Kymera® INTERNATIONAL | Metallisation thermal spray solutions

HALOJET™

REDEFINING
INTERNAL COATINGS
ONE REVOLUTION
AT A TIME.

BRINGING **TECHNOLOGY** TO THE **PART**

Eliminate cumbersome & costly part manipulation. HaloJet™ delivers precision & efficiency through its rotating torch.

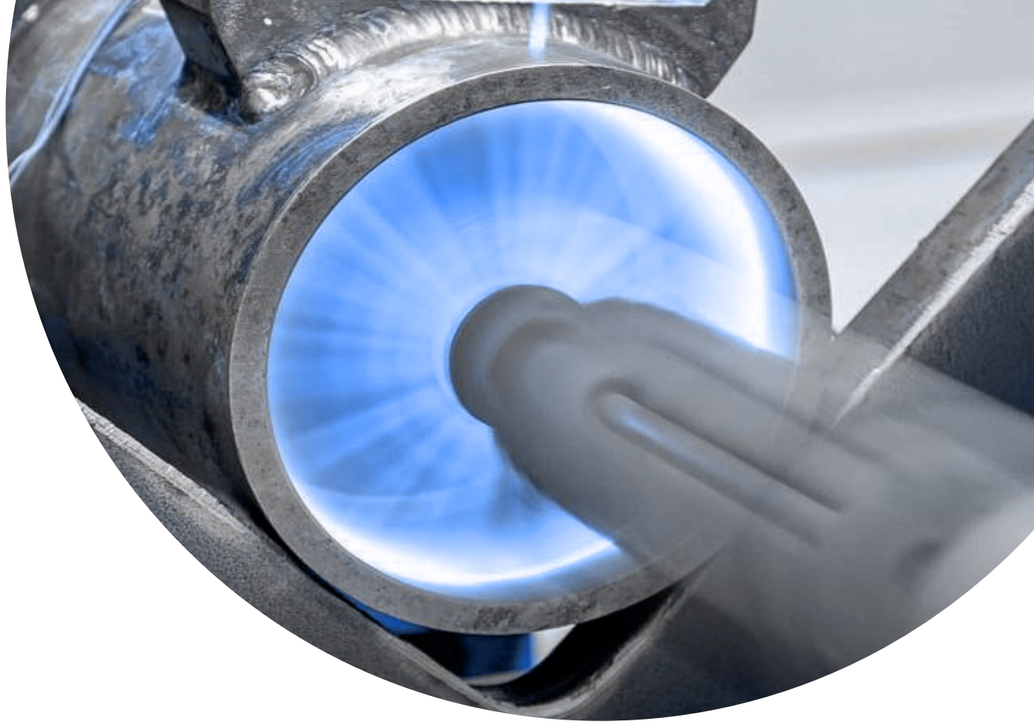
WHERE **INNOVATION** MEETS PERFORMANCE

Introducing the HaloJet™, a cutting-edge High Velocity Oxygen Fuel (HVOF) system from Metallisation, designed for precision coating applications in confined spaces. With the capability to operate in internal diameters as small as 63mm (2.5inches), the HaloJet™ ensures comprehensive coverage where traditional methods fall short. Its innovative fuel, gas, oxidiser, and combustion chamber geometry deliver superior coating quality with minimal pre- and post-surface treatment. Ideal for industries requiring durable and reliable coatings, the HaloJet™ exemplifies Metallisation's commitment to advancing thermal spray technology.

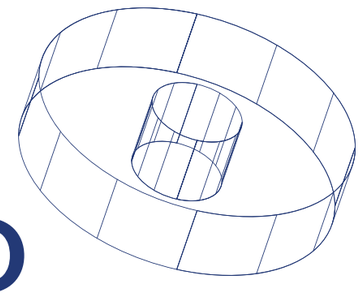
FASTER PREP, **GREATER** ACCURACY

With reduced setup time & improvement in operational efficiency, HaloJet™ is the perfect technology for high-precision applications.

THE HALOJET™ OFFERING



PRECISION COATINGS **REDEFINED**



The HaloJet™ system from Metallisation includes a comprehensive set of components designed for high-performance thermal spray coating.

At its core is the NanoGun, a compact, precision-engineered spray gun optimised for internal diameter (ID) and external surface coatings.

The Lance serves as the mechanical link between the NanoGun and the RotaryJet, which provides synchronised rotational motion to ensure uniform coating application.

This modular configuration houses the system's primary control and fuel management functions, working in tandem with the Electrical Panel to distribute power and regulate system operations.

A Human-Machine Interface touchscreen provides an intuitive user interface for monitoring and controlling the spray process in real-time.

Completing the system is the Powder Feeder, which precisely delivers coating materials into the spray stream, ensuring consistent powder flow rates for high-quality, uniform coatings. This modular configuration allows the HaloJet™ System to achieve superior coating performance while maintaining compliance with strict environmental and safety standards.

PRECISION, **PERFORMANCE**, CUSTOMISATION

CHOOSE THE PERFECT SOLUTION FOR YOUR NEEDS

HALOJET™

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HaloJet™ System Includes:

- HaloJet™ System Console
- HaloJet™ System Electrical Enclosure
- RotaryJet Cage
- HaloJet™ NanoGun
- Lance
- HaloJet™ Powder Feeder (5 litre)
- Ignitor Box Assembly

HALOJET-R

The HaloJet™ seamlessly integrates with robotic systems, enabling fully automated torch manipulation for precise and repeatable coatings. By synchronising torch rotation, spray parameters, and robotic movement, the system ensures uniform coverage in even the most confined spaces.

Includes all HaloJet™ features, plus:

- Foundry spec 6-axis robot
- 2.3m reach capacity
- HaloJet™ Integration
- Safety Circuit
- Operator Program Training
- Starter parts coded

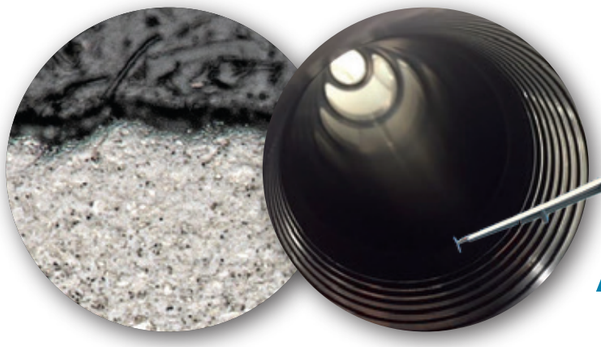
HALOJET-RS

When paired with a spray booth, the HaloJet™ delivers fully automated, precise coatings in a controlled environment. The booth captures overspray, manages fumes, and ensures uniform coverage as the robotic system manoeuvres the torch, maximising efficiency and consistency.

Includes all HaloJet™ and HaloJet-R features, plus:

- 75db(A) spray cell (5m x 4m x 3m)
- Extraction system
- Chiller Cooling systems
- Installation & Commissioning

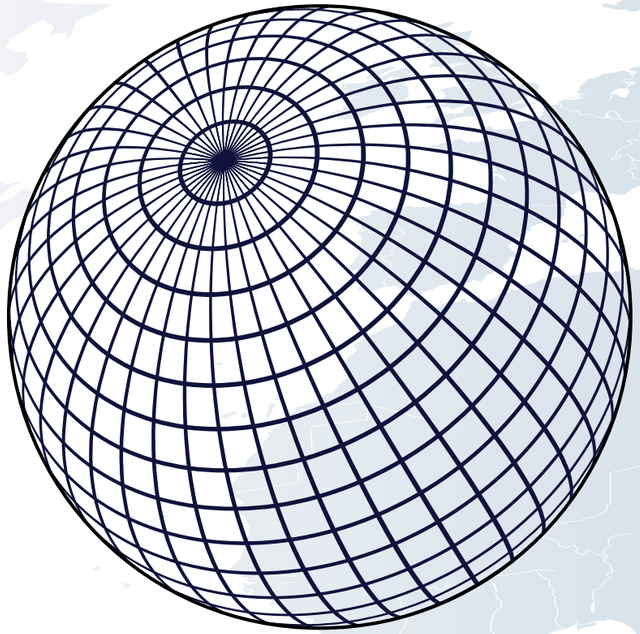
QUALITY **PROTECTION** PERFECTION



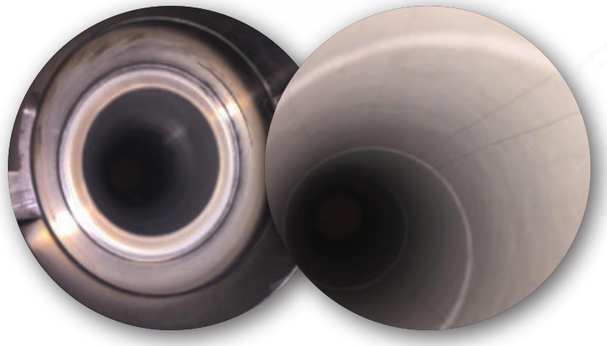
HaloJet™ WCCoCr Coating in a 3” ID

Cleaned HaloJet™ coated shock jar after 263 hours in service

AEROSPACE



OIL & **GAS**



Battery Insert after coating with HaloJet™ UHD ID HVOF

Close up of the Battery Insert after coating with HaloJet™ UHD ID HVOF

CERTIFIED **EXCELLENCE** | Approved for use in both Oil & Gas and Aerospace

GLOBAL REACH UNMATCHED **SUPPORT**

Metallisation offers a comprehensive support package for customers who purchase the HaloJet™, ensuring seamless integration, optimal performance, and long-term reliability. This package includes expert installation assistance, in-depth training for operators and maintenance personnel, and ongoing technical support to maximise system efficiency. Customers also benefit from access to spare parts, consumables, and regular software updates to keep their equipment operating at peak performance. Additionally, Metallisation provides remote diagnostics and on-site servicing options to minimise downtime and maintain productivity. With this robust support package, customers can confidently invest in the HaloJet™, knowing they have the backing of industry-leading expertise and service.

PRECISION **SOLUTIONS**
EXPERT GUIDANCE

WORLD CLASS APPLICATION ENGINEERING
PROVIDING CUTTING EDGE TURNKEY SOLUTIONS

Decades of **Expertise**

Identify
1 with the customer the basic project requirements & what would be considered a successful outcome. Complete any necessary non-disclosure.

Review
2 the process economics to ensure the basic principle is feasible (the detail of this increases as the project progresses).

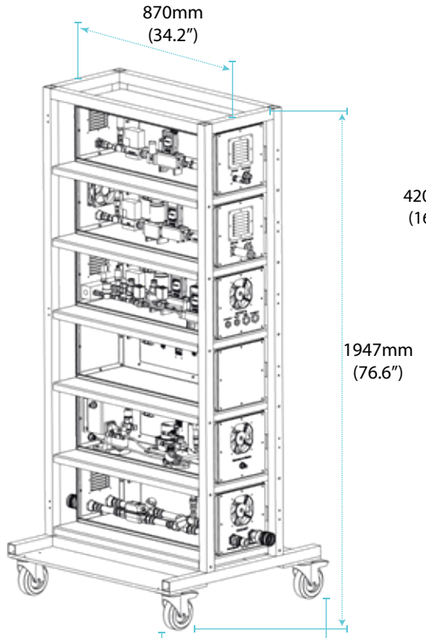
Develop
3 an application engineering program, clearly identifying the aim, method, resources, costs and expected data collection.

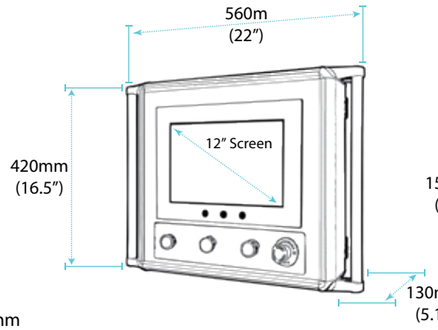
Undertake
4 the testing / process prove-out either independently or with the customer present. Record all agreed data and evaluate with the customer.

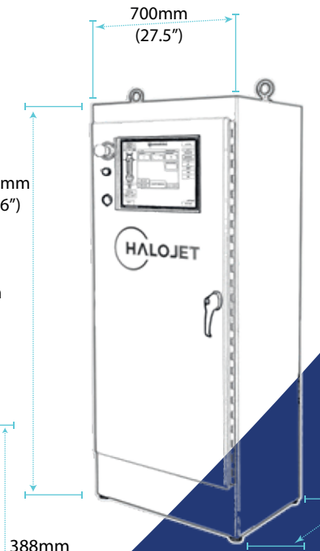
Identify
5 next steps, training program or prepare a turnkey solution to implement with the customer to apply the approved coating.

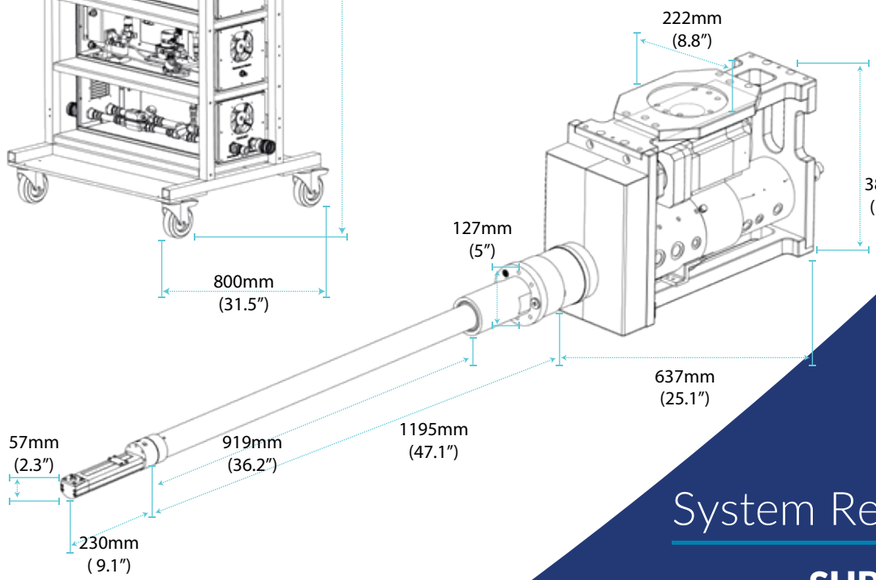
Perfected in our lab & tailored **for you**

TECHNICAL DATA





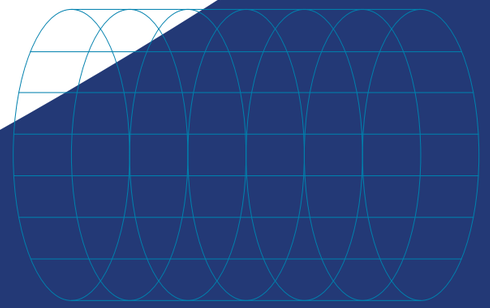




RotaryJet & Lance

Max depth: 1.5m

Max rotation speed: 300rpm



System Requirements

SUPPLIES

DESCRIPTION		CHARACTERISTICS
Regulated Gas Supply	Hydrogen	17-19 bar (250-275 psi)
	Oxygen	17-19 bar (250-275 psi)
	Nitrogen	17-19 bar (250-275 psi)
	Kerosene	0.7-1.4 bar (10-20 psi)
Water Supply for Chiller		Clean, distilled water (<10µS) Changed annually (minimum) Glycol added if operating in freezing temperatures
Water Chiller		Minimum 52kW (15 ton) cooling capacity Output: 19-27 lpm at 10-14 bar (5-7 gpm at 150-200 psi)

ELECTRICAL

DESCRIPTION		CHARACTERISTICS
Electrical	CONSOLE	380/480VAC, 3-phase, 20A, 50/60 Hz
	HMI	Powered by Electrical Panel

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