

**THINK TANK**



# **PULSAR<sup>®</sup> R86 RADAR**

**The Smarter Non-Contact Radar Transmitter**  
The latest innovation from the Magnetrol<sup>®</sup> Think Tank is here



# PULSAR® R86 RADAR



**We never stop thinking about your needs. Here's the result.**

The company that changed the game with Guided Wave Radar is about to change the way you think about Non-Contact Radar. That's because the PULSAR Model R86 is here, and it puts over 13 years of Magnetrol® radar expertise to work for you.

The PULSAR R86 is Magnetrol's first industrial, 26 GHz Pulse Burst Non-contact Radar transmitter. More importantly, it's the transmitter with the innovations today's process industries need.

**The PULSAR Model R86 offers:**

- Improved Performance and Resolution
- Circular Polarization
- Nozzle Extensions to 72" (1.8 meters)
- Advanced Diagnostics
- On-Board Help text
- 130 foot (40 meter) measurement range
- HTHP Antennas
- SIL 2 Capability offered as standard

The PULSAR R86 is also the perfect complement to the existing Magnetrol Model R96 Radar and Eclipse® Model 706 Guided Wave Radar transmitters. Together, this family of transmitters offers a smarter solution for any of your process level applications.



## True Versatility

Nozzle extensions from 12" to 72" and horn antennas from 1½" to 4".



# SMARTER ON EVERY LEVEL

## Improved Performance

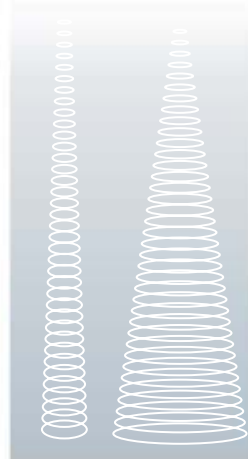
The 26GHz radar signal has a smaller wavelength for smaller antennas and improved 1mm resolution. The smaller beam angle allows installation into process connections as small 1.5".

## Circular Polarization

Now there's no need to rotate the antenna to ensure proper orientation. This simplifies installation and delivers proper alignment in virtually every application.

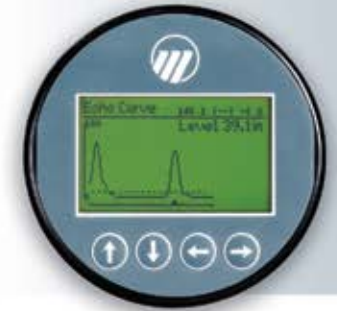


## 26GHz vs. 6GHz



## Advanced Diagnostics

- Automated Echo Capture conveys real-time waveform and trend data.
- 4-Button Interface and Large LCD Display provide enhanced depth of data and indicate on-screen waveforms.
- Expanded Event History shows up to 20 events including diagnostic and configuration data.
- Troubleshooting Tips offer practical solutions that help you reduce downtime.
- Setup and Echo Rejection Wizards will easily guide you through the process.
- Custom Echo Rejection allows you to modify an existing echo rejection curve to fit around moving echoes encountered in applications of mixing blades.



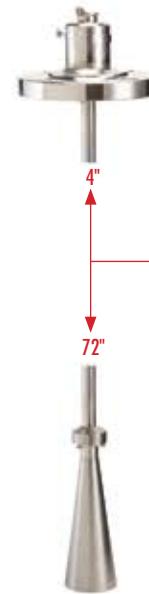
## HTHP Antennas

Designed for use in extremely demanding applications and punishing conditions up to +750°F (+400°C) / 2320psi (160 bar).



## Nozzle extensions to 72"

Nozzle extensions from 4" to 72" (1.8 meters). That means nonstandard nozzle lengths and buried vessel standpipes are never a problem.



## Powerful Microprocessor

Offers significant memory for exciting new features, including:

- Volumetric and Open Channel Flow capability with a 30-point strapping table for uncommon vessel shapes
- Data Logging which can be programmed to save data/echo curves on either event-based or time-based conditions

## SIL 2 capability

SIL 2 hardware compliance is standard. Safe Failure Fraction (SFF) = 93.2%.

## PULSAR® Model R86 Non-Contact Radar Solutions

INDUSTRIES	APPLICATIONS
Oil & Gas	Liquefied Gases, Crude Storage, Distillation Columns, Blending Tanks, Finished Product Storage
Power Generation	Condensate Tanks, Fuel Storage
Chemical Manufacturing	Chemical Injection, Mixing and Blending, Scrubber Vessels, Finished Product Storage
Water & Wastewater	Clarifier Level, Sludge Level, Lime Slurry Level
Pulp & Paper	Pulp Storage, Pulp Washing Systems, Bar Screens, Finished Product Storage
Food & Beverage	Ingredient Storage, Mixing Vessels, Cookers, Finished Product Storage

### Features at a glance

FEATURE	PULSAR 86 RADAR
Operating Frequency	26 GHz
Process Temperature Range	To +750 °F (+400 °C)
Process Pressure Range	To 2320 psi (160 bar)
Measuring Range	130 feet (40 meters) covers >99% of all known radar applications
Measured Error	±0.1" (±3 mm)
Resolution	1 mm
Nozzle Extensions	To 72" (1.8 meters)
Horn Antennas	1½" to 4"
Digital Communications	HART® 7.0, FOUNDATION fieldbus™
Menu Languages	English, French, German, Spanish, Russian
SIL2 Hardware (Safety Integrity Level)	SIL 2 Capable, SFF = 93.2%



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