HYDRAPORT HYDRAULICS.

MOTORS

Hydraport

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Content

Usage Guide

In order to make the motors working in optimal situation, we recommend the following:

1. Oil temperature :normal 20℃~60℃ upper limit 90℃(no more than one hour).
2. Filtering and oil cleanliness :a return filter should be installed in the system with a fineness in the range of 10~30μm and a piece of magnet should be installed at the bottom of the tank to prevent grits into the system. The max solid contamination grade of the oil is no more than 19/16.
3. Viscosity: 42~74 mm²/s at 40℃ of oil temperature ,according to the condition to choose an applicable hydraulic oil. The motors can be operated in parallel or in series. When the pressure of the back exceeds 2MPa,it is
4. necessary to install an external drain line to the tank.
   For HBMM and HBMP and HBMR series motors,the type of output shaft may be chosen in demand.

5.1 5.1.1 The output shaft permits a radial force with the radial bearing.
5.1.2 The output shaft doesn' t permit the radial force without the radial bearing.When the radial force acts on the shaft,the force must be discharged.

5.2 For HBMK2、HBMSY、HBMT 、HBMV and HBMK6 series motors, the output shaft permit high axial and radial forces.

6. The optimal operation situation should be at the 1/3~2/3 of the rated operation situation.
7. In order to obtain a longer life of operating motor should operate motors at first for one hour under 30% of rated pressure. In any case, be sure to fill up with hydraulic oil inside motor before increasing load.

Specification Data of Hydraulic Motors

Distribution type	Model	Displacement (cm^3/rev.)	Max. operating pressure (MPa)	Speed range (rpm)	Max. output power (kW)
Axial distribution	HBMM	8~50	14	30-1950	3.2
	HBMP	36~400	16.5	30~879	10
	HBMR	36~375	20	30~970	15
	HBMH	200~500	20	30~430	17

Specification Data of Hydraulic Motor

Distribution type	Model	Displacement (cm^3/rev.)	Max. operating pressure (MPa)	Speed range (rpm)	Max. output power (kW)
Disc distribution	HBMSY	80~475	22.5	8~800	24
	HBMT	160~800	24	10~705	35
	HBMV	315~800	28	10~446	43

HBMM SERIES HYDRAULIC MOTOR

HBMM series motor are small volume, economical type, which is designed with shaft distribution flow, which adapt the Gerotor gear set design and provide compact volume, high power and low weigth.

Characteristic features:

* Advanced manufacturing devices for the Gerotor gear set, which provide small volume, high efficiency and long life.
* Shaft seal can bear high pressure of motor of which can be used in parallel or in series.
* Advanced construction design, high power and low weight.

Main Specification

Type		HBMM 8	HBMM 12.5	HBMM 20	HBMM 32	HBMM 40	HBMM 50
Geometric displacement (cm^3/rev.)		8.2	12.9	19.9	31.6	39.8	50.3
Max. speed (rpm)	cont.	1950	1550	1000	630	500	400
	int.	2450	1940	1250	800	630	500
Max. torque (N•m)	cont.	11	16	25	40	45	46
	int.	15	23	35	57	70	88
	peak	21	33	51	64	82	100
Max. output (kW)	cont.	1.8	2.4	2.4	2.4	2.2	1.8
	int.	2.6	3.2	3.2	3.2	3.2	3.2
Max. pressure drop (MPa)	cont.	10	10	10	10	9	7
	int.	14	14	14	14	14	14
	peak	20	20	20	16	16	16
Max. flow (L/min)	cont.	16	20	20	20	20	20
	int.	20	25	25	25	25	25
Weight (kg)		1.9	2	2.1	2.2	2.3	2.4

Type		Max.inlet pressure
HBMM8-50 (MPa)	cont.	17.5
	int.	22.5

* Continuous pressure:Max. value of operating motor continuously.
* Intermittent pressure:Max. value of operating motor in 6 seconds per minute.
* Peak pressure:Max. value of operating motor in 0.6 second per minute.

Performance Data

HBMM8 [8.2 cc/rev.

Pressure (MPa)

Flow (L/min)	3.5	5	7	10	12	14
				Max.cont.		Max.int.
2	3 **228**	5 **218**	8 **206**	10 **156**	12 **111**	14 **58**
4	3 **474**	5 **471**	7 **463**	11 **426**	13 **391**	15 **331**
8	3 **953**	5 **946**	7 **926**	11 **884**	13 **855**	15 **816**
12	2 **1444**	5 **1426**	7 **1402**	10 **1360**	13 **1324**	15 **1288**
Max.cont. 15		4 **1912**	7 **1900**	10 **1861**	12 **1833**	14 **1780**
Max.int. 20			6 **2395**	10 **2350**	11 **2328**	14 **2281**

HBMM12.5 12.9 cc/rev

Pressure (MPa)

Flow (L/min)	3.5	5	7	10	12	14
				Max.cont.		Max.int.
2	6 **140**	8 **136**	11 **119**	16 **68**	19 **35**	
4	6 **296**	8 **289**	12 **274**	17 **229**	19 **200**	23 **145**
8	5 **605**	8 **596**	12 **583**	17 **543**	20 **514**	24 **469**
12	5 **912**	8 **905**	11 **895**	16 **859**	20 **834**	24 **784**
15	5 **1152**	7 **1144**	11 **1136**	16 **1102**	19 **1078**	23 **1036**
Max.cont. 20	3 **1542**	7 **1532**	10 **1521**	15 **1500**	19 **1482**	22 **1437**
Max.int. 25	2 **1910**	6 **1891**	9 **1878**	14 **1848**	18 **1828**	22 **1788**

HBMM20 19.9 cc/rev

Pressure (MPa)

Flow (L/min)	1.7	3.5	5	7	10	12	14
					Max.cont.		Max.int.
2	3 **99**	9 **96**	14 **89**	19 **74**	26 **42**	30 **21**	
4	4 **197**	9 **191**	14 **182**	19 **178**	26 **134**	31 **112**	36 **74**
8	4 **398**	9 **395**	13 **391**	19 **377**	27 **340**	31 **319**	36 **288**
12	3 **596**	8 **594**	13 **588**	18 **579**	26 **545**	31 **523**	37 **493**
15	3 **745**	8 **741**	12 **738**	17 **728**	25 **695**	30 **684**	36 **660**
Max.cont. 20	1 **998**	6 **995**	11 **991**	19 **985**	24 **962**	29 **916**	35 **885**
Max.int. 25		4 **1247**	9 **1245**	14 **1242**	23 **1189**	28 **1180**	33 **1176**

HBMM32 31.6 cc/rev.

Pressure (MPa)

Flow (L/min)	2	3.5	5	7	10	12	14
					Max.cont.		Max.int.
2	7 **61**	15 **57**	21 **52**	28 **47**	40 **16**		
4	7 **126**	15 **121**	21 **114**	29 **106**	41 **82**	48 **67**	57 **49**
8	7 **250**	15 **244**	21 **239**	29 **231**	41 **207**	49 **194**	58 **167**
12	6 **378**	13 **374**	20 **369**	28 **362**	40 **338**	48 **322**	58 **297**
15	4 **476**	12 **472**	18 **468**	27 **462**	39 **441**	47 **429**	57 **406**
Max.cont. 20	3 **633**	10 **630**	17 **627**	25 **619**	37 **601**	46 **585**	55 **566**
Max.int. 25	1 **791**	8 **789**	15 **787**	23 **783**	35 **766**	43 **753**	52 **732**

HBMM40 39.8 cc/rev

Pressure (MPa)

Flow (L/min)	3	5	7	8.5	10	12
				Max.cont.		Max.int.
2	16 **45**	27 **40**	36 **34**	44 **28**	51 **17**	
4	16 **96**	27 **93**	37 **85**	44 **79**	52 **65**	62 **52**
8	15 **197**	26 **195**	36 **182**	44 **176**	52 **166**	63 **154**
12	14 **293**	25 **287**	35 **282**	43 **277**	51 **268**	62 **257**
15	13 **371**	24 **365**	34 **360**	42 **355**	50 **347**	62 **338**
Max.cont. 20	10 **497**	21 **492**	31 **487**	39 **480**	48 **472**	59 **463**
Max.int. 25	7 **622**	19 **617**	29 **612**	37 **607**	44 **600**	56 **591**

Torque (N•m) 37
Speed (rpm) **607**

HBMM50 50.3 cc/rev

Pressure (MPa)

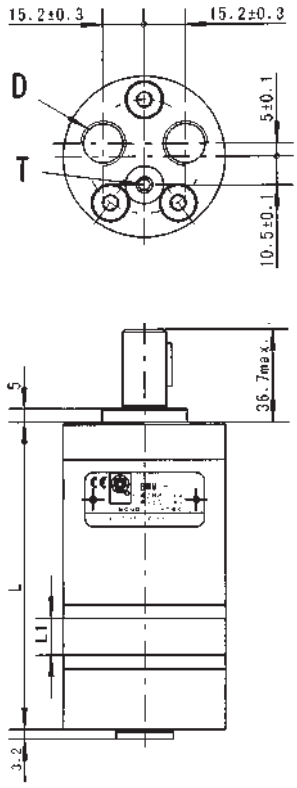
Flow (L/min)	1.5	3	5	7	10
				Max.cont.	Max.int.
2	11 **37**	23 **33**	36 **27**	50 **22**	
4	11 **76**	22 **73**	36 **68**	50 **63**	70 **55**
8	11 **157**	21 **154**	35 **149**	50 **145**	71 **137**
12	11 **237**	20 **234**	33 **231**	49 **226**	71 **218**
15	10 **296**	18 **295**	32 **294**	47 **288**	69 **282**
Max.cont. 20	8 **395**	14 **395**	29 **393**	44 **390**	64 **381**
Max.int. 25	4 **498**	10 **496**	25 **494**	40 **490**	59 **484**

cont.
int.

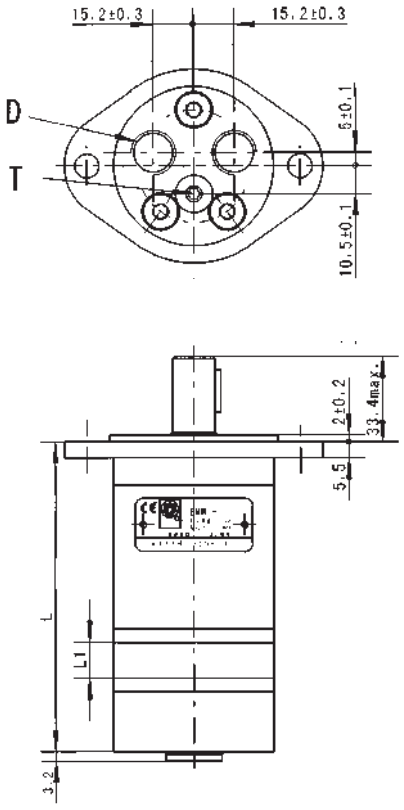
HBMM END PORT DIMENSIONS AND MOUNTING DATA

MOUNTING

Flange M、U



Flange F



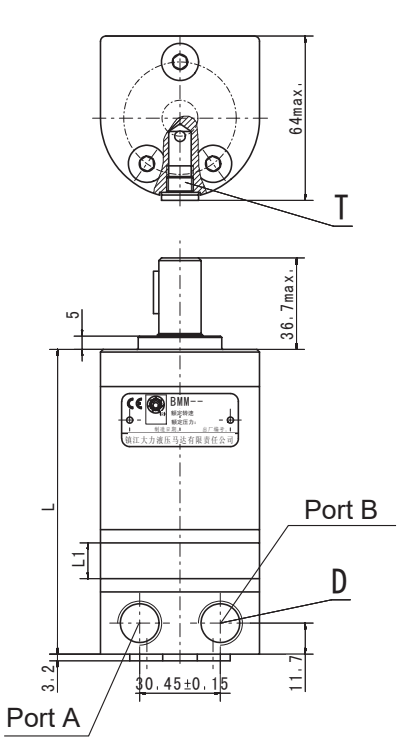
	M、U Flange		F Flange	
Model	L	L1	L	L1
HBMM8	104	3.5	107.5	3.5
HBMM12.5	106	5.5	109.5	5.5
HBMM20	109	8.5	112.5	8.5
HBMM32	114	13.5	117.5	13.5
HBMM40	117.5	17	121	17
HBMM50	122	21.5	125.5	21.5

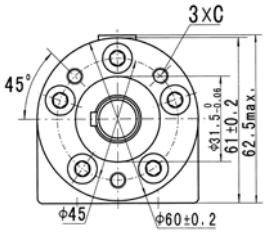
	M、U Flange		F Flange	
Code / Mounting	1E (depth)	1U (depth)	1E (depth)	1U (depth)
C	[M]3-M6 (10)	[U]3-1/4-28UNF-2B(10)	[M]--	[U]--
D	G3/8 (12)	9/16-18UNF(12)	G3/8 (12)	9/16-18UNF(12)
T	G1/8 (8)	3/8-24UNF(8)	G1/8 (8)	3/8-24UNF(8)

HBMM SIDE PORT DIMENSIONS AND MOUNTING DATA

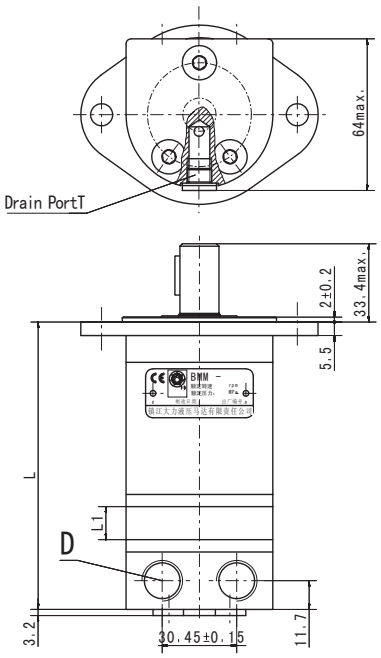
MOUNTING

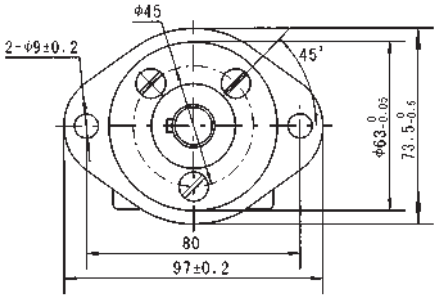
Flange M、U





Flange F



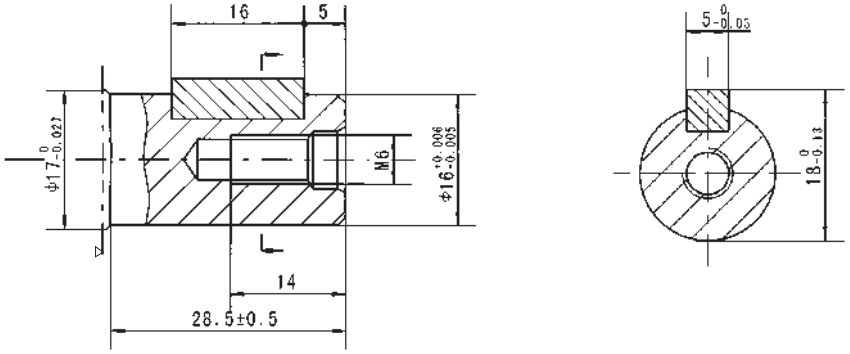


	M、U Flange		F Flange	
Model	L	L1	L	L1
HBMM8	105	3.5	108.5	3.5
HBMM12.5	107	5.5	110.5	5.5
HBMM20	110	8.5	113.5	8.5
HBMM32	115	13.5	118.5	13.5
HBMM40	118.5	17	122	17
HBMM50	123	21.5	126.5	21.5

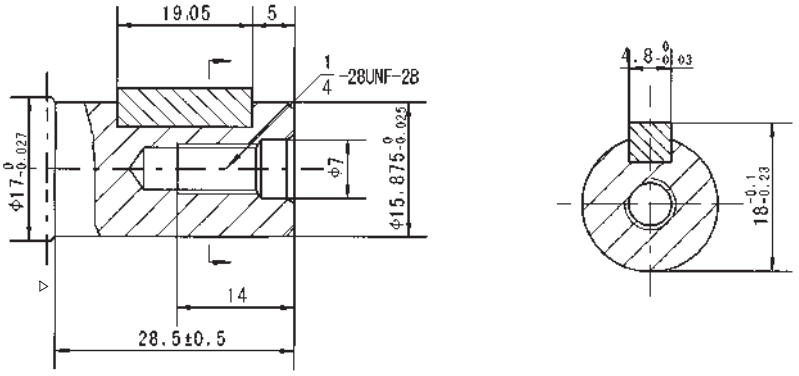
	M、U Flange		F Flange	
Code / Mounting	E (depth)	U (depth)	E (depth)	U (depth)
C	[M]3-M6 (10)	[U]3-1/4-28UNF-2B(10)	[M]--	[U]--
D	G3/8 (12)	9/16-18UNF(12)	G3/8 (12)	9/16-18UNF(12)
T	G1/8 (8)	3/8-24UNF(8)	G1/8 (8)	3/8-24UNF(8)

HBMM SHAFT EXTENSIONS FOR HBMM MOTORS

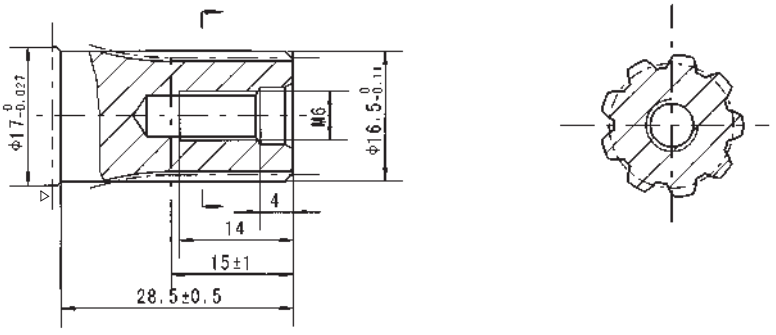
Shaft A: Cylindrical shaft ø16
Parallel key 5x5x16



Shaft B: Cylindrical shaft ø15.875
Parallel key 4.8x4.8x19.05



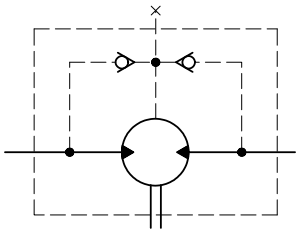
Shaft C: Involute splind shaft
B17x14 DIN5482

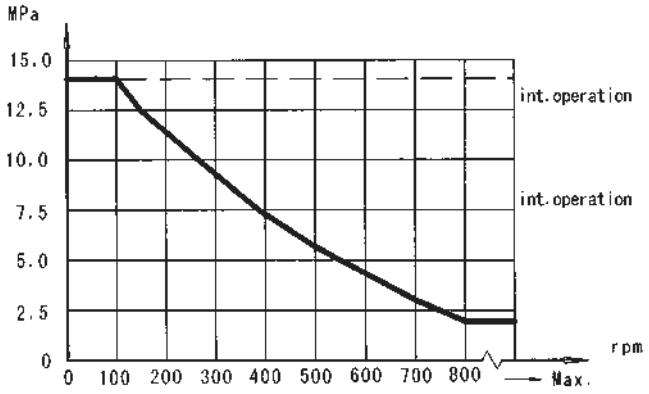


▷ Motor Mounting Surface

HBMM Series Hydraulic Motor

Permissible shaft seal pressure

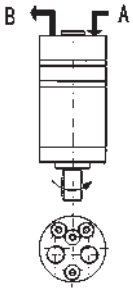




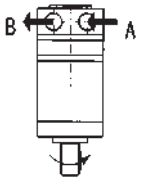
In applications without drain line, output shaft seal exceeds a bit of the pressure in the return line. When applications use the drain line, the pressure of output shaft seal equals the pressure in drain line.

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.



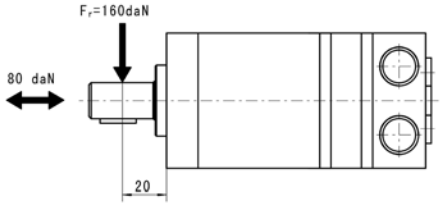
HBMM End Port



HBMM Side Port

Status of the shaft's radial force

$$F_r = \frac{13040}{61.5+L}\ daN$$



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

Order Information

HBMM 1 – 2 – 3 – 4 – 5 – 6 – 7 – 8

Pos.1	2	3		4		5		6		7		8	
Code	Displacement	Flange		Output shaft		Ports and drain port		Rotation direction		Paint		Unusually function	
Omit	8 12.5 20 32 40 50	M U F	3-M6 Circle-flange, pilot Ø31.5×5 3-1/4-28UNF Circle flange,pilot Ø31.5×5 2-Ø9 Rhomb-flange, pilot Ø63×2	A B C	Shaft Ø16, parallel key 5×5×16 Shaft Ø15.875, parallel key 4.8×4.8×19.05 Shaft Ø16.5, involute B17×14, DIN5482	E U 1E 1U	G3/8, G1/8 9/16-18UNF, 3/8-24UNF End port G3/8, G1/8 End port 9/16-18UNF, 3/8-24UNF	Omit R	Standard Opposite	00 Omit B S	No paint Blue Black Silver grey	Omit 0	Standard No case drain

Note:When the table is used, please fill the code of left rows in the table 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.

HBMP SERIES HYDRAULIC MOTOR

HBMP series motor are small volume, economical type, which is designed with shaft distribution flow, which adapt the Gerotor gear set design and provide compact volume, high power and low weight.

Characteristic features:

* Advanced manufacturing devices for the Gerotor gear set, which provide small volume, high efficiency and long life.
* Shaft seal can bear high pressure of motor of which can be used in parallel or in series.
* Advanced construction design, high power and low weight.

Main Specification

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

Type		HBMP HBMPH HBMPW 36	HBMP HBMPH HBMPW 50	HBMP HBMPH HBMPW 80	HBMP HBMPH HBMPW 100	HBMP HBMPH HBMPW 125	HBMP HBMPH HBMPW 160	HBMP HBMPH HBMPW 200	HBMP HBMPH HBMPW 250	HBMP HBMPH HBMPW 315	HBMP HBMPH HBMPW 400	HBMP HBMPH HBMPW 500
Geometric displacement (cm^3/rev.)		36	51.7	77.7	96.2	120.2	157.2	194.5	240.3	314.5	389.5	486.5
Max. speed (rpm)	cont.	1500	1150	770	615	490	383	310	250	192	155	120
	int.	1650	1450	960	770	615	475	385	310	240	190	150
Max. torque (N•m)	cont.	55	100	146	182	236	302	360	380	375	360	385
	int.	76	128	186	227	290	370	440	460	555	525	560
	peak	96	148	218	264	360	434	540	550	650	680	680
Max. output (kW)	cont.	8.0	10.0	10.0	11.0	10.0	10.0	10.0	8.5	7.0	6.0	5.0
	int.	11.5	12.0	12.0	13.0	12.0	12.0	12.0	10.5	8.5	7.0	6.0
Max. pressure drop (MPa)	cont.	12.5	14	14	14	14	14	14	11	9	7	6
	int.	16.5	17.5	17.5	17.5	17.5	17.5	17.5	14	14	10.5	9
	peak	22.5	22.5	22.5	22.5	22.5	22.5	22.5	18	16	14	12
Max. flow (L/min)	cont.	55	60	60	60	60	60	60	60	60	60	60
	int.	60	75	75	75	75	75	75	75	75	75	75
Weight (kg)		5.6	5.6	5.7	5.9	6.0	6.2	6.4	6.7	6.9	7.4	8

* Continuous pressure:Max. value of operating motor continuously.
* Intermittent pressure:Max. value of operating motor in 6 seconds per minute.
* Peak pressure:Max. value of operating motor in 0.6 second per minute.

Main Specification

Technical data for HBMP with 31.75 and 32 shaft

Type		HBMP 36	HBMP 50	HBMP 80	HBMP 100	HBMP 125	HBMP 160	HBMP 200	HBMP 250	HBMP 315	HBMP 400	HBMP 500
Geometric displacement (cm^3/rev.)		36	51.7	77.7	96.2	120.2	157.2	194.5	240.3	314.5	389.5	486.5
Max. speed (rpm)	cont.	1500	1150	770	615	490	383	310	250	192	155	120
	int.	1650	1450	960	770	615	475	385	310	240	190	150
Max. torque (N•m)	cont.	55	100	146	182	236	302	360	460	475	490	430
	int.	76	128	186	227	290	370	440	570	555	580	560
	peak	96	148	218	264	360	434	540	670	840	840	780
Max. output (kW)	cont.	8.0	10.0	10.0	11.0	10.0	10.0	10.0	8.5	7.0	6.0	6.0
	int.	11.5	12.0	12.0	13.0	12.0	12.0	12.0	10.5	8.5	7.0	7.0
Max. pressure drop (MPa)	cont.	12.5	14	14	14	14	14	14	14	12	9.5	7
	int.	16.5	17.5	17.5	17.5	17.5	17.5	17.5	17.5	14	11.5	9
	peak	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	18	13
Max. flow (L/min)	cont.	55	60	60	60	60	60	60	60	60	60	60
	int.	60	75	75	75	75	75	75	75	75	75	75
Weight (kg)		5.6	5.6	5.7	5.9	6.0	6.2	6.4	6.7	6.9	7.4	8.0

* Continuous pressure:Max.value of operating motor continuously.

* Intermittent pressure:Max.value of operating motor in 6 seconds per minute .

* Peak pressure:Max.value of operating motor in 0.6 second per minute.

Performance Data

HBMP 36 [36cm³/rev.]

Pressure (MPa)

Flow (L/min)	3	6	7	8	10	11	12.5 Max.cont.	16.5 Max.int.
8	13	25	29	34	43	48		
	214	**205**	**200**	**194**	**187**	**179**		
15	13	25	29	34	43	48	56	75
	406	**398**	**391**	**383**	**374**	**366**	**353**	**324**
20	13	24	29	34	43	48	56	76
	541	**534**	**528**	**521**	**513**	**500**	**486**	**458**
30	12	24	29	34	43	48	56	76
	814	**804**	**792**	**778**	**763**	**749**	**726**	**701**
35	12	23	28	34	43	48	56	76
	952	**944**	**930**	**913**	**897**	**879**	**858**	**833**
40	12	23	28	32	41	47	55	75
	1090	**1078**	**1064**	**1048**	**1024**	**998**	**977**	**943**
45	11	22	26	32	41	46	54	74
	1232	**1218**	**1196**	**1175**	**1149**	**1118**	**1080**	**1044**
Max.cont. 55	6	15	22	28	37	44	52	71
	1505	**1494**	**1480**	**1466**	**1438**	**1406**	**1367**	**1309**
Max.int. 60	3	11	18	20	30	38	49	67
	1650	**1640**	**1626**	**1603**	**1571**	**1536**	**1502**	**1446**

HBMP 50 [51.7cm³/rev.]

Pressure (MPa)

Flow (L/min)	3	6	8	10	12.5	14 Max.cont.	16	17.5 Max.int.
8	20	41	56	69	89	95		
	151	**134**	**115**	**90**	**56**	**42**		
15	19	40	56	71	91	100	112	120
	286	**274**	**261**	**243**	**204**	**182**	**139**	**102**
20	18	39	55	71	92	101	117	128
	382	**373**	**361**	**348**	**318**	**309**	**287**	**251**
30	17	38	55	71	91	98	116	124
	573	**568**	**558**	**535**	**503**	**488**	**462**	**440**
35	17	38	54	69	89	98	117	124
	670	**661**	**652**	**640**	**606**	**589**	**562**	**548**
45	14	36	53	67	88	98	114	123
	863	**858**	**849**	**837**	**807**	**788**	**764**	**746**
55	12	33	50	65	85	96	111	121
	1055	**1042**	**1028**	**1010**	**979**	**963**	**947**	**920**
Max.cont. 60	10	32	47	64	83	94	108	119
	1150	**1143**	**1126**	**1111**	**1079**	**1065**	**1043**	**1015**
Max.int. 75	6	25	42	56	76	87	101	112
	1440	**1430**	**1416**	**1395**	**1367**	**1351**	**1335**	**1312**

HBMP 80 [77.7cm³/rev.]

Pressure (MPa)

Flow (L/min)	3	6	8	10	12.5	14 Max.cont.	16	17.5 Max.int.
8	32	62	85	104	129	144		
	97	**87**	**74**	**55**	**33**	**22**		
15	32	63	84	107	126	144	165	
	186	**181**	**170**	**154**	**132**	**118**	**86**	
20	31	63	84	107	132	146	168	185
	251	**243**	**236**	**225**	**207**	**196**	**178**	**155**
30	31	62	83	106	131	146	168	186
	381	**379**	**368**	**355**	**332**	**316**	**285**	**263**
35	30	59	81	102	130	144	167	185
	443	**435**	**426**	**415**	**397**	**383**	**361**	**342**
45	25	58	79	100	126	142	165	182
	570	**564**	**554**	**543**	**526**	**509**	**483**	**458**
55	23	57	78	97	124	140	161	179
	696	**685**	**672**	**656**	**643**	**630**	**602**	**579**
Max.cont. 60	20	53	75	94	120	137	160	177
	761	**753**	**744**	**736**	**720**	**706**	**681**	**660**
Max.int. 75	14	44	67	87	112	151	169	169
	948	**940**	**931**	**920**	**906**	**890**	**871**	**854**

Torque (N•m) 87
Speed (rpm) **920**

HBMP 100 [96.2cm³/rev.]

Pressure (MPa)

Flow (L/min)	3	6	8	10	12.5	14 Max.cont.	16	17.5 Max.int.
8	40	77	105	130	161	180		
	81	**75**	**69**	**57**	**36**	**24**		
15	39	77	106	130	160	180	208	
	152	**149**	**145**	**140**	**122**	**103**	**81**	
20	36	74	104	128	161	179	205	227
	204	**200**	**195**	**190**	**177**	**166**	**148**	**133**
30	33	72	103	125	160	177	203	225
	308	**304**	**298**	**290**	**280**	**268**	**255**	**231**
35	30	70	98	122	159	176	202	224
	360	**352**	**343**	**331**	**320**	**306**	**294**	**275**
45	29	67	95	118	155	174	200	220
	462	**458**	**451**	**443**	**433**	**419**	**402**	**383**
55	25	64	93	116	152	170	198	217
	566	**558**	**549**	**540**	**529**	**515**	**498**	**478**
Max.cont. 60	22	60	91	114	149	167	194	213
	618	**611**	**601**	**589**	**580**	**570**	**558**	**540**
Max.int. 75	15	54	83	106	141	160	186	205
	771	**763**	**755**	**744**	**735**	**724**	**708**	**693**

cont.
int.

Performance Data

HBMP 125 [120.2cm³/rev.]

Pressure (MPa)

Flow (L/min)	3	6	8	10	12.5	14 (Max.cont.)	16	17.5 (Max.int.)
8	51	98	137	168	208	236		
	63	**60**	**55**	**47**	**28**	**15**		
15	51	101	138	168	209	236	267	
	121	**116**	**110**	**102**	**89**	**73**	**48**	
20	48	98	135	167	211	237	269	290
	162	**158**	**153**	**148**	**137**	**128**	**109**	**94**
30	46	96	132	164	209	232	264	287
	243	**239**	**234**	**227**	**216**	**202**	**189**	**176**
35	42	92	130	160	206	229	260	284
	284	**279**	**274**	**269**	**259**	**247**	**231**	**222**
45	37	89	125	157	201	224	261	281
	370	**362**	**355**	**348**	**340**	**327**	**310**	**296**
55	33	84	122	152	196	218	252	275
	452	**446**	**438**	**431**	**420**	**412**	**402**	**384**
Max.cont. 60	29	78	117	146	191	215	248	272
	490	**482**	**475**	**468**	**459**	**448**	**439**	**427**
Max.int. 75	18	66	107	133	179	202	236	260
	615	**606**	**598**	**586**	**575**	**563**	**549**	**528**

HBMP 160 [157.2cm³/rev.]

Pressure (MPa)

Flow (L/min)	3	6	8	10	12.5	14 (Max.cont.)	16	17.5 (Max.int.)
8	62	120	170	212	263	290		
	49	**48**	**46**	**42**	**26**	**14**		
15	60	122	172	215	264	294	340	
	93	**91**	**88**	**85**	**76**	**68**	**48**	
20	57	120	170	214	262	290	340	371
	125	**123**	**120**	**117**	**110**	**106**	**92**	**81**
30	53	115	164	206	259	288	335	368
	187	**184**	**181**	**178**	**175**	**168**	**155**	**139**
35	49	110	160	202	255	284	328	362
	220	**216**	**213**	**209**	**205**	**202**	**192**	**176**
45	44	102	154	196	248	278	321	358
	283	**280**	**276**	**272**	**267**	**260**	**250**	**238**
55	40	99	148	191	243	272	316	351
	345	**342**	**340**	**336**	**331**	**328**	**320**	**303**
Max.cont. 60	33	94	144	188	236	267	308	345
	377	**374**	**371**	**367**	**363**	**359**	**353**	**342**
Max.int. 75	19	80	124	170	216	252	296	325
	473	**469**	**465**	**459**	**453**	**447**	**440**	**424**

HBMP 200 [194.5cm³/rev.]

Pressure (MPa)

Flow (L/min)	3	6	8	10	12.5	14 (Max.cont.)	16	17.5 (Max.int.)
8	79	164	207	250	320	360		
	40	**39**	**38**	**35**	**28**	**22**		
15	78	162	205	250	322	361	410	
	76	**75**	**74**	**71**	**66**	**61**	**51**	
20	76	158	203	247	320	358	403	422
	100	**98**	**97**	**95**	**92**	**89**	**73**	**57**
30	70	153	200	245	315	350	398	417
	151	**149**	**147**	**145**	**142**	**139**	**131**	**120**
35	66	149	194	232	297	343	386	415
	177	**175**	**173**	**171**	**168**	**166**	**160**	**149**
45	63	146	190	230	294	340	383	410
	228	**226**	**224**	**221**	**218**	**215**	**210**	**198**
55	54	140	181	224	286	334	371	400
	280	**278**	**276**	**274**	**271**	**269**	**263**	**250**
Max.cont. 60	38	127	164	212	270	325	356	395
	304	**302**	**300**	**297**	**294**	**291**	**286**	**272**
Max.int. 75	22	96	145	192	235	293	321	367
	382	**378**	**374**	**371**	**368**	**364**	**360**	**350**

HBMP 250 [240.3cm³/rev.]

Pressure (MPa)

Flow (L/min)	3	6	8	10	12.5	14 (Max.cont.)	16	17.5 (Max.int.)
8	96	190	268	326	403			
	30	**28**	**24**	**21**	**11**			
15	98	194	270	327	405	450	510	
	60	**58**	**54**	**50**	**40**	**30**	**12**	
20	92	188	267	325	405	456	514	565
	82	**80**	**77**	**76**	**69**	**64**	**52**	**38**
30	85	180	259	320	400	448	513	561
	123	**120**	**118**	**114**	**106**	**98**	**87**	**76**
35	77	176	252	311	389	436	504	557
	143	**141**	**139**	**135**	**128**	**122**	**112**	**101**
45	70	168	243	300	377	428	495	543
	185	**182**	**178**	**174**	**168**	**161**	**152**	**139**
55	63	159	237	290	369	417	483	531
	226	**223**	**218**	**213**	**209**	**202**	**193**	**185**
Max.cont. 60	60	150	228	280	358	407	473	520
	248	**246**	**243**	**239**	**233**	**226**	**215**	**207**
Max.int. 75	34	128	202	264	342	387	448	488
	309	**306**	**302**	**297**	**292**	**286**	**278**	**264**

Torque (N•m) 128
Speed (rpm) **306**

cont.

int.

Performance Data

HBMP 315 [314.5cm³/rev.]

Pressure (MPa)

Flow (L/min)	3	5	7	9	10	12.5 (Max.cont.)	14 (Max.int.)
8	123 **25**	215 **23**	292 **21**	368 **17**	405 **11**		
15	118 **47**	211 **46**	287 **44**	367 **40**	404 **28**	495 **21**	568 **10**
20	110 **62**	205 **61**	278 **60**	360 **57**	395 **46**	494 **40**	566 **36**
30	101 **94**	196 **93**	271 **91**	349 **88**	388 **76**	490 **68**	565 **65**
35	96 **109**	188 **107**	264 **106**	341 **104**	382 **96**	478 **89**	557 **84**
45	89 **141**	180 **140**	254 **138**	337 **135**	372 **127**	468 **120**	553 **115**
55	76 **173**	166 **172**	239 **170**	325 **167**	362 **160**	457 **152**	548 **143**
Max.cont. 60	65 **188**	154 **186**	227 **184**	308 **182**	348 **178**	443 **172**	529 **163**
Max.int. 75	40 **236**	120 **234**	201 **232**	279 **228**	323 **226**	418 **223**	497 **214**

HBMP 400 [389.5cm³/rev.]

Pressure (MPa)

Flow (L/min)	3	4.5	5.5	6.5	8	10 (Max.cont.)	12.5 (Max.int.)
8	166 **20**	232 **19**	287 **18**	340 **16**	418 **12**		
15	165 **38**	228 **36**	277 **35**	337 **33**	417 **31**	496 **27**	612 **21**
20	162 **50**	223 **49**	273 **49**	331 **48**	413 **45**	495 **41**	608 **35**
30	154 **76**	216 **75**	266 **74**	318 **73**	405 **71**	486 **67**	600 **60**
35	146 **88**	210 **87**	256 **87**	312 **86**	395 **83**	480 **80**	588 **75**
45	132 **114**	197 **113**	243 **112**	300 **110**	383 **108**	464 **106**	576 **99**
55	117 **139**	184 **137**	227 **136**	283 **135**	363 **135**	450 **132**	552 **123**
Max.cont. 60	102 **153**	163 **152**	215 **150**	272 **148**	347 **146**	436 **143**	532 **138**
Max.int. 75	53 **191**	128 **189**	182 **187**	234 **185**	318 **183**	391 **180**	484 **176**

Torque (N•m) 234
Speed (rpm) **185**

HBMP500[486.5cm³/rev.]

Pressure (MPa)

Flow (L/min)	1.5	3	4.5	6 (Max.cont.)	7	8	9 (Max.int.)
4	96 **7**	194 **6**	285 **4**				
8	98 **15**	201 **15**	304 **14**	391 **14**	443 **12**	512 **9**	574 **7**
15	96 **30**	192 **30**	284 **29**	380 **28**	421 **26**	496 **23**	550 **22**
20	96 **40**	191 **40**	280 **40**	372 **39**	418 **37**	493 **33**	546 **31**
30	91 **61**	185 **60**	272 **60**	360 **58**	412 **56**	486 **53**	541 **50**
40	86 **81**	172 **80**	261 **80**	343 **79**	408 **76**	480 **73**	538 **70**
50	78 **102**	160 **101**	241 **100**	332 **98**	391 **96**	466 **93**	528 **90**
Max.cont. 60	66 **122**	134 **121**	213 **120**	305 **119**	371 **117**	438 **114**	496 **110**
70	52 **143**	111 **142**	189 **141**	292 **139**	344 **137**	418 **135**	475 **131**
Max.int. 75	35 **153**	83 **152**	154 **151**	241 **150**	312 **149**	389 **147**	448 **144**

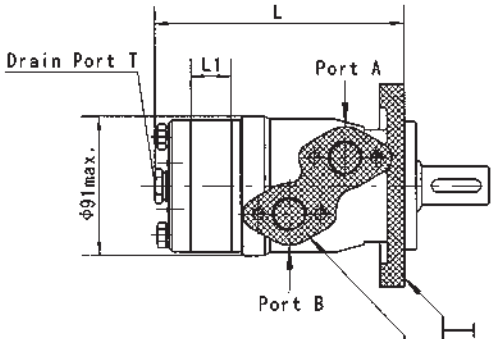
Torque (N•m) 389
Speed (rpm) **147**

cont.

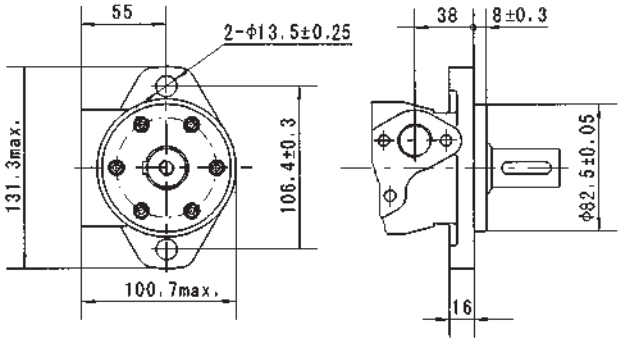
int.

HBMP DIMENSIONS AND MOUNTING DATA

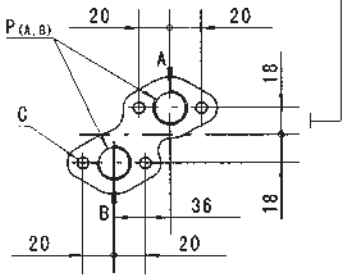
MOUNTING



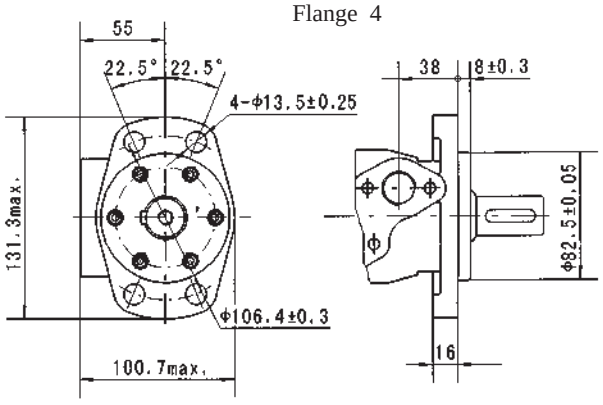
Flange 2



PORT

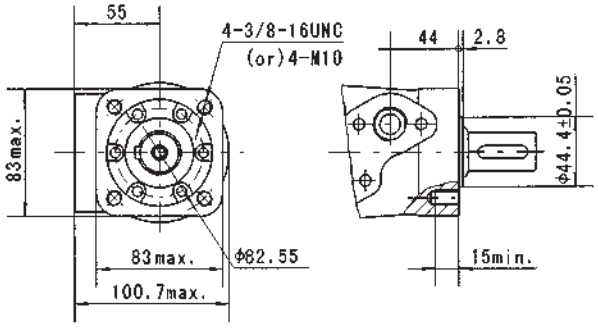


Flange 4



Model	L	L1
HBMP36	137	7
HBMP50	137	7
HBMP80	140.5	10.5
HBMP100	143	13
HBMP125	146	16
HBMP160	151	21
HBMP200	157	26
HBMP250	162	32
HBMP315	172	42
HBMP400	182	52
HBMP500	195	65

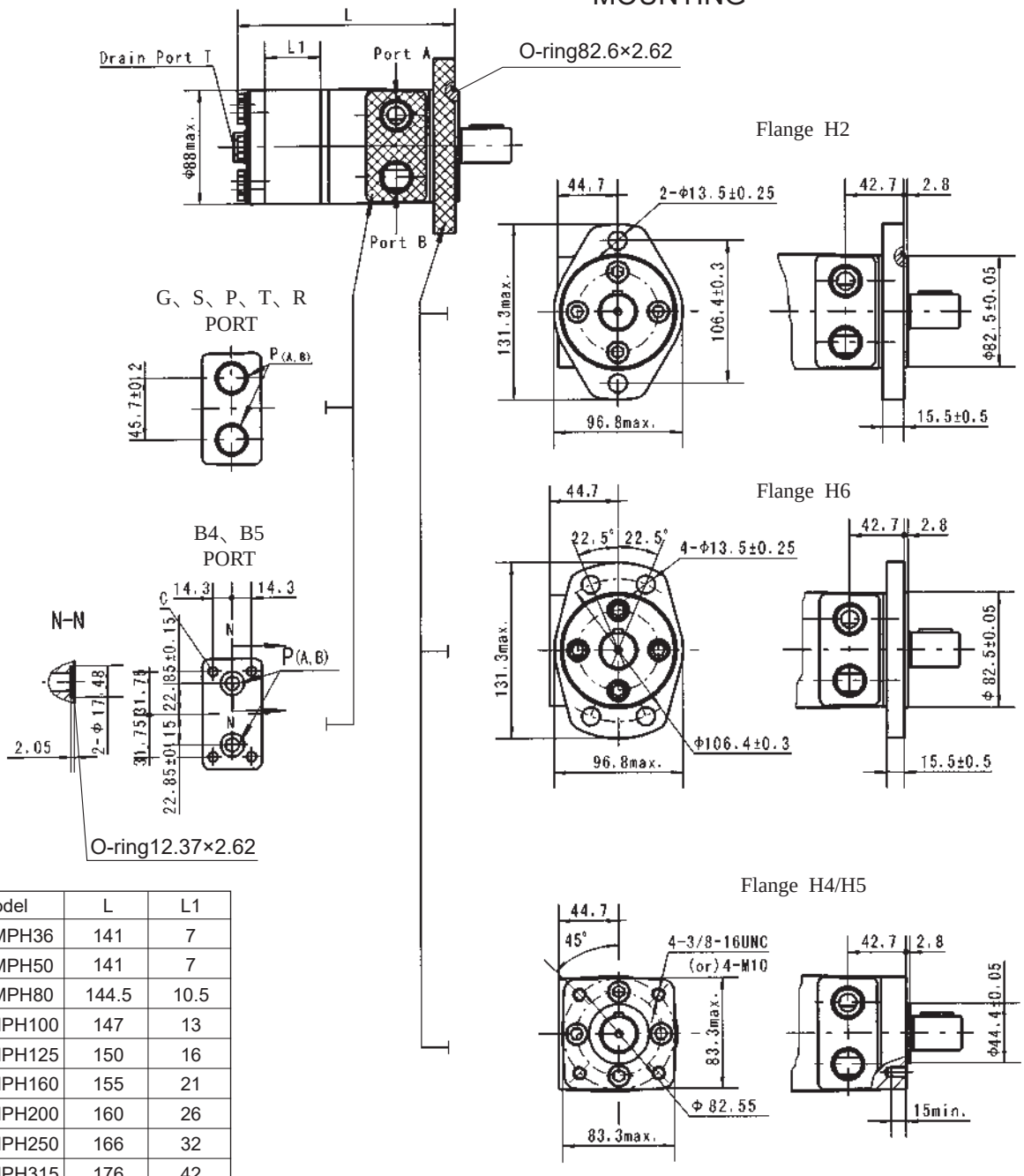
Flange H4/H5



Mounting \ Code	D (depth)	M (depth)	S (depth)	P (depth)	R (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)

HBMPH DIMENSIONS AND MOUNTING DATA

MOUNTING

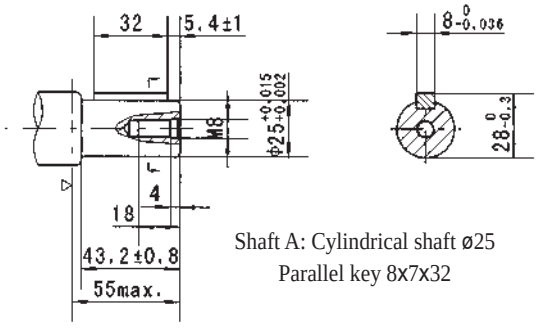


Model	L	L1
HBMPH36	141	7
HBMPH50	141	7
HBMPH80	144.5	10.5
HBMPH100	147	13
HBMPH125	150	16
HBMPH160	155	21
HBMPH200	160	26
HBMPH250	166	32
HBMPH315	176	42
HBMPH400	186	52
HBMPH500	199	65

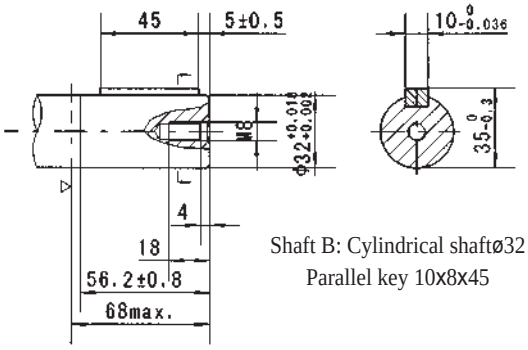
Note: The size L of the HBMPH N1 should be increased by 2mm.

Mounting \ Code	G (depth)	S (depth)	P (depth)	T (depth)	R (depth)	B4 (depth)	B5 (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)

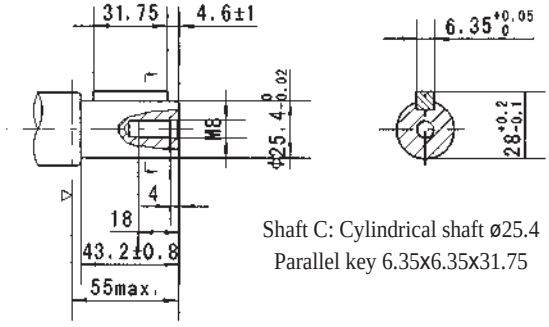
HBMP SHAFT EXTENSIONS DIMENSIONS DATA



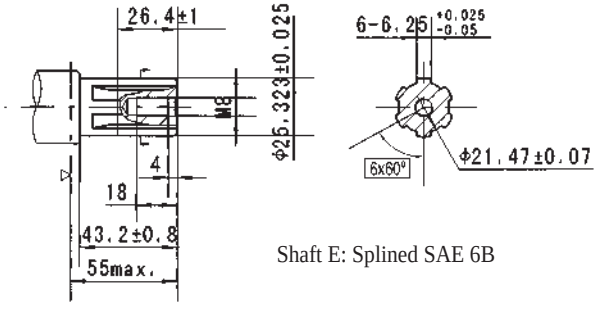
Shaft A: Cylindrical shaft ø25
Parallel key 8x7x32



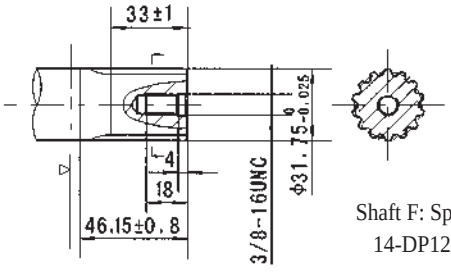
Shaft B: Cylindrical shaftø32
Parallel key 10x8x45



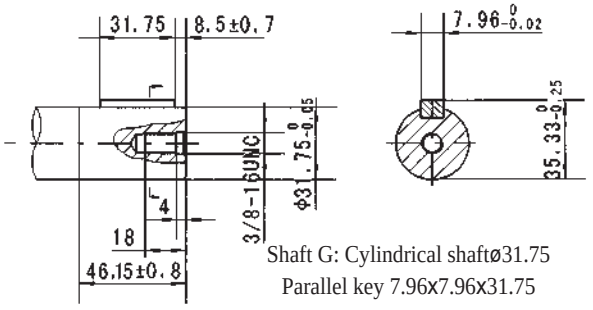
Shaft C: Cylindrical shaft ø25.4
Parallel key 6.35x6.35x31.75



Shaft E: Splined SAE 6B



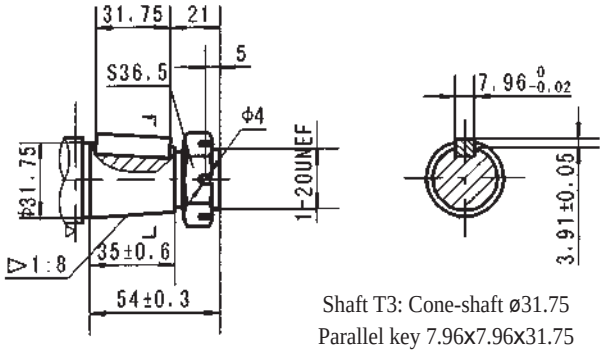
Shaft F: Splined
14-DP12/24



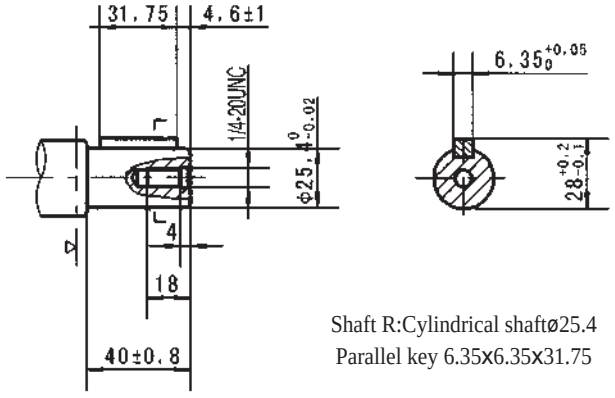
Shaft G: Cylindrical shaftø31.75
Parallel key 7.96x7.96x31.75

▷ Motor Mounting Surface

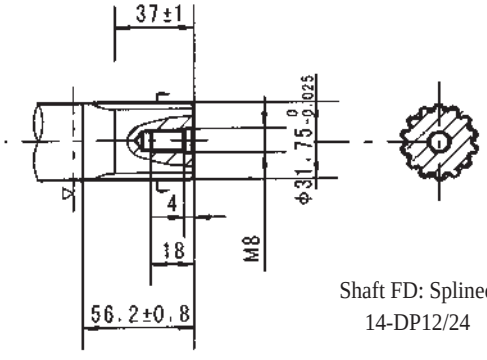
HBMP SHAFT EXTENSIONS DIMENSIONS DATA



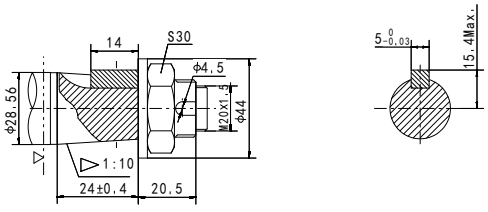
Shaft T3: Cone-shaft ø31.75
Parallel key 7.96x7.96x31.75
Tightening torque:200±10Nm



Shaft R:Cylindrical shaftø25.4
Parallel key 6.35x6.35x31.75



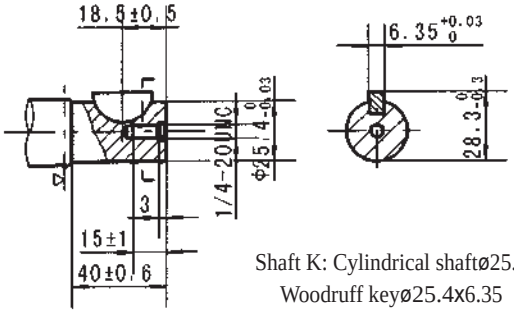
Shaft FD: Splined
14-DP12/24



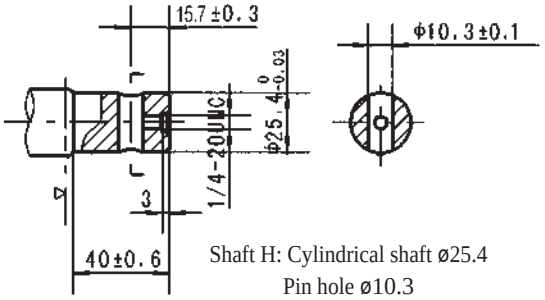
Shaft T: Cone-shaft ø28.56
Parallel key B5x5x14
Tightening torque:100±10Nm

▷ Motor Mounting Surface

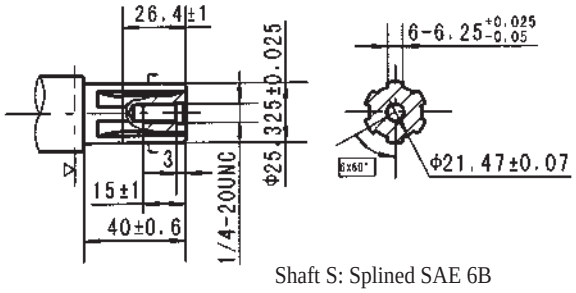
HBMPH SHAFT EXTENSIONS DIMENSIONS DATA



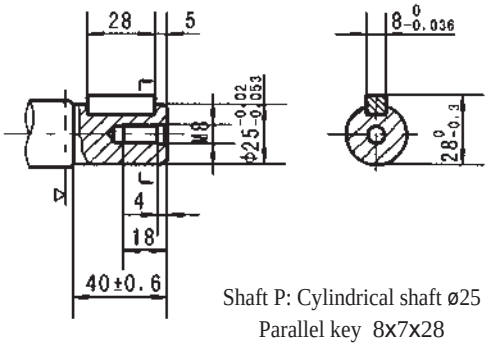
Shaft K: Cylindrical shaftø25.4
Woodruff keyø25.4x6.35



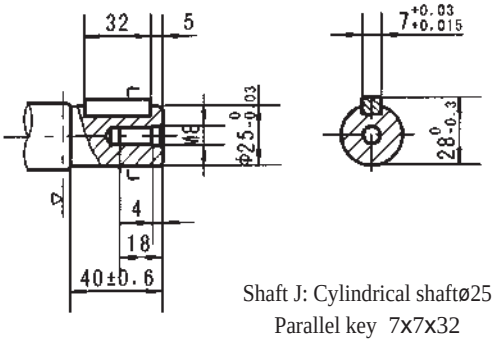
Shaft H: Cylindrical shaft ø25.4
Pin hole ø10.3



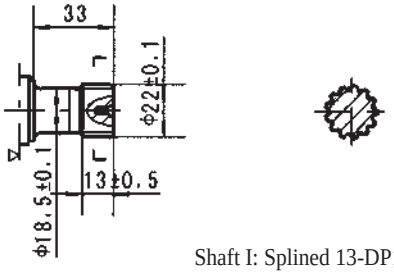
Shaft S: Splined SAE 6B



Shaft P: Cylindrical shaft ø25
Parallel key 8x7x28



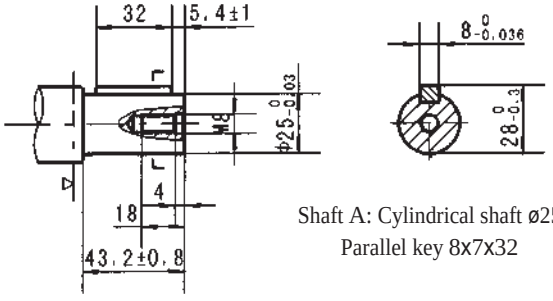
Shaft J: Cylindrical shaftø25
Parallel key 7x7x32



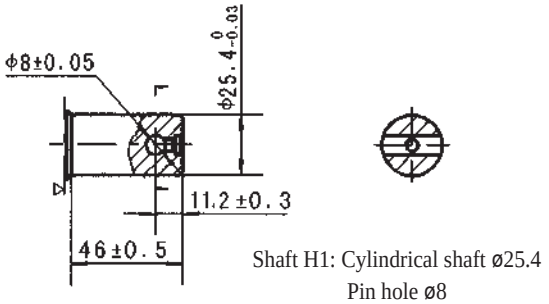
Shaft I: Splined 13-DP16/32

▷ Motor Mounting Surface

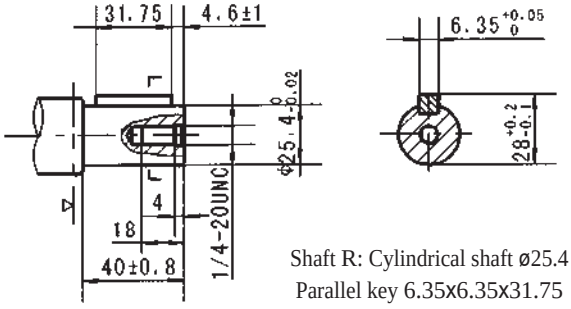
HBMPH SHAFT EXTENSIONS DIMENSIONS DATA



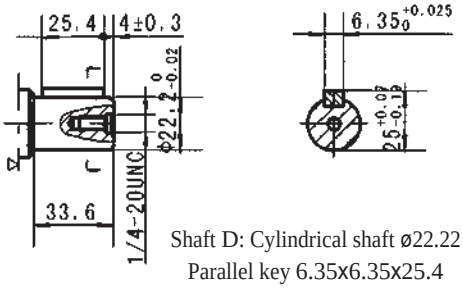
Shaft A: Cylindrical shaft ø25
Parallel key 8x7x32



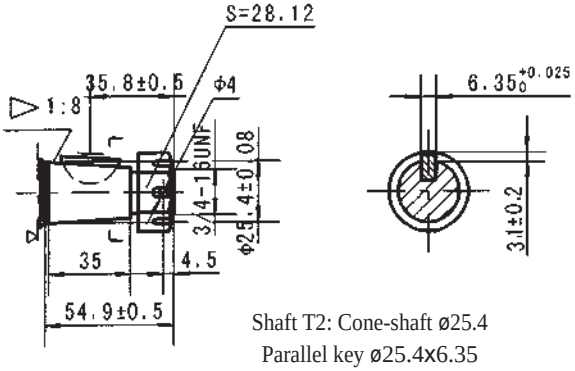
Shaft H1: Cylindrical shaft ø25.4
Pin hole ø8



Shaft R: Cylindrical shaft ø25.4
Parallel key 6.35x6.35x31.75



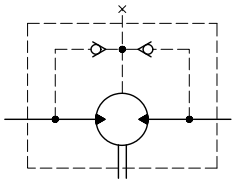
Shaft D: Cylindrical shaft ø22.22
Parallel key 6.35x6.35x25.4



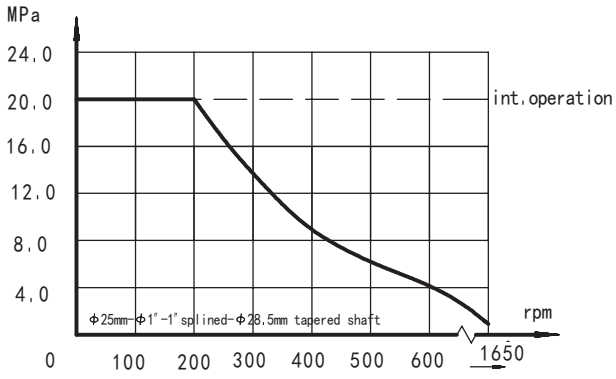
Shaft T2: Cone-shaft ø25.4
Parallel key ø25.4x6.35
Tightening torque:200±10Nm

▷ Motor Mounting Surface

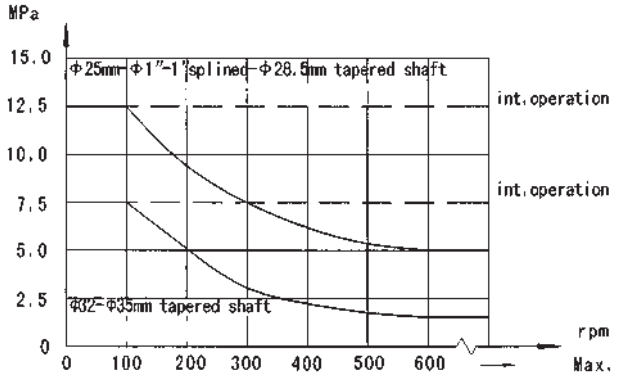
HBMP、HBMPH Series Hydraulic Motor



Permissible shaft seal pressure



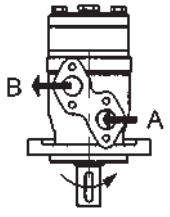
High pressure shaft seal



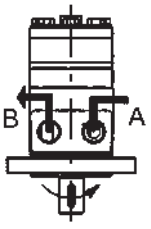
In applications without drain line, output shaft seal exceeds a bit of the pressure in the return line. When applications use the drain line, the pressure of output shaft seal equals the pressure in drain line.

Direction of shaft rotation: Standard

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

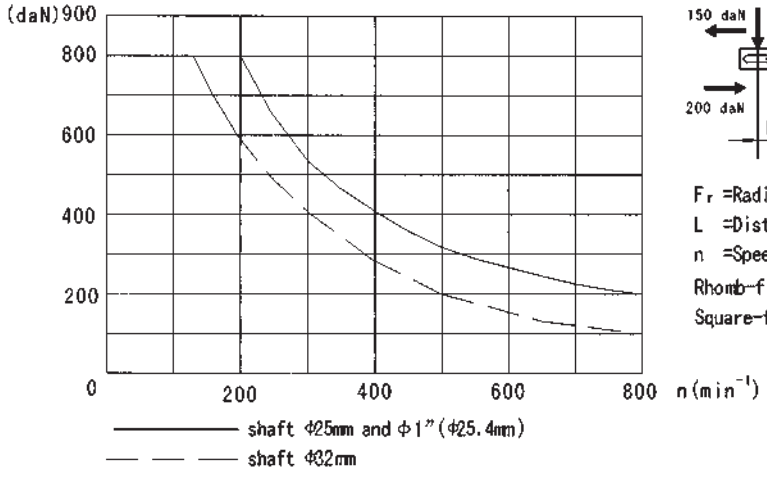


BMP

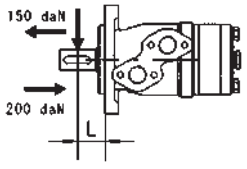


BMPH

Status of the shaft's 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

Oil flow in drain line

The table shows the Max. oil flow in the drain line at a return pressure less than 0.5-1MPa.

Pressure drop (MPa)	Viscosity (mm^2/s)	Oil flow in the drain line (L/min.)
10	20	2.5
	35	1.8
14	20	3.5
	35	2.8

Order Information

1	2	3	4	5	6	7	8
HBMP	–	–	–	–	–	–	–

Pos.1	2	3		4		5		6		7		8	
Code	Disp.	Flange		Output Shaft		Ports and Drain Port		Rotation Direction		Paint		Unusually Function	
HBMP	36 50 80 100 125 160 200 250 315 400 500	2 4 H4 H5	2-Ø13.5 Rhomb-flange , pilot Ø82.5×8 4-Ø13.5 Rhomb-flange , pilot Ø82.5×8 4-3/8-16 Square-flange , pilot Ø44.4×2.8 4-M10 Square-flange , pilot Ø44.4×2.8	A C E R T B F FD G T3	Shaft Ø25,parallel key 8x7x32 Shaft Ø25.4,parallel key 6.35x6.35x31.75 Shaft Ø25.4,splined tooth SEA 6B Short shaft Ø25.4,parallel key6.35x6.35x31.75 Cone shaft Ø28.56,parallel key B5x5x14 Shaft Ø32,parallel key 10x8x45 Shaft Ø31.75,splined tooth 14-DP12/24 Long shaft Ø31.75,splined tooth14-DP12/24 Shaft Ø31.75, parallel key 7.96x7.96x31.75 Cone shaft Ø31.75,parallel key 7.96x7.96x25.4	D M S P R	G1/2 Manifold Mount 4×M8, G1/4 M22×1.5 Manifold Mount 4×M8, M14×1.5 7/8-14 O-ring manifold 4x5/16-18UNC, 7/16-20UNF 1/2-14 NPTF Manifold 4x5/16-18UNC, 7/16-20UNF PT(Rc)1/2 Manifold 4xM8, PT(Rc)1/4	Omit R	Standard Opposite	00 Omit B S	No paint Blue Black Silver grey	Omit N1 0 F LS	Standard Big radial force No case drain Free Running Low Speed

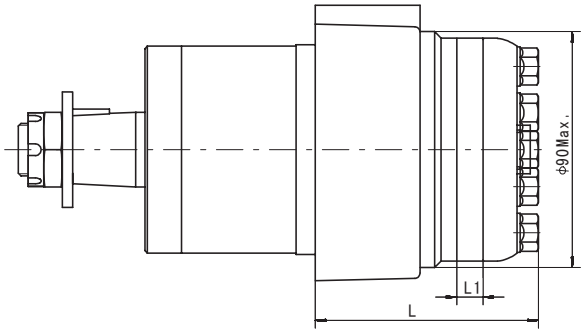
Note:The shafts of B\F\FD\G\T1\T3 are only suitable for flanges of 2 and 4.

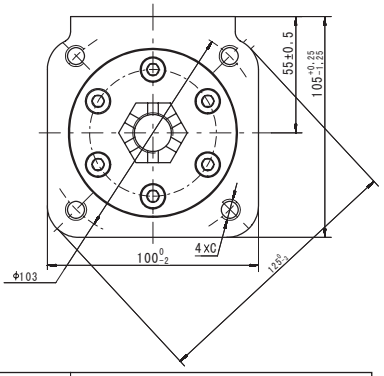
1	2	3	4	5	6	7	8
HBMPH	–	–	–	–	–	–	–

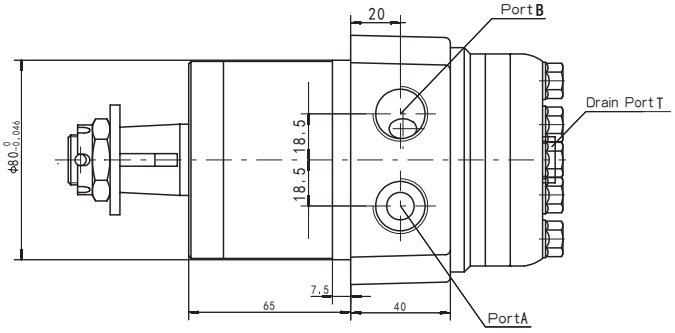
Pos.1	2	3		4		5		6		7		8	
Code	Disp.	Flange		Output Shaft		Ports and Drain Port		Rotation Direction		Paint		Unusually Function	
HBMPH	36 50 80 100 125 160 200 250 315 400 500	H2 H6 H4 H5	2-Ø13.5 Rhomb-flange , pilot Ø82.5×2.8 4-Ø13.5 Rhomb-flange , pilot Ø82.5×2.8 4-3/8-16 Square-flange , pilot Ø44.4×2.8 4-M10 Square-flange , pilot Ø44.4×2.8	K S A R H H1 D I T2 P J	Shaft Ø25.4, woodruff key Ø25.4×6.35 Shaft Ø25.4 , splined tooth SEA 6B Shaft Ø25 , parallel key 8×7×32 Shaft Ø25.4, parallel key 6.35×6.35×31.75 Shaft Ø25.4 , pin hole Ø10.3 Shaft Ø25.4 , pin hole Ø8 Shaft Ø22.22, parallel key 6.35×6.35×25.4 Shaft Ø22.22, splined tooth 13-DP16/32 Cone shaft Ø25.4 , woodruff key Ø25.4×6.35 Shaft Ø25 , parallel key 8×7×28 Shaft Ø25 , parallel key 7×7×32	G S P T R B4 B5	G1/2, G1/4 7/8-14 O-ring ,7/16-20UNF 1/2-14 NPTF, 7/16-20UNF 3/4-16 O-ring, 7/16-20UNF PT(Rc)1/2 ,PT(Rc)1/4 Ø10 O-ring manifold 4x5/16-18UNC,7/16-20UNF Ø10 O-ring manifold 4xM8, 7/16-20UNF	Omit R	Standard Opposite	00 Omit B S	No paint Blue Black Silver grey	Omit N1 0 F LS	Standard Big radial force No case drain Free Running Low Speed

Note:When the table is used, please fill the code of left rows in dash area 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.

HBMPW DIMENSIONS AND MOUNTING DATA







Model	L	L1
HBMPW50	81	7
HBMPW80	84.5	10.5
HBMPW100	87	13
HBMPW125	90	16
HBMPW160	95	21
HBMPW200	100	26
HBMPW250	106	32
HBMPW315	116	42
HBMPW400	126	52
HBMPW500	139	65

Mounting \ Code	G (depth)	S (depth)	M (depth)
P(A,B)	G1/2 (15)	7/8-14 O-ring (17)	M22×1.5 (15)
T	G1/4 (12)	7/16-20UNF (12)	M14×1.5 (12)
C	4×M10(20)	4×3/8-16UNC(20)	4×M10(20)

Order Information

Pos.1	2	3	4	5	6	7	8
Code		Flange	Output shaft	Ports and drain port	Rotation direction	Paint	Unusually function
HBMPW	50	Omit Wheel-flange pilat Ø80×7.5	A Shaft Ø25k6 ,Parallel key 8×7×32	G G1/2, G1/4	Omit Standard	00 No paint	Omit Standard
	80		C Shaft Ø25.4 ,Parallel key 6.35×6.35×31.75	S 7/8-14 O-ring,	R Opposite	B Blue	N1 Big radial force
	100		E Shaft Ø25.4 ,Splined key SAE 6B	7/16-20UNF		S Black	0 No case drain
	125		T Cone shaft Ø28.56 ,Parallel key B5×5×14	M M22×1.5,M14×1.5		Silver grey	
	160						
	200						
	250						
	315						
	400						
	500						

Note:When the table is used, please fill the code of left rows in the table 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.

HOZ SERIES HYDRAULIC MOTOR

HOZ series motor are small volume, economical type, which is designed with shaft distribution flow, which adapt the Gerotor gear set design and provide compact volume, high power and low weight.

Characteristic features:

* Advanced manufacturing devices for the Gerotor gear set, which provide small volume, high efficiency and long life.
* Shaft seal can bear high pressure of motor of which can be used in parallel or in series.
* Advanced construction design, high power and low weight.

Main Specification

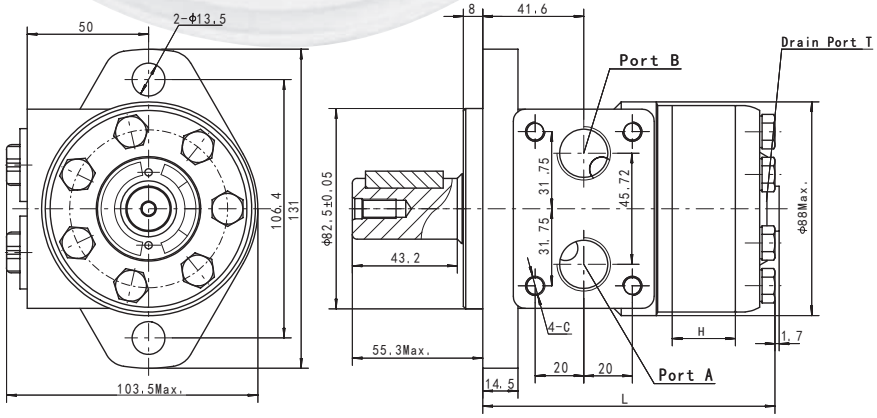
Technical data for HOZ with 25 and 1 in and 1 in splined and 28.56 tapered shaft

Code	Displacement [cm/rev]	Max.Speed [rpm]	Max.Torque [Nm]		Max.output [kW]		Max.pressure [MPa]		Max.Oil Flow[L/min]
		cont.	cont.	int.	cont.	int.	cont.	int.	cont.
HOZ 36	36	1081	51	68	5.2	8.6	10.5	14	40
HOZ 50	51.7	774	73	96	5.2	8.6	10.5	14	40
HOZ 80	77.7	515	106	143	5.2	8.6	10.5	14	40
HOZ 100	96.2	416	140	178	5.2	8.6	10.5	14	40
HOZ 125	120.2	339	162	218	5.2	8.6	10.5	14	40
HOZ 160	157.2	257	216	288	5.2	8.6	10.5	14	40
HOZ 200	194.5	211	264	351	5.2	8.6	10.5	14	40
HOZ 250	240.3	173	281	351	4.6	7	9	11.5	40
HOZ 315	314.5	128	312	433	3.4	5.8	7	10.5	40
HOZ 400	389.5	104	392	582	3.4	5.8	7	10.5	40

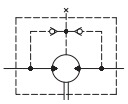
* Intermittent operation: the permisssible values may occur for max.10% of every minute

HOZ DIMENSIONS AND MOUNTING DATA

Type	H	L
HOZ36	7	101
HOZ50	7	101
HOZ80	10.5	104.5
HOZ100	13	107
HOZ125	16	110
HOZ160	21	115
HOZ200	26	120
HOZ250	32	126
HOZ315	42	136
HOZ400	52	146

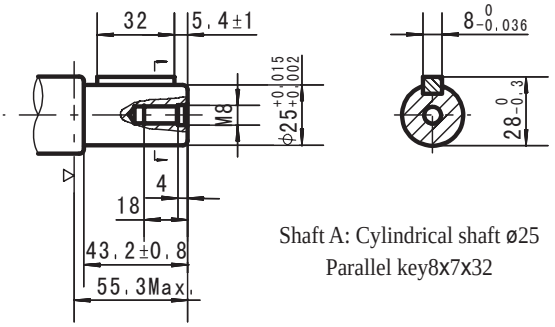


Mounting \ Code	D (depth)	M (depth)	S (depth)	P (depth)	R (depth)
P(A,B)	G1/2 (15)	M22 x 1.5 (15)	7/8-14 O-ring (16.7)	1/2-14NPTF (15)	PT(RC)1/2 (15)
C	4-M8 (13)	4-M8 (13)	4-5/16-18UNC(13)	4-5/16-18UNC(13)	4-M8 (13)
T	G1/4 (12)	M14 x 1.5 (12)	7/16-20UNF (12)	7/16-20UNF (12)	PT(RC)1/4 (9.7)

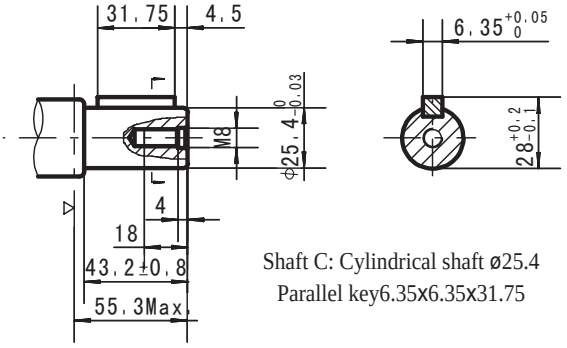


Direction of shaft rotation: Standard
When facing shaft end of motor,shaft to rotate:
Clockwise when port "A" is pressurized.
Counter-clockwise when port "B" is pressurized.

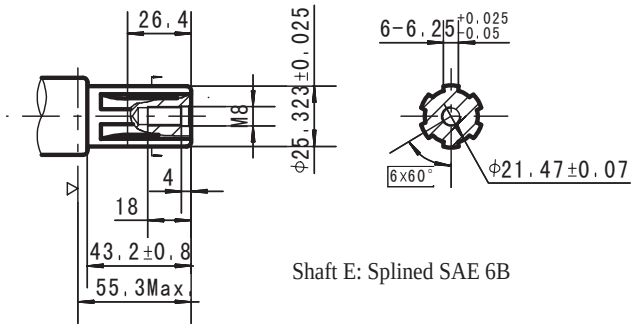
SHAFT EXTENSIONS FOR HOZ MOTORS



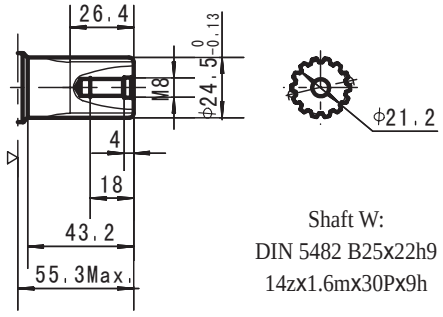
Shaft A: Cylindrical shaft ø25
Parallel key8x7x32



Shaft C: Cylindrical shaft ø25.4
Parallel key6.35x6.35x31.75



Shaft E: Splined SAE 6B



Shaft W:
DIN 5482 B25x22h9
14zx1.6mx30Px9h

▷ Motor Mounting Surface

Order Information

HOZ — 1 — 2 — 3 — 4 — 5 — 6 — 7 — 8

Pos.1	2	3	4			5		6		7		8	
Code	Disp.	Flange	Output Shaft			Ports and Drain Port		Rotation Direction		Paint		Unusually Function	
Omit	36	2-ø13.5 Rhomb-flange , pilot ø82.5×8	A	Shaft ø25 , parllel key 8×7×32	D	G1/2 Manifold 4×M8, G1/4	Omit	Standard	00	No paint	Omit	Standard
	50		C	Shaft ø25.4 , parllel key 6.35×6.35×31.75	M	M22×1.5 Manifold4×M8,M14×1.5	R	Opposite	Omit	Blue	F	Free Running
	80		E	Shaft ø25.4, splined key SEA 6B	S	7/8-14 O-ring manifold			B	Black	0	No case drain
	100		W	Shaft ø24.5, splined B25X22	P	4×5/16-18UNC,7/16-20UNF 1/2-14NPTF manifold			S	Silver grey		
	125		T	Cone shaft ø28.56, parllel key B5×5×14	R	4×5/16-18UNC,7/16-20UNF PT(Rc)1/2 manifold 4×M8, PT(Rc)1/4						
	160												
	200												
	250												
	315												
	400												

HBMR SERIES HYDRAULIC MOTOR

HBMR series motor adapt the advanced Geroler gear set design with shaft distribution flow, which can automatically compensate in operating with high pressure, provide reliable and smooth operation, high efficiency and long life.

Characteristic features:

*Advanced manufacturing devices for the Gerolor gear set, which use low pressure of start-up, provide smooth, reliable operation and high efficiency.

*Shaft seal can bear high pressure of back and the motor can be used in parallel or in series.

*Special design in the driver-linker and prolong operating life

*Special design for distribution system can meet the requirement of low noise of unit.

*Compact volume and easy installation

Main Specification

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

Type		HBMR HBMRS 36	HBMR HBMRS 50	HBMR HBMRS 80	HBMR HBMRS 100	HBMR HBMRS 125	HBMR HBMRS 160	HBMR HBMRS 200	HBMR HBMRS 250	HBMR HBMRS 315	HBMR HBMRS 375
Geometric displacement (cm^3/rev.)		36	51.7	81.5	102	127.2	157.2	194.5	253.3	317.5	381.4
Max. speed (rpm)	cont.	1085	960	750	600	475	378	310	240	190	155
	int.	1220	1150	940	750	600	475	385	300	240	190
Max. torque (N•m)	cont.	72	100	195	240	300	360	360	390	390	365
	int.	83	126	220	280	340	430	440	490	535	495
	peak	105	165	270	320	370	460	560	640	650	680
Max. output (kW)	cont.	8.5	9.5	12.5	13.0	12.5	12.5	10.0	7.0	6.0	5.0
	int.	9.8	11.2	15.0	15.0	14.5	14.0	13.0	9.5	9.0	8.0
Max. pressure drop (MPa)	cont.	14.0	14	17.5	17.5	17.5	16.5	13	11	9	7
	int.	16.5	17.5	20	20	20	20	17.5	15	13	10
	peak	22.5	22.5	22.5	22.5	22.5	22.5	22.5	20	17.5	15
Max. flow (L/min)	cont.	40	50	60	60	60	60	60	60	60	60
	int.	45	60	75	75	75	75	75	75	75	75
Weight (kg)		6.5	6.7	6.9	7	7.3	7.6	8.0	8.5	9.0	9.5

* Continuous pressure:Max.value of operating motor continuously.

* Intermittent pressure:Max.value of operating motor in 6 seconds per minute .

* Peak pressure:Max.value of operating motor in 0.6 second per minute.

Main Specification

Technical data for HBMR with 31.75 and 32 shaft

Type		HBMR 36	HBMR 50	HBMR 80	HBMR 100	HBMR 125	HBMR 160	HBMR 200	HBMR 250	HBMR 315	HBMR 375
Geometric displacement (cm^3/rev.)		36	51.7	81.5	102	127.2	157.2	194.5	253.3	317.5	381.4
Max. speed (rpm)	cont.	1085	960	750	600	475	378	310	240	190	155
	int.	1220	1150	940	750	600	475	385	300	240	190
Max. torque (N•m)	cont.	72	100	195	240	300	380	450	540	550	580
	int.	83	126	220	280	340	430	500	610	690	690
	peak	105	165	270	320	370	460	560	710	840	830
Max. output (kW)	cont.	8.5	9.5	12.5	13.0	12.5	12.5	11.0	10.0	9.0	7.5
	int.	9.8	11.2	15.0	15.0	14.5	14.0	13.0	12.0	10.0	9.0
Max. pressure drop (MPa)	cont.	14.0	14	17.5	17.5	17.5	17.5	17.5	17.5	13.5	11.5
	int.	16.5	17.5	20	20	20	20	20	20	17.5	15
	peak	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5	21	17.5
Max. flow (L/min)	cont.	40	50	60	60	60	60	60	60	60	60
	int.	45	60	75	75	75	75	75	75	75	75
Weight (kg)		6.5	6.7	6.9	7	7.3	7.6	8.0	8.5	9.0	9.5

* Continuous pressure:Max.value of operating motor continuously.
* Intermittent pressure:Max.value of operating motor in 6 seconds per minute .
* Peak pressure:Max.value of operating motor in 0.6 second per minute.

Performance Data

HBMR 36 [36cm³/rev.]

Pressure (MPa)

Flow (L/min)	2	3	5	7	9	10	12.5	14.0 Max.cont.	16.5 Max.int.
4	10	16	25	37	46	50			
	105	**100**	**92**	**80**	**71**	**58**			
8	9	15	25	37	47	50	63	71	83
	208	**200**	**188**	**175**	**158**	**149**	**134**	**120**	**108**
15	8	14	23	36	45	51	64	72	82
	403	**392**	**380**	**365**	**348**	**326**	**318**	**302**	**274**
20	6	13	22	35	44	50	64	72	82
	540	**531**	**518**	**500**	**483**	**462**	**450**	**435**	**412**
30	6	12	21	32	42	47	63	70	80
	810	**798**	**780**	**763**	**742**	**722**	**705**	**694**	**668**
40 Max.cont.	5	11	19	30	41	45	61	68	79
	1092	**1080**	**1069**	**1056**	**1042**	**1028**	**1011**	**984**	**957**
45 Max.int.	4	10	17	29	40	44	59	66	77
	1230	**1215**	**1194**	**1170**	**1150**	**1128**	**1100**	**1070**	**1020**

HBMR 50 [51.7cm³/rev.]

Pressure (MPa)

Flow (L/min)	5	7	9	10	12	14 Max.cont.	16	17.5 Max.int.
5	35	45	61	67	77	88		
	93	**84**	**76**	**73**	**69**	**46**		
10	36	46	62	69	80	95	108	120
	186	**178**	**166**	**162**	**153**	**136**	**118**	**97**
15	35	49	63	73	88	100	109	123
	283	**277**	**269**	**261**	**250**	**230**	**211**	**185**
20	34.5	47	61	69	83	96	109	126
	377	**375**	**365**	**361**	**346**	**330**	**302**	**270**
30	33	44	60	67	80	95	108	126
	576	**569**	**561**	**554**	**542**	**531**	**500**	**465**
40	30	41	58	66	79	92	106	122
	760	**758**	**753**	**750**	**738**	**724**	**700**	**670**
45	29.5	40	57	65	78	90	105	121
	856	**853**	**849**	**845**	**835**	**815**	**796**	**770**
50 Max.cont.	26	37	53	60	73	85	99	114
	950	**940**	**925**	**906**	**880**	**852**	**832**	**801**
60 Max.int.	20	33	48	56	69	81	95	109
	1138	**1124**	**1100**	**1075**	**1056**	**1028**	**1006**	**970**

HBMR 80 [81.5cm³/rev.]

Pressure (MPa)

Flow (L/min)	5	7	9	10	12	14	16 Max.cont.	17.5	20 Max.int.
5	50	64	88	108	133				
	59	**56**	**50**	**44**	**38**				
10	54	77	99	108	129	150	173		
	118	**113**	**106**	**97**	**86**	**79**	**56**		
20	57	78.0	102	111	134	155	177	196	225
	238	**234**	**227**	**216**	**203**	**190**	**178**	**154**	**135**
30	54	75	100	108	131	152	176	195	223
	360	**352**	**340**	**332**	**316**	**302**	**290**	**274**	**250**
40	48	73	96	105	127	148	172	190	220
	480	**470**	**458**	**445**	**430**	**418**	**403**	**388**	**359**
50	42	70	93	102	124	147	170	188	218
	604	**595**	**582**	**570**	**556**	**540**	**521**	**504**	**487**
60 Max.cont.	37	66	89	98	121	144	166	184	213
	726	**715**	**704**	**692**	**678**	**663**	**647**	**622**	**594**
70	32	60	83	95	116	140	160	177	208
	845	**834**	**820**	**802**	**789**	**767**	**754**	**730**	**705**
75 Max.int.	21	50	78	90	111	135	154	171	200
	910	**895**	**881**	**867**	**852**	**830**	**806**	**787**	**756**

Torque (N•m) 135
Speed (rpm) **830**

HBMR 100 [102cm³/rev.]

Pressure (MPa)

Flow (L/min)	5	7	9	10	12	14	16 Max.cont.	17.5	20 Max.int.
5	66	92	120	135	156				
	45	**42**	**38**	**34**	**27**				
10	68	96	125	138	159	188	212		
	93	**90**	**86**	**81**	**74**	**57**	**42**		
20	65	94.0	123	137	155	186	210	238	274
	189	**185**	**180**	**173**	**165**	**158**	**150**	**139**	**118**
30	63	92	120	133	153	185	209	235	270
	286	**281**	**275**	**266**	**257**	**246**	**237**	**225**	**207**
40	57	88	117	130	152	185	208	233	267
	385	**378**	**365**	**355**	**345**	**332**	**320**	**314**	**297**
50	48	79	110	123	150	183	204	228	260
	482	**477**	**470**	**460**	**448**	**435**	**420**	**405**	**389**
60 Max.cont.	38	70	105	120	144	178	200	220	252
	580	**572**	**560**	**548**	**535**	**523**	**510**	**500**	**478**
70	32	65	100	118	141	176	197	215	246
	678	**670**	**660**	**648**	**638**	**626**	**615**	**606**	**580**
75 Max.int.	23	59	93	111	136	170	192	210	240
	728	**720**	**710**	**695**	**681**	**667**	**650**	**634**	**618**

cont.
int.

Performance Data

HBMR 125 [127.2cm³/rev.]

Pressure (MPa)

Flow (L/min)	5	7	9	10	12	14	16 (Max.cont.)	17.5	20 (Max.int.)
5	76	110	145	167	189				
	36	**31**	**25**	**19**	**13**				
10	84	118	155	176	202	228	253		
	73	**70**	**60**	**48**	**36**	**25**	**19**		
20	82	117	153	174	200	230	259	294	332
	153	**151**	**148**	**144**	**138**	**128**	**117**	**104**	**73**
30	79	116	151	171	198	228	257	292	329
	231	**228**	**224**	**218**	**210**	**201**	**183**	**168**	**137**
40	72	114	148	168	196	226	256	290	327
	309	**307**	**303**	**298**	**292**	**280**	**270**	**252**	**218**
50	62	105	143	165	195	223	254	287	323
	389	**386**	**382**	**378**	**370**	**360**	**344**	**328**	**292**
60 (Max.cont.)	52	98	136	160	191	220	250	282	319
	467	**463**	**459**	**456**	**448**	**427**	**410**	**399**	**352**
70	41	90	130	156	187	215	242	278	313
	545	**542**	**538**	**534**	**529**	**520**	**508**	**486**	**430**
75 (Max.int.)	32	79	126	148	180	208	234	262	300
	586	**583**	**578**	**570**	**560**	**546**	**532**	**520**	**480**

HBMR 160 [157.2cm³/rev.]

Pressure (MPa)

Flow (L/min)	5	7	9	10	12	14	16 (Max.cont.)	17.5	20 (Max.int.)
5	104	146	190	210	245				
	26	**23**	**20**	**16**	**10**				
10	107	150	195	216	250	290	335		
	59	**56**	**50**	**45**	**37**	**30**	**22**		
20	102	151	198	220	257	298	342	370	420
	121	**118**	**115**	**113**	**108**	**102**	**97**	**90**	**78**
30	97	146	190	217	256	295	340	368	416
	184	**178**	**173**	**170**	**164**	**155**	**143**	**128**	**103**
40	89	140	185	210	252	290	335	363	412
	246	**241**	**235**	**228**	**220**	**210**	**194**	**177**	**150**
50	72	128	179	202	244	284	327	358	409
	310	**307**	**300**	**295**	**287**	**278**	**262**	**247**	**210**
60 (Max.cont.)	60	116	170	198	240	279	321	352	400
	374	**367**	**359**	**354**	**346**	**338**	**323**	**306**	**265**
70	49	107	164	193	233	271	309	344	390
	437	**430**	**421**	**415**	**403**	**393**	**381**	**365**	**318**
75 (Max.int.)	36	98	152	185	226	265	300	334	379
	472	**463**	**450**	**441**	**431**	**420**	**405**	**389**	**365**

HBMR 200 [194.5cm³/rev.]

Pressure (MPa)

Flow (L/min)	5	7	9	10	12	14	16 (Max.cont.)	17.5	20 (Max.int.)
5	132	181	238	262	310				
	24	**22**	**18**	**13**	**10**				
10	135	186	240	264	315	356	403		
	49	**47**	**45**	**43**	**38**	**33**	**24**		
20	131	183	238	260	314	358	404	438	498
	99	**97**	**94**	**92**	**88**	**83**	**74**	**64**	**56**
30	126	178	233	254	311	355	402	431	486
	149	**147**	**144**	**141**	**135**	**126**	**113**	**105**	**91**
40	112	169	228	250	307	352	400	426	477
	200	**197**	**194**	**191**	**185**	**174**	**160**	**151**	**127**
50	95	156	221	246	300	350	398	421	470
	252	**249**	**246**	**243**	**238**	**228**	**212**	**194**	**161**
60 (Max.cont.)	78	145	213	238	289	342	386	412	459
	304	**301**	**298**	**294**	**286**	**276**	**262**	**243**	**218**
70	67	135	206	228	277	336	375	408	453
	355	**353**	**349**	**340**	**329**	**316**	**300**	**288**	**257**
75 (Max.int.)	58	125	197	220	270	321	360	398	442
	382	**379**	**373**	**362**	**350**	**337**	**322**	**312**	**278**

cont.

int.

HBMR 250 [253.5cm³/rev.]

Pressure (MPa)

Flow (L/min)	5	7	9	10	12	14	16 (Max.cont.)	17.5	20 (Max.int.)
5	175	243	304	342	407				
	17	**16**	**14**	**12**	**10**				
10	178	246	310	344	409	465	525		
	37	**35**	**31**	**28**	**23**	**18**	**11**		
20	175	244	308	340	408	463	520	558	636
	75	**73**	**72**	**70**	**66**	**58**	**53**	**50**	**42**
30	162	235	304	332	400	455	516	550	621
	114	**111**	**108**	**106**	**100**	**92**	**83**	**77**	**65**
40	143	223	300	329	396	447	512	546	617
	154	**152**	**150**	**147**	**143**	**132**	**120**	**110**	**90**
50	124	208	289	323	384	440	503	535	600
	193	**190**	**187**	**174**	**168**	**160**	**149**	**140**	**116**
60 (Max.cont.)	103	192	280	314	371	426	489	514	578
	233	**230**	**227**	**224**	**218**	**205**	**190**	**181**	**155**
70	88	178	264	301	356	418	479	498	560
	273	**270**	**267**	**263**	**252**	**242**	**226**	**209**	**173**
75 (Max.int.)	62	165	256	288	347	412	474	486	542
	294	**291**	**287**	**283**	**274**	**263**	**249**	**236**	**211**

Torque (N•m) 256
Speed (rpm) **287**

Performance Data

HBMR 315 [317.5cm³/rev.]

Pressure (MPa)

Flow (L/min)	5	7	9	10	12	14 (Max.cont.)	16	17.5 (Max.int.)
5	215 / **13**	302 / **11**						
10	218 / **28**	305 / **27**	383 / **25**	422 / **24**	488 / **21**	551 / **18**	622 / **13**	
20	215 / **60**	303 / **59**	380 / **57**	418 / **55**	485 / **52**	549 / **49**	620 / **45**	660 / **42**
30	204 / **91**	296 / **89**	375 / **86**	413 / **84**	480 / **81**	542 / **78**	613 / **72**	654 / **67**
40	196 / **122**	287 / **120**	368 / **117**	410 / **112**	477 / **106**	539 / **100**	609 / **94**	650 / **85**
50	176 / **154**	270 / **151**	356 / **147**	393 / **140**	461 / **131**	526 / **120**	597 / **109**	645 / **100**
Max.cont. 60	162 / **185**	246 / **182**	339 / **177**	374 / **172**	446 / **163**	511 / **152**	586 / **140**	628 / **134**
70	143 / **217**	235 / **213**	324 / **208**	358 / **201**	430 / **190**	493 / **178**	562 / **166**	614 / **158**
Max.int. 75	125 / **232**	212 / **228**	303 / **222**	339 / **216**	417 / **208**	481 / **200**	543 / **183**	582 / **171**

Torque (N•m) 481
Speed (rpm) **200**

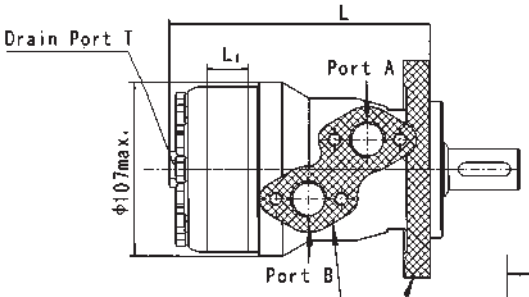
HBMR 375 [381.4cm³/rev.]

Pressure (MPa)

Flow (L/min)	3	4.5	5.5	6.5	8	10 (Max.cont.)	12.5	14 (Max.int.)
5	153 / **12**	232 / **10**						
10	157 / **24**	236 / **23**	284 / **22**	337 / **21**	406 / **19**	497 / **17**	612 / **15**	668 / **12**
20	150 / **49**	232 / **48**	280 / **47**	332 / **46**	401 / **44**	490 / **41**	606 / **38**	660 / **32**
30	142 / **76**	215 / **75**	274 / **74**	327 / **73**	398 / **71**	483 / **67**	603 / **63**	652 / **50**
40	126 / **103**	212 / **101**	268 / **99**	320 / **97**	393 / **95**	477 / **92**	593 / **88**	635 / **70**
50	105 / **128**	187 / **126**	242 / **124**	302 / **121**	376 / **118**	455 / **115**	583 / **111**	608 / **96**
Max.cont. 60	90 / **154**	167 / **152**	229 / **150**	281 / **148**	362 / **145**	444 / **138**	566 / **130**	600 / **121**
70	90 / **180**	149 / **179**	200 / **178**	258 / **176**	341 / **173**	425 / **168**	546 / **160**	580 / **148**
Max.int. 75	56 / **195**	125 / **194**	182 / **193**	241 / **191**	320 / **189**	408 / **185**	524 / **178**	565 / **170**

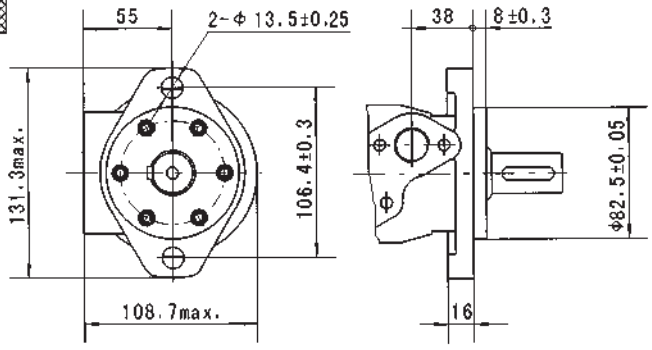
cont.
int.

HBMR DIMENSIONS AND MOUNTING DATA

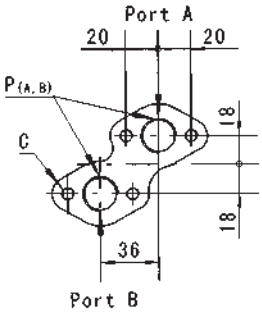


MOUNTING

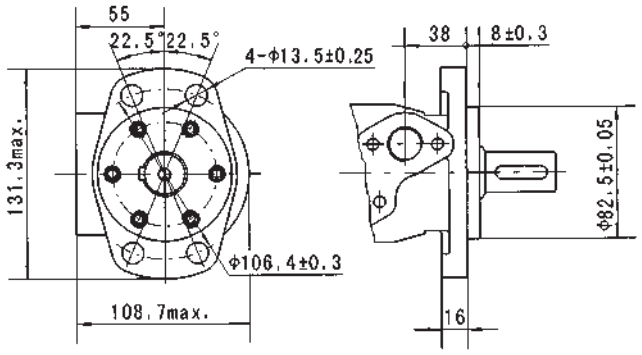
Flange 2



PORT

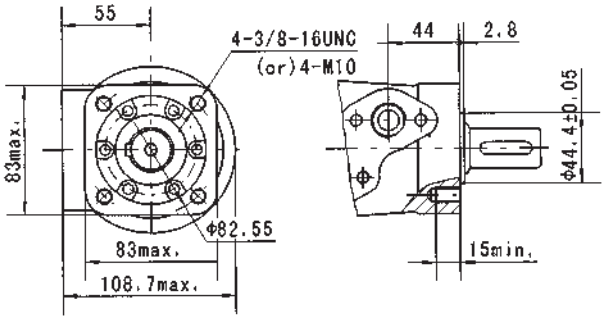


Flange 4



Model	L	L1
HBMR36	137	7
HBMR50	140	10
HBMR80	146	16
HBMR100	150	20
HBMR125	155	25
HBMR160	160.5	30.5
HBMR200	168	38.1
HBMR250	180	50
HBMR315	192	62
HBMR375	204	74

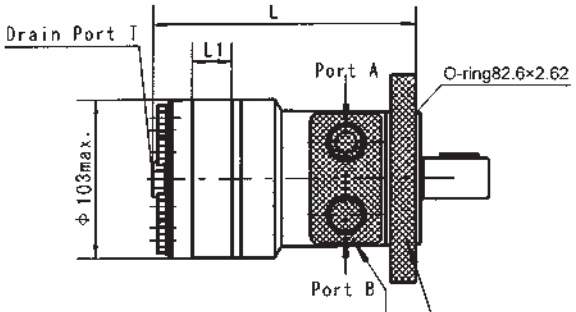
Flange H4/H5



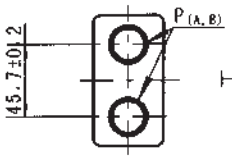
Code / Mounting	D (depth)	M (depth)	S (depth)	P (depth)	R (depth)
P(A,B)	G1/2 (15)	M22 x 1.5 (15)	7/8-14 O-ring (17)	1/2-14NPTF (15)	PT(RC)1/2 (15)
C	4-M8 (13)	4-M8 (13)	4-5/16-18UNC(13)	4-5/16-18UNC(13)	4-M8 (13)
T	G1/4 (12)	M14 x 1.5 (12)	7/16-20UNF (12)	7/16-20UNF (12)	PT(RC)1/4 (9.7)

HBMRS DIMENSIONS AND MOUNTING DATA

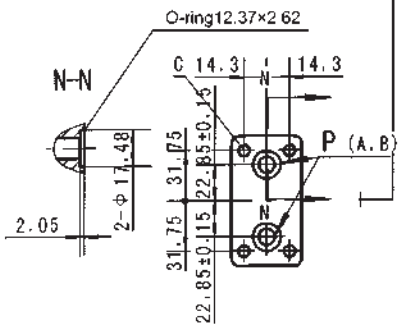
MOUNTING



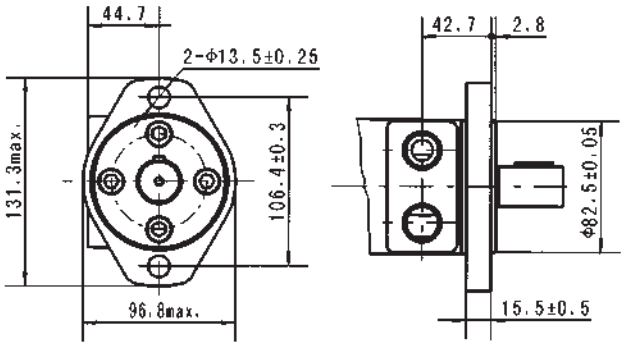
PORT: G、S、P、R、M1、M2、M3



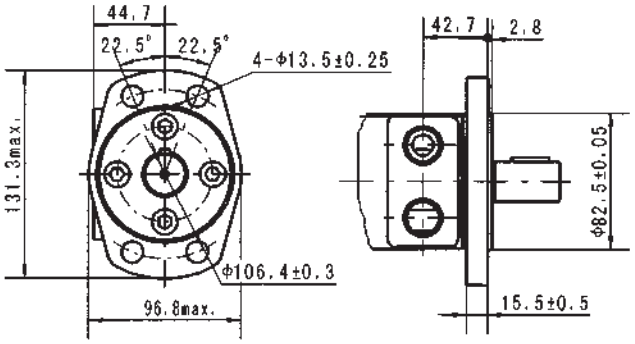
PORT: B4、B5



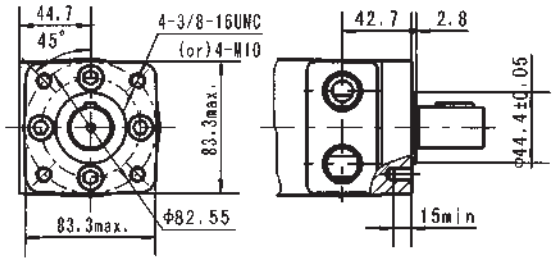
Flange H2



Flange H6



Flange H4/H5

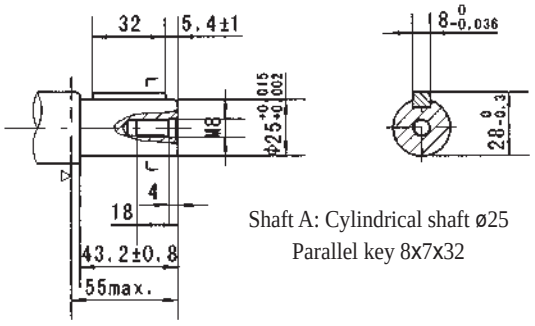


Model	L	L1
HBMRS36	143	7
HBMRS50	146	10
HBMRS80	152	16
HBMRS100	156	20
HBMRS125	161	25
HBMRS160	166.5	30.5
HBMRS200	174	38.1
HBMRS250	186	50
HBMRS315	198	62
HBMRS375	210	74

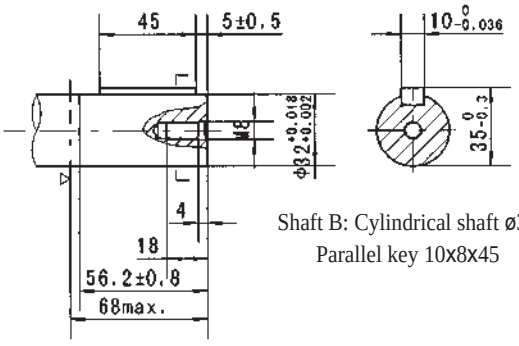
Note: The size L of the HBMRS N1 should be increased by 2mm.

Code / Mounting	G (depth)	S (depth)	P (depth)	R (depth)	M1 (depth)	M2 (depth)	M3 (depth)	B4 (depth)	B5 (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)

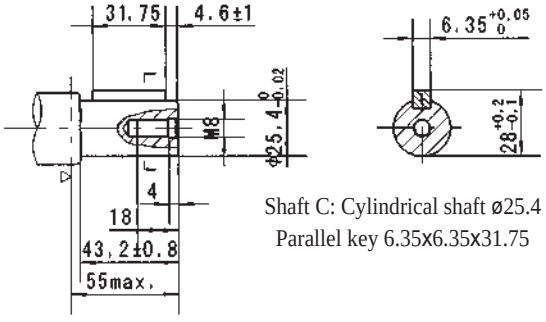
HBMR SHAFT EXTENSIONS DIMENSIONS DATA



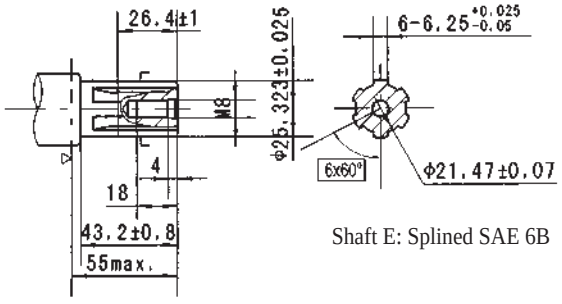
Shaft A: Cylindrical shaft ø25
Parallel key 8x7x32



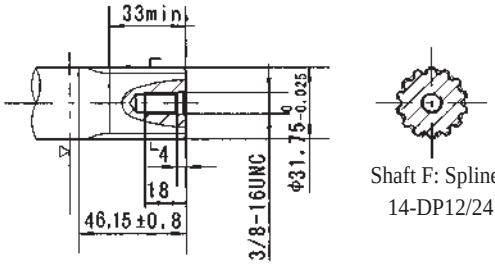
Shaft B: Cylindrical shaft ø32
Parallel key 10x8x45



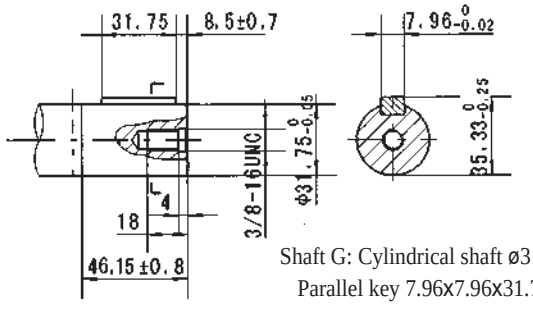
Shaft C: Cylindrical shaft ø25.4
Parallel key 6.35x6.35x31.75



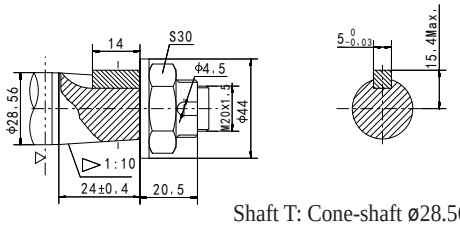
Shaft E: Splined SAE 6B



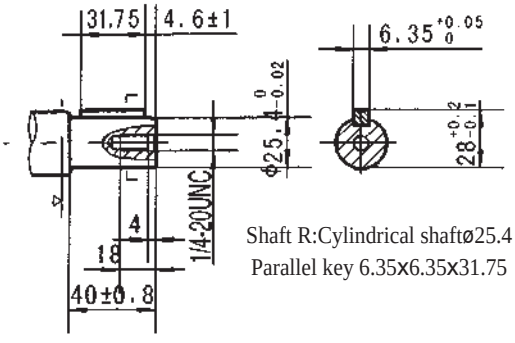
Shaft F: Splined
14-DP12/24



Shaft G: Cylindrical shaft ø31.75
Parallel key 7.96x7.96x31.75



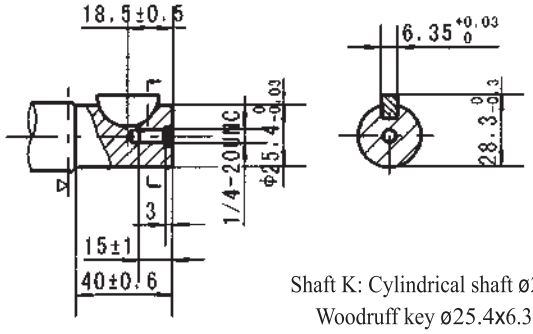
Shaft T: Cone-shaft ø28.56
Parallel key B5x5x14
Tightening torque:100±10Nm



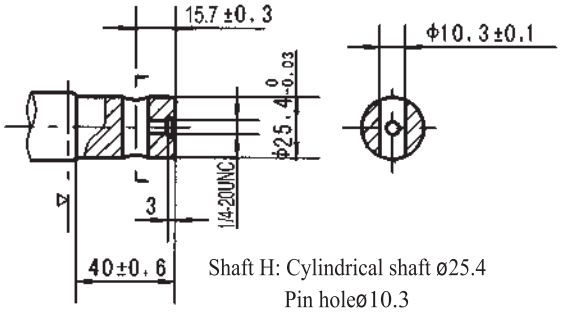
Shaft R:Cylindrical shaftø25.4
Parallel key 6.35x6.35x31.75

▷ Motor Mounting Surface

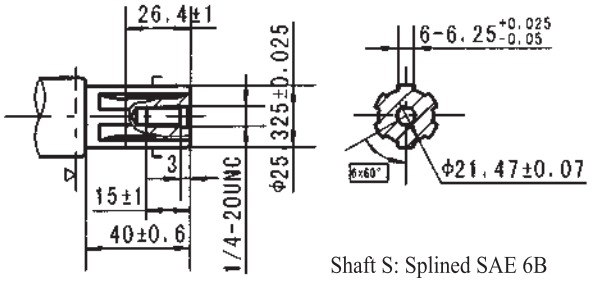
BMRS SHAFT EXTENSIONS DIMENSIDNS DATA



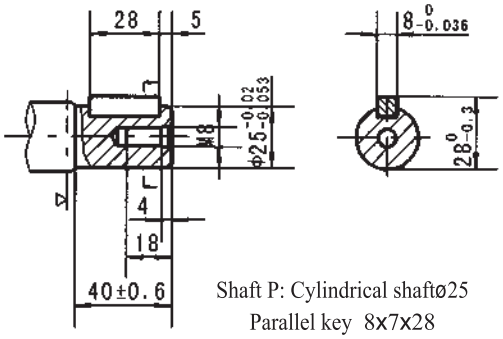
Shaft K: Cylindrical shaft ø25.4
Woodruff key ø25.4x6.35



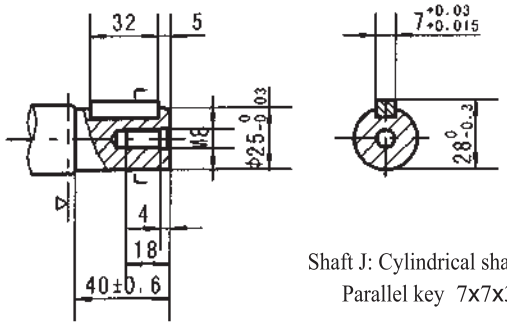
Shaft H: Cylindrical shaft ø25.4
Pin holeø10.3



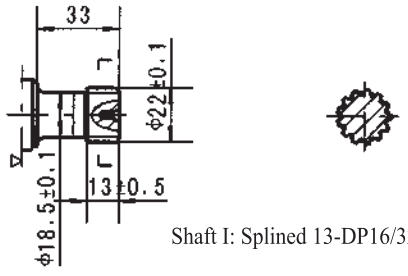
Shaft S: Splined SAE 6B



Shaft P: Cylindrical shaftø25
Parallel key 8x7x28



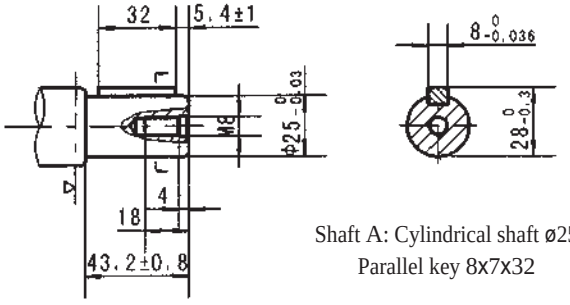
Shaft J: Cylindrical shaft ø25
Parallel key 7x7x32



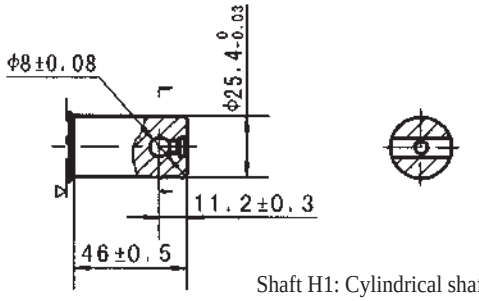
Shaft I: Splined 13-DP16/32

▷ Motor Mounting Surface

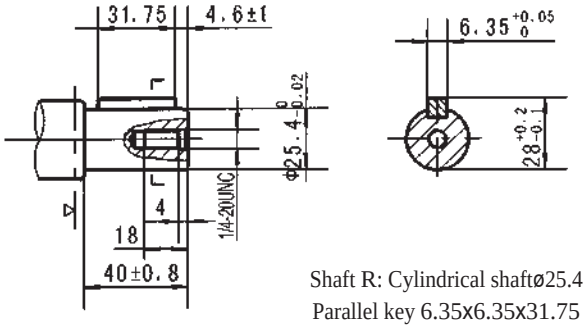
HBMRS SHAFT EXTENSIONS DIMENSIONS DATA



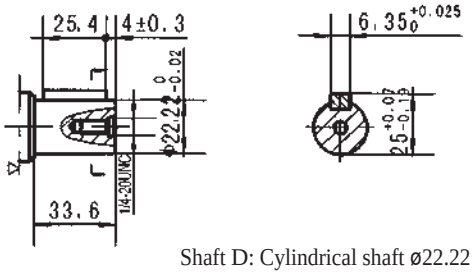
Shaft A: Cylindrical shaft ø25
Parallel key 8x7x32



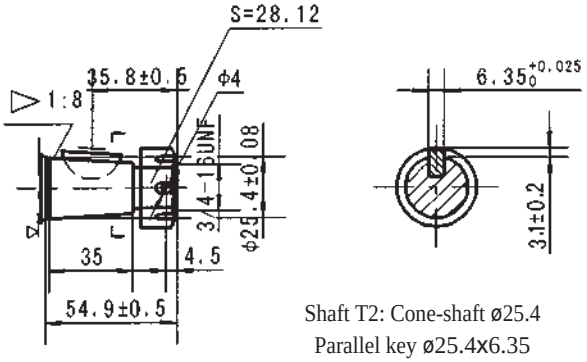
Shaft H1: Cylindrical shaft ø25.4
Pin hole ø8



Shaft R: Cylindrical shaftø25.4
Parallel key 6.35x6.35x31.75



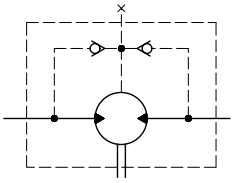
Shaft D: Cylindrical shaft ø22.22
Parallel key 6.35x6.35x25.4



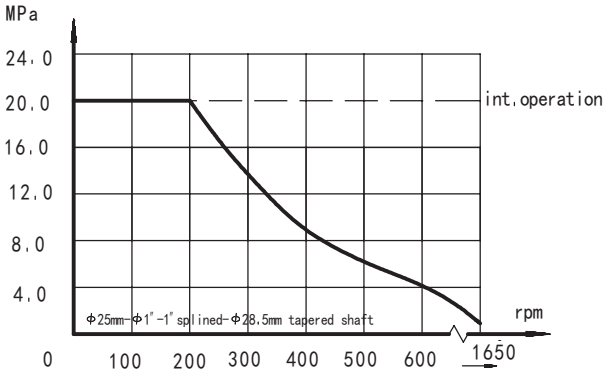
Shaft T2: Cone-shaft ø25.4
Parallel key ø25.4x6.35
Tightening torque:200±10Nm

▷ Motor Mounting Surface

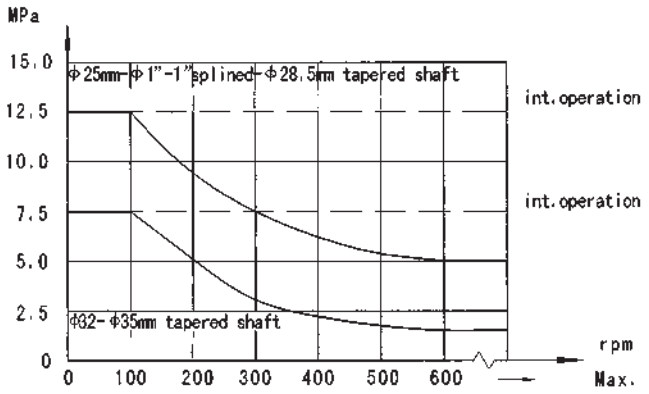
HBMR、HBMRS Series Hydraulic Motor



Permissible shaft seal pressure



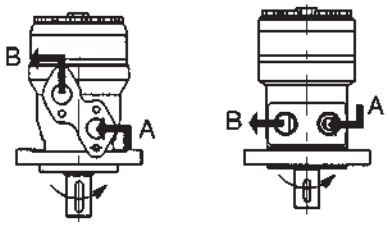
High pressure shaft seal



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.

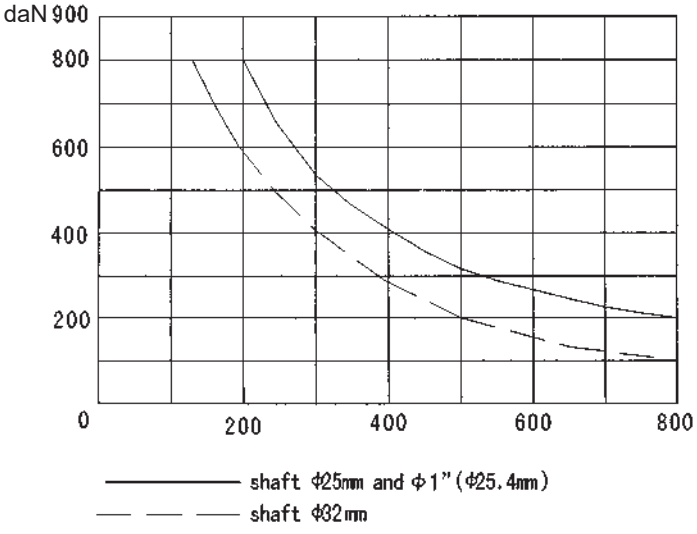
Direction of shaft ration : Standard

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

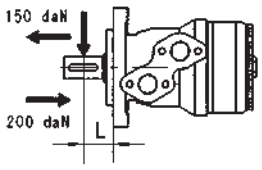


BMR BMRS

Status of the shaft's radial force
(Standard motor with journal bearing)



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



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

Oil flow in drain line

The table shows the Max. oil flow in the drain line at a return pressure less than 0.5-1MPa.

Pressure drop (MPa)	Viscosity (mm2/s)	Oil flow in the drain line (L/min.)
10	20	2.5
	35	1.8
14	20	3.5
	35	2.8

Order Information

1	2	3	4	5	6	7	8
HBMR –		–		–		–		–		–		–		–	

Pos.1	2	3		4		5		6		7		8	
Code	Disp.	Flange		Output Shaft		Ports and Drain Port		Rotation Direction		Paint		Unusually Function	
HBMR	36 50 80 100 125 160 200 250 315 375	2 4 H4 H5	2-Ø13.5Rhomb-flange, pilot Ø82.5×8 4-Ø13.5Rhomb-flange, pilot Ø82.5×8 4-3/8-16 Square-flange, pilot Ø44.4×2.8 4-M10 Square-flange, pilot Ø44.4×2.8	A C E R T B F FD G	Shaft Ø25,parallel Key 8x7x32 Shaft Ø25.4,parallel Key 6.35x6.35x31.75 Shaft Ø25.4,splined tooth SAE 6B Short shaft Ø25.4,parallel key 6.35x6.35x31.75 Cone-Shaft Ø28.56,parallel Key B5x5x14 Shaft Ø32,parallel Key 10x8x45 Shaft Ø31.75,splined tooth 14-DP12/24 Long shaft Ø31.75,splined tooth 14-DP12/24 Shaft Ø31.75,parallel Key 7.96x7.96x31.75	D M S P R	G1/2 Manifold Mount 4-M8, G1/4 M22×1.5 Manifold Mount 4-M8, M14×1.5 7/8-14 O-ring manifold 4-5/16-18UNC, 7/16-20UNF 1/2-14 NPTF Manifold 4-5/16-18UNC, 7/16-20UNF PT(Rc)1/2 Manifold 4-M8, PT(Rc)1/4	Omit R	Standard Opposite	00 Omit B S	No paint Blue Black Silver grey	Omit N1 0 F LS	Standard Big radial force No case drain Free Running Low Speed

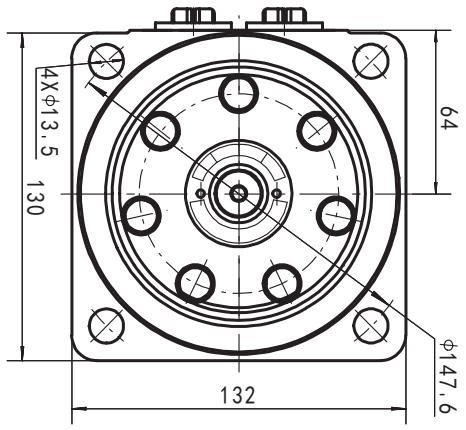
Note:The shafts of B\F\FD\G\T1\T3 are only suitable for flanges of 2 and 4.

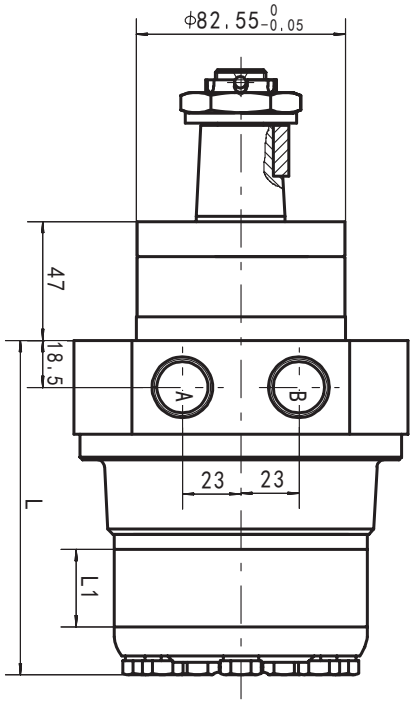
1	2	3	4	5	6	7	8
HBMRS –		–		–		–		–		–		–		–	

Pos.1	2	3		4		5		6		7		8	
Code	Disp.	Flange		Output Shaft		Ports and Drain Port		Rotation Direction		Paint		Unusually Function	
HBMRS	36 50 80 100 125 160 200 250 315 375	H2 H6 H4 H5	2-Ø13.5Rhomb-flange, pilot Ø82.5×2.8 4-Ø13.5Rhomb-flange, pilot Ø82.5×2.8 4-3/8-16 Square-flange, pilot Ø44.4×2.8 4-M10 Square-flange, pilot Ø44.4×2.8	K S A R H H1 D I T2 P J	Shaft Ø25.4,Woodruff Key Ø25.4×6.35 Sub-shaft Ø25.4,splined tooth SAE 6B Shaft Ø25 , parallel key 8×7×32 Shaft Ø25.4, parallel key 6.35×6.35×31.75 Sub-shaft Ø25.4,Pin hole Ø10.3 Shaft Ø25.4, pin hole Ø8 Shaft Ø22.22, parallel key 6.35×6.35×25.4 Shaft Ø22.22, splined tooth 13-DP16/32 Cone shaft Ø25.4 , woodruff key Ø25.4×6.35 Shaft Ø25,parallel Key 8×7×28 Shaft Ø25,parallel Key 7×7×32	G S P T R B4 B5 M1 M2 M3	G1/2, G1/4 7/8-14 O-ring 7/16-20UNF (G1/4) 1/2-14 NPTF, 7/16-20UNF (G1/4) 3/4-16 O-ring, 7/16-20UNF PT(Rc)1/2, PT(Rc)1/4 Ø10 O-ring manifold 4x5/16-18, 7/16-20UNF Ø10 O-ring manifold 4xM8, G1/4 M18×1.5, M10×1 M20×1.5, M10×1 M22×1.5, M10×1	Omit R	Standard Opposite	00 Omit B S	No paint Blue Black Silver grey	Omit N1 0 F LS	Standard Big radial force No case drain Free Running Low Speed

Note:When the table is used, please fill the code of left rows in dash area 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.

HBMRWN DIMENSIONS MOUNTING DATA





Model	L	L1
HBMRWN-50	113	10
HBMRWN-80	119	16
HBMRWN-100	123	20
HBMRWN-125	128	25
HBMRWN-160	133.5	30.5
HBMRWN-200	141	38.1
HBMRWN-250	153	50
HBMRWN-315	165	62
HBMRWN-375	177	74

Order Information

Pos.1	2	3	4		5		6		7		8
Code		Flange	Output shaft		Ports and drain port		Rotation direction		Paint		Unusually function
HBMRWN	50	0mit 4-Ø13.5 Wheel Mount , Ø82.5×9.4	T1	1:10Cone shaft Ø35, parllel key B6×6×20	D	G1/2, G1/4	00	No paint	0mit	Standard
	80		B	Shaft Ø32 , parllel key 10×8×4	M	M22×1.5,M14×1.5	0mit	Standard	B	Blue	
	100		F	Shaft Ø31.75, splined key 14-DP12/2	S	7/8-14 O-ring,7/16-20UNF	R	Opposite	S	Black	
	125		FD	Long Shaft Ø31.75, splined key14-DP12/24	P	1/2-14NPTF ,7/16-20UNF				Silver grey	
	160		G	Shaft Ø31.75, parllel key 7.96×7.96×31.75							
	200										
	250										
	315										
	375										

HBMRWN — 1 — 2 — 3 — 4 — 5 — 6 — 7 — 8

Note:When the table is used , please fill the code of right rows in the table 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 conact us .

Mounting \ Code	G(depth)	M(depth)	S(depth)	P(depth)
P(A,B)	G1/2(15)	M22x1.5(15)	7/8-14O-ring(17)	1/2-14NPTF(15)
C	G1/4(12)	M14x1.5(12)	7/16-20UNF(12)	7/16-20UNF(12)

HBMR-BK3 Series Hydraulic Brake Motor

HBMR-BK3 is a type of shaft flow distribution brake motor with a friction pair direct brake linkage shaft, reliable braking, need external brake oil circuit, multiple sets of spring braking force, compact structure, flexible adjustment, assembly, parameter adjustment and disassembly maintenance and other convenience.

Main Specification

Technical data for HBMR-BK3 with Φ25 and Φ25.4 and Φ25.4 splined SAE 6B and Φ28.56 tapered shaft.

Main Specification

Type		HBMR -BK3 65	HBMR -BK3 80	HBMR -BK3 100	HBMR -BK3 125	HBMR -BK3 160	HBMR -BK3 200	HBMR -BK3 250	HBMR -BK3 315	HBMR -BK3 375
Geometric displacement (cm^3/rev.)		66.8	81.5	102	127.2	157.2	194.5	253.3	311	384
Max. speed (rpm)	cont.	800	750	600	475	378	310	240	190	155
	int.	950	940	750	600	475	385	300	240	190
Max. torque (N•m)	cont.	165	195	240	300	360	360	410	490	500
	int.	195	220	280	340	430	440	490	550	620
	peak	220	270	320	370	460	560	640	650	680
Max. output (KW)	cont.	11	12.5	13	12.5	12.5	10	7	9	7.5
	int.	13	15	15	14.5	14	13	9.5	10	9
Max. Pressure drop (MPa)	cont.	17.5	17.5	17.5	17.5	16.5	13	12	12	10
	int.	20	20	20	20	20	17.5	15	14	12.5
	peak	22.5	22.5	22.5	22.5	22.5	22.5	20	17.5	15
Max. Flow (L/min)	cont.	55	60	60	60	60	60	60	60	60
	int.	65	75	75	75	75	75	75	75	75
Item Code		HBMR-BK3A				HBMR-BK3B				
Static Torque (N · m)		360~440				460~540				
Brake release press (MPa)		1.4~1.9				1.7~2.3				
Max. release press (MPa)		20				20				
Weight	(kg)	11.4	11.7	11.9	12.1	12.4	12.9	13.5	13.8	13.8

* Continuous pressure:Max.value of operating motor continuously.

* ntermittent pressure:Max.value of operating motor in 6 seconds per minute .

* Peak pressure:Max.value of operating motor in 0.6 second per minute.

1、The ture pressure difference between inlet port and outlet port.

2、Normal oil temperature 20℃~60℃upper limit 90℃(no more than 1 hour).

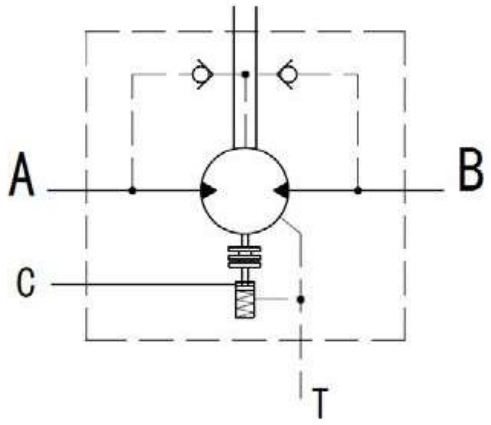
3、Filtering and oil cleanliness：A return filter should be installed in the system with fineness in the rang of 10~30μm and a piece of magnet should be installed at the bottom of the tank to prevent grits into the system. The max. solid contamination grade of the oil is no more than 19/16.

4、Viscosity: 42~74mm2/s at 40℃of oil temperature,according to the condition to choose an applicable hydraulic oil.

5、The optimal operation situation should be at the 1/3 ~2/3 of the max. cont. operation situation.

6、To assure best motor life,run motor for approximately 1 hour at 30% of the max. cont. pressure before application to full load.Besure motor is fulled with fluid prioe to any load applications.

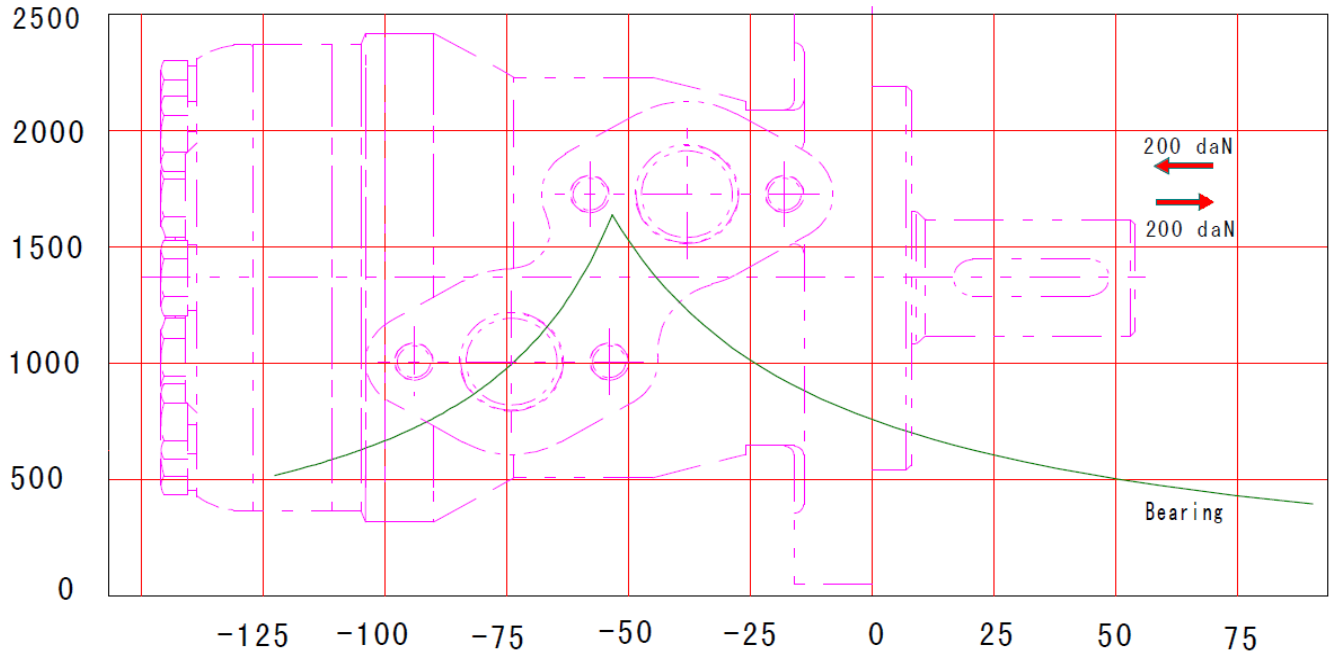
HBMR-BK3 Hydraulic systems



The brake motor must always have a drain line.
rake release pressure is the difference between the pressure
brake release line and the pressure in the drain line.

HBMR--BK3 N1 Mounting Flange Radial Forceting

Side Load（daN）



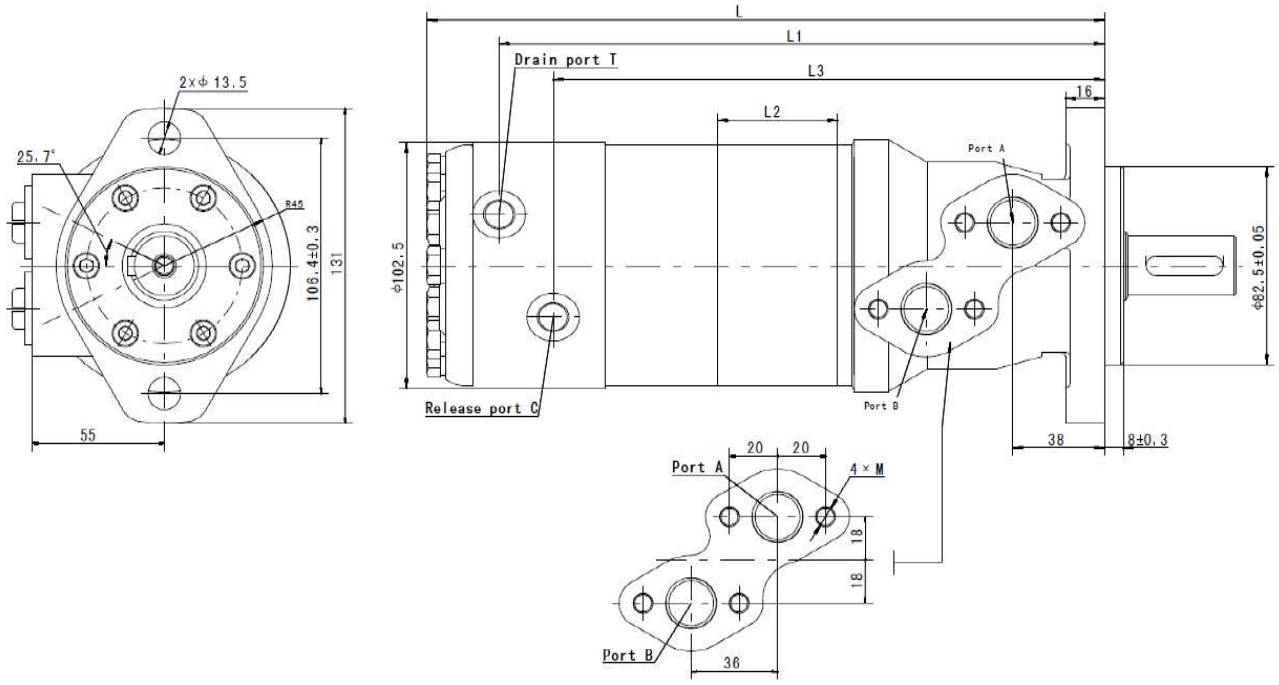
Distance from mounting face (mm)

The bearing curve represents allowable bearinng loads for an L_{10} bearing life at 12×10^6 revolutions. Or 2000 hours at 100 rpm.

Bearing load multiplication factor table									
RPM	50	100	200	300	400	500	600	700	800
FACTOR	1.23	1	0.81	0.72	0.66	0.62	0.58	0.56	0.54

HBMR-BK3 DIMENSIONS AND MOUNTINS DATA

Flange 2



Content / Mounting	Code				
	D (Depth)	M (Depth)	S (Depth)	P (Depth)	R (Depth)
P (A、B)	G1/2 (15)	M22×1.5 (15)	7/8-14UNF (17)	1/2-14NPTF (15)	PT (RC) 1/2 (15)
T	G1/4 (12)	M14×1.5 (12)	7/16-20UNF (12)	7/16-20UNF (12)	PT (RC) 1/4 (12)
M	4×M10 (13)	4×M8 (13)	4×5/16-18UNC (13)	4×5/16-18UNC (13)	4×M8 (13)

Model	L	L1	L3	L2
BMR-BK3-65	247	215	192.5	13
BMR-BK-80	250	218	195.5	16
BMR-BK3-100	254	222	199.5	20
BMR-BK3-125	259	227	204.5	25
BMR-BK3-160	264.5	232.5	210	30.5
BMR-BK3-200	272.1	240.1	217.6	38.1
BMR-BK3-250	284	252	229.5	50
BMR-BK3-310	288	256	233.5	54
BMR-BK3-395	288	256	233.5	54

Order information

	1		2		3		4		5		6		7		8		9
HBMR-BK3		–		–		–		–		–		–		–		–	

Pos.1	2	3		4		5		6		7		8		9	
Code	Disp.	Flange and Pilot		Output Shaft		Ports and Drain Port		Brake release Port		Rotation Direction		Paint		Unusually Function	
HBMR-BK3A	65 80 100 125 160	2	2xØ13.5 Oval flange, pilot Ø82.5×8	A	Shaft Ø25,parallel Key 8×7×32	D	G1/2 Manifold Mount 4×M8, G1/4	G	G1/4	Omit	Standard	00	No paint	N1	Big radial force
		4	4xØ13.5 Oval flange, pilot Ø82.5×8	C	Shaft Ø25.4, parallel Key 6.35×6.35×31.75	M	M22×1.5 Manifold Mount 4×M8, M14×1.5	S	7/8-14UNF Manifold Mount 4×5/16-18UNC, 7/16-20UNF	R	Opposite	Omit	paint (Grey)		
HBMR-BK3B	200 250 315 395	H4	4x3/8x16 Square-flange, pilot Ø44.4×2.8	E	Shaft Ø25.4,splined tooth SAE 6B	P	1/2-14 NPTF Manifold Mount 4×5/16-18UNC, 7/16-20UNF	S	7/16-20UNF			B	Black		
		H5	4xM10 Square-flange, pilot Ø44.4×2.8	JP	Shaft Ø25,parallel Key 8×7×32	R	PT(Rc)1/2 Manifold 4×M8, PT(Rc)1/4					S	Silver grey		
				K	Shaft Ø25.4,Woodruff Key Ø25.4×6.35										
				H	Shaft Ø25.4,Cross hole Ø10.3										
				W	Shaft Ø24.5,Splined B25x22 Din 5482										
				T	Cone-Shaft Ø28.56,parallel Key B5×5×14										

Note:When the table is used , please fill the code of left rows in dash area 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 .

HOK SERIES HYDRAULIC MOTOR

HOK series motor adapt the advanced Geroler gear set design with shaft distribution flow, which can automatically compensate in operating with high pressure, provide reliable and smooth operation, high efficiency and long life.

Characteristic features:

*Advanced manufacturing devices for the Gerolor gear set, which use low pressure of start-up, provide smooth, reliable operation and high efficiency.

*Shaft seal can bear high pressure of back and the motor can be used in parallel or in series.

*Special design in the driver-linker and prolong operating life

*Special design for distribution system can meet the requirement of low noise of unit.

*Compact volume and easy installation

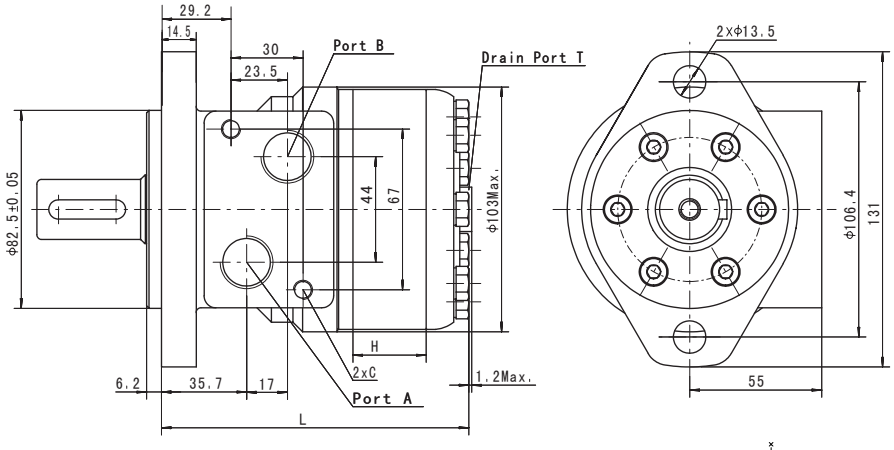
Main Specification

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

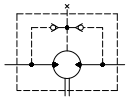
Code	Displacement [cm/rev]	Max.Speed [rpm]	Max.Torque [Nm]		Max.output [kW]		Max.pressure [MPa]		Max.Oil Flow[L/min]
		cont.	cont.	int.	cont.	int.	cont.	int.	cont.
HOK 36	36	1111	66	83	9	10.4	14	17.5	40
HOK 50	51.7	780	100	129	9	10.4	14	17.5	40
HOK 80	81.5	744	158	196	10.4	12.6	14	17.5	60
HOK 100	102	595	200	242	10.8	12.8	14	17.5	60
HOK 125	127.2	480	248	298	10.8	12.5	14	17.5	60
HOK 160	157.2	382	315	384	10.4	11.5	14	17.5	60
HOK 200	194.5	301	339	419	8.8	10.2	12.5	15.5	60
HOK 250	253.3	238	403	474	8.1	9.4	11	14	60
HOK 315	317.5	191	398	498	7.4	7.8	9	12.5	60
HOK 375	381.4	162	373	466	6.2	7.1	7.5	9	60

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

Type	H	L
HOK36	7	105
HOK50	10	108
HOK80	16	114
HOK100	20	118
HOK125	25	123
HOK160	30.5	128.5
HOK200	38.1	136
HOK250	50	148
HOK315	62	160
HOK375	74	172

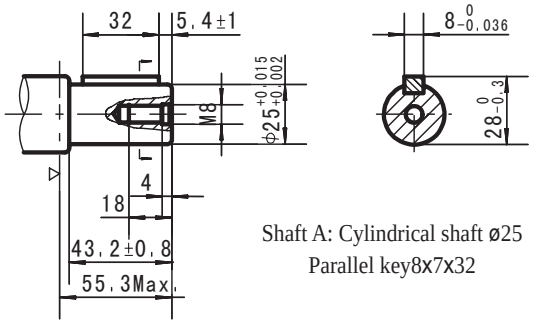


Code / Mounting	D (depth)	M (depth)	S (depth)	P (depth)	R (depth)
P(A,B)	G1/2 (15)	M22 x 1.5 (15)	7/8-14 O-ring (16.7)	1/2-14NPTF (15)	PT(RC)1/2 (15)
C	4-M8 (13)	4-M8 (13)	4-5/16-18UNC(13)	4-5/16-18UNC(13)	4-M8 (13)
T	G1/4 (12)	M14 x 1.5 (12)	7/16-20UNF (12)	7/16-20UNF (12)	PT(RC)1/4 (9.7)

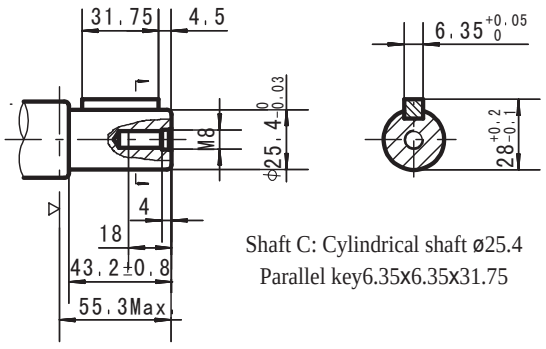


Direction of shaft rotation: Standard
When facing shaft end of motor,shaft to rotate:
Clockwise when port "A" is pressurized.
Counter-clockwise when port "B" is pressurized.

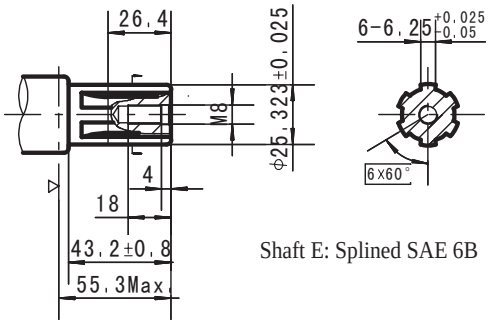
SHAFT EXTENSIONS FOR HOK MOTORS



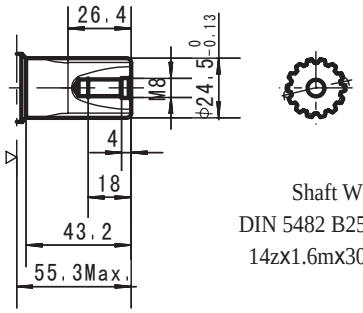
Shaft A: Cylindrical shaft ø25
Parallel key8x7x32



Shaft C: Cylindrical shaft ø25.4
Parallel key6.35x6.35x31.75



Shaft E: Splined SAE 6B



Shaft W:
DIN 5482 B25x22h9
14zx1.6mx30Px9h

▷ Motor Mounting Surface

Order Information

HOK – 1 2 3 4 5 6 7 8

Pos.1	2	3	4		5		6		7		8	
Code	Disp.	Flange	Output Shaft		Ports and Drain Port		Rotation Direction		Paint		Unusually Function	
Omit	36 50 80 100 125 160 200 250 315 375	2 2-Ø13.5 Rhomb-flange , pilot Ø82.5×6.2	A	Shaft Ø25 , parllel key 8×7×32	D	G1/2 Manifold 4×M8, G1/4	Omit	Standard	0O	No paint	Omit	Standard
			C	Shaft Ø25.4 , parllel key 6.35×6.35×31.75	M	M22×1.5 Manifold4×M8,M14×1.5	R	Opposite	Omit	Blue	F	Free Running
			E	Shaft Ø25.4, splined key SEA 6B	S	7/8-14 O-ring manifold			B	Black	0	No case drain
			W	Shaft Ø24.5, splined B25X22	P	4×5/16-18UNC,7/16-20UNF 1/2-14NPTF manifold			S	Sliver grey		
			T	Cone shaft Ø28.56, parllel key B5×5×14	R	4×5/16-18UNC,7/16-20UNF PT(Rc)1/2 manifold 4×M8,PT(Rc)1/4						

HBMH SERIES HYDRAULIC MOTOR

HBMH series motor adapt the advanced Geroler gear set design with shaft distribution flow, which can automatically compensate in operating with high pressure, provide reliable and smooth operation, high efficiency and long life.

Characteristic features:

*Advanced manufacturing devices for the Gerolor gear set, which use low pressure of start-up, provide smooth, reliable operation and high efficiency.
*Shaft seal can bear high pressure of back and the motor can be used in parallel or series.
*Special design in the driver-linker and prolong operating life.
*Special design for distribution system can meet the requirement of low noise of unit.
*Compact volume and easy installation.

Main Specification

Type		HBMH 200	HBMH 250	HBMH 315	HBMH 400	HBMH 500
Geometric displacement (cm^3/rev.)		203.2	255.9	316.1	406.4	489.2
Max. speed (rpm)	cont.	366	290	236	183	155
	int.	439	348	282	220	184
Max. torque (N•m)	cont.	510	621	740	850	830
	int.	579	702	827	990	1040
	peak	651	790	980	1092	1170
Max. output (kW)	cont.	16	16	14	12.5	11
	int.	18.5	18.5	15.5	15	14
Max. pressure drop (MPa)	cont.	17.5	17.5	17.5	15.5	12.5
	int.	20	20	20	19	16
	peak	22.5	22.5	22.5	21	18
Max. flow (L/min)	cont.	75	75	75	75	75
	int.	90	90	90	90	90
Weight (kg)		10.5	11	11.5	12.3	13

Type		Max.inlet pressure	Max.return pressure with drain line
HBMH200-500 (MPa)	cont.	20	17.5
	int.	22.5	20
	peak	25	22.5

* Continuous pressure :Max. value of operating motor continuously.
* Intermittent pressure:Max. value of operating motor in 6 seconds per minute.
* Peak pressure:Max. value of operating motor in 0.6 second per minute.
* Technical data HBMH with 35mm cylindnical,$1^1/4$ in splined and 35mm tapered shaft.

Performance Data

HBMH 200 [203.2cm³/rev.]

Flow (L/min)	Pressure (MPa) 3.5	7	10.5	14	17.5 (Max.cont.)	20 (Max.int.)
5	98 / **25**	194 / **25**	284 / **22**			
10	101 / **43**	204 / **41**	301 / **36**	391 / **29**	482 / **14**	
20	99 / **100**	201 / **97**	304 / **93**	402 / **85**	509 / **69**	576 / **56**
30	97 / **145**	197 / **143**	300 / **139**	402 / **130**	510 / **114**	579 / **101**
40	90 / **200**	190 / **200**	292 / **200**	399 / **188**	507 / **168**	578 / **153**
50	82 / **248**	183 / **246**	284 / **244**	392 / **235**	500 / **213**	571 / **199**
60	73 / **292**	174 / **290**	274 / **287**	384 / **279**	493 / **260**	563 / **244**
70	63 / **352**	163 / **350**	264 / **349**	374 / **338**	481 / **318**	554 / **301**
Max.cont. 75	59 / **366**	157 / **365**	259 / **363**	366 / **355**	475 / **335**	547 / **319**
80	53 / **381**	150 / **381**	253 / **380**	358 / **371**	466 / **352**	538 / **338**
Max.int. 90	39 / **439**	140 / **437**	241 / **434**	348 / **426**	456 / **407**	526 / **392**

HBMH 250 [255.9cm³/rev.]

Flow (L/min)	Pressure (MPa) 3.5	7	9	12	14.5 (Max.cont.)	17.5	20 (Max.int.)
5	121 / **19**	246 / **19**	318 / **18**	398 / **14**			
10	130 / **34**	258 / **33**	331 / **31**	425 / **29**	515 / **23**	595 / **12**	
20	130 / **78**	258 / **77**	332 / **76**	432 / **73**	520 / **65**	621 / **53**	702 / **42**
30	122 / **115**	251 / **113**	327 / **111**	429 / **105**	520 / **96**	621 / **84**	700 / **75**
40	115 / **157**	240 / **157**	323 / **156**	422 / **150**	513 / **139**	616 / **127**	698 / **114**
50	105 / **196**	232 / **195**	314 / **192**	411 / **185**	505 / **173**	606 / **159**	687 / **147**
60	94 / **232**	220 / **230**	302 / **226**	401 / **218**	496 / **206**	596 / **192**	676 / **180**
70	81.4 / **274**	209 / **274**	288 / **274**	389 / **266**	484 / **252**	582 / **238**	666 / **222**
Max.cont. 75	72 / **290**	203 / **289**	280 / **287**	381 / **279**	475 / **266**	574 / **251**	659 / **236**
80	66 / **303**	194 / **302**	273 / **298**	371 / **290**	467 / **279**	566 / **264**	651 / **249**
Max.int. 90	49 / **348**	178 / **347**	256 / **345**	355 / **337**	453 / **325**	552 / **309**	634 / **292**

HBMH 315 [316.1cm³/rev.]

Flow (L/min)	Pressure (MPa) 3.5	7.5	10	13.5	15.5	17.5 (Max.cont.)	20 (Max.int.)
5	155 / **16**	325 / **13**					
10	163 / **27**	342 / **24**	454 / **18**	556 / **14**			
20	169 / **63**	349 / **61**	469 / **55**	582 / **48**	664 / **40**	733 / **32**	809 / **19**
30	165 / **93**	344 / **89**	470 / **82**	580 / **77**	669 / **67**	740 / **59**	824 / **46**
40	154 / **126**	337 / **126**	465 / **119**	577 / **111**	663 / **99**	737 / **88**	827 / **73**
50	141 / **159**	325 / **155**	455 / **148**	568 / **139**	656 / **126**	728 / **115**	824 / **98**
60	121 / **187**	312 / **186**	440 / **179**	555 / **169**	643 / **154**	715 / **143**	812 / **124**
70	103 / **222**	298 / **222**	425 / **215**	541 / **205**	631 / **187**	703 / **176**	800 / **157**
Max.cont. 75	94 / **236**	287 / **233**	417 / **224**	529 / **215**	623 / **196**	696 / **184**	792 / **166**
80	82 / **246**	277 / **244**	406 / **236**	518 / **228**	611 / **210**	688 / **197**	784 / **174**
Max.int. 90	62 / **282**	256 / **280**	386 / **275**	496 / **266**	593 / **248**	669 / **234**	767 / **209**

Torque (N•m) 593
Speed (rpm) **248**

HBMH 400 [406.4cm³/rev.]

Flow (L/min)	Pressure (MPa) 3.5	6	10.5	12.5	15.5 (Max.cont.)	19 (Max.int.)
5	196 / **13**	348 / **13**	516 / **10**			
10	205 / **22**	363 / **21**	546 / **21**	702 / **17**	859 / **11**	
20	209 / **50**	366 / **49**	543 / **46**	708 / **41**	874 / **36**	988 / **31**
30	201 / **73**	357 / **72**	542 / **70**	706 / **63**	864 / **56**	984 / **51**
40	195 / **99**	346 / **98**	532 / **96**	701 / **86**	858 / **77**	973 / **71**
50	173 / **123**	332 / **122**	518 / **118**	687 / **107**	848 / **97**	958 / **90**
60	154 / **146**	319 / **144**	501 / **141**	668 / **128**	833 / **115**	944 / **106**
70	138 / **174**	305 / **173**	480 / **169**	649 / **156**	814 / **141**	925 / **130**
Max.cont. 75	128 / **183**	294 / **181**	466 / **177**	637 / **163**	802 / **149**	911 / **138**
80	113 / **192**	277 / **191**	451 / **188**	621 / **174**	786 / **158**	899 / **144**
Max.int. 90	90 / **220**	256 / **220**	433 / **215**	595 / **202**	767 / **183**	881 / **165**

cont.
int.

Performance Data

HBMH 500 [489.2cm³/rev.]

Pressure (MPa)

Flow (L/min)		2.5	5	8.5	10	12.5	16
						Max.cont.	Max.int.
	5	165 **11**	317 **11**	516 **8**			
	10	178 **20**	335 **19**	555 **17**	669 **15**	791 **13**	969 **9**
	20	177 **42**	331 **42**	559 **41**	673 **38**	799 **36**	988 **29**
	30	172 **64**	320 **63**	553 **61**	663 **57**	792 **53**	983 **47**
	40	163 **85**	309 **85**	541 **83**	654 **79**	783 **75**	971 **67**
	50	146 **103**	296 **103**	523 **103**	635 **97**	768 **93**	954 **85**
	60	121 **124**	275 **124**	502 **123**	614 **117**	747 **113**	934 **103**
	70	97 **148**	256 **148**	482 **148**	597 **140**	729 **134**	917 **122**
Max.cont.	75	79 **155**	240 **155**	469 **155**	582 **152**	714 **144**	902 **130**
	80	60 **166**	226 **166**	453 **166**	570 **159**	701 **153**	884 **139**
Max.int.	90	34 **184**	201 **183**	421 **182**	550 **177**	673 **166**	869 **155**

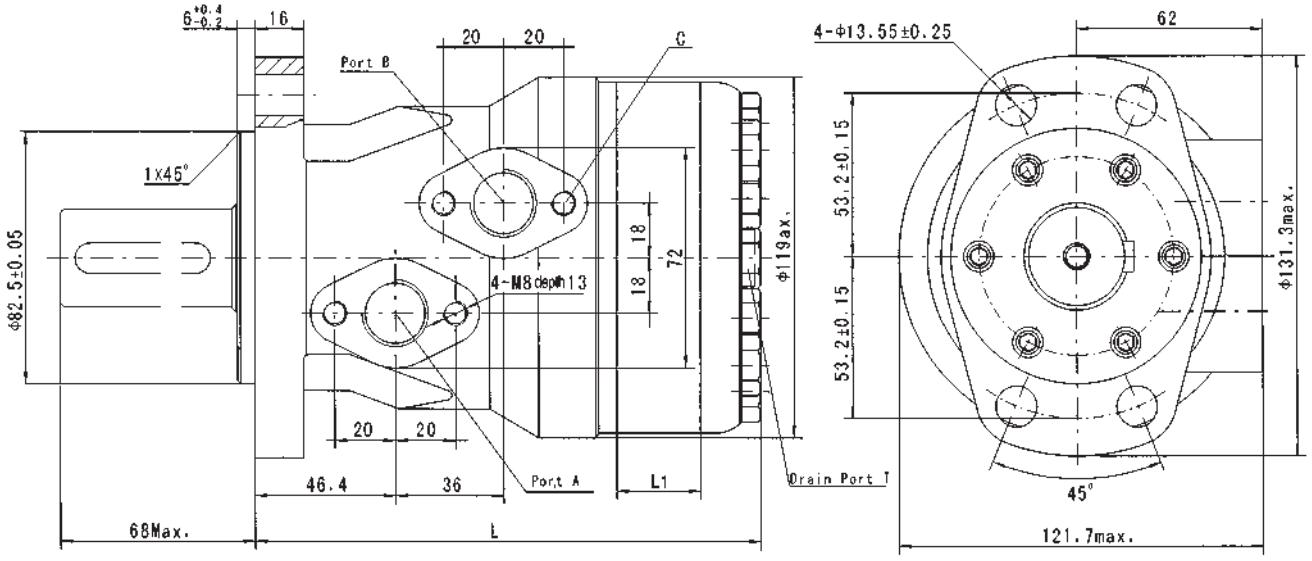
Torque (N•m) 673
Speed (rpm) **166**

cont.

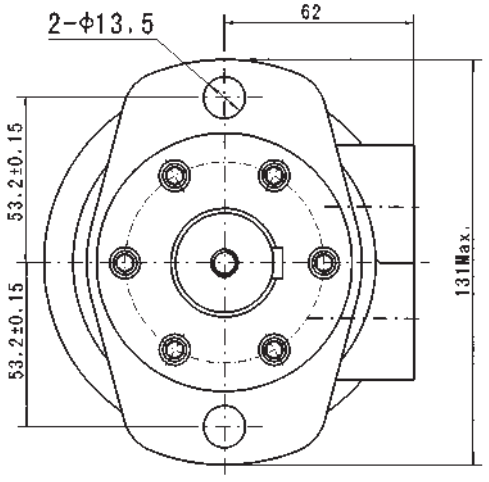
int.

HBMH DIMENSIONS AND MOUNTING DATA

Flange 4



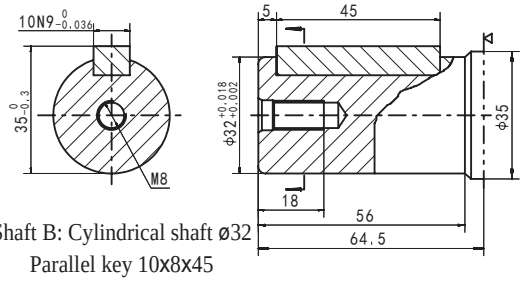
Flange 2



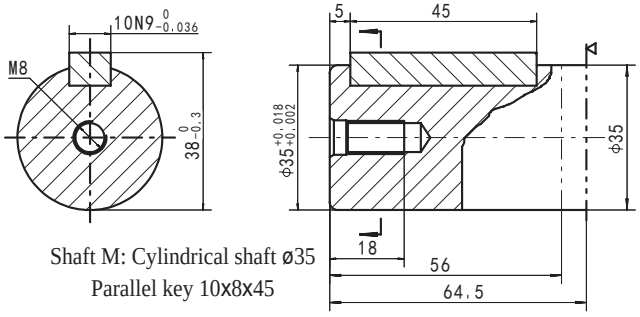
Model	L	L1
HBMH-160	162	21
HBMH-200	168	27
HBMH-250	175	34
HBMH-315	183	42
HBMH-400	195	54
HBMH-500	206	65

Code / Mounting	D (depth)	M (depth)	S (depth)	P (depth)	R (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

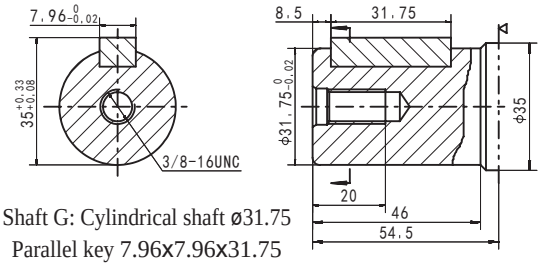
HBMH SHAFT EXTENSIONS DIMINSIONS DATA



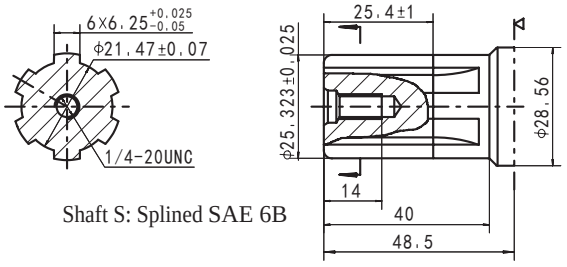
Shaft B: Cylindrical shaft ø32
Parallel key 10x8x45



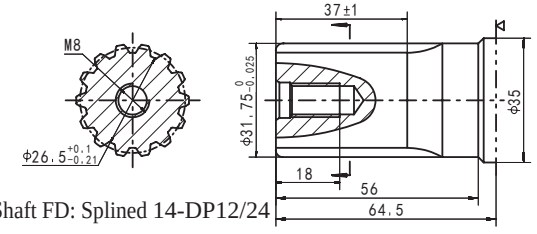
Shaft M: Cylindrical shaft ø35
Parallel key 10x8x45



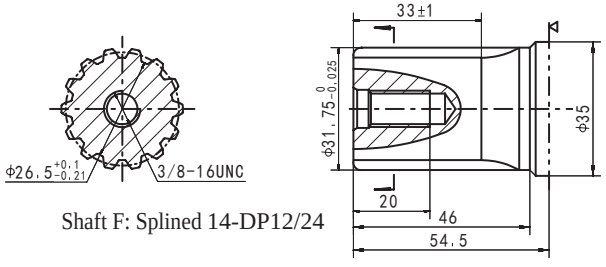
Shaft G: Cylindrical shaft ø31.75
Parallel key 7.96x7.96x31.75



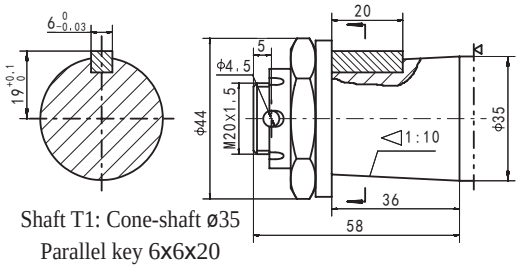
Shaft S: Splined SAE 6B



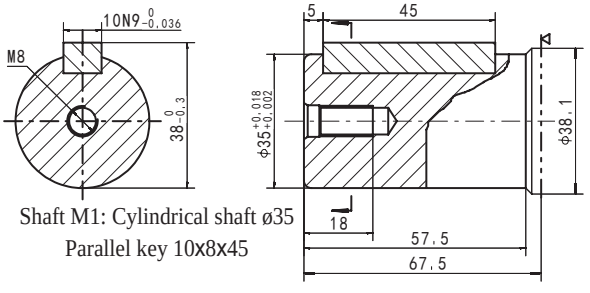
Shaft FD: Splined 14-DP12/24



Shaft F: Splined 14-DP12/24



Shaft T1: Cone-shaft ø35
Parallel key 6x6x20
Tightening torque:200±10Nm

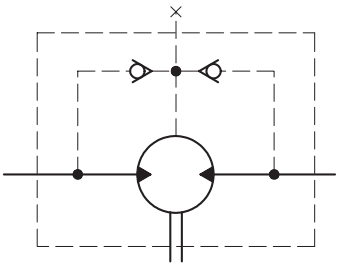


Shaft M1: Cylindrical shaft ø35
Parallel key 10x8x45

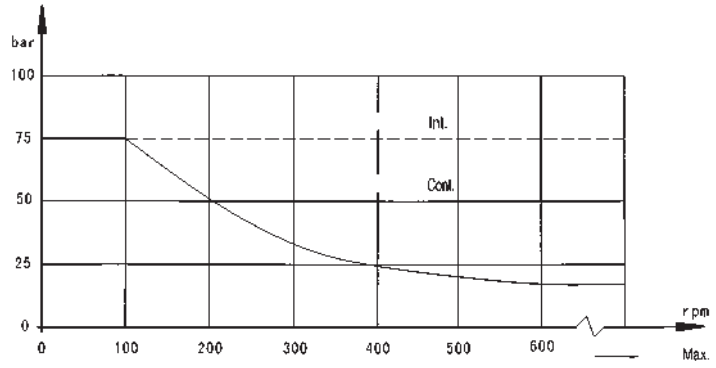
▷ Motor Mounting Surface

HBMH series Hydraulic Motor

Permissible shaft seal pressure



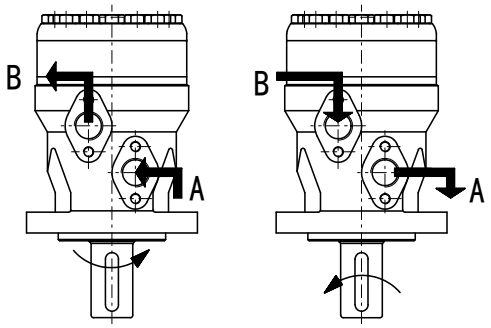
In applications without drain line, output shaft seal exceeds a bit of the pressure in the return line. When applications use the drain line, the pressure of output shaft seal equals the pressure in drain line.



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.

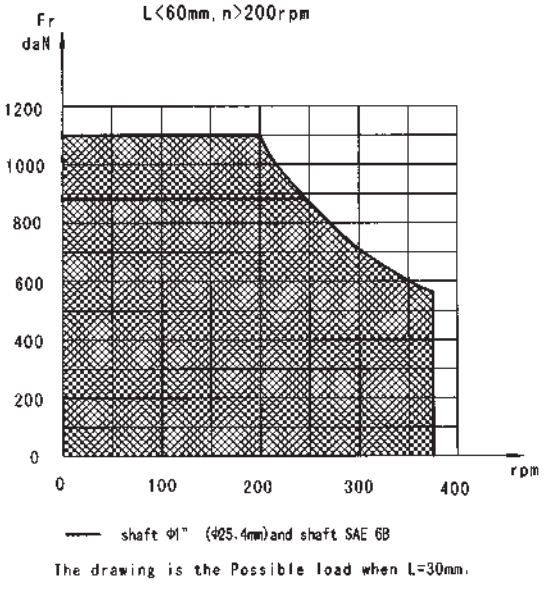
HBMH



Status of the shaft's radial force

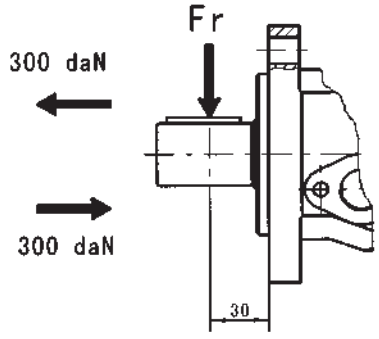
$$F_r = \frac{1100}{n} \times \frac{25000}{103.5+L} \text{ daN}$$

L<60mm, n>200rpm



shaft Φ1" (Φ25.4mm)and shaft SAE 6B

The drawing is the Possible load when L=30mm.



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

Oil flow in drain line

The table shows the Max. oil flow in the drain line at a return pressure less than 0.5-1MPa.

Pressure drop （MPa）	Viscosity (mm2/s)	Oil flow in the drain line (L/min.)
10	20	2.5
	35	1.8
14	20	3.5
	35	2.8

Order Information

1	2	3	4	5	6	7	8
HBMH	–	–	–	–	–	–	–

Pos.1	2	3		4		5		6		7		8	
Code		Flange		Output shaft		Ports and drain port		Rotation direction		Paint		Unusually function	
Omit	160 200 250 315 400 470 500	4 2	4×Ø13.5 Rhomb×flange Pilot Ø82.5×6 2×Ø13.5 Rhomb×flange Pilot Ø82.5×6	B M1 F FD G T1 S M	Shaft Ø32 , parallel key 10×8×45 Shaft Ø35, parallel key 10×8×45 Shaft Ø31.75, splined key 14-DP12/24 Long Shaft Ø31.75, splined key 14-DP12/24 Shaft Ø32 , parallel key 7.96×7.96×31.75 Cone shaft Ø35, parallel key B6×6×20 Shaft Ø25.4 , parallel key SAE 6B Shaft Ø35,Parallel key 10×8×45	D M S P R	G1/2 Manifold mount 4×M8, G1/4 M22×1.5 Manifold mount 4×M8, M14×1.5 7/8-14 O×ring Manifold mount 4×5/16-18UNC,7/16-20UNF 1/2-14 NPTF Manifold mount 4×5/16-18UNC,7/16-20UNF PT(Rc) 1/2 Manifold mount 4×M8,PT(Rc)1/4	Omit R	Standard Opposite	00 Omit B S	No paint Blue Black Silver grey	Omit 0 F LS N1	Standard No drain Free Running Low Speed Big radial force

Note:When the table is used, please fill the code of left rows in dash area 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.

HBMSY SERIES HYDRAULIC MOTOR

HBMSY new series motor adapt the advanced Geroler gear set designed with disc distribution flow and high pressure.The unit can be supplied the individual variant in operating multifunction in accordance with requirement of applications.

Characteristic featutres:

* Advanced manufacturing devices for the Geroler gear set, which use low pressure of start-up, provide smooth and reliable operation and high efficiency.
* The output shaft adapts in tapered roller bearings that permit high axial and radial forces. The case can offers capacities of high pressure and high torque in the wide of applications.
* Advanced design in disc distribution flow, which can automatically compensate in operating with high volume efficiency and long life , provide smooth and reliable operation.
* The new series motor is suitable for vehicles with greater loads and pressure drop.

Main Specification

Type		HBMSY HBMSYS 80	HBMSY HBMSYS 100	HBMSY HBMSYS 125	HBMSY HBMSYS 160	HBMSY HBMSYS 200	HBMSY HBMSYS 250	HBMSY HBMSYS 315	HBMSY HBMSYS 400	HBMSY HBMSYS 475
Geometric displacement (cm^3/rev.)		80.6	100.8	125	154	194	243	311	394	475
Max. speed (rpm)	cont.	800	748	600	470	375	300	240	185	155
	int.	988	900	720	560	450	360	280	225	185
Max. torque (N•m)	cont.	225	290	365	485	586	708	880	880	910
	int.	305	390	480	590	705	860	1000	980	990
Max. output (kW)	cont.	16	18	18	18.1	18.1	18	17	11	9
	int.	20	22	23	25	24	23.8	20.2	12	11
Max. pressure drop (MPa)	cont.	20.5	20.5	20.5	21	21	20	20	16	14
	int.	27.5	27.5	27.5	26	25	25	24	19	15
	peak	29.5	29.5	29.5	28	27	27	26	21	17.5
Max. flow (L/min)	cont.	65	75	75	75	75	75	75	75	75
	int.	80	90	90	90	90	90	90	90	90
Max. inlet pressure (MPa)	cont.	25	25	25	25	25	25	25	25	25
	int.	30	30	30	30	30	30	30	30	30
Weight (kg)		9.8	10	10.3	10.7	11.1	11.6	12.3	13.2	14.3

* Continuous pressure:Max. value of operating motor continuously.
* Intermittent pressure:Max. value of operating motor in 6 seconds per minute.
* Peak pressure:Max. value of operating motor in 0.6 second per minute.

Performance Data

HBMSY80 [80.6cm³/rev.]

Pressure (MPa)

Flow (L/min)	3.5	7	10.5	14	17.5	20.5 (Max.cont.)	22.5 (Max.int.)
15	35	80	120	158	195	228	249
	180	**174**	**168**	**164**	**158**	**151**	**143**
30	35	80	120	158	195	232	260
	362	**352**	**346**	**338**	**330**	**322**	**310**
40	35	79	119	155	193	227	250
	487	**480**	**468**	**457**	**446**	**438**	**425**
50	30	77	117	153	192	224	248
	612	**603**	**592**	**581**	**572**	**558**	**542**
60	28	77	117	153	192	224	243
	735	**726**	**718**	**703**	**687**	**673**	**646**
65 (Max.cont.)	26	75	116	151	188	217	236
	794	**786**	**773**	**760**	**744**	**722**	**706**
80 (Max.int.)	24	72	109	142	176	206	227
	981	**968**	**955**	**925**	**893**	**870**	**832**

HBMSY100 [100.8cm³/rev.]

Pressure (MPa)

Flow (L/min)	3.5	7	10.5	14	17.5	20.5 (Max.cont.)	22.5 (Max.int.)
15	48	95	150	200	250	282	310
	146	**144**	**139**	**135**	**130**	**120**	**105**
30	45	94	146	198	250	290	317
	291	**289**	**278**	**274**	**269**	**258**	**242**
40	43	89	142	196	248	288	316
	387	**384**	**374**	**359**	**350**	**335**	**320**
50	40	88	135	194	247	286	315
	486	**483**	**473**	**462**	**450**	**430**	**420**
60	37	88	132	185	244	283	312
	588	**584**	**574**	**562**	**550**	**538**	**520**
75 (Max.cont.)	35	80	130	180	240	279	310
	740	**735**	**720**	**705**	**696**	**676**	**653**
90 (Max.int.)	30	75	124	170	236	271	303
	850	**840**	**810**	**787**	**770**	**750**	**747**

HBMSY125 [125cm³/rev.]

Pressure (MPa)

Flow (L/min)	3.5	7	10.5	14	17.5	20.5 (Max.cont.)	22.5 (Max.int.)
15	55	120	176	245	309	345	375
	115	**113**	**110**	**104**	**98**	**90**	**84**
30	55	120	175	250	315	364	404
	231	**228**	**223**	**214**	**202**	**188**	**172**
40	53	118	178	250	315	364	403
	312	**309**	**290**	**289**	**278**	**262**	**235**
50	50	115	176	248	315	362	397
	391	**386**	**378**	**365**	**352**	**339**	**308**
60	45	113	171	241	308	358	397
	469	**461**	**450**	**437**	**425**	**400**	**372**
75 (Max.cont.)	45	110	167	240	306	352	389
	588	**574**	**560**	**544**	**526**	**505**	**481**
90 (Max.int.)	40	105	162	237	301	343	378
	710	**696**	**680**	**661**	**646**	**628**	**610**

TORQUE(N•m) 301
SPEED (r/min) **646**

HBMSY160 [154cm³/rev.]

Pressure (MPa)

Flow (L/min)	3.5	7	10.5	14	17.5	21 (Max.cont.)	22.5 (Max.int.)
15	70	142	215	298	372	435	476
	93	**91**	**89**	**85**	**80**	**76**	**58**
30	73	151	225	312	382	456	492
	189	**187**	**181**	**176**	**170**	**162**	**153**
40	75	152	228	314	383	454	488
	252	**250**	**246**	**239**	**234**	**228**	**212**
50	70	148	225	305	372	445	480
	313	**310**	**306**	**298**	**293**	**285**	**272**
60	68	143	218	296	370	442	480
	378	**376**	**370**	**362**	**353**	**346**	**332**
75 (Max.cont.)	62	140	211	291	365	439	475
	475	**469**	**461**	**450**	**441**	**432**	**414**
90 (Max.int.)	59	131	202	286	357	425	460
	567	**561**	**554**	**543**	**532**	**520**	**509**

cont.
int.

Performance Data

HBMSY200 [194cm³/rev.]

Pressure (MPa)

Flow (L/min)	3.5	7	10.5	14	17.5	21 (Max.cont.)	22.5 (Max.int.)
15	87	179	273	371	471	562	610
	74	**73**	**71**	**68**	**64**	**60**	**48**
30	91	190	288	386	489	572	618
	150	**148**	**143**	**140**	**134**	**128**	**119**
40	94	193	296	394	498	584	645
	198	**195**	**192**	**188**	**183**	**178**	**167**
50	90	191	292	389	493	580	634
	248	**246**	**241**	**236**	**230**	**223**	**212**
60	85	185	279	382	483	575	622
	300	**295**	**288**	**281**	**273**	**263**	**251**
75 (Max.cont.)	78	176	271	370	472	561	610
	374	**370**	**364**	**360**	**352**	**340**	**331**
90 (Max.int.)	68	163	265	361	456	545	599
	443	**440**	**435**	**428**	**424**	**413**	**400**

HBMSY250 [243cm³/rev.]

Pressure (MPa)

Flow (L/min)	3.5	7	10.5	14	17.5	20 (Max.cont.)	22.5 (Max.int.)
15	110	231	351	462	585	681	778
	59	**58**	**56**	**53**	**50**	**46**	**35**
30	116	236	359	475	597	700	790
	119	**117**	**114**	**108**	**102**	**92**	**80**
40	118	241	363	480	599	706	796
	162	**159**	**156**	**150**	**143**	**134**	**121**
50	111	234	352	472	591	693	788
	203	**201**	**197**	**191**	**182**	**173**	**158**
60	106	224	345	462	582	685	772
	244	**242**	**237**	**230**	**220**	**208**	**194**
75 (Max.cont.)	101	214	340	454	570	670	760
	303	**299**	**294**	**285**	**272**	**260**	**244**
90 (Max.int.)	93	209	335	447	559	657	749
	363	**359**	**354**	**348**	**340**	**328**	**303**

HBMSY315 [311cm³/rev.]

Pressure (MPa)

Flow (L/min)	3.5	7	10.5	14	17.5	20 (Max.cont.)	22.5 (Max.int.)
15	148	304	456	613	762	879	978
	48	**47**	**45**	**43**	**41**	**39**	**27**
30	155	314	465	635	778	884	988
	95	**93**	**91**	**89**	**86**	**82**	**67**
40	160	321	479	650	796	906	997
	127	**125**	**121**	**117**	**115**	**109**	**91**
50	155	314	465	638	780	886	988
	159	**157**	**153**	**149**	**145**	**142**	**128**
60	151	306	453	620	765	886	976
	187	**185**	**181**	**176**	**169**	**157**	**143**
75 (Max.cont.)	146	300	445	613	755	875	966
	238	**236**	**232**	**227**	**224**	**220**	**196**
90 (Max.int.)	135	284	436	601	740	863	952
	286	**283**	**278**	**272**	**265**	**257**	**232**

HBMSY400 [394cm³/rev.]

Pressure (MPa)

Flow (L/min)	3.5	7	10.5	14	16 (Max.cont.)	17.5 (Max.int.)
15	186	379	578	779	896	986
	37	**36**	**35**	**33**	**31**	**29**
30	190	388	590	791	905	991
	75	**73**	**71**	**68**	**65**	**61**
40	195	394	596	797	912	998
	99	**97**	**95**	**93**	**90**	**85**
50	191	388	587	785	904	983
	125	**123**	**118**	**114**	**109**	**102**
60	186	388	587	785	904	983
	149	**146**	**142**	**137**	**131**	**122**
75 (Max.cont.)	181	372	576	770	891	973
	187	**183**	**177**	**171**	**164**	**153**
90 (Max.int.)	176	367	571	766	883	965
	226	**221**	**214**	**208**	**199**	**183**

TORQUE (N•m) 766
SPEED (rpm) **208**

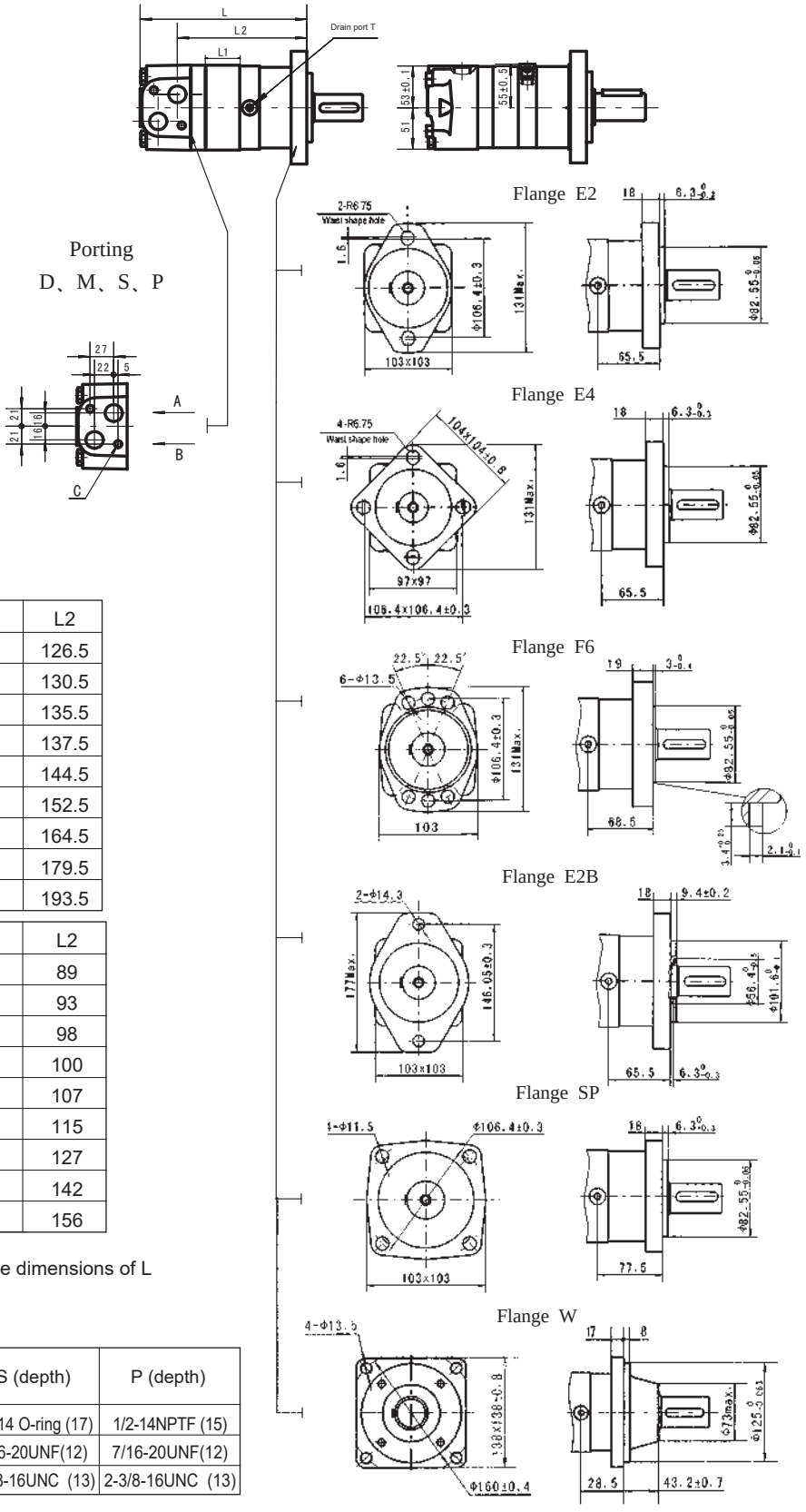
HBMSY475 [475cm³/rev.]

Pressure (MPa)

Flow (L/min)	3.5	7	10.5	14	15 (Max.int.)
15	218	439	661	892	995
	30	**29**	**28**	**27**	**25**
30	223	450	676	910	1002
	61	**60**	**58**	**56**	**53**
40	228	461	689	927	1017
	82	**80**	**77**	**74**	**68**
50	224	456	682	920	1008
	103	**101**	**97**	**92**	**86**
60	220	451	677	913	998
	123	**121**	**118**	**112**	**105**
75 (Max.cont.)	212	443	664	901	980
	155	**153**	**147**	**140**	**132**
90 (Max.int.)	196	421	643	877	959
	186	**184**	**178**	**170**	**157**

cont.
int.

HBMSY DIMENSIONS AND MOUNTING DATA



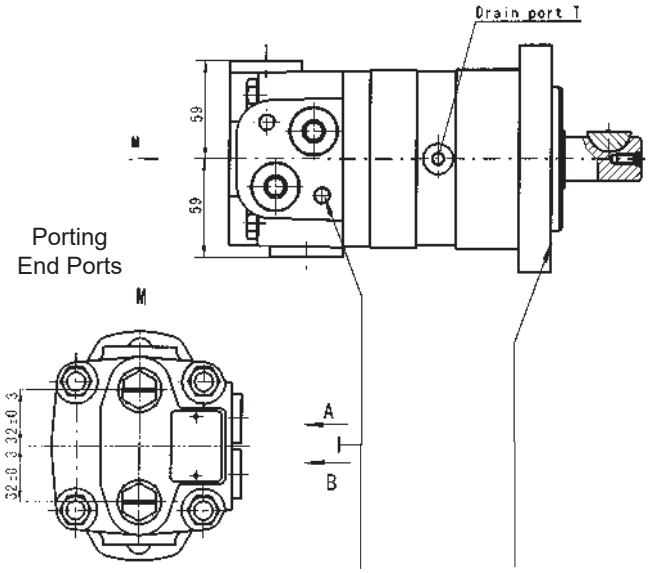
Model	L	L1	L2
HBMSY-80	170	16	126.5
HBMSY-100	174	20	130.5
HBMSY-125	179	25	135.5
HBMSY-160	181	27	137.5
HBMSY-200	188	34	144.5
HBMSY-250	196	42	152.5
HBMSY-315	208	54	164.5
HBMSY-400	223	69	179.5
HBMSY-475	237	83	193.5

Model	L	L1	L2
HBMSY-80-W	132.5	16	89
HBMSY-100-W	136.5	20	93
HBMSY-125-W	141.5	25	98
HBMSY-160-W	143.5	27	100
HBMSY-200-W	150.5	34	107
HBMSY-250-W	158.5	42	115
HBMSY-315-W	170.5	54	127
HBMSY-400-W	185.5	69	142
HBMSY-475-W	199.5	83	156

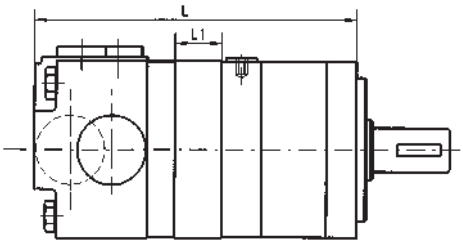
Note:If the mounting SP is used,the dimensions of L and L2 should plus 12mm.

Code / Mounting	D (depth)	M (depth)	S (depth)	P (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)

HBMSY DIMENSIONS AND MOUNTING DATA



Porting
End Ports

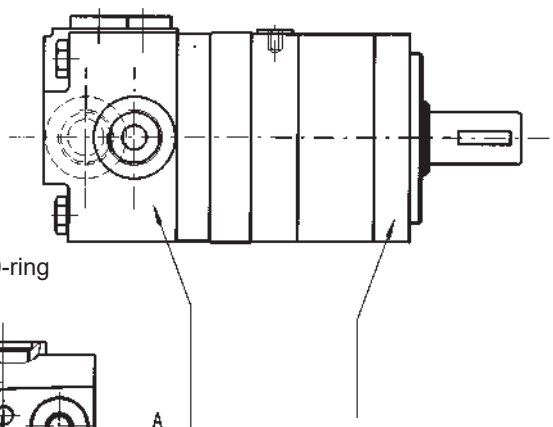


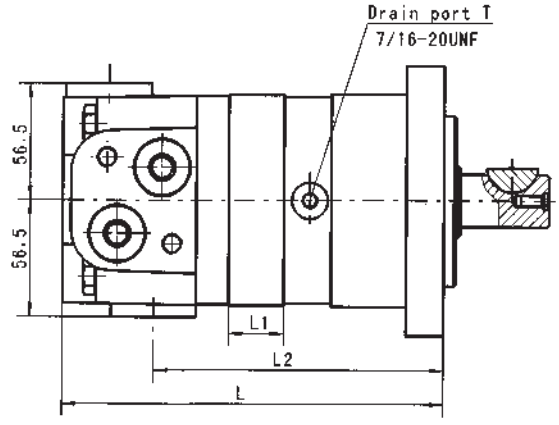
End Ports P(A\ B)

Model	L	L1
HBMSY-80	176	16
HBMSY-100	180	20
HBMSY-125	185	25
HBMSY-160	187	27
HBMSY-200	194	34
HBMSY-250	202	42
HBMSY-315	214	54
HBMSY-400	229	69
HBMSY-475	243	83

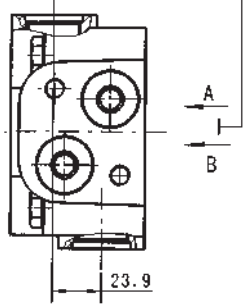
Model	L	L1
HBMSY-80-WE	148	16
HBMSY-100-WE	152	20
HBMSY-125-WE	157	25
HBMSY-160-WE	159	27
HBMSY-200-WE	166	34
HBMSY-250-WE	174	42
HBMSY-315-WE	186	54
HBMSY-400-WE	201	69
HBMSY-475-WE	215	83

Mounting \ Code	EE-D (depth)	EE-M2 (depth)	EE-S2 (depth)
P(A,B)	G1/2 (15)	M22 x 1.5 (15)	7/8-14 O-ring (17)
T	G1/4 (12)	M14 x 1.5 (12)	7/16-20UNF(12)





Porting
ED 1-1/16-12UN 0-ring
180°Apart ports

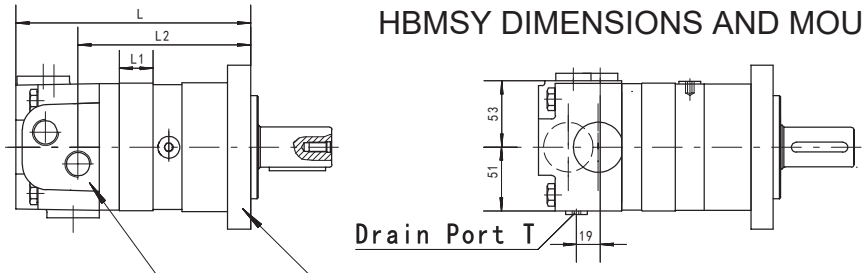


Mounting \ Code	ED (depth)
P(A,B)	1-1/16-12UN (18)
T	7/16-20UNF (12)

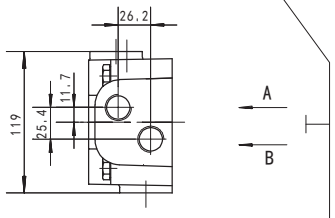
Model	L	L1	L2
HBMSY-80	176	16	130
HBMSY-100	180	20	134
HBMSY-125	185	25	139
HBMSY-160	187	27	141
HBMSY-200	194	34	148
HBMSY-250	202	42	156
HBMSY-315	214	54	168
HBMSY-400	229	69	183
HBMSY-475	243	83	197

Model	L	L1	L2
HBMSY-80-WE	148	16	102
HBMSY-100-WE	152	20	106
HBMSY-125-WE	157	25	111
HBMSY-160-WE	159	27	113
HBMSY-200-WE	166	34	119
HBMSY-250-WE	178	42	127
HBMSY-315-WE	190	54	139
HBMSY-400-WE	205	69	154
HBMSY-475-WE	219	83	168

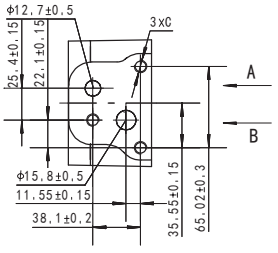
HBMSY DIMENSIONS AND MOUNTING DATA



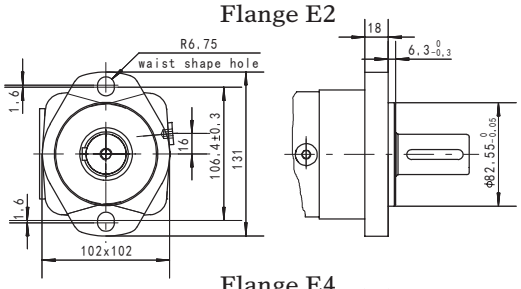
Porting
DB、DU、SU、SB、M4



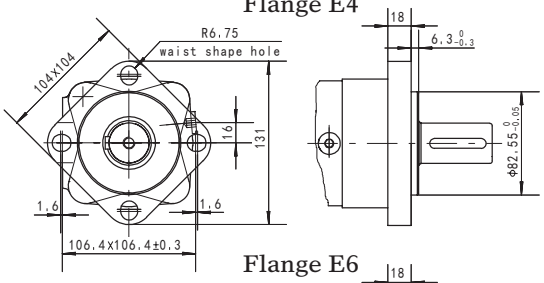
Porting MU、MM



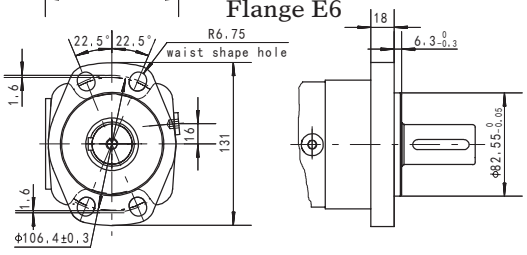
Flange E2



Flange E4

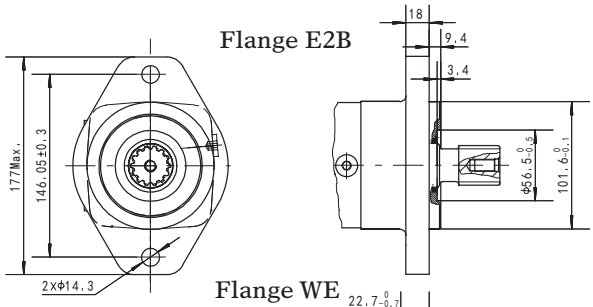


Flange E6



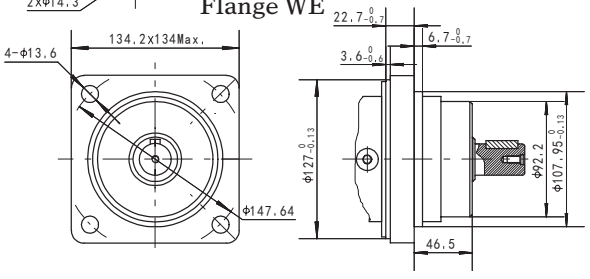
Model	L	L1	L2
HBMSY-80	177	16	126.5
HBMSY-100	181	20	130.5
HBMSY-125	186	25	135.5
HBMSY-160	188	27	137.5
HBMSY-200	195	34	144.5
HBMSY-250	203	42	152.5
HBMSY-315	215	54	164.5
HBMSY-400	230	69	179.5
HBMSY-475	244	83	193.5

Flange E2B



Model	L	L1	L2
HBMSY-80-WE	148.5	16	98
HBMSY-100-WE	152.5	20	102
HBMSY-125-WE	157.5	25	107
HBMSY-160-WE	159.5	27	109
HBMSY-200-WE	166.5	34	116
HBMSY-250-WE	174.5	42	124
HBMSY-315-WE	186.5	54	136
HBMSY-400-WE	201.5	69	151
HBMSY-475-WE	215.5	83	165

Flange WE

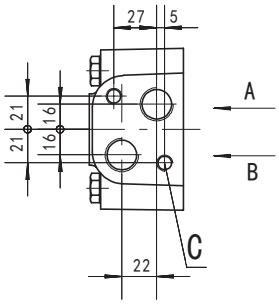


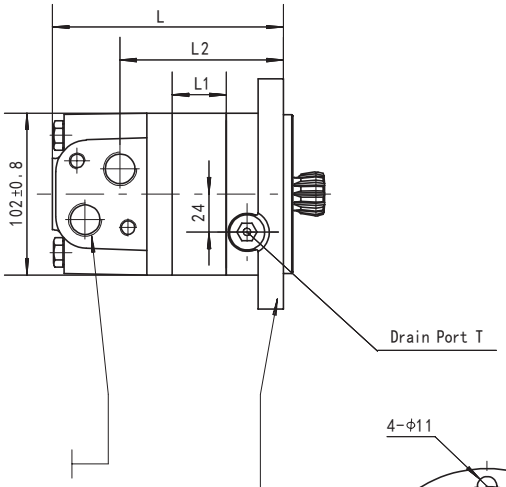
Code / Mounting	DB(depth)	DU (depth)	SU (depth)	SB (depth)	M4 (depth)	MU	MM
P(A,B)	G1/2(15)	G1/2(15)	7/8-14O-ring(17)	7/8-14O-ring(17)	M22x1.5(15)	Φ12.7,Φ15.8	Φ12.7,Φ15.8
T	G1/4(12)	7/16-20UNF(12)	7/16-20UNF(12)	G1/4(12)	M14x1.5(12)	7/16-20UNF(12)	G1/4(12)
C	-					3/8-16UNC	M10

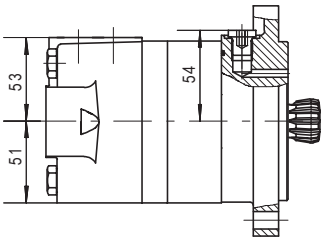
HBMSYS DIMENSIONS AND MOUNTING DATA

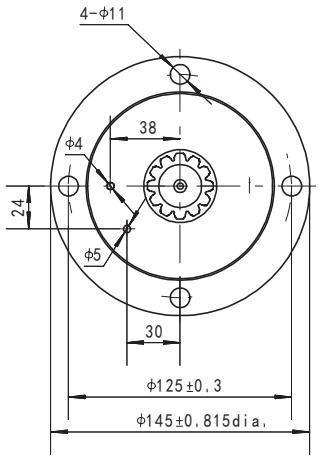
Porting

D、M、S、P

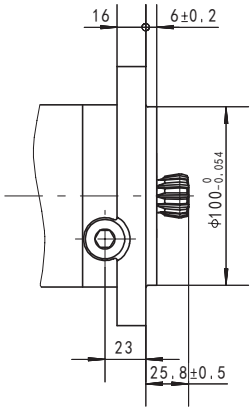




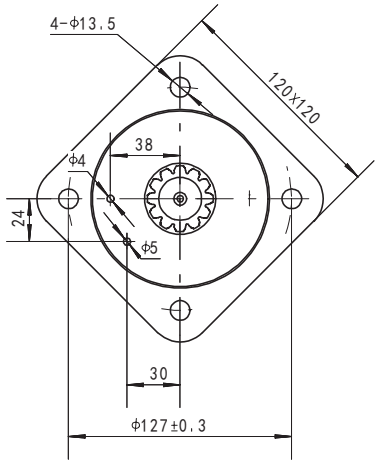


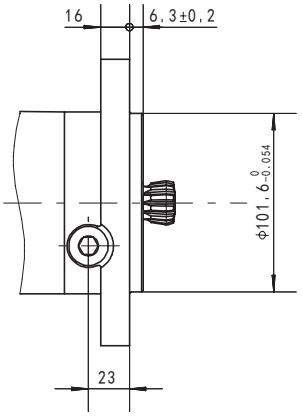


Flange D



Flange E

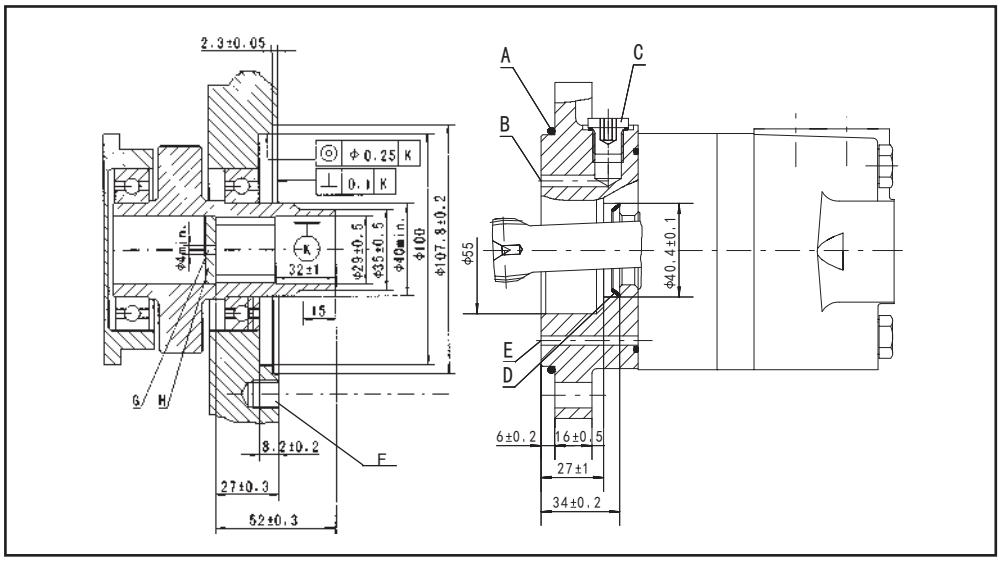




Model	L	L1	L2
HBMSYS-80	129	16	85
HBMSYS-100	133	20	89
HBMSYS-125	138	25	94
HBMSYS-160	140	27	96
HBMSYS-200	147	34	103
HBMSYS-250	155	42	111
HBMSYS-315	167	54	123
HBMSYS-400	182	69	138
HBMSYS-475	196	83	152

Code / Mounting	D (depth)	M (depth)	S (depth)	P (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)

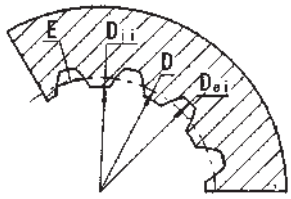
HBMSYS DIMENSIONS AND MOUNTING DATA



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

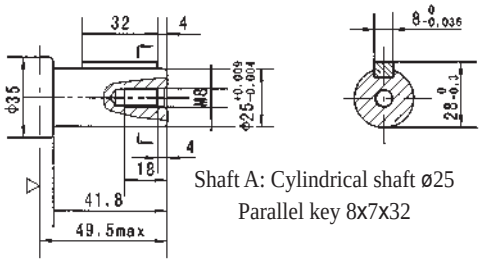
INTERNAL SPLINE DATA FOR THE ATTACHED COMPONENT

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

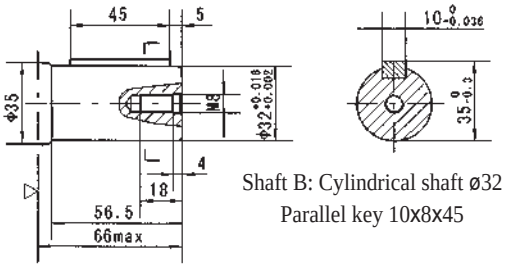


Hardering Specification: HRC 62±2
Effective case depth 0.7±0.2

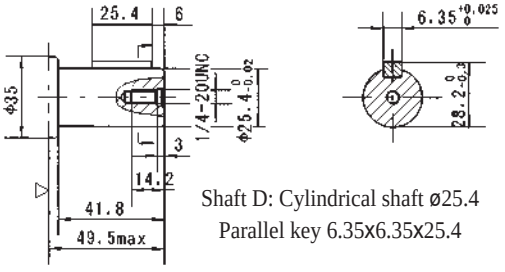
SHAFT EXTENSIONS FOR HBMSY MOTORS



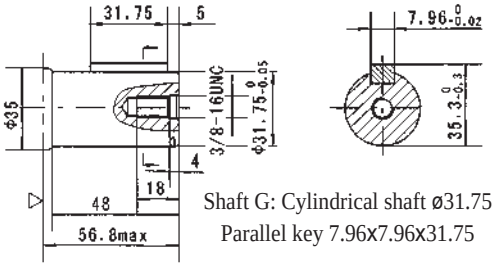
Shaft A: Cylindrical shaft ø25
Parallel key 8x7x32



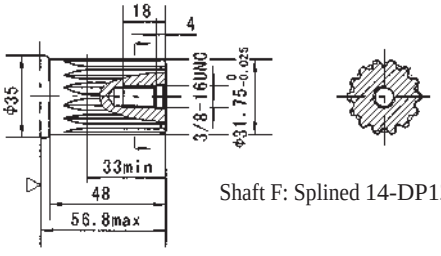
Shaft B: Cylindrical shaft ø32
Parallel key 10x8x45



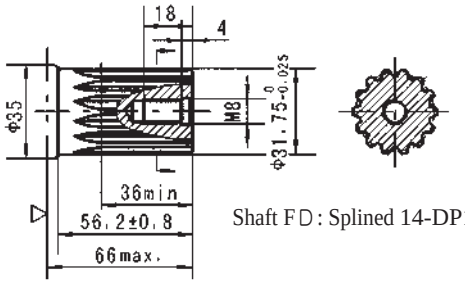
Shaft D: Cylindrical shaft ø25.4
Parallel key 6.35x6.35x25.4



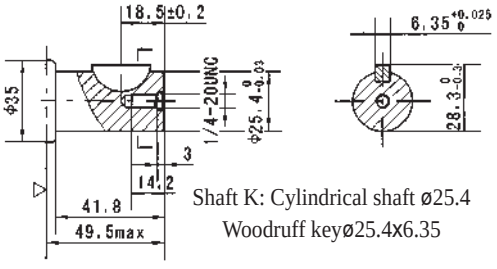
Shaft G: Cylindrical shaft ø31.75
Parallel key 7.96x7.96x31.75



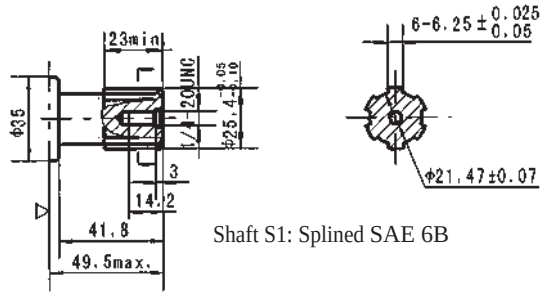
Shaft F: Splined 14-DP12/24



Shaft FD: Splined 14-DP12/24



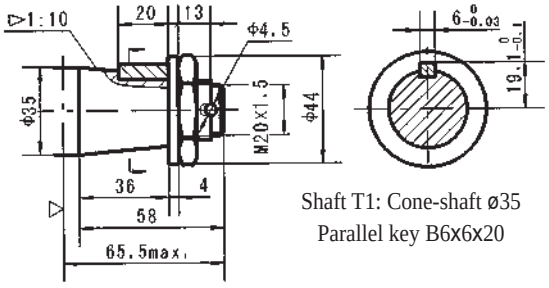
Shaft K: Cylindrical shaft ø25.4
Woodruff keyø25.4x6.35



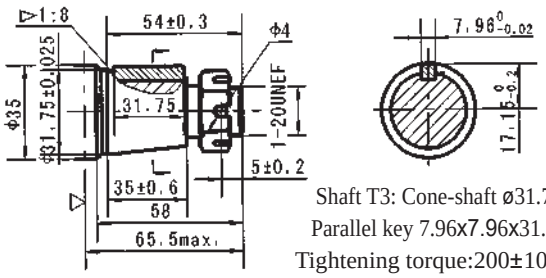
Shaft S1: Splined SAE 6B

▷ Motor Mounting Surface(Dimension corresponding mounting E2, by analogy with others)

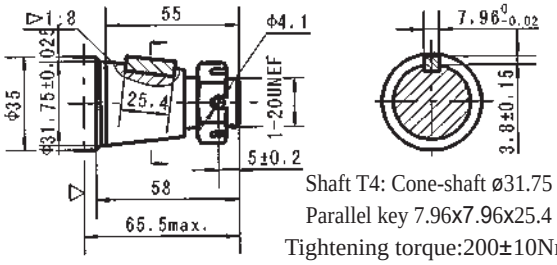
SHAFT EXTENSIONS FOR HBMSY MOTORS



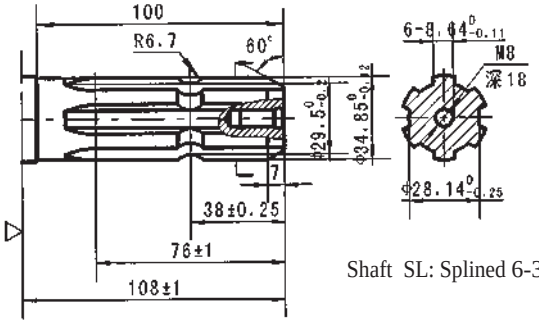
Shaft T1: Cone-shaft ø35
Parallel key B6x6x20



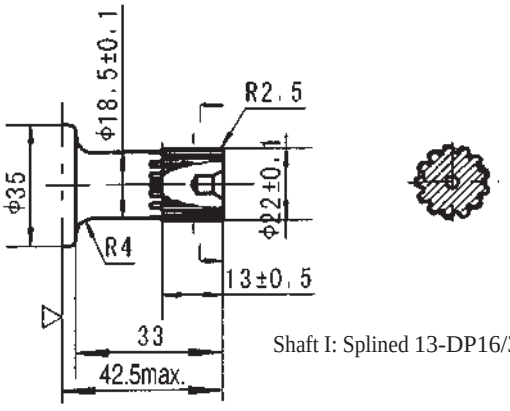
Shaft T3: Cone-shaft ø31.75
Parallel key 7.96x7.96x31.75
Tightening torque:200±10Nm



Shaft T4: Cone-shaft ø31.75
Parallel key 7.96x7.96x25.4
Tightening torque:200±10Nm



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

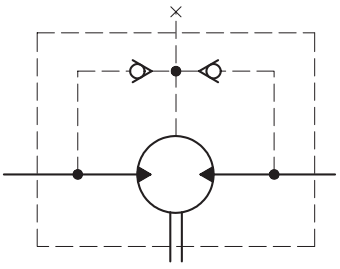


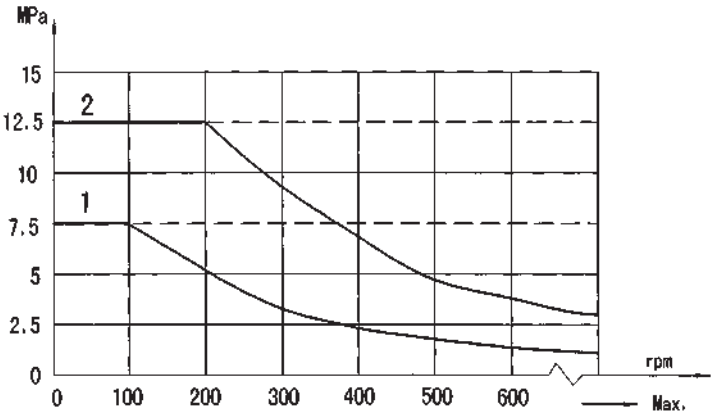
Shaft I: Splined 13-DP16/32

▷ Motor Mounting Surface(Dimension corresponding mounting E2, by analogy with others)
Note:Mounting SP is the same with shaft modle T1、D、B、F and G.

HBMSY Series Hydraulic Motor

Permissible shaft seal pressure

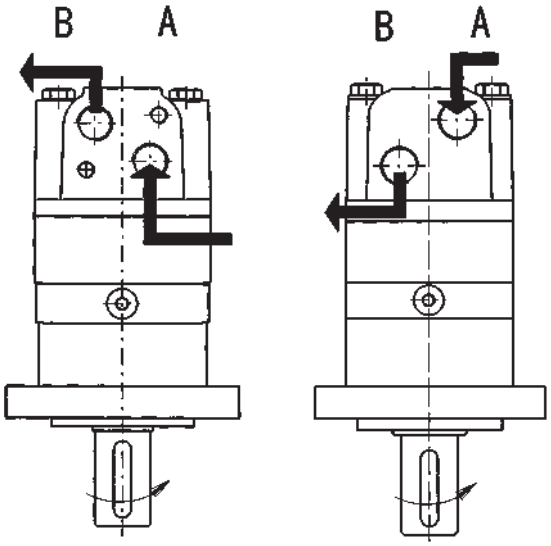




Note:1.Chart for standard shaft seal;
2.Chart for high pressure shaft seal.

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.



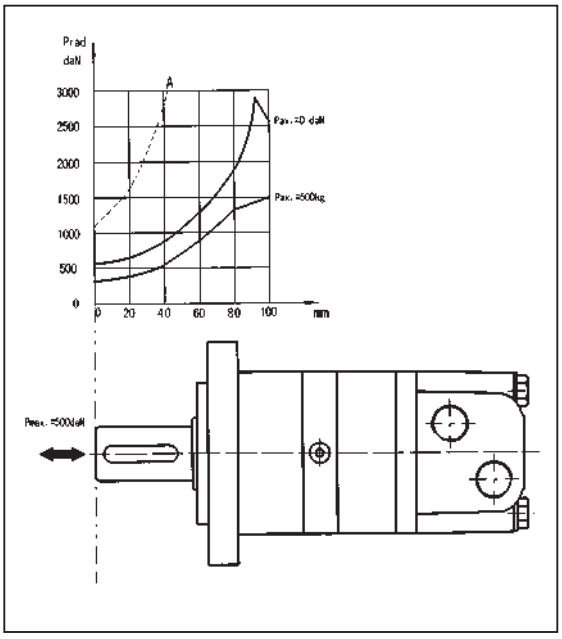
In applications without drain line, output shaft seal exceeds a bit of the pressure in the return line. When applications use the drain line, the pressure of output shaft seal equals the pressure in drain line.

Oil flow in drain line

The table shows the Max. oil flow in the drain line at a return pressure less than 0.5-1MPa.

Pressure drop （MPa）	Viscosity (mm^2/s)	Oil flow in the drain line (L/min.)
14	20	1.5
	35	1
21	20	3
	35	2

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.

Order Information

HBMSY 1 – 2 – 3 – 4 – 5 – 6 – 7 – 8

Pos.1	2	3		4		5		6		7		8	
Code	Disp.	Flange		Output Shaft		Port and Drain Port		Rotation Direction		Paint		Unusually Function	
Omit	80 100 125 160 200 250 315 400 475	E2	2- 13.5 Rhomb-flange Ø106.4, pilot Ø82.5×6.3	B	Shaft Ø 32 , parllel key 10×8×45	D	G1/2 Manifold Mount	Omit	Standard	00	No paint	Omit	Standard
		E4	4-Ø13.5 Rhomb-flange Ø106.4, pilot Ø82.5×6.3	D	Shaft Ø 25.4 , parllel key6.35×6.35×25.4								
		F6	6-Ø13.5 Rhomb-flange Ø106.4, pilot Ø82.5×2.6	G	Shaft Ø 31.75 , parllel key 7.96×7.96×31.75								
		W	4-Ø13.5 Wheel-flange Ø160 , pilot Ø125×8	F	Shaft Ø 31.75 , splined key 14-DP12/24								
		E2B	2-Ø14.3 Rhomb-flange Ø146.05, pilot Ø101.6×9.4	FD	Long Shaft Ø31.75 , splined key 14-DP12/24	M	M22×1.5 Manifold Mount 2-M10 , M14×1.5			B	Black	F	Free Running
		SP	4-Ø11.5 Square-flange Ø106.4 pilot Ø82.5×6.3	SL	shaft Ø34.85,Splined key 6-34.85×28.14×8.64	S	7/8-14UNF O-ring manifold 2-3/8-16 , 7/16-20UNF	R	Opposite			LS	Low Speed
				T1	Cone-shaft Ø35 ,parllel key B6×6×20								
				T3	Cone-shaft Ø 31.75 , parllel key 7.96×7.96×31.75	P	1/2-14NPTF manifold 2-3/8-16UNC , 7/16-20UNF			S	Silver gray		
				S1	Shaft Ø25.4 ,splined key SAE 6B								
				I	Sub-shaft Ø22 , splined key 13-DP16/32								
S		D	4-Ø11 Circle-flange Ø125 , pilot Ø100×6	Omit	Short shaft 12-DP12/24								
		E	4-Ø13.5 Circle-flange Ø127, pilot Ø101.6×6.3										

Pos.1	2	3		4		5		6		7		8	
Code	Disp.	Flange		Output Shaft		Port and Drain Port		Rotation Direction		Paint		Unusually Function	
Omit	80 100 125 160 200 250 315 400 475	E2	2-Ø13.5 Rhomb-flange Ø106.4, pilot Ø82.5×6.3	A	Shaft Ø25 , parllel key 8×7×32	EE-D	G1/2, G1/4	Omit	Standard	00	No paint	Omit	Standard
		E4	4-Ø13.5 Rhomb-flange Ø106.4, pilot Ø82.5×6.3	B	Shaft Ø32 , parllel key 10×8×45	EE-M	2M22×1.5, M14×1.5						
		E6	6-Ø13.5 Rhomb-flange Ø106.4, pilot Ø82.5×6.3	K	Shaft Ø25.4 , Woodruff key Ø25.4×6.35	EE-S2	7/8-14UNF O-ring, 7/16-20 UNF						
		E2B	2-Ø14.3 Rhomb-flange Ø146.05, pilot Ø101.6×9.4			ED	1-1/16-12UN O-ring, 7/16-20 UNF						
		WE	4-Ø13.6Wheel-flange Ø147.6, pilot Ø107.95×6.4	G	Shaft Ø31.75 , parllel key 7.96×7.96×31.75	DB	G1/2, G1/4						
						DU	G1/2, 7/16-20 UNF						
				F	Shaft Ø31.75 , splined key 14-DP12/24	SB	7/8-14UNF O-ring, G1/4	Omit	Standard	Omit	Blue		
				FE	Shaft Ø31.75 , splined key 14-DP12/24	SU	7/8-14UNF O-ring, 7/16-20 UNF					F	Free Running
						M4	M22×1.5, M14×1.5						
				T4	Cone-shaft Ø31.75 , parllel key 7.96×7.96×25.4	MU	1/2",5/8"Crosshole Manifold 3×3/8-16UNC,7/16-20UNF			B	Black	LS	Low Speed
						MM	1/2", 5/8"Crosshole Manifold 3×M10, G1/4	R	Opposite				
				S1	Shaft Ø25.4 ,splined key SAE 6B	G	G1/2, G1/4			S	Silver gray		
				I	Sub-shaft Ø21.74 , splined key 13-DP16/32	M2	M22×1.5, M14×1.5						
						S2	7/8-14UNF O-ring, 7/16-20 UNF						

Note:When the table is used, please fill the code of left rows in the table and give us, which the code information is consists of construction, displacement, mounting flange, output shaft and ports.The informations of mounting flange,output shaft and frorts are the same as BMS serier.The SP flange afflies to shafts of T1、D、B、F、G. If the specification is not in the table or you have specific requirements, please contact us.

HBMT SERIES HYDRAULIC MOTOR

HBMT series motor adapt the advanced Geroler gear set design with disc distribution flow and high pressure.The unit can be supplied the individual variant in operating multifunction in accordance with requirement of applications.

Characteristic features:

* Advanced manufacturing devices for the Geroler gear set,which use low pressure of start-up, provide smooth and reliable operation and high efficiency.
* The output shaft adapts in tapered roller bearings that permit high axial and radial forces.Can offer capacities of high pressure and high torque in the wide of applications.
* Advanced design in disc distrbution flow, which can automatically compensate in operating with high volume efficiency and long life, provide smooth and reliable operation.

Main Specification

Type		HBMT 160	HBMT 200	HBMT 230	HBMT 250	HBMT 315	HBMT 400	HBMT 500	HBMT 630	HBMT 800
Geometric displacement (cm^3/rev.)		161.1	201.4	232.5	251.8	326.3	410.9	523.6	629.1	801.8
Max. speed (rpm)	cont.	625	625	536	500	380	305	240	196	154
	int.	780	750	643	600	460	365	285	233	185
Max. torque (N•m)	cont.	470	590	670	730	950	1080	1220	1318	1464
	int.	560	710	821	880	1140	1260	1370	1498	1520
	peak	669	838	958	1036	1346.3	1450.3	1643.8	1618.8	1665
Max. output (kW)	cont.	27.7	34.9	34.7	34.5	34.9	31.2	28.8	25.3	22.2
	int.	32	40	40	40	40	35	35	27.5	26.8
Max. pressure drop (MPa)	cont.	20	20	20	20	20	18	16	14	12.5
	int.	24	24	24	24	24	21	18	16	13
	peak	28	28	28	28	28	24	21	19	16
Max. flow (L/min)	cont.	100	125	125	125	125	125	125	125	125
	int.	125	150	150	150	150	150	150	150	150
Max. inlet pressure (MPa)	cont.	21	21	21	21	21	21	21	21	21
	int.	25	25	25	25	25	25	25	25	25
	peak	30	30	30	30	30	30	30	30	30
Weight (kg)		19.5	20	20.4	20.5	21	22	23	24	25

* Continuous pressure:Max. value of operating motor continuously.
* Intermittent pressure:Max. value of operating motor in 6 seconds per minute.
* Peak pressure:Max. value of operating motor in 0.6 second per minute.

Performance Data

HBMT 160 [161.1cm³/rev.]

Pressure (MPa)

Flow (L/min)	4	8	10	12	16 (Max.cont.)	20	24 (Max.int.)
10	88 / **60**	176 / **59**	228 / **58**	275 / **56**	361 / **54**	447 / **50**	535 / **44**
20	89 / **121**	181 / **120**	234 / **117**	277 / **114**	372 / **109**	459 / **103**	557 / **95**
40	91 / **249**	180 / **246**	235 / **243**	277 / **236**	381 / **230**	471 / **223**	573 / **212**
60	82 / **371**	178 / **367**	235 / **362**	277 / **356**	381 / **349**	470 / **340**	572 / **330**
80	78 / **492**	173 / **489**	229 / **485**	276 / **478**	379 / **470**	466 / **462**	567 / **447**
100 (Max.cont.)	70 / **614**	160 / **611**	218 / **606**	269 / **598**	370 / **590**	455 / **582**	558 / **570**
125 (Max.int.)	58 / **770**	148 / **764**	211 / **758**	261 / **750**	359 / **741**	448 / **731**	552 / **715**

HBMT 200 [201.4cm³/rev.]

Pressure (MPa)

Flow (L/min)	4	8	10	12	16 (Max.cont.)	20	24 (Max.int.)
10	124 / **47**	233 / **46**	289 / **45**	340 / **42**	454 / **39**	560 / **37**	669 / **33**
20	125 / **95**	239 / **94**	298 / **92**	347 / **90**	468 / **87**	576 / **84**	696 / **75**
40	120 / **195**	241 / **193**	296 / **191**	352 / **187**	475 / **183**	589 / **178**	716 / **167**
60	116 / **297**	237 / **295**	295 / **292**	352 / **287**	478 / **282**	589 / **276**	718 / **263**
80	108 / **395**	231 / **393**	289 / **389**	350 / **384**	474 / **377**	586 / **370**	716 / **359**
100	99 / **493**	227 / **490**	286 / **486**	344 / **482**	471 / **475**	580 / **467**	712 / **460**
125 (Max.cont.)	84 / **615**	208 / **611**	276 / **607**	333 / **602**	459 / **595**	566 / **588**	697 / **572**
150 (Max.int.)	70 / **743**	194 / **740**	260 / **735**	324 / **727**	447 / **717**	554 / **706**	682 / **682**

HBMT 250 [251.8cm³/rev.]

Pressure (MPa)

Flow (L/min)	4	8	10	12	16 (Max.cont.)	20	24 (Max.int.)
10	138 / **38**	286 / **38**	355 / **37**	419 / **36**	559 / **34**	689 / **32**	824 / **31**
20	143 / **76**	296 / **75**	364 / **74**	432 / **72**	580 / **70**	708 / **67**	853 / **62**
40	139 / **156**	301 / **154**	372 / **152**	440 / **149**	593 / **146**	723 / **142**	884 / **134**
60	132 / **237**	294 / **236**	372 / **233**	441 / **229**	592 / **224**	727 / **219**	888 / **207**
80	128 / **317**	283 / **316**	364 / **314**	433 / **308**	587 / **303**	721 / **299**	887 / **284**
100	126 / **396**	282 / **394**	355 / **391**	427 / **387**	582 / **381**	716 / **373**	879 / **359**
125 (Max.cont.)	116 / **495**	260 / **492**	340 / **488**	414 / **483**	568 / **476**	703 / **469**	864 / **454**
150 (Max.int.)	88 / **592**	242 / **589**	320 / **585**	397 / **580**	552 / **572**	686 / **565**	847 / **545**

Torque (N•m) 552
Speed (rpm) **572**

HBMT 315 [326.3cm³/rev.]

Pressure (MPa)

Flow (L/min)	4	8	10	12	16 (Max.cont.)	20	24 (Max.int.)
10	184 / **30**	363 / **29**	453 / **28**	545 / **27**	734 / **26**	891 / **25**	1062 / **23**
20	189 / **60**	380 / **59**	472 / **58**	562 / **56**	757 / **54**	917 / **52**	1109 / **50**
40	191 / **121**	381 / **120**	484 / **118**	570 / **115**	774 / **112**	954 / **109**	1149 / **104**
60	189 / **183**	376 / **181**	493 / **179**	573 / **175**	772 / **172**	962 / **168**	1154 / **158**
80	179 / **244**	369 / **242**	479 / **239**	565 / **236**	768 / **231**	954 / **227**	1153 / **217**
100	169 / **305**	357 / **304**	467 / **301**	562 / **298**	758 / **294**	942 / **289**	1143 / **276**
125 (Max.cont.)	147 / **380**	336 / **378**	447 / **375**	544 / **371**	745 / **367**	920 / **362**	1127 / **349**
150 (Max.int.)	119 / **458**	318 / **456**	432 / **453**	526 / **449**	713 / **444**	894 / **431**	1097 / **425**

Performance Data

HBMT 400 [410.9cm³/rev.]

Pressure (MPa)

Flow (L/min)	3	6	9	12	15 (Max.cont.)	18	21 (Max.int.)
10	176	367	560	715	885	1050	1209
	24	**23**	**22**	**21**	**20**	**19**	**18**
20	179	370	565	726	899	1071	1236
	49	**48**	**47**	**44**	**42**	**40**	**38**
40	176	370	567	733	919	1091	1263
	96	**95**	**93**	**90**	**87**	**83**	**79**
60	174	361	563	729	920	1095	1269
	145	**143**	**139**	**135**	**131**	**127**	**121**
80	166	353	553	719	912	1084	1263
	193	**191**	**188**	**184**	**180**	**176**	**170**
100	150	339	538	708	896	1067	1252
	242	**240**	**238**	**234**	**228**	**224**	**218**
Max.cont. 125	135	309	524	688	873	1045	1221
	302	**300**	**298**	**294**	**289**	**285**	**278**
Max.int. 150	126	292	508	666	852	1020	1197
	364	**362**	**358**	**354**	**350**	**346**	**339**

HBMT 500 [523.6cm³/rev.]

Pressure (MPa)

Flow (L/min)	3	6	9	12	14 (Max.cont.)	16	18 (Max.int.)
10	222	451	692	892	1050	1193	1340
	18	**18**	**18**	17	**16**	**15**	**13**
20	231	464	714	918	1070	1220	1377
	37	**36**	**35**	34	**33**	**32**	**30**
40	230	466	727	941	1094	1244	1422
	75	**74**	**73**	72	**70**	**68**	**64**
60	225	457	714	941	1088	1245	1409
	113	**112**	**111**	109	**107**	**105**	**101**
80	213	431	696	927	1076	1244	1401
	151	**150**	**149**	147	**145**	**143**	**138**
100	194	420	680	901	1063	1224	1383
	189	**188**	**187**	185	**183**	**181**	**177**
Max.cont. 125	182	398	641	877	1024	1199	1352
	237	**236**	**235**	233	**231**	**229**	**225**
Max.int. 150	147	369	618	853	1004	1167	1325
	284	**283**	**282**	280	**278**	**276**	**272**

HBMT 630 [629.1cm³/rev.]

Pressure (MPa)

Flow (L/min)	3	6	9	10.5	12 (Max.cont.)	14	16 (Max.int.)
10	233	520	795	902	1074	1194	1363
	14	**14**	**13**	**13**	**13**	**11**	**11**
20	237	554	837	953	1117	1239	1407
	28	**27**	**27**	**26**	**26**	**24**	**22**
40	239	553	860	987	1171	1308	1483
	62	**62**	**61**	**60**	**59**	**56**	**54**
60	223	544	863	978	1172	1318	1498
	94	**94**	**92**	**91**	**90**	**86**	**82**
80	220	537	854	965	1172	1314	1497
	123	**122**	**121**	**119**	**118**	**114**	**110**
100	208	522	832	945	1156	1303	1488
	156	**155**	**153**	**152**	**150**	**147**	**142**
Max.cont. 125	201	499	810	931	1137	1292	1472
	196	**196**	**194**	**192**	**191**	**187**	**183**
Max.int. 150	174	492	785	921	1121	1277	1454
	233	**232**	**231**	**230**	**227**	**223**	**217**

Torque (N•m) 1121
Speed (rpm) **227**

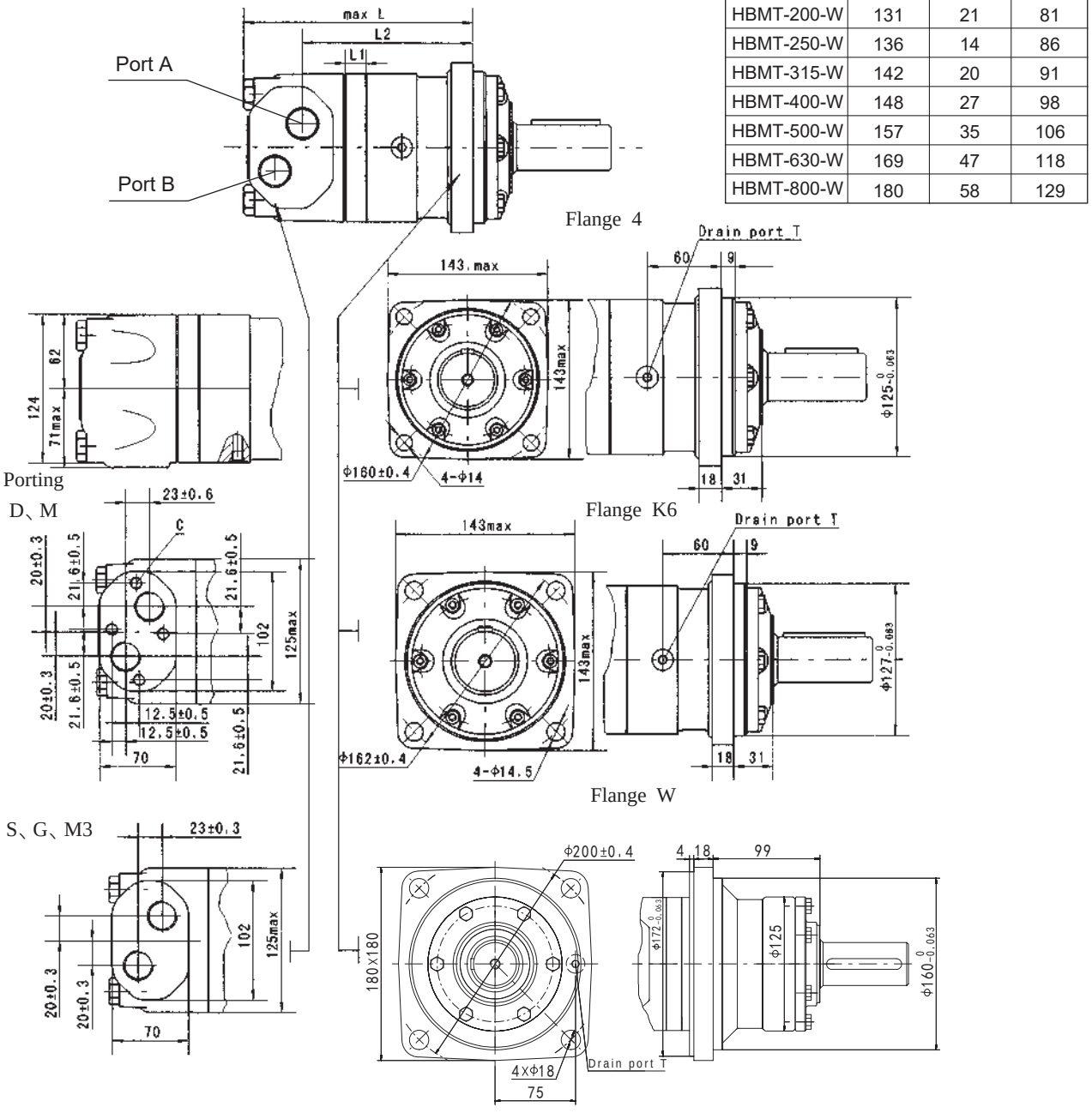
HBMT 800 [801.8cm³/rev.]

Pressure (MPa)

Flow (L/min)	3	6	9	10.5	12.5 (Max.cont.)	13 (Max.int.)
10	346	677	1003	1159	1365	1390
	12	**12**	**11**	**11**	**11**	**10**
20	356	692	1034	1183	1404	1458
	24	**24**	**24**	**23**	**22**	**18**
40	365	703	1066	1236	1459	1516
	50	**50**	**49**	**48**	**46**	**40**
60	354	703	1060	1237	1464	1520
	74	**73**	**71**	**71**	**68**	**63**
80	332	686	1050	1226	1464	1514
	99	**98**	**98**	**96**	**93**	**86**
100	305	654	1025	1207	1445	1506
	125	**123**	**123**	**121**	**118**	**110**
Max.cont. 125	280	622	989	1181	1422	1487
	154	**153**	**153**	**150**	**149**	**140**
Max.int. 150	247	590	953	1156	1406	1476
	185	**184**	**183**	**181**	**179**	**172**

HBMT DIMENSIONS AND MOUNTING DATA

Model	L	L1	L2
HBMT-160-W	127	17	77
HBMT-200-W	131	21	81
HBMT-250-W	136	14	86
HBMT-315-W	142	20	91
HBMT-400-W	148	27	98
HBMT-500-W	157	35	106
HBMT-630-W	169	47	118
HBMT-800-W	180	58	129

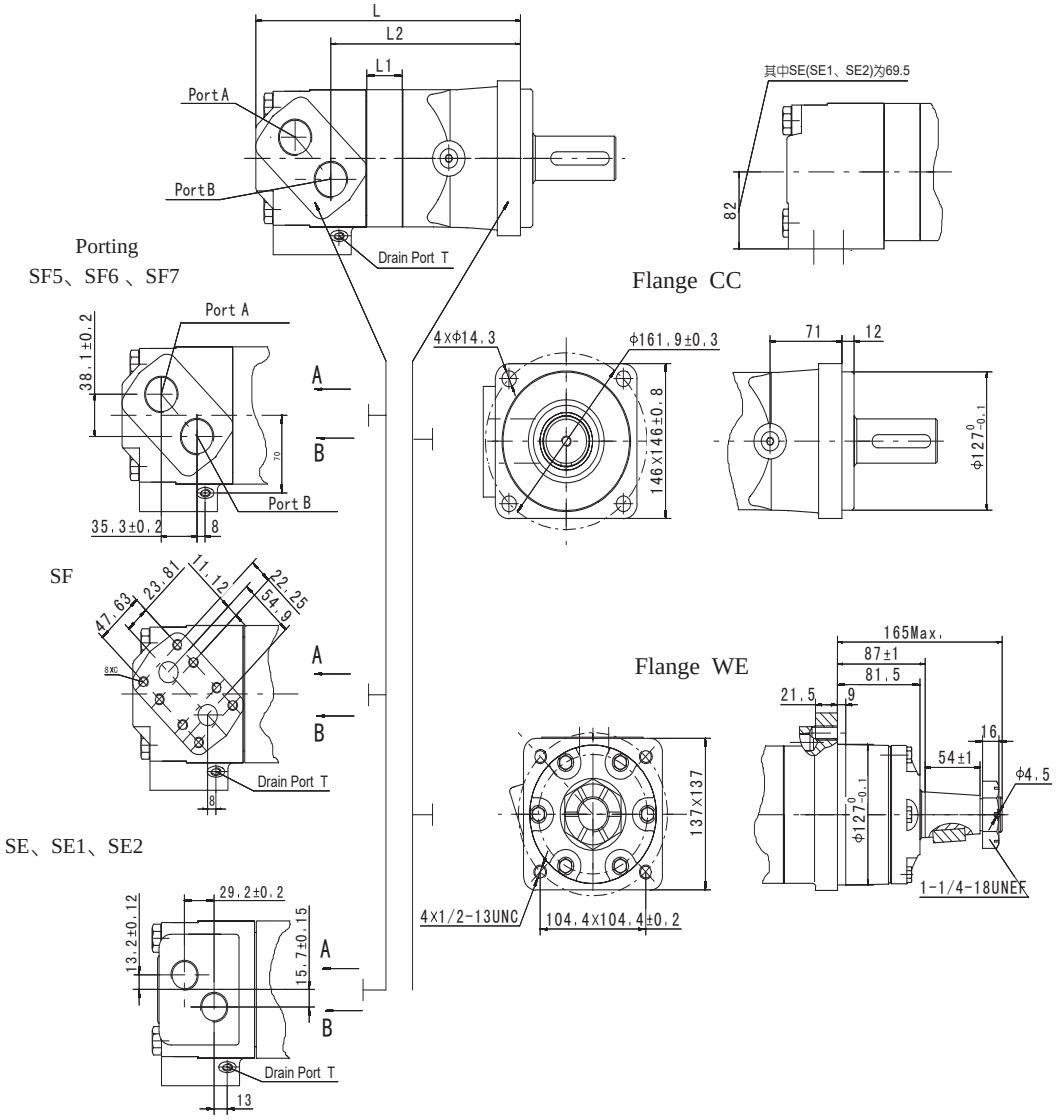


Model	L	L1	L2
HBMT160	193	17	142.5
HBMT200	197	21	146.5
HBMT250	204	14	152.5
HBMT315	210	20	158.5
HBMT400	217	27	165.5
HBMT500	225	35	173.5
HBMT630	237	47	185.5
HBMT800	248	58	196.5

Content / Mounting	Code					
	D (depth)	M (depth)	S (depth)	G (depth)	M3 (depth)	S1 (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.

HBMTE DIMENSIONS AND MOUNTING DATA

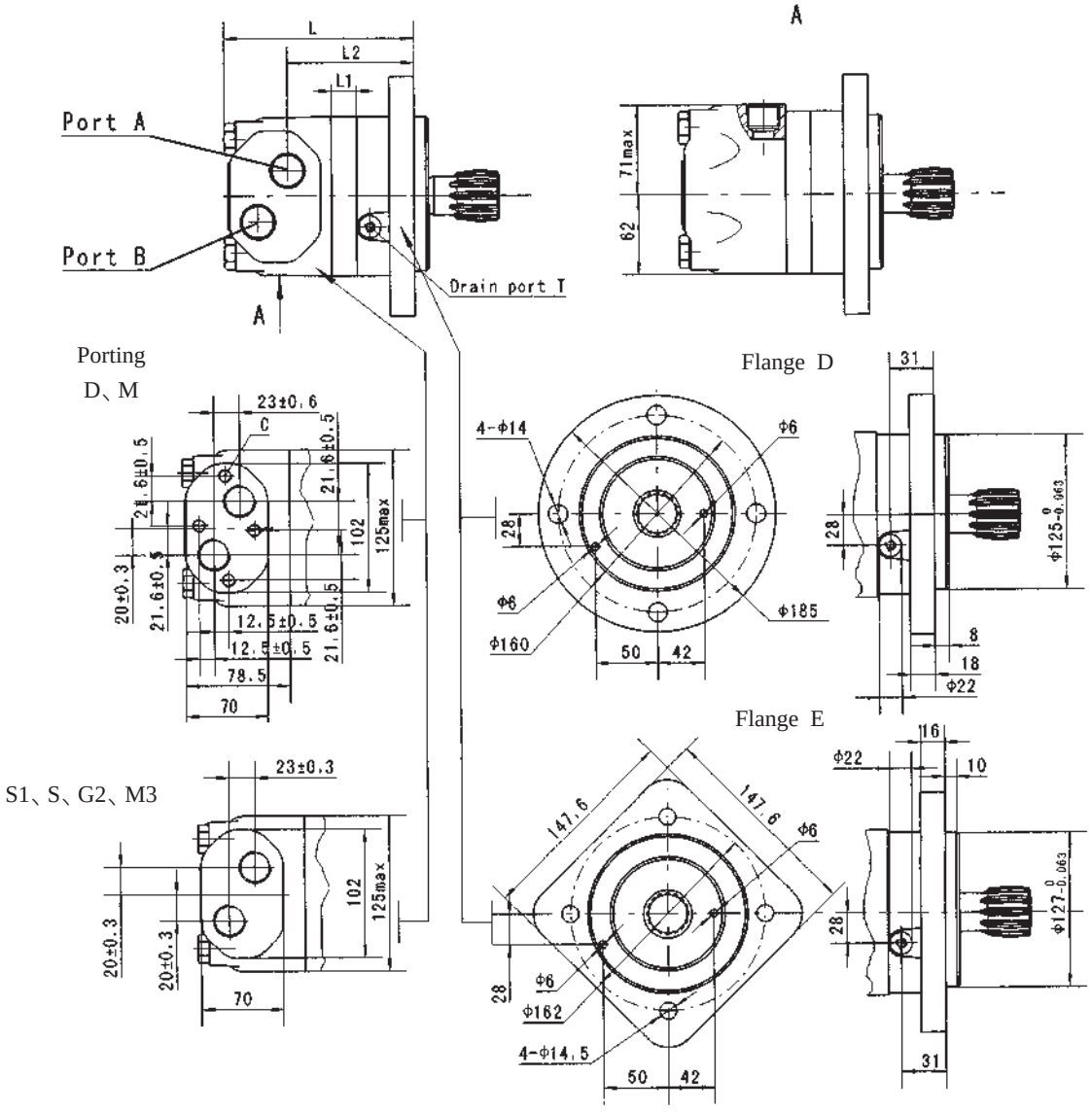


Model	L	L1	L2
HBMTE230	238.5	12	164.5
HBMTE250	240.5	14	166.5
HBMTE315	246.5	20	172.5
HBMTE400	253.5	27	179.5
HBMTE500	261.5	35	187.5
HBMTE630	273.5	47	199.5
HBMTE800	284.5	58	210.5

Note:1)The data for the port of SF (SF5 and SF6and sf7)
2)The data for the port of SE (SE1 and SE2) and flange WE:L-70 and L2-59.
3)The thickness of the stator and rotor for disp,from 315 to 800 is the dimension of L1 adding on 7mm.

Content / Mounting	Code						
	SF5(depth)	SF6 (depth)	SF7 (depth)	SF (depth)	SE (depth)	SE1 (depth)	SE2(depth)
P(A,B)	1-5/16-12UN (18)	M33 x 2 (18)	G1 (18)	3/4" (18)	1-1/16-12UN (18)	1-1/16-12UN (18)	G3/4 (18)
T	7/16-20UNF (12)	M14 x 1.5 (12)	G1/4 (12)	7/16-20UNF (12)	9/16-18UNF (12)	7/16-20UNF (12)	G1/4 (12)
C	--	--	--	8 x 3/8-16UNC	--		

HBMTS DIMENSIONS AND MOUNTING DATA

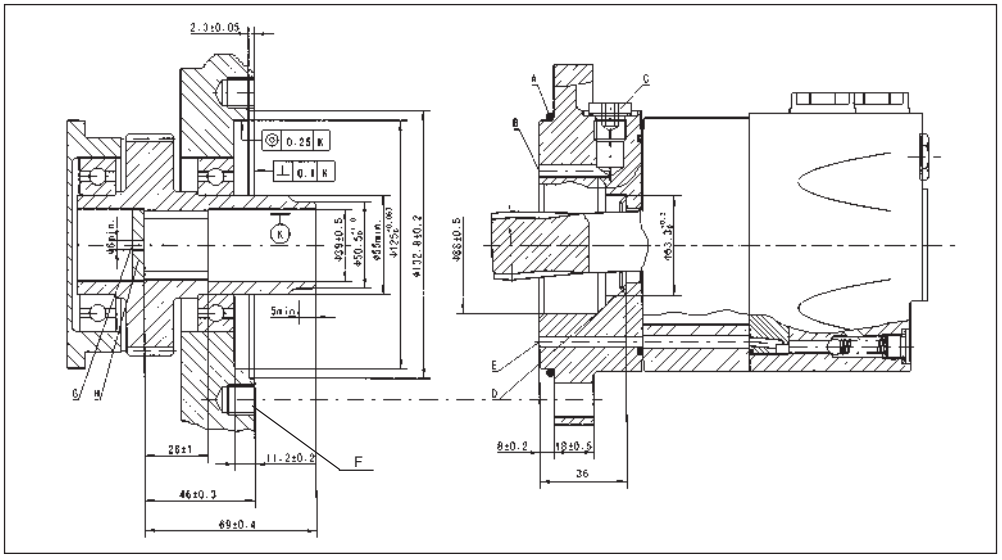


Model	L	L1	L2
HBMT160	148	17	96.5
HBMT200	152	21	100.5
HBMT250	157	14	109
HBMT315	163	20	115
HBMT400	170	27	122
HBMT500	178	35	130
HBMT630	190	47	142
HBMT800	201	58	153

Content / Mounting	Code					
	D (depth)	M (depth)	S (depth)	G (depth)	M3 (depth)	S1 (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.

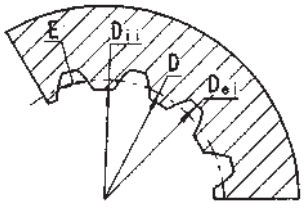
HBMTS MOUNTING DATA



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

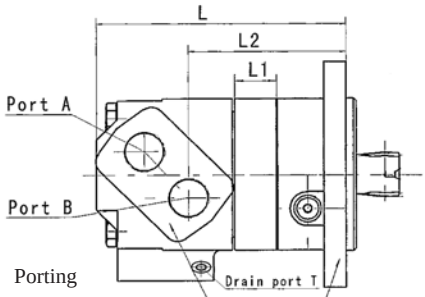
INTERNAL SPLINE DATA FOR THE ATTACHED COMPONENT

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



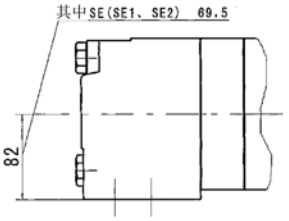
Hardering Specification: HRC 62±2
Effective case depth 0.7±0.2

HBMTJ DIMENSIONS AND MOUNTING DATA

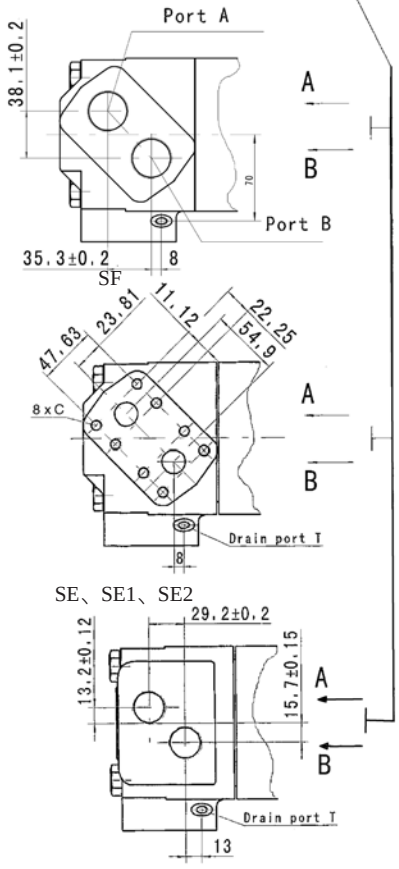


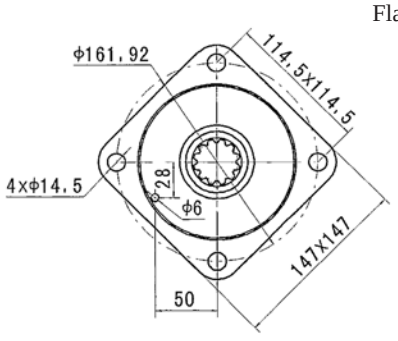
Porting

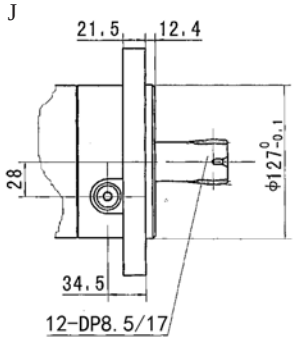
SF5、SF6、SF7

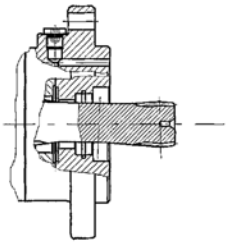


Flange J









Model	L	L1	L2
HBMTJ230	176	12	104.5
HBMTJ250	178	14	106.5
HBMTJ315	184	20	112.5
HBMTJ400	191	27	119.5
HBMTJ500	199	35	127.5
HBMTJ630	211	47	139.5
HBMTJ800	222	58	150.5

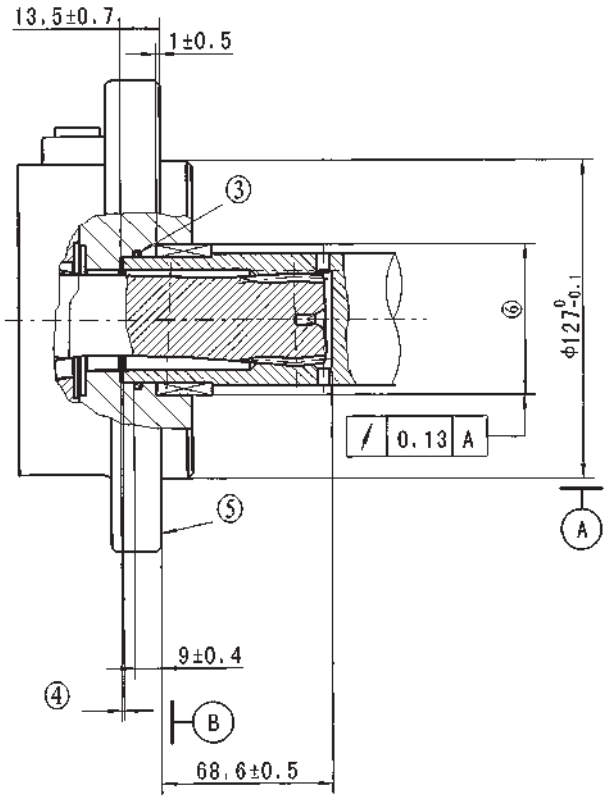
Note:1)The data for the port of SF (SF5 and SF6 andSF7).

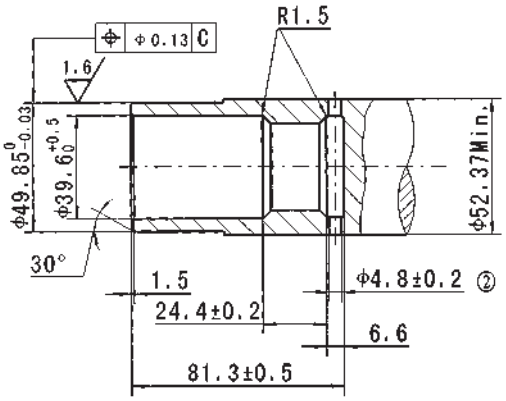
2)The data for the port of SE (SE1 and SE2) and flange WE:L-70 and L2-59.

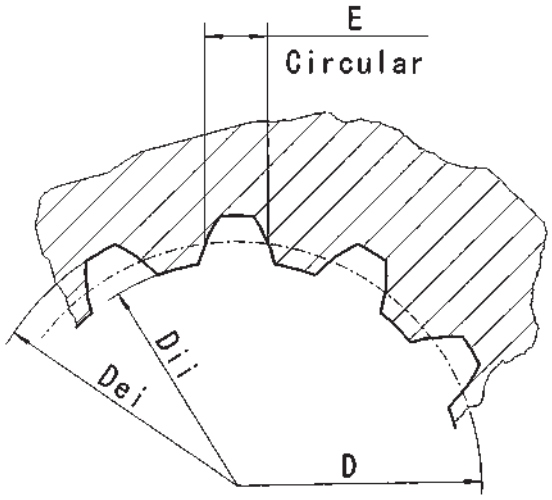
3)The thickness of the stator and rotor is the dimension of L1 adding on 7mm.

Content / Mounting	Code						
	SF5 (depth)	SF6 (depth)	SF7 (depth)	SF (depth)	SE (depth)	SE1 (depth)	SE2 (depth)
P(A,B)	1-5/16-12UN (18)	M33 x 2 (18)	G1 (18)	3/4" (18)	1-1/16-12UN (18)	1-1/16-12UN (18)	G3/4 (18)
T	7/16-20UNF (12)	M14 x 1.5 (12)	G1/4 (12)	7/16-20UNF (12)	9/16-18UNF (12)	7/16-20UNF (12)	G1/4 (12)
C	--	--	--	8 x 3/8-16UNC	--		

HBMTJ DIMENSIONS AND MOUNTING DATA





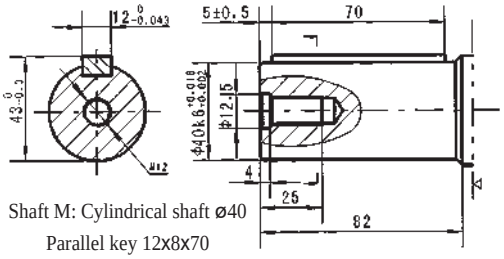


INTERNAL SPLINE DATA FOR THE ATTACHED COMPONENT

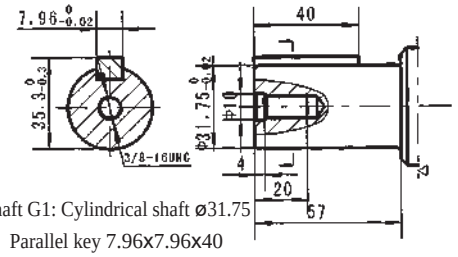
Fillet Root Side Fit		mm
Number of Teeth	Z	12
Diametral Pitch	DP	8.5/17
Pressure Angle	D	30˚
Pitch Dia.	α_D	ø35.858823
Major Dia.	D_{ei}	ø38.97$^{+0.20}_{0}$
Minor Dia.	D_{ii}	ø33.3$^{+0.18}_{0}$
Space Width［Circular］	E	5.866±0.032
Dimension between two pins(ø4)	M_e	26.929-27.084

①Internal spline in mating part to be as follows:Material to be ASTM A304, 8620H. Carborize to a hardness of 60-64HRC with case depth (to 50HRC) of 0.75-1［.030-.040］ (dimensions apply after heat treat).
②Mating part to have critical dimensions as shown,
Oil holes must be provided and open for proper oil circulation.
③Some means of maintaining clearance between shaft and mounting flange must be provided.
④Seal to be furnished with motor for proper oil circulation thru splines.
⑤Similar to SAE "C" Four Bolt Flange
⑥Counterbore designed to adapt to a standard sleeve bearing 50.010-50.038［1.9689-1.9700］ID by 60.51-60.079［2.3642-2.3653］ O.D.(Oilite bronze sleeve bearing).
C This surface to be diameter of output shaft.

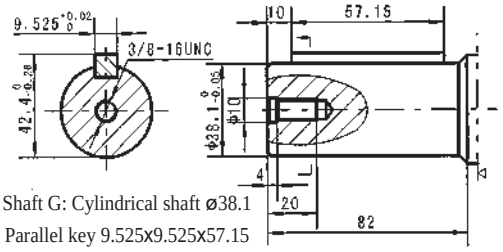
SHAFT EXTENSIONS FOR HBMT(E) MOTORS



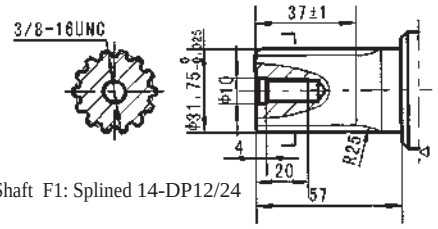
Shaft M: Cylindrical shaft ø40
Parallel key 12x8x70



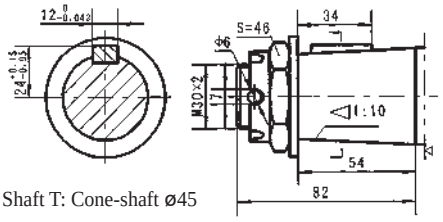
Shaft G1: Cylindrical shaft ø31.75
Parallel key 7.96x7.96x40



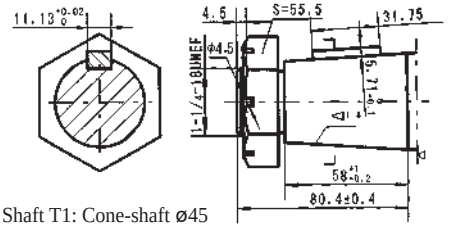
Shaft G: Cylindrical shaft ø38.1
Parallel key 9.525x9.525x57.15



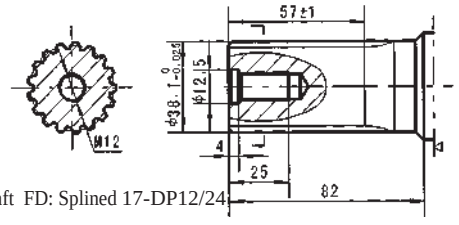
Shaft F1: Splined 14-DP12/24



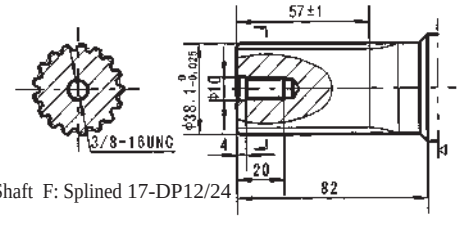
Shaft T: Cone-shaft ø45
Parallel key B12x8x28
Tightening torque:500±10Nm



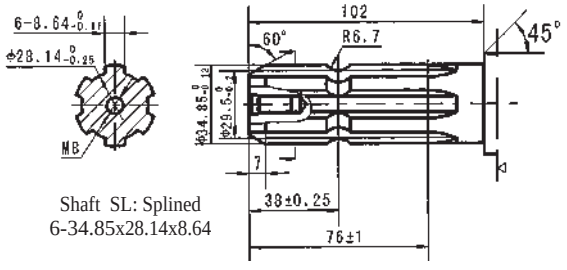
Shaft T1: Cone-shaft ø45
Parallel key 11.13x11.13x31.75
Tightening torque:500±10Nm



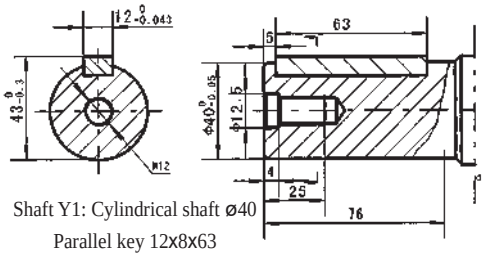
Shaft FD: Splined 17-DP12/24



Shaft F: Splined 17-DP12/24



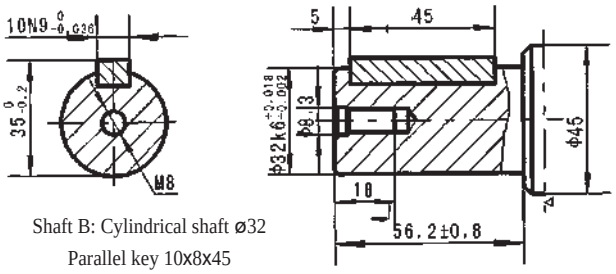
Shaft SL: Splined
6-34.85x28.14x8.64



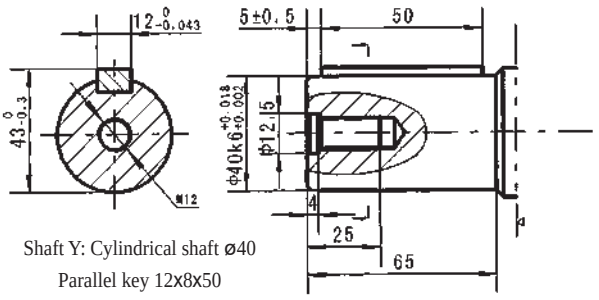
Shaft Y1: Cylindrical shaft ø40
Parallel key 12x8x63

▷ Motor Mounting Surface

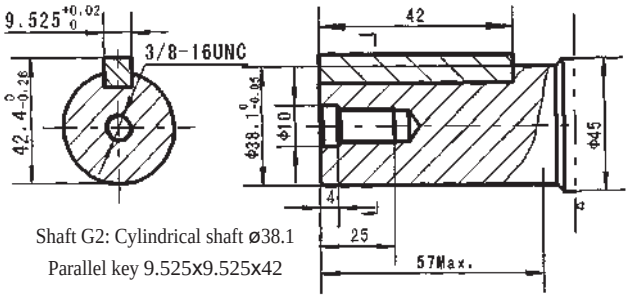
SHAFT EXTENSIONS FOR HBMT(E) MOTORS



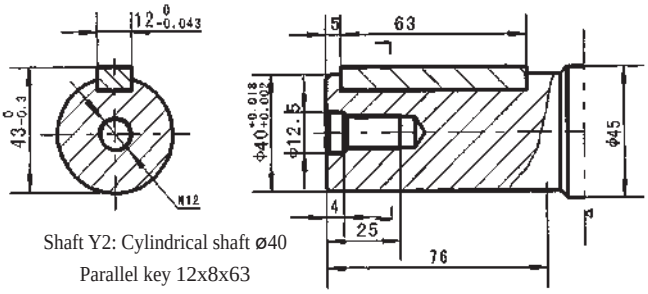
Shaft B: Cylindrical shaft ø32
Parallel key 10x8x45



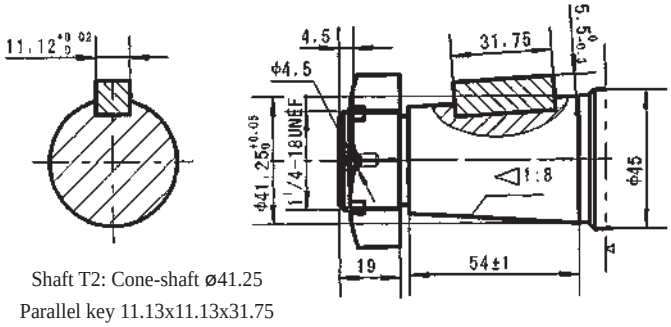
Shaft Y: Cylindrical shaft ø40
Parallel key 12x8x50



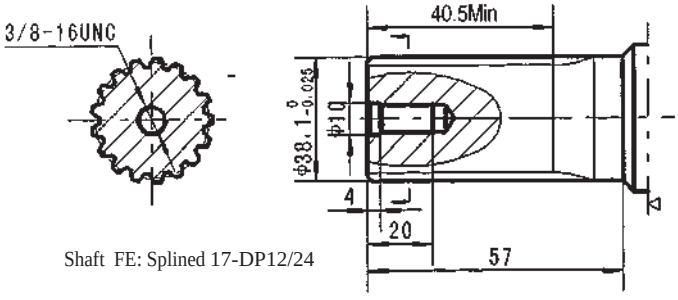
Shaft G2: Cylindrical shaft ø38.1
Parallel key 9.525x9.525x42



Shaft Y2: Cylindrical shaft ø40
Parallel key 12x8x63



Shaft T2: Cone-shaft ø41.25
Parallel key 11.13x11.13x31.75
Tightening torque:500±10Nm

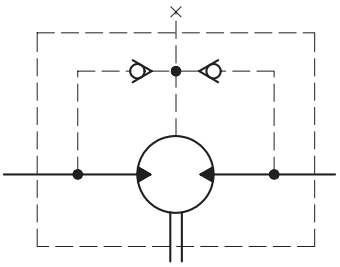


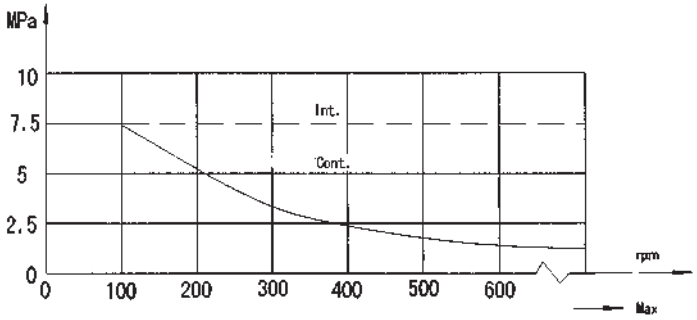
Shaft FE: Splined 17-DP12/24

▷ Motor Mounting Surface

HBMT Series Hydraulic Motor

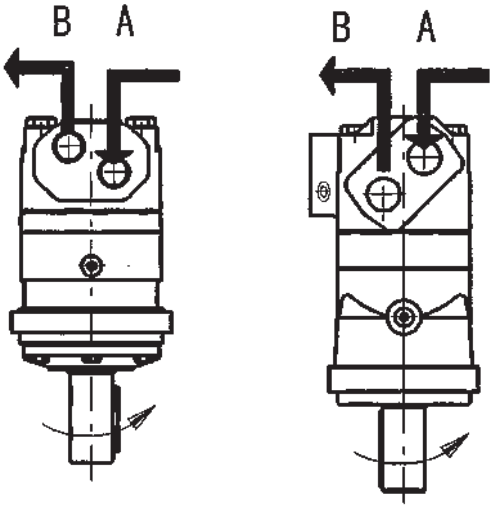
Permissible shaft seal pressure





Standard direction of shaft rotation: Standard

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



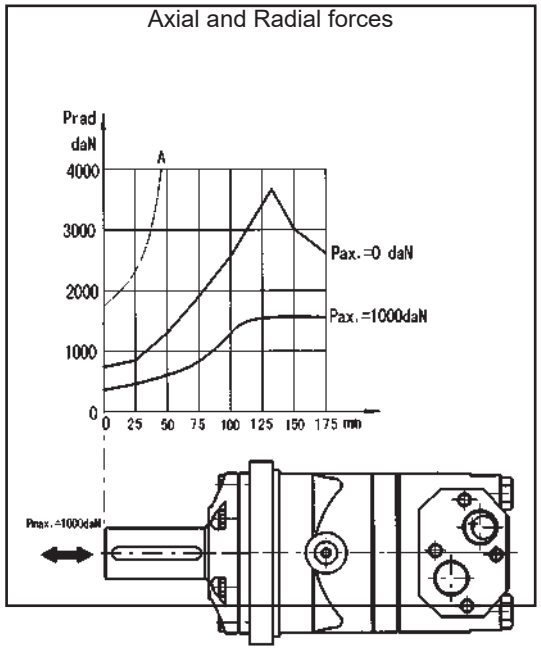
In applications without drain line, output shaft seal exceeds a bit of the pressure in the return line. When applications use the drain line, the pressure of output shaft seal equals the pressure in drain line.

Oil flow in drain line

The table shows the Max. oil flow in the drain line at a return pressure less than 0.5-1MPa.

Pressure drop （MPa）	Viscosity (mm^2/s)	Oil flow in the drain line (L/min.)
14	20	2.5
	35	1.5
21	20	5
	35	3

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.

Order Information

1	2	3	4	5	6	7	8
HBMT	–	–	–	–	–	–	–	–

1	2	3	4	5	6	7	8
HBMTS	–	–	–	–	–	–	–	–

Pos.1	2	3		4		5		6		7		8	
Code	Disp.	Flange		Output Shaft		Ports and Drain Port		Rotation Direction		Paint		Unusually Function	
HBMT	160 200 250 315 400 500 630 800	4	4-Ø14 Square-flangeØ160, pilotØ125 × 9	M	Shaft Ø40 , parallel key 12 × 8 × 70	D	G3/4 Manifold Mount,4-M10 , G1/4	Omit	Standard	00	No paint	Omit	Standard
		K6	4-Ø14.5Square-flangeØ162, pilotØ127 × 9	G	Shaft Ø38.1 ,parallel key 9.52 × 9.52 × 57.15	M	M27 × 2 Manifold Mount,4-M10, M14 × 1.5	R	Opposite	Omit	Blue	F	Free Running
		W	4-Ø18 Wheel-flangeØ200, pilotØ160 × 7	F	Shaft Ø38.1 ,splined tooth 17-DP12/24	S	1-1/16-12UN O-ring, 9/16-18UNF			B	Black	LS	Low Speed
				FD	Shaft Ø38.1 ,splined tooth 17-DP12/24	S1	1-1/16-12UN O-ring, 7/16-20UNF			S	Silver grey		
				T	Cone-shaft 1:10 Ø45 ,parallel key B12 × 8 × 28	G	G3/4,G1/4						
				T1	Cone-shaft 1:8 Ø45 , parallel key 11.13 × 11.13 × 31.75	M3	M27 × 2,M14 × 1.5						
				SL	shaft Ø34.85,Splined key								
				G1	Splined key 6-34.85 × 28.14 × 8.64 shaftØ31.75 , parallel key 7.96 × 7.96 × 40								
				F1	Shaft Ø31.75,splined tooth 14-DP12/24								
HBMTS		D	4-Ø14 Circle-flange Ø160, pilot Ø125 × 8	Omit	Short shaft 16-DP12/24								
		E	4-Ø14.5 Square-flange Ø162, pilot Ø127 × 10										

Order Information

1	2	3	4	5	6	7	8
HBMTE	–		–		–		–		–		–		–	

1	2	3	4	5	6	7	8
HBMTJ	–		–		–		–		–		–		–	

Pos.1	2	3		4		5		6		7		8	
Code	Disp.	Flange		Output Shaft		Ports and Drain Port		Rotation Direction		Paint		Unusually Function	
BMTE	230 250 315 400 500 630 800	CC	4-Ø14.3 Square-flange Ø161.9, pilotØ127 × 12	G2 FE Y1 Y2 T2	Shaft Ø38.1 ,parallel key 9.52 × 9.52 × 42 Shaft Ø38.1 ,splined tooth 17-DP12/24 ShaftØ40,parallel key 12 × 8 × 63 ShaftØ40,parallel key 12 × 8 × 63 Cone-shaft 1:8 Ø41.25 , parallel key 11.13 × 11.13 × 31.75	SF SF5 SF6 SF7 SE SE1 SE2	3/4" , Manifold Mount,8-3/8-16UNC, 7/16-20UNF 1-5/16-12UN O-ring,7/16-20 UNF M33 × 2,M14 × 1.5 G1,G1/4 1-1/16-12UN O-ring,9/16-18UNF 1-1/16-12UN O-ring,7/16-20 UNF G3/4,G1/4	Omit R	Standard Opposite	00 Omit B S	No paint Blue Black Silver grey	Omit F LS	Standard Free Running Low Speed
		WE	4-1/2-13UNC Wheel-flangeØ147.6, pilotØ127 × 9	T3	Cone-shaft 1:8 Ø41.25 , parallel key 11.13 × 11.13 × 31.75								
BMTJ		J	4-Ø14.5 Square-flange Ø161.9 pilot Ø127 × 12.4	Omit	Short shaft 12-DP8.5/17								

Note:When the table is used, please fill the code of left rows in the table 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 .

HBMV SERIES HYDRAULIC MOTOR

HBMV series motor adapt the advanced Geroler gear set designed with disc distribution flow and high pressure.The unit can be supplied the individual variant in operating multifunction in accordance with requirement of applications.

Characteristic features:

* Advanced manufacturing devices for the Geroler gear set,which use low pressure of start-up, provide smooth and reliable operation and high efficiency.
* The output shaft adapts in tapered roller bearings that permit high axial and radial forces. The case can offer capacities of high pressure and high torque in the wide of applications.
* Advanced design in disc distrbution flow, which can automatically compensate in operating with high volume efficiency and long life, provide smooth and reliable operation.

Main Specification

Type		HBMV 315	HBMV 400	HBMV 500	HBMV 630	HBMV 800	HBMV 1000
Geometric displacement (cm^3/rev.)		333	419	518	666	801	990
Max. speed (rpm)	cont.	510	500	400	320	250	200
	int.	630	600	480	380	300	240
Max. torque (N•m)	cont.	920	1180	1460	1660	1880	2015
	int.	1110	1410	1760	1940	2110	2280
	peak	1290	1640	2050	2210	2470	2400
Max. output (kW)	cont.	38.0	47.0	47.0	40.0	33.0	28.6
	int.	46.0	56.0	56.0	56.0	44.0	40.0
Max. pressure drop (MPa)	cont.	20	20	20	18	16	14
	int.	24	24	24	21	18	16
	peak	28	28	28	24	21	18
Max. flow (L/min)	cont.	160	200	200	200	200	200
	int.	200	240	240	240	240	240
Weight (kg)		31.8	32.6	33.5	34.9	36.5	38.6

* Continuous pressure:Max. value of operating motor continuously.
* Intermittent pressure:Max. value of operating motor in 6 seconds per minute.
* Peak pressure:Max. value of operating motor in 0.6 second per minute.

Performance Data

HBMV 315 [333cm³/rev.]

Flow (L/min)	Pressure (MPa) 3.5	7	10	14	18	20 (Max.cont.)	24 (Max.int.)
10	140	294	440	610	742	845	1000
	26	**24**	**23**	**22**	**20**	**17**	**14**
20	153	314	466	636	787	895	1070
	55	**54**	**53**	**52**	**51**	**48**	**44**
50	149	312	465	654	815	935	1112
	145	**144**	**142**	**140**	**137**	**133**	**127**
75	143	304	458	642	816	940	1119
	220	**218**	**215**	**211**	**207**	**202**	**195**
100	136	297	452	636	810	936	1108
	294	**292**	**290**	**287**	**283**	**278**	**270**
125	123	286	442	626	799	921	1093
	368	**366**	**364**	**361**	**357**	**352**	**345**
150	114	275	435	615	788	906	1078
	445	**443**	**441**	**437**	**430**	**422**	**410**
Max.cont. 160	107	268	430	608	780	895	1070
	475	**473**	**470**	**466**	**460**	**452**	**439**
Max.int. 200	82	249	412	593	758	871	1047
	596	**594**	**590**	**584**	**576**	**565**	**544**

HBMV 400 [419cm³/rev.]

Flow (L/min)	Pressure (MPa) 3.5	7	10	14	18	20 (Max.cont.)	24 (Max.int.)
10	183	385	568	776	968	1101	1292
	20	**20**	**19**	**18**	**17**	**16**	**14**
20	196	398	590	815	1010	1152	1346
	44	**44**	**43**	**42**	**40**	**39**	**37**
50	200	402	603	842	1040	1186	1430
	114	**113**	**113**	**112**	**110**	**108**	**103**
75	195	394	596	838	1043	1188	1432
	175	**173**	**170**	**166**	**163**	**157**	**152**
100	172	385	593	827	1036	1184	1425
	236	**235**	**233**	**231**	**227**	**223**	**215**
125	167	374	583	816	1021	1177	1413
	296	**294**	**291**	**288**	**282**	**275**	**268**
150	158	361	559	801	1008	1165	1390
	355	**354**	**352**	**349**	**344**	**335**	**324**
175	143	346	553	784	989	1145	1377
	416	**414**	**411**	**407**	**403**	**396**	**388**
Max.cont. 200	118	331	536	770	969	1128	1356
	475	**473**	**469**	**463**	**455**	**448**	**439**
Max.int. 240	82	301	506	740	943	1104	1332
	571	**569**	**565**	**548**	**539**	**530**	**520**

HBMV 500 [518cm³/rev.]

Flow (L/min)	Pressure (MPa) 3.5	7	10	14	18	20 (Max.cont.)	24 (Max.int.)
10	242	468	696	959	1190	1353	1607
	17	**17**	**16**	**16**	**15**	**13**	**11**
20	245	501	738	1003	1232	1394	1658
	36	**35**	**35**	**34**	**33**	**32**	**29**
50	240	500	758	1025	1270	1449	1743
	93	**92**	**91**	**90**	**88**	**85**	**80**
75	233	498	752	1030	1288	1475	1766
	140	**139**	**137**	**135**	**132**	**127**	**120**
100	228	491	748	1026	1289	1472	1760
	189	**187**	**185**	**182**	**178**	**173**	**166**
125	220	483	742	1014	1280	1460	1745
	237	**236**	**234**	**231**	**227**	**223**	**216**
150	201	465	723	1008	1250	1429	1736
	287	**286**	**284**	**281**	**276**	**270**	**260**
175	182	446	711	997	1238	1406	1715
	335	**334**	**332**	**329**	**325**	**320**	**310**
Max.cont. 200	161	423	676	974	1218	1385	1697
	384	**383**	**381**	**378**	**374**	**366**	**354**
Max.int. 240	120	378	622	921	1172	1340	1650
	461	**459**	**457**	**454**	**450**	**444**	**432**

Torque (N•m) 1340
Speed (rpm) **444**

HBMV 630 [666cm³/rev.]

Flow (L/min)	Pressure (MPa) 3.5	6	9	12	15	18 (Max.cont.)	21 (Max.int.)
10	280	522	812	1100	1268	1549	1784
	14	**13**	**13**	**12**	**12**	**11**	**10**
20	288	552	839	1101	1315	1607	1864
	28	**28**	**27**	**27**	**26**	**24**	**22**
50	289	555	868	1137	1364	1682	1956
	72	**72**	**71**	**69**	**68**	**66**	**62**
75	270	548	863	1120	1352	1680	1964
	109	**108**	**106**	**104**	**102**	**99**	**94**
100	264	538	856	1093	1350	1674	1965
	146	**145**	**143**	**141**	**138**	**135**	**130**
125	251	516	837	1071	1336	1659	1950
	184	**183**	**181**	**179**	**177**	**173**	**168**
150	240	495	817	1063	1330	1650	1928
	221	**220**	**219**	**217**	**215**	**212**	**205**
175	210	485	796	1052	1300	1636	1908
	259	**258**	**257**	**254**	**250**	**246**	**241**
Max.cont. 200	182	469	751	1018	1280	1611	1883
	297	**297**	**295**	**293**	**290**	**284**	**273**
Max.int. 240	130	416	712	978	1237	1563	1835
	358	**357**	**355**	**351**	**346**	**340**	**332**

cont.
int.

Performance Data

HBMV 800 [801cm³/rev.]

Flow (L/min)	Pressure (MPa) 2.5	5	8	10	13	16 Max.cont.	18 Max.int.
10	278	565	830	1095	1405	1712	1915
	11	**10**	**10**	**9**	**8**	**8**	**7**
20	282	571	845	1150	1456	1783	1994
	23	**22**	**22**	**21**	**20**	**18**	**16**
50	288	582	856	1162	1463	1790	2001
	60	**59**	**57**	**56**	**54**	**52**	**48**
75	269	580	855	1165	1465	1786	1993
	91	**90**	**89**	**87**	**84**	**81**	**77**
100	251	566	840	1140	1448	1767	1985
	122	**121**	**120**	**118**	**115**	**111**	**105**
125	242	535	824	1118	1427	1739	1976
	153	**152**	**150**	**147**	**143**	**139**	**133**
150	236	526	808	1102	1401	1714	1959
	185	**183**	**181**	**178**	**174**	**169**	**163**
175	215	504	793	1079	1377	1698	1936
	216	**214**	**212**	**209**	**206**	**203**	**196**
Max.cont. 200	197	468	765	1063	1362	1681	1913
	247	**245**	**243**	**240**	**237**	**232**	**225**
Max.int. 240	118	388	713	1020	1318	1637	1838
	297	**296**	**295**	**293**	**288**	**283**	**277**

HBMV 1000 [990cm³/rev.]

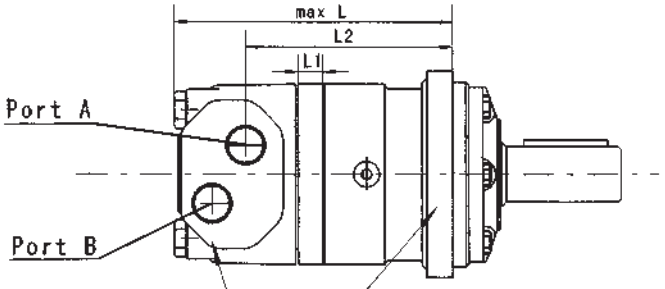
Flow (L/min)	Pressure (MPa) 2.5	5	7	10	14 Max.cont.	16 Max.int.
10	312	640	971	1400	1978	2259
	9	**9**	**9**	**8**	**7**	**6**
30	320	648	978	1410	1980	2270
	28	**27**	**26**	**25**	**23**	**21**
50	326	655	992	1422	2015	2280
	47	**46**	**45**	**43**	**41**	**38**
75	318	642	987	1425	2003	2276
	72	**71**	**70**	**68**	**66**	**63**
100	309	634	983	1418	1994	2243
	98	**97**	**95**	**93**	**90**	**86**
125	303	624	975	1409	1988	2224
	123	**122**	**120**	**117**	**114**	**110**
150	278	602	961	1368	1963	2208
	149	**148**	**146**	**144**	**140**	**133**
175	264	580	946	1338	1925	2159
	174	**172**	**170**	**166**	**162**	**155**
Max.cont. 200	230	556	912	1300	1891	2105
	199	**196**	**193**	**190**	**185**	**178**
Max.int. 240	166	513	867	1267	1825	2034
	240	**237**	**233**	**229**	**225**	**218**

Torque (N•m) 1825
Speed (rpm) **225**

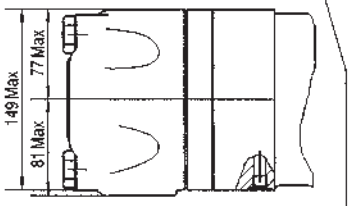
cont.

int.

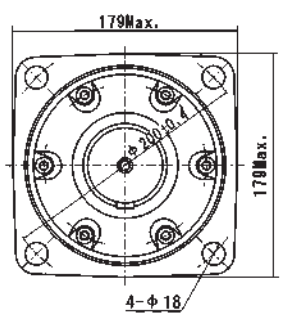
HBMV DIMINSIONS AND MOUNTING DATA

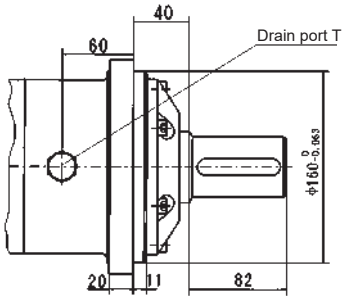


Model	L	L1	L2
HBMV315	217	20	161.5
HBMV400	224	27	168.5
HBMV500	232	35	176.5
HBMV630	244	47	188.5
HBMV800	255	58	199.5
HBMV1000	271	74	215.5

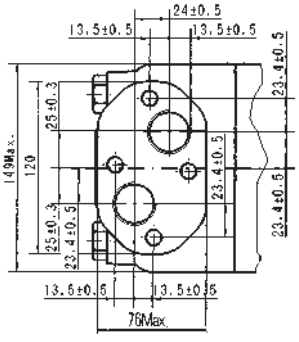


Flange 4

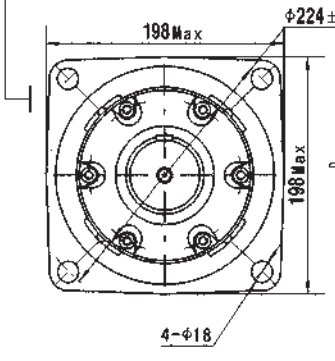


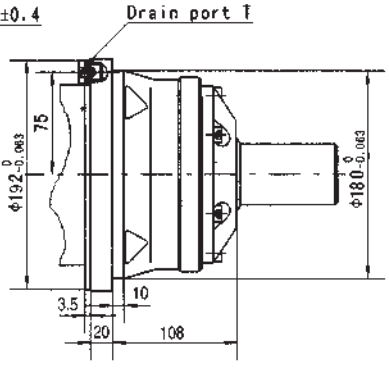


Porting
D、M

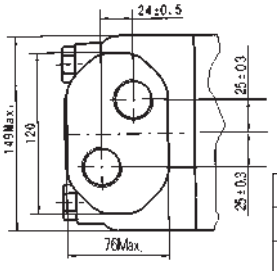


Flange W





S、G、M5、S1

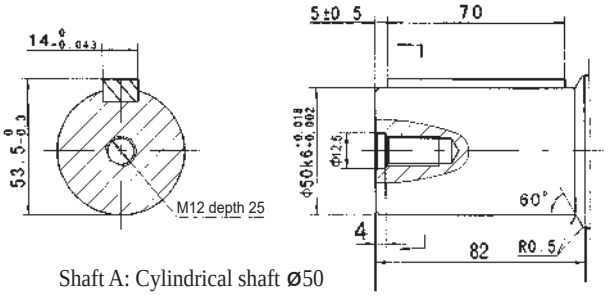


Model	L	L1	L2
HBMV-315-W	148.5	20	93.5
HBMV-400-W	155.5	27	100.5
HBMV-500-W	163.5	35	108.5
HBMV-630-W	175.5	47	120.5
HBMV-800-W	186.5	58	131.5
HBMV-1000-W	202.5	74	147.5

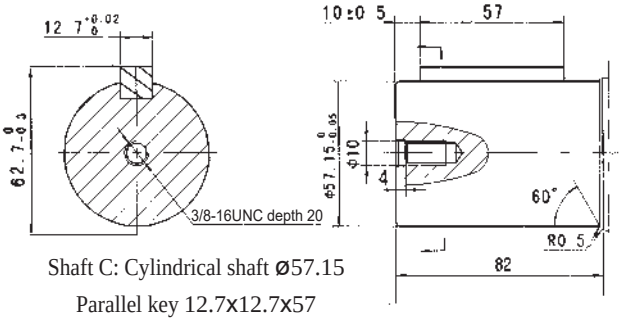
Note:The thickness of the stator and rotor is the dimension of L1adding on 7mm.

Content / Mounting	Code					
	D (depth)	M (depth)	S (depth)	G (depth)	M5 (depth)	S1 (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)	--	--	--	--

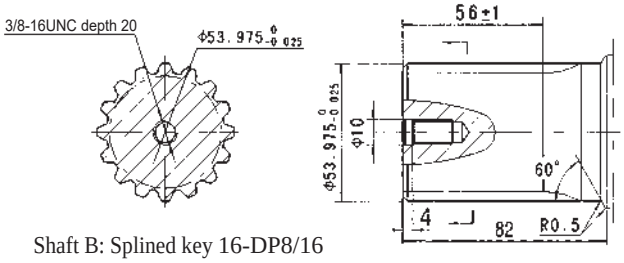
HBMV SHAFT EXTENSIONS DIMENSIONS DATA



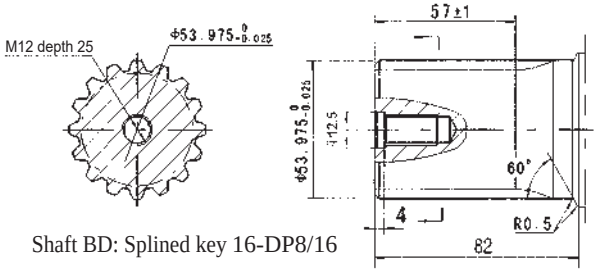
Shaft A: Cylindrical shaft Ø50
Parallel key 14x9x70



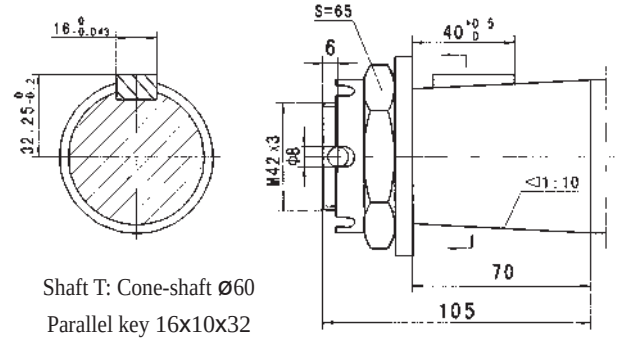
Shaft C: Cylindrical shaft Ø57.15
Parallel key 12.7x12.7x57



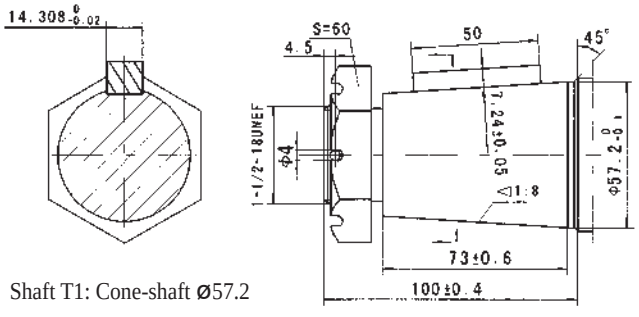
Shaft B: Splined key 16-DP8/16



Shaft BD: Splined key 16-DP8/16



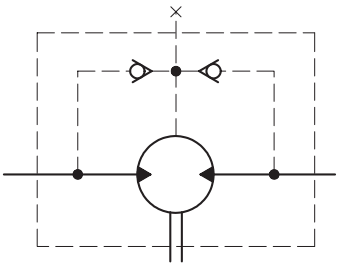
Shaft T: Cone-shaft Ø60
Parallel key 16x10x32
Tightening torque: 750±50Nm

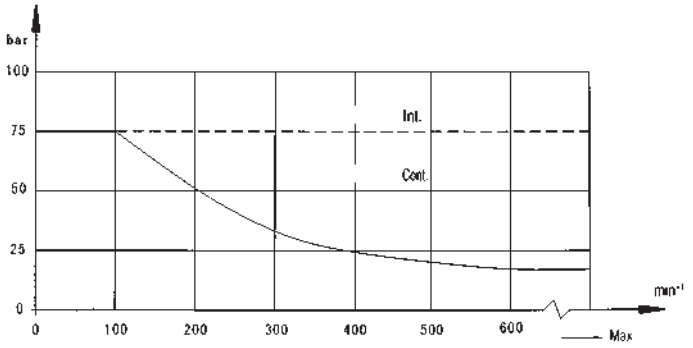


Shaft T1: Cone-shaft Ø57.2
Parallel key 14.308x14.308x50
Tightening torque: 750±50Nm

HBMV Series Hydraulic Motor

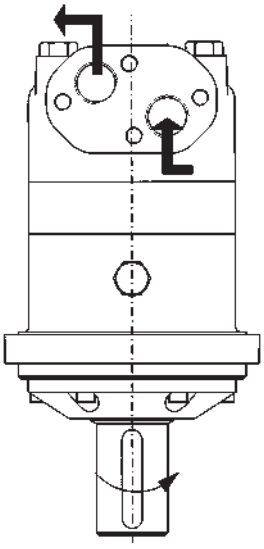
Permissible shaft seal pressure





Standard direction of shaft rotation: Standard

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



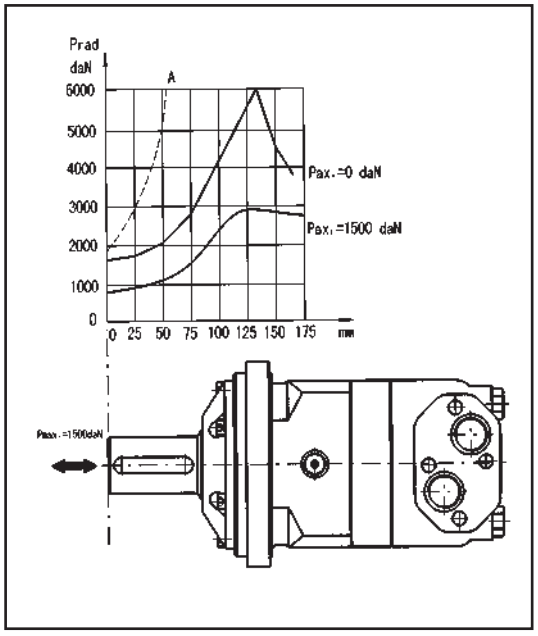
Oil flow in drain line

The table shows the Max. oil flow in the drain line at a return pressure less than 0.5-1MPa.

Pressure drop （MPa）	Viscosity (mm^2/s)	Oil flow in the drain line (L/min.)
14	20	3
	35	2
21	20	6
	35	4

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 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.

Order Information

	1		2		3		4		5		6		7		8
HBMV		–		–		–		–		–		–		–	

Pos.1	2	3		4		5		6		7		8	
Code	Displacement	Flange		Output shaft		Ports and drain port		Rotation direction		Paint		Unusually function	
Omit	315 400 500 630 800 1000	4	4-Ø18 Square-flangeØ200, pilot Ø160×11	A	Shaft Ø50 , parallel key 14×9×70	D	G1 Manifold 4×M12, G1/4	Omit	Standard	00	No paint	Omit	Standard
		W	4-Ø18 Wheel-flange Ø224, pilot Ø180×10	BD	Shaft Ø53.975, splined key 16-DP8/16	M	M33×2 Manifold 4×M12, M14×1.5	R	Opposite	Omit	Blue		
				B	Shaft Ø53.975, splined key 16-DP8/16	S	1-5/16-12UN, 9/16-18UNF			B	Black		
				C	Shaft Ø57.15, parallel key 12.7×12.7×57.15	G	G1,G1/4			S	Silver grey		
				T	Cone shaft Ø60, parallel key 16×10×32	M5	M33×2, M14×1.5						
				T1	Cone shaft Ø57.2, parallel key 14.308×14.308×50.8	S1	1-5/16-12UN 7/16-20UNF						

Note:When the table is used, please fill the code of left rows in dash area 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.

HBMK2 SERIES HYDRAULIC MOTOR

HBMK2 new series motor adapt the advanced Geroler gear set designed with disc distribution flow and high pressure. The unit can be supplied the individual variant in operating multifunction in accordance with requirement of applications.

Characteristic featutres:

* Advanced manufacturing devices for the Geroler gear set, which use low pressure of start-up, provide smooth and reliable operation and high efficiency.
* The output shaft adapts in tapered roller bearings that permit high axial and radial forces. The case can offers capacities of high pressure and high torque in the wide of applications.
* Advanced design in disc distribution flow, which can automatically compensate in operating with high volume efficiency and long life , provide smooth and reliable operation.
* The new series motor is suitable for vehicles with greater loads and pressure drop.

Main Specification

Type			HBMK2 65	HBMK2 80	HBMK2 100	HBMK2 125	HBMK2 160	HBMK2 200	HBMK2 250	HBMK2 315	HBMK2 400	HBMK2 475
Geometric displacement	(cm^3/rev.)		65	80	100.9	129.8	156.8	193.4	242.5	304.3	390.8	485
Max.speed	(rpm)	cont.	835	800	742	576	477	385	308	246	191	153
		int.	990	980	924	720	713	577	462	365	287	230
Max.torque	(N•m)	cont.	185	235	295	385	455	540	660	765	775	845
		int.	245	345	445	560	570	665	820	885	925	930
Max.pressure drop	(MPa)	cont.	20.5	21	21	21	20.5	20.5	20.5	20.5	15.5	12
		int.	27.5	31	31	31	26	26	26	31	17	14
		peak.	31	31	31	31	31	31	31	75	20.5	17
Max.flow	(L/min)	cont.	55	65	75	75	75	75	75	115	75	75
		int.	65	80	95	95	115	115	115	11.5	115	115
Weight	(kg)		9.2	9.4	9.7	10	10.2	10.5	11		12	12.4

* Continuous pressure:Max.value of operating motor continuously.
* Intermittent pressure:Max.value of operating motor in 6 seconds per minute .
* Peak pressure:Max.value of operating motor in 0.6 second per minute.

Performance Data

HBMK2 65 [65 cm³/rev.]
Pressure (MPa)

Flow (L/min)	3.5	7	10.5	14	17.5	20.5	Max.cont. 24	Max.int. 27.5	Peak 31
2	28	54	80						
	22	**12**	**6**						
4	30	58	88	115	146	165	**195**		
	52	**47**	**43**	**35**	**30**	**24**	16		
8	31	60	92	120	150	170	**200**	**225**	
	107	**98**	**92**	**85**	**70**	**55**	40	30	
15	32	62	94	124	155	175	**205**	**230**	**250**
	214	**208**	**200**	**193**	**185**	**174**	160	145	130
22	32	65	95	125	157	178	**206**	**232**	**254**
	320	**315**	**308**	**296**	**286**	**275**	260	242	230
30	30	65	95	128	160	180	**210**	**235**	**258**
	445	**440**	**430**	**420**	**408**	**395**	380	360	325
38	28	62	95	130	165	185	**216**	**240**	**260**
	565	**560**	**550**	**540**	**526**	**512**	495	470	420
45	26	60	92	125	160	180	**215**	**245**	**265**
	675	**670**	**660**	**648**	**632**	**615**	600	580	530
55 (Max.cont.)	23	55	88	120	155	175	**210**	**235**	**255**
	835	**825**	**810**	**790**	**770**	**745**	720	690	640
65 (Max.int.)	20	50	84	112	150	170	205	230	250
	990	**980**	**965**	**945**	**935**	**910**	**880**	**860**	**800**

HBMK2 80 [80 cm³/rev.]
Pressure (MPa)

Flow (L/min)	3.5	7	10.5	14	17.5	20.5	Max.cont. 24	Max.int. 27.5	Peak 31
2	29	54	86						
	18	**9**	**3**						
4	35	75	112	145	172	208	218	236	
	45	**41**	**38**	**35**	**28**	**22**	**14**	**3**	
8	35	75	114	148	175	212	230	260	280
	90	**85**	**80**	**76**	**72**	**64**	**55**	**46**	**40**
15	38	78	116	152	184	215	245	275	300
	180	**175**	**170**	**166**	**160**	**153**	**140**	**126**	**115**
22	36	75	114	150	185	220	250	285	315
	265	**260**	**255**	**250**	**242**	**234**	**220**	**205**	**185**
30	35	75	115	150	185	225	260	295	325
	363	**355**	**350**	**342**	**334**	**322**	**302**	**280**	**260**
38	34	72	112	155	190	230	265	300	335
	460	**452**	**442**	**430**	**418**	**405**	**385**	**360**	**335**
45	32	70	110	150	190	230	265	305	340
	545	**535**	**528**	**515**	**505**	**495**	**465**	**440**	**410**
55	30	68	110	150	190	230	270	305	335
	670	**660**	**650**	**635**	**620**	**605**	**575**	**540**	**510**
65 (Max.cont.)	25	65	105	145	180	225	260	295	325
	800	**790**	**778**	**755**	**740**	**728**	**690**	**650**	**610**
75	22	63	102	145	180	225	260	290	
	910	**900**	**880**	**860**	**850**	**830**	**790**	**750**	
80 (Max.int.)	20	60	100	140	175	220	250		
	980	**970**	**955**	**920**	**900**	**875**	**840**		

HBMK2 100 [100.9 cm³/rev.]
Pressure (MPa)

Flow (L/min)	1.75	3.5	7	10.5	14	17.5	20.5	Max.cont. 24	Max.int. 27.5	Peak 31
2	15	32	68							
	14	**10**	**5**							
4	18	42	92	130	170	205	230			
	36	**34**	**32**	**28**	**22**	**14**	**5**			
8	20	45	90	135	180	210	240	280	310	
	74	**73**	**70**	**66**	**60**	**52**	**42**	**26**	**15**	
15	20	45	90	135	185	220	260	305	345	390
	142	**140**	**137**	**134**	**129**	**120**	**105**	**92**	**78**	**65**
22	18	45	90	140	190	230	275	315	360	405
	210	**207**	**201**	**195**	**188**	**179**	**160**	**150**	**138**	**125**
30	16	42	88	142	195	240	285	330	375	425
	290	**288**	**282**	**276**	**268**	**258**	**242**	**230**	**212**	**195**
38	15	40	88	140	190	240	285	335	380	430
	370	**365**	**360**	**352**	**340**	**326**	**310**	**295**	**275**	**255**
45	15	40	86	140	190	240	285	340	385	440
	440	**435**	**430**	**422**	**410**	**395**	**380**	**365**	**345**	**320**
55	12	36	85	135	190	240	285	340	385	440
	540	**534**	**528**	**520**	**510**	**500**	**485**	**465**	**440**	**405**
65	10	35	80	130	185	235	280	335	380	440
	640	**635**	**630**	**622**	**605**	**590**	**575**	**550**	**525**	**500**
75 (Max.cont.)	5	30	75	125	180	230	275	330	375	
	738	**735**	**728**	**715**	**700**	**680**	**655**	**635**	**610**	
85	3	25	75	125	175	225	270	320	370	
	838	**835**	**830**	**820**	**805**	**785**	**760**	**730**	**690**	
95 (Max.int.)		23	70	120	170	220	260	310		
		925	**918**	**905**	**890**	**870**	**840**	**810**		

HBMK2 125 [129.8 cm³/rev.]
Pressure (MPa)

Flow (L/min)	1.75	3.5	7	10.5	14	17.5	20.5	Max.cont. 24	Max.int. 27.5	Peak 31
2	25	40								
	12	**7**								
4	28	55	110	175	220	280	325			
	27	**26**	**22**	**18**	**14**	**11**	**8**			
8	28	60	115	175	230	290	330	375	400	
	57	**56**	**53**	**48**	**42**	**38**	**34**	**26**	**20**	
15	28	60	120	180	240	295	340	390	440	485
	113	**112**	**110**	**105**	**98**	**92**	**86**	**80**	**72**	**65**
22	28	55	120	180	245	305	360	415	470	530
	165	**163**	**160**	**155**	**150**	**144**	**138**	**130**	**115**	**100**
30	25	52	120	185	245	310	365	425	480	545
	228	**224**	**222**	**210**	**212**	**206**	**198**	**188**	**178**	**165**
38	25	50	120	180	245	315	370	430	495	550
	288	**285**	**282**	**275**	**268**	**260**	**252**	**242**	**230**	**215**
45	22	50	120	180	245	315	370	430	490	550
	345	**343**	**338**	**332**	**325**	**315**	**305**	**292**	**280**	**265**
55	20	46	115	175	245	330	375	430	490	
	420	**418**	**414**	**408**	**400**	**390**	**378**	**365**	**346**	
65	15	43	110	170	240	320	370	425	485	
	498	**496**	**492**	**486**	**480**	**465**	**458**	**440**	**425**	
75 (Max.cont.)	12	42	108	170	235	310	365	425		
	575	**574**	**568**	**560**	**550**	**548**	**525**	**502**		
85	8	40	105	165	230	310	360	420		
	653	**652**	**645**	**636**	**625**	**616**	**600**	**578**		
95 (Max.int.)		40	100	160	225	290	355	415		
		722	**715**	**702**	**690**	**680**	**670**	**655**		

Torque (N•m) 225
Speed (rpm) **690**

cont.
int.

HBMK2 160 [156.8 cm³/rev.]
Pressure (MPa)

Flow (L/min)	1.75	3.5	7	10.5	14	17.5	20.5 (Max.cont.)	24	26 (Max.int.)
2	28	55	110	175					
	9	**7**	**5**	**3**					
4	32	63	125	190	250	315	370		
	22	**21**	**19**	**17**	**13**	**8**	**3**		
8	37	68	130	200	260	325	390	450	480
	47	**45**	**42**	**39**	**36**	**34**	**32**	**27**	**22**
15	35	68	135	210	275	370	420	500	530
	93	**92**	**89**	**85**	**80**	**76**	**70**	**60**	**45**
22	35	75	140	215	285	370	440	515	550
	138	**136**	**133**	**128**	**122**	**116**	**110**	**102**	**95**
30	35	75	145	220	290	370	440	520	560
	190	**187**	**184**	**178**	**172**	**167**	**164**	**154**	**142**
38	37	70	150	225	310	380	450	525	565
	240	**237**	**234**	**230**	**225**	**218**	**202**	**193**	**185**
45	32	70	150	225	310	380	450	525	565
	285	**283**	**280**	**275**	**268**	**259**	**247**	**236**	**225**
55	28	66	145	220	305	375	450	525	
	348	**346**	**242**	**338**	**332**	**324**	**314**	**300**	
65	25	63	140	220	300	375	445		
	412	**410**	**406**	**400**	**393**	**383**	**370**		
75 (Max.cont.)	22	60	135	215	295	370	440		
	476	**474**	**470**	**464**	**454**	**445**	**435**		
85	18	55	130	210	290	365	435		
	540	**536**	**532**	**524**	**514**	**502**	**485**		
95 (Max.int.)	15	50	125	205	285	360	430		
	600	**595**	**590**	**580**	**565**	**555**	**545**		
115		40	115	200	280	350	425		
		715	**705**	**695**	**685**	**670**	**655**		

HBMK2 200 [193.4 cm³/rev.]
Pressure (MPa)

Flow (L/min)	1.75	3.5	7	10.5	14	17.5	20.5 (Max.cont.)	24	26 (Max.int.)
2	32	68	110	145					
	9	**7**	**5**	**3**					
4	40	75	150	195	300	360			
	18	**16**	**14**	**11**	**7**	**4**			
8	45	80	160	240	315	405	500	570	600
	37	**36**	**34**	**30**	**26**	**21**	**17**	**13**	**11**
15	48	90	170	255	335	425	510	590	620
	75	**74**	**72**	**68**	**64**	**60**	**56**	**50**	**42**
22	46	90	175	265	350	440	520	605	645
	112	**110**	**108**	**105**	**101**	**97**	**91**	**86**	**80**
30	45	90	180	270	360	450	530	615	655
	153	**151**	**148**	**145**	**141**	**135**	**128**	**122**	**116**
38	45	90	180	275	370	455	540	625	
	193	**191**	**188**	**184**	**178**	**172**	**166**	**158**	
45	40	85	180	275	370	460	545		
	230	**228**	**226**	**222**	**218**	**210**	**202**		
55	38	82	180	275	375	465	550		
	280	**278**	**275**	**270**	**264**	**255**	**248**		
65	35	80	175	270	370	465	545		
	332	**330**	**328**	**322**	**315**	**306**	**295**		
75 (Max.cont.)	30	72	170	265	360	455	540		
	384	**382**	**378**	**370**	**365**	**356**	**346**		
85	25	70	165	260	355	450	540		
	436	**434**	**430**	**420**	**410**	**400**	**390**		
95 (Max.int.)	20	60	155	255	350	445	530		
	488	**485**	**478**	**470**	**458**	**448**	**438**		
115		50	140	240	330	440	520		
		580	**572**	**562**	**550**	**538**	**520**		

HBMK2 250 [242.5 cm³/rev.]
Pressure (MPa)

Flow (L/min)	1.75	3.5	7	10.5	14	17.5	20.5 (Max.cont.)	24	26 (Max.int.)
2	45	95							
	4	**2**							
4	50	100	210	310	410	510	610		
	14	**13**	**11**	**9**	**6**	**4**	**3**		
8	55	105	215	320	420	530	620	730	780
	29	**28**	**26**	**23**	**20**	**17**	**14**	**11**	**9**
15	55	110	220	330	440	550	650	755	810
	59	**58**	**56**	**53**	**50**	**47**	**45**	**43**	**40**
22	50	115	225	340	455	560	665	770	
	88	**87**	**85**	**82**	**78**	**74**	**69**	**65**	
30	50	115	230	350	465	570	680	785	
	122	**121**	**118**	**113**	**109**	**104**	**100**	**92**	
38	48	112	235	355	475	580	695	795	
	154	**152**	**149**	**145**	**140**	**135**	**130**	**122**	
45	45	110	230	350	475	590	700		
	183	**182**	**180**	**176**	**170**	**165**	**158**		
55	42	105	230	345	470	580			
	224	**223**	**221**	**218**	**212**	**205**			
65	35	100	220	340	460	565			
	266	**265**	**263**	**258**	**252**	**242**			
75 (Max.cont.)	32	95	210	330	455	560			
	307	**306**	**303**	**298**	**290**	**280**			
85	30	85	200	320	450	555			
	348	**346**	**342**	**336**	**330**	**320**			
95 (Max.int.)	25	70	190	315	440	540			
	386	**384**	**378**	**372**	**365**	**355**			
115		65	180	300	430				
		465	**458**	**450**	**442**				

HBMK2 315 [304.3 cm³/rev.]
Pressure (MPa)

Flow (L/min)	1.75	3.5	7	10.5	14	17.5	20.5 (Max.cont.)	24 (Max.int.)
2	45	95						
	4	**2**						
4	65	130	250	380	490			
	12	**11**	**10**	**8**	**6**			
8	70	135	260	390	510	630	760	875
	24	**23**	**22**	**20**	**18**	**15**	**10**	**6**
15	75	140	275	410	535	670	800	920
	48	**48**	**47**	**45**	**42**	**38**	**34**	**30**
22	70	140	285	425	555	685	810	940
	71	**70**	**69**	**66**	**62**	**56**	**50**	**42**
30	70	145	290	430	565	695	820	
	97	**97**	**96**	**93**	**88**	**80**	**70**	
38	66	140	290	435	570	715	835	
	123	**122**	**120**	**117**	**112**	**102**	**90**	
45	62	135	290	435	575	720	840	
	147	**146**	**144**	**142**	**135**	**125**	**118**	
55	58	130	285	430	575	720		
	180	**179**	**176**	**172**	**165**	**155**		
65	52	120	275	425	570	715		
	213	**212**	**210**	**205**	**200**	**190**		
75 (Max.cont.)	40	110	260	415	560	710		
	246	**245**	**242**	**236**	**225**	**212**		
85	30	100	250	405	540			
	278	**277**	**274**	**270**	**260**			
95 (Max.int.)	20	90	245	380	515			
	311	**310**	**307**	**303**	**296**			
115		80	225	350				
		365	**361**	**355**				

Torque (N•m) 225
Speed (rpm) **361**

cont.
int.

HBMK2 400 [390.8 cm³/rev.]

Flow (L/min)	Pressure (MPa) 1.75	3.5	7	10.5	14	15.5 Max.cont.	17.5 Max.int.	19
2	70 **4**	145 **2**						
4	80 **9**	170 **9**	345 **8**	500 **7**	660 **6**	740 **5**		
8	85 **19**	175 **18**	355 **17**	520 **16**	680 **14**	765 **13**	830 **12**	910 **10**
15	90 **37**	185 **37**	370 **36**	550 **35**	720 **32**	810 **30**	880 **28**	
22	95 **55**	190 **55**	380 **54**	565 **52**	750 **48**	830 **46**	900 **44**	
30	92 **76**	188 **75**	385 **73**	570 **71**	760 **68**	835 **65**	905 **62**	
38	90 **96**	185 **94**	385 **92**	575 **90**	765 **86**	840 **84**	930 **80**	
45	85 **114**	180 **113**	380 **111**	570 **108**	760 **102**			
55	80 **140**	175 **139**	380 **137**	570 **133**	760 **127**			
65	75 **165**	170 **164**	370 **163**	560 **160**	750 **155**			
Max.cont. 75	68 **191**	160 **190**	360 **188**	555 **184**	740 **178**			
85	65 **214**	150 **212**	355 **210**	550 **206**	730 **200**			
Max.int. 95	50 **242**	135 **240**	340 **237**	530 **233**	710 **228**			
115		125 **286**	310 **282**	510 **275**				

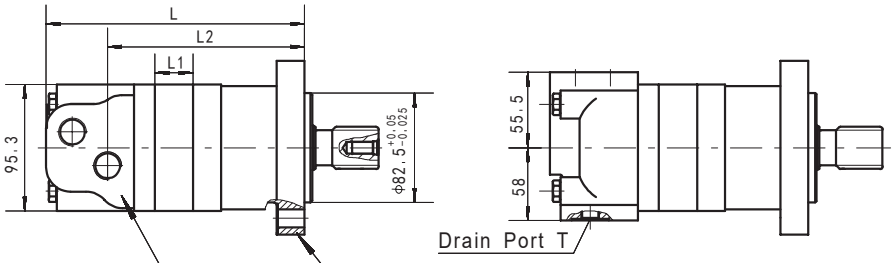
HBMK2 475 [485 cm³/rev.]

Flow (L/min)	Pressure (MPa) 1.75	3.5	7	10.5	12 Max.cont.	14 Max.int.
2	75 **2**	175 **1**				
4	110 **7**	220 **6**	430 **4**	540 **1**		
8	110 **14**	225 **13**	450 **11**	700 **7**		
15	105 **29**	235 **28**	470 **26**	710 **24**	825 **22**	895 **19**
22	105 **44**	240 **43**	480 **42**	720 **40**	835 **37**	915 **34**
30	110 **61**	240 **60**	485 **58**	725 **55**	840 **52**	935 **48**
38	110 **77**	235 **75**	480 **73**	720 **70**	840 **68**	930 **65**
45	100 **91**	220 **91**	470 **89**	715 **85**	825 **83**	
55	95 **112**	210 **110**	460 **108**	710 **104**	820 **100**	
65	85 **132**	200 **131**	445 **128**	700 **125**	810 **120**	
Max.cont. 75	70 **153**	185 **152**	440 **149**	690 **145**	800 **140**	
85	60 **173**	175 **172**	430 **169**	680 **165**	785 **160**	
Max.int. 95	40 **195**	150 **193**	405 **190**	655 **185**		
115		130 **230**	380 **226**	625 **220**		

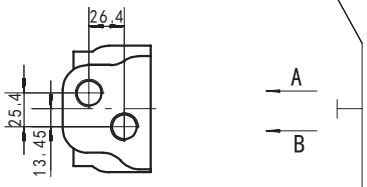
Torque (N•m) 130
Speed (rpm) **230**

cont.
int.

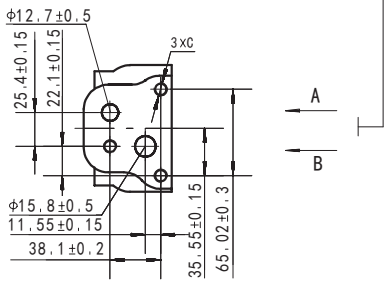
HBMK2 DIMENSIONS AND MOUNTING DATA



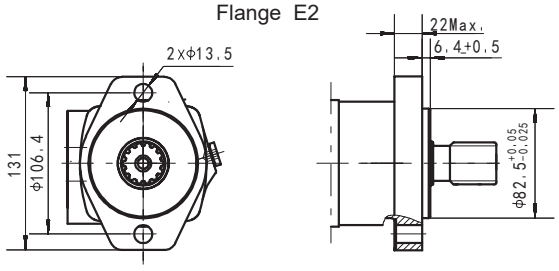
Porting
DB、DU、SU、SB、M4



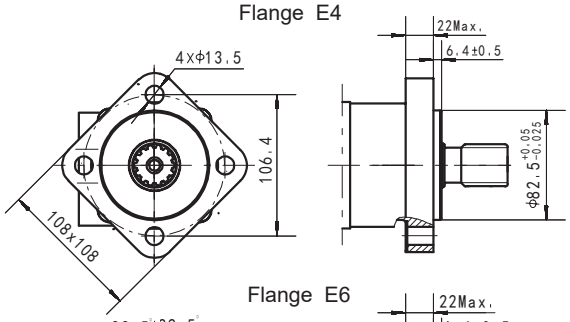
Porting MU、MM



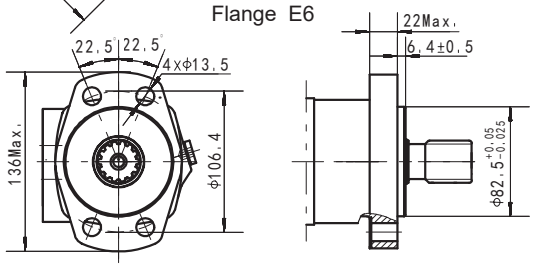
Flange E2



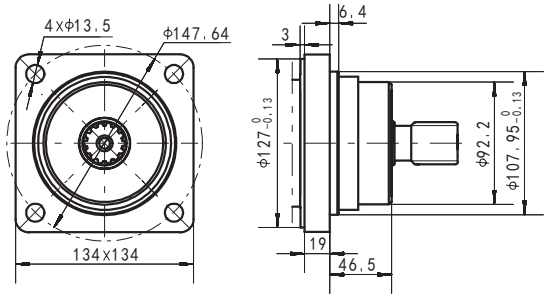
Flange E4



Flange E6



Flange WE

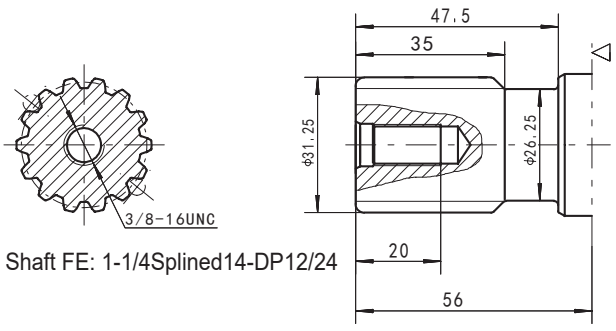


Model	L	L1	L2
HBMK2-65	182	14.5	133.5
HBMK2-80	185	17.8	136.5
HBMK2-100	189.5	22.5	141.5
HBMK2-125	196	28.9	148
HBMK2-160	196	28.9	148
HBMK2-200	202.5	35.6	154.5
HBMK2-250	211.5	44.6	163.5
HBMK2-315	223	56	175
HBMK2-400	239	72	191
HBMK2-475	256.5	89.3	208.5

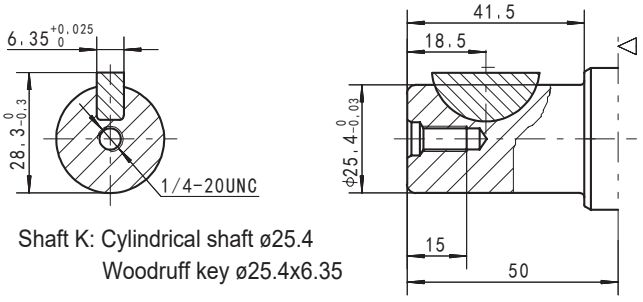
Model	L	L1	L2
HBMK2-65-WE	142	14.5	93.5
HBMK2-80-WE	145.5	17.8	97
HBMK2-100-WE	150	22.5	101.5
HBMK2-125-WE	156.5	28.9	108
HBMK2-160-WE	156.5	28.9	108
HBMK2-200-WE	163	35.6	114.5
HBMK2-250-WE	172	44.6	123.5
HBMK2-315-WE	183.5	56	135
HBMK2-400-WE	199.5	72	151
HBMK2-475-WE	217	89.3	168.5

Code / Mounting	DB (Depth)	DU (Depth)	SU (Depth)	SB (Depth)	M4 (Depth)	MU	MM
P(A,B)	G1/2 (15)	G1/2 (15)	7/8-14 O-ring (17)	7/8-14 O-ring (17)	M22 x 1.5 (15)	φ12.7、φ15.8	φ12.7、φ15.8
T	G1/4 (12)	7/16-20UNF(12)	7/16-20UNF(12)	G1/4 (12)	M14 x 1.5 (12)	7/16-20UNF(12)	G1/4 (12)
C	--					3/8-16UNC(15)	M10(15)

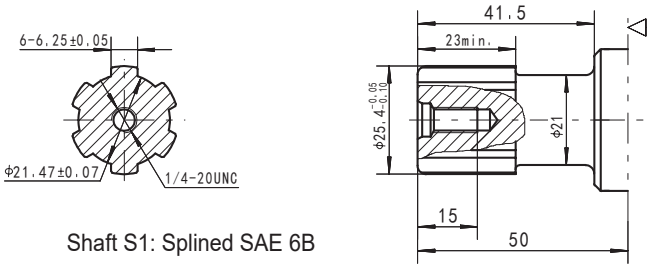
SHAFT EXTENSIONS FOR HBMK2 MOTORS



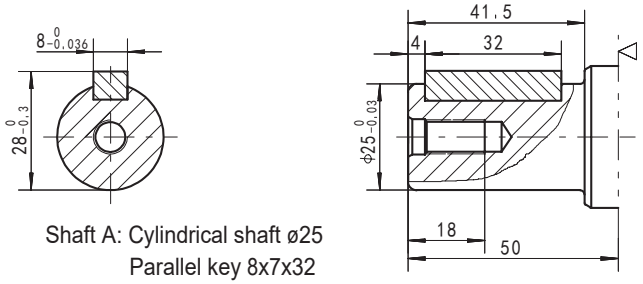
Shaft FE: 1-1/4Splined14-DP12/24



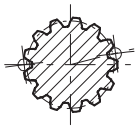
Shaft K: Cylindrical shaft ø25.4
Woodruff key ø25.4x6.35



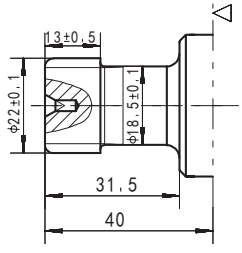
Shaft S1: Splined SAE 6B

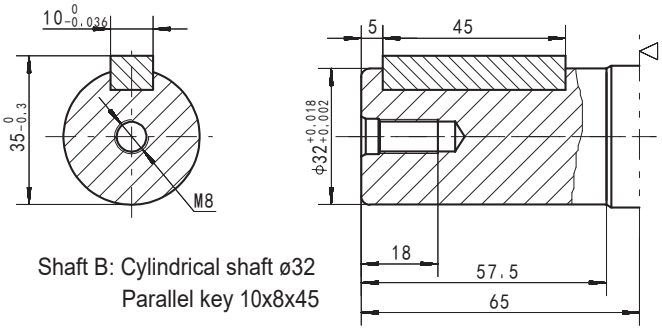


Shaft A: Cylindrical shaft ø25
Parallel key 8x7x32

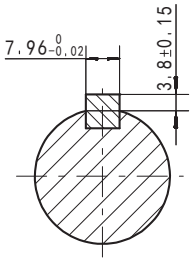


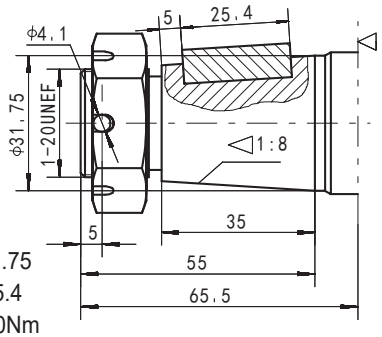
Shaft I: Splined 13-DP16/32



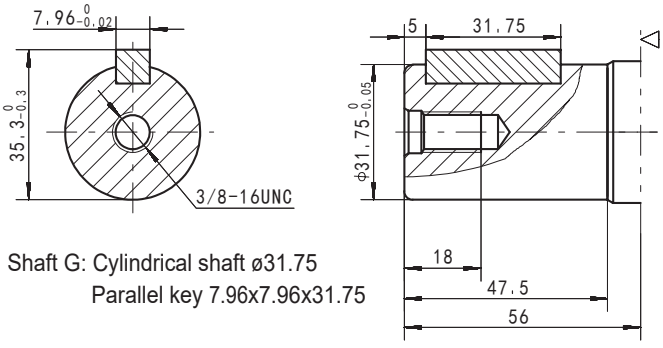


Shaft B: Cylindrical shaft ø32
Parallel key 10x8x45





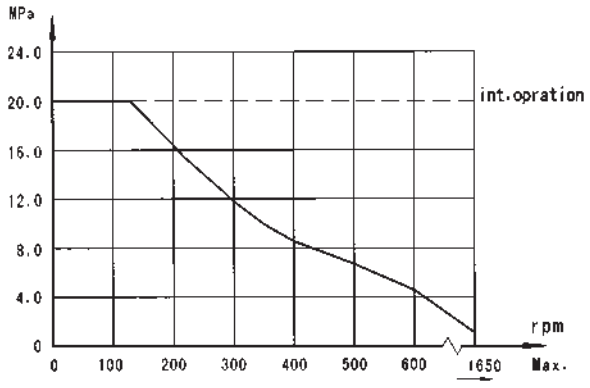
Shaft T4: Cone-shaft ø31.75
Parallel key 7.96x7.96x25.4
Tightening torque:200±10Nm



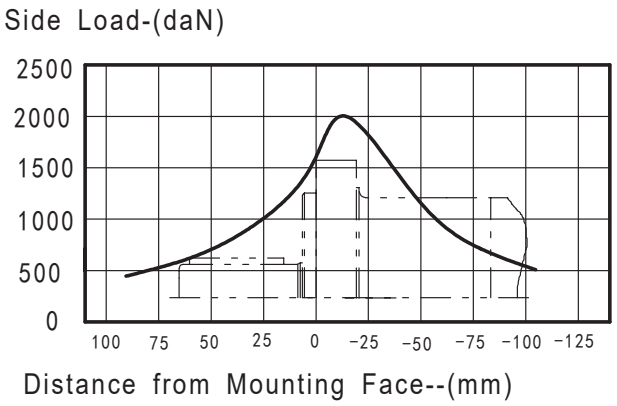
Shaft G: Cylindrical shaft ø31.75
Parallel key 7.96x7.96x31.75

◁ Motor Mounting Surface E2 Flange

Permissible shaft seal pressure



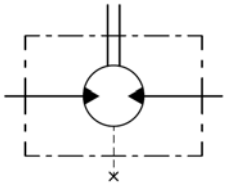
HBMK2 Standard Mounting Flange[E2]Radial Forces

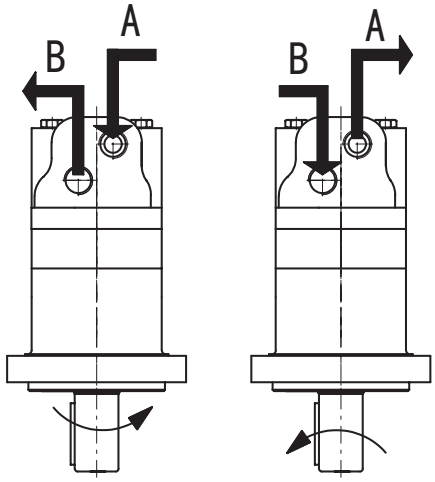


The bear ing curve represents allowable bearing loads for an B_{10} bearing life (2000 hours or $12x10^6$ revolutions at 100rpm) atrated output torque.

Direction of shaft rotation: Standard

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



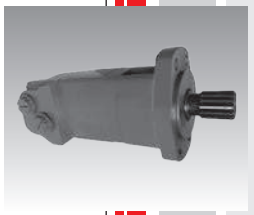


Order Information

	1		2		3		4		5		6		7		8
HBMK2		–		–		–		–		–		–		–	

Pos.1	2	3		4		5		6		7		8	
Code	Disp.	Flange		Output Shaft		Port and Drain Port		Rotation Direction		Paint		Unusually Function	
	65 80 100 125 160 200 250 315 400 475	E2 E4 E6 WE	2×Φ13.5 Rhomb-flange Φ106.4, pilot Φ82.5×6.4 4×Φ13.5 Rhomb-flange Φ106.4, pilot Φ82.5×6.4 4×Φ13.5 Rhomb-flange Φ106.4, pilot Φ82.5×6.4 4×Φ13.6Wheel-flangeΦ147.6, pilot Φ107.95x6.4	A B K G FE S1 I T4	Shaft Φ25 , parllel key 8×7×32 Shaft Φ32 , parllel key 10×8×45 Shaft Φ25.4 , Woodruff key Φ25.4×6.35 Shaft Φ31.75 , parllel key 7.96×7.96×31.75 Shaft Φ31.75 , splined 14-DP12/24 Shaft Φ25.4 ,splined SAE 6B Sub-shaft Φ22 , splined 13-DP16/32 Cone-shaftΦ31.75 , parllel key 7.96×7.96×25.4	DB DU SB SU M4 MU MM	G1/2,G1/4 G1/2,7/16-20 UNF 7/8-14UNF O-ring,G1/4 7/8-14UNF O-ring,7/16-20 UNF M22×1.5,M14×1.5 1/2",5/8"Crosshole Manifold 3×3/8-16UNC,7/16-20UNF 1/2",5/8"Crosshole Manifold 3×M10,G1/4	Omit R	Standard Opposite	00 Omit B S	No paint Blue Black Silver grey	Omit F	Standard Free Running

Note: When the table is used , please fill the code of right rows in the table 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 .



HBMK6 SERIES HYDRAULIC MOTOR

HBMK6 series motor adapt the advanced Geroler gear set designed with disc distribition flow and high pressure.The unit can be supplied the individual variant in operating multifunction in accordance with requirement of applications.

Characteristic features:

* Advanced manufacturing devices for the Geroler gear set,which use low pressure of start-up,provide smooth and reliable operation and high efficiency.
* Advanced design in disc distribution flow ,which can automatically compensate in operating with high volume efficiency and long life ,provide smooth and reliable operation.
* Shaft seal can bear high pressure of back .
* The output shaft adapts in tapered roller bearings that permit high axial and radial forces.The case can offers capacities of high pressure and high torque in the wide of applications.

Main Specification

Type		HBMK6 200	HBMK6 250	HBMK6 315	HBMK6 400	HBMK6 500	HBMK6 630	HBMK6 800	HBMK6 1000
Geometric displacement (cm^3/rev.)		195.6	246.1	311.6	391.3	490.8	623	802.4	981.6
Max.speed (rpm)	cont.	765	610	480	382	304	240	186	152
	int.	865	830	690	570	455	360	280	230
Max.torque (N•m)	cont.	565	710	920	1160	1445	1480	1580	1675
	int.	840	1080	1325	1625	1880	1890	1880	1860
Max.pressure drop (MPa)	cont.	20	20	20	20	20	17.5	14	14
	int.	30	30	30	30	27.5	22.5	15.5	14
	peak.	30	30	30	30	30	24	17.5	17
Max.flow (L/min)	cont.	150	150	150	150	150	150	150	150
	int.	170	205	225	225	225	225	225	225
Weight (kg)		26.3	26.8	27.3	28	28.8	29.6	30.5	32

∗Continuous pressure:Max.value of operating motor continuously.

∗Intermittent pressure:Max.value of operating motor in 6 seconds per minute .

∗Peak pressure:Max.value of operating motor in 0.6 second per minute.

Performance Data

HBMK6 200 [195.6cm³/rev.]
Pressure (MPa)

Flow (L/min)	1.75	3.5	7	10.5	14	17.5	20 (Max.cont.)	24	27.5 (Max.int.)	30 (Peak)
2	30 **9**	73 **7**	160 **5**							
8	36 **39**	76 **38**	168 **35**	262 **34**	345 **31**	438 **27**	465 **16**			
15	36 **75**	81 **75**	174 **74**	270 **71**	365 **65**	455 **60**	510 **45**	580 **32**	640 **16**	
30	37 **152**	85 **151**	175 **147**	275 **142**	370 **132**	465 **121**	540 **109**	615 **96**	700 **80**	765 **60**
45	37 **228**	85 **227**	180 **223**	280 **218**	375 **210**	470 **200**	535 **185**	650 **165**	740 **146**	805 **110**
60	38 **305**	80 **304**	178 **302**	282 **297**	380 **288**	475 **280**	565 **255**	660 **235**	750 **210**	825 **170**
75	32 **382**	78 **380**	175 **376**	275 **370**	378 **362**	480 **350**	565 **328**	670 **300**	760 **270**	840 **230**
90	26 **459**	75 **456**	172 **452**	270 **445**	375 **436**	475 **420**	565 **405**	660 **383**	765 **355**	
105	22 **536**	70 **534**	170 **530**	270 **523**	370 **510**	470 **496**	560 **470**	660 **435**	760 **400**	
120	20 **612**	67 **610**	166 **605**	265 **598**	365 **585**	465 **570**	560 **536**	660 **502**	755 **450**	
135	14 **690**	65 **687**	160 **680**	260 **672**	360 **650**	465 **638**	560 **595**	655 **550**	750 **485**	
150 (Max.cont.)	10 **765**	60 **765**	155 **755**	258 **740**	356 **725**	450 **700**	550 **640**	650 **580**		
170 (Max.int.)		60 **865**	155 **850**	255 **840**	350 **820**	450 **800**	545 **745**	640 **700**		

HBMK6 250 [246.1cm³/rev.]
Pressure (MPa)

Flow (L/min)	1.75	3.5	7	10.5	14	17.5	20 (Max.cont.)	24	27.5 (Max.int.)	30 (Peak)
2	46 **7**	92 **4**								
8	51 **31**	103 **30**	215 **27**	335 **24**	440 **21**	550 **15**	560 **10**			
15	52 **58**	105 **57**	220 **55**	340 **52**	455 **46**	570 **40**	640 **37**	745 **28**	850 **10**	960 **5**
30	55 **118**	110 **116**	232 **113**	352 **110**	470 **105**	600 **96**	685 **80**	790 **64**	900 **48**	1020 **35**
45	58 **180**	110 **177**	235 **174**	355 **170**	475 **164**	610 **155**	705 **140**	840 **126**	940 **106**	1050 **88**
60	53 **242**	110 **240**	230 **237**	350 **233**	480 **224**	615 **212**	705 **198**	845 **180**	955 **162**	1080 **140**
75	45 **302**	105 **298**	230 **292**	355 **285**	485 **278**	620 **268**	710 **254**	850 **230**	960 **206**	1080 **182**
90	45 **364**	105 **360**	225 **352**	350 **342**	480 **338**	615 **322**	710 **305**	845 **288**	955 **265**	
105	40 **424**	100 **420**	220 **414**	340 **408**	475 **394**	610 **372**	705 **352**	840 **334**	950 **315**	
120	38 **485**	95 **479**	210 **471**	340 **463**	470 **454**	590 **442**	700 **420**	830 **385**	940 **365**	
135	35 **546**	85 **540**	205 **532**	325 **525**	460 **516**	580 **504**	690 **478**	820 **445**		
150 (Max.cont.)	30 **608**	80 **605**	200 **600**	320 **592**	450 **580**	570 **566**	680 **532**	815 **496**		
170 (Max.int.)		65 **686**	190 **678**	315 **665**	440 **652**	560 **635**	675 **600**	750 **565**		
185			185 **750**	310 **746**	430 **730**	545 **708**	670 **658**			
205			175 **830**	300 **820**	418 **800**	536 **776**	562 **735**			

HBMK6 315 [311.6cm³/rev.]
Pressure (MPa)

Flow (L/min)	1.75	3.5	7	10.5	14	17.5	20 (Max.cont.)	24	27.5 (Max.int.)	30 (Peak)
2	65 **5**	126 **4**								
8	68 **24**	135 **23**	280 **22**	410 **20**	540 **16**	650 **13**	750 **9**	880 **3**		
15	70 **46**	135 **45**	285 **44**	435 **41**	565 **36**	690 **30**	810 **22**	940 **16**	1010 **9**	1035 **3**
30	70 **93**	135 **92**	295 **90**	440 **86**	600 **80**	740 **71**	880 **62**	990 **52**	1100 **43**	1180 **31**
45	70 **142**	140 **140**	300 **138**	460 **132**	610 **127**	750 **120**	900 **118**	1035 **96**	1165 **85**	1300 **72**
60	70 **190**	140 **189**	300 **186**	460 **182**	615 **176**	775 **167**	920 **154**	1055 **138**	1200 **124**	1325 **105**
75	65 **238**	135 **237**	295 **235**	455 **231**	615 **225**	780 **214**	920 **200**	1065 **180**	1215 **160**	
90	60 **285**	130 **284**	290 **280**	450 **276**	615 **270**	780 **260**	920 **245**	1070 **226**	1220 **210**	
105	50 **335**	125 **333**	280 **330**	445 **324**	605 **316**	770 **302**	915 **290**	1070 **271**	1205 **248**	
120	45 **384**	120 **382**	280 **380**	440 **372**	600 **364**	765 **350**	910 **338**	1055 **312**		
135	40 **432**	115 **428**	275 **420**	435 **412**	585 **408**	760 **391**	900 **380**	1050 **350**		
150 (Max.cont.)	35 **480**	110 **475**	270 **462**	420 **458**	570 **450**	755 **435**	880 **420**	1030 **395**		
190 (Max.int.)		100 **595**	245 **580**	375 **574**	520 **560**	685 **548**	820 **530**			
225			220 **690**	350 **683**	500 **674**	640 **652**	770 **634**			

HBMK6 400 [391.3cm³/rev.]
Pressure (MPa)

Flow (L/min)	1.75	3.5	7	10.5	14	17.5	20 (Max.cont.)	24	27.5 (Max.int.)	30 (Peak)
2	90 **4**	172 **2**	360 **1**							
8	95 **19**	180 **18**	370 **17**	555 **16**	730 **14**	885 **12**	1025 **9**	1195 **4**		
15	95 **37**	185 **37**	375 **36**	560 **35**	740 **33**	930 **28**	1070 **22**	1265 **14**	1380 **5**	1625 **1**
30	98 **75**	185 **74**	380 **73**	575 **71**	760 **68**	960 **65**	1135 **55**	1315 **45**	1455 **31**	1625 **20**
45	95 **114**	185 **113**	385 **111**	580 **108**	765 **105**	970 **100**	1145 **90**	1335 **80**	1530 **72**	
60	90 **152**	180 **152**	380 **150**	580 **147**	770 **142**	975 **134**	1155 **126**	1345 **112**		
75	85 **191**	180 **191**	380 **188**	580 **186**	775 **181**	980 **172**	1160 **160**	1355 **148**		
90	80 **230**	175 **229**	375 **227**	570 **224**	765 **220**	975 **212**	1155 **200**			
105	70 **268**	165 **267**	360 **265**	560 **260**	760 **254**	965 **246**	1150 **232**			
120	65 **306**	160 **305**	355 **303**	550 **298**	745 **290**	950 **278**	1140 **262**			
135	55 **345**	155 **343**	340 **337**	545 **330**	735 **322**	940 **310**	1120 **295**			
150 (Max.cont.)	45 **382**	145 **380**	320 **376**	530 **370**	730 **362**	925 **352**				
190 (Max.int.)		130 **483**	300 **476**	515 **470**	730 **458**	915 **445**				
225			285 **570**	500 **560**	710 **550**	895 **535**				

HBMK6 500 [490.8cm³/rev.]
Pressure (MPa)

Flow (L/min)	1.75	3.5	7	10.5	14	17.5	20 (Max.cont.)	24 (Max.int.)	27.5 (Peak)
4	120 **7**	230 **6**	470 **5**	685 **3**					
8	125 **15**	240 **14**	475 **13**	705 **12**	940 **11**	1165 **8**	1375 **3**		
15	125 **30**	235 **29**	480 **29**	720 **28**	960 **27**	1190 **25**	1400 **21**	1625 **17**	1880 **12**
30	125 **60**	235 **59**	485 **58**	735 **57**	975 **54**	1215 **50**	1445 **45**	1685 **35**	
45	125 **91**	235 **90**	485 **89**	735 **87**	975 **84**	1215 **78**	1450 **70**		
60	120 **121**	235 **121**	480 **120**	730 **118**	975 **114**	1220 **108**	1460 **98**		
75	110 **152**	225 **151**	470 **149**	725 **146**	970 **142**	1220 **135**			
90	100 **182**	220 **182**	465 **180**	720 **178**	965 **175**	1215 **168**			
105	95 **213**	205 **212**	460 **210**	710 **206**	960 **201**	1210 **195**			
120	90 **244**	195 **243**	450 **240**	700 **235**	950 **228**	1205 **221**			
135	85 **274**	175 **273**	435 **270**	680 **265**	935 **258**	1170 **250**			
150 (Max.cont.)	70 **304**	155 **303**	420 **301**	665 **292**	920 **287**	1150 **280**			
190 (Max.int.)		130 **385**	360 **382**	580 **373**	865 **365**				
225			320 **455**	555 **440**	800 **432**				

HBMK6 630 [623cm³/rev.]
Pressure (MPa)

Flow (L/min)	1.75	3.5	7	10.5	14	17.5 (Max.cont.)	20	22.5 (Max.int.)
4	130 **6**	245 **5**	500 **4**	750 **2**				
8	135 **12**	265 **12**	540 **11**	805 **10**	1050 **6**			
15	140 **24**	280 **23**	585 **22**	865 **21**	1085 **16**	1425 **13**		
30	145 **48**	295 **47**	605 **45**	925 **42**	1270 **38**	1480 **34**	1780 **30**	1890 **27**
45	145 **72**	295 **71**	610 **70**	920 **68**	1330 **65**	1465 **58**	1770 **50**	
60	135 **95**	285 **94**	605 **91**	915 **87**	1330 **83**	1465 **78**		
75	130 **120**	275 **119**	595 **116**	915 **112**	1325 **106**			
90	115 **145**	260 **144**	585 **141**	905 **137**	1310 **130**			
105	100 **168**	255 **167**	575 **164**	895 **160**	1305 **152**			
120	85 **192**	235 **191**	560 **186**	880 **182**	1280 **175**			
135	75 **216**	220 **215**	540 **212**	855 **207**				
150 (Max.cont.)	50 **240**	200 **239**	525 **236**	84 **233**				
190 (Max.int.)			465 **300**	795 **293**				
225			430 **360**	740 **348**				

HBMK6 800 [802.4cm³/rev.]
Pressure (MPa)

Flow (L/min)	1.75	3.5	5	7	8.5	10.5	12	14 (Max.cont.)	15.5	17.5 (Max.int.)
4	172 **4**	345 **4**	530 **2**	690 **2**	860 **1**					
8	180 **9**	355 **9**	540 **8**	725 **8**	955 **7**	1080 **6**	1275 **5**	1360 **4**		
15	185 **18**	370 **18**	565 **17**	758 **17**	980 **16**	1130 **15**	1265 **14**	1420 **12**	1655 **10**	1880 **9**
30	190 **36**	385 **35**	590 **34**	795 **33**	1005 **32**	1200 **31**	1330 **29**	1580 **28**	1740 **26**	
45	190 **55**	385 **55**	590 **54**	800 **53**	1015 **52**	1200 **52**	1380 **50**	1550 **48**		
60	185 **74**	380 **73**	580 **72**	790 **70**	1015 **69**	1200 **67**	1345 **65**			
75	176 **92**	370 **92**	575 **91**	782 **88**	1000 **87**	1185 **85**	1365 **82**			
90	165 **112**	360 **111**	560 **110**	765 **108**	990 **106**	1170 **102**				
105	150 **130**	340 **129**	555 **128**	750 **127**	972 **125**	1155 **120**				
120	132 **149**	325 **148**	545 **146**	735 **143**	945 **140**	1130 **135**				
135	105 **168**	302 **167**	525 **165**	710 **162**	911 **158**					
150 (Max.cont.)	80 **186**	270 **185**	500 **183**	680 **180**	880 **176**					
190 (Max.int.)		300 **235**	475 **233**	660 **230**	855 **226**					
225			423 **280**	612 **276**	830 **272**					

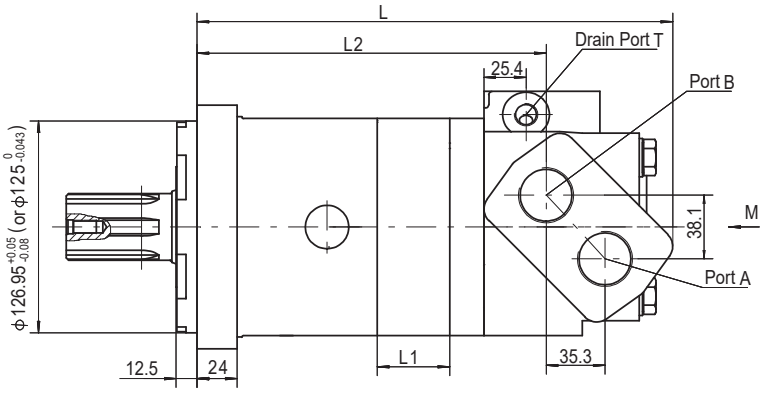
Torque (N•m) 423
Speed (rpm) **280**

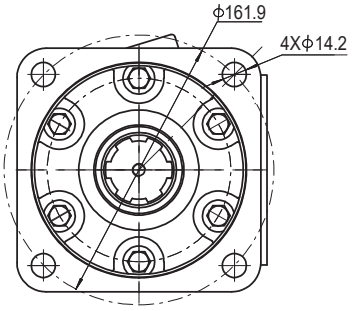
HBMK6 1000 [981.6cm³/rev.]
Pressure (MPa)

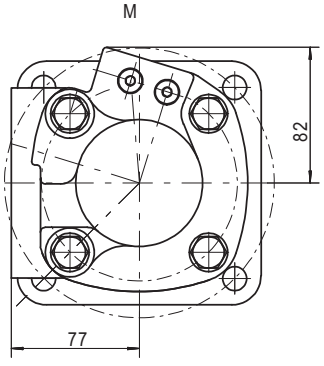
Flow (L/min)	1.75	3.5	5	7	8.5	10.5	12 (Max.cont.)	14 (Max.int.)
4	225 **3**	460 **3**	640 **2**	875 **2**	1085 **1**			
8	230 **7**	470 **7**	695 **6**	945 **6**	1170 **5**	1415 **4**	1560 **3**	1675 **2**
15	240 **15**	485 **15**	715 **15**	965 **14**	1200 **14**	1445 **13**	1580 **13**	1780 **12**
30	240 **30**	495 **30**	720 **30**	995 **29**	1235 **28**	1480 **27**	1640 **25**	1860 **23**
45	240 **45**	495 **45**	720 **44**	1000 **44**	1250 **43**	1490 **42**	1700 **40**	
60	235 **60**	490 **60**	715 **60**	990 **59**	1245 **57**	1500 **55**		
75	225 **76**	475 **76**	710 **76**	980 **75**	1230 **73**	1485 **70**		
90	215 **91**	460 **91**	705 **91**	960 **90**	1215 **88**	1465 **85**		
105	200 **106**	445 **106**	690 **105**	940 **105**	1195 **103**	1440 **100**		
120	185 **122**	420 **122**	665 **121**	920 **119**	1155 **116**			
135	150 **137**	390 **137**	635 **136**	890 **136**	1120 **134**			
150 (Max.cont.)	110 **152**	360 **151**	605 **150**	860 **148**	1080 **145**			
190 (Max.int.)		320 **192**	575 **190**	820 **188**	1045 **185**			
225			515 **230**	800 **228**	1020 **224**			

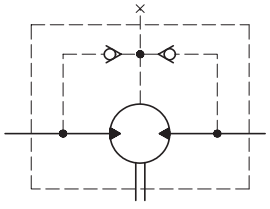
cont.
int.

HBMK6 DIMENSIONS MOUNTING DATA



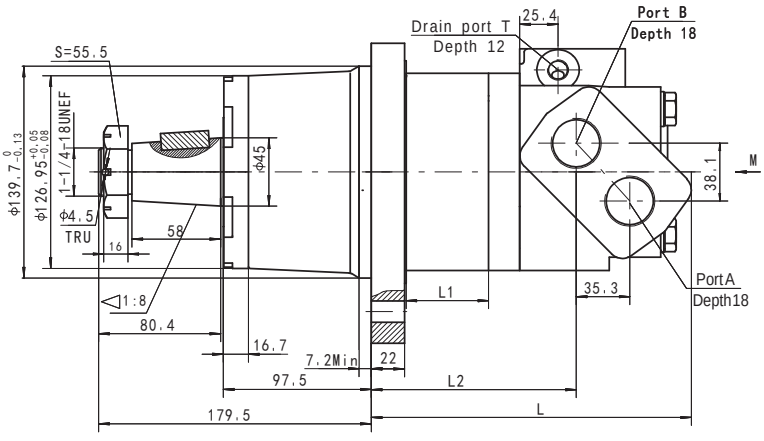


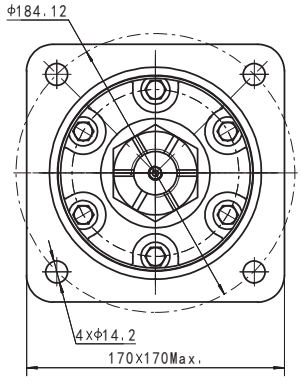


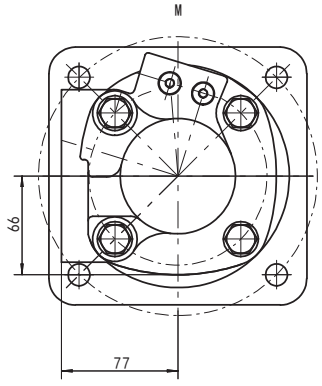


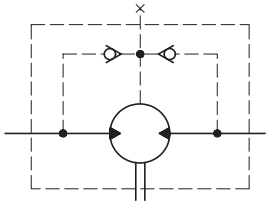
Model	L	L1	L2
HBMK6-200	265	21.7	187.5
HBMK6-250	271	27.3	193.1
HBMK6-315	278	34.5	200.3
HBMK6-400	287	43.4	209.2
HBMK6-500	298	54.4	220.2
HBMK6-630	313	69.1	234.9
HBMK6-800	333	89	254.8
HBMK6-1000	353	108.9	274.7

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





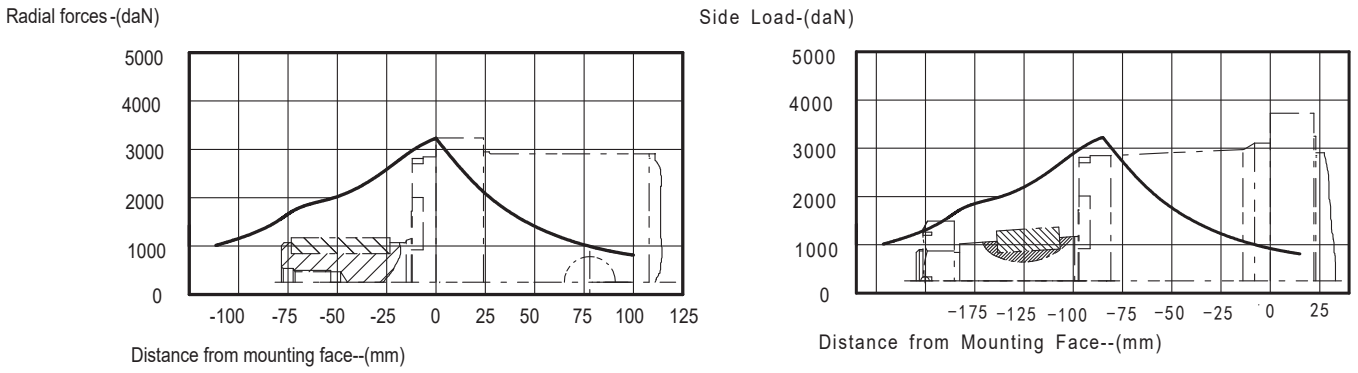




Model	L	L1	L2
HBMK6-200	179	21.7	102.5
HBMK6-250	185	27.3	108
HBMK6-315	192	34.5	115.5
HBMK6-400	201	43.4	124.5
HBMK6-500	212	54.4	135.5
HBMK6-630	226.7	69.1	150.2
HBMK6-800	246.5	89	170
HBMK6-1000	266.5	108.9	190

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

HBMK6 for CC And W Mounting Radial forces

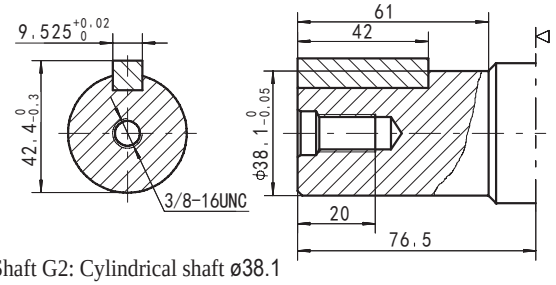


The bearing curve represents allowable bearing loads for an B10 bearing life (2000 hours or $12x10^6$ revolutions at 100rpm) at rated output torque. Other speed load multiply a load values.

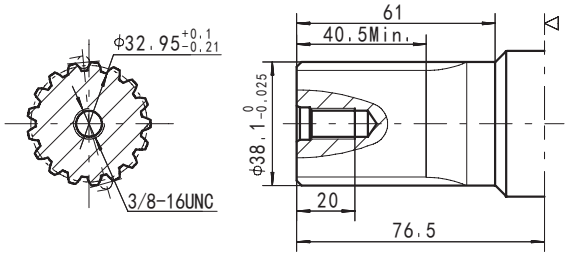
The maximum load curve is defined by bearing static load capacity.

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

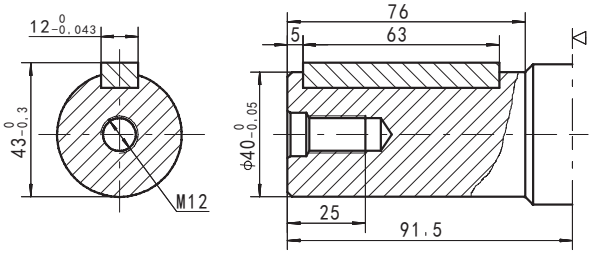
HBMK6 Shaft Extensions For Dimensions Data



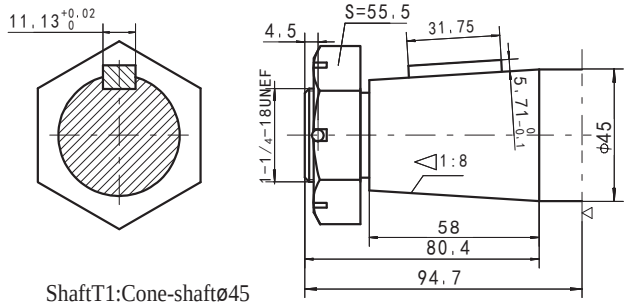
Shaft G2: Cylindrical shaft ø38.1
Parallel key 9.525x9.525x42
Max.Torque: 1350Nm



Shaft FE: Splined 17-DP12/24
Max.Torque: 1350Nm



Shaft Y1: Cylindrical shaft ø40
Parallel key 12x8x63
Max.Torque: 1400Nm

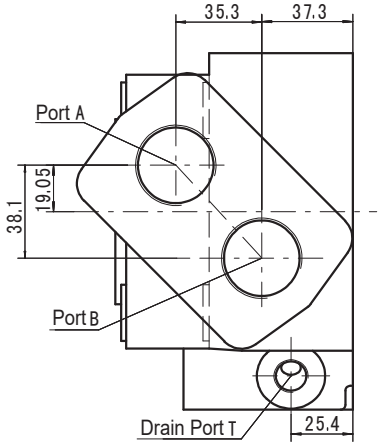


ShaftT1:Cone-shaftø45
Parallelkey11.13x11.13x31.75
Tighteningtorque: 500±10Nm
Max. torque 2100Nm

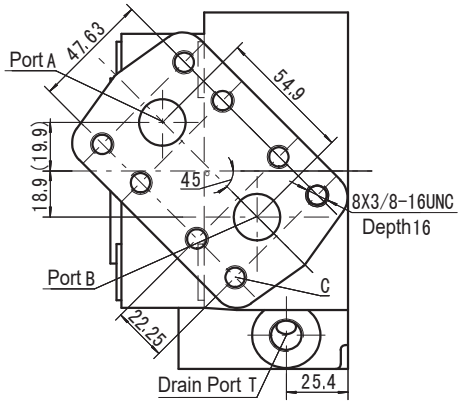
◁ Motor Mounting Surface CC Flange

DIMENSIONS of PORTS FOR HBMK6

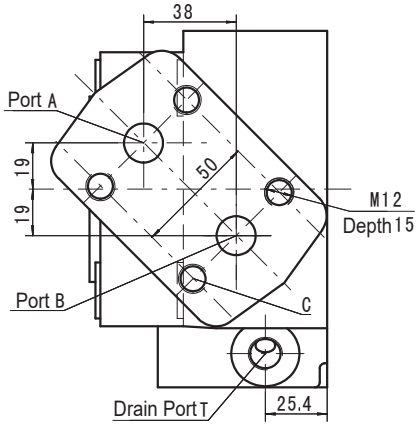
Port：SF5、SF6、SF7、SF8



Port：SF



Port：SF0



Order Information

1	2	3	4	5	6	7	8
HBMK6							

Pos.1	2	3			4		5		6	7	8
Code	Disp.	Flange			Output Shaft		Port and Drain Port		Rotation Direction	Paint	Unusually Function
Omit	200	CC	4-Φ14.2Square-flange Φ161.9, pilot Φ127×12.5	G2	Shaft Φ38.1, parallel key9.52×9.52×57.15	SF	3/4"Manifold Mount8×3/8-16UNC, 7/16-20UNF	Omit	Standard	00 No paint	Omit Standard
	250					SF0	Φ16Manifold Mount4×M12, M14×1.5		Opposite	Omit Blue	
	315	CC1	4-Φ14.2Square-flange Φ161.9, pilot Φ125×12.5	FE	Shaft Φ38.1, splined tooth17-DP12/24	SF5	1-5/16-12UN, 7/16-20UNF	R		B Black	
	400			Y1	Shaft Φ40, parallel key12×8×63	SF6	M33×2, M14×1.5			S Silver grey	
	500	W	4-Φ14.2 Wheel-flange Φ184.12, Pilot 139.7	T1	Cone-shaft 1:8 Φ45, parallel key 11.13X11.13X31.75	SF7	G1, G1/4				
	630					SF8	G3/4, G1/4				
	800										
	1000										

Note: When the table is used, please fill the code of left rows in dash area 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.

Code / Mounting	Type					
	SF5 (depth)	SF6 (depth)	SF7 (depth)	SF8 (depth)	SF (depth)	SF0 (depth)
P(A,B)	1-5/16-12UN(18)	M33X2(18)	G1(18)	G3/4(18)	Φ19.05	Φ16
T	7/16-20UNF(12)	M14X1.5(12)	G1/4(12)	G1/4(12)	7/16-20UNF(12)	M14X1.5(12)
C	-	-	-	-	8X3/8-16UNC	4XM12

HBMK10 Series Hydraulic Motor

Introduction

BMK10 series motor adapt the advanced Geroler gear set designed with disc distribition flow and high pressure. The unit can be supplied the individual variant in operating multifunction in accordance with requirement of applications.

Characteristic features:

*Advanced manufacturing devices for the Geroler gear set, which use low pressure of start-up, provide smooth and reliable operation and high efficiency.

*Advanced design in disc distribution flow , which can automatically compensate in operating with high volume efficiency and long life , provide smooth and reliable operation.

*Shaft seal can bear high pressure of back .

*The output shaft adapts in cylinder roller bearings that permit high axial and radial forces. The case can offers capacities of high pressure and high torque in the wide of applications.

Main specification

Type		BMK10-350	BMK10-480	BMK10-665	BMK10-940
Geometric displacement (cm^2/rev)		351	479	638	933
Max. speed (rpm)	cont.	485	355	265	180
	int.	755	555	410	280
Max. torque (N. m)	cont.	1025	1425	1930	2480
	int.	1425	1960	2520	3400
Max. pressure drop (Mpa)	cont.	20	20	20	17.5
	int.	27.5	27.5	26.0	24.0
	peak.	27.5	27.5	27.5	26.0
Max. flow (L/min)	cont.	170	170	170	170
	int.	265	265	265	265
Weight(kg)		43.4	45.8	45.8	47.1

Note:

*Continuous pressure : Max. value of operating motor continuously.

*Intermittent pressure: Max. value of operating motor in 6 seconds per minute.

*Peak pressure: Max. value of operating motor in 0.6 second per minute.

◎Oil recommend: Anti-wear hydraulic oil, viscosity 37-73cSt, cleanliness of oil as ISO 18/13, Max. operating temperature upper limit 80 ℃.

◎Special motive seal, motor permits back pressure can reach 7-20MPa(optical), but to achieve good life cycle and overall performance, we recommend the back pressure cant over 5 MPa, if so, recommend to use drain line, to make sure inside of the motor fulfilled with oil when drain oil in use. The drain line pipe should have a certain throttle to keep the back pressure over 3.5 Bar. If the drain line in use, it is not only can keep low back pressure, but also can flash the wear pollution out, still have a function as cooling.

◎There is a run-in period before full load of the motor, recommend to do the run -in period for 1 hour under 30% of the Max. working pressure. The Max. output torque related to the type of shaft.

HBMK10 Series Hydraulic Motor

Performance Data 性能参数

请注意：
马达可以按照所有区域内标记的扭矩和转速下高效率运行，但是选择白色背景区域内的扭矩和转速下运行，能使马达获得最佳的寿命。

Notice:
Motor can operating in all the marked torque and speed in each zone, but choose the torque and speed in white back ground , motor can acquire best life cycle.

BMK10-350[351cm³/rev.]
Pressure压力(MPa)

Flow流量(L/min)	1.75	3.5	7	10.5	14	17.5	20 连续最大 Max.cont.	24	27.5 断续最大 Max.int.
4	70 **3**	153 **1**							
8	87 **22**	177 **20**	357 **16**	538 **11**	718 **8**	898 **4**			
15	87 **42**	177 **40**	357 **36**	538 **32**	718 **29**	898 **25**	1027 **21**	1233 **17**	1413 **14**
30	84 **85**	174 **84**	354 **80**	535 **76**	716 **72**	897 **68**	1025 **64**	1231 **60**	1412 **56**
45	82 **127**	172 **126**	353 **123**	533 **119**	713 **115**	894 **111**	1023 **107**	1230 **103**	1410 **99**
60	80 **170**	170 **169**	351 **167**	531 **162**	711 **158**	892 **153**	1021 **150**	1228 **145**	1408 **141**
75	77 **213**	167 **212**	347 **211**	528 **206**	708 **201**	889 **196**	1019 **192**	1224 **187**	1404 **184**
90	74 **255**	164 **254**	345 **253**	525 **249**	705 **245**	886 **239**	1015 **235**	1221 **230**	1402 **225**
105	70 **296**	160 **295**	341 **294**	521 **292**	701 **287**	883 **283**	1012 **278**	1219 **272**	1399 **267**
120	67 **340**	157 **339**	338 **338**	518 **336**	698 **330**	879 **325**	1009 **320**	1215 **315**	1395 **310**
135	63 **383**	153 **382**	333 **381**	514 **379**	694 **373**	875 **368**	1005 **362**	1211 **357**	1392 **352**
150	58 **425**	148 **424**	330 **423**	510 **422**	691 **417**	871 **411**	1001 **405**	1207 **400**	
170 连续最大 Max.cont.	54 **482**	143 **481**	323 **480**	503 **479**	683 **475**	863 **470**	992 **463**	1197 **457**	
225		126 **637**	306 **636**	486 **635**	668 **632**	848 **625**	980 **619**		
265 断续最大 Max.int.		112 **752**	293 **750**	473 **747**	654 **746**	835 **739**	966 **731**		

Torque 扭矩（Nm）112
Speed 转速（rpm）**752**

BMK10-480[479cm³/rev.]
Pressure压力(MPa)

Flow流量(L/min)	1.75	3.5	7	10.5	14	17.5	20 连续最大 Max.cont.	24	27.5 断续最大 Max.int.
4	87 **6**	176 **5**	357 **4**	531 **2**					
8	119 **16**	24 **14**	494 **12**	743 **8**	994 **5**	1243 **2**			
15	119 **31**	244 **29**	493 **27**	742 **24**	993 **21**	1242 **18**	1421 **16**	1706 **13**	1955 **10**
30	117 **62**	241 **61**	491 **58**	741 **55**	990 **53**	1240 **50**	1419 **47**	1704 **44**	1953 **42**
45	113 **93**	238 **92**	488 **89**	738 **86**	987 **83**	1237 **80**	1416 **77**	1700 **74**	1951 **72**
60	110 **124**	236 **123**	485 **121**	734 **118**	983 **115**	1234 **112**	1413 **109**	1697 **106**	1947 **103**
75	106 **156**	231 **155**	480 **153**	731 **149**	980 **146**	1229 **143**	1409 **140**	1694 **137**	1943 **134**
90	102 **188**	226 **187**	477 **184**	726 **181**	975 **178**	1226 **174**	1405 **171**	1689 **168**	
105	97 **219**	222 **218**	472 **215**	722 **213**	971 **209**	1221 **206**	1401 **202**	1685 **199**	
120	93 **250**	217 **249**	467 **247**	717 **243**	966 **240**	1216 **236**	1396 **233**	1680 **229**	
135	87 **280**	212 **279**	462 **278**	711 **275**	961 **271**	1211 **268**	1391 **264**		
150	81 **313**	206 **312**	456 **310**	706 **306**	955 **303**	1205 **299**	1385 **295**		
170 连续最大 Max.cont.	74 **354**	199 **353**	448 **351**	699 **348**	948 **344**	1197 **340**	1379 **336**		
225	49 **469**	174 **468**	424 **467**	674 **464**	923 **459**	1173 **455**	1355 **451**		
265 断续最大 Max.int.		156 **552**	405 **551**	655 **547**	905 **542**	1155 **537**	1337 **533**		

连续 cont.

断续 int.

HBMK10 Series Hydraulic Motor

Performance Data 性能参数

请注意：
马达可以按照所有区域内标记的扭矩和转速下高效率运行，但是选择白色背景区域内的扭矩和转速下运行，能使马达获得最佳的寿命。

Notice:
Motor can operating in all the marked torque and speed in each zone, but choose the torque and speed in white back ground , motor can acquire best life cycle.

BMK10-665[638cm³/rev.]

Flow流量(L/min)	Pressure压力(MPa) 1.75	3.5	7	10.5	14	17.5	20 连续最大 Max.cont.	24 断续最大 Max.int.	26
4	162 **4**	331 **3**	671 **2**						
8	163 **11**	332 **10**	672 **8**	1011 **7**	1350 **4**	1689 **2**			
15	162 **23**	331 **22**	671 **20**	1010 **18**	1349 **15**	1688 **13**	1931 **11**	2319 **9**	2513 **8**
30	158 **45**	328 **44**	667 **42**	1007 **40**	1347 **38**	1685 **36**	1928 **34**	2316 **33**	2509 **32**
45	154 **69**	324 **68**	664 **66**	1002 **64**	1342 **62**	1682 **60**	1924 **58**	2312 **56**	2506 **55**
60	149 **92**	320 **91**	658 **89**	998 **87**	1338 **85**	1677 **83**	1920 **81**	2304 **79**	
75	144 **116**	314 **115**	653 **113**	993 **111**	1332 **107**	1672 **105**	1916 **103**		
90	138 **139**	308 **138**	647 **135**	987 **133**	1327 **131**	1665 **128**	1909 **126**		
105	132 **162**	302 **161**	642 **159**	980 **156**	1320 **154**	1660 **152**			
120	125 **186**	296 **185**	634 **182**	974 **180**	1314 **178**	1653 **175**			
135	119 **209**	288 **208**	628 **206**	967 **202**	1306 **200**	1645 **197**			
150	111 **232**	280 **231**	620 **228**	960 **226**	1298 **223**	1638 **221**			
170 连续最大 Max.cont.	101 **264**	270 **262**	610 **259**	949 **257**	1288 **254**	1628 **252**			
225	67 **349**	236 **347**	576 **345**	916 **342**	1255 **339**				
265 断续最大 Max.int.		212 **410**	551 **407**	890 **404**	1230 **400**				

Torque 扭矩（Nm）212
Speed 转速（rpm）**410**

BMK10-940[933cm³/rev.]

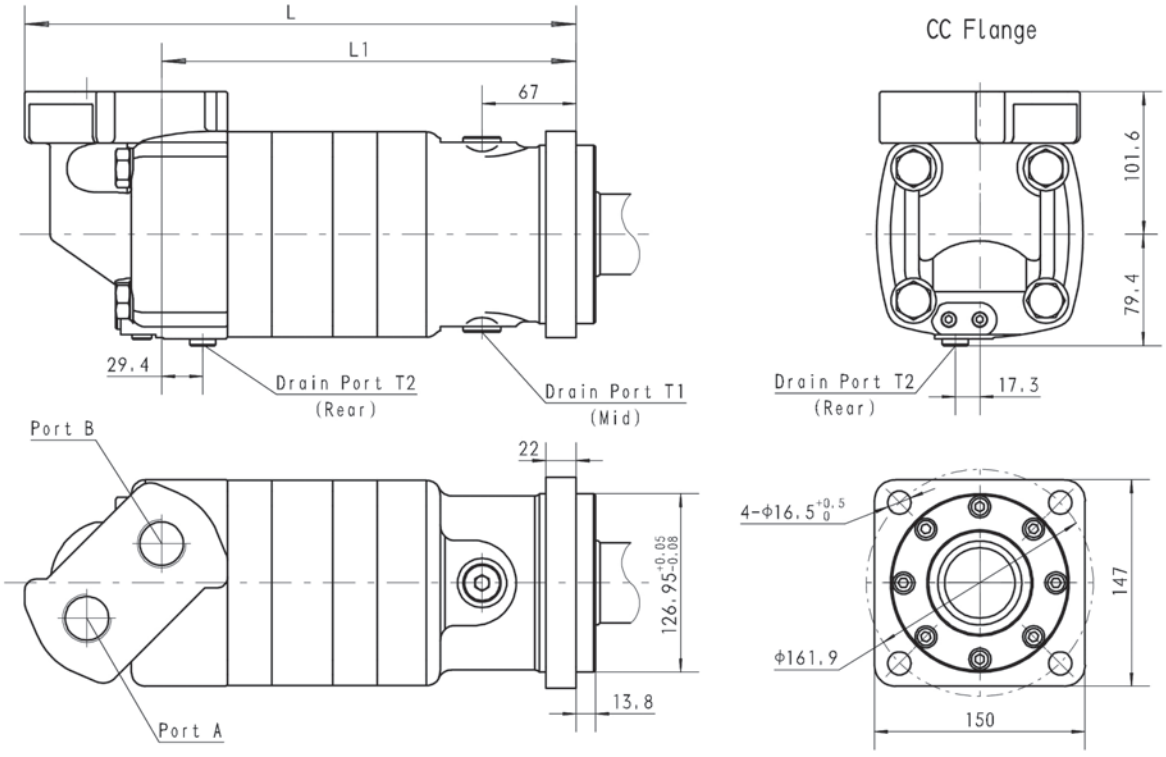
Flow流量(L/min)	Pressure压力(MPa) 1.75	3.5	7	10.5	14	17.5 连续最大 Max.cont.	20	24 断续最大 Max.int.
4	236 **3**	484 **2**						
8	238 **7**	485 **6**	982 **5**	1478 **3**	1975 **1**			
15	236 **15**	484 **14**	980 **13**	1477 **11**	1974 **9**	2469 **7**	2824 **6**	3393 **4**
30	232 **31**	480 **30**	977 **28**	1472 **27**	1969 **25**	2466 **23**		
45	226 **47**	474 **46**	971 **44**	1467 **43**	1964 **41**	2460 **39**		
60	219 **63**	467 **62**	964 **60**	1460 **58**	1957 **57**			
75	211 **79**	459 **78**	956 **76**	1452 **74**	1949 **72**			
90	202 **95**	451 **94**	947 **92**	1444 **90**	1941 **88**			
105	193 **111**	442 **110**	938 **108**	1435 **106**	1932 **104**			
120	184 **127**	432 **126**	928 **124**	1425 **122**				
135	173 **143**	422 **142**	918 **140**	1414 **138**				
150	161 **159**	410 **158**	906 **156**	1403 **154**				
170 连续最大 Max.cont.	147 **180**	396 **179**	891 **177**	1388 **175**				
225	98 **239**	346 **238**	842 **235**	1339 **233**				
265 断续最大 Max.int.	61 **281**	309 **280**	806 **277**	1303 **275**				

连续 cont.

断续 int.

HBMK10 Series Hydraulic Motor

BMK10 Dimensions of Mounting and Ports Date



Direction of shaft rotation: Standard

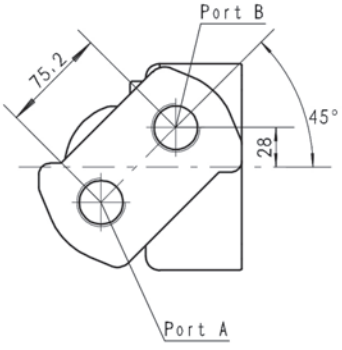
When facing shaft end of motor, shaft to rotate:

Clockwise when port "A" is pressurized.

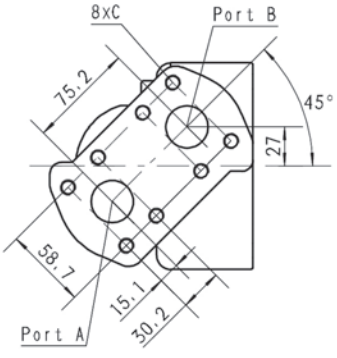
Counter-clockwise when port "B" is pressurized.

Model	L1	L
HBMK10-350	281	381
HBMK10-480	293	393
HBMK10-665	293	393
HBMK10-940	313	413

Port: SF5、SF7



Port: SF



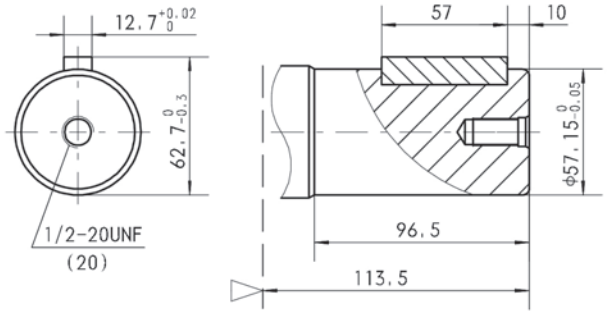
Port	Code	
	SF5	SF7
A, B	1-5/16-12UN(18)	G1(18)
T1	7/8-14UNF(16)	G1/2(16)
T2	9/16-18UNF(12)	G1/4(12)

Port	Code
	SF
A, B	φ29.4
T1	7/8-14UNF(16)
T2	9/16-18UNF(12)
C	7/16-14UNC(25)

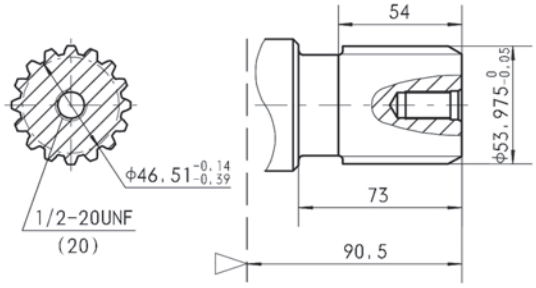
HBMK10 Series Hydraulic Motor

BMK10 Dimensions of Mounting and Ports Date

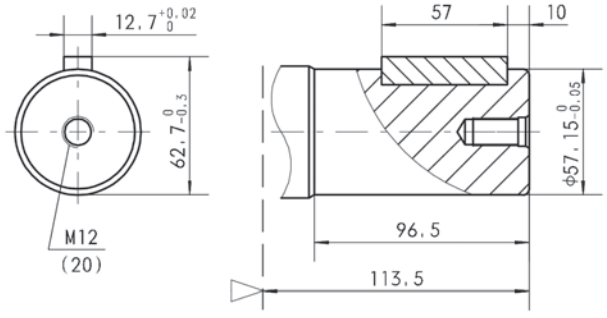
Shaft: C Cylindrical shaft ϕ57.15
Key: 12.7x12.7x57



Shaft: BD Splined 16-DP8/16

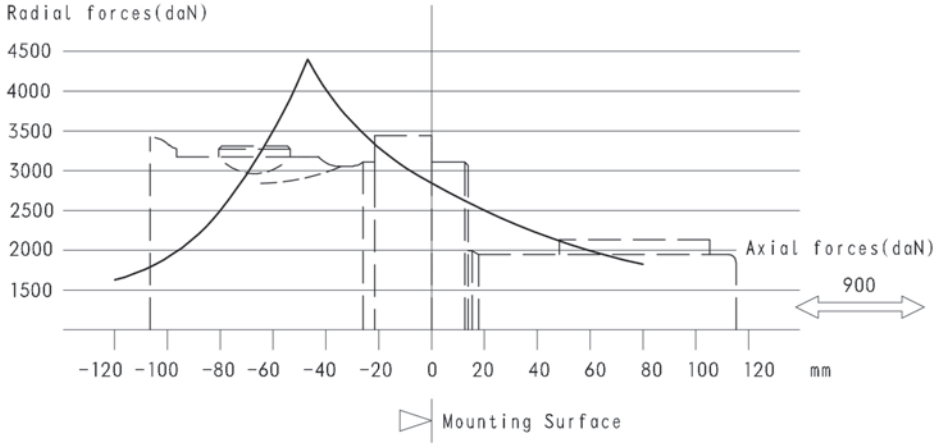


Shaft: C1 Cylindrical shaft ϕ57.15
Key: 12.7x12.7x57



Motor Mounting Surface CC Flange

BMK10 Shaft Radial&Axial Forces of CC Mounting



Notice:

The curve on the top means the outputshaft permits radial load in different position.

The table as follow means the speed of motor influence the radial force.

BMK10 Series Hydraulic Motor

BMK10 Series Hydraulic Motor Order code

	1	2	3	4	5	6	7	8
BMK10								

Pos.1	2	3		4		5		6		7		8	
Code	Disp.	Flange		Shaft		Port		Rotation Direction		Paint		Unusually Function	
Omit	350 480 665 940	CC	4- Φ 16.5 Squre flange Φ 161.9 Pilot Φ127*13.8	C	Φ57.15 Straight Shaft Parallel key 12.7*12.7*57	SF5	A、B: 1-5/16-12UNF T1: 7/8-14UNF T2: 9/16-18UNF	Omit	Standard CW	00	No paint	Omit	Standard
				C1	Φ57.15 Straight Shaft Parallel key 12.7*12.7*57	SF7	A、B: G1 T1: G1/2 T2: G1/4	R	Recverse CCW	B	Black		
				BD	Φ53.975 Splined Shaft Splined 16-DP8/16	SF	Manifold mount 8×7/16-14UNC T1: 7/8-14UNF T2: 9/16-18UNF						

Note: when the table is used, please fill the code of left rows in dash area 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.

BME2 SERIES HYDRAULIC MOTOR

HBME2 series motor adapt the advanced Geroler gear set designed with high speed distribution flow and high pressure, and have good stability in low speed , and can keep high volume efficiency. The unit can be supplied the individual variant in operating multifunction in accordance with requirement of applications.

Characteristic features:

* Advanced manufacturing devices for the Geroler gear set, which use low pressure of start-up, provide smooth and reliable operation and high efficiency.

* The output shaft adapts in needle roller bearings that permit high axial and radial forces. The case can offers capacities of high pressure and high torque in the wide of applications.

* Advanced design in high speed distribution flow, which can automatically compensate in operating with high volume efficiency and long life , provide smooth and reliable operation.

* Lowest leakage rate, most accurate timing methods.Commutator rotates 6x faster than shaft speed. It make the distribution in a high precision reduces life-cycle cost, maintain high volume efficiencies and can run very smoothly at low speed, gear box not required.

Main Specification

Type		HBME2 65	HBME2 80	HBME2 100	HBME2 125	HBME2 160	HBME2 200	HBME2 230	HBME2 250	HBME2 295	HBME2 315	HBME2 375
Geometric displacement (cm^3/rev.)		66.8	81.3	101.6	127	157.2	193.6	226	257	287.8	314.5	370
Max. speed (rpm)	cont.	667	543	439	350	283	229	247	216	196	178	152
	int.	842	689	553	441	355	289	328	287	254	235	199
Max. torque (N•m)	cont.	126	157	191	245	307	382	378	381	393	448	439
	int.	176	215	268	335	422	520	528	543	547	587	613
Max. output (kW)	cont.	8.3	8.8	7.9	8.9	8.9	9	9.9	9.3	8.7	8	7.6
	int.	13.9	14.4	13.5	14.1	15.6	15.7	17.9	16.5	15.6	14.3	14
Max. pressure drop (MPa)	cont.	14	14	14	14	14	14	12	11	10	10	9
	int.	19	19	19	19	19	19	165	15.5	14.5	13.5	12.5
	peak	20	20	20	20	20	20	18	18	17	16	16
Max. flow (L/min)	cont.	45	45	45	45	45	45	57	57	57	57	57
	int.	57	57	57	57	57	57	75	75	75	75	75

* Continuous pressure:Max. value of operating motor continuously.

* Intermittent pressure:Max. value of operating motor in 6 seconds per minute.

* Peak pressure:Max. value of operating motor in 0.6 second per minute.

Performance Data

HBME2 65 [66.8 cm³/rev.]

Pressure (MPa)

Flow (L/min)	3.5	7	10.5	14 (Max.cont.)	19 (Max.int.)
2	26 **22**	54 **16**	83 **4**		
5	27 **69**	56 **62**	87 **53**	118 **42**	
10	29 **145**	60 **141**	91 **132**	123 **122**	171 **95**
15	30 **221**	62 **216**	94 **207**	126 **196**	176 **149**
20	28 **295**	58 **290**	91 **279**	122 **261**	174 **232**
25	24 **368**	55 **365**	90 **352**	121 **341**	172 **312**
34	22 **501**	54 **493**	89 **478**	119 **457**	171 **423**
Max.cont. 45	20 **667**	52 **660**	85 **642**	115 **621**	168 **587**
Max.int. 57	15 **842**	46 **835**	80 **814**	112 **789**	163 **735**

HBME2 80 [81.3 cm³/rev.]

Pressure (MPa)

Flow (L/min)	3.5	7	10.5	14 (Max.cont.)	19 (Max.int.)
2	33 **18**	70 **14**	106 **4**		
5	35 **55**	72 **51**	111 **44**	150 **25**	
10	36 **121**	75 **118**	114 **113**	155 **107**	215 **88**
15	37 **181**	77 **178**	116 **171**	157 **162**	215 **148**
20	35 **242**	74 **238**	112 **231**	151 **223**	206 **205**
25	35 **303**	71 **298**	108 **289**	148 **275**	202 **261**
34	31 **411**	69 **407**	105 **396**	145 **382**	198 **373**
Max.cont. 45	23 **543**	62 **537**	100 **521**	139 **513**	12 **501**
Max.int. 57	18 **689**	55 **681**	98 **665**	134 **649**	186 **618**

HBME2 100 [101.6 cm³/rev.]

Pressure (MPa)

Flow (L/min)	3.5	7	10.5	14 (Max.cont.)	19 (Max.int.)
2	40 **15**	82 **11**	126 **4**		
5	41 **44**	83 **36**	150 **28**	206 **12**	
10	42 **97**	91 **95**	138 **94**	177 **81**	230 **54**
15	42 **147**	91 **144**	138 **137**	185 **124**	257 **93**
20	38 **195**	88 **192**	136 **182**	180 **169**	244 **138**
25	39 **244**	89 **241**	142 **230**	191 **221**	268 **194**
34	31 **331**	79 **328**	131 **323**	179 **308**	250 **273**
Max.cont. 45	21 **439**	70 **436**	119 **433**	168 **419**	241 **383**
Max.int. 57	10 **553**	60 **545**	109 **534**	158 **527**	232 **491**

Torque (N•m) 158
Speed (rpm) **527**

HBME2 125 [127 cm³/rev.]

Pressure (MPa)

Flow (L/min)	3.5	7	10.5	14 (Max.cont.)	19 (Max.int.)
2	52 **12**	150 **9**	158 **3**		
5	55 **35**	112 **31**	170 **22**	221 **15**	290 **10**
10	57 **78**	117 **75**	180 **69**	242 **63**	335 **46**
15	56 **116**	118 **113**	180 **109**	245 **99**	331 **76**
20	55 **155**	117 **153**	178 **147**	242 **136**	331 **110**
25	52 **593**	111 **188**	177 **182**	238 **172**	325 **151**
34	43 **264**	105 **262**	169 **254**	231 **244**	326 **220**
Max.cont. 45	38 **350**	95 **348**	159 **346**	219 **331**	314 **301**
Max.int. 57	21 **441**	176 **439**	141 **431**	280 **417**	302 **384**

cont.
int.

Performance Data

HBME2 160 [157.2 cm³/rev.]

Pressure (MPa)

Flow (L/min)	3.5	7	10.5	14 (Max.cont.)	19 (Max.int.)
2	64 **10**	132 **8**	199 **2**		
5	68 **28**	138 **26**	208 **19**	281 **10**	
10	71 **62**	147 **60**	221 **56**	303 **53**	419 **38**
15	72 **93**	148 **91**	225 **87**	307 **79**	426 **61**
20	71 **126**	148 **123**	223 **118**	305 **110**	422 **95**
25	62 **157**	140 **155**	218 **152**	296 **141**	415 **129**
34	56 **214**	134 **211**	211 **206**	287 **197**	408 **181**
45 (Max.cont.)	47 **283**	127 **281**	205 **275**	281 **266**	391 **241**
57 (Max.int.)	36 **355**	97 **352**	182 **346**	260 **336**	370 **311**

HBME2 200 [193.6 cm³/rev.]

Pressure (MPa)

Flow (L/min)	3.5	7	10.5	14 (Max.cont.)	19 (Max.int.)
2	80 **9**	163 **7**	245 **3**		
5	88 **23**	178 **21**	266 **18**	352 **12**	
10	89 **49**	181 **48**	275 **43**	378 **39**	517 **27**
15	91 **76**	188 **73**	280 **68**	382 **63**	520 **44**
20	89 **101**	182 **98**	275 **95**	374 **86**	517 **69**
25	78 **127**	170 **125**	271 **121**	376 **113**	518 **101**
34	64 **173**	158 **171**	268 **165**	363 **156**	502 **143**
45 (Max.cont.)	51 **229**	157 **227**	252 **221**	351 **212**	494 **196**
57 (Max.int.)	36 **289**	138 **286**	231 **279**	330 **271**	469 **256**

HBME2 230 [226 cm³/rev.]

Pressure (MPa)

Flow (L/min)	3.5	7	10.5	12 (Max.cont.)	16.5 (Max.int.)
2	97 **7**	191 **4**	280 **2**		
5	101 **18**	199 **14**	301 **8**	348 **4**	
10	103 **43**	214 **42**	325 **40**	378 **36**	527 **29**
15	104 **65**	215 **63**	327 **59**	375 **52**	528 **47**
20	101 **86**	210 **84**	321 **81**	371 **75**	524 **66**
25	95 **108**	201 **106**	316 **102**	364 **94**	511 **87**
34	82 **147**	188 **145**	308 **141**	358 **135**	501 **128**
45	55 **197**	158 **195**	276 **191**	329 **186**	485 **176**
57 (Max.cont.)	19 **247**	130 **244**	256 **240**	301 **230**	451 **221**
75 (Max.int.)		65 **328**	183 **323**	250 **311**	401 **303**

Torque (N•m) 250
Speed (rpm) **311**

HBME2 250 [257 cm³/rev.]

Pressure (MPa)

Flow (L/min)	3.5	7	10.5	11 (Max.cont.)	15.5 (Max.int.)
2	112 **6**	207 **3**	309 **1**		
5	115 **18**	218 **14**	320 **8**	348 **4**	
10	113 **39**	235 **38**	358 **35**	379 **31**	543 **23**
15	113 **58**	234 **56**	357 **53**	381 **45**	542 **3**
20	111 **77**	233 **75**	356 **72**	376 **65**	541 **48**
25	109 **97**	228 **95**	354 **89**	371 **81**	532 **69**
34	91 **131**	213 **128**	346 **123**	364 **116**	521 **103**
45	89 **174**	211 **172**	345 **165**	361 **157**	518 **135**
57 (Max.cont.)	73 **216**	208 **213**	339 **205**	342 **197**	487 **184**
75 (Max.int.)		74 **287**	198 **284**	301 **278**	441 **267**

cont.
int.

Performance Data

HBME2 295[287.8 cm³/rev.]

Pressure (MPa)

Flow (L/min)	3.5	7	11	14.5 (Max.int.)
5	121 **15**	243 **14**	368 **10**	509 **5**
10	125 **33**	253 **31**	381 **27**	529 **20**
15	129 **51**	261 **50**	393 **47**	547 **41**
20	127 **68**	259 **67**	390 **63**	545 **55**
25	126 **86**	255 **84**	386 **80**	539 **69**
34	123 **116**	248 **114**	380 **110**	531 **98**
45	115 **154**	234 **153**	368 **148**	522 **136**
57 (Max.cont.)	108 **196**	227 **194**	359 **187**	514 **176**
75 (Max.int.)		211 **254**	349 **246**	506 **231**

Torque (N•m) 506
Speed (rpm) **231**

HBME2 315[314.5 cm³/rev.]

Pressure (MPa)

Flow (L/min)	3.5	7	11	13.5 (Max.int.)
5	136 **11**	281 **8**	427 **3**	
10	139 **30**	287 **29**	438 **26**	574 **20**
15	141 **47**	295 **46**	448 **43**	587 **40**
20	138 **62**	287 **61**	442 **58**	587 **53**
25	131 **78**	280 **75**	431 **71**	567 **66**
34	117 **106**	269 **104**	423 **98**	557 **91**
45	114 **141**	253 **138**	397 **132**	535 **125**
57 (Max.cont.)	86 **178**	219 **173**	383 **168**	505 **162**
75 (Max.int.)		108 **235**	287 **231**	416 **219**

HBME2 375[370 cm³/rev.]

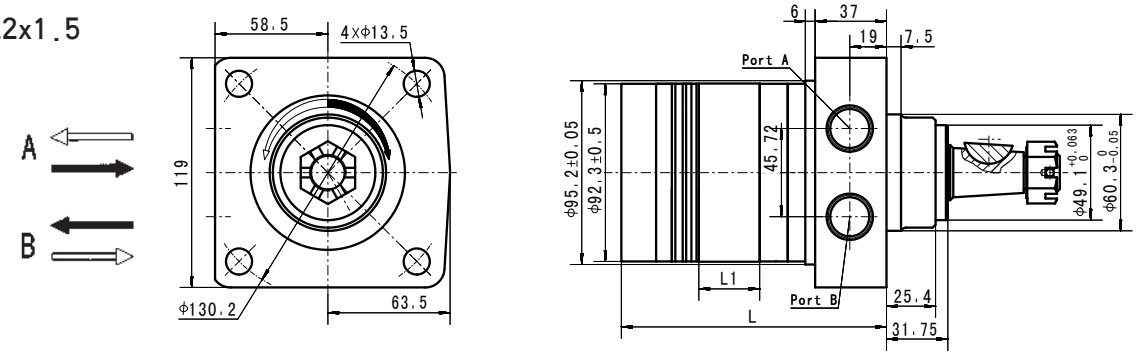
Pressure (MPa)

Flow (L/min)	3.5	7	9	12.5 (Max.int.)
5	151 **10**	315 **7**	412 **3**	
10	155 **25**	324 **24**	427 **21**	606 **18**
15	162 **40**	331 **39**	439 **37**	613 **32**
20	158 **53**	326 **52**	434 **49**	602 **45**
25	151 **67**	316 **65**	424 **62**	589 **58**
34	141 **91**	309 **89**	417 **85**	580 **80**
45	138 **121**	300 **119**	408 **115**	572 **107**
57 (Max.cont.)	118 **152**	281 **150**	393 **144**	550 **136**
75 (Max.int.)		258 **199**	369 **191**	518 **183**

cont.
int.

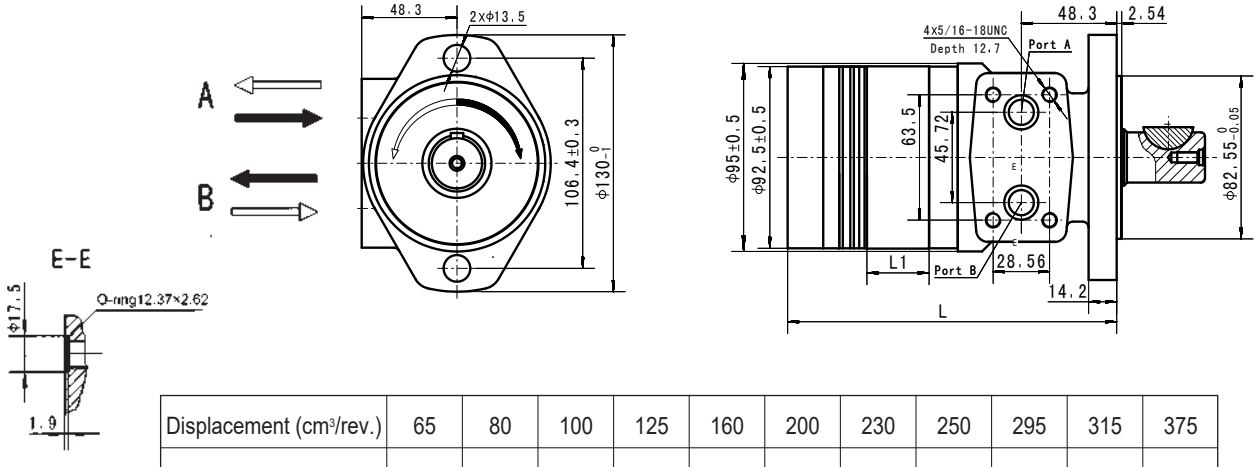
HBME2 DIMENSIONS AND MOUNTING DATA

Wheel Mount
Code： Port A、B
WS 7/8—14 O—ring
WD G1/2
WM M22x1.5



Displacement (cm³/rev.)	65	80	100	125	160	200	230	250	295	315	375
L1(mm)	13	16	20	25	30.5	38.1	44	50	56	62	74
L(mm)	119	122	126	131	136.5	144	150	156	162	168	180
Weight(kg)	7.4	7.5	7.8	8	8.3	8.7	9.2	9.6	10	10.3	10.8

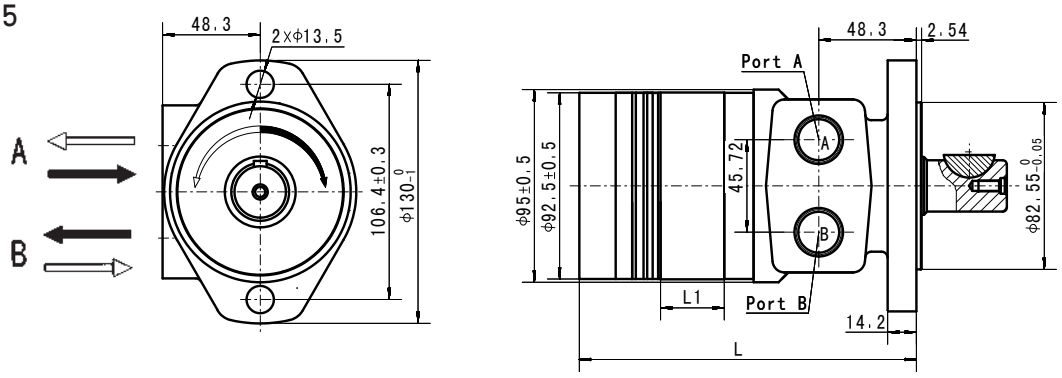
Code:HM Manifold
A、B Port Ø12.7



Displacement (cm³/rev.)	65	80	100	125	160	200	230	250	295	315	375
L1(mm)	13	16	20	25	30.5	38.1	44	50	56	62	74
L(mm)	149	152	156	161	166.5	174	180	186	192	198	210
Weight(kg)	6.4	6.5	6.8	7	7.3	7.7	8.2	8.6	9	9.3	9.8

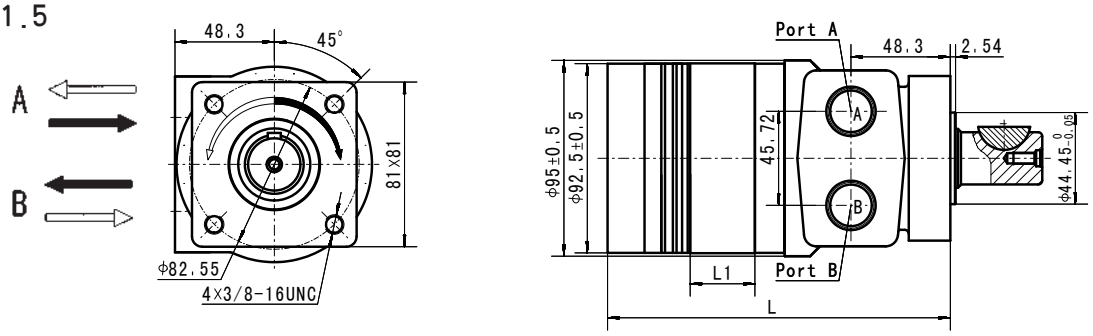
HBME2 DIMENSIONS AND MOUNTING DATA

Code： Port A、B
HS 7/8—14UNF
HP 1/2—14NPTF
HD G1/2
HG M22x1.5



Displacement (cm³/rev.)	65	80	100	125	160	200	230	250	295	315	375
L1(mm)	13	16	20	25	30.5	38.1	44	50	56	62	74
L(mm)	149	152	156	161	166.5	174	180	186	192	198	210
Weight(kg)	6.4	6.5	6.8	7	7.3	7.7	8.2	8.6	9	9.3	9.8

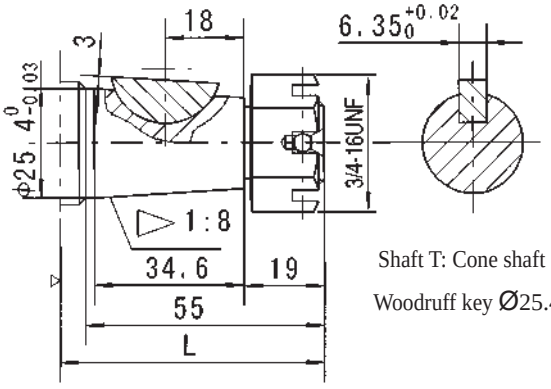
Code： Port A、B
H4S 7/8—14UNF
H4P 1/2—14NPTF
H4D G1/2
H4G M22x1.5



Displacement (cm³/rev.)	65	80	100	125	160	200	230	250	295	315	375
L1(mm)	13	16	20	25	30.5	38.1	44	50	56	62	74
L(mm)	149	152	156	161	166.5	174	180	186	192	198	210
Weight(kg)	6.4	6.5	6.8	7	7.3	7.7	8.2	8.6	9	9.3	9.8

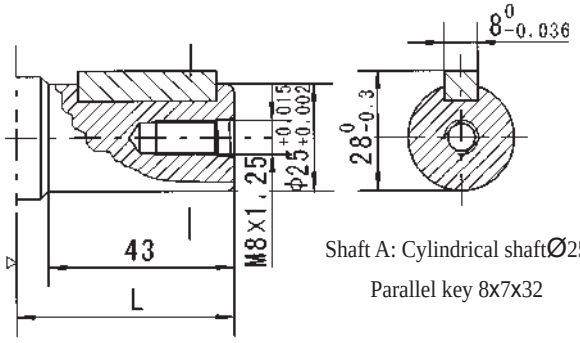
HBME2 SHAFT EXTENSIONS DIMENSIONS DATA

Shaft T



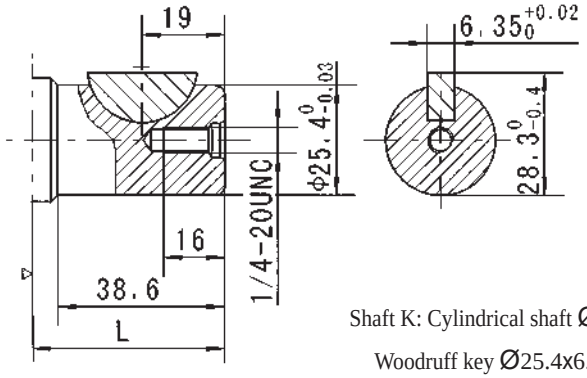
Shaft T: Cone shaft Ø25.4
Woodruff key Ø25.4x6.35

Shaft A



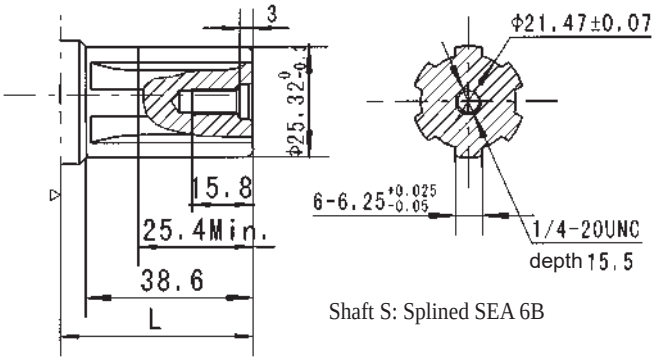
Shaft A: Cylindrical shaftØ25
Parallel key 8x7x32

Shaft K



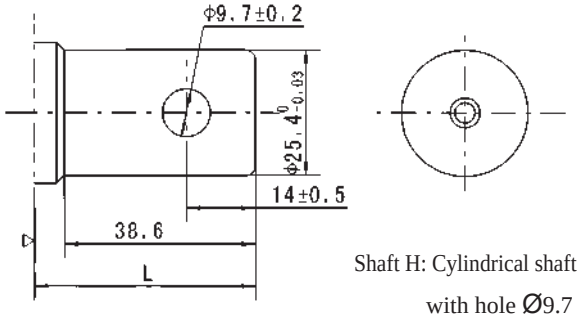
Shaft K: Cylindrical shaft Ø25.4
Woodruff key Ø25.4x6.35

Shaft S



Shaft S: Splined SEA 6B

Shaft H



Shaft H: Cylindrical shaft Ø25.4
with hole Ø9.7

Dimension L

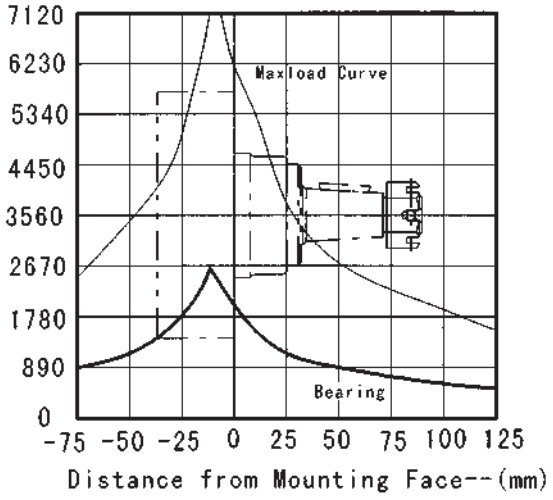
Mounting \ Shaft	T	A	K	S	H
WS	90.2	78.2	73.9	73.9	73.9
HS/HP	61	49	44.7	44.7	44.7
H4S/H4P					
HM					

▷ Motor Mounting Surface

Permissble Shaft Loads

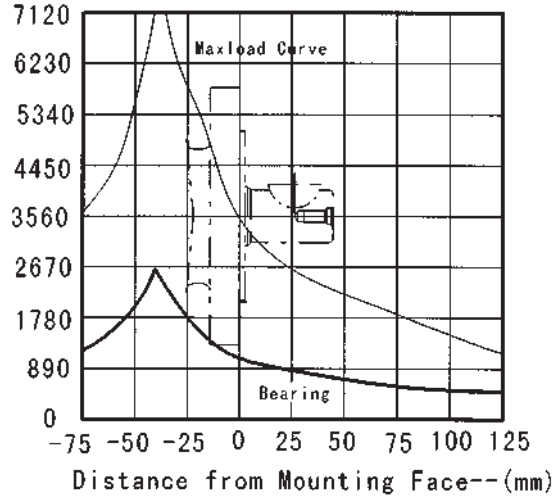
HBME2 for Wheel

Mounting Side Load-(daN)



HBME2 for Other

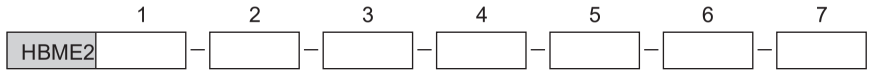
Mounting Side Load-(daN)



The bearing curve represents al lowable bearing loads for an L_{10} bearing life at $3x10^6$ revolutions,

The maximum load curve is defined by bearing static load capacity, This curve should not be exceeded at any time including shock loads.

Order Information



Pos.1	2	3		4		5		6		7	
Code	Disp.	Flange,Pilot,Ports		Output Shaft		Rotation Direction		Paint		Unusually Function	
Omit	65 80 100 125 160 200 230 250 295 315 375	WS	4-Ø13.5 Wheel - flange,Pilot Ø60.3×7 Port 7/8-14 O-ring	T	Cone-Shaft Ø25.4,Woodruff key Ø25.4×6.35	Omit	Standard	00	No paint	Omit	Standard
		WD	4-Ø13.5 Wheel -flange,Pilot Ø60.3×7 Port G1/2	A	Cylindrical Shaft Ø25, Parallel key 8×7×32			Omit	Blue		
		WM	4-Ø13.5 Wheel -flange,Pilot Ø60.3×7 Port M22*1.5	K	Cylindrical Shaft Ø25.4, Woodruff key Ø25.4×6.35			B	Black		
		HM	2-Ø13.5 Rhomb-flange,Pilot Ø82.5×2.54 Port 1/2” Manifold mount 4×5/8-18	S	Shaft Ø25.4, Splined key SAE 6B	R	Opposite	S	Silver grey		
		HS	2-Ø13.5 Rhomb-flange,Pilot Ø82.5×2.54 Port 7/8-14 O-ring	H	Cylindrical Shaft Ø25.4,Pin Hole Ø9.7						
		HP	2-Ø13.5 Rhomb-flange,Pilot Ø82.5×2.54 Port 1/2-14 NPFT Pipe								
		HD	2-Ø13.5 Rhomb-flange,Pilot Ø82.5×2.54 Port G1/2								
		HG	2-Ø13.5 Rhomb-flange,Pilot Ø82.5×2.54 Port M22x1.5								
		H4S	4-3/8-16 Square- flange,Pilot Ø44.4×2.54 Port 7/8-14 O-ring								
		H4P	4-3/8-16 Square- flange,Pilot Ø44.4×2.54 Port 1/2-14 NPFT Pipe								
		H4D	4-3/8-16 Square- flange,Pilot Ø44.4×2.54 Port G1/2								
		H4G	4-3/8-16 Square- flange,Pilot Ø44.4×2.54 Port M22x1.5								

Note:When the table is used, please fill the code of left rows in the table 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 contract us.

HBMJ SERIES HYDRAULIC MOTOR

HBMJ series motor adapt the advanced Geroler gear set designed with high speed distribution flow and high pressure, and have good stability in low speed , and can keep high volume efficiency. The unit can be supplied the individual variant in operating multifunction in accordance with requirement of applications.

Characteristic features:

* Advanced manufacturing devices for the Geroler gear set, which use low pressure of start-up, provide smooth and reliable operation and high efficiency.

* The output shaft adapts in needle roller bearings that permit high axial and radial forces. The case can offers capacities of high pressure and high torque in the wide of applications.

* Advanced design in high speed distribution flow, which can automatically compensate in operating with high volume efficiency and long life , provide smooth and reliable operation.

* Lowest leakage rate, most accurate timing methods.Commutator rotates 6x faster than shaft speed. It make the distribution in a high precision reduces life-cycle cost, maintain high volume efficiencies and can run very smoothly at low speed, gear box not required.

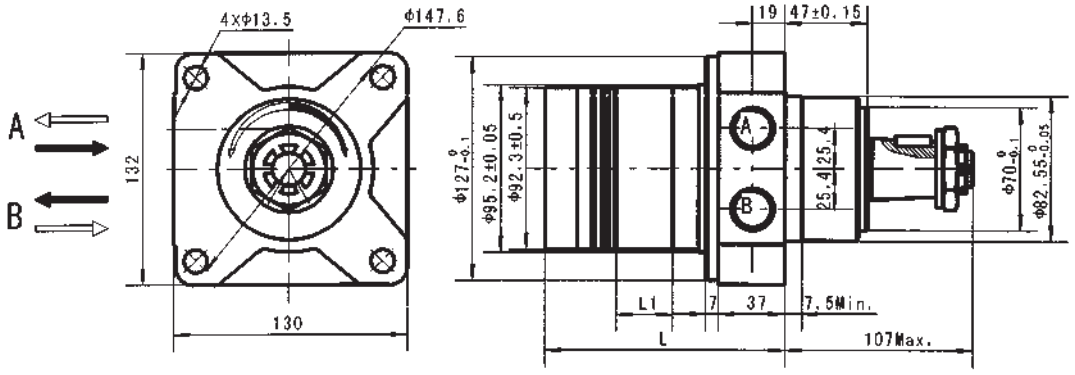
Main Specification

Type		HBMJ 65	HBMJ 80	HBMJ 100	HBMJ 125	HBMJ 160	HBMJ 200	HBMJ 230	HBMJ 250	HBMJ 295	HBMJ 315	HBMJ 375
Geometric displacement (cm^3/rev.)		66.8	81.3	101.6	127	157.2	193.6	226	257	287.8	314.5	370
Max. speed (rpm)	cont.	667	543	439	350	283	229	247	216	196	178	152
	int.	842	689	553	441	355	289	328	287	254	235	199
Max. torque (N•m)	cont.	126	157	191	245	307	382	378	381	393	448	439
	int.	176	215	268	335	422	520	528	543	547	587	613
Max. output (kW)	cont.	8.3	8.8	7.9	8.9	8.9	9	9.9	9.3	8.7	8	7.6
	int.	13.9	14.4	13.5	14.1	15.6	15.7	17.9	16.5	15.6	14.3	14
Max. pressure (MPa)	cont.	14	14	14	14	14	14	12	11	10	10	9
	int.	19	19	19	19	19	19	165	15.5	14.5	13.5	12.5
	peak	20	20	20	20	20	20	18	18	17	16	16
Max. flow (L/min)	cont.	45	45	45	45	45	45	57	57	57	57	57
	int.	57	57	57	57	57	57	75	75	75	75	75

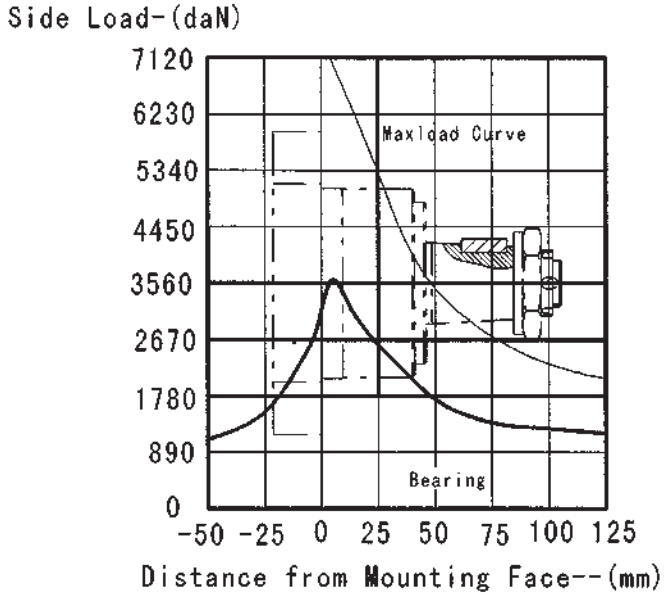
* Continuous pressure:Max. value of operating motor continuously.
* Intermittent pressure:Max. value of operating motor in 6 seconds per minute.
* Peak pressure:Max. value of operating motor in 0.6 second per minute.

HBMJ DIMENSIONS MOUNTING DATA

Wheel Mount
Code : WS Ports A、B 7/8—14 O—Ring
Code : WD Ports A、B G1/2
Code : WM Ports A、B M22x1.5



Displacement (cm³/rev.)	65	80	100	125	160	200	230	250	295	315	375
L1(mm)	13	16	20	25	30.5	38.1	44	50	56	62	74
L(mm)	115	118	122	127	132.5	140	146	152	158	164	176
Weight(kg)	9	9.1	10.4	10.6	10.9	11.3	11.8	12.2	12.6	12.9	13.4

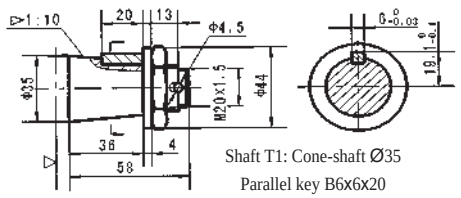


The bearing curve represents allowable bearing loads for an L_{10} bearing life at 3×10^6 revolutions.

The maximum load curve is defined by bearing static load capacity,This curve should not be exceeded at any time including shock loads.

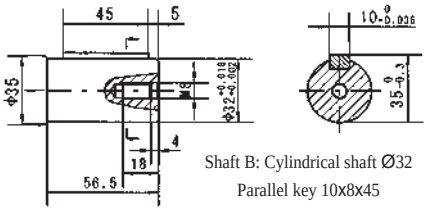
HBMJ Shaft Extensions For Dimensions Data

Shaft T1



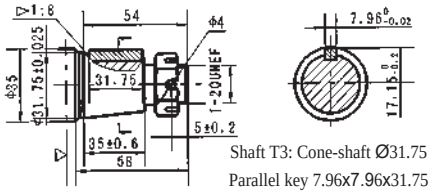
Shaft T1: Cone-shaft Ø35
Parallel key B6x6x20
Tightening torque:200±10Nm

Shaft B



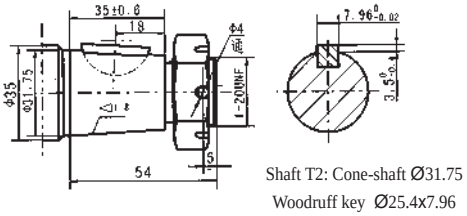
Shaft B: Cylindrical shaft Ø32
Parallel key 10x8x45

Shaft T3



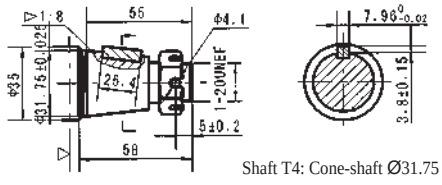
Shaft T3: Cone-shaft Ø31.75
Parallel key 7.96x7.96x31.75
Tightening torque:200±10Nm

Shaft T2



Shaft T2: Cone-shaft Ø31.75
Woodruff key Ø25.4x7.96

Shaft T4



Shaft T4: Cone-shaft Ø31.75
Parallel key 7.96x7.96x25.4
Tightening torque:200±10Nm

▷ Motor Mounting Surface

Order Information

HBMJ — 1 — 2 — 3 — 4 — 5 — 6 — 7

Pos.1	2	3		4		5	6	7
Code	Disp.	Flange , Pilot , Ports		Output Shaft		Rotation direction	Paint	Unusually function
Omit	65 80 100 125 160 200 230 250 295 315 375	WS	4-Ø13.5 Wheel-flange, Pilot Ø82.55×7, Port 7/8-14 O-ring	T1	Cone-Shaft Ø35,Parallel key B6×6×20	Omit R	00 Omit B S	Omit Standard
		WD	4-Ø13.5 Wheel-flange, Pilot Ø82.55×7, Port G1/2	T2	Cone-Shaft Ø31.75,Woodruff key ø25.4×7.96	Omit R	00 Omit B S	Omit Standard
				T3	Cone-Shaft Ø31.75,Parallel key 7.96×7.96×31.75	Omit R	00 Omit B S	Omit Standard
				T4	Cone-Shaft Ø31.75,Parallel key 7.96×7.96×25.4	Omit R	00 Omit B S	Omit Standard
		WM	4-Ø13.5 Wheel-flange, Pilot Ø82.55×7, Port M22x1.5	B	Cylindrical Shaft Ø32,Parallel key 10×8×45	Omit R	00 Omit B S	Omit Standard

Note:When the table is used, please fill the code of left rows in the table 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.

HBMER SERIES HYDRAULIC MOTOR

HBMER series motor adapt the advanced Geroler gear set designed with high speed distribution flow and high pressure, and have good stability in low speed , and can keep high volume efficiency. The unit can be supplied the individual variant in operating multifunction in accordance with requirement of applications.

Characteristic features:

* Advanced manufacturing devices for the Geroler gear set, which use low pressure of start-up, provide smooth and reliable operation and high efficiency.
* The output shaft adapts in needle roller bearings that permit high axial and radial forces. The case can offers capacities of high pressure and high torque in the wide of applications.
* Advanced design in high speed distribution flow, which can automatically compensate in operating with high volume efficiency and long life , provide smooth and reliable operation.
* Lowest leakage rate, most accurate timing methods.Commutator rotates 6x faster than shaft speed. It make the distribution in a high precision reduces life-cycle cost, maintain high volume efficiencies and can run very smoothly at low speed, gear box not required.

Main Specification

Type		HBMER 125	HBMER 160	HBMER 200	HBMER 230	HBMER 250	HBMER 300	HBMER 350	HBMER 375	HBMER 400	HBMER 475	HBMER 540	HBMER 650	HBMER 750
Geometric displacement (cm^3/rev.)		118	156	196	228	257	296	345	371	405	462	540	647	745
Max. speed (rpm)	cont.	360	375	330	290	290	250	220	200	185	160	140	115	100
	int.	490	470	425	365	350	315	270	240	220	195	170	138	120
Max. torque (N•m)	cont.	325	450	530	625	700	810	905	990	1010	1085	980	1015	1050
	int.	380	525	600	710	790	930	1035	1140	1180	1180	1240	1250	1180
	peak	450	590	750	870	980	1120	1285	1360	1360	1260	1380	1380	1370
Max. output (kW)	cont.	12.0	15.0	15.5	16.0	17.5	18.0	17.5	16.5	15.5	14.5	11.5	10.0	8.0
	int.	14.0	17.5	18.0	19.0	20.0	21.0	20.0	19.0	18.0	16.5	15.0	12.0	10.0
Max. pressure drop (MPa)	cont.	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	19	17.5	14	12	10.5
	int.	24	24	24	24	24	24	24	24	22.5	19	17.5	15.5	12
	peak	27.6	27.6	27.6	27.6	27.6	27.6	27.6	27.6	25	20.5	20.5	17.5	14
Max. flow (L/min)	cont.	45	60	70	70	75	80	80	75	75	75	75	75	75
	int.	60	75	85	85	90	95	95	90	90	90	90	90	90

*Continuous pressure:Max.value of operating motor continuously.

*Intermittent pressure:Max.value of operating motor in 6 seconds per minute .

*Peak pressure:Max.value of operating motor in 0.6 second per minute.

Performance Data

HBMER125 [118cm³/rev.]

Pressure (MPa)

Flow (L/min)	1.75	3.5	7	10.5	14	17.5	20.5 (Max.cont.)	24 (Max.int.)
2	20 **14**	50 **13**	96 **11**	137 **7**				
4	24 **28**	53 **26**	110 **24**	166 **19**	221 **13**			
8		55 **60**	113 **54**	174 **50**	225 **45**	266 **39**	294 **35**	336 **26**
15		53 **115**	114 **110**	180 **100**	234 **96**	275 **90**	326 **84**	348 **76**
25		48 **194**	110 **185**	164 **173**	226 **168**	272 **160**	323 **155**	352 **149**
34			108 **276**	166 **260**	220 **244**	278 **232**	315 **225**	373 **217**
45			98 **362**	160 **350**	215 **342**	271 **325**	308 **322**	369 **303**
53 (Max.cont.)			90 **423**	152 **418**	208 **404**	265 **399**	304 **371**	
60 (Max.int.)			82 **488**	141 **472**	205 **455**	260 **442**	300 **421**	

HBMER160 [156cm³/rev.]

Pressure (MPa)

Flow (L/min)	1.75	3.5	7	10.5	14	17.5	20.5 (Max.cont.)	24 (Max.int.)
2	35 **8**	74 **4**	146 **3**	218 **3**	298 **2**			
4	29 **22**	78 **19**	157 **18**	235 **16**	316 **14**	370 **13**	424 **8**	
8	35 **47**	78 **44**	158 **42**	236 **40**	312 **37**	373 **34**	450 **32**	526 **27**
15	37 **93**	74 **90**	155 **86**	234 **84**	310 **82**	368 **79**	440 **75**	517 **69**
25		68 **155**	152 **151**	227 **147**	308 **142**	364 **137**	436 **131**	499 **124**
34		68 **214**	152 **213**	227 **210**	308 **204**	364 **198**	436 **191**	499 **184**
45		64 **282**	143 **280**	218 **275**	296 **268**	360 **263**	425 **256**	481 **245**
53			135 **330**	216 **327**	293 **322**	357 **315**	421 **306**	476 **296**
60 (Max.cont.)			122 **379**	207 **376**	284 **368**	350 **362**	416 **356**	467 **345**
68			109 **423**	196 **419**	273 **414**	345 **406**	396 **394**	
75 (Max.int.)			104 **472**	188 **466**	270 **460**	337 **450**	390 **436**	

HBMER200 [196cm³/rev.]

Pressure (MPa)

Flow (L/min)	1.75	3.5	7	10.5	14	17.5	20.5 (Max.cont.)	24 (Max.int.)
2	39 **8**	88 **4**	132 **4**	286 **3**	370 **2**			
4	42 **16**	85 **14**	188 **13**	270 **11**	361 **10**	427 **9**	506 **6**	
8	43 **35**	90 **32**	192 **29**	291 **28**	367 **27**	450 **25**	529 **23**	600 **19**
15	38 **74**	92 **71**	196 **68**	298 **64**	381 **60**	462 **58**	530 **55**	602 **50**
25		82 **124**	188 **121**	283 **117**	377 **113**	456 **108**	528 **103**	605 **92**
34		79 **170**	183 **169**	270 **167**	362 **160**	447 **154**	515 **146**	591 **135**
45			163 **223**	259 **218**	352 **212**	441 **208**	510 **199**	593 **189**
53			149 **260**	256 **258**	350 **254**	440 **248**	501 **241**	582 **230**
60			132 **299**	248 **292**	336 **284**	432 **276**	497 **272**	575 **263**
68 (Max.cont.)			120 **336**	230 **332**	330 **327**	412 **319**	486 **310**	570 **301**
75			108 **375**	208 **372**	311 **365**	403 **358**	480 **350**	
85 (Max.int.)				184 **425**	280 **420**	380 **411**	462 **390**	

Torque (N•m) 380
Speed (rpm) **411**

HBMER230 [228cm³/rev.]

Pressure (MPa)

Flow (L/min)	1.75	3.5	7	10.5	14	17.5	20.5 (Max.cont.)	24 (Max.int.)
2	44 **6**	90 **4**	182 **3**	291 **2**	374 **1**			
4	48 **15**	100 **13**	216 **11**	310 **11**	405 **9**	484 **7**	549 **3**	
8	50 **31**	104 **29**	212 **27**	320 **25**	421 **23**	518 **20**	603 **16**	700 **10**
15	44 **63**	106 **61**	207 **58**	318 **55**	426 **52**	529 **47**	623 **41**	712 **34**
25		101 **103**	209 **100**	324 **96**	428 **92**	532 **87**	620 **81**	705 **71**
34		88 **145**	205 **143**	316 **139**	421 **133**	522 **126**	623 **120**	702 **109**
45			186 **192**	294 **187**	422 **182**	507 **176**	595 **170**	688 **160**
53			175 **226**	290 **221**	393 **215**	496 **208**	584 **203**	678 **194**
60			152 **256**	270 **253**	390 **248**	485 **242**	569 **235**	661 **222**
68 (Max.cont.)			140 **292**	265 **288**	351 **283**	482 **278**	563 **273**	642 **256**
75			124 **324**	235 **321**	344 **316**	448 **308**	552 **300**	
85 (Max.int.)				207 **366**	335 **360**	442 **351**	546 **338**	

cont.
int.

HBMER250 [257cm³/rev.]

Pressure (MPa)

Flow (L/min)	1.75	3.5	7	10.5	14	17.5	20.5 (Max.cont.)	24 (Max.int.)
2	48	111						
	5	**2**						
4	54	113	237	362	471	570	642	
	12	**11**	**10**	**9**	**8**	**6**	**3**	
8	54	115	244	366	482	587	688	
	27	**26**	**24**	**22**	**20**	**18**	**14**	
15	50	113	256	367	485	591	692	794
	57	**56**	**54**	**51**	**48**	**45**	**43**	**37**
25	44	114	241	360	488	593	699	782
	95	**93**	**90**	**86**	**82**	**77**	**72**	**63**
34		95	226	348	481	590	686	774
		129	**125**	**121**	**116**	**111**	**106**	**96**
45		77	215	346	468	572	674	779
		174	**173**	**170**	**166**	**161**	**155**	**143**
53		66	200	325	448	564	657	756
		203	**202**	**200**	**196**	**190**	**184**	**175**
60			180	296	438	550	642	741
			232	**229**	**225**	**220**	**215**	**202**
68			162	294	415	548	637	730
			262	**261**	**257**	**250**	**241**	**228**
75 (Max.cont.)			137	274	388	520	618	726
			290	**289**	**285**	**280**	**273**	**260**
85			130	261	370	509	604	
			328	**326**	**322**	**316**	**307**	
90 (Max.int.)			85	224	358	490		
			348	**347**	**344**	**336**		

HBMER300 [296cm³/rev.]

Pressure (MPa)

Flow (L/min)	1.75	3.5	7	10.5	14	17.5	20.5 (Max.cont.)	24 (Max.int.)
2	50	93						
	3	**1**						
4	62	141	294	429	502	618		
	11	**10**	**9**	**8**	**7**	**4**		
8	63	147	298	432	565	667	761	819
	22	**21**	**20**	**19**	**16**	**13**	**9**	**5**
15	66	144	305	427	568	671	810	894
	48	**47**	**45**	**43**	**39**	**33**	**28**	**20**
25	59	138	289	420	552	676	791	932
	82	**81**	**80**	**76**	**71**	**64**	**56**	**44**
34	48	130	297	393	562	689	805	926
	113	**112**	**110**	**107**	**102**	**96**	**86**	**73**
45		96	268	385	527	636	753	880
		150	**149**	**148**	**143**	**135**	**124**	**112**
53		76	242	383	524	631	758	900
		177	**176**	**175**	**173**	**165**	**152**	**138**
60		64	225	362	506	627	753	892
		200	**199**	**198**	**193**	**186**	**174**	**162**
68			200	333	470	630	750	882
			225	**224**	**222**	**212**	**201**	**194**
75 (Max.cont.)			178	322	464	610	741	870
			251	**250**	**247**	**240**	**232**	**215**
85			140	316	455	570	728	
			285	**284**	**278**	**270**	**257**	
95 (Max.int.)			106	260	431	552	700	
			316	**314**	**311**	**307**	**292**	

HBMER350 [345cm³/rev.]

Pressure (MPa)

Flow (L/min)	1.75	3.5	7	10.5	14	17.5	20.5 (Max.cont.)	24 (Max.int.)
2	63	133						
	4	**4**						
4	64	135	290	440				
	10	**9**	**8**	**7**				
8	68	146	310	458	589	735	847	
	21	**20**	**20**	**19**	**18**	**16**	**12**	
15	72	150	314	468	627	769	880	984
	42	**41**	**40**	**39**	**37**	**35**	**32**	**26**
25	63	148	313	470	628	765	892	1018
	70	**69**	**68**	**66**	**63**	**60**	**55**	**46**
34	52	133	304	455	619	760	905	1034
	97	**96**	**95**	**93**	**89**	**85**	**78**	**68**
45		100	261	442	583	736	887	1028
		129	**128**	**127**	**125**	**118**	**112**	**101**
53		85	247	418	566	715	880	1024
		152	**150**	**148**	**145**	**139**	**132**	**118**
60		65	233	410	550	712	842	996
		171	**170**	**169**	**167**	**162**	**155**	**143**
68			218	387	543	696	825	976
			195	**194**	**190**	**185**	**175**	**162**
75 (Max.cont.)			206	373	515	680	822	966
			215	**214**	**212**	**206**	**197**	**183**
85			176	355	510	679	808	
			243	**242**	**239**	**234**	**227**	
95 (Max.int.)				353	509	645		
				272	**269**	**265**		

Torque (N•m) 645
Speed (rpm) **265**

HBMER375 [371cm³/rev.]

Pressure (MPa)

Flow (L/min)	1.75	3.5	7	10.5	14	17.5	20.5 (Max.cont.)	24 (Max.int.)
2	75							
	3							
4	83	160	330	488	636	761		
	8	**8**	**7**	**6**	**5**	**3**		
8	81	170	356	527	679	822	948	1060
	18	**17**	**17**	**16**	**14**	**12**	**9**	**5**
15	76	162	356	533	683	845	978	1102
	39	**38**	**37**	**35**	**32**	**29**	**25**	**18**
25	68	156	350	524	680	857	994	1138
	65	**64**	**62**	**59**	**55**	**48**	**44**	**35**
34	58	148	339	506	690	841	993	1145
	90	**89**	**87**	**83**	**77**	**71**	**63**	**53**
45		121	302	478	650	813	972	1134
		120	**119**	**117**	**113**	**108**	**100**	**90**
53		95	282	466	628	785	934	1103
		141	**140**	**138**	**134**	**128**	**120**	**105**
60		75	264	428	592	766	925	1070
		161	**161**	**160**	**158**	**155**	**151**	**141**
68			232	422	585	756	901	1066
			182	**180**	**176**	**169**	**161**	**148**
75 (Max.cont.)			207	380	556	738	865	1012
			201	**200**	**197**	**190**	**181**	**165**
85			175	370	526	700	832	
			228	**226**	**221**	**216**	**206**	
90 (Max.int.)			148	316	500	654		
			242	**240**	**237**	**226**		

cont.
int.

HBMER400 [405cm³/rev.]

Pressure (MPa)

Flow (L/min)	1.75	3.5	7	10.5	14	17.5 Max.cont.	19	22.5 Peak
2	85 **3**	170 **2**						
4	90 **8**	182 **7**	368 **6**	540 **5**	715 **4**	885 **3**		
8	93 **17**	190 **16**	385 **15**	575 **14.4**	750 **13**	895 **10**	950 **9**	1155 **7**
15	88 **36**	180 **35**	380 **34**	575 **33**	750 **31**	905 **28**	980 **24**	1165 **20**
25	88 **60**	180 **59**	380 **58**	575 **56**	750 **53**	915 **49**	1010 **44**	1165 **40**
34	75 **83**	165 **83**	365 **82**	560 **81**	750 **77**	915 **72**	1000 **68**	1180 **60**
45		150 **110**	350 **110**	545 **109**	735 **106**	900 **102**	980 **94**	1165 **86**
53		125 **130**	330 **129**	525 **128**	720 **125**	885 **120**	960 **112**	1150 **100**
60		100 **147**	305 **147**	505 **146**	680 **145**	860 **142**	940 **138**	1125 **130**
68			275 **167**	480 **167**	660 **164**	845 **158**	925 **150**	1100 **140**
Max. cont. 75			250 **184**	455 **183**	635 **180**	820 **176**	900 **170**	1065 **158**
85			225 **209**	415 **208**	600 **206**	785 **202**	865 **194**	
Max.int. 90			160 **220**	365 **218**	575 **216**	770 **210**		

HBMER475 [462cm³/rev.]

Pressure (MPa)

Flow (L/min)	1.75	3.5	7	10.5	14	17.5 Max.cont.	20.5 Peak
2	93 **2**	186 **1**					
4	98 **7**	202 **6**	405 **5**	608 **5**	805 **4**		
8	98 **15**	206 **14**	430 **13**	652 **13**	844 **12**	1005 **10**	1180 **8**
15	94 **31**	202 **30**	441 **28**	654 **28**	875 **26**	1056 **23**	1238 **20**
25	94 **52**	202 **51**	441 **48**	654 **45**	875 **43**	1056 **39**	1238 **35**
34	75 **72**	180 **71**	420 **68**	660 **65**	850 **61**	1085 **55**	1266 **44**
45		144 **96**	380 **95**	627 **93**	835 **90**	1062 **84**	1261 **73**
53		116 **113**	346 **112**	573 **111**	795 **107**	1008 **102**	1212 **90**
60		82 **128**	318 **128**	539 **127**	790 **124**	975 **119**	1186 **110**
68		58 **146**	272 **145**	520 **144**	740 **141**	955 **136**	1156 **125**
Max. cont. 75			230 **161**	480 **160**	702 **158**	920 **153**	1116 **140**
85			200 **182**	454 **180**	662 **177**	876 **168**	
Max.int. 90			150 **194**	378 **193**	615 **190**	840 **182**	

HBMER540 [540cm³/rev.]

Pressure (MPa)

Flow (L/min)	1.75	3.5	7	10.5	14 Max.cont.	17.5 Max.int.
2	105 **2**	198 **2**				
4	125 **6**	231 **5**	470 **5**	688 **4**	932 **4**	1136 **3**
8	134 **13**	238 **13**	496 **12**	749 **11**	966 **11**	1175 **8**
15	122 **27**	230 **26**	505 **26**	750 **25**	981 **24**	1218 **21**
25	100 **44**	225 **43**	500 **42**	774 **41**	986 **39**	1220 **35**
34	80 **62**	212 **61**	481 **60**	748 **58**	977 **54**	1243 **49**
45		173 **82**	437 **82**	714 **81**	936 **79**	1190 **75**
53		142 **97**	416 **97**	678 **96**	938 **94**	1170 **89**
60		106 **110**	380 **110**	664 **109**	896 **108**	1158 **106**
68		85 **125**	357 **124**	616 **124**	870 **123**	1108 **120**
Max. cont. 75			318 **138**	600 **137**	826 **135**	1100 **132**
85			292 **154**	538 **153**	780 **152**	
Max.int. 90			214 **169**	486 **168**	755 **168**	

Torque (N•m) 486
Speed (rpm) **168**

HBMER650 [647cm³/rev.]

Pressure (MPa)

Flow (L/min)	1.75	3.5	7	10.5 Max.cont.	12 Max.int.	15.5 Peak
2	119 **2**	230 **1**				
4	135 **5**	268 **5**	552 **4**	805 **4**	940 **3**	
8	145 **11**	285 **11**	574 **10**	825 **10**	955 **9**	1255 **7**
15	140 **22**	280 **22**	595 **21**	875 **21**	982 **20**	1276 **16**
25	130 **37**	275 **36**	590 **36**	886 **35**	1005 **34**	1302 **30**
34	115 **51**	260 **51**	580 **50**	890 **49**	1015 **47**	1310 **44**
45		235 **69**	555 **68**	870 **67**	995 **66**	1280 **63**
53		200 **80**	520 **80**	850 **79**	975 **78**	1250 **76**
60		170 **91**	490 **91**	825 **90**	935 **89**	1215 **88**
68		145 **104**	430 **103**	775 **102**	880 **101**	1185 **99**
Max.cont. 75			420 **114**	730 **113**	855 **112**	1130 **110**
83			380 **130**	660 **129**	795 **128**	
Max.int. 90			290 **138**	585 **137**	730 **136**	

HBMER750 [745cm³/rev.]

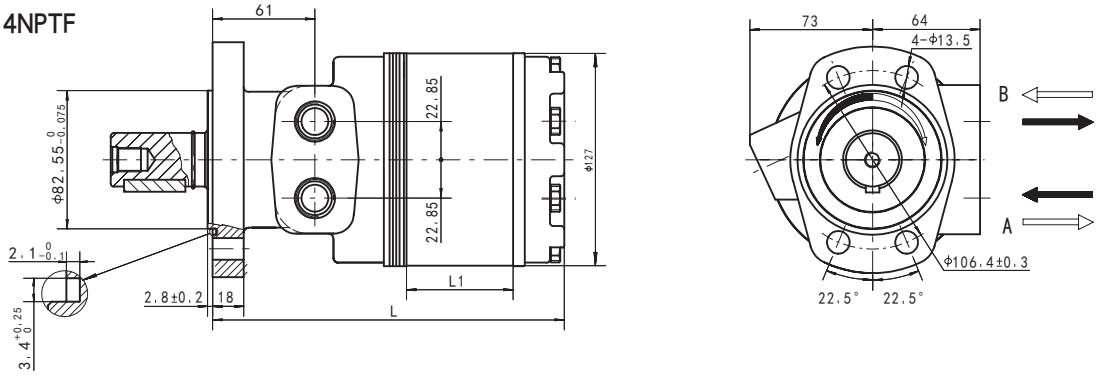
Pressure (MPa)

Flow (L/min)	1.75	3.5	7	10.5 Max.cont.	12 Max.int.	14 Peak
2	145 **2**	280 **1**				
4	160 **4**	321 **4**	654 **4**	960 **3**	1115 **3**	1312 **2**
8	162 **9**	335 **9**	688 **9**	1026 **8**	1159 **8**	1347 **7**
15	156 **19**	330 **19**	694 **18**	1047 **18**	1184 **17**	1376 **16**
25	142 **32**	320 **31**	688 **30**	1046 **30**	1179 **29**	1373 **27**
34	110 **44**	288 **44**	658 **42**	1021 **41**	1169 **40**	1366 **37**
45	71 **60**	242 **59**	620 **59**	982 **58**	1143 **58**	1345 **55**
53		202 **70**	568 **69**	941 **68**	1105 **67**	1308 **66**
60		140 **79**	527 **78**	898 **77**	1086 **76**	1286 **74**
68		100 **90**	486 **90**	852 **89**	1034 **88**	1251 **87**
Max.cont. 75		65 **99**	425 **99**	812 **98**	980 **97**	1178 **96**
83			395 **110**	745 **109**	906 **108**	
Max.int. 90			298 **120**	660 **119**	800 **117**	

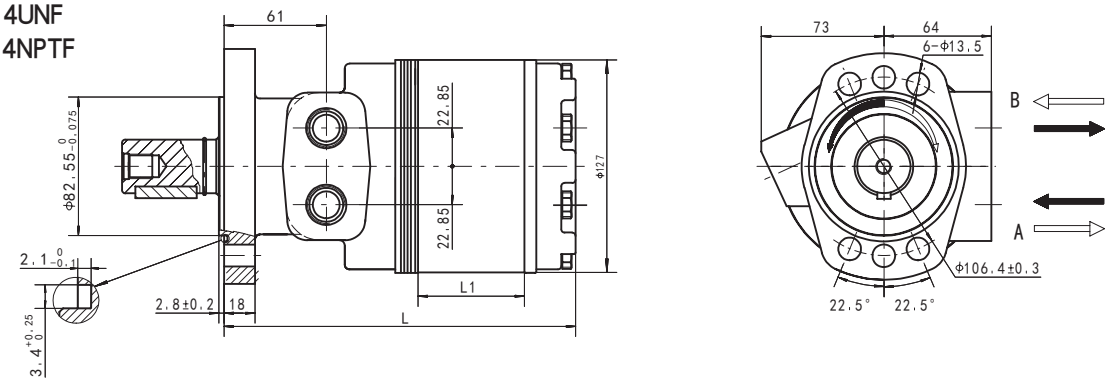
cont.
int.

HBMER-2 DIMENSIONS MOUNTING DATA

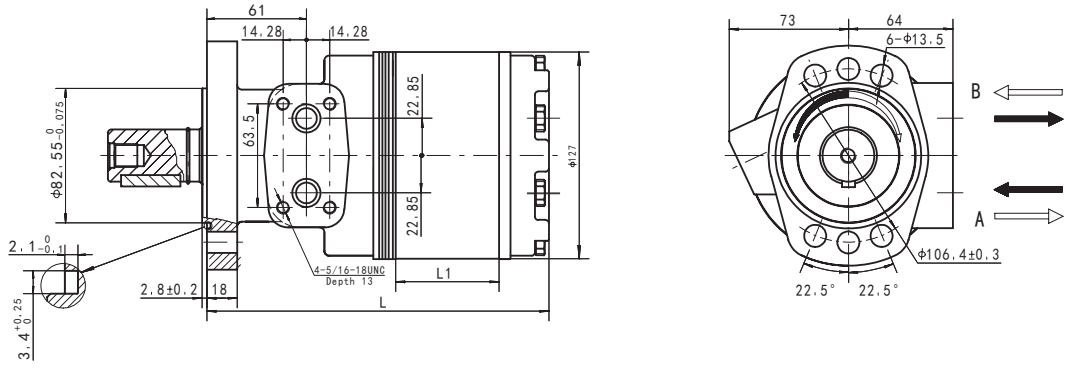
Magneto Mount 4—Hole
Code： Port A、B
MS 7/8—14UNF
MP 1/2—14NPTF
MD G1/2



Magneto Mount 6—Hole
Code： Port A、B
FS 7/8—14UNF
FP 1/2—14NPTF
FD G1/2



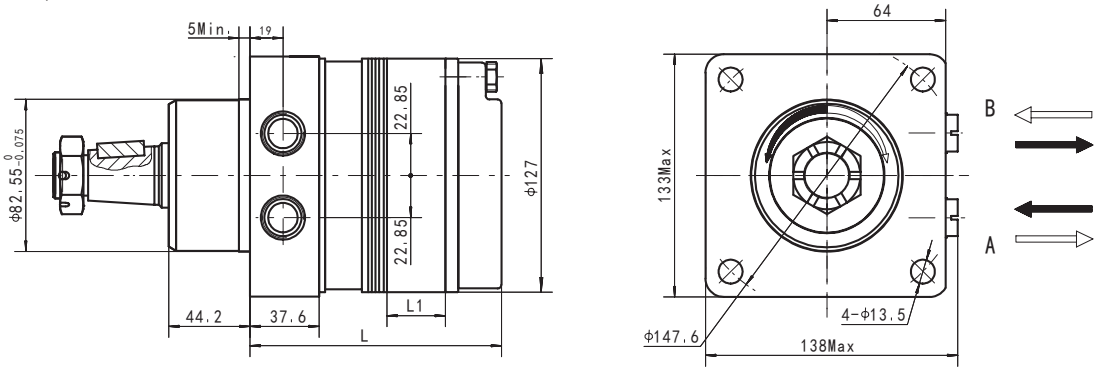
Magneto Mount 6—Hole
Code:Manifold Port A、B
FH Ø12.7



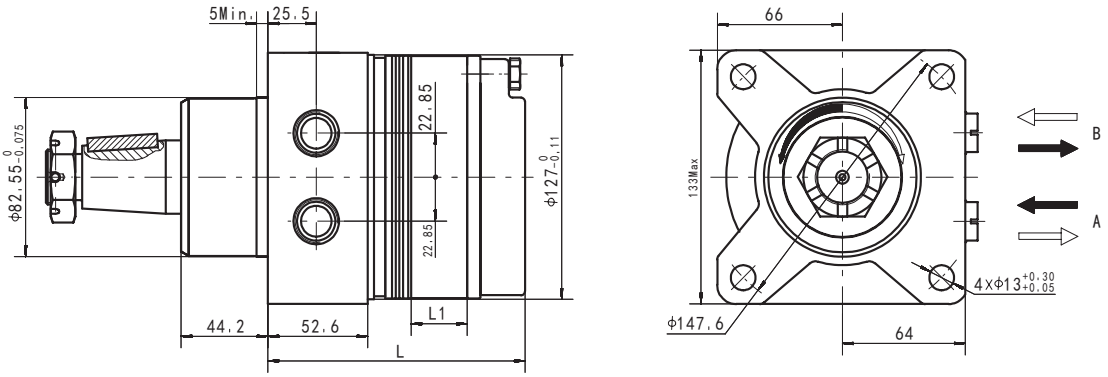
Displacement (cm³/rev.)	125	160	200	230	250	300	350	375	400	475	540	650	750
L1(mm)	10.2	13.5	17	19.5	22	25.4	29.5	31.8	35.5	39.4	47.3	57	63.5
L(mm)	157	160	163.5	166	168.5	172	176	178.5	182	186	194	204	210
Weight(kg)	10.6	10.9	11.2	11.3	11.4	11.6	12	12.5	12.7	13	13.5	14.5	15

HBMER-2 DIMENSIONS MOUNTING DATA

Wheel Mount
Code: Port A、B
WS 7/8—14UNF
WP 1/2—14NPTF
WD G1/2



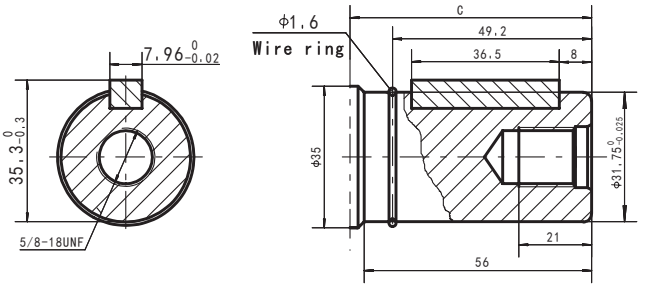
Wheel Mount
Code: Port A、B
TS 7/8—14UNF
TP 1/2—14NPTF
TD G1/2



Displacement (cm³/rev.)	125	160	200	230	250	300	350	375	400	475	540	650	750
L1(mm)	10.2	13.5	17	19.5	22	25.4	29.5	31.8	35.5	39.4	47.3	57	63.5
L(mm)	119	122	125.5	128	130.5	134.5	138	140.5	144	148	156	166	173
Weight(kg)	12	12.1	12.3	12.4	12.6	13	13.2	13.5	13.7	14	14.6	15.5	16

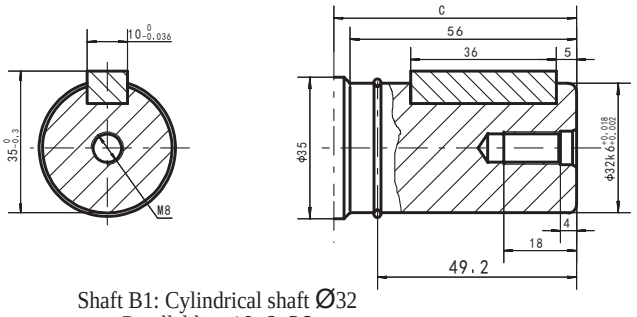
HBMER-2 SHAFT EXTENSIONS DIMENSIONS DATA

Shaft G2



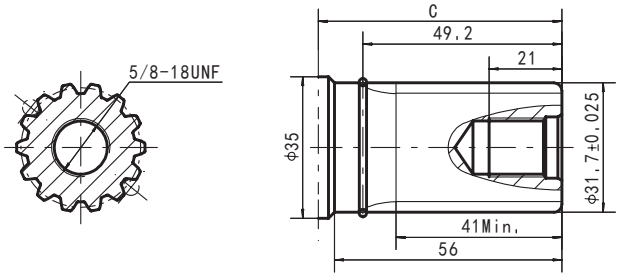
Shaft G2: Cylindrical shaft Ø31.75
Parallel key 7.96x7x36.5

Shaft B1



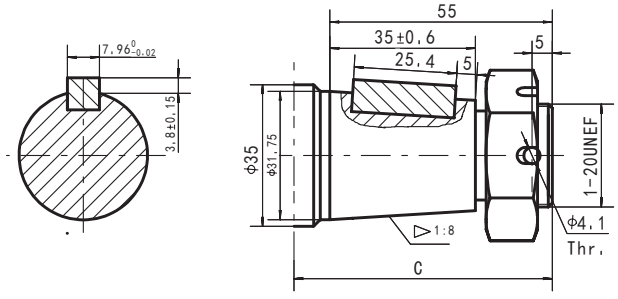
Shaft B1: Cylindrical shaft Ø32
Parallel key 10x8x36

Shaft FD1



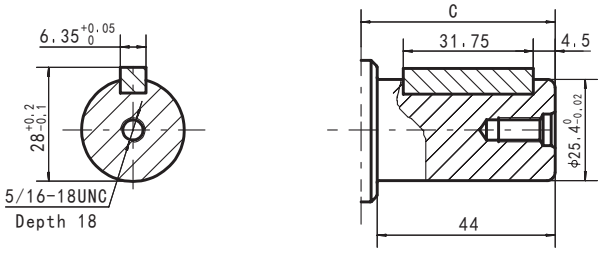
Shaft FD1: Splined 14-DP12/24
Flat root side fit
to fit ANSI B92.1 1996

Shaft T4



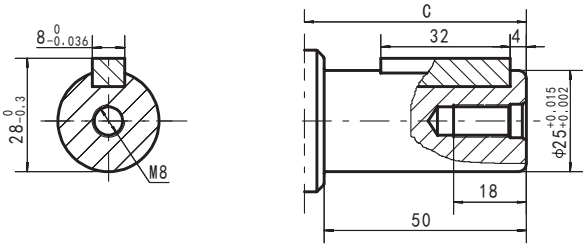
Shaft T4: Cone-shaft Ø31.75
Parallel key 7.96x7.96x25.4
Tightening torque:200±10Nm

Shaft RW



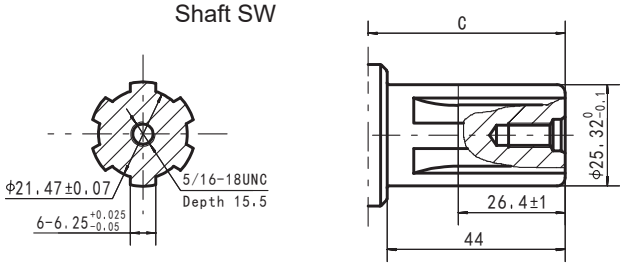
Shaft RW: Cylindrical shaft Ø25.4
Parallel key 6.35x6.35x31.75

Shaft AW



Shaft AW: Cylindrical shaft Ø25
Parallel key 8x7x32

Shaft SW



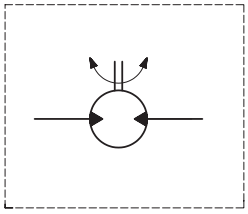
Shaft SW: Splined SAE 6B

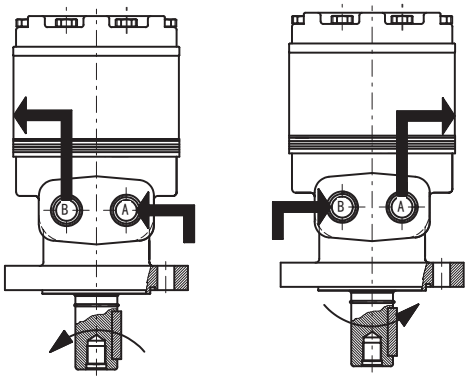
From Mounting Flange to Shaft End		
Dimension C		
Shaft Code	Magneto Mount (mm)	Wheel Mount (mm)
G2	61	103
B1	61	103
FD1	61	103
T4	65	107
RW	50	91
AW	56	97
SW	50	91

HBMER-2 can be conf gured Φ38.1 shaft seal. Shaft type T31 and M1 and G32. Please consuit the sales manager.

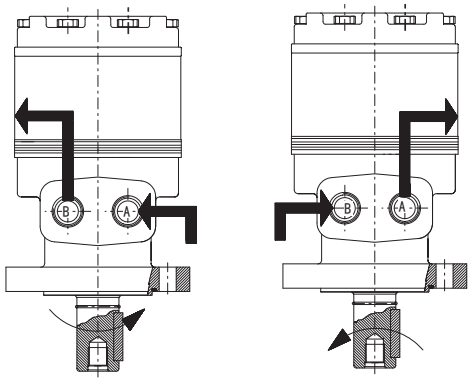
HBMER-2 Series Hydraulic Motor

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





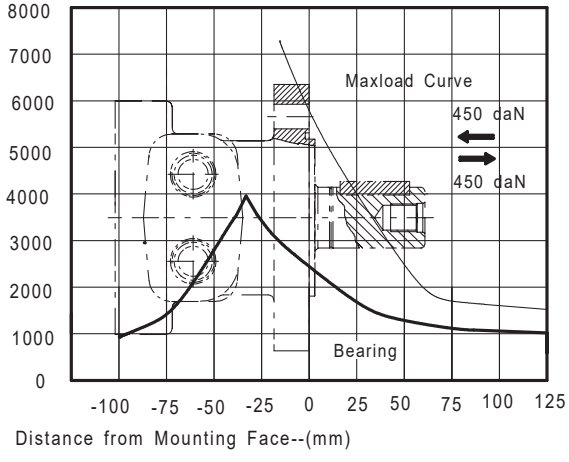
Direction of shaft rotation: Standard
When facing shaft end of motor,shaft to rotate:
Clockwise when port “A" is pressurized.
Counter-clockwise when port “B" is pressurized.



Axial and Radial forces

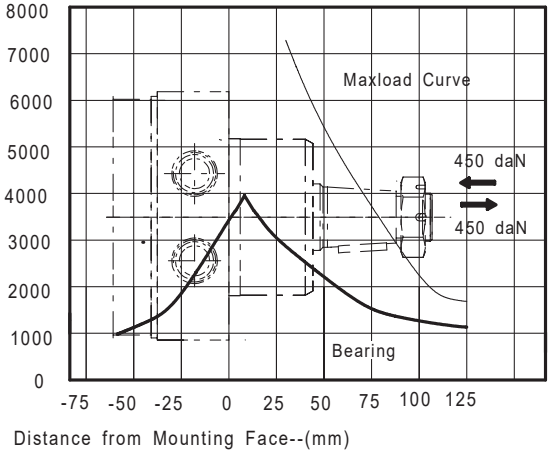
HBMER-2 or M#/F#

Mounting Side Load-(daN)



HBMER-2 for W# Mounting

Side Load-(daN)



The bearing curve represents allowable bearing loads for an L_{10} bearing life at $12x10^6$ revolutions.
The maximum load curve is defined by bearing static load capacity. This curve should not be exceeded at any time including shock loads.

Order Information

HBMER- 1 – 2 – 3 – 4 – 5 – 6 – 7

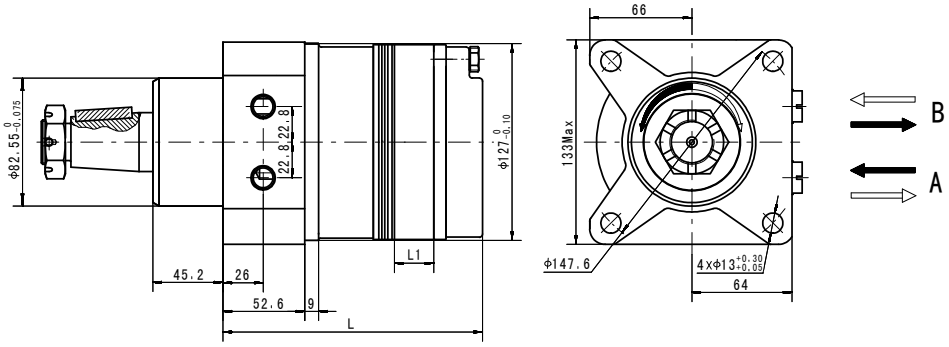
Pos.1	2	3		4		5		6		7	
Code	Disp.	Flange , Pilot , Ports		Output Shaft		Rotation direction		Paint		Unusually function	
2	125 160 200 230 250 300 350 375 400 475 540 650 750	MS MP MD FS FP FD FH WS WP WD TS TP TD	4-Ø13.5 Magneto Mount,Pilot Ø82.55×2.8, Ports 7/8-14 O-ring 4-Ø13.5 Magneto Mount,Pilot Ø82.55×2.8, Ports 1/2-14NPTF 4-Ø13.5 Magneto Mount,Pilot Ø82.55×2.8, Ports G1/2 6-Ø13.5 Magneto Mount,Pilot Ø82.55×2.8, Ports 7/8-14 O-ring 6-Ø13.5 Magneto Mount,Pilot Ø82.55×2.8, Ports 1/2-14NPTF 6-Ø13.5 Magneto Mount,Pilot Ø82.55×2.8, Ports G1/2 6-Ø13.5 Magneto Mount,Pilot Ø82.55×2.8, Manifold Ports 1/2 4-Ø13.5 Wheel Mount, Pilot Ø82.55×5, Ports 7/8-14 O-ring 4-Ø13.5 Wheel Mount, Pilot Ø82.55×5, Ports 1/2-14NPTF 4-Ø13.5 Wheel Mount, Pilot Ø82.55×5, Ports G1/2 4-Ø13.5 Wheel Mount,Pilot Ø82.55×5, Ports 7/8-14 O-ring 4-Ø13.5 Wheel Mount, Pilot Ø82.55×5, Ports 1/2-14NPTF 4-Ø13.5 Wheel Mount, Pilot Ø82.55×5, Ports G1/2	G2 B1 FD1 T4 RW AW SW	Shaft Ø31.75 , parllel key 7.96x7x36.5 ShaftØ32, Parallel key 10×8×45 Shaft Ø31.75, splined key 14-DP12/24 Cone-Shaft Ø31.75, Parallel key 7.96×7.96×25.4 Shaft Ø25.4 , parllel key 6.35×6.35×31.75 Shaft Ø25 , parllel key 8×7×32 Shaft Ø25.4 ,splined key SAE 6B	None R	Standard Reverse Timed	00 None B S	No paint Blue Black Sliver Grey	None	Standard
				M1 T31 G32	ShaftØ35, Parallel key 10×8×45 Cone-Shaft Ø38.1, Parallel key 7.96×7×36.5 Shaft Ø38.1 , parllel key 9.525×9.525×42						

Note: When the table is used, please fill the code of left rows in dash area 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.

HBMER-2 Motor：The dimensions 44.2 is replaced by 45.7 with shaft M1、T31、G32 of Ø38.1 shaft seal in flange w# and T#.

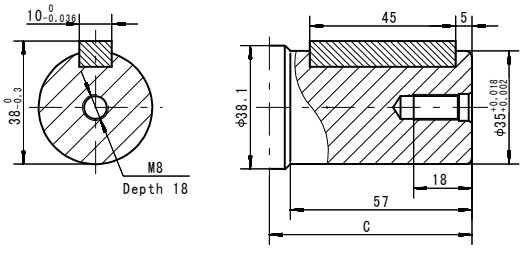
HBMER-3 SHAFT EXTENSIONS DIMENSIONS DATA

Wheel Code	Mount Port A、B
WS	7/8—14UNF
WP	1/2—14NPTF
WD	G1/2



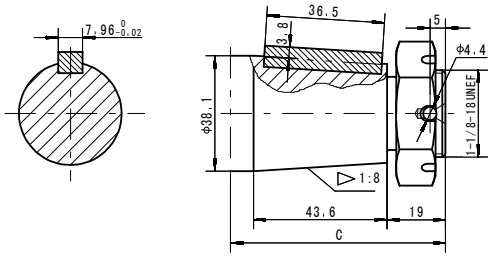
Displacement (cm³/rev.)	125	160	200	230	250	300	350	375	400	475	540	650	750
L1(mm)	10.2	13.5	17	19.5	22	25.4	29.5	31.8	35.5	39.4	47.3	57	63.5
L(mm)	153	156	159.5	162	164.5	168	172	174.5	178	182	190	199.5	206
Weight(kg)	13.2	13.5	13.8	14	14.2	14.5	14.9	15.2	15.5	15.7	16.5	17.3	17.8

Shaft M31



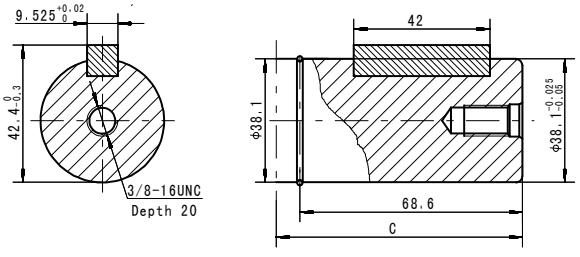
Shaft M31:Cylindrical shaft Ø35
Parallel key 10x8x45

Shaft T31



Shaft T31:Cone-shaft Ø38.1
Parallel key 7.96x7x36.5
Tightening torque:410~510Nm

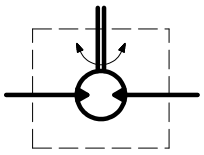
Shaft G31



Shaft G31:Cylindrical shaft Ø38.1
Parallel key 9.525x9.525x42

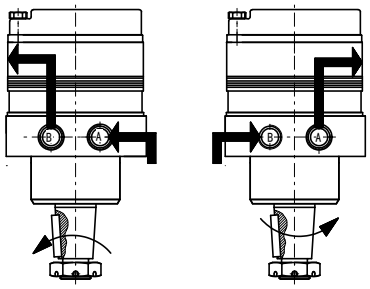
From Mounting Flange to Shaft End		
Dimension C		
Shaft Code	Magneto Mount (mm)	Wheel Mount (mm)
M31	_	105
T31	_	117
G31	_	119

HBMER-3 Series Hydraulic Motors



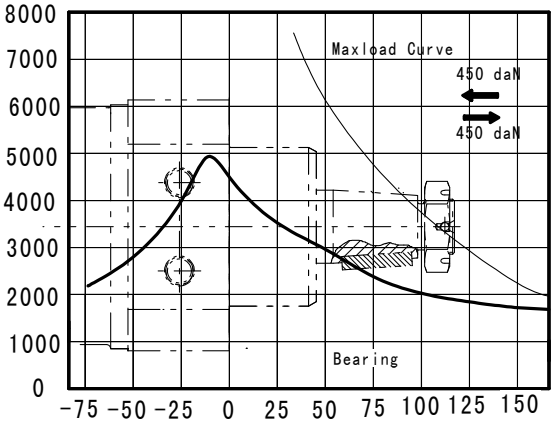
Direction of shaft rotation: Reverse timed

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



HBMER-3 for W# Mounting

Side Load-(daN)



The bearing curve represents allowable bearing loads for an L_{10} bearing life at $12X10^6$ revolutions.
The maximum load curve is defined by bearing static load capacity.
This curve should not be exceeded at any time including shock loads.

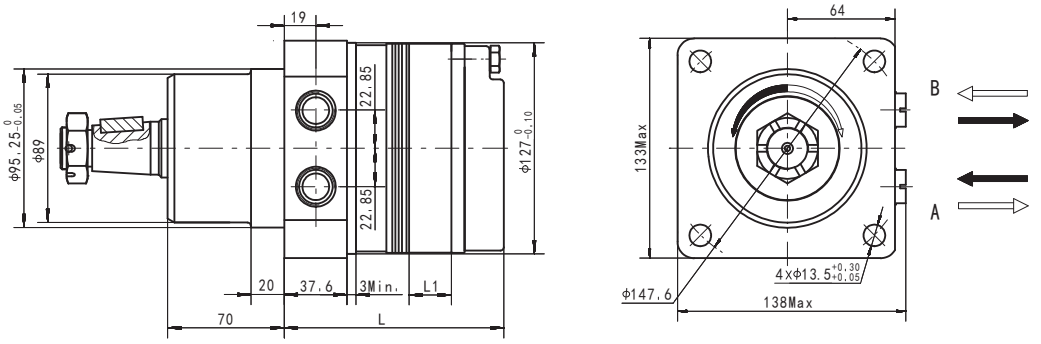
Order Information

	1	2	3		4		5		6		7	
Pos.1	F		Mount Flange, Pilot, Port		Output Shaft		Rotation direction		Paint		Unusually function	
Code		Disp.										
		125										
		160										
		200										
		230										
		250	WS	4-Ø13.5 Wheel Mount, Pilot Ø82.55, Ports 7/8-14 O-ring			None	Standard	00	No paint	None	Standard
		300			M31	Shaftø35, Parallel key 10×8×45						
3		350	WP	4-Ø13.5 Wheel Mount, Pilot Ø82.55, Ports 1/2-14NPTF	T31	Cone-Shaft Ø38.1, Parallel key 7.96×7×36.5	R	Reverse timed	None	Blue		
		375			G31	Shaft Ø38.1 , parllel key 9.525×9.525×42			B	Black		
		400	WD	4-Ø13.5 Wheel Mount, Pilot Ø82.55, Ports G1/2					S	Sliver Grey		
		475										
		540										
		650										
		750										

Note: When the table is used, please fill the code of left rows in dash area 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.

HBMER-4 DIMENSIONS MOUNTING DATA

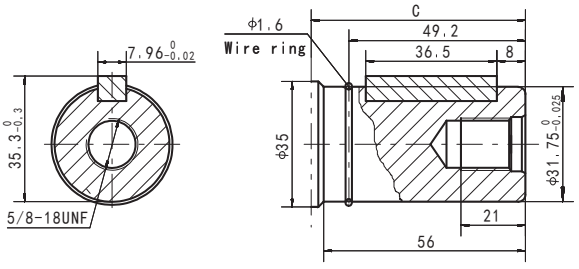
Wheel Mount
Code ： Port A、B
WS 7/8—14UNF
WP 1/2—14NPTF
WD G1/2



Displacement (cm³/rev.)	125	160	200	230	250	300	350	375	400	475	540	650	750
L1(mm)	10.2	13.5	17	19.5	22	25.4	29.5	31.8	35.5	39.4	47.3	57	63.5
L(mm)	119	122	125.5	128	130.5	134.5	138	140.5	144.5	148	156	165.5	172
Weight(kg)	12.8	13.1	13.4	13.6	13.8	14.1	14.5	14.8	15.2	15.6	16.1	16.9	17.4

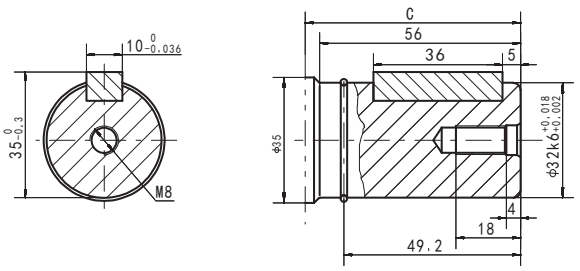
Shaft Extensions For HBMER-4 Motors

Shaft G2



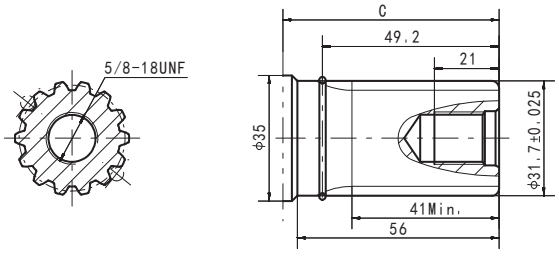
Shaft G2:Cylindrical shaft Ø31. 75
Parallel key 7x96x7x36x5

Shaft B1



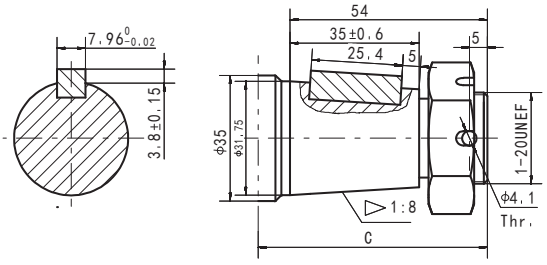
Shaft B1:Cylindrical shaft Ø32
Parallel key 10x8x36

Shaft FD1



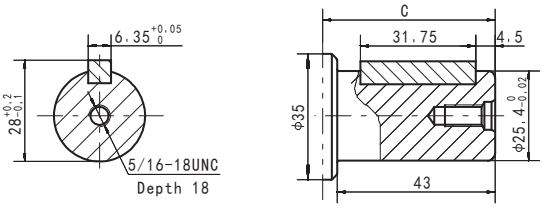
Shaft FD1:Splined 14-DP12/24
Flat root side fit
to fit ANSI B92.1 1996

Shaft T4



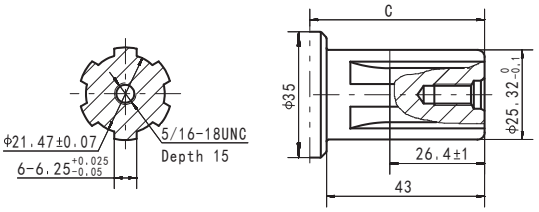
Shaft T4:Cone-shaft Ø31.75
Parallel key 7.96x7.96x25.4
Tightening torque:200±10Nm

Shaft RW



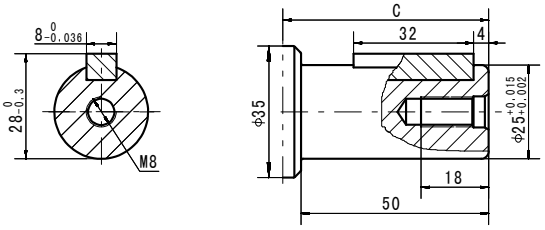
Shaft RW:Cylindrical shaft Ø25 4
Parallel key 6.35x6.35x31.75

Shaft SW



Shaft SW:Splined SAE 6B

Shaft AW

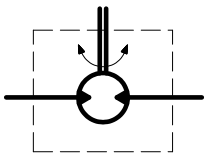


Shaft AW:Cylindrical shaft Ø25
Parallel key 8x7x32

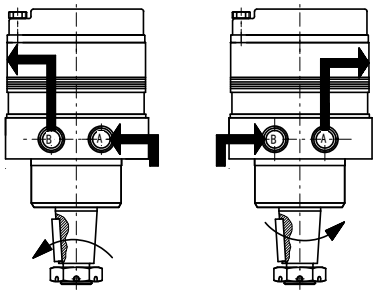
From Mounting Flange to Shaft End	
D i m e n s i o n C	
Shaft Code	Wheel Mount (mm)
G2	131
B1	130
FD1	131
T4	135
RW	119
SW	119
AW	125

HBMER-4 can be configured Shaft type of ø38.1 shaft seal. Please consuit the sales manager.

HBMER-4 Series Hydraulic Motors

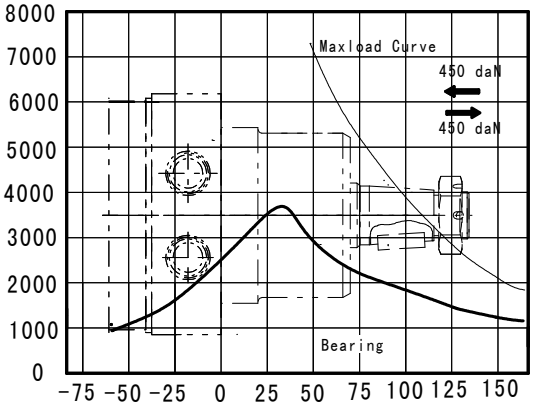


Direction of shaft rotation: Reverse timed
When facing shaft end of motor,shaft to rotate:
Clockwise when port " B " is pressurized.
Counter-clockwise when port " A " is pressurized.



HBMER-4 for W# Mounting

Side Load-(daN)



The bearing curve represents allowable bearing loads for an L_{10} bearing life at $12X10^6$ revolutions.
The maximum load curve is defined by bearing static load capacity.
This curve should not be exceeded at any time including shock loads.

Order Information

F | 1 | 2 | 3 | 4 | 5 | 6 | 7

Pos.1	2	3			4		5		6		7	
Code	Disp.	Mount Flange, Pilot, Port			Output Shaft		Rotation direction		Paint		Unusually function	
4	125	WS	4-ø13.5 Wheel Mount, Pilot ø82.55×5, Ports 7/8-14 O-ring	G2	Shaft ø31.75 , parllel key 7.96×7×36.5	None	Standard	00	No paint	None	Standard	
	160			B1	Shaftø32, Parallel key 10×8×45			None	Blue			
	200			FD1	Shaft ø31.75, splined key 14-DP12/24	R	Reverse timed	B	Black			
	230			T4	Cone-Shaft ø31.75, Parallel key 7.96×7.96×25.4			S	Sliver Grey			
	250	WP	4-ø13.5 Wheel Mount, Pilot ø82.55×5, Ports 1/2-14NPTF	RW	Shaft ø25.4 , parllel key 6.35×6.35×31.75							
	300			SW	Shaft ø25.4 ,splined key SAE 6B							
	350			AW	Shaft ø25 , parllel key 8×7×32							
	375	WD	4-ø13.5 Wheel Mount, Pilot ø82.55×5, Ports G1/2									
	400											
	475											
	540											
	650											
	750											

Note: When the table is used, please fill the code of left rows in dash area 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.

HBK10 Series Static Wet Hydraulic Brake

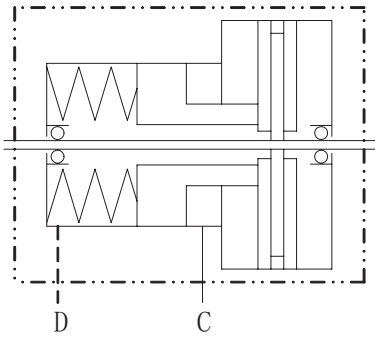
HBK10 series static wet hydraulic brake is suitable for lower speed application of scissors type aerial work platform and agricultural machinery and others with wheel mounting. The feature:

* The output shaft adopts the same heavy duty roller bearing in front and behind, which is bigger ability on radial load.
* It adopts optimized disc brake piece and spring load, for reliable braking and good endurance.
* Optimizing piston and loading mechanism, to provide the minimum dimension of wheel connection method.
* With double braking release port, in order to discharge the braking cylinder gas or external brake fluid.
* Big braking torque, suitable for static braking.

Main Specification

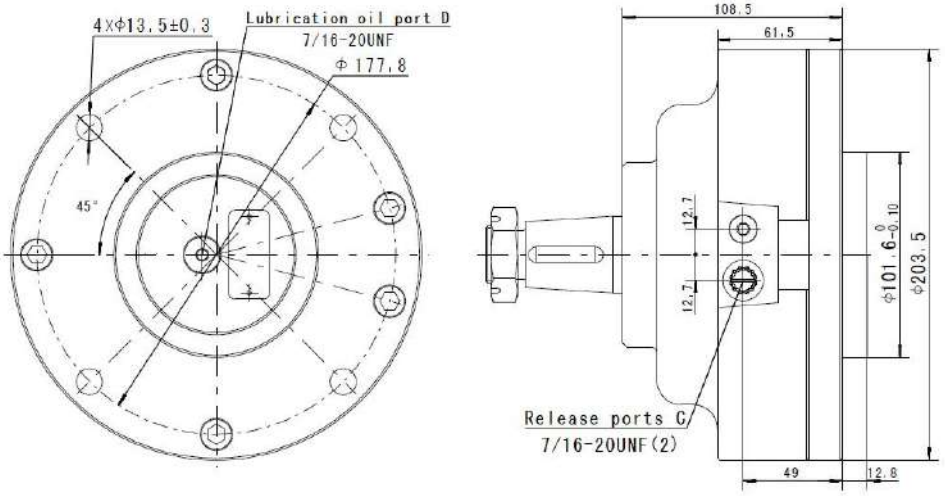
Item	HBK10-1	HBK10-2
Min. Static Torque [Nm]	1150	1700
Release Pressure [MPa]	2.8	
Max. Release Pressure [MPa]	21	
Max. Speed [rpm]	300	
Release Volume [cm^3]	12	
Oil Volume [cm^3]	140～160	
Max. Pressure of Lubrication oil port [MPa]	0.05	
Weight [kg]	17.6	19.5

Hydraulic systems



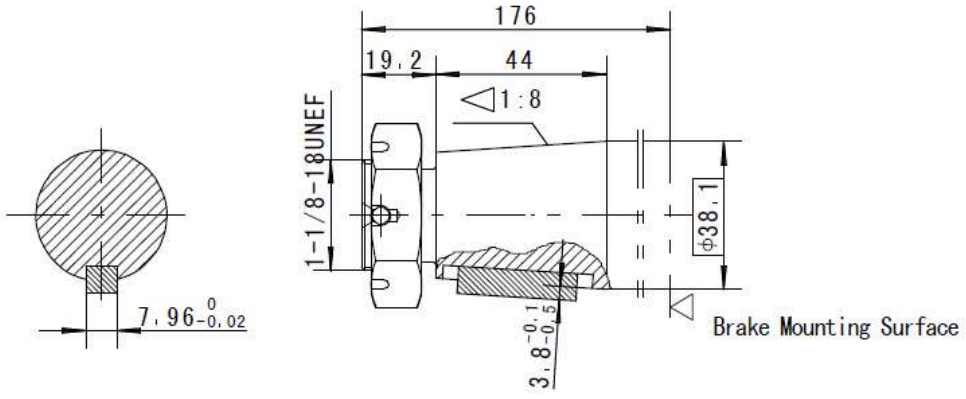
HBK10-1 DIMENSIONS AND MOUNTING DATA

S1 Flange and Pilot and Brake Pors



HBK10-1 DIMENSIONS OF SHAFT EXTENTSIONS

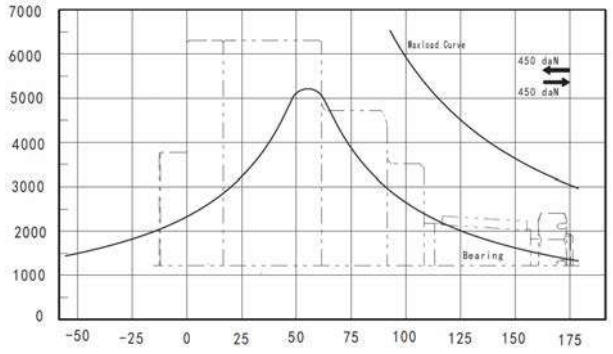
T31 Φ38.1 Cone—shaft 1:8



HBK10-1 Mounting Flange Radial Forces

BK10-1 Mounting Flange Radial Forces

Side Load（daN）



Distance from mounting face (mm)

The bearing curve represents allowable bearing loads for an L_{10} bearing life at $12x10^6$ revolutions.
The maximum load curve is defined by bearing static load capacity. This curve should not be exceeded at any time including shock loads.

Bearing load multiplication factor table									
RPM	**50**	**100**	**200**	**300**	**400**	**500**	**600**	**700**	**800**
FACTOR	**1.23**	**1**	**0.81**	**0.72**	**0.66**	**0.62**	**0.58**	**0.56**	**0.54**

Order Information

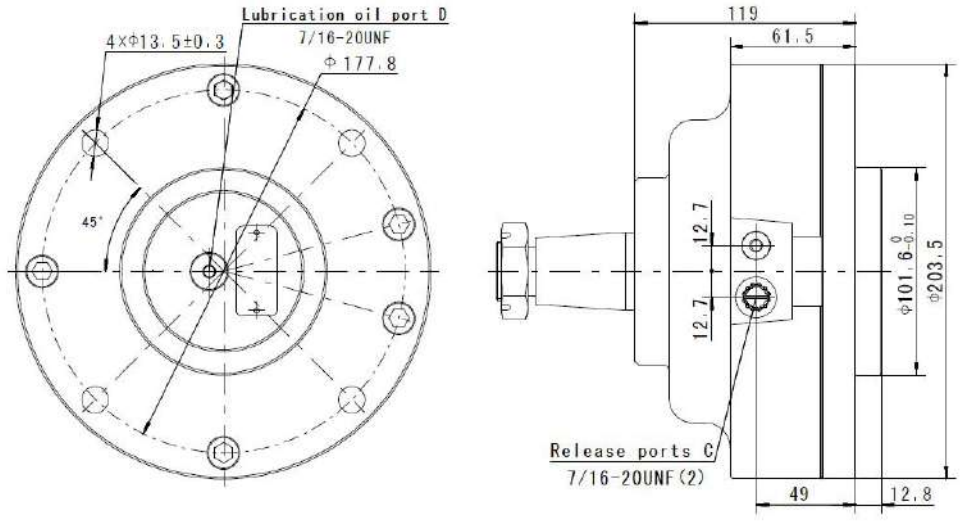
HBK10- 1 2 3 4 5 6 7 8

Pos.1	2	3		4		5		6		7		8	
Code	Brake Torque	Output shaft		Flange and Pilot and Brake Pors		Lubrication Port		Paint		Design Code		Nut Code	
1	1150	T31	Ø38.1 Cone-Shaft 1:8. Parallel key 7.96x6.5x28.8	S1	Round Flange 4x Ø13.5, Ø177.8, Pilot Ø101.6x12.8, Brake Pors 7/16-20UNF	Omit	7/16-20UNF	B	Black	Omit		Omit	N-Type thick Nut
								S	Sliver Grey grey	003			
								00	No paint Plaint (Black)				
								Omit					

Note: When the table is used, please fill the code of left rows in dash area and give us, which the code information is consists of construction, output shaft, Flange and Pilot and Brake Pors, Lubrication Port etc.. If the specification is not in the table or you have specific requirements, please contact us.

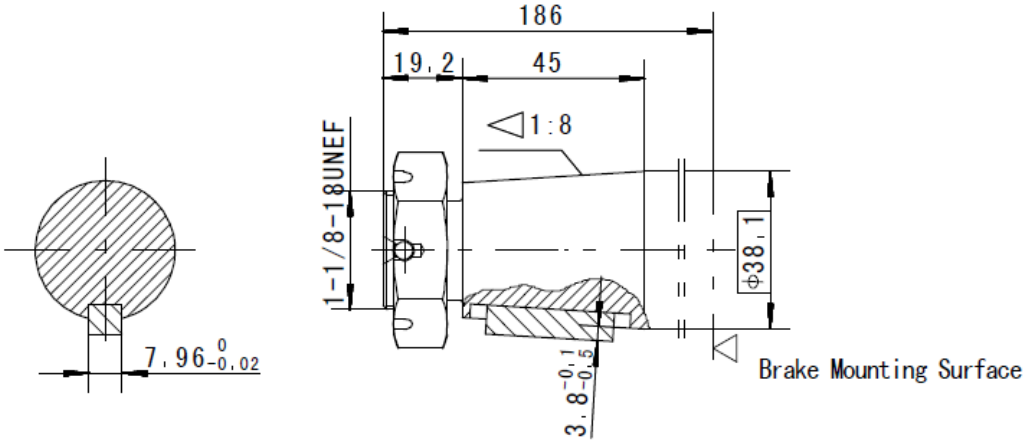
HBK10-2 DIMENSIONS AND MOUNTING DATA

S1 Flange and Pilot and Brake Pors



HBK10-2 DIMENSIONS OF SHAFT EXTENTSIONS

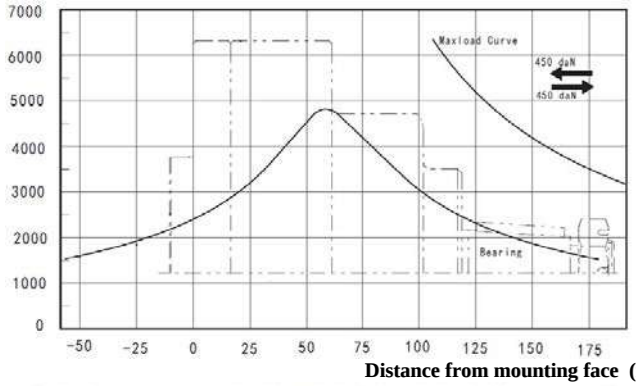
T31 Φ38.1 Cone—shaft 1:8



HBK10-2 Mounting Flange Radial Forces

BK10-2 Mounting Flange Radial Forces

Side Load（daN）



Distance from mounting face (mm)

The bearing curve represents allowable bearing loads for an L_{10} bearing life at $12x10^6$ revolutions.
The maximum load curve is defined by bearing static load capacity. This curve should not be exceeded at any time including shock loads.

Bearing load multiplication factor table									
RPM	**50**	**100**	**200**	**300**	**400**	**500**	**600**	**700**	**800**
FACTOR	**1.23**	**1**	**0.81**	**0.72**	**0.66**	**0.62**	**0.58**	**0.56**	**0.54**

Order Information

HBK10- 1 — 2 — 3 — 4 — 5 — 6 — 7 — 8

Pos.1	2	3		4		5		6		7		8	
Code	Brake Torque	Output shaft		Flange and Pilot and Brake Pors		Lubrication Port		Paint		Design Code		Nut Code	
2	1700	T31	Ø38.1 Cone-Shaft 1:8. Parallel key 7.96x6.5x28.8	S1	Round Flange 4x Ø13.5, Ø177.8, Pilot Ø101.6x12.8, Brake Pors 7/16-20UNF	Omit	7/16-20UNF	BS	Black Sliver Grey grey No paint Plaint (Black)	Omit	003	Omit	N-Type thick Nut
								00	Omit				

Note: When the table is used, please fill the code of left rows in dash area and give us, which the code information is consists of construction, output shaft, Flange and Pilot and Brake Pors, Lubrication Port etc.. If the specification is not in the table or you have specific requirements, please contact us.

HBK2 SERIES HYDRAULIC BRAKE

Introduction

HBK2 series brake is one kind of hydraulic wet disc brake. The brake force is caused by the spring, and hydraulic pressure releases the brake force.
Features as follows:
* HBK2 series adopts the special friction disc and high strength spring design: long.life endurance, low noise, high braking reliability.
* with 4 Drain port design , the brake can be used in different applications.
* compact structure, easy mounting.
* it can be used preferentially together with HBMP, HBMR, BMS series hydraulic motor.

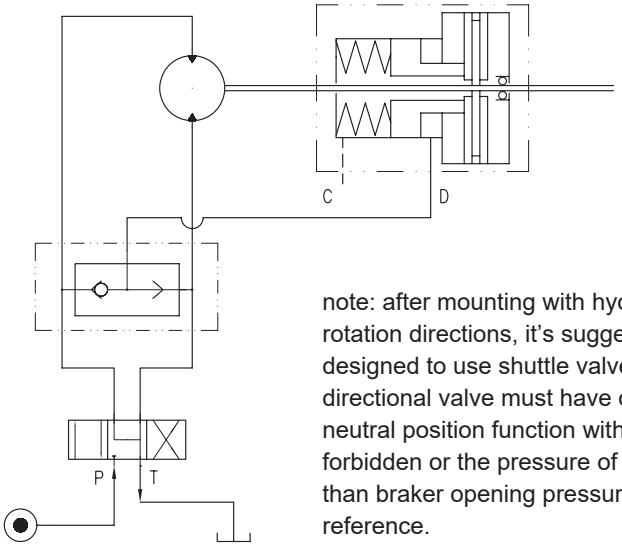
Application

HBK2 series hydraulic brake stays in braking condition since delivery out of the factory. During normal operation, there exists the braking force in the brake disc, only if the pressure of hydraulic system, that the brake links , is lower than the pressure required by the release of brake, the spring force shall keep the brake in braking condition.
HBK2 series hydraulic brake is widely used in heavy duty machinery, such as engineering machinery, cranes, off-highway machinery vehicles, construction machinery, material handling machinery, agricultural machinery, mining, sanitation machinery, timber industries. They are also used in winches and in hydrostatic drive systems for automatization engines.
Special Note: such kind of brake is only used in static parking brake.Dynamic braking is not recommended.

Intruction Manual

一、In order to make the HBK2 series brake work under the best situation, we recommend the normal requirements as follows:
1.Assembly: 1st of all , we have to mount the brake HBK2 with hydraulic motor, and then fill the brake with lubrication oil through the drain port, and then mount with other parts.
2.Fluid type：Mineral based-HM(GB/T763.2-87) (ISO6743/4) or HLP(DIN51524).
3.Temperature range:normal -20℃−90℃the best optimal situation 20℃−60℃
4.Viscosity range：20～75mm^2/s; the best optimal situation 42～74mm^2/s at 40℃.
5.Filtration：nominal filtration of 25 micron, ISO code 20/16.
6.Maintenance: changed after the first 50～100h； then after every 500～1000h.

Typical Applications Drawing

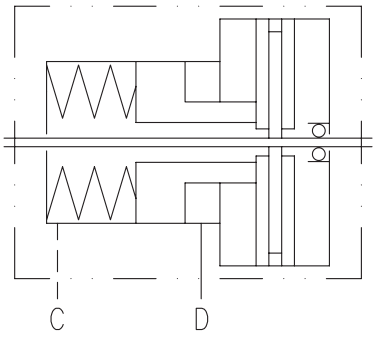


note: after mounting with hydraulic motor, if the motor needs both rotation directions, it's suggested that the hydraulic system is designed to use shuttle valve, and the neutral position of the directional valve must have off-load function(type Y or H), the neutral position function without off-load function (type O) is forbidden or the pressure of the outlet port in the system is larger than braker opening pressure. Please check the drawing for reference.

Specification Data

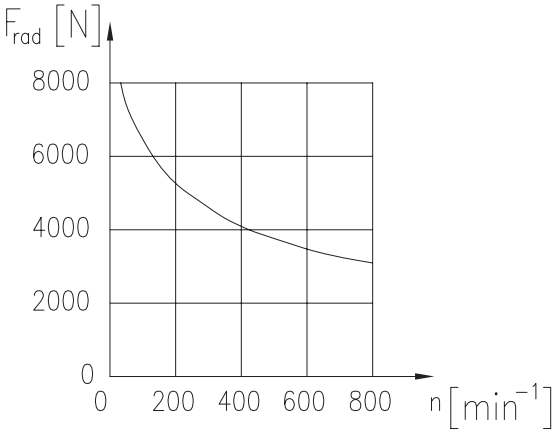
Item	HBK2-1	
Min. static Torque [Nm]	200～230	410～450
Min. Opening Pressure [MPa]	1.7～2.3	
Max. Opening Pressure [MPa]	30	
Min.oil quantity for brake releasing[cm^3]	7～8	
Oil volume [cm^3]	50～120	
Max. pressure in drain space [MPa]	0.05	
Weight [kg]	9	

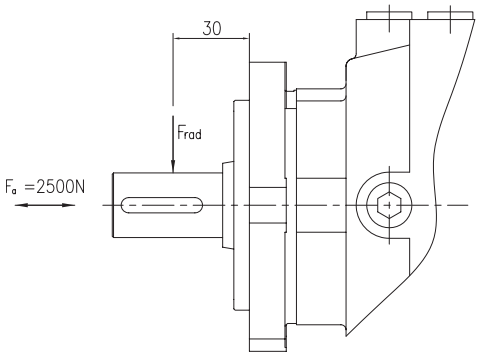
*Static torque is obtained at working pressure 0 MPa



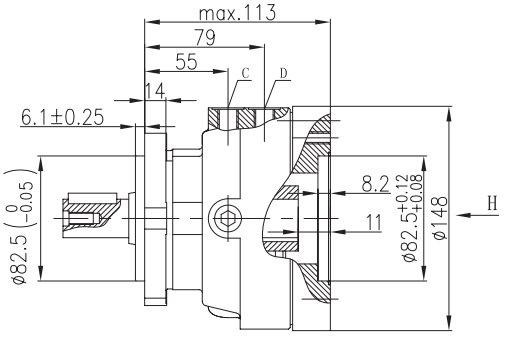
symble drawing

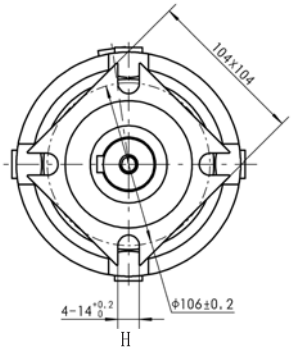
Load Curve



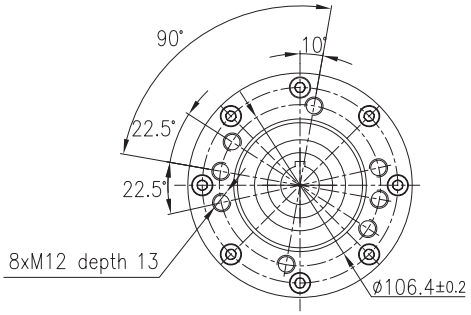


Mounting Data
Model HBK2-1



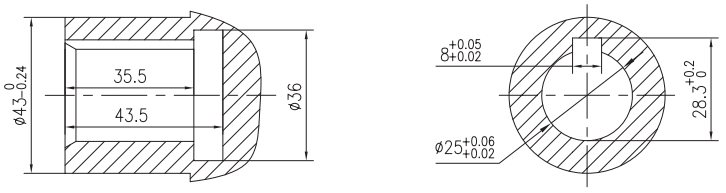


C Drain port——G1/4, 9mm depth; Infuse port in the housing
D Brake release port——G1/4, 9mm depth

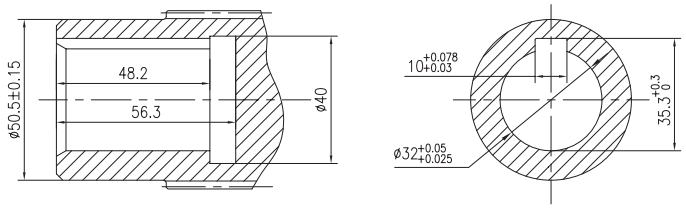


INPUT & OUTPUT SHAFT DATA
INPUT SHAFT HOLES

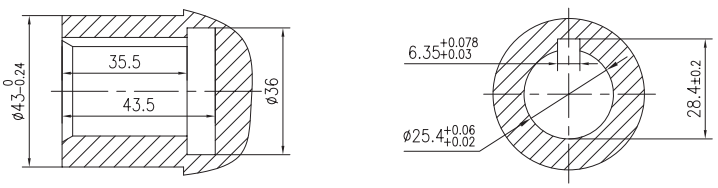
A



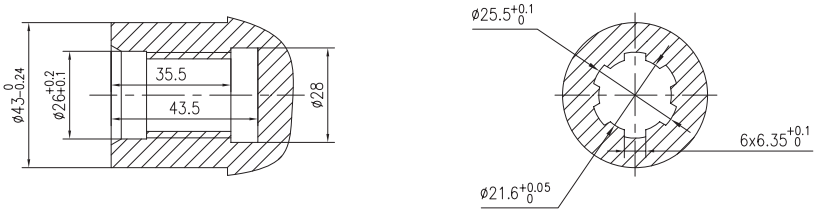
B



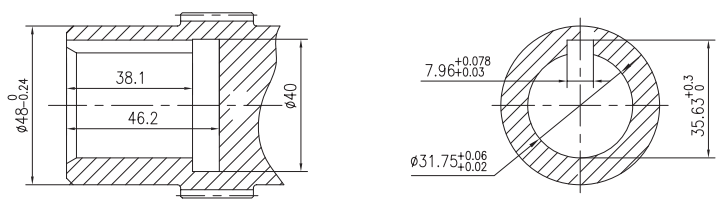
C



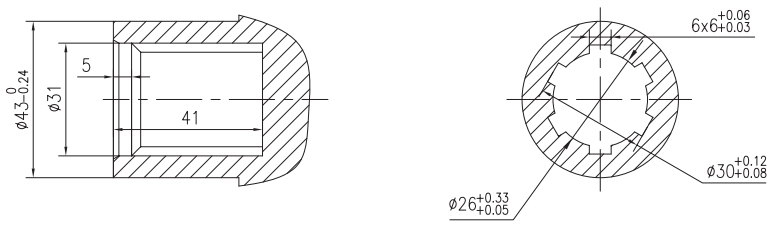
E



G

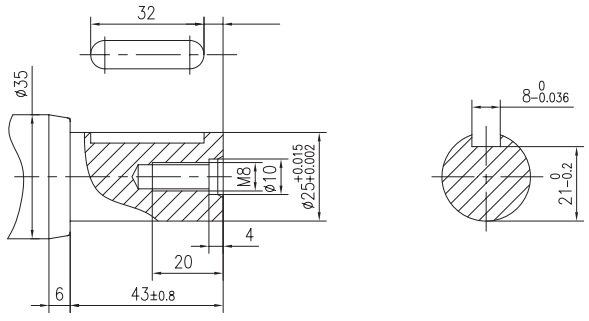


N



OUTPUT SHAFT EXTENSIONS

A



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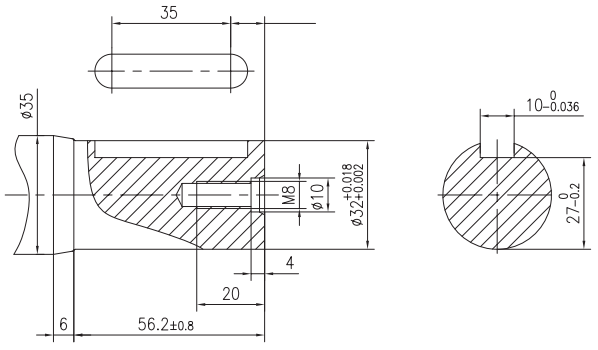

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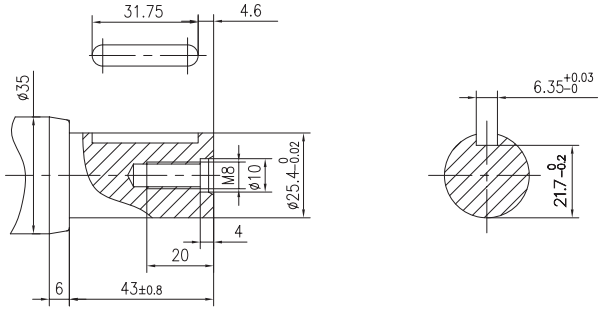

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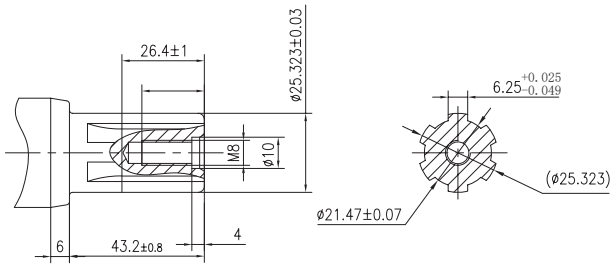
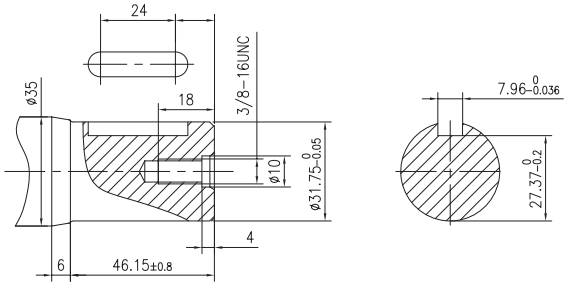
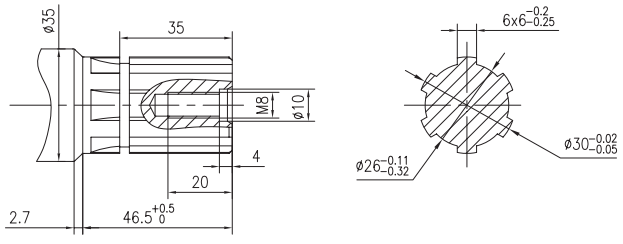


G



N



Order Information

	1		2		3		4		5		6		7
HBK		–		–		–		–		–		–	

Pos.1	2	3		4		5		6		7	
Series Code	Structure Code	Torque		Input Shaft holes		Output Shaft extensions		Paint		Unusually function	
2	1	Torque200--230Nm Torque410--450Nm	210 430	Shaft holes Φ25, Parallel key 8×7×32	A	ShaftΦ25, Parallel key 8×7×32	A	No Paint Blue Black Sliver Grey	00 omit B S	Standard	omit
				Shaft holesΦ32, Parallel key 10×8×45	B	ShaftΦ32, Parallel key 10×8×45	B				
				Shaft holes Φ25.4, Parallel key 6.35×6.35×31.75	C	ShaftΦ25.4, Parallel Key6.35×6.35×31.75	C				
				Shaft holes Φ25.4, splined key SAE 6B	E	ShaftΦ25.4, splined key SAE 6B	E				
				Shaft holes Φ31.75, Parallel key 7.96×7.96×31.75	G	ShaftΦ31.75, Parallel Key7.96×7.96×31.75	G				

Note: When the table is used, pls fill the code with right rows in the table and give us, which the code information is consist of construction, torque, input Shaft holes, output Shaft extensions, Paint .If the specification is not in the table or you have specific requirements, please contact us.

HWGB SERIES PLANETARY GEARBOX

Introduction

HWGB Series planetary gearbox is used in tracklayers , wheel driving vehicles , different kinds of self-mobile machineries, and such kind of transmission & lifting machinery as winches, cylinder machinery , etc. By adopting special orbital motor and compact structure design, the planetary gearbox can be installed inside the wide groove of the pedrail or wheel, or inside the drum of the winches or the cylinder machinery; the design is simple with reasonable space, and easy mounting. HWGB Series planetary gearbox is suitable for open and close hydraulic loop system.

HWGB Series planetary gearbox is widely used in self-mobile equipment, such as engineering machinery, lifting machinery, road machinery vehicles, construction machinery, convey machinery, agricultural machinery, mine machinery, sweeping & cleaning machinery, wood machinery, etc., it's also used in winches, and automatization engine's static hydraulic driving system. The features are shown as follows:

* Adopt special sealing system. Special design of composite sealing, being used in the radial and axial sealing in & between rotating and fixed parts;
* Adopt built-in multi-disk parking brake system which is also the spring-load parking brake ,hydraulic pressure releases brake force; on the condition that the pressure of hydraulic system decreases lower than the required pressure of the release brake, it will safely stop rotation completely.
* Compact structure, easy mounting.
* To be preemptively used together with HBMR, BMS series hydraulic orbital motors.

Instruction Manual

In order to keep the hydraulic system operating under optimal condition, the normal requirements are shown as follows:

1.Hydraulic oil: HM mineral oil(ISO 6743/4)(GB/T763.2-87) or HLP mineral oil(DIN 51524).
2.Oil temperature: normal operation temperature: -20℃~90℃; optimal temperature scope : 20℃~60℃;
3.Oil viscosity: 20~75mm²/s;optimal viscosity scope : 42~74mm²/s at the temperature of 40℃;
4.Oil cleanness: oil filtration precision: 25μm; solid contamination level has to be lower than 20/16;

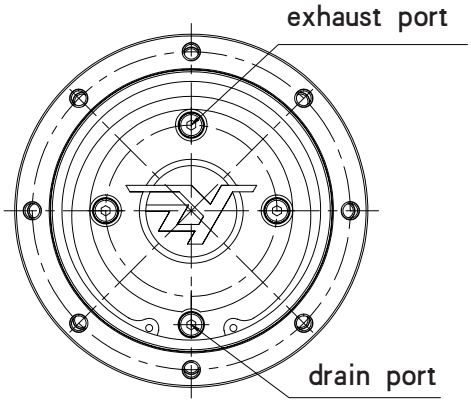
In order to keep the planetary gearbox operating under the best condition, the normal requirements are shown as follows:

1.Lubrication oil: CKC220 mineral gear oil(ISO 12925-1)(GB/T5903);
2.Oil viscosity: 220mm²/s at the temperature of 40℃;
3.Maintenance period: 1st maintenance should be carried out 50-200 hours after initial operation; afterwards normal maintenance should be carried out every 500~1000 hours.
4.We suggest that MOBIL GEAR630, ESSO SPARTAN EP220, SHELL OMALA EP220 be used.

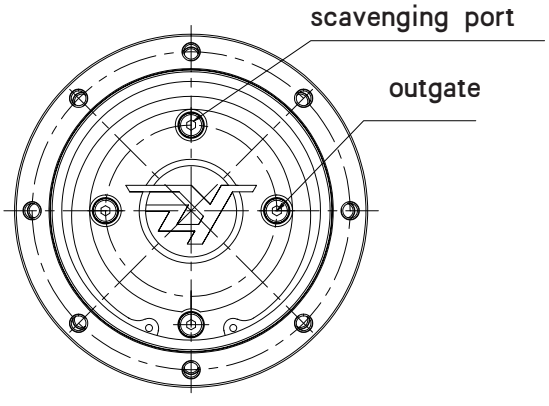
How to change the oil for planetary gearbox:

No lubricate oil in the gearbox lubricate the gearbox before it be used.

1.As shown in Drawing A, dismantle two port plugs , discharge the lubrication oil out of the planetary gearbox. and then clean the planetary housing with the detergent supplied by lubrication oil supplier.
2.As shown in Drawing B, fill more hydraulic oil. More oil till lubrication oil flows out of the drain port; fasten two plugs till the ports are sealed.



Drawing A

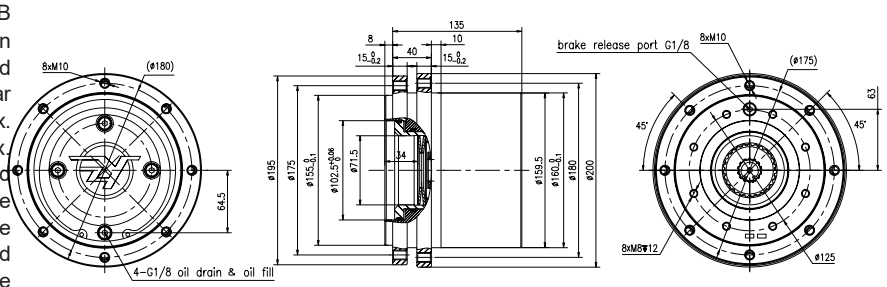


Drawing B

Main mounting data and dimensions

HWGB150A Series

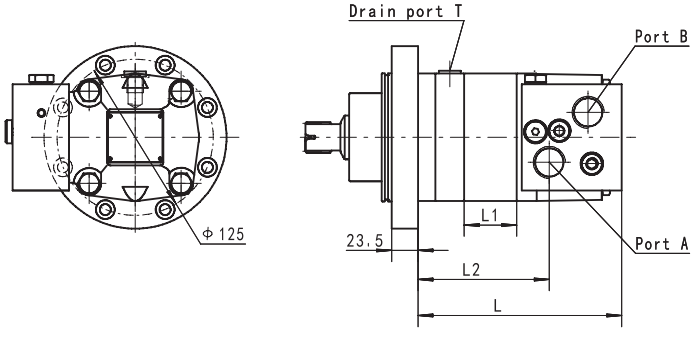
HWGB150 Series standard motor HBMSY125,main specifications of the non-standard motor with HWGB 150 will be calculated upon hydraulic motor.The main technical planetary gearbox needs to be calculated according to the hydraulic motor and gearbox gear reduction ratio of performance parameters.The max. output torque of HWGB 150 is 1500 Nm, the max. output power is 14 kW. The rotation direction of input and output of HWGB 150 planetary gearbox is reverse..The main technical planetary gearbox needs to be calculated according to the hydraulic motor and gearbox gear reduction ratio of performance parameters.



Main mounting and dimensions of motor for WGB150A

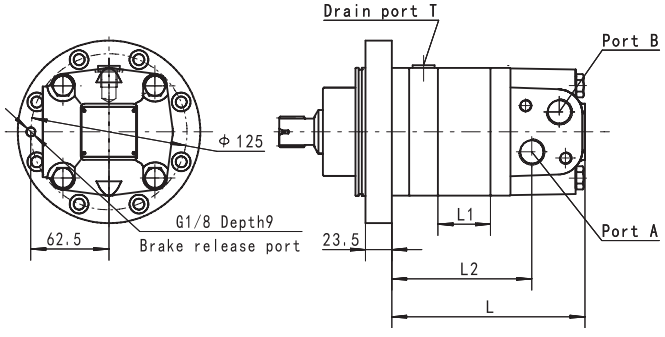
HBMSY-IT Series（Inside brake oil runner)

Model	L	L1	L2
HBMSY-IT-80	137	16	74.5
HBMSY-IT-100	141	20	78
HBMSY-IT-125	146	25	82.5
HBMSY-IT-160	148	27	87.5
HBMSY-IT-200	155	34	94.5
HBMSY-IT-250	163	42	102.5
HBMSY-IT-315	175	54	114.5
HBMSY-IT-375	190	69	129.5
HBMSY-IT-400	204	83	143.5



HBMSY-WT Series（Outboard brake oil runner)

Model	L	L1	L2
HBMSY-WT-80	127	16	81.5
HBMSY-WT-100	131	20	85
HBMSY-WT-125	136	25	89.5
HBMSY-WT-160	138	27	94.5
HBMSY-WT-200	145	34	101.5
HBMSY-WT-250	153	42	109.5
HBMSY-WT-315	165	54	121.5
HBMSY-WT-375	180	69	136.5
HBMSY-WT-400	194	83	150.5



Order information

1	2	3	4	5	6
HWGB	–	–	–	–	–

Pos.1		2	3		4		5		6	
Series code		Ratio	Brake code		Flange code		Painted		Unusually function	
1500Nm	150A	3.28 4.6 5.75	With Brake No Brake	BK Omit	Standard	Omit	No Painted Blue Black Silver grey	00 Omit B S	Standard	Omit

Note: from the order code , please choose the colorful code in the right column, and provide us with the information in regard to series, ratio ,brake structure, and the paint etc. When selecting brakes, brake parameters: brake release pressure is 1.7 ~ 2.2MPa, brake release port for the G1 / 8, the brake release port maximum pressure 25MPa, the maximum braking torque of 400Nm.
If the specification is not in the table or you have special requirements, please contact us.

Order information (HBMSY–WT、HBMSY–IT)

1	2	3	4	5	6
	–	–	–	–	–

Pos.1	1	2		3		4		5	
Order information	Motor displacement	Port and drain port		Rotation direction		Painted		Unusually function	
HBMSY-WT	80 100 125 160 200 250 315 375 400 475	D M S P	G1/2 manifold 2-M10，G1/4 M22×1.5 manifold 2-M10，M14×1.5 7/8-14UNF O-ring manifold 2-3/8-16, 7/16-20UNF 1/2-14NPTF manifold 2-3/8-16UNC, 7/16-20UNF	Omit	Standard		No Painted Blue Black Silver grey	Omit	Standard
HBMSY-IT		MC-FSSY-D MC-FSSY-M MC-FSSY-S MC-FSSY-P	G1/2,G1/4 M22×1.5,M14×1.5 7/8-14UNF,7/16-20UNF 1/2-14NPTF,7/16-20UNF	R	Opposite				

Note: Motor of gearbox performance parameters are the same with the catalogue of BMS \ HBMSY.
Users in the use of the ordering information, the motor structure, displacement, out of port and other information, select the left pornographic site code can be written to us by the above format.
If the selected size is not in the above table or special requirements, please contact us.
When selecting a motor, for built-in brake balance valve ports and features, please technical communication.

HHGB SERIES PLANETARY GEARBOX

Introduction

HHGB series planetary gearbox is one speed reducer for various machinery, adopting the compact design of combining hydraulic orbital motor and speed reducer, design structure is simple, with reasonable mounting space, easy for mounting. This kind of gearbox fits all kinds of hydraulic loop system.
HHGB series planetary gearbox is widely used various machinery, such as engineering machinery, lifting machinery, road machinery vehicles, construction machinery, convey machinery, agricultural machinery, mine machinery, sweeping & cleaning machinery, wood machinery, etc., it's also used in winches, and automatization engine's static hydraulic driving system. The features are shown as follows:
* Compact structure, easy mounting.
* Small volume, strong power.
* To be preemptively used together with HBMR,HBMH, BMS series hydraulic orbital motors.

Instruction Manual

In order to keep the hydraulic system operating under optimal condition, the normal requirements are shown as follows:
1.Hydraulic oil: HM mineral oil(ISO 6743/4)(GB/T763.2-87) or HLP mineral oil(DIN 51524).
2.Oil temperature: normal operation temperature: -20℃~90℃; optimal temperature scope : 20℃~60℃;
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3.Maintenance period: 1st maintenance should be carried out 50-200 hours after initial operation; afterwards
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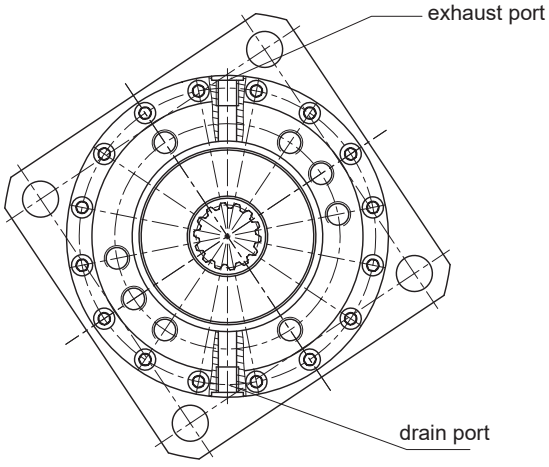
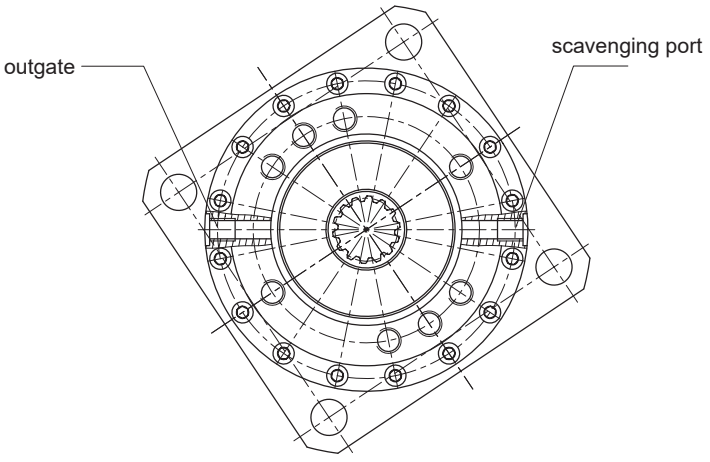
How to change the oil for planetary gearbox:

No lubricate oil in the gearbox lubricate the gearbox before it be used.
1.As shown in Drawing A, dismantle two port plugs , discharge the lubrication oil out of the planetary gearbox. and then clean the planetary housing with the detergent supplied by lubrication oil supplier.
2.As shown in the Drawing , fill more hydraulic oil till lubrication oil flows out of the drain port; fasten two plugs till the ports are sealed.

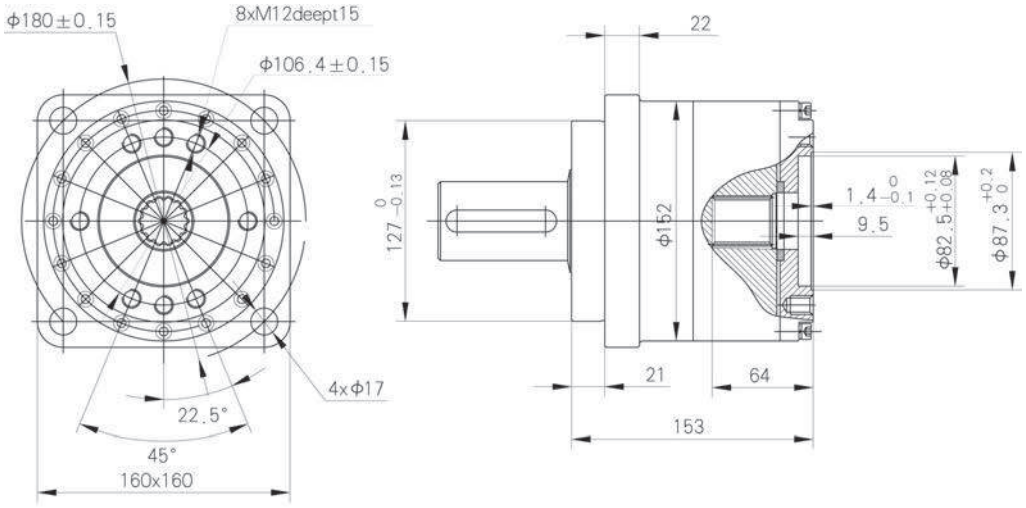


Drawing A



Drawing B

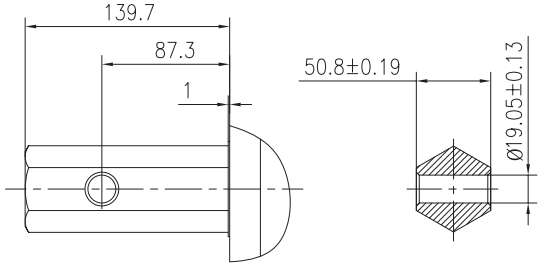
Main mounting and specification data



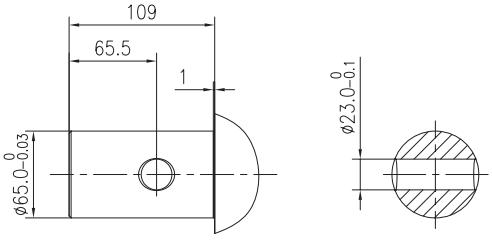
Input hole

Output shaft extensions

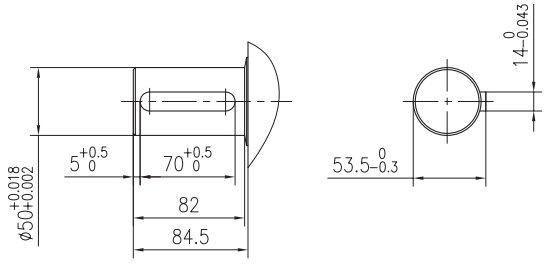
shaft H1



shaft H2



shaft A



Main specifications of the HBMP,HBMR,HBMH and HBMSY motor with HGBwill be calculated upon hydraulic motor. The rotation direction of input and output of HHGB planetary geardox is the same. The speed reduction radio is 3.65.The max. output torque of HHGB is 2500Nm,the max.output power is 15kw.

Order Information

	1	2	3	4	5	6
HHGB						

Pos.1		2	3		4		5		6	
Series Code		Ratio Code	Input hole code		Output Shaft code		Paint		Unusually Function	
	Omit	3.65	SAE 6B splined hole	E	Hexangular 50	H1	No paint Bule Black Silver gray	00 None B S	Standard	None
					Φ65	H2				
			14-DP12/24 splined hole	F	Φ50	A				

Note：From the order code, please choose the colorful code in the right column,and provide us with the information in regard to ratio,output torque ,input hole output shaft ,motor code ,etc. If the specification is not in the table or you have specific requirements, please contract us.


HP
Hydraport