

MOMR SERIES HYDRAULIC MOTOR

MOMR Series motors are medium speed high torque motors designed on an internal gear design consisting of a rotor and stator. These motors are suitable for long operating periods at moderate pressures.

Characteristic Features:

- Advanced manufacturing design for the Geroler gear set, which provide high starting torque, high efficiency and long life
- Motors have high pressure shaft seals which can be used in Parallel or Series
- Smooth running over the entire speed range

Main Specifications

Type	MOMR & MOMRS										
	36	50	80	100	125	160	200	250	315	375	
Geometric Displacement (cm ³ /rev.)	36	51.3	80.6	100.8	124.9	157.2	199.2	252	314.5	370	
Max. Speed (rpm)	Cont.	1085	755	750	600	475	375	300	240	190	160
	Int.	1220	970	940	750	600	470	375	300	240	200
Max. Torque (Nm)	Rated	69	100	160	200	250	320	330	352	360	420
	Cont.	69	100	190	240	292	363	358	352	360	420
	Int.	88	126	220	280	340	430	448	470	470	548
Max. Output (kW)	Rated	7.5	7.7	12.3	12.3	12.0	12.3	10	9	7	6.5
	Cont.	7.5	7.7	15	15	14	14	11	9	7	8.6
	Int.	9.4	9.7	17	17	16	16	14	12	9	12
Max. Pressure Drop (Bar)	Rated	140	140	140	140	140	140	120	110	85	85
	Cont.	140	140	175	175	175	165	130	110	85	85
	Int.	175	175	200	200	200	200	175	140	115	115
Max. Flow (L/min)	Cont.	40	40	60	60	60	60	60	60	60	60
	Int.	50	50	75	75	75	75	75	75	75	75
Weight (kg)	6.7	6.7	6.9	6.9	7.2	7.5	8.0	8.5	9	9.3	

- Rated Speed & Rated Torque: Output value of speed and torque under rated flow and rated pressure
- 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 seconds per minute

PERFORMANCE DATA

MOMR50 [51.3cm³/rev.]

		Pressure (Bar)							
		50	70	90	100	Max.Cont.		Max.Int.	
Flow (L/min)	5	35	45	61	67	77	88		
		95	84	76	73	69	46		
	10	36	46	62	69	80	95	108	120
		184	176	165	162	150	130	111	84
	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	308	276
25	34	45	61	69	81	96	109	126	
	476	468	460	453	438	423	395	361	
30	33	44	60	67	80	95	108	126	
	576	569	561	554	542	531	500	465	
35	31	42	59	66	80	93	107	124	
	669	665	657	654	638	623	598	561	
Max. Cont.	40	30	41	58	66	79	92	106	122
		760	758	753	750	738	724	700	670
Max. Int.	45	29.5	40	57	65	78	90	105	121
		856	856	850	845	835	815	799	780

MOMR80 [80.6cm³/rev.]

		Pressure (Bar)							
		50	70	90	100	Max.Cont.		Max.Int.	
Flow (L/min)	10	55	77	98	107	130	149	170	180
		115	109	106	101	91	75	53	45
	20	50	81.6	105	118	132	160	178	189
		239	235	227	224	209	196	172	160
	30	48	74	97	114	131	150	179	190
		364	360	357	345	332	321	300	284
	40	45	71	95	105	128	149	177	188
		488	483	475	472	460	447	420	408
50	42	70	90	98	125	147	171	187	
	619	615	607	598	593	568	547	535	
60	38	63	85	95	118	142	169	185	
	740	725	721	715	707	688	667	657	
Max. Cont.	70	36	58	80	89	112	139	164	179
		860	853	839	837	823	811	790	776
Max. Int.	75	29	56	77	85	110	133	161	177
		925	915	910	899	888	871	853	837

MOMR100 [100.8cm³/rev.]

		Pressure (Bar)							
		50	70	90	100	Max.Cont.		Max.Int.	
Flow (L/min)	10	70	100	122	138	159	182	210	222
		99	95	87	84	74	63	52	44
	20	68	95	123	143	165	200	221	238
		199	194	188	182	175	162	150	138
	30	62	94	121	140	164	194	220	240
		299	294	288	284	278	263	249	236
	40	59	88	119	134	161	192	218	238
		400	398	387	385	380	366	350	336
50	55	83	117	125	157	185	217	235	
	498	496	488	484	475	464	450	436	
60	48	79	110	119	152	180	214	233	
	599	595	587	585	579	569	552	538	
Max. Cont.	70	43	70	100	112	142	170	201	229
		699	693	687	683	679	668	648	636
Max. Int.	75	39	63	97	105	140	167	197	227
		748	741	737	735	720	713	697	686

MOMR125 [124.9cm³/rev.]

		Pressure (Bar)							
		50	70	90	100	Max.Cont.		Max.Int.	
Flow (L/min)	10	90	122	160	173	205	237	258	270
		73	71	66	63	55	42	23	14
	20	85	118	159	172	208	250	278	292
		154	152	150	145	138	123	109	91
	30	82	107	158	164	206	241	277	291
		237	236	233	226	219	207	192	170
	40	79	105	150	161	204	238	275	289
		315	313	309	307	302	297	272	254
50	75	96	145	160	198	236	262	282	
	398	397	395	391	381	368	353	337	
60	62	95	139	158	183	222	254	279	
	475	473	471	470	463	450	427	416	
Max. Cont.	70	59	83	125	150	178	212	250	262
		554	553	551	550	546	538	514	500
Max. Int.	75	56	80	122	145	172	205	245	261
		598	597	593	590	586	577	551	537

Cont
Int.

Torque (Nm) 167
Speed (rpm) 713

PERFORMANCE

MOMR160 [157.2cm³/rev.]

		Pressure (Bar)							
		50	70	90	100	Max.Cont.		Max.Int.	
		50	70	90	100	120	140	160	175
Flow (L/min)	10	115	160	203	220	260	300	340	362
		58	55	52	50	44	38	34	26
	20	114	160	205	230	265	320	355	380
		119	115	111	108	103	95	84	76
	30	105	158	202	221	261	305	344	378
		184	181	177	172	165	153	134	130
40	100	145	196	218	257	299	340	374	
	246	244	239	237	230	218	199	184	
50	90	140	190	209	250	295	336	366	
	307	305	302	300	292	280	262	244	
60	84	136	180	199	240	286	330	360	
	370	368	364	362	355	342	334	304	
Max. Cont.	70	65	120	164	180	223	280	320	350
		435	434	430	427	416	405	335	366
Max. Int.	75	59	116	158	175	220	272	314	342
		465	462	458	456	447	433	416	395

MOMR200 [199.2cm³/rev.]

		Pressure (Bar)							
		50	70	90	105	Max.Cont.		Max.Int.	
		50	70	90	105	120	140	175	
Flow (L/min)	10	148	205	255	290	327	370	442	
		49	47	45	43	40	30	24	
	20	140	202	250	323	330	411	448	
		99	97	93	90	86	78	65	
	30	130	193	241	307	325	377	445	
		149	146	140	136	131	122	105	
40	125	186	232	305	313	390	436		
	200	197	192	188	181	170	149		
50	120	177	225	295	305	382	427		
	250	247	242	238	231	218	193		
60	110	166	221	285	292	372	419		
	300	298	291	287	282	268	236		
Max. Cont.	70	98	150	205	244	278	331	410	
		350	347	342	338	331	318	282	
Max. Int.	75	85	141	199	235	268	323	400	
		375	372	366	362	357	343	310	

MOMR250 [252cm³/rev.]

		Pressure (Bar)							
		30	50	70	80	Max.Cont.		Max.Int.	
		30	50	70	80	100	110	140	175
Flow (L/min)	10	115	180	251	295	350	380	470	535
		40	38	37	35	32	30	22	16
	20	110	178	252	294	352	385	470	548
		79	78	75	74	70	68	57	48
	30	100	170	248	285	348	381	469	545
		120	119	117	116	110	107	95	79
40	91	159	232	268	332	366	460	530	
	158	157	156	154	151	148	130	110	
50	81	148	216	252	320	352	453	521	
	200	198	196	195	163	160	152	147	
60	75	132	201	235	305	340	433	505	
	241	240	239	237	232	228	210	180	
Max. Cont.	70	50	117	189	220	290	320	412	495
		280	279	277	276	271	268	250	215
Max. Int.	75	42	105	180	211	281	310	405	486
		300	299	298	297	295	289	272	239

MOMR315 [314.5cm³/rev.]

		Pressure (Bar)							
		30	50	65	80	90	Max.Cont.		Max.Int.
		30	50	65	80	90	130	135	
Flow (L/min)	10	135	215	279	343	383	515	550	
		31	29	28	27	27	24	22	
	20	133	216	289	349	380	508	552	
		62	61	60	58	57	52	50	
	30	125	205	275	341	375	494	543	
		95	92	91	90	88	81	79	
40	113	195	267	335	367	485	526		
	123	121	120	118	117	106	104		
50	92	170	253	321	352	474	511		
	155	154	152	149	147	137	133		
60	80	160	231	305	334	458	492		
	190	187	193	179	176	163	157		
Max. Cont.	70	57	136	215	285	320	444	480	
		222	220	217	212	208	192	185	
Max. Int.	75	55	124	205	269	308	427	469	
		235	234	231	227	225	408	201	

Cont
Int.

Torque (Nm) 205
Speed (rpm) 231

PERFORMANCE

MOMR375 [370cm³/rev.]

Pressure (Bar)

Max.Cont.

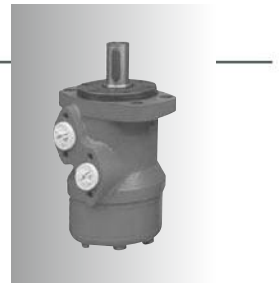
Max.Int.

30	50	65	80	90	130	135
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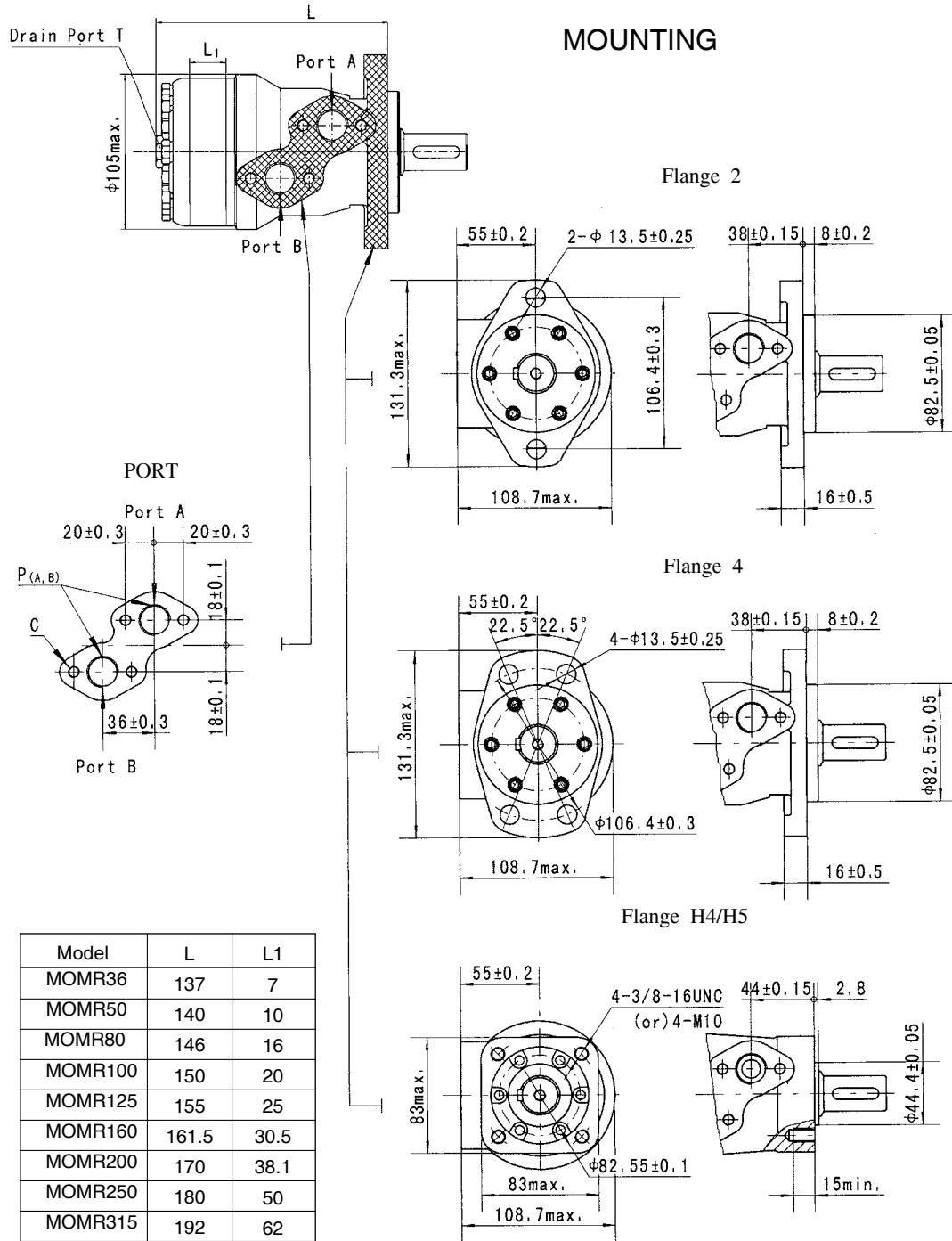
Flow (L/min)	10	160 26	270 25	340 24	420 22	470 21	550 19	610 17
	20	159 53	260 52	340 51	410 49	470 47	540 42	605 37
	30	150 79	255 78	330 77	400 75	450 73	530 67	600 60
	40	135 106	240 105	310 104	375 102	430 99	520 93	590 85
	50	120 134	230 132	295 131	360 129	420 126	505 120	570 110
	60	98 159	210 158	275 157	340 155	390 153	490 147	550 135
	Max. Cont.	75 187	175 186	250 185	320 183	370 180	465 175	530 160
Max. Int.	75 200	160 199	230 198	310 195	360 192	450 187	515 178	

Cont
Int.

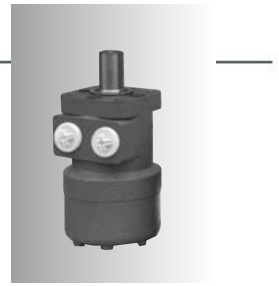
Torque (Nm) 230
Speed (rpm) 198



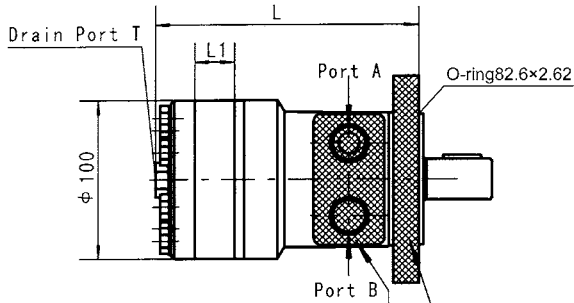
MOMR DIMENSIONS AND MOUNTING DATA



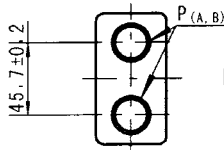
Code	D (depth)	M (depth)	S (depth)	P (depth)	R (depth)
P(A,B)	G1/2 (15)	M22 x 1.5 (15)	7/8-14 O-ring (17)	1/2-14NPTF (15)	PT(RC)1/2 (15)
C	4-M8 (13)	4-M8 (13)	4-5/16-18UNC(13)	4-5/16-18UNC(13)	4-M8 (13)
T	G1/4 (12)	M14 x 1.5 (12)	7/16-20UNF (12)	7/16-20UNF (12)	PT(RC)1/4 (9.7)



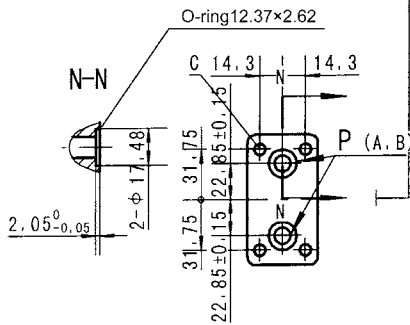
M103- DIMENSIONS AND MOUNTING DATA



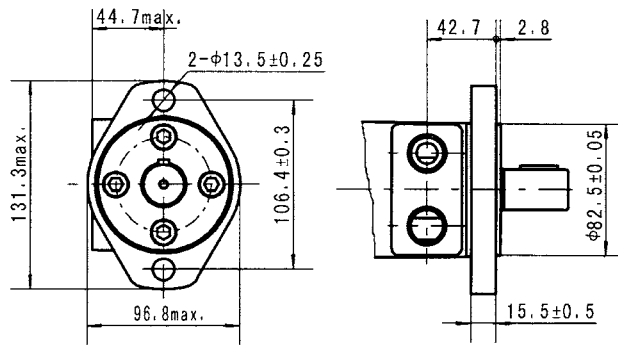
PORT: G, S, P, R, M1, M2, M3



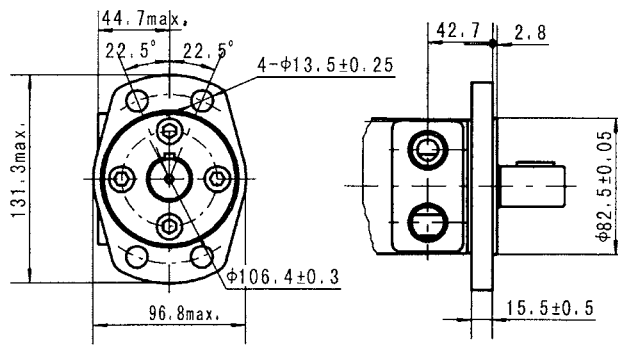
PORT: B4, B5



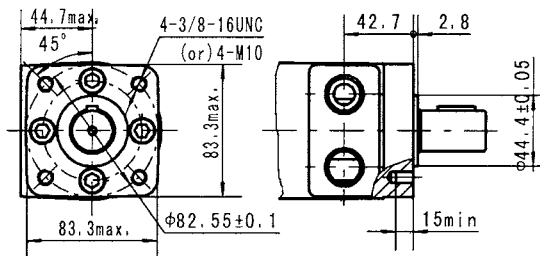
Flange H2



Flange H6



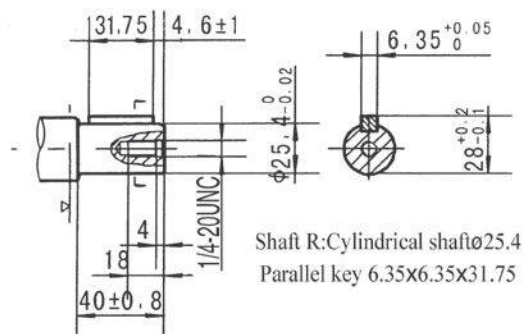
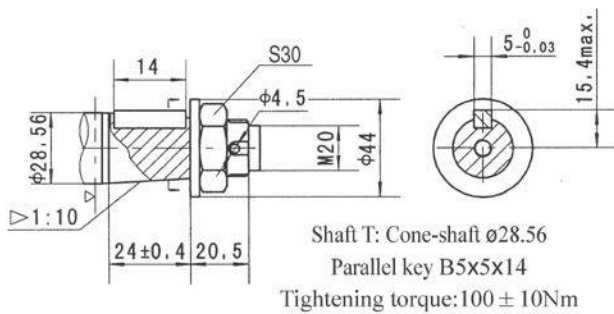
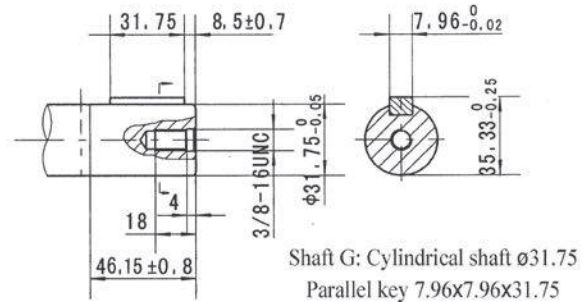
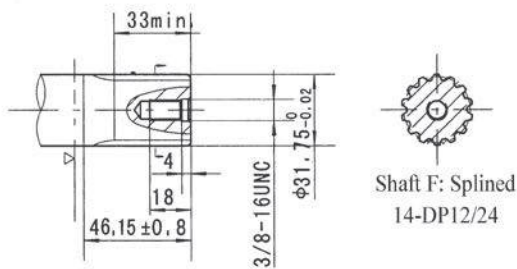
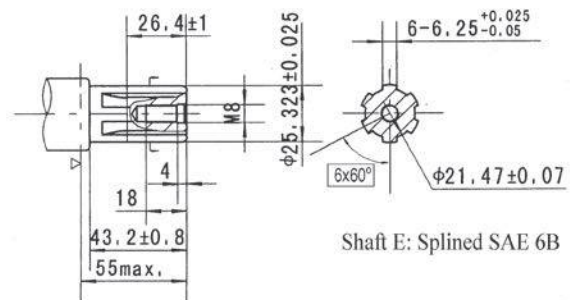
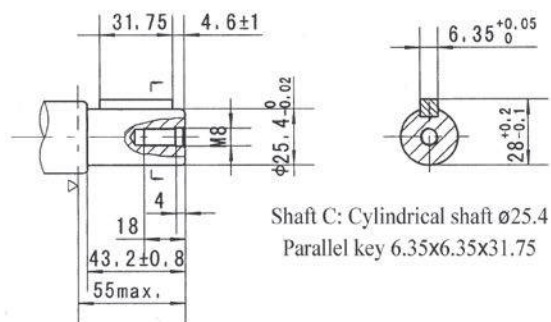
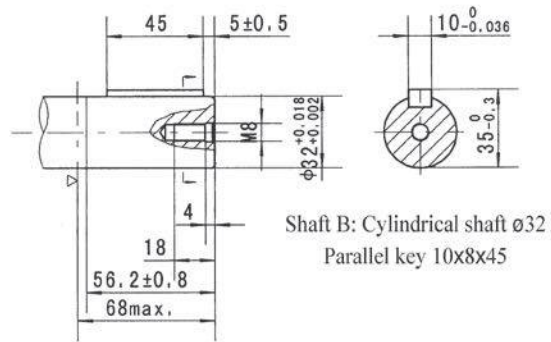
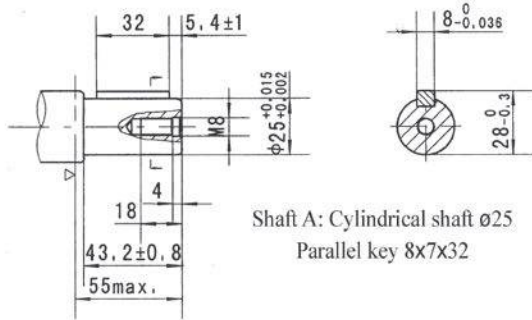
Flange H4/H5



Model	L	L1
M103-36	141	7
M103-50	144	10
M103-80	150	16
M103-100	154	20
M103-125	159	25
M103-160	165.5	30.5
M103-200	174	38.1
M103-250	184	50
M103-315	196	62
M103-375	208	74

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)

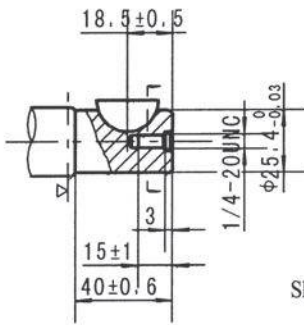
MOMR SHAFT EXTENSIONS DIMENSIONS DATA



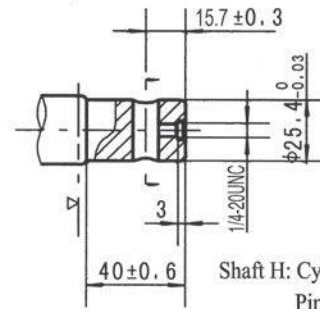
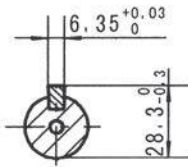
▷ Motor Mounting Surface



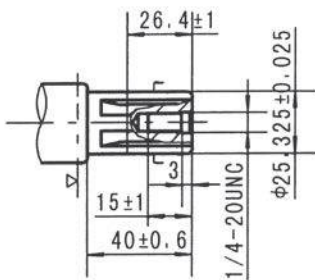
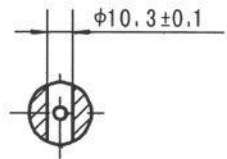
M103- SHAFT EXTENSIONS DIMENSIONS DATA



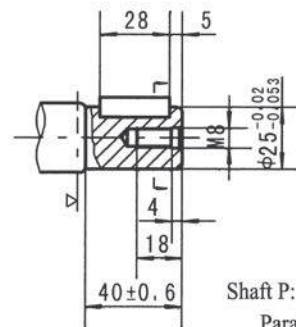
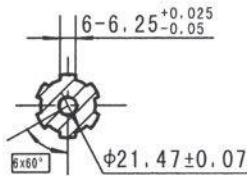
Shaft K: Cylindrical shaft $\phi 25.4$
Woodruff key $\phi 25.4 \times 6.35$



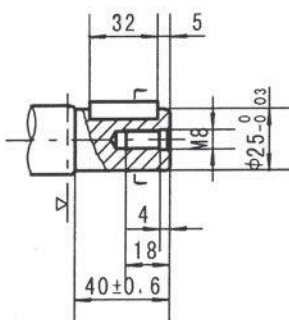
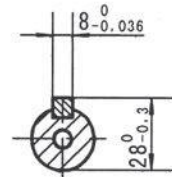
Shaft H: Cylindrical shaft $\phi 25.4$
Pin hole $\phi 10.3$



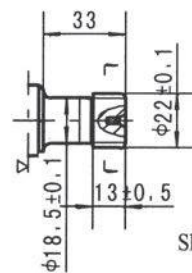
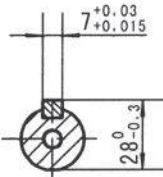
Shaft S: Splined SAE 6B



Shaft P: Cylindrical shaft $\phi 25$
Parallel key $8 \times 7 \times 28$



Shaft J: Cylindrical shaft $\phi 25$
Parallel key $7 \times 7 \times 32$



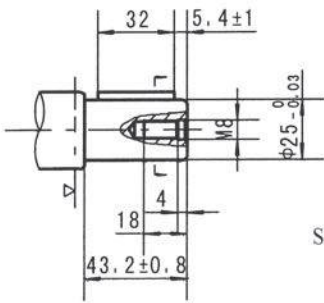
Shaft I: Splined 13-DP16/32



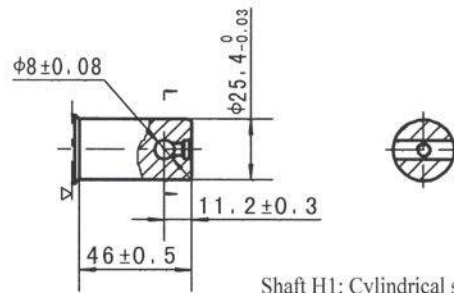
▷ Motor Mounting Surface



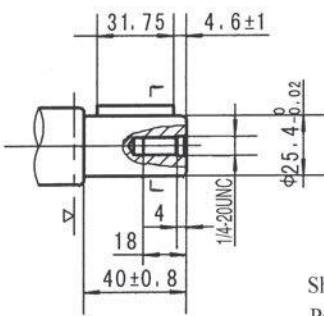
M103- SHAFT EXTENSIONS DIMENSIONS DATA



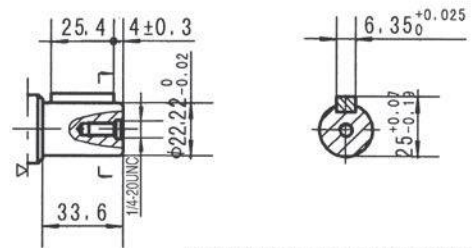
Shaft A: Cylindrical shaft ø25
Parallel key 8x7x32



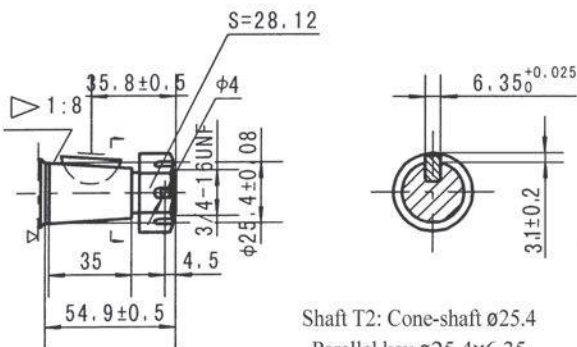
Shaft H1: Cylindrical shaft ø25.4
Pin hole ø8



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



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

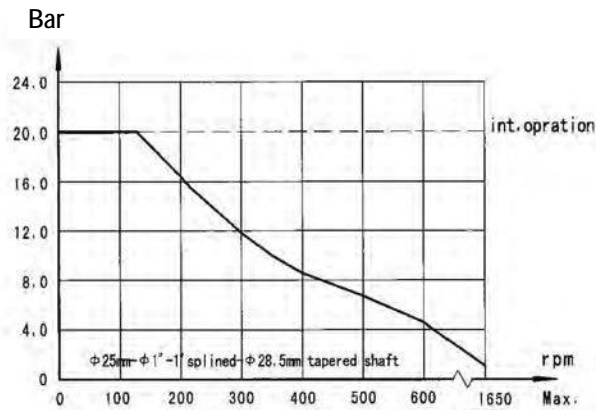
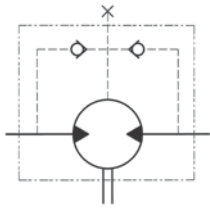


Shaft T2: Cone-shaft ø25.4
Parallel key ø25.4x6.35
Tightening torque: 200 ± 10Nm

▷ Motor Mounting Surface

MOMR, M103- SERIES HYDRAULIC MOTOR

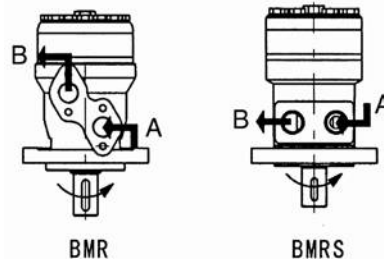
PERMISSIBLE SHAFT SEAL PRESSURE



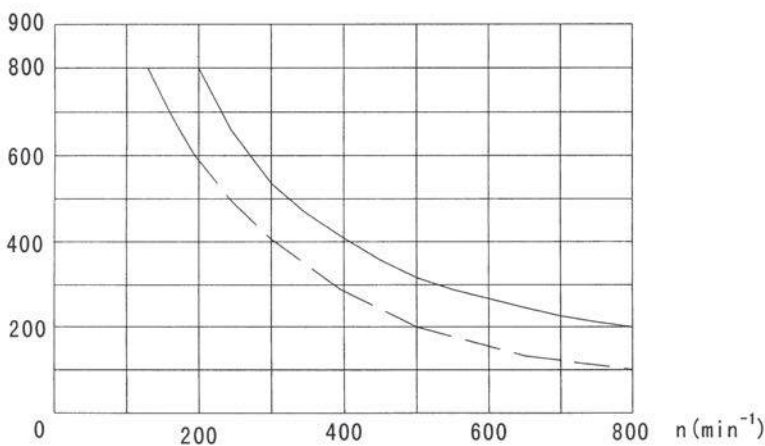
In applications without drain line, the shaft seal pressure is equal to the pressure in the return line.
When applications use the drain line, the pressure behind the output shaft seal equals the pressure in drain line.

DIRECTION OF SHAFT ROTATION

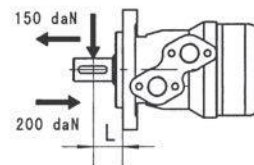
When facing shaft end of motor, shaft to rotate:
Clockwise when Port "A" is pressurised
Counter-clockwise Port "B" is pressurised



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=30mm
Square-flange L=24mm

————— shaft ϕ25mm and ϕ1" (ϕ25.4mm)
- - - - - shaft ϕ32mm

