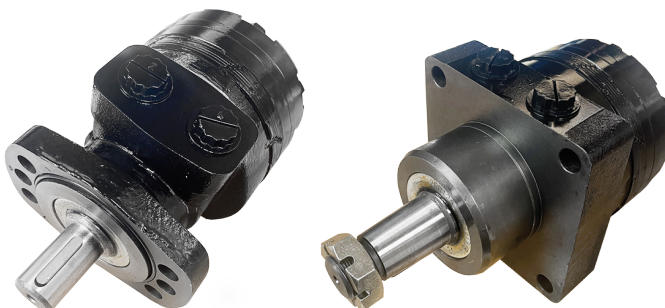


BMER2 Series Low Speed High Torque Hydraulic Motors



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The BMER2 Series Geroler Motors are available with displacements from 125 - 750cc/rev. They are very compact and efficient in design. The output shaft needle bearings permit high axial and radial forces for a smooth operation during low pressure start up and high pressure operation. The BMER2's are available with either a Wheel Drive Mount or a Magneto Mount to suit numerous application requirements.



Replaces: HW, RE/500/505, MB/ME, TF/TG

Max. Operating Pressure MPa		Speed Range rpm	Max. Output Power kW
Continuous	Intermittent		
20.5	24	4 - 360	18.0

Specifications

		BMER 125	BMER 160	BMER 200	BMER 230	BMER 250	BMER 300	BMER 350	BMER 375	BMER 475	BMER 540	BMER 750
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 (MPa)	Cont	20.5	20.5	20.5	20.5	20.5	20.5	20.5	20.5	17.5	14	10.5
	Int	24	24	24	24	24	24	24	24	19	17.5	12
	Peak	27.6	27.6	27.6	27.6	27.6	27.6	27.6	27.6	27.6	20.5	20.5
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



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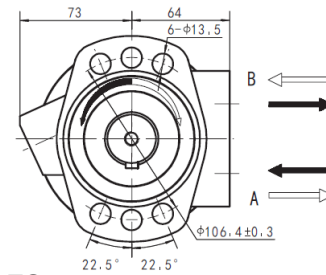
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Standard Model

Part Number	Displacement	Mount	Shaft	Ports	L	L1
BMER2-125-FS-G2	125cc	6 Bolt Magneto	1 1/4" Straight Keyed	7/8" UNO-ring Ports	157	10.2
BMER2-160-FS-G2	160cc				160	13.5
BMER2-200-FS-G2	200cc				163.5	17
BMER2-230-FS-G2	230cc				166	19.5
BMER2-250-FS-G2	250cc				168.5	22
BMER2-300-FS-G2	300cc				172	25.4
BMER2-350-FS-G2	350cc				176	29.5
BMER2-375-FS-G2	375cc				178.5	31.8
BMER2-475-FS-G2	475cc				186	39.4
BMER2-540-FS-G2	540cc				194	47.3
BMER2-750-FS-G2	750cc				210	63.5

Options

Mount Type	
FS	6 Bolt Magneto Mount 2 Bolt SAE A 82.55 Spigot
WS	4 Bolt Wheel Mount
Shaft Type	
G2	1 1/4" Straight Keyed Shaft
RW	1" Straight Keyed Shaft
T4	1 1/4" Tapered Shaft
T31	1 1/2" Tapered Shaft
FD1	1 1/4" 14T Splined Shaft



FS

BMER Ordering Code

Series	Code	Displacement cc/rev	-	Mount	-	Shaft	
BMER	2	125	-	FS	6 Bolt Magneto	G2	1 1/4" Straight Keyed
		160	-	WS	4 Bolt Wheel Mount	RW	1" Straight Keyed
		200	-	-	-	T4	1 1/4" Tapered
		230	-	-	-	T31	1 1/2" Tapered Shaft
		250	-	-	-	FD1	1 1/4" 14T Splined Shaft
		300	-	-	-	-	-
		350	-	-	-	-	-
		375	-	-	-	-	-
		475	-	-	-	-	-
		540	-	-	-	-	-
750	-	-	-	-	-		



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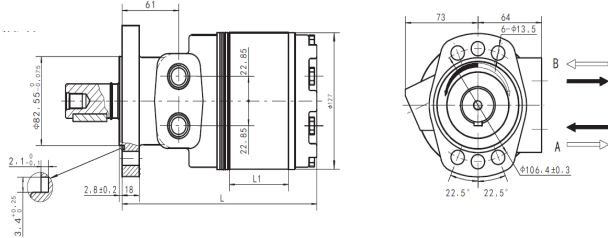
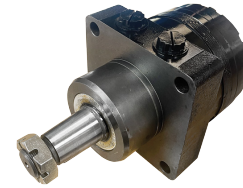


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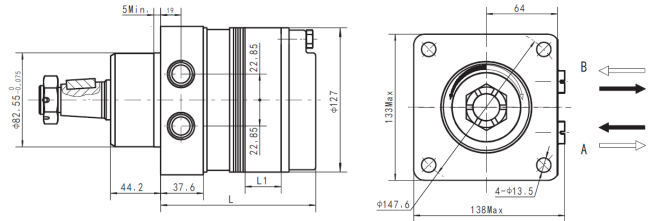


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FS 6 Bolt Magneto Mount

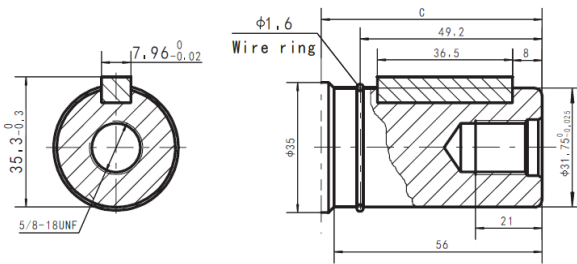


WS 4 Bolt Wheel Mount

Wheel Mount (WS) Dimension Data

Displacement	125	160	200	230	250	300	350	375	475	540	750
L(mm)	119	122	125.5	128	130.5	134.5	138	140.5	148	156	173
L1(mm)	10.2	13.5	17	19.5	22	25.4	29.5	31.8	39.4	47.3	63.5

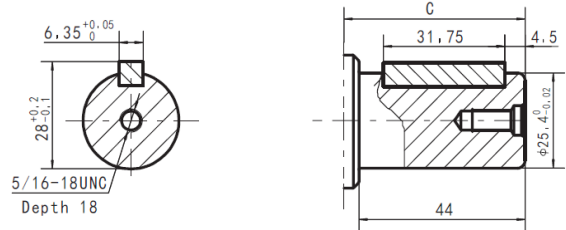
Shaft G2



Shaft G2: Cylindrical shaft $\varnothing 31.75$
Parallel key 7.96x7x36.5

G2 1 1/4" Straight Keyed Shaft

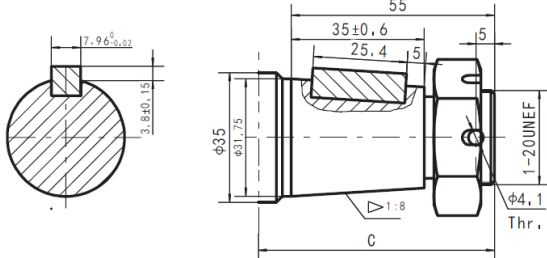
Shaft RW



Shaft RW: Cylindrical shaft $\varnothing 25.4$
Parallel key 6.35x6.35x31.75

RW 1" Straight Keyed Shaft

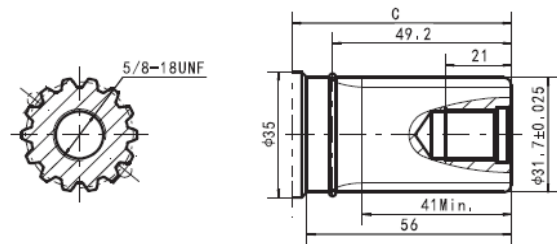
Shaft T4



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

T4 1 1/4" Tapered Shaft

Shaft FD1



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

FD1 1 1/4" 14T Splined Shaft

Shaft Dimension C

Shaft Code	Magneto Mount	Wheel Mount
G2	61mm	103mm
RW	50mm	91mm
T4	65mm	107mm
FD1	61mm	103mm



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Performance Data

cont.
int.

BMER125 [118cm³/rev]

Pressure MPa

Max. Cont Max. Int

	1.75	3.5	7	10.5	14	17.5	20.5	24
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
	15		53 115	114 110	180 100	234 96	275 90	326 84
	25		48 194	110 185	164 173	226 168	272 160	323 155
	34			108 276	166 260	220 244	278 232	315 225
	45			98 362	160 350	215 342	271 325	308 322
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 MPa

Max. Cont Max. Int

	1.75	3.5	7	10.5	14	17.5	20.5	24
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
	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
	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
Max. Cont	53		135 330	216 327	293 322	357 315	421 306	476 296
Max. Int	60		122 379	207 376	284 368	350 362	416 356	467 345
	68		109 423	196 419	273 414	345 406	396 394	
	75		104 472	188 466	270 460	337 450	390 436	

BMER200 [196cm³/rev]

Pressure MPa

Max. Cont Max. Int

	1.75	3.5	7	10.5	14	17.5	20.5	24
Flow L/min	2	39 8	88 4	132 4	286 3	370 2		
	4	42 16	85 14	188 13	270 11	361 10	427 9	506 6
	8	43 35	90 32	192 29	291 28	367 27	450 25	529 23
	15	38 74	92 71	196 68	298 64	381 60	462 58	530 55
	25		82 124	188 121	283 117	377 113	456 108	528 103
	34		79 170	183 169	270 167	362 160	447 154	515 146
	45			163 223	259 218	352 212	441 208	510 199
Max. Cont	53		149 260	256 258	350 254	440 248	501 241	582 230
Max. Int	60		132 299	248 292	336 284	432 276	497 272	575 263
	68		120 336	230 332	330 327	412 319	486 310	570 301
	75		108 375	208 372	311 365	403 358	480 350	

BMER230 [228cm³/rev]

Pressure MPa

Max. Cont Max. Int

	1.75	3.5	7	10.5	14	17.5	20.5	24
Flow L/min	2	44 6	90 4	182 3	291 2	374 1		
	4	48 15	100 13	216 11	310 11	405 9	484 7	549 3
	8	50 31	104 29	212 27	320 25	421 23	518 20	603 16
	15	44 63	106 61	207 58	318 55	426 52	529 47	623 41
	25		101 103	209 100	324 96	428 92	532 87	620 81
	34		88 145	205 143	316 139	421 133	522 126	623 120
	45			186 192	294 187	422 182	507 176	595 170
Max. Cont	53		175 226	290 221	393 215	496 208	584 203	678 194
Max. Int	60		152 256	270 253	390 248	485 242	569 235	661 222
	68		140 292	265 288	351 283	482 278	563 273	642 256
	75		124 324	235 321	344 316	448 308	552 300	
	85			207 366	335 360	442 351	546 338	

Torque Nm
Speed rpm



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Performance Data

cont.
int.

BMER250 [257cm³/rev]

Pressure MPa

Max. Cont Max. Int

	1.75	3.5	7	10.5	14	17.5	20.5	24
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	266 125	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			137 290	274 289	388 285	520 280	618 273	726 260
Max. Int			130 348	261 347	370 344	509 336	604 307	

BMER300 [296cm³/rev]

Pressure MPa

Max. Cont Max. Int

	1.75	3.5	7	10.5	14	17.5	20.5	24
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	305 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. Cont			178 251	322 250	464 247	610 240	741 232	870 215
Max. Int			140 285	316 284	455 278	570 270	728 257	
			106 316	260 314	431 311	552 307	700 292	

BMER350 [345cm³/rev]

Pressure MPa

Max. Cont Max. Int

	1.75	3.5	7	10.5	14	17.5	20.5	24
2	63 4	133 4						
4	64 10	135 9	290 8	440 7				
8	68 21	146 20	310 20	458 19	589 18	735 16	847 12	
15	72 42	150 41	314 40	468 39	627 37	769 35	880 32	984 26
25	63 70	148 69	313 68	470 66	628 63	765 60	892 55	1018 46
34	52 97	133 96	304 95	455 93	619 89	760 85	905 78	1034 68
45		100 129	261 128	442 127	583 125	736 118	887 112	1028 101
53		85 152	247 150	418 148	566 145	715 139	880 132	1024 118
60		65 171	233 170	410 169	550 167	712 162	842 155	996 143
68			218 195	387 194	543 190	696 185	825 175	976 162
Max. Cont			206 215	373 214	515 212	680 206	822 197	966 183
Max Int			176 243	355 242	510 239	679 234	808 227	
			353 272	509 269	645 265			

BMER375 [371cm³/rev]

Pressure MPa

Max. Cont Max. Int

	1.75	3.5	7	10.5	14	17.5	20.5	24
2	75 3							
4	83 8	160 8	330 7	488 6	636 5	761 3		
8	81 18	170 17	356 17	527 16	679 14	822 12	948 9	1060 5
15	76 39	162 38	356 37	533 35	683 32	845 29	978 25	1102 18
25	68 65	156 64	350 62	524 59	680 55	857 48	994 44	1138 35
34	58 90	148 89	339 87	506 83	690 77	841 71	993 63	1145 53
45		121 120	302 119	478 117	650 113	813 108	972 100	1134 90
53		95 141	282 140	466 138	628 134	785 128	934 120	1103 105
60		75 161	264 161	428 160	592 158	766 155	925 151	1070 141
68			232 182	422 180	585 176	756 169	901 161	1066 148
Max. Cont			207 201	380 200	556 197	738 190	865 181	1012 165
Max Int			175 228	370 226	526 221	700 216	832 206	
			148 242	316 240	500 237	654 226		

Torque Nm
Speed rpm



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Performance Data

cont.
int.

BMER475 [462cm³/rev]

Pressure MPa

Max. Cont Peak

	1.75	3.5	7	10.5	14	17.5	20.5		
Flow L/min	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	702 158	920 153	1116 140		
Max. Int	85		200 182	454 180	662 177	876 168			
	90		150 194	378 193	615 190	840 182			

BMER540 [540cm³/rev]

Pressure MPa

Max. Cont Max. Int

	1.75	3.5	7	10.5	14	17.5		
Flow L/min	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. Cont	75		318 138	600 137	826 135	1100 132		
Max. Int	85		292 154	538 153	780 152			
	90		214 169	486 168	755 168			

BMER750 [745cm³/rev]

Pressure MPa

Max. Cont Max. Int Peak

	1.75	3.5	7	10.5	12	14		
Flow L/min	2	145 2	280 1					
	4	160 4	321 4	654 4	960 3	1115 3	1312 2	
	8	162 9	335 9	688 9	1026 8	1159 8	1347 7	
	15	156 19	330 19	694 18	1047 18	1184 17	1376 16	
	25	142 32	320 31	688 30	1046 30	1179 29	1373 27	
	34	110 44	288 44	658 42	1021 41	1169 40	1366 37	
	45	71 60	242 59	620 59	982 58	1143 58	1345 55	
	53		202 70	568 69	941 68	1105 67	1308 66	
	60		140 79	527 78	898 77	1086 76	1286 74	
	68		100 90	486 90	852 89	1034 88	1251 87	
Max. Cont	75	65 99	425 99	812 98	980 97	1178 96		
Max. Int	85		395 110	745 109	906 108			
	90		298 120	660 119	800 117			

Torque Nm
Speed rpm



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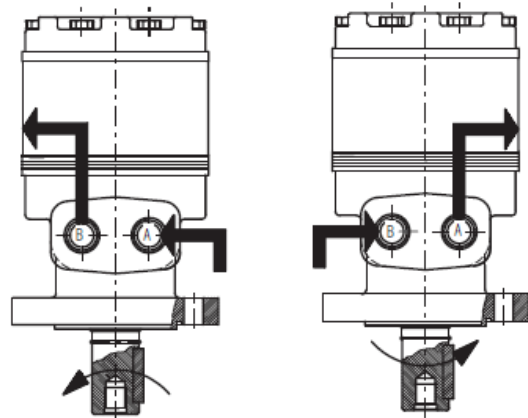
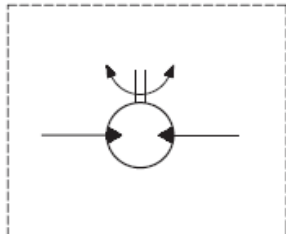
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BMER-2 Series Motors

Direction of Shaft Rotation: Reverse Timed

When facing shaft end of motor, shaft to rotate:

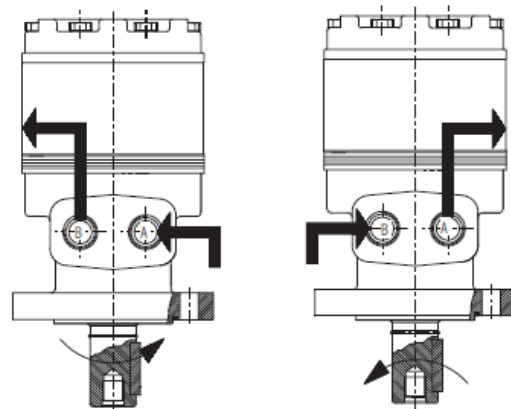
- Clockwise when port "B" is pressurised.
- Counter-clockwise when port "A" is pressurised.



Direction of shaft rotation: Standard

When facing shaft end of motor, shaft to rotate:

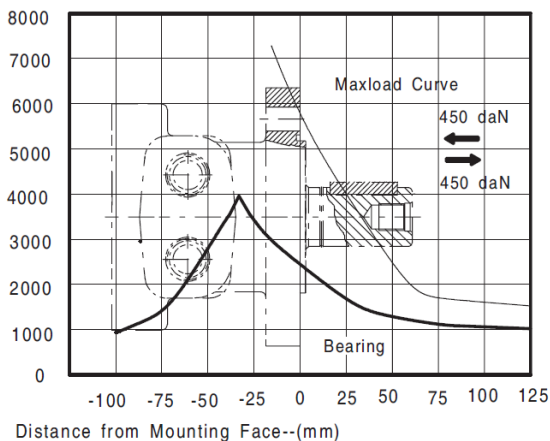
- Clockwise when port "A" is pressurised
- Counter-clockwise when port "B" is pressurised.



Axial and Radial Forces

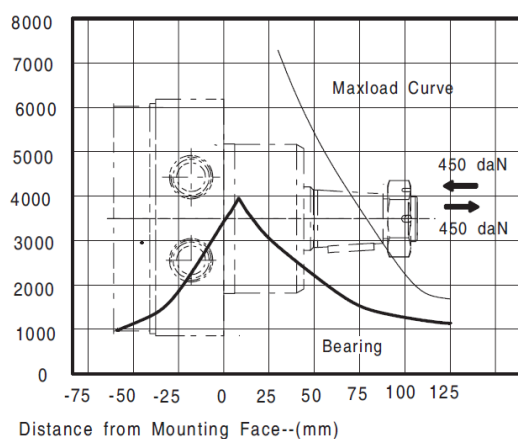
BMER-2 or M#/F# Mounting

Side Load-(daN)



BMER-2 for W# Mounting

Side Load-(daN)



The bearing curve represents allowable bearing loads for an L_{10} 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.