Sundyne

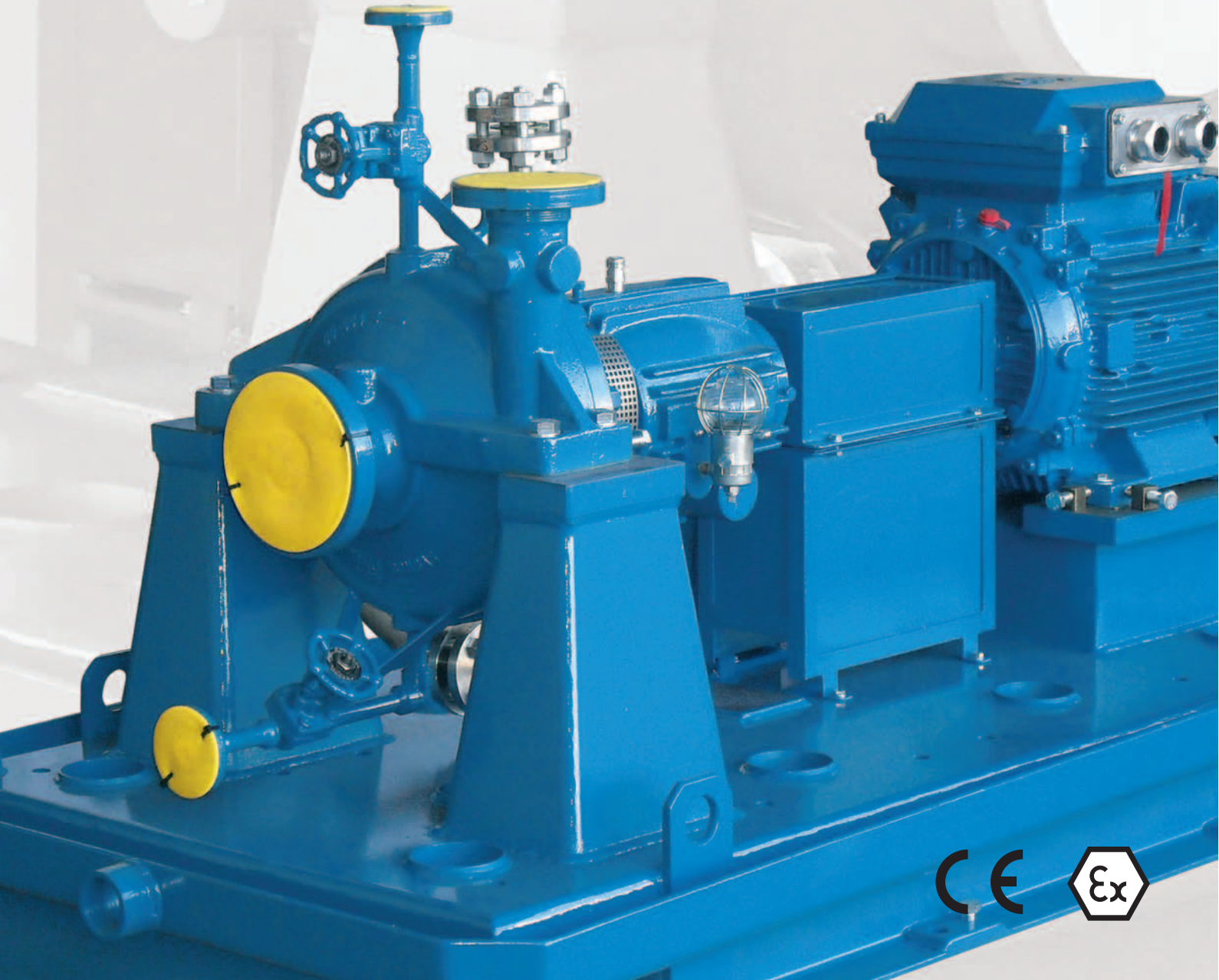
SMK

Overhung, End-suction, Horizontal Single & Double Volute Radially Split, Pump

OH2 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 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
- Reserve osmosis
- Synfuels
- Heavy-duty industry applications
- Other intensive services and systems, that demand high reliability and efficient equipment

Design

Sundyne Marelli SMK pump series are end-suction, centerline mounted, radial split, overhung horizontal single and double volute centrifugal pumps. SMK OH2 type pumps fully complies to API-610 10th edition / ISO 13709 standards.

Operating Data

- Capacities: up to 1600m³/hr (7000 usgpm)
- Heads: up to 360 meters (1200 feet)
- Max Working Pressure: up to 50 bar (725 psi)
- Temperature Range: -150 °C (-238 °F) to 450 °C (842 °F)
- Rotational speed: up to 4000 rpm

Materials

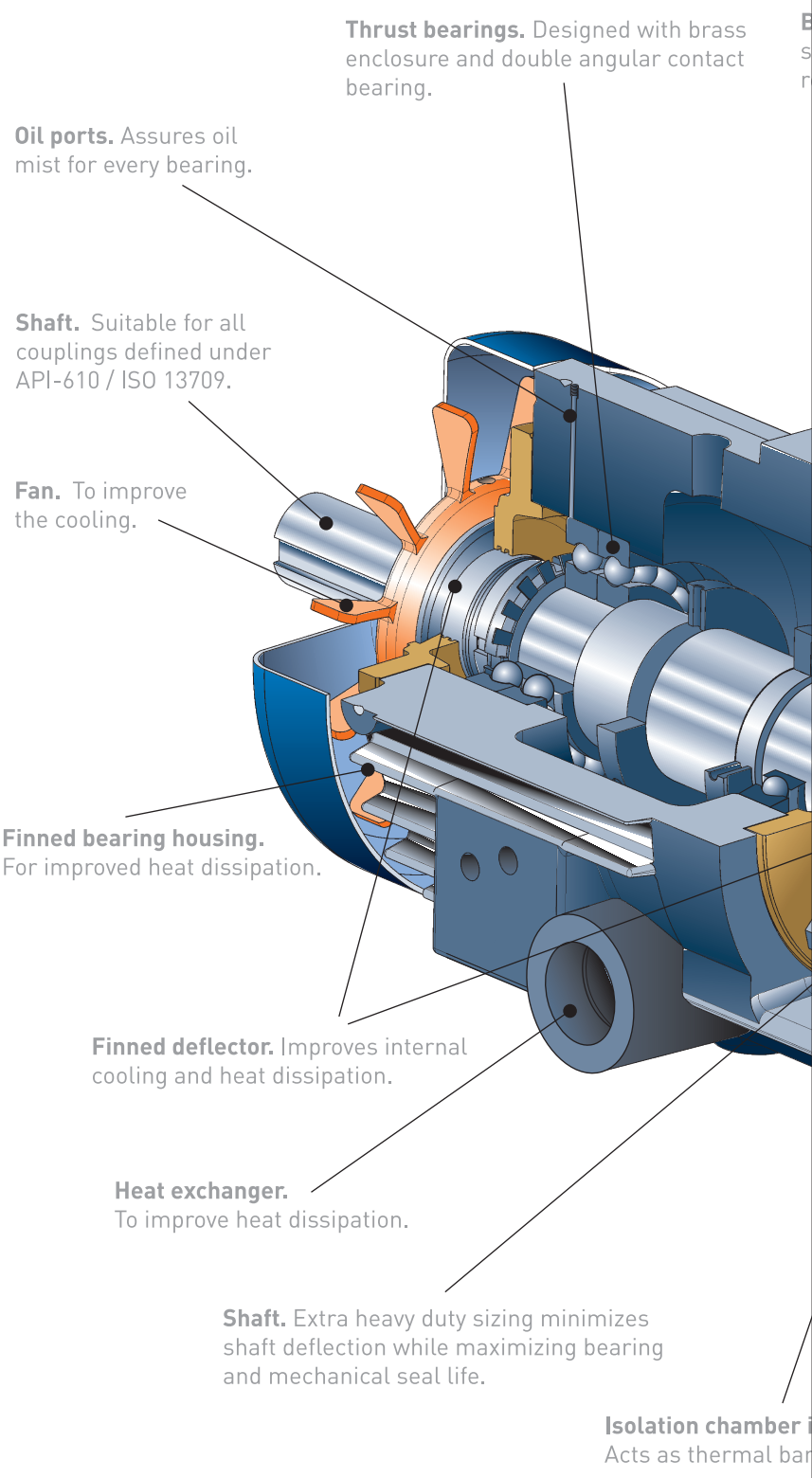
PART	According to Table H1 - API-610 10th Edition						
	S1	S5	S6	S8	C6	A8	D1
Pressure Casing	Carbon Steel (A216 WCB)				12% CHR	316 AUS	Duplex
Impeller	Cast Iron	Carbon Steel	12% CHR	316 AUS	12% CHR	316 AUS	Duplex
Wear Rings	Cast Iron	12% CHR Hardened		Hard-faced 316 AUS	12% CHR Hardened	Hard-faced 316 AUS	Hard-faced Duplex
Shaft	Carbon Steel	AISI 4140		316 AUS	12% CHR	316 AUS	Duplex
Bearing Housing	Carbon Steel (A216 WCB)						
Case Gasket	AUS, Spiral Wound			316 AUS Spiral Wound	AUS, Spiral Wound	316 AUS Spiral Wound	Duplex SS Spiral Wound

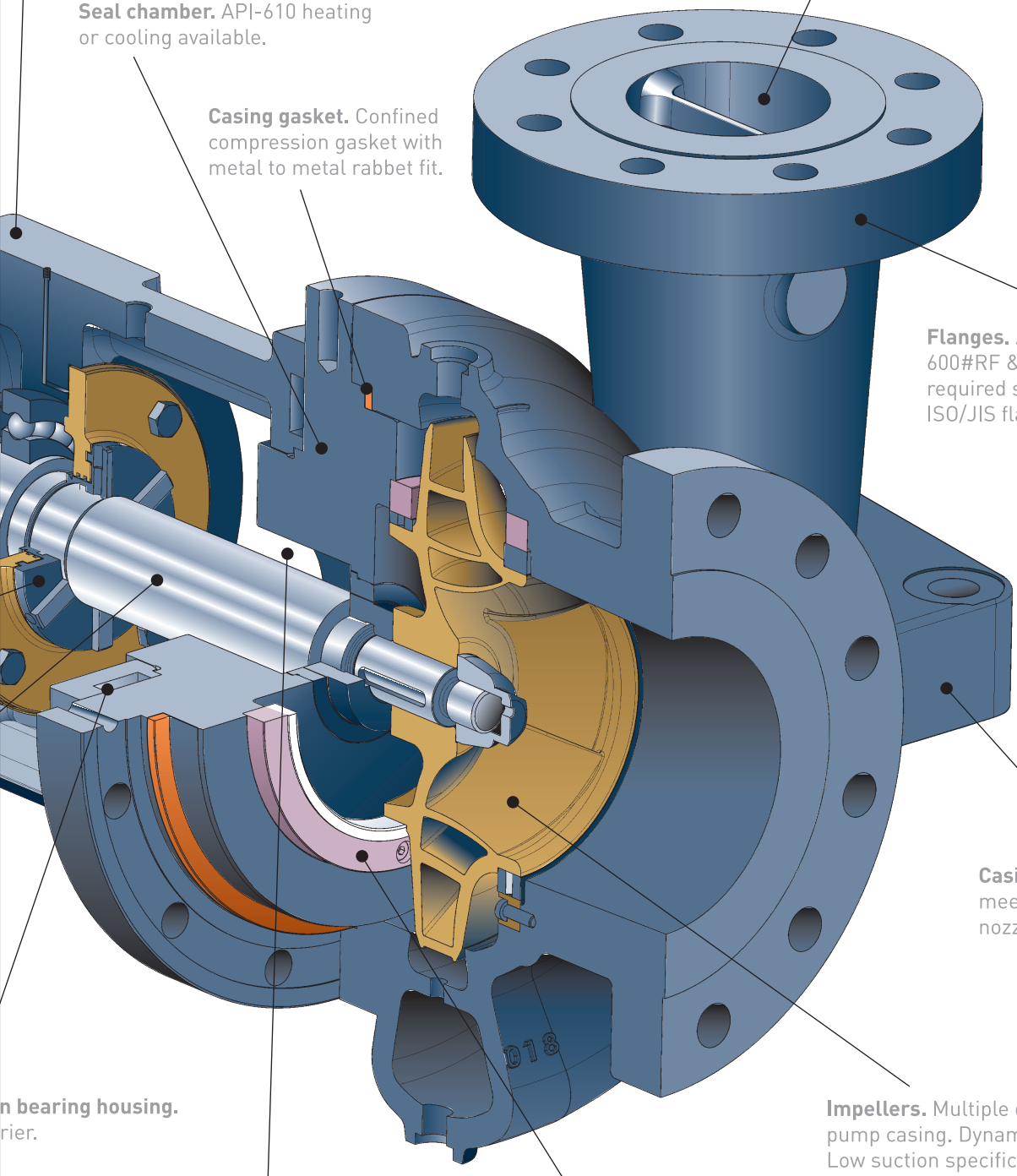
OTHER MATERIALS AND METALURGIES AVAILABLE UPON REQUEST

API-610, 10th Edition
ISO 13709 OH2 Type

Standard Features and Benefits

- API-610 10th Edition / ISO 13709 Full Compliance for reliability and accountability.
- All pumps within SMK series are suitable for operation at 50 Hz and 60 Hz.
- Higher efficiencies. Due to a design with tangential discharge and wide variety of hydraulics to match all types of duty points.
- Centerline mounted pump casing maintains alignment during operation at elevated temperatures.
- Low suction specific speed 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.
- Isolation chamber at bearing housing. Thermal barrier amongst mechanical seal chamber and bearing housing.
- 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 API-682 3rd Edition. Also complies to API-610 standards.
- Socket welded flanged drains and vents as standard. Gussets and bracing also available.
- Choice of multiple impellers in each hydraulic pump casing for optimum efficiency over a wide operating range.
- A variety of instrumentation options are available for monitoring all key operating parameters (temperature, pressure, vibrations, etc.).





earing housing. Multiple
izes available to meet load
equirements.

Pump casing. Dual volute configuration to minimize radial loads and shaft deflection (over 3" discharge nozzle size). Flanges designed to ASME VIII. Top suction and lateral discharges available.

Seal chamber. API-610 heating or cooling available.

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

Flanges. ANSI B16.5 300#RF, 600#RF & 900#RF and their required serrations. ASME/DIN/ ISO/JIS flanges also available.

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

n bearing housing.
rier.

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

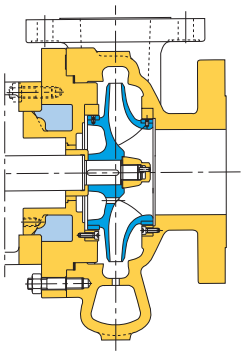
Seal chamber. Designed to API-610 / ISO 13709. Ready to fit cartridge seals under API-682 / ISO 21049.

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

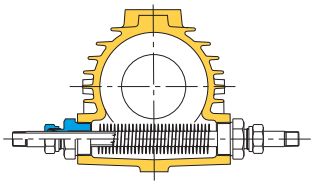
Optional Features

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

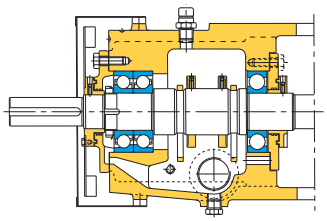
For High Temperature



- Cooled mechanical seal chamber.



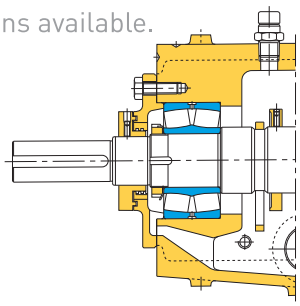
- External cooling for bearing housing with finned heat exchanger fed with inert fluid and/or water.



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

For 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 designed for high suction pressure.
- Engineered bearing solutions available.

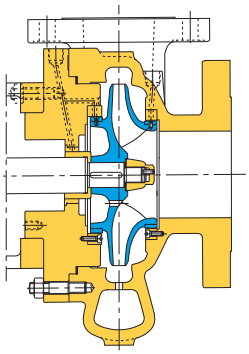


For Lubrication System

- 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.

For Coking Services

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

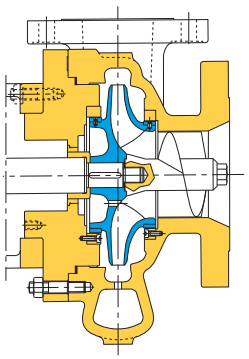


Baseplate Designs

- Pre-grouted and non-grouted for all driver types.
- Special base designs to match oversize drivers, pumps and turbines.
- Tailor made baseplates are available.
- Skid mounting and oil field designs available.

Other Available Solutions

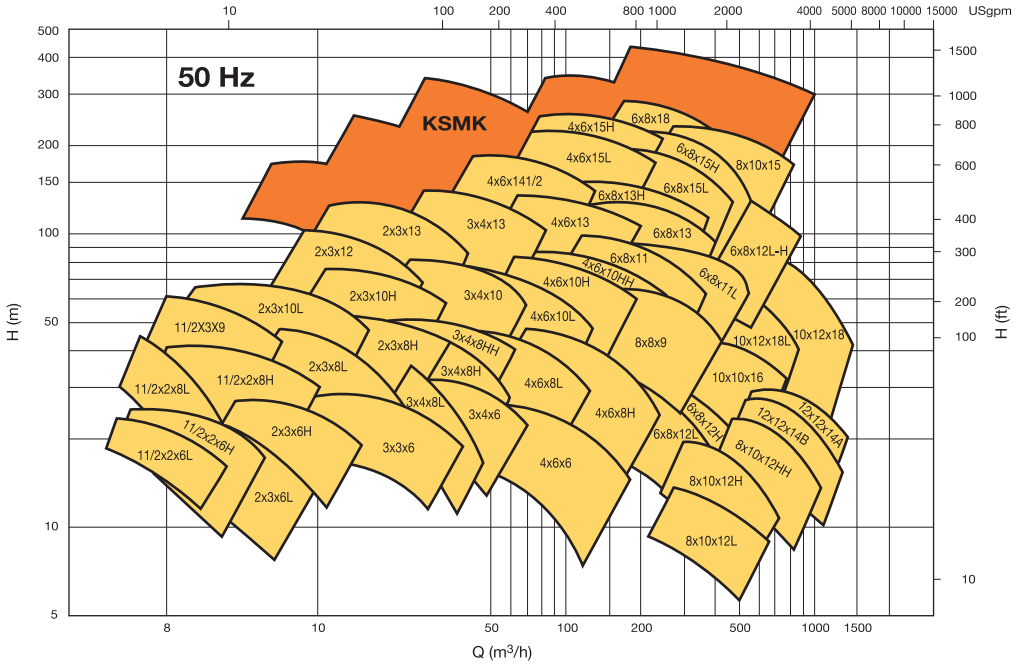
- State of the art inducer designs to improve suction capacity.
- Top suction designs on demand.
- Lateral right/left side pump discharges for matching existing pipe work at plant.

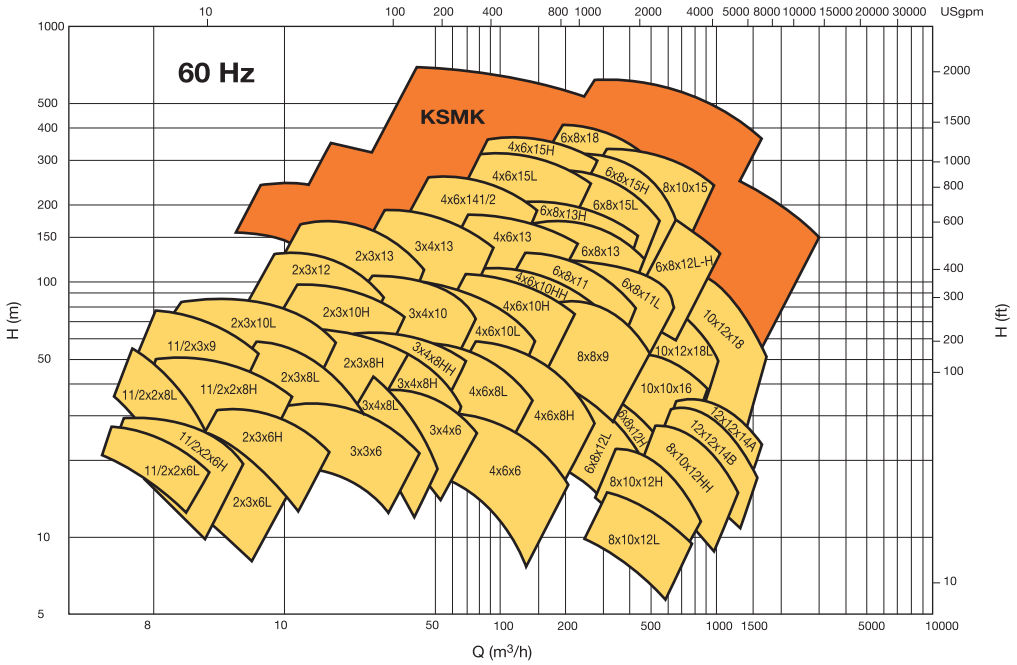


Sundyne Marelli SMK Series

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

Performance Curves





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Sundyne

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