

# i-VX-S SERIES

EC Motor Driven

High Performance Crossflow with EC Motor

Packaged Cooling Tower

Single-Cell Up to 320HRT Cooling Capacity

Energy Conservation

Plug & Play Control



# This is the Truwater Advantage

For more than a quarter-century, Truwater Cooling Towers Sdn Bhd has been at the forefront of cooling innovation. As an ISO 9001 and ISO 14001 certified manufacturer, Truwater specializes in advanced wet and hybrid cooling tower solutions that cater to a wide array of industries, including power generation, petrochemicals, biomass, co-generation, district cooling, data center, and oil and gas.

Truwater's cutting-edge cooling towers constructed from premium materials such as reinforced concrete, pultruded composite FRP,

PVC, steel and timber are designed to excel in both cross-flow and counter-flow applications. These versatile systems are meticulously engineered.

At Truwater, our unwavering commitment to innovation, reliability and versatility ensures that we remain the trusted choice for cooling excellence. Experience the Truwater difference - where over 25 years of experience converge to redefine the cooling landscape.

## Truwater: The Cooling Tower Company with Experience You Can Trust



# i-VX-S SERIES

High Performance Crossflow Type

Single-Cell Up to 320HRT Cooling Capacity

## Overview

Experience the future of cooling technology with i-VX-S Series cooling towers.

The i-VX-S Series cooling towers are equipped with pioneering, high-performance EC external rotor motors, boasting an impressive shaft power of 20 kW. By integrating ebm-papst's innovative EC external rotor motor DV280, our state-of-the-art i-VX-S Series cooling towers deliver unmatched performance, exceptional energy efficiency and ease of maintenance.

## Key Benefits

- Compact system consisting of a motor and integrated control electronics
- Ease of commissioning
- Maximum efficiency of up to 95%
- Integrated derating function enabling thermal and mechanical overload protection
- Integrated Resonance Detection for preventive maintenance and a longer product lifespan



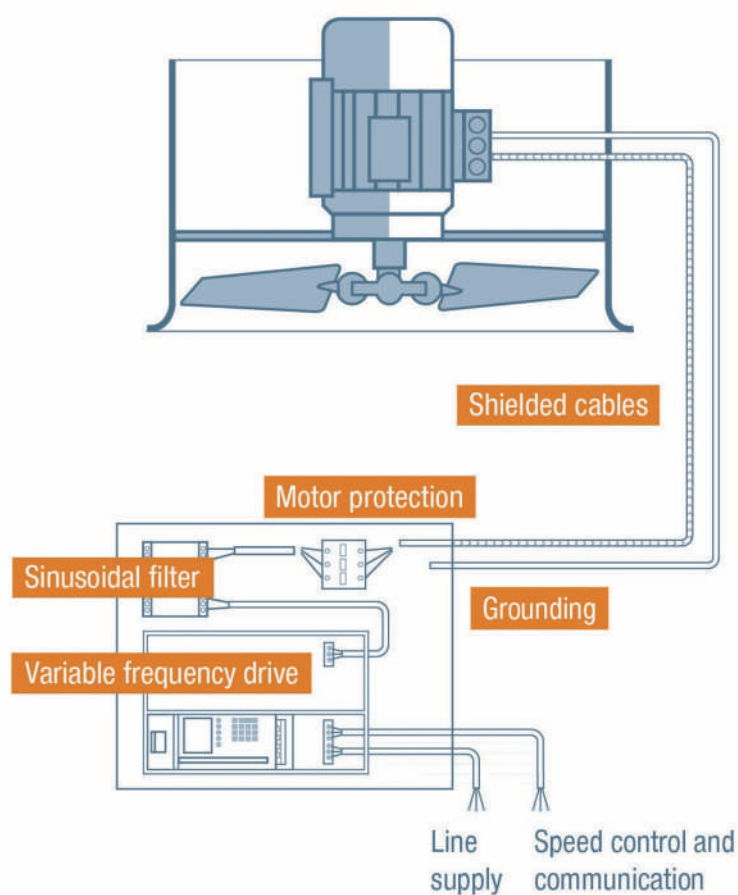
# i-VX-S SERIES

High Performance Crossflow Type

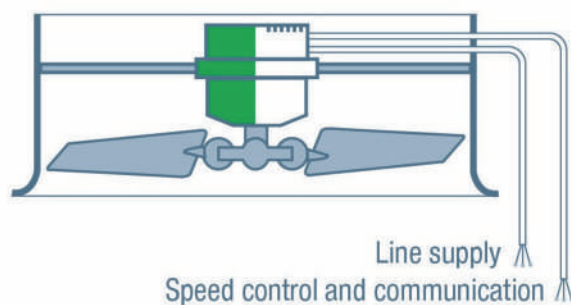
Single-Cell Up to 320HRT Cooling Capacity

## Overview

Conventional fans with variable frequency drive



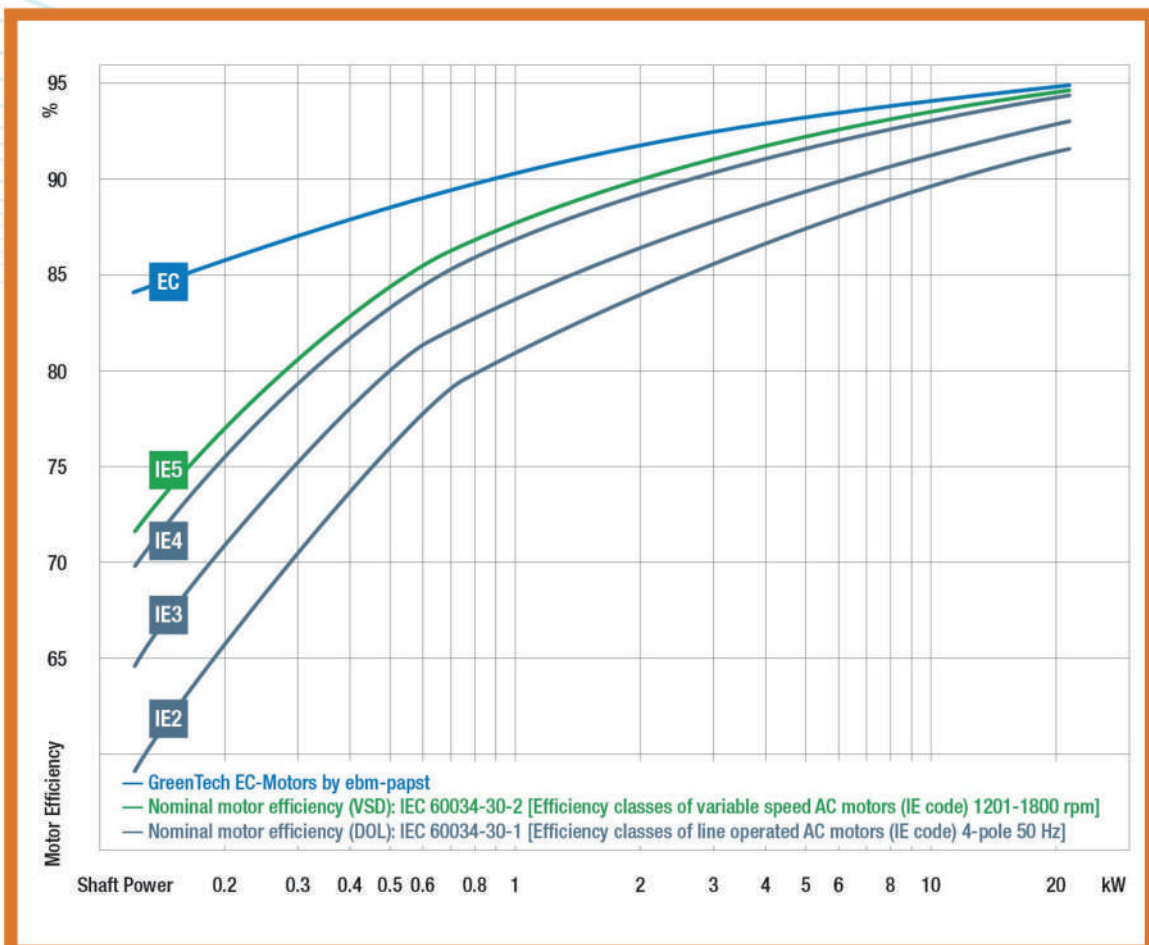
Highly efficient EC fan



# Engineering Highlights

## Enhanced Efficiency, Simplified Design

Greentech EC Motor from ebm-papst outperform conventional AC motors in every aspect. The EC external rotor motor DV 280 meets or exceeds the specifications of efficiency class IE5 (IEC TS 60034-30-2:2016). The integrated control electronics ensure exceptional compactness, simplify installation and commissioning processes. This makes EC technology the smart choice for superior performance reliability.







## Advantages

### Modular Design

- Modular and compact design which can easily be installed with no Belt & Pulley or Gear Reducer Drive.

### Reduced Wiring Requirement

- Centrifugal impeller is bolted directly onto rotor motor, axial impeller is mounted on shaft end, which will result in significant reduction of wiring and starter/control panel.

### Integrated Sensor for Operational Reliability

- An integrated sensor detects and compensates for resonance, ensuring higher operational reliability and reducing premature fan failure.

### Integrated Control Electronics

- Speed can be easily controlled without the need of using external Variable Frequency Drive.

### CTI Certified

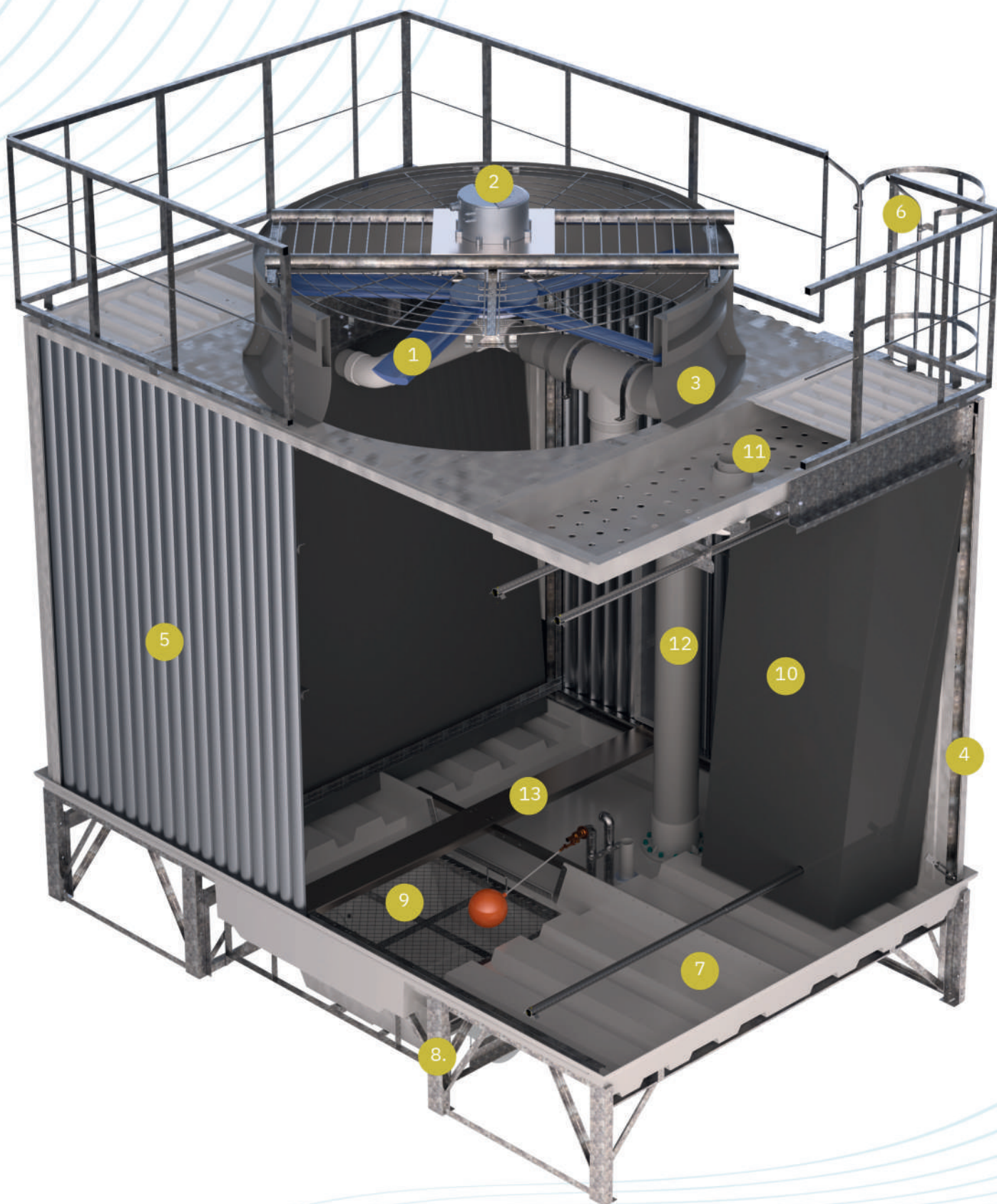
- CTI Certified full and part load operation with high efficiency direct drive fan system.

### Configurable Control Interface & MODBUS-RTU

- Analog and serial control signals (MODBUS-RTU) compatibility.

### Energy Efficiency

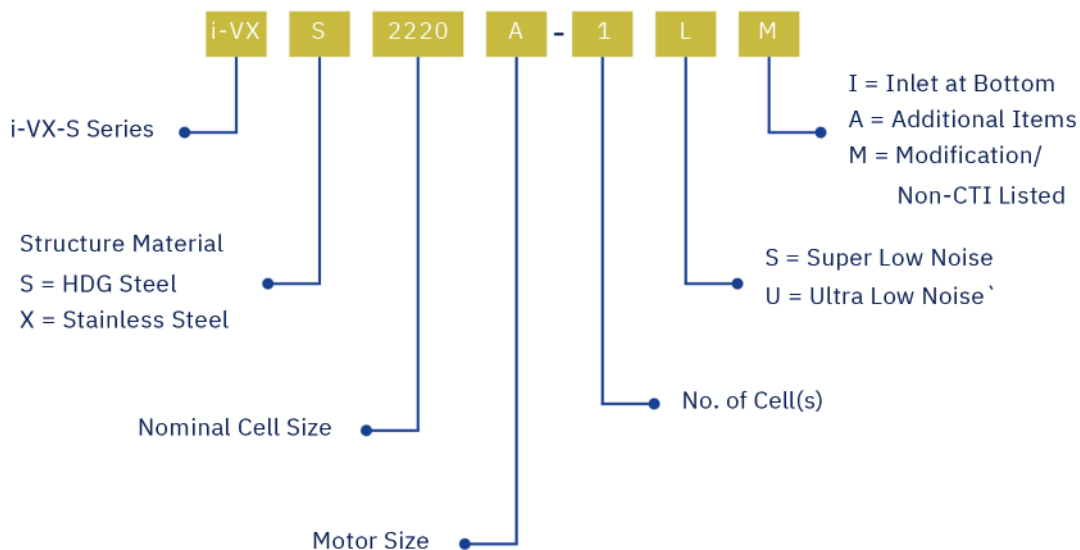
- Reduces energy consumption.



# Features

- 1 Axial Fan Assembly
  - Default: Aluminium Alloy
  - Optional: FRP Fan Assembly for Super Low Noise or EC Fan Application
- 2 Electronically Commutated (EC) Motor
  - With integrated control electronics Fan Stack
- 3
  - High-strength, lightweight FRP
  - Comes with default Fan Guard for safety
- 4 Main Frame Structure
  - HDG Steel with Zinc coating
  - Provide a protective barrier against rust and oxidation
- 5 Casing
  - FRP with UV resistance
  - Excellent corrosion resistance
- 6 Ladder
  - HDG Steel, default for access to the fan deck level
  - Can be equipped with a handrail and cage
  - Customised to meet OSHA standards
- 7 Cold Water Basin Floor
  - FRP Construction
  - Lightweight, corrosion-resistant
  - Durable against chemicals and moisture
- 8 Cold Water Basin Frame
  - HDG Steel with Zinc coating
  - Extends the basin frame's lifespan by protecting against rust and degradation
- 9 Suction Sump
  - FRP Construction
  - Lightweight, corrosion-resistant
  - Incorporates screen to prevent large particles from entering the stream
- 10 High Performance Firm Fill
  - Vacuum-formed, corrugated PVC sheets
  - Featuring a maximum flame spread rating of 25 per ASTM E84
  - Integral with Louver & Drift Eliminator
  - Efficiently reduces drift loss up to 0.005%
- 11 Hot Water Basin
  - High-strength, lightweight FRP
  - can be equipped with Hot Water Basin Cover to prevent debris accumulation and minimizes evaporation losses
- 12 Internal Piping
  - High durability PVC pipe
  - Resistant to scaling, algae and biofilm buildup
- 13 Safety Maintenance Platform
  - HDG Steel ensuring high strength durability and corrosion resistance

## Model Definition Example







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