

BMK2

Orbital Hydraulic Motor

Sizes: 65 to 475cc/rev

Max. Pressure up 210Bar



Index

Page No

• Introduction	02
• Performance data	03
• BMK2 Dimensions and Mounting data	06
• Shaft Extensions for BMK2 Motors	07
• BMK2 Standard Mounting	08
• Ordering Code	09



Introduction

- BMK2 new series motor adopt the advanced Geroler gear set designed 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 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 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.
 - The new series motor is suitable for vehicles with greater loads and pressure drop.
- Main Specifications:

Type		BMK2 65	BMK2 80	BMK2 100	BMK2 125	BMK2 160	BMK2 200	BMK2 250	BMK2 315	BMK2 400	BMK2 475
Geometric displacement (cm ³ /rev.)		65	80	100.9	129.8	156.8	193.4	242.5	304.3	390.8	485
Max. speed (rpm)	cont.	835	800	742	576	477	385	308	246	191	153
	int.	990	980	924	720	713	577	462	365	287	230
Max. torque (N•m)	cont.	185	235	295	385	455	540	660	765	775	845
	int.	245	345	445	560	570	665	820	885	925	930
Max. pressure drop (MPa)	cont.	20.5	21	21	21	20.5	20.5	20.5	21	15.5	12
	int.	27.5	31	31	31	26	26	26	24	17	14
	peak.	31	31	31	31	31	31	31	31	20.5	17
Max. flow (L/min.)	cont.	55	65	75	75	75	75	75	75	75	75
	int.	65	80	95	95	115	115	115	115	115	115
Weight (Kg)		9.2	9.4	9.7	10	10.2	10.5	11	11.5	12	12.4

- 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

BMK2 65 [65 cm³/rev.]
Pressure (MPa)

Flow (L/min)	Pressure (MPa)								
	3.5	7	10.5	14	17.5	20.5	24	27.5	31
2	28	54	80						
	22	12	6						
4	30	58	88	115	146	165	195		
	52	47	43	35	30	24	16		
8	31	60	92	120	150	170	200	225	
	107	98	92	85	70	55	40	30	
15	32	62	94	124	155	175	205	230	250
	214	208	200	193	185	174	160	145	130
22	32	65	95	125	157	178	206	232	254
	320	315	308	296	286	275	260	242	230
30	30	65	95	128	160	180	210	235	258
	445	440	430	420	408	395	380	360	325
38	28	62	95	130	165	185	216	240	260
	565	560	550	540	526	512	495	470	420
45	26	60	92	125	160	180	215	245	265
	675	670	660	648	632	615	600	580	530
55	23	55	88	120	155	175	210	235	255
	835	825	810	790	770	745	720	690	640
65	20	50	84	112	150	170	205	230	250
	990	980	965	945	935	910	880	860	800

BMK2 80 [80 cm³/rev.]
Pressure (MPa)

Flow (L/min)	Pressure (MPa)								
	3.5	7	10.5	14	17.5	20.5	24	27.5	31
2	29	54	86						
	18	9	3						
4	35	75	112	145	172	208	218	236	
	45	41	38	35	28	22	14	3	
8	35	75	114	148	175	212	230	260	280
	90	85	80	76	72	64	55	46	40
15	38	78	116	152	184	215	245	275	300
	180	175	170	166	160	153	140	126	115
22	36	75	114	150	185	220	250	285	315
	265	260	255	250	242	234	220	205	185
30	35	75	115	150	185	225	260	295	325
	363	355	350	342	334	322	302	280	260
38	34	72	112	155	190	230	265	300	335
	460	452	442	430	418	405	385	360	335
45	32	70	110	150	190	230	265	305	340
	545	535	528	515	505	495	465	440	410
55	30	68	110	150	190	230	270	305	335
	670	660	650	635	620	605	575	540	510
65	25	65	105	145	180	225	260	295	325
	800	790	778	755	740	728	690	650	610
75	22	63	102	145	180	225	260	290	
	910	900	880	860	850	830	790	750	
80	20	60	100	140	175	220	250		
	980	970	955	920	900	875	840		

BMK2 100 [100.9 cm³/rev.]
Pressure (MPa)

Flow (L/min)	Pressure (MPa)									
	1.75	3.5	7	10.5	14	17.5	20.5	24	27.5	31
2	15	32	68							
	14	10	5							
4	18	42	92	130	170	205	230			
	36	34	32	28	22	14	5			
8	20	45	90	135	180	210	240	280	310	
	74	73	70	66	60	52	42	26	15	
15	20	45	90	135	185	220	260	305	345	390
	142	140	137	134	129	120	105	92	78	65
22	18	45	90	140	190	230	275	315	360	405
	210	207	201	195	188	179	160	150	138	125
30	16	42	88	142	195	240	285	330	375	425
	290	288	282	276	268	258	242	230	212	195
38	15	40	88	140	190	240	285	335	380	430
	370	365	360	352	340	326	310	295	275	255
45	15	40	86	140	190	240	285	340	385	440
	440	435	430	422	410	395	380	365	345	320
55	12	36	85	135	190	240	285	340	385	440
	540	534	528	520	510	500	485	465	440	405
65	10	35	80	130	185	235	280	335	380	440
	640	635	630	622	605	590	575	550	525	500
75	5	30	75	125	180	230	275	330	375	
	738	735	728	715	700	680	655	635	610	
85	3	25	75	125	175	225	270	320	370	
	838	835	830	820	805	785	760	730	690	
95		23	70	120	170	220	260	310		
		925	918	905	890	870	840	810		

BMK2 125 [129.8 cm³/rev.]
Pressure (MPa)

Flow (L/min)	Pressure (MPa)									
	1.75	3.5	7	10.5	14	17.5	20.5	24	27.5	31
2	25	40								
	12	7								
4	28	55	110	175	220	280	325			
	27	26	22	18	14	11	8			
8	28	60	115	175	230	290	330	375	400	
	57	56	53	48	42	38	34	26	20	
15	28	60	120	180	240	295	340	390	440	485
	113	112	110	105	98	92	86	80	72	65
22	28	55	120	180	240	305	360	415	470	530
	165	163	160	155	150	144	138	130	115	100
30	25	52	120	185	245	310	365	425	480	545
	228	224	222	210	212	206	198	188	178	165
38	25	50	120	180	245	315	370	430	495	550
	288	285	282	275	268	260	252	242	230	215
45	22	50	120	180	245	315	370	430	490	550
	345	343	338	332	325	315	305	292	280	265
55	20	46	115	175	245	330	375	430	490	
	420	418	414	408	400	390	378	365	346	
65	15	43	110	170	240	320	370	425	485	
	498	496	492	486	480	465	458	440	425	
75	12	42	108	170	235	310	365	425		
	575	574	568	560	550	548	525	502		
85	8	40	105	165	230	310	360	420		
	653	652	645	636	625	616	600	578		
95		40	100	160	225	290	355	415		
		722	715	702	690	680	670	655		

□ cont.
■ int.

Torque (N•m) **225**
Speed (rpm) **690**



Performance Data

BMK2 160 [156.8 cm³/rev.]

Pressure (MPa)

	1.75	3.5	7	10.5	14	17.5	20.5	24	26
--	------	-----	---	------	----	------	------	----	----

Flow (L/min)	Max.cont.									Max.int.	
	1.75	3.5	7	10.5	14	17.5	20.5	24	26		
2	28	55	110	175							
	9	7	5	3							
4	32	63	125	190	250	315	370				
	22	21	19	17	13	8	3				
8	37	68	130	200	260	325	390	450	480		
	47	45	42	39	36	34	32	27	22		
15	45	68	135	210	275	370	420	500	530		
	93	92	89	85	80	76	70	60	45		
22	35	75	140	215	285	370	440	515	550		
	138	136	133	128	122	116	110	102	95		
30	35	75	145	220	290	370	440	520	560		
	190	187	184	178	172	167	164	154	142		
38	37	70	150	225	310	380	450	525	565		
	240	237	234	230	225	218	202	193	185		
45	32	70	150	225	310	380	450	525	565		
	285	283	280	275	268	259	247	236	225		
55	28	66	145	220	305	375	450	525			
	348	346	242	338	332	324	314	300			
65	25	63	140	220	300	375	445				
	412	410	406	400	393	383	370				
Max.cont. 75	22	60	135	215	295	370	440				
	476	474	470	464	454	445	435				
Max.int. 85	18	55	130	210	290	365	435				
	540	536	532	524	514	502	485				
Max.int. 95	15	50	125	205	285	360	430				
	600	595	590	580	565	555	545				
115		40	115	200	280	350	425				
		715	705	695	685	670	655				

BMK2 200 [193.4 cm³/rev.]

Pressure (MPa)

	1.75	3.5	7	10.5	14	17.5	20.5	24	26
--	------	-----	---	------	----	------	------	----	----

Flow (L/min)	Max.cont.									Max.int.	
	1.75	3.5	7	10.5	14	17.5	20.5	24	26		
2	32	68	110	145							
	9	7	5	3							
4	40	75	150	195	300	360					
	18	16	14	11	7	4					
8	45	80	160	240	315	405	500	570	600		
	37	36	34	30	26	21	17	13	11		
15	48	90	170	255	335	425	510	590	620		
	75	74	72	68	64	60	56	50	42		
22	46	90	175	265	350	440	520	605	645		
	112	110	108	105	101	97	91	86	80		
30	45	90	180	270	360	450	530	615	655		
	153	151	148	145	141	135	128	122	116		
38	45	90	180	275	370	455	540	625			
	193	191	188	184	178	172	166	158			
45	40	85	180	275	370	460	545				
	230	228	226	222	218	210	202				
55	38	82	180	275	375	465	550				
	280	278	275	270	264	255	248				
65	35	80	175	270	370	465	545				
	332	330	328	322	315	306	295				
Max.cont. 75	30	72	170	265	360	455	540				
	384	382	378	370	365	356	346				
Max.int. 85	25	70	165	260	355	450	540				
	436	434	430	420	410	400	390				
Max.int. 95	20	60	155	255	350	445	530				
	488	485	478	470	458	448	438				
115		50	140	240	330	440	520				
		580	572	562	550	538	520				

BMK2 250 [242.5 cm³/rev.]

Pressure (MPa)

	1.75	3.5	7	10.5	14	17.5	20.5	24	26
--	------	-----	---	------	----	------	------	----	----

Flow (L/min)	Max.cont.									Max.int.	
	1.75	3.5	7	10.5	14	17.5	20.5	24	26		
2	45	95									
	4	2									
4	50	100	210	310	410	510	610				
	14	13	11	9	6	4	3				
8	55	105	215	320	420	530	620	730	780		
	29	28	26	23	20	17	14	11	9		
15	55	110	220	330	440	550	650	755	810		
	59	58	56	53	50	47	45	43	40		
22	50	115	225	340	455	560	665	770			
	88	87	85	82	78	74	69	65			
30	50	115	230	350	465	570	680	785			
	122	121	118	113	109	104	100	92			
38	48	112	235	355	475	580	695	795			
	154	152	149	145	140	135	130	122			
45	45	110	230	350	475	590	700				
	183	182	180	176	170	165	158				
55	42	105	230	345	470	580					
	224	223	221	218	212	205					
65	35	100	220	340	460	565					
	266	265	263	258	252	242					
Max.cont. 75	32	95	210	330	455	560					
	307	306	303	298	290	280					
Max.int. 85	30	85	200	320	450	555					
	348	346	342	336	330	320					
Max.int. 95	25	70	190	315	440	540					
	386	384	378	372	365	355					
115		65	180	300	430						
		465	458	450	442						

BMK2 315 [304.3 cm³/rev.]

Pressure (MPa)

	1.75	3.5	7	10.5	14	17.5	20.5	24
--	------	-----	---	------	----	------	------	----

Flow (L/min)	Max.cont.								Max.int.	
	1.75	3.5	7	10.5	14	17.5	20.5	24		
2	45	95								
	4	2								
4	65	130	250	380	490					
	12	11	10	8	6					
8	70	135	260	390	510	630	760	875		
	24	23	22	20	18	15	10	6		
15	75	140	275	410	535	670	800	920		
	48	48	47	45	42	38	34	30		
22	70	140	285	425	555	685	810	940		
	71	70	69	66	62	56	50	42		
30	70	145	290	430	565	695	820			
	97	97	96	93	88	80	70			
38	66	140	290	435	570	715	835			
	123	122	120	117	112	<				



Performance Data

BMK2 400 [390.8 cm³/rev.]
Pressure (MPa)

	1.75	3.5	7	10.5	14	15.5	17.5	19
--	------	-----	---	------	----	------	------	----

Flow (L/min)	Max.cont.								Max.int.	
	1.75	3.5	7	10.5	14	15.5	17.5	19		
2	70 4	145 2								
4	80 9	170 9	345 8	500 7	660 6	740 5				
8	85 19	175 18	355 17	520 16	680 14	765 13	830 12	910 10		
15	90 37	185 37	370 36	550 35	720 32	810 30	880 28			
22	95 55	190 55	380 54	565 52	750 48	830 46	900 44			
30	92 76	188 75	385 73	570 71	760 68	835 65	905 62			
38	90 96	185 94	385 92	575 90	765 86	840 84	930 80			
45	85 114	180 113	380 111	570 108	760 102					
55	80 140	175 139	380 137	570 133	760 127					
65	75 165	170 164	370 163	560 160	750 155					
Max.cont. 75	68 191	160 190	360 188	555 184	740 178					
85	65 214	150 212	355 210	550 206	730 200					
Max.int. 95	50 242	135 240	340 237	530 233	710 228					
115		125 286	310 282	510 275						

cont.
 int.

BMK2 475 [485 cm³/rev.]
Pressure (MPa)

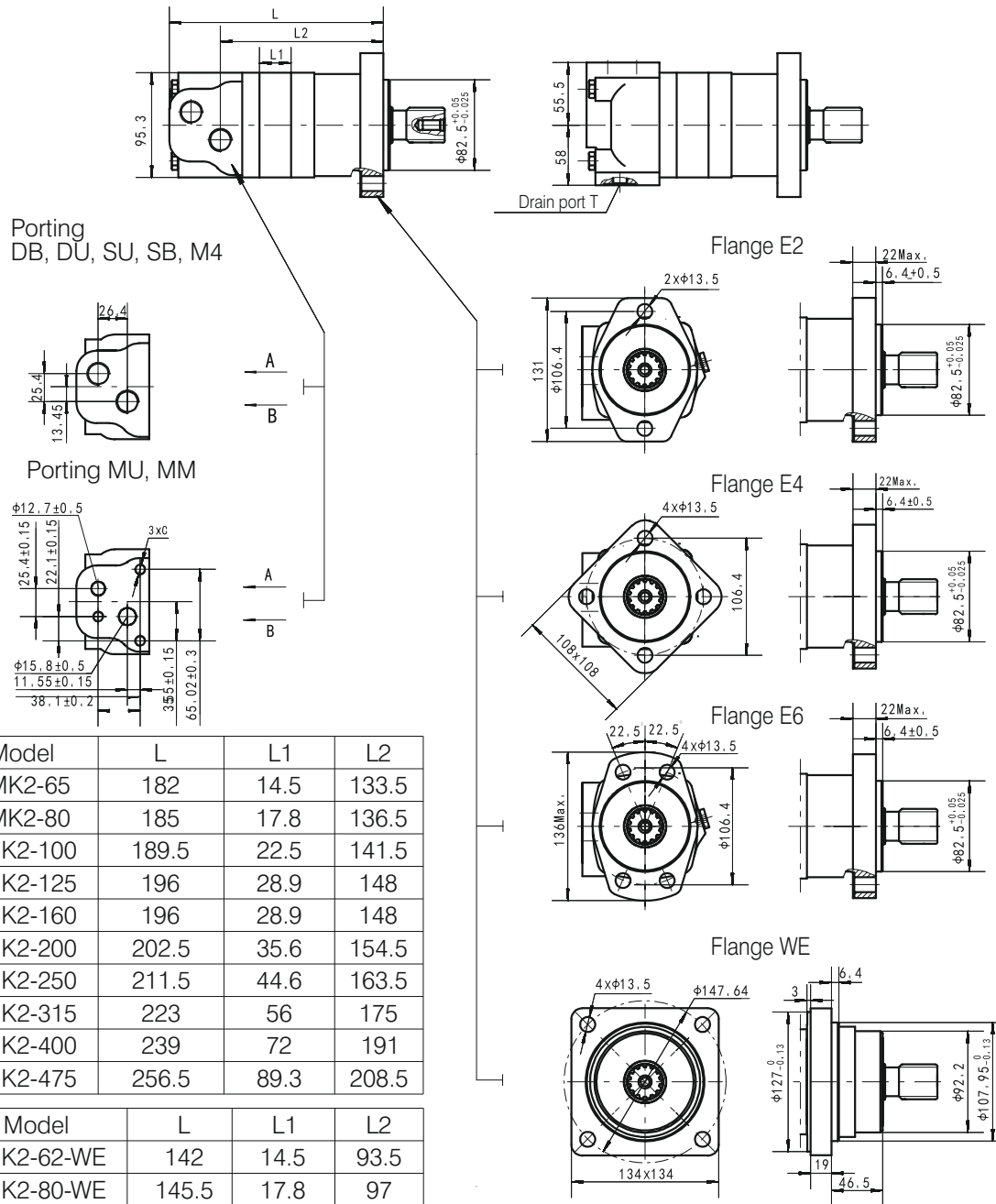
	1.75	3.5	7	10.5	12	14
--	------	-----	---	------	----	----

Flow (L/min)	Max.cont.						Max.int.	
	1.75	3.5	7	10.5	12	14		
2	75 2	175 1						
4	110 7	220 6	430 4	540 1				
8	110 14	225 13	450 11	700 7				
15	105 29	235 28	470 26	710 24	825 22	895 19		
22	105 44	240 43	480 42	720 40	835 37	915 34		
30	110 61	240 60	485 58	725 55	840 52	935 48		
38	110 77	235 75	480 73	720 70	840 68	930 65		
45	100 91	220 91	470 89	715 85	825 83			
55	95 112	210 110	460 108	710 104	820 100			
65	85 132	200 131	445 128	700 125	810 120			
Max.cont. 75	70 153	185 152	440 149	690 145	800 140			
85	60 173	175 172	430 169	680 165	785 160			
Max.int. 95	40 195	150 193	405 190	655 185				
115		130 230	380 226	625 220				

Torque (N•m) 130
Speed (rpm) 230



BMK2 Dimensions and Mounting Data



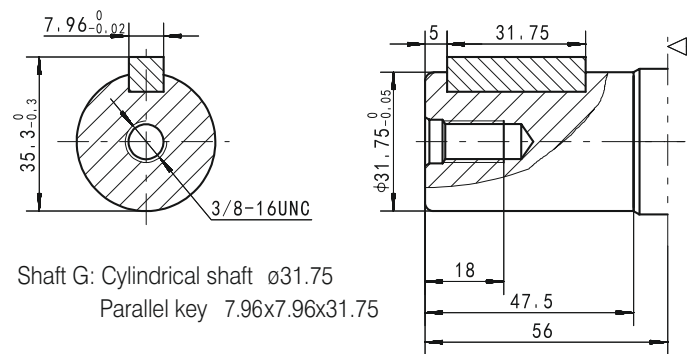
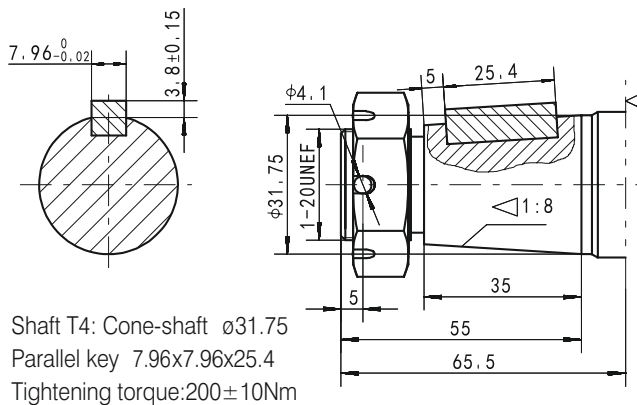
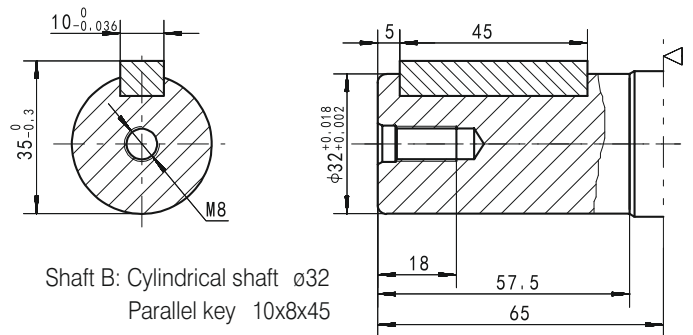
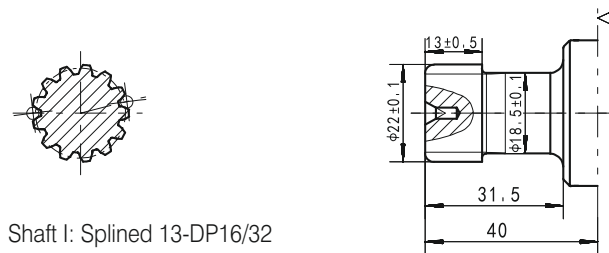
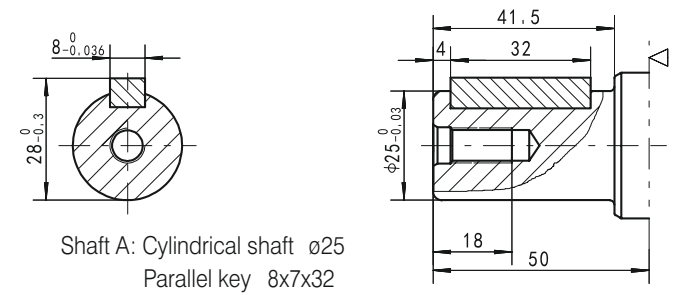
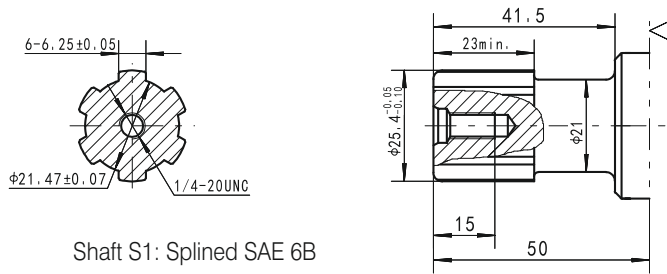
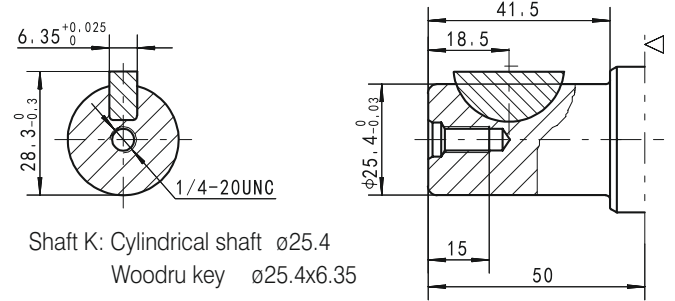
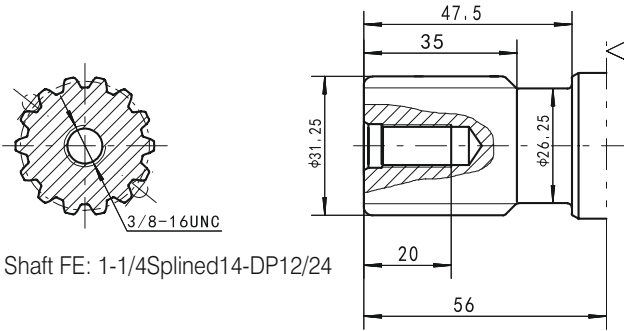
Model	L	L1	L2
BMK2-65	182	14.5	133.5
BMK2-80	185	17.8	136.5
BMK2-100	189.5	22.5	141.5
BMK2-125	196	28.9	148
BMK2-160	196	28.9	148
BMK2-200	202.5	35.6	154.5
BMK2-250	211.5	44.6	163.5
BMK2-315	223	56	175
BMK2-400	239	72	191
BMK2-475	256.5	89.3	208.5

Model	L	L1	L2
BMK2-62-WE	142	14.5	93.5
BMK2-80-WE	145.5	17.8	97
BMK2-100-WE	150	22.5	101.5
BMK2-125-WE	156.5	28.9	108
BMK2-160-WE	156.5	28.9	108
BMK2-200-WE	163	35.6	114.5
BMK2-250-WE	172	44.6	123.5
BMK2-315-WE	183.5	56	135
BMK2-400-WE	199.5	72	151
BMK2-475-WE	217	89.3	168.5

Code	DB (Depth)	DU (Depth)	SU (Depth)	SB (Depth)	M4 (Depth)	MU	MM
P(A,B)	G1/2 (15)	G1/2 (15)	7/8-14 O-ring (17)	7/8-14 O-ring (17)	M22 x 1.5 (15)	(12.7) $\phi 15.8$	(12.7) $\phi 15.8$
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)
C			--			3/8-16UNC(15)	M10(15)



Shaft Extensions for BMK2 Motors

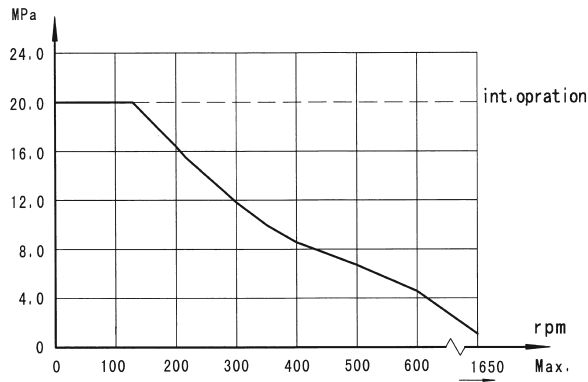


Motor Mounting Surface E2 Flange

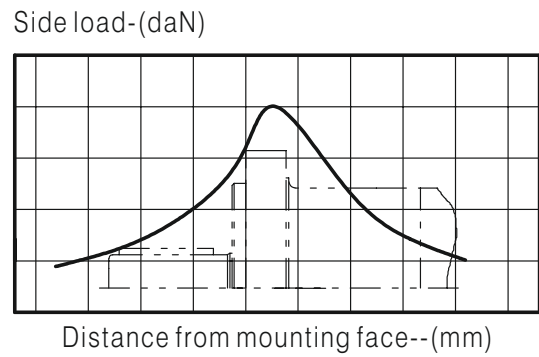


BMK2 Standard Mounting

- Permissible shaft seal pressure



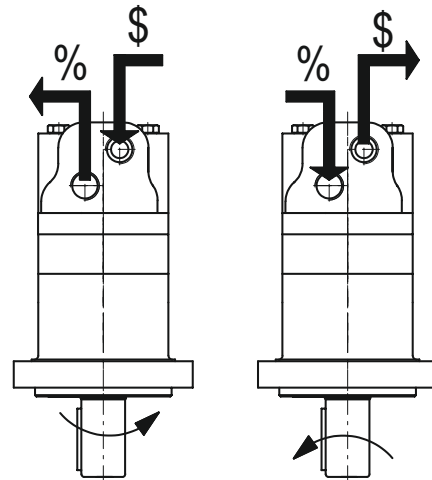
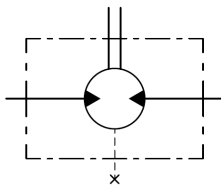
Flange [E2] Radial Forces



- The bearing curve represents allowable bearing loads for an B_{10} bearing life (2000 hours or 12×10^6 revolutions at 100rpm) at rated output torque.

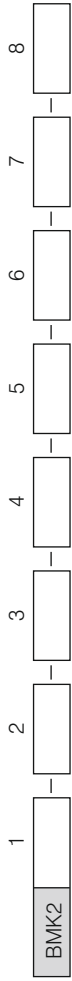
- Direction of shaft rotation: Standard

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





Ordering Code



Pos.1	2	3	4	5	6	7	8
Code	Disp.	Flange	Output Shaft	Port and Drain Port	Rotation Direction	Paint	Unusually Function
65			A Shaft Ø25 , parallel key 8×7×32	DB G1/2,G1/4			
80			B Shaft Ø32 , parallel key 10×8×45	DU G1/2,7/16-20 UNF			
100	E2	2×Ø 13.5 Rhomb-flange Ø106.4, pilot Ø82.5×6.4	K Shaft Ø25.4 , Woodruff key Ø25.4×6.35	SB 7/8-14UNF O-ring,G1/4			
125	E4	4×Ø 13.5 Rhomb-flange Ø106.4, pilot Ø82.5×6.4	G Shaft Ø31.75 , parallel key 7.96×7.96×31.75	SU 7/8-14UNF O-ring,7/16-20 UNF			
160	E6	4×Ø 13.5 Rhomb-flange Ø106.4, pilot Ø82.5×6.4	FE Shaft Ø31.75 , splined 14-DP12/24	M4 M22×1.5,M14×1.5			
200			S1 Shaft Ø25.4 , splined SAE 6B	MU 1/2",5/8"Crosshole Manifold 3×3/8-16UNC,7/16-20UNF			
250	WE	4×Ø 13.6 Wheel-flange Ø147.6, pilot Ø107.95×6.4	I Sub-shaft Ø22 , splined 13-DP16/32	MM 1/2",5/8"Crosshole Manifold 3×M10,G1/4			
315							
400							
475			T4 Cone-shaft Ø31.75 , parallel key 7.96×7.96×25.4				

Note: When the table is used, please fill the code of right rows in the table and give us, which the code information is consists of construction, displacement, mounting flange, output shaft and ports. If the specifications is not in the table or you have specific requirements, please contact us.

