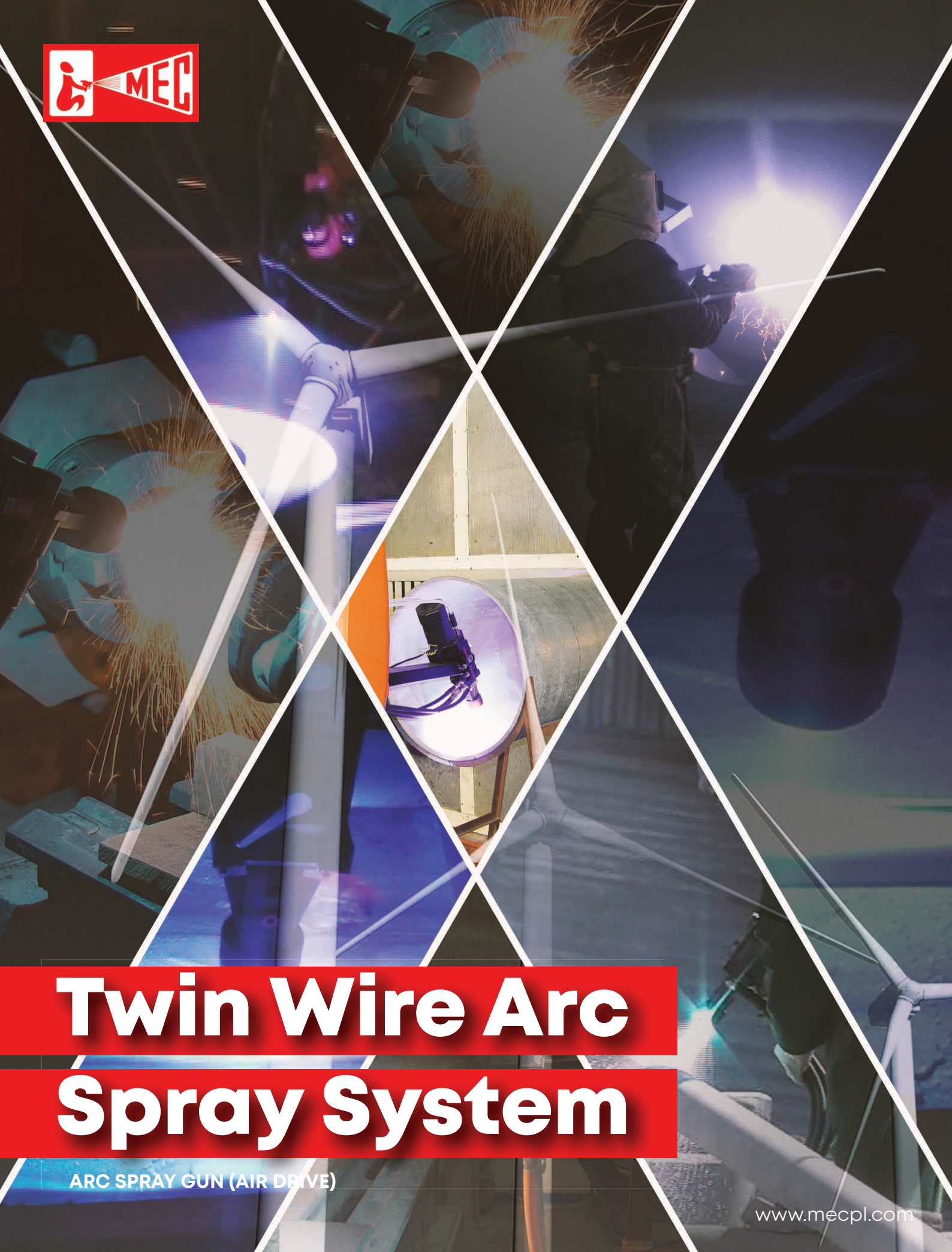


Twin Wire Arc Spray System

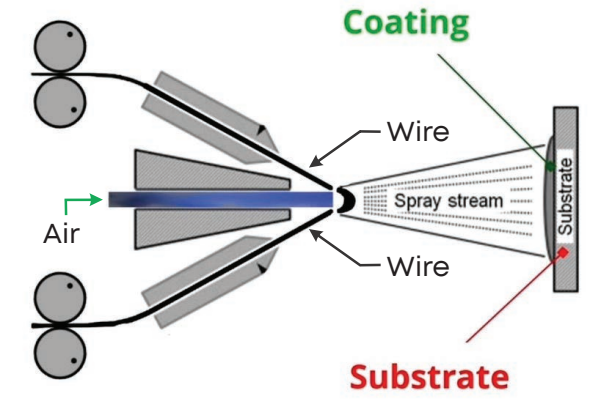
ARC SPRAY GUN (AIR DRIVE)

www.mecpl.com

ARC SPRAY PROCESS

The Arc Spraying Process involves melting two wires—either like or unlike materials (the coating material)—in an electric arc and propelling the molten particles toward the prepared work surface using an atomizing gas such as compressed air.

This high-performance wire spraying process requires the coating material to be electrically conductive. Twin wires are fed into the arc using either an electrically driven motor or an air motor.

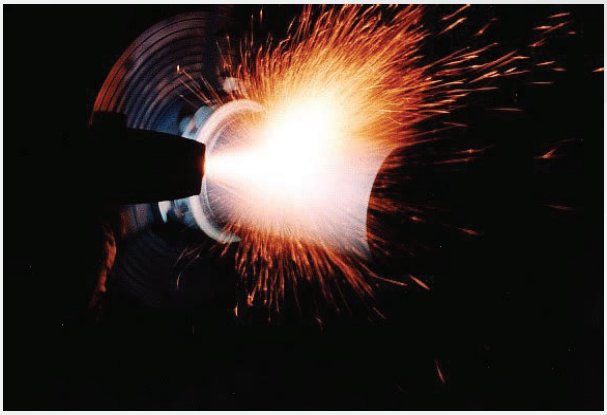


Advantages of Electric Arc Spraying:

High-Quality Coatings: Arc spray coatings are typically denser and stronger compared to equivalent combustion spray coatings.

Cost Efficiency: The process offers low running costs and high spray rates, making it ideal for large areas and high-production rates.

No Combustible Gas Required: Unlike other thermal spray processes, electric arc spraying does not rely on oxygen or combustible gases, making it safer and more economical.



Applications:

Anti-Corrosion Coatings: Widely used for spraying zinc and aluminum to protect surfaces from corrosion.

Machine Element Repairs: Ideal for restoring the dimensions of large components.

Features of Arc Spray Systems:

Advanced Power Supply Technology:
Our cutting-edge power supply technology, combined with highly accurate wire feed mechanisms, ensures unbeatable coating quality and performance.

Controlled and Uniform Energy Transfer:
The system allows precise energy transfer to the wire material, ensuring uniform melting. This adaptability enables the energy transfer to meet the specific requirements of various applications.

Versatility in Wire Types:
Our Arc Spray Systems are designed to process all types of electrically conductive wires, including solid wires, cored wires, and flexible cords.

Dual Compatibility Control Console:
The Control Console is engineered to be compatible with both air-driven and electric-driven arc spray guns, providing flexibility and operational efficiency.

MEC ARC SPRAY SYSTEM

ARCJET 99-AD

- Manual system with high velocity option.
- Swivel stand for easy movement.

ARCJET 101-A

- 3.17 mm wire
- Light weight gun
- 850 @ 75% D.C
- 700A @ 100% D.C

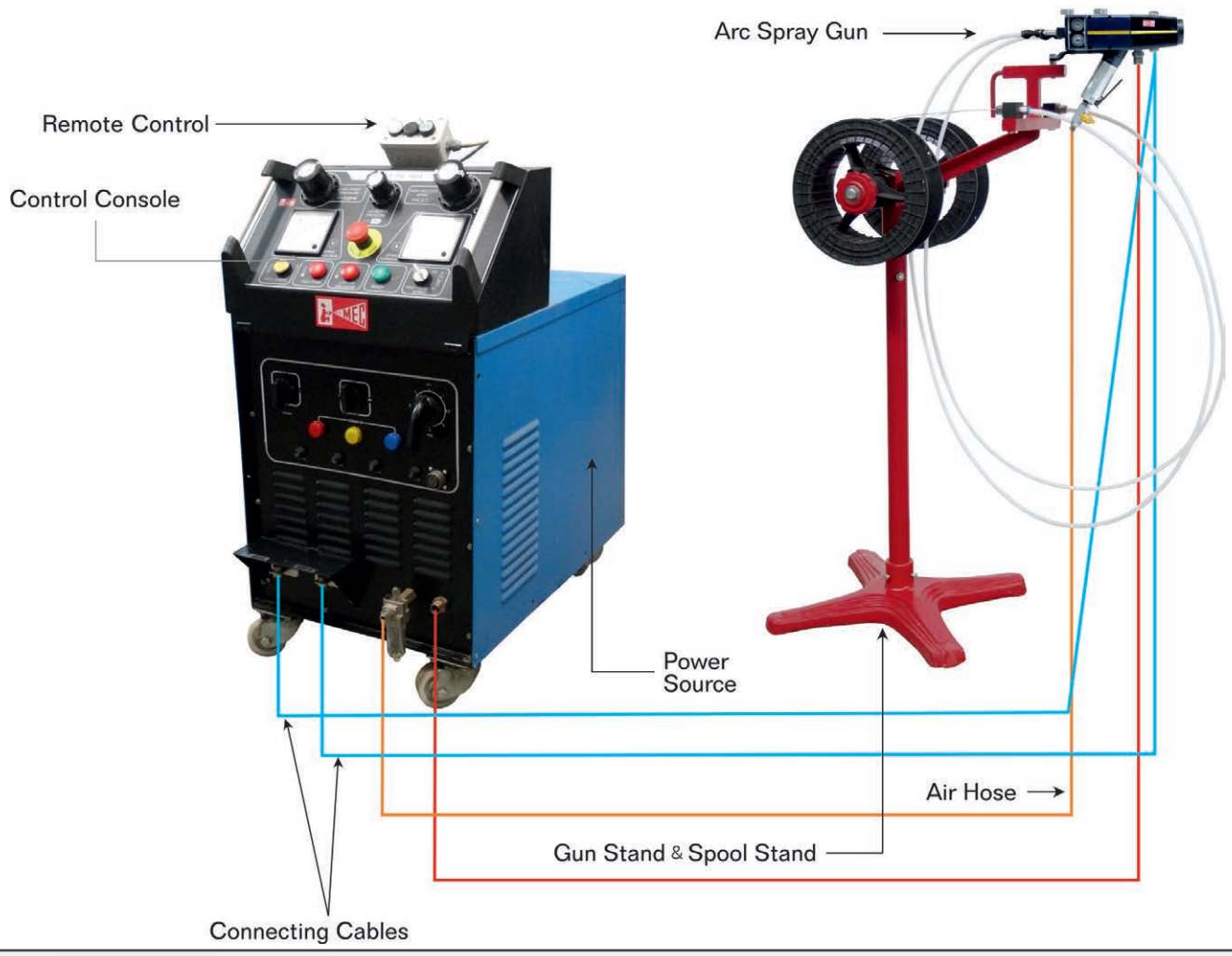
ARCJET 99-ED

- Soft start
- PLC controalled
- Robot itegration
- Up to 2.5 mm

Common features & components

- Safety equipments
- Suitable for site work
- Arcjet gun with air cooled are head
- Portable wire feed & gun stand
- Interconnecting hoses & cables
- Power source with in-built control panel

ARC SPRAY SYSTEM (LAYOUT)



Key Features:

Power Source:

The system operates on a DC current rectifier powered by a 3-phase, 200/400/600/700V, 50/60Hz power supply, delivering a voltage range of 18 to 50 volts.

Control Console:

The control console, mounted above the power source, is equipped with regulators and pressure gauges for managing the air supply to the gun. A remote control, connected via cable, allows the operator to turn the unit ON/OFF conveniently.

Twin Wire Spool Stand:

Two insulated wire spools supply the wires for the arc's two electrodes. The spools are securely mounted on a stud to ensure reliable operation.

Gun Stand:

Designed for mounting and precisely positioning the gun in the desired direction for accurate spraying.

Spool Stand:

Specifically engineered for securely mounting the wire spools.

Interconnecting Hoses and Cables:

The system includes interconnecting hoses and cables with a standard length of 5 meters. Additional length is available as an optional upgrade.

ARC SPRAY PROCESS

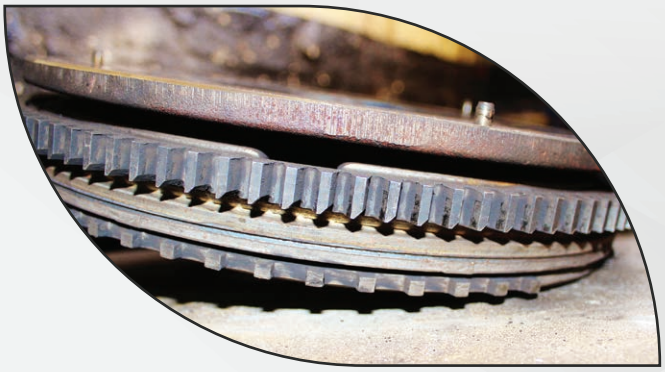
APPLICATION

Wear Resistance

Cored wire technology has expanded the range of applications for arc spraying. By utilizing materials with specially designed compositions, including carbide-infused formulas, it is possible to create coatings with superior wear and abrasion resistance, all while being more cost-effective than Plasma and HVOF methods.

Part Restoration

The arc spray process is versatile and forgiving, enabling the cost-efficient application of thick coatings without compromising bond strength. This makes it the ideal solution for part restoration, particularly in situations where replacing components is costly or on-site refurbishing is necessary.



Aircraft Component Repair

The arc spray process is often specified by major aircraft engine manufacturers for repairing various components. This process is used to apply coatings that restore dimensions, provide resistance to high-temperature erosion, and act as bond coats.

Corrosion Protection

Arc sprayed coatings are widely adopted to combat both high and low-temperature corrosion. These coatings have demonstrated exceptional performance in demanding environments, such as boilers, offering excellent oxidation and heat resistance. They also provide superior protection against atmospheric corrosion, making them ideal for bridges and other infrastructure components.

Heavy Equipment

In the heavy-duty equipment sector, arc spraying is used to restore worn parts and correct surface imperfections in both old and new components.

MEC ARC SPRAY SYSTEM

ARC SPRAY SYSTEM		MODEL : 99/200	MODEL : 99/400	MODEL : 99/600	MODEL : 101/700
MAX. COVERAGE [M² / 100 µ m / HR]	ZINC	13.05	26.10	39.15	0.82
	ALUMINIUM	13.03	26.06	39.10	2.88
	Cr-Ni-STEEL	07.29	14.58	21.87	____
	AL-BRONZE	10.90	21.78	32.67	____
WEIGHT		275 IBS(125KG.)	440 IBS(200 KG)	495 IBS(225 KG)	750 KG
POWER REQUIREMENT		7 KW	15 KW	25 KW	30 KW
INPUT SUPPLY		415V/3P/ 50-60Hz	415V/3P/ 50-60Hz	415V/3P/ 50-60Hz	415V/3P/ 50-60Hz
HIGH VELOCITY OPTION INSTALLED		NO	YES	YES	YES
WIRE SIZE (DIA)		1.6 mm	1.6mm to 3.17mm	2mm to 3.17mm	2mm to 3.17mm

EXTENSION & CONSUMABLES

MEC®

CERTIFICATION
ISO 9001:2015
ISO 17025:2017
AS 9100D, CE

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