BMM HYDRAULIC MOTOR

BMM series motor are small volume, economical type, which is designed with shaft distribution flow, which adapt the Gerotor gear set design and provide compact volume, high power and low weigth.

Characteristic features:

* Advanced manufacturing devices for the Gerotor gear set, which provide small volume, high efficiency and long life.
* Shaft seal can bear high pressure of motor of which can be used in parallel or in series.
* Advanced construction design, high power and low weight.

Main Specification

Type		BMM 8	BMM 12.5	BMM 20	BMM 32	BMM 40	BMM 50
Geometric displacement (cm^3/rev.)		8.2	12.9	19.9	31.6	39.8	50.3
Max. speed (rpm)	cont.	1950	1550	1000	630	500	400
	int.	2450	1940	1250	800	630	500
Max. torque (N•m)	cont.	11	16	25	40	45	46
	int.	15	23	35	57	70	88
	peak	21	33	51	64	82	100
Max. output (kW)	cont.	1.8	2.4	2.4	2.4	2.2	1.8
	int.	2.6	3.2	3.2	3.2	3.2	3.2
Max. pressure drop (MPa)	cont.	10	10	10	10	9	7
	int.	14	14	14	14	14	14
	peak	20	20	20	16	16	16
Max. flow (L/min)	cont.	16	20	20	20	20	20
	int.	20	25	25	25	25	25
Weight (kg)		1.9	2	2.1	2.2	2.3	2.4

Type		Max.inlet pressure
BMM8-50 (MPa)	cont.	17.5
	int.	22.5

* 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

BMM8 [8.2 cm³/rev.]

Pressure (MPa)

Flow (L/min)	3.5	5	7	10 (Max.cont.)	12	14 (Max.int.)
2	3 **228**	5 **218**	8 **206**	10 **156**	12 **111**	14 **58**
4	3 **474**	5 **471**	7 **463**	11 **426**	13 **391**	15 **331**
8	3 **953**	5 **946**	7 **926**	11 **884**	13 **855**	15 **816**
12	2 **1444**	5 **1426**	7 **1402**	10 **1360**	13 **1324**	15 **1288**
15 (Max.cont.)		4 **1912**	7 **1900**	10 **1861**	12 **1833**	14 **1780**
20 (Max.int.)			6 **2395**	10 **2350**	11 **2328**	14 **2281**

BMM12.5 [12.9 cm³/rev.]

Pressure (MPa)

Flow (L/min)	3.5	5	7	10 (Max.cont.)	12	14 (Max.int.)
2	6 **140**	8 **136**	11 **119**	16 **68**	19 **35**	
4	6 **296**	8 **289**	12 **274**	17 **229**	19 **200**	23 **145**
8	5 **605**	8 **596**	12 **583**	17 **543**	20 **514**	24 **469**
12	5 **912**	8 **905**	11 **895**	16 **859**	20 **834**	24 **784**
15	5 **1152**	7 **1144**	11 **1136**	16 **1102**	19 **1078**	23 **1036**
20 (Max.cont.)	3 **1542**	7 **1532**	10 **1521**	15 **1500**	19 **1482**	22 **1437**
25 (Max.int.)	2 **1910**	6 **1891**	9 **1878**	14 **1848**	18 **1828**	22 **1788**

BMM20 [19.9 cm³/rev.]

Pressure (MPa)

Flow (L/min)	1.7	3.5	5	7	10 (Max.cont.)	12	14 (Max.int.)
2	3 **99**	9 **96**	14 **89**	19 **74**	26 **42**	30 **21**	
4	4 **197**	9 **191**	14 **182**	19 **178**	26 **134**	31 **112**	36 **74**
8	4 **398**	9 **395**	13 **391**	19 **377**	27 **340**	31 **319**	36 **288**
12	3 **596**	8 **594**	13 **588**	18 **579**	26 **545**	31 **523**	37 **493**
15	3 **745**	8 **741**	12 **738**	17 **728**	25 **695**	30 **684**	36 **660**
20 (Max.cont.)	1 **998**	6 **995**	11 **991**	19 **985**	24 **962**	29 **916**	35 **885**
25 (Max.int.)		4 **1247**	9 **1245**	14 **1242**	23 **1189**	28 **1180**	33 **1176**

BMM32 [31.6 cc/rev.]

Pressure (MPa)

Flow (L/min)	2	3.5	5	7	10 (Max.cont.)	12	14 (Max.int.)
2	7 **61**	15 **57**	21 **52**	28 **47**	40 **16**		
4	7 **126**	15 **121**	21 **114**	29 **106**	41 **82**	48 **67**	57 **49**
8	7 **250**	15 **244**	21 **239**	29 **231**	41 **207**	49 **194**	58 **167**
12	6 **378**	13 **374**	20 **369**	28 **362**	40 **338**	48 **322**	58 **297**
15	4 **476**	12 **472**	18 **468**	27 **462**	39 **441**	47 **429**	57 **406**
20 (Max.cont.)	3 **633**	10 **630**	17 **627**	25 **619**	37 **601**	46 **585**	55 **566**
25 (Max.int.)	1 **791**	8 **789**	15 **787**	23 **783**	35 **766**	43 **753**	52 **732**

BMM40 [39.8 cm³/rev.]

Pressure (MPa)

Flow (L/min)	3	5	7	8.5 (Max.cont.)	10	12 (Max.int.)
2	16 **45**	27 **40**	36 **34**	44 **28**	51 **17**	
4	16 **96**	27 **93**	37 **85**	44 **79**	52 **65**	62 **52**
8	15 **197**	26 **195**	36 **182**	44 **176**	52 **166**	63 **154**
12	14 **293**	25 **287**	35 **282**	43 **277**	51 **268**	62 **257**
15	13 **371**	24 **365**	34 **360**	42 **355**	50 **347**	62 **338**
20 (Max.cont.)	10 **497**	21 **492**	31 **487**	39 **480**	48 **472**	59 **463**
25 (Max.int.)	7 **622**	19 **617**	29 **612**	37 **607**	44 **600**	56 **591**

Torque (N•m) 37
Speed (rpm) **607**

BMM50 [50.3 cm³/rev.]

Pressure (MPa)

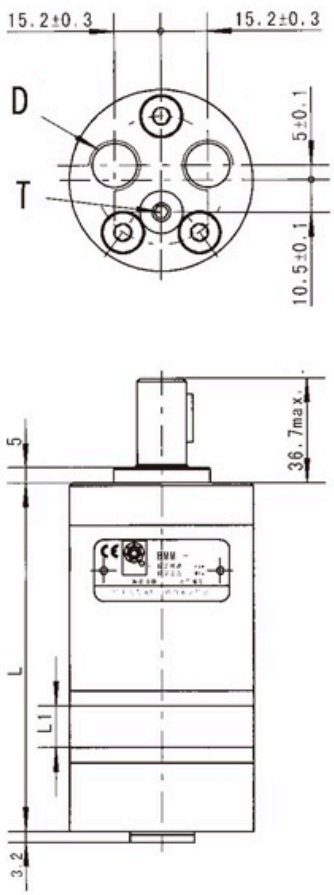
Flow (L/min)	1.5	3	5	7 (Max.cont.)	10 (Max.int.)
2	11 **37**	23 **33**	36 **27**	50 **22**	
4	11 **76**	22 **73**	36 **68**	50 **63**	70 **55**
8	11 **157**	21 **154**	35 **149**	50 **145**	71 **137**
12	11 **237**	20 **234**	33 **231**	49 **226**	71 **218**
15	10 **296**	18 **295**	32 **294**	47 **288**	69 **282**
20 (Max.cont.)	8 **395**	14 **395**	29 **393**	44 **390**	64 **381**
25 (Max.int.)	4 **498**	10 **496**	25 **494**	40 **490**	59 **484**

cont.
int.

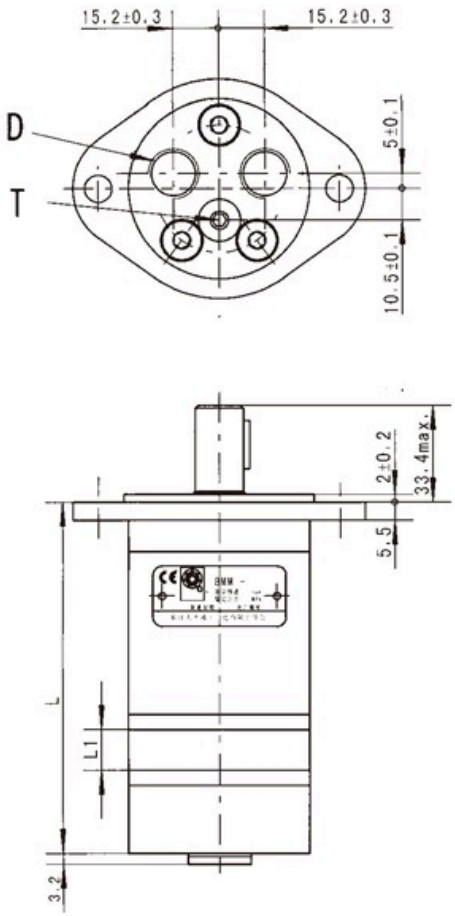
BMM END PORT DIMENSIONS AND MOUNTING DATA

MOUNTING

Flange M、U



Flange F



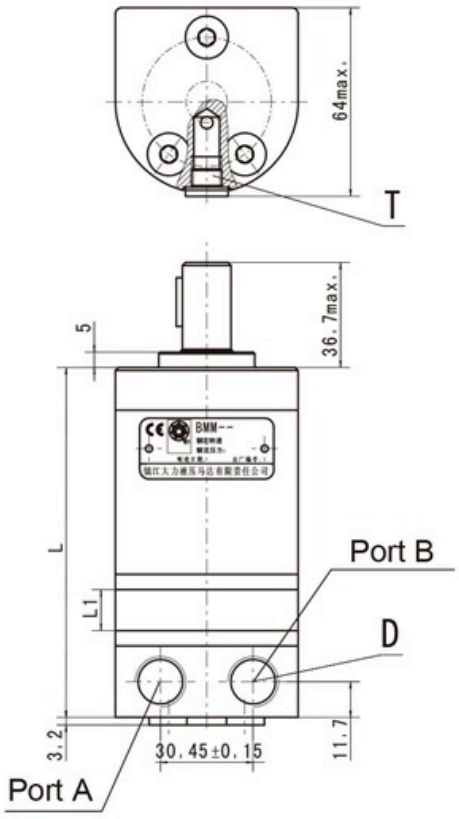
	M、U Flange		F Flange	
Model	L	L1	L	L1
BMM8	104	3.5	107.5	3.5
BMM12.5	106	5.5	109.5	5.5
BMM20	109	8.5	112.5	8.5
BMM32	114	13.5	117.5	13.5
BMM40	117.5	17	121	17
BMM50	122	21.5	125.5	21.5

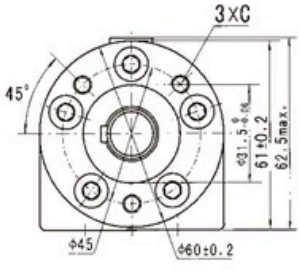
	M、U Flange		F Flange	
Code / Mounting	1E (depth)	1U (depth)	1E (depth)	1U (depth)
C	[M]3-M6 (10)	[U]3-1/4-28UNF-2B(10)	[M]--	[U]--
D	G3/8 (12)	9/16-18UNF(12)	G3/8 (12)	9/16-18UNF(12)
T	G1/8 (8)	3/8-24UNF(8)	G1/8 (8)	3/8-24UNF(8)

BMM SIDE PORT DIMENSIONS AND MOUNTING DATA

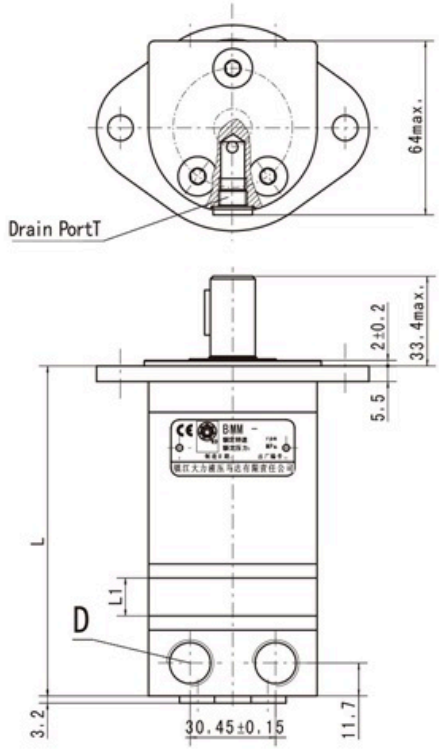
MOUNTING

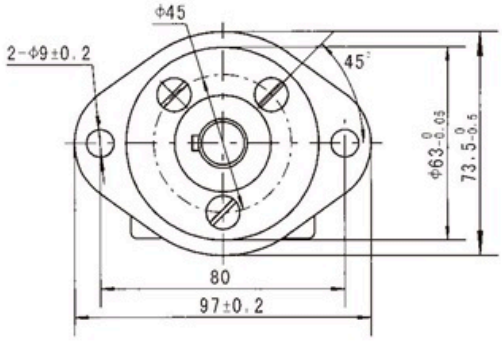
Flange M、U





Flange F



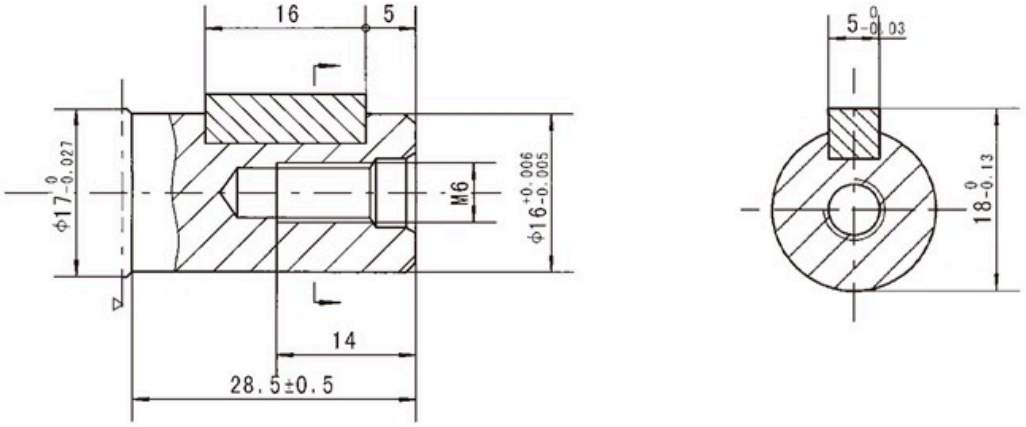


	M、U Flange		F Flange	
Model	L	L1	L	L1
BMM8	105	3.5	108.5	3.5
BMM12.5	107	5.5	110.5	5.5
BMM20	110	8.5	113.5	8.5
BMM32	115	13.5	118.5	13.5
BMM40	118.5	17	122	17
BMM50	123	21.5	126.5	21.5

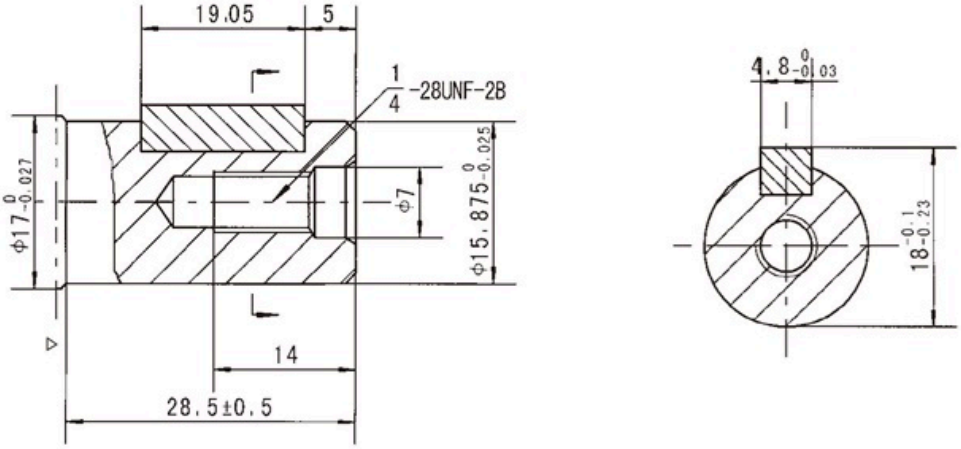
	M、U Flange		F Flange	
Code / Mounting	E (depth)	U (depth)	E (depth)	U (depth)
C	[M]3-M6 (10)	[U]3-1/4-28UNF-2B(10)	[M]--	[U]--
D	G3/8 (12)	9/16-18UNF(12)	G3/8 (12)	9/16-18UNF(12)
T	G1/8 (8)	3/8-24UNF(8)	G1/8 (8)	3/8-24UNF(8)

BMM SHAFT EXTENSIONS FOR BMM MOTORS

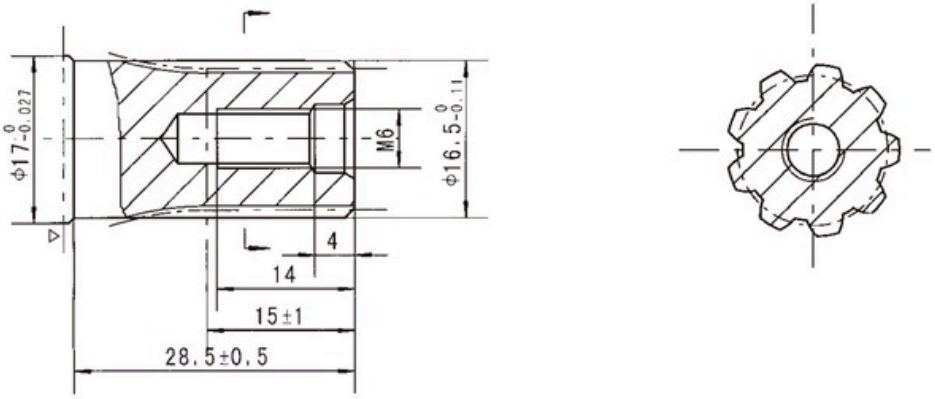
Shaft A: Cylindrical shaft Ø16
Parallel key 5x5x16



Shaft B: Cylindrical shaft Ø15.875
Parallel key 4.8x4.8x19.05



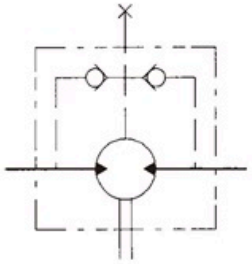
Shaft C: Involute splind shaft
B17x14 DIN5482

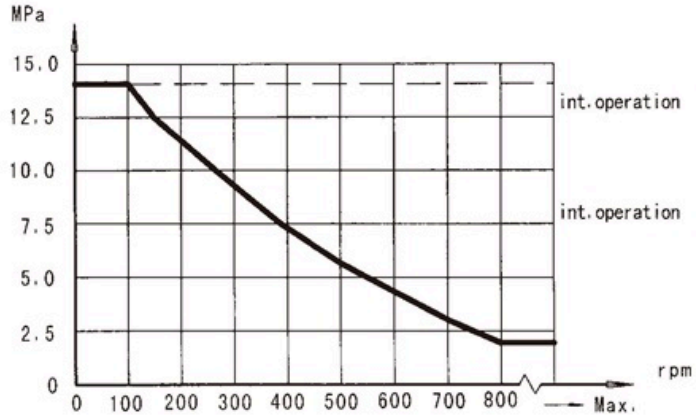


▷ Motor Mounting Surface

BMM Series Hydraulic Motor

Permissible shaft seal pressure

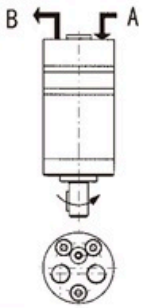




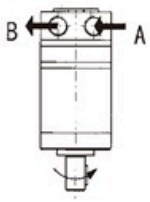
In applications without drain line, output shaft seal exceeds a bit of the pressure in the return line. When applications use the drain line, the pressure of output shaft seal equals the pressure in drain line.

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.



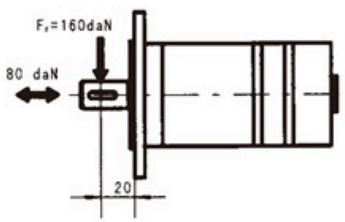
BMM End Port



BMM Side Port

Status of the shaft's radial force

$$F_r = \frac{13040}{61.5+L}\ daN$$



Fr=Radial Force (daN)
L =Distance (mm)
n =Speed (rpm)
Max.force load
Rhomb-flange L=15mm
Square-flange L=20mm