

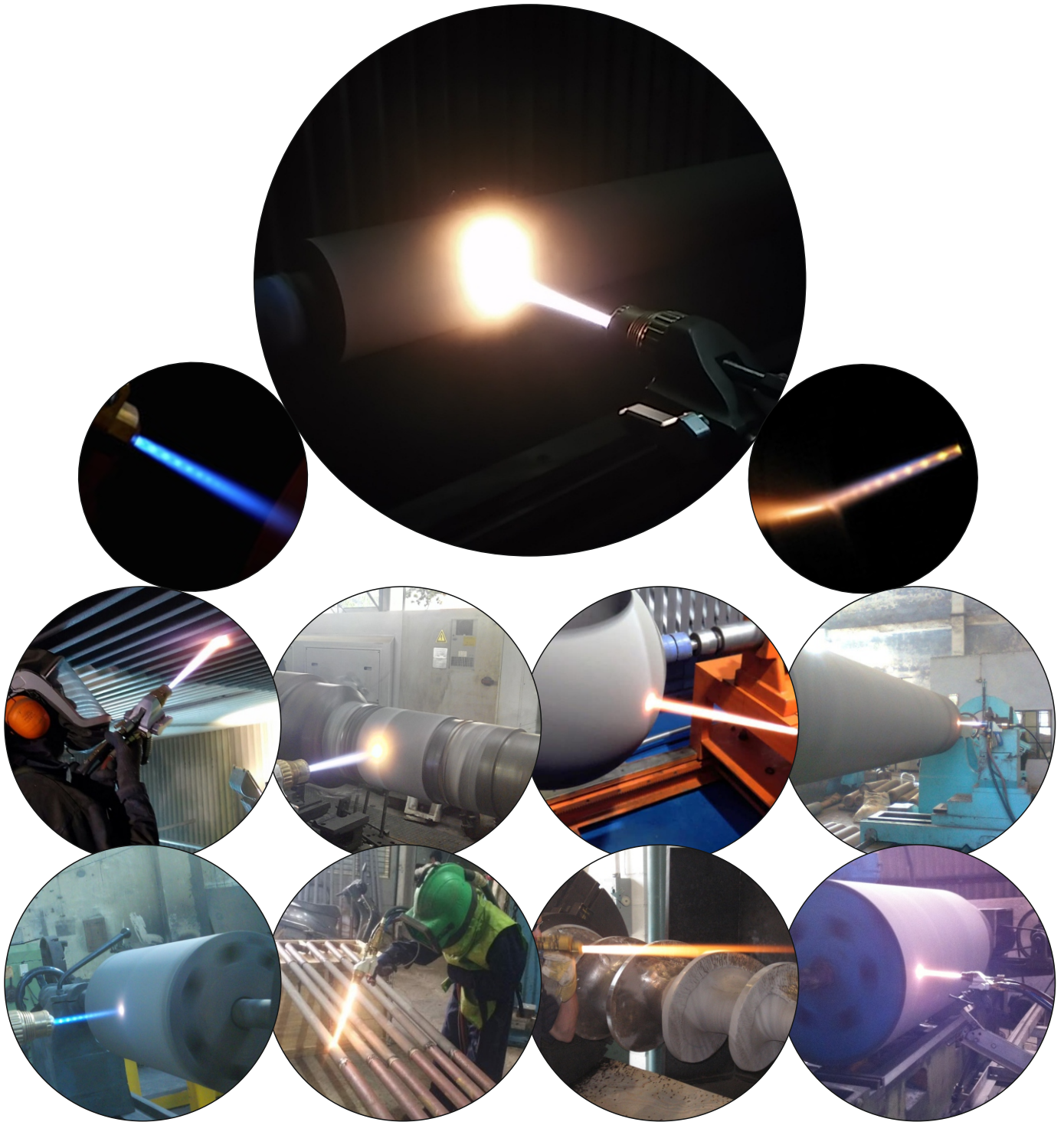


ISO 9001:2015

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**WORLD SURFACE TECHNOLOGIES**

*From Surface Preparation to Thermal Spray Coating Solutions*



# SUPERJET-I GAS HVOF SYSTEM

## SYSTEM FEATURES :

Ideal for small & medium shops with occasional surfacing needs.

Precision components designed for reliable & repeatable coatings incorporating high safety standards.

Rotameter gas metering system.

Compatible with both Air Cooled SUPERJET-I Gun and a high performance Water Cooled (Hybrid) SUPERJET-I-HY

Customize your system with gun and part manipulation equipment ideal for your spray applications.

User friendly mobile Unit.

## SYSTEM SPECIFICATIONS :

GUN	SUPERJET-I
Weight	1.80 Kg. (3.96 lb)
Gases	Oxygen, LPG/Propane/ Natural Gas, Air
CONTROL PANEL	MJ-3100
Dimensions	870 x 500 x 140 mm
Weight	38 Kg (83.77 lb)
Electricity	220 V / 1 P / 50/60 Hz
POWDER FEEDER	PFD-3500
Capacity	3300 CC
Weight	39 Kg
Electricity	220 V / 1 P / 50/60 Hz

## GUIDANCE PARAMETERS :

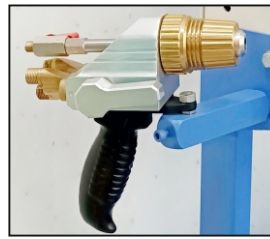
Gas	Flow (LPM)	Operating Pressure
Oxygen	250 - 350	10.0 Kg/Cm <sup>2</sup>
LPG/Propane	60 - 80	07.0 Kg/Cm <sup>2</sup>

Powder	Spray Rate	Deposit Efficiency
WC-12Co	38 gm/min (5.01 lb/hour)	55%
WC-17Co	38 gm/min (5.01 lb/hour)	52%
WC-10Co-4Cr	38 gm/min (5.01 lb/hour)	55%

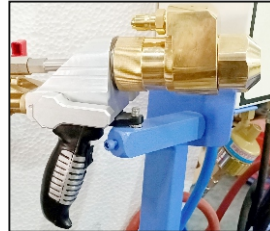
These parameters are only for reference. Actual parameters depend upon the local conditions, geometry, type of powder & size of the job.



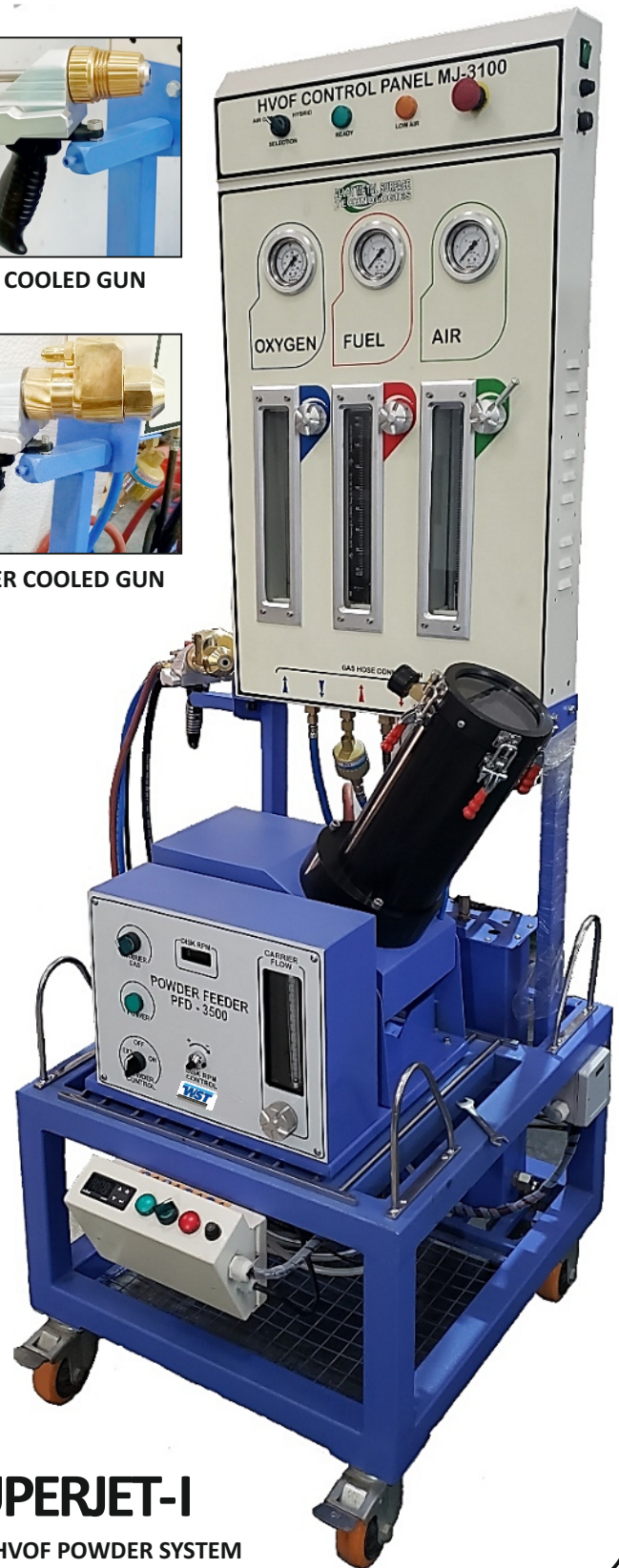
**EXTENSION FOR INSIDE SPRAY**



**AIR COOLED GUN**



**WATER COOLED GUN**



**SUPERJET-I**  
**GAS HVOF POWDER SYSTEM**

### STANDARD SYSTEM

- ✦ SUPERJET-I HVOF GUN
- ✦ POWDER FEEDER; PFD-3500
- ✦ CONTROL PANEL; MJ-3100
- ✦ GAS CONTROL UNIT; GCU-27
- ✦ AIR CONTROL UNIT; ACU-27
- ✦ HOSE UNIT; HU-27
- ✦ PORTABLE TROLLEY
- ✦ SET OF RECOMMENDED PARTS FOR GUN

### OPTIONAL ACCESSORIES

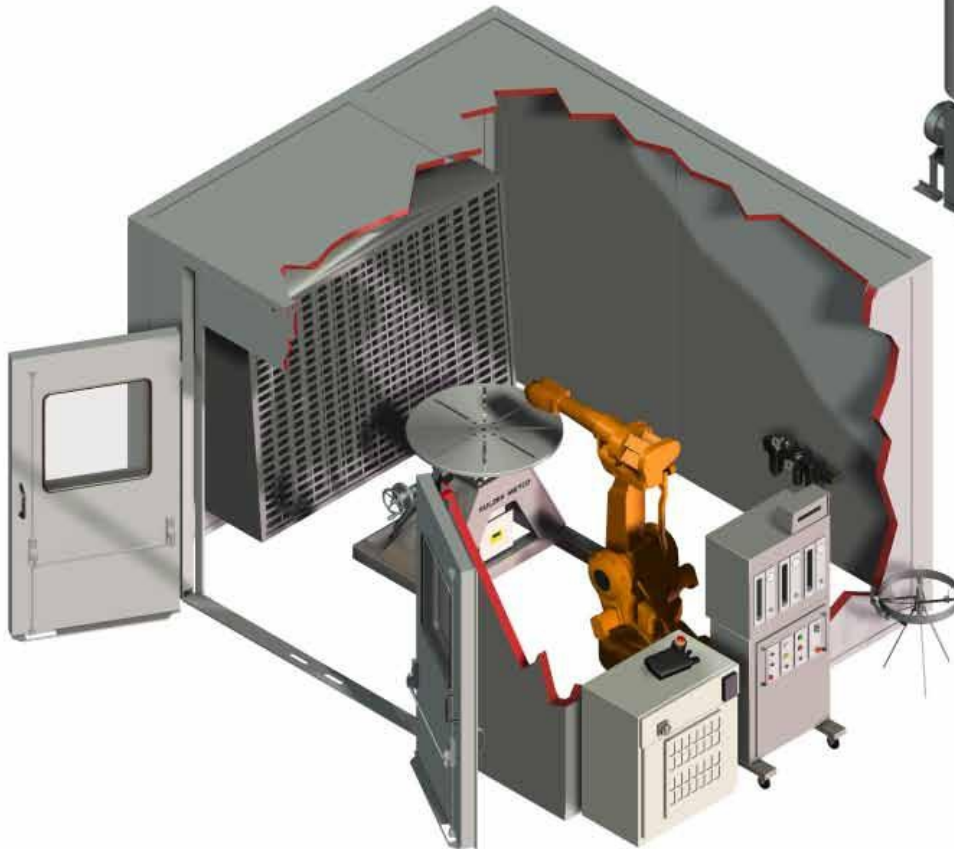
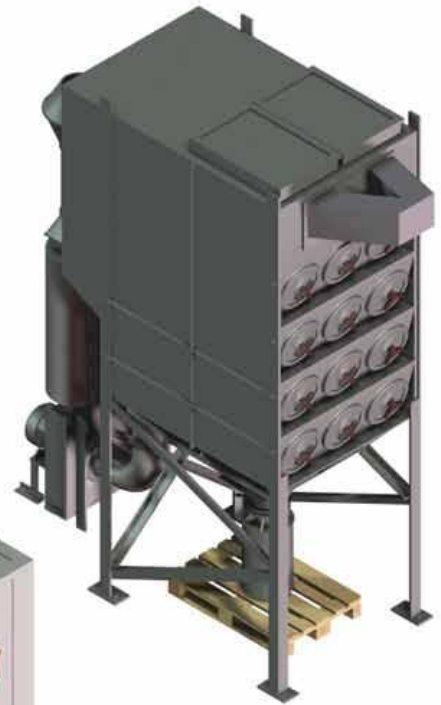
- ✦ LPG VAPOURIZER
- ✦ WATER COOLED JACKET (HYBRID)
- ✦ WATER JAM BOX
- ✦ EXTENSION NOZZLE
- ✦ GAS CYLINDER MANIFOLD
- ✦ AIR BLAST UNIT
- ✦ EXTRA LENGTH OF HOSES

# ROBOTIC THERMAL SPRAY CELL

During HVOF process, high noise level(>130 dBA) is generated. It is advisable to operate the system in sound proof booth (Acoustic Room) which protects both personnel and the environment. Shown below is a modern Thermal Spray Cell, complete with Robot & Turn Table. The sound level is reduced by 40 to 50 dBA.

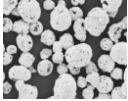
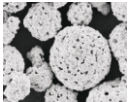
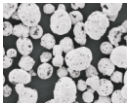


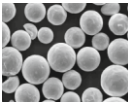
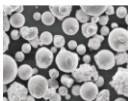
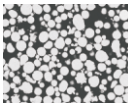
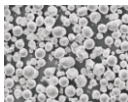
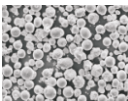
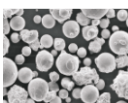
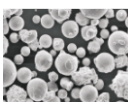
**Customize your spray system with gun and part manipulation equipment from AMST that includes robotic manipulators, turntables, vertical and horizontal traverses & more.**

**Specialized handling requirements ? No problem! We can custom design, fabricate and install exactly what you need.**



## HVOF POWDERS

Commonly used HVOF Powders are as under :

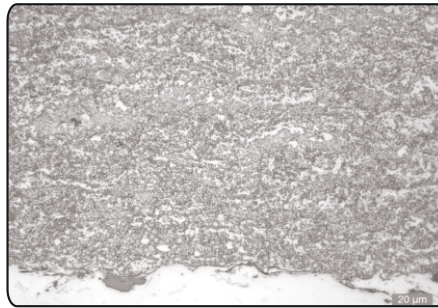
Morphology	Composition	Description
	WC - 12% Co	Agglomerated Sintered
	WC - 17% Co	Agglomerated Sintered
	WC - 10% Co - 4% Cr	Agglomerated Sintered
	Cr <sub>3</sub> C <sub>2</sub> - 25%NiCr	Agglomerated Sintered
	Cr <sub>3</sub> C <sub>2</sub> -20%NiCr	Agglomerated Sintered
	WC-20%CrC-7%Ni	Agglomerated Sintered
	NiCrBSi	Gas Atomised
	Inconel-718	Gas Atomised
	Stellite - 6	Gas Atomized
	Stellite - 12	Gas Atomized
	Ni-5%Al	Gas Atomized
	Hastalloy C276	Gas Atomized

## TYPICAL COATINGS

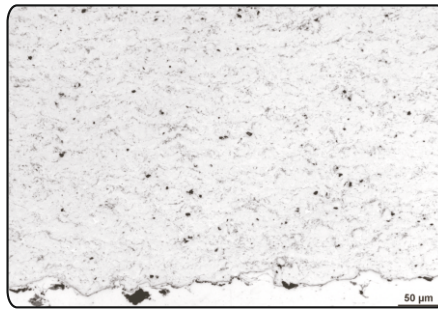
WC-12%Co



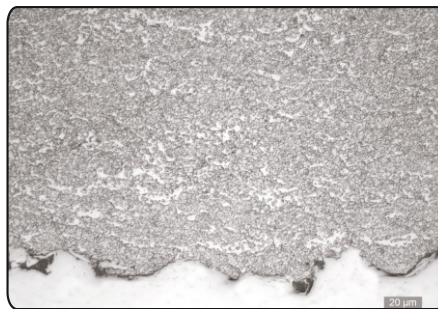
WC-10%Co-4%Cr



Cr<sub>3</sub>C<sub>2</sub>-25%NiCr



WC-17%Co

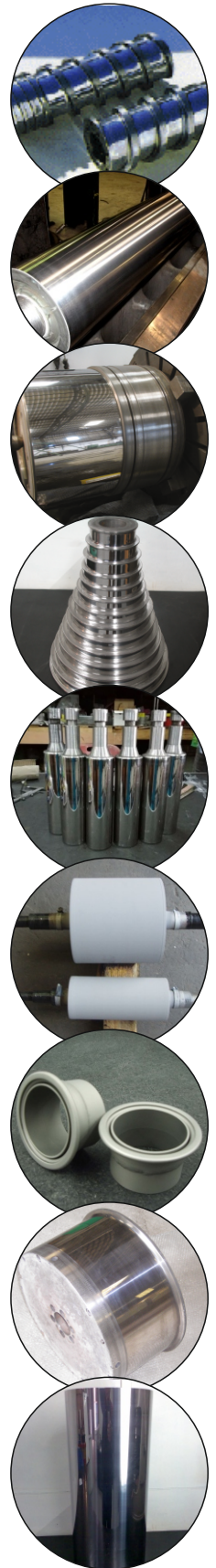


## COATING FEATURES

- ⊕ High Density (Low Porosity <1%)
- ⊕ Optimum Hardness (1250 VHN<sub>0.3</sub>)
- ⊕ Smooth (as-sprayed) Surface (3-5µmRa)
- ⊕ High Bond Strengths (above 10000 psi)
- ⊕ Excellent Wear Resistance
- ⊕ Reduced Oxide Content than Plasma Coating

#Depends on type of powder & parameters

## APPLICATIONS



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## World Surface Technologies Pte Ltd

Address : 42A Penjuru Road, Singapore 609164

Office: Level 6, Lobby 1

Workshop: Level 4, Bay 1

Tel: +65 6864 0960 | Fax: +65 6861 0965

Website: <http://www.wstgroup.sg/>

Email: [support@wstgroup.sg](mailto:support@wstgroup.sg)