

CHEM-GARD[®] CGM-ANSI Thermoplastic **MAGNETICALLY DRIVEN SEALLESS CENTRIFUGAL PUMPS**



- POLYPROPYLENE (PP)
- POLYVINYLIDENE FLUORIDE (PVDF)
- Flows to 600 gpm
- Heads to 280 feet
- Ratings to 45 hp
- Temperatures to 275 F

Vantion Chem-Gard[®] CGM-ANSI magnetically driven end suction process pumps are sealless, single stage, volute type centrifugals which meet ANSI B73.1 process pump specifications and conform to Hydraulic Institute Standards. They are designed to reflect the latest clean air regulations, to be environmentally safe, and to provide for the leakproof transfer of corrosive, toxic, hazardous and volatile liquids. These are not lined pumps. All fluid contact parts are made of solid, molded, stand-alone, chemically inert thermoplastic components. This avoids inherent liner-related dangers of pinpoint porosity, substrate separation due to faulty application or differential expansion, and surface abrasion.

Power is transmitted by high performance permanent rare earth magnets, with the inner magnet rotor assembly encapsulated in PVDF or polypropylene. The Vantion design utilizes a dual nonmetallic containment can assembly consisting of a fluoropolymer for the inner can in direct fluid contact, backed by a rugged composite rigid outer can. This avoids troublesome eddy currents that reduce pump efficiency by loss of magnetic force. Maintenance costs and spare parts inventory are minimized by the fact that CGM pump sizes use interchangeable components.

MATERIALS OF CONSTRUCTION

The heavy duty pump casing, stationary bearing housing and impeller are furnished in solid molded polypropylene and polyvinylidene fluoride. The inner magnet rotor assembly is encapsulated in PVDF or polypropylene, and the stainless steel large diameter shaft is isolated from the fluid by a Teflon* assembly.

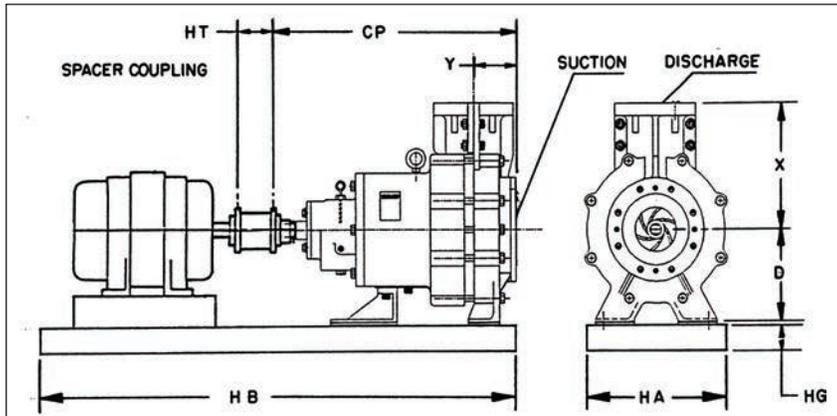
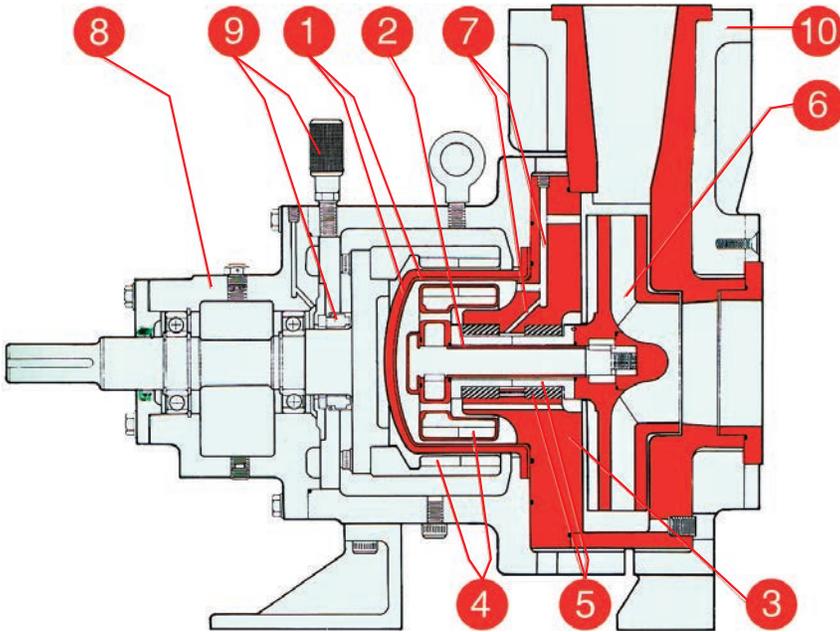
APPLICATIONS

These sealless pumps are ideal for handling a broad range of corrosive and hazardous liquids used in chemical, pharmaceutical and other process industries, and for safe-guarding the environment through leak-free transfer of aggressive fluids generated by industrial or municipal wastewater treatment. Since the rugged thermoplastic casings are additionally protected by structural metal armor, these pumps withstand the same nozzle loadings as metal pumps and their conformance to ANSI specifications permits direct replacement of conventional mechanically sealed centrifugal pumps.

Pump opened to show solid, stand-alone thermoplastic casing, impeller and bearing housing.



CHEM-GARD® CGM THERMOPLASTIC MAGNETICALLY DRIVEN ANSI CENTRIFUGAL PUMPS



| PUMP SIZE | ANSI DES. | SUCTION SIZE | DIS-CHARGE SIZE | DIMENSIONS (IN INCHES) | | | | | | |
|------------|-----------|--------------|-----------------|------------------------|---|----|---|-----|-------------------------------|----|
| | | | | CP | D | X | Y | HA* | HG* | HT |
| 1 x 1 x 6 | AA | 1 | 1 | 17 | 5 | 6 | 4 | 12 | 3 | 3 |
| 3 x 2 x 6 | A-10 | 3 | 2 | 23 | 8 | 8 | 4 | 15 | 3 ³ / ₈ | 3 |
| 3 x 2 x 8 | A-60 | 3 | 2 | 23 | 8 | 9 | 4 | 15 | 3 ³ / ₈ | 3 |
| 4 x 3 x 8 | A-70 | 4 | 3 | 23 | 8 | 11 | 4 | 15 | 3 ⁷ / ₈ | 3 |
| 4 x 3 x 9 | A-70 | 4 | 3 | 23 | 8 | 11 | 4 | 18 | 3 ⁷ / ₈ | 3 |
| 4 x 3 x 10 | A-70 | 4 | 3 | 23 | 8 | 11 | 4 | 18 | 3 ⁷ / ₈ | 3 |

* Baseplate dimensions will vary slightly with motor frame size. All dimensions are inches and are approximate and not to be used for construction purposes. Pump dimensions conform to ANSI B73.1.

Design specifics subject to modification as indicated by ongoing product improvement program.

SPECIFICATIONS

1. Dual nonmetallic containment can assembly with a fluoropolymer inner can to resist corrosive fluids, backed by a rigid nonmetallic composite outer can. This construction avoids troublesome eddy currents and enhances efficiency.
2. Teflon* sleeve assembly completely isolates the large diameter stainless steel shaft from the fluid.
3. Pump casing, inner magnet bearing housing and impeller are molded from homogeneous, virgin thermoplastics (polypropylene or polyvinylidene fluoride). Metal armor provides structural protection and permits the pump to withstand the same nozzle loadings as metal pumps.
4. High performance permanent rare earth magnets offer power ratings to 45 hp for flow rates to 600 gpm at heads to 280 feet. The pumps are recommended for service at temperatures to 275 F.
5. Low PV stationary bearings and rotating sleeve/thrust bearings of silicon carbide are standard. Ultrapure alumina ceramic and other materials are available as options.
6. Dynamically balanced, closed vane thermoplastic impellers with molded-in, encapsulated stainless inserts to assure rigidity, are key locked to the shaft.
7. Wide-open fluid passages provide for continuous flow of fresh liquid for cooling and lubricating the bearings.
8. Drive shaft bearing housing is furnished with heavy duty, sealed, grease lubricated ball bearings. It is readily adaptable to other lubrication methods.
9. Optional air-cooled dry running tertiary seal. (API requirement)
10. ANSI standard construction assures simple retrofitting in installations using conventional mechanically sealed process pumps.

*Trademark Dupont Company



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