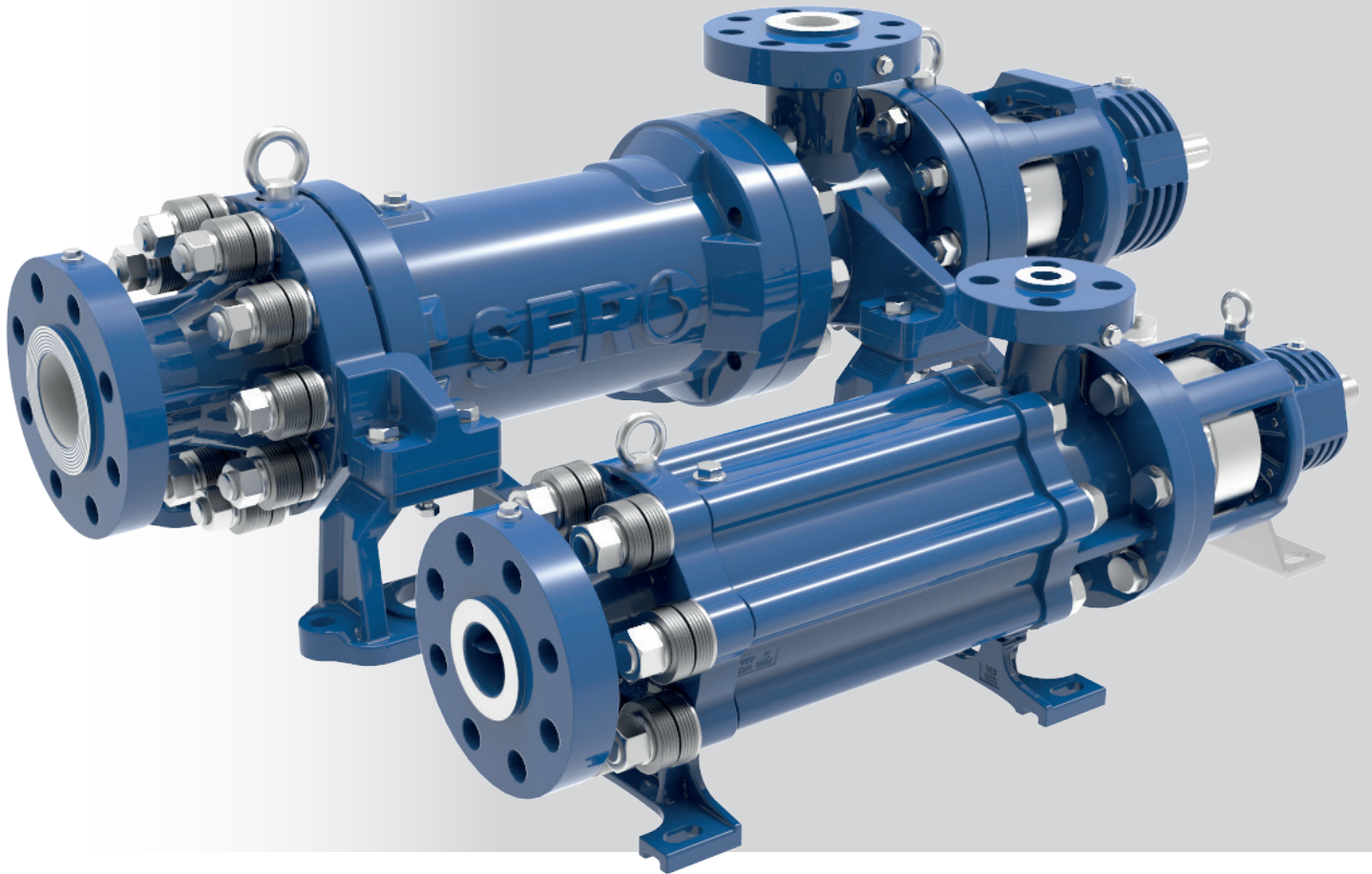


SHP®

**SERO**  
PumpSystems



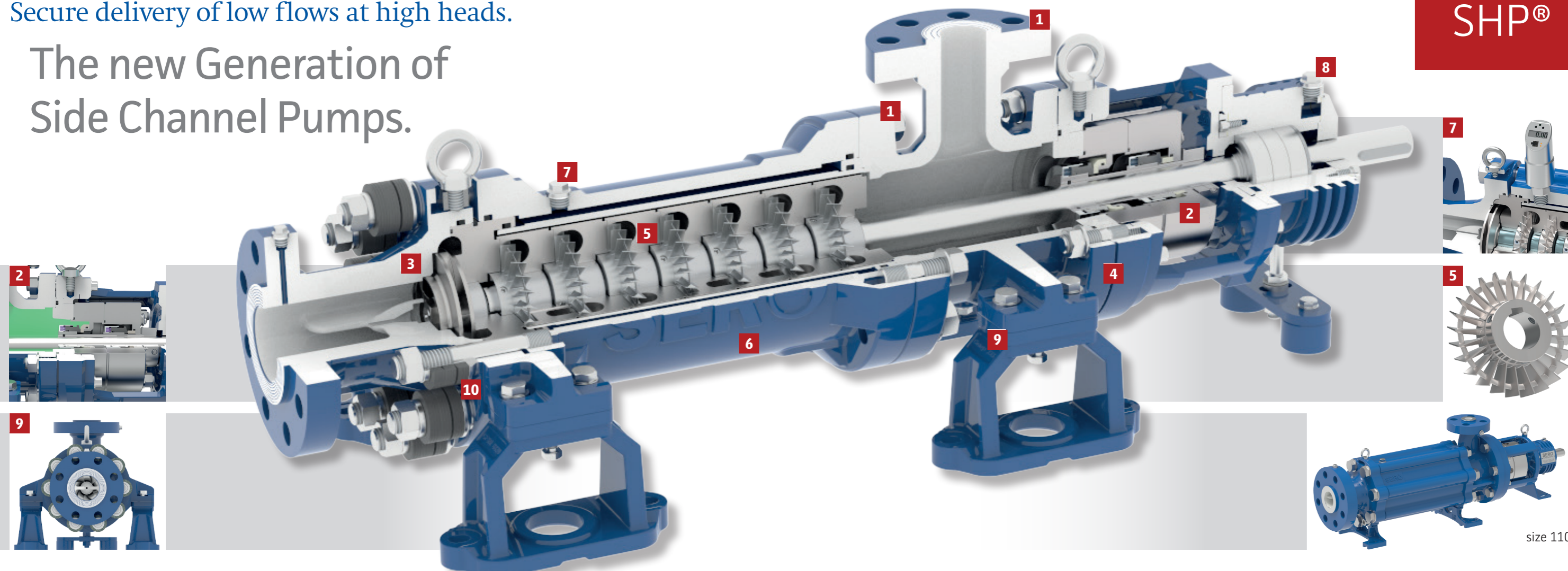
## High Pressure Pump SHP®.

# Exceptional Process Safety at High Pressures.

- Low Flow and High Heads
- Low NPSH requirements
- Incorporating many API features
- Rugged multi-stage pump with barrel design

Secure delivery of low flows at high heads.

# The new Generation of Side Channel Pumps.



size 110

## Design

SHP 110 – 220	
Nozzle position	End suction: axial inlet (50 mm/80 mm) Top discharge: radial outlet (25 mm/50 mm)
Flanges	ASME B 16.5 - 900 lbs RF or DIN EN 1092.1 - PN 100
Shaft seal	Mechanical cartridge seal single or dual API plan: – for max. 100 bar/1450 psi (based on API 682) – according to API 682 – industrial standard
Bearing (Hydraulic end)	Based on required specific application metal-jacket silicon carbide (SiC) or carbongraphite, resin-impregnated or antimony-impregnated
Bearing (Drive end)	Heavy angular ball bearings with lifetime grease-filling, based on configured application two in row (standard) or multiple design (heavy duty)
Direction of rotation	counterclockwise (seen from drive-end)

## Operating Data

SHP 110 – 220	
Flow rates	0,4 to 23 m <sup>3</sup> /h
Heads	up to 2100 m
Speed	up to 3600 1/min
Temperature	-60 °C up to +130 °C
Nominal Pressure	100 bar
NPSH	0,2 up to 1,2 m

## Features

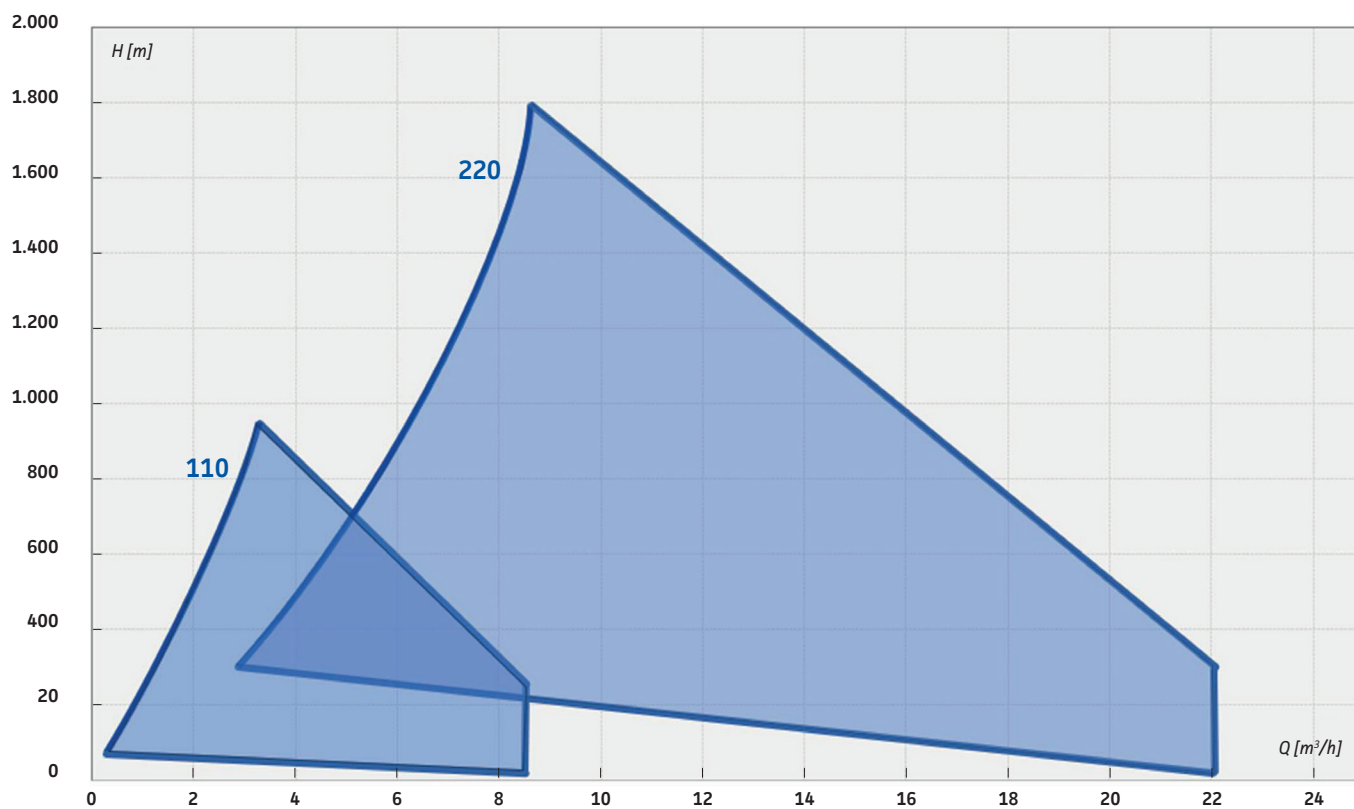
- 1** Heavy duty pressure casings meeting API 610 nozzle load standards.
- 2** Different shaft seal options according to API 682.
- 3** Due to special suction stage speed independent NPSH-values of 0,2 m are achievable.
- 4** The materials of all wetted parts are according to API 610. The pumps are tailor-made in material classes or specific options for low temperatures, with short lead time.
- 5** The high performance hydraulics is free of pulsation. The SHP is not self-priming, but ideal for handling vapour laden process fluids.
- 6** The barrel is also a benefit for lower system pressures an ensures highest operational safety. The inner of this secondary containment normally is dry and sealed with a second set of O-rings.
- 7** The interspace between inner and outer barrel can be monitored with a pressure gauge or inerted.
- 8** For high ambient temperatures and/or heavy duty requirements, a bearing housing cooling can be selected as an option.
- 9** Excellent running smoothness due compact design. Nearly center line mounted at size 220. Foot mounted at size 110.
- 10** Thermal compensation through spring washer packages.

## Material Specification

	size 110 only	size 110 + 220	size 110 only	size 110 + 220
	C-6	A-8	TT-6	TT-8
	SERO Standard for hydrocarbon services down to -20° C	API 610 „full compliance“ down to -20° C	Ambient temperature down to -50 °C	Liquid temperature down to -60 °C
Pressure casings	A487 Gr CA6NM	A351 Gr CF3M	A351 Gr CF3M	A351 Gr CF3M
Stages	A743 Gr CA6NM	A743 Gr CF3M	A743 Gr CA6NM	A743 Gr CF3M
Impellers	A743 Gr CA6NM	A743 Gr CF3M	A743 Gr CA6NM	A743 Gr CF3M
Shaft	EN 10088 - 1.4021 [420]	EN 10088 - 1.4571 [316Ti]	EN 10088 - 1.4021 [420]	EN 10088 - 1.4571 [316Ti]
Pressure sleeve (Inner barrel)	EN 10220 - 1.0580 [1024]	EN 10220 - 1.4571 [316Ti]	EN 10220 - 1.4571 [316Ti]	EN 10220 - 1.4571 [316Ti]
Barrel (2nd containment)	A352 Gr LC2	A352 Gr LC2	A352 Gr LC2	A352 Gr LC2
Seal housing and bearing housing	A352 Gr LC2	A352 Gr LC2	A352 Gr LC2	A352 Gr LC2

[Subject to modifications]

## Performance range



1450-3500 rpm