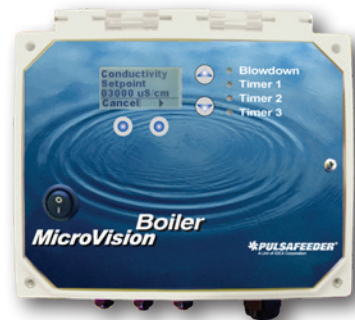
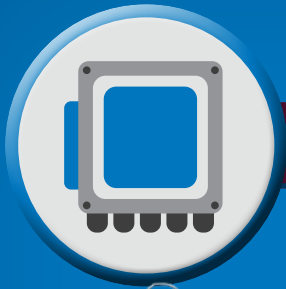




## CONTROLLER CAPABILITIES

*SIMPLE, RELIABLE AND SECURE.*



CONTROLLERS MOUNTED AND WIRED MAKES INSTALLATION QUICK AND EASY.



# WORRY LESS AND DO MORE WITH **PULSAFEEDER CONTROLLERS**

## *Pulsafeeder simplifies advanced controller technology.*

**Pulsafeeder makes life simpler for water treaters.** Our advanced controller is easy to install, program and operate because of **proven MicroVision software** that utilizes an intuitive user interface. Accurate measurement is achieved by our **toroidal probe**, which is factory-calibrated and maintenance-free. **PULSALink cloud-based communication protocol** delivers convenience and the highest security. The Pulsafeeder line of controllers are ideal for all cooling tower applications including comfort cooling, industrial cooling, rinse, industrial process and also wastewater applications.

Water treaters can select from multiple control configurations and probe inputs – with specific models utilizing all available probe options, including Conductivity (Toroidal), pH, ORP and PTSA.

Controller options include

- Conductivity Control
- Conductivity and pH
- Conductivity and ORP
- Conductivity, pH and ORP
- Conductivity, pH, ORP and PTSA
- Boiler Control
- Timer Control

Pulsafeeder's line of controllers, along with the support of Pulsafeeder sales and technical representatives, ensure water treaters of **quick troubleshooting**, freeing up more time to serve their customers. **Maintain process control, reduce costs and limit downtime.**



### MicroVision EX

#### COOLING TOWER CONDUCTIVITY, PH, PTSA & ORP CONTROLLER.

- Large LCD screen for programming simplicity
- Maintenance free toroidal conductivity
- Bleed, pH & ORP control
- PTSA on a 4-20mA input
- Up to Six programmable timers
- Two 4-20mA inputs
- Four 4-20mA outputs
- USB data logging and cloning
- Alarm dry contact
- High pressure models
- PULSAlink cloud communications
- Modbus



### MicroVision

#### COOLING TOWER CONDUCTIVITY CONTROLLER.

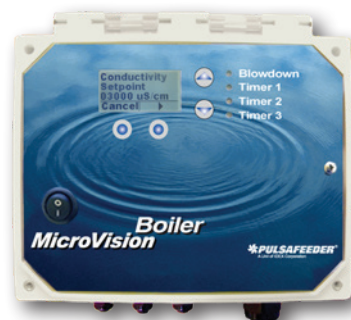
- Graphical display
- Maintenance free toroidal conductivity
- Bleed control
- One inhibitor timer
- Dual biocide timers
- Three Timers
- Standard 4-20mA output
- Alarm dry contact
- Easy programming



### MicroTrac

#### COOLING TOWER CONDUCTIVITY CONTROLLER.

- LCD display
- Maintenance free toroidal conductivity
- Bleed control
- One selectable timer
- Easy programming
- Outstanding value



### MicroVision Boiler

#### BOILER CONDUCTIVITY CONTROLLER.

- Graphical display
- Boiler conductivity control
- Three Timers
- Standard 4-20mA output
- Alarm dry contact
- Condensate models
- Easy programming



### MicroVision Timer

#### COOLING TOWER TIMER CONTROLLER.

- Graphical display
- Four powered timers
- One dry contact timer
- Easy programming
- Add timers to existing systems

# ADVANCED FEATURES AND FUNCTIONS TO BETTER SERVE YOUR CUSTOMERS.

MicroTrac



MicroVision



MicroVision Timer



MicroVision Boiler



MicroVision EX



|                |                                         |
|----------------|-----------------------------------------|
| Control        | Bleed                                   |
|                | pH                                      |
|                | ORP                                     |
|                | Boiler Control                          |
| Probe          | Maintenance Free Torroidal Conductivity |
|                | PTSA (4-20 mA input)                    |
| Display        | Graphical Display                       |
|                | Color LCD                               |
| Programming    | Customizable Display                    |
|                | Install Wizard                          |
|                | Statistics Screen                       |
| Timers         | Number of Timers                        |
|                | Limit Timer                             |
|                | Percent Timer                           |
|                | % Post Bleed With Limit Timer           |
|                | Water Meter Pulse Timer                 |
|                | Alarm Output                            |
|                | Biocide Control Timer                   |
|                | 4-20 Input, Conductivity, pH, or ORP    |
| Digital Inputs | Number of Digital Inputs                |
|                | Dry Contact                             |
|                | Hall Effect                             |
|                | Drum Level                              |
|                | Flow                                    |
| Relays         | Number of Powered Relays                |
|                | Alarm Interlock                         |
|                | Inhibitor feed Bio Tracking interlock   |
|                | Dry Contact Alarm                       |
| Communications | PULSALink Cloud Communication           |
|                | Data Logging                            |
|                | Reporting & Graphing                    |
|                | USB Configuration Cloning               |
|                | Modbus                                  |
| Options        | Condensate                              |
|                | Corrosion Sensor                        |
|                | High Pressure Models                    |
|                | 4-20 I/O Maximum                        |

As a longtime recognized leader in fluids handling technology, Pulsafeeder sets the standard for the development of controller technologies through our proven MicroVision and MicroVision EX control platforms. Rely on our controllers for features that allow you to better serve your customers' specific needs — all while making your job easier.

[illegible]

# **TOROIDAL PROBE MEANS MAINTENANCE FREE, RELIABILITY AND SAVINGS.**



## **TOROIDAL CONDUCTIVITY PROBE BRINGS SUPERIOR RELIABILITY AND SAVINGS.**

- Factory-calibrated and maintenance-free for the life of the probe
- No annual replacement needed
- Not susceptible to sensor fouling, which eliminates cleaning downtime and erroneous conductivity readings
- No exposed electrodes
- No need to complete routine calibrations, which saves time and money and reduces downtime for your customers

## **INNOVATIVE TOROIDAL SENSOR TECHNOLOGY.**

MicroVision family of controllers features the toroidal conductivity sensor, factory-calibrated for the life of the probe to eliminate routine calibrations and save you valuable service time and money. Because the sensor features no exposed electrodes, cleaning, downtime and erroneous conductivity readings are eliminated when installed according to the manufacturer's instructions.



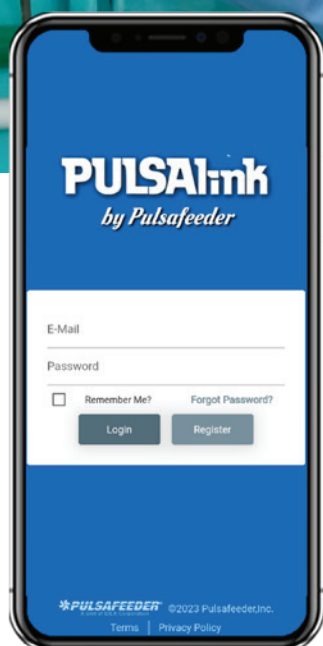


## PULSALINK COMMUNICATIONS SAVES TIME AND OFFERS PEACE OF MIND.

- Cloud storage
- Military-grade encryption AES 256
- Easy navigation
- Fast data retrieval
- Multi-level user access



## PULSALINK PUTS YOU IN CONTROL ANYTIME, ANYWHERE.



Exclusive PULSALink communication delivers cloud-based, secure mobile access to your MicroVision EX controllers. Data is stored safely on the cloud, and AES 256-bit military-grade encryption provides unsurpassed security. Get easy-to-use, interactive reporting and graphing tools — plus quick access to settings and notifications — right from your mobile device. This level of connectivity enables you to monitor and make adjustments anytime, from anywhere.

*The **PULSALink app** gives water treaters easier access through streamlined navigation, putting vital information at your fingertips anytime, anywhere.*



# **PULSALINK COMMUNICATIONS IS CONVENIENT AND SECURE.**

Save time and money by accessing your MicroVision EX controllers without having to make the drive to site locations.

MicroVision EX delivers the cloud-based communications capabilities of PULSALink, leveraging military-grade

AES 256-bit encryption to ensure the highest data security. Now it's easy to provide your customers with the peace of mind they deserve, while you monitor and make needed adjustments anytime, from anywhere.



## EASY ACCESS ON THE GO.

PULSAlink communications enables you to use your mobile phone, tablet or computer to access your controller anytime from anywhere — putting vital information at your fingertips. The PULSAlink app gives water treaters easier access than the desktop version by offering more streamlined navigation.

### LIVE READINGS

View and monitor cooling tower readings anytime, anywhere using any device with an internet connection.

### CHANGE SETTINGS

MicroVision EX Touch allows you to quickly change system settings remotely.

### EMAIL NOTIFICATIONS

Configure alerts for alarm notifications and live readings to be emailed to any necessary staff.

### REPORTS

Download and create reports without having to be in front of your controller.



## CUSTOMIZATION AT YOUR FINGERTIPS.

Customizable names for relays, water meters and inputs, synced to Controller, PULSAlink website, App iOS/Android, and reports. You deserve reporting capability that lets you do your job quickly and accurately, so you can get more done. And now you have it. PULSAlink doesn't require you to refresh the report to change test parameters. At any time, you can simply drag all parameters onto one screen. With PULSAlink, reporting has never been easier:

- Report page automatically pulls up past week's data
- Toggle from default report page to specific time periods and test output parameters
- Compatible with eService Report
- Unsurpassed reporting and graphing
- No need to enter individual dates and variables to develop graphs
- Enhanced charting capabilities
- Robust data logging capabilities



## YOUR SECURITY IS A LOCK.

PULSAlink offers centralized data storage and management for superior control of your equipment. Should your controller ever be offline, your data is safe and accessible. Anyone attempting to access the PULSAlink website will need a login password, which is only generated by Pulsafeeder or your administrator.

MicroVision EX and PULSAlink are supported by the highest encryption level in the industry:

- Prevents unauthorized manipulation of controller
- Prevents unauthorized data access
- Connects directly to the Internet without the need of an additional modem
- Doesn't require the use of ports that may be affected by a firewall

***Communications with data logging and reporting has become very important in the fight against Legionella. Timely response is vital. MicroVision EX controllers with PULSAlink lets you quickly access your controllers without having to waste time driving to site locations.***

| COOLING TOWER CONTROLLERS |                                               |             |                     |                    |                | MicroVision EX                           |
|---------------------------|-----------------------------------------------|-------------|---------------------|--------------------|----------------|------------------------------------------|
| Conductivity Control      |                                               |             |                     |                    |                |                                          |
| Model Number              | Probe Style                                   | Flow Switch | Programmable Timers | Panel / Pump Mount | Digital Inputs | PULSALink and Smart Phone App Compatible |
| No Panel                  |                                               |             |                     |                    |                |                                          |
| MVECXXPX-XXX-XXX          | Torodial                                      | None        | 3                   | None               | 6              | No                                       |
| MVECXXPX-XXX-CZXXX        | Torodial                                      | None        | 3                   | None               | 6              | No                                       |
| MVECXXPF-XXX-XXX          | Torodial                                      |             | 3                   | None               | 6              | No                                       |
| MVECXXPF-XXX-CZXXX        | Torodial                                      |             | 3                   | None               | 6              | No                                       |
| MVEC8XXPX-XXX-XXX         | Torodial, Field upgradable to pH & ORP models | None        | 3                   | None               | 10             | Yes                                      |
| MVEC8XXPF-XXX-XXX         | Torodial, Field upgradable to pH & ORP models |             | 3                   | None               | 10             | Yes                                      |
| Panel / No Pump Mounts    |                                               |             |                     |                    |                |                                          |
| MVECXXPA-XXX-XXX          | Torodial                                      |             | 3                   | Yes / No           | 6              | No                                       |
| MVECXXPA-XXX-CZXXX        | Torodial                                      |             | 3                   | Yes / No           | 6              | No                                       |
| MVEC5XXPA-XXX-XXX         | Torodial                                      |             | 4                   | Yes / No           | 6              | No                                       |
| MVEC5XXPA-XXX-CZXXX       | Torodial                                      |             | 4                   | Yes / No           | 6              | No                                       |
| MVECXXPA-EXX-XXX          | Torodial                                      |             | 3                   | Yes / No           | 6              | Included                                 |
| MVECXXPA-EXX-CZXXX        | Torodial                                      |             | 3                   | Yes / No           | 6              | Included                                 |
| MVECXXPA-EPX-XXX          | Torodial, PYXIS (PTSA)                        |             | 2                   | Yes / No           | 6              | Included                                 |
| MVECXXPA-MXX-XXX          | Torodial                                      |             | 3                   | Yes / No           | 6              | Included/Modbus Compatibility            |
| Panel / 3 Pump Mounts     |                                               |             |                     |                    |                |                                          |
| MVECXXPD-XXX-XXX          | Torodial                                      |             | 3                   | Yes / Yes - 3      | 6              | No                                       |
| MVECXXPD-EXX-XXX          | Torodial                                      |             | 3                   | Yes / Yes - 3      | 6              | Included                                 |
| MVECXXPD-EQX-XXX          | Torodial, PYXIS ready                         |             | 3                   | Yes / Yes - 3      | 6              | Included                                 |
| Conductivity and pH       |                                               |             |                     |                    |                |                                          |
| Model Number              | Probe Style                                   | Flow Switch | Programmable Timers | Panel / Pump Mount | Digital Inputs | PULSALink and Smart Phone App Compatible |
| No Panel                  |                                               |             |                     |                    |                |                                          |
| MVECPXXPF-XXX-XXX         | Torodial, pH                                  |             | 6                   | None               | 10             | Order: ACT-PULSALINK                     |
| MVECPXXPF-XXX-CZXXX       | Torodial, pH                                  |             | 6                   | None               | 10             | Order: ACT-PULSALINK                     |
| Panel / No Pump Mounts    |                                               |             |                     |                    |                |                                          |
| MVECPXXPA-XXX-XXX         | Torodial, pH                                  |             | 6                   | Yes / No           | 10             | Order: ACT-PULSALINK                     |
| MVECPXXPA-XXX-CZXXX       | Torodial, pH                                  |             | 6                   | Yes / No           | 10             | Order: ACT-PULSALINK                     |
| MVECPXXPA-EXX-XXX         | Torodial, pH                                  |             | 6                   | Yes / No           | 10             | Included                                 |
| Panel / 3 Pump Mounts     |                                               |             |                     |                    |                |                                          |
| MVECPXXPD-EXX-XXX         | Torodial, pH                                  |             | 6                   | Yes / Yes - 3      | 10             | Included                                 |
| Conductivity and ORP      |                                               |             |                     |                    |                |                                          |
| Model Number              | Probe Style                                   | Flow Switch | Programmable Timers | Panel / Pump Mount | Digital Inputs | PULSALink and Smart Phone App Compatible |
| No Panel                  |                                               |             |                     |                    |                |                                          |
| MVECOXXPF-XXX-XXX         | Torodial, ORP                                 |             | 6                   | None               | 10             | Order: ACT-PULSALINK                     |
| Panel / No Pump Mounts    |                                               |             |                     |                    |                |                                          |
| MVECOXXPA-EXX-XXX         | Torodial, ORP                                 |             | 6                   | Yes / No           | 10             | Included                                 |
| MVECOXXPA-EPX-XXX         | Torodial, ORP, PYXIS (PTSA)                   |             | 5                   | Yes / No           | 10             | Included                                 |
| Panel / 3 Pump Mounts     |                                               |             |                     |                    |                |                                          |
| MVECOXXPD-EPX-XXX         | Torodial, ORP, PYXIS (PTSA)                   |             | 5                   | Yes / Yes - 3      | 10             | Included                                 |
| Conductivity, pH and ORP  |                                               |             |                     |                    |                |                                          |
| Model Number              | Probe Style                                   | Flow Switch | Programmable Timers | Panel / Pump Mount | Digital Inputs | PULSALink and Smart Phone App Compatible |
| No Panel                  |                                               |             |                     |                    |                |                                          |
| MVECPOXP-XXX-XXX          | Torodial, pH, ORP                             |             | 5                   | None               | 10             | Order: ACT-PULSALINK                     |
| MVECPOXP-XXX-CZXXX        | Torodial, pH, ORP                             |             | 5                   | None               | 10             | Order: ACT-PULSALINK                     |
| Panel / No Pump Mounts    |                                               |             |                     |                    |                |                                          |
| MVECPOXPA-XXX-CZXXX       | Torodial, pH, ORP                             |             | 5                   | Yes / No           | 10             | Order: ACT-PULSALINK                     |
| MVECPOXPA-EXX-XXX         | Torodial, pH, ORP                             |             | 5                   | Yes / No           | 10             | Included                                 |
| MVECPOXPA-EPX-XXX         | Torodial, pH, ORP, PYXIS (PTSA)               |             | 4                   | Yes / No           | 10             | Included                                 |
| MVECPOXPHP-EXX-XXX        | High Pressure Conductivity, pH, ORP           |             | 5                   | Yes / No           | 10             | Included                                 |
| MVECPOXPA-VXX-XXX         | Torodial, pH, ORP                             |             | 5                   | Yes / No           | 10             | Included & Modem Millie                  |
| Panel / 3 Pump Mounts     |                                               |             |                     |                    |                |                                          |
| MVECPOXPD-EXX-XXX         | Torodial, pH, ORP                             |             | 5                   | Yes / Yes - 3      | 10             | Included                                 |

| COOLING TOWER CONTROLLERS |                                  |                                                                 |                                                                           | MicroVision                       |
|---------------------------|----------------------------------|-----------------------------------------------------------------|---------------------------------------------------------------------------|-----------------------------------|
| Model Number              | Voltage                          | Power Wiring                                                    | Panels                                                                    |                                   |
| MVS1PA-XXX                | 115V                             | Prewired w/ pigtails                                            | Standard Panel & Flow Assembly                                            |                                   |
| MVS1PA-CZXXX              | 230V                             | Conduit                                                         | Standard Panel & Flow Assembly                                            |                                   |
| MVS1PD-XXX                | 115V                             | Prewired w/ pigtails                                            | Panel & Flow Assy, 3 Pump Mount, strainer, sensor tee, 3 inj tees & rails |                                   |
| MVS1PD-CZXXX              | 230V                             | Conduit                                                         | Panel & Flow Assy, 3 Pump Mount, strainer, sensor tee, 3 inj tees & rails |                                   |
| MVS1PF-XXX                | 115V                             | Prewired w/ pigtails                                            | Flow assembly, No Panel                                                   |                                   |
| MVS1PF-CZXXX              | 230V                             | Conduit                                                         | Flow assembly, No Panel                                                   |                                   |
| MVS1PX-XXX                | 115V                             | Prewired w/ pigtails                                            | No Panel and No Flow assembly                                             |                                   |
| MVS1XX-XXX                | 115V                             | Conduit                                                         | No Panel and No Flow assembly                                             |                                   |
| MVS1XX-CZXXX              | 230V                             | Conduit                                                         | No Panel and No Flow assembly                                             |                                   |
| COOLING TOWER CONTROLLERS |                                  |                                                                 |                                                                           | MicroTrac                         |
| Model Number              | Voltage                          | Relay & Power Wiring                                            | Sensor Tee                                                                | Flow Switch                       |
| MTC1LTA-XXX               | 115V                             | Liquid-Tight                                                    | Yes                                                                       | Standard Panel & Flow Assembly    |
| MTC1LTA-CZXXX             | 230V                             | Liquid-Tight                                                    | Yes                                                                       | Standard Panel & Flow Assembly    |
| MTC1LTF-XXX               | 115V                             | Liquid-Tight                                                    | Yes                                                                       | Flow Switch with 15' cable        |
| MTC1LTF-CZXXX             | 230V                             | Liquid-Tight                                                    | Yes                                                                       | Flow Switch with 15' cable        |
| MTC1LTX-XXX               | 115V                             | Liquid-Tight                                                    | Yes                                                                       | Standard (no flow switch)         |
| MTC1LTX-CZXXX             | 230V                             | Liquid-Tight                                                    | Yes                                                                       | Standard (no flow switch)         |
| MTC1PTA-XXX               | 115V                             | Prewired w/ pigtails                                            | Yes                                                                       | Standard Panel & Flow Assembly    |
| MTC1PTF-XXX               | 115V                             | Prewired w/ pigtails                                            | Yes                                                                       | Flow Switch with 15' cable        |
| MTC1PTL-XXX               | 115V                             | Prewired w/ pigtails                                            | Yes                                                                       | Standard Flow Assembly (no panel) |
| MTC1PTX-XXX               | 115V                             | Prewired w/ pigtails                                            | Yes                                                                       | Standard (no flow switch)         |
| MTC1XTF-XXX               | 115V                             | Prewired & Liquid-Tight                                         | Yes                                                                       | Flow Switch with 15' cable        |
| MTC1XTX-XXX               | 115V                             | Prewired & Liquid-Tight                                         | Yes                                                                       | Standard (no flow switch)         |
| BOILER ONTROLLERS         |                                  |                                                                 |                                                                           | MicroVision Boiler                |
| Model Number              | Power Wiring                     | System Options                                                  | Sensor                                                                    | Cable Length                      |
| MVBXCHAS010-XXX           | Conduit connections              | 100 psi max.-Timed Sample-Solenoid vlv, orifice union w/ plates | Contact Electrode                                                         | 10 feet                           |
| MVBXCHXS010-XXX           | Conduit connections              | None                                                            | Contact Electrode                                                         | 10 feet                           |
| MVBXCHXS010-CZXXX         | Conduit connections; 230V        | None                                                            | Contact Electrode                                                         | 10 feet                           |
| MVBXCHXH010-XXX           | Conduit connections              | None                                                            | 4420F / 375 psi - H.T. & Press.                                           | 10 feet                           |
| MVBXCHXR010-XXX           | Conduit connections              | None                                                            | 3/4" Short style sensor & tee                                             | 10 feet                           |
| MVBXCHXS025-XXX           | Conduit connections              | None                                                            | Contact Electrode                                                         | 25 feet                           |
| MVBXCHXS025-CZXXX         | Conduit connections; 230V        | None                                                            | Contact Electrode                                                         | 25 feet                           |
| MVBXCHXS050-XXX           | Conduit connections              | None                                                            | Contact Electrode                                                         | 50 feet                           |
| MVBXCHXS075-XXX           | Conduit connections              | None                                                            | Contact Electrode                                                         | 75 feet                           |
| MVBXCHXS075-CZXXX         | Conduit connections, 230V        | None                                                            | Contact Electrode                                                         | 75 feet                           |
| MVBXPHBS025-XXX           | Prewired with pigtails           | 250 psi max-Timed Sample-Motorized vlv, flow throttling vlv     | Contact Electrode                                                         | 25 feet                           |
| MVBXPHXH010-XXX           | Prewired with pigtails           | None                                                            | 4420F / 375 psi - H.T. & Press.                                           | 10 feet                           |
| MVBXPHXR010-XXX           | Prewired with pigtails           | None                                                            | 3/4" Short style sensor & tee                                             | 10 feet                           |
| MVBXPHXS010-XXX           | Prewired with pigtails           | None                                                            | Contact Electrode                                                         | 10 feet                           |
| MVBXPHXS025-XXX           | Prewired with pigtails           | None                                                            | Contact Electrode                                                         | 25 feet                           |
| MVBXPHXS050-XXX           | Prewired with pigtails           | None                                                            | Contact Electrode                                                         | 50 feet                           |
| MVBXPHXS150-XXX           | Prewired with pigtails           | None                                                            | Contact Electrode                                                         | 150 feet                          |
| CONDENSATE CONTROLLERS    |                                  |                                                                 |                                                                           | MicroVision Condensate            |
| Model Number              | Power Wiring                     | System Options                                                  | Sensor                                                                    | Cable Length                      |
| MVBXCHXC025-XXX           | Conduit connections              | None                                                            | Condensate - 0 to 20 $\mu$ S/cm                                           | 25 feet                           |
| MVBXCHXC025-CZXXX         | Conduit connections; 230V        | None                                                            | Condensate - 0 to 20 $\mu$ S/cm                                           | 25 feet                           |
| MVBXPHXC025-XXX           | Prewired with pigtails           | None                                                            | Condensate - 0 to 20 $\mu$ S/cm                                           | 25 feet                           |
| PROGRAMMABLE TIMERS       |                                  |                                                                 |                                                                           | MicroVision Timer                 |
| Model Number              | Power Wiring                     | Panels                                                          |                                                                           |                                   |
| MVT1PA-XXX                | Prewired power cord and pigtails | Standard Panel and Flow Assembly                                |                                                                           |                                   |
| MVT1PF-XXX                | Prewired power cord and pigtails | Flow Assembly, No Panel                                         |                                                                           |                                   |
| MVT1PX-XXX                | Prewired power cord and pigtails | No Panel and No Flow Assembly                                   |                                                                           |                                   |

## **Authorized Distributor Pulsafeeder**

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