



BMK10 SERIES HYDRAULIC MOTOR

BMK10 series motor adapt the advanced Geroler gear set designed with disc distribution, flow and high pressure. The unit can be supplied the individual variant in operating multifunction in accordance with requirement of applications.

Characteristic features:

- *Advanced manufacturing devices for the Geroler gear set which use low pressure of startup, provide smooth and reliable operation and high efficiency.
- *Advanced design in disc distribution flow, which can automatically compensate in operating with high volume efficiency and long life, provide smooth and reliable operation.
- *Shaft seal can bear high pressure of back.
- *The output shaft adapts in cylinder roller bearings that permit high axial and radial forces. The case can offer capacities of high pressure and high torque in the wide of applications.

Main Specification

| Type | | BMK10-350 | BMK10-480 | BMK10-665 | BMK10-940 |
|--|-------|-----------|-----------|-----------|-----------|
| Geometric displacement (cm ³ /rev.) | | 351 | 479 | 638 | 933 |
| Max. speed (rpm) | cont. | 485 | 355 | 265 | 180 |
| | int. | 755 | 555 | 410 | 280 |
| Max. torque (N·m) | cont. | 1025 | 1425 | 1930 | 2480 |
| | int. | 1425 | 1960 | 2520 | 3400 |
| Max. pressure drop (MPa) | cont. | 20 | 20 | 20 | 17.5 |
| | int. | 27.5 | 27.5 | 26.0 | 24.0 |
| | peak. | 27.5 | 27.5 | 27.5 | 26.0 |
| Max. flow (L/min) | cont. | 170 | 170 | 170 | 170 |
| | int. | 265 | 265 | 265 | 265 |
| Weight (kg) | | 43.4 | 45.8 | 45.8 | 47.1 |

Note:

*Continuous pressure: Max. value of operating motor continuously.

*Intermittent pressure: Max. value of operating motor in 6 seconds per minute.

*Peak pressure: Max. value of operating motor in 0.6 second per minute.

Oil recommend: Anti-wear hydraulic oil, viscosity 37-73cSt, cleanliness of oil as ISO 18/13, Max. operating temperature upper limit 80.

Special motive seal, motor permits back pressure can reach 7-20MPa(optical), but to achieve good life cycle and overall performance, we recommend the back pressure can't over 5 MPa, if so, recommend to use drain line, to make sure inside of the motor fulfilled with oil when drain oil in use. The drain line pipe should have a certain throttle to keep the back pressure over 3.5 Bar. If the drain line in use, it is not only can keep low back pressure, but also can flash the wear pollution out, still have a function as cooling. There is a run-in period before full load of the motor, recommend to do the run-in period for 1 hour under 30% of the Max. working pressure. The Max. output torque related to the type of shaft.

Performance Data

请注意：
马达可以按照所有区域内标记的扭矩和转速下高效率运行，但是选择白色背景区域内的扭矩和转速下运行，能使马达获得最佳的寿命。

Notice:
Motor can operating in all the marked torque and speed in each zone, but choose the torque and speed in white background, motor can acquire best life cycle.

BMK10-350 [351cm³/rev.] 连续最大 断续最大
Pressure 压力 (MPa) Max.cont. Max.int.

| | | | | | | | | |
|------|-----|---|------|----|------|----|----|------|
| 1.75 | 3.5 | 7 | 10.5 | 14 | 17.5 | 20 | 24 | 27.5 |
|------|-----|---|------|----|------|----|----|------|

| | | | | | | | | |
|-----|------------|------------|------------|------------|------------|------------|------------|------------|
| 4 | 70 | 153 | | | | | | |
| | 3 | 1 | | | | | | |
| 8 | 87 | 177 | 357 | 538 | 718 | 898 | | |
| | 22 | 20 | 16 | 11 | 8 | 4 | | |
| 15 | 87 | 177 | 357 | 538 | 718 | 898 | 1027 | 1233 |
| | 42 | 40 | 36 | 32 | 29 | 25 | 21 | 17 |
| 30 | 84 | 174 | 354 | 535 | 716 | 897 | 1025 | 1231 |
| | 85 | 84 | 80 | 76 | 72 | 68 | 64 | 60 |
| 45 | 82 | 172 | 353 | 533 | 713 | 894 | 1023 | 1230 |
| | 127 | 126 | 123 | 119 | 115 | 111 | 107 | 103 |
| 60 | 80 | 170 | 351 | 531 | 711 | 892 | 1021 | 1228 |
| | 170 | 169 | 167 | 162 | 158 | 153 | 150 | 145 |
| 75 | 77 | 167 | 347 | 528 | 708 | 889 | 1019 | 1224 |
| | 213 | 212 | 211 | 206 | 201 | 196 | 192 | 187 |
| 90 | 74 | 164 | 345 | 525 | 705 | 886 | 1015 | 1221 |
| | 255 | 254 | 253 | 249 | 245 | 239 | 235 | 230 |
| 105 | 70 | 160 | 341 | 521 | 701 | 883 | 1012 | 1219 |
| | 296 | 295 | 294 | 292 | 287 | 283 | 278 | 272 |
| 120 | 67 | 157 | 338 | 518 | 698 | 879 | 1009 | 1215 |
| | 340 | 339 | 338 | 336 | 330 | 325 | 320 | 315 |
| 135 | 63 | 153 | 333 | 514 | 694 | 875 | 1005 | 1211 |
| | 383 | 382 | 381 | 379 | 373 | 368 | 362 | 357 |
| 150 | 58 | 148 | 330 | 510 | 691 | 871 | 1001 | 1207 |
| | 425 | 424 | 423 | 422 | 417 | 411 | 405 | 400 |
| 170 | 54 | 143 | 323 | 503 | 683 | 863 | 992 | 1197 |
| | 482 | 481 | 480 | 479 | 475 | 470 | 463 | 457 |
| 225 | | 126 | 306 | 486 | 668 | 848 | 980 | |
| | | 637 | 636 | 635 | 632 | 625 | 619 | |
| 265 | | 112 | 293 | 473 | 654 | 835 | 966 | |
| | | 752 | 750 | 747 | 746 | 739 | 731 | |

连续最大
Max.cont.

断续最大
Max.int.

Torque 扭矩 (Nm) 112
Speed 转速 (rpm) 752


BMK10-480 [479cm³/rev.] 连续最大 断续最大
Pressure 压力 (MPa) Max.cont. Max.int.

| | | | | | | | | |
|------|-----|---|------|----|------|----|----|------|
| 1.75 | 3.5 | 7 | 10.5 | 14 | 17.5 | 20 | 24 | 27.5 |
|------|-----|---|------|----|------|----|----|------|

| | | | | | | | | |
|-----|------------|------------|------------|------------|------------|------------|------------|------------|
| 4 | 87 | 176 | 357 | 531 | | | | |
| | 6 | 5 | 4 | 2 | | | | |
| 8 | 119 | 24 | 494 | 743 | 994 | 1243 | | |
| | 16 | 14 | 12 | 8 | 5 | 2 | | |
| 15 | 119 | 244 | 493 | 742 | 993 | 1242 | 1421 | 1706 |
| | 31 | 29 | 27 | 24 | 21 | 18 | 16 | 13 |
| 30 | 117 | 241 | 491 | 741 | 990 | 1240 | 1419 | 1704 |
| | 62 | 61 | 58 | 55 | 53 | 50 | 47 | 44 |
| 45 | 113 | 238 | 488 | 738 | 987 | 1237 | 1416 | 1700 |
| | 93 | 92 | 89 | 86 | 83 | 80 | 77 | 74 |
| 60 | 110 | 236 | 485 | 734 | 983 | 1234 | 1413 | 1697 |
| | 124 | 123 | 121 | 118 | 115 | 112 | 109 | 106 |
| 75 | 106 | 231 | 480 | 731 | 980 | 1229 | 1409 | 1694 |
| | 156 | 155 | 153 | 149 | 146 | 143 | 140 | 137 |
| 90 | 102 | 226 | 477 | 726 | 975 | 1226 | 1405 | 1689 |
| | 188 | 187 | 184 | 181 | 178 | 174 | 171 | 168 |
| 105 | 97 | 222 | 472 | 722 | 971 | 1221 | 1401 | 1685 |
| | 219 | 218 | 215 | 213 | 209 | 206 | 202 | 199 |
| 120 | 93 | 217 | 467 | 717 | 966 | 1216 | 1396 | 1680 |
| | 250 | 249 | 247 | 243 | 240 | 236 | 233 | 229 |
| 135 | 87 | 212 | 462 | 711 | 961 | 1211 | 1391 | |
| | 280 | 279 | 278 | 275 | 271 | 268 | 264 | |
| 150 | 81 | 206 | 456 | 706 | 955 | 1205 | 1385 | |
| | 313 | 312 | 310 | 306 | 303 | 299 | 295 | |
| 170 | 74 | 199 | 448 | 699 | 948 | 1197 | 1379 | |
| | 354 | 353 | 351 | 348 | 344 | 340 | 336 | |
| 225 | 49 | 174 | 424 | 674 | 923 | 1173 | 1355 | |
| | 469 | 468 | 467 | 464 | 459 | 455 | 451 | |
| 265 | | 156 | 405 | 655 | 905 | 1155 | 1337 | |
| | | 552 | 551 | 547 | 542 | 537 | 533 | |

连续最大
Max.cont.

断续最大
Max.int.

 连续 cont.
 断续 int.

请注意：
马达可以按照所有区域内标记的扭矩和转速下高效率运行，但是选择白色背景区域内的扭矩和转速下运行，能使马达获得最佳的寿命。

Notice:
Motor can operating in all the marked torque and speed in each zone, but choose the torque and speed in white background, motor can acquire best life cycle.

BMK10-665 [638cm³/rev.] 连续最大 断续最大
Pressure 压力 (MPa) Max.cont. Max.int.

| | | | | | | | | |
|------|-----|---|------|----|------|----|----|----|
| 1.75 | 3.5 | 7 | 10.5 | 14 | 17.5 | 20 | 24 | 26 |
|------|-----|---|------|----|------|----|----|----|

| | | | | | | | | |
|-----|------------|------------|------------|------------|------------|------------|------------|-----------|
| 4 | 162 | 331 | 671 | | | | | |
| | 4 | 3 | 2 | | | | | |
| 8 | 163 | 332 | 672 | 1011 | 1350 | 1689 | | |
| | 11 | 10 | 8 | 7 | 4 | 2 | | |
| 15 | 162 | 331 | 671 | 1010 | 1349 | 1688 | 1931 | 2319 |
| | 23 | 22 | 20 | 18 | 15 | 13 | 11 | 9 |
| 30 | 158 | 328 | 667 | 1007 | 1347 | 1685 | 1928 | 2316 |
| | 45 | 44 | 42 | 40 | 38 | 36 | 34 | 33 |
| 45 | 154 | 324 | 664 | 1002 | 1342 | 1682 | 1924 | 2312 |
| | 69 | 68 | 66 | 64 | 62 | 60 | 58 | 56 |
| 60 | 149 | 320 | 658 | 998 | 1338 | 1677 | 1920 | 2304 |
| | 92 | 91 | 89 | 87 | 85 | 83 | 81 | 79 |
| 75 | 144 | 314 | 653 | 993 | 1332 | 1672 | 1916 | |
| | 116 | 115 | 113 | 111 | 107 | 105 | 103 | |
| 90 | 138 | 308 | 647 | 987 | 1327 | 1665 | 1909 | |
| | 139 | 138 | 135 | 133 | 131 | 128 | 126 | |
| 105 | 132 | 302 | 642 | 980 | 1320 | 1660 | | |
| | 162 | 161 | 159 | 156 | 154 | 152 | | |
| 120 | 125 | 296 | 634 | 974 | 1314 | 1653 | | |
| | 186 | 185 | 182 | 180 | 178 | 175 | | |
| 135 | 119 | 288 | 628 | 967 | 1306 | 1645 | | |
| | 209 | 208 | 206 | 202 | 200 | 197 | | |
| 150 | 111 | 280 | 620 | 960 | 1298 | 1638 | | |
| | 232 | 231 | 228 | 226 | 223 | 221 | | |
| 170 | 101 | 270 | 610 | 949 | 1288 | 1628 | | |
| | 264 | 262 | 259 | 257 | 254 | 252 | | |
| 225 | 67 | 236 | 576 | 916 | 1255 | | | |
| | 349 | 347 | 345 | 342 | 339 | | | |
| 265 | | 212 | 551 | 890 | 1230 | | | |
| | | 410 | 407 | 404 | 400 | | | |

连续最大
Max.cont.

断续最大
Max.int.

Torque 扭矩 (Nm) 212
Speed 转速 (rpm) 410

BMK10-940 [933cm³/rev.] 连续最大 断续最大
Pressure 压力 (MPa) Max.cont. Max.int.

| | | | | | | | |
|------|-----|---|------|----|------|----|----|
| 1.75 | 3.5 | 7 | 10.5 | 14 | 17.5 | 20 | 24 |
|------|-----|---|------|----|------|----|----|

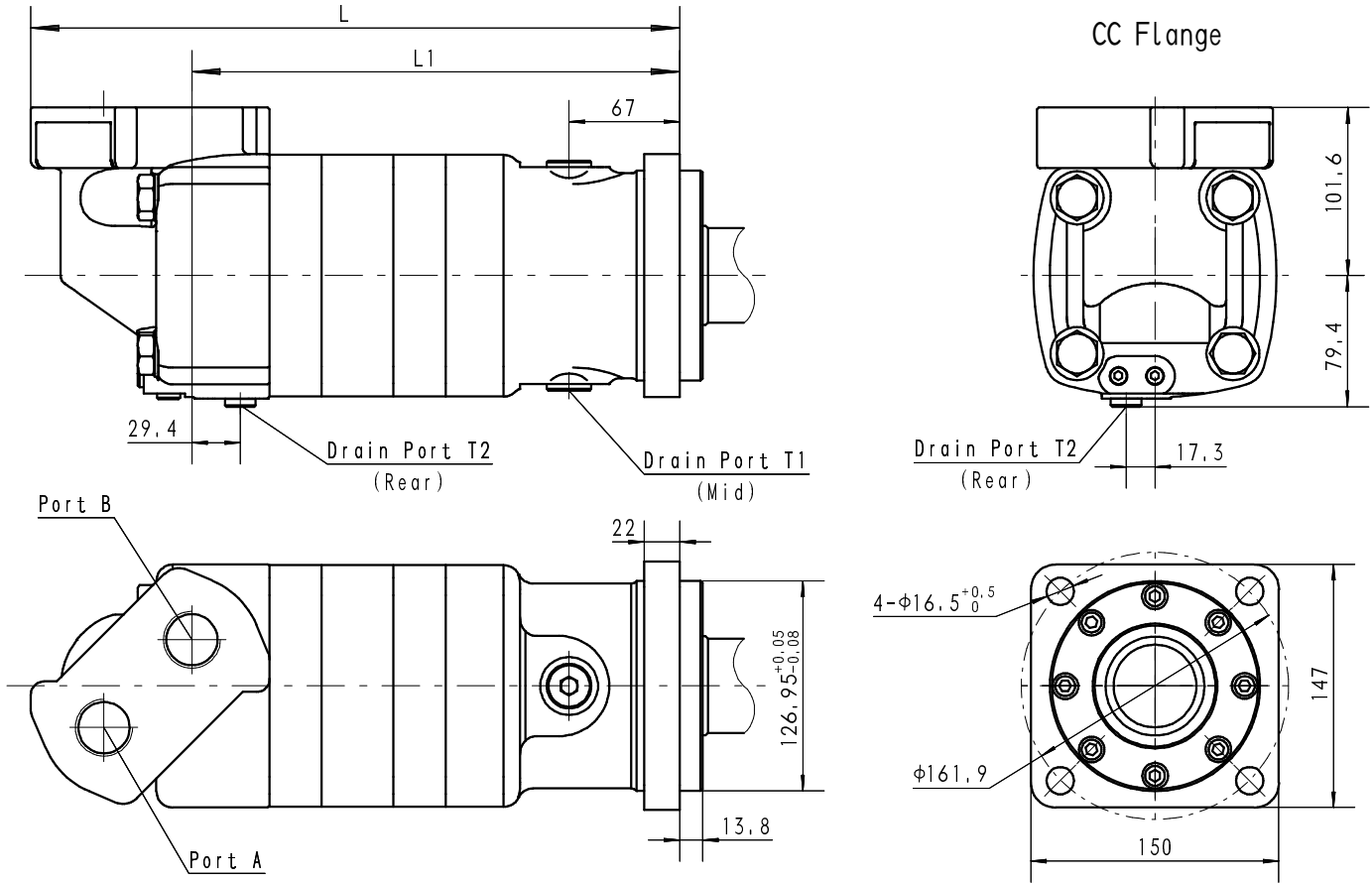
| | | | | | | | |
|-----|------------|------------|------------|------------|------------|-----------|----------|
| 4 | 236 | 484 | | | | | |
| | 3 | 2 | | | | | |
| 8 | 238 | 485 | 982 | 1478 | 1975 | | |
| | 7 | 6 | 5 | 3 | 1 | | |
| 15 | 236 | 484 | 980 | 1477 | 1974 | 2469 | 3393 |
| | 15 | 14 | 13 | 11 | 9 | 7 | 6 |
| 30 | 232 | 480 | 977 | 1472 | 1969 | 2466 | |
| | 31 | 30 | 28 | 27 | 25 | 23 | |
| 45 | 226 | 474 | 971 | 1467 | 1964 | 2460 | |
| | 47 | 46 | 44 | 43 | 41 | 39 | |
| 60 | 219 | 467 | 964 | 1460 | 1957 | | |
| | 63 | 62 | 60 | 58 | 57 | | |
| 75 | 211 | 459 | 956 | 1452 | 1949 | | |
| | 79 | 78 | 76 | 74 | 72 | | |
| 90 | 202 | 451 | 947 | 1444 | 1941 | | |
| | 95 | 94 | 92 | 90 | 88 | | |
| 105 | 193 | 442 | 938 | 1435 | 1932 | | |
| | 111 | 110 | 108 | 106 | 104 | | |
| 120 | 184 | 432 | 928 | 1425 | | | |
| | 127 | 126 | 124 | 122 | | | |
| 135 | 173 | 422 | 918 | 1414 | | | |
| | 143 | 142 | 140 | 138 | | | |
| 150 | 161 | 410 | 906 | 1403 | | | |
| | 159 | 158 | 156 | 154 | | | |
| 170 | 147 | 396 | 891 | 1388 | | | |
| | 180 | 179 | 177 | 175 | | | |
| 225 | 98 | 346 | 842 | 1339 | | | |
| | 239 | 238 | 235 | 233 | | | |
| 265 | 61 | 309 | 806 | 1303 | | | |
| | 281 | 280 | 277 | 275 | | | |

连续最大
Max.cont.

断续最大
Max.int.

 连续 cont.

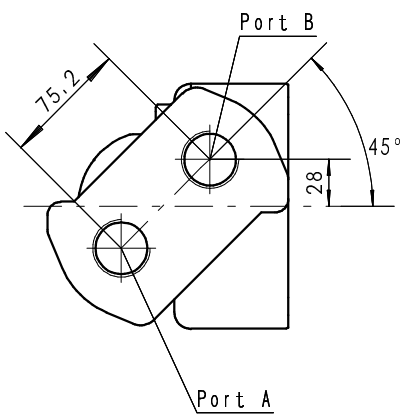
 断续 int.



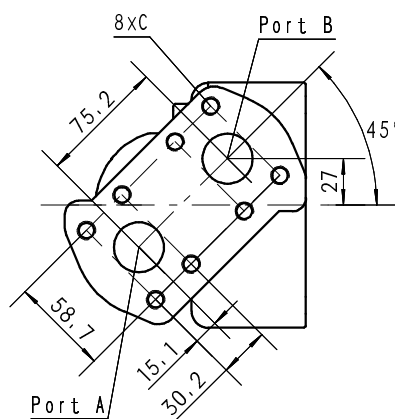
Direction of shaft rotation: Standard
When facing shaft end of motor, shaft to rotate:
Clockwise when port "A" is pressurized,
Counter-clockwise when port "B" is pressurized.

| Model | L1 | L |
|-----------|-----|-----|
| BMK10-350 | 281 | 381 |
| BMK10-480 | 293 | 393 |
| BMK10-665 | 293 | 393 |
| BMK10-940 | 313 | 413 |

Port: SF5、SF7



Port: SF

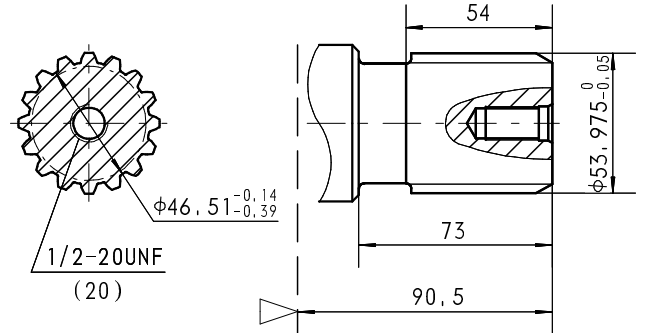
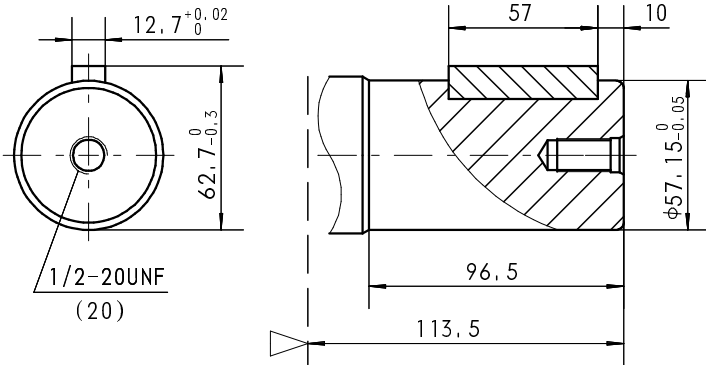


| Port | Code | |
|------|-----------------|----------|
| | SF5 | SF7 |
| A, B | 1-5/16-12UN(18) | G1(18) |
| T1 | 7/8-14UNF(16) | G1/2(16) |
| T2 | 9/16-18UNF(12) | G1/4(12) |

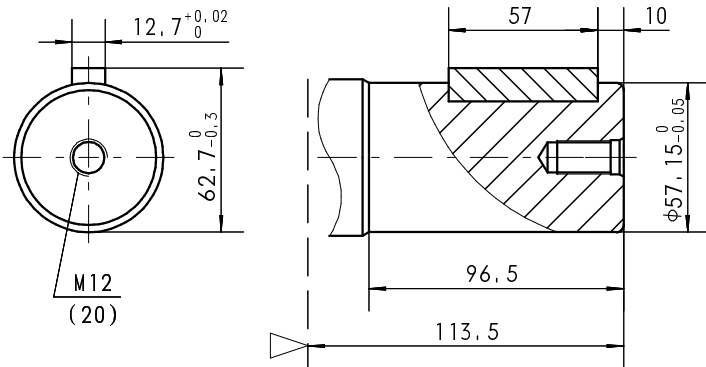
| Port | Code |
|------|----------------|
| | SF |
| A, B | $\phi 29.4$ |
| T1 | 7/8-14UNF(16) |
| T2 | 9/16-18UNF(12) |
| C | 7/16-14UNC(25) |

Shaft: C Cylindrical shaft $\phi 57,15$
Key: 12.7x12.7x57

Shaft: BD Splined 16-DP8/16

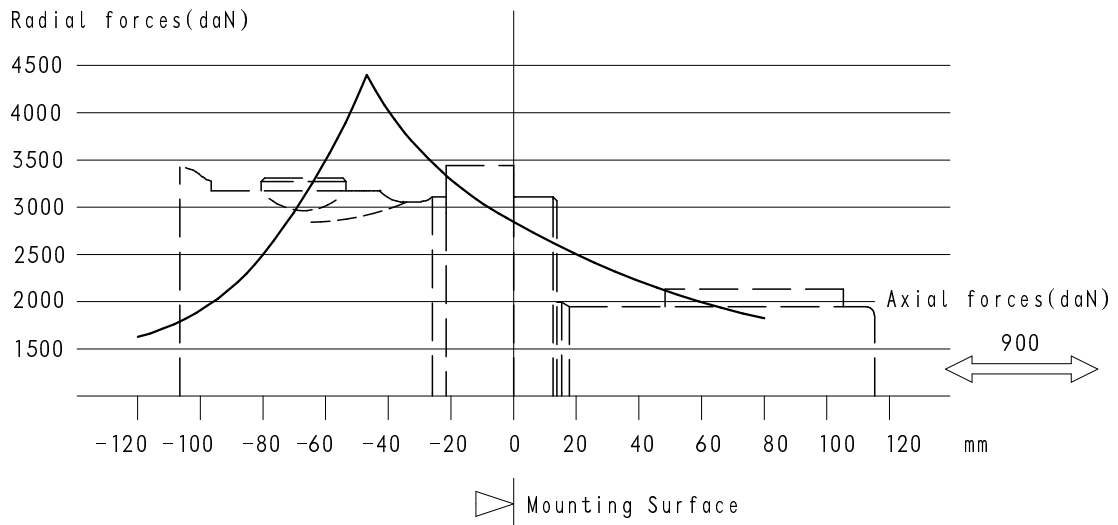


Shaft: C1 Cylindrical shaft $\phi 57,15$
Key: 12.7x12.7x57



▷ Motor Mounting Surface CC Flange

BMK10 Shaft Radial&Axial Forces of CC Mounting



▷ Mounting Surface

Notice:

The curve on the top means the outputshaft permits radial load in different position.
The table as follow means the speed of motor influence the radial force.

BMK10 Series Hydraulic Motor

BMK10 Series Hydraulic Motor Order code

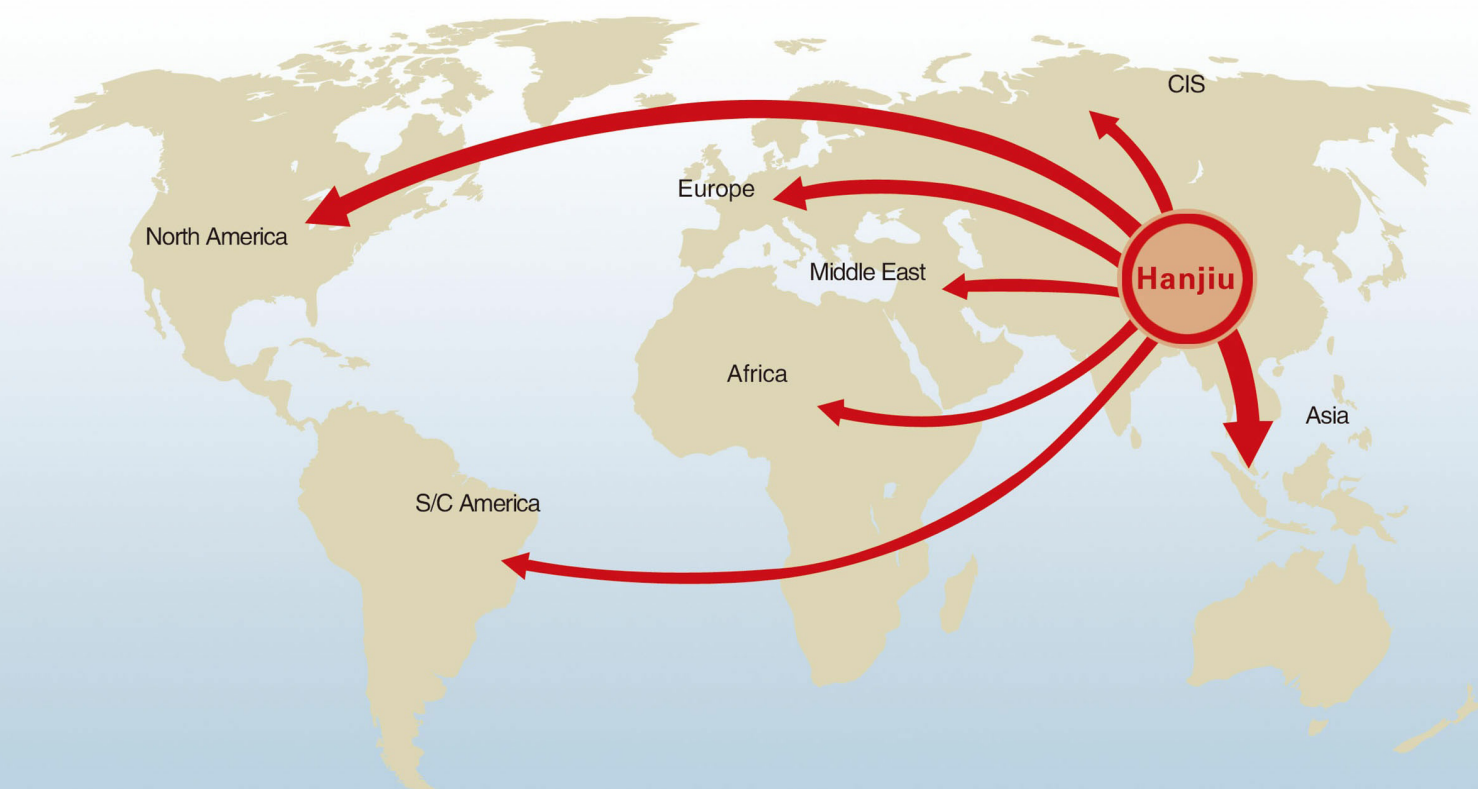
| | | | | | | | |
|--------------|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| BMK10 | | | | | | | |

| Pos.1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|-------|-------|---|--|---|--------------------|----------|--------------------|
| Code | Disp. | Flange | Shaft | Port | Rotation Direction | Paint | Unusually Function |
| | | | | A, B: 1-5/16-12UNF T1: 7/8-14UNF T2: 9/16-18UNF | | | |
| | 350 | C | Φ57.15 Straight Shaft Parallel key 12.7*12.7*57 | SF5 | Omit | 00 | Omit |
| | 480 | 4- Φ 16.5 Square flange Φ 161.9 CC Pilot Φ127*13.8 | Φ57.15 Straight Shaft Parallel key 12.7*12.7*57 | SF7 | Standard CW | No paint | |
| | 665 | | | A, B: G1 T1: G1/2 T2: G1/4 | Reverse CCW | B | Standard |
| | 940 | | | Manifold mount 8×7/16-14UNC T1: 7/8-14UNF T2: 9/16-18UNF | R | | |
| | | | | SF | | | |

Note : when the table is used, please fill the code of left rows in dash area and give us, which the code information is consists of construction , displacement, mounting flange, output shaft and ports, if the specification is not In the table or you have specific requirements, please contact us.

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PROFESSIONAL ON HYDRAULIC- FOCUS ON HIGH QUALITY



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