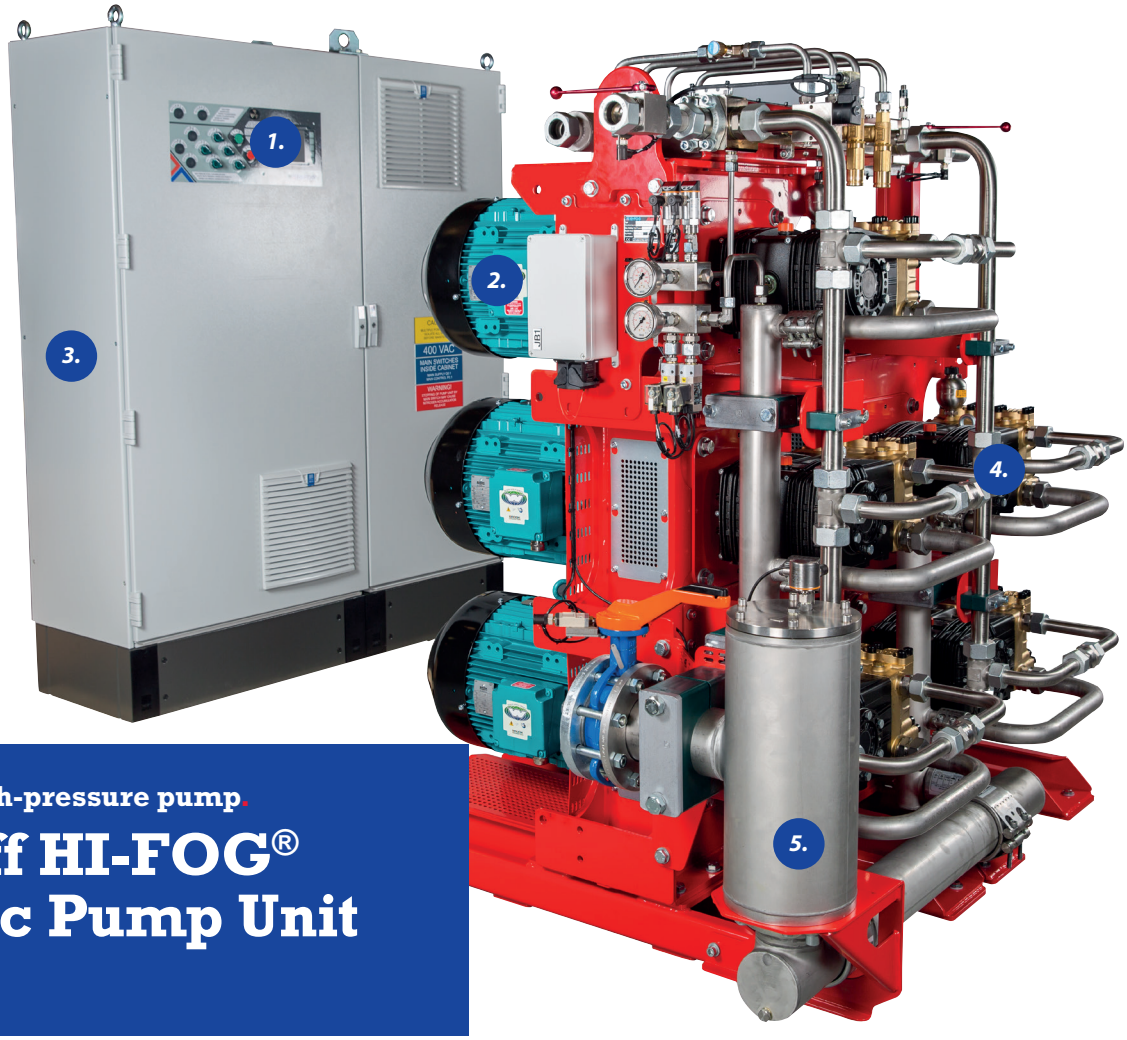

Advanced high-pressure pump.

Marioff HI-FOG® Electric Pump Unit (EPU)

Pump units are the heart of the HI-FOG systems. The advanced HI-FOG Electric Pump Unit (EPU) has revolutionized pumping technology for the high-pressure water mist fire suppression segment. Its modern control system enables optimization for energy-efficiency and maintenance planning.

The HI-FOG water mist fire protection system has a reputation for reliable fire suppression performance, and the EPU makes it even stronger by incorporating many built-in redundancies to increase operational reliability.

1. ***Pump user panel***
   A user-friendly interface allows you to monitor the status of the unit in real time and control the alarms. It will also provide you with help information, maintenance reminders, and an event history log, which makes managing the system easy. Reliable two-way communication with self-diagnostics enables fast troubleshooting.

2. ***Electric motors***
   The high-pressure pumps are connected to efficient and environmentally sustainable IE3 motors with 22.5 kW or 27 kW output. They are capable of operating at 50 or 60 hertz for a wide range of voltages.

3. ***Control cabinet***
   The embedded control system controls the pressure in all operating states and monitors the HI-FOG system pressure continuously. During activation, the control system runs only as many motors as needed to reach working pressure. Pressure is optimized with an advanced software control system and a frequency converter.

4. ***High-pressure pumps***
   Premium long-life pumps ensure reliable operation at the required working pressure and flow.

5. ***Filter unit***
   The freshwater filter is always supplied with bypass and monitoring, ensuring continuous system operation.

Advanced controls

The embedded control system takes care of the closed loop pressure control and continuous HI-FOG system pressure monitoring. During activation, the control system ensures that the pump unit provides the optimal pressure and flow. Pressure is optimized with an advanced software control system and a frequency converter.

Excess water unloading is no longer needed in the operational mode, which simplifies the mechanical design.

Operational reliability

To promote operational reliability, the EPU incorporates many built-in redundancies. Internal and external communication networks, embedded control system and system pressure monitoring are duplicated. Each electric motor also has individual control circuits to ensure that the unit can operate even if one of the motors has a malfunction.

Networking functionality enables intelligent changeover of system control between HI-FOG EPUs. Up to eight HI-FOG EPUs can also be connected through a tubing and communication network, operating as a single water distribution system. This provides more capacity which allows flexible design and system redundancy possibilities.

Designed for flexibility

The HI-FOG EPU consists of a modular pump frame and a separate control cabinet which can be scaled up from two to nine motors per unit. The unique modular structure allows the pump frame and control cabinet to be installed separately which brings more flexibility to the pump room design. Furthermore, the capacity and required pump size can be optimized through dual pressure functionality.

All service points are easily accessible for safe and efficient maintenance. Service access is needed from only two sides, so the pump frame can be installed against the wall. The number of wear and tear components has been minimized for increased system reliability and simplified maintenance.

Marioff is a leading developer of water mist fire protection technology and supplies system solutions worldwide. The company's innovative HI-FOG water mist fire protection system controls and suppresses fire using significantly less water than conventional sprinkler systems, reducing water damage, cleanup time and operational downtime. For more information, visit ***www.marioff.com.***

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Your safety is our expertise.