

PULSAFEEDER®

Process Control Instrumentation



Product

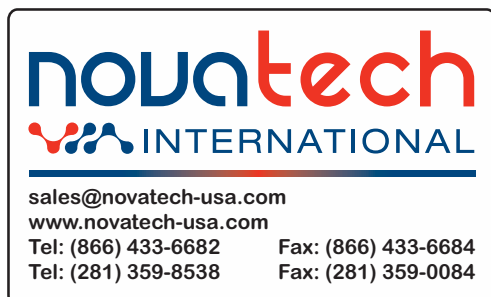
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IMPORTANT INFORMATION WHEN PLACING AN ORDER

1. Fax, mail or telephone orders directly to the Customer Service Department:



2. Please have the following information available when placing an order:

Account Name	Special Tags or Marks (if needed)
Billing Zip Code	Item(s) Being Ordered
Purchase Order Number	Quantity of Each Item
Ship to Address	Pricing
Payment Terms	Shipping Information
3. Orders are entered upon receipt. Our ability to change in house orders is limited. Please be certain your orders are complete when placed. Any order cancellation or change request is subject to a cancellation fee.
4. Orders are assigned standard lead times based on the size of the order and product mix:
Orders requiring expedited shipping (sooner than the standard lead times) are subject to a expedite charge. Unless the order clearly requests expedited shipping, the order will be treated as a routine order. When expedited shipping is requested a designated carrier must be selected. Orders that need to ship the same day must be received by 12:00 PM EST. Same day and next working day shipping is generally available for larger orders but not guaranteed, please verify with customer service. We shall have no liability if unable to provide expedited shipping of an order
5. Repairs and returns are coordinated through our Customer Service Department. All orders returned must have factory authorization, and are subject to a 25% restocking charge for standard product.
6. Other Important Information:
 - Prices are subject to change without notice, and are effective when order is accepted, and acknowledged at point of shipment.
 - When ordering, specify your P.O. number, model number, quantity, price, shipping and/or billing address and order date.
 - Standard terms are NET 30 days from date of invoice for approved accounts on open account.
 - WE ACCEPT VISA, MASTERCARD, AMERICAN EXPRESS and DISCOVER CARD.
 - All prices are F.C.A. Punta Gorda, FL or Kingwood, Texas location.
 - Custom product sales are final.
 - Charges for export documentation may apply an very by requirements.
 - Expedite fees may apply. Orders requiring expedited shipping (sooner than the standard lead times) are subject to an expedite charge.
 - Fees for changes to or cancellation of orders may apply.

MicroVision^{EX}

MicroVision EX 3.0 is a microprocessor-based conductivity, pH and ORP controller, with the features and functions you need for accurate monitoring and control of cooling tower water that won't break your budget!

Features

- Toroidal conductivity sensor.
- One-point calibration.
- Large easy to read color display.
- Lockable front cover.
- Multiple level security codes.
- Up to 10 digital inputs.
- Optional 4-20 mA analog outputs.
- Dry contact alarm output.
- Battery backup.
- USB data logging is standard:
 - ◊ Up to 2 years of data logging.
 - ◊ Upload/Download program settings.
 - ◊ Upgrades to the Operating System.
- Optional PULSAlink cloud based communications.
- eServiceReport compatible.
- Customizable names for relays, water meters and inputs, synced to Controller, PULSAlink cloud, App and reports.
- Unsurpassed reporting and graphing.
- Enhanced charting capabilities.
- Customizable timer programs without system reboot.
- Ability to add 2nd water meter.
- Robust data logging capabilities.



Model Number	Probe Style	Programmable Timers	Panel / Pump Mount	Digital Inputs	PULSAlink and Smart Phone App Compatible ²
Conductivity Control					
MVECXXXPX-XXX-XXX ¹	Torodial	3	None	6	No
MVECXXXPX-XXX-CZXXX ¹	Torodial	3	None	6	No
MVECXXXPF-XXX-XXX	Torodial	3	None	6	No
MVECXXXPF-XXX-CZXXX	Torodial	3	None	6	No
MVECXXXPA-XTX-XXX	Little Dipper PTSA	3	Yes / No	6	No
MVECXXXPA-XPX-XXX	Pyxis PTSA	3	Yes / No	6	No
MVECXXXPA-XXX-XXX	Torodial	3	Yes / No	6	No
MVECXXXPA-XXX-CZXXX	Torodial	3	Yes / No	6	No
MVECXXXPA-EXX-XXX	Torodial	3	Yes / No	6	Included
MVECXXXPA-EXX-CZXXX	Torodial	3	Yes / No	6	Included
MVECXXXPA-ETX-XXX	Little Dipper PTSA	2	Yes / No	6	Included
MVECXXXPA-EPX-XXX	Pyxis PTSA	2	Yes / No	6	Included
MVECXXXPD-XXX-XXX	Torodial	3	Yes / Yes - 3	6	No
MVECXXXPD-XXX-CZXXX	Torodial	3	Yes / Yes - 3	6	No
MVECXXXPD-EXX-XXX	Torodial	3	Yes / Yes - 3	6	Included
MVECXXXPD-EXX-CZXXX	Torodial	3	Yes / Yes - 3	6	Included
MVEC5XXPF-XXX-XXX	Torodial	4	None	6	No
MVEC5XXPF-XXX-CZXXX	Torodial	4	None	6	No
MVEC5XXPA-XXX-XXX	Torodial	4	Yes / No	6	No
MVEC5XXPA-XXX-CZXXX	Torodial	4	Yes / No	6	No
MVEC5XXPA-EXX-XXX	Torodial	4	Yes / No	6	Included
MVEC5XXPD-EXX-XXX	Torodial	4	Yes / Yes - 3	6	Included
MVEC5XXPD-EXX-CZXXX	Torodial	4	Yes / Yes - 3	6	Included
MVEC5XXPA-ETX-XXX	Little Dipper PTSA	3	Yes / No	6	Included
MVEC5XXPA-EPX-XXX	Pyxis PTSA	3	Yes / No	6	Included
Conductivity and pH					
MVECPXXPF-XXX-XXX	Torodial	6	None	10	Order: ACT-PULSALINK
MVECPXXPF-XXX-CZXXX	Torodial	6	None	10	Order: ACT-PULSALINK
MVECPXXPA-XXX-XXX	Torodial	6	Yes / No	10	Order: ACT-PULSALINK
MVECPXXPA-XXX-CZXXX	Torodial	6	Yes / No	10	Order: ACT-PULSALINK
MVECPXXPA-EXX-XXX	Torodial	6	Yes / No	10	Included
MVECPXXPA-EXX-CZXXX	Torodial	6	Yes / No	10	Included
MVECPXXPA-ETX-XXX	Little Dipper PTSA	5	Yes / No	10	Included
MVECPXXPA-EPX-XXX	Pyxis PTSA	5	Yes / No	10	Included
MVECPXXPD-XXX-XXX	Torodial	6	Yes / Yes - 3	10	Order: ACT-PULSALINK
MVECPXXPD-XXX-CZXXX	Torodial	6	Yes / Yes - 3	10	Order: ACT-PULSALINK
MVECPXXPD-EXX-XXX	Torodial	6	Yes / Yes - 3	10	Included
MVECPXXPD-EXX-CZXXX	Torodial	6	Yes / Yes - 3	10	Included

Conductivity and ORP					
MVECQXPF-XXX-XXX	Torodial	6	None	10	Order: ACT-PULSALINK
MVECQXPF-XXX-CZXXX	Torodial	6	None	10	Order: ACT-PULSALINK
MVECQXPA-XXX-XXX	Torodial	6	Yes / No	10	Order: ACT-PULSALINK
MVECQXPA-XXX-CZXXX	Torodial	6	Yes / No	10	Order: ACT-PULSALINK
MVECQXPA-EXX-XXX	Torodial	6	Yes / No	10	Included
MVECQXPA-EXX-CZXXX	Torodial	6	Yes / No	10	Included
MVECQXPA-ETX-XXX	Little Dipper PTSA	5	Yes / No	10	Included
MVECQXPA-EPX-XXX	Pyxis PTSA	5	Yes / No	10	Included
MVECQXPD-XXX-XXX	Torodial	6	Yes / Yes - 3	10	Order: ACT-PULSALINK
MVECQXPD-XXX-CZXXX	Torodial	6	Yes / Yes - 3	10	Order: ACT-PULSALINK
MVECQXPD-EXX-XXX	Torodial	6	Yes / Yes - 3	10	Included
MVECQXPD-EXX-CZXXX	Torodial	6	Yes / Yes - 3	10	Included
Conductivity pH and ORP					
MVECPOXPF-XXX-XXX	Torodial	5	None	10	Order: ACT-PULSALINK
MVECPOXPF-XXX-CZXXX	Torodial	5	None	10	Order: ACT-PULSALINK
MVECPOXPF-EXX-XXX	Torodial	5	None	10	Included
MVECPOXPA-XXX-XXX	Torodial	5	Yes / No	10	Order: ACT-PULSALINK
MVECPOXPA-XXX-CZXXX	Torodial	5	Yes / No	10	Order: ACT-PULSALINK
MVECPOXPA-EXX-XXX	Torodial	5	Yes / No	10	Included
MVECPOXPA-EXX-CZXXX	Torodial	5	Yes / No	10	Included
MVECPOXPA-ETX-XXX	Little Dipper PTSA	4	Yes / No	10	Included
MVECPOXPA-EPX-XXX	Pyxis PTSA	4	Yes / No	10	Included
MVECPOXPD-XXX-XXX	Torodial	5	Yes / Yes - 3	10	Order: ACT-PULSALINK
MVECPOXPD-XXX-CZXXX	Torodial	5	Yes / Yes - 3	10	Order: ACT-PULSALINK
MVECPOXPD-EXX-XXX	Torodial	5	Yes / Yes - 3	10	Included
MVECPOXPD-EXX-CZXXX	Torodial	5	Yes / Yes - 3	10	Included

1. Does not include Flow Switch
2. Download PULSALink on the App Store or Google Play

Programmable Timer Modes:

- Limit timer
- Percent timer
- % post bleed with limit timer
- Water meter pulse timer
- Biocide control timer, with pre-bleed, lockout, & conductivity minimum
- 4-20mA input, pH, or ORP set point control
- Alarm output

Digital Input Assignments

- #1 Flow Switch
- #2, 3 & 4 Drum Levels
- #5 Water Meter – Hall Effect or Dry Contact
- #6 & 7 Water Meter – Dry Contact
- #8, 9 & 10 Water Meter–Hall Effect or Dry Contact

MicroVision EX Parts	
Part Number	Description
12-600-00	Acc kit, Fuse, relay name lables, IOM
16-170-07	Probe Tee
16-170-08	Flow Assembly, Cond, Flow
04-080-01	Little dipper sensor kit, Sensor and tee
04-000-21-1	Toroidal probe
04-060-00	pH probe
04-060-01	ORP probe
04-080-02	Pyxis sensor kit, Sensor and tee

MicroVision EX Accessories and Expansions	
Part Number	Description
CK750	Check Valve Kit
PC025	Cable, Cond, Flow - Extension Kit; 25 ft
PC050	Cable, Cond, Flow - Extension Kit; 50 ft
PC075	Cable, Cond, Flow - Extension Kit; 75 ft
PC100	Cable, Cond, Flow - Extension Kit; 100 ft
UGK-MILIN	4-20mA input Upgrade kit (1)
UGK-MILOUT	4-20mA output Upgrade kit (1)
ACT-PULSALINK	PULSALink cloud communications connection kit (required for remote communications)

MicroVision^{EX}

Microvision Ex Controller Mounted Panels

Pulsafeeder offers Microvision Ex Controller Mounted Pre-fab Panels. Worry less about equipment installation. Do more with a professional appearance and factory fabricated standard equipment setup.

Features

- Professional Appearance
- Pre-installed Equipment
- Fabricated to Provide Standard Equipment Setup



Model Number	Control Parameters	Probe	Programmable Timers	Relays	PULSAlink and Smart Phone App Compatible ²
MicroVision EX Controller Mounted Panels					
MVECXXPD-EPX-XXX	Conductivity	Toroidal, PYXIS (PTSA)	2	4	Included
MVECXXPD-ETX-XXX	Conductivity	Toroidal, Turner (PTSA)	2	4	Included
MVEC5XXPD-EPX-XXX	Conductivity	Toroidal, PYXIS (PTSA)	3	5	Included
MVEC5XXPD-ETX-XXX	Conductivity	Toroidal, Turner (PTSA)	3	5	Included
MVECOXXPD-EPX-XXX	Conductivity & ORP	Toroidal, PYXIS (PTSA)	5	8	Included
MVECOXXPD-ETX-XXX	Conductivity & ORP	Toroidal, Turner (PTSA)	5	8	Included
MVECPXXPD-EPX-XXX	Conductivity & pH	Toroidal, PYXIS (PTSA)	5	8	Included
MVECPXXPD-ETX-XXX	Conductivity & pH	Toroidal, Turner (PTSA)	5	8	Included
MVECPXXPD-EPX-XXX	Conductivity, pH, & ORP	Toroidal, PYXIS (PTSA)	4	8	Included
MVECXXPD-EXX-CZ759 ¹	Conductivity	Torodial	3	4	Included
MVECXXPD-XXX-D753 ¹	Conductivity	Torodial	3	4	No
MVECXXPD-EXX-D753 ¹	Conductivity	Torodial	3	4	Included

Note: See Pulsatron.Com For Drawing and Accessory List

Pulsatron Pumps Ordered Separately

Includes 3 Pump Mounts

1. Includes Capacitor Return Motorized Ball Valve

MicroVision

The MicroVision controller series features innovative Toroidal sensor technology. Toroidal sensors are not susceptible to fouling and eliminate the need for routine cleaning and calibration.

The MicroVision is designed specifically for cooling tower applications. The MicroVision is a microprocessor-based conductivity controller with selectable timer and dual biocide control.

The MicroVision controller comes standard with selectable timer, Dry contact/ Hall Effect water meter input, dual biocide with pre-bleed, lockout, inhibitor interface, and four programmable start times per biocide, 4-20mA output, dry contact alarm output and 3 drum level inputs.

The base unit comes with the controller, toroidal sensor with signal cable, and a power cord. Pre-wired pigtails on the relays, and a pre-wired flow switch are available to make installation quick and easy. A 15' signal cable is standard, up to 100' optional, on models without a flow switch, and a 3' cable is standard on models with a flow switch.



MicroVision Selection Guide

PRODUCT DESIGNATOR Position 1, 2 & 3	MVS = MicroVision Toroidal Conductivity Cooling Tower Controller	MVS	-	-	-	-	-
VOLTAGE Position 4	1 = 115/230 volt						
POWER WIRING Position 5	X = Liquid Tight connections (required for CE input power cord options below) P = Prewired power cord and relays (115 VAC Only)						
PANELS Position 6	X = No Panel and No Flow assembly F = Flow assembly, No Panel A = Standard Panel & Flow Assembly B = Panel & Flow Assy, 1 Pump Mount, strainer, sensor tee, inj tee & rails C = Panel & Flow Assy, 2 Pump Mount, strainer, sensor tee, 2 inj tees & rails D = Panel & Flow Assy, 3 Pump Mount, strainer, sensor tee, 3 inj tees & rails						
SUFFIX CODE Position 7, 8 & 9	XXX = Suffix Code 750 = 3/4" Back Flow Check Valve PC025 = 25 Feet (7.6m) of Probe and Flow Switch wiring PC050 = 50 Feet (15.2m) of Probe and Flow Switch wiring PC075 = 75 Feet (22.8m) of Probe and Flow Switch wiring PC100 = 100 Feet (30.4m) of Probe and Flow Switch wiring CZ XXX = CE Approval w/input power cord and plug (CZXXX=European plug ; CZUKXXX=UK plug; CZSUIXXX=Swiss plug)						

MicroVision Parts

Part No.	Description
16-170-07	Probe Tee
16-170-08	Standard Flow Assembly

MicroVision Accessories and Expansions

Part Number	Description
CK750	Check Valve Kit
PC025	Cable, Cond, Flow - Extension Kit; 25 ft
PC050	Cable, Cond, Flow - Extension Kit; 50 ft
PC075	Cable, Cond, Flow - Extension Kit; 75 ft
PC100	Cable, Cond, Flow - Extension Kit; 100 ft

MicroTrac

The MICROtrac controller series features innovative Toroidal sensor technology. Toroidal sensors are not susceptible to fouling and eliminate the need for routine cleaning and calibration.

The MICROtrac measures the conductivity of the cooling tower recirculating water via a toroidal conductivity sensor. The controller activates two independent relay outputs based on bleed and a selectable feed mode of operation.

The MICROtrac controller comes standard with selectable rising or falling setpoint for open or closed loop control, water meter pulse input, percent timer, % post bleed timer and limit timer.

The base unit comes with the controller, toroidal sensor with signal cable, and a power cord. Optional features such as a sensor mounting tee, pre-wired pigtailed on the relays, and a pre-wired flow switch are available to make installation quick and easy. A 15' signal cable is standard, up to 100' optional, on models without a flow switch, and a 3' cable is standard on models with a flow switch.



MicroTrac Selection Guide

MicroTrac Selection Guide		MTC	-	-	-	-	-
PRODUCT DESIGNATOR Position 1, 2 & 3	MTC	= MicroTrac Toroidal Conductivity Cooling Tower Controller					
VOLTAGE Position 4	1	= 115/230 volt					
RELAY & POWER WIRING Position 5	X L P	= Prewired power cord & Liquid-Tight relay connections = Liquid-Tight connections only = Prewired power cord and relays (115 VAC only)					
SENSOR TEE Position 6	X T	= Standard (no tee) = Sensor Tee with 3/4" inlet/outlet connections					
FLOW SWITCH Position 7	X F L A B	= Standard (no flow switch) = Flow Switch with 15' cable = Standard Flow Assembly (no panel) = Standard Panel & Flow Assembly = Deluxe Panel & Flow Assy, 1 Pump Mount, in/out ball valves, strainer, inj tee & rails					
SUFFIX CODE Position 7, 8 & 9	XXX 750 PC025 PC050 PC075 PC100 CZ XXX	= Suffix Code = 3/4" Back Flow Check Valve = 25 Feet (7.6m) of Probe and Flow Switch wiring = 50 Feet (15.2m) of Probe and Flow Switch wiring = 75 Feet (22.8m) of Probe and Flow Switch wiring = 100 Feet (30.4m) of Probe and Flow Switch wiring = CE Approval w/input power cord and plug (CZXXX=European plug ; CZUKXXX=UK plug; CZSUIXXX=Swiss plug)					

MicroTrac Parts

Part No.	Description
04-000-21-1	Toroidal sensor
16-100-01	Flow switch
16-170-07	Sensor Tee

Part No.	Description
CCBS-MVB	MicroVision Boiler Sensor - No Cross

Condensate MicroVision

The MicroVision Condensate Controller delivers condensate return monitoring with a reliable and accurate temperature compensated conductivity probe. Worry less about installation with 'plug and play' simplicity with user friendly easy to use programming to save time and money on equipment installation. This latest addition to the MicroVision family of controllers is configured specifically for precise measurement of conductivity in the condensate return and allows for more efficient use of time in inhibiting corrosion.



• CE approved, non-prewired models, or 230 VAC, change the end of the code from "-XXX" to "-CZXXX".

Model Number	Power Wiring	System Options	Sensor	Cable Length
MVBXCHXC025-XXX	Conduit connections	None	Condensate Electrode	25 Feet Max. (Use of the supplied cable is required)
MVBXCHXC025-CZXXX	Conduit connections; 230V	None	Condensate Electrode	25 Feet Max. (Use of the supplied cable is required)
MVBXPHXC025-XXX	Prewired with pigtails	None	Condensate Electrode	25 Feet Max. (Use of the supplied cable is required)

MicroVision Condensate Parts	
Part Number	Description
CCBS-C-25	MicroVision Condensate Probe Assembly with 25 ft Cable
13-511-07-1	25 feet cable must be used with MicroVision Condensate Controller
03-135-02	Tee, Iron Black, 0.75" NPT

MicroVision Timer Selection Guide		MVT	-	-	-	-
PRODUCT DESIGNATOR Position 1, 2 & 3	MVT = MicroVision Timer Controller					
VOLTAGE Position 4	1 = 115 volt					
POWER WIRING Position 5	X = Liquid Tite connections only (required for 230VAC) P = Prewired w/Power Cord and Pigtails for 115 VAC					
PANELS Position 6	X = No Panel and No Flow assembly F = Flow assembly, No Panel A = Standard Panel & Flow Assembly B = Panel & Flow Assy, 1 Pump Mount, strainer, inj tee & rails C = Panel & Flow Assy, 2 Pump Mount, strainer, 2 inj tees & rails D = Panel & Flow Assy, 3 Pump Mount, strainer, 3 inj tees & rails					
SUFFIX CODE Position 7 thru 13	XXX = Suffix Code CZ_XXX = CE Approval (CZXXX=Europe; CZUKXXX=UK; CZSUIXXX=Switzerland/Liechtenstein)					

A completed model should look like "MVT1PB-XXX"

Flow Controller

The versatile Flow Controller may be used to establish flow/no- flow control of metering pumps in various applications. Each unit comes prewired with an eight-foot, three-wire power cord for easy installation. A test switch is also provided for manual circuit tests.



Flow Controllers

Model No.	Description
FC2000	Flow Controller - Standard flow controller has 3/4" PVC threaded connections with 3/4" PVC slip adaptors to use if needed. 1 GPM minimum flow required for activation
FC2000C	Flow Controller - Standard flow controller w/ 1" PVC slip connectors; 1 GPM min. flow required for activation.
Available options for FC2000 & FC2000C:	
Receptacle functions (Standard--both on with flow)	
1	Both on with no flow
2	One on with flow, other on no flow
3	One on with flow, other service
4	One on with no flow, other service

Replacement Flow Assemblies

Part No.	Description
16-977-79	3/4" (FC2000)
16-977-71	1" (FC2000C)

Bowl Strainer - Cooling Tower Applications

The polypropylene bowl strainers ensure the controller's sensors are protected from debris in the sample stream piping. Rated 100 psi at 70°F.



Bowl Strainers

Part Number	Description
12-069-62	3/4" Bowl Strainer (50 MESH)
12-069-64	3/4" Bowl Strainer (80 MESH)
12-069-66	3/4" Bowl Strainer (100 MESH)

Conductivity Testers



Hand Held Conductivity Testers

Model No.	Description
HJ6BC	0-100, 0-1000, 0-10,000 $\mu\text{S}/\text{cm}$
HJ7B	0-50, 0-500, 0-5,000 $\mu\text{S}/\text{cm}$

Pressure Gauge

Liquid Filled Pressure Gauges in Brass or Stainless Steel 1/4" Bottom or Back Connection.



Pressure Gauge

Bottom Connection

Part Number	Description
12-130-04	Face 2", 100 PSI, Liquid Fill, 1/4" Brass Bottom Connection
12-130-05	Face 2", 100 PSI, Liquid Fill, 1/4" SS Bottom Connection
12-130-06	Face 2", 200 PSI, Liquid Fill, 1/4" Brass Bottom Connection
12-130-07	Face 2", 200 PSI, Liquid Fill, 1/4" SS Bottom Connection
12-130-08	Blk Steel Face 2", 100 PSI, Liquid Fill, 1/4" Brass Bottom Connection
12-130-09	Blk Steel Face 2", 200 PSI, Liquid Fill, 1/4" Brass Bottom Connection

Back Connection

Part Number	Description
12-130-10	Face 2", 100 PSI, Liquid Fill, 1/4" Brass Back Connection
12-130-11	Face 2", 100 PSI, Liquid Fill, 1/4" SS Back Connection
12-130-12	Face 2", 200 PSI, Liquid Fill, 1/4" Brass Back Connection
12-130-13	Face 2", 200 PSI, Liquid Fill, 1/4" SS Back Connection
12-130-14	Blk Steel Face 2", 100 PSI, Liquid Fill, 1/4" Brass Back Connection
12-130-15	Blk Steel Face 2", 200 PSI, Liquid Fill, 1/4" Brass Back Connection

Digital Glycol Feeders

Pulsafeeder's Digital Glycol Feeder provides a consistent operating pressure in closed loop systems. This allows a controlled percentage of glycol solution to be fed from the 55 gallon tank. The Digital Glycol Feeder is available in two models; the DGF1 for single loop and the DGF2 for dual loop systems. The control unit utilizes an 8-bit microcontroller for precise feed system control. The NEMA4X enclosure can be wired conduit or prewire for easy startup. The preplumbed assembly includes a pressure gauge, pressure switch, and pressure relief valve to prevent excessive pressure build up. A low liquid level switch with optional audible alarm prevents the gear pump from operating when the solution is low.



DIGITAL GLYCOL FEEDER Selection Guide		DGF							
CLOSED LOOPS Position 4	1 = Single Loop 2 = Dual Loop								
CONDUIT / PREWIRE Position 5	A = Conduit B = Prewire								
AUDIBLE ALARM Position 6	A = without Audible Alarm B = with Audible Alarm								
ALARM OUTPUT OPTION Position 7	X = None A = Dry Contact, Single B = Dry Contact, Dual C = AC Output, Single D = AC Output, Dual E = Dry Contact, Single & AC Output, Single								
PRESSURE SWITCH OPTION Position 8	A = Standard pressure switch, 30 to 50 psi (adjustable to 80 psi) B = Low pressure switch, 5 to 10 psi (adjustable to 35 psi) C = One standard and one low pressure switch (DGF2 only)								
PUMP AND VOLTAGE RATING Position 9	A = 115VAC no pump C = 115VAC 60Hz 1.50GPM @ 100psi E = 115VAC 60Hz 3.75GPM @ 100 psi								
AGENCY APPROVAL Position 10	X = None								
PANEL ASSEMBLY Position 11	B = Assembled (must ship via freight)								

Accessories

Digital Glycol Feeder for Closed Loop Systems

Replacement Pumps	
Part No.	Description
18-600-35	115V 60Hz 1.50GPM @ 100PSI
18-600-42	115V 60Hz 3.75GPM @ 100PSI
Replacement Wand	
16-171-81-9	Wand, level, adjustable up to 34
Cables	
16-171-81-3	Cable, extension, 10' with connectors
Replacement Fuse	
05-052-18	Fuse, 16A, 250V, 5X20MM
Pressure Switches	
12-140-00	Standard pressure switch 30 - 50psi (adjustable to 80 psi)
12-140-01	Low pressure switch to 5 - 10psi (adjustable to 35 psi)

Corrosion Coupon Racks

Our Corrosion Coupon Racks are hydrostatically tested for maximum system performance exceeding industry standards. These simple and reliable coupon test stations are typically installed on the side stream of re-circulating systems to allow for controlled testing of coupon samples. Samples are periodically removed and examined by a laboratory in order to calculate corrosion rates and other effects such as pitting and deposition.



Corrosion Coupon Racks - Includes PVC coupon holder, nylon screw & nut, PVC inlet ball vlv, 0.75 in (19mm) piping, Sch. 80 PVC				
Model Number	Stations	Mount	Piping	Description
CCR2	2 Station	.50" HDPE	3/4" PVC	Standard
CCR20DF5	2 Station	Unistrut	3/4" black iron	Flow control valve 5 GPM
CCR20DX7X8CF3	2 Station	Unistrut	3/4" black iron	PVC outlet ball valve, 3/4" brass gate valve 250 psi; Y Strainer; Flow control valve 3 GPM
CCR20DX7X8CF5	2 Station	Unistrut	3/4" black iron	PVC outlet ball valve, 3/4" brass gate valve 250 psi; Y Strainer; Flow control valve 5 GPM
CCR20DXSX7	2 Station	Unistrut	3/4" black iron w/ SS Holder rod	PVC outlet ball valve, 3/4" brass gate valve 250 psi
CCR20X1X4X7	2 Station	.25 " HDPE	3/4" PVC	Quick release coupon holders; 3/4" hot/cold water flow meter, Max. 100 psi (7 bar) @ 130°F (54°C); PVC outlet ball valve; 3/4" brass gate valve 250 psi
CCR20X1X7F5	2 Station	.25 " HDPE	3/4" PVC	Quick release coupon holders; PVC outlet ball valve; 3/4" brass gate valve 250 psi; Flow control valve 5 GPM
CCR20X1X4X7X8DX9Z4	2 Station	Unistrut	3/4" black iron	Quick release coupon holders; 3/4" hot/cold water flow meter, Max. 100 psi (7 bar) @ 130°F (54°C); PVC outlet ball valve; 3/4" brass gate valve 250 psi; 3/4" Polypropylene bowl strainer 30 mesh, 150 psi max at 70°F; Clear PVC pipe sections; Sample/Drain port
CCR20X4	2 Station	Unistrut	3/4" black iron	3/4" hot/cold water flow meter, Max. 100 psi (7 bar) @ 130°F (54°C).
CCR2D	2 Station	Unistrut	3/4" black iron	Standard
CCR3	3 Station	.50" HDPE	3/4" PVC	Standard
CCR4	4 Station	.50" HDPE	3/4" PVC	Standard
CCR40DX7X8CF5	4 Station	Unistrut	3/4" black iron	PVC outlet ball valve, 3/4" brass gate valve 250 psi; Y Strainer; Flow control valve 5 GPM
CCR40DXSX7	4 Station	Unistrut	3/4" black iron w/ SS Holder rod	PVC outlet ball valve, 3/4" brass gate valve 250 psi
CCR40X1X4X7	4 Station	.25 " HDPE	3/4" PVC	Quick release coupon holders; 3/4" hot/cold water flow meter, Max. 100 psi (7 bar) @ 130°F (54°C); PVC outlet ball valve; 3/4" brass gate valve 250 psi
CCR40X1X7F5	4 Station	.25 " HDPE	3/4" PVC	Quick release coupon holders; PVC outlet ball valve; 3/4" brass gate valve 250 psi; Flow control valve 5 GPM
CCR4AX1X6X7	4 Station	.50" HDPE	1" PVC	Quick release coupon holders; 1" cold water flow meter, Max. 100 psi (7 bar) @ 110°F (43°C); PVC outlet ball valve; 3/4" brass gate valve 300 psi
CCR4D	4 Station	.50" HDPE	3/4" black iron	Standard
CCR4DX4	4 Station	.50" HDPE	3/4" black iron	3/4" hot/cold water flow meter, Max. 100 psi (7 bar) @ 130°F (54°C)
CCR4EX71F5	4 Station	.50" HDPE	1" PVC clear	1" PVC outlet ball valve; 3/4" brass gate valve 300 psi; Flow control valve 5 GPM
CCR4F5	4 Station	.50" HDPE	3/4" PVC	Flow control valve 5 GPM
CCR4X1X7X8AF5	4 Station	.50" HDPE	3/4" PVC	Quick release coupon holders; PVC outlet ball valve; 3/4" brass gate valve 300 psi; Y Strainer; Flow control valve 5 GPM

Corrosion Rack Accessories



Coupon Rack Replacement Parts

Part Number	Description
16-756-51-1	Quick Release coupon holder with hardware
16-756-50	PVC and CPVC holder with hardware
16-756-42	Steel on black iron holder with hardware
33-022-16	3/4" hot/cold water flow meter

Coupons for Corrosion Coupon Racks & Deposit Monitors

Part Number	Description
03-220-10	Mild Steel
03-220-00	Copper
03-220-60	303 Stainless Steel
03-220-70	304 Stainless Steel
03-220-20	316 Stainless Steel
03-220-50	Nickel
03-221-30	Brass
03-221-40	Bronze
03-221-50	Aluminum

Water Meters - Contacting Head Water Meters

Multi-Jet Meters:

3/4 in. to 2 in., are designed for use in conjunction with a pulse timer to proportionally control pumps, valves etc. Typical applications include water treatment in cooling tower and boiler systems, water chlorination, car washes and other industrial processes which require proportional control. The Multi-Jet chamber of the water meter assures accuracy over a wide range of flows with low head loss. To prevent wear and maintain accuracy the load is equally distributed on the impeller.

Turbine Meters:

3 inch to 6 inch operate continuously with exceptional accuracy. Each meter incorporates a highly efficient horizontal turbine that essentially floats on the water. The turbine is attached to a Tungsten steel shaft riding in Jewel bearings. The rotation of the turbine is transmitted through a magnetic drive to a sealed odometer register.



Lead Free Brass Contacting Water Meters - Cold Water

Part Number	Rating	Size	Gallons Per Contact (GPC)
MTR100-G	.25 - 20 GPM	.75" NPT	Totalizer
MTR101-G	.25 - 20 GPM	.75" NPT	0.1 GPC
MTR102-G	.25 - 20 GPM	.75" NPT	0.25 GPC
MTR103-G	.25 - 20 GPM	.75" NPT	0.5 GPC
MTR104-G	.25 - 20 GPM	.75" NPT	1 GPC
MTR107-G	.25 - 20 GPM	.75" NPT	10 GPC
MTR300-G	.75 - 50 GPM	1" NPT	Totalizer
MTR301-G	.75 - 50 GPM	1" NPT	0.1 GPC
MTR302-G	.75 - 50 GPM	1" NPT	0.25 GPC
MTR304-G	.75 - 50 GPM	1" NPT	1 GPC
MTR307-G	.75 - 50 GPM	1" NPT	10 GPC
MTR310-G	.75 - 50 GPM	1" NPT	100 GPC
MTR400-G	1.5 - 100 GPM	1.5" NPT	Totalizer
MTR402-G	1.5 - 100 GPM	1.5" NPT	0.25 GPC
MTR404-G	1.5 - 100 GPM	1.5" NPT	1 GPC
MTR407-G	1.5 - 100 GPM	1.5" NPT	10 GPC
MTR410-G	1.5 - 100 GPM	1.5" NPT	100 GPC
MTR504-G	2 - 160 GPM	2" NPT	1 GPC
MTR507-G	2 - 160 GPM	2" NPT	10 GPC
MTR510-G	2 - 160 GPM	2" NPT	100 GPC

3/4" - 2" Meters have male Epoxy Coated NPT Bronze Bodies with unions,
Rated for 150 PSI max, 105 F max.

NSF/ANSI 61 for these models only

Brass Contacting Water Meters - Cold Water

Part Number	Rating	Size	Gallons Per Contact (GPC)
MTR200	.5 - 20 GPM	.75" NPT	Totalizer
MTR201	.5 - 20 GPM	.75" NPT	0.1 GPC
MTR202	.5 - 20 GPM	.75" NPT	0.25 GPC
MTR203	.5 - 20 GPM	.75" NPT	0.50 GPC
MTR204	.5 - 20 GPM	.75" NPT	1 GPC
MTR207	.5 - 20 GPM	.75" NPT	10 GPC
MTR210	.5 - 20 GPM	.75" NPT	100 GPC
MTR300	.75 - 50 GPM	1" NPT	Totalizer
MTR302	.75 - 50 GPM	1" NPT	0.25 GPC
MTR304	.75 - 50 GPM	1" NPT	1 GPC
MTR307	.75 - 50 GPM	1" NPT	10 GPC
MTR310	.75 - 50 GPM	1" NPT	100 GPC
MTR400	1.5 - 100 GPM	1.5" NPT	Totalizer
MTR404	1.5 - 100 GPM	1.5" NPT	1 GPC
MTR407	1.5 - 100 GPM	1.5" NPT	10 GPC
MTR410	1.5 - 100 GPM	1.5" NPT	100 GPC
MTR504	2 - 160 GPM	2" NPT	1 GPC
MTR507	2 - 160 GPM	2" NPT	10 GPC
MTR510	2 - 160 GPM	2" NPT	100 GPC

3/4" - 2" Meters have male Epoxy Coated NPT Bronze Bodies with unions, rated for 150 PSI max, 105 F max.

Plastic Contacting Water Meters - Cold Water

Part Number	Rating	Size	Gallons Per Contact (GPC)
MTR100-P	.25 - 20 GPM	.75" NPT	Totalizer
MTR101-P	.25 - 20 GPM	.75" NPT	0.1 GPC
MTR102-P	.25 - 20 GPM	.75" NPT	0.25 GPC
MTR104-P	.25 - 20 GPM	.75" NPT	1 GPC
MTR104-P-L	.25 - 20 GPM	.75" NPT	1 LPC
MTR107-P	.25 - 20 GPM	.75" NPT	10 GPC
MTR300-P	.75 - 50 GPM	1" NPT	Totalizer
MTR301-P	.75 - 50 GPM	1" NPT	0.1 GPC
MTR302-P	.75 - 50 GPM	1" NPT	0.25 GPC
MTR304-P	.75 - 50 GPM	1" NPT	1 GPC
MTR304-P-L	.75 - 50 GPM	1" NPT	1 LPC
MTR307-P	.75 - 50 GPM	1" NPT	10 GPC
MTR400-P	1.5 - 100 GPM	1.5" NPT	Totalizer
MTR402-P	1.5 - 100 GPM	1.5" NPT	0.25 GPC
MTR404-P	1.5 - 100 GPM	1.5" NPT	1 GPC
MTR407-P	1.5 - 100 GPM	1.5" NPT	10 GPC

Rated for 100 PSI max, 120 F max.

NSF/ANSI 61 for these models only

Turbine Contacting Water Meters - Cold Water

Part Number	Rating	Size	Gallons Per Contact (GPC)
MTR610	440 GPM	3" Flanged	100 GPC
MTR613	440 GPM	3" Flanged	1,000 GPC
MTR710	660 GPM	4" Flanged	100 GPC
MTR810	1650 GPM	6" Flanged	100 GPC
MTR813	1650 GPM	6" Flanged	1,000 GPC

3", 4" & 6" Meters have Epoxy Coated Ductile Iron Flanged Bodies, rated for 200 PSI max, 105 F max.

Solenoid Valves - Cooling Tower Applications



Standard Solenoid Valve



High Temp Solenoid Valve

Standard Solenoid Valves - 2 Way Normally Closed

Part Number	Material	MOPD- Max. Operating Press. Differential	Voltage	Mfr
12-072-62	1/4" S.S. Body with TFE Seat	150 psi MOPD at 160°F	120/60, 110/50V	ASCO
12-072-53	1/2" NPT Brass Body	0 psi min - 150 psi; 180°F	120/60, 110/50V	ASCO
12-072-54	3/4" NPT Brass Body	0 psi min - 150 psi; 180°F	120/60, 110/50V	ASCO
12-072-55	1" NPT Brass Body	0 psi min - 150 psi; 180°F	120/60V	ASCO
12-072-56	1" NPT Brass Body	5 psi min - 150 psi at 180°F	120/60, 110/50V	ASCO
12-072-57	1 1/2" NPT Brass Body	0 psi min - 150 psi; 180°F	120/60V	ASCO
12-072-58	1 1/2" NPT Brass Body	5 psi min - 150 psi at 180°F	120/60V	ASCO
12-072-59	2" NPT Brass Body	5 psi min - 150 psi; 180°F	120/60V	ASCO

High Temp Solenoid Valves - 2 Way Normally Closed

12-072-60	1/2" NPT Brass Body	1 psi min - 125 psi	120/60V	ASCO
12-072-61	3/4" NPT Brass Body	2 psi min - 125 psi at 353°F	120/60, 110/50V	ASCO
12-048-00	1/2" Brass Body, PTFE	0 psi differential, 100 psi @ 356°F	115 VAC	
12-056-00	3/4" Brass Body, PTFE	0 psi differential, 100 psi @ 356°F	115 VAC	

Motorized Ball Valves



EC Series Solenoid Valve

EC Series - Motorized Valves

Part Number	Description
Motorized Valves for Cooling Tower Applications	
Low differential pressure applications. Brass bodies. Spring return.	
12-045-00	1/2" NPT (25 psi maximum)
12-054-10	3/4" NPT (25 psi maximum)
12-057-00	1" NPT (15 psi maximum)

Motorized Capacitor Return Ball Valves

A capacitor return motorized ball valve offers a reliable alternative to a solenoid valve with a full bore design for bleed-off of cooling tower water. The motorized ball valve offers a manual override feature and low working current as well as a long service life (70,000 – 100,000 cycles).



Motorized Capacitor Return Ball Valves

Part Number	Description
12-050-00	Capacitor Return MBV, 1/2", 304SS
12-050-00-J	Capacitor Return MBV W/ Power Cord, 1/2"
12-050-01	Capacitor Return MBV, 3/4", 304SS
12-050-01-J	Capacitor Return MBV W/ Power Cord, 3/4"
12-050-02	Capacitor Return MBV, 1", 304SS
12-050-02-J	Capacitor Return MBV W/ Power Cord, 1"

Motorized Ball Valves & Valve Packages - Boiler Applications

Materials of construction: Solenoid Valves are bronze body with stainless steel pilot and valves; Motorized Ball Valves are carbon steel body with 316 stainless steel ball and stem; Throttling Valves are carbon steel body and valve; and Orifice Unions are carbon steel union with stainless steel plates.



Throttling Valve

Valve Packages	
Timed Sample Systems	
Part Number	Description
16-896-00	Up to 100 psi Package includes 1/2" solenoid valve (12-048-00) and 1" orifice union with 4 orifice plates (12-012-00 and 12-013-50).
16-896-04	Up to 300 psi Package includes 1/2" motorized ball valve with heavy duty 90 degree actuator (16-892-00) and 1/2" flow throttling valve (12-046-01).
16-896-08	Up to 450 psi Package includes 1/2" motorized ball valve with 360 degree actuator (16-892-02) and 1" orifice union with 4 orifice plates (12-012-00 and 12-013-50).
Valve Packages	
Continuous Sample Systems	
16-896-02	Up to 100 psi Package includes 3/4" solenoid valve (12-056-00) and two 1" orifice unions with 4 orifice plates each (12-012-00 and 12-013-50).
16-896-06	Up to 300 psi Package includes 3/4" motorized ball valve with 90 degree actuator (16-892-01), 3/4" flow throttling valve (12-055-01), and 1/2" flow throttling valve (12-046-01).
16-896-10	Up to 425 psi Package includes 3/4" motorized ball valve with 360 degree actuator (16-892-04) and two 1" orifice unions with 4 orifice plates each (12-012-00 and 12-013-50).
Available option:	
-2	230 VAC service

Note: Materials of construction: Solenoid Valves are bronze body with stainless steel pilot and valves; Motorized Ball Valves are carbon steel body with 316 stainless steel ball and stem; Throttling Valves are carbon steel body and valve; and Orifice Unions are carbon steel union with stainless steel plates.



Motorized Ball Valve

Motorized Ball Valves	
Part Number	Description
16-892-00	1/2" motorized ball valve (10-75 Worcester Actuator)
16-892-01	3/4" motorized ball valve (10-75 Worcester Actuator)
16-892-02	1/2" motorized ball valve (10-36 Worcester Actuator)
16-892-04	3/4" motorized ball valve (10-36 Worcester Actuator)
Available option:	
-2	230 VAC service
Part Number	Description
12-040-00	Worcester 10-75 actuator only
12-040-10	Worcester 10-36 actuator only
Motorized Ball Valve Parts	
Part Number	Description
12-043-00	Worcester 1/2" steam rated ball valve only
12-051-00	Worcester 3/4" steam rated ball valve only
12-049-00	Mounting kit for 12-051-00 & 12-040-00

Flow Control Valves - Boiler Applications

Flow control valves maintain sufficient back pressure in boiler blowdown lines in order to prevent flashing and to ensure adequate blowdown rates. The orifice union includes four plates, 1/16", 1/8", 1/4" and a 5/16". Flow control valves include an indexed position indicator



Flow Control Valves



Orifice Union



Orifice Plates

Flow Control Valves	
Part Number	Description
12-075-01	3/8" valve (300 psi maximum)
12-046-01	1/2" valve (300 psi maximum)
12-055-01	3/4" valve (300 psi maximum)

Orifice Unions & Orifice Plates	
Part Number	Description
12-012-00-1	1" orifice union with set of (4) orifice plates
12-013-50	Set of four orifice plates

Sample Cooler

Pulsafeeder's Sample Cooler part number 12-066-00 is a safe method of withdrawing water from boilers, steam lines or tanks containing chemicals and for cooling the withdrawn liquid for subsequent chemical analysis.



Sample Coolers

Part Number	Description
12-066-00	Sample Cooler

Bleed-Off Piping Assembly - Cooling Tower Applications

The pre-plumbed bleed-off assemblies make installation of a cooling tower bleed valve easy. The assemblies include a solenoid valve, Y strainer and a brass shutoff valve.



Bleed-off Piping Assembly

Part Number	Description
	Includes SVC solenoid valve, steel Y-strainer, and brass shutoff valve.
16-900-18	3/4"
16-900-12	1"

Sample Steam Parts

Sample Stream Parts

Part Number	Description
12-069-00	3/4" Clear PVC Y-strainer
12-070-00	Replacement mesh for 12-069-00
12-072-00	3/4" PVC ball valve
16-810-00	2 stage injection manifold
16-810-03	3 stage injection manifold
16-810-08	5 stage injection manifold
04-300-08	Sample valve assembly