

KSMK
**Between-Bearings,
Multistage, Radially Split
Double Volute Pump**

BB2 Type *API-610, 10th edition*
ISO 13709

MARELLI



Sundyne Marelli

More than 40 years of experience in centrifugal pump design, development, manufacturing and service, to fulfill the latest standards for petroleum, petrochemical process and heavy duty processing industries, as full compliance machinery.

Applications

Sundyne Marelli, develops tailor made solutions for the high-pressure movement of water, hydrocarbon, CO₂ and other process liquids. Our solutions meet the most stringent customer specifications for the following heavy industries:

- ▶ Refineries
- ▶ Petrochemical plants
- ▶ Crude oil and gas pipelines
- ▶ Off-shore and on-shore installations for petroleum and gas
- ▶ Reverse osmosis
- ▶ Water injection
- ▶ Synfuels
- ▶ High pressure heavy-duty industry applications
- ▶ Other intensive high-pressure services and systems, that demand high reliability and efficient equipment

Design

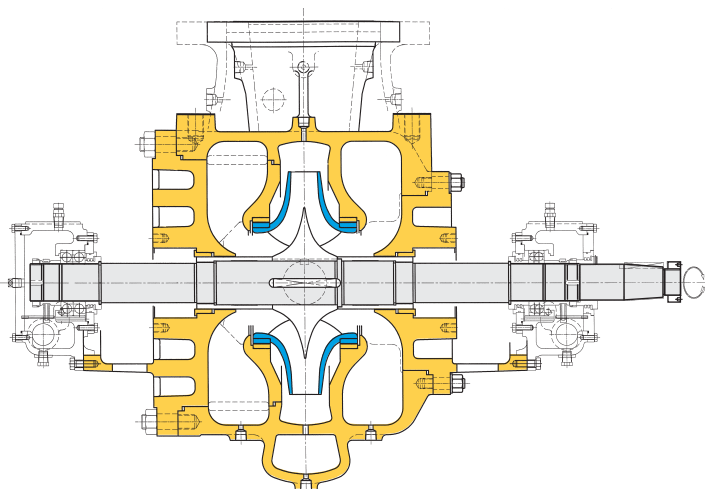
Sundyne Marelli KSMK pump series are horizontal radially split one and two stage, between bearings, centerline mounted, double volute centrifugal pumps. KSMK BB2 type pumps fully complies to API-610 10th edition / ISO 13709 standards.

Operating Data

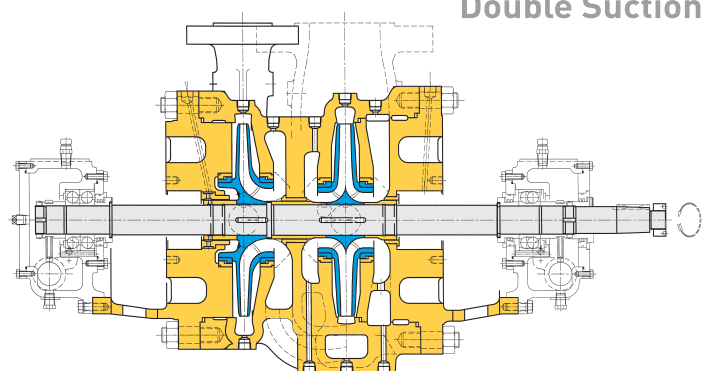
- ▶ Capacities: up to 3600m³/hr (16000 usgpm)
- ▶ Heads: up to 720 meters (2400 feet)
- ▶ Max Working Pressure: up to 60 bar (870 psi)
- ▶ Temperature Range: -150 °C (-238 °F) to 450 °C (842 °F)
- ▶ Rotational speed: up to 4000 RPM

Materials

According to Table H1 - API-610 10th Edition.
OTHER MATERIALS AND METALURGIES
AVAILABLE UPON REQUEST



**One Stage
Double Suction**



**Two Stage
Double Suction**

**API-610, 10th Edition
ISO 13709 BB2 Type**



Standard Features and Benefits

- API-610 10th Edition / ISO 13709 Full Compliance for reliability and accountability.
- All pumps within KSMK series are suitable for operation at 50 Hz and 60 Hz.
- Choice of multiple impellers in each hydraulic pump casing for maximum efficiency over a wide operating range.
- Centerline mounted pump casing maintains alignment during operation at elevated temperatures.
- Low suction specific speed and low NPSH characteristics, with a wide choice of impellers for optimum efficiency over a large operating range.
- Finned bearing housing to provide maximum heat dissipation under API-610 compliance.
- Deflection system with fins to improve cooling.
- Labyrinth bearing seals to avoid external contamination and maximize seal and lubrication life.
- Highly maintainable and replaceable wear rings to reduce overall life cycle costs (LCC).
- Mechanical seal chamber suitable for cartridges defined under API-682 3rd Edition. Also complies to API-610 standards.
- Socket welded flanged drains and vents as standard. Gussets and bracing also available.
- A variety of instrumentation options are available for monitoring all key operating parameters (temperature, pressure, vibrations, etc.).

Pump casing. Dual volute configuration to minimize radial loads and shaft deflection. Flanges designed to ASME VIII. Lateral right/left, "side by side" pump discharges available.

Flange
600#
requir
ISO/J

Casing gasket. Confined compression gasket with metal to metal rabbet fit.

Seal chamber. API-610 heating or cooling available.

Oil ports. Assures proper oil mist for every bearing.

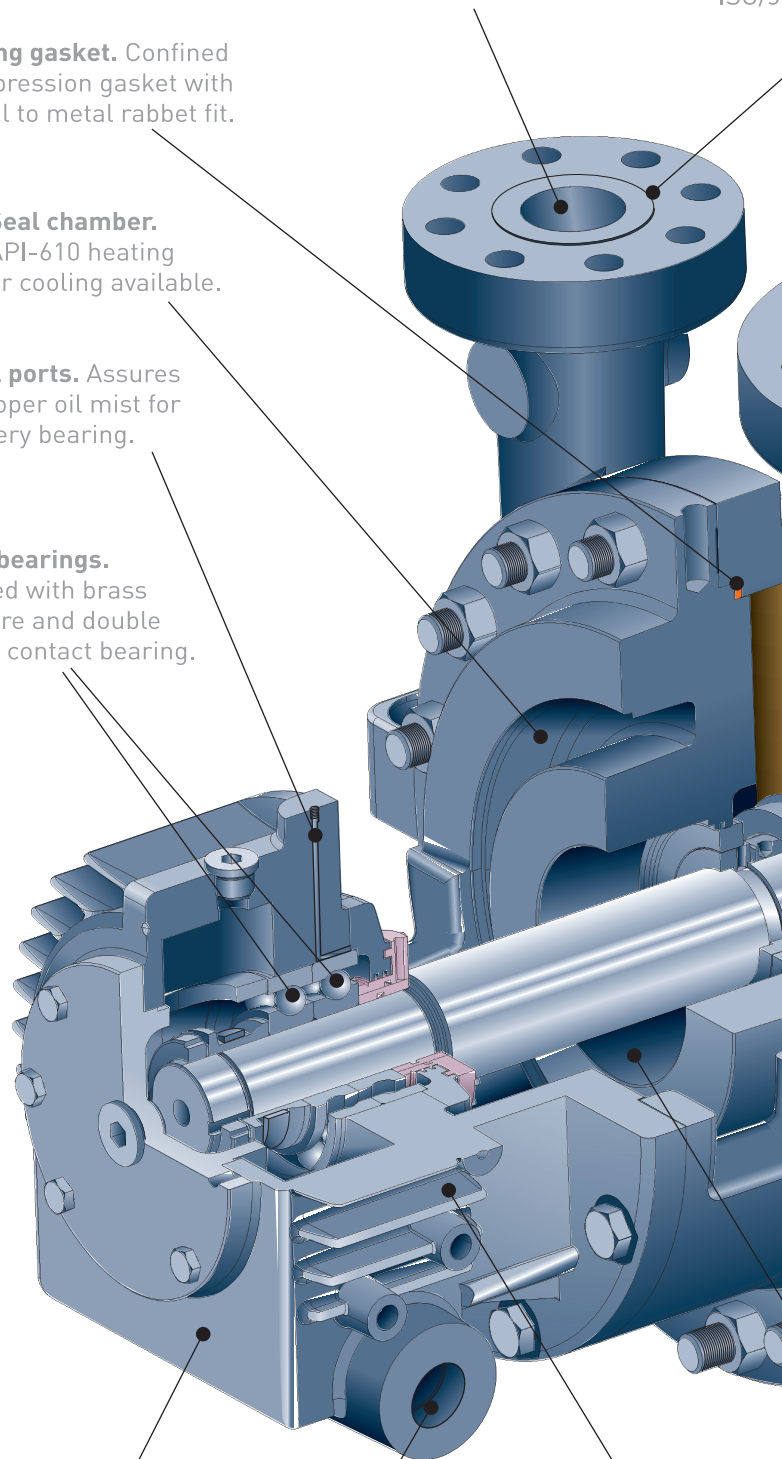
Thrust bearings. Designed with brass enclosure and double angular contact bearing.

Bearing housing. Multiple sizes available to meet load requirements.

Heat exchanger. To improve heat dissipation.

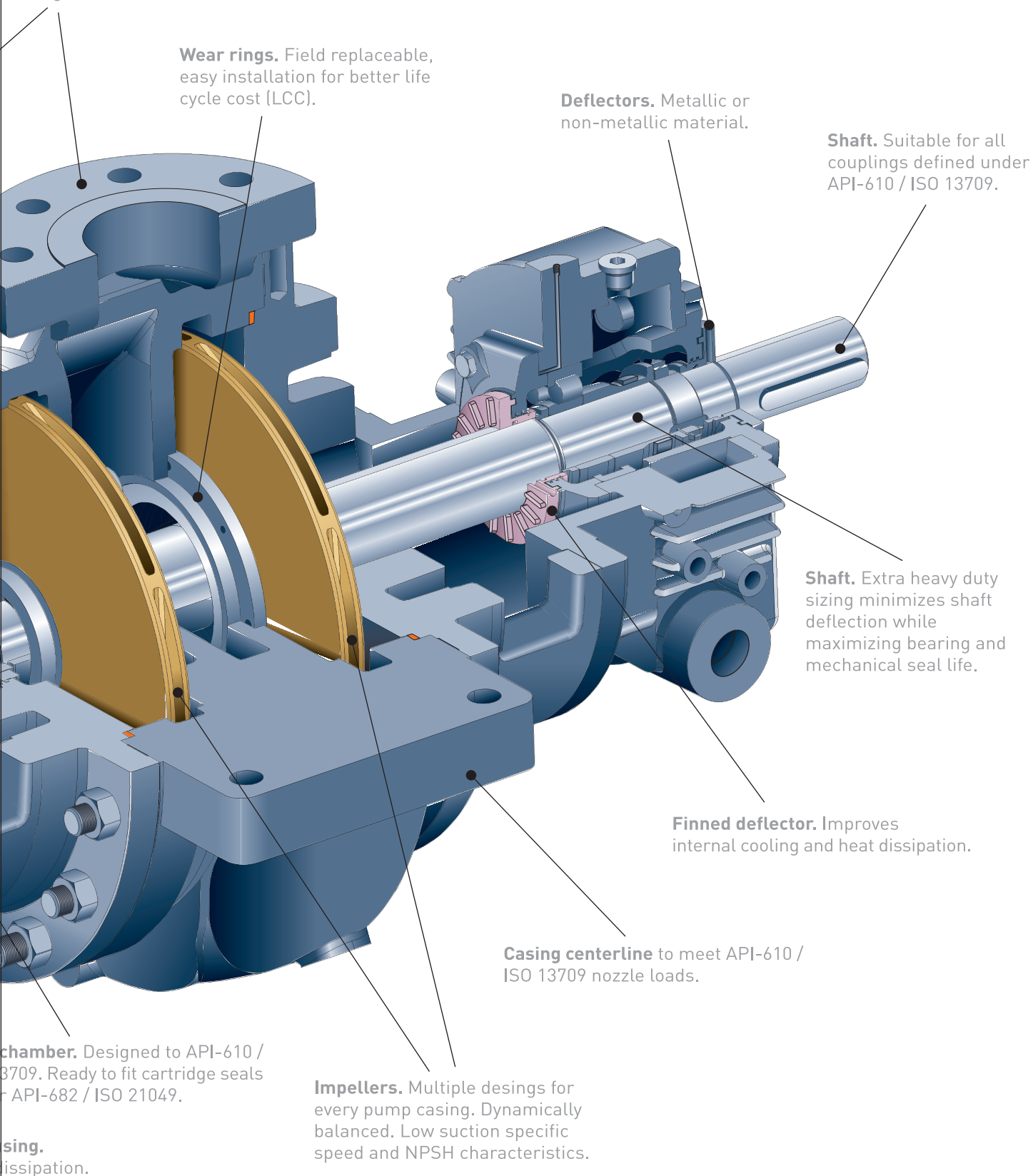
Finned bearing housing
For improved heat c

Seal
ISO 1
unde



es. ANSI B16.5 300#RF,
RF & 900#RF and their
ed serrations. ASME/DIN/
S flanges also available.

Two Stage Single Suction



Wear rings. Field replaceable, easy installation for better life cycle cost (LCC).

Deflectors. Metallic or non-metallic material.

Shaft. Suitable for all couplings defined under API-610 / ISO 13709.

Shaft. Extra heavy duty sizing minimizes shaft deflection while maximizing bearing and mechanical seal life.

Finned deflector. Improves internal cooling and heat dissipation.

Casing centerline to meet API-610 / ISO 13709 nozzle loads.

chamber. Designed to API-610 / ISO 13709. Ready to fit cartridge seals for API-682 / ISO 21049.

Impellers. Multiple designs for every pump casing. Dynamically balanced. Low suction specific speed and NPSH characteristics.

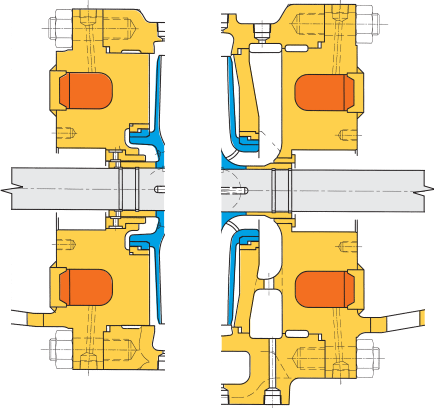
ing.
dissipation.

Optional Features

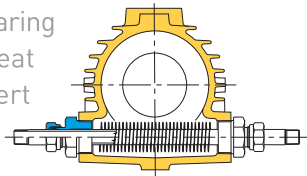
Sundyne Marelli provides the KSMK pump series with a range of customized features, to meet specific application requirements.

For High Temperature

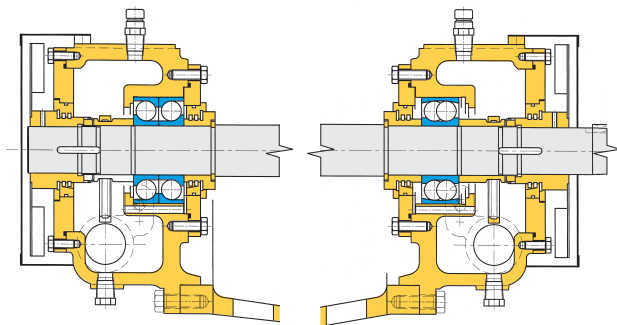
- Cooled mechanical seal chamber.



- External cooling for bearing housing with finned heat exchanger fed with inert fluid and/or water.



- Convection venting for bearing housing with a low noise fan placed at rear in coupling side.



For Lubrication System

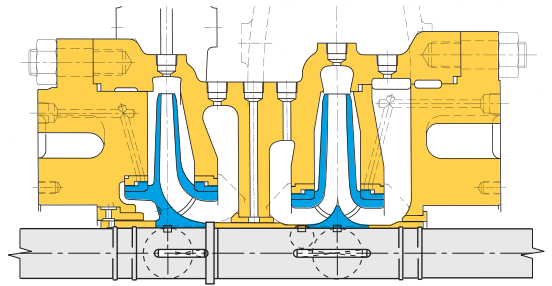
- Purge ports with drain valve. Test gauges for condition analysis.
- Oil mist lubrication system, with purge ports, is outboard for assuring mist flow through each bearing.

Sundyne Marelli KSMK Series

Precision engineered pumps meeting rigorous customer requirements in a multitude of applications, while reducing the total life cycle cost (LCC) and improving MTBM.

For High Suction Pressure

- Heavy duty bearing housings designed for high suction pressure applications.
- Mechanical seals to meet safety and environmental requirements.
- Pump casing and seal chamber dimensioned for high suction pressure.
- Engineered bearing solutions are available.



For Coking Services

- Backwash system for wear rings and neck bushing.
- Specific coke crusher available upon request.

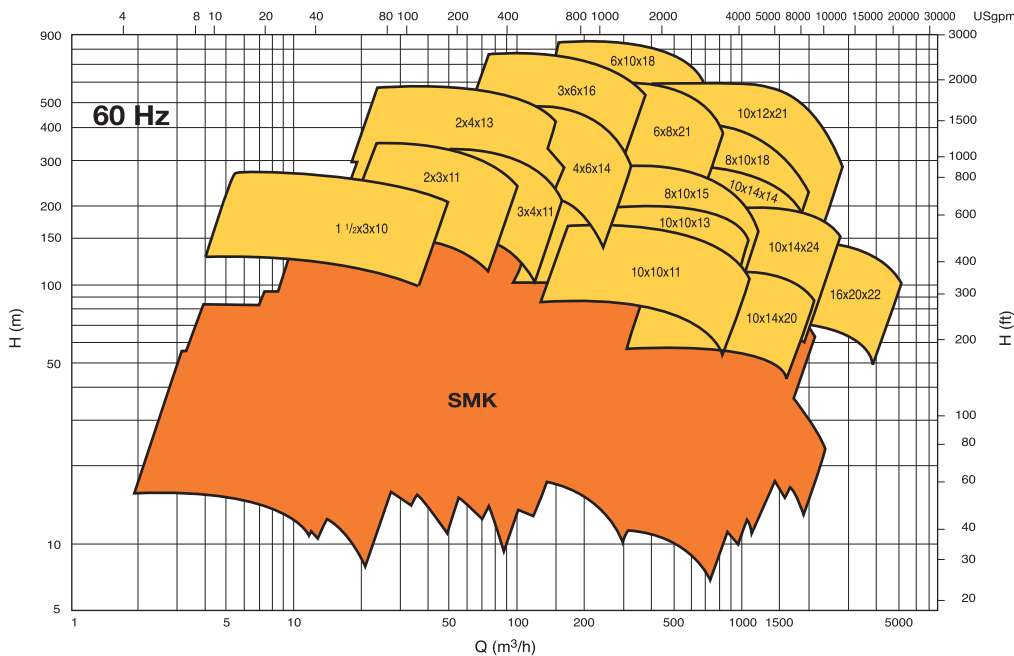
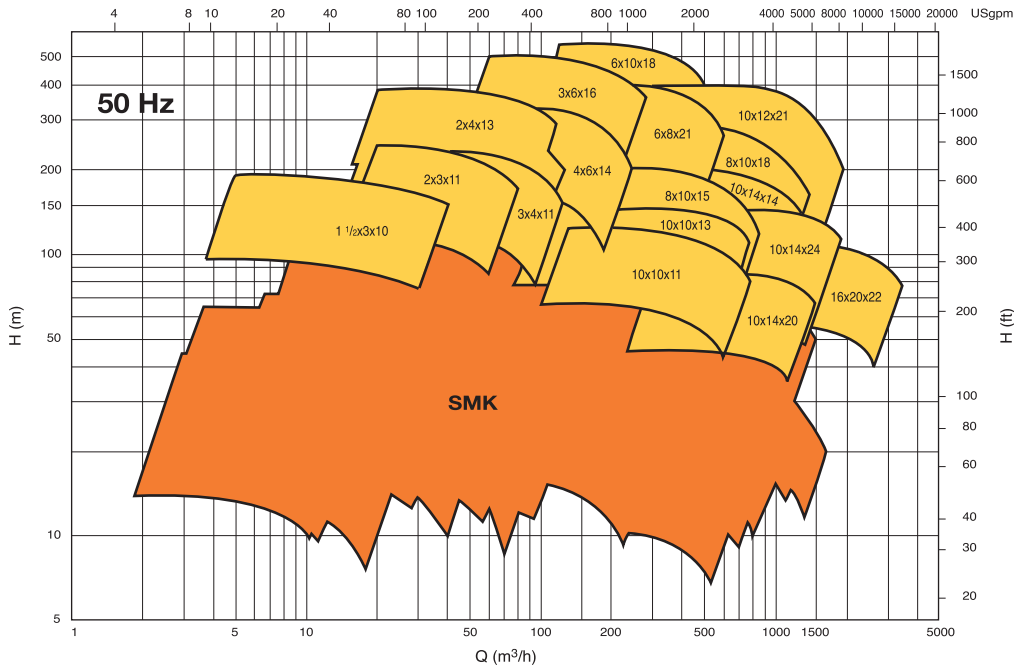
Baseplate Designs

- Pre-grouted and non-grouted for all driver types of drivers.
- Special larger bases designed to match oversize drivers, pumps and turbines. Special designs are also available for extra mechanical stress situations.
- Tailor made baseplates for off-shore applications.
- Skid mounting and oil field designs are also available.

Other Available Solutions

- Lateral right/left side pump discharges for matching existing pipe work at plant.

Performance Curves



PUMPS

COMPRESSORS

ELECTROMAGNETICS

GENUINE PARTS

SERVICE

Worldwide Headquarters

Sundyne Corporation
14845 West 64th Avenue
Arvada, Colorado
USA
Phone: +1 303 425 0800
Fax: +1 303 425 0896
E-mail: pumps@sundyne.com

European Sales Office

Sundstrand International, S.A.
13-15 Bd. Eiffel
Zone Industrielle de Dijon SUD
B.P. 30
21600 Longvic Cedex
France
Phone: +33 380 383300
Fax: +33 380 383336
E-mail: european-sales@sundyne.com

Sundyne Marelli Manufacturing

Ctra. Madrid-Toledo, Km. 30,8
45200 Illescas (Toledo)
Spain
Phone: +34 925 53 45 00
Fax: +34 925 51 16 00
E-mail: info@marellipumps.com

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