Twin Wire Arc Spray Technology

EuTronic Arc Spray 4

COATING

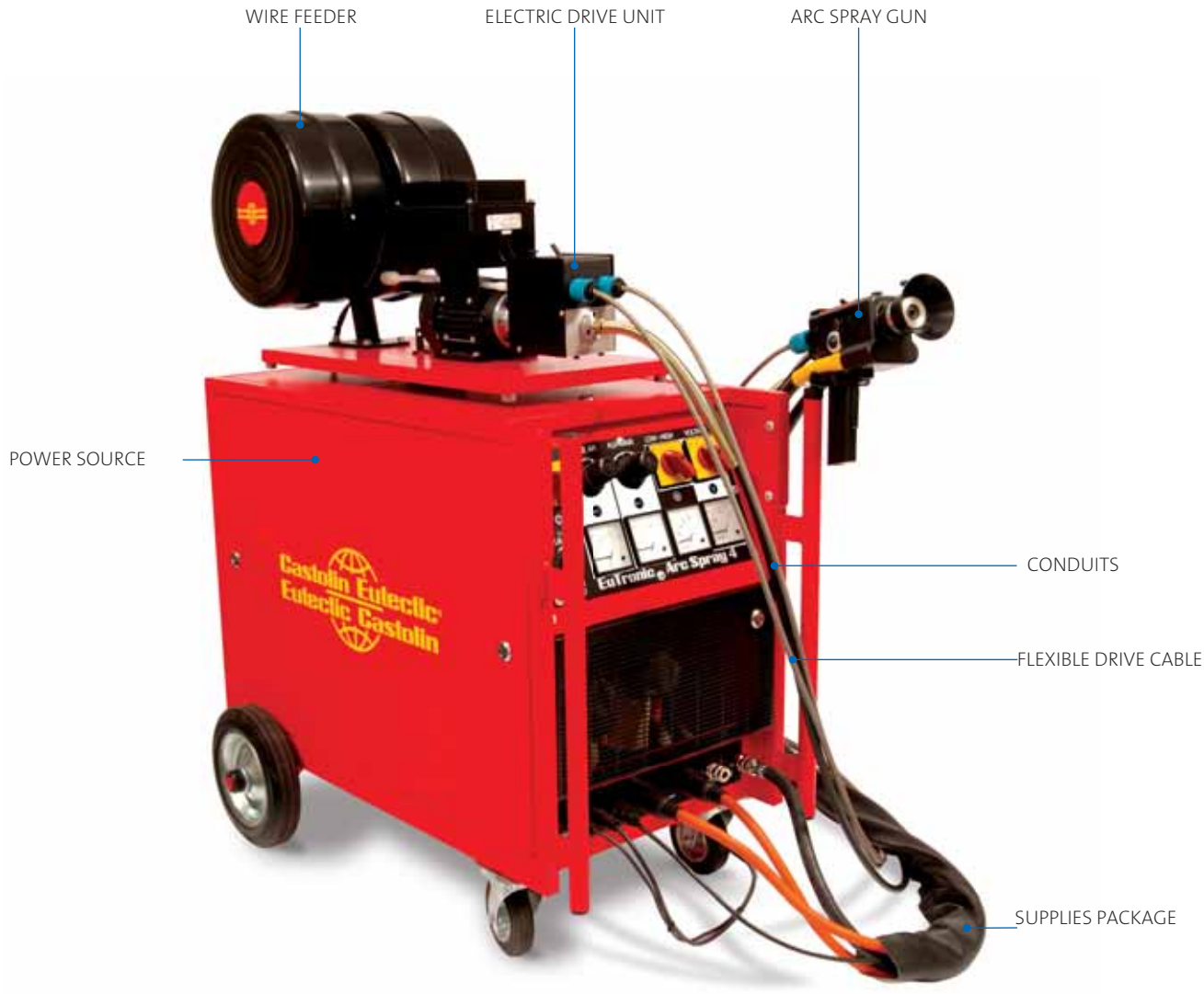
Equipment Specification

Castolin Eutectic®
Eutectic Castolin

1. EuTronic Arc Spray 4 Supplies Setups

1.1. Standard Configuration (Push/Pull)

- Power source, push/pull drive & wire feeder.
- Arc Spray Gun.
- Drive unit position : On power source or floor.
- 5 m Push/Pull from Wire.
- Supplies package includes power and control cables, air hose, wire conduits and flexible drive.



Part Nº / ESC Code	Description
263000	EuTronic Arc Spray 4 complete kit

1.2. Options

- Remote wire feeder.
- 10 m/20 m Push/Pull from Wire.
- Arc Jet.
- Arc Spray extension neck.

2. Benefits

2.1. 350 A switched voltage power source

- 350 Amp continuous operation.
- Large 'Site Capable' wheels and rigid handles offer excellent portability on site and in workshop.
- Sealed electrical control circuit – reduces dust ingression for added reliability.
- Overcurrent limit protection – protects all parts of spray system from over-current.
- Clear displays and large controls give ease of operation.
- Easy access power source panels & external fuse bank for reduced Mean Time to Repair (MTTR).
- Simple design for ease of maintenance.
- Wire feeder packaging options allow drive unit to be compactly mounted on the power source or separately on the floor or on site trolley.
- When wire drive is power source mounted, the drive unit can rotate through 180° to follow the operator whilst spraying, minimising strain and bends on the wire.

2.2. General Benefits

- Push Pull system for a more stable arc ensuring quality coatings with consistent operation.
- Patented Flexible Drive system (Synchronised).
- 5 to 20 Meter supplies packages from the wire to the Gun for spraying accessibility.
- Air-cooled cables reduce Gun supply weight and operator fatigue.
- Good Gun manoeuvrability.
- Lightweight and good balance for ease of handling.
- Suitable for Engineering Anti-wear and Anti-corrosion wires, steels, copper and bronzes.
- Sealed/lubed for life inverter motor.
- Uses 1.6 mm wire size as standard. 2 mm, 2.3 mm and 2.5 mm options available.
- Easy to maintain, less than 3 minutes to change contact tubes and nozzles. Contact tubes and nozzles do not require adjustment.
- Low running costs as compared with gas systems.
- Variable wire speed control for accurate spray settings.
- Soft start for smooth start ups reducing electrical loading on components.
- Steel reinforced conduits for extended service life.
- Safety interlocks.

3. EuTronic Arc Spray Gun 4

The Gun has been designed to give consistent throughputs with high coating quality. It is a lightweight, heavy-duty unit with robust but compact construction.

Part Nº / ESC Code	Description
263266	Gun 4 complete for 1.6 mm wires

3.1. Technical overview

- Designed and used in practice for anti-corrosion, anti-wear and engineering coatings.
- Standard 1.6 mm wire size. Option 2.0 mm, 2.3 mm and 2.5 mm.
- No requirement to change feed rollers when changing wire sizes.
- Quality coating.
- CG (constant geometry head) ensuring smooth feed, repeatable wire alignment and no adjustment of contact tubes//nozzle arrangement required.
- The Wire Drive Unit utilises intermeshed steel wormshaft and bronze wormwheels, being driven by a lightweight, flexible drive.
- Lightweight air-cooled conductor cables are fitted ; which reduces the operator supported weight and further improves the overall balance of the Gun.
- Closed arc for improved spray conditions and efficiency.
- Gun 4 Gun includes flywheel for better stability at low spray rates with engineering wires.

3.1.1. Technical data

Description	Characteristics
Maximum Current	350 Amps
Weight	2.3 Kgs
Weight – at a held height of 1.2 M	4.5 Kgs – inc Cables and Hoses
Width	102 mm
Length	457 mm
Height	229 mm

3.1.2. Typical performance figures for the EuTronic Arc Spray Gun 4

MATERIAL	WIRE SIZE	THROUGHPUT KG/HR @ 350 Amps
Zinc wire	2.0 mm 2.3 mm	36.0
Aluminium wire	2.0 mm 2.3 mm	8.5
Copper wire	1.6 mm	17.5
Steel wire	1.6 mm	15.8

Throughput is assumed to be independent of wire diameter : preferred diameter shown bold

3.1.3. Optional conversions of wire type and size

The EuTronic Arc Spray 4 can also be converted to use cored wires or solid wire as well as other wire diameters by using the following parts in the Gun and in the wire feeder. EAS4 roller, contact tube, nozzle and aircup selection

Spray wire		Feed roller 4 items per EAS4		Contact tube 2 items	Nozzle 1 item	Aircap 1 item
Type	Diameter mm	Type	Part Nº ESC Code	Part Nº ESC Code	Part Nº ESC Code	Part Nº ESC Code
Standard Roller						
Solid or cored	1.6	U-Roller 	263110	263252 Standard	263245 Standard	263063 Standard
	2.0			263133 Optional	263244 Optional	263242 Optional
	2.3			263134 Optional	263071 Optional	263241 Optional
	2.5			263144 Optional	263072 Optional	263241 Optional
Optional Roller						
Cored* or solid	1.6	V-Roller 	751664	263252 Standard	263245 Standard	263063 Standard

* For cored wires, V-Rollers must be used with supplies package longer than 5 m.

4. Supplies Package

Part Nº / ESC Code	Description
263273	5 m Supplies Package
Options	
263272	10 m Supplies Package
263274	20 m Supplies Package
263275	Extension from 10 to 20 m Supplies Package

4.1. Standard Supplies Package includes



Power, Air and Control Cables

Flexible Drive Cable

Wire Conduits

4.1.1. Technical overview

- 5 to 20 meter supplies packages for integration to Power source.
- Protective cover supplied for protection.
- Supplied with all fittings appropriate to connect to Gun and power source.
- Steel reinforced conduits for extended service life.
- Lightweight air-cooled conductor cables thereby reducing the operator supported weight and fatigue.
- Supply Package Extensions available for maximum flexibility on-site and in workshop applications. Available to extend a 10 m package up to a maximum of 20 m.
- Power cables fitted with twist and lock connectors into the power source. Air hoses fitted with quick release fittings into the power source.

5. Power Source

Part Nº / ESC Code	Description
263227	Power source 4 for Inverter Drive

This Power source has been specifically designed for those users who are likely to spray a varying range of materials. Ideally suited for the General Engineering Workshop Anti-wear and Anti-corrosion industry.

5.1. Technical overview

- 350 Amp continuous operation (100% duty cycle).
- Specifically designed to suit only Arcspraying with stabile power output.
- Large 'Site Capable' wheels and rigid handle offers excellent portability on site and in workshop.
- Clear displays and large controls give ease of operation.
- Sealed electrical control circuit – reduces dust ingression for added reliability.
- Overcurrent limit protection – protects all parts of spray system from over-current.
- Simple design for ease of maintenance.
- Easy access power source panels & external fuse bank for reduced Mean Time to Repair (MTTR).
- Switched output voltage control.

5.1.1. Power & air requirements

Description	Characteristics
Power Requirements	380/440 V 50-60 Hz 3 Phase
Power Option	220 V 50-60 Hz 3 Phase
Fuses Required	32 A/Phase (415 V input)
Fuses Required Option	40 A/Phase (220 V input)
Max Power Consumption	18 KVA
Duty	0-350 Amps @ 100% Duty Cycle
Output Voltage	0-50 Vdc (nominal) Switched High/Low & 1 - 5
Air Requirements	1.56 m^3/min @ 6 bar (55 cfm @ 90 psi)

5.1.2. Power source specification

Weight : 215 Kg

Width : 665 mm

Length : 900 mm

Height : 913 mm

6. Wire Feeder and Drive

6.1. Spool Wire Feeder

Part Nº / ESC Code	Description
263223	Wire Feeder for Spools

6.1.1. Technical overview

- Specifically designed to suit Arcspraying with the spools being individually insulated from each other.
- Electric Inverter Drive Motor for smooth wire control.
- Includes inverter drive motor, gearbox, wire drive assembly and flexible drive connection.
- Push/pull mechanism positively drives the wire at the feeder and also at the Gun via the flexible drive, ensuring constant speed at the drive unit and Gun.
- Allows complete use of all the wire (unlike push only systems).
- Brake tension to ensure wire does not uncoil.
- Spool dust cover to ensure more consistent spraying.
- Designed to ensure a smooth wire feed to the Gun.

Description	
Weight	24kg (without wire spools)
Width	350 mm
Length	820 mm
Height	430 mm

6.2. Optional Spool Wire Feeder

Part Nº / ESC Code	Description
263283	Remote Wire Feeder for Spools

Part Nº / ESC Code	Description
263282	Skid frame for electric drive

Electric drive mounted in the skid frame

6.2.1. Technical overview

- Features and benefits the same as the standard unit in 6.1.
- Wire and drive unit can be mounted separately.
- Drive motor protected from knocks by skid frame.
- For remote mounting away from the power source and for limited access applications such as via manholes of boilers.
- Includes clamp blocks and maximum 2 x 3 m lengths of conduit tube (PTFE) between wire feeder and drive unit.

7. Tool Kit

Appropriate hand tools are supplied with the Arcspray system along with an operating manual and Gun case.

8. Options

8.1. ArcJet :

Part Nº / ESC Code	Description
263270	ArcJet 4 for 1.6 mm wires

Note: no contact tubes and no nozzles are supplied with the ArcJet.

ArcJet mounted on the Gun

8.1.1. Technical overview

- Reduces Arcspray footprint.
- Finer Coatings.
- Improved Deposit efficiency when spraying onto small components.
- Less apparent porosity.
- Improved hardness.

8.1.2 Technical data

Description	Characteristics
Maximum Current	350 Amps
Compressed Air	0.7 m^3/min @ 3.5 Bar

8.2. Arc Spray Extension neck

Part Nº / ESC Code	Description
263269	Extension neck 0.5 m long
263267	Extension neck 1 m long
263268	Extension neck 1.5 m long

8.2.1. Technical overview

- For 1.6 mm wire diameter
- Suitable for internal bores (min Diameter 75 mm) or recesses.
- Variable deflected spray from 0 to 75 Degrees.
- Rigid construction.

8.2.2 Technical data

Description	Characteristics
Maximum Current	200 Amps
Compressed Air	0.6 m^3/min @ 4.5 Bar

8.3 Remote control

Part Nº / ESC Code	Description
263326	EAS remote control

8.3.1 Technical data

- Robust remote control for the EuTronic Arc Spray 4 system
- 5 meters operation
- Red button mimics the “STOP” button on the Gun
- Green button mimics the “START” button on the Gun
- Key switch mimics the trigger “SPRAY/WIRE FEED” on the gun. This safety feature avoids any accidental activation of the Gun

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