ID-NOVA™ PLATFORM · COMPACT HVOF TORCH

Mini-Nova™

HVOF Torch

Precision coating for internal diameters as small as 2.35″ (59.7 mm).

COMPACT REACH

Standard and high-angle elbows for hard-to-reach bores.



65 kW	2.35″	>70 %	>1000	<1 %
Rated power	Min. internal diameter (59.7 mm)	DE achieved (WC) typical ~65%	HV300 hardness (WC-CoCr)	Porosity, routinely (WC-CoCr)

OVERVIEW

The Mini-Nova™ HVOF torch enables high-efficiency internal diameter coatings down to 2.35″ (59.7 mm). Featuring axial powder injection, optimized gas dynamics and multiple elbow angle configurations, it delivers dense, high-hardness coatings with exceptional deposition efficiency — ideal for precision applications in aerospace, power generation and industrial components.

TECHNICAL SPECIFICATIONS

Rated power	**65 kW**
Gases	**Hydrogen (other fuel gases possible)**
Powder injection	**Axial feed**
Internal diameter reach	**2.35″ (59.7 mm)**
Deposition efficiency	**~65% typical, >70% achieved (WC)**
Surface finish	**Typical Ra ~2 µm (<1 µm achieved)**
Inconel 625	**0.2% porosity, ~100% DE, ~2 mm thick, 352±25 HV100gf**
Coatings	**WC-10Co4Cr, Cr_3C_2-NiCr, MCrAlYs; metals incl. aluminum, stainless steel, Ni and Ti alloys, hard-facing alloys**
Thickness	**Tens to hundreds of microns**

KEY FEATURES

- Coats internal diameters down to 2.35″ (59.7 mm)
- Axial powder injection: ~65% typical DE, >70% achieved (WC)
- Standard and high-angle elbows for extended spray reach
- Consistent coating quality: >1000 HV300, porosity <1% (WC-CoCr)
- Coating composition and properties tailored to customer needs
- Adaptable for Warm Spray with inert or nitrogen gas additions
- Compatible with the ID-Nova H2V controller and Pulsar rotation system

APPLICATIONS

01 **Aerospace MRO** — Landing gear, vanes and combustion parts.

02 **Power generation** — Turbine components and wear surfaces.

03 **Oil & gas tooling** — Internal downhole surfaces and pumps.

04 **Industrial & OEM** — Small-bore pipe systems and hard-to-reach surfaces.

05 **Hard chrome replacement** — Compliant with hexavalent chrome phase-outs.

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