

C10:

BMSY, BMER, BMT & BMV Series

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The manufacturer reserves the right to change the technical specifications without notice

USAGE GUIDE

For optimal working, we recommend the following:

1. **Oil Temperature**
Normal: 20°C – 60°C
Maximum: 90°C (maximum one hour)
2. **Filtering & Oil Cleanliness**
System Filtration: 10µm nominal
A magnet should be installed in the filter or at the bottom of the tank to prevent ingress into the system
3. **Viscosity**
Based on external ambient temperature and type of application
Recommended Oil Viscosity is 32 – 68mm²/s
4. The motors can be operated in Parallel or Series
When the pressure of the case exceeds 20 Bar, it is recommended to install an external drain line to the tank
5. Various output shaft and flange options are available
- 5.1 Various Manifold Mount Valving available
6. The optimal operation condition should be at the 1/3 – 2/3 of the rated operation
7. In order to obtain a longer life, operating motor should operate for first hour under 30% of rated pressure
Motor must be filled with oil prior to being put under load

SPECIFICATION DATA OF HYDRAULIC MOTOR

Distribution Type	Model	Displacement (cm ³ /rev.)	Max. Operating Pressure (Bar)	Speed Range (rpm)	Max. Output Power Cont. (kw)	Max. Output Power Int. (kw)
Disc Distribution	BMSY	80 – 475	225	30 – 800	20	25
	BMER	125-750	276	30 - 470	18	21
	BMT	160 – 800	240	30 – 705	35	40
	BMV	315 - 800	280	10 - 446	43	52



BMSY SERIES HYDRAULIC MOTOR

The BMSY Series motor utilizes its advanced Geroler gear disc valve design to achieve high efficiencies and the ability to perform at high pressures and operating speeds allowing the designer to put the power where it's needed.

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 fitted with tapered roller bearings that permit high axial and radial forces. Smooth running over the entire speed range
- High starting torque
- Constant operating torque over a wide speed range

Main Specifications

Type		BMSY								
		80	100	125	160	200	503	315	400	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 (Nm)	Cont.	225	290	365	485	586	708	880	880	910
	Int.	250	320	400	540	645	806	960	960	960
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 (Bar)	Cont.	205	205	205	210	210	200	200	160	140
	Int.	225	225	225	225	225	225	225	175	150
	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 (Bar)	Cont.	250	250	250	250	250	250	250	250	250
	Int.	300	300	300	300	300	300	300	300	300
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 seconds per minute



PERFORMANCE DATA

BMSY80 [80.6cm³/rev.]

		Pressure (Bar)						Max.Cont	Max.Int.
		35	70	105	140	175	205	225	
Flow (L/min)	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	
Max. Cont.	50	30	77	117	153	192	224	248	
		612	603	592	581	572	558	542	
Max. Int.	60	28	77	117	153	192	224	243	
		735	726	718	703	687	673	646	
Max. Cont.	65	26	75	116	151	188	217	236	
		794	786	773	760	744	722	706	
Max. Int.	80	24	72	109	142	176	206	227	
		981	968	955	925	893	870	832	

BMSY100 [100.8cm³/rev.]

		Pressure (Bar)						Max. Cont.	Max.Int.
		35	70	105	140	175	205	225	
Flow (L/min)	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	
Max. Cont.	50	40	88	135	194	247	286	315	
		486	483	473	462	450	430	420	
Max. Int.	60	37	88	132	185	244	283	312	
		588	584	574	562	550	538	520	
Max. Cont.	75	35	80	130	180	240	279	310	
		740	735	720	705	696	676	653	
Max. Int.	90	30	75	124	170	236	271	303	
		850	840	810	787	770	750	747	

BMSY125 [125cm³/rev.]

		Pressure (Bar)						Max.Cont	Max.Int.
		35	70	105	140	175	205	225	
Flow (L/min)	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	
Max. Cont.	50	50	115	176	248	315	362	397	
		391	386	378	365	352	339	308	
Max. Int.	60	45	113	171	241	308	358	397	
		469	461	450	437	425	400	372	
Max. Cont.	75	45	110	167	240	306	352	389	
		588	574	560	544	526	505	481	
Max. Int.	90	40	105	162	237	301	343	378	
		710	696	680	661	646	628	610	

BMSY160 [154cm³/rev.]

		Pressure (Bar)						Max. Cont.	Max.Int.
		35	70	105	140	175	210	225	
Flow (L/min)	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	
Max. Cont.	50	70	148	225	305	372	445	480	
		313	310	306	298	293	285	272	
Max. Int.	60	68	143	218	296	370	442	480	
		378	376	370	362	353	346	332	
Max. Cont.	75	62	140	211	291	365	439	475	
		475	469	461	450	411	432	414	
Max. Int.	90	59	131	202	286	357	425	460	
		567	561	554	543	532	520	509	

Cont
Int.

Torque (Nm) 301
Speed (rpm) 646



PERFORMANCE DATA

BMSY200 [194cm³/rev.]

		Pressure (Bar)						
		35	70	105	140	175	210	225
Flow (L/min)	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	
Max. Cont.	75	78	176	271	370	472	561	610
		374	370	364	360	352	340	331
Max. Int.	90	68	163	265	361	456	545	599
		443	440	435	428	424	413	400

BMSY250 [243cm³/rev.]

		Pressure (Bar)						
		35	70	105	140	175	200	225
Flow (L/min)	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	
Max. Cont.	75	101	214	340	454	570	670	760
		303	299	294	285	272	260	244
Max. Int.	90	93	209	335	447	559	657	749
		363	359	354	348	340	328	303

BMSY315 [311cm³/rev.]

		Pressure (Bar)						
		35	70	105	140	175	200	225
Flow (L/min)	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	883	976	
	187	185	181	176	169	157	143	
Max. Cont.	75	146	300	445	613	755	875	966
		238	236	232	227	224	220	196
Max. Int.	90	135	284	436	601	740	863	952
		286	283	278	272	265	257	232

BMSY400 [394cm³/rev.]

		Pressure (Bar)					
		35	70	105	140	160	175
Flow (L/min)	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	
Max. Cont.	75	181	372	576	770	891	973
		187	183	177	171	164	153
Max. Int.	90	176	367	571	766	883	965
		226	221	214	208	199	183

Cont
Int.

Torque (Nm) 740
Speed (rpm) 265



PERFORMANCE DATA

BMSY475 [475cm³/rev.]

Pressure (Bar) Max.Cont Max.Int.

35	70	105	140	150
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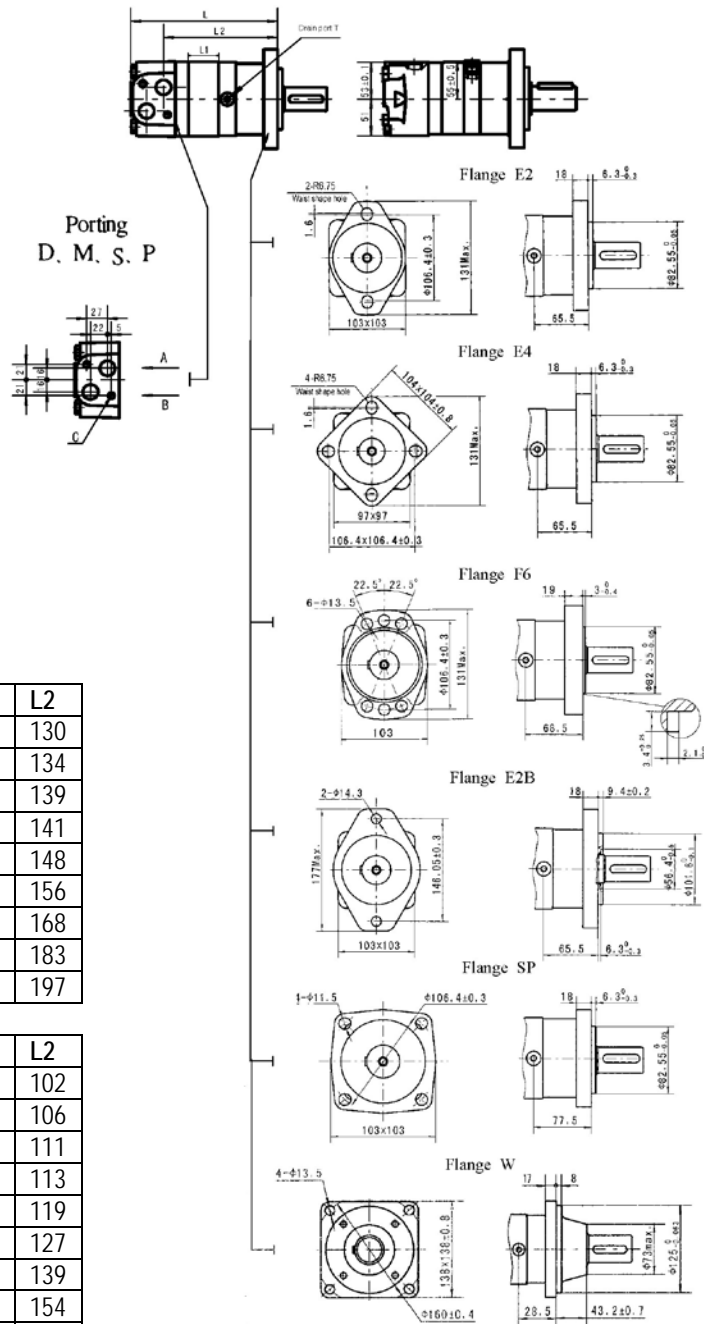
Flow (L/min)	15	218	439	661	892	995
		30	29	28	27	25
30	223	450	676	910	1002	
	61	60	58	56	53	
40	228	461	689	927	1017	
	82	80	77	74	68	
50	224	456	682	920	1008	
	103	101	97	92	86	
60	220	451	677	913	998	
	123	121	118	112	105	
Max. Cont.	75	212	443	664	901	980
		155	153	147	140	132
Max. Int.	90	196	421	643	877	959
		186	184	178	170	157

Torque (Nm) 643
Speed (rpm) 178

Cont
Int.



BMSY DIMENSIONS & MOUNTING DATA



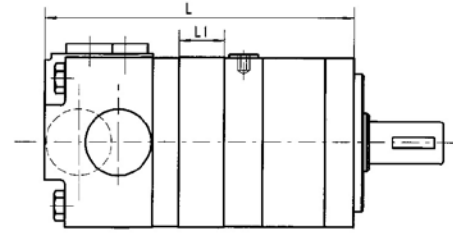
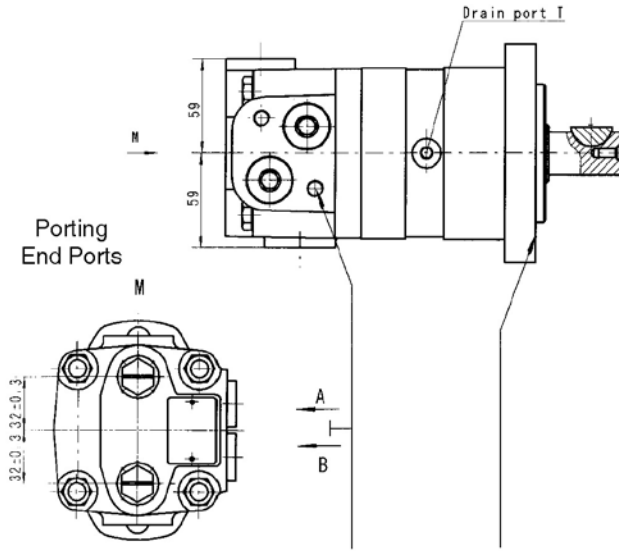
MODEL	L	L1	L2
BMSY-80	176	16	130
BMSY-100	180	20	134
BMSY-125	185	25	139
BMSY-160	187	27	141
BMSY-200	194	34	148
BMSY-250	202	42	156
BMSY-315	214	54	168
BMSY-400	229	69	183
BMSY-475	243	83	197

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

Mounting Code	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)	7/16-29UNF (12)	7/16-20UNF (12)
C	2-M10 (13)	2-M10 (13)	2-3/8-16UNC (13)	2-3/8-16UNC (13)



BMSY DIMENSIONS & MOUNTING DATA

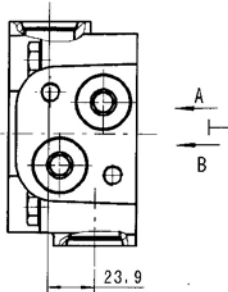


End Ports P(A) B)

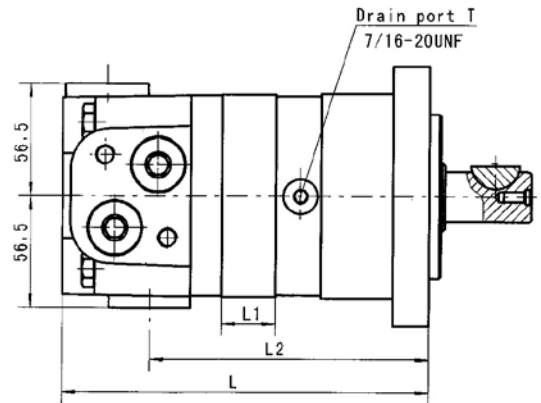
Model	L	L1	Model	L	L1
BMSY-80	176	16	BMSY-80-WE	148	16
BMSY-100	180	20	BMSY-100-WE	152	20
BMSY-125	185	25	BMSY-125-WE	157	25
BMSY-160	187	27	BMSY-160-WE	159	27
BMSY-200	194	34	BMSY-200-WE	166	34
BMSY-250	202	42	BMSY-250-WE	174	42
BMSY-315	214	54	BMSY-315-WE	186	54
BMSY-400	229	69	BMSY-400-WE	201	69
BMSY-475	243	83	BMSY-475-WE	215	83

Code	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)

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



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

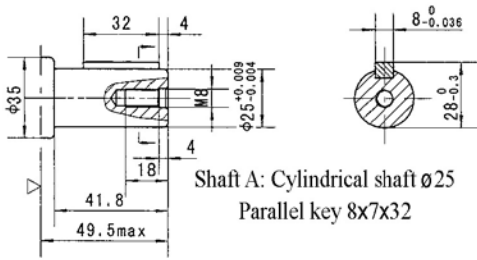


Model	L	L1	L2
BMSY-80	176	16	130
BMSY-100	180	20	134
BMSY-125	185	25	139
BMSY-160	187	27	141
BMSY-200	194	34	148
BMSY-250	202	42	156
BMSY-315	214	54	168
BMSY-400	229	69	183
BMSY-475	243	83	197

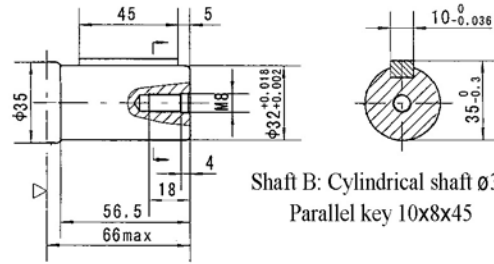
Model	L	L1	L2
BMSY-80-WE	148	16	102
BMSY-100-WE	152	20	106
BMSY-125-WE	157	25	111
BMSY-160-WE	159	27	113
BMSY-200-WE	166	34	119
BMSY-250-WE	178	42	127
BMSY-315-WE	190	54	139
BMSY-400-WE	205	69	154
BMSY-475-WE	219	83	168



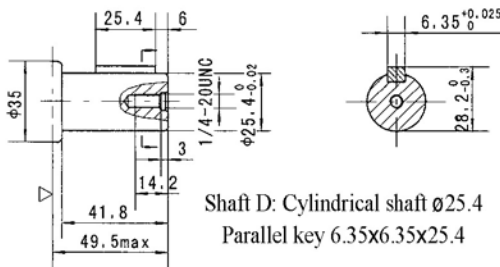
SHAFT EXTENSIONS FOR BMSY MOTORS



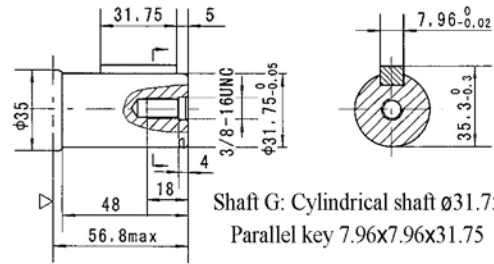
Shaft A: Cylindrical shaft ø25
Parallel key 8x7x32



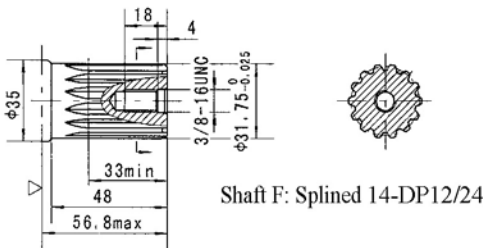
Shaft B: Cylindrical shaft ø32
Parallel key 10x8x45



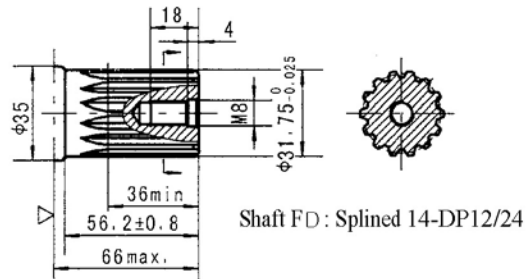
Shaft D: Cylindrical shaft ø25.4
Parallel key 6.35x6.35x25.4



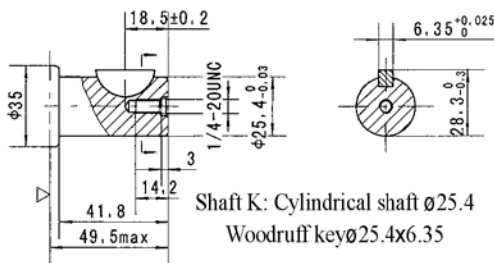
Shaft G: Cylindrical shaft ø31.75
Parallel key 7.96x7.96x31.75



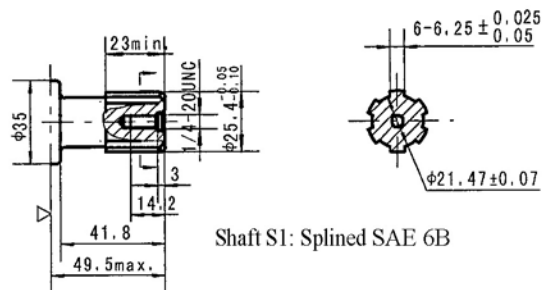
Shaft F: Splined 14-DP12/24



Shaft FD: Splined 14-DP12/24



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

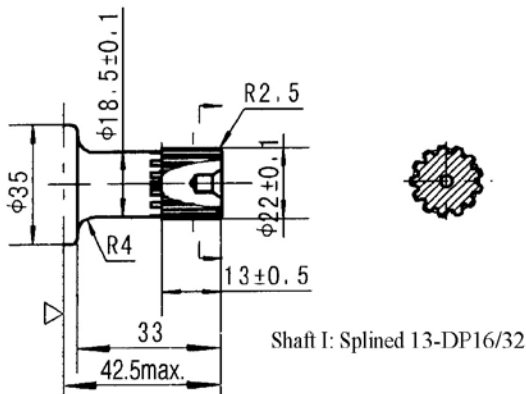
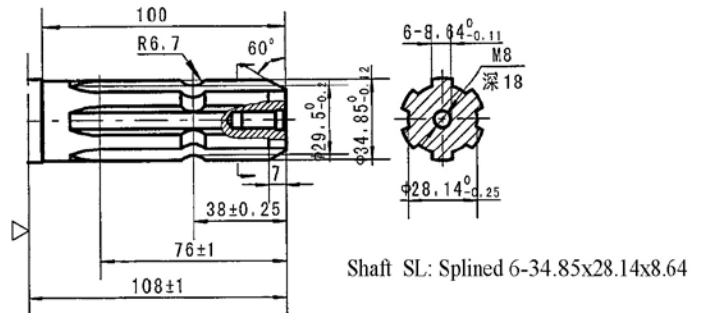
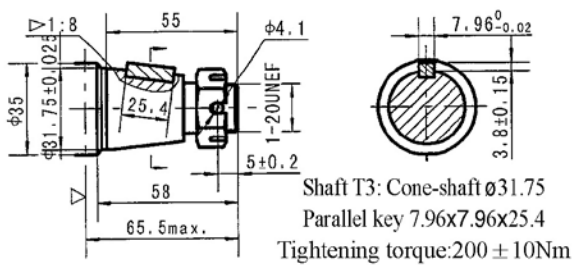
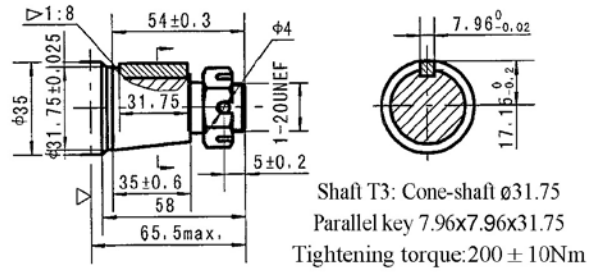
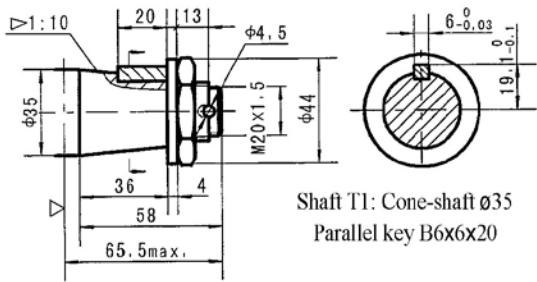


Shaft S1: Splined SAE 6B

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



SHAFT EXTENSIONS FOR BMSY MOTORS



- ▷ 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.



BMSY SERIES HYDRAULIC MOTOR

Permissible shaft seal pressure

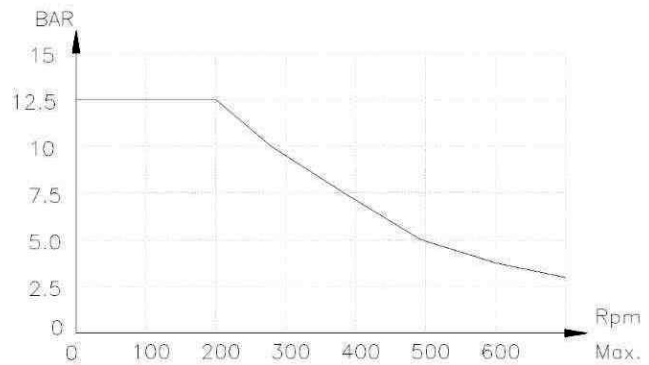
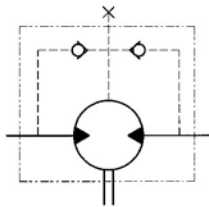
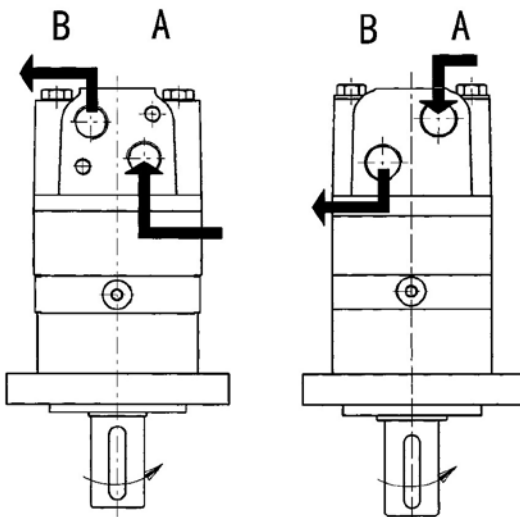


Chart for high pressure shaft seal.

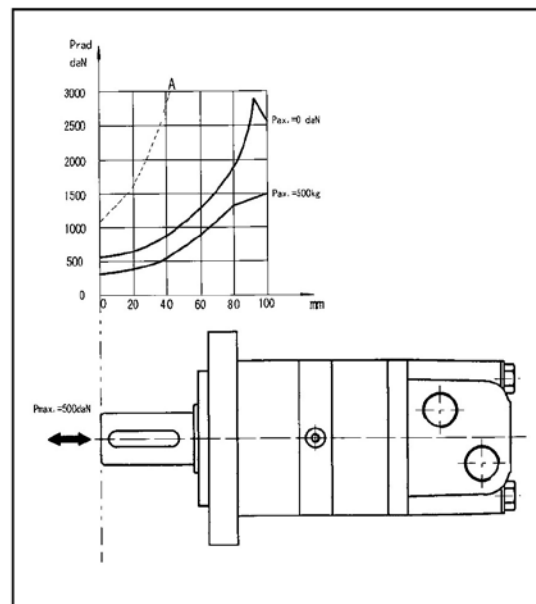
In applications without drain line, output shaft seal exceeds a bit of the pressure in the return line. When applications use the drain line, the pressure of output shaft seal equals the pressure in drain line.

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.



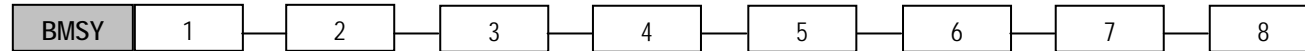
Axial and Radial forces



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.

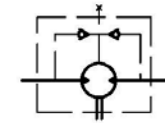
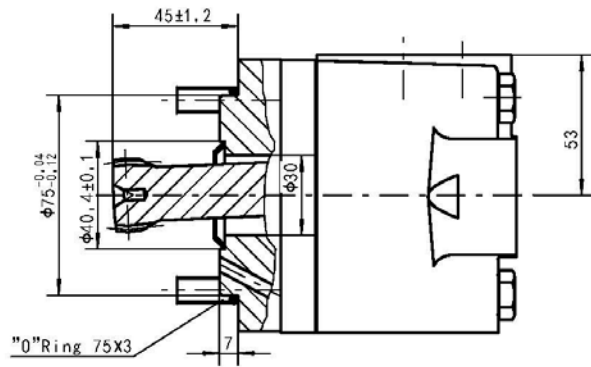
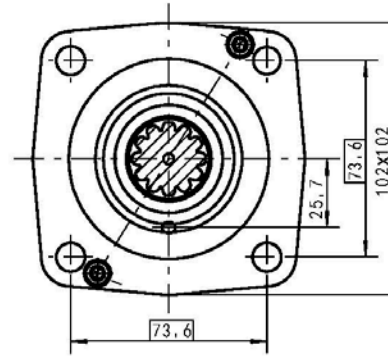
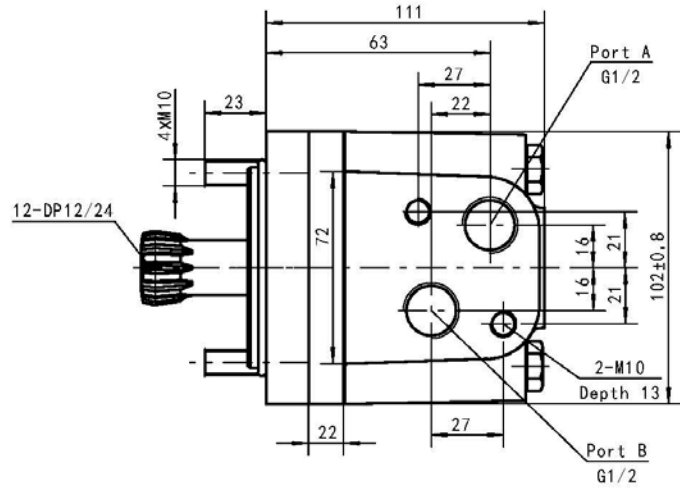


ORDER INFORMATION



1	2	3		4		5		6		7		8	
Code	Disp.	Flange, Pilot, Port		Output Shaft		Ports and Drain Port		Rotation Direction		Paint		Special Addition	
Omit	80 100 125 160 200 250 315 400 475	E2	2-Ø13.5 Rhomb-Flange Ø106.4, Pilot Ø82.5x6.3	A	Shaft Ø25, Parallel Key 8x7x32	D	G1/2 Manifold Mount 2-M10, G1/4	Omit R	Standard Opposite	00 Omit B S	No Paint Blue Black Silver Grey	Omit F LS	Standard Free Running Low Speed
		E4	4-Ø13.5 Rhomb-Flange Ø106.4, Pilot Ø82.5x6.3	B	Shaft Ø32, Parallel Key 10x8x45	M	M22x1.5 manifold Mount 2-M10, M14x1.5						
		F6	6-Ø13.5 Rhomb-Flange Ø106.4, Pilot Ø82.5x6.3	D	Shaft Ø25.4, Parallel Key 6.35x6.35x25.4	S	7/8-14UNF O-Ring Manifold 2-3/8-16, 7/16-20UNF						
		W	4-Ø13.5 Wheel-Flange Ø160, Pilot Ø125x8	G	Shaft Ø31.75, Parallel Key 7.96x7.96x31.75	P	½-14nptf Manifold 2-3/8-16, 7/16-20UNF						
		E2B	2-Ø14.3 Rhomb-Flange Ø146.05, Pilot Ø101.6x9.4	F	Shaft Ø31.75, Splined Key 14-DP12/24	EE-D	G1/2, G1/4 (End Port)						
		SP	4-Ø11.5 Square-Flange Ø106.4, Pilot Ø82.5x6.3	FD	Long Shaft Ø31.75, Splined Key 14-DP12/24	EE-M2	M22x1.5, M14x1.5 (End Port)						
		SL		SL	Shaft Ø34.85, Splined Key 6-34.85x28.14x8.64	EE-S2	7/8-14UNF O-Ring, 7/16-20 UNF (End Port)						
		T1		T1	Cone-Shaft Ø35, Parallel Key B6x6x20	ED	1-1/6-12UN O-Ring, 7/16-20 UNF (180° Apart Ports)						
		T3		T3	Cone-Shaft Ø31.75, Parallel Key 7.96x7.96x31.75								
		S1		S1	Shaft Ø25.4, Splined Key SAE 6B								
I		I	Sub-Shaft Ø22, Splined Key 13-DP16/32										

BMSU SERIES HYDRAULIC MOTOR



Direction of shaft rotation: Standard

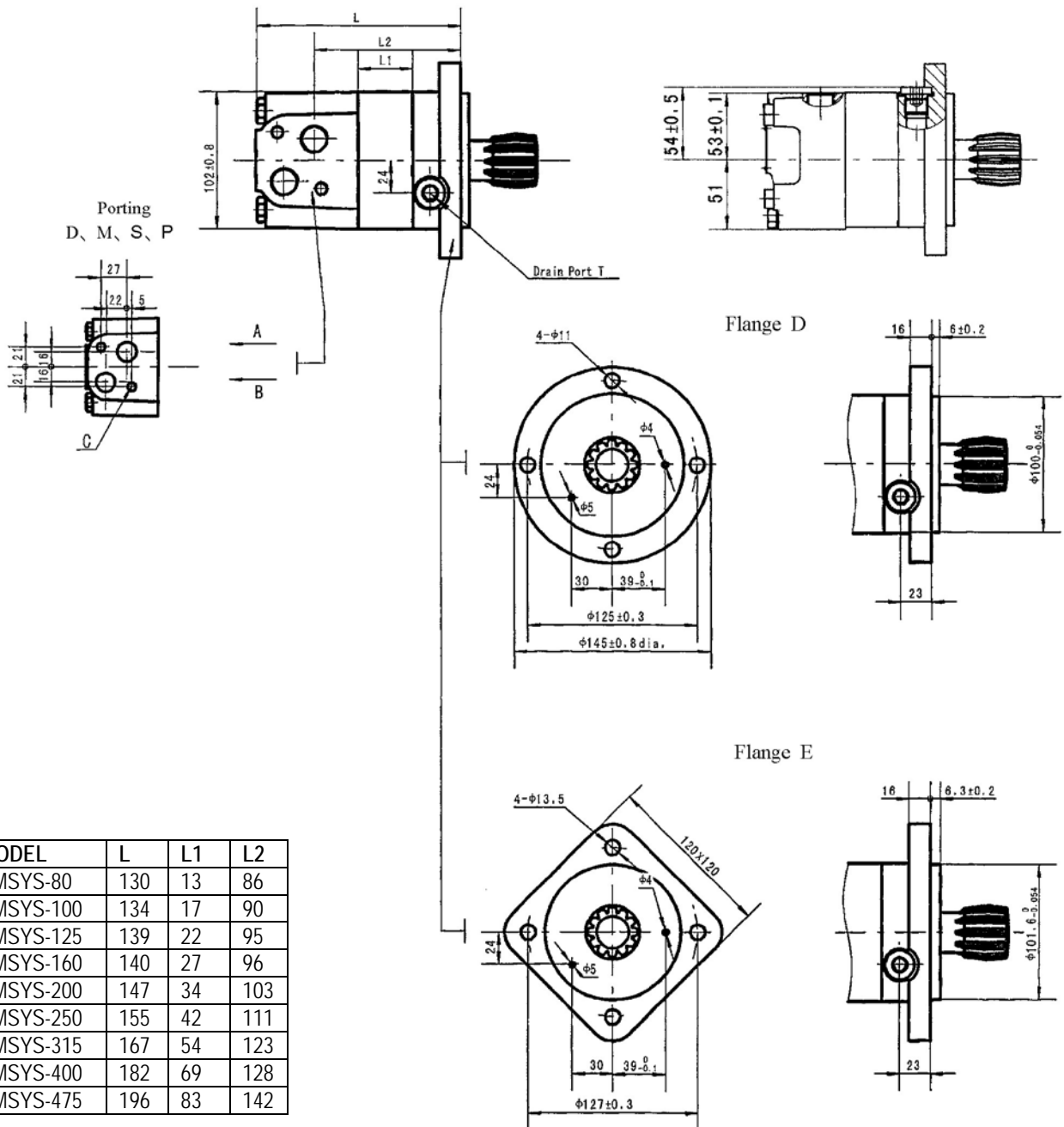
When facing shaft end of motor, shaft to rotate:
 Clockwise when port "A" is pressurized.
 Counter-clockwise when port "B" is pressurized.

Model	L	L1	L2
BMSU-80	102	13	54
BMSU-100	106	17	58
BMSU-125	111	22	63
BMSU-160	116,5	27,5	68,5
BMSU-200	124,1	35,1	76,1
BMSU-250	136	47	88
BMSU-315	148	59	100
BMSU-375	160	71	112

Model			Port			Rotation
			S	A	B	BMSU-125-D



BMSYS DIMENSIONS AND MOUNTING DATA

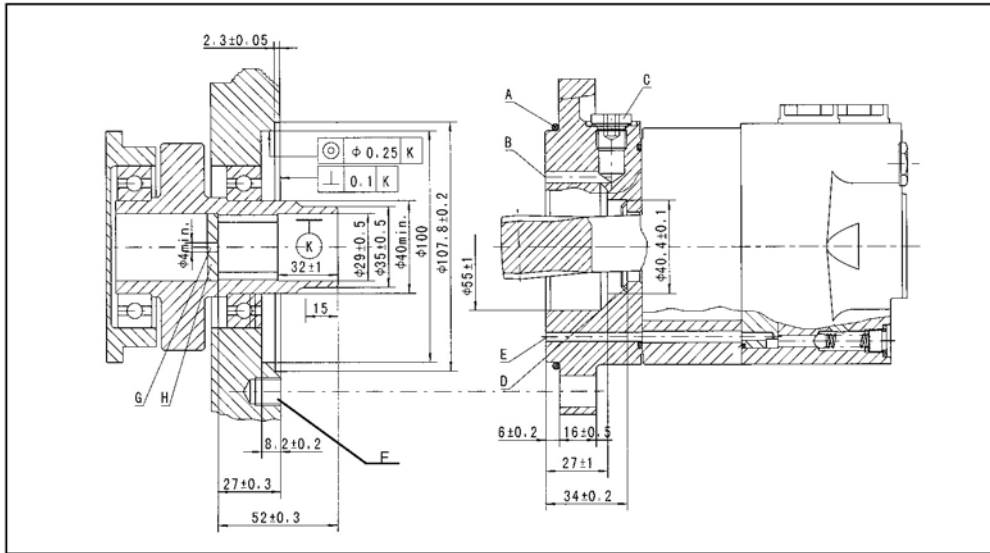


MODEL	L	L1	L2
BMSYS-80	130	13	86
BMSYS-100	134	17	90
BMSYS-125	139	22	95
BMSYS-160	140	27	96
BMSYS-200	147	34	103
BMSYS-250	155	42	111
BMSYS-315	167	54	123
BMSYS-400	182	69	128
BMSYS-475	196	83	142

Code	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)



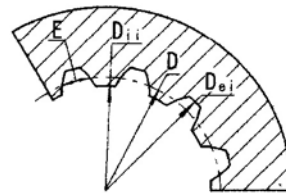
BMSYS DIMENSIONS AND MOUNTING DATA



- 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

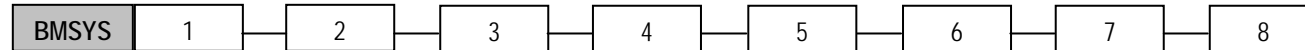
Fillet Root Side Fit		mm
Number of Teeth	Z	12
Diametral Pitch	DP	12/24
Pressure Angle	α_D	30°
Pitch Dia.	D	ø25.4
Major Dia.	D_{e_i}	ø28 ⁰ _{-0.1}
Minor Dia.	D_i	ø23 ^{+0.033} ₀
Space Width [Circular]	E	4.308 ± 0.02



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



ORDER INFORMATION



1	2	3		4		5		6		7		8																	
Code	Disp.	Flange, Pilot, Port		Output Shaft		Ports and Drain Port		Rotation Direction		Paint		Special Addition																	
BMSYS	80	D	4-Ø11 Circle-Flange Ø125, Pilot Ø100x6	Omit	Short Shaft 12-DP12/24	D	G1/2 Manifold Mount 2-M10, G1/4	Omit	Standard	00	No Paint	Omit	Standard																
	100													E	4-Ø13.5 Square-Flange Ø106.4, Pilot Ø82.5x6.3	M	M22x1.5 Manifold Mount 2-M10, M14x1.5	R	Opposite	B	Blue	F	Free Running						
	125																							S	7/8-14UNF O-Ring Manifold 2-3/8-16,7/16-20UNF	S	Silver Grey	LS	Low Speed
	160																												
200	P	1/2-14NPTF Manifold 2-3/8-16,7/16-20UNF	P																										
250																													
315																													
400																													
475																													



BMER SERIES HYDRAULIC MOTOR

BMER series motors with advanced Geroler gear set design combining high speed/flow distribution with high pressure, while holding good stability at low speed, maintaining volume efficiency.

Characteristic Features:

- Advanced manufacturing technologies for the Geroler gear set, which allow low pressure start-up and provide smooth, reliable operation with high efficiency
- The output shaft fitted in needle roller bearings permitting high axial and radial forces.
The design offers the capacity of both high pressure and high torque covering a wide scope of applications
- Advanced design in high speed distribution, which automatically compensate; giving high volume efficiency and long life, provide smooth and reliable operation
- Low leakage with accurate timing methods. The commutator rotates 6x faster than shaft speed ensuring high precision distribution, maintaining high volume efficiencies and smooth running at low rpm

Main Specifications

		BMER										
		125	160	200	230	250	300	350	375	475	540	750
Geometric Displacement (cm ³ /rev.)		118	156	196	228	257	296	345	371	462	540	745
Max. Speed (rpm)	Cont.	360	375	330	290	290	250	220	200	160	140	100
	Int.	490	470	425	365	350	315	270	240	195	170	120
Max. Torque (Nm)	Cont.	325	450	530	625	700	810	905	990	1085	980	1050
	Int.	380	525	600	710	790	930	1035	1140	1180	1240	1180
	Peak.	450	590	750	870	980	1120	1285	1360	1260	1380	1370
Max. Output (kW)	Cont.	12.0	15.0	15.5	16.0	17.5	18.0	17.5	16.5	14.5	11.5	8.0
	Int.	14.0	17.5	18.0	19.0	20.0	21.0	20.0	19.0	16.5	15.0	10.0
Max. Pressure Drop (Bar)	Cont.	205	205	205	205	205	205	205	205	175	140	105
	Int.	240	240	240	240	240	240	240	240	190	175	120
	Peak	276	276	276	276	276	276	276	276	205	205	140
Max. Flow (L/min)	Cont.	45	60	70	70	75	80	80	75	75	75	75
	Int.	60	75	85	85	90	95	95	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 seconds per minute



PERFORMANCE DATA

BMER125 [118cm³/rev.]

Pressure (Bar)	Max Cont. Max.Int.								
	17.5	35	70	105	140	175	205	240	
Flow (L/min)	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	
	Max. Cont.	53		90 423	152 418	208 404	265 399	304 371	
Max. Int.	60			82 488	141 472	205 455	260 442	300 421	

BMER160 [156cm³/rev.]

Pressure (Bar)	Max Cont. Max.Int.								
	17.5	35	70	105	140	175	205	240	
Flow (L/min)	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
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
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
Max. Cont.	60			122 379	207 376	284 368	350 362	416 356	467 345
	68			109 423	196 419	273 414	345 406	156 345	
Max. Int.	75			104 472	188 466	270 270	337 450	156 337	

Cont
Int.

Torque (Nm) 188
Speed (rpm) 466



PERFORMANCE DATA

BMER200 [196cm³/rev.]

	Pressure (Bar)							Max Cont.	Max.Int.
	17.5	35	70	105	140	175	205		
2	39	88	132	286	370				
	8	4	4	3	2				
4	42	85	188	270	361	427	506		
	16	14	13	11	10	9	6		
8	43	90	192	291	367	450	529	600	
	35	32	29	28	27	25	23	19	
15	38	92	196	298	381	462	530	602	
	74	71	68	64	60	58	55	50	
25		82	188	283	377	456	528	605	
		124	121	117	113	108	103	92	
34		79	183	270	362	447	515	591	
		170	169	167	160	154	146	135	
45			163	259	352	441	510	593	
			223	218	212	208	199	189	
53			149	256	350	440	501	582	
			260	258	254	248	241	230	
60			132	248	336	432	497	575	
			299	292	284	276	272	263	
Max. Cont.			120	230	330	412	486	570	
			336	332	327	319	310	301	
75			108	208	311	403	480		
			375	372	365	358	350		
Max. Int.				184	280	380	462		
				425	420	411	390		

BMER230 [228cm³/rev.]

	Pressure (Bar)							Max Cont.	Max.Int.
	17.5	35	70	105	140	175	205		
2	44	90	182	291	374				
	6	4	3	2	1				
4	48	100	216	310	405	484	549		
	15	13	11	11	9	7	3		
8	50	104	212	320	421	518	603	700	
	31	29	27	25	23	20	16	10	
15	44	106	207	318	426	529	623	712	
	63	61	58	55	52	47	41	34	
25		101	209	324	428	532	620	705	
		103	100	96	92	87	81	71	
34		88	205	316	421	522	623	702	
		145	143	139	133	126	120	109	
45			186	294	422	507	595	688	
			192	187	182	176	170	160	
53			175	290	393	496	584	678	
			226	221	215	208	203	194	
60			152	270	390	485	569	661	
			256	253	248	242	235	222	
Max. Con			140	265	351	482	563	642	
			292	288	283	278	273	256	
75			124	235	344	448	552		
			324	321	344	308	300		
Max. Int.				207	335	442	546		
				366	360	351	338		

Cont
Int.

Torque (Nm) 380
Speed (rpm) 411



PERFORMANCE DATA

BMER250 [257cm³/rev.]

Pressure (Bar) Max
Cont. Max.Int.

17.5	35	70	105	140	175	205	240
------	----	----	-----	-----	-----	-----	-----

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

BMER300 [296cm³/rev.]

Pressure (Bar) Max
Cont. Max.Int.

17.5	35	70	105	140	175	205	240
------	----	----	-----	-----	-----	-----	-----

Flow (L/min)	2	50 3	93 1						
	4	62 11	141 10	294 9	429 8	502 7	618 4		
	8	63 22	147 21	298 20	432 19	565 16	667 13	761 9	819 5
	15	66 48	144 47	205 45	427 43	568 39	671 33	810 28	894 20
	25	59 82	138 81	289 80	420 76	552 71	676 64	791 56	932 44
	34	48 113	130 112	297 110	393 107	562 102	689 96	805 86	926 73
	45		96 150	268 149	385 148	527 143	636 135	753 124	880 112
	53		76 177	242 176	383 175	524 173	631 165	758 152	900 138
	60		64 200	225 199	362 198	506 193	627 186	753 174	892 162
	68			200 225	333 224	470 222	630 212	750 201	882 194
Max. Con	75			178 251	322 250	464 464	610 240	741 232	870 215
	85			140 285	316 284	455 278	570 270	728 257	
Max. Int.	95			106 316	260 314	431 311	552 307	700 292	

Cont
Int.

Torque (Nm) 260
Speed (rpm) 314



PERFORMANCE DATA

BMER350 [345cm³/rev.]

Pressure (Bar)	Max						
	17.5	35	70	105	140	175	205

Flow (L/min)	Max							
	17.5	35	70	105	140	175	205	240
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
Max. Cont.			206	373	515	680	822	966
			215	214	515	206	197	183
85			176	355	510	679	808	
			243	242	239	234	227	
Max. Int.				353	509	645		
				272	269	265		

BMER375 [371cm³/rev.]

Pressure (Bar)	Max						
	17.5	35	70	105	140	175	205

Flow (L/min)	Max							
	17.5	35	70	105	140	175	205	240
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
Max. Con			207	380	556	738	865	1012
			201	200	556	190	181	165
85			175	370	526	700	832	
			228	226	221	216	206	
Max. Int.				148	316	500	654	
				242	240	237	226	

Cont.
Int.

Torque (Nm) 645
Speed (rpm) 265



PERFORMANCE DATA

BMER475 [462cm³/rev.]

Flow (L/min)	Pressure (Bar)						
	17.5	35	70	105	140	175	205
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	702 702	920 153	1116 140
85			200 182	454 180	662 177	876 168	
Max. Int.	90		150 194	378 193	615 190	840 182	

BMER540 [540cm³/rev.]

Flow (L/min)	Pressure (Bar)					
	17.5	35	70	105	140	175
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. Con	75		318 138	600 137	826 826	1100 132
85			292 154	538 153	780 152	
Max. Int.	90		214 169	486 168	755 168	

Cont
Int.

Torque (Nm) 486
Speed (rpm) 168



PERFORMANCE DATA

BMER750[745/rev.]

Pressure (Bar)			Max	Max	Peak
			Cont.	Int.	
17.5	35	70	105	120	140

Flow (L/min)			Max	Max	Peak
			Cont.	Int.	
2	145	280			
	2	1			
4	160	321	654	960	1115
	4	4	4	3	3
8	162	335	688	1026	1159
	9	9	9	8	8
15	156	330	694	1047	1184
	19	19	18	18	17
25	142	320	688	1046	1179
	32	31	30	30	29
34	110	288	658	1021	1169
	44	44	42	41	40
45	71	242	620	982	1143
	60	59	59	58	58
53		202	568	941	1105
		70	69	68	67
60		140	527	898	1086
		79	78	77	76
68		100	486	852	1034
		90	90	89	88
Max. Cont.	75	65	425	812	980
		99	99	98	97
85			395	745	906
			110	109	108
Max. Int.	90		298	660	800
			120	119	117

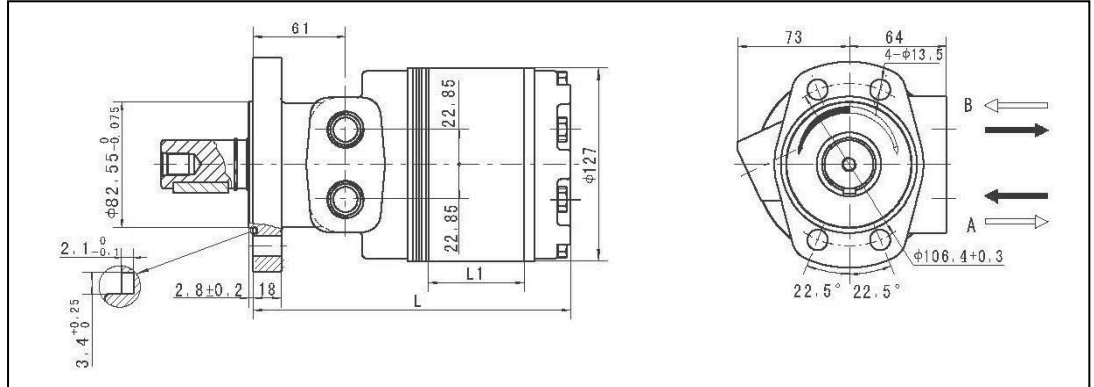
Cont.
Int.

Torque (Nm) 660
Speed (rpm) 119

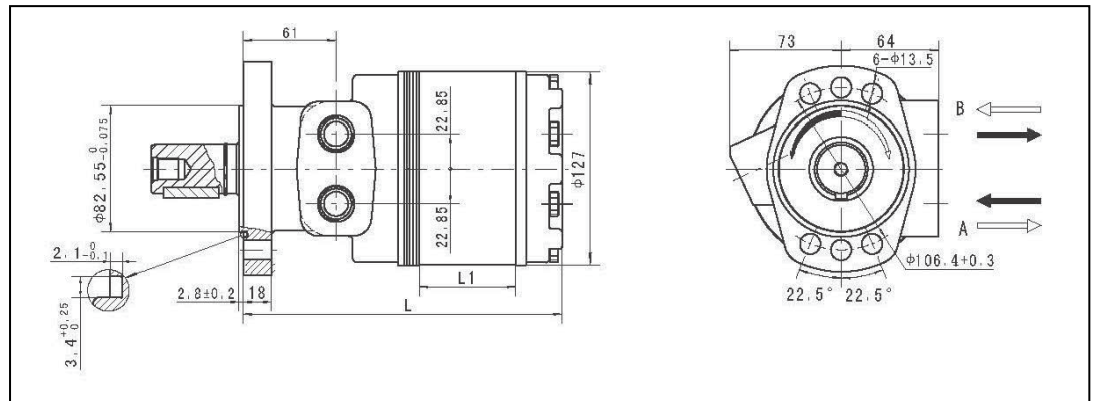
BMER-1 DIMENSIONS MOUNTING DATA



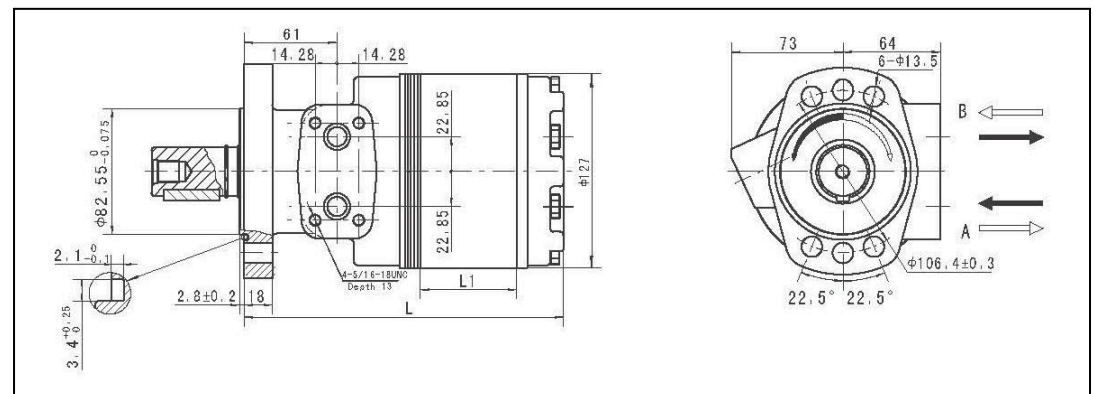
Magneto Mount 4-Hole
 Code Port A, B
 MS 7/8-14UNF
 MP 1/2-14NPTF
 MD G1/2



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



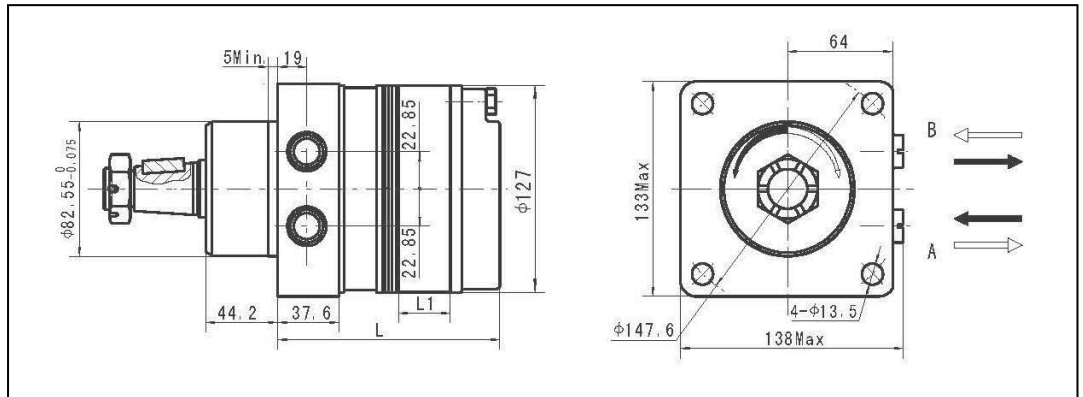
Displacement (cm ³ /rev)	125	160	200	230	250	300	350	375	475	540	750
L1 (mm)	10.2	13.5	17	19.5	22	25.4	29.5	31.8	39.4	47.3	63.5
L (mm)	157	160	163.5	166	168.5	172	176	178.5	186	194	210
Weight (kg)	10.6	10.9	11.2	11.3	11.4	11.6	12	12.5	13	13.5	15



BMER-1 DIMENSIONS MOUNTING DATA

Wheel Mount

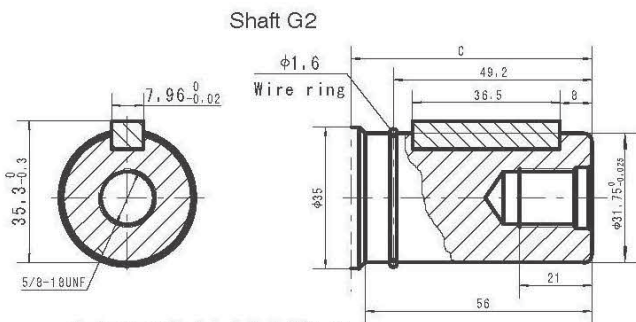
Code Port A, B
 WS 7/8-14UNF
 WP 1/2-14NPTF
 WD G1/2



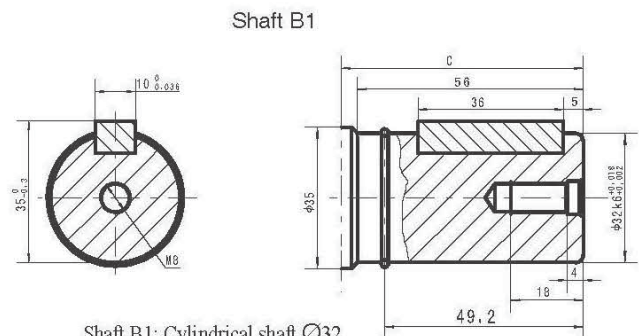
Displacement (cm ³ /rev)	125	160	200	230	250	300	350	375	475	540	750
L1 (mm)	10.2	13.5	17	19.5	22	25.4	29.5	31.8	39.4	47.3	63.5
L (mm)	119	122	125.5	128	130.5	134.5	138	140.5	148	156	176
Weight (kg)	12	12.1	12.3	12.4	12.6	13	13.2	13.5	14	14.6	16



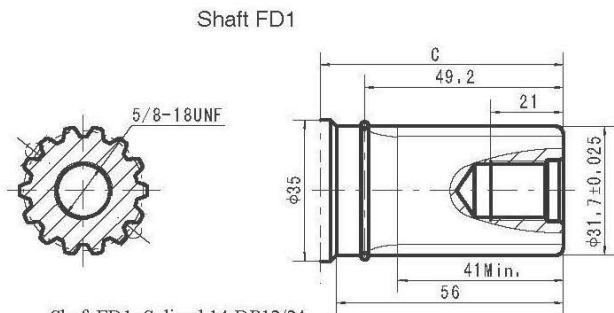
BMER-1 SHAFT EXTENSIONS DIMENSIONS DATA



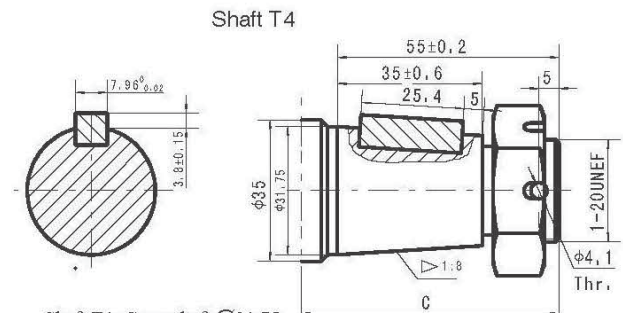
Shaft G2: Cylindrical shaft $\text{O}31.75$
Parallel key 7.96x7x36.5



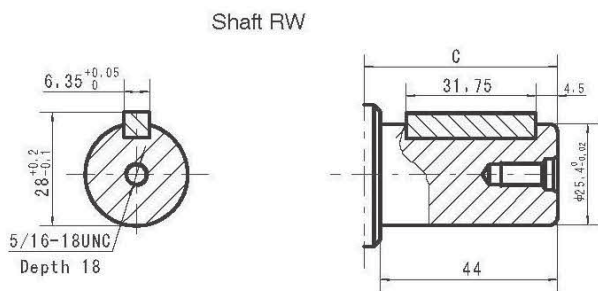
Shaft B1: Cylindrical shaft $\text{O}32$
Parallel key 10x8x36



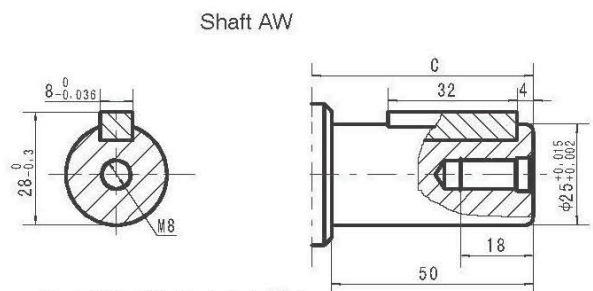
Shaft FD1: Splined 14-DP12/24
Flat root side fit
to fit ANSI B92.1 1996



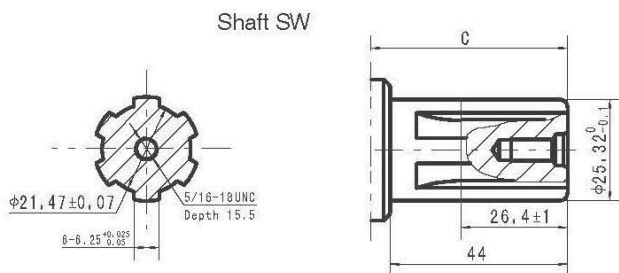
Shaft T4: Cone-shaft $\text{O}31.75$
Parallel key 7.96x7.96x25.4
Tightening torque: 200±10Nm



Shaft RW: Cylindrical shaft $\text{O}25.4$
Parallel key 6.35x6.35x31.75



Shaft AW: Cylindrical shaft $\text{O}25$
Parallel key 8x7x32



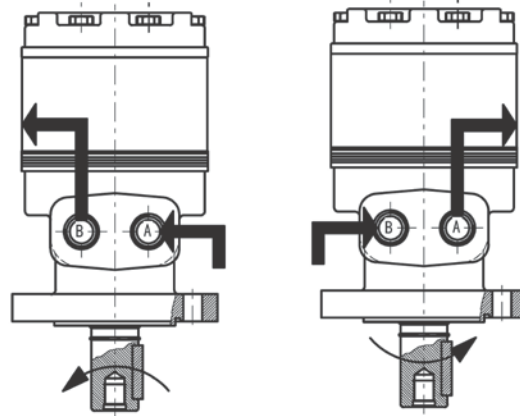
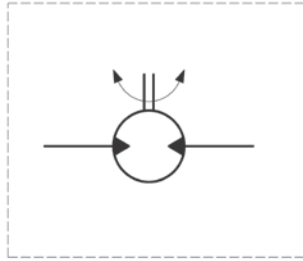
Shaft SW: Splined SAE 6B

Shaft Code	From Mounting Flange to Shaft End Dimension C	
	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



BMER-1 SERIES HYDRAULIC MOTOR

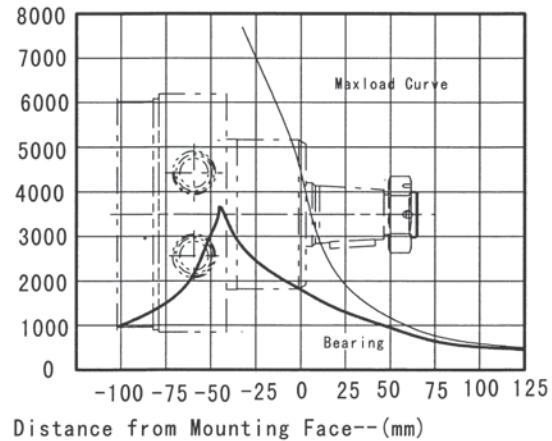
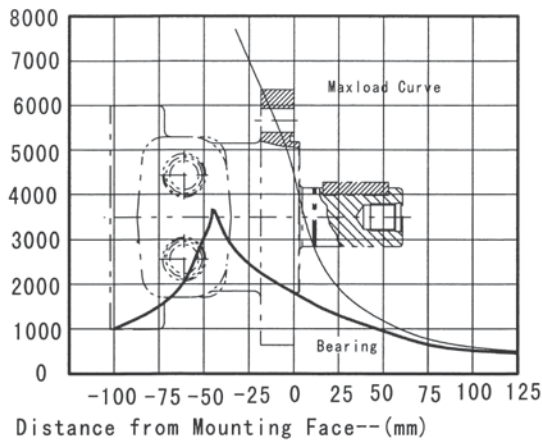
Direction of shaft Rotation: Reverse timed when facing shaft end of motor, Shaft to rotate:
 Clockwise when port "B" is pressurized
 Counter-clockwise when port "A" is pressurized



AXIAL & RADIAL FORCES

BMER-1 for Flange Mount
 Side Load – (daN)

BMER-1 for Wheel Mount
 Side Load – (daN)



The bearing curve represents allowable bearing loads for an L10 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.

REN-TEK

ORDER INFORMATION

BMER-	1	2	3	4	5	6	7
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Pos. 1	2	3		4		5		6		7						
Code	Disp.	Flange, Pilot, Port		Output Shaft		Rotation Direction		Paint		Special Addition						
1		MS	4-Ø13.5 Magneto Mount Pilot Ø82.55x2.8 Ports 7/8-14 O-Ring													
	125	MP	4-Ø13.5 Magneto Mount Pilot Ø82.55x2.8 Ports 1/2-14NPTF													
	160	MD	4-Ø13.5 Magneto Mount Pilot Ø82.55x2.8 Ports G1/2													
	200	FS	6-Ø13.5 Magneto Mount Pilot Ø82.55x2.8 Ports 7/8-14 O-Ring													
	230	FP	6-Ø13.5 Magneto Mount Pilot Ø82.55x2.8 Ports 1/2-14NPTF	G2	Shaft Ø31.75, Parallel Key 7.96x7.96x31.75	None R	Standard Reverse Timed	00 None B S	No Paint Blue Black Silver Grey	None	Standard					
	250			B1	Shaft Ø31.75, Parallel Key 10x8x45											
	300			FD1	Shaft Ø31.75, Splined Key 14-DP12/24											
	350			T4	Cone Shaft Ø31.75, Parallel Key 7.96x7.96x25.4											
	375			RW	Shaft Ø25.4, Parallel Key 6.35x6.35x31.75											
	475			AW	Shaft Ø25, Parallel Key 8x7x32											
	540			SW	Shaft Ø25.4, Splined Key SAE 6B											
	750															
		FH	6-Ø13.5 Magneto Mount Pilot Ø82.55x2.8 Manifold Ports ½													
		WS	4-Ø13.5 Wheel Mount Pilot Ø82.55x5 Ports 7/8-14 O-Ring													
		WP	4-Ø13.5 Wheel Mount Pilot Ø82.55x5 Ports 1/2-14NPTF													
		WD	4-Ø13.5 Wheel Mount Pilot Ø82.55x5 Ports G1/2													



BMT SERIES HYDRAULIC MOTOR

BMT series motors with advanced Geroler gear set design combining high speed/flow distribution with high pressure, while holding good stability at low speed, maintaining volume efficiency.

Characteristic Features:

- Advanced manufacturing technologies for the Geroler gear set, which allow low pressure start-up and provide smooth, reliable operation with 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 a wide range of applications
- Advanced design in disc distribution flow, which automatically compensates operating giving high volume efficiency and long life, provide smooth and reliable operation

Main Specifications

		BMT								
		160	200	230	250	315	400	500	630	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 (Nm)	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	1450	1643	1618	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 (Bar)	Cont.	200	200	200	200	200	180	160	140	125
	Int.	240	240	240	240	240	210	180	160	130
	Peak	280	280	280	280	280	240	210	190	160
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 (Bar)	Cont.	210	210	210	210	210	210	210	210	210
	Int.	250	250	250	250	250	250	250	250	250
	Peak	300	300	300	300	300	300	300	300	300
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 seconds per minute



PERFORMANCE DATA

BMT160 [161.1cm³/rev.]

		Pressure (Bar)						
		40	80	100	120	160	200	240
Flow (L/min)	10	88	176	228	275	361	447	535
		60	59	58	56	54	50	44
	20	89	181	234	277	372	459	557
		121	120	117	114	109	103	95
	40	91	180	235	277	381	471	573
	249	246	243	236	230	223	212	
60	82	178	235	277	381	470	572	
	371	367	362	356	349	340	330	
80	78	173	229	276	379	466	567	
	492	489	485	478	470	462	447	
Max. Cont.	100	70	160	218	269	370	455	558
		614	611	606	598	590	582	570
Max. Int.	125	58	148	211	261	359	448	552
		770	764	758	750	741	731	715

BMT200 [201.4cm³/rev.]

		Pressure (Bar)						
		40	80	100	120	160	200	240
Flow (L/min)	10	124	233	289	340	454	560	669
		47	46	45	42	39	37	33
	20	125	239	298	347	468	576	696
		95	94	92	90	87	84	75
	40	120	241	296	352	475	589	716
	195	193	191	187	183	178	167	
60	116	237	295	352	478	589	718	
	297	295	292	287	282	276	263	
80	108	231	289	350	474	586	716	
	395	393	389	384	377	370	359	
Max. Cont.	100	99	227	286	344	471	580	712
		493	490	486	482	475	467	460
Max. Int.	125	84	208	276	333	459	566	697
		615	611	607	602	595	588	572
Max. Int.	150	70	194	260	324	447	554	682
		743	740	735	727	717	706	682

BMT250 [251.8cm³/rev.]

		Pressure (Bar)						
		40	80	100	120	160	200	240
Flow (L/min)	10	138	286	355	419	559	689	824
		38	38	37	36	34	32	31
	20	143	296	364	432	580	708	853
		76	75	74	72	70	67	62
	40	139	301	372	440	593	723	884
	156	154	152	149	146	142	134	
60	132	294	372	441	592	727	888	
	237	236	233	229	224	219	207	
80	128	283	364	433	587	721	887	
	317	316	314	308	303	299	284	
Max. Cont.	100	126	282	355	427	582	716	879
		396	394	391	387	381	373	359
Max. Cont.	125	116	260	340	414	568	703	864
		495	492	488	483	476	469	454
Max. Int.	150	88	242	320	397	552	686	847
		592	589	585	580	572	565	545

BMT315 [326.3cm³/rev.]

		Pressure (Bar)						
		40	80	100	120	160	200	240
Flow (L/min)	10	184	363	453	545	734	891	1062
		30	29	28	27	26	25	23
	20	189	380	472	562	757	917	1109
		60	59	58	56	54	52	50
	40	191	381	484	570	774	954	1149
	121	120	118	115	112	109	104	
60	189	376	493	573	772	962	1154	
	183	181	179	175	172	168	158	
80	179	369	479	565	768	954	1153	
	244	242	239	236	231	227	217	
Max. Cont.	100	169	357	467	562	758	942	1143
		305	304	301	298	294	289	276
Max. Cont.	125	147	336	447	544	745	920	1127
		380	378	375	371	367	362	349
Max. Int.	150	119	318	432	526	713	894	1097
		458	456	453	449	444	431	425

Cont
Int.

Torque (Nm) 713
Speed (rpm) 444

REN-TEK

PERFORMANCE DATA

BMT400 [410.9cm³/rev.]

		Pressure (Bar)			Max.Cont		Max.Int.	
		30	60	90	120	150	180	210
Flow (L/min)	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

BMT500 [523.6cm³/rev.]

		Pressure (Bar)			Max.Cont		Max.Int	
		30	60	90	120	140	160	180
Flow (L/min)	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



BMT630 [629.1cm³/rev.]

		Pressure (Bar)			Max.Cont		Max.Int.	
		30	60	90	105	120	140	160
Flow (L/min)	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	1254
		233	232	231	230	227	223	217
Cont								
Int.								

BMT800 [801.8cm³/rev.]

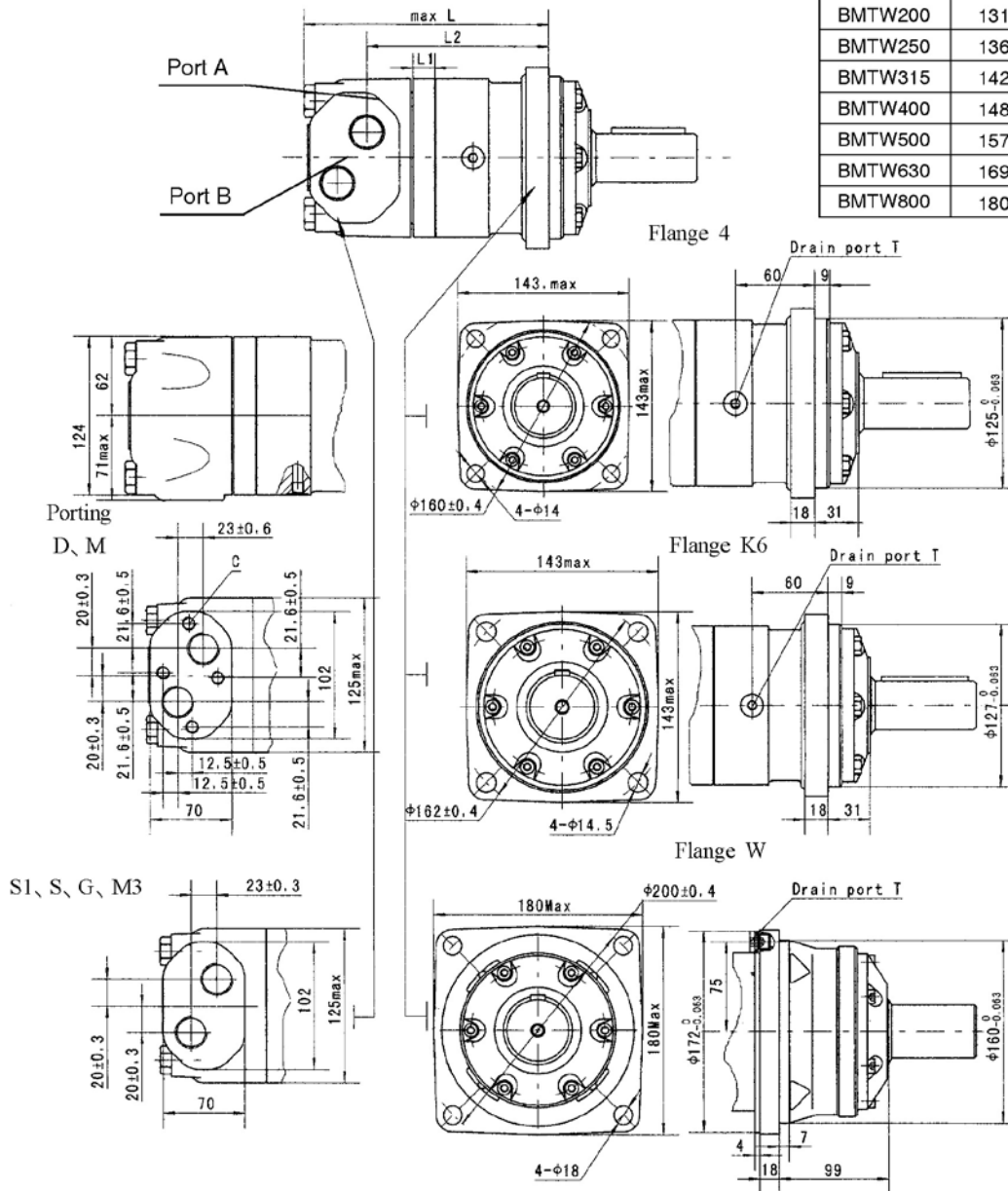
		Pressure (Bar)			Max.Cont		Max.Int	
		30	60	90	105	125	130	
Flow (L/min)	10	346	677	1003	1159	1365	1390	
		12	12	11	11	11	10	
	20	356	692	1034	1183	1404	1458	
		24	24	24	23	22	18	
	40	365	703	1066	1236	1459	1516	
	50	50	49	48	46	40		
	60	354	703	1060	1237	1464	1520	
		74	73	71	71	68	63	
	80	332	686	1050	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	

Torque (Nm) 953
Speed (rpm) 183



BMT DIMENSIONS MOUNTING DATA

Model	L	L1	L2
BMTW160	127	17	77
BMTW200	131	21	81
BMTW250	136	14	86
BMTW315	142	20	91
BMTW400	148	27	98
BMTW500	157	35	106
BMTW630	169	47	118
BMTW800	180	58	129



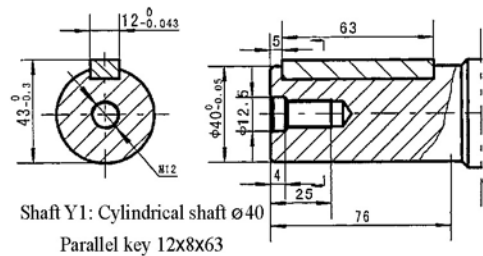
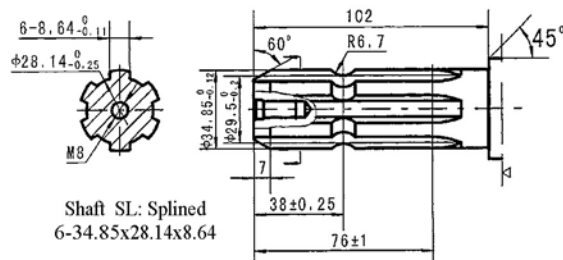
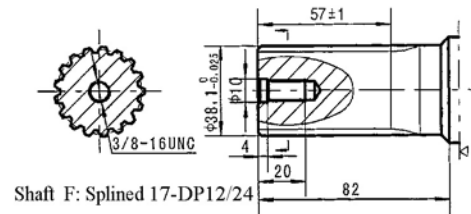
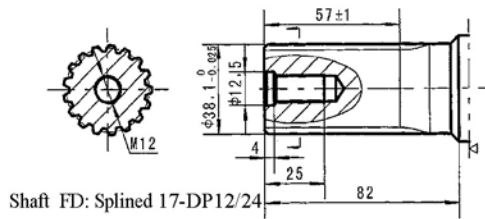
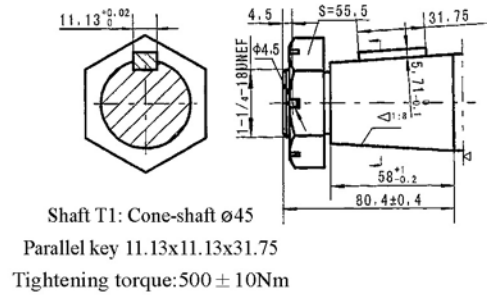
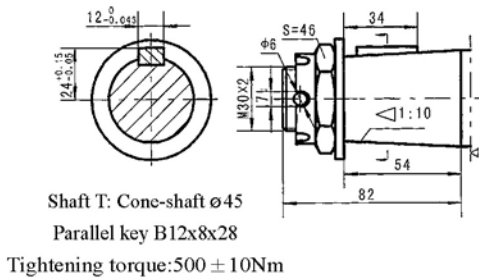
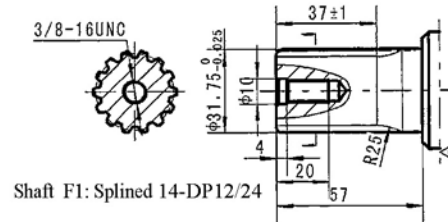
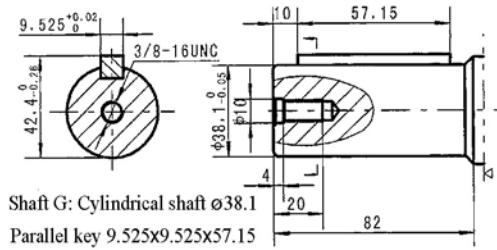
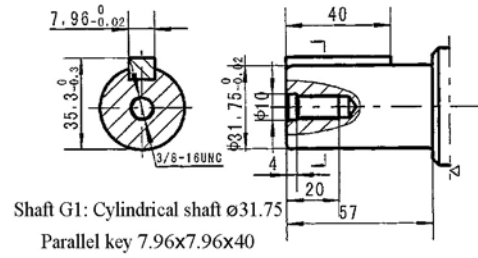
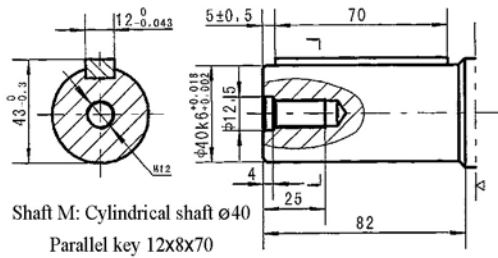
Model	L	L1	L2
BMT160	193	17	142.5
BMT200	197	21	146.5
BMT250	204	14	152.5
BMT315	210	20	158.5
BMT400	217	27	165.5
BMT500	225	35	173.5
BMT630	237	47	185.5
BMT800	248	58	196.5

Content	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.

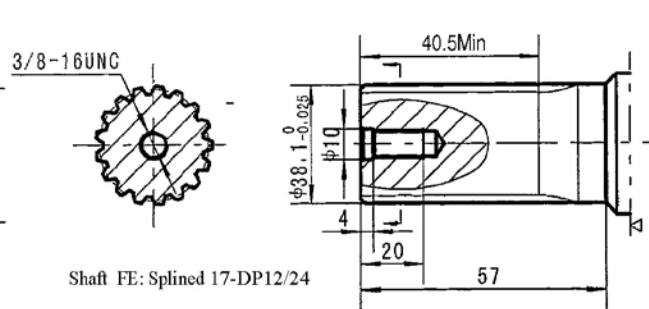
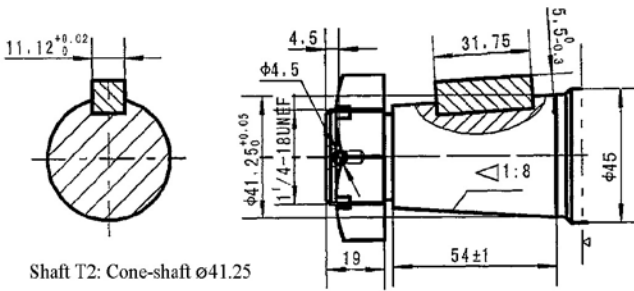
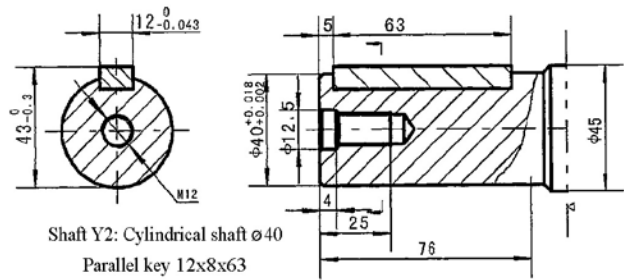
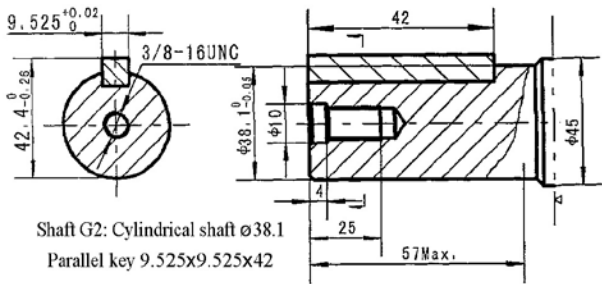
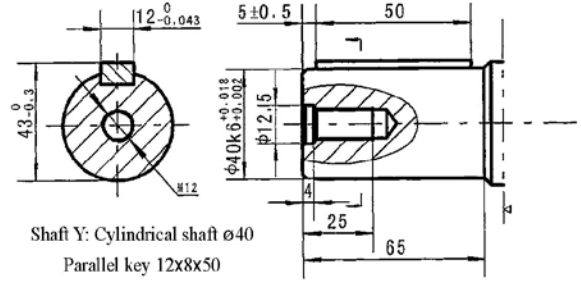
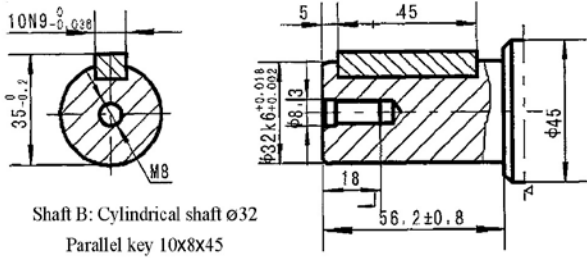


SHAFT EXTENSIONS FOR BMT(E) MOTORS



▷ Motor Mounting Surface

SHAFT EXTENSIONS FOR BMT(E) MOTORS

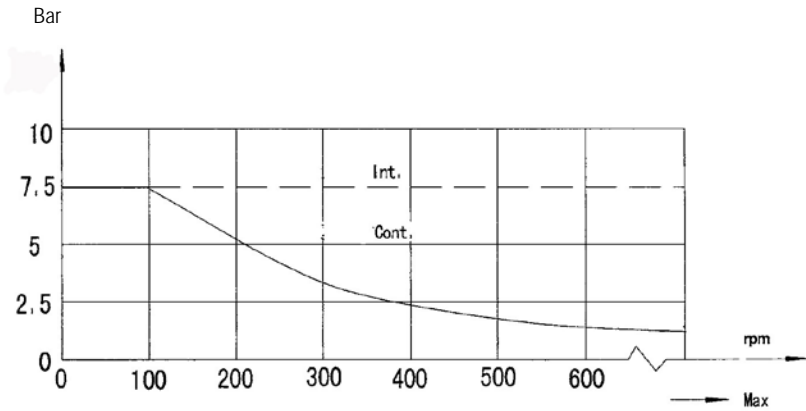
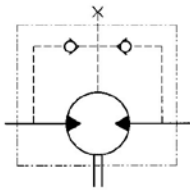


▷ Motor Mounting Surface

BMT SERIES HYDRAULIC MOTOR



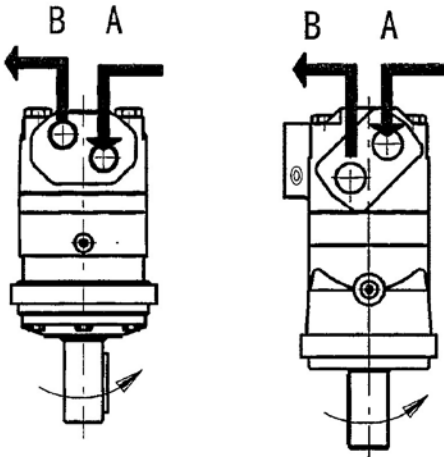
Permissible shaft seal pressure



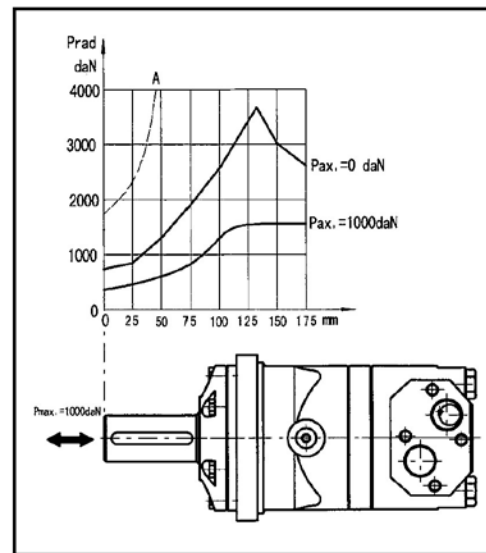
In applications without drain line, output shaft seal exceeds a bit of the pressure in the return line. When applications use the drain line, the pressure of output shaft seal equals the pressure in drain line.

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.



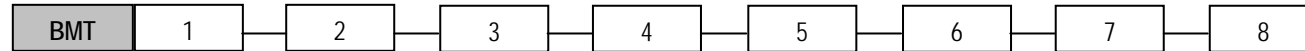
Axial and Radial forces



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 Code	2 Disp.	3 Flange		4 Output Shaft		5 Ports and Drain Port		6 Rotation Direction		7 Paint		8 Special Addition								
BMT		4	4-Ø14 Square-Flange Ø106, Pilot Ø125x9	M	Shaft Ø40, Parallel Key 12x8x70	D	G3/4 Manifold Mount, 4-M10, G1/4													
		K6	4-Ø14.5 Square-Flange Ø162, Pilot Ø127x9	G	Shaft Ø38.1, Parallel Key 9.52x9.52x57.15	M	M27x2 Manifold Mount, 4-M10, M14x1.5													
	160	W	4-Ø18 Wheel-Flange Ø200, Pilot Ø160x7	F	Shaft Ø38.1, Splined Tooth 17-DP12/24	S	1-1/16-12UN O-Ring, 9/16-18UNF	Omit R	Standard Opposite	00 Omit B S	No Paint Blue Black Silver Grey	Omit F LS	Standard Free Running Low Speed							
	200			FD	Shaft Ø38.1, Splined Tooth 17-DP12/24	S1	1-1/16-12UN O-Ring, 7/16-20UNF													
	250			T	Cone-Shaft 1:10 Ø45, Parallel Key B12x8x28	G	G3/4, G1/4													
	315			T1	Cone-Shaft 1:8 Ø45, Parallel Key 11.13x11.13x31.75	M3	M27x2, M14x1.5													
	400			SL	Shaft Ø34.85, Splined Key 6-34.85x28.14x8.64															
	500			G1	Shaft Ø31.75, Parallel Key 7.96x7.96x40															
	630			F1	Shaft Ø31.75, Splined Tooth 14-DP12/24															
	800																			



BMV SERIES HYDRAULIC MOTOR

BMV series motors with advanced Geroler gear set design combining high speed/flow distribution with high pressure, while holding good stability at low speed, maintaining volume efficiency.

Characteristic Features:

- Advanced manufacturing technologies for the Geroler gear set, which allow low pressure start-up and provide smooth, reliable operation with 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 a wide range of applications
- Advanced design in disc distribution flow, which automatically compensates operating giving high volume efficiency and long life, provide smooth and reliable operation

Main Specifications

		BMV					
		315	400	500	630	800	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 (Nm)	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 (Bar)	Cont.	200	200	200	180	160	140
	Int.	240	240	240	210	180	160
	Peak	280	280	280	240	210	180
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 seconds per minute



PERFORMANCE DATA

BMV315 [333cm³/rev.]

		Pressure (Bar)						
		35	70	100	140	180	200	240
Flow (L/min)	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	
Max. Cont.	150	114	275	435	615	788	906	1078
		445	443	441	437	430	422	410
Max. Int.	160	107	268	430	608	780	895	1070
		475	473	470	466	460	452	439
	200	82	249	412	593	758	871	1047
		596	594	590	584	576	565	544

BMV400 [419cm³/rev.]

		Pressure (Bar)						
		35	70	100	140	180	200	240
Flow (L/min)	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

Torque (Nm) 506
Speed (rpm) 565

Cont
Int.



PERFORMANCE DATA

BMV500 [518cm³/rev.]

Pressure (Bar)		Max.Cont						Max.Int.								
		35	70	100	140	180	200	240								
Flow (L/min)	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

BMV630 [666cm³/rev.]

Pressure (Bar)		Max.Cont						Max.Int.								
		35	60	90	120	150	180	210								
Flow (L/min)	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

Torque (Nm) 416
Speed (rpm) 357

Cont
Int.



PERFORMANCE DATA

BMV800 [801cm³/rev.]

		Pressure (Bar)						Max.Cont	Max.Int.
		25	50	80	100	130	160	180	
Flow (L/min)	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	

BMV1000 [990cm³/rev.]

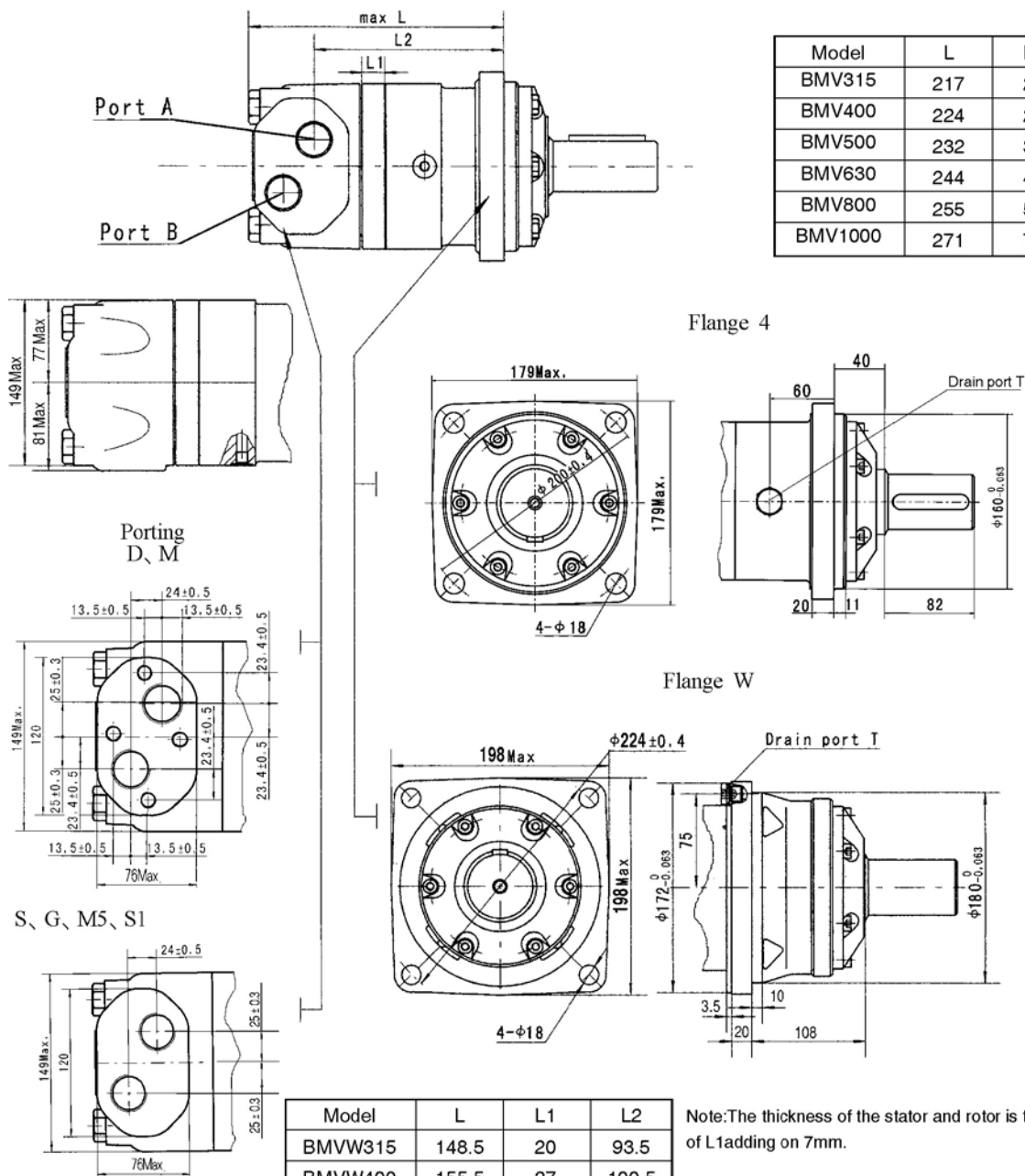
		Pressure (Bar)						Max.Cont	Max.Int
		25	50	70	100	140	160		
Flow (L/min)	10	312	640	971	1400	1978	2259		
		9	9	9	8	7	6		
	20	320	648	978	1410	1980	2270		
		28	27	26	25	23	21		
	50	326	655	992	1422	2015	2280		
		47	46	45	43	41	38		
	75	318	642	987	1425	2003	2276		
		72	71	70	68	66	63		
	100	309	634	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 (Nm) 513
Speed (rpm) 237

Cont
Int.



BMV DIMENSIONS AND MOUNTING DATA



Model	L	L1	L2
BMV315	217	20	161.5
BMV400	224	27	168.5
BMV500	232	35	176.5
BMV630	244	47	188.5
BMV800	255	58	199.5
BMV1000	271	74	215.5

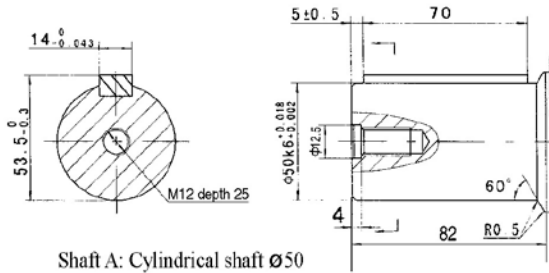
Model	L	L1	L2
BMVW315	148.5	20	93.5
BMVW400	155.5	27	100.5
BMVW500	163.5	35	108.5
BMVW630	175.5	47	120.5
BMVW800	186.5	58	131.5
BMVW1000	202.5	74	147.5

Note: The thickness of the stator and rotor is the dimension of L1 adding on 7mm.

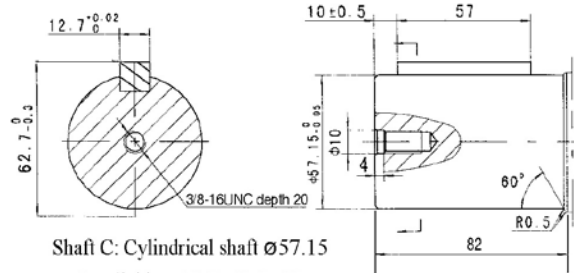
Content	Code					
	D (depth)	M (depth)	S (depth)	G (depth)	M5 (depth)	S1 (depth)
P(A,B)	G1 (18)	M33 x 2 (18)	1-5/16-12UN(18)	G1 (18)	M33 x 2 (18)	1-5/16-12UN(18)
T	G1/4 (12)	M14 x 1.5 (12)	9/16-18UNF(12)	G1/4 (12)	M14 x 1.5 (12)	7/16-20UNF(12)
C	4-M12 (10)	4-M12 (10)	--	--	--	--



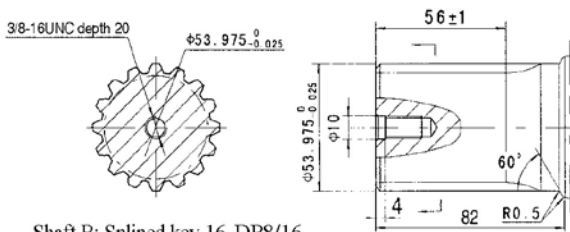
BMV SHAFT EXTENSIONS DIMENSIONS DATA



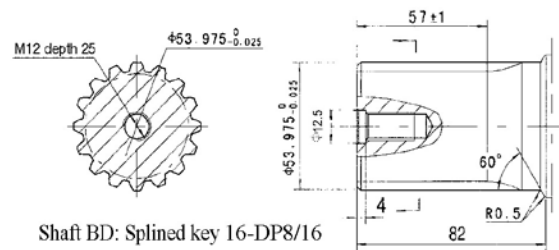
Shaft A: Cylindrical shaft Ø50
Parallel key 14x9x70



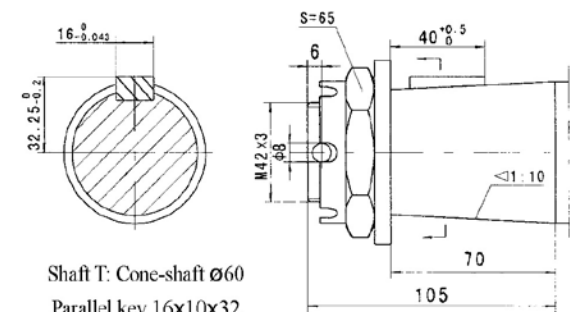
Shaft C: Cylindrical shaft Ø57.15
Parallel key 12.7x12.7x57



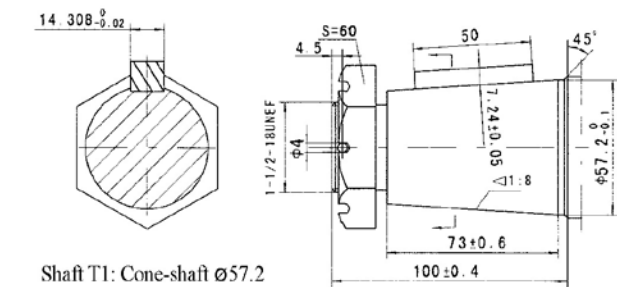
Shaft B: Splined key 16-DP8/16



Shaft BD: Splined key 16-DP8/16



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

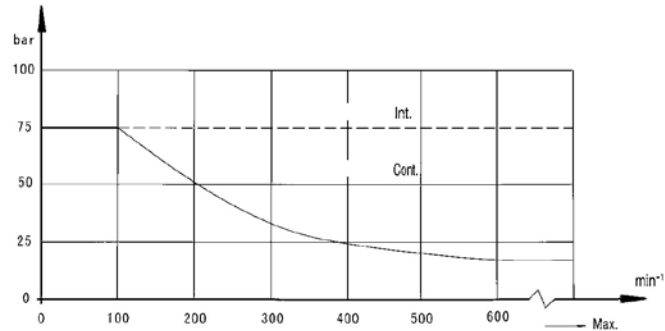
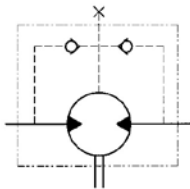


Shaft T1: Cone-shaft Ø57.2
Parallel key 14.308x14.308x50
Tightening torque: 750 ± 50Nm



BMV SERIES HYDRAULIC MOTOR

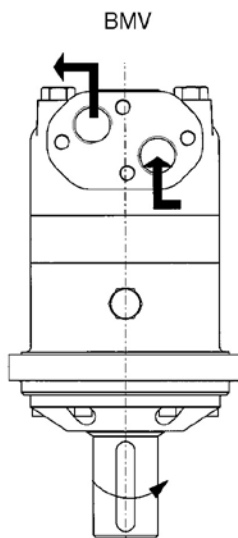
Permissible shaft seal pressure



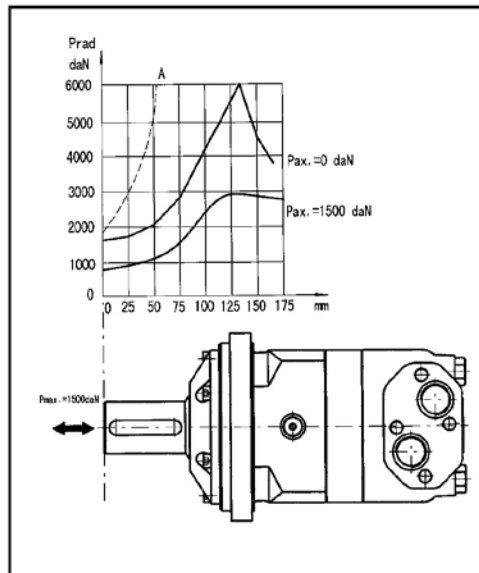
In applications without drain line, output shaft seal exceeds a bit of the pressure in the return line. When applications use the drain line, the pressure of output shaft seal equals the pressure in drain line.

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.



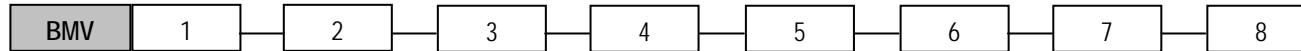
Axial and Radial forces



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	
Code	Disp.	Flange		Output Shaft		Ports and Drain Port		Rotation Direction		Paint		Special Addition	
Omit	315 400 500 630 800 1000	4	4-Ø18 Square-Flange Ø200, Pilot Ø160x11	A	Shaft Ø50, Parallel Key 14x9x70	D	G1 Manifold 4xM12, G1/4	Omit R	Standard Opposite	00 Omit B S	No Paint Blue Black Silver Grey	Omit	Standard
		W	4-Ø18 Wheel-Flange Ø224, Pilot Ø180x10	BD	Shaft Ø53.975, Splined Key 16-DP8/16	M	M33x2 Manifold 4xM12, M14x1.5						
				B	Shaft Ø53.975, Splined Key 16-DP8/16	S	1-5/16-12UN, 9/16-18UNF						
				C	Shaft Ø57.15, Parallel Key 12.7x12.7x57.15	G	G1, G1/4						
				T	Cone-Shaft Ø60, Parallel Key 16x10x32	M5	M33x2, M14x1.5						
				T1	Cone-Shaft Ø60, Parallel Key 14.308x14.308x50.8	S1	1-5/16-12UN (18), 7/16-20UNF (12)						