



accuraspray CS

**Great coatings
every run**
Cold spray
sensor

tecnar

Innovate to differentiate.



Production-friendly cold spray sensor

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

The *Accuraspray CS* can measure average particle velocity and relative feed rate. Light is shone onto the spray plume to illuminate particles passing through the measurement volume. These illuminated particles are then characterized (velocity, real-time feed rate) based on the reflected light.



Work with the industry leader

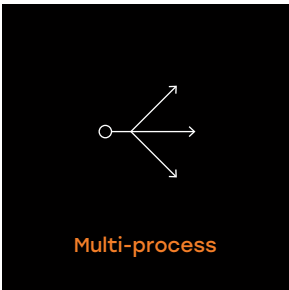
Tecnar is an industry leader in bringing spray sensors to the shop floor. Every day, over 1000 of our sensor heads are at work in over 25 countries around the world. Since the beginning, we have invested heavily in R&D, innovation and in listening to our clients. That's why the thermal spray sensors are the product of our devotion to innovation.

Get the Accuraspray CS advantages:



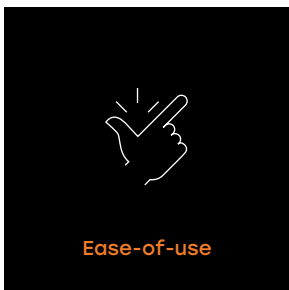
Calibration made simple and reliable

Accuraspray CS ensures validated readings with Tecnar's technology. The factory calibration provides long-term dependability, with recalibration needed only for periodic verification.



Works on all spray densities and velocities

Accuraspray's patented velocity measurement technology works seamlessly for any spray density and velocity, from high-density low-pressure to ultra-high-speed low-density sprays.

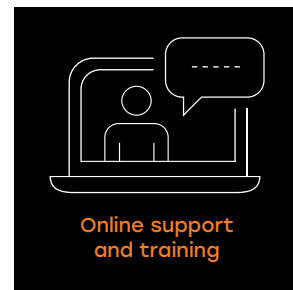
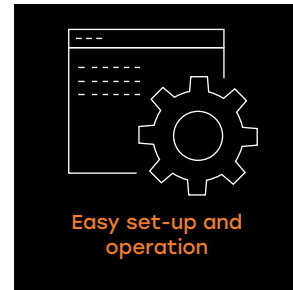


Just point and measure

Accuraspray CS's technology is extremely simple: a green light illuminates the measuring volume, and self-validated readings are immediately displayed upon starting the process.

Industry 4.0 ready

The Accuraspray CS provides a web-based interface for easy access from any computer, allowing for full 4.0 booth integration via HTTP or external PLC. The unit comes with detailed documentation and free virtual training for self-installation and setup.



Build your intellectual property on what really counts

Particle velocity
Relative feed rate
Process stability
Substrate temperature

The Accuraspray CS is used for:

Quicker spray parameter development
Easy spray parameter transfer
Process monitoring
Quality management
Predicting gun changes

See how fast is fast enough

Cold spray is very sensitive to particle velocity. Achieving critical velocity is key to maximizing deposition efficiency and ensuring good coating adhesion. Monitoring the real-time in-flight velocity can help production managers ensure maximize spray time efficiency and coating consistency.

Technical specifications

Measurements

Particle velocity range	5-1200 m/s (15-4000 ft/s) at 2% accuracy
Relative feed rate	Normalized a.u.
Substrate temperature pyrometer	0-500°C (32-932°F)
Process stability	Automatic instability detection

Measurement area information

Measurement area	Ø3.4 mm = 9 mm ² (Ø0.13 in. = 0.05 in. ²)
Working distance	200 mm (7.87 in.)

Laser characteristics

Laser wavelength	940 nm
Nominal laser power	20 W
Nominal power density	15.7 W/cm ² (101 W/in. ²)
Laser type	Class IV

Plant supplies

Electrical requirements	120/230 VAC, Auto-Switch 50/60Hz 3/2A
Air supply	2.4 bar (35 psi) of clean dry compressed air
Positioning bracket	Refer to mechanical drawing in manual

Dimensions

Sensor head	205 mm x 149 mm x 62 mm (8.1 in. x 5.8 in. x 2.4 in.)
Controller	400 mm x 400 mm x 200 mm (15.7 in. x 15.7 in. x 7.9 in.)
Total weight	30 kg (67 lb)

Engineering 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 CS



“At PolyCSAM, we use the *Accuraspray CS* for monitoring the in-flight particle’s velocity within our Cold Spray Additive Manufacturing process. The sensor has helped us identify changes in the CSAM system, as reflected by particle velocities. The *Accuraspray CS* is very sensitive to changes in the velocity of particles, which has a direct impact on the resultant coating/build-up. In our facility, it’s a great addition for process monitoring and quality control.”

Fernanda Caio, Operations Manager
PolyCSAM