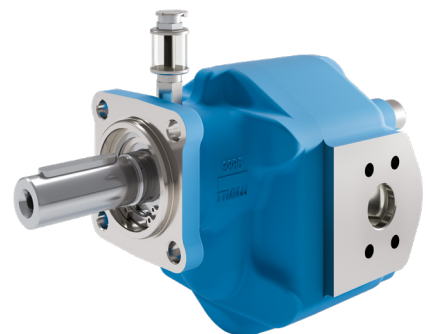


High pressure
gear pumps
KP .../434



KRACHT®
FLUID TECHNOLOGY AND SYSTEMS

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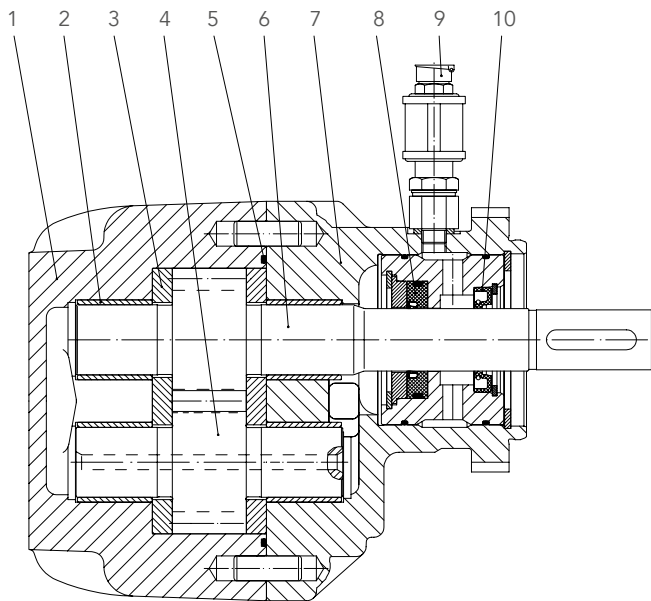
General

I Description

The KP.../434 high-pressure gear pumps are suitable for non-abrasive fluids. Examples of such fluids are, e.g., silicates (sodium silicate), isocyanates and polyols without fillers such as are used in PUR technology. The gear is supported in multicomponent plain bearings, is case hardened and is super-finished. The sliding plates are made of high-strength material with special surface hardness. Depending on the pumping

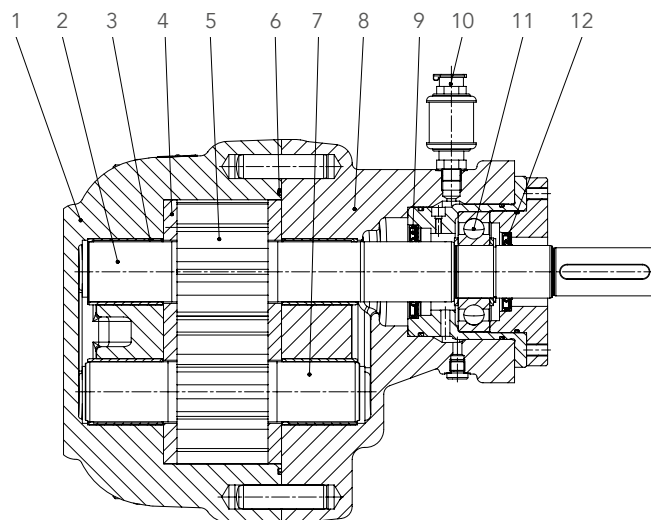
medium, at drive speeds of 1500 1/min working pressures of up to 150 bar are feasible. The main application area for these high-pressure gear pumps are mainly multi-component systems in PUR technology without fillers. The double seal with quench tank reliably prevents crystallisation on the seal to the pumping medium.

I Construction KP 2 / KP 3



- 1 Housing
- 2 Bearing bush
- 3 Sliding plate
- 4 Driven Shaft
- 5 O-ring
- 6 Driving Shaft
- 7 Flange cover
- 8 Special seal
- 9 Quench tank
- 10 Rotary shaft seal

I Construction KP 5



- 1 Housing
- 2 Driving Shaft
- 3 Bearing bush
- 4 Sliding plate
- 5 Gear
- 6 O-ring
- 7 Driven Shaft
- 8 Flange cover
- 9 Rotary shaft seal
- 10 Quench tank
- 11 Roller bearing
- 12 Rotary shaft seal

Technical data

I Materials

Housing	EN-GJL-300 (GG 30)
Flange cover	EN-GJL-300 (GG 30)
Gearing	Steel, case hardened
Sliding plates	EN-GJS-600-3 nitrocarburized
Bearing	Multicomponent plain bearings
Shaft sealing	Double rotary shaft seal with quench chamber incl. quench tank

I Characteristics

Geometrical displacement	V_g KP 2 = 28, 40 cm ³ /rev KP 3 = 63, 100, 125 cm ³ /rev KP 5 = 150, 200, 250 cm ³ /rev																					
Mounting position	horizontal																					
Fixing type	KP 2 / KP3 = flange (4-hole flange DIN ISO 7653) KP 5 = flange (SAE-C 2-hole-flange)																					
Inlet port	SAE 1¼" – 1½" – 2" – 2½" flange																					
Outlet port	SAE 1" – 1¼" – 2" flange																					
Max. working pressure	150 bar = KP 2/28, KP 2/40 150 bar = KP 3/63, KP 3/100 110 bar = KP 3/125 100 bar = KP 5/150, KP 5/200, KP 5/250																					
Max. inlet pressure	<table border="1"> <thead> <tr> <th>Pressure inlet port bar</th> <th>Pressure inlet port bar</th> <th>Speed 1/min</th> </tr> </thead> <tbody> <tr> <td>KP 2 / KP 3</td> <td>KP 5</td> <td></td> </tr> <tr> <td>-0.4 ... 20</td> <td>-0.4 ... 9</td> <td>max. 400</td> </tr> <tr> <td>-0.4 ... 16</td> <td>-0.4 ... 9</td> <td>max. 500</td> </tr> <tr> <td>-0.4 ... 11</td> <td>-0.4 ... 5.5</td> <td>max. 750</td> </tr> <tr> <td>-0.4 ... 80</td> <td>-0.4 ... 4.5</td> <td>max. 1000</td> </tr> <tr> <td>-0.4 ... 50</td> <td>-0.4 ... 30</td> <td>max. 1500</td> </tr> </tbody> </table>	Pressure inlet port bar	Pressure inlet port bar	Speed 1/min	KP 2 / KP 3	KP 5		-0.4 ... 20	-0.4 ... 9	max. 400	-0.4 ... 16	-0.4 ... 9	max. 500	-0.4 ... 11	-0.4 ... 5.5	max. 750	-0.4 ... 80	-0.4 ... 4.5	max. 1000	-0.4 ... 50	-0.4 ... 30	max. 1500
Pressure inlet port bar	Pressure inlet port bar	Speed 1/min																				
KP 2 / KP 3	KP 5																					
-0.4 ... 20	-0.4 ... 9	max. 400																				
-0.4 ... 16	-0.4 ... 9	max. 500																				
-0.4 ... 11	-0.4 ... 5.5	max. 750																				
-0.4 ... 80	-0.4 ... 4.5	max. 1000																				
-0.4 ... 50	-0.4 ... 30	max. 1500																				
Viscosity	ν 34 up to 50 000 mm ² /s (higher viscosities on request)																					
Media temperature	ϑ_{max} 120 °C																					
Ambient temperature	ϑ_{min} - 20 °C ϑ_{max} 60 °C																					
Shaft end	KP 2 / KP 3 = Cylindrical shaft Ø 24 mm KP 5 = Cylindrical shaft Ø 32 mm																					

Type key

Ordering example

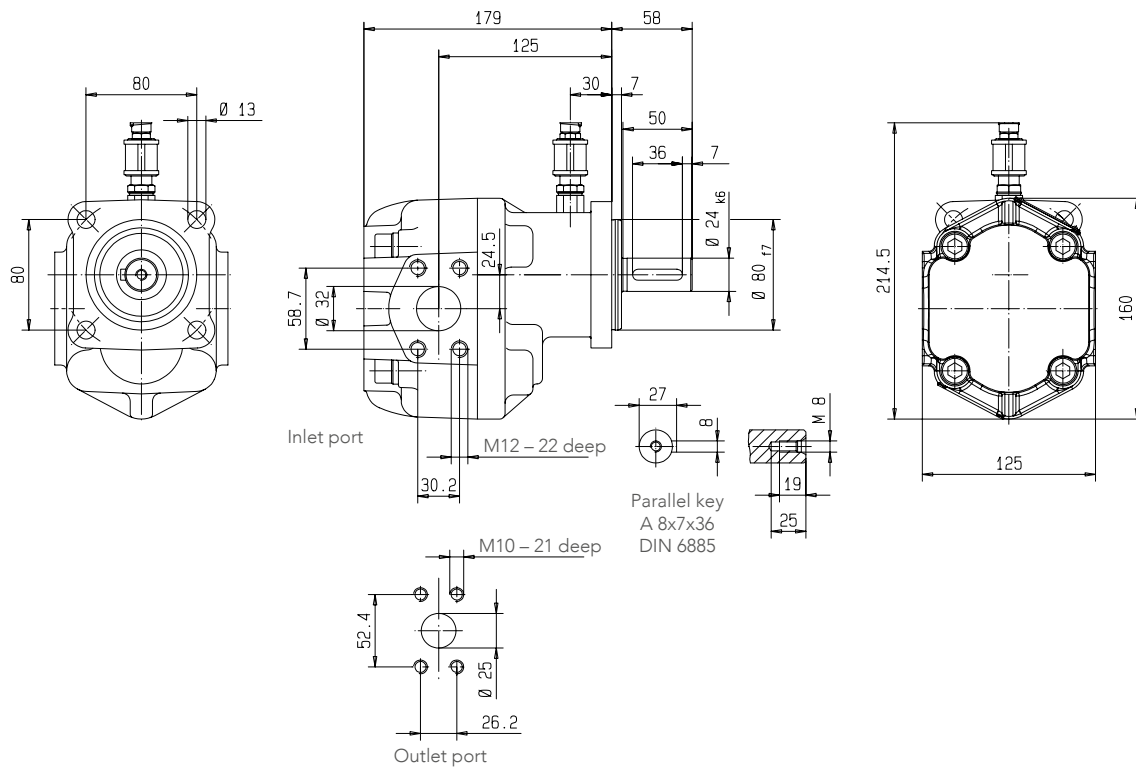
KP	3/	63	X	1	0	G	Y	0	0	6	D	L	2/	434
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

1 Product	
2 Size	
2 · 3 · 5	
3 Nominal displacement	
28 · 40 · 63 · 100 · 125 · 150 · 200 · 250	
4 Flange mounting cover (LA = Hole spacing / Z = Centering diameter)	
X	KP 2 / KP 3 = 4 hole flange, LA = Ø 113 mm, Ø _z = 80 mm
H	KP5 = SAE-C-2 hole flange, LA = 181 mm, Ø _z = 127 mm
5 Direction of rotation	
1	clockwise
2	anticlockwise
6 Outboard flanges or bearing	
0	without
7 Housing connection	
F	Inlet port 1 1/4" (Ø 32 mm) Outlet port 1" (Ø 25 mm) (Nominal displacement 28)
G	Inlet port 1 1/2" SAE-connection (Ø 40 mm) Outlet port 1 1/4" SAE-connection (Ø 32 mm) (Nominal displacement 40 ... 63)
J	Inlet port 2" SAE-connection (Ø 50 mm) Outlet port 1 1/4" SAE-connection (Ø 32 mm) (Nominal displacement 100 and 125)
K	Inlet port 2 1/2" SAE-connection (Ø 65 mm) Outlet port 2" SAE-connection (Ø 50 mm) (Nominal displacement 150 ... 250)
8 Shaft end	
Y	Cylindrical shaft Ø 24 mm (230 Nm _{max}) KP 2 / KP 3
Z	Cylindrical shaft Ø 32 mm (550 Nm _{max}) KP5
9 Second shaft end	
0	without
10 Adaptor pieces	
0	without
11 Design serial no.	
4	KP 2
6	KP 3
0	KP 5
12 Code for materials (Housing and bearing execution)	
D	Gray cast iron housing, multicomponent plain bearing
13 Type of gearing	
L	KP 2 / KP 3 = Driving shaft and driven shaft made of case-hardened steel (steel tooth flanks grinded and honed)
E	KP 5 = Gear made of case-hardening steel, hardened and ground
14 Seal	
2	FKM
15 Code for special design	
434	

Dimensions

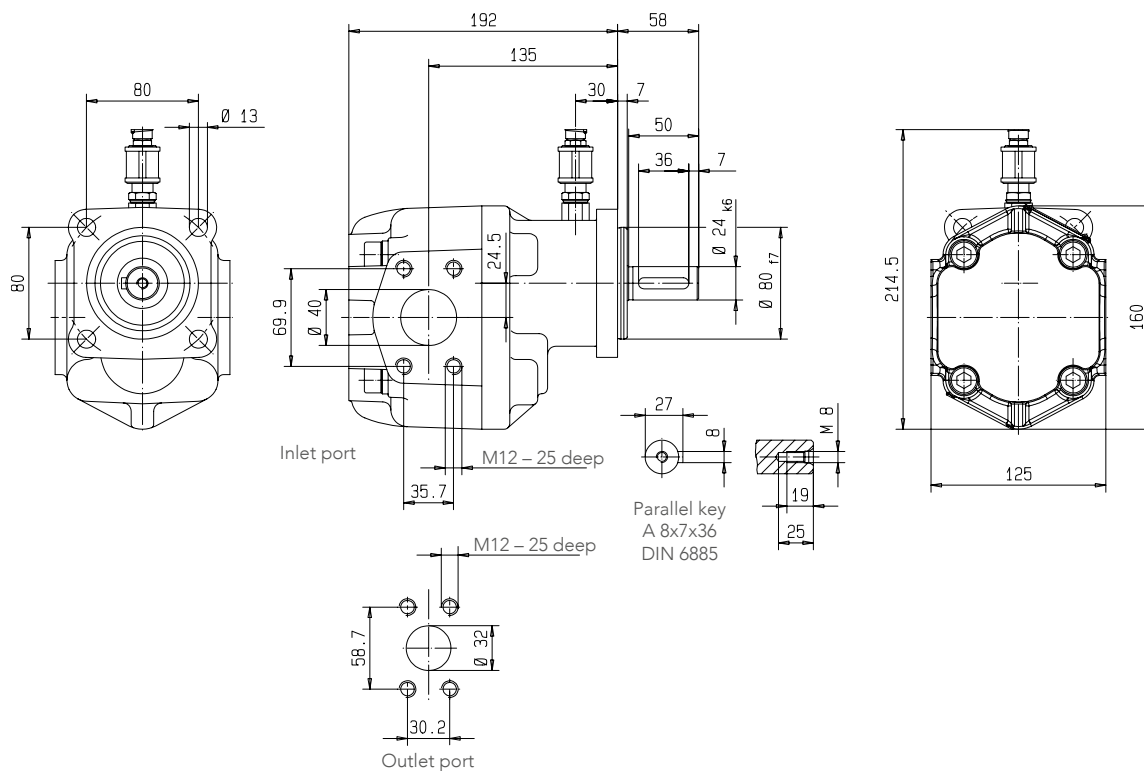
I KP 2/28.../434

Weight: 15 kg



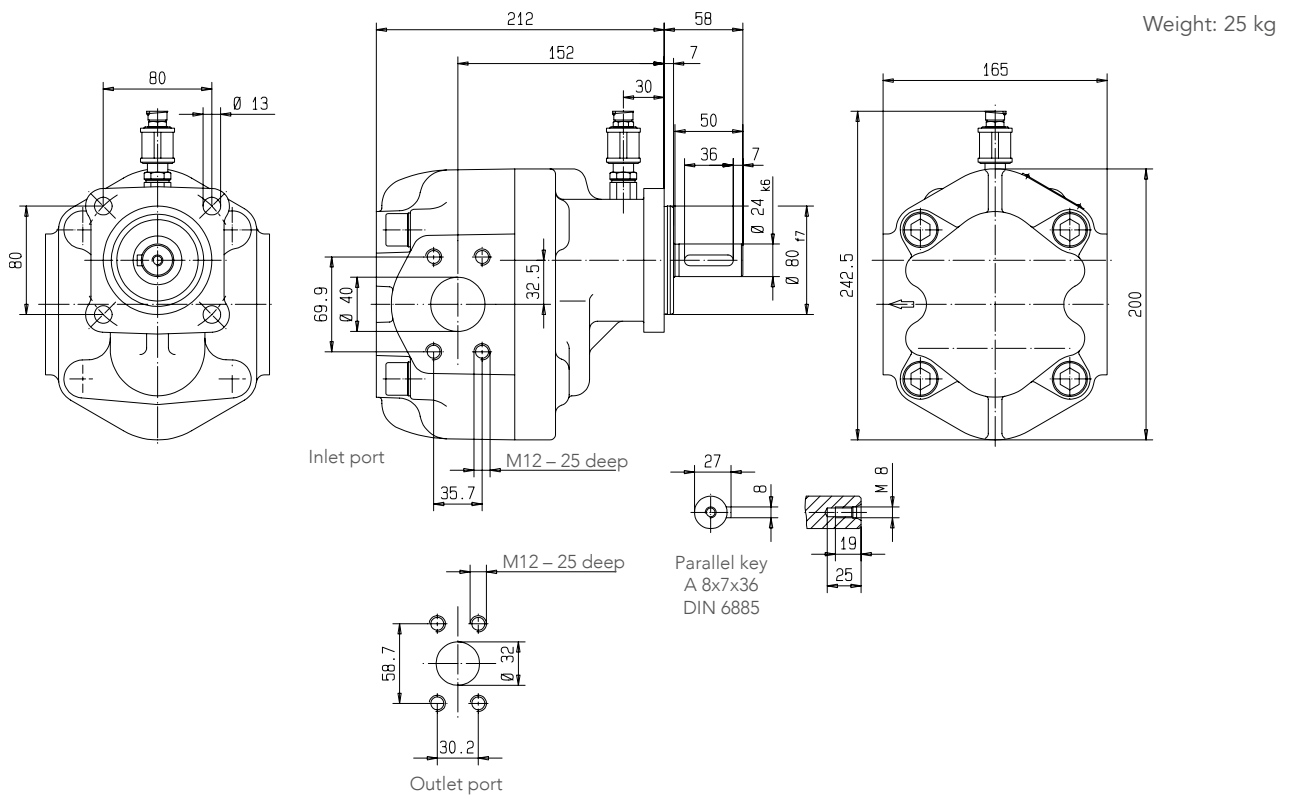
I KP 2/40.../434

Weight: 16 kg

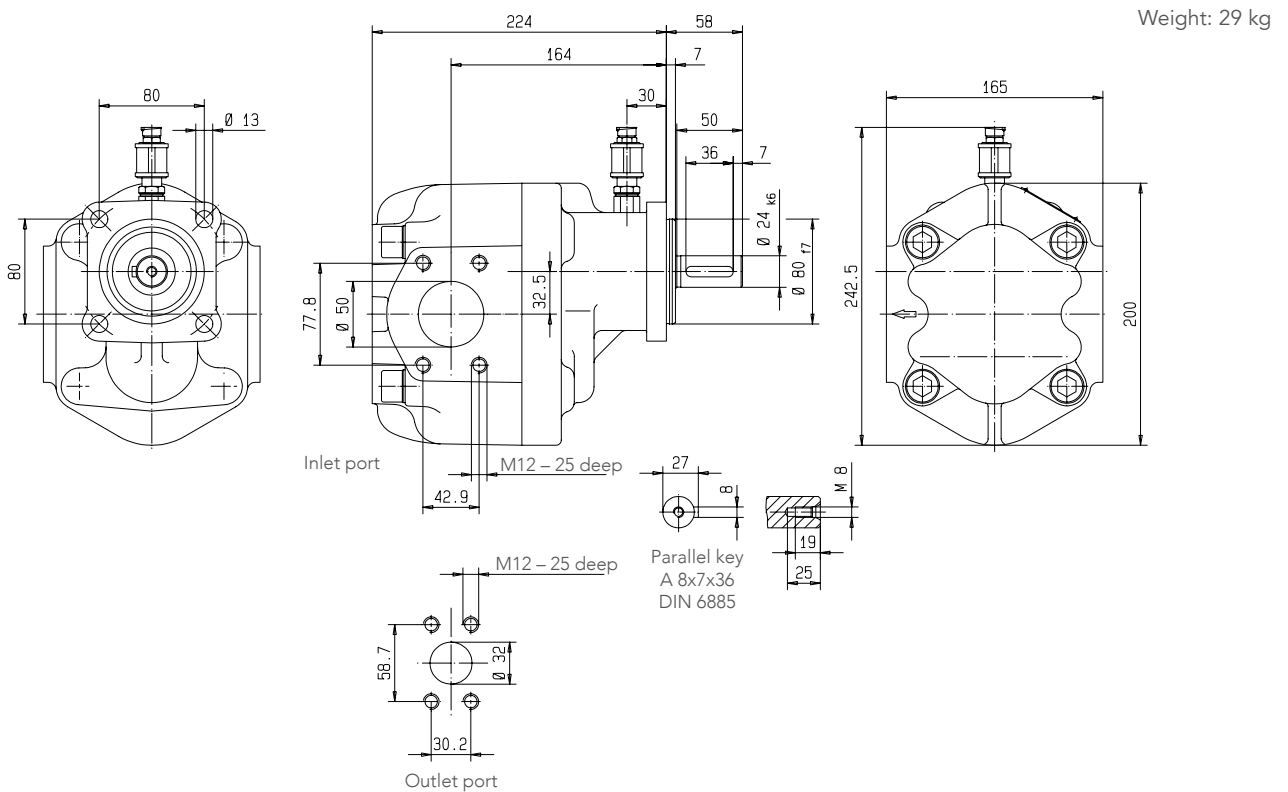


Dimensions

I KP 3/63.../434

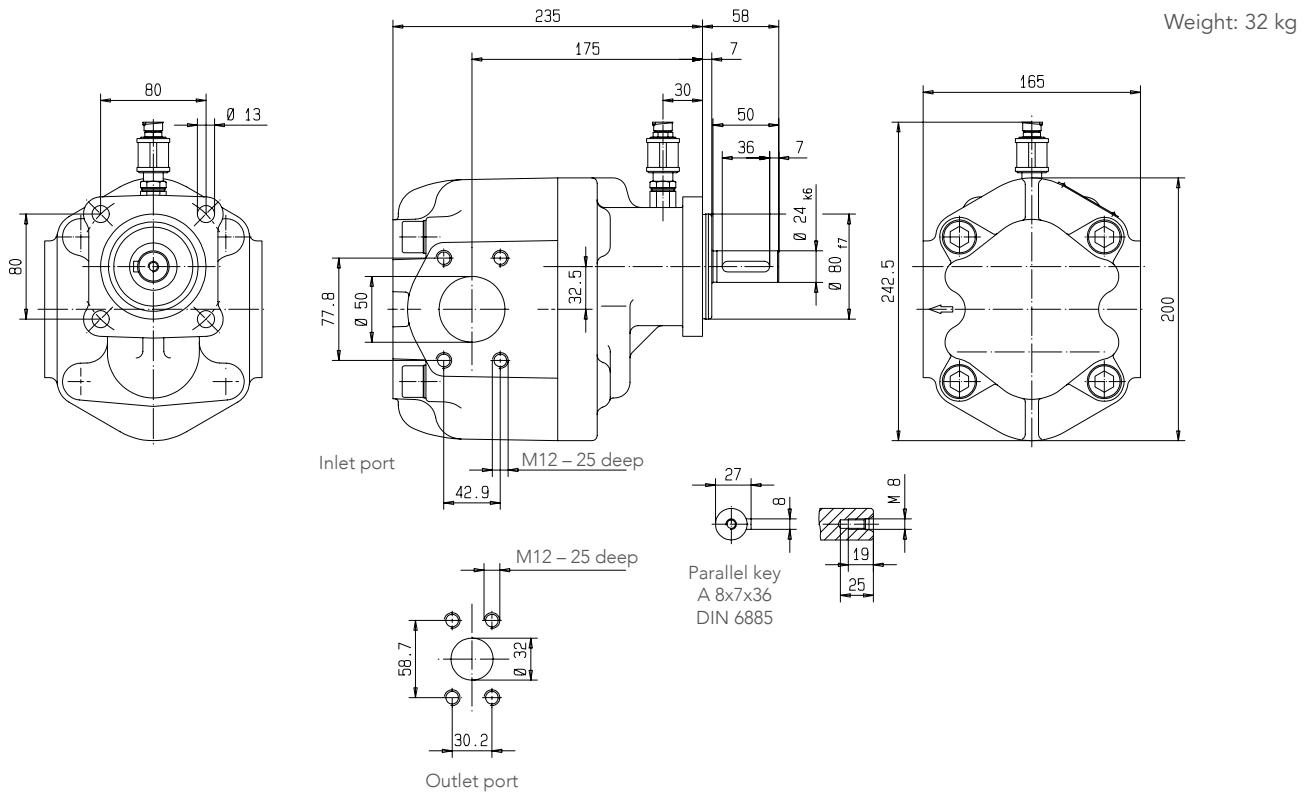


I KP 3/100.../434

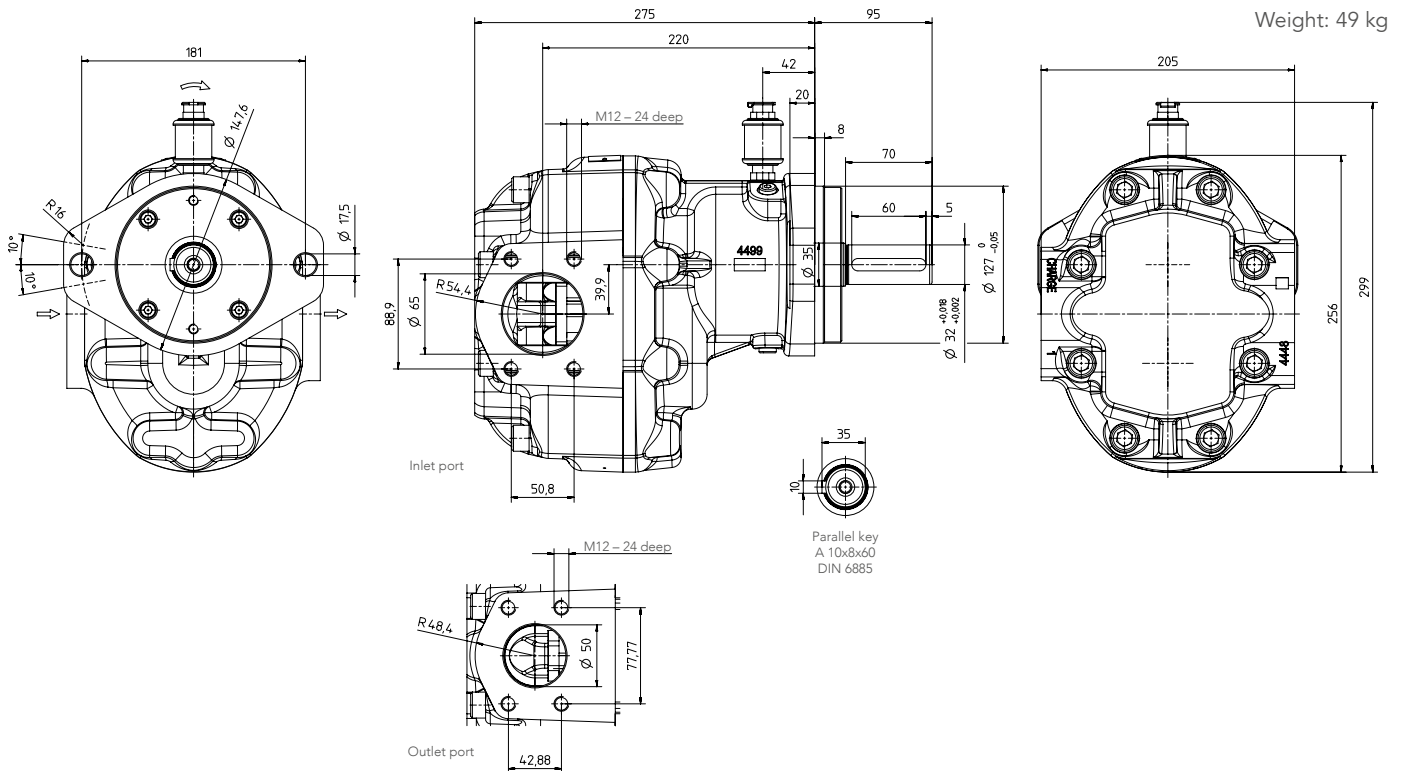


Dimensions

I KP 3/125.../434

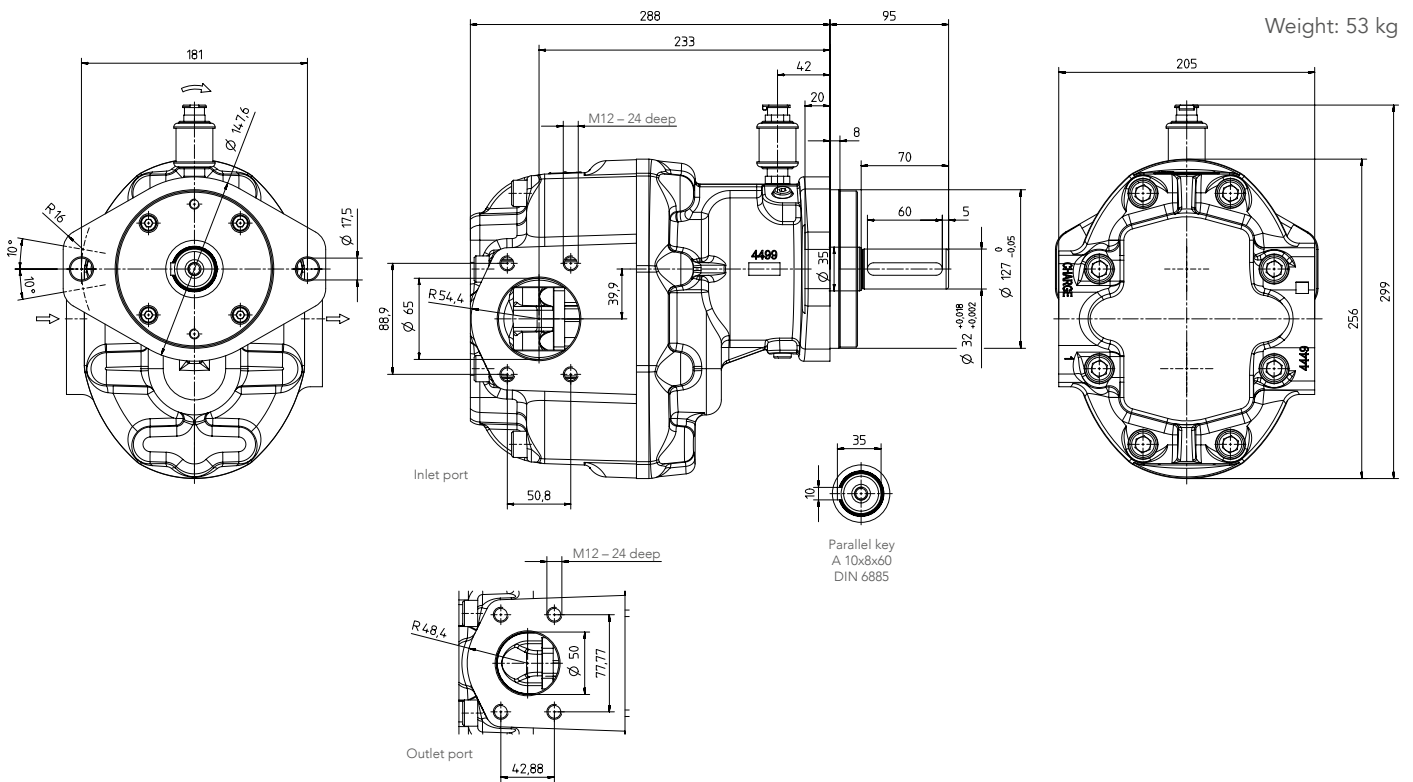


I KP 5/150.../434

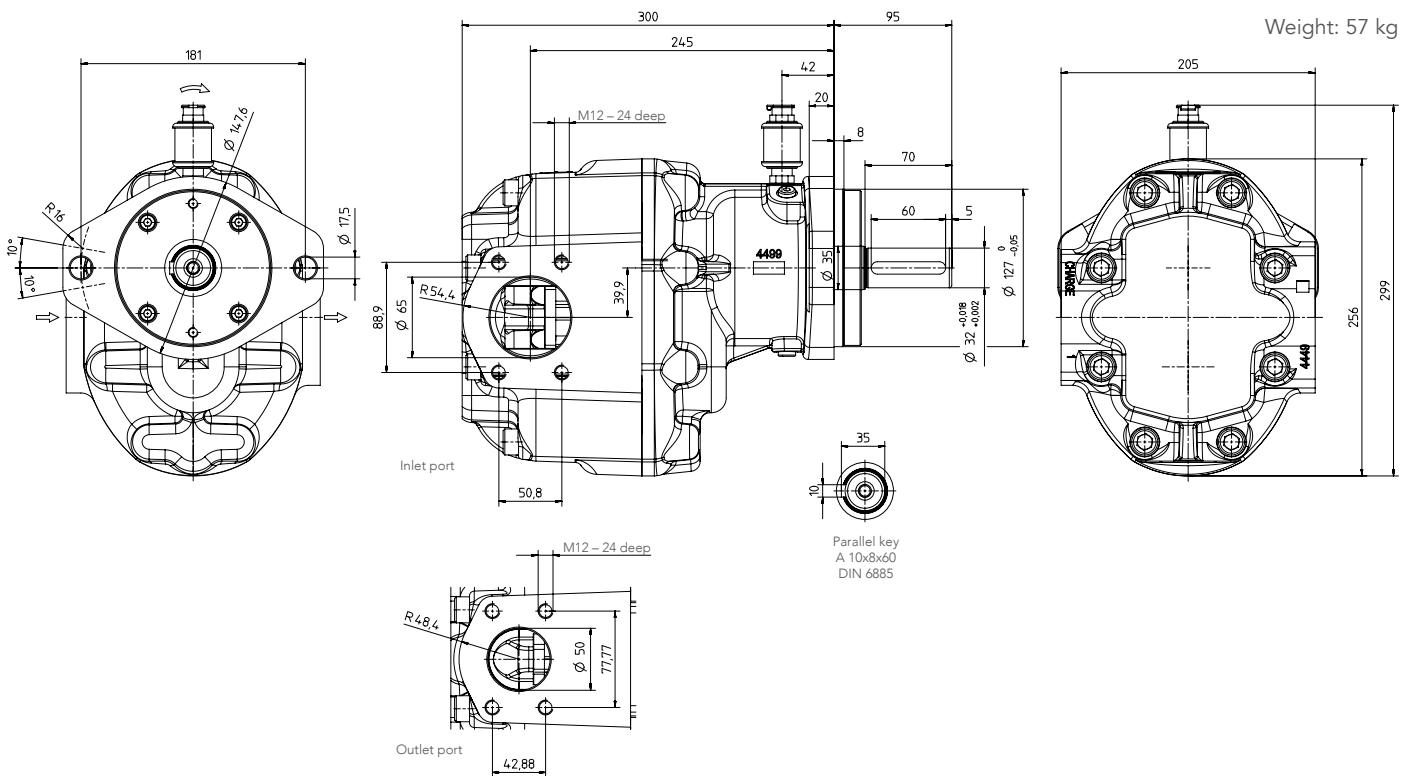


Dimensions

I KP 5/200.../434

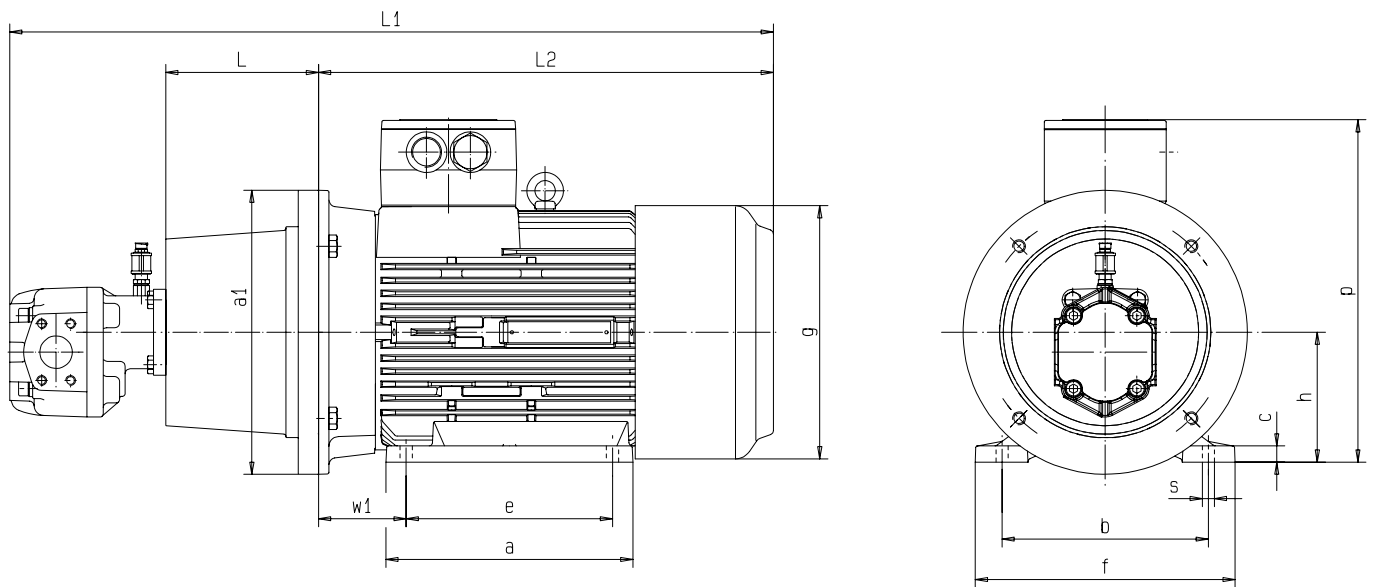


I KP 5/250.../434



Technical data

I Motor-pump assemblies KP 2



Size	Motor 8-pole		Motor 6-pole		Motor 4-pole		Bell housing	Coupling
	Power in KW	Speed in 1/min	Power in KW	Speed in 1/min	Power in KW	Speed in 1/min		
132 S	2.2	710	3.0	960	5.5	1440	PK300/04/42-00	RA28/38-Z35/24-Z35/38
132 M	3.0	710	5.5	970	7.5	1440		
160 M	4.0	720	7.5	970	11.0	1460	PK350/04/46-00	RA38/45-Z45/24-Z45/42
160 L	5.5	720	11.0	970	15.0	1470		
180 M	–	–	–	–	18.5	1470	PK350/06/58-00	RA42/55-Z50/24-Z50/48
180 L	11.0	730	15.0	970	22.0	1480		
200 L	15.0	730	22.0	970	30.0	1480	PK400/04/34-00	RA42/55-Z50/24-Z50/55

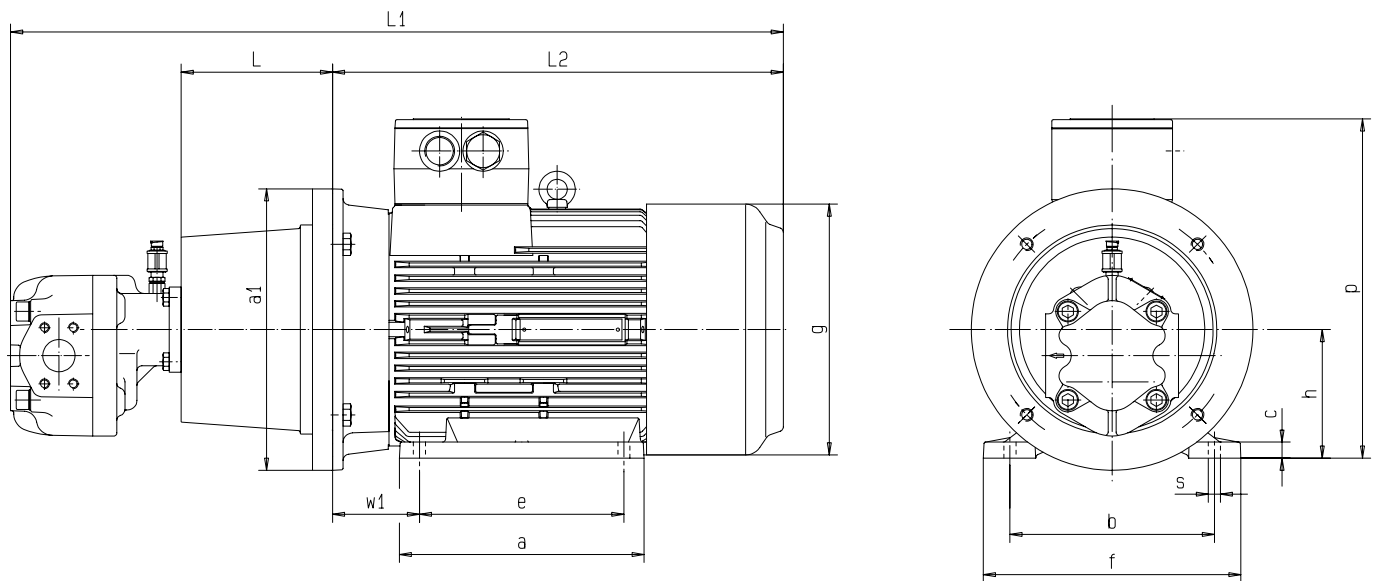
All motor dimensions and specifications refer to the motor make AC. Other motor makes on request.
Motor type IMB35. The motor dimensions of other manufacturers may differ.

Size	KP 2/28	KP 2/40													
	L1	L1	L	a ₁	a	b	c	e	f	g	h	L ₂	p	s	w ₁
132 S	729	742	155	300	186	216	15	140	262	258	132	395	320	12	89
132 M	767	780	155	300	224	216	15	178	262	258	132	433	320	12	89
160 M	865	878	188	350	260	254	20	210	314	314	160	498	411	15	108
160 L	909	922	188	350	304	254	20	254	314	314	160	542	411	15	108
180 M	961	974	204	350	311	279	22	241	349	355	180	578	447	15	121
180 L	999	1012	204	350	349	279	22	279	349	355	180	616	447	15	121
200 L	1052	1065	204	400	369	318	25	305	388	397	200	669	525	19	133

All pump nominal sizes and motor sizes can be combined with each other.

Technical data

I Motor-pump assemblies KP 3



Size	Motor 8-pole		Motor 6-pole		Motor 4-pole		Bell housing	Coupling
	Power in KW	Speed in 1/min	Power in KW	Speed in 1/min	Power in KW	Speed in 1/min		
132 S	2.2	710	3.0	960	5.5	1440	PK300/04/42-00	RA28/38-Z35/24-Z35/38
132 M	3.0	710	5.5	970	7.5	1440		
160 M	4.0	720	7.5	970	11.0	1460	PK350/04/46-00	RA38/45-Z45/24-Z45/42
160 L	5.5	720	11.0	970	15.0	1470		
180 M	–	–	–	–	18.5	1470	PK350/06/58-00	RA42/55-Z50/24-Z50/48
180 L	11.0	730	15.0	970	22.0	1480		
200 L	15.0	730	22.0	970	30.0	1480	PK400/04/34-00	RA42/55-Z50/24-Z50/55
225 S	18.5	730	–	–	37.0	1480	PK450/02/55-50	RA48/60-Z56/24-Z56/60
225 M	22.0	730	30.0	980	45.0	1480		
250 M	30.0	730	37.0	980	55.0	1480	PL550/08/68-50	RG55/70-Z65/24-Z65/65

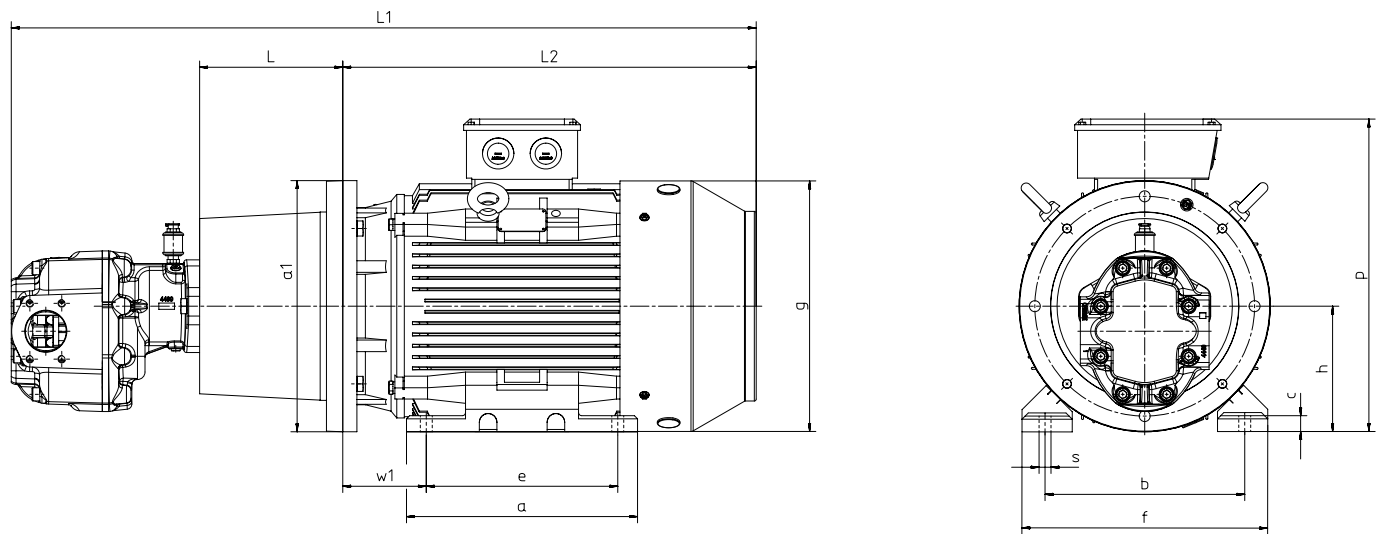
All motor dimensions and specifications refer to the motor make AC. Other motor makes on request.
Motor type IMB35. The motor dimensions of other manufacturers may differ.

Size	KP 3/63	KP 3/100	KP 3/125													
	L1	L1	L1	L	a ₁	a	b	c	e	f	g	h	L ₂	p	s	w ₁
132 S	762	774	785	155	300	186	216	15	140	262	258	132	395	320	12	89
132 M	800	812	823	155	300	224	216	15	178	262	258	132	433	320	12	89
160 M	898	910	921	188	350	260	254	20	210	314	314	160	498	411	15	108
160 L	942	954	965	188	350	304	254	20	254	314	314	160	542	411	15	108
180 M	994	1006	1017	204	350	311	279	22	241	349	355	180	578	447	15	121
180 L	1032	1044	1055	204	350	349	279	22	279	349	355	180	616	447	15	121
200 L	1085	1097	1108	204	400	369	318	25	305	388	397	200	669	525	19	133
225 S	1130	1142	1153	234	450	368	356	28	286	431	446	225	684	547	19	149
225 M	1155	1167	1178	234	450	393	356	28	311	431	446	225	709	547	19	149
250 M	1230	1242	1253	248	550	445	406	30	349	484	485	250	770	608	24	168

All pump nominal sizes and motor sizes can be combined with each other.

Technical data

I Motor-pump assemblies KP 5



Size	Motor 8-pole		Motor 6-pole		Motor 4-pole		Bell housing	Coupling
	Power in KW	Speed in 1/min	Power in KW	Speed in 1/min	Power in KW	Speed in 1/min		
160 M	4.0	720	7.5	970	11.0	1460	Z3/350/228-K	RA 38-Z45/32-Z45/42
160 L	5.5	720	11.0	970	15.0	1470		RA 42-Z50/32-Z50/48
180 M	–	–	–	–	18.5	1470		RA 42-Z50/32-Z50/48
180 L	11.0	730	15.0	970	22.0	1480	Z3/400/228-K	RA 42-Z50/32-Z50/55
200 L	15.0	730	22.0	970	30.0	1480	Z3/450/262-K	RG 48-Z56/32-Z56/60
225 S	18.5	730	–	–	37.0	1480		RG 48-Z56/32-Z56/60
225 M	22.0	730	30.0	980	45.0	1480	Z3/550/265-K	RG 55-Z65/32-Z65/65
250 M	30.0	730	37.0	980	55.0	1480		RG 55-Z65/32-Z65/65

All motor dimensions and specifications refer to the motor make AC. Other motor makes on request.
Motor type IMB35. The motor dimensions of other manufacturers may differ.

Size	KP 5/150	KP 5/200	KP 5/250													
	L1	L1	L1	L	a ₁	a	b	c	e	f	g	h	L ₂	p	s	w ₁
160 M	1001	1014	1026	228	350	260	254	20	210	314	314	160	498	411	15	108
160 L	1045	1058	1070	228	350	304	254	20	254	314	314	160	542	411	15	108
180 M	1081	1094	1106	228	350	311	279	22	241	349	355	180	578	447	15	121
180 L	1119	1131	1143	228	350	349	279	22	279	349	355	180	616	447	15	121
200 L	1172	1185	1197	228	400	369	318	25	305	388	397	200	669	525	19	133
225 S	1221	1233	1245	262	450	368	356	28	286	431	446	225	684	547	19	149
225 M	1246	1259	1271	262	450	393	356	28	311	431	446	225	709	547	19	149
250 M	1310	1323	1335	265	550	445	406	30	349	484	485	250	770	608	24	168

All pump nominal sizes and motor sizes can be combined with each other.

Notes

Notes

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