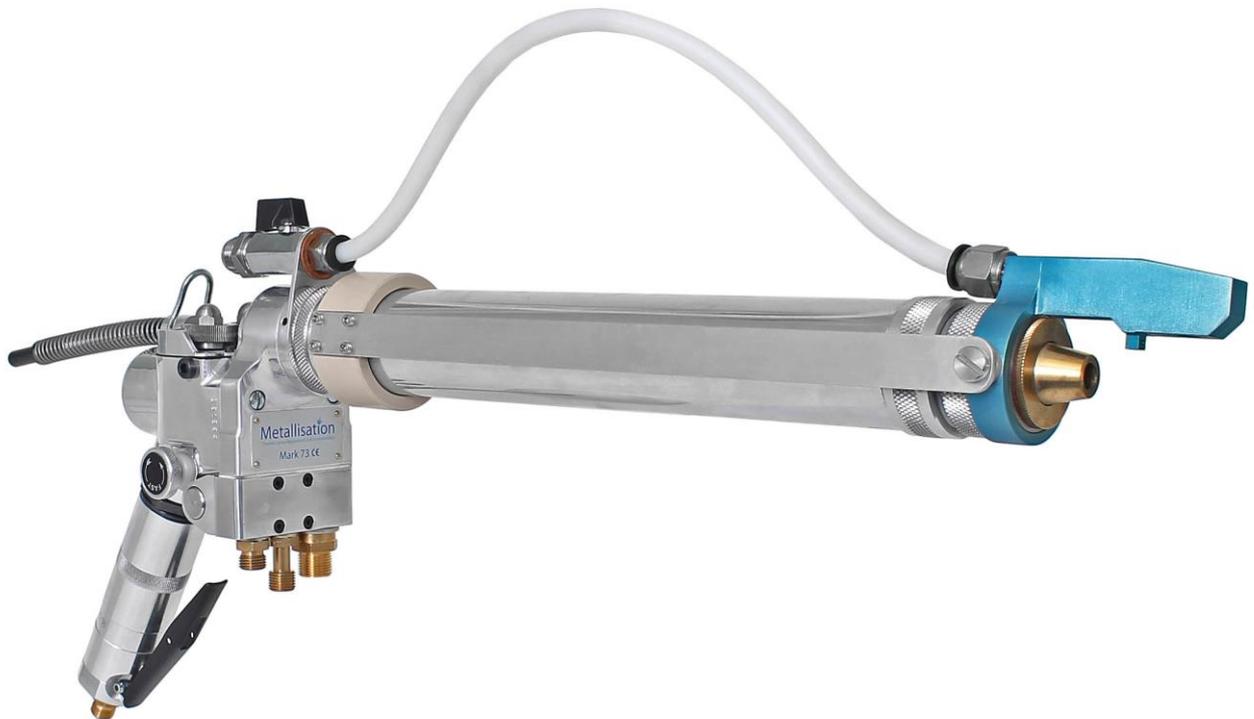


# Metallisation

Thermal spray equipment and consumables



## Equipment Specification

Deflected Flame Spray Extension

## INTRODUCTION

---

The following specification covers the entire accessory that is the deflected flame spray extension. For the specific offer, please refer to your Metallisation quotation and cross reference the part numbers for each piece of equipment.

The Metallisation deflected flame spray extension has been developed as a direct result of customers requirements to apply a quality coating in difficult access areas. The initial requirement was for spraying onto pipe runs in the petro-chemical industry where the access between pipes and near pipe supports or other structures was limited. Without the extension, the best that could be achieved was to apply a coating from a distance at an imperfect angle, resulting in a less than ideal coverage and coating porosity. Now using the extension, a much higher quality coating can be achieved, ensuring that corrosion protection is maintained even in difficult access areas.

In general fabrications outside of the refinery industry, arc spray systems with deflected extensions would typically be used. This new, flame spray extension allows sprayers whom are more familiar with the flame spray systems to achieve improved coatings in difficult access areas.

The new Metallisation deflected flame spray extension is designed to be robust for use on-site and comes in three standard lengths to suit most common requirements. It can be used with either 1/8" (3.17mm) or 3/16" (4.76mm) wires.

Spray rates through the extension unit when using 3/16" wire is throttled back slightly from a standard spray system to assist the operator to control coating thickness in the difficult access areas, resulting in improved coating quality and spray efficiency.

The extension unit will fit directly onto either of Metallisation's current flame spray systems, the MK73 or MK61. It is designed to use the same consumable spares as our standard flame spray pistols and can spray either directly forward or at a deflected angle. The angle of deflection can be varied from 0° to 90° by varying the deflector air pressure. The deflection nozzle can also be rotated through 180° to allow spraying in a 360° arc around the pistol.

**Safety:** The equipment quoted will produce levels of noise and dust that will require safety measures to be taken by those using the equipment. It will use pressurised air and will also use flammable gases. 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.

## DEFLECTED FLAME SPRAY EXTENSION

Part No.	Description
GAS-EXT-150	Gas Extension Deflector 150mm
GAS-EXT-300	Gas Extension Deflector 300mm
GAS-EXT-450	Gas Extension Deflector 450mm



### TECHNICAL OVERVIEW

- ✦ Fits directly to Metallisation MK73 (oxy-propane) or MK61 (oxy-acetylene) flame spray pistols
- ✦ Will spray from 0° to 90° deflection.
- ✦ For use with 1/8" (3.17mm) or 3/16" (4.76mm) wires.
- ✦ Requires additional regulated air supply (parts to modify the Metallisation current standard ARF unit or a stand alone unit to provide the additional air supply can be offered – see ARF section below).
- ✦ Supplied with 6.5m of air hose as standard (longer lengths available upon request).
- ✦ Coating characteristics with the extension are in line with standard flame sprayed coating characteristics (adhesion, surface finish).

### Technical data

Description	Characteristics		
	150mm	300mm	450mm
Weight	1.1kg	1.3kg	1.5kg
Overall length	270mm	420mm	570mm
Typical access envelope (head diameter + spray stream formation)	75mm		
Compressed air usage	Same as standard gas pistol		
Oxygen usage	Same as standard gas pistol		
Fuel gas usage	Same as standard gas pistol		

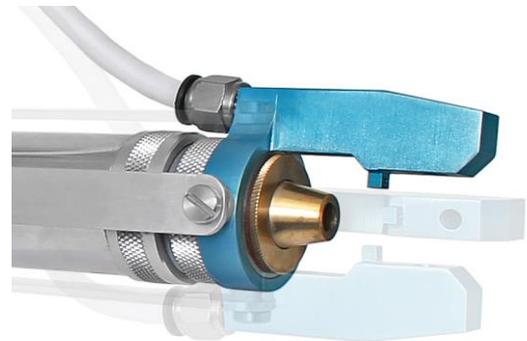
### Typical performance figures for the MK73 pistol

Material	Wire Diameter	Throughput kg/hr	Coverage m <sup>2</sup> /kg/100μ
<b>Metallisation Wire 01E</b> Aluminium	<i>Stop/Start Mode</i> 3/16" 1/8"	7.5 3.6	3.2
<b>Metallisation Wire 02E</b> Zinc	<i>Stop/Start Mode</i> 3/16" 1/8"	23.0 16.0	0.82
<b>Metallisation Wire 21E</b> Zinc/Aluminium 85/15	<i>Stop/Start Mode</i> 3/16" 1/8"	18.0 12.5	1

All data provided is an approximation and is offered as guidance only as performance can vary depending on application and parameters.

### SPRAY DEFLECTION

The spray head will deflect the spray stream from 0° up to 90° by varying the air pressure either at the regulated air supply or the ball valve on the extension. The deflector is able to rotate through 180° using the rotator, ensuring that spraying into almost any area is possible.



### FITTING THE EXTENSION

As standard, the extension will fit directly onto any Metallisation MK73 or MK61 pistol that is already spraying 1/8" or 3/16" wire.

The front end of the standard pistol will be removed and the air nipple, nozzle, insert, mixing block, O-rings, air nipple lock ring, lock ring washer and flexible washer are retained.

The extension unit is screwed onto the front of the pistol in the same manner as the standard air cover would be fitted.

The standard consumable parts retained are then assembled into the front of the extension. Alternatively, a full set of parts can be supplied that will be dedicated to the extension (see below)

Different parameters are used when spraying with the extension unit and the gas, oxygen and air pressures will need to be changed as appropriate.

### Front end parts kit

Part No.	Description
<b>GAS-EXT-1/8 KIT</b>	<b>Front end parts for 1/8" wire on gas extension</b>
<b>GAS-EXT-3/16 KIT</b>	<b>Front end parts for 3/16" wire on gas extension</b>

## ARF CONVERSION

Part No.	Description
<b>21222A</b>	ARF Base Unit Assy
<b>27020-FS</b>	Air prep set for Freestanding Flamespray Control Board - Mk73/Mk61
<b>GAS-EXT-ARF KIT</b>	Parts to Modify Standard ARF to add Deflector Air Regulator



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



GAS-EXT-ARF-KIT fitted to a 27020-FS

### TECHNICAL OVERVIEW

- ✦ The existing ARF unit is made up of a filter bowl, lubricator, regulator
- ✦ The GAS-EXT-ARF KIT includes all items to add an additional regulated outlet for the deflector air supply.

## ARF RETROFIT FOR 'OLD STYLE' ARF UNITS

Part No.	Description
<b>21222E</b>	ARF Unit for Gas Ext'n Deflector (Retrofit for Old ARF's)



### TECHNICAL OVERVIEW

- ✦ For 'old style' or non Metallisation system ARF's, the above unit is offered as a stand-alone item to filter and regulate the deflector air
- ✦ The 21222E will require separate mounting and its own dedicated air supply.





# Metallisation

Thermal spray equipment and consumables

## Metallisation Ltd

Peartree Lane  
Dudley  
West Midlands  
DY2 0XH  
United Kingdom

Tel: +44 (0)1384 252464

Fax: +44 (0)1384 237196

Email: [sales@metallisation.com](mailto:sales@metallisation.com)

Website: [www.metallisation.com](http://www.metallisation.com)

