FTX-21-07.0

ITT

Flowtronex

FloBoy™

Small and Mid-Size VFD Pump Packages

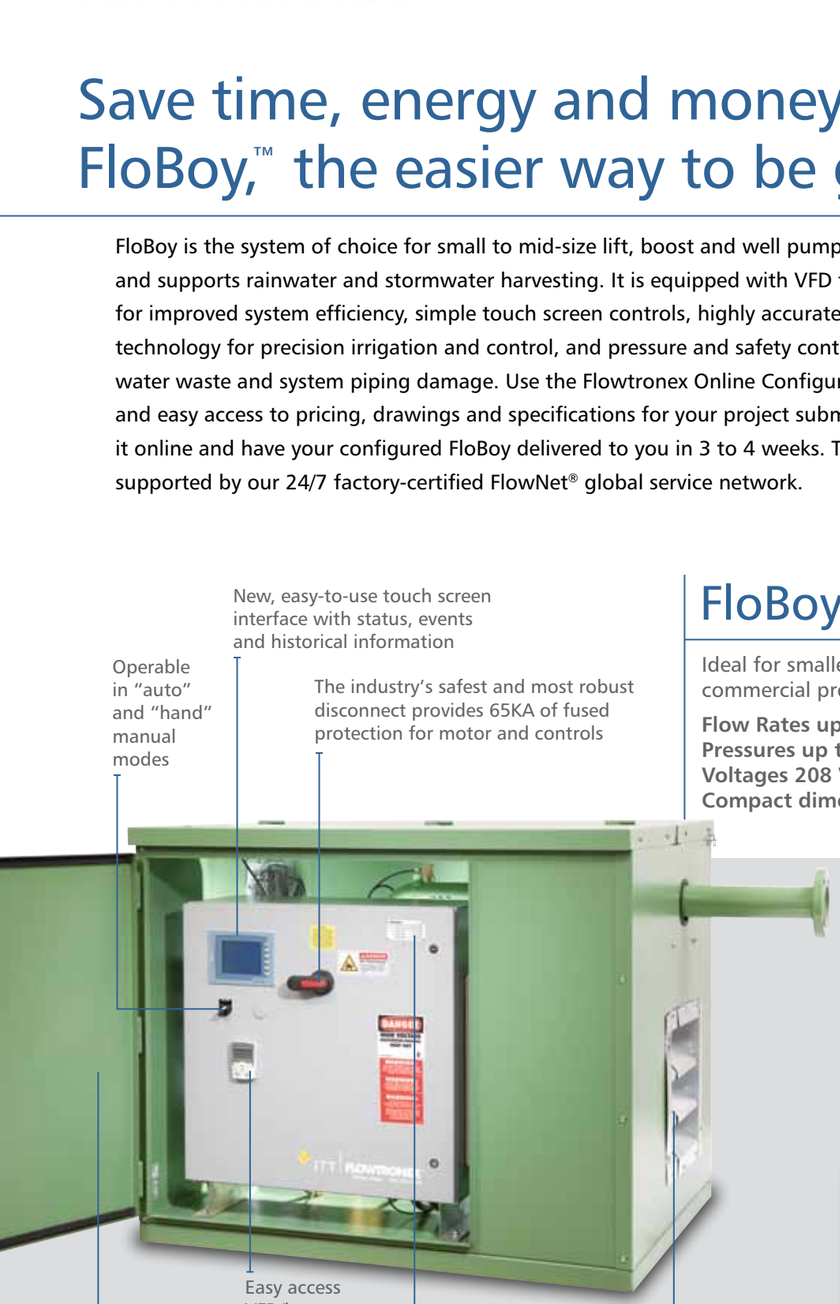
- *For lift, boost and well applications*
- *Delivered in three to four weeks*

Engineered for life

FLOWTRONEX®

Save time, energy and money with FloBoy,™ the easier way to be green.

FloBoy is the system of choice for small to mid-size lift, boost and well pump applications, and supports rainwater and stormwater harvesting. It is equipped with VFD technology for improved system efficiency, simple touch screen controls, highly accurate flowmeter technology for precision irrigation and control, and pressure and safety controls to prevent water waste and system piping damage. Use the Flowtronex Online Configurator for fast and easy access to pricing, drawings and specifications for your project submittals. Order it online and have your configured FloBoy delivered to you in 3 to 4 weeks. The FloBoy is supported by our 24/7 factory-certified FlowNet® global service network.



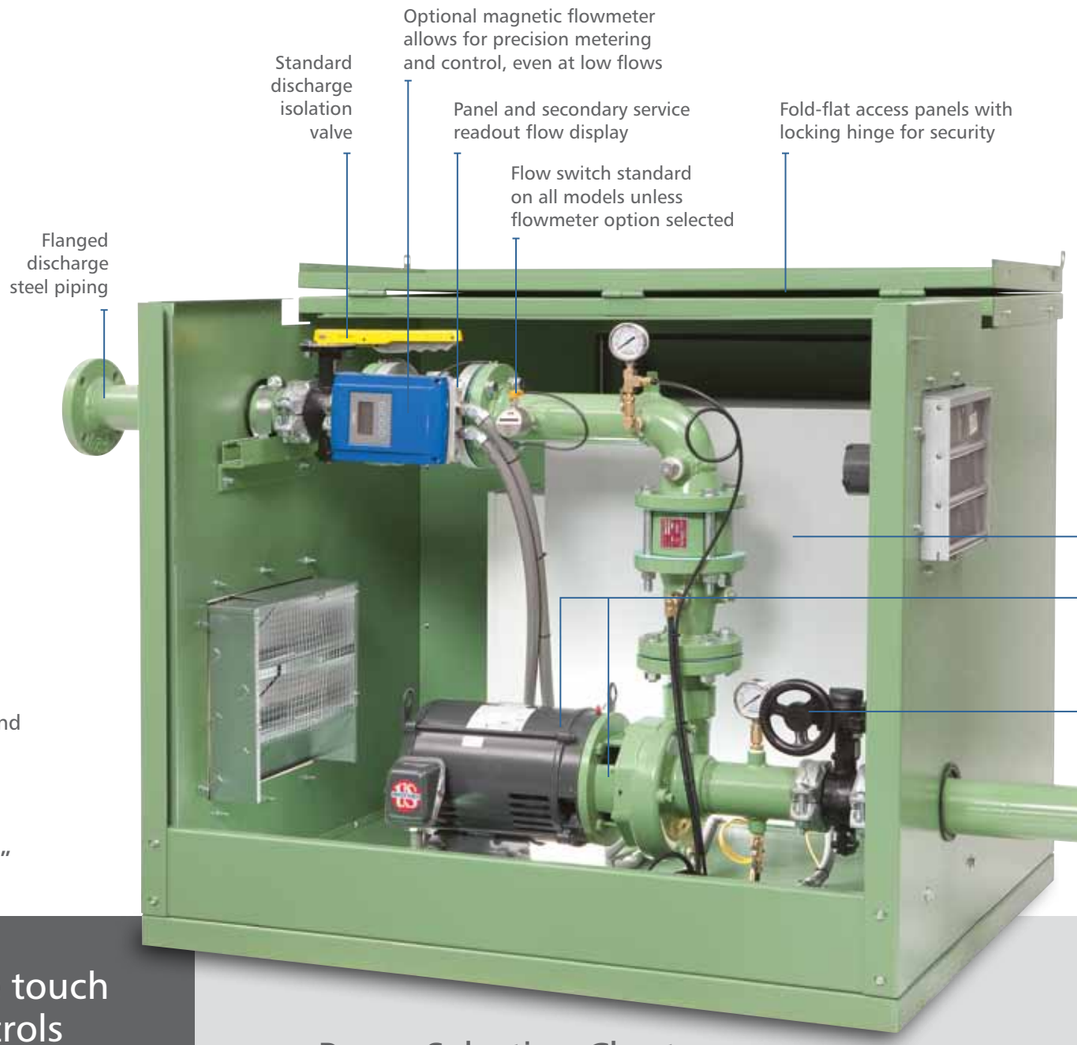
FloBoy S

Ideal for smaller landscapes, residential and commercial projects.

Flow Rates up to 250 gpm
Pressures up to 140 psi
Voltages 208 V, 230 V, 460 V
Compact dimensions 52" x 40" x 44.25"

Easy-to-use touch screen controls

- Password protected.
- Intuitive access to reports, settings, configurations and pump status.
- Shows real-time operational data.
- View graphs and alarm history.

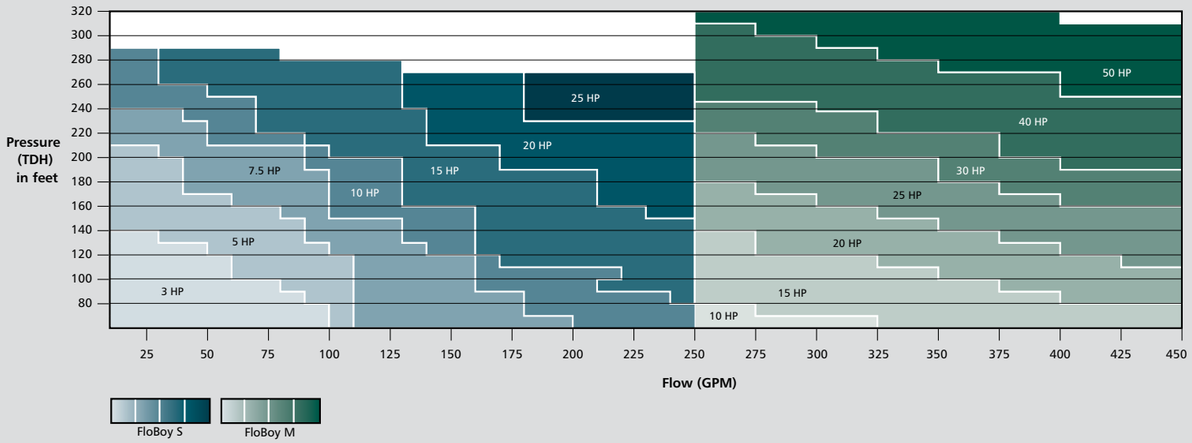


FloBoy M

Ideal for large sports turf applications, business complexes, cemeteries, nurseries, agriculture and other large irrigation projects.

Flow Rates up to 450 gpm
Pressures up to 140 psi
Voltages 208 V, 230 V, 460 V
Compact dimensions 64" x 53" x 54"

Pump Selection Chart



Part 1 – General

1.10 Manufacturer. The pumping station shall be manufactured by ITT Flowtronex Inc. of Dallas, TX, USA, 800-786-7480 or equal approved by the purchaser prior to bid opening.

Part 2 - Mechanical

2.00 Scope. Pump station shall be a completely skid-mounted unitized pump station, with an enclosure built by a single manufacturer. All equipment including, but not limited, to pumps, motors, piping, filters, valves, instrumentation and controls shall be mounted on a common structural aluminum base to form a complete operating pumping station. The base of the enclosure shall be mounted on a concrete pad supplied by others, of sufficient size and strength to support pump system.

2.10 Station Base. The pump station base shall be designed and fabricated to provide proper structural support for all attached equipment. Pump station base shall be manufactured of #12-gauge carbon steel.

2.20 Piping. Pump inlet and discharge piping shall be constructed from schedule 40, ASTM, A120, ASTM A53, or API 5L steel pipe or heavier.

2.30 Enclosure. The Pumping system enclosure shall be of a weather-resistant nature. The main housing shall be of solid sheet construction punched on the sides with louvers for ventilation. The lid shall have a double hinge system that will prevent accidental closure and will accept a padlock.

2.40 Fan. A fan shall be mounted on the enclosure. The purpose of the fan is to exhaust heat that the motor produces.

2.50 Bolts. All bolts used in the assembly of the pumping system shall be unichrome plated to retard corrosion. The bolts shall meet SAE J429 Grade 5 and ASTM A449 specifications.

Part 3 - Pumps and Motors

3.00 Scope. Pump station manufacturer shall strictly adhere to the following specifications.

3.10 Pumps. Horizontal end-suction centrifugal pumps shall be of the back pull-out design to allow access to the impeller without disturbing the piping arrangement. Pumps shall be as manufactured by Goulds.™ The casing/volute shall be manufactured of ASTM A48 class 25-35 close-grained cast iron or AISI type 316L stainless steel, precision machined to modern hydraulic standards.

3.20 Motors. Motors shall be NEMA JM, JP, or C face ODP design with 200 degree, C-rated, high efficiency, moisture-resistant copper windings impregnated with high-temperature polyester insulation resin. Motors shall have locked-shaft end bearings for longer life and positive end play control.

Part 4 – Valves and Gauges

4.00 Scope. Pump station manufacturer shall strictly adhere to the following specifications.

4.10 System Discharge Isolation Valve. An isolation valve shall be installed to isolate the irrigation system from the pump station.

4.20 Suction Pressure Gauge. Gauge shall be silicon filled to reduce wear due to vibration. Accuracy shall be within 2%.

4.30 Discharge Pressure Gauge. All gauges shall be silicon filled to reduce wear due to vibration. Accuracy shall be within 2%.

Part 5 - Electrical

5.00 Scope and Codes. Control panel with controls shall be built in accordance to N.E.C., U.L., and E.T.L. standards. The pump station, including electrical components and enclosure, shall be labeled as a complete U.L. Listed assembly with manufacturers U.L. label applied to the pump station. All equipment and wiring shall be mounted within the enclosure and labeled for proper identification. A complete wiring circuit and legend, with all terminals, components, and wiring identification, shall be provided.

5.10 Control Enclosure. All branch circuit protection equipment, disconnect, wiring and controls shall be mounted in a single NEMA 4 enclosure. All components shall be labeled for proper identification and shall be accessible from the front of the enclosure for ease in maintenance and adjustment. Complete drawings shall be provided showing the location and identification of all components.

5.20 Station Disconnect. A three-pole main station disconnect shall be mounted in the control enclosure to completely disconnect the incoming power. This shall also house the fusing that protects the control system. These fuses shall be time-delayed for the appropriate amperage. This disconnect will be suitable for use as a service entrance disconnect.

5.30 Control Power. Power for the controls shall be provided by a control power transformer which will not be used for any other external load. The control power transformer shall be protected on the primary and secondary side by current limiting fuses of adequate size and voltage rating.

5.40 Short Circuit Current Rating. U.L. rated control assembly shall be rated to withstand no less than 50 KA of short-circuit current.

Part 6 - Controls

6.10 Controls. All control logic shall be handled by the HMI with integrated central controller. HMI features shall include Mono STN LCD, 16 shade, blue, 320 x 240 pixel, CCFT backlight lifetime: approximately 50,000h at 25 deg. C, and analog touch membrane. Operator interface providing graphical data entry and read-out capabilities.

6.20 Variable Frequency Drive. Variable frequency drive shall be an ABBTM model ACS550 or preapproved equal.

6.30 Skid Wiring. All station wiring for the motor and control(s) circuits shall be completed by the pump station manufacturer. All other wiring, including incoming power and external irrigation control wiring, shall be the responsibility of the owner or contractor.

Part 7 – Testing

7.00 Run Testing. The pumping system shall be completely run-tested prior to shipment to verify the performance. A complete test of the pumping system shall include operation at condition point flow, pressure, voltage, and amperage.

Part 9 - Optional Skid-Mounted and Control Integrated Equipment

9.10 Flow Meter Magnetic Flowmeter. The pump station shall have a flow sensor installed, which shall be utilized for control and to display the pump station flow rate, and to display total flow through the pump station controller operator interface device (OID).

ITT Flowtronex
10661 Newkirk St.
Dallas, TX 75220
Phone: (800) 786-7480
www.flowtronex.com

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