

## Product Data Sheet

### ECO ARC™ 250 Electric Arc Spray System

The Sulzer Metco ECO ARC 250 Electric Arc Spray System combines the benefits of a small, compact unit with excellent performance to apply zinc and zinc-aluminum corrosion protective coatings on any size structure.

The ECO ARC 250 system is designed for safe, reliable operation and meets CE standards. It is configured for on-site work to apply corrosion protective coatings to:

- Marine structures
- Steel structures
- Steel-reinforced concrete structures

The system can also be used in shop. Using the optional wheeled cart, the ECO ARC 250 is easily moved from place to place.

#### 1 Description

The ECO ARC 250 Electric Arc Spray System comes equipped with all hoses and cables, and is composed of four modules:

- ECO ARC 250 Power Supply with on-board Push 4 Wire Drive Unit
- Hand-held LD/U3 Spray Gun with integrated operator safety handle
- 10 m (32.8 ft) Hose and Cable Package
- Spool Holder/Decoiler

Optimized to apply coatings of zinc or zinc aluminum, the system produces a very stable arc, resulting in excellent coating results.



### 1.1 ECO ARC 250 Power Supply

The ECO ARC 250 power supply is small and easily placed whether used on-site or in the shop. The unit has been specifically engineered to meet the requirements of the electric arc thermal spray process and incorporates PLC (programmable logic control) technology. It delivers the system-rated arc current of 250 A at 100% duty cycle. PLC (programmable logic control) ensures accuracy and repeatability of the system settings.

A small display on the front of the unit with keypad indicates the status of the system and provides diagnostic information.

### 1.2 LD/U3 Spray Gun

The LD/U3 Wire Spray Gun is light and designed for safety. Ergonomic and weighing only 3 kg (6.6 lb), it is equipped with an integrated safety handle to prevent injury to the operator or others if the gun is dropped.

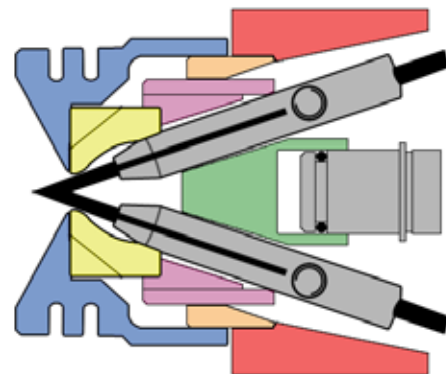
The gun has low wear part requirements and is designed for long spray campaigns with very low maintenance.

Easily accessible buttons on the top of the spray gun allow the operator to instantly start and stop the spray process. A powerful air motor built into the gun augments the feed of wires from the "Push 4" Wire Drive Unit mounted on the power supply unit.

The on-board wire drive unit employs a push-type motor to reliably transport the coating wire feedstock material to the spray gun.

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 and the push motor are protected against overloading, overheating and air pressure drops.

The LD/U3 is equipped with a closed-nozzle system and an air cap that produces very fine spray particles, which result in smooth coatings with extremely low porosity. The low surface roughness can reduce follow-on paint overcoatings by as much as 40%.



Closed-nozzle system with slit contact tips

## 2 Features and Benefits

### Effective

- Applies high-quality corrosion protection coatings of zinc and zinc-aluminum.
- Configured for use on-site or in shop.
- Applied coatings are low porosity and smooth with high bond strength.
- Power supply operates at 250 A, 100% duty cycle, without overheating or overloading.

### Efficient

- Simple to use and maintain.
- Display shows system status and diagnostics, saving time.
- Hand-held, lightweight gun for long spray campaigns.

- Accessible buttons on gun for quick start/stop of the spray process.

### Economical

- Fan-free, convection-cooled power supply prevents contamination from overspray dust.
- Low wear part requirement with long-lasting contact tips
- Low coating surface roughness reduces paint top-coat requirements by up to 40%.

### Environmental

- Ergonomic gun design for operator comfort.
- Safety handle for increased operator safety.

### 3 Options and Accessories

Sulzer Metco supplies a number of options for the ECO ARC 250 Electric Arc Spray System, including options for different spray patterns and spool types. Please contact your Sulzer Metco Sales Representative for more information.

**Spool adapters:** Hasp-style spools are standard. Adapters are available for dorn-style spools.

**Drum Decoiler:** Optionally available for use with wire packaged in drums.

**Wheeled Cart:** Easily move the ECO ARC 250 unit with this option.

**Spool Holder/Decoiler:** The ECO ARC 250 is factory-configured with a hasp-style spool holder/decoiler. A dorn-style holder/decoiler is available as an option. A factory-configured ECO ARC 250 unit equipped for dorn spools is available as a special order.

**Optional 8 m (26.2 ft) Hose Package:** Shorter hose package replaces standard 10 m hose package.

**Optional 15 m (63.8 ft) Hose Package:** Longer hose package replaces standard 10 m hose package.

#### 3.1 Spray Kits

The Sulzer Metco ECO ARC 250 Arc Spray System is versatile, and can be used zinc or zinc/aluminum wires. All spray kits include the following hardware:

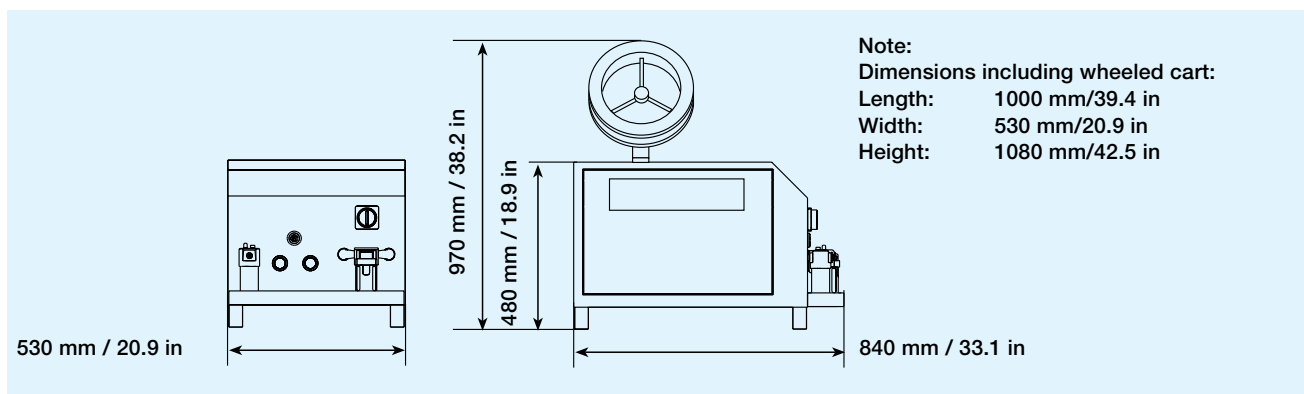
- One (1) air cap
- Two (2) contact tips
- Two (2) spray gun drive rollers
- Two (2) pair “Push 4” drive and pressure rollers
- Two (2) pair wire guide tubes for use with the 10 m hose package

Spray Kit	Gun	Order Number	Wire Type	Wire Size
Soft Wire Spray Kit 1	LD/U3	1062673	Zinc, 85Zn/15Al	2.0 mm
Soft Wire Spray Kit 1	ECO CORR	1062674	Zinc, 85Zn/15Al	2.0 mm

<sup>1</sup> Contains an additional pair of wire guide tubes for the air motor to gun, 1.2 m hose package. Spray Kits are only available for current owners of the ECO CORR gun.

### 4 Technal Data

#### 4.1 Dimensions



### 4.2 Specifications

<b>Power supply</b>		
Weight (without spool holder)	107 kg 236 lb	
Electrical requirements	400 V, 50/60 Hz	
Primary current	< 11 A	
Fuse	16 A	
Nominal power	< 5.7 kVA	
Secondary current	250 A	
Voltage	19 V	
Open circuit voltage	23 V	
Duty cycle (at full amperage)	100%	
Cooling	Ambient air - convection	
<b>Wire Drive Unit</b>		
<b>Push 4</b>		
Power (nominal)	0.09 kW	
Speed control type	Fixed	
Wire feed	2 slip rolls per wire	
<b>Spray Gun</b>		
<b>LD/U3</b>		
Weight (with air motor)	3 kg	6.6 lb
Nozzle system	Closed nozzle system	
<b>Air Requirements</b>		
Supply pressure (max.)	10 bar	145 psi
Atomizer air	1250 NLPM @ 4 bar	2853 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
<b>Hose and Cable Set</b>		
Length	10 m	32.8 ft
Weight	19.4 kg	42.8 lb
<b>Wire Materials</b>		
Compatibility	Solid Zn and Zn/Al electric arc wires available from Sulzer Metco in appropriate wire sizes	
Wire diameters	2.0 mm	0.079 in
Spray rates		
Zn	25 kg/h	55 lb/h
85Zn 15Al	22 kg/h	48.5 lb/h

[www.sulzermetco.com](http://www.sulzermetco.com) • [info@sulzermetco.com](mailto:info@sulzermetco.com)

The Secret of Staying Ahead

**Sulzer Metco (US) Inc.**  
1101 Prospect Avenue  
Westbury NY 11590  
USA  
Tel. +1 516 334 1300  
Fax +1 516 338 2414

**Sulzer Metco (Japan) Ltd.**  
4-2 Hikawadai 3-Chome,  
Nerima-ku, Tokyo 179-0084  
Japan  
Tel. +81 359 203 302  
Fax +81 359 203 512

**Sulzer Metco Europe GmbH**  
Spreestrasse 2  
65451 Kelsterbach  
Germany  
Tel. +49 6142 6033 0  
Fax +49 6142 6033 400

**Sulzer Metco AG (Switzerland)**  
Rigackerstrasse 16  
5610 Wohlen  
Switzerland  
Tel. +41 56 618 81 81  
Fax +41 56 618 81 01

**Sulzer Metco (Singapore) Pte. Ltd.**  
2 Loyang Lane  
# 06-02  
Singapore 508913  
Tel. +65 6545 0870  
Fax +65 6545 0816

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