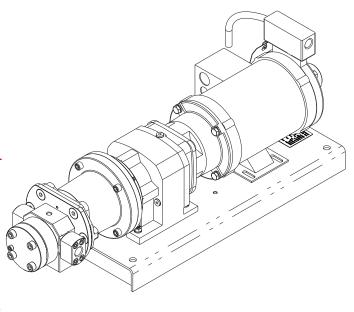
## 9000MD MAG-COUPLED GEAR PUMP FROM ZENITH PUMPS

## AFFORDS SAFE OPERATION WHILE PRECISELY METERING DANGEROUS FLUIDS.

Since 1926, Zenith established a worldwide standard of excellence for innovative gear metering pump designs that are consistently used in the most critical fluid metering applications. Zenith's 9000MD again shows our commitment to industry that Zenith can provide quality products and services needed in order to meet today's rigorous demands.



The 9000MD offers a static seal alternative to traditional mechanical and compression type dynamic seals. A permanent magnetic coupling transmits torque by magnetic forces between the internal and external rotors, through a statically sealed barrier. The barrier is constructed from stainless steel, nickel alloy or other corrosion resistant material and is not contacted by either the inner or outer rotor.

The pump head is coupled to NEMA 56C/14OTC framed motors, either AC or DC, which allows the motor to be removed from the pump housing without difficulty. Pump speeds are limited based on the pump of choice. The system can be close coupled without the need of a gear reducer. The 9000MD eliminates shaft leakage of hazardous fluids, increases plant safety, and reduces VOC emissions. The magnetic coupling also reduces downtime due to excessive mechanical seal failures and eliminates the need for buffer fluids.

Zenith's magnetically coupled pump designs include the B-, C-, and H-9000 models. The B-9000 pumps are made of through hardened 400 series SS while the C-9000 is constructed from hardened 316 SS/compatible materials and H-9000 is constructed from hardened tool steel. This new seal design can be retrofitted to any existing 9000 series pump ranging from 0.05 to 90 cc/rev. Zenith's C-9000 is primarily used for non-lubricating, corrosive and/or thin fluids, where 316 SS compatible materials of construction are usually desired. The B-9000 is considered a chemical duty metering pump suitable for a variety of chemical metering applications. The H-9000 is primarily used for lubricating fluids and fine abrasives.

## DESIGNED TO DELIVER

The Zenith 9000MD offers the following features and benefits.

- > Eliminates shaft seal leakage No fugitive emission whatsoever, no leak to capture, nothing to clean-up
- Eliminates shaft seal wear No daily adjustment of packing, no shut-down for seal replacement.
- Eliminates the need for double seals and buffer liquids –
  No contact between liquid and external atmosphere, no precipitation or freezing at the seal.
- Corrosion resistant Stationary can and internal magnet encased in 316 stainless steel, titanium stabilized.

## CRITICAL FLUID METERING APPLICATIONS INCLUDE

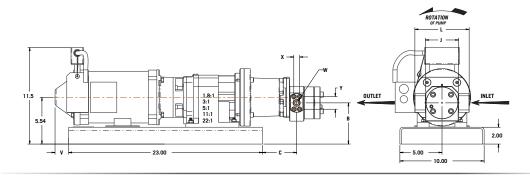
- General Chemical
- Corrosive / Poor Lubricity
- > Abrasive / High Temperature
- Release agents
- Catalysts
- Hazardous







| Magnetic Coupling<br>Pump Options/<br>Capabilities: | B- / H- 9000 Series - Industrial Duty<br>Constructed of through hardened<br>400 Stainless / Tool Steel | C-9000 Corrosive/Non-Lubricating<br>Constructed of hardened 316 SS and<br>compatible materials |  |  |  |  |
|-----------------------------------------------------|--------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|--|--|--|--|
| Capacities:                                         | 0.05, 0.3, 0.6, 1.2, 2.4, 4.5, 9.0, 15, 30, 45, 90                                                     | 0.3, 0.6, 1.2, 2.4, 4.5, 9.0                                                                   |  |  |  |  |
| Recommended Speeds:                                 | Up to 500 RPM                                                                                          | Up to 1000 RPM                                                                                 |  |  |  |  |
| Flow Range:                                         | Up to 27,000 cc/min or up to 7.1 GPM                                                                   | Up to 9000 cc/min or up to 2.4 GPM                                                             |  |  |  |  |
| Inlet Pressure:                                     | 300 Psi (20 Bar) Maximum                                                                               | 300 Psi (20 Bar) Maximum Outlet                                                                |  |  |  |  |
| Pressure:                                           | 1000 Psi (70 Bar) Maximum                                                                              | 1000 Psi (70 Bar) Maximum                                                                      |  |  |  |  |
| Differential Pressure:                              | 20 to 1000 Psi (viscosity dependent)                                                                   | 20 to 1000 Psi (viscosity dependent)                                                           |  |  |  |  |
| Temperature:                                        | 0° F (-18° C) Minimum                                                                                  | -15° F (-25° C ) Minimum                                                                       |  |  |  |  |
|                                                     | 400° F (205° C) Maximum                                                                                | 350° F (175° C) Maximum                                                                        |  |  |  |  |
| Seal Type:                                          | Rare Earth - Samarium Cobalt Magnets                                                                   | Rare Earth - Samarium Cobalt Magnets                                                           |  |  |  |  |
| Port Connections:                                   | Metric thread or SAE 61 Standard                                                                       | Metric thread or SAE 61 Standard                                                               |  |  |  |  |
| Optional Port Adapters:                             | M12 X 1/4" NPT 0.05 - 2.4 cc/rev                                                                       | M12 X 1/4" NPT 0.3 - 2.4 cc/rev                                                                |  |  |  |  |
|                                                     | 1/2" SAE X 1/2" NPT 4.5 - 9.0 cc/rev                                                                   | 1/2" SAE X 1/2" NPT .4.5 - 9.0 cc/rev                                                          |  |  |  |  |



| System Configuration                        | Magnetic<br>Coupling | В      | С       | J       | L      | Motor<br>Overhang, V | W          | х      | Υ     | Motor<br>NEMA |
|---------------------------------------------|----------------------|--------|---------|---------|--------|----------------------|------------|--------|-------|---------------|
| 0.5 - 2.4 cc/rev<br>1/2 HP AC, with Reducer | 23 in-lb             | 4.89   | 2.95    | 2.76    | 4.4    | 1.6                  | ¼" NPTF    | N/A    | N/A   | 56-C          |
| 0.5 - 2.4 cc/rev<br>1 HP AC, with Reducer   | 55 IN-LB             | 4.89   | 2.95    | 2.76    | 4.4    | 1.6                  | ¼" NPTF    | N/A    | N/A   | 56-C          |
| 4.5 - 9.0 cc/rev<br>1/2 HP AC, with Reducer | 110 IN-LB            | 5.08   | 4.06    | 3.94    | 6.5    | 1.6                  | ½" NPTF    | 0.69   | 1.5   | 56-C          |
| 4.5 - 9.0 cc/rev<br>1 HP AC, with Reducer   | 110 IN-LB            | 5.08   | 4.06    | 3.94    | 6.5    | 1.6                  | ½" NPTF    | 0.69   | 1.5   | 56-C          |
| 4.5 - 9.0 cc/rev<br>2 HP AC, with Reducer   | 110 IN-LB            | 5.08   | 4.06    | 3.94    | 6.5    | 1.6                  | ½" NPTF    | 0.69   | 1.5   | 140-TC        |
| 15 -30 cc/rev<br>1- 2 HP AC, with Reducer   | 440 IN-LB            | 34" BA | SEPLATE | E LENGT | H. CON | TACT FACTORY         | FOR DIMENS | IONS A | ND PO | RTING OPTIONS |
| 45 -90 cc/rev<br>1- 2 HP AC, with Reducer   | 700 IN-LB            | 34" BA | SEPLATE | E LENGT | H. CON | TACT FACTORY         | FOR DIMENS | IONS A | ND PO | RTING OPTIONS |



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