



**accuraspray** 4.0

**Great coatings  
every run**  
Thermal spray  
sensor

**tec**nar

Innovate to differentiate.

# Get ready for thermal spray 4.0!

Tecnar is dedicated to helping you achieve quality, consistent coatings with every run. Spray conditions must be optimal at all times. For this, you need a sensor that's precise, reliable, simple to use, affordable, easy to install, can monitor all spray processes and has built-in industrial intelligence. The *Accuraspray 4.0* empowers you to decrease your reliance on equipment and personnel for greater efficiency and productivity.



## Work with the leader in the field

Tecnar has brought online sensing technologies to the shop floor. Every day, over 1000 of our sensor heads are at work in over 25 countries around the world. Since we began, we have invested heavily in R&D and regular voice-of-customer exercises and, today, the *Accuraspray 4.0* is the product of our devotion to innovation.

## Build your intellectual property on what really counts

Particle temperature

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Particle velocity

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Process stability

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Substrate temperature

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Plume angle, width & position

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Plume intensity & density

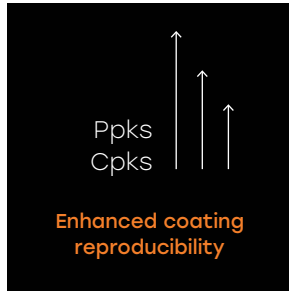
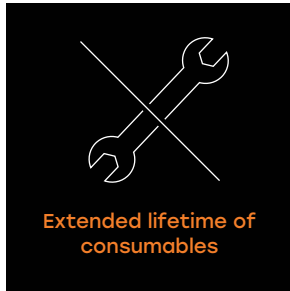
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## Get the Accuraspray 4.0 advantages:

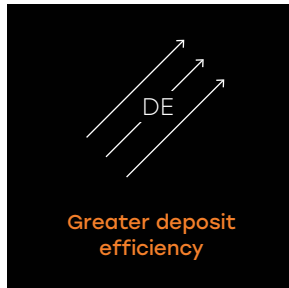
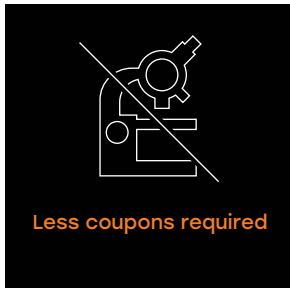
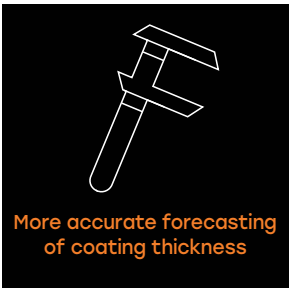
### Be consistent every run

Ensure consistent coatings by continuously monitoring the properties of the sprayed material, either in manual or automatic mode. Now your operators can react and readjust before the process falls out of its green window and significantly improve your process  $C_{pks}$  &  $P_{pks}$ .



### Spray more efficiently

With the Accuraspray 4.0 you can control your deposit efficiency (DE), minimize the test coupons, replace spray hardware (electrodes, nozzles) on a needs-only basis and qualify new lots of feedstock.



### 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 (HVOF)

Suspension Plasma Spray (SPS)

Vacuum Plasma Spray (VPS)

Low-Pressure Plasma Spray (LPPS)

Plasma Transferred Wire-Arc (PTWA)

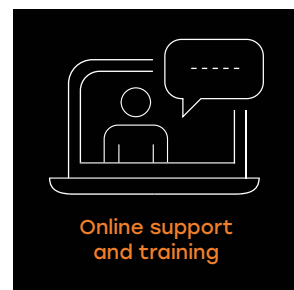
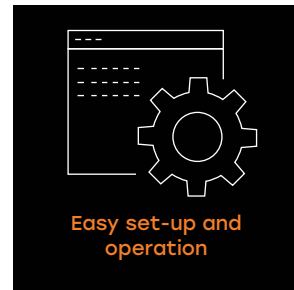
### Monitor—anywhere, any time

The Tecnar Accuraspray 4.0 features a modern, web-based user interface and full SQL query capabilities. Advanced reporting features make it easy to monitor spray booth productivity and consistency from anywhere at any time.



### 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'll be fully capable of installing and using the equipment.



# 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
Substrate temperature pyrometer	0-500°C (32-932°F)
Process stability	Automatic instability detection

## 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 <sup>2</sup> (0.13 in. x 1 in. = 0.13 in. <sup>2</sup> )
Temperature and velocity measurement area without cylindrical lens	∅3.4 mm = 9 mm <sup>2</sup> (∅0.13 in. = 0.05 in. <sup>2</sup> )
CMOS camera field of view	400 mm (15.75 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) of clean dry compressed air
Positioning bracket	Refer to mechanical drawing in manual

## Dimensions

Sensor head	190 mm X 110 mm X 62 mm (7.5 in. x 4.3 in. x 2.5 in.)
Controller	230 mm X 230 mm X 102 mm (9 in. x 9 in. x 3.9 in.)
Total weight	12 kg (26.5 lb)





# Engineering user interface



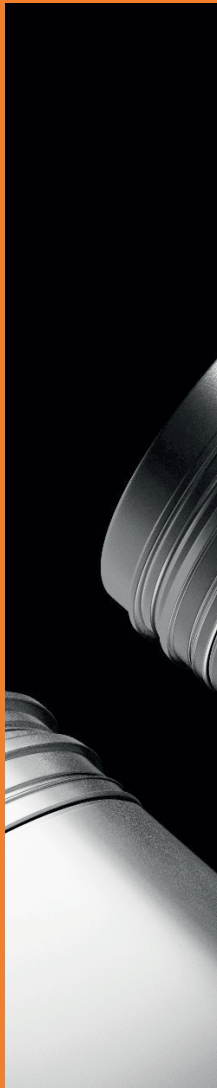
Keep your process within its window of tolerance

**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 4.0

## References

Chromalloy  
General Electric  
GKN Aerospace  
Mitsubishi Heavy  
Industries  
Oerlikon Metco  
Pratt & Whitney  
Progressive Surface  
Rolls-Royce  
Siemens



"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**