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NINGBO ZHONGYI: LEADER MANUFACTURER OF ORBITAL MOTORS

THOTH

ziHYD

Ningbo Zhongyi Hydr. Motor Co. Ltd was founded in 1971.
Today the Company is recognized, in terms of quality, as the **chinese leader manufacturer of orbital motors and hydraulic steerings.** The Company also produces radial piston motors, hydraulic planetary gearboxes and hydraulic winches.
Ningbo Zhongyi has developed, introduced and certified a Company Quality System in line with ISO 9001 to increase and stabilize the products quality, all of them are CE certified.
Ningbo Zhongyi, who made in 2020 more than 500.000 orbital motors, has in Ningbo a plant of about 44.000 m^2, another of 80.000 m^2 in Wuhu Anhui and a modern R & D Center in Zhejiang.
The manufacturing plants are based on highly automated and efficient processes.
The Company established also a good cooperation with the most famous Chinese Universities, in order to have a continuous improvement in terms of products quality and reliability.
Ningbo Zhongyi has loyal relationships with the major Chinese and international OEM like SANY, XCMG, ZOOMLION, KUBOTA, BAOLI, LIUGONG.
The Company developed 2 brand, **ziHYD** mainly for Chinese market, and **THOTH** mainly for the Export market.

RUDIFLEX: EXCLUSIVE DISTRIBUTOR OF THE ZIHYD AND THOTH BRANDS

Rudiflex is a leading company in the distribution of mechanical and hydraulic components.
One of the keys of Rudiflex' success is undoubtedly the service: the company thanks to its own trucks and the collaboration with the main couriers is able to make deliveries to any customer in a timely manner.
From January 2021 Rudiflex has been appointed from Ningbo Zhongyi exclusive Distributor for the Italian market of the whole range of orbital motors with ziHYD anf Thoth brands.
Thanks to this Agreement Rudiflex is able to offer to the customers a range of very high quality orbital motors at competitive prices. Furthermore, thanks to qualified personnel, high orbital motors stock and conversion kits, Rudiflex is able to respond to any request by offering prompt deliveries.

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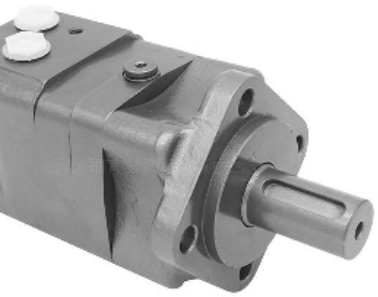

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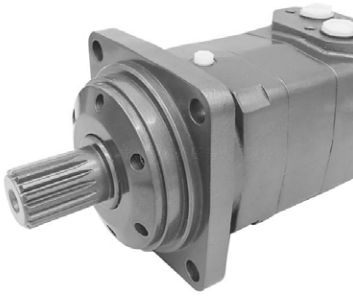


BMM Orbit Hydraulic Motor With Spool Valve

■ INTRODUCTION

This series of motor , with its shell made of ductile cast iron of adequate intenty, can be applied to situations with less load and interval operation,widely to agriculture,forestry,plastics,machine tools and minmachines etc.

■ CHARACTERISTICS

1. With the axial oil distribution structur,it is of smaller,high efficiency and long life.

2. Shaft seal can bear high pressure of motor of which can be used in parallel or in series.

■ TECHNICAL DATA

Type		BMM–8	BMM–12.5	BMM–20	BMM–32	BMM–40	BMM–50
Displacement.(ml/r)		8.2	12.9	19.9	31.6	39.8	50.3
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.torque (Nm)	cont.	11	16	25	40	45	46
	int.	15	23	35	57	70	88
	peak.	21	33	51	64	82	100
Speed.Range(cont.)(r/min)		1950	1550	1005	630	500	395
Max.Flow(cont.)(L/min)		16	20	20	20	20	20
Max.Output.Power(cont.)		1.8	2.4	2.4	2.4	2.2	1.8
Weight(Kg)		1.9	2	2.1	2.2	2.3	2.4

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.

■ PERFORMANCE DATA

BMM 8(8.2ml/r)

Flow(L/min) \ Pressure(Mpa)	3.5	5	7	10	12	14
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**
Max.cont. 16		4 **1912**	7 **1900**	10 **1861**	12 **1833**	14 **1780**
Max.int. 20			6 **2395**	10 **2350**	11 **2328**	14 **2281**

BMM 12.5(12.9ml/r)

Flow(L/min) \ Pressure(Mpa)	3.5	5	7	10	12	14
2	6 **140**	8 **136**	11 **119**	15 **68**	19 **35**	
4	6 **296**	8 **289**	12 **274**	16 **229**	19 **200**	23 **145**
8	5 **605**	8 **596**	12 **583**	16 **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**
Max.cont. 20	3 **1542**	7 **1532**	10 **1521**	15 **1500**	19 **1482**	22 **1437**
Max.int. 25	2 **1910**	6 **1891**	9 **1878**	14 **1848**	18 **1828**	22 **1788**

BMM 20(19.9ml/r)

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

BMM 32(31.6ml/r)

Flow(L/min) \ Pressure(Mpa)	2	3.5	5	7	10	12	14
2	7 **61**	15 **57**	21 **52**	28 **47**	39 **16**		
4	7 **126**	15 **121**	21 **114**	29 **106**	40 **82**	48 **67**	57 **49**
8	7 **250**	15 **244**	21 **239**	29 **231**	40 **207**	49 **194**	58 **167**
12	6 **378**	13 **374**	20 **369**	28 **362**	40 **338**	48 **322**	58 **297**
15	4 **474**	12 **472**	18 **468**	27 **462**	39 **441**	47 **429**	57 **406**
Max.cont. 20	3 **631**	10 **630**	17 **627**	25 **619**	37 **601**	46 **585**	55 **566**
Max.int. 25	1 **791**	8 **789**	15 **787**	23 **783**	35 **766**	43 **753**	52 **732**

BMM 40(39.8ml/r)

Flow(L/min) \ Pressure(Mpa)	3	5	7	9	10	12
2	16 **45**	27 **40**	36 **34**	44 **28**	51 **17**	
4	16 **96**	27 **93**	37 **85**	45 **79**	52 **65**	62 **52**
8	15 **197**	26 **195**	36 **182**	45 **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**
Max.cont. 20	10 **497**	21 **492**	31 **487**	39 **480**	48 **472**	59 **463**
Max.int. 25	7 **622**	19 **617**	29 **612**	37 **607**	44 **600**	56 **591**

(Torque) : 44Nm
(Speed) : 600r/min

BMM50(50.3ml/r)

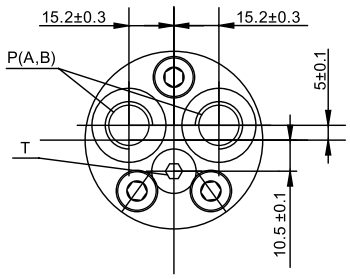
Flow(L/min) \ Pressure(Mpa)	1.5	3	5	7	10
2	9 **37**	18 **33**	32 **27**	45 **22**	
4	9 **76**	19 **73**	33 **68**	46 **63**	64 **55**
8	9 **157**	19 **154**	33 **149**	46 **145**	64 **137**
12	9 **237**	18 **234**	32 **231**	46 **226**	63 **218**
15	8 **296**	17 **295**	31 **294**	42 **288**	62 **282**
Max.cont. 20	6 **395**	13 **395**	27 **393**	40 **390**	59 **381**
Max.int. 25	4 **497**	11 **496**	25 **494**	37 **490**	58 **484**

Cont.
Int.

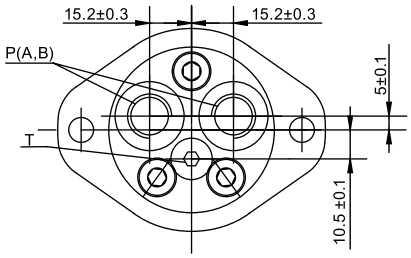
■ BMM Installation

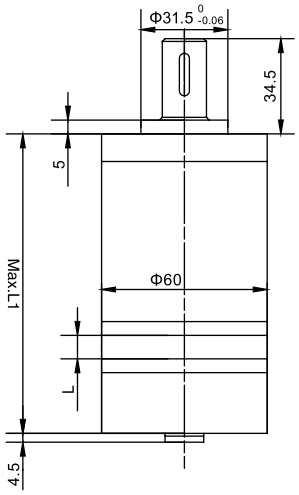
Y*(End port Y*)

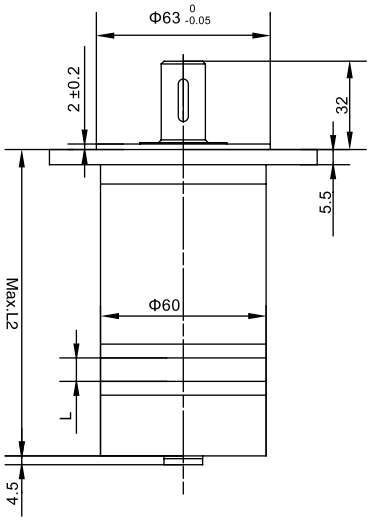
lange C,C1

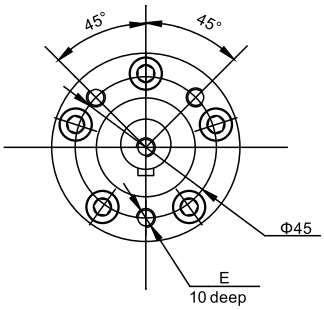


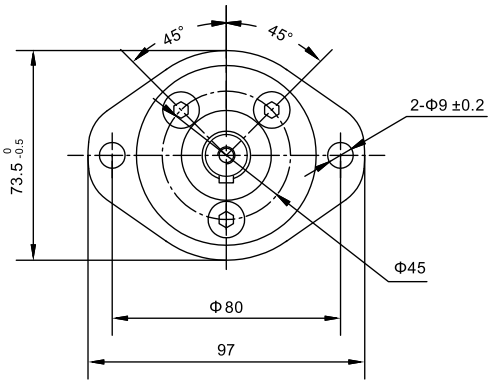
A Ⅱ 2–hole oval flange AII











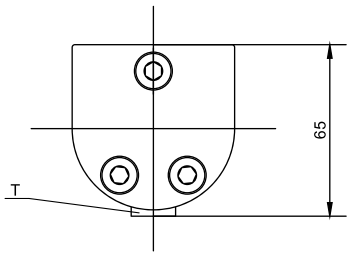
Flange	E
C	3–M6
C1	3–1/4–28UNF

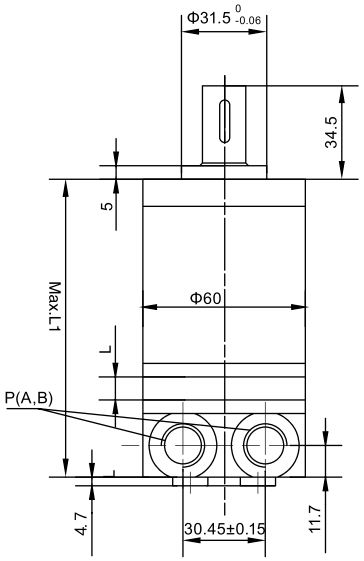
Type	BMM–8	BMM–12.5	BMM–20	BMM–32	BMM–40	BMM–50
L	3.5	5.5	8.5	13.5	17	21.5
L1	104.5	106.5	109.5	114.5	118	122.5
L2	107	109	112	117	120.5	125

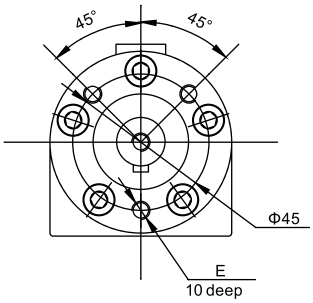
■ BMM Installation

S*(Side port S*)

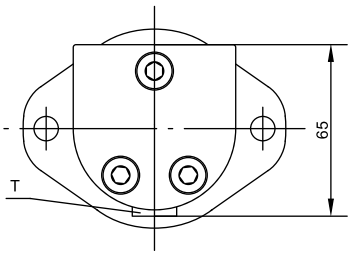
lange C,C1

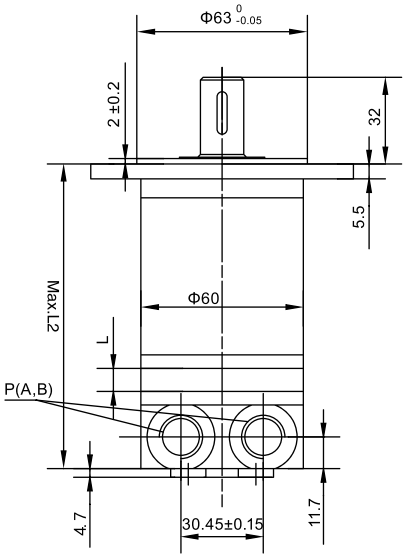


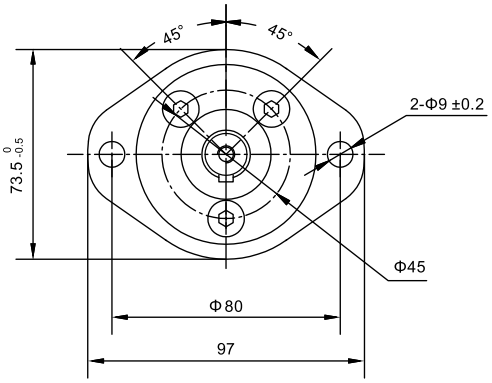




A Ⅱ 2–hole oval flange AII





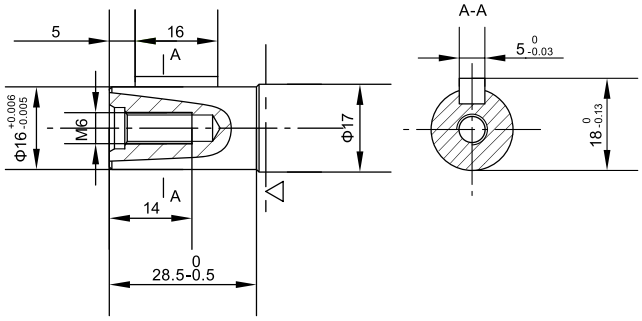


Flange	E
C	3–M6
C1	3–1/4–28UNF

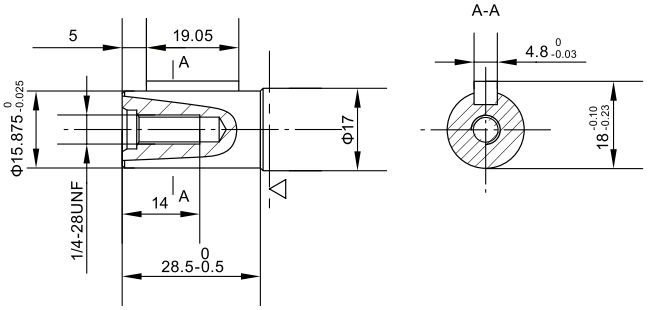
Type	BMM–8	BMM–12.5	BMM–20	BMM–32	BMM–40	BMM–50
L	3.5	5.5	8.5	13.5	17	21.5
L1	106	108	111	116	119.5	124
L2	108.5	110.5	113.5	118.5	122	126.5

■ SHAFT VERSION

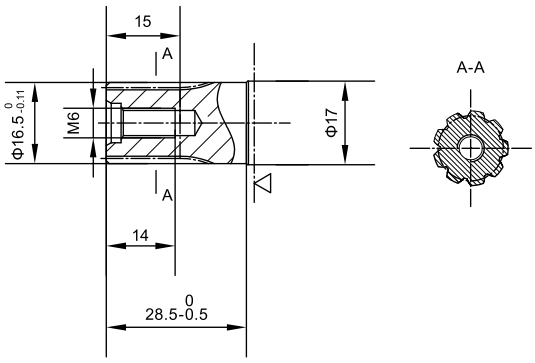
P1: Φ16 Cylindrical shaft，parallel key5 × 5 × 16



P2: Φ15.875Cylindrical shaft，parallel key4.8 × 4.8 × 19.05



K1: Φ16.5involute splined shaft B17 × 14 DIN5482

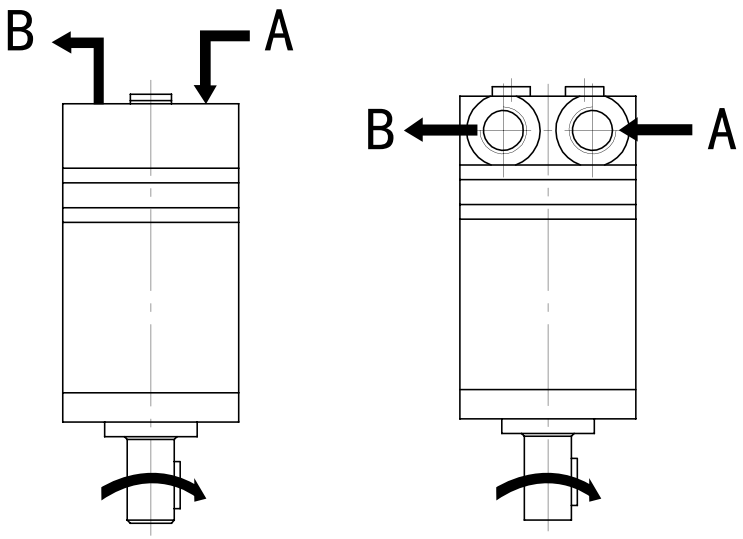


◁ : Motor mounting surface

■ DIRECTION OF SHAFT ROTATION: STANDARD

Direction of shaft ration：Standard

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



■ ORDERING CODE

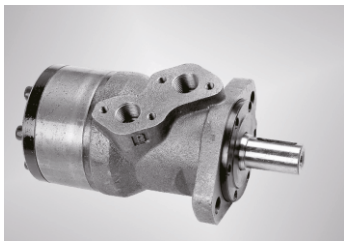
1		2	3	4	5		6		7
BMM	—					/		—	

Pos.1	2	3		4	
Series	Disp		Output		Flange
BMM	8 12.5 20 32 40 50	P1	Φ16 Cylindrical shaft，parallel key5×5×16	C	3–M6 Flange, pilot Φ31.5
		P2	Φ15.875 Cylindrical shaft，parallel key4.8×4.8×19.05	C1	3–1/4–28UNF Fange, pilot Φ Φ31.5
		K1	Φ16.5 involute splined shaft，B17×14 DIN5482	A Ⅱ	2–Φ9 Oval fange, pilot Φ Φ63

5		6		7	
Code	Ports Ports(A,B)(deep) Drain port T(deep)	Special features		Rotation direction	
	(End port Y*)	Omit	Standard	Omit	Standard
Y1	G3/8(12),G1/8(8)				
Y2	9/16–18UNF(12),3/8–24UNF(8)				
	S*(Side port S*)			L	Opposite
S1	G3/8(12),G1/8(8)				
S2	9/16–18UNF(12),3/8–24UNF(8)				

BMR Orbit Hydraulic Motor With Spool Valve

■ BMR INTRODUCTION



This series of motor, with its shell made of ductile cast iron of adequate intensity, can be applied to situations with less load and interbval operation, widely to agriculture, forestry, plastics, machine tools and min machines, such as the mould height adjustment of the injection molding machine, the cleaner, the sawmill the worktable etc.

■ BMR CHARACTERISTICS

1. The output shaft, with the deep groove ball bearing, can bear certain axial force and radial force.
2. With the axial oil distrbution structur, it is of smaller size and less weight.
3. With two inner check valves, no drain connection.
4. With cycoid group with the roller, it has a small friction and high mechanical efficiency.

■ BMR TECHNICAL DATA

Type		BMR BMRW BMRS BMRE 50	BMR BMRW BMRS BMRE 80	BMR BMRW BMRS BMRE 100	BMR BMRW BMRS BMRE 125	BMR BMRW BMRS BMRE 160	BMR BMRW BMRS BMRE 200	BMR BMRW BMRS BMRE 250	BMR BMRW BMRS BMRE 315	BMR BMRW BMRS BMRE 400
Displacement.(ml/r)		51.7	80.5	100.5	126.3	160.8	200.9	252.6	321.5	401.9
Max.Pressure. Drop (Mpa)	cont.	14	14	14	14	14	14	11	9	7
	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
Max.torque (Nm)	cont.	93	152	194	237	310	369	380	380	380
	int.	118	189	236	296	378	450	470	470	470
	peak.	135	216	270	338	433	509	540	540	540
Max.Speed(cont.)(r/min)		770	745	595	475	370	295	235	185	150
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 Orbit Hydraulic Motor With Spool Valve

■ BMRY TECHNICAL DATA

Type		BMRY 50	BMRY 80	BMRY 100	BMRY 125	BMRY 160	BMRY 200	BMRY 250	BMRY 315	BMRY 400
Displacement.(ml/r)		51.7	80.5	100.5	126.3	160.8	200.9	252.6	321.5	401.9
Max.Pressure. Drop (Mpa)	cont.	17.5	17.5	17.5	17.5	17.5	17.5	14	12	10
	int.	20	20	20	20	20	19	16	14	12
	peak.	22	22	22	22	22	20	18	15	14
Max.torque (Nm)	cont.	110	189	236	296	378	450	470	485	500
	int.	135	216	270	338	433	486	540	573	614
	peak.	144	225	281	353	450	511	579	614	710
Max.Speed(cont.)(r/min)		770	745	595	475	370	295	235	185	150
Max.Flow(cont.)(L/min)		40	60	60	60	60	60	60	60	60
Max.Output.Power(cont.) (Kw)		7.5	12	12	12	12	11	9.5	7.5	6.5
Weight(Kg)		6.9	7.3	7.4	7.7	7.9	8.4	8.9	9.4	11.4

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.

■ BMR PERFORMANCE DATA

BMR 50[51.7ml/r]
Pressure (Mpa)

Flow(L/min)	5	7	9	10	12	14 (Max.cont.)	16	17.5 (Max.int.)
5	34 **94**	44 **85**	58 **77**	65 **77**	75 **72**	88 **50**		
10	35 **188**	45 **179**	61 **167**	68 **163**	79 **154**	94 **137**	107 **119**	119 **98**
15	34 **285**	48 **279**	62 **271**	72 **263**	87 **252**	100 **232**	108 **213**	122 **187**
20	34 **379**	46 **377**	60 **367**	68 **363**	82 **348**	95 **332**	109 **304**	125 **272**
30	32 **578**	43 **571**	59 **563**	66 **556**	79 **544**	94 **533**	107 **502**	121 **467**
40 (Max.cont.)	30 **762**	40 **760**	57 **755**	65 **752**	78 **740**	91 **726**	105 **702**	120 **672**
45	29 **858**	39 **855**	56 **851**	64 **847**	77 **837**	89 **817**	104 **798**	120 **772**
50 (Max.int.)	25 **952**	36 **942**	52 **927**	59 **908**	72 **882**	84 **854**	98 **834**	113 **803**

BMR 80[80.5ml/r]
Pressure (Mpa)

Flow(L/min)	5	7	9	10	12	14 (Max.cont.)	16	17.5 (Max.int.)
5	48 **61**	58 **58**	84 **52**	106 **46**	129 **40**			
10	50 **122**	74 **116**	96 **112**	106 **108**	126 **106**	145 **99**	170 **60**	
20	54 **243**	76 **239**	100 **231**	109 **219**	131 **206**	152 **192**	174 **176**	193 **152**
30	50 **362**	72 **358**	96 **356**	104 **350**	128 **349**	148 **335**	172 **325**	191 **300**
40	45 **484**	70 **480**	95 **478**	104 **476**	125 **470**	146 **468**	171 **440**	188 **438**
50	41 **610**	68 **608**	91 **606**	101 **603**	122 **600**	145 **598**	168 **550**	186 **520**
60 (Max.cont.)	35 **726**	65 **723**	88 **720**	96 **718**	120 **710**	142 **700**	164 **698**	182 **680**
70	30 **845**	58 **834**	81 **820**	93 **802**	114 **789**	136 **767**	158 **754**	175 **730**
75 (Max.int.)	19 **910**	48 **895**	76 **881**	88 **867**	108 **852**	132 **830**	151 **806**	168 **787**

■ BMR PERFORMANCE DATA

BMR 100[100.5ml/r]
Pressure (Mpa)

Flow(L/min)	5	7	9	10	12	14 (Max.cont.)	16	17.5 (Max.int.)
5	64 **49**	90 **48**	118 **46**	134 **42**	154 **38**			
10	65 **96**	93 **94**	122 **93**	134 **91**	155 **80**	183 **60**	210 **48**	
20	62 **192**	93 **188**	121 **184**	135 **178**	153 **171**	184 **168**	208 **158**	236 **146**
30	61 **296**	90 **294**	118 **290**	130 **290**	150 **288**	180 **282**	200 **270**	232 **258**
40	55 **387**	86 **380**	115 **369**	126 **361**	146 **356**	181 **348**	206 **338**	228 **320**
50	46 **484**	77 **479**	108 **472**	121 **463**	146 **452**	181 **445**	200 **428**	221 **410**
60 (Max.cont.)	34 **583**	62 **567**	98 **569**	110 **555**	136 **540**	170 **536**	186 **528**	199 **516**
70	30 **680**	63 **672**	97 **662**	110 **650**	138 **640**	170 **635**	190 **620**	210 **606**
75 (Max.int.)	20 **728**	54 **720**	90 **710**	106 **695**	130 **681**	165 **667**	188 **650**	200 **634**

BMR 125[126.3ml/r]
Pressure (Mpa)

Flow(L/min)	5	7	9	10	12	14 (Max.cont.)	16	17.5 (Max.int.)
5	74 **37**	106 **32**	140 **27**	163 **21**				
10	81 **78**	114 **77**	152 **74**	172 **59**	200 **45**	220 **29**	250 **20**	
20	80 **157**	114 **156**	150 **154**	170 **151**	200 **146**	221 **142**	254 **120**	292 **114**
30	78 **232**	112 **230**	149 **228**	169 **222**	198 **220**	220 **218**	252 **199**	290 **170**
40	77 **312**	111 **311**	147 **307**	168 **300**	196 **298**	218 **284**	250 **270**	288 **252**
50	62 **391**	105 **388**	143 **384**	165 **380**	195 **372**	223 **362**	254 **346**	287 **330**
60 (Max.cont.)	52 **470**	98 **468**	136 **464**	160 **459**	191 **448**	220 **434**	250 **412**	282 **405**
70	41 **548**	90 **544**	130 **540**	156 **541**	187 **538**	215 **535**	242 **530**	278 **496**
75 (Max.int.)	32 **586**	79 **583**	126 **578**	148 **570**	180 **560**	208 **546**	234 **532**	262 **520**

BMR 160[160.8ml/r]
Pressure (Mpa)

Flow(L/min)	5	7	9	10	12	14 (Max.cont.)	16	17.5 (Max.int.)
5	100 **29**	142 **26**	188 **21**	207 **19**				
10	104 **62**	146 **60**	191 **58**	211 **49**	245 **45**	282 **32**	330 **25**	
20	102 **124**	148 **120**	194 **118**	218 **114**	251 **109**	290 **104**	338 **99**	368 **94**
30	96 **183**	141 **181**	186 **179**	215 **176**	248 **166**	288 **158**	335 **144**	364 **132**
40	87 **246**	136 **242**	180 **240**	206 **235**	248 **231**	286 **219**	330 **200**	358 **181**
50	70 **309**	126 **307**	172 **300**	198 **295**	238 **287**	278 **278**	320 **262**	350 **247**
60 (Max.cont.)	58 **371**	111 **367**	168 **359**	191 **354**	232 **346**	271 **338**	312 **323**	342 **306**
70	47 **435**	104 **430**	160 **421**	190 **415**	228 **403**	267 **393**	301 **381**	338 **365**
75 (Max.int.)	34 **470**	91 **463**	150 **450**	180 **441**	221 **431**	261 **420**	291 **405**	328 **389**

(Torque) : 150Nm
(Speed) : 450r/min

Cont.
Int.

BMR 200[200.9ml/r]
Pressure (Mpa)

Flow(L/min)	5	7	9	10	12	14 (Max.cont.)	16	17.5 (Max.int.)
5	129 **24**	176 **22**	230 **18**	256 **13**				
10	133 **49**	182 **47**	236 **45**	261 **43**	310 **38**	352 **33**	400 **24**	
20	131 **99**	181 **97**	232 **94**	256 **92**	308 **88**	354 **83**	400 **74**	431 **64**
30	126 **149**	176 **147**	299 **144**	252 **141**	308 **135**	353 **126**	400 **113**	430 **105**
40	112 **200**	168 **197**	224 **194**	248 **191**	304 **185**	350 **174**	393 **160**	423 **151**
50	94 **252**	154 **249**	220 **246**	243 **243**	294 **238**	343 **228**	384 **212**	414 **194**
60 (Max.cont.)	78 **304**	144 **301**	213 **298**	236 **294**	287 **286**	339 **276**	382 **262**	410 **243**
70	67 **355**	135 **353**	206 **349**	228 **340**	277 **329**	336 **316**	375 **300**	408 **288**
75 (Max.int.)	58 **382**	125 **379**	197 **373**	220 **362**	270 **350**	321 **337**	360 **322**	398 **312**

■ BMR PERFORMANCE DATA

BMR 250[252.6ml/r]

Flow(L/min)	Pressure (Mpa) 5	7	9	10	11	12	14
				Max.cont.			Max.int.
5	172 **20**	240 **19**	300 **18**	338 **16**	352 **15**		
10	173 **42**	242 **38**	308 **36**	340 **33**	351 **33**	405 **28**	462 **22**
20	170 **79**	238 **77**	301 **75**	339 **72**	350 **71**	402 **69**	460 **61**
30	160 **117**	231 **114**	298 **111**	330 **109**	347 **108**	398 **103**	455 **95**
40	141 **157**	221 **155**	298 **153**	327 **150**	342 **148**	394 **146**	445 **135**
50	122 **196**	206 **193**	287 **190**	321 **177**	332 **175**	382 **170**	438 **163**
Max.cont. 60	101 **236**	190 **233**	278 **230**	312 **227**	328 **225**	369 **221**	424 **208**
70	86 **276**	176 **273**	262 **270**	298 **266**	302 **264**	353 **255**	416 **245**
Max.int. 75	60 **297**	163 **294**	254 **290**	286	291 **282**	345 **277**	410 **266**

BMR 315[321.5ml/r]

Flow(L/min)	Pressure (Mpa) 3	5	7	9	10	11
				Max.cont.		Max.int.
5	110 **14**	199 **12**				
10	108 **31**	190 **30**	272 **29**	360 **28**	400 **26**	451 **25**
20	110 **61**	196 **60**	279 **59**	356 **57**	398 **55**	448 **53**
30	106 **91**	186 **90**	270 **89**	355 **86**	390 **84**	442 **82**
40	100 **123**	179 **122**	262 **120**	350 **117**	382 **112**	436 **110**
50	92 **154**	169 **153**	252 **151**	342 **147**	373 **140**	432 **136**
Max.cont. 60	86 **185**	159 **184**	241 **182**	339 **177**	369 **172**	428 **170**
70	77 **217**	146 **216**	235 **213**	324 **208**	342 **201**	412 **200**
Max.int. 75	66 **232**	132 **231**	212 **228**	303 **222**	332 **216**	402 **214**

BMR 400[401.9ml/r]

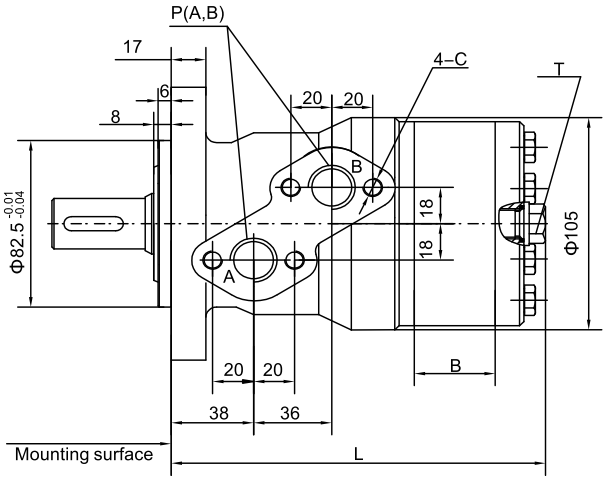
Flow(L/min)	Pressure (Mpa) 3	4	6	7	8	9
				Max.cont.		Max.int.
5	152 **12**					
10	154 **24**	205 **21**	308 **18**	349 **17**		
20	150 **49**	201 **48**	302 **47**	340 **46**	392 **44**	441 **41**
30	146 **73**	198 **74**	296 **73**	331 **72**	387 **70**	438 **67**
40	140 **98**	191 **97**	290 **96**	321 **95**	381 **94**	421 **92**
50	132 **122**	182 **121**	281 **118**	315 **115**	376 **112**	402 **110**
Max.cont. 60	128 **146**	176 **145**	272 **143**	312 **140**	362 **138**	389 **132**
70	110 **170**	171 **168**	259 **166**	301 **162**	341 **160**	379 **154**
Max.int. 75	98 **182**	162 **180**	232 **178**	292 **176**	320 **174**	356 **170**

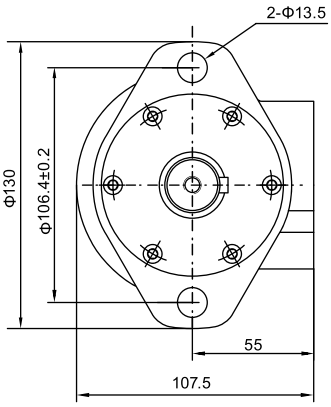
(Torque) : 232Nm
(Speed) : 178r/min

Cont.
Int.

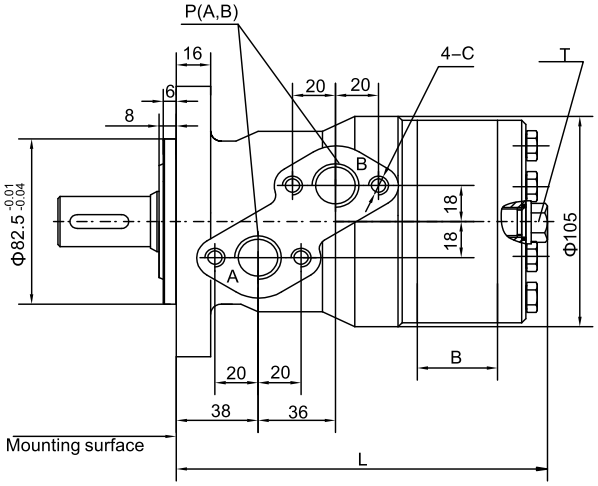
■ BMR, BMRE Installation

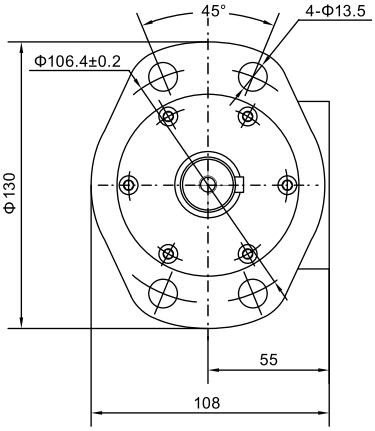
2–hole oval flange AⅡ



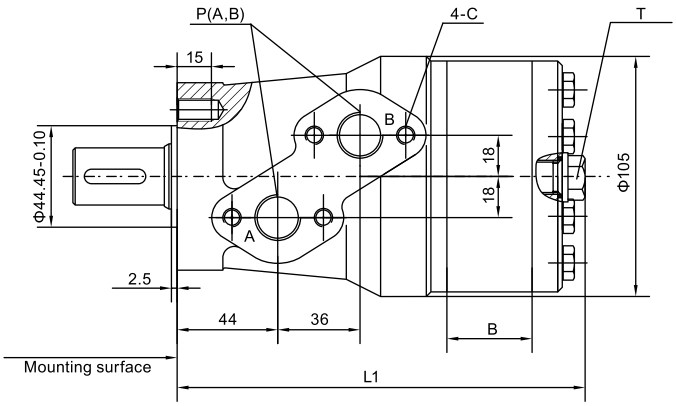


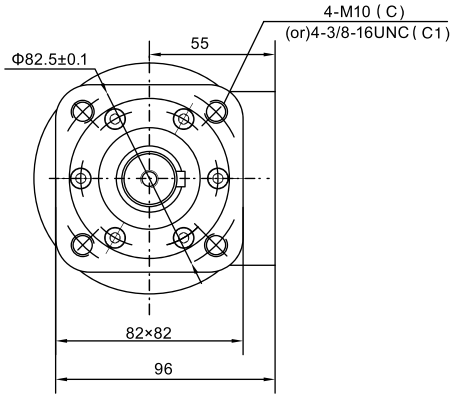
4–hole oval flange A Ⅳ





Square flange C，C1

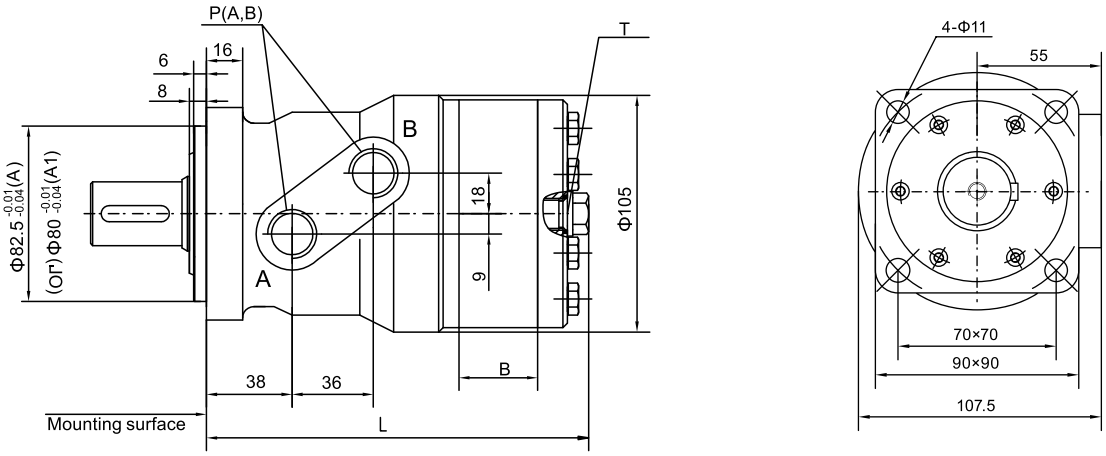




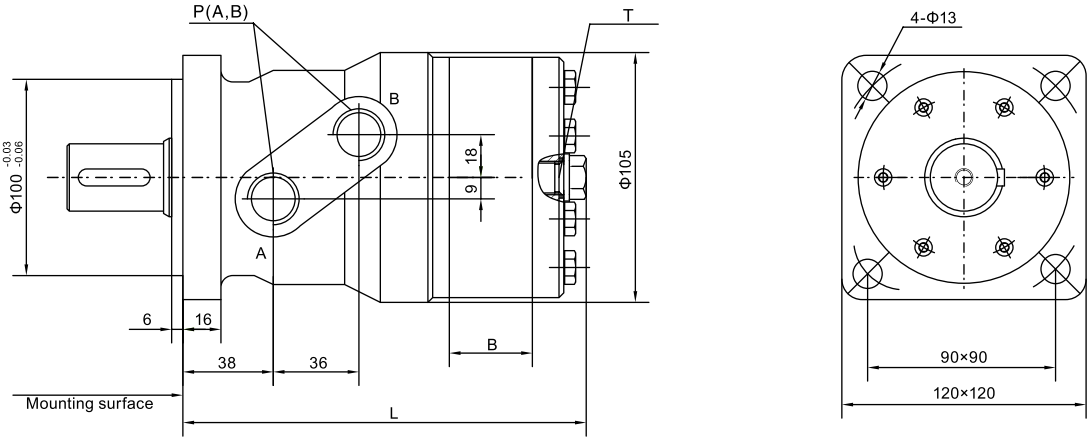
Note：C，C1 mounting are assembling to BMRS shaft

■ BMR, BMRE Installation

Square flange A , A1



Square flange A2 Ⅲ



Type	BMR-50	BMR-80	BMR-100	BMR-125	BMR-160	BMR-200	BMR-250	BMR-315	BMR-400
L	143	148	151.5	156	162	169	178	190	204
L1	151	156	159.5	164	170	177	186	198	212
B	9	14	17.5	22	28	35	44	56	70

■ BMRY Installtion

Type	BMRY-50	BMRY-80	BMRY-100	BMRY-125	BMRY-160	BMRY-200	BMRY-250	BMRY-315	BMRY-400
L	150	155	158.5	163	169	176	185	197	211
L1	158	163	166.5	171	177	184	193	205	219
B	9	14	17.5	22	28	35	44	56	70

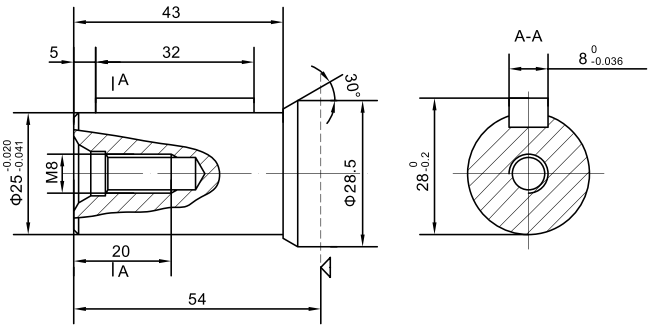
■ BMR,BMRE PORTS CODE

Ports / Code	P(A、B)(deep)	C（deep）	T（deep）
Y	G1/2 (15)	M8 (13)	M14×1.5 (12)
Y1	M18×1.5 (15)	M8 (13)	M14×1.5 (12)
Y2	M22×1.5 (15)	M8 (13)	M14×1.5 (12)
Y4	ZG3/8 (15)	M8 (13)	M14×1.5 (12)
Y5	7/8–14UNF (15)	—	M14×1.5 (12)
Y7	ZG1/2 (15)	M8 (13)	M14×1.5 (12)
Y8	NPT1/2 (15)	M8 (13)	M14×1.5 (12)
Y9	NPTF1/2 (15)	5/16–18UNC (13)	7/16–20UNF (12)
Y10	G1/2 (15)	M8 (13)	G1/4 (12)
Y15	7/8–14UNF (15)	5/16–18UNC (13)	7/16–20UNF (12)

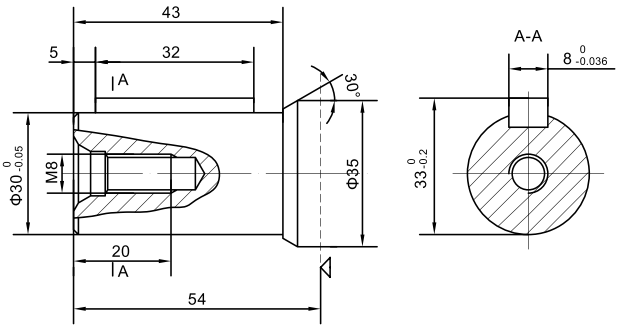
Note:P(A，B)––Ports，C––Mounting Thread （—Indicates no this thread），T––Drain connettion

■ BMR,BMRE — SHAFT VERSION

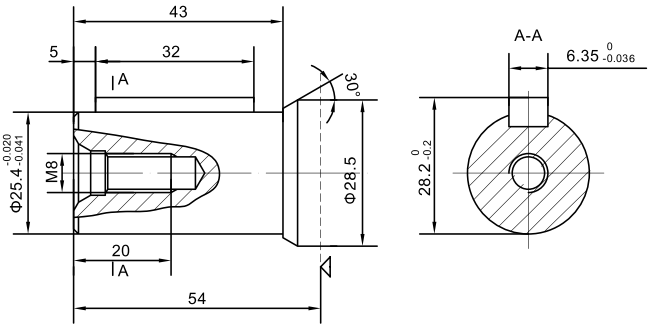
P1: Φ25 Cylindrical shaft，parallel key8×7×32



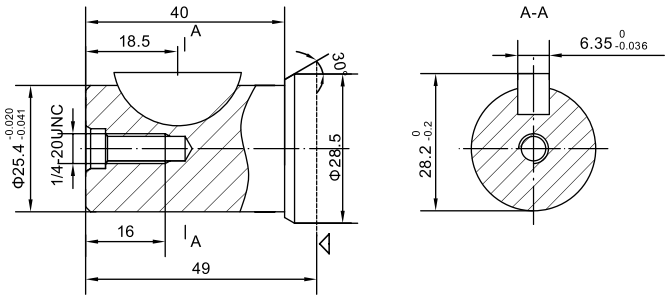
P2: Φ30 Cylindrical shaft，parallel key8×7×32



P3: Φ25.4 Cylindrical shaft，parallel key6.35×6.35×32



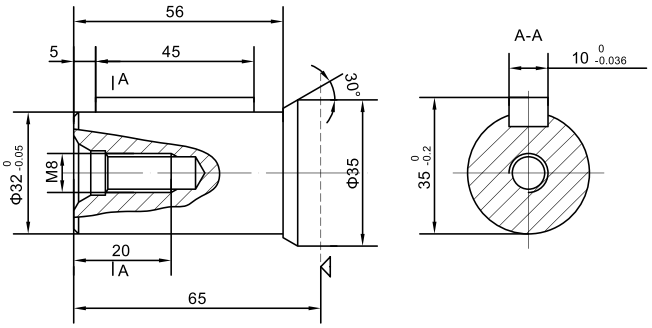
P4: Φ25.4 Cylindrical shaft，Woodruff key Φ25.4×6.35



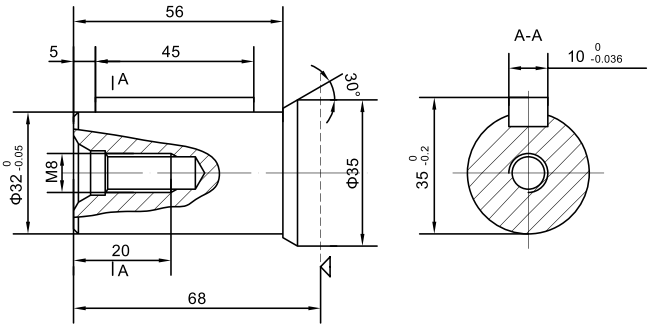
◁ : Motor mounting surface

■ BMR,BMRE — SHAFT VERSION

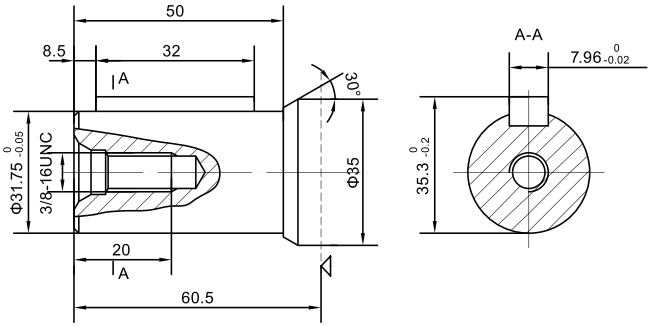
P5: Φ32 Cylindrical shaft，parallel key10 × 8 × 45



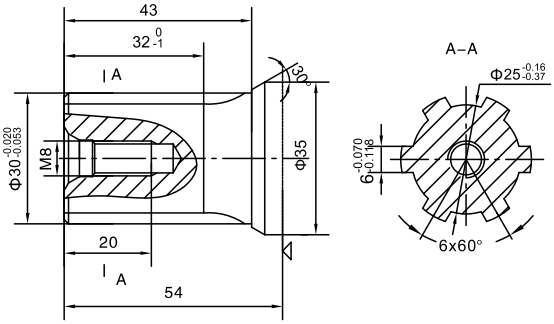
P52: Φ32 Cylindrical shaft，parallel key10 × 8 × 45



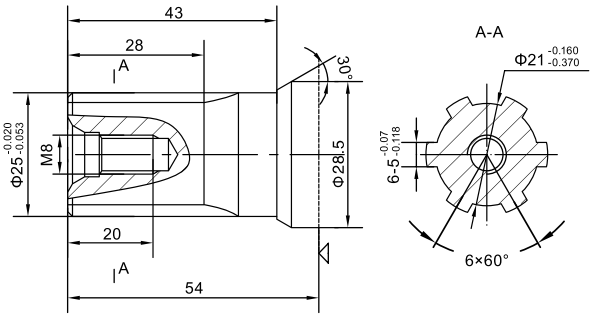
P6: Φ31.75 Cylindrical shaft，parallel key7.96 × 7.96 × 32



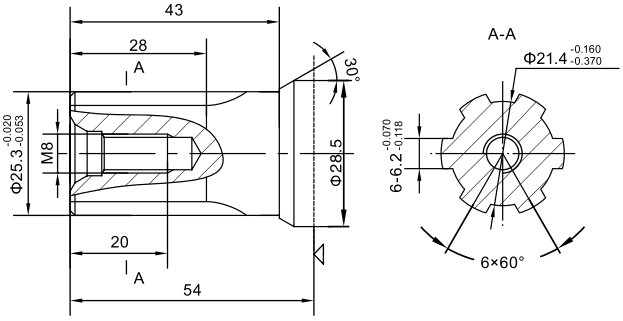
H1: Φ30 Splined shaft，6–30 × 25 × 6



H2: Φ25 Splined shaft，6–25 × 21 × 5



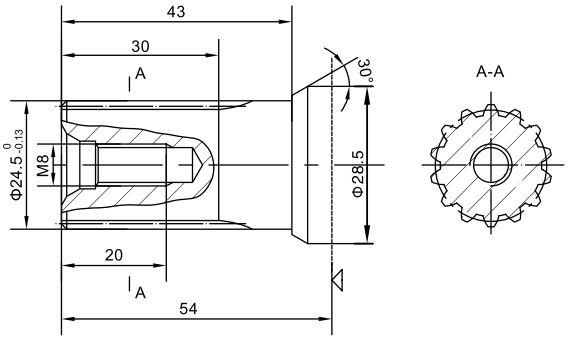
H3: Φ25.3 Splined shaft，6–25.3 × 21.4 × 6.2



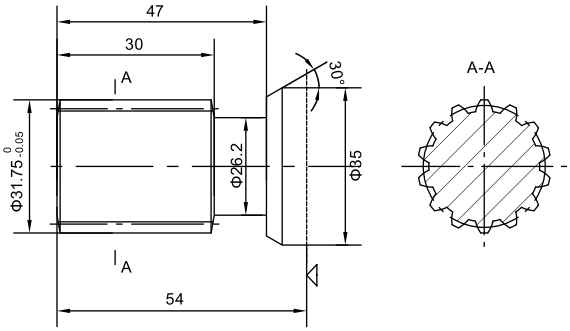
◁ : Motor mounting surface

■ BMR,BMRE — SHAFT VERSION

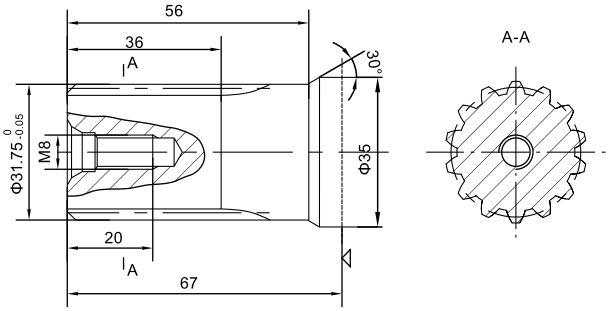
K4: Φ24.5 involute splined shaft B25 × 22 DIN5482 m: 1.6 Z:14



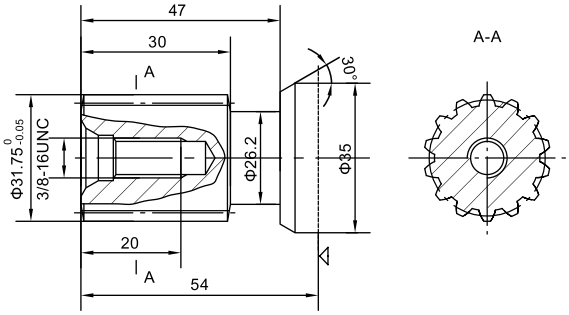
K10: Φ31.75 involve splined shaft 14–DP12/24 a=30°



K13: Φ31.75 involute splined shaft 14–DP12/24 a=30°



K14: Φ31.75 involute splined shaft 14–DP12/24 a=30°

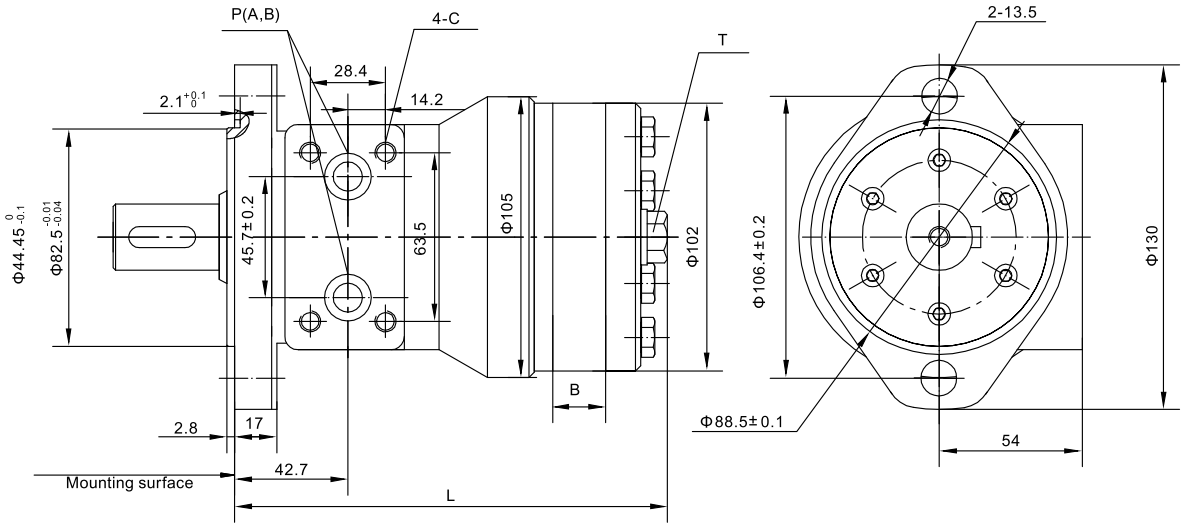


Note：BMRE series motors don't include the following output shafts：P2, P5, P52, P6, H1, K4, K10, K13, K14.

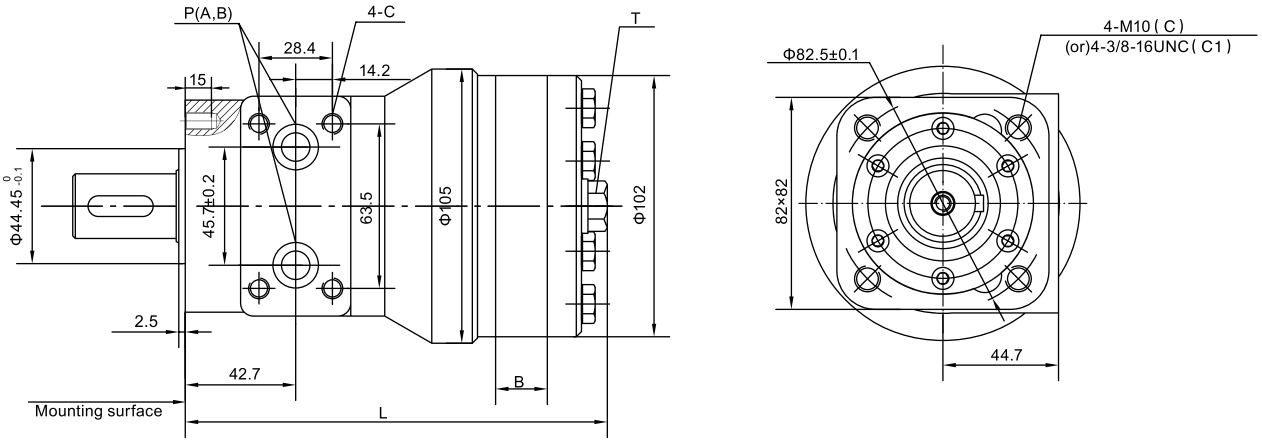
◁ : Motor mounting surface

■ BMRS Installation

2–hole oval flange A‖



C,C1 Square flange



Type	BMRS–50	BMRS–80	BMRS–100	BMRS–125	BMRS–160	BMRS–200	BMRS–250	BMRS–315	BMRS–400
L	151	156	159.5	164	170	177	186	198	212
B	9	14	17.5	22	28	35	44	56	70

BMRS Orbit Hydraulic Motor With Spool Valve

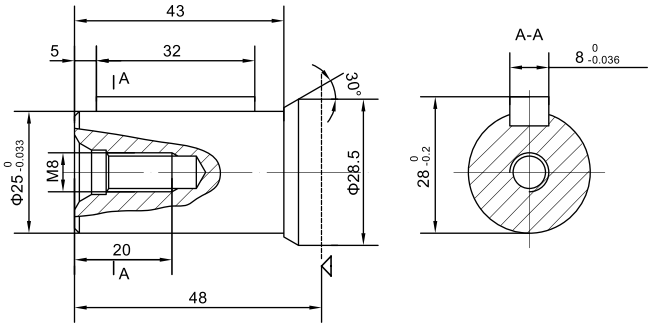
■ BMRS PORTS CODE

Ports / Code	P(A、B)(deep)	C（deep）	T（deep）
Y	G1/2 (15)	—	M14×1.5(12)
Y5	7/8–14UNF(15)	—	7/16–20UNF(12)
Y7	ZG1/2(15)	—	G1/4(12)
Y9	NPTF1/2(15)	—	7/16–20UNF(12)
Y10	G1/2(15)	—	G1/4(12)
Y17	3/4–16UNF(15)	—	7/16–20UNF(12)
Y19	Φ11(15)	5/16–18UNC(13)	7/16–20UNF(12)
Y20	M18×1.5(15)	M8 (13)	G1/4(12)

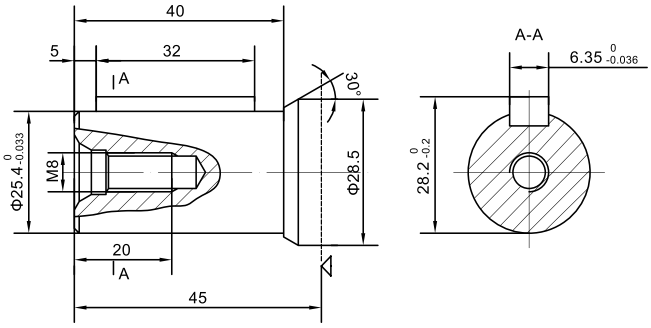
P(A、B)––Ports，C––Mounting Thread（—Indicates no this thread），T––Drain connettion

■ BMRS SHAFT VERSION

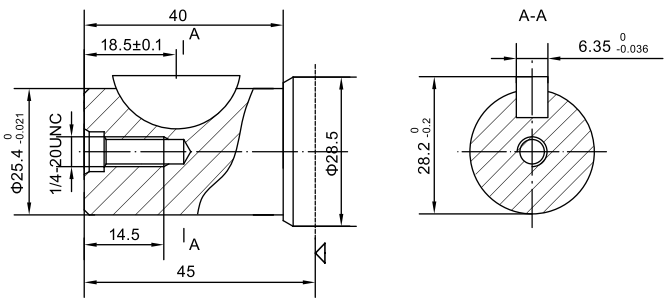
P1: Φ25 Cylindrical shaft，parallel key8×7×32



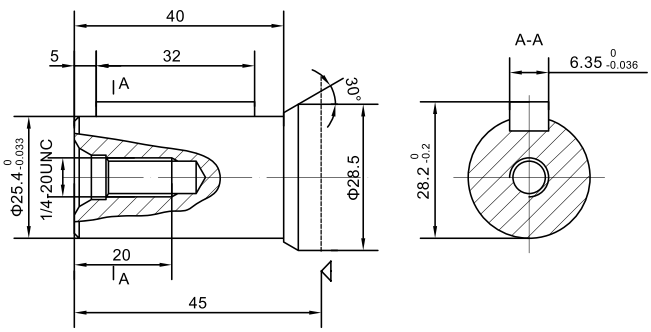
P3：Φ25.4 Cylindrical shaft，parallel key6.35×6.35×32



P4: Φ25.4 Cylindrical shaft，Woodruff key Φ25.4×6.35



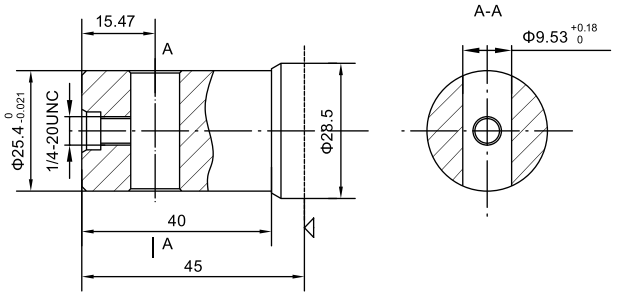
P33: Φ25.4 Cylindrical shaft，parallel key6.35×6.35×32



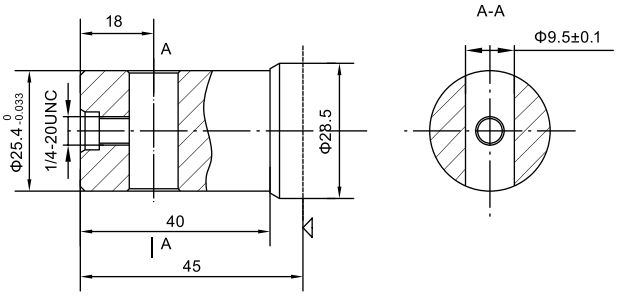
◁：Motor mounting surface

■ BMRS SHAFT VERSION

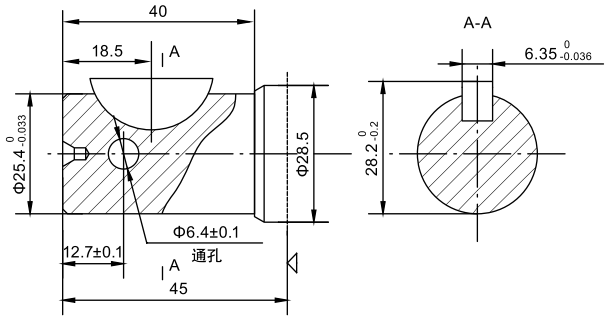
P89: Φ25.4Cylindrical shaft pin hole Φ9.53



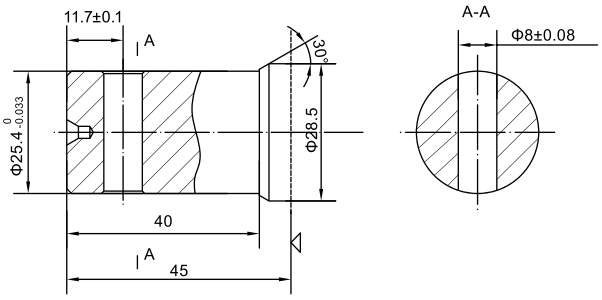
P93: Φ25.4Cylindrical shaft pin hole Φ9.5



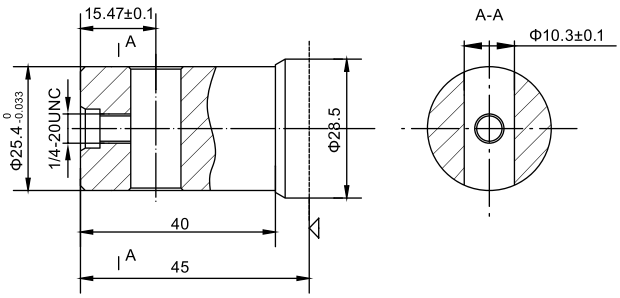
P95: Φ25.4Cylindrical shaft pin hole Φ6.4，Woodruff key Φ25.4 × 6.35



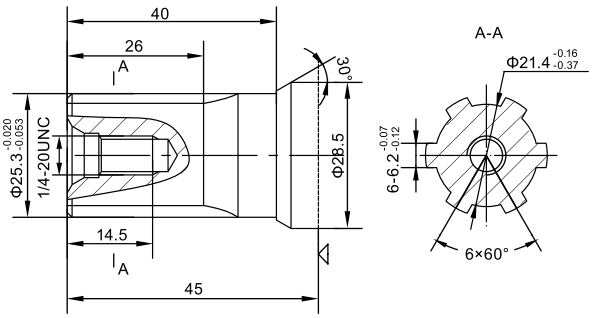
P96: Φ25.4Cylindrical shaft pin hole Φ8



P97: Φ25.4Cylindrical shaft pin hole Φ10.3



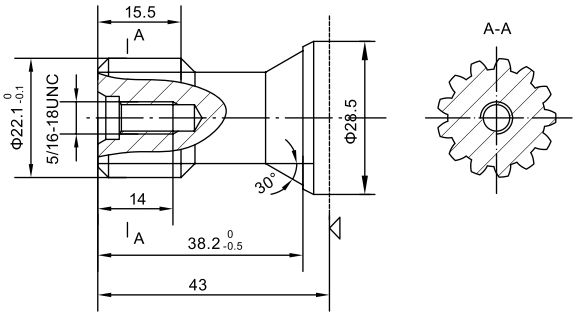
H4：Φ25.3 Splined shaft， 6–25.3 × 21.4 × 6.2



◁ : Motor mounting surface

■ BMRS SHAFT VERSION

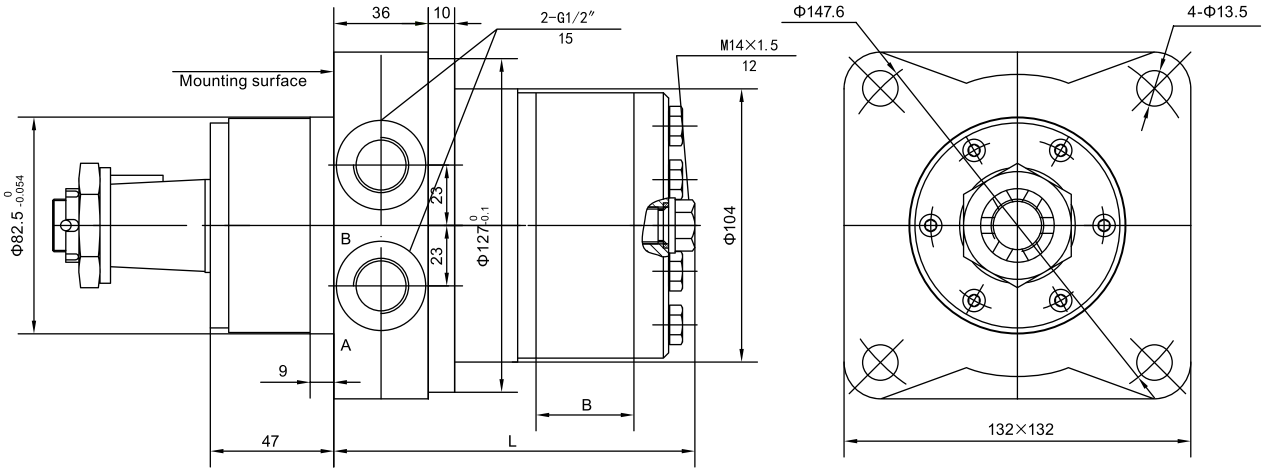
K8: Φ22.1 involute splined shaft，13–DP16/32



◁ : Motor mounting surface

BMRW Orbit Hydraulic Motor With Spoor Valve

■ BMRW Installation



Type	BMRW–50	BMRW–80	BMRW–100	BMRW–125	BMRW–160	BMRW–200	BMRW–250	BMRW–315	BMRW–400
L	108	113	117	121	127	134	143	155	169
B	9	14	17.5	22	28	35	44	56	70

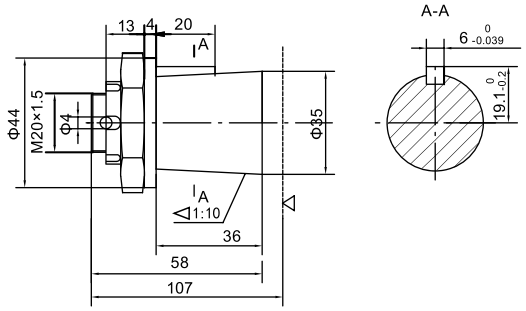
■ BMRW PORTS CODE

Ports / Code	P(A、B)(deep)	C (deep)	T (deep)
Y	G1/2 (15)	—	M14 × 1.5(12)

P(A、B)--Ports，C--Mounting Thread （—Indicates no this thread），T--Drain connettion

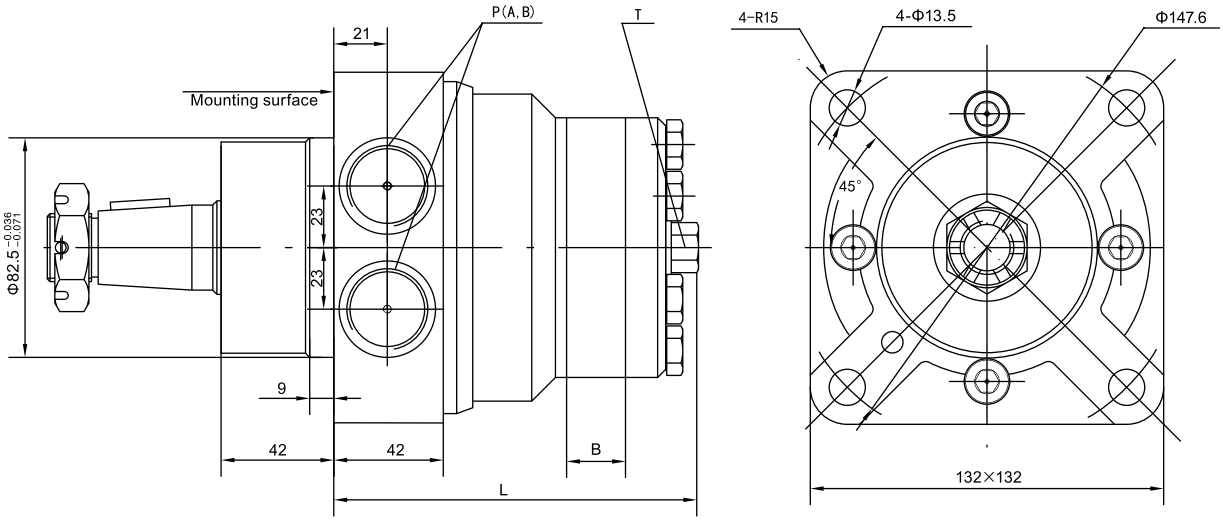
■ BMRW

Z： Φ35 Tapered shaft，taper1:10，parallel key B6 × 6 × 20



◁ : Motor mounting surface

■ BMRW1 Installation



Type	BMRW1-50	BMRW1-80	BMRW1-100	BMRW1-125	BMRW1-160	BMRW1-200	BMRW1-250	BMRW1-315	BMRW1-400
L	125	130	134	138	144	151	160	172	186
B	9	14	17.5	22	28	35	44	56	70

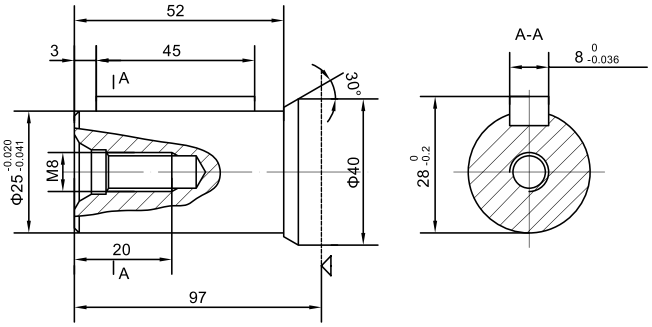
■ BMRW1 PORTS CODE

Ports / Code	P(A、B)(deep)	C (deep)	T (deep)
Y	G1/2 (15)	—	M14 × 1.5(12)
Y5	7/8-14UNF(15)	—	M14 × 1.5(12)
Y10	G1/2 (15)	—	G1/4 (12)

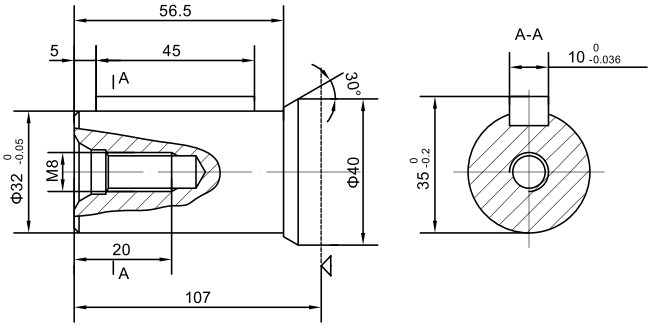
P(A、B)--Ports，C--Mounting Thread （—Indicates no this thread），T--Drain connettion

■ BMRW1 SHAFT VERSION

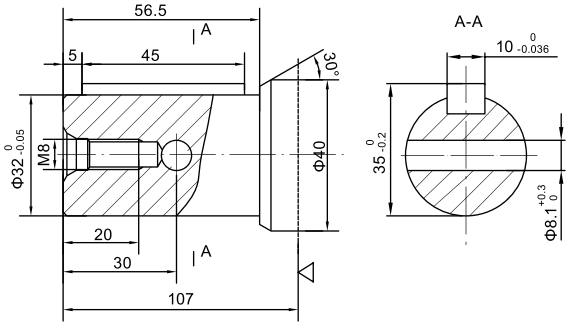
P1：Φ25 Cylindrical shaft，Parallel key 8 × 7 × 45



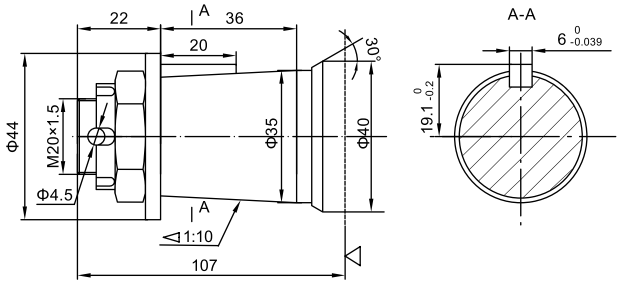
P5：Φ32 Cylindrical shaft，parallel key 10 × 8 × 45



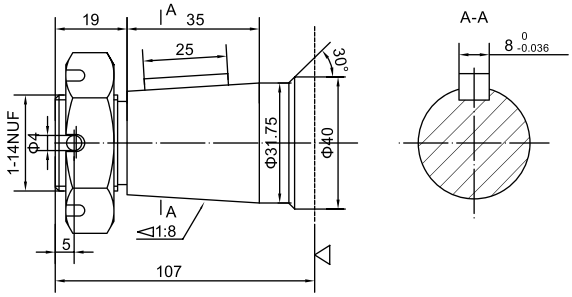
P6：Φ32 Cylindrical shaft，Cylindrical shaft pin hole Φ 8.1，
parallel key 10 × 8 × 45



Z：Φ35 Tapered shaft，taper1:10，parallel key B6 × 6 × 20



Z1：Φ31.75 Tapered shaft，taper1:8，parallel key 8 × 7 × 25

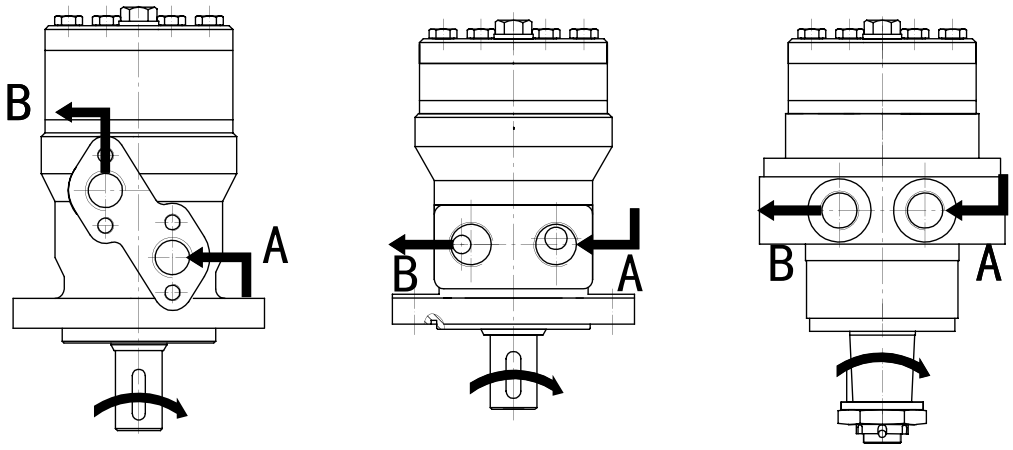


◁ : Motor mounting surface

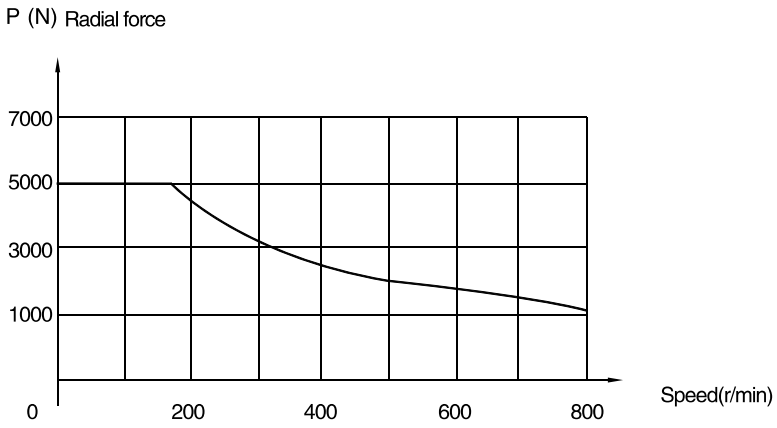
■ BMR、BMRS、BMRW Series Mortor

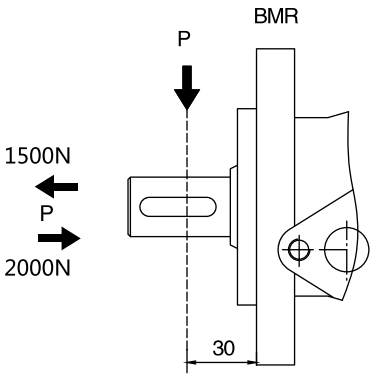
Direction of shaft ration：Standard

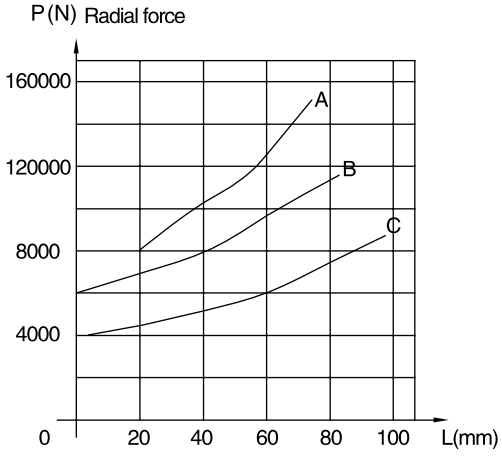
When facing shaft end of motor，shaft to rotate：
Clockwise when port “A” is pressurized.
Counter–clockwise port “B” is pressurized.



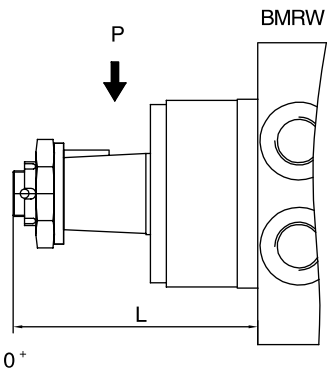
■ BMR,BMRW PERMISSIBLE SHAFT LOADS



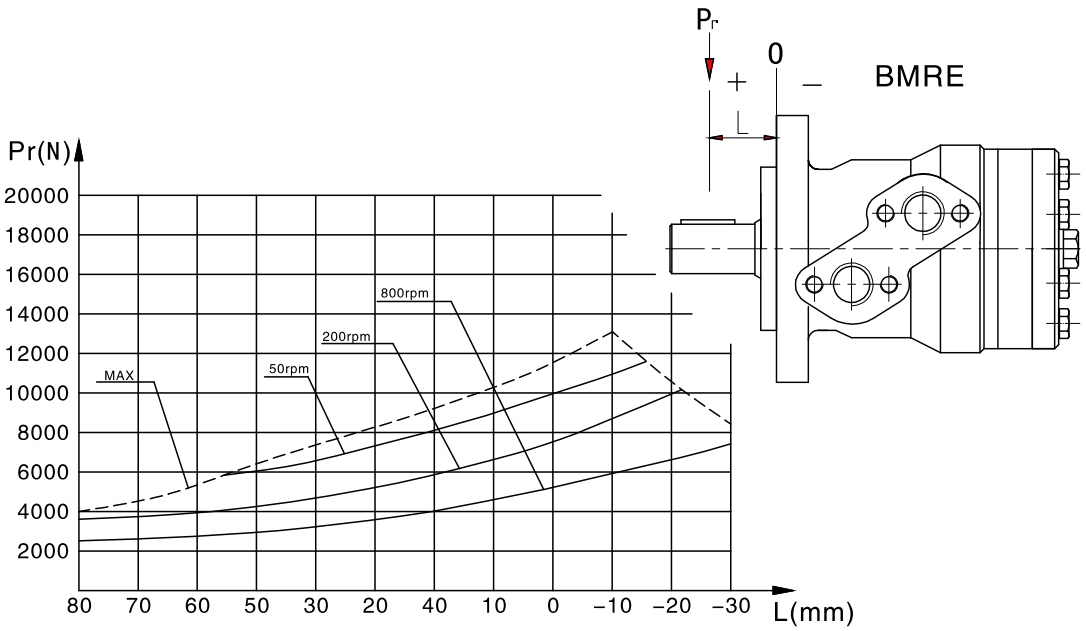




A:n=50 r/min
B:n=200 r/min
C:n=800 r/min



BMRE PERMISSIBLE SHAFT LOADS



■ BMR、BMRE、BMRS、BMRW ORDERING CODE

1		2	3	4	5		6		7
BMR/BMRE	—					／		—	

Pos.1	2	3		4	
Series	Disp	Output		Flange	
BMR/BMRE	50	P1	Φ25 Cylindrical shaft，parallel key8×7×32	A Ⅱ	2–Φ13.5 Oval flange, pilot Φ82.5×6
	80	P2	Φ30 Cylindrical shaft，parallel key8×7×32		
		P3	Φ25.4 Cylindrical shaft，parallel key6.35×6.35×32	A Ⅳ	4–Φ13.5 Oval flange, pilot Φ82.5×6
	100	P4	Φ25.4 Cylindrical shaft，Woodruff key Φ25.4×6.35		
		P5	Φ32 Cylindrical shaft，parallel key10×8×45	C	4–M10 Square flange, pilot Φ44.45×2.5
	125	P52	Φ32 Cylindrical shaft，parallel key10×8×45		
		P6	Φ31.75 Cylindrical shaft，parallel key7.96×7.96×32	C1	4–3/8–16UNC Square flange, pilot Φ44.45×2.5
	160	H1	Φ30 Splined shaft， 6–30×25×6		
		H2	Φ25 Splined shaft， 6–25×21×5	A	4–Φ11Square flange, pilot Φ82.5×6
	200	H3	Φ25.3 Splined shaft， 6–25.3×21.4×6.2		
		K4	Φ24.5 involute splined shaft，B25×22 DIN5482	A1	4–Φ11 Square flange, pilot Φ80×6
	250	K10	Φ31.75 involute splined shaft，14–DP12/24 a=30°		
		K13	Φ31.75 involute splined shaft，14–DP12/24 a=30°	A2 Ⅲ	4–Φ13 Square flange, pilot Φ100×6
	315	K14	Φ31.75 involute splined shaft，14–DP12/24 a=30°		
	400	Z1	Φ28.56 Tapered shaft，taper1:10，parallel key 5×5×14		

BMRE series motors don't include the following output shafts： P2、P5、P52、P6、H1、K4、K10、K13、K14

5			6		7	
Code	Ports		Special features		Rotation direction	
	Ports(A,B)(deep)	Drain port T(deep)				
Y	G1/2(15)	M14×1.5(12)	Omit	Standard	Omit	Standard
Y1	M18×1.5(15)	M14×1.5(12)				
Y2	M22×1.5(15)	M14×1.5(12)				
Y4	ZG3/8(15)	M14×1.5(12)				
Y5	7/8–14UNF(15)	M14×1.5(12)	T7	With dustproof ring	L	Opposite
Y7	ZG1/2(15)	M14×1.5(12)	T10	With high pressure seals		
Y8	NPT1/2(15)	M14×1.5(12)				
Y9	NPTF1/2(15)	7/16–20UNF(12)				
Y10	G1/2(15)	G1/4(12)				
Y15	7/8–14UNF(15)	7/16–20UNF(12)				

■ BMR、BMRS、BMRW ORDERING CODE

1		2	3	4	5		6		7
BMRS	—					/		—	

Pos.1	2	3		4	
Series	Disp	Output		Flange	
BMRS	50	P1	Φ25 Cylindrical shaft，parallel key8 × 7 × 32	A Ⅱ	2–Φ13.5 Oval flange, pilot Φ82.5 × 2.8
	80	P3	Φ25.4 Cylindrical shaft，parallel key6.35 × 6.35 × 32		
		P4	Φ25.4 Cylindrical shaft，Woodruff key Φ25.4 × 6.35		
	100	P33	Φ25.4 Cylindrical shaft，parallel key6.35 × 6.35 × 32		
	125	P89	Φ25.4 Cylindrical shaft pin hole Φ 9.53		
	160	P93	Φ25.4 Cylindrical shaft pin hole Φ 9.5	C	4–M10 Square flange, pilot Φ44.45 × 2.8
	200	P95	Φ25.4 Cylindrical shaft pin hole Φ6.4，Woodruff key Φ25.4 × 6.35		
		P96	Φ25.4 Cylindrical shaft pin hole Φ8		
	250	P97	Φ25.4 Cylindrical shaft pin hole Φ10.3	C1	4–3/8–16UNC Square flange, pilot Φ44.45 × 2.8
	315	H4	Φ25.3 Splined shaft， 6–25.3 × 21.4 × 6.2		
	400	K8	Φ22.1 involute splined shaft，13–DP16/32		

5			6		7	
Code	Ports		Special features		Rotation direction	
	Ports(A,B)(deep)	Drain port T(deep)				
Y	G1/2(15)	M14 × 1.5(12)	Omit	Standard	Omit	Standard
Y5	7/8–14UNF(15)	7/16–20UNF(12)				
Y7	ZG1/2(15)	G1/4(12)				
Y9	NPTF1/2(15)	7/16–20UNF(12)	T21	No case drain	L	Opposite
Y10	G1/2(15)	G1/4(12)				
Y17	3/4–16UNF(15)	7/16–20UNF(12)				
Y19	Φ11(15)	7/16–20UNF(12)				
Y20	M18 × 1.5(15)	G1/4(12)				

■ BMR、BMRS、BMRW ORDERING CODE

1		2	3	4	5		6		7
BMRW	—					/		—	

Pos.1	2	3		4	
Series	Disp	Output		Flange	
BMRW	50 80 100 125 160 200 250 315 400	Z	Φ35 Tapered shaft，taper1:10，parallel key B6×6×20	A	4–Φ13.5 Square flange, pilot Φ82.5×9

5			6		7	
Code	Ports		Special features		Rotation direction	
	Ports(A,B)(deep)	Drain port T(deep)				
Y	G1/2(15)	M14×1.5(12)	Omit	Standard	Omit	Standard
					L	Opposite

1		2	3	4	5		6		7
BMRW1	—					/		—	

Pos.1	2	3		4	
Series	Disp	Output		Flange	
BMRW1	50 80 100 125 160 200 250 315 400	P1	Φ25 Cylindrical shaft，parallel key 8×7×45	A	4–Φ13.5 Square flange, pilot Φ82.5×9
		P5	Φ32 Cylindrical shaft，parallel key 10×8×45		
		P6	Φ32 Cylindrical shaft，Cylindrical shaft pin hole Φ8.1, parallel key 10×8×45		
		Z	Φ35Tapered shaft, taper1:10, parallel key B6×6×20		
		Z1	Φ31.75Tapered shaft, taper1:8, parallel key 8×7×25		

5			6		7	
Code	Ports		Special features		Rotation direction	
	Ports(A,B)(deep)	Drain port T(deep)				
Y	G1/2(15)	M14×1.5(12)	Omit	Standard	Omit	Standard
Y5	7/8–14UNF(15)	M14×1.5(12)	T7	With dustproof ring	L	Opposite
Y10	G1/2(15)	G1/4(12)				

BS Orbit Hydraulic Motor With Spool Valve

■ BS INTRODUCTION

This series of motor is with spool valve design, with the advanced geroler gear set and ductile iron of adequate intensity. It can be applied to the situation with less load and interval operation, and widely to agricultural machines, forestry machinery, plastic injection machinery, mining machines, metal working machines, conveyors etc.

■ BS CHARACTERISTICS

1、Compact volume, easy installation, especially for limited space working condition.
2、Using geroler gear set design, with the function of low friction, low starting pressure, high efficiency, smooth working and longer working life.
3、Spool valve design with less side and weight.
4、With two inner check valves, drain line can be closed.
5、With high pressure seal, the motor can be used in parallel or in series.

■ BS TECHNICAL DATA

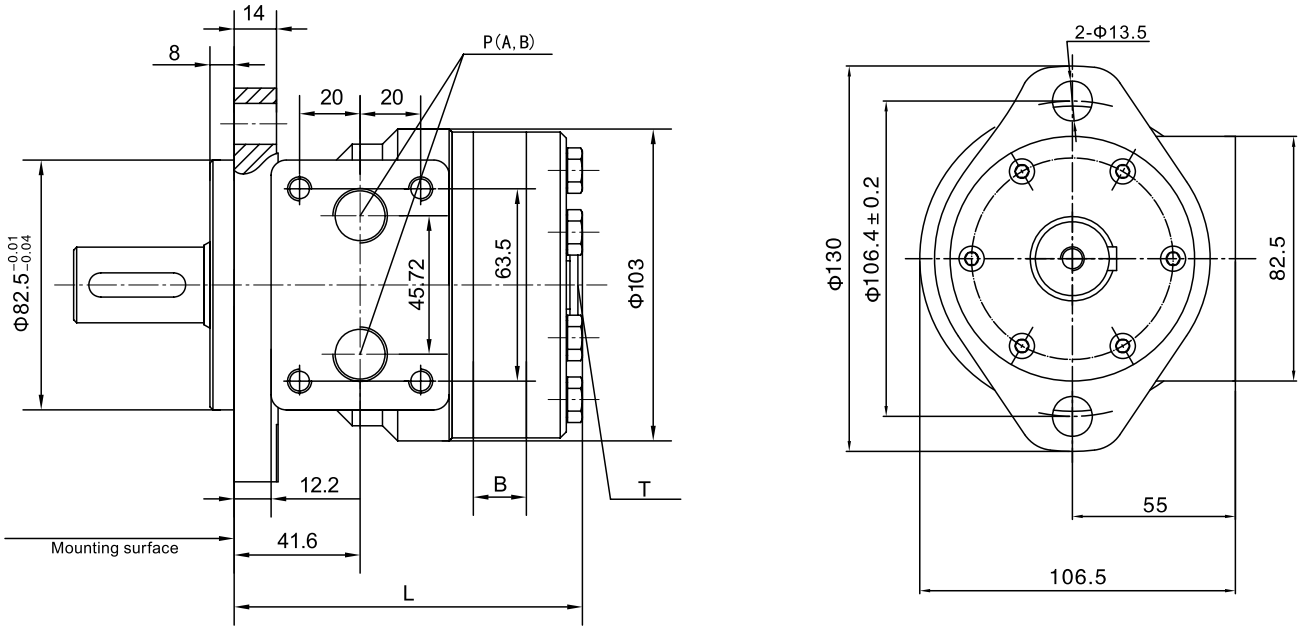
TYPE		BS-50	BS-80	BS-100	BS-125	BS-160	BS-200	BS-250	BS-315	BS-400
Displacement(ml/r)		51.7	80.5	100.5	126.3	160.8	200.9	252.6	321.5	401.9
Max.Pressure.Drop (Mpa)	cont.	14	14	14	14	14	12.5	11	9	7
	int.	17.5	17.5	17.5	17.5	17.5	15.5	14	11	9
	peak.	20	20	20	20	20	18	16	13	11
Max.torque (N.m)	cont.	93	152	194	237	310	320	380	380	380
	int.	118	189	236	296	378	398	470	470	470
	peak.	135	216	270	338	433	460	540	540	540
Max.Speed(cont.)(r/min)		770	745	595	475	370	295	235	185	150
Max.Flow(L/min)		40	60	60	60	60	60	60	60	60
Max.Output.Power(cont.)(Kw)		7	10	10	10	10	7	6	5	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

BS Orbit Hydraulic Motor With Spool Valve

■ BS INSTALLATION

2–ø13.5hole oval flange AII



TYPE	BS–50	BS–80	BS–100	BS–125	BS–160	BS–200	BS–250	BS–315	BS–400
L	107	112	115.5	120	126	133	142	154	168
B	9	14	17.5	22	28	35	44	56	70

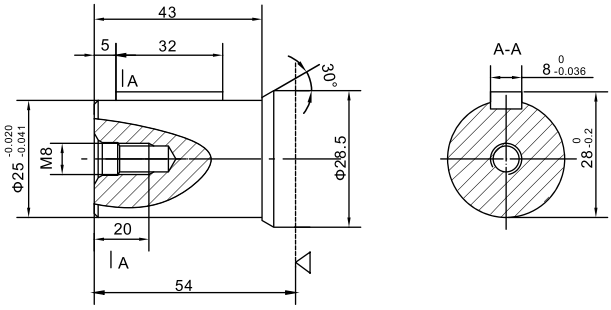
■ BS Ports Code

Ports / Code	P (A, B) (deep)	C (deep)	T (deep)
Y	G1/2 (15)	M8 (13)	M14x1. 5 (12)
Y1	M18x1.5 (15)	M8 (13)	M14x1. 5 (12)
Y2	M22x1.5 (15)	M8 (13)	M14x1. 5 (12)
Y9	NPTF1/2 (15)	5/6–18UNC (13)	7/16–20UNF (12)
Y10	G1/2 (15)	M8 (13)	G1/4 (12)
Y15	7/8–14UNF (15)	5/6–18UNC (13)	7/16–20UNF (12)

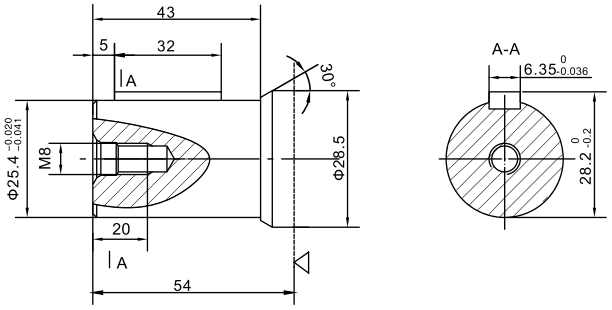
Note:P(A、B)––Ports，C––Mounting Thread （—Indicates no this thread ），T––Drain connettion

■ BS SHAFT VERSION

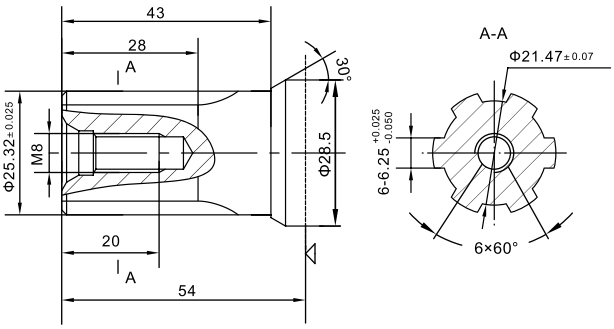
P1：Φ25 Cylindrical shaft,parallel key 8x7x32



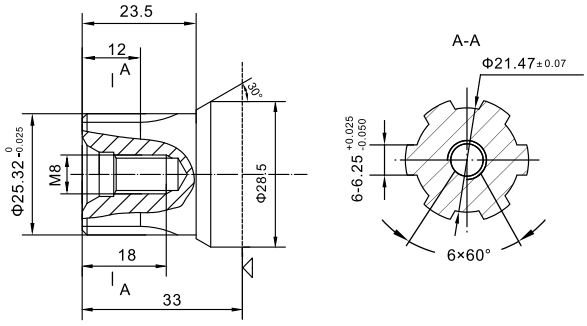
P3：Φ25.4 Cylindrical shaft,parallel key 6.35x6.35x32



H3：Φ25.3 Splined shaft，6-25.32x21.47x6.25



H5：Φ25.3 Splined shaft，6-25.32x21.47x6.25



◁ : Motor mounting surface

BS Orbit Hydraulic Motor With Spool Valve

■ BS

1		2	3	4	5		6		7
BS	—					/		—	

Pos.1	2	3		4	
Series	Disp	Output Shaft		Flange	
BS	50 80 100 125 160 200 250 315 400	P1	Φ 25Cylindrical shaft，parallel key 8x7x32	A Ⅱ	2–Φ13.5 Oval flange polit Φ82.5x8
		P3	Φ 25.4 Cylindrical shaft，parallel key 6.35x6.35x32		
		H3	Φ25.3Splined shaft， 6–25.32x21.47x6.25		
		H5	Φ25.3Splined shaft， 6–25.32x21.47x6.25		

5			6		7	
Code	Ports		Special features		Rotation direction	
	Ports(A,B)(deep)	Drain port T(deep)				
Y	G1/2 (15)	M14x1. 5 (12)	Omit	Standard	Omit	Standard
Y1	M18x1. 5 (15)	M14x1. 5 (12)				
Y2	M22x1. 5 (15)	M14x1. 5 (12)				
Y9	NPTF1/2 (15)	7/16–20UNF (12)				
Y10	G1/2 (15)	G1/4 (12)			L	Opposite
Y15	7/8–14UNF (15)	7/16–20UNF (12)				

BMH Orbit Hydraulic Motor With Spool Valve

■ BMH INTRODUCTION

This series of motor, with its shell made of ductile cast iron of adequate intensity, can be applied to situations with less load and interbval operation, widely to agriculture, forestry, plastics, machine tools and min machines, such as the mould height adjustment of the injection molding machine, the cleaner, the sawmill the worktable etc.

■ BMH CHARACTERISTICS

1. The output shaft, with the deep groove ball bearing, can bear certain axial force and radial force.

2. With the axial oil distrbution structur, it is of smaller size and less weight.

3. With two inner check valves, no drain connection.

4. With cycoid group with the roller, it has a small friction and high mechanical efficiency.

■ BMH TECHNICAL DATA

TYPE		BMH–200	BMH–250	BMH–315	BMH–400	BMH–500
Displacement(ml/r)		203	253.7	318.9	405.9	471.1
Max.Pressure.Drop (Mpa)	cont.	16	16	15	14	12
	int.	19	19	18	17	15
	peak.	22	22	21	20	18
Max.torque (N.m)	cont.	425	530	610	825	720
	int.	510	635	750	900	910
	peak.	590	735	875	1055	1090
Max. Cont. Speed (r/min)		365	295	235	180	155
Max.Flow(cont.)(L/min)		75	75	75	75	75
Max.Output.Power(cont.)(Kw)		13.8	13.8	12.5	11.5	9.8
Weight(kg)		10.5	11	11.5	12.5	13

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

■ BMH PERFORMANCE DATA

BMH 200(203ml/r)

Pressure (Mpa) — Max.cont. Max.int.

Flow(L/min)	3.5	7	10.5	14	16	19
5	91 **25**	192 **24**	284 **23**			
10	92 **48**	191 **47**	282 **46**	344 **44**	440 **42**	520 **38**
20	90 **96**	188 **95**	280 **94**	342 **92**	438 **90**	516 **88**
30	88 **144**	181 **143**	278 **139**	388 **130**	435 **114**	511 **101**
40	86 **193**	172 **192**	270 **191**	384 **188**	432 **186**	506 **171**
50	83 **241**	168 **240**	264 **238**	380 **234**	428 **230**	498 **228**
60	80 **290**	156 **289**	258 **287**	375 **284**	420 **271**	492 **264**
70	75 **334**	149 **333**	249 **331**	362 **329**	419 **324**	489 **320**
Max.cont. 75	69 **362**	132 **360**	240 **359**	351 **358**	408 **351**	478 **342**
80	53 **382**	124 **381**	231 **380**	338 **374**	395 **365**	453 **360**
Max.int. 90	41 **434**	119 **433**	228 **431**	324 **429**	387 **418**	446 **411**

BMH 250(253.7ml/r)

Pressure (Mpa) — Max.cont. Max.int.

Flow(L/min)	3.5	7	10.5	14	16	19
5	118 **19**	242 **19**	311 **18**			
10	126 **38**	251 **37**	326 **36**	421 **34**	550 **30**	
20	124 **85**	250 **84**	325 **83**	414 **81**	542 **78**	640 **71**
30	118 **115**	243 **113**	321 **111**	410 **105**	538 **95**	634 **84**
40	111 **153**	238 **152**	315 **150**	402 **143**	530 **139**	629 **132**
50	106 **190**	231 **188**	310 **187**	395 **186**	523 **183**	621 **172**
60	101 **230**	223 **229**	302 **227**	390 **224**	518 **217**	613 **209**
70	96 **268**	218 **267**	294 **266**	381 **262**	512 **257**	602 **241**
Max.cont. 75	84 **287**	210 **285**	284 **284**	375 **280**	506 **275**	596 **270**
80	76 **306**	201 **305**	271 **303**	368 **301**	497 **297**	581 **286**
Max.int. 90	56 **347**	182 **345**	268 **341**	351 **337**	481 **333**	562 **328**

BMH 315(318.9ml/r)

Pressure (Mpa) — Max.cont. Max.int.

Flow(L/min)	3.5	7.5	10	15	18
10	148 **31**	312 **30**	416 **28**	650 **23**	
20	142 **61**	308 **60**	411 **58**	645 **51**	765 **46**
30	140 **91**	301 **90**	402 **89**	639 **86**	751 **78**
40	131 **122**	294 **121**	398 **120**	631 **117**	732 **107**
50	128 **152**	289 **151**	391 **149**	623 **144**	715 **135**
60	121 **183**	281 **181**	382 **179**	611 **174**	703 **170**
70	110 **215**	273 **214**	372 **211**	600 **207**	692 **200**
Max.cont. 75	98 **228**	261 **226**	357 **224**	586 **221**	679 **214**
80	72 **243**	258 **240**	346 **237**	571 **233**	666 **222**
Max.int. 90	62 **274**	243 **272**	332 **270**	559 **263**	643 **252**

BMH 400(405.9ml/r)

Pressure (Mpa) — Max.cont. Max.int.

Flow(L/min)	3.5	5.5	7	10.5	14	17
10	186 **24**	284 **22**	370 **20**			
20	184 **48**	282 **47**	365 **45**	541 **41**	760 **34**	920 **28**
30	182 **72**	280 **71**	361 **70**	538 **64**	751 **59**	911 **48**
40	178 **96**	274 **95**	356 **93**	532 **91**	740 **85**	899 **78**
50	175 **119**	270 **118**	351 **116**	530 **111**	731 **106**	882 **99**
60	171 **143**	261 **141**	342 **138**	522 **135**	712 **129**	870 **116**
70	164 **167**	248 **165**	338 **161**	513 **158**	703 **152**	857 **146**
Max.cont. 75	152 **179**	240 **177**	332 **175**	510 **171**	689 **166**	841 **159**
80	141 **193**	223 **192**	330 **190**	497 **187**	670 **181**	823 **172**
Max.int. 90	120 **217**	218 **215**	320 **211**	480 **208**	645 **202**	800 **185**

(Torque) : 320Nm
(Speed) : 211r/min

BMH500(471.1ml/r)

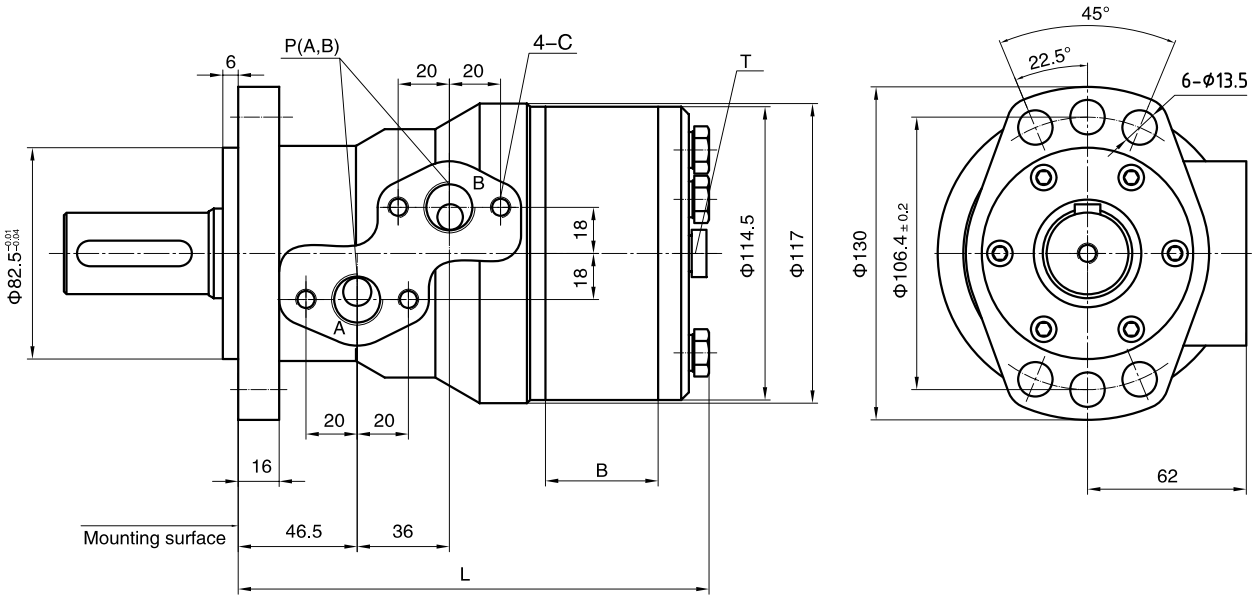
Pressure (Mpa) — Max.cont. Max.int.

Flow(L/min)	2.5	4	6	8.5	12	15
10	153 **21**	249 **20**				
20	152 **42**	242 **41**	370 **40**	650 **34**	755 **29**	940 **23**
30	150 **62**	236 **61**	361 **60**	645 **55**	742 **49**	931 **45**
40	147 **82**	230 **81**	352 **80**	640 **74**	731 **69**	922 **65**
50	145 **104**	224 **102**	340 **100**	637 **96**	720 **90**	911 **84**
60	142 **124**	212 **122**	331 **120**	632 **114**	703 **110**	899 **104**
70	140 **146**	202 **143**	328 **140**	621 **136**	689 **131**	887 **125**
Max.cont. 75	130 **154**	197 **152**	324 **150**	612 **142**	682 **136**	879 **130**
80	121 **165**	183 **163**	310 **161**	601 **150**	661 **142**	865 **138**
Max.int. 90	110 **185**	172 **184**	294 **182**	583 **172**	654 **167**	848 **161**

Cont.
Int.

■ BMH Installation

6–hole oval flange AⅣ



TYPE	BMH–200	BMH–250	BMH–315	BMH–400	BMH–500
L	168	175	184	196	205
B	28	35	44	56	65

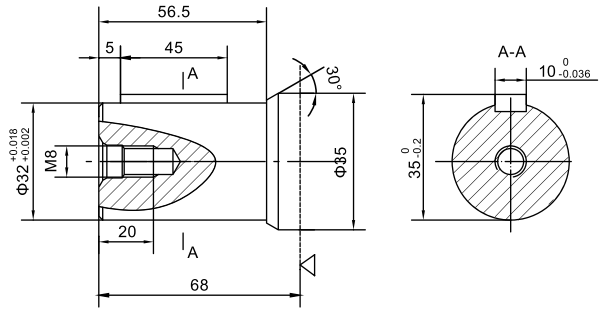
■ BMH PORTS CODE

Ports / Code	P(A、B)(deep)	C (deep)	T (deep)
Y	G1/2 (15)	M8 (13)	G1/4 (12)
Y5	7/8–14UNF (15)	3/8–16UNC (13)	7/16–20UNF (12)
Y8	NPT1/2 (15)	5/16–18UNC (13)	7/16–20UNF (12)
Y25	7/8–14UNF (15)	M8 (13)	7/16–20UNF (12)

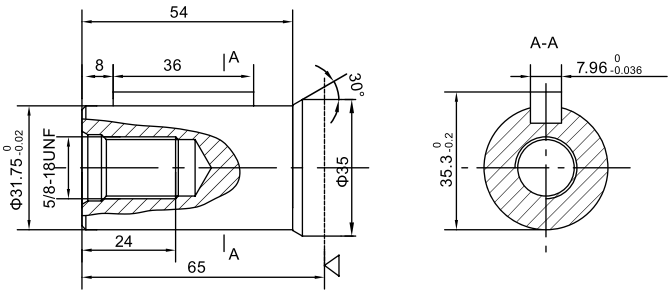
Note:P(A、B)––Ports，C––Mounting Thread （—Indicates no this thread），T––Drain connettion

■ BMH SHAFT VERSION

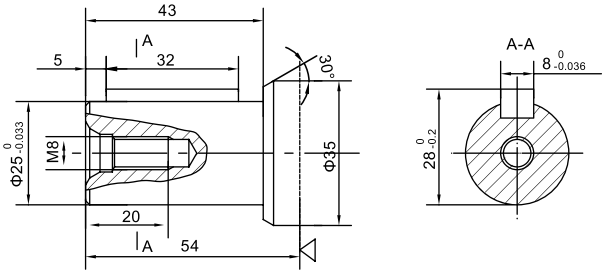
P1: Φ32Cylindrical shaft，parallel key10 × 8 × 45



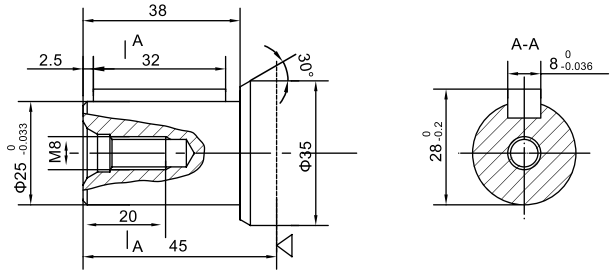
P2: Φ31.75Cylindrical shaft，parallel key7.96 × 7.96 × 36



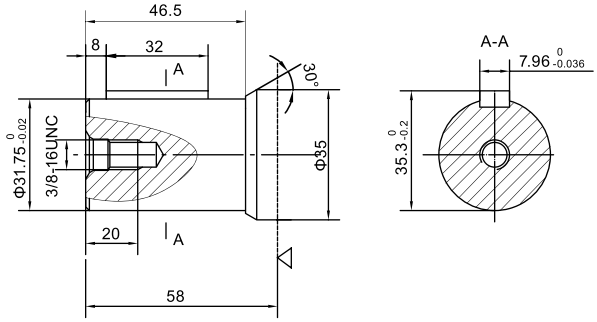
P3: Φ25Cylindrical shaft，parallel key8 × 7 × 32



P4: Φ25Cylindrical shaft，parallel key8 × 7 × 32



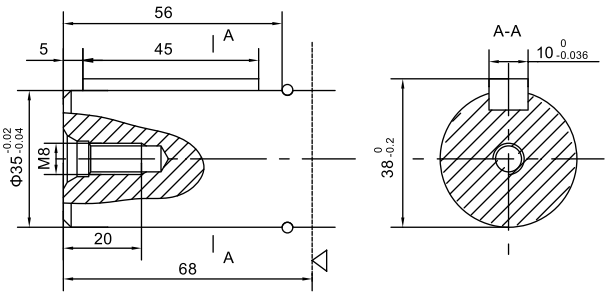
P5: Φ31.75 Cylindrical shaft，parallel key7.96 × 7.96 × 32



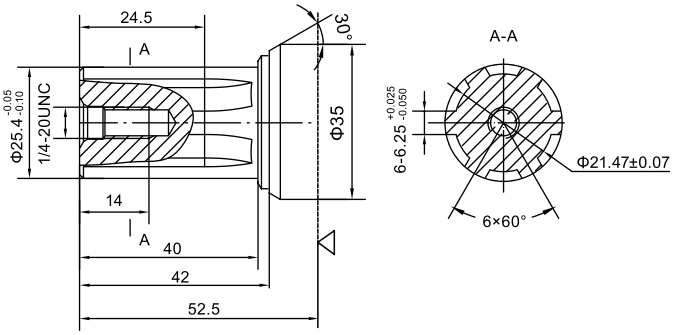
◁ : Motor mounting surface

■ BMH SHAFT VERSION

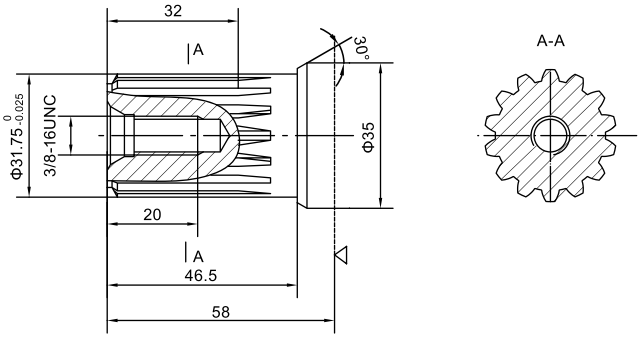
P7: Φ35Cylindrical shaft，parallel key10 × 8 × 45



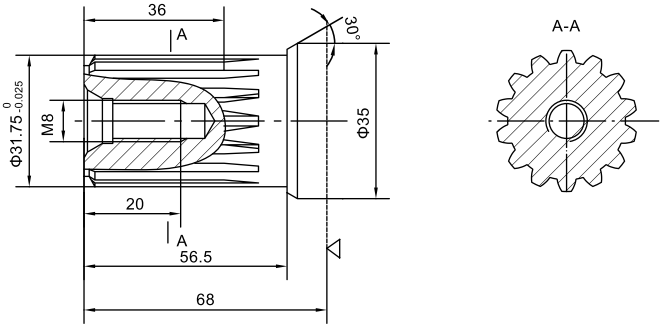
H3: Φ25.4 Splined shaft，6–25.4 × 21.47 × 6.25



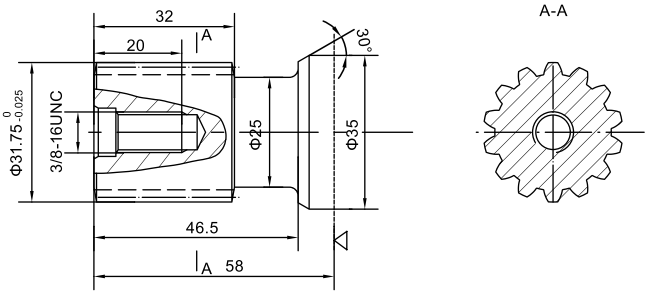
K1: Φ31.75 involve splined shaft 14–DP12/24 a=30°



K2: Φ31.75 involve splined shaft 14–DP12/24 a=30°



K11: Φ31.75 involute splined shaft 14–DP12/24 a=30°

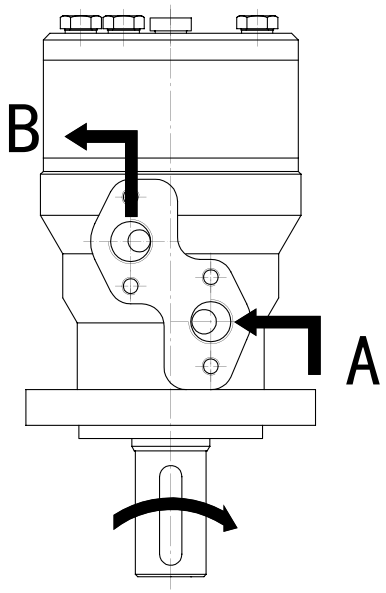


◁ : Motor mounting surface

■ BMH Series Mortor

Direction of shaft ration：Standard

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



■ BMH ORDERING CODE

1		2	3	4	5		6		7
BMH	—					/		—	

Pos.1	2	3		4	
Series	Disp	Output		Flange	
BMH	200 250 315 400 500	P1	Φ32 Cylindrical shaft，parallel key10×8×45	AIV	6–Φ13.5 Oval flange, pilot Φ82.5×6
		P2	Φ31.75 Cylindrical shaft，parallel key7.96×7.96×36		
		P3	Φ25 Cylindrical shaft，parallel key8×7×32		
		P4	Φ25 Cylindrical shaft，parallel key8×7×32		
		P5	Φ31.75 Cylindrical shaft，parallel key7.96×7.96×32		
		P6	Φ32 Cylindrical shaft，parallel key10×8×45		
		P7	Φ35 Cylindrical shaft，parallel key10×8×45		
		H3	Φ25.4 Splined shaft， 6–25.4×21.47×6.25		
		K1	Φ31.75 involute splined shaft，14–DP12/24 a=30°		
		K2	Φ31.75 involute splined shaft，14–DP12/24 a=30°		
		K11	Φ31.75 involute splined shaft，14–DP12/24 a=30°		

5			6		7	
Code	Ports		Special features		Rotation direction	
	Ports(A,B)(deep)	Drain port T(deep)				
Y	G1/2(15)	G1/4(12)	Omit	Standard	Omit	Standard
Y5	7/8–14UNF(15)	7/16–20UNF(12)				
Y8	NPTF1/2(15)	7/16–20UNF(12)			L	Opposite
Y25	7/8–14UNF(15)	7/16–20UNF(12)				

BMP Orbit Hydraulic Motor With Spool Valve

■ INTRODUCTION

This series of motor are small volume,economical type,which is designed with Spool Valve,which adapt the gerotor gear set design and provide compact volume,high power and low weight.

■ CHARACTERISTICS

1 Advanced manufacturing devices for the Gerotor gear set, which provide small volume, high efficiency and long life.

2 Shaft seal can bear high pressure of motor of which can be used in parallel or in series.

3 Advanced construction design,high power and low weight.

■ BMP TECHNICAL DATA

TYPE		BMP 50	BMP 80	BMP 100	BMP 125	BMP 160	BMP 200	BMP 250	BMP 315	BMP 400
Displacement(ml/r)		52.9	79.3	98.2	120.9	158.7	196.4	241.8	317.3	392.9
Max.Pressure.Drop (Mpa)	cont.	14	14	14	14	14	14	12	10	8
	int.	17.5	17.5	17.5	17.5	17.5	17.5	14	12	10
	peak.	22	22	22	22	22	22	20	15	13
Max.torque (N.m)	cont.	97	148	183	229	295	364	369	404	416
	int.	125	189	238	292	382	470	444	501	531
	peak.	149	222	276	340	445	532	568	555	596
Max.Speed(cont.)(r/min)		755	750	610	490	375	305	245	185	150
Max.Flow(cont.)(L/min)		40	60	60	60	60	60	60	60	60
Max.Output.Power(cont.)(Kw)		6.5	10	10	10	10	10	8	7	5.7
Weight (kg)		5.6	5.7	5.9	6	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

■ BMP PERFORMANCE DATA

BMP 50(52.9ml/r)

Pressure (Mpa)

Flow(L/min)	3	6	8	10	12.5	14 (Max.cont.)	16	17.5 (Max.int.)
8	18	38	55	69	87	100	115	
	148	**140**	**123**	**102**	**83**	**61**	**42**	
15	19	39	56	70	87	102	116	128
	277	**264**	**251**	**242**	**233**	**219**	**202**	188
20	19	39	54	69	89	100	115	127
	370	**359**	**348**	**337**	**328**	**320**	**301**	282
30	18	38	53	68	88	98	114	126
	556	**541**	**529**	**516**	**509**	**500**	**487**	461
35	17	37	52	67	86	97	113	125
	649	**629**	**619**	**608**	**601**	**595**	**578**	559
40	16	36	50	66	85	96	111	123
	741	**725**	**718**	**710**	**695**	**688**	**673**	**627**
Max.cont. 50	13	31	47	59	81	94	104	115
	927	**919**	**910**	**900**	**888**	**874**	**856**	837
Max.int. 60	9	25	42	50	76	90	98	106
	1122	**1101**	**1094**	**1082**	**1075**	**1064**	**1042**	**1011**

BMP 80(79.3ml/r)

Pressure (Mpa)

Flow(L/min)	3	6	8	10	12.5	14 (Max.cont.)	16	17.5 (Max.int.)
8	33	60	81	103	133	148	172	
	99	**91**	**79**	**67**	**56**	**42**	**32**	
15	36	61	82	104	133	149	173	192
	185	**172**	**163**	**152**	**134**	**125**	**117**	**94**
20	34	62	83	105	134	150	174	192
	247	**238**	**230**	**220**	**205**	**197**	**189**	**172**
30	33	60	82	104	133	149	172	190
	370	**363**	**355**	**342**	**327**	**316**	**302**	**285**
35	32	59	80	102	131	148	170	189
	433	**417**	**406**	**398**	**390**	**384**	**367**	**365**
40	30	57	78	101	129	147	169	188
	494	**484**	**478**	**471**	**461**	**453**	**443**	**411**
50	29	56	77	100	128	145	168	186
	617	**604**	**597**	**590**	**578**	**571**	**558**	**519**
Max.cont. 60	28	55	76	99	127	144	167	184
	741	**726**	**718**	**710**	**700**	**686**	**673**	**624**
Max.int. 75	22	48	71	93	120	134	160	175
	926	**906**	**896**	**887**	**867**	**857**	**838**	**779**

BMP 100(98.2ml/r)

Pressure (Mpa)

Flow(L/min)	3	6	8	10	12.5	14 (Max.cont.)	16	17.5 (Max.int.)
8	37	73	98	128	164	186		
	80	**68**	**59**	**50**	**163**	**33**		
15	38	74	99	129	165	187	218	240
	150	**139**	**129**	**117**	**102**	**96**	**87**	**69**
20	39	75	100	130	166	188	219	241
	200	**189**	**180**	**171**	**159**	**150**	**136**	**119**
30	37	73	98	127	163	185	216	239
	299	**286**	**279**	**270**	**259**	**250**	**234**	**219**
35	36	71	97	126	161	183	214	238
	349	**338**	**333**	**329**	**318**	**309**	**299**	**281**
40	35	70	96	124	160	182	213	236
	399	**391**	**387**	**383**	**375**	**370**	**363**	**338**
50	34	69	95	123	159	181	211	235
	499	**489**	**484**	**479**	**468**	**463**	**453**	**423**
Max.cont. 60	33	68	94	122	158	180	210	233
	599	**587**	**580**	**574**	**562**	**556**	**544**	**507**
Max.int. 75	27	61	86	111	149	168	198	202
	748	**733**	**726**	**718**	**703**	**695**	**680**	**634**

BMP 125(120.9ml/r)

Pressure (Mpa)

Flow(L/min)	3	6	8	10	12.5	14 (Max.cont.)	16	17.5 (Max.int.)
8	44	90	123	158	205	231		
	65	**61**	**51**	**44**	**36**	**30**		
15	45	91	124	159	206	232	265	294
	122	**118**	**112**	**105**	**99**	**91**	**79**	**61**
20	46	90	125	160	206	233	266	295
	165	**152**	**143**	**133**	**126**	**112**	**106**	**98**
30	45	88	123	158	204	230	264	293
	243	**238**	**236**	**231**	**224**	**217**	**206**	**191**
35	43	86	121	156	202	229	263	292
	284	**278**	**275**	**272**	**266**	**263**	**258**	**240**
40	42	85	120	154	200	226	262	290
	342	**323**	**314**	**311**	**304**	**301**	**294**	**274**
50	41	84	118	152	197	223	261	288
	405	**397**	**393**	**389**	**380**	**376**	**368**	**343**
Max.cont. 60	40	83	116	150	195	221	259	286
	486	**476**	**470**	**465**	**465**	**452**	**441**	**412**
Max.int. 75	31	78	107	139	187	211	241	272
	608	**596**	**589**	**583**	**571**	**564**	**552**	**515**

BMP 160(158.7ml/r)

Pressure (Mpa)

Flow(L/min)	3	6	8	10	12.5	14 (Max.cont.)	16	17.5 (Max.int.)
8	57	117	160	206	261			
	49	**46**	**41**	**34**	**29**			
15	58	118	161	207	262	298	349	385
	93	**84**	**79**	**72**	**64**	**58**	**50**	**41**
20	59	119	162	208	263	299	350	386
	123	**118**	**115**	**111**	**104**	**99**	**93**	**82**
30	58	117	160	205	261	298	348	384
	185	**181**	**177**	**173**	**168**	**165**	**159**	**148**
35	57	115	159	203	260	295	346	382
	216	**211**	**209**	**207**	**202**	**200**	**196**	**183**
40	55	114	156	201	259	293	344	380
	247	**241**	**238**	**236**	**231**	**228**	**220**	**207**
50	53	111	154	199	258	292	342	378
	309	**302**	**299**	**296**	**289**	**286**	**280**	**261**
Max.cont. 60	52	109	152	197	256	290	340	376
	370	**363**	**359**	**355**	**348**	**344**	**336**	**314**
Max.int. 75	43	101	143	190	249	282	322	358
	463	**453**	**448**	**444**	**430**	**420**	**410**	**383**

BMP 200(196.4ml/r)

Pressure (Mpa)

Flow(L/min)	3	6	8	10	12.5	14 (Max.cont.)	16	17.5 (Max.int.)
8	69	140	193	248				
	40	**33**	**29**	**25**				
15	70	141	194	249	324	366	428	
	75	**70**	**64**	**58**	**50**	**41**	**32**	
20	71	142	195	250	325	367	428	472
	100	**92**	**83**	**75**	**69**	**58**	**52**	**47**
30	70	141	193	248	323	366	426	471
	150	**140**	**136**	**129**	**120**	**112**	**101**	**93**
35	69	140	191	247	321	364	425	470
	175	**170**	**164**	**160**	**154**	**148**	**140**	**129**
40	67	138	190	246	320	362	423	468
	199	**194**	**191**	**188**	**183**	**179**	**171**	**159**
50	66	136	189	244	318	361	422	466
	249	**244**	**241**	**239**	**234**	**230**	**226**	**211**
Max.cont. 60	65	135	187	243	316	359	420	465
	299	**293**	**290**	**287**	**281**	**278**	**255**	**238**
Max.int. 75	58	127	179	234	308	348	408	456
	374	**366**	**362**	**358**	**351**	**347**	**339**	**317**

(Torque) : 143Nm
(Speed) : 448r/min

Cont.

Int.

■ BMP PERFORMANCE DATA

BMP 250(241.8ml/r)

Flow(L/min)	Pressure (Mpa) 3	6	8	10	12	14
8	86 **32**	172 **30**	234 **26**			
15	87 **61**	173 **59**	235 **54**	297 **49**	368 **40**	443 **33**
20	88 **81**	174 **78**	236 **73**	298 **68**	369 **62**	444 **56**
30	86 **123**	173 **120**	235 **118**	297 **116**	368 **112**	443 **103**
35	85 **142**	171 **138**	234 **132**	296 **125**	366 **117**	442 **108**
40	83 **162**	169 **159**	232 **154**	294 **150**	364 **144**	440 **135**
50	82 **203**	167 **198**	230 **195**	293 **193**	362 **191**	438 **186**
Max.cont. 60	81 **243**	166 **238**	228 **236**	292 **233**	360 **230**	437 **221**
Max.int. 75	74 **304**	153 **297**	212 **294**	281 **291**	349 **288**	423 **277**

Max.cont. Max.int.

BMP 315(317.3ml/r)

Flow(L/min)	Pressure (Mpa) 3	5	7	9	10	12
8	114 **25**	191 **22**	270 **19**			
15	115 **46**	192 **42**	271 **38**	355 **34**	403 **29**	500 **21**
20	116 **62**	193 **59**	272 **55**	356 **51**	404 **45**	501 **40**
30	114 **93**	191 **90**	270 **86**	354 **80**	403 **76**	499 **65**
35	112 **108**	189 **105**	268 **103**	352 **101**	400 **100**	497 **95**
40	110 **123**	187 **121**	266 **119**	350 **116**	398 **114**	495 **109**
50	108 **154**	184 **151**	264 **148**	348 **144**	396 **142**	493 **137**
Max.cont. 60	106 **185**	182 **181**	262 **179**	346 **176**	394 **174**	491 **171**
Max.int. 75	100 **231**	175 **226**	156 **222**	339 **219**	387 **215**	482 **209**

Max.cont. Max.int.

BMP 400(392.9ml/r)

Flow(L/min)	Pressure (Mpa) 3	4	5	7	8	10
8	155 **20**	204 **18**				
15	156 **37**	205 **34**	262 **31**	366 **27**	428 **24**	544 **19**
20	157 **50**	208 **47**	264 **44**	368 **39**	434 **37**	549 **32**
30	152 **75**	204 **72**	258 **69**	362 **66**	424 **64**	540 **60**
35	148 **87**	198 **84**	252 **81**	356 **77**	416 **74**	531 **69**
40	142 **100**	193 **97**	246 **94**	348 **90**	406 **88**	523 **84**
50	136 **125**	186 **122**	238 **120**	341 **117**	398 **115**	515 **111**
Max.cont. 60	131 **150**	180 **148**	231 **146**	333 **142**	390 **140**	506 **137**
Max.int. 75	123 **187**	168 **183**	215 **179**	312 **172**	371 **169**	492 **162**

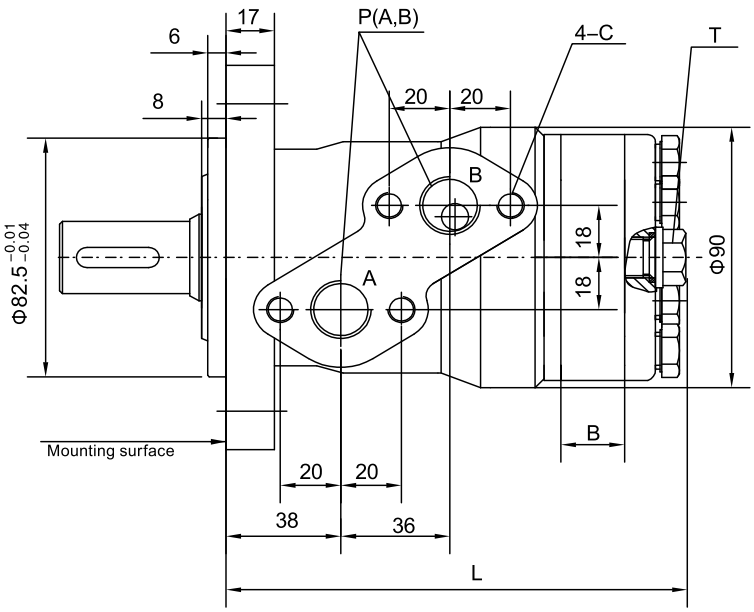
Max.cont. Max.int.

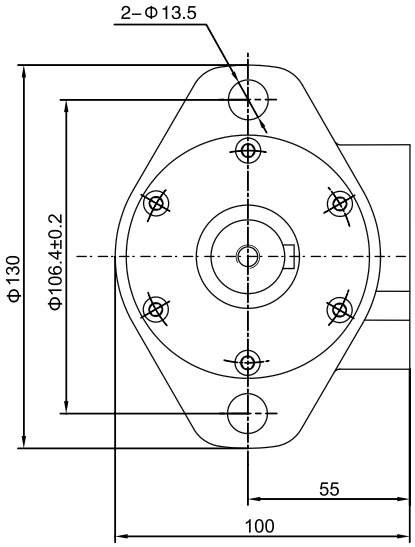
(Torque) : 312Nm
(Speed) : 172r/min

Cont.
Int.

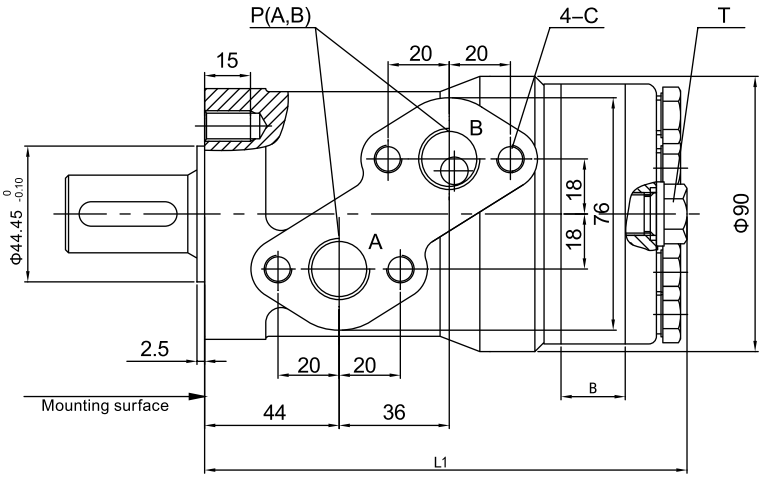
■ BMP Installation

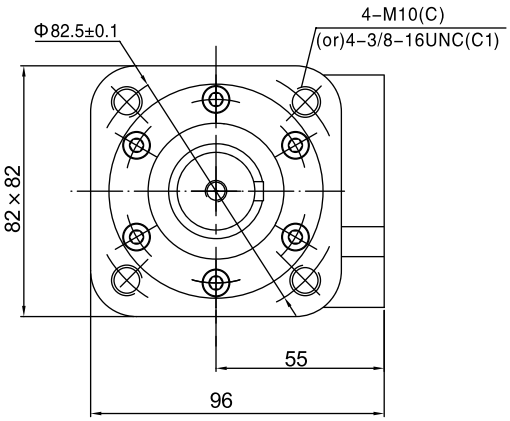
2–hole oval flange A Ⅱ





Square flange C,C1





Note: C、C1 mounting are assembling to BMPH shaft.

TYPE	BMP-50	BMP-80	BMP-100	BMP-125	BMP-160	BMP-200	BMP-250	BMP-315	BMP-400
L	143.5	145	147	150	155	160	166	176	186
L1	151.5	153	155	158	163	168	174	184	194
B	7	11	13	16	21	26	32	42	52

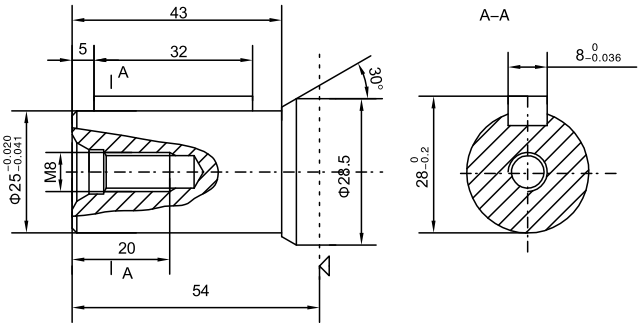
■ BMP PORTS CODE

Code \ Ports	P(A、B)(deep)	C（deep）	T（deep）
Y	G1/2 (15)	M8 (10)	M14×1.5 (12)
Y1	M18×1.5 (15)	M8 (10)	M14×1.5 (12)
Y2	M22×1.5 (15)	M8 (10)	M14×1.5 (12)
Y4	ZG3/8 (15)	M8 (10)	M14×1.5 (12)
Y5	7/8–14UNF (15)	—	M14×1.5 (12)
Y7	ZG1/2 (15)	M8 (10)	M14×1.5 (12)
Y8	NPT1/2 (15)	M8 (10)	M14×1.5 (12)
Y9	NPTF1/2 (15)	5/16-18 UNC(10)	7/16-20UNF(12)
Y10	G1/2 (15)	M8 (10)	G1/4 (12)
Y15	7/8–14UNF (15)	5/16–18UNC (10)	7/16–20UNF (12)

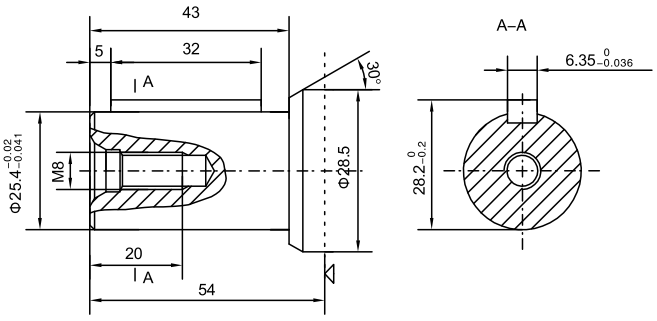
Note:P(A、B)––Ports，C––Mounting Thread（—Indicates no this thread），T––Drain connettion

■ BMP SHAFT VERSION

P1: Φ25 Cylindrical shaft，parallel key8×7×32



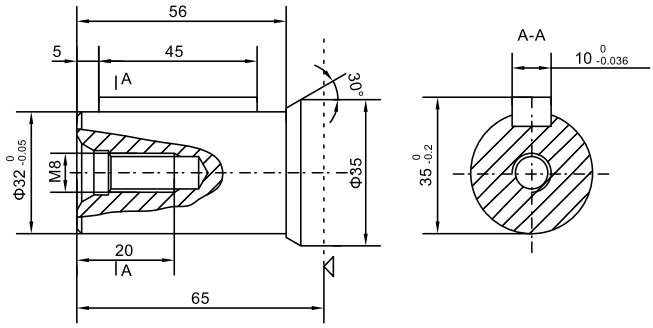
P3: Φ25.4 Cylindrical shaft，parallel key6.35×6.35×32



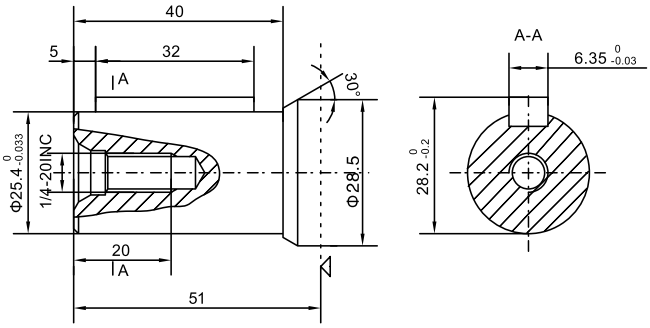
◁：Motor mounting surface

■ BMP SHAFT VERSION

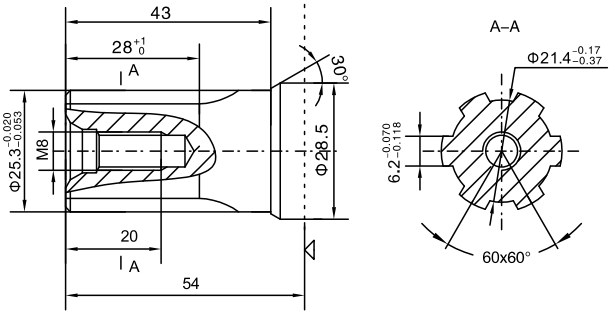
P5: Φ32 Cylindrical shaft，parallel key10 × 8 × 45



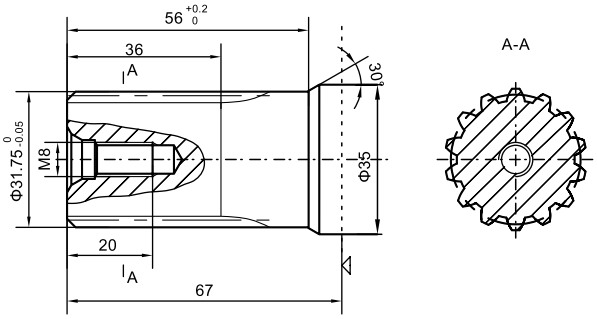
P33: Φ25.4 Cylindrical shaft，parallel key6.35 × 6.35 × 32



H3: Φ25.3Splined shaft，6–25.3 × 21.4 × 6.2



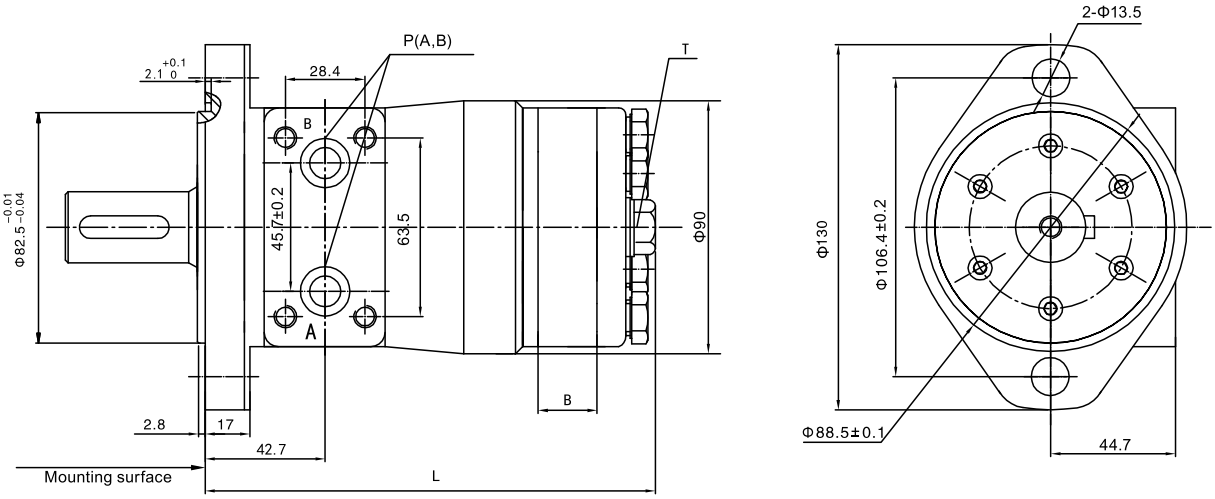
K13: Φ31.75 involute splined shaft 14–DP12/24 a=30°



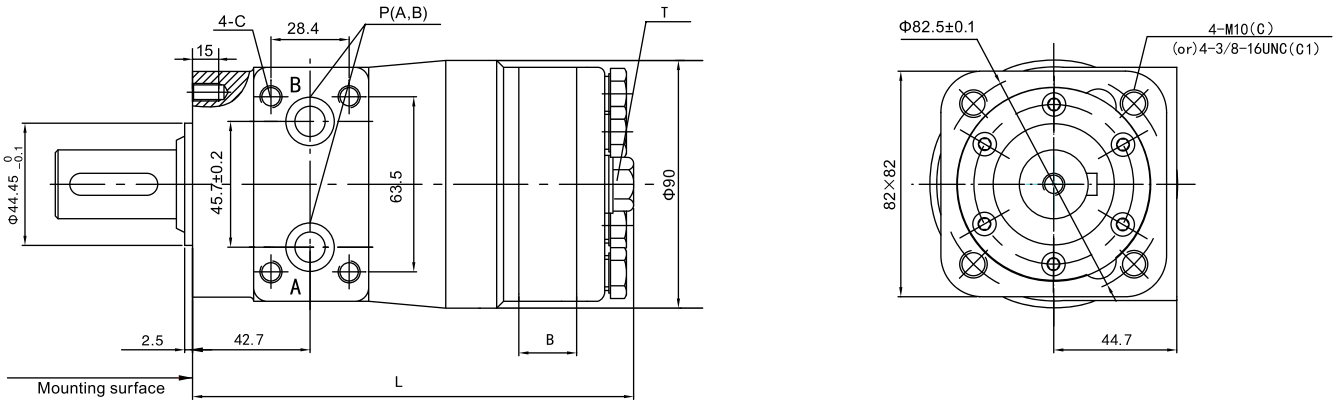
◁ : Motor mounting surface

■ BMPH Installation

2–hole oval flange A Ⅱ



Square flange C,C1



TYPE	BMPH-50	BMPH-80	BMPH-100	BMPH-125	BMPH-160	BMPH-200	BMPH-250	BMPH-315	BMPH-400
L	151.5	153	155	158	163	168	174	184	194
B	7	11	13	16	21	26	32	42	52

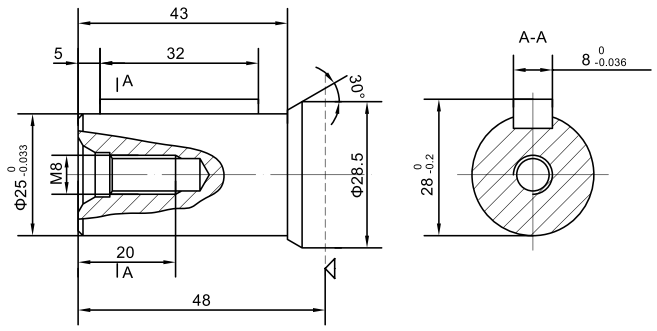
■ BMPH PORTS CODE

Code \ Ports	P(A、B)(deep)	C（deep）	T（deep）
Y	G1/2 (15)	—	M14×1.5(12)
Y5	7/8–14UNF(15)	—	7/16–20UNF(12)
Y7	ZG1/2(15)	—	G1/4(12)
Y9	NPTF1/2(15)	—	7/16–20UNF(12)
Y10	G1/2(15)	—	G1/4(12)
Y17	3/4–16UNF(15)	—	7/16–20UNF(12)
Y19	Φ11(15)	5/16–18UNC(13)	7/16–20UNF(12)
Y20	M18×1.5(15)	M8 (13)	G1/4(12)

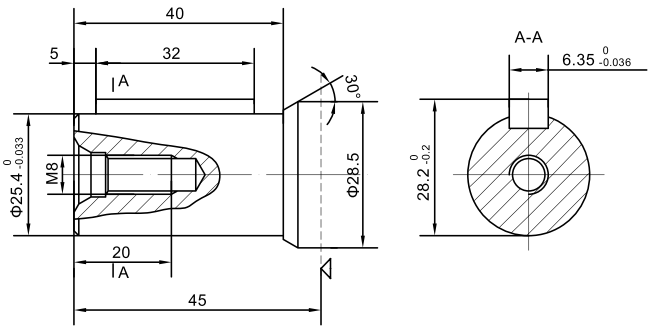
P(A、B)––Ports，C––Mounting Thread（—Indicates no this thread），T––Drain connettion

■ BMPH SHAFT VERSION

P1: Φ25 Cylindrical shaft，parallel key8×7×32



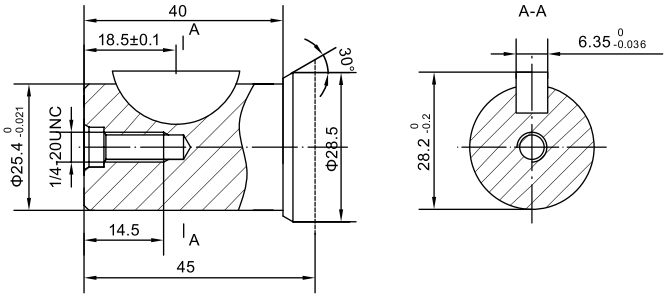
P3: Φ25.4 Cylindrical shaft，parallel key6.35×6.35×32



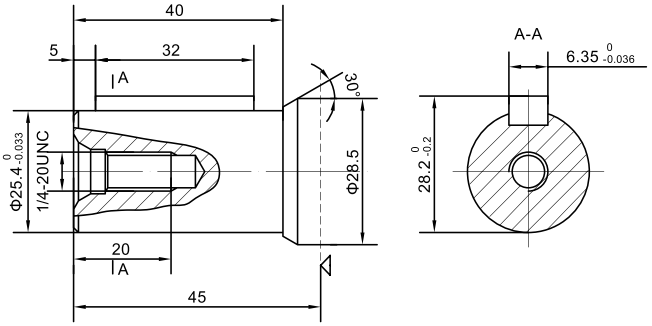
◁ : Motor mounting surface

■ BMPH SHAFT VERSION

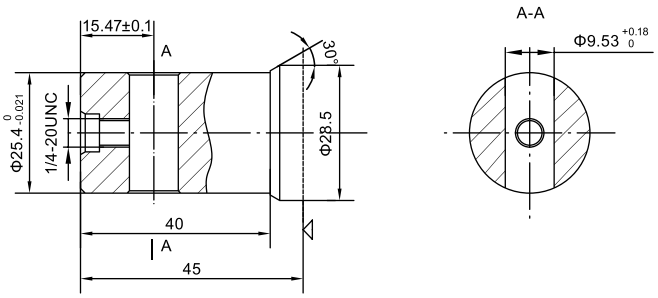
P4: Φ25.4 Cylindrical shaft，Woodruff key Φ25.4 × 6.35



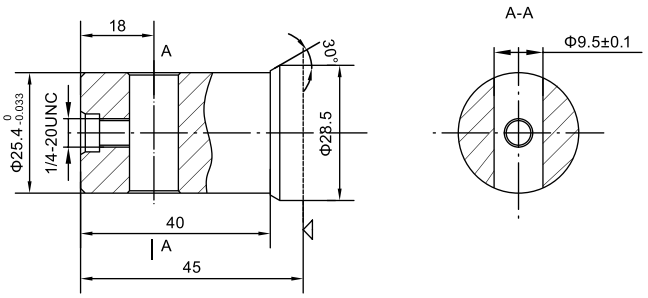
P33: Φ25.4 Cylindrical shaft，parallel key6.35 × 6.35 × 32



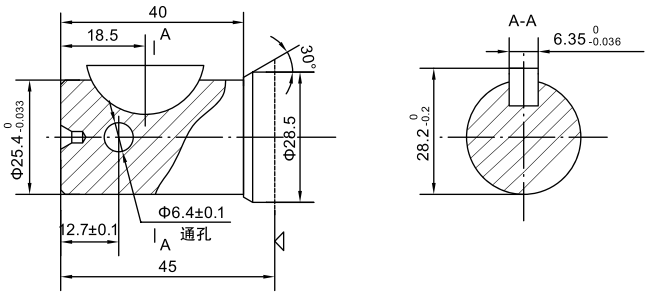
P89: Φ25.4Cylindrical shaft pin hole Φ9.53



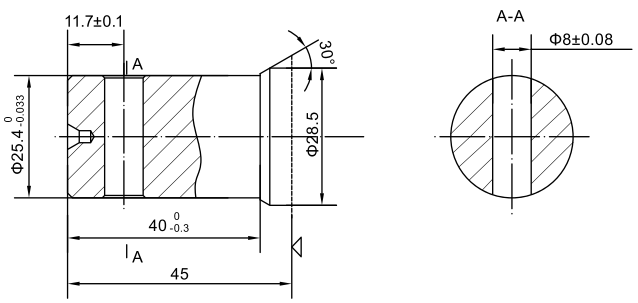
P93: Φ25.4Cylindrical shaft pin hole Φ9.5



P95: Φ25.4Cylindrical shaft pin hole Φ6.4，
Woodruff key Φ25.4 × 6.35



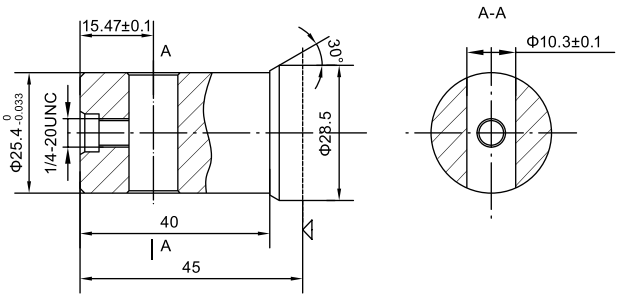
P96: Φ25.4Cylindrical shaft pin hole Φ8



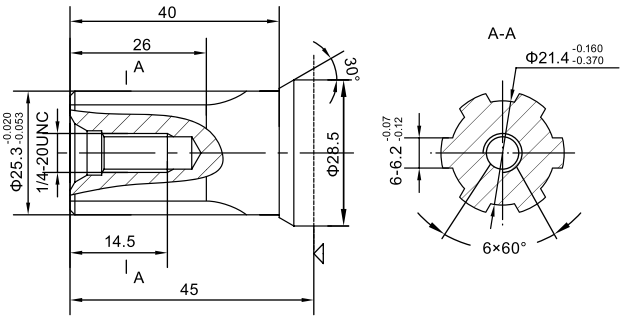
◁ : Motor mounting surface

■ BMPH SHAFT VERSION

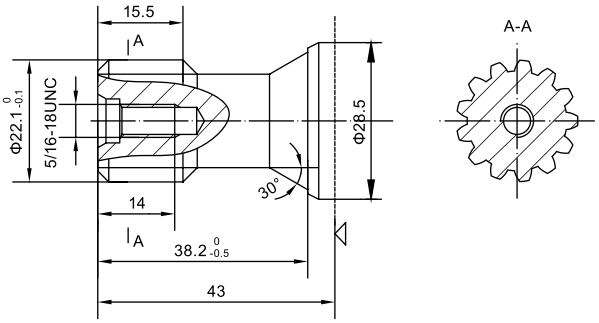
P97: Φ25.4Cylindrical shaft pin hole Φ10.3



H4: Φ25.3 Splined shaft，6–25.3 × 21.4 × 6.2



K8: Φ22.1 involve splined shaft 13–DP16/32

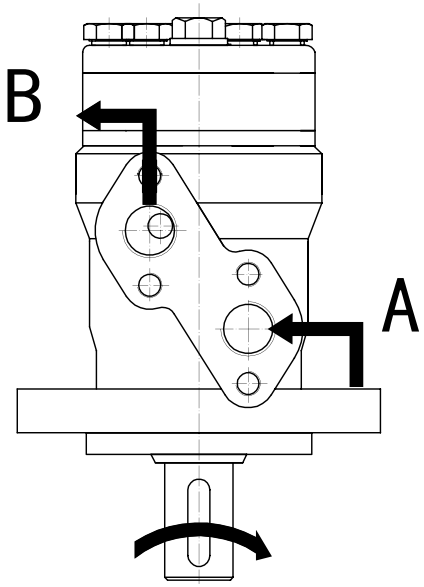


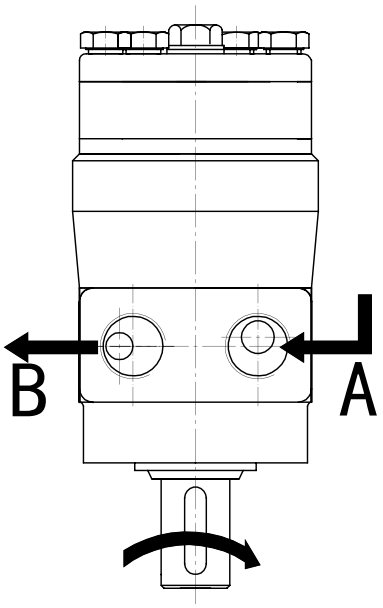
◁ : Motor mounting surface

■ BMP、BMPH Series Mortor

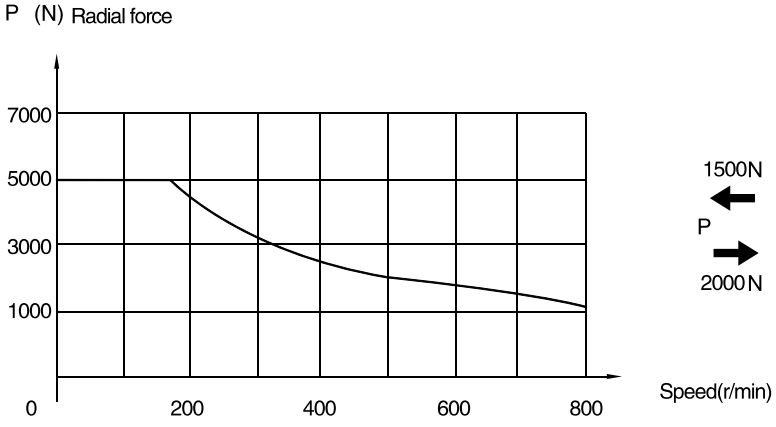
Direction of shaft ration：Standard

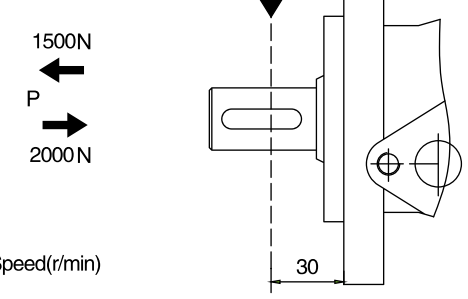
When facing shaft end of motor，shaft to rotate：
Clockwise when port “A” is pressurized.
Counter–clockwise port “B” is pressurized.





■ PERMISSIBLE SHAFT LOADS





BMP、BMPH ORDERING CODE

■ BMP BMPH ORDERING CODE

1		2	3	4	5		6		7
BMP	—					/		—	

Pos.1	2	3		4	
Series	Disp	Output		Flange	
BMP	50	P1	Φ25 Cylindrical shaft，parallel key8×7×32	A Ⅱ	2–Φ13.5 Oval flange, pilot Φ82.5×8
	80	P3	Φ25.4 Cylindrical shaft，parallel key6.35×6.35×32		
	100	P5	Φ32 Cylindrical shaft，parallel key10×8×45		
	125				
	160	P33	Φ25.4 Cylindrical shaft，parallel key6.35×6.35×32	C	4–M10 Square flange, pilot Φ44.45×2.5
	200	H3	Φ25.3 Splined shaft， 6–25.3×21.4×6.2		
	250				
	315	H33	Φ25.3 Splined shaft， 6–25.3×21.4×6.2	C1	4–3/8–16UNC Square flange, pilot Φ44.45×2.5
	400	K13	Φ31.75 involute splined shaft，14–DP12/24 a=30°		

5			6		7	
Code	Ports		Special features		Rotation direction	
	Ports(A,B)(deep)	Drain port T(deep)				
Y	G1/2(15)	M14×1.5(12)	Omit	Standard	Omit	Standard
Y1	M18×1.5(15)	M14×1.5(12)				
Y2	M22×1.5(15)	M14×1.5(12)				
Y4	ZG3/8(15)	M14×1.5(12)				
Y5	7/8–14UNF(15)	M14×1.5(12)	T7	With dustproof ring	L	Opposite
Y7	ZG1/2(15)	M14×1.5(12)				
Y8	NPT1/2(15)	M14×1.5(12)	T10	With high pressure seals		
Y9	NPTF1/2(15)	7/16–20UNF(12)				
Y10	G1/2(15)	G1/4(12)				
Y15	7/8–14UNF(15)	7/16–20UNF(12)				

Note: C、C1 mounting are assembling to BMPH shaft.

BMP、BMPH ORDERING CODE

■ BMP BMPH ORDERING CODE

1		2	3	4	5		6		7
BMPH	—					/		—	

Pos.1	2	3		4	
Series	Disp			Flange	
BMPH	50	P1	Φ25 Cylindrical shaft, parallel key8×7×32	A Ⅱ	2–Φ13.5 Oval flange, pilot Φ82.5×2.8
	80	P3	Φ25.4 Cylindrical shaft, parallel key6.35×6.35×32		
		P4	Φ25.4 Cylindrical shaft, Woodruff key Φ25.4×6.35		
	100	P33	Φ25.4 Cylindrical shaft, parallel key6.35×6.35×32		
	125	P89	Φ25.4 Cylindrical shaft pin hole Φ9.53		
	160	P93	Φ25.4 Cylindrical shaft pin hole Φ9.5	C	4–M10 Square flange, pilot Φ44.45×2.8
		P95	Φ25.4 Cylindrical shaft pin hole Φ6.4, Woodruff key Φ25.4×6.35		
	200	P96	Φ25.4 Cylindrical shaft pin hole Φ8		
	250	P97	Φ25.4 Cylindrical shaft pin hole Φ10.3		
	315	H4	Φ25.3 Splined shaft, 6–25.3×21.4×6.2	C1	4–3/8–16UNC Square flange, pilot Φ44.45×2.8
	400	K8	Φ22.1 involute splined shaft, 13–DP16/32		

5			6		7	
Code	Ports		Special features		Rotation direction	
	Ports(A,B)(deep)	Drain port T(deep)				
Y	G1/2(15)	M14×1.5(12)	Omit	Standard	Omit	Standard
Y5	7/8–14UNF(15)	7/16–20UNF(12)				
Y7	ZG1/2(15)	G1/4(12)				
Y9	NPTF1/2(15)	7/16–20UNF(12)				
Y10	G1/2(15)	G1/4(12)	T21	No case drain	L	Opposite
Y17	3/4–16UNF(15)	7/16–20UNF(12)				
Y19	Φ11(15)	7/16–20UNF(12)				
Y20	M18×1.5(15)	G1/4(12)				

BH Orbit Hydraulic Motor With Spool Valve

■ BH INTRODUCTION

This seriees of motor, with its shell made of ductile cast iron of adequate intenty, can be applied to situations with less load and interval operation, widely to agriculture, forestry, plastics, machine tools and minmachines etc.

■ BH CHARACTERISTICS

1、With the axial oil distribution structur, it is of smaller, high efficiency and long life.
2、shaft seal can bear high pressure of motor of which can be used in parallel or in series.

■ BH TECHNICAL DATA

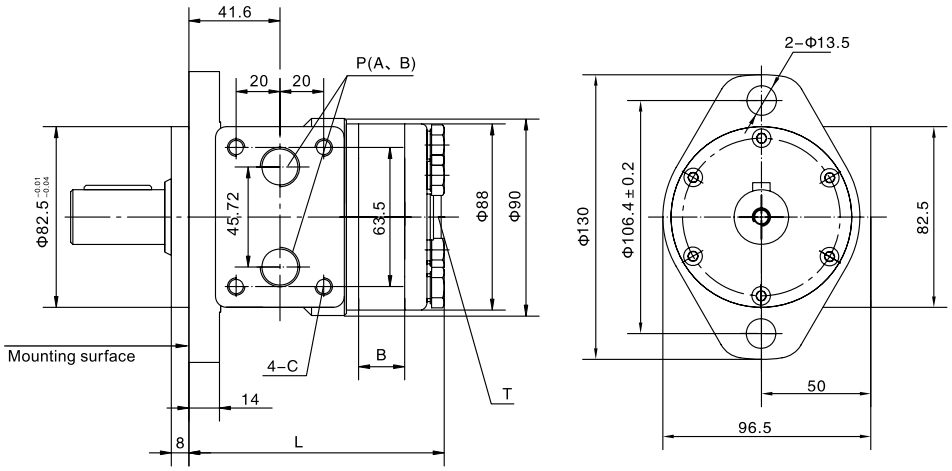
TYPE		BH-50	BH-80	BH-100	BH-125	BH-160	BH-200	BH-250	BH-315	BH-400
Displacement(ml/r)		49.3	76.6	95.8	120.4	153.2	191.6	240.8	306.5	383.1
Max.Pressure.Drop (Mpa)	cont.	10.5	10.5	10.5	10.5	10.5	10.5	9	7	7
	int.	14	14	14	14	14	14	11.5	10.5	9
	peak.	18	18	18	18	18	18	15	14	11
Max.torque (N.m)	cont.	65	105	130	160	205	255	275	305	335
	int.	90	140	175	220	280	350	360	410	429
	peak.	115	180	225	285	365	455	475	560	550
Max.Speed (cont.)(r/min)		810	520	415	330	260	205	165	125	100
Max.Flow(L/min)		40	40	40	40	40	40	40	40	40
Max.Output.Power(cont.)(Kw)		4.5	4.8	4.8	4.8	4.8	4.6	4	3.5	3

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

BH Orbit Hydraulic Motor With Spool Valve

■ BH INSTALLATION



TYPE	BH-50	BH-80	BH-100	BH-125	BH-160	BH-200	BH-250	BH-315	BH-400
L	107	112	115.5	120	126	133	142	154	168
B	9	14	17.5	22	28	35	44	56	70

■ BH PORTS CODE

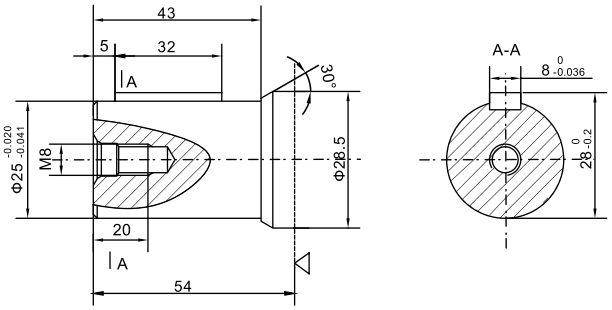
Ports / Code	P (A, B) (deep)	C (deep)	T (deep)
Y	G1/2 (15)	M8 (13)	M14x1. 5 (12)
Y1	M18x1.5 (15)	M8 (13)	M14x1. 5 (12)
Y2	M22x1.5 (15)	M8 (13)	M14x1. 5 (12)
Y9	NPTF1/2 (15)	5/16-18UNC (13)	7/16-20UNF (12)
Y10	G1/2 (15)	M8 (13)	G1/4 (12)
Y15	7/8-14UNF (15)	5/16-18UNC (13)	7/16-20UNF (12)

Note:P(A、B)--Ports，C--Mounting Thread （—Indicates no this thread ），T--Drain connettion

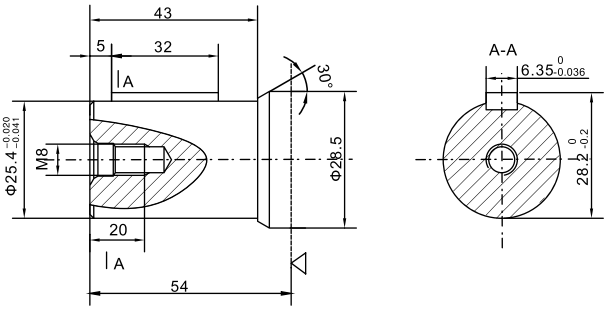
BH Orbit Hydraulic Motor With Spool Valve

■ BH SHAFT VERSION

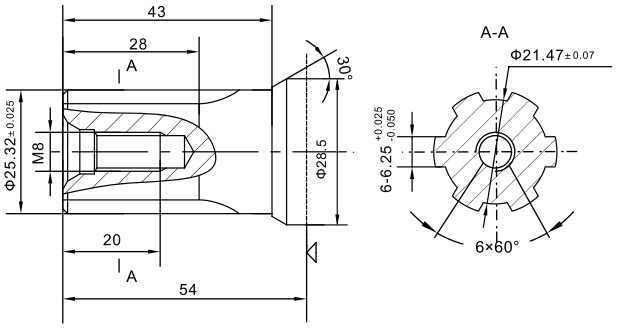
P1：Φ25 Cylindrical shaft,parallel key 8x7x32



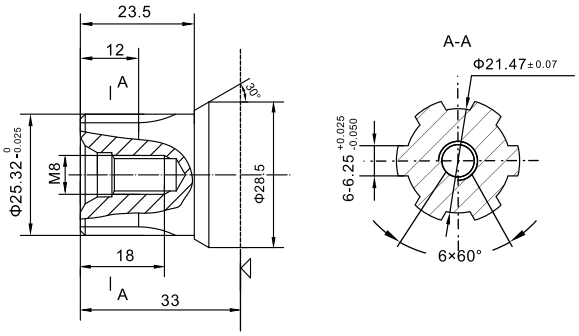
P3：Φ25.4 Cylindrical shaft,parallel key 6.35x6.35x32



H3：Φ25.3 Splined shaft，6-25.32x21.47x6.25



H5：Φ25.3 Splined shaft，6-25.32x21.47x6.25



◁ : Motor mounting surface

BH Orbit Hydraulic Motor With Spool Valve

■ BH ORDERING CODE

1		2	3	4	5		6		7
BH	—					/		—	

Pos.1	2	3		4	
Series	Disp	Output Shaft		Flange	
BH	50 80 100 125 160 200 250 315 400	P1	Φ 25Cylindrical shaft，parallel key 8x7x32	A Ⅱ	2–Φ13.5 Oval flange polit Φ82.5x8
		P3	Φ 25.4 Cylindrical shaft，parallel key 6.35x6.35x32		
		H3	Φ25.3Splined shaft， 6–25.32x21.47x6.25		
		H5	Φ25.3Splined shaft， 6–25.32x21.47x6.25		

5			6		7	
Code	Ports		Special features		Rotation direction	
	Ports(A,B)(deep)	Drain port T(deep)				
Y	G1/2 (15)	M14x1.5 (12)	Omit	Standard	Omit	Standard
Y1	M18x1.5 (15)	M14x1.5 (12)				
Y2	M22x1.5 (15)	M14x1.5 (12)				
Y9	NPTF1/2 (15)	7/16–20UNF (12)				
Y10	G1/2 (15)	G1/4 (12)			L	
Y15	7/8–14UNF (15)	7/16–20UNF (12)				

TMPH Orbit Hydraulic Motor With Spool Valve

INTRODUCTION

TMPH series motors is a compact, economical and spool valve type of hydraulic motor. Suitable for working conditions with small load and intermittent operation. Widely used in agriculture, forestry, plastics, machine tools and mining machinery. Such as in jection plastic machine's mold ad justment, sweeping car, sawmill and other work platforms.

CHARACTERISTICS

1. Due to the geroler type, it has low friction,high mechanical cfficiency and long lifetime.
2. High shaft seal could be used in parallel and in series.
3. With two inside check valves, it needn't to connect the case drain.
4. Same performance with BMR series motor, similar size wilh BMP series motor.
5. The mounting flange and the front housing are separated, so it is easy to replace the flange.

TMPH TECHNICAL DATA

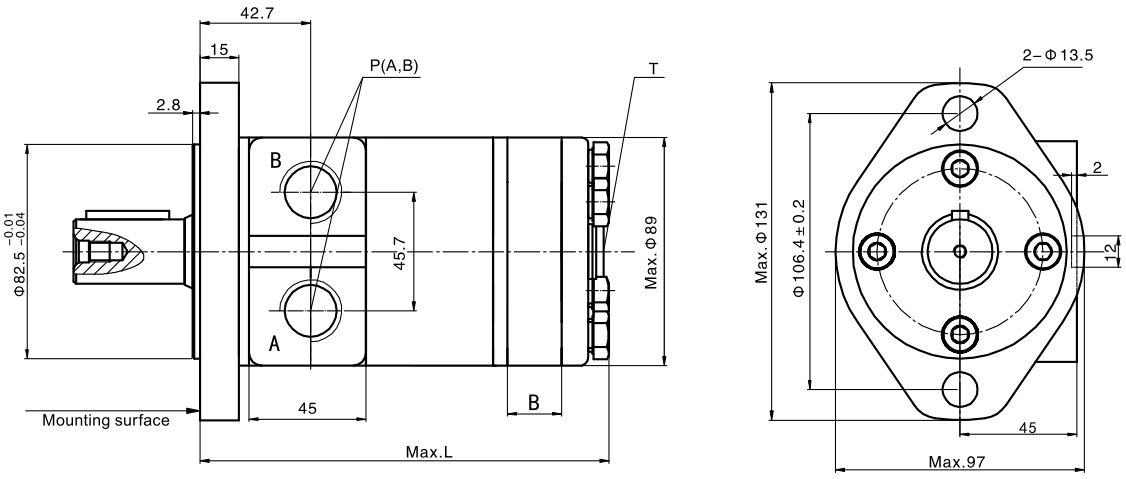
TYPE		TMPH-50	TMPH-80	TMPH-100	TMPH-125	TMPH-160	TMPH-200	TMPH-250	TMPH-315	TMPH-400
Displacement(ml/r)		49.3	76.6	95.8	120.4	153.2	191.6	240.8	306.5	383.1
Max.Pressure.Drop (Mpa)	cont.	14	14	14	14	14	14	11	9	7
	int.	17.5	17.5	17.5	17.5	17.5	17.5	14	11	9
	peak.	20	20	20	20	20	20	16	13	11
Max.torque (N.m)	cont.	90	140	175	220	280	350	350	360	350
	int.	115	175	220	275	355	440	445	445	455
	peak.	130	205	255	320	410	510	515	530	555
Max.Speed (cont.)(r/min)		810	780	625	495	390	310	245	195	155
Max.Flow(L/min)		40	60	60	60	60	60	60	60	60
Max.Output.Power(cont.)(Kw)		6.4	9.5	9.5	9.5	9.5	9.5	7.4	6	4.8

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

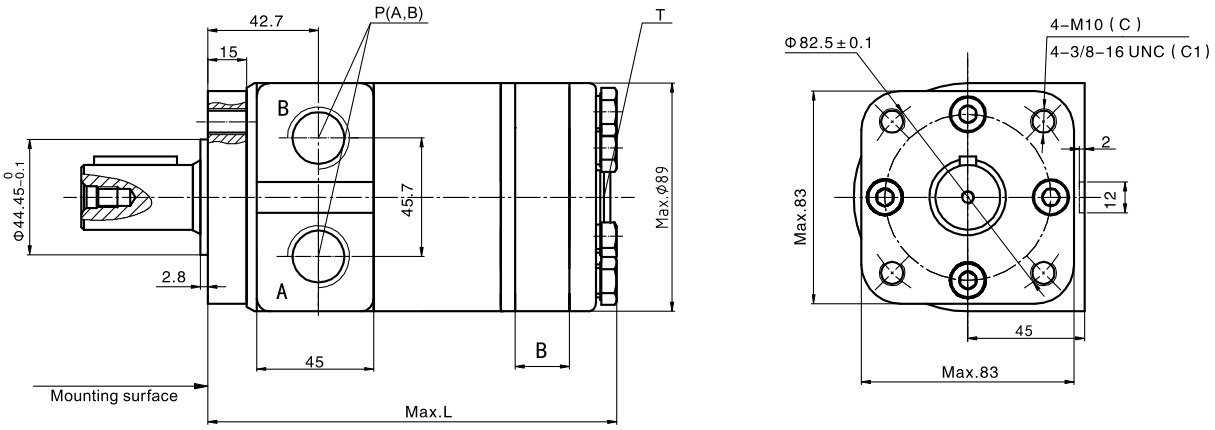
2. to use under max.speed & maxpressure at the same time is not recommended

■ TMPH Installation

2–Ø13.5hole oval flange AⅡ



Square flangeC,C1



TYPE	TMPH–50	TMPH–80	TMPH–100	TMPH–125	TMPH–160	TMPH–200	TMPH–250	TMPH–315	TMPH–400
L	148	153	156.5	161	167	174	183	195	209
B	9	14	17.5	22	28	35	44	56	70

TMPH Orbit Hydraulic Motor With Spool Valve

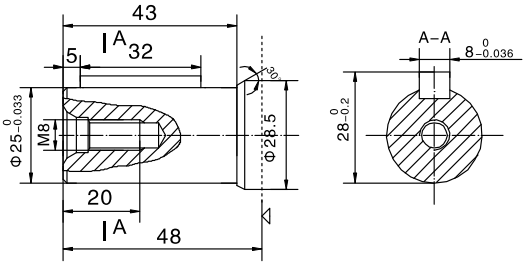
■ TMPH Ports Code

Ports / Code	P(A、B)(deep)	C (deep)	T (deep)
Y	G1/2 (15)	—	M14 × 1.5 (12)
Y7	ZG1/2 (15)	—	G1/4 (12)
Y9	NPTF1/2 (15)	—	7/16–20 UNF(12)
Y10	G1/2 (15)	—	G1/4 (12)
Y15	7/8–14UNF (15)	—	7/16–20 UNF(12)

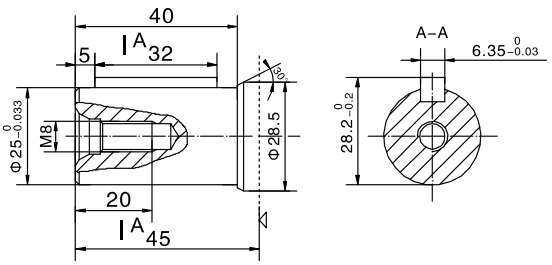
P(A、B)––Ports，C––Mounting Thread （—Indicates no this thread），T––Drain connettion

■ TMPH SHAFT VERSION

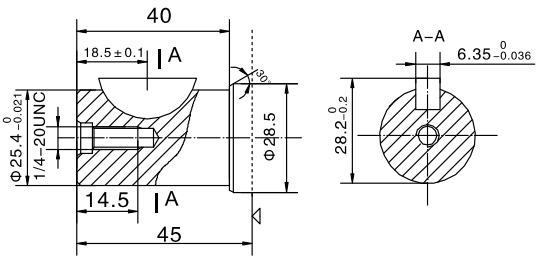
P1：Φ25Cylindrical shaft,parallel key8 × 7 × 32



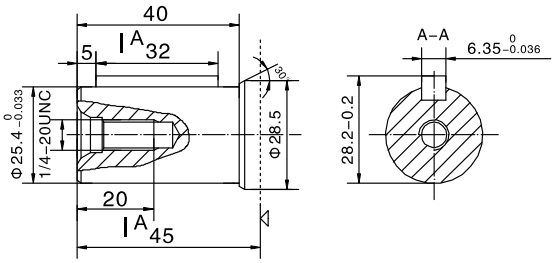
P3：Φ25.4Cylindrical shaft,parallel key6.35 × 6.35 × 32



P4：Φ25.4Cylindrical shaft,Woodruff key Φ25.4 × 6.35



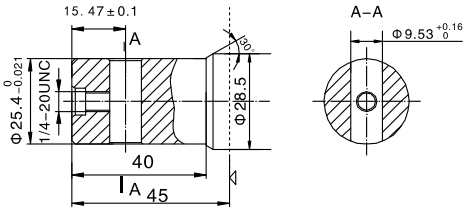
P33：Φ25.4Cylindrical shaft,parallel key6.35 × 6.35 × 32



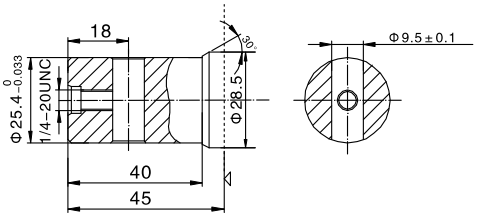
◁：Motor mounting surface

■ TMPH SHAFT VERSION

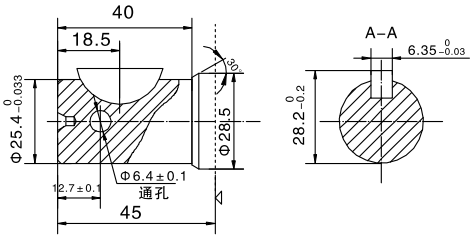
P89：Φ25.4Cylindrical shaft pin hole Φ9.53



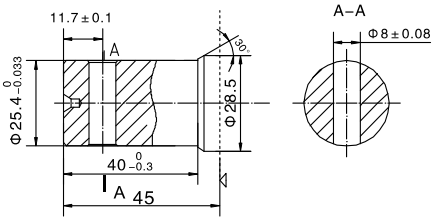
P93：Φ25.4Cylindrical shaft pin hole Φ9.5



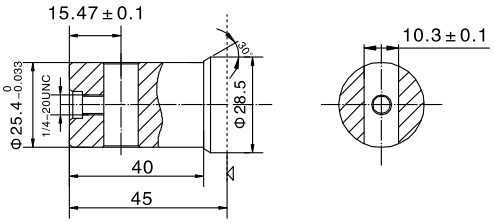
P95：Φ25.4Cylindrical shaft pin hole Φ6.4
Woodruff key Φ25.4×6.35



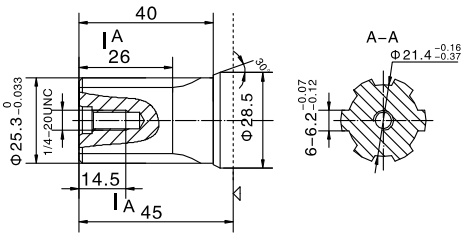
P96：Φ25.4Cylindrical shaft pin hole Φ8



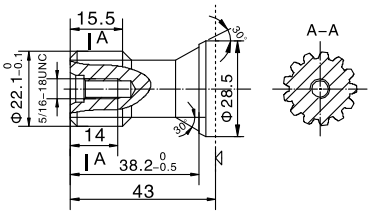
P97：Φ25.4Cylindrical shaft pin hole Φ10.3



H4：Φ25.3Splined Shaft，6-25.3×21.4×6.2



K8：Φ22.1involveCylindrical shaft，13-DP 16/32



◁：Motor mounting surface

■ TMPH

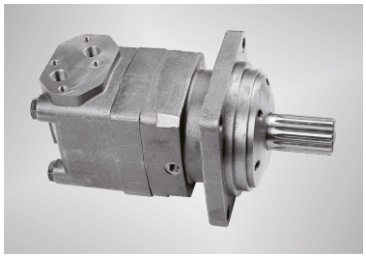
1		2	3	4	5		6		7
TMPH	—					/		—	

Pos.1	2	3		4	
Series	Disp	Output		Flange	
TMPH	50	P1	Φ25 Cylindrical shaft，parallel key8×7×32	A Ⅱ	2–Φ13.5 Oval flange, pilot Φ82.5×6
	80	P3	Φ25.4 Cylindrical shaft，parallel key6.35×6.35×32		
		P4	Φ25.4 Cylindrical shaft，Woodruff key Φ25.4×6.35		
	100	P33	Φ25.4 Cylindrical shaft，parallel key6.35×6.35×32		
	125	P89	Φ25.4 Cylindrical shaft pin hole Φ9.53		
	160	P93	Φ25.4 Cylindrical shaft pin hole Φ9.5	C	4–M10 Square flange, pilot Φ44.45×2.8
	200	P95	Φ25.4 Cylindrical shaft pin hole Φ6.4，Woodruff key Φ25.4×6.35		
		P96	Φ25.4 Cylindrical shaft pin hole Φ8		
	250	P97	Φ25.4 Cylindrical shaft pin hole Φ6.4，Woodruff key Φ25.4×6.35		
	315	H4	Φ25.3 Splined shaft， 6–25.3×21.4×6.2	C1	4–3/8–16UNC Square flange, pilot Φ44.45×2.8
	400	K8	Φ22.1 involute splined shaft，13–DP16/32		

5			6		7	
Code	Ports		Special features		Rotation direction	
	Ports(A,B)(deep)	Drain port T(deep)				
Y	G1/2(15)	M14×1.5(12)	Omit	Standard	Omit	Standard
Y7	ZG1/2(15)	G1/4(12)				
Y9	NPTF1/2(15)	7/16–20UNF(12)	T21	No case drain	L	Opposite
Y10	G1/2(15)	G1/4(12)	T26	Flange face is vertical ports		
Y15	7/8–14UNF(15)	7/16–20UNF(12)				

INTRODUCTION

FEATURES AND APPLICATIONS

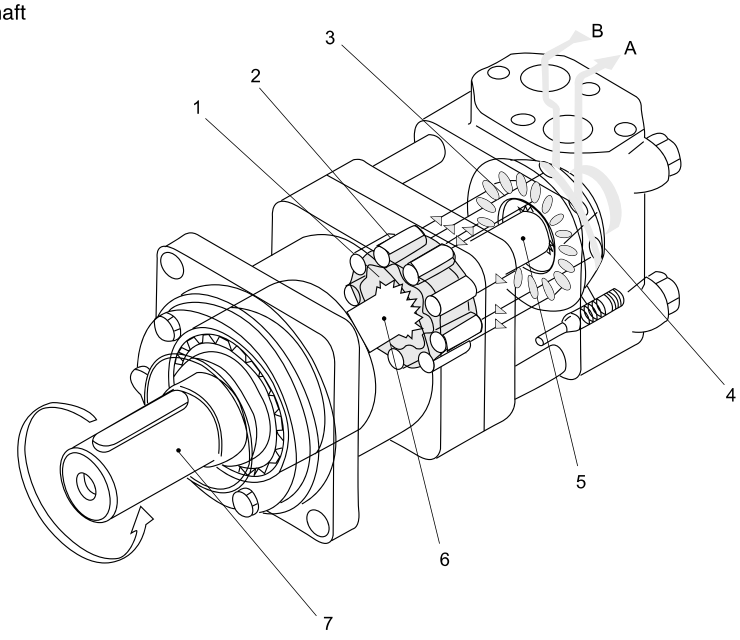


BM hydraulic motor is one type of high torque low speed hydraulic motors, with high efficiency and long life. BM motor has a wide Speed range, high starting torque and rotating stable at high speed Compact and light, it can be connected to working machine directly, adapted to all kinds of low speed heavy load facilities.

BM hydraulic motors are widely applied in agriculture machinery, fishing machinery, plastic industry, mining, and construction machinery.

WORKING PRINCIPLE

1 orbit cam 2 roll 3 distributor 4 auxiliary plate
5 distributor shaft 6 transmission shaft 7 output shaft



Shown as the drawing, high pressure oil goes into the motor's housing through the inlet, passing the auxiliary plate, distributor, then the working space between the orbit cam and rolls. Pressed by the high pressure oil, orbit cam rotates from the high pressure side to the low pressure side. The orbit cam makes rotation and revolution against the rolls, at the same time, high pressure oil is distributed continuously, thus, the output shaft can also rotate continuously.

The output speed can be controlled by adjusting the inlet flow capability of the motor, and the rotating direction can be changed by exchanging the flow direction.

BM3Y Orbit Hydraulic Motor With Disk Valve

■ BM3Y TECHNICAL DATA

TYPE		BM3Y-80 BM3SY-80 BM3S3Y-80 BM3WY-80	BM3Y-100 BM3SY-100 BM3S3Y-100 BM3WY-100	BM3Y-125 BM3SY-125 BM3S3Y-125 BM3WY-125	BM3Y-160 BM3SY-160 BM3S3Y-160 BM3WY-160	BM3Y-200 BM3SY-200 BM3S3Y-200 BM3WY-200	BM3Y-250 BM3SY-250 BM3S3Y-250 BM3WY-250	BM3Y-315 BM3SY-315 BM3S3Y-315 BM3WY-315	BM3Y-400 BM3SY-400 BM3S3Y-400 BM3WY-400	BM3Y-500 BM3SY-500 BM3S3Y-500 BM3WY-500
Displacement(ml/r)		80.5	100.5	126.3	160.8	200.9	252.6	321.5	401.9	476.5
Max.Pressure. Drop (Mpa)	cont.	20.5	20.5	20.5	20.5	20.5	20	20	15.5	12
	int.	27.5	27.5	27.5	26	25	25	24	19	14
	peak.	29.5	29.5	29.5	28	27	27	26	21	16
Max.torque (N.m)	cont.	226	282	355	451	564	684	870	813	728
	int.	293	365	459	559	672	845	1032	1021	903
	peak.	306	383	481	588	708	891	1091	1141	1044
Max.Speed(cont.)(r/min)		805	745	590	465	370	295	230	185	155
Max.Flow(cont.)(L/min)		65	75	75	75	75	75	75	75	75
Max.Output.Power(cont.)(Kw)		16	18	18	18	18	18	17	11	9
Weight (kg)		9.8	10.0	10.3	10.7	11.1	11.6	12.3	13.2	14.3

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

■ BM3Y PERFORMANCE DATA

BM3Y 80(80.5ml/r)

Flow(L/min)	Pressure(Mpa) 3.5	7	10.5	14	17.5	Max.cont. 20.5	Max.int. 22.5
15	35 / **181**	75 / **177**	114 / **170**	150 / **165**	187 / **158**	220 / **151**	239 / **141**
30	35 / **363**	75 / **355**	115 / **346**	152 / **340**	190 / **330**	222 / **322**	240 / **310**
40	33 / **485**	75 / **479**	115 / **464**	155 / **453**	193 / **444**	226 / **437**	240 / **415**
50	30 / **610**	73 / **602**	113 / **594**	153 / **580**	190 / **565**	223 / **556**	237 / **530**
60	28 / **735**	70 / **724**	110 / **714**	150 / **698**	188 / **680**	220 / **670**	235 / **642**
Max.cont. 65	27 / **801**	68 / **790**	108 / **775**	148 / **760**	186 / **742**	215 / **727**	233 / **704**
Max.int. 80	23 / **988**	66 / **975**	104 / **955**	140 / **938**	176 / **915**	205 / **897**	213 / **870**

BM3Y 100(100.5ml/r)

Flow(L/min)	Pressure(Mpa) 3.5	7	10.5	14	17.5	Max.cont. 20.5	Max.int. 22.5
15	44 / **145**	94 / **142**	142 / **136**	187 / **132**	233 / **127**	275 / **121**	298 / **113**
30	42 / **291**	93 / **284**	144 / **277**	190 / **272**	237 / **264**	278 / **258**	300 / **248**
40	41 / **388**	92 / **384**	144 / **372**	194 / **363**	241 / **356**	282 / **350**	300 / **332**
50	37 / **489**	91 / **482**	141 / **476**	191 / **465**	237 / **453**	278 / **445**	296 / **425**
60	35 / **589**	87 / **580**	137 / **572**	187 / **559**	235 / **545**	273 / **537**	293 / **514**
Max.cont. 75	34 / **740**	85 / **730**	135 / **716**	185 / **702**	232 / **686**	268 / **672**	291 / **651**
Max.int. 90	29 / **890**	82 / **879**	130 / **861**	175 / **845**	222 / **825**	258 / **808**	266 / **784**

BM3Y 125(126.3ml/r)

Flow(L/min)	Pressure(Mpa) 3.5	7	10.5	14	17.5	Max.cont. 20.5	Max.int. 22.5
15	54 / **115**	117 / **113**	179 / **108**	235 / **105**	293 / **101**	348 / **96**	375 / **90**
30	55 / **231**	118 / **226**	180 / **221**	238 / **217**	298 / **210**	351 / **205**	377 / **198**
40	54 / **309**	120 / **305**	180 / **296**	243 / **289**	303 / **283**	355 / **279**	377 / **265**
50	51 / **389**	118 / **384**	177 / **379**	240 / **370**	298 / **360**	351 / **354**	372 / **338**
60	48 / **468**	114 / **461**	173 / **455**	235 / **445**	295 / **433**	347 / **427**	369 / **409**
Max.cont. 75	42 / **589**	109 / **581**	169 / **570**	232 / **559**	292 / **546**	342 / **535**	366 / **518**
Max.int. 90	38 / **708**	103 / **699**	163 / **685**	220 / **673**	279 / **656**	327 / **643**	334 / **624**

(Torque) : 163Nm
(Speed) : 685r/min

BM3Y 160(160.8ml/r)

Flow(L/min)	Pressure(Mpa) 3.5	7	10.5	14	17.5	Max.cont. 20.5	Max.int. 22.5
15	70 / **91**	147 / **89**	228 / **85**	300 / **83**	374 / **79**	444 / **76**	477 / **71**
30	72 / **182**	150 / **178**	230 / **173**	304 / **170**	380 / **165**	447 / **161**	479 / **155**
40	74 / **243**	151 / **240**	230 / **232**	310 / **227**	386 / **222**	451 / **219**	479 / **208**
50	71 / **305**	147 / **301**	226 / **297**	306 / **290**	380 / **283**	447 / **278**	473 / **265**
60	68 / **368**	143 / **362**	220 / **357**	300 / **349**	376 / **340**	442 / **335**	469 / **321**
Max.cont. 75	64 / **463**	138 / **456**	216 / **448**	296 / **439**	372 / **429**	437 / **420**	465 / **407**
Max.int. 90	60 / **556**	133 / **549**	208 / **538**	280 / **528**	352 / **515**	416 / **505**	425 / **490**

Cont.
Int.

■ BM3Y PERFORMANCE DATA

BM3Y 200(200.6ml/r)

Flow(L/min)	Pressure(Mpa) 3.5	7	10.5	14	17.5	Max.cont. 20.5	Max.int. 22.5
15	87	184	285	374	467	557	596
	73	**71**	**68**	**66**	**63**	**61**	**56**
30	89	187	287	379	474	560	599
	145	**142**	**139**	**136**	**132**	**129**	**124**
40	92	187	287	387	482	564	599
	194	**192**	**186**	**182**	**178**	**175**	**166**
50	88	182	282	382	474	560	591
	244	**241**	**238**	**232**	**226**	**223**	**212**
60	84	175	275	374	469	555	586
	295	**290**	**286**	**280**	**272**	**268**	**257**
Max.cont. 75	77	170	270	369	464	550	581
	370	**365**	**358**	**351**	**343**	**336**	**325**
Max.int. 90	68	165	260	349	434	510	532
	445	**440**	**430**	**423**	**412**	**404**	**392**

BM3Y 250(252.6ml/r)

Flow(L/min)	Pressure(Mpa) 3.5	7	10.5	14	17.5	Max.cont. 20	Max.int. 22.5
15	114	234	358	469	584	377	742
	58	**56**	**54**	**53**	**50**	**48**	**45**
30	115	235	361	471	587	680	746
	116	**113**	**110**	**108**	**105**	**103**	**100**
40	115	235	355	473	591	684	751
	155	**153**	**148**	**144**	**141**	**139**	**136**
50	114	230	355	474	587	680	746
	194	**192**	**189**	**185**	**180**	**175**	**169**
60	112	225	352	471	583	675	741
	234	**231**	**228**	**224**	**219**	**214**	**208**
Max.cont. 75	109	220	349	467	578	669	735
	295	**290**	**285**	**279**	**273**	**267**	**260**
Max.int. 90	103	213	343	460	568	654	715
	354	**350**	**342**	**334**	**326**	**320**	**310**

BM3Y 315(321.5ml/r)

Flow(L/min)	Pressure(Mpa) 3.5	7	10.5	14	17.5	Max.cont. 20	Max.int. 22.5
15	140	284	433	583	745	863	947
	45	**44**	**43**	**41**	**40**	**38**	**35**
30	140	288	437	586	748	866	951
	91	**89**	**87**	**85**	**83**	**81**	**78**
40	138	290	440	588	752	870	956
	121	**120**	**116**	**113**	**111**	**109**	**106**
50	136	291	439	587	748	866	951
	153	**151**	**149**	**145**	**141**	**139**	**136**
60	134	286	435	583	744	862	947
	184	**181**	**179**	**175**	**170**	**166**	**160**
Max.cont. 75	131	280	431	580	738	856	939
	231	**228**	**224**	**220**	**214**	**210**	**204**
Max.int. 90	125	272	421	570	718	826	899
	278	**275**	**269**	**264**	**258**	**253**	**243**

BM3Y 400(401.9ml/r)

Flow(L/min)	Pressure(Mpa) 3.5	7	10.5	14	Max.cont. 15.5	Max.int. 17.5
15	172	347	522	705	806	926
	36	**35**	**34**	**33**	**32**	**30**
30	174	350	526	708	809	930
	73	**71**	**69**	**68**	**66**	**64**
40	173	352	529	710	813	935
	97	**96**	**93**	**91**	**89**	**86**
50	171	350	531	710	809	930
	122	**121**	**119**	**116**	**113**	**110**
60	168	343	522	705	801	924
	147	**145**	**143**	**140**	**136**	**130**
Max.cont. 75	164	339	517	700	791	916
	185	**183**	**179**	**176**	**171**	**163**
Max.int. 90	160	325	503	680	766	886
	223	**220**	**215**	**211**	**206**	**196**

(Torque) : 503Nm
(Speed) : 215r/min

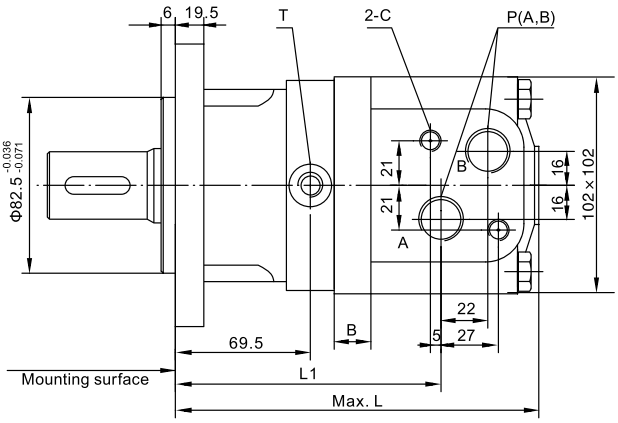
BM3Y 500(476.5ml/r)

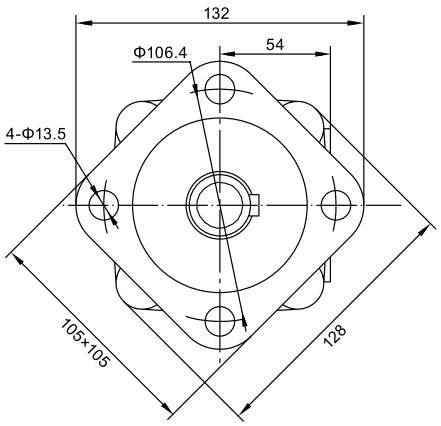
Flow(L/min)	Pressure(Mpa) 3.5	7	10.5	Max.cont. 12	Max.int. 14
15	180	403	607	721	816
	31	**30**	**29**	**28**	**27**
30	183	407	613	724	824
	61	**60**	**58**	**57**	**56**
40	185	409	617	728	832
	82	**81**	**78**	**77**	**75**
50	184	406	616	724	833
	103	**102**	**100**	**98**	**95**
60	182	403	609	719	819
	124	**122**	**121**	**118**	**115**
Max.cont. 75	180	401	606	712	815
	156	**154**	**151**	**148**	**145**
Max.int. 90	173	391	601	702	803
	188	**185**	**182**	**178**	**174**

Cont.
Int.

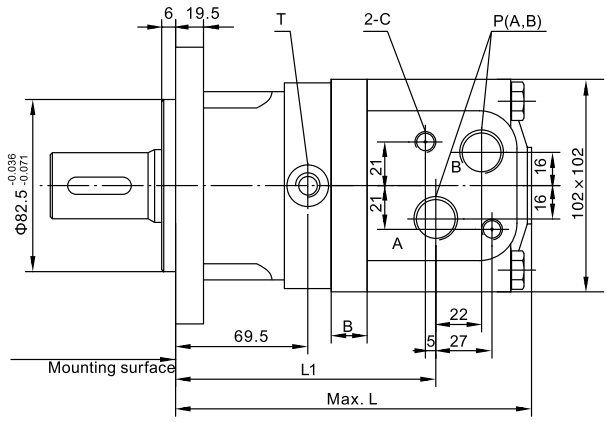
■ BM3Y Installation

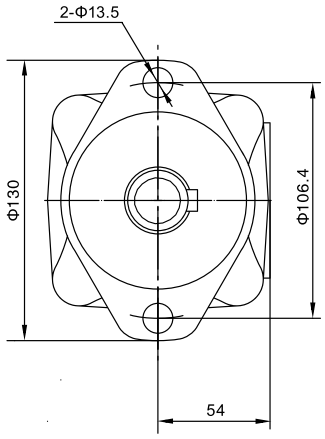
Square flange A



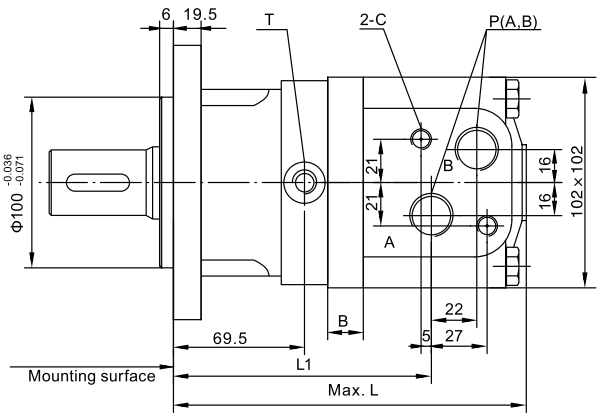


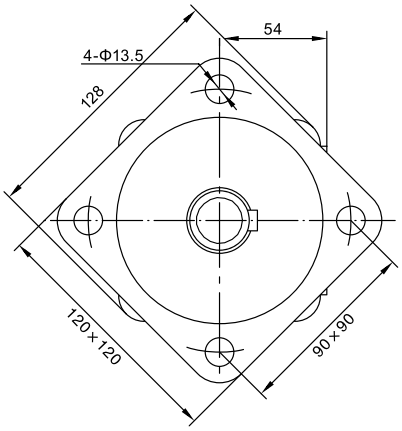
2–hole oval flange AII





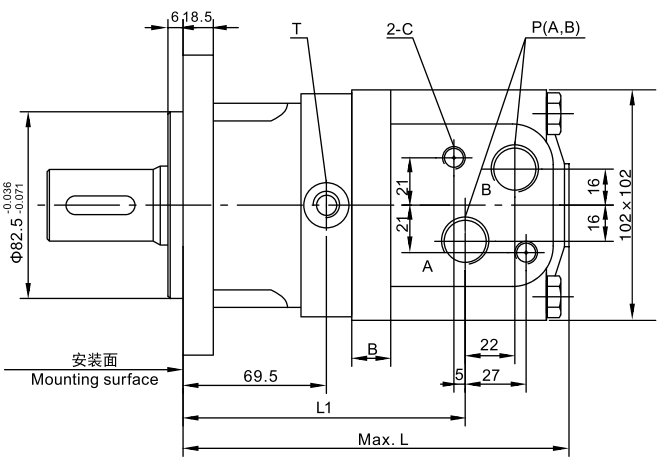
Square flange A2III

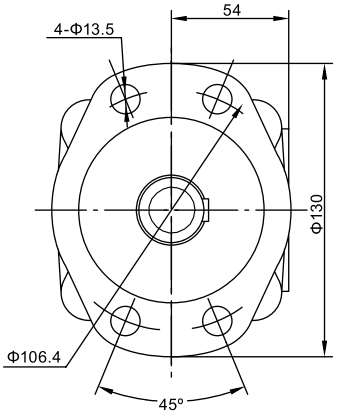




■BM3Y Installation

4–hole oval flange AIV





Type	BM3Y–80	BM3Y–100	BM3Y–125	BM3Y–160	BM3Y–200	BM3Y–250	BM3Y–315	BM3Y–400	BM3Y–500
L	170	173.5	178	184	191	200	212	226	239
L1	125.5	129	133.5	139.5	146.5	155.5	167.5	181.5	194.5
B	11	14.5	19	25	32	41	53	67	80

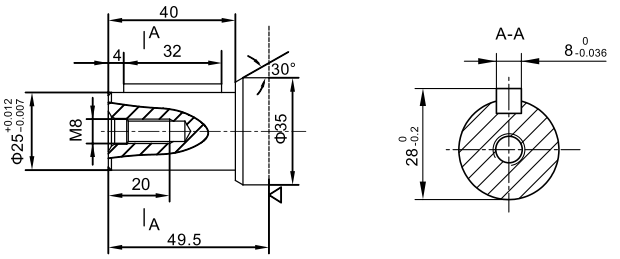
■ BM3Y PORTS CODE

Code \ Ports	P(A、B)(deep)	C (deep)	T (deep)
Y	G1/2 (15)	M10 (12)	G1/4 (12)
Y1	M18 × 1.5 (15)	M10 (12)	M14 × 1.5 (12)
Y2	M22 × 1.5 (15)	M10 (12)	M14 × 1.5 (12)
Y3	M20 × 1.5 (15)	M10 (12)	M14 × 1.5 (12)
Y5	7/8–14UNF (15)	—	7/16–20 UNF(12)
Y8	NPT1/2 (15)	M10 (12)	G1/4 (12)
Y10	G1/2 (15)	—	G1/4 (12)

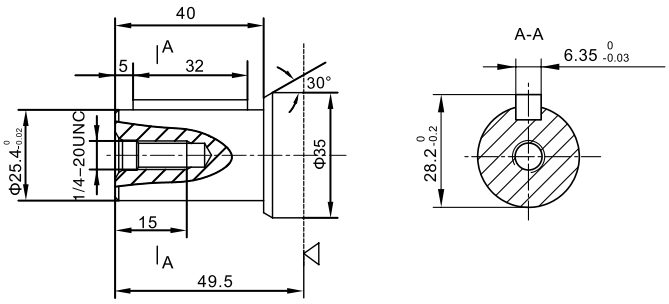
Note:P(A、B)––Ports，C––Mounting Thread （—Indicates no this thread），T––Drain connettion

■ BM3Y SHAFT VERSION

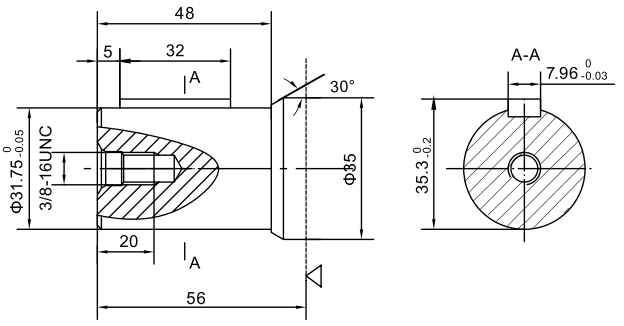
P1: Φ25 Cylindrical shaft，parallel key8 × 7 × 32



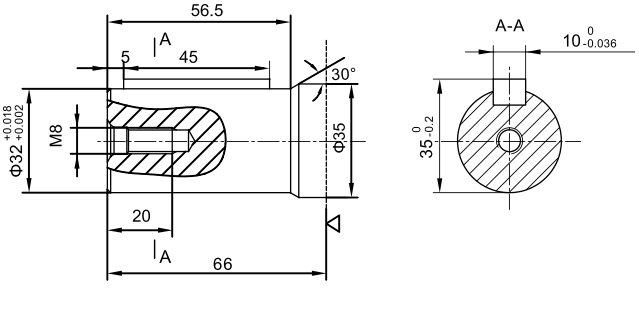
P3: Φ25.4 Cylindrical shaft，parallel key6.35 × 6.35 × 32



P5: Φ31.75 Cylindrical shaft，parallel key7.96 × 7.96 × 32



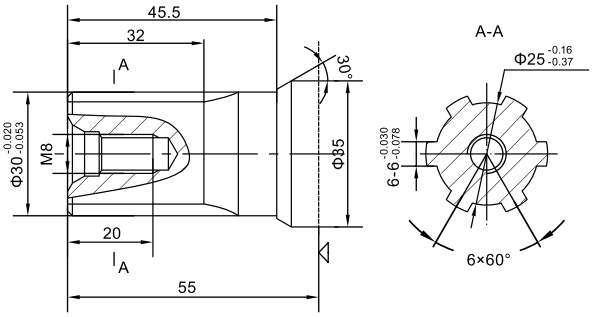
P10: Φ32 Cylindrical shaft，parallel key10 × 8 × 45



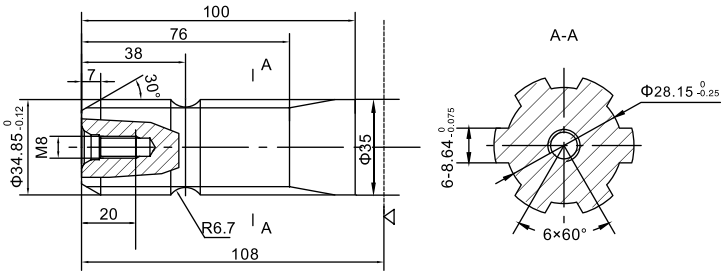
◁-- Motor mounting surface

■BM3Y SHAFT VERSION

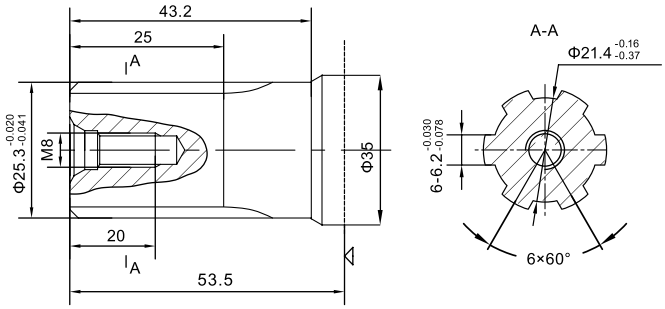
H1: Φ30 Splined shaft，6–30 × 25 × 6



H3: Φ34.85 Splined shaft，6–34.85 × 28.15 × 8.64

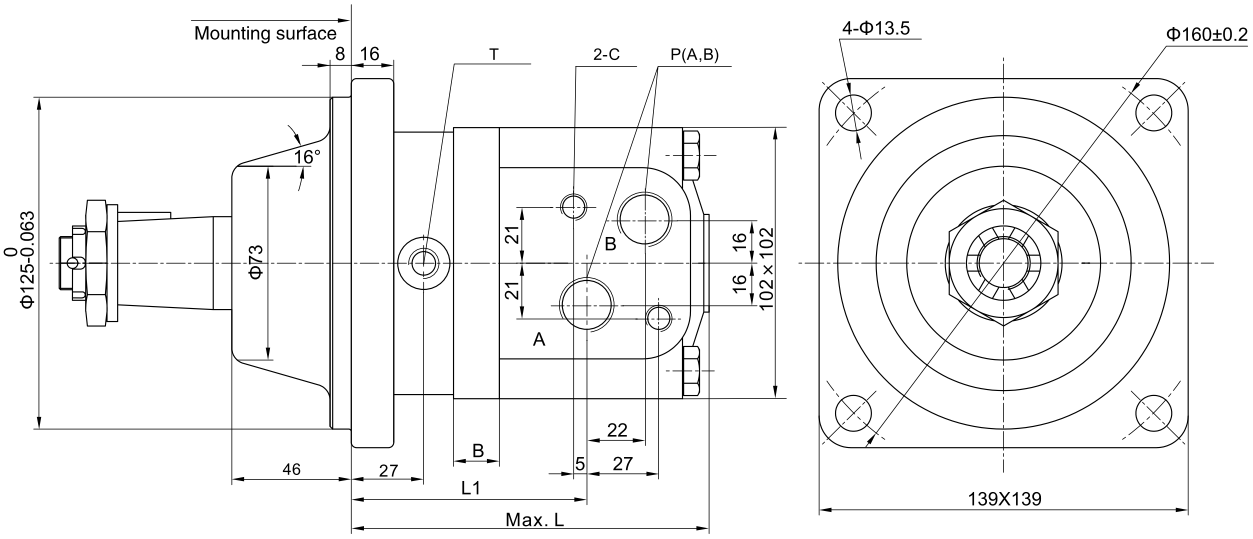


H51: Φ25.3 Splined shaft，6–25.3 × 21.4 × 6.2



◁-- Motor mounting surface

■ BM3WY Installation



Type	BM3WY–80	BM3WY–100	BM3WY–125	BM3WY–160	BM3WY–200	BM3WY–250	BM3WY–315	BM3WY–400	BM3WY–500
L	127.5	131	135.5	141.5	148.5	157.5	169.5	183.5	196.5
L1	83	86.5	91	97	104	113	125	139	152
B	11	14.5	19	25	32	41	53	67	80

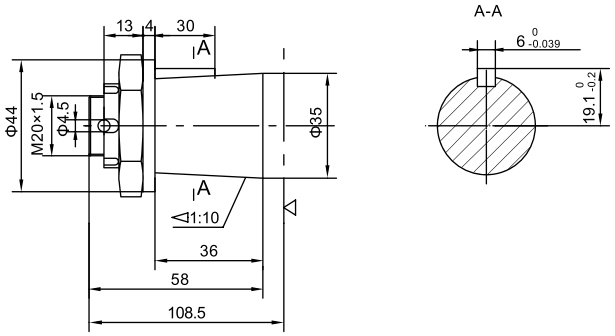
■BM3WY PORTS CODE

Code \ Ports	P(A、B)(deep)	C（deep）	T（deep）
Y	G1/2 (15)	M10 (12)	G1/4 (12)
Y5	7/8–14UNF (15)	—	7/16–20UNF (12)

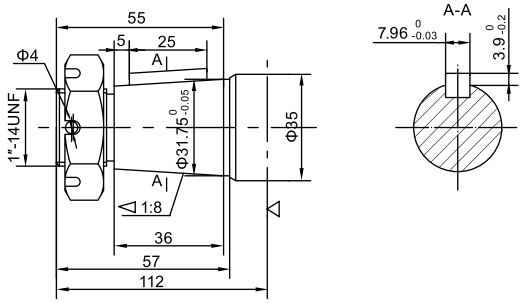
Note:P(A、B)––Ports，C––Mounting Thread（—Indicates no this thread），T––Drain connettion

■ BM3WY SHAFT VERSION

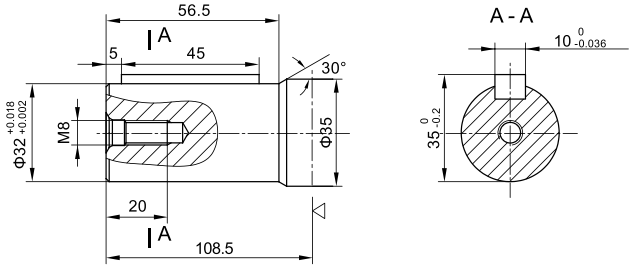
Z：Φ35 Tapered shaft，taper1:10，parallel key 6 × 6 × 30



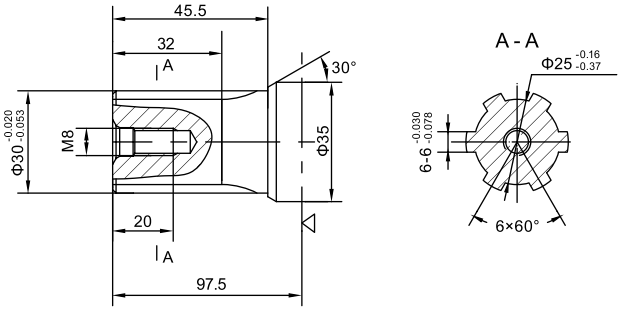
Z2：Φ31.75 Tapered shaft，taper1:8，parallel key 7.96 × 7.96 × 25



P10: Φ32 Cylindrical shaft，parallel key10 × 8 × 45

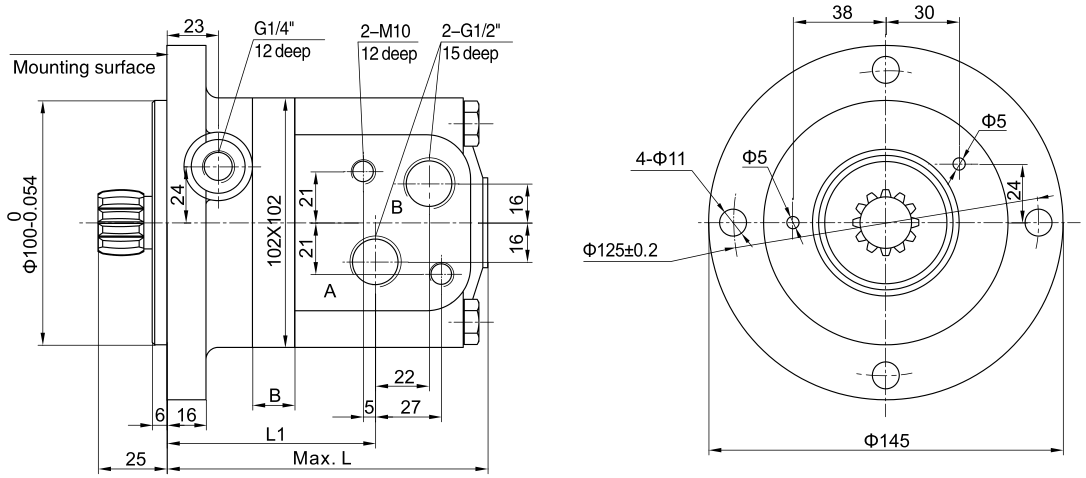


H1: Φ30 Splined shaft，6–30 × 25 × 6



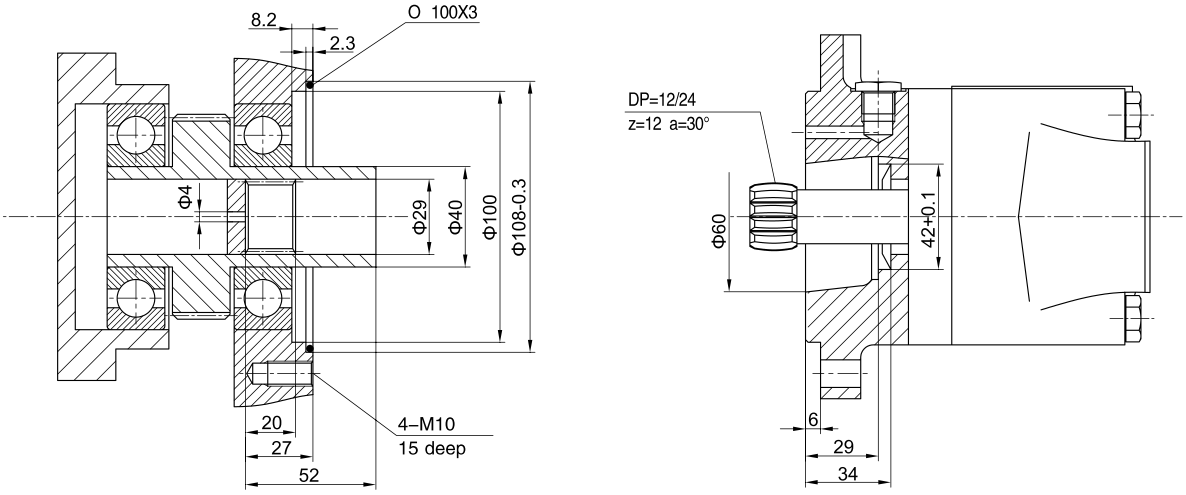
◁-- Motor mounting surface

■ BM3SY Installation

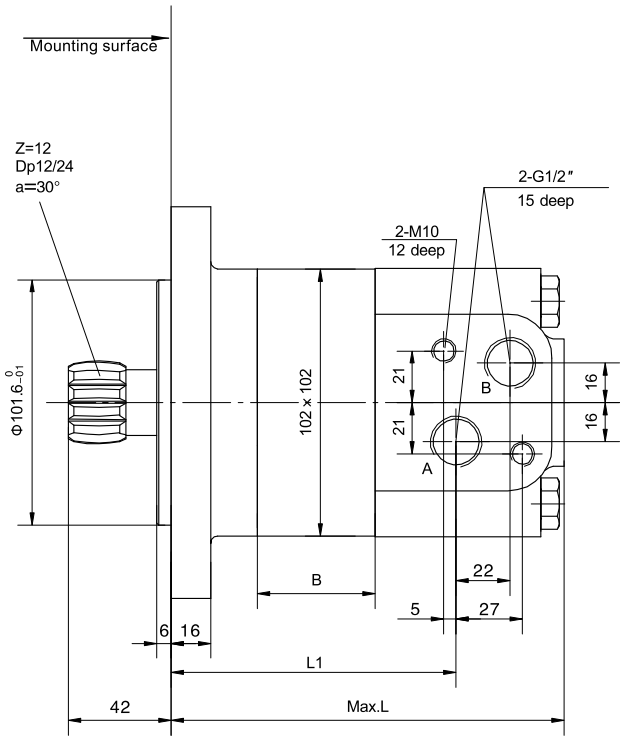


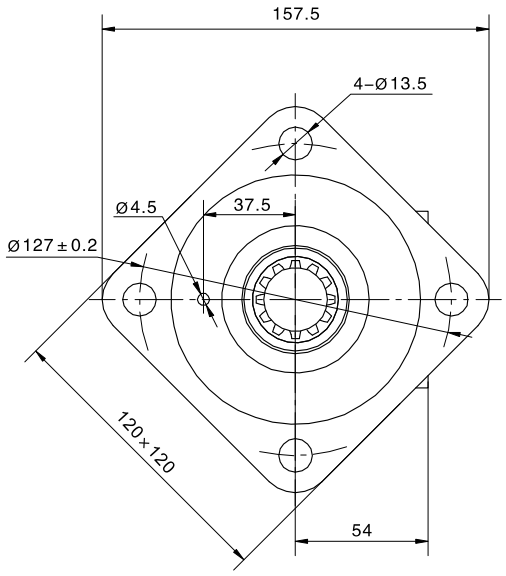
Type	BM3SY–80	BM3SY–100	BM3SY–125	BM3SY–160	BM3SY–200	BM3SY–250	BM3SY–315	BM3SY–400	BM3SY–500
L	124	127.5	132	138	145	154	166	180	193
L1	79.5	83	87.5	93.5	100.5	109.5	121.5	135.5	148.5
B	11	14.5	19	25	32	41	53	67	80

■ BM3SY DIMENSIONS OF THE ATTACHED COMPONENT



■ BM3S3Y Installation



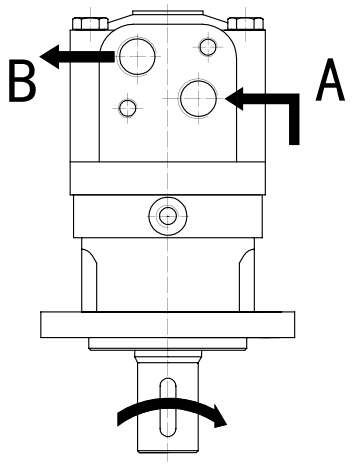


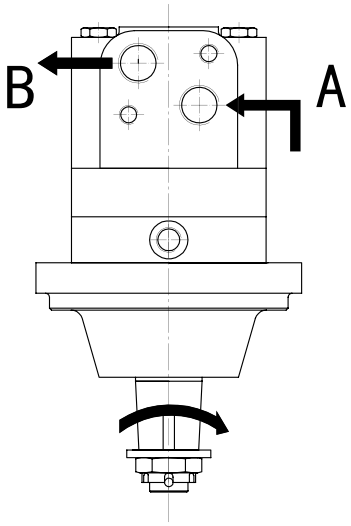
Type	BM3S3Y-80	BM3S3Y-100	BM3S3Y-125	BM3S3Y-160	BM3S3Y-200	BM3S3Y-250	BM3S3Y-315	BM3S3Y-400	BM3S3Y-500
L	124	127.5	132	138	145	154	166	180	193
L1	79.5	83	87.5	93.5	100.5	109.5	121.5	135.5	148.5
B	11	14.5	19	25	32	41	53	67	80

■ BM3Y、BM3WY、BM3SY Series Mortor

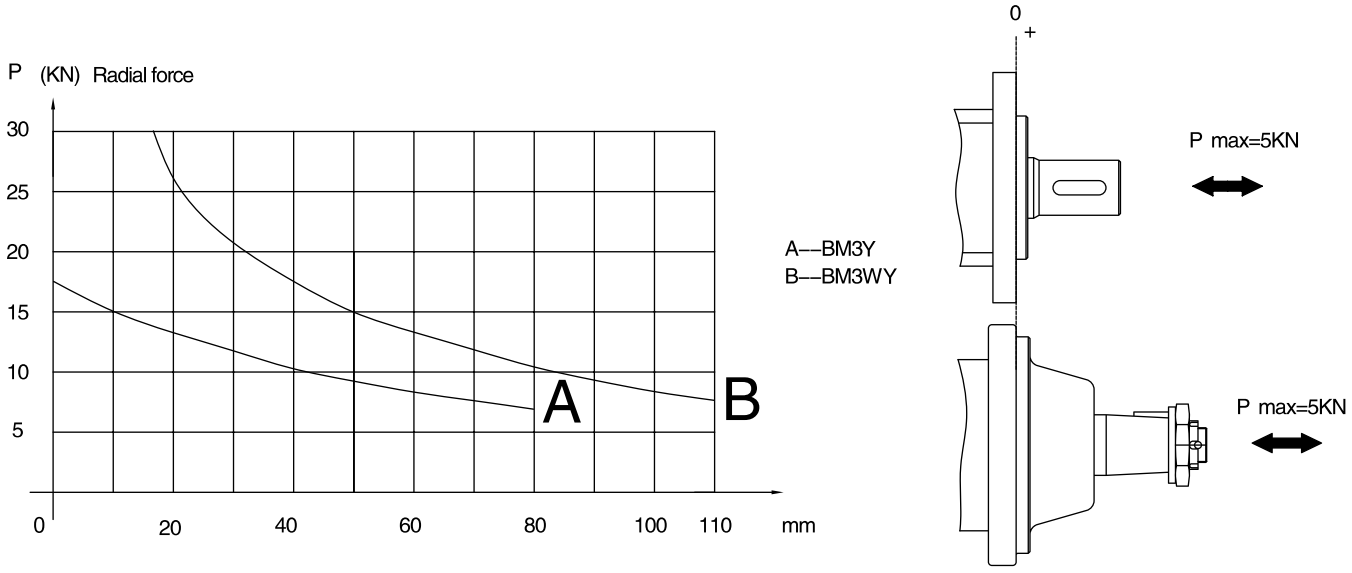
Direction of shaft ration：Standard

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





■ PERMISSIBLE SHAFT LOADS



■ BM3Y ORDERING CODE

1		2	3	4	5		6		7
BM3Y	—					/		—	

Pos.1	2	3		4	
Series	Disp	Output		Flange	
BM3Y	80 100 125 160 200 250 315 400 500	P1	Φ25 Cylindrical shaft，parallel key8×7×32	A	4–Φ13.5 Square flange, pilot Φ82.5
		P3	Φ25.4 Cylindrical shaft，parallel key6.35×6.35×32	A Ⅱ	2–Φ13.5 Oval flange, pilot Φ82.5
		P5	Φ31.75 Cylindrical shaft，parallel key7.96×7.96×32		
		P10	Φ32 Cylindrical shaft，parallel key10×8×45	A2 Ⅲ	4–Φ13.5 Square flange, pilot Φ100
		H1	Φ30 Splined shaft， 6–30×25×6	AⅣ	4–Φ13.5 Oval flange, pilot Φ82.5
		H3	Φ34.85 Splined shaft， 6–34.85×28.15×8.64		
		H51	Φ25.3 Splined shaft，6–25.3×21.4×6.2		

5			6		7	
Code	Ports		Special features		Rotation direction	
	Ports(A,B)(deep)	Drain port T(deep)				
Y	G1/2(15)	G1/4(12)	Omit	Standard	Omit	Standard
Y1	M18×1.5(15)	M14×1.5(12)				
Y2	M22×1.5(15)	M14×1.5(12)				
Y3	M20×1.5(15)	M14×1.5(12)			L	Opposite
Y5	7/8–14UNF(15)	7/16–20UNF(12)				
Y8	NPT1/2(15)	G1/4(12)				
Y10	G1/2(15)	G1/4(12)				

■ BM3WY、BM3SY、BM3S3Y ORDERING CODE

1		2	3	4	5		6		7
BM3WY	—					／		—	

Pos.1	2	3		4	
Series	Disp	Output		Flange	
BM3WY	80 100 125 160 200 250 315 400 500	P10	Φ32 Cylindrical shaft，parallel key10×8×45	A	4–Φ13.5 Square flange, pilot Φ125
		H1	Φ30 Splined shaft， 6–30×25×6		
		Z	Φ35 Tapered shaft，taper1:10，parallel key6×6×30		
		Z2	Φ31.75 Tapered shaft，taper1:8，parallel key7.96×7.96×25		

5			6		7	
	ports		Special features		Rotation direction	
Code	Ports(A,B)(deep)	Drain port T(deep)				
Y	G1/2(15)	M14×1.5(12)	Omit	Standard	Omit	Standard
Y5	7/8–14UNF(15)	7/16–20UNF(12)			L	Opposite

1		2		3
BM3SY	—		／	

Pos.1	2	3	
Series	Disp	Special features	
BM3SY	80 100 125 160 200 250 315 400 500	Omit	Standard

1		2		3
BM3S3Y	—		／	

Pos.1	2	3	
Series	Disp	Special features	
BM3S3Y	80 100 125 160 200 250 315 400 500	Omit	Standard

BM4 Orbit Hydraulic Motor With Disk Valve

BM4 TECHNICAL DATA

TYPE		BM4-160 BM4S-160 BM4W-160	BM4-200 BM4S-200 BM4W-200	BM4-250 BM4S-250 BM4W-250	BM4-320 BM4S-320 BM4W-320	BM4-400 BM4S-400 BM4W-400	BM4-500 BM4S-500 BM4W-500
Displacement(ml/r)		158.8	200.8	252.2	317.5	401.6	535.3
Max.Pressure.Drop (Mpa)	cont.	20	20	20	20	18	16
	int.	24	24	24	24	21	18
	peak.	28	28	28	28	24	21
Max.torque (N.m)	cont.	450	561	710	902	1008	1121
	int.	559	714	883	1143	1255	1377
	peak.	663	818	1021	1322	1431	1598
Max.Speed (cont.)(r/min)		625	495	395	310	245	185
Max.Flow(cont.)(L/min)		100	100	100	100	100	100
Max.Output.Power(cont.)(Kw)		20.1	25.2	25.2	25.2	22	21
Weight (kg)		20.3	20.8	21.4	22.4	23	24

BM4Y TECHNICAL DATE

TYPE		BM4Y-160	BM4Y-200	BM4Y-250	BM4Y-320	BM4Y-400	BM4Y-500
Displacement(ml/r)		158.8	200.8	252.2	317.5	401.6	535.3
Max.Pressure.Drop (Mpa)	cont.	24	24	24	23	21	18
	int.	27	27	27	26	23	20
	peak.	30	30	30	29	25	23
Max.torque (N.m)	cont.	559	714	883	1095	1255	1377
	int.	639	789	985	1227	1371	1521
	peak.	710	876	1093	1369	1490	1750
Max.Speed (cont.)(r/min)		625	495	395	310	245	185
Max.Flow(L/min)		100	100	100	100	100	100
Max.Output.Power(cont.)(Kw)		24.1	30	30	28.8	25.3	24.1
Weight (kg)		20.3	20.8	21.4	22.4	23	24

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.

■ BM4 PERFORMANCE DATA

BM4 160[158.8cm³/rev]
Pressure (Mpa)

Flow(L/min)	4	8	10	12	16	20	24
10	85	169	219	264	347	429	514
	61	**60**	**59**	**57**	**55**	**51**	**45**
20	86	174	225	266	357	441	535
	123	**122**	**119**	**116**	**111**	**105**	**97**
40	87	173	226	266	366	452	550
	254	**251**	**248**	**241**	**235**	**228**	**216**
60	79	171	226	266	366	450	549
	378	**374**	**369**	**363**	**356**	**347**	**337**
80	75	166	220	265	364	447	544
	502	**499**	**495**	**488**	**480**	**472**	**457**
Max.cont. 100	67	154	209	258	355	437	536
	626	**623**	**618**	**610**	**602**	**594**	**581**
Max.int. 125	56	142	211	251	345	430	530
	785	**779**	**773**	**765**	**756**	**746**	**729**

Max.cont. Max.int.

BM4 200[200.8cm³/rev]
Pressure (Mpa)

Flow(L/min)	4	8	10	12	16	20	24
10	119	221	275	323	431	532	636
	48	**47**	**46**	**43**	**40**	**38**	**34**
20	120	227	283	330	445	547	661
	97	**96**	**94**	**92**	**89**	**86**	**77**
40	115	229	281	334	451	560	680
	199	**197**	**195**	**191**	**187**	**182**	**171**
60	111	225	280	334	454	560	682
	306	**301**	**298**	**296**	**288**	**282**	**269**
80	103	220	275	333	450	557	680
	403	**401**	**397**	**392**	**385**	**378**	**367**
Max.cont. 100	94	216	272	327	447	551	676
	503	**500**	**496**	**492**	**485**	**477**	**470**
125	80	198	262	316	436	538	662
	627	**623**	**619**	**614**	**607**	**600**	**584**
Max.int. 150	67	184	247	308	425	526	648
	758	**754**	**749**	**741**	**731**	**720**	**696**

Max.cont. Max.int.

BM4 250[252.2cm³/rev]
Pressure (Mpa)

Flow(L/min)	4	8	10	12	16	20	24
10	134	277	344	406	542	689	800
	39	**39**	**38**	**37**	**35**	**33**	**32**
20	139	287	353	419	563	708	828
	78	**77**	**76**	**74**	**72**	**69**	**64**
40	135	292	361	427	575	723	858
	159	**157**	**155**	**152**	**149**	**145**	**137**
60	128	285	361	428	574	705	861
	242	**241**	**238**	**234**	**228**	**223**	**211**
80	125	275	353	420	569	699	860
	323	**322**	**320**	**314**	**309**	**305**	**290**
Max.cont. 100	123	274	344	414	565	695	853
	404	**402**	**399**	**395**	**389**	**380**	**366**
125	113	252	330	402	551	682	838
	505	**502**	**498**	**492**	**485**	**478**	**463**
Max.int. 150	85	235	310	385	535	666	822
	603	**600**	**596**	**591**	**583**	**576**	**558**

Max.cont. Max.int.

BM4 320[317.5cm³/rev]
Pressure (Mpa)

Flow(L/min)	4	8	10	12	16	20	24
10	175	345	430	518	697	847	1011
	31	**30**	**29**	**28**	**27**	**26**	**24**
20	180	361	449	534	719	871	1054
	62	**61**	**60**	**58**	**56**	**54**	**52**
40	182	362	460	542	735	906	1092
	126	**125**	**123**	**120**	**117**	**114**	**109**
60	180	361	473	544	733	914	1096
	189	**187**	**185**	**181**	**178**	**176**	**166**
80	170	354	459	540	730	906	1095
	251	**249**	**248**	**243**	**238**	**234**	**224**
Max.cont. 100	161	342	447	537	720	895	1086
	314	**313**	**310**	**307**	**303**	**297**	**284**
125	140	321	427	519	708	874	1071
	391	**389**	**386**	**382**	**378**	**373**	**360**
Max.int. 150	113	303	412	501	677	849	1042
	471	**469**	**466**	**462**	**457**	**444**	**438**

Max.cont. Max.int.

BM4 400[401.6cm³/rev]
Pressure (Mpa)

Flow(L/min)	3	6	9	12	15	18	21
10	165	343	524	669	827	982	1130
	25	**24**	**23**	**22**	**21**	**20**	**19**
20	167	346	528	679	841	1001	1156
	51	**50**	**49**	**46**	**44**	**42**	**40**
40	165	346	530	685	859	1020	1181
	99	**98**	**96**	**93**	**90**	**86**	**82**
60	163	338	526	682	860	1024	1187
	149	**147**	**143**	**139**	**135**	**131**	**125**
80	155	330	517	672	853	1014	1181
	199	**197**	**194**	**190**	**186**	**182**	**176**
Max.cont. 100	140	317	503	662	838	998	1171
	249	**247**	**245**	**241**	**235**	**231**	**225**
125	126	289	490	643	816	977	1142
	311	**309**	**307**	**303**	**298**	**294**	**287**
Max.int. 150	118	273	475	623	797	954	1119
	375	**373**	**369**	**365**	**361**	**357**	**350**

(Torque) : 797Nm
(Speed) : 361r/min

Max.cont. Max.int.

BM4 500[535.3cm³/rev]
Pressure (Mpa)

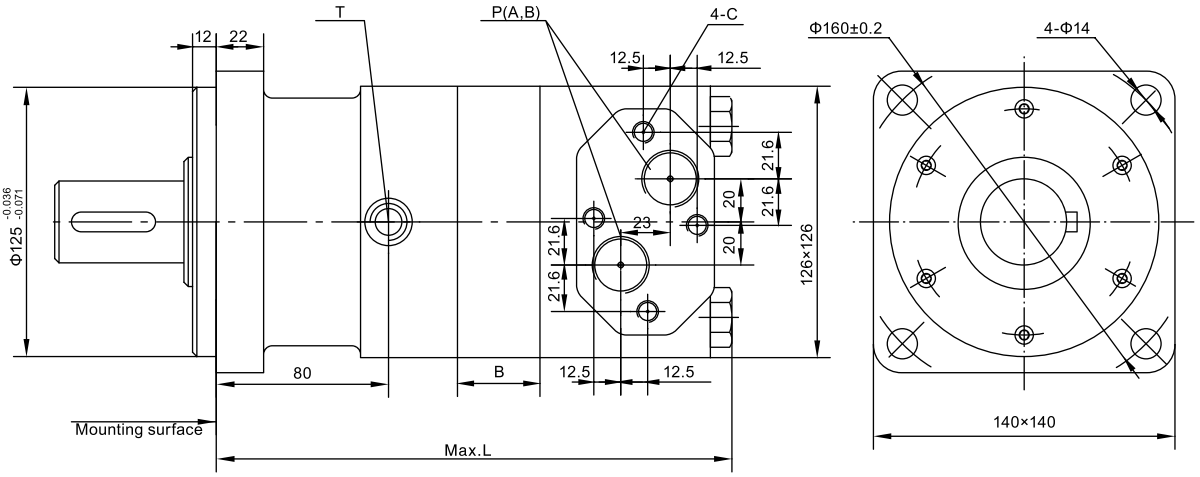
Flow(L/min)	3	6	9	12	14	16	18
10	204	415	637	821	966	1098	1233
	18	**18**	**18**	**17**	**16**	**15**	**13**
20	213	427	656	845	984	1122	1267
	37	**36**	**35**	**34**	**33**	**32**	**30**
40	212	429	669	866	1007	1145	1308
	75	**74**	**73**	**72**	**70**	**68**	**64**
60	207	421	657	866	1001	1146	1296
	113	**112**	**111**	**109**	**107**	**105**	**101**
80	196	397	640	853	990	1145	1289
	151	**150**	**149**	**147**	**145**	**143**	**138**
Max.cont. 100	179	387	626	829	978	1126	1272
	189	**188**	**187**	**185**	**183**	**181**	**177**
125	168	366	590	807	942	1103	1244
	237	**236**	**235**	**233**	**231**	**229**	**225**
Max.int. 150	135	339	569	785	924	1074	1219
	284	**283**	**282**	**280**	**278**	**276**	**272**

Max.cont. Max.int.

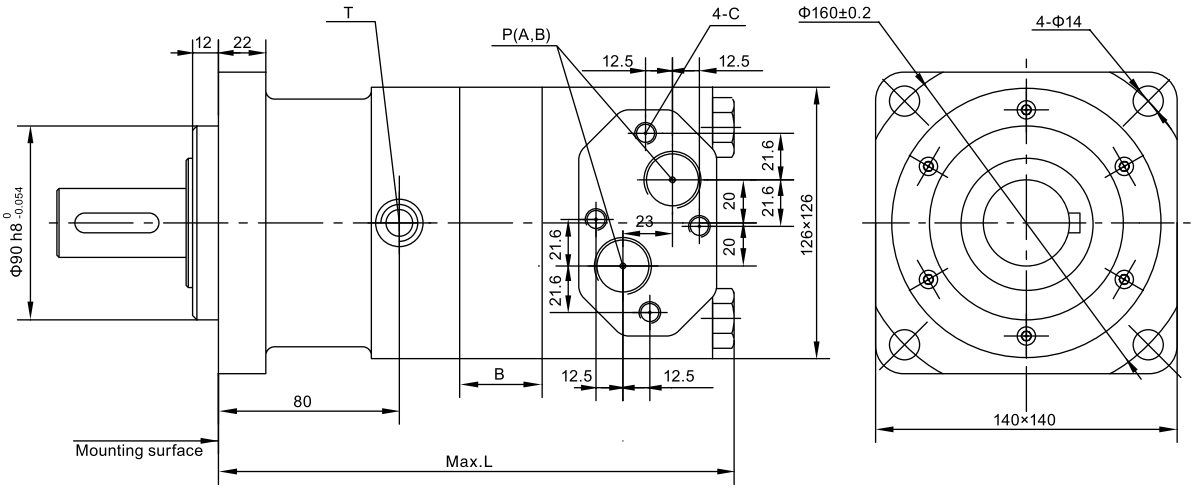
Cont.
Int.

■ BM4 Installation

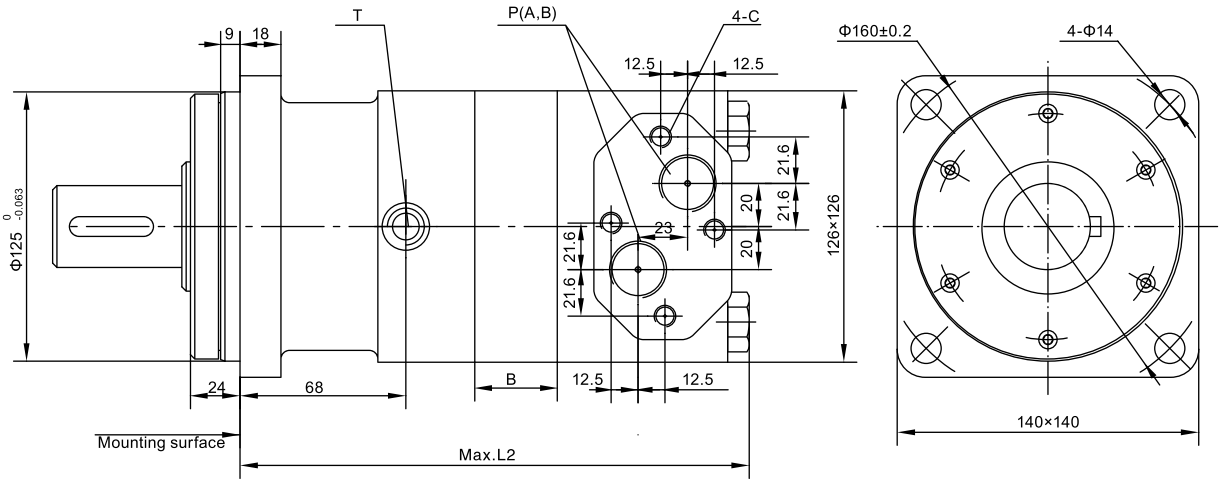
Square flange A



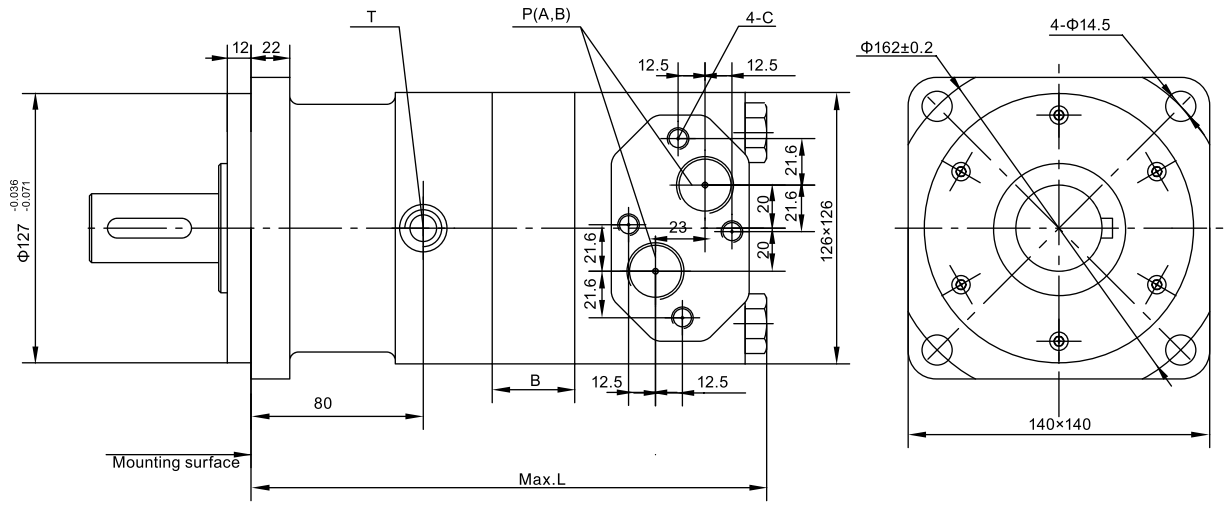
Square flange A1



Square flange A4



■ BM4 Installation



Type	BM4–160	BM4–200	BM4–250	BM4–320	BM4–400	BM4–500
L	217.5	222	227.5	234.5	243.5	262
B	12	16.5	22	29	38	56.5
L2	205.5	210	215.5	222.5	231.5	250

■ BM4 PORTS CODE

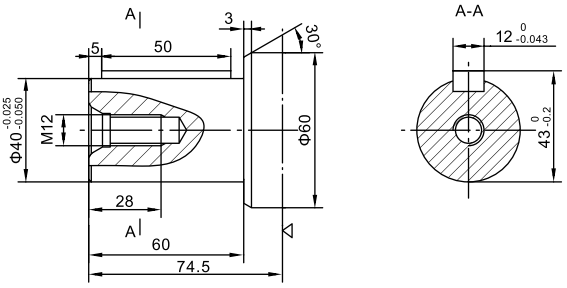
Ports / Code	P(A、B)(deep)	C (deep)	T (deep)
Y	G3/4 (15)	M10 (12)	G1/4(12)
Y3	M27 × 2(15)	M10 (12)	M14 × 1.5(12)
Y4	M22 × 1.5(15)	M10 (12)	M14 × 1.5(12)
Y8	7/8–14UNF(15)	—	7/16–20UNF(12)
Y10	1 1/16–12UN(15)	—	9/16–18UNF(12)

P(A、B)––Ports，C––Mounting Thread （—Indicates no this thread），T––Drain connettion

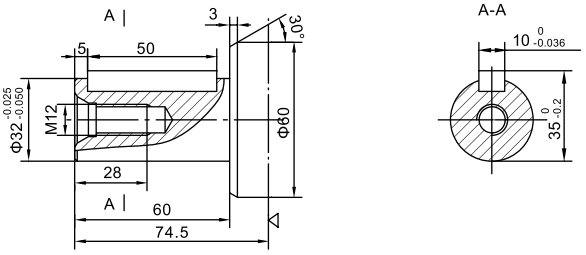
■ BM4 SHAFT VERSION

Only match A,A1,A7 flange

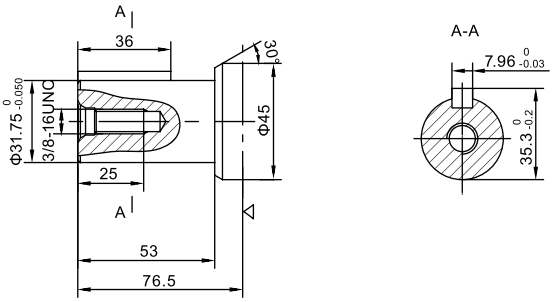
P: Φ40 Cylindrical shaft，parallel key12 × 8 × 50



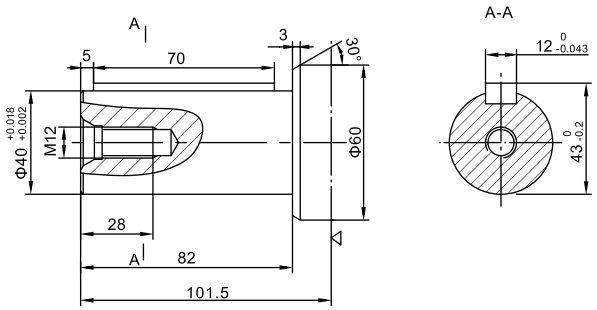
P1： Φ32 Cylindrical shaft，parallel key10 × 8 × 50



P13: Φ31.75 Cylindrical shaft，parallel key7.96 × 7.96 × 36



P33: Φ40 Cylindrical shaft，parallel key12 × 8 × 70

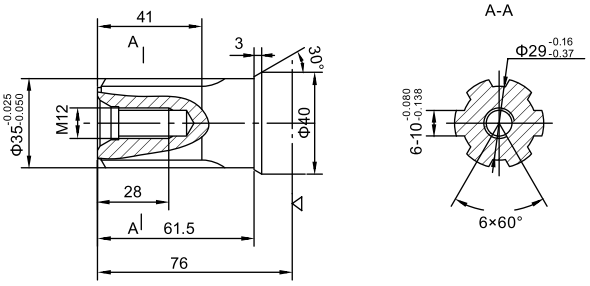


◁ : Motor mounting surface

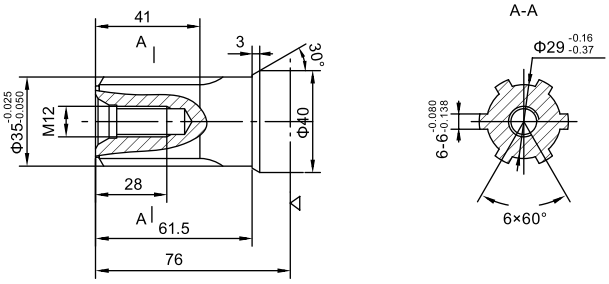
■ BM4 SHAFT VERSION

Only match A,A1,A7 flange

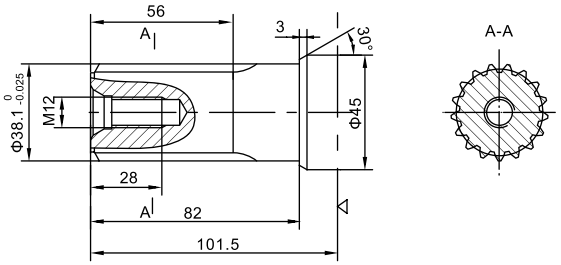
H4: Φ35 Splined shaft，6–35 × 29 × 10



H5: Φ35 Splined shaft，6–35 × 29 × 6



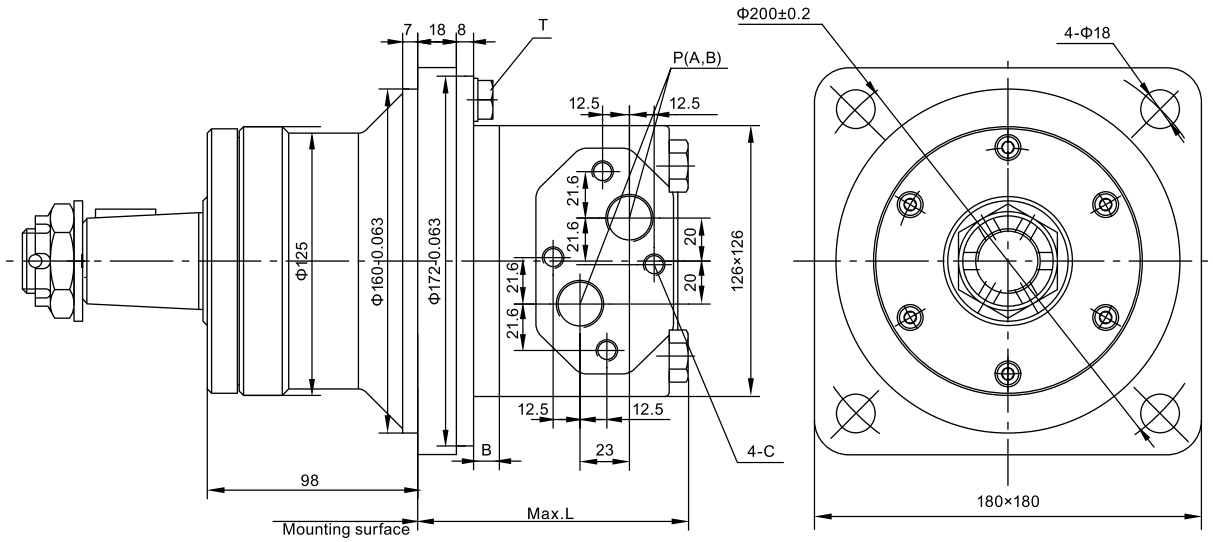
K3: Φ38.1 involute splined shaft 17–DP12/24 a=30°



Note: Flange with A4 type, hydraulic motor shaft from the mounting surface to increase 12mm.

◁ : Motor mounting surface

■ BM4W ORDERING CODE



Type	BM4W–160	BM4W–200	BM4W–250	BM4W–320	BM4W–400	BM4W–500
L	131.5	136	142.5	149.5	158.5	177
B	12	16.5	22	29	38	56.5

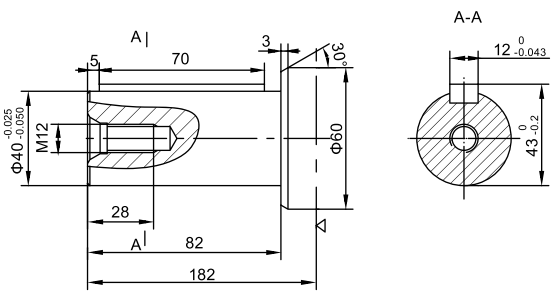
■ BM4W PORTS CODE

Ports / Code	P(A、B)(deep)	C (deep)	T (deep)
Y	G3/4 (15)	M10 (12)	G1/4(12)

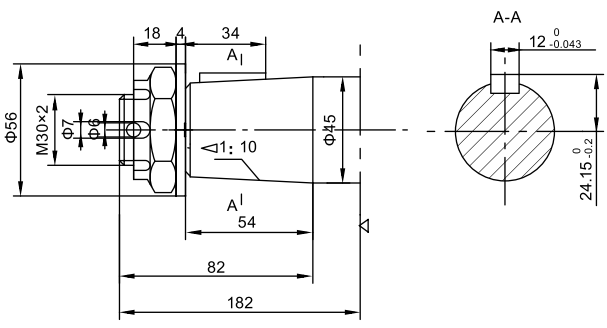
P(A、B)--Ports，C--Mounting Thread （—Indicates no this thread），T--Drain connettion

■ BM4W SHAFT VERSION

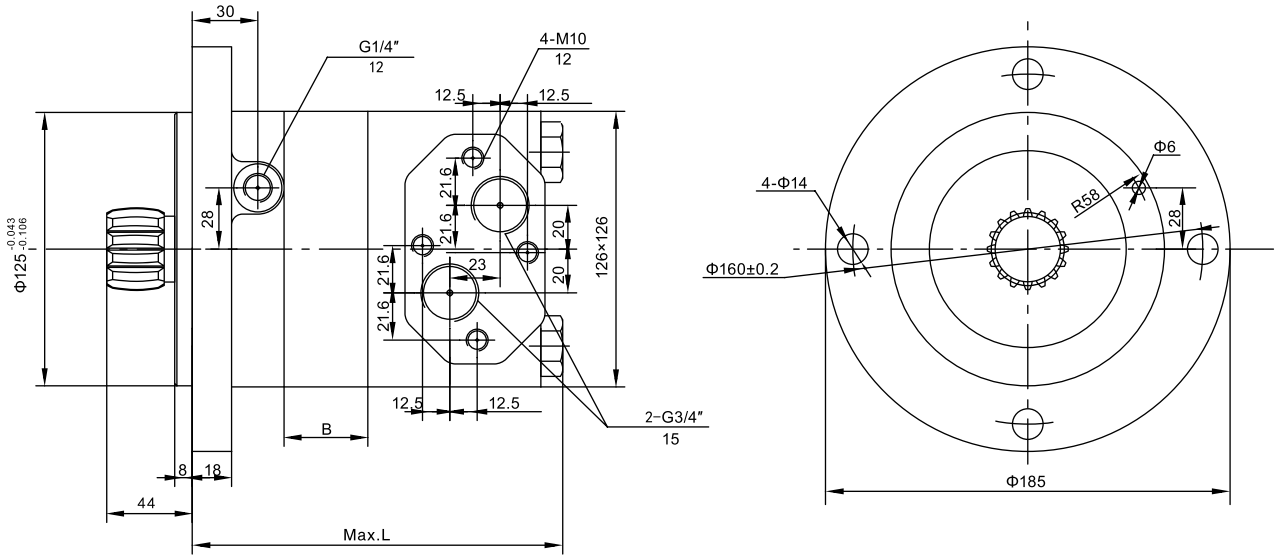
P31: Φ40 Cylindrical shaft，parallel key12 × 8 × 70



Z2: Φ45 Tapered shaft，taper1:10， parallel key 12 × 8 × 28

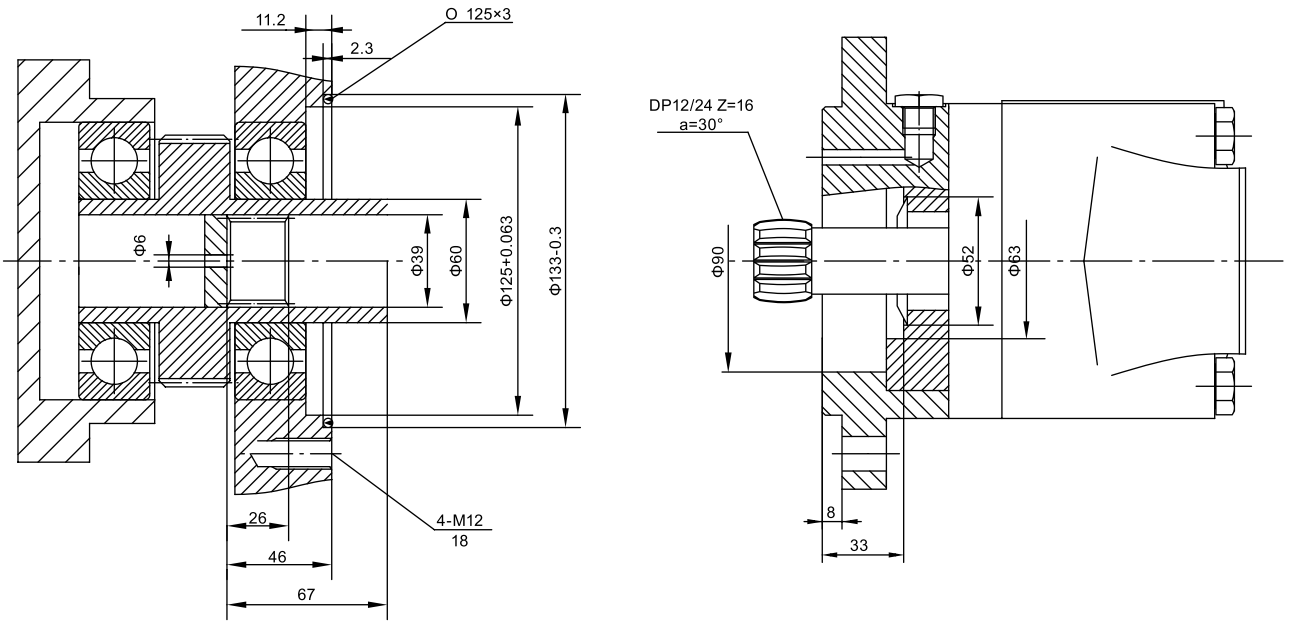


■ BM4S INSTALLATION



Type	BM4S-160	BM4S-200	BM4S-250	BM4S-320	BM4S-400	BM4S-500
L	148.5	153	158.5	165.5	174.5	193
B	12	16.5	22	29	38	56.5

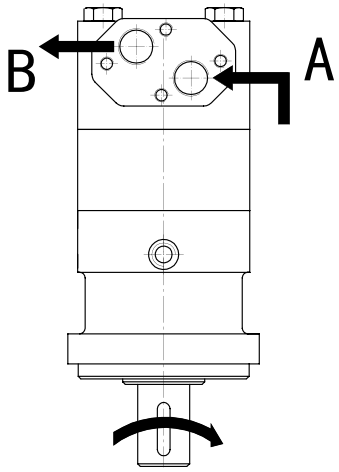
■ BM4S SHAFT VERSION

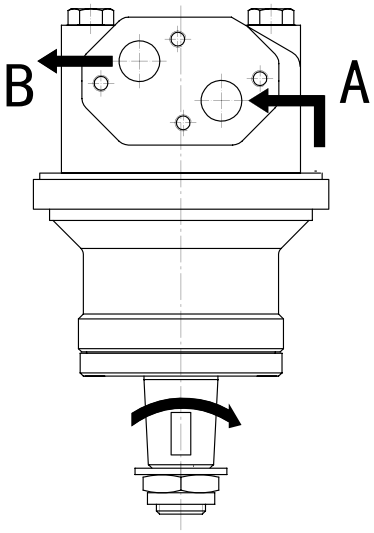


■ BM4、BM4W、BM4S Series Mortor

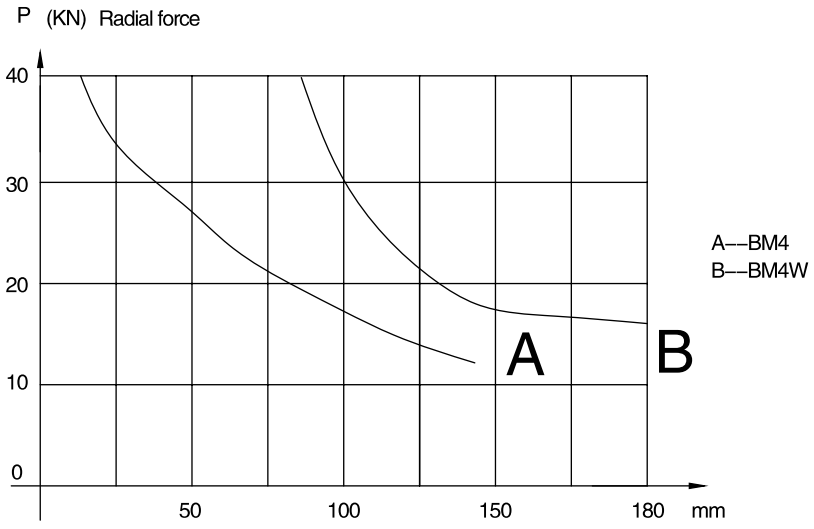
Direction of shaft ration：Standard

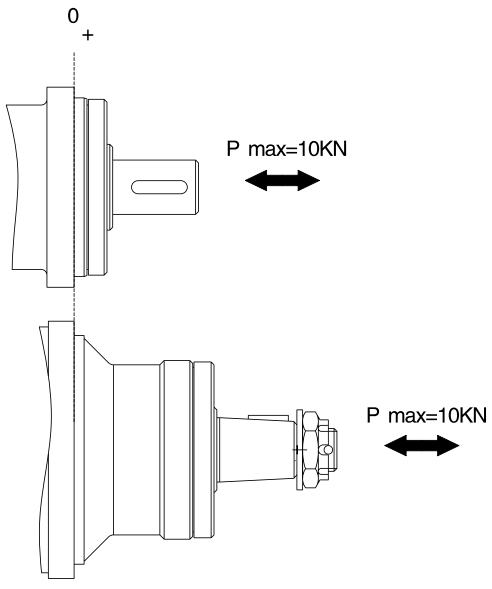
When facing shaft end of motor，shaft to rotate：
Clockwise when port “A” is pressurized.
Counter–clockwise port “B” is pressurized.





■ PERMISSIBLE SHAFT LOADS





■ BM4、BM4W、BM4S ORDERING CODE

1		2	3	4	5		6		7
BM4	—					/		—	

Pos.1	2	3		4	
Series	Disp	Output		Flange	
BM4	160	P33	Φ40 Cylindrical shaft，parallel key12×8×70	A	4–Φ14 Oval flange, pilot Φ125
	200	P	Φ40 Cylindrical shaft，parallel key12×8×50		
	250	P1	Φ32 Cylindrical shaft，parallel key10×8×50	A1	4–Φ14 Oval flange, pilot Φ90
		P13	Φ31.75 Cylindrical shaft，parallel key7.96×7.96×36		
	320	H4	Φ35 Splined shaft， 6–35×29×10	A4	4–Φ14 Oval flange, pilot Φ125
	400	H5	Φ35 Splined shaft， 6–35×29×6		
	500	K3	Φ38.1 involute splined shaft，17–DP12/24 a=30°	A7	4–Φ14.5 Oval flange, pilot Φ127

5			6		7	
Code	Ports		Special features		Rotation direction	
	Ports(A,B)(deep)	Drain port T(deep)				
Y	G3/4(15)	G1/4(12)	Omit	Standard	Omit	Standard
Y3	M27×2(15)	M14×1.5(12)				
Y4	M22×1.5(15)	M14×1.5(12)	T7	With dustproof ring	L	Opposite
Y8	7/8–14UNF(15)	7/16–20UNF(12)				
Y10	1 1/16–12UN(15)	9/16–18UNF(12)				

■ BM4、BM4W、BM4S ORDERING CODE

1		2	3	4	5		6		7
BM4W	—					/		—	

Pos.1	2	3		4	
Series	Disp	Output		Flange	
BM4W	160 200 250 320 400 500	P31	Φ40 Cylindrical shaft，parallel key12×8×70	A	4–Φ18 Oval flange, pilotΦ160
		Z2	Φ45 Tapered shaft，taper1:10，parallel keyB12×8×28		

5			6		7	
Code	Ports		Special features		Rotation direction	
	Ports(A,B)(deep)	Drain port T(deep)				
Y	G3/4(15)	G1/4(12)	Omit	Standard	Omit L	Standard Opposite

1		2		3
BM4S	—		/	

Pos.1	2	3	
Series	Disp	Special features	
BM4S	160 200 250 320 400 500	Omit	Standard

BM5 Orbit Hydraulic Motor With Disk Valve

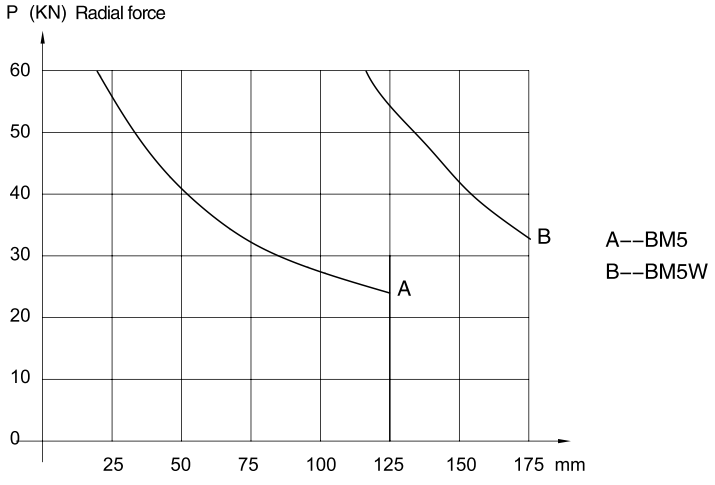
■ BM5 TECHNICAL DATA

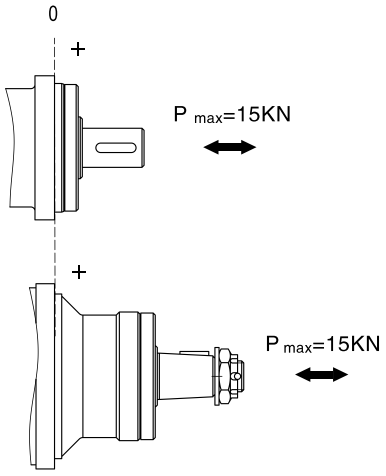
TYPE		BM5-315 BM5S-315 BM5W-315	BM5-400 BM5S-400 BM5W-400	BM5-500 BM5S-500 BM5W-500	BM5-630 BM5S-630 BM5W-630	BM5-800 BM5S-800 BM5W-800	BM5-985 BM5S-985 BM5W-985
Displacement(ml/r)		314.9	399.7	496.6	617.8	787.4	969.1
Max.Pressure.Drop (Mpa)	cont.	20	20	20	18	16	14
	int.	24	24	24	21	18	16
	peak.	28	28	28	24	21	18
Max.torque (N.m)	cont.	873	1108	1385	1570	1773	1900
	int.	1119	1440	1783	1951	2122	2133
	peak.	1293	1650	2060	2249	2481	2399
Max.Speed(cont.)(r/min)		475	375	300	240	190	150
Max.Flow(cont.)(L/min)		150	150	150	150	150	150
Max.Output.Power(cont.)(Kw)		32	32	32	32	32	24
Weight (kg)		30.7	31.5	32.4	33.6	35.2	37.2

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





■ BM5 PERFORMANCE DATA

BM5 315[314.9ml/r]
Pressure (Mpa)

Flow(L/min)	3.5	7	10	14	18	20 (Max.cont.)	24 (Max.int.)
10	132 / **28**	278 / **25**	416 / **24**	576 / **23**	701 / **21**	799 / **18**	945 / **15**
20	145 / **58**	297 / **57**	440 / **56**	601 / **55**	744 / **54**	846 / **51**	1011 / **47**
50	141 / **153**	295 / **152**	439 / **150**	618 / **148**	770 / **145**	884 / **141**	1051 / **134**
75	135 / **233**	287 / **231**	433 / **228**	607 / **223**	771 / **219**	888 / **214**	1057 / **206**
100	129 / **311**	281 / **309**	427 / **307**	601 / **304**	765 / **299**	885 / **294**	1047 / **286**
125	116 / **389**	270 / **387**	418 / **385**	592 / **382**	755 / **378**	870 / **372**	1033 / **365**
150 (Max.cont.)	108 / **471**	260 / **469**	411 / **467**	581 / **462**	745 / **455**	856 / **447**	1019 / **434**
160	101 / **503**	253 / **501**	406 / **497**	575 / **493**	737 / **487**	846 / **478**	1011 / **465**
200 (Max.int.)	77 / **631**	235 / **629**	389 / **624**	560 / **618**	716 / **610**	823 / **598**	989 / **576**

BM5 400[399.7ml/r]
Pressure (Mpa)

Flow(L/min)	3.5	7	10	14	18	20 (Max.cont.)	24 (Max.int.)
10	175 / **21**	367 / **21**	542 / **20**	740 / **19**	923 / **18**	1050 / **17**	1233 / **15**
20	187 / **46**	380 / **46**	563 / **45**	778 / **44**	964 / **42**	1099 / **41**	1284 / **39**
50	191 / **119**	384 / **118**	575 / **118**	803 / **117**	992 / **115**	1131 / **113**	1364 / **108**
75	186 / **183**	376 / **181**	569 / **178**	799 / **174**	995 / **171**	1133 / **165**	1366 / **159**
100	164 / **247**	367 / **246**	566 / **244**	789 / **242**	988 / **238**	1130 / **234**	1359 / **225**
125	159 / **310**	357 / **308**	556 / **305**	778 / **302**	974 / **296**	1123 / **288**	1348 / **281**
150 (Max.cont.)	151 / **372**	344 / **371**	533 / **369**	764 / **366**	962 / **361**	1111 / **351**	1326 / **340**
175	136 / **436**	330 / **434**	528 / **431**	748 / **427**	944 / **422**	1092 / **415**	1314 / **407**
200 (Max.int.)	113 / **498**	316 / **496**	511 / **492**	735 / **485**	924 / **477**	1076 / **470**	1294 / **460**

BM5 500[496.6ml/r]
Pressure (Mpa)

Flow(L/min)	3.5	7	10	14	18	20 (Max.cont.)	24 (Max.int.)
10	232 / **18**	448 / **18**	667 / **17**	919 / **17**	1140 / **16**	1296 / **14**	1540 / **11**
20	235 / **38**	480 / **37**	707 / **37**	961 / **35**	1180 / **34**	1335 / **33**	1588 / **30**
50	230 / **97**	479 / **96**	726 / **95**	982 / **94**	1217 / **92**	1388 / **89**	1670 / **84**
75	223 / **146**	477 / **145**	720 / **143**	987 / **141**	1234 / **138**	1413 / **133**	1692 / **125**
100	218 / **197**	470 / **195**	717 / **193**	983 / **190**	1235 / **186**	1410 / **181**	1686 / **173**
125	211 / **247**	463 / **246**	711 / **244**	971 / **241**	1226 / **237**	1399 / **233**	1672 / **225**
150 (Max.cont.)	193 / **300**	445 / **299**	693 / **296**	966 / **293**	1198 / **288**	1369 / **282**	1663 / **271**
175	174 / **350**	427 / **349**	681 / **347**	955 / **343**	1186 / **339**	1347 / **334**	1643 / **324**
200 (Max.int.)	154 / **401**	405 / **400**	648 / **398**	933 / **395**	1167 / **390**	1327 / **382**	1626 / **370**

BM5 630[617.8ml/r]
Pressure (Mpa)

Flow(L/min)	3.5	6	9	12	15	18 (Max.cont.)	21 (Max.int.)
10	260 / **15**	484 / **14**	753 / **14**	1020 / **13**	1175 / **13**	1436 / **12**	1654 / **11**
20	267 / **30**	512 / **30**	778 / **29**	1021 / **29**	1219 / **28**	1490 / **26**	1728 / **24**
50	268 / **78**	514 / **78**	805 / **77**	1054 / **74**	1264 / **73**	1559 / **71**	1813 / **67**
75	250 / **118**	508 / **117**	800 / **114**	1038 / **112**	1253 / **110**	1557 / **107**	1821 / **101**
100	245 / **157**	499 / **156**	794 / **154**	1013 / **152**	1251 / **149**	1552 / **146**	1822 / **140**
125	233 / **198**	478 / **197**	776 / **195**	993 / **193**	1238 / **191**	1538 / **187**	1808 / **181**
150 (Max.cont.)	222 / **238**	459 / **237**	757 / **236**	985 / **234**	1233 / **232**	1530 / **229**	1787 / **221**
175	195 / **279**	450 / **278**	738 / **277**	975 / **274**	1205 / **270**	1517 / **265**	1769 / **260**
200 (Max.int.)	169 / **320**	435 / **320**	696 / **318**	944 / **316**	1187 / **313**	1493 / **306**	1746 / **294**

BM5 800[787.4ml/r]
Pressure (Mpa)

Flow(L/min)	2.5	5	8	10	13	16 (Max.cont.)	18 (Max.int.)
10	273 / **11**	555 / **10**	816 / **10**	1076 / **9**	1381 / **8**	1683 / **8**	1882 / **7**
20	277 / **23**	561 / **22**	831 / **22**	1130 / **21**	1431 / **20**	1753 / **18**	1960 / **16**
50	283 / **61**	572 / **60**	841 / **58**	1142 / **57**	1438 / **55**	1760 / **53**	1967 / **49**
75	264 / **93**	570 / **92**	840 / **91**	1145 / **89**	1440 / **85**	1756 / **82**	1962 / **78**
100	247 / **124**	556 / **123**	826 / **122**	1121 / **120**	1423 / **117**	1737 / **113**	1951 / **107**
125	238 / **156**	526 / **155**	810 / **153**	1099 / **150**	1403 / **145**	1709 / **141**	1942 / **135**
150 (Max.cont.)	232 / **188**	517 / **186**	794 / **184**	1083 / **181**	1377 / **177**	1685 / **172**	1926 / **166**
175	211 / **251**	495 / **249**	780 / **247**	1061 / **244**	1354 / **241**	1669 / **236**	1903 / **229**
200 (Max.int.)	194 / **302**	460 / **301**	752 / **300**	1045 / **298**	1339 / **293**	1652 / **288**	1807 / **282**

(Torque) : 1045Nm
(Speed) : 298r/min

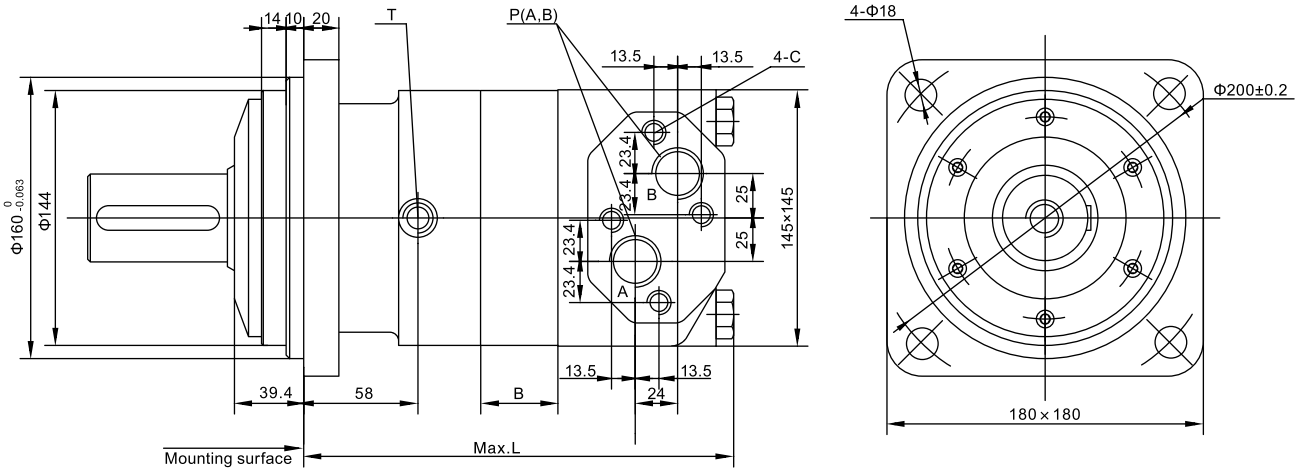
Cont.
Int.

BM5 985[969.1ml/r]
Pressure (Mpa)

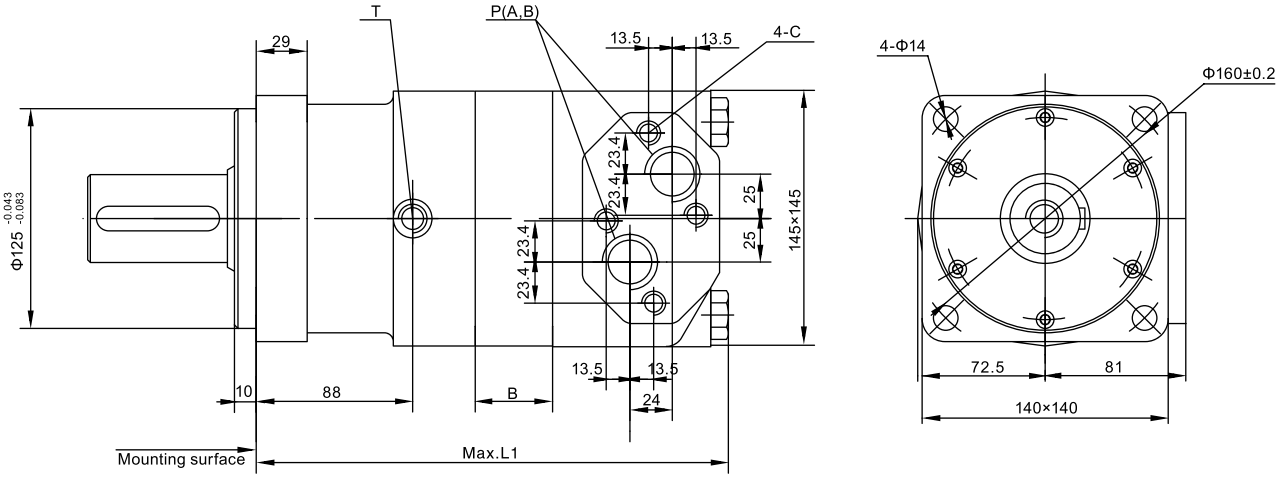
Flow(L/min)	2.5	5	7	10	14 (Max.cont.)	16 (Max.int.)
10	305 / **9**	627 / **9**	951 / **9**	1371 / **8**	1936 / **7**	2212 / **6**
20	313 / **29**	634 / **28**	957 / **27**	1380 / **26**	1938 / **23**	2222 / **21**
50	319 / **48**	641 / **47**	971 / **46**	1392 / **44**	1973 / **42**	2232 / **39**
75	311 / **74**	629 / **73**	966 / **72**	1395 / **69**	1961 / **67**	2228 / **64**
100	303 / **100**	621 / **99**	962 / **97**	1388 / **95**	1952 / **92**	2196 / **88**
125	297 / **126**	611 / **125**	955 / **123**	1379 / **120**	1946 / **116**	2177 / **112**
150 (Max.cont.)	272 / **152**	589 / **151**	941 / **149**	1339 / **147**	1922 / **143**	2162 / **136**
175	258 / **178**	568 / **176**	926 / **174**	1310 / **170**	1885 / **165**	2114 / **158**
200 (Max.int.)	163 / **245**	502 / **242**	849 / **238**	1240 / **234**	1787 / **230**	1991 / **223**

■ BM5 Installation

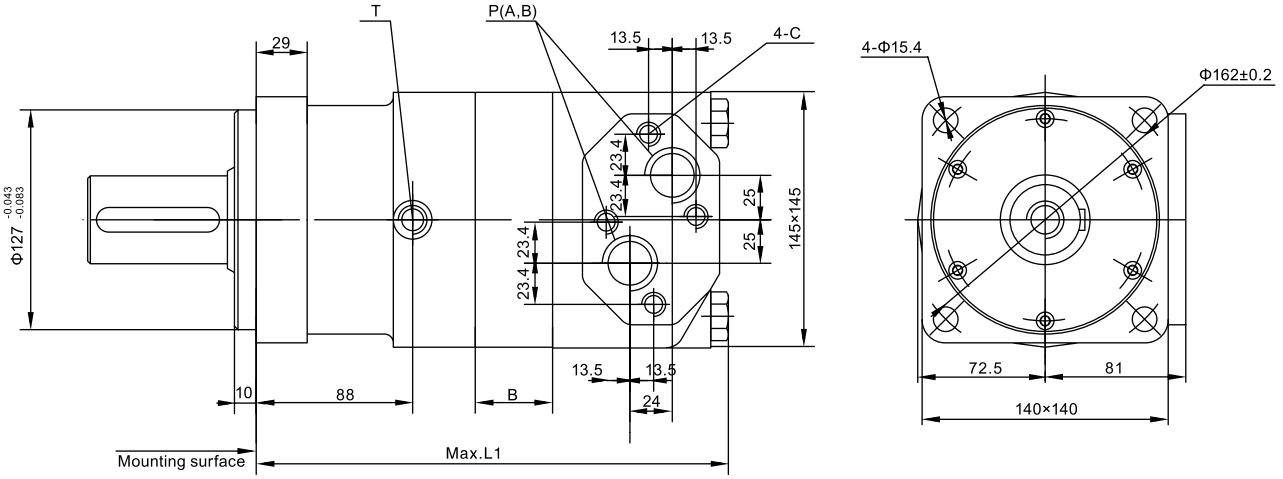
A Square flange A



A1 Square flange A1



A7 Square flange A7



BM5 Orbit Hydraulic Motor With Disk Valve

Type	BM5–315	BM5–400	BM5–500	BM5–630	BM5–800	BM5–985
L	216	223	231	241	255	270
L1	246	253	261	271	285	300
B	19	26	34	44	58	73

■ BM5 PORTS CODE

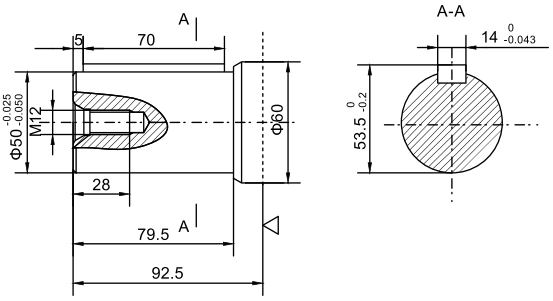
Ports / Code	P(A、B)(deep)	C (deep)	T (deep)
Y	G1 (18)	M12(12)	G1/4(12)
Y1	G3/4(18)	M12(12)	G1/4(12)
Y2	M33 × 2(18)	M12(12)	M14 × 1.5(12)
Y3	M27 × 2(18)	M12(12)	M14 × 1.5(12)
Y8	1 5/16–12UN(18)	—	9/16–18UNF(12)

P(A、B)––Ports，C––Mounting Thread （—Indicates no this thread），T––Drain connettion

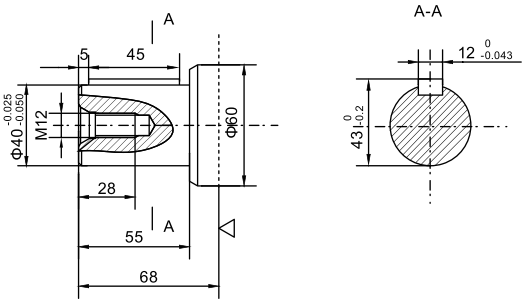
■ BM5 SHAFT VERSION

Only match A1,A7 flange

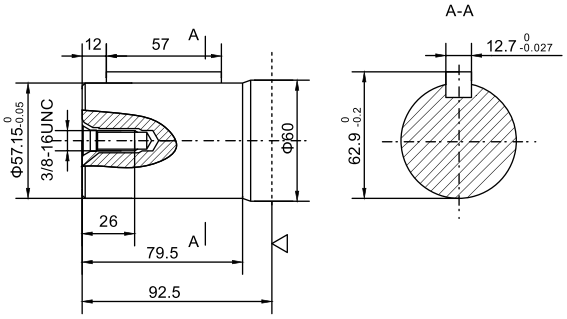
P: Φ50 Cylindrical shaft，parallel key14 × 9 × 70



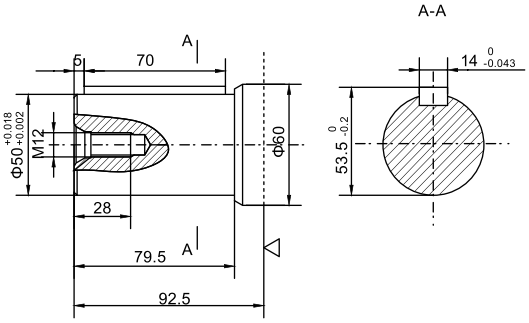
P1：Φ40 Cylindrical shaft，parallel key12 × 8 × 45



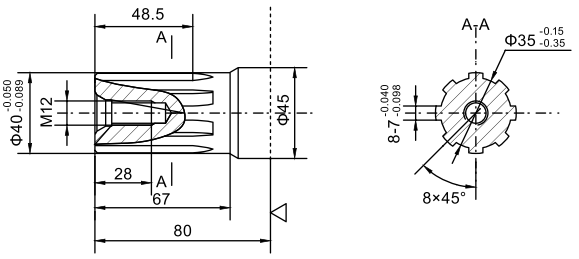
P12: Φ57.15 Cylindrical shaft，parallel key12.7 × 12.7 × 57



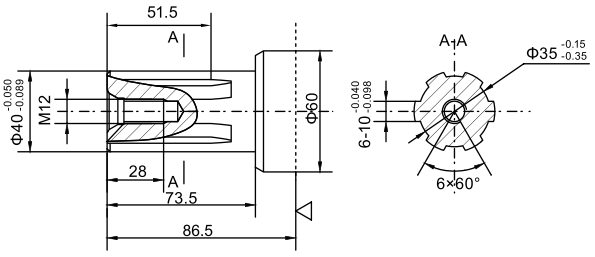
P99: Φ50 Cylindrical shaft，parallel key14 × 9 × 70



H4: Φ40 Splined shaft，8–40 × 35 × 7



H5: Φ40 Splined shaft，6–40 × 35 × 10

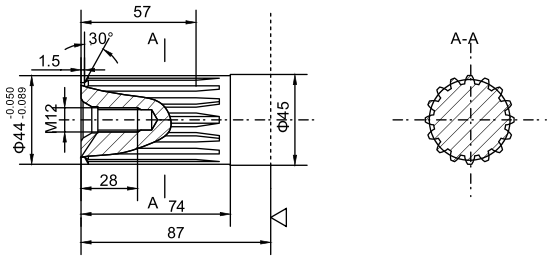


◁ : Motor mounting surface

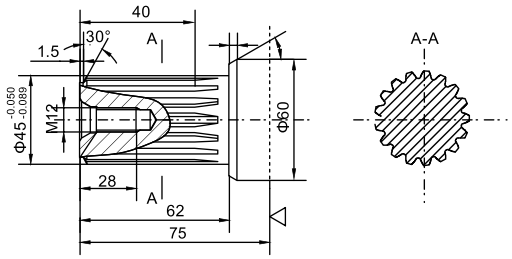
■ BM5 SHAFT VERSION

Only match A1,A7 flange

K2: Φ44 involute splined shaft m2.5 z16 a=30°



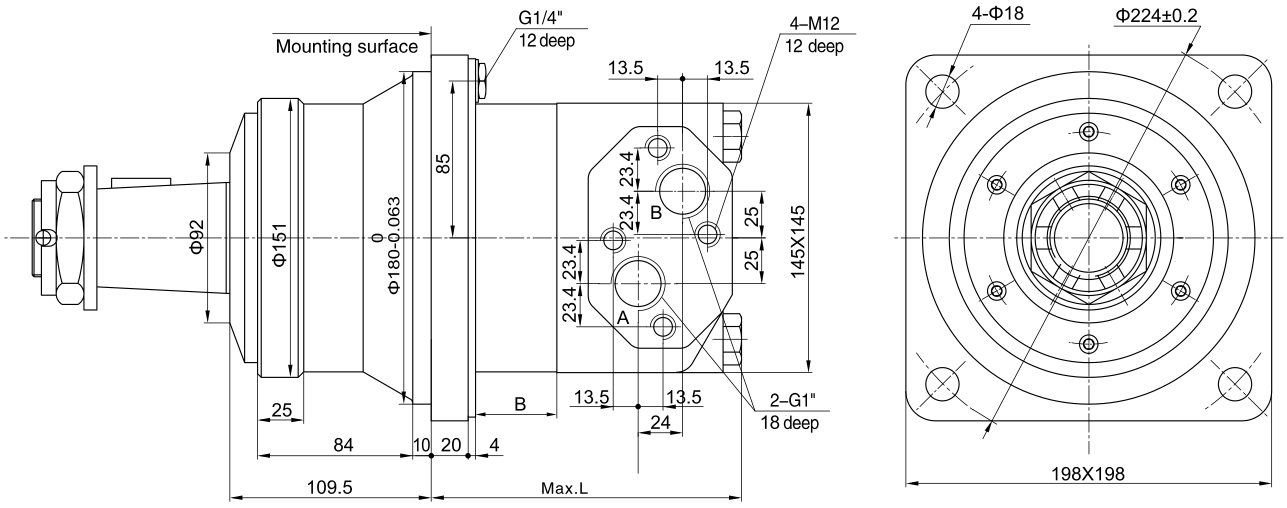
K3: Φ45 involute splined shaft m2.5 z17 a=30°



Note: Flange with A type, hydraulic motor shaft from the mounting surface to increase 30mm.

◁ : Motor mounting surface

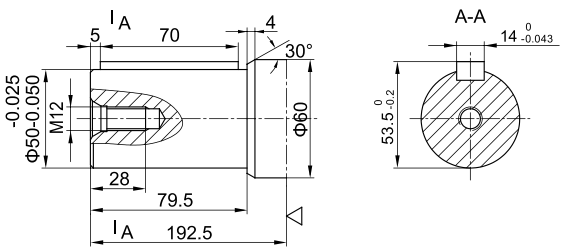
■ BM5W Installation



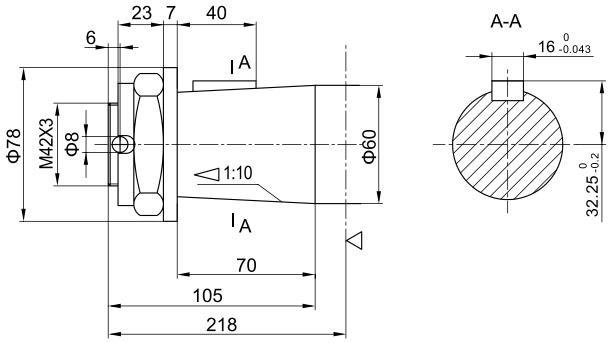
TYPE	BM5W-315	BM5W-400	BM5W-500	BM5W-630	BM5W-800	BM5W-985
L	148	155	163	174	187	202
B	19	26	34	44	58	73

■ BM5W SHAFT VERSION

P：Φ50 Cylindrical shaft, parallel key 14X9X70

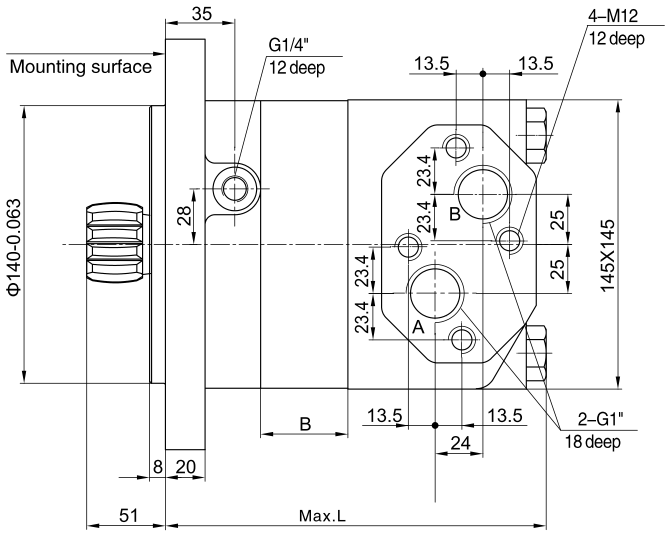


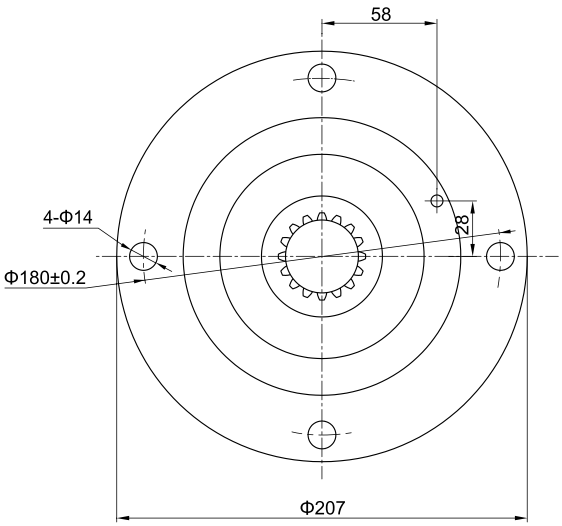
Z：Φ60 Tapered shaft, taper1: 10, parallel key 16X10X32



◁-- Motor mounting surface

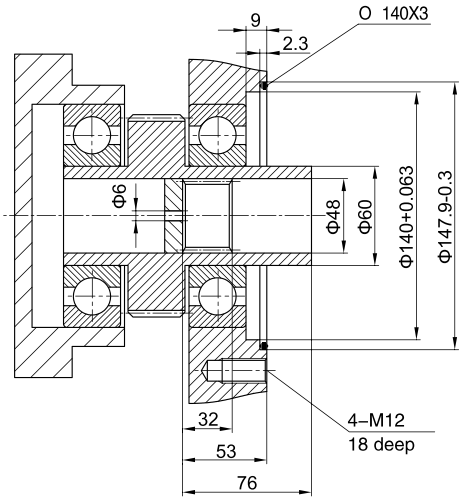
■ BM5S Installation

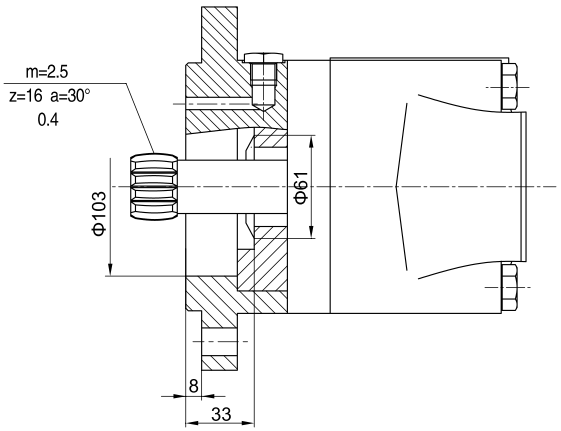




TYPE	BM5S-315	BM5S-400	BM5S-500	BM5S-630	BM5S-800	BM5S-985
L	170	177	185	195	209	224
B	19	26	34	44	58	73

■ BM5S SHAFT VERSION

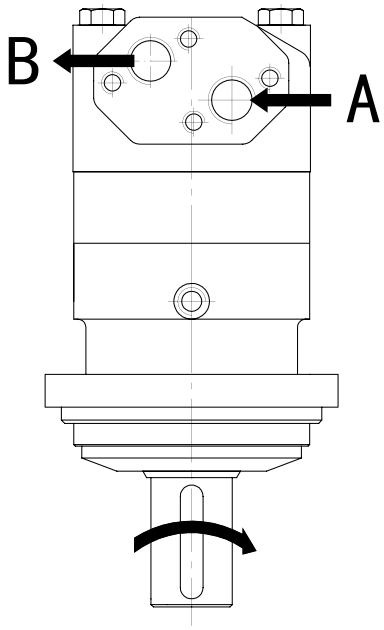


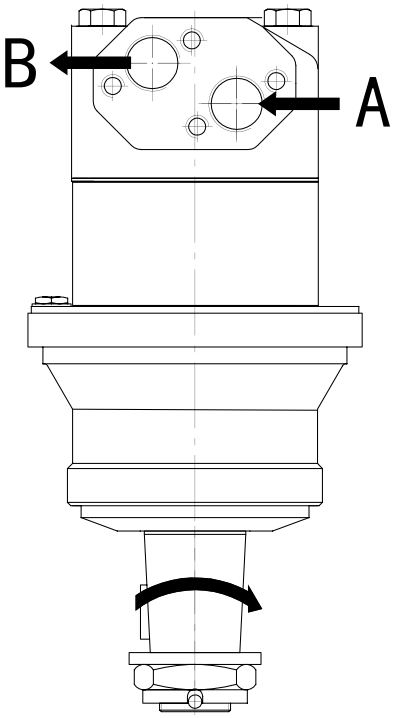


■ BM5、BM5W、BM5S Series Mortor

Direction of shaft ration：Standard

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





■ BM5、BM5W、BM5S ORDERING CODE

1		2	3	4	5		6		7
BM5	—					/		—	

Pos.1	2	3		4	
Series	Disp	Output		Flange	
BM5	315	P	Φ50 Cylindrical shaft，parallel key14×9×70	A	4–Φ18 Square flange, pilot Φ160
	400	P1	Φ40 Cylindrical shaft，parallel key12×8×45		
		P12	Φ57.15 Cylindrical shaft，parallel key12.7×12.7×57		
	500	P99	Φ50 Cylindrical shaft，parallel key14×9×70	A1	4–Φ14 Square flange, pilot Φ125
	630	H4	Φ40 Splined shaft，8–40×35×7		
		H5	Φ40 Splined shaft，6–40×35×10		
	800	K2	Φ44 involute splined shaft，m2.5,z16,a=30°	A7	4–Φ15.4 Square flange, pilot Φ127
	985	K3	Φ45 involute splined shaft，m2.5,z17,a=30°		

5			6		7	
Code	Ports		Special features		Rotation direction	
	Ports(A,B)(deep)	Drain port T(deep)				
Y	G1(18)	G1/4(12)	Omit	Standard	Omit	Standard
Y1	G3/4(18)	G1/4(12)				
Y2	M33×2(18)	M14×1.5(12)			L	Opposite
Y3	M27×2(18)	M14×1.5(12)				
Y8	1 5/16–12UN(18)	9/16–18UNF(12)				

■ BM5、BM5W、BM5S ORDERING CODE

1		2	3	4	5		6		7
BM5W	—					/		—	

Pos.1	2	3		4	
Series	Disp	Output			Flange
BM5W	315 400 500 630 800 985	P	Φ50 Cylindrical shaft，parallel key14×9×70	A	4–Φ18 Square flange, pilotΦ180
		Z	Φ60 Tapered shaft，taper1:10， parallel key 16×10×32		

5			6		7	
Code	Ports		Special features		Rotation direction	
	Ports(A,B)(deep)	Drain port T(deep)				
Y	G1(18)	G1/4(12)	Omit	Standard	Omit L	Standard Opposite

1		2		3
BM5S	—		/	

Pos.1	2	3	
Series	Disp	Special features	
BM5S	315 400 500 630 800 985	Omit	Standard

BM6 Orbit Hydraulic Motor With Disk Valve

■ BM6 TECHNICAL DATA

TYPE		BM6-800	BM6-1000	BM6-1250
Displacement(ml/r)		759.6	949.5	1186.8
Max.Pressure.Drop (Mpa)	cont.	16	16	16
	int.	18	18	18
	peak.	21	21	21
Max.torque (N.m)	cont.	1690	2160	2650
	int.	1903	2379	2973
	peak.	2220	2774	3469
Speed.Range(cont.)(r/min)		5-200	5-160	5-130
Max.Flow(cont.)(L/min)		160	160	160
Max.Output.Power(cont.)(Kw)		35	35	35
Weight (kg)		54	56	58

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

■ BM6 PERFORMANCE DATA

BM6 800[759.6ml/r]
Pressure (Mpa)

Flow(L/min)	3	5	7	10.5	12	14	16	18
10	233 **13**	490 **13**	683 **12**					
15	230 **20**	485 **20**	680 **19**	1005 **17**	1145 **16**	1340 **15**		
30	297 **39**	481 **38**	678 **38**	1003 **37**	1142 **37**	1336 **36**	1685 **35**	1921 **32**
45	295 **58**	479 **58**	675 **57**	1000 **57**	1140 **56**	1332 **55**	1680 **54**	
60	292 **77**	476 **77**	671 **76**	998 **75**	1138 **75**	1329 **74**	1699 **74**	
75	288 **96**	473 **95**	668 **94**	995 **94**	1135 **93**	1325 **92**	1695 **91**	
90	283 **115**	471 **114**	660 **113**	990 **113**	1132 **112**	1320 **111**	1690 **110**	
105	280 **135**	463 **134**	650 **133**	982 **132**	1120 **130**	1312 **129**		
120		451 **153**	635 **152**	968 **151**	1111 **149**	1300 **147**		
140		440 **178**	620 **176**	952 **175**	1101 **173**			
Max.cont. 160			612 **198**	932 **197**	1092 **196**			
Max.int. 190			**241**	913 **240**	1071 **238**			

Max.cont. Max.int.

BM6 1000[949.5ml/r]
Pressure (Mpa)

Flow(L/min)	3	5	7	10.5	12	14	16	18
15	366 **14**	602 **13**	836 **13**	1250 **12**	1438 **11**			
30	364 **31**	600 **31**	834 **30**	1248 **30**	1432 **29**	1669 **28**		
45	362 **46**	598 **45**	832 **45**	1245 **44**	1428 **43**	1667 **43**		
60	360 **62**	595 **61**	830 **61**	1242 **60**	1420 **59**	1662 **58**	2012 **57**	2316 **54**
75	358 **77**	593 **76**	828 **75**	1240 **74**	1418 **73**	1658 **72**	2006 **72**	
90	354 **93**	590 **92**	826 **92**	1238 **91**	1415 **90**	1651 **89**	2003 **88**	
105	350 **108**	581 **107**	801 **106**	1221 **105**	1402 **104**	1648 **103**		
120		571 **123**	791 **122**	1210 **121**	1394 **120**	1432 **119**		
140		552 **143**	772 **142**	1196 **140**	1385 **139**	1425 **138**		
Max.cont. 160			761 **163**	1186 **162**	1368 **161**			
Max.int. 190			742 **193**	1165 **192**	1352 **191**			

Max.cont. Max.int.

(Torque) : 1165Nm
(Speed) : 192r/min

Cont.
Int.

■ BM6 PERFORMANCE DATA

BM6 1250[1186.8ml/r

Pressure (Mpa)

Flow(L/min)	3	5	7	10.5	12	14	16	18
30	468 **25**	770 **24**	1070 **23**	1602 **22**				
45	465 **37**	767 **36**	1068 **35**	1599 **34**	1826 **33**			
60	462 **50**	763 **49**	1065 **48**	1596 **47**	1822 **45**			
75	460 **62**	760 **61**	1062 **60**	1592 **58**	1818 **57**	2123 **57**	2654 **56**	2978 **52**
90	456 **74**	758 **73**	1060 **72**	1590 **71**	1816 **70**	2118 **68**	2652 **67**	2975 **64**
105	453 **87**	756 **86**	1058 **85**	1587 **84**	1814 **82**	2116 **82**	2650 **81**	2973 **79**
120		751 **98**	1050 **97**	1582 **96**	1802 **95**	2110 **93**	2641 **92**	2963 **91**
140		742 **113**	1041 **112**	1561 **111**	1792 **109**	2008 **107**		
Max.cont. 160			1032 **129**	1550 **128**	1782 **127**	1986 **126**		
Max.int. 190			1020 **153**	1532 **152**	1770 **151**			

Max.cont. Max.int.

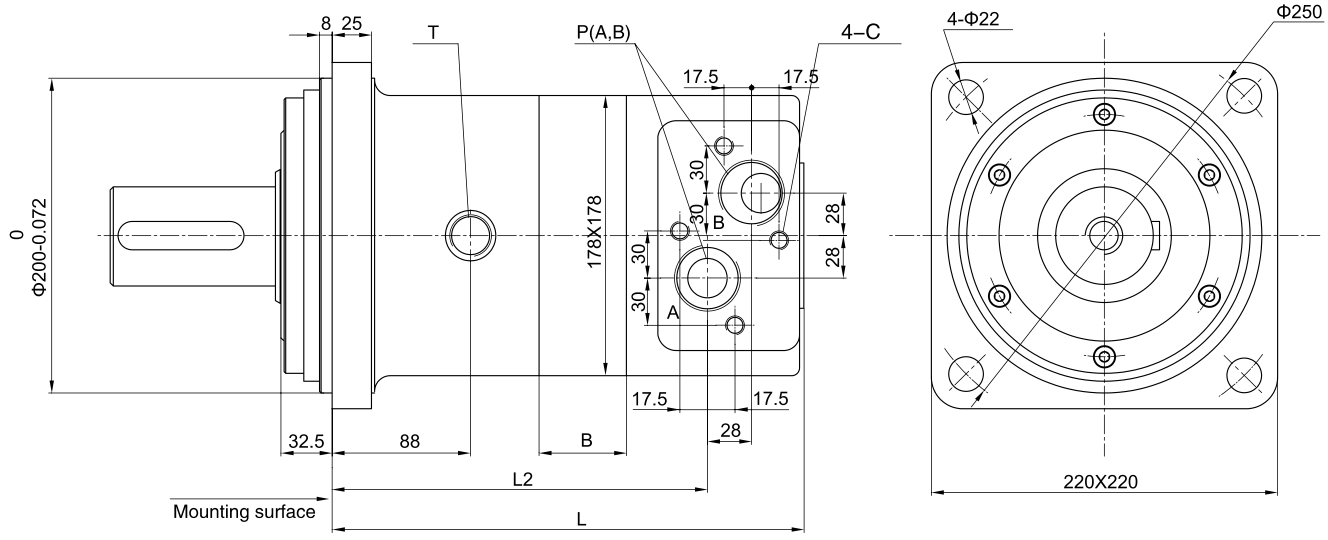
(Torque) : 1532Nm
(Speed) : 152r/min

Cont.

Int.

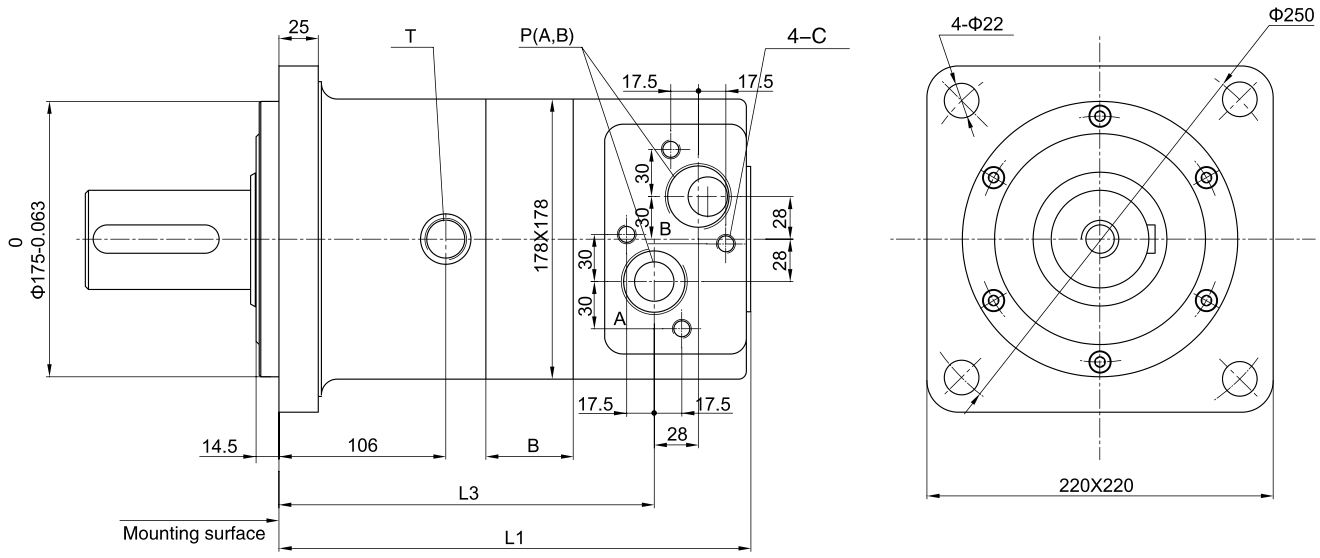
■ BM6 Installation

4–Φ22 square flange A



■ BM6 Installation

4–Φ22 square flange A1



TYPE	BM6-800	BM6-1000	BM6-1250
L	278	288	300
L1	296	306	318
L2	217	227	239
L3	235	245	257
B	33	43	55.5

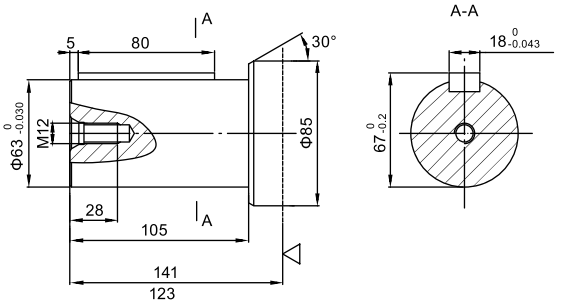
■ BM6 PORTS CODE

Ports / Code	P(A、B)(deep)	C（ deep ）	T（ deep ）
Y	G1–1/4(20)	M12(12)	G3/8″ (12)
Y1	Φ36(20)	M12(12)	G3/8″ (12)

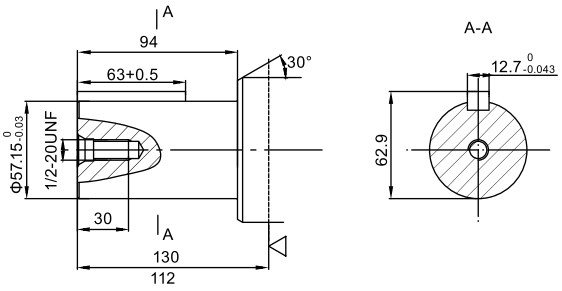
P(A、B)––Ports，C––Mounting Thread （—Indicates no this thread），T––Drain connettion

■ BM6 SHAFT VERSION

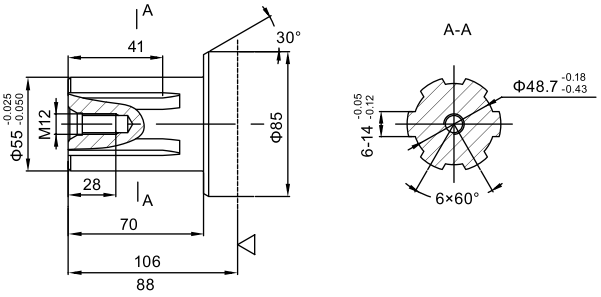
P： Φ63 Cylindrical shaft，parallel key18 × 11 × 80



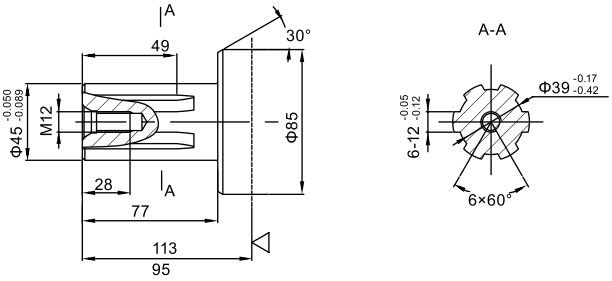
P1： Φ57.15 Cylindrical shaft，parallel key C12.7x11x63



H1: Φ55 Splined shaft，6–55 × 48.7 × 14



H2: Φ45 Splined shaft，6–45 × 39 × 12

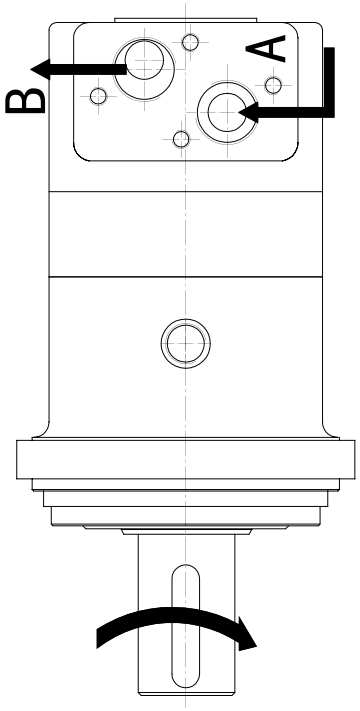


◁ : Motor mounting surface

■ BM6 Series Mortor

Direction of shaft ration：Standard

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



■ BM6 ORDERING CODE

1		2	3	4	5		6		7
BM6	—					/		—	

Pos.1	2	3		4	
Series	Disp	Output			
BM6	800 1000 1250	P	Φ63 Cylindrical shaft，parallel key 18×11×80	A	4–Φ22 Square flange, pilot Φ200
		P1	Φ57.15 Cylindrical shaft，parallel key C12.7×11×63		
		H1	Φ55 Splined shaft，6–55×48.7×14	A1	4–Φ22 Square flange, pilot Φ175
		H2	Φ45 Splined shaft，6–45×39×12		

5			6		7	
Code	Ports		Special features		Rotation direction	
	Ports(A,B)(deep)	Drain port T(deep)				
Y	G1 1/4(20)	G3/8″ (12)	Omit	Standard	Omit	Standard
Y1	Φ36(20)	G3/8″ (12)			L	Opposite

APPENDIX

■ COMPARISON

	BMP	BMR	BM3Y	BM3SY	BM4	BM4S	BM5	BM5S	BM6
Danfoss	OMP	OMR	OMS	OMSS	OMT	OMTS	OMV	OMVS	–
M+S	EPM	EPRM	EPMS	–	EPMT	–	EPMV	–	–

■ USAGE AND NOTICE

1、Selecting motor by standard technical data.
2、The motor must be coaxial with the driven part and the bracket should be stiff enough.
3、Working temperature is 25~55 ℃, maximum temperature is 65 ℃. Hydraulic oil with kenimatic viscosity 25~70mm^2/s (50 ℃) is recommended. The filter is about 20μm. The oil must be clear, polluted oil will damage the motor badly.
4、For BM4-6 there should be a pipe connected the drain port and the oil tank; for BMR、BMP、BM3 the back pressure should be lower than 0.7Mpa, if the back pressure is higher than 1.0Mpa, a drain line should be connected to the oil tank.
5、If nonstandard motor is needed, please contact our technical department.

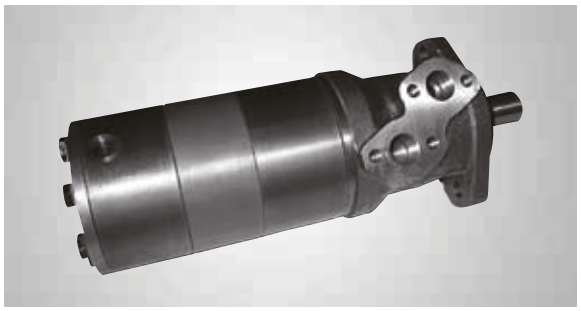
■ COMMON UNIT AND CONVERSION

N	1 N = 10^{-3} KN
kgf	1 kgf = 9.81 N
lbf	1 lbf = 4.45 N
bar	1 bar = 10^5 Pa = 14.5 Psi
Pa	1 Pa = 1 N/m^2 = 10^{-6} MPa
N · m	
kgf · m	1kgf·m=9.81 N·m

■ FORMULA

(一) n	(二) Ts	(三) Ps
$n=\frac{q_s}{V}\eta_V$ (r/min) q_s –– (L/min) V –– (L/r) η_V ––	$Ts=\frac{\Delta pV}{2\pi}\eta_m$ (N·m) Δp –– (MPa) V –– (ml/r) η_m ––	Ps=n*Ts/9550

ZBMR Hydraulic Motor with Braker



INTRODUCTION

ZBMR are BMR orbit hydraulic motor with multi-disc brake. There are shuttle valve and inner hydraulic control system. It has small volume, short radial dimension, low weight and easy to install. It's widely applied in construction machinery, shipping machinery, cranes, mining, port, metallurgical industry, etc.

ORDERING CODE

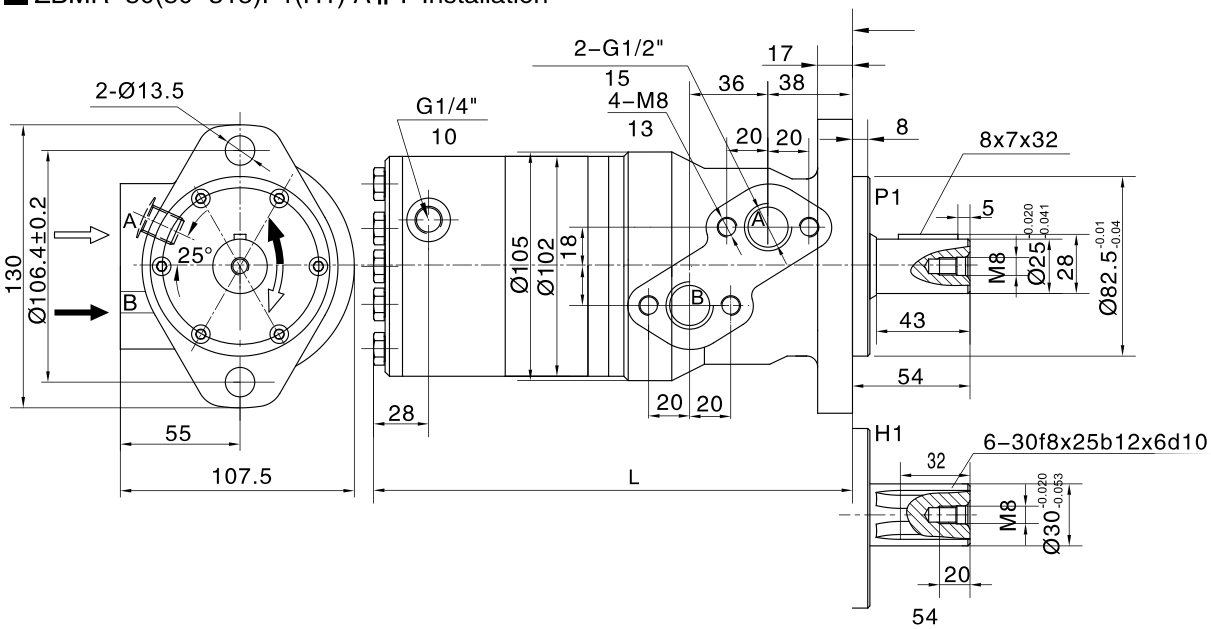
		1	2	3	4		5
ZBMR	-					/	

1、Displacement
2、Output shaft
P1– Standard flat key H1– Standard spline key
3、Mounting Flange
4、Ports
5、Special Features

TECHNICAL DATA

Type	Displacement ml/r	Max.pressure Mpa	Max.torque N.m	Speed range r/min	Releasing pressure Mpa	Static brake torque N.m	Associated motor	Weight kg	Length mm
ZBMR-80	80.5	14	152	20-500	1.3-1.7	250-300	BMR-80	12.3	240
ZBMR-100	100.5	14	194	20-450	1.3-1.7	250-300	BMR-100	12.5	244
ZBMR-125	126.3	14	237	20-400	1.3-1.7	250-300	BMR-125	12.8	248
ZBMR-160	160.8	14	310	20-300	2.6-3.2	450-500	BMR-160	13	254
ZBMR-200	200.9	14	369	20-250	2.6-3.2	450-500	BMR-200	13.5	261
ZBMR-250	252.6	11	380	15-200	2.6-3.2	450-500	BMR-250	14	270
ZBMR-315	321.5	9	380	15-160	2.6-3.2	450-500	BMR-315	14.5	282

ZBMR–80(80–315)P1(H1) A‖Y Installation



ZBMR/N Hydraulic motor with braker

INTRODUCTION

ZBMR/N hydraulic motor–brake is made up of BMR geroler motor and multi–disc brake, with shuttle valve and built–in control oil circuit.It has the advantages of simple structure, short radial dimension, more compact and easy installation, etc..This brake is characterized by point braking,and there are total six braking points in a circle.When receiving the stop signal, the motor needs to keep running at most 60 degrees to be braked. It can not stop running suddenly and can not be used for precise positioning.It is widely used for injection molding machine, some of transmission and horizontal pulling application.

ORDERING CODE

		1	2	3	4		5
ZBMR	-					/ N –	

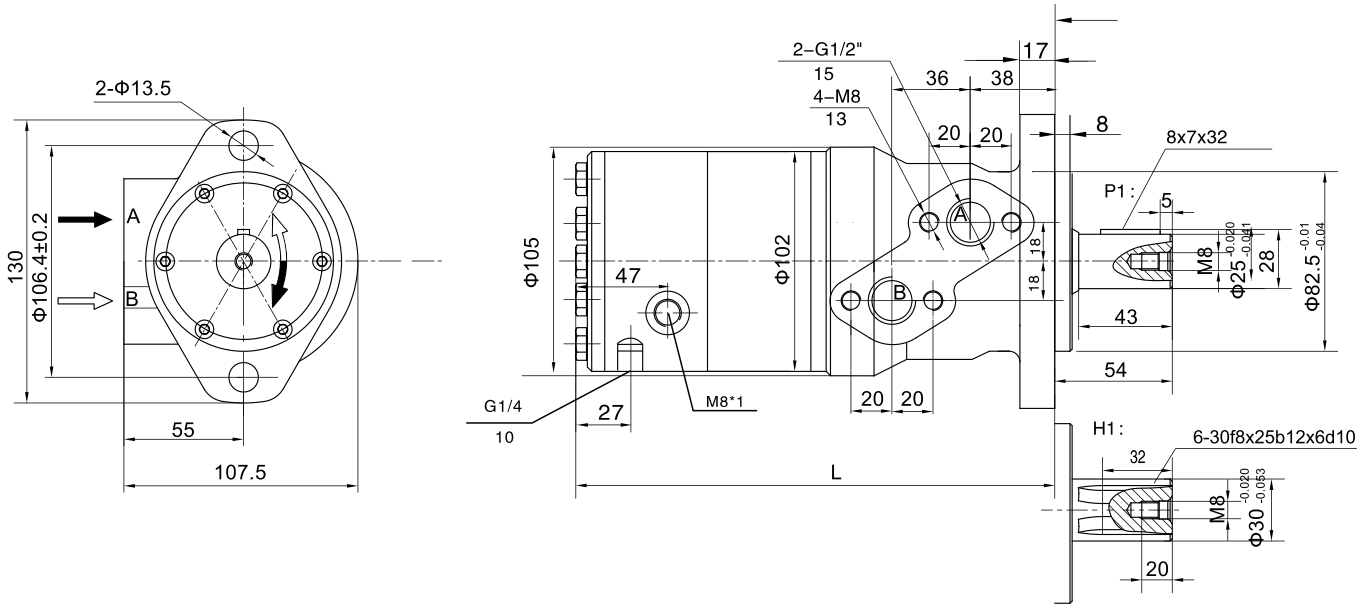
1、Displacement
2、Output shaft
P1– Standard flat key H1– Standard spline key
3、Mounting Flange
4、Ports
5、Special Features

TECHNICAL DATA

Type	Displacement ml/r	Max. pressure Mpa	Max. torque N • m	Speed range r/min	Braker		Associated motor	Length mm	Weight kg
					Mpa Releasing pressure	N.m Brake torque			
ZBMR–80/N	80.5	14	152	60–500	2.4	450	BMR–80	187	9.4
ZBMR–100/N	100.5	14	194	50–480	2.4	450	BMR–100	190	9.5
ZBMR–125/N	126.3	14	237	40–380	2.4	450	BMR–125	195	9.8
ZBMR–160/N	160.8	14	310	30–300	2.4	450	BMR–160	201	10
ZBMR–200/N	200.9	14	369	25–240	2.4	450	BMR–200	208	10.5
ZBMR–250/N	252.6	11	380	20–195	2.4	450	BMR–250	217	11
ZBMR–315/N	321.5	9	380	15–150	2.4	450	BMR–315	229	11.5
ZBMR–400/N	401.9	7	380	10–130	2.4	450	BMR–400	243	13.5

Notice: 1. ZBMR/N Hydraulic Motor–Brake is only for static brake.
2.When the motor is braked: for the internal control motor, the input and output line can not be pressured, otherwise it will not be braked; for external control motor, the control line can not be pressured, otherwise it will not be braked.

■ ZBMR-(80-400)P1(H1)AⅡY/N



ZBM Hydraulic motor with braker

INTRODUCTION

ZBM are BM orbit hydraulic motor with multi-disc friction brake. The brake can be released or closed automatically while the motor starts or stops, to keep the motor being blocked stably without working pressure. Also, the control inlet can be connected to any other control loops, to accomplish different applications, adapted for high system pressure working places.

TECHNICAL DATA

Type	Displacement ml/r	Max. pressure Mpa	Max. torque N • m	Speed range r/min	Braker		Associated motor	Weight kg
					Mpa Releasing pressure	N.m Brake torque		
ZBM3/80	80.5	16	156	15-620	2.6	245	BM3-80	18
ZBM3/100	100.5	16	193	15-500	2.6	245	BM3-100	18
ZBM3/125	126.3	16	243	15-400	2.6	245	BM3-125	18
ZBM4/160	158.8	16	307	15-500	2.6	590	BM4-160	37
ZBM4/200	200.8	16	387	12-400	2.6	824	BM4-200	37
ZBM4/250	252.2	16	513	12-320	2.6	824	BM4-250	37
ZBM4/320	317.5	16	613	10-250	2.6	824	BM4-320	37
ZBM4/400	401.6	12.5	685	10-200	2.6	824	BM4-400	38
ZBM5/400	399.7	16	770	10-250	2.6	824	BM5-400	46
ZBM5/500	496.6	16	960	10-200	2.6	1060	BM5-500	46
ZBM5/630	617.8	13	983	10-160	2.6	1060	BM5-630	46
ZBM5B/630	617.8	16	1250	30-200	3.0	1450	BM5-630	55
ZBM5B/800	787.4	16	1600	30-150	3.0	1680	BM5-800	55
ZBM6B/1250	1186.8	16	2250	20-110	3.6	2330	BM6-1250	70

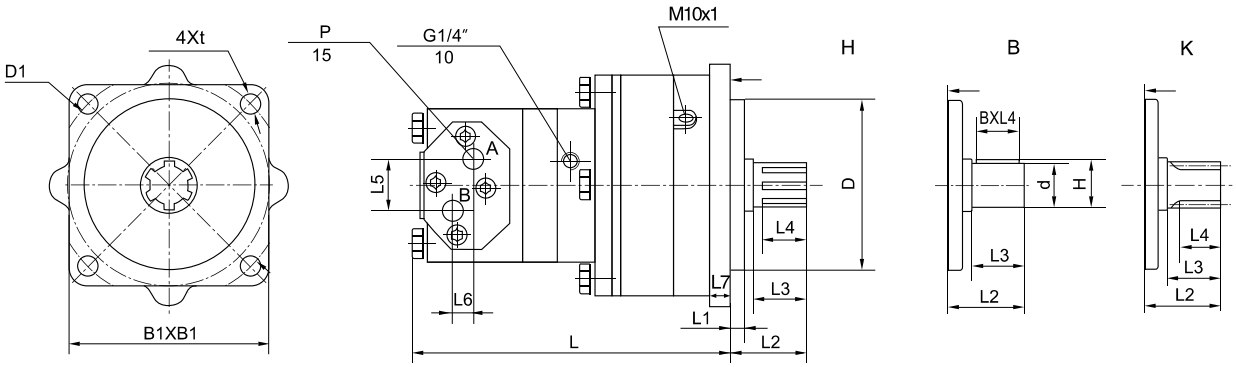
ORDERING CODE

ZBM □/□-□-□-□□

1 2 3 4 5 6 7

1. Orbit hydraulic motor with braker 2. Series 3. Displacement
4. Installation dimension: F– Vertical front flange
5. Standard spline key B– Standard flat key
6. Inner hydraulic control system (see page 121)
7. ports

ZBM ✳ / ✳ –F–H–K1Y Installation

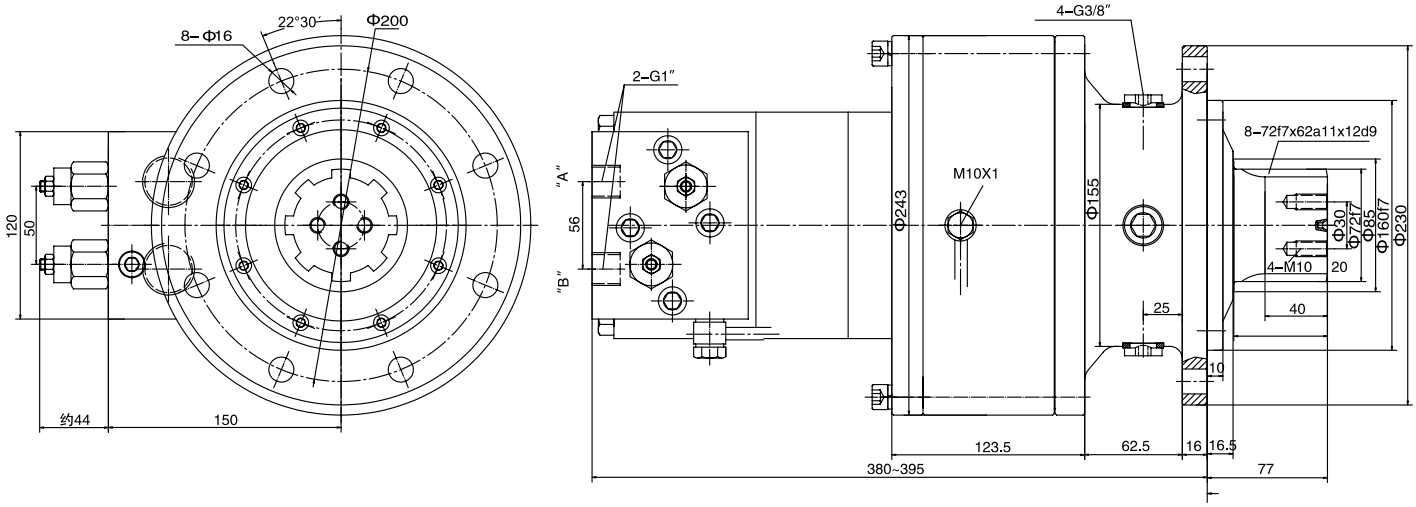


ZBM Hydraulic motor with braker

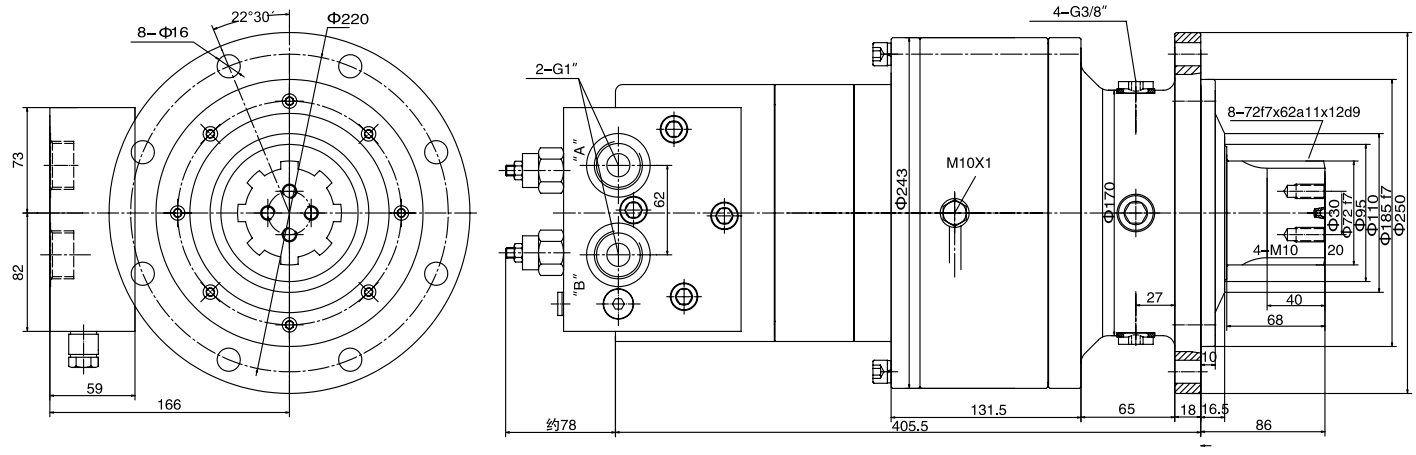
ZBM DIMENSIONS

Type	Shape and junction				Flange and mounting face size						Output shaft size						
	L	L5	L6	P	D	D1	B1xB1	L1	nxt	L7	Type	d	L2	L3	L4	B	H
ZBM3/80-125	189-230	32	22	G1/2″	Φ100f7	Φ132	124	6.5	4xΦ10.5	16	B Type	Φ32f7	62.5	54	45	10h9	35
											H Type	Φ30f7	50	43.5	30	-	-
												6-30f7x25b12x6d10					
ZBM4/160-400	249-285	40	23	G3/4″	Φ125f7	Φ200	178	15	4xΦ17	18.5	B Type	Φ40f7	75	58	50	12h9	43
											H Type	Φ38f7	75	58	40	-	-
												8-38f7x30b12x6d10					
ZBM5/400-630	271-300	50	24	G1″	Φ160f7	Φ200	178	16.5	4xΦ17	19	B Type	Φ40f7	73.5	55	45	12h9	43
											H Type	Φ45f7	98	77.5	55	-	-
												6-45f7x38.2b12x12c10					
											K Type	ExT 17zx2.5mx30p					

ZBM5B/630–800–F–H–K3Y Installation



ZBM6B/1250–F–H–K3Y2 Installation



ZDM Hydraulic braker

INTRODUCTION

ZDM series hydraulic braking device is mainly composed of friction plate and high strength spring,through the external working pressure released brake, input power priority with orbit hydraulic motor. Having characteristics of low noise, high reliability, compact structure, convenient installation,etc. It is suitable for engineering machinery, handling machinery, agricultural machinery,etc.

ORDERING CODE

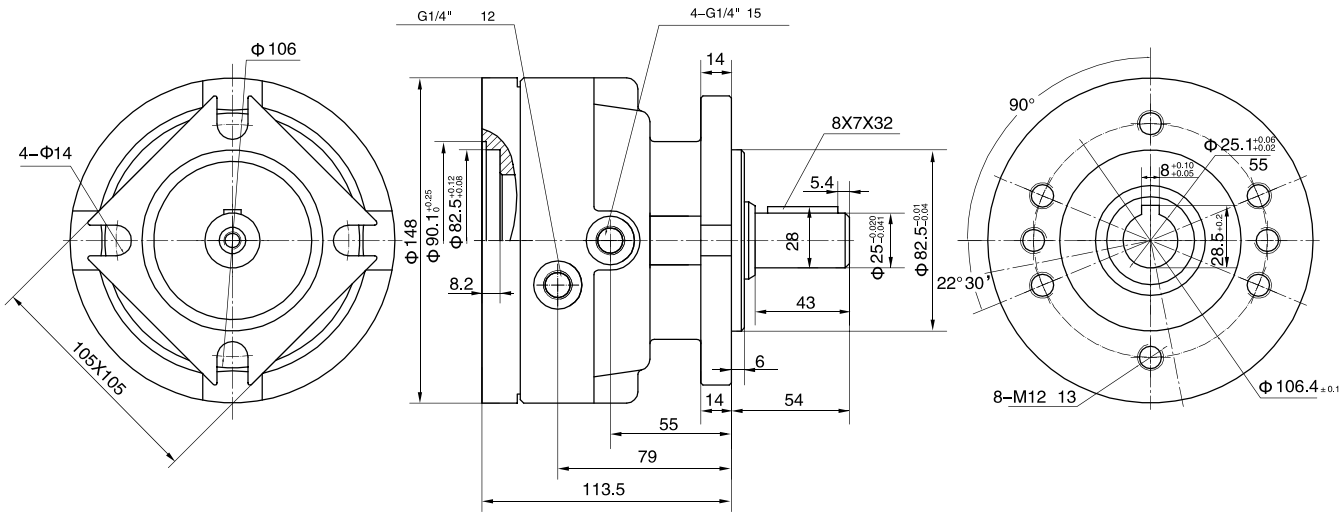
1	2		3		4		5		6
ZDM2	/	430	–	F	–	B	–	B	/	T

1、Product Series
2、Brake Torque
3、Mounting Flange
4、Output Shaft Type
5、Input Type
6、Special Features

TECHNICAL DATA

Type	Static brake torque N.m	Releasing pressure Mpa	MAX control pressure Mpa	MAX oil drain pressure Mpa	weight kg	Lubricating oil volume ml	Speed range r/min
ZDM2–430	410–450	2.2–2.7	20	0.05	9	50–100	0–800
ZDM2–230	210–230	2.2–2.7	20	0.05	9	50–100	0–800

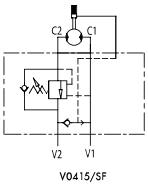
ZDM2–430–F–B– Installation

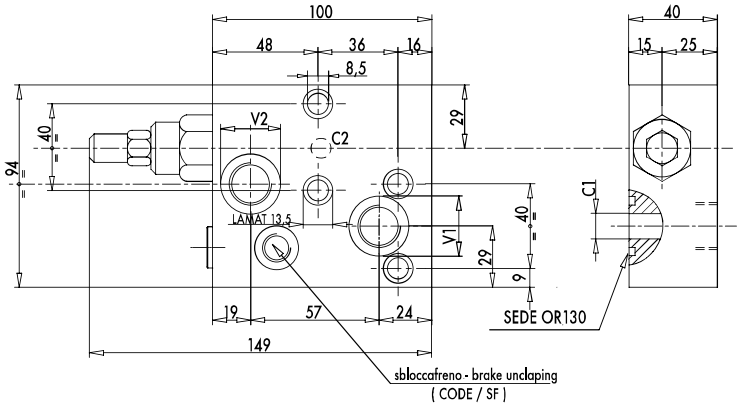


OVERCENTRE VALVES FLANGEABLE ON DANFOSS MOTORS OMP/OMR

TYPE VBCDF SE OMP/OMR

SE



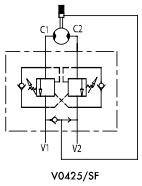


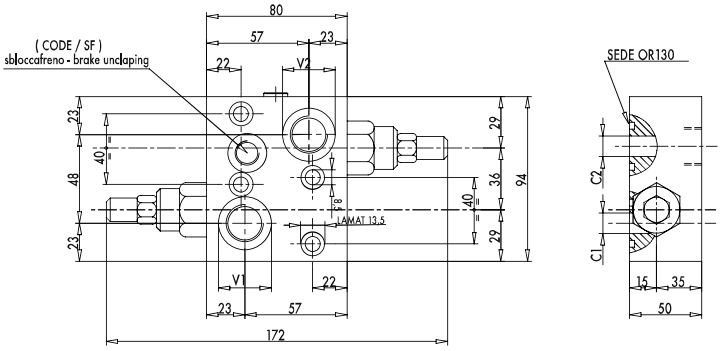
Art.	Type	Pilot radio	Max flow Lt./min	Max pressure Bar	V1-V2 Gas	C1-C2	Weight Kg
MQ248030	VBCDF 1/2" SE OMP-OMR	1:4,5	50	350	G 1/2"	Ø 9	2,686
MQ248031	VBCDF 1/2" SE OMP-OMR SF	1:4,5	50	350	G 1/2"	Ø 9	2,686

On request: VBCDF/SF-DE - With brake release port - Face mounting - Material: steel

TYPE VBCDF DE OMP/OMR

DE





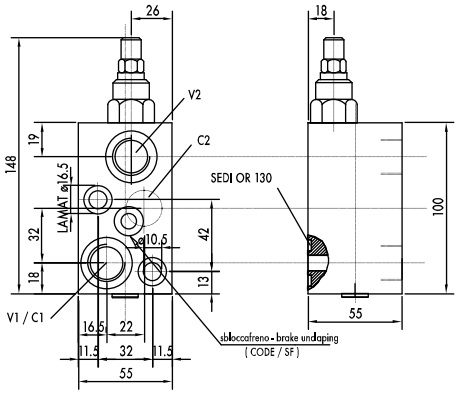
Art.	Type	Pilot radio	Max flow Lt./min	Max pressure Bar	V1-V2 Gas	C1-C2	Weight Kg
MQ248032	VBCDF 1/2" DE OMP-OMR	1:4,5	50	350	G 1/2"	Ø 9	2,708
MQ248033	VBCDF 1/2" DE OMP-OMR SF	1:4,5	50	350	G 1/2"	Ø 9	2,708

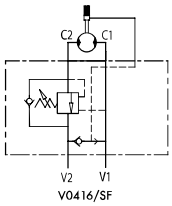
On request: VBCDF/SF-DE - With brake release port - Face mounting - Material: steel

OVERCENTRE VALVES FLANGEABLE ON DANFOSS MOTORS OMS

TYPE VBCDF SE OMS

SE



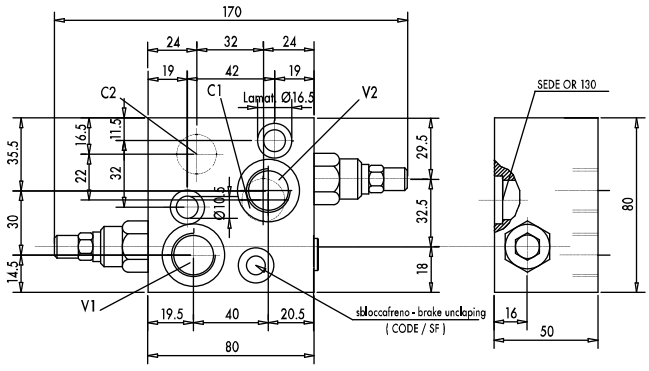


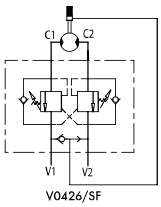
Art.	Type	Pilot radio	Max flow Lt./min	Max pres-sure Bar	V1-V2 Gas	C1-C2	Weight Kg
MQ248034	VBCDF 1/2” SE OMS	1:4,5	50	350	G 1/2”	Ø 9	1,700
MQ248035	VBCDF 1/2” SE OMS SF	1:4,5	50	350	G 1/2”	Ø 9	1,700

On request: VBCDF/SF-SE - With brake release port - Face mounting - Material: steel

TYPE VBCDF DE OMS

DE





Art.	Type	Pilot radio	Max flow Lt./min	Max pres-sure Bar	V1-V2 Gas	C1-C2	Weight Kg
MQ248036	VBCDF 1/2” DE OMS	1:4,5	50	350	G 1/2”	Ø 9	2,150
MQ248037	VBCDF 1/2” DE OMS SF	1:4,5	50	350	G 1/2”	Ø 9	2,150

On request: VBCDF/SF-SE - With brake release port - Face mounting - Material: steel

RUDIFLEX. PERFECTION IN SERVICE

Innovation, experience, quality, reliability, production flexibility and a customer oriented service are the cornerstones of Rudiflex company philosophy.

In 2020 Rudiflex has finalized Partnership Agreements with leading hydraulic components manufacturers and today the company in its two divisions, hydraulic and mechanical, has a wide range of products always available at stock.

Flexibility and technical knowhow allow Rudiflex people to design and produce complete hydraulic systems that are tailored to customer's specific requirements.

The organizational changes made confirm that Rudiflex is very dynamic and ready to face the future challenges, proposing itself to its customers not only as a supplier of components but also as a Partner in the supply of mechatronic solutions.

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