



MM Series Hydraulic Motor

The MM series motor is of a small volume, economical type, which is designed with shaft distribution flow, adapting the advanced Gerotor gear set design providing compact volume, high power and low weight.



HYDRA PART	MOTOR SERIES	CAPACITY	FLANGE TYPE	SHAFT TYPE	PORT
X	X	X	X	X	X

CODE SYSTEMS

Featured Characteristics:

- * 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		MM 8	MM 12.5	MM 20	MM 32	MM 40	MM 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
MM8-50 (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

MM8 [8.2 cm³/rev.]

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

MM12.5 [12.9 cm³/rev.]

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

MM20 [19.9 cm³/rev.]

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

MM32 [31.6 cc/rev.]

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

MM40 [39.8 cm³/rev.]

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

MM50 [50.3 cm³/rev.]

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

Torque (N·m) 37
Speed (rpm) 607

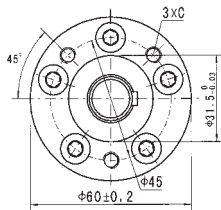
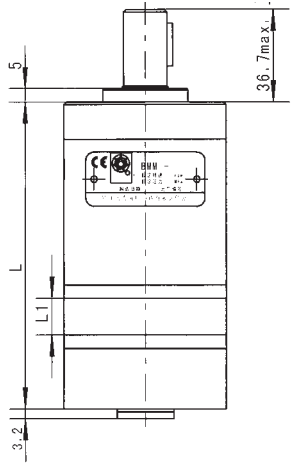
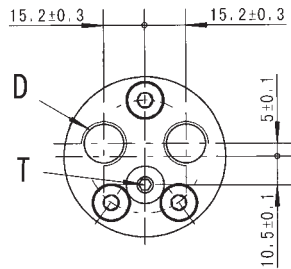
cont.
int.



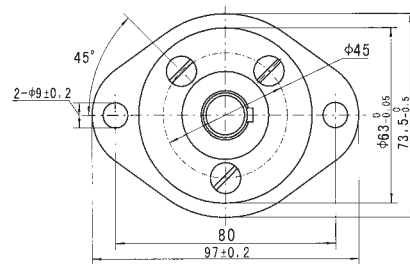
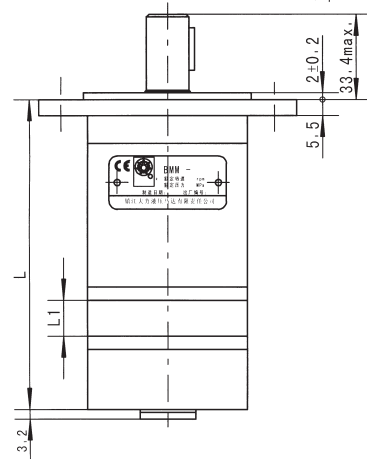
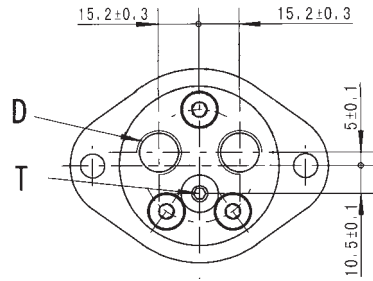
MM END PORT DIMENSIONS AND MOUNTING DATA

MOUNTING

Flange M、U



Flange F



Model	M、U Flange		F Flange	
	L	L1	L	L1
MM8	104	3.5	107.5	3.5
MM12.5	106	5.5	109.5	5.5
MM20	109	8.5	112.5	8.5
MM3	114	13.5	117.5	13.5
MM40	117.5	17	121	17
MM50	122	21.5	125.5	21.5

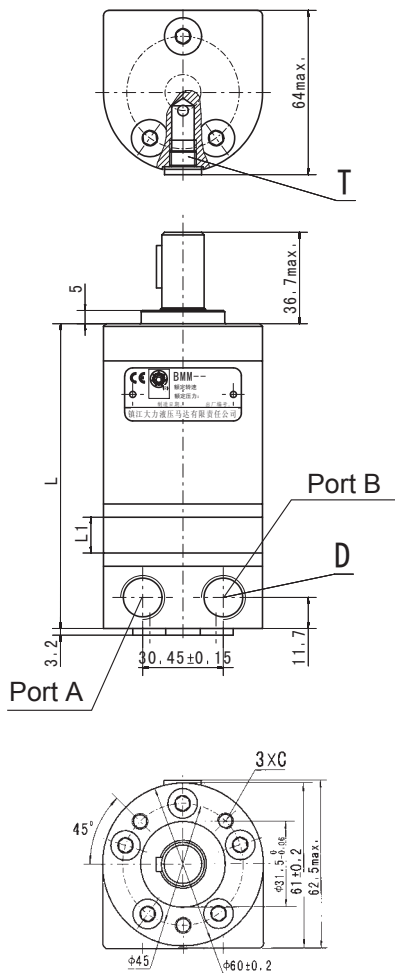
Mounting	Code	M、U Flange		F Flange	
		1E (depth)	1U (depth)	1E (depth)	1U (depth)
C		3-M6 (10)	3-1/4-28UNF-2B(10)	--	--
D		G3/8 (12)	9/16-18UNF(12)	G3/8 (12)	9/16-18UNF(12)
T		G1/8 (8)	3/8-24UNF(8)	G1/8 (8)	3/8-24UNF(8)



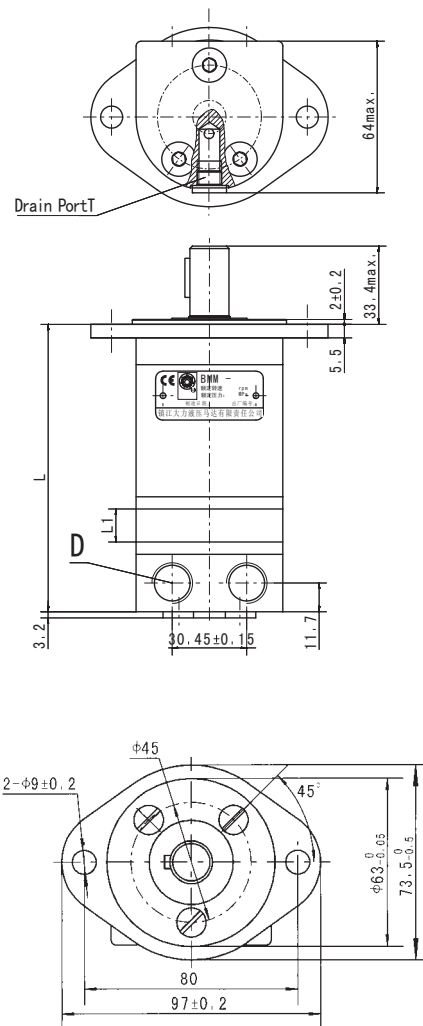
MM SIDE PORT DIMENSIONS AND MOUNTING DATA

MOUNTING

Flange M、U



Flange F

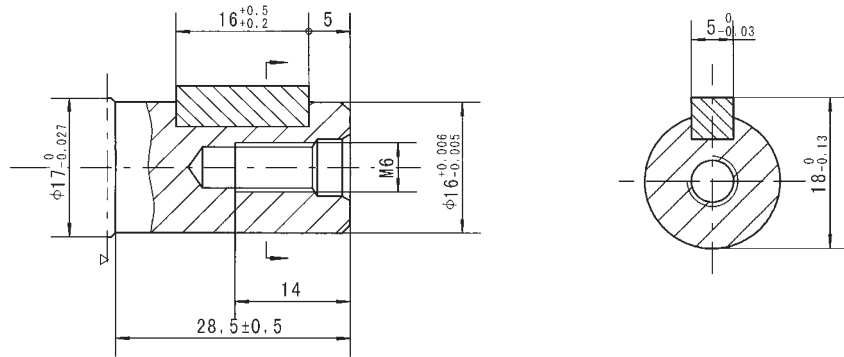


Model	M、U Flange		F Flange	
	L	L1	L	L1
MM8	105	3.5	108.5	3.5
MM12.5	107	5.5	110.5	5.5
MM20	110	8.5	113.5	8.5
MM32	115	13.5	118.5	13.5
MM40	118.5	17	122	17
MM50	123	21.5	126.5	21.5

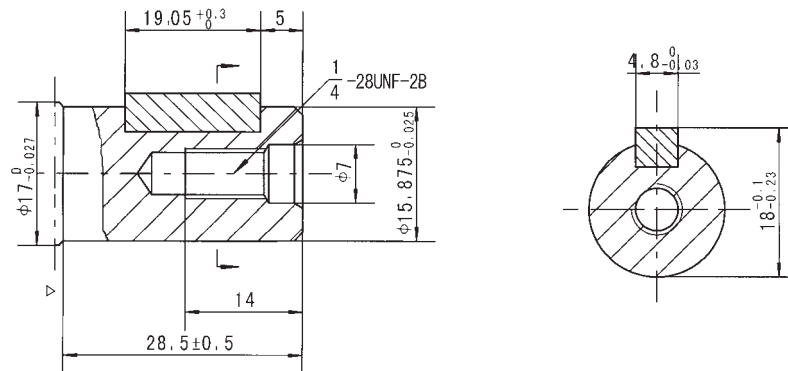
Mounting	M、U Flange		F Flange	
	E (depth)	U (depth)	E (depth)	U (depth)
C	3-M6 (10)	3-1/4-28UNF-2B(10)	--	--
D	G3/8 (12)	9/16-18UNF(12)	G3/8 (12)	9/16-18UNF(12)
T	G1/8 (8)	3/8-24UNF(8)	G1/8 (8)	3/8-24UNF(8)

MM SHAFT EXTENSIONS FOR MM MOTORS

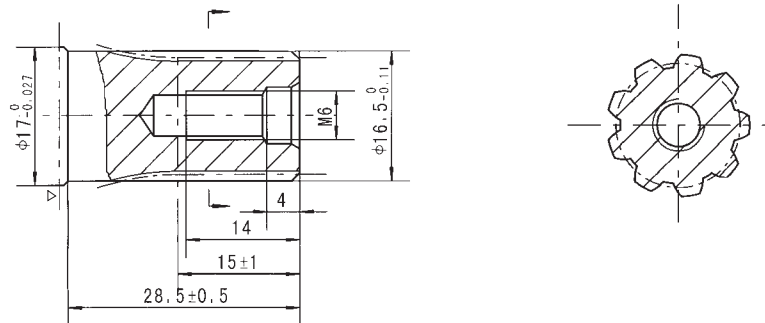
Shaft A: Cylindrical shaft $\varnothing 16$
Parallel key 5x5x16



Shaft B: Cylindrical shaft $\varnothing 15.875$
Parallel key 4.8x4.8x19.05



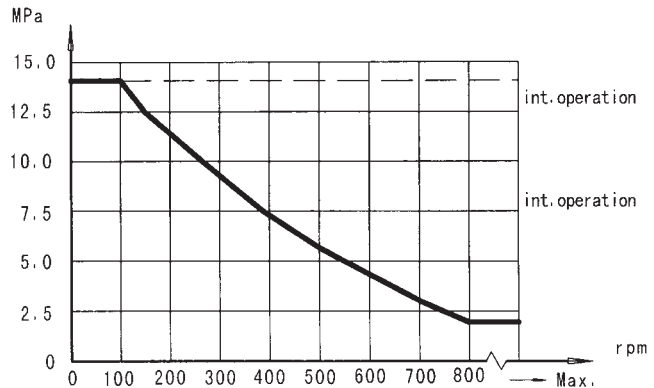
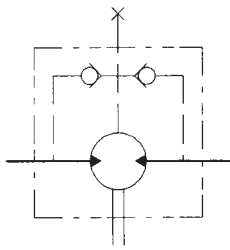
Shaft C: Involute splind shaft
B17x14 DIN5482





MM Series Hydraulic Motor

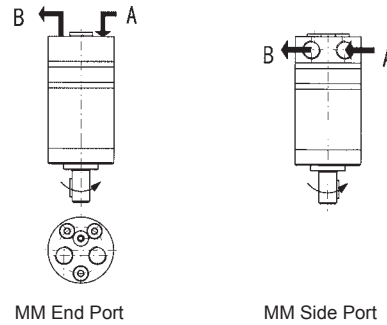
Permissible shaft seal pressure



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.

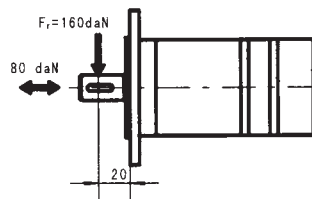
Direction of shaft rotation: Standard

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



Status of the shaft's radial force

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



F_r = Radial Force (daN)
 L = Distance (mm)
 n = Speed (rpm)
 Max. force load
 Rhomb-flange $L=15\text{mm}$
 Square-flange $L=20\text{mm}$



Order Information

MM	1	2	3	4	5	6	7	8
	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Pos.1	2	3	4	5	6	7	8
Code	Displacement	Flange	Output shaft	Port and drain port	Rotation direction	Paint	Unusually function
8	12.5	M 3-M6 Circle-flange, pilot Ø31.5x5	A Shaft Ø16, parallel key 5x5x16	E G3/8, G1/8	Omit Standard	No paint	Omit Standard
20	20	U 3-1/4-28UNF Circle flange, pilot Ø31.5x5	B Shaft Ø15.875, parallel key 4.8x4.8x19.05	U 9/16-18UNF, 3/8-24UNF	R Opposite	Blue	0 No case drain
32	32	F 2-Ø9 Rhomb-flange, pilot Ø63x2	C Shaft Ø16.5, involute B17x14, DIN5482	1E End port G3/8, G1/8	B	Black	
40	40			1U End port 9/16-18UNF, 3/8-24UNF	S	Silver grey	
50	50						

Note: When the table is used, please fill the code of left rows in the table 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.