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# The Safety Behind Wireless Monitoring

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# Agenda

- Why Monitor Your
- Does Monitoring = Safety?
- What To Monitor
- How To Monitor
- System Needs To Monitor



# Why Should I Monitor?



- Real-Time, Highly Accurate Results
- Ability To Track Data Over Time
- Provides Machine Insights for PM's
- Early Failure Detection
- Installation Time Savings
- Safety – No Personal Near the High Pressure Zone
- Risk Mitigation

# Safety Behind Monitoring

- *Monitoring Is **Error Detection & Recovery** In Which The Malfunction Involves A **Safety Hazard***
- High Pressure Zone
  - Ex: Roll Balance Cylinders
    - Gas Charge Pressure of 2,500 PSI to 5,500 PSI
  - Ex: Hydraulics – Fluid Pressure of 1,000 plus PSI
    - Leaks – Pinhole & General
- Temperatures
  - Critical Applications Where Temperature Matters
    - Ex: Hydraulics – High Temps pose a safety risk
    - Ex: Bearings – Early Warning of Failure



# What Should I Monitor?



- Any Critical Gas or Liquid Zone
- High Pressure Zones
  - Zones over 100 PSI pose a safety hazard
- Non-Accessible Areas
  - Hard to get to during operation or maintenance
- Daily Critical Work Items
  - Work Roll Springs – Go / No-Go
  - Pumps – Overtemp/Overpressure
- Environmental Hazards
  - Leaks & Spills
- Many Others

# How To Monitor?

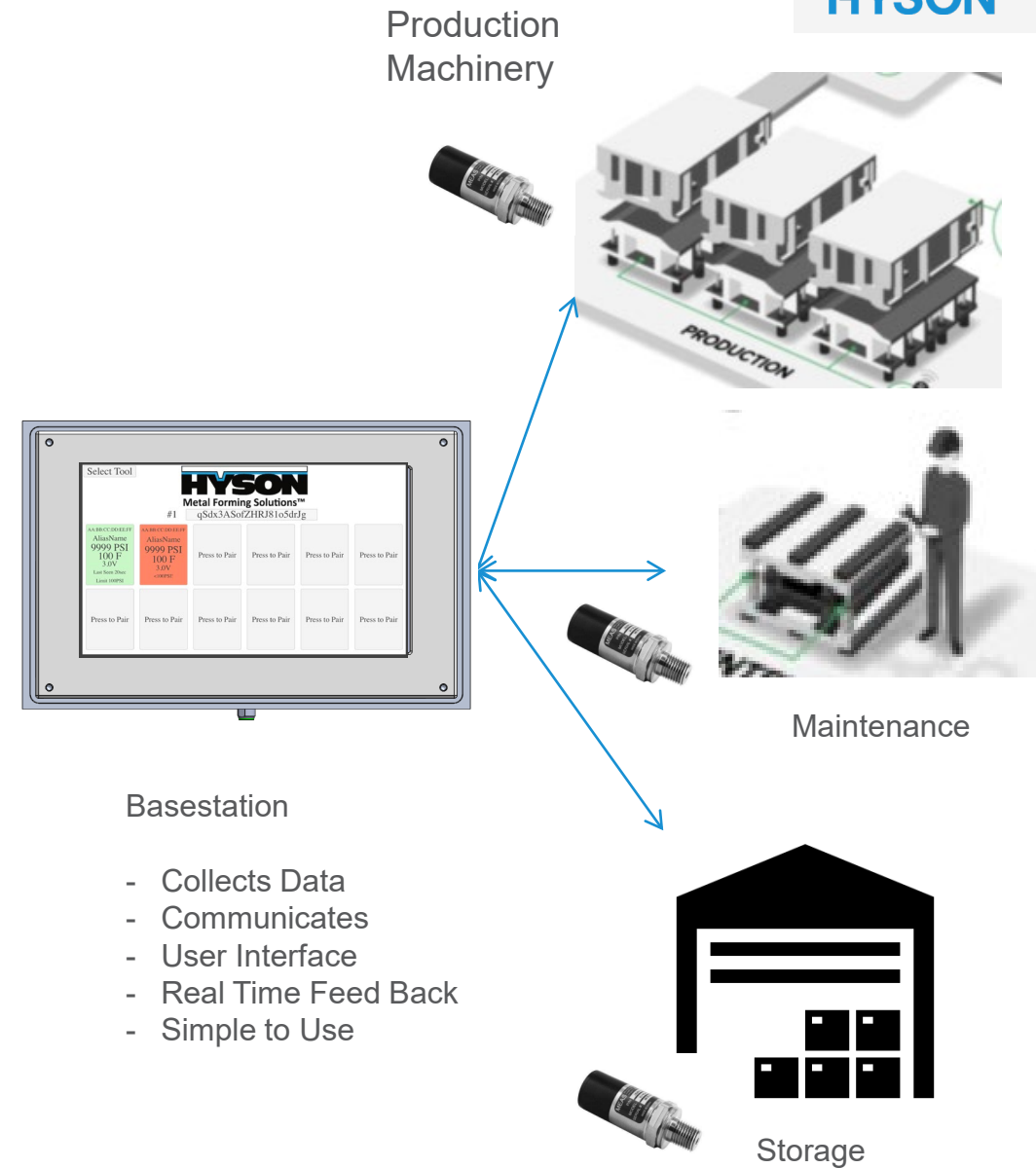
- **Wireless Sensor**

- Wireless – No Cables
- Utilizes Latest Scalable Technology
- Encrypted Data Transmission
- Range
  - Line of sight
  - Obstructions

- **Device to Read Signal**

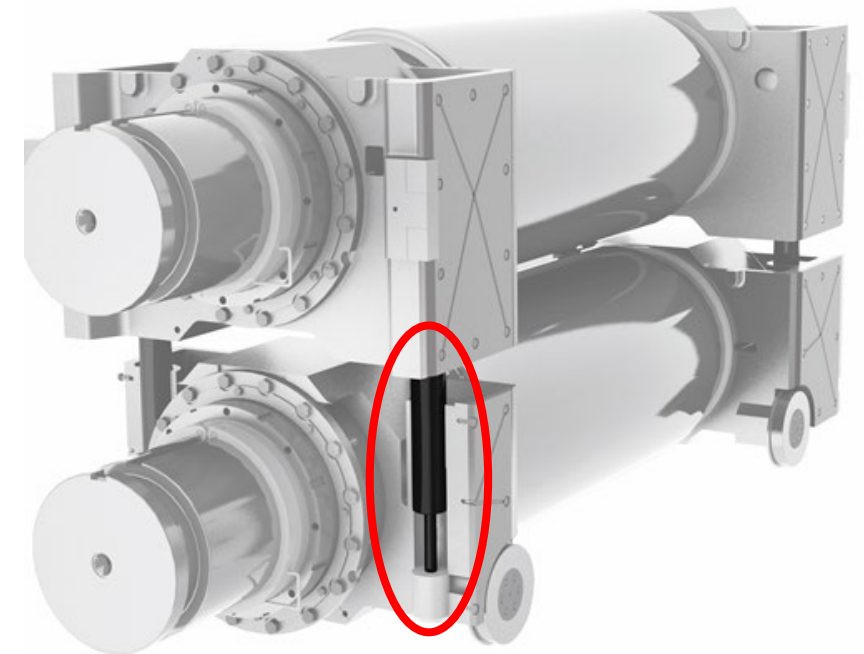
- Handheld Reader
  - Convenience and on person
- Basestation
  - Mountable near workstation
  - Integral to current process/operation
  - Network or stand-alone

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# Sensor

- For Use in Gas or Liquid Mediums
- 25' – 50' Obstructed Range
- 100' – 150' Non-obstructed Range
- Encrypted, Wireless Data Transmission
  - 0.5 sec Data Burst (3 month battery life)
  - 20 sec Data Burst (1.5 – 2 Year battery life)
  - 40 sec Data Burst (2.5 – 3 Year battery life)
- Pressure Range of 0 – 10,000 PSI
  - Accuracy of +/- 1%
- Temperature Range of -20°C – 85°C
  - Accuracy of +/- 3°C



Work Roll Set

# Handheld Reader



- Only Receives
  - Encrypted Signal
- Fits into a Pocket
- On-Demand Mode
  - Instant Reading
- Continuous Mode
  - Receives and Updates in Real-Time
- Truly a No-Touch Solution
- Instant Verification (Go/No-Go)



# Basestation

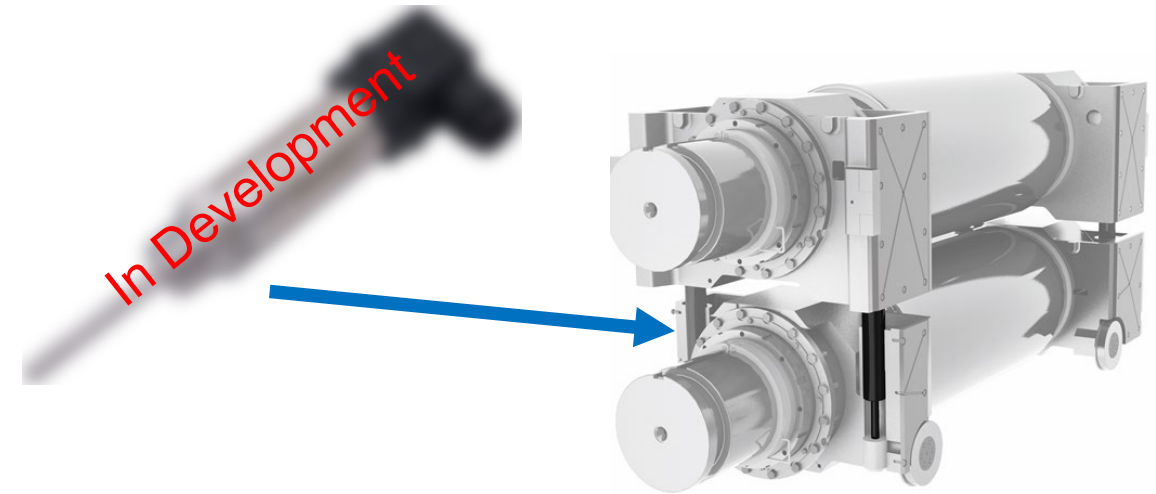
- Displays Real-time Data
- Displays Faults and/or Warnings
  - Faults Trip Built-in Relay
- Only Receives
  - Encrypted Signal
- Built in Relay
  - M12, 4 Pin Industry Standard
- 24V or 120V Power
- Data out to your PLC via RS232 Port
  - Utilize Anybus 6xxx or 7xxx gateway
- 10.1” Industrial Touchscreen
- Fully Adjustable Parameters



# More Ways to Monitor

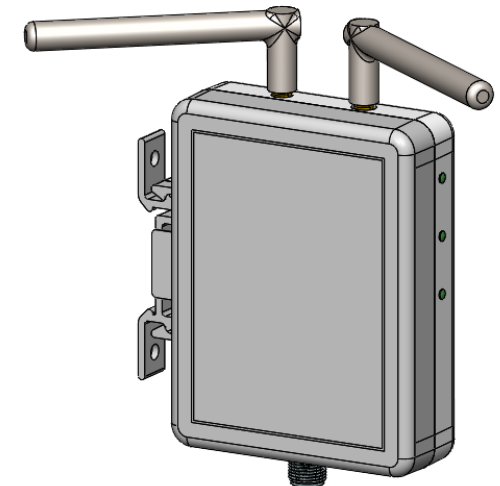
- Temperature Only

- Remove Temp Guns & Stickers
- Stop Getting Close to the Heat Source
- Contact/Non-Contact Thermowell Sensor
- 40 Second Encrypted Data Transmit
- Monitor Bearings, etc.



- Range Extender

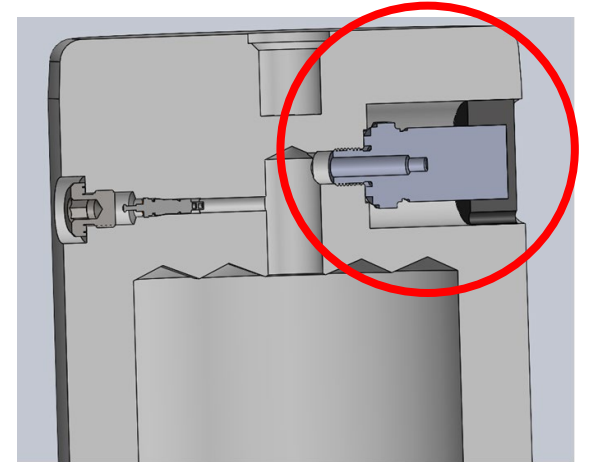
- Used in Conjunction with Sensor & Receivers
- Extends Range
  - Minimizes Issues with Obstructions
  - Ex: Get data from your Drive Side/Op Side to operations



Extender

# System Needs to Monitor

- A G1/8 Port (BSPP Standard Thread form) Connected to Pressure Zone
- Sensors & a Receiving Device
  - Handheld Reader  
or
  - Basestation Monitor



# Wireless Monitoring Conclusions

- Increases Safety
- Reduces Risks
- Gain Machine Insights
- Early Failure Detection
- Reduces Scrap, Downtime & Costs



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# Thank You

**Questions?**