

Product Data Sheet

FLEXI ARC 200 Electric Arc Spray System

The Oerlikon Metco FLEXI ARC™ 200 Electric Arc Spray System is an all-purpose unit for applying wear and corrosion protection coatings using a variety of solid arc spray wires.

A highly versatile system, FLEXI ARC 200 is designed for safe, reliable operation and meets CE standards. With its wheeled power supply, the FLEXI ARC 200 is easily moved from place to place.

The applications for coatings sprayed using the FLEXI ARC 200 system range from zinc for corrosion protection to molybdenum for piston ring wear protection and lubricity. FLEXI ARC 200 is also recommended for coating:

- Rolls used in paper manufacturing
- Industrial fans to prevent particulate erosion
- Bearing seats
- General purpose wear coatings
- General purpose corrosion coatings

1 Description

The FLEXI ARC 200 Electric Arc Spray System is designed for manual operation. It comes equipped with all hoses and cables, and is composed of four modules:

- FLEXI ARC 200 Wheeled Power Supply
- Hand-held LD/U2 Spray Gun
- 4 m (13.1 ft) Hose and Cable Package with 4 m (13.1 ft) Insulated wire guides
- Spool Holder / Decoiler

The FLEXI ARC 200 system is suitable for spraying solid wires. For spraying cored wires, the FLEXI ARC 300 Electric Arc Spray System is recommended.



1.1 FLEXI ARC 200 Power Supply

The FLEXI ARC 200 power supply is versatile for use with many different arc wire spray applications. The unit has been specifically engineered to meet the requirements of the electric arc thermal spray process and incorporates PLC (programmable logic control) technology for accuracy and repeatability of the system settings. It delivers the system-rated arc current of 200 A at 100 % duty cycle.

All controls and displays are logically arranged on an inclined panel, that is easy for the operator to read and access. The unit has a choke, which can be turned on or off depending on the wire to be sprayed.

Connections for the hose and cable assembly are located on the front of the unit below the front panel, on a panel that inclines 45° downwards. This helps to prevent strain on the cable and hose connections. Connections for the air supply hose and electrical supply are on the back panel.

The power supply is mounted on large wheels, making it stable and easy to move.

2 Features and Benefits

Effective

- Versatile system that applies a variety of quality coatings for wear and corrosion protection.
- For use with many different types of solid soft and hard arc wire materials.
- Power supply operates at 200 A, 100 % duty cycle, without overheating or overloading.

Efficient

- Simple to use and maintain.
- Simple, easy to read and access control panel.
- Hand-held, lightweight gun.
- Fast and simple wire changeover.

Economical

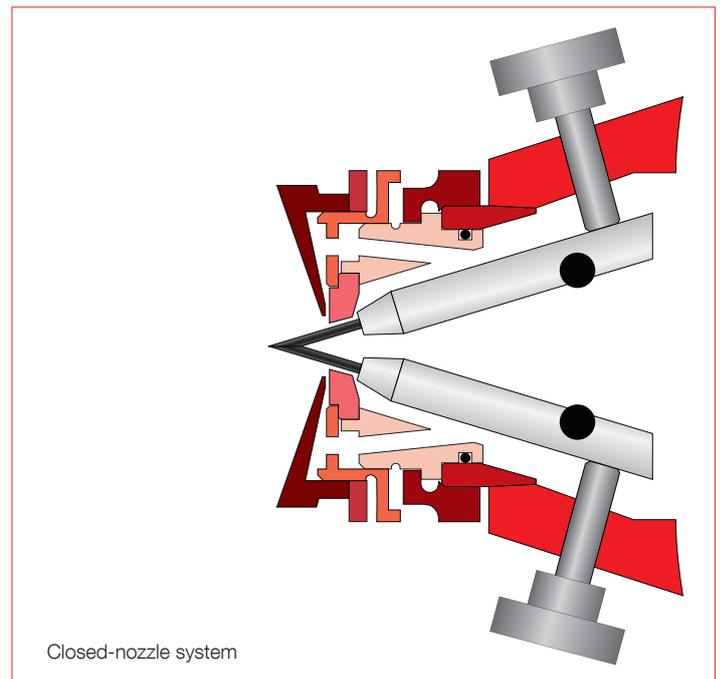
- Fan-free, convection-cooled power supply prevents contamination from overspray dust.
- Low wear part requirement with long-lasting contact tips.

The internal electrical control elements are well-protected from the environment and spray dust. Convection cooling prevents spray dust getting into the power supply, decreasing the possibility of electrical shorts from metallic dust contamination. The power supply is protected against overloading, overheating and air pressure drops.

1.2 LD/U2 Spray Gun

The LD/U2 Wire Spray Gun is lightweight, handheld gun for general purpose spray work. It has low wear part requirements and is designed low maintenance. Wear components and gun hardware for different types of wires are quickly and easily changed, when necessary. A closed-nozzle system ensures high quality coating application.

The LD/U2 incorporates a powerful air motor and gear system to feed the spray wires smoothly and reliably. The insulated wires guides are attached to the gun using quick connect fittings, to simplify and reduce the time necessary for wire changeovers.



3 Options and Accessories

Oerlikon Metco supplies many options for the FLEXI ARC 200 Electric Arc Spray System, including gun hardware for different wires and spool adapters for dorn or basket style spools (standard equipment uses hasp spools). Please contact your Oerlikon Metco Sales Representative for more information.

3.1 Spray Kits

The Oerlikon Metco FLEXI ARC 200 Arc Spray System is versatile, and can be used with many different types of wires and wire sizes using optional Spray Kits. Customers can choose the spray kit configuration desired on a new arc system. All spray kits include the following hardware:

- One (1) pair air cap nozzle plate and nut
- Two (2) contact tips
- Two (2) drive rollers
- Two (2) 4 m wire guide tubes

Spray Kit	Order Number	Wire Type	Wire Size
Hard Wire Spray Kit 1 ^a	1062771	Hard wires	1.6 mm (14 AWG)
Hard Wire Spray Kit 2 ^b	1062772	Hard wires	2.0 mm
Soft Wire Spray Kit 1 ^a	1062773	Zinc, 85Zn/15Al, 95Al/5Mg, Sprababbitt ^c	1.6 mm (14 AWG)
Soft Wire Spray Kit 2 ^a	1062774	Zinc	2.0 mm
Soft Wire Spray Kit 3 ^a	1062775	Zinc, 85Zn/15Al, 95Al/5Mg	2.5 mm, 2.3 mm (11 AWG)
Soft Wire Spray Kit 4	1062776	85Zn/15Al, 95Al/5Mg	2.0 mm
Soft Wire Spray Kit 5	1062777	Aluminum	1.6 mm (14 AWG)
Soft Wire Spray Kit 6	1062778	Aluminum	2.0 mm
Soft Wire Spray Kit 7	1062779	Aluminum	2.5 mm, 2.3 mm (11 AWG)
Soft Wire Spray Kit 8	1062780	Sprababbitt, Tin	2.0 mm
Soft Wire Spray Kit 9	1062781	Sprababbitt, Tin	2.5 mm, 2.3 mm (11 AWG)

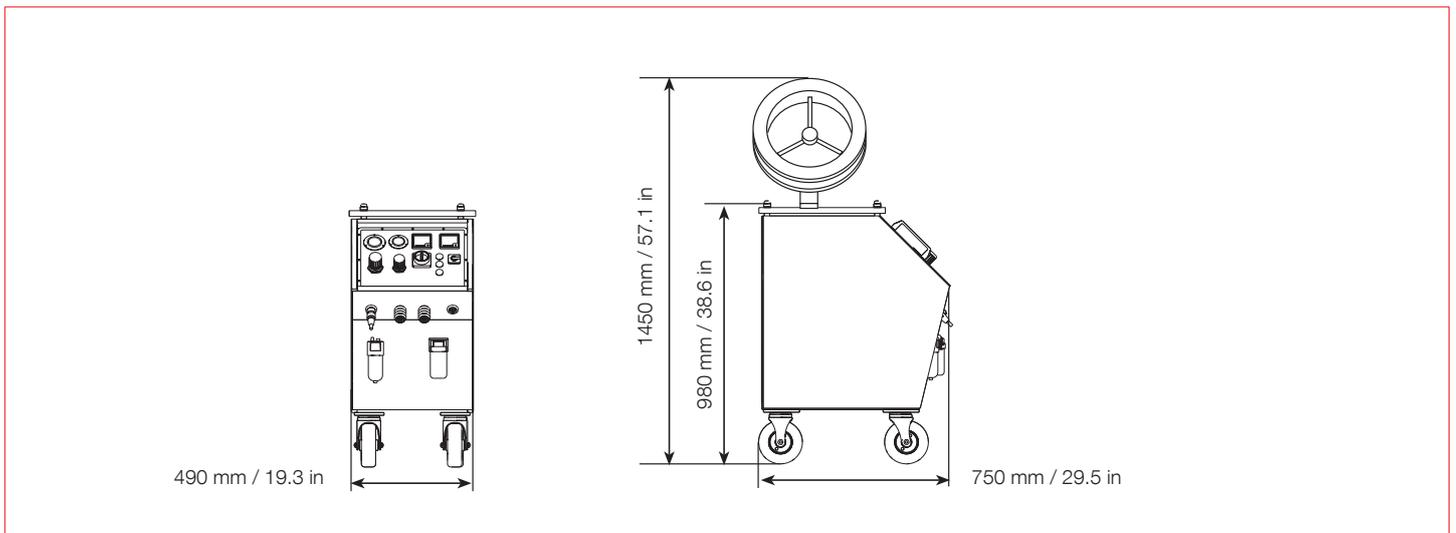
^a Can be specified for factory configuration on new spray equipment.

^b Use of 2.0 mm hard wires is not recommended; high melting point 2.0 mm hard wires should be completely avoided.

^c For Sprababbitt, better results are obtained using larger diameter wires.

4 Technical Data

4.1 Dimensions



4.2 Specifications

Power supply	200V	400V	415V	460V
Weight (without spool holder)	152 kg 335 lb	148 kg 326 lb	148 kg 326 lb	148 kg 326 lb
Electrical requirements ^a	200 V, 50/60 Hz	400 V, 50/60 Hz	415 V, 50/60 Hz	460 V, 50/60 Hz
Primary current	< 23 A	< 12 A	< 12 A	< 11 A
Fuse	32 A	16 A	16 A	16 A
Nominal power	< 6.9 kVA	< 6.9 kVA	< 6.9 kVA	< 6.9 kVA
Secondary current	200 A	200 A	200 A	200 A
Voltage	18 to 30 V (9 steps)			
Open circuit voltage	20 to 33 V			
Duty cycle (at full amperage)	100 %	100 %	100 %	100 %
Cooling	Ambient air – convection			

Spray Gun	LD/U2
Weight (with air motor)	2.8 kg 6.2 lb
Nozzle system	Closed nozzle system
Wire feed	1 roll per wire

Air Requirements

Supply pressure (max.)	10 bar	145 psi
Atomizer air	1500 NLPM @ 4 bar	3424 SCFH @ 58 psi
Air motor air	350 NLPM @ 4 bar	799 SCFH @ 58 psi
Air purity	Filtered, dry, oil-free, in accordance with DIN ISO 8573 Class 1	
Recooled air temperature (min.)	25 °C	77 °F

Hose and Cable Set

Length	4 m	13.1 ft
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Wire Materials

Compatibility	All solid electric arc wires available from Oerlikon Metco in appropriate wire sizes	
Wire diameters ^b	1.6 mm, 2.0 mm, 2.3 mm, 2.5 mm	14 AWG, 0.079 in, 11 AWG, 0.098 in
Spray rates (examples)		
Aluminum	6 kg/h	13.3 lb/h
Steel	10 kg/h	22.0 lb/h
Bronze	12 kg/h	26.5 lb/h
Nickel / Chrome	11 kg/h	24.3 lb/h
Tin	40 kg/h	88.2 lb/h
Molybdenum	6 kg/h	13.3 lb/h

^a Other voltages available on request

^b When using hard wires, 1.6 mm (14 AWG) wires are recommended. Other wire diameters are recommended only for soft wires.