

TIDLAND PRESSUREMAX AIR PRESSURE MONITORING SYSTEM

Improve Performance & Safety with Responsive Air-Pressure Monitoring Alerts

Introducing the PressureMax air shaft pressure monitoring system from Tidland.

The PressureMax system reduces operating costs by minimizing unplanned downtime and scrap while improving safety during unwind and rewind processes.

Internal air bladders of winding shafts and chucks require correct inflation and regular maintenance to ensure adequate torque is transferred to the roll.

Tidland's Industry 4.0 solution provides real-time condition monitoring, alerts and analytics to machine operators, helping to maintain correct inflation levels and to detect air bladder leaks before failures occur. PressureMax air monitoring can eliminate core slippage that would otherwise result in safety risks, web breaks, material scrap and unplanned downtime.



APPLICATIONS

Display, monitoring and alerts for air pressure and temperature on air shafts, reel spools, chucks and adapters

Retrofit for existing process lines

Integration into new equipment builds

Simplex winding, 2 and 4 shaft turret winders, multiple shaft machines

Winding processes with tank valves (no continuous air)

Real-time data and status delivered to PLC, historian or asset management systems

See
PressureMax
in action!
Scan QR code:



KEY FEATURES

- Real-time air leak detection and alerts
- Improves safety and reduces scrap
- Wireless collection and display of pressure and temperature data, ensuring proper inflation and deflation
- Preventative maintenance reduces your downtime and maintenance costs
- Easy analysis and troubleshooting with saved trend, alarm, and warning history
- Optional data input/output to PLC provides integration into operator control stations
- Customizable alert thresholds
- Configurable display modes for simplex and multi-shaft turrets
- One-way RF receiver provides a secure connection to sensors

SPECIFICATIONS

HMI/Receiver

Operating Temperature Range
0°C to +50°C (32°F to +122°F)

Display
7 inch color LCD resistive touchscreen

I/O Ports
LAN: 1 x 10/100 Base-T RJ-45,
1 x GbE RJ-45
CANbus: Yes

Input Voltage & Frequency
100-240 VAC, 1ph, 50-60 Hz

Input Current
2.3 A @ 120 V, 1.1A @ 220-230 V

Mounting
Direct wall mount, hardware included



Sensor



Operating Temperature Range
-20°C to +70°C (-4°F to +158°C)

Operating Pressure Range
8 to 215 psi

Transmit Range
Approx. 100 m (328 ft) line of sight

RF Transmission Frequency
433.92 MHz +/- 20.6 KHz, one way

Transmit Interval
Immediate with +/- 10% change in pressure
Every 14 seconds while inflated
Sleep mode while deflated

Battery Life
Internal non-replaceable battery,
3+ year lifespan

Installation
Female thread, screws directly onto
Schrader valve

Placement
Dedicated valve opening in journal or
body, new or retrofit

Certifications and Compliances

HMI/Receiver
UL & FCC certified components
Designed to UL508A
NFPA79, CE, RoHS
NEMA 4, 12; IP65

Sensor
FCC, CE, IC, RoHS
Select J1455 and MIL STD 810G

Materials

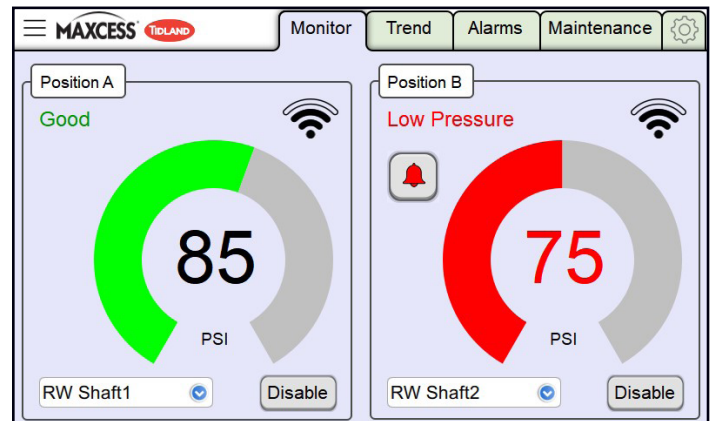
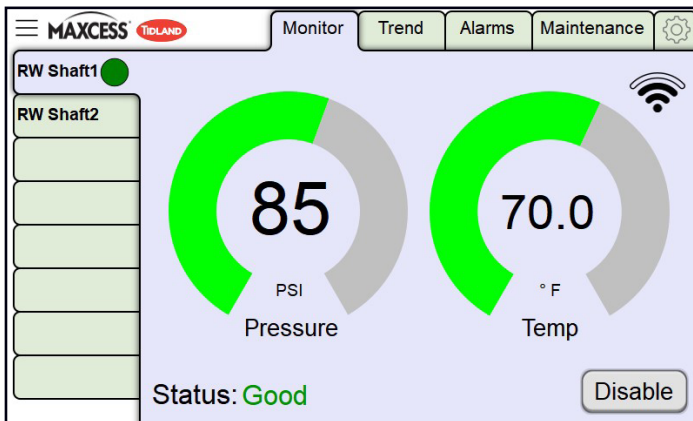
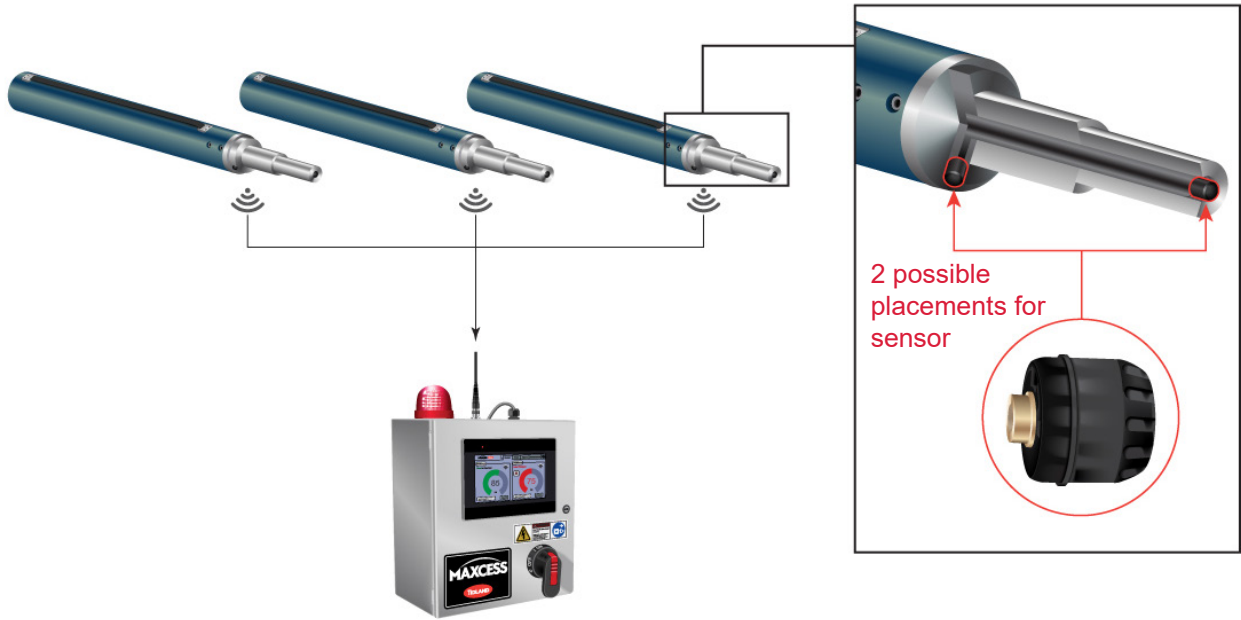
Industrial construction and operation ratings provide reliable performance in all factory conditions

Enclosure
Powder coated steel (grey)

Sensor
Self-contained plastic housing with brass
connection threads

SYSTEM DETAILS

Tidland Reel Spools, Shafts or Chucks



Software

Pairing

Connect with up to 8 shafts/sensors

View Mode

Single, 2-shaft turret or 4-shaft turret screen view

Notifications

Real-time status icons for each shaft; quickly identify issues

Tab View

Separate monitor, trend, alarms and maintenance tabs for each paired sensor/shaft

Alarm History

Saved alarm history by paired sensor/shaft for easy troubleshooting

Operation Statistics

Current and lifetime inflation count and timer for preventative maintenance

Inflation Thresholds

Set custom minimum and maximum inflation thresholds by shaft, time to inflate, count warnings and leak limits

Automatic Operation

Options for automatic enabling and disabling of alarms based on operation conditions

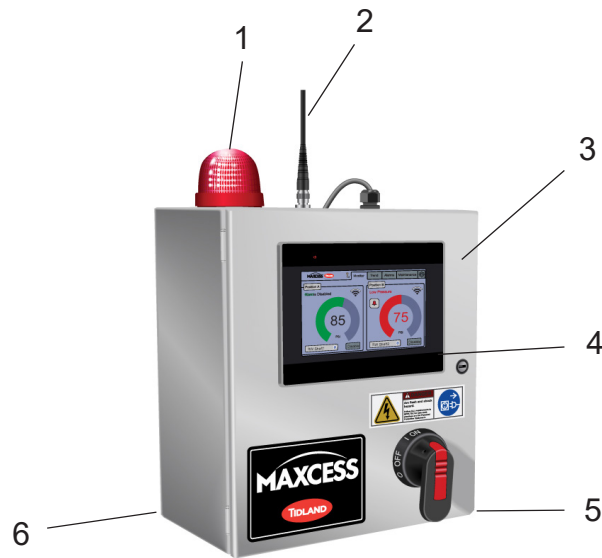
Optional Input/Output

Supports digital or PLC run/stop input and data output via LAN to minimize operator interaction with HMI (EthernetIP, ProfiNet, Modbus TCP and more)

DESIGN FEATURES

PressureMax Receiver/HMI

1. Red signal beacon makes alerts visible from any viewing angle
2. External antenna (receive only) provides secure and extended operating range
3. Large 7 inch LCD color touchscreen HMI - clear view of data and navigation
4. Pressure monitoring software provides real-time data, custom alerts and history to improve safety and performance, reducing downtime and material scrap
5. Main disconnect switch to safely turn cabinet power on and off
6. Industrial construction and operation ratings provide reliable performance in all factory conditions



DIMENSIONS

PressureMax Dimensions

Model	Weight	Width/Diameter	Enclosure Height	Height w/Antenna	Depth	Mounting Centers
Receiver/HMI	51.5 kg (23 lbs)	249.9 mm (9.84 in)	300 mm (11.81 in)	452.4 mm (17.81 in)	199.9 mm (7.87 in)	281.4 x 185.4 mm
Sensor	0.02 kg (0.04 lbs)	28.2 mm (1.11 in)	25.7 mm (1.01 in)	N/A	N/A	N/A

Options and Catalog Numbers

- PressureMax Receiver/HMI for customer drilled cable entry (**part no. 270039512**)
- PressureMax Receiver/HMI with factory drilled top cable entry (**part no. 270041202**)
- PressureMax Sensor, sold separately (replacement) (**part no. 270039509**)
- PressureMax Sensor retrofit kit (for installation in Maxcess factory) (**part no. 270039510**)

Accessories from Maxcess

- Connection cord set, 3.05 m (10 ft) with NEMA 5-15P plug (**part no. 270041094**)
- Connection cord set, 6.10 m (20 ft) with NEMA 5-15P plug (**part no. 270041095**)
- Hand tool for sensor installation or removal (**part no. 270040797**)
- Force5 chuck (3 to 6 inch) end cover and valve retrofit kit (**part no. 270041142**)
- Mounting bracket kit for receiver/HMI (**part no. 270041096**)



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