

Liquid Fueled HVOF Technology

# CastoJet<sup>®</sup> CJK5



**INDUSTRY'S #1  
HVOF SYSTEM**

- Easy to use, intuitive to operate
- Kerosene fueled high pressure HVOF for high quality coatings
- Unlimited recording of process parameters for repeatable coatings
- Safe and Rapid start up saves fuel and time
- Simplified Maintenance
- Produces thick, low stressed coatings that are in compression



## Intuitive to Operate



The CastoJet® Kerosene 5 - CJK5 - is the latest Castolin Eutectic development of kerosene fuelled high pressure HVOF (High-Velocity Oxy-Fuel) systems. Using mass flow control for repeatable coating quality. The system produces the densest metallic and carbide coatings of all. The coatings can be compressively stressed, allowing thick layers to be applied without fear of spalling.

The latest developments are to the gun, powder feeder and operator interface. The operator interface is simple to follow using a touch screen interface. The powder feeder has mass flow controlled carrier gas and closed loop motor control for reliability and repeatability of powder feed rates.



The value is in the technology to make it intuitive to operate, to reduce operator errors, to simplify the maintenance and to obtain repeatable high quality coatings.

### Advantages

- High-pressure of the combustion chamber is typically at least double that of gas fuelled HVOF, what improves the gas speed of 20% over gas fuelled HVOF.
- Mass flow control of oxygen and carrier gas = repeatability.
- PC control with touch screen operator interface.
- Optional keyboard control or operator interface unit.
- Unlimited recipes and parameter recording.
- Low running costs compared with hydrogen fuel HVOF systems.
- High Bond strength and low porosity coatings.
- Manual or fully sequenced start-up, operation and shut-down.
- Hydrogen, Propylene, Propane or Kerosene start-up.
- Liquid fuel = thick, low stressed coatings.
- High hardness, low oxide level coatings

### Technical Data:

Typical Material	GPM (grams)	Deposit Efficiency (%)
TeroJet 55-575	70	50
TeroJet 55-586	70	49
TeroJet 55-583	70	45
TeroJet 55-588	70	45
TeroJet 55-125	70	47
TeroJet 55-396	70	48

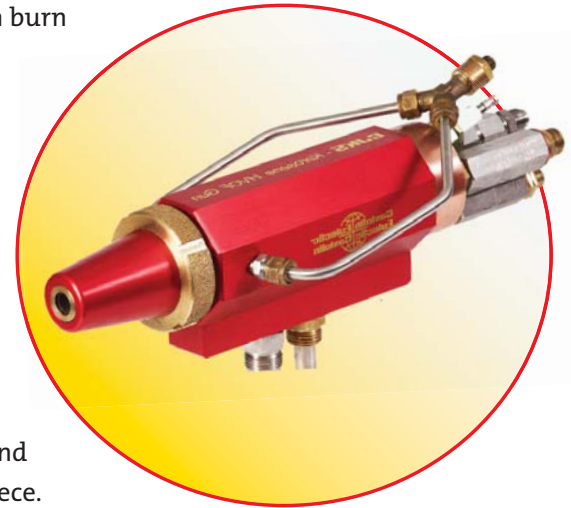
All figures are typical

### Typical applications:

- Hard chrome plating alternative
- CGL mill rolls
- Gas ball and gate valves
- Down hole tools used in the oil and gas industry
- Paper rolls
- Hydraulic rams
- Aircraft Landing gear
- Suspension components
- Hydro-electric turbines
- Automotive valves
- Wire drawing blocks

## CJK5 Torch Gun

- Optimized, single point fuel injection system to promote a complete, clean burn within the combustion chamber.
- Two nozzle lengths available, 100mm and 200mm enable a wide range of coating properties to be achieved from hard but ductile coatings to extremely hard but more brittle coatings.
- Very simple nozzle design reduces consumable spares costs.
- Simple gun maintenance for reduced downtime when changing consumables.
- Steel powder feed tubes for reliable operation – do not melt in operation.
- Robust chamber pressure transducer provides accurate feedback directly from the chamber.
- Propylene, Hydrogen, Kerosene or Propane pilot lighting = clean start-up and shutdown, minimizing fuel spray into the workshop and onto the work piece.
- Sturdy, robust design for long service life.
- Robot mounting interface.



Description	Characteristics
Weight JET4L-100	8.8 lb. (4 KG)
Dimensions	L 16" (400mm) x W 6.4" (160mm) x H 4.8" (120mm)
Weight JET4L-200	9.7 lb (4.4 KG)
Dimensions	L 20" (500mm) x W 6.4" (160mm) x H 4.8" (120mm)

## CJK5 Control System

The CJK5 control system is shown with the operator interface mounted onto the gas box for pictorial purposes only. In a typical installation, the gas box would be inside the spray booth. The powder feeder would either be inside or outside the spray booth. The operator interface would be outside the spray booth.



Description	Characteristics
Weight	44 lb. (20 KG)
Electrical supply	220/240v 1ph
Cooling requirements	Free air circulation
Dimensions	W-23.5" x D-7" x H-16.5" (W-590 x D-175 x H-410mm)

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