



**KM-MCS**



**KM-CDS**



**KM-PCS**

<b>Deposition Nozzle</b>	Friction compensated, sonic nozzle	Friction compensated, sonic nozzle	Friction compensated, sonic nozzles, Dual
<b>Thermal Conditioning Unit (TCU)</b>	Nozzle Integrated, 2.5kW	Nozzle Integrated, 2.5kW	Nozzle Integrated, 2.5kW, Dual
<b>Powder Fluidizing Unit</b>	Ultra-fine powder-enabled, 1 liter capacity	Ultra-fine powder-enabled, 1 liter capacity	Ultra-fine powder-enabled, 1 liter capacity, Dual
<b>Gas Control</b>	Open loop pressure control Pressure regulator	Closed loop pressure control Gas mass flow metering User Defined gas selection	Closed loop pressure control Gas mass flow metering User Defined gas selection
<b>Positioning System &amp; Robot Control</b>	Hand-held operation or Customer provided	Robot: 6- axis, dust and mist proof (IP65) Integrated Control Software Mounting Pedestal Rotation table w/ fixture	Customer provided
<b>Spray Enclosure</b>	Customer provided	RIA Compliant Spray Enclosure Unobstructed viewing and quiet sound Exhaust gas outlet	Customer provided
<b>KM System Control</b>	Ruggedized portable enclosure Manual operation 1-2-3 operating logic	Control Cabinet Human-Machine Interface Real-Time System Control Industrial Computer	Control Cabinet Human-Machine Interface Real-Time System Control Industrial Computer

## The Kinetic Metallization™ Advantage

Kinetic Metallization™ (KM) is a low-temperature, solid-state, impact consolidation process in which powders are sprayed through a friction-compensated sonic deposition nozzle onto a substrate surface. The deposition nozzle design accelerates the entrained metal particles with an inert carrier gas. The subsequent high-speed collision causes very large strain and the resultant particle deformation creates a new surface that is oxide free. When the active surfaces make contact, pure metallurgical bonds are formed. Since the metallurgical bonding is formed through the solid-state reaction, i.e. no bulk melting, the coating surface retains the properties of its base metal. Deposition has been successfully demonstrated on a wide range of metal, ceramic, foam (metal and ceramic), and plastic substrates.

KM is the lowest cost means of producing high-quality coatings.

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