

**Energy • Environment • Sustainability** 



### **ABOUT COMPANY**

Ensavior Technologies Pvt. Ltd., headquartered in New Delhi, India was established in 2011 on the belief that smarter and healthier buildings require high performance engineering solutions by adopting best engineering practices keeping special emphasis on Economic, Environmental and Social Sustainability in forefront.

Ensavior is a leading brand in the building services industry offering a host of services from the conceptualization stage to implementation with excellence in quality and engineering services.

We are a full-service Design, Engineering, Sales, Maintenance and Manufacturing company, that promotes most advanced energy saving products and systems pertaining to Heating, Ventilation, Air Conditioning (HVAC), Public Health Engineering (PHE), Indoor and Outdoor Air Quality (IAQ & OAQ), and Fire.

With a combination of state of the art products and professional engineering expertise, We provide engineering solutions around "Water and Air" related to Building Services Sector.





### WHAT WE DO – Our Services

Ensavior manages its business based on three diversified segments, within the building service industry:

- Distribution and Trading
- Manufacturing and Assembly
- After Sales Services and Maintenance

Ensavior believes in providing the most sustainable solutions to its clients and has a comprehensive training system to support them. The employees are constantly upgraded with the new innovative product solutions that come to the marketplace to think ahead and advise their clients better. The focus on giving outstanding satisfaction, exceptional service, and enhanced safety performance to its clients resulting in, Ensavior becoming a renowned partner of choice in the building services industry today.

Ensavior has built enduring relationships with major contractors and corporate entities, proudly contributing to the creation of Airports, Office Complexes, IT Parks, Trade Centres, Metro Rails, Shopping Malls, Hospitals, Five-Star Hotels, Schools, and Manufacturing Facilities across the Indian sub-continent.

Our products are being used in prestigious projects including Supreme Court, Parliament House, ITPO, Delhi International Airport, Delhi Metro, Jaipur Metro, Lucknow Metro, Kolkata Metro, India International Convention Center, DLF, Westin Hotels, Coca-Cola, Qualcomm, Amazon, SIFY, Tata Group, IDBI Bank, Lodha Group, Maruti Suzuki, Google and many more.





### WATER SOLUTIONS



### Filtration & Treatment

Suspended Solids Filtration Electolytic Scale Remover





### Pumping Solutions

HVAC, Plumbing, and Fire-Fighting



### **Pumping Solutions**

HVAC - Constant & Variable Speed Pumping



i-1510

The Next Generation End Suction Pump – Designed for HVAC



**VSX** 

Double Suction
Vertical Split Case Pump



HSC3

Double Suction
Horizontal Split Case Pump



E-80 SC

Split-Coupled Vertical In-line Centrifugal Pumps



### **Pumping Solution**

Hydro-Pneumatic, Sewage, Drainage System

### Xylem Lowara Hydro-Pneumatic Pumping Solutions

Lowara is a world leader in stainless steel pumping technology, offering solutions for Water, Waste-water, HVAC, Fire Protection and Irrigation.

### **Xylem Steady Sewage Pumping Solutions**

Xylem Steady is an ideal pump for sewage and surface waste-water disposal. The hydraulic design of the pumps has been proven to reduce clogging and maintain efficiency.











### **Pumping Solution**

**UL listed & Non listed**Fire-Fighting Applications

### Lowara Modular Fire-Fighting Booster Solutions



Available with the use of either an electric motor or a diesel engine, depending on the type of water supply needed and the level of reliability required from the system.

### Xylem A-C Fire Protection Pumping Solutions

A-C Fire Pump are available in a wide range and turnkey systems. UL listed/ FM approved Fire-fighting skid packages are also available.







# PICV & Automatic Balancing Valves



### Automatic Balancing Valve

For Flow Limiting Across Chillers, Condensers, Pumps, Heat Exchangers, and Cooling Towers etc.



#### FlowCon AHU Wafer 50-80

- Removable pre-set stainless-steel insert.
- Ductile iron housing.

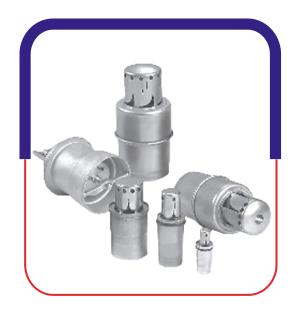
### FlowCon Wafer 100-1000

- Multiple removable pre-set stainless-steel insert.
- Ductile iron housing.



#### FlowCon Stainless Steel Inserts

- Factory pre-set stainless steel inserts, AISI 304.
- dP-range: 10-880 kPaD (1-128 psid).
- Flow rate: 0.021-18.9 l/sec (0.33-300 GPM) (per inserts).

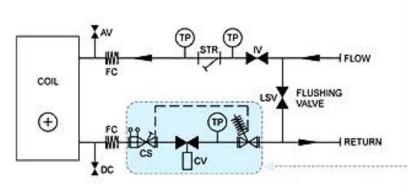




**3-in-1 combi valve**, Modulating Control Valve, Dynamic Flow Limiter and Differential Pressure Control Valve in one body.









### Pressure Independent Control Valves (PICV)

Balance the water flow in Fan Coil Units (FCU)





### Pressure Independent Control Valves (PICV)

Balance the water flow in Air Handling Units (AHU)



#### FlowCon SM DN 15-40

- Dynamic self-balancing modulating control valve.
- Total authority, pressure independent.
- Adjustable to 51 different maximum flow rate limits.
- Forged brass housing.



### FlowCon SM DN 50-250

- New state-of-the-art userfriendly actuator.
- Dynamic self-balancing modulating control valve.
- Total authority, pressure independent.
- Adjustable to 51 different maximum flow rate limits.
- Ductile iron housing.





# Chilled Water Thermal Energy Storage



# Chilled Water Thermal Energy Storage System

Some Key Features of Chilled Water TES System

- Shaves off peak load, resulting in significant reduction of installed chiller capacity.
- Chilled Water backup for Mission Critical
   Facilities like; Control Rooms, Data Centers
   and High Tech. manufacturing.
- Demand Side Management





### Chilled Water Thermal Energy Storage System

Ensavior TES Systems with Radial Disk Diffusers in Data Centres –

Bangalore / Jaipur / Chennai / Hyderabad











### Chilled Water Thermal Energy Storage System

TES System of 1300 TRH in New Delhi for Demand Management –

Reduction in Chiller Installed Capacity by 25%













# Automatic Tube Cleaning System (ATCS)



### Automatic Tube Cleaning System (ATCS)

- Water-based cooling systems suffer from fouling of the heat exchanger surfaces, leading to a reduction in efficiency that leads to increased energy use and higher operating costs.
- The automatic tube cleaning system is a unique hydro-mechanical cleaning system that operates continuously to keep heat exchanger surfaces completely free from fouling.



ATCS for Multiple Chillers



**ATCS Online** 



**ATCS with Pump** 



**ATCS without Pump** 

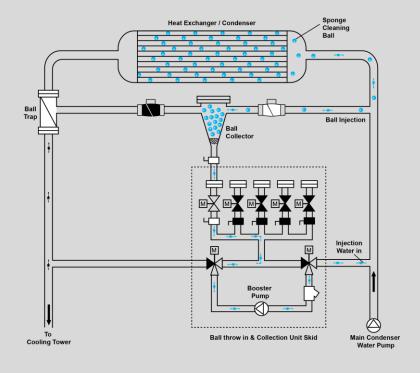


# Schematic Automatic Tube Cleaning System (ATCS)

#### **BALL COLLECTION CYCLE**

# Heat Exchanger / Condenser Ball Collection Sponge Cleaning Ball Collector Ball Main Condenser Colling Tower Ball throw in & Collection Unit Skid Water Pump Water Pump

#### **BALL INJECTION CYCLE**



- NRV in Open Position
- NRV in Closed Position
- Pump Run Mode
- Motorized valve OFF Mode
- Motorized valve ON Mode
- Motorized Three Way valve
- Isolation Valve in Closed Position
- **└─** Isolation Valve in Open Position
- Y Stainer

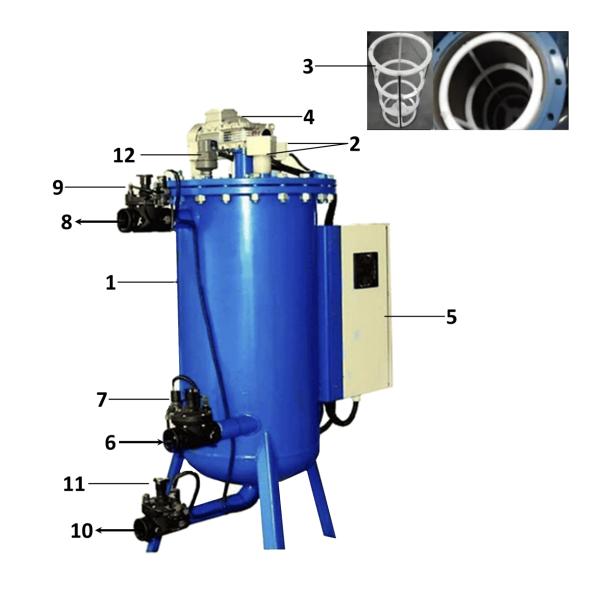


# Electrolytic Scale Treatment System (EST)



### Electrolytic Scale Treatment System (EST)

- 1. Reaction Tank
- 2. Electrodes
- 3. Scrapper (see the Inset picture)
- 4. Scrapper Motor
- 5. Control Panel
- 6. Inlet Connection
- 7. Inlet Valve
- 8. Outlet Connection
- 9. Outlet Valve
- 10. Drain Outlet
- 11. Drain Valve
- 12. Air Release/Intake Valve







## **Electrolytic Scale Treatment System (EST)**

The cooling tower water treatment system faces three problems – **Scale, Corrosion and Algae**. To address these issues, Electrolytic Scale Treatment (EST) System is recommended.

### Savings of up to 60% in annual treatment cost, due to:

- No need to use chemicals
- 20 40% saving of water
- 5 15% saving in electricity consumption
- 10 50% saving in labor costs

### Additional advantages

- Exterior to the cooling tower No changes in Cooling Tower circuit
- Very low life cycle cost
- Controllable and measurable to ensure consistent water quality
- Creates an alkaline pH environment that prevents corrosion
- Water can be re-used for gardening without further treatment as chemical contamination is not there in the blow down.



### Hydronic Regulation



### **Hydraulic Regulation**

Multi-function Hydraulic Separators for



Pressure Maintaining, Deaeration Device with Vacuum Spray Tube and Pressure-less Expansion Tank





Water Make-up Device

### **Core Team**

**Ankit Gupta** Associate Director-Sales (North & East)



**Dinesh Semwal** 

**Managing Director** 



**Lalit Malhotra** 

Vice President – Engineering

**Rajkumar Bhat** 



Associate Vice President (South)







Sanjay Koul

Associate Vice President (West)







**Shankkar Narayann** 

Head – Strategic Business Unit



Tanuj Keshwani

**Chief Financial Officer** 



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