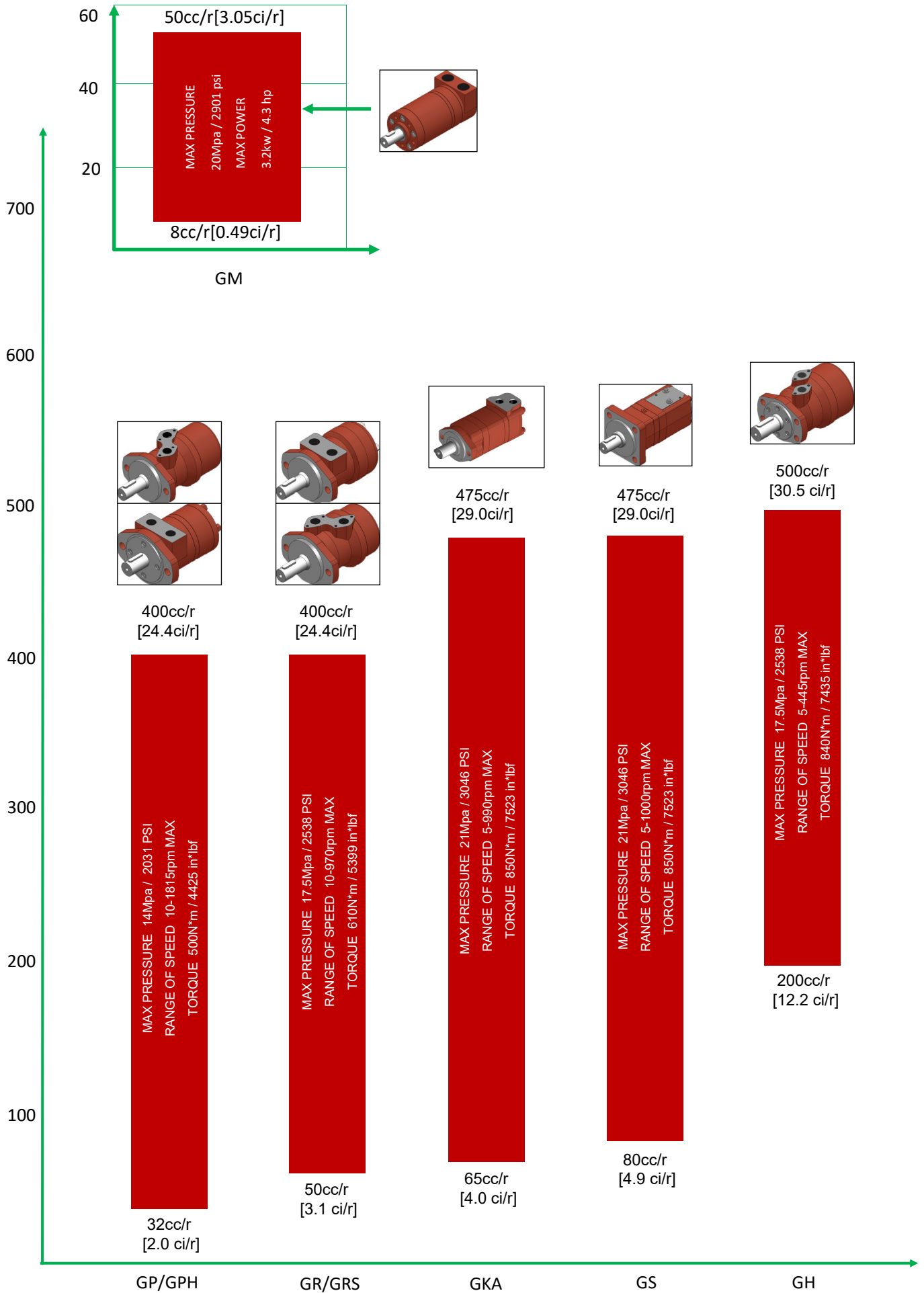




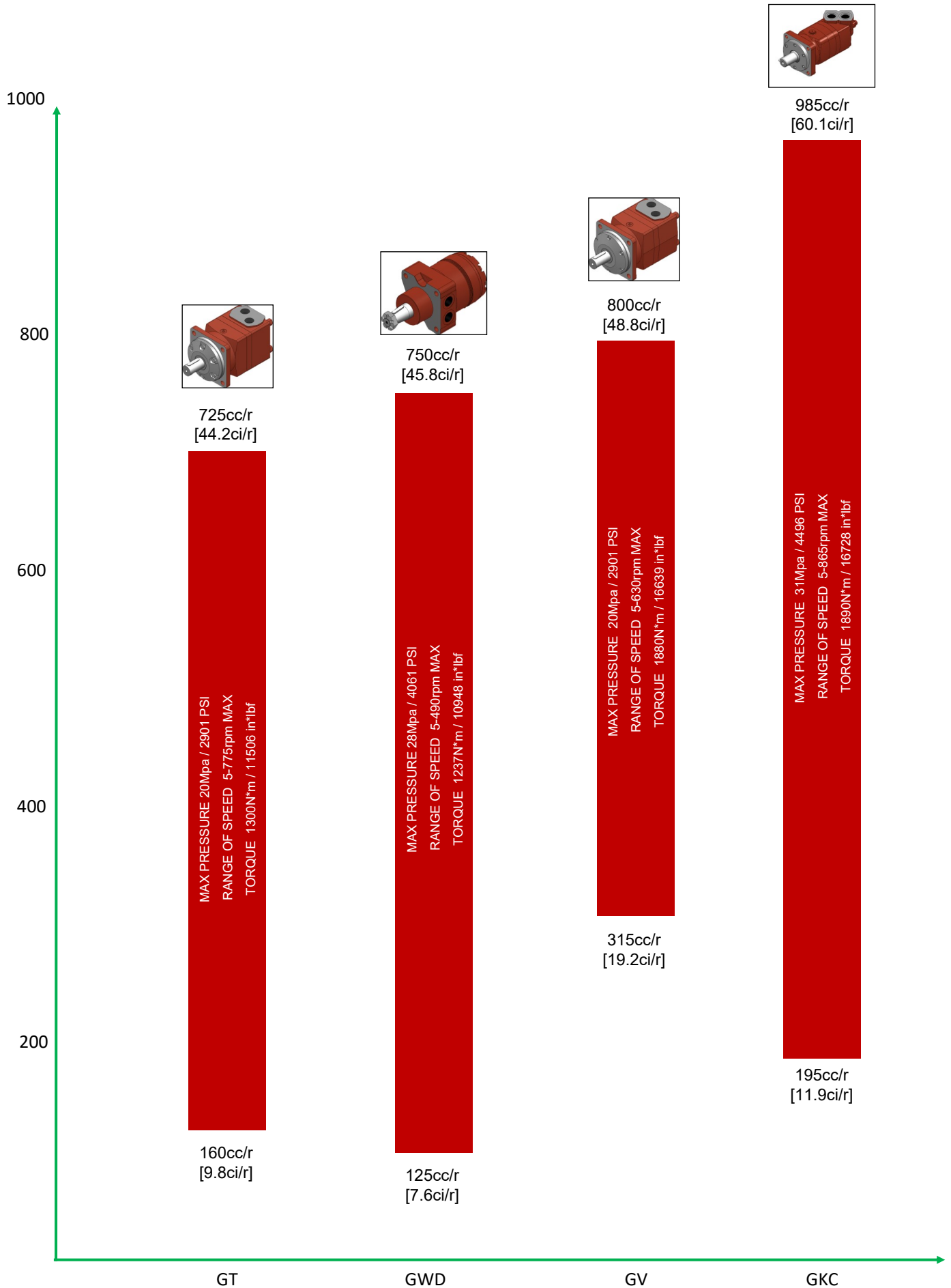
Hydraulic Orbit Motors Guide



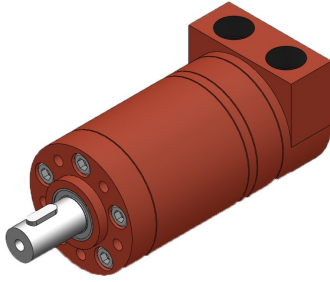
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CONTENTS



General

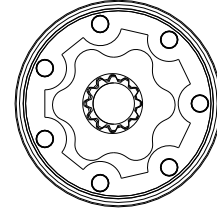


APPLICATION

- ◇ Conveyors
- ◇ Feeding machinery of robots and manipulators
- ◇ Metal working machines
- ◇ Textile machines
- ◇ Agricultural machines
- ◇ Food industries
- ◇ Lawn mower

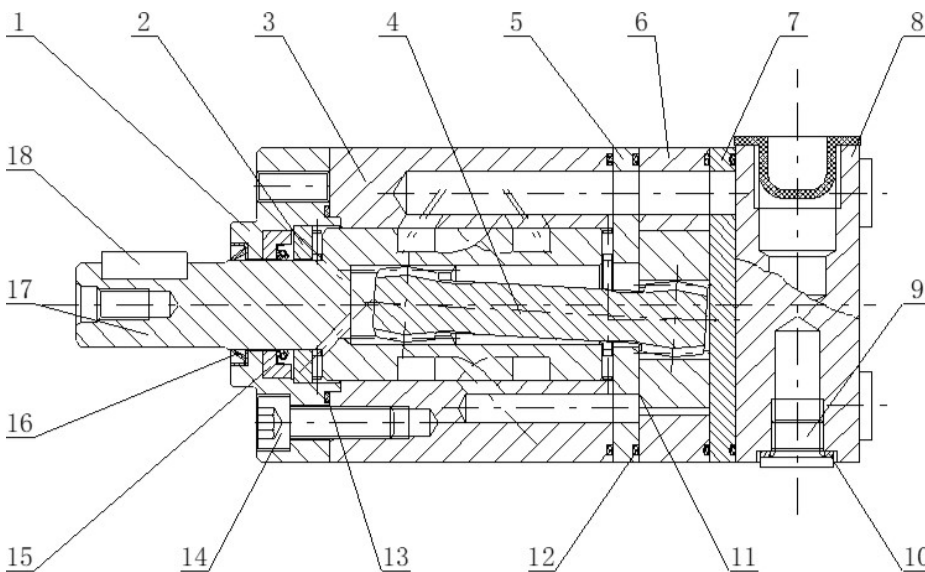
OPTIONS

- ◇ Flange connection
- ◇ Motor with needle bearing
- ◇ Side and rear ports
- ◇ Shafts—straight, splined and tapered
- ◇ Shaft seal for high and low pressure
- ◇ Metric and BSPP ports
- ◇ Speed sensing



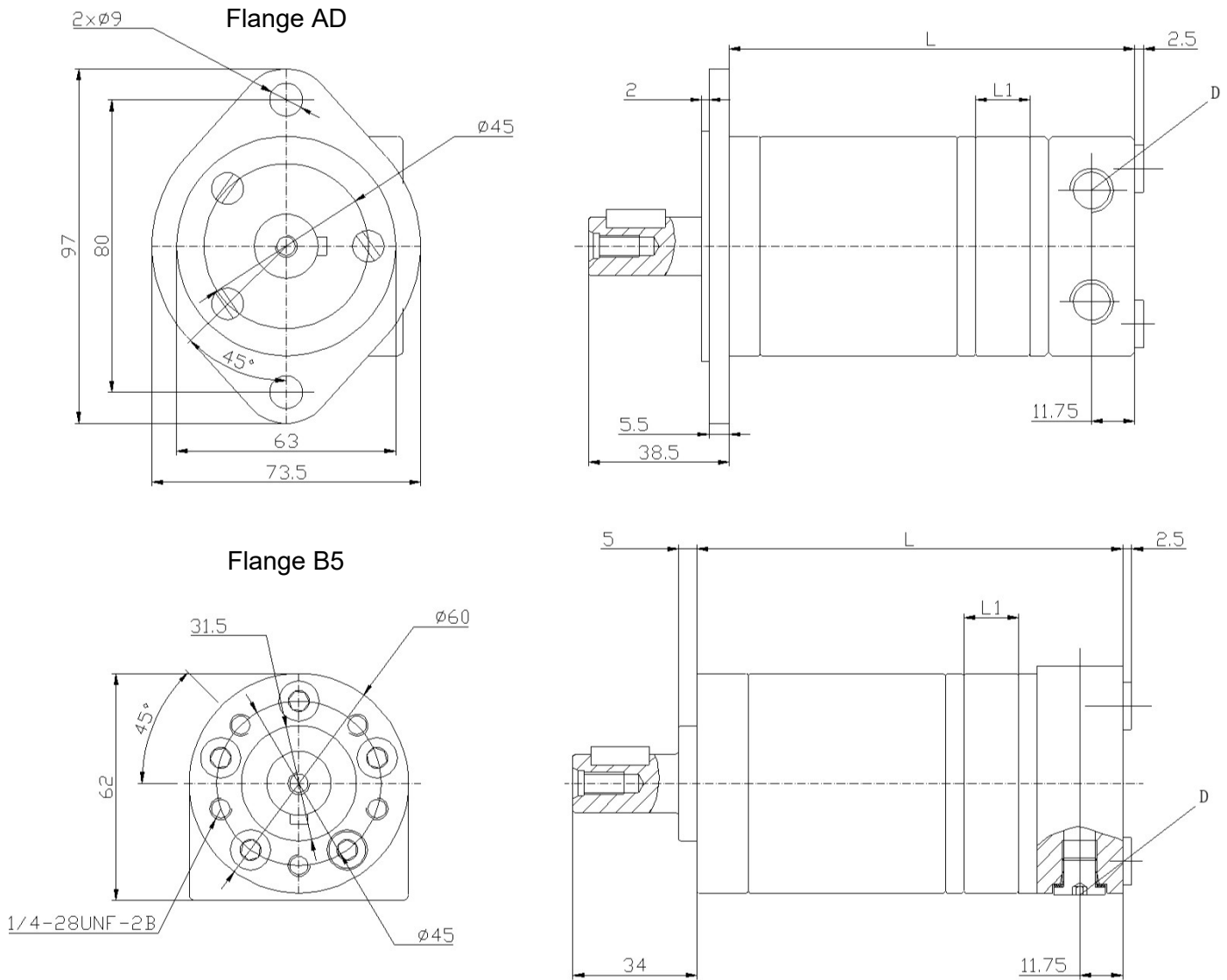
◇ Shaft distribution flow

Model		GM8	GM12.5	GM20	GM32	GM40	GM50
Disp.	in ³ /rev	0.5	0.76	1.21	1.93	2.43	3.07
	cm ³ /rev	8.2	12.9	19.9	31.6	39.8	50.3
Max Speed rpm	cont.	1950	1550	1000	630	500	400
	int.	2450	1940	1250	800	630	500
Max Torque N m [lb-in]	cont.	11 [97]	16 [141]	25 [221]	40 [354]	45 [398]	46 [407]
	int.	15 [132]	23 [203]	35 [310]	57 [504]	70 [620]	88 [779]
Max Dif. bar [psi]	cont.	102 [1450]	102 [1450]	102 [1450]	102 [1450]	86 [1233]	71 [1015]
	int.	142 [2030]	142 [2030]	142 [2030]	142 [2030]	122 [1740]	102 [1450]
Max Flow l/min [gpm]	cont.	15 [3.96]	20 [5.28]	20 [5.28]	20 [5.28]	20 [5.28]	20 [5.28]
	int.	20 [5.28]	25 [6.6]	25 [6.6]	25 [6.6]	25 [6.6]	25 [6.6]
Weight kg [lbs]		1.94 [4.3]	2.03 [4.5]	2.12 [4.72]	2.23 [4.95]	2.25 [5]	2.30 [5.1]



1. Front Cover
2. Thrust Washer
3. Housing
4. Cardan Joint
5. Front Plate
6. Gear Set
7. End Plate
8. End Cover
9. Drain Plug
10. Washer
11. Axial Needle Bearing
12. O-ring
13. O-ring
14. Screw
15. Shaft Seal
16. Dust Seal
17. Shaft
18. Key

Dimensions and Mounting Data

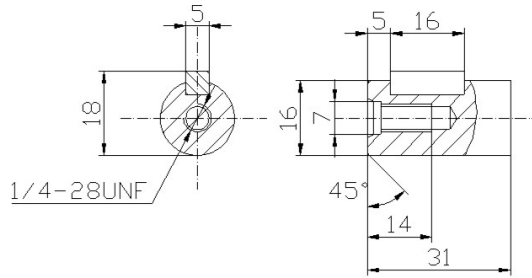


Model	A		B	
	L	L1	L	L1
GM8	109 [4.29"]	3 [0.12"]	105 [4.13"]	3 [0.12"]
GM12.5	111 [4.37"]	5 [0.20"]	107 [4.21"]	5 [0.20"]
GM20	114 [4.49"]	8 [0.32"]	110 [4.33"]	8 [0.32"]
GM32	119 [4.69"]	13.5 [0.53"]	115 [4.53"]	13.5 [0.53"]
GM40	122 [4.80"]	17 [0.67"]	118 [4.65"]	17 [0.67"]
GM50	127 [5.00"]	21 [0.83"]	123 [4.84"]	21 [0.83"]

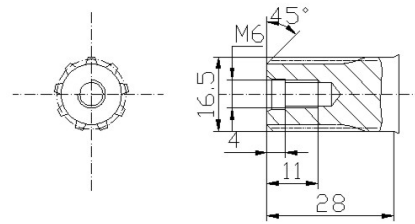
Ports	A	B
D	SAE-6 O'ring 9/16-18	SAE-6 O'ring 9/16-18
T	SAE-3 O'ring 3/8-24	SAE-3 O'ring 3/8-24

GM Shaft Extension Dimensions Data

Shaft SS : Cylindrical shaft $\varnothing 16$,
Parallel key 5x5x16



Shaft RK : Splined B17x14 DIN5482



Model	Displacement	Flange	Drive shaft	Ports	Other functions
GM	8	B4	SS	GA	ACA
Model	Disp.	Flange	Drive shaft	Ports	
GM	8	<u>B4</u> =3-M6 circle flange $\varnothing 45$, pilot $\varnothing 31.5 \times 5$	<u>SS</u> =Shaft $\varnothing 16$, parallel key 5x5x16	<u>GA</u> =G3/8, G1/8	
	12.5	<u>B5</u> =3-1/4-28 UNF circle flange $\varnothing 45$, pilot $\varnothing 31.5 \times 5$	<u>ST</u> =Shaft $\varnothing 0.625$ ", parallel key 0.188"x0.188"x0.75"	<u>U8</u> =SAE-6 O'ring 9/16-18 UNF, 3/8-24 UNF, Side	
	20				
	32	<u>AD</u> =2- $\varnothing 9$ rhomb flange $\varnothing 80$, pilot $\varnothing 63 \times 2$	<u>RK</u> =Shaft $\varnothing 16.5$, splined B17x14 DIN5482	<u>1U</u> =SAE-6 O'ring 9/16-18 UNF, 3/8-24 UNF, Rear	
	40				
50					

Rotation direction	Paint	Standard Options
<u>A</u> =Standard / CW 'A' port pressurized <u>R</u> =Reverse / CCW 'A' port pressurized	<u>A</u> =No paint <u>B</u> =Blue <u>C</u> =Black <u>S</u> =Silver gray <u>G</u> =Corrosion resistant coating	<u>A</u> =Standard <u>N</u> =Large radial force <u>D</u> =No case drain <u>F</u> =Free running <u>L</u> =Low speed <u>V</u> =High temperature <u>S</u> =Low temperature

Hydraulic Orbit Motors GM



Flow Data

GM8		8.2cm ³ /rev (0.50in ³ /rev)			Max Cont.		Max Int.
Pressure bar [psi→]		35.7 [510]	50.8 [725]	71.1 [1015]	101.5 [1450]	122.5 [1750]	142.1 [2030]
Flow	l/min [gpm↓]	Torque N m [lb-in] Speed Specification					
	2 [0.52]	3 [27]	5 [44]	8 [71]	10 [89]	12 [106]	14 [124]
		228rpm	218rpm	206rpm	156rpm	111rpm	58rpm
	4 [1.05]	3 [27]	5 [44]	7 [62]	11 [97]	13 [115]	15 [133]
		474rpm	471rpm	463rpm	426rpm	391rpm	331rpm
	8 [2.1]	3 [27]	5 [44]	7 [62]	11 [97]	13 [115]	15 [133]
		953rpm	946rpm	926rpm	884rpm	855rpm	816rpm
	12 [3.15]	2 [18]	5 [44]	7 [62]	10 [89]	13 [115]	15 [133]
		1444rpm	1426rpm	1402rpm	1360rpm	1324rpm	1288rpm
	15 [3.95]		4 [35]	7 [62]	10 [89]	12 [106]	14 [124]
Max Cont.		1912rpm	1900rpm	1861rpm	1833rpm	1780rpm	
20 [5.25]			6 [53]	10 [89]	11 [97]	14 [124]	
Max Int.			2395rpm	2350rpm	2328rpm	2281rpm	
GM12.5		12.9cm ³ /rev (0.76in ³ /rev)			Max Cont.		Max Int.
Pressure bar [psi→]		35.7 [510]	50.8 [725]	71.1 [1015]	101.5 [1450]	122.5 [1750]	142.1 [2030]
Flow	l/min [gpm↓]	Torque N m [lb-in] Speed Specification					
	2 [0.52]	6 [53]	8 [71]	11 [97]	16 [142]	19 [168]	
		140rpm	136rpm	119rpm	68rpm	35rpm	
	4 [1.05]	6 [53]	8 [71]	12 [106]	17 [150]	19 [168]	23 [204]
		296rpm	289rpm	274rpm	229rpm	200rpm	145rpm
	8 [2.1]	5 [44]	8 [71]	12 [106]	17 [150]	20 [177]	24 [212]
		605rpm	596rpm	583rpm	543rpm	514rpm	469rpm
	12 [3.15]	5 [44]	8 [71]	11 [97]	16 [142]	20 [177]	24 [212]
		912rpm	905rpm	895rpm	859rpm	834rpm	784rpm
	15 [3.95]	5 [44]	7 [62]	11 [97]	16 [142]	19 [168]	23 [204]
1152rpm		1144rpm	1136rpm	1102rpm	1078rpm	1036rpm	
20 [5.25]	3 [27]	7 [62]	10 [89]	15 [133]	19 [168]	22 [195]	
Max Cont.	1542rpm	1532rpm	1521rpm	1500rpm	1482rpm	1437rpm	
25 [6.57]	2 [18]	6 [53]	9 [80]	14 [124]	18 [159]	22 [195]	
Max Int.	1910rpm	1891rpm	1878rpm	1848rpm	1828rpm	1788rpm	
GM20		19.9cm ³ /rev (1.21in ³ /rev)			Max Cont.		Max Int.
Pressure bar [psi→]		17.2 [246]	35.7 [510]	50.8 [725]	71.1 [1015]	101.5 [1450]	122.5 [1750]
Flow	l/min [gpm↓]	Torque N m [lb-in] Speed Specification					
	2 [0.52]	3 [27]	9 [80]	14 [124]	19 [168]	26 [230]	30 [266]
		99rpm	96rpm	89rpm	74rpm	42rpm	21rpm
	4 [1.05]	4 [35]	9 [80]	14 [124]	19 [168]	26 [230]	31 [274]
		197rpm	191rpm	182rpm	178rpm	134rpm	112rpm
	8 [2.1]	4 [35]	9 [80]	13 [115]	19 [168]	27 [239]	31 [274]
		398rpm	395rpm	391rpm	377rpm	340rpm	319rpm
	12 [3.15]	3 [27]	8 [71]	13 [115]	18 [159]	26 [230]	31 [274]
		596rpm	594rpm	588rpm	579rpm	545rpm	523rpm
	15 [3.95]	3 [27]	8 [71]	12 [106]	17 [150]	25 [221]	30 [266]
745rpm		741rpm	738rpm	728rpm	695rpm	684rpm	
20 [5.25]	1 [9]	6 [53]	11 [97]	19 [168]	24 [212]	29 [257]	
Max Cont.	998rpm	995rpm	991rpm	985rpm	962rpm	916rpm	
25 [6.57]		4 [35]	9 [80]	14 [124]	23 [204]	28 [248]	
Max Int.		1247rpm	1245rpm	1242rpm	1189rpm	1180rpm	

Hydraulic Orbit Motors GM



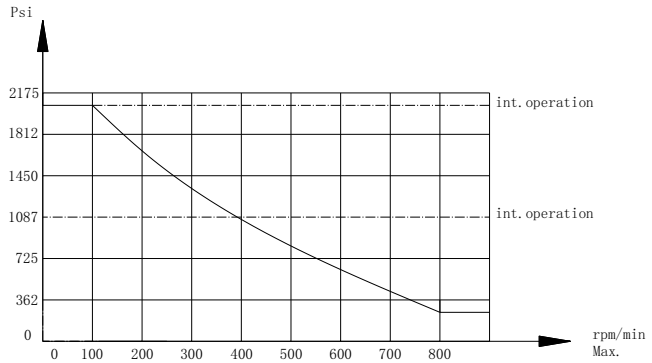
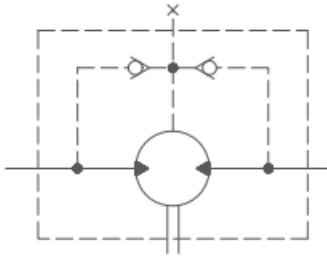
Flow Data

GM32		31.6cm ³ /rev (1.90in ³ /rev)				Max Cont.		Max Int.	
Pressure bar [psi→]		20.3 [290]	35.7 [510]	50.8 [725]	71.1 [1015]	101.5 [1450]	122.5 [1750]	142.1 [2030]	
Flow	l/min [gpm↓]	Torque N m [lb-in] Speed Specification							
	2 [0.52]	7 [62]	15 [133]	21 [186]	28 [248]	40 [354]			
		61rpm	57rpm	52rpm	47rpm	16rpm			
	4 [1.05]	7 [62]	15 [133]	21 [186]	29 [257]	41 [363]	48 [425]	57 [504]	
		126rpm	121rpm	114rpm	106rpm	82rpm	67rpm	49rpm	
	8 [2.1]	7 [62]	15 [133]	21 [186]	29 [257]	41 [363]	49 [434]	58 [513]	
		250rpm	244rpm	239rpm	231rpm	207rpm	194rpm	167rpm	
	12 [3.15]	6 [53]	13 [115]	20 [177]	28 [248]	40 [354]	48 [425]	58 [513]	
		378rpm	374rpm	369rpm	362rpm	338rpm	322rpm	297rpm	
	15 [3.95]	4 [35]	12 [106]	18 [159]	27 [238]	39 [345]	47 [416]	57 [504]	
476rpm		472rpm	468rpm	462rpm	441rpm	429rpm	406rpm		
20 [5.25]	3 [27]	10 [89]	17 [150]	25 [221]	37 [327]	46 [407]	55 [487]		
	Max Cont.	633rpm	630rpm	627rpm	619rpm	601rpm	585rpm	566rpm	
25 [6.57]	1 [9]	8 [71]	15 [133]	23 [204]	35 [310]	43 [381]	52 [460]		
Max Int.	791rpm	789rpm	787rpm	783rpm	766rpm	753rpm	732rpm		
GM40		39.8cm ³ /rev (2.39in ³ /rev)				Max Cont.		Max Int.	
Pressure bar [psi→]		35.7 [510]	50.8 [725]	71.1 [1015]	86.3 [1233]	101.5 [1450]	122.5 [1750]		
Flow	l/min [gpm↓]	Torque N m [lb-in] Speed Specification							
	2 [0.52]	16 [142]	27 [239]	36 [319]	44 [389]	51 [451]			
		45rpm	40rpm	34rpm	28rpm	17rpm			
	4 [1.05]	16 [142]	27 [239]	37 [327]	44 [389]	52 [460]	62 [549]		
		96rpm	93rpm	85rpm	79rpm	65rpm	52rpm		
	8 [2.1]	15 [133]	26 [230]	36 [319]	44 [389]	52 [460]	63 [558]		
		197rpm	195rpm	182rpm	176rpm	166rpm	154rpm		
	12 [3.15]	14 [124]	25 [221]	35 [310]	43 [381]	51 [451]	62 [549]		
		293rpm	287rpm	282rpm	277rpm	268rpm	257rpm		
	15 [3.95]	13 [115]	24 [212]	34 [301]	42 [372]	50 [443]	62 [549]		
371rpm		365rpm	360rpm	355rpm	347rpm	338rpm			
20 [5.25]	10 [89]	21 [186]	31 [274]	39 [345]	48 [425]	59 [522]			
	Max Cont.	497rpm	492rpm	487rpm	480rpm	472rpm	463rpm		
25 [6.57]	7 [62]	19 [168]	29 [257]	37 [327]	44 [389]	56 [496]			
Max Int.	622rpm	617rpm	612rpm	607rpm	600rpm	591rpm			
GM50		50.3cm ³ /rev (3.02in ³ /rev)				Max Cont.		Max Int.	
Pressure bar [psi→]		15.3 [218]	35.7 [510]	50.8 [725]	71.1 [1015]	101.5 [1450]			
Flow	l/min [gpm↓]	Torque N m [lb-in] Speed Specification							
	2 [0.52]	11 [97]	23 [204]	36 [319]	50 [443]				
		37rpm	33rpm	27rpm	22rpm				
	4 [1.05]	11 [97]	22 [195]	36 [319]	50 [443]	70 [620]			
		76rpm	73rpm	68rpm	63rpm	55rpm			
	8 [2.1]	11 [97]	21 [186]	35 [310]	50 [443]	71 [628]			
		157rpm	154rpm	149rpm	145rpm	137rpm			
	12 [3.15]	11 [97]	20 [177]	33 [292]	49 [434]	71 [628]			
		237rpm	234rpm	231rpm	226rpm	218rpm			
	15 [3.95]	10 [89]	18 [159]	32 [283]	47 [415]	69 [611]			
296rpm		295rpm	294rpm	288rpm	282rpm				
20 [5.25]	8 [71]	14 [124]	29 [257]	44 [389]	64 [566]				
	Max Cont.	395rpm	395rpm	393rpm	390rpm	381rpm			
25 [6.57]	4 [35]	10 [89]	25 [221]	40 [354]	59 [522]				
Max Int.	498rpm	496rpm	494rpm	490rpm	484rpm				

Technical Data

Hydraulic orbit Motors GPH

Permissible shaft seal pressure



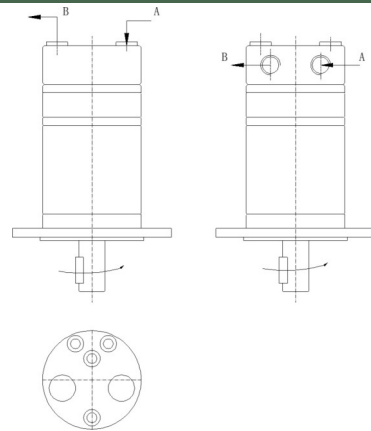
In applications without drain line, output shaft seal exceeds a bit of the pressure in the return line. When applications use the drain line, the pressure of output shaft seal equals the pressure in drain line.

Case Drain

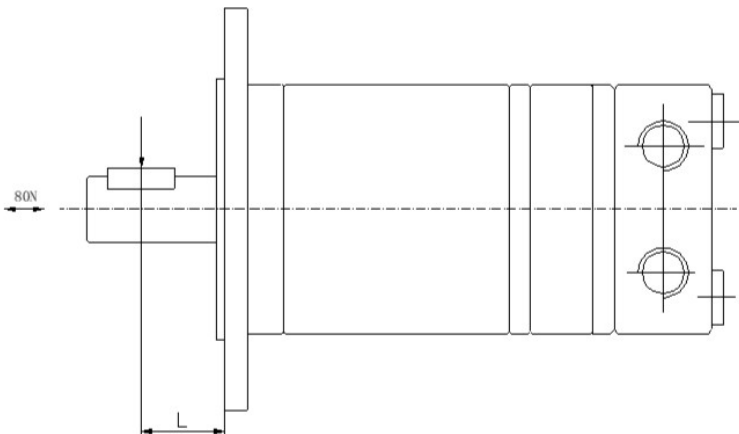
In applications without a motor drain line, the pressure exerted on the shaft seal is marginally in excess of the return line pressure. When the Drain line is used, the pressure exerted on the shaft seal is equal to the return line pressure.

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.



Axial and Radial force



$$Fr = \frac{130400}{61.5 + L} n$$

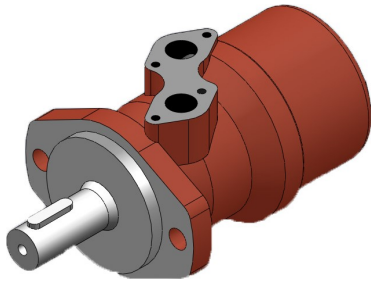
Fr = Radial Force (daN)
 L = Distance (mm)
 n = Speed (rpm)
 Rhomb-flange L=15mm
 Square-flange L=20mm

GRH Hydraulic Motor Series

Guide for orbit motors	
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4: GR Series Dimensions, Data, Function Diagrams and Order Information	32-41
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9: GT Series Dimensions, Data, Function Diagrams and Order Information	82-90
10: GWD Series Dimensions, Data, Function Diagrams and Order Information	91-102
11: GV Series Dimensions, Data, Function Diagrams and Order Information	103-110
12: GKC Series Dimensions, Data, Function Diagrams and Order Information	111-118



General

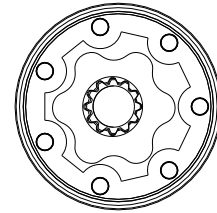


APPLICATION

- ◇ Conveyors
- ◇ Feeding machinery of robots and manipulators
- ◇ Metal working machines
- ◇ Textile machines
- ◇ Agricultural machines
- ◇ Food industries
- ◇ Lawn mower

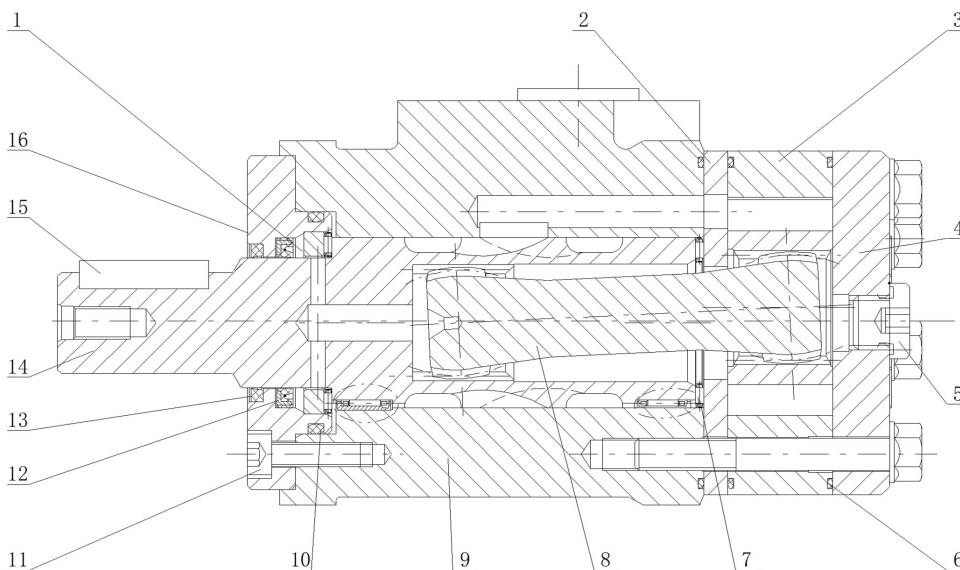
OPTIONS

- ◇ Flange mount
- ◇ Motor with needle roller bearing
- ◇ Speed sensing
- ◇ Side and bottom ports
- ◇ Shaft seal for high and low pressure
- ◇ Shafts—straight, splined and tapered
- ◇ Metric and BSPP ports
- ◇ Other special features



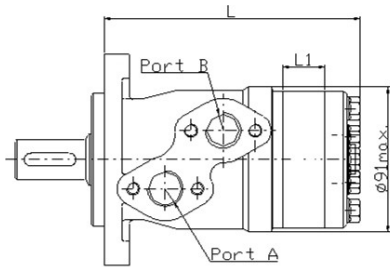
- ◇ Shaft distribution flow

Model		GP40	GP50	GP80	GP100	GP125	GP160	GP200	GP250	GP315	GP400
Disp.	in ³ /rev	2.44	3.02	4.83	6.04	7.55	9.66	12.1	15.1	19.3	24.16
	cm ³ /rev	40	49.5	79.2	99	123.8	158.4	198	247.5	316.8	396
Max Speed rpm	连续 cont.	1500	1210	755	605	486	378	303	242	190	150
	断续 int.	1750	1515	945	755	605	472	378	303	236	189
Max Torque N m [lb-in]	连续 cont.	62 [550]	94 [835]	151 [1340]	193 [1710]	237 [2100]	313 [2770]	366 [3240]	380 [3360]	380 [3360]	360 [3190]
	断续 int.	82 [730]	119 [1050]	195 [1725]	237 [2100]	298 [2640]	378 [3345]	456 [4035]	583 [5160]	560 [4960]	590 [5240]
Max Dif. bar [psi]	连续 cont.	120 [1750]	140 [2030]	140 [2030]	140 [2030]	140 [2030]	140 [2030]	140 [2030]	110 [1600]	90 [1300]	70 [1015]
	断续 int.	155 [2550]	175 [2540]	175 [2540]	175 [2540]	175 [2540]	175 [2540]	175 [2540]	175 [2540]	140 [2030]	115 [1655]
Max Flow l/min [gpm]	连续 cont.	60 [15.9]	60 [15.9]	60 [15.9]	60 [15.9]	60 [15.9]	60 [15.9]	60 [15.9]	60 [15.9]	60 [15.9]	60 [15.9]
	断续 int.	70 [18.5]	75 [19.8]	75 [19.8]	75 [19.8]	75 [19.8]	75 [19.8]	75 [19.8]	75 [19.8]	75 [19.8]	75 [19.8]
Weight kg [lbs]		5.7 [12.6]	5.8 [12.8]	5.9 [13.2]	6.1 [13.5]	6.2 [13.7]	6.4 [14.1]	6.6 [14.6]	6.8 [15]	7.1 [15.6]	7.6 [16.8]

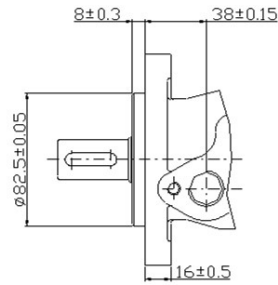
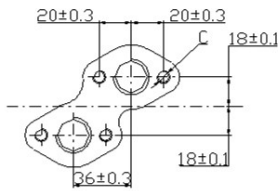


1. Thrust Washer
2. Wear Plate
3. Gear Set
4. End Cover
5. Case Drain Plug
6. O-ring
7. Axial Needle Bearing
8. Cardan Joint
9. Housing
10. O-ring
11. Bolt
12. Shaft Seal
13. Dust Seal
14. Output Shaft
15. Key
16. Front Cover

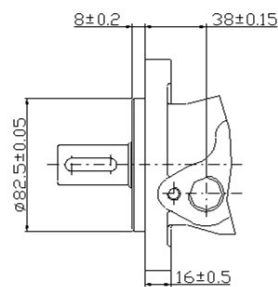
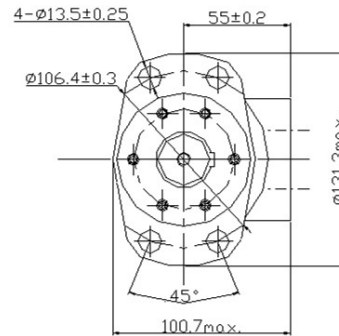
Dimensions and Mounting Data



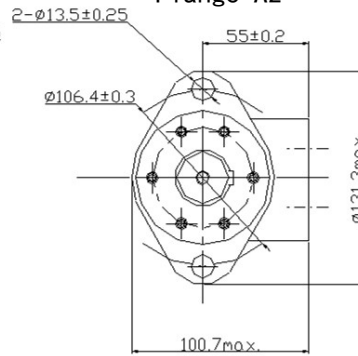
Port 油口



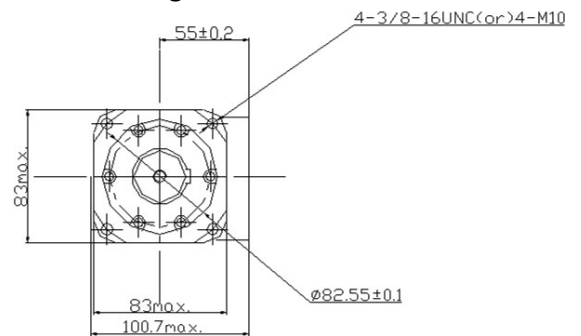
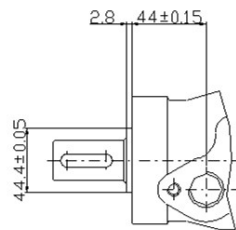
Flange A4



Flange A2



Flange H4/H5

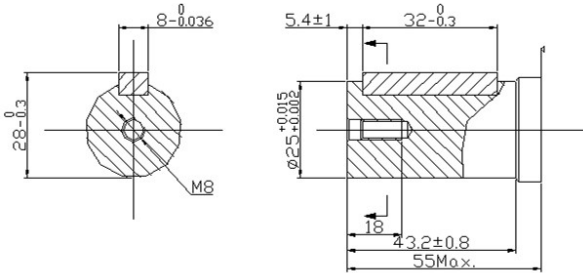


Model	L	L1
GP40	141 [5.55"]	7 [0.28"]
GP50	141 [5.55"]	7 [0.28"]
GP80	144.5 [5.69"]	10.5 [0.41"]
GP100	147 [5.79"]	13 [0.51"]
GP125	150 [5.91"]	16 [0.63"]
GP160	155 [6.10"]	21 [0.83"]
GP200	160 [6.30"]	26 [1.02"]
GP250	166 [6.54"]	32 [1.26"]
GP315	176 [6.93"]	42 [1.65"]
GP400	186 [7.32"]	52 [2.05"]

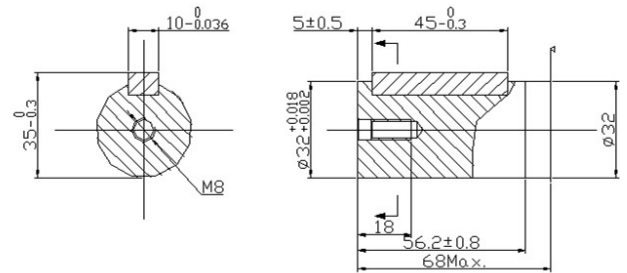
***Flat Seal**

Port	G1 (Depth)	M1 (Depth)	U2 (Depth)	U1 (Depth)	G2 (Depth)
P(A,B)	G1/2(15)	M22x1.5(15)	SAE-10 O'ring 7/8-14 UNF	1/2-14NPTF(15)	PT(RC)1/2(15)
T	G1/4(12)	M14x1.5(12)	* 7/16-20UNF(12)	* 7/16-20UNF(12)	PT(RC)1/4(9.7)
C	4-M8(13)	4-M8(13)	4-5/16-18UNC (13)	4-5/16-18UNC(13)	4-M8(13)

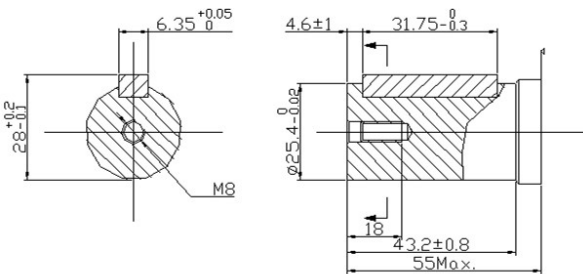
GP Shaft Extension Dimensions Data



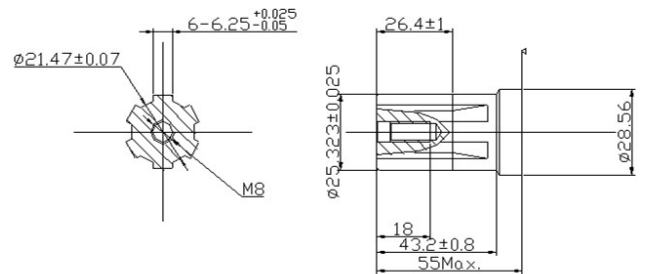
Shaft S1: Cylindrical shaft $\varnothing 25$,
Parallel key 8x7x32



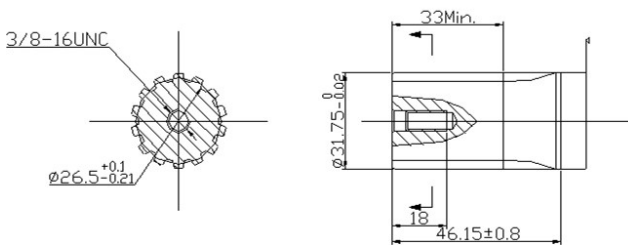
Shaft S4: Cylindrical shaft $\varnothing 32$,
Parallel key 10x8x45



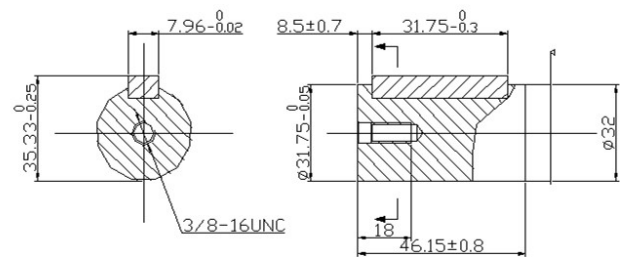
Shaft S2: Cylindrical shaft $\varnothing 1.00"$,
Parallel key 0.25"x0.25"x1.25"



Shaft R1: Splined SAE 6B

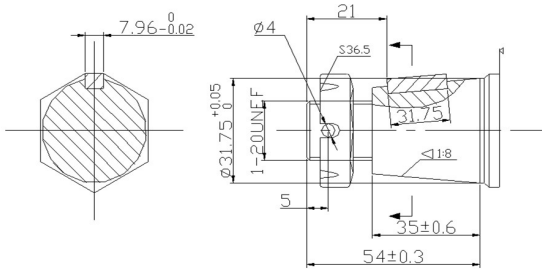


Shaft R2: Splined 14-DP12/24

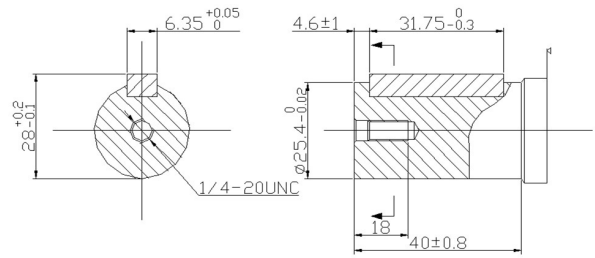


Shaft S5: Cylindrical shaft $\varnothing 1.25"$,
Parallel key 0.31"x0.31"x1.25"

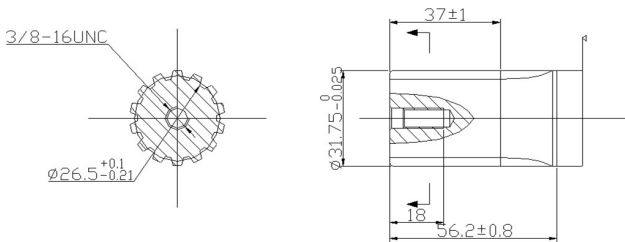
GP Shaft Extension Dimensions Data



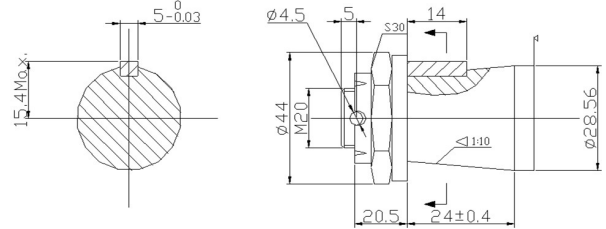
Shaft T2: Tapered shaft $\varnothing 1.25$ ",
Parallel key $0.31 \times 0.31 \times 1.25$ "
Tightening torque: 200 ± 10 Nm



Shaft S3: Cylindrical shaft $\varnothing 1.00$ ",
Parallel key $0.25 \times 0.25 \times 1.25$ "



Shaft R3: Splined 14-DP12/24



Shaft T1: Tapered shaft $\varnothing 28.56$,
Parallel key $B5 \times 5 \times 14$
Tightening torque: 100 ± 10 Nm



GP - How To Order

Ordering Example:		Model	Displacement	Flange	Drive shaft	Ports	Other functions
		GP	40	A2	S1	U20	ACA
Model	Disp.	Flange		Drive shaft		Ports	
GP	40						
	50						
	80	A2 =2-Hole SAE A Flange, Pilot ∅3.25"x 0.32"		S1 =Shaft ∅25, parallel key 8x7x32 S2 =Shaft ∅1.00", parallel key 0.25"x 0.25"x 1.25" S3 =Short shaft ∅1.00", parallel key 0.25"x 0.25"x 1.25"		G1 =G1/2 manifold mount 4xM8, G1/4 M1 =M22x1.5 manifold mount 4xM8, M14x1.5	
	100	A4 =4-Hole SAE A Flange, Pilot ∅3.25"x 0.32"		S4 =Shaft ∅32, parallel key 10x8x45 S5 =Shaft ∅1 .25", parallel key 0.31"x 0.31"x 1.25"		U2 =SAE-10 O'ring 7/8-14UNF manifold 4x5/16-18UNC, 7/16-20UNF (flat seal)	
	125			R1 =Shaft ∅1 .00", splined tooth SAE 6B		U20 =SAE-10 O'ring 7/8-14UNF manifold 4x5/16-18UNC, SAE-4 O'ring 7/16-20UNF	
	160	H4 =4-3/8-16 Hole Square Flange, Pilot ∅1.75"x 0.11"		R2 =Shaft ∅1.25", splined tooth 14- DP12/24		U1 =1/2-14NPTF manifold 4x5/16-18UNC, 7/16-20UNF (flat seal)	
	200	H5 =4-M10 Hole Square Flange, Pilot ∅1.75"x 0.11"		R3 =Long shaft ∅1.25" splined tooth 14-DP12/24		U10 =1/2-14NPTF manifold 4x5/16-18UNC, SAE-4 O'ring 7/16-20UNF	
	250			T1 =Tapered shaft ∅28.56, parallel key B5x5x14		G2 =PT(Rc)1/2 manifold 4xM8, PT(Rc)1/4	
315			T2 =Tapered shaft ∅1.25", parallel key 0.31"x 0.31"x 1.00"				
400							

Shaft Rotation	Paint	Standard Options	Seal Options	Relief Options	Speed Sensor Options
A =Standard / CW 'A' port pressurized R =Reverse / CCW 'A' port pressurized	A =No Paint B =Blue Paint C =Black S =Silver Gray G =Corrosion resistant coating	A =Standard N =Large Radial Force D =No Case Drain E =Free Running L =Low Speed V =High Temperature S =Low Temperature	Blank =None HPS =High Pressure Seal SG =Seal Guard HPS-SG =High Pressure Seal & Seal Guard	Blank =None R =Valve Cavity Only R12 =Bi-Directional Relief Max 125 bar R20 =Bi-Directional Relief Max 207 bar	Blank =None SS =Speed sensor, 4- pin, M12 male connector

Hydraulic Orbit Motors GP



Flow Data

GP40		40cm ³ /rev (2.44in ³ /rev)						Max Cont.	Max Int.
Pressure bar [psi→]		30.5 [435]	60.9 [870]	71.1 [1015]	81.2 [1160]	101.5 [1450]	111.7 [1595]	126.9 [1813]	167.5 [2393]
Flow	l/min[gpm↓]	Torque N m [lb-in] Speed Specification							
	8 [2.11]	13 [115]	25 [221]	29 [257]	34 [301]	43 [381]	48 [425]		
		214rpm	205rpm	200rpm	194rpm	187rpm	179rpm		
	15 [3.96]	13 [115]	25 [221]	29 [257]	34 [301]	43 [381]	48 [425]	56 [496]	75 [664]
		406rpm	398rpm	391rpm	383rpm	374rpm	366rpm	353rpm	324rpm
	20 [5.28]	13 [115]	24 [212]	29 [257]	34 [301]	43 [381]	48 [425]	56 [496]	76 [673]
		541rpm	534rpm	528rpm	521rpm	513rpm	500rpm	486rpm	458rpm
	30 [7.93]	12 [106]	24 [212]	29 [257]	34 [301]	43 [381]	48 [425]	56 [496]	76 [673]
		814rpm	804rpm	792rpm	778rpm	763rpm	749rpm	726rpm	701rpm
	35 [9.25]	12 [106]	23 [204]	28 [248]	34 [301]	43 [381]	48 [425]	56 [496]	76 [673]
		952rpm	944rpm	930rpm	913rpm	897rpm	879rpm	858rpm	833rpm
	40 [10.57]	12 [106]	23 [204]	28 [248]	32 [283]	41 [363]	47 [416]	55 [487]	75 [664]
		1090rpm	1078rpm	1064rpm	1048rpm	1024rpm	998rpm	977rpm	943rpm
	45 [11.89]	11 [97]	22 [195]	26 [230]	32 [283]	41 [363]	46 [407]	54 [478]	74 [655]
1232rpm		1218rpm	1196rpm	1175rpm	1149rpm	1118rpm	1080rpm	1044rpm	
55 [14.53]	6 [53]	15 [133]	22 [195]	28 [248]	37 [327]	44 [389]	52 [460]	71 [628]	
	1505rpm	1494rpm	1480rpm	1466rpm	1438rpm	1406rpm	1367rpm	1309rpm	
60 [15.85]	3 [27]	11 [97]	18 [159]	20 [177]	30 [266]	38 [336]	49 [434]	67 [593]	
	1650rpm	1640rpm	1626rpm	1603rpm	1571rpm	1536rpm	1502rpm	1446rpm	

GP50		49.5cm ³ /rev (3.02in ³ /rev)						Max Cont.	Max Int.
Pressure bar [psi→]		30.5 [435]	60.9 [870]	81.2 [1160]	101.5 [1450]	126.9 [1813]	142.2 [2031]	162.5 [2321]	177.7 [2538]
Flow	l/min[gpm↓]	Torque N m [lb-in] Speed Specification							
	8 [2.11]	20 [177]	41 [363]	56 [496]	69 [611]	89 [788]	95 [841]		
		151rpm	134rpm	115rpm	90rpm	56rpm	42rpm		
	15 [3.96]	19 [168]	40 [354]	56 [496]	71 [628]	91 [805]	100 [885]	112 [991]	120 [1062]
		286rpm	274rpm	261rpm	243rpm	204rpm	182rpm	139rpm	102rpm
	20 [5.28]	18 [159]	39 [345]	55 [487]	71 [628]	92 [814]	101 [894]	117 [1036]	128 [1133]
		382rpm	373rpm	361rpm	348rpm	318rpm	309rpm	287rpm	251rpm
	30 [7.93]	17 [150]	38 [336]	55 [487]	71 [628]	91 [805]	98 [867]	116 [1027]	124 [1097]
		573rpm	568rpm	558rpm	535rpm	503rpm	488rpm	462rpm	440rpm
	35 [9.25]	17 [150]	38 [336]	54 [478]	69 [611]	89 [788]	98 [867]	117 [1036]	124 [1097]
		670rpm	661rpm	652rpm	640rpm	606rpm	589rpm	562rpm	548rpm
	45 [11.89]	14 [124]	36 [319]	53 [469]	67 [593]	88 [779]	98 [867]	114 [1009]	123 [1089]
		863rpm	858rpm	849rpm	837rpm	807rpm	788rpm	764rpm	746rpm
	55 [14.53]	12 [106]	33 [292]	50 [443]	65 [575]	85 [752]	96 [850]	111 [982]	121 [1071]
1055rpm		1042rpm	1028rpm	1010rpm	979rpm	963rpm	947rpm	920rpm	
60 [15.85]	10 [89]	32 [283]	47 [416]	64 [566]	83 [735]	94 [832]	108 [956]	119 [1053]	
	1150rpm	1143rpm	1126rpm	1111rpm	1079rpm	1065rpm	1043rpm	1015rpm	
75 [19.82]	6 [53]	25 [221]	42 [372]	56 [496]	76 [673]	87 [770]	101 [894]	112 [991]	
	1430rpm	1416rpm	1395rpm	1367rpm	1351rpm	1335rpm	1312rpm		

Hydraulic orbit Motors GP



Flow Data

GP80		79.2cm ³ /rev (4.83in ³ /rev)						Max Cont.	Max Int.	
Pressure bar [psi→]		30.5 [435]	60.9 [870]	81.2 [1160]	101.5 [1450]	126.9 [1813]	142.2 [2031]	162.5 [2321]	177.7 [2538]	
Flow	l/min [gpm↓]	Torque N m [lb-in] Speed Specification								
	8 [2.11]	32 [283]	62 [549]	85 [752]	104 [920]	129 [1142]	144 [1275]			
		97rpm	87rpm	74rpm	55rpm	33rpm	22rpm			
	15 [3.96]	32 [283]	63 [558]	84 [743]	107 [947]	126 [1115]	144 [1275]	165 [1460]		
		186rpm	181rpm	170rpm	154rpm	132rpm	118rpm	86rpm		
	20 [5.28]	31 [274]	63 [558]	84 [743]	107 [947]	132 [1168]	146 [1292]	168 [1487]	185 [1637]	
		251rpm	243rpm	236rpm	225rpm	207rpm	196rpm	178rpm	155rpm	
	30 [7.93]	31 [274]	62 [549]	83 [735]	106 [938]	131 [1159]	146 [1292]	168 [1487]	186 [1646]	
		381rpm	379rpm	368rpm	355rpm	332rpm	316rpm	285rpm	263rpm	
	35 [9.25]	30 [266]	59 [522]	81 [717]	102 [903]	130 [1151]	144 [1275]	167 [1478]	185 [1637]	
		443rpm	435rpm	426rpm	415rpm	397rpm	383rpm	361rpm	342rpm	
	45 [11.89]	25 [221]	58 [513]	79 [699]	100 [885]	126 [1115]	142 [1257]	165 [1460]	182 [1611]	
		570rpm	564rpm	554rpm	543rpm	526rpm	509rpm	483rpm	458rpm	
	55 [14.53]	23 [204]	57 [504]	78 [690]	97 [859]	124 [1097]	140 [1239]	161 [1425]	179 [1584]	
696rpm		685rpm	672rpm	656rpm	643rpm	630rpm	602rpm	579rpm		
60 [15.85]	20 [177]	53 [469]	75 [664]	94 [832]	120 [1062]	137 [1213]	160 [1416]	177 [1567]		
	761rpm	753rpm	744rpm	736rpm	720rpm	706rpm	681rpm	660rpm		
75 [19.82]	14 [124]	44 [389]	67 [593]	87 [770]	112 [991]	151 [1336]	169 [1496]	169 [1496]		
Max Int.		948rpm	940rpm	931rpm	920rpm	906rpm	890rpm	871rpm	854rpm	

GP100		99cm ³ /rev (6.04in ³ /rev)						Max Cont.	Max Int.	
Pressure bar [psi→]		30.5 [435]	60.9 [870]	81.2 [1160]	101.5 [1450]	126.9 [1813]	142.2 [2031]	162.5 [2321]	177.7 [2538]	
Flow	l/min [gpm↓]	Torque N m [lb-in] Speed Specification								
	8 [2.11]	40 [354]	77 [682]	105 [929]	130 [1151]	161 [1425]	180 [1593]			
		81rpm	75rpm	69rpm	57rpm	36rpm	24rpm			
	15 [3.96]	39 [345]	77 [682]	106 [938]	130 [1151]	160 [1416]	180 [1593]	208 [1841]		
		152rpm	149rpm	145rpm	140rpm	122rpm	103rpm	81rpm		
	20 [5.28]	36 [319]	74 [655]	104 [920]	128 [1133]	161 [1425]	179 [1584]	208 [1814]	227 [2009]	
		204rpm	200rpm	195rpm	190rpm	177rpm	166rpm	148rpm	133rpm	
	30 [7.93]	33 [292]	72 [637]	103 [912]	125 [1106]	160 [1416]	177 [1567]	203 [1797]	225 [1991]	
		308rpm	304rpm	298rpm	290rpm	280rpm	268rpm	255rpm	231rpm	
	35 [9.25]	30 [266]	70 [620]	98 [867]	122 [1080]	159 [1407]	176 [1558]	202 [1788]	224 [1983]	
		360rpm	352rpm	343rpm	331rpm	320rpm	306rpm	294rpm	275rpm	
	45 [11.89]	29 [257]	67 [593]	95 [841]	118 [1044]	155 [1372]	174 [1540]	200 [1770]	220 [1947]	
		462rpm	458rpm	451rpm	443rpm	433rpm	419rpm	402rpm	383rpm	
	55 [14.53]	25 [221]	64 [566]	93 [823]	116 [1027]	152 [1345]	170 [1505]	198 [1752]	217 [1921]	
566rpm		558rpm	549rpm	540rpm	529rpm	515rpm	498rpm	478rpm		
60 [15.85]	22 [195]	60 [531]	91 [805]	114 [1009]	149 [1319]	167 [1478]	194 [1717]	213 [1885]		
	618rpm	611rpm	601rpm	589rpm	580rpm	570rpm	558rpm	540rpm		
75 [19.82]	15 [133]	54 [478]	83 [735]	106 [938]	141 [1248]	160 [1416]	186 [1646]	205 [1814]		
Max Int.		771rpm	763rpm	755rpm	744rpm	735rpm	724rpm	708rpm	693rpm	

Hydraulic Orbit Motors GP



Flow Data

GP125		123.8cm ³ /rev(7.55in ³ /rev)						Max Cont.	Max Int.
Pressure bar [psi→]		30.5 [435]	60.9 [870]	81.2 [1160]	101.5 [1450]	126.9 [1813]	142.2 [2031]	162.5 [2321]	177.7 [2538]
Flow	l/min(gpm↓)	Torque N m [lb-in] Speed Specification							
	8 [2.11]	51 [451]	98 [867]	137 [1213]	168 [1487]	208 [1841]	236 [2089]		
		63rpm	60rpm	55rpm	47rpm	28rpm	15rpm		
	15 [3.96]	51 [451]	101 [894]	138 [1221]	168 [1487]	209 [1850]	236 [2089]	267 [2363]	
		121rpm	116rpm	110rpm	102rpm	89rpm	73rpm	48rpm	
	20 [5.28]	48 [425]	98 [867]	135 [1195]	167 [1478]	211 [1867]	237 [2098]	269 [2381]	290 [2567]
		162rpm	158rpm	153rpm	148rpm	137rpm	128rpm	109rpm	94rpm
	30 [7.93]	46 [407]	96 [850]	132 [1168]	164 [1452]	209 [1850]	232 [2053]	264 [2337]	287 [2540]
		243rpm	239rpm	234rpm	227rpm	216rpm	202rpm	189rpm	176rpm
	35 [9.25]	42 [372]	92 [814]	130 [1151]	160 [1416]	206 [1823]	229 [2027]	260 [2301]	284 [2514]
		284rpm	279rpm	274rpm	269rpm	259rpm	247rpm	231rpm	222rpm
	45 [11.89]	37 [327]	89 [788]	125 [1106]	157 [1390]	201 [1779]	224 [1983]	261 [2310]	281 [2487]
		370rpm	362rpm	355rpm	348rpm	340rpm	327rpm	310rpm	296rpm
	55 [14.53]	33 [292]	84 [743]	122 [1080]	152 [1345]	196 [1735]	218 [1929]	252 [2230]	275 [2434]
452rpm		446rpm	438rpm	431rpm	420rpm	412rpm	402rpm	384rpm	
60 [15.85]	29 [257]	78 [690]	117 [1036]	146 [1292]	191 [1690]	215 [1903]	248 [2195]	272 [2407]	
	490rpm	482rpm	475rpm	468rpm	459rpm	448rpm	439rpm	427rpm	
75 [19.82]	18 [159]	66 [584]	107 [947]	133 [1177]	179 [1584]	202 [1788]	236 [2089]	260 [2301]	
	615rpm	606rpm	598rpm	586rpm	575rpm	563rpm	549rpm	528rpm	

GP160		158.4cm ³ /rev(9.66in ³ /rev)						Max Cont.	Max Int.
Pressure bar [psi→]		30.5 [435]	60.9 [870]	81.2 [1160]	101.5 [1450]	126.9 [1813]	142.2 [2031]	162.5 [2321]	177.7 [2538]
Flow	l/min(gpm↓)	Torque N m [lb-in] Speed Specification							
	8 [2.11]	62 [549]	120 [1062]	170 [1505]	212 [1876]	263 [2328]	290 [2567]		
		49rpm	48rpm	46rpm	42rpm	26rpm	14rpm		
	15 [3.96]	60 [531]	122 [1080]	172 [1522]	215 [1903]	264 [2337]	294 [2602]	340 [3009]	
		93rpm	91rpm	88rpm	85rpm	76rpm	68rpm	48rpm	
	20 [5.28]	57 [504]	120 [1062]	170 [1505]	214 [1894]	262 [2319]	290 [2567]	340 [3009]	371 [3284]
		125rpm	123rpm	120rpm	117rpm	110rpm	106rpm	92rpm	81rpm
	30 [7.93]	53 [469]	115 [1018]	164 [1452]	206 [1823]	259 [2292]	288 [2549]	335 [2965]	368 [3257]
		187rpm	184rpm	181rpm	178rpm	175rpm	168rpm	155rpm	139rpm
	35 [9.25]	49 [434]	110 [974]	160 [1416]	202 [1788]	255 [2257]	284 [2514]	328 [2903]	362 [3204]
		220rpm	216rpm	213rpm	209rpm	205rpm	202rpm	192rpm	176rpm
	45 [11.89]	44 [389]	102 [903]	154 [1363]	196 [1735]	248 [2195]	278 [2460]	321 [2841]	358 [3169]
		283rpm	280rpm	276rpm	272rpm	267rpm	260rpm	250rpm	238rpm
	55 [14.53]	40 [354]	99 [876]	148 [1310]	191 [1690]	243 [2151]	272 [2407]	316 [2797]	351 [3107]
345rpm		342rpm	340rpm	336rpm	331rpm	328rpm	320rpm	303rpm	
60 [15.85]	33 [292]	94 [832]	144 [1275]	188 [1664]	236 [2089]	267 [2363]	308 [2726]	345 [3053]	
	377rpm	374rpm	371rpm	367rpm	363rpm	359rpm	353rpm	342rpm	
75 [19.82]	19 [168]	80 [708]	124 [1097]	170 [1505]	216 [1912]	252 [2230]	296 [2620]	325 [2876]	
	473rpm	469rpm	465rpm	459rpm	453rpm	447rpm	440rpm	424rpm	

Hydraulic orbit Motors GP



Flow Data

GP200		198cm ³ /rev(12.1in ³ /rev)						Max Cont.	Max Int.
Pressure bar [psi→]		30.5 [435]	60.9 [870]	81.2 [1160]	101.5 [1450]	126.9 [1813]	142.2 [2031]	162.5 [2321]	177.7 [2538]
Flow	l/min(gpm↓)	Torque N m [lb-in] Speed Specification							
	8 [2.11]	79 [699]	164 [1452]	207 [1832]	250 [2213]	320 [2832]	360 [3186]		
		40rpm	39rpm	38rpm	35rpm	28rpm	22rpm		
	15 [3.96]	78 [690]	162 [1434]	205 [1814]	250 [2213]	322 [2850]	361 [3195]	410 [3629]	
		76rpm	75rpm	74rpm	71rpm	66rpm	61rpm	51rpm	
	20 [5.28]	76 [673]	158 [1398]	203 [1797]	247 [2186]	320 [2832]	358 [3169]	403 [3567]	422 [3735]
		100rpm	98rpm	97rpm	95rpm	92rpm	89rpm	73rpm	57rpm
	30 [7.93]	70 [620]	153 [1354]	200 [1770]	245 [2168]	315 [2788]	350 [3098]	398 [3523]	417 [3691]
		151rpm	149rpm	147rpm	145rpm	142rpm	139rpm	131rpm	120rpm
	35 [9.25]	66 [584]	149 [1319]	194 [1717]	232 [2053]	297 [2629]	343 [3036]	386 [3416]	415 [3673]
		177rpm	175rpm	173rpm	171rpm	168rpm	166rpm	160rpm	149rpm
	45 [11.89]	63 [558]	146 [1292]	190 [1682]	230 [2036]	294 [2602]	340 [3009]	383 [3390]	410 [3629]
		228rpm	226rpm	224rpm	221rpm	218rpm	215rpm	210rpm	198rpm
	55 [14.53]	54 [478]	140 [1239]	181 [1602]	224 [1983]	286 [2531]	334 [2956]	371 [3284]	400 [3540]
280rpm		278rpm	276rpm	274rpm	271rpm	269rpm	263rpm	250rpm	
60 [15.85]	38 [336]	127 [1124]	164 [1452]	212 [1876]	270 [2390]	325 [2876]	356 [3151]	395 [3496]	
	Max Cont.	304rpm	302rpm	300rpm	297rpm	294rpm	291rpm	286rpm	272rpm
75 [19.82]	22 [195]	96 [850]	145 [1283]	192 [1699]	235 [2080]	293 [2593]	321 [2841]	367 [3248]	
	Max Int.	382rpm	378rpm	374rpm	371rpm	368rpm	364rpm	360rpm	350rpm

GP250		247.5cm ³ /rev(15.1in ³ /rev)						Max Cont.	Max Int.
Pressure bar [psi→]		30.5 [435]	60.9 [870]	81.2 [1160]	101.5 [1450]	126.9 [1813]	142.2 [2031]	162.5 [2321]	177.7 [2538]
Flow	l/min(gpm↓)	Torque N m [lb-in] Speed Specification							
	8 [2.11]	96 [850]	190 [1682]	268 [2372]	326 [2885]	403 [3567]			
		30rpm	28rpm	24rpm	21rpm	11rpm			
	15 [3.96]	98 [867]	194 [1717]	270 [2390]	327 [2894]	405 [3585]	450 [3983]	510 [4514]	
		60rpm	58rpm	54rpm	50rpm	40rpm	30rpm	12rpm	
	20 [5.28]	92 [814]	188 [1664]	267 [2363]	325 [2876]	405 [3585]	456 [4036]	514 [4549]	565 [5001]
		82rpm	80rpm	77rpm	76rpm	69rpm	64rpm	52rpm	38rpm
	30 [7.93]	85 [752]	180 [1593]	259 [2292]	320 [2832]	400 [3540]	448 [3965]	513 [4540]	561 [4965]
		123rpm	120rpm	118rpm	114rpm	106rpm	98rpm	87rpm	76rpm
	35 [9.25]	77 [682]	176 [1558]	252 [2230]	309 [2753]	389 [3443]	436 [3859]	504 [4461]	557 [4930]
		143rpm	141rpm	139rpm	135rpm	128rpm	122rpm	112rpm	101rpm
	45 [11.89]	70 [620]	168 [1487]	243 [2151]	300 [2655]	377 [3337]	428 [3788]	495 [4381]	543 [4806]
		185rpm	182rpm	178rpm	174rpm	168rpm	161rpm	152rpm	139rpm
	55 [14.53]	63 [558]	159 [1407]	237 [2098]	290 [2567]	369 [3266]	417 [3691]	483 [4275]	531 [4700]
226rpm		223rpm	218rpm	213rpm	209rpm	202rpm	193rpm	185rpm	
60 [15.85]	60 [531]	150 [1328]	228 [2018]	280 [2478]	358 [3169]	407 [3602]	473 [4186]	520 [4602]	
	Max Cont.	248rpm	246rpm	243rpm	239rpm	233rpm	226rpm	215rpm	207rpm
75 [19.82]	34 [301]	128 [1133]	202 [1788]	264 [2337]	342 [3027]	387 [3425]	448 [3965]	488 [4319]	
	Max Int.	309rpm	306rpm	302rpm	297rpm	292rpm	286rpm	278rpm	264rpm

Hydraulic Orbit Motors GP



Flow Data

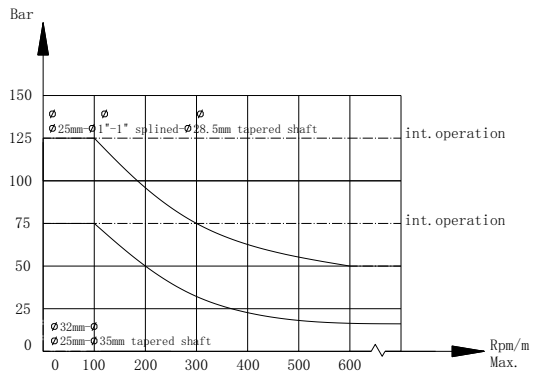
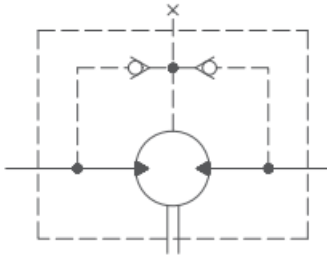
GP315		316.8cm ³ /rev(19.3in ³ /rev)					Max Cont.	Max Int.
Pressure bar [psi→]		30.5 [435]	50.8 [725]	71.1 [1015]	91.4 [1305]	101.5 [1450]	126.9 [1813]	142.2 [2031]
Flow	l/min[gpm↓]	Torque N m [lb-in] Speed Specification						
	8 [2.11]	123 [1089]	215 [1903]	292 [2584]	368 [3257]	405 [3585]		
		25rpm	23rpm	21rpm	17rpm	11rpm		
	15 [3.96]	118 [1044]	211 [1867]	287 [2540]	367 [3248]	404 [3576]	495 [4381]	568 [5027]
		47rpm	46rpm	44rpm	40rpm	28rpm	21rpm	10rpm
	20 [5.28]	110 [974]	205 [1814]	278 [2460]	360 [3186]	395 [3496]	494 [4372]	566 [5009]
		62rpm	61rpm	60rpm	57rpm	46rpm	40rpm	36rpm
	30 [7.93]	101 [894]	196 [1735]	271 [2399]	349 [3089]	388 [3434]	490 [4337]	565 [5001]
		94rpm	93rpm	91rpm	88rpm	76rpm	68rpm	65rpm
	35 [9.25]	96 [850]	188 [1664]	264 [2337]	341 [3018]	382 [3381]	478 [4231]	557 [4930]
		109rpm	107rpm	106rpm	104rpm	96rpm	89rpm	84rpm
	45 [11.89]	89 [788]	180 [1593]	254 [2248]	337 [2983]	372 [3292]	468 [4142]	553 [4894]
		141rpm	140rpm	138rpm	135rpm	127rpm	120rpm	115rpm
	55 [14.53]	76 [673]	166 [1469]	239 [2115]	325 [2876]	362 [3204]	457 [4045]	548 [4850]
173rpm		172rpm	170rpm	167rpm	160rpm	152rpm	143rpm	
60 [15.85]	65 [575]	154 [1363]	227 [2009]	308 [2726]	348 [3080]	443 [3921]	529 [4682]	
	Max Cont.	188rpm	186rpm	184rpm	182rpm	178rpm	172rpm	163rpm
75 [19.82]	40 [354]	120 [1062]	201 [1779]	279 [2469]	323 [2859]	418 [3700]	497 [4399]	
	Max Int.	236rpm	234rpm	232rpm	228rpm	226rpm	223rpm	214rpm

GP400		396cm ³ /rev(24.16in ³ /rev)					Max Cont.	Max Int.
Pressure bar [psi→]		30.5 [435]	45.7 [653]	55.9 [798]	66.0 [943]	81.2 [1160]	101.5 [1450]	126.9 [1813]
Flow	l/min[gpm↓]	Torque N m [lb-in] Speed Specification						
	8 [2.11]	166 [1469]	232 [2053]	287 [2540]	340 [3009]	418 [3700]		
		20rpm	19rpm	18rpm	16rpm	12rpm		
	15 [3.96]	165 [1460]	228 [2018]	277 [2452]	337 [2983]	417 [3691]	496 [4390]	612 [5417]
		38rpm	36rpm	35rpm	33rpm	31rpm	27rpm	21rpm
	20 [5.28]	162 [1434]	223 [1974]	273 [2416]	331 [2930]	413 [3655]	495 [4381]	608 [5381]
		50rpm	49rpm	49rpm	48rpm	45rpm	41rpm	35rpm
	30 [7.93]	154 [1363]	216 [1912]	266 [2354]	318 [2815]	405 [3585]	486 [4301]	600 [5310]
		76rpm	75rpm	74rpm	73rpm	71rpm	67rpm	60rpm
	35 [9.25]	146 [1292]	210 [1859]	256 [2266]	312 [2761]	395 [3496]	480 [4248]	588 [5204]
		88rpm	87rpm	87rpm	86rpm	83rpm	80rpm	75rpm
	45 [11.89]	132 [1168]	197 [1744]	240 [2151]	300 [2655]	383 [3390]	464 [4107]	576 [5098]
		114rpm	113rpm	112rpm	110rpm	108rpm	106rpm	99rpm
	55 [14.53]	117 [1036]	184 [1629]	227 [2009]	283 [2505]	363 [3213]	450 [3983]	552 [4886]
139rpm		137rpm	136rpm	135rpm	135rpm	132rpm	123rpm	
60 [15.85]	102 [903]	163 [1443]	215 [1903]	272 [2407]	347 [3071]	436 [3859]	532 [4709]	
	Max Cont.	153rpm	152rpm	150rpm	148rpm	146rpm	143rpm	138rpm
75 [19.82]	53 [469]	128 [1133]	182 [1611]	234 [2071]	318 [2815]	391 [3461]	484 [4284]	
	Max Int.	191rpm	189rpm	187rpm	185rpm	183rpm	180rpm	176rpm

Technical Data

Hydraulic orbit Motors GP

Permissible shaft seal pressure



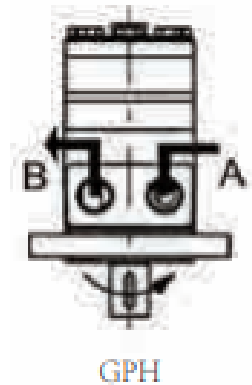
In applications without drain line, output shaft seal exceeds a bit of the pressure in the return line. When applications use the drain line, the pressure of output shaft seal equals the pressure in drain line.

Case Drain

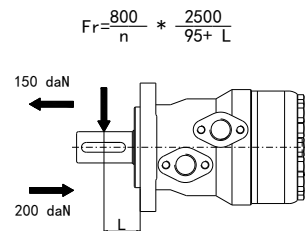
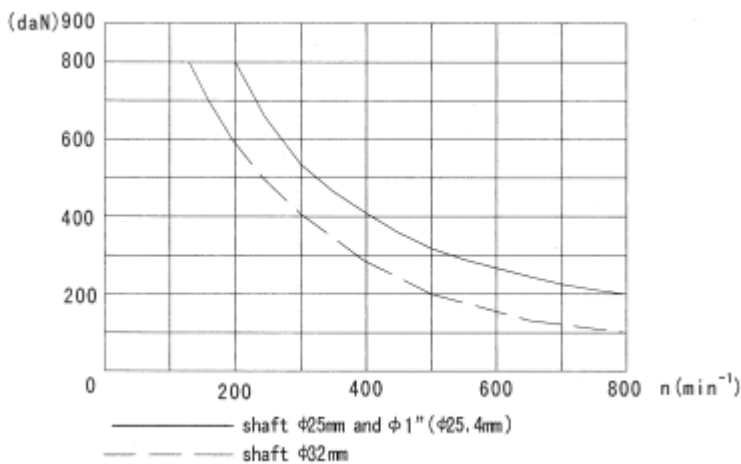
In applications without a motor drain line, the pressure exerted on the shaft seal is marginally in excess of the return line pressure. When the Drain line is used, the pressure exerted on the shaft seal is equal to the return line pressure.

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.

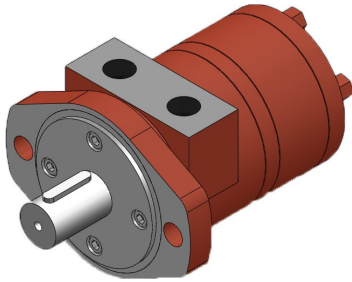


Axial and Radial forces



Fr =Radial Force (daN)
 L =Distance (mm)
 n =Speed (rpm)
 Rhomb-flange L=30mm
 Square-flange L=24mm

General

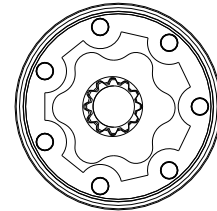


APPLICATION

- ◇ Conveyors
- ◇ Feeding machinery of robots and manipulators
- ◇ Metal working machines
- ◇ Textile machines
- ◇ Agricultural machines
- ◇ Food industries
- ◇ Lawn mower

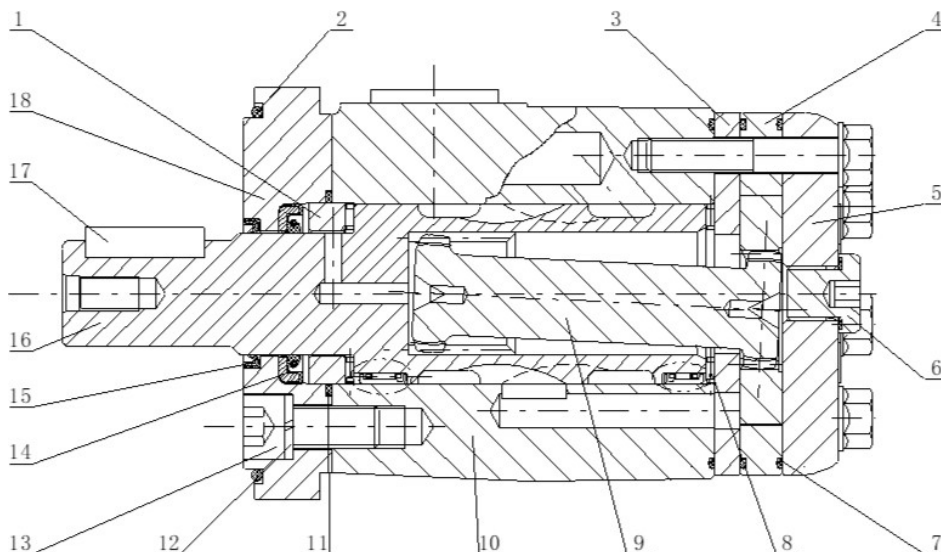
OPTIONS

- ◇ Flange mount
- ◇ Motor with needle roller bearing
- ◇ Speed sensing
- ◇ Side and bottom ports
- ◇ Shaft seal for high and low pressure
- ◇ Shafts—straight, splined and tapered
- ◇ Metric and BSPP ports
- ◇ Other special features



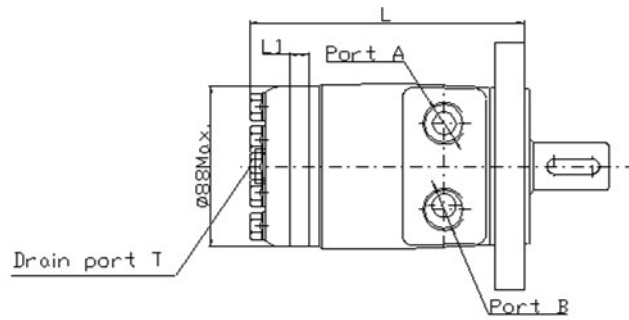
- ◇ Shaft distribution flow

Model		GPH40	GPH50	GPH80	GPH100	GPH125	GPH160	GPH200	GPH250	GPH315	GPH400
Disp.	in ³ /rev	2.44	3.02	4.83	6.04	7.55	9.66	12.1	15.1	19.3	24.16
	cm ³ /rev	40	49.5	79.2	99	123.8	158.4	198	247.5	316.8	396
Max Speed rpm	cont.	1500	1210	755	605	486	378	303	242	190	150
	int.	1750	1515	945	755	605	472	378	303	236	189
Max Torque N m [lb-in]	cont.	62 [550]	94 [835]	151 [1340]	193 [1710]	237 [2100]	313 [2770]	366 [3240]	380 [3360]	380 [3360]	360 [3190]
	int.	82 [730]	119 [1050]	195 [1725]	237 [2100]	298 [2640]	378 [3345]	456 [4035]	583 [5160]	560 [4960]	590 [5240]
Max Dif. bar [psi]	cont.	120 [1750]	140 [2030]	140 [2030]	140 [2030]	140 [2030]	140 [2030]	140 [2030]	110 [1600]	90 [1300]	70 [1015]
	int.	155 [2550]	175 [2540]	175 [2540]	175 [2540]	175 [2540]	175 [2540]	175 [2540]	175 [2540]	140 [2030]	115 [1655]
Max Flow l/min [gpm]	cont.	60 [15.9]	60 [15.9]	60 [15.9]	60 [15.9]	60 [15.9]	60 [15.9]	60 [15.9]	60 [15.9]	60 [15.9]	60 [15.9]
	int.	70 [18.5]	75 [19.8]	75 [19.8]	75 [19.8]	75 [19.8]	75 [19.8]	75 [19.8]	75 [19.8]	75 [19.8]	75 [19.8]
Weight kg [lbs]		5.7 [12.6]	5.8 [12.8]	5.9 [13.2]	6.1 [13.5]	6.2 [13.7]	6.4 [14.1]	6.6 [14.6]	6.8 [15]	7.1 [15.6]	7.6 [16.8]



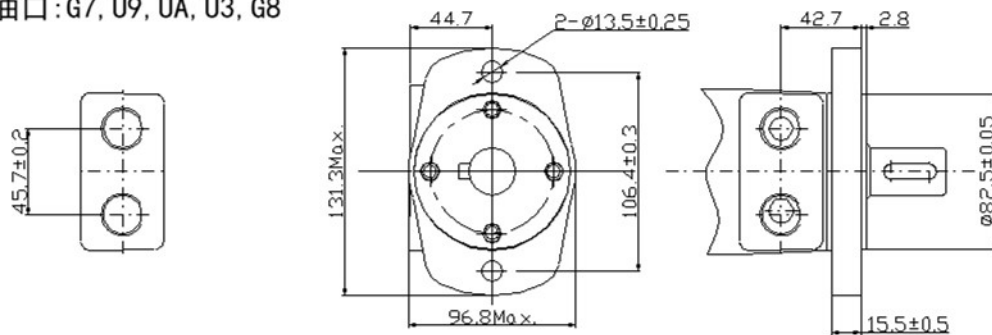
1. Thrust Washer
2. O-ring
3. Wear Plate
4. Gear Set
5. End Cover
6. Case Drain Plug
7. O-ring
8. Axial Needle Bearing
9. Cardan Joint
10. Housing
11. O-ring
12. Lock Washer
13. Bolt
14. Shaft Seal
15. Dust Seal
16. Output Shaft
17. Key
18. Front Cover

Dimensions and Mounting Data



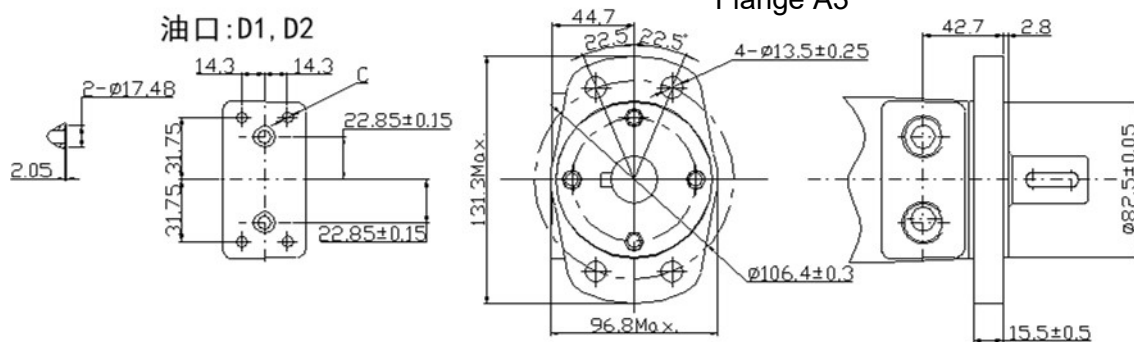
油口 : G7, U9, UA, U3, G8

Flange A1

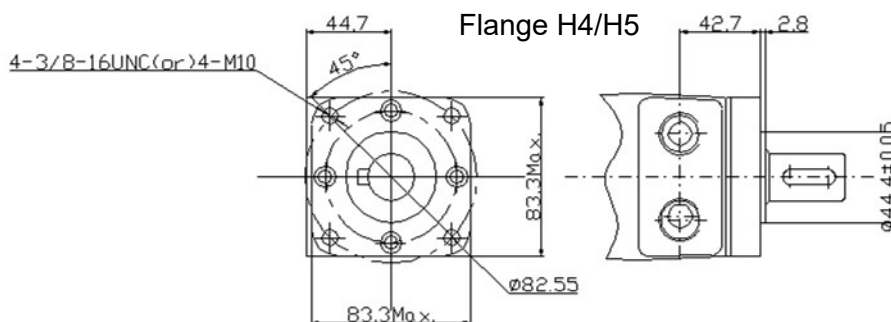


油口 : D1, D2

Flange A3



Flange H4/H5



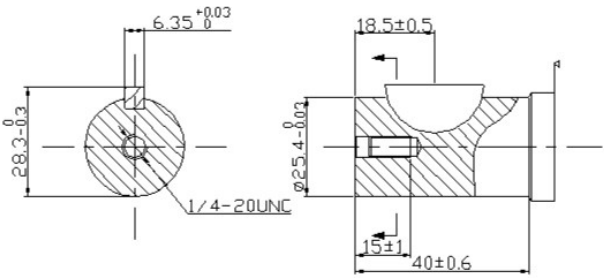
* flat seal

Model	L	L1
GPH40	141 [5.55"]	7 [0.28"]
GPH50	141 [5.55"]	7 [0.28"]
GPH80	144.5 [5.69"]	10.5 [0.41"]
GPH100	147 [5.79"]	13 [0.51"]
GPH125	150 [5.91"]	16 [0.63"]
GPH160	155 [6.10"]	21 [0.83"]
GPH200	160 [6.30"]	26 [1.02"]
GPH250	166 [6.54"]	32 [1.26"]
GPH315	176 [6.93"]	42 [1.65"]
GPH400	186 [7.32"]	52 [2.05"]

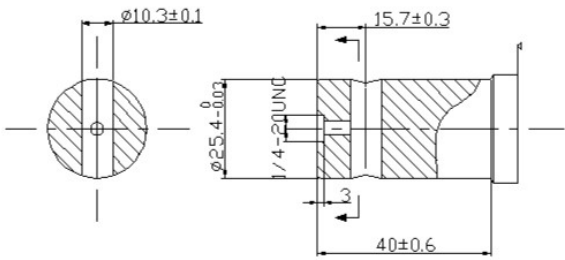
Port	G7 (Depth)	U9 (Depth)	UA (Depth)	U3 (Depth)	G8 (Depth)	D1 (Depth)	D2 (Depth)
	P(A,B)	G1/2(15)	SAE-10 O'ring 7/8-14	1/2-14NPTF(15)	SAE-8 O'ring 3/4-16	PT(RC)1/2(15)	$\varnothing 10$
T	G1/4(12)	* 7/16-20UNF(12)	* 7/16-20UNF(12)	* 7/16-20UNF(12)	PT(RC)1/4(9.7)	* 7/16-20UNF(12)	G1/4(12)
C	-	-	-	-	-	4-5/16-18UNC(13)	4-M8(13)



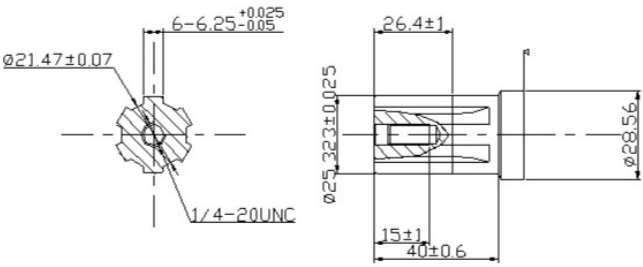
GPH Shaft Extension Dimensions Data



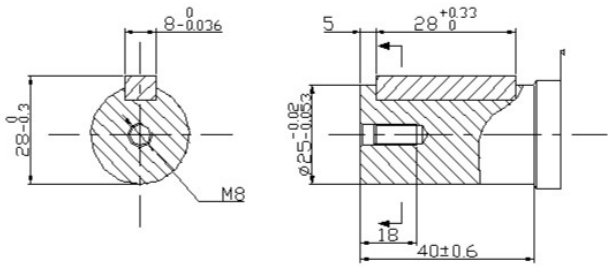
Shaft S6: Cylindrical shaft \varnothing 1.00",
Woodruff key .025"X 1.00"



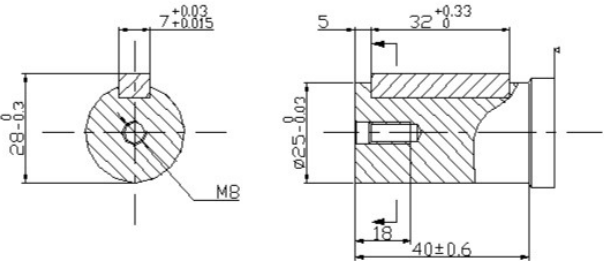
Shaft S9: Cylindrical shaft \varnothing 1.00",
Pin hole \varnothing 0.406"



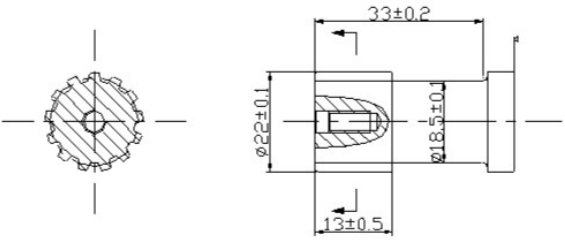
Shaft R4: Splined SAE 6B



Shaft SC: Cylindrical shaft \varnothing 25,
Parallel key 8x7x28

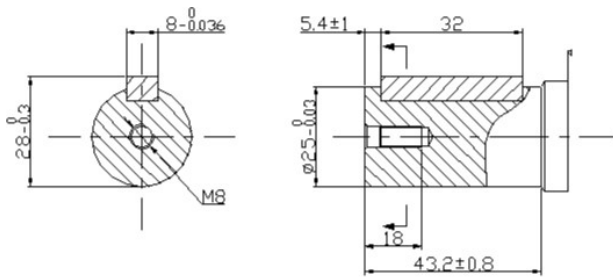


Shaft SD: Cylindrical shaft \varnothing 25,
Parallel key 7x7x32

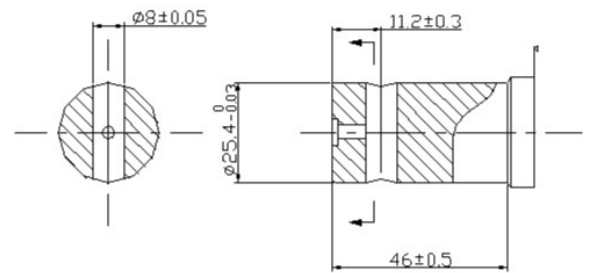


Shaft R5: Splined 13-DP16/32

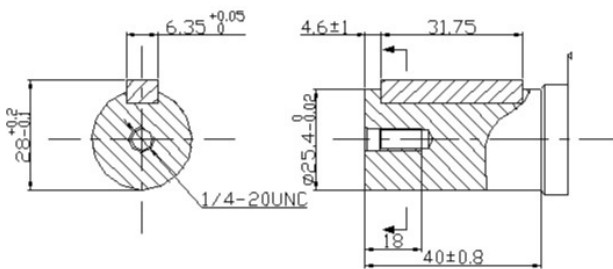
GPH Shaft Extension Dimensions Data



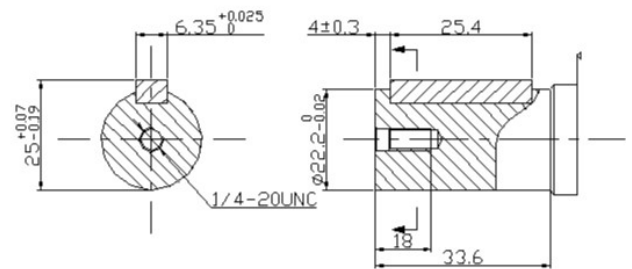
Shaft S7: Cylindrical shaft $\varnothing 25$,
Parallel key 8x7x32



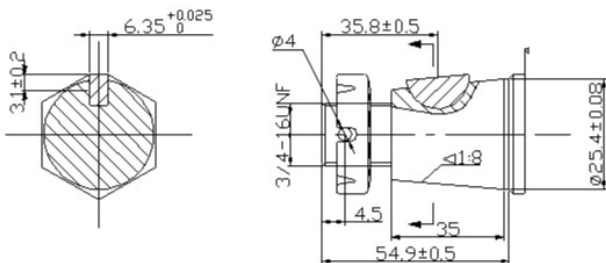
Shaft SA: Cylindrical shaft $\varnothing 1.00$ ",
Pin hole $\varnothing 0.315$ "



Shaft S8: Cylindrical shaft $\varnothing 1.00$ ",
Parallel key 0.25"x 0.25"x 1.25"



Shaft SB: Cylindrical shaft $\varnothing 0.875$ ",
Parallel key 0.25"x 0.25"x 1.00"



Shaft T3: Tapered shaft $\varnothing 1.00$ "
Parallel Woodruff key 0.25"x
1.00" Tightening torque:200
 ± 10 Nm



GPH - How To Order

Ordering Example:		Model	Displacement	Flange	Drive shaft	Ports	Other functions
		GPH	40	A1	S6	U90	ACA
Model	Disp.	Flange		Drive shaft		Ports	
GPH	40			<u>S6</u> =Shaft \varnothing 1.00", woodruff key 0.25"x 1.00"		<u>G7</u> =G1/2, G1/4	
	50			<u>S7</u> =Shaft \varnothing 25, parallel key 8x7x32		<u>G8</u> =PT(Rc)1/2, PT(Rc)1/4	
	80	<u>A1</u> =2-Hole SAE A flange, pilot \varnothing 3.25"x 0.11"		<u>S8</u> =Shaft \varnothing 1.00", parallel key 0.25"x 0.25"x 1.25"		<u>D1</u> = \varnothing 10 O-ring manifold 4x 5/16-18UNC, 7/16-20UNF (flat seal)	
	100	<u>A3</u> =4-Hole SAE A flange, pilot \varnothing 3.25"x 0.11"		<u>S9</u> =Shaft \varnothing 1.00", pin hole \varnothing 0.41"		<u>D10</u> = \varnothing 10 O-ring manifold 4x 5/16-18UNC, 7/16-20UNF (flat seal)	
	125	<u>A3</u> =4-Hole SAE A flange, pilot \varnothing 3.25"x 0.11"		<u>SA</u> =Shaft \varnothing 1.00", pin hole \varnothing 0.32"		<u>D2</u> = \varnothing 10 O-ring manifold 4xM8, G1/4	
	160	<u>H4</u> =4-3/8-16 Hole square flange, pilot \varnothing 1 .75"x 0.11"		<u>SB</u> =Shaft \varnothing 0.875", parallel key 0.25"x 0.25"x 1.00"		<u>U3</u> =SAE-8 O'ring 3/4-16, 7/16-20 UNF (flat seal)	
	200	<u>H4</u> =4-3/8-16 Hole square flange, pilot \varnothing 1 .75"x 0.11"		<u>SC</u> =Shaft \varnothing 25, parallel key 8x7x28		<u>U30</u> =SAE-8 O'ring 3/4-16, SAE-4 O'ring 7/16-20 UNF	
	250	<u>H5</u> =4-M10 Hole square flange, pilot \varnothing 1 .75"x 0.11"		<u>SD</u> =Shaft \varnothing 25, parallel key 8x7x32		<u>U9</u> =SAE-10 O'ring 7/8-14UNF, 7/16-20 UNF (flat seal)	
315			<u>R4</u> =Shaft \varnothing 1.00", splined tooth SAE 6B		<u>U90</u> =SAE-10 O'ring 7/8-14UNF, SAE-4 O'ring 7/16-20 UNF		
400			<u>R5</u> =Shaft \varnothing 0.875", splined tooth 13-DP16/32		<u>UA</u> =1/2-14NPTF, 7/16-20 UNF (flat seal)		
				<u>T3</u> =Tapered shaft \varnothing 1.00", Woodruff key 0.25"x 1.00"		<u>UA0</u> =1/2-14NPTF, SAE-4 O'ring 7/16-20 UNF	

Shaft Rotation	Paint	Standard Options	Seal Options	Relief Options	Speed Sensor Option
<u>A</u> =Standard / CW 'A' port pressurized <u>R</u> =Reverse / CCW 'A' port pressurized	<u>A</u> =No Paint <u>B</u> =Blue Paint <u>C</u> =Black <u>S</u> =Silver Gray <u>G</u> =Corrosion resistant coating	<u>A</u> =Standard <u>N</u> =Large Radial Force <u>D</u> =No Case Drain <u>F</u> =Free Running <u>L</u> =Low Speed <u>V</u> =High Temperature <u>S</u> =Low Temperature	<u>Blank</u> =None <u>HPS</u> =High Pressure Seal <u>SG</u> =Seal Guard <u>HPS-SG</u> =High Pressure Seal & Seal Guard	<u>Blank</u> =None <u>R</u> =Valve Cavity Only <u>R12</u> =Bi-Directional Relief Max 125 bar <u>R20</u> =Bi-Directional Relief Max 207 bar	<u>Blank</u> =None <u>SS</u> =Speed sensor, 4-pin, M12 male connector

Hydraulic Orbit Motors GPH



Flow Data

GPH40		40cm ³ /rev (2.44in ³ /rev)					Max Cont.	Max Int.		
Pressure bar [psi→]		30.5 [435]	60.9 [870]	71.1 [1015]	81.2 [1160]	101.5 [1450]	111.7 [1595]	126.9 [1813]	167.5 [2393]	
Flow	l/min[gpm↓]	Torque N m [lb-in] Speed Specification								
	8 [2.11]	13 [115]	25 [221]	29 [257]	34 [301]	43 [381]	48 [425]			
		214rpm	205rpm	200rpm	194rpm	187rpm	179rpm			
	15 [3.96]	13 [115]	25 [221]	29 [257]	34 [301]	43 [381]	48 [425]	56 [496]	75 [664]	
		406rpm	398rpm	391rpm	383rpm	374rpm	366rpm	353rpm	324rpm	
	20 [5.28]	13 [115]	24 [212]	29 [257]	34 [301]	43 [381]	48 [425]	56 [496]	76 [673]	
		541rpm	534rpm	528rpm	521rpm	513rpm	500rpm	486rpm	458rpm	
	30 [7.93]	12 [106]	24 [212]	29 [257]	34 [301]	43 [381]	48 [425]	56 [496]	76 [673]	
		814rpm	804rpm	792rpm	778rpm	763rpm	749rpm	726rpm	701rpm	
	35 [9.25]	12 [106]	23 [204]	28 [248]	34 [301]	43 [381]	48 [425]	56 [496]	76 [673]	
		952rpm	944rpm	930rpm	913rpm	897rpm	879rpm	858rpm	833rpm	
	40 [10.57]	12 [106]	23 [204]	28 [248]	32 [283]	41 [363]	47 [416]	55 [487]	75 [664]	
		1090rpm	1078rpm	1064rpm	1048rpm	1024rpm	998rpm	977rpm	943rpm	
	45 [11.89]	11 [97]	22 [195]	26 [230]	32 [283]	41 [363]	46 [407]	54 [478]	74 [655]	
1232rpm		1218rpm	1196rpm	1175rpm	1149rpm	1118rpm	1080rpm	1044rpm		
55 [14.53]	6 [53]	15 [133]	22 [195]	28 [248]	37 [327]	44 [389]	52 [460]	71 [628]		
	1505rpm	1494rpm	1480rpm	1466rpm	1438rpm	1406rpm	1367rpm	1309rpm		
60 [15.85]	3 [27]	11 [97]	18 [159]	20 [177]	30 [266]	38 [336]	49 [434]	67 [593]		
	1650rpm	1640rpm	1626rpm	1603rpm	1571rpm	1536rpm	1502rpm	1446rpm		

GPH50		49.5cm ³ /rev (3.02in ³ /rev)					Max Cont.	Max Int.		
Pressure bar [psi→]		30.5 [435]	60.9 [870]	81.2 [1160]	101.5 [1450]	126.9 [1813]	142.2 [2031]	162.5 [2321]	177.7 [2538]	
Flow	l/min[gpm↓]	Torque N m [lb-in] Speed Specification								
	8 [2.11]	20 [177]	41 [363]	56 [496]	69 [611]	89 [788]	95 [841]			
		151rpm	134rpm	115rpm	90rpm	56rpm	42rpm			
	15 [3.96]	19 [168]	40 [354]	56 [496]	71 [628]	91 [805]	100 [885]	112 [991]	120 [1062]	
		286rpm	274rpm	261rpm	243rpm	204rpm	182rpm	139rpm	102rpm	
	20 [5.28]	18 [159]	39 [345]	55 [487]	71 [628]	92 [814]	101 [894]	117 [1036]	128 [1133]	
		382rpm	373rpm	361rpm	348rpm	318rpm	309rpm	287rpm	251rpm	
	30 [7.93]	17 [150]	38 [336]	55 [487]	71 [628]	91 [805]	98 [867]	116 [1027]	124 [1097]	
		573rpm	568rpm	558rpm	535rpm	503rpm	488rpm	462rpm	440rpm	
	35 [9.25]	17 [150]	38 [336]	54 [478]	69 [611]	89 [788]	98 [867]	117 [1036]	124 [1097]	
		670rpm	661rpm	652rpm	640rpm	606rpm	589rpm	562rpm	548rpm	
	45 [11.89]	14 [124]	36 [319]	53 [469]	67 [593]	88 [779]	98 [867]	114 [1009]	123 [1089]	
		863rpm	858rpm	849rpm	837rpm	807rpm	788rpm	764rpm	746rpm	
	55 [14.53]	12 [106]	33 [292]	50 [443]	65 [575]	85 [752]	96 [850]	111 [982]	121 [1071]	
1055rpm		1042rpm	1028rpm	1010rpm	979rpm	963rpm	947rpm	920rpm		
60 [15.85]	10 [89]	32 [283]	47 [416]	64 [566]	83 [735]	94 [832]	108 [956]	119 [1053]		
	1150rpm	1143rpm	1126rpm	1111rpm	1079rpm	1065rpm	1043rpm	1015rpm		
75 [19.82]	6 [53]	25 [221]	42 [372]	56 [496]	76 [673]	87 [770]	101 [894]	112 [991]		
	1430rpm	1416rpm	1395rpm	1367rpm	1351rpm	1335rpm	1312rpm			

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Flow Data

GPH80		79.2cm ³ /rev (4.83in ³ /rev)						Max Cont.	Max Int.
Pressure bar [psi→]		30.5 [435]	60.9 [870]	81.2 [1160]	101.5 [1450]	126.9 [1813]	142.2 [2031]	162.5 [2321]	177.7 [2538]
Flow	l/min [gpm↓]	Torque N m [lb-in] Speed Specification							
	8 [2.11]	32 [283]	62 [549]	85 [752]	104 [920]	129 [1142]	144 [1275]		
		97rpm	87rpm	74rpm	55rpm	33rpm	22rpm		
	15 [3.96]	32 [283]	63 [558]	84 [743]	107 [947]	126 [1115]	144 [1275]	165 [1460]	
		186rpm	181rpm	170rpm	154rpm	132rpm	118rpm	86rpm	
	20 [5.28]	31 [274]	63 [558]	84 [743]	107 [947]	132 [1168]	146 [1292]	168 [1487]	185 [1637]
		251rpm	243rpm	236rpm	225rpm	207rpm	196rpm	178rpm	155rpm
	30 [7.93]	31 [274]	62 [549]	83 [735]	106 [938]	131 [1159]	146 [1292]	168 [1487]	186 [1646]
		381rpm	379rpm	368rpm	355rpm	332rpm	316rpm	285rpm	263rpm
	35 [9.25]	30 [266]	59 [522]	81 [717]	102 [903]	130 [1151]	144 [1275]	167 [1478]	185 [1637]
		443rpm	435rpm	426rpm	415rpm	397rpm	383rpm	361rpm	342rpm
	45 [11.89]	25 [221]	58 [513]	79 [699]	100 [885]	126 [1115]	142 [1257]	165 [1460]	182 [1611]
		570rpm	564rpm	554rpm	543rpm	526rpm	509rpm	483rpm	458rpm
	55 [14.53]	23 [204]	57 [504]	78 [690]	97 [859]	124 [1097]	140 [1239]	161 [1425]	179 [1584]
696rpm		685rpm	672rpm	656rpm	643rpm	630rpm	602rpm	579rpm	
60 [15.85]	20 [177]	53 [469]	75 [664]	94 [832]	120 [1062]	137 [1213]	160 [1416]	177 [1567]	
	Max Cont.	761rpm	753rpm	744rpm	736rpm	720rpm	706rpm	681rpm	660rpm
75 [19.82]	14 [124]	44 [389]	67 [593]	87 [770]	112 [991]	151 [1336]	169 [1496]	169 [1496]	
	Max Int.	948rpm	940rpm	931rpm	920rpm	906rpm	890rpm	871rpm	854rpm

GPH100		99cm ³ /rev (6.04in ³ /rev)						Max Cont.	Max Int.
Pressure bar [psi→]		30.5 [435]	60.9 [870]	81.2 [1160]	101.5 [1450]	126.9 [1813]	142.2 [2031]	162.5 [2321]	177.7 [2538]
Flow	l/min [gpm↓]	Torque N m [lb-in] Speed Specification							
	8 [2.11]	40 [354]	77 [682]	105 [929]	130 [1151]	161 [1425]	180 [1593]		
		81rpm	75rpm	69rpm	57rpm	36rpm	24rpm		
	15 [3.96]	39 [345]	77 [682]	106 [938]	130 [1151]	160 [1416]	180 [1593]	208 [1841]	
		152rpm	149rpm	145rpm	140rpm	122rpm	103rpm	81rpm	
	20 [5.28]	36 [319]	74 [655]	104 [920]	128 [1133]	161 [1425]	179 [1584]	208 [1814]	227 [2009]
		204rpm	200rpm	195rpm	190rpm	177rpm	166rpm	148rpm	133rpm
	30 [7.93]	33 [292]	72 [637]	103 [912]	125 [1106]	160 [1416]	177 [1567]	203 [1797]	225 [1991]
		308rpm	304rpm	298rpm	290rpm	280rpm	268rpm	255rpm	231rpm
	35 [9.25]	30 [266]	70 [620]	98 [867]	122 [1080]	159 [1407]	176 [1558]	202 [1788]	224 [1983]
		360rpm	352rpm	343rpm	331rpm	320rpm	306rpm	294rpm	275rpm
	45 [11.89]	29 [257]	67 [593]	95 [841]	118 [1044]	155 [1372]	174 [1540]	200 [1770]	220 [1947]
		462rpm	458rpm	451rpm	443rpm	433rpm	419rpm	402rpm	383rpm
	55 [14.53]	25 [221]	64 [566]	93 [823]	116 [1027]	152 [1345]	170 [1505]	198 [1752]	217 [1921]
566rpm		558rpm	549rpm	540rpm	529rpm	515rpm	498rpm	478rpm	
60 [15.85]	22 [195]	60 [531]	91 [805]	114 [1009]	149 [1319]	167 [1478]	194 [1717]	213 [1885]	
	Max Cont.	618rpm	611rpm	601rpm	589rpm	580rpm	570rpm	558rpm	540rpm
75 [19.82]	15 [133]	54 [478]	83 [735]	106 [938]	141 [1248]	160 [1416]	186 [1646]	205 [1814]	
	Max Int.	771rpm	763rpm	755rpm	744rpm	735rpm	724rpm	708rpm	693rpm

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Flow Data

GPH125		123.8cm ³ /rev(7.55in ³ /rev)						Max Cont.	Max Int.
Pressure bar [psi→]		30.5 [435]	60.9 [870]	81.2 [1160]	101.5 [1450]	126.9 [1813]	142.2 [2031]	162.5 [2321]	177.7 [2538]
Flow	l/min(gpm↓)	Torque N m [lb-in] Speed Specification							
	8 [2.11]	51 [451]	98 [867]	137 [1213]	168 [1487]	208 [1841]	236 [2089]		
		63rpm	60rpm	55rpm	47rpm	28rpm	15rpm		
	15 [3.96]	51 [451]	101 [894]	138 [1221]	168 [1487]	209 [1850]	236 [2089]	267 [2363]	
		121rpm	116rpm	110rpm	102rpm	89rpm	73rpm	48rpm	
	20 [5.28]	48 [425]	98 [867]	135 [1195]	167 [1478]	211 [1867]	237 [2098]	269 [2381]	290 [2567]
		162rpm	158rpm	153rpm	148rpm	137rpm	128rpm	109rpm	94rpm
	30 [7.93]	46 [407]	96 [850]	132 [1168]	164 [1452]	209 [1850]	232 [2053]	264 [2337]	287 [2540]
		243rpm	239rpm	234rpm	227rpm	216rpm	202rpm	189rpm	176rpm
	35 [9.25]	42 [372]	92 [814]	130 [1151]	160 [1416]	206 [1823]	229 [2027]	260 [2301]	284 [2514]
		284rpm	279rpm	274rpm	269rpm	259rpm	247rpm	231rpm	222rpm
	45 [11.89]	37 [327]	89 [788]	125 [1106]	157 [1390]	201 [1779]	224 [1983]	261 [2310]	281 [2487]
		370rpm	362rpm	355rpm	348rpm	340rpm	327rpm	310rpm	296rpm
	55 [14.53]	33 [292]	84 [743]	122 [1080]	152 [1345]	196 [1735]	218 [1929]	252 [2230]	275 [2434]
452rpm		446rpm	438rpm	431rpm	420rpm	412rpm	402rpm	384rpm	
60 [15.85]	29 [257]	78 [690]	117 [1036]	146 [1292]	191 [1690]	215 [1903]	248 [2195]	272 [2407]	
	490rpm	482rpm	475rpm	468rpm	459rpm	448rpm	439rpm	427rpm	
75 [19.82]	18 [159]	66 [584]	107 [947]	133 [1177]	179 [1584]	202 [1788]	236 [2089]	260 [2301]	
	615rpm	606rpm	598rpm	586rpm	575rpm	563rpm	549rpm	528rpm	

GPH160		158.4cm ³ /rev(9.66in ³ /rev)						Max Cont.	Max Int.
Pressure bar [psi→]		30.5 [435]	60.9 [870]	81.2 [1160]	101.5 [1450]	126.9 [1813]	142.2 [2031]	162.5 [2321]	177.7 [2538]
Flow	l/min(gpm↓)	Torque N m [lb-in] Speed Specification							
	8 [2.11]	62 [549]	120 [1062]	170 [1505]	212 [1876]	263 [2328]	290 [2567]		
		49rpm	48rpm	46rpm	42rpm	26rpm	14rpm		
	15 [3.96]	60 [531]	122 [1080]	172 [1522]	215 [1903]	264 [2337]	294 [2602]	340 [3009]	
		93rpm	91rpm	88rpm	85rpm	76rpm	68rpm	48rpm	
	20 [5.28]	57 [504]	120 [1062]	170 [1505]	214 [1894]	262 [2319]	290 [2567]	340 [3009]	371 [3284]
		125rpm	123rpm	120rpm	117rpm	110rpm	106rpm	92rpm	81rpm
	30 [7.93]	53 [469]	115 [1018]	164 [1452]	206 [1823]	259 [2292]	288 [2549]	335 [2965]	368 [3257]
		187rpm	184rpm	181rpm	178rpm	175rpm	168rpm	155rpm	139rpm
	35 [9.25]	49 [434]	110 [974]	160 [1416]	202 [1788]	255 [2257]	284 [2514]	328 [2903]	362 [3204]
		220rpm	216rpm	213rpm	209rpm	205rpm	202rpm	192rpm	176rpm
	45 [11.89]	44 [389]	102 [903]	154 [1363]	196 [1735]	248 [2195]	278 [2460]	321 [2841]	358 [3169]
		283rpm	280rpm	276rpm	272rpm	267rpm	260rpm	250rpm	238rpm
	55 [14.53]	40 [354]	99 [876]	148 [1310]	191 [1690]	243 [2151]	272 [2407]	316 [2797]	351 [3107]
345rpm		342rpm	340rpm	336rpm	331rpm	328rpm	320rpm	303rpm	
60 [15.85]	33 [292]	94 [832]	144 [1275]	188 [1664]	236 [2089]	267 [2363]	308 [2726]	345 [3053]	
	377rpm	374rpm	371rpm	367rpm	363rpm	359rpm	353rpm	342rpm	
75 [19.82]	19 [168]	80 [708]	124 [1097]	170 [1505]	216 [1912]	252 [2230]	296 [2620]	325 [2876]	
	473rpm	469rpm	465rpm	459rpm	453rpm	447rpm	440rpm	424rpm	

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Flow Data

GPH200		198cm ³ /rev(12.1in ³ /rev)						Max Cont.	Max Int.
Pressure bar [psi→]		30.5 [435]	60.9 [870]	81.2 [1160]	101.5 [1450]	126.9 [1813]	142.2 [2031]	162.5 [2321]	177.7 [2538]
Flow	l/min(gpm↓)	Torque N m [lb-in] Speed Specification							
	8 [2.11]	79 [699]	164 [1452]	207 [1832]	250 [2213]	320 [2832]	360 [3186]		
		40rpm	39rpm	38rpm	35rpm	28rpm	22rpm		
	15 [3.96]	78 [690]	162 [1434]	205 [1814]	250 [2213]	322 [2850]	361 [3195]	410 [3629]	
		76rpm	75rpm	74rpm	71rpm	66rpm	61rpm	51rpm	
	20 [5.28]	76 [673]	158 [1398]	203 [1797]	247 [2186]	320 [2832]	358 [3169]	403 [3567]	422 [3735]
		100rpm	98rpm	97rpm	95rpm	92rpm	89rpm	73rpm	57rpm
	30 [7.93]	70 [620]	153 [1354]	200 [1770]	245 [2168]	315 [2788]	350 [3098]	398 [3523]	417 [3691]
		151rpm	149rpm	147rpm	145rpm	142rpm	139rpm	131rpm	120rpm
	35 [9.25]	66 [584]	149 [1319]	194 [1717]	232 [2053]	297 [2629]	343 [3036]	386 [3416]	415 [3673]
		177rpm	175rpm	173rpm	171rpm	168rpm	166rpm	160rpm	149rpm
	45 [11.89]	63 [558]	146 [1292]	190 [1682]	230 [2036]	294 [2602]	340 [3009]	383 [3390]	410 [3629]
		228rpm	226rpm	224rpm	221rpm	218rpm	215rpm	210rpm	198rpm
	55 [14.53]	54 [478]	140 [1239]	181 [1602]	224 [1983]	286 [2531]	334 [2956]	371 [3284]	400 [3540]
280rpm		278rpm	276rpm	274rpm	271rpm	269rpm	263rpm	250rpm	
60 [15.85]	38 [336]	127 [1124]	164 [1452]	212 [1876]	270 [2390]	325 [2876]	356 [3151]	395 [3496]	
	Max Cont.	304rpm	302rpm	300rpm	297rpm	294rpm	291rpm	286rpm	272rpm
75 [19.82]	22 [195]	96 [850]	145 [1283]	192 [1699]	235 [2080]	293 [2593]	321 [2841]	367 [3248]	
	Max Int.	382rpm	378rpm	374rpm	371rpm	368rpm	364rpm	360rpm	350rpm

GPH250		247.5cm ³ /rev(15.1in ³ /rev)						Max Cont.	Max Int.
Pressure bar [psi→]		30.5 [435]	60.9 [870]	81.2 [1160]	101.5 [1450]	126.9 [1813]	142.2 [2031]	162.5 [2321]	177.7 [2538]
Flow	l/min(gpm↓)	Torque N m [lb-in] Speed Specification							
	8 [2.11]	96 [850]	190 [1682]	268 [2372]	326 [2885]	403 [3567]			
		30rpm	28rpm	24rpm	21rpm	11rpm			
	15 [3.96]	98 [867]	194 [1717]	270 [2390]	327 [2894]	405 [3585]	450 [3983]	510 [4514]	
		60rpm	58rpm	54rpm	50rpm	40rpm	30rpm	12rpm	
	20 [5.28]	92 [814]	188 [1664]	267 [2363]	325 [2876]	405 [3585]	456 [4036]	514 [4549]	565 [5001]
		82rpm	80rpm	77rpm	76rpm	69rpm	64rpm	52rpm	38rpm
	30 [7.93]	85 [752]	180 [1593]	259 [2292]	320 [2832]	400 [3540]	448 [3965]	513 [4540]	561 [4965]
		123rpm	120rpm	118rpm	114rpm	106rpm	98rpm	87rpm	76rpm
	35 [9.25]	77 [682]	176 [1558]	252 [2230]	309 [2753]	389 [3443]	436 [3859]	504 [4461]	557 [4930]
		143rpm	141rpm	139rpm	135rpm	128rpm	122rpm	112rpm	101rpm
	45 [11.89]	70 [620]	168 [1487]	243 [2151]	300 [2655]	377 [3337]	428 [3788]	495 [4381]	543 [4806]
		185rpm	182rpm	178rpm	174rpm	168rpm	161rpm	152rpm	139rpm
	55 [14.53]	63 [558]	159 [1407]	237 [2098]	290 [2567]	369 [3266]	417 [3691]	483 [4275]	531 [4700]
226rpm		223rpm	218rpm	213rpm	209rpm	202rpm	193rpm	185rpm	
60 [15.85]	60 [531]	150 [1328]	228 [2018]	280 [2478]	358 [3169]	407 [3602]	473 [4186]	520 [4602]	
	Max Cont.	248rpm	246rpm	243rpm	239rpm	233rpm	226rpm	215rpm	207rpm
75 [19.82]	34 [301]	128 [1133]	202 [1788]	264 [2337]	342 [3027]	387 [3425]	448 [3965]	488 [4319]	
	Max Int.	309rpm	306rpm	302rpm	297rpm	292rpm	286rpm	278rpm	264rpm

Hydraulic Orbit Motors GPH



Flow Data

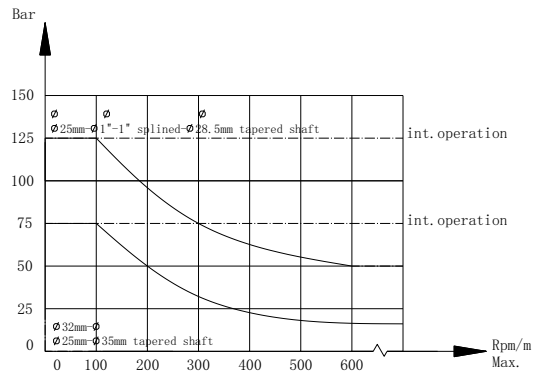
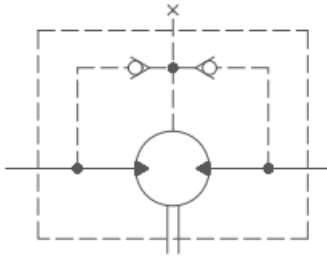
GPH315		316.8cm ³ /rev (19.3in ³ /rev)					Max Cont.	Max Int.
Pressure bar [psi→]		30.5 [435]	50.8 [725]	71.1 [1015]	91.4 [1305]	101.5 [1450]	126.9 [1813]	142.2 [2031]
Flow	l/min [gpm↓]	Torque N m [lb-in] Speed Specification						
	8 [2.11]	123 [1089]	215 [1903]	292 [2584]	368 [3257]	405 [3585]		
		25rpm	23rpm	21rpm	17rpm	11rpm		
	15 [3.96]	118 [1044]	211 [1867]	287 [2540]	367 [3248]	404 [3576]	495 [4381]	568 [5027]
		47rpm	46rpm	44rpm	40rpm	28rpm	21rpm	10rpm
	20 [5.28]	110 [974]	205 [1814]	278 [2460]	360 [3186]	395 [3496]	494 [4372]	566 [5009]
		62rpm	61rpm	60rpm	57rpm	46rpm	40rpm	36rpm
	30 [7.93]	101 [894]	196 [1735]	271 [2399]	349 [3089]	388 [3434]	490 [4337]	565 [5001]
		94rpm	93rpm	91rpm	88rpm	76rpm	68rpm	65rpm
	35 [9.25]	96 [850]	188 [1664]	264 [2337]	341 [3018]	382 [3381]	478 [4231]	557 [4930]
		109rpm	107rpm	106rpm	104rpm	96rpm	89rpm	84rpm
	45 [11.89]	89 [788]	180 [1593]	254 [2248]	337 [2983]	372 [3292]	468 [4142]	553 [4894]
		141rpm	140rpm	138rpm	135rpm	127rpm	120rpm	115rpm
	55 [14.53]	76 [673]	166 [1469]	239 [2115]	325 [2876]	362 [3204]	457 [4045]	548 [4850]
173rpm		172rpm	170rpm	167rpm	160rpm	152rpm	143rpm	
60 [15.85]	65 [575]	154 [1363]	227 [2009]	308 [2726]	348 [3080]	443 [3921]	529 [4682]	
	Max Cont.	188rpm	186rpm	184rpm	182rpm	178rpm	172rpm	163rpm
75 [19.82]	40 [354]	120 [1062]	201 [1779]	279 [2469]	323 [2859]	418 [3700]	497 [4399]	
	Max Int.	236rpm	234rpm	232rpm	228rpm	226rpm	223rpm	214rpm

GPH400		396cm ³ /rev (24.16in ³ /rev)					Max Cont.	Max Int.
Pressure bar [psi→]		30.5 [435]	45.7 [653]	55.9 [798]	66.0 [943]	81.2 [1160]	101.5 [1450]	126.9 [1813]
Flow	l/min [gpm↓]	Torque N m [lb-in] Speed Specification						
	8 [2.11]	166 [1469]	232 [2053]	287 [2540]	340 [3009]	418 [3700]		
		20rpm	19rpm	18rpm	16rpm	12rpm		
	15 [3.96]	165 [1460]	228 [2018]	277 [2452]	337 [2983]	417 [3691]	496 [4390]	612 [5417]
		38rpm	36rpm	35rpm	33rpm	31rpm	27rpm	21rpm
	20 [5.28]	162 [1434]	223 [1974]	273 [2416]	331 [2930]	413 [3655]	495 [4381]	608 [5381]
		50rpm	49rpm	49rpm	48rpm	45rpm	41rpm	35rpm
	30 [7.93]	154 [1363]	216 [1912]	266 [2354]	318 [2815]	405 [3585]	486 [4301]	600 [5310]
		76rpm	75rpm	74rpm	73rpm	71rpm	67rpm	60rpm
	35 [9.25]	146 [1292]	210 [1859]	256 [2266]	312 [2761]	395 [3496]	480 [4248]	588 [5204]
		88rpm	87rpm	87rpm	86rpm	83rpm	80rpm	75rpm
	45 [11.89]	132 [1168]	197 [1744]	240 [2151]	300 [2655]	383 [3390]	464 [4107]	576 [5098]
		114rpm	113rpm	112rpm	110rpm	108rpm	106rpm	99rpm
	55 [14.53]	117 [1036]	184 [1629]	227 [2009]	283 [2505]	363 [3213]	450 [3983]	552 [4886]
139rpm		137rpm	136rpm	135rpm	135rpm	132rpm	123rpm	
60 [15.85]	102 [903]	163 [1443]	215 [1903]	272 [2407]	347 [3071]	436 [3859]	532 [4709]	
	Max Cont.	153rpm	152rpm	150rpm	148rpm	146rpm	143rpm	138rpm
75 [19.82]	53 [469]	128 [1133]	182 [1611]	234 [2071]	318 [2815]	391 [3461]	484 [4284]	
	Max Int.	191rpm	189rpm	187rpm	185rpm	183rpm	180rpm	176rpm

Technical Data

Hydraulic orbit Motors GPH

Permissible shaft seal pressure



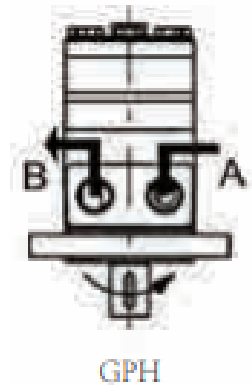
In applications without drain line, output shaft seal exceeds a bit of the pressure in the return line. When applications use the drain line, the pressure of output shaft seal equals the pressure in drain line.

Case Drain

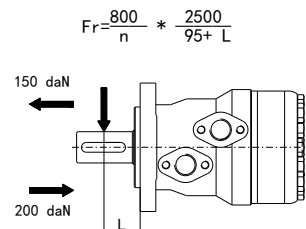
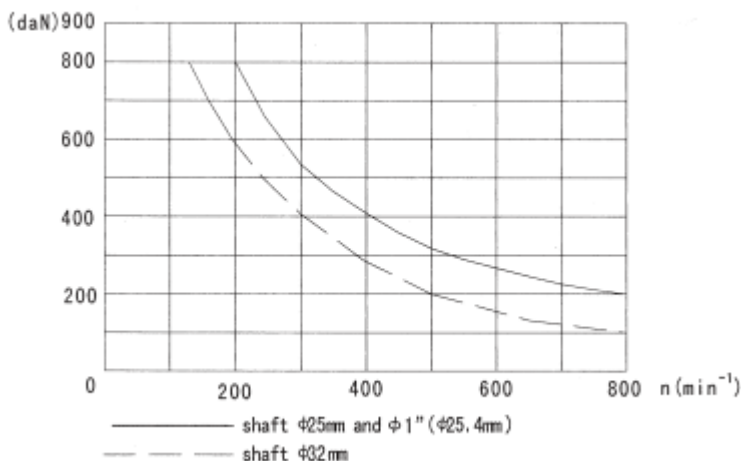
In applications without a motor drain line, the pressure exerted on the shaft seal is marginally in excess of the return line pressure. When the Drain line is used, the pressure exerted on the shaft seal is equal to the return line pressure.

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.



Axial and Radial forces



$$Fr = \frac{800}{n} * \frac{2500}{95 + L}$$

Fr =Radial Force (daN)

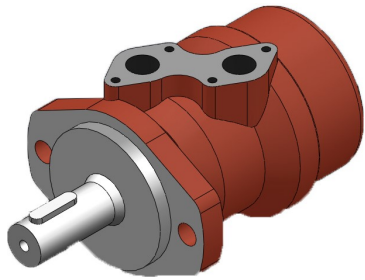
L =Distance (mm)

n =Speed (rpm)

Rhomb-flange L=30mm

Square-flange L=24mm

General

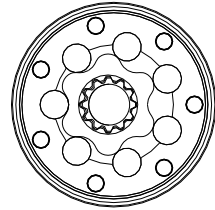


APPLICATION

- ◇ Conveyors
- ◇ Feeding machinery of robots and manipulators
- ◇ Metal working machines
- ◇ Textile machines
- ◇ Agricultural machines
- ◇ Food industries
- ◇ Lawn mower

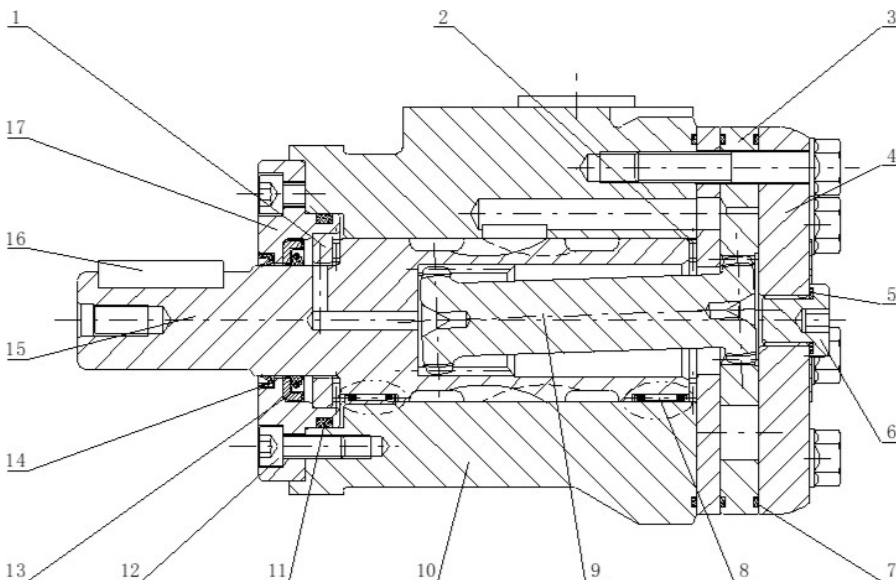
OPTIONS

- ◇ Flange connection
- ◇ Motor with needle bearing
- ◇ Side and rear ports
- ◇ Shafts—straight, splined and tapered
- ◇ Shaft seal for high and low pressure
- ◇ Metric and BSPP ports
- ◇ Speed sensing
- ◇ Other special features



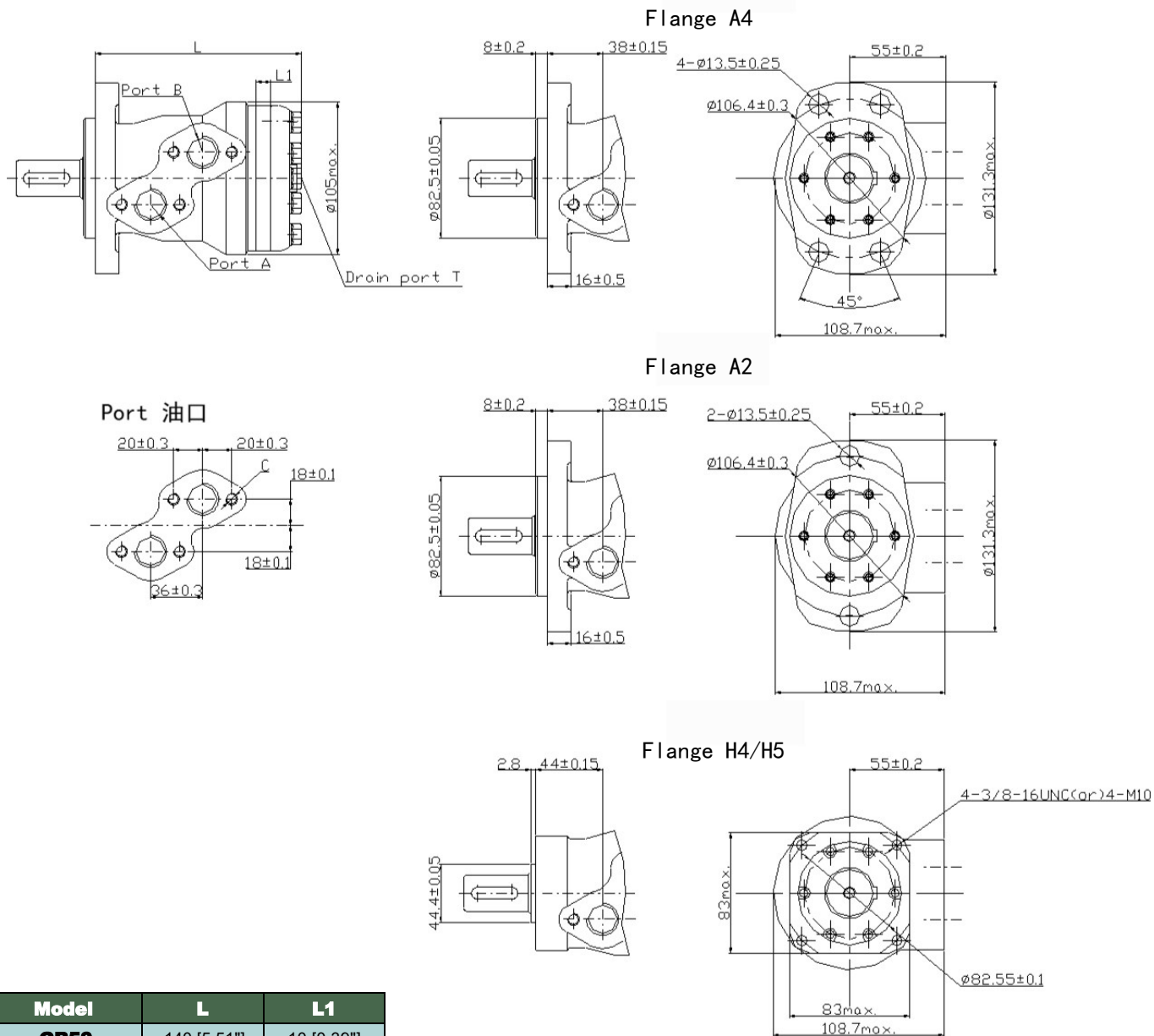
◇ Shaft distribution flow

Model		GR50	GR80	GR100	GR125	GR160	GR200	GR250	GR315	GR400
Disp.	in ³ /rev	3.14	4.90	6.09	7.67	9.74	12.19	15.26	19.26	24.4
	cm ³ /rev	51.5	80.3	99.8	125.7	159.6	199.8	250.1	315.7	397
Max Speed rpm	cont.	775	750	600	475	375	300	240	190	150
	int.	970	940	750	600	470	375	300	240	190
Max Torque N m [lb-in]	cont.	100 [900]	200 [1770]	240 [2125]	300 [2665]	390 [3450]	385 [3410]	390 [3450]	360 [3185]	380 [3360]
	int.	130 [1150]	220 [1947]	280 [2480]	340 [3010]	430 [3805]	460 [4070]	470 [4160]	470 [4160]	470 [4160]
Max Dif. bar [psi]	cont.	140 [2030]	175 [2540]	175 [2540]	175 [2540]	175 [2540]	140 [2030]	110 [1600]	85 [1230]	65 [940]
	int.	175 [2540]	200 [2900]	200 [2900]	200 [2900]	200 [2900]	175 [2540]	140 [2030]	115 [1670]	90 [1300]
Max Flow l/min [gpm]	cont.	40 [10.5]	60 [15.8]	60 [15.8]	60 [15.8]	60 [15.8]	60 [15.8]	60 [15.8]	60 [15.8]	60 [15.8]
	int.	50 [13.2]	75 [19.8]	75 [19.8]	75 [19.8]	75 [19.8]	75 [19.8]	75 [19.8]	75 [19.8]	75 [19.8]
Weight kg [lbs]		6.9 [15.2]	7 [15.4]	7.3 [16.1]	7.4 [16.3]	7.6 [15.4]	8.1 [17.6]	8.5 [18.5]	9.2 [20.3]	9.9 [21.8]



1. Thrust Washer
2. Axial Needle Bearing
3. Gear Set
4. End Cover
5. Seal
6. Case Drain Plug
7. O-ring
8. Radial Needle Bearing
9. Cardan Joint
10. Housing
11. O-ring
12. Bolt
13. Shaft Seal
14. Dust Seal
15. Output Shaft
16. Key
17. Front Cover

Dimensions and Mounting Data

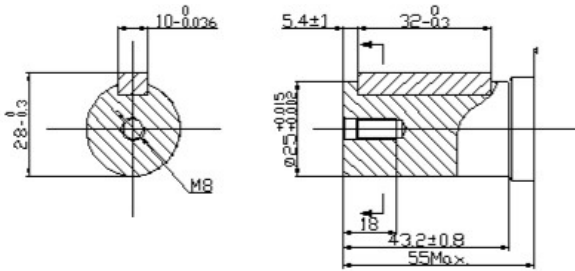


* Flat seal

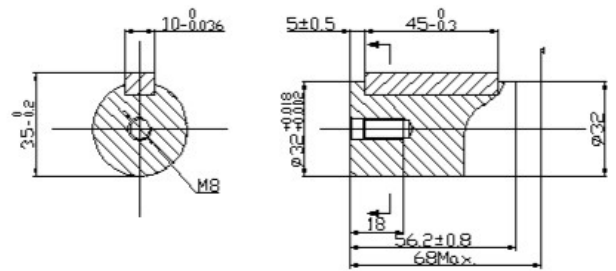
Model	L	L1
GR50	140 [5.51"]	10 [0.39"]
GR80	146 [5.75"]	16 [0.63"]
GR100	150 [5.91"]	20 [0.79"]
GR125	155 [6.10"]	25 [0.98"]
GR160	161.5 [6.36"]	30.5 [1.20"]
GR200	170 [6.69"]	38.1 [1.50"]
GR250	180 [7.09"]	50 [1.97"]
GR315	192 [7.56"]	62 [2.44"]
GR400	207 [8.15"]	76 [2.99"]

Port	G1 (Depth)	M1 (Depth)	U2 (Depth)	U1 (Depth)	G2 (Depth)
	P(A,B)	G1/2(15)	M22x1.5(15)	SAE-10 O'ring 7/8-14	1/2-14NPTF(15)
T	G1/4(12)	M14x1.5(12)	* 7/16-20UNF(12)	* 7/16-20UNF(12)	PT(RC)1/4(9.7)
C	4-M8(13)	4-M8(13)	4-5/16-18UNC(13)	4-5/16-18UNC(13)	4-M8(13)

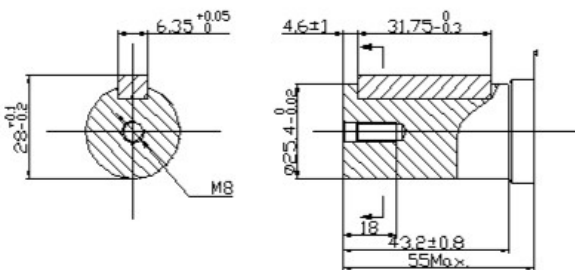
GR Shaft Extension Dimensions Data



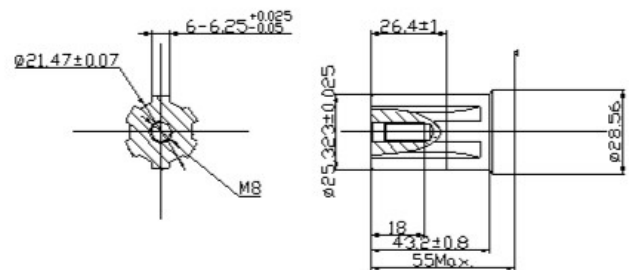
Shaft S1: Cylindrical shaft $\varnothing 25$,
Parallel key 8x7x32



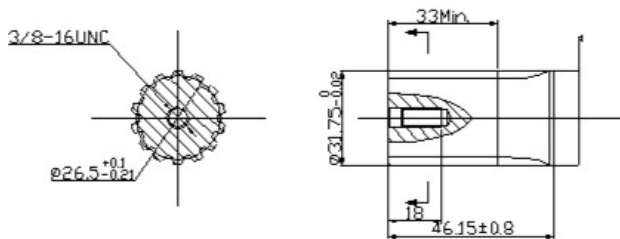
Shaft S4: Cylindrical shaft $\varnothing 32$,
Parallel key 10x8x45



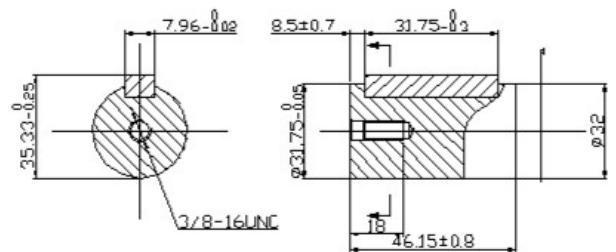
Shaft S2: Cylindrical shaft $\varnothing 1.00$ ",
Parallel key 0.25"x 0.25"x 1.25"



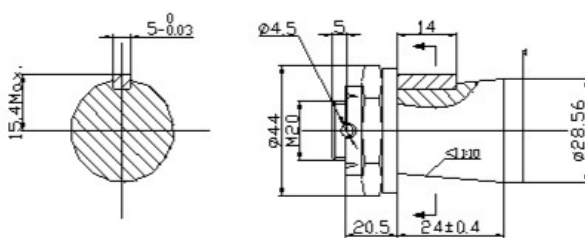
Shaft R1: Splined SAE 6B



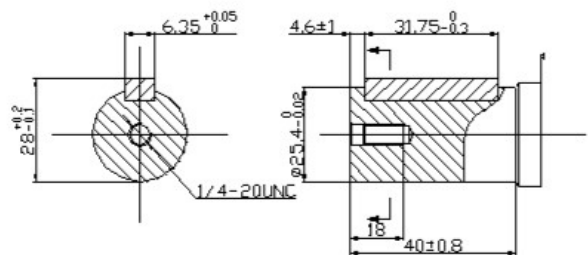
Shaft R2: Splined 14-DP12/24



Shaft S5: Cylindrical shaft $\varnothing 1.25$ ",
Parallel key 0.313"x 0.313"x 1.25"



Shaft T1: Tapered shaft $\varnothing 28.56$,
Parallel key B5x5x14
Tightening torque: 100±10Nm



Shaft S3: Cylindrical shaft $\varnothing 1.00$ ",
Parallel key 0.25"x 0.25"x 1.25"



GR - How To Order

Ordering Example:						
Model	Brake Opt	Disp.	Flange	Drive shaft	Ports	Other functions
GR	None= blank Brake= GBD	50	A2	S1	U20	ACA
Model	Brake Opt	Disp.	Flange	Drive shaft	Ports	Other functions
GR	None= blank Brake= GBD	50 80 100 125 160 200 250 315 400	A2=2-Hole SAE A Flange, Pilot ∅ 3.25" x 0.32" A4=4-Hole SAE A Flange, Pilot ∅ 3.25" x 0.32" H4=4-3/8-16 Hole Square Flange, Pilot ∅ 1.75" x 0.11" H5=4-M10 Hole Square Flange, Pilot ∅ 1.75" x 0.11"	S1=Shaft ∅25, parallel key 8x7x32 S2=Shaft ∅ 1.00", parallel key 0.25"x 0.25"x 1.25" S3=Short Shaft ∅ 1.00", parallel key 0.25"x 0.25"x 1.25" S4=Shaft ∅ 32, parallel key 10x8x45 S5=Shaft ∅ 1.25", parallel key 0.31"x 0.31"x 1.25" R1=Shaft ∅ 1.00", splined tooth SAE 6B R2=Shaft ∅ 1.25", splined tooth 14- DP12/24 T1=Tapered shaft ∅28.56, parallel key B5x5x14 T2=Tapered shaft ∅1 .25" parallel key 0.31"x 0.31"x 1.00"	G1=G1/2 manifold mount 4xM8, G1/4 G2=PT(Rc)1/2 manifold 4xM8, PT(Rc)1/4 U1=1/2-14NPTF manifold 4 x 5/16-18UNC, 7/16-20UNF (flat seal) U10=1/2-14NPTF manifold 4x5/16-18 UNC, SAE-4 O'ring 7/16-20UNF U2=SAE-10 O'ring 7/8-14UNF manifold 4x5/16-18UNC, 7/16-20 UNF (flat seal) U20=SAE-10 O'ring 7/8-14UNF manifold 4x5/16-18UNC, SAE-4 O'ring 7/16-20 UNF M1=M22x1.5 manifold mount 4xM8, M14X1.5	ACA

Shaft Rotation	Paint	Standard Options	Seal Options	Relief Options	Speed Sensor Option
A=Standard / CW 'A' port pressurized R=Reverse / CCW 'A' port pressurized	A=No paint B=Blue C=Black S=Silver gray G=Corrosion resistant coating	A=Standard N=Large radial force D=No case drain F=Free running L=Low speed V=High temperature S=Low temperature	Blank= None HPS=High Pressure Seal SG=Seal Guard HPS-SG= High Pressure Seal & Seal Guard	Blank=None R=Valve Cavity Only R12=Bi-directional relief max 125 bar R20= Bi-directional relief max 207 bar	Blank= None SS= Speed Sensor, 4- pin, M12 male connector

Hydraulic Orbit Motors GR



Flow Data

GR50		51.5cm ³ /rev (3.14in ³ /rev)					Max Cont.		Max Int.
Pressure bar [psi→]		50.8[725]	71.1[1015]	91.4[1305]	101.5[1450]	121.8[1740]	142.2[2031]	162.5[2321]	177.7[2538]
Flow	l/min[gpm↓]	Torque N m [lb-in] Speed Specification							
	5 [1.32]	35 [310]	45 [398]	61 [540]	67 [593]	77 [682]	88 [779]		
		93rpm	84rpm	76rpm	73rpm	69rpm	46rpm		
	10 [2.64]	36 [319]	46 [407]	62 [549]	69 [611]	80 [708]	95 [841]	108 [956]	120 [1062]
		186rpm	178rpm	166rpm	162rpm	153rpm	136rpm	118rpm	97rpm
	15 [3.96]	35 [310]	49 [434]	63 [558]	73 [646]	88 [779]	100 [885]	109 [965]	123 [1089]
		283rpm	277rpm	269rpm	261rpm	250rpm	230rpm	211rpm	185rpm
	20 [5.28]	34 [305]	47 [416]	61 [540]	69 [611]	83 [735]	96 [850]	109 [965]	126 [1115]
		377rpm	375rpm	365rpm	361rpm	346rpm	330rpm	302rpm	270rpm
	30 [7.93]	33 [292]	44 [389]	60 [531]	67 [593]	80 [708]	95 [841]	108 [956]	126 [1115]
		576rpm	569rpm	561rpm	554rpm	542rpm	531rpm	500rpm	465rpm
	40 [10.57]	30 [266]	41 [363]	58 [513]	66 [584]	79 [699]	92 [814]	106 [938]	122 [1080]
		760rpm	758rpm	753rpm	750rpm	738rpm	724rpm	700rpm	670rpm
	45 [11.89]	29 [261]	40 [354]	57 [504]	65 [575]	78 [690]	90 [797]	105 [929]	121 [1071]
856rpm		853rpm	849rpm	845rpm	835rpm	815rpm	796rpm	770rpm	
50 [13.21]	26 [230]	37 [327]	53 [469]	60 [531]	73 [646]	85 [752]	99 [876]	114 [1009]	
Max Cont.	950rpm	940rpm	925rpm	906rpm	880rpm	852rpm	832rpm	801rpm	
60 [15.85]	20 [177]	33 [292]	48 [425]	56 [496]	69 [611]	81 [717]	95 [841]	109 [965]	
Max Int.	1138rpm	1124rpm	1100rpm	1075rpm	1056rpm	1028rpm	1006rpm	970rpm	

GR80		80.3cm ³ /rev (4.90in ³ /rev)					Max Cont.		Max Int.	
Pressure bar [psi→]		50.8[725]	71.1[1015]	91.4[1305]	101.5[1450]	121.8[1740]	142.2[2031]	162.5[2321]	177.7[2538]	203.1[2901]
Flow	l/min[gpm↓]	Torque (lb-in) Speed Specification								
	5 [1.32]	50 [443]	64 [566]	88 [779]	108 [956]	133 [1177]				
		59rpm	56rpm	50rpm	44rpm	38rpm				
	10 [2.64]	54 [478]	77 [682]	99 [876]	108 [956]	129 [1142]	150 [1328]	173 [1531]		
		118rpm	113rpm	106rpm	97rpm	86rpm	79rpm	56rpm		
	20 [5.28]	57 [504]	78 [690]	102 [903]	111 [982]	134 [1186]	155 [1372]	177 [1567]	196 [1735]	225 [1991]
		238rpm	234rpm	227rpm	216rpm	203rpm	190rpm	178rpm	154rpm	135rpm
	30 [7.93]	54 [478]	75 [664]	100 [885]	108 [956]	131 [1159]	152 [1345]	176 [1558]	195 [1726]	223 [1974]
		360rpm	352rpm	340rpm	332rpm	316rpm	302rpm	290rpm	274rpm	250rpm
	40 [10.57]	48 [425]	73 [646]	96 [850]	105 [929]	127 [1124]	148 [1310]	172 [1522]	190 [1682]	220 [1947]
		480rpm	470rpm	458rpm	445rpm	430rpm	418rpm	403rpm	388rpm	359rpm
	50 [13.21]	42 [372]	70 [620]	93 [823]	102 [903]	124 [1097]	147 [1301]	170 [1505]	188 [1664]	218 [1929]
		604rpm	595rpm	582rpm	570rpm	556rpm	540rpm	521rpm	504rpm	487rpm
	60 [15.85]	37 [327]	66 [584]	89 [788]	99 [876]	121 [1071]	144 [1275]	166 [1469]	184 [1629]	213 [1885]
726rpm		715rpm	704rpm	692rpm	678rpm	663rpm	647rpm	622rpm	594rpm	
70 [18.49]	32 [283]	60 [531]	83 [735]	95 [841]	116 [1027]	140 [1239]	160 [1416]	177 [1567]	208 [1841]	
	845rpm	834rpm	820rpm	802rpm	789rpm	767rpm	754rpm	730rpm	705rpm	
75 [19.82]	21 [186]	50 [443]	78 [690]	90 [797]	111 [982]	135 [1195]	154 [1363]	171 [1513]	200 [1770]	
	910rpm	895rpm	881rpm	867rpm	852rpm	830rpm	806rpm	787rpm	756rpm	

Hydraulic Orbit Motors GR



Flow Data

GR100		99.8cm ³ /rev (6.09in ³ /rev)						Max Cont.		Max Int.
Pressure bar [psi→]		50.8 [725]	71.1[1015]	91.4[1305]	101.5[1450]	121.8[1740]	142.2[2031]	162.5[2321]	177.7[2538]	203.1[2901]
Flow	l/min[gpm↓]	Torque N m [lb-in] Speed Specification								
	5 [1.32]	66 [584]	92 [814]	120 [1062]	135 [1195]	156 [1381]				
		45rpm	42rpm	38rpm	34rpm	27rpm				
	10 [2.64]	68 [602]	96 [850]	125 [1106]	138 [1221]	159 [1407]	188 [1664]	212 [1876]		
		93rpm	90rpm	86rpm	81rpm	74rpm	57rpm	42rpm		
	20 [5.28]	65 [575]	94 [832]	123 [1089]	137 [1213]	155 [1372]	186 [1646]	210 [1859]	238 [2106]	274 [2425]
		189rpm	185rpm	180rpm	173rpm	165rpm	158rpm	150rpm	139rpm	118rpm
	30 [7.93]	63 [558]	92 [814]	120 [1062]	133 [1177]	153 [1354]	185 [1637]	209 [1850]	235 [2080]	270 [2390]
		286rpm	281rpm	275rpm	266rpm	257rpm	246rpm	237rpm	225rpm	207rpm
	40 [10.57]	57 [504]	88 [779]	117 [1036]	130 [1151]	152 [1345]	185 [1637]	208 [1841]	233 [2062]	267 [2363]
		385rpm	378rpm	365rpm	355rpm	345rpm	332rpm	320rpm	314rpm	297rpm
	50 [13.21]	48 [425]	79 [699]	110 [974]	123 [1089]	150 [1328]	183 [1620]	204 [1806]	228 [2018]	260 [2301]
482rpm		477rpm	470rpm	460rpm	448rpm	435rpm	420rpm	405rpm	389rpm	
60 [15.85]	38 [336]	70 [620]	105 [929]	120 [1062]	144 [1275]	178 [1575]	200 [1770]	220 [1947]	252 [2230]	
	Max Cont.	580rpm	572rpm	560rpm	548rpm	535rpm	523rpm	510rpm	500rpm	478rpm
70 [18.49]	32 [283]	65 [575]	100 [885]	118 [1044]	141 [1248]	176 [1558]	197 [1744]	215 [1903]	246 [2177]	
	678rpm	670rpm	660rpm	648rpm	638rpm	626rpm	615rpm	606rpm	580rpm	
75 [19.82]	23 [204]	59 [522]	93 [823]	111 [982]	136 [1204]	170 [1505]	192 [1699]	210 [1859]	240 [2124]	
	Max Int.	728rpm	720rpm	710rpm	695rpm	681rpm	667rpm	650rpm	634rpm	618rpm

GR125		125.7cm ³ /rev (7.67in ³ /rev)						Max Cont.		Max Int.
Pressure bar [psi→]		50.8[725]	71.1[1015]	91.4 [1305]	101.5 [1450]	121.8 [1740]	142.2 [2031]	162.5 [2321]	177.7 [2538]	203.1 [2901]
Flow	l/min[gpm↓]	Torque N m [lb-in] Speed Specification								
	5 [1.32]	76 [673]	110 [974]	145 [1283]	167 [1478]	189 [1673]				
		36rpm	31rpm	25rpm	19rpm	13rpm				
	10 [2.64]	84 [743]	118 [1044]	155 [1372]	176 [1558]	202 [1788]	228 [2018]	253 [2239]		
		73rpm	70rpm	60rpm	48rpm	36rpm	25rpm	19rpm		
	20 [5.28]	82 [726]	117 [1036]	153 [1354]	174 [1540]	200 [1770]	230 [2036]	259 [2292]	294 [2602]	332 [2938]
		153rpm	151rpm	148rpm	144rpm	138rpm	128rpm	117rpm	104rpm	73rpm
	30 [7.93]	79 [699]	116 [1027]	151 [1336]	171 [1513]	198 [1752]	228 [2018]	257 [2275]	292 [2584]	329 [2912]
		231rpm	228rpm	224rpm	218rpm	210rpm	201rpm	183rpm	168rpm	137rpm
	40 [10.57]	72 [637]	114 [1009]	148 [1310]	168 [1487]	196 [1735]	226 [2000]	256 [2266]	290 [2567]	327 [2894]
		309rpm	307rpm	303rpm	298rpm	292rpm	280rpm	270rpm	252rpm	218rpm
	50 [13.21]	62 [549]	105 [929]	143 [1266]	165 [1460]	195 [1726]	223 [1974]	254 [2248]	287 [2540]	323 [2859]
389rpm		386rpm	382rpm	378rpm	370rpm	360rpm	344rpm	328rpm	292rpm	
60 [15.85]	52 [460]	98 [867]	136 [1204]	160 [1416]	191 [1690]	220 [1947]	250 [2213]	282 [2496]	319 [2823]	
	Max Cont.	467rpm	463rpm	459rpm	456rpm	448rpm	427rpm	410rpm	399rpm	352rpm
70 [18.49]	41 [363]	90 [797]	130 [1151]	156 [1381]	187 [1655]	215 [1903]	242 [2142]	278 [2460]	313 [2770]	
	545rpm	542rpm	538rpm	534rpm	529rpm	520rpm	508rpm	486rpm	430rpm	
75 [19.82]	32 [283]	79 [699]	126 [1115]	148 [1310]	180 [1593]	208 [1841]	234 [2071]	262 [2319]	300 [2655]	
	Max Int.	586rpm	583rpm	578rpm	570rpm	560rpm	546rpm	532rpm	520rpm	480rpm

Hydraulic Orbit Motors GR



Flow Data

GR160		159.6cm ³ /rev (9.74in ³ /rev)						Max Cont.		Max Int.
Pressure bar [psi→]		50.8[725]	71.1[1015]	91.4[1305]	101.5[1450]	121.8[1740]	142.2[2031]	162.5[2321]	177.7[2538]	203.1[2901]
Flow	l/min(gpm↓)	Torque N m [lb-in] Speed Specification								
	5 [1.32]	104 [920]	146 [1292]	190 [1682]	210 [1859]	245 [2168]				
		26rpm	23rpm	20rpm	16rpm	10rpm				
	10 [2.64]	107 [947]	150 [1328]	195 [1726]	216 [1912]	250 [2213]	290 [2567]	335 [2965]		
		59rpm	56rpm	50rpm	45rpm	37rpm	30rpm	22rpm		
	20 [5.28]	102 [903]	151 [1336]	198 [1752]	220 [1947]	257 [2275]	298 [2638]	342 [3027]	370 [3275]	420 [3717]
		121rpm	118rpm	115rpm	113rpm	108rpm	102rpm	97rpm	90rpm	78rpm
	30 [7.93]	97 [859]	146 [1292]	190 [1682]	217 [1921]	256 [2266]	295 [2611]	340 [3009]	368 [3257]	416 [3682]
		184rpm	178rpm	173rpm	170rpm	164rpm	155rpm	143rpm	128rpm	103rpm
	40 [10.57]	89 [788]	140 [1239]	185 [1637]	210 [1859]	252 [2230]	290 [2567]	335 [2965]	363 [3213]	412 [3646]
		246rpm	241rpm	235rpm	228rpm	220rpm	210rpm	194rpm	177rpm	150rpm
	50 [13.21]	72 [637]	128 [1133]	179 [1584]	202 [1788]	244 [2160]	284 [2514]	327 [2894]	358 [3169]	409 [3620]
		310rpm	307rpm	300rpm	295rpm	287rpm	278rpm	262rpm	247rpm	210rpm
	60 [15.85]	60 [531]	116 [1027]	170 [1505]	198 [1752]	240 [2124]	279 [2469]	321 [2841]	352 [3115]	400 [3540]
374rpm		367rpm	359rpm	354rpm	346rpm	338rpm	323rpm	306rpm	265rpm	
70 [18.49]	49 [434]	107 [947]	164 [1452]	193 [1708]	233 [2062]	271 [2399]	309 [2735]	344 [3045]	390 [3452]	
	437rpm	430rpm	421rpm	415rpm	403rpm	393rpm	381rpm	365rpm	318rpm	
75 [19.82]	36 [319]	109 [867]	152 [1345]	185 [1637]	226 [2000]	265 [2345]	300 [2655]	334 [2956]	379 [3354]	
	472rpm	463rpm	450rpm	441rpm	431rpm	420rpm	405rpm	389rpm	365rpm	

GR200		199.8cm ³ /rev (12.19in ³ /rev)						Max Cont.		Max Int.
Pressure bar [psi→]		50.8[725]	71.1[1015]	91.4[1305]	101.5[1450]	121.8[1740]	142.2[2031]	162.5[2321]	177.7[2538]	203.1[2901]
Flow	l/min(gpm↓)	Torque N m [lb-in] Speed Specification								
	5 [1.32]	132 [1168]	181 [1602]	238 [2106]	262 [2319]	310 [2744]				
		24rpm	22rpm	18rpm	13rpm	10rpm				
	10 [2.64]	135 [1195]	186 [1646]	240 [2124]	264 [2337]	315 [2788]	356 [3151]	403 [3567]		
		49rpm	47rpm	45rpm	43rpm	38rpm	33rpm	24rpm		
	20 [5.28]	131 [1159]	183 [1620]	238 [2106]	260 [2301]	314 [2779]	358 [3169]	404 [3576]	438 [3877]	498 [4408]
		99rpm	97rpm	94rpm	92rpm	88rpm	83rpm	74rpm	64rpm	56rpm
	30 [7.93]	126 [1115]	178 [1575]	233 [2062]	254 [2248]	311 [2753]	355 [3142]	402 [3558]	431 [3815]	486 [4301]
		149rpm	147rpm	144rpm	141rpm	135rpm	126rpm	113rpm	105rpm	91rpm
	40 [10.57]	112 [991]	169 [1496]	228 [2018]	250 [2213]	307 [2717]	352 [3115]	400 [3540]	426 [3770]	477 [4222]
		200rpm	197rpm	194rpm	191rpm	185rpm	174rpm	160rpm	151rpm	127rpm
	50 [13.21]	95 [841]	156 [1381]	221 [1956]	246 [2177]	300 [2655]	350 [3098]	398 [3523]	421 [3726]	470 [4160]
		252rpm	249rpm	246rpm	243rpm	238rpm	228rpm	212rpm	194rpm	161rpm
	60 [15.85]	78 [690]	145 [1283]	213 [1885]	238 [2106]	289 [2558]	342 [3027]	386 [3416]	412 [3646]	459 [4062]
304rpm		301rpm	298rpm	294rpm	286rpm	276rpm	262rpm	243rpm	218rpm	
70 [18.49]	67 [593]	135 [1195]	206 [1823]	228 [2018]	277 [2452]	336 [2974]	375 [3319]	408 [3611]	453 [4009]	
	355rpm	353rpm	349rpm	340rpm	329rpm	316rpm	300rpm	288rpm	257rpm	
75 [19.82]	58 [513]	125 [1106]	197 [1744]	220 [1947]	270 [2390]	321 [2841]	360 [3186]	398 [3523]	442 [3912]	
	382rpm	379rpm	373rpm	362rpm	350rpm	337rpm	322rpm	312rpm	278rpm	

Hydraulic orbit Motors GR



Flow Data

GR250		15. 26in ³ /rev (250. 1cm ³ /rev)						Max Cont.		Max Int.	
Pressure bar [psi→]		50. 8[725]	71. 1[1015]	91. 4[1305]	101. 5[1450]	121. 8[1740]	142. 2[2031]	162. 5[2321]	177. 7[2538]	203. 1[2901]	
Flow	(gpm↓)	Torque N m [lb-in] Speed Specification									
	5 [1. 32]	175 [1549]	240 [2125]	304 [2691]	342 [3027]	407 [3602]					
		17rpm	16rpm	14rpm	12rpm	10rpm					
	10 [2. 64]	178 [1575]	246 [2177]	310 [2744]	344 [3045]	409 [3620]	465 [4116]	525 [4647]			
		37rpm	35rpm	31rpm	28rpm	23rpm	18rpm	11rpm			
	20 [5. 28]	175 [1549]	244 [2160]	308 [2726]	340 [3009]	408 [3611]	463 [4098]	520 [4602]	558 [4939]	686 [5629]	
		75rpm	73rpm	72rpm	70rpm	66rpm	58rpm	53rpm	50rpm	42rpm	
	30 [7. 93]	162 [1434]	235 [2080]	304 [2691]	332 [2938]	400 [3540]	455 [4027]	516 [4567]	550 [4868]	621 [5496]	
		114rpm	111rpm	108rpm	106rpm	100rpm	92rpm	83rpm	77rpm	65rpm	
	40 [10. 57]	143 [1266]	223 [1974]	300 [2655]	329 [2912]	396 [3505]	447 [3956]	512 [4532]	546 [4832]	617 [5461]	
		154rpm	152rpm	150rpm	147rpm	143rpm	132rpm	120rpm	110rpm	90rpm	
	50 [13. 21]	124 [1097]	208 [1841]	289 [2558]	323 [2859]	384 [3399]	440 [3894]	503 [4452]	535 [4735]	600 [5310]	
		193rpm	190rpm	187rpm	174rpm	168rpm	160rpm	149rpm	140rpm	116rpm	
	60 [15. 85]	103 [912]	192 [1699]	280 [2478]	314 [2779]	371 [3284]	381 [3370]	489 [4328]	514 [4549]	578 [5116]	
Max Cont.		233rpm	230rpm	227rpm	224rpm	218rpm	205rpm	190rpm	181rpm	155rpm	
70 [18. 49]	88 [779]	178 [1575]	264 [2337]	301 [2664]	356 [3151]	418 [3700]	479 [4239]	498 [4408]	560 [4956]		
	273rpm	270rpm	267rpm	263rpm	252rpm	242rpm	226rpm	209rpm	173rpm		
75 [19. 82]	62 [549]	165 [1460]	256 [2266]	288 [2549]	347 [3071]	412 [3646]	474 [4195]	486 [4301]	542 [4797]		
	Max Int.	294rpm	291rpm	287rpm	283rpm	274rpm	263rpm	249rpm	236rpm	211rpm	

GR315		19. 26in ³ /rev (315. 7cm ³ /rev)						Max Cont.		Max Int.	
Pressure bar [psi→]		50. 8[725]	71. 1[1015]	91. 4[1305]	101. 5[1450]	121. 8[1740]	142. 2[2031]	162. 5[2321]	177. 7[2538]		
Flow	l/min(gpm↓)	Torque N m [lb-in] Speed Specification									
	5 [1. 32]	215 [1903]	302 [2673]								
		13rpm	11rpm								
	10 [2. 64]	218 [1929]	305 [2699]	383 [3390]	422 [3735]	488 [4319]	551 [4877]	622 [5505]			
		28rpm	27rpm	25rpm	24rpm	21rpm	18rpm	13rpm			
	20 [5. 28]	215 [1903]	303 [2682]	380 [3363]	418 [3700]	485 [4293]	549 [4859]	620 [5487]	660 [5841]		
		60rpm	59rpm	57rpm	55rpm	52rpm	49rpm	45rpm	42rpm		
	30 [7. 93]	204 [1806]	296 [2620]	375 [3319]	413 [3655]	480 [4248]	542 [4797]	613 [5425]	654 [5788]		
		91rpm	89rpm	86rpm	84rpm	81rpm	78rpm	72rpm	67rpm		
	40 [10. 57]	196 [1735]	287 [2540]	368 [3257]	410 [3629]	477 [4222]	539 [4771]	609 [5390]	650 [5753]		
		122rpm	120rpm	117rpm	112rpm	106rpm	100rpm	94rpm	85rpm		
	50 [13. 21]	176 [1558]	270 [2390]	356 [3151]	393 [3478]	461 [4080]	526 [4655]	597 [5284]	645 [5709]		
		154rpm	151rpm	147rpm	140rpm	131rpm	120rpm	109rpm	100rpm		
	60 [15. 85]	162 [1434]	246 [2177]	339 [3000]	374 [3310]	446 [3947]	511 [4523]	586 [5187]	628 [5558]		
Max Cont.		185rpm	182rpm	177rpm	172rpm	163rpm	152rpm	140rpm	134rpm		
70 [18. 49]	143 [1266]	235 [2080]	324 [2868]	358 [3169]	430 [3806]	493 [4363]	562 [4974]	614 [5434]			
	217rpm	213rpm	208rpm	201rpm	190rpm	178rpm	166rpm	158rpm			
75 [19. 82]	145 [1106]	212 [1876]	303 [2682]	339 [3000]	417 [3691]	481 [4257]	543 [4806]	582 [5151]			
	Max Int.	232rpm	228rpm	222rpm	216rpm	208rpm	200rpm	183rpm	171rpm		

Hydraulic Orbit Motors GR



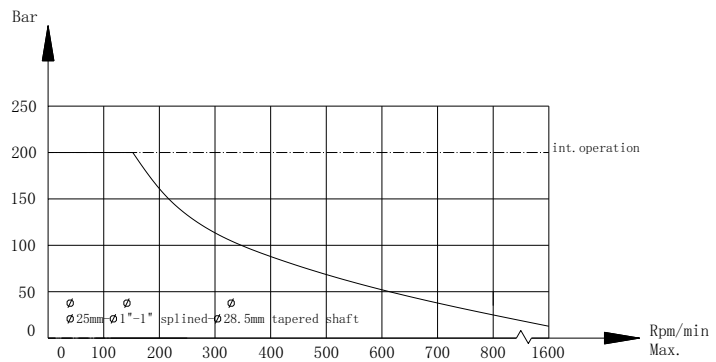
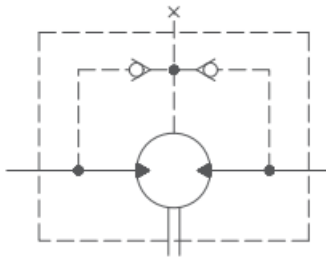
Flow Data

GR400		397cm ³ /rev (24.4in ³ /rev)					Max Cont.	Max Int.		
Pressure bar [psi→]		50.8[725]	71.1[1015]	91.4[1305]	101.5[1450]	121.8[1740]	142.2[2031]	162.5[2321]	177.7[2538]	
Flow	l/min(gpm↓)	Torque N m [lb-in] Speed Specification								
	5 [1.32]	153 [1354]	232 [2053]							
		12rpm	10rpm							
	10 [2.64]	157 [1390]	236 [2089]	284 [2514]	337 [2983]	406 [3593]	497 [4399]	612 [5417]	668 [5912]	
		24rpm	23rpm	22rpm	21rpm	19rpm	17rpm	15rpm	12rpm	
	20 [5.28]	150 [1328]	232 [2053]	280 [2478]	332 [2938]	401 [3549]	490 [4337]	606 [5364]	649 [5841]	
		49rpm	48rpm	47rpm	46rpm	44rpm	41rpm	38rpm	32rpm	
	30 [7.93]	142 [1257]	215 [1903]	274 [2425]	327 [2894]	398 [3523]	483 [4275]	603 [5337]	652 [5771]	
		76rpm	75rpm	74rpm	73rpm	71rpm	67rpm	63rpm	50rpm	
	40 [10.57]	126 [1115]	212 [1876]	268 [2372]	320 [2832]	393 [3478]	477 [4222]	593 [5248]	635 [5620]	
		103rpm	101rpm	99rpm	97rpm	95rpm	92rpm	88rpm	70rpm	
	50 [13.21]	105 [929]	187 [1655]	242 [2142]	302 [2673]	376 [3328]	455 [4027]	583 [5160]	608 [5381]	
		128rpm	126rpm	124rpm	121rpm	118rpm	115rpm	111rpm	96rpm	
60 [15.85]	90 [797]	167 [1478]	229 [2027]	281 [2487]	362 [3204]	444 [3930]	566 [5009]	600 [5310]		
	Max Cont.	154rpm	152rpm	150rpm	148rpm	145rpm	138rpm	130rpm	121rpm	
70 [18.49]	90 [797]	149 [1319]	200 [1770]	258 [2283]	341 [3018]	425 [3762]	546 [4832]	580 [5133]		
	180rpm	179rpm	178rpm	176rpm	173rpm	168rpm	160rpm	148rpm		
75 [19.82]	56 [496]	125 [1106]	182 [1611]	241 [2133]	320 [2832]	408 [3611]	524 [4638]	565 [5001]		
	Max Int.	195rpm	194rpm	193rpm	191rpm	189rpm	185rpm	178rpm	170rpm	

Technical Data

Hydraulic orbit Motors GR

Permissible shaft seal pressure



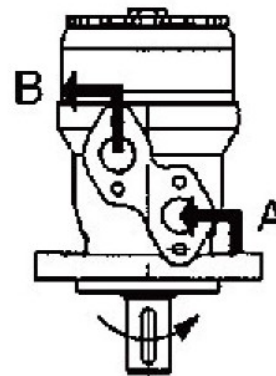
In applications without drain line, output shaft seal exceeds a bit of the pressure in the return line. When applications use the drain line, the pressure of output shaft seal equals the pressure in drain line.

Case Drain

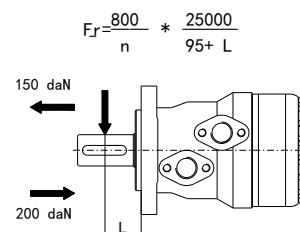
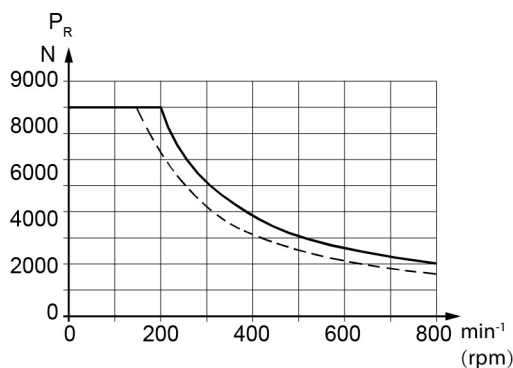
In applications without a motor drain line, the pressure exerted on the shaft seal is marginally in excess of the return line pressure. When the Drain line is used, the pressure exerted on the shaft seal is equal to the return line pressure.

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.



Axial and Radial forces



$$F_r = \frac{800}{n} * \frac{25000}{95 + L}$$

F_r =Radial Force (daN)

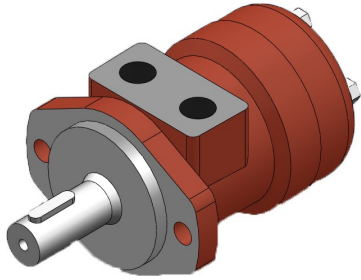
L =Distance (mm)

n =Speed (rpm)

Rhomb-flange $L=30$ mm

Square-flange $L=24$ mm

General

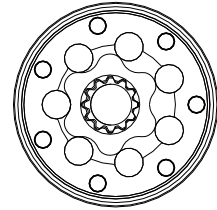


APPLICATION

- ◇ Conveyors
- ◇ Feeding machinery of robots and manipulators
- ◇ Metal working machines
- ◇ Textile machines
- ◇ Agricultural machines
- ◇ Food industries
- ◇ Lawn mower

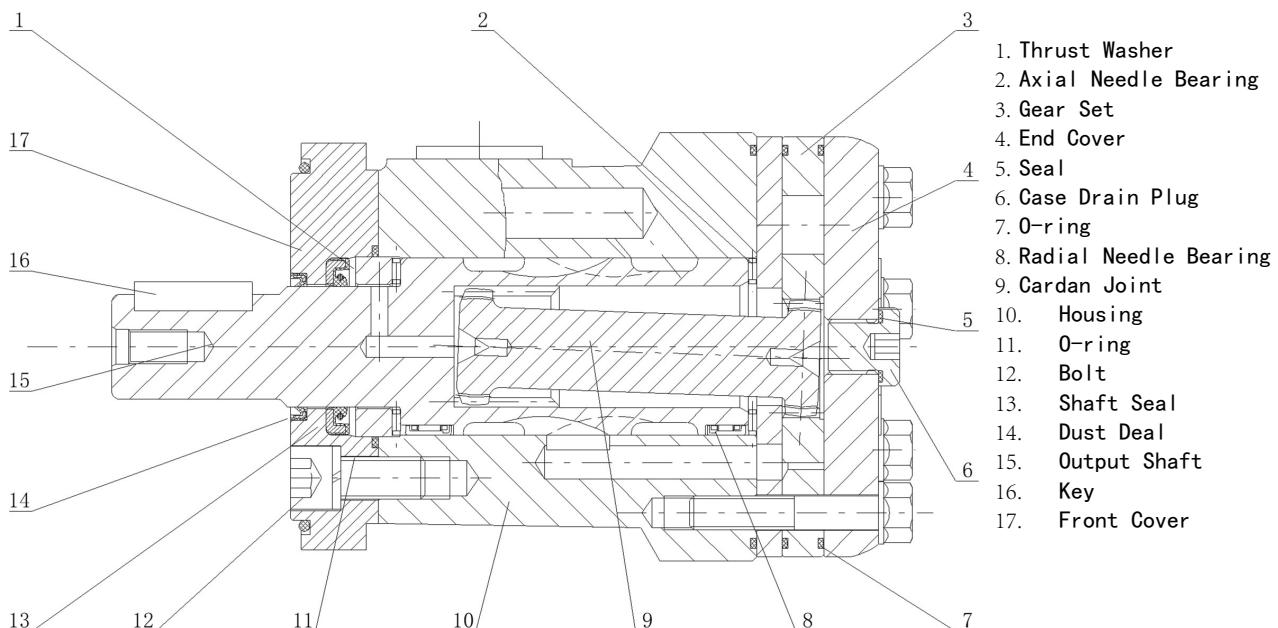
OPTIONS

- ◇ Flange connection
- ◇ Motor with needle bearing
- ◇ Side and rear ports
- ◇ Shafts—straight, splined and tapered
- ◇ Shaft seal for high and low pressure
- ◇ Metric and BSPP ports
- ◇ Speed sensing
- ◇ Other special features

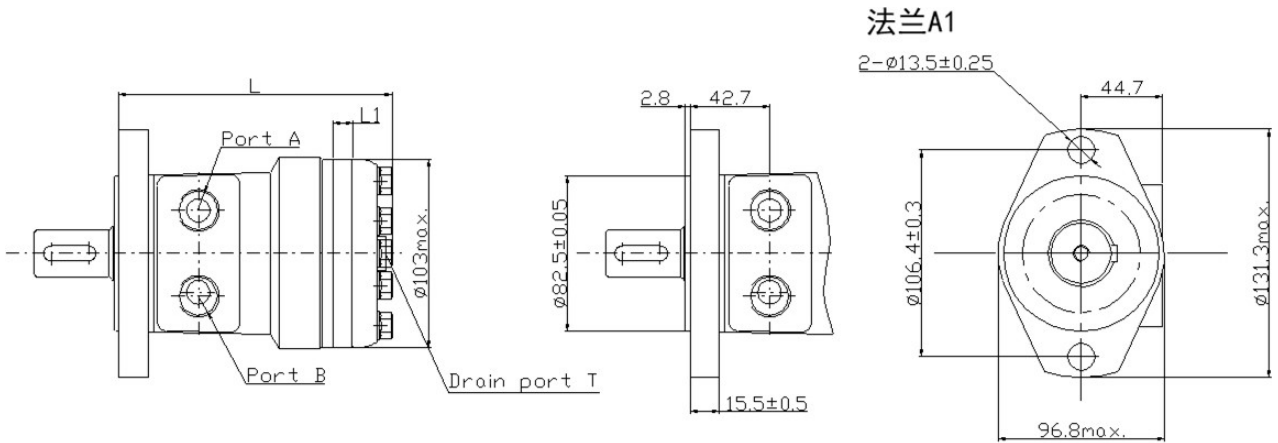


◇ Shaft distribution flow

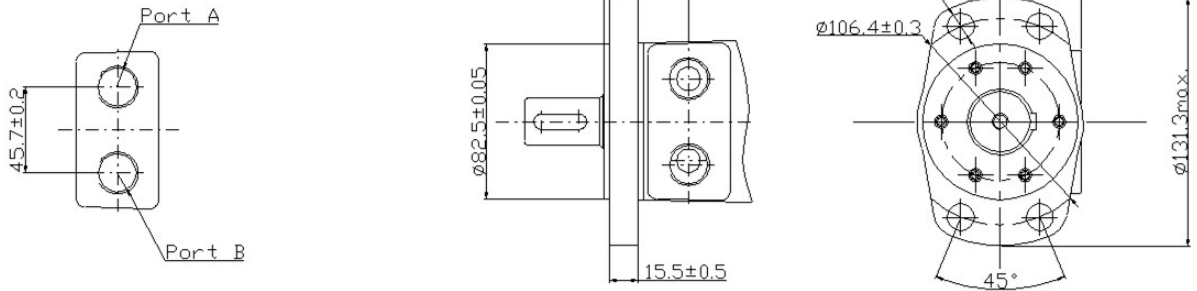
Model		GRS50	GRS80	GRS100	GRS125	GRS160	GRS200	GRS250	GRS315	GRS400
Disp.	in ³ /rev	3.14	4.90	6.09	7.67	9.74	12.19	15.26	19.26	24.4
	cm ³ /rev	51.5	80.3	99.8	125.7	159.6	199.8	250.1	315.7	397
Max Speed rpm	连续 cont.	775	750	600	475	375	300	240	190	150
	断续 int.	970	940	750	600	470	375	300	240	190
Max Torque N m [lb-in]	连续 cont.	100 [900]	200 [1770]	240 [2125]	300 [2665]	390 [3450]	385 [3410]	390 [3450]	360 [3185]	380 [3360]
	断续 int.	130 [1150]	220 [1947]	280 [2480]	340 [3010]	430 [3805]	460 [4070]	470 [4160]	470 [4160]	470 [4160]
Max Dif. bar [psi]	连续 cont.	140 [2030]	175 [2540]	175 [2540]	175 [2540]	175 [2540]	140 [2030]	110 [1600]	85 [1230]	65 [940]
	断续 int.	175 [2540]	200 [2900]	200 [2900]	200 [2900]	200 [2900]	175 [2540]	140 [2030]	115 [1670]	90 [1300]
Max Flow l/min [gpm]	连续 cont.	40 [10.5]	60 [15.8]	60 [15.8]	60 [15.8]	60 [15.8]	60 [15.8]	60 [15.8]	60 [15.8]	60 [15.8]
	断续 int.	50 [13.2]	75 [19.8]	75 [19.8]	75 [19.8]	75 [19.8]	75 [19.8]	75 [19.8]	75 [19.8]	75 [19.8]
Weight kg [lbs]		6.9[15.2]	7[15.4]	7.3[16.1]	7.4[16.3]	7.6[15.4]	8.1[17.6]	8.5[18.5]	9.2[20.3]	9.9[21.8]



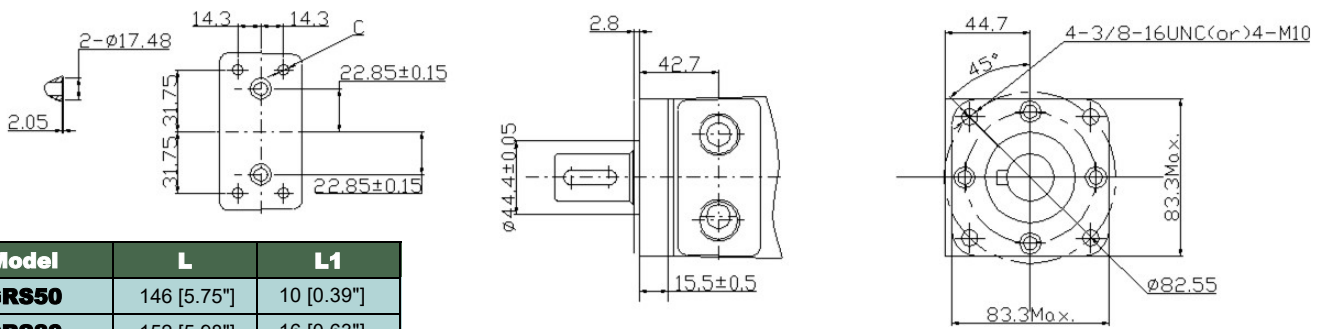
Dimensions and Mounting Data



Port 油口 : G, S, P, R, M1, M2, M3



Port 油口 : D1, D2

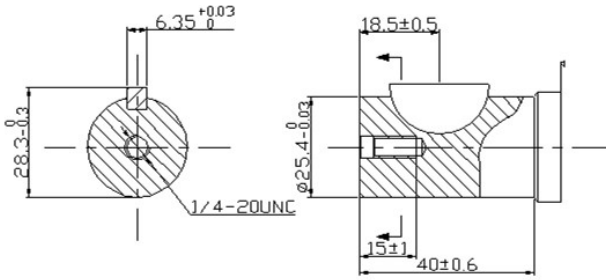


Model	L	L1
GRS50	146 [5.75"]	10 [0.39"]
GRS80	152 [5.98"]	16 [0.63"]
GRS100	156 [6.14"]	20 [0.79"]
GRS125	161 [6.34"]	25 [0.98"]
GRS160	166.5 [6.56"]	30.5 [1.20"]
GRS200	174 [6.85"]	38.1 [1.50"]
GRS250	186 [7.32"]	50 [1.97"]
GRS315	198 [7.80"]	62 [2.44"]
GRS400	213 [8.39"]	76 [2.99"]

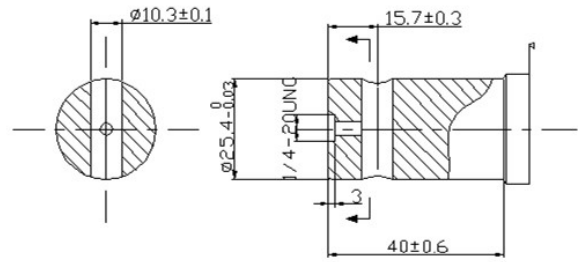
* (flat seal)

Port	G7 (Depth)	U9 (Depth)	UA (Depth)	G8 (Depth)	M2 (Depth)	M3 (Depth)	M4 (Depth)	D1 (Depth)	D2 (Depth)
P(A,B)	G1/2(15)	SAE-10 O'ring 7/8-14	1/2-14NPTF(15)	PT(RC)1/2(15)	M18x1.5(15)	M20x1.5(15)	M22x1.5(15)	10	10
T	G1/4(12)	* 7/16-20UNF(12)	* 7/16-20UNF(12)	PT(RC)1/4(9.7)	M10x1(12)	M10x1(12)	M10x1(12)	* 7/16-20UNF(12)	G1/4(12)
C	-	-	-	-	-	-	-	4-5/16-18UNC(13)	4-M8(13)

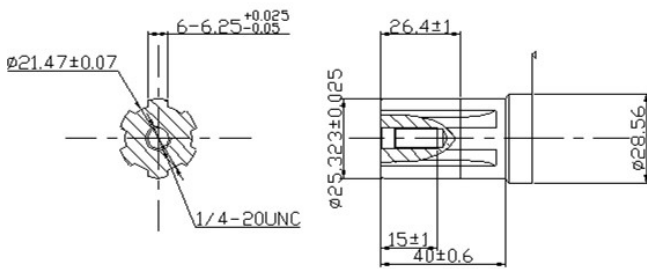
GRS Shaft Extension Dimensions Data



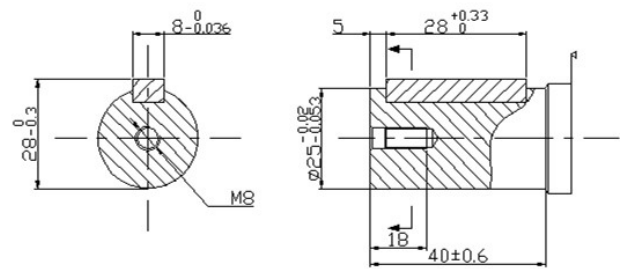
Shaft S6: Cylindrical shaft $\varnothing 25.4$
Woodruff key 0.25"x 1.00"



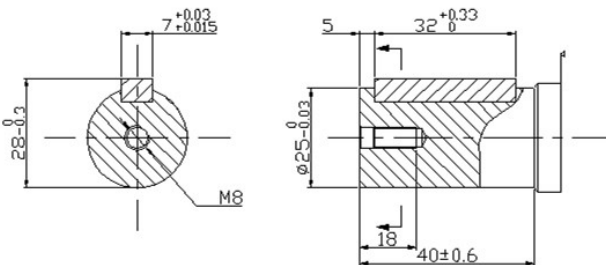
Shaft S9: Cylindrical shaft $\varnothing 1.00$ ",
Pin hole $\varnothing 0.406$ "



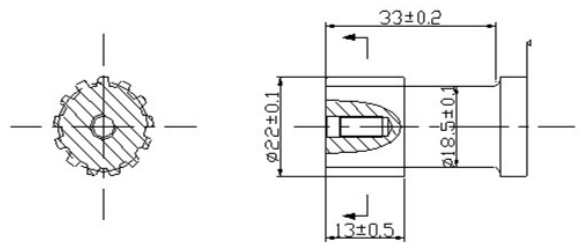
Shaft R4: Splined SAE 6B



Shaft SC: Cylindrical shaft $\varnothing 25$
Parallel key 8x7x8

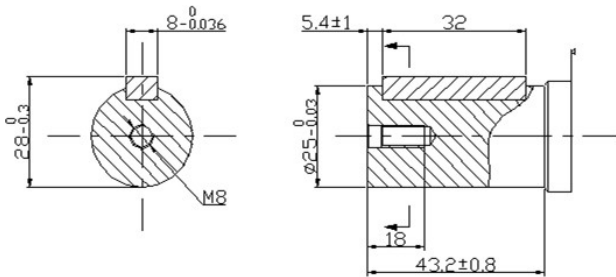


Shaft SD: Cylindrical shaft $\varnothing 25$
Parallel key 7x7x32

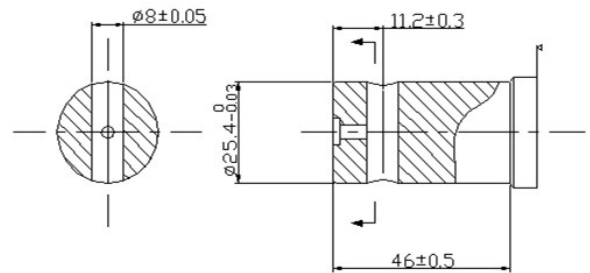


Shaft R5: Splined 13-DP16/32

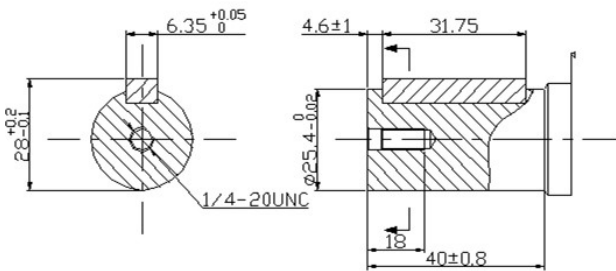
GRS Shaft Extension Dimensions Data



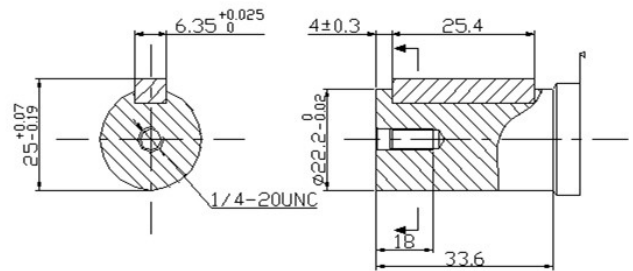
Shaft S7: Cylindrical shaft $\varnothing 25$
Parallel key 8x7x32



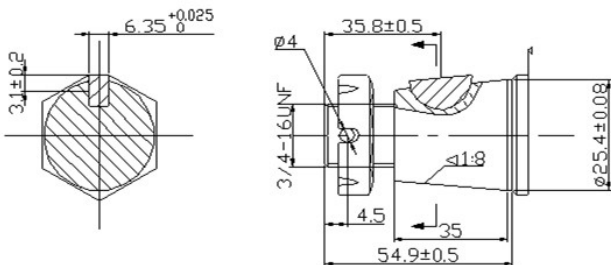
Shaft SA: Cylindrical shaft $\varnothing 1.00$ ",
Pin hole $\varnothing 0.315$ "



Shaft S8: Cylindrical shaft $\varnothing 1.00$ "
Parallel key 0.25"x 0.25"x 1.25"



Shaft SB: Cylindrical shaft $\varnothing 0.875$ "
Parallel key 0.25"x 0.25"x 1.00"



Shaft T3: Tapered shaft $\varnothing 1.00$ "
Woodruff key 0.25"x 1.00"
Tightening torque: 200±10Nm



GRS - How To Order

Ordering Example:		Model	Displacement	Flange	Drive shaft	Ports	Other functions
		GRS	50	A1	S6	D10	ACA
Model	Brake Opt	Disp.	Flange	Drive shaft		Ports	
GRS	None= blank Brake= GBD	50	A1=2-Hole SAE A Flange, Pilot \varnothing 3.25"x 0.32"	S6=Shaft \varnothing 1.00", woodruff key 0.25"x 1.00"		G7=G1/2, G1/4	
		80		S7=Shaft \varnothing 25, parallel key 8x7x32		U9=SAE-10 O'ring 7/8-14, 7/16-20 UNF (flat seal)	
		100	A2=4-Hole SAE A Flange, Pilot \varnothing 3.25"x 0.315"	S8=Shaft \varnothing 1.00", parallel key 0.25"x 0.25"x 1.25"		U90=SAE-10 O'ring 7/8-14, SAE-4 O'ring 7/16-20 UNF	
		125		S9=Shaft \varnothing 1.00", Pin hole \varnothing 0.41"		UA=1/2-14NPTF, 7/16-20UNF(flat seal)	
		160	H4=4-3/8-16 Hole Square Flange, Pilot \varnothing 1.75"x 0.11"	SA=Shaft \varnothing 1.00", Pin hole \varnothing 0.32"		UA0=1/2-14NPTF, SAE-4 O'ring 7/16-20UNF	
		200		SB=Shaft \varnothing 0.88", parallel key 0.25"x 0.25"x 1.00"		G8=PT(Rc)1/2, PT(Rc)1/4	
		250	H5=4-M10 Hole Square Flange, Pilot \varnothing 1.75"x 0.11"	SD=Shaft \varnothing 2.5, parallel key 7x7x32		D1= \varnothing 10 O-ring Plate 4x5/16-18 UNC, 7/16-20UNF (flat seal)	
		315		SC=Shaft \varnothing 2.5, parallel key 8x7x28		D10= \varnothing 10 O-ring Plate 4x5/16-18 UNC, SAE-4 O'ring 7/16-20UNF	
400		R4=Shaft \varnothing 1.00", spline SAE 6B		D2= \varnothing 10 O-ring Plate 4xM8, G1/4			
			R5=Shaft \varnothing 0.88" spline 13-DP16/32		M2=M18x1.5, M10x1		
			T3=Tapered shaft \varnothing 1.00", woodruff key 0.25"x 1.00"		M3=M20x1.5, M10x1		
					M4=M22x1.5, M10x1		

Shaft Rotation	Paint	Standard Options	Seal Options	Relief Options	Speed Sensor Option
<u>A</u> =Standard / CW 'A' port pressurized <u>R</u> =Reverse / CCW 'A' port pressurized	<u>A</u> =No paint <u>B</u> =Blue <u>C</u> =Black <u>S</u> =Silver gray <u>G</u> =Corrosion resistant coating	<u>A</u> =Standard <u>N</u> =Large radial force <u>D</u> =No case drain <u>F</u> =Free running <u>L</u> =Low speed <u>V</u> =High temperature <u>S</u> =Low temperature	<u>Blank</u> = None <u>HPS</u> =High Pressure Seal <u>SG</u> =Seal Guard <u>HPS-SG</u> = High Pressure Seal & Seal Guard	<u>Blank</u> =None <u>R</u> =Valve Cavity only <u>R12</u> =Bi-directional relief max 125 bar <u>R20</u> = Bi-directional relief max 207 bar	<u>Blank</u> = None <u>SS</u> = Speed Sensor, 4-pin, M12 male connector

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Flow Data

GRS50		51.5cm ³ /rev (3.14in ³ /rev)					Max Cont.	Max Int.	
Pressure bar [psi→]		50.8[725]	71.1[1015]	91.4[1305]	101.5[1450]	121.8[1740]	142.2[2031]	162.5[2321]	177.7[2538]
Flow	l/min[gpm↓]	Torque N m [lb-in] Speed Specification							
	5 [1.32]	35 [310]	45 [398]	61 [540]	67 [593]	77 [682]	88 [779]		
		93rpm	84rpm	76rpm	73rpm	69rpm	46rpm		
	10 [2.64]	36 [319]	46 [407]	62 [549]	69 [611]	80 [708]	95 [841]	108 [956]	120 [1062]
		186rpm	178rpm	166rpm	162rpm	153rpm	136rpm	118rpm	97rpm
	15 [3.96]	35 [310]	49 [434]	63 [558]	73 [646]	88 [779]	100 [885]	109 [965]	123 [1089]
		283rpm	277rpm	269rpm	261rpm	250rpm	230rpm	211rpm	185rpm
	20 [5.28]	34 [305]	47 [416]	61 [540]	69 [611]	83 [735]	96 [850]	109 [965]	126 [1115]
		377rpm	375rpm	365rpm	361rpm	346rpm	330rpm	302rpm	270rpm
	30 [7.93]	33 [292]	44 [389]	60 [531]	67 [593]	80 [708]	95 [841]	108 [956]	126 [1115]
		576rpm	569rpm	561rpm	554rpm	542rpm	531rpm	500rpm	465rpm
	40 [10.57]	30 [266]	41 [363]	58 [513]	66 [584]	79 [699]	92 [814]	106 [938]	122 [1080]
		760rpm	758rpm	753rpm	750rpm	738rpm	724rpm	700rpm	670rpm
	45 [11.89]	29 [261]	40 [354]	57 [504]	65 [575]	78 [690]	90 [797]	105 [929]	121 [1071]
856rpm		853rpm	849rpm	845rpm	835rpm	815rpm	796rpm	770rpm	
50 [13.21]	26 [230]	37 [327]	53 [469]	60 [531]	73 [646]	85 [752]	99 [876]	114 [1009]	
Max Cont.	950rpm	940rpm	925rpm	906rpm	880rpm	852rpm	832rpm	801rpm	
60 [15.85]	20 [177]	33 [292]	48 [425]	56 [496]	69 [611]	81 [717]	95 [841]	109 [965]	
Max Int.	1138rpm	1124rpm	1100rpm	1075rpm	1056rpm	1028rpm	1006rpm	970rpm	

GRS80		80.3cm ³ /rev (4.90in ³ /rev)					Max Cont.	Max Int.		
Pressure bar [psi→]		50.8[725]	71.1[1015]	91.4[1305]	101.5[1450]	121.8[1740]	142.2[2031]	162.5[2321]	177.7[2538]	203.1[2901]
Flow	l/min[gpm↓]	Torque (lb-in) Speed Specification								
	5 [1.32]	50 [443]	64 [566]	88 [779]	108 [956]	133 [1177]				
		59rpm	56rpm	50rpm	44rpm	38rpm				
	10 [2.64]	54 [478]	77 [682]	99 [876]	108 [956]	129 [1142]	150 [1328]	173 [1531]		
		118rpm	113rpm	106rpm	97rpm	86rpm	79rpm	56rpm		
	20 [5.28]	57 [504]	78 [690]	102 [903]	111 [982]	134 [1186]	155 [1372]	177 [1567]	196 [1735]	225 [1991]
		238rpm	234rpm	227rpm	216rpm	203rpm	190rpm	178rpm	154rpm	135rpm
	30 [7.93]	54 [478]	75 [664]	100 [885]	108 [956]	131 [1159]	152 [1345]	176 [1558]	195 [1726]	223 [1974]
		360rpm	352rpm	340rpm	332rpm	316rpm	302rpm	290rpm	274rpm	250rpm
	40 [10.57]	48 [425]	73 [646]	96 [850]	105 [929]	127 [1124]	148 [1310]	172 [1522]	190 [1682]	220 [1947]
		480rpm	470rpm	458rpm	445rpm	430rpm	418rpm	403rpm	388rpm	359rpm
	50 [13.21]	42 [372]	70 [620]	93 [823]	102 [903]	124 [1097]	147 [1301]	170 [1505]	188 [1664]	218 [1929]
		604rpm	595rpm	582rpm	570rpm	556rpm	540rpm	521rpm	504rpm	487rpm
	60 [15.85]	37 [327]	66 [584]	89 [788]	99 [876]	121 [1071]	144 [1275]	166 [1469]	184 [1629]	213 [1885]
726rpm		715rpm	704rpm	692rpm	678rpm	663rpm	647rpm	622rpm	594rpm	
70 [18.49]	32 [283]	60 [531]	83 [735]	95 [841]	116 [1027]	140 [1239]	160 [1416]	177 [1567]	208 [1841]	
	845rpm	834rpm	820rpm	802rpm	789rpm	767rpm	754rpm	730rpm	705rpm	
75 [19.82]	21 [186]	50 [443]	78 [690]	90 [797]	111 [982]	135 [1195]	154 [1363]	171 [1513]	200 [1770]	
	910rpm	895rpm	881rpm	867rpm	852rpm	830rpm	806rpm	787rpm	756rpm	

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Flow Data

GRS100		99.8cm ³ /rev (6.09in ³ /rev)						Max Cont.		Max Int.
Pressure bar [psi→]		50.8 [725]	71.1[1015]	91.4[1305]	101.5[1450]	121.8[1740]	142.2[2031]	162.5[2321]	177.7[2538]	203.1[2901]
Flow	l/min[gpm↓]	Torque N m [lb-in] Speed Specification								
	5 [1.32]	66 [584]	92 [814]	120 [1062]	135 [1195]	156 [1381]				
		45rpm	42rpm	38rpm	34rpm	27rpm				
	10 [2.64]	68 [602]	96 [850]	125 [1106]	138 [1221]	159 [1407]	188 [1664]	212 [1876]		
		93rpm	90rpm	86rpm	81rpm	74rpm	57rpm	42rpm		
	20 [5.28]	65 [575]	94 [832]	123 [1089]	137 [1213]	155 [1372]	186 [1646]	210 [1859]	238 [2106]	274 [2425]
		189rpm	185rpm	180rpm	173rpm	165rpm	158rpm	150rpm	139rpm	118rpm
	30 [7.93]	63 [558]	92 [814]	120 [1062]	133 [1177]	153 [1354]	185 [1637]	209 [1850]	235 [2080]	270 [2390]
		286rpm	281rpm	275rpm	266rpm	257rpm	246rpm	237rpm	225rpm	207rpm
	40 [10.57]	57 [504]	88 [779]	117 [1036]	130 [1151]	152 [1345]	185 [1637]	208 [1841]	233 [2062]	267 [2363]
		385rpm	378rpm	365rpm	355rpm	345rpm	332rpm	320rpm	314rpm	297rpm
	50 [13.21]	48 [425]	79 [699]	110 [974]	123 [1089]	150 [1328]	183 [1620]	204 [1806]	228 [2018]	260 [2301]
482rpm		477rpm	470rpm	460rpm	448rpm	435rpm	420rpm	405rpm	389rpm	
60 [15.85]	38 [336]	70 [620]	105 [929]	120 [1062]	144 [1275]	178 [1575]	200 [1770]	220 [1947]	252 [2230]	
Max Cont.	580rpm	572rpm	560rpm	548rpm	535rpm	523rpm	510rpm	500rpm	478rpm	
70 [18.49]	32 [283]	65 [575]	100 [885]	118 [1044]	141 [1248]	176 [1558]	197 [1744]	215 [1903]	246 [2177]	
	678rpm	670rpm	660rpm	648rpm	638rpm	626rpm	615rpm	606rpm	580rpm	
75 [19.82]	23 [204]	59 [522]	93 [823]	111 [982]	136 [1204]	170 [1505]	192 [1699]	210 [1859]	240 [2124]	
Max Int.	728rpm	720rpm	710rpm	695rpm	681rpm	667rpm	650rpm	634rpm	618rpm	

GRS125		125.7cm ³ /rev (7.67in ³ /rev)						Max Cont.		Max Int.
Pressure bar [psi→]		50.8[725]	71.1[1015]	91.4 [1305]	101.5 [1450]	121.8 [1740]	142.2 [2031]	162.5 [2321]	177.7 [2538]	203.1 [2901]
Flow	l/min[gpm↓]	Torque N m [lb-in] Speed Specification								
	5 [1.32]	76 [673]	110 [974]	145 [1283]	167 [1478]	189 [1673]				
		36rpm	31rpm	25rpm	19rpm	13rpm				
	10 [2.64]	84 [743]	118 [1044]	155 [1372]	176 [1558]	202 [1788]	228 [2018]	253 [2239]		
		73rpm	70rpm	60rpm	48rpm	36rpm	25rpm	19rpm		
	20 [5.28]	82 [726]	117 [1036]	153 [1354]	174 [1540]	200 [1770]	230 [2036]	259 [2292]	294 [2602]	332 [2938]
		153rpm	151rpm	148rpm	144rpm	138rpm	128rpm	117rpm	104rpm	73rpm
	30 [7.93]	79 [699]	116 [1027]	151 [1336]	171 [1513]	198 [1752]	228 [2018]	257 [2275]	292 [2584]	329 [2912]
		231rpm	228rpm	224rpm	218rpm	210rpm	201rpm	183rpm	168rpm	137rpm
	40 [10.57]	72 [637]	114 [1009]	148 [1310]	168 [1487]	196 [1735]	226 [2000]	256 [2266]	290 [2567]	327 [2894]
		309rpm	307rpm	303rpm	298rpm	292rpm	280rpm	270rpm	252rpm	218rpm
	50 [13.21]	62 [549]	105 [929]	143 [1266]	165 [1460]	195 [1726]	223 [1974]	254 [2248]	287 [2540]	323 [2859]
389rpm		386rpm	382rpm	378rpm	370rpm	360rpm	344rpm	328rpm	292rpm	
60 [15.85]	52 [460]	98 [867]	136 [1204]	160 [1416]	191 [1690]	220 [1947]	250 [2213]	282 [2496]	319 [2823]	
Max Cont.	467rpm	463rpm	459rpm	456rpm	448rpm	427rpm	410rpm	399rpm	352rpm	
70 [18.49]	41 [363]	90 [797]	130 [1151]	156 [1381]	187 [1655]	215 [1903]	242 [2142]	278 [2460]	313 [2770]	
	545rpm	542rpm	538rpm	534rpm	529rpm	520rpm	508rpm	486rpm	430rpm	
75 [19.82]	32 [283]	79 [699]	126 [1115]	148 [1310]	180 [1593]	208 [1841]	234 [2071]	262 [2319]	300 [2655]	
Max Int.	586rpm	583rpm	578rpm	570rpm	560rpm	546rpm	532rpm	520rpm	480rpm	

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Flow Data

GRS160		159.6cm ³ /rev(9.74in ³ /rev)						Max Cont.		Max Int.
Pressure bar [psi→]		50.8[725]	71.1[1015]	91.4[1305]	101.5[1450]	121.8[1740]	142.2[2031]	162.5[2321]	177.7[2538]	203.1[2901]
Flow	l/min[gpm↓]	Torque N m [lb-in] Speed Specification								
	5 [1.32]	104 [920]	146 [1292]	190 [1682]	210 [1859]	245 [2168]				
		26rpm	23rpm	20rpm	16rpm	10rpm				
	10 [2.64]	107 [947]	150 [1328]	195 [1726]	216 [1912]	250 [2213]	290 [2567]	335 [2965]		
		59rpm	56rpm	50rpm	45rpm	37rpm	30rpm	22rpm		
	20 [5.28]	102 [903]	151 [1336]	198 [1752]	220 [1947]	257 [2275]	298 [2638]	342 [3027]	370 [3275]	420 [3717]
		121rpm	118rpm	115rpm	113rpm	108rpm	102rpm	97rpm	90rpm	78rpm
	30 [7.93]	97 [859]	146 [1292]	190 [1682]	217 [1921]	256 [2266]	295 [2611]	340 [3009]	368 [3257]	416 [3682]
		184rpm	178rpm	173rpm	170rpm	164rpm	155rpm	143rpm	128rpm	103rpm
	40 [10.57]	89 [788]	140 [1239]	185 [1637]	210 [1859]	252 [2230]	290 [2567]	335 [2965]	363 [3213]	412 [3646]
		246rpm	241rpm	235rpm	228rpm	220rpm	210rpm	194rpm	177rpm	150rpm
	50 [13.21]	72 [637]	128 [1133]	179 [1584]	202 [1788]	244 [2160]	284 [2514]	327 [2894]	358 [3169]	409 [3620]
		310rpm	307rpm	300rpm	295rpm	287rpm	278rpm	262rpm	247rpm	210rpm
	60 [15.85]	60 [531]	116 [1027]	170 [1505]	198 [1752]	240 [2124]	279 [2469]	321 [2841]	352 [3115]	400 [3540]
374rpm		367rpm	359rpm	354rpm	346rpm	338rpm	323rpm	306rpm	265rpm	
70 [18.49]	49 [434]	107 [947]	164 [1452]	193 [1708]	233 [2062]	271 [2399]	309 [2735]	344 [3045]	390 [3452]	
	437rpm	430rpm	421rpm	415rpm	403rpm	393rpm	381rpm	365rpm	318rpm	
75 [19.82]	36 [319]	109 [867]	152 [1345]	185 [1637]	226 [2000]	265 [2345]	300 [2655]	334 [2956]	379 [3354]	
	472rpm	463rpm	450rpm	441rpm	431rpm	420rpm	405rpm	389rpm	365rpm	

GRS200		199.8cm ³ /rev(12.19in ³ /rev)						Max Cont.		Max Int.
Pressure bar [psi→]		50.8[725]	71.1[1015]	91.4[1305]	101.5[1450]	121.8[1740]	142.2[2031]	162.5[2321]	177.7[2538]	203.1[2901]
Flow	l/min[gpm↓]	Torque N m [lb-in] Speed Specification								
	5 [1.32]	132 [1168]	181 [1602]	238 [2106]	262 [2319]	310 [2744]				
		24rpm	22rpm	18rpm	13rpm	10rpm				
	10 [2.64]	135 [1195]	186 [1646]	240 [2124]	264 [2337]	315 [2788]	356 [3151]	403 [3567]		
		49rpm	47rpm	45rpm	43rpm	38rpm	33rpm	24rpm		
	20 [5.28]	131 [1159]	183 [1620]	238 [2106]	260 [2301]	314 [2779]	358 [3169]	404 [3576]	438 [3877]	498 [4408]
		99rpm	97rpm	94rpm	92rpm	88rpm	83rpm	74rpm	64rpm	56rpm
	30 [7.93]	126 [1115]	178 [1575]	233 [2062]	254 [2248]	311 [2753]	355 [3142]	402 [3558]	431 [3815]	486 [4301]
		149rpm	147rpm	144rpm	141rpm	135rpm	126rpm	113rpm	105rpm	91rpm
	40 [10.57]	112 [991]	169 [1496]	228 [2018]	250 [2213]	307 [2717]	352 [3115]	400 [3540]	426 [3770]	477 [4222]
		200rpm	197rpm	194rpm	191rpm	185rpm	174rpm	160rpm	151rpm	127rpm
	50 [13.21]	95 [841]	156 [1381]	221 [1956]	246 [2177]	300 [2655]	350 [3098]	398 [3523]	421 [3726]	470 [4160]
		252rpm	249rpm	246rpm	243rpm	238rpm	228rpm	212rpm	194rpm	161rpm
	60 [15.85]	78 [690]	145 [1283]	213 [1885]	238 [2106]	289 [2558]	342 [3027]	386 [3416]	412 [3646]	459 [4062]
304rpm		301rpm	298rpm	294rpm	286rpm	276rpm	262rpm	243rpm	218rpm	
70 [18.49]	67 [593]	135 [1195]	206 [1823]	228 [2018]	277 [2452]	336 [2974]	375 [3319]	408 [3611]	453 [4009]	
	355rpm	353rpm	349rpm	340rpm	329rpm	316rpm	300rpm	288rpm	257rpm	
75 [19.82]	58 [513]	125 [1106]	197 [1744]	220 [1947]	270 [2390]	321 [2841]	360 [3186]	398 [3523]	442 [3912]	
	382rpm	379rpm	373rpm	362rpm	350rpm	337rpm	322rpm	312rpm	278rpm	

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Flow Data

GRS250		250.1cm ³ /rev (15.26in ³ /rev)						Max Cont.		Max Int.
Pressure bar [psi→]		50.8[725]	71.1[1015]	91.4[1305]	101.5[1450]	121.8[1740]	142.2[2031]	162.5[2321]	177.7[2538]	203.1[2901]
Flow	l/min[gpm↓]	Torque N m [lb-in] Speed Specification								
	5 [1.32]	175 [1549]	240 [2125]	304 [2691]	342 [3027]	407 [3602]				
		17rpm	16rpm	14rpm	12rpm	10rpm				
	10 [2.64]	178 [1575]	246 [2177]	310 [2744]	344 [3045]	409 [3620]	465 [4116]	525 [4647]		
		37rpm	35rpm	31rpm	28rpm	23rpm	18rpm	11rpm		
	20 [5.28]	175 [1549]	244 [2160]	308 [2726]	340 [3009]	408 [3611]	463 [4098]	520 [4602]	558 [4939]	686 [5629]
		75rpm	73rpm	72rpm	70rpm	66rpm	58rpm	53rpm	50rpm	42rpm
	30 [7.93]	162 [1434]	235 [2080]	304 [2691]	332 [2938]	400 [3540]	455 [4027]	516 [4567]	550 [4868]	621 [5496]
		114rpm	111rpm	108rpm	106rpm	100rpm	92rpm	83rpm	77rpm	65rpm
	40 [10.57]	143 [1266]	223 [1974]	300 [2655]	329 [2912]	396 [3505]	447 [3956]	512 [4532]	546 [4832]	617 [5461]
		154rpm	152rpm	150rpm	147rpm	143rpm	132rpm	120rpm	110rpm	90rpm
	50 [13.21]	124 [1097]	208 [1841]	289 [2558]	323 [2859]	384 [3399]	440 [3894]	503 [4452]	535 [4735]	600 [5310]
		193rpm	190rpm	187rpm	174rpm	168rpm	160rpm	149rpm	140rpm	116rpm
	60 [15.85]	103 [912]	192 [1699]	280 [2478]	314 [2779]	371 [3284]	381 [3370]	489 [4328]	514 [4549]	578 [5116]
Max Cont.		233rpm	230rpm	227rpm	224rpm	218rpm	205rpm	190rpm	181rpm	155rpm
70 [18.49]	88 [779]	178 [1575]	264 [2337]	301 [2664]	356 [3151]	418 [3700]	479 [4239]	498 [4408]	560 [4956]	
	273rpm	270rpm	267rpm	263rpm	252rpm	242rpm	226rpm	209rpm	173rpm	
75 [19.82]	62 [549]	165 [1460]	256 [2266]	288 [2549]	347 [3071]	412 [3646]	474 [4195]	486 [4301]	542 [4797]	
	Max Int.	294rpm	291rpm	287rpm	283rpm	274rpm	263rpm	249rpm	236rpm	211rpm

GRS315		315.7cm ³ /rev (19.26in ³ /rev)						Max Cont.		Max Int.
Pressure bar [psi→]		50.8[725]	71.1[1015]	91.4[1305]	101.5[1450]	121.8[1740]	142.2[2031]	162.5[2321]	177.7[2538]	
Flow	l/min[gpm↓]	Torque N m [lb-in] Speed Specification								
	5 [1.32]	215 [1903]	302 [2673]							
		13rpm	11rpm							
	10 [2.64]	218 [1929]	305 [2699]	383 [3390]	422 [3735]	488 [4319]	551 [4877]	622 [5505]		
		28rpm	27rpm	25rpm	24rpm	21rpm	18rpm	13rpm		
	20 [5.28]	215 [1903]	303 [2682]	380 [3363]	418 [3700]	485 [4293]	549 [4859]	620 [5487]	660 [5841]	
		60rpm	59rpm	57rpm	55rpm	52rpm	49rpm	45rpm	42rpm	
	30 [7.93]	204 [1806]	296 [2620]	375 [3319]	413 [3655]	480 [4248]	542 [4797]	613 [5425]	654 [5788]	
		91rpm	89rpm	86rpm	84rpm	81rpm	78rpm	72rpm	67rpm	
	40 [10.57]	196 [1735]	287 [2540]	368 [3257]	410 [3629]	477 [4222]	539 [4771]	609 [5390]	650 [5753]	
		122rpm	120rpm	117rpm	112rpm	106rpm	100rpm	94rpm	85rpm	
	50 [13.21]	176 [1558]	270 [2390]	356 [3151]	393 [3478]	461 [4080]	526 [4655]	597 [5284]	645 [5709]	
		154rpm	151rpm	147rpm	140rpm	131rpm	120rpm	109rpm	100rpm	
	60 [15.85]	162 [1434]	246 [2177]	339 [3000]	374 [3310]	446 [3947]	511 [4523]	586 [5187]	628 [5558]	
Max Cont.		185rpm	182rpm	177rpm	172rpm	163rpm	152rpm	140rpm	134rpm	
70 [18.49]	143 [1266]	235 [2080]	324 [2868]	358 [3169]	430 [3806]	493 [4363]	562 [4974]	614 [5434]		
	217rpm	213rpm	208rpm	201rpm	190rpm	178rpm	166rpm	158rpm		
75 [19.82]	145 [1106]	212 [1876]	303 [2682]	339 [3000]	417 [3691]	481 [4257]	543 [4806]	582 [5151]		
	Max Int.	232rpm	228rpm	222rpm	216rpm	208rpm	200rpm	183rpm	171rpm	

Hydraulic Orbit Motors GRS



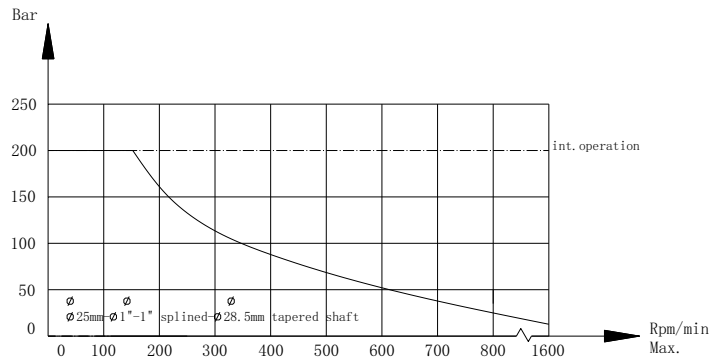
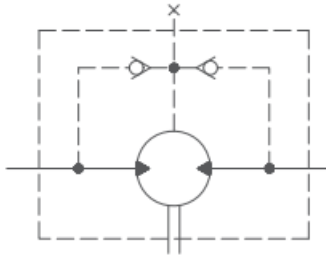
Flow Data

GRS400		397cm ³ /rev(24.4in ³ /rev)					Max Cont.	Max Int.		
Pressure bar [psi→]		50.8[725]	71.1[1015]	91.4[1305]	101.5[1450]	121.8[1740]	142.2[2031]	162.5[2321]	177.7[2538]	
Flow	l/min[gpm↓]	Torque N m [lb-in] Speed Specification								
	5 [1.32]	153 [1354]	232 [2053]							
		12rpm	10rpm							
	10 [2.64]	157 [1390]	236 [2089]	284 [2514]	337 [2983]	406 [3593]	497 [4399]	612 [5417]	668 [5912]	
		24rpm	23rpm	22rpm	21rpm	19rpm	17rpm	15rpm	12rpm	
	20 [5.28]	150 [1328]	232 [2053]	280 [2478]	332 [2938]	401 [3549]	490 [4337]	606 [5364]	649 [5841]	
		49rpm	48rpm	47rpm	46rpm	44rpm	41rpm	38rpm	32rpm	
	30 [7.93]	142 [1257]	215 [1903]	274 [2425]	327 [2894]	398 [3523]	483 [4275]	603 [5337]	652 [5771]	
		76rpm	75rpm	74rpm	73rpm	71rpm	67rpm	63rpm	50rpm	
	40 [10.57]	126 [1115]	212 [1876]	268 [2372]	320 [2832]	393 [3478]	477 [4222]	593 [5248]	635 [5620]	
		103rpm	101rpm	99rpm	97rpm	95rpm	92rpm	88rpm	70rpm	
	50 [13.21]	105 [929]	187 [1655]	242 [2142]	302 [2673]	376 [3328]	455 [4027]	583 [5160]	608 [5381]	
		128rpm	126rpm	124rpm	121rpm	118rpm	115rpm	111rpm	96rpm	
	60 [15.85]	90 [797]	167 [1478]	229 [2027]	281 [2487]	362 [3204]	444 [3930]	566 [5009]	600 [5310]	
Max Cont.		154rpm	152rpm	150rpm	148rpm	145rpm	138rpm	130rpm	121rpm	
70 [18.49]	90 [797]	149 [1319]	200 [1770]	258 [2283]	341 [3018]	425 [3762]	546 [4832]	580 [5133]		
		180rpm	179rpm	178rpm	176rpm	173rpm	168rpm	160rpm	148rpm	
75 [19.82]	56 [496]	125 [1106]	182 [1611]	241 [2133]	320 [2832]	408 [3611]	524 [4638]	565 [5001]		
	Max Int.	195rpm	194rpm	193rpm	191rpm	189rpm	185rpm	178rpm	170rpm	

Technical Data

Hydraulic orbit Motors GRS

Permissible shaft seal pressure



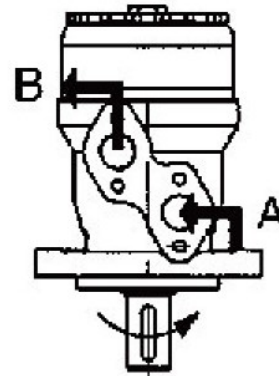
In applications without drain line, output shaft seal exceeds a bit of the pressure in the return line. When applications use the drain line, the pressure of output shaft seal equals the pressure in drain line.

Case Drain

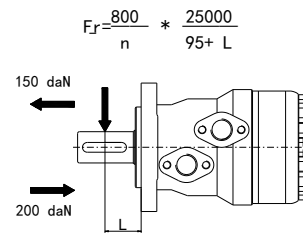
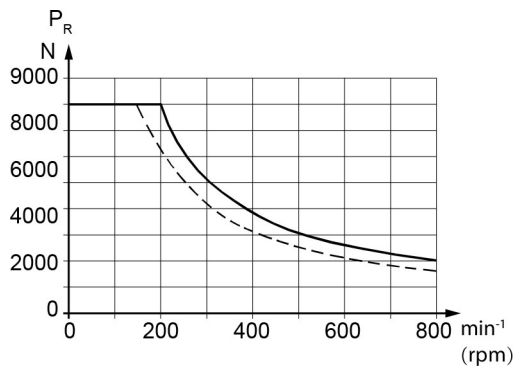
In applications without a motor drain line, the pressure exerted on the shaft seal is marginally in excess of the return line pressure. When the Drain line is used, the pressure exerted on the shaft seal is equal to the return line pressure.

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.

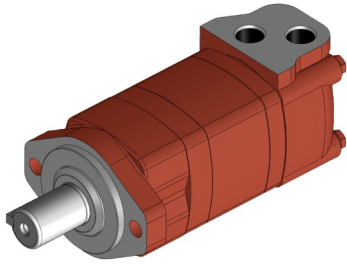


Axial and Radial force



F_r =Radial Force (daN)
 L =Distance (mm)
 n =Speed (rpm)
 Rhomb-flange $L=30$ mm
 Square-flange $L=24$ mm

General

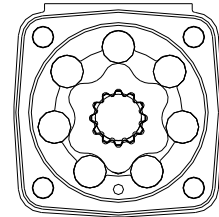


APPLICATION

- ◇ Conveyors
- ◇ Road building machines
- ◇ Metal working machines
- ◇ Special vehicles etc.
- ◇ Agricultural machines
- ◇ Food industries
- ◇ Mining machines

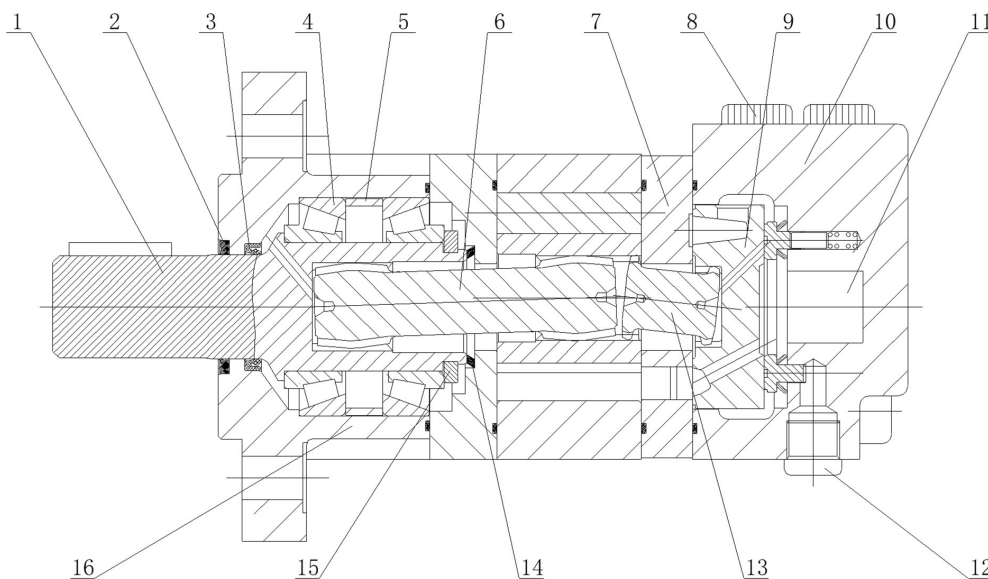
OPTIONS

- ◇ Flange and wheel mount
- ◇ Short motor
- ◇ Motor with drum brake
- ◇ Tachometer connection
- ◇ Speed sensing
- ◇ Side and rear ports
- ◇ Shafts—straight, splined and tapered
- ◇ Shaft seal for high and low pressure
- ◇ Metric and BSPP ports
- ◇ Other special features



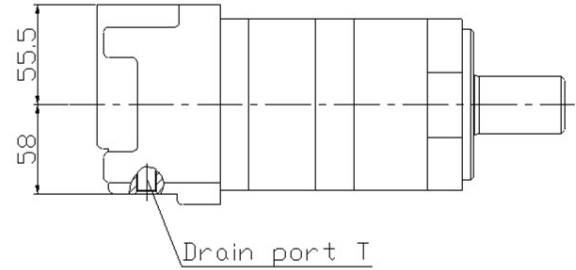
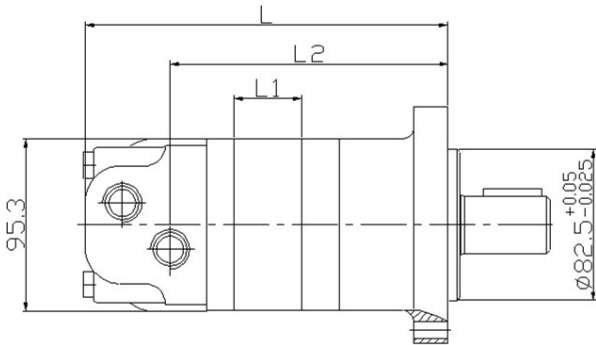
- ◇ Disc distribution flow

Model	GKA65	GKA80	GKA100	GKA125	GKA160	GKA200	GKA250	GKA315	GKA395	GKA475	
Disp.	in ³ /rev	3.97	4.88	6.15	7.92	9.56	11.80	14.79	18.56	23.84	29.59
	cm ³ /rev	65	80	100.9	129.8	156.8	193.4	242.5	304.4	390.8	485
Max Speed rpm	cont.	835	800	742	576	477	385	308	246	191	153
	int.	990	980	924	720	713	577	462	365	287	230
Max Torque N m [lb-in]	cont.	185 [1637]	235 [2080]	295 [2611]	385 [3407]	445 [3938]	540 [4779]	660 [5841]	765 [6770]	775 [6859]	845 [7478]
	int.	245 [2168]	345 [3053]	445 [3938]	560 [4956]	570 [5045]	665 [5885]	820 [7257]	885 [7832]	925 [8186]	930 [8231]
Max Dif. bar [psi]	cont.	205 [2932]	210 [3003]	210 [3003]	210 [3003]	205 [2932]	205 [2932]	205 [2932]	205 [2932]	155 [2217]	120 [1716]
	int.	275 [3933]	310 [4433]	310 [4433]	310 [4433]	260 [3718]	260 [3718]	260 [3718]	240 [3432]	170 [2431]	140 [2002]
Max Flow l/min [gpm]	cont.	55 [14.52]	65 [17.16]	75 [19.80]	75 [19.80]	75 [19.80]	75 [19.80]	75 [19.80]	75 [19.80]	75 [19.80]	75 [19.80]
	int.	65 [17.16]	80 [21.12]	95 [25.08]	95 [25.08]	115 [30.36]	115 [30.36]	115 [30.36]	115 [30.36]	115 [30.36]	115 [30.36]
Weight kg [lbs]		9.2 [20]	9.4 [21]	9.7 [21]	10 [22]	10.2 [22]	10.5 [23]	11 [24]	11.5 [25]	12 [26]	12.4 [27]

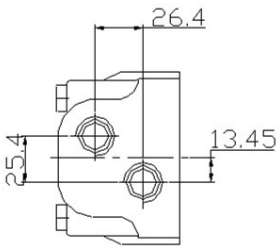


1. Output Shaft
2. Dust Deal
3. Shaft Seal
4. Roller Bearing
5. Bearing Spacer
6. Cardan Joint
7. Timing Plate
8. Shipping Plug
9. Distributor Plate
10. Rear Housing
11. Spacer
12. Case Drain Plug
13. Distributor Drive Link
14. Oil Control Ring
15. Bearing Nut
16. Front Housing
22. Drain Manifold

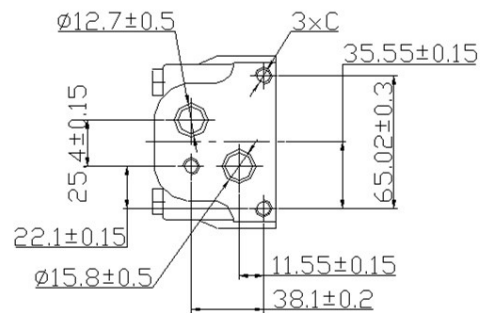
Dimensions and Mounting Data



Port: G7, DU, U9, SB, M4



Port: MU, MM

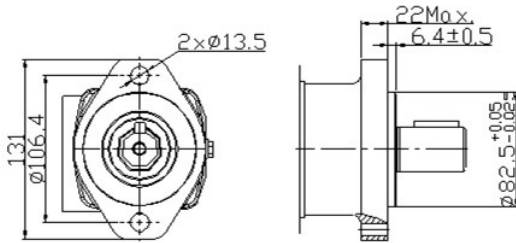


Model	L	L1	L2
GKA65	182 [7.17"]	14.5 [0.57"]	133.5 [5.26"]
GKA80	185 [7.28"]	17.8 [0.70"]	136.5 [5.37"]
GKA100	189.5 [7.46"]	22.5 [0.89"]	141.5 [5.57"]
GKA125	196 [7.72"]	28.9 [1.14"]	148 [5.83"]
GKA160	196 [7.72"]	28.9 [1.14"]	148 [5.83"]
GKA200	202.5 [7.97"]	35.6 [1.40"]	154.5 [6.08"]
GKA250	211.5 [8.33"]	44.6 [1.76"]	163.5 [6.44"]
GKA315	223 [8.78"]	56 [2.20"]	175 [6.89"]
GKA400	235.3 [9.26"]	72 [2.84"]	188.3 [7.41"]
GKA475	256.5 [10.10"]	89.3 [3.52"]	208.5 [8.21"]

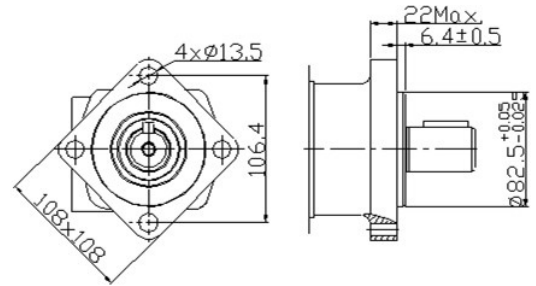
Port	G7 (Depth)	DU (Depth)	U9 (Depth)	SB (Depth)	M4 (Depth)	MU (Depth)	MM (Depth)
	P(A,B)	G1/2(15)	G1/2(15)	SAE-10 O'ring 7/8-14	SAE-10 O'ring 7/8-14	M22x1.5(15)	Φ12.7,Φ15.8
T	G1/4(12)	SAE-4 O'ring 7/16-20UNF	SAE-4 O'ring 7/16-20UNF	G1/4(12)	M14x1.5(12)	SAE-4 O'ring 7/16-20	G1/4(12)
C	-	-	-	-	-	3/8-16UNC(15)	M10x1(15)

Dimensions and Mounting Data

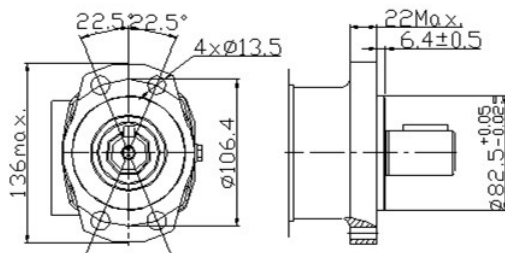
Flange A7



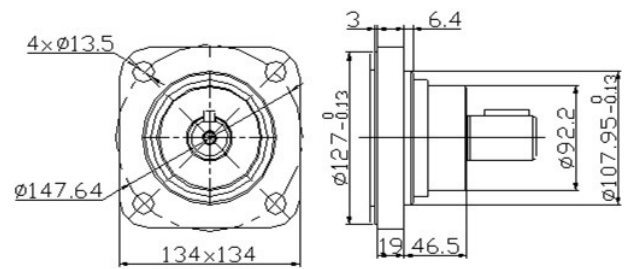
Flange H3



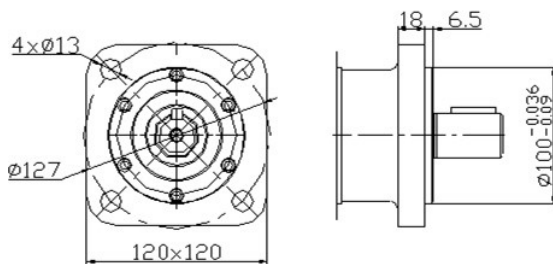
Flange A9



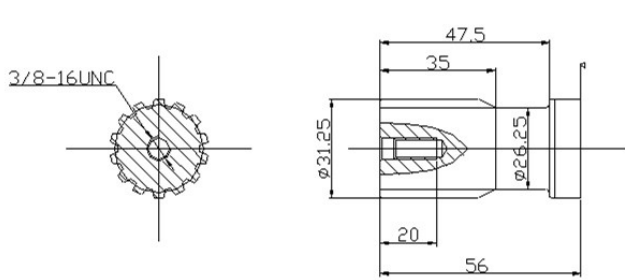
Flange W1



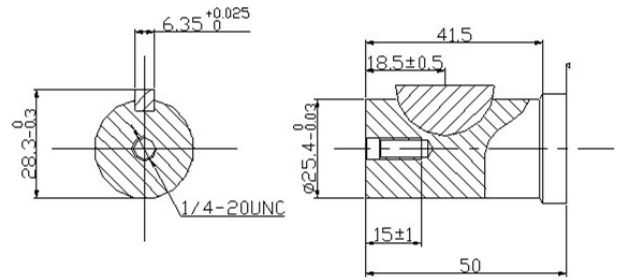
Flange W2



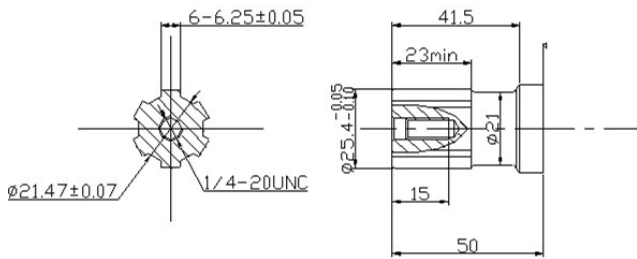
GKA Shaft Extension Dimensions Data



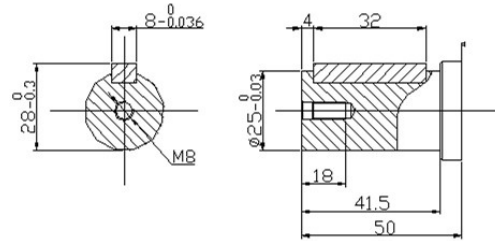
Shaft R6: Splined 14-DP12/24



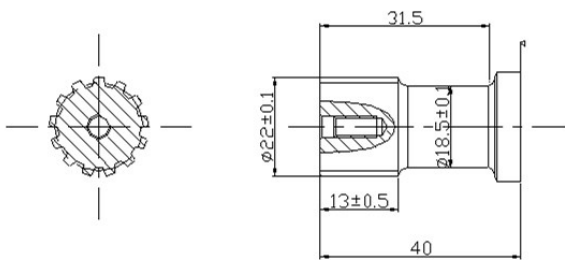
Shaft S6: Cylindrical shaft $\varnothing 1.00$ ",
Woodruff key 0.25"x 1.00"



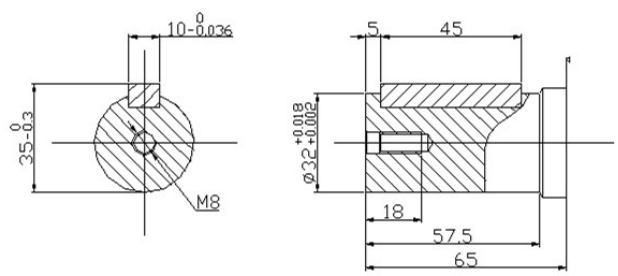
Shaft R8: 25.4 Splined SAE 6B



Shaft S1: Cylindrical shaft $\varnothing 25$,
Parallel key 8x7x32

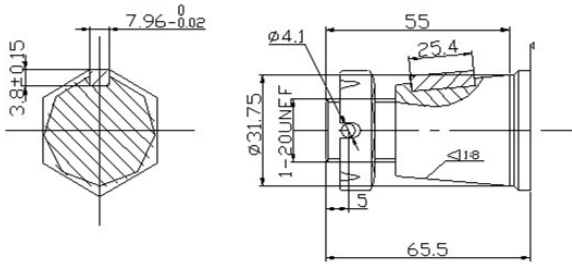


Shaft R5: Splined 13-DP16/32

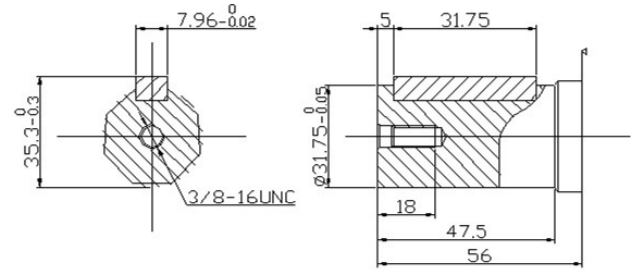


Shaft S4: Cylindrical shaft $\varnothing 32$
Parallel key 10x8x45

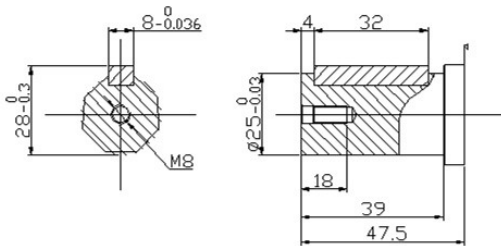
GKA Shaft Extension Dimensions Data



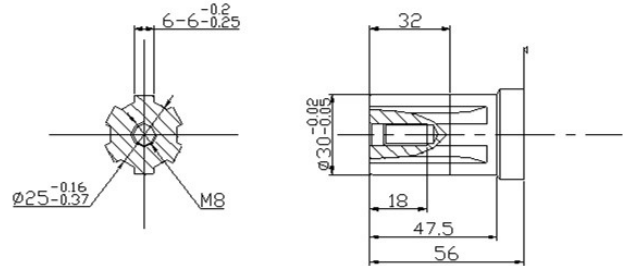
Shaft T2: Tapered shaft $\varnothing 1.25''$,
Parallel key 0.31"x 0.31"x 1.25"
Tightening torque: $200 \pm 10 \text{ Nm}$



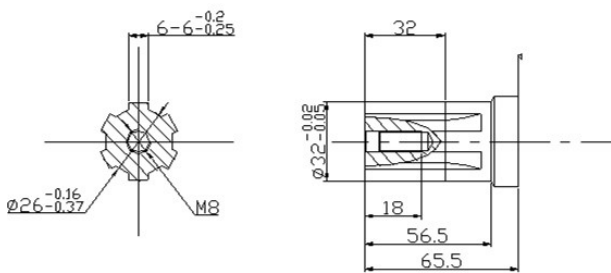
Shaft SG: Cylindrical shaft $\varnothing 1.25''$,
Parallel key 0.31"x 0.31"x 1.25"



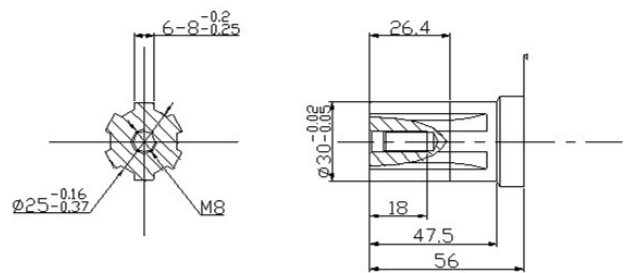
Shaft A1: Cylindrical shaft $\varnothing 25$
Parallel key 8x7x32



Shaft N: Splined 6-30x25x6



Shaft Z: Splined 6-32x26x6



Shaft J: Splined 6-30x25x8



GKA - How To Order

Ordering Example:	Model	Displacement	Flange	Drive shaft	Ports	Other functions
	GKA	65	A7	R6	U90	ACA

Model	Disp.	Flange	Drive shaft	Ports	
GKA	65	<u>A7</u> =2-Hole SAE A Flange, Pilot ∅3.25"x 0.25"	<u>S1</u> =Shaft ∅25, parallel key 8x7x32	<u>G7</u> =G1/2, G1/4 <u>DU</u> =G1/2, SAE-4 O'ring 7/16-20UNF <u>U9</u> =SAE-10 O'ring 7/8-14, SAE-4 O'ring 7/16-20UNF <u>UE</u> = SAE-12 O'ring 1-1/16"-12UNF 180 Side Ports, SAE-4 O'ring 7/16"-20UNF <u>SB</u> =SAE-10 O'ring 7/8-14 O-ring, G1/4 <u>M4</u> =M22x1.5, M14x1.5 <u>MU</u> =∅ 12.7, ∅ 15.8 manifold 3x3/8-16 UNC, SAE-4 O'ring 7/16-20UNF <u>MM</u> =∅ 12.7, ∅ 15.8 manifold, 3xM10x1, G1/4	
	80		<u>S4</u> =Shaft ∅32, parallel key 10x8x45		
	100		<u>S6</u> =Shaft ∅1.00", woodruff key 0.25"x 1.00"		
	125		<u>SG</u> =Shaft ∅1.25", parallel key 0.31"x 0.31"x 1.25"		
	160		<u>R5</u> =Splined 13-DP16/32		
	200		<u>R6</u> =Splined 14-DP12/24		
	250		<u>R8</u> =Shaft ∅1.00", splined SAE 6B		
	315		<u>T2</u> =Tapered shaft ∅1.25", parallel key 0.31"x 0.31"x 1.00"		
	395		<u>W1</u> =4-Hole Square Flange, Pilot ∅4.25"x 1.83"		<u>A1</u> =Shaft ∅25, parallel key 8x7x32
	475		<u>W2</u> =4-∅13 Hole Square Flange, Pilot ∅100x6.5		<u>N</u> =Splined 6-30x25x6 <u>Z</u> =Splined 6-32x26x6 <u>J</u> =Splined 6-30x25x8

Shaft Rotation	Paint	Standard Options	Seal Options	Relief Options	Speed Sensor Option
<u>A</u> =Standard / CW 'A' port pressurized <u>R</u> =Reverse / CCW 'A' port pressurized	<u>A</u> =No paint <u>B</u> =Blue <u>C</u> =Black <u>S</u> =Silver gray <u>G</u> =Corrosion resistant coating	<u>A</u> =Standard <u>N</u> =Large radial force <u>D</u> =No case drain <u>F</u> =Free running <u>L</u> =Low speed <u>V</u> =High temperature <u>S</u> =Low temperature	<u>Blank</u> = None <u>HPS</u> =High Pressure Seal <u>SG</u> =Seal Guard <u>HPS-SG</u> = High Pressure Seal & Seal Guard	<u>Blank</u> =None <u>R</u> =Valve Cavity Only <u>R12</u> =Bi-directional relief max 125 bar <u>R20</u> = Bi-Directional relief max 207 bar	<u>Blank</u> = None <u>SS</u> = Speed Sensor, 4-pin, M12 male connector

Hydraulic Orbit Motors GKA



Flow Data

GKA65	65cm ³ /rev (3.97in ³ /rev)					Max Cont.	Max Int.		Peak	
Pressure bar [psi→]	35 [500]	70 [1000]	105 [1500]	140 [2000]	175 [2503]	205 [2929]	240 [3429]	275 [3929]	310 [4429]	
Flow	l/min [gpm↓]	Torque N m [lb-in] Speed Specification								
	2 [0.53]	28[248]	54[478]	80[708]						
		22rpm	12rpm	6rpm						
	4 [1.06]	30[266]	58[513]	88[779]	115[1018]	146[1292]	165[1460]	195[1726]		
		52rpm	47rpm	43rpm	35rpm	30rpm	24rpm	16rpm		
	8 [2.11]	31[274]	60[531]	92[814]	120[1062]	150[1328]	170[1505]	200[1770]	225[1991]	
		107rpm	98rpm	92rpm	85rpm	70rpm	55rpm	40rpm	30rpm	
	15 [3.96]	32[283]	62[549]	94[832]	124[1097]	155[1372]	175[1549]	205[1814]	230[2036]	250[2213]
		214rpm	208rpm	200rpm	193rpm	185rpm	174rpm	160rpm	145rpm	130rpm
	22 [5.81]	32[283]	65[575]	95[841]	125[1106]	157[1389]	178[1575]	206[1823]	232[2053]	254[2248]
		320rpm	315rpm	308rpm	296rpm	286rpm	275rpm	260rpm	242rpm	230rpm
	30 [7.92]	30[266]	65[575]	95[841]	128[1133]	160[1416]	180[1593]	210[1859]	235[2080]	258[2283]
		445rpm	440rpm	430rpm	420rpm	408rpm	395rpm	380rpm	360rpm	325rpm
	38 [10.03]	28[248]	62[549]	95[841]	130[1151]	165[1460]	185[1637]	216[1912]	240[2124]	260[2301]
		565rpm	560rpm	550rpm	540rpm	526rpm	512rpm	495rpm	470rpm	420rpm
	45 [11.88]	26[230]	60[531]	92[814]	125[1106]	160[1416]	180[1593]	215[1903]	245[2168]	265[2345]
675rpm		670rpm	660rpm	648rpm	632rpm	615rpm	600rpm	580rpm	530rpm	
55 [14.52]	23[204]	55[487]	88[779]	120[1062]	155[1372]	175[1549]	210[1859]	235[2080]	255[2257]	
	835rpm	825rpm	810rpm	790rpm	770rpm	745rpm	720rpm	690rpm	640rpm	
65 [17.16]	20[177]	50[443]	84[743]	112[991]	150[1328]	170[1505]	205[1814]	230[2036]	250[2213]	
Max Int.	990rpm	980rpm	965rpm	945rpm	935rpm	910rpm	880rpm	860rpm	800rpm	

GKA80	80cm ³ /rev (4.88in ³ /rev)					Max Cont.	Max Int.		Peak	
Pressure bar [psi→]	35 [500]	70 [1000]	105 [1500]	140 [2000]	175 [2503]	205 [2929]	240 [3429]	275 [3929]	310 [4429]	
Flow	l/min [gpm↓]	Torque N m [lb-in] Speed Specification								
	2 [0.53]	29[257]	54[478]	86[761]						
		18rpm	9rpm	3rpm						
	4 [1.06]	35[310]	75[664]	112[991]	145[1283]	172[1522]	208[1841]	218[1929]	236[2089]	
		45rpm	41rpm	38rpm	35rpm	28rpm	22rpm	14rpm	3rpm	
	8 [2.11]	35[310]	75[664]	114[1009]	148[1310]	175[1549]	212[1876]	230[2036]	260[2301]	280[2478]
		90rpm	85rpm	80rpm	76rpm	72rpm	64rpm	55rpm	46rpm	40rpm
	15 [3.96]	38[336]	78[690]	116[1027]	152[1345]	184[1628]	215[1903]	245[2168]	275[2434]	300[2655]
		180rpm	175rpm	170rpm	166rpm	160rpm	153rpm	140rpm	126rpm	115rpm
	22 [5.81]	36[319]	75[664]	114[1009]	150[1328]	185[1637]	220[1947]	250[2213]	285[2522]	315[2788]
		265rpm	260rpm	255rpm	250rpm	242rpm	234rpm	220rpm	205rpm	185rpm
	30 [7.92]	35[310]	75[664]	115[1018]	150[1328]	185[1637]	225[1991]	260[2301]	295[2611]	325[2876]
		363rpm	355rpm	350rpm	342rpm	334rpm	322rpm	302rpm	280rpm	260rpm
	38 [10.03]	34[301]	72[637]	112[991]	155[1372]	190[1682]	230[2036]	265[2345]	300[2655]	335[2965]
		460rpm	452rpm	442rpm	430rpm	418rpm	405rpm	385rpm	360rpm	335rpm
	45 [11.88]	32[283]	70[620]	110[974]	150[1328]	190[1682]	230[2036]	265[2345]	305[2699]	340[3009]
545rpm		535rpm	528rpm	515rpm	505rpm	495rpm	465rpm	440rpm	410rpm	
55 [14.52]	30[266]	68[602]	110[974]	150[1328]	190[1682]	230[2036]	270[2390]	305[2699]	335[2965]	
	670rpm	660rpm	650rpm	635rpm	620rpm	605rpm	575rpm	540rpm	510rpm	
65 [17.16]	25[221]	65[575]	105[929]	145[1283]	180[1593]	225[1991]	260[2301]	295[2611]	325[2876]	
	800rpm	790rpm	778rpm	755rpm	740rpm	728rpm	690rpm	650rpm	610rpm	
75 [19.80]	22[195]	63[558]	102[903]	145[1283]	180[1593]	225[1991]	260[2301]	290[2567]		
	910rpm	900rpm	880rpm	860rpm	850rpm	830rpm	790rpm	750rpm		
80 [21.12]	20[177]	60[531]	100[885]	140[1239]	175[1549]	220[1947]	250[2213]			
	980rpm	970rpm	955rpm	920rpm	900rpm	875rpm	840rpm			

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Flow Data

GKA100		100.9cm ³ /rev (6.15in ³ /rev)						Max Cont.	Max Int.	Peak		
Pressure bar [psi→]		17.5 [250]	35 [500]	70 [1000]	105 [1500]	140 [2000]	175 [2503]	205 [2929]	240 [3429]	275 [3929]	310 [4429]	
Flow	l/min [gpm↓]	Torque N m [lb-in] Speed Specification										
	2 [0.53]	15[133]	32[283]	68[602]								
		14rpm	10rpm	5rpm								
	4 [1.06]	18[159]	42[372]	92[814]	130[1151]	170[1505]	205[1814]	230[2036]				
		36rpm	34rpm	32rpm	28rpm	22rpm	14rpm	5rpm				
	8 [2.11]	20[177]	45[398]	90[797]	135[1195]	180[1593]	210[1589]	240[2124]	280[2478]	310[2744]		
		74rpm	73rpm	70rpm	66rpm	60rpm	52rpm	42rpm	26rpm	15rpm		
	15 [3.96]	20[177]	45[398]	90[797]	135[1195]	185[1637]	220[1947]	260[2301]	305[2699]	345[3053]	390[3452]	
		142rpm	140rpm	137rpm	134rpm	129rpm	120rpm	105rpm	92rpm	78rpm	65rpm	
	22 [5.81]	18[159]	45[398]	90[797]	140[1239]	190[1682]	230[2036]	275[2434]	315[2788]	360[3186]	405[3584]	
		210rpm	207rpm	201rpm	195rpm	188rpm	179rpm	160rpm	150rpm	138rpm	125rpm	
	30 [7.92]	16[142]	42[372]	88[779]	142[1257]	195[1726]	240[2124]	285[2522]	330[2921]	375[3319]	425[3761]	
		290rpm	288rpm	282rpm	276rpm	268rpm	258rpm	242rpm	230rpm	212rpm	195rpm	
	38 [10.03]	15[133]	40[354]	88[779]	140[1239]	190[1682]	240[2124]	285[2522]	335[2965]	380[3363]	430[3806]	
		370rpm	365rpm	360rpm	352rpm	340rpm	326rpm	310rpm	295rpm	275rpm	255rpm	
	45 [11.88]	15[133]	40[354]	86[761]	140[1239]	190[1682]	240[2124]	285[2522]	340[3009]	385[3407]	440[3894]	
		440rpm	435rpm	430rpm	422rpm	410rpm	395rpm	380rpm	365rpm	345rpm	320rpm	
55 [14.52]	12[106]	36[319]	85[752]	135[1195]	190[1682]	240[2124]	285[2522]	340[3009]	385[3407]	440[3894]		
	540rpm	534rpm	528rpm	520rpm	510rpm	500rpm	485rpm	465rpm	440rpm	405rpm		
65 [17.16]	10[89]	35[310]	80[708]	130[1151]	185[1637]	235[2080]	280[2478]	335[2965]	380[3363]	440[3894]		
	640rpm	635rpm	630rpm	622rpm	605rpm	590rpm	575rpm	550rpm	525rpm	500rpm		
75 [19.80]	5[44]	30[266]	75[664]	125[1106]	175[1549]	225[1991]	275[2434]	320[2832]	370[3275]			
	738rpm	735rpm	728rpm	715rpm	700rpm	680rpm	655rpm	635rpm	610rpm			
Max Cont.	3[27]	25[221]	75[664]	125[1106]	175[1549]	225[1991]	270[2390]	320[2832]	370[3275]			
	838rpm	835rpm	830rpm	820rpm	805rpm	785rpm	760rpm	730rpm	690rpm			
85 [22.44]		23[204]	70[620]	120[1062]	170[1505]	220[1947]	260[2301]	310[2744]				
		925rpm	918rpm	905rpm	890rpm	870rpm	840rpm	810rpm				
95 [25.08]												
	Max Int.											

GKA125		129.8cm ³ /rev (7.92in ³ /rev)						Max Cont.	Max Int.	Peak		
Pressure bar [psi→]		17.5 [250]	35 [500]	70 [1000]	105 [1500]	140 [2000]	175 [2503]	205 [2929]	240 [3429]	275 [3929]	310 [4429]	
Flow	l/min [gpm↓]	Torque N m [lb-in] Speed Specification										
	2 [0.53]	25[221]	40[354]									
		12rpm	7rpm									
	4 [1.06]	28[248]	55[487]	110[974]	175[1549]	220[1947]	280[2478]	325[2876]				
		27rpm	26rpm	22rpm	18rpm	14rpm	11rpm	8rpm				
	8 [2.11]	28[248]	60[531]	115[1018]	175[1549]	230[2036]	290[2567]	330[2921]	375[3319]	400[3540]		
		57rpm	56rpm	53rpm	48rpm	42rpm	38rpm	34rpm	26rpm	20rpm		
	15 [3.96]	28[248]	60[531]	120[1062]	180[1593]	240[2124]	295[2611]	340[3009]	390[3452]	440[3894]	485[4292]	
		113rpm	112rpm	110rpm	105rpm	98rpm	92rpm	86rpm	80rpm	72rpm	65rpm	
	22 [5.81]	28[248]	55[487]	120[1062]	180[1593]	245[2168]	305[2699]	360[3186]	415[3673]	470[4160]	530[4691]	
		165rpm	163rpm	160rpm	155rpm	150rpm	144rpm	138rpm	130rpm	115rpm	100rpm	
	30 [7.92]	25[221]	52[460]	120[1062]	185[1637]	245[2168]	310[2744]	365[3230]	425[3761]	480[4248]	545[4823]	
		228rpm	224rpm	222rpm	210rpm	212rpm	206rpm	198rpm	188rpm	178rpm	165rpm	
	38 [10.03]	25[221]	50[443]	120[1062]	180[1593]	245[2168]	315[2788]	370[3275]	430[3806]	495[4381]	550[4868]	
		288rpm	285rpm	282rpm	275rpm	268rpm	260rpm	252rpm	242rpm	230rpm	215rpm	
	45 [11.88]	22[195]	50[443]	120[1062]	180[1593]	245[2168]	315[2788]	370[3275]	430[3806]	490[4337]	550[4868]	
		345rpm	343rpm	338rpm	332rpm	325rpm	315rpm	305rpm	292rpm	280rpm	265rpm	
55 [14.52]	20[177]	46[407]	115[1018]	175[1549]	245[2168]	330[2921]	375[3319]	430[3806]	490[4337]			
	420rpm	418rpm	414rpm	408rpm	400rpm	390rpm	378rpm	365rpm	346rpm			
65 [17.16]	15[133]	43[381]	110[974]	170[1505]	240[2124]	320[2832]	370[3275]	425[3761]	485[4292]			
	498rpm	496rpm	492rpm	486rpm	480rpm	465rpm	458rpm	440rpm	425rpm			
75 [19.80]	12[106]	42[372]	108[956]	170[1505]	235[2080]	310[2744]	365[3230]	425[3761]				
	575rpm	574rpm	568rpm	560rpm	550rpm	548rpm	525rpm	502rpm				
Max Cont.	8[71]	40[354]	105[929]	165[1460]	230[2036]	310[2744]	360[3186]	420[3717]				
	653rpm	652rpm	645rpm	636rpm	625rpm	616rpm	600rpm	578rpm				
85 [22.44]		40[354]	100[885]	160[1416]	225[1991]	290[2567]	355[3142]	415[3673]				
		722rpm	715rpm	702rpm	690rpm	680rpm	670rpm	655rpm				
95 [25.08]												
	Max Int.											

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Flow Data

GKA160		156.8cm ³ /rev (9.56in ³ /rev)						Max Cont.	Max Int.	
Pressure bar [psi→]		17.5 [250]	35 [500]	70 [1000]	105 [1500]	140 [2000]	175 [2503]	205 [2929]	240 [3429]	260 [3718]
Flow	l/min [gpm↓]	Torque N m [lb-in] Speed Specification								
	2 [0.53]	28[248] 9rpm	55[487] 7rpm	110[974] 5rpm	175[1549] 3rpm					
	4 [1.06]	32[283] 22rpm	63[558] 21rpm	125[1106] 19rpm	190[1682] 17rpm	250[2213] 13rpm	315[2788] 8rpm	370[3275] 3rpm		
	8 [2.11]	37[327] 47rpm	68[602] 45rpm	130[1151] 42rpm	200[1770] 39rpm	260[2301] 36rpm	325[2876] 34rpm	390[3452] 32rpm	450[3983] 27rpm	480[4248] 22rpm
	15 [3.96]	35[310] 93rpm	68[602] 92rpm	135[1195] 89rpm	210[1859] 85rpm	275[2434] 80rpm	370[3275] 76rpm	420[3717] 70rpm	500[4425] 60rpm	530[4691] 45rpm
	22 [5.81]	35[310] 138rpm	75[664] 136rpm	140[1239] 133rpm	215[1903] 128rpm	285[2522] 122rpm	370[3275] 116rpm	440[3894] 110rpm	515[4558] 102rpm	550[4868] 95rpm
	30 [7.92]	35[310] 190rpm	75[664] 187rpm	145[1283] 184rpm	220[1947] 178rpm	290[2567] 172rpm	370[3275] 167rpm	440[3894] 164rpm	520[4602] 154rpm	560[4956] 142rpm
	38 [10.03]	37[327] 240rpm	70[620] 237rpm	150[1328] 234rpm	225[1991] 230rpm	310[2744] 225rpm	380[3363] 218rpm	450[3983] 202rpm	525[4646] 193rpm	565[5000] 185rpm
	45 [11.88]	32[283] 285rpm	70[620] 283rpm	150[1328] 280rpm	225[1991] 275rpm	310[2744] 268rpm	380[3363] 259rpm	450[3983] 247rpm	525[4646] 236rpm	565[5000] 225rpm
	55 [14.52]	28[248] 348rpm	66[584] 346rpm	145[1283] 342rpm	220[1947] 338rpm	305[2699] 332rpm	375[3319] 324rpm	450[3983] 314rpm	525[4646] 300rpm	
	65 [17.16]	25[221] 412rpm	63[558] 410rpm	140[1239] 406rpm	220[1947] 400rpm	300[2655] 393rpm	375[3319] 383rpm	445[3938] 370rpm		
	75 [19.80]	22[195] 476rpm	60[531] 474rpm	135[1195] 470rpm	215[1903] 464rpm	295[2611] 454rpm	370[3275] 445rpm	440[3894] 435rpm		
	Max Cont.	18[159] 540rpm	55[487] 536rpm	130[1151] 532rpm	210[1859] 524rpm	290[2567] 514rpm	365[3230] 502rpm	435[3850] 485rpm		
	85 [22.44]	15[133] 600rpm	50[443] 595rpm	125[1106] 590rpm	205[1814] 580rpm	285[2522] 565rpm	360[3186] 555rpm	430[3806] 545rpm		
	Max Int.		40[354] 715rpm	115[1018] 705rpm	200[1770] 695rpm	280[2478] 685rpm	350[3098] 670rpm	425[3761] 655rpm		
	115 [30.36]									

GKA200		193.4cm ³ /rev (11.80in ³ /rev)						Max Cont.	Max Int.	
Pressure bar [psi→]		17.5 [250]	35 [500]	70 [1000]	105 [1500]	140 [2000]	175 [2503]	205 [2929]	240 [3429]	260 [3718]
Flow	l/min [gpm↓]	Torque N m [lb-in] Speed Specification								
	2 [0.53]	32[283] 9rpm	68[602] 7rpm	110[974] 5rpm	145[1283] 3rpm					
	4 [1.06]	40[354] 18rpm	75[664] 16rpm	150[1328] 14rpm	195[1726] 11rpm	300[2655] 7rpm	360[3186] 4rpm			
	8 [2.11]	45[398] 37rpm	80[708] 36rpm	160[1416] 34rpm	240[2124] 30rpm	315[2788] 26rpm	405[3584] 21rpm	500[4425] 17rpm	570[5045] 13rpm	600[5310] 11rpm
	15 [3.96]	48[425] 75rpm	90[797] 74rpm	170[1505] 72rpm	255[2257] 68rpm	335[2965] 64rpm	425[3761] 60rpm	510[4514] 56rpm	590[5222] 50rpm	620[5487] 42rpm
	22 [5.81]	46[407] 112rpm	90[797] 110rpm	175[1549] 108rpm	265[2345] 105rpm	350[3098] 101rpm	440[3894] 97rpm	520[4602] 91rpm	605[5354] 86rpm	645[5708] 80rpm
	30 [7.92]	45[398] 153rpm	90[797] 151rpm	180[1593] 148rpm	270[2390] 145rpm	360[3186] 141rpm	450[3983] 135rpm	530[4691] 128rpm	615[5443] 122rpm	655[5797] 116rpm
	38 [10.03]	45[398] 193rpm	90[797] 191rpm	180[1593] 188rpm	275[2434] 184rpm	370[3275] 178rpm	455[4027] 172rpm	540[4779] 166rpm	625[5531] 158rpm	
	45 [11.88]	40[354] 230rpm	85[752] 228rpm	180[1593] 226rpm	275[2434] 222rpm	370[3275] 218rpm	460[4071] 210rpm	545[4823] 202rpm		
	55 [14.52]	38[336] 280rpm	82[726] 278rpm	180[1593] 275rpm	275[2434] 270rpm	375[3319] 264rpm	465[4115] 255rpm	550[4868] 248rpm		
	65 [17.16]	35[310] 332rpm	80[708] 330rpm	175[1549] 328rpm	270[2390] 322rpm	370[3275] 315rpm	465[4115] 306rpm	545[4823] 295rpm		
	75 [19.80]	30[266] 384rpm	72[637] 382rpm	170[1505] 378rpm	265[2345] 370rpm	360[3186] 365rpm	455[4027] 356rpm	540[4779] 346rpm		
	Max Cont.	25[221] 436rpm	70[620] 434rpm	165[1460] 430rpm	260[2301] 420rpm	355[3142] 410rpm	450[3983] 400rpm	540[4779] 390rpm		
	85 [22.44]	20[177] 488rpm	60[531] 485rpm	155[1372] 478rpm	255[2257] 470rpm	350[3098] 458rpm	445[3938] 448rpm	530[4691] 438rpm		
	Max Int.		50[443] 580rpm	140[1239] 572rpm	240[2124] 562rpm	330[2921] 550rpm	440[3894] 538rpm	520[4602] 520rpm		
	115 [30.36]									

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Flow Data

GKA250		242.5cm ³ /rev (14.79in ³ /rev)						Max Cont.	Max Int.	
Pressure bar [psi→]		17.5 [250]	35 [500]	70 [1000]	105 [1500]	140 [2000]	175 [2503]	205 [2929]	240 [3429]	260 [3718]
Flow	l/min [gpm↓]	Torque N m [lb-in] Speed Specification								
	2 [0.53]	45[398] 4rpm	95[841] 2rpm							
	4 [1.06]	50[443] 14rpm	100[885] 13rpm	210[1859] 11rpm	310[2744] 9rpm	410[3629] 6rpm	510[4514] 4rpm	610[5399] 3rpm		
	8 [2.11]	55[487] 29rpm	105[929] 28rpm	215[1903] 26rpm	320[2832] 23rpm	420[3717] 20rpm	530[4691] 17rpm	620[5487] 14rpm	730[6461] 11rpm	780[6903] 9rpm
	15 [3.96]	55[487] 59rpm	110[974] 58rpm	220[1947] 56rpm	330[2921] 53rpm	440[3894] 50rpm	550[4868] 47rpm	650[5753] 45rpm	755[6682] 43rpm	810[7169] 40rpm
	22 [5.81]	50[443] 88rpm	115[1018] 87rpm	225[1991] 85rpm	340[3009] 82rpm	455[4027] 78rpm	560[4956] 74rpm	665[5885] 69rpm	770[6815] 65rpm	
	30 [7.92]	50[443] 122rpm	115[1018] 121rpm	230[2036] 118rpm	350[3098] 113rpm	465[4115] 109rpm	570[5046] 104rpm	680[6018] 100rpm	785[6947] 92rpm	
	38 [10.03]	48[425] 154rpm	112[991] 152rpm	235[2080] 149rpm	355[3142] 145rpm	475[4204] 140rpm	580[5133] 135rpm	695[6151] 130rpm	795[7036] 122rpm	
	45 [11.88]	45[398] 183rpm	110[974] 182rpm	230[2036] 180rpm	350[3098] 176rpm	470[4160] 170rpm	590[5222] 165rpm	700[6195] 158rpm		
	55 [14.52]	42[372] 224rpm	105[929] 223rpm	230[2036] 221rpm	345[3053] 218rpm	470[4160] 212rpm	580[5133] 205rpm			
	65 [17.16]	35[310] 266rpm	100[885] 265rpm	220[1947] 263rpm	340[3009] 258rpm	460[4071] 252rpm	565[5000] 242rpm			
	75 [19.80]	32[283] 307rpm	95[841] 306rpm	210[1859] 303rpm	330[2921] 298rpm	455[4027] 290rpm	560[4956] 280rpm			
	Max Cont.	30[266] 348rpm	85[752] 346rpm	200[1770] 342rpm	320[2832] 336rpm	450[3983] 330rpm	555[4912] 320rpm			
	85 [22.44]	25[221] 386rpm	70[620] 384rpm	190[1682] 378rpm	315[2788] 372rpm	440[3894] 365rpm	540[4779] 355rpm			
	Max Int.		65[575] 465rpm	180[1593] 458rpm	300[2655] 450rpm	430[3806] 442rpm				
	115 [30.36]									

GKA315		304.3cm ³ /rev (18.56in ³ /rev)						Max Cont.	Max Int.	
Pressure bar [psi→]		17.5 [250]	35 [500]	70 [1000]	105 [1500]	140 [2000]	175 [2503]	205 [2929]	240 [3429]	
Flow	l/min [gpm↓]	Torque N m [lb-in] Speed Specification								
	2 [0.53]	45[398] 4rpm	95[841] 2rpm							
	4 [1.06]	65[575] 12rpm	130[1151] 11rpm	250[2213] 10rpm	380[3363] 8rpm	490[4337] 6rpm				
	8 [2.11]	70[620] 24rpm	135[1195] 23rpm	260[2301] 22rpm	390[3452] 20rpm	510[4514] 18rpm	630[5576] 15rpm	760[6726] 10rpm	875[7735] 6rpm	
	15 [3.96]	75[664] 48rpm	140[1239] 48rpm	275[2434] 47rpm	410[3629] 45rpm	535[4735] 42rpm	670[5930] 38rpm	800[7080] 34rpm	920[8142] 30rpm	
	22 [5.81]	70[620] 71rpm	140[1239] 70rpm	285[2522] 69rpm	425[3761] 66rpm	555[4912] 62rpm	685[6062] 56rpm	810[7169] 50rpm	940[8319] 42rpm	
	30 [7.92]	70[620] 97rpm	145[1283] 97rpm	290[2567] 96rpm	430[3806] 93rpm	565[5000] 88rpm	695[6151] 80rpm	820[7257] 70rpm		
	38 [10.03]	66[584] 123rpm	140[1239] 122rpm	290[2567] 120rpm	435[3850] 117rpm	570[5045] 112rpm	715[6328] 102rpm	835[7390] 90rpm		
	45 [11.88]	62[549] 147rpm	135[1195] 146rpm	290[2567] 144rpm	435[3850] 142rpm	575[5089] 135rpm	720[6372] 125rpm	840[7434] 118rpm		
	55 [14.52]	58[513] 180rpm	130[1151] 179rpm	285[2522] 176rpm	430[3806] 172rpm	575[5089] 165rpm	720[6372] 155rpm			
	65 [17.16]	52[460] 213rpm	120[1062] 212rpm	275[2434] 210rpm	425[3761] 205rpm	570[5045] 200rpm	715[6328] 190rpm			
	75 [19.80]	40[354] 246rpm	110[974] 245rpm	260[2301] 242rpm	415[3673] 236rpm	560[4956] 225rpm	710[6284] 212rpm			
	Max Cont.	30[266] 278rpm	100[885] 277rpm	250[2213] 274rpm	405[3584] 270rpm	540[4779] 270rpm				
	85 [22.44]	20[177] 311rpm	90[797] 310rpm	245[2168] 307rpm	380[3363] 303rpm	515[4558] 296rpm				
	Max Int.		80[708] 365rpm	225[1991] 361rpm	350[3098] 355rpm					
	115 [30.36]									

Hydraulic Orbit Motors GKA



Flow Data

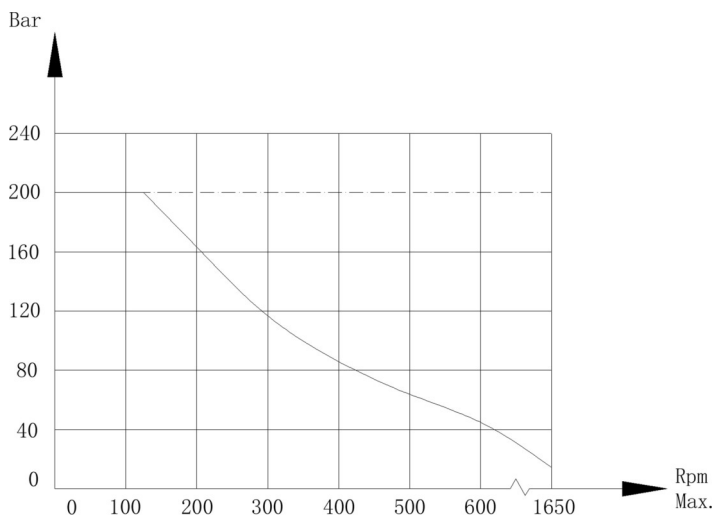
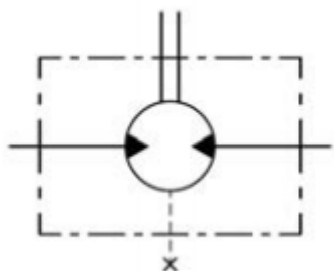
GKA395		390.8cm ³ /rev (23.84in ³ /rev)					Max Cont.	Max Int.		
Pressure bar [psi→]		17.5 [250]	35 [500]	70 [1000]	105 [1500]	140 [2000]	155 [2217]	175 [2503]	190 [2717]	
Flow	l/min [gpm↓]	Torque N m [lb-in] Speed Specification								
	2 [0.53]	70[620] 4rpm	145[1283] 2rpm							
	4 [1.06]	80[708]	170[1505]	345[3053]	500[4425]	660[5841]	740[6549]			
		9rpm	9rpm	8rpm	7rpm	6rpm	5rpm			
	8 [2.11]	85[752]	175[1549]	355[3142]	520[4602]	680[6018]	765[6770]	830[7346]	910[8054]	
		19rpm	18rpm	17rpm	16rpm	14rpm	13rpm	12rpm	10rpm	
	15 [3.96]	90[797]	185[1637]	370[3275]	550[4868]	720[6372]	810[7169]	880[7788]		
		37rpm	37rpm	36rpm	35rpm	32rpm	30rpm	28rpm		
	22 [5.81]	95[841]	190[1682]	380[3363]	565[5000]	750[6638]	830[7346]	900[7965]		
		55rpm	55rpm	54rpm	52rpm	48rpm	46rpm	44rpm		
	30 [7.92]	92[814]	188[1664]	385[3407]	570[5045]	760[6726]	835[7390]	905[8009]		
		76rpm	75rpm	73rpm	71rpm	68rpm	65rpm	62rpm		
	38 [10.03]	90[797]	185[1637]	385[3407]	575[5089]	765[6770]	840[7434]	930[8231]		
		96rpm	94rpm	92rpm	90rpm	86rpm	84rpm	80rpm		
	45 [11.88]	85[752]	180[1593]	380[3363]	570[5045]	760[6726]				
		114rpm	113rpm	111rpm	108rpm	102rpm				
	55 [14.52]	80[708]	175[1549]	380[3363]	570[5045]	760[6726]				
		140rpm	139rpm	137rpm	133rpm	127rpm				
	65 [17.16]	75[664]	170[1505]	370[3275]	560[4956]	750[6638]				
		165rpm	164rpm	163rpm	160rpm	155rpm				
75 [19.80]	68[602]	160[1416]	360[3186]	555[4912]	740[6549]					
	191rpm	190rpm	188rpm	184rpm	178rpm					
85 [22.44]	65[575]	150[1328]	355[310]	550[4868]	730[6461]					
	214rpm	212rpm	210rpm	206rpm	200rpm					
95 [25.08]	50[443]	135[1195]	340[3009]	530[4691]	710[6284]					
	242rpm	240rpm	237rpm	233rpm	228rpm					
115 [30.36]		125[1106]	310[2744]	510[4514]						
		286rpm	282rpm	275rpm						

GKA475		485cm ³ /rev (29.59in ³ /rev)				Max Cont.	Max Int.	
Pressure bar [psi→]		17.5 [250]	35 [500]	70 [1000]	105 [1500]	120 [1716]	140 [2000]	
Flow	l/min [gpm↓]	Torque N m [lb-in] Speed Specification						
	2 [0.53]	75[664] 2rpm	175[1549] 1rpm					
	4 [1.06]	110[974]	220[1947]	430[3806]	540[4779]			
		7rpm	6rpm	4rpm	1rpm			
	8 [2.11]	110[974]	225[1991]	450[3983]	700[6195]			
		14rpm	13rpm	11rpm	7rpm			
	15 [3.96]	105[929]	235[2080]	470[4160]	710[6284]	825[7285]	895[7921]	
		29rpm	28rpm	26rpm	24rpm	22rpm	19rpm	
	22 [5.81]	105[929]	240[2124]	480[4248]	720[6372]	835[7390]	915[8098]	
		44rpm	43rpm	42rpm	40rpm	37rpm	34rpm	
	30 [7.92]	110[974]	240[2124]	485[4292]	725[6416]	840[7434]	935[8275]	
		61rpm	60rpm	58rpm	55rpm	52rpm	48rpm	
	38 [10.03]	110[974]	235[2080]	480[4248]	720[6372]	840[7434]	930[8231]	
		77rpm	75rpm	73rpm	70rpm	68rpm	65rpm	
	45 [11.88]	100[885]	220[1947]	470[4160]	715[6328]	825[7301]		
		91rpm	91rpm	89rpm	85rpm	83rpm		
	55 [14.52]	95[841]	210[1859]	460[4071]	710[6284]	820[7257]		
		112rpm	110rpm	108rpm	104rpm	100rpm		
	65 [17.16]	85[752]	200[1770]	445[3938]	700[6195]	810[7169]		
		132rpm	131rpm	128rpm	125rpm	120rpm		
75 [19.80]	70[620]	185[1637]	440[3894]	690[531]	800[7080]			
	153rpm	152rpm	149rpm	145rpm	140rpm			
85 [22.44]	60[531]	175[1549]	430[3806]	680[6018]	785[6947]			
	173rpm	172rpm	169rpm	165rpm	160rpm			
95 [25.08]	40[354]	150[1328]	405[3584]	655[5797]				
	195rpm	193rpm	190rpm	185rpm				
115 [30.36]		130[1151]	380[3363]	625[5531]				
		230rpm	226rpm	220rpm				

Technical Data

Hydraulic orbit Motors GKA

Permissible shaft seal pressure

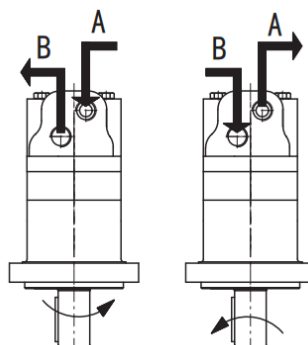


Case Drain :

In applications without a motor drain line, the pressure exerted on the shaft seal is marginally in excess of the return line pressure. When the Drain line is used, the pressure exerted on the shaft seal is equal to the return line pressure.

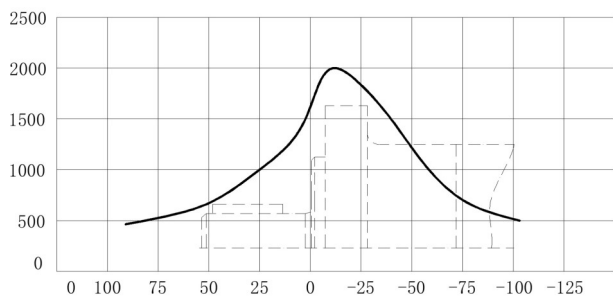
Standard direction of shaft rotation: Standard

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



Axial and Radial forces

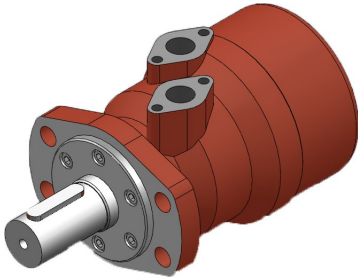
Radial force (daN)



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

This radial force curve is obtained under the rated torque to ensure the bearing life B10 allowable load (2000 hours or 12×10^6 revolutions at 150rpm), and must be multiplied by a certain coefficient under other speed conditions.

General

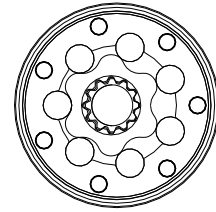


APPLICATION

- ◇ Conveyors
- ◇ Feeding machinery of robots and manipulators
- ◇ Metal working machines
- ◇ Textile machines
- ◇ Agricultural machines
- ◇ Food industries
- ◇ Mining machines

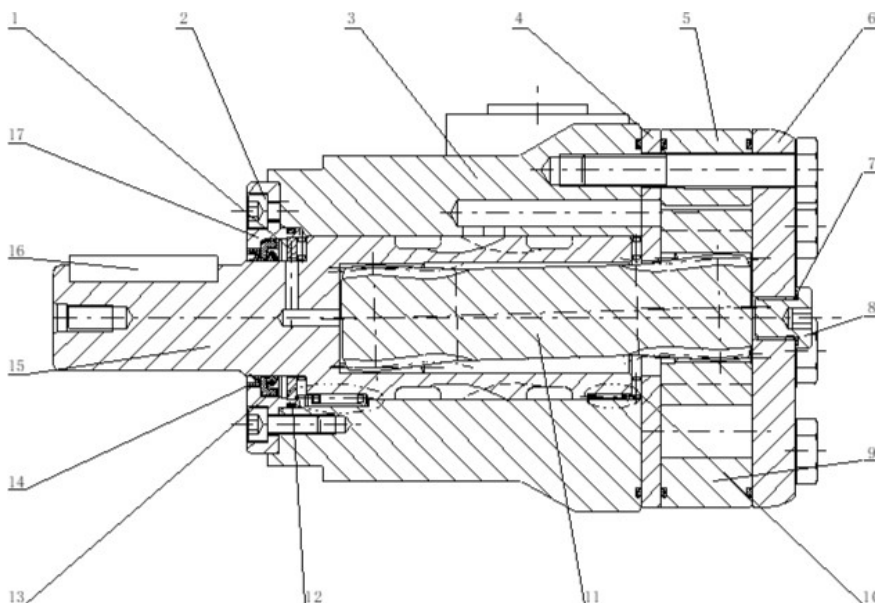
OPTIONS

- ◇ Flange connection
- ◇ Shafts—straight, splined and tapered
- ◇ Metric and BSPP ports
- ◇ Other special features



- ◇ Shaft distribution flow

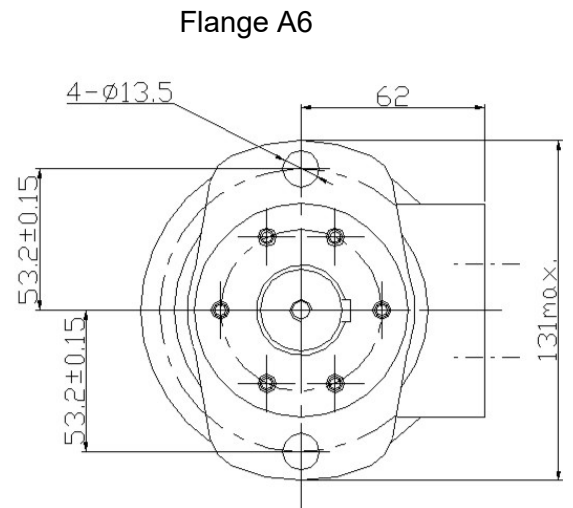
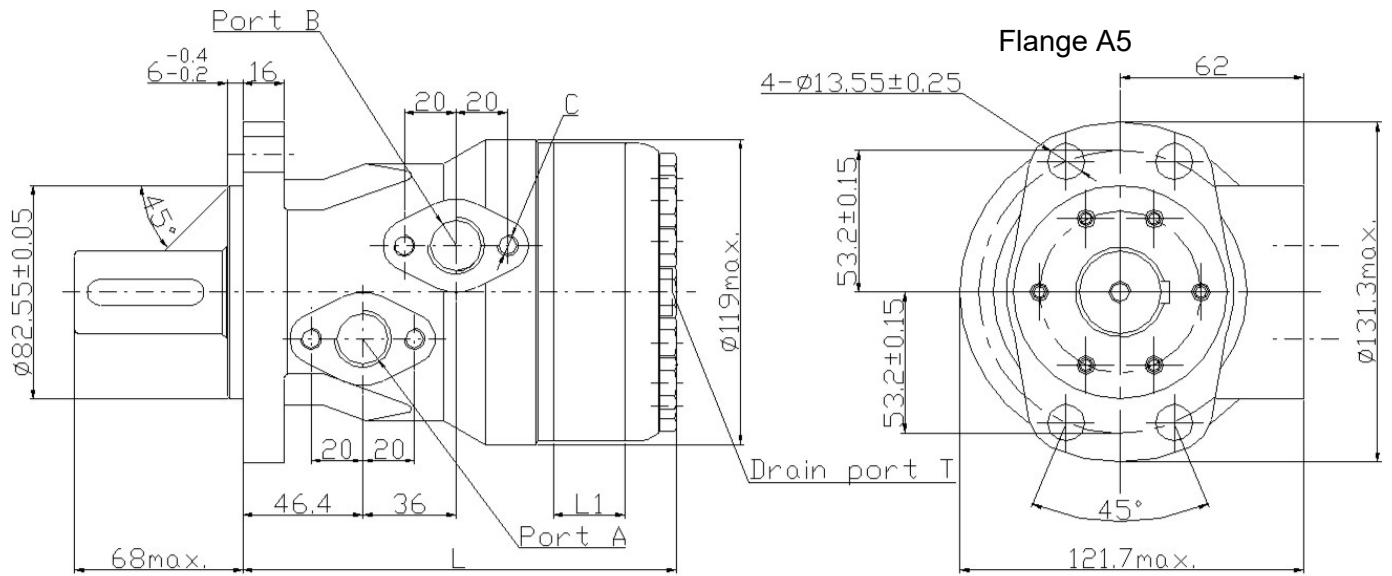
Model		GH200	GH250	GH315	GH400	GH500
Disp.	in ³ /rev	12.3	15.4	19.2	24.2	30.7
	cm ³ /rev	201.3	252	314.9	396.8	502.4
Max Speed rpm	cont.	370	295	235	185	150
	int.	445	350	285	225	180
Max Torque N m [lb-in]	cont.	510 [4510]	610 [5398]	740 [6548]	840 [7434]	820 [7257]
	int.	580 [5130]	700 [6195]	820 [7257]	980 [8673]	1040 [9204]
Max Dif. bar [psi]	cont.	175 [2540]	175 [2540]	175 [2540]	155 [2240]	125 [1810]
	int.	200 [2900]	200 [2900]	200 [2900]	190 [2750]	160 [2320]
Max Flow l/min [gpm]	cont.	75 [19.81]	75 [19.81]	75 [19.81]	75 [19.81]	75 [19.81]
	int.	90 [23.78]	90 [23.78]	90 [23.78]	90 [23.78]	90 [23.78]
Weight kg [lbs]		10.5 [23.2]	11 [24.3]	11.5 [25.4]	12.3 [27.1]	13 [28.7]



1. Thrust Washer
2. Screw
3. Housing
4. Wear Plate
5. Set
6. End Cover
7. Seal
8. Case Drain Plug
9. O-ring
10. Axial Needle Bearing
11. Cardan Joint
12. O-ring
13. Shaft Seal
14. Dust Seal
15. Output Shaft
16. Key
17. Front Cover

Hydraulic Orbit Motors GH

Dimensions and Mounting Data 尺寸和安装参数

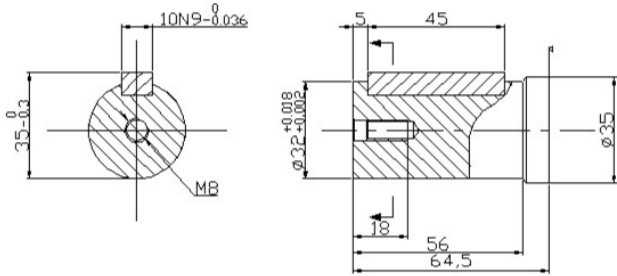


Model	L	L1
GH 200	168 [6.61"]	27 [1.06"]
GH 250	175 [6.89"]	34 [1.39"]
GH 315	184 [7.24"]	42 [1.62"]
GH 400	195 [7.68"]	54 [2.13"]
GH 500	206 [8.11"]	65 [2.56"]

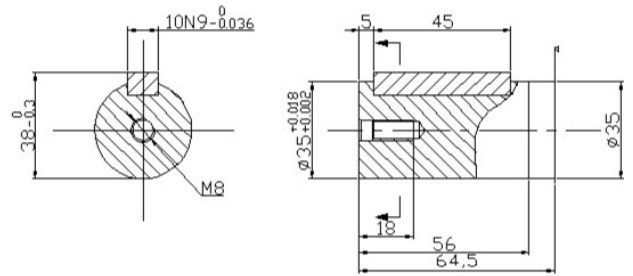
*** Flat Seal**

Port	G1 (Depth)	M1 (Depth)	U2 (Depth)	U1 (Depth)	G2 (Depth)
P(A,B)	G1/2(15)	M22x1.5(15)	SAE-10 O'ring 7/8"-14UNF	1/2-14NPTF(15)	PT(RC)1/2(15)
C	4-M8(13)	4-M8(13)	4-5/16-18UNC(13)	4-5/16-18UNC(13)	4-M8(13)
T	G1/4(12)	M14x1.5(12)	* 7/16-20UNF(12)	* 7/16-20UNF(12)	PT(RC)1/4(12)

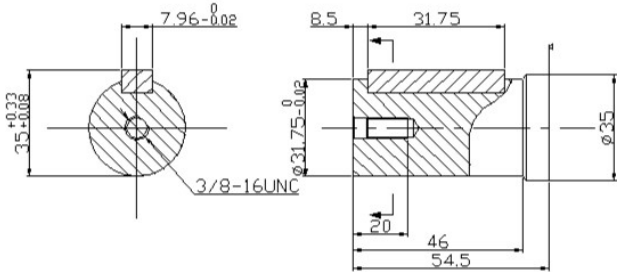
GH Shaft Extension Dimensions Data



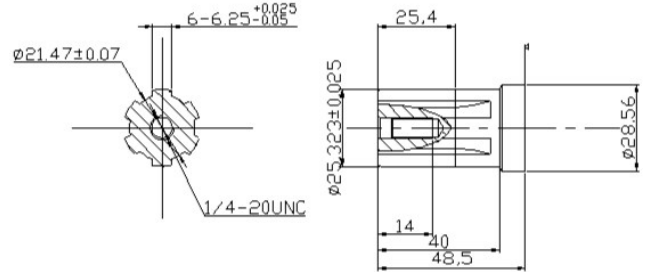
Shaft S4: Cylindrical shaft $\varnothing 32$,
Parallel key 10x8x45



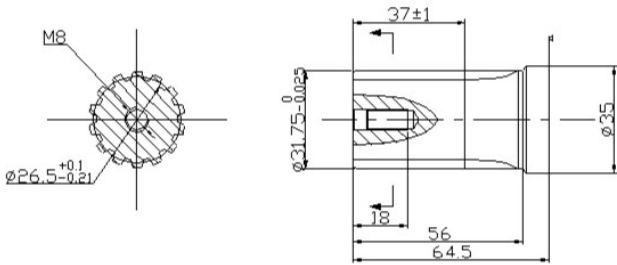
Shaft SF: Cylindrical shaft $\varnothing 35$,
Parallel key 10x8x45



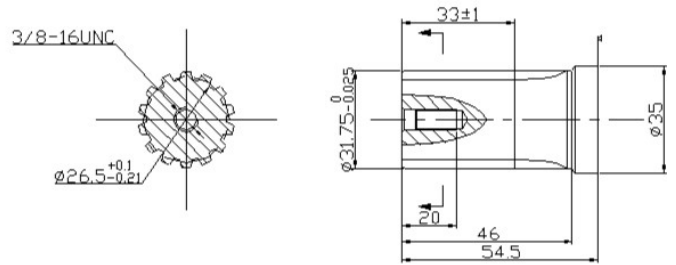
Shaft SG: Cylindrical shaft $\varnothing 1.25$ ",
Parallel key 0.31"x 0.31"x 1.25"



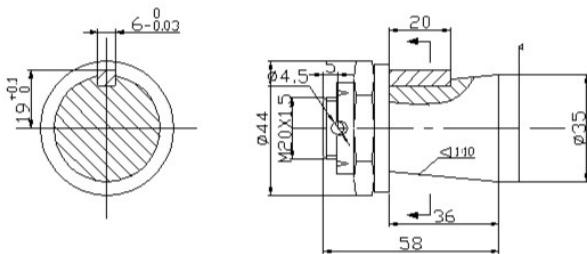
Shaft R4: Splined SAE 6B



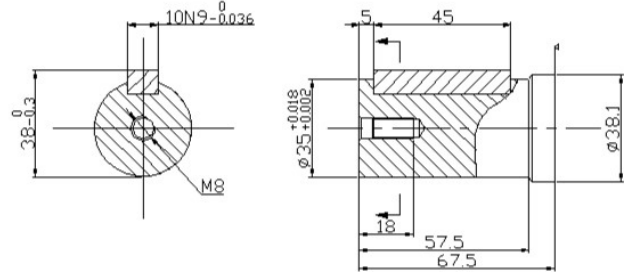
Shaft R3: Splined 14-DP12/24



Shaft Splined R6: 14-DP12/24



Shaft T4: Tapered shaft $\varnothing 35$
Parallel key 6x6x20
Tightening torque: 200 ± 10 Nm



Shaft SH: Cylindrical shaft $\varnothing 35$
Parallel key 10x8x45



GH - How To Order

Ordering Example:		Model	Displacement	Flange	Drive shaft	Ports	Other functions
		GH	200	A5	SG	U20	ACA
Model	Disp.	Flange		Drive shaft		Ports	
GH	200	<u>A5</u> =4-Hole SAE A flange, pilot ∅3.25"x 0.24"		<u>S4</u> =Shaft ∅32, parallel key 10x8x45		<u>G1</u> =G1/2 manifold mount 4xM8, G1/4	
	250			<u>SF</u> =Shaft ∅35, parallel key 10x8x45		<u>G2</u> =PT(Rc)1/2 manifold mount 4xM8, PT(Rc) 1/4	
	315	<u>A6</u> =2-Hole SAE A flange, pilot ∅3.25"x 0.24"		<u>SG</u> =Shaft ∅1.25", parallel key 0.31"x 0.31"x 1.25"		<u>U1</u> =1/2-14NPTF manifold mount 4x5/16-18UNC, 7/16-20UNF (flat seal)	
	400			<u>SH</u> =Shaft ∅35, parallel key 10x8x45		<u>U10</u> =1/2-14NPTF manifold mount 4x5/16-18UNC, SAE-4 O'ring 7/16-20UNF	
	500			<u>R3</u> =Shaft ∅1.25", splined tooth 14- DP12/24		<u>U2</u> =SAE-10 O'ring 7/8"-14 manifold mount 4x5/16-18UNC, 7/16-20UNF (flat seal)	
				<u>R4</u> =Shaft ∅1.00", parallel key SAE 6B		<u>U20</u> =SAE-10 O'ring 7/8"-14 manifold mount 4x5/16-18UNC, SAE-4 O'ring 7/16-20UNF	
				<u>R6</u> =Long shaft ∅1.25", splined tooth 14-DP12/24			
				<u>T4</u> =Tapered shaft ∅35, parallel key B6x6x20			

Shaft Rotation	Paint	Standard Options	Seal Options	Relief Options	Speed Sensor Option
<u>A</u> =Standard / CW 'A' port pressurized <u>R</u> =Reverse / CCW 'A' port pressurized	<u>A</u> =No paint <u>B</u> =Blue <u>C</u> =Black <u>S</u> =Silver gray <u>G</u> =Corrosion resistant coating	<u>A</u> =Standard <u>N</u> =Large radial force <u>D</u> =No case drain <u>F</u> =Free running <u>L</u> =Low speed <u>V</u> =High temperature <u>S</u> =Low temperature	<u>Blank</u> = None <u>HPS</u> =High Pressure Seal <u>SG</u> =Seal Guard <u>HPS-SG</u> = High Pressure Seal & Seal Guard	<u>Blank</u> =None <u>R</u> =Valve Cavity Only <u>R12</u> =Bi-directional relief max 125 bar <u>R20</u> = Bi-directional relief max 207 bar	<u>Blank</u> = None <u>SS</u> = Speed Sensor, 4- pin, M12 male connector

Hydraulic Orbit Motors GH



Flow Data

GH200		201.3cm ³ /rev(12.3in ³ /rev)				Max Cont.	Max Int.
Pressure bar [psi→]		36.1 [515]	72.1 [1030]	108.2 [1546]	144.2 [2060]	180.3 [2576]	206.5 [2950]
Flow	l/min [gpm↓]	Torque N m [lb-in] Speed Specification					
	5 [1.32]	98 [867]	194 [1717]	284 [2513]			
		25rpm	25rpm	22rpm			
	10 [2.65]	101 [894]	204 [1805]	301 [2664]	391 [3460]	482 [4266]	
		43rpm	41rpm	36rpm	29rpm	14rpm	
	20 [5.26]	99 [876]	201 [1779]	304 [2690]	402 [3558]	509 [4505]	576 [5098]
		100rpm	97rpm	93rpm	85rpm	69rpm	56rpm
	30 [7.9]	97 [858]	197 [1743]	300 [2655]	402 [3558]	510 [4513]	579 [5124]
		145rpm	143rpm	139rpm	130rpm	114rpm	101rpm
	40 [10.5]	90 [797]	190 [1681]	292 [2584]	399 [3531]	507 [4487]	578 [5115]
		200rpm	200rpm	200rpm	188rpm	168rpm	153rpm
	50 [13.15]	82 [726]	183 [1619]	284 [2513]	392 [3469]	500 [4425]	571 [5053]
		248rpm	246rpm	244rpm	235rpm	213rpm	199rpm
	60 [15.8]	73 [646]	174 [1540]	274 [2425]	384 [3398]	493 [4363]	563 [4982]
292rpm		290rpm	287rpm	279rpm	260rpm	244rpm	
70 [18.4]	63 [557]	163 [1442]	264 [2336]	374 [3309]	481 [4256]	554 [4903]	
	352rpm	350rpm	349rpm	338rpm	318rpm	301rpm	
75 [19.75]	59 [522]	158 [1389]	259 [2292]	366 [3239]	475 [4204]	547 [4841]	
	366rpm	365rpm	363rpm	355rpm	335rpm	319rpm	
80 [21.05]	53 [469]	150 [1328]	253 [2239]	358 [3168]	466 [4124]	538 [4761]	
	Max Cont.	381rpm	381rpm	380rpm	371rpm	352rpm	338rpm
90 [23.68]	39 [345]	140 [1239]	241 [2133]	348 [3080]	456 [4036]	526 [4655]	
	Max Int.	443rpm	437rpm	434rpm	426rpm	407rpm	392rpm

GH250		252cm ³ /rev(15.4in ³ /rev)				Max Cont.	Max Int.
Pressure bar [psi→]		36.1 [515]	72.1 [1030]	92.3 [1328]	123.6 [1766]	149.7 [2139]	180.3 [2576]
Flow	l/min [gpm↓]	Torque N m [lb-in] Speed Specification					
	5 [1.32]	115 [1071]	246 [2177]	318 [2814]	398 [3522]		
		19rpm	19rpm	18rpm	14rpm		
	10 [2.65]	130 [1150]	258 [2283]	331 [2929]	425 [3761]	515 [4558]	595 [5266]
		34rpm	33rpm	31rpm	29rpm	23rpm	12rpm
	20 [5.26]	130 [1150]	258 [2283]	332 [2938]	432 [3823]	520 [4602]	621 [5496]
		78rpm	77rpm	76rpm	73rpm	65rpm	53rpm
	30 [7.9]	122 [1080]	251 [2221]	327 [2894]	429 [3797]	520 [4602]	621 [5496]
		115rpm	113rpm	111rpm	105rpm	96rpm	84rpm
	40 [10.5]	115 [1017]	240 [2124]	323 [2858]	422 [3735]	513 [4540]	616 [5452]
		157rpm	157rpm	156rpm	150rpm	139rpm	127rpm
	50 [13.15]	105 [929]	232 [2053]	315 [2779]	411 [3637]	505 [4469]	606 [5363]
		196rpm	195rpm	192rpm	185rpm	173rpm	159rpm
	60 [15.8]	94 [831]	220 [1947]	302 [2673]	401 [3549]	496 [4390]	596 [5275]
232rpm		230rpm	226rpm	218rpm	206rpm	192rpm	
70 [18.4]	81 [720]	209 [1850]	288 [2550]	389 [3442]	484 [4283]	582 [5150]	
	274rpm	274rpm	274rpm	266rpm	252rpm	238rpm	
75 [19.75]	72 [637]	203 [1796]	280 [2478]	381 [3372]	475 [4204]	574 [5080]	
	290rpm	289rpm	287rpm	279rpm	266rpm	251rpm	
80 [21.05]	66 [584]	194 [1717]	273 [2416]	371 [3283]	467 [4133]	566 [5009]	
	Max Cont.	303rpm	302rpm	298rpm	290rpm	279rpm	264rpm
90 [23.68]	49 [433]	178 [1575]	256 [2266]	355 [3142]	453 [4009]	552 [4885]	
	Max Int.	348rpm	347rpm	345rpm	337rpm	325rpm	309rpm

Hydraulic Orbit Motors GH



Flow Data

GH315		314.9cm ³ /rev(19.2in ³ /rev)					Max Cont.	Max Int.	
Pressure bar [psi→]		36.1 [515]	77.4 [1105]	102.9 [1470]	139.1 [1987]	160.0 [2286]	180.3 [2576]	206.5 [2950]	
Flow	l/min [gpm↓]	Torque N m [lb-in] Speed Specification							
	5 [1.32]	155 [1372]	325 [2876]						
		16rpm	13rpm						
	10 [2.65]	163 [1442]	342 [3026]	454 [4018]	556 [4921]				
		27rpm	24rpm	18rpm	14rpm				
	20 [5.26]	169 [1496]	349 [3089]	469 [4151]	582 [5150]	664 [5876]	733 [6487]	809 [7160]	
		63rpm	61rpm	55rpm	48rpm	40rpm	32rpm	19rpm	
	30 [7.9]	165 [1460]	344 [3044]	470 [4159]	580 [5133]	669 [5921]	740 [6549]	824 [7292]	
		93rpm	89rpm	82rpm	77rpm	67rpm	59rpm	46rpm	
	40 [10.5]	154 [1363]	337 [2982]	465 [4115]	577 [5106]	663 [5867]	737 [6522]	827 [7319]	
		126rpm	126rpm	119rpm	111rpm	99rpm	88rpm	73rpm	
	50 [13.15]	141 [1248]	325 [2876]	455 [4027]	568 [5027]	656 [5806]	728 [6443]	824 [7292]	
		159rpm	155rpm	148rpm	139rpm	126rpm	115rpm	98rpm	
	60 [15.8]	121 [1071]	312 [2761]	440 [3894]	555 [4912]	643 [5690]	715 [6328]	812 [7186]	
		187rpm	186rpm	179rpm	169rpm	154rpm	143rpm	124rpm	
70 [18.4]	103 [911]	298 [2637]	425 [3761]	541 [4788]	631 [5584]	703 [6221]	800 [7080]		
	222rpm	222rpm	215rpm	205rpm	187rpm	176rpm	157rpm		
75 [19.75]	94 [831]	287 [2540]	417 [3690]	529 [4682]	623 [5514]	696 [6160]	792 [7009]		
	236rpm	233rpm	224rpm	215rpm	196rpm	184rpm	166rpm		
80 [21.05]	82 [726]	277 [2451]	406 [3593]	518 [4584]	611 [5407]	688 [6089]	784 [6938]		
Max Cont.	246rpm	244rpm	236rpm	228rpm	210rpm	197rpm	174rpm		
90 [23.68]	62 [549]	256 [2266]	386 [3416]	496 [4390]	593 [5248]	669 [5921]	767 [6788]		
Max Int.	282rpm	280rpm	275rpm	266rpm	248rpm	234rpm	209rpm		

GH400		396.8cm ³ /rev(24.2in ³ /rev)					Max Cont.
Pressure bar [psi→]		36.1 [515]	77.4 [1105]	102.9 [1470]	139.1 [1987]	160.0 [2286]	196.1 [2802]
Flow	l/min [gpm↓]	Torque N m [lb-in] Speed Specification					
	5 [1.32]	196 [1735]	348 [3080]	516 [4566]			
		13rpm	13rpm	10rpm			
	10 [2.65]	205 [1814]	363 [3212]	546 [4832]	702 [6213]	859 [7602]	
		22rpm	21rpm	21rpm	17rpm	11rpm	
	20 [5.26]	209 [1850]	366 [3239]	543 [4805]	708 [6266]	874 [7735]	988 [8744]
		50rpm	49rpm	46rpm	41rpm	36rpm	31rpm
	30 [7.9]	201 [1779]	357 [3159]	542 [4797]	706 [6248]	864 [7646]	984 [8708]
		73rpm	72rpm	70rpm	63rpm	56rpm	51rpm
	40 [10.5]	195 [1726]	346 [3062]	532 [4708]	701 [6204]	858 [7593]	973 [8611]
		99rpm	98rpm	96rpm	86rpm	77rpm	71rpm
	50 [13.15]	173 [1531]	332 [2938]	518 [4584]	687 [6080]	848 [7504]	958 [8478]
		123rpm	122rpm	118rpm	107rpm	97rpm	90rpm
	60 [15.8]	154 [1363]	319 [2823]	501 [4434]	668 [5912]	833 [7372]	944 [8354]
		146rpm	144rpm	141rpm	128rpm	115rpm	106rpm
70 [18.4]	138 [1221]	305 [2699]	480 [4248]	649 [5744]	814 [7204]	925 [8186]	
	174rpm	173rpm	169rpm	156rpm	141rpm	130rpm	
75 [19.75]	128 [1133]	294 [2602]	466 [4124]	637 [5637]	802 [7098]	911 [8062]	
	183rpm	181rpm	177rpm	163rpm	149rpm	138rpm	
80 [21.05]	113 [1000]	277 [2451]	451 [3991]	621 [5496]	786 [6956]	899 [7956]	
Max Cont.	192rpm	191rpm	188rpm	174rpm	158rpm	144rpm	
90 [23.68]	90 [796]	256 [2266]	433 [3832]	595 [5266]	767 [6788]	881 [7797]	
Max Int.	220rpm	220rpm	215rpm	202rpm	183rpm	165rpm	



Flow Data

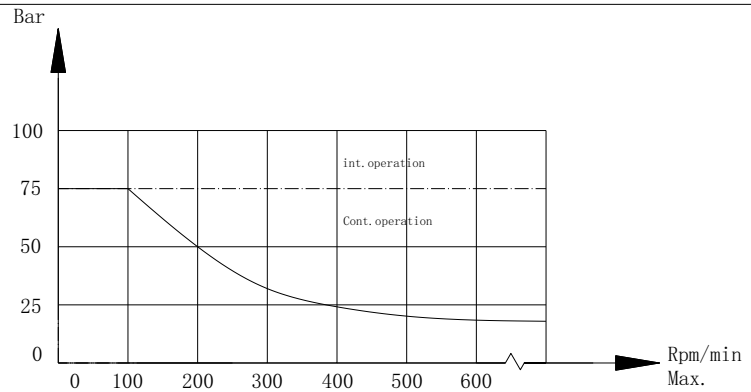
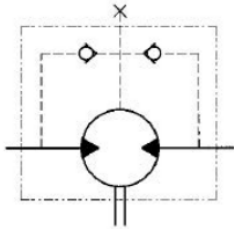
GH500		502.4cm ³ /rev(30.7in ³ /rev)				Max Cont.	Max Int.
Pressure bar [psi→]		25.8 [368]	51.7 [738]	87.8 [1254]	102.9 [1470]	128.8 [1840]	164.9 [2355]
Flow	l/min [gpm↓]	Torque N m [lb-in] Speed Specification					
	5 [1.32]	165 [1460]	317 [2805]	516 [4567]			
		11rpm	11rpm	8rpm			
	10 [2.65]	178 [1575]	335 [2965]	555 [4912]	669 [5921]	791 [7000]	969 [8576]
		20rpm	19rpm	17rpm	15rpm	13rpm	9rpm
	20 [5.26]	177 [1566]	331 [2929]	559 [4947]	673 [5956]	779 [6894]	988 [8744]
		42rpm	42rpm	41rpm	38rpm	36rpm	29rpm
	30 [7.9]	172 [1522]	320 [2832]	553 [4894]	663 [5867]	792 [7009]	983 [8699]
		64rpm	63rpm	61rpm	57rpm	53rpm	47rpm
	40 [10.5]	163 [1443]	309 [2735]	541 [4788]	654 [5788]	783 [6930]	971 [8593]
		85rpm	85rpm	83rpm	79rpm	75rpm	67rpm
	50 [13.15]	146 [1292]	240 [2120]	523 [4628]	635 [5620]	768 [6797]	954 [8443]
		103rpm	103rpm	103rpm	97rpm	93rpm	85rpm
	60 [15.8]	121 [1071]	275 [2434]	502 [4443]	614 [5434]	747 [6611]	934 [8266]
		124rpm	124rpm	123rpm	117rpm	113rpm	103rpm
	70 [18.4]	97 [858]	256 [2266]	482 [4266]	597 [5283]	729 [6452]	917 [8115]
		148rpm	148rpm	148rpm	140rpm	134rpm	122rpm
	75 [19.75]	79 [699]	240 [2124]	469 [4151]	582 [5151]	714 [6319]	902 [7983]
		155rpm	155rpm	155rpm	152rpm	144rpm	130rpm
	80 [21.05]	60 [531]	226 [2000]	453 [4009]	570 [5044]	701 [6204]	884 [7823]
	166rpm	166rpm	166rpm	159rpm	153rpm	139rpm	
90 [23.68]	34 [301]	201 [1779]	421 [3726]	550 [4868]	673 [5956]	869 [7691]	
	166rpm	165rpm	164rpm	157rpm	156rpm	155rpm	
	Max Cont.						
	Max Int.						

Hydraulic Orbit Motors GH

Technical Data

Hydraulic orbit Motors GH

Permissible shaft seal pressure



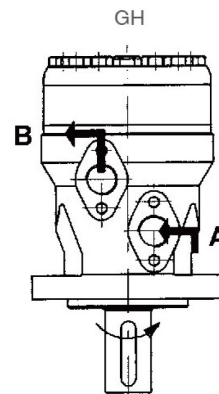
In applications without drain line, output shaft seal exceeds a bit of the pressure in the return line. When applications use the drain line, the pressure of output shaft seal equals the pressure in drain line.

Case Drain :

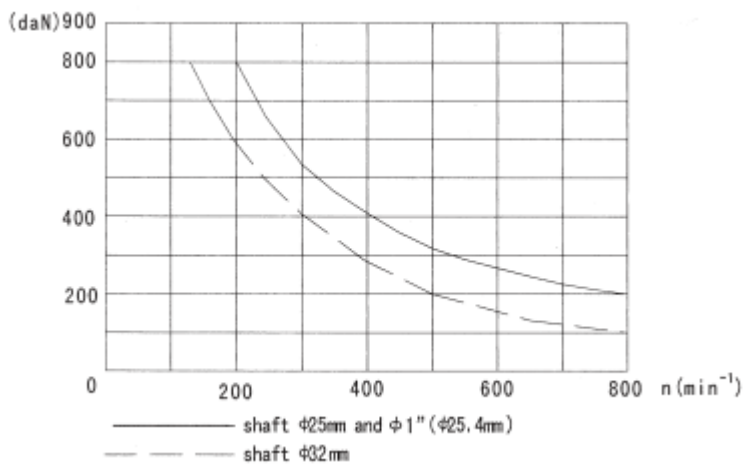
In applications without a motor drain line, the pressure exerted on the shaft seal is marginally in excess of the return line pressure. When the Drain line is used, the pressure exerted on the shaft seal is equal to the return line pressure.

Standard direction of shaft rotation: Standard

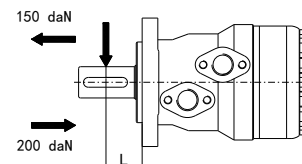
When facing shaft end of motor, shaft to rotate: Clock-wise when port "A" is pressurized. Counter-clockwise port "B" is pressurized.



Axial and Radial forces



$$Fr = \frac{800}{n} * \frac{2500}{95 + L}$$



Fr =Radial Force (daN)

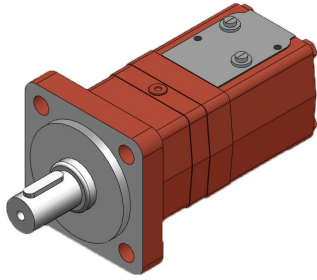
L =Distance (mm)

n =Speed (rpm)

Rhomb-flange L=30mm

Square-flange L=24mm

General

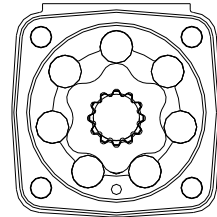


APPLICATION

- ◇ Conveyors
- ◇ Road building machines
- ◇ Metal working machines
- ◇ Special vehicle etc.
- ◇ Agricultural machines
- ◇ Food industries
- ◇ Mining machines

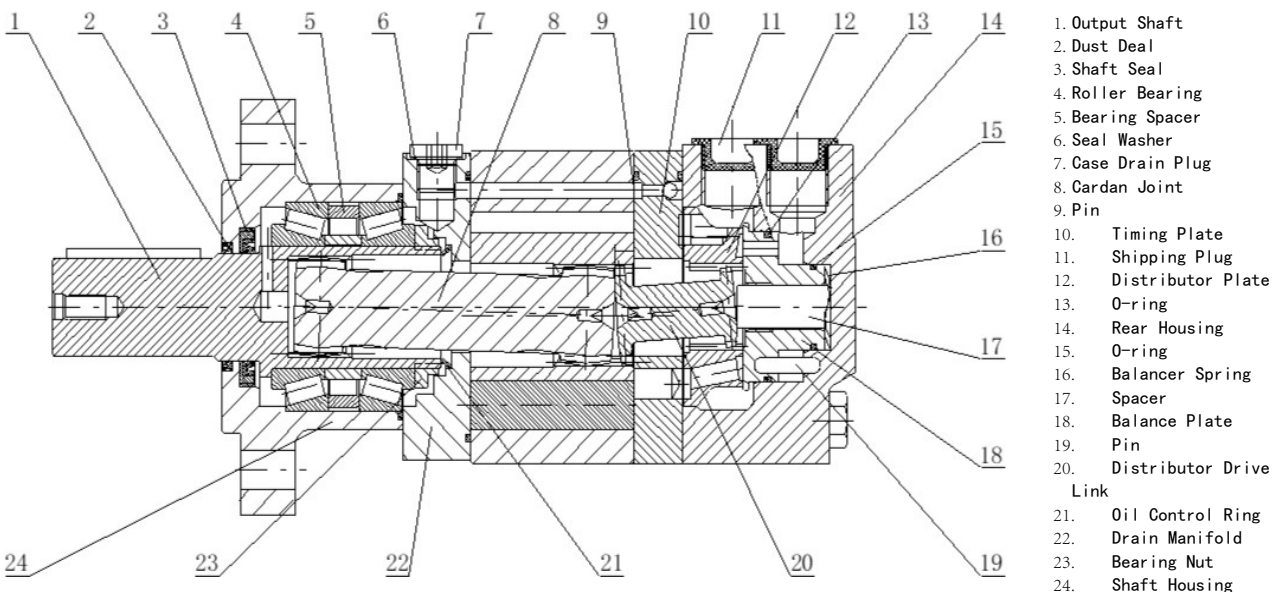
OPTIONS

- ◇ Flange and wheel mount
- ◇ Short motor
- ◇ Motor with drum brake
- ◇ Tachometer connection
- ◇ Speed sensing
- ◇ Side and rear ports
- ◇ Shafts—straight, splined and tapered
- ◇ Shaft seal for high and low pressure
- ◇ Metric and BSPP ports
- ◇ Other special features



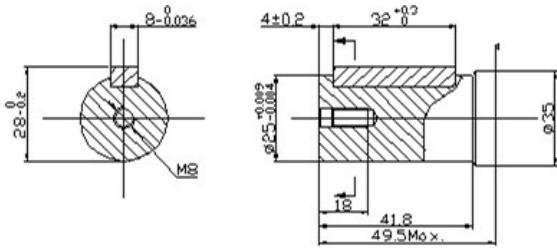
- ◇ Disc distribution flow

Model		GS80	GS100	GS125	GS160	GS200	GS250	GS315	GS400	GS475
Disp.	in ³ /rev	4.91	6.1	7.67	9.74	12.2	15.25	19.21	24.22	28.95
	cm ³ /rev	80.5	100	125.7	159.7	200	250	314.9	397	474.6
Max Speed rpm	cont.	810	750	600	470	375	300	240	190	160
	int.	1000	900	720	560	450	360	290	230	190
Max Torque N m [lb-in]	cont.	225 [1991]	290 [2566]	365 [3230]	485 [4292]	586 [5185]	708 [6265]	880 [7787]	880 [7786]	910 [8053]
	int.	250 [2212]	320 [2832]	400 [3540]	540 [4778]	645 [5707]	807 [7142]	960 [8495]	960 [8495]	960 [8495]
Max Dif. bar [psi]	cont.	208 [2973]	208 [2973]	208 [2973]	213 [3045]	213 [3045]	203 [2900]	203 [2900]	162 [2320]	142 [2030]
	int.	229 [3265]	229 [3265]	229 [3265]	229 [3265]	229 [3265]	229 [3265]	229 [3265]	179 [2563]	152 [2175]
Max Flow l/min [gpm]	cont.	65 [17.1]	75 [19.81]	75 [19.81]	75 [19.81]	75 [19.81]	75 [19.81]	75 [19.81]	75 [19.81]	75 [19.81]
	int.	80 [21.13]	90 [23.77]	90 [23.77]	90 [23.77]	90 [23.77]	90 [23.77]	90 [23.77]	90 [23.77]	90 [23.77]
Weight kg [lbs]		10.7 [23.7]	10.8 [24.1]	11.1 [24.8]	11.3 [25]	10.4 [26.2]	12.3 [27.4]	13.0 [29.0]	13.9 [31.0]	14.8 [32.8]

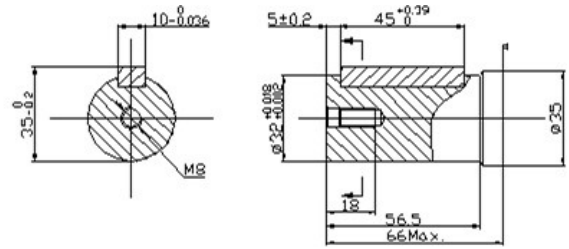


1. Output Shaft
2. Dust Deal
3. Shaft Seal
4. Roller Bearing
5. Bearing Spacer
6. Seal Washer
7. Case Drain Plug
8. Cardan Joint
9. Pin
10. Timing Plate
11. Shipping Plug
12. Distributor Plate
13. O-ring
14. Rear Housing
15. O-ring
16. Balancer Spring
17. Spacer
18. Balance Plate
19. Pin
20. Distributor Drive Link
21. Oil Control Ring
22. Drain Manifold
23. Bearing Nut
24. Shaft Housing

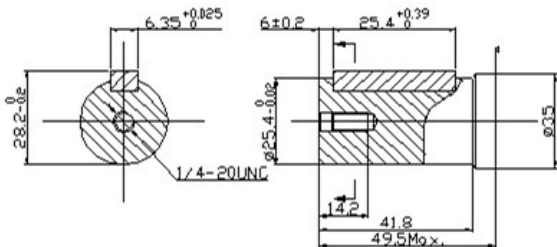
GS Shaft Extension Dimensions Data



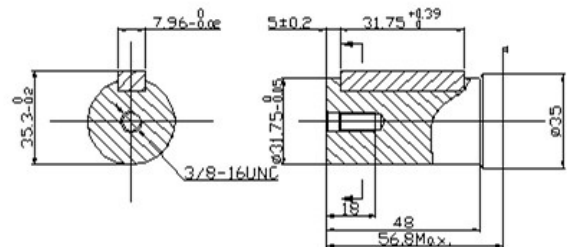
Shaft S1: Cylindrical shaft $\varnothing 25$,
Parallel key 8x7x32



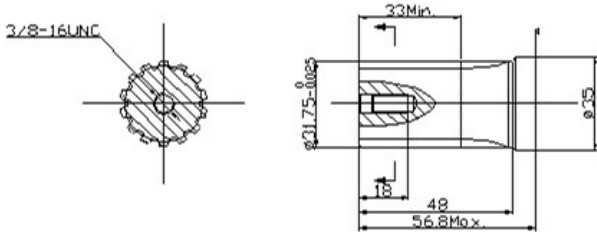
Shaft S4: Cylindrical shaft $\varnothing 32$,
Parallel key 10x8x45



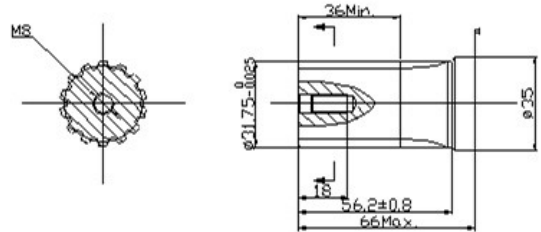
Shaft S8: Cylindrical shaft $\varnothing 1.00$ ",
Parallel key 0.25"x 0.25"



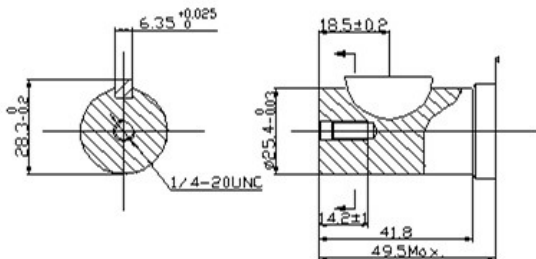
Shaft SG: Cylindrical shaft $\varnothing 1.25$ ",
Parallel key 0.31"x 0.31"x 1.25"



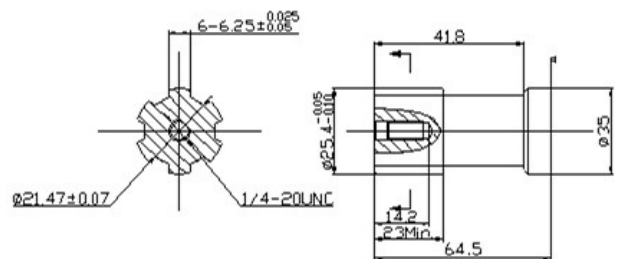
Shaft R2: Splined 14-DP12/24



Shaft R3: Splined 14-DP12/24

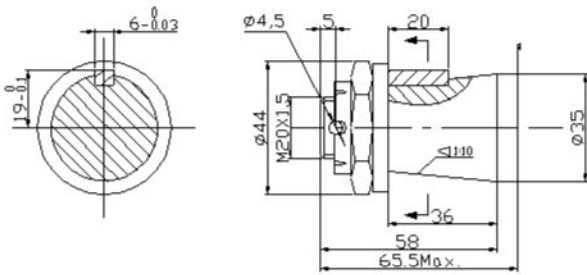


Shaft S6: Cylindrical shaft $\varnothing 1.00$ ",
Woodruff key 0.25"x 1.00"

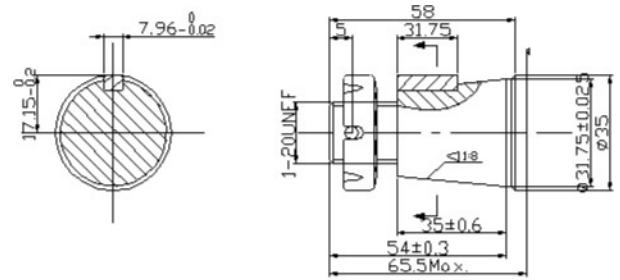


Shaft R8: Splined SAE 6B

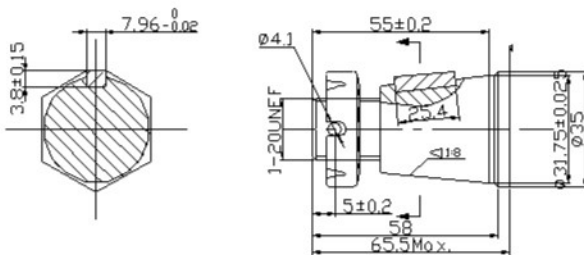
GS Shaft Extension Dimensions Data



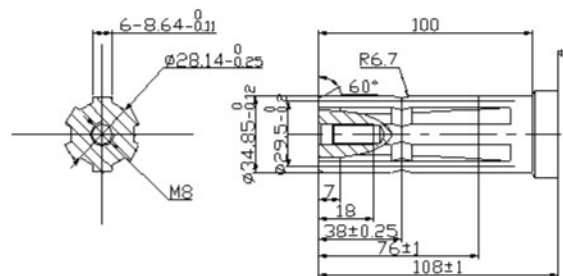
Shaft T4: Tapered shaft
 $\varnothing 35$ Parallel key B6x6x20



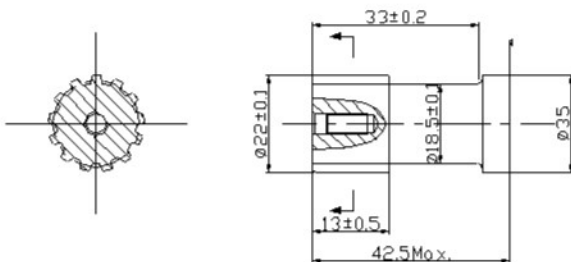
Shaft T5: Tapered shaft $\varnothing 1.25"$,
 Parallel key 0.31"x 0.31"x 1.25"
 Tightening torque: 200±10Nm



Shaft T2: Tapered shaft $\varnothing 1.25"$,
 Parallel key 0.31"x 0.31"x 1.00"
 Tightening torque: 200±10Nm



Shaft R7: Splined 6-34.85x28.14x8.64



Shaft R5: Splined 13-DP16/32



GS Shaft Extension Dimensions Data

Ordering Example:		Model	Displacement	Flange	Drive shaft	Ports	Other functions
		GSS	400	H2	C1	UB	ACA
Model	Disp.	Flange		Drive shaft		Ports	
GS	80	GS <u>A7</u> =2-Hole, SAE A flange \varnothing 4.19", pilot \varnothing 3.25"x 0.25"		GS <u>S4</u> =Shaft \varnothing 32, parallel key 10x8x45			
	100	<u>A9</u> =6-Hole, SAE A flange \varnothing 4.19", pilot \varnothing 3.25"x 0.102"		<u>S6</u> =Shaft \varnothing 1.00", Woodruff key 0.25"x 1.00"			
	125	<u>AA</u> =2-Hole, SAE B flange \varnothing 5.75", pilot \varnothing 4.00"x 0.370"		<u>S8</u> =Shaft \varnothing 1.00", parallel key 0.25"x 0.25"x 1.00"			
	160	<u>H3</u> =4-Hole diagonal, square flange \varnothing 4.19", pilot \varnothing 3.25"x 0.25"		<u>SG</u> =Shaft \varnothing 1.25", parallel key 0.31"x 0.31"x 1.25"			
	200	<u>H1</u> =4-Hole, square flange \varnothing 4.188", pilot \varnothing 3.25"x 0.25"		<u>R2</u> =Shaft \varnothing 1.25", splined tooth 14-DP 12/24		<u>G9</u> =G1/2 manifold mount 2xM10, G1/4	
	250	<u>W1</u> =4 Hole, wheel flange \varnothing 160, pilot \varnothing 125x8		<u>R3</u> =Long Shaft \varnothing 1.25", splined tooth 14-DP 12/25		<u>M8</u> =M22x1.5 manifold mount 2xM10, M14x1.5	
	400	GSS <u>B1</u> =4-Hole, Bearingless round flange \varnothing 125, pilot \varnothing 100x6		<u>R5</u> =Shaft \varnothing 22, splined tooth 13-DP16/32		<u>UB</u> =SAE-10 O'ring 7/8"-14 manifold 2x 3/8-16 UNC, SAE-4 O'ring 7/16-20UNF	
475	<u>H2</u> =4-Hole, Bearingless square flange \varnothing 5.00", pilot \varnothing 4.00"x 0.25"		<u>R7</u> =Shaft \varnothing 34.85, splined tooth 6 -34.85x 28.14x 8.64		<u>UC</u> =1/2-14NPTF manifold 2x 3/8-16 UNC, SAE-4 O'ring 7/16-20UNF		
			<u>R8</u> =Shaft \varnothing 1.00", parallel key SAE 6B		<u>UE</u> = SAE-12 O'ring 1-1/16"-12UNF 180 side ports, SAE-4 O'ring 7/16"-20UNF		
			<u>T2</u> =Tapered Shaft \varnothing 1.25", parallel key 0.31"x 0.31"x 1.00"		<u>EE-S2</u> =SAE-10 O'ring 7/8"-14 Rear Ports, SAE-4 O'ring 7/16"-20UNF		
			<u>T4</u> =Tapered Shaft \varnothing 35, parallel key B6x 6x 20				
			<u>T5</u> =Tapered Shaft \varnothing 1.25", parallel key 0.31"x 0.31"x 1.25"				
			GSS <u>C1</u> =Cardan shaft 12-DP12/24				

Shaft Rotation	Paint	Standard Options	Seal Options	Relief Options	Speed Sensor Option
<u>A</u> =Standard / CW 'A' port pressurized <u>R</u> =Reverse / CCW 'A' port pressurized	<u>A</u> =No paint <u>B</u> =Blue <u>C</u> =Black <u>S</u> =Silver gray <u>G</u> =Corrosion resistant coating	<u>A</u> =Standard <u>N</u> =Large radial force <u>D</u> =No case drain <u>F</u> =Free running <u>L</u> =Low speed <u>V</u> =High temperature <u>S</u> =Low temperature	<u>Blank</u> = None <u>HPS</u> =High Pressure Seal <u>SG</u> =Seal Guard <u>HPS-SG</u> = High Pressure Seal & Seal Guard	<u>Blank</u> =None <u>R</u> =Valve Cavity Only <u>R12</u> =Bi-directional relief max 125 bar <u>R20</u> = Bi-directional relief max 207 bar	<u>Blank</u> = None <u>SS</u> = Speed Sensor, 4-pin, M12 male connector

Hydraulic Orbit Motors GS



Flow Data

GS80		80.6cm ³ /rev (4.92in ³ /rev)					Max Cont.	Max Int.
Pressure bar [psi→]		36.1 [515]	72.1 [1030]	108.2 [1546]	144.2 [2060]	180.3 [2576]	208.1 [2973]	231.6 [3308]
Flow	l/min [gpm↓]	Torque N m [lb-in] Speed Specification						
	15 [3.96]	35 [310]	80 [708]	120 [1062]	158 [1398]	195 [1726]	228 [2017]	249 [2204]
		180rpm	174rpm	168rpm	164rpm	158rpm	151rpm	143rpm
	30 [7.93]	35 [310]	80 [708]	120 [1062]	158 [1398]	195 [1726]	232 [2053]	260 [2301]
		362rpm	352rpm	346rpm	338rpm	330rpm	322rpm	310rpm
	40 [10.57]	35 [310]	79 [699]	119 [1053]	155 [1372]	193 [1708]	227 [2009]	250 [2213]
		487rpm	480rpm	468rpm	457rpm	446rpm	438rpm	425rpm
	50 [13.21]	30 [266]	77 [681]	117 [1035]	153 [1354]	192 [1699]	224 [1982]	248 [2195]
		612rpm	603rpm	592rpm	581rpm	572rpm	558rpm	542rpm
	60 [15.85]	28 [248]	77 [681]	117 [1035]	153 [1354]	192 [1699]	224 [1982]	243 [2150]
735rpm		726rpm	718rpm	703rpm	687rpm	673rpm	646rpm	
65 [17.17]	26 [230]	75 [664]	116 [1026]	151 [1336]	188 [1663]	217 [1920]	236 [2088]	
Max Cont.	794rpm	786rpm	773rpm	760rpm	744rpm	722rpm	706rpm	
80 [21.13]	25 [217]	72 [637]	109 [964]	142 [1256]	176 [1557]	206 [1823]	227 [2009]	
Max Int.	981rpm	968rpm	955rpm	925rpm	893rpm	870rpm	832rpm	
GS100		100.8cm ³ /rev (6.15in ³ /rev)					Max Cont.	Max Int.
Pressure bar [psi→]		36.1 [515]	72.1 [1030]	108.2 [1546]	144.2 [2060]	180.3 [2576]	208.1 [2973]	231.6 [3308]
Flow	l/min [gpm↓]	Torque N m [lb-in] Speed Specification						
	15 [3.96]	48 [425]	95 [841]	150 [1328]	200 [1770]	250 [2213]	282 [2495]	310 [2744]
		146rpm	144rpm	139rpm	135rpm	130rpm	120rpm	105rpm
	30 [7.93]	45 [398]	94 [832]	146 [1292]	198 [1752]	250 [2213]	290 [2566]	317 [2805]
		291rpm	289rpm	278rpm	274rpm	269rpm	258rpm	242rpm
	40 [10.57]	43 [381]	89 [788]	169 [1492]	196 [1735]	248 [2195]	288 [2549]	316 [2797]
		387rpm	384rpm	374rpm	359rpm	350rpm	335rpm	320rpm
	50 [13.21]	40 [354]	88 [779]	135 [1195]	194 [1717]	247 [2186]	286 [2531]	315 [2788]
		486rpm	483rpm	473rpm	462rpm	450rpm	430rpm	420rpm
	60 [15.85]	37 [327]	88 [779]	132 [1168]	187 [1657]	244 [2159]	283 [2504]	312 [2761]
588rpm		584rpm	574rpm	562rpm	550rpm	538rpm	520rpm	
75 [19.81]	35 [310]	80 [708]	130 [1151]	180 [1593]	240 [2124]	279 [2469]	310 [2744]	
Max Cont.	740rpm	735rpm	720rpm	705rpm	696rpm	676rpm	653rpm	
90 [23.77]	30 [266]	75 [664]	124 [1097]	170 [1505]	236 [2089]	271 [2398]	303 [2682]	
Max Int.	850rpm	840rpm	810rpm	787rpm	770rpm	750rpm	747rpm	
GS125		125cm ³ /rev (7.63in ³ /rev)					Max Cont.	Max Int.
Pressure bar [psi→]		36.1 [515]	72.1 [1030]	108.2 [1546]	144.2 [2060]	180.3 [2576]	208.1 [2973]	231.6 [3308]
Flow	l/min [gpm↓]	Torque (lb-in) Speed Specification						
	15 [3.96]	55 [487]	120 [1062]	176 [1558]	245 [2168]	309 [2735]	345 [3053]	375 [3319]
		115rpm	113rpm	110rpm	104rpm	98rpm	90rpm	84rpm
	30 [7.93]	55 [487]	120 [1062]	175 [1549]	250 [2213]	315 [2787]	364 [3221]	404 [3575]
		231rpm	228rpm	223rpm	214rpm	202rpm	188rpm	172rpm
	40 [10.57]	53 [469]	118 [1044]	178 [1575]	250 [2213]	315 [2787]	364 [3221]	403 [3566]
		312rpm	299rpm	290rpm	289rpm	278rpm	262rpm	235rpm
	50 [13.21]	50 [443]	115 [1020]	176 [1558]	248 [2195]	315 [2787]	362 [3203]	397 [3513]
		391rpm	386rpm	378rpm	365rpm	352rpm	339rpm	308rpm
	60 [15.85]	45 [398]	113 [1000]	171 [1513]	241 [2133]	308 [2726]	358 [3168]	397 [3513]
469rpm		461rpm	450rpm	437rpm	425rpm	400rpm	372rpm	
75 [19.81]	45 [398]	110 [974]	167 [1478]	308 [2724]	306 [2708]	352 [3115]	389 [3442]	
Max Cont.	588rpm	574rpm	560rpm	544rpm	526rpm	505rpm	481rpm	
90 [23.77]	40 [354]	106 [938]	162 [1434]	237 [2097]	301 [2664]	343 [3035]	378 [3345]	
Max Int.	710rpm	696rpm	680rpm	661rpm	646rpm	628rpm	610rpm	

Hydraulic Orbit Motors GS



Flow Data

GS160		154cm ³ /rev(9.39in ³ /rev)					Max Cont.	Max Int.	
Pressure bar [psi→]		36.1 [515]	72.1 [1030]	108.2 [1546]	144.2 [2060]	180.3 [2576]	213.2 [3045]	231.6 [3308]	
Flow	l/min [gpm↓]	Torque N m [lb-in] Speed Specification							
	15 [3.96]	70 [620]	142 [1257]	213 [1904]	298 [2639]	372 [3295]	435 [3852]	476 [4216]	
		93rpm	91rpm	89rpm	85rpm	80rpm	76rpm	58rpm	
	30 [7.93]	73 [646]	151 [1337]	225 [1992]	312 [2763]	382 [3383]	456 [4038]	494 [4357]	
		189rpm	187rpm	181rpm	176rpm	170rpm	162rpm	153rpm	
	40 [10.57]	75 [664]	152 [1346]	228 [2019]	314 [2781]	383 [3392]	454 [4021]	488 [4322]	
		252rpm	250rpm	246rpm	239rpm	234rpm	228rpm	212rpm	
	50 [13.21]	70 [620]	148 [1310]	225 [1992]	305 [2701]	372 [3294]	445 [3941]	480 [4251]	
		313rpm	310rpm	306rpm	298rpm	293rpm	285rpm	272rpm	
	60 [15.85]	65 [575]	143 [1266]	218 [1930]	296 [2621]	370 [3277]	442 [3914]	480 [4251]	
378rpm		376rpm	370rpm	362rpm	353rpm	346rpm	332rpm		
75 [19.81]	62 [549]	140 [1239]	211 [1868]	291 [2577]	365 [3232]	439 [3888]	475 [4207]		
Max Cont.	475rpm	469rpm	461rpm	450rpm	441rpm	432rpm	414rpm		
90 [23.77]	59 [522]	131 [1160]	202 [1789]	286 [2533]	357 [3159]	425 [3764]	460 [4074]		
Max Int.	567rpm	561rpm	554rpm	543rpm	532rpm	520rpm	509rpm		
GS200		194cm ³ /rev(11.8in ³ /rev)					Max Cont.	Max Int.	
Pressure bar [psi→]		36.1 [515]	72.1 [1030]	108.2 [1546]	144.2 [2060]	180.3 [2576]	213.2 [3045]	231.6 [3308]	
Flow	l/min [gpm↓]	Torque N m [lb-in] Speed Specification							
	15 [3.96]	87 [771]	179 [1585]	309 [2737]	371 [3286]	471 [4171]	562 [4977]	611 [5403]	
		74rpm	73rpm	71rpm	68rpm	64rpm	60rpm	48rpm	
	30 [7.93]	91 [806]	190 [1682]	288 [2550]	386 [3418]	489 [4331]	572 [5066]	618 [5473]	
		150rpm	148rpm	143rpm	140rpm	134rpm	128rpm	119rpm	
	40 [10.57]	94 [832]	193 [1709]	296 [2621]	394 [3489]	498 [4410]	584 [5172]	645 [5712]	
		198rpm	195rpm	192rpm	188rpm	183rpm	178rpm	167rpm	
	50 [13.21]	90 [797]	191 [1691]	292 [2586]	389 [3445]	493 [4366]	580 [5137]	634 [5615]	
		248rpm	246rpm	241rpm	236rpm	230rpm	223rpm	212rpm	
	60 [15.85]	85 [752]	185 [1638]	279 [2471]	382 [3383]	483 [4277]	575 [5092]	623 [5509]	
300rpm		295rpm	288rpm	281rpm	273rpm	263rpm	251rpm		
75 [19.81]	78 [690]	176 [1558]	271 [2400]	370 [3277]	472 [4180]	561 [4968]	610 [5402]		
Max Cont.	374rpm	370rpm	364rpm	360rpm	352rpm	340rpm	331rpm		
90 [23.77]	68 [602]	163 [1443]	265 [2347]	361 [3197]	456 [4038]	545 [4827]	599 [5305]		
Max Int.	443rpm	440rpm	435rpm	428rpm	424rpm	413rpm	400rpm		
GS250		243cm ³ /rev(14.8in ³ /rev)					Max Cont.	Max Int.	
Pressure bar [psi→]		36.1 [515]	72.1 [1030]	108.2 [1546]	144.2 [2060]	180.3 [2576]	203.0 [2900]	231.6 [3308]	
Flow	l/min [gpm↓]	Torque N m [lb-in] Speed Specification							
	15 [3.96]	110 [974]	231 [2045]	351 [3108]	462 [4091]	585 [5181]	682 [6031]	779 [6890]	
		59rpm	58rpm	56rpm	53rpm	50rpm	46rpm	35rpm	
	30 [7.93]	116 [1027]	236 [2090]	359 [3179]	475 [4207]	597 [5287]	700 [6199]	791 [6997]	
		119rpm	117rpm	114rpm	108rpm	102rpm	92rpm	80rpm	
	40 [10.57]	118 [1045]	241 [2134]	363 [3215]	480 [4251]	599 [5305]	707 [6253]	797 [7050]	
		162rpm	159rpm	156rpm	150rpm	143rpm	134rpm	121rpm	
	50 [13.21]	111 [983]	234 [2072]	352 [3117]	472 [4180]	591 [5234]	693 [6137]	789 [6979]	
		203rpm	201rpm	197rpm	191rpm	182rpm	173rpm	158rpm	
	60 [15.85]	105 [929]	220 [1947]	345 [3055]	462 [4091]	582 [5154]	686 [6067]	773 [6837]	
244rpm		242rpm	237rpm	230rpm	220rpm	208rpm	194rpm		
75 [19.81]	95 [841]	214 [1895]	340 [3011]	454 [4021]	570 [5048]	671 [5934]	761 [6731]		
Max Cont.	303rpm	299rpm	294rpm	285rpm	272rpm	260rpm	244rpm		
90 [23.77]	90 [797]	209 [1851]	335 [2967]	447 [3959]	559 [4951]	658 [5819]	750 [6633]		
Max Int.	363rpm	359rpm	354rpm	348rpm	340rpm	328rpm	303rpm		

Hydraulic Orbit Motors GS



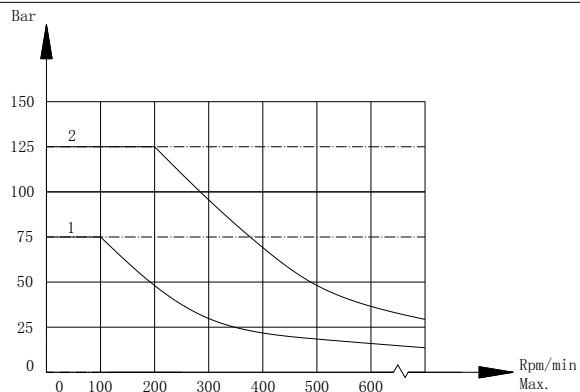
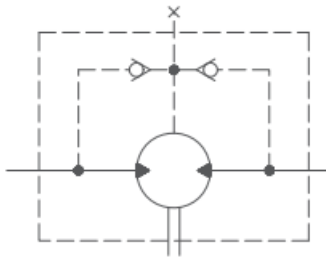
Flow Data

GS315		311cm ³ /rev(18.9in ³ /rev)					Max Cont.	Max Int.
Pressure bar [psi→]		36.1 [515]	72.1 [1030]	108.2 [1546]	144.2 [2060]	177.7 [2538]	203 [2900]	231.6 [3308]
Flow	l/min [gpm↓]	Torque N m [lb-in] Speed Specification						
	15 [3.96]	150 [1310]	304 [2692]	456 [4038]	613 [5429]	763 [6749]	880 [7785]	979 [8662]
		48rpm	47rpm	45rpm	43rpm	41rpm	39rpm	27rpm
	30 [7.93]	155 [1372]	314 [2781]	465 [4118]	636 [5624]	779 [6890]	885 [7829]	989 [8750]
		95rpm	93rpm	91rpm	89rpm	86rpm	82rpm	67rpm
	40 [10.57]	160 [1417]	310 [2843]	479 [4242]	651 [5757]	797 [7050]	907 [8024]	998 [8830]
		127rpm	125rpm	121rpm	117rpm	115rpm	109rpm	91rpm
	50 [13.21]	155 [1372]	314 [2781]	465 [4118]	638 [5650]	781 [6908]	887 [7847]	989 [8750]
		159rpm	157rpm	153rpm	149rpm	145rpm	142rpm	128rpm
	60 [15.85]	151 [1337]	306 [2710]	453 [4012]	620 [5491]	757 [6695]	887 [7847]	977 [8644]
187rpm		185rpm	181rpm	176rpm	169rpm	157rpm	143rpm	
75 [19.81]	146 [1293]	300 [2657]	445 [3941]	613 [5429]	755 [6681]	875 [7743]	966 [8549]	
Max Cont.	238rpm	236rpm	232rpm	227rpm	224rpm	220rpm	196rpm	
90 [23.77]	135 [1194]	284 [2513]	436 [3858]	601 [5318]	740 [6549]	863 [7637]	952 [8425]	
Max Int.	286rpm	283rpm	278rpm	272rpm	265rpm	257rpm	232rpm	
GS400		394cm ³ /rev(24.04in ³ /rev)					Max Cont.	Max Int.
Pressure bar [psi→]		36.1 [515]	72.1 [1030]	108.2 [1546]	144.2 [2060]	164.8 [2354]	180.3 [2576]	
Flow	l/min [gpm↓]	Torque N m [lb-in] Speed Specification						
	15 [3.96]	186 [1646]	379 [3354]	578 [5115]	779 [6894]	896 [7930]	986 [8726]	
		37rpm	36rpm	35rpm	33rpm	31rpm	29rpm	
	30 [7.93]	190 [1681]	388 [3433]	590 [5221]	791 [7000]	905 [8009]	991 [8770]	
		75rpm	73rpm	71rpm	68rpm	65rpm	61rpm	
	40 [10.57]	195 [1725]	394 [3486]	569 [5035]	797 [7053]	912 [8071]	998 [8832]	
		99rpm	97rpm	95rpm	93rpm	90rpm	85rpm	
	50 [13.21]	191 [1690]	388 [3433]	587 [5194]	785 [6947]	904 [8000]	983 [8699]	
		125rpm	123rpm	118rpm	114rpm	109rpm	102rpm	
	60 [15.85]	186 [1646]	388 [3433]	587 [5194]	785 [6947]	904 [8000]	983 [8699]	
149rpm		146rpm	142rpm	137rpm	131rpm	122rpm		
75 [19.81]	181 [1601]	372 [3292]	576 [5097]	770 [6814]	891 [7885]	973 [8611]		
Max Cont.	187rpm	183rpm	177rpm	171rpm	164rpm	153rpm		
90 [23.77]	176 [1557]	367 [3247]	571 [5053]	766 [6779]	883 [7814]	965 [8540]		
Max Int.	226rpm	221rpm	214rpm	208rpm	199rpm	183rpm		
GS475		475cm ³ /rev(28.9in ³ /rev)					Max Cont.	Max Int.
Pressure bar [psi→]		36.1 [515]	72.1 [1030]	108.2 [1546]	144.2 [2060]	154.5 [2207]		
Flow	(gpm↓)	Torque N m [lb-in] Speed Specification						
	15 [3.96]	218 [1929]	439 [3885]	661 [5849]	892 [7894]	995 [8805]		
		30rpm	29rpm	28rpm	27rpm	25rpm		
	30 [7.93]	223 [1973]	450 [3982]	676 [5982]	910 [8053]	1002 [8867]		
		61rpm	60rpm	58rpm	56rpm	53rpm		
	40 [10.57]	228 [2017]	461 [4079]	689 [6097]	927 [8203]	1017 [9000]		
		82rpm	80rpm	77rpm	74rpm	68rpm		
	50 [13.21]	224 [1982]	456 [4035]	682 [6035]	920 [8142]	1008 [8920]		
		103rpm	101rpm	97rpm	92rpm	86rpm		
	60 [15.85]	220 [1947]	451 [3991]	677 [5991]	913 [8080]	998 [8832]		
123rpm		121rpm	118rpm	112rpm	105rpm			
75 [19.81]	212 [1876]	443 [3920]	664 [5876]	901 [7973]	980 [8673]			
Max Cont.	155rpm	153rpm	147rpm	140rpm	132rpm			
90 [23.77]	196 [1734]	421 [3725]	609 [5690]	877 [7761]	959 [8487]			
Max Int.	186rpm	184rpm	178rpm	170rpm	157rpm			

Technical Data

Hydraulic orbit Motors GS

Permissible shaft seal pressure



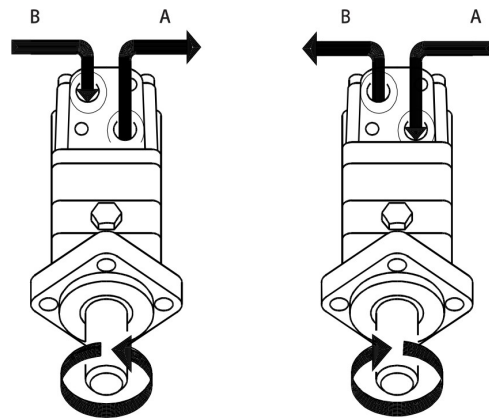
In applications without drain line, output shaft seal exceeds a bit of the pressure in the return line. When applications use the drain line, the pressure of output shaft seal equals the pressure in drain line.

Case Drain :

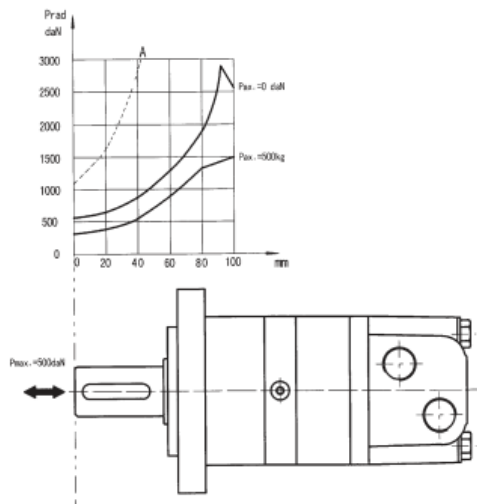
In applications without a motor drain line, the pressure exerted on the shaft seal is marginally in excess of the return line pressure. When the Drain line is used, the pressure exerted on the shaft seal is equal to the return line pressure.

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.

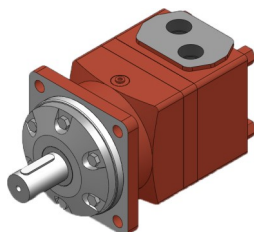


Axial and Radial forces



The output shaft runs in tapered bearings that permit high axial and radial forces, Curve "A" shows max radial shaft load, Any shaft loads exceeding the values quoted in the curve will involve a risk of breakage, The two other curves apply to a B10 bearing life of 3000 hours at 200 RPM.

General

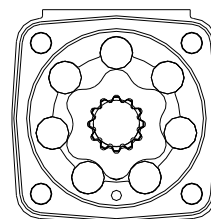


APPLICATION

- ◇ Metal working machines
- ◇ Agricultural machines
- ◇ Road building machines
- ◇ Mining machinery
- ◇ Food industries
- ◇ Special vehicles etc.
- ◇ Injection molding machines
- ◇ Conveyors

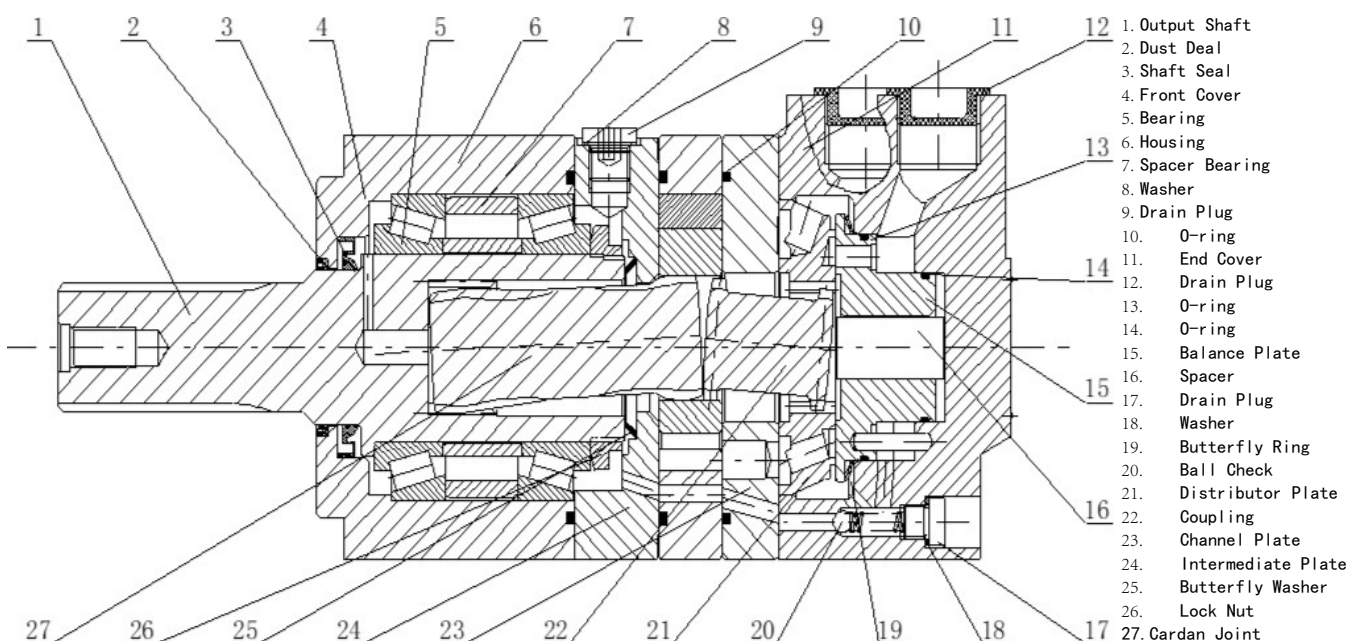
OPTIONS

- ◇ Flange and wheel mount
- ◇ Short motor
- ◇ Motor with drum brake
- ◇ Tachometer connection
- ◇ Speed sensing
- ◇ Side and rear ports
- ◇ Shafts—straight, splined and tapered
- ◇ Metric and BSPP ports
- ◇ Other special features

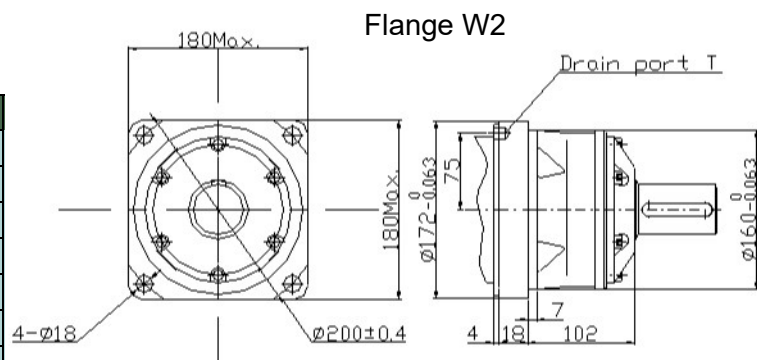
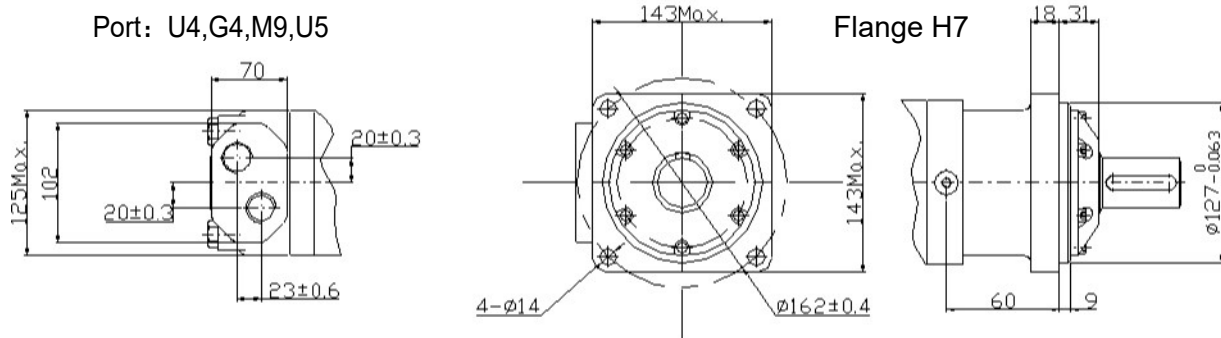
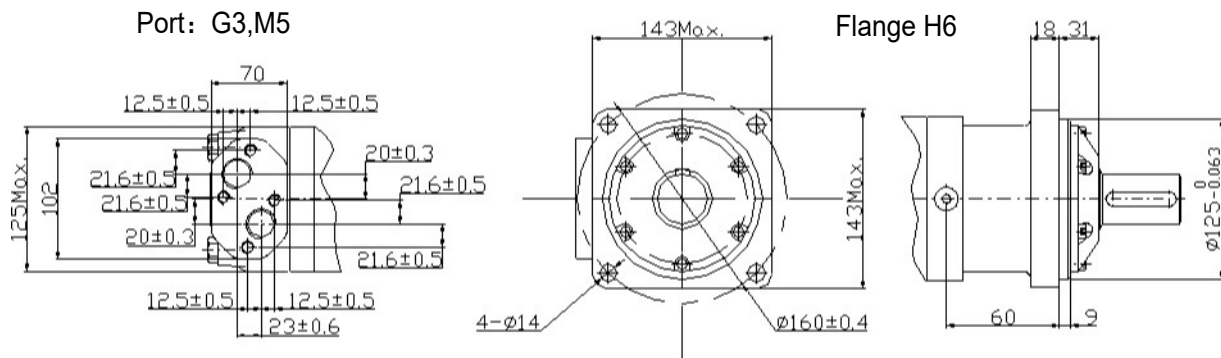
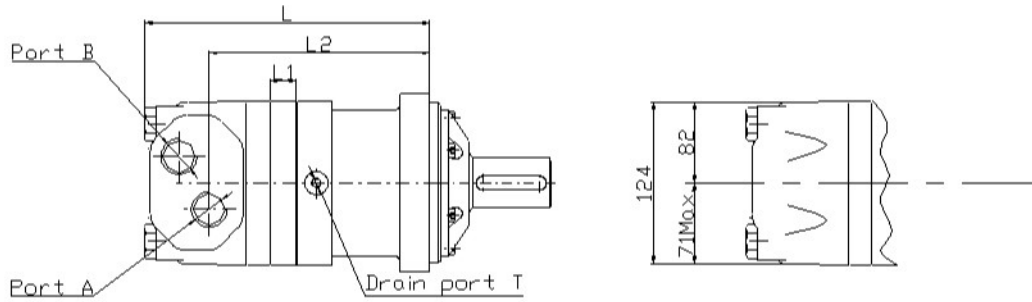


- ◇ Disc distribution flow

Model		GT160	GT200	GT250	GT315	GT400	GT500	GT630	GT725
Disp.	in ³ /rev	9.83	12.29	15.36	19.9	25.06	31.95	38.52	44.2
	cm ³ /rev	161.1	201.4	251.8	326.3	410.9	523.6	631.2	724.3
Max Speed rpm	cont.	622	620	496	382	304	238	197	172
	int.	775	752	601	461	368	289	234	209
Max Torque N m [lb-in]	cont.	470 [4160]	590 [5220]	730 [6460]	950 [8410]	1080 [9560]	1220 [10800]	1300 [11500]	1270 [11240]
	int.	560 [4960]	710 [6285]	880 [7790]	1140 [10090]	1260 [11150]	1370 [12125]	1480 [13100]	1470 [13010]
Max Dif. bar [psi]	cont.	200 [2900]	200 [2900]	200 [2900]	200 [2900]	180 [2610]	160 [2320]	140 [2010]	120 [1740]
	int.	240 [3480]	240 [3480]	240 [3480]	240 [3480]	210 [3050]	180 [2610]	160 [2320]	140 [2010]
Max Flow l/min [gpm]	cont.	100 [26]	125 [33]	125 [33]	125 [33]	125 [33]	125 [33]	125 [33]	125 [33]
	int.	125 [33]	150 [39.6]	150 [39.6]	150 [39.6]	150 [39.6]	150 [39.6]	150 [39.6]	150 [39.6]
Weight kg [lbs]		20 [44.1]	21.5 [47.4]	21 [46.3]	22 [48.5]	23 [50.7]	24 [52.9]	23.5 [51.8]	24.5 [54.0]



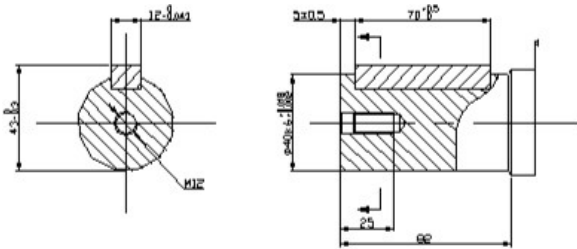
Dimensions and Mounting Data



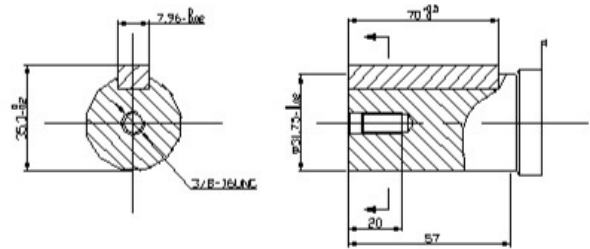
Model	L	L1	L2
GT160	193 [7.60"]	17 [0.67"]	142.5 [5.61"]
GT200	197 [7.76"]	21 [0.83"]	146.5 [5.77"]
GT250	204 [8.03"]	14 [0.55"]	152.5 [6.00"]
GT315	210 [8.27"]	20 [0.89"]	158.5 [6.24"]
GT400	217 [8.54"]	27 [1.06"]	165.5 [6.52"]
GT500	225 [8.86"]	35 [1.38"]	173.5 [6.83"]
GT630	237 [9.33"]	47 [1.85"]	185.5 [7.30"]
GT725	248 [9.76"]	58 [2.28"]	196.5 [7.74"]

Port	G3 (Depth)	M5 (Depth)	U4 (Depth)	G4 (Depth)	M9 (Depth)	U5 (Depth)
	P(A,B)	G3/4(18)	M27x2(18)	SAE-12 O'ring 1-1/16-12UN	G3/4(18)	M27x2(18)
T	G1/4(12)	M14x1.5(12)	SAE-6 O'ring 9/16-18UNF	G1/4(12)	M14x1.5(12)	SAE-4 O'ring 7/16-20UNF
C	4-M10(10)	4-M10(10)	-	-	-	-

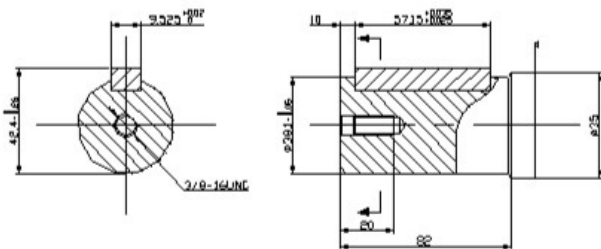
GT Shaft Extension Dimensions Data



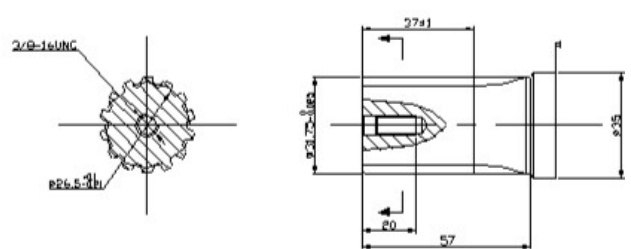
Shaft SK: Cylindrical shaft $\varnothing 40$,
Parallel key 12x8x70



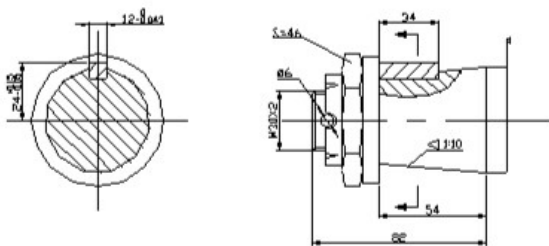
Shaft SM: Cylindrical shaft $\varnothing 1.25$ ",
Parallel key 0.31"x 0.31"x 1.58"



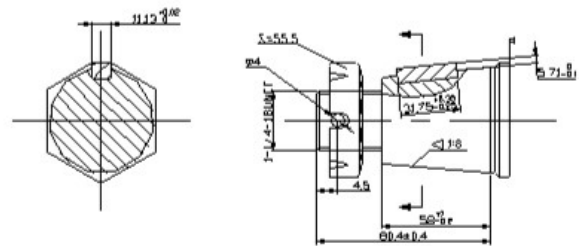
Shaft SL: Cylindrical shaft $\varnothing 1.50$ ",
Parallel key 0.38"x 0.38"x 2.25"



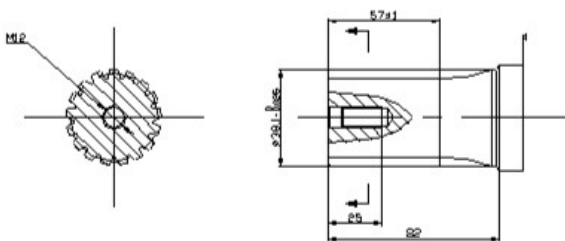
Shaft R3: Splined 14-DP12/24



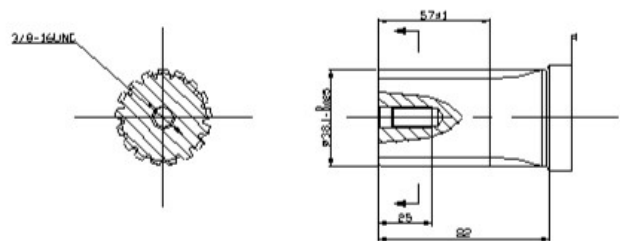
Shaft T6: Tapered shaft $\varnothing 45$ Parallel
key B12x8x28 Tightening torque:500
 ± 10 Nm



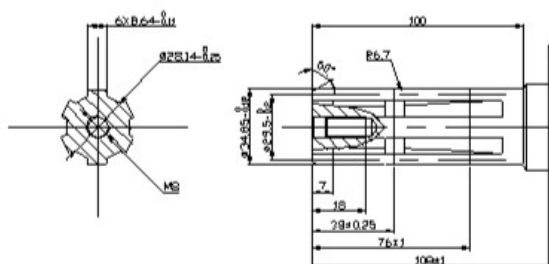
Shaft T7: Tapered shaft $\varnothing 45$ Parallel
key 0.44"x 0.44"x 1.25" Tightening
torque:500 ± 10 Nm



Shaft RA: Splined 17-DP12/24



Shaft R9: Splined 17-DP12/24



Shaft R7: Splined 6-34.85x28.14x8.64



GT - How To Order

Ordering Example:		Model	Displacement	Flange	Drive shaft	Ports	Other functions
		GT	160	H7	SL	U4	ACA
Model	Disp.	Flange		Drive shaft		Ports	
GT GTS	160	GT		GT			
	200	H6=4-Hole square flange ø 160, pilot ø 125x9		SK=Shaft Ø4 0, parallel key 12x8x70		G3=G3/4 manifold mount 4x M10, G1/4	
	250	H7=4-Hole square flange ø 6.38", pilot ø 5.00"x 0.35"		SL=Shaft Ø1 .50", parallel key 0.38"x 0.38"x 2.25"		M5=M27x 2 manifold mount 4x M10, M14x 1.5	
	315			SM=Shaft Ø1 .25", parallel key 0.31"x 0.31"x 1.58"		U4=SAE-12 O'ring 1-1/16-12 UN, SAE-6 O'ring 9/16-18 UNF	
	400	W2=4-Hole wheel flange ø 200, pilot ø 160x7		R3 = 1-1/4" 14 tooth spline		U5=SAE-12 O'ring 1-1/16-12 UN, SAE-4 O'ring 7/16-20 UNF	
	500	GTS		R7 = 34.85 mm 6 tooth PTO spline 34.85 x 28.14 x 8.64		G4=G3/4, G1/4	
	630	B2=4-Hole round flange ø 160, pilot ø 125x8		R9=Shaft Ø1.50", splined tooth 17-DP12/24x 3/8-16		M9=M27x2, M14x1.5	
725	H8=4-Hole square flange ø 6.38", pilot ø 5.00"x 0.39"		RA=Shaft Ø1 .50", splined tooth 17-DP12/24x M12				
				T6=Tapered shaft 1:10 Ø4 5, parallel key B12x8x28			
				T7=Tapered shaft 1:8 Ø4 5, parallel key 0.44"x 0.44"x 1.25"			
				GTS			
				C2 = Cardan shaft 16-DP12/24			

Shaft Rotation	Paint	Standard Options	Seal Options	Relief Options	Speed Sensor Option
A=Standard / CW 'A' port pressurized R=Reverse / CCW 'A' port pressurized	A=No paint B=Blue C=Black S=Silver gray G=Corrosion resistant coating	A=Standard N=Large radial force D=No case drain F=Free running L=Low speed V=High temperature S=Low temperature	Blank= None HPS=High Pressure Seal SG=Seal Guard HPS-SG= High Pressure Seal & Seal Guard	Blank=None R=Valve Cavity Only R12=Bi-directional relief max 125 bar R20= Bi-directional relief max 207 bar	Blank= None SS= Speed Sensor, 4-pin, M12 male connector

Hydraulic Orbit Motors GT



Flow Data

GT160		161.1cm ³ /rev(9.83in ³ /rev)					Max Cont.	Max Int.
Pressure bar [psi→]		41.2 [588]	82.3 [1175]	102.9 [1470]	123.6 [1766]	164.9 [2355]	206.5 [2950]	247.5 [3535]
Flow	l/min [gpm↓]	Torque N m [lb-in] Speed Specification						
	10 [2.64]	88 [780]	176 [1558]	235 [2081]	275 [2434]	361 [3195]	447 [3956]	535 [4735]
		60rpm	59rpm	58rpm	56rpm	54rpm	50rpm	44rpm
	20 [5.28]	89 [788]	181 [1602]	234 [2071]	277 [2451]	372 [3292]	459 [4062]	557 [4929]
		121rpm	120rpm	117rpm	114rpm	109rpm	103rpm	95rpm
	40 [10.57]	91 [805]	180 [1593]	235 [2080]	277 [2451]	381 [3372]	471 [4168]	573 [5071]
		249rpm	246rpm	243rpm	236rpm	230rpm	223rpm	212rpm
	60 [15.85]	82 [726]	178 [1575]	235 [2080]	277 [2451]	381 [3372]	470 [4160]	572 [5063]
		371rpm	367rpm	362rpm	356rpm	349rpm	340rpm	330rpm
	80 [21.13]	78 [690]	173 [1531]	229 [2027]	276 [2443]	379 [3356]	466 [4124]	567 [5018]
		492rpm	489rpm	485rpm	478rpm	470rpm	462rpm	447rpm
	100 [26.42]	70 [620]	160 [1416]	218 [1929]	269 [2380]	370 [3275]	455 [4026]	558 [4938]
	Max Cont.	614rpm	611rpm	606rpm	598rpm	590rpm	582rpm	570rpm
	125 [33.02]	58 [513]	148 [1309]	211 [1867]	261 [2310]	359 [3177]	448 [3965]	552 [4885]
Max Int.	770rpm	764rpm	758rpm	750rpm	741rpm	731rpm	715rpm	

GT200		201.4cm ³ /rev(12.29in ³ /rev)					Max Cont.	Max Int.
Pressure bar [psi→]		41.2 [588]	82.3 [1175]	102.9 [1470]	123.6 [1766]	164.9 [2355]	206.5 [2950]	247.5 [3535]
Flow	l/min [gpm↓]	Torque N m [lb-in] Speed Specification						
	10 [2.64]	124 [1097]	233 [2062]	289 [2558]	340 [3007]	454 [4015]	560 [4953]	669 [5917]
		47rpm	46rpm	45rpm	42rpm	39rpm	37rpm	33rpm
	20 [5.28]	125 [1106]	307 [2715]	298 [2637]	347 [3069]	468 [4139]	576 [5094]	696 [6155]
		95rpm	94rpm	92rpm	90rpm	87rpm	84rpm	75rpm
	40 [10.57]	120 [1062]	241 [2133]	296 [2620]	352 [3113]	475 [4201]	589 [5210]	716 [6332]
		195rpm	193rpm	191rpm	187rpm	183rpm	178rpm	167rpm
	60 [15.85]	116 [1027]	237 [2097]	295 [2611]	352 [3113]	478 [4227]	589 [5209]	718 [6350]
		297rpm	295rpm	292rpm	287rpm	282rpm	276rpm	263rpm
	80 [21.13]	108 [956]	231 [2044]	289 [2558]	350 [3095]	474 [4192]	586 [5183]	716 [6332]
		395rpm	393rpm	389rpm	384rpm	377rpm	370rpm	259rpm
	100 [26.42]	98 [871]	227 [2009]	286 [2531]	344 [3042]	471 [4166]	580 [5130]	712 [6297]
		493rpm	490rpm	486rpm	482rpm	475rpm	467rpm	460rpm
	125 [33.02]	84 [743]	208 [1841]	276 [2443]	333 [2945]	459 [4059]	566 [5006]	697 [6164]
Max Cont.	615rpm	611rpm	607rpm	602rpm	595rpm	588rpm	572rpm	
150 [39.63]	70 [620]	194 [1717]	260 [2301]	324 [2865]	447 [3953]	554 [4900]	682 [6032]	
Max Int.	743rpm	740rpm	735rpm	727rpm	717rpm	706rpm	682rpm	

Hydraulic Orbit Motors GT



Flow Data

GT250		251.8cm ³ /rev (15.36in ³ /rev)					Max Cont.	Max Int.
Pressure bar [psi→]		41.2 [588]	82.3 [1175]	102.9 [1470]	123.6 [1766]	164.9 [2355]	206.5 [2950]	247.5 [3535]
Flow	l/min [gpm↓]	Torque N m [lb-in] Speed Specification						
	10 [2.64]	138 [1221]	286 [2531]	355 [3142]	419 [3708]	559 [4947]	689 [6098]	824 [7292]
		38rpm	38rpm	37rpm	36rpm	34rpm	32rpm	31rpm
	20 [5.28]	143 [1266]	296 [2620]	364 [3221]	432 [3823]	580 [5133]	708 [6266]	853 [7550]
		76rpm	75rpm	74rpm	72rpm	70rpm	67rpm	62rpm
	40 [10.57]	139 [1230]	301 [2664]	373 [3297]	440 [3894]	593 [5248]	723 [6400]	884 [7823]
		156rpm	154rpm	152rpm	149rpm	146rpm	142rpm	134rpm
	60 [15.85]	132 [1168]	294 [2602]	372 [3292]	441 [3903]	592 [5239]	727 [6434]	888 [7860]
		237rpm	236rpm	233rpm	229rpm	224rpm	219rpm	207rpm
	80 [21.13]	128 [1133]	283 [2505]	364 [3221]	433 [3832]	587 [5195]	721 [6381]	887 [7850]
317rpm		316rpm	314rpm	308rpm	303rpm	299rpm	284rpm	
100 [26.42]	126 [1115]	282 [2496]	355 [3142]	427 [3779]	582 [5151]	716 [6337]	879 [7779]	
	396rpm	394rpm	391rpm	387rpm	381rpm	373rpm	359rpm	
125 [33.02]	116 [1027]	260 [2301]	340 [3010]	414 [3665]	568 [5027]	703 [6222]	864 [7646]	
Max Cont.	485rpm	492rpm	488rpm	483rpm	476rpm	469rpm	454rpm	
150 [39.63]	88 [779]	242 [2142]	320 [2832]	397 [3513]	552 [4885]	686 [6071]	847 [7496]	
Max Int.	592rpm	589rpm	585rpm	580rpm	572rpm	565rpm	545rpm	

GT315		326.3cm ³ /rev (19.91in ³ /rev)					Max Cont.	Max Int.
Pressure bar [psi→]		41.2 [588]	82.3 [1175]	102.9 [1470]	123.6 [1766]	164.9 [2355]	206.5 [2950]	247.5 [3535]
Flow	l/min [gpm↓]	Torque N m [lb-in] Speed Specification						
	10 [2.64]	184 [1628]	363 [3213]	453 [4009]	545 [4823]	734 [6496]	891 [7885]	1051 [9399]
		30rpm	29rpm	28rpm	27rpm	26rpm	25rpm	23rpm
	20 [5.28]	189 [1673]	380 [3363]	472 [4177]	562 [4975]	757 [6700]	917 [8115]	1109 [9815]
		60rpm	59rpm	58rpm	56rpm	54rpm	52rpm	50rpm
	40 [10.57]	191 [1690]	381 [3372]	484 [4283]	570 [5045]	774 [6850]	954 [8445]	1149 [10170]
		121rpm	120rpm	118rpm	115rpm	112rpm	109rpm	104rpm
	60 [15.85]	189 [1673]	376 [3328]	493 [4363]	573 [5070]	772 [6832]	962 [8514]	1154 [10213]
		183rpm	181rpm	179rpm	175rpm	172rpm	168rpm	158rpm
	80 [21.13]	179 [1584]	369 [3266]	479 [4240]	565 [5000]	768 [6797]	954 [8443]	1153 [10204]
244rpm		242rpm	239rpm	236rpm	231rpm	227rpm	217rpm	
100 [26.42]	169 [1496]	357 [3160]	467 [4133]	562 [4975]	758 [6708]	944 [8357]	1143 [10116]	
	305rpm	304rpm	301rpm	298rpm	294rpm	289rpm	276rpm	
125 [33.02]	147 [1301]	336 [2975]	447 [3955]	544 [4815]	745 [6595]	920 [8145]	1127 [9975]	
Max Cont.	380rpm	378rpm	375rpm	371rpm	367rpm	362rpm	349rpm	
150 [39.63]	119 [1053]	318 [2812]	432 [3825]	526 [4655]	713 [6310]	894 [7912]	1097 [9710]	
Max Int.	458rpm	456rpm	453rpm	449rpm	444rpm	431rpm	425rpm	

Hydraulic Orbit Motors GT



Flow Data

GT400		410.9cm ³ /rev (25.06in ³ /rev)					Max Cont.	Max Int.
Pressure bar [psi→]		30.8 [440]	61.6 [880]	92.8 [1325]	123.6 [1766]	154.6 [2208]	185.6 [2652]	216.3 [3090]
Flow	l/min [gpm↓]	Torque N m [lb-in] Speed Specification						
	10 [2.64]	176 [1558]	367 [3248]	560 [4956]	715 [6328]	885 [7833]	1050 [9293]	1209 [10701]
		24rpm	23rpm	22rpm	21rpm	20rpm	19rpm	18rpm
	20 [5.28]	179 [1584]	370 [3275]	565 [5001]	726 [6426]	899 [7957]	1071 [9479]	1236 [10940]
		49rpm	48rpm	47rpm	44rpm	42rpm	40rpm	38rpm
	40 [10.57]	176 [1558]	370 [3275]	567 [5018]	733 [6488]	919 [8134]	1091 [9656]	1263 [11178]
		96rpm	95rpm	93rpm	90rpm	87rpm	83rpm	79rpm
	60 [15.85]	174 [1540]	361 [3195]	563 [4983]	729 [6452]	920 [8143]	1095 [9692]	1269 [11232]
		145rpm	143rpm	139rpm	135rpm	131rpm	127rpm	121rpm
	80 [21.13]	166 [1469]	353 [3124]	553 [4894]	719 [6364]	912 [8072]	1084 [9594]	1263 [11178]
193rpm		191rpm	188rpm	184rpm	180rpm	176rpm	170rpm	
100 [26.42]	150 [1328]	339 [3000]	538 [4762]	708 [6266]	896 [7930]	1067 [9444]	1252 [11081]	
	242rpm	240rpm	238rpm	234rpm	228rpm	224rpm	218rpm	
125 [33.02]	135 [1195]	309 [2735]	524 [4638]	688 [6089]	873 [7727]	1045 [9249]	1221 [10807]	
Max Cont.	302rpm	300rpm	298rpm	294rpm	289rpm	285rpm	178rpm	
150 [39.63]	126 [1115]	292 [2584]	508 [4496]	666 [5895]	852 [7541]	1020 [9028]	1197 [10594]	
Max Int.	364rpm	362rpm	358rpm	354rpm	350rpm	346rpm	339rpm	

GT500		523.6cm ³ /rev (31.95in ³ /rev)					Max Cont.	Max Int.
Pressure bar [psi→]		30.8 [440]	61.6 [880]	92.8 [1325]	123.6 [1766]	144.2 [2060]	164.9 [2355]	185.6 [2652]
Flow	l/min [gpm↓]	Torque (lb-in) Speed Specification						
	10 [2.64]	222 [1965]	451 [3992]	692 [6125]	892 [7895]	1050 [9293]	1193 [10559]	1340 [11860]
		18rpm	18rpm	18rpm	17rpm	16rpm	15rpm	13rpm
	20 [5.28]	231 [2045]	464 [4107]	714 [6319]	918 [8125]	1070 [9470]	1220 [10798]	1377 [12187]
		37rpm	36rpm	35rpm	34rpm	33rpm	32rpm	30rpm
	40 [10.57]	230 [2036]	466 [4124]	727 [6434]	941 [8329]	1094 [9683]	1244 [11010]	1422 [12586]
		75rpm	74rpm	73rpm	72rpm	70rpm	68rpm	64rpm
	60 [15.85]	225 [1991]	457 [4045]	714 [6319]	941 [8329]	1088 [9630]	1245 [11019]	1409 [12471]
		113rpm	112rpm	111rpm	109rpm	107rpm	105rpm	101rpm
	80 [21.13]	213 [1885]	431 [3815]	696 [6160]	927 [8205]	1076 [9523]	1244 [11010]	1401 [12400]
151rpm		150rpm	149rpm	147rpm	145rpm	143rpm	138rpm	
100 [26.42]	194 [1717]	420 [3717]	680 [6019]	902 [7978]	1063 [9408]	1224 [10833]	1383 [12241]	
	189rpm	188rpm	187rpm	185rpm	183rpm	181rpm	177rpm	
125 [33.02]	182 [1611]	398 [3523]	641 [5673]	877 [7762]	1024 [9063]	1199 [10612]	1352 [11966]	
Max Cont.	237rpm	236rpm	235rpm	233rpm	231rpm	229rpm	225rpm	
150 [39.63]	147 [1301]	369 [3266]	618 [5470]	853 [7550]	1004 [8886]	1157 [10239]	1325 [11727]	
Max Int.	284rpm	283rpm	282rpm	280rpm	278rpm	276rpm	272rpm	



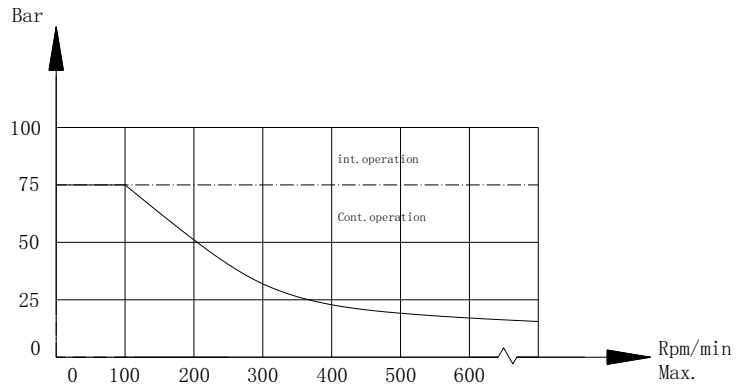
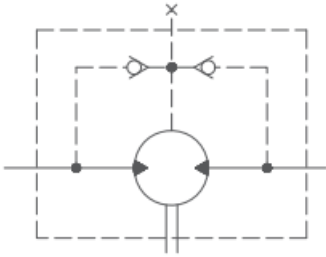
Flow Data

GT630		631.2cm ³ /rev (38.52in ³ /rev)					Max Cont.	Max Int.
Pressure bar [psi→]		30.8 [440]	61.6 [880]	92.8 [1325]	108.2 [1546]	123.6 [1766]	144.2 [2060]	164.9 [2355]
Flow	(gpm↓)	Torque N m [lb-in] Speed Specification						
	10 [2.64]	233 [2062]	520 [4602]	795 [7036]	902 [7983]	1074 [9505]	1194 [10567]	1363 [12063]
		14rpm	14rpm	13rpm	13rpm	13rpm	11rpm	11rpm
	20 [5.28]	237 [2097]	554 [4903]	837 [7407]	953 [8434]	1117 [9885]	1239 [10965]	1407 [12452]
		28rpm	27rpm	27rpm	26rpm	26rpm	24rpm	22rpm
	40 [10.57]	239 [2115]	553 [4894]	860 [7611]	987 [8735]	1171 [10364]	1308 [11576]	1483 [13125]
		62rpm	62rpm	61rpm	60rpm	59rpm	56rpm	54rpm
	60 [15.85]	223 [1974]	544 [4814]	863 [7638]	978 [8655]	1172 [10372]	1318 [11664]	1498 [13257]
		94rpm	94rpm	92rpm	91rpm	90rpm	86rpm	82rpm
	80 [21.13]	220 [1947]	573 [5071]	854 [7558]	965 [8540]	1172 [10372]	1314 [11629]	1497 [13248]
123rpm		123rpm	121rpm	119rpm	118rpm	114rpm	110rpm	
100 [26.42]	208 [1841]	522 [4620]	832 [7363]	945 [8363]	1156 [10231]	1156 [10231]	1488 [13169]	
	156rpm	155rpm	153rpm	152rpm	150rpm	147rpm	142rpm	
125 [33.02]	201 [1779]	499 [4416]	810 [7169]	931 [8239]	1137 [10062]	1292 [11435]	1472 [13028]	
Max Cont.	196rpm	196rpm	194rpm	192rpm	191rpm	187rpm	183rpm	
150 [39.63]	174 [1540]	492 [4354]	785 [6947]	921 [8151]	1120 [9912]	1277 [11301]	1454 [12868]	
Max Int.	233rpm	232rpm	231rpm	230rpm	227rpm	223rpm	217rpm	

Technical Data

Hydraulic orbit Motors GT

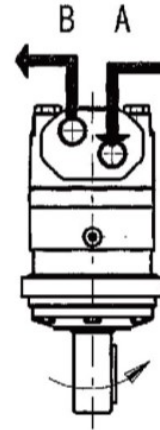
Permissible shaft seal pressure



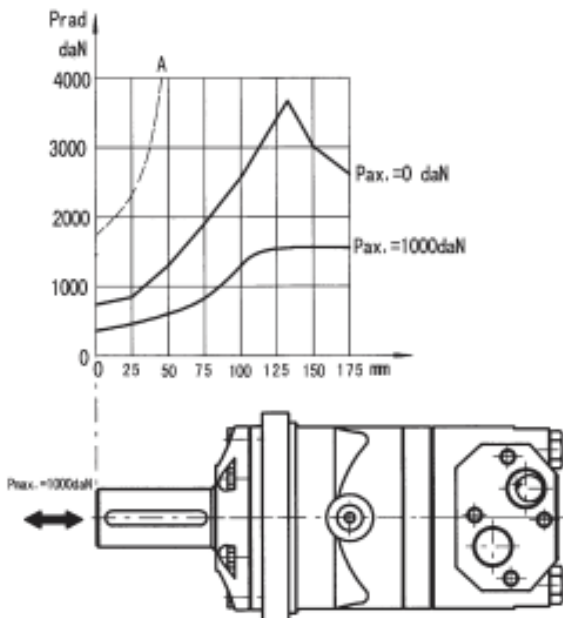
In applications without drain line, output shaft seal exceeds a bit of the pressure in the return line. When applications use the drain line, the pressure of output shaft seal equals the pressure in drain line.

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.

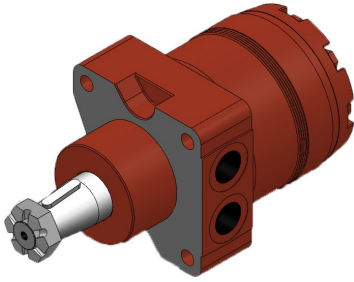


Axial and Radial forces



The output shaft runs in tapered bearings that permit high axial and radial forces, Curve "A" shows max radial shaft load, Any shaft loads exceeding the values quoted in the curve will involve a risk of breakage. The two other curves apply to a B10 bearing life of 3000 hours at 200 RPM.

General

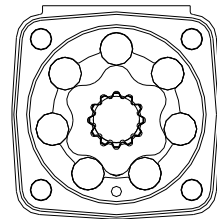


APPLICATION

- ◇ Aerial work platform
- ◇ Material handling and lifting machinery
- ◇ Agricultural machines
- ◇ Marine machinery
- ◇ Road machinery
- ◇ Garden machinery
- ◇ Lawn and turf machinery

OPTIONS

- ◇ Rotor flow distribution, pin-tooth stator pair
- ◇ Flange connection
- ◇ Motor with needle bearing
- ◇ Align the ports on the side
- ◇ Shafts—straight and tapered
- ◇ High pressure oil seal
- ◇ Metric, American and BSPP ports

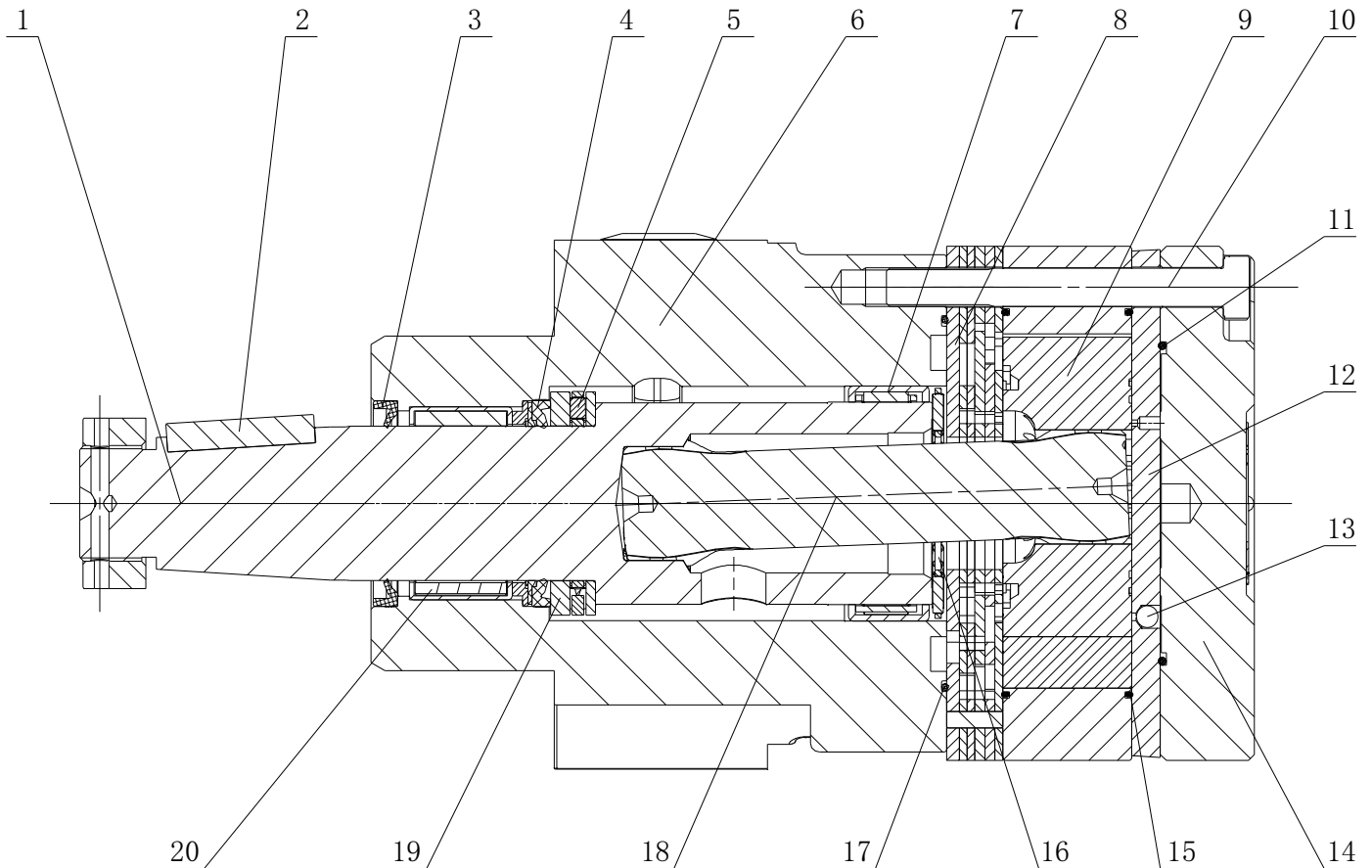


- ◇ Disc distribution flow

Model		GWD120	GWD160	GWD200	GWD230	GWD260	GWD300
Disp.	in ³ /rev	7.4	9.9	12.4	14.2	15.9	18.3
	cm ³ /rev	121	162	204	232	261	300
Max Speed rpm	cont.	360	370	300	260	260	250
	int.	490	470	370	320	350	320
Max Torque N m [lb-in]	cont.	327 [2900]	475 [4200]	542 [4800]	611 [5400]	712 [6300]	825 [7300]
	int.	383 [3400]	542 [4800]	633 [5600]	712 [6300]	791 [7000]	938 [8300]
Max Dif. bar [psi]	cont.	207 [3000]	207 [3000]	207 [3000]	207 [3000]	207 [3000]	207 [3000]
	int.	241 [3500]	241 [3500]	241 [3500]	241 [3500]	241 [3500]	241 [3500]
Max Flow l/min [gpm]	cont.	45 [12]	61 [16]	68 [18]	68 [18]	76 [19.8]	76 [19.8]
	int.	61 [16]	76 [20]	83 [22]	83 [22]	91 [23.8]	95 [25]
Weight kg [lbs]		13.3 [29.4]	13.3 [29.4]	13.7 [30.2]	13.8 [30.4]	14.1 [31.0]	14.4 [31.8]

Model		GWD350	GWD375	GWD470	GWD540	GWD620	GWD750
Disp.	in ³ /rev	21.2	22.8	28.3	32.7	38.5	45.6
	cm ³ /rev	348	363	465	536	631	748
Max Speed rpm	cont.	220	200	160	140	120	100
	int.	270	250	200	170	150	130
Max Torque N m [lb-in]	cont.	921 [8150]	1006 [8900]	1096 [9700]	983 [8700]	1014 [8976]	1062 [9400]
	int.	1045 [9250]	1158 [10250]	1184 [10475]	1243 [11000]	1291 [11421]	1237 [10950]
Max Dif. bar [psi]	cont.	207 [3000]	207 [3000]	172 [2500]	138 [2000]	121 [1750]	103 [1500]
	int.	241 [3500]	241 [3500]	189 [2750]	173 [2500]	155 [2250]	121 [1750]
Max Flow l/min [gpm]	cont.	76 [19.8]	76 [20]	76 [20]	76 [20]	76 [20]	76 [20]
	int.	95 [25]	91 [24]	91 [24]	91 [24]	91 [24]	91 [24]
Weight kg [lbs]		15.5 [34.2]	15.0 [33.0]	15.5 [34.2]	16.1 [35.4]	16.8 [36.9]	17.5 [38.5]

General



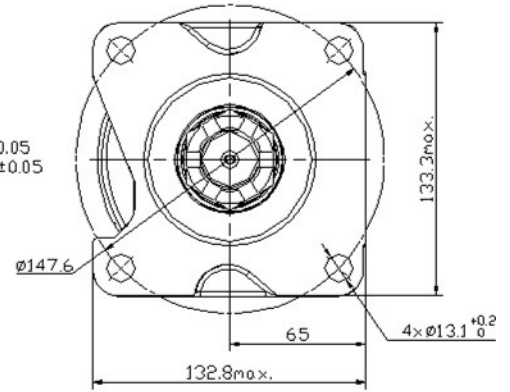
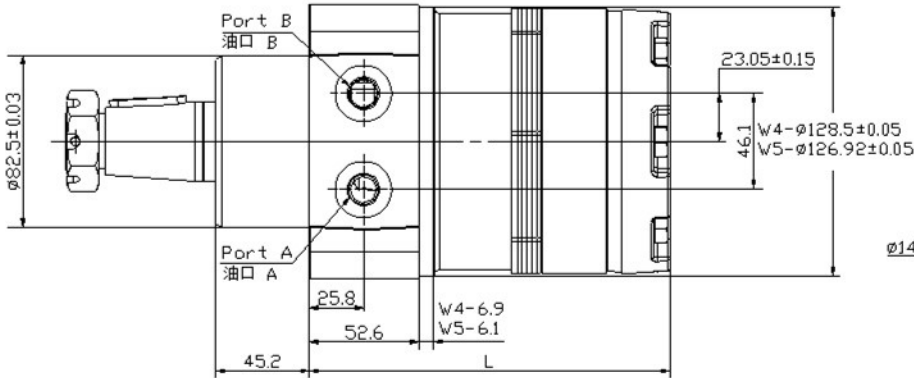
- | | |
|--------------------------|--------------------------|
| 1. Output Shaft | 11.O-Ring |
| 2. Key | 12.Balance Plate |
| 3. Dust Seal | 13.Ball |
| 4. Shaft Seal | 14.End Cover |
| 5. Axial Needle Bearing | 15.O-Ring |
| 6. Housing | 16.Axial Needle Bearing |
| 7. Radial Needle Bearing | 17.O-Ring |
| 8. Timing Plate | 18.Drive Shaft |
| 9. Gear Set | 19.Thrust Washer |
| 10. Bolt | 20.Radial Needle Bearing |

Dimensions and Mounting Data

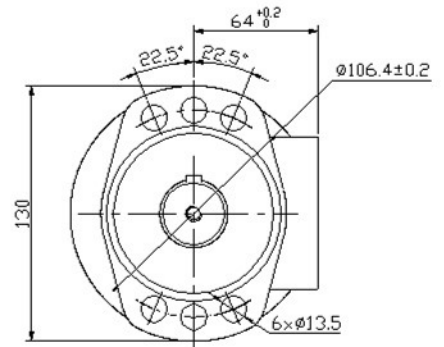
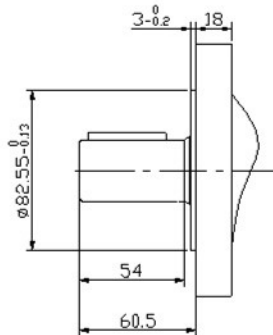
UD: 9/16-18UNF GC:G1/2

UF: 7/8-14UNF MC:M22X1.5

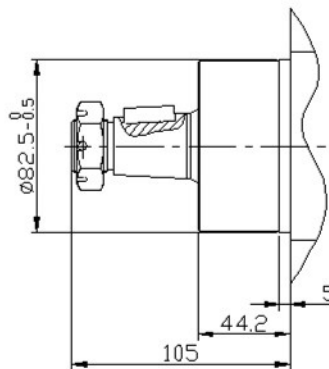
W4 & W5 Wheel Mount



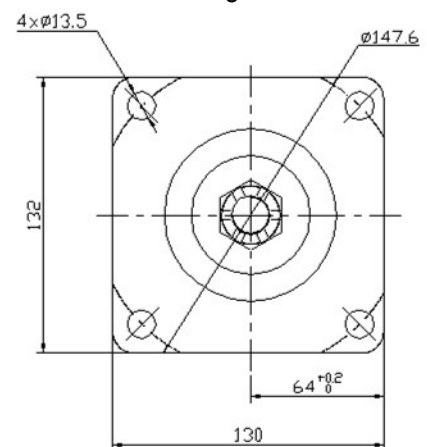
Flange: A9



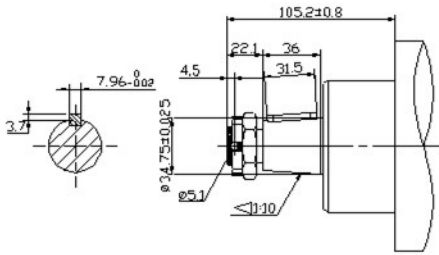
Model	L	Weight
	mm [In]	kg [lb]
GWD120	156 [6.14]	13.3 [29.4]
GWD160	156 [6.14]	13.3 [29.4]
GWD200	159 [6.26]	13.7 [30.2]
GWD230	162 [6.38]	13.8 [30.4]
GWD260	165 [6.50]	14.1 [31.0]
GWD300	168 [6.61]	14.4 [31.8]
GWD350	182 [7.17]	15.5 [34.2]
GWD375	174 [6.85]	15.0 [33.0]
GWD470	182 [7.17]	15.5 [34.2]
GWD540	188 [7.40]	16.1 [35.4]
GWD620	196 [7.72]	16.8 [36.9]
GWD750	206 [8.11]	17.5 [38.5]



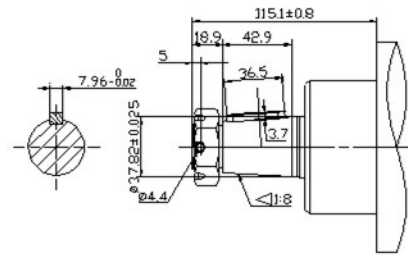
Flange: W6



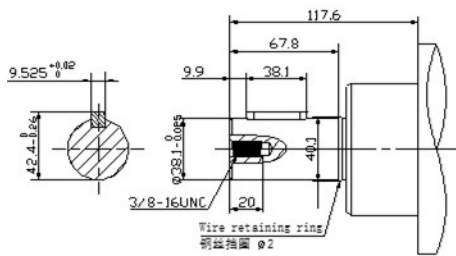
GWD Shaft Extension Dimensions Data



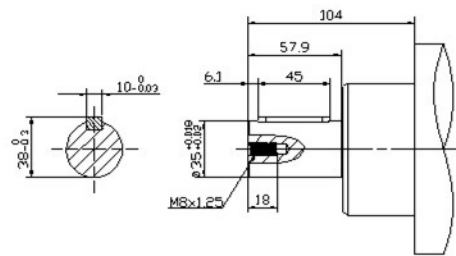
Shaft TB: Tapered shaft $\varnothing 35$,
Parallel key 7.96x7x31.5
Tightening torque: 325Nm



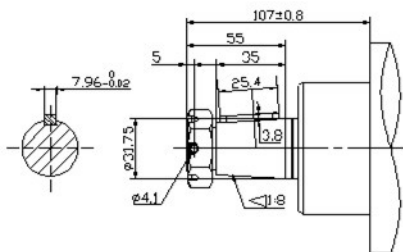
Shaft TA: Tapered shaft $\varnothing 1.50$ ",
Parallel key 7.96x7x36.5
Tightening torque: 410-540Nm



Shaft SL : Cylindrical shaft
 $\varnothing 1.50$ ", Parallel key 0.38"x 0.38"x
1.50"



Shaft SH : Cylindrical shaft $\varnothing 35$,
Parallel key 10x8x45



Shaft T2: Tapered shaft $\varnothing 1.25$ ",
Parallel key 0.31"x 0.31"x 1.00"
Tightening torque: 200±10Nm

Hydraulic Orbit Motors GWD



GWD - How To Order

Ordering Example:						
Model	Displacement	Flange	Drive shaft	Ports	Other functions	
GWD	120	W4	SH	UD	ACA	
Model	Disp.	Flange	Drive shaft	Ports		
GWD	120 160 200 230 260 300 350 375 470 540 620 750	<u>A9</u> =6 Hole SAE A Flange, Pilot 3.25"x 0.25" <u>W4</u> =4-Hole wheel flange, front pilot \varnothing 3.25"x 1.77", back pilot \varnothing 128.5x7 <u>W5</u> =4-Hole wheel flange, front pilot \varnothing 3.25"x 1.77", back pilot \varnothing 5.00"x 0.24"	<u>SG</u> =Shaft \varnothing 1 .25", parallel key 0.31"x 0.31"x 1.58" <u>SH</u> =Shaft \varnothing 35, parallel key 10x8x45 <u>SL</u> =Shaft \varnothing 1 .50", parallel key 0.38"x 0.38"x 1.50" <u>R3</u> = 1-1/4" -14 T Spline <u>RQ</u> = 1" SAE 6B Spline <u>RW</u> = Shaft \varnothing 1 .00", parallel key 0.25"x 0.25"x 1.25" <u>TA</u> =Tapered shaft \varnothing 1. 50", parallel key 7.96x7x36.5 <u>TB</u> =Tapered shaft \varnothing 35, parallel key 7.96x7x31.5 <u>T2</u> =Tapered shaft \varnothing 1.25", parallel key 0.31"x0.31"x 1.00"	<u>D1</u> = O-ring Manifold 4-Bolt, 5/16"-18UNC <u>UD</u> =SAE-6 O'ring 9/16-18 UNF <u>UF</u> =SAE-10 O'ring 7/8-14 UNF <u>GC</u> =G1/2 <u>MC</u> =M22X1.5		

Shaft Rotation	Paint	Standard Options	Seal Options	Relief Options	Speed Sensor Option
<u>A</u> =Standard / CCW 'A' port pressurized <u>R</u> =Reverse / CW 'A' port pressurized	<u>A</u> =No paint <u>B</u> =Blue <u>C</u> =Black <u>S</u> =Silver gray <u>G</u> =Corrosion resistant coating	<u>A</u> =Standard <u>N</u> =Large radial force <u>D</u> =No case drain <u>F</u> =Free running <u>L</u> =Low speed <u>V</u> =High temperature <u>S</u> =Low temperature	<u>Blank</u> = None <u>HPS</u> =High Pressure Seal <u>SG</u> =Seal Guard <u>HPS-SG</u> = High Pressure Seal & Seal Guard	<u>Blank</u> =None <u>R</u> =Valve Cavity Only <u>R12</u> =Bi-directional relief max 125 bar <u>R20</u> = Bi-directional relief max 207 bar	<u>Blank</u> = None <u>SS</u> = Speed Sensor, 4-pin, M12 male connector

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Flow Data

GWD125		121cm ³ /rev (7.4in ³ /rev)					Max Cont.	Max Int.		
Pressure bar [psi→]		17[247]	35[508]	69[1001]	104[1508]	138[2001]	173[2509]	207[3002]	241[3495]	
Flow	l/min(gpm↓)	Torque N m [lb-in] Speed Specification								
	2 [0.53]	20 [177]	49 [434]	95 [842]	138 [1223]					
		13rpm	12rpm	10rpm	7rpm					
	4 [1.06]	23 [204]	52 [461]	109 [966]	159 [1409]	203 [1799]				
		26rpm	24rpm	24rpm	19rpm	12rpm				
	8 [2.11]		56 [496]	116 [1028]	175 [1551]	225 [1994]	268 [2374]	299 [2649]	338 [2995]	
			56rpm	51rpm	49rpm	42rpm	39rpm	35rpm	26rpm	
	15 [3.96]		53 [470]	114 [1010]	185 [1639]	235 [2082]	274 [2428]	332 [2942]	351 [3110]	
			109rpm	104rpm	94rpm	91rpm	87rpm	83rpm	77rpm	
	23 [6.07]		48 [425]	114 [1010]	167 [1480]	229 [2029]	274 [2428]	323 [2942]	356 [3154]	
			172rpm	165rpm	153rpm	148rpm	141rpm	137rpm	135rpm	
	30 [7.92]			109 [966]	167 [1480]	221 [1958]	280 [2481]	321 [2844]	383 [3393]	
				290rpm	275rpm	229rpm	224rpm	220rpm	186rpm	
	38 [10.03]			102 [904]	164 [1453]	216 [1914]	270 [2392]	324 [2871]	381 [3376]	
			291rpm	279rpm	266rpm	258rpm	248rpm	239rpm		
45 [11.88]			97 [859]	159 [1409]	215 [1905]	274 [2428]	318 [2817]	381 [3376]		
			355rpm	341rpm	329rpm	323rpm	318rpm	302rpm		
53 [14.00]			90 [797]	154 [1364]	206 [1825]	265 [2348]	336 [2977]			
Max Cont.			412rpm	410rpm	395rpm	388rpm	366rpm			
61 [16.10]			83 [735]	144 [1276]	210 [1861]	270 [2392]	324 [2871]			
Max Int.			483rpm	474rpm	455rpm	445rpm	425rpm			

GWD160		162cm ³ /rev (9.9in ³ /rev)					Max Cont.	Max Int.		
Pressure bar [psi→]		17[247]	35[508]	69[1001]	104[1508]	138[2001]	173[2509]	207[3002]	241[3495]	
Flow	l/min(gpm↓)	Torque N m [lb-in] Speed Specification								
	2 [0.53]	36 [319]	76 [763]	147 [1302]	221 [1958]	308 [2729]	345 [3057]			
		6rpm	3rpm	3rpm	2rpm	2rpm	1rpm			
	4 [1.06]	29 [257]	78 [691]	162 [1435]	241 [2135]	320 [2835]	375 [3323]	439 [3890]		
		20rpm	17rpm	17rpm	15rpm	14rpm	9rpm	8rpm		
	8 [2.11]	35 [310]	80 [709]	159 [1409]	238 [2109]	314 [2782]	378 [3349]	481 [4262]	548 [4855]	
		43rpm	42rpm	40rpm	39rpm	36rpm	34rpm	31rpm	27rpm	
	15 [3.96]	38 [337]	75 [665]	168 [1488]	251 [2224]	319 [2826]	375 [3323]	445 [3943]	512 [4536]	
		90rpm	88rpm	84rpm	83rpm	81rpm	78rpm	74rpm	71rpm	
	23 [6.07]		68 [602]	155 [1373]	234 [2073]	314 [2782]	385 [3411]	455 [4031]	514 [4554]	
			135rpm	131rpm	129rpm	125rpm	121rpm	120rpm	116rpm	
	30 [7.92]		66 [585]	162 [1435]	235 [2082]	309 [2738]	384 [3402]	452 [4005]	508 [4501]	
			185rpm	179rpm	175rpm	171rpm	168rpm	166rpm	161rpm	
	38 [10.03]		72 [638]	148 [1311]	231 [2047]	306 [2711]	373 [3305]	452 [4005]	519 [4598]	
		232rpm	229rpm	226rpm	219rpm	218rpm	212rpm	206rpm		
45 [11.88]		66 [585]	142 [1258]	224 [1985]	302 [2676]	367 [3252]	438 [3881]	495 [4386]		
		279rpm	277rpm	269rpm	268rpm	262rpm	252rpm	245rpm		
53 [14.00]			134 [1187]	227 [2011]	309 [2738]	374 [3314]	453 [4014]	535 [4740]		
			326rpm	322rpm	316rpm	310rpm	303rpm	298rpm		
61 [16.10]			122 [1081]	212 [1878]	297 [2631]	366 [3243]	433 [3836]	499 [4421]		
Max Cont.			371rpm	368rpm	361rpm	359rpm	355rpm	348rpm		
68 [17.95]			107 [948]	198 [1754]	281 [2490]	360 [3190]	416 [3686]			
Max Int.			418rpm	416rpm	414rpm	405rpm	339rpm			
76 [20.06]			104 [921]	194 [1719]	279 [2472]	348 [3083]	450 [3987]			
			465rpm	464rpm	460rpm	451rpm	440rpm			

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Flow Data

GWD200		204cm ³ /rev (12.4in ³ /rev)						Max Cont.	Max Int.
Pressure bar [psi→]		17[247]	35[508]	69[1001]	104[1508]	138[2001]	173[2509]	207[3002]	241[3495]
Flow	l/min(gpm↓)	Torque N m [lb-in] Speed Specification							
	2 [0.53]	39 [346]	90 [797]	132 [1170]	292 [2587]	375 [3323]			
		6rpm	5rpm	4rpm	3rpm	3rpm			
	4 [1.06]	42 [372]	84 [744]	198 [1754]	274 [2428]	370 [3278]	439 [3890]	523 [4634]	
		15rpm	12rpm	12rpm	11rpm	9rpm	8rpm	6rpm	
	8 [2.11]	43 [381]	92 [815]	193 [1710]	297 [2631]	372 [3596]	458 [4058]	540 [4784]	613 [5431]
		33rpm	30rpm	28rpm	26rpm	26rpm	24rpm	22rpm	19rpm
	15 [3.96]	38 [337]	93 [824]	196 [1737]	303 [2685]	399 [3535]	474 [4200]	541 [4793]	623 [5520]
		71rpm	68rpm	65rpm	61rpm	59rpm	56rpm	53rpm	49rpm
	23 [6.60]		81 [718]	190 [1683]	282 [2499]	387 [3429]	461 [4084]	550 [4873]	632 [5600]
			109rpm	106rpm	105rpm	101rpm	99rpm	97rpm	88rpm
	30 [7.92]		79 [700]	187 [1657]	283 [2507]	400 [3544]	456 [4040]	540 [4784]	624 [5529]
			147rpm	143rpm	139rpm	133rpm	131rpm	128rpm	122rpm
	38 [10.03]		65 [576]	179 [1586]	273 [2419]	361 [3198]	455 [4031]	532 [4714]	612 [5422]
			184rpm	180rpm	175rpm	171rpm	168rpm	162rpm	158rpm
	45 [11.88]			164 [1453]	260 [2304]	360 [3190]	447 [3960]	532 [4714]	615 [5449]
				220rpm	212rpm	208rpm	204rpm	195rpm	193rpm
53 [14.00]			148 [1311]	271 [2401]	365 [3234]	446 [3952]	555 [4917]	599 [5307]	
			256rpm	255rpm	245rpm	241rpm	239rpm	232rpm	
61 [16.10]			133 [1178]	252 [2234]	331 [2933]	432 [3828]	521 [4616]	595 [5272]	
			295rpm	290rpm	282rpm	275rpm	270rpm	265rpm	
68 [17.95]			120 [1063]	231 [2047]	337 [2986]	414 [3668]	509 [4510]	596 [5281]	
	Max Cont.		331rpm	328rpm	325rpm	316rpm	309rpm	305rpm	
76 [20.06]	Max Int.		108 [957]	204 [1807]	306 [2711]	399 [3535]	504 [4465]		
83 [21.91]				190 [1683]	282 [2499]	375 [3323]	482 [4271]		
				405rpm	401rpm	393rpm	386rpm		

GWD230		232cm ³ /rev (14.2in ³ /rev)						Max Cont.	Max Int.
Pressure bar [psi→]		17[247]	35[508]	69[1001]	104[1508]	138[2001]	173[2509]	207[3002]	241[3495]
Flow	l/min(gpm↓)	Torque N m [lb-in] Speed Specification							
	2 [0.53]	44 [390]	90 [797]	182 [1613]	290 [2569]	372 [3296]			
		5rpm	4rpm	3rpm	2rpm	1rpm			
	4 [1.06]	47 [416]	99 [877]	221 [1958]	312 [2764]	411 [3641]	488 [4324]	556 [4926]	
		13rpm	12rpm	11rpm	10rpm	8rpm	6rpm	4rpm	
	8 [2.11]	49 [434]	103 [913]	213 [1887]	327 [2897]	422 [3739]	519 [4598]	614 [5440]	705 [6246]
		29rpm	27rpm	25rpm	24rpm	21rpm	18rpm	16rpm	11rpm
	15 [3.96]	42 [372]	106 [939]	208 [1843]	326 [2888]	432 [3828]	537 [4758]	653 [5786]	716 [6344]
		63rpm	58rpm	55rpm	54rpm	51rpm	45rpm	41rpm	38rpm
	23 [6.60]		101 [895]	213 [1887]	336 [2977]	425 [3766]	536 [4749]	627 [5555]	716 [6344]
			91rpm	88rpm	84rpm	81rpm	76rpm	72rpm	69rpm
	30 [7.92]		89 [789]	205 [1816]	315 [2791]	425 [3766]	519 [4598]	637 [5644]	714 [6326]
			126rpm	121rpm	120rpm	112rpm	108rpm	105rpm	97rpm
	38 [10.03]		77 [682]	195 [1728]	309 [2738]	433 [3836]	524 [4643]	608 [5387]	696 [6167]
			159rpm	155rpm	149rpm	146rpm	141rpm	138rpm	130rpm
	45 [11.88]			188 [1666]	294 [2605]	423 [3748]	506 [4483]	596 [5281]	685 [6069]
				188rpm	184rpm	180rpm	174rpm	168rpm	162rpm
53 [14.00]			175 [1311]	291 [2401]	385 [3234]	494 [3952]	585 [4917]	675 [5307]	
			223rpm	215rpm	213rpm	206rpm	203rpm	196rpm	
61 [16.10]			148 [1311]	270 [2392]	395 [3500]	484 [4288]	571 [5059]	666 [5901]	
			256rpm	254rpm	248rpm	244rpm	234rpm	224rpm	
68 [17.95]			141 [1249]	263 [2330]	354 [3136]	492 [4359]	568 [5032]	652 [5777]	
	Max Cont.		292rpm	285rpm	281rpm	274rpm	273rpm	255rpm	
76 [20.06]	Max Int.		121 [1072]	234 [2073]	342 [3030]	452 [4005]	568 [5032]		
83 [21.91]				209 [1852]	336 [2977]	464 [4111]	545 [4829]		
				356rpm	348rpm	343rpm	337rpm		

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Flow Data

GWD260		261cm ³ /rev (15.9in ³ /rev)						Max Cont.	Max Int.
Pressure bar [psi→]		17[247]	35[508]	69[1001]	104[1508]	138[2001]	173[2509]	207[3002]	241[3495]
Flow	l/min(gpm↓)	Torque N m [lb-in] Speed Specification							
	2 [0.53]	48 [425] 4rpm	110 [975] 2rpm						
	4 [1.06]	52 [461] 11rpm	112 [992] 11rpm	240 [2126] 10rpm	363 [3216] 8rpm	474 [4200] 7rpm	575 [5095] 7rpm	645 [5715] 5rpm	
	8 [2.11]	53 [470] 26rpm	114 [1010] 24rpm	246 [2180] 23rpm	366 [3243] 22rpm	486 [4306] 20rpm	588 [5210] 18rpm	701 [6211] 15rpm	
	15 [3.96]	48 [425] 56rpm	113 [1001] 54rpm	260 [2304] 50rpm	361 [3198] 50rpm	484 [4288] 46rpm	592 [5245] 44rpm	694 [6149] 41rpm	804 [7123] 37rpm
	23 [6.07]	44 [390] 85rpm	114 [1010] 81rpm	235 [2082] 78rpm	363 [3216] 76rpm	495 [4386] 74rpm	588 [5210] 68rpm	719 [6370] 66rpm	799 [7079] 61rpm
	30 [7.92]		93 [824] 113rpm	225 [1994] 108rpm	345 [3057] 107rpm	475 [4209] 103rpm	588 [5210] 99rpm	689 [6105] 94rpm	792 [7017] 86rpm
	38 [10.03]		84 [744] 144rpm	230 [2038] 142rpm	338 [2995] 139rpm	468 [4146] 136rpm	582 [5157] 131rpm	682 [6043] 125rpm	793 [7026] 117rpm
	45 [11.88]		77 [682] 172rpm	216 [1914] 172rpm	353 [3128] 166rpm	462 [4093] 164rpm	565 [5006] 159rpm	669 [5927] 151rpm	798 [7070] 142rpm
	53 [14.00]		63 [558] 201rpm	197 [1745] 200rpm	324 [2871] 198rpm	442 [3916] 194rpm	566 [5015] 182rpm	665 [5892] 178rpm	762 [6751] 174rpm
	61 [16.10]			181 [1604] 229rpm	298 [2640] 226rpm	447 [3960] 219rpm	550 [4873] 217rpm	649 [5750] 214rpm	748 [6627] 206rpm
	68 [17.95]			159 [1409] 260rpm	303 [2685] 259rpm	416 [3686] 255rpm	548 [4855] 245rpm	640 [5670] 237rpm	735 [6512] 230rpm
	76 [20.06]			135 [1196] 289rpm	277 [2454] 288rpm	388 [3438] 282rpm	519 [4598] 275rpm	633 [5608] 272rpm	732 [6486] 260rpm
	Max Cont.			131 [1161]	262 [2321]	372 [3296]	510 [4519]	612 [5422]	
	Max Int.			318rpm	317rpm	312rpm	308rpm	299rpm	
	91 [24.02]			81 [718] 347rpm	226 [2002] 345rpm	361 [3198] 343rpm	494 [4377] 338rpm		

GWD300		300cm ³ /rev (18.3in ³ /rev)						Max Cont.	Max Int.
Pressure bar [psi→]		17[247]	35[508]	69[1001]	104[1508]	138[2001]	173[2509]	207[3002]	241[3495]
Flow	l/min(gpm↓)	Torque N m [lb-in] Speed Specification							
	2 [0.53]	50 [443] 3rpm	94 [833] 1rpm						
	4 [1.06]	62 [549] 10rpm	144 [1276] 10rpm	300 [2658] 8rpm	431 [3819] 7rpm	507 [4492] 7rpm	624 [5529] 4rpm		
	8 [2.11]	60 [532] 21rpm	156 [1382] 18rpm	306 [2711] 16rpm	435 [3854] 16rpm	568 [5032] 14rpm	674 [5972] 11rpm	765 [6778] 8rpm	825 [7310] 5rpm
	15 [3.96]	64 [567] 47rpm	143 [1267] 46rpm	314 [2782] 42rpm	428 [3792] 41rpm	574 [5086] 35rpm	677 [5998] 31rpm	817 [7239] 26rpm	905 [8018] 20rpm
	23 [6.07]	57 [505] 75rpm	138 [1223] 74rpm	288 [2552] 71rpm	422 [3739] 66rpm	543 [4811] 63rpm	687 [6087] 55rpm	799 [7079] 48rpm	942 [8346] 39rpm
	30 [7.92]	44 [425] 100rpm	126 [1116] 99rpm	303 [2685] 97rpm	388 [3438] 94rpm	568 [5032] 85rpm	695 [6158] 80rpm	822 [7283] 69rpm	925 [8196] 60rpm
	38 [10.03]		109 [966] 125rpm	280 [2481] 123rpm	407 [3606] 120rpm	501 [4439] 114rpm	681 [6034] 104rpm	792 [7017] 97rpm	917 [8125] 86rpm
	45 [11.88]		90 [797] 149rpm	259 [2295] 148rpm	386 [3420] 145rpm	470 [4164] 141rpm	638 [5653] 130rpm	779 [6902] 120rpm	878 [7779] 112rpm
	53 [14.00]		75 [665] 176rpm	242 [2144] 175rpm	388 [3438] 174rpm	528 [4678] 171rpm	659 [5839] 161rpm	805 [7132] 149rpm	947 [8390] 136rpm
	61 [16.10]		61 [540] 201rpm	223 [1976] 200rpm	363 [3216] 198rpm	505 [4474] 190rpm	629 [5564] 185rpm	791 [7008] 171rpm	912 [8080] 161rpm
	68 [17.95]			198 [1754] 225rpm	336 [2977] 224rpm	464 [4111] 221rpm	663 [5874] 209rpm	801 [7097] 197rpm	894 [7921] 192rpm
	76 [20.06]			168 [1488] 251rpm	326 [2888] 249rpm	476 [4217] 245rpm	608 [5387] 238rpm	742 [6574] 231rpm	904 [8009] 214rpm
	83 [21.91]			142 [1258] 276rpm	319 [2826] 274rpm	464 [4111] 266rpm	573 [5077] 261rpm	729 [6459] 252rpm	
	Max Cont.			118 [1045]	280 [2481]	432 [3828]	556 [4926]	699 [6193]	
	Max Int.			302rpm	301rpm	299rpm	289rpm	278rpm	
	95 [25.08]			103 [913] 314rpm	260 [2304] 313rpm	431 [3819] 309rpm	550 [4873] 305rpm	704 [6237] 292rpm	

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Flow Data

GWD350		348cm ³ /rev (21.2in ³ /rev)					Max Cont.	Max Int.	
Pressure bar [psi→]		17[247]	35[508]	69[1001]	104[1508]	138[2001]	173[2509]	207[3002]	241[3495]
Flow	l/min(gpm↓)	Torque N m [lb-in] Speed Specification							
	2 [0.53]	63 [558]	132 [1170]	271 [2401]	395 [3500]				
		4rpm	3rpm	3rpm	2rpm				
	4 [1.06]	62 [549]	132 [1170]	293 [2596]	434 [3845]				
		9rpm	8rpm	8rpm	7rpm				
	8 [2.11]	67 [594]	142 [1258]	309 [2738]	459 [4067]	598 [5298]	739 [6548]	852 [7549]	
		21rpm	19rpm	18rpm	17rpm	17rpm	16rpm	13rpm	
	15 [3.96]	69 [611]	149 [1320]	313 [2773]	468 [4146]	627 [5555]	768 [6804]	885 [7841]	987 [8745]
		41rpm	41rpm	39rpm	38rpm	36rpm	34rpm	33rpm	27rpm
	23 [6.07]	60 [532]	149 [1320]	312 [2764]	471 [4173]	627 [5555]	766 [6787]	921 [8160]	1028 [9108]
		63rpm	61rpm	60rpm	58rpm	55rpm	52rpm	49rpm	44rpm
	30 [7.92]	52 [461]	137 [1214]	305 [2702]	456 [4040]	623 [5520]	765 [6778]	924 [8187]	1046 [9268]
		85rpm	83rpm	82rpm	80rpm	77rpm	74rpm	68rpm	64rpm
	38 [10.03]		111 [983]	297 [2631]	428 [3792]	598 [5298]	742 [6574]	907 [8036]	1058 [9374]
			108rpm	107rpm	106rpm	99rpm	98rpm	91rpm	86rpm
	45 [11.88]		97 [859]	264 [2339]	443 [3925]	578 [5121]	737 [6530]	887 [7859]	1038 [9197]
			130rpm	129rpm	128rpm	123rpm	115rpm	107rpm	102rpm
	53 [14.00]		84 [744]	249 [2206]	420 [3721]	568 [5032]	720 [6379]	879 [7788]	1028 [9108]
			151rpm	150rpm	149rpm	145rpm	137rpm	131rpm	118rpm
	61 [16.10]		61 [540]	232 [2056]	407 [3606]	547 [4846]	718 [6361]	848 [7513]	1009 [8940]
		172rpm	171rpm	169rpm	168rpm	161rpm	153rpm	145rpm	
68 [17.95]			218 [1931]	392 [3473]	569 [5041]	694 [6149]	835 [7398]	981 [8692]	
			194rpm	192rpm	188rpm	185rpm	172rpm	162rpm	
76 [20.06]			205 [1816]	372 [3296]	510 [4519]	680 [6025]	831 [7363]	971 [8603]	
			216rpm	214rpm	213rpm	211rpm	193rpm	186rpm	
83 [21.91]			177 [1568]	349 [3092]	551 [4882]	682 [6043]	809 [7168]	953 [8444]	
Max Cont.			239rpm	238rpm	236rpm	231rpm	218rpm	213rpm	
91 [24.02]			170 [1506]	357 [3163]	531 [4705]	663 [5874]			
Max Int.			260rpm	259rpm	257rpm	254rpm			
95 [25.08]				366 [3243]	527 [4669]	645 [5715]			
				269rpm	268rpm	263rpm			

GWD375		375cm ³ /rev (22.8in ³ /rev)					Max Cont.	Max Int.	
Pressure bar [psi→]		17[247]	35[508]	69[1001]	104[1508]	138[2001]	173[2509]	207[3002]	241[3495]
Flow	l/min(gpm↓)	Torque N m [lb-in] Speed Specification							
	2 [0.53]	75 [665]							
		3rpm							
	4 [1.06]	82 [727]	160 [1418]	327 [2897]	488 [4324]	638 [5653]	759 [6725]		
		7rpm	6rpm	6rpm	5rpm	5rpm	3rpm		
	8 [2.11]	80 [709]	169 [1497]	358 [3172]	534 [4731]	685 [6069]	831 [7363]	948 [8399]	
		18rpm	17rpm	16rpm	15rpm	13rpm	11rpm	9rpm	
	15 [3.96]	74 [656]	161 [1426]	355 [3145]	534 [4731]	692 [6131]	855 [7575]	983 [8709]	1116 [9888]
		38rpm	37rpm	36rpm	34rpm	31rpm	28rpm	24rpm	19rpm
	23 [6.07]	66 [585]	156 [1382]	352 [3119]	525 [4652]	692 [6131]	861 [7628]	1008 [8931]	1162 [10295]
		59rpm	58rpm	56rpm	55rpm	49rpm	45rpm	38rpm	35rpm
	30 [7.92]	55 [487]	147 [1302]	337 [2986]	507 [4492]	692 [6131]	844 [7478]	1004 [8895]	1152 [10207]
		80rpm	79rpm	76rpm	75rpm	69rpm	62rpm	58rpm	49rpm
	38 [10.03]		131 [1161]	319 [2826]	492 [4359]	678 [6007]	832 [7372]	1003 [8887]	1152 [10207]
			100rpm	98rpm	95rpm	91rpm	85rpm	78rpm	68rpm
	45 [11.88]		112 [992]	298 [2640]	478 [4235]	642 [5688]	806 [7141]	975 [8639]	1136 [10065]
			120rpm	119rpm	117rpm	111rpm	106rpm	96rpm	90rpm
	53 [14.00]		91 [806]	278 [2463]	475 [4209]	631 [5591]	792 [7017]	946 [8382]	1114 [9870]
			141rpm	139rpm	137rpm	133rpm	126rpm	117rpm	103rpm
	61 [16.10]		72 [638]	259 [2295]	427 [3783]	596 [5281]	768 [6804]	931 [8249]	1086 [9622]
		161rpm	160rpm	159rpm	154rpm	149rpm	139rpm	128rpm	
68 [17.95]			234 [2073]	432 [3828]	595 [5272]	762 [6751]	905 [8018]	1082 [9587]	
			180rpm	179rpm	175rpm	166rpm	159rpm	149rpm	
76 [20.06]			207 [1834]	382 [3385]	559 [4953]	738 [6539]	874 [7744]	1023 [9064]	
Max Cont.			201rpm	200rpm	196rpm	188rpm	181rpm	166rpm	
83 [21.91]			176 [1559]	371 [3287]	527 [4669]	696 [6167]	835 [7398]		
Max Int.			222rpm	220rpm	216rpm	211rpm	203rpm		
91 [24.02]			138 [1223]	316 [2800]	507 [4492]	658 [5830]			
			240rpm	238rpm	237rpm	231rpm			

Hydraulic Orbit Motors GWD



Flow Data

GWD470		465cm ³ /rev (28.3in ³ /rev)					Max Cont.	Max Int.
Pressure bar [psi→]		17[247]	35[508]	69[1001]	104[1508]	138[2001]	173[2509]	207[3002]
Flow	l/min(gpm↓)	Torque N m [lb-in] Speed Specification						
	2 [0.53]	91 [806]	184 [1630]					
		2rpm	1rpm					
	4 [1.06]	95 [842]	199 [1763]	406 [3597]	607 [5378]	811 [7185]		
		6rpm	5rpm	5rpm	4rpm	4rpm		
	8 [2.11]	95 [842]	206 [1825]	432 [3828]	652 [5777]	852 [7849]	1022 [9055]	1194 [10579]
		14rpm	14rpm	12rpm	12rpm	11rpm	10rpm	8rpm
	15 [3.96]	81 [718]	197 [1745]	441 [3907]	656 [5812]	883 [7823]	1062 [9409]	1245 [11031]
		30rpm	27rpm	26rpm	26rpm	23rpm	21rpm	20rpm
	23 [6.07]	83 [735]	191 [1692]	436 [3863]	671 [5945]	870 [7708]	1068 [9462]	1255 [11119]
		47rpm	46rpm	43rpm	42rpm	39rpm	36rpm	31rpm
	30 [7.92]	71 [629]	177 [1568]	424 [3757]	661 [5856]	852 [7549]	1094 [9693]	1274 [11288]
		63rpm	62rpm	60rpm	59rpm	55rpm	48rpm	42rpm
	38 [10.03]	50 [443]	162 [1435]	405 [3588]	625 [5538]	848 [7513]	1064 [9427]	1271 [11261]
		81rpm	80rpm	78rpm	77rpm	74rpm	67rpm	60rpm
	45 [11.88]		138 [1223]	377 [3340]	625 [5538]	828 [7336]	1064 [9427]	1269 [11243]
			96rpm	94rpm	92rpm	88rpm	81rpm	74rpm
	53 [14.00]		111 [983]	348 [3083]	576 [5103]	796 [7053]	1008 [8931]	1218 [10791]
			113rpm	109rpm	108rpm	106rpm	101rpm	92rpm
	61 [16.10]		81 [718]	319 [2826]	542 [4802]	793 [7026]	962 [8523]	1185 [10499]
		130rpm	127rpm	125rpm	121rpm	117rpm	112rpm	
68 [17.95]		54 [478]	272 [2410]	523 [4634]	736 [6521]	953 [8444]	1162 [10295]	
		146rpm	145rpm	144rpm	139rpm	136rpm	126rpm	
76 [20.06]			232 [2056]	477 [4226]	703 [6229]	915 [8107]	1117 [9897]	
Max Cont.			162rpm	161rpm	156rpm	152rpm	141rpm	
83 [21.91]			199 [1763]	458 [4058]	667 [5910]	879 [7788]		
Max Int.			179rpm	176rpm	174rpm	169rpm		
91 [24.02]			156 [1382]	382 [3385]	615 [5449]	839 [7434]		
			195rpm	193rpm	188rpm	184rpm		

GWD540		536cm ³ /rev (32.7in ³ /rev)				Max Cont.	Max Int.	
Pressure bar [psi→]		17[247]	35[508]	69[1001]	104[1508]	138[2001]	173[2509]	
Flow	l/min(gpm↓)	Torque N m [lb-in] Speed Specification						
	2 [0.53]	102 [904]	196 [1737]					
		2rpm	1rpm					
	4 [1.06]	124 [1099]	227 [2011]	465 [4120]	696 [6167]	935 [8284]	1142 [10118]	
		6rpm	6rpm	5rpm	5rpm	4rpm	4rpm	
	8 [2.11]	132 [1170]	238 [2109]	497 [4403]	752 [6663]	972 [8612]	1181 [10464]	
		13rpm	12rpm	12rpm	11rpm	11rpm	9rpm	
	15 [3.96]	118 [1045]	229 [2029]	507 [4492]	756 [6698]	986 [8736]	1218 [10791]	
		27rpm	27rpm	26rpm	25rpm	23rpm	22rpm	
	23 [6.07]	94 [833]	221 [1958]	502 [4448]	780 [6911]	990 [8771]	1220 [10809]	
		41rpm	40rpm	40rpm	39rpm	37rpm	33rpm	
	30 [7.92]	76 [673]	209 [1852]	481 [4262]	748 [6627]	981 [8692]	1249 [11066]	
		56rpm	55rpm	54rpm	53rpm	51rpm	47rpm	
	38 [10.03]	57 [505]	188 [1666]	452 [4005]	726 [6432]	957 [8479]	1241 [10995]	
		70rpm	69rpm	69rpm	68rpm	66rpm	61rpm	
	45 [11.88]		174 [1542]	436 [3863]	705 [6246]	941 [8337]	1198 [10614]	
			84rpm	82rpm	81rpm	79rpm	76rpm	
	53 [14.00]		136 [1205]	415 [3677]	681 [6034]	948 [8399]	1178 [10437]	
			98rpm	96rpm	95rpm	93rpm	90rpm	
	61 [16.10]		106 [939]	382 [3385]	662 [5865]	896 [7939]	1159 [10269]	
		112rpm	112rpm	110rpm	109rpm	104rpm		
68 [17.95]		83 [735]	354 [3136]	608 [5387]	863 [7646]	1113 [9861]		
		126rpm	125rpm	124rpm	123rpm	122rpm		
76 [20.06]			321 [2844]	601 [5325]	826 [7318]	1104 [9781]		
Max Cont.			140rpm	138rpm	137rpm	132rpm		
83 [21.91]			295 [2614]	535 [4740]	788 [6982]			
Max Int.			154rpm	151rpm	149rpm			
91 [24.02]			214 [1896]	488 [4324]	747 [6618]			
			169rpm	167rpm	167rpm			

Hydraulic Orbit Motors GWD



Flow Data

GWD620		631cm³/rev (38.5in³/rev)				Max Cont.	Max Int.	
Pressure bar [psi→]		17[247]	35[508]	69[1001]	104[1508]	121[1755]	155[2248]	
Flow	l/min (gpm↓)	Torque N m [lb-in] Speed Specification						
	2 [0.53]		117 [1037]	224 [1985]				
		2rpm		1rpm				
	4 [1.06]		134 [1187]	262 [2321]	535 [4740]	793 [7026]	932 [8258]	
		5rpm		5rpm	4rpm	4rpm	3rpm	
	8 [2.11]		139 [1232]	273 [2419]	569 [5032]	848 [7513]	982 [8701]	1251 [11084]
		11rpm		10rpm	10rpm	9rpm	8rpm	6rpm
	15 [3.96]		129 [1143]	268 [2374]	578 [5121]	865 [7664]	1003 [8887]	1275 [11297]
		23rpm		22rpm	22rpm	21rpm	20rpm	16rpm
	23 [6.07]		108 [957]	258 [2286]	572 [5068]	881 [7806]	1008 [8931]	1279 [11332]
		35rpm		34rpm	33rpm	32rpm	31rpm	28rpm
	30 [7.92]		88 [780]	244 [2162]	552 [4891]	852 [7549]	997 [8833]	1287 [11403]
		47rpm		46rpm	46rpm	44rpm	43rpm	39rpm
	38 [10.03]		65 [576]	218 [1931]	524 [4643]	831 [7363]	968 [8576]	1266 [11217]
		58rpm		58rpm	57rpm	57rpm	55rpm	51rpm
	45 [11.88]			201 [1781]	449 [3978]	812 [7194]	953 [8444]	1238 [10969]
				70rpm	69rpm	69rpm	68rpm	64rpm
	53 [14.00]			157 [1391]	473 [4191]	775 [6867]	925 [8196]	1221 [10818]
				82rpm	79rpm	78rpm	77rpm	76rpm
	61 [16.10]			125 [1108]	438 [3881]	749 [6636]	891 [7894]	1185 [10499]
			94rpm	93rpm	91rpm	90rpm	88rpm	
68 [17.95]			90 [797]	407 [3606]	699 [6193]	849 [7522]	1142 [10118]	
			107rpm	105rpm	104rpm	103rpm	102rpm	
76 [20.06]				357 [3163]	673 [5963]	812 [7194]	1098 [9728]	
Max Cont.				119rpm	117rpm	114rpm	113rpm	
83 [21.91]				328 [2906]	615 [5449]	755 [6689]		
Max Int.				131rpm	130rpm	128rpm		
91 [24.02]				245 [2171]	557 [4935]	704 [6237]		
				141rpm	140rpm	134rpm		

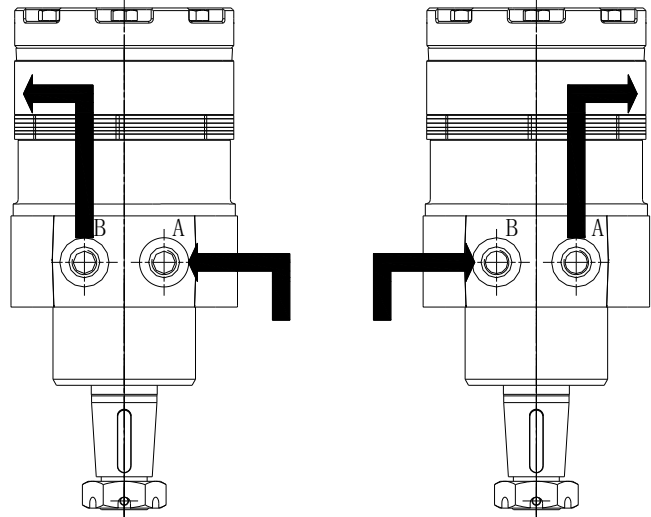
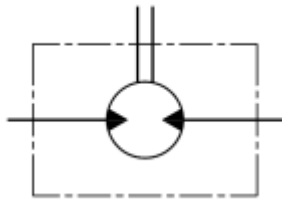
GWD750		748cm³/rev (45.6in³/rev)				Max Cont.	Max Int.	
Pressure bar [psi→]		17[247]	35[508]	69[1001]	104[1508]	138[2001]		
Flow	l/min (gpm↓)	Torque N m [lb-in] Speed Specification						
	2 [0.53]		144 [1276]	279 [2472]				
		2rpm		1rpm				
	4 [1.06]		153 [1356]	319 [2817]	648 [5741]	963 [8532]	1302 [11536]	
		4rpm		4rpm	3rpm	3rpm	3rpm	
	8 [2.11]		155 [1373]	337 [2986]	690 [6113]	1024 [9073]	1355 [12005]	
		9rpm		8rpm	8rpm	7rpm	7rpm	
	15 [3.96]		151 [1338]	330 [2924]	702 [6220]	1062 [9409]	1413 [12519]	
		19rpm		18rpm	17rpm	17rpm	15rpm	
	23 [6.07]		132 [1170]	317 [2809]	694 [6149]	1055 [9347]	1405 [12448]	
		29rpm		28rpm	27rpm	27rpm	25rpm	
	30 [7.92]		112 [992]	301 [2667]	675 [5981]	1036 [9179]	1418 [12563]	
		40rpm		39rpm	38rpm	36rpm	32rpm	
	38 [10.03]		79 [700]	268 [2374]	648 [5741]	1011 [8957]	1368 [12120]	
		49rpm		48rpm	48rpm	47rpm	46rpm	
	45 [11.88]		52 [461]	247 [2188]	614 [5440]	980 [8683]	1341 [11881]	
		60rpm		59rpm	58rpm	58rpm	55rpm	
	53 [14.00]			195 [1728]	574 [5086]	943 [8355]	1307 [11580]	
				69rpm	68rpm	67rpm	66rpm	
	61 [16.10]			147 [1302]	531 [4705]	902 [7992]	1265 [11208]	
			79rpm	78rpm	76rpm	74rpm		
68 [17.95]			102 [904]	491 [4350]	855 [7575]	1224 [10845]		
			90rpm	88rpm	88rpm	87rpm		
76 [20.06]			60 [532]	421 [3730]	802 [7106]	1168 [10348]		
Max Cont.			99rpm	99rpm	98rpm	97rpm		
83 [21.91]				382 [3385]	745 [6601]			
Max Int.				110rpm	109rpm			
91 [24.02]				299 [2454]	665 [5892]			
				120rpm	118rpm			

Technical Data

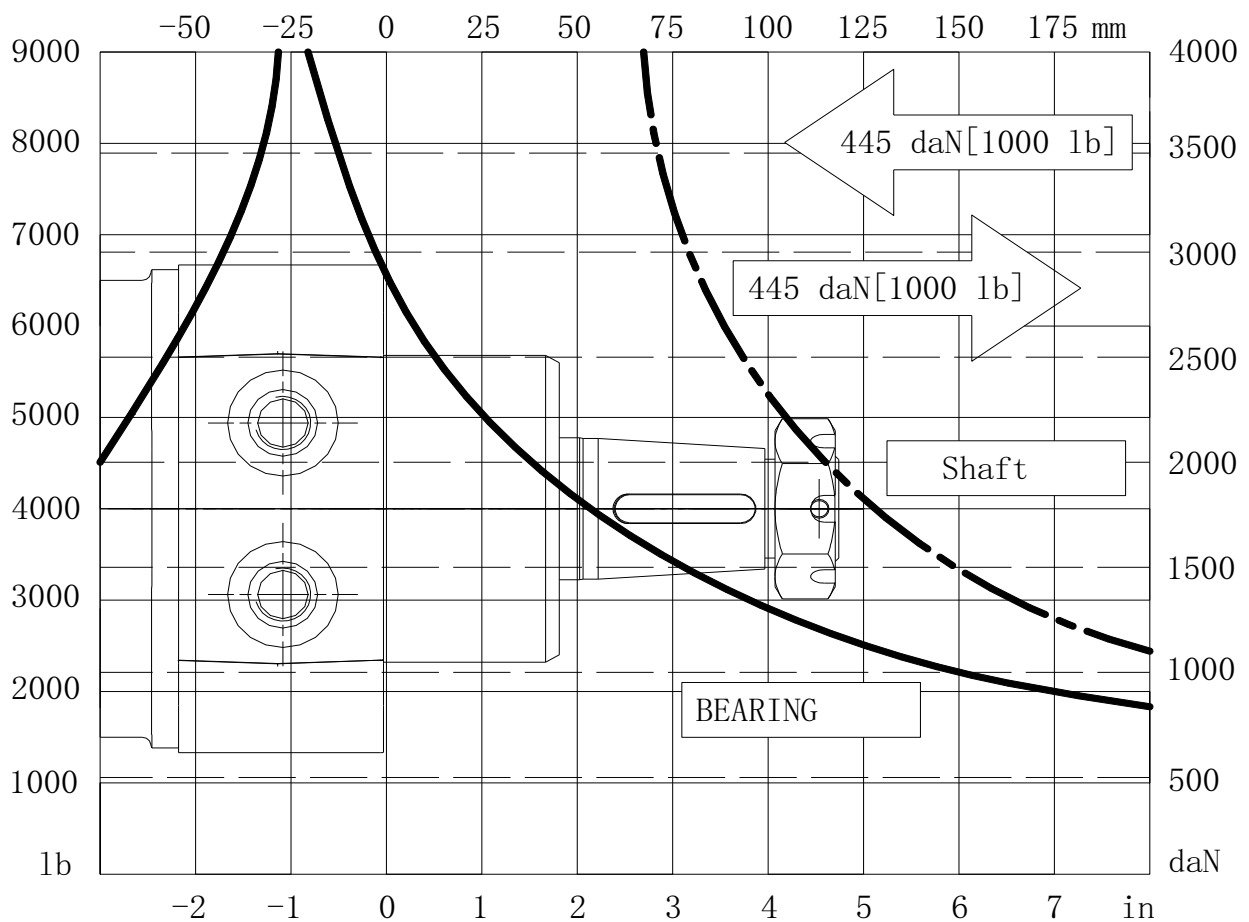
Shaft Rotation Direction: Standard

When looking at the shaft end of motor, shaft will rotate:

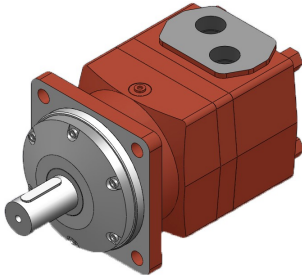
- Clockwise when port "B" is pressurized.
- Counter-clockwise when port "A" is pressurized.



W4 & W5 Wheel Mounts



General

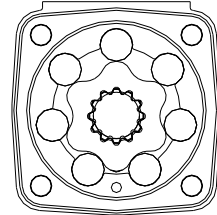


APPLICATION

- ◇ Conveyors
- ◇ Metal working machines
- ◇ Agricultural machines
- ◇ Road building machines
- ◇ Mining machinery
- ◇ Food industries
- ◇ Special vehicles etc.
- ◇ Injection molding machines

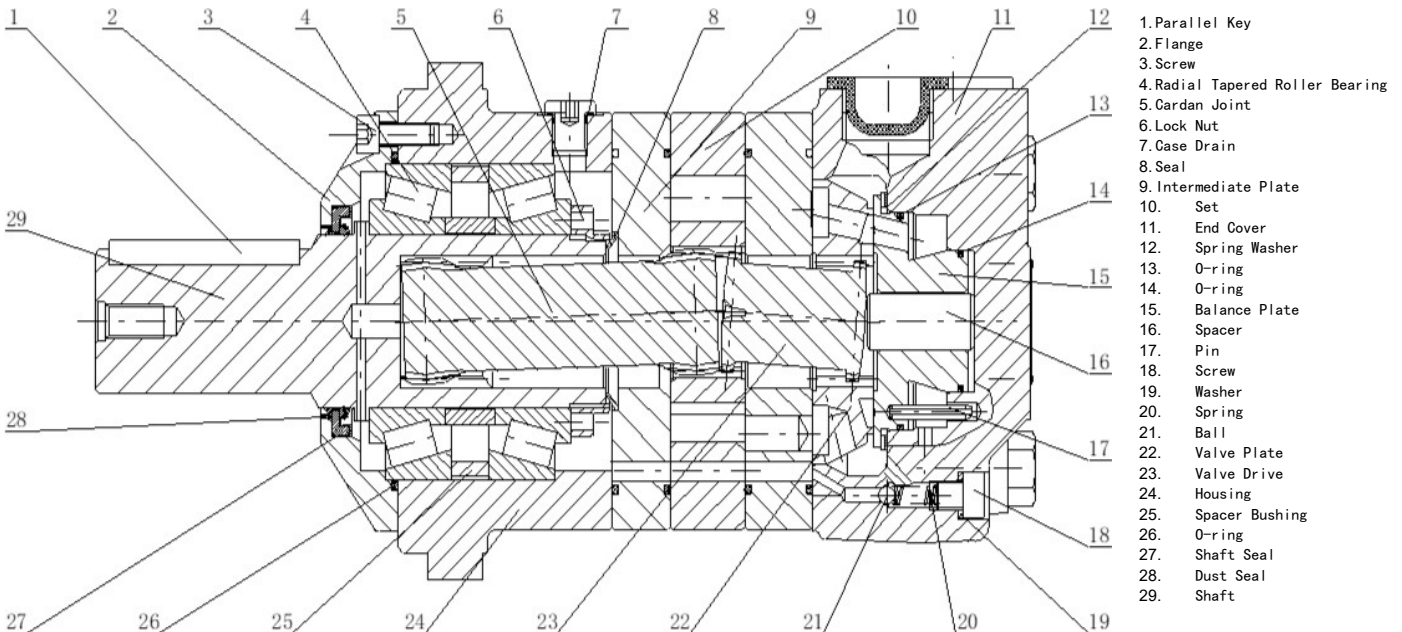
OPTIONS

- ◇ Flange mount
- ◇ Short motor
- ◇ Tachometer connection
- ◇ Side ports
- ◇ Shafts—straight, splined and tapered
- ◇ Metric and BSPP ports
- ◇ Other special features

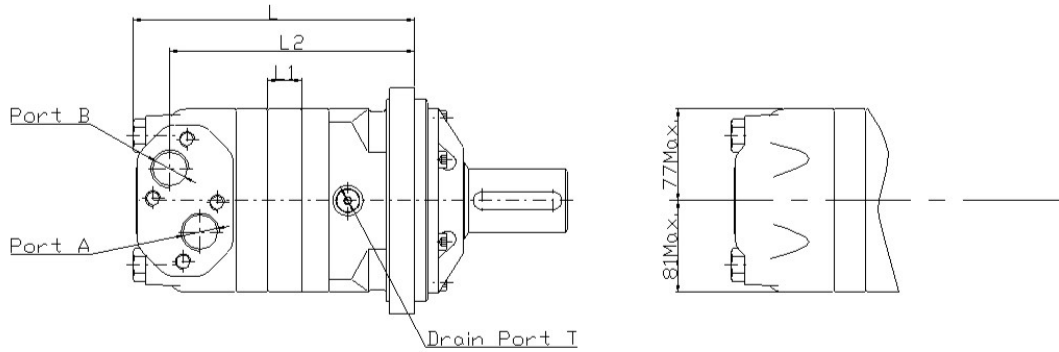


- ◇ Disc distribution flow

Model		GV315	GV400	GV500	GV630	GV800
Disp.	in ³ /rev	19.18	24.45	30.48	38.38	48.91
	cm ³ /rev	314.5	400.9	499.6	629.1	801.8
Max Speed rpm	cont.	510	500	400	320	250
	int.	630	600	480	380	300
Max Torque N m [lb-in]	cont.	920 [8150]	1180 [10450]	1460 [12950]	1660 [14700]	1880 [16650]
	int.	1110 [9800]	1410 [12500]	1760 [15550]	1940 [17150]	2110 [18650]
Max Dif. bar [psi]	cont.	200 [2900]	200 [2900]	200 [2900]	180 [2610]	160 [2320]
	int.	240 [3480]	240 [3480]	240 [3480]	210 [3050]	180 [2610]
Max Flow l/min [gpm]	cont.	160 [42.3]	200 [52.8]	200 [52.8]	200 [52.8]	200 [52.8]
	int.	200 [52.8]	240 [63.4]	240 [63.4]	240 [63.4]	240 [63.4]
Weight kg [lbs]		31.8 [70.1]	32.6 [71.9]	33.5 [73.8]	34.9 [76.9]	36.5 [80.5]

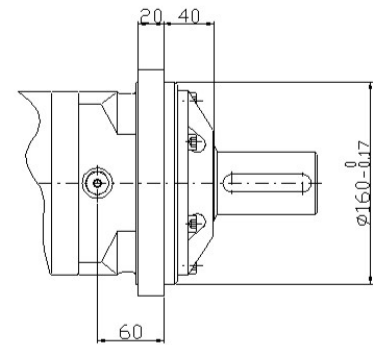
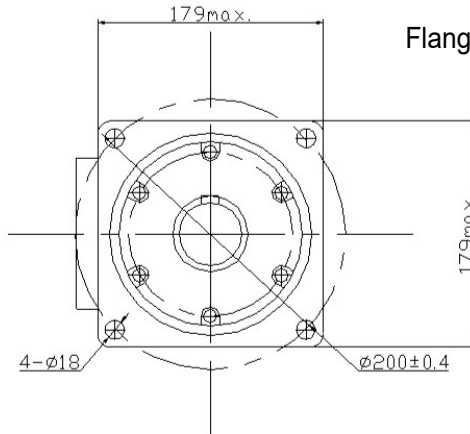
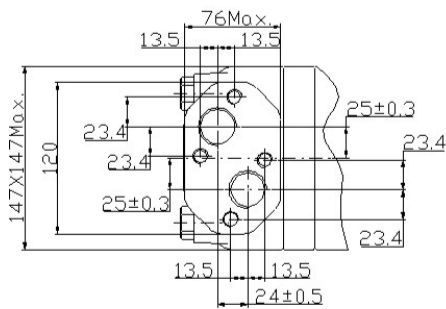


Dimensions and Mounting Data



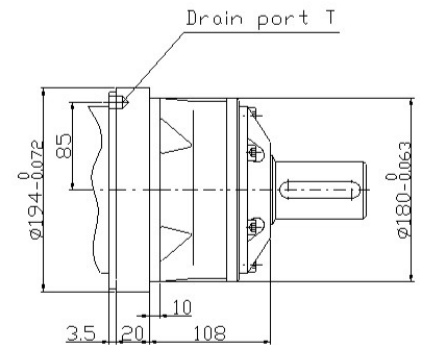
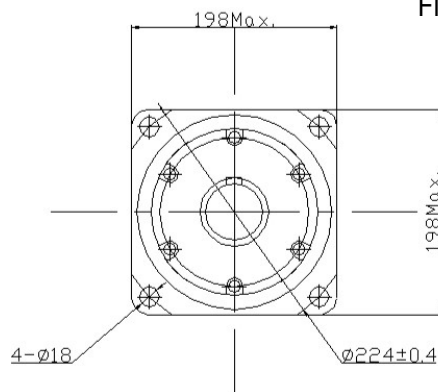
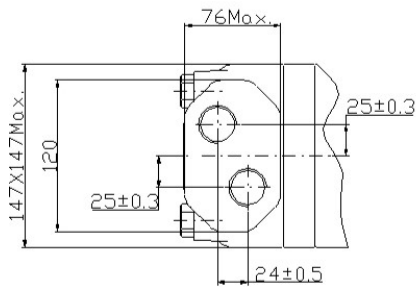
Port: G5,M6

Flange H9



Port: U6,G6,M7,U7

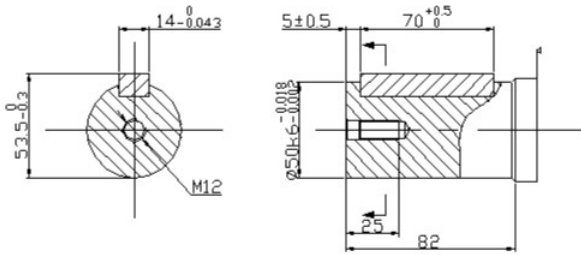
Flange W3



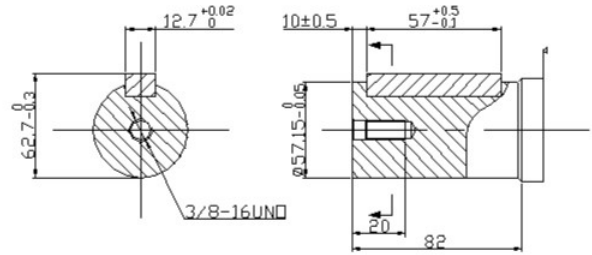
Model	L	L1	L2
GV315	217 [8.54"]	20 [0.79"]	161.5 [6.36"]
GV400	224 [8.82"]	27 [1.06"]	168.5 [6.64"]
GV500	232 [9.13"]	35 [1.38"]	176.5 [6.95"]
GV630	244 [9.61"]	47 [1.85"]	188.5 [7.42"]
GV800	255 [10.04"]	58 [2.28"]	199.5 [7.85"]

Port	G5 (Depth)	M6 (Depth)	U6 (Depth)	G6 (Depth)	M7 (Depth)	U7 (Depth)
P(A,B)	G1(18)	M33x2(18)	SAE-16 O'ring 1-5/16-12UN	G1(18)	M33x2(18)	SAE-16 O'ring 1-5/16-12UN
T	G1/4(12)	M14x1.5(12)	SAE-6 O'ring 9/16-18UNF	G1/4(12)	M14x1.5(12)	SAE-4 O'ring 7/16-20UNF
C	4-M12(12)	4-M12(12)				

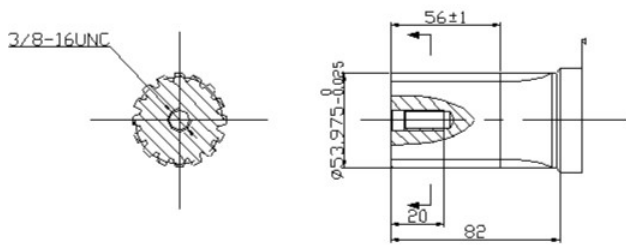
GV Shaft Extension Dimensions Data



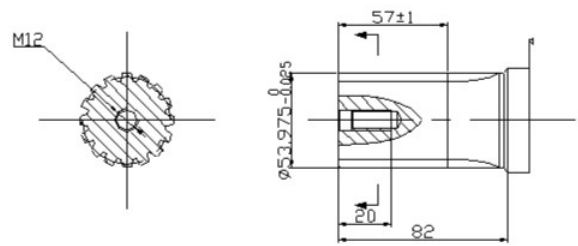
Shaft SN: Cylindrical shaft $\varnothing 50$,
Parallel key 14x9x70



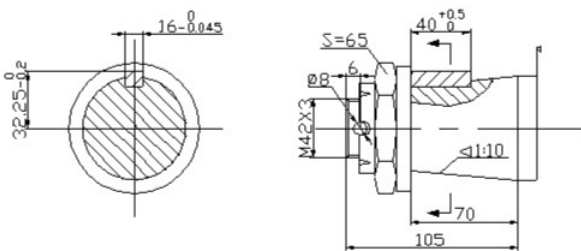
Shaft SP: Cylindrical shaft $\varnothing 2.25$ ",
Parallel key 0.50"x 0.50"x 2.25"



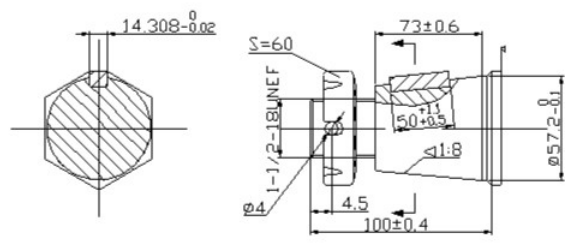
Shaft RB: Splined key 16-DP8/16



Shaft RC: Splined key 16-DP8/16



Shaft T8: Tapered shaft $\varnothing 60$,
Parallel key 16x10x32
Tightening torque: 750±50Nm



Shaft T9: Tapered shaft $\varnothing 2.25$ ",
Parallel key 0.56"x 0.56"x 1.97"
Tightening torque: 750±50Nm

Hydraulic Orbit Motors GV



GV - How To Order

Ordering Example: **; J G** **315** **B3** **C3** **U7** **ACA**

Model	Disp.	Flange	Drive Shaft	Ports
GV ; J G	<p>HF=4-Hole square SAE C flange, 5.00" pilot, 6.38" bolt circle</p> <p>PJM=6.30"x0.43"</p> <p>YHM=Hole, 0.50" dia</p> <p>OHM=Hole round, 0.50" dia</p>	<p>GV</p> <p>2.13" dia</p> <p>2.25" dia</p> <p>0.50"x0.50"x2.25"</p> <p>GVS</p> <p>2.25" dia</p> <p>0.56"x0.56"x2.00"</p>	<p>GV</p> <p>C3=Cardan shaft 16-DP10/20</p>	<p>0.50"x0.50"x2.25"</p> <p>MSAE-16 O'ring</p> <p>SAE-6 O'ring</p>

Shaft Rotation	Paint	Standard Options	Seal Options	Relief Options	Speed Sensor Option
<p>A=Standard / CW 'A' port pressurized</p> <p>R=Reverse / CCW 'A' port pressurized</p>	<p>A=No paint</p> <p>B=Blue</p> <p>C=Black</p> <p>S=Silver grey</p> <p>G=Corrosion resistant coating</p>	<p>A=Standard</p> <p>N=Large radial force</p> <p>D=No case drain</p> <p>F=Free running</p> <p>L=Low speed</p> <p>V=High temperature</p> <p>S=Low temperature</p>	<p>Blank= None</p> <p>HPS=High Pressure Seal</p> <p>SG=Seal Guard</p> <p>HPS-SG= High Pressure Seal & Seal Guard</p>	<p>Blank=None</p> <p>R=Valve Cavity Only</p> <p>R12=Bi-directional relief max 125 bar</p> <p>R20= Bi-directional relief max 207 bar</p>	<p>Blank= None</p> <p>SS= Speed Sensor, 4-pin, M12 male connector</p>

Hydraulic Orbit Motors GV



Flow Data

GV315		314.5cm ³ /rev (19.18in ³ /rev)					Max Cont.	Max Int.
Pressure bar [psi→]		35.5 [507]	71.1 [1015]	101.5 [1450]	142.1 [2030]	182.7 [2610]	203 [2900]	243.6 [3480]
Flow	l/min [gpm↓]	Torque N m [lb-in] Speed Specification						
	10 [2.64]	140 [1239]	294 [2602]	440 [3894]	610 [5398]	731 [6467]	845 [7478]	1000 [8850]
		26rpm	24rpm	23rpm	22rpm	20rpm	17rpm	14rpm
	20 [5.28]	153 [1354]	314 [2779]	466 [4124]	636 [5629]	787 [6965]	895 [7921]	1070 [9470]
		55rpm	54rpm	53rpm	52rpm	51rpm	48rpm	44rpm
	50 [13.21]	149 [1318]	312 [2761]	465 [4115]	654 [5788]	815 [7213]	935 [8275]	1112 [9842]
		145rpm	144rpm	142rpm	140rpm	137rpm	133rpm	127rpm
	75 [19.81]	143 [1265]	304 [2690]	459 [4058]	642 [5682]	816 [7222]	940 [8319]	1119 [9903]
		220rpm	218rpm	215rpm	211rpm	207rpm	202rpm	195rpm
	100 [26.42]	136 [1203]	297 [2628]	452 [4000]	636 [5629]	810 [7169]	936 [8284]	1108 [9806]
		294rpm	292rpm	290rpm	287rpm	283rpm	278rpm	270rpm
	125 [33.02]	123 [1088]	286 [2531]	442 [3912]	626 [5540]	799 [7071]	921 [8151]	1093 [9673]
		368rpm	366rpm	364rpm	361rpm	357rpm	352rpm	345rpm
	150 [39.63]	114 [1008]	275 [2433]	435 [3850]	615 [5443]	788 [6974]	906 [8018]	1078 [9541]
445rpm		443rpm	441rpm	437rpm	430rpm	422rpm	410rpm	
160 [42.27]	107 [947]	268 [2371]	430 [3805]	608 [5381]	780 [6903]	895 [7921]	1070 [9470]	
	475rpm	473rpm	470rpm	466rpm	460rpm	452rpm	439rpm	
200 [52.83]	82 [725]	249 [2203]	412 [3646]	593 [5248]	758 [6708]	871 [7708]	1047 [9266]	
	596rpm	594rpm	590rpm	584rpm	576rpm	565rpm	544rpm	

GV400		400.9cm ³ /rev (24.45in ³ /rev)					Max Cont.	Max Int.
Pressure bar [psi→]		35.5 [507]	71.1 [1015]	101.5 [1450]	142.1 [2030]	182.7 [2610]	203 [2900]	243.6 [3480]
Flow	l/min [gpm↓]	Torque N m [lb-in] Speed Specification						
	10 [2.64]	183 [1619]	385 [3407]	568 [5027]	776 [6868]	968 [8567]	1101 [9744]	1292 [11435]
		20rpm	20rpm	19rpm	18rpm	17rpm	16rpm	14rpm
	20 [5.28]	196 [1734]	398 [3522]	590 [5221]	815 [7213]	1010 [8939]	1152 [10196]	1346 [11913]
		44rpm	44rpm	43rpm	42rpm	40rpm	39rpm	37rpm
	50 [13.21]	200 [1770]	402 [3557]	603 [5336]	842 [7452]	927 [9204]	1186 [10496]	1430 [12656]
		114rpm	113rpm	113rpm	112rpm	110rpm	108rpm	103rpm
	75 [19.81]	195 [1725]	394 [3487]	596 [5275]	838 [7416]	1043 [9231]	1188 [10514]	1432 [12674]
		175rpm	173rpm	170rpm	166rpm	163rpm	157rpm	152rpm
	100 [26.42]	172 [1522]	385 [3407]	593 [5248]	827 [7319]	1036 [9169]	1184 [10479]	1425 [12612]
		236rpm	235rpm	233rpm	231rpm	227rpm	223rpm	215rpm
	125 [33.02]	167 [1478]	374 [3310]	583 [5159]	816 [7222]	1021 [9036]	1177 [10417]	1413 [12506]
		296rpm	294rpm	291rpm	288rpm	282rpm	275rpm	268rpm
	150 [39.63]	158 [1398]	361 [3195]	559 [4947]	801 [7089]	1008 [8921]	1167 [10311]	1390 [12302]
355rpm		354rpm	352rpm	349rpm	344rpm	335rpm	324rpm	
175 [46.23]	143 [1265]	346 [3062]	553 [4894]	784 [6938]	989 [8753]	1145 [10134]	1377 [12187]	
	416rpm	414rpm	411rpm	407rpm	403rpm	396rpm	388rpm	
200 [52.83]	118 [1044]	331 [2929]	536 [4743]	770 [6815]	969 [8576]	1128 [9983]	1356 [12001]	
	475rpm	473rpm	469rpm	463rpm	455rpm	448rpm	439rpm	
240 [63.4]	82 [725]	301 [2664]	506 [4478]	740 [6549]	943 [8346]	1104 [9771]	1332 [11789]	
	571rpm	569rpm	565rpm	548rpm	539rpm	530rpm	520rpm	

Hydraulic Orbit Motors GV



Flow Data

GV500		499.6cm ³ /rev (30.48in ³ /rev)					Max Cont.	Max Int.	
Pressure (psi→)		507	1015	1450	2030	2610	2900	3480	
Flow	(gpm↓)	Torque N m [lb-in] Speed Specification							
	2.64	242 [2141]	468 [4142]	696 [6160]	959 [8487]	1190 [10532]	1353 [11975]	1607 [14223]	
		17rpm	17rpm	16rpm	16rpm	15rpm	13rpm	11rpm	
	5.28	245 [2169]	501 [4434]	738 [6531]	1003 [8877]	1232 [10904]	1394 [12337]	1658 [14674]	
		36rpm	35rpm	35rpm	34rpm	33rpm	32rpm	29rpm	
	13.21	240 [2124]	500 [4425]	758 [6708]	1025 [9072]	1270 [11240]	1449 [12824]	1743 [15426]	
		93rpm	92rpm	91rpm	90rpm	88rpm	85rpm	80rpm	
	19.81	233 [2062]	498 [4407]	752 [6655]	1030 [9116]	1288 [11399]	1475 [13054]	1766 [15630]	
		140rpm	139rpm	137rpm	135rpm	132rpm	127rpm	120rpm	
	26.42	228 [2017]	491 [4345]	748 [6620]	1026 [9080]	1289 [11408]	1472 [13028]	1760 [15577]	
		189rpm	187rpm	185rpm	182rpm	178rpm	173rpm	166rpm	
	33.02	220 [1947]	483 [4274]	742 [6567]	1014 [8974]	1280 [11328]	1460 [12922]	1745 [15444]	
		237rpm	236rpm	234rpm	231rpm	227rpm	223rpm	216rpm	
	39.63	201 [1778]	465 [4115]	723 [6399]	1008 [8921]	1250 [11063]	1429 [12647]	1736 [15364]	
287rpm		286rpm	284rpm	281rpm	276rpm	270rpm	260rpm		
46.23	182 [1610]	446 [3947]	711 [6292]	997 [8824]	1238 [10957]	1406 [12444]	1715 [15179]		
	335rpm	334rpm	332rpm	329rpm	325rpm	320rpm	310rpm		
52.83	161 [1424]	423 [3743]	776 [6868]	974 [8620]	1218 [10780]	1385 [12258]	1697 [15019]		
Max Cont.		384rpm	383rpm	381rpm	378rpm	374rpm	366rpm	354rpm	
63.4	120 [1062]	378 [3345]	722 [6390]	921 [8151]	1172 [10373]	1340 [11859]	1650 [14603]		
Max Int.		461rpm	459rpm	457rpm	454rpm	450rpm	444rpm	432rpm	

GV630		629.1cm ³ /rev (38.38in ³ /rev)					Max Cont.	Max Int.	
Pressure (psi→)		507	870	1305	1740	2175	2610	3045	
Flow	(gpm↓)	Torque N m [lb-in] Speed Specification							
	2.64	280 [2478]	522 [4620]	812 [7186]	1100 [9735]	1268 [11222]	1549 [13709]	1784 [15789]	
		14rpm	13rpm	13rpm	12rpm	12rpm	11rpm	10rpm	
	5.28	288 [2549]	552 [4885]	839 [7425]	1101 [9744]	1315 [11638]	1607 [14223]	1864 [16497]	
		28rpm	28rpm	27rpm	27rpm	26rpm	24rpm	22rpm	
	13.21	289 [2557]	555 [4912]	868 [7682]	1137 [10063]	1364 [12072]	1682 [14886]	1956 [17312]	
		72rpm	72rpm	71rpm	69rpm	68rpm	66rpm	62rpm	
	19.81	270 [2389]	548 [4850]	863 [7638]	1120 [9912]	1352 [11966]	1680 [14869]	1964 [17382]	
		109rpm	108rpm	106rpm	104rpm	102rpm	99rpm	94rpm	
	26.42	264 [2336]	538 [4761]	856 [7576]	1083 [9585]	1350 [11948]	1674 [14816]	1965 [17391]	
		146rpm	145rpm	143rpm	141rpm	138rpm	135rpm	130rpm	
	33.02	251 [2221]	516 [4566]	837 [7408]	1071 [9479]	1336 [11824]	1659 [14683]	1950 [17258]	
		184rpm	183rpm	181rpm	179rpm	177rpm	173rpm	168rpm	
	39.63	240 [2124]	495 [4381]	817 [7231]	1063 [9408]	1330 [11771]	1650 [14603]	1928 [17064]	
221rpm		220rpm	219rpm	217rpm	215rpm	212rpm	205rpm		
46.23	210 [1858]	485 [4292]	796 [7045]	1052 [9310]	1300 [11505]	1636 [14479]	1908 [16887]		
	259rpm	258rpm	257rpm	254rpm	250rpm	246rpm	241rpm		
52.83	182 [1610]	469 [4150]	751 [6646]	1018 [9010]	1280 [11328]	1611 [14258]	1883 [16665]		
Max Cont.		297rpm	297rpm	295rpm	293rpm	290rpm	284rpm	273rpm	
63.4	130 [1150]	146 [3681]	712 [6301]	978 [8656]	1237 [10948]	1563 [13833]	1835 [16241]		
Max Int.		358rpm	357rpm	355rpm	351rpm	346rpm	340rpm	332rpm	

Hydraulic Orbit Motors GV



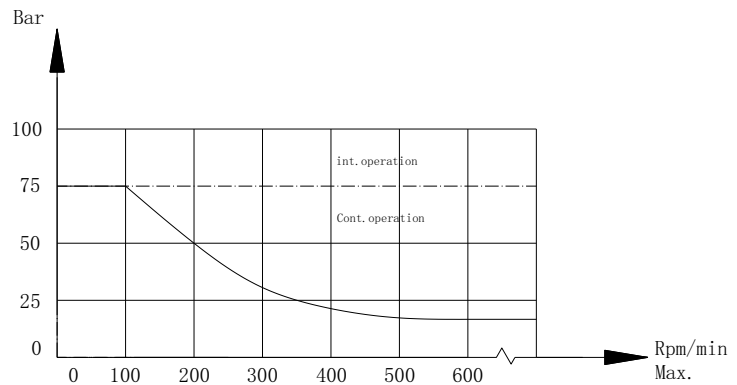
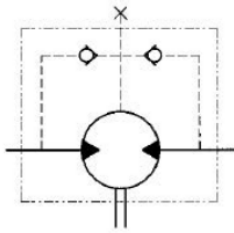
Flow Data

GV800		801.8cm ³ /rev (48.91in ³ /rev)					Max Cont.	Max Int.
Pressure bar [psi→]		18.3 [262]	50.8 [725]	81.2 [1160]	101.5 [1450]	132.0 [1885]	162.4 [2320]	182.7 [2610]
Flow	l/min [gpm↓]	Torque N m [lb-in] Speed Specification						
	10 [2.64]	278 [2460]	565 [5000]	830 [7346]	1095 [9691]	1405 [12435]	1712 [15152]	1915 [16949]
		11rpm	10rpm	10rpm	9rpm	8rpm	8rpm	7rpm
	20 [5.28]	282 [2495]	571 [5053]	845 [7478]	1150 [10178]	1456 [12886]	1783 [15780]	1994 [17648]
		23rpm	22rpm	22rpm	21rpm	20rpm	18rpm	16rpm
	50 [13.21]	288 [2549]	582 [5151]	856 [7576]	1162 [10284]	1463 [12948]	1790 [15842]	2001 [17710]
		60rpm	59rpm	57rpm	56rpm	54rpm	52rpm	48rpm
	75 [19.81]	269 [2380]	580 [5133]	855 [7567]	1167 [10331]	1465 [12966]	1786 [15807]	1993 [17639]
		91rpm	90rpm	89rpm	87rpm	84rpm	81rpm	77rpm
	100 [26.42]	251 [2221]	566 [5009]	840 [7434]	1140 [10089]	1448 [12815]	1767 [15639]	1985 [17568]
		122rpm	121rpm	120rpm	118rpm	115rpm	111rpm	105rpm
	125 [33.02]	242 [2141]	535 [4735]	824 [7293]	1118 [9895]	1427 [12630]	1739 [15391]	1976 [17489]
		153rpm	152rpm	150rpm	147rpm	143rpm	139rpm	133rpm
	150 [39.63]	236 [2088]	526 [4655]	808 [7151]	1102 [9753]	1401 [12399]	1714 [15170]	1959 [17338]
185rpm		183rpm	181rpm	178rpm	174rpm	169rpm	163rpm	
175 [46.23]	215 [1902]	504 [4460]	793 [7018]	1079 [9549]	1377 [12187]	1698 [15028]	1936 [17135]	
	216rpm	214rpm	212rpm	209rpm	206rpm	203rpm	196rpm	
200 [52.83]	197 [1743]	468 [4142]	765 [6770]	1063 [9408]	1362 [12054]	1681 [14878]	1913 [16931]	
	Max Cont.	247rpm	245rpm	243rpm	240rpm	237rpm	232rpm	225rpm
240 [63.4]	118 [1044]	388 [3434]	713 [6310]	1020 [9027]	1318 [11665]	1637 [14488]	1838 [16267]	
	Max Int.	297rpm	296rpm	295rpm	293rpm	288rpm	283rpm	277rpm

Technical Data

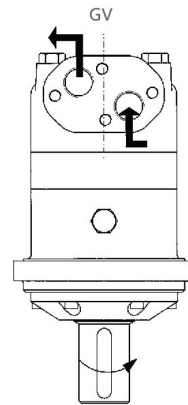
Hydraulic orbit Motors GV

Permissible shaft seal pressure

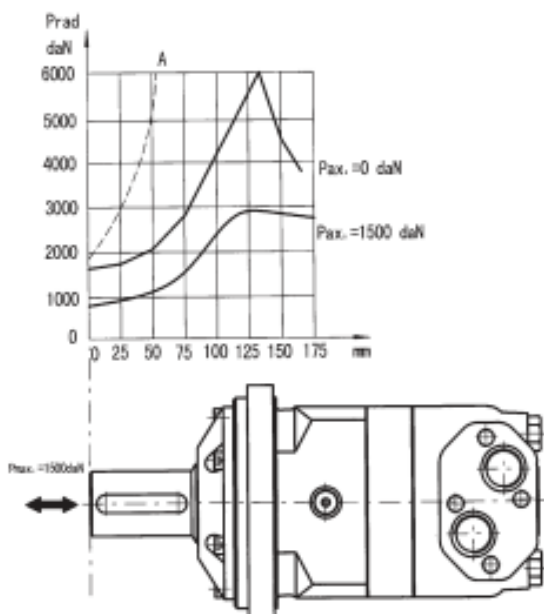


In applications without drain line, output shaft seal exceeds a bit of the pressure in the return line. When applications use the drain line, the pressure of output shaft seal equals the pressure in drain line.

Standard direction of shaft rotation: Standard

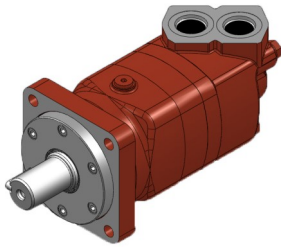


Axial and Radial forces



The output shaft runs in tapered bearings that permit high axial and radial forces, Curve "A" shows max radial shaft load, Any shaft loads exceeding the values quoted in the curve will involve a risk of breakage, The two other curves apply to a B10 bearing life of 3000 hours at 200 RPM.

General

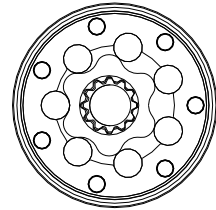


APPLICATION

- ◇ Conveyors
- ◇ Feeding machinery of robots and manipulators
- ◇ Metal working machines
- ◇ Textile machines
- ◇ Agricultural machines
- ◇ Food industries
- ◇ Mining machines

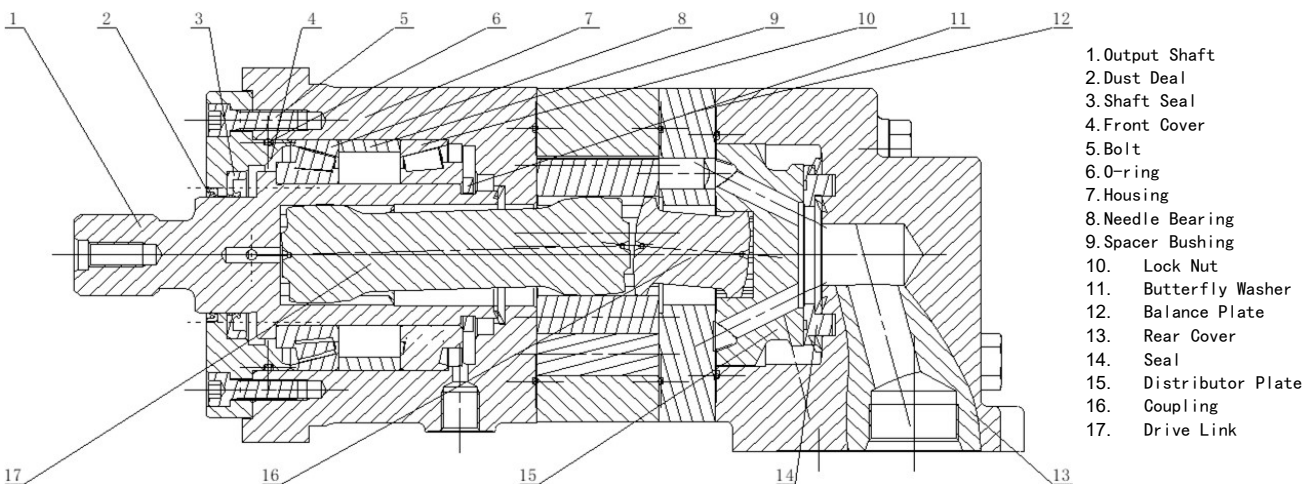
OPTIONS

- ◇ Flange connection
- ◇ Shafts—straight, splined and tapered
- ◇ Metric and BSPP ports
- ◇ Other special features

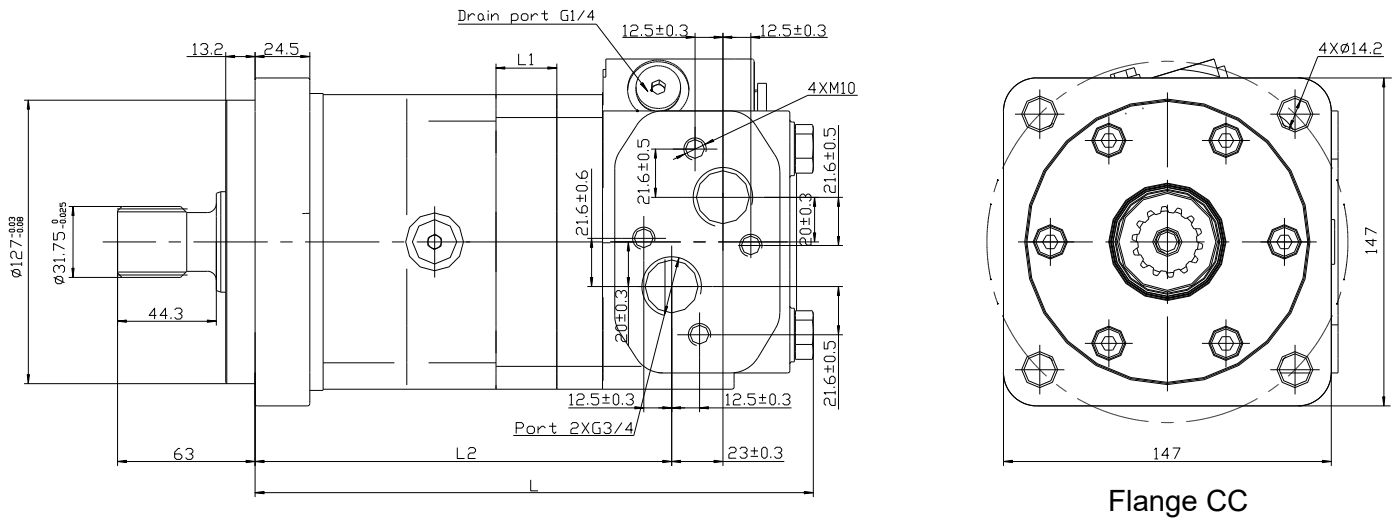


◇ Disc distribution flow

Model		GKC195	GKC245	GKC310	GKC395	GKC490	GKC625	GKC800	GKC985
Disp.	in ³ /rev	11.93	15.01	19.01	23.87	29.95	38.01	48.96	59.90
	cm ³ /rev	195.6	246.1	311.6	391.3	490.8	623	802.4	981.6
Max Speed rpm	cont.	765	610	480	382	304	240	186	152
	int.	865	830	690	570	455	360	280	230
Max Torque N m [lb-in]	cont.	565 [5000]	710 [6284]	920 [8142]	1160 [10266]	1445 [12789]	1480 [13099]	1580 [13984]	1675 [14824]
	int.	840 [7434]	1080 [9558]	1325 [11727]	1625 [14382]	1880 [16639]	1890 [16726]	1880 [16639]	1860 [16462]
Max Dif. bar [psi]	cont.	203 [2900]	203 [2900]	203 [2900]	203 [2900]	203 [2900]	178 [2538]	142 [2031]	142 [2031]
	int.	305 [4351]	305 [4351]	305 [4351]	305 [4351]	279 [3988]	228 [3263]	178 [2538]	142 [2031]
Max Flow l/min [gpm]	cont.	150 [39.62]	150 [39.62]	150 [39.62]	150 [39.62]	150 [39.62]	150 [39.62]	150 [39.62]	150 [39.62]
	int.	170 [44.90]	205 [54.15]	225 [59.43]	225 [59.43]	225 [59.43]	225 [59.43]	225 [59.43]	225 [59.43]
Weight kg [lbs]		25.2 [56]	25.7 [57]	26.6 [59]	27.0 [60]	28.4 [63]	29.7 [66]	31.5 [70]	33.3 [74]

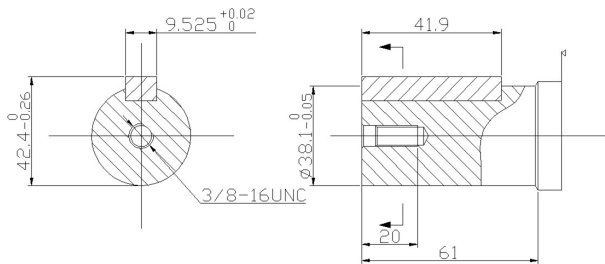


Dimensions and Mounting Data

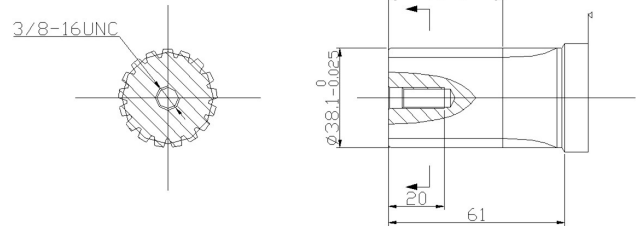


Model	L	L1	L2
GKC195	247 [9.72"]	21.7 [0.85"]	182 [7.17"]
GKC245	252 [9.92"]	27.3 [1.08"]	187 [7.36"]
GKC310	278 [10.95"]	34.5 [1.36"]	200 [7.87"]
GKC395	287 [11.30"]	43.4 [1.71"]	209.5 [8.25"]
GKC490	298 [11.73"]	54.4 [2.14"]	221 [8.70"]
GKC625	313 [12.32"]	69.1 [2.72"]	235 [9.25"]
GKC800	333 [13.11"]	88.9 [3.50"]	255 [10.04"]
GKC985	353 [13.90"]	109 [4.29"]	274.6 [10.81"]

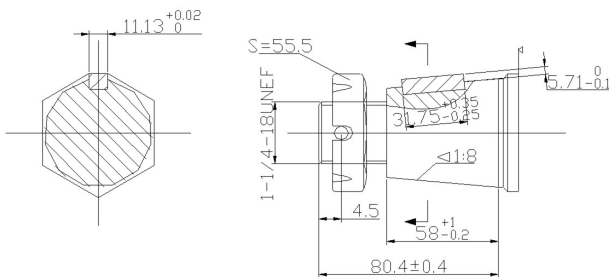
GKC Shaft Extension Dimensions Data



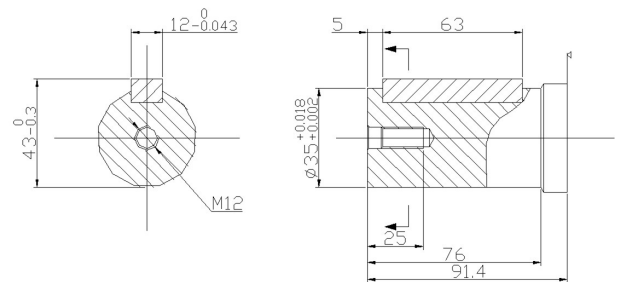
Shaft G2: Cylindrical shaft $\phi 1.50$ " Parallel
key 0.375"x 0.375"x 1.65"



Shaft FE: Splined 17-DP12/24



Shaft T1: Tapered shaft $\phi 1.75$ ",
Parallel key 0.438"x 0.438"x 1.25"
Tightening torque: 500±10Nm



Shaft Y1: Cylindrical shaft $\phi 35$ Parallel
key 12x12x63

Hydraulic Orbit Motors GKC



GKC - How To Order

Ordering Example:		Model	Displacement	Flange	Drive shaft	Ports	Other functions
		GKC	195	CC	G2	SF5	ACA
Model	Disp.	Flange		Drive shaft		Ports	
GKC	195 245 310 395 490 625 800 985	<u>CC</u> =4-Hole square flange $\varnothing 6.38"$, pilot $\varnothing 5.00" \times 0.52"$		<u>FE</u> =Shaft $\varnothing 38.1$, splined tooth 17-DP12/24 <u>G2</u> =Shaft $\varnothing 1.50"$, parallel key $0.38" \times 0.38" \times 1.65"$ <u>Y1</u> =Shaft $\varnothing 35$, parallel key $12 \times 12 \times 63$ <u>T1</u> =Tapered shaft 1:8 $\varnothing 1.75"$, parallel key $0.44" \times 0.44" \times 1.25"$		<u>G3</u> =G3/4 manifold mount 4xM10, G1/4 <u>SF5</u> =SAE-16 O'ring 1-5/16-12UN, SAE-4 O'ring 7/16-20UNF <u>SF7</u> =G1, G1/4	

Shaft Rotation	Paint	Standard Options	Seal Options	Relief Options	Speed Sensor Option
<u>A</u> =Standard / CW 'A' port pressurized <u>R</u> =Reverse / CCW 'A' port pressurized	<u>A</u> =No paint <u>B</u> =Blue <u>C</u> =Black <u>S</u> =Silver grey <u>G</u> =Corrosion resistant coating	<u>A</u> =Standard <u>N</u> =Large radial force <u>D</u> =No case drain <u>F</u> =Free running <u>L</u> =Low speed <u>V</u> =High temperature <u>S</u> =Low temperature	<u>Blank</u> =None <u>HPS</u> =High Pressure Seal <u>SG</u> =Seal Guard <u>HPS-SG</u> =High Pressure Seal & Seal Guard	<u>Blank</u> =None <u>R</u> =Valve Cavity Only <u>R12</u> =Bi-directional relief max 125 bar <u>R20</u> =Bi-directional relief max 207 bar	<u>Blank</u> =None <u>SS</u> =Speed Sensor, 4-pin, M12 male connector

Hydraulic Orbit Motors GKC



Flow Data

GKC195		195.6cm ³ /rev (11.93in ³ /rev)					Max Cont.	Max Int.	Peak		
Pressure bar [psi→]		35 [500]	70 [1000]	105 [1500]	140 [2000]	170 [2429]	210 [3000]	240 [3429]	275 [3929]	310 [4429]	
Flow	l/min [gpm↓]	Torque N m [lb-in]					Speed Specification				
	15 [4.0]	80 [708]	175 [1549]	271 [2398]	366 [3239]	454 [4018]	521 [4611]	589 [5212]	654 [5788]		
		76rpm	74rpm	71rpm	65rpm	62rpm	45rpm	32rpm	18rpm		
	30 [7.9]	86 [761]	179 [1584]	274 [2425]	371 [3283]	464 [4106]	545 [4823]	626 [5540]	704 [6230]	779 [6894]	
		153rpm	148rpm	144rpm	130rpm	119rpm	116rpm	99rpm	82rpm	65rpm	
	45 [11.9]	85 [752]	180 [1593]	279 [2469]	374 [3310]	476 [4212]	565 [5000]	654 [5788]	751 [6646]	825 [7301]	
		230rpm	226rpm	221rpm	212rpm	202rpm	186rpm	168rpm	148rpm	118rpm	
	61 [16.1]	79 [699]	179 [1584]	280 [2478]	376 [3327]	475 [4204]	574 [5080]	664 [5876]	760 [6726]	845 [7478]	
		307rpm	303rpm	300rpm	290rpm	283rpm	258rpm	236rpm	214rpm	181rpm	
	76 [20.1]	80 [708]	179 [1584]	281 [2487]	380 [3363]	480 [4248]	574 [5080]	671 [5938]	769 [6805]	860 [7611]	
		385rpm	379rpm	373rpm	365rpm	255rpm	332rpm	305rpm	280rpm	246rpm	
	91 [24.0]	80 [708]	174 [1540]	274 [2425]	375 [3319]	474 [4195]	575 [5088]	669 [5920]	770 [6814]		
		462rpm	456rpm	450rpm	439rpm	430rpm	412rpm	388rpm	363rpm		
	106 [28.0]	74 [655]	176 [1558]	271 [2398]	375 [3319]	474 [4195]	570 [5044]	669 [5920]	770 [6814]		
539rpm		532rpm	525rpm	516rpm	502rpm	475rpm	448rpm	420rpm			
121 [32.0]	70 [619]	169 [1496]	269 [2381]	369 [3265]	470 [4159]	570 [5044]	670 [5929]	763 [6752]			
	617rpm	609rpm	602rpm	590rpm	575rpm	541rpm	510rpm	480rpm			
136 [35.9]	70 [619]	163 [1442]	264 [2336]	364 [3221]	465 [4115]	565 [5000]	664 [5876]	763 [6752]			
	692rpm	684rpm	674rpm	660rpm	645rpm	600rpm	564rpm	527rpm			
151 [39.9]	70 [619]	164 [1451]	364 [3221]	466 [4124]	559 [4947]	660 [5841]					
Max Cont.	770rpm	759rpm	745rpm	733rpm	717rpm	666rpm	624rpm				
170 [44.9]	65 [575]	161 [1425]	259 [2292]	360 [3186]	461 [4080]	555 [4912]	655 [5796]				
Max Int.	866rpm	854rpm	844rpm	825rpm	808rpm	749rpm	702rpm				

GKC245		246.1cm ³ /rev (15.01in ³ /rev)					Max Cont.	Max Int.	Peak		
Pressure bar [psi→]		35 [500]	70 [1000]	105 [1500]	140 [2000]	170 [2429]	205 [2929]	240 [3429]	275 [3929]	310 [4429]	
Flow	l/min [gpm↓]	Torque N m [lb-in]					Speed Specification				
	15 [4.0]	106 [938]	227 [2009]	346 [3062]	461 [4080]	577 [5106]	643 [5690]	751 [6646]	853 [7549]	960 [8496]	
		60rpm	56rpm	54rpm	48rpm	42rpm	39rpm	30rpm	12rpm	6rpm	
	30 [7.9]	110 [973]	237 [2097]	354 [3133]	475 [4204]	596 [5274]	701 [6204]	800 [7080]	905 [8009]	1018 [9009]	
		120rpm	116rpm	113rpm	104rpm	95rpm	81rpm	67rpm	48rpm	35rpm	
	45 [11.9]	110 [973]	235 [2080]	360 [3186]	482 [4265]	607 [5372]	721 [6381]	840 [7434]	955 [8451]	1075 [9513]	
		182rpm	179rpm	175rpm	165rpm	157rpm	141rpm	123rpm	107rpm	90rpm	
	61 [16.1]	112 [991]	236 [2088]	360 [3186]	487 [4310]	611 [5407]	730 [6460]	844 [7469]	960 [8496]	1181 [10451]	
		244rpm	240rpm	236rpm	228rpm	221rpm	202rpm	184rpm	163rpm	144rpm	
	76 [20.1]	105 [929]	232 [2053]	354 [3133]	485 [4292]	614 [5434]	735 [6504]	823 [7283]	980 [8673]	1100 [9735]	
		306rpm	301rpm	297rpm	287rpm	277rpm	256rpm	238rpm	217rpm	197rpm	
	91 [24.0]	104 [920]	231 [2044]	356 [3150]	482 [4265]	612 [5416]	735 [6504]	961 [8504]	979 [8664]		
		365rpm	361rpm	357rpm	348rpm	338rpm	314rpm	290rpm	270rpm		
	106 [28.0]	102 [903]	227 [2009]	352 [3115]	483 [4274]	611 [5407]	733 [6487]	855 [7566]	980 [8673]		
426rpm		421rpm	416rpm	403rpm	375rpm	355rpm	335rpm	320rpm			
121 [32.0]	91 [805]	216 [1912]	346 [3062]	470 [4159]	600 [5310]	725 [6416]	850 [7522]	975 [8628]			
	489rpm	481rpm	474rpm	461rpm	447rpm	422rpm	395rpm	370rpm			
136 [35.9]	80 [708]	210 [1858]	334 [2956]	460 [4071]	580 [5133]	710 [6283]	840 [7434]				
	550rpm	544rpm	537rpm	524rpm	510rpm	480rpm	454				
151 [39.9]	80 [708]	202 [1788]	330 [2920]	456 [4035]	580 [5133]	700 [6195]	800 [7080]				
Max Cont.	612rpm	606rpm	600rpm	585rpm	570rpm	538rpm	507rpm				
170 [44.9]	66 [584]	202 [1788]	326 [2885]	446 [3947]	575 [5088]	685 [6062]	755 [6681]				
	688rpm	682rpm	674rpm	685rpm	640rpm	606rpm	571rpm				
189 [49.9]		195 [1726]	316 [2796]	441 [3903]	555 [4912]	670 [5929]					
		758rpm	749rpm	731rpm	710rpm	675rpm					
208 [54.9]		191 [1690]	311 [2752]	431 [3814]	551 [4876]	665 [5885]					
Max Int.		834rpm	824rpm	804rpm	783rpm	742rpm					

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Flow Data

GKC310		311.6cm ³ /rev (19.02in ³ /rev)					Max Cont.	Max Int.	Peak		
Pressure bar [psi→]		35 [500]	70 [1000]	105 [1500]	140 [2000]	170 [2429]	210 [3000]	240 [3429]	275 [3929]	310 [4429]	
Flow	l/min [gpm↓]	Torque N m [lb-in]					Speed Specification				
	15 [4.0]	136[1204]	292[2584]	431[3814]	573[5071]	684[6053]	801[7088]	934[8265]	1020[9027]	1070[9469]	
		47rpm	45rpm	42rpm	38rpm	32rpm	24rpm	17rpm	10rpm	3rpm	
	30 [7.9]	140[1239]	300[2655]	451[3991]	596[5274]	732[6478]	870[7699]	985[8717]	1100[9735]	1235[10929]	
		95rpm	92rpm	87rpm	81rpm	73rpm	63rpm	54rpm	44rpm	32rpm	
	45 [11.9]	140[1239]	306[2708]	461[4080]	612[5416]	760[6726]	909[8044]	1045[9248]	1180[10442]	1330[11770]	
		143rpm	140rpm	135rpm	129rpm	120rpm	110rpm	99rpm	88rpm	75rpm	
	61 [16.1]	140[1239]	302[2673]	462[4088]	615[5442]	771[6823]	920[8142]	1060[9381]	1200[10619]	1350[11947]	
		192rpm	188rpm	184rpm	178rpm	167rpm	154rpm	140rpm	124rpm	109rpm	
	76 [20.1]	135[1195]	296[2619]	457[4044]	617[5460]	772[6832]	925[8186]	1075[9513]	1220[10796]		
		241rpm	236rpm	232rpm	226rpm	216rpm	200rpm	182rpm	165rpm		
	91 [24.0]	130[1150]	296[2619]	456[4035]	614[5434]	774[6850]	929[8221]	1078[9540]	1226[10850]		
		289rpm	282rpm	278rpm	273rpm	260rpm	248rpm	232rpm	215rpm		
	106 [28.0]	130[1150]	290[2566]	450[3982]	609[5389]	768[6796]	928[8212]	1073[9496]	1220[10796]		
		336rpm	333rpm	327rpm	320rpm	308rpm	295rpm	276rpm	257rpm		
	121 [32.0]	125[1106]	285[2522]	444[3929]	600[5310]	763[6752]	918[8124]	1060[9381]			
384rpm		381rpm	375rpm	367rpm	354rpm	341rpm	320rpm				
136 [35.9]	120[1062]	276[2442]	434[3841]	590[5221]	748[6619]	912[8071]	1050[9292]				
	430rpm	421rpm	416rpm	410rpm	396rpm	383rpm	360rpm				
151 [39.9]	115[1018]	271[2398]	424[3752]	578[5115]	743[6575]	902[7982]	1035[9159]				
	Max Cont.	478rpm	466rpm	461rpm	456rpm	441rpm	427rpm	403rpm			
189 [44.9]	110[973]	245[2168]	384[3398]	523[4628]	682[6035]	836[7398]					
	597rpm	582rpm	576rpm	570rpm	551rpm	534rpm					
227 [60.0]		220[1947]	364[3221]	513[4540]	647[5726]	796[7044]					
	Max Int.	698rpm	691rpm	684rpm	661rpm	641rpm					

GKC395		391.3cm ³ /rev (23.87in ³ /rev)					Max Cont.	Max Int.	Peak		
Pressure bar [psi→]		35 [500]	70 [1000]	105 [1500]	140 [2000]	170 [2429]	205 [2929]	240 [3429]	275 [3929]	310 [4429]	
Flow	l/min [gpm↓]	Torque N m [lb-in]					Speed Specification				
	15 [4.0]	188[1664]	378[3345]	563[4982]	743[6575]	923[8168]	1083[9584]	1276[11292]	1371[12133]	1635[14469]	
		37rpm	36rpm	34rpm	32rpm	28rpm	21rpm	13rpm	5rpm	1rpm	
	30 [7.9]	188[1664]	383[3389]	578[5115]	763[6752]	953[8434]	1137[10062]	1316[11646]	1456[12885]	1635[14469]	
		75rpm	73rpm	71rpm	67rpm	64rpm	54rpm	44rpm	32rpm	20rpm	
	45 [11.9]	188[1664]	388[3434]	583[5159]	773[6841]	968[8566]	1152[10195]	1341[11867]	1540[13628]		
		114rpm	111rpm	108rpm	104rpm	99rpm	90rpm	80rpm	78rpm		
	61 [16.1]	183[1619]	383[3389]	583[5159]	773[6841]	968[8566]	1156[10230]	1345[11903]			
		153rpm	150rpm	146rpm	143rpm	131rpm	125rpm	115rpm			
	76 [20.1]	183[1619]	383[3389]	583[5159]	778[6885]	973[8611]	1161[10274]	1356[12000]			
		192rpm	188rpm	186rpm	181rpm	174rpm	161rpm	151rpm			
	91 [24.0]	173[1531]	373[3301]	573[5071]	768[6796]	968[8566]	1156[10230]				
		228rpm	228rpm	224rpm	219rpm	211rpm	203rpm				
	106 [28.0]	168[1487]	368[3257]	568[5027]	763[6752]	963[8522]	1151[10186]				
		267rpm	265rpm	260rpm	254rpm	247rpm	235rpm				
	121 [32.0]	163[1442]	358[3168]	558[4938]	753[6664]	947[8381]	1146[10142]				
305rpm		303rpm	298rpm	291rpm	281rpm	268rpm					
136 [35.9]	158[1398]	343[3035]	548[4850]	733[6487]	933[8487]	1131[10009]					
	345rpm	339rpm	335rpm	328rpm	316rpm	300rpm					
151 [39.9]	153[1354]	328[2903]	538[4761]	733[6487]	917[8115]						
	Max Cont.	385rpm	379rpm	374rpm	367rpm	358rpm					
189 [49.9]	133[1177]	303[2681]	518[4584]	733[6487]	913[8080]						
	481rpm	474rpm	468rpm	459rpm	448rpm						
227 [60.0]		283[2504]	502[4442]	721[6381]	891[7885]						
	Max Int.	569rpm	561rpm	551rpm	537rpm						

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Flow Data

GKC490		490.8cm ³ /rev (29.95in ³ /rev)					Max Cont.	Max Int.	Peak
Pressure bar [psi→]		35 [500]	70 [1000]	105 [1500]	140 [2000]	170 [2429]	205 [2929]	240 [3429]	275 [3929]
Flow	l/min [gpm↓]	Torque N m [lb-in] Speed Specification							
	15 [4.0]	235 [2080]	486 [4301]	725 [6416]	962 [8513]	1195 [10575]	1408 [12460]	1643 [14540]	1880 [16637]
		30rpm	29rpm	28rpm	27rpm	25rpm	21rpm	17rpm	12rpm
	30 [7.9]	235 [2080]	486 [4301]	734 [6513]	973 [8611]	1213 [10735]	1442 [12761]	1680 [14867]	
		60rpm	59rpm	57rpm	54rpm	51rpm	45rpm	38rpm	
	45 [11.9]	235 [2080]	485 [4292]	733 [6487]	974 [8619]	1218 [10779]	1450 [12832]		
		91rpm	89rpm	87rpm	84rpm	79rpm	71rpm		
	61 [16.1]	234 [2071]	480 [4248]	728 [6442]	973 [8611]	1217 [10770]	1456 [12885]		
		122rpm	121rpm	118rpm	114rpm	109rpm	100rpm		
	76 [20.1]	225 [1991]	470 [4159]	723 [6398]	972 [8602]	1217 [10770]			
		152rpm	150rpm	147rpm	144rpm	139rpm			
	91 [24.0]	220 [1947]	469 [4150]	719 [6363]	968 [8558]	121 [1071]			
		184rpm	181rpm	180rpm	176rpm	171rpm			
	106 [28.0]	209 [1850]	459 [4062]	708 [6265]	957 [8469]	1205 [10664]			
		214rpm	211rpm	208rpm	204rpm	198rpm			
	121 [32.0]	194 [1717]	448 [3965]	700 [6195]	947 [8381]	1200 [10619]			
244rpm		241rpm	237rpm	232rpm	226rpm				
136 [35.9]	175 [1549]	433 [3832]	683 [6044]	937 [8292]	1170 [10354]				
	275rpm	272rpm	265rpm	260rpm	255rpm				
151 [39.9]	160 [1416]	423 [3743]	673 [5956]	917 [8115]	1145 [10133]				
	Max Cont.	306rpm	303rpm	295rpm	290rpm	284rpm			
189 [44.9]	130 [1150]	364 [3221]	588 [5204]	857 [7584]					
	382rpm	379rpm	365rpm	362rpm					
227 [60.0]		323 [2858]	546 [4832]	800 [7080]					
	Max Int.		454rpm	442rpm	435rpm				

GKC625		623.0cm ³ /rev (38.01in ³ /rev)					Max Cont.	Max Int.	Peak
Pressure bar [psi→]		35 [500]	50 [714]	70 [1000]	85 [1214]	105 [1500]	120 [1714]	140 [2000]	170 [2429]
Flow	l/min [gpm↓]	Torque N m [lb-in] Speed Specification							
	15 [4.0]	275 [2434]	425 [3761]	570 [5044]	709 [6274]	849 [7513]	954 [8442]	1063 [9407]	1190 [10531]
		24rpm	24rpm	23rpm	22rpm	21rpm	18rpm	16rpm	15rpm
	30 [7.9]	295 [2611]	450 [3982]	604 [5345]	754 [6673]	923 [8168]	1093 [9673]	1267 [11212]	1355 [11991]
		45rpm	44rpm	44rpm	43rpm	42rpm	39rpm	37rpm	36rpm
	45 [11.9]	295 [2611]	448 [3965]	609 [5389]	764 [6761]	918 [8124]	1123 [9938]	1327 [11743]	1375 [12168]
		72rpm	71rpm	71rpm	70rpm	68rpm	66rpm	64rpm	63rpm
	61 [16.1]	285 [2522]	445 [3938]	604 [5345]	759 [6717]	914 [8088]	1118 [9894]	1323 [11708]	1370 [12124]
		94rpm	93rpm	92rpm	91rpm	89rpm	87rpm	85rpm	83rpm
	76 [20.1]	280 [2478]	439 [3885]	594 [5257]	754 [6673]	914 [8088]	1118 [9894]	1324 [11717]	1372 [12142]
		119rpm	118rpm	117rpm	116rpm	115rpm	112rpm	110rpm	107rpm
	91 [24.0]	264 [2336]	429 [3796]	585 [5177]	744 [6584]	904 [8000]	1108 [9805]	1317 [11655]	1365 [12080]
		143rpm	142rpm	140rpm	139rpm	138rpm	135rpm	132rpm	130rpm
	106 [28.0]	255 [2257]	414 [3664]	574 [5080]	734 [6496]	893 [7903]	1103 [9761]	1312 [11611]	1360 [12035]
		168rpm	166rpm	165rpm	164rpm	162rpm	159rpm	156rpm	153rpm
	121 [32.0]	240 [2124]	400 [3540]	559 [4947]	719 [6363]	878 [7770]	1088 [9628]	1297 [11478]	1343 [11885]
192rpm		190rpm	188rpm	187rpm	185rpm	182rpm	179rpm	176rpm	
136 [35.9]	220 [1947]	379 [3354]	539 [4770]	698 [6177]	853 [7549]	1047 [9265]			
	216rpm	214rpm	213rpm	212rpm	210rpm	207rpm			
151 [39.9]	200 [1770]	360 [3186]	519 [4593]	679 [6009]	833 [7372]	1012 [8956]			
	Max Cont.	240rpm	239rpm	238rpm	237rpm	236rpm	233rpm		
189 [49.9]		310 [2743]	469 [4150]	629 [5566]	788 [6973]				
		298rpm	296rpm	294rpm	290rpm				
227 [60.0]		254 [2248]	430 [3805]	588 [5204]	742 [6566]				
	Max Int.		355rpm	353rpm	350rpm	345rpm			

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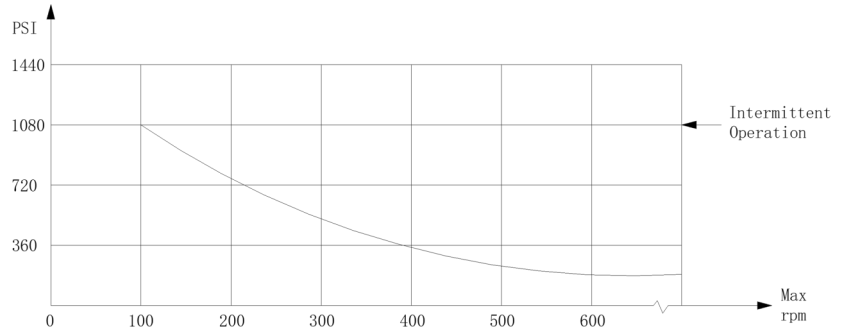
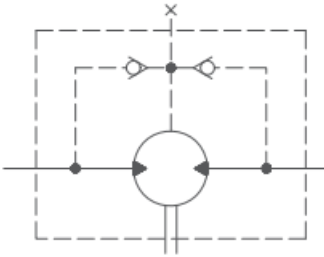
Flow Data

GKC800		802.4cm ³ /rev (48.96in ³ /rev)						Max Cont.
Pressure bar [psi→]		35 [500]	50 [714]	70 [1000]	85 [1214]	105 [1500]	120 [1714]	140 [2000]
Flow	l/min [gpm↓]	Torque N m [lb-in]						Speed Specification
	15 [4.0]	434[3841]	607[5372]	838[7416]	1018[9009]	1238[10956]	1377[12186]	1646[14566]
		18rpm	17rpm	17rpm	16rpm	15rpm	14rpm	13rpm
	30 [7.9]	419[3708]	395[3496]	828[7327]	1003[8876]	1238[10956]	1412[12496]	1606[14212]
		36rpm	35rpm	35rpm	34rpm	33rpm	31rpm	29rpm
	45 [11.9]	379[3354]	564[4991]	794[7027]	970[8584]	1187[10504]	1358[12018]	
		55rpm	55rpm	54rpm	54rpm	53rpm	51rpm	
	61 [16.1]	339[3000]	519[4593]	758[6708]	937[8292]	1167[10327]		
		75rpm	74rpm	72rpm	71rpm	70rpm		
	76 [20.1]	324[2867]	498[4407]	728[6442]	897[7938]	1135[10044]		
		93rpm	92rpm	90rpm	89rpm	87rpm		
	91 [24.0]	314[2779]	468[4142]	698[6177]	857[7584]	1076[9522]		
		111rpm	110rpm	109rpm	108rpm	105rpm		
	106 [28.0]	309[2734]	448[3965]	648[5735]	797[7053]	1016[8991]		
		129rpm	128rpm	127rpm	125rpm	123rpm		
	121 [32.0]	279[2469]	419[3708]	608[5381]	746[6602]			
148rpm		146rpm	145rpm	143rpm				
136 [35.9]	269[2381]	398[3522]	547[4841]	695[6150]				
	166rpm	165rpm	165rpm	164rpm				
151 [39.9]	249[2204]	348[2195]	497[4398]	631[5584]				
	184rpm	183rpm	182rpm	180rpm				
189 [44.9]		299[2646]	438[3876]	576[5097]				
		230rpm	228rpm	225rpm				
227 [60.0]			378[3345]	516[4566]				
			276rpm	273rpm				

GKC985		981.6cm ³ /rev (59.90in ³ /rev)						Max Cont.
Pressure bar [psi→]		35 [500]	50 [714]	70 [1000]	85 [1214]	105 [1500]	120 [1714]	140 [2000]
Flow	l/min [gpm↓]	Torque N m [lb-in]						Speed Specification
	15 [4.0]	484[4283]	774[6850]	964[8531]	1203[10646]	1443[12770]	1567[13867]	1786[15805]
		15rpm	15rpm	14rpm	14rpm	13rpm	13rpm	12rpm
	30 [7.9]	494[4372]	749[6628]	994[8796]	1233[10912]	1477[13071]	1637[14487]	1871[16558]
		30rpm	30rpm	29rpm	28rpm	27rpm	26rpm	25rpm
	45 [11.9]	494[4372]	749[6628]	1000[8850]	1248[11044]	1492[13204]	1696[15009]	
		45rpm	45rpm	44rpm	43rpm	42rpm	41rpm	
	61 [16.1]	489[4327]	739[6540]	995[8805]	1243[11000]	1497[11478]		
		61rpm	61rpm	60rpm	59rpm	58rpm		
	76 [20.1]	475[4204]	730[6460]	983[8699]	1233[10912]	1481[13106]		
		77rpm	76rpm	76rpm	75rpm	74rpm		
	91 [24.0]	460[4071]	704[6230]	959[8487]	1217[10770]	1466[12973]		
		92rpm	92rpm	91rpm	90rpm	89rpm		
	106 [28.0]	444[3929]	700[6195]	949[8398]	1197[10593]	1446[12976]		
		107rpm	107rpm	106rpm	105rpm	103rpm		
	121 [32.0]	425[3761]	674[5965]	923[8168]	1156[10230]			
123rpm		122rpm	121rpm	120rpm				
136 [35.9]	394[3487]	645[5708]	893[7903]	1120[9912]				
	138rpm	138rpm	137rpm	135rpm				
151 [39.9]	365[3230]	609[5389]	964[8531]	1080[9558]				
	153rpm	152rpm	151rpm	150rpm				
189 [49.9]	325[2876]	858[7593]	829[7336]	1047[9265]				
	191rpm	190rpm	189rpm	188rpm				
227 [60.0]		525[4646]	809[7159]	1020[9027]				
		230rpm	229rpm	226rpm				

Technical Data

Shaft Seal Rated Pressure

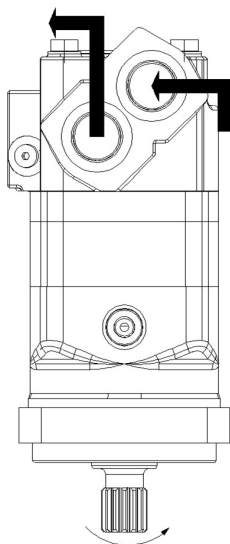


Case Drain :

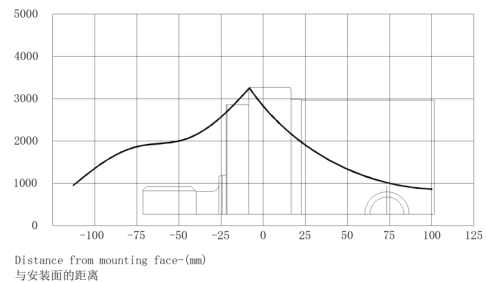
In applications without a motor drain line, the pressure exerted on the shaft seal is marginally in excess of the return line pressure. When the Drain line is used, the pressure exerted on the shaft seal is equal to the return line pressure.

Shaft Rotation Direction

GKC for CC Mounting Radial forces



Radial forces-(daN)
径向力



The bearing curve represents allowable bearing loads for an B10 bearing life(2000 hours or 12x10⁶ revolutions at 100rpm) at rated output torque. Other speed load multiply a load values.

The maximum load curve is defined by bearing static load capacity.

This curve should not be exceeded at any time including shock loads.

ALA Industries Limited



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