

METAL COAT

FLAME SPRAY POWDER GUN 6PM-II



**FLAME SPRAY POWDER GUN
6PM-II** for combustion powder
spray have been designed for
demanding, high-volume
production performance and
consistent coating results.
Suitable for coating of
hardfacing alloys, ceramics,
metals and carbides.

FLAME SPRAY POWDER SPRAY GUN 6PM-II

The 6PM-II spray guns can be used to apply premium coatings to solve many surface problems including machine element repairs, dimensional restoration, corrosion protection, abrasives and wear resistance.

Economical to operate, the 6PM-II series guns have high spray rates with low gas consumption and high deposit efficiencies can be achieved. These guns are also simple to learn to operate and maintain.

The 6PM-II gun series is suitable for all purpose use in that it can apply a wide range of coating materials such as self-fluxing alloys, ceramics, self-bonding materials and conventional materials such as steels, stainless steels, bronze, aluminum and nickel alloys.

A consistent and accurate supply of powder is fed from the MPF-700 Powder Feeder to the gun allowing you to mount or manually spray in virtually any position without affecting the powder feed rates.

Specifications

Size

270 mm (L)
210 mm (H)
125 mm (W)

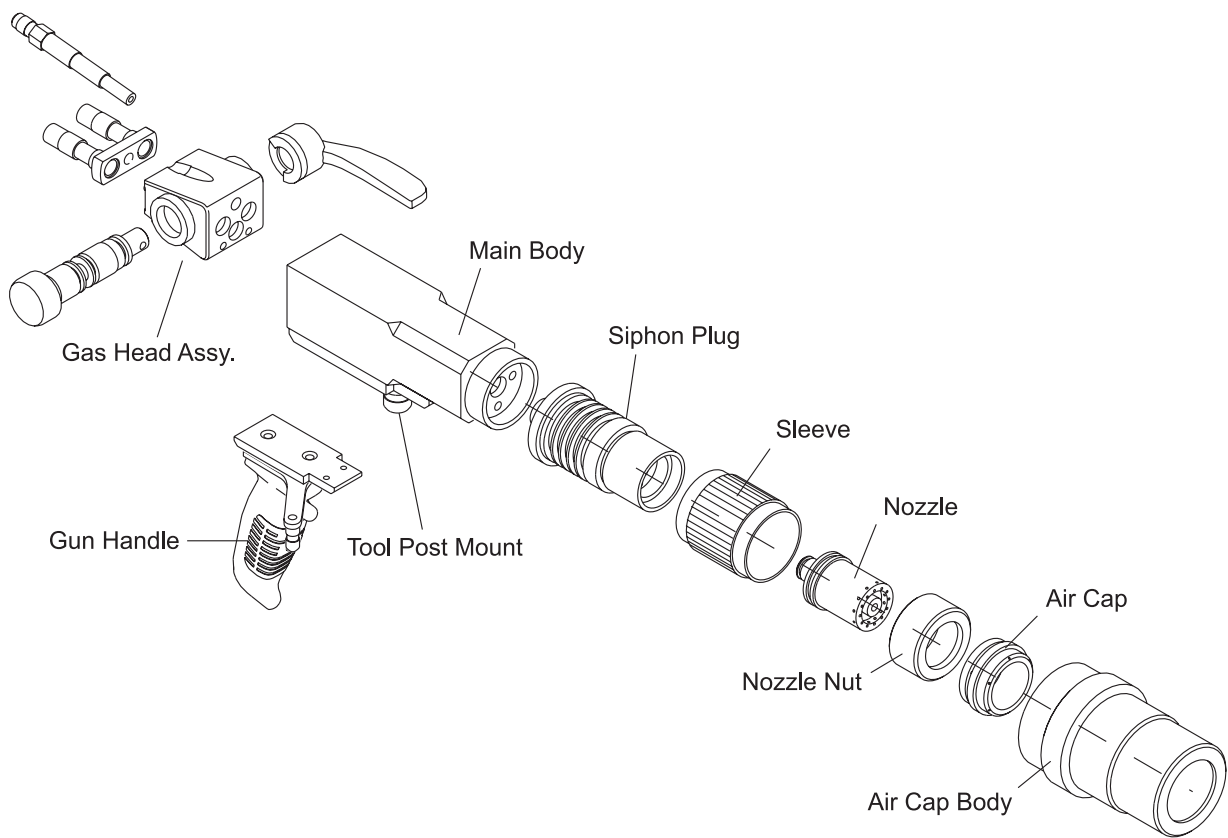
Weight

Approx.
without hoses 1.650 Kg.

Gases Consumption

Acetylene	20 to 34 NLPM
Hydrogen	108 to 170 NLPM
Oxygen	20 to 45 NLPM
Compressed Air	0.85 m3/min at 4.5 bar

Note: Flame Spray Powder Gun 6PM-II supplied with complete kit having spark lighter, valve lube, spare nozzle air cap, o-rings, tool post fixture & instruction manual.



FLAME SPRAY POWDER SPRAY GUN 6PM-II

The 6PM-II can be used with either acetylene or hydrogen as the fuel gas. Hydrogen is recommended when spraying finer powder materials. A siphon plug system mixes the fuel and oxygen gases in precise volumetric proportions at the gun to provide consistent operation and prevents the possibility of backfire. Two siphon plugs are provided – a standard plug used with the majority of spray materials and a second designed for high spray rate operations with ceramic and self-bonding materials.

Air caps supplied with the gun appropriately shape the flame for different applications. The standard air cap, used for most coatings, provides divergent gun cooling air that will not interfere with the flame or spray stream. A reversible air cap can be used to create a parallel air flow to cool the workpiece or as a convergent pinch air flow for use with fine materials, to increase the spray

efficiency of certain materials, such as carbides, or to obtain cleaner, brighter coatings produced from self fluxing alloys.

The specially designed high performance nozzle, accelerates spray powders efficiently by feeding the powders directly into the flame centre of gun & gives the consistent deposition efficiency for varied spraying.



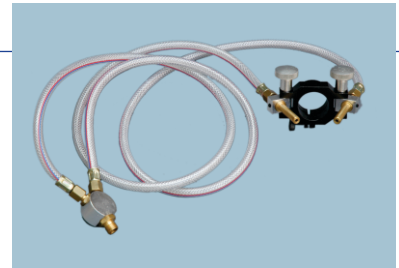
SPECIAL FEATURES

- Rugged design: built for long service life with limited maintenance.
- Simple operation: requires minimal operator training.
- Wide range of coating materials: can be used for a variety of surfacing applications, including ceramic materials.
- Choice of fuel gas: allows spray operations to choose between acetylene or hydrogen.
- High spray rates and deposit efficiencies: applies coatings quickly and economically.
- Light weight and well-balanced: designed for handheld operation, unloaded canister and without hoses, with a comfortable 'pistol grip' handle design, and machine-mount models that can be used with smaller, less costly robots and traverses.
- Smooth, gravimetric powder feed: guns may be used in any position, even upside down, with consistent results.
- Simple powder feed start / stop: via trigger on hand-held model.
- On-board gas valve: for simple process gas flow start and stop.
- Mounting stud: for machine mounted operation'.
- O-ring seals between nozzle and siphon plug: ensures safe and reliable operation without the risk of backfire and simplifies gun maintenance.
- Choice of air caps: optimizes cooling during spray operations for a variety of coatings.
- Simple maintenance and hardware changeover: the nozzle and siphon plug assemblies can be easily removed and replaced without additional tools.

STANDARD ACCESSORIES

Air Jet Assembly

If additional workpiece cooling is required or if denser, harder coatings are desirable, the 2PSA Air Jet Assembly is available. Designed for attachment to the front of the 6P-II gun, it injects high velocity air into the spray stream. Adjustable cooling tubes can be focused towards any part of the spray stream or directly onto the workpiece.



Gas Control Unit

Consisting of precision two stage regulators for regulative oxygen and fuel gas supply to gun.



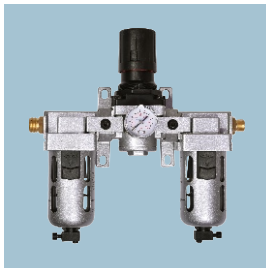
2GFM Gas Flow Meter

Use for measuring the flow of Oxygen and Fuel gas and also prevent back fire.



Air Control Unit

Consist of Air regulator with pressure gauge and dual air filter for regulating compressed air supply to the gun.



Hose Kit

Standard length of High pressure hose for oxygen and fuel gas to connect the gun with Gas Control Unit.

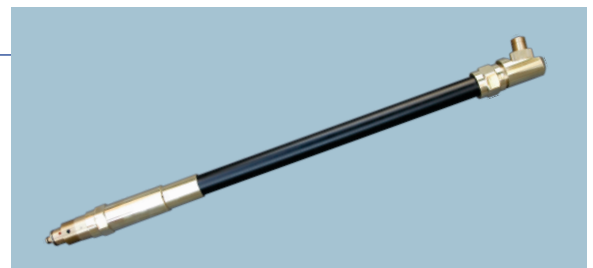


Extension Nozzle

The extensions come in 1 or 2 feet lengths, can be fitted with 80 or 45° angular gas heads. Typical uses are internal diameter or hard to reach coating surfaces. Installation is simple by removing the Air Cap Body and Siphon plug and replacing with the extension. This can be done in about 1 - 2 minutes without tools.

305mm - 1 Feet

610mm - 2 Feet



POWDER FEEDER - MPF-700

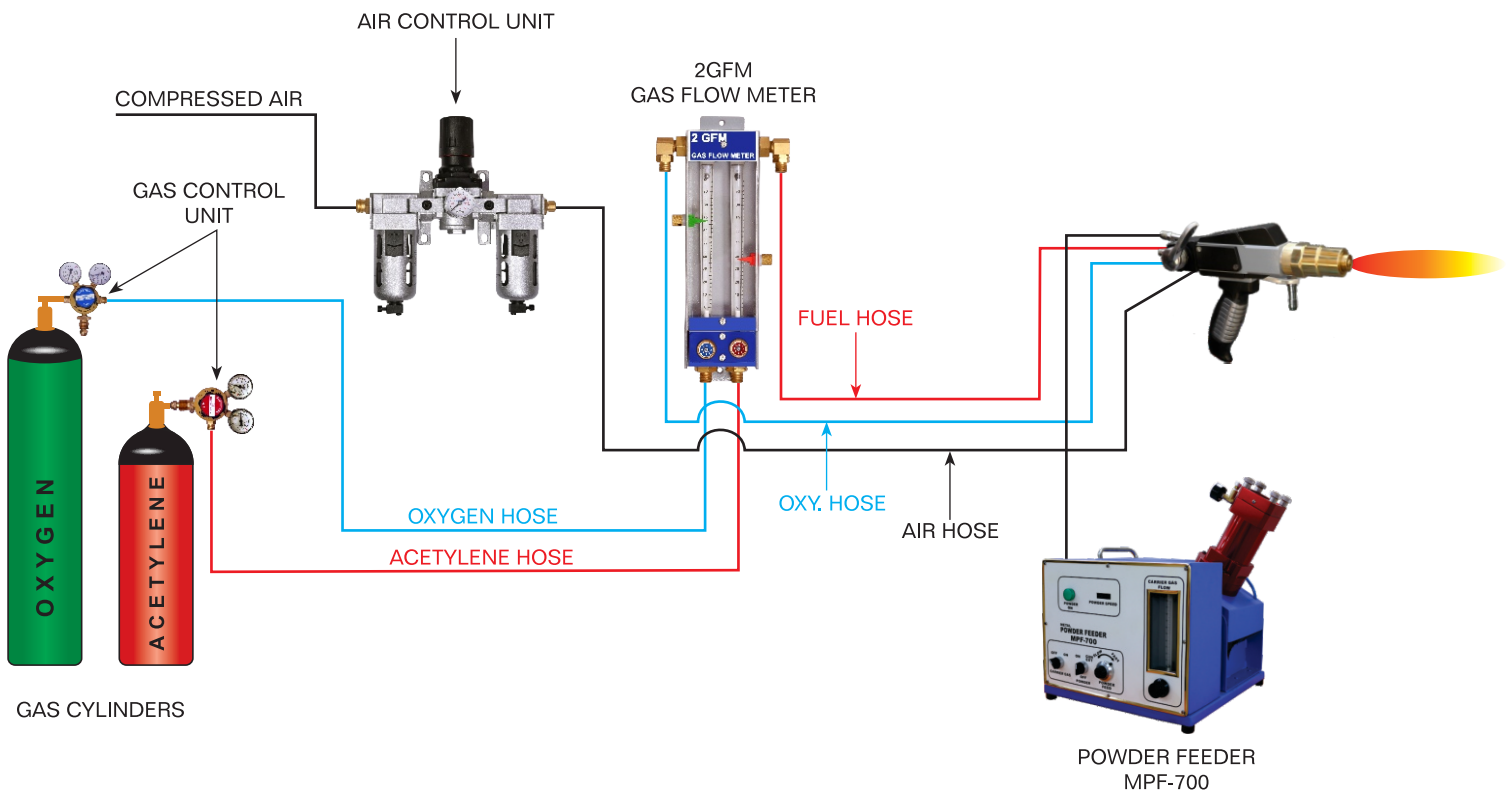
Powder Feeder works on pressurization & constant volumetric feed principal. Ideally suited for production, job-shop and research. It has a variable AC Drive fitted with digital RPM display. During operation, the powder is gravity fed into the slots of the rotating disk through which controlled quantity of the powder is pushed into the powder feed hose by the carrier gas Nitrogen. The power feed rate is directly proportional to the powder disc RPM which can be controlled by a pot on the front panel. A safety valve is provided to release high canister pressure. All electrical cables and a 3 Meter powder feed hose are supplied.

FEATURES:

- Feed Rate from 1 RPM to 29 RPM
- Disc RPM Display.
- Remote or Local Powder Feed control selectable
- High Pressure Safety Valve.
- Sensor less vector control technology for accurate RPM Control
- Canister Capacity : 700 Cm3



Flame Spray Powder Gun 6PM-II Installation



PROPERTIES OF COATING POWDERS

When a material is flame-sprayed, a new & different material is created. This is why quality of coating depends upon quality of powder. A slight variation in powder chemistry can greatly influence the property of final coating. The particle size distribution in a powder can affect the density and porosity of the coating. Our Powders meet tough standards on chemical composition, particle shape & size, flow rate & purity. The following are few powders most commonly used.

Nickel Aluminium Alloy

(A) Ni-Al 95/5

Nickle Aluminium composite that reacts exothermically during spraying. General purpose Bond Coat. Produces dense & self bonding coating. Good resistance to thermal shock & oxidation. Hardness : 75 R

(B) Ni-Al-Mo 95/5/5

Nickle-Aluminium-molybdenum composite, for general purpose for medium hard coating for hard bearing and wear resistant applications. Coating is tough & can withstand impact. HARDNESS : 75 R

Nickel Based Self Fluxing Alloy

(A) Ni-Cr-Fe-Si-B

Nickle based self fluxing alloy. Produces hard, dense and pore free coating that is fusible. Good resistance to corrosion & wear by abrasive grains, hard surfaces, particle erosion, fretting & cavitation. Easy to fuse & will not crack even in thick build up. HARDNESS: 60 R

Ceramic Powders

(A) $\text{Al}_2\text{O}_3\text{-TiO}_2$ 97/3

Aluminium-Titania (97/3) powder for good wear resistance to abrasion & erosion. It can be used in many environments including most acids and alkalies. Hardness : 50 R

(B) $\text{Al}_2\text{O}_2\text{-TiO}_2$ 60/40

Contains 60% aluminium oxide & balance titanium oxide for highly abrasion resistant coating with good corrosion resistance. It can be used for thread guide to resist abrasive fibers. HARDNESS : 60 R

(C) Cr_2O_3

Pure chromium oxide powder, suitable for wear due to abrasion, corrosion, oxidation, fretting or erosion resistance coating. Coating will be dense and can be used on pump seal areas, ground rolls and wear rings. HARDNESS : 60 R

TYPICAL SPRAYING RATE OF 6PM-II GUN

Powder	Spray Rate (Kg/Hr)	Deposit Efficiency
Ceramics	0.9 Kg/hr	25 - 75%
Metallic	2.7 Kg/hr	80 - 90%
Self Fluxing	9.1 Kg/hr	85 - 95%

Depends upon powder composition & particle size.
Above parameters are only for guidance.

SAFETY WEARS

Metallizing Helmet

Light weight & comfortable with excellent vision. Supplied from a separate air supply which should be filtered by Helmet Air Conditioner.



Air Breather

This is installed in between compressed air line originating from fitting to the operators helmets. Activated charcoal is contained in the breather unit which separates the oil traces from the compressed air and clean compressed air is fed to the operator's helmet.



Helmet Air Conditioner

Air from the air breather is fed to the helmet air conditioner and air is conditioned before it is fed to the helmet for breathing. It has also a regulator knob so that the operator can regulate the temperature of air fed to the helmet. It is self driven and doesn't need external power.



Ear Muff

Light weight & comfortable. Operator & other personnel close to the spray operation must wear. Protect the operator from noise originating during thermal spray.



Protective Glass

Light weight & comfortable with excellent vision. Operator & other personnel close to the spray operation must wear.



Operator Safety Mask

Ensure clean breathing air at all times. Conforms to current legislation on breathing air quality.



Hand Gloves

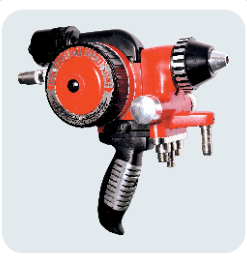
These are made of rubber and have anti-static properties. Hand gloves protect the operators' hand against flying abrasive and static charge if any.



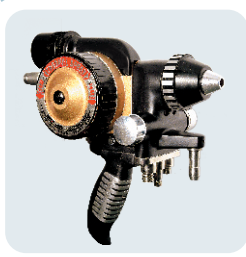
OTHER PRODUCT RANGE



12M
WIRE FLAME SPRAY GUN



11M
WIRE FLAME SPRAY GUN



14M
WIRE FLAME SPRAY GUN



5KM
WIRE FLAME SPRAY GUN



ARC SPRAY GUN
(AIR DRIVE)



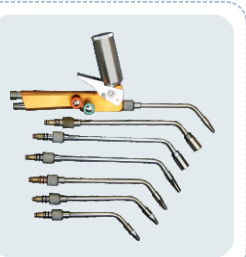
ARC SPRAY GUN
(AC DRIVE)



ARC SPRAY GUN
(DC DRIVE)



5PM-II
POWDER SPRAY GUN



ST-100
SPRAY & FUSE GUN

H.O. & Works:

METAL COAT

B-43, 44, 45, 46, Industrial Estate
Jodhpur - 342 003 (Rajasthan) INDIA

+91 93140 28848

+91 98290 27807

+91-291-2641325

metalcoat291@yahoo.in

sales@metalcoat.co.in

www.metalcoat.co.in