

GKB Series Hydraulic Motors

Options

- Flange connection
- Bearingless motor
- Speed sensing
- Straight, splined and tapered shafts
- Metric and BSPP ports
- Other special features

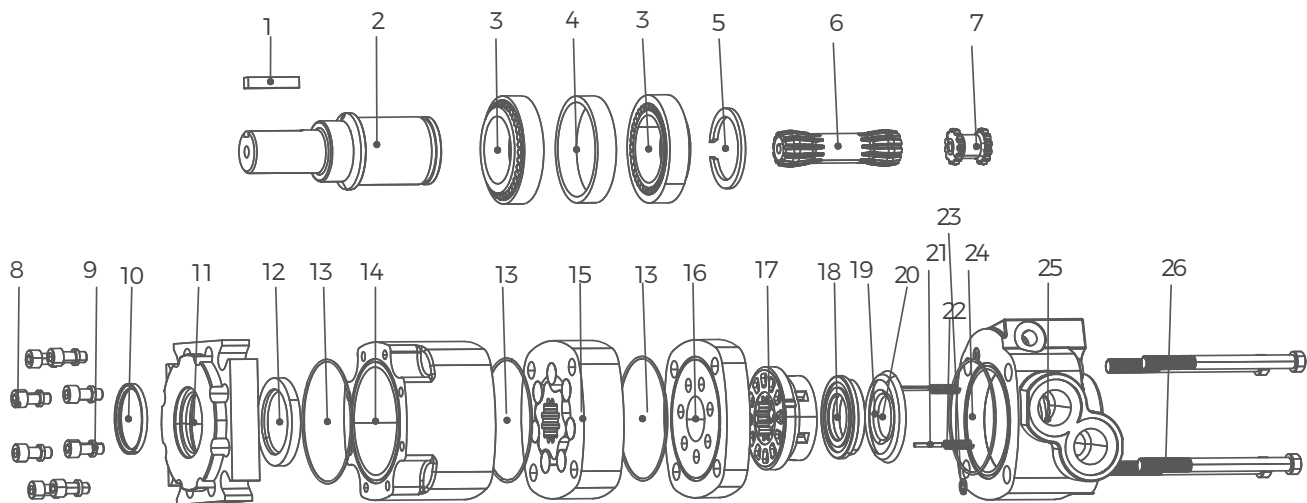
Applications

- Metal working machines
- Agricultural machines
- Road building machines
- Mining machines
- Food industries
- Special vehicles
- Injection molding machines
- Conveyors







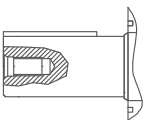
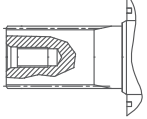
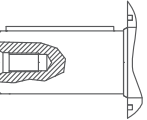
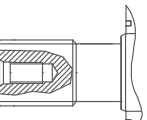
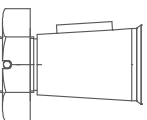
General

Max. Displacement	cm ³ /rev [in ³ /rev]	625 [38.0]
Max. Speed	RPM	697
Max. Torque	daNm [lb-in]	cont.: 97,2 [8605] int.: 118,1 [10450]
Max. Pressure Drop	bar [PSI]	cont.: 205 [3000] int.: 310 [4500]
Max. Oil Flow	lpm [GPM]	150 [40]
Pressure Fluid		Mineral based- HLP (DIN 51524) or HM (ISO 6743/4)
Temperature Range	°C [°F]	-40÷140 [-40÷284]
Optimal Viscosity range	mm ² /s [SUS]	20÷75 [98÷347]
Filtration		ISO code 20/16 (Min. recommended fluid filtration of 25 microns)



1 Flat key	6 Transmission shaft	11 Flange	16 Balance plate	21 Positioning pins
2 Output shaft	7 Coupling shaft	12 Shaft seal	17 Flow distribution plate	22 Spring
3 Tapered roller bearing	8 Bolt	13 Sealing gasket	18 Flow pressure plate	23 O-ring
4 Bearing outer retainer ring	9 Spring washer	14 Rear housing	19 Inner butterfly ring	24 O-ring
5 Washers	10 Anti-dust ring	15 Rotor and stator	20 Outer butterfly ring	25 Rear housing
				26 Screw

Ordering Code

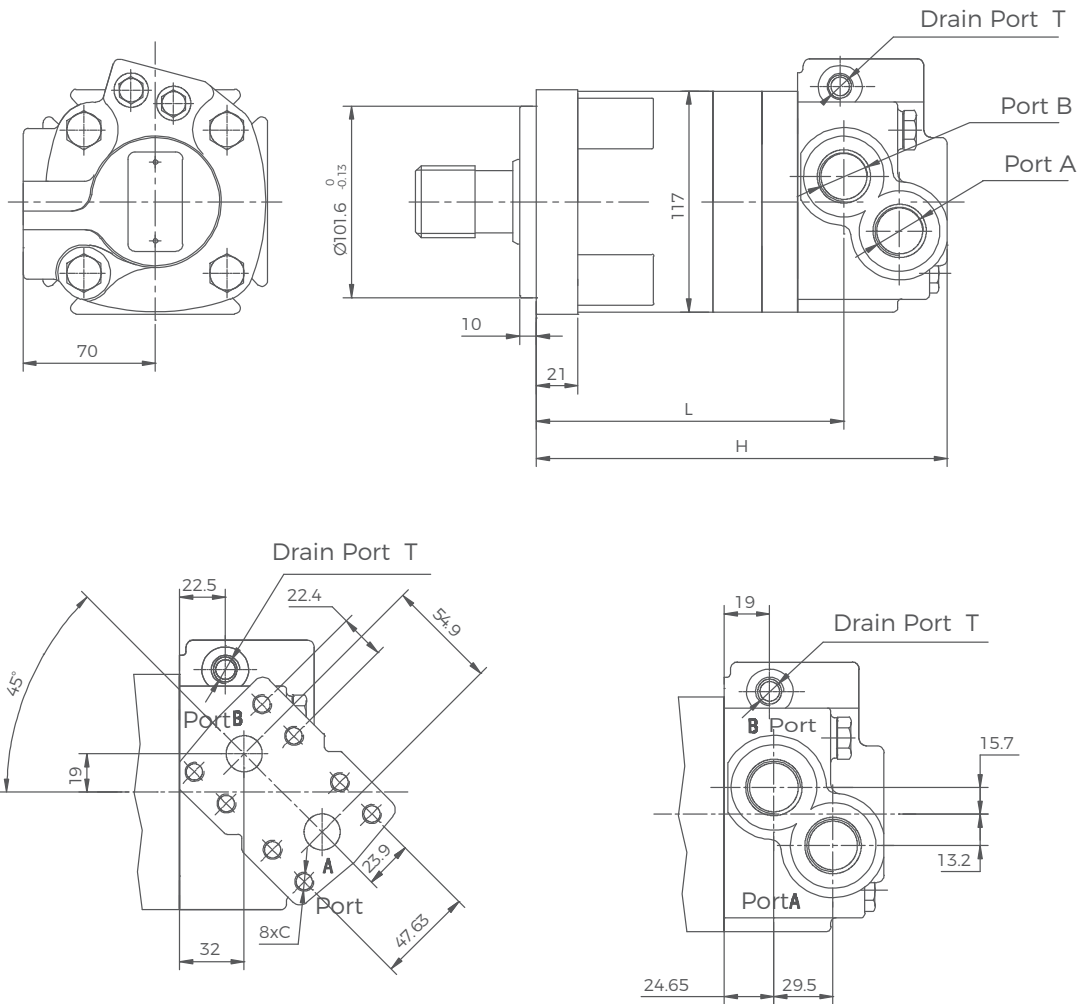
GKB SERIES		DISP	FLANGE		SHAFT	PORTS		ROTATION	PAINT	FUNCTION	
CODE	DISP	CODE	FLANGE	CODE	PORTS	CODE	PAINT	CODE	FUNCTION	CODE	ROTATION
110	110cm ³ /rev [6.1in ³ /rev]	H9	4- Ø15 square pilot Ø101.6×9 	U5	1-1/16-12 O-ring, 7/16-20UNF	A	No Paint	A	Standard	A	Standard
130	130cm ³ /rev [7.9in ³ /rev]	HL	4- Ø14.5 square pilot Ø127×12.3 	UK	7/8-14 O-ring, 9/16-18UNF	B	Blue	N	Big radial force	R	Opposite
160	160cm ³ /rev [9.9in ³ /rev]	W7	4- Ø14.5 wheel pilot Ø139.6 	MD	M22×1.5, M14×1.5	C	Black	D	No case drain		
205	205cm ³ /rev [12.5in ³ /rev]	HM	4- Ø15 bolt (bearingless) pilot Ø127×12.4 	UL	Ø19.05, 7/16-20UNF manifold 3×3/8-16UNC	S	Silver grey	F	Free running		
245	245cm ³ /rev [15.0in ³ /rev]			SM	Ø31.75 parallel key 7.96×7.96×41 			L	Low speed		
310	310cm ³ /rev [19.0in ³ /rev]			RT	Splined 14-DP 12/24 			V	High Temp.		
395	395cm ³ /rev [24.0in ³ /rev]			SA1	Ø40 paralle key 12×8×70 			S	Low Temp.		
495	495cm ³ /rev [30.0in ³ /rev]			RV	Splined 17-DP 12/24 						
625	625cm ³ /rev [38in ³ /rev]			TE	Tapered Ø41.25 parallel key 11.13×11.13×31.4 						

Specifications

Type		GKB100	GKB130	GKB160	GKB205	GKB245
Displ. cm ³ /rev [in ³ /rev]		110[6.7]	130[7.9]	160[9.9]	205[12.5]	245[15.0]
Max. Speed	Cont.	626	722	582	459	383
RPM	Int.*	697	862	693	546	532
Flow	Cont.	75[20]	95[25]	95[25]	95[25]	95[25]
lpm [GPM]	Int.*	95[25]	115[30]	115[30]	115[30]	130[35]
Torque	Cont.	32.2[2850]	37.6[3330]	48.5[4290]	59.9[5300]	70.5[6240]
daNm [lb - in]	Int.*	47.0[4160]	55.8[4940]	70.5[6240]	80.2[7100]	84.4[7470]
Pressure Δ	Cont.	205[3000]	205[3000]	205[3000]	205[3000]	205[3000]
bar [Δ PSI]	Int.*	310[4500]	310[4500]	310[4500]	310[4500]	260[3750]
	Peak**	310[4500]	310[4500]	310[4500]	310[4500]	310[4500]
Weight kg [lb]	Standard or Wheel mount	17.9[39.5]	18.1[40.0]	18.1[40.0]	18.4[40.5]	18.6[41.0]
	Bearingless	14.1[31.0]	14.1[31.0]	14.3[31.5]	14.5[32.0]	14.7[32.5]

Type		GKB280	GKB310	GKB395	GKB495	GKB625
Displ. cm ³ /rev [in ³ /rev]		280[17.1]	310[19.0]	395[24.0]	495[30.0]	625[38.0]
Max. Speed	Cont.	336	303	239	191	151
RPM	Int.*	468	422	376	305	241
Flow	Cont.	95[25]	95[25]	95[25]	95[25]	95[25]
lpm [GPM]	Int.*	130[35]	130[35]	150[40]	150[40]	150[40]
Torque	Cont.	75.3[6666]	85.1[7530]	93.1[8240]	94.6[8375]	97.2[8605]
daNm [lb - in]	Int.*	95.7[8471]	106.4[9420]	118.3[10470]	116.9[10350]	118.1[10450]
Pressure	Cont.	205[3000]	205[3000]	190[2750]	140[2000]	115[1700]
bar [PSI]	Int.*	260[3750]	260[3750]	240[3500]	170[2500]	140[200]
	Peak**	310[4500]	310[4500]	295[4250]	230[3300]	180[2600]
Weight kg [lb]	Standard or Wheel mount	19.1[42.0]	19.5[43.0]	20.4[45]	21.8[48.0]	23.1[51.0]
	Bearingless	15.2[33.5]	15.6[34.5]	16.6[36.5]	17.9[39.5]	19.3[42.5]

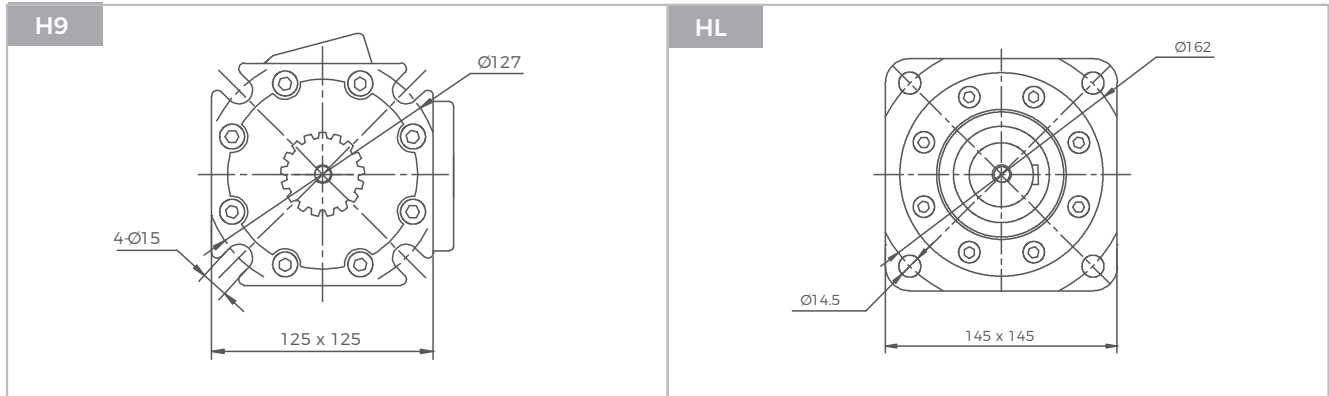
GKB Dimensions and Mountings



Model	1-1/16-12 or G3/4 Threaded Ports		3/4 Split Flange Oil Ports	
	H	L	H	L
GKB110	214.4	158.3	246.3	166.7
GKB130	218.4	162.3	250.4	170.8
GKB160	224.7	168.7	256.7	177.1
GKB205	233.2	177.2	265.2	185.6
GKB245	224.7	168.7	256.7	177.1
GKB310	233.2	177.2	265.2	185.6
GKB395	243.9	187.9	275.9	196.3
GKB495	256.8	200.7	288.8	209.2
GKB625	273.9	217.8	305.9	226.2

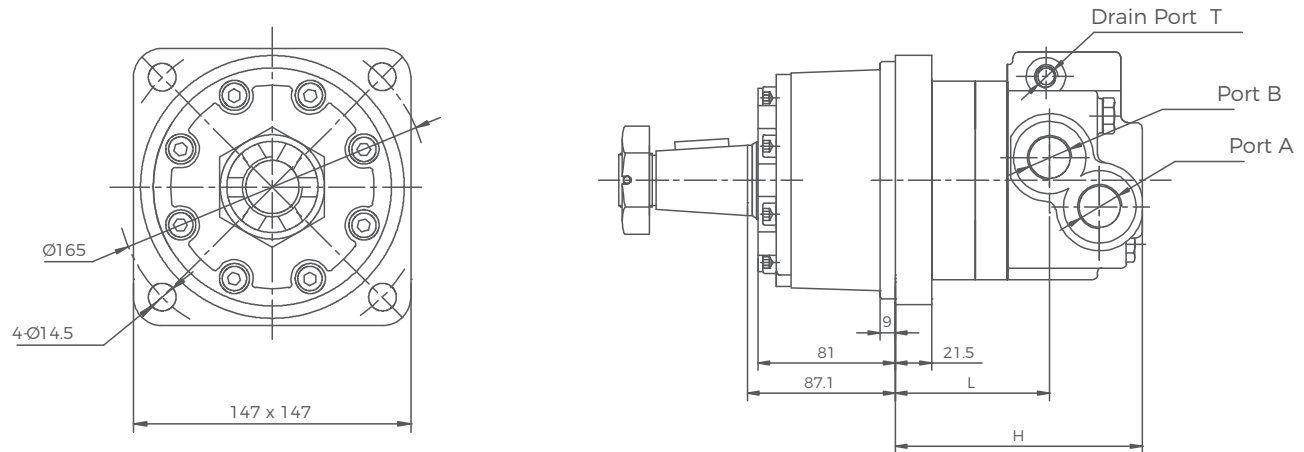
Mounting	U5 (depth)	UK (depth)	MD (depth)	UL (depth)
P(A, B)	1-1/16-12 O-ring	7/8-14 UNF O-ring	M22 x 1.5	2- $\text{Ø}19.05$
T	7/16-20 O-ring	9/16-18 UNF O-ring	M22 x 1.5	7/16-20 UNF
C	—	—	—	M10

GKB Flange Covers Dimensions

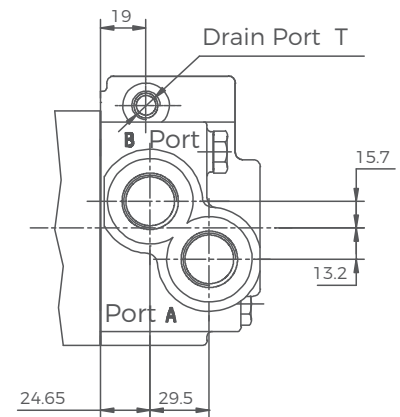


GKB Wheel Motor Dimensions and Mountings

Flange W7



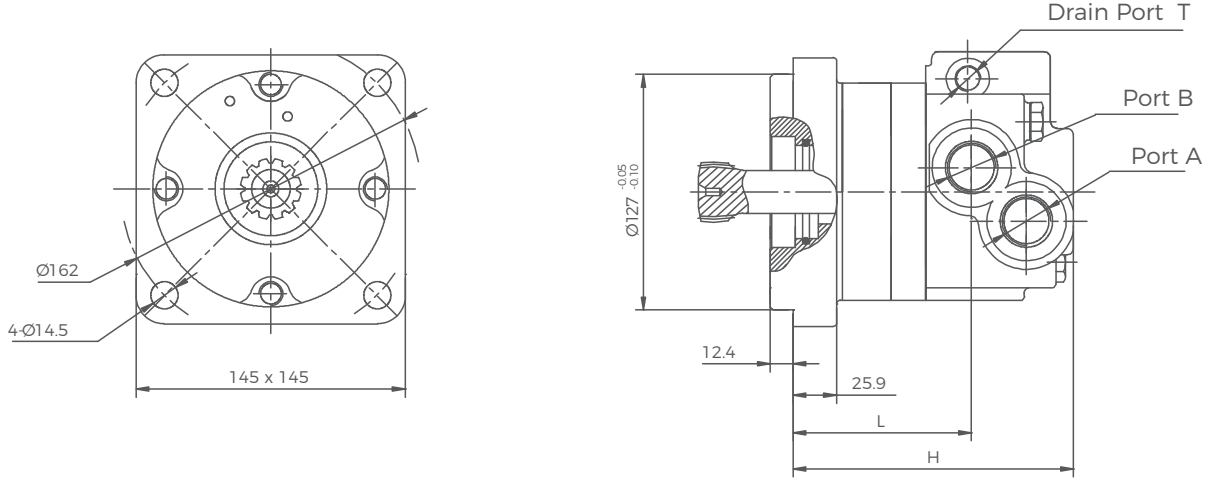
Model	1-1/16-12 or G3/4 Threaded Ports		3/4 Split Flange Oil Ports	
	H	L	H	L
GKB110	143.3	87.4	174.5	95.1
GKB130	147.3	91.5	178.5	99.1
GKB160	153.6	97.8	184.9	105.5
GKB205	162.2	106.3	193.4	114.0
GKB245	153.6	97.8	184.9	105.5
GKB310	162.2	106.3	193.4	114.0
GKB395	172.8	117.0	204.1	124.7
GKB495	185.8	129.9	217.0	137.6
GKB625	202.8	147.0	234.0	154.6



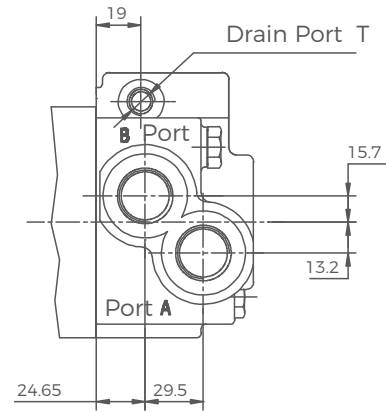
Mounting	U5 (depth)	UK (depth)	MD (depth)	UL (depth)
P(A, B)	1-1/16-12 O-ring	7/8-14 UNF O-ring	M22 x 1.5	2-Φ 19.05
T	7/16-20 O-ring	9/16-18 UNF O-ring	M22 x 1.5	7/16-20 UNF
C	—	—	—	M10

GKB Bearingless Motor Dimensions and Mountings

Flange HM

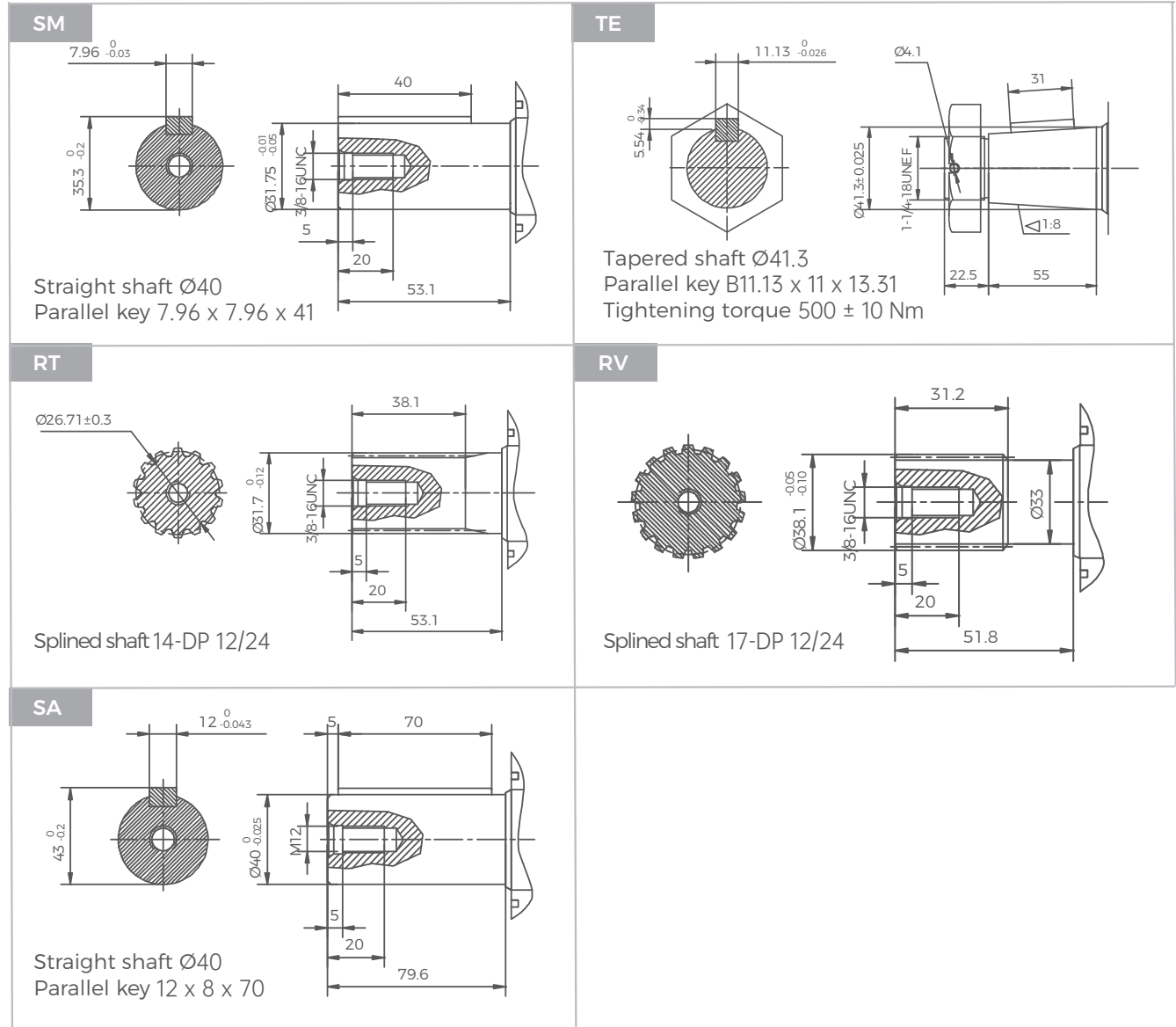


Model	1-1/16-12 or G3/4 Threaded Ports		3/4 Split Flange Oil Ports	
	H	L	H	L
GKB110	146.8	91.0	178.7	99.4
GKB130	150.8	95.1	182.8	103.5
GKB160	157.1	101.4	189.1	109.8
GKB205	165.7	109.9	197.6	118.3
GKB245	157.1	101.4	189.1	109.8
GKB310	165.7	109.9	197.6	118.3
GKB395	176.3	120.6	208.3	129.0
GKB495	189.2	133.5	221.2	141.9
GKB625	206.3	150.5	238.3	159.0



Mounting	U5 (depth)	UK (depth)	MD (depth)	UL (depth)
P(A, B)	1-1/16-12 O-ring	7/8-14 UNF O-ring	M22 x 1.5	2-Ø19.05
T	7/16-20 O-ring	9/16-18 UNF O-ring	M22 x 1.5	7/16-20 UNF
C	—	—	—	3 x 3/8-16UNC

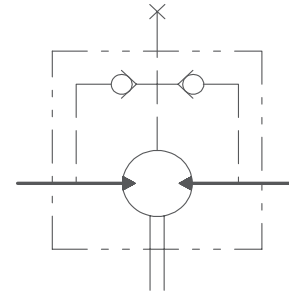
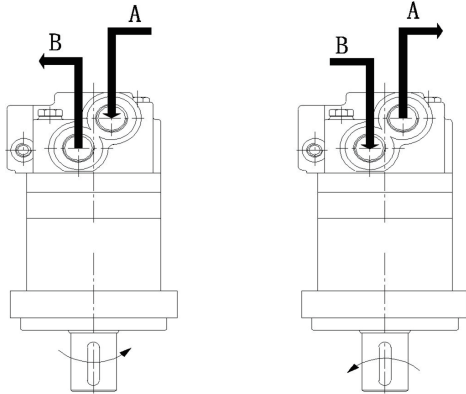
GKB Shafts Dimensions



GKB Series Hydraulic Motors

Standard direction of shaft rotation: Standard

When facing shaft end of motor, shaft to rotate:
Clockwise. When port A is pressurized.
Counter-clockwise port B is pressurized.



GKB with standard shaft seal check valves and without use of drain connection: The pressure on the shaft seal never exceeds the pressure in the return line.

GKB with standard shaft seal, check valves and with drain connection: The shaft seal

Output shaft stand radial force

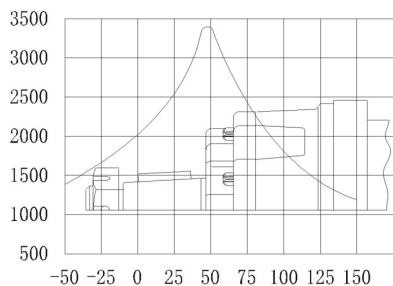
The following curves represent the load capacity at various locations along the radial direction of the motor output shaft. The curves are based on B10 bearing life at rated output torque. (2000 hours or 12,000,000 revolutions at 100RPM). To determine the radial load at speeds other than 100 RPM, multiply the load values on the bearing curves by the factors given in the table below.

RPM	Coefficients
50	1.23
100	1.00
200	0.81
300	0.72
400	0.66
500	0.62
600	0.58
700	0.56
800	0.54

52% increase in load capacity at 3,000,000 rpm or 500 hours.

Wheel motor with tapered shaft

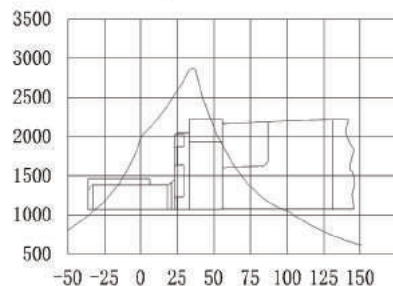
Radial force (daN)



The distance between the force point and the flange surface (mm)

Standard motor with cylindrical shaft

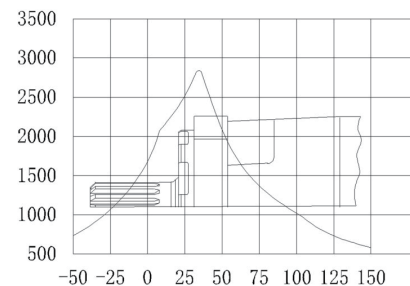
Radial force (daN)



The distance between the force point and the flange surface (mm)

Standard motor with spline shaft

Radial force (daN)



The distance between the force point and the flange surface (mm)