QED

HORIZONTAL, CENTRIFUGAL, VOLUTE-TYPE PUMPS WITH DUO-FLOW IMPELLER

ISH PUMPS OLOMOUC

APPLICATION

- transportation of petroleum and other petroleum products
- primary and secondary pumping stations
- booster stations to increase the pressure in transportation networks

WORKING CONDITIONS

- petroleum or petroleum products
- medium temperature up to +80°C
- kinematic viscosity up to 80 $mm^2.s^{-1}$
- content of insoluble substances up to 3 $g.l^{-1}$
- size of particles cannot exceed 0,5mm
- pH 5,5-11

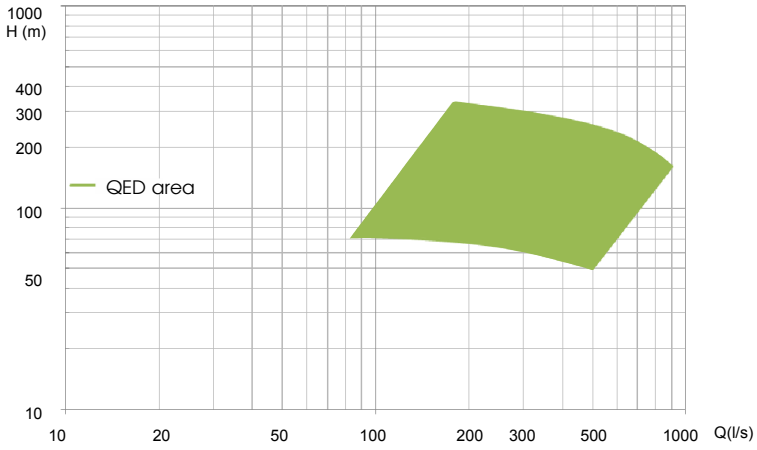
TYPE IDENTIFICATION

300-QED- 460- 50-OU-020

- 300 – nominal diameter of discharge pipe
- QED – pump type (QED)
- 460 – impeller nominal diameter
- 50 – impeller outlet channel width
- OU – material specifications
- 020 – pump number

WORKING AREA

Pump size	Shaft speed (min^{-1})	Flow Q (l/s)	Delivery head H (m)	Temperature max (°C)
300-QED-460	1450 to 2980	100 to 800	50 to 300	80



CONSTRUCTION

- QED series are designed as horizontal, centrifugal, volute-type, duo-flow impeller pumps with radial diffuser and horizontally split body
- design enables to insert in one body two different diffuser and impeller combinations, which allows to achieve wide working area
- on the lower part of the body is placed suction and discharge pipe "IN-LINE" upright to the axis of the shaft
- stator – forms the pump body, cut in the horizontal level in two halves, in the lower half is suction and discharge pipe, flanges for bearing bracket and feet for base plate mounting; opening with a plug for draining the pump, the upper half includes holes for venting the pump and possibly for flooding the seal
- part of the stator are replaceable sealing rings and floating throttle bushing with vane radial diffuser, that is inserted into to pump body by partitions
- rotor – forms shaft, impeller with double entrance, impeller sealing rings, protective shaft sleeves, impeller spring, bushings and coupling, tightening rotor nut, sealing and splash rings
- shaft is below floating throttle bushings protected against wear by protective sleeves
- impeller tightening nut and proper axial setting against sealing rings
- bearings lubricated with oil, bearings with external pressure circuit
- bearings housing can be equipped with resistance temperature sensors
- adapted for the use of mechanical seal, design and integration into circuits in accordance with ČSN ISO EN 21 3707, part of mech. seal

MATERIAL SPECIFICATION

Part name	OU
pump body – bottom end	ASTM 487-4C
pump body – upper end	ASTM 487-4C
bearing body	EN-GJS-500
impeller	X20Cr14 (DIN)
diffuser	X20Cr14 (DIN)
partition	1.0619
body seal ring	3346-HM
impeller seal ring	3347-E
shaft	1.8159
base plate	1.0570

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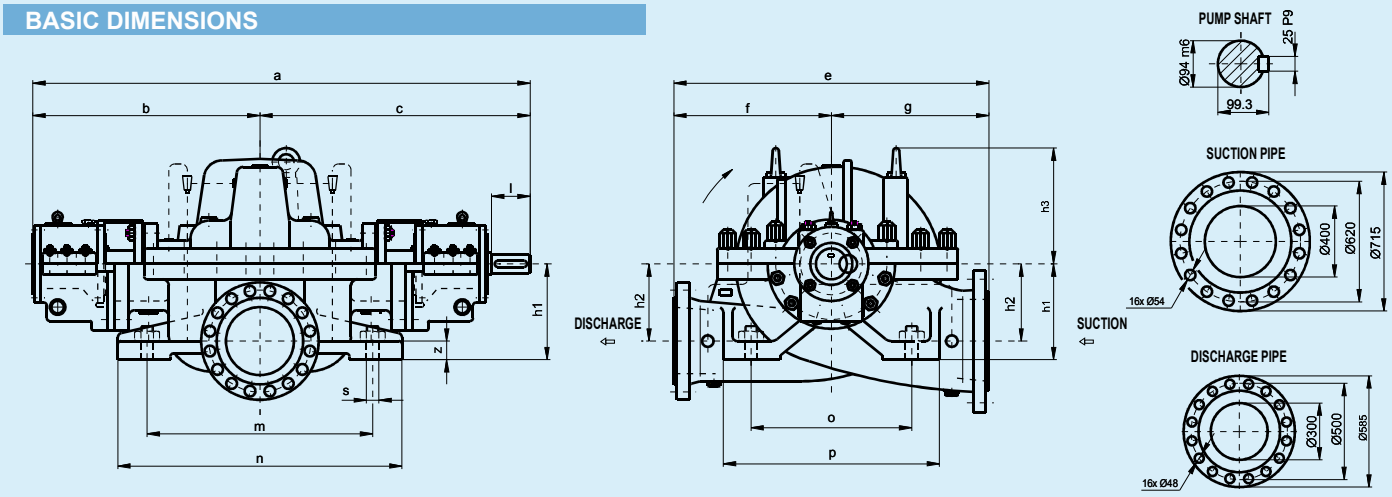
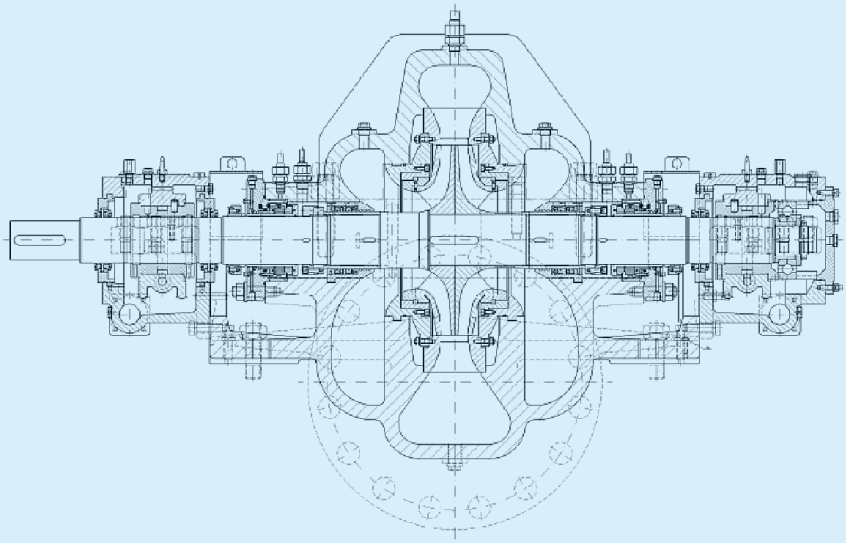
BASIC DIMENSIONS



IDENTIFICATION	NOZZLES				PUMP DIMENSIONS [mm]																
TYPE	DN1	DN2	PN1	PN2	a	b	c	e	f	g	h1	h2	h3	m	n	o	p	s	z	l	[kg]
300-QED-460	300	400	100	100	2015	935	1080	1400	700	700	300	345	505	980	1190	770	930	42	55	170	4500

CROSS-SECTION DRAWING



SEAL DESIGN

- hydraulic area tightness on both ends achieved by means of shaft packing
  - non-flooded packing (for pure petroleum)
  - flooded from foreign source (for polluted petroleum and petroleum products)
- types of seals
  - single mechanical seal, cartridge type

MOTORS

- foot-mounted el. motor drive
- driving force transmitted using flexible or gear coupling
  - flexible or gear coupling with spacer
  - flexible or gear coupling without spacer

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