



MOMS SERIES HYDRAULIC MOTOR

MOMS 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 feautures:

- * 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.

Main Specificaion

Type		MOMS MOMSE 80	MOMS MOMSE 100	MOMS MOMSE 125	MOMS MOMSE 160	MOMS MOMSE 200	MOMS MOMSE 250	MOMS MOMSE 315	MOMS MOMSE 375
Geometric displacement (cm ³ /rev.)		80.6	100.8	125	157.2	200	252	314.5	370
Max. speed (rpm)	cont.	800	748	600	470	375	300	240	200
	int.	988	900	720	560	450	360	280	240
Max. torque (N•m)	cont.	190	240	310	316	400	450	560	536
	int.	240	300	370	430	466	540	658	645
	peak	260	320	400	472	650	690	740	751
Max. output (kW)	cont.	15.9	18.8	19.5	15.6	15.7	14.1	14.1	11.8
	int.	20.1	23.5	23.2	21.2	18.3	17.0	18.9	17
Max. pressure drop (MPa)	cont.	17.5	17.5	17.5	15	14	12.5	12	10
	int.	21	21	21	21	16	16	14	12
	peak	22.5	22.5	22.5	22.5	22.5	20	18.5	14
Max. flow (L/min)	cont.	65	75	75	75	75	75	75	75
	int.	80	90	90	90	90	90	90	90
Max. inlet pressure (MPa)	cont.	25	25	25	25	25	25	25	25
	int.	30	30	30	30	30	30	30	30
Weight (kg)		9.8	10	10.3	10.7	11.1	11.6	12.3	12.6

- * 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

MOMS 80 [80.6cm³/rev.]

		Pressure (MPa)						
		3.5	7	10.5	14	17.5	21	22.5
Flow (L/min)	15	35	80	120	158	195	235	249
		180	174	168	164	158	151	143
30		35	80	120	158	195	240	260
		362	352	346	338	330	322	310
40		35	79	119	155	193	234	250
		482	473	464	453	444	434	415
50		30	77	117	153	192	232	248
		602	594	587	569	560	551	522
Max.cont.	60	28	77	117	153	192	232	247
		724	713	707	683	673	664	629
Max.int.	65	25	75	114	152	190	230	245
		790	785	770	760	742	720	704
80		22	70	110	140	170	200	220
		980	965	950	920	891	860	830

MOMS 100 [100.8cm³/rev.]

		Pressure (MPa)						
		3.5	7	10.5	14	17.5	21	22.5
Flow (L/min)	15	48	95	150	200	250	289	310
		146	144	139	135	130	120	105
30		45	94	146	198	250	295	317
		291	289	278	274	269	258	242
40		43	89	142	196	248	293	316
		387	384	374	359	350	335	320
50		40	88	135	194	247	292	315
		486	483	473	462	450	430	420
Max.cont.	60	37	88	132	185	244	289	312
		588	584	574	562	550	538	520
Max.int.	75	35	80	130	180	240	286	310
		740	735	720	705	696	676	653
90		30	75	124	170	236	277	303
		850	840	810	787	770	750	747

MOMS 125 [125cm³/rev.]

		Pressure (MPa)						
		3.5	7	10.5	14	17.5	21	22.5
Flow (L/min)	15	55	120	176	245	309	349	375
		112	110	103	96	93	90	84
30		55	120	175	250	324	375	408
		222	220	217	208	200	199	190
40		55	120	175	250	324	370	408
		302	298	292	284	276	268	260
50		50	115	176	248	320	370	406
		379	373	368	363	350	339	328
60		45	113	171	245	324	368	406
		456	448	443	439	425	406	393
Max.cont.	75	45	110	167	240	314	370	401
		570	563	555	546	533	515	503
Max.int.	90	40	105	162	237	309	365	398
		685	676	670	659	644	625	610

MOMS 160 [157.2cm³/rev.]

		Pressure (MPa)						
		3.5	7	10.5	14	17.5	21	22.5
Flow (L/min)	15	70	140	205	305	371	430	473
		91	88	84	78	76	74	58
30		75	150	214	321	380	427	490
		185	182	176	168	164	162	152
40		70	150	215	320	378	425	488
		248	244	239	229	224	217	204
50		65	145	215	316	378	425	482
		312	308	304	294	288	280	270
60		65	145	214	315	375	424	482
		375	371	365	357	346	336	323
Max.cont.	75	60	138	208	311	375	420	
		470	465	458	447	436	426	
Max.int.	90	56	130	200	308	370	414	
		564	559	551	541	526	517	

Torque (N•m) 309
Speed (rpm) 644

cont.
int.



Performance Data

MOMS 200 [200cm³/rev.]

		Pressure (MPa)					
		Max.cont.			Max.int.		
		3.5	7	10.5	14	17.5	22.5
Flow (L/min)	15	89	190	295	400	484	608
		73	71	68	64	60	52
	30	87	190	294	399	485	600
		148	146	143	140	135	127
	40	86	188	292	397	483	594
		193	191	189	186	181	172
Max.cont.	50	80	184	290	395	480	590
		247	245	243	240	235	226
	60	74	178	286	390	475	582
		298	295	293	290	284	273
	75	58	160	275	375	460	570
		372	369	365	362	358	346
Max.int.	90	49	148	260	355	445	555
		440	435	430	422	411	401

MOMS 250 [252cm³/rev.]

		Pressure (MPa)					
		Max.cont.			Max.int.		
		3.5	7	10.5	14	17.5	22.5
Flow (L/min)	15	117	230	355	52	450	554
		58	55	350	51	47	46
	30	117	225	348	446	560	657
		118	117	348	109	107	106
	40	115	225	342	442	552	650
		160	156	345	150	146	142
Max.cont.	50	110	220	340	438	546	645
		202	200	340	196	195	192
	60	105	220	338	435	542	642
		242	239	338	234	231	229
	75	95	215	332	430	537	638
		300	296	332	286	282	278
Max.int.	90	90	205	348	420	530	632
		360	354		340	332	326

MOMS 315 [314.5cm³/rev.]

		Pressure (MPa)					
		Max.cont.			Max.int.		
		3.5	7	10.5	12	14	18.5
Flow (L/min)	15	160	320	465	555	650	748
		48	47	45	43	40	38
	30	165	322	468	560	658	752
		94	92	90	89	86	85
	40	160	310	457	546	642	741
		125	123	120	118	116	115
Max.cont.	50	155	305	450	538	637	736
		158	156	153	150	147	145
	60	152	302	442	532	632	732
		175	174	170	164	162	159
	75	145	295	436	525	628	726
		236	234	230	227	225	222
Max.int.	90	132	280	430	520	622	723
		285	282	280	276	273	270

MOMS 375 [370cm³/rev.]

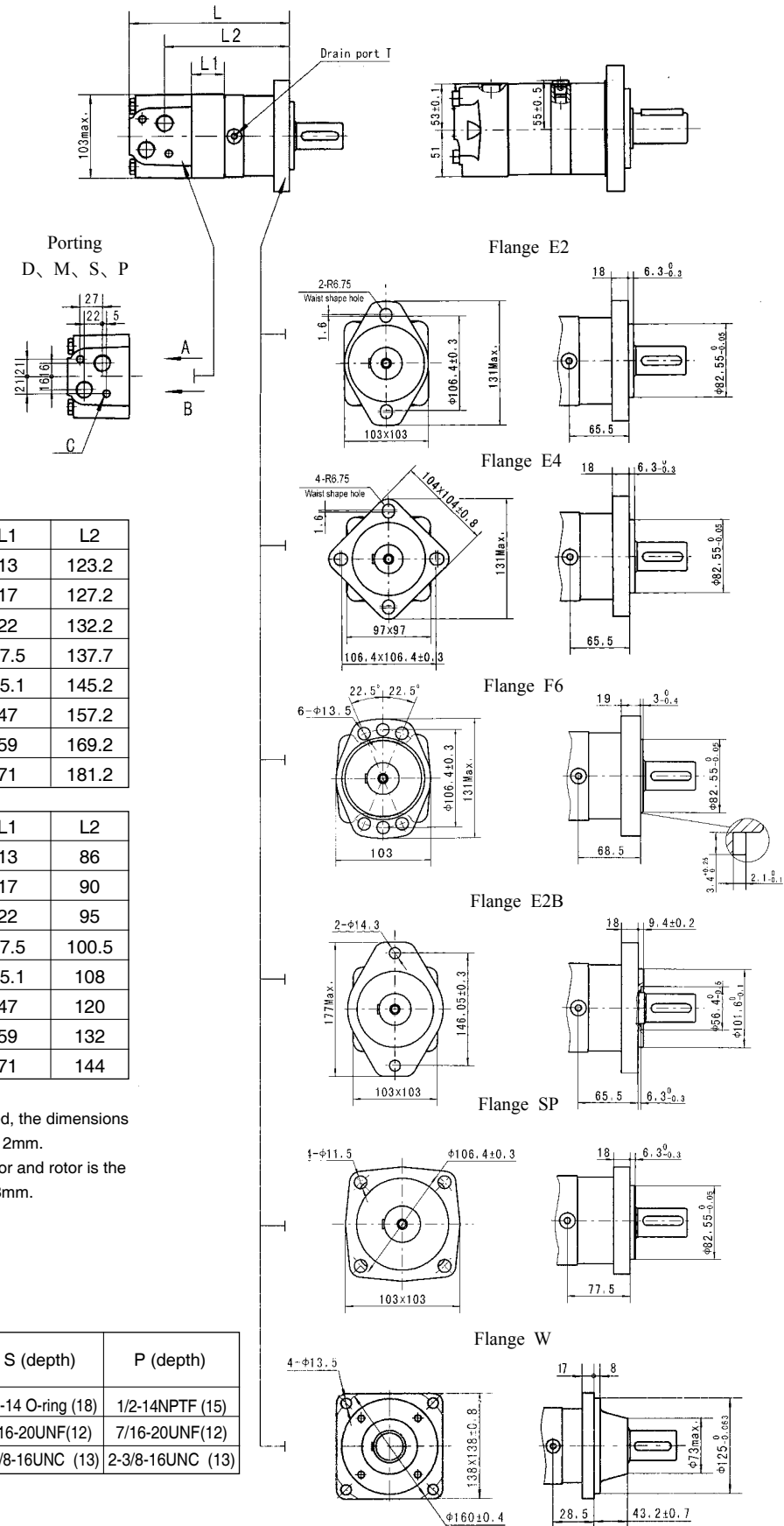
		Pressure (MPa)					
		Max.cont.			Max.int.		
		3.5	7	9	10	12	14
Flow (L/min)	15	185	362	474	512	588	660
		40	39	38	37	35	33
	30	184	364	475	514	590	661
		80	78	77	76	74	72
	40	180	362	473	513	588	659
		106	104	103	102	100	97
Max.cont.	50	160	360	472	511	586	658
		133	131	130	129	128	125
	60	150	359	471	510	585	657
		157	156	155	154	152	150
	75	130	353	465	504	584	651
		200	198	196	195	194	193
Max.int.	90	105	350	462	500	580	647
		238	235	234	232	230	227

Torque (N•m) 520
Speed (rpm) 276

cont.
int.



MOMS DIMENSIONS AND MOUNTING DATA



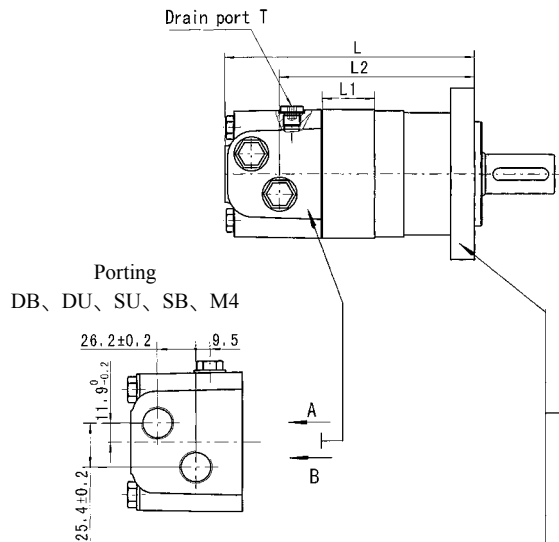
Model	L	L1	L2
MOMS-80	167	13	123.2
MOMS-100	171	17	127.2
MOMS-125	176	22	132.2
MOMS-160	181.5	27.5	137.7
MOMS-200	189	35.1	145.2
MOMS-250	201	47	157.2
MOMS-315	213	59	169.2
MOMS-375	225	71	181.2

Model	L	L1	L2
MOMS-80-W	129.4	13	86
MOMS-100-W	133.4	17	90
MOMS-125-W	138.4	22	95
MOMS-160-W	143.9	27.5	100.5
MOMS-200-W	151.4	35.1	108
MOMS-250-W	163.4	47	120
MOMS-315-W	175.4	59	132
MOMS-375-W	187.4	71	144

Note:1) If the mounting SP is used, the dimensions of L and L2 should plus 12mm.
2) The thickness of the stator and rotor is the dimension of L1 plused 3mm.

Code Mounting	D (depth)	M (depth)	S (depth)	P (depth)
P(A,B)	G1/2(18)	M22x1.5(18)	7/8-14 O-ring (18)	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)

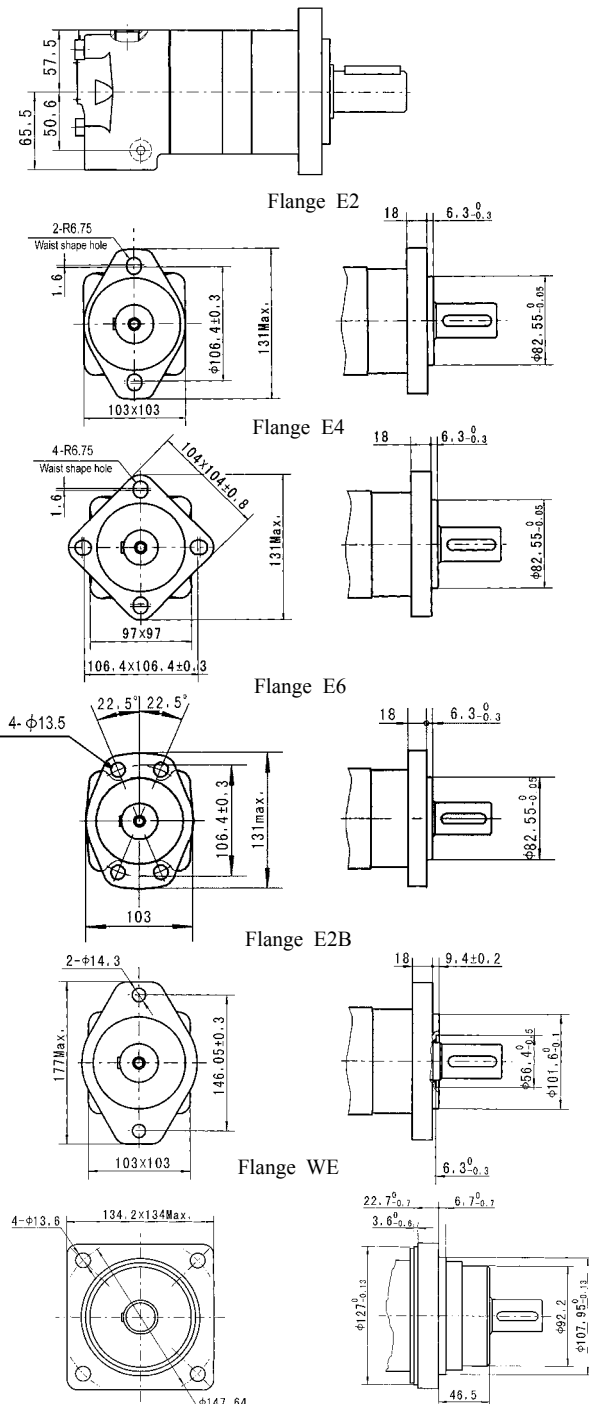
MOMSE DIMENSIONS AND MOUNTING DATA



Model	L	L1	L2
MOMSE-80	171	13	123.2
MOMSE-100	175	17	127.2
MOMSE-125	180	22	132.2
MOMSE-160	185.5	27.5	137.7
MOMSE-200	193	35.1	145.2
MOMSE-250	205	47	157.2
MOMSE-315	217	59	169.2
MOMSE-375	229	71	181.2

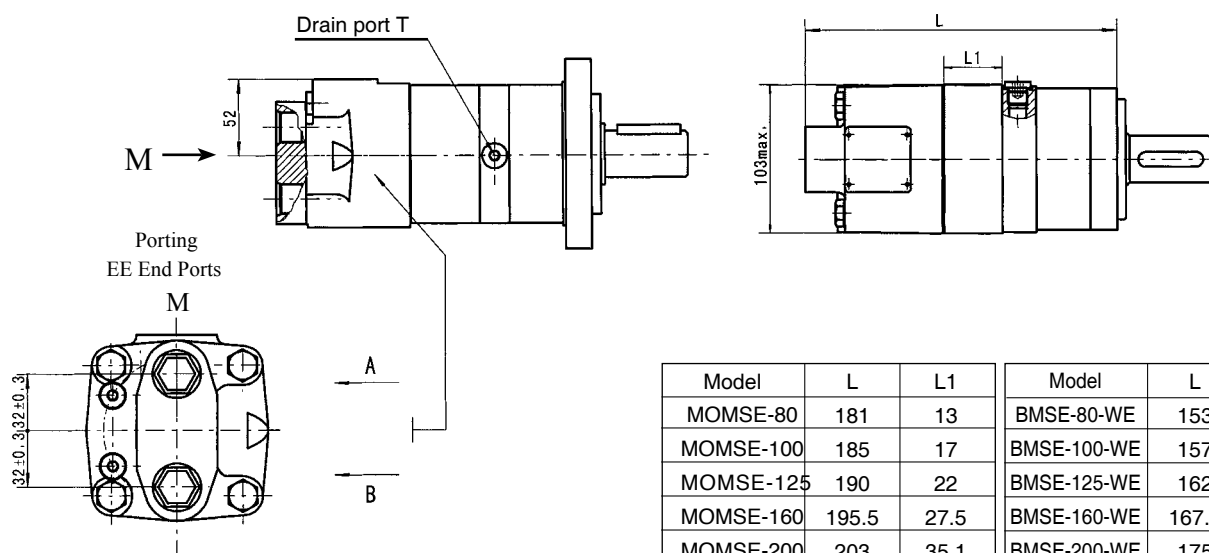
Model	L	L1	L2
MOMSE-80-WE 143	143	13	95
MOMSE-100-WE 147	147	17	99
MOMSE-125-WE 152	152	22	104
MOMSE-160-WE 157.5	157.5	27.5	109.5
MOMSE-200-WE 165	165	35.1	117
MOMSE-250-WE 177	177	47	129
MOMSE-315-WE 189	189	59	141
MOMSE-375-WE 201	201	71	153

Note: The thickness of the stator and rotor is the dimension of L1 plus 3mm.



Code Mounting	DB (depth)	DU (depth)	SU (depth)	SB (depth)	M4 (depth)
P(A,B)	G1/2 (18)	G1/2 (18)	7/8-14 O-ring (18)	7/8-14 O-ring (18)	M22 x 1.5 (18)
T	G1/4 (12)	7/16-20UNF(12)	7/16-20UNF(12)	G1/4 (12)	M14 x 1.5 (12)

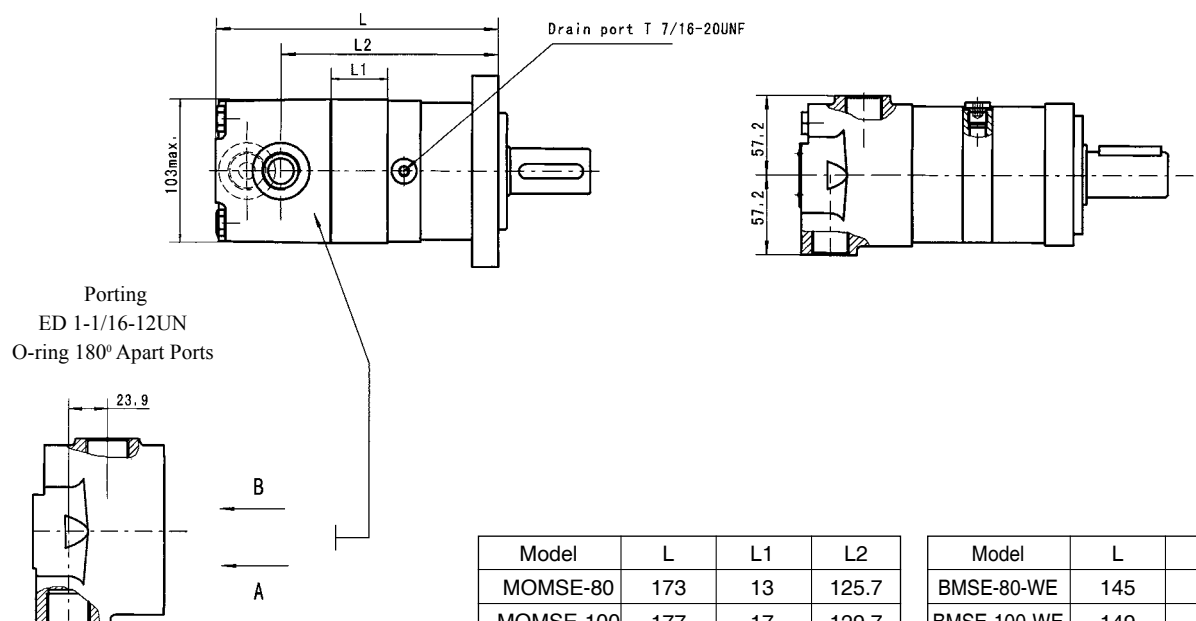
MOMSE DIMENSIONS AND MOUNTING DATA



Code Mounting	EE-D (depth)	EE-M2 (depth)	EE-S2 (depth)
P(A,B)	G1/2 (18)	M22 x 1.5 (18)	7/8-14 O-ring (18)
T	G1/4 (12)	M14 x 1.5 (12)	7/16-20UNF(12)

Model	L	L1	Model	L	L1
MOMSE-80	181	13	BMSE-80-WE	153	13
MOMSE-100	185	17	BMSE-100-WE	157	17
MOMSE-125	190	22	BMSE-125-WE	162	22
MOMSE-160	195.5	27.5	BMSE-160-WE	167.5	27.5
MOMSE-200	203	35.1	BMSE-200-WE	175	35.1
MOMSE-250	215	47	BMSE-250-WE	187	47
MOMSE-315	227	59	BMSE-315-WE	199	59
MOMSE-375	239	71	BMSE-375-WE	211	71

Note: The thickness of the stator and rotor is the dimension of L1 plus 3mm.



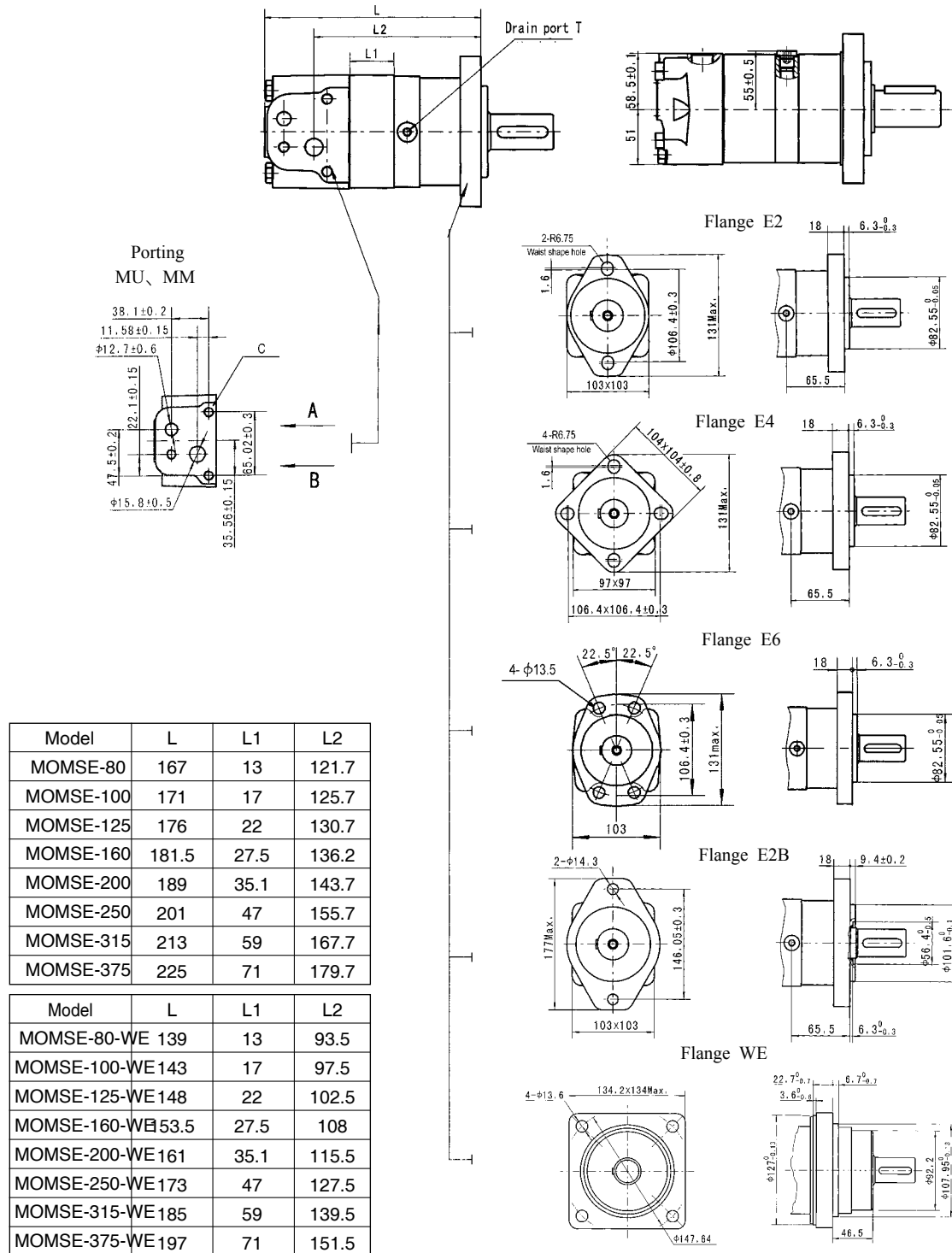
Code Mounting	ED (depth)
P(A,B)	1-1/16-12UN O-ring (18)
T	7/16-20UNF(12)

Model	L	L1	L2
MOMSE-80	173	13	125.7
MOMSE-100	177	17	129.7
MOMSE-125	182	22	134.7
MOMSE-160	187.5	27.5	140.2
MOMSE-200	195	35.1	147.7
MOMSE-250	207	47	159.7
MOMSE-315	219	59	171.7
MOMSE-375	231	71	183.7

Model	L	L1	L2
BMSE-80-WE	145	13	97.5
BMSE-100-WE	149	17	101.5
BMSE-125-WE	153	22	106.5
BMSE-160-WE	158.5	27.5	112
BMSE-200-WE	166	35.1	119.5
BMSE-250-WE	179	47	131.5
BMSE-315-WE	191	59	143.5
BMSE-375-WE	203	71	155.5

Note: The thickness of the stator and rotor is the dimension of L1 plus 3mm.

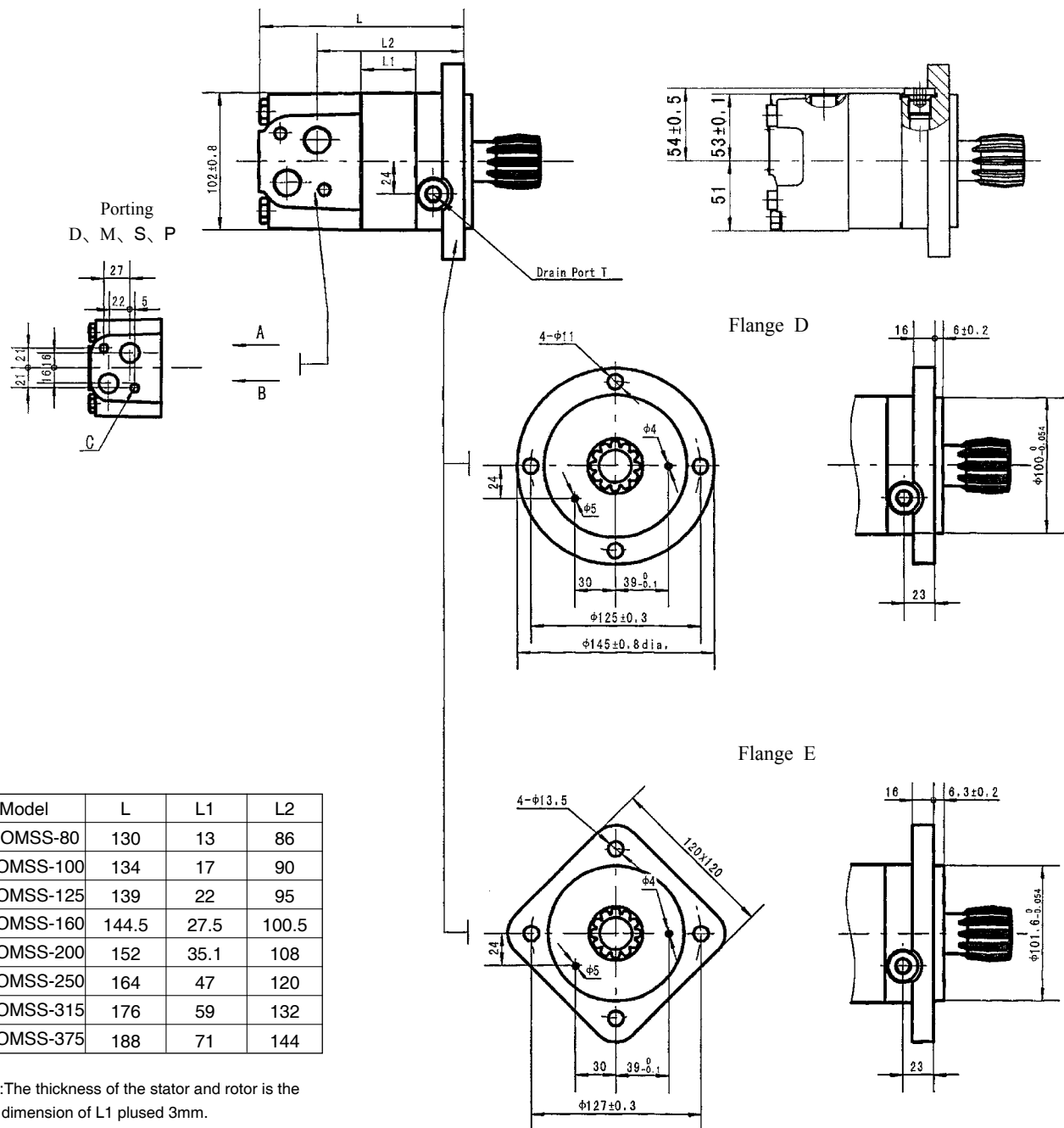
MOMSE DIMENSIONS AND MOUNTING DATA



Note:1) If the porting G, M2, S2 is used, the dimensions of L2 should plus 1.5mm.
2) The thickness of the stator and rotor is the dimension of L1 plus 3mm.

Code	MU	MM
Mounting		
P(A,B)	ø12.7, ø15.8	ø12.7, ø15.8
T	7/16-20UNF(12)	G1/4 (12)
C	3 x 3/8-16UNC	3 x M10

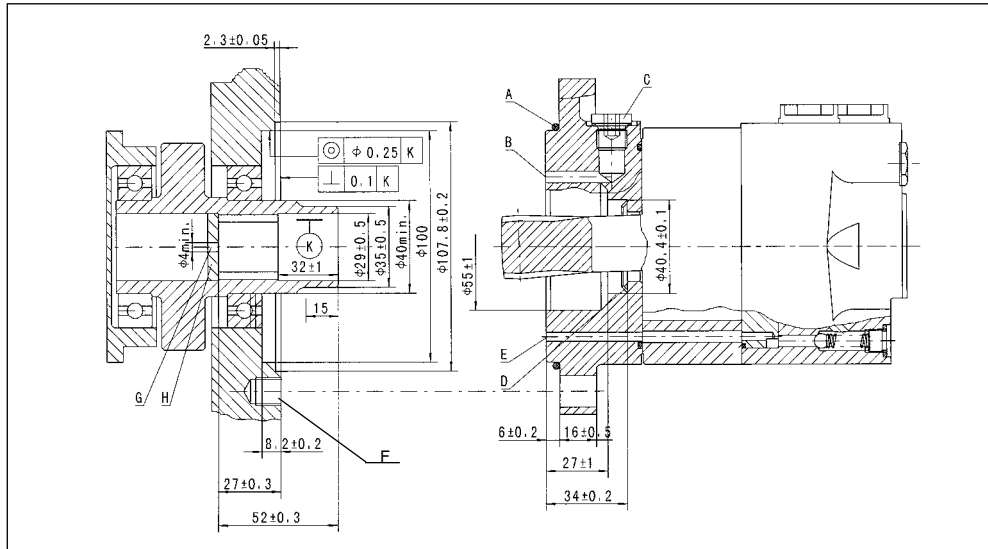
MOMSS DIMENSIONS AND MOUNTING DATA



Code Mounting	D (depth)	M (depth)	S (depth)	P (depth)
P(A,B)	G1/2 (18)	M22 x 1.5 (18)	7/8-14 O-ring (18)	1/2-14NPTF (15)
T	G1/4 (12)	M14 x 1.5 (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)



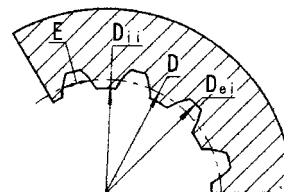
MOMSS DIMENSIONS AND MOUNTING DATA



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

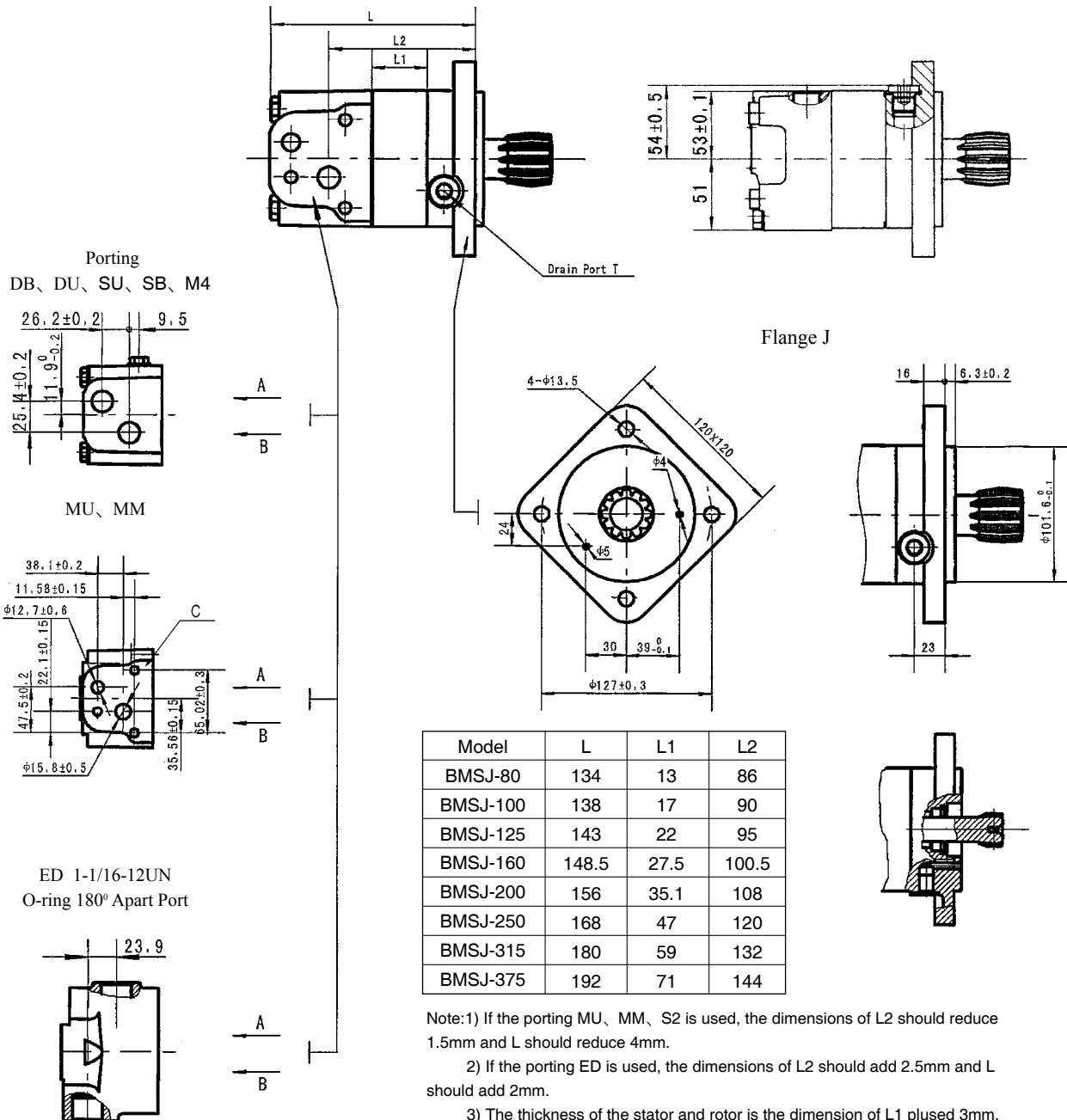
INTERNAL SPLINE DATA FOR THE ATTACHED COMPONENT

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



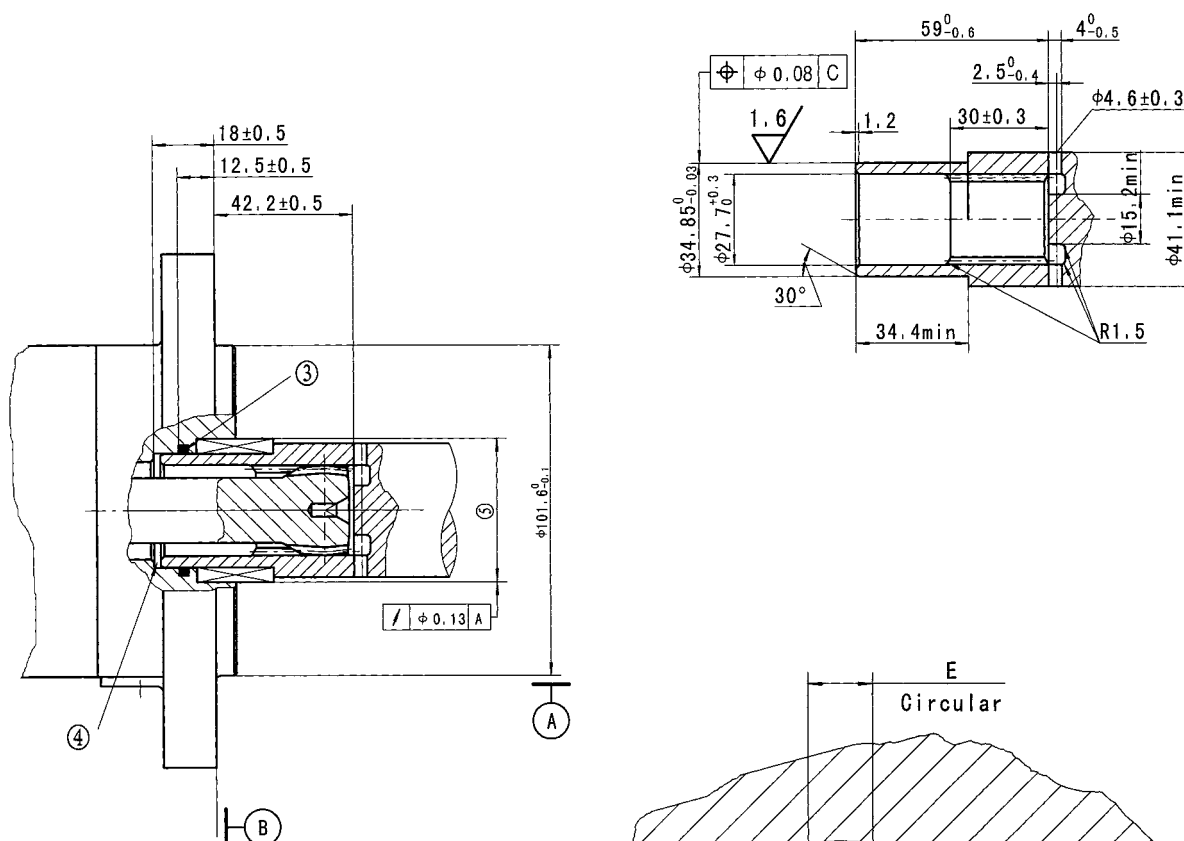
Hardening Specification: HRC 62 ± 2
Effective case depth 0.7 ± 0.2

MOMSJ DIMENSIONS AND MOUNTING DATA



Code Mounting	DB (depth)	DU (depth)	SU (depth)	SB (1depth)	M4 (depth)	MU	MM	ED (depth)
P(A,B)	G1/2 (18)	G1/2 (18)	7/8-14 O-ring (18)	7/8-14 O-ring (18)	M22 x 1.5 (18)	φ12.7, φ15.8	φ12.7, φ15.8	1-1/16-12UN (18)
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)	7/16-20UNF(12)
C			--			3 x 3/8-16UNC	3 x M10	--

MOMSJ DIMENSIONS AND MOUNTING DATA



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	25.4
Major Dia.	D_{ei}	$27.6^{+0.14}_0$
Minor Dia.	D_{ii}	$23.1^{+0.12}_0$
Space Width [Circular]	E	4.282 ± 0.036
Dimension between two pins (23.38)	M_e	19.02-19.19

① Internal spline in mating part to be per data. Specification material to be ASTM A304, 8620H. Vacuum degassed alloy steel carburize to a hardness of 58-62HRC with case depth (to 50HRC) of 0.75-1 [.030-.040] (dimensions apply after heat treat).

② Mating part to have critical dimensions as shown, Oil holes must be provided and open for proper oil circulation.

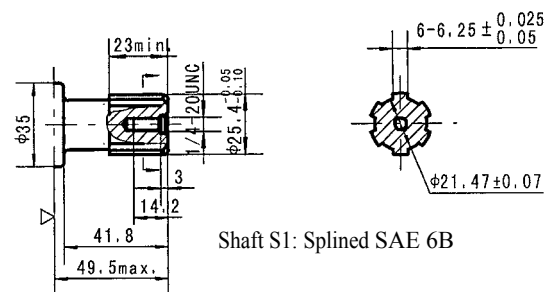
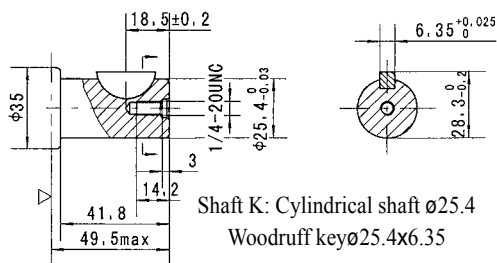
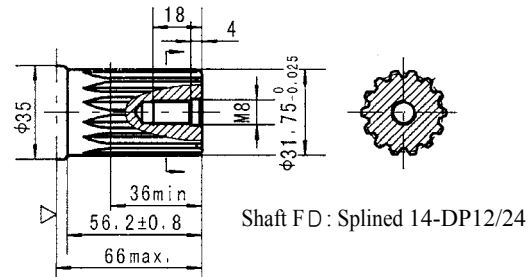
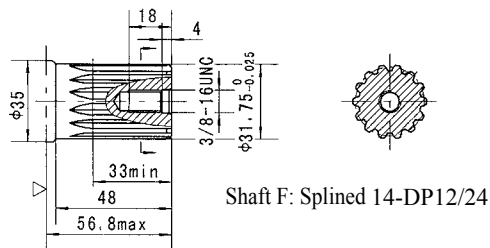
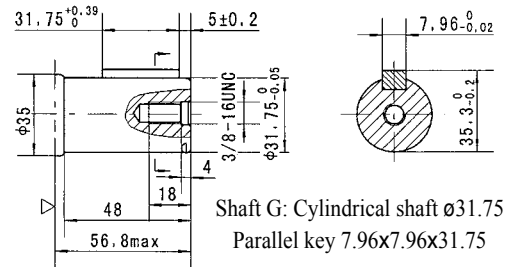
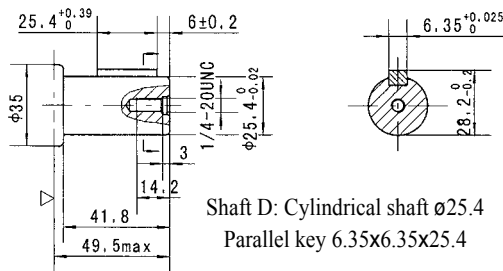
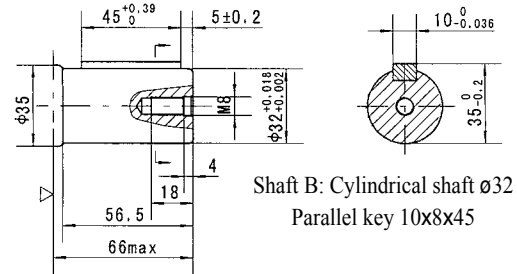
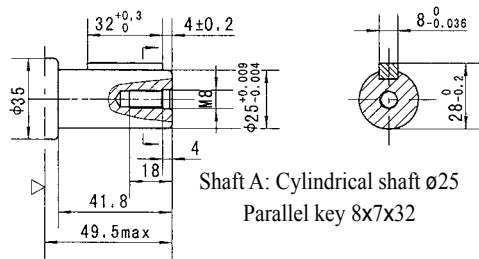
③ Some means of maintaining clearance between shaft and mounting flange must be provided.

④ Seal to be furnished with motor for proper oil circulation thru splines.

⑤ Counterbore designed to adapt to a standard sleeve bearing 35.010-35.040 [1.3784-1.3795] ID by 44.040-44.070 [1.7339-1.7350] O.D. (Oilite Bronze Sleeve Bearing AAM3544-22).

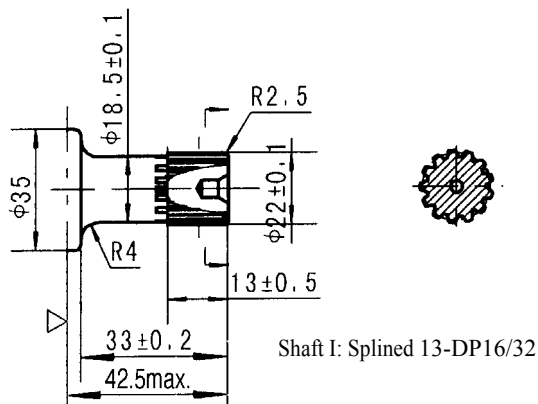
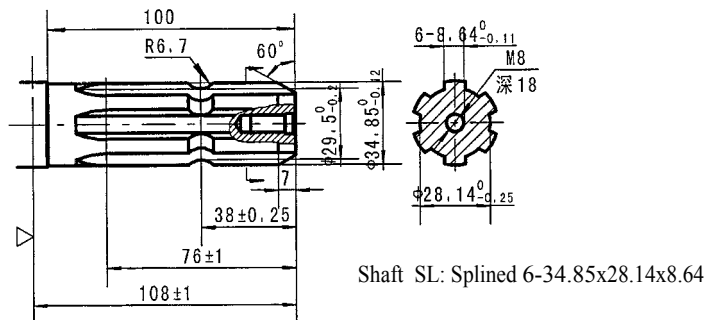
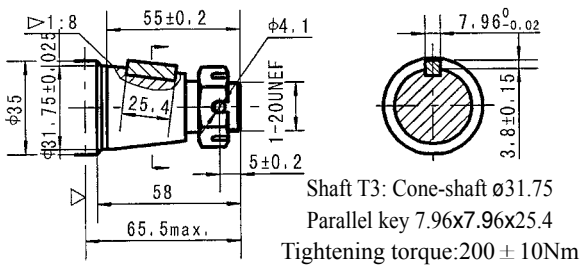
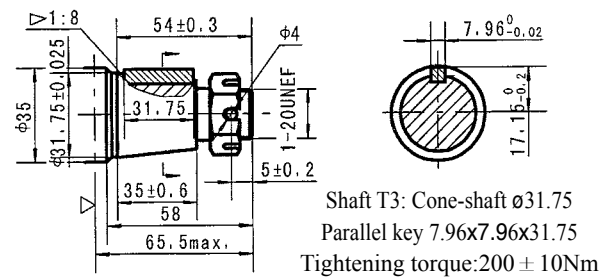
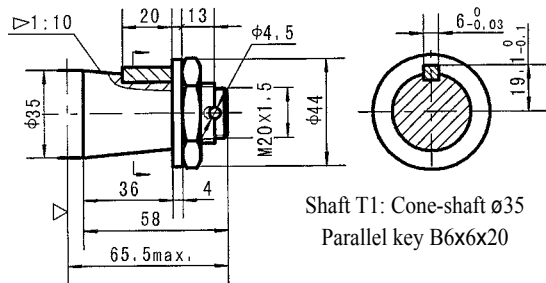
C This surface to be diameter of output shaft.

SHAFT EXTENSIONS FOR MOMS(E) MOTORS



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

SHAFT EXTENSIONS FOR MOMS(E) MOTORS

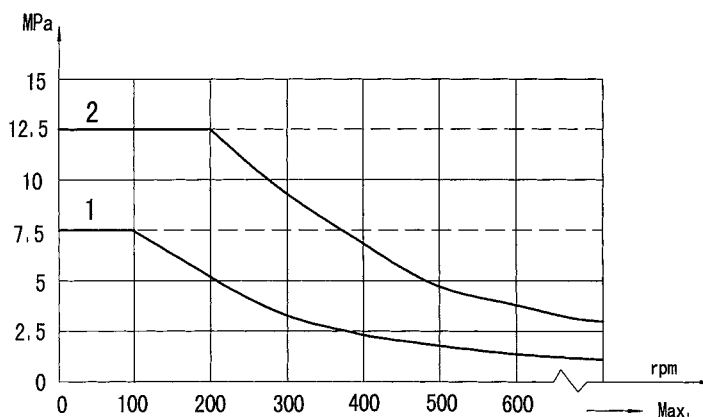
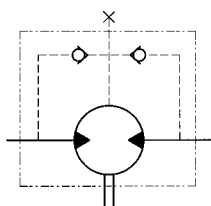


- ▷ Motor Mounting Surface(Dimension corresponding mounting E2, by analogy with others)
Note: Mounting SP is the same with shaft mode T1、D、B、F and G.



MOMS(E) Series Hydraulic Motor

Permissible shaft seal pressure

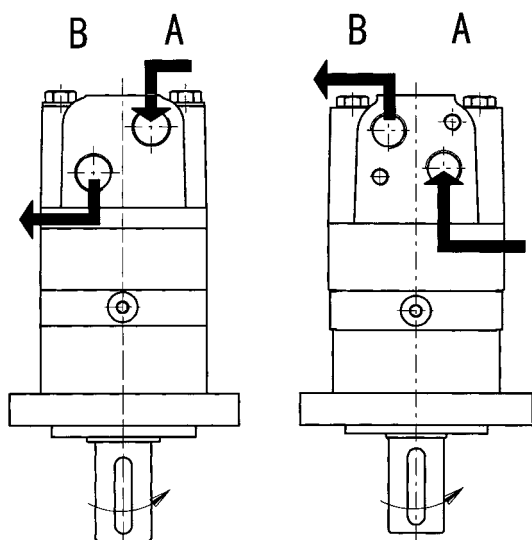


Note: 1. Chart for standard shaft seal;
2. Chart for high pressure shaft seal.

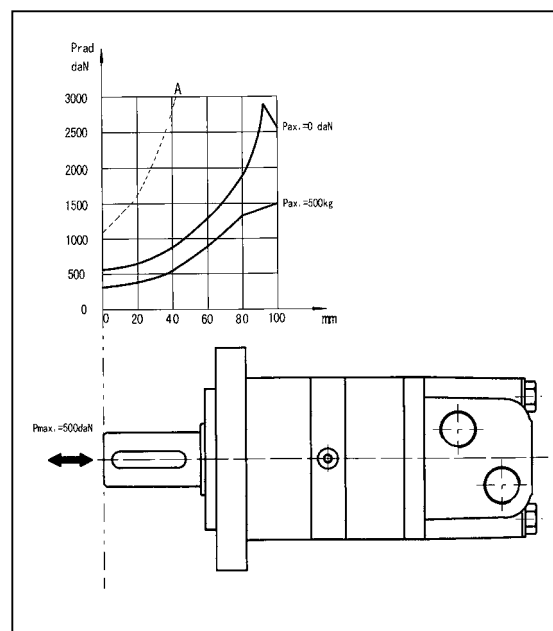
In applications without drain line, output shaft seal exceeds a bit of the pressure in the return line. When applications use the drain line, the pressure of output shaft seal equals the pressure in drain line.

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.



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
MOMS							

1	2	3	4	5	6	7	8
MOMSS							

Pos.1	2	3		4		5		6		7		8									
Code	Disp.	Flange		Output Shaft		Port and Drain Port		Rotation Direction		Paint		Unusually Function									
MOMS	80	E2	2-Ø13.5 Rhomb-flange Ø106.4, pilot Ø82.5 × 6.3	A	Shaft Ø25 , parall key 8 × 7 × 32	D	G1/2 Manifold Mount 2-M10 , G1/4	Omit	Standard	00	No paint	Omit	Standard								
	100	E4	4-Ø13.5 Rhomb-flange Ø106.4, pilot Ø82.5 × 6.3	B	Shaft Ø32 , parall key 10 × 8 × 45									M	M22 × 1.5 Manifold Mount 2-M10 , M14 × 1.5	R	Opposite	B	Black	F	Free Running
				D	Shaft Ø25.4 , parll key6.35 × 6.35 × 25.4																
	125	F6	6-Ø13.5 Rhomb-flange Ø106.4, pilot Ø82.5 × 2.6	G	Shaft Ø31.75 , parll key 7.96 × 7.96 × 31.75									F	Shaft Ø31.75 , splined tooth 14-DP12/24	FD	Long Shaft Ø31.75 , splined tooth 14-DP12/24	SL	shaft Ø34.85,Splined key 6-34.85 × 28.14 × 8.64		
	160	W	4-Ø13.5 Wheel-flange Ø160 , pilot Ø125 × 8	T1	Cone-shaft Ø35 ,parll key B6 × 6 × 20									T3	Cone-shaftØ31.75 , parll key 7.96 × 7.96 × 31.75					S1	Shaft Ø25.4 ,splined tooth SAE 6B
	200	E2B	2-Ø14.3 Rhomb-flange Ø146.05, pilot Ø101.6 × 9.4	I	Sub-shaft Ø22, splined tooth 13-DP16/32																
	250	SP	4-Ø11.5 Square-flange Ø106.4, pilot Ø82.5 × 6.3																		
	315																				
MOMSS	375	D	4-Ø11 Circle-flange Ø125 , pilot Ø100 × 6	Omit	Short shaft 12-DP12/24																
		E	4-Ø13.5 Square-flange Ø127 , pilot Ø101.6 × 6.3																		

Note: When the table is used, please fill the code of left rows in the table and give us, which the code information 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. SP for T1、D、B、F、G.

Order Information

1	2	3	4	5	6	7	8
MOMSE							

1	2	3	4	5	6	7	8
MOMSJ							

Pos.1	2	3	4	5	6	7	8
Code	Disp.	Flange	Output Shaft	Port and Drain Port	Rotation Direction	Paint	Unusually Function
MOMSE	80	E2 2-Ø13.5 Rhomb-flange Ø106.4, pilot Ø82.5 × 6.3	A Shaft Ø25 , parllel key 8 × 7 × 32 B Shaft Ø32 , parllel key 10 × 8 × 45 K Shaft Ø25.4 , Woodruff key Ø25.4 × 6.35	MU 1/2" ,5/8" Crosshole Manifold 3 × 3/8-16UNC,7/16-20UNF	Omit R	Standard Opposite	Omit LL F LS
	100	E4 4-Ø13.5 Rhomb-flange Ø106.4, pilot Ø82.5 × 6.3	G Shaft Ø31.75 , parllel key 7.96 × 7.96 × 31.75	MM 1/2" ,5/8" Crosshole Manifold 3 × M10,G1/4			
	125	E2B 2-Ø14.3 Rhomb-flange Ø146.05, pilot Ø101.6 × 9.4	F Shaft Ø31.75 , splined tooth 14-DP12/24	EE-D G1/2,G1/4			
	160	E6 4-Ø13.5 Rhomb-flange Ø106.4, pilot Ø82.5 × 6.3	T4 Cone-shaftØ31.75 , parllel key 7.96 × 7.96 × 25.4	EE-M2 M22 × 1.5,M14 × 1.5			
	200	WE 4-Ø13.6Wheel-flangeØ147.6, pilot Ø107.95×6.4	S1 Shaft Ø25.4 ,splined tooth SAE 6B	EE-S2 7/8-14UNF O-ring,7/16-20 UNF			
	250		I Sub-shaft Ø22 , splined tooth 13-DP16/32	ED 1-1/16-12UN O-ring,7/16-20 UNF			
	315			DB G1/2,G1/4			
	375			DU G1/2,7/16-20 UNF			
MOMSJ	J	4-Ø13.5 Square-flange Ø127 , pilot Ø101.6 × 6.3	Omit Short shaft12- DP12/24	SB 7/8-14UNF O-ring,G1/4 SU 7/8-14UNF O-ring,7/16-20 UNF M4 M22 × 1.5,M14 × 1.5			