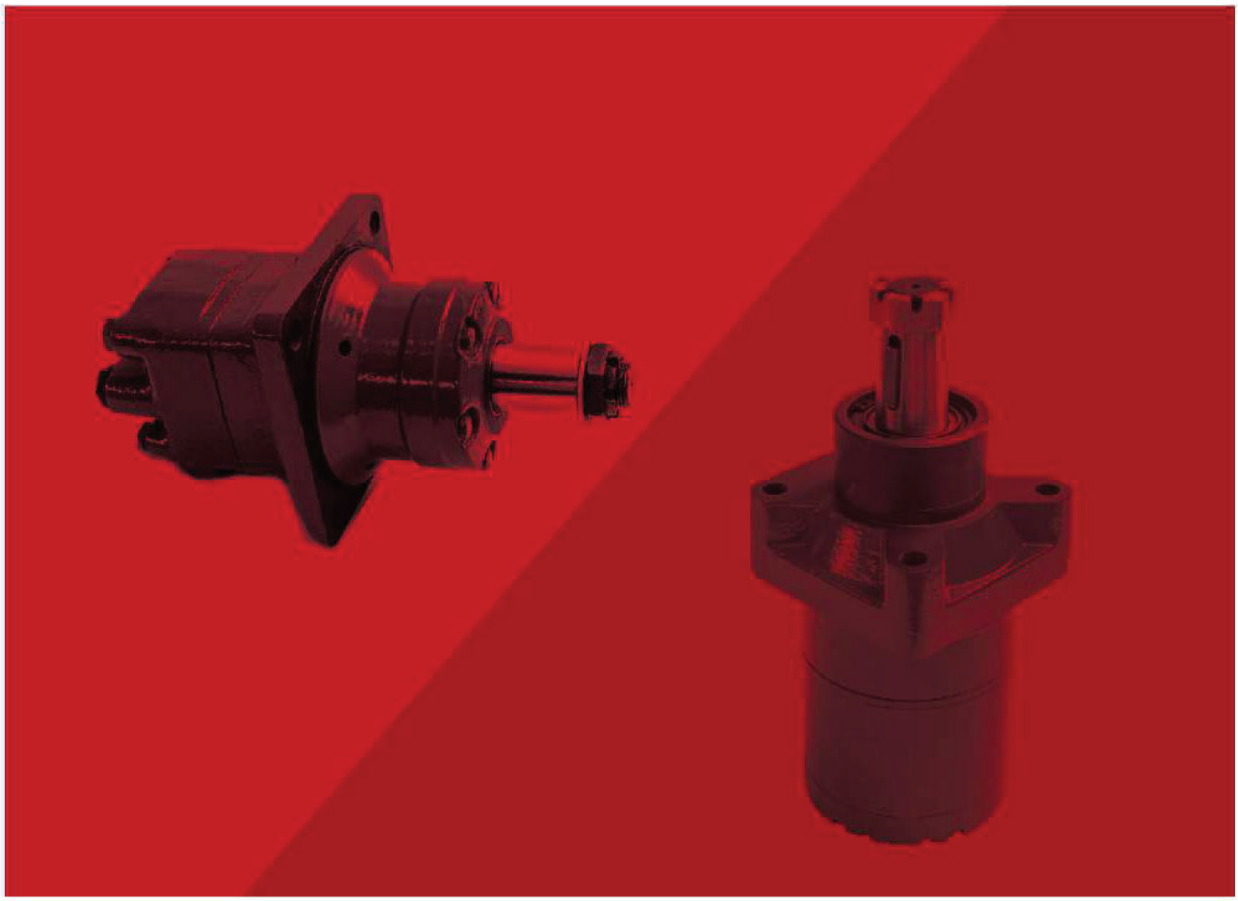
purelogic
research & development

КАТАЛОГ

РОТОРНЫЕ ГИДРОМОТОРЫ

ORBITAL MOTORS

GP / GR / GH / GS / GT / GV / GGM



Contents

Orbital Motors

Orbital Motors

GP Series Orbital Motors

Application

- Conveyors
- Feeding mechanism of robots and manipulators
- Metal working machines
- Textile machines
- Agricultural machines
- Food industries
- Grass cutting machinery etc.

Options

- Model - Spool valve, gerotor
- Flange and wheel mount
- Motor with needle bearing
- Side and rear ports
- Shafts - straight, splined and tapered
- Shaft seal for high and low pressure
- Metric and BSPP ports
- Other special features

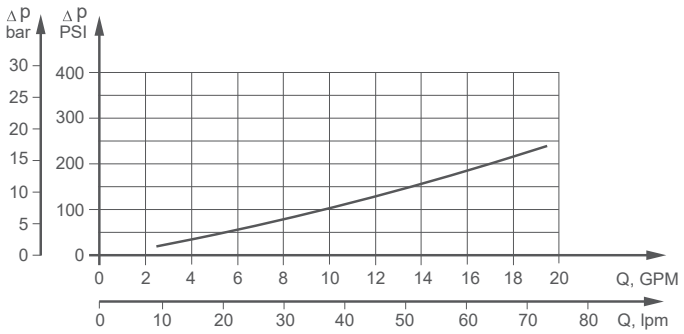
General

Max. Displacement, cm^3/rev [in^3/rev]	623,6 [38.05]
Max. Speed, [RPM]	1815
Max. Torque, daNm [lb-in]	cont.:50[5144] int.:64[5565]
Max. Output, kW [HP]	12,8 [17.1]
Max. Pressure Drop, bar [PSI]	cont.:140[2030] int.:175 [2540]
Max. Oil Flow, lpm [GPM]	75 [19.8]
Min. Speed, [RPM]	10
Pressure fluid	Mineral based- HLP(DIN 51524) or HM(ISO 6743/4)
Temperaturerange, 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)

Oil Flow in Drain Line

Pressure drop bar [PSI]	Viscosity mm^2/s [SUS]	Oil flow in drain line lpm [GPM]
100 [1450]	20 [98]	2,5 [.660]
	35 [164]	1,8 [.476]
140 [2030]	20 [98]	3,5 [.925]
	35 [164]	2,8 [.740]

Pressure Loss



Specifications

Technical data for GP with 25 and 1 in and 1 in splined and 28.56 tapered shaft

Type		GP 25	GP 32	GP 40	GP 50	GP 80	GP 100	GP 125
Displacement, cm³/rev[in³/rev]		25 [1.52]	32 [1.95]	40 [2.44]	49,5 [3.02]	79,2 [4.83]	99 [6.04]	123,8 [7.55]
Max. Speed,	Cont.	1600	1560	1500	1210	755	605	486
[RPM]	Int.*	1815	1720	1750	1515	945	755	605
Max. Torque	Cont.	3,3 [290]	4,3 [380]	6,2 [550]	9,4 [835]	15,1 [1340]	19,3 [1710]	23,7 [2100]
daNm [lb-in]	Int.*	4,7 [415]	6,1 [540]	8,2 [730]	11,9 [1050]	19,5 [1725]	23,7 [2100]	29,8 [2640]
	Peak**	6,7 [595]	8,6 [760]	10,7 [950]	14,3 [1285]	22,4 [1985]	27,5 [2435]	36,5 [3235]
Max. Output	Cont.	4,5 [6.0]	5,8 [7.8]	8,4 [11.5]	10,1 [13.5]	10,2 [13.7]	10,5 [14.1]	10,2 [13.7]
kW [HP]	Int.*	6,1 [8.2]	7,8 [10.5]	11,6 [15.5]	12,2 [16.1]	12,5 [16.8]	12,8 [17.1]	12 [16.1]
Max. Pressure Drop	Cont.	100 [1450]	100 [1450]	120 [1750]	140 [2030]	140 [2030]	140 [2030]	140 [2030]
bar [PSI]	Int.*	140 [2030]	140 [2030]	155 [2250]	175 [2540]	175 [2540]	175 [2540]	175 [2540]
	Peak**	225 [3260]	225 [3260]	225 [3260]	225 [3260]	225 [3260]	225 [3260]	225 [3260]
Max. Oil Flow	Cont.	40 [10.5]	50 [13.2]	60 [15.9]	60 [15.9]	60 [15.9]	60 [15.9]	60 [15.9]
lpm [GPM]	Int.*	45 [11.9]	55 [14.5]	70 [18.5]	75 [19.8]	75 [19.8]	75 [19.8]	75 [19.8]
Max. Inlet Pressure	Cont.	175 [2540]	175 [2540]	175 [2540]	175 [2540]	175 [2540]	175 [2540]	175 [2540]
bar [PSI]	Int.*	200 [2900]	200 [2900]	200 [2900]	200 [2900]	200 [2900]	200 [2900]	200 [2900]
	Peak**	225 [3260]	225 [3260]	225 [3260]	225 [3260]	225 [3260]	225 [3260]	225 [3260]
Max. Return Pressure	Cont.	175 [2540]	175 [2540]	175 [2540]	175 [2540]	175 [2540]	175 [2540]	175 [2540]
with Drain Line	Int.*	200 [2900]	200 [2900]	200 [2900]	200 [2900]	200 [2900]	200 [2900]	200 [2900]
bar [PSI]	Peak**	225 [3260]	225 [3260]	225 [3260]	225 [3260]	225 [3260]	225 [3260]	225 [3260]
Max. Starting Pressure with Unloaded Shaft, bar [PSI]		10 [145]	10 [145]	10 [145]	10 [145]	10 [145]	10 [145]	9 [131]
Min. Starting Torque	At max.press. drop Cont.	3,0 [265]	4,0 [355]	5,4 [480]	7,8 [690]	13,2 [1170]	16,6 [1470]	20,7 [1830]
daNm [lb-in]	At max.press. drop Int.*	4,2 [370]	5,6 [500]	6,8 [600]	10 [885]	16,8 [1490]	21 [1860]	26,6 [2360]
Min. Speed***, [RPM]		20	15	10	10	10	10	10
Weight, kg [lb] For rear ports +0,450 [.992]	GP(H)	5,6 [12.3]	5,6 [12.3]	5,7 [12.6]	5,8 [12.8]	5,9 [13.2]	6,1 [13.5]	6,2 [13.7]

*Intermittent operation: the permissible values may occur for max. 10% of every minute
**Peak load:the permissible values may occur for max. 1% of every minute
***For speeds lower than given, consult factory or your regional manager

Specifications

Technical data for GP with 25 and 1 in and 1 in splined and 28.56 tapered shaft

Type		GP 160	GP 200	GP 250	GP 315	GP 400	GP 500	GP 630
Displacement, cm³/rev[in³/rev]		158,4 [9.66]	198 [12.1]	247,5 [15.1]	316,8 [19.3]	396 [24.16]	495 [30.2]	623,6 [38.05]
Max. Speed,	Cont.	378	303	242	190	150	120	95
[RPM]	Int.*	472	378	303	236	189	150	120
Max. Torque	Cont.	31,3 [2770]	36,6 [3240]	38 [3360]	38 [3360]	36 [3190]	39 [3452]	44 [3895]
daNm [lb-in]	Int.*	37,8 [3345]	45,6 [4035]	58,3 [5160]	56 [4960]	59 [5240]	57 [5045]	64 [5665]
	Peak**	43,8 [3880]	55 [4870]	68,5 [6060]	85 [7505]	85,4 [7560]	78 [6903]	82 [7257]
Max. Output	Cont.	10,1 [13.5]	10 [13.5]	7,5 [10]	5,8 [7.9]	4,6 [6.2]	3,5 [4.7]	3,3 [4.4]
kW [HP]	Int.*	12,1 [16.2]	12 [16.1]	12 [16.1]	9 [12.1]	7,8 [10.5]	7,2 [9.7]	5,6 [7.5]
Max. Pressure Drop	Cont.	140 [2030]	140 [2030]	110 [1600]	90 [1300]	70 [1015]	60 [870]	55 [800]
bar [PSI]	Int.*	175 [2540]	175 [2540]	175 [2540]	140 [2030]	115 [1665]	90 [1305]	80 [1160]
	Peak**	225 [3260]	225 [3260]	225 [3260]	225 [3260]	180 [2610]	130 [1885]	110 [1740]
Max. Oil Flow	Cont.	60 [15.9]	60 [15.9]	60 [15.9]	60 [15.9]	60 [15.9]	60 [15.9]	60 [15.9]
lpm [GPM]	Int.*	75 [19.8]	75 [19.8]	75 [19.8]	75 [19.8]	75 [19.8]	75 [19.8]	75 [19.8]
Max. Inlet Pressure	Cont.	175 [2540]	175 [2540]	175 [2540]	175 [2540]	175 [2540]	140 [2030]	140 [2030]
bar [PSI]	Int.*	200 [2900]	200 [2900]	200 [2900]	200 [2900]	200 [2900]	175 [2540]	175 [2540]
	Peak**	225 [3260]	225 [3260]	225 [3260]	225 [3260]	225 [3260]	225 [3260]	225 [3260]
Max. Return Pressure	Cont.	175 [2540]	175 [2540]	175 [2540]	175 [2540]	175 [2540]	140 [2030]	140 [2030]
with Drain Line	Int.*	200 [2900]	200 [2900]	200 [2900]	200 [2900]	200 [2900]	175 [2540]	175 [2540]
bar [PSI]	Peak**	225 [3260]	225 [3260]	225 [3260]	225 [3260]	225 [3260]]	225 [3260]	225 [3260]
Max. Starting Pressure with Unloaded Shaft, bar [PSI]		8 [116]	7 [100]	6 [87]	5 [73]	5 [73]	5 [73]	5 [73]
Min. Starting Torque	At max.press. drop Cont.	28,2 [2500]	33,5 [2950]	33,6 [2970]	34,4 [3045]	34,5 [3050]	36 [3180]	41,5 [3670]
daNm [lb-in]	At max.press. drop Int.*	35,5 [3140]	42,6 [3770]	54,2 [4795]	61,9 [5480]	60,8 [5390]	54 [4780]	62 [5480]
Min. Speed***, [RPM]		10	10	10	10	10	10	10
Weight, kg [lb] For rear ports +0,450 [.992]	GP(H)	6,4 [14.1]	6,6 [14.6]	6,8 [15]	7,1 [15.6]	7,6 [16.8]	8,9 [20]	9,5 [21.4]

*Intermittent operation:the permissible values may occur for max. 10% of every minute
**Peak load:the permissible values may occur for max. 1% of every minute
***For speeds lower than given, consult factory or your regional manager.

Specifications

Technical data for GP with 31.75 and 32 shaft

Type		GP 25	GP 32	GP 40	GP 50	GP 80	GP 100	GP 125
Displacement, cm³/rev[in³/rev]		25 [1.52]	32 [1.95]	40 [2.44]	49,5 [3.02]	79,2 [4.83]	99 [6.04]	123,8 [7.55]
Max. Speed,	Cont.	1600	1560	1500	1210	755	605	486
[RPM]	Int.*	1815	1720	1750	1515	945	755	605
Max. Torque	Cont.	3,3 [290]	4,3 [380]	6,2 [550]	9,4 [835]	15,1 [1340]	19,3 [1710]	23,7 [2100]
daNm [lb-in]	Int.*	4,7 [415]	6,1 [540]	8,2 [730]	11,9 [1050]	19,5 [1725]	23,7 [2100]	29,8 [2640]
	Peak**	6,7 [595]	8,6 [760]	10,7 [950]	14,3 [1285]	22,4 [1985]	27,5 [2435]	36,5 [3235]
Max. Output	Cont.	4,5 [6.0]	5,8 [7.8]	8,4 [11.5]	10,1 [13.5]	10,2 [13.7]	10,5 [14.1]	10,2 [13.7]
kW [HP]	Int.*	6,1 [8.2]	7,8 [10.5]	11,6 [15.5]	12,2 [16.1]	12,5 [16.8]	12,8 [17.1]	12 [16.1]
Max. Pressure Drop	Cont.	100 [1450]	100 [1450]	120 [1750]	140 [2030]	140 [2030]	140 [2030]	140 [2030]
bar [PSI]	Int.*	140 [2030]	140 [2030]	155 [2250]	175 [2540]	175 [2540]	175 [2540]	175 [2540]
	Peak**	225 [3260]	225 [3260]	225 [3260]	225 [3260]	225 [3260]	225 [3260]	225 [3260]
Max. Oil Flow	Cont.	40 [10.5]	50 [13.2]	60 [15.9]	60 [15.9]	60 [15.9]	60 [15.9]	60 [15.9]
lpm [GPM]	Int.*	45 [11.9]	55 [14.5]	70 [18.5]	75 [19.8]	75 [19.8]	75 [19.8]	75 [19.8]
Max. Inlet Pressure	Cont.	175 [2540]	175 [2540]	175 [2540]	175 [2540]	175 [2540]	175 [2540]	175 [2540]
bar [PSI]	Int.*	200 [2900]	200 [2900]	200 [2900]	200 [2900]	200 [2900]	200 [2900]	200 [2900]
	Peak**	225 [3260]	225 [3260]	225 [3260]	225 [3260]	225 [3260]	225 [3260]	225 [3260]
Max. Return Pressure	Cont.	175 [2540]	175 [2540]	175 [2540]	175 [2540]	175 [2540]	175 [2540]	175 [2540]
with Drain Line	Int.*	200 [2900]	200 [2900]	200 [2900]	200 [2900]	200 [2900]	200 [2900]	200 [2900]
bar [PSI]	Peak**	225 [3260]	225 [3260]	225 [3260]	225 [3260]	225 [3260]	225 [3260]	225 [3260]
Max. Starting Pressure with Unloaded Shaft,bar [PSI]		10 [145]	10 [145]	10 [145]	10 [145]	10 [145]	10 [145]	9 [131]
Min. Starting Torque	At max.press. drop Cont.	3,0 [265]	4,0 [355]	5,4 [480]	7,8 [690]	13,2 [1170]	16,6 [1470]	20,7 [1830]
daNm [lb-in]	At max.press. drop Int.*	4,2 [370]	5,6 [500]	6,8 [600]	10 [885]	16,8 [1490]	21 [1860]	26,6 [2360]
Min. Speed***, [RPM]		20	15	10	10	10	10	10
Weight, kg [lb] For rear ports +0,450 [.992]	GP(H)	5,6 [12.3]	5,6 [12.3]	5,7 [12.6]	5,9 [13]	6 [13.2]	6,2 [13.7]	6,3 [13.9]

*Intermittent operation:the permissible values may occur for max. 10% of every minute
**Peak load:the permissible values may occur for max. 1% of every minute
*** For speeds lower than given, consult factory or your regional manager.

Specifications

Technical data for GP with 31.75 and 32 shaft

Type		GP 160	GP 200	GP 250	GP 315	GP 400	GP 500	GP 630
Displacement, cm³/rev[in³/rev]		158,4 [9.66]	198 [12.1]	247,5 [15.1]	316,8 [19.3]	396 [24.16]	495 [30.2]	623,6 [38.05]
Max. Speed,	Cont.	378	303	242	190	150	120	95
[RPM]	Int.*	472	378	303	236	189	150	120
Max. Torque	Cont.	31,3 [2770]	36,6 [3240]	47 [4160]	48 [4360]	50 [4415]	39 [3452]	44 [3895]
daNm [lb-in]	Int.*	37,8 [3345]	45,6 [4035]	58,3 [5160]	56 [4960]	59 [5240]	57 [5045]	64 [5665]
	Peak**	43,8 [3880]	55 [4870]	68,5 [6060]	85 [7505]	85,4 [7560]	78 [6903]	82 [7257]
Max. Output	Cont.	10,1 [13.5]	10 [13.5]	9 [12.1]	7,6 [10.2]	6,2 [8.3]	3,5 [4.7]	3,3 [4.4]
kW [HP]	Int.*	12,1 [16.2]	12 [16.1]	12 [16.1]	9 [12.1]	7,8 [10.5]	7,2 [9.7]	5,6 [7.5]
Max. Pressure Drop	Cont.	140 [2030]	140 [2030]	140 [2030]	120 [1740]	95 [1400]	60 [870]	55 [800]
bar [PSI]	Int.*	175 [2540]	175 [2540]	175 [2540]	140 [2030]	115 [1670]	90 [1305]	80 [1160]
	Peak**	225 [3260]	225 [3260]	225 [3260]	225 [3260]	180 [2610]	130 [1885]	110 [1740]
Max. Oil Flow	Cont.	60 [15.9]	60 [15.9]	60 [15.9]	60 [15.9]	60 [15.9]	60 [15.9]	60 [15.9]
lpm [GPM]	Int.*	75 [19.8]	75 [19.8]	75 [19.8]	75 [19.8]	75 [19.8]	75 [19.8]	75 [19.8]
Max. Inlet Pressure	Cont.	175 [2540]	175 [2540]	175 [2540]	175 [2540]	175 [2540]	140 [2030]	140 [2030]
bar [PSI]	Int.*	200 [2900]	200 [2900]	200 [2900]	200 [2900]	200 [2900]	175 [2540]	175 [2540]
	Peak**	225 [3260]	225 [3260]	225 [3260]	225 [3260]	225 [3260]	225 [3260]	225 [3260]
Max. Return Pressure	Cont.	175 [2540]	175 [2540]	175 [2540]	175 [2540]	175 [2540]	140 [2030]	140 [2030]
with Drain Line	Int.*	200 [2900]	200 [2900]	200 [2900]	200 [2900]	200 [2900]	175 [2540]	175 [2540]
bar [PSI]	Peak**	225 [3260]	225 [3260]	225 [3260]	225 [3260]	225 [3260]	225 [3260]	225 [3260]
Max. Starting Pressure with Unloaded Shaft, bar[PS]		8 [116]	7 [100]	6 [87]	5 [73]	5 [73]	5 [73]	5 [73]
Min. Starting Torque	At max.press. drop Cont.	28,2 [2500]	33,5 [2950]	42,8 [3790]	4050 [45,8]	46,8 [4140]	36 [3180]	41,5 [3670]
daNm [lb-in]	At max.press. drop Int.*	35,5 [3140]	42,6 [3770]	54,2 [4795]	5480 [61,9]	60,8 [5390]	54 [4780]	62 [5480]
Min. Speed***, [RPM]		10	10	10	10	10	10	10
Weight, kg [lb] For rear ports +0,450 [.992]	GP(H)	6,5 [14.3]	6,7 [14.8]	6,9 [15.2]	7,2 [15.9]	7,7 [17]	9,0 [19.9]	9,6 [21.2]

*Intermittent operation: the permissible values may occur for max. 10% of every minute.

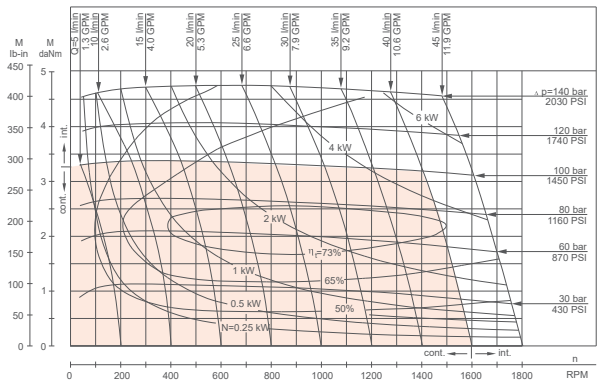
**Peak load: the permissible values may occur for max. 1% of every minute.

***For speeds lower than given, consult factory or your regional manager.

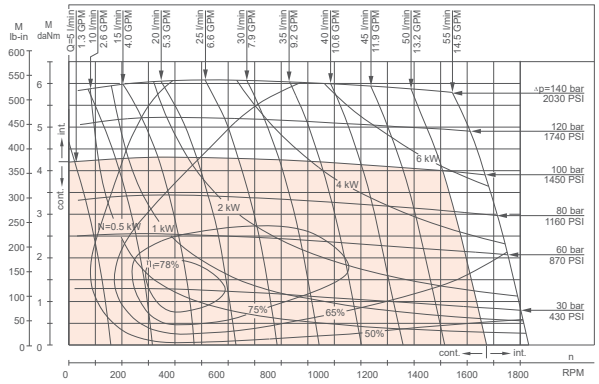
- 1. Intermittent speed and intermittent pressure must not occur simultaneously.
- 2. Recommended filtration is per ISO cleanliness code 20/16. A nominal f ltration of 25 micron or better.
- 3. Recommend using a premium quality, anti-wear type mineral based hydraulic oil HLP(DIN51524) orHM (ISO 6743/4). If using synthetic fluids consult the factory for alternative seal materials.
- 4. Recommended minimum oil viscosity 13 mm²/s [70 SUS] at 50°C [122°F].
- 5. Recommended maximum system operating temperature is 82°C [180°F].
- 6. To assure optimum motor life fill with fluid prior to loading and run at moderate load and speed for 10-15 minutes.

Function Diagrams

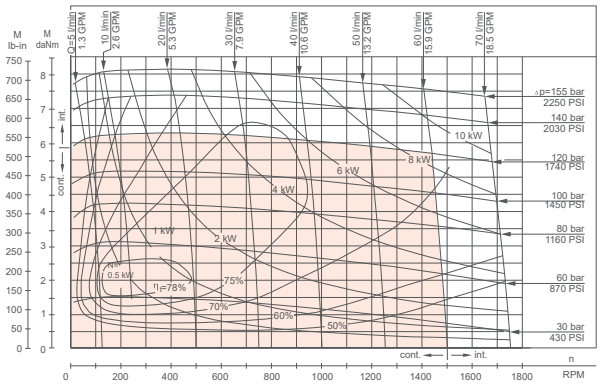
GP 25



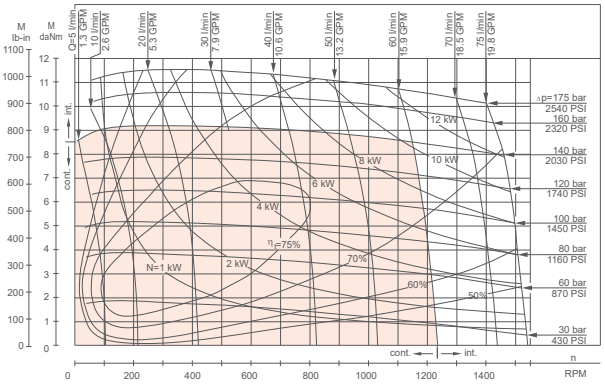
GP 32



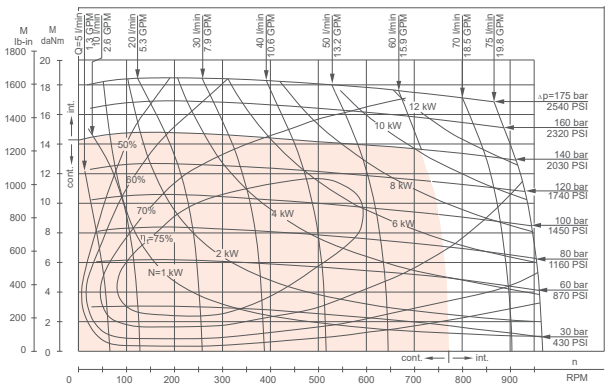
GP 40



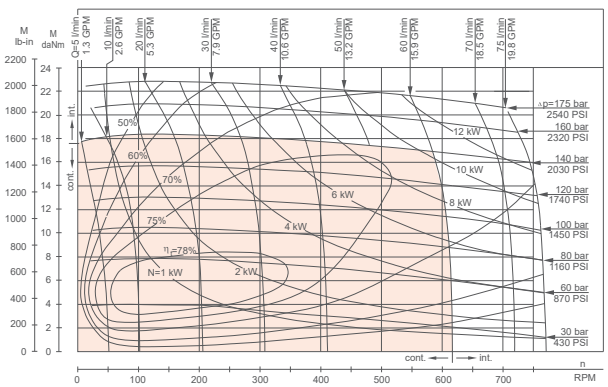
GP 50



GP 80



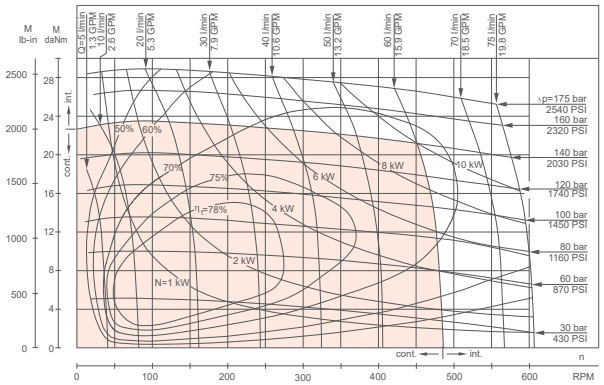
GP 100



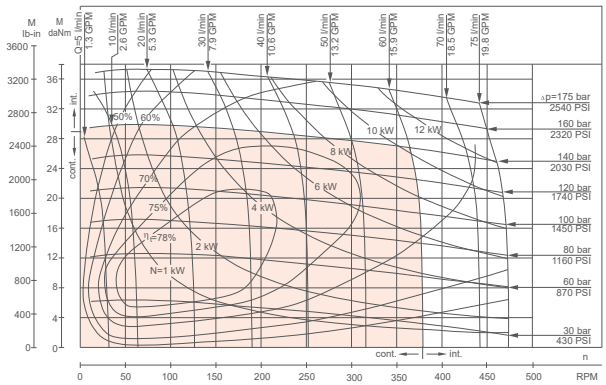
The function diagrams data is for average performance of randomly selected motors at back pressure 5÷10 bar [72.5÷145 PSI] and oil with viscosity of 32 mm²/s [150 SUS] at 50°C [122°F].

Function Diagrams

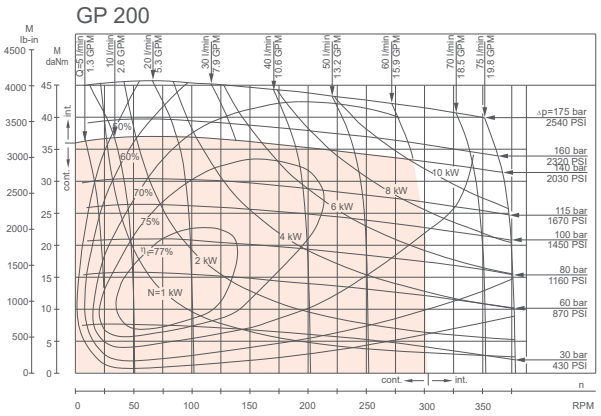
GP 125



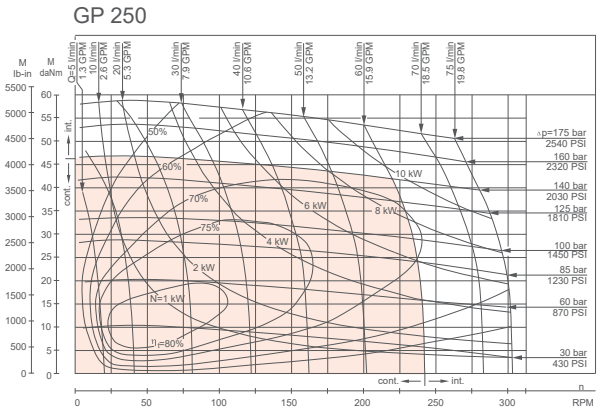
GP 160



GP 200



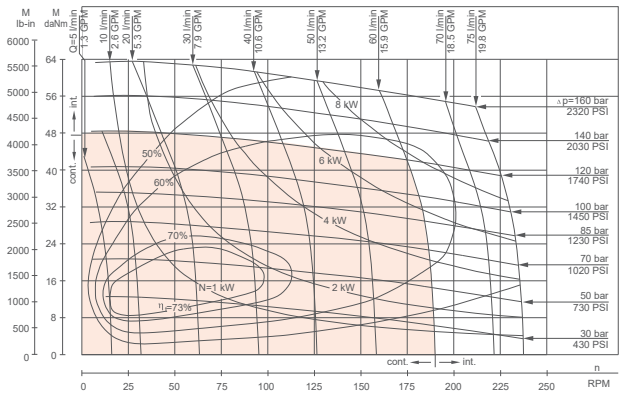
GP 250



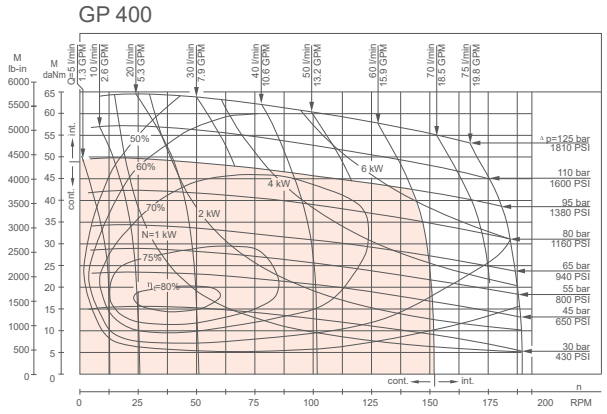
The function diagrams data is for average performance of randomly selected motors at back pressure 5÷10 bar [72.5÷145 PSI] and oil with viscosity of 32 mm²/s [150 SUS] at 50°C [122°F].

Function Diagrams

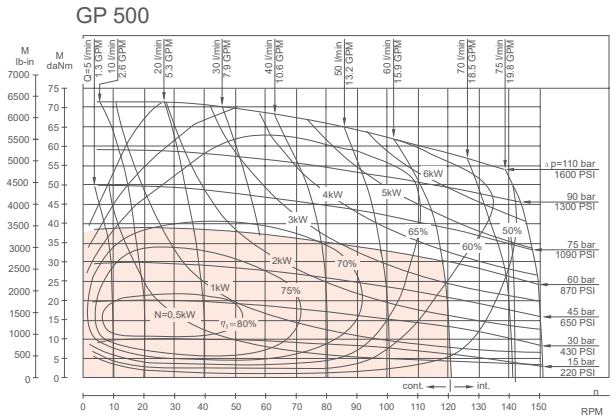
GP 315



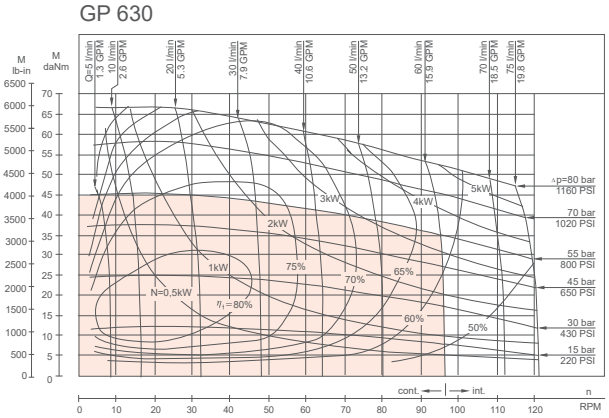
GP 400



GP 500

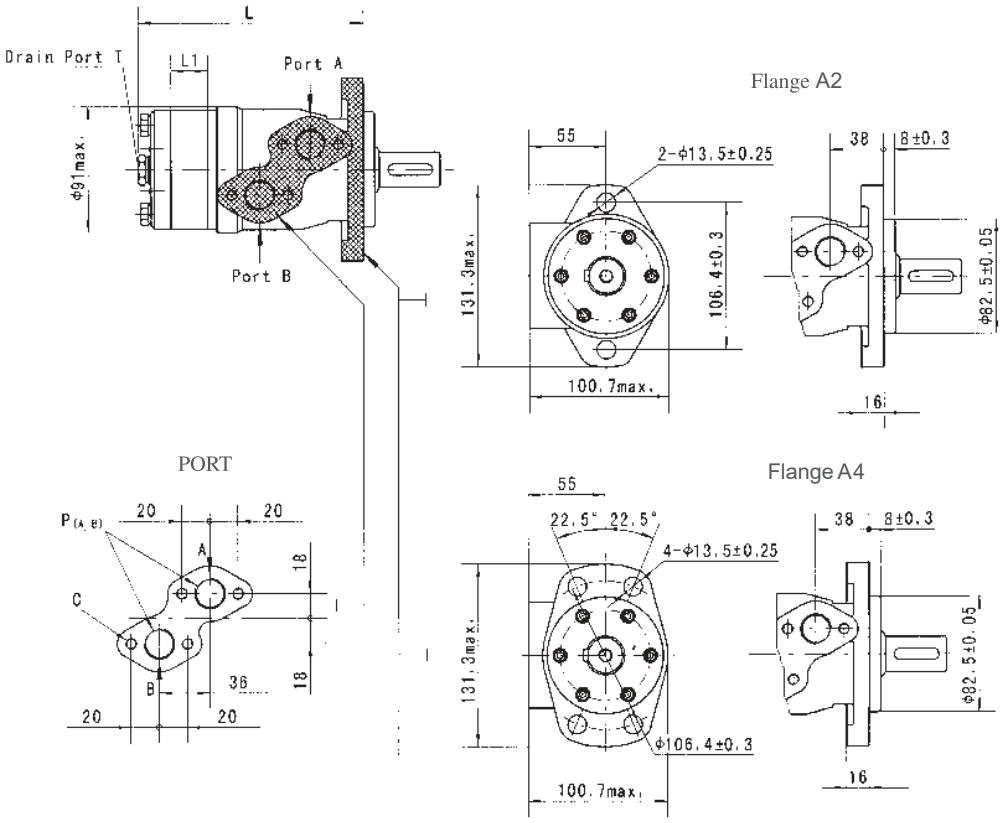


GP 630



The function diagrams data is for average performance of randomly selected motors at back pressure 5÷10 bar [72.5÷145 PSI] and oil with viscosity of 32 mm²/s [150 SUS] at 50°C [122°F].

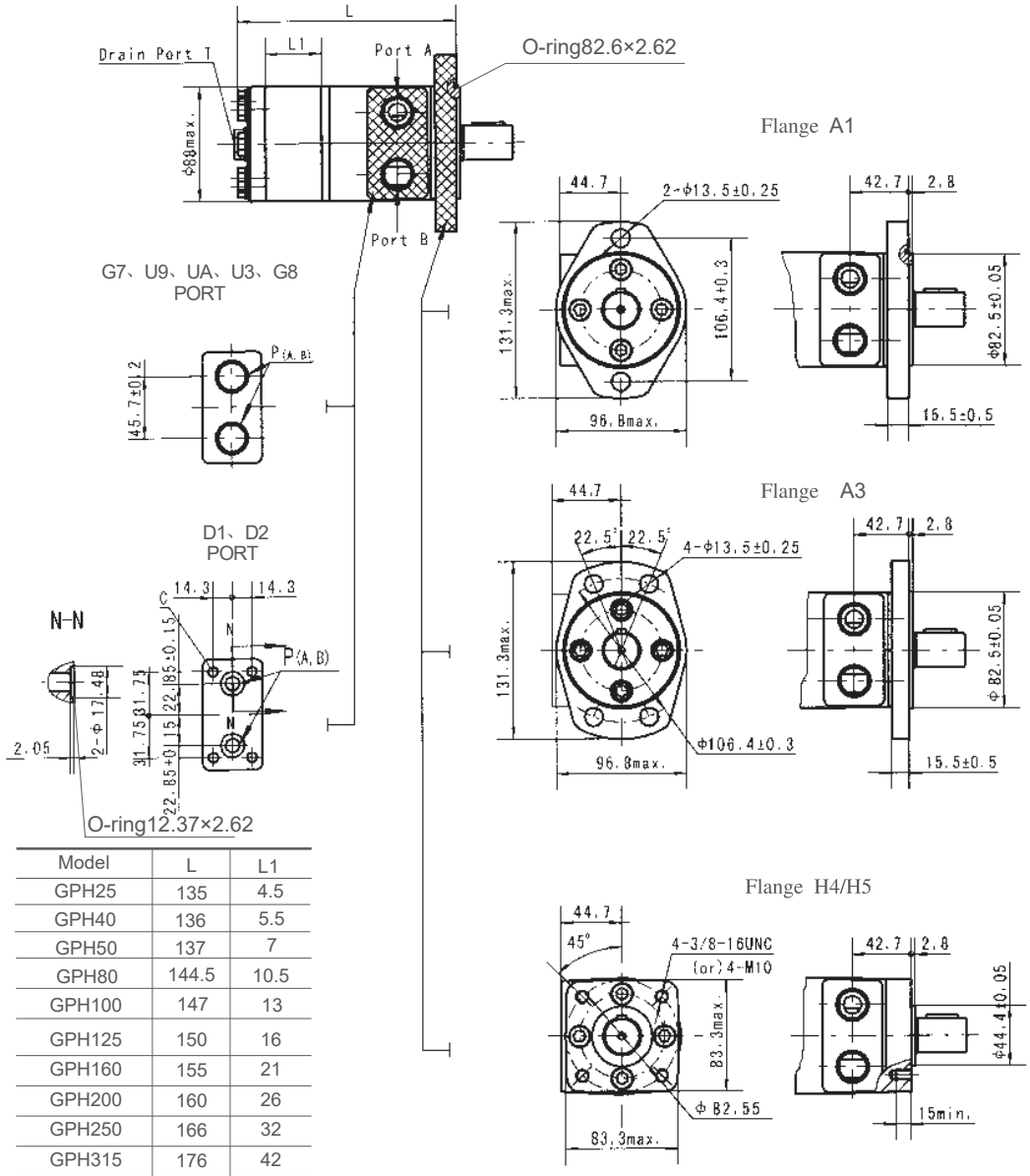
GP Dimensions and Mounting



Model	L	L1
GP25	135	4.5
GP40	136	5.5
GP50	137	7
GP80	140.5	10.5
GP100	143	13
GP125	146	16
GP160	151	21
GP200	157	26
GP250	162	32
GP315	172	42
GP400	182	52
GP500	195	65
GP630	213	84

Code / Mounting	G 1 (depth)	M 1 (depth)	U2 (depth)	U1 (depth)	G2 (depth)
P(A,B)	G1/2 (15)	M22 x 1.5 (15)	7/8-14 O-ring (17)	1/2-14NPTF (15)	PT(RC)1/2 (15)
C	4-M8 (13)	4-M8 (13)	4-5/16-18UNC (13)	4-5/16-18UNC (13)	4-M8 (13)
T	G1/4 (12)	M14 x 1.5 (12)	7/16-20UNF (12)	7/16-20UNF (12)	PT(RC)1/4 (9.7)

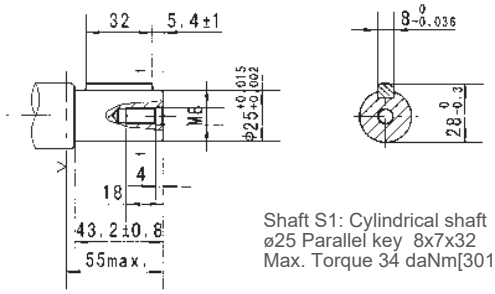
GPH Dimensions and Mounting



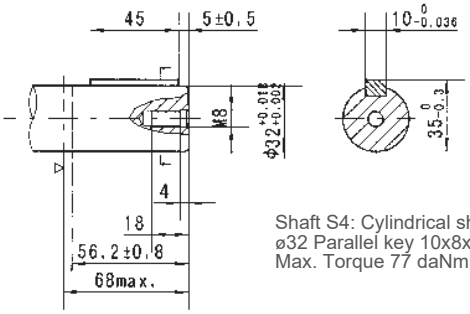
Model	L	L1
GPH25	135	4.5
GPH40	136	5.5
GPH50	137	7
GPH80	144.5	10.5
GPH100	147	13
GPH125	150	16
GPH160	155	21
GPH200	160	26
GPH250	166	32
GPH315	176	42
GPH400	186	52
GPH500	199	65
GPH630	203	84

Mounting \ Code	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)

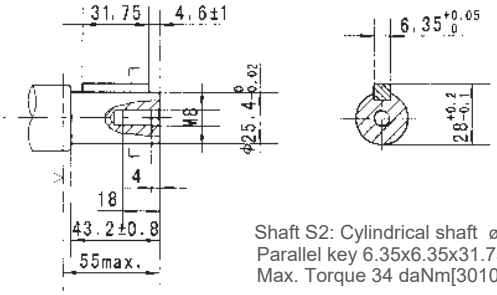
GP Shafts Extension Dimensions



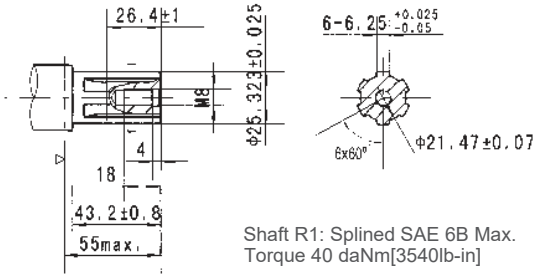
Shaft S1: Cylindrical shaft
ø25 Parallel key 8x7x32
Max. Torque 34 daNm[3010lb-in]



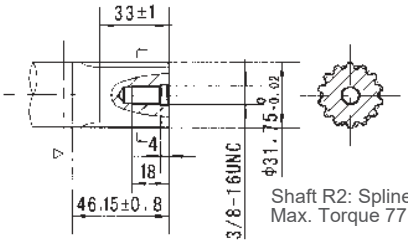
Shaft S4: Cylindrical shaft
ø32 Parallel key 10x8x45
Max. Torque 77 daNm[6815lb-in]



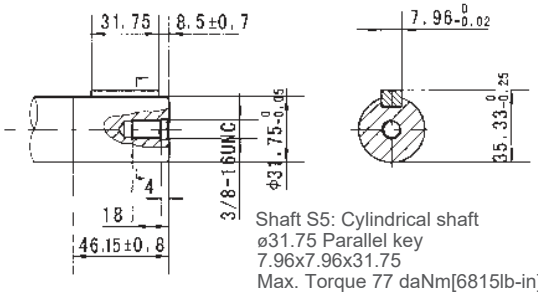
Shaft S2: Cylindrical shaft ø25.4
Parallel key 6.35x6.35x31.75
Max. Torque 34 daNm[3010lb-in]



Shaft R1: Splined SAE 6B Max.
Torque 40 daNm[3540lb-in]

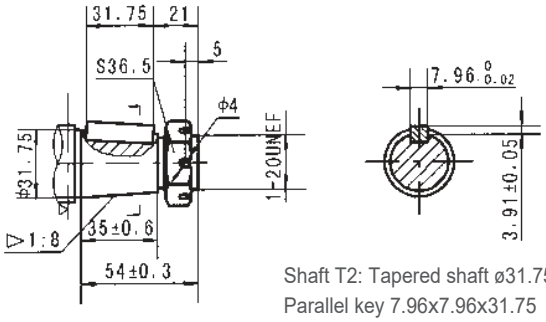


Shaft R2: Splined 14-DP12/24
Max. Torque 77 daNm[6815lb-in]

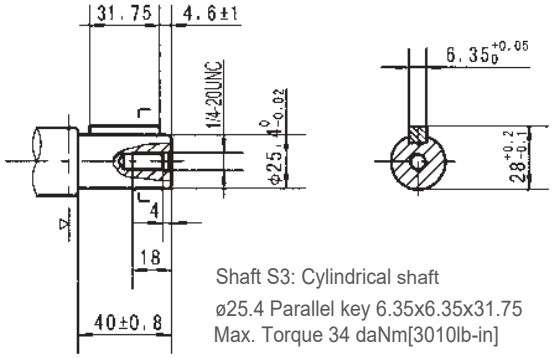


Shaft S5: Cylindrical shaft
ø31.75 Parallel key
7.96x7.96x31.75
Max. Torque 77 daNm[6815lb-in]

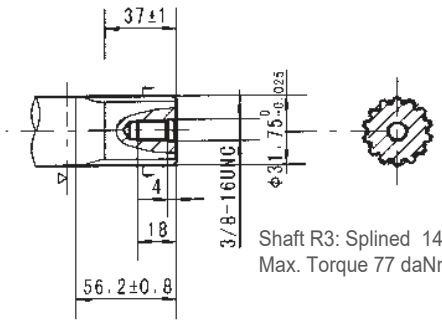
GP Shafts Extension Dimensions



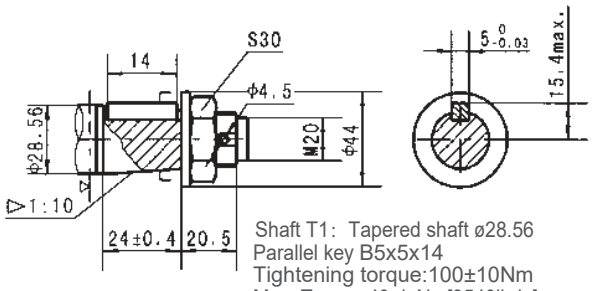
Shaft T2: Tapered shaft ø31.75
Parallel key 7.96x7.96x31.75
Tightening torque:200±10Nm
Max. Torque 77 daNm[6815lb-in]



Shaft S3: Cylindrical shaft
ø25.4 Parallel key 6.35x6.35x31.75
Max. Torque 34 daNm[3010lb-in]

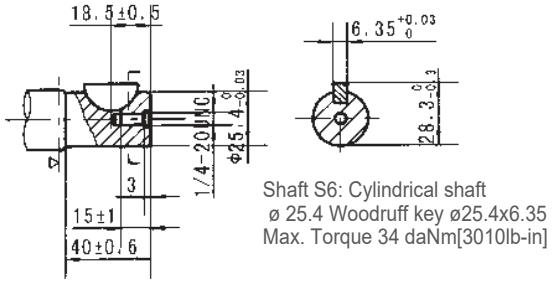


Shaft R3: Splined 14-DP12/24
Max. Torque 77 daNm[6815lb-in]

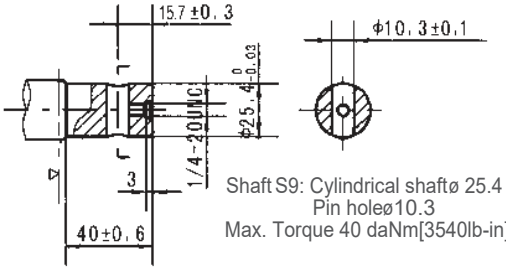


Shaft T1: Tapered shaft ø28.56
Parallel key B5x5x14
Tightening torque:100±10Nm
Max. Torque 40 daNm[3540lb-in]

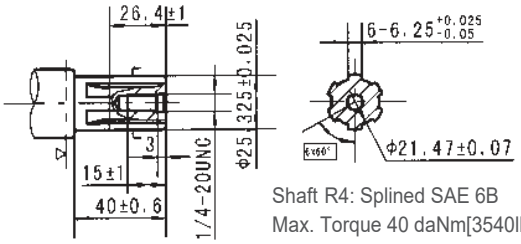
GPH Shafts Extension Dimensions



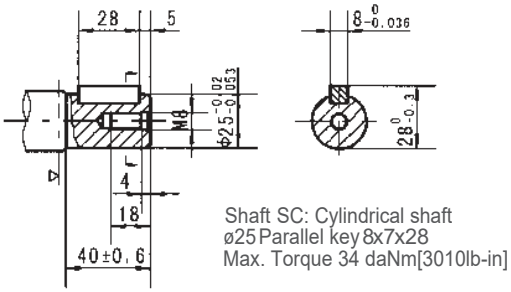
Shaft S6: Cylindrical shaft
ø 25.4 Woodruff key ø25.4x6.35
Max. Torque 34 daNm[3010lb-in]



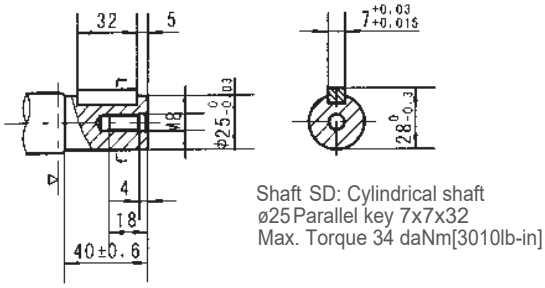
Shaft S9: Cylindrical shaftø 25.4
Pin holeø10.3
Max. Torque 40 daNm[3540lb-in]



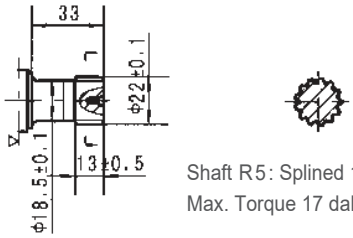
Shaft R4: Splined SAE 6B
Max. Torque 40 daNm[3540lb-in]



Shaft SC: Cylindrical shaft
ø25 Parallel key 8x7x28
Max. Torque 34 daNm[3010lb-in]

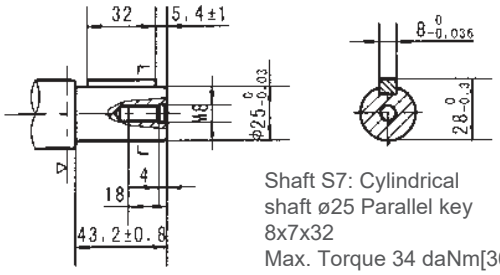


Shaft SD: Cylindrical shaft
ø25 Parallel key 7x7x32
Max. Torque 34 daNm[3010lb-in]

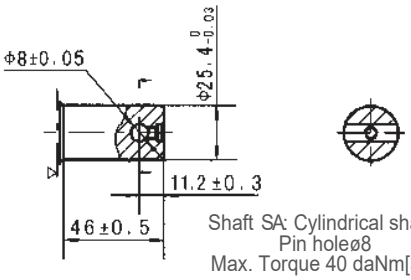


Shaft R5: Splined 13-DP16/32
Max. Torque 17 daNm[1500lb-in]

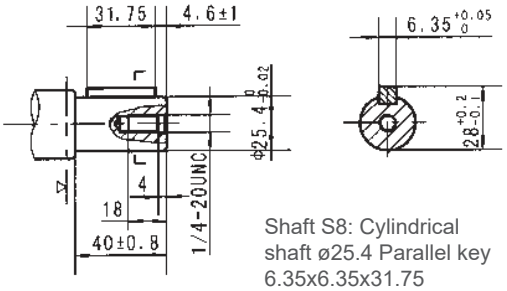
GPH Shafts Extension Dimensions



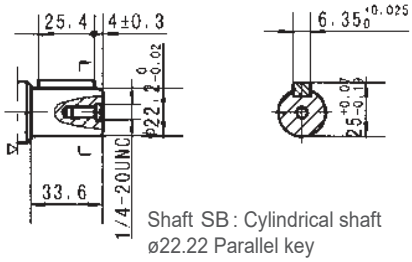
Shaft S7: Cylindrical
shaft ø25 Parallel key
8x7x32
Max. Torque 34 daNm[3010lb-in]



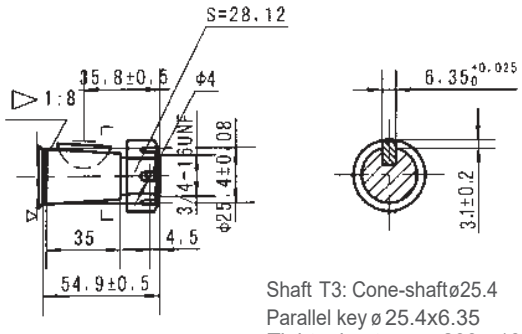
Shaft SA: Cylindrical shaft ø25.4
Pin holeø8
Max. Torque 40 daNm[3540lb-in]



Shaft S8: Cylindrical
shaft ø25.4 Parallel key
6.35x6.35x31.75
Max. Torque 34 daNm[3010lb-in]

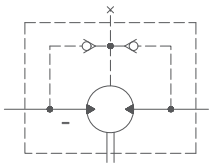


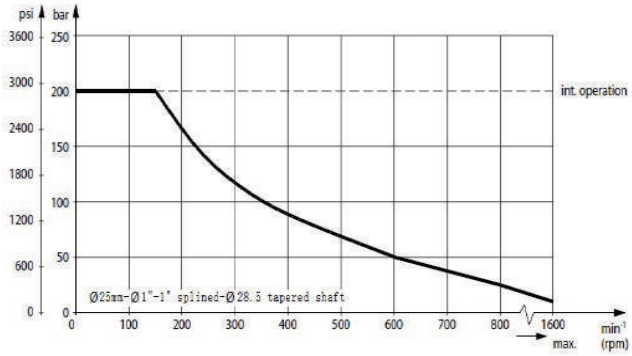
Shaft SB : Cylindrical shaft
ø22.22 Parallel key
6.35x6.35x25.4
Max. Torque 17 daNm[1500lb-in]



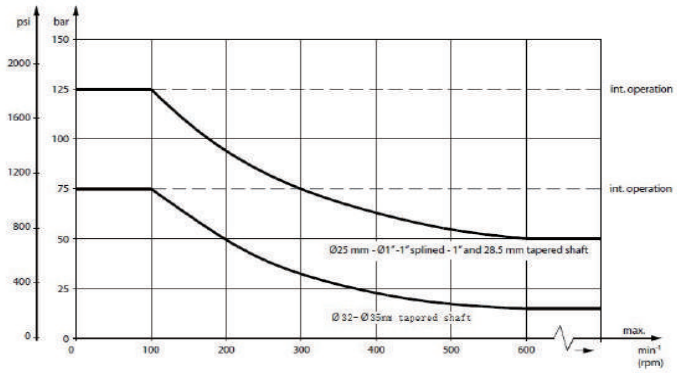
Shaft T3: Cone-shaftø25.4
Parallel key ø 25.4x6.35
Tightening torque:200 ± 10Nm
Max. Torque 34 daNm[3010lb-in]

GP GPH Series Hydraulic Motors





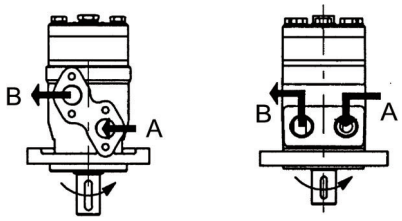
High pressure shaft seal



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

Direction of Shafts Rotation: Standard

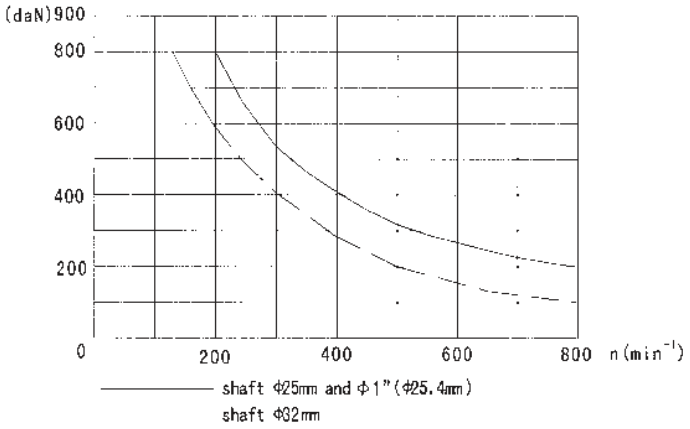
When facing shaft end of motor,shaft to rotate:
Clockwise when port "A" is pressurized.
Counter-clockwise port "B" is pressurized.



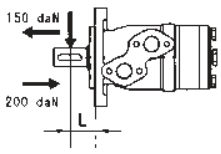
GP GPH

Status of the Shafts Radial Force

(Standard motor with journal bearing)



$$F_r = \frac{800}{n} \cdot \frac{25000}{95+L} \text{ daN}$$



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

Ordering Code

1	2	3	4	5	6	7	8
SERIES	DISP.	FLANGE	SHAFT	PORTS	ROTATION	PAINT	FUNTION

1 - SERIES

GP	Orbital motor

2 - DISPLACEMENT

025	25 cm^3/rev [1.52 in^3/rev]
032	32 cm^3/rev [1.95 in^3/rev]
040	40 cm^3/rev [2.44 in^3/rev]
050	49.5 cm^3/rev [3.02 in^3/rev]
080	79.2 cm^3/rev [4.83 in^3/rev]
100	99 cm^3/rev [6.04 in^3/rev]
125	123.8 cm^3/rev [7.55 in^3/rev]
160	158.4 cm^3/rev [9.66 in^3/rev]
200	198 cm^3/rev [12.1 in^3/rev]
250	247.5 cm^3/rev [15.1 in^3/rev]
315	316.8 cm^3/rev [19.3 in^3/rev]
400	396 cm^3/rev [24.16 in^3/rev]
500	495 cm^3/rev [30.2 in^3/rev]
630	623.6 cm^3/rev [38.05 in^3/rev]

3 - FLANGE

A2	2-Hole SAE A flange, pilot Φ82.5×8
A4	4-Hole SAE A flange, pilot Φ82.5×8
H4	4-3/8-16 UNC square flange, pilot Φ44.4×2.8
H5	4-M10 square flange, pilot Φ44.4×2.8

4 - OUTPUT SHAFT

S1	Shaft Φ25,parallel key 8×7×32
S2	Shaft Φ25.4, parallel key 6.35×6.35×31.75
R1	Shaft Φ25.4,splined tooth SAE 6B
S3	Short shaft Φ25.4, parallel key 6.35×6.35×31.75
S4	Shaft Φ32,parallel key 10×8×45
R2	Shaft Φ31.75, splined tooth 14-DP12/24
R3	Long shaft Φ31.75,splined tooth 14-DP12/24
S5	Shaft Φ31.75, parallel key 7.96×7.96×31.75
T1	Tapered shaft Φ28.56,parallel key B5×5×14
T2	Tapered shaft Φ31.75,parallel key 7.96×7.96×25.4

5 - PORTS AND DRAIN PORT

G1	G1/2 manifold mount 4×M8,G1/4
M1	M22×1.5 manifold mount 4×M8,M14×1.5
U2	7/8-14 UNF O-ring manifold 4×5/16-18 UNC, 7/16-20 UNF
U1	1/2-14 NPTF manifold 4×5/16-18 UNC, 7/16-20 UNF
G2	PT(Rc)1/2 manifold 4×M8,PT(Rc)1/4

6 - ROTATION DIRECTION

A	Standard
R	Opposite

7 - PAINT

A	No paint
B	Blue
C	Black
S	Silver grey

8 - Unusually function

A	Standard
N	Big radial force
D	No case drain
F	Free running
L	Low speed
V	High temperature
S	Low temperature

Note:
1)The shafts of S4\R2\R3\S5\T1\T2 are only suitable for flanges of A2 and A4
2)When the table is used, please fill the code and give us, which the code information is consists of construction, dis-placement, mounting flange, output shaft and ports. If the specification is not in the table or you have specific require-ments, please contact us.

Ordering Code

1		2		3		4		5		6		7		8
SERIES		DISP.		FLANGE		SHAFT		PORTS		ROTATION		PAINT		FUNTION

1 - SERIES

GPH	Orbital motor

2 - DISPLACEMENT

025	25 cm^3/rev [1.52 in^3/rev]
032	32 cm^3/rev [1.95 in^3/rev]
040	40 cm^3/rev [2.44 in^3/rev]
050	49.5 cm^3/rev [3.02 in^3/rev]
080	79.2 cm^3/rev [4.83 in^3/rev]
100	99 cm^3/rev [6.04 in^3/rev]
125	123.8 cm^3/rev [7.55 in^3/rev]
160	158.4 cm^3/rev [9.66 in^3/rev]
200	198 cm^3/rev [12.1 in^3/rev]
250	247.5 cm^3/rev [15.1 in^3/rev]
315	316.8 cm^3/rev [19.3 in^3/rev]
400	396 cm^3/rev [24.16 in^3/rev]
500	495 cm^3/rev [30.2 in^3/rev]
630	623.6 cm^3/rev [38.05 in^3/rev]

3 - FLANGE

A1	2-Hole SAE A flange, pilot Φ82.5×2.8
A3	4-Hole SAE A flange, pilot Φ82.5×2.8
H4	4- 3/8-16 UNC square flange, pilot Φ44.4×2.8
H5	4-M10 square flange, pilot Φ44.4×2.8

4 - OUTPUT SHAFT

S6	Shaft Φ25.4,woodruff key Φ25.4×6.35
R4	Shaft Φ25.4,splined tooth SAE 6B
S7	Shaft Φ25,parallel key 8×7×32
S8	Shaft Φ25.4,parallel key 6.35×6.35×31.75
S9	Shaft Φ25.4,pin hole Φ10.3
SA	Shaft Φ25.4,pin hole Φ8
SB	Shaft Φ22.22,parallel key 6.35×6.35×25.4
R5	Shaft Φ22.22,splined tooth 13-DP16/32
T3	Tapered shaft Φ25.4,woodruff key Φ25.4×6.35
SC	Shaft Φ25,parallel key 8×7×28
SD	Shaft Φ25,parallel key 7×7×32

5 - PORTS AND DRAIN PORT

G7	G1/2,G1/4
U9	7/8-14 UNF O-ring, 7/16-20 UNF
UA	1/2-14 NPTF, 7/16-20 UNF
U3	3/4-16 O-ring, 7/16-20 UNF
G8	PT(Rc)1/2, PT(Rc)1/4
D1	Φ10 O-ring manifold4×5/16-18 UNC,7/16-20 UNF
D2	Φ10 O-ring manifold 4×M8,G1/4

6 - ROTATION DIRECTION

A	Standard
R	Opposite

7 - PAINT

A	No paint
B	Blue
C	Black
S	Silver grey

8 - Unusually function

A	Standard
N	Big radial force
D	No case drain
F	Free running
L	Low speed
V	High temperature
S	Low temperature

Note: When the table is used, please fill the code and give us, which the code information is consists of construction, displacement, mounting flange, output shaft and ports. If the specification is not in the table or you have specific requirements, please contact us.

GR Series Orbital Motors

Application

- Conveyors
- Feeding mechanism of robots and manipulators
- Metal working machines
- Textile machinesFood industries
- Agricultural machines
- Food industries
- Grass cutting machinery etc.

Options

- Model - Spool valve, roll-gerotor
- Flange mount
- Motor with needle bearing
- Side and rear ports
- Shafts - straight, splined and tapered
- Shaft seal for high and low pressure
- Metric and BSPP ports
- Other special features

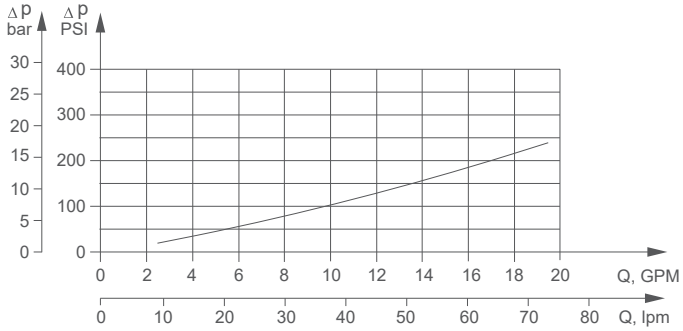
General

Max. Displacement, cm^3/rev [in^3/rev]	397 [24.4]
Max. Speed, [RPM]	970
Max. Torque, daNm [lb-in]	cont.: 61 [5400] int.: 69 [6100]
Max. Output, kW [HP]	15 [20.1]
Max. Pressure Drop, bar [PSI]	cont.: 175 [2540] int.: 200 [2900]
Max. Oil Flow, lpm [GPM]	75 [20]
Min. Speed, [RPM]	10
Pressure fluid	Mineral based- HLP(DIN 51524) or HM(ISO 6743/4)
Temperature range, ^{O}C [^{O}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)

Oil Flow in Drain Line

Pressure drop bar [PSI]	Viscosity mm^2/s [SUS]	Oil flow in drain line lpm [GPM]
100 [1450]	20 [98]	2,5 [.660]
	35 [164]	1,8 [.476]
140 [2030]	20 [98]	3,5 [.925]
	35 [164]	2,8 [.740]

Pressure Loss



Specifications

Technical data for GR with 25 and 1 in and 1 in splined and 28.56 tapered shaft

Type		GR 50	GR 80	GR 100	GR 125	GR 160	GR 200	GR 250	GR 315	GR 400
Displacement, cm^3/rev		51,5	80,3	99,8	125,7	159,6	199,8	250,1	315,7	397
[in^3/rev]		[3.14]	[4.90]	[6.09]	[7.67]	[9.74]	[12.19]	[15.26]	[19.26]	[24.4]
Max. Speed,	Cont.	775	750	600	475	375	300	240	190	150
[RPM]	Int.*	970	940	750	600	470	375	300	240	190
Max. Torque	Cont.	10 [900]	20 [1770]	24 [2125]	30 [2655]	39 [3450]	38,5[3410]	39 [3450]	36 [3185]	38 [3360]
daNm [in-lb]	Int.*	13 [1150]	22 [1947]	28 [2480]	34 [3010]	43 [3805]	46 [4070]	47 [4160]	47 [4160]	47 [4160]
	Peak**	17 [1505]	27 [2390]	32 [2832]	37 [3275]	46 [4070]	56 [4960]	60 [5310]	61 [5400]	61 [5400]
Max. Output	Cont.	7 [9.5]	12,5 [17]	13 [17.4]	12,5[16.8]	11,5[15.4]	9 [12]	8 [10.7]	5 [6.7]	4,8 [6.4]
kW [HP]	Int.*	8,5 [11.9]	15 [20.1]	15 [20.1]	14,5[19.5]	14 [18.8]	12 [16.1]	9,5 [12.7]	8 [10.7]	6,8 [9.1]
Max. Pressure Drop	Cont.	140 [2030]	175 [2540]	175[2540]	175[2540]	175[2540]	140[2030]	110[1600]	85 [1230]	65 [940]
bar [PSI]	Int.*	175 [2540]	200 [2900]	200[2900]	200[2900]	200[2900]	175[2540]	140[2030]	115[1670]	90 [1300]
	Peak**	225 [3260]	225 [3260]	225[3260]	225[3260]	225[3260]	225[3260]	200[2900]	150[2175]	115[1670]
Max. Oil Flow	Cont.	40 [10.5]	60 [15.8]	60 [15.8]	60 [15.8]	60 [15.8]	60 [15.8]	60 [15.8]	60 [15.8]	60 [15.8]
lpm [GPM]	Int.*	50 [13.2]	75 [19.8]	75 [19.8]	75 [19.8]	75 [19.8]	75 [19.8]	75 [19.8]	75 [19.8]	75 [19.8]
Max. Inlet Pressure	Cont.	175 [2540]	175 [2540]	175[2540]	175[2540]	175[2540]	175[2540]	175[2540]	175[2540]	175[2540]
bar [PSI]	Int.*	200 [2900]	200 [2900]	200[2900]	200[2900]	200[2900]	200[2900]	200[2900]	200[2900]	200[2900]
	Peak**	225 [3260]	225 [3260]	225[3260]	225[3260]	225[3260]	225[3260]	225[3260]	225[3260]	225[3260]
Max. Return Pres-	Cont.	175 [2540]	175 [2540]	175[2540]	175[2540]	175[2540]	175[2540]	175[2540]	175[2540]	175[2540]
sure with Drain Line	Int.*	200 [2900]	200 [2900]	200[2900]	200[2900]	200[2900]	200[2900]	200[2900]	200[2900]	200[2900]
bar [PSI]	Peak**	225 [3260]	225 [3260]	225[3260]	225[3260]	225[3260]	225[3260]	225[3260]	225[3260]	225[3260]
Max. Starting Pressure with Unloaded Shaft, bar[PSI]		10 [145]	10 [145]	10 [145]	9 [130]	7 [102]	5 [73]	4 [58]	3 [44]	3 [44]
Min. Starting Torque	At max.press.									
daNm [in-lb]	drop Cont.	8 [710]	15 [1330]	20 [1770]	25 [2215]	32 [2832]	33 [2920]	31 [2740]	31,5[2875]	31,5[2875]
	At max.press. drop Int.*	10 [85]	17 [1505]	23 [2035]	28 [2480]	37 [3275]	40 [3540]	48 [4250]	58 [5220]	50 [4425]
Min. Speed***, [RPM]		10	10	10	10	10	10	10	10	10
Weight, kg [lb] For rear ports : +0,650 [1.433]	GR(S)	6,8 [15]	6,9 [15,2]	7,2 [15.9]	7,3 [16.1]	7,5 [15.2]	8 [17.6]	8,4 [18.5]	9,1 [20]	9,8 [21.6]

* Intermittent operation:the permissible values may occur for max. 10% of every
** minute Peak load:the permissible values may occur for max. 1% of every minute
*** For speeds lowe:than given,consult factory or your regional manage

Specifications

Technical data for GR with 31.75 and 32 shaft

Type		GR 50	GR 80	GR 100	GR 125	GR 160	GR 200	GR 250	GR 315	GR 400
Displacement, cm^3/rev		51,5	80,3	99,8	125,7	159,6	199,8	250,1	315,7	397
[in^3/rev]		[3.14]	[4.90]	[6.09]	[7.67]	[9.74]	[12.19]	[15.26]	[19.26]	[24.4]
Max. Speed,	Cont.	775	750	600	475	375	300	240	190	150
[RPM]	Int.*	970	940	750	600	470	375	300	240	190
Max. Torque	Cont.	10 [900]	20 [1770]	24 [2125]	30 [2655]	39 [3450]	45 [4000]	54 [4780]	55 [4870]	61 [5400]
daNm [in-lb]	Int.*	13 [1150]	22 [1947]	28 [2480]	34 [3010]	43 [3805]	50 [4425]	61 [5400]	69 [6110]	69 [6110]
	Peak**	17 [1505]	27 [2390]	32 [2832]	37 [3275]	46 [4070]	56 [4960]	71 [6280]	84 [7435]	87 [7700]
Max. Output	Cont.	7 [9.5]	12,5 [17]	13 [17.4]	12,5[16.8]	11,5[15.4]	11 [14.8]	10 [13.4]	9 [12]	7,8 [10.5]
kW [HP]	Int.*	8,5 [11.9]	15 [20.1]	15 [20.1]	14,5[19.5]	14 [18.8]	13 [17.4]	12 [16.1]	10 [13.4]	10,6[14.2]
Max. Pressure Drop	Cont.	140[2030]	175[2540]	175[2540]	175[2540]	175[2540]	175[2540]	175[2540]	135[1960]	110[1600]
bar [PSI]	Int.*	175[2540]	200[2900]	200[2900]	200[2900]	200[2900]	200[2900]	200[2900]	175[2540]	140[2030]
	Peak**	225[3260]	225[3260]	225[3260]	225[3260]	225[3260]	225[3260]	225[3260]	210[3045]	175[2540]
Max. Oil Flow	Cont.	40 [10.5]	60 [15.8]	60 [15.8]	60 [15.8]	60 [15.8]	60 [15.8]	60 [15.8]	60 [15.8]	60 [15.8]
lpm [GPM]	Int.*	50 [13.2]	75 [19.8]	75 [19.8]	75 [19.8]	75 [19.8]	75 [19.8]	75 [19.8]	75 [19.8]	75 [19.8]
Max. Inlet Pressure	Cont.	175[2540]	175[2540]	175[2540]	175[2540]	175[2540]	175[2540]	175[2540]	175[2540]	175[2540]
bar [PSI]	Int.*	200[2900]	200[2900]	200[2900]	200[2900]	200[2900]	200[2900]	200[2900]	200[2900]	200[2900]
	Peak**	225[3260]	225[3260]	225[3260]	225[3260]	225[3260]	225[3260]	225[3260]	225[3260]	225[3260]
Max. Return Pres-	Cont.	175[2540]	175[2540]	175[2540]	175[2540]	175[2540]	175[2540]	175[2540]	175[2540]	175[2540]
sure with Drain Line	Int.*	200[2900]	200[2900]	200[2900]	200[2900]	200[2900]	200[2900]	200[2900]	200[2900]	200[2900]
bar [PSI]	Peak**	225[3260]	225[3260]	225[3260]	225[3260]	225[3260]	225[3260]	225[3260]	225[3260]	225[3260]
Max. Starting Pressure with Unloaded Shaft, bar [PSI]		10 [145]	10 [145]	10 [145]	9 [130]	7 [102]	5 [73]	4 [58]	3 [44]	3 [44]
Min. Starting Torque	At max.press. drop Cont.	8 [710]	15 [1330]	20 [1770]	25 [2215]	32 [2832]	41 [3630]	50 [4425]	50 [4425]	50 [4425]
daNm [in-lb]	At max.press. drop Int.*	10 [885]	17 [1505]	23 [2035]	28 [2480]	37 [3275]	46 [4070]	55 [4870]	66 [5840]	61 [5400]
Min. Speed***, [RPM]		10	10	10	10	10	10	10	10	10
Weight, kg [lb] For rear ports : +0,650 [1.433]	GR(S)	6,9 [15,2]	7 [15,4]	7,3 [16.1]	7,4 [16.3]	7,6 [15.4]	8,1 [18.9]	8,5 [18.7]	9,2 [20.3]	9,9 [21.8]

* Intermittent operation: the permissible values may occur for max. 10% of every minute.

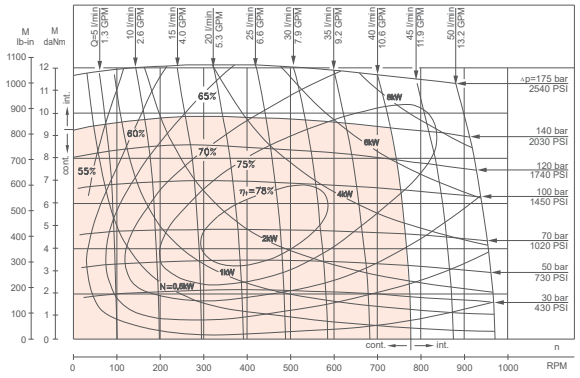
** Peak load: the permissible values may occur for max. 1% of every minute.

*** For speeds lower than given, consult factory or your regional manager.

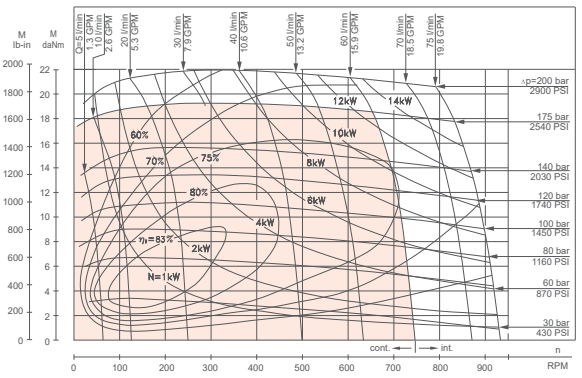
- 1. Intermittent speed and intermittent pressure must not occur simultaneously.
- 2. Recommended filtration is per ISO cleanliness code 20/16. A nominal f ltration of 25 micron or better.
- 3. Recommend using a premium quality, anti-wear type mineral based hydraulic oil HLP(DIN51524) orHM (ISO 6743/4). If using synthetic fluids consult the factory for alternative seal materials.
- 4. Recommended minimum oil viscosity 13 mm^2/s [70 SUS] at 50°C [122°F].
- 5. Recommended maximum system operating temperature is 82°C [180°F].
- 6. To assure optimum motor life fill with fluid prior to loading and run at moderate load and speed for 10-15 minutes.

Function Diagrams

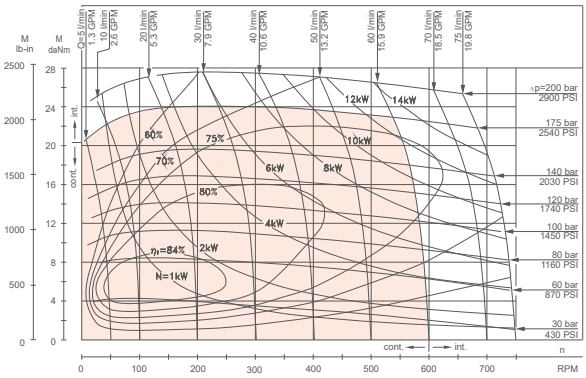
GR 50



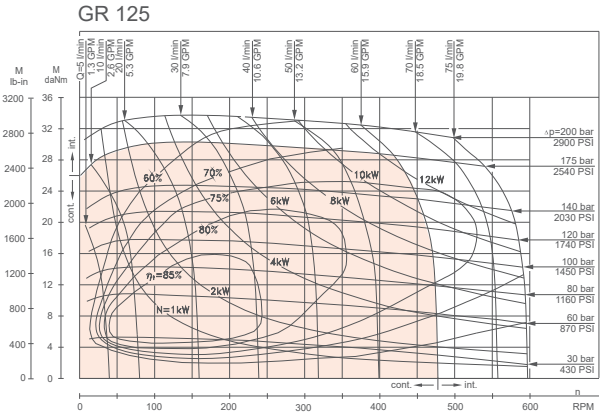
GR 80



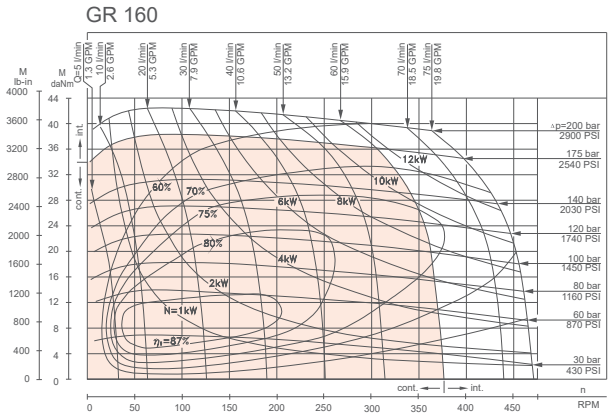
GR 100



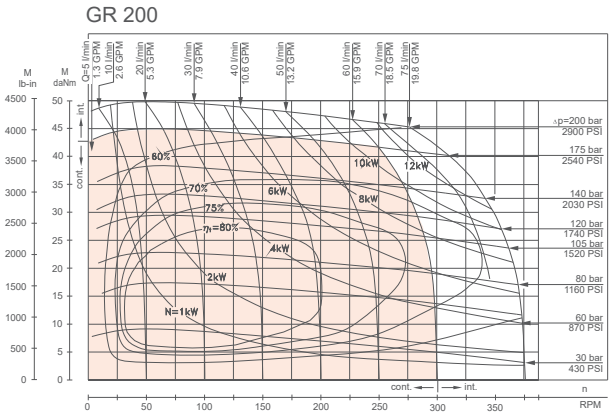
GR 125



GR 160



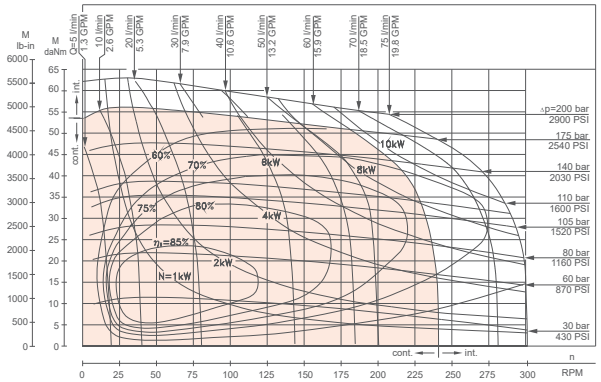
GR 200



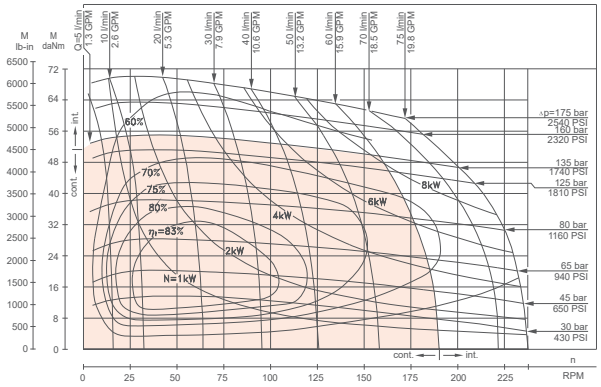
The function diagrams data is for average performance of randomly selected motors at back pressure 5÷10 bar [72.5÷145 PSI] and oil with viscosity of 32 mm²/s [150 SUS] at 50°C [122°F].

Function Diagrams

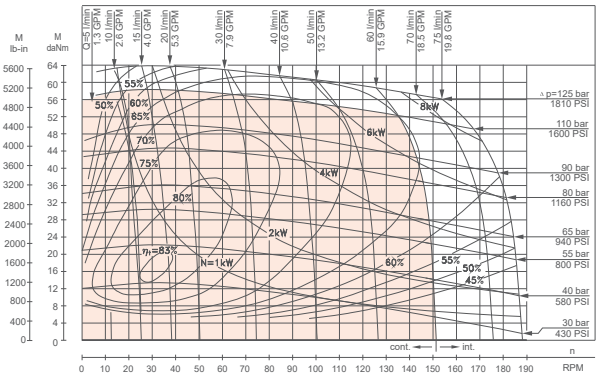
GR 250



GR 315

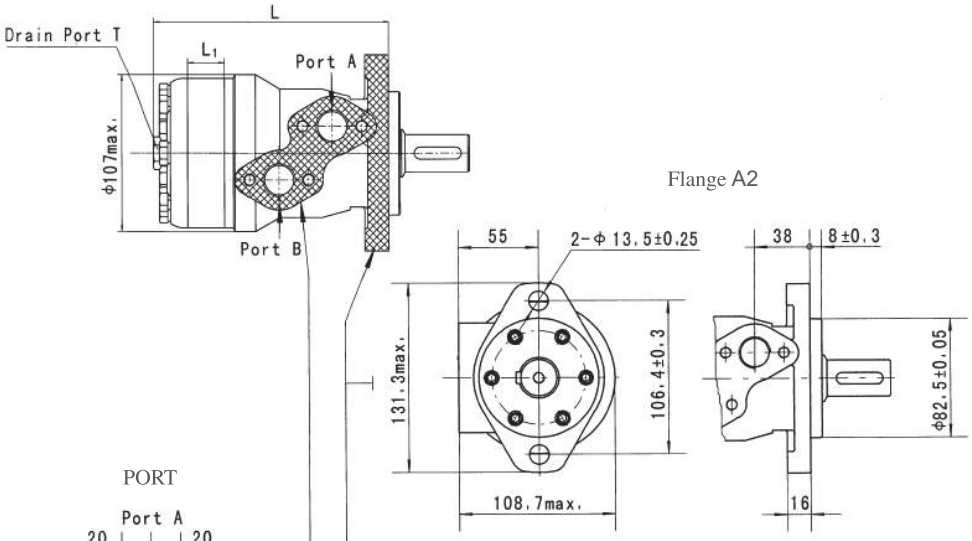


GR 400



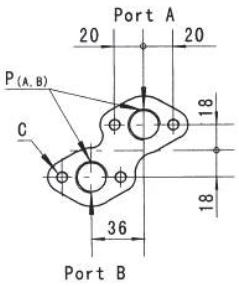
The function diagrams data is for average performance of randomly selected motors at back pressure 5÷10 bar [72.5÷145PSI] and oil with viscosity of 32 mm² /s [150 SUS] at 50°C [122°F]

GR Dimensions and Mounting

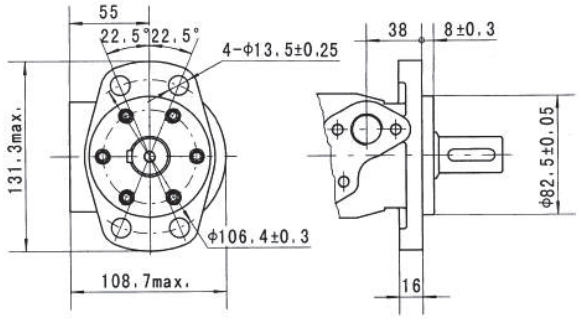


Flange A2

PORT

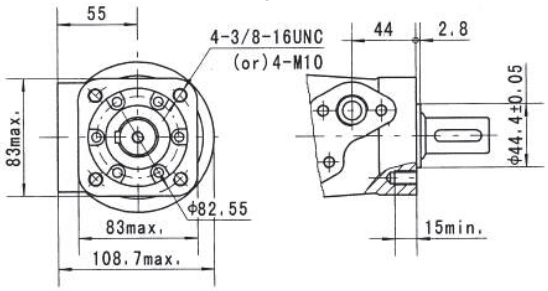


Flange A4



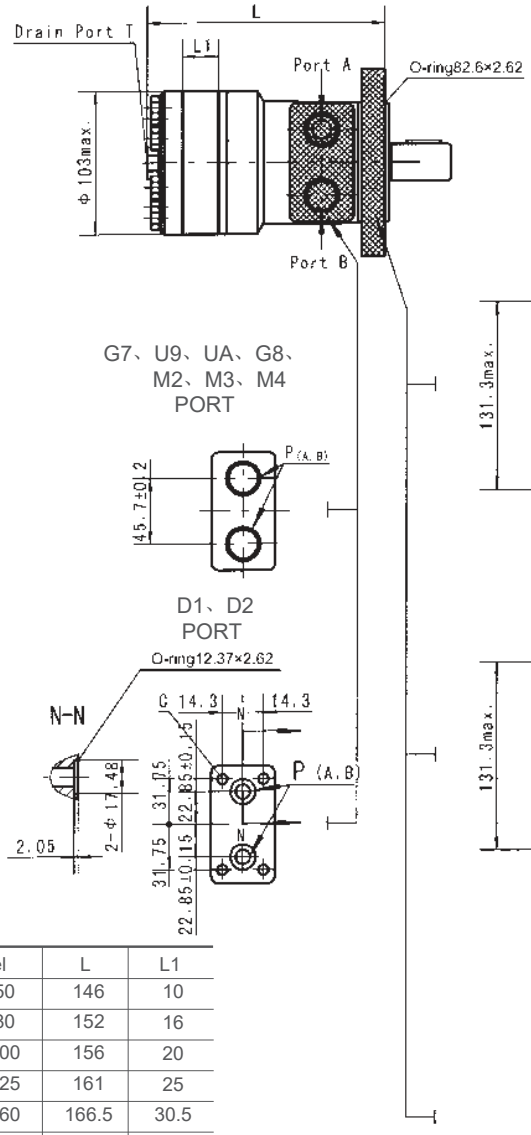
Model	L	L1
GR50	140	10
GR80	146	16
GR100	150	20
GR125	155	25
GR160	161.5	30.5
GR200	170	38.1
GR250	180	50
GR315	192	62
GR400	207	76

Flange H4/H5

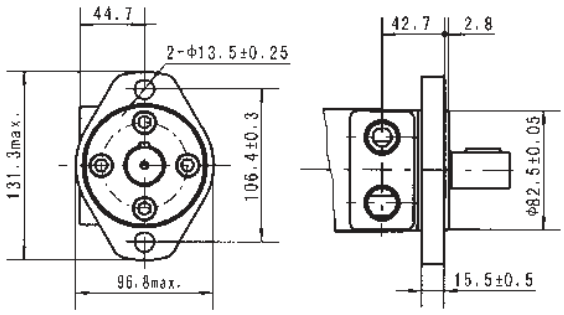


Code / Mounting	G1 (depth)	M1 (depth)	U2 (depth)	U1 (depth)	G2 (depth)
P(A,B)	G1/2 (15)	M22 x 1.5 (15)	7/8-14 O-ring (17)	1/2-14NPTF (15)	PT(RC)1/2 (15)
C	4-M8 (13)	4-M8 (13)	4-5/16-18UNC(13)	4-5/16-18UNC(13)	4-M8 (13)
T	G1/4 (12)	M14 x 1.5 (12)	7/16-20UNF (12)	7/16-20UNF (12)	PT(RC)1/4 (9.7)

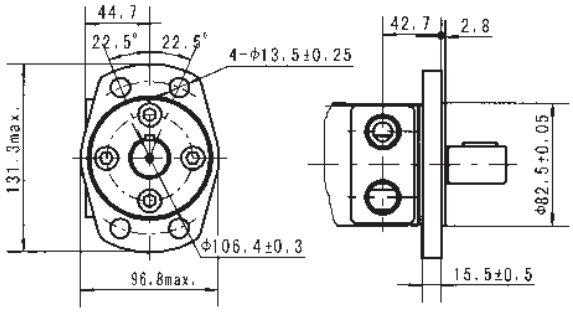
GRS Dimensions and Mounting



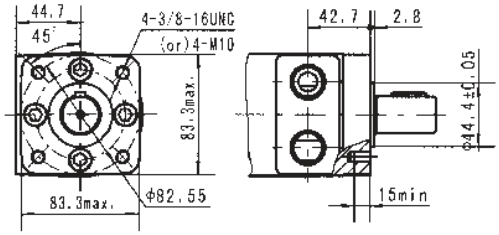
Flange A1



Flange A3



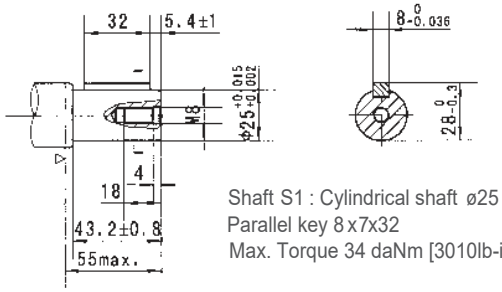
Flange H4/H5



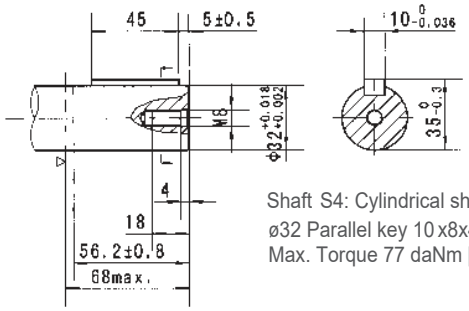
Model	L	L1
GRS50	146	10
GRS80	152	16
GRS100	156	20
GRS125	161	25
GRS160	166.5	30.5
GRS200	174	38.1
GRS250	186	50
GRS315	198	62
GRS400	213	76

Code / Mounting	G7 (depth)	U9 (depth)	UA (depth)	G8 (depth)	M2 (depth)	M3 (depth)	M4 (depth)	D1 (depth)	D2 (depth)
P(A,B)	G1/2 (15)	7/8-14 O-ring (17)	1/2-14NPTF (15)	PT(RC)1/2 (15)	M18 x 1.5 (15)	M20 x 1.5 (15)	M22 x 1.5 (15)	ø10	ø10
T	G1/4 (12)	7/16-20UNF (12)	7/16-20UNF (12)	PT(RC)1/4 (9.7)	M10 x 1 (12)	M10 x 1 (12)	M10 x 1 (12)	7/16-20UNF(12)	G1/4(12)
C	–	–	–	–	–	–	–	4-5/16-18UNC(13)	4-M8(13)

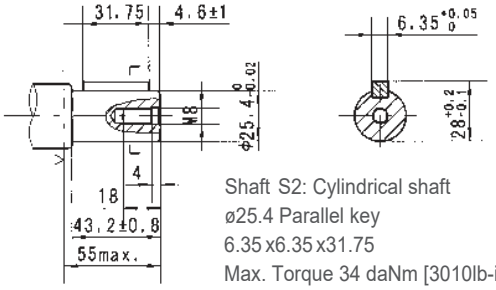
GR Shafts Extension Dimensions



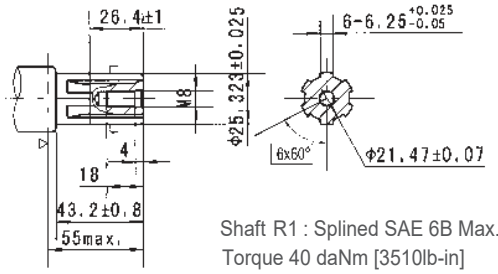
Shaft S1 : Cylindrical shaft ø25
Parallel key 8 x7x32
Max. Torque 34 daNm [3010lb-in]



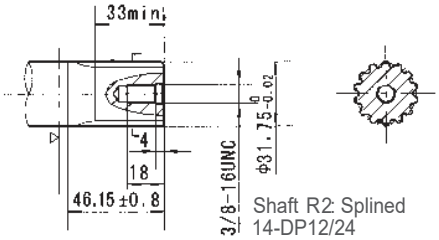
Shaft S4: Cylindrical shaft
ø32 Parallel key 10 x8x45
Max. Torque 77 daNm [6815lb-in]



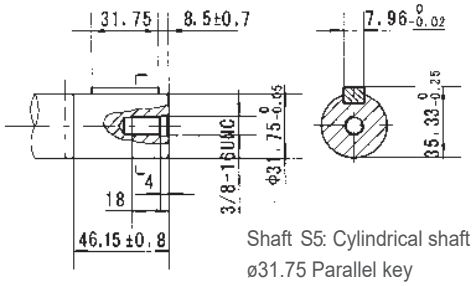
Shaft S2: Cylindrical shaft
ø25.4 Parallel key
6.35 x6.35 x31.75
Max. Torque 34 daNm [3010lb-in]



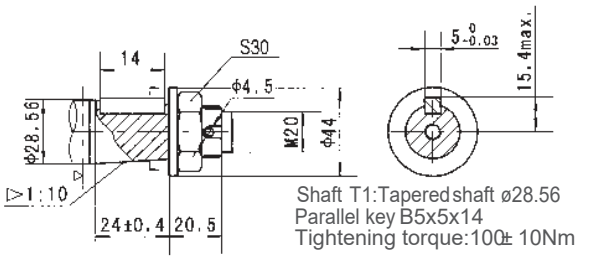
Shaft R1 : Splined SAE 6B Max.
Torque 40 daNm [3510lb-in]



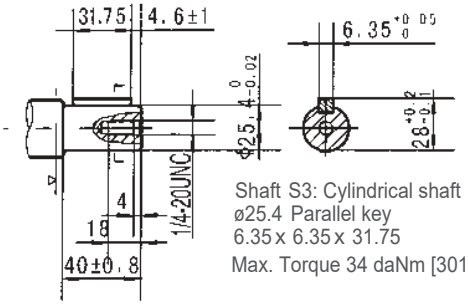
Shaft R2: Splined
14-DP12/24
Max. Torque 77 daNm [6815lb-in]



Shaft S5: Cylindrical shaft
ø31.75 Parallel key
7.96 x 7.96 x 31.75
Max. Torque 77 daNm [6815lb-in]

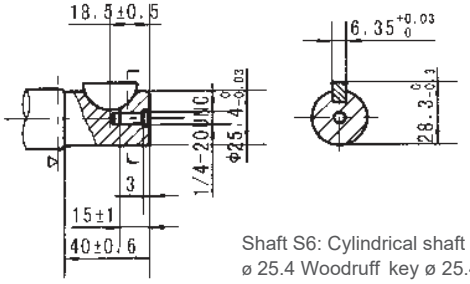


Shaft T1:Tapered shaft ø28.56
Parallel key B5x5x14
Tightening torque:100± 10Nm
Max. Torque 40 daNm [3510lb-in]

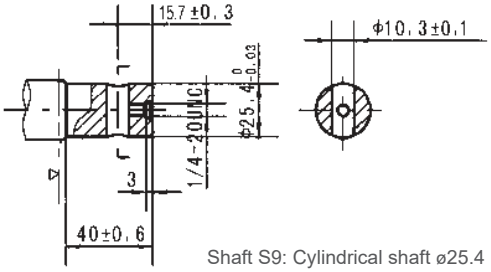


Shaft S3: Cylindrical shaft
ø25.4 Parallel key
6.35 x 6.35 x 31.75
Max. Torque 34 daNm [3010lb-in]

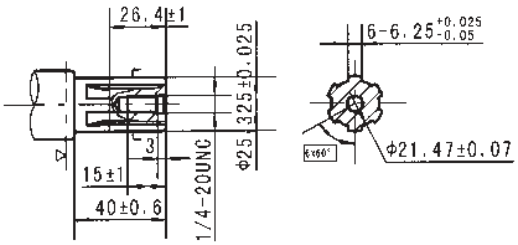
GRS Shafts Extension Dimensions



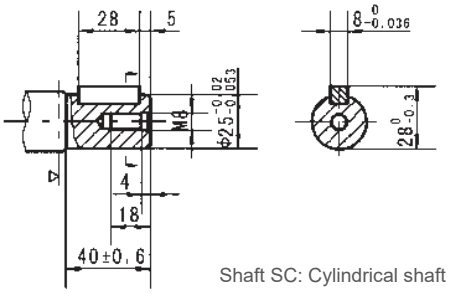
Shaft S6: Cylindrical shaft
ø 25.4 Woodruff key ø 25.4x6.35
Max.Torque 34 daNm [3010 lb-in]



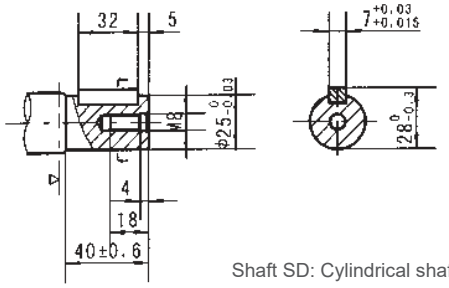
Shaft S9: Cylindrical shaft ø25.4
Pin hole ø10.3
Max.Torque 34 daNm [3010 lb-in]



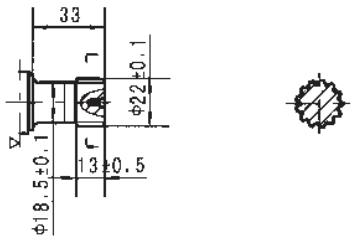
Shaft R4: Splined SAE 6B
Max.Torque 40 daNm [3540 lb-in]



Shaft SC: Cylindrical shaft
ø25 Parallel key 8x7x28
Max.Torque 34 daNm [3010 lb-in]

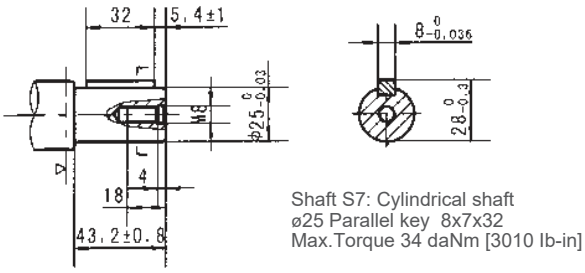


Shaft SD: Cylindrical shaft
ø25 Parallel key 7x7x32
Max.Torque 34 daNm [3010 lb-in]

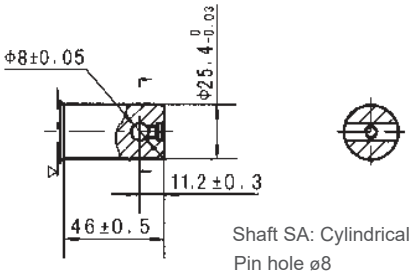


Shaft R5: Splined 13-DP16/32
Max.Torque 17 daNm [1500 lb-in]

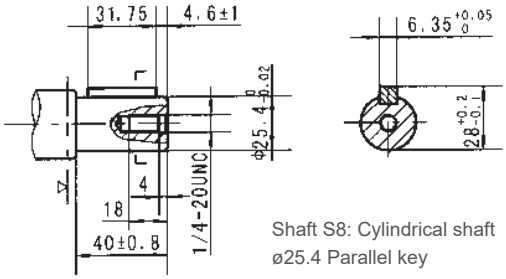
GRS Shafts Extension Dimensions



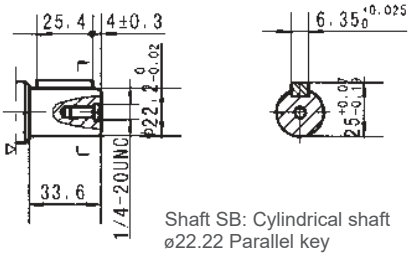
Shaft S7: Cylindrical shaft
ø25 Parallel key 8x7x32
Max.Torque 34 daNm [3010 lb-in]



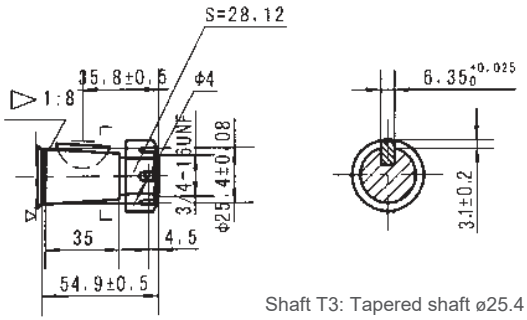
Shaft SA: Cylindrical shaft ø25.4
Pin hole ø8
Max.Torque 34 daNm [3010 lb-in]



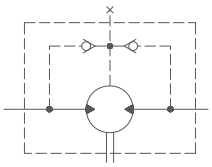
Shaft S8: Cylindrical shaft
ø25.4 Parallel key
6.35x6.35x31.75
Max.Torque 34 daNm [3010 lb-in]



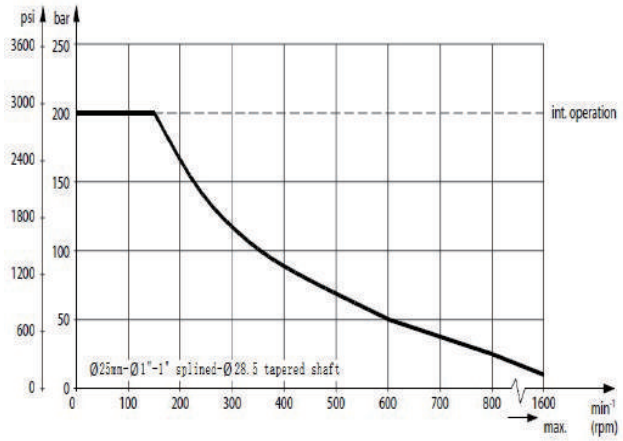
Shaft SB: Cylindrical shaft
ø22.22 Parallel key
6.35x6.35x25.4
Max.Torque 17 daNm [1500 lb-in]



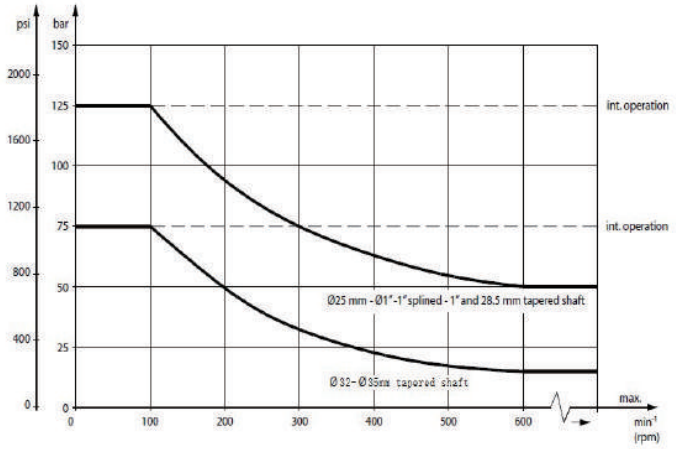
Shaft T3: Tapered shaft ø25.4
Parallel key ø25.4x6.35
Tightening torque:200±10Nm
Max.Torque 34 daNm [3010 lb-in]



GR GRS Series Hydraulic Motors



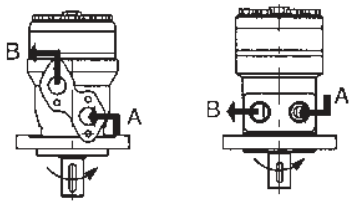
High pressure shaft seal



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

Direction of Shafts Ration : Standard

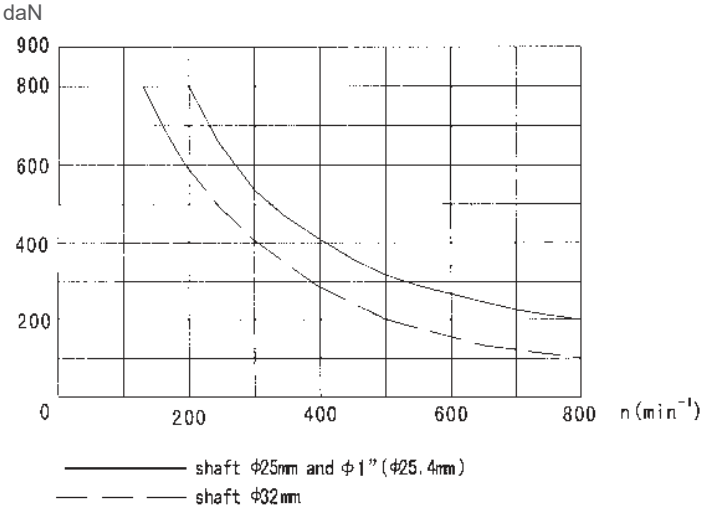
When facing shaft end of motor,shaft to rotate:
Clockwise when port "A" is pressurized.
Counter-clockwise port "B" is pressurized.



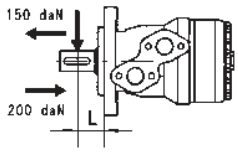
GR GRS

Status of the Shafts Radial Force

(Standard motor with journal bearing)



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



F_r =Radial Force (daN)
L =Distance (mm)
n =Speed (rpm)

Rhomb-flange L=30mm
Square-flange L=24mm

Ordering Code

1	2		3		4		5		6		7		8
SERIES	DISP.		FLANGE		SHAFT		PORTS		ROTATION		PAINT		FUNTION

1 - SERIES

GR	Orbital motor

2 - DISPLACEMENT

50	51.5 cm^3/rev [3.14 in^3/rev]
80	80.3 cm^3/rev [4.90 in^3/rev]
100	99.8 cm^3/rev [6.09 in^3/rev]
125	125.7 cm^3/rev [7.67 in^3/rev]
160	159.6 cm^3/rev [9.74 in^3/rev]
200	199.8 cm^3/rev [12.19 in^3/rev]
250	250.1 cm^3/rev [15.26 in^3/rev]
315	315.7 cm^3/rev [19.26 in^3/rev]
400	397 cm^3/rev [24.4 in^3/rev]

3 - FLANGE

A2	2-Φ13.5 SAE A flange, pilot Φ82.5×8
A4	4-Φ13.5 SAE A flange, pilot Φ82.5×8
H4	4-3/8-16 square flange, pilot Φ44.4×2.8
H5	4-M10 square flange, pilot Φ44.4×2.8

4 - OUTPUT SHAFT

S1	Shaft Φ25,parallel key 8×7×32
S2	Shaft Φ25.4, parallel key 6.35×6.35×31.75
R1	Shaft Φ25.4,splined tooth SAE 6B
S3	Short shaft Φ25.4, parallel key 6.35×6.35×31.75
S4	Shaft Φ32,parallel key 10×8×45
R2	Shaft Φ31.75, splined tooth 14-DP12/24
S5	Shaft Φ31.75, parallel key 7.96×7.96×31.75
T1	Tapered shaft Φ28.56,parallel key B5×5×14

5 - PORTS AND DRAIN PORT

G1	G1/2 manifold mount 4×M8,G1/4
M1	M22×1.5 manifold mount 4×M8,M14×1.5
U2	7/8-14 UNF O-ring manifold 4×5/16-18 UNC, 7/16-20 UNF
U1	1/2-14 NPTF manifold 4×5/16-18 UNC, 7/16-20 UNF
G2	PT(Rc)1/2 manifold 4×M8, PT(Rc)1/4

6 - ROTATION DIRECTION

A	Standard
R	Opposite

7 - PAINT

A	No paint
B	Blue
C	Black
S	Silver grey

8 - Unusually function

A	Standard
N	Big radial force
D	No case drain
F	Free running
L	Low speed
V	High temperature
S	Low temperature

Note:
1)The shafts of S4\R2\S5\T1 are only suitable for flanges of A2 and A4.
2)When the table is used, please fill the code and give us, which the code information is consists of construction, displacement, mount-ing flange, output shaft and ports. If the specification is not in the table or you have specific requirements, please contact us.

Ordering Code

1	2		3		4		5		6		7		8
SERIES	DISP.		FLANGE		SHAFT		PORTS		ROTATION		PAINT		FUNTION

1 - SERIES

GRS	Orbital motor

2 - DISPLACEMENT

50	51.5 cm^3/rev [3.14 in^3/rev]
80	80.3 cm^3/rev [4.90 in^3/rev]
100	99.8 cm^3/rev [6.09 in^3/rev]
125	125.7 cm^3/rev [7.67 in^3/rev]
160	159.6 cm^3/rev [9.74 in^3/rev]
200	199.8 cm^3/rev [12.19 in^3/rev]
250	250.1 cm^3/rev [15.26 in^3/rev]
315	315.7 cm^3/rev [19.26 in^3/rev]
400	397 cm^3/rev [24.4 in^3/rev]

3 - FLANGE

A1	2-Hole SAE A flange, pilot Φ82.5×2.8
A3	4-Hole SAE A flange, pilot Φ82.5×2.8
H4	4-Hole square flange, pilot Φ44.4×2.8
H5	4-Hole square flange, pilot Φ44.4×2.8

4 - OUTPUT SHAFT

S6	Shaft Φ25.4,woodruff key Φ25.4×6.35
R4	Shaft Φ25.4,splined tooth SAE 6B
S7	Shaft Φ25.4,parallel key 8×7×32
S8	Shaft Φ25.4,parallel key 6.35×6.35×31.75
S9	Shaft Φ25.4,pin hole Φ10.3
SA	Shaft Φ25.4,pin hole Φ8
SB	Shaft Φ22.22,parallel key 6.35×6.35×25.4
R5	Shaft Φ22.22,splined tooth 13-DP16/32
T3	Tapered shaft Φ25.4,woodruff key Φ25.4×6.35
SC	Shaft Φ25,parallel key 8×7×28
SD	Shaft Φ25,parallel key 7×7×32

5 - PORTS AND DRAIN PORT

G7	G1/2,G1/4
U9	7/8-14 UNF O-ring, 7/16-20 UNF
UA	1/2-14 NPTF, 7/16-20 UNF
G8	PT(Rc)1/2, PT(Rc)1/4
D1	Φ10 O-ring manifold 4×5/16-18 UNC,7/16-20 UNF
D2	Φ10 O-ring manifold 4×M8,G1/4
M2	M18×1.5 ,M10×1
M3	M20×1.5 ,M10×1
M4	M22×1.5 ,M10×1

6 - ROTATION DIRECTION

A	Standard
R	Opposite

7 - PAINT

A	No paint
B	Blue
C	Black
S	Silver grey

8 - Unusually function

A	Standard
N	Big radial force
D	No case drain
F	Free running
L	Low speed
V	High temperature
S	Low temperature

Note: When the table is used, please fill the code and give us, which the code information is consists of construction, displacement, mounting flange, output shaft and ports. If the specification is not in the table or you have specific requirements, please contact us.

GH Series Orbital Motors

Application

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

Options

- Model - Spool valve, roll-gerotor
- Flange mount
- Shafts - straight, splined and tapered
- Metric and BSPP ports
- Other special features

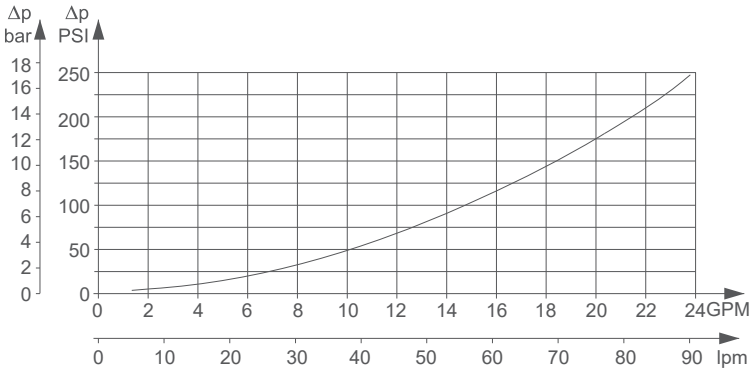
General

Max. Displacement,	cm^3/rev [in^3/rev]	502,4 [30.7]
Max. Speed,	[RPM]	445
Max. Torque,	daNm [lb-in]	cont.: 84 [7434] int.: 104 [9204]
Max. Output,	kW [HP]	18,5 [24.8]
Max. Pressure Drop,	bar [PSI]	cont.: 175 [2540] int.: 200 [2900]
Max. Oil Flow,	lpm [GPM]	90 [23.78]
Min. Speed,	[RPM]	5
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)

Oil Flow in Drain Line

Pressure drop bar [PSI]	Viscosity mm^2/s[SUS]	Oil flow in drain line lpm [GPM]
100 [1450]	20 [98]	2,5 [.660]
	35 [164]	1,8 [.476]
140 [2030]	20 [98]	3,5 [.925]
	35 [164]	2,8 [.740]

Pressure Loss



Specifications

Type		GH 200	GH 250	GH 315	GH 400	GH 500
Displacement, cm³/rev[in³/rev]		201,3 [12.3]	252 [15.4]	314,9 [19.2]	396,8 [24.2]	502,4 [30.7]
Max. Speed, [RPM]	Cont.	370	295	235	185	150
	Int.*	445	350	285	225	180
Max. Torque daNm [lb-in]	Cont.	51 [4510]	61 [5398]	74 [6548]	84 [7434]	82 [7257]
	Int.*	58 [5130]	70 [6195]	82 [7257]	98 [8673]	104 [9204]
	Peak**	64 [5064]	79 [6992]	98 [8673]	109 [9647]	117 [10350]
Max. Output kW [HP]	Cont.	16 [21]	16 [21]	14 [18.7]	12,5 [16.7]	11 [14.7]
	Int.*	18,5 [24.8]	18,5 [24.8]	15,5 [20.7]	15 [20.1]	14 [18.7]
Max. Pressure Drop bar [PSI]	Cont.	175 [2540]	175 [2540]	175 [2540]	155 [2240]	125 [1810]
	Int.*	200 [2900]	200 [2900]	200 [2900]	190 [2750]	160 [2320]
	Peak**	225 [3260]	225 [3260]	225 [3260]	210 [3045]	180 [2610]
Max. Oil Flow lpm [GPM]	Cont.	75 [19.81]	75 [19.81]	75 [19.81]	75 [19.81]	75 [19.81]
	Int.*	90 [23.78]	90 [23.78]	90 [23.78]	90 [23.78]	90 [23.78]
Max. Inlet Pressure bar [PSI]	Cont.	200 [2900]	200 [2900]	200 [2900]	200 [2900]	200 [2900]
	Int.*	225 [3260]	225 [3260]	225 [3260]	225 [3260]	225 [3260]
	Peak**	250 [3626]	250 [3626]	250 [3626]	250 [3626]	250 [3626]
Max. Starting Pressure with Unloaded Shaft, bar[PSI]		5 [72]	5 [72]	5 [72]	5 [72]	5 [72]
Min. Starting Torque, daNm [lb-in]	At max.press.dropCont	39 [3450]	52 [4600]	66 [5840]	72 [6370]	72 [6370]
	At max.press.drop Int.*	45 [3980]	59 [5221]	73 [6460]	88 [7788]	88 [7788]
Min. Speed***, [RPM]		10	10	8	5	5
Weight, kg [lb]		10,5 [23.2]	11 [24.3]	11,5 [25.4]	12,3 [27.1]	13 [28.7]

* Intermittent operation: the permissible values may occur for max. 10% of every minute.

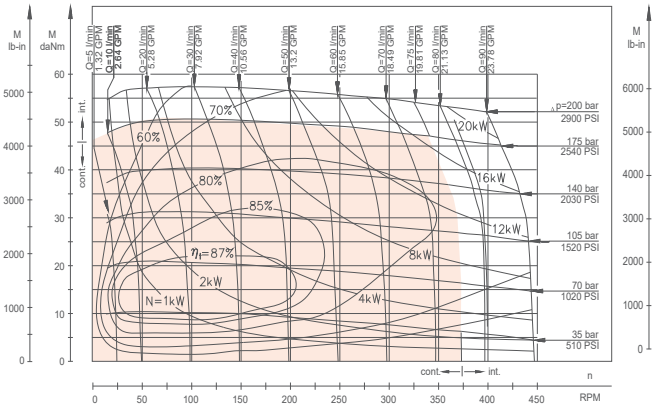
** Peak load: the permissible values may occur for max. 1% of every minute.

*** For speeds lower than given, consult factory or your regional manager.

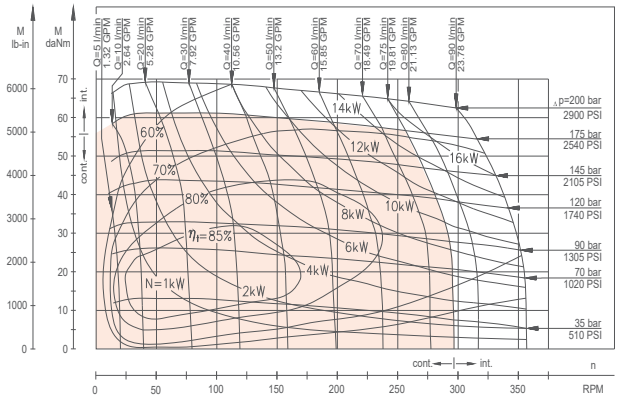
- 1. Intermittent speed and intermittent pressure must not occur simultaneously.
- 2. Recommended filtration is per ISO cleanliness code 20/16. A nominal f ltration of 25 micron or better.
- 3. Recommend using a premium quality, anti-wear type mineral based hydraulic oil HLP(DIN51524) orHM (ISO 6743/4). If using synthetic fluids consult the factory for alternative seal materials.
- 4. Recommended minimum oil viscosity 13 mm²/s [70 SUS] at 50°C [122°F].
- 5. Recommended maximum system operating temperature is 82°C [180°F].
- 6. To assure optimum motor life fill with fluid prior to loading and run at moderate load and speed for 10-15 minutes.

Function Diagrams

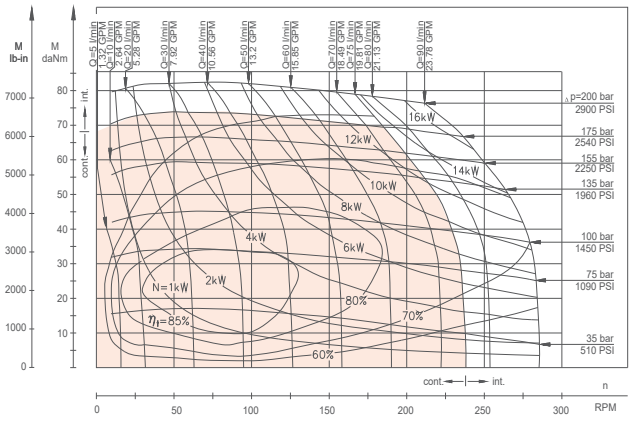
GH 200



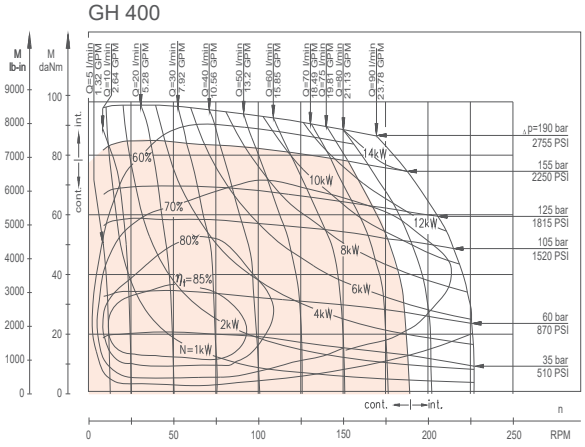
GH 250



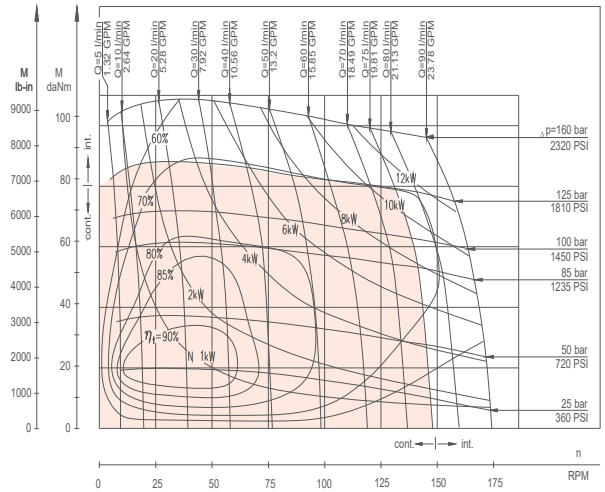
GH 315



GH 400



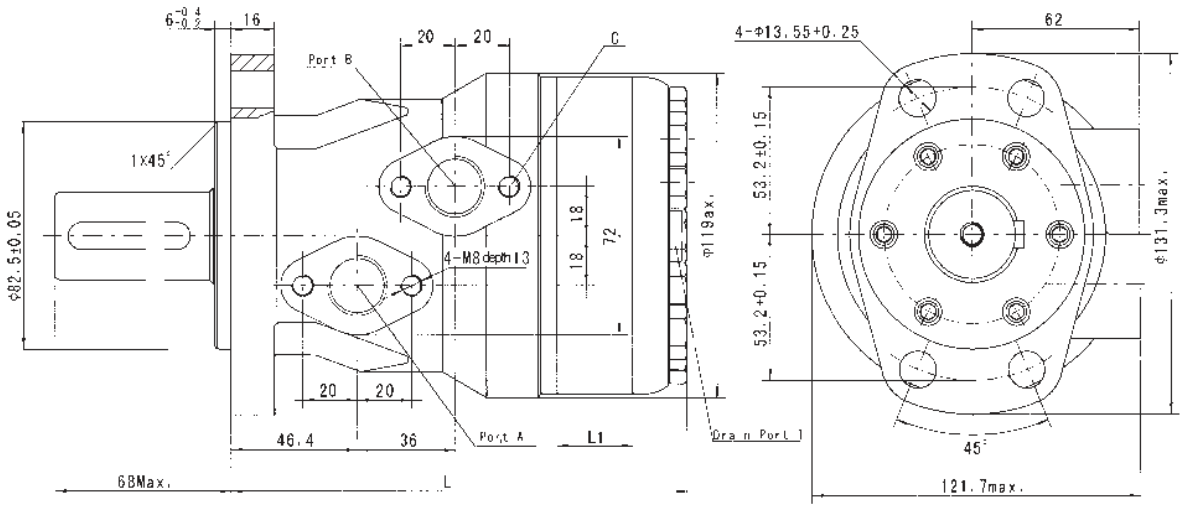
GH 500



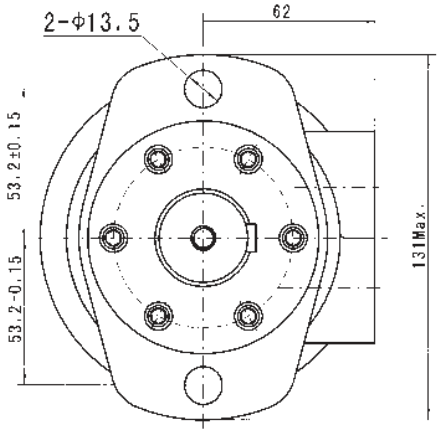
The function diagrams data is for average performance of randomly selected motors at back pressure 5÷10 bar [72.5÷145PSI] and oil with viscosity of 32 mm²/s [150 SUS] at 50°C[122°F]

GH Dimensions and Mounting

Flange A5



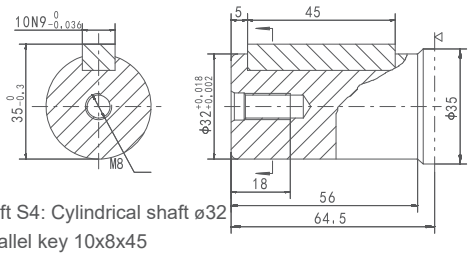
Flange A6



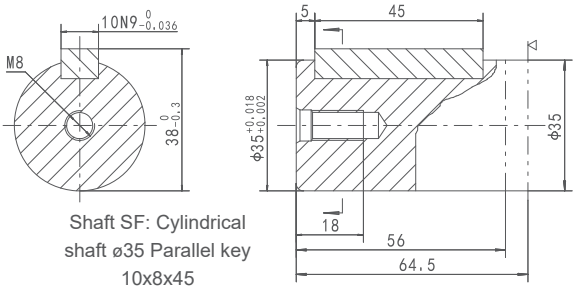
Model	L	L1
GH-200	168	27
GH-250	175	34
GH-315	184	42
GH-400	195	54
GH-500	206	65

Mounting \ Code	G1 (depth)	M1 (depth)	U2 (depth)	U1 (depth)	G2 (depth)
P(A,B)	G1/2 (15)	M22 x 1.5 (15)	7/8-14 O-ring (15)	1/2-14NPTF (15)	PT(RC)1/2 (15)
C	4-M8 (13)	4-M8 (13)	4-5/16-18UNC(13)	4-5/16-18UNC(13)	4-M8 (13)
T	G1/4 (12)	M14 x 1.5 (12)	7/16-20UNF(12)	7/16-20UNF (12)	PT(RC)1/4 1/4

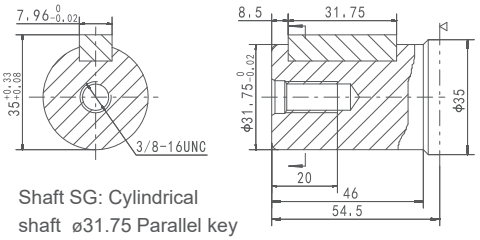
Shafts Extension Dimensions



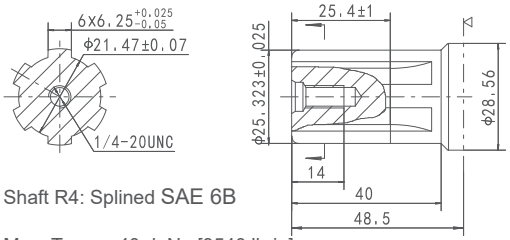
Shaft S4: Cylindrical shaft ø32
Parallel key 10x8x45
Max. Torque 77 daNm[6815 lb-in]



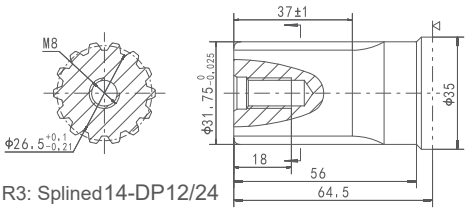
Shaft SF: Cylindrical
shaft ø35 Parallel key
10x8x45
Max. Torque 95 daNm[8400 lb-in]



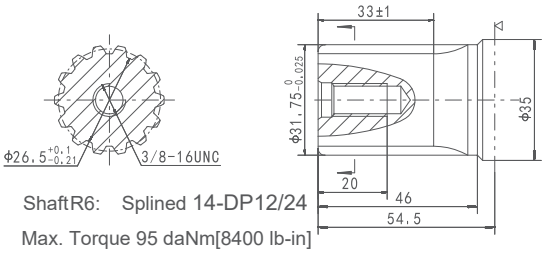
Shaft SG: Cylindrical
shaft ø31.75 Parallel key
7.96x7.96x31.75
Max. Torque 77 daNm[6815 lb-in]



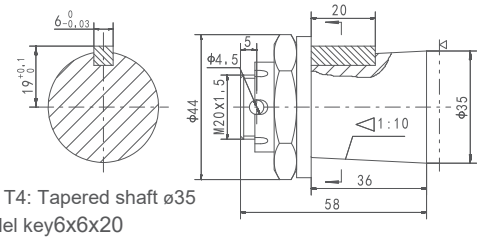
Shaft R4: Splined SAE 6B
Max. Torque 40 daNm[3540 lb-in]



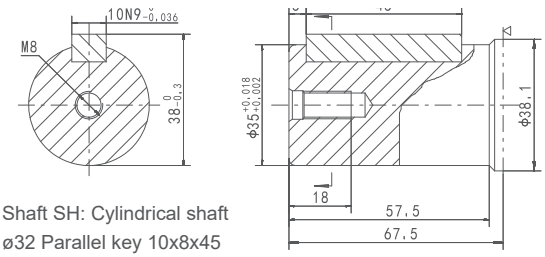
Shaft R3: Splined14-DP12/24
Max. Torque 95 daNm[8400 lb-in]



ShaftR6: Splined 14-DP12/24
Max. Torque 95 daNm[8400 lb-in]



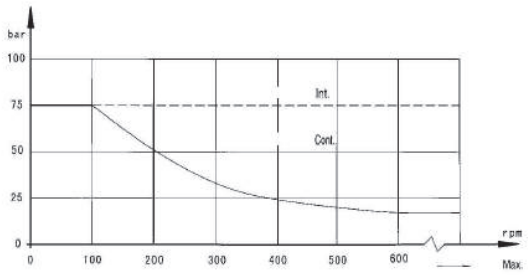
Shaft T4: Tapered shaft ø35
Parallel key6x6x20
Tightening torque:200±10Nm
Max. Torque 95 daNm[8400 lb-in]

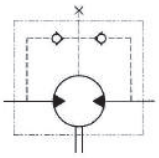


Shaft SH: Cylindrical shaft
ø32 Parallel key 10x8x45
Max. Torque 95 daNm[8400 lb-in]

GH series Hydraulic Motor

Permissible shaft seal pressure

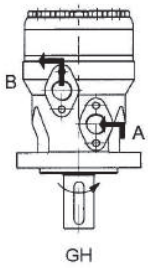




In applications without drain line, output shaft seal exceeds a bit of the pressure in the return line. When applications use the drain line, the pressure of output shaft seal equals the pressure in drain line.

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.

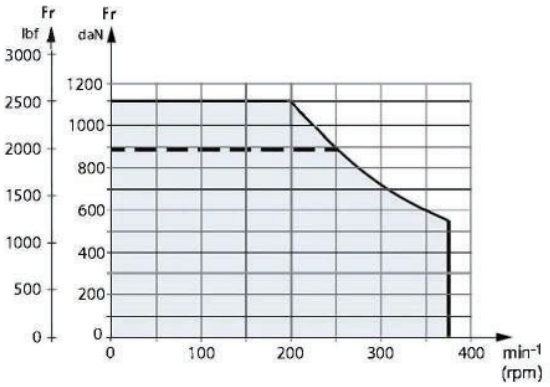


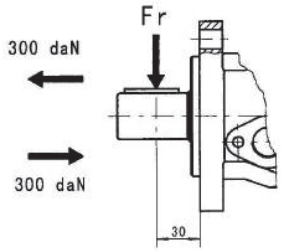
GH

Status of the shaft's radial force

$$F_r = \frac{1100}{n} \times \frac{25000}{103.5+L} \text{ daN}$$

L<60mm, n>200rpm





F_r =Radial Force (daN)
L =Distance (mm)
n =Speed (rpm)

——1 in SAE 6B splined shaft
The drawing shows the permissible radial load when L = 30 mm [1.18 in].

Ordering Code

1	2	3	4	5	6	7	8
SERIES	DISP.	FLANGE	SHAFT	PORTS	ROTATION	PAINT	FUNTION

1 - SERIES

GH	Orbital motor

2 - DISPLACEMENT

200	201.3 cm^3/rev [12.9 in^3/rev]
250	252 cm^3/rev [15.4 in^3/rev]
315	314.9 cm^3/rev [19.2 in^3/rev]
400	396.8 cm^3/rev [24.2 in^3/rev]
500	502.4 cm^3/rev [30.7 in^3/rev]

3 - FLANGE

A5	2-Φ13.5 SAE A flange, pilot Φ82.5×6
A6	4-Φ13.5 SAE A flange, pilot Φ82.5×6

4 - OUTPUT SHAFT

S4	Shaft Φ32,parallel key 10×8×45
SF	Shaft Φ35,parallel key 10×8×45
R3	Shaft Φ31.75,splined tooth 14-DP12/24
R6	Long shaft Φ31.75,splined tooth 14-DP12/24
SG	Shaft Φ31.75,parallel key 7.96×7.96×31.75
T4	Tapered shaft Φ35,parallel key B6×6×20
R4	Shaft Φ25.4,parallel key SAE 6B
SH	Shaft Φ35,parallel key 10×8×45

6 - ROTATION DIRECTION

A	Standard
R	Opposite

7 - PAINT

A	No paint
B	Blue
C	Black
S	Silver grey

8 - Unusually function

A	Standard
N	Big radial force
D	No drain
F	Free running
L	Low speed
V	High temperature
S	Low temperature

Note: When the table is used, please fill the code and give us, which the code information is consists of construction, displacement, mounting flange, output shaft and ports. If the specification is not in the table or you have specific requirements, please contact us.

GS Series Orbital Motors

Application

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

Options

- Model - Disc valve, roll-gerotor
- Flange and wheel mount
- Short motor
- Tacho connection
- Side and rear ports
- Shafts - straight, splined and tapered
- SAE, Metric and BSPP ports
- Other special features

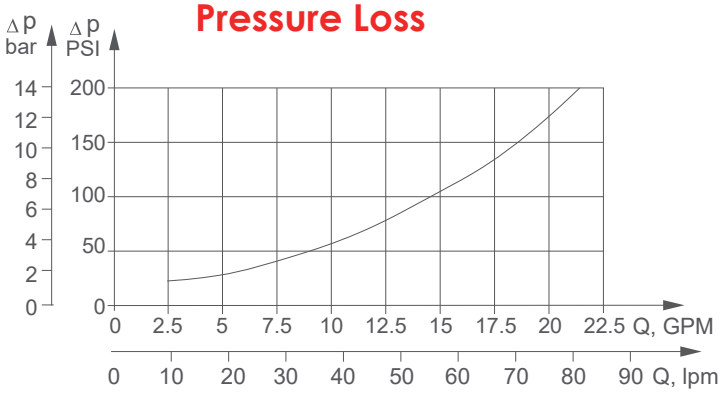
General

Max. Displacement,	cm^3/rev [in^3/rev]	564,9 [34.47]
Max. Speed,	[RPM]	1000
Max. Torque,	daNm [lb-in]	cont.: 85 [7520] int.: 99 [8760]
Max. Output,	kW [HP]	23 [30.8]
Max. Pressure Drop,	bar [PSI]	cont.: 210 [3050] int.: 275 [3990]
Max. Oil Flow,	lpm [GPM]	90 [24]
Min. Speed,	[RPM]	5
Permissible Shaft Loads	daN [lbs]	P_a=500 [1125]
Pressure fluid		Mineral based- HLP(DIN 51524) or HM(ISO 6743/4)
Temperature range,	^{o}C [^{o}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)

Oil Flow in Drain Line

Pressure drop bar [PSI]	Viscosity mm^2/s [SUS]	Oil flow in drain line lpm [GPM]
140 [2030]	20 [98]	1,5 [.396]
	35 [164]	1 [.264]
210 [3045]	20 [98]	3 [.793]
	35 [164]	2 [.528]

Pressure Loss



Specifications

Type		GS80	GS100	GS125	GS160	GS200
Displacement, cm³/rev [in³/rev]		80,5 [4.91]	100 [6.1]	125,7 [7.67]	159,7 [9.74]	200 [12.2]
Max. Speed,	cont.	810	750	600	470	375
[RPM]	Int.*	1000	900	720	560	450
Max. Torque	cont.	24 [2120]	30,5 [2700]	37,5 [3320]	49 [4340]	61 [5400]
daNm [lb-in]	Int.*	31 [2740]	39 [3450]	49 [4340]	60 [5310]	72 [6370]
Max. Output	cont.	15,5 [20.8]	18 [24.1]	18 [24.1]	16,5 [22.1]	16,5 [22.1]
kW [HP]	int.*	19,5 [26.2]	22,8 [30.2]	22,5 [30.2]	23 [30.8]	22 [29.52]
Max. Pressure Drop	cont.	210 [3050]	210 [3050]	210 [3050]	210 [3050]	210 [3050]
bar [PSI]	Int.*	275 [3990]	275 [3990]	275 [3990]	275 [3990]	275 [3990]
	peak**	295 [4280]	295 [4280]	295 [4280]	295 [4280]	295 [4280]
Max. Oil Flow	cont.	65 [17]	75 [20]	75 [20]	75 [20]	75 [20]
lpm [GPM]	Int.*	80 [21]	90 [24]	90 [24]	90 [24]	90 [24]
Max. Inlet Pressure	cont.	230 [3340]	230 [3340]	230 [3340]	230 [3340]	230 [3340]
bar [PSI]	Int.*	295 [4280]	295 [4280]	295 [4280]	295 [4280]	295 [4280]
	peak**	300 [4350]	300 [4350]	300 [4350]	300 [4350]	300 [4350]
Max. Return Pressure	cont.	140 [2030]	140 [2030]	140 [2030]	140 [2030]	140 [2030]
with 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]		12 [175]	10 [145]	10 [145]	8 [115]	8 [115]
Min. Starting Torque	at max. press. drop cont.	18 [1590]	23 [2040]	29 [2570]	37 [3270]	47 [4160]
daNm [lb-in]	at max. press. drop Int.*	23,5 [2080]	30 [2660]	38 [3360]	46 [4070]	56 [4960]
Min. Speed***, [RPM]		10	10	8	8	6
Weight, kg [lb]	GS	9,9 [21.8]	10,1 [22.2]	10,4 [22.9]	10,8 [23.8]	11,2 [24.7]
For Rear Ports + 0,40 [.88]	GSS	7,9 [17.4]	8,1 [17.8]	8,4 [18.5]	8,8 [19.4]	9,2 [20.2]

* Intermittent operation: the permissible values may occur fo『 max. 10% of every minute.
** Peak load: the permissible values may occur for max. 1 % of every minute.
*** For speeds lower than given, consult factory or your regional manager.

Specifications

Type		GS 250	GS 315	GS 400	GS 475	GS 525	GS 565
Displacement, cm³/rev[in³/rev]		250 [15.3]	314,9 [19.2]	397 [24.2]	474,6[28.96]	522,7 [31.88]	564,9[34.47]
Max. Speed,	cont.	300	240	190	160	145	130
[RPM]	Int.*	360	290	230	190	175	160
Max. Torque	cont.	72 [6370]	82,5 [7300]	86,5 [7660]	85 [7520]	85 [7520]	85 [7520]
daNm [lb-in]	Int.*	87 [7700]	100 [8850]	99 [8760]	99 [8760]	99 [8760]	99 [8760]
Max. Output	cont.	14,5 [19.4]	15 [20.1]	11 [14.8]	8,4 [11]	7,6 [10.2]	6,9 [9]
kW [HP]	int.*	18 [24.1]	17 [22.8]	12,5 [16.8]	11,3 [15]	10,4 [13.9]	9,6 [13]
Max. Pressure Drop	cont.	200 [2900]	200 [2900]	160 [2320]	130 [1880]	115 [1670]	105 [1520]
bar [PSI]	Int.*	250 [3630]	240 [3480]	190 [2760]	150 [2180]	135 [1960]	125 [1810]
	peak**	270 [3920]	260 [3770]	210 [3050]	170 [2470]	155 [2250]	145 [2100]
Max. Oil Flow	cont.	75 [20]	75 [20]	75 [20]	75 [20]	75 [20]	75 [20]
lpm [GPM]	Int.*	90 [24]	90 [24]	90 [24]	90 [24]	90 [24]	90 [24]
Max. Inlet Pressure	cont.	230 [3340]	230 [3340]	230 [3340]	230 [3340]	230 [3340]	230 [3340]
bar [PSI]	Int.*	295 [4280]	295 [4280]	295 [4280]	295 [4280]	295 [4280]	295 [4280]
	peak**	300 [4350]	300 [4350]	300 [4350]	300 [4350]	300 [4350]	300 [4350]
Max. Return Pressure	cont.	140 [2030]	140 [2030]	140 [2030]	140 [2030]	140 [2030]	140 [2030]
with Drain Line	Int.*	175 [2540]	175 [2540]	175 [2540]	175 [2540]	175 [2540]	175 [2540]
bar [PSI]	peak**	210 [3050]	210 [3050]	210 [3050]	210 [3050]	210 [3050]	210 [3050]
Max. Starting Pressure with	Unloaded Shaft,bar[PSI]	8 [115]	8 [115]	8 [115]	8 [115]	8 [115]	8 [115]
Min. Starting Torque	at max. press. drop cont.	56 [4960]	71 [6280]	71 [6280]	71 [6280]	71 [6280]	71 [6280]
daNm [lb-in]	at max. press. drop Int.*	70 [6200]	85 [7520]	84 [7430]	84 [7430]	84 [7430]	84 [7430]
Min. Speed***, [RPM]		6	5	5	5	5	5
Weight, kg [lb]	GS	11,7 [25.8]	12,4 [27.3]	13,1 [29.3]	14,1 [31]	14,6 [32.2]	15 [33.1]
For Rear Ports + 0,40 [.88]	GSS	9,7 [21.4]	10,4 [22.9]	11,3 [24.9]	12.1 [26.7]	12,6 [27.8]	13 [28.6]

* Intermittent operation: the permissible values may occur for max. 10% of every minute.

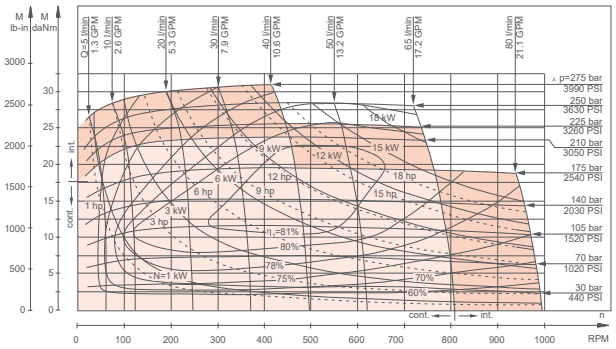
** Peak load: the permissible values may occur for max. 1% of every minute.

*** For speeds lower than given, consult factory or your regional manager.

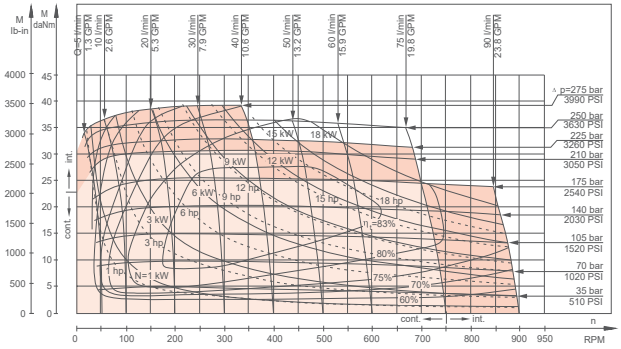
- 1. Intermittent speed and intermittent pressure must not occur simultaneously.
- 2. Recommended filtration is per ISO cleanliness code 20/16. A nominal f ltration of 25 micron or better.
- 3. Recommend using a premium quality, anti-wear type mineral based hydraulic oil HLP(DIN51524) orHM (ISO 6743/4). If using synthetic fluids consult the factory for alternative seal materials.
- 4. Recommended minimum oil viscosity 13 mm²/s [70 SUS] at 50°C [122°F].
- 5. Recommended maximum system operating temperature is 82°C [180°F].
- 6. To assure optimum motor life fill with fluid prior to loading and run at moderate load and speed for 10-15 minutes.

Function Diagrams

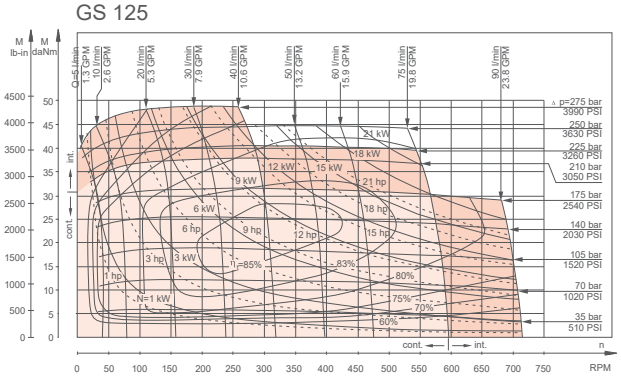
GS 80



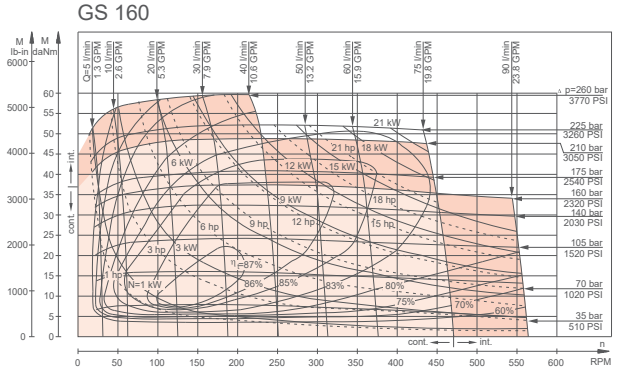
GS 100



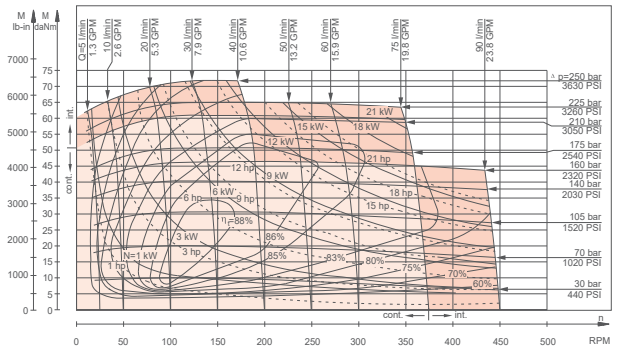
GS 125



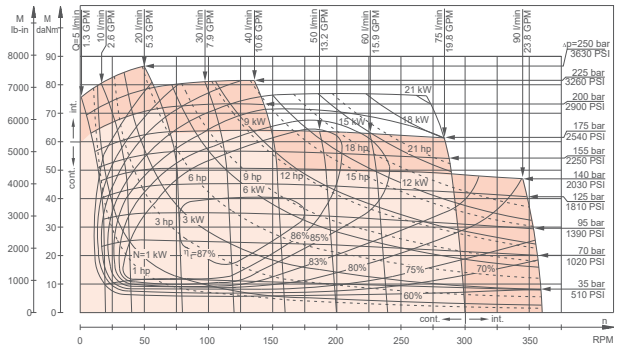
GS 160



GS 200



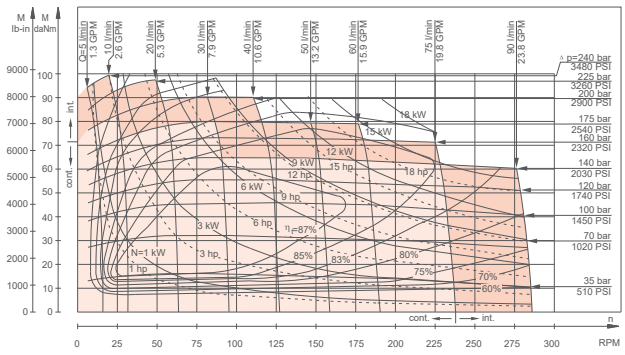
GS 250



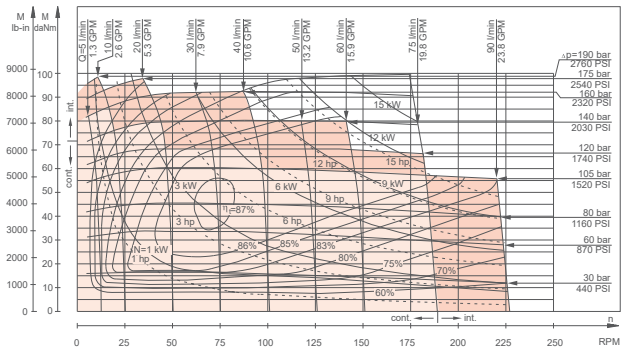
The function diagrams data is for average performance of randomly selected motors at back pressure 5÷10 bar [72.5÷145 PSI] and oil with viscosity of 32mm²/s[150 SUS] at 50°C[122°F]

Function Diagrams

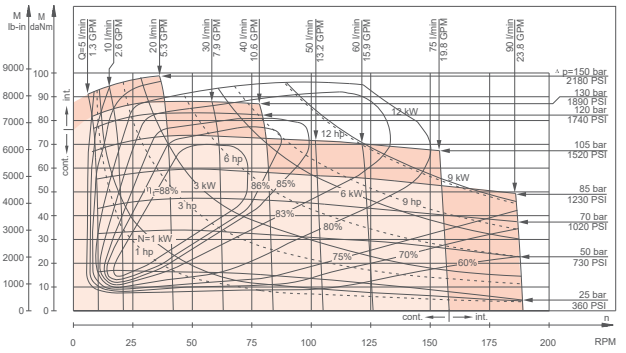
GS 315



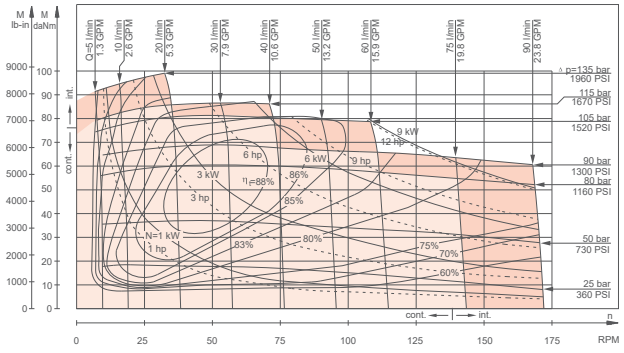
GS 400



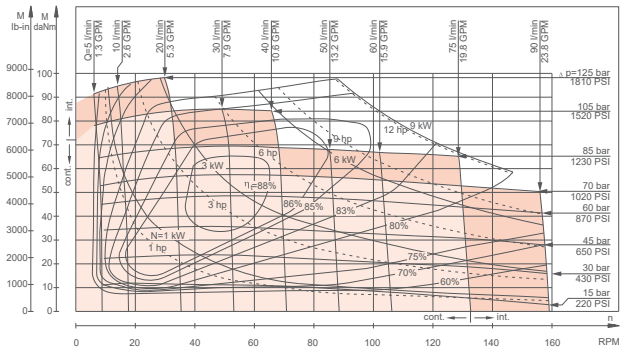
GS 475



GS 525

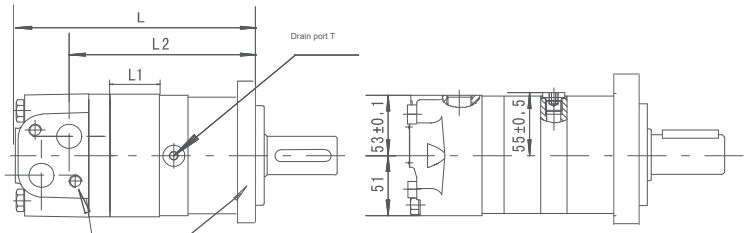


GS 565

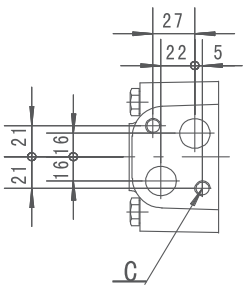


The function diagrams data is for average performance of randomly selected motors at back pressure 5÷10 bar [72.5÷145 PSI] and oil with viscosity of 32mm²/s[150 SUS] at 50°C[122°F]

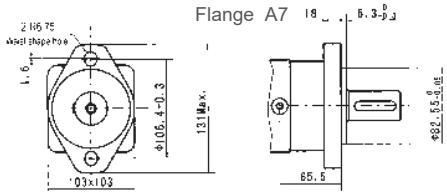
GS Dimensions and Mounting



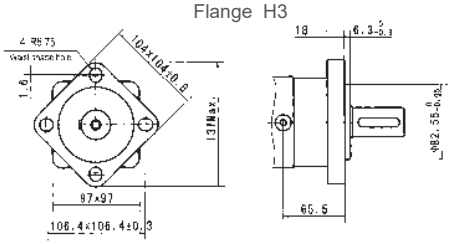
G9、M8、UB、UC PORT



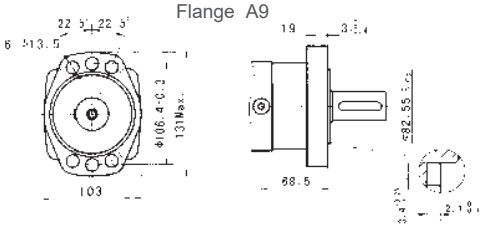
Flange A7



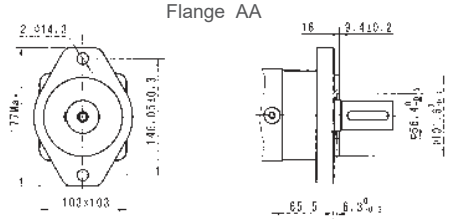
Flange H3



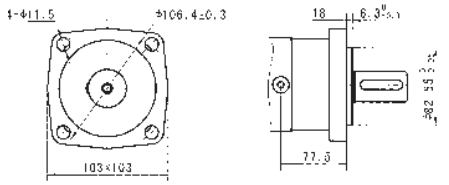
Flange A9



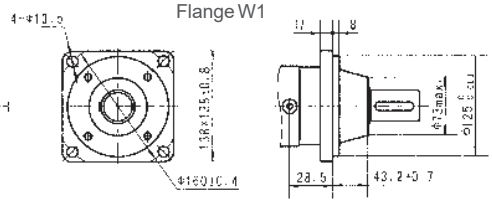
Flange AA



Flange H1



Flange W1

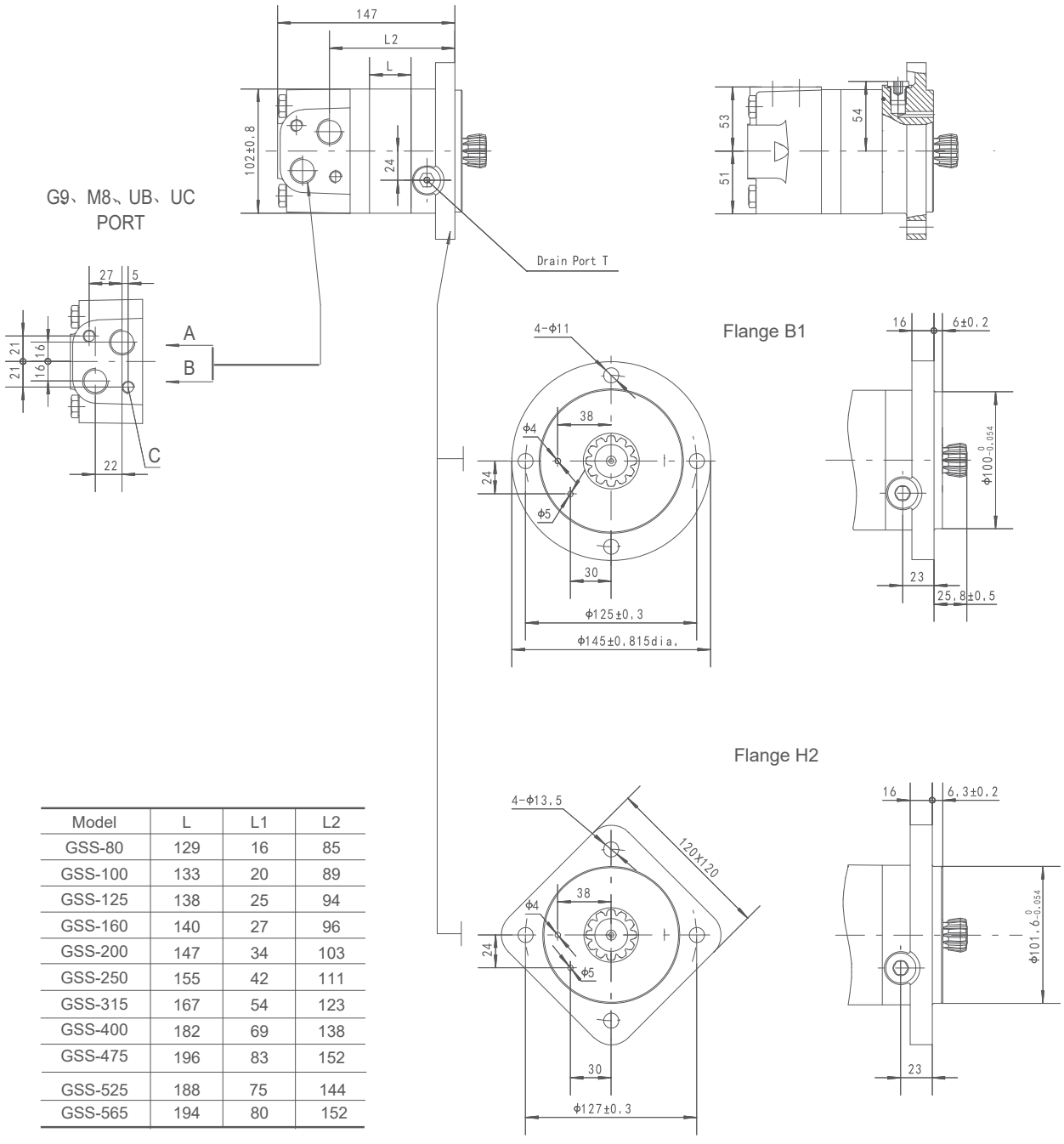


Model	L	L1	L2
GS-80	170	16	126.5
GS-100	174	20	130.5
GS-125	179	25	135.5
GS-160	181	27	137.5
GS-200	188	34	144.5
GS-250	196	42	152.5
GS-315	208	54	164.5
GS-400	223	69	179.5
GS-475	237	83	193.5
GS-525	229	75	185
GS-565	235	80	191

Note:If the mounting W1 is used,the dimensions of L and L2 should minus 38mm.

Code / Mounting	G9 (depth)	M8 (depth)	UB (depth)	UC (depth)
P(A,B)	G1/2(15)	M22x1.5(15)	7/8-14 O-ring (17)	1/2-14NPTF (15)
T	G1/4(12)	M14x1.5(12)	7/16-20UNF(12)	7/16-20UNF(12)
C	2-M10(13)	2-M10 (13)	2-3/8-16UNC (13)	2-3/8-16UNC (13)

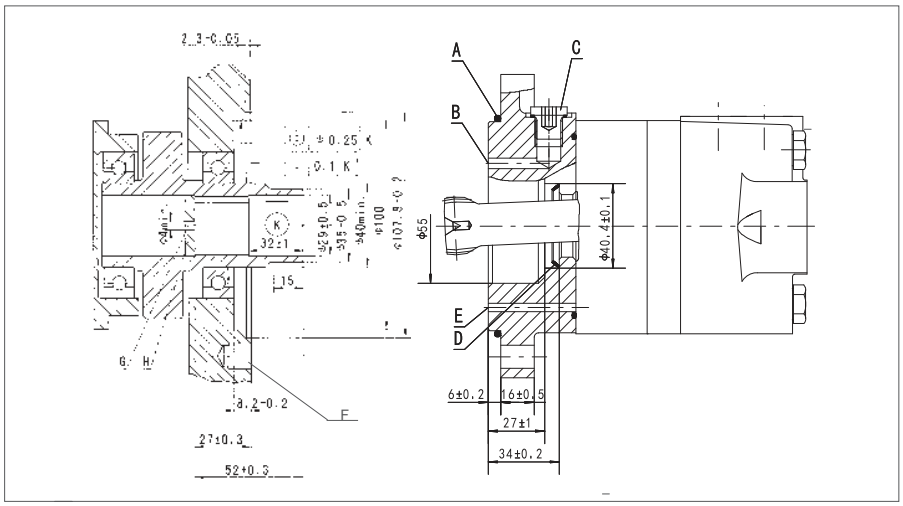
GS Dimensions and Mounting



Model	L	L1	L2
GSS-80	129	16	85
GSS-100	133	20	89
GSS-125	138	25	94
GSS-160	140	27	96
GSS-200	147	34	103
GSS-250	155	42	111
GSS-315	167	54	123
GSS-400	182	69	138
GSS-475	196	83	152
GSS-525	188	75	144
GSS-565	194	80	152

Code / Mounting	G9 (depth)	M8 (depth)	UB (depth)	UC (depth)
P(A,B)	G1/2(15)	M22x1.5(15)	7/8-14O-ring(17)	1/2-14NPTF(15)
T	G1/4(12)	M14x1.5(12)	7/16-20UNF(12)	7/16-20UNF(12)
C	2-M10(13)	2-M10(13)	2-3/8-16UNC(13)	2-3/8-16UNC(13)

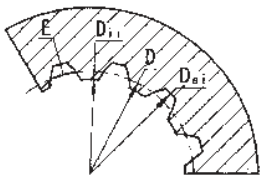
GS Dimensions and Mounting



A: O-ring:100x3
B: External drain channel
C: Drain connection G 1/4;12 mm deep
D: Conical seal ring
E: Internal drain channal
F: M10;min. 15mm deep
G: Oil circulation hole
H: Hardened stop plate

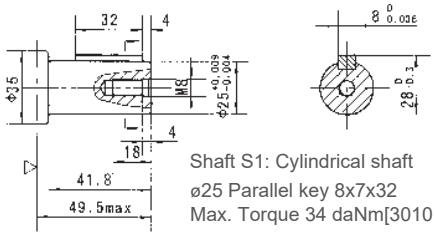
INTERNAL SPLINE DATA FOR THE ATTACHED COMPONENT

Fillet Root Side Fit		mm
Number of Teeth	Z	12
Diametral Pitch	DP	12/24
Pressure Angle	α_D	30°
Pitch Dia.	D	ø25.4
Major Dia.	D_{ei}	ø28 $^{0}_{-0.1}$
Minor Dia.	D_{ii}	ø23 $^{+0.033}_{0}$
Space Width [Circular]	E	4.308±0.02

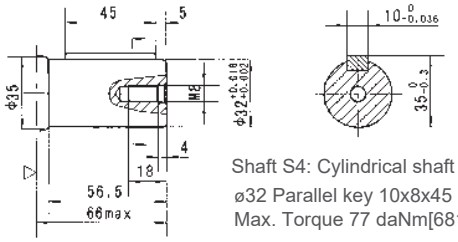


Hardering Specification: HRC 62±2
Effective case depth 0.7±0.2

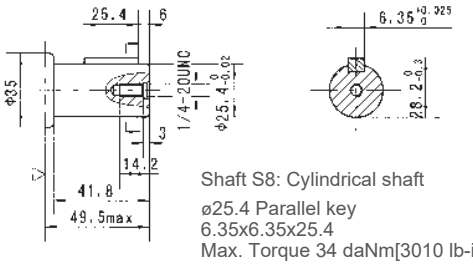
Shaft Extensions for GS Motors



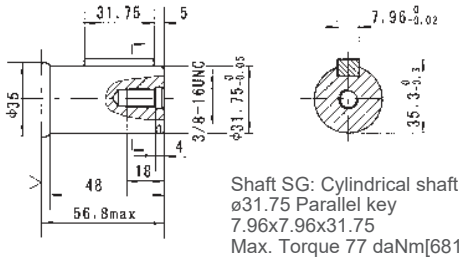
Shaft S1: Cylindrical shaft
ø25 Parallel key 8x7x32
Max. Torque 34 daNm[3010 lb-in]



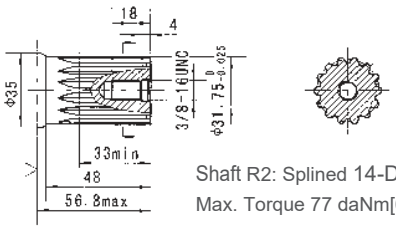
Shaft S4: Cylindrical shaft
ø32 Parallel key 10x8x45
Max. Torque 77 daNm[6815 lb-in]



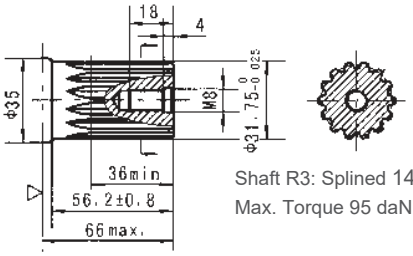
Shaft S8: Cylindrical shaft
ø25.4 Parallel key
6.35x6.35x25.4
Max. Torque 34 daNm[3010 lb-in]



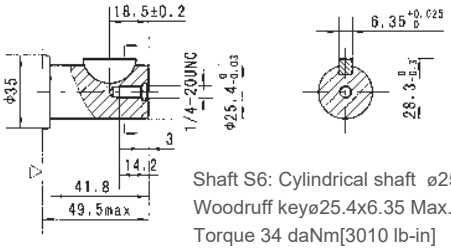
Shaft SG: Cylindrical shaft
ø31.75 Parallel key
7.96x7.96x31.75
Max. Torque 77 daNm[6815 lb-in]



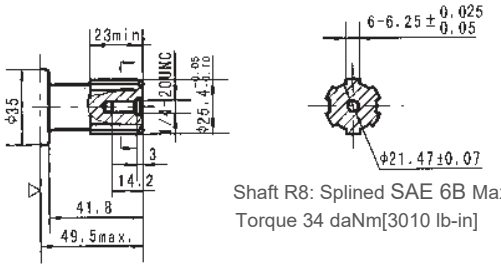
Shaft R2: Splined 14-DP12/24
Max. Torque 77 daNm[6815 lb-in]



Shaft R3: Splined 14-DP12/24
Max. Torque 95 daNm[8400 lb-in]

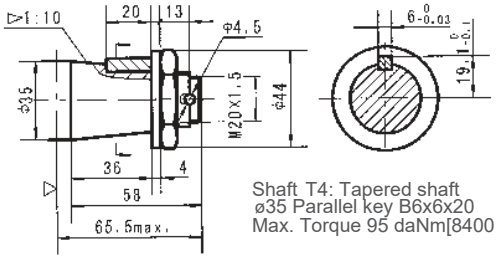


Shaft S6: Cylindrical shaft ø25.4
Woodruff keyø25.4x6.35 Max.
Torque 34 daNm[3010 lb-in]

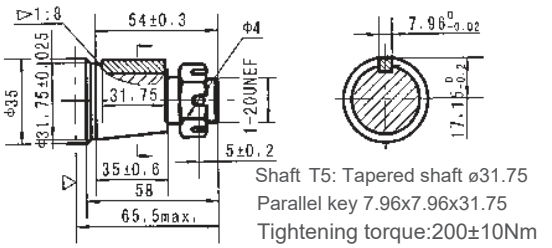


Shaft R8: Splined SAE 6B Max.
Torque 34 daNm[3010 lb-in]

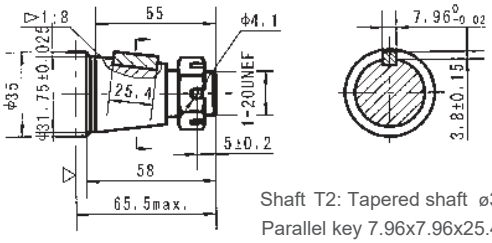
Shaft Extensions for GS Motors



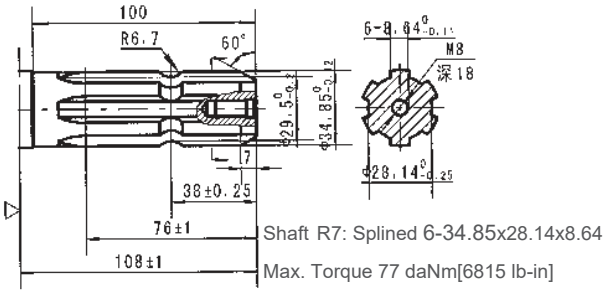
Shaft T4: Tapered shaft
ø35 Parallel key B6x6x20
Max. Torque 95 daNm[8400 lb-in]



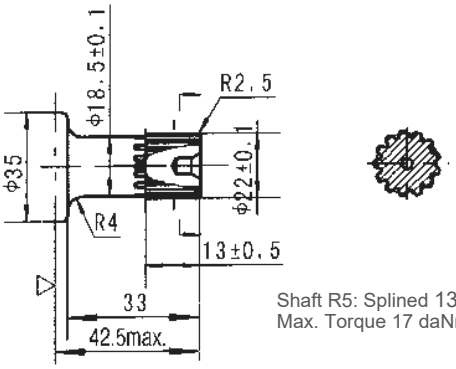
Shaft T5: Tapered shaft ø31.75
Parallel key 7.96x7.96x31.75
Tightening torque:200±10Nm
Max. Torque 95 daNm[8400 lb-in]



Shaft T2: Tapered shaft ø31.75
Parallel key 7.96x7.96x25.4
Tightening torque:200±10Nm
Max. Torque 95 daNm[8400 lb-in]

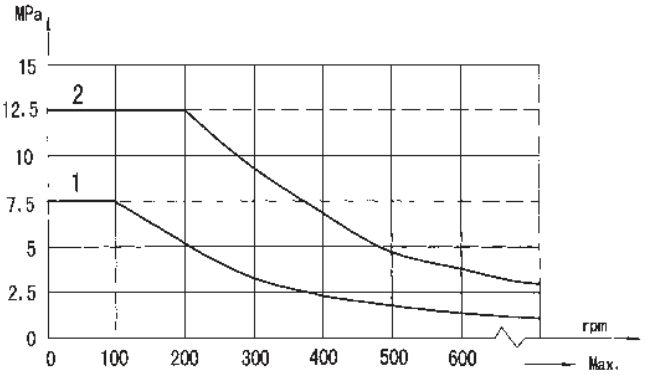


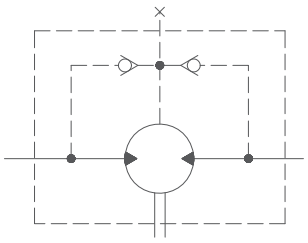
Shaft R7: Splined 6-34.85x28.14x8.64
Max. Torque 77 daNm[6815 lb-in]



Shaft R5: Splined 13-DP16/32
Max. Torque 17 daNm[1500 lb-in]

GS Series Hydraulic Motors Permissible Shaft Seal Pressure

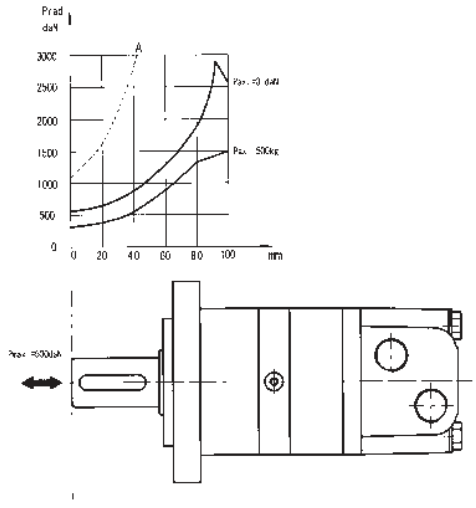




Note:1.Chart for standard shaft seal;
2.Chart for high pressure shaft seal.

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

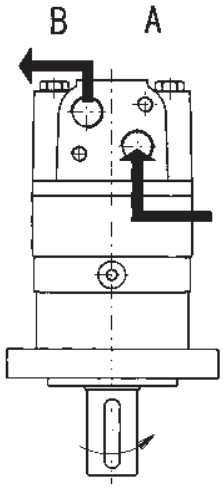
Axial and Radial Force



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.

Standard Direction of Shafts Rotation: Standard

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



GS

Ordering Code

1	2	3	4	5	6	7	8
SERIES	DISP.	FLANGE	SHAFT	PORTS	ROTATION	PAINT	FUNTION

1 - SERIES

GS	Orbital motor
GSS	Short motor

2 - DISPLACEMENT

80	80.5 cm^3/rev[4.91 in^3/rev]
100	100 cm^3/rev[6.1 in^3/rev]
125	125.7 cm^3/rev[7.67 in^3/rev]
160	159.7 cm^3/rev[9.74 in^3/rev]
200	200 cm^3/rev[12.2 in^3/rev]
250	250 cm^3/rev[15.3 in^3/rev]
315	314.9 cm^3/rev[19.2 in^3/rev]
400	397 cm3/rev[24.2 in^3/rev]
475	474.6 cm^3/rev[28.96 in^3/rev]
525	522.7 cm^3/rev[31.88 in^3/rev]
565	564.9 cm^3/rev[34.47 in^3/rev]

3 - FLANGE

A7	2-Φ13.5 rhomb flange Φ106.4, pilot Φ82.5×6.3
H3	4-Φ13.5 square flange Φ106.4, pilot Φ82.5×6.3
A9	6-Φ13.5 rhomb flange Φ106.4, pilot Φ82.5×2.6
W1	4-Φ13.5 wheel flange Φ160, pilot Φ125×8
AA	2-Φ14.3 rhomb flange Φ146.05, pilot Φ101.6×9.4
H1	4-Φ11.5 square flange Φ106.4, pilot Φ82.5×6.3
B1	4-Φ11 circle flange Φ125, pilot Φ100×6
H2	4-Φ13.5 square flange Φ127, pilot Φ101.6×6.3

4 - OUTPUT SHAFT

C1	Cardan shaft 12-DP12/24
S4	Shaft Φ32,parallel key 10×8×45
S8	Shaft Φ25.4,parallel key 6.35×6.35×25.4
SG	Shaft Φ31.75,parallel key 7.96×7.96×31.75
R2	Shaft Φ31.75, splined tooth 14-DP12/24
R3	Long shaft Φ31.75,splined tooth 14-DP12/24
R7	Shaft Φ34.85,splined tooth 6-34.85×28.14×8.64
T4	Tapered shaft Φ35,parallel key B6×6×20
T5	Tapered shaft Φ31.75, parallel key 7.96×7.96×31.75
R8	Shaft Φ25.4,parallel key SAE 6B
R5	Shaft Φ22,splined tooth 13-DP16/32
S1	Shaft Φ25,parallel key 8×7×32
S6	Shaft Φ25.4,woodruff key Φ25.4×6.35
T2	Tapered shaft Φ35,parallel key 7.96×7.96×25.4

5 - PORTS AND DRAIN PORT

G9	G1/2 manifold mount 2×M10,G1/4
M8	M22×1.5 manifold mount 2×M10,M14×1.5
UB	7/8-14 UNF O-ring manifold 2×3/8-16 UNC, 7/16-20 UNF
UC	1/2-14 NPTF manifold 2×3/8-16 UNC,7/16-20 UNF

6 - ROTATION DIRECTION

A	Standard
R	Opposite

7 - PAINT

A	No paint
B	Blue
C	Black
S	Silver grey

8 - Unusually function

A	Standard
F	Free running
L	Low speed
V	High temperature
S	Low temperature

Note :
1)The GSS series are only available with the C1 cardan shaft and the B1, H2 Flanges.
2)When the table is used, please fill the code and give us, which the code information is consists of construction, displacement, mounting flange, output shaft and ports. If the specification is not in the table or you have specific require-ments, please contact us.

GT Series Orbital Motors

Application

- Conveyors
- Metal working machines
- Road building machines
- Agricultural machines
- Mining machinery
- Food industries
- Special vehicles
- Plastic and rubber machinery etc.

Options

- Model - Disc valve, roll-gerotor
- Flange with wheel mount
- Short motor
- Side and rear ports
- Shafts - straight, splined and tapered
- Metric and BSPP ports
- Other special features

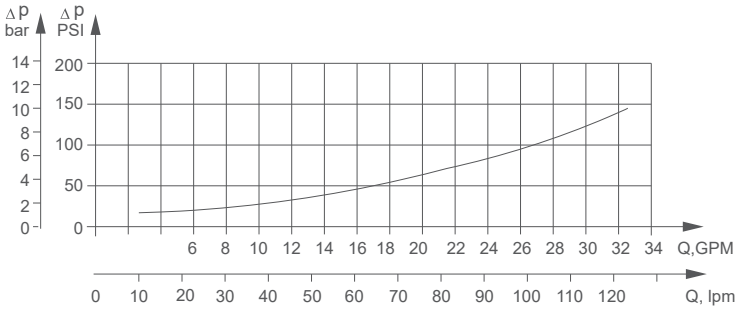
General

Max. Displacement,	cm^3/rev [in^3/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]
	bar [PSI]	cont.: 200 [2900] int. 240 [3480]
Max. Oil Flow,	lpm [GPM]	150 [39.6]
Min. Speed,	[RPM]	5
Permissible Shaft Loads	daN [lbs]	P_a=1000 [2250]
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)

Oil Flow in Drain Line

Pressure drop bar [PSI]	Viscosity mm^2/s[SUS]	Oil flow in drain line lpm [GPM]
140[2030]	20[98]	2,5[.660]
	35[164]	1,5[.396]
210[3045]	20[98]	5[1.321]
	35 [164]	3[.793]

Pressure Loss



Specifications

Type		GT 160	GT 200	GT 250	GT 315
Displacement, cm³/rev [in³/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 with 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 Rear 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]

*Intermittent operation: the permissible values may occur for max. 10% of every minute.
**Peak load: the permissible values may occur for max. 1 % of every minute.
***For speeds lower than given, consult factory or your regional manager.

Specifications

Type		GT 400	GT 500	GT 630	GT 725
Displacement, cm³/rev [in³/rev]		410,9 [25.06]	523,6 [31.95]	631,2 [38.52]	724,3 [44.2]
Max. Speed, [RPM]	Cont.	304	238	197	172
	Int.*	368	289	234	209
Max. Torque daNm [lb-in]	Cont.	108 [9560]	122 [10800]	130 [11500]	127 [11240]
	Int.*	126 [11150]	137 [12125]	148 [13100]	147 [13010]
	Peak**	144 [12745]	160 [14160]	176 [15580]	175 [15490]
Max. Output kW [HP]	Cont.	30 [40]	26,5 [36]	24,3 [33]	20,2 [27]
	Int.*	35 [47]	30 [40]	27,5 [37]	26,8 [36]
Max. Pressure Drop bar [PSI]	Cont.	180 [2610]	160 [2320]	140 [2010]	120 [1740]
	Int.*	210 [3050]	180 [2610]	160 [2320]	140 [2010]
	Peak**	240 [3480]	210 [3050]	190 [2760]	165 [2395]
Max. Oil Flow lpm [GPM]	Cont.	125 [33]	125 [33]	125 [33]	125 [33]
	Int.*	150 [39.6]	150 [39.6]	150 [39.6]	150 [39.6]
Max. Inlet Pressure bar [PSI]	Cont.	210 [3050]	210 [3050]	210 [3600]	210 [3050]
	Int.*	250 [3600]	250 [3600]	250 [4350]	250 [3600]
	Peak**	300 [4350]	300 [4350]	300 [2000]	300 [4350]
Max. Return Pressure with Drain Line bar [PSI]	Cont.	140 [2000]	140 [2000]	140 [2500]	140 [2000]
	Int.*	175 [2500]	175 [2500]	175 [3000]	175 [2500]
	Peak**	210 [3000]	210 [3000]	210 [3000]	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.	84 [7435]	95 [8410]	95 [8410]	95 [8410]
	At max. press. drop Int.*	97 [8585]	106 [9380]	110 [9740]	115 [10180]
Min. Speed***, [RPM]		6	5	5	5
Weight, kg [lb] For Rear Ports +0,450 [.992]	GT	23 [50.7]	24 [52.9]	23,5 [51.8]	24,5 [54.0]
	GTS	18 [39.7]	19 [41.9]	18,5 [40.8]	19,5 [43.0]

* Intermittent operation: the permissible values may occur for max. 10% of every minute.

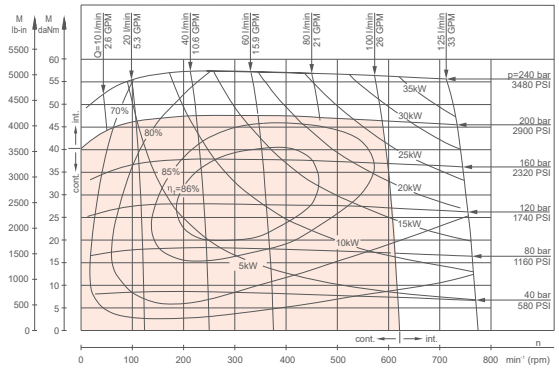
** Peak load: the permissible values may occur for max. 1% of every minute.

*** For speeds lower than given, consult factory or your regional manager.

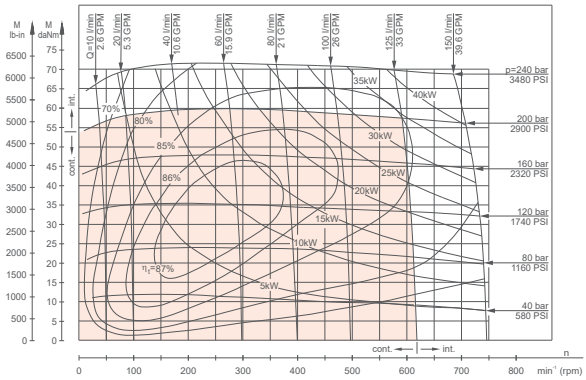
- 1. Intermittent speed and intermittent pressure must not occur simultaneously.
- 2. Recommended filtration is per ISO cleanliness code 20/16. A nominal f ltration of 25 micron or better.
- 3. Recommend using a premium quality, anti-wear type mineral based hydraulic oil HLP(DIN51524) orHM (ISO 6743/4). If using synthetic fluids consult the factory for alternative seal materials.
- 4. Recommended minimum oil viscosity 13 mm²/s [70 SUS] at 50°C [122°F].
- 5. Recommended maximum system operating temperature is 82°C [180°F].
- 6. To assure optimum motor life fill with fluid prior to loading and run at moderate load and speed for 10-15 minutes.

Function Diagrams

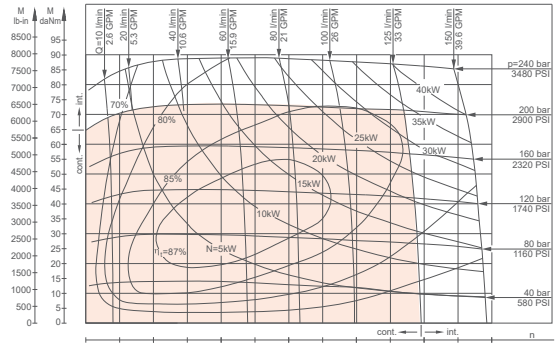
GT 160



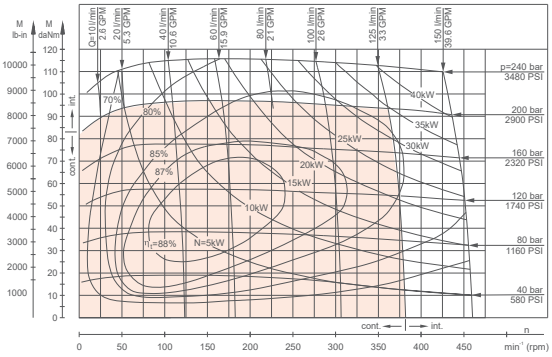
GT 200



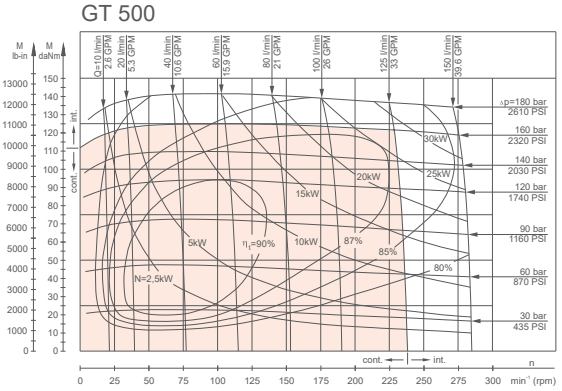
GT 250



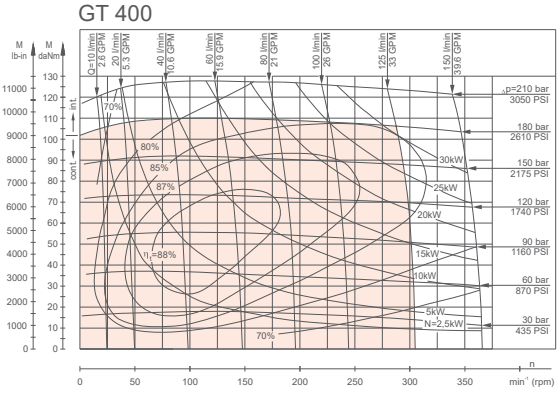
GT 315



GT 500



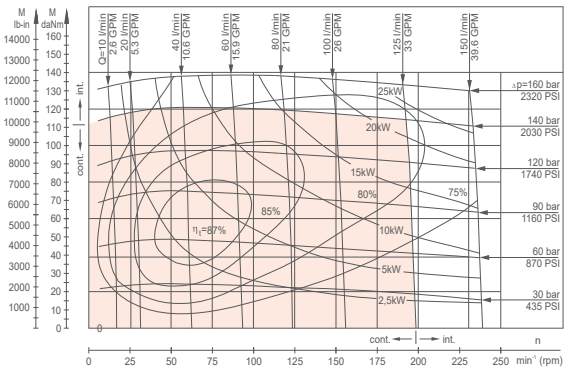
GT 400



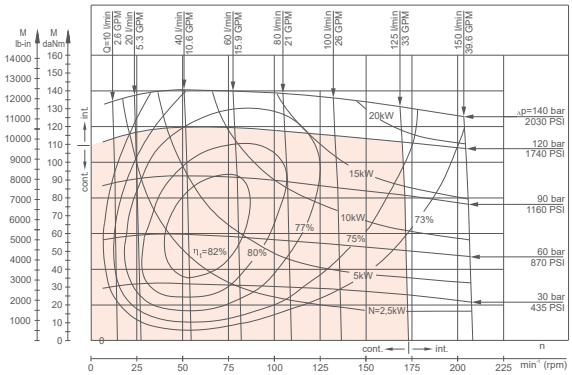
The function diagrams data is for average performance of randomly selected motors at back pressure 5÷10 bar [72.5÷145 PSI] and oil with viscosity of 32 mm²/s [150 SUS] at 50°C [122°F].

Function Diagrams

GT 630

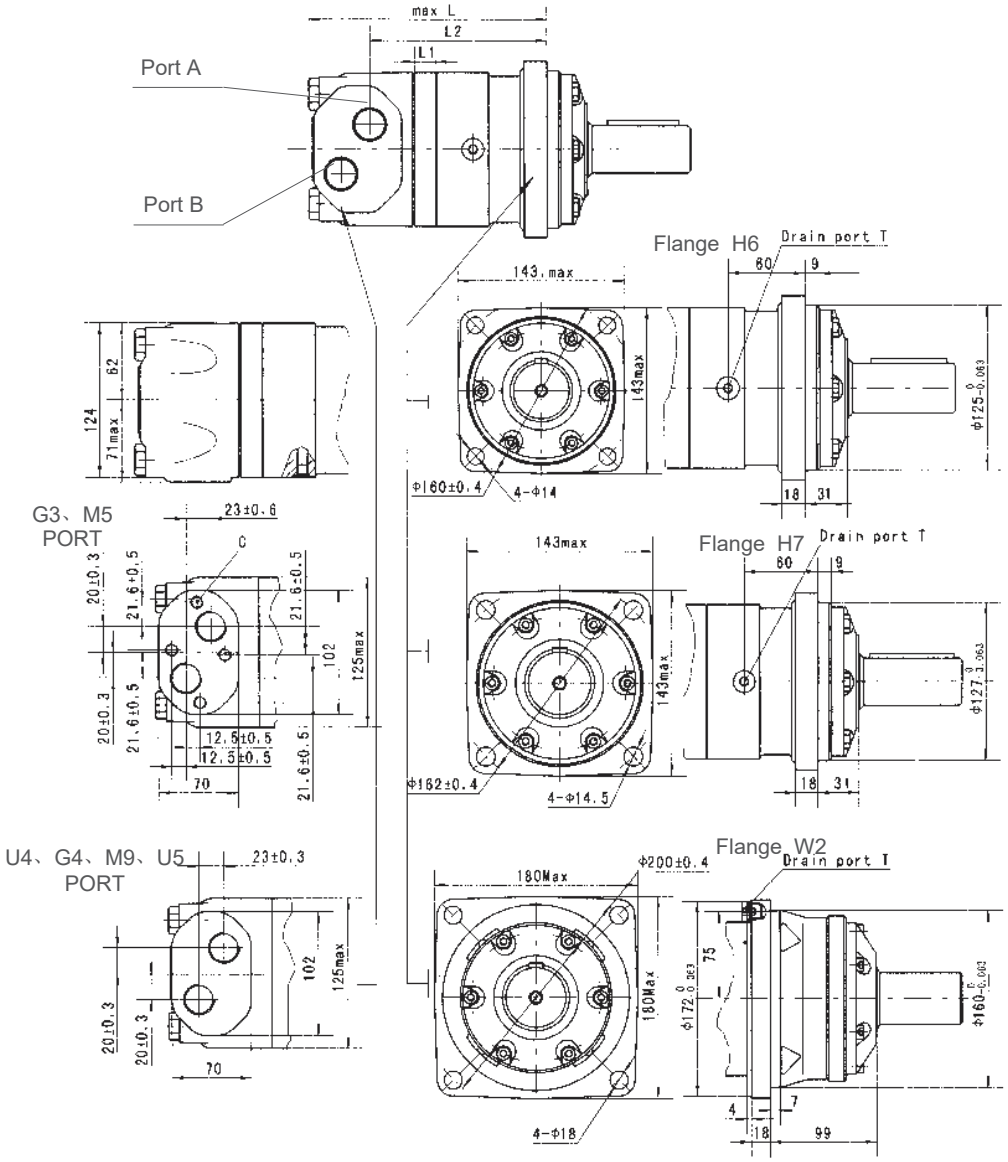


GT 725



The function diagrams data is for average performance of randomly selected motors at back pressure 5÷10 bar [72.5÷145 PSI] and oil with viscosity of 32mm²/s[150 SUS] at 50°C[122°F]

GT Dimensions and Mounting



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

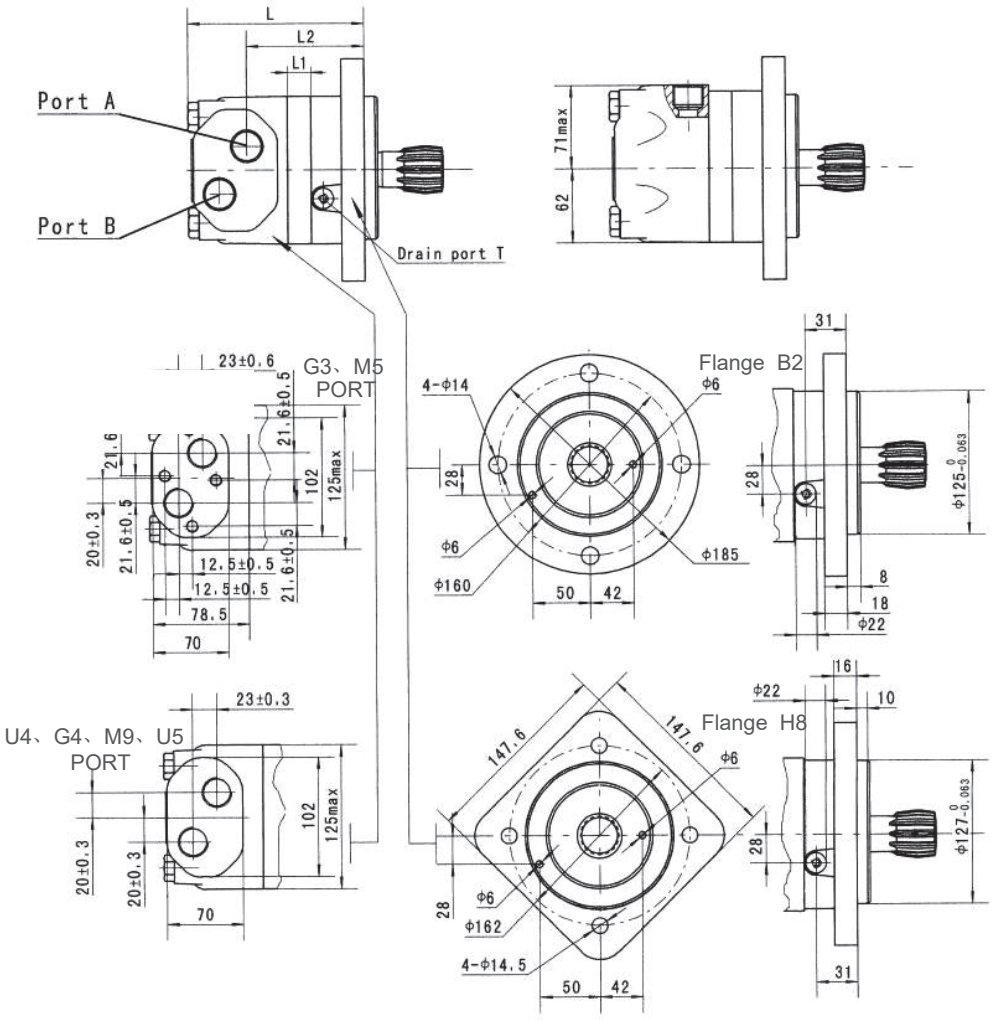
Content / Mounting	Code					
	G3 (depth)	M5 (depth)	U4 (depth)	G4(depth)	M9(depth)	U5(depth)
P(A,B)	G3/4 (18)	M27 x 2 (18)	1-1/16-12UN (18)	G3/4 (18)	M27 x 2 (18)	1-1/16-12UN (18)
T	G1/4 (12)	M14 x 1.5 (12)	9/16-18UNF (12)	G1/4 (12)	M14 x 1.5 (12)	7/16-20UNF (12)
C	4-M10(10)	4-M10(10)	--	--	--	--

Note:1)The thickness of the stator and rotor for disp. from 160 to 200 is the dimension of L1 adding on 3mm.

2)The thickness of the stator and rotor for disp. from 250 to 800 is the dimension of L1 adding on 7mm.

3)If the mounting W2 is used,the dimensions of L and L2 should minus 66 mm.

GTS Dimensions and Mounting

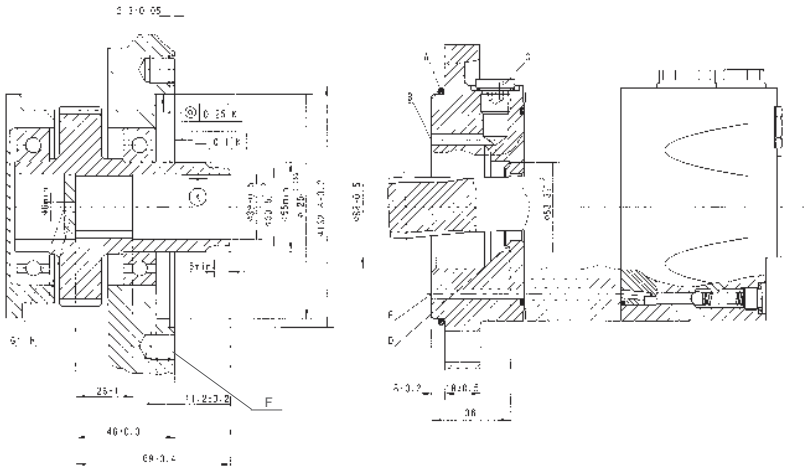


Model	L	L1	L2
GTS 160	148	17	96.5
GTS 200	152	21	100.5
GTS 250	157	14	109
GTS 315	163	20	115
GTS 400	170	27	122
GTS 500	178	35	130
GTS 630	190	47	142
GTS 725	201	58	153

Content / Mounting	Code					
	G3 (depth)	M5 (depth)	U4 (depth)	G4 (depth)	M9 (depth)	U5 (depth)
P(A,B)	G3/4 (18)	M27 x 2 (18)	1-1/16-12UN (18)	G3/4 (18)	M27 x 2 (18)	1-1/16-12UN (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-M10(10)	4-M10(10)	--	--	--	--

Note:1)The thickness of the stator and rotor for disp.from 160 to 200 is the dimension of L1 adding on 3mm.
2)The thickness of the stator and rotor for disp.from 250 to 800 is the dimension of L1 adding on 7mm.

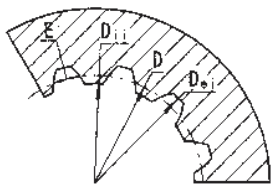
GTS Mounting



A: O-ring:125x3
B: External drain channel
C: Drain connection G 1/4;12 mm deep
D: Conical seal ring
E: Internal drain channal
F: M12;min. 18mm deep
G: Oil circulation hole
H: Hardened stop plate

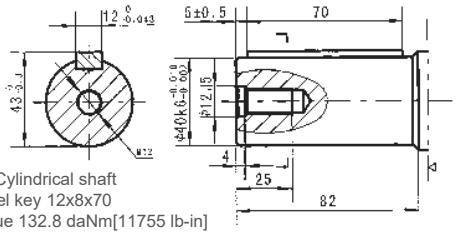
Internal Spline for the Attached Components

Fillet Root Side Fit		mm
Number of Teeth	Z	16
Diametral Pitch	DP	12/24
Pressure Angle	α_D	30°
Pitch Dia.	D	ø33.8656
Major Dia.	D_{ei}	ø38.4 $^{+0.25}_{0}$
Minor Dia.	D_{ii}	ø32.15 $^{+0.04}_{0}$
Space Width [Circular]	E	4.516±0.037

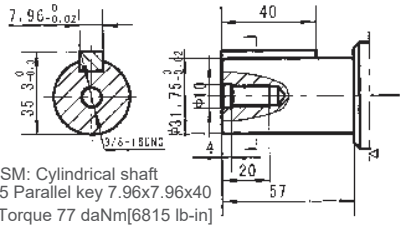


Hardering Specification: HRC 62±2
Effective case depth 0.7±0.2

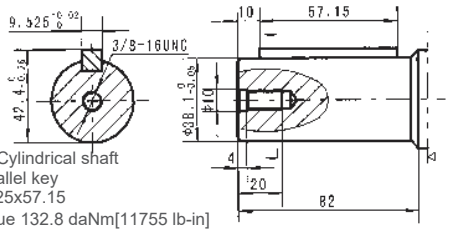
Shaft Extensions for GT Motors



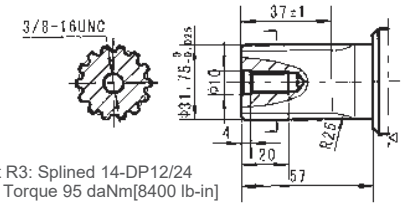
Shaft SK: Cylindrical shaft
ø40 Parallel key 12x8x70
Max. Torque 132.8 daNm[11755 lb-in]



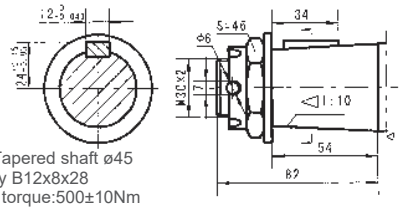
Shaft SM: Cylindrical shaft
ø31.75 Parallel key 7.96x7.96x40
Max. Torque 77 daNm[6815 lb-in]



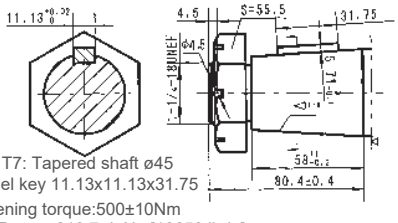
Shaft SL: Cylindrical shaft
ø38.1 Parallel key
9.525x9.525x57.15
Max. Torque 132.8 daNm[11755 lb-in]



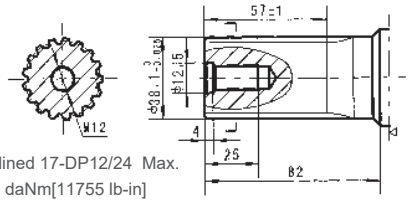
Shaft R3: Splined 14-DP12/24
Max. Torque 95 daNm[8400 lb-in]



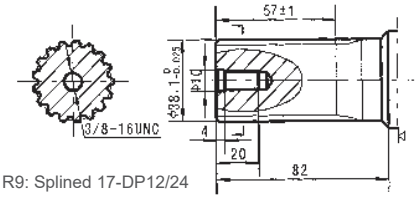
Shaft T6: Tapered shaft ø45
Parallel key B12x8x28
Tightening torque:500±10Nm
Max. Torque 210.7 daNm[18650 lb-in]



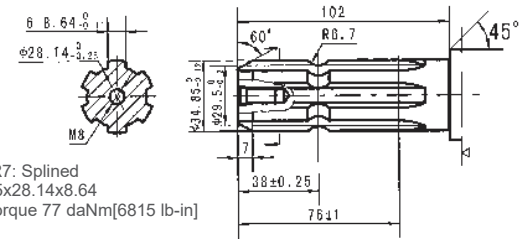
Shaft T7: Tapered shaft ø45
Parallel key 11.13x11.13x31.75
Tightening torque:500±10Nm
Max. Torque 210.7 daNm[18650 lb-in]



Shaft RA: Splined 17-DP12/24 Max.
Torque 132.8 daNm[11755 lb-in]

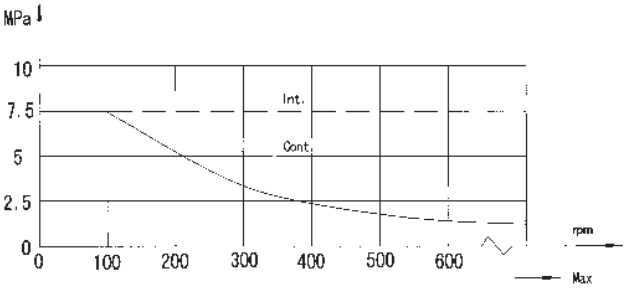


Shaft R9: Splined 17-DP12/24
Max. Torque 132.8 daNm[11755 lb-in]

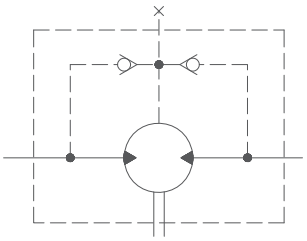


Shaft R7: Splined
6-34.85x28.14x8.64
Max. Torque 77 daNm[6815 lb-in]

GT Series Hydraulic Motors



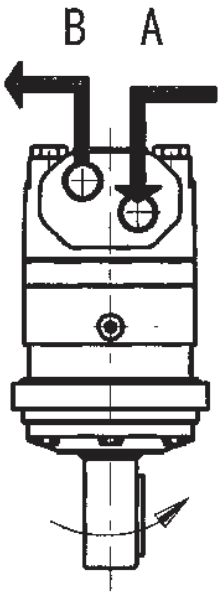
Permissible shaft seal pressure



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

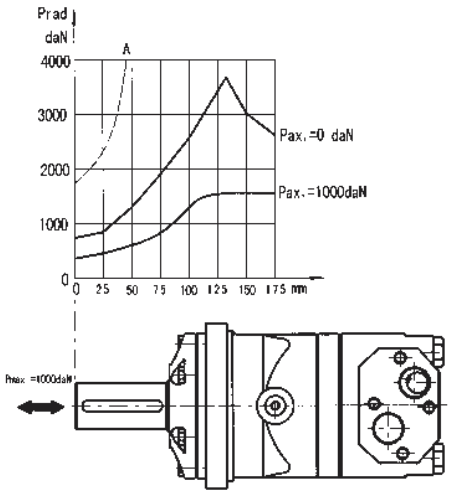
Standard Direction of Shafts Rotation: Standard

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



GT

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.

Ordering Code

1	2	3	4	5	6	7	8
SERIES	DISP.	FLANGE	SHAFT	PORTS	ROTATION	PAINT	FUNTION

1 - SERIES

GT	Orbital motor
GTS	Short motor

2 - DISPLACEMENT

160	161.1 cm^3/rev[9.83 in^3/rev]
200	201.4 cm^3/rev[12.29 in^3/rev]
250	251.8 cm^3/rev[15.36 in^3/rev]
315	326.3 cm^3/rev[19.90 in^3/rev]
400	410.9 cm^3/rev[25.06 in^3/rev]
500	523.6 cm^3/rev[31.95 in^3/rev]
630	631.2 cm^3/rev[38.52 in^3/rev]
725	724.3 cm^3/rev[44.2 in^3/rev]

3 - FLANGE

H6	4-Φ14 square flange Φ160, pilot Φ125×9
H7	4-Φ14.5 square flange Φ162, pilot Φ127×9
W2	4-Φ18 wheel flange Φ200, pilot Φ160×7
B2	4-Φ14 circle flange Φ160, pilot Φ125×8
H8	4-Φ14.5 square flange Φ162, pilot Φ127×10

4 - OUTPUT SHAFT

C2	Cardan shaft 16-DP12/24
SK	Shaft Φ40,parallel key 12×8×70
SL	Shaft Φ38.1,parallel key 9.53×9.53×57.15
R9	Shaft Φ38.1,splined tooth 17-DP12/24
RA	Shaft Φ38.1,splined tooth 17-DP12/24
T6	Tapered shaft 1:10 Φ45,parallel key B12×8×28
T7	Tapered shaft 1:8 Φ45,parallel key 11.13×11.13×31.75
R7	Shaft Φ34.85, splined tooth 6-34.85×28.14×8.64
SM	Shaft Φ31.75, parallel key 7.96×7.96×40
R3	Shaft Φ31.75, splined tooth 14-DP12/24

5 - PORTS AND DRAIN PORT

G3	G3/4 manifold mount 4×M10,G1/4
M5	M27×2 manifold mount 4×M10,M14×1.5
U4	1-1/16-12 UN O-ring,9/16-18 UNF
U5	1-1/16-12 UN O-ring,7/16-20 UNF
G4	G3/4,G1/4
M9	M27×2,M14×1.5

6 - ROTATION DIRECTION

A	Standard
R	Opposite

7 - PAINT

A	No paint
B	Blue
C	Black
S	Silver grey

8 - Unusually function

A	Standard
F	Free running
L	Low speed
V	High temperature
S	Low temperature

Note:
1)The GTS series are only available with the C2 cardan shaft and the B2, H8 Flanges.
2)When the table is used, please fill the code and give us, which the code information is consists of construction, displacement, mounting flange, output shaft and ports. If the specification is not in the table or you have specific requirements, please contact us.

GV Series Orbital Motors

Application

- Conveyors
- Metal working machines
- Road building machines
- Mining machinery
- Food industries
- Agricultural machines
- Special vehicles
- Plastic and rubber machinery etc.

Options

- Model - Disc valve, roll-gerotor
- Flange mount
- Short motor
- Side ports
- Shafts - straight, splined and tapered
- BSPP ports
- Other special features

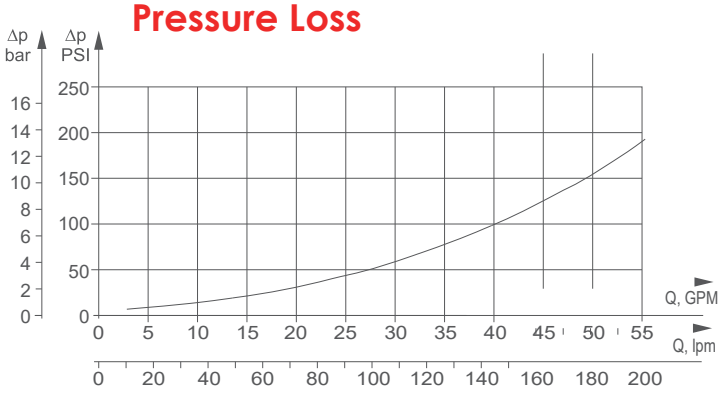
General

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 daN [lbs]	P_a=1500 [3300]
Pressure fluid	Mineral based- HLP(DIN 51524) or HM(ISO 6743/4)
Temperature range, ^{O}C [^{O}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)

Oil Flow in Drain Line

Pressure drop bar [PSI]	Viscosity mm^2/s [SUS]	Oil flow in drain line lpm [GPM]
140 [2030]	20 [98]	3 [.793]
	35 [164]	2 [.528]
210 [3045]	20 [98]	6 [1.585]
	35 [164]	4 [1.057]

Pressure Loss



Specifications

Type		GV 315	GV 400	GV 500	GV 630	GV 800
Displacement, cm³/rev [In³/rev]		314,5 [19.18]	400,9 [24.45]	499,6 [30.48]	629,1 [38.38]	801,8 [48.91]
Max. Speed, [RPM]	Cont.	510	500	400	320	250
	Int.*	630	600	480	380	300
Max. Torque daNm[lb-in]	Cont.	92 [8150]	118 [10450]	146 [12950]	166 [14700]	188 [16650]
	Int.*	111 [9800]	141 [12500]	176 [15550]	194 [17150]	211 [18650]
	Peak**	129 [11400]	164 [14500]	205 [18150]	221 [19550]	247 [21850]
Max Output kW [HP]	Cont.	42,5 [57]	53,5 [71.7]	53,5 [71.7]	48 [64.4]	42,5 [57]
	Int.*	51 [68.4]	64 [85.8]	64 [85.8]	56 [75]	48 [64.4]
Max.Pressure Drop bav [PSI]	Cont.	200 [2900]	200 [2900]	200 [2900]	180 [2610]	160 [2320]
	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 lp m [GPM]	Cont.	160 [42.3]	200 [52.8]	200 [52.8]	200 [52.8]	200 [52.8]
	Int.*	200 [52.8]	240 [63.4]	240 [63.4]	240 [63.4	240 [63.4]
Max. Inlet Pressure bar [PSI]	Cont.	210 [3050]	210 [3050]	210 [3050]	210 [3050]	210 [3050]
	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 wit h Drai n Lin e bar [PSI]	Cont.	140 [2040]	140 [2040]	140 [2040]	140 [2040]	140 [2040]
	Int.*	175 [2540]	175 [2540]	175 [2540]	175 [2540]	175 [2540]
	Peak**	210 [3050]	210 [3050]	210 [3050]	210 [3050]	210 [3050]
Max. Startin g 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]
Min. Speed***, [RPM]		10	9	8	6	5
Weight,kg[lb]	GV	31,8 [70.1]	32,6 [71.9]	33,5 [73.8]	34,9 [76.9]	36,5 [80.5]
	GVS	22,7 [50]	23,5 [51.8]	24,4 [53.8]	25,6 [56.4]	27,7 [61.1]

* Intermittent operation: the permissible values may occur for max. 10% of every minute.

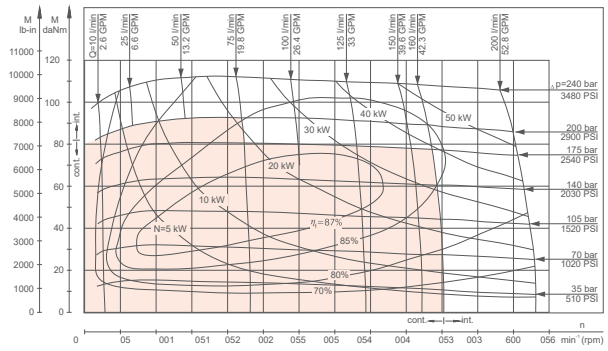
** Peak load: the permissible values may occur for max. 1% of every minute.

*** For speeds lower than given, consult factory or your regional manager.

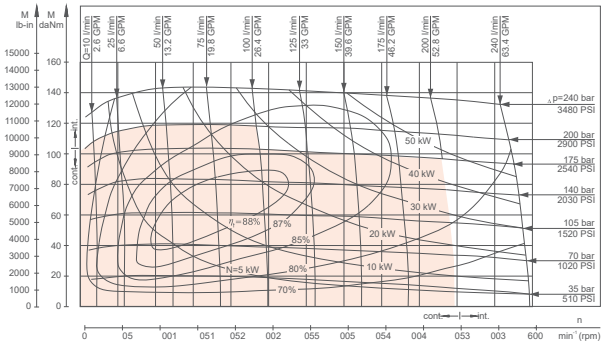
- 1. Intermittent speed and intermittent pressure must not occur simultaneously.
- 2. Recommended filtration is per ISO cleanliness code 20/16. A nominal f ltration of 25 micron or better.
- 3. Recommend using a premium quality, anti-wear type mineral based hydraulic oil HLP(DIN51524) orHM (ISO 6743/4). If using synthetic fluids consult the factory for alternative seal materials.
- 4. Recommended minimum oil viscosity 13 mm²/s [70 SUS] at 50°C [122°F].
- 5. Recommended maximum system operating temperature is 82°C [180°F].
- 6. To assure optimum motor life fill with fluid prior to loading and run at moderate load and speed for 10-15 minutes.

Function Diagrams

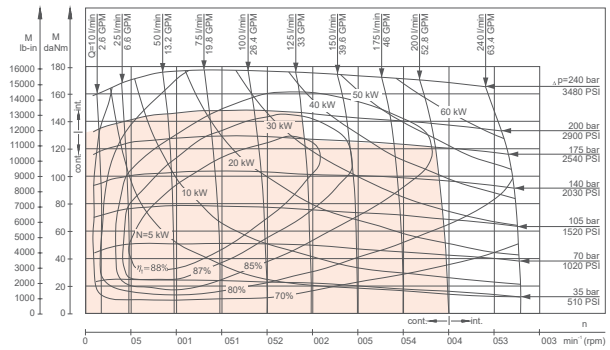
GV 315



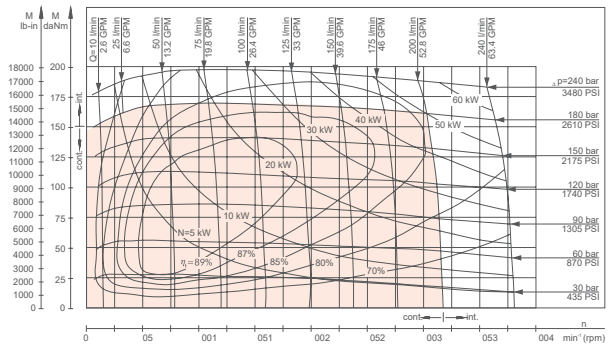
GV 400



GV 500

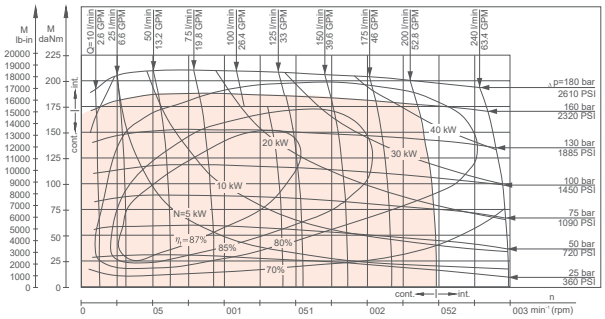


GV 630

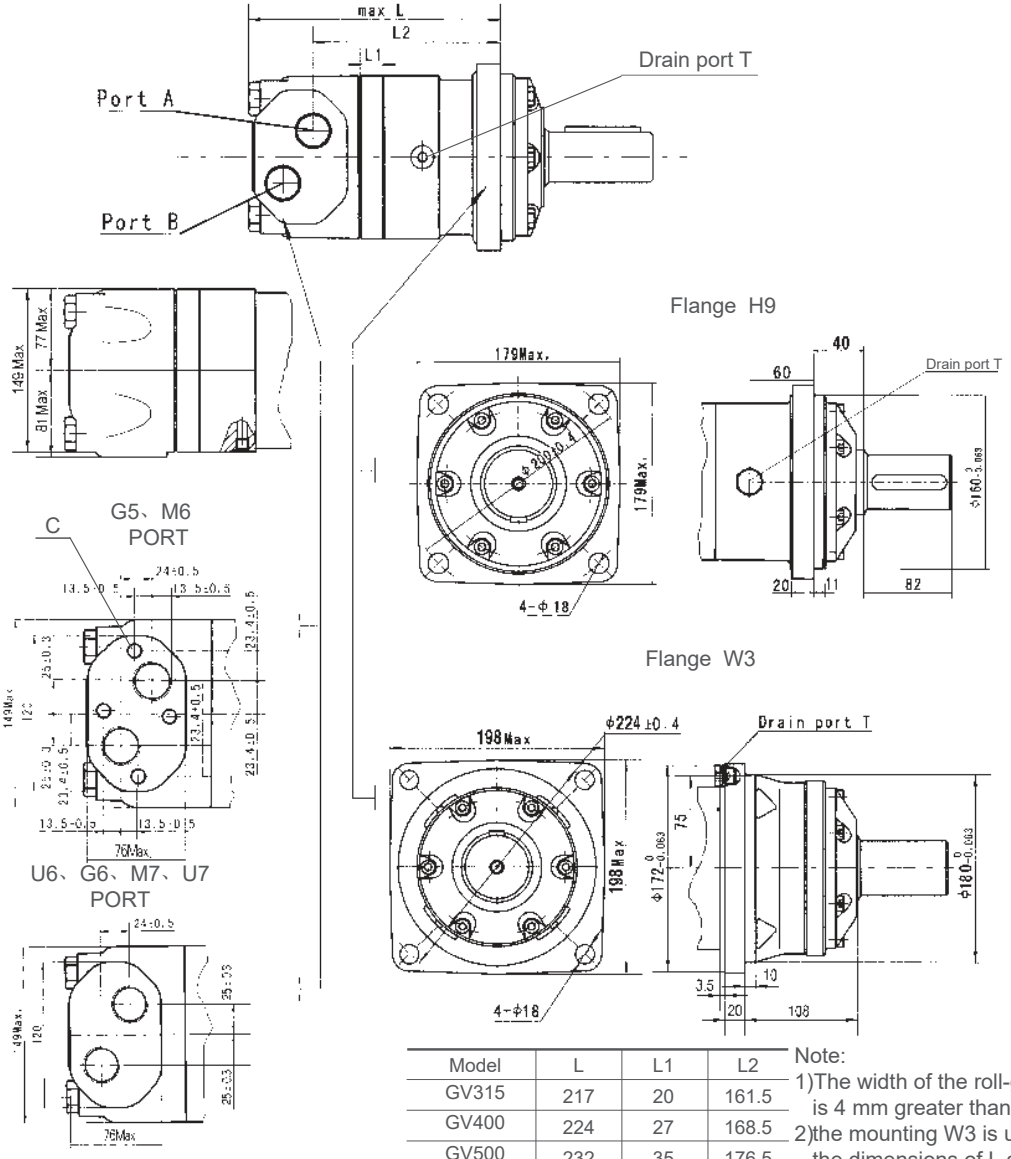


The function diagrams data is for average performance of randomly selected motors at back pressure 5÷10 bar [72.5÷145 PSI] and oil with viscosity of 32mm²/s[150 SUS] at 50°C[122°F]

GV 800



GV Dimensions and Mounting

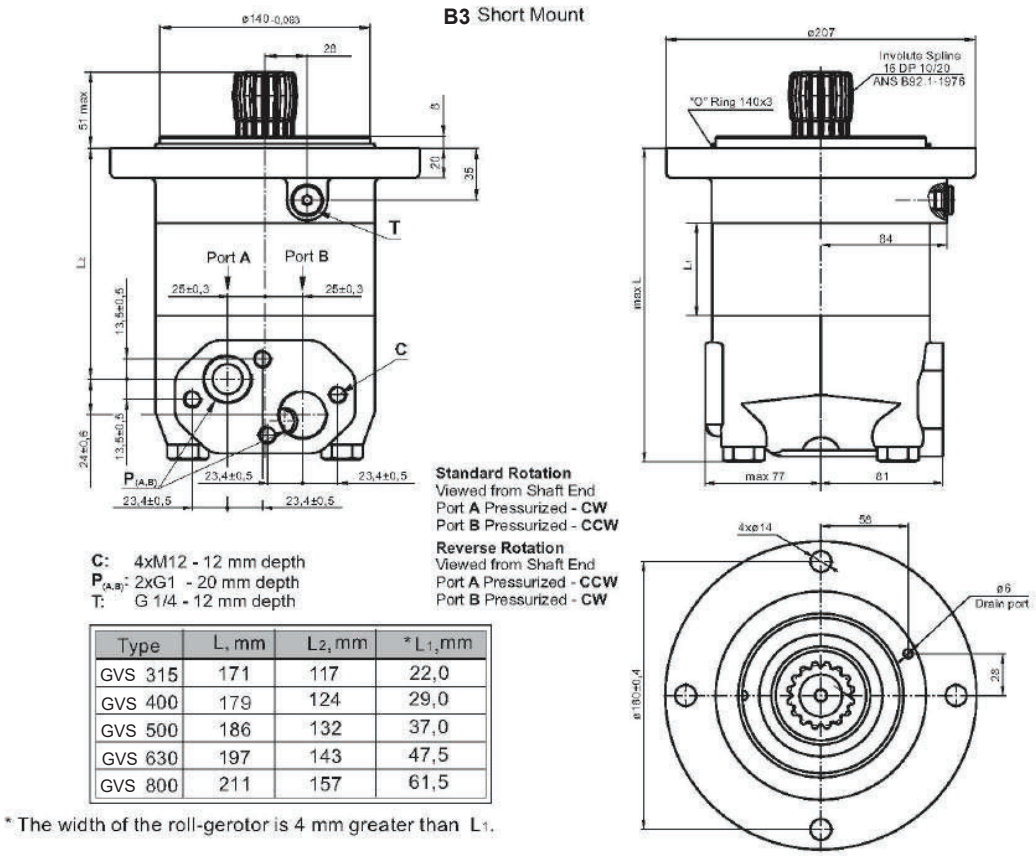


Model	L	L1	L2
GV315	217	20	161.5
GV400	224	27	168.5
GV500	232	35	176.5
GV630	244	47	188.5
GV800	255	58	199.5

Note:
1)The width of the roll-gerotor is 4 mm greater than L1. If
2)the mounting W3 is used, the dimensions of L and L2 should minus 68 mm.

Content / Mounting	Code					
	G5 (depth)	M6(depth)	U6(depth)	G6 (depth)	M7(depth)	U7(depth)
P(A,B)	G1 (18)	M33 x 2 (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 (10)	4-M12 (10)	--	--	--	--

Dimensions and Mounting



Standard Rotation
Viewed from Shaft End
Port **A** Pressurized - **CW**
Port **B** Pressurized - **CCW**

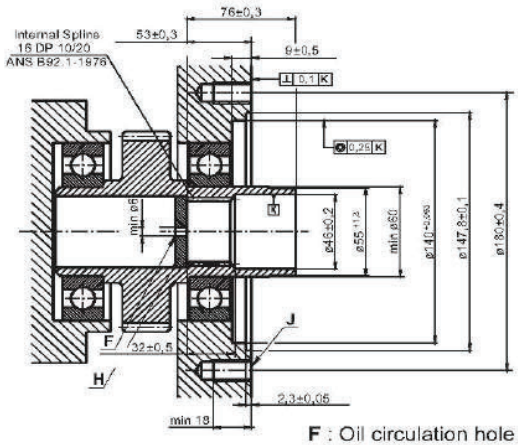
Reverse Rotation
Viewed from Shaft End
Port **A** Pressurized - **CCW**
Port **B** Pressurized - **CW**

C: 4xM12 - 12 mm depth
$P_{(A,B)}$: 2xG1 - 20 mm depth
T: G 1/4 - 12 mm depth

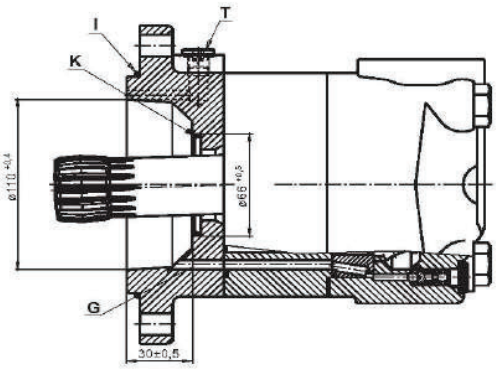
Type	L, mm	L_2, mm	* L_1, mm
GVS 315	171	117	22,0
GVS 400	179	124	29,0
GVS 500	186	132	37,0
GVS 630	197	143	47,5
GVS 800	211	157	61,5

* The width of the roll-gerotor is 4 mm greater than L_1.

Dimensions of the Attached Components



F : Oil circulation hole
G: Internal drain channel
H Hardened stop plate
I : O-Ring 140x3mm



J: 4xM12-18 mm depth, 90°
K: Conical seal ring
T: Drain connection G1/4 - 12 mm depth

Drain Connection

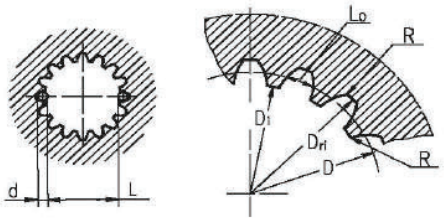
A drain line has to be used when pressure in the return line can exceed the permissible pressure. It can be connected:
- For GV to the drain port of the motor;

The drain line must be possible for oil to flow freely between motor and attached component and must be led to the tank. The maximum pressure in the drain line is limited by the attached component and its seal.

Internal Spline for the Attached Component

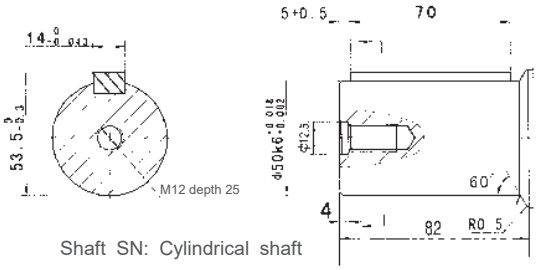
Standard ANS B92.1-1976, class 5
[m=2.54; corrected x.m=+1,0]

Fillet Root Side Fit		mm
Number of Teeth	z	16
Diametral Pitch	DP	10/20
Pressure Angle		30°
Pitch Dia.	D	40,640
Major Dia.	Dri	$45,2^{+0,4}$
Minor Dia.	Di	$38,5^{+0,038}$
Space Width [Circular]	Lo	5,18±0,037
Fillet Radius	R	0,4
Max. Measurement between Pins	L	$32,47^{+0,15}$
Pin Dia.	d	5,6±0,001

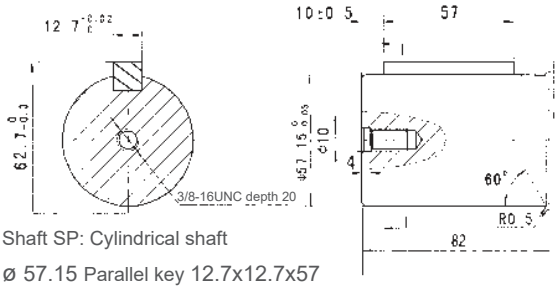


Hardening Specification:
HV=750±50 on the surface.
HV=560 at 0,7±0,2 mm case depth
Material: 20 MoCr4 EN 10084 or better.

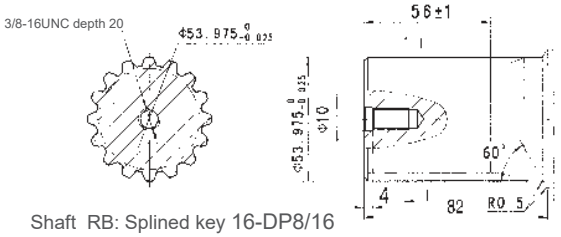
GV Shaft Extensions Dimensions



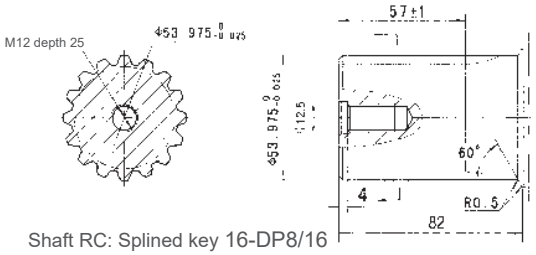
Shaft SN: Cylindrical shaft
ø50 Parallel key 14x9x70
Max. Torque 210.7 daNm[18650 lb-in]



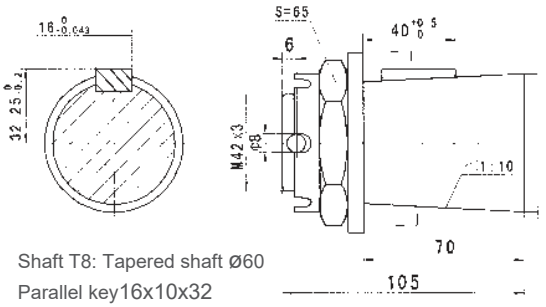
Shaft SP: Cylindrical shaft
ø 57.15 Parallel key 12.7x12.7x57
Max. Torque 271.2 daNm[24000 lb-in]



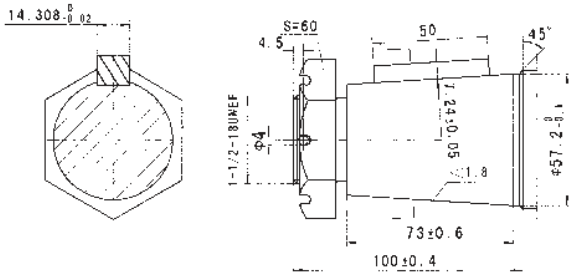
Shaft RB: Splined key 16-DP8/16
Max. Torque 271.2 daNm[24000 lb-in]



Shaft RC: Splined key 16-DP8/16
Max. Torque 271.2 daNm[24000 lb-in]

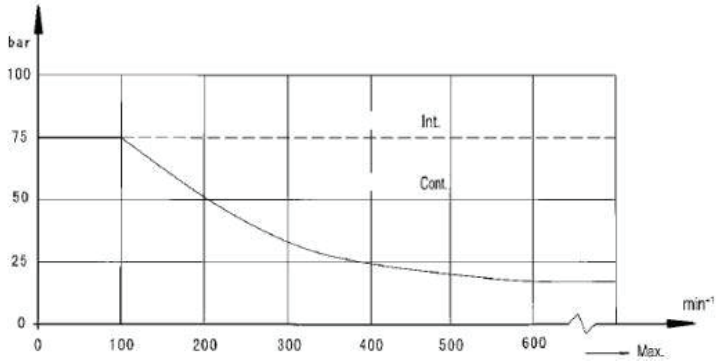


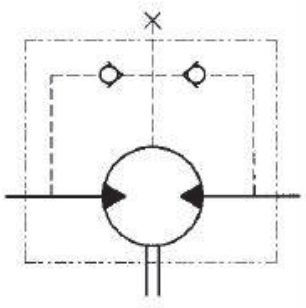
Shaft T8: Tapered shaft Ø60
Parallel key16x10x32
Tightening torque: 75±50Nm
Max. Torque 271.2 daNm[24000 lb-in]



Shaft T9: Tapered shaft Ø57.2 Parallel key 14.308x14.308x50
Tightening torque: 750±50Nm
Max. Torque 271.2 daNm[24000 lb-in]

Permissible shaft seal pressure

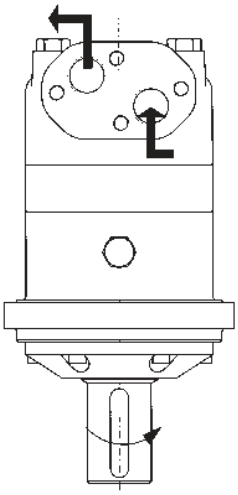




In applications without drain line, output shaft seal exceeds a bit of the pressure in the return line. When applications use the drain line, the pressure of output shaft seal equals the pressure in drain line.

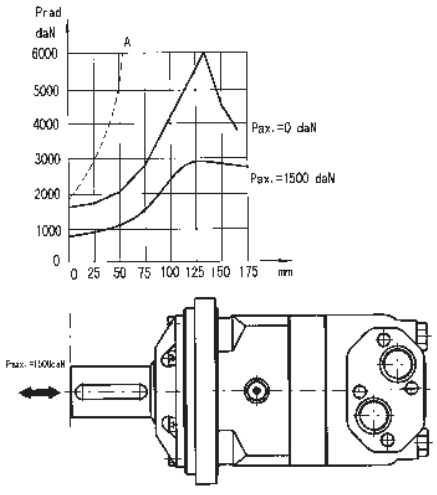
Standard direction of shaft rotation: Standard

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



GV

Axial and Radial forces



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

Ordering Code

1		2		3		4		5		6		7		8
SERIES		DISP.		FLANGE		SHAFT		PORTS		ROTATION		PAINT		FUNTION

1 - SERIES

GV	Orbital motor
GVS	Short motor

2 - DISPLACEMENT

315	314.5 cm^3/rev[19.18 in^3/rev]
400	400.9 cm^3/rev[24.45 in^3/rev]
500	499.6 cm^3/rev[30.48 in^3/rev]
630	629.1 cm^3/rev[38.38 in^3/rev]
800	801.8 cm^3/rev[48.91 in^3/rev]

3 - FLANGE

H9	4-Φ18 square flange Φ200, pilot Φ160×11
W3	4-Φ18 wheel flange Φ224, pilot Φ180×10
B3	4-Φ14 circle flange Φ180, pilot Φ140×8

4 - OUTPUT SHAFT

C3	Cardan shaft 16-DP10/20
SN	Shaft Φ50,parallel key 14×9×70
RB	Shaft Φ53.975,splined tooth 16-DP8/16
RC	Shaft Φ53.975,splined tooth 16-DP8/16
SP	Shaft Φ57.15,parallel key 12.7×12.7×57.15
T8	Tapered shaft Φ60,parallel key 16×10×32
T9	Tapered shaft Φ60, parallel key 14.308×14.308×50.8

5 - PORTS AND DRAIN PORT

G5	G1 manifold 4×M12,G1/4
M6	M33×2 manifold 4×M12,M14×1.5
U6	1-5/16-12 UN O-ring,9/16-18 UNF
G6	G1,G1/4
M7	M33×2,M14×1.5
U7	1-5/16-12 UN O-ring,7/16-20 UNF

6 - ROTATION DIRECTION

A	Standard
R	Opposite

7 - PAINT

A	No paint
B	Blue
C	Black
S	Silver grey

8 - Unusually function

A	Standard
V	High temperature
S	Low temperature

Note:
1)The GVS series are only available with the C3 cardan shaft and B3 Flange.
2)When the table is used, please fill the code and give us, which the code information is consists of construction, displacement, mounting flange, output shaft and ports. If the specification is not in the table or you have specific requirements, please contact us.

GGM Specifications

Specifications for GGM Series

Description .....Hydraulic Motors

Flow Range.....To 15 GPM (56.7 LTR)

Displacements..... To.700 C.I.R.(11.47 CC's/REV.)

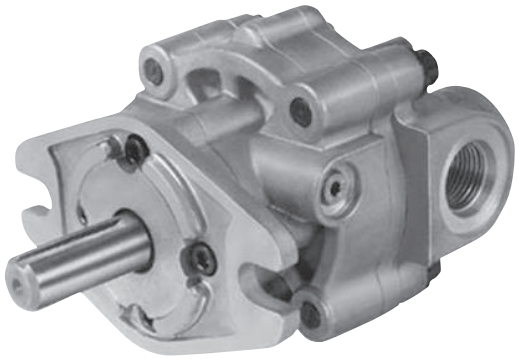
Maximum Pressure to .....2000 PSI (137 BAR)

Maximum Speed to .....5000 RPM

Rotation ..... Bi-Directional

Bearings .....Roller

Construction .....Aluminum



Performance

Motor Model	Displacement/Revolution (Theoretical)					Maximum Continuous Pressure		Maximum Speed
	US Gallons	Cubic Inches	Liters	Cubic Centimenters	Imperial Gallons	PSI	BAR	RPM
GGM3.6	.0010	.218	.0039	3.572	.0008	2000	138	5000
GGM6.1	.0016	.372	.0062	6.096	.0013	2000	138	5000
GGM7.4	.0020	.450	.0078	7.374	.0016	2000	138	5000
GGM9.5	.0025	.580	.0097	9.505	.0021	2000	138	5000
GGM11.5	.0030	.700	.0116	11.471	.0025	1500	104	5000

When used in series circuits, back pressure is not to exceed 1000 (69.0 BAR) PSI.

GGM Displacement

MODEL NO.	GGM3.6	GGM6.1	GGM7.4	GGM9.5	GGM11.5
DISPLACEMENT PER REVOLUTION	.218 in.^{3} (3.57 cm^3)	.372 in.^{3} (6.094 cm^3)	.450 in.^{3} (7.374 cm^3)	.580 in.^{3} (9.50 cm^3)	.700 in.^{3} (11.471 cm^3)
MAXIMUM RATED RPM	5000	5000	5000	5000	5000
RATED FLOW PER 1000 RPM (NOMINAL)	.95 GPM (3.6 liters/min)	1.61 GPM (6.1 liters/min)	1.95 GPM (7.4 liters/min)	2.51 GPM (9.5 liters/min)	3.03 GPM (11.5 liters/min)
MAXIMUM RATED PRESSURE — CONTINUOUS	2000 PSI (138.0 bar)	2000 PSI (138.0 bar)	2000 PSI (138.0 bar)	2000 PSI (138.0 bar)	1500 PSI (103.5 bar)
MAXIMUM RATED PRESSURE — INTERMITTENT	2500 PSI (172.5 bar)	2500 PSI (172.5 bar)	2500 PSI (172.5 bar)	2500 PSI (172.5 bar)	2000 PSI (138.0 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)	92 in.-lbs. (107 kg-cm)	111 in.-lbs. (128 kg-cm)
WEIGHT	2.8 pounds (1.25 kg)	3.0 pounds (1.36 kg)	3.1 pounds (1.41 kg)	3.3 pounds (1.50 kg)	3.5 pounds (1.59 kg)
SHAFT SIDE LOAD**	170 lbs. (77.0 kg)	130 lbs. (59.0 kg)	110 lbs. (50.0 kg)	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.)

⚠WARNING

Never exceed the INTERMITTENT pressure rating or 5000 RPM

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.

GGM Dimensions

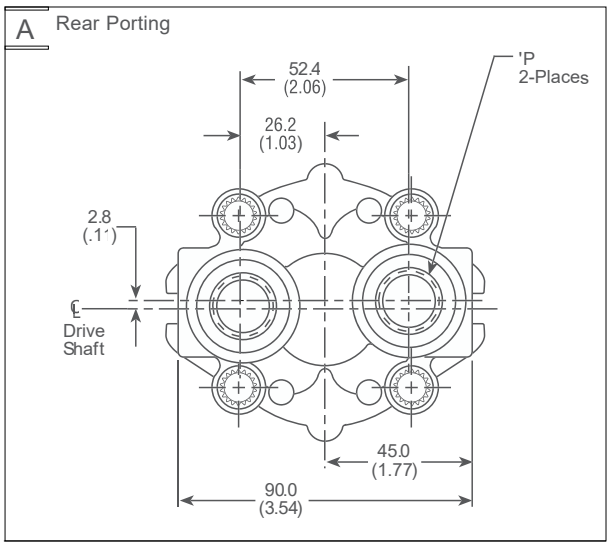
Mounting Dimensions

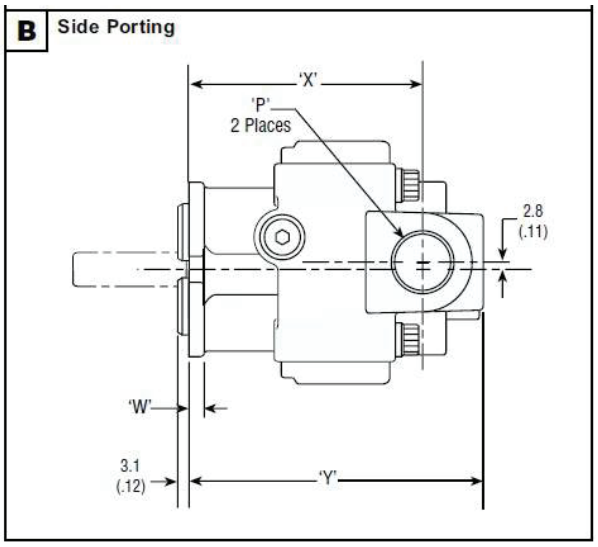
MODEL NO.	DIMENSIONS 'X'	DIMENSIONS 'Y'
GGM3.6	73.1 (2.88)	93.1 (3.67)
GGM6.1	77.3 (3.04)	97.3 (3.83)
GGM7.4	79.4 (3.13)	99.4 (3.91)
GGM9.5	83.0 (3.27)	103.0 (4.06)
GGM11.5	86.3 (3.40)	106.3 (4.19)

FLANGE	'W'
2-BOLT 'A-A'	6.3 (.25)
4-BOLT	6.3 (.25)
2-BOLT 'A'	9.5 (.38)

MODEL NO.	'P' STRAIGHT TH'D O-RING PORT PER SAE SPEC. 514d
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)

Cover Plate Available





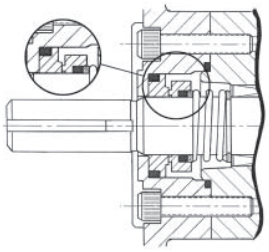
Rotation

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

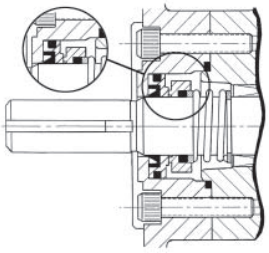
Design, Shafts and Mounting Flange

Design Available

A GGM - Bi-Directional
Standard Seal

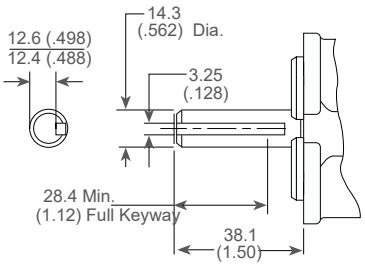


B GGM - Bi-Directional
With Dust Seal

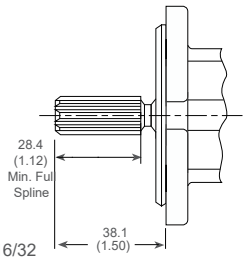


Shafts Available

SQ 9/16 Dia. Keyed Shaft
Torque Limit 39 Lbs. Ft. (52.9 Nm)

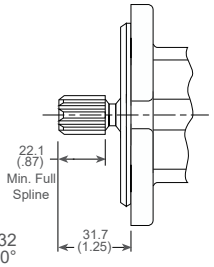


RD 9/16 Dia. 8 Tooth Spline Shaft
Flat Root Side Fit-Class 2 Fit
Torque Limit 39 Lbs. Ft. (52.9 Nm)



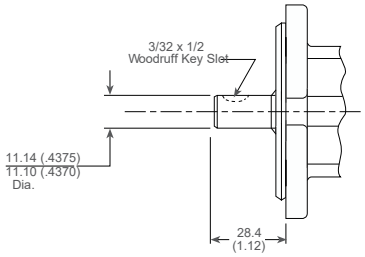
Spline Data
Pitch Diameter 16/32
Pressure Angle ..... 30°
No. of Teeth 8

RF 5/8 Dia. 9 Tooth Spline Shaft
Flat Root Side Fit - Class 1 Fit
Torque Limit 52 Lbs. Ft. (70.5 Nm)
Available as Standard in Models

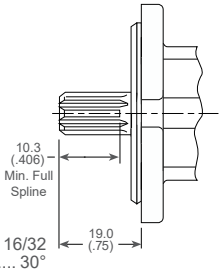


Spline Data
Pitch Diameter 16/32
Pressure Angle ..... 30°
No. of Teeth 9

SR 7/16 Dia. Keyed Shaft
Torque Limit 19 Lbs. Ft. (25.8 Nm)
Available as Standard in Models

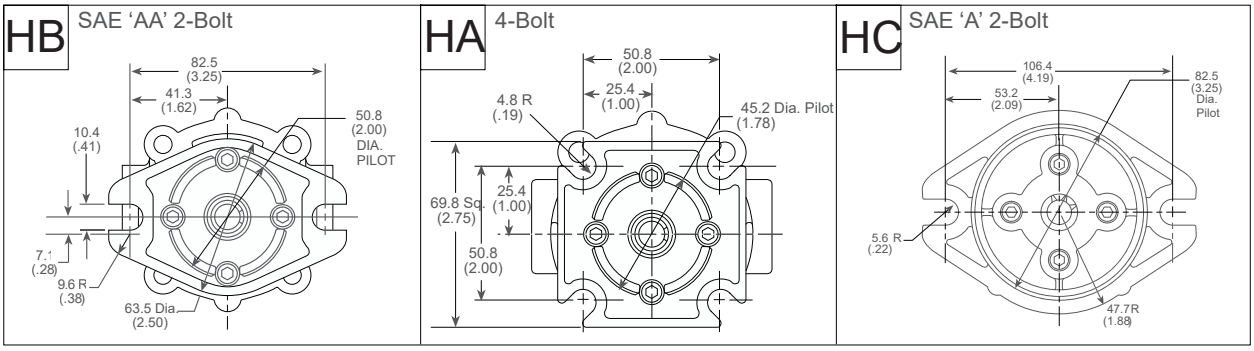


RG 9/16 Dia. 8 Tooth Spline Shaft
Flat-Root Side Fit-Class 2 Fit
Torque Limit 39 Lbs. Ft. (52.9 Nm)
Available as Standard in Models

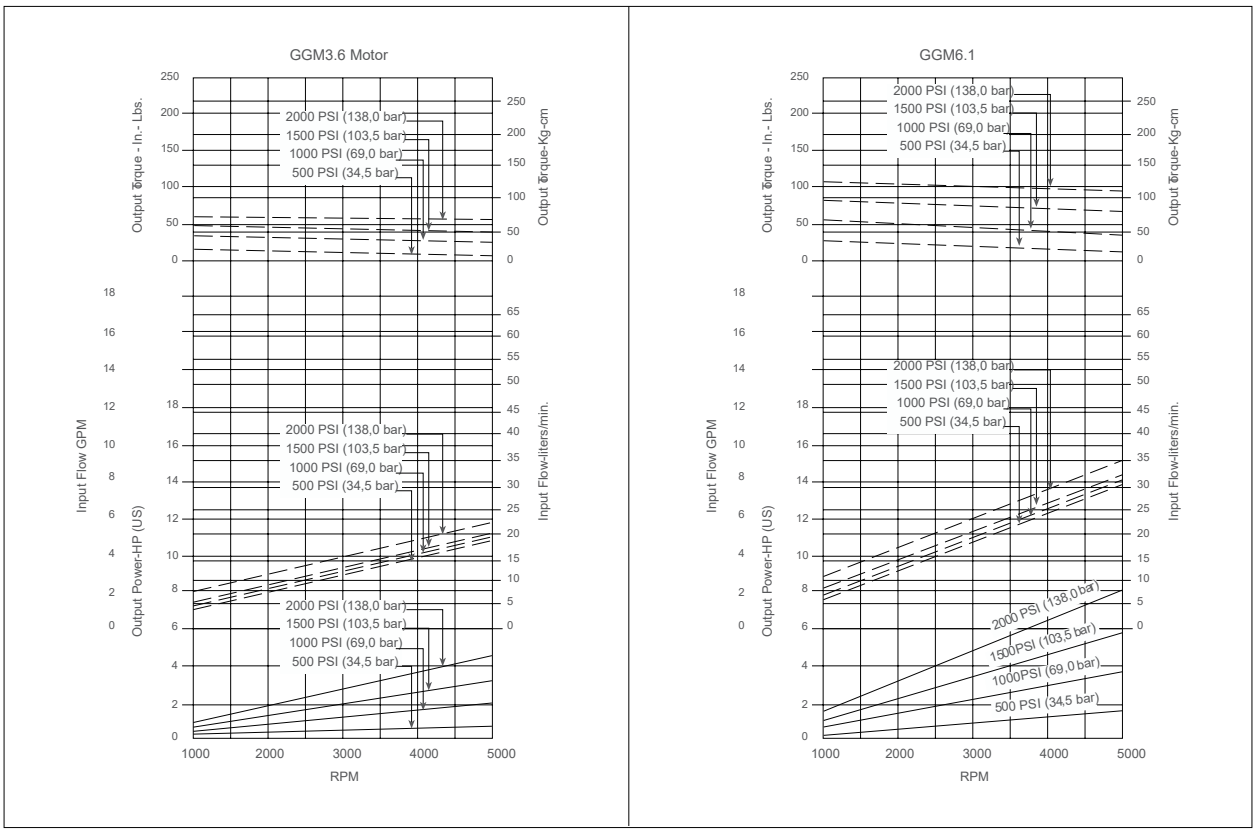


Spline Data
Pitch Diameter 16/32
Pressure Angle ..... 30°
No. of Teeth 8

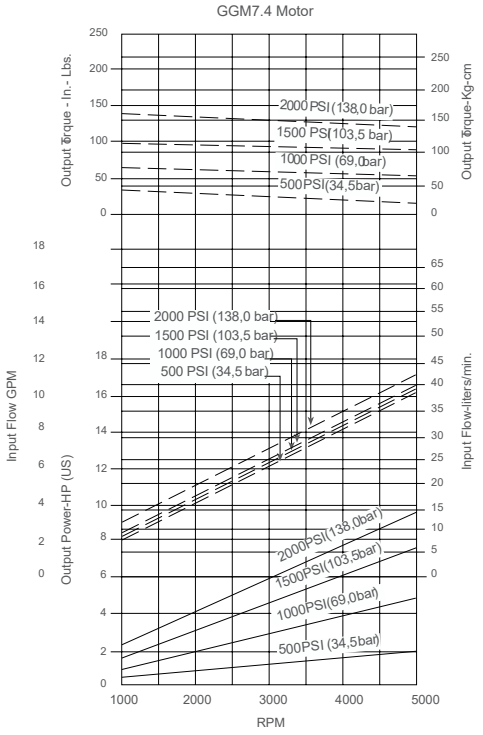
Mounting Flange Available

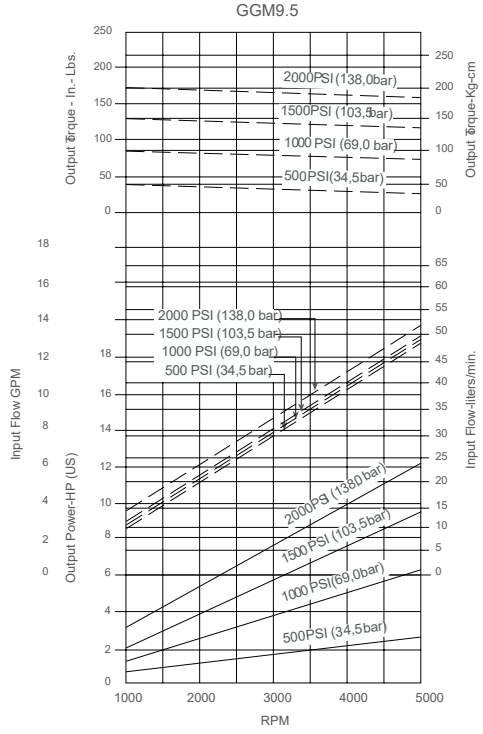


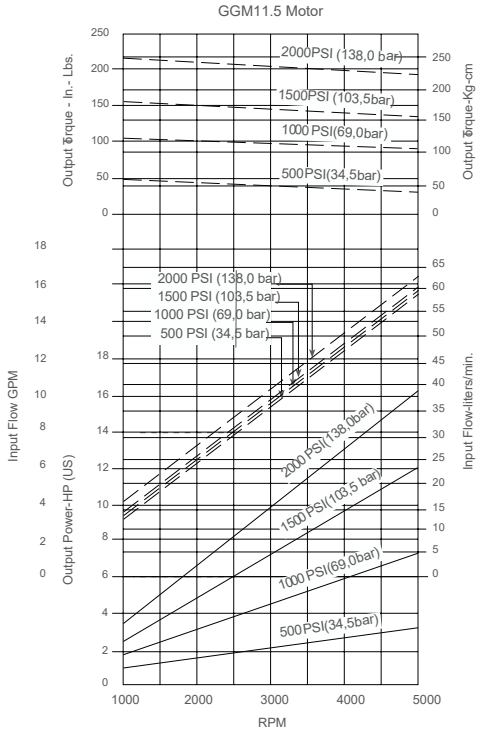
GGM Torque and Speed Selection Charts

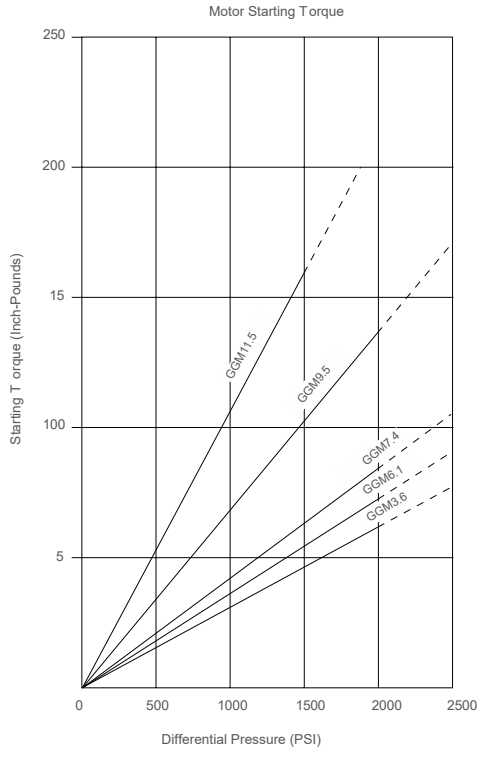


GGM Torque and Speed Selection Charts









Ordering Code

1		2		3		4		5		6		7		8
SERIES		DISP.		FLANGE		SHAFT		PORTS		ROTATION		PAINT		FUNTION

1 - SERIES

GGM	High speed orbital motor

2 - DISPLACEMENT

3.6	3.9 cm^3/rev[.218 in^3/rev]
6.1	6.2 cm^3/rev[.372 in^3/rev]
7.4	7.8 cm^3/rev[.450 in^3/rev]
9.5	9.7 cm^3/rev[.580 in^3/rev]
11.5	11.6 cm^3/rev[.700 in^3/rev]

3 - FLANGE

AB	2-Φ10.4 rhomb flange Φ82.55, pilot Φ50.8×3.1
HA	4-Φ10 square flange50.8×50.8, pilot Φ45.2×3.1
AC	2-Φ11.2 rhomb flange Φ106.4, pilot Φ82.55×3.1

4 - OUTPUT SHAFT

SQ	9/16 Dia. keyed shaft
RD	9/16 Dia. 8 tooth spline long shaft
RF	5/8 Dia. 9 tooth spline shaft
SR	7/16 Dia. Keyed shaft
RG	9/16 Dia. 8 tooth spline shaft

Note: When the table is used, please fill the code and give us, which the code information is consists of construction, displacement, mounting flange, output shaft and ports. If the specification is not in the table or you have specific requirements, please contact us.

5 - PORTS

A	Rear
B	Side

6 - ROTATION DIRECTION

A	Standard
R	Opposite

7 - PAINT

A	No paint

8 - Unusually function

A	Standard seal
B	Standard seal w/dust seal
V	High temperature
S	Low temperature

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Пн	Вт	Ср	Чт	Пт	Сб	Вс
	8^{00}-17^{00}			8^{00}-16^{00}	выходной	