

W14 Wire Flame Spray System

GENERAL DESCRIPTION

The W14 Gun has been designed and built to be one of the best handguns for producing flame sprayed coatings with metallizing wires.

The universal gas head assembly can be adapted to use any fuel gas.

The standard gun may be set up to spray 1/16" to 1/8" OD wire, using acetylene as the fuel gas.

Suitable hardware is available for handling all standard wire sizes ranging from 3/16" down to 20 gauge.

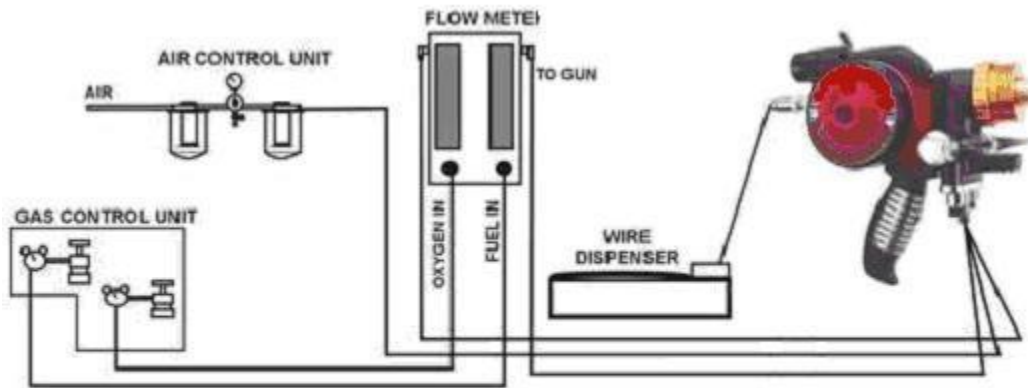


The following are the contents of a complete W14 System:

W14 Wire Thermal Spray Gun with case
with standard equipment spares
Air Control Unit, including the Pressure Regulator,
gauge and two air filters
Gas Control Unit, including Oxygen, Acetylene or
LPG Pressure Regulators
Gas Flowmeter (2 GF Type)
Hose Unit for Oxygen, Acetylene/LPG & Air
Wire Reel Stand with wire Straightener

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Typical Installation Diagram for W14 System



The controlled speed range of the W14 Gun is from about 1.5 ft. of wire per minute with standard gears to approximately 45 ft. per minute with the special, high-speed gear set. The high-speed gear set is for continuous high speed spraying of the lower melting point metals such as zinc, babbitt and tin.

Although the W14 Gun has been designed primarily for hand-held operation, a simple, rugged tool post fixture is supplied with each unit to permit mounting on a machine tool such as a lathe.

PRINCIPLE OF OPERATION

The wire is pulled into the rear of the gun by an automatic feed mechanism powered by a self-contained compressed air driven turbine. The wire is fed through the gun into a fuel gas/oxygen flame. A stream of compressed air restricts the flame and blasts the molten tip of the wire, producing a fine metal spray.

The A-Flame W14 Gun offers many outstanding design features. Some of these are described below:

- An improved version of W14 Gun's siphon jet gas head produces high spray rates, low gas consumption and extreme resistance to backfire and its effects.
- Nozzle-to-siphon plug seals are "O" Rings, instead of being lapped surfaces, which are troublesome to Maintain.
- A new grease seal on the high-speed turbine shaft minimizes leakage of lubricant.

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- ❑ A sight plug permits checking the level of lubricant in the gear case without the need to open it, eliminating a source of contamination.
- ❑ The gas head valve provides long service life with minimum maintenance. Worn or damaged valve parts can be replaced in the field without lapping or other precise fitting.
- ❑ New design nozzles and air caps provide excellent coatings at very high spraying speeds.
- ❑ The wire nozzle, siphon plug and front wire guide assemble as a unit which can quickly and easily be removed and replaced when changing wire size or for servicing.
- ❑ The Gun's controlled-power governor provides increase power and more stable wire speed.
- ❑ The gear chamber contains a built-in pump for circulating the gear lubricant. The coupled with large rugged gears and improved gear chamber sealing provides longer gear life.
- ❑ The drive rolls and wire guides are made of hardened stainless steel for high resistance to wear and corrosion.
- ❑ The gun mounting stud is centrally located, making it very easy to adjust the gun position when it is lathe-mounted.

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