



HYDRAULIC MOTORS
CATALOGUE

GENERAL DESCRIPTION

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

MAIN CHARACTERISTICS

- Advanced manufacturing devices for the Gerator 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

BMR TECHNICAL SPECIFICATIONS

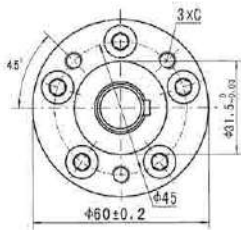
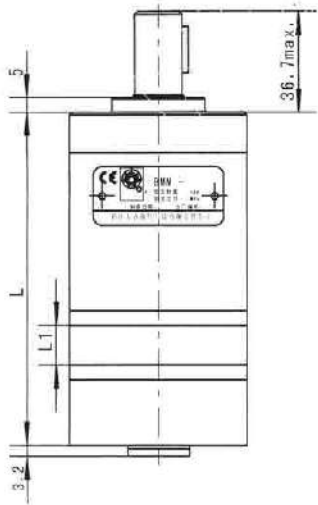
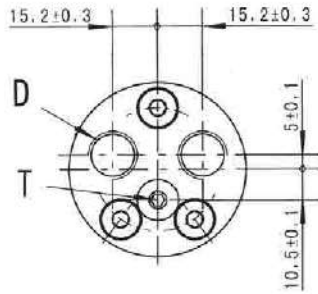
Type		BBM 8	BBM 12.5	BBM 20	BBM 32	BBM 40	BBM 50
Geometric displacement (cm ³ /rev.)		8.2	12.9	19.9	31.6	39.8	50.3
Max. speed (rpm)	cont.	1950	1550	1000	630	500	400
	int.	2450	1940	1250	800	630	500
Max. torque (N·m)	cont.	11	16	25	40	45	46
	int.	15	23	35	57	70	88
	peak	21	33	51	64	82	100
Max. output (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
Max. flow (L/min)	cont.	17.5
	int.	22.5

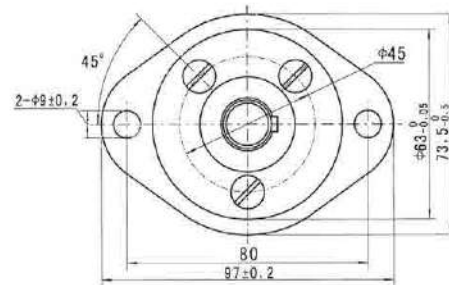
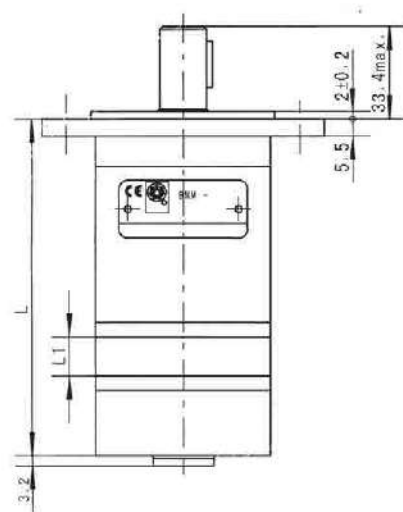
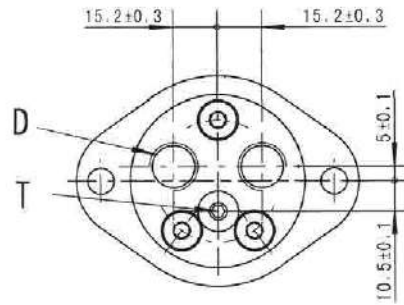
- Continuous pressure: Max. value of operating motor continuously.
- Intermittent pressure: Max. value of operating motor in 6 seconds per minute.
- Peak pressure: Max. value of operating motor in 0.6 seconds per minute.

MOUNTING

Flange M, U



Flange F

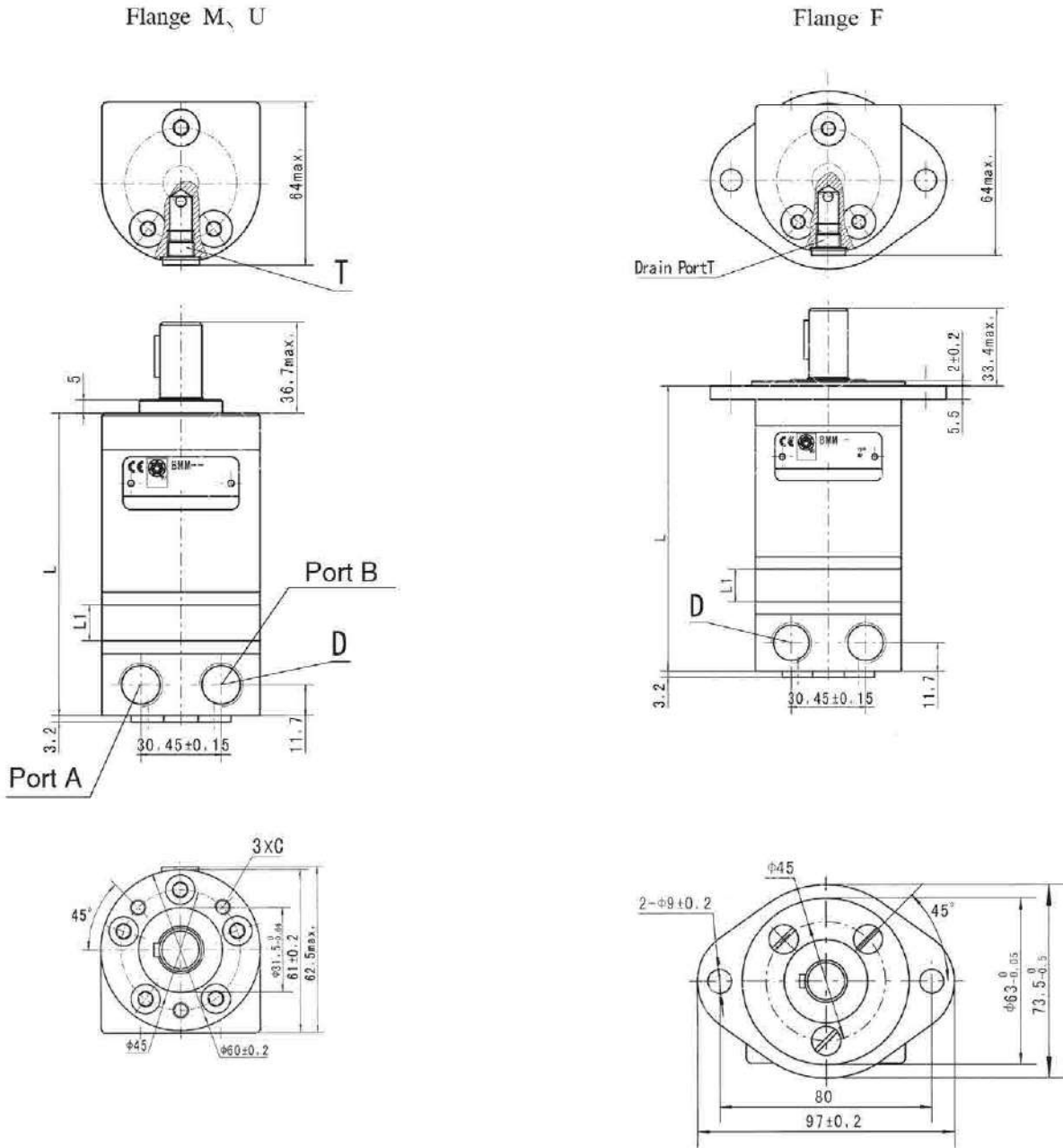


Model	M, U Flange		F Flange	
	L	L1	L	L1
BMM8	104	3.5	107.5	3.5
BMM12.5	106	5.5	109.5	5.5
BMM20	109	8.5	112.5	8.5
BMM32	114	13.5	117.5	13.5
BMM40	117.5	17	121	17
BMM50	122	21.5	125.5	21.5

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)

BMM SIDE PORT DIMENSIONS AND MOUNTING DATA

MOUNTING

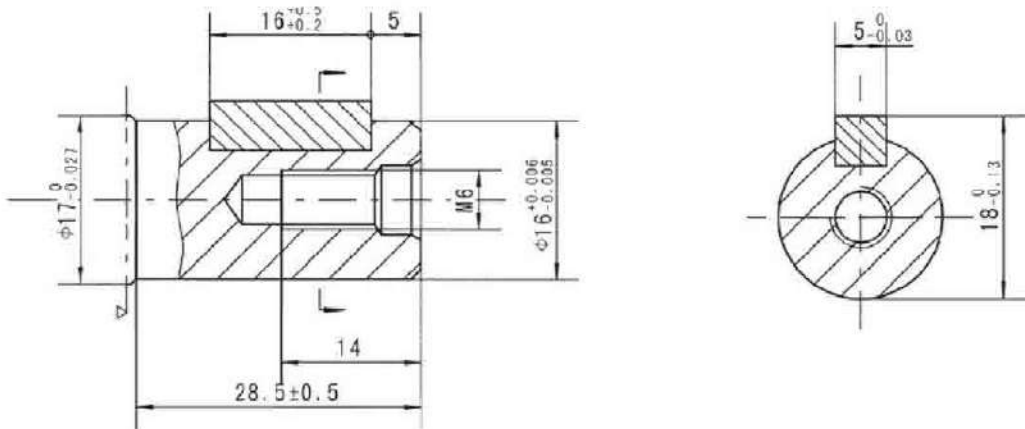


Model	M, U Flange		F Flange	
	L	L1	L	L1
BMM8	105	3.5	108.5	3.5
BMM12.5	107	5.5	110.5	5.5
BMM20	110	8.5	113.5	8.5
BMM32	115	13.5	118.5	13.5
BMM40	118.5	17	122	17
BMM50	123	21.5	126.5	21.5

Code	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)

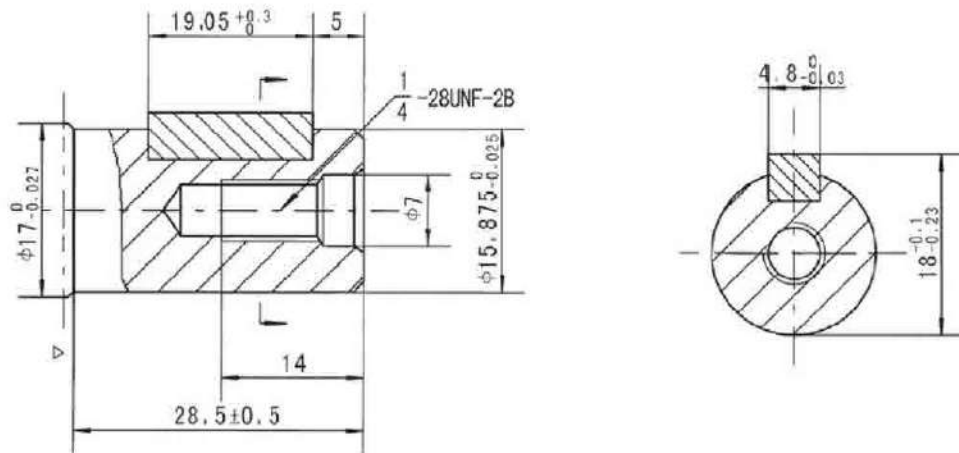
Shaft A:

Cylindrical shaft $\varnothing 16$ Parallel key 5x5x16



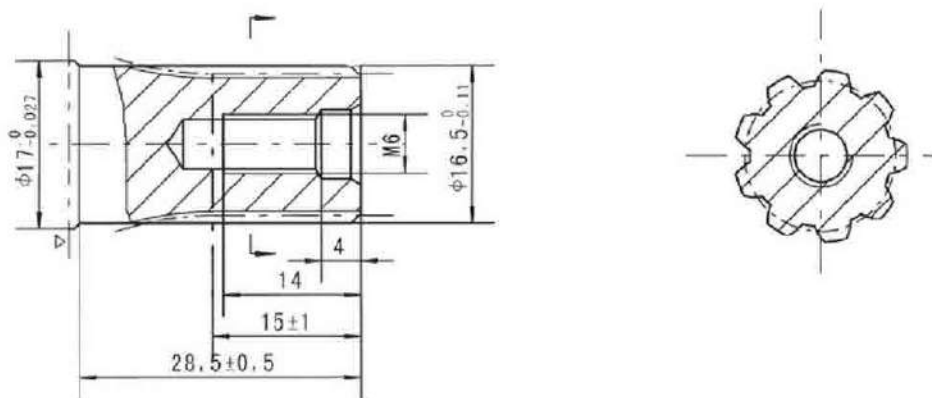
Shaft B:

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



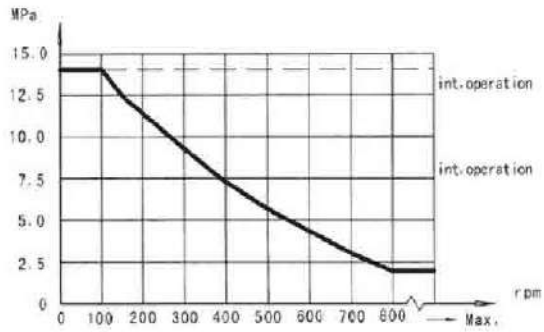
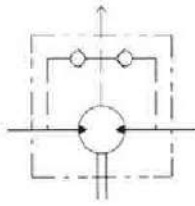
Shaft C:

Involute splind shaft B17x14 DIN5482



Motor Mounting Surface

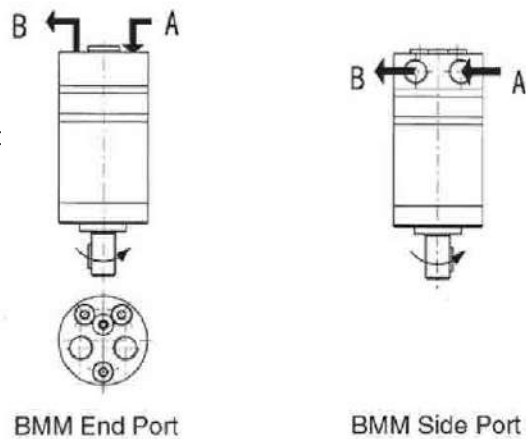
Permissible shaft seal pressure



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.

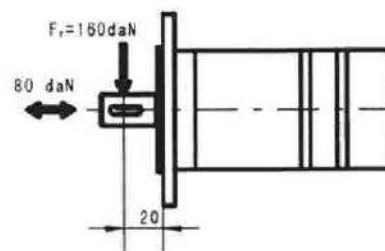
Direction of shaft rotation: Standard

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 $L=20\text{mm}$

GENERAL DESCRIPTION

The BMP hydraulic motor series are small volume, economical type, Spool Valve design hydraulic motors. This kind of motors provide high power, compact volume and low weight.

MAIN CHARACTERISTICS

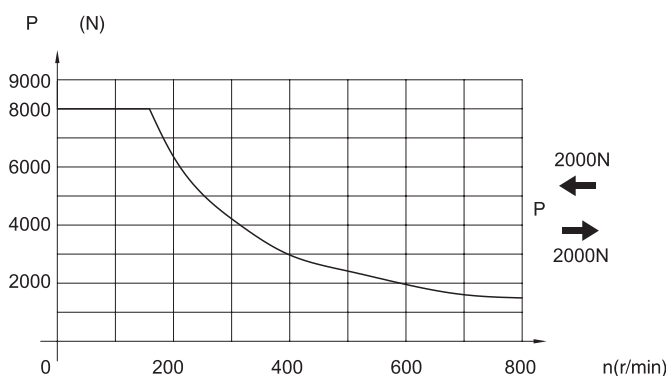
Spool Valve Design offers superior performance and smooth operation.
 High Pressure Shaft Seal allows motor to work in either parallel or series circuits and offers superior seal life.
 Advanced Gerotor Design provides compact volume, high power and low weight.

BMP TECHNICAL SPECIFICATIONS

TYPE		BMP-50	BMP-80	BMP-100	BMP-125	BMP-160	BMP-200	BMP-250	BMP-315	BMP-400
Displacement (cm ³ /rev)		52.9	79.3	98.2	120.9	158.7	196.4	241.8	317.3	392.9
	cont.	14	14	14	14	14	14	11	9	7
Max.Pressure.Drop (Mpa)	int.	17.5	17.5	17.5	17.5	17.5	17.5	14	11	9
	peak.	20	20	20	20	20	20	16	13	11
	cont.	89	150	191	235	307	365	378	378	378
Max.torque (N.m)	int.	110	185	231	292	376	440	465	465	465
	peak.	130	215	268	336	430	506	537	537	537
Speed.Range(cont.)(r/min)		10-800	10-770	9-615	9-480	8-385	7-310	5-250	5-195	5-155
Max.Flow(cont.)(L/min)		40	60	60	60	60	60	60	60	60
Max.Output.Power(cont.)(Kw)		7	10	10	10	10	8	6	5	4
Weight (kg)		5.6	5.7	5.9	6.0	6.2	6.4	6.6	6.9	7.4

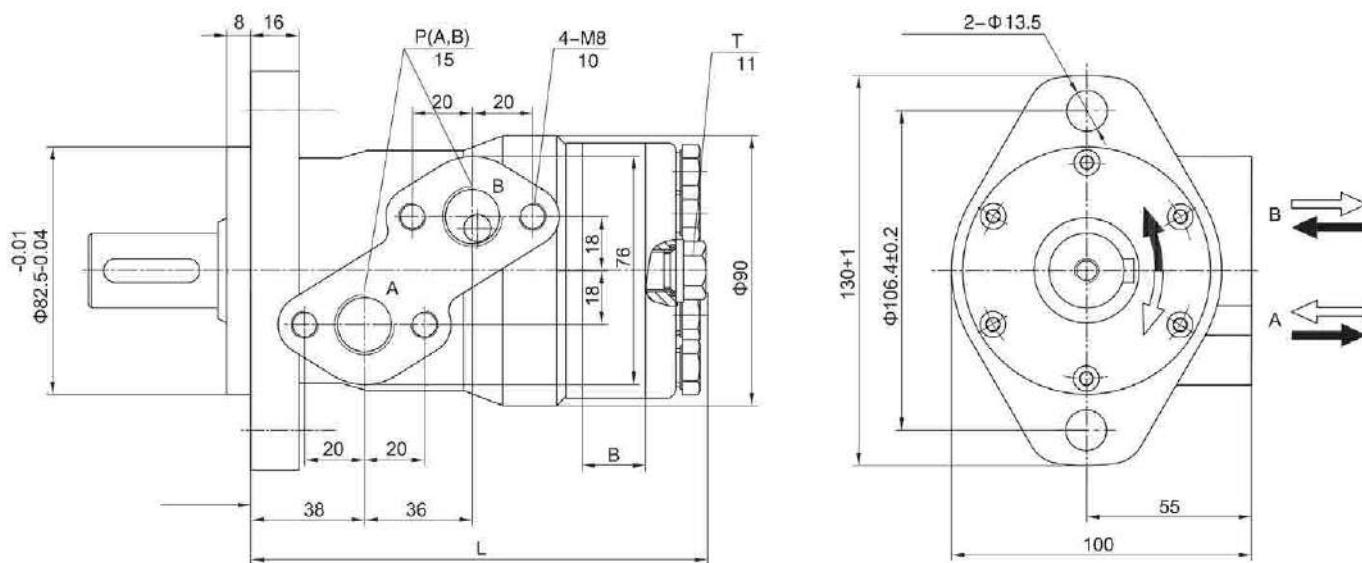
Intermittent operation the permissible values may occur for max. 10% of every minute
 Peak load: the permissible values may occur for max. 1% of every minute

PERMISSIBLE SHAFT LOADS

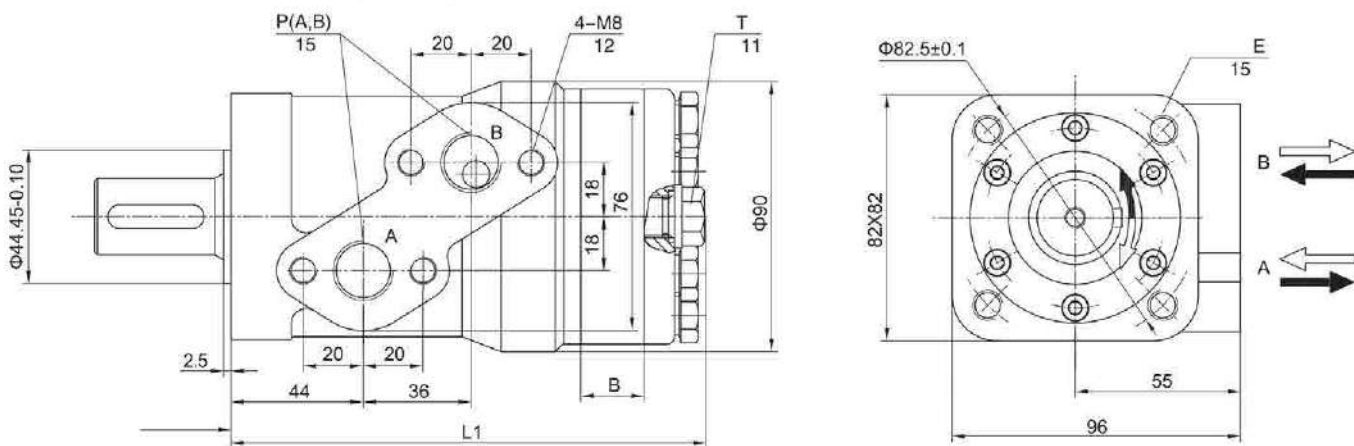


■ BMP DIMENSIONS AND MOUNTING DATA

A Version 2-hole oval flange



C,C1 Version Square flange



Flange	E
C	4-M10
C1	4- $\frac{3}{8}$ -16UNC

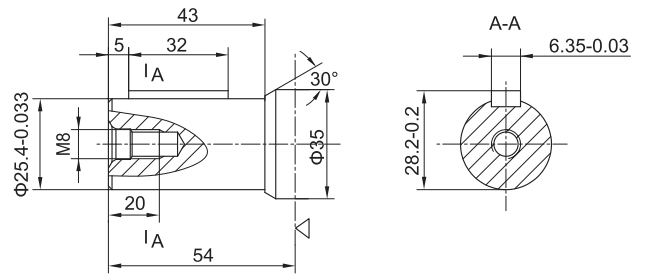
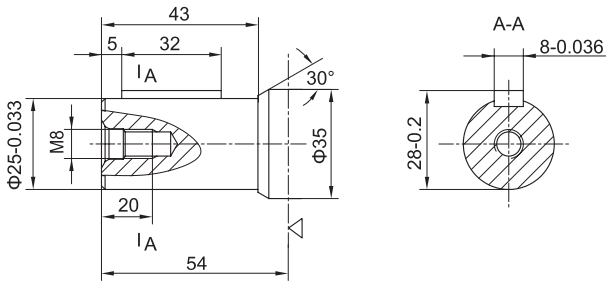
TYPE	BMP-50	BMP-80	BMP-100	BMP-125	BMP-160	BMP-200	BMP-250	BMP-315	BMP-400
L	141	145	147	150	155	160	166	176	186
L1	147	151	153	156	161	166	172	182	192
B	7	11	13	16	21	26	32	42	52

■ BMP SHAFT VERSIONS

Match with A flange

C 25 Cylindrical shaft, parallel key 8X7X32

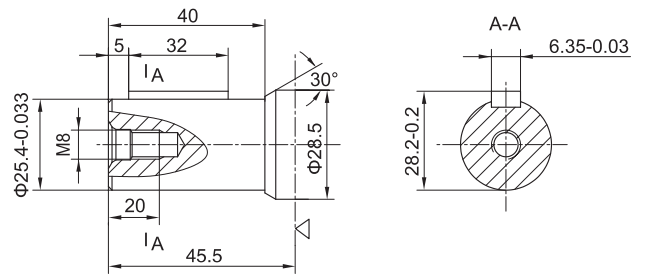
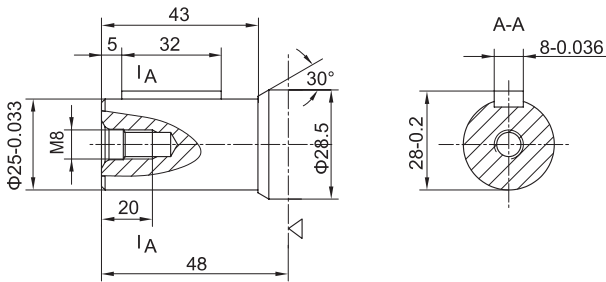
C 25.4 Cylindrical shaft, parallel key 6.35X6.35X32



Match with C, C1 flange

C 25 Cylindrical shaft, parallel key 8X7X32

C 25.4 Cylindrical shaft, parallel key 6.35X6.35X32



■ BMP ORDERING CODE

		1	2	3	4	5
BMP	-					/

1	Displacement
50, 80, 100, 125, 160, 200, 250, 315, 400	

2	Shaft
C 25	Φ25 8X7X32
C 25,4	Φ25.4 6.35X6.35X32

3	Mounting Flange
A	2-Φ13.5 Φ82.5
C	4-M8 Φ44.45
C1	4-3/8-16UNC Φ44.45

4	Ports
	P(A,B) T
G	G1/2 M14X1.5
M1	M18X1.5 M14X1.5
M2	M22X1.5 M14X1.5
U	7/8-14UNF M14X1.5
N	NPT 1/2 M14X1.5

■ GENERAL DESCRIPTION

The BMR hydraulic motor series can be used in medium load applications such as agricultural, metal working and injection molding machines. Its ductile cast iron shell and optimized gerotor provide smooth performance, high efficiency and durability.

■ MAIN CHARACTERISTICS

Output Shaft with Deep Groove Ball Bearing can hold certain axial and radial forces.
Built In Check valves offers versatility and increased seal life.
Cycloid Group with the Roller has small friction and higher mechanical efficiency.
Axial Distribution Structure provides less weight and size.

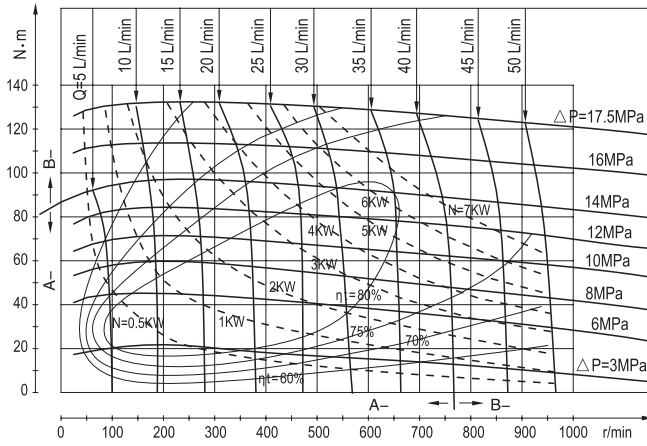
■ BMR TECHNICAL SPECIFICATIONS

TYPE	BMR-50	BMR-80	BMR-100	BMR-125	BMR-160	BMR-200	BMR-250	BMR-315	BMR-400
	BMRW-50	BMRW-80	BMRW-100	BMRW-125	BMRW-160	BMRW-200	BMRW-250	BMRW-315	BMRW-400
Displacement (cm ³ /rev)	51.7	80.5	100.5	126.3	160.8	200.9	252.6	321.5	401.9
cont.	14	14	14	14	14	14	11	9	7
Max.Pressure.Drop (Mpa)	17.5	17.5	17.5	17.5	17.5	17.5	14	11	9
peak.	20	20	20	20	20	20	16	13	11
cont.	93	152	194	237	310	369	380	380	380
Max.torque (N.m)	118	189	236	296	378	450	470	470	470
peak.	135	216	270	338	433	509	540	540	540
Speed.Range(cont.)(r/min)	10-775	10-750	10-600	9-475	7-375	5-300	5-240	5-190	5-160
Max.Flow(cont.)(L/min)	40	60	60	60	60	60	60	60	60
Max.Output.Power(cont.)(Kw)	7	10	10	10	10	8	6	5	4
Weight (kg)	6.5	6.9	7.0	7.3	7.5	8.0	8.5	9.0	11

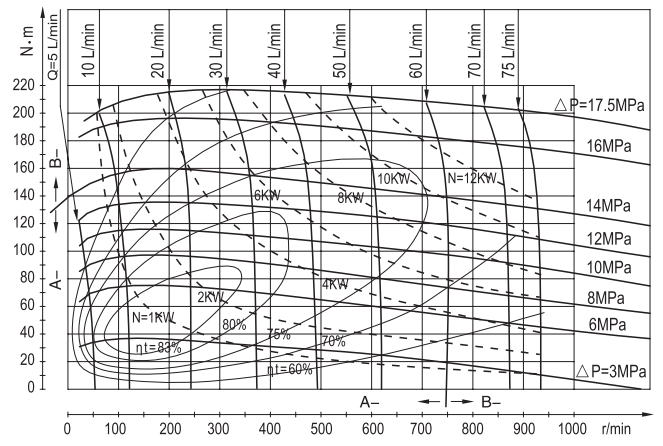
Intermittent operation the permissible values may occur for max. 10% of every minute
Peak load: the permissible values may occur for max. 1% of every minute

BMR FUNCTION DIAGRAMS

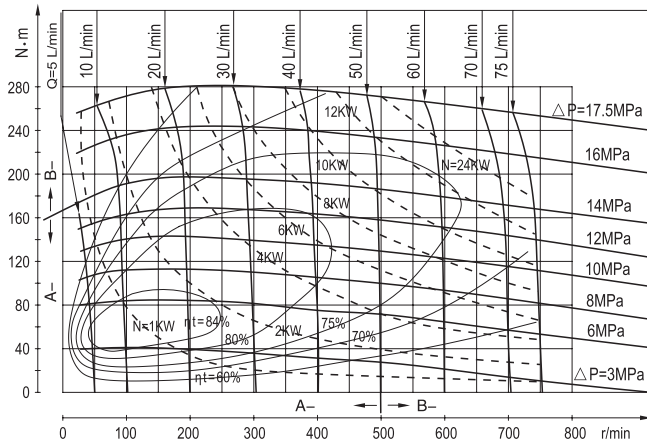
BMR-50



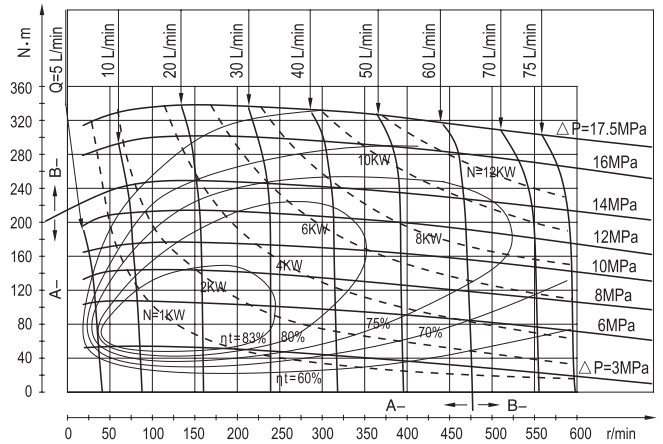
BMR-80



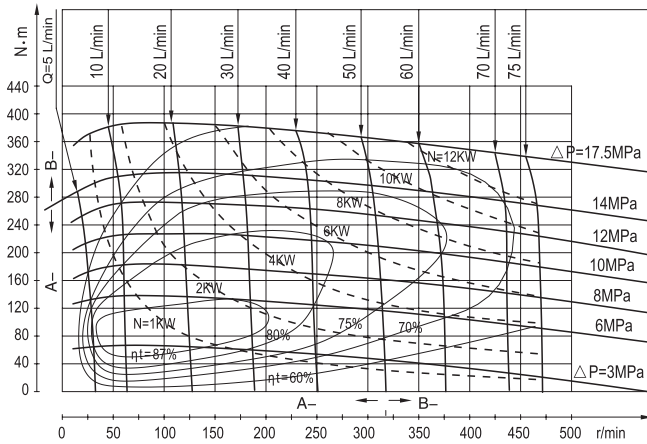
BMR-100



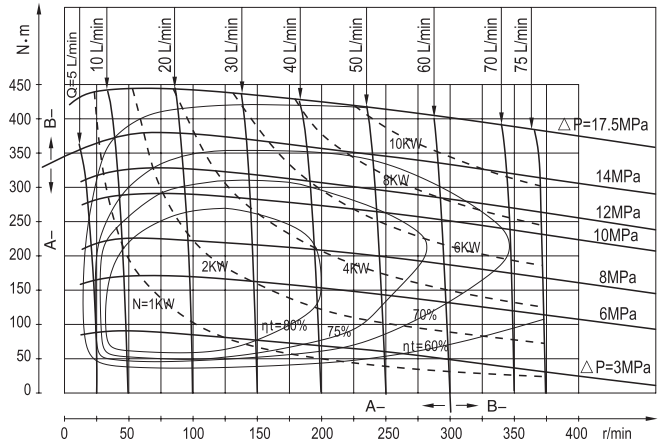
BMR-125



BMR-160

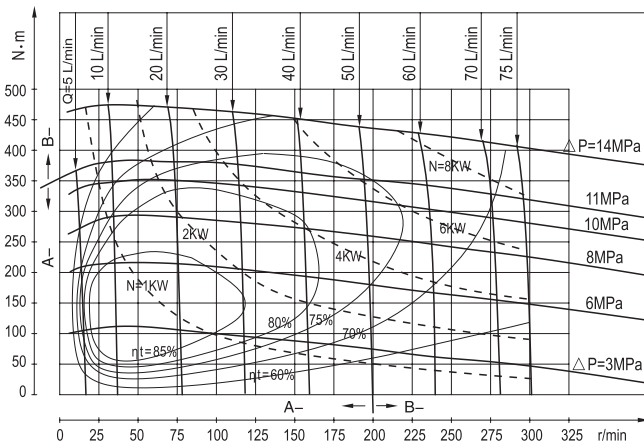


BMR-200

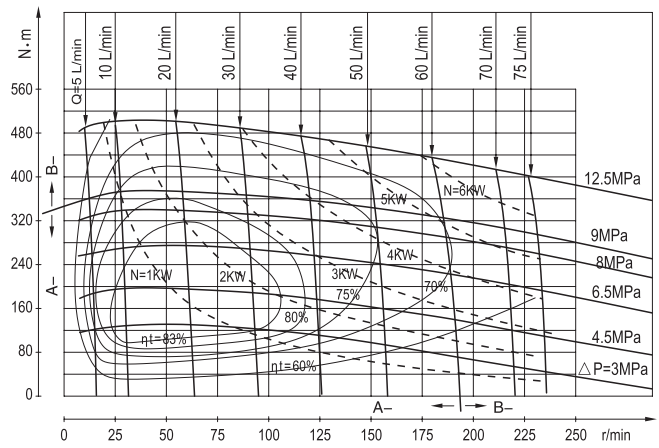


FUNCTION DIAGRAMS

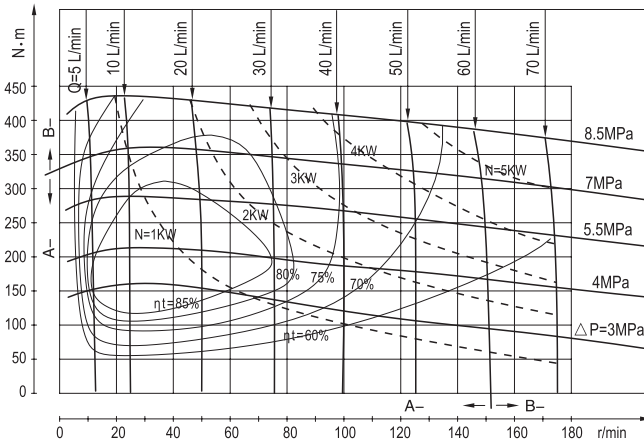
BMR-250



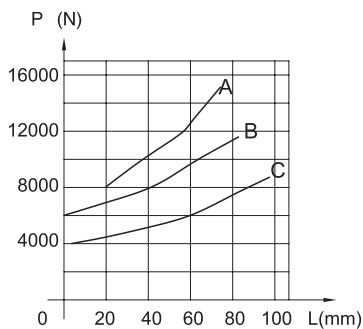
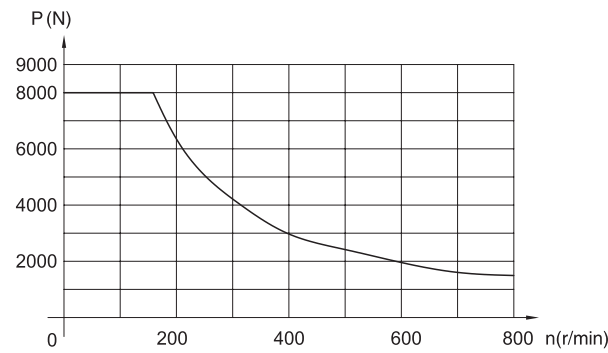
BMR-315



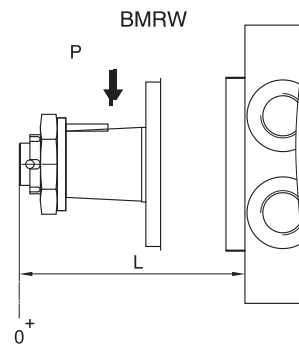
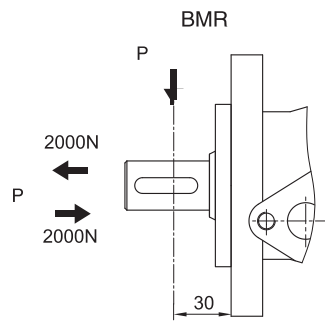
BMR-400



PERMISSIBLE SHAFT LOADS

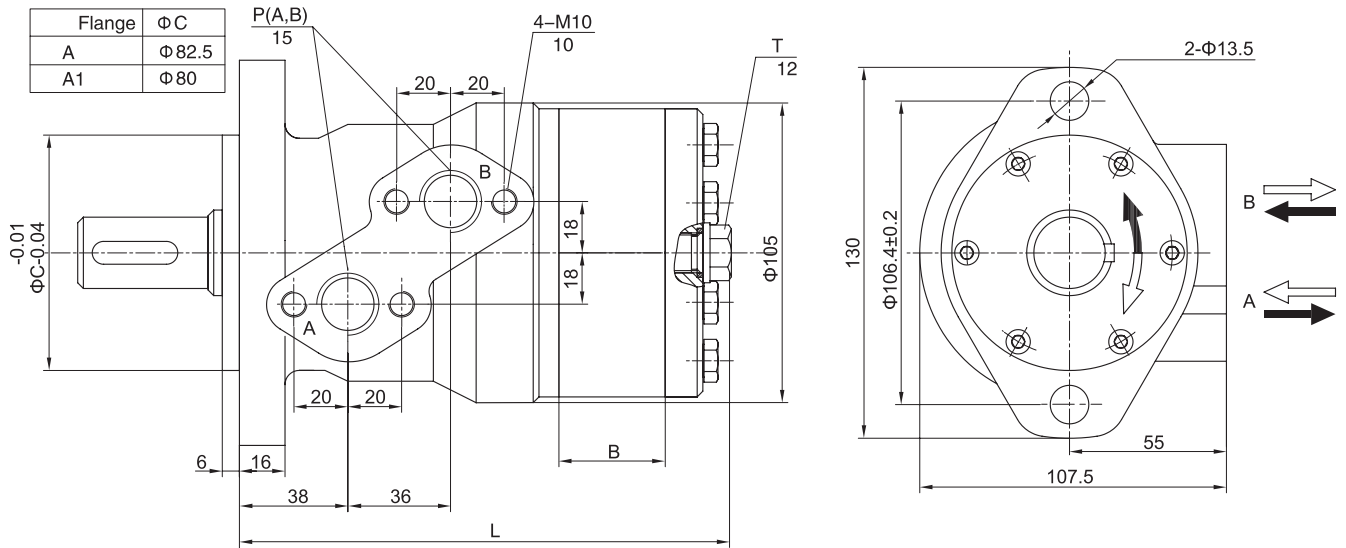


A: n=50 r/min
B: n=200 r/min
C: n=800 r/min

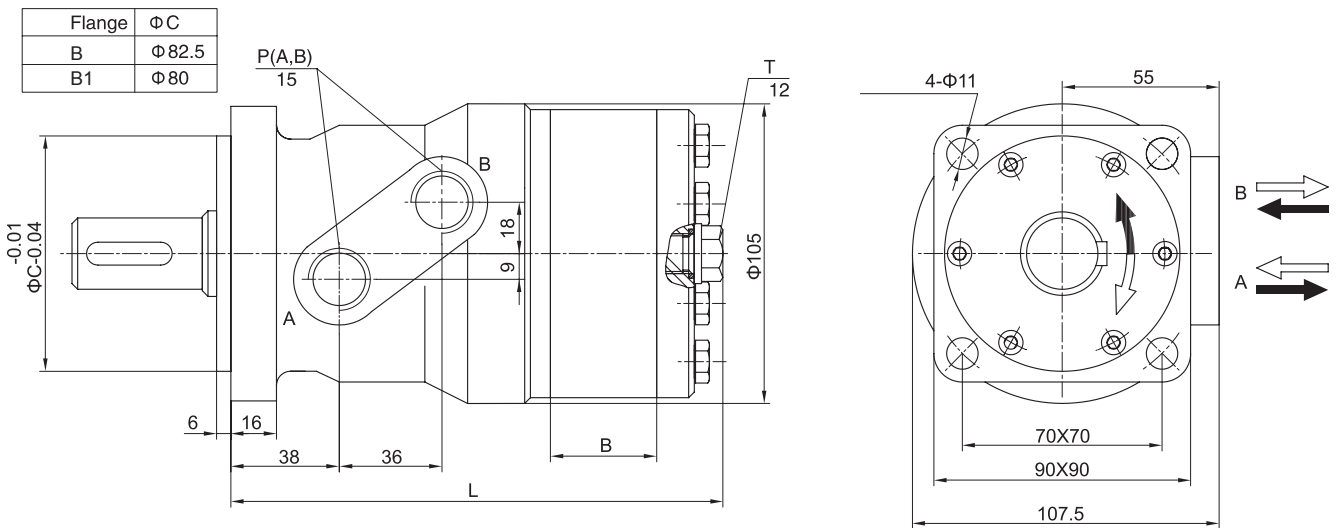


BMR DIMENSIONS AND MOUNTING DATA

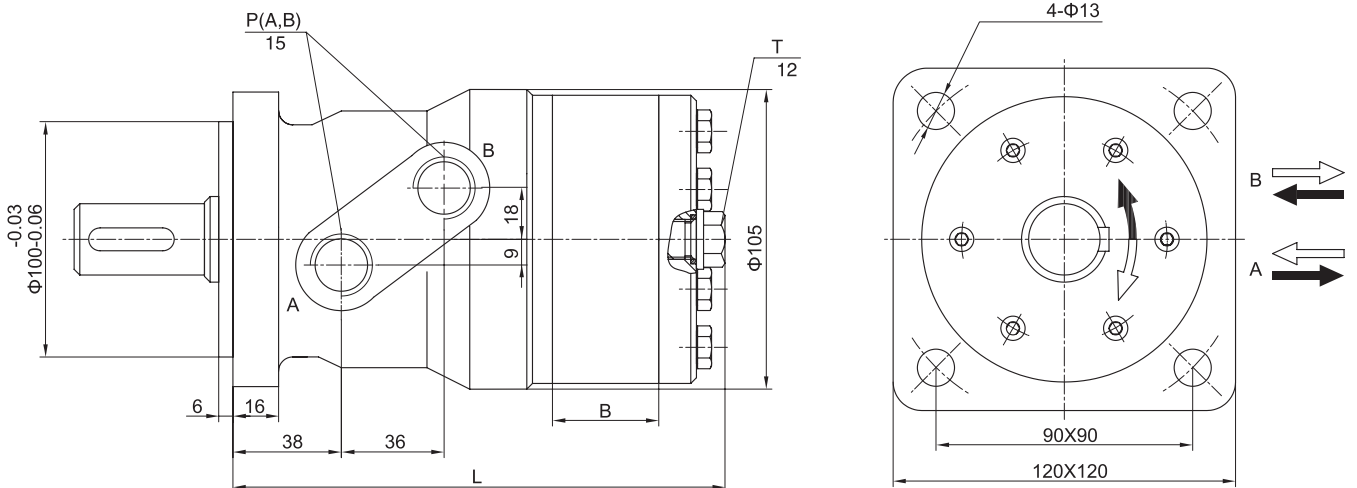
A , A1 Version 2-hole oval flange



B, B1 Version Square flange

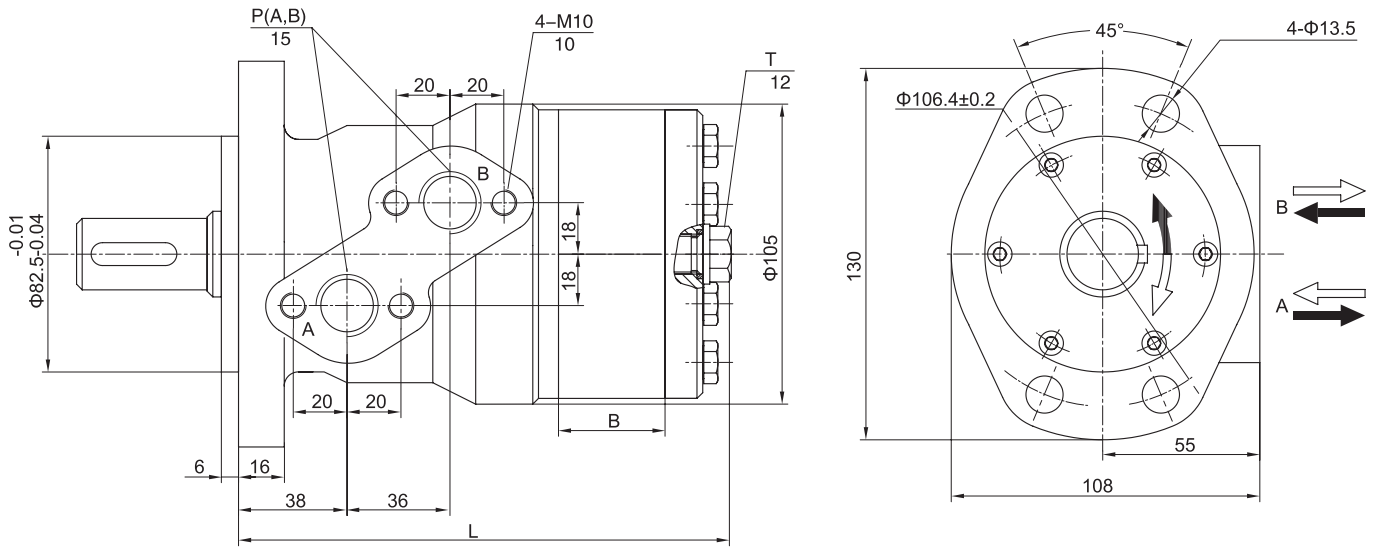


C Version Square flange



BMR INSTALLATION AND MOUNTING FLANGE

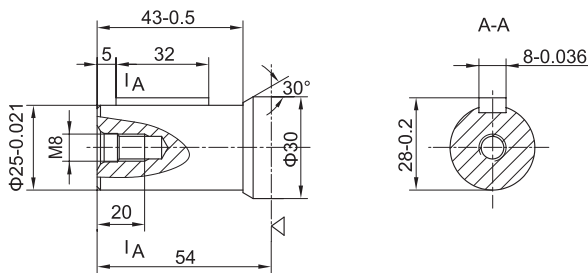
D Version 4-hole oval flange



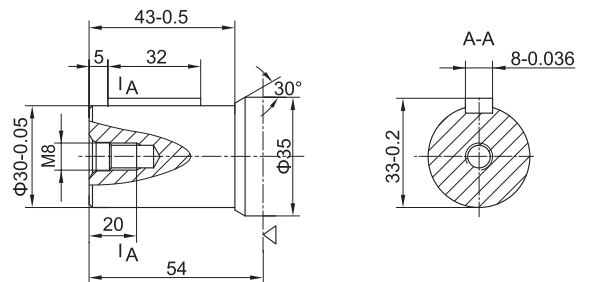
TYPE	BMR-50	BMR-80	BMR-100	BMR-125	BMR-160	BMR-200	BMR-250	BMR-315	BMR-400
L	139	144	148	152	158	165	174	186	200
B	9	14	18	22	28	35	44	56	70

BMR SHAFT VERSION

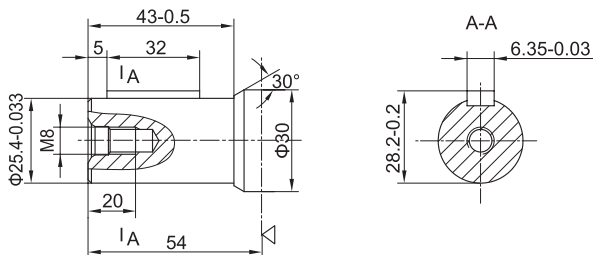
C 25 Cylindrical shaft, parallel key 8X7X32



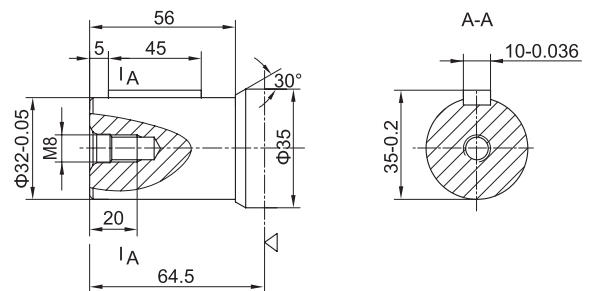
C 30 Cylindrical shaft, parallel key 8X7X32



C 25.4 Cylindrical shaft, parallel key 6.35X6.35X32

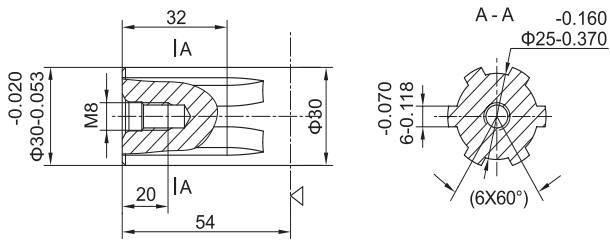


C 32 Cylindrical shaft, parallel key 10X8X45

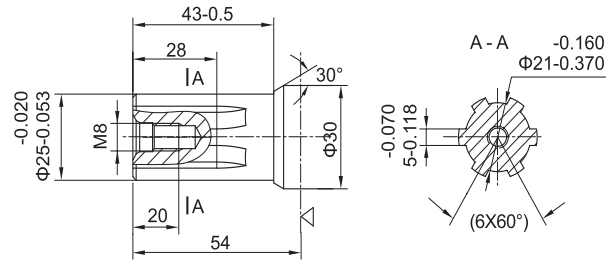


■ BMR SHAFT VERSION

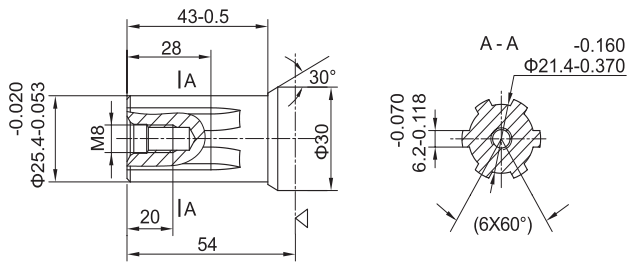
S 30 Φ30 Splined shaft, 6-30X25X6



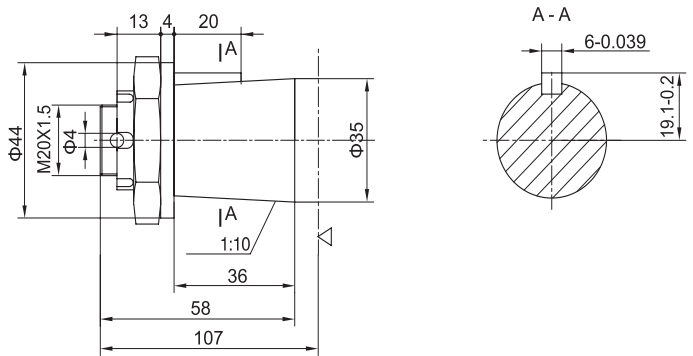
S 25 Φ25 Splined shaft, 6-25X21X5



S 25.4 Φ25.4 Splined shaft, 6-25.4X21.4X6.2



T 35 Φ35 Tapered shaft, taper1: 10, parallel key B6X6X20



■ BMR ORDERING CODE

	1	2	3	4	5
BMR	-				/

1 Displacement

50, 80, 100, 125, 160, 200, 250, 315, 400

2 Shaft

C 25	Φ25.8X7X32
C 30	Φ30.8X7X32
C 25.4	Φ25.4 6.35X6.35X32
C 32	Φ32 10X8X45
S 30	Φ30,6-30X25X6
S 25	Φ25,6-25X21X5
S 25.4	Φ25.4,6-25.4X21.4X6.2
T 35	Φ35-1:10.B6X6X20

3 Mounting Flange

A	2-Φ13.5	Φ82.5
A 1	2-Φ13.5	Φ80
B	4-Φ11	Φ82.5
B1	4-Φ11	Φ80
C	4-Φ13	Φ100
D	4-Φ13.5	Φ82.5

4 Ports

	P(A,B)	T
G	G1/2	M14X1.5
M1	M18X1.5	M14X1.5
M2	M22X1.5	M14X1.5
U	7/8-14UNF	M14X1.5
N	NPT 1/2	M14X1.5

