



OMP SERIES HYDRAULIC MOTOR

OMP 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 BMP with 25 and 1 in and 1 in splined and 28.56 tapered shaft

Type		OMP	OMP	OMP	OMP	OMP	OMP	OMP	OMP	OMP	OMP	
		OMPH	OMPH	OMPH	OMPH	OMPH	OMPH	OMPH	OMPH	OMPH	OMPH	OMPH
		OMPW	OMPW	OMPW	OMPW	OMPW	OMPW	OMPW	OMPW	OMPW	OMPW	
		36	50	80	100	125	160	200	250	315	400	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 OMP with 31.75 and 32 shaft

Type		OMP OMPH 36	OMP OMPH 50	OMP OMPH 80	OMP OMPH 100	OMP OMPH 125	OMP OMPH 160	OMP OMPH 200	OMP OMPH 250	OMP OMPH 315	OMP OMPH 400	OMP OMPH 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

OMP 36 [36cm³/rev.]

Pressure (MPa)

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

OMP 50 [51.7cm³/rev.]

Pressure (MPa)

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

OMP 80 [77.7cm³/rev.]

Pressure (MPa)

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

OMP 100 [96.2cm³/rev.]

Pressure (MPa)

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

Torque (N*m) 87
Speed (rpm) 920

cont.
 int.



Performance Data

OMP 125 [120.2cm³/rev.]

Pressure (MPa)

		Max.cont.							Max.int.		
		3	6	8	10	12.5	14	16	17.5		
Flow (L/min)	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		

OMP 160 [157.2cm³/rev.]

Pressure (MPa)

		Max.cont.							Max.int.		
		3	6	8	10	12.5	14	16	17.5		
Flow (L/min)	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		

OMP 200 [194.5cm³/rev.]

Pressure (MPa)

		Max.cont.							Max.int.		
		3	6	8	10	12.5	14	16	17.5		
Flow (L/min)	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		

OMP 250 [240.3cm³/rev.]

Pressure (MPa)

		Max.cont.							Max.int.		
		3	6	8	10	12.5	14	16	17.5		
Flow (L/min)	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		

□ cont.
 □ int.

Torque (N•m) 128
 Speed (rpm) 306



Performance Data

OMP 315 [314.5cm³/rev.]

Pressure (MPa)		Max.cont.				Max.int.	
3	5	7	9	10	12.5	14	

Flow (L/min)	Pressure (MPa)						
	3	5	7	9	10	12.5	14
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

OMP 400 [389.5cm³/rev.]

Pressure (MPa)		Max.cont.				Max.int.	
3	4.5	5.5	6.5	8	10	12.5	

Flow (L/min)	Pressure (MPa)						
	3	4.5	5.5	6.5	8	10	12.5
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

OMP500[486.5cm³/rev.]

Pressure (MPa)		Max.cont.				Max.int.	
1.5	3	4.5	6	7	8	9	

Flow (L/min)	Pressure (MPa)						
	1.5	3	4.5	6	7	8	9
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

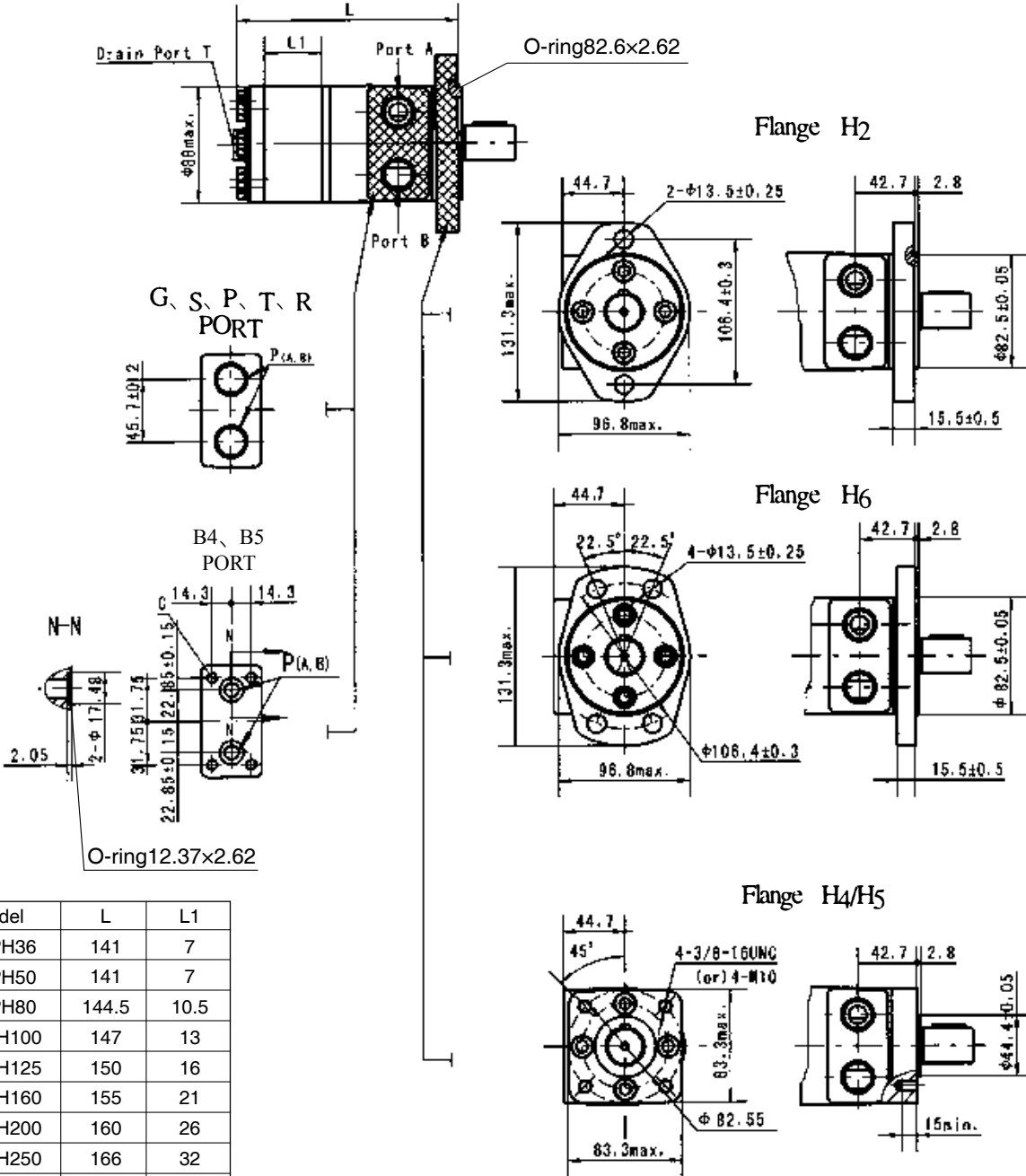
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int.

Torque (N•m) 389
Speed (rpm) 147



OMPH DIMENSIONS AND MOUNTING DATA

MOUNTING

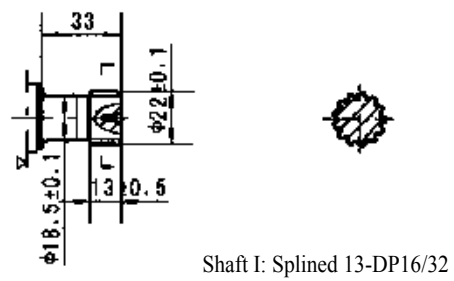
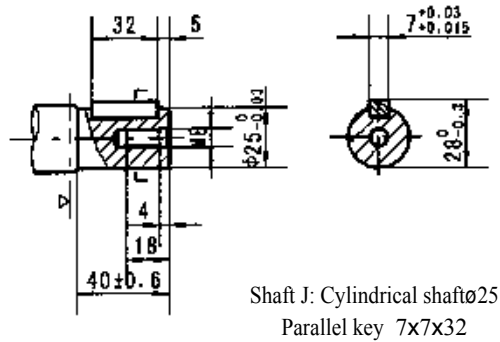
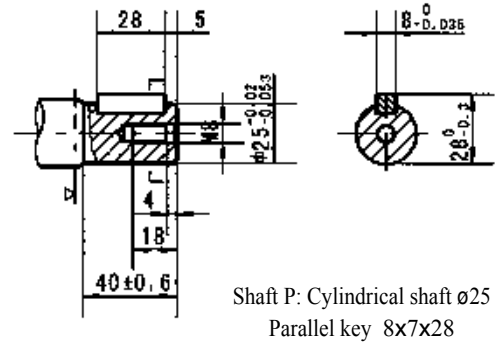
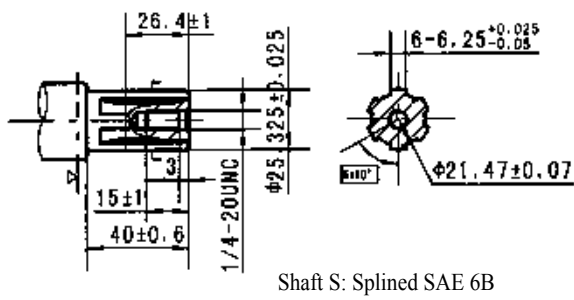
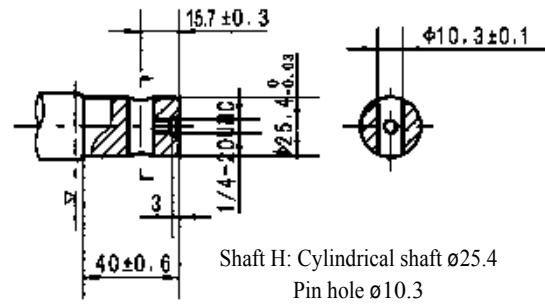
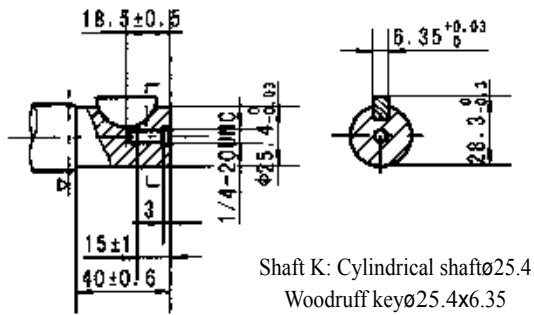


Model	L	L1
BMPH36	141	7
BMPH50	141	7
BMPH80	144.5	10.5
BMPH100	147	13
BMPH125	150	16
BMPH160	155	21
BMPH200	160	26
BMPH250	166	32
BMPH315	176	42
BMPH400	186	52
BMPH500	199	65

Code	Mounting						
	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)



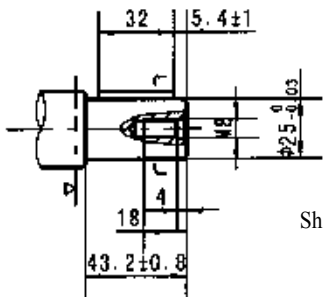
OMPH SHAFT EXTENSIONS DIMENSIONS DATA



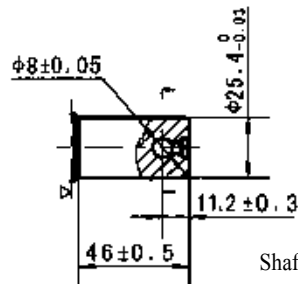
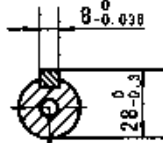
▷ Motor Mounting Surface



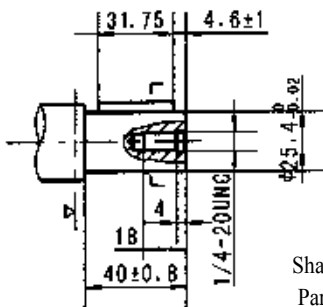
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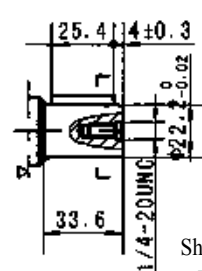
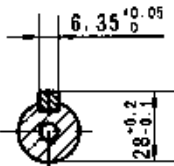
Shaft A: Cylindrical shaft $\phi 25$
Parallel key 8x7x32



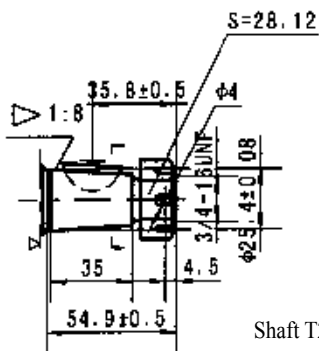
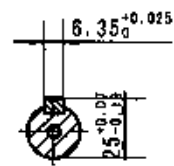
Shaft H1: Cylindrical shaft $\phi 25.4$
Pin hole $\phi 8$



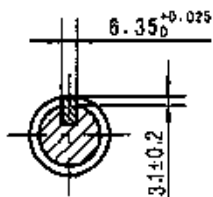
Shaft R: Cylindrical shaft $\phi 25.4$
Parallel key 6.35x6.35x31.75



Shaft D: Cylindrical shaft $\phi 22.22$
Parallel key 6.35x6.35x25.4



Shaft T2: Cone-shaft $\phi 25.4$
Parallel key $\phi 25.4 \times 6.35$
Tightening torque: $200 \pm 10 \text{ Nm}$

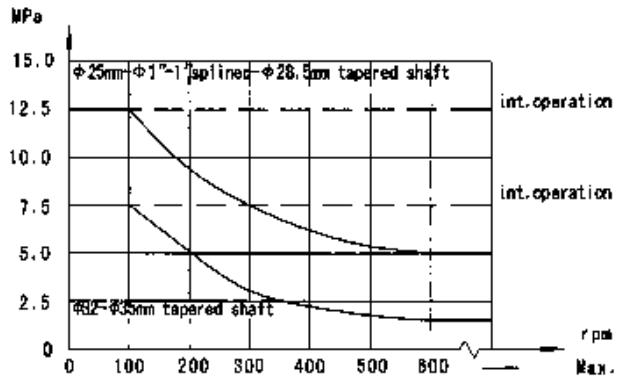
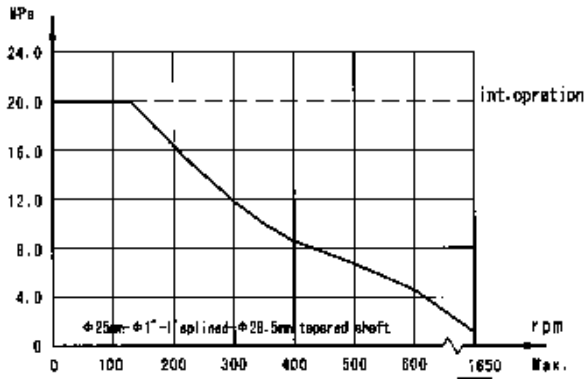
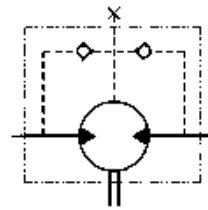


▷ Motor Mounting Surface



OMP, OMPH Series Hydraulic Motor

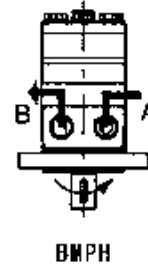
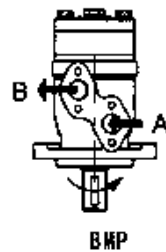
Permissible shaft seal pressure



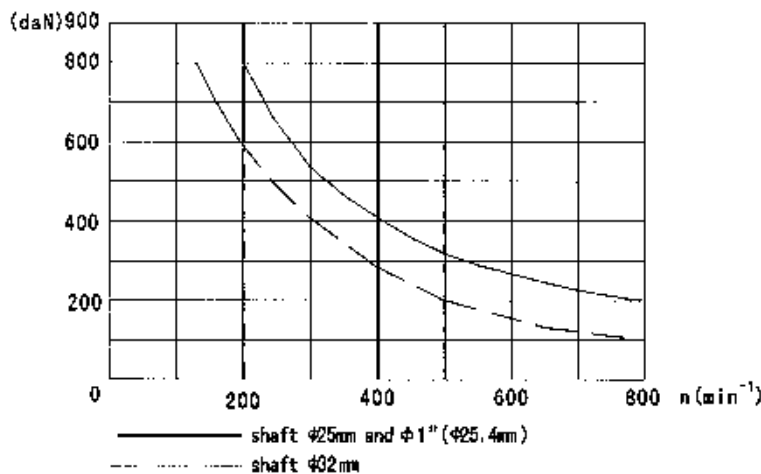
In applications without drain line, output shaft seal exceeds a bit of the pressure in the return line. When applications use the drain line, the pressure of output shaft seal equals the pressure in drain line.

Direction of shaft rotation: Standard

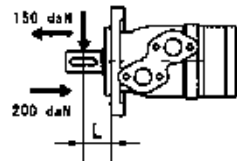
When facing shaft end of motor, shaft to rotate:
 Clockwise when port "A" is pressurized.
 Counter-clockwise port "B" is pressurized.



Status of the shaft's radial force



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



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