PROCESS PUMPS
FOR OIL & GAS, PETROCHEMICAL
AND POWER GENERATION
M PUMPS benefit from 40-year experience in designing and manufacturing process pumps. M PUMPS process application department can provide proposals as well as design and manufacturing of process centrifugal and other rotary pumps, meeting and exceeding the most stringent and demanding international standards and customers’ specific requests.

- M PUMPS Process application Department set up:
- Experienced, skilled multilingual application engineers
- Technical department with advanced CAD software and FEM Analysis
- Internal R&D for custom-made pumps requirements
- Assembly department with dedicated team and supervision
- Europe’s largest and most fully equipped centrifugal pump testing area
- Experienced engineering team for contractual technical documentation and witnessing
- Post sales assistance with worldwide service (via branch offices or trained partners) and 24-hour spare parts delivery

OH3 API 610 process pumps tested according to ISO 9614-2. Test facility prepared with soundproofing walls.

All pumps manufactured by M Pumps are designed in full accordance with existing international standard.

- ISO 9001/2008 certification ensures compliance with highest quality standards.
- ISO 14001-2004 certification proves M Pumps absolute care for the environment.
MAGNETIC DRIVE PUMPS
M PUMPS OFFERS THE MOST ADVANCED REAR CONTAINMENT SHELL ON THE MARKET.

A magnetic drive pump uses a magnetic field to create the rotation of the impeller (or any other device utilized to displace fluid). The external magnet is mounted on the motor shaft. The liquid end consists of pump impeller (or any other device used to displace fluids) and an internal magnet mounted onto the driven shaft which is supported by bushing assembly and HERMETICALLY sealed by containment shell. Without the need of a mechanical seal.

The external magnet begins to rotate when the motor is started. The rotating magnetic field effects the inner magnetic field which begins to rotate the impeller as the same speed of the external magnet to displace the fluid.

MAGNETIC DRIVE PUMPS OFFER A SERIES OF SUPERIOR ADVANTAGES OVER MECHANICAL SEAL PUMPS:

- Pump is sealless guaranteeing operational safety for operators and environment, most of all in case of critical, hazardous, corrosive or expensive chemicals pumping.
- Without mechanical seal, both initial costs of the same and cumbersome auxiliary API plans are avoided.
- For the same reason, pump selection, operation and maintenance are much simpler and less expensive than mechanical seal.
- Ability to handle high gas content fluids in which most mechanical seals would fail due to poor lubrication and cooling.

Are you concerned about energy costs, maintenance costs (Spare parts and downtime), leakages of dangerous/expansive chemicals, frequent seal failure and complex sealing system? M Pumps has the solution to address your concerns with its advanced sealless pump technology.

With its superior technology applied on the HYBRID containment shell which generates negligible Eddy current loss, M Pumps is now able to directly replace double mechanical seal pumps and canned motor containment shell which generates negligible Eddy current loss, M Pumps is now able to directly replace double mechanical seal pumps and canned motor.

M PUMPS HAS SOLVED ALL THESE ISSUES WITH THE HYBRID CONTAINMENT SHELL (SEE PAGE 9)

The Hybrid Rear Shell offers several advantages:

- Vs other magnetic drive manufacturers, much lower power absorption.
- Consequently the power consumption is much lower, offering very competitive Total Cost of Ownership.
- Almost negligible heat generation, with easy handling of: low boiling chemicals/cooling agents.
- 50 bar g design pressure and -90°C+200°C design temperature.
- On demand: Reliable, immediate temperature reading (temperature sensor is located at the source of the magnetic field, providing accurate reading and timely response, avoiding pump failure).

Hybrid technology reduces greatly heat generation in the rear casing region. This benefit is particularly important when pumping low boiling liquids.

There are NO MORE technical reasons to choose a mechanical seal pumps Vs a M PUMPS magnetic sealless pump.

Thanks to our 40 years of experience in magnetic drive technology, M Pumps is able to supply innovative and unique rear containment shell on magnetic drive pumps to enhance the competitiveness and operational efficiency in today’s process industry. As technology advances, the need for high pressure, high temperature and energy efficient become the top priorities among pump users.

Staying ahead of these priorities required M Pumps to adopt a forward thinking and proactive approach to pump design.

AVAILabe ON ALL M PUMPS PROCESS PUMPS

Based on this Philosophy, M Pumps has created an advanced High Pressure, High Temperature and Energy efficient Rear Containment Shell to eliminate the various concerns on the use of magnetic driven pumps in the process industry.

M PUMPS Hybrid Technology is the most advanced and attractive ENERGY SAVING solution available now in the market. Innovative and unique M Pumps solution offering:

MAIN ADVANTAGES

- Impressive reduction in Magnetic losses
- High Pressure design: vacuum to 50 bar g
- High Temperature design: -90°C to 200°C
- Motor power installation up to 1000 kW

The patented hybrid technology containment shell combines the reliability of a standard inner metallic seal (High Pressure and High Temperature) with the strength of Carbon Fibre outer shell to achieve an energy efficient (Reduction in magnetic loss and cost of ownership) and environmental friendly Hermetically sealed solution.

MAG LOSSES AND HEAT REDUCTION

<table>
<thead>
<tr>
<th>Material</th>
<th>Design Temp °C</th>
<th>MAG Loss Comparison</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hastelloy C / Carbon Fiber</td>
<td>50°C to 280°C</td>
<td>0.7%</td>
</tr>
<tr>
<td>Zirconium Oxide</td>
<td>16°C to 200°C</td>
<td>2%</td>
</tr>
<tr>
<td>Metal Zirconium Oxide</td>
<td>16°C to 200°C</td>
<td>1.5%</td>
</tr>
<tr>
<td>Stainless Steel</td>
<td>16°C to 200°C</td>
<td>1.5%</td>
</tr>
<tr>
<td>Composite PTFE</td>
<td>16°C to 200°C</td>
<td>1.5%</td>
</tr>
<tr>
<td>Beryllium Copper</td>
<td>16°C to 200°C</td>
<td>1.5%</td>
</tr>
</tbody>
</table>

(*) Comparison with installed motor 18.5 kW, 2 poles, 50 Hz.

Comparison between M Pumps and other rear shell solutions available now on the market.

MINIMIZED TEMPERATURE RISING ON REAR CASING REGION

Hybrid technology reduces greatly heat generation in the rear casing region. This benefit is particularly important when pumping low boiling liquids.
V IN LINE
Sealless sliding vane pump with permanent magnet drive system

OPERATING DATA
- Q (m³/h): 3
- Press. Syst (bar): 25/150
- T (°C): 200

DESIGN FEATURES
Suitable for a variety of applications, including reverse osmosis systems, cooling circulation and sampling application in refi nery.

The sealing system with O-Rings prevents product from leaking in the atmosphere

MATERIALS
- ANSI 316 (basic version)
- Duplex or Super Duplex
- Hastelloy C® 276
- Incoloy 825
- Titanium et
- Other alloys based on NORSOK/NACE requirements

V MODULAR
Sealless sliding vane multistage modular pump with permanent magnet drive system

OPERATING DATA
- Q (m³/h): 2
- Press. Syst (bar): 50/150
- T (°C): 200

DESIGN FEATURES
Close-coupled configuration allows conventional drivers to be mounted directly to pump frame.

No base, coupling or guards are required for this mounting.

MATERIALS
- ANSI 316 (basic version)
- Duplex or Super Duplex
- Hastelloy C® 276
- Incoloy 825
- Titanium et
- Other alloys based on NORSOK/NACE requirements
GS MAG-M
Sealless mag drive chemical gear pumps

OPERATING DATA
- Q (m³/h): 80
- Press. Syst (bar): 30
- T (°C): 200

DESIGN FEATURES
Rotors are achieved from rolled bar forging that is cut, turned and ground into its final shape as opposed to using cast parts, thus ensuring maximum hardness.
High power synchronous magnetic coupling

MATERIALS
- ANSI 316 (basic version)
- Duplex or Super Duplex
- Hastelloy C® 276
- Incoloy 825
- Titanium et
- Other alloys based on NORSOK/NACE requirements

T MAG-M
Horizontal, sealless peripheral pump with permanent magnet drive system, no mechanical seal

OPERATING DATA
- Q (m³/h): 9
- H (m): 90
- Press. Syst (bar): 25
- T (°C): 350

DESIGN FEATURES
Particular design of the hydraulic, with self balancing impeller to improve the wear ring life.
Low flow and high heads are the main characteristics of this pump design.

MATERIALS
- ANSI 316 (basic version)
- Duplex or Super Duplex
- Hastelloy C® 276
- Incoloy 825
- Titanium et
- Other alloys based on NORSOK/NACE requirements
**CT MAG-M**
Horizontal, sealless low NPSH peripheral pump with permanent magnet drive system

**OPERATING DATA**
- Q (m³/h): 25
- H (m): 310
- Press. Syst (bar): 25
- T (C°): 350

**DESIGN FEATURES**
Low NPSH pumps (0.5 m) are the perfect design for the refrigeration market.

The separation of liquid chamber/atmosphere by means of an isolation shell is the best solution to pump aggressive, explosive and toxic liquids, hydrocarbons, heat transfer liquids and liquids difficult to seal.

**MATERIALS**
- ANSI 316 (basic version)
- Duplex or Super Duplex
- Hastelloy C® 276
- Incoloy 825
- Titanium et
- Other alloys based on NORSOK/NACE requirements

---

**CT MAG-MS**
Horizontal peripheral pump multistage low NPSH

**OPERATING DATA**
- Q (m³/h): 24
- H (m): 1000
- Press. Syst (bar): 50
- T (C°): 350

**DESIGN FEATURES**
Particular design of the hydraulic, with self balancing impeller to improve the wear ring life.

The range includes the construction with two and four stages, with or without centrifugal inducer to minimize the required NPSH up to 0.6 m, to allows the pumping of condensed and generally all low available NPSH installations.

**MATERIALS**
- ANSI 316 (basic version)
- Duplex or Super Duplex
- Hastelloy C® 276
- Incoloy 825
- Titanium et
- Other alloys based on NORSOK/NACE requirements
**SC MAG-M**

*Side channel pump*

*Regenerative side channel Multistage Metallic Mag-Drive pumps*

**OPERATING DATA**

- Q (m³/h): 35
- H (m): 360
- Press. Syst (bar): 50
- T (°C): 250

**DESIGN FEATURES**

SC MAG-M pump series are heavy duty side channel pumps, designed specifically for clean chemical process, low boiling and highly volatile, explosive and dangerous liquids.

**MATERIALS**

- ANSI 316 (basic version)
- Duplex or Super Duplex
- Hastelloy C® 276
- Incoloy B2S
- Titanium et
- Other alloys based on NORSOK/NACE requirements

---

**CN MAG-M ISO 2858**

*Heavy duty horizontal, sealless centrifugal pump with permanent magnet drive system no mecahnical seal ISO 2858 - DIN 24256*

**OPERATING DATA**

- Q (m³/h): 4000
- H (m): 220
- Press. Syst (bar): 150
- T (°C): 450

**DESIGN FEATURES**

- with closed impellers, back-pull-out design, with end suction and top discharge flange.
- Sturdy legs are provide as standard for foot mounting on the base plate.
- Capacity and outer dimension, according to DIN 24256/ISO 2858 Zero leakage (100% leak free)

**MATERIALS**

- ANSI 316 (basic version)
- Duplex or Super Duplex
- Hastelloy C® 276
- Incoloy B2S
- Titanium et
- Other alloys based on NORSOK/NACE requirements

---

**Graphs and charts**

- Flow vs. Head charts for different RPM speeds for both SC MAG-M and CN MAG-M ISO 2858 pumps.
**CN MAG-M ANSI**

Heavy duty horizontal, sealless centrifugal pump with permanent magnet drive system

**DESIGN FEATURES**

- Zero leakage (100% leak free) Ensure a clean and safe operating environment, highly efficient
- No mechanical seals or packed glands
- No external flushing systems

**MATERIALS**

- ANSI 316 (basic version)
- Duplex or Super Duplex
- Hastelloy C® 276
- Incoloy 825
- Titanium etc
- Other alloys based on NORSOK/NACE requirements

**OPERATING DATA**

- Q (m³/h): 4000
- H (m): 155
- Press. Syst (bar): 50
- T (°C): 350

---

**CN MAG-M API 685**

Horizontal, single stage, radially split centerline heavy duty OH2 to API 685 STD 2nd Ed.

**DESIGN FEATURES**

- Meeting and exceeding API STD 685 2nd Ed.
- Horizontal, single-stage, radial-split, heavy-duty design OH2.
- Single or double rear containment shell (in Hastelloy C®, Titanium Grade 5 or Hybrid - patented).
- Secondary control/containment on demand according to API STD 685 2nd Ed.

**MATERIALS**

- ANSI 316 (basic version)
- Duplex or Super Duplex
- Hastelloy C® 276
- Incoloy 825
- Titanium etc
- Other alloys based on NORSOK/NACE requirements

**OPERATING DATA**

- Q (m³/h): 4000
- H (m): 300
- Press. Syst (bar): 150
- T (°C): 400
**CN MAG-MV API 685**

Close-coupled, vertical, in-line, single-stage overhung heavy-duty OH5 to API 685 STD 2nd Ed.

**DESIGN FEATURES**

Meeting and exceeding API STD 685 2nd Ed.

Horizontal, single-stage, radial-split, heavy-duty design OH1.

Single or double rear containment shell (in Hastelloy C®, Titanium Grade 5 or Hybrid - patented).

Secondary control/container on demand according to API STD 685 2nd Ed.

**MATERIALS**

- ANSI 316 (basic version)
- Duplex or Super Duplex
- Hastelloy C® 276
- Incoloy 825
- Titanium et
- Other alloys based on NORSOK/NACE requirements

**OPERATING DATA**

- Q (m³/h): 4000
- H (m): 300
- Press. Syst (bar): 150
- T (°C): 400

---

**CL MAG-M ISO 2858**

**CL MAG M Horizontal centrifugal pump single stage OH1 ISO 2858**

**DESIGN FEATURES**

Ideal for pump highly corrosive.

High permeation resistance

Solid handling capability

High strength metallic lined rotating shaft with silicon carbide sleeves

**MATERIALS**

- ANSI 316 (basic version)
- Duplex or Super Duplex
- Hastelloy C® 276
- Incoloy 825
- Titanium et
- Other alloys based on NORSOK/NACE requirements

**OPERATING DATA**

- Q (m³/h): 90
- H (m): 63
- Press. Syst (bar): 20
- T (°C): 150
**CL MAG-M ANSI**

Horizontal, sealless PFA lined centrifugal pump with permanent magnet drive system, acc. to ASME B73.3-2003

**OPERATING DATA**

- Q (m³/h): 102
- H (m): 77
- Press. Syst (bar): 20
- T (°C): 300

**DESIGN FEATURES**

Hermetic construction is made by a thick PFA lining, transfer molding achieved, that ensure best quality and best corrosion resistance, allowing the handling of corrosive liquids.

Smart construction for the maximum reduction of wearing parts and easy/fast maintenance.

**MATERIALS**

- ANSI 316 (basic version)
- Duplex or Super Duplex
- Hastelloy C® 276
- Incoloy 825
- Titanium et
- Other alloys based on NORSOK/NACE requirements

---

**CNV MAG-M**

Vertical, sealless centrifugal pump with permanent magnet drive system

**OPERATING DATA**

- Q (mc/h): 4000
- H (m): 350
- Press. Syst (bar): 16/150
- T (°C): 200

**DESIGN FEATURES**

This pump is the best solution for the chemical, pharmaceutical and petrochemical industry.

Modular construction allows lengths up to 7 meters

**MATERIALS**

- ANSI 316 (basic version)
- Duplex or Super Duplex
- Hastelloy C® 276
- Incoloy 825
- Titanium et
- Other alloys based on NORSOK/NACE requirements
**CV MAG-P STD**
Vertical, sealless pp and pvdf armored centrifugal pump with permanent magnet drive system.

**OPERATING DATA**
- Q (m³/h): 140
- H (m): 44
- Press. Syst (bar): 5
- T (°C): 90

**DESIGN FEATURES**
The simple construction combined with an high thickness guarantees a long life against the corrosion.

Pump casing shall be one single piece, achieved from solid bar, made of very high thickness PP and PVDF to have a good mechanical resistance and a guaranteed long life against the corrosion.

**MATERIALS**
- ANSI 316 (basic version)
- Duplex or Super Duplex
- Hastelloy C® 276
- Incoloy 825
- Titanium et
- Other alloys based on NORSOK/NACE requirements

---

**CN MAG-MS API 685**
Radially split, multistage, between-bearings pumps heavy duty BB5 to API 685 STD 2nd Ed.

**OPERATING DATA**
- Q (m³/h): 1000
- H (m): 2200
- Press. Syst (bar): 150
- T (°C): 400

**DESIGN FEATURES**
Meeting and exceeding API STD 685 2nd Ed.
Radially split, multistage, between bearings pumps, heavy duty design BB5.

Single or double rear containment shell (in Hastelloy C®, Titanium Grade 5 or Hybrid - patented).
Secondary control/containment on demand according to API STD 685 2nd Ed.

**MATERIALS**
- ANSI 316 (basic version)
- Duplex or Super Duplex
- Hastelloy C® 276
- Incoloy 825
- Titanium et
- Other alloys based on NORSOK/NACE requirements
WN MAG-M API 685
Between bearings radially split, single stage heavy duty BB2 to API 685 STD 2nd Ed.

OPERATING DATA
- Q (m³/h): 4000
- H (m): 240
- Press. Syst (bar): 150
- T (°C): 400

DESIGN FEATURES
Meeting and exceeding API STD 685 2nd Ed.
Between bearings radially split single stage heavy duty BB2.
Single or double rear containment shell (in Hastelloy C®, Titanium Grade 5 or Hybrid - patented).
Secondary control/containment on demand according to API STD 685 2nd Ed.

MATERIALS
- ANSI 316 (basic version)
- Duplex or Super Duplex
- Hastelloy C® 276
- Incoloy 825
- Titanium et
- Other alloys based on NORSOK/NACE requirements

WN MAG-MS API 685
Between bearings radially split, double stage heavy duty BB2 to API 685 STD 2nd Ed.

OPERATING DATA
- Q (m³/h): 4000
- H (m): 470
- Press. Syst (bar): 150
- T (°C): 400

DESIGN FEATURES
Meeting and exceeding API STD 685 2nd Ed.
Between bearings radially split double stage heavy duty BB2.
Single or double rear containment shell (in Hastelloy C®, Titanium Grade 5 or Hybrid - patented).
Secondary control/containment on demand according to API STD 685 2nd Ed.

MATERIALS
- ANSI 316 (basic version)
- Duplex or Super Duplex
- Hastelloy C® 276
- Incoloy 825
- Titanium et
- Other alloys based on NORSOK/NACE requirements
CONTENTS

MECHANICAL SEAL PUMPS

CN SEAL-M ISO 2858
CN SEAL-M API 610
CL SEAL-M ISO 2858
CN SEAL-MV API 610
CNV SEAL-M API 610
CN SEAL-MS API 610
WN SEAL-M API 610
WN SEAL-MS API 610
CN SEAL-M ISO 2858
Centrifugal, single stage, metallic pumps according to ISO 2858 - 5199.
Mechanical seal chamber according to uni 3069.

OPERATING DATA
- Q (m³/h): 1000
- H (m): 225
- Press. Syst (bar): 16
- T (°C): 200

DESIGN FEATURES
Standard mechanical seal flushing with internal recirculation from pressure side to seal chamber.
Possibility to insert many.

MATERIALS
- ANSI 316 (basic version)
- Duplex or Super Duplex
- Hastelloy C® 276
- Incoloy 825
- Titanium et
- Other alloys based on NORSOK/NACE requirements

CN SEAL-M API 610
Horizontal, single stage, radially split centerline heavy duty OH2 to API 610 STD 11th Ed.

OPERATING DATA
- Q (m³/h): 4000
- H (m): 2400
- Press. Syst (bar): 50
- T (°C): 400

DESIGN FEATURES
Meeting and exceeding API STD 610 11th Ed.
Horizontal, single stage, radial-split, heavy duty design OH2.
Back pull out.
Possible updating to API 685 without disassembling pump from process connections.

MATERIALS
- ANSI 316 (basic version)
- Duplex or Super Duplex
- Hastelloy C® 276
- Incoloy 825
- Titanium et
- Other alloys based on NORSOK/NACE requirements
**CL SEAL-M ISO 2858**

Centrifugal, single stage, lined, according to ISO 2858 - 5199.

**OPERATING DATA**
- Q (m³/h): 340
- H (m): 86
- Press. Syst (bar): 16
- T (°C): 120

**DESIGN FEATURES**
A high thickness PFA lined coating made by transfer molding ensure exceptional corrosion resistance.

Robust cast iron (ASTM A395) casings absorbs pipework forces and eliminates need for expansion joint.

**MATERIALS**
- ANSI 316 (basic version)
- Duplex or Super Duplex
- Hastelloy C® 276
- Incoloy 825
- Titanium et
- Other alloys based on NORSOK/NACE requirements

---

**CN SEAL-MV API 610**

Vertical, in-line, single-stage overhunting pumps with separate bearing brackets OH3 to API 610 STD 11th Ed.

**OPERATING DATA**
- Q (m³/h): 4000
- H (m): 350
- Press. Syst (bar): 50
- T (°C): 400

**DESIGN FEATURES**
Meeting and exceeding API STD 610 11th Ed.

Vertical, in-line, single-stage overhunting pumps with separate bearing brackets OH3.

**MATERIALS**
- ANSI 316 (basic version)
- Duplex or Super Duplex
- Hastelloy C® 276
- Incoloy 825
- Titanium et
- Other alloys based on NORSOK/NACE requirements
**CNV SEAL-M API 610**

*Vertical suspended, single-casing, volute, line-shaft-driven sump pumps heavy duty VS4 to API 610 STD 11 Ed.*

**OPERATING DATA**

- Q (m³/h): 600
- H (m): 220
- Press. Syst (bar): 25
- T (°C): 300

**DESIGN FEATURES**

Meeting and exceeding API STD 685 2nd Ed.

Vertically suspended, single-casing, volute, line-shaft-driven sump pump, heavy duty design VS4 shaft length up to 7 meters.

**MATERIALS**

- ANSI 316 (basic version)
- Duplex or Super Duplex
- Hastelloy C® 276
- Incoloy 825
- Titanium et
- Other alloys based on NORSOK/NACE requirements

**CN SEAL-MS API 610**

*Radially split, multistage, between-bearings pumps heavy duty BB5 to API 610 STD 11nd Ed.*

**OPERATING DATA**

- Q (m³/h): 1000
- H (m): 2200
- Press. Syst (bar): 150
- T (°C): 400

**DESIGN FEATURES**

Meeting and exceeding API STD 610 11nd Ed.

Radially split, multistage, between bearings pumps, heavy duty design BB5.

Back pull out.

Possible upgrading to API 685 without disassembling pump from process connections.

**MATERIALS**

- ANSI 316 (basic version)
- Duplex or Super Duplex
- Hastelloy C® 276
- Incoloy 825
- Titanium et
- Other alloys based on NORSOK/NACE requirements
**WN SEAL-M API 610**
Between bearings radially split, single stage heavy duty BB2 to API 610 STD 11th Ed.

**OPERATING DATA**
- Q (m$^3$/h): 4000
- H (m): 240
- Press. Syst (bar): 150
- T (C°): 400

**DESIGN FEATURES**
Meeting and exceeding API STD 610 11th Ed.
Between bearings radially split single stage heavy duty BB2.
Back pull out.
Possible upgrading to API 685 without disassembling pump from process connections.

**MATERIALS**
- ANSI 316 (basic version)
- Duplex or Super Duplex
- Hastelloy C® 276
- Incoloy 825
- Titanium et
- Other alloys based on NORSOK/NACE requirements

---

**WN SEAL-MS API 610**
Between bearings radially split, double stage heavy duty BB2 to API 685 STD 11nd Ed.

**OPERATING DATA**
- Q (m$^3$/h): 4000
- H (m): 470
- Press. Syst (bar): 150
- T (C°): 400

**DESIGN FEATURES**
Meeting and exceeding API STD 610 11th Ed.
Between bearings radially split, double stage heavy duty BB2.
Black pull out.
Possible upgrading to API 685 without disassembling pump from process connections.

**MATERIALS**
- ANSI 316 (basic version)
- Duplex or Super Duplex
- Hastelloy C® 276
- Incoloy 825
- Titanium et
- Other alloys based on NORSOK/NACE requirements
SPECIAL PUMPS

With almost 40-year experience in designing magnetic driven pumps for industrial demanding application, we have the ability to supply bespoke units.

All pumps are designed following the most rigorous methods of calculation, and, thanks to the FEM system specific analysis are carried out to simulate actual process conditions.

Special pumps are divided into five main categories:

- Special pumps are divided into five main categories:
- First level with operating temperature up to 250°C
- Second with operating temperature up to 350°C
- Third level above 350°C

HIGH SYSTEM PRESSURE APPLICATIONS

With solution both for positive displacement and centrifugal pumps, and pressure rating ranging from #300, #600, #900, #1500, #2500 ANSI #2500 rating

COMBINATION OF HIGH TEMPERATURE & HIGH PRESSURE

We successfully supplied pumps operating @ 270°C that were hydraulically tested @ 750 bar g.

LOW TEMPERATURE APPLICATIONS

Pumps with special construction are suitable to work with chemicals as low as ~120°C pumping temperature.

SPECIAL MATERIALS

Exotic materials (meeting NACE and NORSOK requirements such as Duplex Steel, Hastelloy C® 276, Titanium, Monel® and various type of jacketing are available too

CENTREX TECHNICAL SALES

T MAG-XPM SERIES
High System Pressure Peripheral Pump
Flow up to 3m³/h
Head up to 30 m
System Pressure up to 1500 bar

CN MAG-M SERIES
Process centrifugal pumps with Hybrid Rear Containment Shell and inducer for critical NPSHr available as low as 1,3 meters

SC MAG-M SERIES
Special jacketing on head and bracket to handle supercritical chemicals
Mag drive side channel pump with cooling jacketing and brackets specifically designed for pumping Hydrogen Peroxide.

M PUMPS RANGE

CENTRIFUGAL PUMPS
State of the art centrifugal pumps from the simplest to the most demanding industrial process application. Suitable for transfer, unloading, circulation and many other applications. High efficiency, long life and low cost maintenance. Meeting several international standards (ISO/ DIN/ANSI/API) and available in both magnetic drive (sealless) and traditional mechanical seal.

- Flow up to 4000 m³/h
- Head up to 2200 m
- System pressure from vacuum up to 1500 bar
- Temperature from -150°C up to +400°C
- No heat exchanger required up to +350°C

REGENERATIVE TURBINE PUMPS
Low to medium flows, pulsation free, suitable where high pressure is required. Perfect solution where traditional centrifugal pumps are not suitable (used instead of a multistage pumps).

- Flow up to 24 m³/h
- Head up to 800 m
- System pressure from vacuum up to 1500 bar
- Temperature from -150°C up to +400°C
- No heat exchanger required up to +350°C

SIDE CHANNEL PUMPS
316 stainless steel (or better) multi-stage barrel construction. Ideal to pump liquefied gasses and liquids under vapor pressure like condensate, refrigerant, boiler feed water or LPG (up to 50% gas content).

- From low to medium flows up to +250°C
- Flow rates up to 80 m³/h, discharge pressure up to 48 bar g.
- Suitable for lubricating media up to 25000 cP
- Temperature up to +400°C
- Viscosities up to 10000 cP

VOLUMETRIC PUMPS

SLIDING VANE PUMPS
- Flow rates up to 3000 l/h, discharge pressure up to 48 bar g.
- Suitable for viscosities from 1 to 1000 cP
- Pulsation free dosing/sampling/transfer pumps
- Flow rates up to 80 m³/h, discharge pressure up to 30 bar g.
- Temperature up to +200°C

EXTERNAL GEAR PUMPS
- Flow rates up to 3000 l/h, discharge pressure up to 48 bar g.
- Pulsation free dosing/sampling/transfer pumps
- Flow rates up to 80 m³/h, discharge pressure up to 30 bar g.
- Suitable for lubricating media up to 25000 cP
- Temperature up to +200°C

HOLLOW DISC
- Flow rates up to 38 m³/h, discharge pressure up to 5 bar g
- Viscosities up to 10000 cP

M PUMPS
M PUMPS is able to design and manufacture bespoke pumps for the most demanding applications:

- High system pressure (up to 1500 bar g)
- High design temperature (400°C)
- Low design temperature (liquid CO₂, cryogenic application)
- Solid content
- Jacketing
- Exotic materials such as: Hastelloy C® 276, Titanium, Monel®

All above parameter are indicative and not associated.
Since its foundation in 1978, M Pumps has been the driving force in the design and development in magnetic driven sealless pumps technology. Our unparalleled expertise and unrelenting passion have created a new paradigm in the application of magnetic sealless pumps in the process industry.

Energy Saving, Environmental Friendly, Safety, Performance, Operation reliability, Total Cost of Ownership and pumps system simplification are now available with one supplier only: M Pumps advanced magnetic sealless pumps and pump systems. M Pumps with its wide portfolio of products incorporates over 26 designs and 350 basic models allow our engineering department to select the right pump for your exact process requirement. Pre-engineered pumps, highly engineered and special purpose pumps and systems can be tailor-made to meet any demanding operating parameters as required by today’s complex processes.