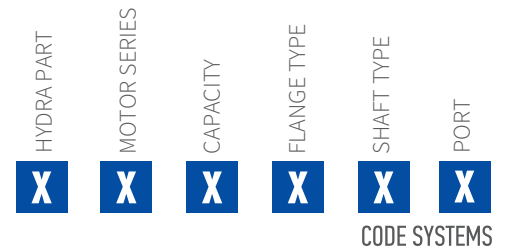
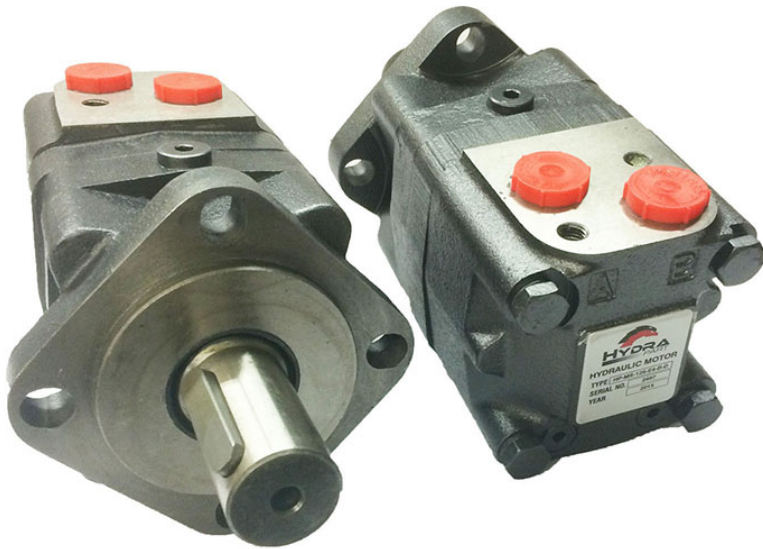




MSY Series Hydraulic Motor

The MSY is a new series of motor adapting the advanced Geroler gear set designed with disc distribution flow and high pressure. The unit can be supplied with the individual variants in accordance with requirement of your applications.



Characteristic features:

- * The motor is described with 15-20% higher technical data(Max. torque and Max. pressure drop), thereby higher power. The new motor is suitable for vehicles with greater loads and pressure drop.

Main Specification

Type	MSY 80	MSY 100	MSY 125	MSY 160	MSY 200	MSY 250	MSY 315	MSY 400	MSY 475	
Geometric displacement (cm ³ /rev.)	80.6	100.8	125	154	194	243	311	394	475	
Max. speed (rpm)	cont.	800	748	600	470	375	300	240	185	155
	int.	988	900	720	560	450	360	280	225	185
Max. torque (N•m)	cont.	225	290	365	485	586	708	880	880	910
	int.	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 (MPa)	cont.	20.5	20.5	20.5	21	21	20	20	16	14
	int.	22.5	22.5	22.5	22.5	22.5	22.5	22.5	17.5	15
	peak	29.5	29.5	29.5	28	27	27	26	21	17.5
Max. flow (L/min)	cont.	65	75	75	75	75	75	75	75	75
	int.	80	90	90	90	90	90	90	90	90
Max. inlet pressure (MPa)	cont.	25	25	25	25	25	25	25	25	25
	int.	30	30	30	30	30	30	30	30	30
Weight (kg)	9.8	10	10.3	10.7	11.1	11.6	12.3	13.2	14.3	

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



Performance Data

MSY80 [80.6cm³/rev.]

Pressure (MPa)

				Max.cont.		Max.int.		
		3.5	7	10.5	14	17.5	20.5	22.5
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
	60	28	77	117	153	192	224	243
Max.int.		735	726	718	703	687	673	646
	65	26	75	116	151	188	217	236
		794	786	773	760	744	722	706
	24	72	109	142	176	206	227	
	80	981	968	955	925	893	870	832

MSY100 [100.8cm³/rev.]

Pressure (MPa)

				Max.cont.		Max.int.		
		3.5	7	10.5	14	17.5	20.5	22.5
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
	60	37	88	132	185	244	283	312
Max.int.		588	584	574	562	550	538	520
	75	35	80	130	180	240	279	310
		740	735	720	705	696	676	653
	30	75	124	170	236	271	303	
	90	850	840	810	787	770	750	747

MSY125 [125cm³/rev.]

Pressure (MPa)

				Max.cont.		Max.int.		
		3.5	7	10.5	14	17.5	20.5	22.5
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
	60	45	113	171	241	308	358	397
Max.int.		469	461	450	437	425	400	372
	75	45	110	167	240	306	352	389
		588	574	560	544	526	505	481
	40	105	162	237	301	343	378	
	90	710	696	680	661	646	628	610

MSY160 [154cm³/rev.]

Pressure (MPa)

				Max.cont.		Max.int.		
		3.5	7	10.5	14	17.5	21	22.5
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
	60	68	143	218	296	370	442	480
Max.int.		378	376	370	362	353	346	332
	75	62	140	211	291	365	439	475
		475	469	461	450	441	432	414
	59	131	202	286	357	425	460	
	90	567	561	554	543	532	520	509

TORQUE(N*m) 301
SPEED (r/min) 646

□ cont.
■ int.



Performance Data

MSY200 [194cm³/rev.]

Pressure (MPa)

		Max.cont.						Max.int.
		3.5	7	10.5	14	17.5	21	22.5
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
Max.cont.	50	90	191	292	389	493	580	634
		248	246	241	236	230	223	212
Max.int.	60	85	185	279	382	483	575	622
		300	295	288	281	273	263	251
	75	78	176	271	370	472	561	610
		374	370	364	360	352	340	331
	90	68	163	265	361	456	545	599
		443	440	435	428	424	413	400

MSY250 [243cm³/rev.]

Pressure (MPa)

		Max.cont.						Max.int.
		3.5	7	10.5	14	17.5	20	22.5
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
Max.cont.	50	111	234	352	472	591	693	788
		203	201	197	191	182	173	158
Max.int.	60	106	224	345	462	582	685	772
		244	242	237	230	220	208	194
	75	101	214	340	454	570	670	760
		303	299	294	285	272	260	244
	90	93	209	335	447	559	657	749
		363	359	354	348	340	328	303

MSY315 [311cm³/rev.]

Pressure (MPa)

		Max.cont.						Max.int.
		3.5	7	10.5	14	17.5	20	22.5
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
Max.cont.	50	155	314	465	638	780	886	988
		159	157	153	149	145	142	128
Max.int.	60	151	306	453	620	765	886	976
		187	185	181	176	169	157	143
	75	146	300	445	613	755	875	966
		238	236	232	227	224	220	196
	90	135	284	436	601	740	863	952
		286	283	278	272	265	257	232

MSY400 [394cm³/rev.]

Pressure (MPa)

		Max.cont.						Max.int.
		3.5	7	10.5	14	16	17.5	
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	
Max.cont.	50	191	388	587	785	904	983	
		125	123	118	114	109	102	
Max.int.	60	186	388	587	785	904	983	
		149	146	142	137	131	122	
	75	181	372	576	770	891	973	
		187	183	177	171	164	153	
	90	176	367	571	766	883	965	
		226	221	214	208	199	183	

TORQUE (N*m) 766
SPEED (rpm) 208

MSY475 [475cm³/rev.]

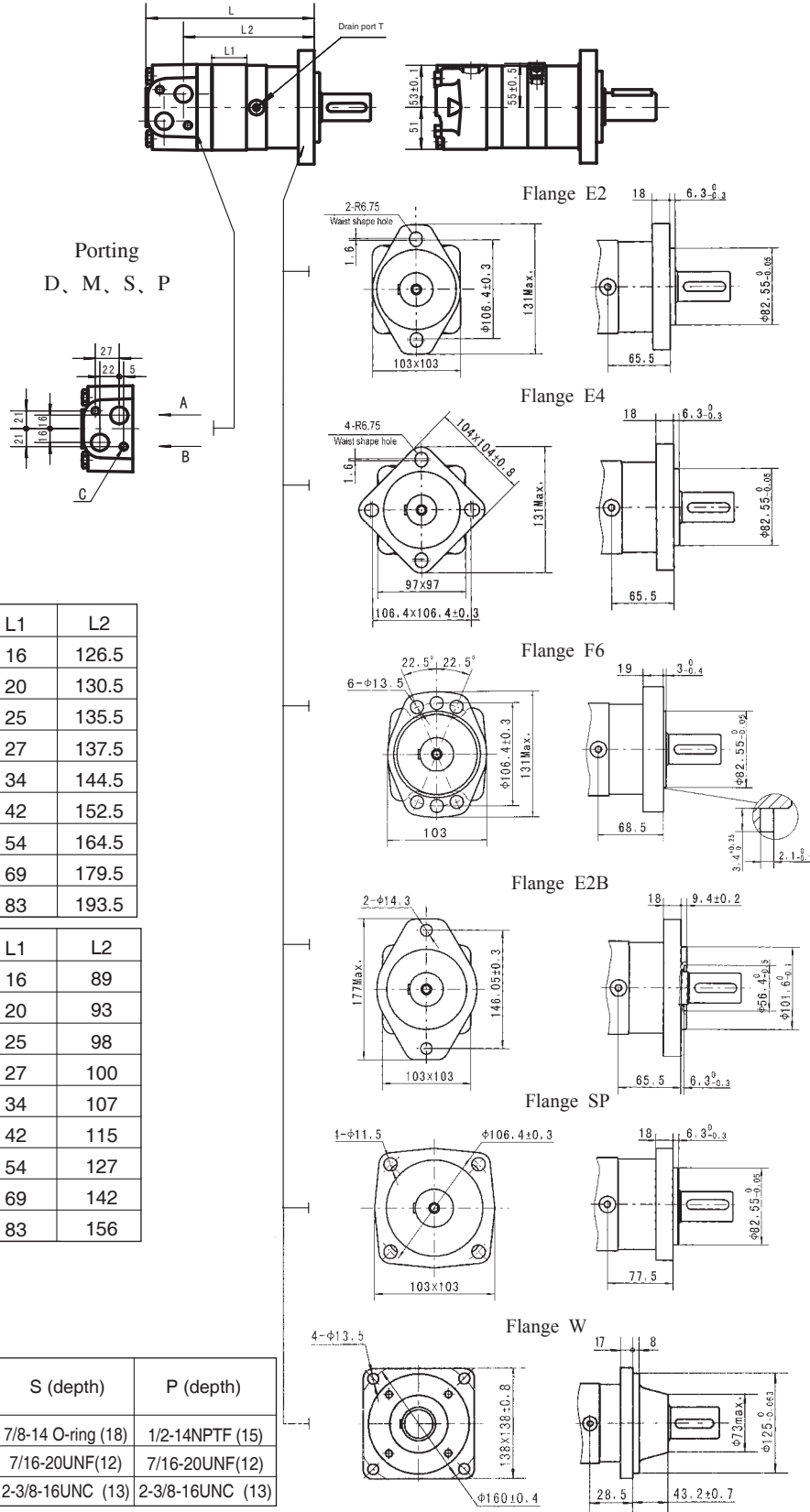
Pressure (MPa)

		Max.cont.					Max.int.
		3.5	7	10.5	14	15	
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	
Max.cont.	50	224	456	682	920	1008	
		103	101	97	92	86	
Max.int.	60	220	451	677	913	998	
		123	121	118	112	105	
	75	212	443	664	901	980	
		155	153	147	140	132	
	90	196	421	643	877	959	
		186	184	178	170	157	

cont.
int.



MSY DIMENSIONS AND MOUNTING DATA



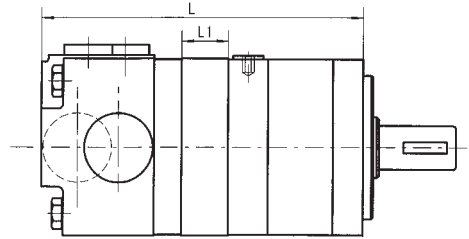
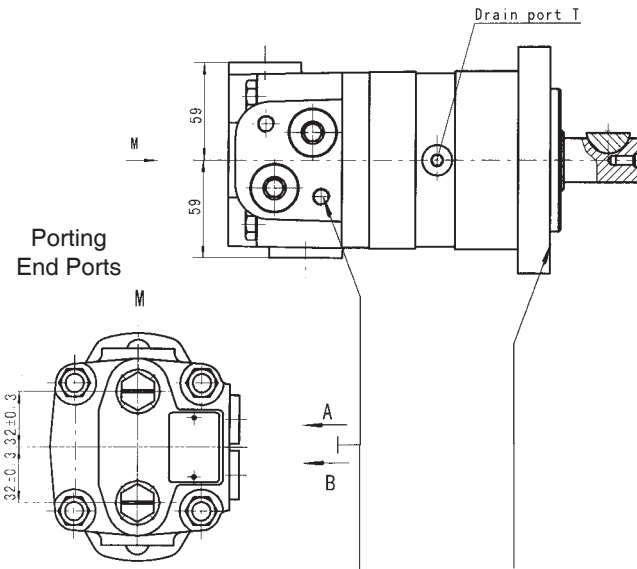
Model	L	L1	L2
MSY-80	170	16	126.5
MSY-100	174	20	130.5
MSY-125	179	25	135.5
MSY-160	181	27	137.5
MSY-200	188	34	144.5
MSY-250	196	42	152.5
MSY-315	208	54	164.5
MSY-400	223	69	179.5
MSY-475	237	83	193.5

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

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)



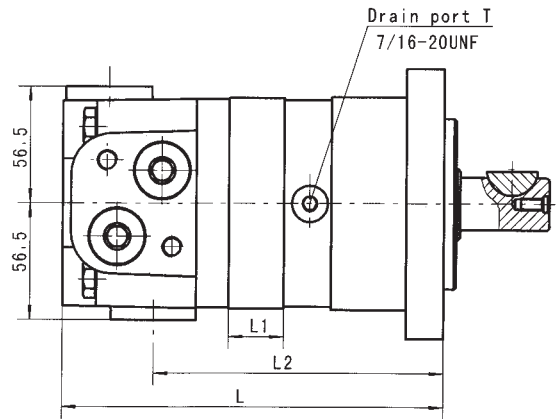
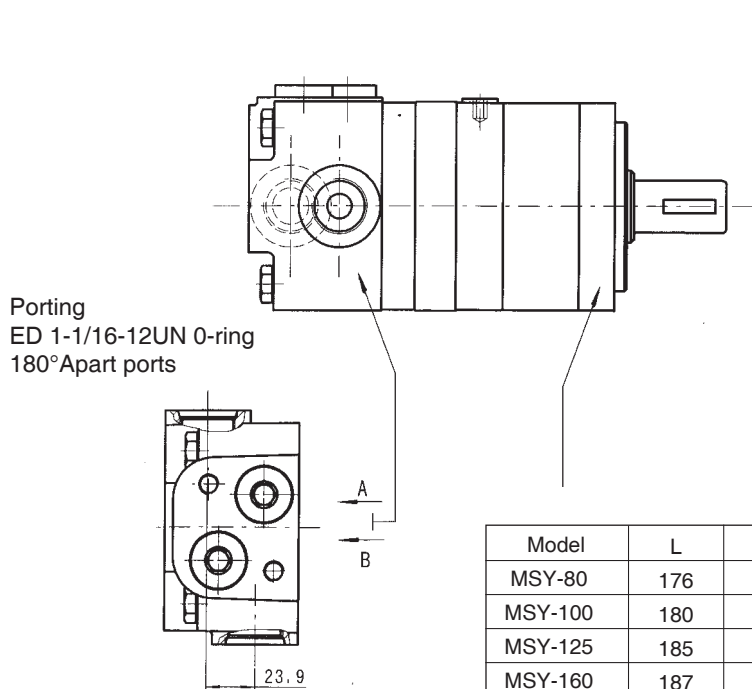
MSY DIMENSIONS AND MOUNTING DATA



End Ports P(A\B)

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

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)



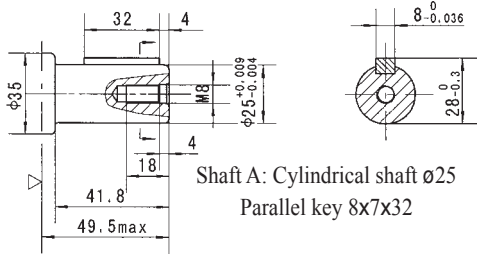
Code Mounting	ED (depth)
P(A,B)	1-1/16-12UN (18)
T	7/16-20UNF (12)

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

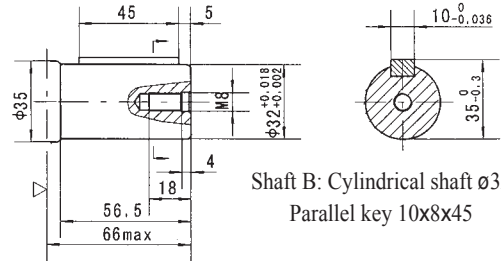
Model	L	L1	L2
MSY-80-WE	148	16	102
MSY-100-WE	152	20	106
MSY-125-WE	157	25	111
MSY-160-WE	159	27	113
MSY-200-WE	166	34	119
MSY-250-WE	178	42	127
MSY-315-WE	190	54	139
MSY-400-WE	205	69	154
MSY-475-WE	219	83	168



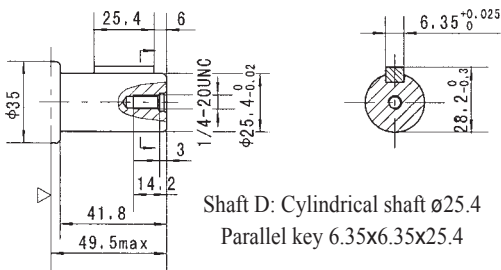
SHAFT EXTENSIONS FOR MSY MOTORS



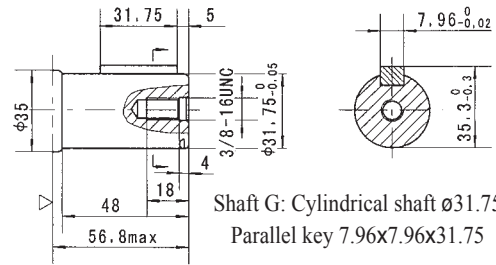
Shaft A: Cylindrical shaft $\phi 25$
Parallel key 8x7x32



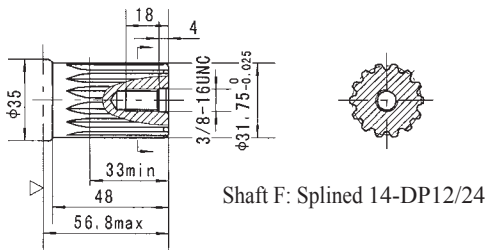
Shaft B: Cylindrical shaft $\phi 32$
Parallel key 10x8x45



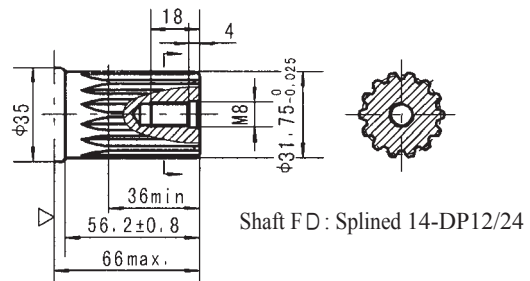
Shaft D: Cylindrical shaft $\phi 25.4$
Parallel key 6.35x6.35x25.4



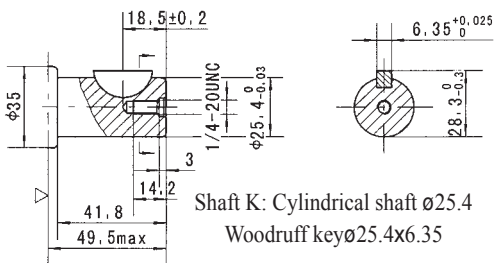
Shaft G: Cylindrical shaft $\phi 31.75$
Parallel key 7.96x7.96x31.75



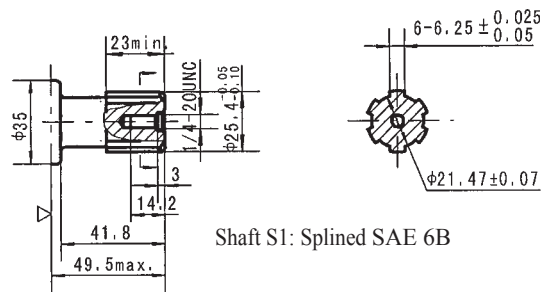
Shaft F: Splined 14-DP12/24



Shaft FD: Splined 14-DP12/24



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

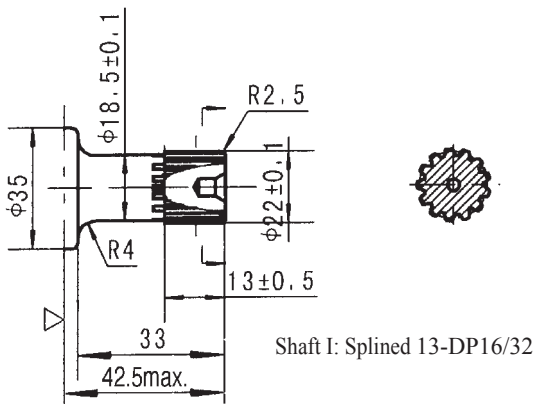
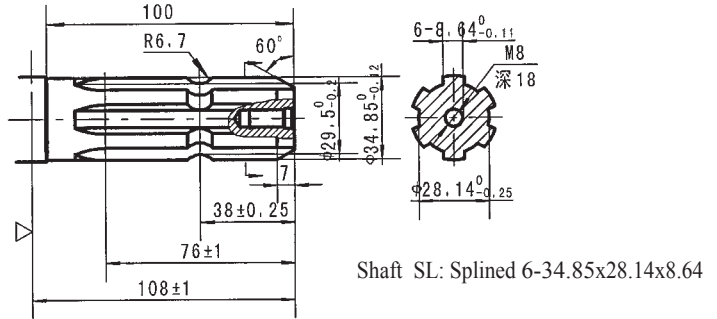
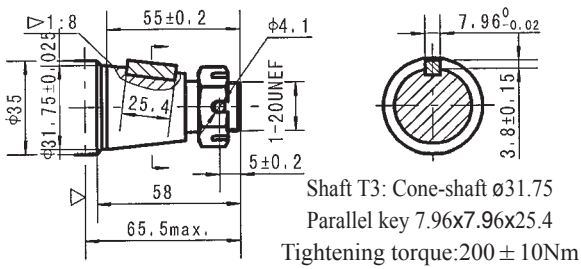
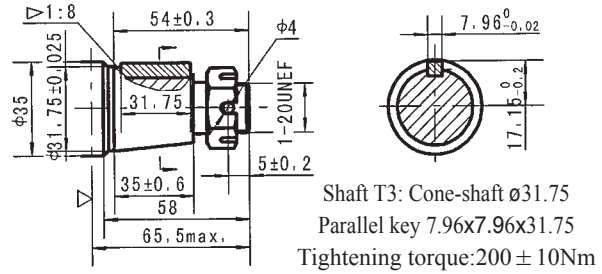
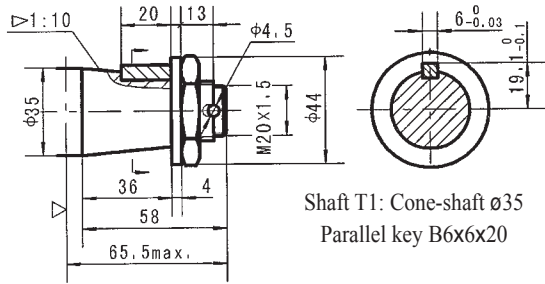


Shaft S1: Splined SAE 6B

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



SHAFT EXTENSIONS FOR MSY MOTORS

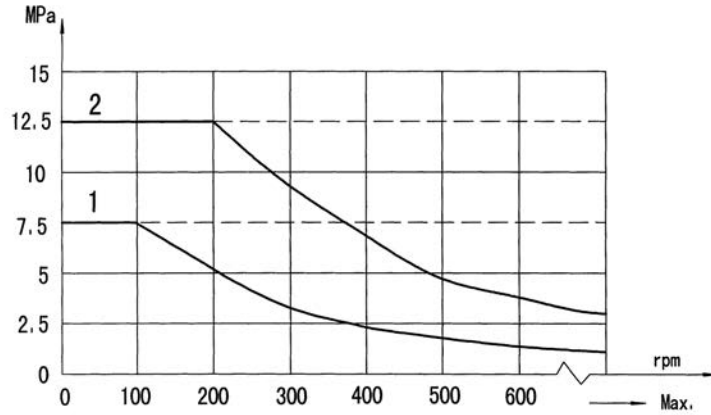
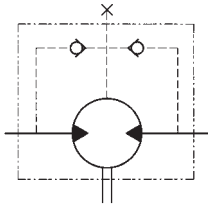


- ▷ Motor Mounting Surface(Dimension corresponding mounting E2, by analogy with others)
Note:Mounting SP is the same with shaft modle T1、D、B、F and G.



MSY Series Hydraulic Motor

Permissible shaft seal pressure

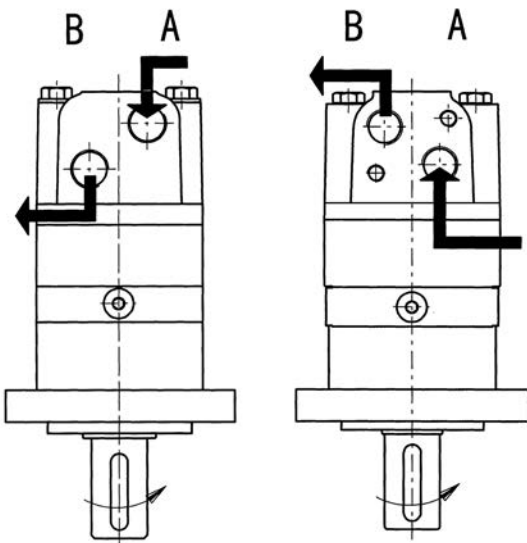


Note: 1. Chart for standard shaft seal;
2. Chart for high pressure shaft seal.

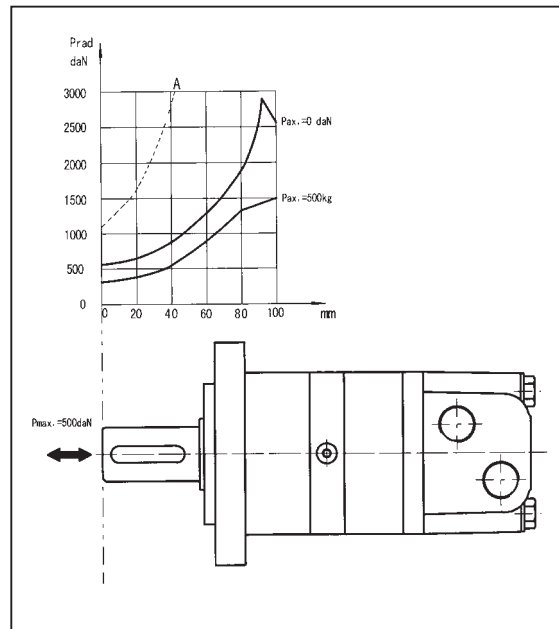
In applications without drain line, output shaft seal exceeds a bit of the pressure in the return line. When applications use the drain line, the pressure of output shaft seal equals the pressure in drain line.

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.