



RESERVE SEALTM FREON PUMP

Freon, CO₂ & NH₃ Leak-Free
Recirculation Pumps

Seal-Less Mag-Drive Pumps Ensure
Zero (0) Leakage

Freon, CO₂ & NH₃ recirculation pumps must be capable of pumping unstable pressurized gases without leakage or interruption in critical refrigeration systems. This type of service has been problematic for conventional pumps due to the risks of extremely low NPSHa, potential entrained gas, and highly reactive and penetrating refrigerants.

SCM centrifugal pumps are extremely robust seal-less designs. Low NPSH, dynamically balanced impeller designs meet challenging process conditions. **SCM** pumps employ TEFC VFD motors for reduced operating speeds without overheating motor windings.

SCM pumps meet EPA zero (0) emissions regulations. **SCM** mag-drive pumps are extremely versatile with independent NEMA motors and field repairable quick change cartridge assemblies.

Heat induction sources for canned motor pumps include TELC motor stator windings, motor armature slippage, eddy current losses, internal recirculation and bushing friction. Mag-drive pumps employ external TEFC motors, eliminating the first two heat sources. Both canned motor pumps and magnetic pumps generate eddy currents (electromagnetic and permanent magnetic fields, respectively) that diminishes exponentially with speed. However, the heat load of the TELC liquid cooled canned motor pump windings is constant regardless of pump speed. Therefore, the heat load is typically five to 10 times higher than with the corresponding air cooled mag-drive pumps.

Intermittent cycling in stand-by systems can flash refrigerants in canned motor pumps, accelerating wear and damage. Minimized heat in **SCM** mag-drive pumps stops during idle periods, avoiding vapor locking.



Centrifugal Process Pumps

SERIES | SCM
for Refrigerants



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Guaranteed Performance for Approved Applications

SEAL-LESS.COM



CO2 High Pressure Pump

SCM Centrifugal Pumps

SCM Series Centrifugal Seal-Less Mag-Drive Pumps are designed for high flow / moderate head applications. Equipped with zero leakage magnetic couplings **SCM** meets the latest toxic emissions regulations. The absence of mechanical seals eliminates process exposure, pump maintenance and costly down-time.

SCM pumps and couplings are equipped with engineered gaskets for bubble tight sealing

Process Capabilities:

- Thin, non-lubricating liquids
- High system pressures
- Pressurized gases
- Low NPSH systems

Design Features

- Heavy duty casing and containment shell
- Balanced impellers w/ low axial thrust loads
- High torque magnets, suitable for low temperatures
- Close coupled standard NEMA or IEC motors

Specifications

- Flows: to 300 GPM
- Differential Heads: to 250 feet (75 m)
- Temperatures: -150°F (-100°C) up to +600°F (315°C)
- System Pressures (MAWP): 350 PSIG (25 Bar) - to 2200 PSIG (150 Bar)
- VFD Rated TEFC Motors
- Specific Gravities: to 2.0

Available Materials

- 316-SS
- 304-SS
- Hastelloy-C

Options

- Dual static seals – Reserve Seal™
- Seal-welded liquid ends
- Flanges and adapter couplings
- Silicon carbide sleeve bearings
- High temperature design

Applications

- Corrosive chemicals
- Freon, CO2 & NH3
- Refrigerants, liquefied gases, hydrocarbons, solvents
- Heat transfer oil



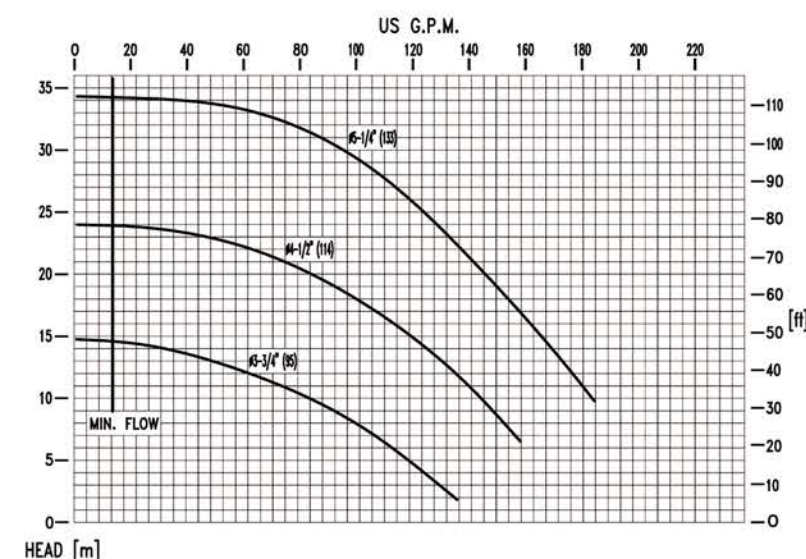
Precision machining centers meet specifications, Q/A & Q/C



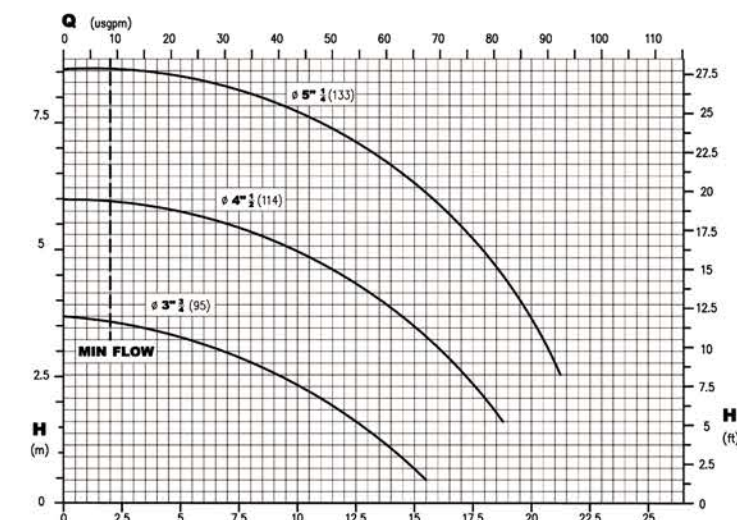
High Pressure/ Low NPSH Pump



SCM4 3500 RPM Performances



SCM4 1750 Performances



THE **EFFICIENT**™
SEAL-LESS PUMP



Hydrodynamically Balanced Impeller

