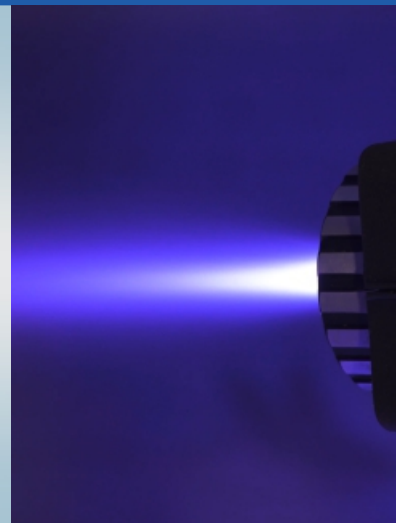
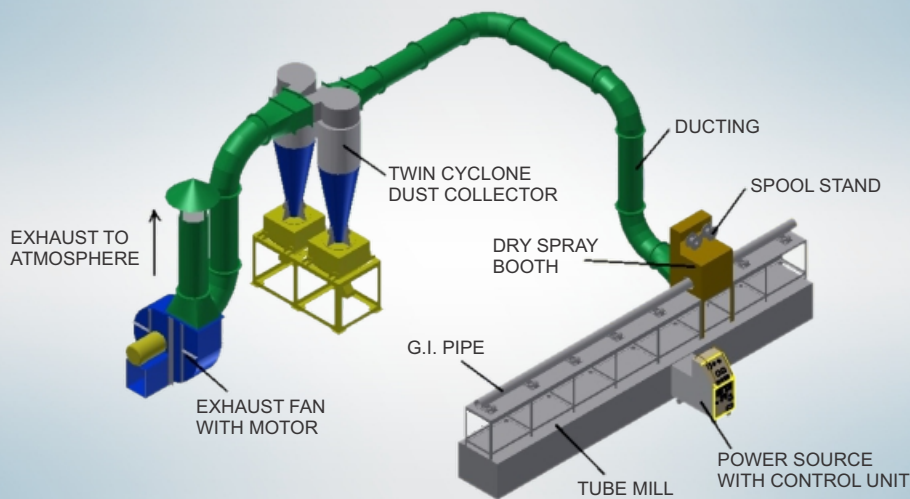




ONLINE ZINC SPRAY COATING

FOR GALVANIZING PIPE & TUBE INDUSTRY



**POWER SOURCE WITH
CONTROL CONSOLE MCP-300 DC**



102DC ARC SPRAY TORCH



101AC ARC SPRAY TORCH

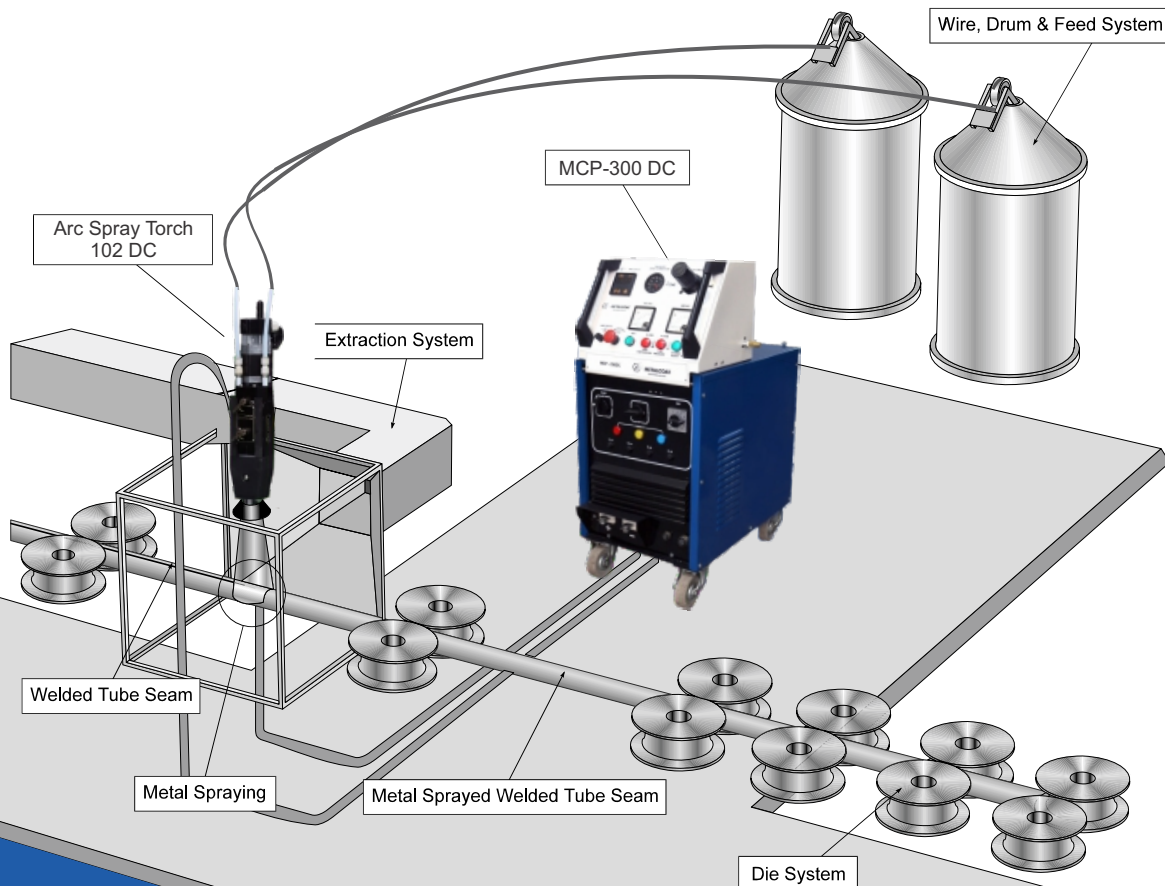
Introduction:

A roll forming machine draws hot or cold rolled steel through successive stations and shapes the material into a tube. Tube is produced on a tube forming mill by Electrical Resistance Welding of the longitudinal seam. Although no filler metal is added that would change the chemical compositions, the welding process applies temperatures high enough to sacrifice some corrosion resistant properties of the base metal. The process also vaporizes some aluminium or galvanized coatings previously applied to the rolled steel. Further, the subsequent tooling operation used to remove the weld fin destroys the external coating around the weld area and unless re-protected this area of the tube is prone to corrosion.

The re-protection of this weld damage is achieved by applying a metal sprayed deposit with a material which affords similar corrosion resistant properties

to the strip pre-coat. This "in-line" method of repair is the only method available which offers the flexibility of producing tube with zinc, aluminium or Zn/Al coatings.

The thermal spray process applies coating of zinc to reinstate the corrosion resistance properties of the tubing. Applying the spray while the weld seam is hot assures a metallurgical bond of the sprayed material with the substrate, improves both the deposit efficiency and density of the sprayed material, and allows the coating to blend, thereby helping to hide the weld seam. Arc spray is the most user-friendly and in terms of operating cost, the least expensive of the thermal or metal spraying processes used for applying metal coatings to base materials. Any electrically conductive material in wire form can be arc sprayed.



Economics :

G. I. Tubes and pipes produced from Tube Mills generally lack corrosion resistance property at weld portion, throughout the entire seam length (due to removal of galvanized layer while welding the seam) resulting poor corrosion resistance and subsequent rusting propagates. Metal coat has analysed the problem and developed chemically non-hazardous thermal spray system for continuous on line zinc spray coating on G. I. Tubes and Pipes on seam. Such systems have been demonstrated and supplied to various leading tube mills where these systems are performing satisfactorily. The Zinc spray is 20 to 30

Microns. However 10 to 100 micron can be deposited (depending upon tube/pipe traverse speed.) on Tubes and Pipes ranging from 15mm N.B. to 125mm N.B. Size without interrupting Tube Mill speed. The average output can be of 10 pipes per minute with an approximate 25 micron coating thickness. The System package consist of dry spray booth (Spray Chamber), Twin Cyclone, Exhaust Fan with motor along with ducting. Arc Spray Gun System includes Arc Spray Gun, Power Source & Control Panel along with cables.

Pre-Galvanised Tube :

Tube made from strip which has a hot dip galvanised deposit applied during manufacture. The galvanised deposit thickness being in the range - 14 to 20 microns (200 to 275 grams/m², both sides coated). The weld damaged area is sprayed with a zinc deposit to a thickness of approximately 0.04mm (40 microns) case to case.

Temperature limitation of finished tube up to 150°C.

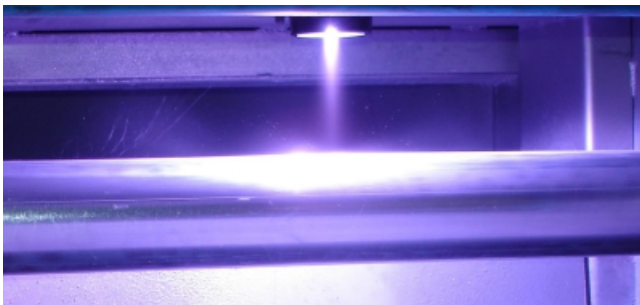
Life expectancy - dependent upon pre-galvanised deposit thickness and working environment. Used in non-polluted rural environments.

Pre-Aluminised Tube :

Tube made from steel strip which has a hot dip aluminised deposit applied during manufacture. The aluminised deposit thickness being in the range - 40 to 50 microns (230 to 290 grams/m², both sides coated). The weld damaged area is sprayed with an aluminium deposit to a thickness of approximately 50 microns.

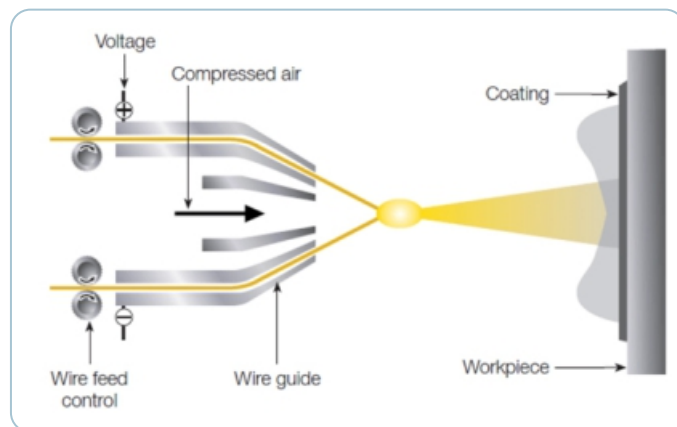
Temperature limitation of finished tube: - up to 500°C.

Life expectancy - dependent upon pre-aluminised deposit thickness and working environment. Used in applications which involve operation at elevated temperatures or where thermal cycling occurs. Also recommended for coastal or offshore environments.



Arc Spraying :

In the Twin Wire Arc Spray Process (also known as the electric arc process), two consumable wire electrodes connected to a high-current direct-current power source are fed into the gun and meet, establishing an arc between them that melts the tips of the wires. Twin wires are fed via electric driven motor or air motor. The molten metal is then atomized and propelled toward the substrate by a stream of air. Because the wires are melted directly by the arc, the thermal efficiency of the electric arc spray process is considerably higher than that of any other thermal spray process.



Spray rates are driven primarily by operating current and vary as a function of both melting point and conductivity. As the molten metal shears from the wires, it atomizes, or breaks up, the material into finer particles, creating a fine distribution of molten metal droplets. The atomizing air is also used to accelerate the particles toward the substrate surface, where the molten particles impact, deform, and solidify to build up a coating.

Method :

The online zinc spray system can be installed on to either new or existing tube mills. The spraying torch must be located as close as possible to the fin removal tool and if possible within 1 metre of the welding coil. The surface to be sprayed should be clean and dry. No "carry over" of lubricating fluid can be tolerated in the spray area, because the mechanism for the adhesion of the coating relies upon the inherent heat retained in the weld seam. It is also undesirable to have excess cooling fluid contaminating the spray chamber as this can lead to a build-up of dust which may restrict air flow in the extraction ducting.

The deposit is applied using the following equipment:

Spray Torch	– Metal Coat 102DC Arc Spray Torch or 101AC Arc Spray Torch
Power Source	– Metal Coat MCP 300DC/MCP 300AC Power Source with Control Consul Rated at 300 Amp duty 100% duty cycle
Spray Controller	– Electronic Controller to accurately control the deposition rate
Wire Dispensing	– Various wire dispensing options are available dependent upon materials to be used and space available in location of spray area. Wires may be in the drum packaging or in the form of spools.

Arc Spray Gun :



ARC SPRAY GUN - Model: 101AC

Specification :

Operation	: Automatic
Wire Feed Mode	: AC Motor
Wire Size	: 1.6mm or 2mm
Rated for DC Power	: 300 Amps.
Compressed Air Req'd.	: 70 cfm at 80 psi (5.5 bar)
Net Weight	: Approx. 7 Kg. (Gun Only)



ARC SPRAY GUN - Model: 102DC

Specification :

Operation	: Automatic
Wire Feed Mode	: DC Motor
Wire Size	: 1.6mm or 2mm
Rated for DC Power	: 300 Amps.
Compressed Air Req'd.	: 70 cfm at 80 psi (5.5 bar)
Net Weight	: Approx. 4.5 Kg. (Gun Only)

Portable Wire Feed & Gun Mounting Stand :

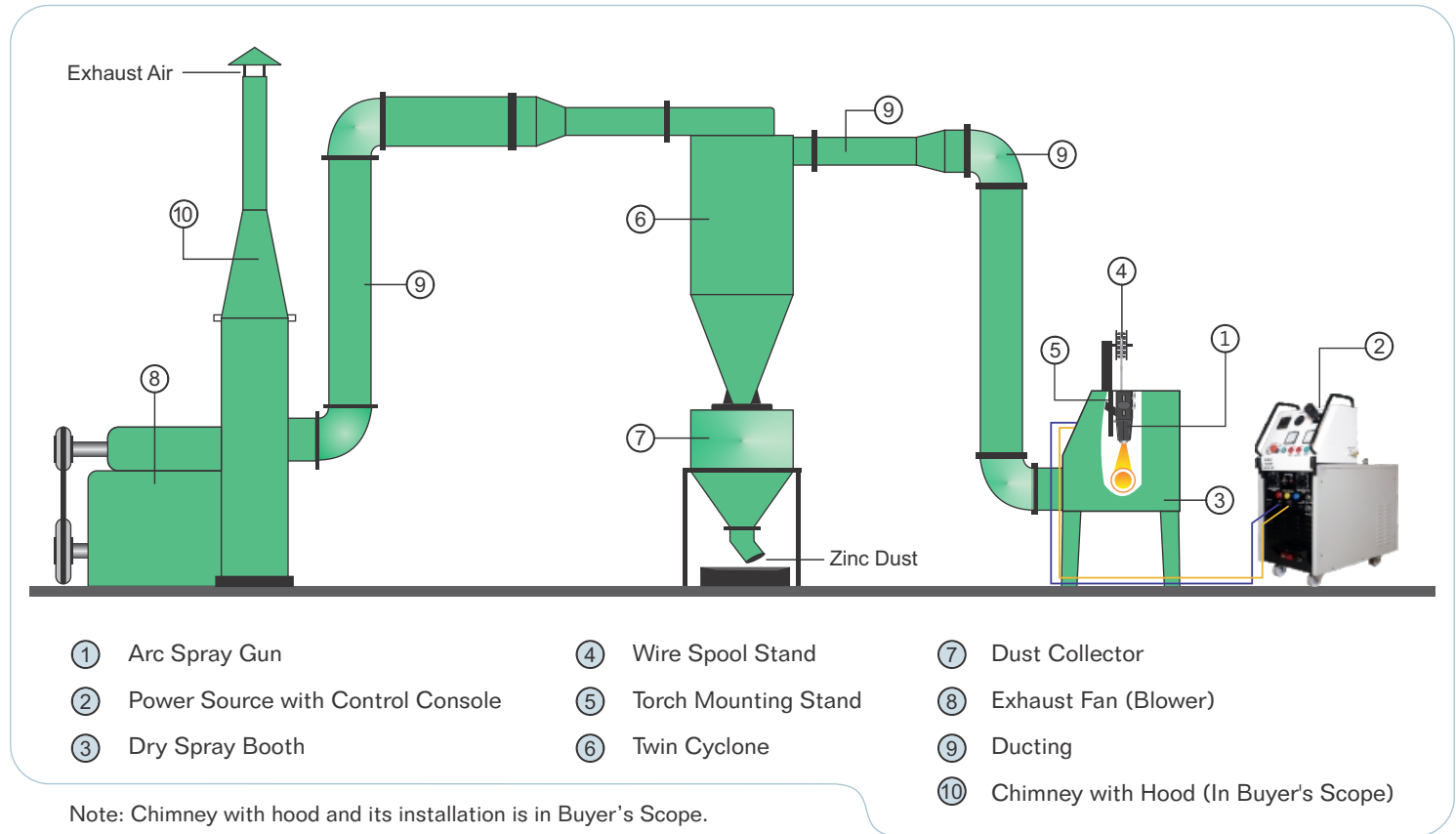
The two wires, which serve as the two electrodes for the arc, are supplied from two insulated wire spools, mounted on a stand. The wires free from any bends or kinks are dispensed from the spools through wire feed tubes and are made to pass through wire guides in the spray gun.

The main feature of the Wire Feed & Gun Mount Stand is the mounting of spools on the top of spray hood and thus allows wire feeding very smoothly into the gun. The gun is mounted on an adjustable fixture which moves gun up & down as per pipe diameter and as per required distance from tube seam.



Metal Coat Online Zinc Spray Coating System For Tube Industry :

The equipment layout is flexible and minimum space required for installation of zinc spray coating system is 5500mm (18') Length x 2240mm (8') Breath x 3660mm (12') Height



The system consists of a spray hood mounted on a platform directly down line of the tube forming process. The tubes can pass through the spray hood while the spray process is going on. A motorized electric arc spray gun 102DC Arc Spray Torch or 101 AC Arc Spray Torch is mounted in the spray hood on its roof. A manually adjusting mechanism is provided to adjust the gap between the tube and gun tip. Arc spray gun is started before the tube enters in the spray hood. The distance from arc to the tube seam is adjusted as per the size of the tube and the spray pattern thereby minimizing the over-spray and precisely controlling the material usage.

As the tube comes under the spray zone, the spray material starts depositing on the weld seam. The hot weld seam assures a metallurgical bond of the sprayed material with the substrate, improves both the deposit efficiency and density of the sprayed material, and allow the coating to blend, thereby helping to hide the weld seam. The over sprayed zinc and dust created during the spray process is continuously sucked .

Ducting is connected from spray hood to the dust collector. Ducting layout can be varied as per the space available for positioning of the dust collector. A twin cyclone type dust collector is provided to collect the maximum heavy dust particles & cartridge element type dust collector is provided to trap the fine zinc dust on the surface of filter cartridges and allows clean air to be exhausted in the atmosphere through the exhaust fan. The spray gun ampere can be set to achieve required coating thickness & desired production output.

Typical Performance Data For Zinc Spraying :

Tube Mill Speed	- 10 to 120 metres/minute
Tube Diameter	- 0.5" to 6"
Tube Travel Speed	- 10 - 120 mtrs/minute approx.
Tube Thickness	- 1.1 to 6 mm
Spray Distance	- 30mm from arc point
Atomising Air Pressure	- 5 bar (approximately 80 psi)
Spray Voltage	- 21 to 23 volts when spraying
Spray Current	- 150 amps

Coating Properties :

Any metal sprayed deposit exhibits some degree of porosity (hence the need to apply slightly thicker sprayed deposits than the pre-coatings which are hot dip applied). The "as sprayed" deposit has a fine satin appearance, surface finish. After spraying, the sizing roll stations of the tube mill will slightly deform the sprayed deposit to produce a flattened partially shiny appearance. The sizing operation will also reduce surface porosity.

Technical Specification: Arc Spray Torch: 102DC / 101AC :

The Metal Coat 102 DC Arc Spray Torch and 101 AC Arc Spray Torch uses electrical energy to melt metal which is in the wire form. Compressed air is used to atomize the molten metal with high velocity to project it onto the prepared work surface. During operation, an electric arc is maintained between two metal consumable wires. The wires are continuously fed to the arc position by a drive mechanism operated by a DC Motor for 102 DC Arc Spray Torch and by AC Motor in 101 AC Arc Spray Torch which ensures precision wire feed speed. The wires meet at the head of the gun and melt in the electrical arc. These are then directed across the arc towards the substrate through the compressed air. The particles

cool to ambient temperature and coalesce into a high-quality metal coating. Wires are fed at a small angle between them to achieve a narrow spray pattern. A narrow-angle also increases the cross-sectional area of the wire ends exposed to the arc. This allows wires to absorb more heat and maintain a stable arc

The Arc Spray System is designed to process all conductive wires relevant to thermal spray & solid wires. The new technology for the power supply is combination with the highly accurate wire feed and the controlled air cap geometry allows controlled and uniform energy transfer on to the wire material.

Technical Specification: Arc Spray Torch: 102DC / 101AC :

This allows the energy transfer to be adapted to the needs of the applications. The distance from the arc to the tube seam is an important measurement on tube mill installations. Standard arc spray air caps provide conical spray patterns. Straight extensions provide elliptical patterns. A small spray width minimizes over-spray and precisely controls material usage.

The flexible hoses package has a standard length of 5 meters though this length can be designed to meet your requirements.

The hose package consists of two current cables on a atomizing air hose. The cable has a standard length of 5 meters.

The fumes and fine Zinc dust generated in spray booth is sucked into cyclone dust collector due to suction created by exhaust fan. Due to cyclonic action the zinc particles are trapped at the bottom of cyclone dust collector and clean air is discharged from outlet of blower into atmosphere keeping environment clean and friendly.

Power Source with Control Console - MCP-300 DC / MCP-300 AC :

The Power Supply is especially developed for arc spraying with integrated control and ergonomic operator console.

The MCP-300 DC / 300 AC Power Source with Inbuilt Control Consul is equipped with an electronic control circuit adapted to arc spraying of various materials. This control circuit has a response time adjusted to the arc spraying process to ensure a stable arc between the melting electrodes.

The effects on the process are tremendous. The control reduces the voltage variations and allows a

uniform coating process at a lower voltage.

The melting-off energy in the arc is more uniform than in conventional arc spraying power sources. This also applies to the droplet size and heat content of the individual particles. Overheating of the spray particles is reduced; burn-off rates and oxidation are minimized. Together, these factors result in an improved coating quality.

The electronic power supply allows working at maximum capacity at a duty cycle of 100%.

Power Source With Control Console - MCP-300 DC & 300 AC

MCP-300 AC CONTROL CONSOLE

SPECIFICATION:

Power Source INPUT

Voltage (V)	: 415V±10%
Phase (Nos)	: 3
Frequency (H2)	: 50

OUT PUT

Static Characteristics	: Constant Potential
Open Circuit Voltage Range	: 18-40

Max. Out Put Current

@ 100% Duty Cycle	: 300 (Amp.)
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GENERAL

Insulation	: F
Dimension L x W x H (inch)	: 37 x 18 x 19
Weight (approx)	: 125 Kgs.
Transformer Coils	: Copper
Cooling	: Forced Air



MCP-300 DC CONTROL CONSOLE

SPECIFICATION:

Power Source INPUT

Voltage (V)	: 415V±10%
Phase (Nos)	: 3
Frequency (H2)	: 50

OUT PUT

Static Characteristics	: Constant Potential
Open Circuit Voltage Range	: 18-40

Max. Out Put Current

@ 100% Duty Cycle	: 300 (Amp.)
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GENERAL

Insulation	: F
Dimension L x W x H (inch)	: 37 x 18 x 19
Weight (approx)	: 125 Kgs.
Transformer Coils	: Copper
Cooling	: Forced Air



Spray Booth with Gun Arrangement System :

Installing the arc spray gun in an enclosed box ventilated to a dust collector ensures environmental and personnel safety. Dust, fumes, and over spray must be removed from the spray zone quickly. Over-spray can contain particles of less than 2 microns in size, and can constitute to 4 to 15% of the over-spray by weight. If not properly ventilated, this could cause a hazardous breathing zone or impede mill operations

downline hence efficient dust collection system is necessary.

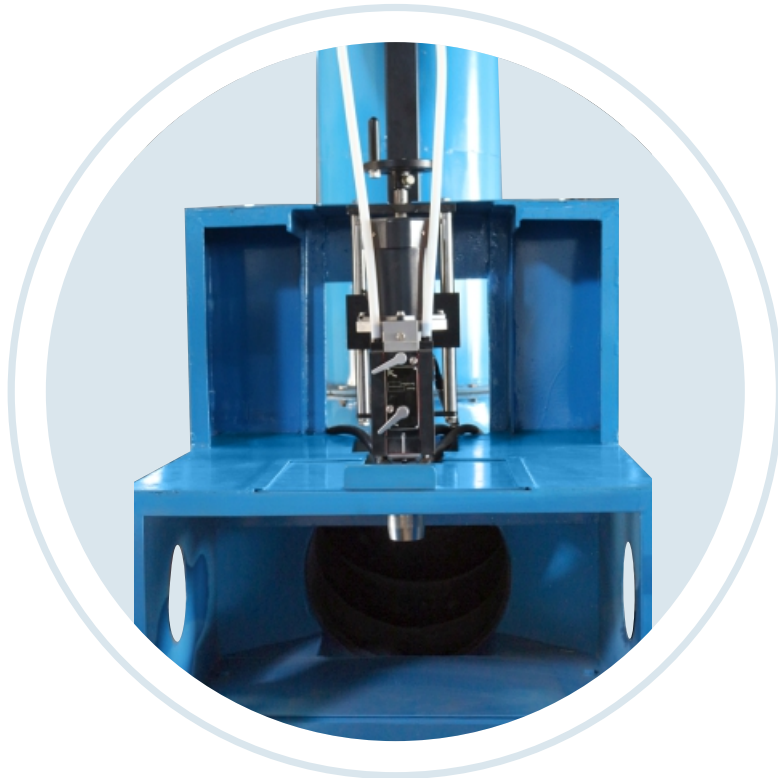
The Spray Hood is fabricated from 2.5 mm M.S sheet in folded and welded construction to give requisite strength and rigidity. Suitable side opening is provided for entry/exit of tubes.

Opening Dimensions

500mm [W] x 300mm [H] Approx

Tube centre height from base

300 mm (Can be as per requirement)



Spray Booth With Dual Spray Torch (Optional)

1. The spray booth has provision to mount two spray gun with individual wire spools. However the power source remains common.
2. At a time only one spray gun is operative other one is just stand by.
3. The switching from one spray gun to another is quick and easy through a selector switch.
4. The biggest advantage of dual spray gun configuration ensures uninterrupted continuous metal spray process even though when one of the operating spray gun needs repair / maintenance.
5. The change over is made first and then maintenance of previous spray gun is attempted.
6. The minimum space required is one meter.



Advantages :

1. Spray booth gun is positioned just above the spray booth resulting non accumulation of metal dust on spray gun.
2. The spray gun remains at low temperature due to better heat dissipation while it is positioned above spray booth.
3. Gun maintenance frequency reduced drastically.
4. Front and top of spray booth is provided with hinged doors to facilitate maintenance ease.
5. Spray Booth had provision for perforation at bottom to drain out water drops carried with pipes.

Twin-Cyclone Dust Collector:

Two Nos. high efficiency cyclone dust collector are constructed in pair for the collection of fumes & heavy dust. Collected dust is automatically discharge from the flap valves provided at the bottom of each cyclone. The dust is collected in the dust bin. Bin to be arranged by buyer. Cyclone dust collector is fabricated from 3.15mm mild steel sheet. Capacity of each cyclone is 1500cfm.



Dry Filter Cartridge Element Type Dust Collector (Optional)

The fumes and dust laden air escape from the twin-cyclones enters into the dust collector. It passes through cartridge elements where the dust particles deposit on the surface of cartridge elements and clean air discharges into the atmosphere. The filter elements are automatically cleaned with aid of automatic timer card through which solenoid valves

are activated & compressed air blown into the cartridges at a time for cleaning the filter elements. The dust released from filter elements is collected in the bin provided below the dust collector hopper. The dust collector is fabricated from 14 gauge steel sheet in welded and folded construction, suitably reinforced for strength & rigidity.

No. of Cartridges	: 4 Nos.
Fan Motor	: 15 HP, 415V/3P/50 Hz
Fan Capacity	: 3000 CFM



Specifications :

Exhaust fan	- Ground mounted
Filter Area	- 104 Sq. Meter.
Composition of Micro Fibers	- Blend of cellulose fibers with a moisture resistant silicone treatment for optimum dust release characteristics
Fractional Efficiency	- 99.999% on 0.5 Micron particles Polytech Flame Retardant Ultra High Efficiency with a micro fiber synthetic melt blown surface laminate
Construction Pans	- Galvanized steel liners
Gasket	- Polyisoprene molded closed cell gasket
Air Permeability	- 25-35 cfm/sq. ft. per 0.5" w.c
Temperature	- 65°C max. operating temperature
Compressed air required	- 15 Cfm at 80 Psig
Dust Emission level	- 10 mg/ cub. Mtr.
Type of cleaning	- Pulsejet through solenoid valves
Pulse duration and frequency	- Adjustable
Pressure gauge, Air Filter	- Provided one each
Discharge	- Cam lock dust bin
Noise Level	- The exhaust air will be below 85 dBA.

A suitable specification of single limb type manometer is provided on the dust collector to measure and read the Pressure Drop across the filter cartridges.

A high quality Explosion Vent is Provided on the dust collector module to avoid any severe damage to the dust collector upon any blast.

Exhaust fan is provided with Anti-Vibration Pad.

Note:- Electric Motor Horse Power capacity is offered considering dust collector 8 mtrs away from the suction hood. Any increase in ducting length will increase motor HP and then additional cost of exhaust system & ducting.

Ducting :

Suitable ducting (maximum 8 mtr) from spray hood to the inlet of twin cyclone dust collector and from cartridge element type dust collector to the exhaust fan is provided. However, ducting beyond the exhaust fan is to be arranged by the buyer. Ducting is constructed by 2.5mm mild steel sheet.

Control Panel:

The motor control panel shall be a centralized control panel housed with switchgear items. The motor control panel shall be mounted with 1 No. suitable rating Switch Fuse Unit for incoming supply.

Individual MCB and thermal overload relay shall be mounted for motor below 12.5 HP.

Painting/colour :

Inside and outside surface of equipment will be blast cleaned and given two coats of Red Oxide Primer. Final coat on exterior of system is Synthetic Enamel Air Drying, Shade: Blue & Crystal White.

UTILITIES (To be arranged by Purchaser at his cost) :

- Dry and oil free compressed air 70 cfm @90 psig upto gun control console.
- Dry and oil free compressed air 20 cfm @ 80 psig upto dust collector (SEPARATE).
- A.C. Electrical Supply at 3 phase & 4 wire. 415V, 50 Hz upto the control panel.
- Spray wire required for Commissioning at User's site.
- All wiring and conduit from customer's main power source to machine's control panel and earthing wherever required. All piping for air and water upto equipment's inlet connection.
- To provide equipments like overhead/portable cranes, tools & tackles necessary for Installation/Commissioning as applicable
- Any concrete embedded materials, such as conduit, piping and anchor bolts, as required for quoted equipment.
- Concrete foundations, leveling pads and grout.
- Weather protective covers as required.
- Unloading and storing of equipment at stores when received and shifting of equipment from Stores to Site, unpacking and keeping ready for Erection/Commissioning.
- Job loading and unloading arrangement.

NOTE:

All above dimensions are approximate. The system's design may be changed without affecting its rated capacity.

Customer has to specify the tube centre height & platform height.

Customer has to provide the available layout where the complete system will be installed.

Advantages Of Metal Coat Arc Spray Systems :

Combustion Flame Spraying has in the past been used for this application. Electric Arc Spraying offers significant benefits over the combustion Flame spray method. These includes: -

Economics

- Energy costs when running arc spray equipment are approximately one tenth those of flame spray systems.
- No energy is consumed by Arc spray systems when wire is not being fed (unlike flame spray systems in which gases are burned even when wire is not feeding).
- Arc spray equipment generally requires less maintenance and uses fewer spare parts than flame spray systems.

Safety

- Arc spray systems do not use explosive gases

Quality

- Pre-set parameters ensure repeatable quality of Arc spray deposits

Using Arc Spray systems throughput rates can be varied independently of the size of wire being sprayed. Thus, spray rates can be co-ordinated with line speed to ensure even coating thicknesses are applied, independent of the mill operating speed, and spray rate adjustments for alteration in line speed, are made automatically.

Consumables :



ZINC SPRAY WIRE

Wire Dia - 1.6 mm / 2 mm

CHEMICAL COMPOSITION

The average chemical composition of Zinc Wire:

GRADE	99.99 ZN	99.95 ZN
ZINC (%)	99.99% MIN	99.95% MIN
Impurities (%)		
Lead (Pb)	0.002 max.	0.020 max.
Cadmium (Cd)	0.003 max.	0.020 max.
Tin (Sn)	0.001 max.	0.002 max.
Iron (Fe)	0.003 max.	0.005 max.
Copper (Cu)	0.001 max.	0.003 max.
Total Impurities	0.01 max.	0.05 max.

- Wire Surface is clean, smooth & Glossy, uniform diameter and with a metallic lustre.
- Spool Packing of 10 / 15 Kgs. per spool.

SAFETY WEARS

Metallizing Helmet

It is light weight & comfortable with excellent vision. Air to the helmet is supplied from the helmet air conditioner followed by air breather.



Air Breather

This is installed in between compressed air line originating from fitting to the operators helmets. Activated charcoal is contained in the breather unit which separates the oil traces from the compressed air and clean compressed air is fed to the operator's helmet.



Helmet Air Conditioner

Air from the air breather is fed to the helmet air conditioner and air is contained before it is fed to the helmet for breathing. It has also a regulator knob so that the operator can regulate the temperature of air fed to the helmet. It is self driven and does not need external power.



Ear Muff

Operator & other personnel close to the spray operation must wear. It protects the operator from noise originating during thermal spray.



Protective Glass

Light weight & comfortable with excellent vision. Operator & other personnel close to the spray operation must wear.



Operator Safety Mask

Ensure clean breathing air at all times.



Hand Gloves

These are made of rubber and have anti-static properties. Hand gloves protect the operators' hand against flying abrasive and static charge if any.





Spare Parts List Of Arc Spray Gun (AC DRIVE) Model No.: 101AC/8835

PART NO.	DESCRIPTION	ITEM
101-01	CLOSE HEAD	
101-01 Assy.	CLOSE HEAD ASSEMBLY	
100-02	NOZZLE POSITIONER LONG SLOT	
101-02	NOZZLE POSITIONER LONG CROSS SLOT	
101-02-S	NOZZLE POSITIONER SHORT SLOT	
101-02-S	NOZZLE POSITIONER SHORT CROSS SLOT	
101-03	NOZZLE CAP GOLDEN (Extra Fine/Medium)	
101-03	NOZZLE CAP GREEN (Medium / Coarse)	
101-03	NOZZLE CAP BLUE (Medium / Coarse)	
101-03	NOZZLE CAP RED (Extra Fine Spray)	
101-04	PROTECTIVE CAP	
101-05	TERMINAL ASSEMBLY	
101-06	INSULATOR SHEET	
101-06A	MOUNTING PLATE	
101-07	CONTACT TUBE	
100-07A	CONTACT TIP 1.6MM (BRASS)	
100-07A	CONTACT TIP 2.0MM (BRASS)	
100-07A	CONTACT TIP 2.5MM (BRASS)	
100-07A	CONTACT TIP 3.17MM (BRASS)	

PART NO.	DESCRIPTION	ITEM
100-07B	CONTACT TIP 1.6MM (COPPER)	
100-07B	CONTACT TIP 2.00MM (COPPER)	
100-07B	CONTACT TIP 2.5MM (COPPER)	
100-07B	CONTACT TIP 3.17MM (COPPER)	
101-10	SIDE COVER PLATE SCREW	
AM4-10	DRIVE GEAR SCREW	
101-11	DRIVE BOX	
AM6-12	MOTOR MOUNTING SCREW	
AM4-12	SCREW FOR GEAR BOX ASSEMBLY	
101-12	WORM SHAFT (Standard Speed)	
101-12	WORM SHAFT (High Speed)	
101-13	REAR BEARING WARM SHAFT	
101-14	YOKE SUPPORT TUBE DOVEL	
101-15	YOKE SUPPORT TUBE	
101-15	HEAD FIXING SCREW	
SM5-16	INNER YOKE	
101-AM14-16	HEAD MOUNTING SCREW	
101-17	OUTER YOKE	



Spare Parts List Of Arc Spray Gun (AC DRIVE) Model No.: 101AC/8835

PART NO.	DESCRIPTION	ITEM
101-18	YOKE BEARING	
101-19	ROLLER SHAFT	
101-GM419	LEVER LOCKING SCREW	
101-20	WIRE ROLLER ASSEMBLY	
101-20	TERMINAL FIXING SCREW	
101-21	WORM WHEEL (Standard Speed)	
101-21	WORM WHEEL (High Speed)	
101-21A	WORM WHEEL RETAINING SCREW	
101-22	LEVER CAM SHAFT	
101-24	ROLLER OPENING LEVER	
101-24A	LEVER LOCATING PIN	
101-24B	LEVER CAM ASSEMBLY	
101-25	TENSION SCREW	
101-26	PLAIN SPRING SUPPORT	
101-27	TENSION SPRING	
101-28	THREADED SPRING SUPPORT	
101-29 R	RIGHT HAND SIDE COVER PLATE	
101-29 L	LEFT HAND SIDE COVER PLATE	
101-30ED	SHORT REAR WIRE GUIDE	

PART NO.	DESCRIPTION	ITEM
101-31ED	LONG REAR WIRE GUIDE	
101-32	SHORT FRONT WIRE GUIDE	
101-33	LONG FRONT WIRE GUIDE	
101-34	FLEXIBLE WIRE GUIDE (TEFLON)	
AM4-35	SCREW FOR HOLDING DRIVE UNIT	
101-35	GAS KET	
101-36	AIR CONNECTOR	
101-42	FIXING NUT FOR WIRE ROLLER	
101-43	MOUNTING STUD	
101-44	CLAMP FIXING SCREW	
101-45	DRIVE GEAR METALLIC	
101-46	DRIVE GEAR FIBER	
101-48	ELECTRIC MOTOR (AC)	
101-50	HOOD	
101-51	HOOD SCREW	
101-52	GEAR BOX ASSEMBLY	
101-56ED	BEARING FRONT (WORM SHAFT)	
101-57	WASHER FOR GEAR	



Spare Parts List Of Arc Spray Gun (AC DRIVE) Model No.: 101AC/8835

PART NO.	DESCRIPTION	ITEM
101-60	ROLLER COVER	
101-61	MICROMASTER (AC DRIVE)	
101-62	CURRENT CABLE (2 Nos.) (70 Sq. mm Cable for 400 AMP) (STD. LENGTH 5 MTRS.)	

PART NO.	DESCRIPTION	ITEM
101-63	REMOTE CONTROL	
101-64	CONNECTING AIR HOSE (STD. LENGTH - 5 MTR.)	
101-65	TEFLON TUBE WITH SMC FITTING (3 MTR. LENGTH)	
101-66	MOTOR CABLE WITH PIN	



Spare Parts List Of Arc Spray Gun (DC DRIVE) Model No.: 102DC/8835

PART NO.	DESCRIPTION	ITEM
102-01	CLOSE HEAD	
102-01-ASSY.	CLOSE HEAD ASSEMBLY	
102-02	NOZZLE POSITIONER LONG SLOT	
102-02	NOZZLE POSITIONER LONG CROSS SLOT	
102-02-S	NOZZLE POSITIONER SHORT SLOT	
102-02-S	NOZZLE POSITIONER SHORT CROSS SLOT	
102-03	NOZZLE CAP GOLDEN (Extra Fine/Medium)	
102-03	NOZZLE CAP GREEN (Medium / Coarse)	
102-03	NOZZLE CAP BLUE (Medium / Coarse)	
102-03	NOZZLE CAP RED (Extra Fine Spray)	
102-04	PROTECTIVE CAP	
102-05	TERMINAL ASSEMBLY	
102-06	INSULATOR SHEET	
102-06A	MOUNTING PLATE	
102-07	CONTACT TUBE	
102-07A	CONTACT TIP 1.6MM (BRASS)	
102-07A	CONTACT TIP 2.0MM (BRASS)	
102-07A	CONTACT TIP 2.5MM (BRASS)	
102-07A	CONTACT TIP 3.17MM (BRASS)	

PART NO.	DESCRIPTION	ITEM
102-07B	CONTACT TIP 1.6MM (COPPER)	
102-07B	CONTACT TIP 2.00MM (COPPER)	
102-07B	CONTACT TIP 2.5MM (COPPER)	
102-07B	CONTACT TIP 3.17MM (COPPER)	
GM4-08	MOTOR GEAR MOUNTING SCREW	
AM4-10	SIDE COVER PLATE SCREW	
AM4-10	DRIVE GEAR SCREW	
102-11	BEVEL GEAR DRIVE BOX (DC DRIVE)	
102-12	MOTOR MOUNTING SCREW	
AM4-12	SCREW FOR GEAR BOX ASSEMBLY	
102-12	WORM SHAFT (Standard Speed)	
102-12	WORM SHAFT (High Speed)	
102-13	REAR BEARING WARM SHAFT	
102-14	YOKE SUPPORT TUBE DOWEL	
102-15	YOKE SUPPORT TUBE	
SM5-15	HEAD FIXING SCREW	
AM4-16	HEAD MOUNTING SCREW	
102-16	INNER YOKE	



Spare Parts List Of Arc Spray Gun (DC DRIVE) Model No.: 102DC/8835

PART NO.	DESCRIPTION	ITEM
102-17	OUTER YOKE	
102-18	YOKE BEARING	
102-19	ROLLER SHAFT	
102-GM4-19	LEVER LOCKING SCREW	
102-20	WIRE ROLLER ASSEMBLY	
102-AM5-20	TERMINAL FIXING SCREW	
102-21	WORM WHEEL (Standard Speed)	
102-21	WORM WHEEL (High Speed)	
102-21a	WORM WHEEL RETAINING SCREW	
102-22	LEVER CAM SHAFT	
102-24	ROLLER OPENING LEVER	
102-24A	LEVER LOCATING PIN	
102-24B	ASSEMBLY ROLLER OPENING (Incl. Part No. 22/24/24A)	
102-25	TENSION SCREW	
102-26	PLAIN SPRING SUPPORT	
102-27	TENSION SPRING	
102-28	THREADED SPRING SUPPORT	
102-29 R	RIGHT HAND SIDE COVER PLATE	
102-29 L	LEFT HAND SIDE COVER PLATE	

PART NO.	DESCRIPTION	ITEM
102-30ED	SHORT REAR WIRE GUIDE	
102-31ED	LONG REAR WIRE GUIDE	
102-32	SHORT FRONT WIRE GUIDE	
102-33	LONG FRONT WIRE GUIDE	
102-34	FLEXIBLE WIRE GUIDE (TEFLON)	
AM4-35	SCREW FOR HOLDING DRIVE UNIT	
102-35	GAS KET	
102-36	AIR CONNECTOR	
102-42	FIXING NUT FOR WIRE ROLLER	
102-43	GUN HOLDING PLATE	
102-43A	MOUNTING STUD	
102-43B	MOUNTING STUD LOCK WASHER	
102-43C	NUT	
102-44	CLAMP FIXING SCREW	
102-50	HOOD	
102-51	HOOD SCREW	
102-56	BEARING FRONT (WORM SHAFT)	
102-57	WASHER FOR GEAR	
102-60	ROLLER COVER	



Spare Parts List Of Arc Spray Gun (DC DRIVE) Model No.: 102DC/8835

PART NO.	DESCRIPTION	ITEM
102-84	ELECTRIC MOTOR (DC)	
102-85	DRIVE GEAR (MOTOR)	
102-86	DRIVE GEAR (SHAFT)	
102-92	GEAR BOX ASSEMBLY	
102-93	INSULATED WIRE GUIDE HOLDER	
102-94	REAR WIRE GUIDE	

PART NO.	DESCRIPTION	ITEM
102-95	CURRENT CABLE (70 Sq. mm Cable for 400 AMP) (STD. LENGTH 5 MTRS.)	
102-96	REMOTE CONTROL	
102-97	CONNECTING AIR HOSE (STD. LENGTH 5 MTRS.)	
102-98	TEFLON TUBE WITH FITTING (3 MTR. LENGTH)	
102-99	MOTOR CABLE WITH PIN	
102-100	ARC SMC FITTING	



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