xylem
Let's Solve Water

Digital Pressure Monitor

DATA DRIVEN DIFFUSER MAINTENANCE

SANITAIRE
a xylem brand

The Digital Pressure Monitor (DPM) measures diffuser health by calculating diffuser fouling. The DPM system not only monitors diffuser pressure, but displays user-friendly and actionable data on a color HMI. Operators can easily review the potential energy savings and return-on-investment if the diffusers were cleaned or replaced.

Know your fouling trend

Get continuous monitor pressure readings and trends on a user-friendly color HMI.

- Digital readings provide operators with trends and insights on the health of the diffusers
- Pressure readings from multiple grids can be tracked from a single DPM controller and HMI
- Historical data can easily be exported

Empowering decision making

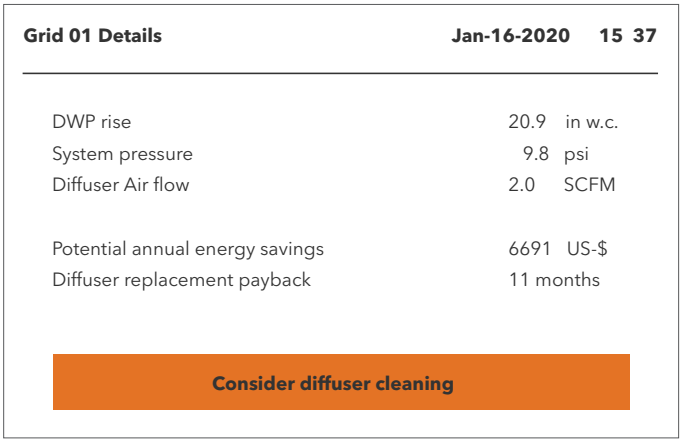
The DPM provides easy-to-understand data about your aeration system by displaying potential energy savings and the return on investment (ROI) for diffuser replacements.

- DPM automatically calculates the annual energy savings if diffuser cleaning is required
- Plan ahead for capital spending as the DPM will display the ROI associated with diffuser replacement based on the fouling
- Knowing when to perform diffuser cleaning and remove fouling increases oxygen transfer efficiency which leads to reduced operating aeration costs.

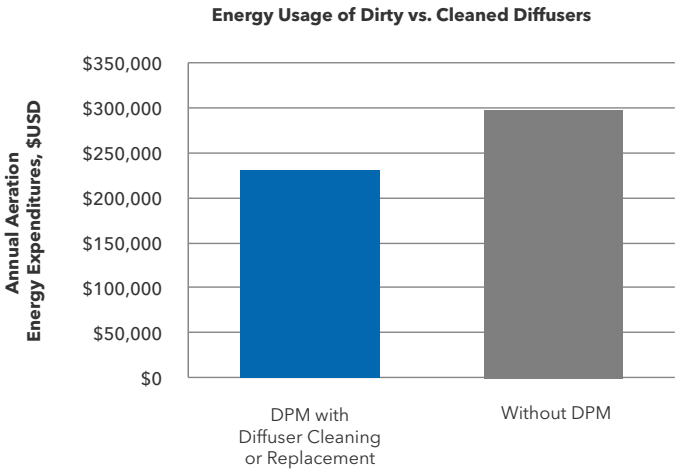
Proven history of reliability

The DPM controller and HMI are based on the existing Xylem IQ SensorNet platform that has been installed in thousands of plants.

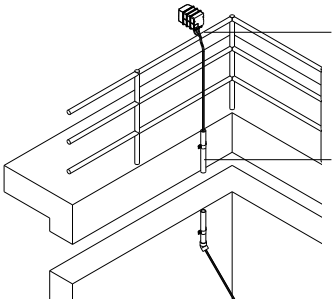
- Hardware can be installed indoors or outdoors (IP-66 rating)
- Integrated lightning protection prevents unexpected electrical issues
- Large family of accessories that are compatible with the hardware (e.g. sun shields, mounting kits)



Example HMI display screen shows monitor pressure readings, system status, and recommendations on cleaning.



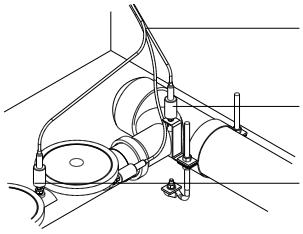
Example of potential savings using DPM combined with diffuser cleaning at 0.75 MGD (118 m^3/hr) plant.



DPM is at the top of the aeration tank

DPM Controller / Display + IC2 Junction Boxes (x2)
Proven hardware that has thousands of installations with integrated overvoltage protection. An integrated color HMI allows operators to quickly view the performance of their aeration diffusers.

Cable carrier column (installed by customer)
Cables are mounted on the aeration tank wall through a cable carrier column to protect from turbulence.



Diffuser is at the bottom of the aeration tank

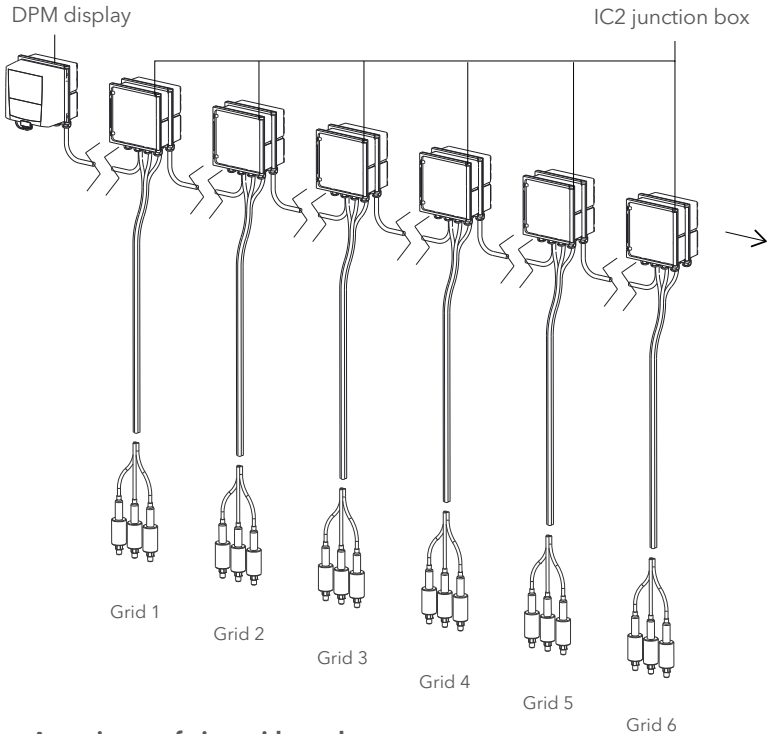
Digital pressure transducers
Mounted onto the diffuser grids to measure air distributor, air plenum and static water pressures. Two pressure transducers are acid-resistant treated to allow for acid cleaning of the diffusers without removing the transducers from the aeration tank.

Multiple installation options available
DPM can be installed into new or existing aeration tanks.

- Monitor single or multiple aeration grids and display data on a single HMI
- Installation into existing aeration grids can be performed with a simple integration kit in one day

Reduce maintenance time with cleaning services
Xylem provides diffuser cleaning services to reduce aeration energy costs.

- Xylem offers cleaning services as part of the DPM solution to simplify your asset management process
- Spend less time on optimizing your aeration efficiency with the support from Xylem's professional service team



A maximum of nine grids can be monitored by one DPM controller

Digital Pressure Monitor TECHNICAL SPECIFICATIONS

DPM Controller & IC2 Module

Certifications	ETL, cETL (conforms with relevant UL and Canadian standards), CE
Electromagnetic Compatibility	EN 61326, Class B; FCC Class A, EMC for indispensable operation
Integrated Lightning Protection	According to EN 61326 enhanced over-voltage protection for entire system
Cable	2-wire with shield for power supply and communications; resistant to polarity reversal; comprehensive EMC shield control; cable topology within network can be in the form of a line, tree, star or multiple star Total cable length max. is 250 m (820 ft.)
Data Logger	5 years of DWP data logged
Display	Graphic color display; resolution 320 x 240 pixels; visible area 77 x 64 mm (3.03 x 2.52 in); backlit
Control Keys/Buttons	Five operation keys: three master keys for Measurement (M), Configuration (C), System settings (S) two function keys for confirmation/switching menu: OK (OK) and Escape (ESC); four directional buttons for quick selection of software functions
Electrical	100 to 240 VAC (50/60 Hz)
Temperature Conditions	Operating Temperature: -4 to 131 °F (-20 to 55 °C) Storage Temperature: -13 to 149 °F (-25 to 65 °C)
Enclosure	Material: PC-20% (Polycarbonate with 20% fiberglass) Rating: IP-66 (not suitable for conduit connection) Dimensions for DPM Controller: 144 W x 144 H x 120.2 D mm (5.67 W x 5.67 H x 4.73 D in) Weight for DPM Controller: 1.2 kg (2.6 lbs.) Dimensions for Transducer Junction Box: 144 W x 144 H x 52 D mm (5.67 W x 5.67 H x 2.06 D in) Weight for Transducer Junction Box: 0.4 kg (0.9 lbs.)
Warranty	3 years
Module	Coupling is located at the rear for combined mechanical and electrical connections; maximum docking is three modules for a stacked mounted unit
Terminal Connections	Screw terminal strips; terminal area for solid connectors 0.2 to 4.0 mm for flexible connectors 0.2 to 2.5 mm; accessible through cover Used for connecting transducers or as an input/output or for looping through/branching of the IQ SensorNet cable
Outputs	Ethernet interface for remote access and cloud connection

Pressure Transducers

		Holder / Piping Transducer	**Static Water Column Transducer**
Input	Pressure Range Proof Pressure Burst Pressure Fatigue Life	0 to 415in wc (0 to 15psi) 100psi 145psi 10 million FS cycles	0 to 415in wc (0 to 15psi) 30psi 525psi Designed for more than 100 million FS cycles
Performance	Long Term Stability Accuracy Thermal Error Compensated Temperatures **Operating Temperatures** Electrical code M Zero Tolerance Span Tolerance Mounting Effects Response Time Supply Voltage Sensitivity	0.25% span/annum 0.2% span max 2% span max -4°F to +140°F (-20°C to +60°C) -5°F to +120°F (-20°C to +50°C) 1% of span 1% of span 0.25% span max 5 ms 0.01% span/volt	0.2% FS/year (non-cumulative) 0.25% FS typical 1.5% FS typical -5°F to+ 180°F (-20°C to +80°C) -5°F to+ 125°F (-20°C to +50°C) 1% of span 1% of span n/a 0.5 ms n/a
Mechanical Configuration	Inconel Pressure Ports Wetted Parts Electrical Connection Enclosure Vibration Acceleration Approvals Weight Output Supply Voltage (Vs) Max. Loop Resistance Cable Length	1/2in NPT External (male) 318 Duplex SS, Ceramic, Nitrile (Viton® Optional) Immersible Cable Assembly, IP68 Code M IP68 Submersible 35g, peak 5-2000 Hz, MIL STD 810, Method 514.2, Procedure I 100g, MIL STD 810C, Method 513.2, Procedure II CE, Lloyds Register 330 g (excluding cable) 4-20 mA (2 wire) 9 - 35 VDC (ExII 1G 9-28 Vdc) (Vs-9) x 50 ohms 42.5 feet (13 m)	3/8in NPT External (male) 17-4 PH Stainless Steel Immersible Cable Assembly, IP68 Code M IP68 Submersible 70g, peak to peak sinusoidal, 5 to 2000Hz 1 DOg steady acceleration in any direction 0.032% FS/g CE, UR (221C, 261C, 22CS, 26CS) Approx. 100 g (excluding cable) 4-20 mA (2 wire) 24 VDC, (7-35 VDC) (Vs-7) x 50 ohms 49 ft (15m)

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