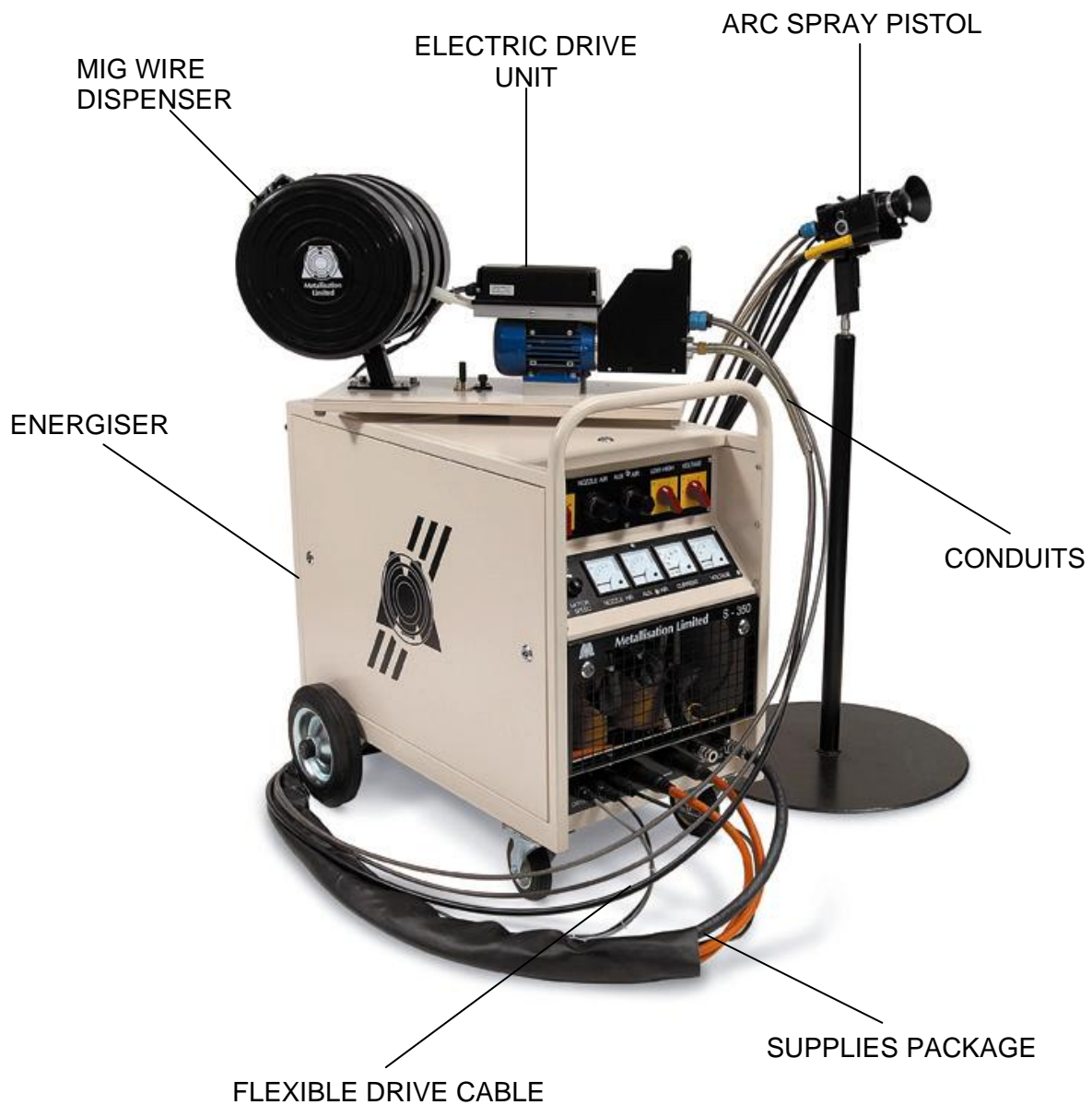


Equipment Specification

140/S350 Arc Spray System



140/S350 Arc Spray System Variations

MIG Reel Setups



MIG reel dispenser and drive unit mounted on the energiser.



MIG reel dispenser and drive unit can be floor or wall mounted.



MIG reel dispenser and drive unit can be supplied on a trolley



MIG reel dispenser and drive unit with a power extension trolley (see next page)

Drum Dispense Setups



Drive unit can be mounted on the energiser.



Drive unit can be mounted on the floor or wall.



Drive unit can be supplied on a trolley.

Not shown: Drums with power extension trolley.

Coil Dispense Setups



Not shown:
Systems can be supplied in the same configurations as drum dispense units but with two tier wire dispenser for coil dispense instead of drums.

140/S350 Arc Spray System Supplies Setups

Standard Configuration for Anti-Corrosion & Long Reach Engineering Applications (Push / Pull)



5m / 10m / 20m
Push/Pull from
Wire



Energiser, push/pull drive & wire dispense.
Wire dispense options:
MIG reels, drum, coil.
Drive unit position:
On energiser, floor/wall or trolley.

Supplies package includes power and control cables, air hose, wire conduits and flexible drive.

Pistol

Extended Configuration for Anti-Corrosion Applications (Push / Pull)



10m



5m / 10m / 20m
Push/Pull from
Wire



Energiser

Extension supplies package includes power and control cable and air hose.

Power extension trolley with push / pull drive unit and wire dispense (MIG reels, drums or coils)

Supplies package includes power and control cables, air hose, wire conduits and flexible drive.

Pistol

Standard Configuration for Engineering Workshops (Pull)



5m



Energiser and pull drive unit with MIG reels

Supplies package includes power & control cables, air hose, wire conduits and flexible drive

Pistol

1 GENERAL

The following specification covers the standard range of 140/S350 Arcspray system. For the specific offer, please refer to the attached quotation and cross-reference the part numbers for each piece of equipment.

Safety: The equipment quoted will produce levels of noise, ultra violet light and dust that will require safety measures to be taken by those using the equipment. It will use pressurised gases such as air. Careful consideration should also be given to the positioning of this equipment. It is the responsibility of the user to ensure that all appropriate measures are taken to ensure safe operation in accordance with local requirements. Metallisation will be pleased to advise as appropriate.

2 BENEFITS

2.1 New S350 energiser

- 350 Amp continuous operation
- Large 'Site Capable' wheels and rigid handle offers excellent portability on site and in workshop
- Sealed electrical control circuit - reduces dust ingress 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 energiser panels & external fuse bank for reduced Mean Time to Repair (MTTR).
- Simple design for ease of maintenance
- New wire dispense packaging options allow drive unit to be compactly mounted on the energiser or separately on the floor or site capable trolleys
- When wire drive is energiser mounted, the drive unit can rotate through 180° to follow the operator whilst spraying

2.2 New 'Power Extension Trolley'

- Power extension trolley designed to allow the energiser to be sited away from the spray job
- 10m extension supplies package as standard. Longer lengths possible for certain applications. Check with Metallisation for more details.
- Large 'Site Capable' wheels and rigid handle offers excellent portability on site
- Quick release power, air and control couplings allow quick assembly / disassembly of package

2.3 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 pistol for spraying accessibility.
- Air-cooled cables reduce pistol supply weight and operator fatigue.
- Good pistol manoeuvrability.
- Lightweight and good balance for ease of handling.
- Suitable for Anti-corrosion and engineering wires, steels, copper and bronzes.
- NEW sealed/lubed for life inverter motor.
- Uses 1.6mm to 2.5mm wire sizes without changing feed rollers.
- 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.
- Various packaging options including drive unit mounted on the energiser, floor/wall mounted and two versions of trolley.
- Steel reinforced conduits for extended service life.
- Safety interlocks.
- Choice of coating textures.

3 ARC140 PISTOL



The Pistol 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	Description
ARC140F-EV16	Arc140 Pistol for 1.6mm pull (Engineering)
ARC140F-CG16	Arc140 Pistol for 1.6mm push/pull (Engineering)
ARC140-CG16	Arc140 Pistol for 1.6mm wires (all wires)
ARC140-CG20	Arc140 Pistol for 2.0mm wires (all wires)
ARC140-CG23	Arc140 Pistol for 2.3mm wires (all wires)

3.1 Technical overview:

- Designed and used in practice for anti-corrosion and engineering coatings.
- Standard 1.6, 2.0 and 2.3mm wire size, 2.5mm available
- 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 Pistol.
- Closed arc for improved spray conditions and efficiency.
- Arc140F pistol 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	102mm
Length	457mm
Height	229mm

3.1.2 Typical performance figures for the ARC140 pistol:

MATERIAL	WIRE SIZE	THROUGHPUT KG/HR @ 350 Amps
Metallisation Wire 02E Zinc	2.0mm 2.3mm	36.0
Metallisation Wire 01E/17E/25E Aluminium & Alloys	2.0mm 2.3mm	8.5
Metallisation Wire 021E Zinc/Aluminium 85/15	2.0mm 2.3mm	31.0
Metallisation Wire 05E Copper	1.6mm	17.5
Metallisation Wire 30E,35E,45E, 55E,57E,60E 65E,80E,84E Steels	1.6mm	15.8
Metallisation Wire 75E Nickel Aluminium	1.6mm	19.0

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

4 SUPPLIES PACKAGE

Part No	Description
SUP140-EV5P	5M Supplies Package for S250/V300/S350 Energiser
SUP140-EV10P	10M Supplies Package for S250/V300/S350 Energiser
SUP140-EV20P	20M Supplies Package for S250/V300/S350 Energiser
SUP140-EX20CP	Extension to 20M Supplies Package for S250/V300/S350 Energiser
7144	PTFE Wire Conduits (Supplied by the meter)
6274/5	½" Clamp Pads for PTFE Tubing
SUP06-EXT10L	10m extension supplies

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 S350 Energiser.
- Protective cover supplied for protection.
- Various wire conduits to suit different applications and wire dispensing methods.
- Supplied with all fittings appropriate to connect to 140 Pistol and S350 energisers.
- 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, up to a maximum of 20m.
- Power cables fitted with twist and lock connectors into the energiser. Air hoses fitted with quick release fittings into the energiser.
- 7144 PTFE tubing or 36890 conduits are supplied when dispensing from drums to go between the drum dispensing cone and the wire drive unit.

4.2 10m power pet supplies, includes:



Power cables
2 off



Air hose
1 off



Control cable
1 off

4.2.1 Technical overview:

- 10m Power Extension Trolley (PET) supplies package available as standard
- Up to 20m available for certain applications (check with Metallisation)
- Supplied with all fittings appropriate to connect to S350 Energiser and Power Extension Trolley
- Quick release power, air and control couplings allow quick assembly / disassembly of package

5 ENERGISER

Part No	Description
2227	S350 Energiser for Inverter Drive
2227D	S350 Energiser for Inverter Drive (220/380/440V)



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

5.1 Technical overview:

- 350 Amp continuous operation (100% duty cycle)
- Specifically designed to suit only Arcspraying.
- 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 ingress for added reliability
- Overcurrent limit protection – protects all parts of spray system from over-current
- Simple design for ease of maintenance
- Easy access energiser panels & external fuse bank for reduced Mean Time to Repair (MTTR).
- Switched output voltage control
- 220V/380V/440V input supply options available (hard wired)

5.1.1 S350 Energiser Specification:

Description	Characteristics
Input Power Requirements	380/440V 50-60Hz 3 Phase
Optional Input Power	220V 50-60Hz 3 Phase
Fusing Required	32A/Phase (415V input)
Max Power Consumption	18 KVA
Duty	0-350 Amps @ 100% Duty Cycle
Output Voltage	0-50Vdc (nominal) Switched High/ Low & 1 - 5
Air Requirements	1.56m ³ /min @ 6bar (55cfm @ 90psi)
Weight	215 Kgs
Width	680mm
Length	900mm
Height	913mm

6 WIRE DRIVE UNITS

Part No	Description
ARC140-DUAEV	Wire Drive Unit Push / Pull
ARC140-DDAEV	Wire Drive Unit Pull Only

6.1 ARC140-DUAEV Wire Drive Unit Push / Pull



Shown mounted on the drive support plate.

6.1.1 Technical overview:

- 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 dispenser and also at the pistol via the flexible drive, ensuring constant speed at the drive unit and pistol
- Allows complete use of all the wire (unlike push only systems)

6.2 ARC140-DDAEV Wire Drive Unit Pull



Shown mounted on the drive support plate with MIG reel dispense.

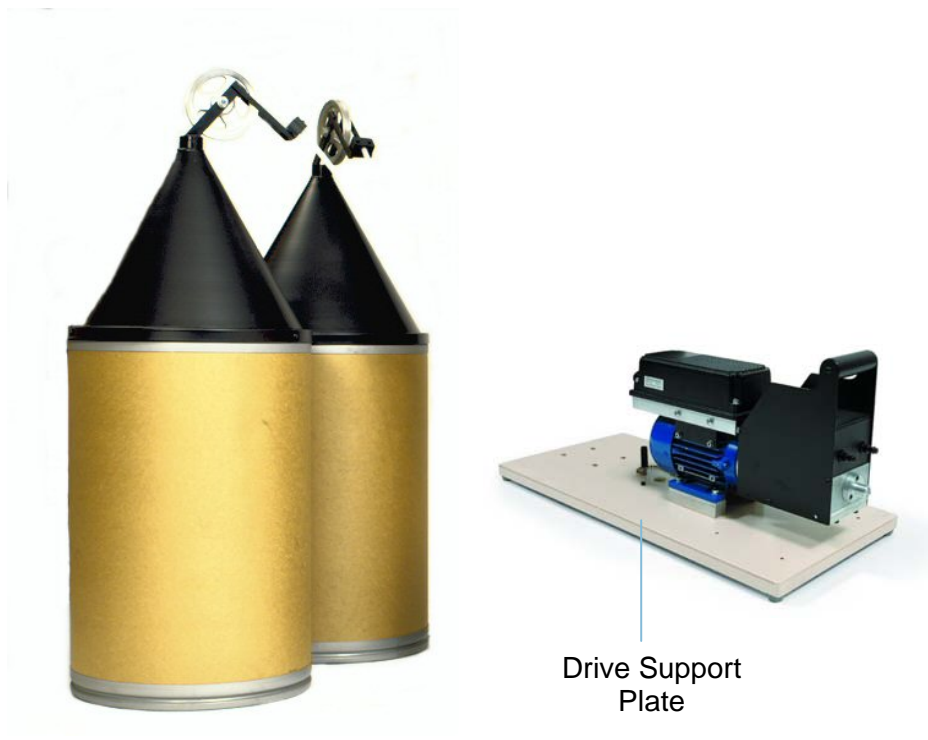
6.2.1 Technical overview:

- Electric Inverter Drive Motor for smooth wire control.
- Includes inverter drive motor and flexible drive connection.
- Pull mechanism positively drives the wire at the pistol via the flexible drive, ensuring controlled wire speed close to the point of arc
- Allows the complete use of the wire (unlike push only systems)
- Suitable for dispensing from MIG reels (most common) or coils

7 WIRE DISPENSE

7.1 Wire Dispensing Cones (Pulley):

Part No	Description
21254	Wire Dispensing Cones (2 required)
2006-DSP	Wire Dispenser Support Plate



7.1.1 Technical overview:

- Suitable for dispensing Zinc and Aluminium wire
- Specifically designed to suit Arcspraying with the each drum being individually insulated from each other.
- Fitted Pulley to ensure a smooth wire feed to the pistol.
- Rigid construction
- Ease of loading and unloading of the wire.
- Drums available in 125kg and 250 Kg for Zinc plus 60Kg for Aluminium.
- Needs to be used with a wire drive unit (see section 6, not included in the wire dispensing cone package) and drive support plate

7.2 Two Tier Wire Dispenser:

Part No	Description
2006-2T	S350/S700 2 Tier Wire Stand

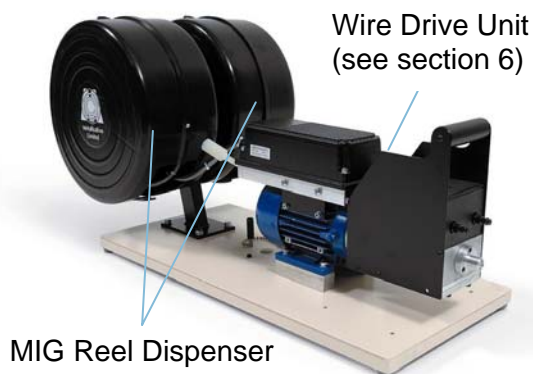


7.2.1 Technical overview:

- Suitable for dispensing raw materials that are only available in coil form
- Wire straighter (for engineering wires) to ensure smooth wire feed to the pistol
- Specifically designed to suit Arcspraying with the each coil being individually insulated from each other.
- Variable brake tension to ensure wire does not uncoil.
- Designed to ensure a smooth wire feed to the pistol.
- Rigid construction
- Lower tier swings out for Ease of loading and unloading of the Coils.
- Castors fitted to the bottom of the dispenser allowing excellent manoeuvrability.
- Shown above with the wire drive unit (see section 6, not included in the 2 tier package) and drive support plate (included in the 2 tier package)

7.3 MIG Reel Wire Dispenser:

Part No	Description
2006-MIG	Wire Dispenser for MIG Reels
2006-BRKT	MIG Reel conduit bracket assy (DDA drive only)



The wire is dispensed in MIG Reels and is shown with the wire drive unit fitted.

7.3.1 Technical overview:

- Specifically designed to suit Arcspraying with the MIG reels being individually insulated from each other.
- Brake tension to ensure wire does not uncoil.
- MIG reel dust cover to ensure more consistent spraying.
- All common anti-corrosion materials and most engineering materials available on MIG reels.
- Designed to ensure a smooth wire feed to the pistol.
- Shown above with the wire drive unit (see section 6, not included in the MIG dispense package)
- The part number 2006-BRKT is required if the pull only version with the ARC140-DDAEV drive motor is used. The bracket will support the wire conduits to stop them from touching and includes the clamp pads to hold the suitable conduits.

7.4 Non Powered Extension Trolley

Part No	Description
2006-NPET	Non Powered Extension Trolley

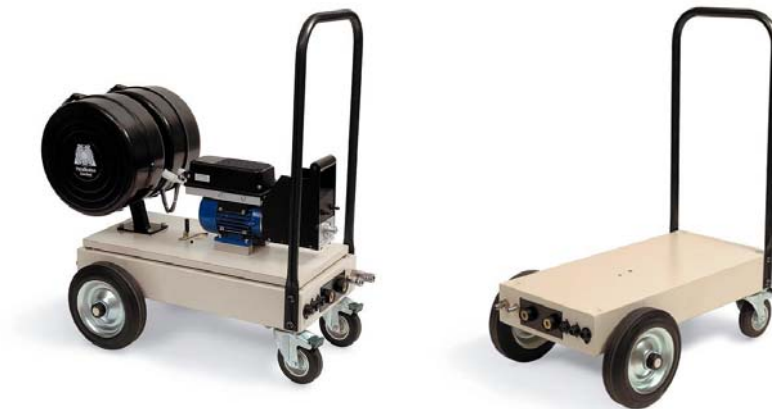


7.4.1 Technical overview:

- Shown with and without drive unit and wire dispense fitted
- Allows movement of the drive unit and wire dispense around the site independently of the energiser
- Braked castors

7.5 Power Extension Trolley

Part No	Description
2006-PETL	Power Extension Trolley



7.5.1 Technical overview:

- Shown with and without drive unit and wire dispense fitted
- Designed to allow the energiser to be sited further away from the spray job, offering greater access to the work area and protecting the energiser from the harsh site environment
- Large, site capable wheels
- Quick release power, air and control couplings to allow quick assembly / disassembly of the spraying system
- Braked castors

8 TOOL KIT



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

9 OPTIONS

9.1 Arc Beam:

Part No	Description
ARCBEAM(140)	Arcbeam for 1.6mm ARC140 Pistol

9.1.1 Technical overview:

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

9.1.2 Technical data:

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

9.2 Arc Extensions:



Part No	Description
ARC140EX500	Arcspray deflector extension 1.6mm, 500mm Long
ARC140EX1000	Arcspray deflector extension 1.6mm, 1000mm Long
ARC140EX1500	Arcspray deflector extension 1.6mm, 1500mm Long

9.2.1 Technical overview:

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

9.2.2 Technical data:

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

9.3 Remote Pendant:



Part No	Description
2227-PENDANT	Remote Pendant for Stop / Start / Spray and Wire Feed

Technical overview:

- Hand held pendant.
- Eyelet to support pendant.
- Rigid construction.
- Stop / Start Button Control.
- Key switch for Spray and Wire Feed.
- Safety Key control to lock off Spray and Wire feed when not in use.
- Easy to use.
- Available in any cable length.