath the level of accumulation or gravity-fed systems are unavailable or uneconomical.

Our pumps give you flexible options and are available in different versions for fixed or portable use, with dry floor-mounted pumps or submersible installation such as within septic tanks.

Lowara





### DOC, DIWA, DOMO and DN Series

Residential applications are as appropriate for the DOC, DIWA and DOMO Series as commercial installations. The DOC submersible pump is lightweight, compact, resistant to corrosion and operates at up to 5 metres depth. It operates in a fixed position in septic tanks, drainage sumps and in rainwater collection, and as a portable pump for floodwater.

With similar features, the stainless steel DIWA Series submersible electric pumps can be immersed to 7 metres, and the DOMO Series submersible pumps with entrained solids has twin-channel or Vortex impeller options and a 5 metre depth.

### DOC, DIWA, DOMO and DN

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

Head: to 21 m

Power: to 1,5 kW

Solids: to 50mm

### Singlebox Series

The Singlebox is a prefabricated 230-litre lifting station with entrained solids wastewater, housing a DOMO or DL sewage pump. It is the ideal solution when untreated domestic wastewater and effluent must be delivered to sewer mains located at a higher level, or where gravity drainage is not possible.





# ITT

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Lowara reserves the right to make modification without prior notice.  
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