

## GT Series Hydraulic Motors

### Options

- Flange and wheel mount
- Bearingless motor
- Motor with brake
- Tachometer connection
- Speed sensing
- Side and rear ports
- Straight, splined and tapered shafts
- Metric and BSPP ports
- Other special features

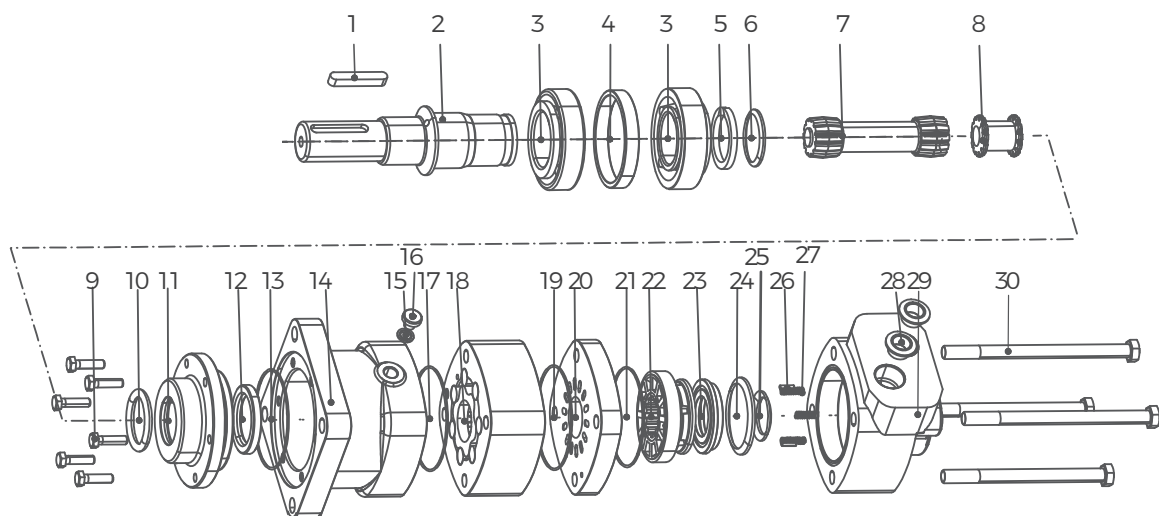
### Applications

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













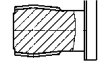
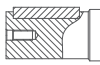
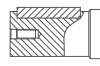
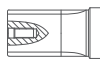
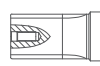
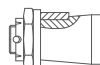

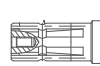

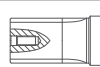
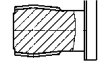
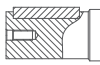
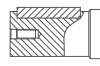
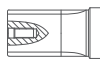
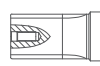
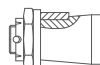

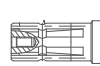

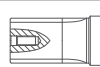





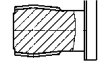
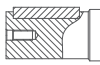
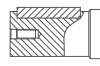
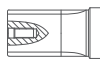
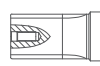
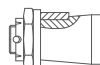

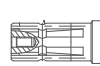

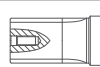
### General

Max. Displacement	cm <sup>3</sup> /rev [ in <sup>3</sup> /rev ]	724.3 [44.2]
Max. Speed	RPM	775
Max. Torque	daNm [lb-in]	cont.: 130 [11500] int.: 148 [13100]
Max. Output	kW [HP]	40 [54]
Max. Pressure Drop	bar [PSI]	cont.: 200 [2900] int.: 240 [3480]
Max. Oil Flow	lpm [GPM]	150 [39.6]
Min. Speed	RPM	5
Pmissible Shaft Loads		Pa=1000 [2250]
Operating Fluid		Mineral based- HLP (DIN 51524) or HM (ISO 6743/4)
Temperature Range	°C [°F]	-40÷140 [-40÷284]
Optimal Viscosity range	mm <sup>2</sup> /s [SUS]	20÷75 [98÷347]
Filtration		ISO code 20/16 (Min. recommended fluid filtration of 25 microns)



- |                          |                      |                     |                            |                       |
|--------------------------|----------------------|---------------------|----------------------------|-----------------------|
| 1 Parallel key           | 7 Transmission shaft | 13 O-ring           | 19 O-ring                  | 25 Small special ring |
| 2 Output shaft           | 8 Coupling shaft     | 14 Housing          | 20 Balance plate           | 26 Positioning pins   |
| 3 Tapered roller bearing | 9 Hexagon screws     | 15 Washer           | 21 O-ring                  | 27 Spring             |
| 4 Bearing outer retainer | 10 O-ring            | 16 Plug             | 22 Flow distribution plate | 28 Oil port plug cap  |
| 5 Washers                | 11 Front cover       | 17 O-ring           | 23 Flow pressure plate     | 29 Rear housing       |
| 6 Special shape ring     | 12 Shaft seal        | 18 Rotor and stator | 24 Large special ring      | 30 Screw              |

### Ordering Code

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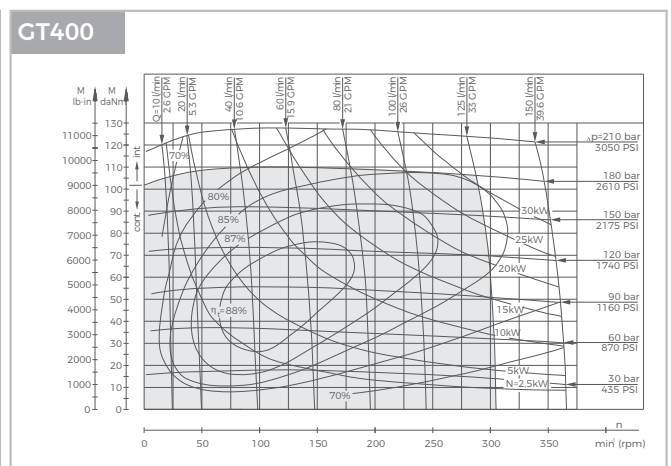
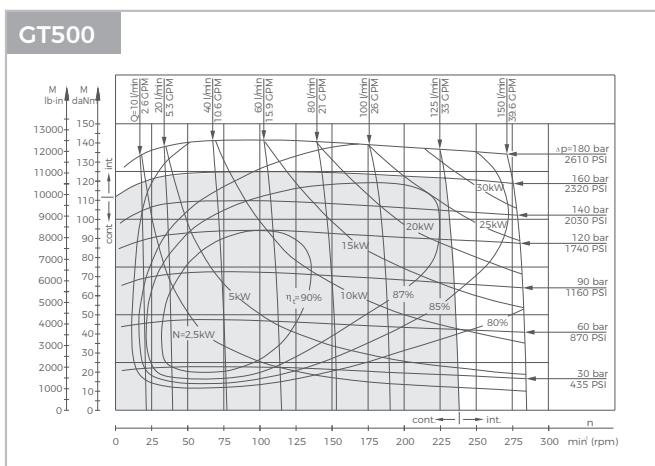
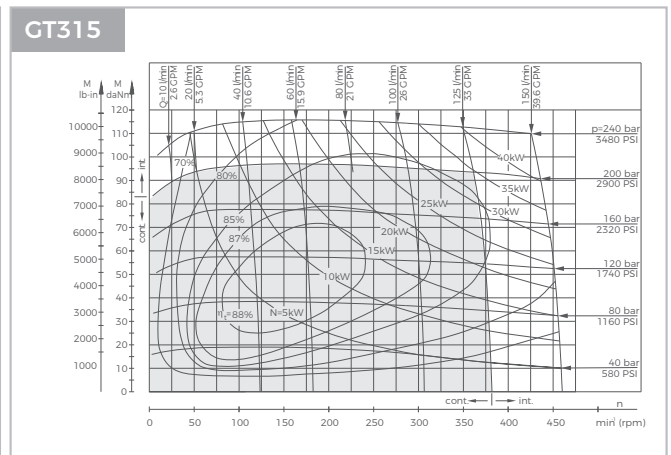
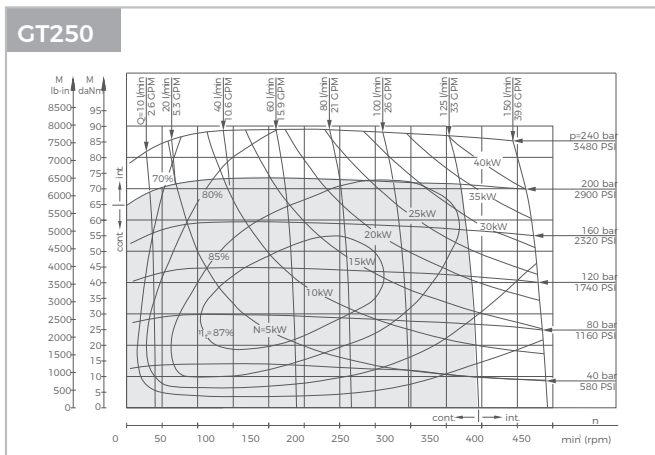
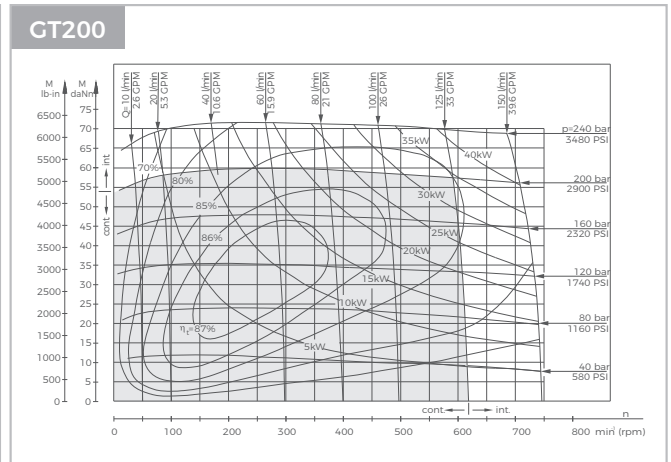
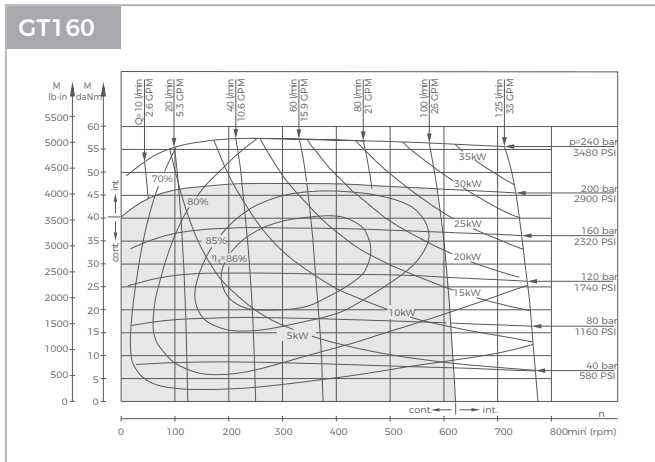
## Specifications

Type		GT160	GT200	GT250	GT315
Displacement, cm <sup>3</sup> /rev [ in <sup>3</sup> /rev ]		161.1[9.83]	201.4[12.29]	251.8[15.36]	326.3[19.90]
Max. Speed, RPM	Cont.	622	620	496	382
	Int.*	775	752	601	461
Max. Torque daNm [lb-in]	Cont.	47[4160]	59[5220]	73[6460]	95[8410]
	Int.*	56[4960]	71[6285]	88[7790]	114[10090]
	Peak**	66[5840]	82[7260]	102[9030]	133[11770]
Max. Output kW [HP]	Cont.	26.5[36]	33.5[45]	33.5[45]	33.5[45]
	Int.*	32[43]	40[54]	40[54]	40[54]
Max. Pressure Drop bar [PSI]	Cont.	200[2900]	200[2900]	200[2900]	200[2900]
	Int.*	240[3480]	240[3480]	240[3480]	240[3480]
	Peak**	280[4050]	280[4050]	280[4050]	280[4050]
Max. Oil Flow lpm [GPM]	Cont.	100[26]	125[33]	125[33]	125[33]
	Int.*	125[33]	150[39.6]	150[39.6]	150[39.6]
Max. Inlet Pressure bar [PSI]	Cont.	210[3050]	210[3050]	210[3050]	210[3050]
	Int.*	250[3600]	250[3600]	250[3600]	250[3600]
	Peak**	300[4350]	300[4350]	300[4350]	300[4350]
Max. Return Pressure without Drain Line bar [PSI]	Cont.	140[2030]	140[2030]	140[2030]	140[2000]
	Int.*	175[2540]	175[2540]	175[2540]	175[2500]
	Peak**	210[3050]	210[3050]	210[3050]	210[3000]
Max. Starting Pressure with Unloaded Shaft, bar [PSI]		10[150]	10[150]	10[150]	10[150]
Min. Starting Torque daNm [lb-in]	At max. press. drop Cont.	34[3010]	43[3800]	53[4690]	74[6550]
	At max. press. drop Int.*	41[3630]	52[4600]	63[5580]	89[7880]
Min. Speed***, RPM		10	9	8	7
Weight, kg [lb] For Reare Ports +0.450 [.992]	GT	20[44.1]	21.5[47.4]	21[46.3]	22[48.5]
	GTS	15[33.1]	15.5[34.2]	16[35.3]	17[37.5]

## Specifications

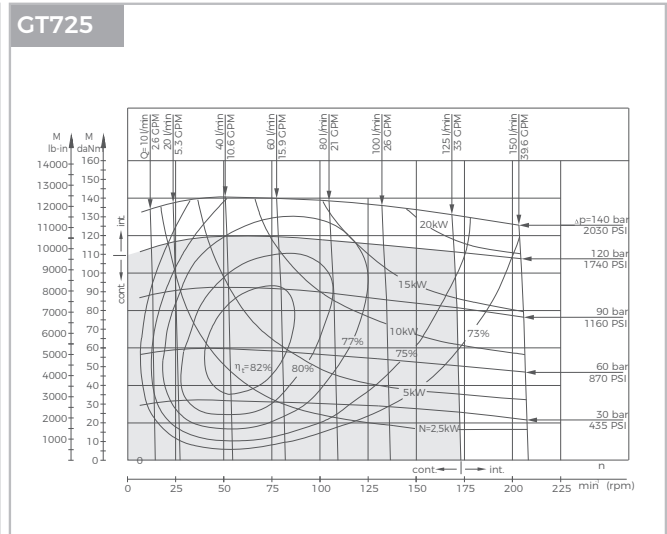
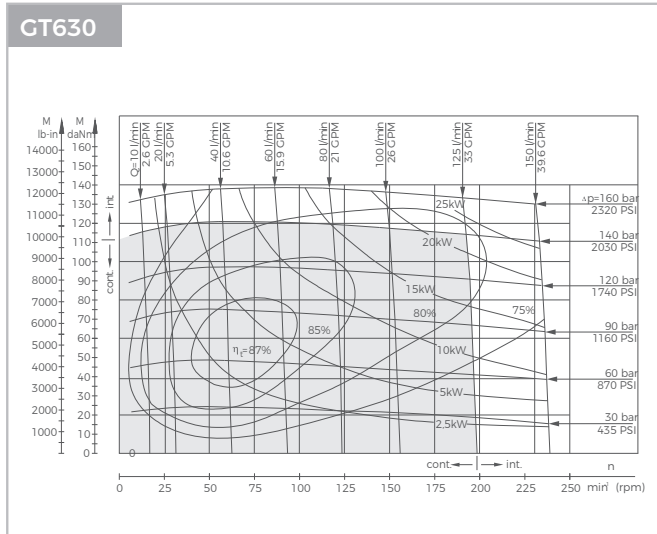
Type		GT400	GT500	GT630	GT725
Displacement, cm <sup>3</sup> /rev [ in <sup>3</sup> /rev ]		410.9[25.06]	523.6[31.95]	631.2[38.52]	724.3[44.2]
Max. Speed	Cont.	304	238	197	172
RPM	Int.*	368	289	234	209
Max. Torque	Cont.	108[9560]	122[10800]	130[11500]	127[11240]
daNm [lb-in]	Int.*	126[11150]	137[12125]	148[13100]	147[13010]
	Peak**	144[12745]	160[14160]	176[15580]	175[15490]
Max. Output	Cont.	30[40]	26.5[36]	24.3[33]	20.2[27]
kW [HP]	Int.*	35[47]	30[40]	27.5[37]	26.8[36]
Max. Pressure Drop	Cont.	180[2610]	160[2320]	140[2010]	120[1740]
bar [PSI]	Int.*	210[3050]	180[2610]	160[2320]	140[2010]
	Peak**	240[3480]	210[3050]	190[2760]	165[2395]
Max. Oil Flow	Cont.	125[33]	125[33]	125[33]	125[33]
lpm [GPM]	Int.*	150[39.6]	150[39.6]	150[39.6]	150[39.6]
Max. Inlet Pressure	Cont.	210[3050]	210[3050]	210[3050]	210[3050]
bar [PSI]	Int.*	250[3600]	250[3600]	250[3600]	250[3600]
	Peak**	300[4350]	300[4350]	300[2000]	300[4350]
Max. Return Pressure	Cont.	140[2000]	140[2000]	140[2500]	140[2000]
without Drain Line	Int.*	175[2500]	175[2500]	175[3000]	175[2500]
bar [PSI]	Peak**	210[3000]	210[3000]	210[3000]	210[3000]
Max. Starting Pressure with Unloaded Shaft, bar [PSI]	At max. press. drop Cont.	10[150]	10[150]	10[150]	10[150]
Min. Starting Torque daNm [lb-in]	At max. press. drop Int.*	84[7435]	95[8410]	95[8410]	95[8410]
Min. Speed***, RPM		97[8585]	106[9380]	110[9740]	115[10180]
Min. Speed***, RPM		6	5	5	5
Weight, kg [lb]	GT	23[50.7]	24[52.9]	23.5[51.8]	24.5[54.0]
For Reare Ports +0,450 [.992]	GTS	18[39.7]	19[41.9]	18.5[40.8]	19.5[43.0]

## Function Diagrams



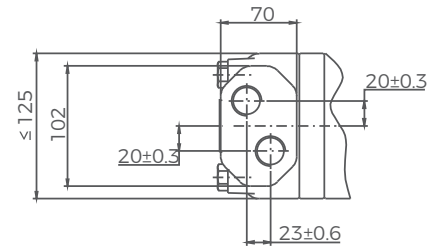
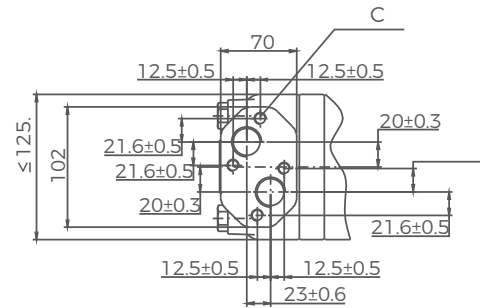
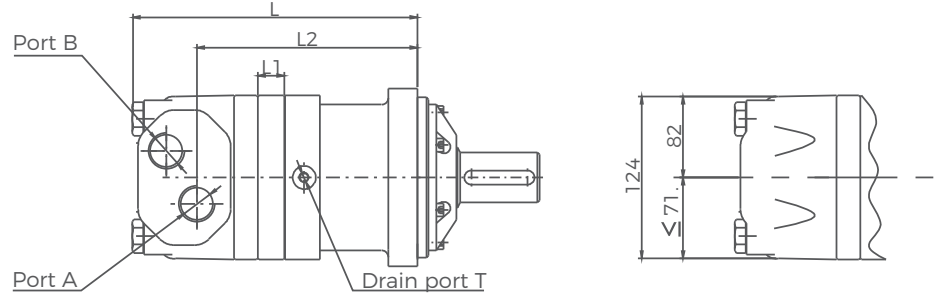
The function diagrams data is for average performance of randomly selected motors at backpressure. 5÷10 bar [72.5÷145 PSI] and oil with viscosity of 32 mm<sup>2</sup>/s [150 SUS] at 50°C [122°F].

## Function Diagrams



The function diagrams data is for average performance of randomly selected motors at backpressure. 5 ÷ 10 bar [72.5 ÷ 145 PSI] and oil with viscosity of 32 mm<sup>2</sup>/s [150 SUS] at 50°C [122°F].

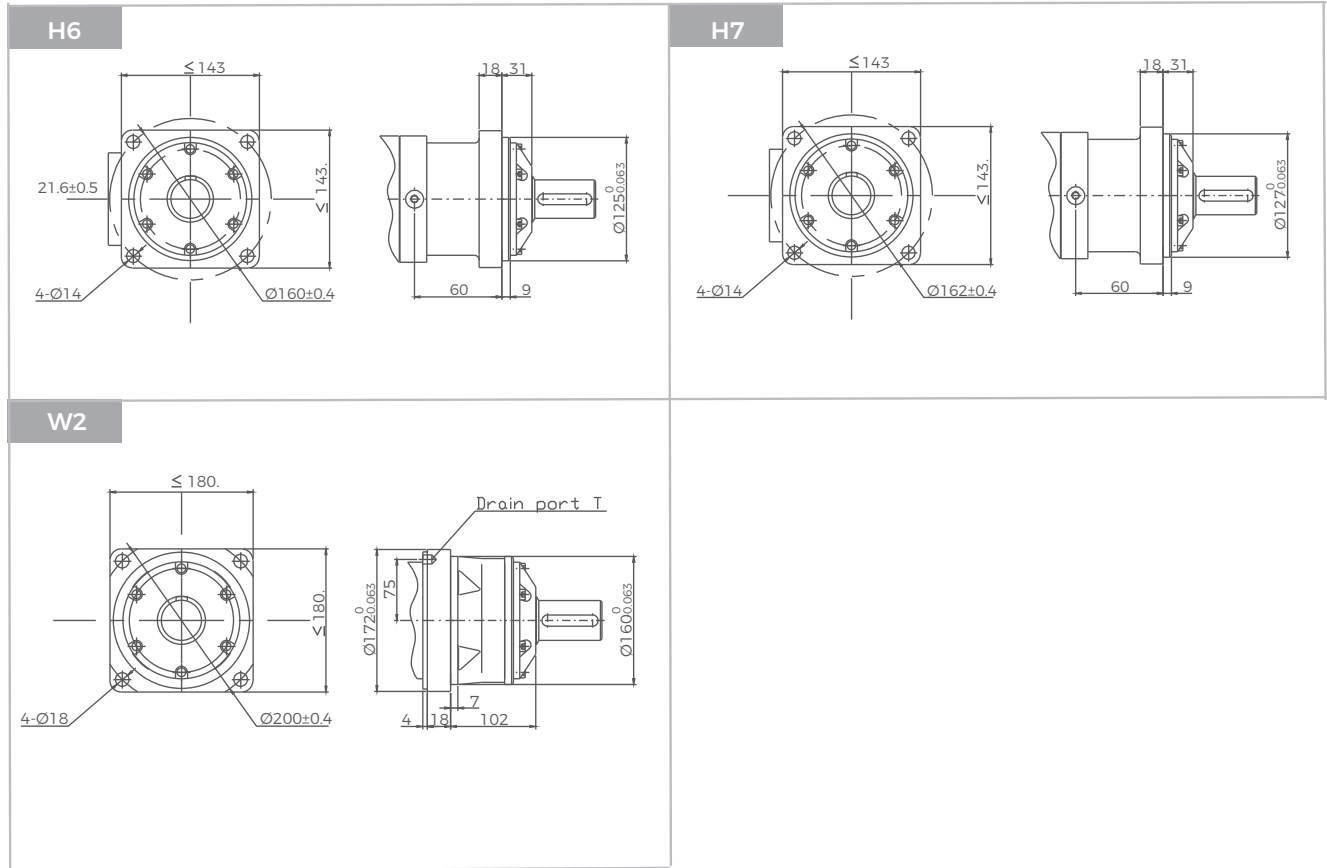
## GT Dimensions and Mountings



Model	L	L1	L2
GT160	193	17	142.5
GT200	197	21	146.5
GT250	204	14	152.5
GT315	210	20	158.5
GT400	217	27	165.5
GT500	225	35	173.5
GT630	237	47	185.5
GT725	248	58	196.5

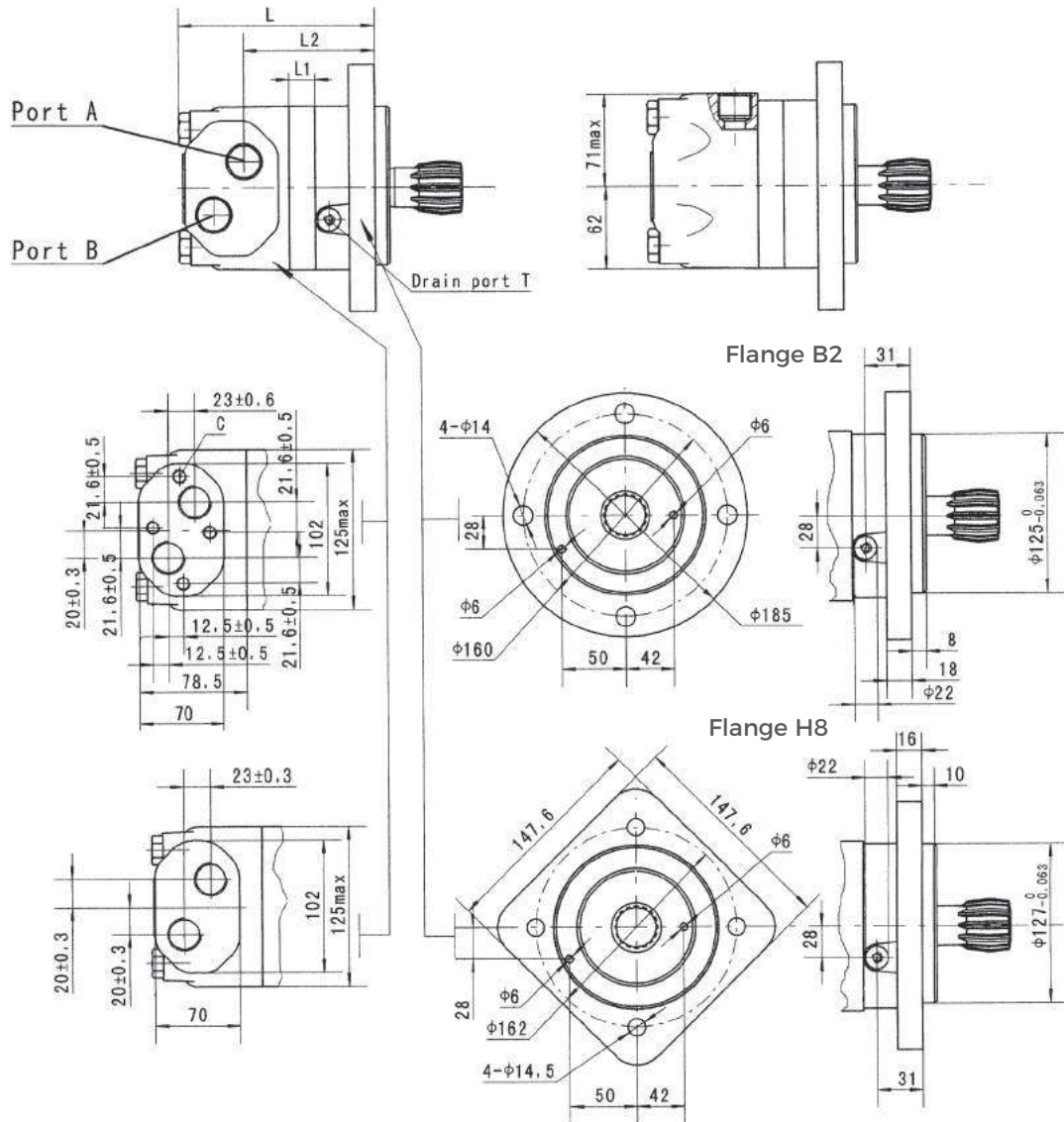
Mounting	G3 (depth)	M5 (depth)	U4 (depth)	M9 (depth)	U5 (depth)
P(A, B)	G3/4(18)	M27 x 2(18)	1-1/16-12 UN(18)	M27 x 2(18)	1-1/16-12 UN(18)
T	G1/4(12)	M14 x 1.5(12)	9/16-18 UNF(12)	M14 x 1.5(12)	7/16-20 UNF(12)
C	4-M10(10)	4-M10(10)	—	—	—

## GT Flange Covers Dimensions





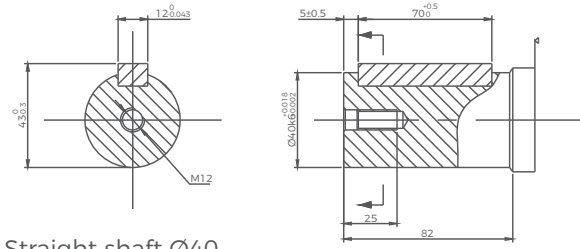
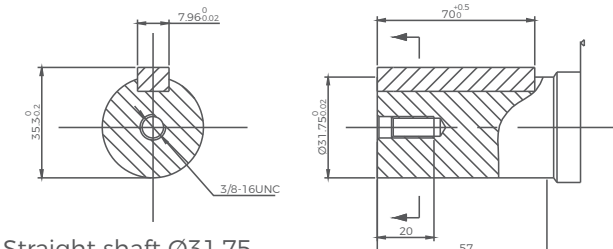
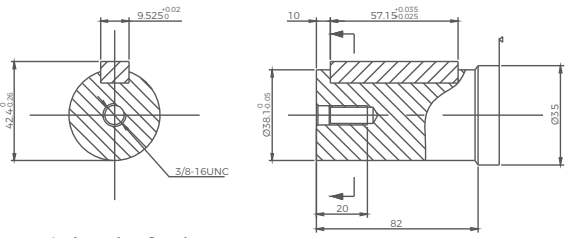
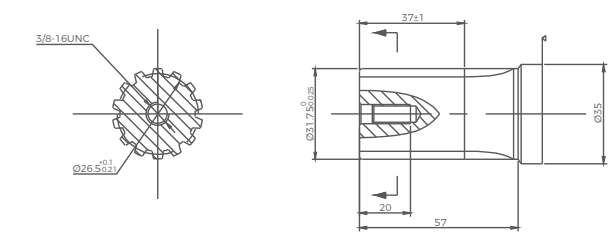
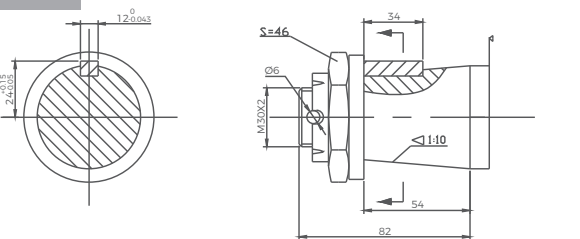
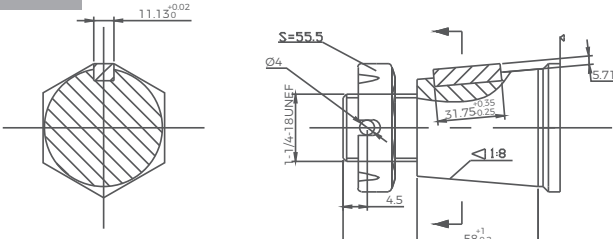
## GTS Bearingless Motor Dimensions and Mounting



Model	L	L1	L2
GTS160	148	17	96.5
GTS200	152	21	100.5
GTS250	157	14	109
GTS315	163	20	115
GTS400	170	27	122
GTS500	178	35	130
GTS630	190	47	142
GTS725	201	58	153

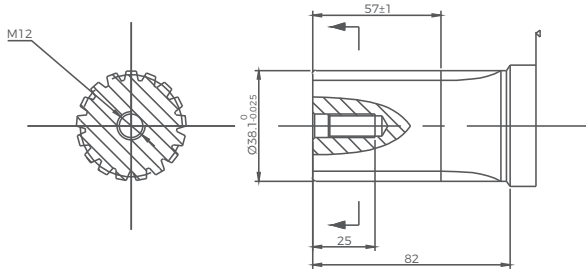
Mounting	G3	M5	U4	M9	U5
	(depth)	(depth)	(depth)	(depth)	(depth)
P(A, B)	G3/4(18)	M27 x 2(18)	1-1/16-12 UN(18)	M27 x 2(18)	1-1/16-12 UN(18)
T	G1/4(12)	M14 x 1.5(12)	9/16-18 UNF(12)	M14 x 1.5(12)	7/16-20 UNF(12)
C	4-M10(10)	4-M10(10)	—	—	—

### GT Shafts Dimensions

<p><b>SK</b></p>  <p>Straight shaft Ø40 Parallel key 12 x 8 x 70</p>	<p><b>SM</b></p>  <p>Straight shaft Ø31.75 Parallel key 7.96 x 7.96 x 40</p>
<p><b>SL</b></p>  <p>Straight shaft Ø38.1 Parallel key 9.525 x 9.525 x 57.15</p>	<p><b>R3</b></p>  <p>Splined shaft 14-DP 12/24</p>
<p><b>T6</b></p>  <p>Tapered shaft Ø45 Parallel key B12 x 8 x 28 Tightening torque: 500 ± 10 Nm</p>	<p><b>T7</b></p>  <p>Tapered shaft Ø45 Parallel key 11.13 x 11.13 x 31.75 Tightening torque: 500 ± 10 Nm</p>

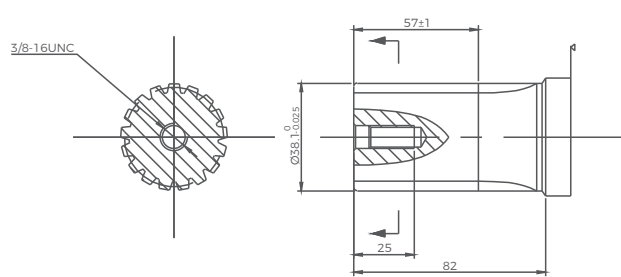
## GT Shafts Dimensions

RA



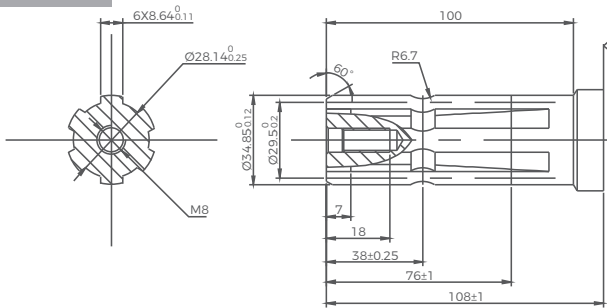
Splined shaft 17-DP 12/24

R9



Splined shaft 17-DP 12/24

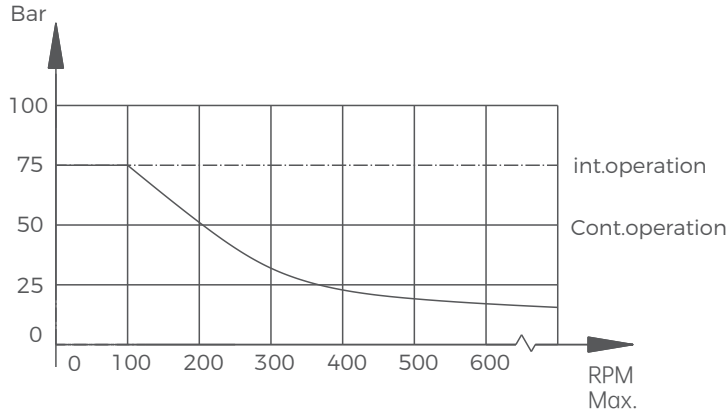
R7



Splined shaft 6-34.85 x 28.14 x 8.64

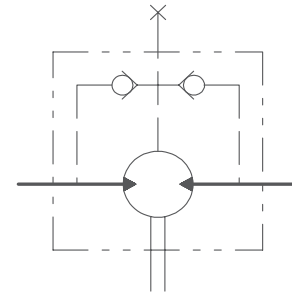
## GT Series Hydraulic Motors

### Permissible shaft seal pressure



### Drain port

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



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

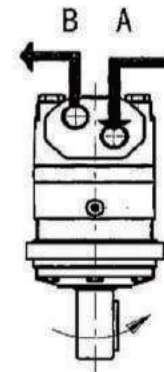
GT with standard shaft seal, check valves and with drain connection: The shaft seal pressure equals the pressure on the drain line.

### Standard direction of shaft rotation: Standard

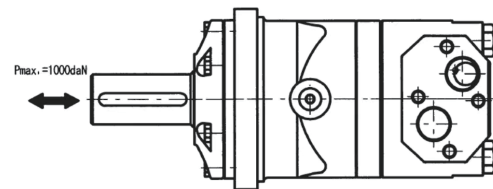
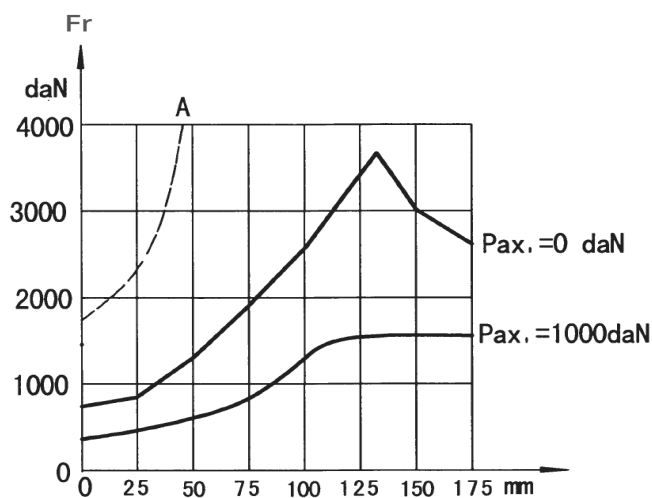
When facing shaft end of motor, shaft to rotate:

Clockwise. When port A is pressurized.

Counter-clockwise port B is pressurized.



### Axial and radial force



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.

## GV Series Hydraulic Motors

### Options

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

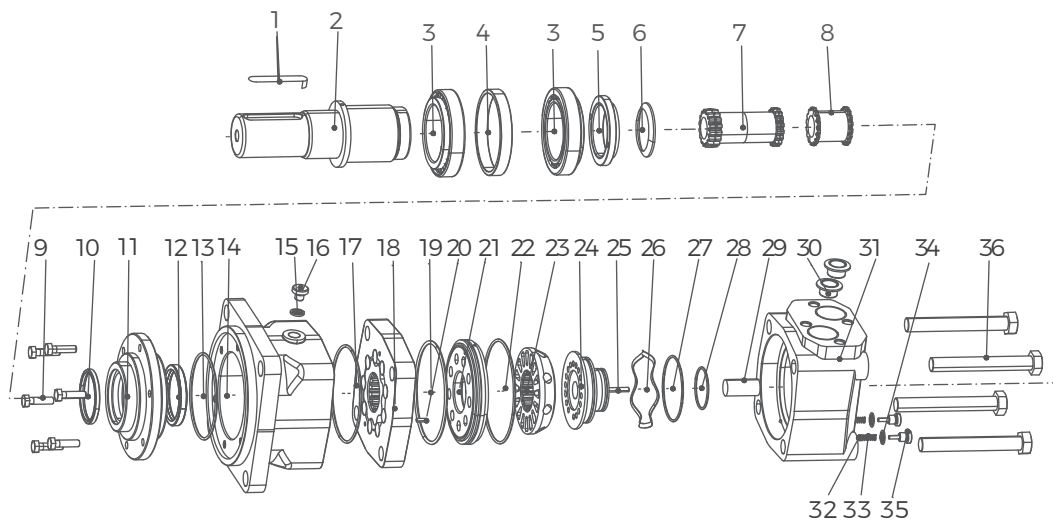
### Applications

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














### General

Max. Displacement	cm <sup>3</sup> /rev [in <sup>3</sup> /rev]	801,8 [48,91]
Max. Speed	RPM	630
Max. Torque	daNm [lb-in]	cont.: 188 [16650] int.: 211 [18650]
Max. Output	kW [HP]	64 [85,8]
Max. Pressure Drop	bar [PSI]	cont.: 200 [2900] int.: 240 [3480]
Max. Oil Flow	lpm [GPM]	240 [63,4]
Min. Speed	RPM	5
Permissible Shaft Loads	daNm [lbs]	Pa=1500 [3300]
Pressure fluid		Mineral based- HLP (DIN 51524) or HM (ISO 6743/4)
Temperature Range	°C [°F]	-40÷140 [-40÷284]
Optimal Viscosity range	mm <sup>2</sup> /s [SUS]	20÷75 [98÷347]
Filtration		ISO code 20/16 (Min. recommended fluid filtration of 25 microns)



- |                      |                   |                     |                               |                      |
|----------------------|-------------------|---------------------|-------------------------------|----------------------|
| 1 Parallel Key       | 8 Coupling shaft  | 15 Washer           | 22 O-ring                     | 29 Limit posts       |
| 2 Output shaft       | 9 Hexagon screws  | 16 Plugs            | 23 Flow distribution plate    | 30 Oil port plug cap |
| 3 Roller bearing     | 10 Anti-dust ring | 17 O-ring           | 24 Distributor pressure plate | 31 Rear cover        |
| 4 Bearing retainer   | 11 Front cover    | 18 Rotor and stator | 25 Positioning pins           | 32 Steel ball        |
| 5 Lock nut           | 12 Shaft seal     | 19 O-Ring           | 26 Wave spring                | 33 Spring            |
| 6 Special shape ring | 13 O-ring         | 20 Positioning pins | 27 O-ring                     | 34 Washer            |
| 7 Transmission shaft | 14 Housing        | 21 Balance plate    | 28 O-ring                     | 35 Hexagon plugs     |
|                      |                   |                     |                               | 36 Screw             |

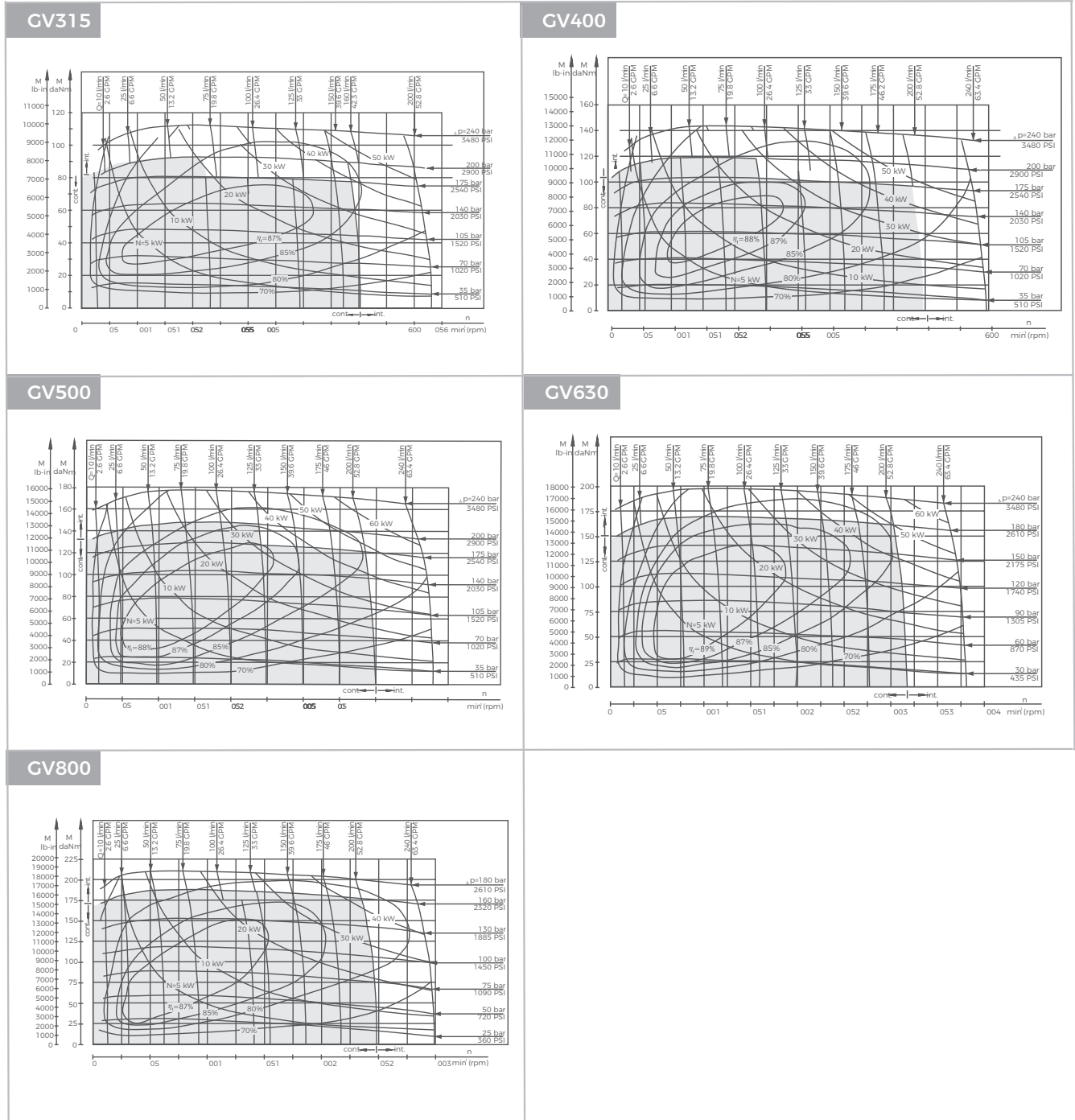
### Ordering Code

CV SERIES		DISP		FLANGE		SHAFT		PORTS		ROTATION		PAINT		FUNCTION	
CODE	TYPE	CODE	DISP	CODE	FLANGE	CODE	SHAFT	CODE	PORTS	CODE	ROTATION	CODE	PAINT	CODE	FUNCTION
GV	Orbital motor	315	314.5cm <sup>3</sup> /rev [19.18in <sup>3</sup> /rev]	H9	4- Ø18 square Ø200, pilot Ø160×11 	C3	Cardan 16-DP 10/20 	G5	G1, G1/4 manifold 4×M12	A	Standard	A	No paint	A	Standard
CVS	Bearingless motor	400	400.9cm <sup>3</sup> /rev [24.45in <sup>3</sup> /rev]	W3	4- Ø18 wheel Ø224, pilot Ø180×10 	SN	Ø50 parallel key 14×9×70 	M6	M33×2, M14×1.5 manifold 4×M12	B	Blue	V	High temp.	B	Blue
		500	499.6cm <sup>3</sup> /rev [30.48in <sup>3</sup> /rev]	B3	4- Ø14 square Ø180, pilot Ø140×8 	RB	Ø53.975 splined tooth 16-DP 8/16 	U6	1-5/16-12UNF O-ring manifold 9/16-18UNF	C	Black	S	Low temp.	C	Black
		630	629.1cm <sup>3</sup> /rev [38.38in <sup>3</sup> /rev]	S	4- Ø14 circle Ø180, pilot Ø140×8 	RC	Ø53.975 splined tooth 16-DP 8/16 	G6	G1, G1/4	S	Silver grey			S	Silver grey
		800	801.8cm <sup>3</sup> /rev [48.91in <sup>3</sup> /rev]			SP	Ø57.15 parallel key 12.7×12.7×57.16 	M7	M33×2, M14×1.5						
						T8	Tapered Ø57.15 parallel key 16×10×32 	U7	1-5/16-12UNF O-ring 7/16-20UNF						
						T9	Tapered Ø60 parallel key 14.308×14.308×50.8 								

## Specifications

Type		GV315	GV400	GV500	GV630	GV800
Displacement, cm <sup>3</sup> /rev [ in <sup>3</sup> /rev ]		314,5[19.18]	400,9[24.45]	499,6[30.48]	629,1[38.38]	801,8[48.91]
Max. Speed	Cont.	510	500	400	320	250
RPM	Int.*	630	600	480	380	300
Max. Torque	Cont.	92[8150]	118[10450]	146[12950]	166[14700]	188[16650]
daNm [lb-in]	Int.*	111[9800]	141[12500]	176[15550]	194[17150]	211[18650]
	Peak**	129[11400]	164[14500]	205[18150]	221[19550]	247[21850]
Max. Output	Cont.	42,5[57]	53,5[71.7]	53,5[71.7]	48[64.4]	42,5[57]
kW [HP]	Int.*	51[68.4]	64[85.8]	64[85.8]	56[75]	48[64.4]
Max. Pressure Drop	Cont.	200[2900]	200[2900]	200[2900]	180[2610]	160[2320]
bar [PSI]	Int.*	240[3480]	240[3480]	240[3480]	210[3050]	180[2610]
	Peak**	280[4060]	280[4060]	280[4060]	240 [3480]	210[3050]
Max. Oil Flow	Cont.	160[42.3]	200[52.8]	200[52.8]	200[52.8]	200[52.8]
lpm [GPM]	Int.*	200[52.8]	240[63.4]	240[63.4]	240[63.4]	240[63.4]
Max. Inlet Pressure	Cont.	210[3050]	210[3050]	210[3050]	210[3050]	210[3050]
bar [PSI]	Int.*	250[3620]	250[3620]	250[3620]	250[3620]	250[3620]
	Peak**	300[4350]	300[4350]	300[4350]	300[4350]	300[4350]
Max. Return Pressure	Cont.	140[2040]	140[2040]	140[2040]	140[2040]	140[2040]
without Drain Line	Int.*	175[2540]	175[2540]	175[2540]	175[2540]	175[2540]
bar [PSI]	Peak**	210[3050]	210[3050]	210[3050]	210[3050]	210[3050]
Max. Starting Pressure with Unloaded Shaft, bar [PSI]		8[120]	8[120]	8[120]	8[120]	8[120]
Min. Starting Torque daNm [lb-in]	At max. press. drop Cont.	71[6300]	91[8100]	113[10000]	133[11800]	151[13400]
	At max. press. drop Int.*	85[7500]	109[9600]	136[12000]	155[13700]	170[15000]
		10	9	8	6	5
Min. Speed***, RPM	GV	31,8[70.1]	32,6[71.9]	33,5[73.8]	34,9[76.9]	36,5[80.5]
Weight, kg [lb]	GV5	22,7[50]	23,5[51.8]	24,4[53.8]	25,6[56.4]	27,7[61.1]

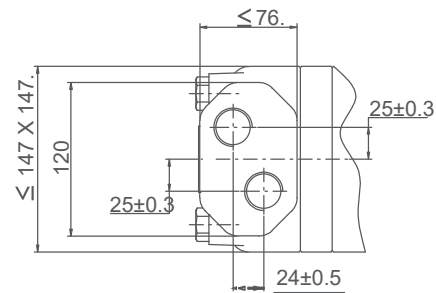
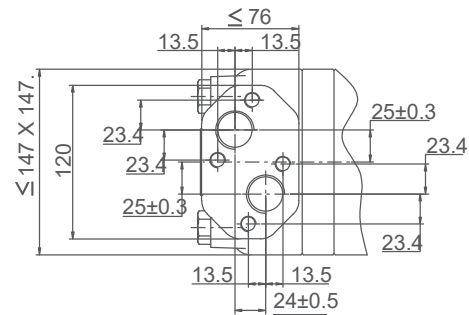
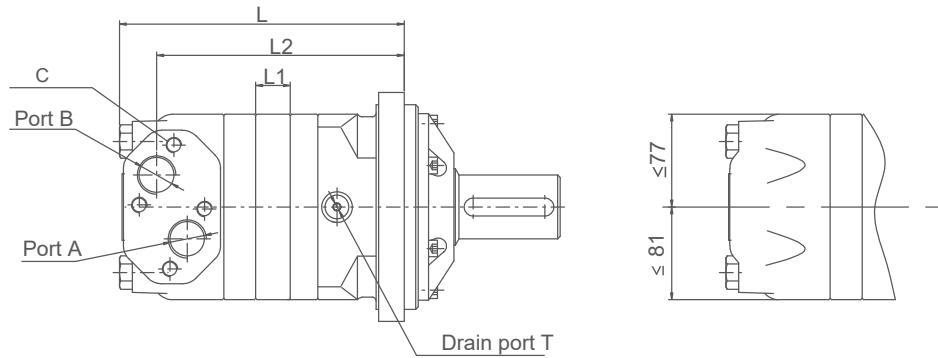
# Function Diagrams



The function diagrams data is for average performance of randomly selected motors at backpressure. 5±10 bar [72.5÷145 PSI] and oil with viscosity of 32 mm<sup>2</sup>/s [150 SUS] at 50°C [122°F].



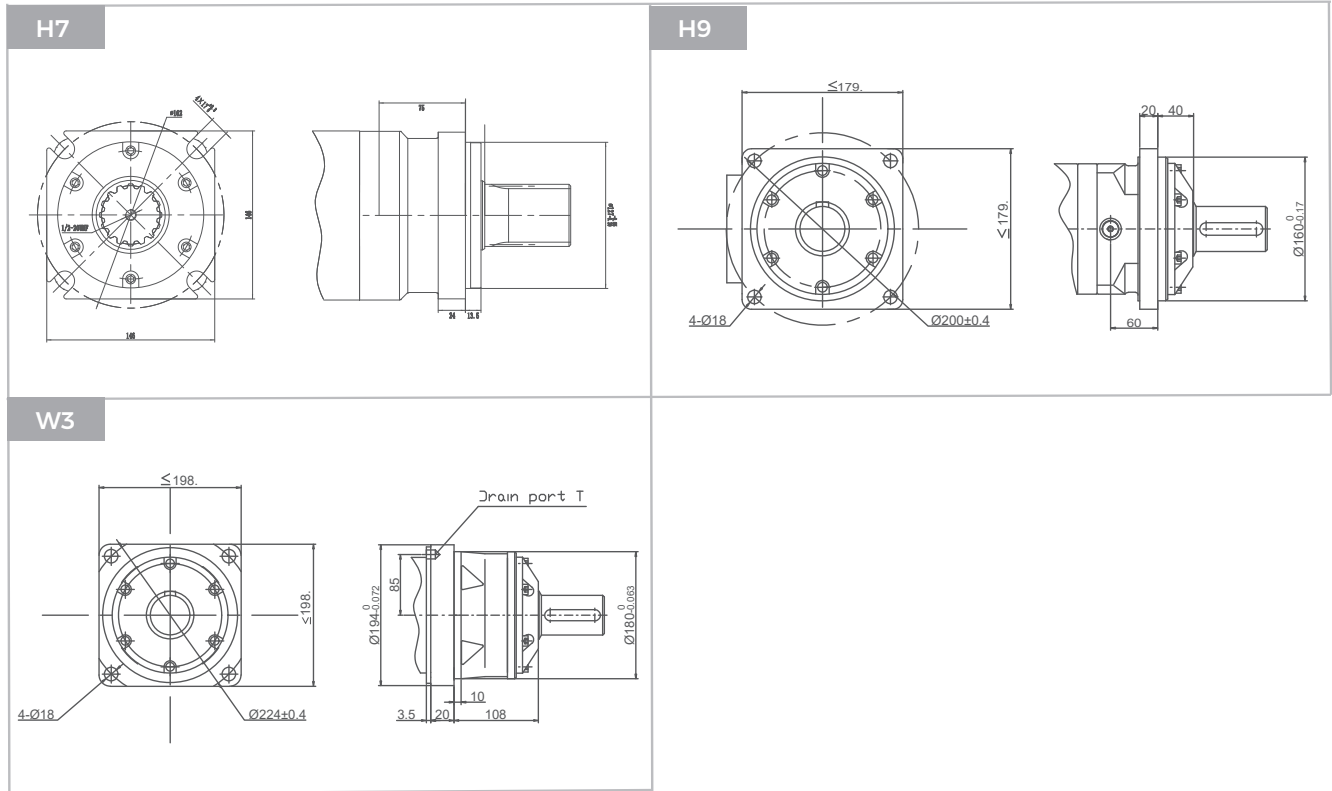
## GV Dimensions and Mountings



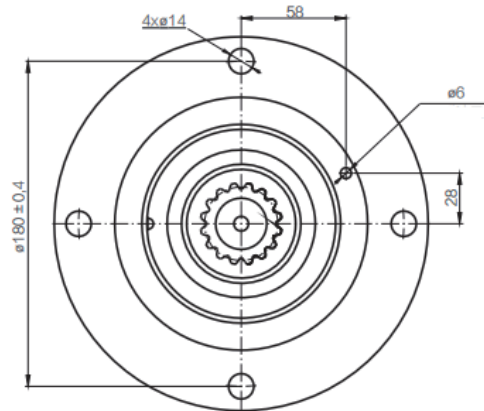
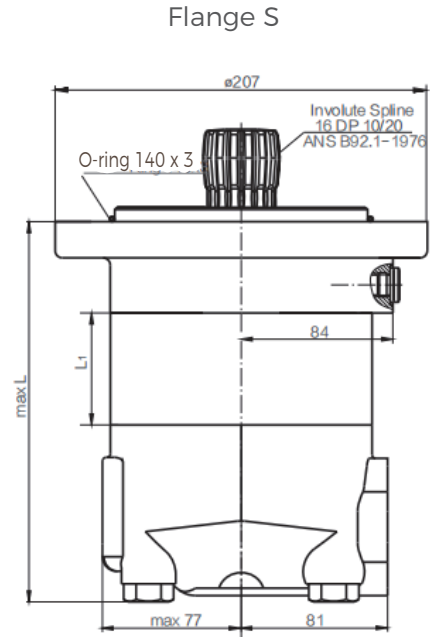
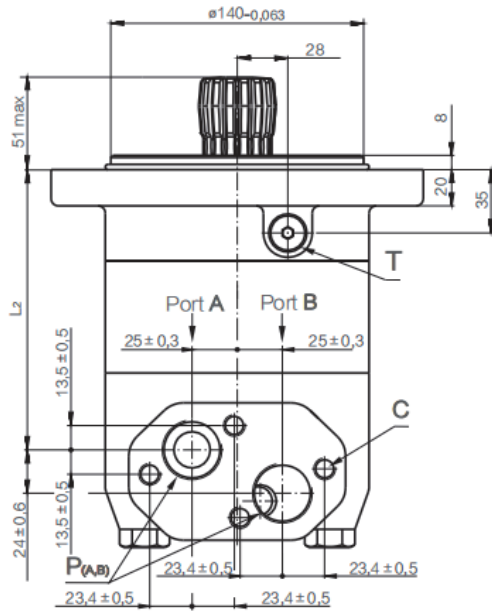
Model	L	L1	L2
GV315	217	20	161.5
GV400	224	27	168.5
GV500	232	35	176.5
GV630	244	47	188.5
GV800	255	58	199.5

Mounting	G5 (depth)	M6 (depth)	U6 (depth)	G6 (depth)	M7 (depth)	U7 (depth)
P(A, B)	G1(18)	M33 X 12(18)	1-5/16-12UN(18)	G1(18)	M33 X 2(18)	1-5/16-12UN(18)
T	G1/4(12)	M14 X 1.5(12)	9/16-18UNF(12)	G1/4(12)	M14 X 1.5 (12)	7/16-20UNF(12)
C	4-M12(12)	4-M12(12)				

### GV Flange Covers Dimensions



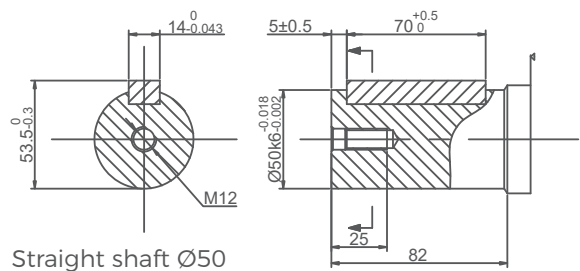
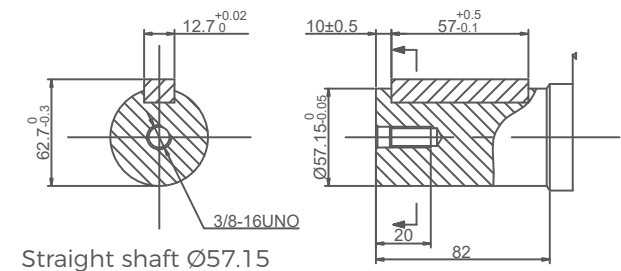
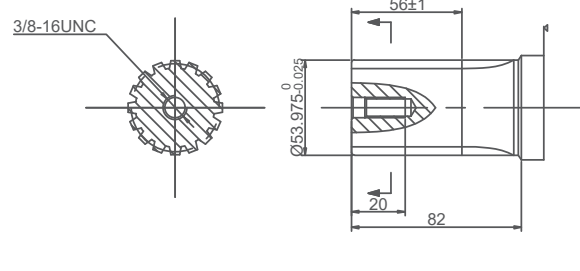
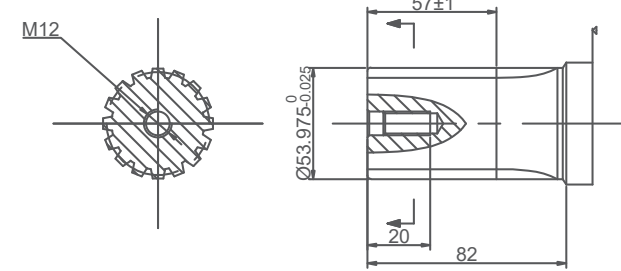
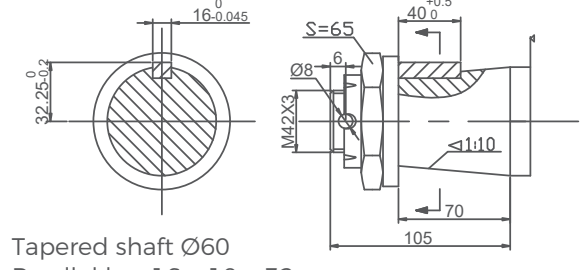
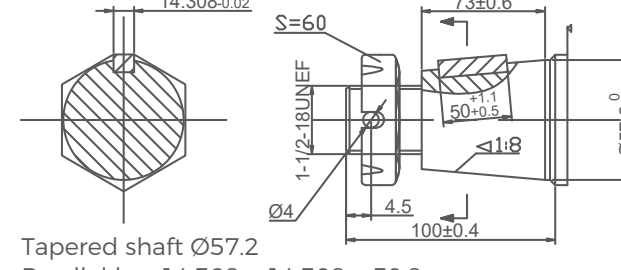
### GVS Bearingless Motor Dimensions and Mountings



Model	L	L1	L2
GVS315	171	22	117
GVS400	179	29	124
GVS500	186	37	132
GVS630	197	47.5	143
GVS800	211	61.5	157

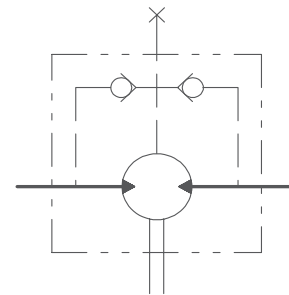
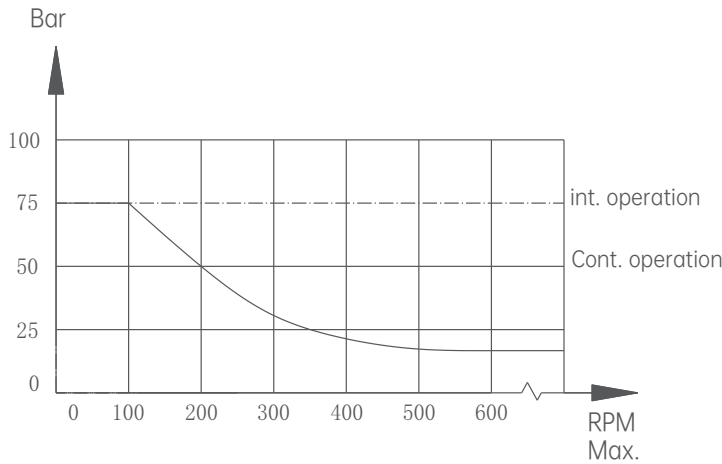
Mounting	G5 (depth)	M6 (depth)	U6 (depth)	G6 (depth)	M7 (depth)	U7 (depth)
P(A, B)	G1(18)	M33 X 12(18)	1-5/16-12UN(18)	G1(18)	M33 X 2(18)	1-5/16-12UN(18)
T	G1/4(12)	M14 X 1.5(12)	9/16-18UNF(12)	G1/4(12)	M14 X 1.5 (12)	7/16-20UNF(12)
C	4-M12(12)	4-M12(12)				

### GV Shafts Dimensions

<p><b>SN</b></p>  <p>Straight shaft <math>\text{Ø}50</math> Parallel key 14 x 9 x 70</p>	<p><b>SP</b></p>  <p>Straight shaft <math>\text{Ø}57.15</math> Parallel key 12.7 x 12.7 x 57.16</p>
<p><b>RB</b></p>  <p>Splined shaft 16-DP 8/16</p>	<p><b>RC</b></p>  <p>Splined shaft 16-DP 8/16</p>
<p><b>T8</b></p>  <p>Tapered shaft <math>\text{Ø}60</math> Parallel key 16 x 10 x 32 Tightening torque: 750 ± 50 Nm</p>	<p><b>T9</b></p>  <p>Tapered shaft <math>\text{Ø}57.2</math> Parallel key 14.308 x 14.308 x 50.8 Tightening torque: 750 ± 50 Nm</p>

## GV Series Hydraulic Motors

### Permissible shaft seal pressure



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

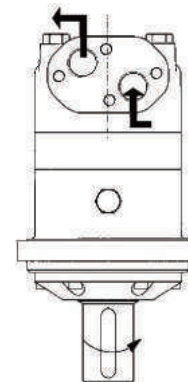
GV with standard shaft seal, check valves and with drain connection: The shaft seal pressure equals the pressure on the drain line.

### Drain Port

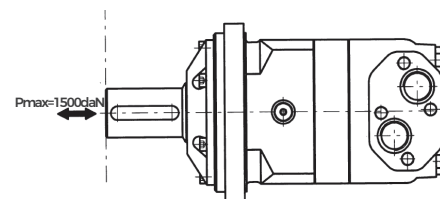
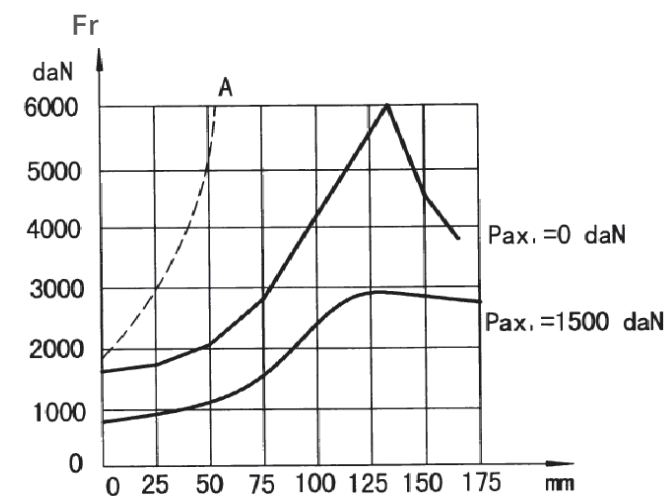
In applications without drain line, output shaft seal exceeds a bit of the pressure in the return line. In applications using the drain line, the pressure of output shaft seal equals the pressure in drain line.

### 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.



### Output shaft stand radial force



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 tow other curves apply to a B10 bearing life of 3000 hours at 200 RPM.

## GFA Series Hydraulic Motors

### Options

- Flange connection
- Motor with needle roller bearing
- Speed sensing
- Side and rear ports
- Shaft seal for high and low pressure
- Straight, splined and tapered shafts
- Metric and BSPP ports
- Other special features

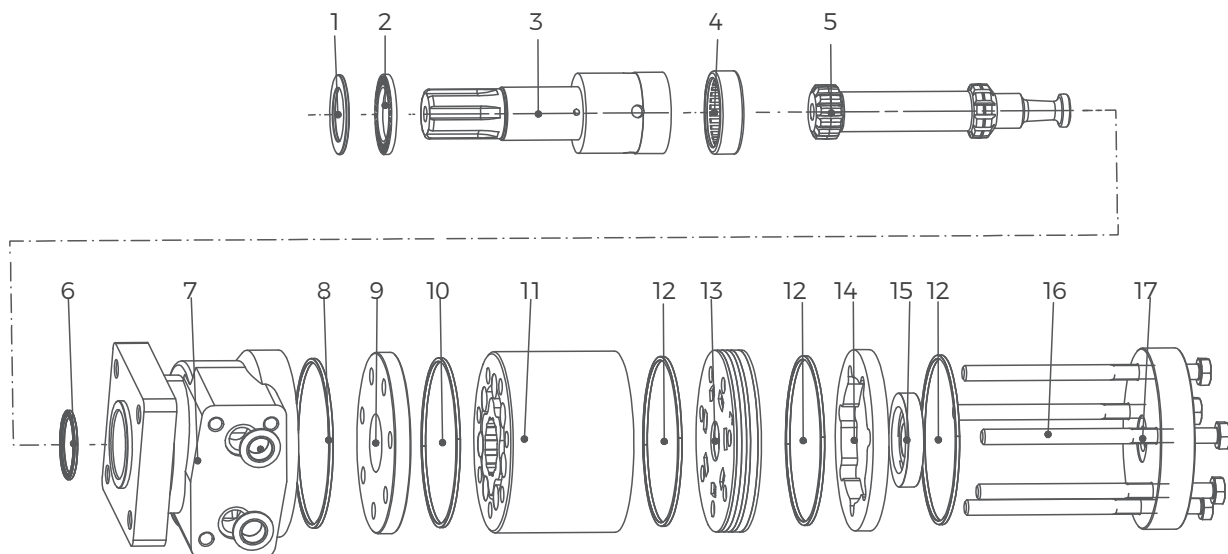
### Applications

- Conveyors
- Feeding machiners
- Metal working machines
- Textile machines
- Agricultural machines
- Food industries
- Lawn mower



### General

Max. Displacement	cm <sup>3</sup> /rev [in <sup>3</sup> /rev]	392 [24.0]
Max. Speed	RPM	1141
Max. Torque	daNm [lb-in]	cont.:44,5 [3935] int.:62,8 [5562]
Max. Output	kW [HP]	12.5 [16.8]
Max. Pressure Drop	bar [PSI]	cont.: 140 [2030] int.: 190 [2750]
Max. Oil Flow	lpm [GPM]	75 [20.0]
Pressure fluid		Mineral based- HLP (DIN 51524) or HM (ISO 6743/4)
Temperature Range	°C [°F]	-40÷140 [-40÷284]
Optimal Viscosity range	mm <sup>2</sup> /s [SUS]	20÷75 [98÷347]
Filtration		ISO code 20/16 (Min. recommended fluid filtration of 25 microns)



1 Bearing retainer

2 Flat bearing

3 Output shaft

4 Cylindrical needle roller bearing

5 Transmission shaft

6 Anti-dust ring

7 Housing

8 O-ring

9 Spacer

10 O-ring

11 Rotor and stator

12 O-ring

13 Distribution plate

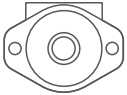
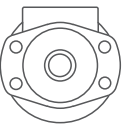
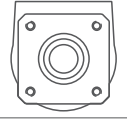
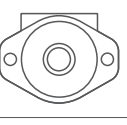





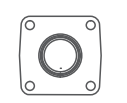








14 Spacer

15 Distribution ring

16 Screw

17 Rear cover

## Ordering Code

CFA SERIES		DISP	FLANGE	SHAFT	PORTS	ROTATION	PAINT	FUNCTION
CODE		DISP	CODE	FLANGE	CODE	PORTS	CODE	PAINT
036		36cm <sup>3</sup> /rev [2.2in <sup>3</sup> /rev]	A1	2-Hole SAE A pilot Ø82.5×2.55 	G7	G1/2, G14	A	No paint
045		41cm <sup>3</sup> /rev [2.5in <sup>3</sup> /rev]			U9	7/8-14 UNFO-ring, 7/16-20UNF	B	Blue
050		49cm <sup>3</sup> /rev [3.0in <sup>3</sup> /rev]			UA	1/2-14 NPTF, 7/16-20UNF	C	Black
065		65cm <sup>3</sup> /rev [4.0in <sup>3</sup> /rev]	A3	4-Hole SAE A pilot Ø82.5×2.79 	U3	3/4-16 O-ring, 7/16-20UNF	S	Silver grey
080		82cm <sup>3</sup> /rev [5.0in <sup>3</sup> /rev]			G8	PT(Rc) 1/2, PT(Rc) 1/4		
100		98cm <sup>3</sup> /rev [6.0in <sup>3</sup> /rev]			D1	Ø10 O-ring, 7/16-20UNF manifold 4×5/16-18UNC		
130		130cm <sup>3</sup> /rev [10.0in <sup>3</sup> /rev]	H4	4-3/8-16UNC square pilot Ø44.4×2.55 	D2	Ø10 O-ring, G1/4 manifold 4×M8		
165		163cm <sup>3</sup> /rev [11.9in <sup>3</sup> /rev]						
195		195cm <sup>3</sup> /rev [12.1in <sup>3</sup> /rev]	A5	2-Hole SAE A pilot Ø82.5×7.44 	S6	Ø25.4 woodruff key Ø25.4×6.35 	A	Standard
230		228cm <sup>3</sup> /rev [13.9in <sup>3</sup> /rev]			R4	Ø25.4, splined tooth SAE 6B 1/4-20UNC 	N	Big radial force
260		260cm <sup>3</sup> /rev [15.9in <sup>3</sup> /rev]	A7	2-Hole SAE B pilot Ø101.6×6.35 	S7	Ø25 parallel key 8×7×32 	D	No case drain
290		293cm <sup>3</sup> /rev [17.9in <sup>3</sup> /rev]			S8	Ø25.4 parallel key 6.35×6.35×31.75 	F	Free running
330		328cm <sup>3</sup> /rev [20.0in <sup>3</sup> /rev]	H6	4-Hole wheel pilot Ø60.32×31.75 	S9	Ø25.4, pin hole Ø10.3 	L	Low speed
365		370cm <sup>3</sup> /rev [22.6in <sup>3</sup> /rev]			SA	Ø25.4, pin hole Ø8 	V	High temp.
390		392cm <sup>3</sup> /rev [24.0in <sup>3</sup> /rev]			SB	Ø22.22 parallel key 6.35×6.35×25.4 	S	Low temp.
					R5	Ø22.22 splined tooth 13-DP 16/32 		
					T3	Tapered Ø25.4 woodruff key Ø25.4×6.35 		
					SC	Ø25 parallel key 8×7×28 		
					SD	Ø25 parallel key 7×7×32 		
					R1	Ø25.4 splined tooth SAE 6B 		
							CODE	ROTATION
							A	Standard
							R	Opposite

## GFA Specifications

Type		GFA36	GFA45	GFA50	GFA65	GFA80
Displacement cm <sup>3</sup> /rev [ in <sup>3</sup> /rev]		36[2.2]	41[2.5]	49[3.0]	65[4.0]	82[5.0]
Max. Speed RPM	Int.	1141	1024	1020	877	695
Max. Oil Flow	Cont.	34[9]	34[9]	34[9]	45[12]	45[12]
lpm [GPM]	Int.	42[11]	42[11]	50[13]	57[15]	57[15]
Max. Differential Pressure	Cont.	140[2030]	140[2030]	140[2030]	140[2030]	140[2030]
bar [PSI]	Int.	190[2750]	190[2750]	190[2750]	190[2750]	190[2750]
Max. Supply Pressure bar [PSI]		200[2900]	200[2900]	200[2900]	200[2900]	200[2900]
Max. Torque	cont.	5,46[483]	7,1[624]	9,0[796]	12,5[1106]	16,0[1416]
daNm [lb-in]	int.	7,11[60]	9,9[876]	12,7[1120]	17,6[1558]	22,0[1947]
Max. Performance kW [HP]		8,5[11.4]	10,4[13.9]	12,8[17.2]	14,7[19.8]	17,3[23.2]
Min. Starting Torque	cont.	4,4[389]	4,4[1111]	7,2[637]	10,0[885]	12,8[1133]
daNm[lb-in]	int.	5,2[460]	6,4[565]	9,8[871]	13,7[1211]	17,1[1515]
Weight, kg [lb]		5,93[13.07]	6,03[13.3]	6,12[13.5]	6,26[13.8]	6,35[14.0]

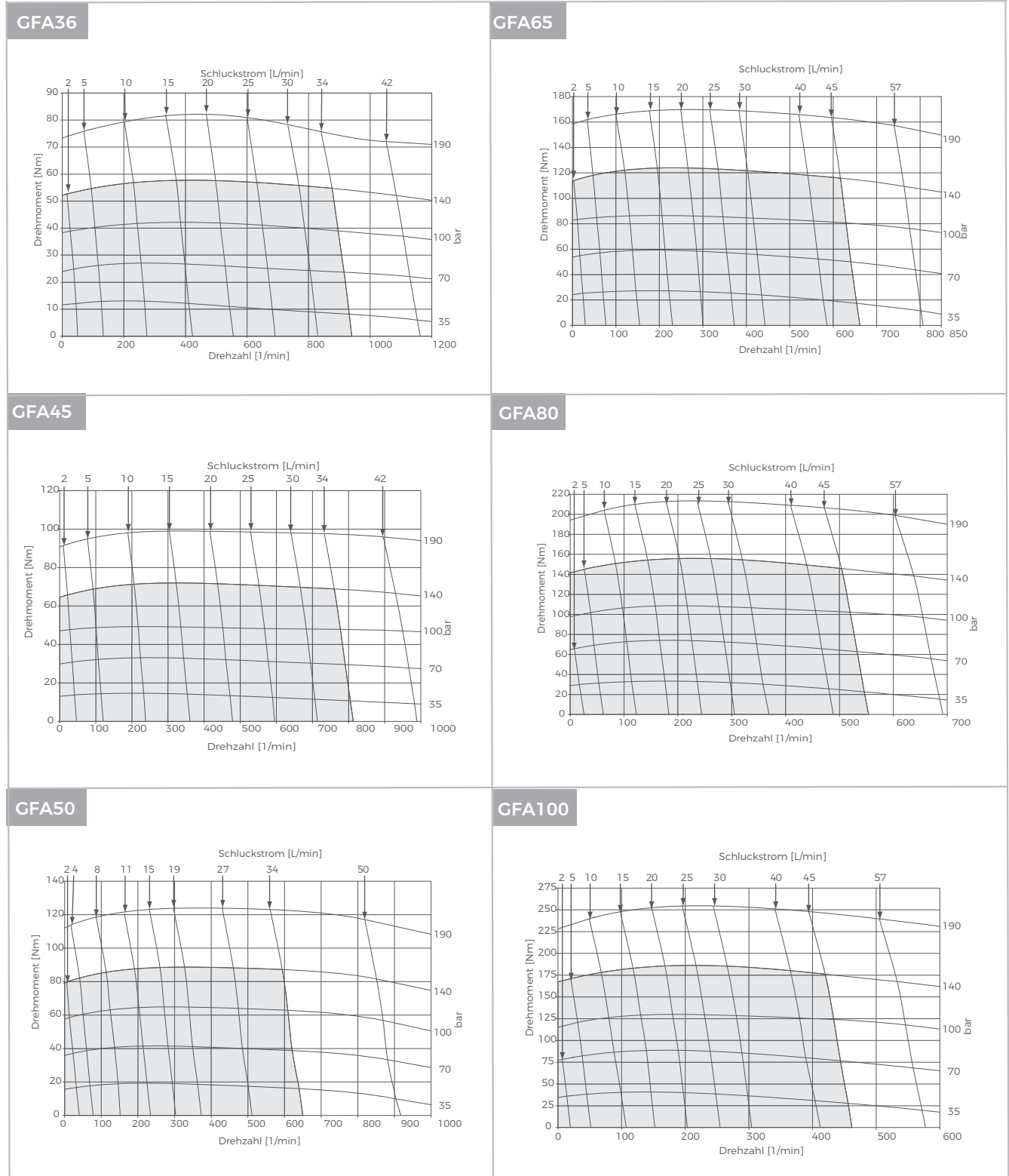
Type		GFA100	GFA0130	GFA165	GFA195	GFA230
Displacement cm <sup>3</sup> /rev [ in <sup>3</sup> /rev]		98[6.0]	130[8.0]	163[10.0]	195[11.9]	228[13.9]
Max. Speed RPM	Int.	582	438	348	292	328
Max. Oil Flow	Cont.	45[12]	45[12]	45[12]	45[12]	57[15]
lpm [GPM]	Int.	57[15]	57[15]	57[15]	57[15]	75[20]
Max. Differential Pressure	Cont.	140[2030]	140[2030]	140[2030]	140[2030]	120[1740]
bar [PSI]	Int.	190[2750]	190[2750]	190[2750]	190[2750]	165[2400]
Max. Supply Pressure bar [PSI]		200[2900]	200[2900]	200[2900]	200[2900]	200[2900]
Max. Torque	cont.	19,0[1682]	25,5[2257]	31,0[2744]	39,0[3452]	38,0[3363]
daNm [lb-in]	int.	26,4[2337]	35,2[3116]	43,6[3846]	52,8[4673]	51,4[4554]
Max. Performance kW [HP]		17,4[23.4]	17,3[23.2]	17,0[22.8]	17,4[23.4]	17,7[23.8]
Min. Starting Torque	cont.	15,2[1345]	20,4[1806]	24,8[2195]	31,2[2762]	30,4[2691]
daNm [lb-in]	int.	20,5[1819]	27,4[2423]	33,8[2992]	41,1[3637]	41,1[3637]
Weight, kg [lb]		6,49[14.3]	6,76[14.9]	7,03[15.5]	7,35[16.2]	7,58[16.7]



## Specifications

Type		GFA260	GFA295	GFA330	GFA365	GFA390
Displacement cm <sup>3</sup> /rev [ in <sup>3</sup> /rev]		260[15.9]	293[17.9]	328[20.0]	370[22.6]	392[24.0]
Max. Speed RPM	Int.	287	256	228	203	191
Max. Oil Flow	Cont.	57[15]	57[15]	57[15]	57[15]	57[15]
lpm [GPM]	Int.	75[20]	75[20]	75[20]	75[20]	75[20]
Max. Differential Pressure	Cont.	110[1595]	100[1450]	100[1450]	95[1378]	85[1233]
bar [PSI]	Int.	155[2250]	145[2100]	135[1950]	125[1825]	120[1740]
Max. Supply Pressure bar [PSI]		200[2900]	200[2900]	200[2900]	200[2900]	200[2900]
Max. Torque	Cont.	40.0[3540]	42.8[3784]	44.3[3926]	46.7[4133]	44.5[3935]
daNm [lb-in]	Int.	55.0[4870]	58.2[5180]	60.0[5312]	64.8[5728]	62.8[5562]
Max. Performance kW [HP]		16.7[22.4]	15.7[21.0]	14.8[19.8]	13.6[18.2]	12.5[16.8]
Min. Starting Torque	Cont.	32.0[2832]	32.8[2903]	33.4[3045]	37.3[3301]	34.8[3080]
daNm [lb-in]	Int.	44.9[3977]	44.5[3939]	45.3[4014]	47.7[4223]	46.2[4090]
Weight, kg [lb]		7.80[17.2]	8.07[17.8]	8.35[18.4]	8.66[19.1]	8.80[19.4]

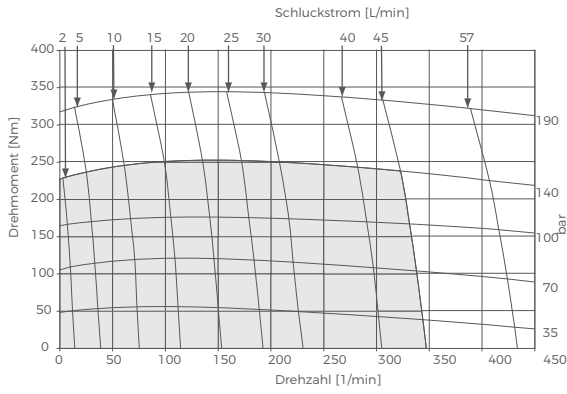
## Function Diagrams



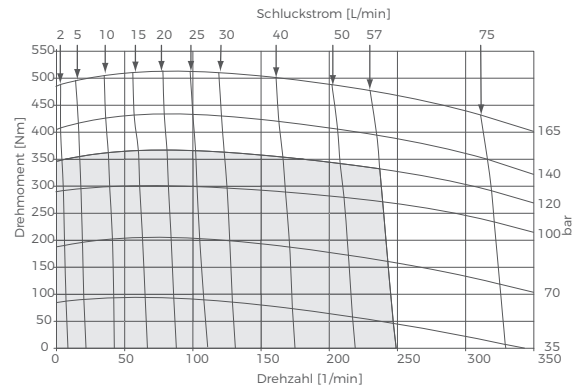
The function diagrams data is for average performance of randomly selected motors at backpressure. 5÷10 bar [72.5÷145 PSI] and oil with viscosity of 32 mm<sup>2</sup>/s [150 SUS] at 50°C [122°F].

### Function Diagrams

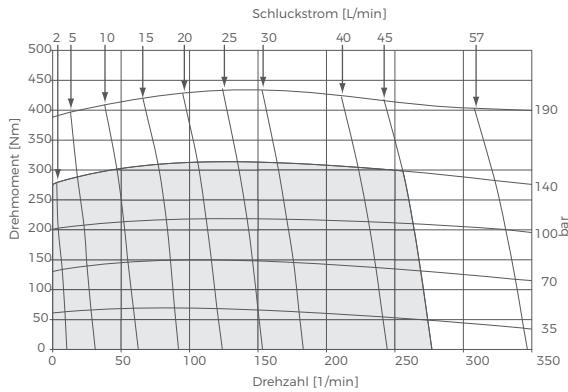
GFA130



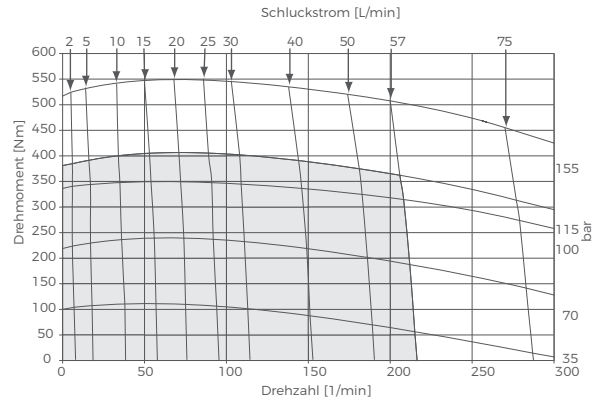
GFA230



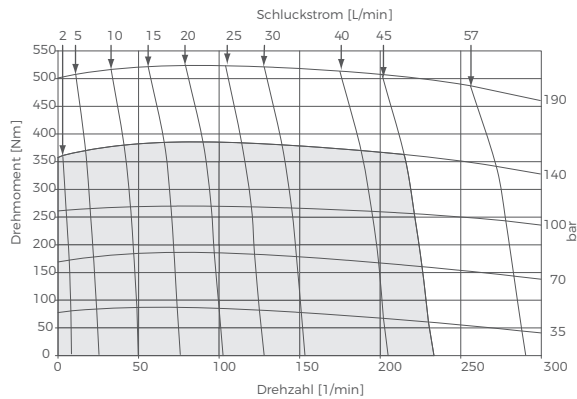
GFA165



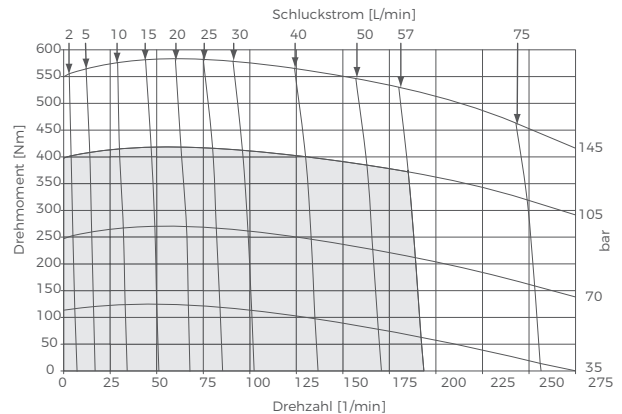
GFA260



GFA195

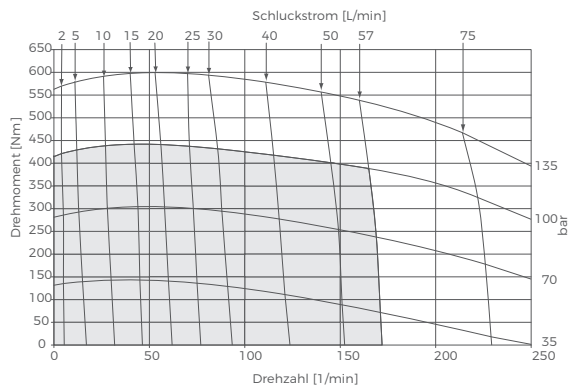
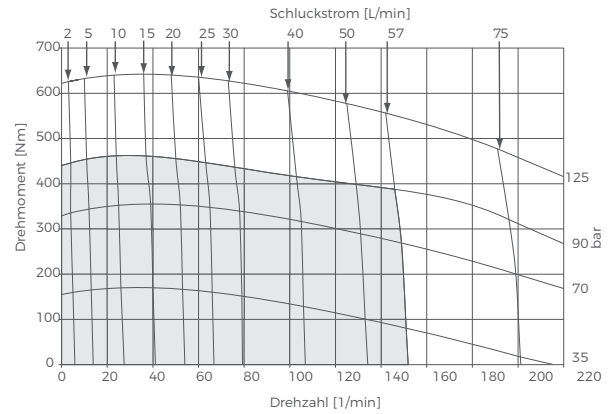
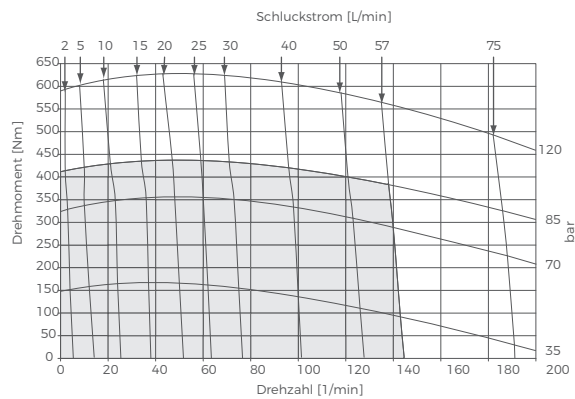


GFA295



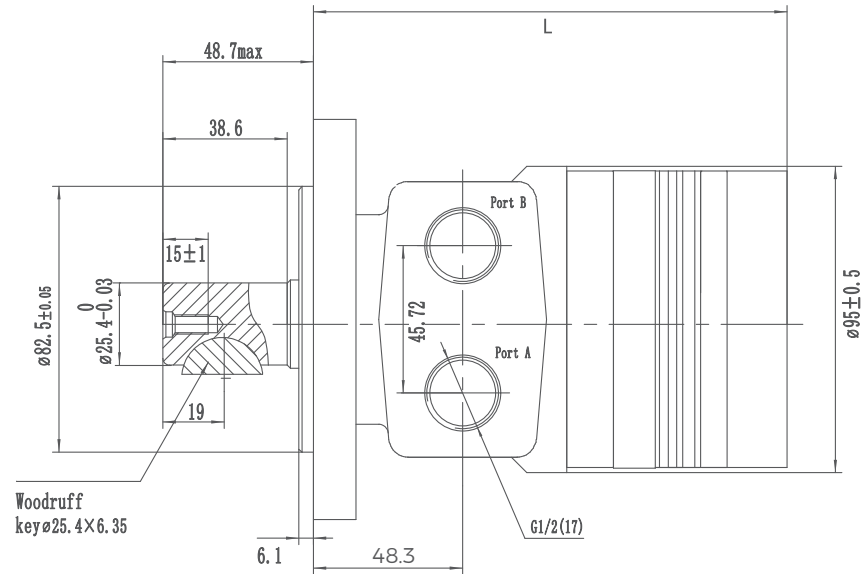
The function diagrams data is for average performance of randomly selected motors at backpressure. 5÷10 bar [72.5÷145 PSI] and oil with viscosity of 32 mm<sup>2</sup>/s [150 SUS] at 50°C [122°F].

## Function Diagrams

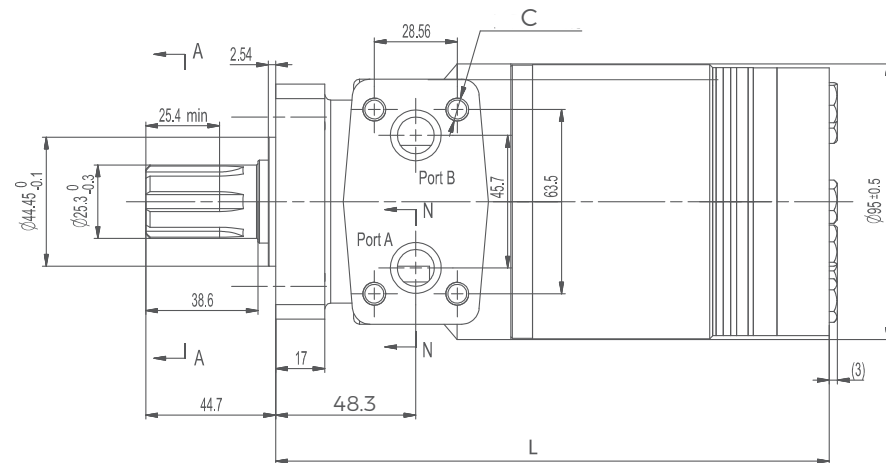
**CFA330**

**CFA365**

**CFA390**


The function diagrams data is for average performance of randomly selected motors at backpressure. 5÷10 bar [72.5÷145 PSI] and oil with viscosity of 32 mm<sup>2</sup>/s [150 SUS] at 50°C [122°F].

## GFA Dimensions and Mountings

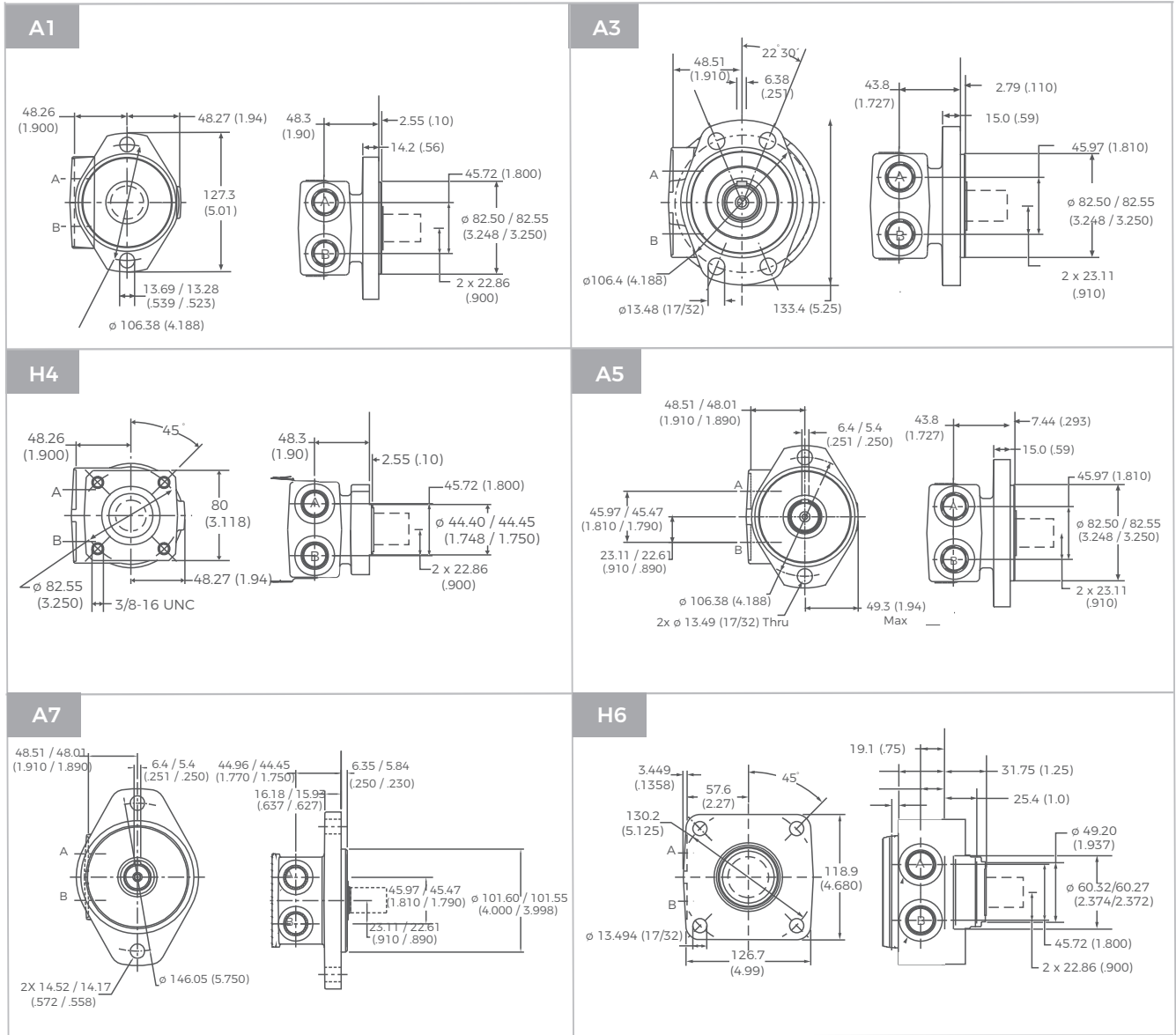


Model	L
GFA36	135
GFA45	136
GFA50	138
GFA65	141
GFA80	144
GFA100	147
GFA130	154
GFA165	160
GFA195	166
GFA230	173
GFA260	179
GFA295	185
GFA330	192
GFA365	200
GFA390	205



Mounting	G7 (depth)	U9 (depth)	UA (depth)	U3 (depth)	G8 (depth)	D1 (depth)	D2 (depth)
P(A, B)	G1/2(15)	7/8-14 O-ring(17)	1/2-14NPTF(15)	3/4-16 O-ring(15)	PT(RC)1/2(15)	Ø10	Ø10
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)

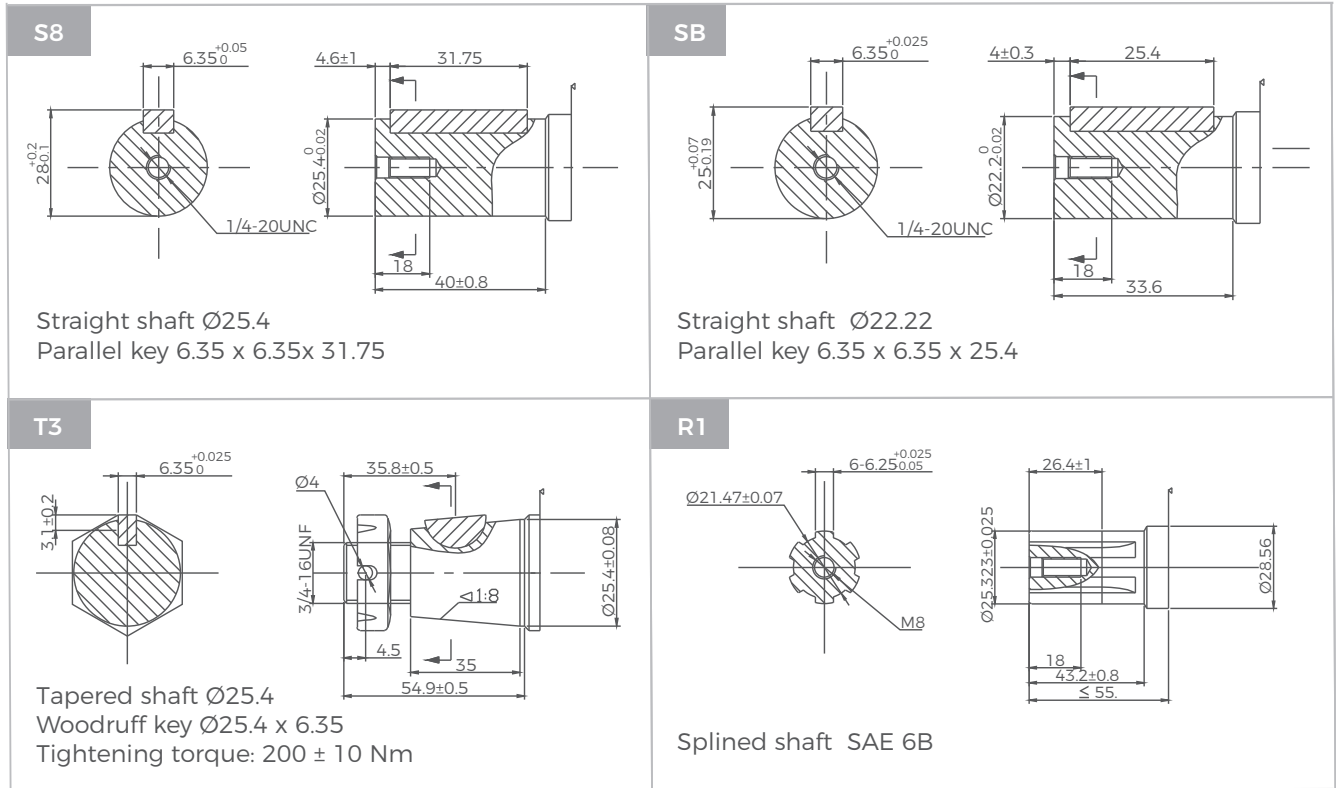
### GFA Flange Covers Dimensions



### GFA Shafts Dimensions

<p><b>S6</b></p> <p>Straight shaft <math>\varnothing 25.4</math> Woodruff key <math>\varnothing 25.4 \times 6.35</math></p>	<p><b>S9</b></p> <p>Straight shaft <math>\varnothing 25.4</math> Pin hole <math>\varnothing 10.3</math></p>
<p><b>R4</b></p> <p>Splined shaft SAE 6B</p>	<p><b>SC</b></p> <p>Straight shaft <math>\varnothing 25</math> Parallel key <math>8 \times 7 \times 28</math></p>
<p><b>SD</b></p> <p>Straight shaft <math>\varnothing 25</math> Parallel key <math>7 \times 7 \times 32</math></p>	<p><b>R5</b></p> <p>Splined shaft tooth 13-DP 16/32</p>
<p><b>S7</b></p> <p>Straight shaft <math>\varnothing 25</math> Parallel key <math>8 \times 7 \times 32</math></p>	<p><b>SA</b></p> <p>Straight shaft <math>\varnothing 25.4</math> Pin hole <math>\varnothing 8</math></p>

### GFA Shafts Dimensions





## GGM Series Hydraulic Motors

### Options

- Gerotor design
- Side ports, rear ports
- Straight, splined shafts
- SAE ports
- Roller bearings for long life
- High pressure mechanical seals

### Applications

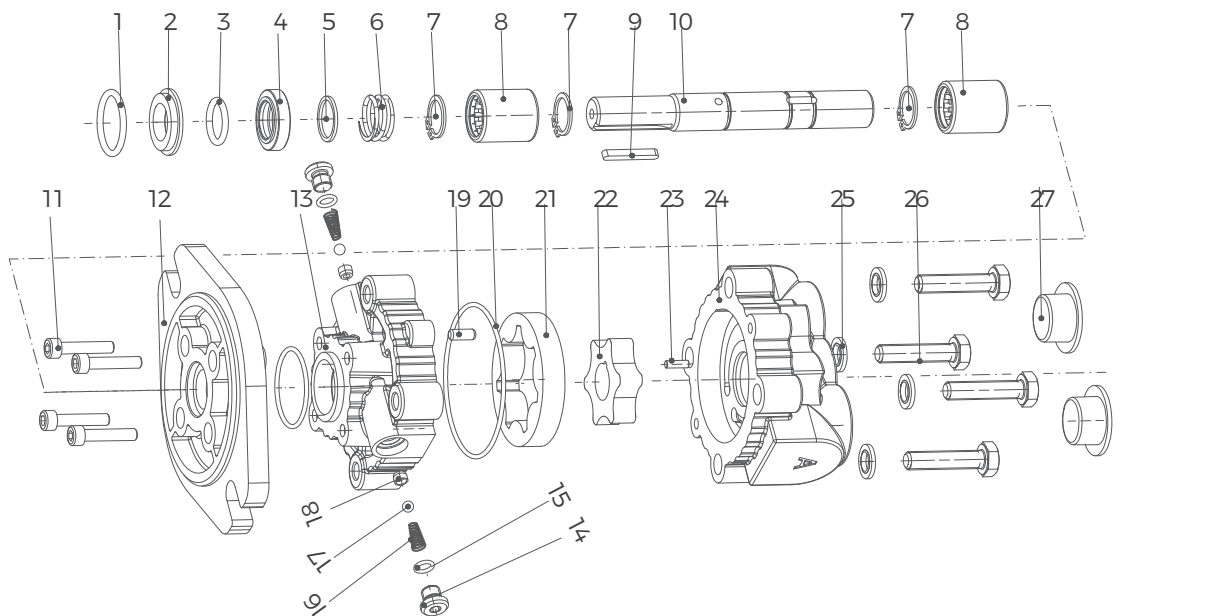
- Construction machines
- Refuse/dump truck
- Material handling
- Forestry machines
- Agriculture machines
- Industrial machines



### General

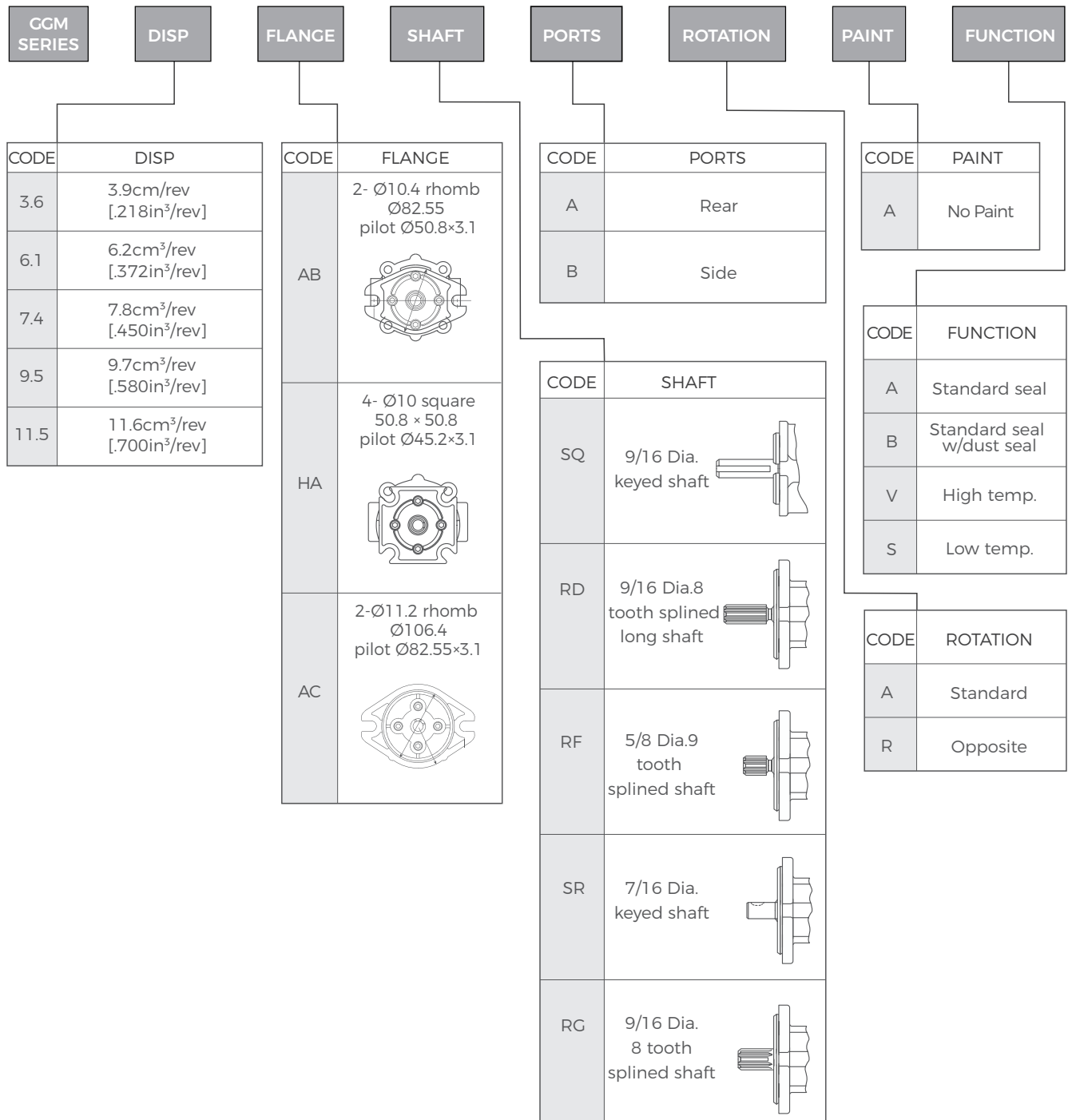
Max. Displacement	cm <sup>3</sup> /rev [in <sup>3</sup> /rev]	11.47 [.700]
Max. Speed	RPM	5000
Max. Torque 1000 PSI	in.-lbs [kg-cm]	111 [128]
Max. Output	kW [HP]	64 [85.8]
Max. Pressure Drop	bar [PSI]	cont.: 138 [2000] int.: 172.58 [2500]
Max. Oil Flow	lpm [GPM]	56.7[15]
Max. Shaft Side Loads	lbs. [kg]	170 [77]
Pressure fluid		Mineral based- HLP (DIN 51524) or HM (ISO 6743/4)
Temperature Range	°C [°F]	-40÷140 [-40÷284]
Optimal Viscosity range	mm <sup>2</sup> /s [SUS]	20÷75 [98÷347]
Filtration		ISO code 20/16 (Min. recommended fluid filtration of 25 microns)

When used in series, the back pressure shall not exceed 69bar.



1 O-ring	7 Non-standard clamp	13 Intermediate	19 Positioning pins	25 Washer
2 Mechanical static ring	8 Needle roller bearing	14 Plug	20 O-ring	26 Bolt
3 O-ring	9 Parallel Key	15 O-ring	21 Inner rotor	27 Oil port plug cap
4 Mechanical dynamic ring	10 Transmission shaft	16 Spring	22 Outer rotor	
5 Washer	11 Screw	17 Steel ball	23 Cylindrical pin	
6 Compression spring	12 Front cover	18 Valve base	24 Rear cover	

### Ordering Code



## Specifications

Type	GGM3.6	GGM6.1	GGM7.4
Displacement in <sup>3</sup> /rev [cm <sup>3</sup> /rev]	.218(3.57)	.372(6.094)	.450(7.374)
Max. Rated RPM	5000	5000	5000
Rated Flow Per 1000 RPM (Nominal)	.95GPM(3.6 L/min)	1.61GPM(6.1 L/min)	1.95GPM(7.4 L/min)
Max. Continuous Pressure	2000PSI(138.0 bar)	2000PSI(138.0 bar)	2000PSI (138.0 bar)
Max. Intermittent Pressure	2500PSI(172.5 bar)	2500PSI(172.5 bar)	2500PSI (172.5 bar)
Output Torque Per 1000 PSI (69.0 bar)	35 in.-lbs (40 kg-cm)	59 in.-lbs (68 kg-cm)	72 in.-lbs. (83 kg-cm)
Weight	2.8 pounds(1.25 kg)	3.0 pounds(1.36 kg)	3.1 pounds(1.41 kg)
Shaft Side Load**	170 lbs(77.0 kg)	130 lbs.(59.0 kg)	110 lbs.(50.0 kg)

Type	GGM9.5	GGM11.5
Displacement in <sup>3</sup> /rev [cm <sup>3</sup> /rev]	.580(9.50)	.700(11.471)
Max. Rated RPM	5000	5000
Rated Flow Per 1000 RPM (Nominal)	2.51GPM(9.5 L/min)	3.03GPM(11.5 L/min)
Max. Continuous Pressure	2000PSI (138.0 bar)	1500PSI (103.5 bar)
Max. Intermittent Pressure	2500PSI (172.5 bar)	2000PSI (138.0 bar)
Output Torque Per 1000 PSI (69.0 bar)	92 in.-lbs. (107 kg-cm)	111 in.-lbs (128 kg-cm)
Weight	3.3 pounds(1.50 kg)	3.5 pounds(1.59 kg)
Shaft Side Load**	70 lbs.(31.7 kg)	30 lbs.(13.5 kg)

\* THEORETICAL

\*\* SIDE LOAD: Maximum Permissible Shaft Side Load at 2500 RPM and 1000 PSI (69.0 bar)  
(B-10 Bearing Life of 1000 Hrs.)

OIL TEMPERATURE: Maximum recommended oil temperature 180° F (82.2° C)

OIL VISCOSITY: Recommended viscosity 150 SUS (3.65 engler).

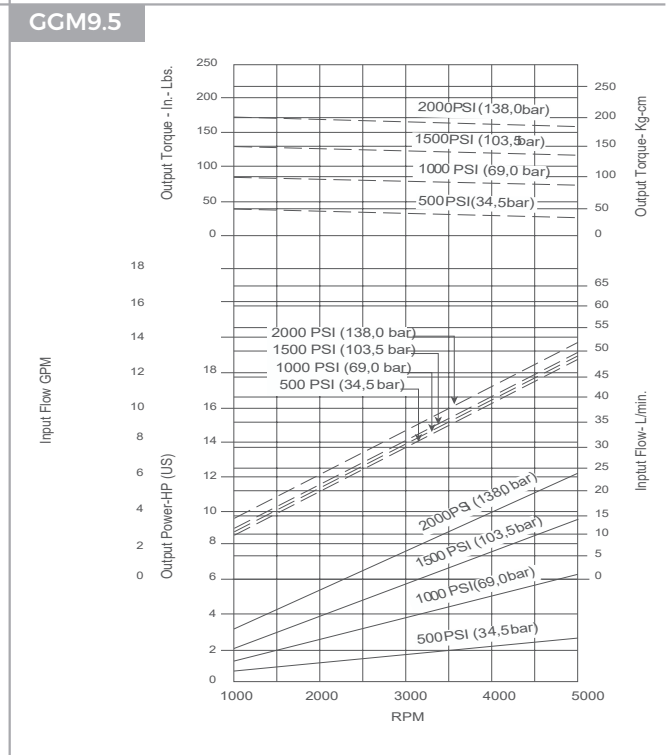
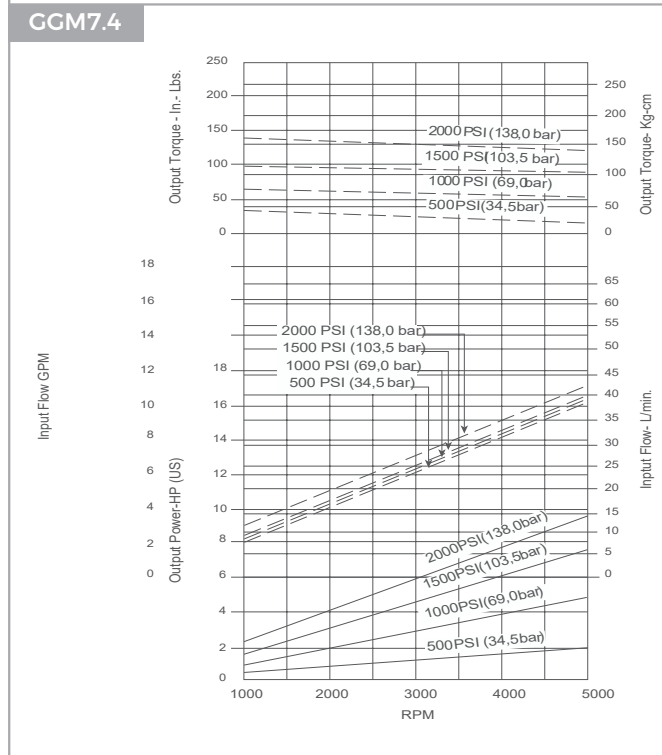
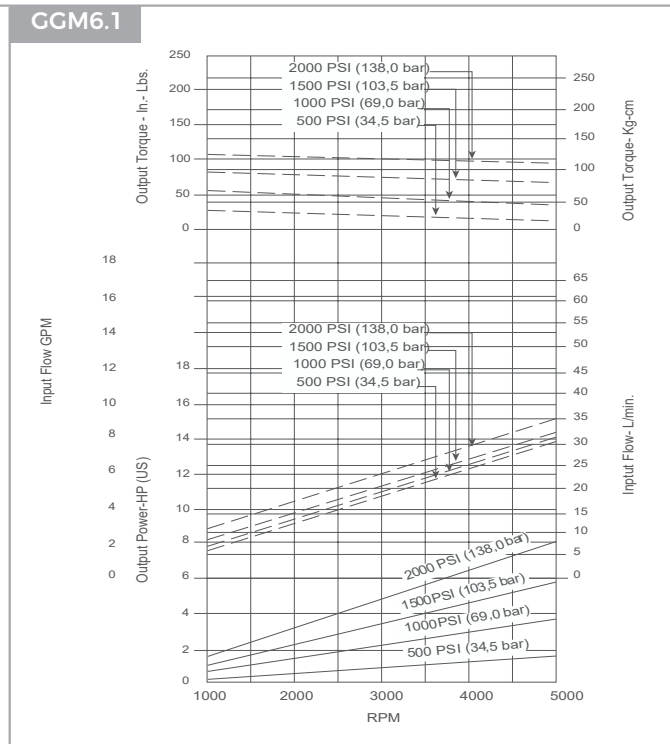
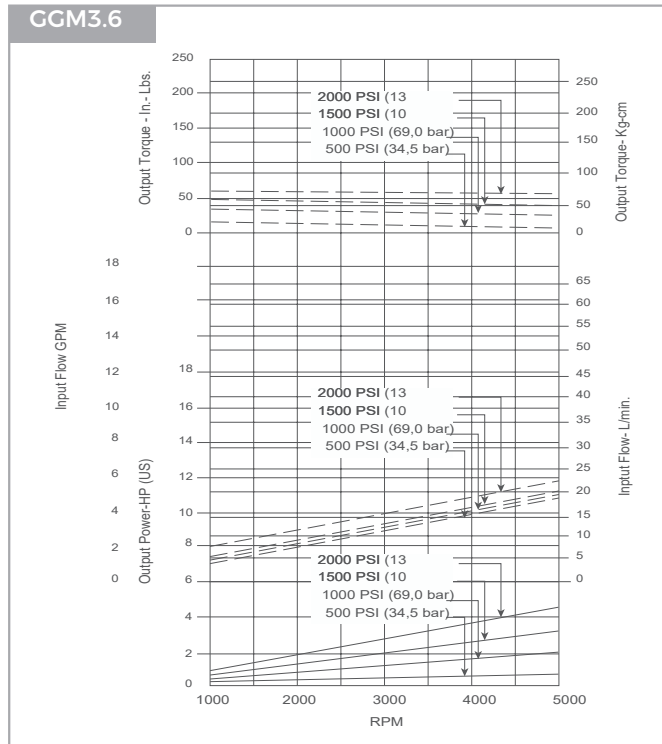
(32 centistokes) Minimum recommended viscosity

60 SUS (2.1 engler) (13 centistokes)

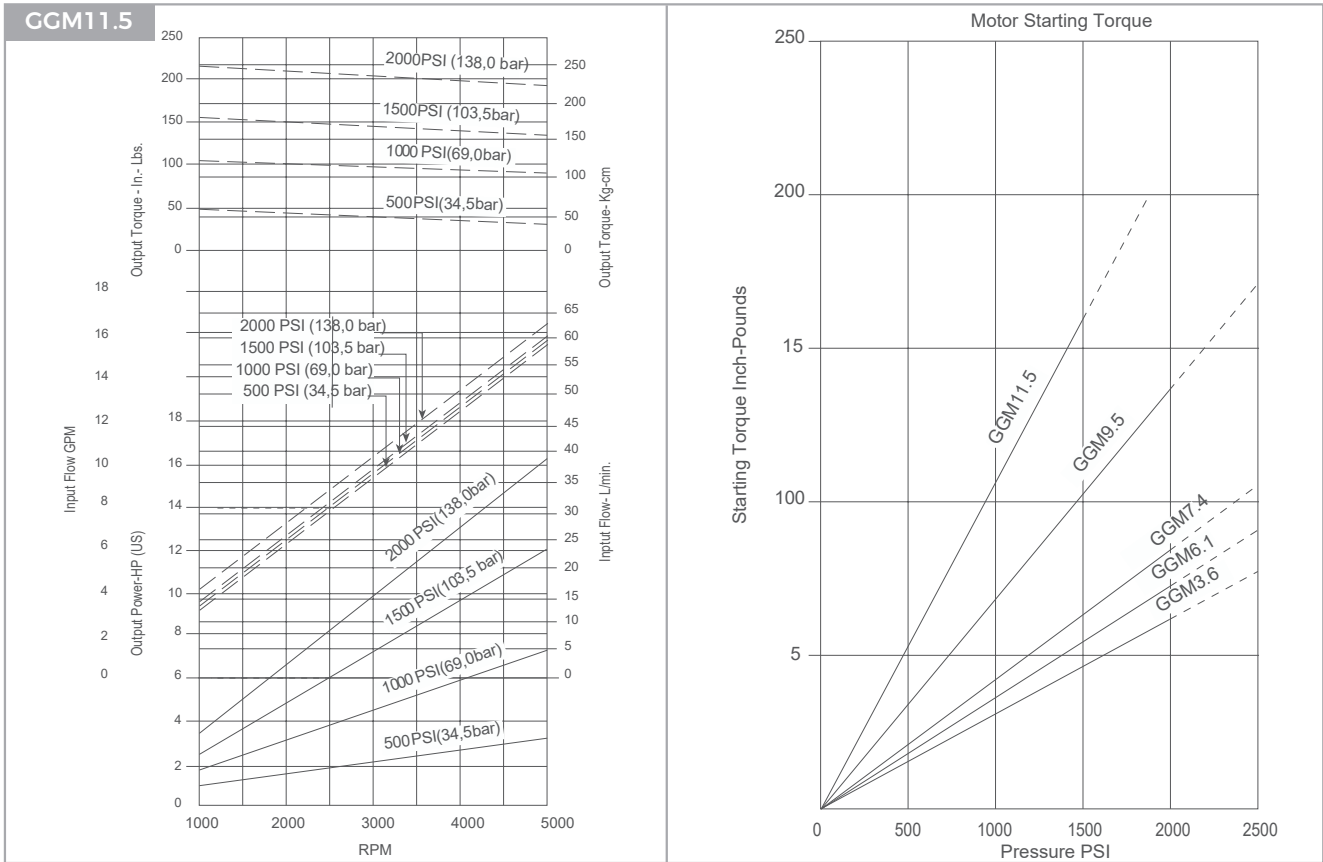
FILTRATION: Minimum recommended filtration 10 Micron.

END THRUST: 80 Lbs. (36.3 kg.) maximum.

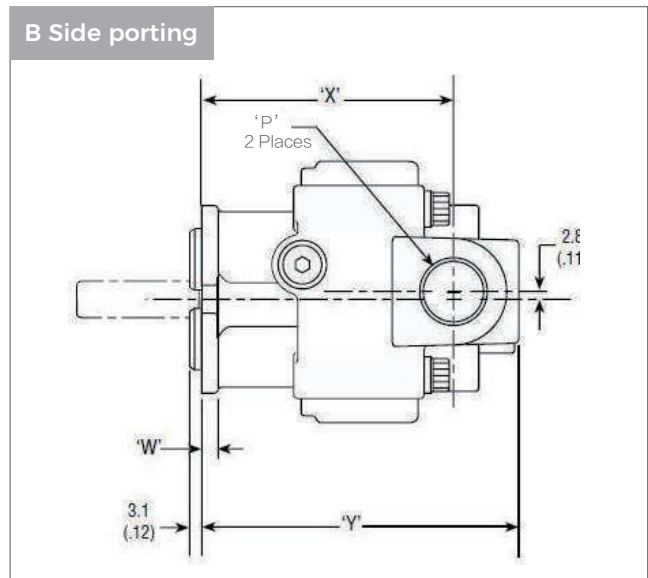
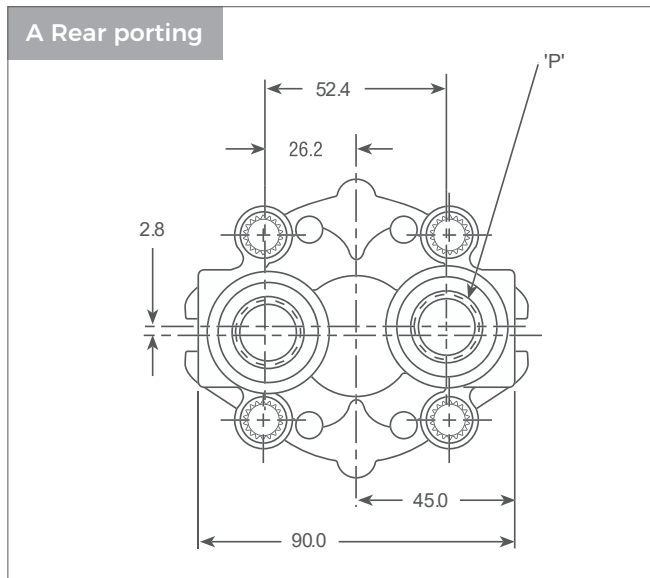
# Function Diagrams



### Function Diagrams



## GGM Dimensions and Mountings

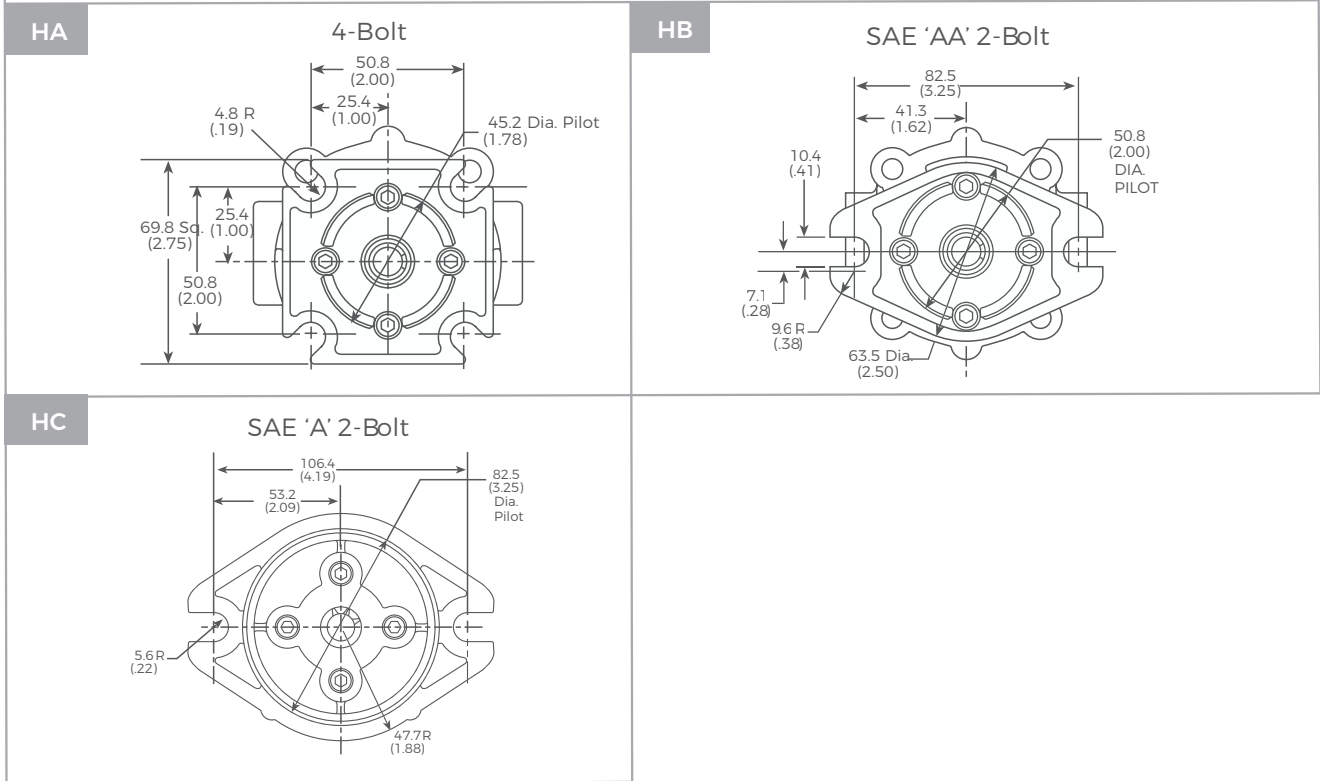


Model	Size	
	"X"	"Y"
GGM3.6	73.1(2.88)	93.1(3.67)
GGM6.1	77.3(3.04)	97.3(3.83)
GGM7.4	79.4(3.13)	99.4(3.91)
GGM9.5	83.0(3.27)	103.0(4.06)
GGM11.5	86.3(3.40)	106.3(4.19)

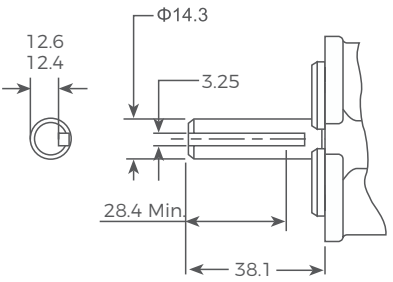
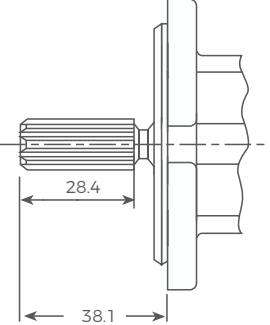
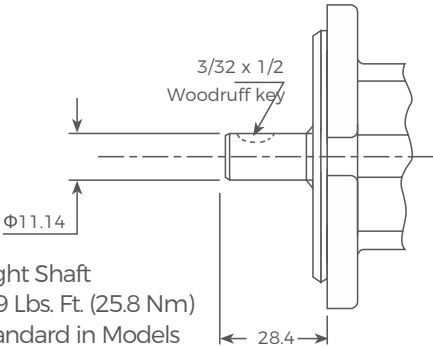
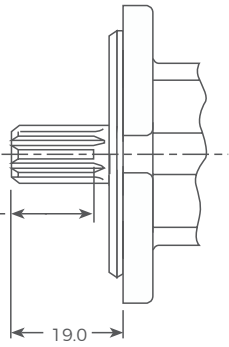
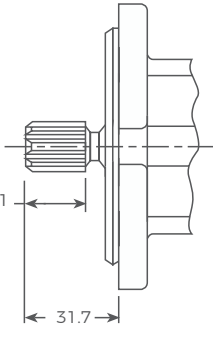
Flange	"W"
2 holes "A-A"	6.3
4 holes	6.3
2 holes "A"	9.5

Model	"P" SAE Straight thread oil port, O-ring seal
GGM3.6	SAE 8(3/4-16UNF)
GGM6.1	SAE 8(3/4-16UNF)
GGM7.4	SAE 8(3/4-16UNF)
GGM9.5	SAE 10(7/8-14UNF)
GGM11.5	SAE 10(7/8-14UNF)

### GGM Flange Covers Dimensions



## GGM Shafts Dimensions

<p><b>SQ</b></p>  <p>Diameter 9/16, Straight shaft Maximum bearing torque 52.9 Nm</p>	<p><b>RD</b></p>  <p>9/16 Dia. 8 Tooth Splined Shaft Flat Root Side Fit-Class 2 Fit Torque Limit 39 Lbs. Ft. (52.9 Nm)</p>
<p><b>SR</b></p>  <p>7/16 Dia. Straight Shaft Torque Limit 19 Lbs. Ft. (25.8 Nm) Available as Standard in Models</p>	<p><b>RG</b></p>  <p>9/16 Dia. 8 Tooth Splined Shaft Flat-Root Side Fit-Class 2 Fit Torque Limit 39 Lbs. Ft. (52.9 Nm) Available as Standard in Models</p>
<p><b>RF</b></p>  <p>5/8 Dia. 9 Tooth Splined Shaft Flat Root Side Fit - Class 1 Fit Torque Limit 52 Lbs. Ft. (70.5 Nm) Available as Standard in Models</p>	



## GKA Series Hydraulic Motors

### Options

- Flange and circle
- Bearingless motor
- Motor with brake
- Tacho connection
- Speed sensing
- Side and rear ports
- Straight, splined and tapered shafts
- Shaft seal for high and low pressure
- Metric and BSPP ports
- Other special features

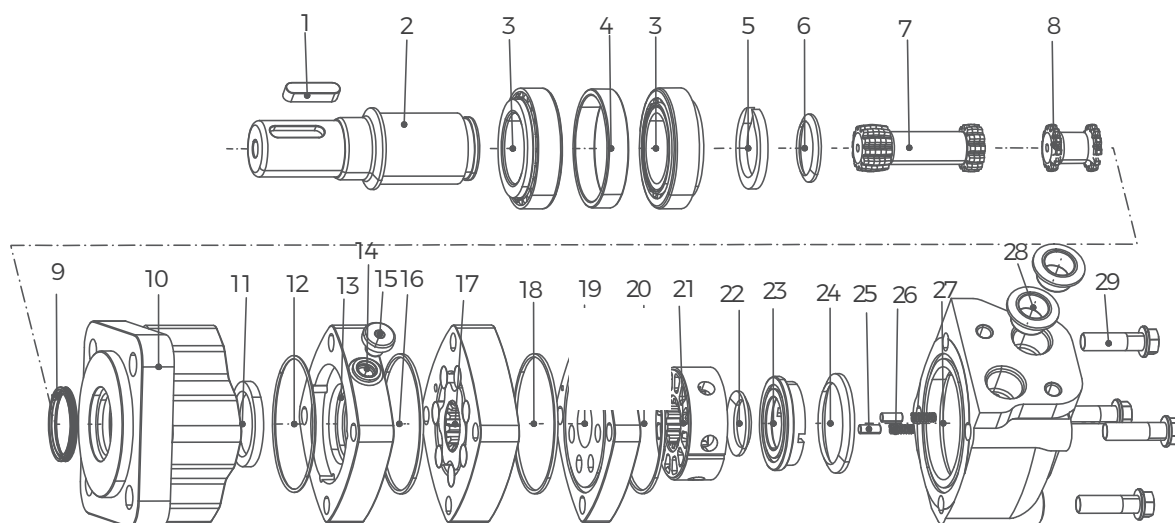
### Applications

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



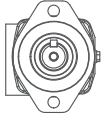

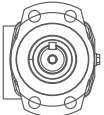

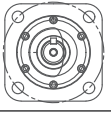












### General

Max. Displacement	cm <sup>3</sup> /rev [in <sup>3</sup> /rev]	490 [29.8]
Max. Speed	RPM	1215
Max. Torque	daNm [lb-in]	cont.: 84,5 [7470]    int.: 93,0 [8225]
Max. Pressure Drop	bar [PSI]	cont.: 205 [3000]    int.: 310 [4500]
Max. Oil Flow	lpm [GPM]	150 [30]
Pressure Fluid		Mineral based- HLP (DIN 51524) or HM (ISO 6743/4)
Temperature Range	°C [°F]	-40÷140 [-40÷284]
Optimal Viscosity range	mm <sup>2</sup> /s [SUS]	20÷75 [98÷347]
Filtration		ISO code 20/16 (Min. recommended fluid filtration of 25 microns)



- |                          |                      |                       |                            |                      |
|--------------------------|----------------------|-----------------------|----------------------------|----------------------|
| 1 Parallel Key           | 7 Transmission shaft | 13 Connecting body    | 19 Balance plate           | 25 Positioning pins  |
| 2 Output shaft           | 8 Coupling shaft     | 14 Sealing gasket     | 20 Special shape ring      | 26 Spring            |
| 3 Tapered roller bearing | 9 Anti-dust ring     | 15 Plug               | 21 Flow distribution plate | 27 Rear housing      |
| 4 Bearing retainer ring  | 10 Front Cover       | 16 O-ring             | 22 Special shape ring      | 28 Oil port plug cap |
| 5 Washers                | 11 Shaft seal        | 17 Rotor and stator   | 23 Flow pressure plate     | 29 Screw             |
| 6 Special shape ring     | 12 O-ring            | 18 Special shape ring | 24 Special shape ring      |                      |

## Ordering Code

CKA SERIES		DISP	FLANGE	SHAFT	PORTS	ROTATION	PAINT	FUNCTION	
CODE	DISP	CODE	FLANGE	CODE	PORTS	CODE	PAINT	CODE	FUNCTION
34	34cm <sup>3</sup> /rev [2.1in <sup>3</sup> /rev]	A7	2-Hole SAE A pilot Ø82.5×6.4 	G7	G1/2, G1/4	A	No paint	A	Standard
41	41cm <sup>3</sup> /rev [2.5in <sup>3</sup> /rev]	H3	4- Ø13.5 Hole Square pilot Ø82.5×6.4 	DU	G1/2, 7/16-20 UNF	B	Blue	N	Big radial force
66	66cm <sup>3</sup> /rev [4.0in <sup>3</sup> /rev]	A9	4-Hole SAE A pilot Ø82.5×6.4 	U9	7/8-14 O-ring, 7/16-20 UNF	C	Black	D	No case drain
80	80cm <sup>3</sup> /rev [4.9in <sup>3</sup> /rev]	W1	4- Ø13.5 Hole Square pilot Ø107.95×46.5 	SB	7/8-14, O-ring G1/4	S	Silver grey	F	Free running
90	90cm <sup>3</sup> /rev [5.5in <sup>3</sup> /rev]	W2	4- Ø13 Hole Square pilot Ø100×6.5 	M4	M22x1.5, M14x1.5			L	Low speed
100	100cm <sup>3</sup> /rev [6.2in <sup>3</sup> /rev]			MU	Ø12.7, Ø15.8, 7/16-20 UNF manifold 3x3/8-16 UNC			V	High temp.
130	130cm <sup>3</sup> /rev [8.0in <sup>3</sup> /rev]			MM	Ø12.7Ø15.8, G1/4 manifoldM10x1			S	Low temp.
160	160cm <sup>3</sup> /rev [9.6in <sup>3</sup> /rev]								
195	195cm <sup>3</sup> /rev [11.9in <sup>3</sup> /rev]			CODE	SHAFT				
245	245cm <sup>3</sup> /rev [14.9in <sup>3</sup> /rev]			R6	Ø31.25 Splined 14-DP 12/24 				
				S6	Ø25.4 woodruff key Ø25.4×6.35 				
				R8	Ø25.4 splined SAE 6B 				
				S1	Ø25 parallel key 8×7×32 				
				R5	Ø22 Splined 13-DP 16/32 				
				S4	Ø32 parallel key 10×8×45 				
				T2	Tapered Ø31.75 parallel key 7.96×7.96×25.4 				
				SG	Ø31.75 parallel key 7.96×7.96×31.75 				
				A1	Ø25 parallel key 8×7×2 				
				N	Ø30 Splined 6-30×25×6 				
				Z	Ø32 Splined 6-32×26×6 				
				J	Ø30 Splined 6-30×25×8 				
						CODE	ROTATION		
						A	Standard		
						R	Opposite		

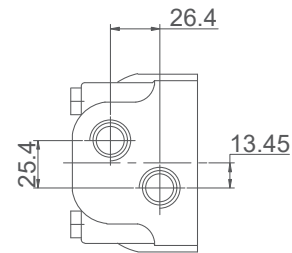
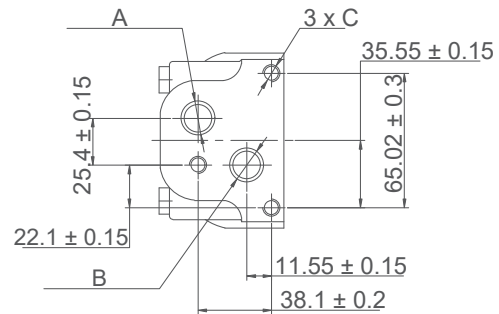
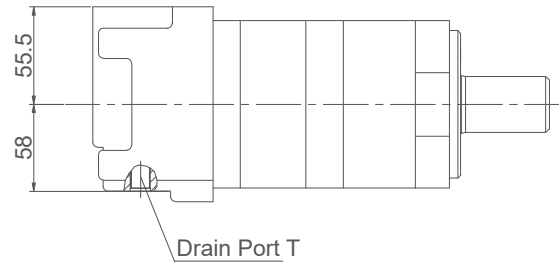
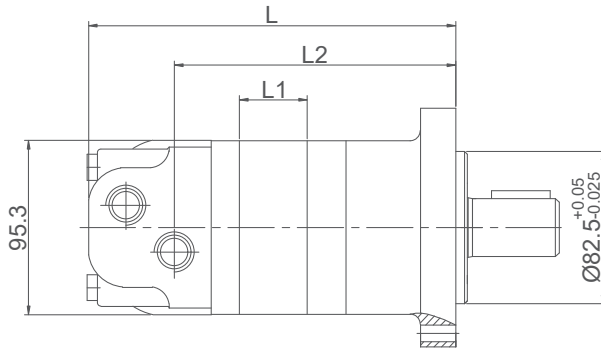
## Specifications

Type		GKA34	GKA41	GKA66	GKA80	GKA90
Displ. cm <sup>3</sup> /rev [in <sup>3</sup> /rev]		34[2.1]	41[2.5]	66[4.0]	80[4.9]	90[5.5]
Max. Speed	Cont.	1215	1104	1075	908	836
RPM	Int.*	1215	1216	1214	908	1042
Flow	Cont.	42[11]	45[12]	72[19]	75[20]	75[20]
lpm [GPM]	Int.*	42[11]	53[14]	87[23]	75[20]	95[25]
Torque	Cont.	9.8[864]	11.2[988]	18.6[1643]	23.5[2065]	26.5[2326]
daNm [lb - in]	Int.*	14.2[1261]	16.9[1497]	27.6[2446]	34.5[3035]	39.0[3458]
Pressure	Cont.	205[3000]	205[3000]	205[3000]	205[3000]	205[3000]
bar [PSI]	Int.*	310[4500]	310[4500]	310[4500]	310[4500]	310[4500]
	Peak**	310[4500]	310[4500]	310[4500]	310[4500]	310[4500]
Weight kg [lb]	Standard or Wheel mount	8.8[19.4]	8.8[19.4]	8.8[19.4]	9.3[20.5]	9.3[20.5]
	Bearingless	6.8[15.0]	6.8[15.0]	6.8[15.0]	7.3[16.0]	7.3[16.0]

Type		GKA100	GKA130	GKA160	GKA195	GKA245
Displ. cm <sup>3</sup> /rev [in <sup>3</sup> /rev]		100[6.2]	130[8.0]	160[9.6]	195[11.9]	245[14.9]
Max. Speed	Cont.	742	576	477	385	308
RPM	Int.*	924	720	713	577	462
Flow	Cont.	75[20]	75[20]	75[20]	75[20]	75[20]
lpm [GPM]	Int.*	95[25]	95[25]	115[30]	115[30]	115[30]
Torque	Cont.	29.5[2630]	38.5[3420]	45.5[4040]	54.0[4780]	66.0[5850]
daNm [lb - in]	Int.*	44.5[3950]	56.0[4970]	57.0[5040]	66.5[5890]	82.0[7250]
Pressure	Cont.	205[3000]	205[3000]	205[3000]	205[3000]	205[3000]
bar [PSI]	Int.*	310[4500]	310[4500]	260[3750]	260[3750]	260[3750]
	Peak**	310[4500]	310[4500]	310[4500]	310[4500]	310[4500]
Weight kg [lb]	Standard or Wheel mount	9.5[21.0]	9.8[21.5]	10.0[22.0]	10.4[23.0]	11.3[25.0]
	Bearingless	7.5[16.5]	7.7[17.0]	7.9[17.5]	8.4[18.5]	9.3[20.5]

Type		GKA305	GKA395	GKA490
Displ. cm <sup>3</sup> /rev [in <sup>3</sup> /rev]		305[18.7]	395[24.0]	490[29.8]
Max. Speed	Cont.	246	191	153
RPM	Int.*	265	335	230
Flow	Cont.	75[20]	75[20]	75[20]
lpm [GPM]	Int.*	115[30]	115[30]	115[30]
Torque	Cont.	76.5[6750]	77.5[6840]	84.5[7470]
daNm [lb - in]	Int.*	88.5[7820]	92.5[2250]	93.6[8225]
Pressure	Cont.	205[3000]	155[2250]	120[1750]
bar [PSI]	Int.*	240[3500]	190[2750]	140[2000]
	Peak**	310[4500]	225[3250]	170[2500]
Weight kg [lb]	Standard or Wheel mount	11.3[25.0]	11.8[26.0]	12.2[27.0]
	Bearingless	9.3[20.5]	9.8[21.5]	10.2[22.5]

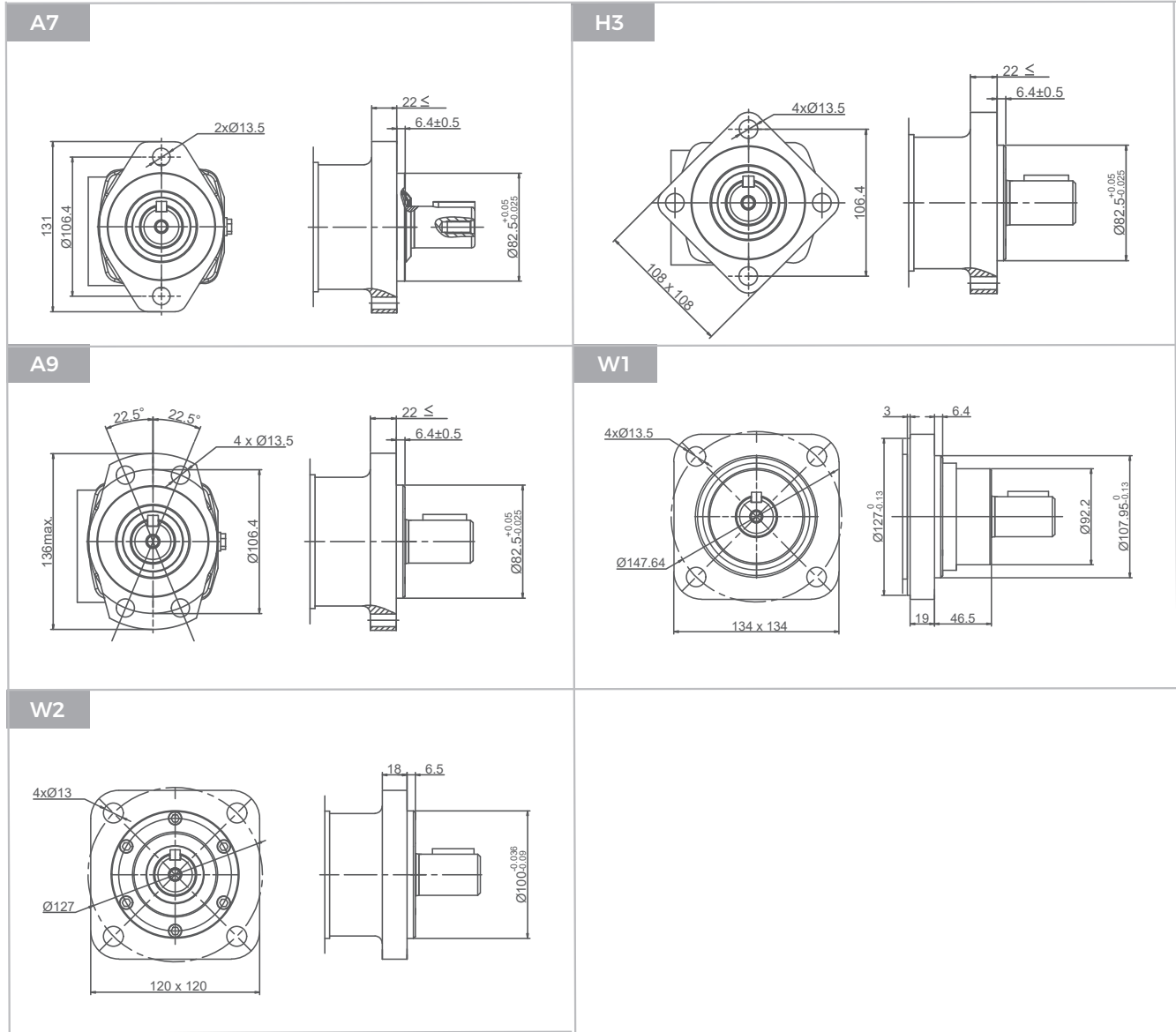
## GKA Dimensions and Mountings



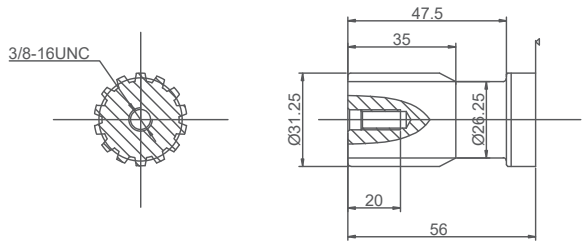
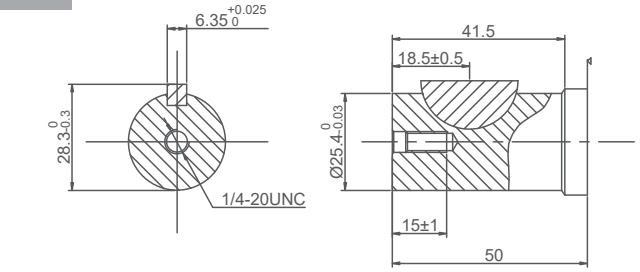
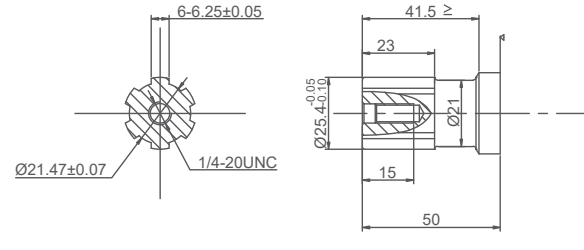
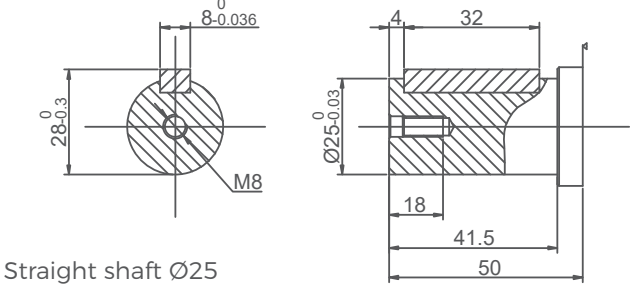
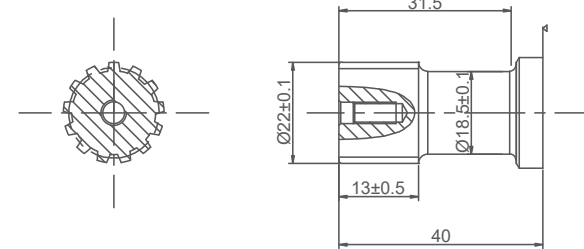
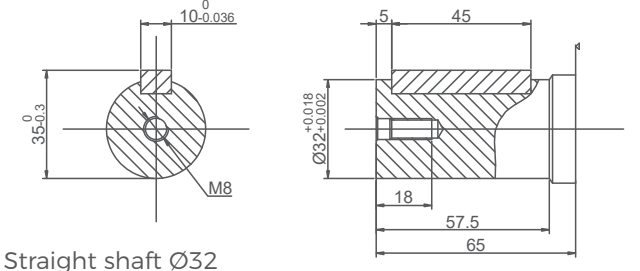
Model	L	L1	L2
GKA34	182	14.5	133.5
GKA41	185	17.8	136.5
GKA66	189.5	22.5	141.5
GKA80	196	28.9	148
GKA90	196	28.9	148
GKA100	202.5	35.6	154.5
GKA130	211.5	44.6	163.5
GKA160	223	56	175
GKA195	235.3	72	188.3
GKA245	256.5	89.3	208.5
GKA305	277.8	107.8	212.5
GKA395	296.5	125.5	237.5
GKA490	313.8	142.3	245

Mounting	G7 (depth)	DU (depth)	U9 (depth)	SB (depth)	M4 (depth)	MU (depth)	MM (depth)
P(A, B)	G1/2 (15)	G1/2 (15)	7/8-14 O-ring (17)	7/8-14 O-ring (17)	M22 x 1.5 (15)	∅12.7, ∅15.8	∅12.7, ∅15.8
T	G1/4(12)	7/16-20 UNF (12)	7/16-20 UNF (12)	G1/4 (12)	M14 x 1.5 (12)	7/16-20 UNF (12)	G1/4 (12)
C	—	—	—	—	—	3/8-16 UNC (15)	M10 x 1(15)

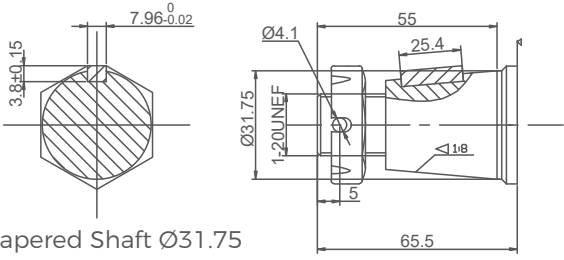
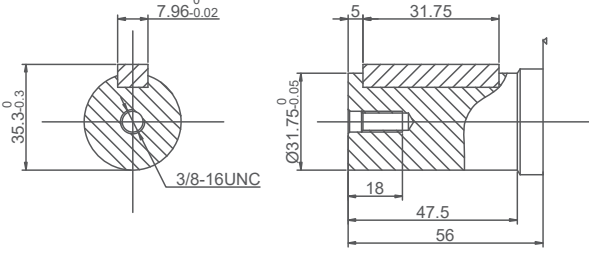
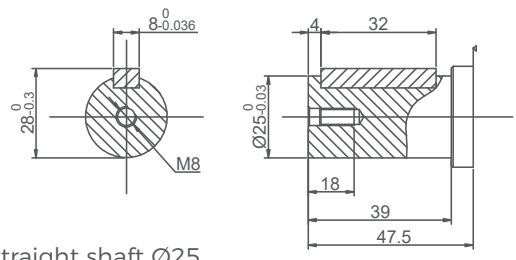
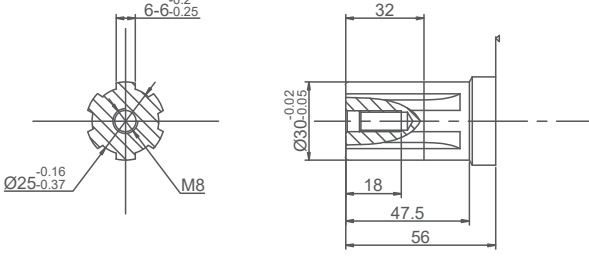
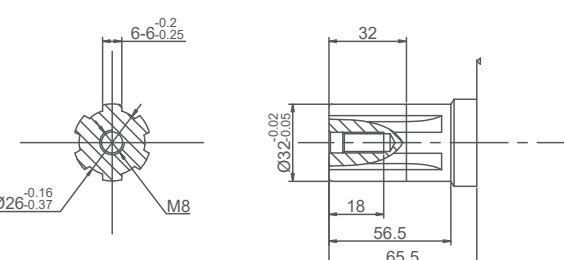
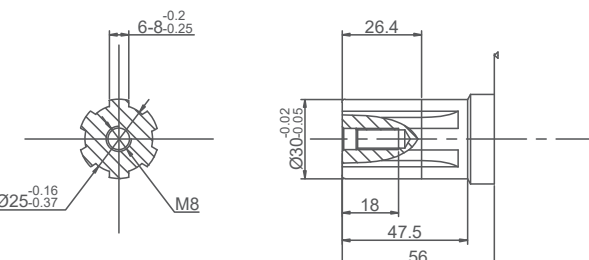
### GKA Flange Covers Dimensions



## GKA Shafts Dimensions

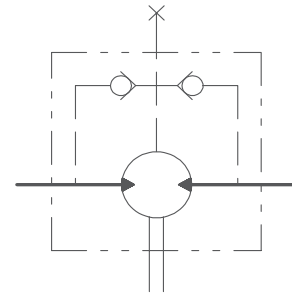
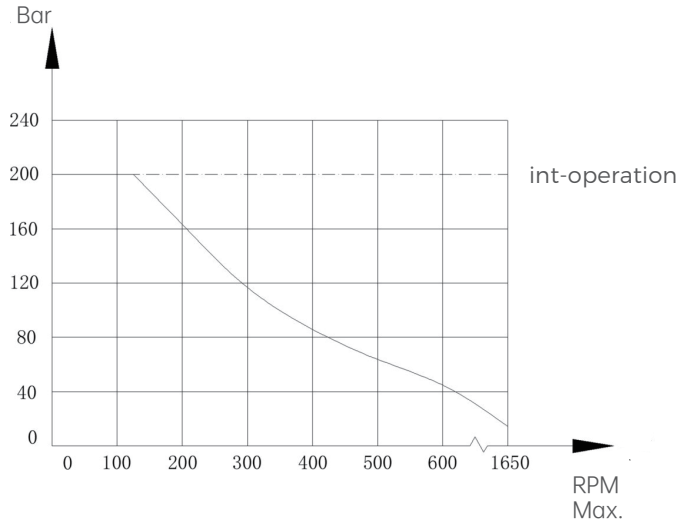
<p><b>R6</b></p>  <p>Splined shaft 14-DP 12/24</p>	<p><b>S6</b></p>  <p>Straight shaft Ø25.4 Woodruff key 25.4 x 6.35</p>
<p><b>R8</b></p>  <p>Splined shaft Ø25.4 SAE 6B</p>	<p><b>S1</b></p>  <p>Straight shaft Ø25 Parallel key 8 x 7 x 32</p>
<p><b>R5</b></p>  <p>Splined shaft 13-DP 16/32</p>	<p><b>S4</b></p>  <p>Straight shaft Ø32 Parallel key 10 x 8 x 45</p>

### GKA Shafts Dimensions

<p><b>T2</b></p>  <p>Tapered Shaft <math>\text{\O}31.75</math>                  Parallel key 7.96 x 7.96 x 25.4                  Tightening torque: <math>200 \pm 10</math> Nm</p>	<p><b>SG</b></p>  <p>Straight shaft <math>\text{\O}31.75</math>                  Parallel key 7.96 x 7.96 x 31.75</p>
<p><b>A1</b></p>  <p>Straight shaft <math>\text{\O}25</math>                  Parallel key 8 x 7 x 32</p>	<p><b>N</b></p>  <p>Splined shaft 6 - 32 x 25 x 6</p>
<p><b>Z</b></p>  <p>Splined shaft 6 - 32 x 26 x 6</p>	<p><b>J</b></p>  <p>Splined shaft 6 - 32 x 25 x 8</p>

## GKA Series Hydraulic Motors

### Permissible shaft seal pressure



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

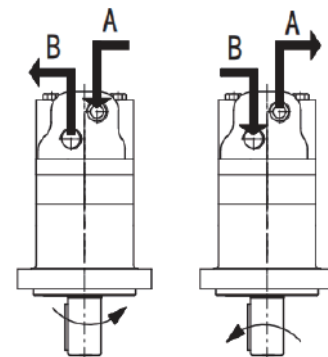
GKA with standard shaft seal, check valves and with drain connection: The shaft seal pressure equals the pressure on the drain line.

### Drain Port

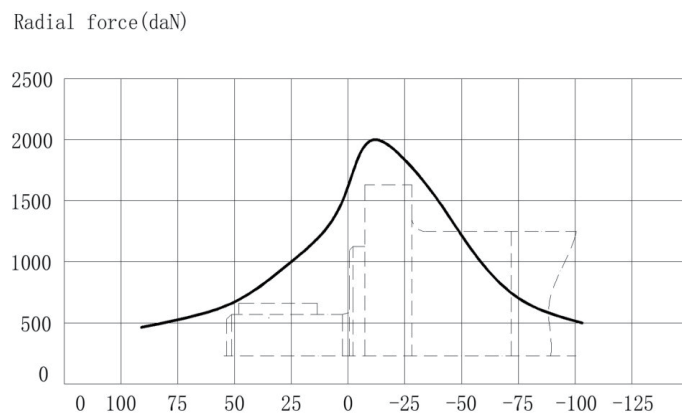
In applications without drain line, output shaft seal exceeds a bit of the pressure in the return line. In applications using the drain line, the pressure of output shaft seal equals the pressure in drain line.

### Standard direction of shaft rotation: Standard

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



### Output shaft stand radial force



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

This radial force curve is derived from the permissible bearing life B10 load at rated torque (2,000 hours or 12x10<sup>6</sup> revolutions at 150 rpm) and must be multiplied by a factor for other speeds.



## GKB Series Hydraulic Motors

### Options

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

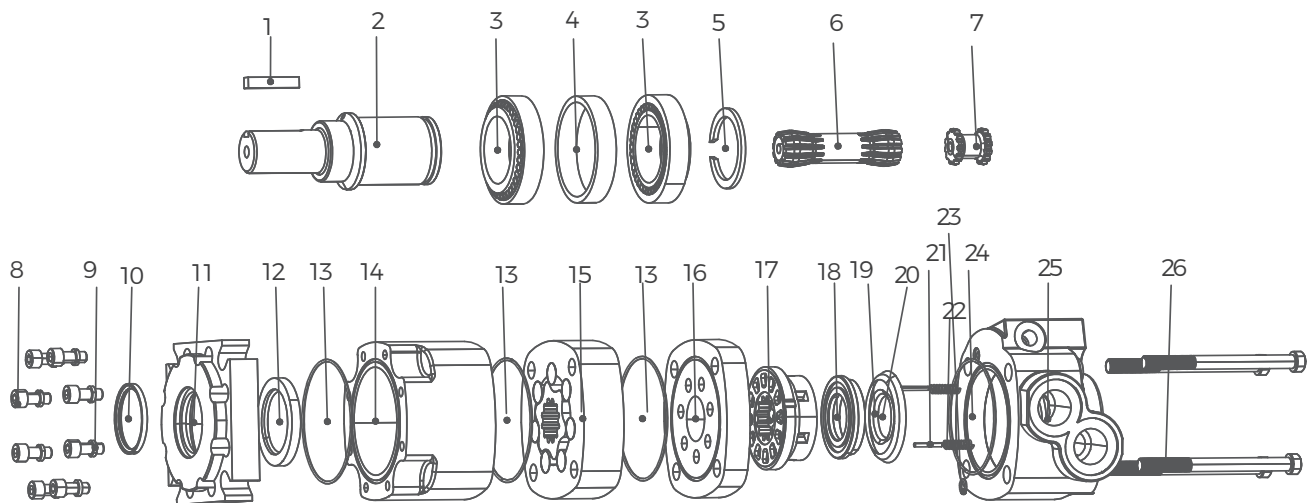
### Applications

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







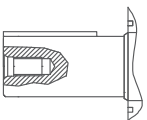
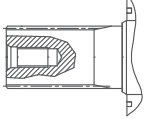
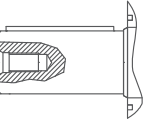
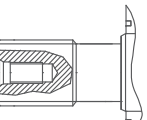
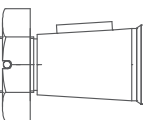
### General

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



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

## Ordering Code

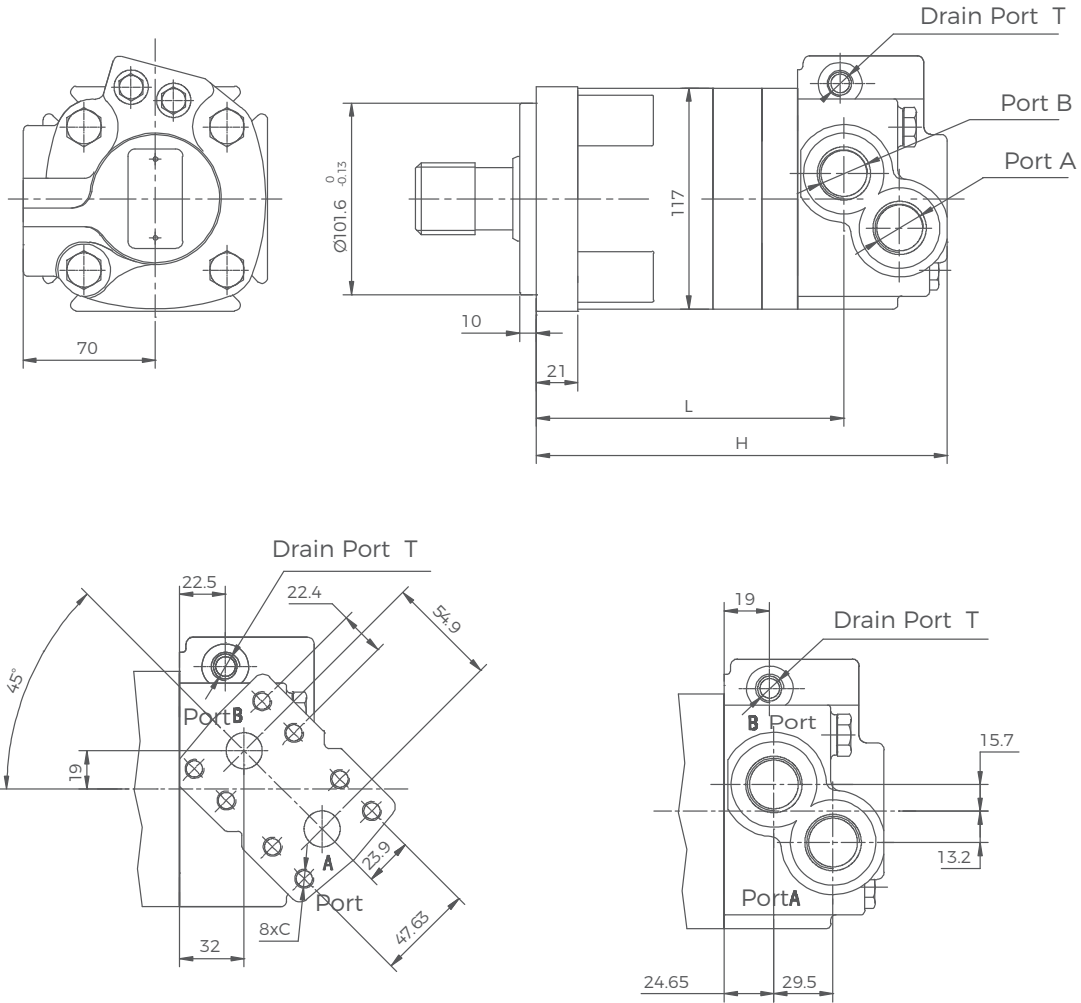
GKB SERIES		DISP	FLANGE		SHAFT	PORTS		ROTATION	PAINT	FUNCTION	
CODE	DISP	CODE	FLANGE	CODE	PORTS	CODE	PAINT	CODE	FUNCTION	CODE	ROTATION
110	110cm <sup>3</sup> /rev [6.1in <sup>3</sup> /rev]	H9	4- Ø15 square pilot Ø101.6×9 	U5	1-1/16-12 O-ring, 7/16-20UNF	A	No Paint	A	Standard	A	Standard
130	130cm <sup>3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

## Specifications

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

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

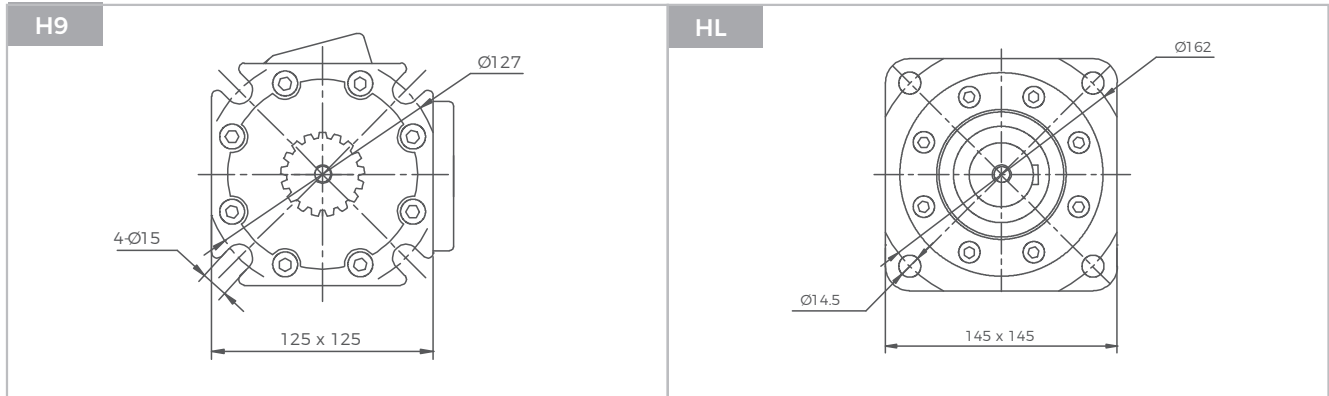
### GKB Dimensions and Mountings



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

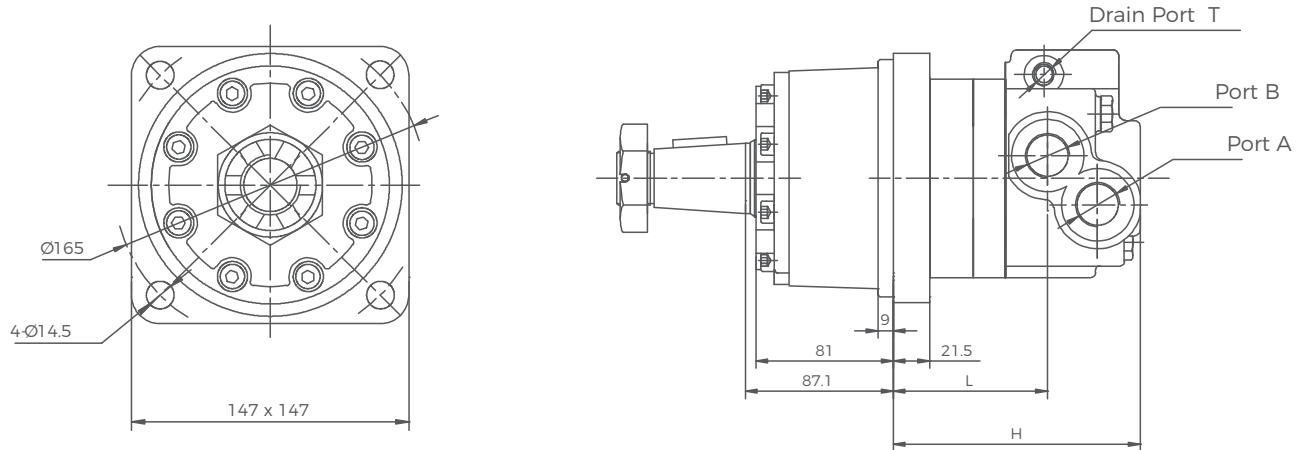
Mounting	U5 (depth)	UK (depth)	MD (depth)	UL (depth)
P(A, B)	1-1/16-12 O-ring	7/8-14 UNF O-ring	M22 x 1.5	2- $\text{Ø}19.05$
T	7/16-20 O-ring	9/16-18 UNF O-ring	M22 x 1.5	7/16-20 UNF
C	—	—	—	M10

## GKB Flange Covers Dimensions

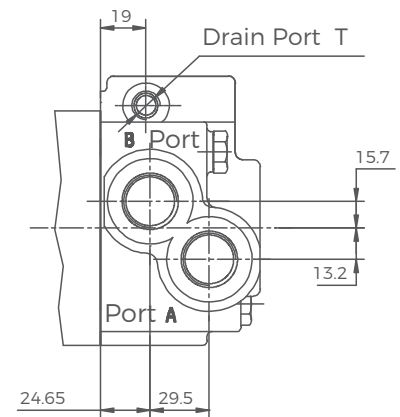


## GKB Wheel Motor Dimensions and Mountings

### Flange W7



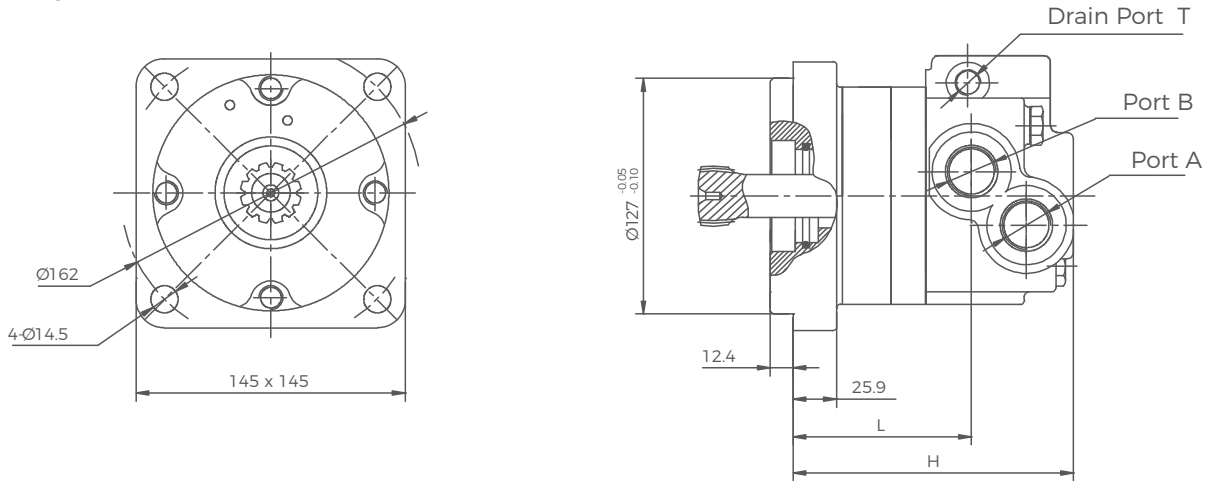
Model	1-1/16-12 or G3/4 Threaded Ports		3/4 Split Flange Oil Ports	
	H	L	H	L
GKB110	143.3	87.4	174.5	95.1
GKB130	147.3	91.5	178.5	99.1
GKB160	153.6	97.8	184.9	105.5
GKB205	162.2	106.3	193.4	114.0
GKB245	153.6	97.8	184.9	105.5
GKB310	162.2	106.3	193.4	114.0
GKB395	172.8	117.0	204.1	124.7
GKB495	185.8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



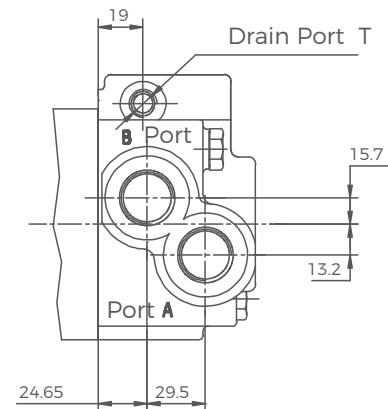
Mounting	U5 (depth)	UK (depth)	MD (depth)	UL (depth)
P(A, B)	1-1/16-12 O-ring	7/8-14 UNF O-ring	M22 x 1.5	2-Φ 19.05
T	7/16-20 O-ring	9/16-18 UNF O-ring	M22 x 1.5	7/16-20 UNF
C	—	—	—	M10

## GKB Bearingless Motor Dimensions and Mountings

### Flange HM

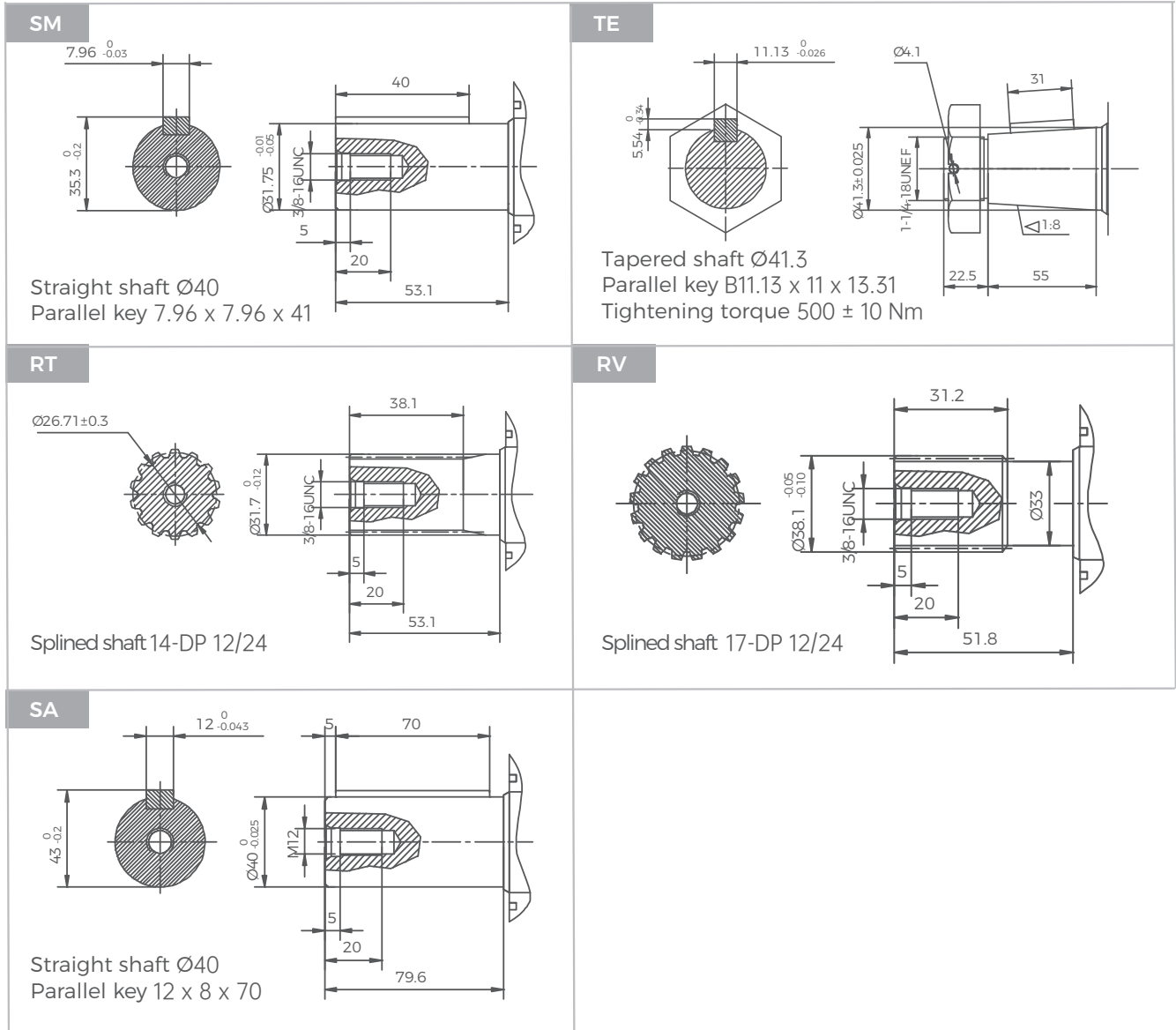


Model	1-1/16-12 or G3/4 Threaded Ports		3/4 Split Flange Oil Ports	
	H	L	H	L
GKB110	146.8	91.0	178.7	99.4
GKB130	150.8	95.1	182.8	103.5
GKB160	157.1	101.4	189.1	109.8
GKB205	165.7	109.9	197.6	118.3
GKB245	157.1	101.4	189.1	109.8
GKB310	165.7	109.9	197.6	118.3
GKB395	176.3	120.6	208.3	129.0
GKB495	189.2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



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

### GKB Shafts Dimensions

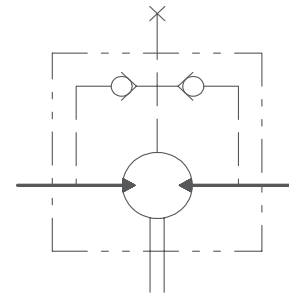
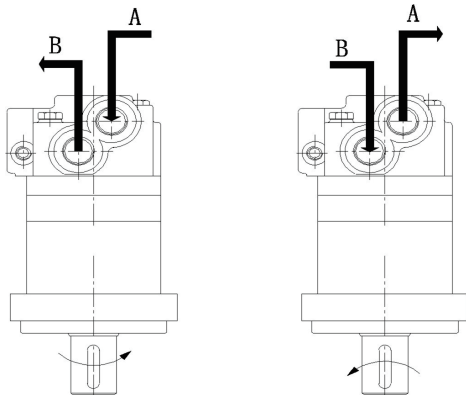




## GKB Series Hydraulic Motors

### Standard direction of shaft rotation: Standard

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



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

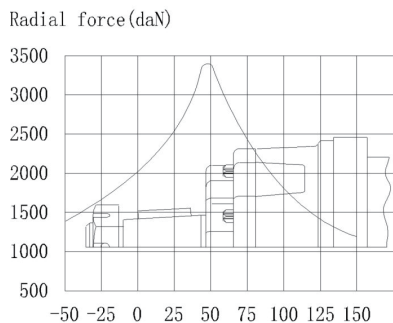
### Output shaft stand radial force

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

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

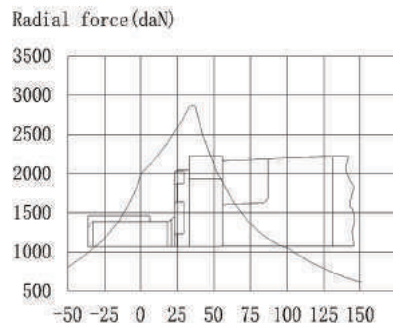
52% increase in load capacity at 3,000,000 rpm or 500 hours.

Wheel motor with tapered shaft



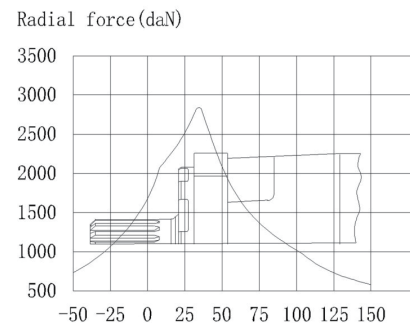
The distance between the force point and the flange surface (mm)

Standard motor with cylindrical shaft



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

Standard motor with spline shaft



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

## GKC Series Hydraulic Motors

### OPTIONS

- Flange connection
- Straight, splined and tapered shaft
- Metric and BSPP ports
- Other special features

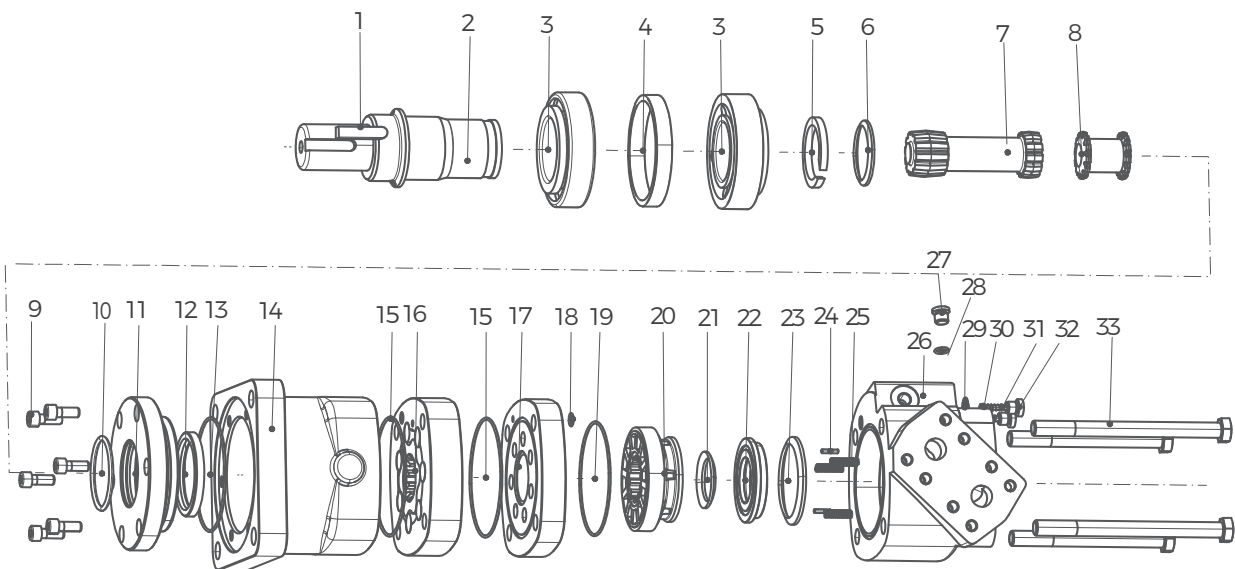
### APPLICATION

- Conveyors
- Feeding machinery
- Metal working machines
- Textile machines
- Agricultural machines
- Food industries
- Mining machines






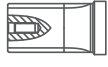

### General

Max. Displacement	cm <sup>3</sup> /rev [in <sup>3</sup> /rev]	985 [60.0]
Max. Speed	RPM	866
Max. Torque	daNm [lb-in]	cont.:168,5 [14920] int.:187,5 [16580]
Max. Pressure Drop	bar [PSI]	cont.:205 [3000] int.:300 [4500]
Max. Oil Flow	lpm [GPM]	225 [60]
Pressure fluid		Mineral based- HLP (DIN 51524) or HM (ISO 6743/4)
Temperature Range	°C [°F]	-40÷140 [-40÷284]
Optimal Viscosity range	mm <sup>2</sup> /s [SUS]	20÷75 [98÷347]
Filtration		ISO code 20/16 (Min. recommended fluid filtration of 25 microns)



1 Paralled key	8 Coupling shaft	15 O-ring	22 Distributor pressure plate	29 Washer
2 Output shaft	9 Screw	16 Rotor and stator	23 Special shape ring	30 Steel Ball
3 Tapered roller bearing	10 O-ring	17 Balance plate	24 Positioning pins	31 Spring
4 Bearing outer retainer ring	11 Front cover	18 O-ring seal	25 Spring	32 Hexagon plugs
5 Washers	12 Shaft seal	19 O-ring seal	26 Rear housing	33 Screw
6 Special shape ring	13 O-ring	20 Distribution plate	27 Plug	
7 Transmission shaft	14 Housing	21 Special shape ring	28 O-ring	

## Ordering Code

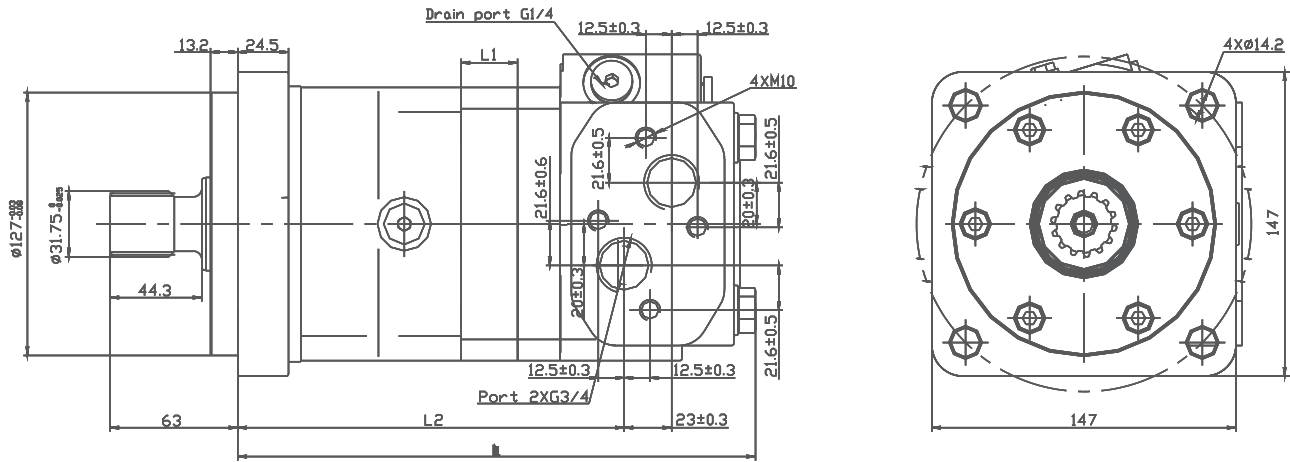
GKC SERIES		DISP	FLANGE	SHAFT	PORTS	ROTATION	PAINT	FUNCTION	
CODE		DISP	CODE	FLANGE	CODE	PORTS	CODE	PAINT	
195		195cm <sup>3</sup> /rev [11.9in <sup>3</sup> /rev]	A1	4- Ø14.2 square Ø162, pilot Ø127x13.2 	G3	G3/4, G1/4, manifold 4xM10	A	No paint	
245		245cm <sup>3</sup> /rev [15.0in <sup>3</sup> /rev]			SF5	1-5/16-12UNF O-ring, 7/16-20UNF	B	Blue	
310		310cm <sup>3</sup> /rev [19.0in <sup>3</sup> /rev]			SF7	G1, G1/4	C	Black	
395		390cm <sup>3</sup> /rev [23.9in <sup>3</sup> /rev]					S	Silver grey	
490		490cm <sup>3</sup> /rev [30.0in <sup>3</sup> /rev]			CODE	SHAFT		CODE	FUNCTION
625		625cm <sup>3</sup> /rev [38.0in <sup>3</sup> /rev]			Y1	Ø35 parallel key 12x12x63 	A	Standard	
735		735cm <sup>3</sup> /rev [45.0in <sup>3</sup> /rev]			G2	Ø38.1 parallel key 9.53x9.53x41.9 	N	Big radial force	
805		805cm <sup>3</sup> /rev [49.0in <sup>3</sup> /rev]			FE	Ø38.1 splined tooth 17-DP 12/24 	D	No case drain	
985		985cm <sup>3</sup> /rev [60.0in <sup>3</sup> /rev]			T1	Tapered 1: 8 Ø45 parallel key 11.13x11.13x31.75 	F	Free running	
							L	Low speed	
							V	High temp.	
							S	Low temp.	
							CODE	ROTATION	
							A	Standard	
							R	Opposite	

## Specifications

Type		GKC195	GKC245	GKC310	GKC390	GKC490
Displacement cm <sup>3</sup> /rev [in <sup>3</sup> /rev]		195[11.9]	245[15.0]	310[19.0]	390[23.9]	490[30.0]
Max. Speed	Cont.	775	615	485	387	307
	RPM	866	834	698	570	454
Max. Oil Flow	Cont.	150[40]	150[40]	150[40]	150[40]	150[40]
	lpm [GPM]	170[45]	210[55]	225[60]	225[60]	225[60]
Max. Torque	Cont.	57.5[5100]	73.5[6510]	93.0[8230]	115.5[10230]	144.5[12800]
	daNm [lb - in]	86.0[7620]	110.0[9740]	135.5[11990]	163.5[14490]	188.5[16670]
Max. Inter Pressure	Cont.	205[3000]	205[3000]	205[3000]	205[3000]	205[3000]
	bar [PSI]	310[4500]	310[4500]	310[4500]	310[4500]	275[4000]
	Peak**	310[4500]	310[4500]	310[4500]	310[4500]	310[4500]
Weight, kg [lb]	Standard or Wheel mount	24.9[55.0]	25.2[55.5]	25.6[56.5]	26.3[58.0]	27.0[59.5]
	Bearingless	20.2[44.5]	20.4[45.0]	20.9[46.0]	21.5[47.5]	22.2[49.0]

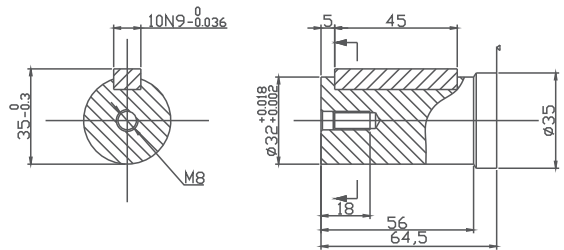
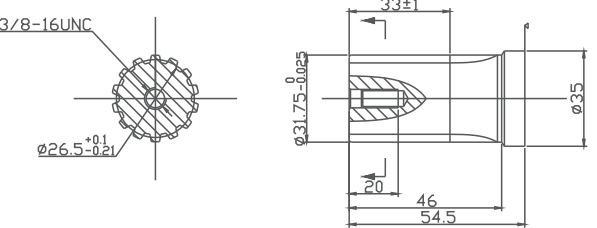
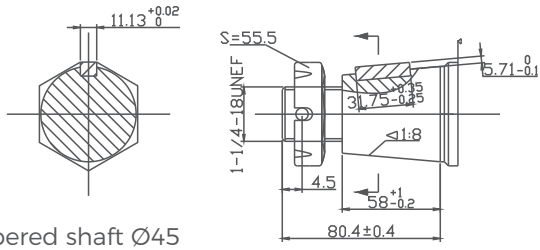
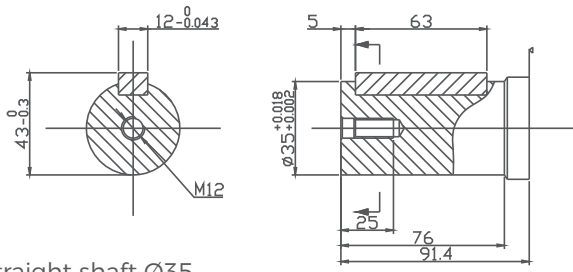
Type		GKC625	GKC735	GKC805	GKC985
Displacement cm <sup>3</sup> /rev [in <sup>3</sup> /rev]		625[38.0]	735[45.0]	805[49.0]	985[60.0]
Max. Speed	Cont.	241	203	187	153
	RPM	353	303	280	230
Max. Oil Flow	Cont.	150[40]	150[40]	150[40]	150[40]
	lpm [GPM]	225[60]	225[60]	225[60]	225[60]
Max. Torque	Cont.	148.0[13100]	137.8[12192]	158.2[14004]	168.5[14920]
	daNm [lb - in]	189.8[16800]	169.9[15040]	185.0[16377]	187.5[16580]
Max. Inter Pressure	Cont.	170[2500]	140[2000]	140[2000]	140[2000]
	bar [PSI]	221[3200]	170[2500]	170[2500]	140[2000]
	Peak**	240[3500]	205[3000]	170[2500]	170[2500]
Weight, kg [lb]	Standard or Wheel mount	27.9[61.5]	28.6[63.0]	29[64.0]	30.4[67.0]
	Bearingless	23.1[51.0]	23.8[52.5]	24.3[53.5]	25.6[56.5]

### GKC Dimensions and Mountings



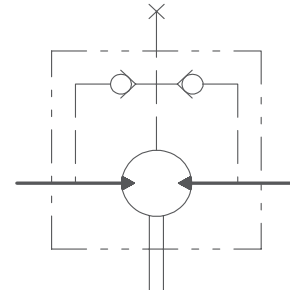
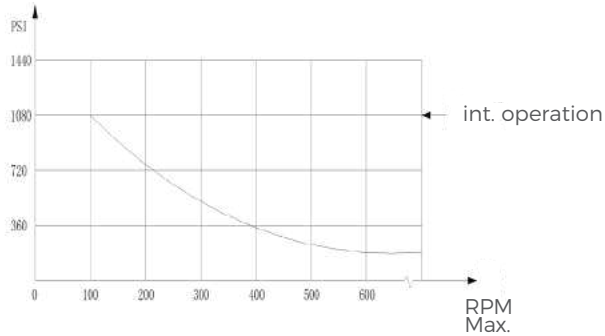
Model	L	L1	L2
GKC195	247	21.7	182
GKC245	252	27.3	187
GKC310	278	34.5	200
GKC395	287	43.4	209.5
GKC490	298	54.4	221
GKC625	313	69.1	235
GKC735	325	79.1	245
GKC805	333	88.9	255
GKC985	353	109	274.6

### GKC Shafts Dimensions

<p><b>C2</b></p>  <p>Straight shaft <math>\varnothing 38.1</math> Parallel key 9.525 x 9.525 x 41.9</p>	<p><b>FE</b></p>  <p>Straight shaft <math>\varnothing 35</math> Parallel key 12 x 12 x 63</p>
<p><b>T1</b></p>  <p>Tapered shaft <math>\varnothing 45</math> Parallel key 11.13 x 11.13 x 31.75 Tightening torque: 500 ± 10 Nm</p>	<p><b>Y1</b></p>  <p>Straight shaft <math>\varnothing 35</math> Parallel key 12 x 12 x 63</p>

## GKC Series Hydraulic Motors

### Permissible shaft seal pressure



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

GKC with standard shaft seal, check valves and with drain connection: The shaft seal pressure equals the pressure on the drain line.

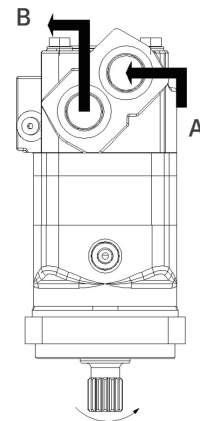
### Drain Port

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

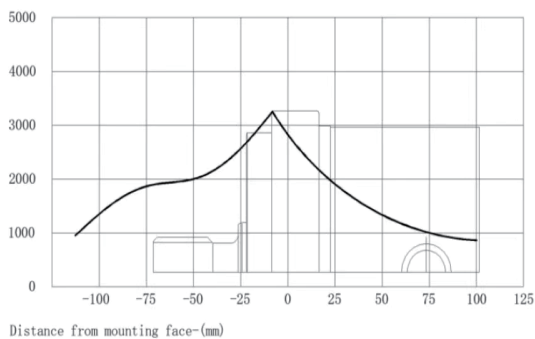
When facing the shaft end of the motor, the shaft rotates: clockwise when port "A" is pressurized.

When port "B" is pressurized, it rotates counterclockwise.



### GKC for CC Mounting Radial forces

Radial forces-(daN)



The bearing curve represents allowable bearing loads for an B10 bearing life(2000 hours or 12x10<sup>6</sup> 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.

## GWD Series Hydraulic Motors

### Options

- Rotor flow distribution, geroler type
- Geroler type
- Motor with needle bearing
- Align the ports on the side
- Straight, splined and tapered shafts
- High pressure seal
- Metric, SAE and BSPP ports

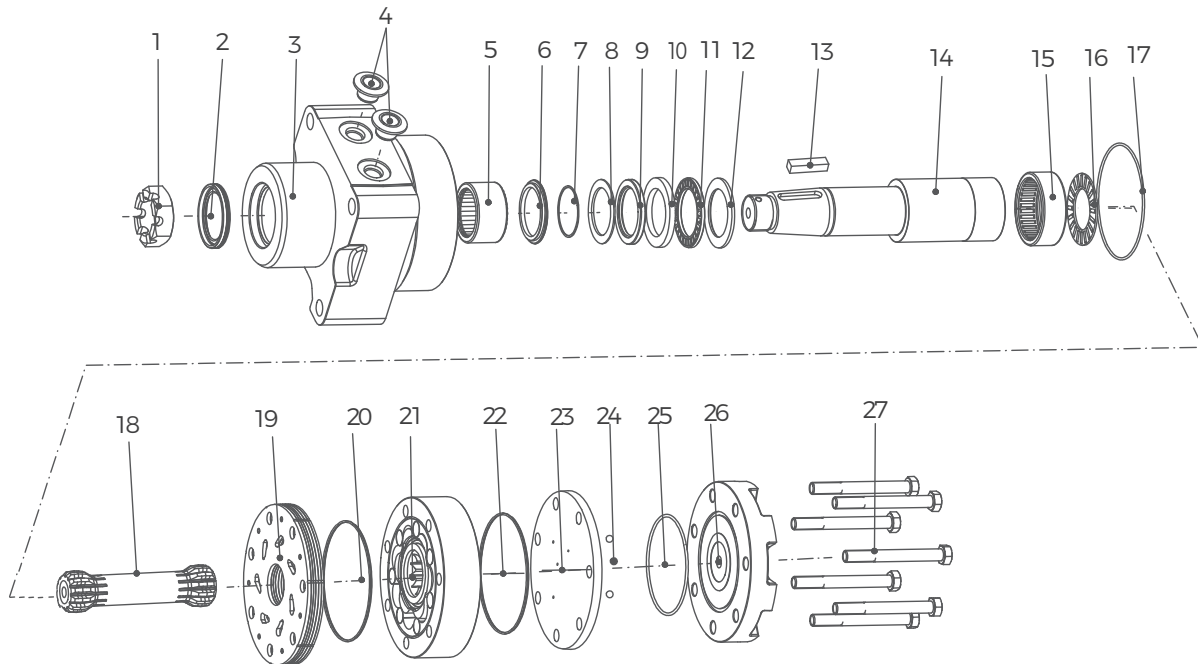
### Applications

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



### General



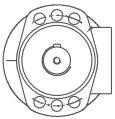

Max. Displacement	cm <sup>3</sup> /rev [in <sup>3</sup> /rev]	748[45.6]
Max. Speed	RPM	490
Max. Torque	daNm [lb-in]	cont.: 106.2[9400] int.: 123.7[10950]
Max. Pressure Drop	bar [PSI]	cont.: 205 [3000] int.: 300 [4500]
Max. Oil Flow	lpm [GPM]	276[72.9]
Pressure fluid		Mineral based- HLP (DIN 51524) or HM (ISO 6743/4)
Temperature Range	°C [°F]	-40÷140 [-40÷284]
Optimal Viscosity range	mm <sup>2</sup> /s [SUS]	20÷75 [98÷347]
Filtration		ISO code 20/16 (Min. recommended fluid filtration of 25 microns)



1 Castle nut	7 O-ring	13 Flat key	19 Distribution plate	26 Rear cover
2 Shaft seal	8 Washer	14 Output shaft	20 Special shape ring	27 Screw
3 Housing	9 shaft seal	15 Rear needle roller bearing	22 Special shape ring	
4 Oil port plug cap	10 Bearing retainer	16 Flat bearing	23 Balance plate	
5 Needle roller bearing	11 Flat bearing	17 O-ring	24 Steel ball	
6 Bearing	12 Bearing retainer	18 Transmission shaft	25 O-ring	



## Ordering Code

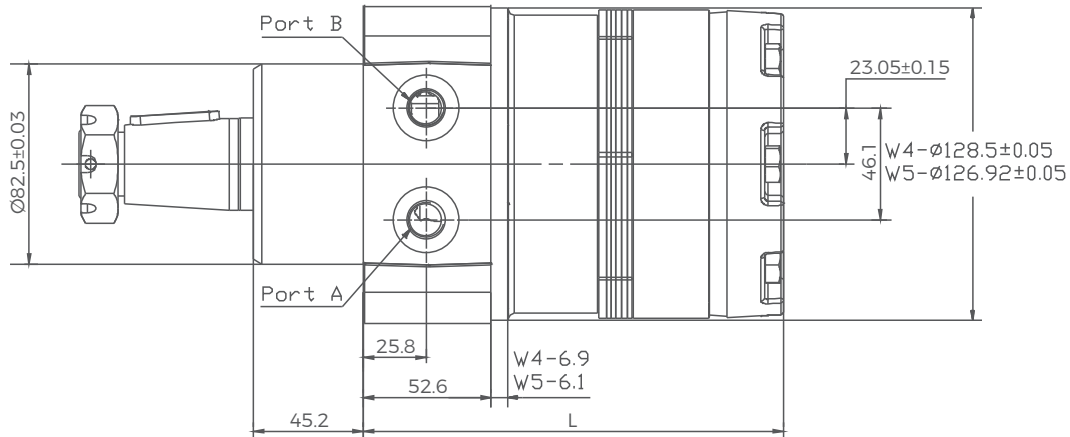
GWD SERIES		DISP	FLANGE	SHAFT	PORTS	ROTATION	PAINT	FUNCTION					
CODE	DISP	CODE	FLANGE	CODE	PORTS	CODE	PAINT	CODE					
120	121cm <sup>3</sup> /rev	W4	Wheel Ø147.6 4- Ø13.1 rear pilot Ø128.5×7	UD	9/16-18UNF	A	No paint	A					
160	162cm <sup>3</sup> /rev				UF		7/8-14UNF		B	Blue			
200	204cm <sup>3</sup> /rev		W5		Wheel Ø147.6 4- Ø13.1 Rear pilot Ø127×7		GC		G1/2	C	Black		
230	232cm <sup>3</sup> /rev						MC		M22×1.5	S	Silver grey		
260	261cm <sup>3</sup> /rev	A9	6- Ø13.5 SAE Ø106.4 pilot Ø82.5×2.8	SH	Ø35 parallel key 10×8×45	F	Free running	V					
300	300cm <sup>3</sup> /rev						SL		Ø38.1 parallel key 9.5×9.5×38.1	S	Low temp.		
350	348cm <sup>3</sup> /rev		W6								Ø147.6 square 4- Ø13.5 pilot Ø82.5×2.8	TB	Tapered Ø35 parallel key 7.96×7×31.5
375	363cm <sup>3</sup> /rev												
470	465cm <sup>3</sup> /rev	T2	Tapered Ø31.75 parallel key 7.96×7×25.4	RQ	Ø25.3 Splined 6-25.3×21×6.2								
540	536cm <sup>3</sup> /rev					R	Opposite						
620	631cm <sup>3</sup> /rev												
750	748cm <sup>3</sup> /rev												

## Specifications

Type		GWD120	GWD160	GWD200	GWD230	GWD260	GWD260
Disp. cm <sup>3</sup> /rev.		121	162	204	232	261	261
Max. Speed	Cont	360	370	300	260	260	260
RPM	Int.	490	470	370	320	350	350
Max. Flow	Cont	45	61	68	68	76	76
LPM	Int.	61	76	83	83	91	91
Max. Torque	Cont	327	475	542	611	712	712
Nm	Int.	383	542	633	712	791	791
Max. Pressure Drop	Cont	207	207	207	207	207	207
bar	Int.	241	241	241	241	241	241
	Peak	276	276	276	276	276	276
Max. No-load Pressure	bar	8	10	10	10	10	10
Min Operating Nm	Drop Cont	235	342	390	440	513	513
Torque At Max. Pres.	Drop Int.	280	396	462	520	577	577
Weight kg	GWD	13.3	13.3	13.7	13.8	14.1	14.1

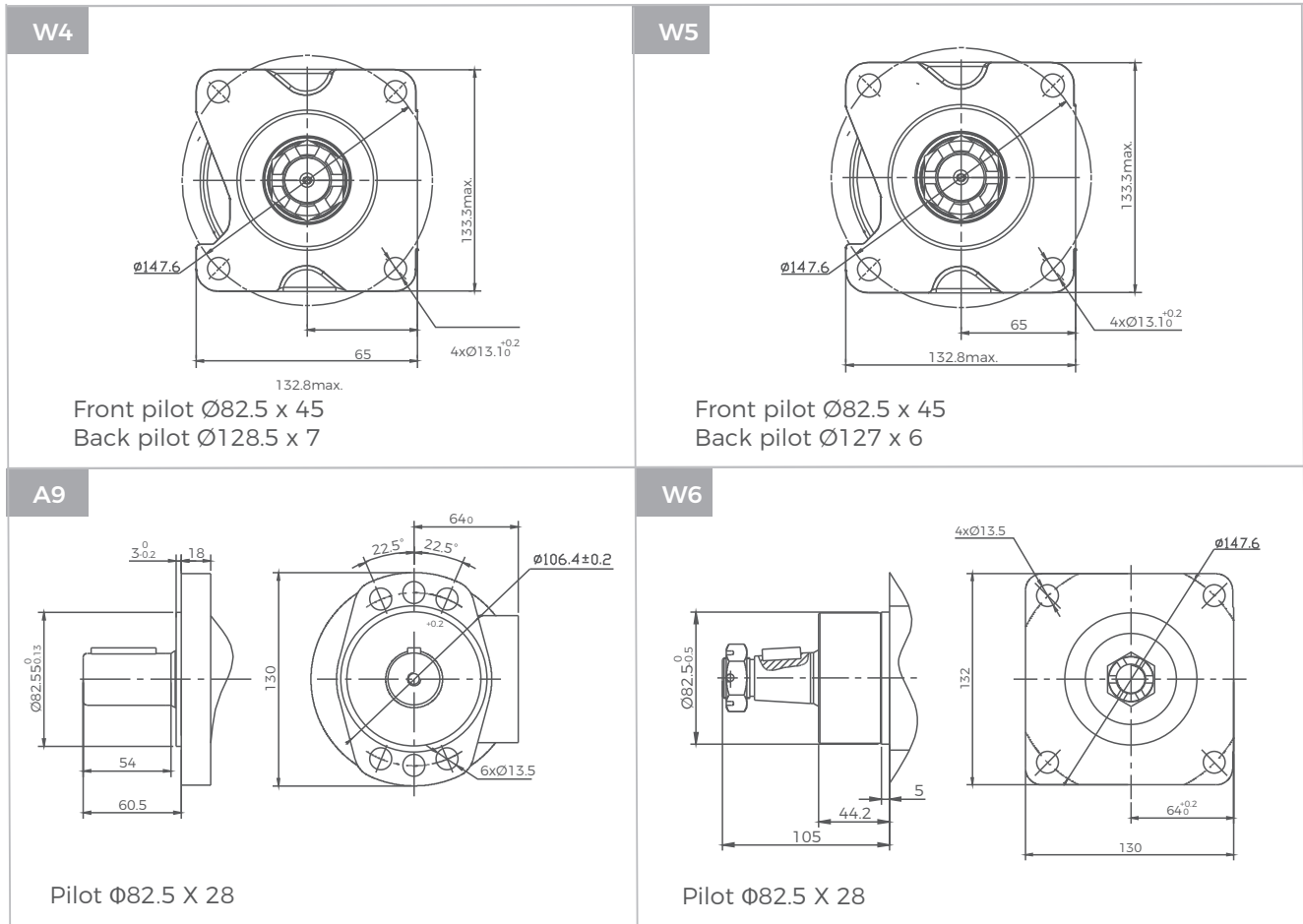
Type		GWD350	GWD375	GWD470	GWD540	GWD620	GWD750
Disp. cm <sup>3</sup> /rev.	cm <sup>3</sup> /rev.	348	363	465	536	631	748
Max. Speed	Cont	220	200	160	140	120	100
RPM	Int.	270	250	200	170	150	130
Max. Flow	Cont	76	76	76	76	76	76
LPM	Int.	95	91	91	91	91	91
Max. Torque	Cont	921	1006	1096	983	1014	1062
Nm	Int.	1045	1158	1184	1243	1291	1237
Max. Pressure Drop	Cont	207	207	172	138	121	103
bar	Int.	241	241	189	173	155	121
	Peak	276	276	207	207	173	138
Max. No-load Pressure	bar	10	10	10	12	12	12
Min Operating Nm	Drop Cont	663	724	822	737	761	797
Torque At Max. Pres.	Drop Int.	763	845	900	945	981	940
Weight kg	GWD	15.5	15	15.5	16.1	16.8	17.5

## GWD Dimensions and Mountings



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	172[7.17]	15.5[29.4]
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]

### GWD Flange Covers Dimensions



### GWD Shafts Dimensions

<p><b>TB</b></p> <p>Tapered shaft <math>\varnothing 35</math>            Parallel key 7.96 x 7 x 31.5            Tightening torque: 325 Nm</p>	<p><b>TA</b></p> <p>Tapered shaft <math>\varnothing 38.1</math>            Parallel key 7.96 x 7 x 36.5            Tightening torque: 410-540 Nm</p>
<p><b>SL</b></p> <p>Straight shaft <math>\varnothing 38.1</math>            Parallel key 9.5 x 9.5 x 38.1</p>	<p><b>SH</b></p> <p>Straight shaft <math>\varnothing 35</math>            Parallel key 10 x 8 x 45</p>
<p><b>T2</b></p> <p>Tapered shaft <math>\varnothing 31.75</math>            Parallel key 7.96 x 7.96 x 25.4            Tightening torque: 200 ± 10 Nm</p>	<p><b>RQ</b></p> <p>Splined shaft 6-25.3 x 21 x 6.2</p>

## GWD Series Hydraulic Motors

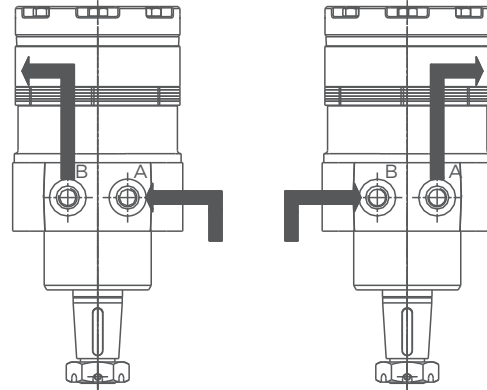
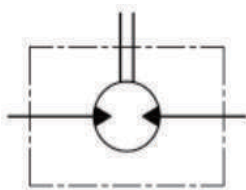
### Shaft Rotation Direction: Standard

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

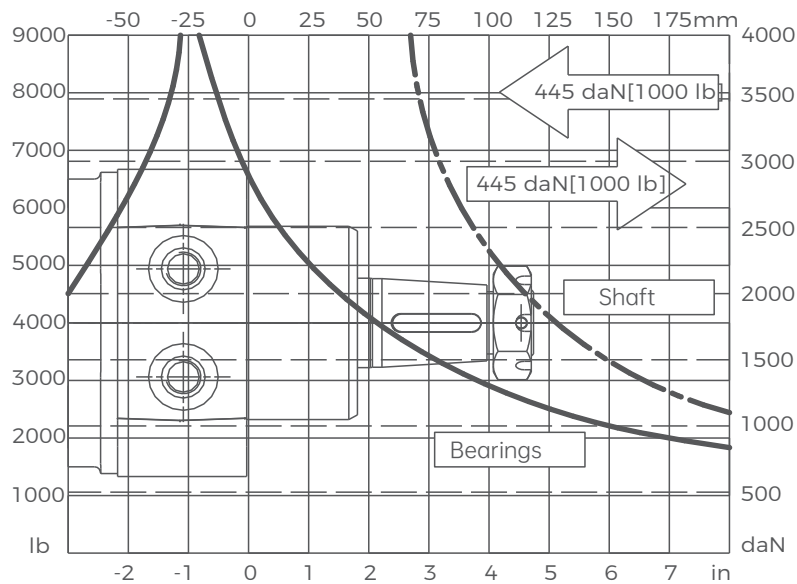
-Clockwise.

When port B is pressurized.

-Counter-clockwise when port A is pressurized.



### W4 & W5 Wheel Mounts



## GBD Series Hydraulic Motor Brakes

### Options

- Double heavy-duty roller bearings
- Double release ports
- Wet braking, spring loaded
- Smaller axial installation size
- Low noise, long service life

### Applications

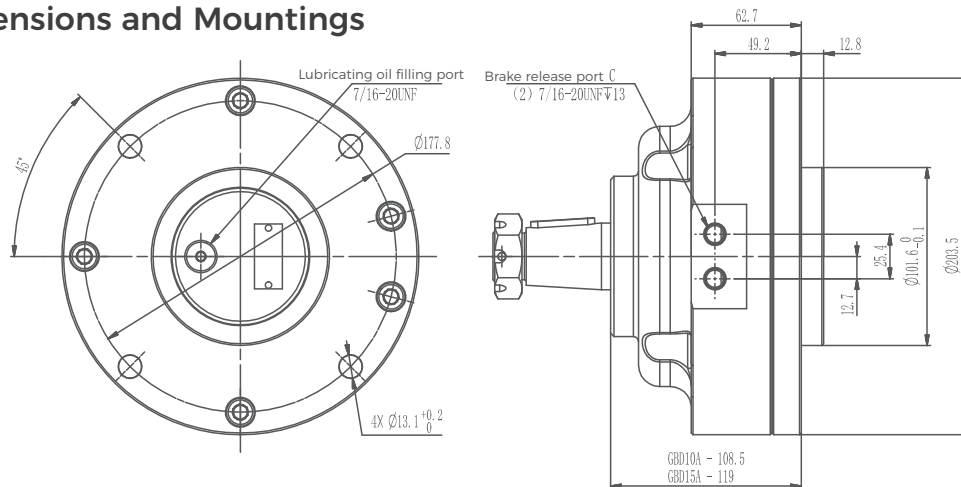
- Aerial work platform
- Wheel drive
- Swing drive
- Transmission



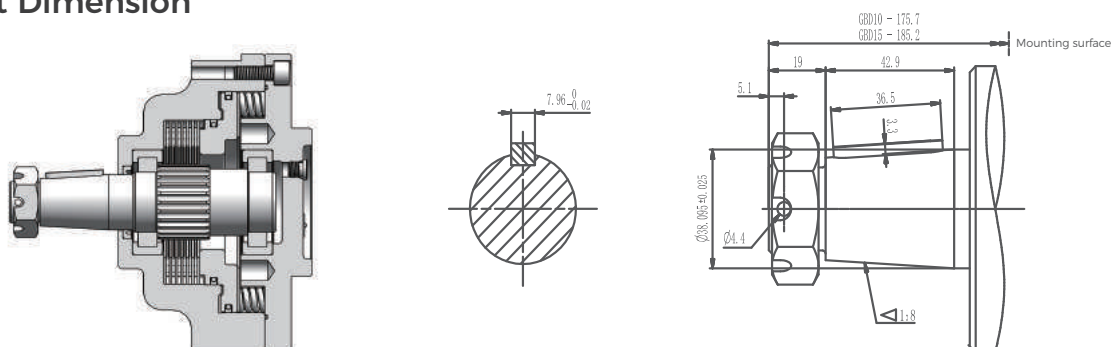
### General

Specifications		GBD10	GBD15
Min. static torque	Nm	1150	1500
Brake release pressure	MPa	2.8	2.8
Max. release pressure	MPa	27.6	27.6
Min. oil released by brake	cm <sup>3</sup>	11.5	11.5
Max. speed	rpm	250	250
Brake chamber oil volume	cm <sup>3</sup>	100-120	100-120
Max. working oil temperature	°C	82	82
Weight	Kg	18	20

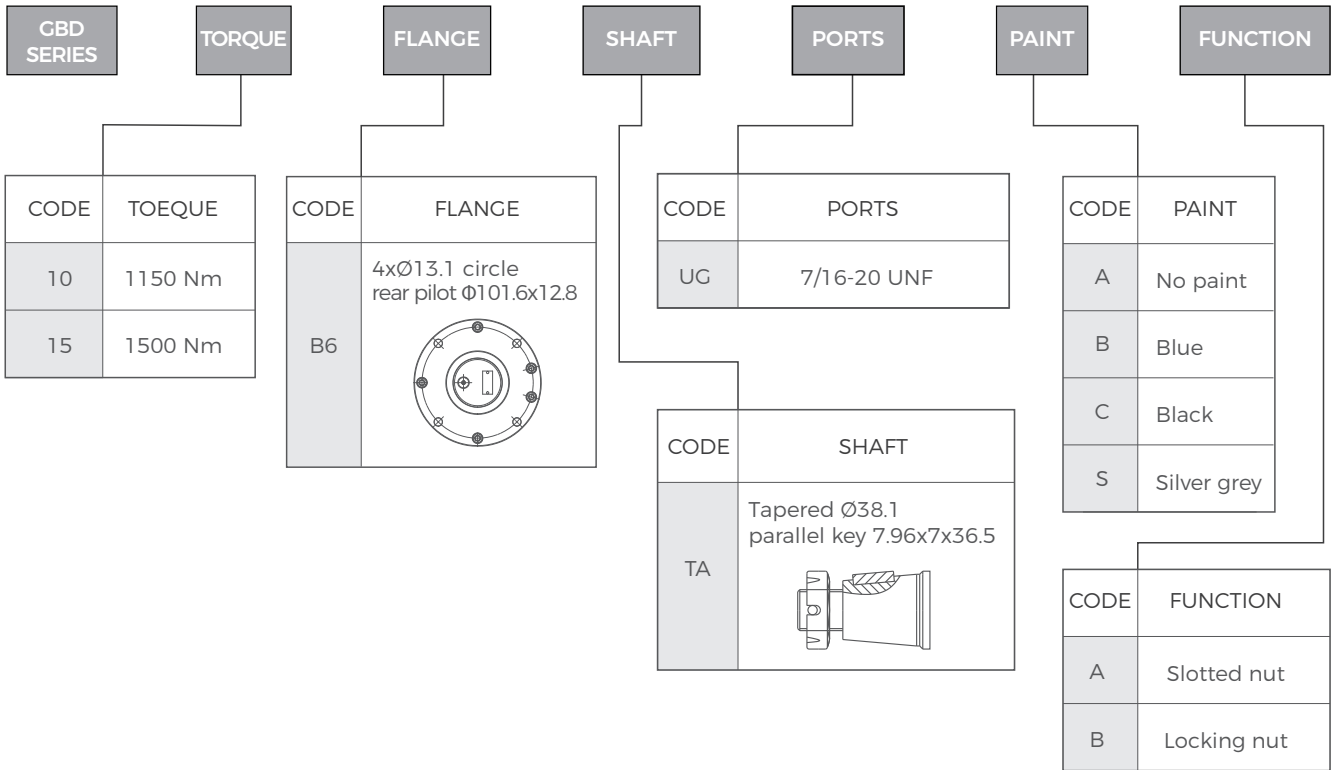
### GBD Dimensions and Mountings



### GBD Shaft Dimension

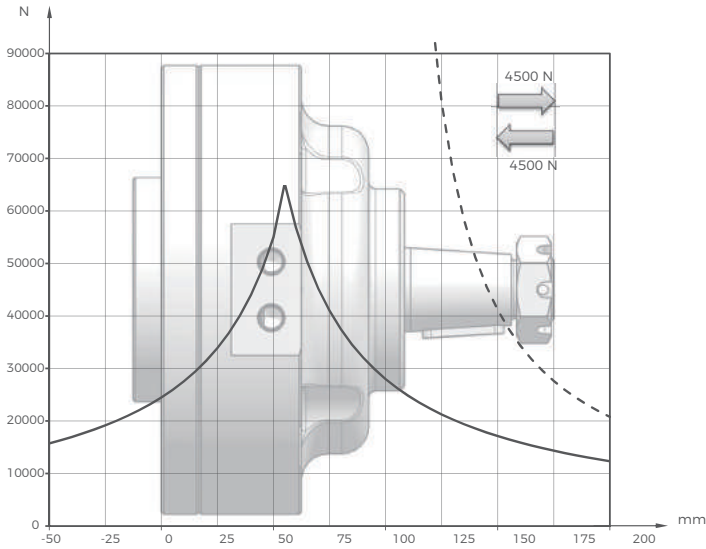


### Ordering Code





## GBD Series Hydraulic Motor Brakes



As shown in the figure, when the axial load is 0N, the radial allowable load of the output shaft is related to the distance between the mounting surface of the flange and the point where the load is applied. The solid line shows the allowable bearing radial load. Denotes the use of hydraulic oil containing anti-wear additives, and the curve is established on the basis of continuous output torque cut, motor speed of 100rpm, bearing L10 service life of 2000 hours. The dashed line shows the maximum radial load on the shaft. If the shaft extension load exceeds this value, the motor will be damaged.