

**Operating Range:**

- Max viscosity 200cSt
- Max system pressure 25 BAR  
(std-depending on the configuration)
- Flow up to 40 m<sup>3</sup>/h
- Head up to 53 m
- Temperature Range from -30 to +130°C (std)
- Electric motors from 1.5 to 15 KW
- ATEX II - /2G cbk II C T5
- Parameters for information purposes ,  
and not associated



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**Typical Application:**

- Ammonia
- Refrigerants
- LPG, Methanol, Gasoline, Diesel
- Solvents
- Caustic and Light Acids
- 1,3-Butadiene, Isobutylene, Propylene
- Vinyl Chloride, Vinyl Acetate
- Acrylonitrile, Styrene

**Fields:**

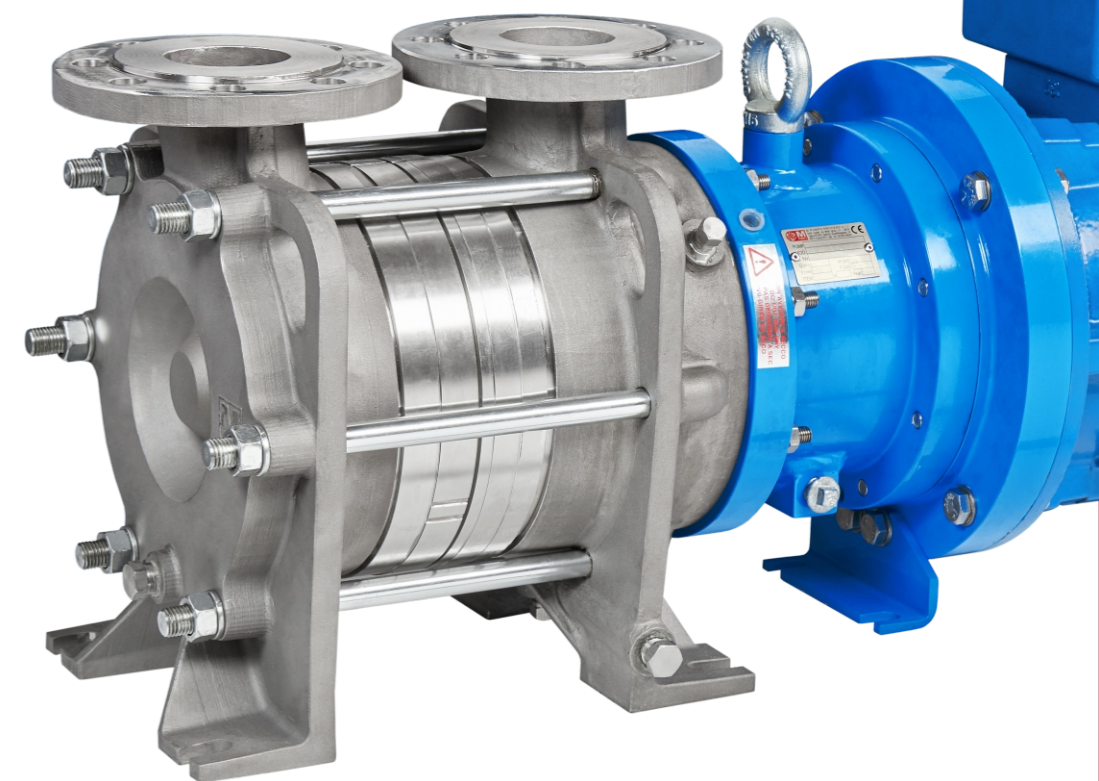
- General and Fine Chemical Industry
- Petrochemical Industry
- Semi-Conductor Industry
- Power Plant
- Pulp and Paper Industry
- Tanker Truck loading/unloading
- Shipbuilding
- Recycling Industry - Plating Industry



# SCE

Regenerative side channel  
Metallic Mag-Drive pumps

*Horizontal side channel mag-drive / energy saving pump range*

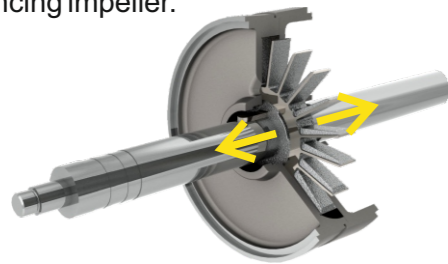


# Pump Details

## Construction Casing

Construction and dimensions according to EN 734, this design ensure strong self-priming performance.

Particular design of the hydraulic, with self balancing impeller.



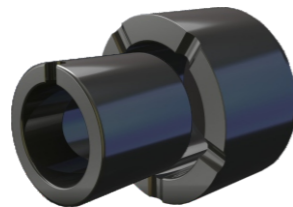
## Materials

Standard execution includes CF8M pump casing, cover & Duplex 22%Cr impellers High quality casting components.

Materials as an option:  
- Hastelloy®,  
- Incoloy®,  
- Duplex,  
- Others available on request.

## Lubricated bearings

Available bearing materials in different types to provide the best solution for each application: Silicon Carbide (SSIC), Tungsten Carbide (TC), Metallized Carbon. The adoption of elastic rings reduces the sleeve bearing loads and the thrust bearing loads to the minimum, to guarantee many years of maintenance-free operation.

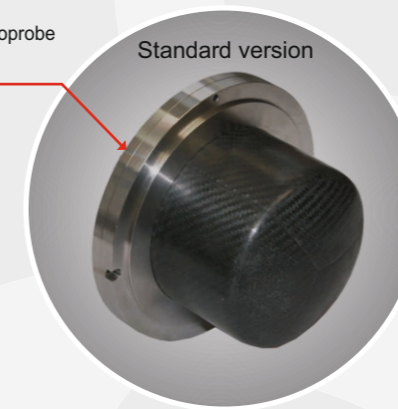


## TOP-TOP Nozzles

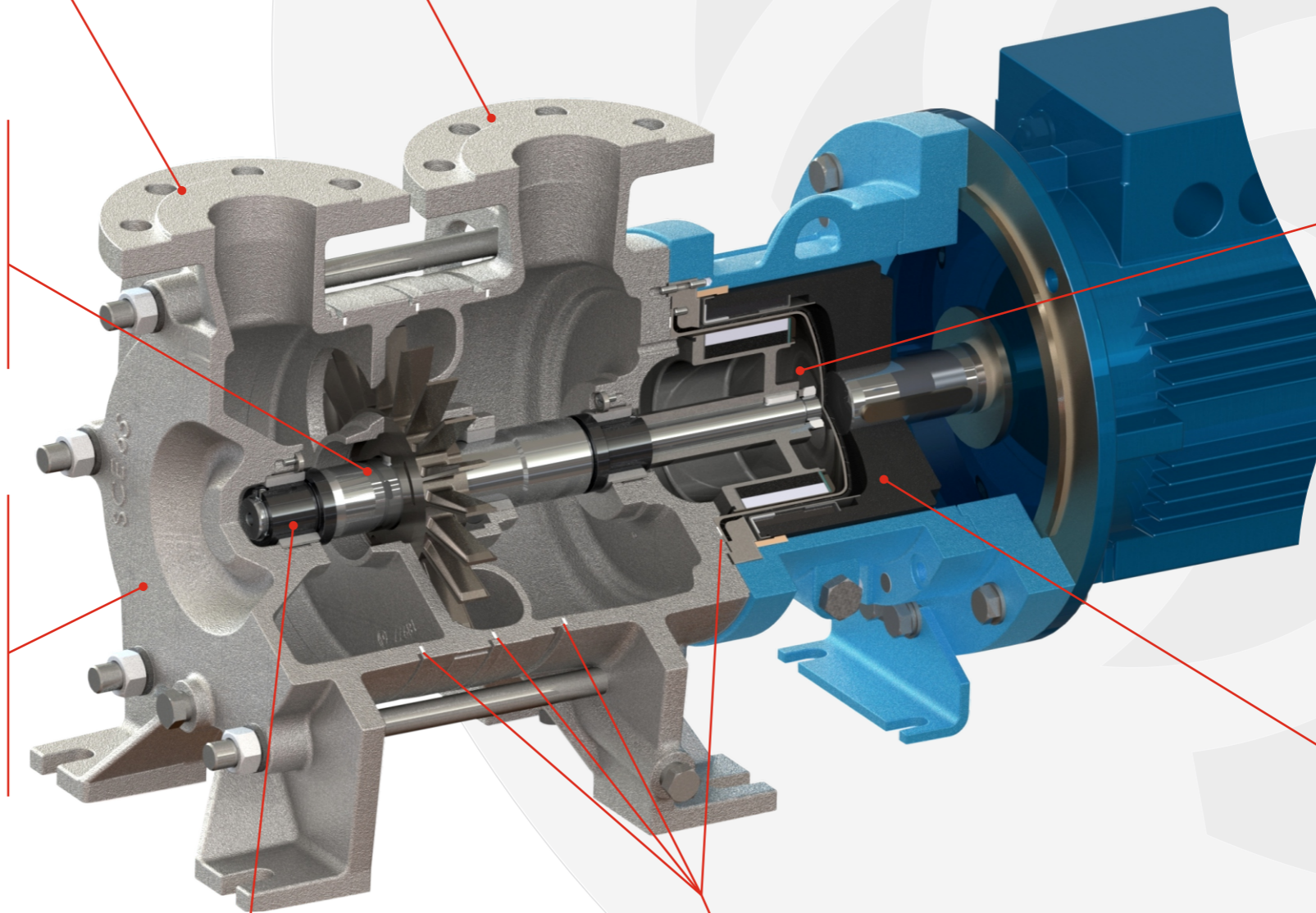
Suction and discharge connections are universal design flanged CLASS 150 RF / PN 16.



On demand:  
integrated thermoprobe  
sensor type E



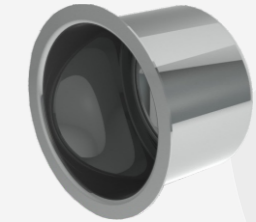
Standard version



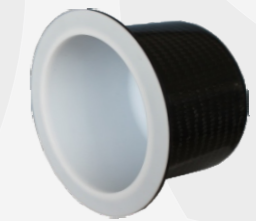
## Containment Shell

SCE series are available with 3 different containment shell configurations:

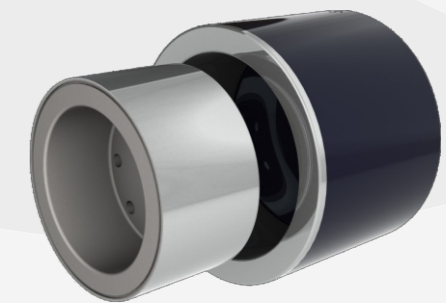
**Hybrid Containment shell:** It's the standard solution. Exclusive patent that provide at the same time mechanical strength and energy saving. Liquid is always in contact with metallic part. (Shown Aside)



**HC:** The rear shell is made of one single piece, no welding, ellipsoidal profile that has been studied to withstand higher pressures than the traditional one.



Now available also the **Zero Losses** version, composed by an internal PTFE shell, reinforced with a strong carbon fiber outer shell, bonded together.

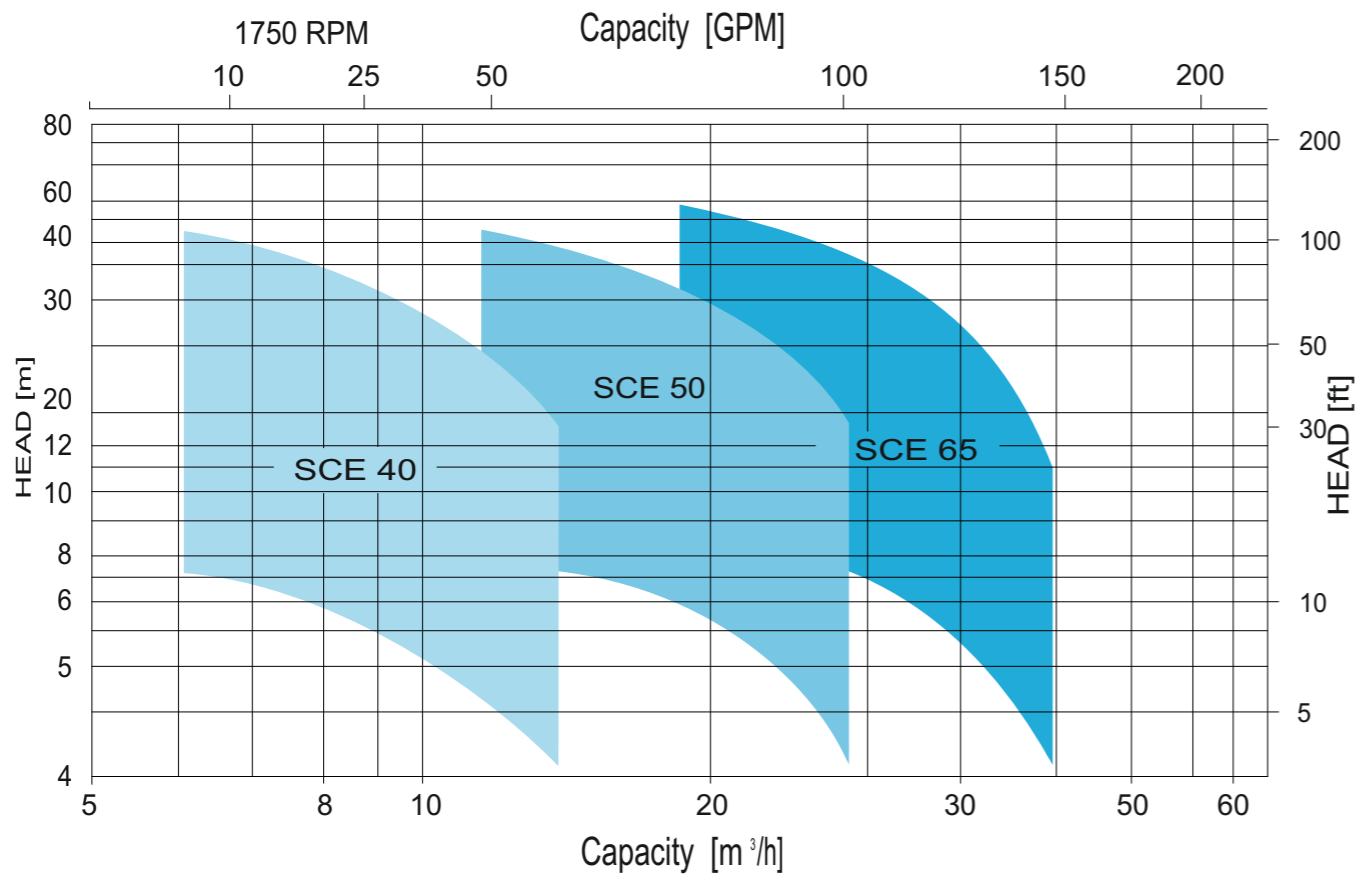
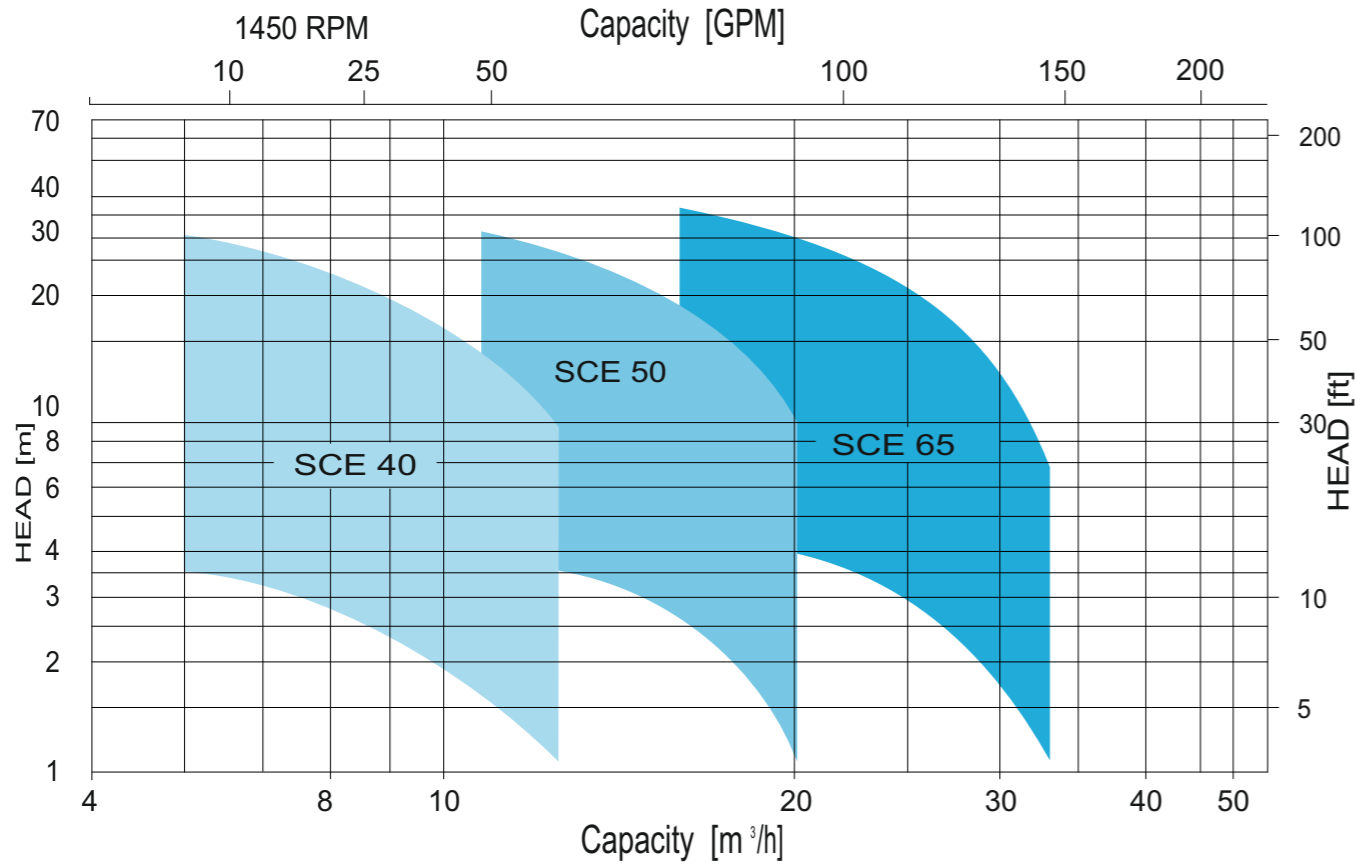


High power synchronous magnetic coupling designed by our technical office and with rare earth magnetic elements mechanically locked.

Standard execution is with Neodimium Iron Boron magnetic elements. No glue or resins are present.

Sealing system with PTFE flat gaskets prevents product from leaking to the atmosphere.

# Pump Performances



# Successful Installations

SCE 65/1, for pumping of solvents, Q=30 mc/h, H= 20m; tanks farm in the Netherlands

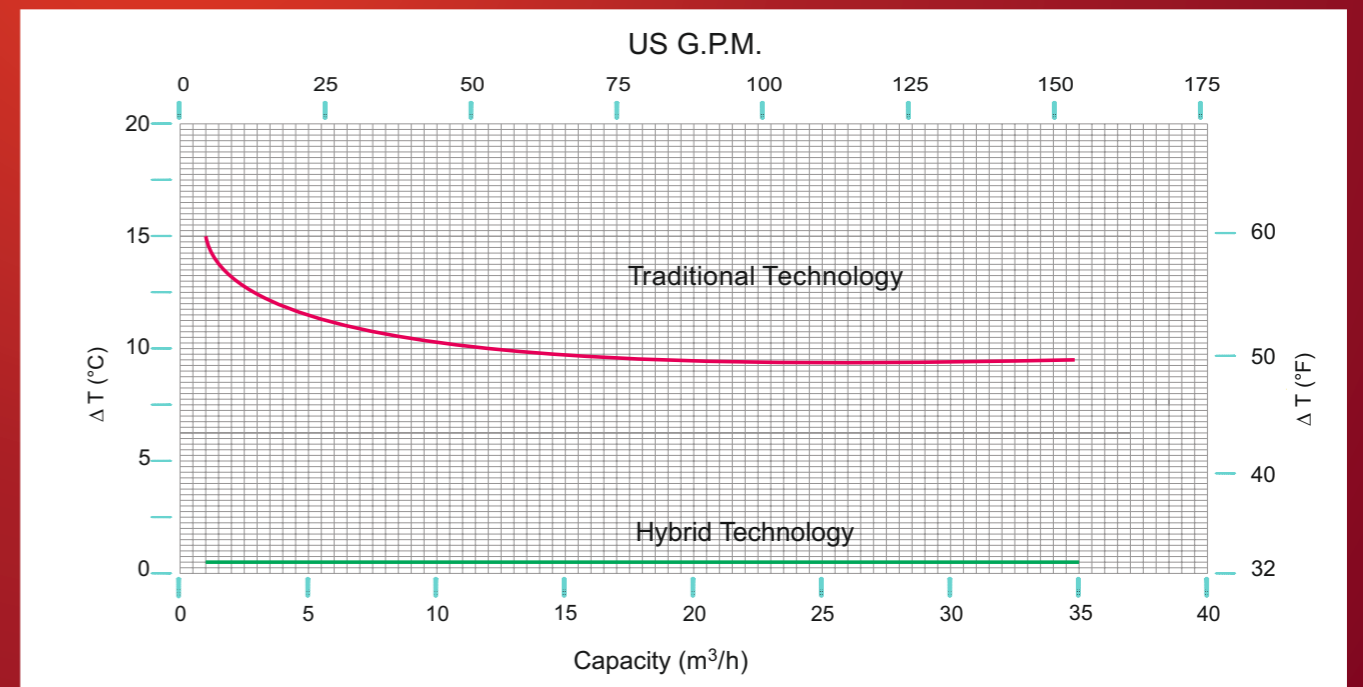


SCE MAG-M65, for pumping of ISOBUTYLENE Q=35 mc/h, H= 40m; Ningbo - China.

SCEV 40/1 for pumping of solvents in a chemical plant, Q=9 mc/h, H= 12m; North Europe



## 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.

## Pump Configuration

SCE pump series are heavy horizontal self priming, side channel pumps, with top suction and discharge, designed specifically for clean chemical process, low boiling and highly volatile, explosive and dangerous liquids, even in presence of high gas percentages.

Low speed operation ensure long life, noiseless performance and reliability.

This pump range is dimensionally corresponding to EN 734.

SCE close couple mounting, with B5 motors, power up to 15 kW, sealless high efficiency construction, SCE is a compact solution ideal for volatiles liquid transferring that simplifies installation and eliminates alignment operation, and reduces footprint space requirements, as alternative, long couple version is available.

## Applications

SCE pumps are side channel pumps suitable to handle liquids which doesn't contain solids or abrasives.

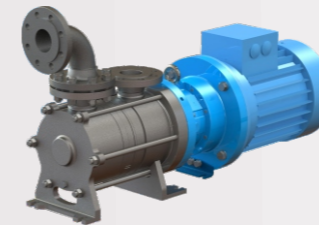
The particular design of the hydraulic allows to handle liquids close to boiling point. This allows a wide field of application when condensate, distillate, coolant and liquefied gas shall be pumped.

SCE pumps are applied in the chemical and petrochemical industry, transfer of LPG and liquified gases, in the surface finishing and hardening, in the pharmaceutical industry, in the plastic and rubber industry, in the air conditioning and refrigeration engineering and in the food, beverage and tobacco industry.

## FEATURES & BENEFITS

- Energy saving magnetic drive thanks to Hybrid containment shell
- Ability to pump liquid at boiling point
- Possibility to pump with up to 40% gas
- Robust Construction, sealless for maximum safe
- Extra strong axial and radial bushing, spring mounted
- Fully encapsulated magnets, no magnetic sectors exposed
- Dimensionally according to EN 734
- Close couple or bare frame construction

## Special Configurations

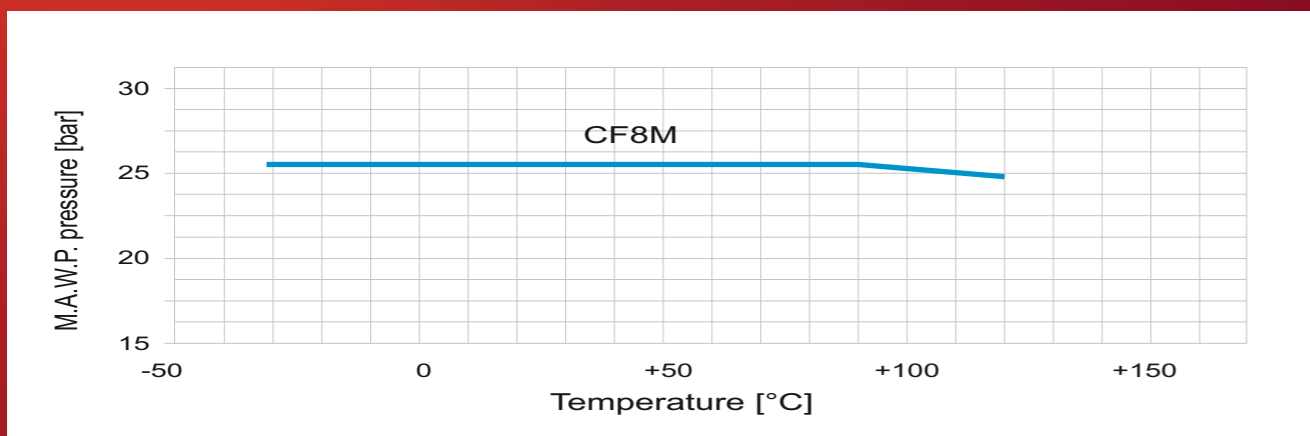


All pumps manufactured by M PUMPS PROCESS are in full accordance to existing international standards

- ISO 9001-2015 certification ensures compliance to highest quality standards.
- ISO 14001-2004 certification proves M PUMPS absolute care for the environment.



## Temperature influences on pump casing pressure resistance



## Protect your investment with Shaft Power Monitor

### Technical data

- Supply voltage 100-240 VAC / 380-500 VAC / 525-690 VAC
- Frequency 50 Hz / 60 Hz
- Rated current Up to 999 A via current transformer
- Protection class IP20
- Approvals CE, UL, cUL



Smart protection for fixed speed application:

- Dry Running
- Cavitation
- Closed Valve
- Locked Pump Impeller
- Detect under load and overload
  - Flow variation
- Change of fluid density
- Activate alarm or shut down the pump before damage occurs.