

The 9000DS-series dispensing systems are ideal for shot dispensing applications requiring high metering accuracy and repeatable performance.

Unique design features combine Zenith's state-of-the-art 9000-series metering pumps with stepper motor and control technology, resulting in unmatched performance in fluid dispensing processes.

Utilizing a modular concept, three models of 9000-series metering pumps and two controller options allow users to maximize performance by mixing and matching components, based on application conditions.

Connectivity and communications interface offers a variety of control schemes from PC to PLC. The 9000DS dispensing system can easily be integrated into basic or more complex automation networks.

The 9000DS stepper motor systems are also an excellent choice for continuous duty applications where extreme flow ranges are required.



9000DS Dispensing System featuring the Zenith PDA interface: a simple yet powerful communication tool for accessing programming, system status and much more.

9000DS Dispensing System

Features

- ◆ Zenith 9000 Series Metering Pumps
 - B-9000 Chemical Duty
 - C-9000 Corrosion Resistant
 - H-9000 Abrasion Resistant
- ◆ Positive Displacement Spur Gear Design
- ◆ Precision Ground and Lapped Components
- ◆ Hardened Pump Materials
- ◆ Compumotor™ Brand Motors and Controllers
- ◆ Integrated Drive and Indexer
- ◆ Zenith Hand-Held PDA Interface
- ◆ Microstepping Motor and Drive Technology
- ◆ Daisy Chain or Multidrop Configuration
- ◆ Compact and Lightweight Design
- ◆ Motor Stall Detection (Gemini only)
- ◆ Multiple Input and Output Functions
- ◆ Electronic Active Motor Damping
- ◆ Full ASCII Compatibility

Benefits

- Match Pump to Application Conditions
 - General Purpose Applications up to 645 °F
 - Meter Corrosive or Non-Lubricating Fluids
 - Dispense Abrasive Slurries up to 950 °F
- Smooth, Virtually Pulse-free Flow
- Accurate and Repeatable Dosing
- Wear Resistance Provides Long Service Life
- Reliable High Quality Microstepping Systems
- Low Cost - No Need for Separate Motor Drives
- Portable Interface with Quick Start Feature
- Extremely Accurate Intermittent Shot Dispensing
- Control up to 99 Separate Dispensing Systems
- Saves Space and Eases Installation and Handling
- Immediate Error Notification Reduces Waste
- Flexible Control Scheme and System Integration
- Smooth Motor Rotation and Increased Torque
- Universal Communications Protocol

Specifications

	B-9000	C-9000	H-9000
Materials of Construction	400 Series Stainless Steel	316 Stainless Steel and Special Alloys	Tool Steel
Shaft Seals (Other Options Available)	Single Mechanical or Double PTFE Lip	Single Mechanical or Double PTFE Lip	Graphoil Packing
Pump Sizes (cc/rev)	.05, .3, .6, 1.2, 2.4, 4.5, 9, 15, 30, 45 and 90	.3, .6, 1.2, 2.4, 4.5 and 9	.3, .6, 1.2, 2.4, 4.5, 9, 15, 30, 45 and 90
Speed Range (RPM)	10 - 300	10 - 500	10 - 300
Flow Range (GPH)	.008 - 285	.05 - 71	.05 - 285
Inlet Pressure Limit (PSI)	300	300	300
Outlet Pressure Limit (PSI)	1000	1000	1000
Δ Pressure Limit (PSI)	700	700	700
Operating Temperature (°F)	32 - 645	-40 - 350	32 - 645 (950 max.)
Shaft Rotation (Facing Shaft)	CW	CW	CW
Viscosity Range (cps)	1 - 1,000,000	.3 - 50,000	1 - 1,000,000
Port Connections	NPT	NPT	NPT
Recommended Uses	General Chemical Duty	Corrosive or Non-Lubricating	Abrasive or High Temperature
Suggested Fluid Handling	Chemicals, Adhesives, Silicones, Isocyanates, Polyols, Additives	Solvents, Water-Based Solutions, Mild Acids, Fuels, Food Products	Abrasive Slurries, Sealants, Paints, Pigments, Plastics

Microstepping Controls and Motors

	Gemini GT6K (Standard)	ZETA (Optional)
Power Requirements	120 VAC/50-60 Hz/1 ∅	120 or 240 VAC/50-60 Hz/1 ∅
Bus Voltage (VDC)	170	170 (340 @ 240 VAC)
Motor Current (A peak)	5 or 8	4, 8, or 12 (4 @ 240 VAC)
Resolution (Steps/rev)	25,000 Default, 128,000 Max.	25,000 Default, 50,800 Max.
Connectivity	PDA, Ethernet, RS232/485	PDA, RS232/485
Protection	Short Circuit, Brown-out, Over-temperature	Short Circuit, Brown-out, Over-temperature
Inputs	8 Programmable (3 Limits) , 1 Analog	16 Programmable, 2 Triggers
Outputs	6 Programmable, 2 Analog	8 Programmable, 1 Auxiliary
Diagnostic LEDs	Power, Motion and Drive Fault	Power, Step Pulses, Over-temperature, Motor Short Circuit
Certification	UL, cUL, CE (LVD & EMC)	UL, CE (LVD)
Environment	Controller: 32 - 113 °F (Still Air) Stepper Motor: 212 °F 0 - 95 % Non-condensing	Controller: 32 - 113 °F (Still Air) Stepper Motor: 212 °F 0 - 95 % Non-condensing
Stepper Motors (Options Available)	TS Series, 2 - Phase Hybrid, PM, 1.8°, up to 217 in-lbs. Maximum Torque	TS Series, 2 - Phase Hybrid, PM, 1.8°, up to 217 in-lbs. Maximum Torque

Parker Hannifin Corporation

Zenith® Products Division
5910 Elwin Buchanan Drive
Sanford, NC 27330-9551 USA
Phone: 800-277-8968 or 919-774-7667 • Fax: 919-774-5952
E-mail: zenithpumps@parker.com • www.zenithproducts.com

