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Low-pressure screw pumps

Application:

These pumps can operate with different working liquids, such as hydraulic oils, lubricating oils, transformer oils, light and heavy diesel oils, fuel oils and with other non-aggressive liquids, having lubricating properties. Working liquids cannot cause corrosion of steel and cast iron elements as well as cannot introduce in contact with nitrile and fluorine rubber.

These pumps are used in below given systems:

- lubricating of machines,
- heating of diesel oils, fuel oils for supply the systems of power stations and marine power plants with these oils,
- transport of oils in petroleum refineries, ports and fuel stations, on board of the vessels,
- filtration and cooling of hydraulic systems.

Operation of screw pump ensures uniform capacity, low-noise run without vibrations and great ability for suction of liquid. Due to simple structure and reliability as well as for reason of use by Hydroster seals type John Crane, our pumps are failure-free and work at temperatures of pumped liquids up to 155°C.



Technical characteristics

Type of pump:

- low-pressure three-screw pump of constant geometrical working volume equipped with adjustable safety valve.

Seal of the shaft output:

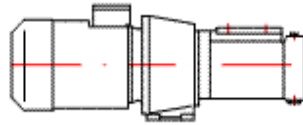
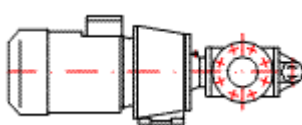
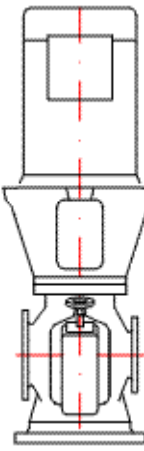
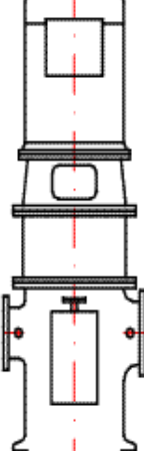
- mechanical seal of structure acc. to DIN 24960

Direction of revolutions viewing from the side of drive:

- right-hand for pumps type ACE, ACG, ACF,
- left-hand for pumps type ABQ,

Production program

Production program of low-pressure screw pumps covers:

				
Type of pump	ACE	ACG	ACF	ABQ
Range of capacity dcm ³ /min	8 ÷ 160	60 ÷ 780	350 ÷ 2800	1500 ÷ 5700

Range of viscosity cSt	2 ÷ 1500	2 ÷ 1500	2 ÷ 3800	2 ÷ 1500
Range of liquid temp. °C	-10 ÷ 155	-10 ÷ 155	-10 ÷ 130	-10 ÷ 90
Minimal suction pressure MPa	-0,05	-0,05	-0,05	-0,06
Maximum acoustic pressure level for nominal working conditions dB(A)	60	69	77	79

The basic working parameters of pumps

Item	Type of pump	Geometrical working volume	Nominal rotational speed.	Nominal delivery pressure	Nominal capacity	Power consump. for nominal run	Max rotational speed	Permis. temperatur. of working liquid	Weight
		V _g	n _n	p _n	Q _n	N _n	n _{max}	t _o	m
		cm ³ /obr.	obr./min	MPa	dcm ³ /min	kW	obr./min	°C	kg
1	2	3	4	5	6	7	8	9	10
1	ACE032-2N1xx	29,1	1450	1,6	29	1,45	3500	130	11
	ACE032-2N2xx							155	12,5
2	ACE038-2N1xx	49,1	1450	1,6	54	2,50	3500	130	14
	ACE038-2N2xx							155	16
3	ACG045-2Nxxx	81,6	1450	1,6	94	3,45	3500	155	23
4	ACG052-2Nxxx	125,9	1450	1,6	151	5,35	3500	155	30
5	ACG060-2Nxxx	193,4	1450	1,6	237	8,25	3500	155	42
6	ACG070-2Nxxx	307,6	1450	1,6	386	13,00	3000	155	54
7	ACF080-3Nxxx	458,3	1450	1,6	599	19,40	3000	130	155
8	ACF090-3Nxxx	652,6	1450	1,6	862	27,60	2700	130	176
9	ACF100-3Nxxx	895,2	1450	1,6	1194	37,90	2250	130	224
10	ACF110-3Lxxx	1053,0	1450	1,6	1399	44,60	2250	130	271
11	ACF110-3Nxxx	1191,5	1450	1,6	1593	50,50	2250	130	271
12	ACF125-3Lxxx	1398,7	1450	1,6	1878	59,20	1800	130	335
13	ACF125-3Nxxx	1748,4	1450	1,6	2355	74,10	1800	130	335
14	ABQ110-3L4xx	2106	1450	1,0	2856	58,80	1800	90	750
15	ABQ110-3N4xx	2383	1450	1,0	3247	66,50	1800	90	750
16	ABQ125-3L4xx	2794	1450	1,0	3822	78,00	1800	90	900
17	ABQ125-3N4xx	3497	1450	1,0	4792	96,30	1800	90	900

Notes:

Values of: nominal capacities Q_n, power consumption for nominal run N_n and suction pressure p_{ss} refer to liquids of viscosity $\nu = 75$ cSt.

Real capacity and power consumption of the pump are function of rotational speed of the pump and delivery pressure and viscosity of the working liquid.

Pump units

Position of pump operation – vertical or horizontal for pumps type ACE, ACG, ACF and vertical for pump type ABQ.

In each case, tips of pump shafts and motor are connected via flexible clutch, without loads of shafts from radial forces.

More detailed information for the screw pumps are presented as below:

- "Catalogue Card of screw pumps ACE" No. KKP-11126/01.99,

- "Catalogue Card of screw pumps ACG" No. KKP-11131/01.99,
- "Catalogue Card of screw pumps ACF" No. KKP-11141/02.99,
- "Catalogue Card of screw pumps ABQ" No. KKP-11130/04.99.