accuraspray 4.0

Great coatings every run

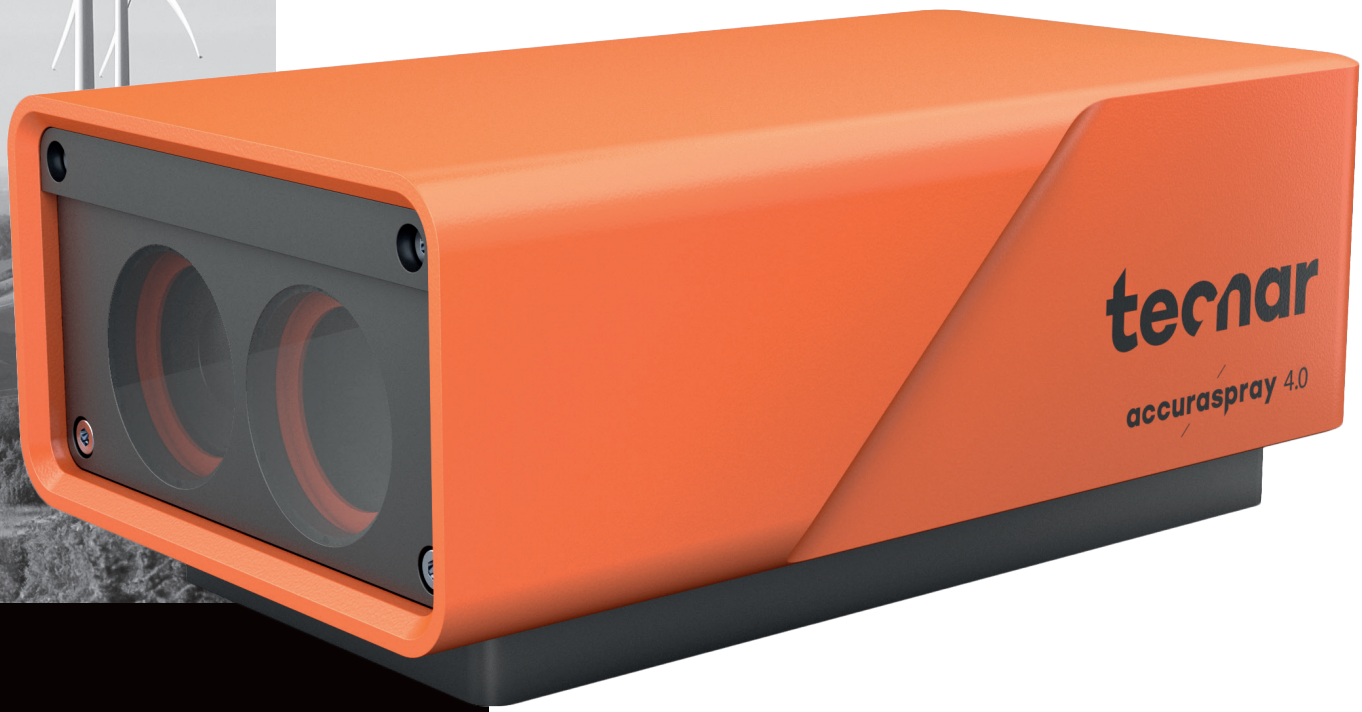
Thermal spray sensor

tecnar

Innovate to differentiate.

Production-friendly thermal spray sensor

Our goal is to help you achieve high-quality, consistent coatings with every run. To ensure this, spray conditions must be optimal at all times. That is exactly why we created the *Accuraspray 4.0*, a precise, reliable, easy-to-use, and affordable sensor.



Work with the industry leader

Tecnar is a global leader in delivering cutting-edge spray sensors to the shop floor. With over 1,000 sensor heads in operation daily across more than 25 countries, we are committed to driving innovation in the industry. From the start, we have invested heavily in R&D and in understanding our clients' needs. This dedication ensures our spray sensors consistently deliver the best performance for our customers.

Why use our spray sensor?

- Powder lot validation
- Process IP archiving
- Optimized gun maintenance
- Reduced coupon usage
- Reduced powder waste
- Minimized downtime
- Less operator dependency
- Instant go/no-go tool
- Proactive problem resolution
- Effortless process optimization
- Quick booth qualification
- Efficient process development

Industry-leading accuracy

Accuraspray's measurement principle is process-independent, ensuring reliable readings. Advanced filtering algorithms certify accuracy, while factory calibration on NIST-traceable stations guarantees precise metrics for real-world conditions.

@Polycontrols

Expert support, every step of the way

Our dedicated team provides reliable, proactive solutions to keep your operations running smoothly. With deep expertise and a customer-first approach, we offer transparent service, detailed documentation, free upgrades and preventive support to minimize downtime and maximize performance.

Absolute repeatability

For this new generation of the product, we envisioned that the Accuraspray would spread the use of sensors for process parameters transfer, parameter development and process consistency to each and every booth in the world. We believe that building trust in the product's consistency is the key to democratizing the use of sensors.

Build your intellectual property on what really counts

- **Particle temperature**
- **Particle velocity**
- **Plume position**
- **Plume angle**
- **Plume intensity**
- **Plume width**
- **Plume density**
- **Process stability**
- **Substrate temperature (optional)**

Industry 4.0 ready

The *Accuraspray 4.0* provides a web-based interface for easy access from any computer, allowing for full 4.0 booth integration via HTTP or external PLC.

Install and set-up yourself

We deliver the unit with detailed documentation for installation and set-up, plus a free remote training session. When it arrives, you will be fully capable of installing and using the equipment.

Go for the universal solution

Our NIST traceable *Accuraspray 4.0* sensor head can characterize all thermal spray processes, including suspensions.

- Wire-Arc Spray
- Flame Spray
- Air Plasma Spray (APS)
- High Velocity Oxy-Fuel Spray (HVOF)
- High Velocity Air-Fuel Spray (HVAF)
- Suspension Plasma Spray (SPS)
- Vacuum Plasma Spray (VPS)
- Low-Pressure Plasma Spray (LPPS)
- Plasma Transferred Wire-Arc (PTWA)

Technical specifications

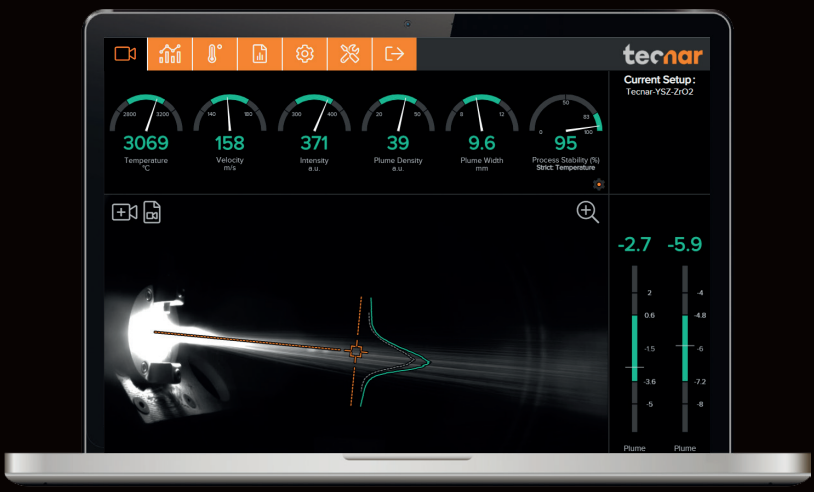
Measurements	
Particle temperature range	≥1000°C (≥1832°F) at 3% accuracy
Particle velocity range	5-1200 m/s (15-4000 ft/s) at 2% accuracy
Plume intensity	5% accuracy
Plume width and position	±0.6 mm (±0.02 in.) accuracy
Plume angle	0.2 degree accuracy
Process stability	Automatic instability detection
Substrate temperature pyrometer	0-500°C (32-932°F)

Measurement area information	
Working distance	200 mm (7.87 in.)
Temperature and velocity measurement area with cylindrical lens (default)	3.4 mm x 25 mm = 85 mm^2 (0.13 in. x 1 in. = 0.13 $in.^2$)
Temperature and velocity measurement area without cylindrical lens	Ø3.4 mm = 9 mm^2 (Ø0.13 in. = 0.014 $in.^2$)
CMOS camera field of view	450 mm (17.7 in.)

Plant supplies	
Electrical requirements	120-230 VAC, Auto-Switch 50/60Hz 1.5/1.5A
Air supply	1.35 to 2 bar (20 to 30 psi)
Positioning bracket	Refer to mechanical drawing in manual

Dimentions and weight	
Sensor head	190 mm X 110 mm X 62 mm (7.5 in. x 4.3 in. x 2.5 in.) 1.8 kg (4 lb)
Controller	230 mm X 230 mm X 102 mm (9 in. x 9 in. x 3.9 in.) 5.6 kg (12 lb)
Total weight	7.4 kg (16 lb)

User interface



Keep your process within
its window of tolerance

Simplify the operator's daily tasks by offering a straightforward indication of the spray condition.

This is achieved through a colour-coded system:

- Spray conditions nominal
- Preventive maintenance required
- Spray conditions out of range

earlier insight changes everything

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Learn more about the *Accuraspray 4.0*

"Thanks to the Accuraspray, we have been able to achieve process Ppks over 1.5– even for very challenging coatings, such as thick, porous TBCs sprayed using new advanced gun concepts. The Accuraspray has also proven invaluable for process parameter development, for establishing tolerance windows, for troubleshooting and, finally, as a go/no go instrument."

The Thermal Spray Team
GKN Aerospace Sweden