

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

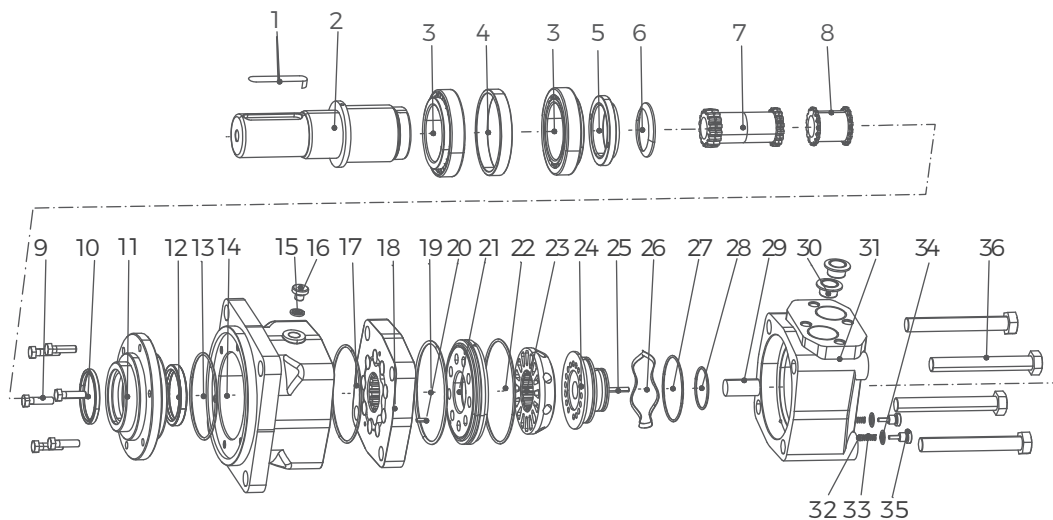
Applications

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



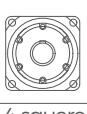









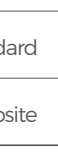
General

Max. Displacement	cm ³ /rev [in ³ /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 ² /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 |

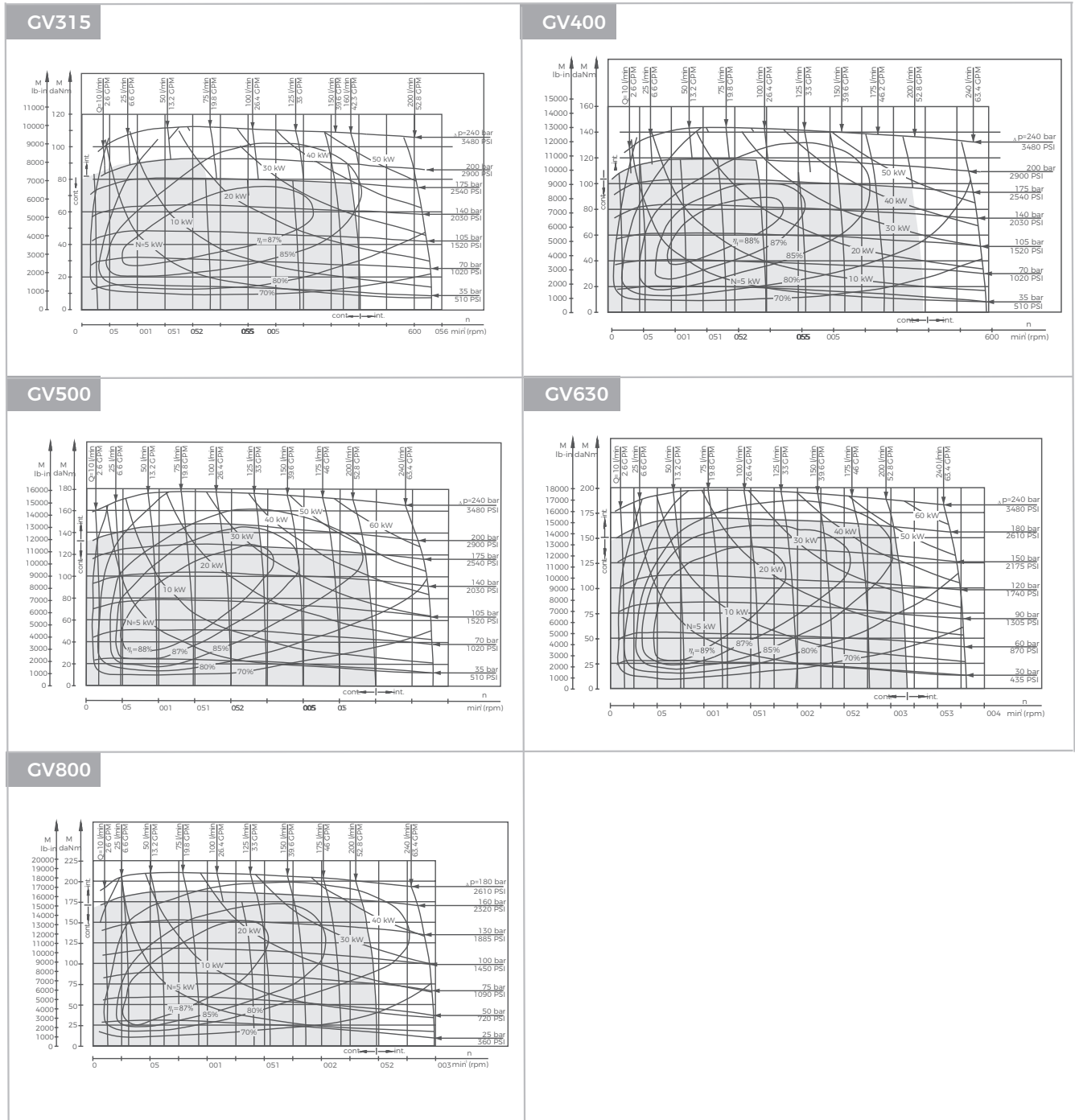
Ordering Code

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 ³ /rev [19.18in ³ /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 ³ /rev [24.45in ³ /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 ³ /rev [30.48in ³ /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 ³ /rev [38.38in ³ /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 ³ /rev [48.91in ³ /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

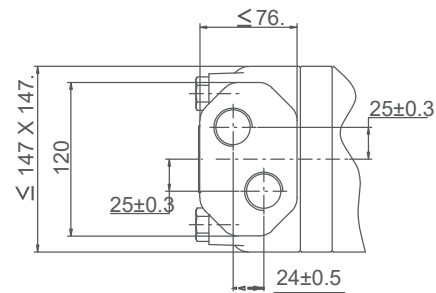
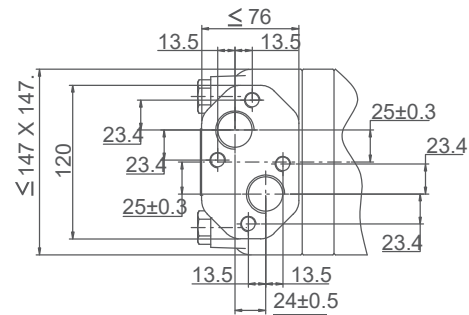
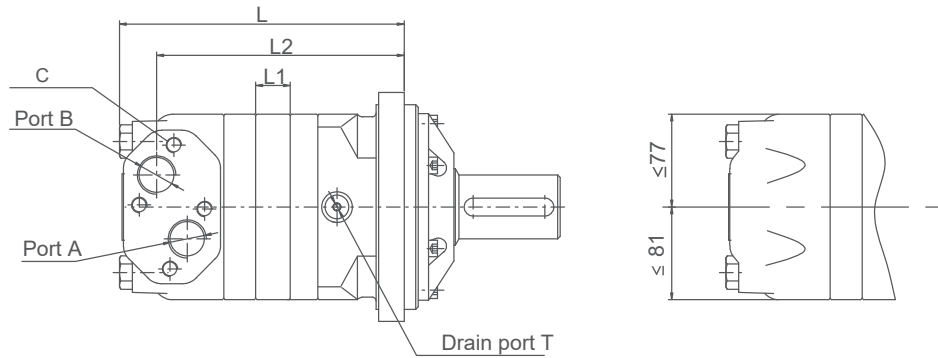
Type		GV315	GV400	GV500	GV630	GV800
Displacement, cm ³ /rev [in ³ /rev]		314,5[19.18]	400,9[24.45]	499,6[30.48]	629,1[38.38]	801,8[48.91]
Max. Speed	Cont.	510	500	400	320	250
RPM	Int.*	630	600	480	380	300
Max. Torque	Cont.	92[8150]	118[10450]	146[12950]	166[14700]	188[16650]
daNm [lb-in]	Int.*	111[9800]	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 mm²/s [150 SUS] at 50°C [122°F].

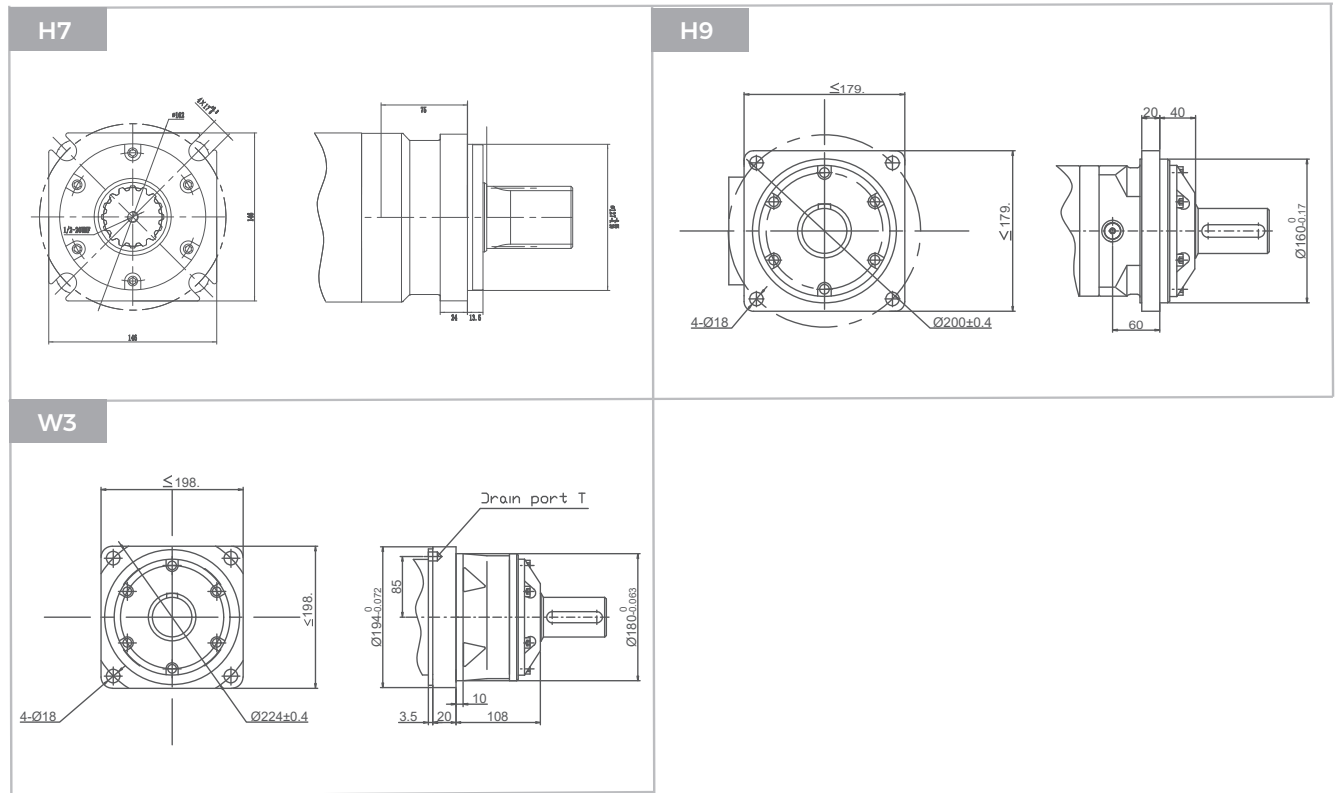
GV Dimensions and Mountings



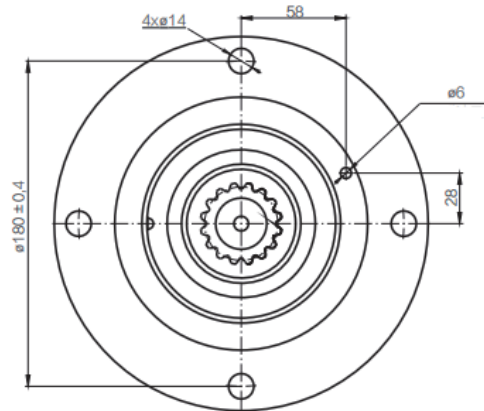
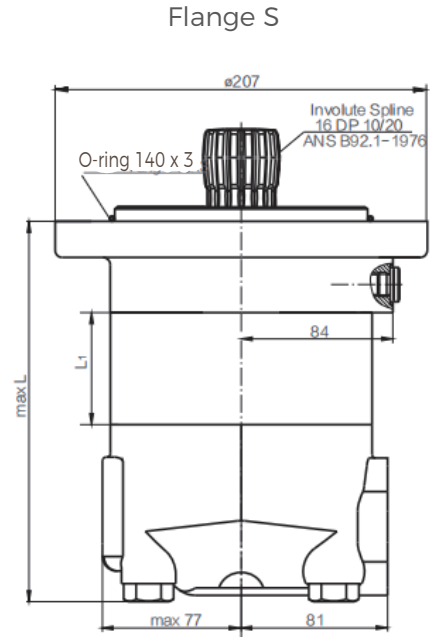
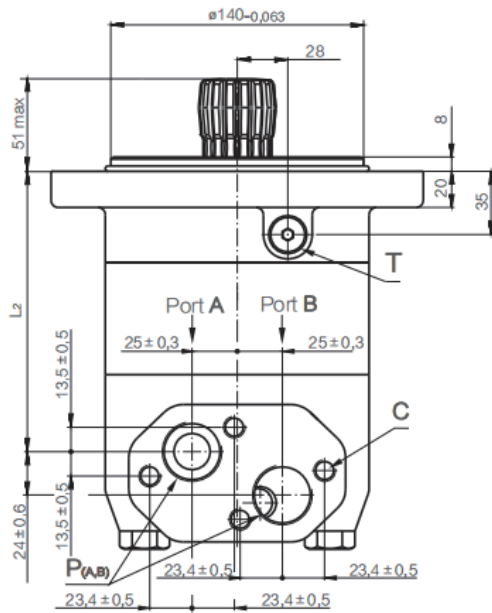
Model	L	L1	L2
GV315	217	20	161.5
GV400	224	27	168.5
GV500	232	35	176.5
GV630	244	47	188.5
GV800	255	58	199.5

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



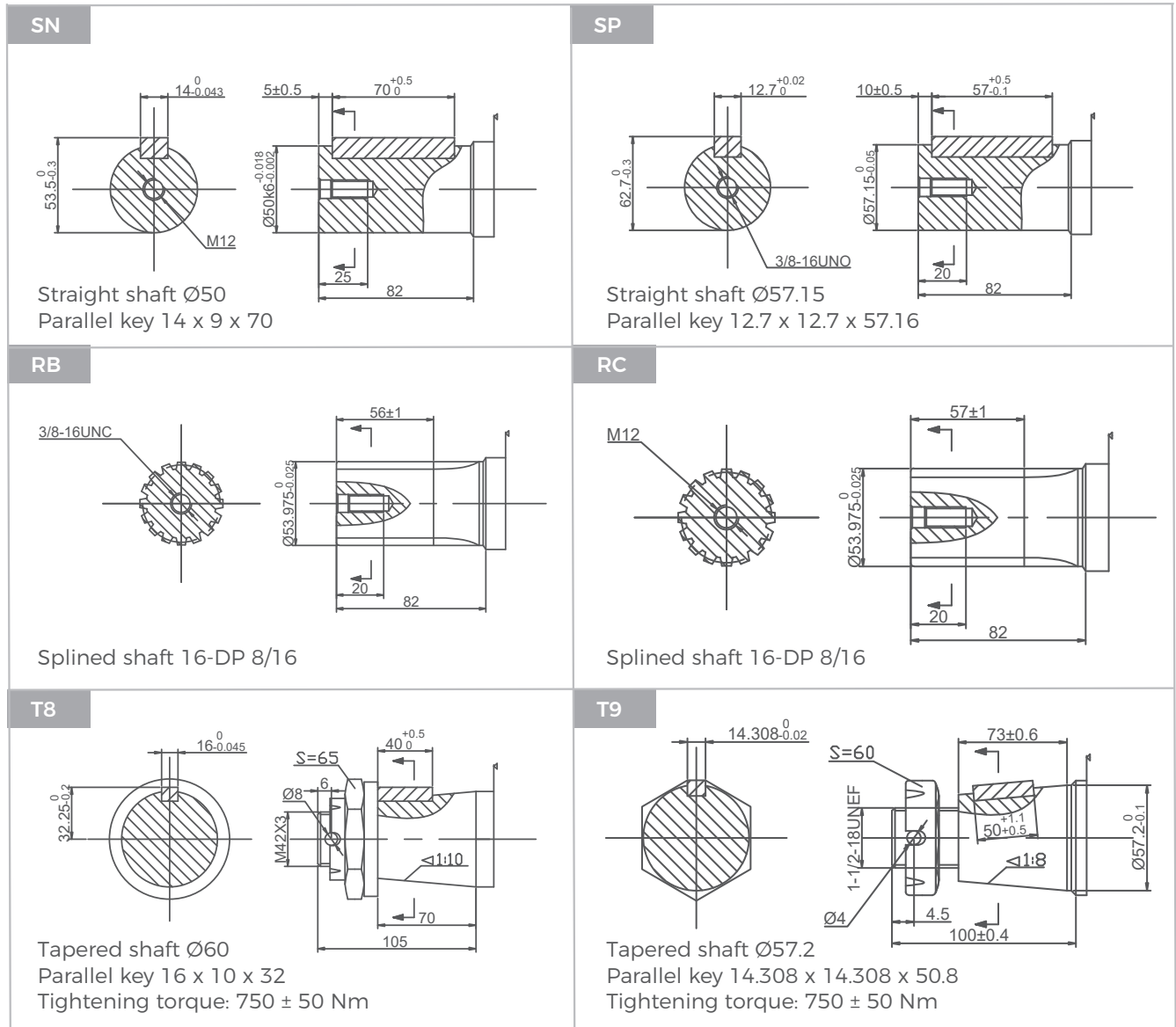
GVS Bearingless Motor Dimensions and Mountings



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

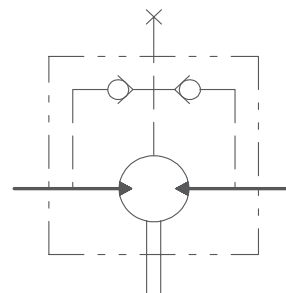
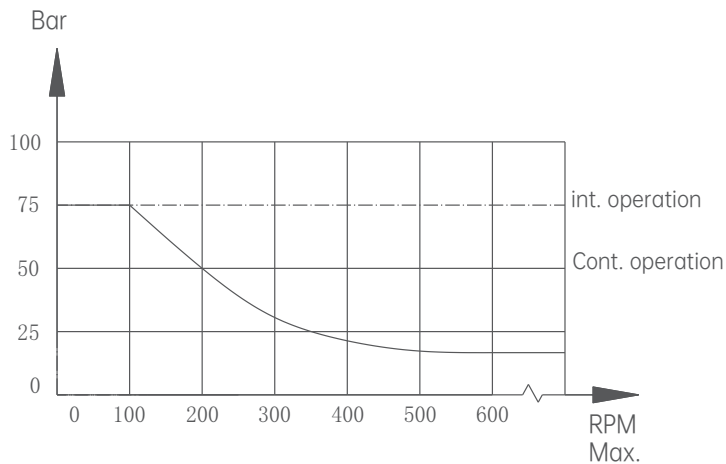
Mounting	G5 (depth)	M6 (depth)	U6 (depth)	G6 (depth)	M7 (depth)	U7 (depth)
P(A, B)	G1(18)	M33 X 12(18)	1-5/16-12UN(18)	G1(18)	M33 X 2(18)	1-5/16-12UN(18)
T	G1/4(12)	M14 X 1.5(12)	9/16-18UNF(12)	G1/4(12)	M14 X 1.5 (12)	7/16-20UNF(12)
C	4-M12(12)	4-M12(12)				

GV Shafts Dimensions



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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.

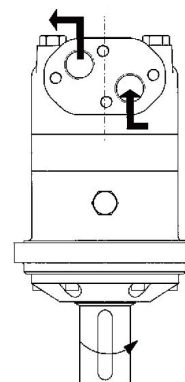
GV with standard shaft seal, check valves and with drain connection: The shaft seal pressure equals the pressure on the drain line.

Drain Port

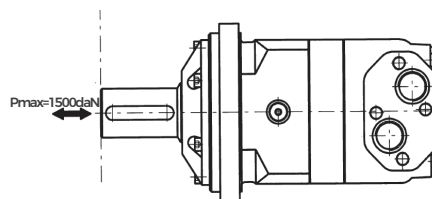
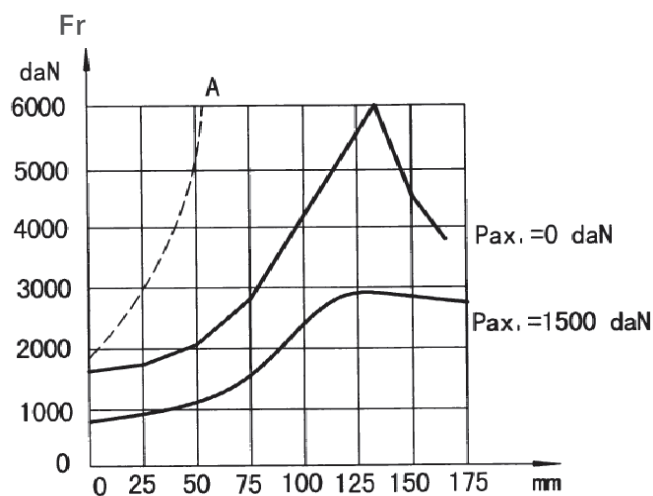
In applications without drain line, output shaft seal exceeds a bit of the pressure in the return line. In applications using the drain line, the pressure of output shaft seal equals the pressure in drain line.

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.