

PPA

API 610 11th Edition ISO 13709 Process Pumps



Application Areas and Pumped Liquids

Petroleum industry, power plants and chemical industry. Fuel oil, motorin, gasoline, LPG, lubricants, kerosene, etc.

Technical Data

Discharge Flange _____	NPS 1" - NPS 10"
Capacity _____	up to 1000 m ³ /h
Head _____	up to 350 m
Speed _____	up to 3600 rpm
Operating Temperature _____	up to +350 °C (*)
Operating Pressure _____	51 bar (*)
Design Type _____	OH2

(*) The Material of pump differs according to the type of pumped liquid, operating temperature and pressure. Contact for detailed information.

Design Features

- According to API 610 11th edition (ISO 13709).
- Center line volute casing design for high pressure and temperature.
- Tangential outlet design for high efficiency at the volute casing.
- For special application double volute casing can be applied.

Pump Designation

Pump Type _____	<div style="text-align: center; font-size: 2em; font-weight: bold;">PPA 6 - 4 - 17</div>
Discharge Nozzle (inch) _____	
Suction Nozzle (inch) _____	
Nominal Impeller Diameter (inch) _____	

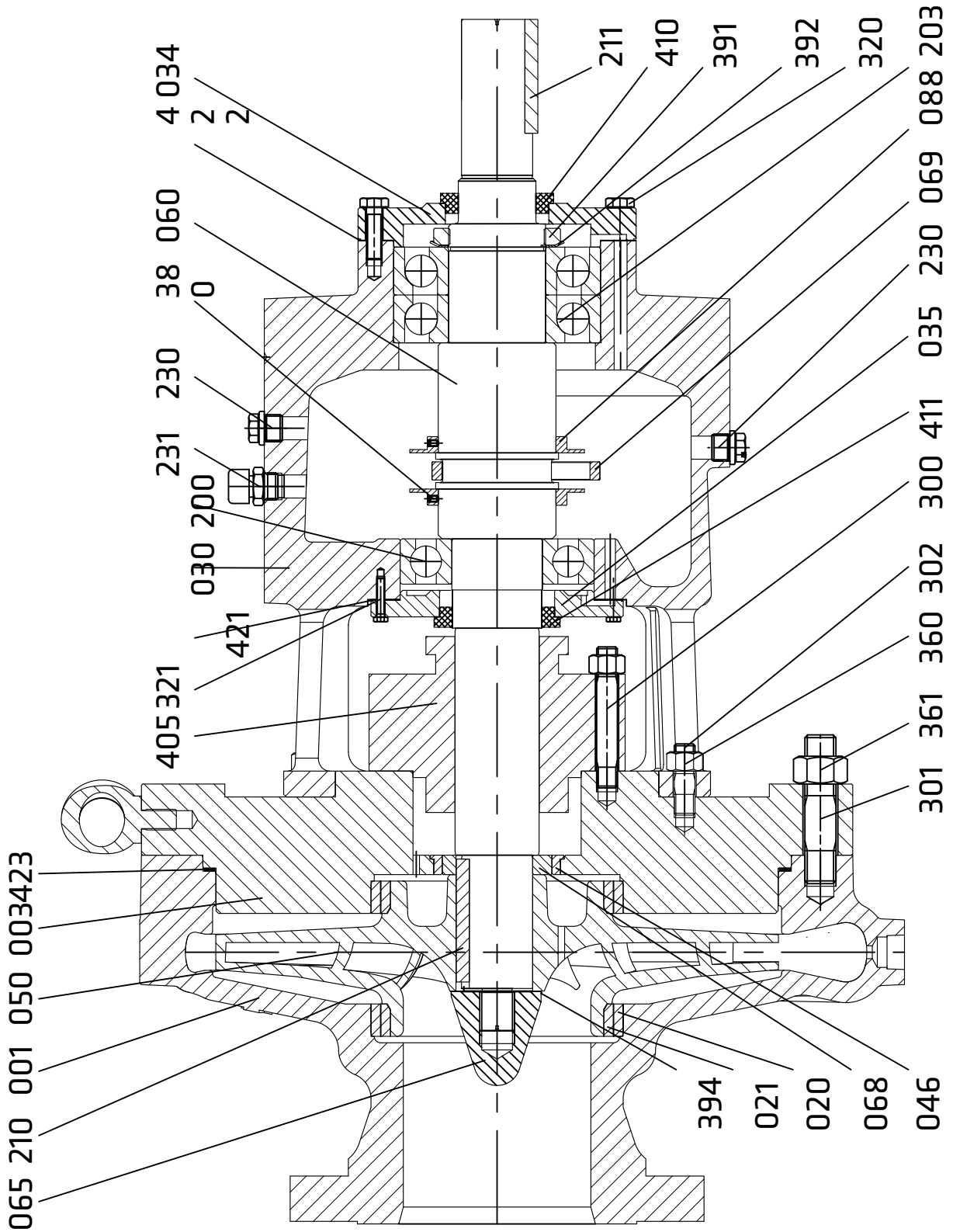
- Due to the back-pull-out design, the complete bearing assembly including impeller and casing cover can be dismantled without removing the volute casing from the pipe system. With spacer coupling application, also possible to take out the rotor group without dismantling the electric motor.
- The suction and discharge flanges are capable for handling the forces and moments which are mentioned in API 610.
- The material of casing gasket is spiral wound gasket for handling high pressure.
- In case of pumping hot liquid there is cooling devices on bearing housing and special construction for mechanical seal.
- Heavy duty type shaft and bearings.
- All impellers are balanced dynamically or statically according to ISO 1940 grade 2.5.
- In case of preventive maintenance, temperature and vibration sensors can be applied.
- For high bearing life time, the constant level oilers are supplied in order to keep oil level in proper level.
- Oil ring are used in standart production and these rings prevent oil foaming.
- The base plate construction is highly rigid as defined in to API 610 standard.

Shaft Sealing

- Mechanical seal cover is designed according to API 610. This mechanical seal cover is suitable to assemble every kind of mechanical seal according to API 682.



Sectional Drawings



Part List

423	CASING GASKET	230	SCREW
422	GASKET	211	COUPLING KEY
421	GASKET	210	IMPELLER KEY
411	LIP SEAL	203	ANGULAR BALL BEARING
410	LIP SEAL	200	BALL BEARING
405	MECHANICAL SEAL	088	THROWER
394	LOCK WASHER	069	OIL RING
392	LOCK WASHER	068	SHAFT SLEEVE
391	LOCK NUT	065	IMPELLER NUT
380	SETSCREW	060	SHAFT
361	CASING NUT	050	IMPELLER
360	NUT	046	THROUTLING BUSH
321	SCREW	035	BEARING COVER
320	SCREW	034	BEARING COVER
302	STUD	030	BEARING HOUSING
301	CASING STUD	021	WEAR RING (CASING COVER)
300	STUD	020	WEAR RING (CASING)
231	OIL FILLING PLUG AND BREATHER	003	CASING COVER
		001	VOLUTE CASING

Material Options

Part No		API 610 MATERIAL CLASS				
		S-5	S-6	S-8	C-6	A-8
001	VOLUTE CASING	STEEL			%12 Chrome	316 SS
050	IMPELLER	STEEL	%12 Chrome	316 SS	%12 Chrome	316 SS
003	CASING COVER	STEEL			%12 Chrome	316 SS
060	SHAFT	AISI 4140		316 SS	420 SS	316 SS
030	BEARING HOUSING	STEEL				
065	IMPELLER NUT	STEEL	316 SS			
034	BEARING COVER	STEEL				
035	BEARING COVER	STEEL				
069	OIL RING	Bronze				
411	LIP SEAL	Bronze / Viton				
410	LIP SEAL	Bronze / Viton				
046	THROUTLING BUSH	420 SS		316 SS	420 SS	316 SS
020	WEAR RING (CASING)	%12 Chrome	%12 Chrome	316 SS	%12 Chrome	316 SS
021	WEAR RING (CASING COVER)	%12 Chrome	%12 Chrome	316 SS	%12 Chrome	316 SS
423	CASING	316 SS Spiral Wound				
301/361	STUD AND NUT (CASING)	AISI 4140				