

# METAL COAT

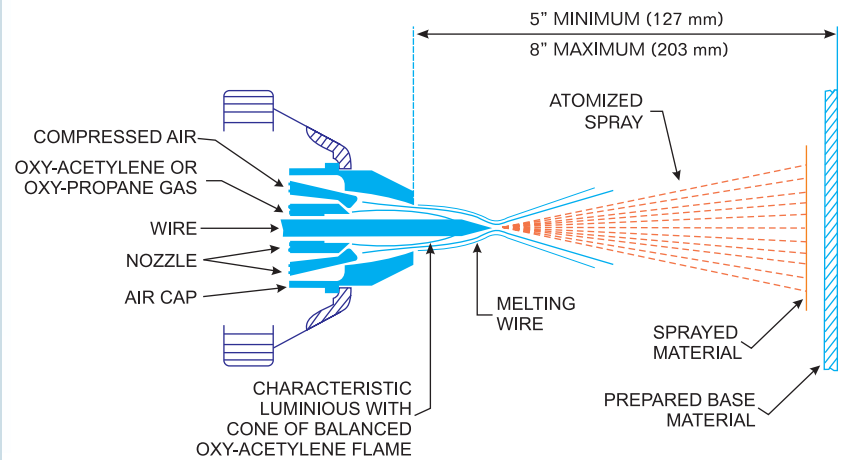


## WIRE FLAME SPRAY GUN MODEL: 11M

Suitable For Heavy Duty Anti-Corrosion Coating using Soft Wire such as Aluminium, Zinc, Lead, Tin, Babbitt of size 1/8", 5/32" & 3/16" (3.17, 3.96, 4.76mm)

## Wire Flame Spray Process

The wire is fed in to the front of gun through air driven turbine. Fuel gas and oxygen is mixed properly and safely in the siphon plug gas head assembly which provides combustible heat source. The molten metal is atomized and propelled by compressed air in the form of fine metal spray particles for coating on job surface.

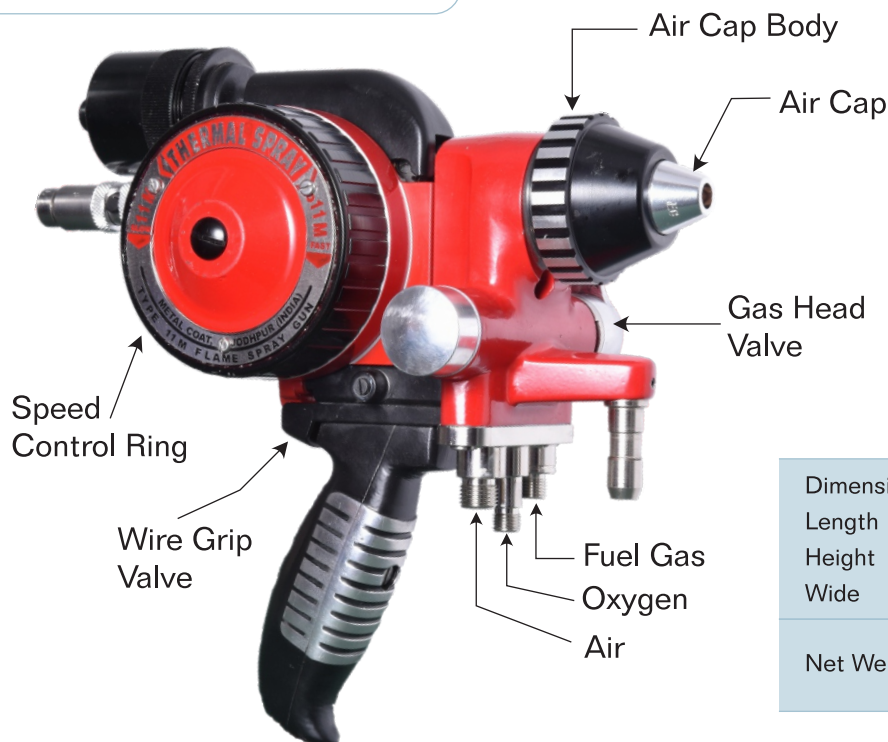


## About 11M Flame Spray Gun

This is specially designed to run at higher speeds allowing the user to apply soft wire material to any substrate efficiently and economically. This gun is convenient for hand-held or start/stop operation due to the Wire feed thumb trigger. It is engineered specifically for soft-wire applications. This gun will not spray hard materials such as Stainless Steel, Nickel, Bronze, Copper or Bonderite. It can be used for smaller jobs as well as cranking out large area applications almost as easily as spray painting. It sprays 1/8" (3.17mm), 5/12" (3.97mm) and 3/16" (4.76mm) soft metalizing wires such as Zinc,

Aluminium, Lead, Tin and Babbitt, with low melting points. Numerous accessories increase its versatility including various Air Cap, Nozzle and Siphon plug configurations to provide exceptional coating quality and economical operation. Converting from one size of wire to another is quick and easy. This is a very effective gun for coating or repairing various metals in severely corrosive environments. This gun is perfect for hand-held, fixed or mobile applications. The entire system (except the compressor), can be mounted on a cart for mobile applications and field repair work.

### The 11M Gun is an equivalent to 11E Gun



Dimensions	
Length	9 Inch
Height	9 Inch
Wide	5- 1/4 Inch
Net Weight	Approx 2.7 Kg. (Gun Only)

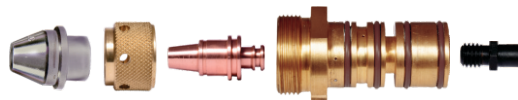
## Spray Coating Wires

Soft metals and metal alloys with low melting temperature in wire form are used for spray coating using 11M i.e. Zinc, Aluminium, Tin, Babbitt etc. Standard Wire used are 1/8" (3.17mm), 5/32" (3.97mm), 3/16" (4.76mm).

## Combustion Gases Used

The combustion gases used are oxygen and fuel gas such as acetylene, LPG, propane etc.

### CONVERSION KIT



Conversion Kit for change of fuel gas acetylene to propane/LPG or vice-versa.

### WIRE FLAME SPRAY GUN-11M SPECIFICATIONS

Operation	Manual
Wire Feed	Air Turbine
Wire Size Standard	1/8" (3.17mm)
Wire Size Optional	5/32" (3.97mm), 3/16" (4.76mm)
Gasses Used	Oxygen
Fuel Gas	Acetylene / LPG / Propane
Compressed Air	35 CFM FAD at 75 psi (5 bar)
Start Stop Operation	By thumb operated wire feed valve
Output (Spray Rate)	
Aluminum	05.00 Kg./Hr approx.
Zinc	21.80 Kg./Hr approx.
Pure Tin	22.70 Kg./Hr approx.
Babbitt	22.70 Kg./Hr approx.

### TYPICAL APPLICATION

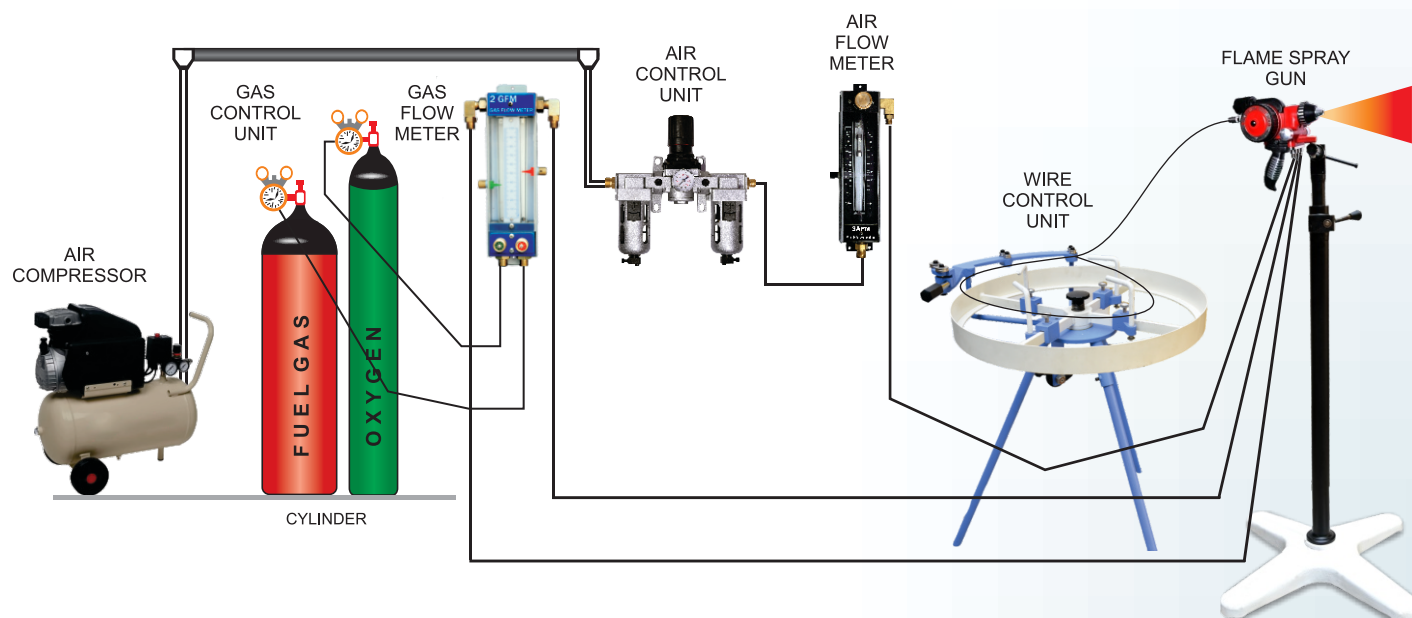
- To provide Anti-Corrosion Coating
- For Galvanizing
- To Enhance Electrical Conductivity

### Note:

1. Given parameters are only for reference purpose. Actual values may differ depending upon the geometry and size of the job.
2. Buyer to specify wire diameter, material and fuel gas to be used while ordering the gun.

**Gun is supplied with standard spares and tool kit.**

## WIRE FLAME SPRAY GUN - COMPLETE INSTALLATION



## OPTIONAL ACCESSORIES

### Gas Control Unit

Consist of Gas Regulator with pressure gauge for regulating gas flow to wire Flame Spray Gun. It has two pressure gauge to indicate cylinder and delivery pressure.

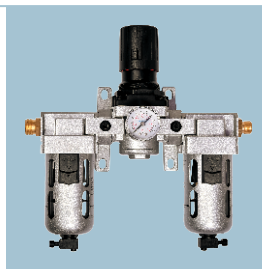
Pressure Rating:	Oxygen	: 10 Bar
	LPG/Propane	: 06 Bar
	Acetylene	: 2.5 Bar



### Air Control Unit

Consist of air filter cum regulator for secondary filtration and regulating air flow to wire flame spray gun. An additional outlet provides connections for operator's helmet.

Pressure Rating: 10 Bar



### Hose Kit

Consist of Hose to connect oxygen cylinder & fuel gas cylinder with gas flow meter to spray gun.

Oxygen Hose	- Blue	: 3+7 Mtrs.
Fuel Gas Hose	- Red	: 3+7 Mtrs.
Air Hose	- Black	: 7 Mtrs.



### Air Flow Meter with Hose

The 3AFM Air Flow Meter is a highly accurate, rugged and reliable instrument for regulating and measuring the flow of compressed air in a manual powder or wire combustion spray system.

Model: 3AFM (Air Flow Meter)  
Flow Unit in both NLPM & SCFM

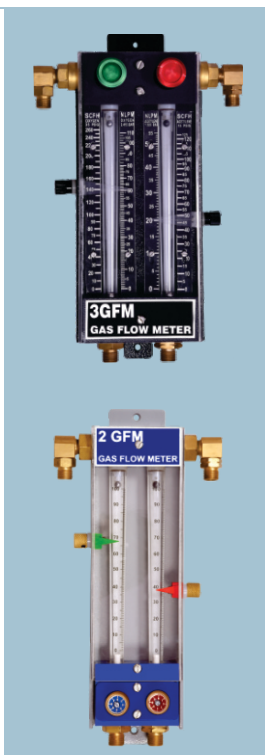


### Gas Flow Meter

These precision wall mounting Flowmeters are recommended to use with Flame Spray Equipment. Ease of reading enables economic operation and rapid fault diagnosis. The unit incorporates separate flowmeter for both Oxygen and Fuel Gas supplies.

Model: 3GFM (Gas Flow Meter)  
Flow Unit in both NLPM & SCFM

Model: 2GFM (Gas Flow Meter)  
Supply with % scale of 0 - 100



### Wire Control Unit

The Wire Reel Stand with Straightner is specifically designed to dispense wires for flame spraying. A wire straightener is included and the unit is capable of handling either reeled or loose coiled wire or spool.



A Trolley with Reel Stand is also available to move the complete system in shop easily.



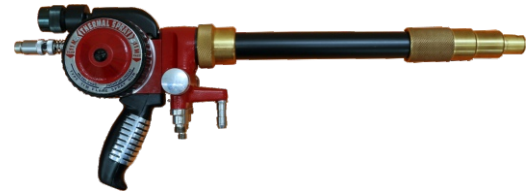
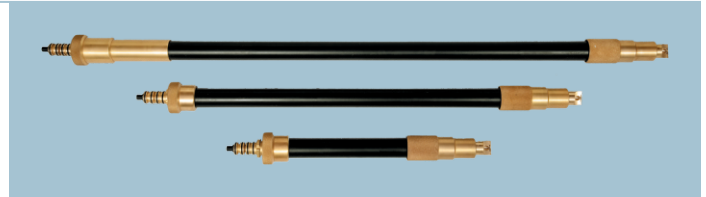
## OPTIONAL ACCESSORIES

### Extension Nozzles

Where deep bores or recesses are to be sprayed, a range of extension nozzles are available. These allow access of the spray at depths upto 1.1 Mtr., whilst straight or deflector air caps can be selected to direct the spray stream to the area required.

Typical use include spraying in internal diameter or hard to reach coating surfaces. For ID coatings, a minimum ID measurement of approximately 8 inches is required to achieve optimal coating quality.

Installation is simple by removing the standard Air Cap Body and Siphon plug and replacing it with the extension. This can be done in about 1-2 minutes without any tools. These are available in various lengths for both Oxy-Acetylene and Oxy-Propane Gun.



Length: 1 FOOT / 2 FEET / 3 FEET

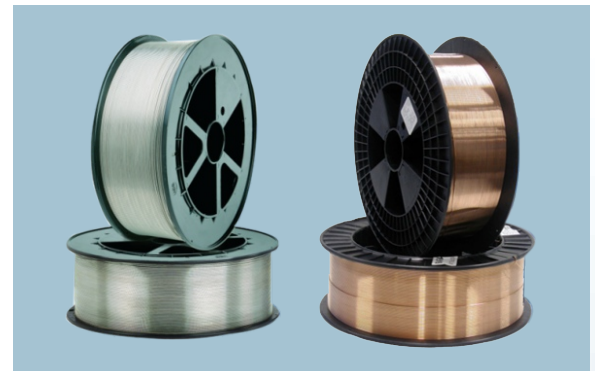
### Spray Booth

It is used for controlling sprayed dust and fumes when metallizing operation takes place. It carries away metal dust particles as well as heat. Duct work has adjustable pipe length as well as ball joint to fit individual requirement. Reclaimed materials also have a resale value.



### Metal Spray Wire

Standard materials wires of low melting points such as Aluminium, Aluminium Alloy, Tin, Tin Alloy, Zinc & Babbitt are available.



### Applications of Various Metal Coatings

- Zinc & Aluminum for anti corrosion coating.
- Tin & Tin Alloy Coating.
- Babbitt for bearing applications.

## SAFETY WEARS

### Metallizing Helmet

Light weight & comfortable with excellent vision. Supplied from a separate air supply which should be filtered by Helmet Air Conditioner.



### 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 conditioned 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 doesn't need external power.



### Ear Muff

Light weight & comfortable. Operator & other personnel close to the spray operation must wear. Protect 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. Conforms to current legislation on breathing air quality.




















### 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 (11M WIRE FLAME SPRAY GUN)

DESCRIPTION	PART NO.	ITEM
AIR CAP BODY	11M-1	
SIPHON PLUG-LARGE GAUGE ACETYLENE	11M-2-3	
SIPHON PLUG-LARGE GAUGE PROPANE/LPG	11M-2-4	
EA AIR CAP (2)	11M-3-EA	
EC AIR CAP (2)	11M-3-EC	
AH AIR CAP (2)	11M-3-AH	
CH AIR CAP (2)	11M-3-CH	
AB FAN SPRAY AIR CAP (2)	11M-4-AB	
CD FAN SPRAY AIR CAP (2)	11M-4-CD	
GAS HEAD ASSEMBLY	11M-5	
NOZZLE NUT (2)	11M-6	
NOZZLE 3/16 ACETYLENE (2)	11M-7-7	
NOZZLE 3/16 PROPANE (2)	11M-7-9	
NOZZLE 1/8 ACETYLENE (2)	11M-7-13	
NOZZLE 1/8 PROPANE (2)	11M-7-15	
OIL SIGHT PLUG ASSEMBLY (Includes 11M-49)	11M-10	
O-RING	11M-13	

DESCRIPTION	PART NO.	ITEM
COUNTER SHAFT PLUG O-RING	11M-14	
SIPHON PLUG-O-RINGS	11M-14	
VALVE CORE O-RINGS	11M-14	
FRONT WIRE GUIDE 3/16"	11M-23-3/16	
FRONT WIRE GUIDE 1/8"	11M-23-1/8	
SET SCREW FOR REAR WIRE GUIDE	11M-25	
UPPER DRIVE ROLL AXLE SCREW	11M-26	
GUN HANDLE	11M-27	
GUN HANDLE SCREW	11M-28	
DRIVE ROLL CARRIER PIVOT PIN	11M-30	
GUN HANDLE MOUNTING SCREW		
BEARING COVER MOUNTING SCREW	11M-31	
VALVE HANDLE SCREW		
UPPER DRIVE ROLL 3/16"	11M-32-3/16	
UPPER DRIVE ROLL 1/8"	11M-32-1/8	
UPPER DRIVE ROLL GEAR	11M-33	
UPPER DRIVE ROLL SCREW	11M-34	











## SPARE PARTS LIST (11M WIRE FLAME SPRAY GUN)

DESCRIPTION	PART NO.	ITEM
LOWER DRIVE ROLL 3/16"	11M-35-3/16	
LOWER DRIVE ROLL 1/8"	11M-35-1/8	
LOWER DRIVE GEAR 3/16"	11M-36-3/16	
LOWER DRIVE GEAR 1/8"	11M-36-1/8	
UPPER DRIVE ROLL AXLE	11M-37	
MOUNTING STUD	11M-40	
MOUNTING STUD ROLL PIN	11M-41	
VALVE CORE	11M-43	
VALVE HANDLE ASSEMBLY	11M-45	
O-RING	11M-46	
BEARING COVER	11M-47	
BEARING COVER GASKET	11M-48	
OIL SIGHT PLUG O-RING SEAL	11M-49	
GREASE PLUG SCREW	11M-50	
REAR BEARING RETAINER	11M-51	
RETAINER PLUG	11M-52	
TURBINE/GEAR COVER SCREW	11M-53	

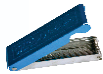















DESCRIPTION	PART NO.	ITEM
GEAR COVER	11M-54	
GEAR COVER GASKET	11M-55	
PLUG SCREW	11M-57	
CENTRAL HOUSING (Includes 11M-13, 11M-60, 11M-61, 11M-62 & 11M-63)	11M-59	
PUMP HOUSING	11M-60	
PUMP HOUSING MOUNTING SCREW	11M-61	
PUMP HOUSING LOCK WASHER	11M-62	
DOWEL PIN FOR MOUNTING GEAR COVER	11M-63	
DRIVE SHAFT	11M-65	
DIVE SHAFT GEAR	11M-66	
SET SCREW FOR TURBINE ROTOR	11M-67	
GEAR SET SCREW		
SET SCREW		
DRIVE SHAFT SEAL	11M-68	
RIGHT BALL BEARING FOR DRIVE SHAFT	11M-69	
FRONT AND REAR BALL BEARING FOR COUNTER SHAFT	11M-70	








## SPARE PARTS LIST (11M WIRE FLAME SPRAY GUN)



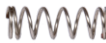











DESCRIPTION	PART NO.	ITEM	DESCRIPTION	PART NO.	ITEM
LEFT BALL BEARING FOR DRIVE SHAFT	11M-70		SPIDER ASSEMBLY	11M-86	
TURBINE ROTOR (Includes 11M-67)	11M-71		DETENT SPRING	11M-87	
TURBINE SHAFT	11M-72		RING NAME PLATE	11M-88	
RIGHT BALL BEARING FOR TURBINE SHAFT	11M-73		SCREW FOR RING NAMEPLATE	11M-89	
WASHER FOR BRAKE DISC RETURN SPRING	11M-74		COUNTER SHAFT	11M-91	
TURBINE SHAFT RIGHT NUT	11M-75		COUNTER SHAFT GEAR	11M-92	
BRAKE DISC RETURN SPRING	11M-76		GAS HEAD MOUNTING SCREW REAR	11M-96	
TURBINE COVER	11M-77		GAS HEAD MOUNTING SCREW FRONT	11M-97	
BRAKE DISC	11M-78		SOCKET WRENCH	11M-100	
O-RING	11M-79		LIGHTER	11M-101	
OIL SEAL BOBBIN	11M-80		TURBINE SHAFT BEARING NUB-RIGHT	11M-102	
OIL SEAL SLEEVE	11M-81		DRIVE ROLL TOOL	11M-103	
OIL SEAL WASHER	11M-82		SPANNER WRENCH	11M-104	
LEFT BALL BEARING FOR TURBINE SHAFT	11M-83		SCREW DRIVER	11M-105	
NUT FOR COUNTER SHAFT FRONT BEARING	11M-84		NOZZLE O-RING, LARGE	11M-108	
NUT FOR LEFT BEARING			NOZZLE O-RING, SMALL	11M-109	
CONTROL RING	11M-85		GEAR LUBE	11M-110	
			VALVE LUBE	11M-111	

## SPARE PARTS LIST (11M WIRE FLAME SPRAY GUN)

DESCRIPTION	PART NO.	ITEM
CLEANING WIRE KIT	11M-114	
SPANNER (13 x 17)	11M-115A	
SPANNER (19 x 22)	11M-115B	
SUPPORT BLOCK MOUNTING SCREW	11M-117	
SNUBBER ASSEMBLY 1/8"	11M-118-1/8	
SNUBBER ASSEMBLY 3/16"	11M-118-3/16	
ROLLER SPRING	11M-119	
TOOL POST FIXTURE	11M-124	
CLAMP SHAFT HOUSING	11M-126	
CLAMP SHAFT	11M-127	
PIN	11M-128	
PUSH ROD SEAL	11M-129	
HANDLE ASSEMBLY	11M-130	
VALVE SHAFT ASSY. (IND. 11M 129)	11M-131	
VALVE SHAFT SPRING	11M-132	
DRIVE ROLL CARRIER	11M-136	
PISTON ROD	11M-138	
STRAIN RELIEF ASSEMBLY (Includes 11M-67, 144 & 163)	11M-143	

DESCRIPTION	PART NO.	ITEM
STRAIN RELIEF BUSHING	11M-144	
GAS HEAD BODY (Includes 11M 40, 11M 41)	11M-145	
GAS HEAD SUB ASSY.	11M-145A	
WIRE FEED VALVE BLOCK (Includes 11M 180)	11M-150	
FACE BLOCK MFG. SCREW	11M-156	
HOSE CONNECTION BLOCK SCREW	11M-157	
OIL SEAL ASSEMBLY (Includes 11M-79, 11M-80, 11M-81, 11M-82 & 11M-283)	11M-160	
STRAIN RELIEF SPRING	11M-163	
PLUNGER (Fuel, Gas & Oxygen)	11M-165	
PLUNGER (Air)	11M-166	
PLUG SCREW O-Ring	11M-167	
PLUNGER O-Ring (Air)		
PLUNGER O-Ring (Fuel, Gas & Oxygen)	11M-168	
PLUNGER SEAL O-Ring (Air)	11M-169	
PLUNGER SEAL O-RING (Gas, Fuel & Oxygen)	11M-170	
PLUNGER SPRING	11M-171	
DETENT PIN	11M-173	
DETENT PIN SPRING	11M-174	

## SPARE PARTS LIST (11M WIRE FLAME SPRAY GUN)

DESCRIPTION	PART NO.	ITEM
HANDLE WASHER	11M-175	
HOSE CONNECTION BLOCK	11M-176	
PISTON RETURN SPRING	11M-177	
VALVE CORE STOP SCREW	11M-179	
O-RING	11M-180	
GAS HEAD VALVE O-RING PACKAGE (Complete set of O-Ring for 11M-5 Gas Head)	11M-184	
GUIDE INSERT 3/16	11M-187 3/16	
GUIDE INSERT 1/8	11M-187 1/8	
SNUBBING REAR GUIDE 3/16	11M-188 3/16	
SNUBBING REAR GUIDE 1/8	11M-188 1/8	
PUSH ROD LOCK	11M-189	
SIPHON PLUG AND NOZZLE O-RING PACKAGE (Includes 11M-14, 11M-108, 11M-109)	11M-190	
SIPHON PLUG ASSEMBLY 1/8, PROPANE	11M-200-2	
SIPHON PLUG ASSEMBLY 1/8, ACETYLENE	11M-200-3	
SIPHON PLUG ASSEMBLY 3/16, PROPANE	11M-200-4	
SIPHON PLUG ASSEMBLY 3/16, ACETYLENE	11M-200-5	
HEX ALLEN KEY 2mm	11M-202	

DESCRIPTION	PART NO.	ITEM
CYLINDER SUPPORT BLOCK	11M-206	
PISTON	11M-207	
PISTON O-RING	11M-208	
CYLINDER	11M-209	
HEX ALLEN KEY 3mm	11M-240	
SPRING RETAINER	11M-241	
ROLLER	11M-242	
SNUBBER SPRING HOUSING	11M-243	
SPRING	11M-245	
OIL SEAL SPRING	11M-283	
PISTON STOP SCREW	11M-293	

The Metal Coat 11M is a direct replacement for Metco 11E Gun. All the parts in this gun are interchangeable with Metco parts. The part number suffix (i.e the portion after the dash "-") should match the Metco part number. For example:

**If you wish to order a 11E-7-15 Nozzle, the Metal Coat Part No. would be 11M-7-15**

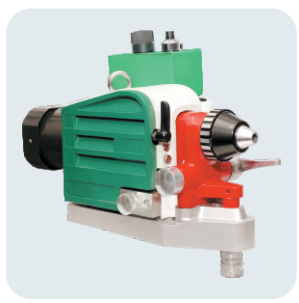
# OTHER PRODUCT RANGE & CONSUMABLES



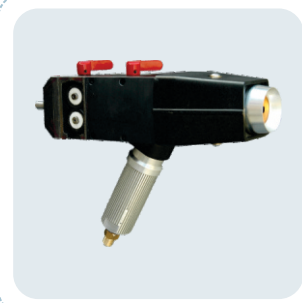
**12M**  
WIRE FLAME SPRAY GUN



**14M**  
WIRE FLAME SPRAY GUN



**5KM**  
WIRE FLAME SPRAY GUN



**AIR DRIVE**  
ARC SPRAY GUN



**AC DRIVE**  
ARC SPRAY GUN



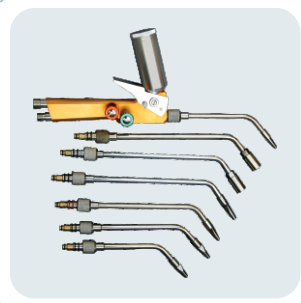
**DC DRIVE**  
ARC SPRAY GUN



**5PM-II**  
POWDER SPRAY GUN



**6PM-II**  
POWDER SPRAY GUN



**SPRAY & FUSE GUN**



**POWDER FEEDER**  
MPF-700 & MPF 3350



**SPRAY BOOTH**



**WIRES**



**POWDER**



**TURN TABLE**



**HVOF  
CONTROL CONSOLE**





H.O. & Works:

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