

CM A3 PUMP

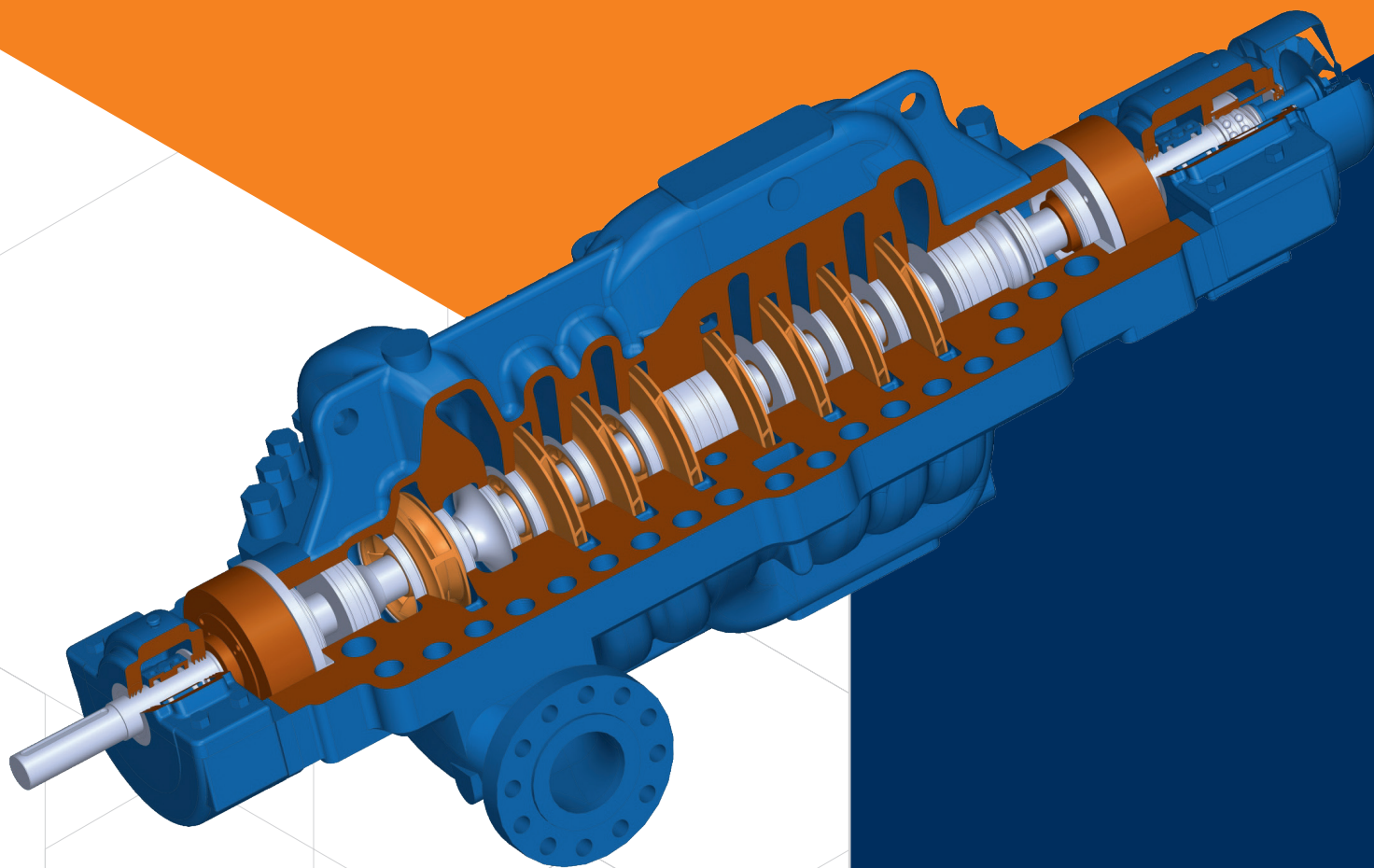
Centrifugal between bearings multistage axially split case pumps

BB3 type pump designed in accordance with ASPI 610

CZ

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KEY FEATURES

CM A3 pums are used in several types of industries where full compliance with API 610 is requested. CM A3 is single casing axially split horizontal multistage pump with self ballancing design of axial and also radial force. Possibility of semi self ballancing design of axial force - depends on number of impellers. Axial force from extra stace is captured by angular contact ball bearings.

For oil & gas, petrochemical and chemical industries, refining, sea water desalination and other high pressure duties.

The CM A3 ´s are API 610 BB3 type pumps. Heavy duty design fully in accordance with API requirements.

MECHANICAL SEALS

- API 682 cartridges are standard
- length of seal chamber is higher than requested value in API 682 4th.
- dynamically balanced.

HEAVY DUTY SLIDING AND ANGULAR CONTACT BALL BEARINGS

- long life of bearings even under the most demanding operations. Possibility of self lubrication and forced lubrication bearings.
- designed according to API long life specifications.

HEAVY DUTY SHAFT

- designed according to API specifications for good dynamical behavior of pump.
- smaller deflection to avoid excessive stress of mechanical seals, wear rings and bearings.

RIGID BEARING HOUSING OF PUMP

- designed for good cooling of radial and angular contact bearing.
- Simple maintenance of mechanical seal and adjustment of rotor.

ENCLOSED IMPELLER

- designed according to the best possible efficiency.
- Impellers in back to back arrangement.
- first stage is designed according to the best possible NPSH3 value.
- double-suction impeller can be used on 1st stage for reduction NPSHr value.

CASING PARTS – PRESSURE BODY OF PUMP

- design pressure up to 25MPa
- rigid structure
- horizontal design – easy to remove inner parts

INLET AND OUTLET FLANGES

- ASME B16.5 Class 300RF and ISO flanges are available

ADVANCED OPTIONS AND APPLICATIONS

1 FRICTION PAIRS

- Shaft sleeve and wear rings are wear resistant and with high hardness of friction pairs. Clearances in friction pairs are designed fully in accordance with API 610 requirements.

2 1ST. STAGE IMPELLER

CM A3 pumps are available with 2 types of impellers on 1st. stage:

- **single suction impeller:** for smaller demands on NPSHr value (it will be adapted when the NPSHa is high)
- **double suction impeller:** for higher demands on NPSHr value (it will be adapted when the NPSHa is low)

3 CASING BOLTS

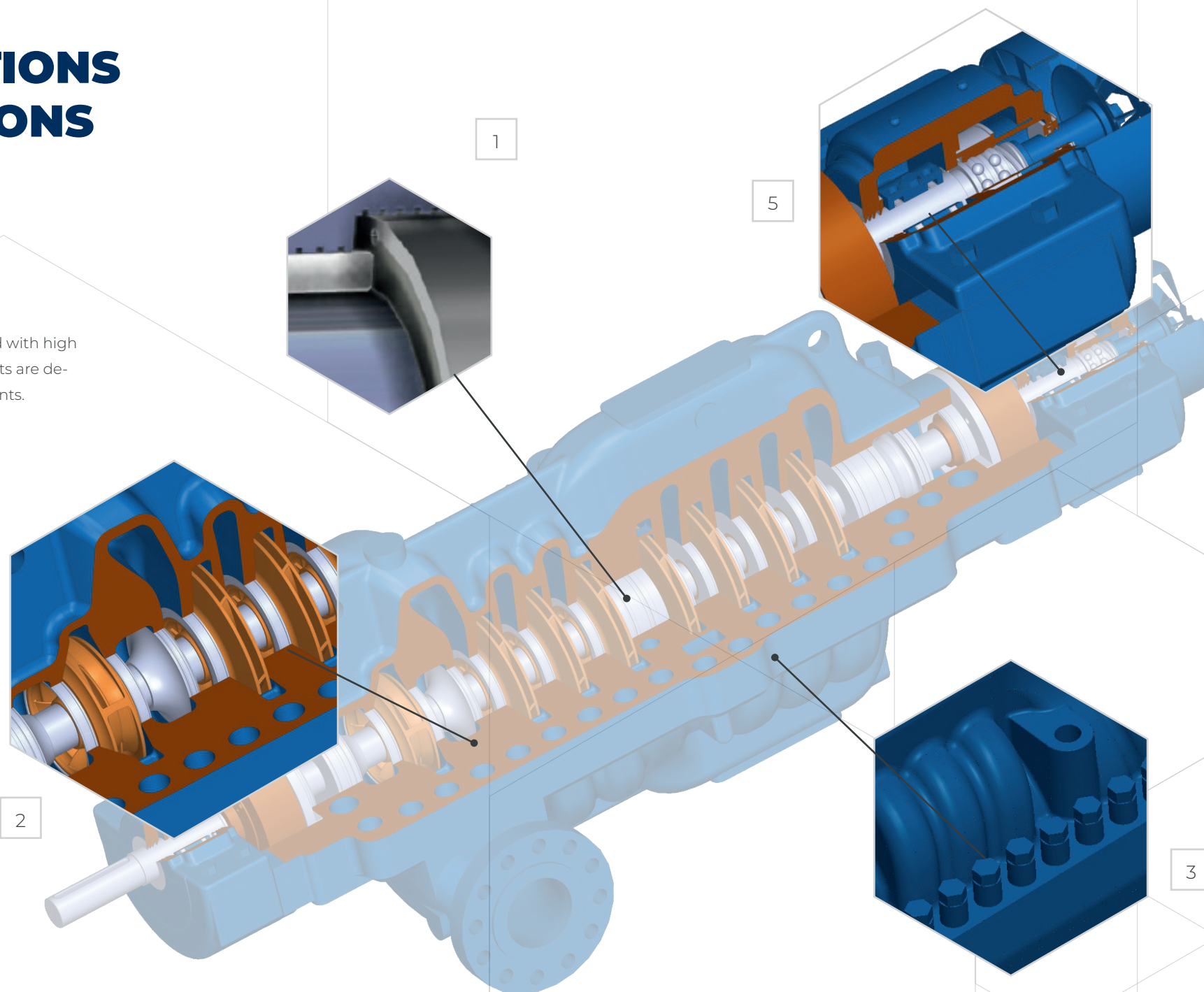
- Designed fully in accordance with API 610 hydrostatic test request. Different bolts and spacers for different working pressure. Spacers are designed according to requested stiffness of each bolt.

4 GASKET

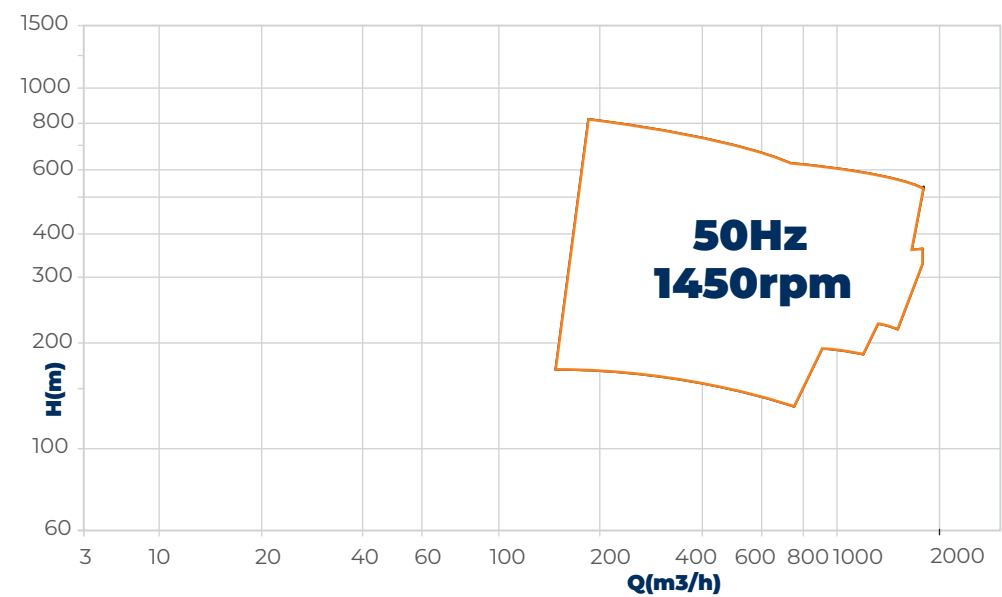
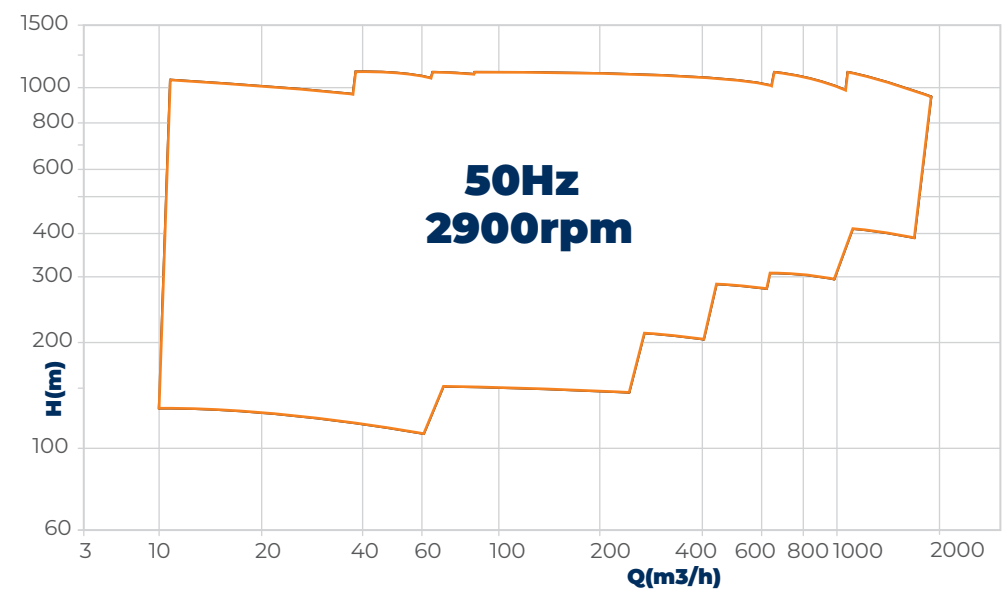
- Gasket is designed according to high resistance against pumped liquid.

5 BEARING SYSTEM OF LUBRICATION

- Designed for operating parameters fully in accordance with API 610 with robust angular contact ball bearing in back to back execution. Sliding bearings are designed in self lubrication or forced lubrication execution. Radial ball bearing can be used instead of sliding bearing as option. Standard design of CMAB-3 pump is with sliding bearing.



PERFORMANCE RANGE CHARTS

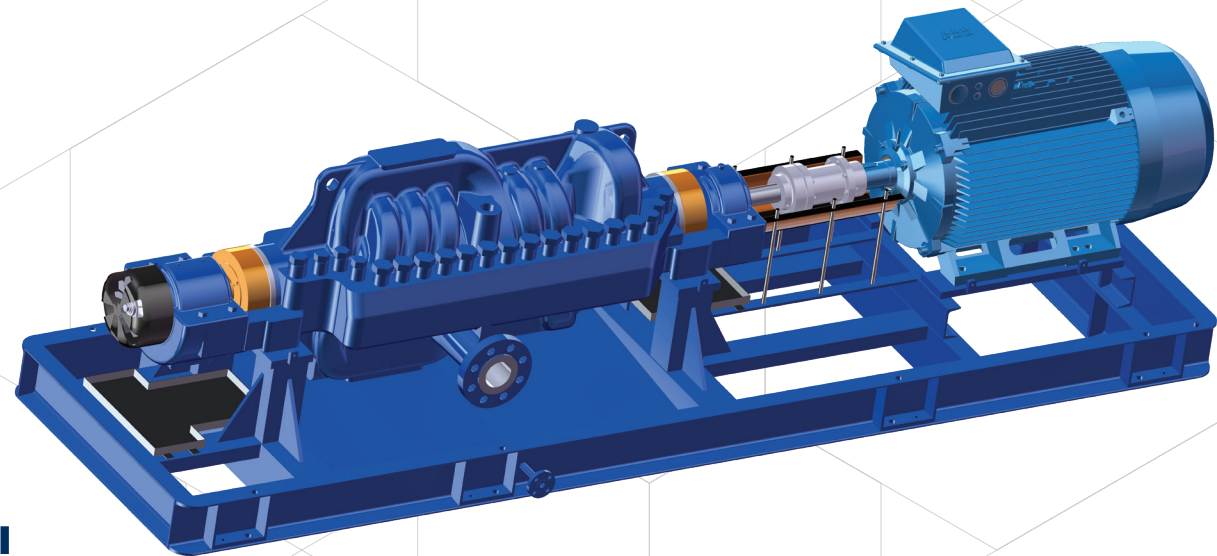


OPERATING PARAMETERS AND DIMENSIONS

- OPERATING FREQUENCY → 50 HZ
- OPERATING FLOW → up to 1680 m³/h
- OPERATING HEAD → up to 1000 m
- OPERATING PRESSURES → up to 250 bar (at 20° C)
- OPERATING TEMPERATURES → -80° C TO 200° C

Materials according to API 610 11th

MATERIAL CLASSES:
S-4, S-5, S-6, S-8, S-9, C-6, A-7, A-8, D-1, D-2



3D Model

EXAMPLES OF USING OUR CMAB-3 PUMPS:
CM 80-8A3 Pump for liquid hydrocarbon

We manufacture industrial pump units that we sell to customers worldwide and we also have our own team of research and development experts who use modern technologies, diagnostics and software (3D Solidworks, Solidworks Flow Simulation, FEAT software Solidworks Simulation, OpenFoam, Adash Vibration Analyzer).



We offer a broad portfolio of pumps even for the most demanding applications and most extreme use. We aim to be a reliable and professional partner in constructions of new investment units and refurbishments of already existing plants.

RENETRA s. r. o. is a holder of the quality certificates ISO 9001:2016, ISO 14001:2016, ISO 18001:2008, TP TC 004/2011, TP TC 010/2011, TP TC 012/2011, ATEX 94/9/EC and the CE mark



RENETRA S. R. O.

 753 53 Všechnovice 294, Czech Republic

 +420 581 655 111

 renetra@renetra.cz

WWW.RENETRA.CZ