

World-class



# Liquid Transfer Solutions



## Liquid transfer – providing the highest efficiency

Efficient liquid transfer and water management is key to efficient processes and water conservation. A.T.E. Enterprises Private Limited has been providing efficient liquid transfer solutions for over three decades to its customers in India and Bangladesh.

A.T.E. is recognised as an expert in flow management and offers a wide range of high technology pumps for a variety of uses. A.T.E. configures solutions using products from some of the world's best brands such as Sulzer, Iwaki, Yamada, Ebara, and also A.T.E.'s own TeraFlow vertical multistage stainless steel centrifugal pumps and hydropneumatic systems. The portfolio also includes Walchem controllers.

A.T.E. has built up deep knowledge across industry verticals for a number of applications spanning a range of flow rates, pressures, viscosities, and fluid types. Our end-to-end solutions start with studying the application requirements, selection, precise sizing, integrating and supplying of pumps and systems with knowledge based engineering, all backed by excellent installation, commissioning and post-commissioning services.

With deep domain knowledge, a wide range of high technology pumps and solutions, and impeccable customer service, you can count on us as your reliable partner for all your liquid transfer needs.

### Markets served

- Municipal
- Automobiles & auto components
- Textiles
- Buildings & construction
- Chemicals
- Food & beverage
- Pharmaceuticals
- Paints & dyes
- Steel
- Print & packaging
- Dairy
- Electronics & semiconductors
- Soaps & cosmetics
- Gems & jewellery
- Battery manufacturing

# Sulzer Pumps

abs pumps, a 140 year old organisation, now a part of the Swiss multinational Sulzer group, is a world leader in products and solutions for the water and wastewater industry.

Sulzer manufactures highly efficient submersible sewage, storm water, drainage, and dewatering pumps.

## Features and benefits

- Energy efficient motors in accordance with IE3 of IEC 60034-30
- Excellent rag handling and anti-clogging features
- Patented hydraulics – Contrabloc® and vortex impeller
- Safety feature – integrated thermal and moisture sensors

## Specifications

- Power: up to 700 kW
- Capacity: up to 26000 m<sup>3</sup>/h
- Head: up to 90 m

## Applications

- For pumping of wastewater and sewage
- Dewatering construction sites
- Sludge handling with high suspended solids
- Storm water and raw water handling
- Industrial waste and effluent treatment plants

## Submersible Wastewater Drainage Pumps



Sewage pumps



Drainage pumps



Storm water pumps



Portable dewatering pumps

## Mixers and Flow Boosters

The Sulzer submersible mixers are widely used in municipal as well as in industry like textile, pharmaceuticals, chemicals, tanneries, sugar, food processing, etc. These mixers find application in sewage and water treatment plants.

## Features and benefits

- Highly energy efficient as compared to conventional mixing by agitators
- Compact, water pressure-tight, self-cleaning design
- Hydrodynamic shape for optimum flow formation and mixing coverage
- Reliable with minimum risk of motor overloading
- Available in cast iron as well as in stainless steel construction

## Specifications

- Propeller: up to 950 mm
- Power: up to 25 kW
- Mixing flow: up to 6444 m<sup>3</sup>/h
- Thrust: up to 6400 N

## Applications

- Agitating, blending, mixing, dissolving, and suspension of solids in industry and municipal treatment plants
- Homogenisation of highly-concentrated sewage sludge
- Mixing and stirring applications in sewage treatment plants and industrial areas
- Low-speed wastewater mixing and stirring applications for denitrification and phosphate elimination process (flow boosters)



Flow booster



Mixer

## Lifting Stations

Sulzer synthetic lifting stations provide an efficient, effective, and economical solution for the removal of wastewater from locations that do not have gravity access to the main sewer line.

- **Features and benefits**

- Ready to install; robust and compact tank for buildings
- Easily transported and fitted
- Corrosion resistant

- **Specifications**

- Power: up to 6 kW
- Capacity: up to 165 m<sup>3</sup>/h
- Head: up to 35 m

- **Applications**

- Domestic sewage and wastewater containing toilet waste
- Apartment blocks, hospitals, hotels, and large commercial buildings



Sanimat



Sanimax

## Submersible Aerators

Submersible aerators from Sulzer are ideal for use in balance tanks, where a combination of mixing and aeration reduces septicity and odour.

- **Features and benefits**

- Easy to install, stand alone or portable with optional fixed installation
- Cost-effective installation
- Self-aspirating and compressed air type (OKI)
- Excellent solids suspension capability

- **Specifications**

- Power: up to 75 kW
- Capacity: up to 405 kgO<sub>2</sub>/h
- Head: up to 16 m

- **Applications**

- Sludge storage and stabilisation
- Flotation of oil and grease
- Additional aeration



XTA

OKI

Venturi jet aerator

## Disc Diffusers

High oxygen transfer efficiency combined with low pressure drops makes the Sulzer diffusers extremely effective.

- **Features and benefits**

- Low pressure drop and high aeration efficiency
- High temperature endurance
- Reliable and long-lasting
- Quick and easy installation with flexible layout design
- Available with HDPE and EPDM membranes

- **Specifications**

- Capacity: up to 336 mm
- Air flow: up to 8 m<sup>3</sup>/h
- Membrane surface area: up to 0.60 m<sup>2</sup>

- **Applications**

- Aeration of municipal and industrial wastewater



Disc diffusers

## Electromagnetic Dosing Pumps

The Iwaki electromagnetic metering pump offers precise chemical injection at an economical cost.

### Features and benefits

- High speed operation – up to 360 strokes per minute; results in high resolution chemical feed
- Double ball check valves – the precision ball, seat, and guide assembly ensure tight sealing to prevent loss of prime
- Compact size – ideal for OEM application; pumps are small, quiet, and lightweight
- Long lasting diaphragm – PTFE coated EPDM is moulded onto a solid core

### Specifications

- Discharge capacity: up to 75 L/h
- Discharge pressure: up to 1.0 MPa
- MOC: PVC, GFRPP, SUS316, PVDF, PTFE
- Stroke rate: 360 spm

### Applications

- Feeding of boiler compound
- Cooling towers
- Controlling concentration of residual chlorine
- Sterilisation of cleaning water
- Metered filling process



Electromagnetic dosing pumps

## Magnetic (mag) Drive Pumps



Compact mag drive



Process mag drive

The Iwaki magnetic drive pumps are ideal for handling various chemicals including acids and alkalis, as well as high purity chemicals and ultra-pure water.

### Features and benefits

- Leak free, seal-less construction
- Simple, modular construction for ease of maintenance
- Non-metallic chemically inert materials offer excellent resistance to corrosive fluids

### Specifications

- Discharge capacity: up to 800 L/min
- Head range: up to 35 m
- MOC: GFRPP, PTFE

### Applications

- Surface treatment
- Water treatment
- Chemical processing
- Food processing
- Fluid handling needs in a variety of OEM equipment
- Dairy
- Recirculation in electroplating

## Motor Driven Metering Pumps



Motorized dosing pumps



Hi-Techno IX series pump

Iwaki's robust mechanical design to withstand severe operating environment and equipped to handle high pressure feed applications.

- **Features and benefits**
  - Precise chemical dosing
  - High turn down ratio
  - Viscous liquid transfer
  - Smooth dosing with low impact
  - High compression pump head design
- **Specifications**
  - Discharge capacity: up to 2700 L/h
  - Discharge pressure: up to 1.5 MPa
  - MOC: PVC, PVDF, SUS 316
- **Applications**
  - Accurate transfer of strong acid
  - Proportional feeding of additive
  - Chemical liquid concentration control
  - Liquid sampling
  - Dairy
  - Recirculation in electroplating

## Chemical Dosing Systems

Iwaki offers a wide range of process specific, custom-built chemical dosing systems with capability to dose a variety of chemicals in a pre-determined sequence and ratio.

- **Features and benefits**
  - Robust construction
  - Skid mounted
  - Corrosion and abrasion resistance
  - Fully tested
- **Applications**
  - Biocides and inhibitors dosing in cooling water
  - Acid and alkali dosing for pH control
  - Coagulants (such as ferric (II/III) chloride ) dosing for waste water treatment
  - Acid and alkali dosing for dyeing, desizing, bleaching processes in textile industry



Chemical dosing system



# Yamada Corporation

An industry leader for over 100 years, Yamada offers the best Japanese technology and is known for its innovative and superior quality products, with unmatched reliability.

## Air Operated Double Diaphragm Pumps (AODD Pumps)

AODD pumps from Yamada can handle many kinds of fluids including corrosive, abrasive, and hazardous liquids as well as powders and slurries. These pumps have no rotating parts or mechanical seals and provide lubrication-free operation.

### Features and benefits

- Handles wide variety of fluids and chemicals
- Self-priming
- Ability to run dry
- Variable flow rate and discharge pressure
- Explosion proof
- FDA compliant

### Specifications

- Normal port size: up to 3 inch (80 mm)
- Discharge pressure: up to 7 bar
- Discharge volume: up to 810 L/min

### Applications

- Latex industry
- Ceramic industry
- Pharmaceutical industry
- Pulp and paper industry
- Chemical industry
- Paint and ink manufacturing industry
- Powder transfer



NDP-5 to NDP-80

## Low Pressure Grease Pumps



Low pressure supply pumps

Yamada air operated pump unit suitable for transferring material like lubricants, paints, etc.

### Features and benefits

- Safely transports flammable liquids
- Adjustable discharge pressure
- Does not affect the properties of the material being transferred
- Suitable for low viscous material such as oil and chemicals

### Specifications

- Suction tube: STKM12B
- Piston packing: Buna N
- Gland packing: Buna N
- Pump ratio: up to 15:1

### Applications

- Suitable for lubricant, paints, and chemical transfer applications

## High Pressure Grease Pumps

Yamada air operated pump unit suitable for transferring/supplying high viscosity material like grease.

- **Features and benefits**

- Variable discharge pressure
- Air tight CE approved design
- Stable flat pail base

- **Specifications**

- Discharge pressure: up to 38.9 MPa
- Discharge volume per cycle: up to 650 mL
- Air supply pressure: up to 0.7 MPa
- Liquid temperature: up to 80 °C
- Pump ratio: up to 55:1

- **Applications**

- Suitable for grease and adhesive transfer applications



High pressure supply pumps

## Lubrication Equipment

Yamada lubrication equipment comes complete with a large cabinet and a stable four caster base, providing maximum portability and versatility.

- **Features and benefits**

- Safely transports flammable liquids
- Transfers material at high pressure
- Does not affect the properties of the material being transferred

- **Specifications**

- Size range: up to 20 L
- Capacity range: up to 40 mL per stroke

- **Applications**

- Suitable for heavy viscosity grease transfer application



Lubrication pump





# Walchem, an Iwaki America Company

Established in 1989, Walchem is an expert in integrating advanced sensing, instrumentation, fluid pumping and communication technologies to deliver reliable and innovative solutions to the global water treatment market.

## Controllers for pH/ORP/Conductivity/ Disinfection/Cooling Tower/Boiler

Walchem series controllers provide an economical and reliable way to automate your water treatment programme under control.

### Features and benefits

- Large touch screen display
- Monitors and controls true value for pH/ORP/conductivity/disinfection
- Centralised 24/7 awareness of account status
- Emailing alarm messages, datalog reports or system summary reports

### Specifications

- pH: -2 to +16 pH
- ORP:  $\pm 1500$  mV (ORP)
- Conductivity: up to 2000000  $\mu\text{S}/\text{cm}$
- Disinfection: -2000 to 1500 mV

### Applications

- Cooling tower biocide control
- RO systems
- Metal finishing and printed circuit board
- Swimming pools and spas
- Food and beverage disinfection
- Potable water treatment
- Active pharmaceutical ingredients process



W100 & W600



WebMaster®



W100 P

## Copper/Nickel Plating Controllers



W400

Measures the actual concentration of copper or nickel in solution used in electroless plating and microtech baths.

### Features and benefits

- Concentration read in units
- Easy to configure
- Simple, integrated data collection
- Four separate control relays and outputs

### Specifications

- Cu: 0.01 to 99 g/L
- Ni: 0.01 to 10 g/L
- pH: -2 to +14 pH

### Applications

- Electroless copper plating
- Electroless nickel plating

# Ebara Corporation

Ebara Corporation, a Japanese multinational company, offers stainless steel close coupled pump-sets for general utility applications as well as cast iron, stainless steel dewatering and sewage pumps for light to medium duty applications.

## Water and Wastewater Pumps

Most comprehensive range of centrifugal surface and submersible pumps from Ebara for clear water application.

- **Features and benefits**

- Energy efficient
- Low life cycle cost
- Higher sheet metal thickness

- **Specifications**

- Capacity: up to 2000 m<sup>3</sup>/h
- Head: up to 220 m

- **Applications**

- Building services
- Industrial utility services
- Industrial processes
- HVAC
- Pressure boosting systems
- Dewatering and sewage handling



Submersible pumps



Multistage pumps

End-suction coupled & split case



General water pumps



End-suction CI pumps



# TeraFlow Pumps and System

A.T.E., an expert in water management, offers TeraFlow range of vertical multistage stainless steel centrifugal pumps and hydropneumatic systems.

## Vertical Multistage Centrifugal Pumps

Designed and engineered for a wide variety of clear water application.

- **Features and benefits**

- Designed for continuous operation
- Low noise level and service friendly
- Compatible with standard IEC motors
- Steeper head capacity curve

- **Specifications**

- Flow: up to 200 m<sup>3</sup>/h
- Head: up to 250 m
- MOC: CI, stainless steel

- **Applications**

- RO plants
- Boiler feed
- Pressure boosting systems
- Industrial washing plants
- HVAC
- Chillers
- Hot water circulation
- Fire fighting system



TFV, TFVI, TFVL

## Hydropneumatic System



Hydropneumatic pressure boosting system

Designed and engineered for constant and efficient water supply management in conditions of varying water demands.

- **Features and benefits**

- Self-cooling and motor-independent drives
- Energy saving up to 70%
- Multi-pump control capability
- Automatic recovery after power failure

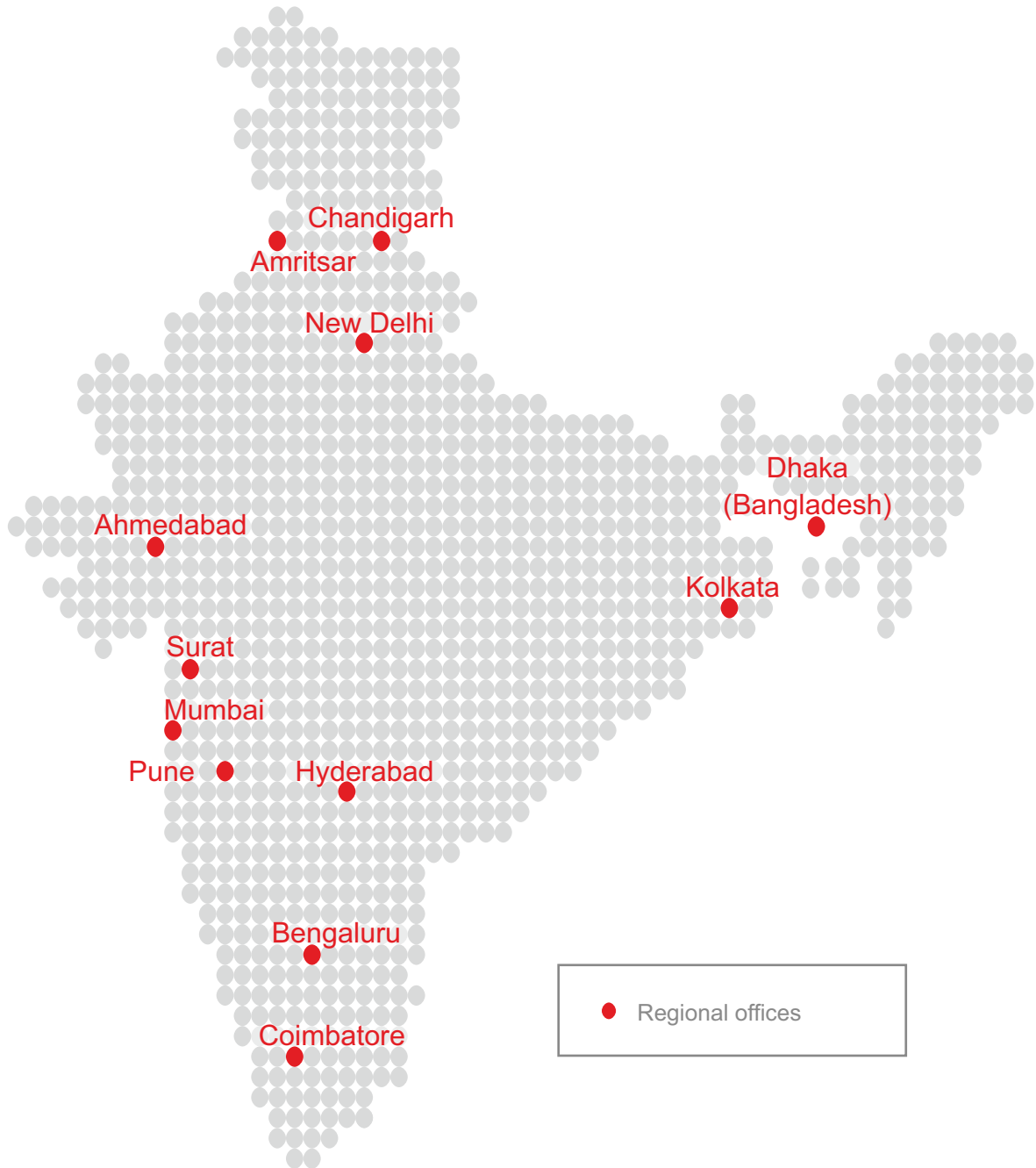
- **Specifications**

- Flow: up to 1200 m<sup>3</sup>/h
- Head: up to 250 m

- **Applications**

- High-rise buildings
- Townships and smart cities
- Bungalows/villas
- Commercial buildings such as malls, hotels
- Hospitals

# NETWORK



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