

POWDER FLAME SPRAY

5PM-II Powder Flame Spray Gun

Compact handheld powder flame spray equipment with retained operating and product details.



SPRAY GUN

Product document

VERIFIED

Source retained

LIVE LINKS

Website and support

WORLDWIDE

Direct supply

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[OPEN PRODUCT ON BUSPRAY.COM](https://www.buspray.com)



FLAME SPRAY POWDER GUN 5PM-II



The 5PM-II Combustion Powder Spray Gun is a compact and lightweight handheld unit designed with a built-in powder canister, eliminating the need for an external powder feeder. Easy to operate and maintain, it is well-suited for occasional thermal spray applications, making it an excellent option for entry-level combustion powder spraying requirements.

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FLAME SPRAY POWDER SPRAY GUN 5PM-II

The 5PM-II Combustion Powder Spray Gun is a highly economical and versatile handheld tool designed for applying coatings across a wide range of applications, including surface repairs, dimensional restoration, corrosion protection, and wear resistance. Featuring an integrated powder feed canister, the 5PM-II eliminates the need for an external feeder, making it an excellent solution for shops with occasional surfacing requirements or those seeking a cost-effective thermal spray system.

Engineered for all-purpose use, the 5PM-II can apply a broad spectrum of coating materials, such as self-fluxing alloys, ceramics, self-bonding materials, as well as conventional metals including steels, stainless steels, bronze, aluminum-based, and nickel-based alloys.

Lightweight and ergonomically designed with a pistol-grip handle, the gun ensures operator comfort and safety during handheld use. For added flexibility, it also includes a tool post fixture, allowing the gun to be safely rested during workpiece changes or mounted for machine-assisted operation.

Specifications

Size

310 mm (L)
305 mm (H)
125 mm (W)

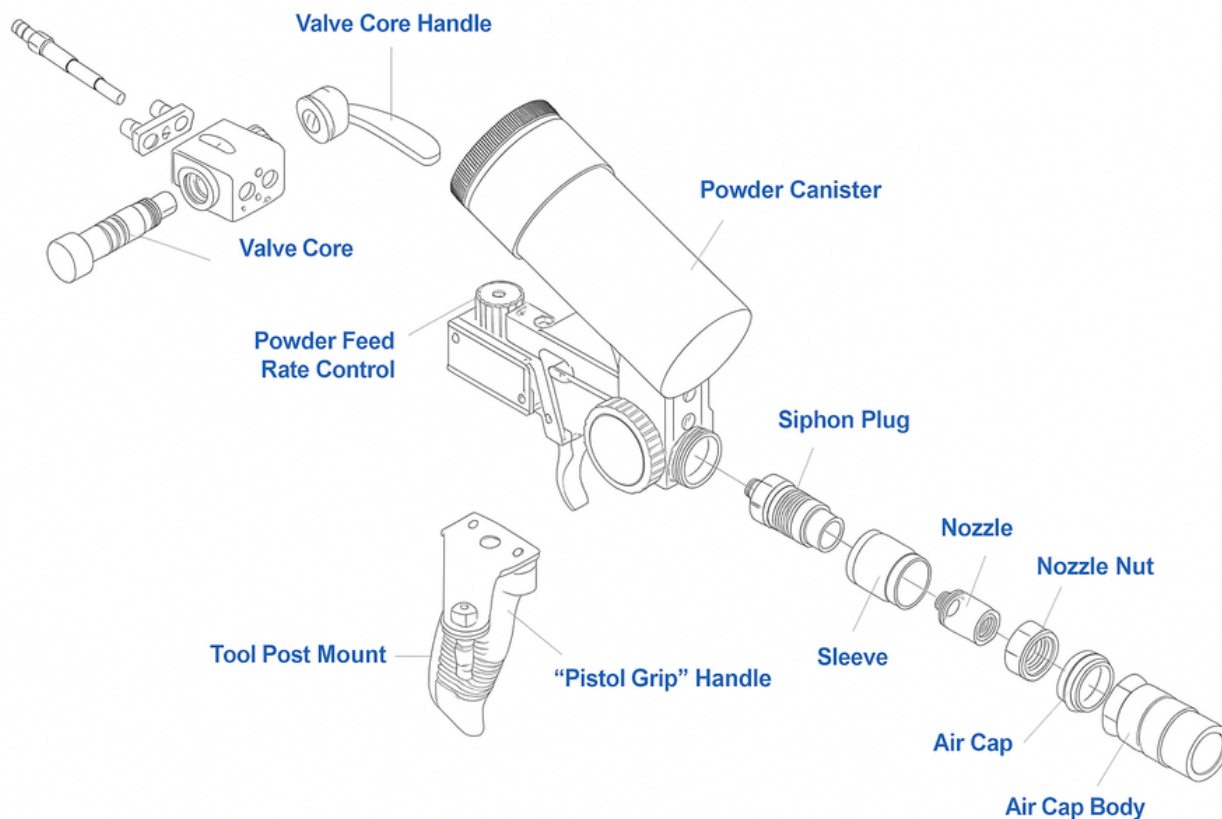
Weight

Approx.
without hoses &
empty powder canister 2 Kg.

Gases Consumption

Acetylene	13.5 to 31.5 NLPM
Hydrogen	90 to 144 NLPM
Oxygen	20 to 45 NLPM
Compressed air	0.85 m ³ /min at 4.5 bar

Note: The Flame Spray Powder Gun 5PM-II is supplied as a complete kit, including a spark lighter, valve lubricant, spare nozzle O-rings, air cap, tool post fixture, and an instruction manual.



FLAME SPRAY POWDER SPRAY GUN 5PM-II

The 5PM-II is designed for ease of use, featuring a trigger mechanism that starts and stops the powder flow, along with an onboard adjustment knob to regulate the feed rate. A built-in gas valve controls the flow of oxygen and fuel gas, allowing precise operation.

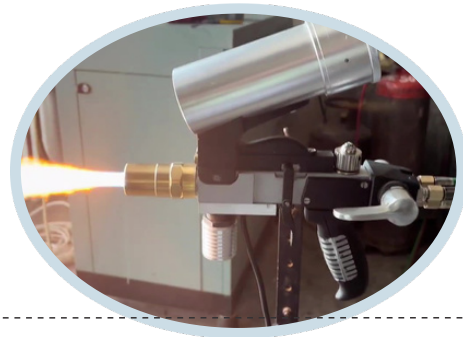
The gun is compatible with both acetylene and hydrogen, with hydrogen recommended for spraying finer powder materials.

The integrated powder canister employs a gravimetric aspiration feed system that is rugged, reliable, and angled to provide balanced weight distribution for comfortable manual operation. Additionally,

a siphon plug system ensures precise mixing of fuel and oxygen gases in correct volumetric proportions, delivering consistent performance while preventing backfire.

The 5PM-II is supplied with interchangeable air caps that shape the flame to suit different applications. The standard air cap, suitable for most coatings, directs divergent cooling air around the gun without disturbing the flame or spray stream.

For specialized requirements, a reversible air cap can be used to generate either a parallel airflow for workpiece cooling or a convergent pinch airflow for fine materials. This enhances spray efficiency with hard coatings such as carbides and produces cleaner, brighter finishes when applying self-fluxing alloys.



SPECIAL FEATURES

- Rugged construction: Engineered for long service life with minimal maintenance.
- Easy to operate: Requires little training for reliable use.
Versatile coating capability: Suitable for a wide range of materials, including ceramics.
- Fuel gas flexibility: Can operate with either acetylene or hydrogen.
- High efficiency: Delivers fast spray rates and excellent deposit efficiency for cost-effective coatings.
- Lightweight, ergonomic design: Well-balanced with a comfortable pistol-grip handle for handheld use (unloaded canister, without hoses).
- Integrated powder canister: Eliminates the need for an external powder feeder.
- Consistent performance: Smooth powder feed ensures uniform, high-quality coatings.
- Powder flow control knob: Conveniently mounted on the gun for easy feed rate adjustment.
- Powder feed trigger: Enables simple start and stop of powder flow.
- Secure canister mount: Bayonet-style lock keeps the powder canister tightly in place to prevent spills.
- Mounting stud: Allows machine-mounted operation or serves as a stable rest during workpiece changeover.
- Reliable sealing: O-ring seals between the nozzle and siphon plug ensure safe operation, prevent backfire, and simplify maintenance.
- Interchangeable air caps: Provide optimized cooling and flame shaping for a wide range of coatings.
- Onboard gas valve: Simple control for starting and stopping oxygen and fuel gas flow.
- Easy maintenance: Nozzle and siphon plug assemblies can be quickly removed and replaced without special tools.

STANDARD ACCESSORIES

Air Jet Assembly

For applications requiring extra workpiece cooling or denser, harder coatings, the 2PSA Air Jet Assembly is available. Designed to attach to the front of the 5PM-II gun, it injects high-velocity air into the spray stream. The adjustable cooling tubes can be directed toward any part of the spray stream or focused directly on the workpiece for optimal results.



Vibrator

For spraying fine or non-free-flowing powders, the 5PVM Vibrator is available. It is offered in single-phase models, compatible with either 220V AC or 110V AC power supply.



Gas Control Unit

Equipped with precision two-stage regulators for reliable, finely tuned oxygen and fuel-gas delivery to the gun.



2GFM Gas Flow Meter

Used to measure the flow rates of oxygen and fuel gas and to prevent backfire, ensuring safe and consistent operation.



Air Control Unit

Air regulator with pressure gauge and dual air filter for controlling the gun's compressed-air supply.



Hose Kit

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



Extension Nozzle

Extension Nozzle for the 5PM-II gun permit coating of interior bore diameters and surfaces, and are available in three standard lengths:

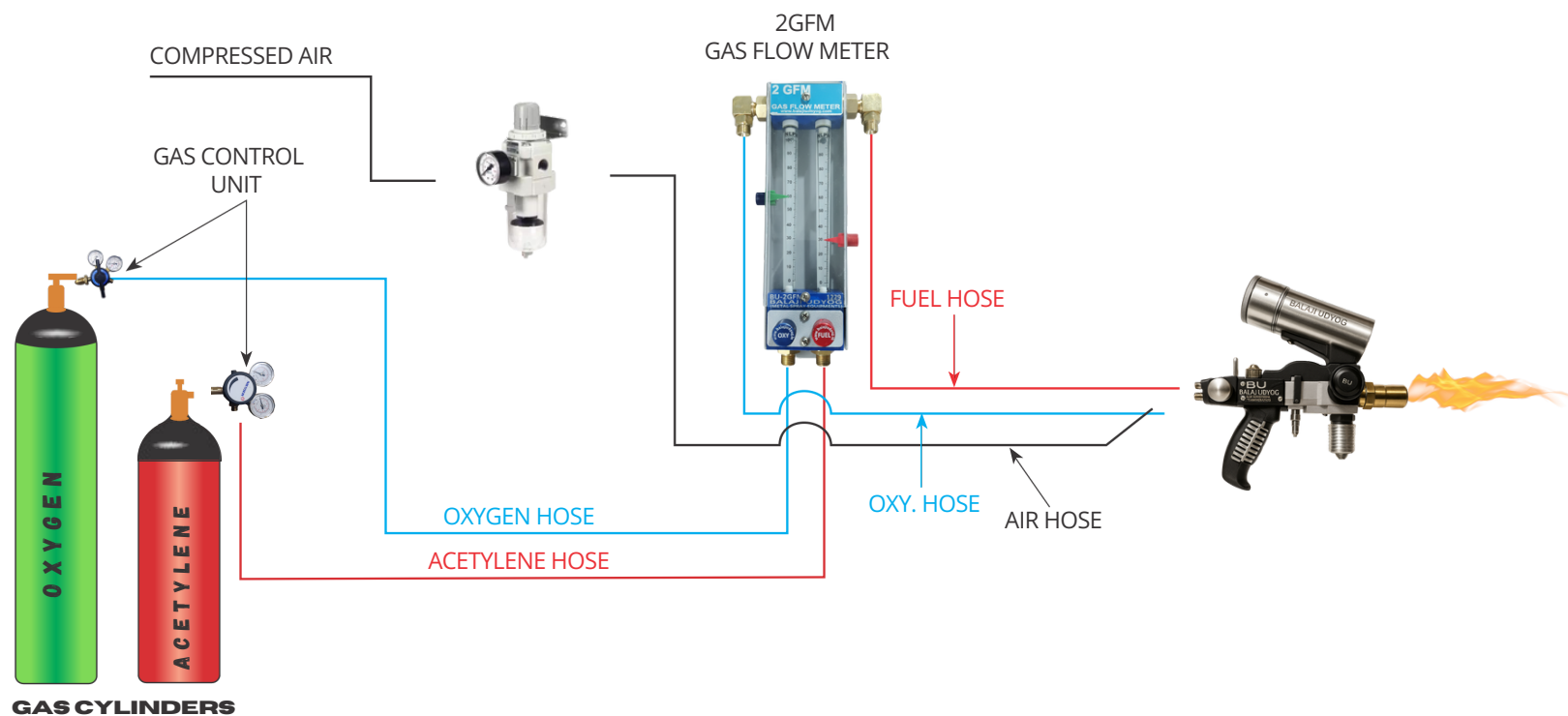
305mm - 1 Feet

610mm - 2 Feet

910mm - 3 Feet



METAL POWDER SPRAY GUN 5PM-II INSTALLATION



PROPERTIES OF COATING POWDERS

When a material is flame-sprayed, it transforms into a new and distinct material, which is why the quality of the coating is directly dependent on the quality of the powder. Even minor variations in powder chemistry can significantly affect the properties of the final coating. Likewise, particle size distribution plays a crucial role, influencing coating density and porosity.

Our powders are manufactured to meet stringent standards of chemical composition, particle shape and size, flow rate, and purity. Below are some of the most commonly used powders.

Nickel Aluminium Alloy

(A) Ni-Al 95/5

Nickel-Aluminum Composite

- Reacts exothermically during spraying
- General-purpose bond coat
- Produces dense, self-bonding coatings
- Excellent resistance to thermal shock and oxidation
- Hardness: ~75 R

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

Nickel-Aluminum-Molybdenum Composite

- General-purpose material for medium-hard coatings
- Suitable for hard-bearing and wear-resistant applications
- Produces tough coatings capable of withstanding impact
- Hardness: ~75 R

Nickel Based Self Fluxing Alloy

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

Nickel-Based Self-Fluxing Alloy

- Produces hard, dense, pore-free, and fusible coatings
- Excellent resistance to corrosion, abrasion, particle erosion, fretting, and cavitation
- Easily fusible and resistant to cracking, even in thick buildups
- Hardness: ~60 R

Ceramic Powders

(A) Al₂O₃-TiO₂ 97/3

Aluminum-Titania (97/3) powder offers excellent wear resistance against abrasion and erosion and can be used in a wide range of environments, including most acids and alkalies, with a hardness of approximately 50 R.

(B) Al₂O₂-TiO₂ 60/40

This powder contains 60% aluminum oxide and the balance titanium oxide, providing highly abrasion-resistant coatings with good corrosion resistance. It is suitable for applications such as thread guides to withstand abrasive fibers, with a hardness of approximately 60 R.

(C) Cr₂O₃

Pure chromium oxide powder is ideal for coatings requiring resistance to abrasion, corrosion, oxidation, fretting, or erosion. It produces dense coatings suitable for applications such as pump seal areas, ground rolls, and wear rings, with a hardness of approximately 60 R.

TYPICAL SPRAYING RATE OF 5PM-II GUN

Powder	Spray Rate (Kg/Hr)
Ni-Cr Self Fluxing Alloy	08
Cobalt Based Self Fluxing Alloy	08
Ni-Al Alloy	2.7
Alumina-Titania	1.2
Chromium Oxide	1.2

SAFETY WEARS FOR METALLIZING

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 contained 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.



PRICE- 2600/-

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.



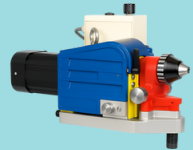
OTHER PRODUCT RANGE



12M
WIRE FLAME SPRAY GUN



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)



6PM-II
POWDER SPRAY GUN



ST-100
SPRAY & FUSE GUN

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