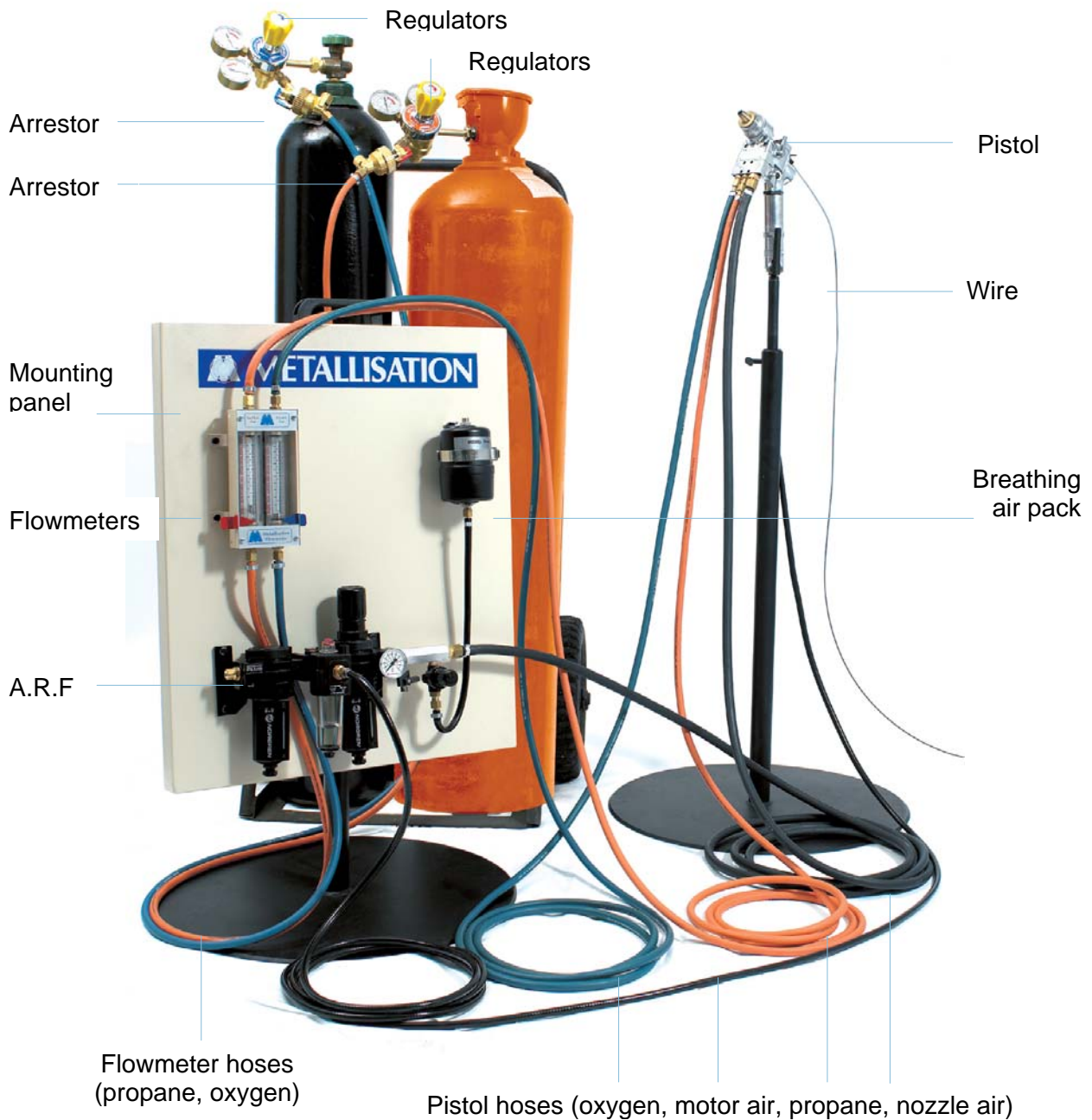


# Equipment Specification

## MK73 Flame Spray System



## 1 GENERAL

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The following specification covers the entire standard range of MK73 flamespray system. For the specific offer, please refer to the attached quotation and cross reference the part numbers for each piece of equipment.

## 2 BENEFITS

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- Fastest pistols on the market (up to 50kg/hr for continuous zinc)
- Stop/start version allows operator to stop spraying and leave the flame lit (e.g., whilst inspecting or moving the workpiece)
- Wide range of wire sizes to suit many application and coating requirements
- Spreader and non-spreader versions to allow detail work or larger areas to be sprayed efficiently
- Variable wire speed control
- Suitable for anti-corrosion wires plus some steels, copper and bronzes.
- Two stage air cap gives optimal setting for lighting and spraying
- Rugged construction combined with light-weight and balance for ease of handling
- Hanging hook for temporary storage or connection to spring balance
- Variety of hose lengths to suit each application
- Flow meters for optimal setting of parameters and fault finding
- Flow meters include large pointers for ease of checking from a distance
- Air Regulator and Filter (A.R.F.) unit supplies motor air, nozzle air and breathing air pack supply from one inlet.
- Variety of wire dispense methods and packaging available

### 3 MARK 73 PISTOL

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Version shown is a 3/16" stop/start pistol complete with a spreader to provide a wider spray pattern. Spreader is an optional extra for all other pistols.

#### Available pistols:

Part No	Description
<b>GAS73-1.6MM</b>	MK73 flamespray pistol for 1.6mm wires
<b>GAS73-2MM</b>	MK73 flamespray pistol for 2mm wires
<b>GAS73-2.3MM</b>	MK73 flamespray pistol for 2.3mm wires
<b>GAS73-3MM</b>	MK73 flamespray pistol for 3mm wires
<b>GAS73-4MM</b>	MK73 flamespray pistol for 4mm wires
<b>GAS73-1/8</b>	MK73 flamespray pistol for 1/8" wires
<b>GAS73-3/16</b>	MK73 flamespray pistol for 3/16" wires
<b>GAS73-3/16"F</b>	MK73 flamespray pistol for 3/16" wires (fast)

#### Technical overview:

- Primarily for spraying anti-corrosion coatings (zinc, aluminium and their alloys)
- Flame produced by burning propane and oxygen gases
- High output (see table over for typical spray rates)
- Most commonly used variant is 3/16" stop start pistol as it maximises spray rate whilst giving the benefits of being able to stop and start spraying and keep the main flame alight
- Wire drive via high torque, positive displacement air motor that also doubles as the handle

## Typical performance figures for the MK73 pistol:

MATERIAL	WIRE SIZE	THROUGHPUT KG/HR
Metallisation Wire 01E )	3/16"	7.5
Aluminium )	1/8"	3.6
)	2mm	2.3
Continuous Mode )	3/16"	12.5
Metallisation Wire 02E )	3/16"	32.0
Zinc )	1/8"	16.0
)	2mm	8.2
Continuous Mode )	3/16"	50.0
Metallisation Wire 21E )	3/16"	25.0
Zinc/Aluminium 85/15 )	1/8"	12.5
)	2mm	7.5
Continuous Mode )	3/16"	38.0
Metallisation Wire 07E, 08E, 09E )	1/8"	21.3
Tin Zinc Alloys )	2mm	9.1

## Technical data:

Description	Characteristics
Weight – at a held height of 1.2 M	3.18 Kgs – inc hoses
Width	95mm
Length	257mm
Height	286mm

## Services required:

	METRIC
Compressed Air	50 m <sup>3</sup> /hr @ 5.5 bar
Oxygen	1.37-7.9 m <sup>3</sup> /hr @ 1.5-4.1 bar
Propane	0.62-1.9 m <sup>3</sup> /hr @ 1.7-4.1 bar

**NOTE:** The gas and oxygen pressure and consumption figures shown cover the full range of possible nozzle assemblies which could be used.

These range from 1.6mm fine spray with the lowest consumption to 3/16" standard with the highest consumption and pressures.

All above figures are approximate as equipment settings and coating parameters/applications can affect the throughput from the pistol.

## 4 HOSES

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### 4.1 General specification:

Orange	Tubing to BS 5120:1987 for Propane
Blue	Tubing to BS 5120:1987 for Oxygen
Black	Tubing to BS 5118:1980 for Compressed Air

### 4.2 Regulator to flowmeter hoses:



Part number 21223  
Oxygen hose – 3m

Not shown: Part number 21140  
Propane hose (orange) – 3m

### Available regulator to flowmeter hoses:

Part No	Description
21140	Propane regulator - flowmeter hose x 3m (orange hose)
21223	Oxygen regulator - flowmeter hose x 3m (blue hose)

### Technical overview:

- Hoses conform to the specifications detailed in section 4.1
- Standard regulator to flowmeter hose lengths are 3m
- Non-standard lengths are available on request
- Supplied with fittings appropriate to connect to all Metallisation supplied flamespray equipment

### 4.3 Flowmeter to pistol hoses



Part number 21501  
Propane hose – 6m



Part number 21503  
Nozzle air hose – 6m



Part number 21504  
Motor air hose – 6m

Not shown 21502  
Oxygen hose – 6m

#### Available flowmeter to pistol hoses:

Part No	Description
<b>21501</b>	Flamespray propane hose x 6m
<b>21502</b>	Flamespray oxygen hose x 6m
<b>21503</b>	Flamespray nozzle air hose x 6m
<b>21504</b>	Flamespray drive motor air hose x 6m

#### Technical overview:

- Hoses conform to the specifications detailed in section 4.1
- Standard flowmeter to pistol hose lengths are 6m
- Non-standard lengths are available upon request
- Propane and oxygen hose fitted with safety check valves to prevent back-feeding of gases
- Maximum safety when hoses with check valves are used together with flame arrestors (see section 7)
- Supplied with fittings appropriate to connect to all Metallisation supplied flamespray equipment

## 5 FLOWMETERS AND MOUNTING PANEL



Part number 26900  
Flamespray mounting panel  
(Shown with all standard ancillaries)



Part number 21129  
Flowmeter for wire systems

### Available flowmeters and mounting panels:

Part No	Description
26900	Flamespray mounting panel
21129	Flamespray flowmeter (wire)

### Technical overview:

- Use with Metallisation regulators (see section 6) to ensure correct mixture of propane and oxygen is fed to the pistol to give the optimum flame the material sprayed
- Mounted in protective steel and Perspex case to provide protection in industrial environments
- Standard left hand threads for fuel gas (propane) to avoid incorrect connection
- Large floats, indicators and scale divisions offer good visibility at a distance
- Used as primary diagnosis tool for fault finding

- Flamespray mounting panel (pictured) offers a convenient method of mounting all the required ancillaries (quoted and supplied separately)

## 6 REGULATORS

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### 6.1 Gas and Oxygen Regulators



Part number: 21237  
Propane regulator



Part number: 21236  
Oxygen regulator

#### Available regulators:

Part No	Description
<b>21237</b>	Flamespray propane regulator
<b>21236</b>	Flamespray oxygen regulator

#### Technical overview:

- Used together with Metallisation flowmeters (section 5) and flame arrestors (section 7)
- Complies with BS5741 and IS02503 standards

## 6.2 Air Regulation And Filtration Unit



Part number: 21222A  
Air regulation and filtration unit (ARF)

### Available air regulation and filtration unit:

Part No	Description
21222A	Air regulation and filtration unit

### Technical overview:

- The ARF unit is made up of a filter bowl, lubricator, regulator and 500mm hose to connect to the breathing air pack.
- High flow and regulation characteristics suitable for flame spray applications
- Single supply feeds drive motor, nozzle and breathing air pack
- Drive motor supply is lubricated to protect motor from corrosion
- Nozzle air is unlubricated to ensure clean, uncontaminated coatings
- Breathing air pack supply is also unlubricated
- Snap-lock facility on regulator and lubricator to prevent accidental changes to settings
- Strainer on lubricator ensures clean oil in the fog generator
- All service parts can be changed without disconnecting hoses for ease of cleaning and maintenance
- Filter bowls have large filter elements for minimum pressure drop
- Filter bowls have sight glasses to prompt the operator to clean bowls

## 7 FLAME ARRESTORS

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Part number: 21123  
Flame arrestor, oxygen



Part number: 21122A  
Flame arrestor, propane/acetylene

### Available flame arrestors:

Part No	Description
<b>21123</b>	Flame arrestor, oxygen
<b>21122A</b>	Flame arrestor, propane/acetylene

### Technical overview:

The flame arrestors are designed as a regulator mounted unit to protect the operator, regulator/manifold and gas supply from flashbacks. The design features:-

- Use together with Metallisation regulators and hoses with check valves for maximum safety
- Mount to the regulator
- Sintered metal flame arrestor quenches the flame front resulting from a flashback.
- Pressure relief valve safely vents excess pressure and fumes
- Pressure sensitive cut-off valve, incorporating a tamper-proof reset mechanism, prevents the re-ignition of unburnt gases after a flashback.

## 8 WIRE DISPENSE

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Two methods of wire dispense are normal for flamespray applications; from coils on a wire stand (Metallisation wire swift) or from production packs with a wire dispensing cone.

### Available wire dispensers:

Part No	Description
<b>24750</b>	Wire Swift – Wire Dispenser/Straightener
<b>21254</b>	Wire dispensing cone with pulley

### 8.1 Wire swift



Wire  
straightener

Part number: 24750  
Wire swift

### Technical overview:

- Wire tripod base giving stability and strength
- Ball race thrust bearing for continued free rotation
- Easily adjusted wire retention arms which may be used for dispensing from coils or removed for dispensing from MIG or LAYER reels
- Ability to carry wire coils of diameters from 10" (250mm) - 30" (750mm) inside diameter
- Provision for a wire straightener for stiff materials such as 1/8" steels etc
- Adjustable brake preventing over-run of wires
- All anti-corrosion and engineering wires will be available in either coil or reel formats

## 8.2 Wire dispensing cone



Part number: 21254  
Wire dispensing cone with pulley for Zn or Al

### Technical overview:

The Metallisation wire dispensing cone offers the ability to conveniently dispense anti-corrosion wires from production packs (drums). The wire is neatly guided to a dispense point, then over the pulley to give a free passage of wire from the drum to pistol. Benefits include:

- Reduces snagging of wire against edge of drum when dispensing
- Fits standard 250kg and 125kg production packs
- Covers wire to minimise dust and moisture contamination
- Reduces kinking of wire when pulling from drum
- Reduces load on pistol drive system which increases the life on the motor and reduces wear on the rollers
- Production packs available as standard for the following materials:
  - Zinc – 1.6mm, 2mm, 2.3mm, 3mm, 4mm, 1/8" and 3/16"
  - Aluminium – 1.6mm, 2mm and 2.3mm
  - Zinc/Aluminium 85/15 - 1.6mm, 2mm, 2.3mm, 3mm, 1/8" & 3/16"
  - Tin/Zinc 80/20 – 2mm
  - Tin/Zinc 70/30 – 2mm