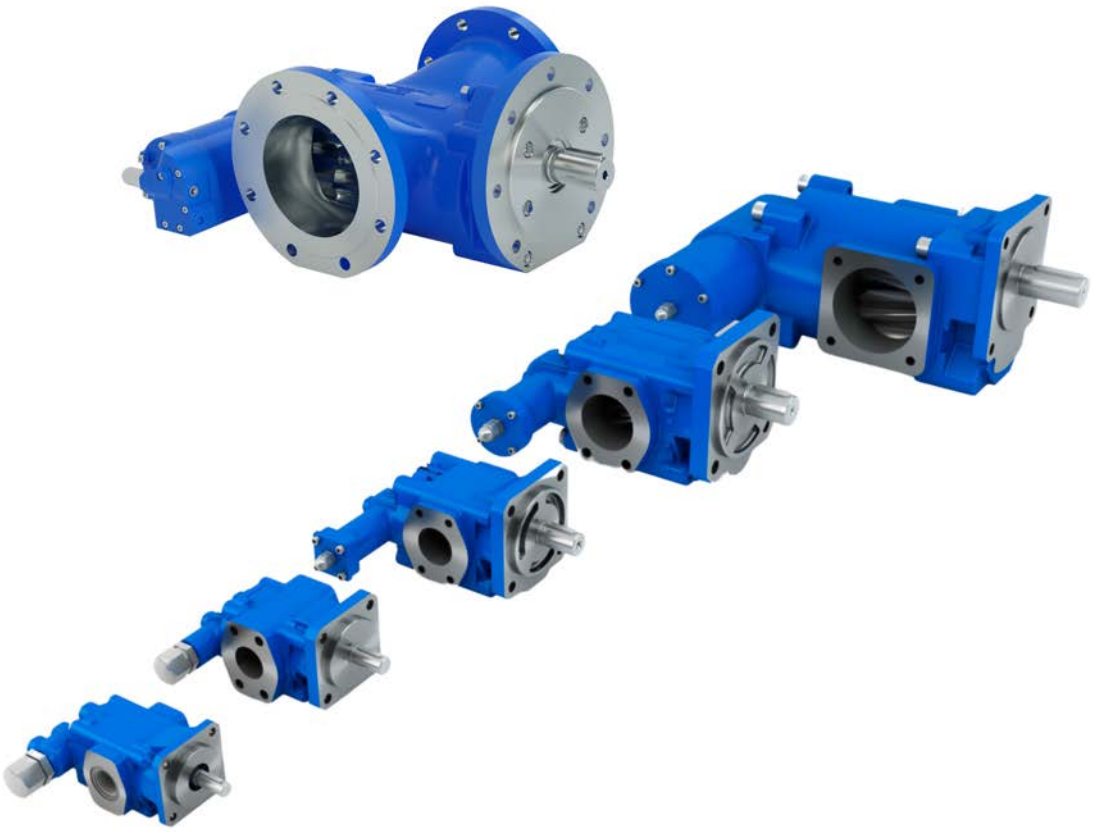
RICKMEIER®
PUMPENTECHNOLOGIE

Data sheet

Gear pumps and pump units
R25/2.5 to R105/2600



2 Description

2.1 Design

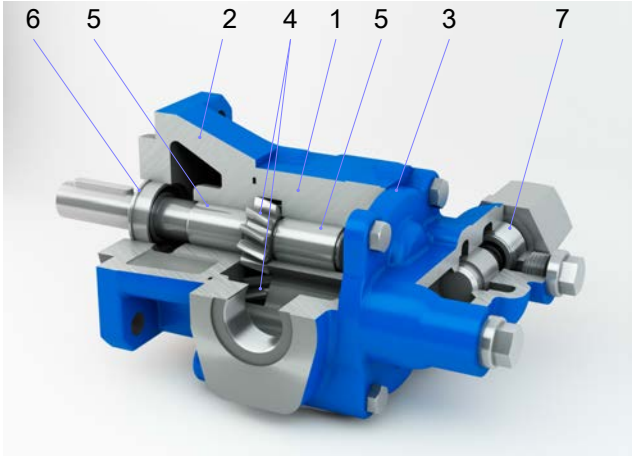


Fig. 2: Gear pump - standard design

1 Gear casing	2 Driving cover
3 End cover	4 Hardened gear shafts
5 Multicomponent friction bearing	6 Radial shaft seal
7 Option: pressure relief valve	

2.2 Product description

RICKMEIER gear pumps are characterised by a simple and robust structure. Short, straight flow channels ensure good priming characteristics and quiet running. Together with a special design of the toothing and the gear casing, an extremely low noise level is ensured during operation.

The casings of the standard version are made of grey cast iron, the gear parts of hardened steel. Generously dimensioned, specially coated multicomponent friction bearings have a long service life and very good dry-running properties.
The shaft seal is designed as standard with a radial shaft seal. In addition, numerous sealing variants are possible (such as a mechanical seal).

8.2 Operating data

8.2.1 Maximum approved operating data

Size	Delivery volume	Maximum approved operating data				Guide values
		Operating pressure [1]	Speed	Axial force [2]	Radial force [3]	Sound pressure level [4]
	Vg [cm³]	p [bar]	n [1/min]	Fa [N]	Fr [N]	Lp(A) [dB(A)]
R25	2.5	25	3600	90	30	54
	3.15				35	
	4				65	
	5				105	
	6.3				135	
	8				210	
	10				260	
	12.5	25	3600	90	330	59
	16				420	
	20				530	
R35	25	25	3600	200	500	63
	31.5				600	
	40				800	
	50	25	3600	200	1000	67
	63				1250	
	80				1250	
R45	80	25	3000	300	1150	69
	100				1450	
	112				1650	
	125	25	3000	300	1850	72
	160				2350	
	180				2350	
	200				2350	
R65	200	25	2200	800	2000	75
	250				2500	
	315				3100	
	400	25	2200	800	4000	79
	500				4900	
	630				6150	
R95	710	25	1800	1500	7800	85
	800				8500	
	900				9200	
	1000				10000	
	1120				11000	
	1250	25	1800	1500	12000	87
	1400				13000	
	1600				14000	
	1800				14000	

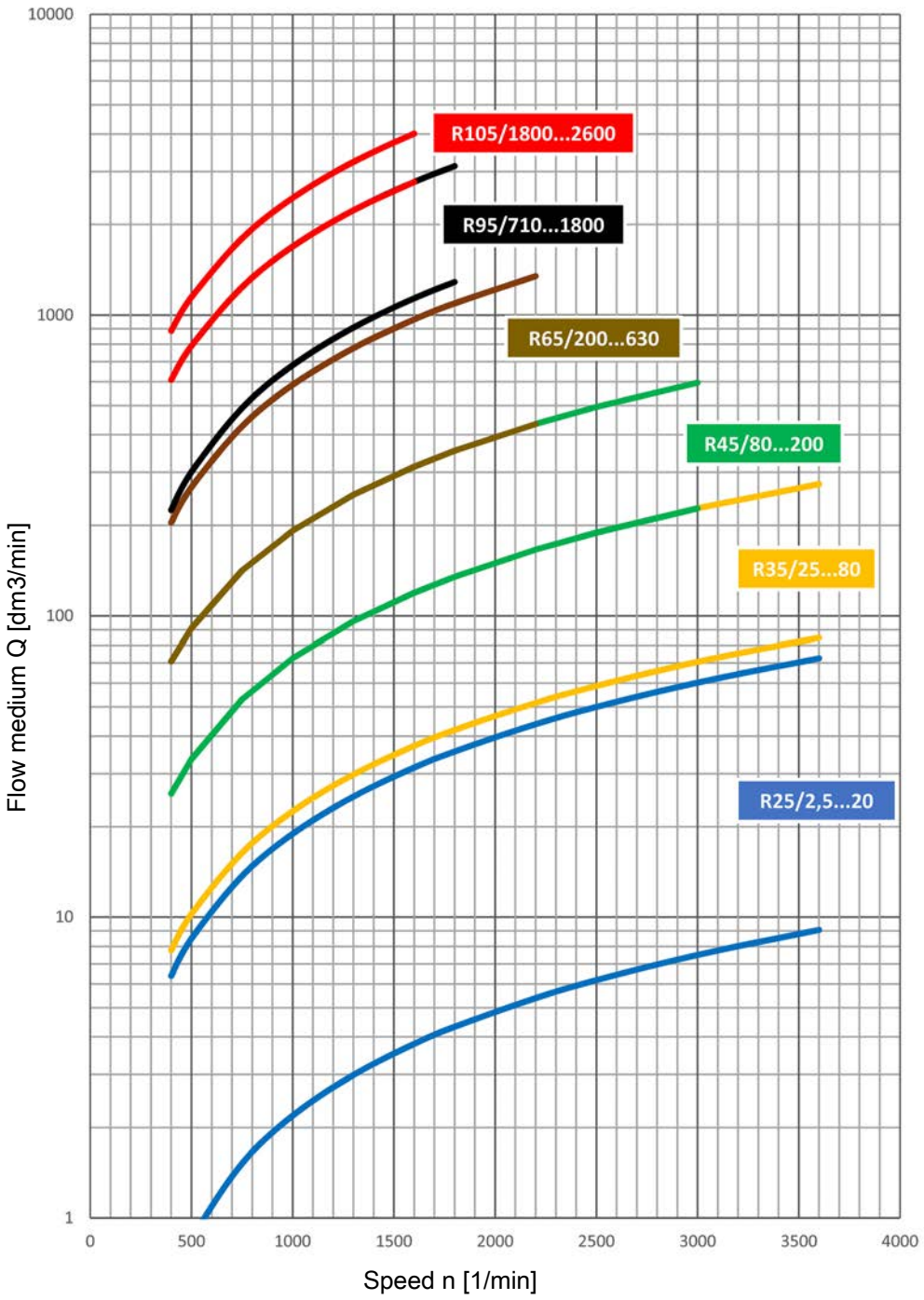


Fig. 10: Flow rate versus speed (values apply for kinematic viscosity = 33 mm²/s and outlet pressure p_2 = 5 bar)

8.2.2 Flow medium and drive power

- The values shown in the following table are guide values and apply for a mineral oil with a viscosity of 33 mm²/s and a density of 860 kg/m³.
- Please contact us for help in calculating delivery volume and power requirement in the case of deviating operating conditions.
- At a lower viscosity, a decrease in the flow medium is to be expected.
- At a higher viscosity, the power requirement P increases.
- An electric motor with a drive power 10% higher than the power requirement indicated or calculated must be selected.

8.2.2.1 Speed n = 950 rpm

Calculated flow medium $Q_{calc.}$ [l/min] at the following operating pressure p [bar]								Displacement volume V_g [cm³]	Power requirement P [kW] at the following operating pressure p [bar]							
2	**4**	**6**	**8**	**10**	**15**	**20**	**25**		**2**	**4**	**6**	**8**	**10**	**15**	**20**	**25**
2.3	2.1	2.0	1.8	1.7	1.4	1.2	0.9	**2.5**	0.02	0.03	0.04	0.05	0.06	0.09	0.11	0.14
2.9	2.7	2.6	2.5	2.3	2.1	1.8	1.6	**3.15**	0.02	0.03	0.05	0.06	0.07	0.11	0.14	0.17
3.8	3.6	3.4	3.2	3.1	2.8	2.5	2.2	**4**	0.03	0.04	0.06	0.08	0.09	0.13	0.17	0.21
4.7	4.4	4.2	4.0	3.8	3.5	3.1	2.8	**5**	0.03	0.05	0.07	0.09	0.11	0.16	0.21	0.26
5.9	5.6	5.3	5.1	4.9	4.4	4.0	3.6	**6.3**	0.04	0.06	0.09	0.11	0.13	0.19	0.26	0.32
7.5	7.1	6.8	6.6	6.3	5.7	5.2	4.8	**8**	0.05	0.08	0.11	0.14	0.17	0.24	0.32	0.39
9.3	8.7	8.2	7.8	7.4	6.5	5.8	5.0	**10**	0.06	0.09	0.13	0.16	0.20	0.29	0.38	0.47
11.9	11.3	10.9	10.5	10.2	9.4	8.6	8.0	**12.5**	0.07	0.11	0.16	0.20	0.25	0.36	0.48	0.59
15.2	14.6	14.1	13.6	13.2	12.2	11.3	10.5	**16**	0.08	0.14	0.20	0.25	0.31	0.46	0.60	0.74
19.0	18.2	17.6	16.9	16.4	15.2	14.0	13.0	**20**	0.09	0.17	0.24	0.32	0.39	0.58	0.76	0.95
22.5	21.6	20.9	20.2	19.6	18.3	17.1	16.0	**25**	0.15	0.24	0.32	0.41	0.49	0.70	0.91	1.13
29	28	27	26	25	24	22	21	**31.5**	0.2	0.3	0.4	0.5	0.6	0.9	1.1	1.4
37	36	35	35	34	33	31	30	**40**	0.2	0.4	0.5	0.6	0.8	1.1	1.5	1.8
46	44	43	42	41	38	36	34	**50**	0.2	0.4	0.6	0.7	0.9	1.3	1.7	2.2
58	56	55	53	52	50	47	45	**63**	0.3	0.5	0.8	1.0	1.2	1.7	2.3	2.8
73	71	69	67	66	62	59	56	**80**	0.5	0.8	1.0	1.3	1.5	2.2	2.8	3.5
92	90	87	85	83	79	75	72	**100**	0.6	0.9	1.2	1.6	1.9	2.7	3.5	4.4
102	99	97	95	92	88	84	80	**112**	0.6	1.0	1.3	1.7	2.1	3.0	3.9	4.8
116	113	111	109	107	103	99	95	**125**	0.8	1.2	1.6	2.0	2.4	3.4	4.4	5.4
151	148	146	144	142	137	133	129	**160**	1.0	1.5	2.0	2.6	3.1	4.4	5.7	7.0
164	160	157	154	151	144	138	133	**180**	0.9	1.5	2.1	2.7	3.3	4.8	6.3	7.8
184	179	175	171	168	160	153	147	**200**	1.3	1.9	2.6	3.2	3.8	5.4	7.0	8.6
231	225	220	216	211	202	194	186	**250**	1.8	2.6	3.5	4.3	5.1	7.1	9.2	11.2
291	284	277	272	267	255	245	235	**315**	2.2	3.2	4.3	5.3	6.3	8.9	11.5	14.0
369	360	351	344	337	322	309	296	**400**	2.5	3.8	5.1	6.3	7.6	10.8	14.1	17.3
462	450	440	431	423	404	388	373	**500**	3.3	4.9	6.5	8.1	9.8	13.8	17.9	22.0
579	561	547	534	522	496	473	452	**630**	4.4	6.4	8.5	10.5	12.6	17.7	22.8	27.9
677	653	633	615	599	563	531	501	**710**	5.5	7.9	10.3	12.8	15.2	21.2	27.2	33.2
770	748	729	713	698	665	636	609	**800**	7.3	10.0	12.7	15.5	18.2	25.0	31.8	38.6
863	837	816	797	780	742	708	677	**900**	8.0	11.1	14.1	17.2	20.3	27.9	35.6	43.2
953	919	891	866	843	792	747	706	**1000**	8.2	11.6	15.0	18.4	21.8	30.2	38.7	47.2
1071	1036	1007	982	959	907	861	820	**1120**	9.6	13.5	17.3	21.1	24.9	34.4	44.0	53.5
1194	1153	1119	1089	1062	1001	947	898	**1250**	10.6	14.9	19.1	23.4	27.7	38.3	49.0	59.7
1345	1306	1274	1245	1220	1162	1112	1066	**1400**	10.7	15.5	20.3	25.1	29.8	41.7	53.7	65.6
1440	1384	1337	1296	1259	1177	1105	1039	**1600**	12.5	17.7	22.9	28.1	33.3	46.2	59.2	72.2
1654	1616	1582	1552	1523				**1800**	14.0	19.9	25.7	31.5	37.3			
1839	1797	1761	1727	1695				**2000**	15.6	22.1	28.5	35.0	41.4			
2024	1979	1939	1903	1868				**2200**	17.2	24.3	31.4	38.5	45.6			
2211	2162	2120	2080	2043				**2400**	18.7	26.5	34.2	42.0	49.8			
2434	2384	2336	2290	2246				**2600**	21.1	29.4	37.7	46.0	54.3			

8.2.2.2 Speed n = 1150 rpm

Calculated flow medium $Q_{calc.}$ [l/min] at the following operating pressure p [bar]								Displacement volume V_g [cm³]	Power requirement P [kW] at the following operating pressure p [bar]							
2	**4**	**6**	**8**	**10**	**15**	**20**	**25**		**2**	**4**	**6**	**8**	**10**	**15**	**20**	**25**
2.9	2.7	2.5	2.4	2.2	1.9	1.7	1.4	**2.5**	0.02	0.03	0.05	0.06	0.07	0.11	0.14	0.17
3.6	3.4	3.2	3.1	3.0	2.7	2.4	2.2	**3.15**	0.03	0.04	0.06	0.07	0.09	0.13	0.17	0.21
4.6	4.4	4.2	4.1	3.9	3.6	3.2	3.0	**4**	0.03	0.05	0.07	0.09	0.11	0.16	0.21	0.26
5.7	5.4	5.2	5.0	4.8	4.4	4.1	3.7	**5**	0.04	0.06	0.09	0.11	0.13	0.19	0.25	0.31
7.2	6.9	6.6	6.4	6.2	5.7	5.3	4.9	**6.3**	0.05	0.08	0.11	0.13	0.16	0.24	0.31	0.38
9.2	8.8	8.5	8.2	7.9	7.3	6.8	6.3	**8**	0.06	0.09	0.13	0.17	0.20	0.29	0.38	0.47
11.3	10.8	10.3	9.8	9.4	8.5	7.7	7.0	**10**	0.07	0.11	0.16	0.20	0.25	0.36	0.47	0.57
14.5	13.9	13.5	13.1	12.7	11.9	11.1	10.4	**12.5**	0.08	0.14	0.19	0.25	0.30	0.44	0.58	0.72
18.6	17.9	17.4	16.9	16.4	15.4	14.5	13.7	**16**	0.10	0.17	0.24	0.31	0.38	0.56	0.73	0.90
23.2	22.4	21.7	21.1	20.5	19.2	18.1	17.0	**20**	0.12	0.21	0.30	0.39	0.48	0.70	0.92	1.15
27.5	26.5	25.8	25.1	24.4	23.0	21.8	20.7	**25**	0.20	0.30	0.40	0.50	0.61	0.86	1.12	1.37
35	34	33	32	31	30	28	27	**31.5**	0.2	0.3	0.5	0.6	0.7	1.1	1.4	1.7
45	44	43	43	42	40	39	38	**40**	0.3	0.5	0.6	0.8	1.0	1.4	1.8	2.2
56	54	53	52	51	48	46	44	**50**	0.3	0.5	0.7	0.9	1.1	1.6	2.1	2.6
71	69	67	66	65	62	60	57	**63**	0.4	0.7	0.9	1.2	1.5	2.1	2.8	3.4
89	87	85	83	81	78	74	71	**80**	0.6	0.9	1.3	1.6	1.9	2.7	3.5	4.3
112	110	107	105	103	99	95	92	**100**	0.7	1.1	1.5	1.9	2.3	3.3	4.3	5.3
124	121	119	117	114	110	106	102	**112**	0.8	1.2	1.7	2.1	2.6	3.7	4.8	5.9
141	138	136	134	132	127	123	120	**125**	1.0	1.5	2.0	2.5	3.0	4.2	5.4	6.7
183	180	178	176	174	170	166	162	**160**	1.3	1.9	2.5	3.2	3.8	5.4	7.0	8.6
201	197	193	190	187	180	175	169	**180**	1.2	2.0	2.7	3.4	4.1	5.9	7.8	9.6
224	219	214	210	207	199	192	185	**200**	1.7	2.4	3.2	4.0	4.8	6.7	8.6	10.5
281	275	270	266	261	252	243	236	**250**	2.4	3.4	4.4	5.4	6.4	8.9	11.4	13.8
355	347	341	335	330	318	307	298	**315**	3.0	4.2	5.5	6.7	7.9	11.1	14.2	17.3
450	440	432	424	418	402	389	376	**400**	3.4	4.9	6.5	8.1	9.6	13.5	17.4	21.3
563	551	540	531	523	504	488	473	**500**	4.4	6.3	8.3	10.3	12.3	17.2	22.1	27.0
706	688	674	661	649	623	600	578	**630**	6.0	8.5	11.0	13.4	15.9	22.1	28.3	34.5
828	805	785	768	752	716	685	656	**710**	7.6	10.6	13.5	16.4	19.3	26.6	33.9	41.2
939	917	898	882	867	834	804	778	**800**	10.1	13.4	16.7	20.0	23.3	31.6	39.8	48.0
1053	1027	1006	987	970	932	898	867	**900**	11.2	14.9	18.6	22.3	26.0	35.2	44.5	53.7
1166	1132	1104	1079	1056	1005	960	920	**1000**	11.2	15.3	19.4	23.5	27.6	37.9	48.1	58.4
1308	1273	1245	1219	1196	1145	1100	1058	**1120**	13.5	18.1	22.7	27.3	31.9	43.5	55.0	66.6
1460	1419	1385	1355	1328	1268	1215	1167	**1250**	14.8	20.0	25.2	30.3	35.5	48.4	61.3	74.2
1641	1601	1569	1540	1514	1456	1406	1360	**1400**	14.7	20.5	26.2	32.0	37.8	52.2	66.6	81.1
1765	1708	1662	1622	1585	1504	1433	1369	**1600**	17.5	23.8	30.1	36.3	42.6	58.3	74.1	89.8
2013	1976	1943	1913	1886				**1800**	20.8	27.8	34.9	41.9	49.0			
2238	2197	2162	2129	2099				**2000**	23.1	30.9	38.7	46.6	54.4			
2463	2419	2380	2346	2313				**2200**	25.4	34.0	42.6	51.2	59.8			
2690	2643	2602	2564	2529				**2400**	27.7	37.1	46.5	55.9	65.3			
2961	2914	2869	2827	2785				**2600**	31.4	41.4	51.5	61.5	71.6			

8.2.2.3 Speed n = 1450 rpm

Calculated flow medium $Q_{calc.}$ [l/min] at the following operating pressure p [bar]								Displacement volume V_g [cm³]	Power requirement P [kW] at the following operating pressure p [bar]							
2	4	6	8	10	15	20	25		2	4	6	8	10	15	20	25
3.7	3.5	3.3	3.2	3.0	2.7	2.4	2.2	**2.5**	0.03	0.04	0.06	0.08	0.09	0.13	0.18	0.22
4.5	4.3	4.2	4.0	3.9	3.6	3.3	3.1	**3.15**	0.03	0.05	0.07	0.09	0.11	0.16	0.21	0.26
5.9	5.7	5.5	5.3	5.1	4.8	4.4	4.1	**4**	0.04	0.07	0.09	0.12	0.14	0.20	0.27	0.33
7.3	7.0	6.8	6.5	6.4	5.9	5.5	5.2	**5**	0.05	0.08	0.11	0.14	0.17	0.25	0.32	0.40
9.2	8.8	8.6	8.3	8.1	7.6	7.1	6.7	**6.3**	0.06	0.10	0.13	0.17	0.21	0.30	0.39	0.49
11.7	11.3	10.9	10.6	10.3	9.7	9.2	8.7	**8**	0.07	0.12	0.17	0.21	0.26	0.37	0.49	0.60
14.5	13.8	13.3	12.9	12.4	11.5	10.6	9.8	**10**	0.09	0.15	0.20	0.26	0.31	0.45	0.59	0.73
18.4	17.8	17.4	16.9	16.5	15.7	14.9	14.2	**12.5**	0.11	0.18	0.25	0.32	0.39	0.56	0.74	0.91
23.6	22.9	22.4	21.8	21.4	20.3	19.3	18.5	**16**	0.13	0.22	0.31	0.40	0.49	0.71	0.93	1.15
29.6	28.7	27.9	27.3	26.7	25.3	24.1	23.1	**20**	0.15	0.27	0.38	0.49	0.61	0.89	1.17	1.45
34.9	33.9	33.0	32.3	31.6	30.1	28.8	27.5	**25**	0.27	0.39	0.52	0.65	0.78	1.11	1.43	1.75
44	43	42	42	41	39	37	36	**31.5**	0.3	0.4	0.6	0.8	0.9	1.3	1.7	2.2
57	56	55	54	54	52	51	49	**40**	0.4	0.6	0.8	1.0	1.3	1.8	2.3	2.8
71	69	68	67	65	63	61	59	**50**	0.4	0.7	0.9	1.2	1.4	2.1	2.7	3.3
90	88	86	85	84	81	78	76	**63**	0.6	0.9	1.2	1.6	1.9	2.7	3.6	4.4
113	111	109	107	105	101	97	94	**80**	0.8	1.2	1.6	2.0	2.4	3.4	4.4	5.4
143	140	137	135	133	129	125	121	**100**	1.0	1.5	2.0	2.5	3.0	4.3	5.5	6.8
158	155	152	150	147	143	138	134	**112**	1.1	1.7	2.2	2.8	3.3	4.7	6.1	7.5
179	176	173	171	169	164	160	156	**125**	1.4	2.0	2.6	3.3	3.9	5.4	7.0	8.5
232	229	227	225	223	219	215	211	**160**	1.7	2.5	3.4	4.2	5.0	7.0	9.0	11.0
255	251	247	244	241	235	229	223	**180**	1.8	2.7	3.6	4.5	5.4	7.7	10.0	12.3
284	278	274	269	266	257	249	243	**200**	2.3	3.3	4.3	5.2	6.2	8.6	11.1	13.5
357	351	345	340	336	326	318	310	**250**	3.5	4.8	6.0	7.3	8.5	11.6	14.7	17.9
450	442	435	429	424	412	401	392	**315**	4.3	5.8	7.4	9.0	10.5	14.5	18.4	22.3
571	561	553	545	538	523	509	496	**400**	5.0	7.0	9.0	10.9	12.9	17.8	22.7	27.7
714	702	691	682	673	654	638	622	**500**	6.4	8.8	11.3	13.8	16.3	22.5	28.7	34.9
897	879	864	851	839	813	789	768	**630**	9.0	12.1	15.3	18.4	21.5	29.3	37.2	45.0
1056	1033	1013	996	981	946	915	887	**710**	11.5	15.2	18.8	22.5	26.2	35.4	44.6	53.8
1193	1170	1152	1135	1120	1087	1057	1031	**800**	15.3	19.5	23.6	27.8	31.9	42.3	52.7	63.1
1338	1312	1291	1272	1255	1216	1182	1152	**900**	16.9	21.6	26.3	30.9	35.6	47.3	58.9	70.6
1486	1451	1423	1398	1375	1325	1281	1241	**1000**	16.5	21.7	26.9	32.0	37.2	50.2	63.1	76.1
1665	1630	1601	1576	1553	1502	1457	1416	**1120**	20.5	26.3	32.2	38.0	43.8	58.3	72.9	87.4
1860	1818	1785	1755	1728	1669	1616	1569	**1250**	22.7	29.2	35.7	42.2	48.7	65.0	81.3	97.6
2086	2045	2012	1982	1956	1898	1846	1800	**1400**	21.8	29.1	36.3	43.6	50.9	69.1	87.3	105.5
2251	2196	2150	2110	2074	1995	1926	1863	**1600**	26.8	34.7	42.6	50.5	58.5	78.3	98.1	117.9
2551	2515	2484	2456	2431				**1800**	34.5	43.4	52.3	61.2	70.0			
2836	2797	2763	2733	2705				**2000**	38.4	48.2	58.1	67.9	77.8			
3121	3078	3042	3010	2980				**2200**	42.2	53.0	63.9	74.7	85.6			
3409	3363	3324	3290	3257				**2400**	46.0	57.9	69.7	81.6	93.4			
3752	3709	3668	3630	3593				**2600**	52.3	65.0	77.7	90.3	103.0			

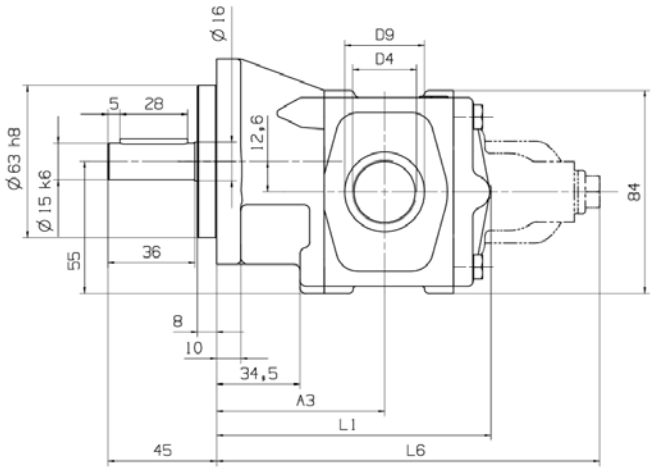
8.2.2.4 Speed n = 1750 rpm

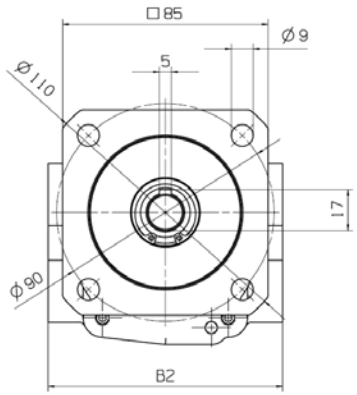
Calculated flow medium $Q_{calc.}$ [l/min] at the following operating pressure p [bar]								Displacement volume V_g [cm³]	Power requirement P [kW] at the following operating pressure p [bar]							
2	**4**	**6**	**8**	**10**	**15**	**20**	**25**		**2**	**4**	**6**	**8**	**10**	**15**	**20**	**25**
4.5	4.3	4.1	3.9	3.8	3.5	3.2	2.9	**2.5**	0.03	0.05	0.07	0.09	0.11	0.16	0.21	0.26
5.5	5.3	5.1	5.0	4.8	4.5	4.2	4.0	**3.15**	0.04	0.07	0.09	0.11	0.14	0.20	0.26	0.32
7.2	6.9	6.7	6.5	6.3	5.9	5.6	5.3	**4**	0.05	0.08	0.11	0.14	0.17	0.25	0.32	0.40
8.8	8.5	8.3	8.1	7.8	7.4	7.0	6.6	**5**	0.06	0.10	0.13	0.17	0.21	0.30	0.39	0.48
11.1	10.8	10.5	10.2	10.0	9.4	8.9	8.5	**6.3**	0.08	0.12	0.16	0.21	0.25	0.37	0.48	0.59
14.1	13.7	13.4	13.0	12.7	12.1	11.5	11.0	**8**	0.09	0.15	0.20	0.26	0.31	0.45	0.59	0.73
17.6	16.9	16.4	15.9	15.4	14.4	13.5	12.7	**10**	0.12	0.18	0.25	0.32	0.38	0.55	0.72	0.88
22.4	21.7	21.2	20.8	20.4	19.4	18.6	17.9	**12.5**	0.14	0.22	0.30	0.39	0.47	0.68	0.89	1.10
28.7	27.9	27.3	26.8	26.3	25.1	24.1	23.2	**16**	0.17	0.27	0.38	0.49	0.59	0.86	1.12	1.39
35.9	34.9	34.1	33.4	32.8	31.4	30.2	29.0	**20**	0.19	0.33	0.46	0.60	0.74	1.08	1.42	1.76
42.3	41.2	40.3	39.5	38.7	37.1	35.7	34.3	**25**	0.34	0.50	0.65	0.81	0.96	1.35	1.74	2.13
54	53	52	51	50	48	47	45	**31.5**	0.4	0.6	0.8	1.0	1.1	1.6	2.1	2.6
69	68	67	66	65	63	62	61	**40**	0.5	0.8	1.0	1.3	1.6	2.2	2.8	3.4
86	84	83	81	80	78	75	73	**50**	0.5	0.9	1.2	1.5	1.8	2.5	3.3	4.1
109	107	105	104	103	100	97	95	**63**	0.7	1.1	1.5	1.9	2.3	3.4	4.4	5.4
137	134	132	130	128	124	120	117	**80**	1.1	1.6	2.0	2.5	3.0	4.2	5.4	6.6
173	170	167	165	163	158	154	150	**100**	1.3	1.9	2.5	3.1	3.7	5.3	6.8	8.3
191	188	185	183	180	175	171	167	**112**	1.4	2.1	2.8	3.4	4.1	5.8	7.5	9.2
216	213	210	208	206	201	196	192	**125**	1.8	2.6	3.3	4.1	4.8	6.7	8.6	10.5
281	278	276	274	272	268	264	260	**160**	2.3	3.2	4.2	5.2	6.2	8.6	11.0	13.5
309	305	302	299	296	289	283	278	**180**	2.4	3.5	4.6	5.7	6.8	9.6	12.3	15.1
344	338	333	328	324	315	307	300	**200**	3.1	4.2	5.4	6.6	7.7	10.7	13.6	16.5
433	426	420	415	411	401	392	384	**250**	4.7	6.2	7.7	9.3	10.8	14.5	18.3	22.1
545	537	530	524	518	506	495	485	**315**	5.8	7.7	9.6	11.5	13.4	18.1	22.8	27.6
693	682	673	666	659	643	629	616	**400**	7.1	9.4	11.8	14.2	16.6	22.5	28.4	34.4
865	852	842	832	824	804	788	772	**500**	8.7	11.7	14.7	17.7	20.7	28.2	35.7	43.2
1088	1070	1054	1041	1029	1003	979	958	**630**	12.7	16.5	20.2	24.0	27.8	37.2	46.7	56.1
1283	1260	1242	1225	1210	1176	1146	1119	**710**	16.2	20.6	25.1	29.5	34.0	45.1	56.2	67.3
1447	1424	1405	1388	1373	1340	1310	1284	**800**	21.6	26.6	31.6	36.6	41.6	54.2	66.7	79.3
1624	1597	1576	1557	1539	1501	1467	1437	**900**	23.9	29.6	35.2	40.8	46.5	60.5	74.6	88.7
1805	1770	1742	1717	1695	1645	1601	1562	**1000**	22.8	29.1	35.3	41.6	47.8	63.5	79.1	94.7
2021	1986	1957	1932	1909	1858	1814	1774	**1120**	29.2	36.2	43.2	50.3	57.3	74.8	92.4	110.0
2259	2217	2184	2154	2128	2069	2018	1971	**1250**	32.3	40.2	48.0	55.9	63.8	83.4	103.1	122.7
2530	2488	2454	2424	2398	2338	2287	2240	**1400**	30.3	39.1	47.9	56.6	65.4	87.4	109.3	131.3
2738	2683	2638	2599	2564	2486	2418	2357	**1600**	38.3	47.8	57.4	67.0	76.5	100.5	124.4	148.3

9 Dimensional sheets of gear pumps

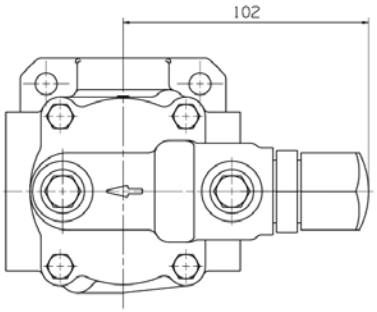
The following pages contain dimensions of the gear pumps in the basic version. If you have questions about the design or special designs, please contact us.

9.1 Size R25

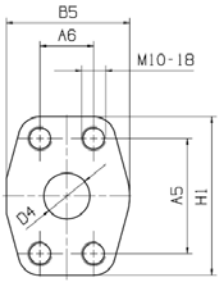




Option: pressure relief valve



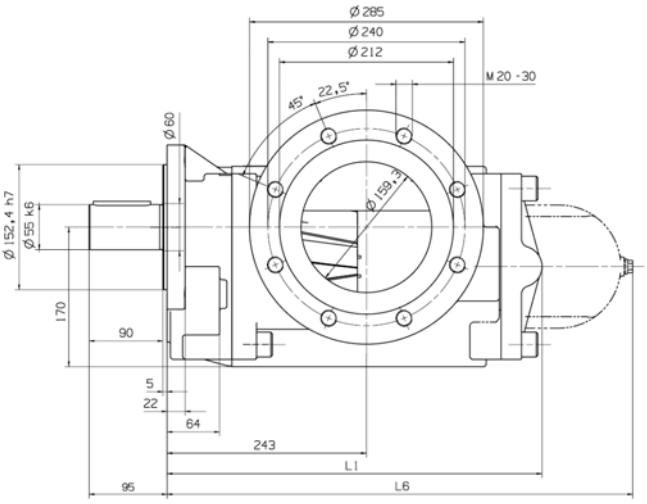
Option: SAE connection

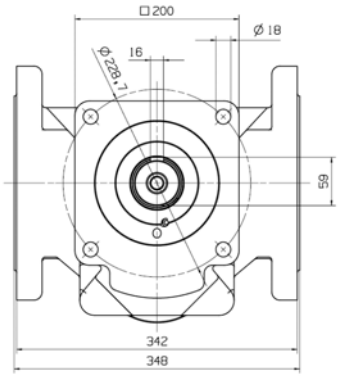


V_g [cm³]	Dimensions [mm]													Weight [kg]	
	Suction and pressure connection														
	Threaded connection			SAE connection											
	B2	D4	D9	A5	A6	B2	B5	D4	H1	Flange size	A3	L1	L6	Standard	Excess weight of DB
2.5	97	G3/4	33-1	47.6	22.2	95	51	19	66	SAE3/4´´	69.5	114	159	4.0	0.8
3.15															
4															
5															
6.3															
8															
10															
12.5	97	G1	40-1	52.4	26.2	95	59	25	70	SAE1´´	74.5	141	186	4.8	0.8
16															
20															

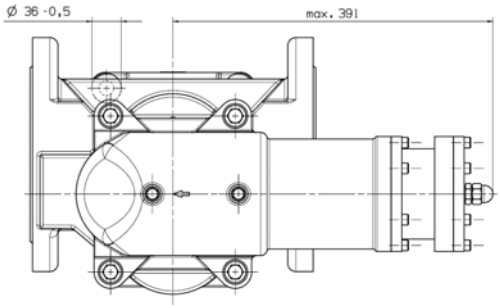
Tab. 10: Dimensional sheet of size R25

9.5.2 Option: version with DIN connection





Option: pressure relief valve



V_g [cm³]	Dimensions [mm]			Weight [kg]	
	Suction and pressure connection				
	Flange size	L1	L6	Standard	Excess weight of DB
710	DN160	457	568	135	32
800					
900					
1000					
1120					
1250					
1400					
1600					
1800					

Tab. 15: Dimensional sheet of size R95 with DIN connection

10 Dimensional sheets of pump units

Pump units are equipped as standard with three-phase asynchronous motors of efficiency class IE3. Single-phase AC motors and DC motors of various voltage levels are also available on request.

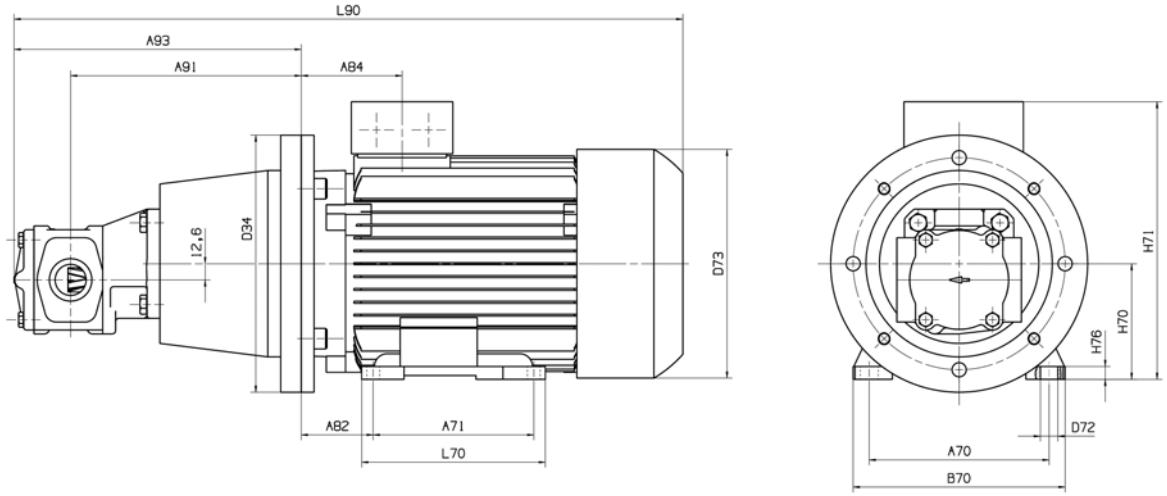
The motor dimensions specified in the dimension tables, which are not standardised in EN 50347, refer to our standard make (special manufacturers are available on request). The dimensions of the standard pump units for different motor sizes can be found in the tables on the following pages.

For different versions (e.g., other motor designs, V1 design, gear pumps with pressure relief valve and/or mechanical seal or magnetic coupling), we will gladly inform you about the respective dimensions and weights on request.

For railway, ship or other applications with special vibration loads, we recommend the heavy-duty design for the unit foot. This changes the drilling pattern of the foot attachment; dimensions on request.

10.1 Size R25

10.1.1 Type IM B35



Size		Dimensions [mm]														
V_g [cm³]	Motor	A70	A71	A82	A84	A91	A93	B70	D34	D72	D73	H70	H71	H76	L70	L90
2.5...10	71M	112	90	45	63.5	159.5	203.5	132	160	7	145	71	182	7	106	414
	80M	125	100	50	73	169.5	213.5	150	200	9.5	159	80	201	8	118	501
	90S	140	100	56	78.5	179.5	223.5	165	200	10	178	90	216	10	143	521
12.5…20	71M	112	90	45	63.5	164.5	231	132	160	7	145	71	182	7	106	441
	80M	125	100	50	73	174.5	241	150	200	9.5	159	80	201	8	118	528
	90S	140	100	56	78.5	184.5	251	165	200	10	178	90	216	10	143	548
	90L	140	125	56	78.5	184.5	251	165	200	10	178	90	216	10	143	548
	100L	160	140	63	96.5	198.5	265	196	250	12	198	100	266	12	176	601

Tab. 17: Dimensional sheet of size R25 - type IM B35