

# 9MB

## Plasma Spray Gun

### Introduction

**9MB plasma spray guns are well-known by the thermal spray industry for their reliability and are one of the most used plasma spray guns worldwide.**

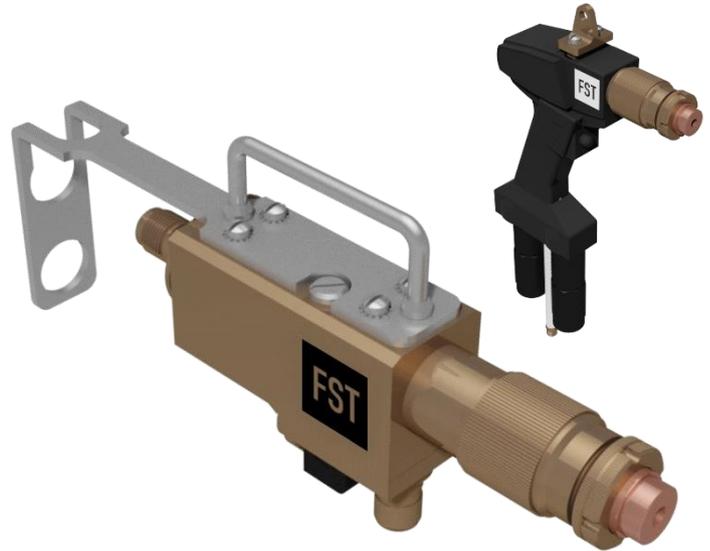
Designed and constructed with high performance hardware, 9MB plasma guns provide high kW range capability while offering extended component service life.

The guns have been carefully engineered to achieve optimum heat transfer through uniform distribution of the cooling water within the electrode and nozzle. This has resulted in the reduction of downtime, increased productivity, reduced maintenance and lower operating costs.

The 9MB is capable of depositing high-quality coatings of metal, metal alloys, carbides, composites, blends, cermets, abrasives and ceramic powders.

The 9MB is available in both machine mount (9MBM) and handheld (9MBH) configurations. Modular construction allows for easy maintenance of major gun components. Nozzles and electrodes are simple plug-in / pullout assemblies.

The 9MB is capable of operating efficiently with a single primary gas of pure argon or nitrogen and with multi-gas parameters of argon, nitrogen, hydrogen and helium.



### Features & benefits

- High power (80 kW @ 100% duty cycle)
- High heat output (up to 16000 °C)
- High plasma gas velocity (up to 3050 m / s)
- High particle velocities (up to 610 m / s)
- High spray rates – improved production time.
- Ease of operation, maintenance, and installation – ideally suited for general purpose and advanced coating applications
- The design of the electrode allows for water cooling into the critical tungsten tip area, resulting in improved electrode life.
- Long life gas insulators – fabricated from heat resistant ceramics, ensure durability and uniform gas flow at high power levels.
- Hardware design – allows easy replacement and changeover of nozzles, electrodes and gas insulator assemblies.
- Proven nozzle design – economical replacement cost.
- Dual Gas Capability – operates with either argon or nitrogen as the primary plasma gas.

**FST offers the following Plasma Controllers:**

- **MP-50 Fully automatic closed-loop multi-process thermal spray system. Available versions:**
  - ◆ MP-50 Professional
  - ◆ MP-50 Advanced
- **AP-50 Fully automatic closed-loop single process APS system. Available versions:**
  - ◆ AP-50 Basic
  - ◆ AP-50 Professional
  - ◆ AP-50 Advanced
- **AP-25 Semi-automatic single process APS system. Available versions:**
  - ◆ AP-25
  - ◆ AP-25i

**Specifications**

Description	Value 1	Value 2
<b>Power</b>	80 kW	
<b>Gas Purity</b>		
Argon	99.95%	Grade 3.5
Hydrogen	99.995%	Grade 4.5
Nitrogen	99.7%	Grade 2.7
Helium	99.995%	Grade 4.5
<b>Cooling Water</b>		
Inlet Temperature	15 – 25 °C	59 – 77 °F
Inlet Pressure	8 – 10 bar	115 – 145 psi
Flow	16 – 18 l / min	4.2 – 4.7 gal / min
Conductivity	< 5 µS / cm	
pH Value	6.6	
<b>Gun Weight (approx.)</b>	3.6 kg	7.9 lb
<b>Typical Deposit Efficiency</b>	40 – 75%	
<b>Typical Spray Rates</b>	40 – 80 g / min	

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