BM1 系列
BM1 Series

结构特点

BM1马达是一种体积较小的轴配流马达。其特点：

先进的配流轴和定转子设计，体积小，结构紧凑。

可靠的轴密封设计，能承受高背压，可以串并联使用。

正反转换向方便、转速平稳。

效率高且经济，适用于中等载荷的场合。

多种法兰，输出轴，油口等连接形式。

Characteristic features:

BM1 motor is a small volume, spool valve type gerolor motor.Characteristic features:

- Advanced design of spool and gerolor, which has Small size and compact structure.
- Credible design of shaft seal, which can bear high pressure and be used in paraller or in series.
- Direction of shaft rotation and speed can be controlled easily and smoothly.
- Best combination of efficiency and economy in medium duty applications.
- A variety of connection types of flange, output shaft and oil port.

主要性能参数

Main Specification

排量（ml/r）Displacement		50	63	80	100	125	160	200	250	315	400
流量（LPM）Flow	最大连续 Cont.	38	45	58	58	58	58	58	58	58	58
	间断 Int.	45	53	69	69	69	69	69	69	69	69
转速（RPM）Speed	最大连续 Cont.	698	663	585	560	456	358	285	236	179	145
	间断 Int.	858	775	720	671	548	426	341	282	210	173
压力（MPa）Pressure	最大连续 Cont.	12.5	12.5	12.5	12.5	12.5	12.5	11	10	9	9
	间断 Int.	14	14	14	14	14	12.5	12.5	12.5	12.5	11
扭矩（N*m）Torque	最大连续 Cont.	74	87	124	155	194	227	282	302	365	456
	间断 Int.	86	98	141	176	221	260	318	383	406	521

1.断续指入口最大压力，连续工作压力指工作压差。

2.马达不应同时在最高压力和最高转速下工作。

3.马达在断续工作条件下，运行时间应不超过10%。

4.最高工作温度80°。

5.马达最高允许背压10MPa，但建议使用背压不要超过5MPa，超过时应接外泄油管。

6.马达满负荷工作前，建议在最大工作压力的40%以下磨合1小时。

7.推荐用68#抗磨液压油，粘度37-73cSt，清洁度IS018/13。

Note: 1. Intermittent means the entrance of the maximum pressure; continuous working pressure means the differential pressure.

2. Motor should not work under the highest pressure and the maximum speed.

3. The running time should not exceed 10% under intermittent working conditions

4. The Maximum working temperature is 80°.

5. The maximum allowable back pressure is IOMPa, but the recommended back pressure should not exceed 5M Pa.a leaking pipes is needed when exceeding.

6. one hour running time under 40% of maximum working pressure is recommendedbefore full capacity working.

7. Recommending N68 anti-wear hydraulic oil, viscosity 37-73cSt, cleanliness IS018/13 .

□连续工作区 ■间断工作区

BM1 系列马达性能参数
BM1 Performance Data

BM1–50 50ml/r

压力 △P (Mpa)　　连续最大 Max.cont.　断续最大 Max/int.

流量 Flow (LPM)	3	6	7	8	10	11	13	16.5
8	18 150	36 147	42 144	50 140	60 137	72 127	79 122	102 90
15	19 290	37 285	43 283	48 276	61 275	73 265	83 256	105 230
20	17 388	37 385	42 381	50 375	62 372	72 365	80 352	107 332
30	15 584	36 578	42 570	50 566	63 560	70 555	81 546	108 516
35	15 680	35 675	42 670	50 662	63 654	68 646	80 640	106 610
45	14 878	34 868	40 863	48 856	62 849	70 840	80 830	
50	13 970	35 960	40 955	48 950	63 942			

BM1–63 63ml/r

压力 △P (Mpa)

流量 Flow (LPM)	3	6	7	8	10	11	13	16.5
8	22 125	46 124	54 123	62 121	76 118	91 116	98 113	126 72
15	22 233	46 231	54 229	60 227	76 224	91 222	104 219	132 185
20	20 310	46 309	54 307	63 305	78 301	90 298	100 294	134 263
30	20 465	45 463	53 462	63 460	79 457	88 455	102 451	135 409
35	19 543	44 540	53 539	63 537	79 533	84 531	100 528	133 484
45	18 705	42 702	50 700	60 698	78 695	88 693	100 689	
50	16 781	44 778	50 776	60 774	79 770			

BM1–80 80ml/r

压力 △P (Mpa)

流量 Flow (LPM)	3	6	7	8	10	11	13	16.5
8	28 97	60 93	70 92	80 89	100 84	110 80	128 75	168 50
15	28 184	61 181	70 178	80 174	100 169	114 166	128 160	170 140
20	27 246	60 243	70 240	80 238	100 234	112 230	129 223	170 205
30	26 370	60 366	69 363	79 360	100 354	110 350	128 345	170 323
35	25 432	58 426	67 424	77 420	100 415	110 411	126 405	170 385
45	23 554	53 550	65 546	77 541	95 536	108 530	124 524	168 503
50	20 616	55 608	65 606	75 603	95 599	105 593	123 585	168 560
60	19 741	53 732	62 727	75 722	95 717	108 712		
75	16 825	47 820	60 815	70 810	90 808			

BM1–100 100ml/r

压力 △P (Mpa)

流量 Flow (LPM)	3	6	7	8	10	11	13	16.5
8	35 78	74 75	88 73	100 70	126 64	140 68	160 56	210 35
15	35 150	74 145	85 144	100 141	126 137	140 133	160 129	212 110
20	34 197	74 195	88 193	100 190	125 189	145 183	161 178	212 160
30	33 295	71 294	85 293	95 290	123 288	138 283	158 279	212 259
35	29 347	70 345	81 344	95 342	120 337	135 335	155 330	212 310
45	30 445	66 443	80 442	93 439	120 435	133 432	155 426	208 405
50	25 498	66 495	79 493	93 491	118 485	134 480	152 476	
60	22 599	65 594	75 589	93 587	116 584	132 577		
75	20 674	58 666	75 663	88 660	113 655			

□连续工作区 ■间断工作区

BM1–125 125ml/r

压力 △P (Mpa)

流量 Flow (LPM)	3	6	7	8	10	11	13	16.5
8	44 60	94 59	112 58	128 56	158 53	180 50	200 45	263 25
15	44 118	85 116	111 115	127 114	160 110	178 108	205 105	265 85
20	42 159	95 157	108 156	128 153	158 150	175 145	202 142	268 129
30	40 236	92 235	108 233	125 230	156 225	178 220	198 218	265 206
35	38 226	87 273	107 273	122 272	154 268	174 265	195 262	268 247
45	37 355	85 352	102 351	120 349	152 345	173 341	194 339	265 322
50	33 395	85 392	98 390	120 388	149 385	170 384	192 380	
60	32 476	83 470	98 468	117 465	148 461	165 459		
75	25 594	75 588	95 585	110 582	142 577			

BM1–160 160ml/r

压力 △P (Mpa)

流量 Flow (LPM)	3	6	7	8	10	11	13	16.5
8	56 47	120 46	143 45	160 44	200 42	226 40	245 38	334 24
15	56 93	120 93	135 92	160 90	202 88	226 86	245 83	341 75
20	55 120	120 118	143 117	160 116	203 115	226 114	245 114	343 104
30	54 185	118 184	140 183	160 181	200 178	225 176	242 175	340 163
35	53 214	115 213	138 212	157 211	199 208	220 207	242 205	337 196
45	52 277	112 275	135 274	156 273	198 270	220 268	238 265	335 256
50	45 308	110 307	132 305	153 303	195 300	215 298	233 296	
60	44 368	106 366	130 365	150 364	192 362	214 360		
75	32 462	95 458	120 457	142 456	183 453			

BM1–200 200ml/r

压力 △P (Mpa)

流量 Flow (LPM)	3	6	7	8	10	11	15
8	75 38	155 37	178 36	204 35	255 33	283 29	385 12
15	72 74	152 72	180 71	206 70	259 68	265 66	390 57
20	71 99	151 98	178 97	205 95	255 94	285 91	390 81
30	70 148	149 147	175 146	200 145	254 142	285 138	388 126
35	68 173	146 172	172 171	200 168	250 165	280 163	383 154
45	63 220	142 219	170 218	195 216	248 213	279 211	382 200
50	58 245	138 243	166 242	195 241	242 238	273 236	
60	56 295	135 294	165 293	190 292	240 289		
75	42 370	122 365	150 364	178 362			

BM1–250 250ml/r

压力 △P (Mpa)

流量 Flow (LPM)	3	6	7	8	10	11	14
8	94 30	195 29	255 28	259 27	326 25	357 24	
15	90 60	193 59	225 58	260 57	326 55	360 53	455 48
20	89 78	191 78	225 77	258 76	320 74	355 73	455 65
30	84 118	188 117	220 117	250 116	320 114	354 122	452 103
35	82 135	184 134	218 132	252 131	316 127	350 125	448 120
45	79 179	179 178	215 177	246 176	310 174	345 172	442 163
50	74 199	174 196	210 195	243 194	306 192	338 191	
60	70 236	171 235	206 235	239 234	300 230		
75	55 297	155 295	190 295	221 294			

□连续工作区 ■间断工作区

BM1–315 315ml/r

压力 △P (Mpa)

流量 Flow (LPM)	3	6	7	8	10	12.5
8	115 25	244 24	282 22	312 17	388 13	
15	116 46	243 46	284 45	324 43	406 40	503 20
20	114 62	242 62	282 61	325 57	405 56	505 44
30	109 93	238 93	276 92	320 90	400 88	500 76
35	105 109	232 108	273 107	314 205	398 103	498 93
45	100 140	225 140	268 138	310 136	390 135	490 125
50	92 156	218 155	262 154	306 153	384 150	486 140
60	89 188	215 187	258 186	300 184	378 180	
75	69 236	195 235	236 233	278 232		

BM1–400 400ml/r

压力 △P (Mpa)

流量 Flow (LPM)	3	6	7	8	8.5	12.5
8	147 19	305 18	355 17			
15	147 38	308 37	359 35	406 33	435 32	531 26
20	144 49	305 49	358 47	408 45	435 43	510 37
30	137 73	300 73	352 72	400 70	433 68	528 63
35	135 85	294 85	345 84	395 82	425 81	525 73
45	130 110	286 110	339 108	390 106	420 105	515 100
50	117 124	278 124	330 122	382 120	410 119	
60	112 148	274 148	326 147	378 146	402 145	
75	88 185	246 185	298 184	350 182		

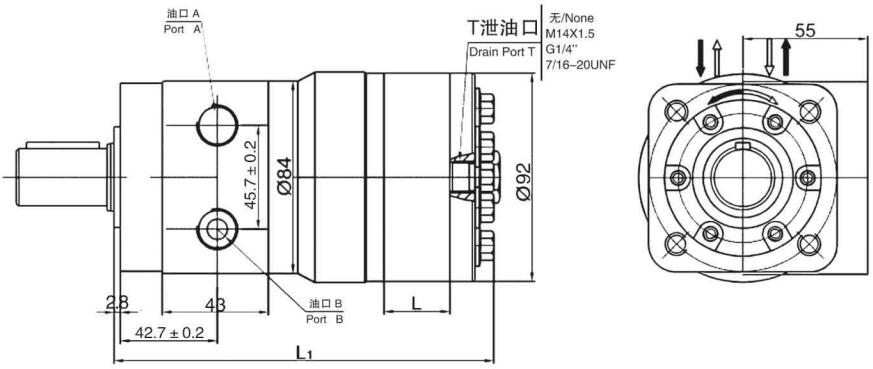
表中数据在使用68#抗磨液压油，50℃油温条件下测试的，不同马达结果略有差别。

All the data was tested at 50℃ with N68 anti–wear hydraulic oil.Actual data may vary slightly from unit to unit in production.

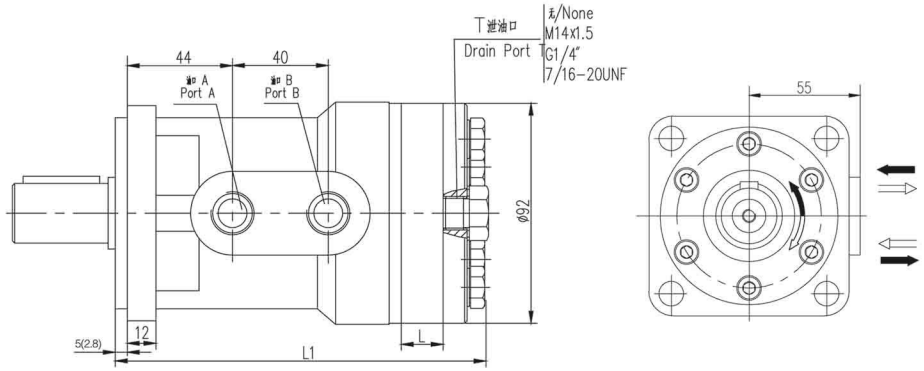
BM1 系列连接尺寸外形图

BM1 DIMENSIONS AND MOUNTING DATA

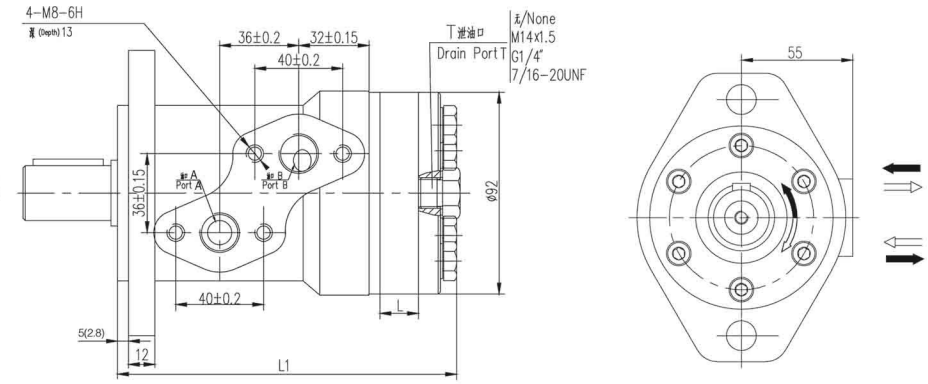
H 形



L 形



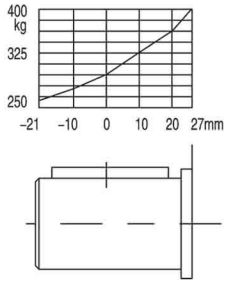
S 形



输出轴负载能力 Shaft Load Capacity:

径向负载 Radial Load: 400Kg Max.

轴向负载 Axis Load : 200Kg Max.



Displacement	50	63	80	100	125	160	200	250	315	400
L	9	11.5	14.5	17.8	23	29	37	46	57	72
L1	143	146	147.5	151	156	162	170	179.5	190.5	205
L2	148	151	152.5	156	161	167	175	184.5	184.5	210

马达标准旋向：

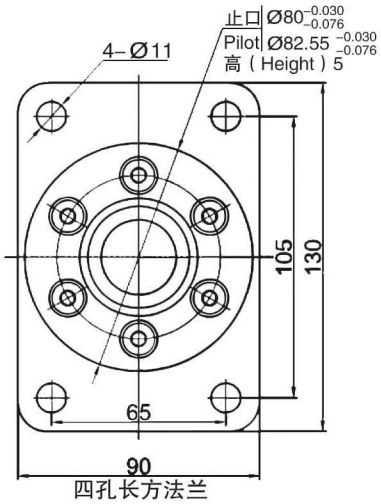
面对输出轴轴端，A油口进油，马达顺时针旋转。

Standard Direction of The Motor Rotation:

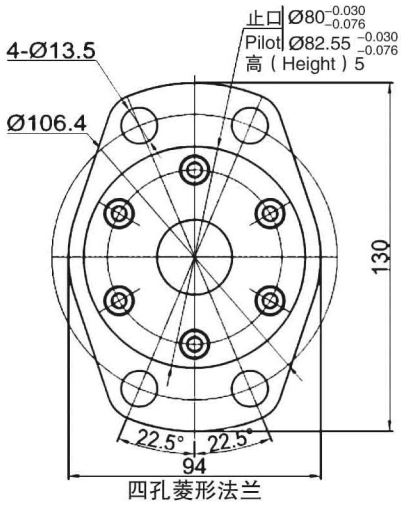
CW----When A Port pressurized, Viewed From the Shaft End.

BM1系列法兰连接尺寸

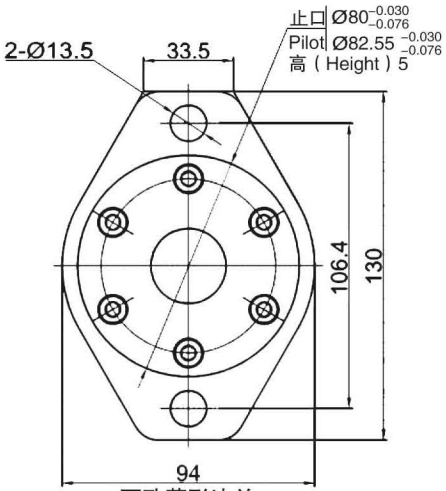
BM1 DIMENSIONS AND MOUNTING DATA



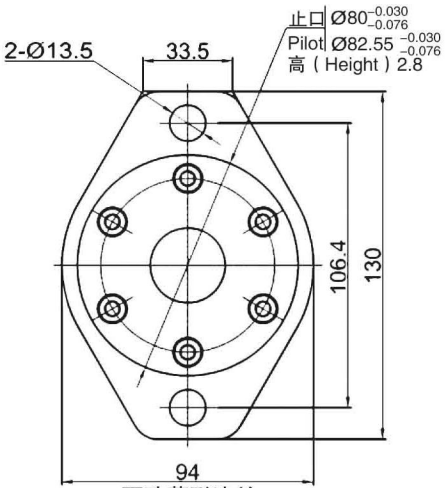
四孔长方法兰
4 Bolt Flange



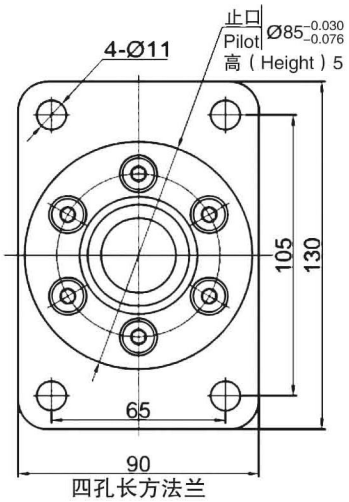
四孔菱形法兰
4 Bolt Flange



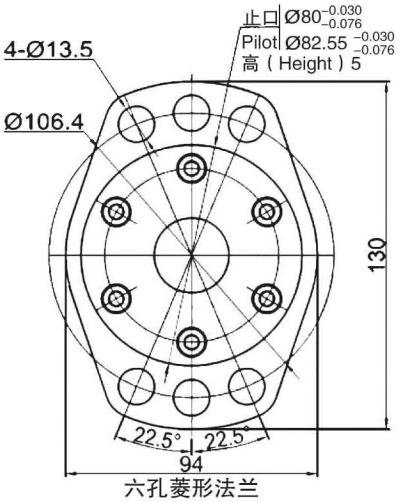
两孔菱形法兰
2 Bolt Flange



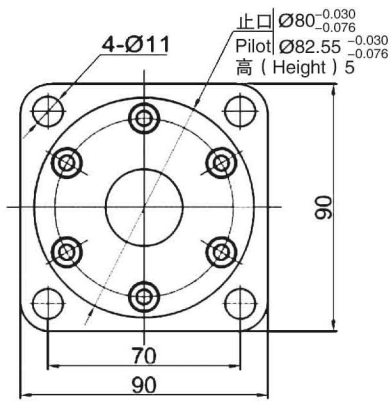
两孔菱形法兰
2 Bolt Flange



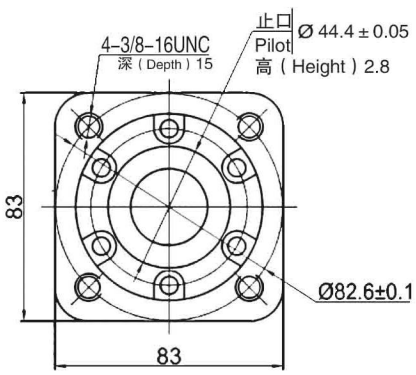
四孔长方法兰
4 Bolt Flange



六孔菱形法兰
6 Bolt Flange



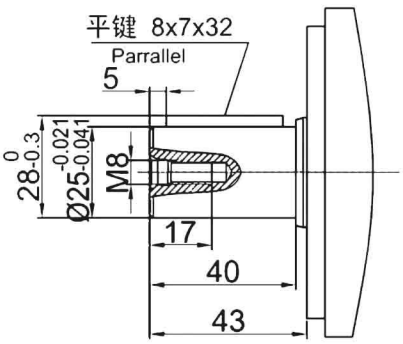
四孔方形法兰
4 Bolt Flange

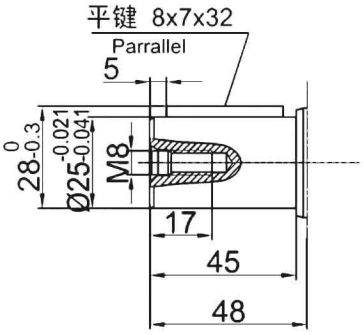


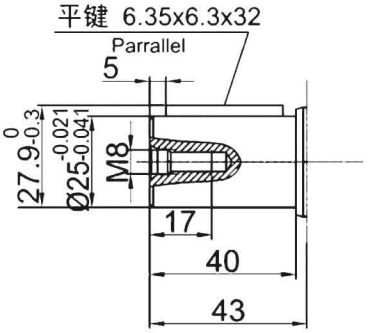
四孔方形法兰
4 Bolt Flange

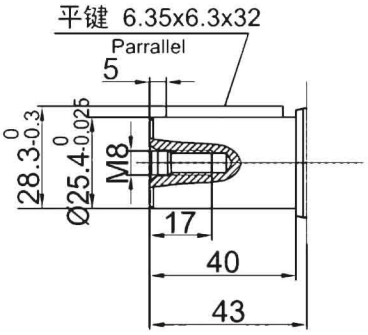
BM1系列输出轴连接尺寸

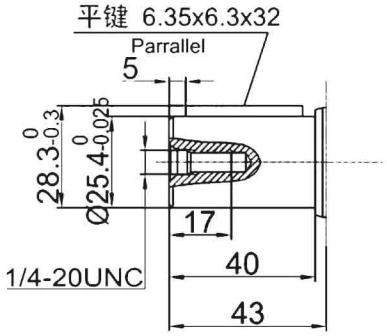
BM1 DIMENSIONS AND MOUNTING DATA

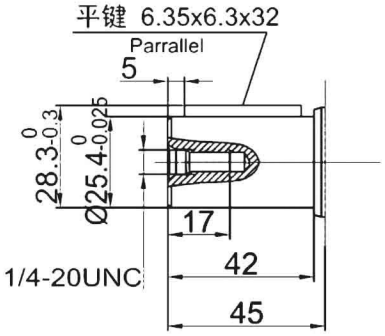


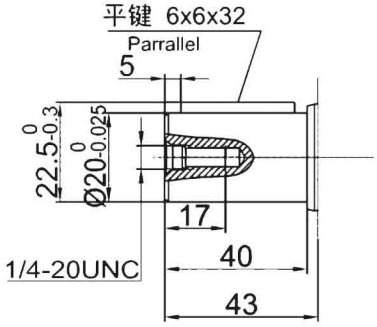


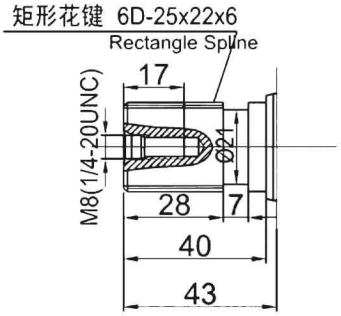


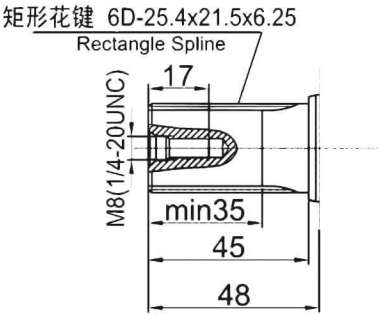


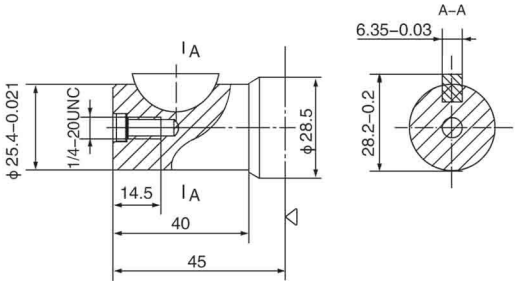












BM1 订货信息

产品特征			排量/编号									
法兰	输出轴	油口	50	63	80	100	125	160	200	250	315	400
菱形；止口φ82.5	φ25.4直轴 平键6.35 轴端螺纹M8	S型G1/2 无外泄油口	111-0010	111-0011	111-0012	111-0013	111-001a	111-0014	111-0015	111-0016	111-0017	111-0018
	φ25.4直轴 平键6.35 轴端螺纹1/4-20UNC	S型G1/2；外泄油口G1/4	111-0380	111-0381	111-0382	111-0383	111-038a	111-0384	111-0385	111-0386	111-0387	111-0388
		S型G1/2；外泄油口M14X1.5	111-0530	111-0531	111-0532	111-0533	111-053a	111-0534	111-0535	111-0536	111-0537	111-0538
	φ25直轴 平键8 轴端螺纹M8	S型M18X1.5；无外泄油口	111-0060	111-0061	111-0062	111-0063	111-006a	111-0064	111-0065	111-0066	111-0067	111-0068
		S型G1/2；外泄油口M14X1.5	111-0080	111-0081	111-0082	111-0083	111-008a	111-0084	111-0085	111-0086	111-0087	111-0088
		S型G1/2 无外泄油口	111-0160	111-0161	111-0162	111-0163	111-016a	111-0164	111-0165	111-0166	111-0167	111-0168
		S型ZG1/2 无外泄油口	111-0210	111-0211	111-0212	111-0213	111-021a	111-0214	111-0215	111-0216	111-0217	111-0218
		S型G1/2；外泄油口G1/4	111-0370	111-0371	111-0372	111-0373	111-037a	111-0374	111-0375	111-0376	111-0377	111-0378
	轴6D-25×21.5×6轴端螺纹M8	S型G1/2；外泄油口G1/4	111-1160	111-1161	111-1162	111-1163	111-116a	111-1164	111-1165	111-1166	111-1167	111-1168
	轴6D-25.4×21.5×6.25轴端螺纹丝M8	S型G1/2；外泄油口G1/4	111-1180	111-1181	111-1182	111-1183	111-118a	111-1184	111-1185	111-1186	111-1187	111-1188
菱形；止口φ82.5；防尘圈	φ25直轴 平键8 轴端螺纹M8	S型G1/2；外泄油口G1/4	111-0280	111-0281	111-0282	111-0283	111-028a	111-0284	111-0285	111-0286	111-0287	111-0288
	轴6D-25.4×21.5×6.25轴端螺纹丝M8	S型G1/2 无外泄油口	111-1170	111-1171	111-1172	111-1173	111-117a	111-1174	111-1175	111-1176	111-1177	111-1178
方形；止口φ80	φ25直轴 平键8 轴端螺纹M8	M18×1.5；无外泄油口	111-0030	111-0031	111-0032	111-0033	111-003a	111-0034	111-0035	111-0036	111-0037	111-0038
		M18×1.5；外泄油口M14×1.5	111-0100	111-0101	111-0102	111-0103	111-010a	111-0104	111-0105	111-0106	111-0107	111-0108
		G1/2 无外泄油口	111-0170	111-0171	111-0172	111-0173	111-017a	111-0174	111-0175	111-0176	111-0177	111-0178
	轴6D-25×21.5×6轴端螺纹丝M8	M18×1.5；外泄油口M14×1.5	111-1110	111-1111	111-1112	111-1113	111-111a	111-1114	111-1115	111-1116	111-1117	111-1118
方形；止口φ80；防尘圈	φ25直轴 平键8 轴端螺纹M8	M18×1.5；外泄油口M14×1.5	111-0120	111-0121	111-0122	111-0123	111-012a	111-0124	111-0125	111-0126	111-0127	111-0128

BM1 Ordering Information

Feature			Displacement/NO.									
Flange	Shaft	Oil port	50	63	80	100	125	160	200	250	315	400
Rhomb-flange; φ82.5	φ25.4 Flat key:6.35;shaft thread:M8	S type G1/2	111-0010	111-0011	111-0012	111-0013	111-001a	111-0014	111-0015	111-0016	111-0017	111-0018
	φ25.4 Flat key:6.35;shaft thread:1/4-20UNC	S type G1/2;drain port G1/4	111-0380	111-0381	111-0382	111-0383	111-038a	111-0384	111-0385	111-0386	111-0387	111-0388
		S type G1/2;drain port M14X1.5	111-0530	111-0531	111-0532	111-0533	111-053a	111-0534	111-0535	111-0536	111-0537	111-0538
	φ25 Flat key:8; shaft thread:M8	S type M18X1.5	111-0060	111-0061	111-0062	111-0063	111-006a	111-0064	111-0065	111-0066	111-0067	111-0068
		S type G1/2;drain port M14X1.5	111-0080	111-0081	111-0082	111-0083	111-008a	111-0084	111-0085	111-0086	111-0087	111-0088
		S type G1/2	111-0160	111-0161	111-0162	111-0163	111-016a	111-0164	111-0165	111-0166	111-0167	111-0168
		S type ZG1/2	111-0210	111-0211	111-0212	111-0213	111-021a	111-0214	111-0215	111-0216	111-0217	111-0218
		S type G1/2;drain port G1/4	111-0370	111-0371	111-0372	111-0373	111-037a	111-0374	111-0375	111-0376	111-0377	111-0378
	Shaft 6D-25X21.5X6;shaft thread:M8	S type G1/2;drain port G1/4	111-1160	111-1161	111-1162	111-1163	111-116a	111-1164	111-1165	111-1166	111-1167	111-1168
	Shaft 6D-25.4X21.5X6.25; shaft thread:M8	S type G1/2;drain port G1/4	111-1180	111-1181	111-1182	111-1183	111-118a	111-1184	111-1185	111-1186	111-1187	111-1188
Rhomb-flange; pilot φ82.5; scraper seal	φ25 Flat key:8; shaft thread:M8	S type G1/2;drain port G1/4	111-0280	111-0281	111-0282	111-0283	111-028a	111-0284	111-0285	111-0286	111-0287	111-0288
	Shaft 6D-25.4X21.5X6.25; shaft thread:M8	S type G1/2	111-1170	111-1171	111-1172	111-1173	111-117a	111-1174	111-1175	111-1176	111-1177	111-1178
Square flange; pilot φ80	φ25 Flat key:8; shaft thread:M8	M18X1.5	111-0030	111-0031	111-0032	111-0033	111-003a	111-0034	111-0035	111-0036	111-0037	111-0038
		M18X1.5;drain port M14X1.5	111-0100	111-0101	111-0102	111-0103	111-010a	111-0104	111-0105	111-0106	111-0107	111-0108
		G1/2	111-0170	111-0171	111-0172	111-0173	111-017a	111-0174	111-0175	111-0176	111-0177	111-0178
	Shaft 6D-25X21.5X6;shaft thread:M8	M18X1.5;drain port M14X1.5	111-1110	111-1111	111-1112	111-1113	111-111a	111-1114	111-1115	111-1116	111-1117	111-1118
Square flange; pilotφ80; scraper seal	φ25 Flat key:8; shaft thread:M8	M18X1.5;drain port M14X1.5	111-0120	111-0121	111-0122	111-0123	111-012a	111-0124	111-0125	111-0126	111-0127	111-0128

型号编号–BM1系列马达

Type number—BM1 series motors

1	2	3	4	5	6	7	8
BM1							

位置 1 BM1系列马达

Position BM1 series motors

位置 2 排量CC/R

Position displacement

1、50
2、63
3、80
4、100
5、125
6、160
7、200
8、250
9、315
10、400

位置 3 法兰和止口

Position Flange and pilot

A、2孔菱形法兰，止口 ϕ 80 × 2.8mm
2 bolt Rhomb–flange，pilot ϕ 80 × 2.8mm
B、2孔菱形法兰，止口 ϕ 82.55 × 2.8mm
2 bolt Rhomb–flange，pilot ϕ 82.55 × 2.8mm
C、2孔菱形法兰，止口 ϕ 80 × 5mm
2 bolt Rhomb–flange，pilot ϕ 80 × 5mm
D、2孔菱形法兰，止口 ϕ 82.55X5mm
2 bolt Rhomb–flange，pilot ϕ 82.55 × 5mm
E、4孔菱形法兰，止口 ϕ 80 × 5mm
4 bolt Rhomb–flange，pilot ϕ 80X5mm
F、4孔菱形法兰，止口 ϕ 82.55 × 5mm
4 bolt Rhomb–flange，pilot ϕ 82.55X5mm
G、4孔方形法兰，止口 ϕ 80 × 5mm
4 bolt Square flange，pilot ϕ 80 × 5mm
H、4孔方形法兰，止口 ϕ 82.55 × 5mm
4 bolt Square flange，pilot ϕ 82.55X5mm
I、4孔方形法兰，止口 ϕ 85X5mm
4 bolt Square flange，pilot ϕ 85 × 5mm
J、4孔方形法兰，止口 ϕ 44.4X2.8mm
4 bolt Square flange，pilot ϕ 44.4X2.8mm
K、6孔菱形法兰，止口 ϕ 80 × 5mm
6 bolt Rhomb–flange，pilot ϕ 80 × 5mm
L、6孔菱形法兰，止口 ϕ 82.55 × 5mm
6 bolt Rhomb–flange，pilot ϕ 82.55 × 5mm

位置 4 输出轴

Position shaft

1、ϕ25直轴，平键8x7x32
ϕ25 straight shaft，flat key 8x7x32
2、ϕ25直轴，平键6.35x6.3x32
ϕ25 straight shaft，flat key 6.35x6.3x32
3、ϕ25. 4直轴，平键6.35x6.3x32
ϕ25.4 straight shaft，flat key 6.35x6.3x32
4、ϕ20直轴，平键6x6x32
ϕ20 straight shaft，flat key 6x6x32
5、矩形花键轴6D–25.4 x21.5 x6.25
Splined shaft 6D–25.4x21.5x6.25
6、矩形花键轴6D–25x22x6
Splined shaft 6D–25x22x6

位置 5 油口

Position oil port

A、G1/2
B、M22x1.5
C、1/2–14NPTF
D、ZGI/2
E、M18X1.5
F、M20X1.5
G、7/8–14UNF

位置 6 泄油口

Position drain port

1、无
2、M14X1.5
3、G1/4
4、7/16–20UNF

位置 7 喷漆颜色

Position paint color

A、银灰漆 silver paint
B、蓝漆 blue
C、亚光黑漆 black
D、不喷漆 no paint

位置 8 旋向

Postion rotation direction

A、标准
standard
B、反向
opposite