Vanton Chem-Gard® CGMC Thermoplastic Close-Coupled, Magnetically Driven, Sealless Centrifugal Pumps

- Polypropylene (PP) or Polyvinylidene Fluoride (PVDF) Construction
- Flows to 400 gpm (91 m³/hr)
- Heads to 180 ft (55 m)
- Temperatures to 225°F (107°C)

Corrosion-free and contamination-free handling of acids, caustics and ultra-pure liquids with zero emissions in a compact size

Vanton Chem-Gard® CGMC magnetically driven end suction process pumps are sealless, single stage, close-coupled centrifugal pumps. All fluid contact parts are injection molded of solid, stand-alone polypropylene (PP) or polyvinylidene fluoride (PVDF). CGMC pumps eliminate corrosion associated with metal pumps, wicking and contamination associated with fiberglass pumps, and porosity/delamination associated with lined metal pumps.

With no mechanical seals to leak or emit vapors, these sealless pumps offer zero emission performance, making them the environmentally safe choice for transferring acidic, caustic, volatile and otherwise hazardous fluids.

High performance permanent rare earth magnets transmit power, with the inner magnet rotor assembly encapsulated in thick-walled PP or PVDF. A non-metallic containment can assembly reduces losses in pump efficiency by eliminating troublesome eddy currents. Rugged thermoplastic wet end components are encased by structural metal armor allowing CGMC pumps to withstand the same nozzle loadings as metal pumps.

Equipped with NEMA or metric C-face motors, the close-coupled CGMC design eliminates the cost and concern associated with pump/motor alignment, while reducing overall length by approximately 20 percent compared to conventionally mounted pumps, allowing placement in restricted spaces. The CGMC hydraulic head conforms to ANSI B73.1 process pump dimensional standards, allowing drop-in replacements without piping or installation modifications.

Advantages of solid thermoplastics
- Chemically inert, eliminating corrosion unlike metal pumps, all of which have annual corrosion rates.
- Eliminates product contamination. Fiberglass composites wick, absorbing fluids by capillary action. Solid, homogeneous PP and PVDF do not.
- Zero ionization or metallic contamination, ensuring product integrity.
- No galling problems associated with metal wet ends.
- No delamination or porosity associated with lined metal pumps.
- Greater chemical resistance across the entire pH range than metal alloys.
**Specifications:**

1. Non-metallic containment can with a thermoplastic wet end and backed by a rigid, non-metallic composite for added stability. This construction enhances efficiency by avoiding troublesome eddy currents.

2. Thermoplastic sleeve assembly completely isolates the stainless steel shaft from the fluid.

3. Pump casing components and impeller are molded from homogeneous, virgin thermoplastics (polypropylene or polyvinylidene fluoride).

4. High performance, permanent rare earth magnets offer power ratings to 30 hp at 3600 for flow rates to 400 gpm (91 m³/hr) and heads to 180 ft (55 m). The pumps are recommended for service at temperatures up to 225°F (107°C).

5. High PV stationary and rotating sleeve/thrust bearings are offered in ultrapure alumina ceramic, siliconized graphite and silicon carbide.

6. Dynamically balanced, closed thermoplastic impeller with molded-in stainless steel inserts are key-locked to the shaft.

7. Wide-open fluid passages provide for continuous flow of liquid for cooling and lubricating the sleeve/thrust bearings.

8. Chemical resistant two-part epoxy coated cast iron armor provides structural support and allows for same nozzle loadings as metal pumps. The CGMC hydraulic head conforms to ANSI B73.1 process pump dimensional standards, allowing for drop-in replacements without piping or installation modifications.

*Dimensions and specifications subject to change and may vary slightly with C-face motor frame sizes from 143 TC to 286 TSC.