BMER SERIES HYDRAULIC MOTOR

BMER series motor adapt the advanced Geroler gear set designed with high speed distribution flow and high pressure, and have good stability in low speed , and can keep high volume efficiency. 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 needle 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 high speed distribution flow, which can automatically compensate in operating with high volume efficiency and long life , provide smooth and reliable operation.

* Lowest leakage rate, most accurate timing methods.Commutator rotates 6x faster than shaft speed. It make the distribution in a high precision reduces life-cycle cost, maintain high volume efficiencies and can run very smoothly at low speed, gear box not required.

Main Specification

Type		BMER 125	BMER 160	BMER 200	BMER 230	BMER 250	BMER 300	BMER 350	BMER 375	BMER 475	BMER 540	BMER 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 (N•m)	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	20.5	20.5	14
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 second per minute.

Performance Data

BMER125 [118cm³/rev.]

Pressure (MPa)

Flow (L/min)	1.75	3.5	7	10.5	14	17.5	20.5 (Max.cont.)	24 (Max.int.)
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**
53 (Max.cont.)			90 **423**	152 **418**	208 **404**	265 **399**	304 **371**	
60 (Max.int.)			82 **488**	141 **472**	205 **455**	260 **442**	300 **421**	

BMER160 [156cm³/rev.]

Pressure (MPa)

Flow (L/min)	1.75	3.5	7	10.5	14	17.5	20.5 (Max.cont.)	24 (Max.int.)
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**	517 **69**
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**	499 **184**
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**
60 (Max.cont.)			122 **379**	207 **376**	284 **368**	350 **362**	416 **356**	467 **345**
68			109 **423**	196 **419**	273 **414**	345 **406**	156 **345**	
75 (Max.int.)			104 **472**	188 **466**	270 **270**	337 **450**	156 **337**	

BMER200 [196cm³/rev.]

Pressure (MPa)

Flow (L/min)	1.75	3.5	7	10.5	14	17.5	20.5 (Max.cont.)	24 (Max.int.)
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**	600 **19**
15	38 **74**	92 **71**	196 **68**	298 **64**	381 **60**	462 **58**	530 **55**	602 **50**
25		82 **124**	188 **121**	283 **117**	377 **113**	456 **108**	528 **103**	605 **92**
34		79 **170**	183 **169**	270 **167**	362 **160**	447 **154**	515 **146**	591 **135**
45			163 **223**	259 **218**	352 **212**	441 **208**	510 **199**	593 **189**
53			149 **260**	256 **258**	350 **254**	440 **248**	501 **241**	582 **230**
60			132 **299**	248 **292**	336 **284**	432 **276**	497 **272**	575 **263**
68 (Max.cont.)			120 **336**	230 **332**	330 **327**	412 **319**	486 **310**	570 **301**
75			108 **375**	208 **372**	311 **365**	403 **358**	480 **350**	
85 (Max.int.)				184 **425**	280 **420**	380 **411**	462 **390**	

Torque (N•m) 380
Speed (rpm) **411**

BMER230 [228cm³/rev.]

Pressure (MPa)

Flow (L/min)	1.75	3.5	7	10.5	14	17.5	20.5 (Max.cont.)	24 (Max.int.)
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**	700 **10**
15	44 **63**	106 **61**	207 **58**	318 **55**	426 **52**	529 **47**	623 **41**	712 **34**
25		101 **103**	209 **100**	324 **96**	428 **92**	532 **87**	620 **81**	705 **71**
34		88 **145**	205 **143**	316 **139**	421 **133**	522 **126**	623 **120**	702 **109**
45			186 **192**	294 **187**	422 **182**	507 **176**	595 **170**	688 **160**
53			175 **226**	290 **221**	393 **215**	496 **208**	584 **203**	678 **194**
60			152 **256**	270 **253**	390 **248**	485 **242**	569 **235**	661 **222**
68 (Max.cont.)			140 **292**	265 **288**	351 **283**	482 **278**	563 **273**	642 **256**
75			124 **324**	235 **321**	344 **344**	448 **308**	552 **300**	
85 (Max.int.)				207 **366**	335 **360**	442 **351**	546 **338**	

cont.
int.

BMER250 [257cm³/rev.]

Pressure (MPa)

Flow (L/min)	1.75	3.5	7	10.5	14	17.5	Max.cont. 20.5	Max.int. 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**	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. 90			85 **348**	224 **347**	358 **344**	490 **336**		

BMER300 [296cm³/rev.]

Pressure (MPa)

Flow (L/min)	1.75	3.5	7	10.5	14	17.5	Max.cont. 20.5	Max.int. 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. 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**	

BMER350 [345cm³/rev.]

Pressure (MPa)

Flow (L/min)	1.75	3.5	7	10.5	14	17.5	Max.cont. 20.5	Max.int. 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. 75			206 **215**	373 **214**	515 **515**	680 **206**	822 **197**	966 **183**
85			176 **243**	355 **242**	510 **239**	679 **234**	808 **227**	
Max.int. 95				353 **272**	509 **269**	645 **265**		

Torque (N•m) 645
Speed (rpm) **265**

BMER375 [371cm³/rev.]

Pressure (MPa)

Flow (L/min)	1.75	3.5	7	10.5	14	17.5	Max.cont. 20.5	Max.int. 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. 75			207 **201**	380 **200**	556 **556**	738 **190**	865 **181**	1012 **165**
85			175 **228**	370 **226**	526 **221**	700 **216**	832 **206**	
Max.int. 90			148 **242**	316 **240**	500 **237**	654 **226**		

cont.
int.

BMER475 [462cm³/rev.]

Pressure (MPa)

Flow (L/min)	1.75	3.5	7	10.5	14	17.5 (Max.cont.)	20.5 (Peak)
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**
75 (Max.cont.)			230 **161**	480 **160**	702 **158**	920 **153**	1116 **140**
85			200 **182**	454 **180**	662 **177**	876 **168**	
90 (Max.int.)			150 **194**	378 **193**	615 **190**	840 **182**	

BMER540 [540cm³/rev.]

Pressure (MPa)

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

Torque (N•m) 486
Speed (rpm) **168**

BMER750 [745cm³/rev.]

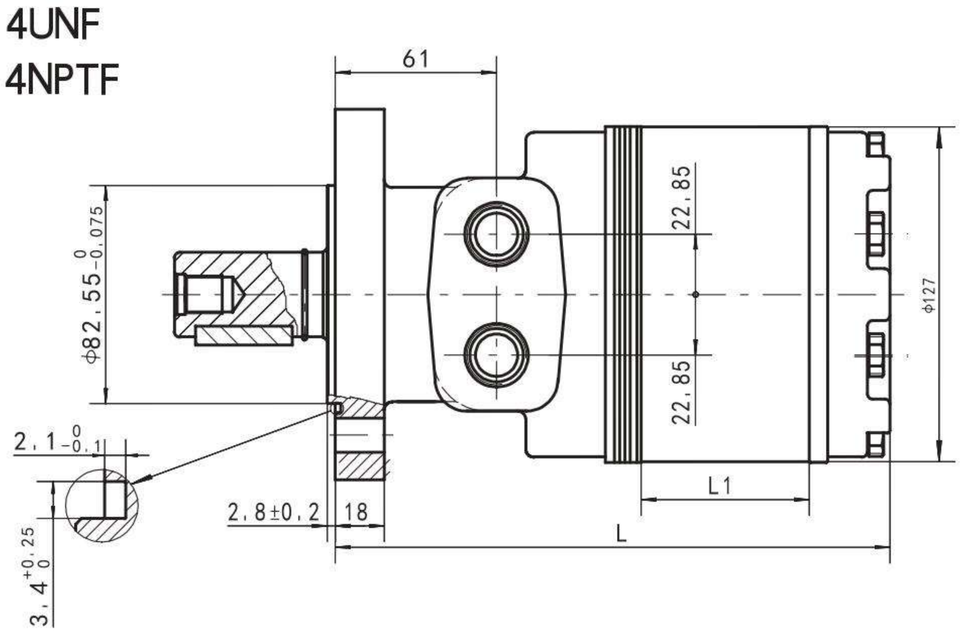
Pressure (MPa)

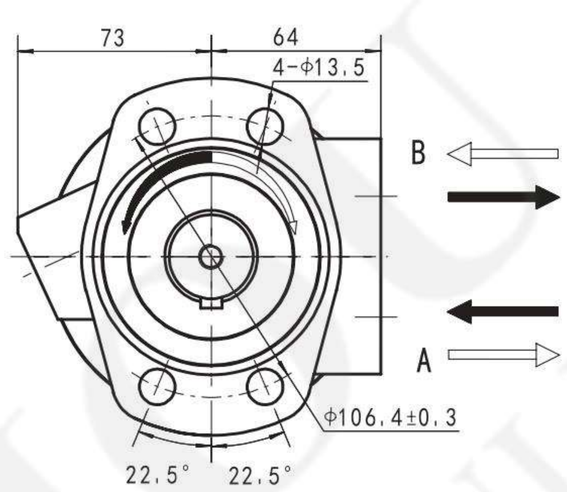
Flow (L/min)	1.75	3.5	7	10.5 (Max.cont.)	12 (Max.int.)	14 (Peak)
2	145 **2**	280 **1**				
4	160 **4**	321 **4**	654 **4**	960 **3**	1115 **3**	1312 **2**
8	162 **9**	335 **9**	688 **9**	1026 **8**	1159 **8**	1347 **7**
15	156 **19**	330 **19**	694 **18**	1047 **18**	1184 **17**	1376 **16**
25	142 **32**	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**
75 (Max.cont.)		65 **99**	425 **99**	812 **98**	980 **97**	1178 **96**
83			395 **110**	745 **109**	906 **108**	
90 (Max.int.)			298 **120**	660 **119**	800 **117**	

cont.
int.

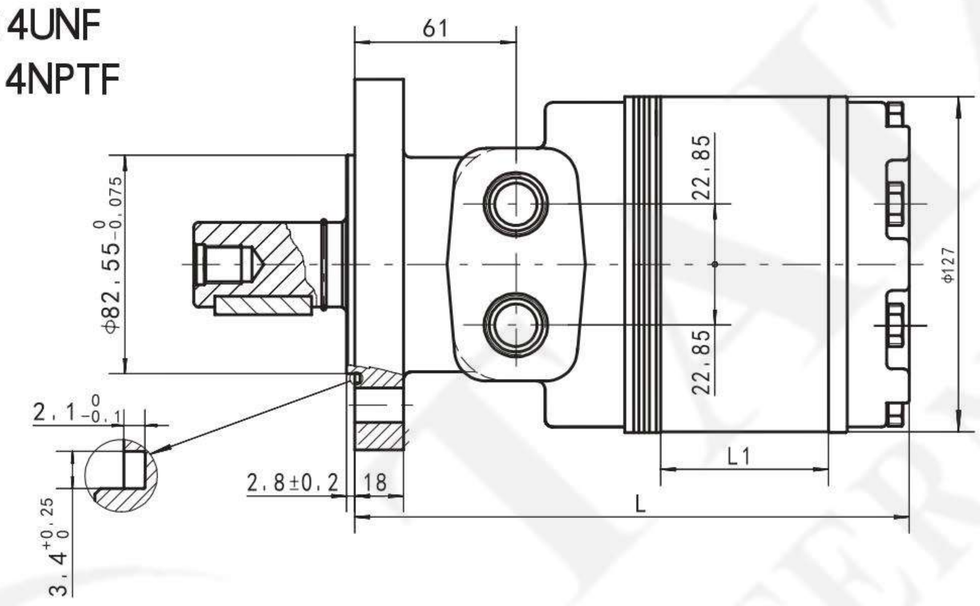
BMER-2 DIMENSIONS MOUNTING DATA

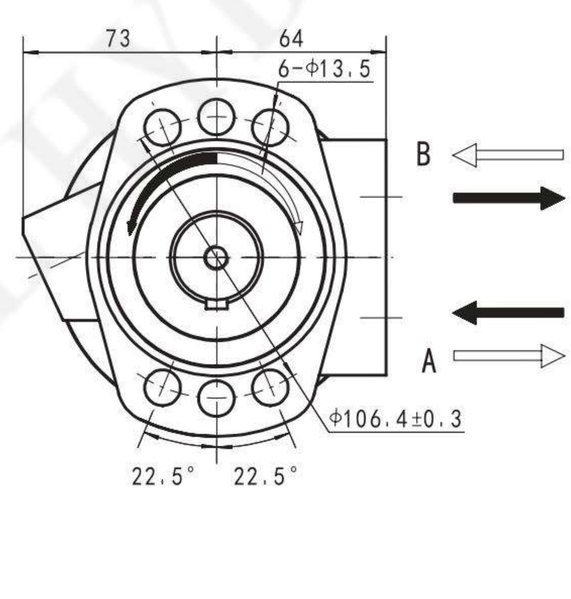
Magneto Mount 4—Hole
Code： Port A、B
MS 7/8—14UNF
MP 1/2—14NPTF
MD G1/2



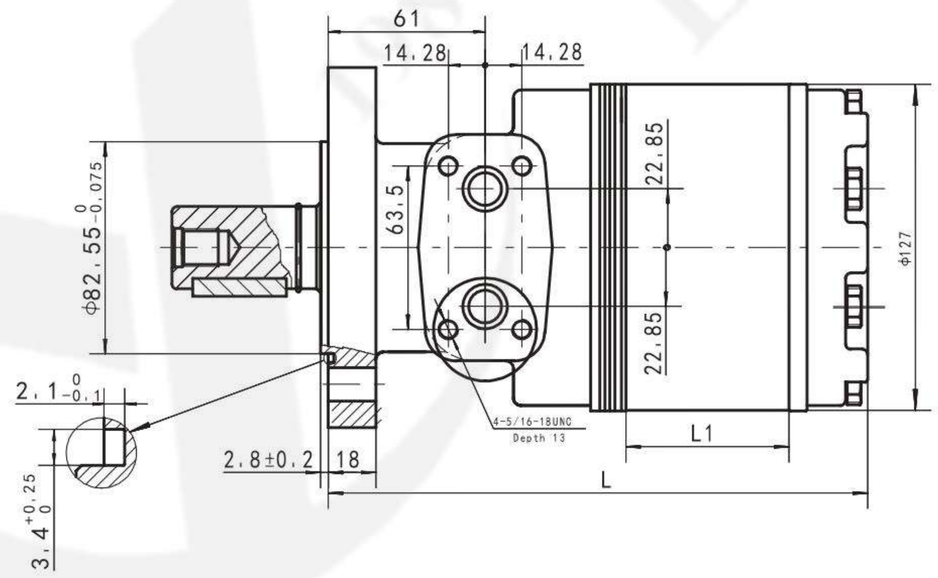


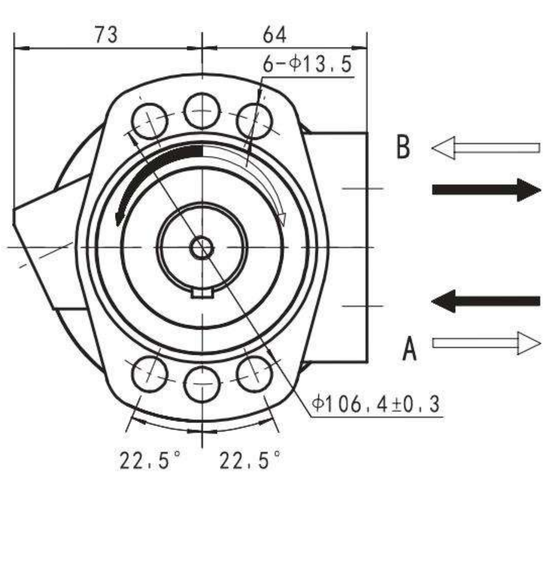
Magneto Mount 6—Hole
Code： Port A、B
FS 7/8—14UNF
FP 1/2—14NPTF
FD G1/2





Magneto Mount 6—Hole
Code:Manifold PortA、B
FH Ø12.7

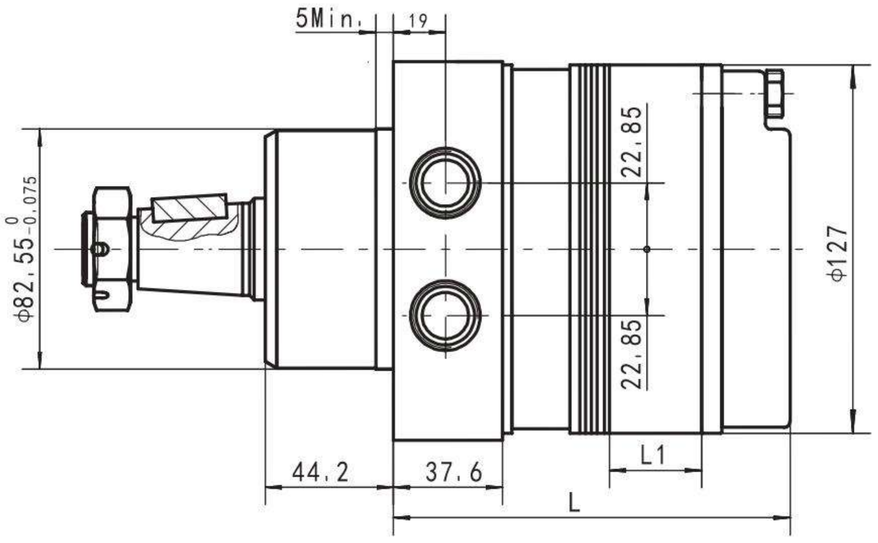


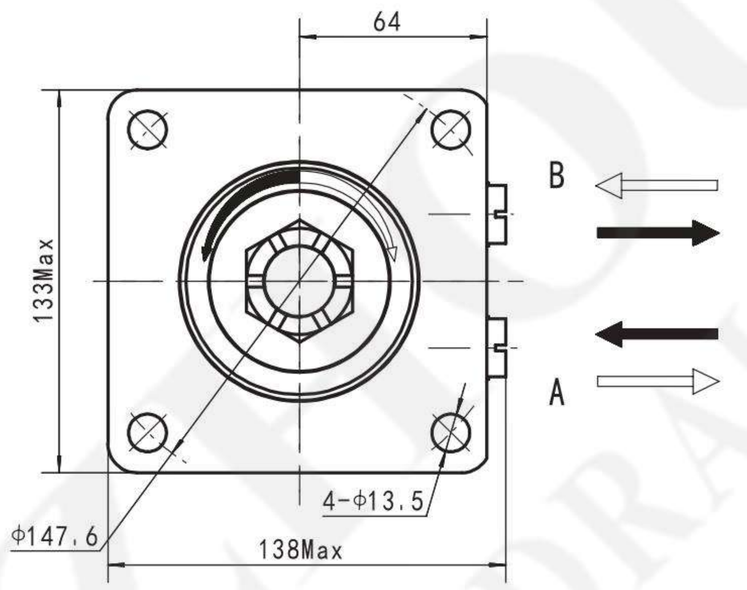


Displacement (cm^3/rev.)	125	160	200	230	250	300	350	375	475	540	750
L1(mm)	10.2	13.5	17	19.5	22	25.4	29.5	31.8	39.4	47.3	63.5
L(mm)	157	160	163.5	166	168.5	172	176	178.5	186	194	210
Weight(kg)	10.6	10.9	11.2	11.3	11.4	11.6	12	12.5	13	13.5	15

BMER-2 DIMENSIONS MOUNTING DATA

Wheel Mount
Code: Port A、B
WS 7/8—14UNF
WP 1/2—14NPTF
WD G1/2

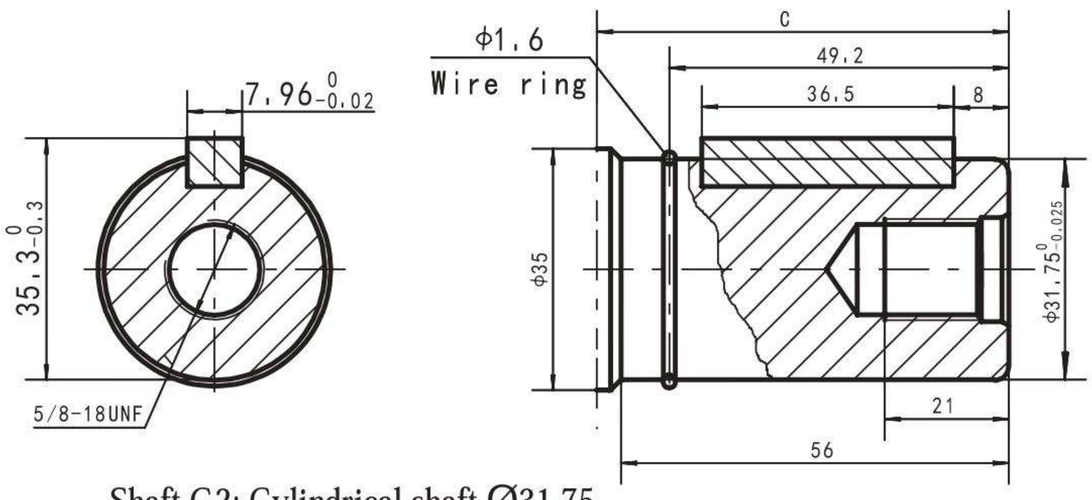




Displacement (cm³/rev.)	125	160	200	230	250	300	350	375	475	540	750
L1(mm)	10.2	13.5	17	19.5	22	25.4	29.5	31.8	39.4	47.3	63.5
L(mm)	119	122	125.5	128	130.5	134.5	138	140.5	148	156	176
Weight(kg)	12	12.1	12.3	12.4	12.6	13	13.2	13.5	14	14.6	16

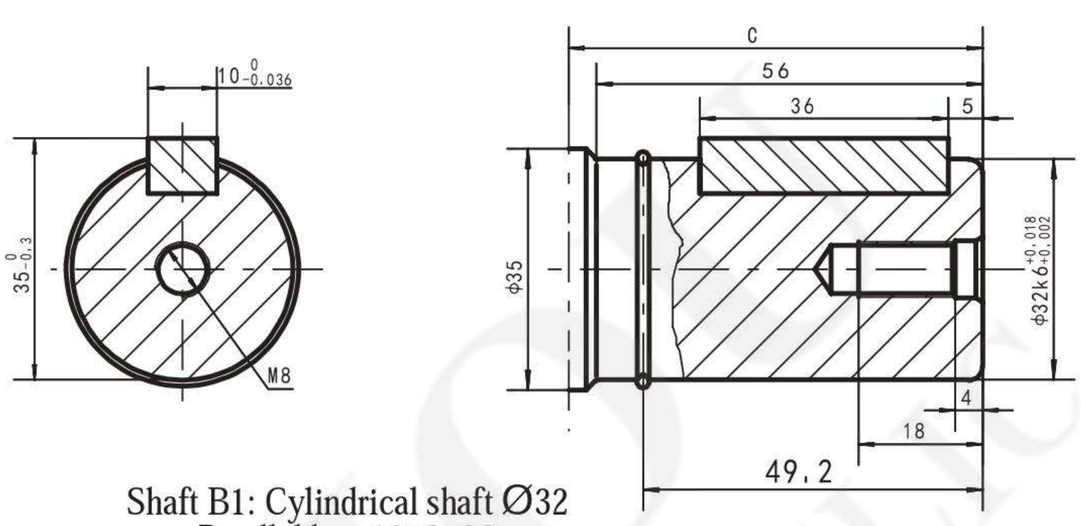
BMER-2 SHAFT EXTENSIONS DIMENSIONS DATA

Shaft G2



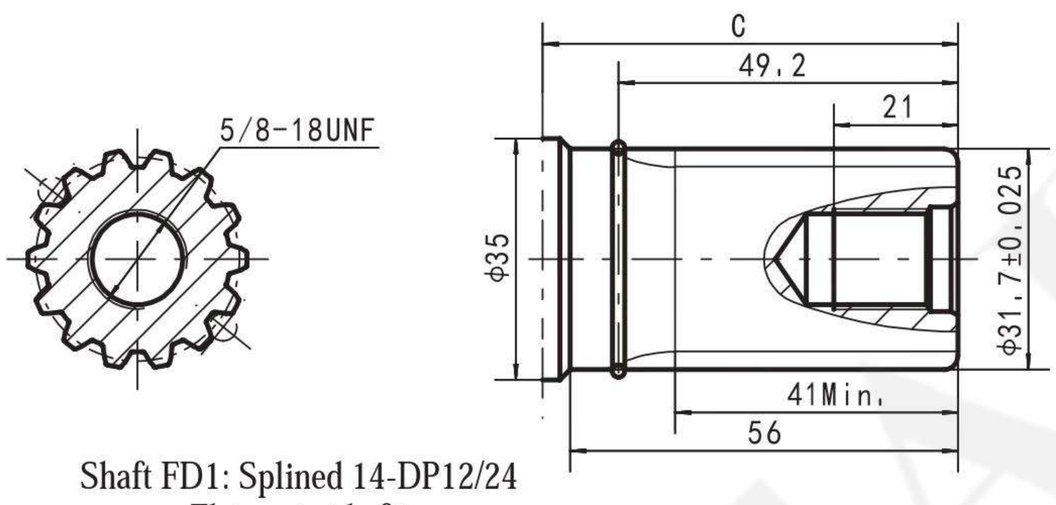
Shaft G2: Cylindrical shaft Ø31.75
Parallel key 7.96x7x36.5

Shaft B1



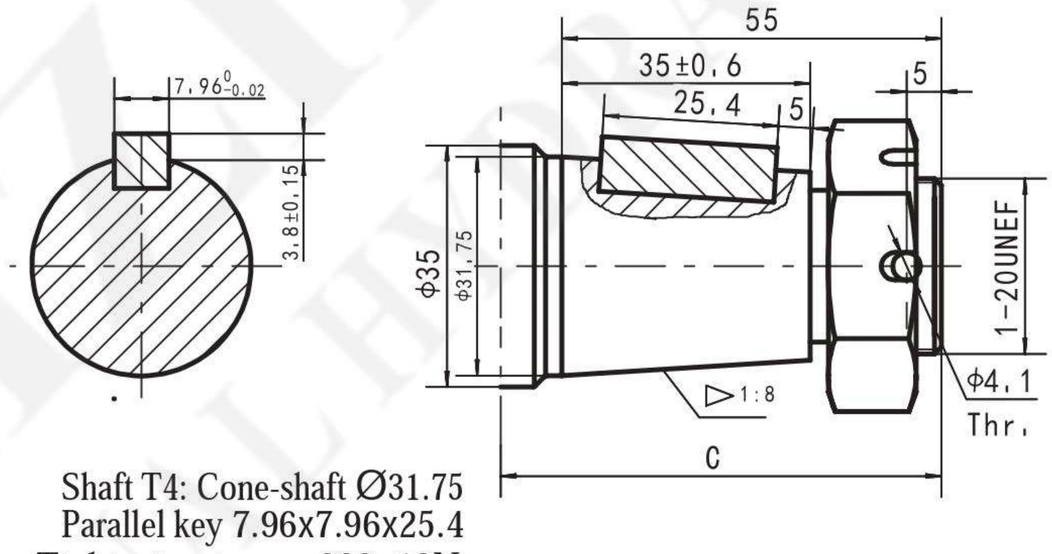
Shaft B1: Cylindrical shaft Ø32
Parallel key 10x8x36

Shaft FD1



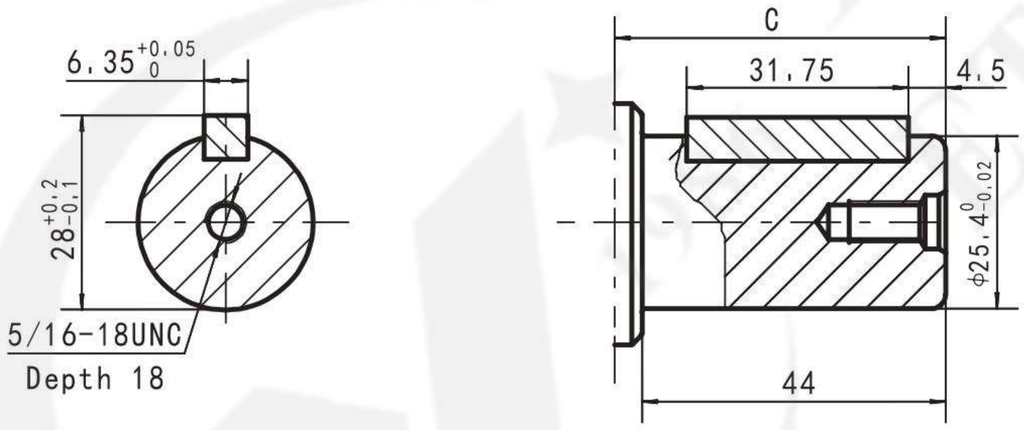
Shaft FD1: Splined 14-DP12/24
Flat root side fit
to fit ANSI B92.1 1996

Shaft T4



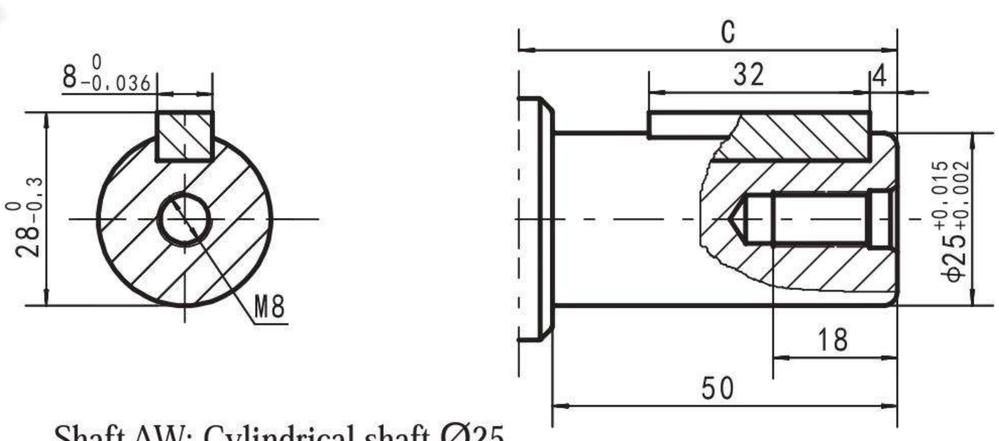
Shaft T4: Cone-shaft Ø31.75
Parallel key 7.96x7.96x25.4
Tightening torque:200±10Nm

Shaft RW



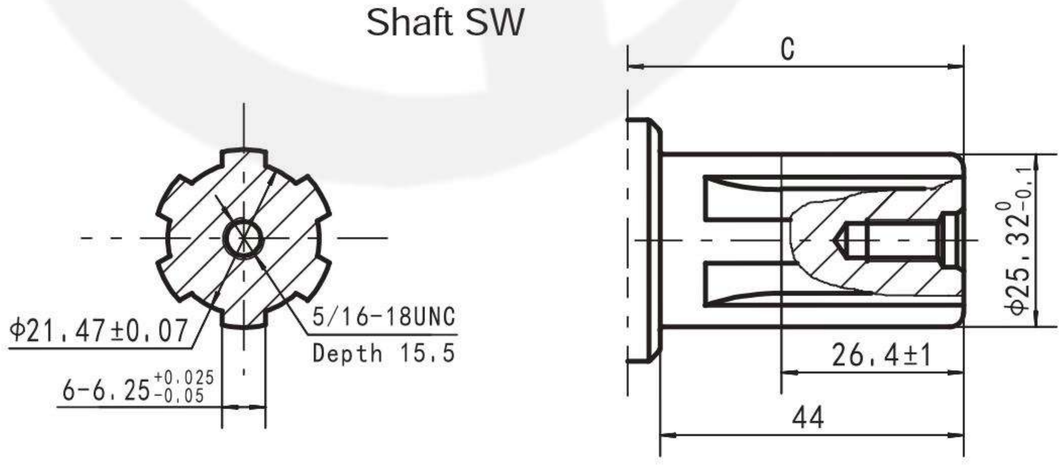
Shaft RW: Cylindrical shaft Ø25.4
Parallel key 6.35x6.35x31.75

Shaft AW



Shaft AW: Cylindrical shaft Ø25
Parallel key 8x7x32

Shaft SW

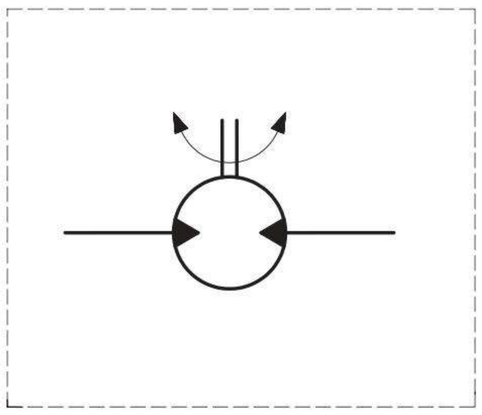


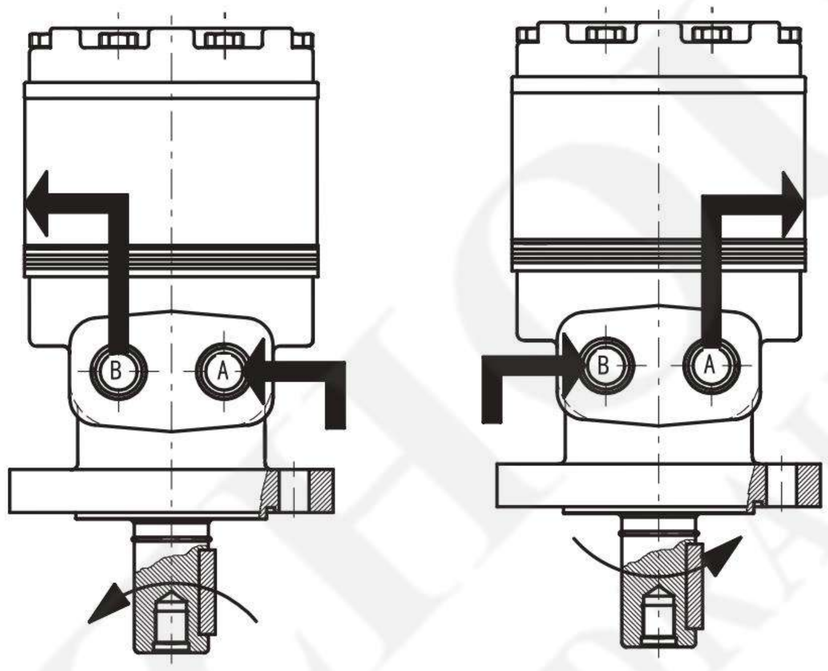
Shaft SW: Splined SAE 6B

From Mounting Flange to Shaft End		
Dimension C		
Shaft Code	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-2 Series Hydraulic Motor

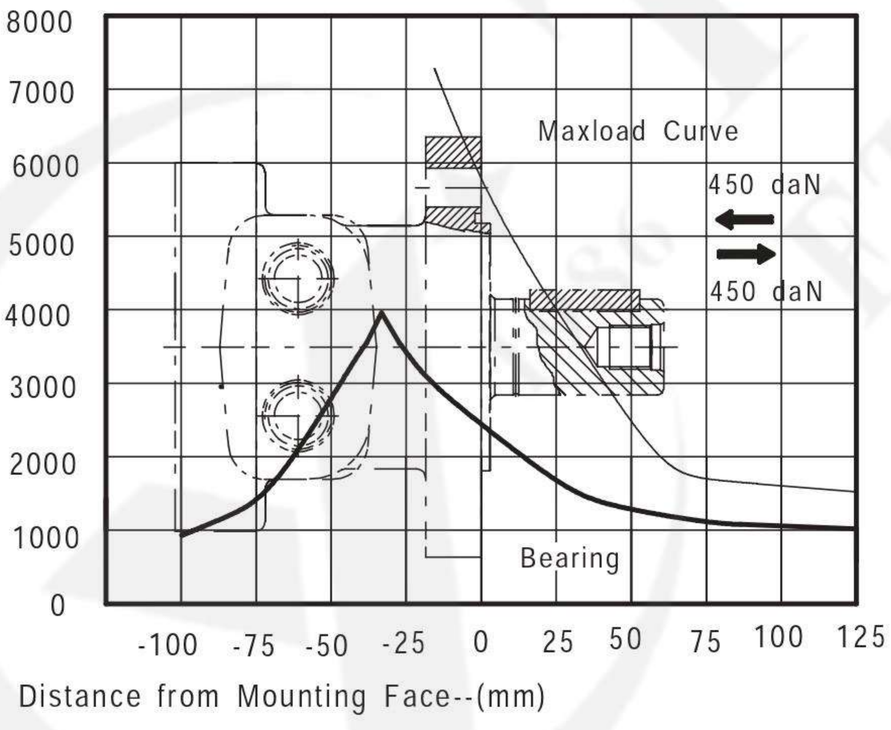
Direction of shaft rotation: Reverse timed
When facing shaft end of motor,shaft to rotate:
Clockwise when port "B" is pressurized.
Counter-clockwise when port "A" is pressurized.



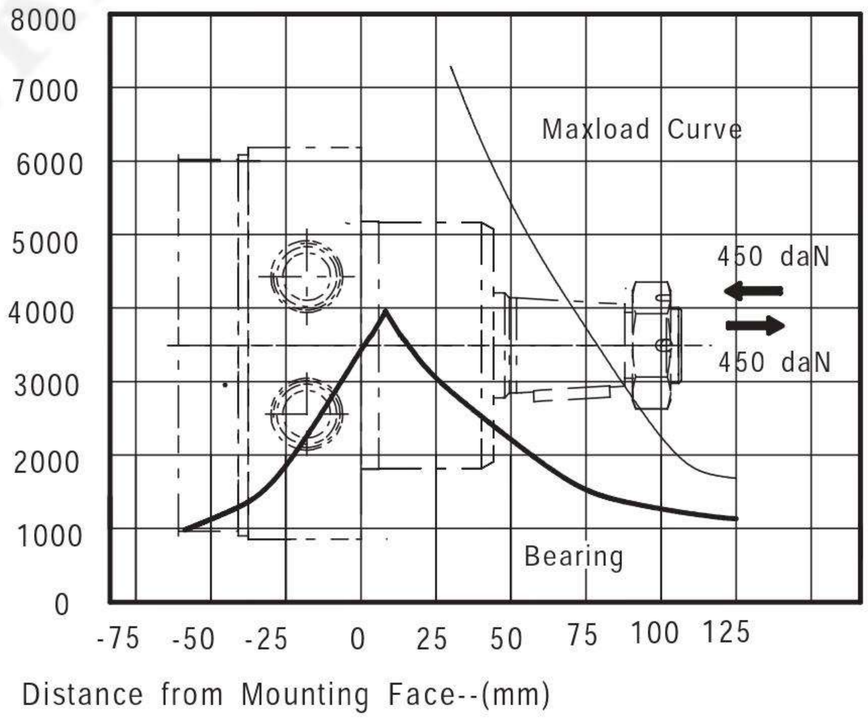


Axial and Radial forces

BMER-2 or M#/F# Mounting



BMER-2 for W# Mounting



The bearing curve represents allowable bearing loads for an L^{10} bearing life at $3x10^6$ revolutions.
The maximum load curve is defined by bearing static load capacity. This curve should not be exceeded at any time including shock loads.

Order Information

BMER- 1 – 2 – 3 – 4 – 5 – 6 – 7

Pos.1	2	3		4		5		6		7	
Code	Disp.	Flange , Pilot , Ports		Output Shaft		Rotation direction		Paint		Unusually function	
2	125 160 200 230 250 300 350 375 475 540 750	MS	4-Ø13.5 Magneto Mount,Pilot Ø82.55×2.8, Ports 7/8-14 O-ring	G2	Shaft Ø31.75 , parllel key 7.96x7x36.5	None	Standard	00	No paint	None	Standard
		MP	4-Ø13.5 Magneto Mount,Pilot Ø82.55×2.8, Ports 1/2-14NPTF	B1	ShaftØ32, Parallel key 10×8×45	R	Reverse	None	Blue		
		MD	4-Ø13.5 Magneto Mount,Pilot Ø82.55×2.8, Ports G1/2	FD1	Shaft Ø31.75, splined key 14-DP12/24		Timed	B	Black		
		FS	6-Ø13.5 Magneto Mount,Pilot Ø82.55×2.8, Ports 7/8-14 O-ring	T4	Cone-Shaft Ø31.75, Parallel key 7.96×7.96×25.4			S	Sliver Grey		
		FP	6-Ø13.5 Magneto Mount,Pilot Ø82.55×2.8, Ports 1/2-14NPTF	RW	Shaft Ø25.4 , parllel key 6.35×6.35×31.75						
		FD	6-Ø13.5 Magneto Mount,Pilot Ø82.55×2.8, Ports G1/2	AW	Shaft Ø25 , parllel key 8×7×32						
		FH	6-Ø13.5 Magneto Mount,Pilot Ø82.55×2.8, Manifold Ports 1/2	SW	Shaft Ø25.4 ,splined key SAE 6B						
		WS	4-Ø13.5 Wheel Mount, Pilot Ø82.55×5, Ports 7/8-14 O-ring								
		WP	4-Ø13.5 Wheel Mount, Pilot Ø82.55×5, Ports 1/2-14NPTF								
		WD	4-Ø13.5 Wheel Mount, Pilot Ø82.55×5, Ports G1/2								

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