

PUMPTRONICS PUMPING SYSTEMS

THE GOLF COURSE WATER MANAGEMENT SPECIALISTS

An Experienced Company with Knowledgeable Staff

- Provide quality advice and efficient pumping systems to over 200 golf and turf operations in North America.
- Pumptronics understands the total water management needs of golf courses and other turf applications.
- The staff has many years of collective golf course and water management experience and keeps current on the latest technologies and product innovations.
- Our knowledgeable staff recommends the right solution that best fits our customer's needs and budget.
- Pumptronics provides a complete range of products and services, from pump maintenance and service, to VFD panel upgrades, to brand new pre-fabricated pump stations.

Satisfied Customers

Pumptronics has installed systems at many fine courses across Canada such as:

- St. Georges Golf and Country Club
- Old Ashburn Golf Club
- Summit Golf and Country Club
- Carnmoney Golf and Country Club
- Cataraqui Golf and Curling Club
- Eagles Glen Golf Club

A complete list of completed projects is available upon request

A Full Product Line

- Pumptronics offers five product lines; Pulse Pro, Pulse, Pulse Sled, Pulse Pak and Pulse Custom; designed to deliver the best solution for any application.

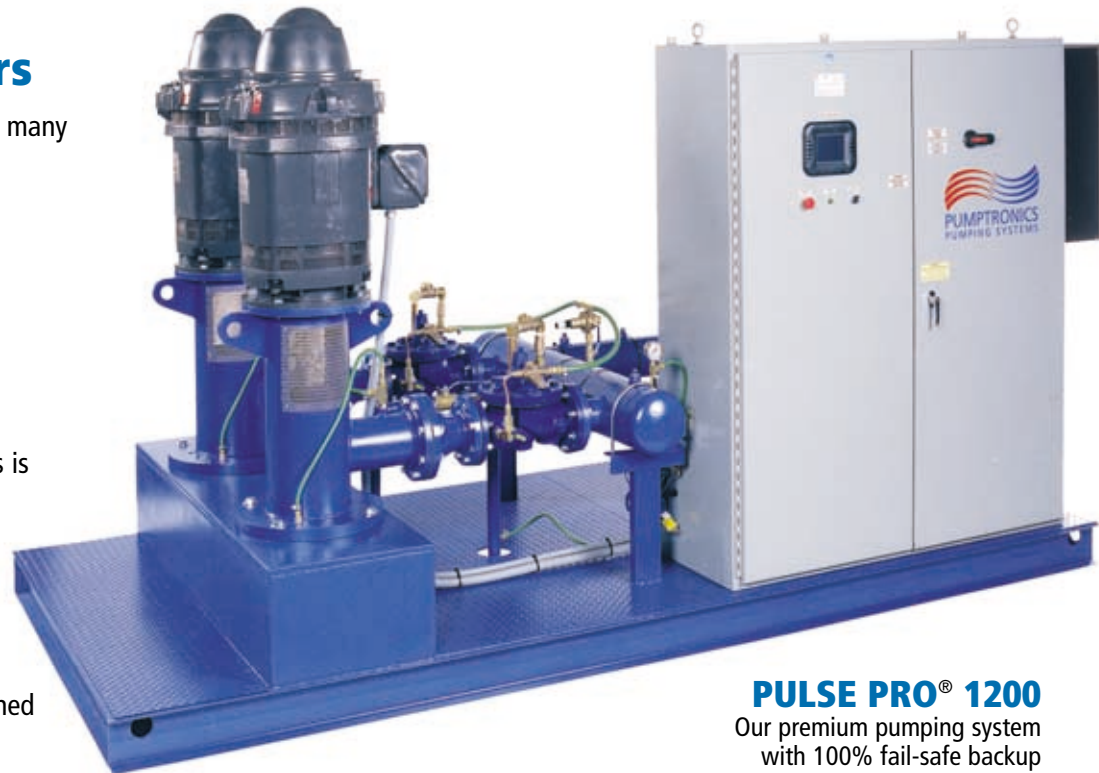
PULSE PRO®

The **PULSE PRO®** is designed to operate under severe conditions and to provide water to your golf course during adverse power fluctuations or component failures.

Extended pump life is ensured by use of lubricated shafts, allowing warranties to be extended up to 10 years.

This pumping station utilizes the most efficient electrical motors. Pumps are individually selected to ensure the highest efficiencies for your specific application.

The highest quality materials available are utilized to ensure many years of carefree operation.



PULSE PRO® 1200

Our premium pumping system
with 100% fail-safe backup



Toll Free 1-888-222-6676 Tel (905) 469-6444 Fax (905) 825-8139
18-1290 Speers Road, Oakville, Ontario L6L 2X4
www.pumptronics.ca



PULSE PRO® FEATURES

FAIL-SAFE FEATURES

- 1) The PULSE PRO® is designed to automatically switch between Variable Frequency Drive pressure control to mechanical pressure control if the electronic drive fails. This guarantees the completion of your irrigation cycle.
- 2) If one motor fails, the PLC alters the low pressure alarm setting, to allow the irrigation system to complete its cycle.
- 3) If the Programmable Logic Controller (PLC) fails, each pump can be started manually and the Clayton Valve will control pressure to the irrigation system.
- 4) System automatically re-starts after low pressure, low water, high pressure, voltage fluctuation and drive alarms.
- 5) Pumps use an external lubrication on shaft to prevent premature shaft wear.
- 6) Colour interface displays graphs of actual flow, pressure, pump hours, pump starts, total flow (daily, weekly, etc.) and PLC timers.
- 7) Pumping system is customized for the specific needs of the golf course industry including such features as slow fill, automatic ramp, energy saving mode, pump start monitor, flow monitor and friction loss compensation.

DESIGN CRITERIA

Overall system efficiencies to 78%

Flow Rates from 600-3500 usgpm

Pressures from 75 - 200 psi

Flow Rates from 40 - 220 litres/s

Pressures from 500 to 1400 K Pa

High Efficiency 1800 RPM Motors (up to 93%)

High Efficiency 1800 RPM Vertical turbine pumps (up to 86%)

Voltages

- Units available in 230, 460 and 600 volt (3 phase), including 230 and 460 volt (single phase)
- Single phase up to 1500 gpm

Quality Construction

- Fabricated steel discharge pump heads with lubricated shaft
- Exclusive 10 year pump warranty
- Clayton hydraulic diaphragm check valve (silent closing & automatic pressure regulation if drive fails during the night)
- Goulds high efficiency vertical turbine pumps with stainless steel shafts, lubricated line shaft bearings and stainless steel basket strainers
- Automatic Drive disconnect to save drive when not irrigating. Clayton relief valve for individual pump cooling when operating in Constant Speed mode
- Flow Meter spool with MUIS flow sensor wired directly to PLC
- Gear operated wafer style station discharge isolation valve for easy opening and closing
- Integral wet well access hatch
- Grit blasted subsurface with 6-8 mil Epoxy Paint Process
- Continuous weld deck plate
- High visibility 3.5" silicone-filled pressure gauges with isolation valves

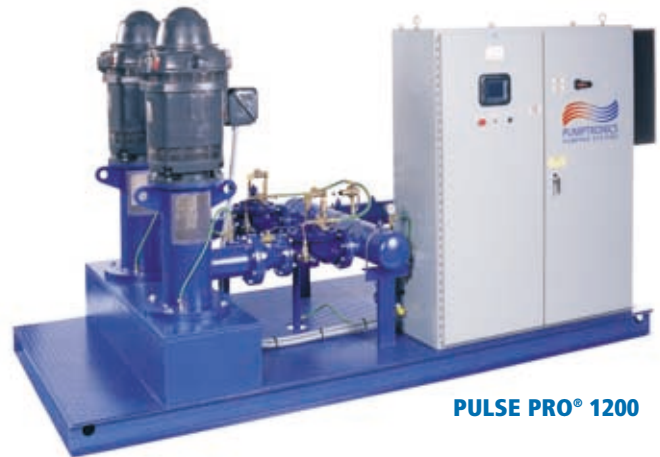
Quality Electronic Controls

- CSA and UL approved panel with safety door inter-lock switch
- Colour Touch Operator Interface Display
- Liquid cooled control panel
- Stainless steel pressure transducers rated at 250 psi
- Fused motor and overload protection
- Variable Frequency Drive (VFD) with input line reactor for extra protection
- Surge and Lightning Protection
- VFD fault shutdown with auto-restart
- Motor phase failure, phase imbalance and phase reversal
- Low Voltage, High Voltage protection
- Individual run time and motor start monitoring
- Automatic alternation of VFD pumps
- Fault alarm list with time and date log
- Automatic Ramp algorithm to bring pressure from 0 to setpoint while protecting the irrigation system
- Last 100 events history

Options Available

Remote monitoring package - monitors pump station and saves information on daily basis for easy record keeping.

Hardware for operating remote equipment such as pumps, lights - software allows operator to run two pieces of external equipment on a time or float condition



PULSE PRO® 1200

MODEL	USGPM	PSI	TOTAL HP	PUMPS
PRO-2VST-600/125-30/2-1770-600/3/60	600	125	60	2
PRO-2VST-800/125-40/2-1770-600/3/60	800	125	80	2
PRO-2VST-1000/125-50/2-1770-600/3/60	1000	125	100	2
PRO-2VST-1200/125-60/2-1770-600/3/60	1200	125	120	2
PRO-2VST-1500/125-75/3-1770-600/3/60	1500	125	150	2
PRO-3VST-2000/125-60/5-1770-600/3/60	2000	125	180	3
PRO-3VST-2500/125-75/5-1770-600/3/60	2500	125	225	3
PRO-3VST-3000/125-100/5-1770-600/3/60	3000	125	300	3

Flow rates and pressures can be altered based on requirements



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