



WATER CHAMP® FX CHEMICAL INDUCTION SYSTEM

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The Water Champ® FX Chemical Induction System is an innovative device designed for the application of a variety of chemicals used for treating potable water and wastewater. The unique feature of the Water Champ FX System is its ability to provide instantaneous mixing and diffusion of chemicals.

The Water Champ FX System offers the highest quality of design and construction of any submersible chemical induction unit. The motor is a hermetically-sealed 316 stainless steel (SS) motor for the highest level of durability and performance required for chemical feed applications. Most wetted materials are constructed from Grade 2 titanium (unalloyed) and are designed for use with most treatment chemicals. The innovative mounting bracket is configured for mounting in open-channel applications and can be easily retrofitted to existing basins and tanks.

Features:

- Titanium wetted parts
- Rugged construction
- Heavy duty bearing design
- Motor protection device

Full Feature Chemical Induction System

Capacities to 10,000 lb/day (60 gpm)

The Water Champ FX System is available at the following gas or liquid feed capacities:

Model	Capacity*	
	Gas	Liquid
Water Champ 5FX	3,000 PPD	25 gpm
Water Champ 7.5FX	4,500 PPD	30 gpm
Water Champ 10FX	6,000 PPD	40 gpm
Water Champ 15FX	8,000 PPD	50 gpm
Water Champ 20FX	10,000 PPD	60 gpm
Water Champ 25FX	10,000 PPD	60 gpm

*Feed rates are application dependent (consult factory).

Key Benefits:

- Quality diffusion/mixing
- No chemical off-gassing
- Elimination of carrier/make-up water
- Efficient energy transfer
- Vacuum gas feed to 10,000 PPD
- Non-vacuum liquid feed to 60 gpm
- Innovative mounting system

Operating Design Principles

Chemical induction system operation is enhanced by these core design principles:

- The unique airfoil design of the propeller enables the Water Champ® FX System to achieve maximum energy transfer.
- The lightweight design and non-corrosive moving parts make the Water Champ FX System easy to install.
- All chemically wetted components are constructed of corrosion-resistant Grade 2 titanium or better.
- The hermetically-sealed motor is constructed of 316 SS for the highest level of durability and performance.
- The Water Champ FX System provides significant chemical and energy savings.

Easy Installation and Maintenance

Application Flexibility:

The Water Champ FX System is suited for retrofit applications or installation in existing chlorination contact basins and channels due to the flexible guiderail and pivot bracket design combination. The guiderail can be positioned in the process to optimize the zone of influence for mixing, while the universal pivot bracket can be field configured to orient the axial mixing geometry directly into the process flow, to achieve maximum performance. The Water Champ FX System can be configured for gas or liquid applications, vacuum or non-vacuum feed. An Alternate Liquid Feed (ALF) assembly can be added for dual feed of chemicals in applications such as chloramination.

Less Maintenance and Reduced Downtime:

The Water Champ FX System utilizes a close-coupled connection between the vacuum body/propeller and the submersible motor. This innovative design isolates the motor shaft from the process, yet allows for authorized service technicians to perform services such as motor replacement in the field. Serviceable components are limited to motor, stationary bushings and o-ring seals. Flexible chemical feed hose and electrical cables to the induction unit make for easy placement in and out of service.

Modular System:

The chemical induction unit is shipped pre-assembled and submergence tested to verify vacuum, flow and electrical load under simulated operating conditions. The guiderail system is designed to fit each application, requiring minimal downtime to install. Once the rail system is installed, the channel does not need to be drained to place the Water Champ FX System into operation or to remove it for inspection and service. Customized guiderail cage designs are available in specific applications where drainage is not possible for the initial guiderail installation.

The electrical supply is connected to the motor control panel, as is the power cable from the chemical induction unit.

Process connections are made via flexible PVC-hose and couplings to the chemical induction unit. Inline ball check valves (for vacuum applications) or back pressure valves (for non-vacuum) are available for preventing backflow or ensuring anti-siphon under normal operating conditions.

The chemical induction unit is lowered into operation by the use of a davit crane or other rated lifting device once all the necessary connections are made.

Technical Data

Horsepower Rating:

5 HP (3.7 kW) – 25 HP (18.5 kW)

Dimensions:

6" D x 34" L (87 cm) – 44" L (112 cm),
depending on capacity

Weight:

90 lb (41 kg) – 145 lb (66 kg)
depending on capacity

Consult Evoqua for Technical Data Sheets on each selected capacity model.



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