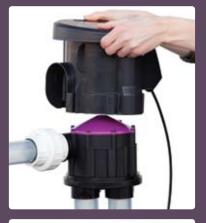


INTELLIGENT VALVE MONITOR<sup>™</sup> for reliable designs and peace of mind<sup>™</sup> IVM6000<sup>™</sup>-LP Line Powered Version Works with all third party 6000 series distributing valves

#### Easy to install & retrofit:

- 10 minute install or retrofit over valve
- No modifications to inlet or outlet piping
- No extra sensors required





# 100% detection of uneven distribution caused by:

- Debris inside valve
- Broken stem spring
- Inadequate flow to seat disk
- Faulty installation
- Flow interruptions, air pockets
- Pump/control panel problems
- Wrong cam or broken cam
- Siphoning through valve
- Back pressure on valve
- Freezing of valve or piping

Unexpected, undetected distributing valve malfunctions can cause significant risk and costly problems for system designers, operators and owners. System overloading, environmental contamination, permit violation, and the associated costly repairs can all be caused by valve problems. Preventing such emergency situations has traditionally required frequent site visits and inspections, however this increases Operation & Maintenance costs.

Introducing the first electronic monitor and early-warning alert system for all major third party 6000 series mechanical distributing valves by K-Rain®, Orenco®, Zoeller® and others.

# The IVM6000<sup>™</sup>-LP Intelligent Valve Monitor<sup>™</sup> ensures reliable designs and peace of mind, by confirming even distribution to all zones, as well as providing early detection and immediate alert of valve malfunctions.

Simply replace the valve's original rubber disk and stem assembly with the sensor enabled one supplied with the IVM6000<sup>™</sup>. Slide the monitor down over the valve and supply low voltage line power. Connect the dry contact alarm output to any standard third party pump control panel and the IVM6000<sup>™</sup>-LP is ready to provide immediate notification of any valve malfunctions.

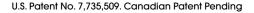
The distributing valve + Intelligent Valve Monitor<sup>™</sup> combination offers superior reliability and control system simplicity compared to using solenoid or motor-actuated valves for zoning effluent distribution systems. It is also much less costly than using larger pumps, or many additional pumps which increases control panel complexity.

"The monitors provide peace of mind that the valves are distributing effluent uniformly, and have significantly reduced the amount of time I spend making random spot checks. Your IVMs are one of the most useful, time saving devices I have seen in a very long time, maybe ever!"

> Art Betker, Class C WWT Operator Rice, Minnesota



Toll free 1-888-747-7645 Direct 1-902-628-1705 IVM@DynamicMonitors.com



# INTELLIGENT VALVE MONITOR™

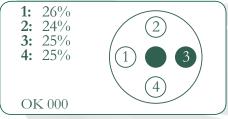
for reliable designs and peace of mind  ${}^{\rm I\!M}$ 

# IVM6000<sup>™</sup>-LP Line Powered Version

Works with all third party 6000 series distributing valves

#### Valve operation is tracked and real-time status of relative distribution is provided on the LCD display.





#### 6404 - Outlet 3 active, status OK

Alarm Event	Description / Explanation
Percent Deviation Exceeded	Uneven distribution has occurred.
Inlet No Outlet	RDSA is not fully seating in "down" position. Water is flowing out of all outlets at the same time.
Outlet No Inlet	RDSA may not be returning to the fully "up" position. Check for broken stem spring or debris.
Outlet is Stuck	Valve does not cycle to next outlet.
Cam Mismatch	Incorrect or damaged valve cam.
Out of Sequence	Outlets were not activated in correct order.
Outlet on Too Long	Maximum pump dose time pre-set value exceeded.
Outlet off Too Early	Minimum pump dose time pre-set value not met.
Temperature Alarm	Below minimum or exceeded maximum temperature value.
Device Reset	Possible power failure





# **Product Specifications**

Valve/Cam Model:	All 6000 series. 2, 3, 4, 5 or 6 outlets.
Line power:	Any from 7.5~ 30V AC or DC.
Power consumption:	<50mA @ 24V AC, <1.2Watts max
Alarm output:	Relay contact ratings 1A/30V DC max, 0.5A/125V AC max.
Event Storage:	Records all events with 255+ repeat counts on each entry.
Dimensions:	9.5" x 8.5" x 7.5" (high) (240mm x 216mm x 191mm)
Shipping Dimensions:	10" x 10" x 10" box
Cable:	24 AWG 4/8 Conductor, Direct bury, 10 ft (3.0m) standard
Weight:	approx. 2 lbs 15 oz (1325g)
Materials:	Case ABS, Lens: Polycarbonate
Measurement resolution: 1 second	
Operating Temperature: -20°C to 50°C (-4°F to 122°F)	
Storage Temperature:	-40°C to 80°C (-40°F to 176°F)

#### Other user adjustable parameters:

- Allowable outlet percent variation
- Valve model/cam
- Alarm error sensitivity (Low, Medium, High)
- Minimum, maximum (pump dose) on time
- Minimum, maximum alarm temperatures
- Date and time
- Lifetime and resettable counters/timers
- LCD backlight

#### Installation:

Slides down over top of valve. Replace original rubber disk and stem assembly (RDSA) with sensor-enabled RDSA supplied with monitor.



(dark blue stem)

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IVM-2012-SS-04

U.S. Patent No. 7,735,509. Canadian Patent Pending