

PERFORMANCE

GOLF Pumping Solutions



MCI Advanced Integration with **TORO** Lynx®

Where **Innovation** Meets Tradition





The PIONEER in Golf Pump Stations since 1972



LEADING INNOVATION

- 1972**
PSI first package pump station
- 1980**
MCI opens
- 1986**
Fabricated pump head w/integral air relief



1990

Flownet first service organization

- 1991**
First VFD controls
- 1992**
PumpLog first remote monitoring
- 2004**
Retrofit door kit
- 2011**



ERA Begins

2012

MPC control industry First AB 10" HMI and powerful Logix PLC

2017
MCI acquires **Flowtronex**



2013

MPC **nConnect** industry first **INSTANT ON** remote monitoring w/factory programming access to **PLC/HMI**

2019

MCI-Flowtronex ships the **17,000** pump station

2018

Industry first strike guard system with **SHUTDOWN** and **REMOTE** restart of the pump station

2018

Remote connection **VFD**

2017

Industry first confirmation of **Filter** operation w/alarm

2016

Industry first **6 Year** complete control panel warranty

2016

nAlert industry first preventative maintenance schedule and notification

2015

nSite industry first cloud w/flow reports and provides detail event and trending

2014

First fusion bonded coating for interior and exterior piping as a **STANDARD**

2013

Industry first **6 Year** VFD warranty

MCI-FLOWTRONEX ABILITIES



EXPERIENCED TEAM

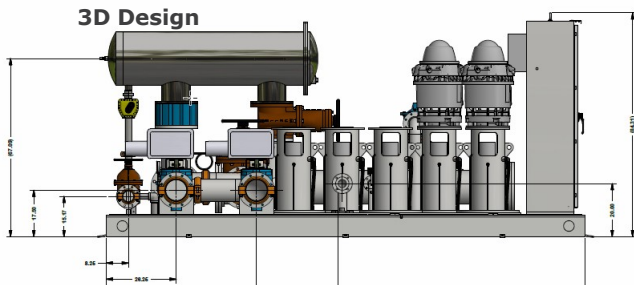
Since 1972 MCI Flowtronex is the company that delivers innovative designs GLOBALLY and provides excellence in operational efficiency, longevity, and performance.

Expert Sales & Application Teams

- Proper system sizing
- New & retrofit site evaluations
- Works closely with owners, operational managers, superintendents, consultants and designers during design, construction and start up phases

Engineering Staff

- 3D mechanical design
- Electrical design
- Control programmers
- Machine programmers



Internal Support Staff

- Technical service
- Aftermarket part sales
- System upgrades
- Support for FLOWNET service network




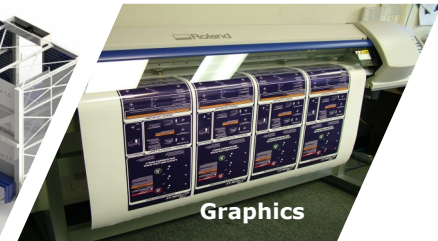
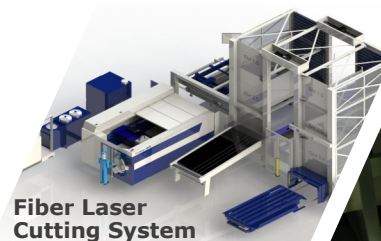
FACTORY CAPABILITY

MCI Flowtronex factory provides the required space along with the most advanced metal and pipe fabrication machines to ensure your station is built to our high quality standards.

Our extensive background in manufacturing of control panels and numerous UL Listings ensure the control panels meet rigid MCI quality and certifying agencies standards.

Manufacturing Space 245,000 SQ FT

- Skids, sleds, manifolds, dog legs
- Shelters
- Lake screens
- Pump baskets
- Vaults
- VT pump head and packing box guard
- Steeline  brand control panel enclosures
- Graphics center
- UL listed package pump system
- UL/CUL 508a listed control panels
- ISO 9001-2015 certified



ACCESS



MPC Controls

MCI's MPC Control System provides remote **ACCESS** to your pump station from a central irrigation computer, phone, tablet or computer.

The MPC will notify you if a situation arises with operation of your pump station.



NO SET UP

MPC is connected to the web as soon as you power up, which allows access via any smart device or PC. No need to deal with a cellular provider or your IT department.



EASY TO USE

MPC interface is a perfect combination of simplicity and performance. Essential data and operational information is one touch away.



DATA AVAILABILITY

Flow reports, status events, and alerts are emailed on a scheduled or as needed basis, 24/7.



REMOTE AVAILABILITY

Complete access to your pump station, anytime or anywhere, to make operational changes or view the current or past status.



INTEGRATION IRRIGATION

nLink provides real time advanced communication with new or existing Toro or Rain Bird central irrigation controls.

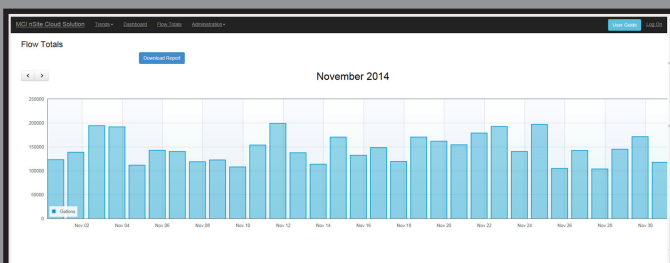


PROGRAM ACCESS

MCI programmers can remotely access PLC, HMI and VFD for program updates, advanced tuning and troubleshooting.

INFORMATION

nSITE



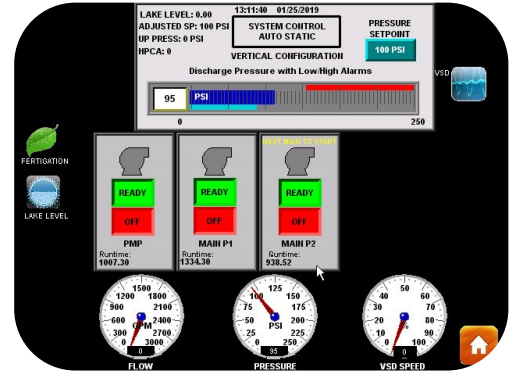
- **Optimize** system operation
- **Manage** your water and resources
- **Meet** your needs for regulatory reporting
- **Ensure** water quality meets standards
- **Data** records pressure, flow rate, drive speed, setpoint, pump status and event/alarm
- **Flow** reports emailed monthly

INTELLIGENT

MPC control logic provides precise control of system pressure while staging pumps for optimal operation and power usage.

Our 10" color interface provides a **1 hour** view with scrolling back/forward controls, trending of pressure, flow, drive speed, setpoint, pump status and event/alarm log.

Configurable system which allows most system customization without custom PLC/HMI programming.



MAINTENANCE SETUP 1							
RESET	ENABLE	HOURS	HRS UNTIL NEXT	MONTHS	HRS UNTIL NEXT	LAST RESET	
	<input checked="" type="checkbox"/>	STATION RUNTIME	1000.0	807.2	6.0	1791.2	10/ 1/2015
	<input checked="" type="checkbox"/>	PUMP #1 OIL	2000.0	1448.2	12.0	2048.0	04/ 6/2015
	<input checked="" type="checkbox"/>	PUMP #2 OIL	2000.0	1448.1	12.0	2048.0	04/ 6/2015
	<input type="checkbox"/>	PUMP #3 OIL	1000.0	1000.0	12.0	8640.0	03/27/2015
	<input type="checkbox"/>	PUMP #4 OIL	1000.0	1000.0	12.0	8640.0	03/27/2015

START (0-24) END (0-24)
 MAINTENANCE MESSAGES ENABLED 10 HR 15 HR

nAlert

Maintenance Manager

- Equipment maintenance by dates/hours
- Email alert when due
- Monitor and report irregular operation of pump, filter, and irrigation system
- Panel notification blue light



STANDARD DROUGHT MANAGEMENT

INTERGRATION

MCI Flowtronex **nLink** provides communication with new or existing Toro or Rain Bird golf irrigation central controls



nLINK



Lynx®
COMMAND SHUTDOWN



PRESSURE
FLOW
PUMP STATUS
ALARMS STATUS



PRESSURE
FLOW
EACH PUMP GPM



RAINBIRD

- Nimbus II
- Cirrus
- Stratus II
- Smart Pump

PRECISE

The **MPC** series control provides the ability to minimize energy use, protect pumps/motors, irrigation systems, and manage water resources.

MPC will monitor water quality parameters such as salinity and pH. The MPC can manage and blend source water to provide regulation of salinity with user allowed adjustments.

MPC Controls

Rockwell Automation

Global Leader Automation Products
Allen Bradley COLOR 10" HMI
Logix PROCESSOR Next Generation AB 503 PLC

Pump Switches

AB Heavy Duty 30 MM w/
LED Pump Run Indication

Pressure Based Controls



- Self tuning as system conditions change and pumps wear
- Variable PID settings based on pressure to SP differential
- Reduce pressure swings to ensure proper irrigation coverage
- Staging pumps On/Off for most efficient operation
- Advanced fault management to ensure smooth restart and return to operation
- Exact pump balancing to ensure equal runtime
- Alternative modes of operation to continue operation during a critical component failure



PROTECTION

6 YEAR
Warranty

Control Panel & VFD

Includes **LIGHTNING** related damage

Service by **FLOWNET**



METHOD

SURGE ARRESTOR

UL 1449 Type 1 protects the complete panel including the main disconnect.

- LED visual diagnostics
- 200 kA SCCR
- 50kA Per Mode / 50kA Per Phase



FUSES

Safest method to interrupt fault current energy without rupturing. Current limiting fuse prevents maximum fault current from destroying components.

Fuses protect:

- Control panel components
- XL operated motors
- VFD—high speed J fuses



IP20 FINGER-SAFE COVERS

High clarity clear allows for protection from live connections with tester probe holes included for easier and safer testing and troubleshooting. Installed on:

- Disconnect & PDBs terminations
- Fuse blocks
- Contactors



RATING

100 kA SCCR

The panel rating is higher than the most severe fault event to ensure a high survival rate if a fault event occurs.

DANFOSS VFD

High lifetime availability, low energy consumption and maintenance cost provide the lowest cost of ownership.

- Reduced harmonic distortion
- 3-8% Energy savings AEO
- AMA motor tuning software



AB ELECTRONIC OL

The E1 Plus overload directly measures motor current.

- Thermal memory circuit
- Separate phase loss detection
- Wide adjustment range



PERFORMANCE

The **Endurance** station is built with 3D modeling, advanced manufacturing techniques, superior coating methods, while utilizing equipment from the market's leading manufacturers.

ENDURANCE

US MOTORS
NEMA Premium Efficiency
Inverter Duty

VT Heads attached with
through bolting to
eliminate the impact of
corrosion and damage to
threaded taps



Engineered for Performance



- 3D design software
- MCI-Flowtronex fabricated head with integral air discharge
- MCI-Flowtronex fabricated packing box guards
- Long life engineered coatings
- SS piping and fittings on 2" and smaller piping
- SS threaded ports
- Six axes pipe profiler for precision non-intrusive pipe copes

RELIABILITY

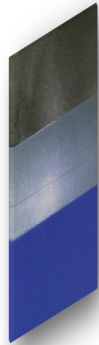
2 YEAR
Warranty

PARTS, LABOR AND CRANE FOR 2 YEARS

SYSTEM

SKID COATINGS

- Steel grit blasting to SSPC-10/NACE 2 standard
- PPG Enviracryl Zinc powder coat primer
- Weather resistant TGIC polyester powder coat



FUSION BONDED EPOXY COATINGS

- **INTERIOR** standard
- Longer pipe life
- Corrosion resistance
- Lifetime friction reduction
- Reduced pipe fouling
- Prevents scaling & tuberculation



PUMPS

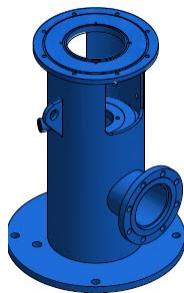
- Premium efficiency
- Investment cast 316 SS impellers
- Porcelain lined bowls



PM Pump
SS drop pipe

HIGH STRENGTH PUMP HEAD

- MCI-FTX fabrication
- Integral air chamber
- Extended bearing
- SS packing box
- Large service window
- 316 SS packing box guards



FLOWMETER

Siemens Magnetic Flow Meter*

- **0.4%** accuracy
- Hastelloy C probes
- N4X transmitter



FILTERS*

- **SS** Filters
- Full flow-bypass
- Wye strainer bypass
- Check valve-downstream to protect screen
- Filter flush indicator to control system for monitoring/alarming successful flush cycles



CLA-VALVE PRESSURE RELIEF VALVE

- SS disk
- Fusion onded epoxy body



MECHANICAL SEAL*

- Cartridge Seal w/ Multi-spring design
- Packing box ext. bearing
- Flush line
- Motor steady bushing



*Optional Upgrades

CORROSION RESISTANT SHELTERS



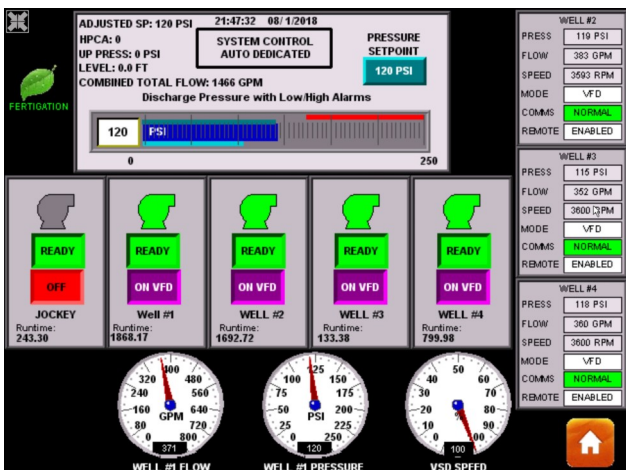
- Aluminum construction
- Powder coat finish
- Multiple color selection
- Insulation options
- Lighting
- HVAC options

ENDURASCAPE ENCLOSED SOLUTIONS

- Aluminum construction
- Powder coat finish
- Multiple color selection
- Insulation options
- Multiple pump selections
- Remote connectivity



WELL & AUXILIARY PUMP CONTROL



- Multiple water source systems
- Integrated with pump station
- Efficient motor controls
- Remote connectivity
- Multiple well direct irrigation
- Water feature pump(s)
- Transfer pump(s)



Irrigation Water Treatment



TREATMENT SOLUTIONS

- Reverse Osmosis
- Ultra-Filtration
- Micro-Filtration
- Nano-Filtration
- Desalination
- Integration with pump station
- Remote monitoring
- Backed by **FLOWNET** service

HISTORY

1975 WET is created to provide advanced filtration technologies

1995 Purchased by Waterlink

2002 Purchased by ITT

2007 Merges with Flowtronex

2018 WET is acquired by **MCI** Motor Controls Incorporated

GOLF COURSE IRRIGATION

WET can analyze your feed water supply quality and develop a complete engineered solution to meet your specific water quality needs.

Our many years of membrane application experience and deep understanding of golf course irrigation needs, provides an unmatched and proven partner you can count on.



WET RO System

- 350,000 Gallons per Day
- Lowered TDS of Feed Water **99%**

ENDURANCE Pump Station

- 2,450 Gallons per Minute
- 120 PSI





SERVICE

MCI-Flowtronex & WET products are supported with MCI internal product support technicians and in the field by our FLOWNET certified service network.



- MCI connectivity allows support staff to access and troubleshoot 24/7
- MCI's staff has full access to HMI, PLC and VFD(s) program remotely to assist when requested
- Spare and replacement parts



- Trained and certified service technicians for support around the globe
- Installation and system start up
- Site service for warranty and non warranty needs
- User training
- Upgrades and retrofits
- Maintenance

CALL 1-800-786-7480 FOR SERVICE

“Meeting our customer’s requirements, every requirement, every time”

Motor Controls Incorporated
10661 Newkirk
Dallas Texas, 75220
1-800-786-7480
Int'l (+1) 972-247-4440
www.motorcontrols.com
info@mciflowtronex.com



<https://www.linkedin.com/company/motor-controls-inc>
<https://twitter.com/mcipumpstation>

Printed in U.S.A.
MCI Product Brochure: GEB012619
© 2019 Motor Controls Inc. All rights reserved