

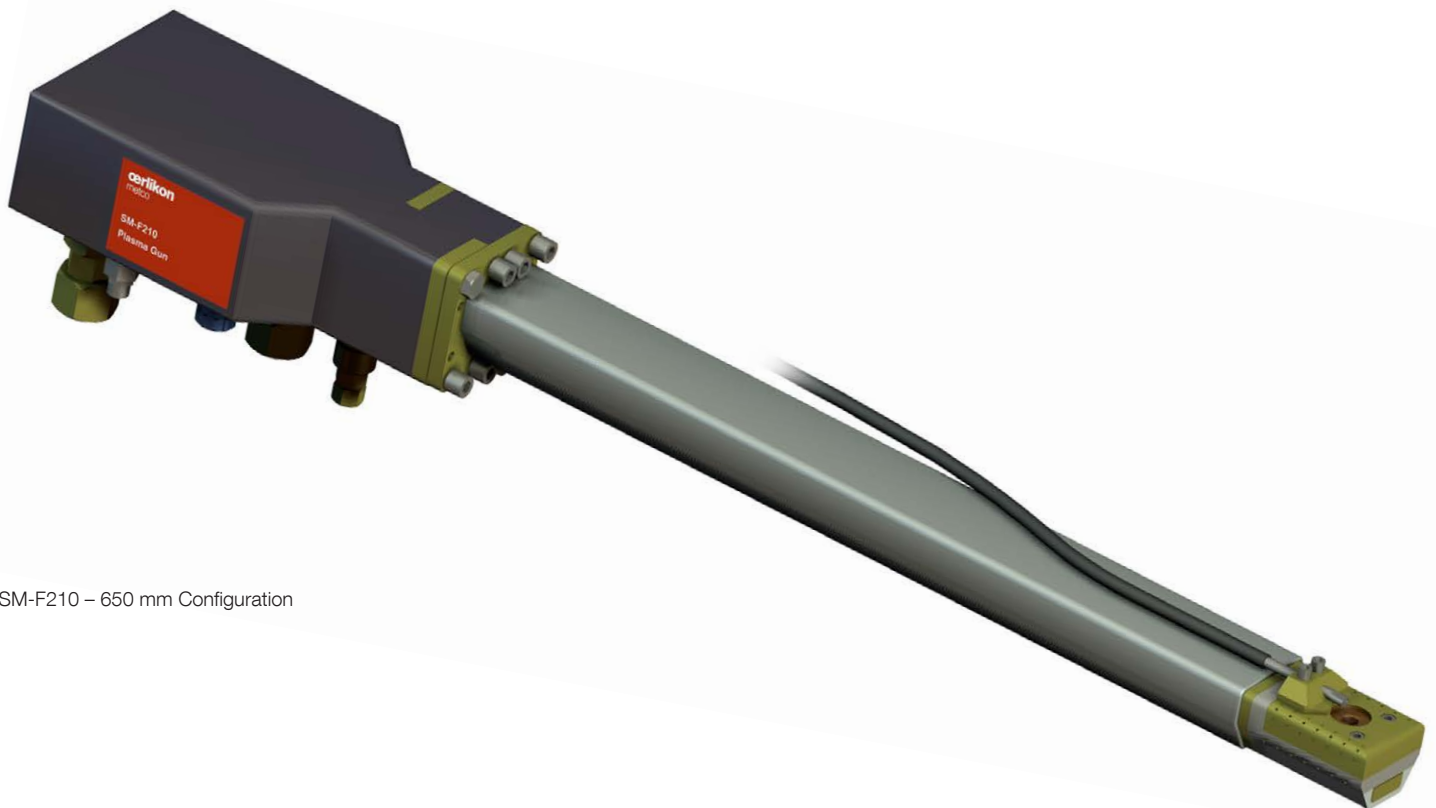
Product Data Sheet

Metco SM-F210 Internal Plasma Spray Gun

Metco™'s SM-F210 internal plasma spray gun is engineered for reliable and universal performance for internal atmospheric plasma spray processes. It has been designed to meet and efficiently utilize the capabilities of the plasma spray process by producing high quality coatings for a variety of applications and specific spray requirements.

The SM-F210 plasma spray gun is ideal for use on complex geometries and internal bore applications such as aerospace and land base gas turbine transition ducts, compressor casings, and combustion liners.

As a long-standing benchmark of the industry, Oerlikon Metco plasma extension guns are highly regarded for their dependable performance. Many OEMs have selected this gun for coating application specifications having complex geometries or internal bores.



SM-F210 – 650 mm Configuration

1 General Description

Modular in design, the SM-F210 can be configured for different lengths, spray angles and hose and cable connection arrangement.

Connection Piece

- Available in two versions; 90° or 180°

Intermediate Section

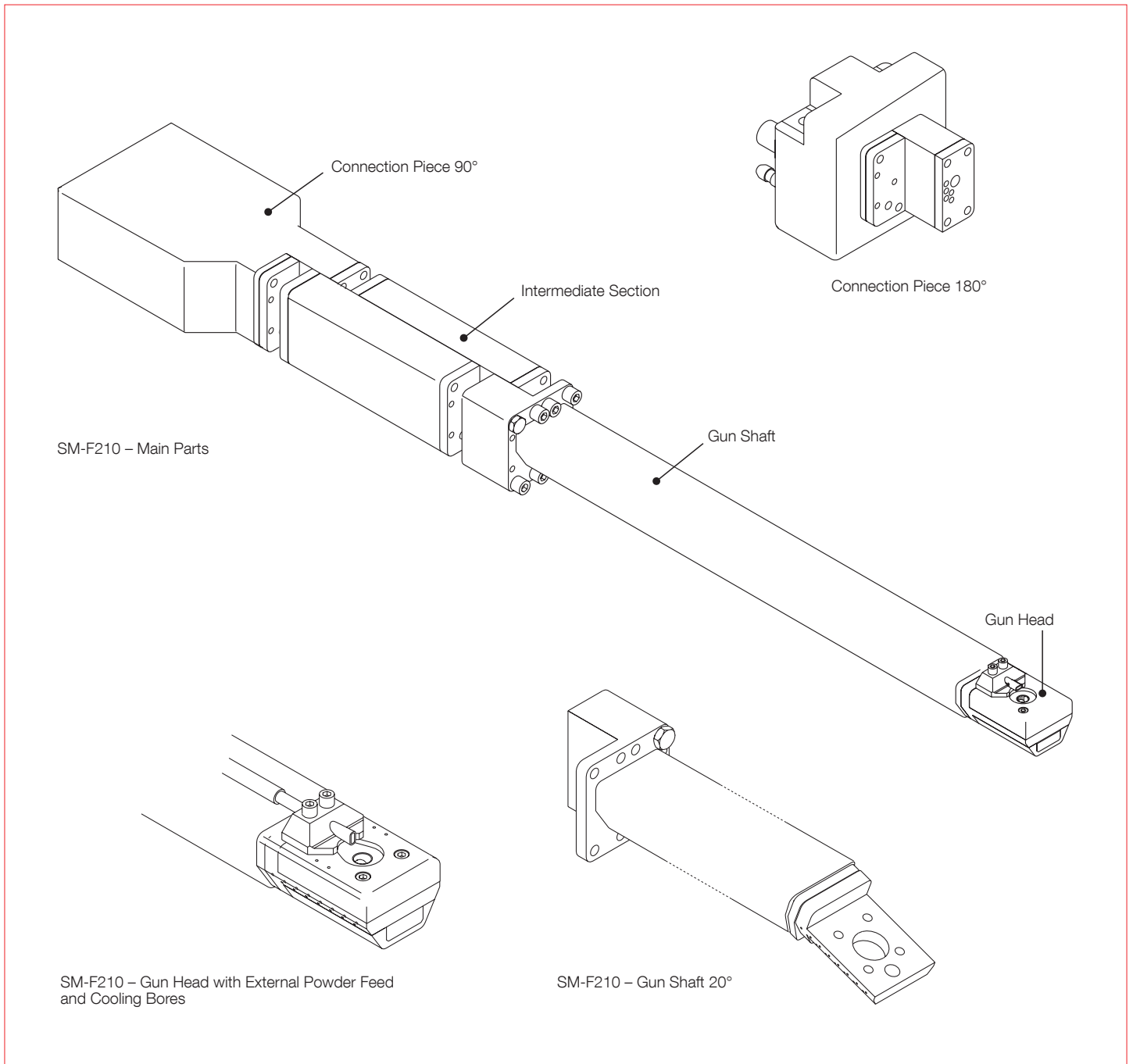
- Used to mount the gun onto the RotaPlasma™ HS1 gun manipulator

Gun Head

- Internal or external powder feed
- Integrated cooling holes for workpiece and gun cooling

Gun Shaft

- Available in various lengths as well as an angled version to spray at an angle of 20°



2 Features and Benefits

- Robust design: for high production operation.
- Modular: purchase a single gun and reconfigure for different lengths and spray angles for different applications.
- Revolutionary vented air jet: built into the gun head nozzle plate eliminates the need for external cooling jets.
- O-ring free nozzle assembly: provides resistance to high temperature operation.
- Flexible powder injection: with a choice of internal (standard) or external (optional) configurations.
- Ideal water cooling: extends life of nozzle and electrode in mass production applications, reducing downtime and maintenance costs.
- Long life hardware: tungsten-tipped electrode and tungsten-lined nozzle produces typical nozzle life in excess of five times that of unlined copper nozzles when proper cooling is used.
- Low operating costs: resulting from excellent deposition efficiency and powder throughput capability.
- Long spray cycles: ideally suited for mass production environments where reliable, continuous spray operations are critical.

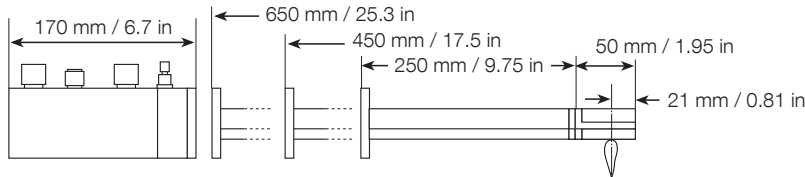
3 Accessories and Options

Oerlikon Metco offers a wide variety of accessories and options for the SM-F210 series spray guns to suit specific spray requirements. These include nozzles, electrodes, powder

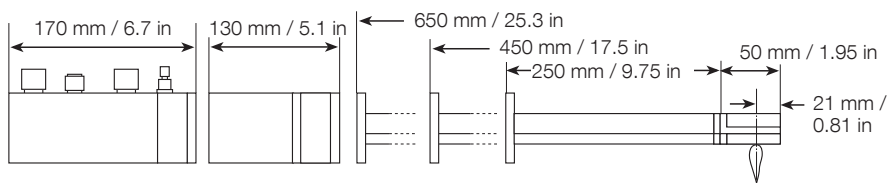
injection, cables and hoses. For a complete list of optional parts and spare parts please refer to the parts lists section of the reference manual.

4 Technical Data

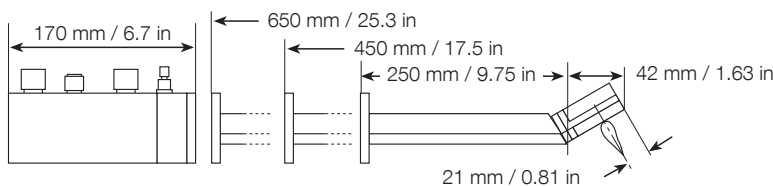
4.1 Dimensions



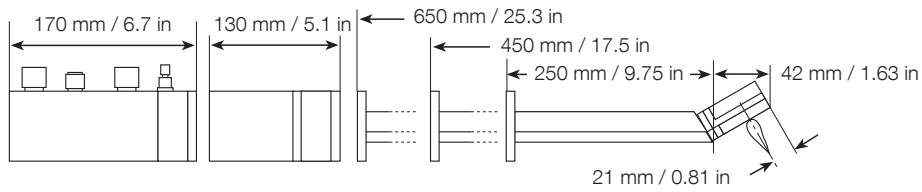
SM-F210 90°



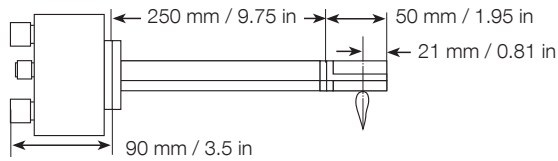
SM-F210 90° with intermediate section



SM-F210 20°



SM-F210 20° with intermediate section



SM-F210 90° with intermediate section and 180° connection piece

4.2 Specifications

Power rating

(100 % duty cycle) 16 kW

Weight

(dependent on configuration) 2.5 to 3.5 kg 7.7 lbs

Cooling Water

Inlet temperature 18° C 65° F

Inlet pressure 13.5 bar 196 psi

Flow 10 l/min 4 gal/min

Quality

Total hardness 0.5 Grade F
0.35 Grade E
0.28 Grade D

Conductivity < 5 μ S/cm

ph Value 6.6

Plasma Gas Purity

Nitrogen 99.7 %

Argon 99.95 %

Hydrogen 99.995 %

Helium 99.995 %

Plasma Controller

Compatibility MultiCoat™; UniCoat™

Powder Feeder

all Oerlikon Metco powder feeders

Information is subject to change without prior notice.