

Model 5000F-SA Powder Feeder

GENERAL INFORMATION

Hardface Alloys model, 5000F-SA is a precision powder metering systems designed and manufactured to enhance the performance capabilities of all thermal spray systems.

By virtue of its design, a feed screw provides the most positive means of delivering powder in an accurate and consistent manner. Actual feed rate is determined by the feed screw RPM which is variable by means of a digital logic controller. This controller provides closed loop control of motor speed thereby maintaining extremely accurate and consistent feed rates.

To assist in maintaining the continuity to the point of powder injection, an electromagnetic vibratory feeder drive and two separate mixing chambers are incorporated into the system. The vibratory feeder drive imparts a vibratory motion to the canister which creates a gentle wave action within the canister. Immediately prior to exiting the feeder, the powder and gas enter a cyclonic mixing chamber to assure thorough distribution of particles throughout the carrier gas stream. Upon leaving the cyclone mixer the powder is evenly dispersed within the gas stream.

Precision accuracy, reliable consistency, and unmatched versatility make the 5000F-SA Powder Feeder a truly cost effective asset to any thermal spray operation.



FEATURES

- Closed Loop Feed Screw RPM Control
- Integrated Carrier Gas Bypass Circuit
- Easy Canister Cleanout
- System Pressure Gage and Carrier Gas Flow Meter
- Process Time Accumulator
- Low Gas Pressure
- 115/230 VAC, 50/60 Hz Switch Selectable
- 15' Remote Control Cable with Start/Stop Pendant
- Caster Equipped Storage Cabinet

BENEFITS

- Compatible with All Thermal Spray Systems
- Feeds All Material
- Instantaneous Powder Feed Stop and Start
- No Surging
- Stable, Consistent, Reliable Powder Delivery at Any RPM
- Uniform Particle Dispersion
- Range of Feed Rate Capabilities
- Unmatched Feed Rate Repeatability
- Simple To Operate & Maintain

Your Single Source Solution For All Your Coating Needs

SPECIFICATIONS

Physical Characteristics:

Dimensions (H x W x D) - 21" x 18" x 18"

Net Weight - 85 lbs.

Shipping Weight - 150 lbs.

Gas/Air Connections RH, 1/4" Compression

Standard Color - Cream

Operational Characteristics:

Canister Capacity - 245 cubic inches

Maximum Operating Pressure - 100 PSIG

Carrier Gas Flow Range - 0.5 - 120 SCFH

Pressure - 100 psi (6.8 Bar) max

Inlet/Outlet - 1/4" tubing

Air - 70 psi (4.75 Bar)

Electrical - 115/230 VAC, 50/60 Hz, Single-Phase

AC Supply Cord - 3-wire grounded, 10 ft.

Max. Motor/Feed Screw Speed - 500 RPM

Motor and Feed Screw RPM - (+/-) 0.05% max.

Feed Rate Range - 0.125 - 100 lbs/hr.

Powder Size - 1 to 150 microns (100 mesh)

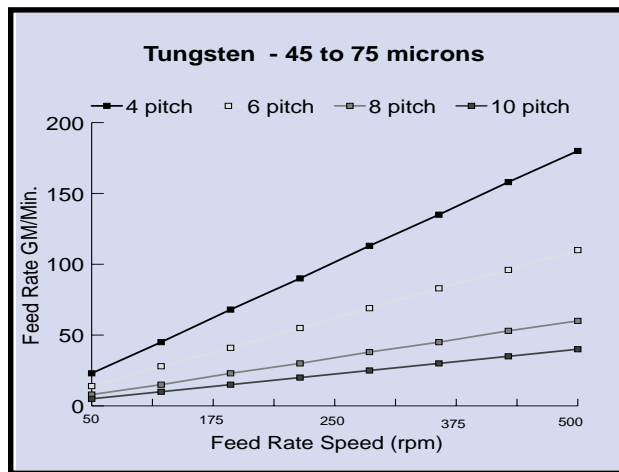
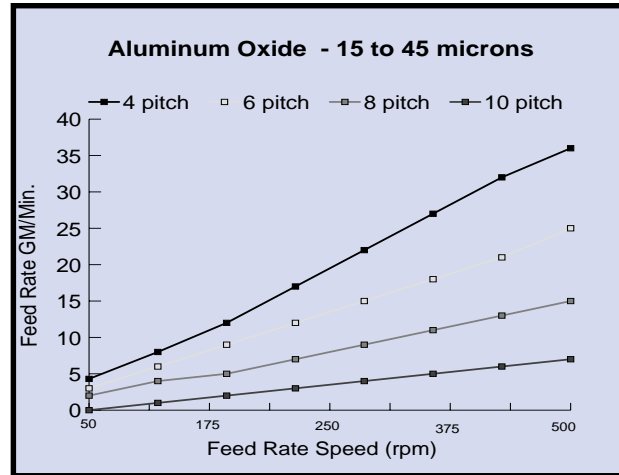
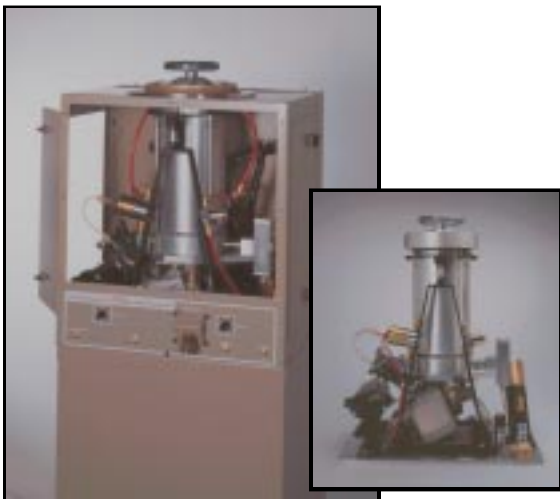
Feed Rate Precision - (+/-) 0.5 g/min (typical)

OPTIONAL ACCESSORIES

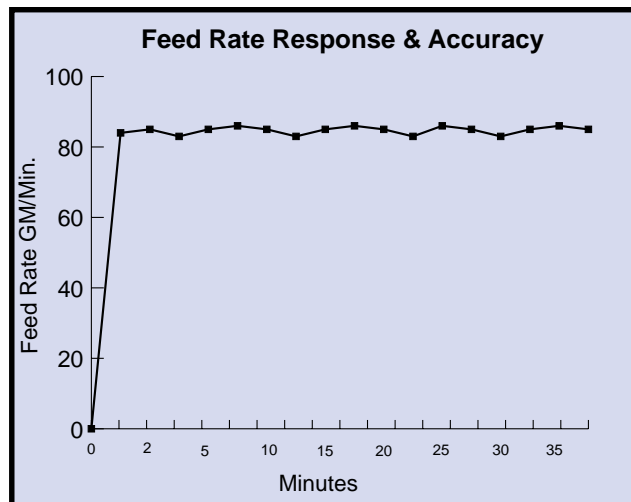
High-Capacity Stainless Steel Canister - to hold up to 90 lbs. of zirconium oxide, 5.1 grams/cc.

RS 232 Port - for PC interface capabilities and data acquisition.

Integrated Weighing Platform - for accurate, closed-loop control of feed rate.



Note: Illustrates the versatility of the 5000F-SA feed rate capabilities. 10 and 12 pitch feed screws are available. 1/2" diam. 3 pitch feed screw requires slight hardware changeover.



Note: Illustrates the accuracy and consistency obtainable with most common spray powders. Rates and accuracies will vary slightly due to unfavorable powder conditions or process controls.

