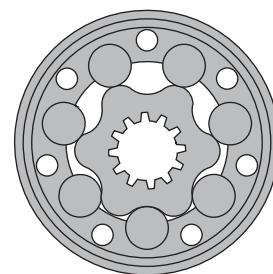


HYDRAULIC MOTOR-BRAKE B/MR



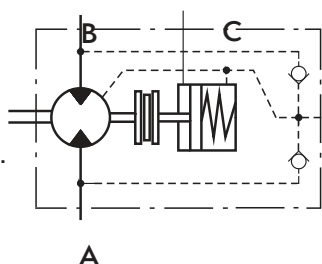
APPLICATION

- » Conveyors
- » Feeding mechanism of robots and manipulators
- » Metal working machines
- » Textile machines
- » Agriculture machines
- » Food industries
- » Mining machinery etc.



CONTENTS

| | |
|-------------------------------|--------|
| Specification data | 22÷23 |
| Dimensions and mounting | 24÷25 |
| Shaft extensions | 2 5 .. |
| Permissible shaft loads | 26 |
| Order code | 26 |



OPTIONS

- » Model-Spool valve, roll-gerotor;
- » Fully integrated friction disk brake;
- » Side port;T
- » Shaft - straight;» BSPP ports.

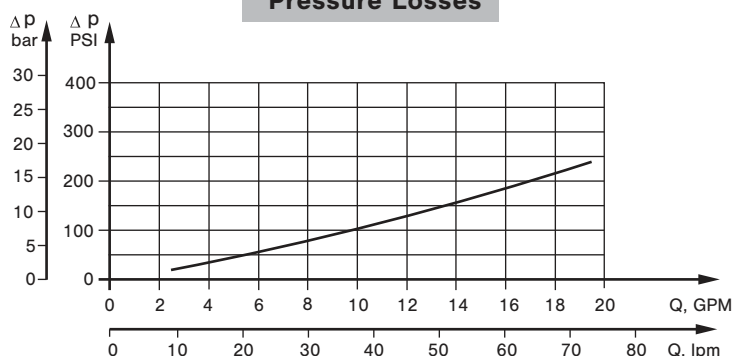
GENERAL

| | |
|---|---|
| Max. Displacement, cm ³ /rev [in ³ /rev] | 397 [24.4] |
| Max. Speed, [RPM] | 600 |
| Max. Torque, daNm [lb-in] | cont.: 61 [5400] int.: 57 [5045] |
| Max. Output, kW [HP] | 14,5 [19.5] |
| Max. Pressure bar [PSI]lpm | cont.: 175 75[[19.8]2540] int.: 200 [2900] |
| Drop Max. Oil Flow, [GPM] | |
| Min. Speed, [RPM] | 10 |
| Permissible Shaft Loads, daN [lb-in] | P _a =200 [450] |
| Pressure fluid | Mineral based-HLP(DIN 51524) or HM(ISO 6743/4) |
| Temperature range, °C [°F] | -40÷140 [-40÷284] |
| Optimal Viscosity range, mm ² /s [SUS] | 20÷75 [98÷347] |
| Filtration | ISO code 20/16 (Min. recommended fluid filtration of 25 micron) |

Oil flow in drain line

| Viscosity mm ² /s [SUS] | Pressure drop bar [PSI] | Oil flow in drain line lpm [GPM] |
|---------------------------------------|----------------------------|--|
| 100 [1450] | 20 [98] | 2,5 [.660] |
| | 35 [164] | 1,8 [.476] |
| 140 [2030] | 20 [98] | 3,5 [.925] |
| | 35 [164] | 2,8 [.740] |

Pressure Losses





SPECIFICATION DATA

| Type | | B/MR 80 | B/MR 100 | B/MR 125 | B/MR 160 | B/MR 160 CB | B/MR 200 | B/MR 200 CB |
|--|-------------------|-----------------|-------------|-------------|-------------|----------------|-------------|----------------|
| Displacement, cm³/rev | | 80,3 | 99,8 | 125,7 | 159,6 | | 199,8 | |
| [in³/rev] | | [4.90] | [6.09] | [7.67] | [9.74] | | [12.19] | |
| Max. Speed, | Cont. | 500 | 500 | 475 | 375 | | 300 | |
| [RPM] | Int.* | 600 | 600 | 600 | 470 | | 375 | |
| Max. Torque | Cont. | 19,5[1725] | 24[2125] | 30[2655] | 30[2655] | 39[3450] | 30[2655] | 45[3980] |
| daNm [in-lb] | Int.* | 22[1947] | 28[2480] | 34[3010] | 39[3450] | 43[3805] | 39[3450] | 50[4425] |
| | Peak** | 27[2390] | 32[2832] | 37[3275] | 46[4070] | 46[4070] | 56[4960] | 56[4955] |
| Max. Output | Cont. | 8,4[11.2] | 10,8[14.5] | 12,5[16.8] | 10 [13.5] | 11,5[11.5] | 7,8[10.5] | 11[14.75] |
| kW [HP] | Int.* | 9,6[12.9] | 12[16.1] | 14,5[19.5] | 12,5[16.8] | 14[18.8] | 12,4[16.6] | 13[17.4] |
| Max. Pressure | Cont. | 175[2540] | 175[2540] | | 135[1960] | | 105[1523] | 175[2540] |
| Drop, | Int.* | 175[2540] | 200[2900] | 175[2540] | 200[2900] | 145[2103] | 200[2900] | 200[2900] |
| bar [PSI] | Peak** | 225[3263] | 225[3263] | 225[3263] | 225[3263] | 225[3263] | 225[3263] | 225[3263] |
| Max. Oil Flow | Cont. | 40 [10.5] | 50 [13.2] | 60 [15.9] | 60 [15.9] | | 60 [15.9] | |
| l/min [GPM] | Int.* | 48 [12.7] | 60 [15.9] | 75 [19.8] | 75 [19.8] | | 75 [19.8] | |
| Max. Inlet | Cont. | 175 [2540] | | | | | | |
| Pressure | Int.* | 200 [2900] | | | | | | |
| bar [PSI] | Peak** | 225 [3260] | | | | | | |
| Max. Starting Pressure bar [PSI] | | 10 [145] | 10 [145] | 9 [130] | 7 [102] | | 5 [73] | |
| Min. Starting | At max.press.drop | Cont 15 [1330] | 20 [1770] | 25 | 24 [2124] | 32 [2832] | 26 [2301] | 41 [3628] |
| Torque, daNm[in-lb] | At max.press.drop | Int.* 17 [1505] | 23 | 28 [2480] | 32 [2832] | 37 [3275] | 33 [2920] | 46 [4071] |
| Min. Speed***, [RPM] | | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Static Torque of Brake, daNm [in-lb] | | 55 [4868] | | | | | | |
| Min. Brake Release Pressure****, bar [PSI] | | 13 [190] | | | | | | |
| Max.Opening Pressure, bar [PSI] | | 200 [2900] | | | | | | |
| Weight, kg[] lb | | 11,0 [24.3] | 11,2 [24.7] | 11,4 [25.2] | 11,6 [25.6] | 11,7 [25.8] | 12,2 [26.9] | 12,3 [27.12] |

* 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.

*** For speeds lower than given, consult factory or your regional manager.

**** Motor-brakes must always have a drain line. The brake release pressure is the difference between the pressure in the brake release line and the pressure in the drain line.

1. Intermittent speed and intermittent pressure must not occur simultaneously.

2. Recommended filtration is per ISO cleanliness code 20/16. A nominal filtration of 25 micron or better.

4) or HM (ISO 6743/4). If using synthetic fluids consult the factory for alternative seal materials.

3. Recommend using a premium quality, anti-wear type mineral based hydraulic oil HLP(DIN5152

4. Recommended minimum oil viscosity 13 mm²/s [70 SUS] at 50°C [122°F].

5. Recommended maximum system operating temperature is 82°C [180°F].

6. To assure optimum motor life fill with fluid prior to loading and run at moderate load and speed for 10-15 minutes.



SPECIFICATION DATA (continued)

| Type | | B/MR 250 | B/MR 250 CB | B/MR 315 | B/MR 315 CB | B/MR 400 | B/MR 400 CB |
|---|-------------------|-------------------|----------------|------------------|----------------|---------------|----------------|
| Displacement, cm ³ /rev [in ³ /rev] | | 250,1 [15.26] | | 315,7 [19.26] | | 397 [24.4] | |
| Max. Speed, [RPM] | Cont. | 240 | | 190 | | 150 | |
| | Int.* | 300 | | 240 | | 190 | |
| Max. Torque daNm [in-lb] | Cont. | 30 [2655] | | 30 [2655] | 55 [4868] | 30 [2655] | 55 [4868] |
| | Int.* | 54 [4780] | 39 [3450] | 57 [5045] | 42 [3717] | 57 [5045] | 43 [3805] |
| | Peak** | 60 [5310] | 71 [6285] | 61 [5400] | 71 [6285] | 60 [5310] | 70 [6195] |
| Max. Output kW [HP] | Cont. | 6,2 [8.3] | 10 [13.4] | 4,5 [6.1] | 9 | 2,2 [2.9] | 7[9.] |
| | Int.* | 9,5 [12.7] | 11 [14.7] | 7,5 [10.1] | 10 [13.4] | 5,6 [7.5] | 8,7 [11.] |
| Max. Pressure Drop, bar [PSI] | Cont. | 85 [1233] | 175 | 65 [942] | 135 [1958] | 45 [652] | 105 [1523] |
| | Int.* | 115 [1668] | 185 | 90 [1305] | 145 | 75 [1087] | 115 [1668] |
| | Peak** | 200 [2900] | 225 | 180 [2610] | 210 [2103] | 140 [2030] | 150 [2175] |
| Max. Oil Flow l/min [GPM] | Cont. | 60 [15.9] | | | | | |
| | Int.* | 75 [19.8] | | | | | |
| Max. Inlet Pressure bar [PSI] | Cont. | 175 [2540] | | | | | |
| | Int.* | 200 [2900] | | | | | |
| | Peak** | 225 [3260] | | | | | |
| Max. Starting Pressure bar [PSI] | | 5 [73] | | 5 [73] | | 5 [73] | |
| Min. Starting Torque, daNm[in-lb] | At max.press.drop | Cont 50 [4425] | 24 [2125] | 25 [2125] | 50 [4425] | 26 [2300] | 44 [3895] |
| | At max.press.drop | Int.* 51,8 [4585] | 38 [3364] | 50 [4425] | 31 [2745] | 51,5 [4560] | 35 [3100] |
| Min. Speed***, [RPM] | | 10 | 10 | 10 | 10 | 10 | 10 |
| Static Torque of Brake, daNm [in-lb] | | 55 [4868] | | | | | |
| Min. Brake Release Pressure****, bar [PSI] | | 13 [190] | | | | | |
| Max. Opening Pressure, bar [PSI] | | 200 [2900] | | | | | |
| Weight, kg[lb] | | 1 , 2 6 [27.8] | 1 , 7 2 [28] | 13 | 3 , [29.3] | 13,4[29.5] | 14 [30.9] |

* 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.

*** For speeds lower than given, consult factory or your regional manager.

**** Motor-brakes must always have a drain line. The brake release pressure is the difference between the pressure in the brake release line and the pressure in the drain line.

1. Intermittent speed and intermittent pressure must not occur simultaneously.

2. Recommended filtration is per ISO cleanliness code 20/16. A nominal filtration of 25 micron or better.

4) or HM (ISO 6743/4). If using synthetic fluids consult the factory for alternative seal materials.

3. Recommend using a premium quality, anti-wear type mineral based hydraulic oil HLP(DIN5152

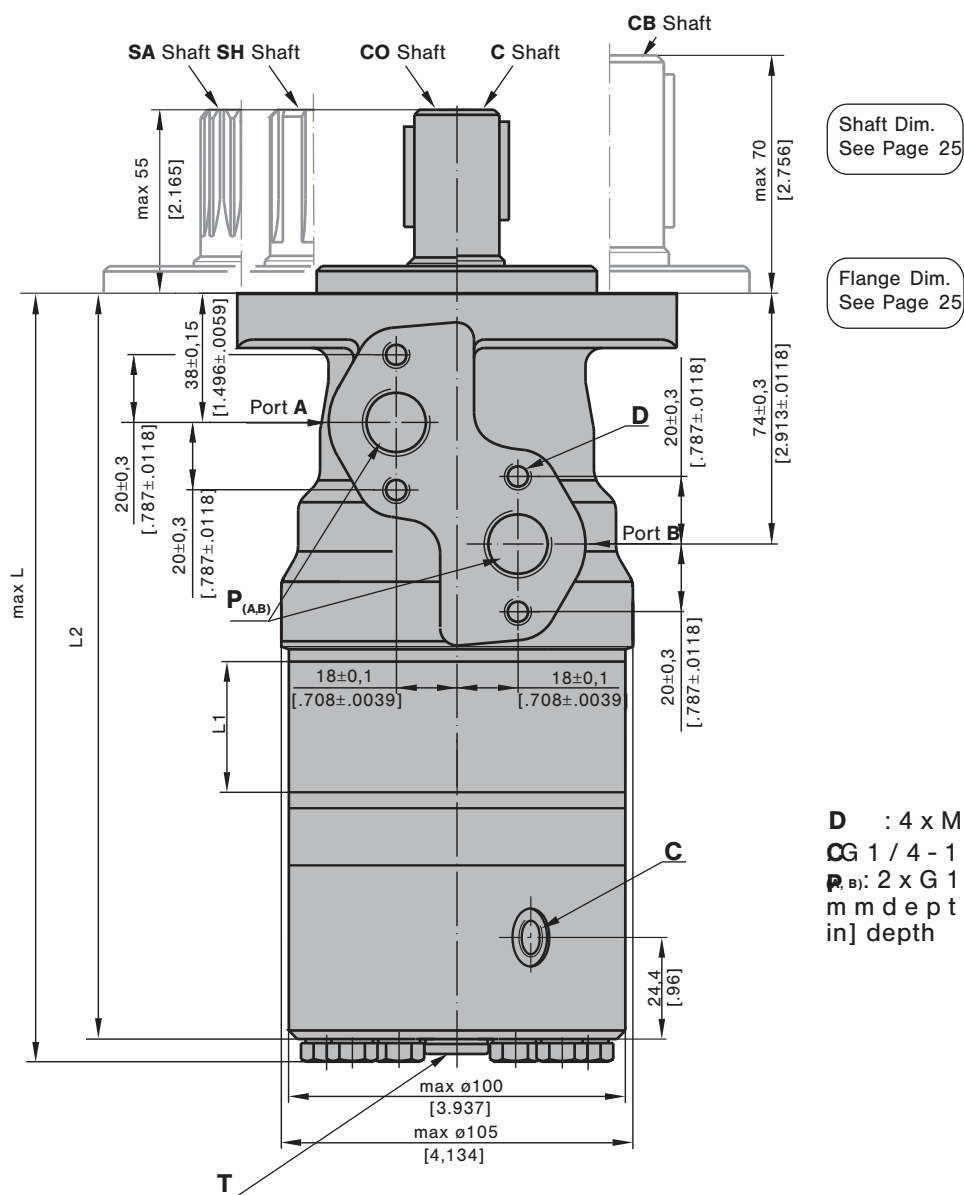
4. Recommended minimum oil viscosity 13 mm²/s [70 SUS] at 50°C [122°F].

5. Recommended maximum system operating temperature is 82°C [180°F].

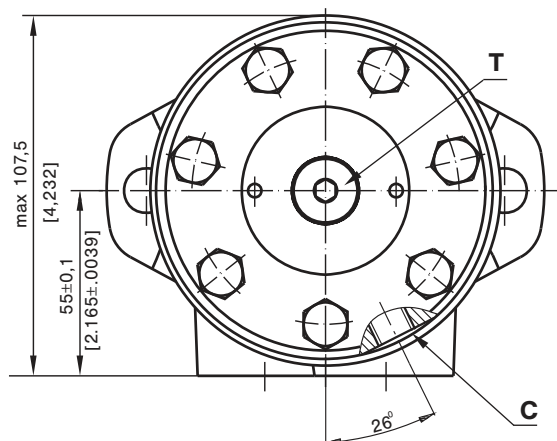
6. To assure optimum motor life fill with fluid prior to loading and run at moderate load and speed for 10-15 minutes.



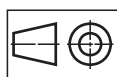
DIMENSIONS AND MOUNTING DATA



D : 4 x M 8 - 13 mm [.51 in] depth
CG 1 / 4 - 12 [.47 in] mm depth
P, B: 2 x G 1 / 2 - 15 [.59 in] mm depth
T: G 1/4 - 10 mm [.393 in] depth



| Type | L1, mm [in] | L2, mm [in] | L, mm [in] |
|----------|--------------|----------------|---------------|
| B/MR 80 | 14,0 [.551] | 205,5 [8.091] | 213,5 [8.405] |
| B/MR 100 | 17,4 [.685] | 209,0 [8.228] | 217,0 [8.543] |
| B/MR 125 | 21,8 [.858] | 213,5 [8.405] | 221,5 [8.720] |
| B/MR 160 | 27,8 [1.095] | 219,5 [8.642] | 227,5 [8.957] |
| B/MR 200 | 34,8 [1.37] | 226,5 [8.917] | 234,5 [9.232] |
| B/MR 250 | 43,5 [1.713] | 235,0 [9.252] | 243,0 [9.567] |
| B/MR 315 | 54,8 [2.157] | 246,5 [9.705] | 254,5 [10.02] |
| B/MR 400 | 69,4 [2.732] | 261,0 [10.275] | 269,0 [10.59] |



mm [in]

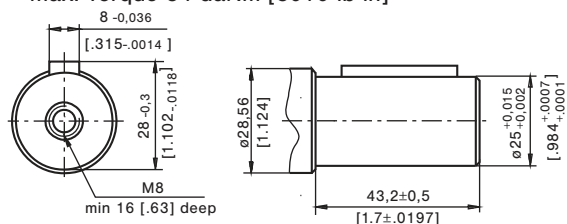
Standard Rotation
 Viewed from Shaft End
 Port A Pressurized -CW
 Port B Pressurized -CCW

Reverse Rotation
 Viewed from Shaft End
 Port A Pressurized -CCW
 Port B Pressurized -CW

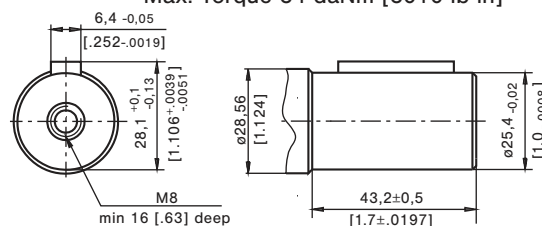


SHAFT EXTENSIONS

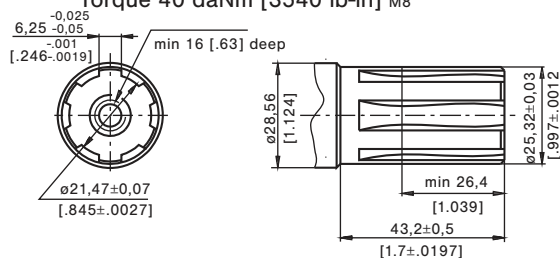
C - $\varnothing 25$ straight, Parallel key A8x7x32 DIN 6885
Max. Torque 34 daNm [3010 lb-in]



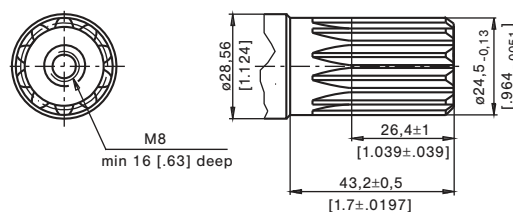
CO - $\varnothing 1$ " straight, Parallel key $\frac{1}{4}$ "x $\frac{1}{4}$ "x $\frac{1}{4}$ " BS46
Max. Torque 34 daNm [3010 lb-in]



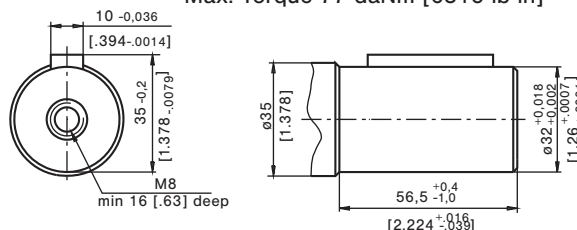
SH -splined, BS 2059 (SAE 6B) Max.
Torque 40 daNm [3540 lb-in] M8



SA -splined, B25x22h9 DIN 5482 Max.
Torque 40 daNm [3540 lb-in]

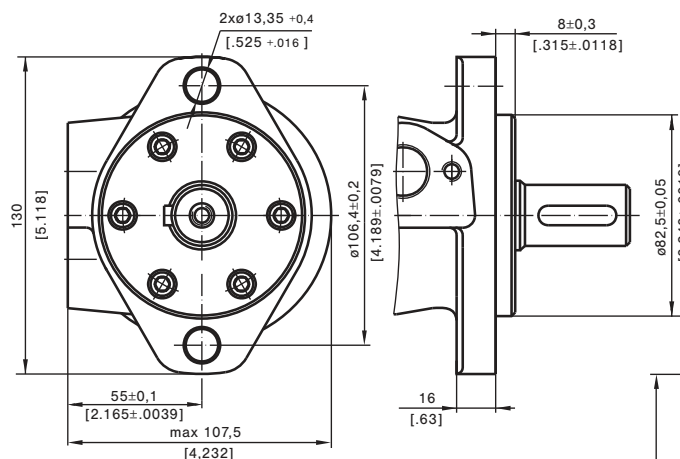


CB - $\varnothing 32$ straight, Parallel key A10x8x45 DIN 6885
Max. Torque 77 daNm [6815 lb-in]

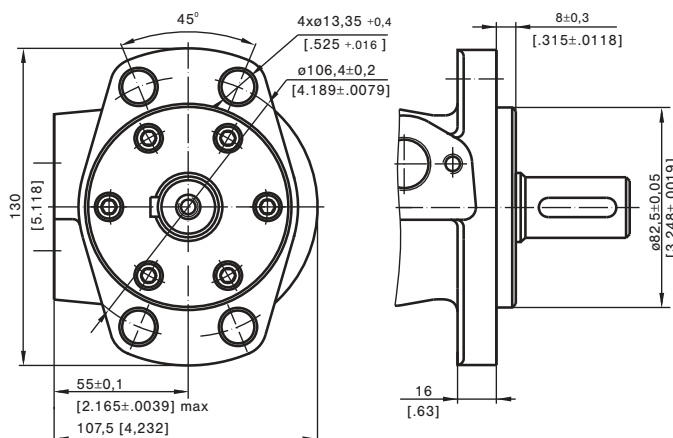


MOUNTING

Oval Mount (2 Holes)

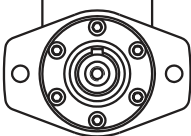
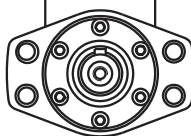


F -Oval Mount (4 Holes)



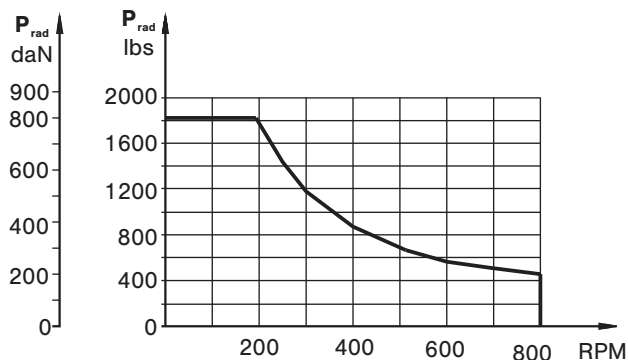
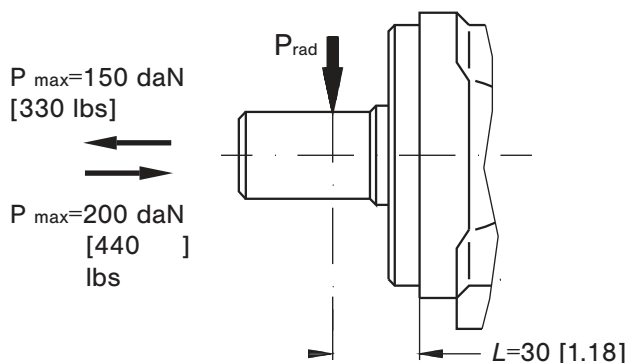
PERMISSIBLE SHAFT LOADS

The permissible radial shaft load P_{rad} depends on the speed n , RPM, distance L from the point of load to the mounting flange and shaft version.

| Mounting Flange |  |  |
|---------------------------------------|---|---|
| Shaft Version | cylindrical -C, CO splined -SH, SA | cylindrical -CB |
| Radial Shaft Load P_{rad} , in mm | $\frac{800 \cdot 25000}{n \cdot 95 + L} \times$, daN* | $\frac{800 \cdot 18750}{n \cdot 95 + L} \times$, daN* |
| Radial Shaft Load P_{rad} , in inch | $\frac{800 \cdot 2215}{RPM \cdot 3.74 + L} \times$, lbs* | $\frac{800 \cdot 1660}{RPM \cdot 3.74 + L} \times$, lbs* |

* $n \leq 200$ RPM; max P_{rad} =800 daN [1800 lbs] $n > 200$ RPM; $L < 55$ mm [2.2 in]

Radial Shaft Load P_{rad} for C, CO Shaft Extensions by $L=30$ mm [1.18 in]



ORDER CODE

| | | | | |
|--------|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
| B/ M R | | | | |

Pos.1 - Mounting Flange

omit -Oval mount, two holes

F - Oval mount, four holes

Pos.2 - Displacement code

| | |
|------------|--|
| 80 | - 80,3 cm ³ /rev [4.90 in ³ /rev] |
| 100 | - 99,8 cm ³ /rev [6.09 in ³ /rev] |
| 125 | -125,7 cm ³ /rev [7.67 in ³ /rev] |
| 160 | -159,6 cm ³ /rev [9.74 in ³ /rev] |
| 200 | -199,8 cm ³ /rev [12.19 in ³ /rev] |
| 250 | -250,1 cm ³ /rev [15.26 in ³ /rev] |
| 315 | -315,7 cm ³ /rev [19.26 in ³ /rev] |
| 400 | -397,0 cm ³ /rev [24.40 in ³ /rev] |

Pos.3 - Shaft Extensions*

| | |
|-----------|---|
| C | -ø25 straight, Parallel key A8x7x32 DIN6885 |
| CO | -ø1" straight, Parallel key 1/4"x1/4"x1 1/4" BS46 |
| SH | -ø25,32 splined BS 2059 (SAE 6B) |
| SA | -ø24,5 splined B 25x22 DIN 5482 |
| C | -ø24,5 splined B 25x22 DIN 5482 |
| B | -ø32 straight, Parallel key A10x8x45 DIN 6885 |

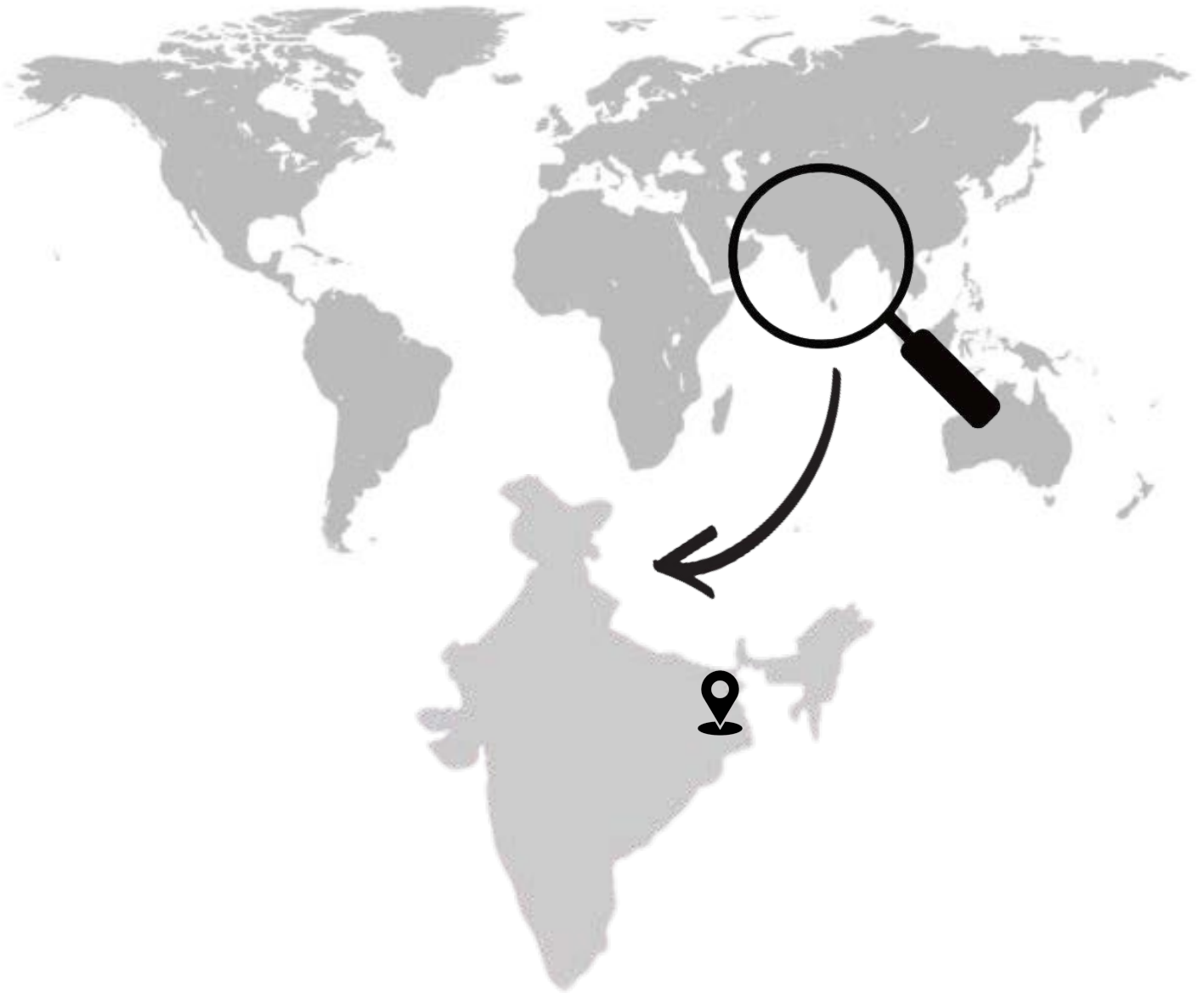
Pos.4 - Special Features (see page 59)

Pos.5 - Design Series

omit -Factory specified

NOTES:

- * The permissible output torque for shafts must be not exceeded!
- The hydraulic motors are mangano phosphatized as standard.



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