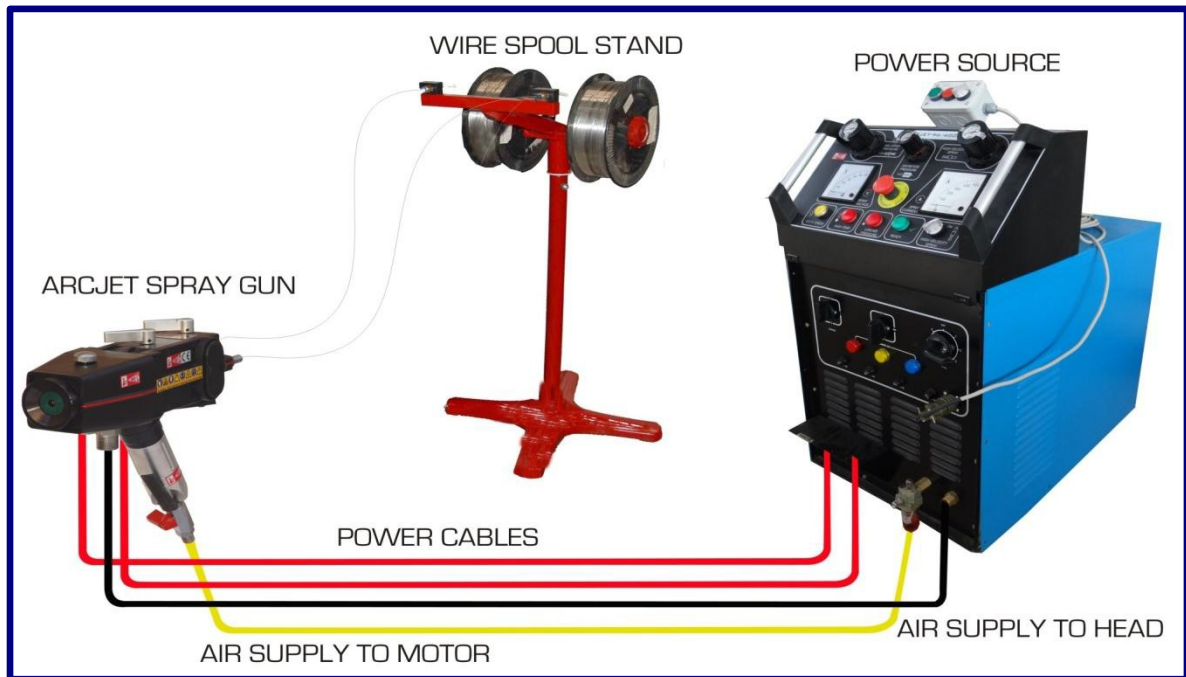




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TWIN WIRE ARC SPRAY SYSTEM, MODEL: ARCJET[®]-99/600



EQUIPMENT DESCRIPTION :

The Arc Spray Unit; Model : 99/600 combines typical features of the arc spray technology such as reliability and robustness with the highest demands for process control and system compatibility of modern arc spray technology.

The Arc Spray Unit; Model : 99/600 is designed to process all conductive wires relevant to thermal spray, solid wires and cored wires.

New technology for the power supply is combination with the highly accurate wire feed and the controlled air cap geometry allows controlled and uniform energy transfer on to the wire material. This allows the energy transfer to be adapted to the needs of the applications.

Arc Spray Unit; Model : 99/600 is a New Generation High Velocity Arc Spray (HVAS) Technique which has great opportunities where near porosity free high quality coating at the most economical cost in the engineering design are required.



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In comparison with other arc spray equipment, the Arc Spray Unit; Model : 99/600 concept enables the user to process wires at decreased voltage level.

Simple and low cost operation, with infrequent consumption of spare parts and high reliability in continuous application are key design components of the Arc Spray Unit.

OPERATING PRINCIPLE & SPECIFICATION :

The Arcjet-99 Metallizing Gun utilizes electrical energy to melt a metal and compressed air to atomize with high velocity and project the molten metal in a super fine spray on to a prepared work surface. During operation, an electric arc is maintained between two metal consumable wires.

The wires are continuously fed to the arc position by a drive mechanism operated by an Air motor. Metal wires are melted by the head compressed air directed across the arc. Wires are fed at a small-included angle between them, (about 30°) to get a narrow spray pattern.

A narrow angle also increases the cross sectional area of the wire tips exposed to the arc. This allows wires to absorb more heat and maintains a more stable arc.

SPECIFICATIONS :

Power Source

Supply Voltage	415 V max.
Main Supply	3 Phase, 60 Hz
Max. Capacity	25 KW
Open Circuit Voltage	19 – 56 V
Current	600 Amps at 75% duty cycle. 450 Amps for continuous operation

Fuses

Control	05 Amps
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Max. Ambient Temp. to which the ratings apply	40 Deg. C
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Air Requirement	70 cfm free air delivery (FAD) at 80 psi air pressure
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Wire Feed	By Air Motor fitted in the gun
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System Total Weight	Approx. 250 Kg.
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CONSTRUCTION & ASSEMBLY

The Arcjet-99/600 Metallizing System consists of the following four main parts:

1. Arcjet Gun; Model : 99 with recommended spares
2. Portable Wire Feed & Gun Mount Stand; SWF-011
3. Power Source with Inbuilt Control Panel; P-600
4. Set of Interconnecting Hoses & Cables

ARCJET GUN; MODEL : 99 GUN WITH INTERCONNECTING HOSES & CABLES



The Arcjet Gun; Model : 99 is **light weight (3.8 Kgs)** and easy to use. It has simple adjustments and requires minimal maintenance.

Arcjet gun Model 99 is ergonomically designed making it easier to hold and operate for longer period of time. The gun has an air cooling system (**patent pending**) to keep air cap, nozzle positioner and spray head cool, thus preventing overheating at high amperes. It has powerful air motor drive to feed spray wire.



The flexible hoses package has a standard length of 5 meters though this length can be designed to meet your requirements. The hose package consists of two current cables on a atomizing air hose. The hose is designed to be flexible to simplify the automation of the system. The cable has a standard length of 5 Mtr.

PORTABLE WIRE FEED & GUN MOUNT STAND; MODEL : SWF-011

The two wires, which serve as the two electrodes for the arc, are supplied from two insulated wire spools, mounted on a stand.

The wires free from any bends or kinks are dispensed from the spools through wire feed tubes and are made to pass through wire guides in the spray gun.

The main feature of Wire Feed & Gun Mount Stand; Model : SWF-011 is **PORTABLE & MOVEABLE** so it can be moved near to job, away from power source.

This stand is also for easy mounting and positioning of gun in any direction after spraying





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POWER SOURCE WITH INBUILT CONTROL PANEL; MODEL : P-600



The Power Supply is especially developed for arc spraying with integrated control and ergonomic operator console.

The ARCJET UNIT is equipped with an electronic control circuit adapted to arc spraying of various materials. This control circuit has a response time adjusted to the arc spraying process to ensure a stable arc between the melting electrodes.

The effects on the process are tremendous. The control reduces the voltage variations and allows a uniform coating process at a lower voltage.

The melting-off energy in the arc is more uniform than in conventional arc spraying power sources. This also applies to the droplet size and heat content of the individual particles. Overheating of the spray particles is reduced; burn-off rates and oxidation are minimized. Together, these factors result in an improved coating quality.

High Velocity mode is available with this model which means better deposit efficiency, Better plasma like coating properties & fine and focused spray.

The electronic power supply allows working at maximum capacity at a duty cycle of 100%.

B. OPTIONAL EQUIPMENT:

EXTENSIONS FOR INTERNAL COATINGS

Where deep bores or recesses are to be sprayed, a range of extension nozzle is available. These allow access of the spray at depth up to 1 meter, whilst straight or deflector systems can be selected to direct the spray steam to the area required.





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C. SAFETY EQUIPMENT



**EAR MUFF &
PROTECTIVE GOGGLE**



AIRFED HELMET



**RESPIRATORY
MASK**

EAR MUFF

The operator and other personnel close to the flame spray operation should be protected from prolonged exposure to noise. If possible, the arc spray operation should be isolated. The noise level of Arcjet-96 Gun is about 120 dBA.

PROTECTIVE GOGGLE

Always wear eye protectors while operating, or watching the flame spray operation. Inspect the eye protectors frequently. Lenses and over plates that are scratched, pitted or damaged can impair vision and seriously reduce protection.

AIRFED HELMET

For operator comfort, visibility and protection while spraying- specially required for Zinc, aluminum, copper and lead spraying. Air is supplied externally. No shut-in feeling. Light weight.



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UTILITIES (To be arranged by Purchaser at his cost) :

- A.C. Electrical Supply at 415V/3P/50 Hz. up to the control panel.
- Dry and oil free compressed air 70 cfm @ 100 psig up to spray gun control panel
- All wiring and conduit from customer's main power source to machine's control panel and earthing wherever required. All piping for air and water up to equipment's inlet connection.
- To provide equipment like overhead/portable cranes, tools & tackles necessary for Installation/Commissioning as applicable
- Any concrete embedded materials, such as conduit, piping and anchor bolts, as required for quoted equipment.
- Concrete foundations, leveling pads and grout.
- Weather protective covers as required.
- Unloading and storing of equipment at stores when received and shifting of equipment from Stores to Site, unpacking and keeping ready for Erection/Commissioning.
- Job loading and unloading arrangement.

NOTE: All above dimensions are approximate. The system's design may be changed without affecting its rated capacity.