

Kermetico AK HVAF System

Spray for ½ the cost of HVOF, deposit better quality coatings 5 times faster!

Oxidant and coolant: Compressed Air. Pressure range 8-11.5 bar (115-165 PSIG).

Fuel: Propane, Propylene, Propane-Butane (LPG), or Natural Gas. Pressure: 7-11.5 bar (100-165 PSIG)

Kermetico AK HVAF spray guns	Gun	Description	Max spray rate, per hour
	AK7	Large parts with diameter >200 mm (8") A powerful gun with the widest range of combustion chamber pressures and the best coating quality on large surfaces. The lowest cost for large surfaces. The best protection against feedstock oxidation.	33+ kg 72+ lbs.
	AK6	Tungsten carbide gun for parts with OD 5-250 mm (0.2"-10") The gun designed to spray tungsten carbide on a wide spectrum of parts. 70% of AK7 power.	28 kg 62 lbs.
	AK5	Compact gun for smaller parts Spraying metals, alloys, and carbides for parts <200 mm diameter, ID from 250 mm (10") and more, thin walls, complex surfaces.	15 kg 33 lbs.
	AK-HH	Manual on-site HVAF spraying and blasting This compact dual-use hand-held or robot-mount equipment helps to spray and blast anywhere. Used for spraying metals, alloys, and carbides. Gun weight: 2.5 kg	15 kg 33 lbs.
	AK-ID AK-IDR	Internal diameters minimum 80 mm (3.15") Rotating head, minimum diameter 100 mm (4") Air cooling and axial powder injection provides hours of continuous ID operation. Spray angle 90°.	5 kg 11 lbs.

Each gun, except for our ID guns, may be configured to **Ultra** (highest velocity), **Economy** (highest DE), or **Balanced** mode and they may be used in blast & spray mode.

The Kermetico AK HVOF system deposits coatings with 5-6 times higher spray rate, 20-30% higher deposition efficiency, 30% less deviation than any HVOF system. Choosing Kermetico AK, an HVOF job shop gains at least 50% cost advantage to HVOF competitors and additional coating quality advantage as a "bonus."*

WCCoCr 86/10/4 Coating Feature	Typical HVOF	Kermetico HVOF gun setup		
		Economy	Balanced	Ultra
Deposit efficiency, %	40-55	60-70	48-58	36-42
Hardness, HV ₃₀₀	1050-1250	1050-1250	1250-1350	1450-1700
Apparent metallographic porosity	<0.8	<0.8	<0.5	<0.1
Bond strength, PSI	+12,000			
Range of as-sprayed roughness, μm ($\mu\text{in.}$)	3.5-4.5 (150-180)	1-3.2 (40-130)		
Maximum coating thickness, mm (inch)	12.7 (0.5)	12.7 (0.5)	3 (0.12)	1.5 (0.06)

Kermetico Control Consoles and Powder Feeders

AK02: Controller & Wide-Screen Industrial Operator Tablet



AK02T: Single-Unit portable



Powder Feeder



Some features of Kermetico AK Systems:

- ✓ Industrial IP67 rated Tablet + PLC Controller;
- ✓ Unlimited number of stored programs;
- ✓ One system fits all guns;
- ✓ Variety of powder feeders and gas vaporizers;
- ✓ Custom-made systems and guns by request;
- ✓ And more.

We have been developing our HVOF process and equipment since 2006. Years of research let us create equipment which produces the best quality coatings and the highest technological efficiency possible. More than 60 systems are at work worldwide. All of our equipment is designed and made in California, USA.

* Multiple scientific papers and case studies supporting this info will be provided by request.