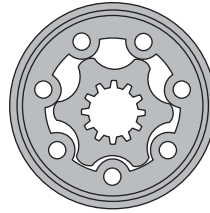


Planetenmotor EPM®

Planetarymotor EPM®



Anwendung

- Förderbänder
- Fördertechnik für Roboter
- Textilmaschinen
- Werkzeugmaschinen
- Nahrungsmittelindustrie
- Landmaschinen
- u.a.

Bauweise und Ausführungen

- Modell: Längsschieberventil, Planetensatz
- Flansch: Ovalflansch, Quadratflansch, Radflansch
- Anschlüsse: Hinten oder seitlich metrisches oder BSPP Gewinde
- Lagerung: Mit und ohne Radialnadellager
- Wellen: Zylindrisch, konisch oder verzahnt
- Wellendichtung: Für hohen und niedrigen Druck
- Drehzahlsensorik
- Sonderausführungen

Application

- Conveyors
- Feeding mechanism of robots and manipulators
- Textile machines
- Machine tools
- Food industries
- Agriculture machines
- etc.

Construction and options

- Model: Spool valve, gerotor
- Flange: Ovalflange, squareflange or wheelflange
- Ports: Rear or side ports, metric or BSPP threaded ports
- Bearing: With or without radial needle bearing
- Shafts: Cylindrical, tapered or splined
- Shaft seal: For high and low pressure
- Speed sensing
- Other special features

Übersicht Overview

| | | | | | |
|----------------------|-------------------------|--------------------|---------|------------------------|--|
| Max. Schluckvolumen | Max. Displacement | cm ³ /U | ccm/rev | [in ³ /rev] | 25,0 - 623,6 [1.52 - 38.05] |
| Max. Drehzahl | Max. Speed | U/min | RPM | | 1815 |
| Max. Drehmoment | Max. Torque | daNm | | [in-lb] | 64 [5565] |
| Max. Leistungsabgabe | Max. Output | kW | | [HP] | 12,8 [17.1] |
| Max. Druckgefälle | Max. Pressure drop | bar | | [PSI] | 175 [2540] |
| Max. Ölstrom | Max. Oil flow | l/min | lpm | [GPM] | 75 [18.5] |
| Min. Drehzahl | Min. Speed | U/min | RPM | | 10 |
| Hydrauliköl | Pressure fluid | | | | HLP (DIN 51524) oder or HM (ISO 6743/4) |
| Öltemperatur | Temperature range | °C | | [°F] | -40 - 140 [-40 - 284] |
| Optimalviskosität | Optimal viscosity range | mm ² /s | | [SUS] | 20 - 75 [98 - 347] |
| Filterierung | Filtration | | | | ISO Code 20/16 (min. empfohlene Filterierung recommended filtration 25 µm) |

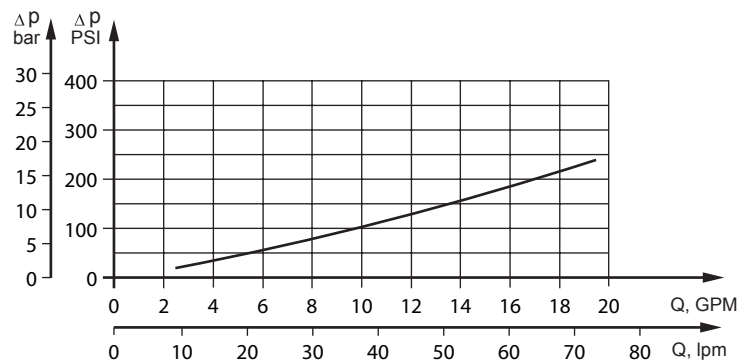
Ölstrom in der Leckölleitung

Oil flow in drain line

| Druckgefälle Pressure drop bar [PSI] | Viskosität Viscosity mm ² /s [SUS] | Ölstrom Oilflow l/min lpm [GPM] |
|--|---|---------------------------------------|
| 140 [2030] | 20 [98] | 2,5 [.660] |
| | 35 [164] | 1,8 [.476] |
| 210 [3045] | 20 [98] | 3,5 [.925] |
| | 35 [164] | 2,8 [.740] |

Druckverlust

Pressure losses



Technische Daten *Technical datas*

Für EPM Motoren mit C, CO, SH, K und SA Wellen (Dichtungsdurchmesser Ø28,56)
For EPM motors with C, CO, SH, K and SA shafts (sealing diameter Ø28,56)

| Typ <i>Type</i> | | EPM 25 | EPM 32 | EPM 40 | EPM 50 | EPM 80 | EPM 100 | EPM 125 |
|---|--|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|
| Schluckvolumen <i>Displacement</i> cm ³ /U <i>ccm/rev</i> [in ³ /rev] | | 25,0 [1.52] | 32,0 [1.95] | 40,0 [2.44] | 49,5 [3.02] | 79,2 [4.83] | 99,0 [6.04] | 123,8 [7.55] |
| Max. Drehzahl <i>Max. Speed</i> U/min <i>RPM</i> | Dauerbetrieb <i>Continuous working</i> | 1600 | 1560 | 1500 | 1210 | 755 | 605 | 486 |
| | Intermittierend* <i>Intermittent *</i> | 1815 | 1720 | 1750 | 1515 | 945 | 755 | 605 |
| Max. Drehmoment <i>Max. Torque</i> daNm [lb-in] | Dauerbetrieb <i>Continuous working</i> | 3,3 [290] | 4,3 [380] | 6,2 [550] | 9,4 [835] | 15,1 [1340] | 19,3 [1710] | 23,7 [2100] |
| | Intermittierend* <i>Intermittent *</i> | 4,7 [415] | 6,1 [540] | 8,2 [730] | 11,9 [1050] | 19,5 [1725] | 23,7 [2100] | 29,8 [2640] |
| | Spitze ** <i>Peak **</i> | 6,7 [595] | 8,6 [760] | 10,7 [950] | 14,3 [1285] | 22,4 [1985] | 27,5 [2435] | 36,5 [3235] |
| Max. Leistungsabgabe <i>Max. Output</i> kW [HP] | Dauerbetrieb <i>Continuous working</i> | 4,5 [6.0] | 5,8 [7.8] | 8,4 [11.5] | 10,1 [13.5] | 10,2 [13.7] | 10,5 [14.1] | 10,2 [13.7] |
| | Intermittierend* <i>Intermittent *</i> | 6,1 [8.2] | 7,8 [10.5] | 11,6 [15.5] | 12,2 [16.1] | 12,5 [16.8] | 12,8 [17.1] | 12,0 [16.1] |
| Max. Druckgefälle <i>Max. Pressure drop</i> bar [PSI] | Dauerbetrieb <i>Continuous working</i> | 100 [1450] | 100 [1450] | 120 [1750] | 140 [2030] | 140 [2030] | 140 [2030] | 140 [2030] |
| | Intermittierend* <i>Intermittent *</i> | 140 [2030] | 140 [2030] | 155 [2250] | 175 [2540] | 175 [2540] | 175 [2540] | 175 [2540] |
| | Spitze ** <i>Peak **</i> | 225 [3260] | 225 [3260] | 225 [3260] | 225 [3260] | 225 [3260] | 225 [3260] | 225 [3260] |
| Max. Ölstrom <i>Max. Oil flow</i> l/min <i>lpm</i> [GPM] | Dauerbetrieb <i>Continuous working</i> | 40 [10.5] | 50 [13.2] | 60 [15.9] | 60 [15.9] | 60 [15.9] | 60 [15.9] | 60 [15.9] |
| | Intermittierend* <i>Intermittent *</i> | 45 [11.9] | 55 [14.5] | 70 [18.5] | 75 [19.8] | 75 [19.8] | 75 [19.8] | 75 [19.8] |
| Max. Eingangsdruck <i>Max. Inlet pressure</i> bar [PSI] | Dauerbetrieb <i>Continuous working</i> | 175 [2540] | 175 [2540] | 175 [2540] | 175 [2540] | 175 [2540] | 175 [2540] | 175 [2540] |
| | Intermittierend* <i>Intermittent *</i> | 200 [2900] | 200 [2900] | 200 [2900] | 200 [2900] | 200 [2900] | 200 [2900] | 200 [2900] |
| | Spitze ** <i>Peak **</i> | 225 [3260] | 225 [3260] | 225 [3260] | 225 [3260] | 225 [3260] | 225 [3260] | 225 [3260] |
| Max. Rücklaufdruck mit Leckölleitung <i>Max. Return pressure with drain line</i> bar [PSI] | Dauerbetrieb <i>Continuous working</i> | 175 [2540] | 175 [2540] | 175 [2540] | 175 [2540] | 175 [2540] | 175 [2540] | 175 [2540] |
| | Intermittierend* <i>Intermittent *</i> | 200 [2900] | 200 [2900] | 200 [2900] | 200 [2900] | 200 [2900] | 200 [2900] | 200 [2900] |
| | Spitze ** <i>Peak **</i> | 225 [3260] | 225 [3260] | 225 [3260] | 225 [3260] | 225 [3260] | 225 [3260] | 225 [3260] |
| Max. Anlaufdruck mit unbelasteter Welle <i>Max. starting pressure with unloaded shaft</i> | bar [PSI] | 10 [145] | 10 [145] | 10 [145] | 10 [145] | 10 [145] | 10 [145] | 9 [131] |
| Min. Anlaufmoment bei max. Druckgefälle <i>Min. starting torque at max. pressure</i> <i>drop</i> daNm [lb-in] | Dauerbetrieb <i>Continuous working</i> | 3,0 [265] | 4,0 [355] | 5,4 [480] | 7,8 [690] | 13,2 [1170] | 16,6 [1470] | 20,7 [1830] |
| | Intermittierend* <i>Intermittent *</i> | 4,2 [370] | 5,6 [500] | 6,8 [600] | 10,0 [885] | 16,8 [1490] | 21,0 [1860] | 26,6 [2360] |
| Min. Drehzahl *** <i>Min speed ***</i> | U/min <i>RPM</i> | 20 | 15 | 10 | 10 | 10 | 10 | 10 |
| Gewicht <i>Weight</i> kg [lb] | EPM (F) (N) | 5,6 [12.3] | 5,6 [12.3] | 5,7 [12.6] | 5,8 [12.8] | 5,9 [13.2] | 6,1 [13.5] | 6,2 [13.7] |
| | EPM-W (N) | 5,3 [11.7] | 5,3 [11.7] | 5,4 [11.9] | 5,5 [12.1] | 5,6 [12.4] | 5,8 [12.8] | 5,9 [13.0] |
| | Für Hintenanschluss <i>For rear ports</i> +0,450 [992] | EPM-Q (N) | 5,0 [11.1] | 5,0 [11.1] | 5,1 [11.2] | 5,2 [11.5] | 5,3 [11.7] | 5,5 [12.1] |

* Intermittierend: Betrieb max. 10% pro Minute

** Spitze: max. 1% pro Minute

*** Für Drehzahlen kleiner der min. Drehzahl sprechen Sie uns bitte an.

- Intermittierende Druckgefälle und Ölströme dürfen nicht gleichzeitig erreicht werden.

- Minimale Viskosität 13 mm²/s [70 SUS] bei 50° C [122° F]

- Maximale Öltemperatur während des Betriebs 82° C [180° F]

- Die Lebensdauer der Motoren kann erhöht werden, wenn die Antriebswelle 10-15 Minuten vor voller Belastung frei läuft.

* Intermittent: Working max. 10% per minute

** Peak: max. 1% per minute

*** For speeds lower than given, please consult us.

- Intermittent speed and pressure should not occur simultaneously.

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

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

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

Technische Daten *Technical datas*

Für EPM Motoren mit C, CO, SH, K und SA Wellen (Dichtungsdurchmesser Ø28,56)
For EPM motors with C, CO, SH, K and SA shafts (sealing diameter Ø28.56)

| Typ <i>Type</i> | | EPM 160 | EPM 200 | EPM 250 | EPM 315 | EPM 400 | EPM 500 | EPM 630 |
|--|---|-----------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Schluckvolumen <i>Displacement cm³/U ccm/rev [in³/rev]</i> | | 158,4 [9.66] | 198,0 [12.10] | 247,5 [15.10] | 316,8 [19.30] | 396,0 [24.16] | 495,0 [30.20] | 623,6 [38.05] |
| Max. Drehzahl <i>Max. Speed</i> U/min <i>RPM</i> | Dauerbetrieb <i>Continuous working</i> | 378 | 303 | 242 | 190 | 150 | 120 | 95 |
| | Intermittierend* <i>Intermittent *</i> | 472 | 378 | 303 | 236 | 189 | 150 | 120 |
| Max. Drehmoment <i>Max. Torque</i> daNm [lb-in] | Dauerbetrieb <i>Continuous working</i> | 31,3 [2770] | 36,6 [3240] | 38,0 [3360] | 38,0 [3360] | 36,0 [3190] | 39,0 [3452] | 44,0 [3895] |
| | Intermittierend* <i>Intermittent *</i> | 37,8 [3345] | 45,6 [4035] | 58,3 [5160] | 56,0 [4960] | 59,0 [5240] | 57,0 [5045] | 64,0 [5665] |
| | Spitze ** <i>Peak **</i> | 43,8 [3880] | 55,0 [4870] | 68,5 [6060] | 85,0 [7505] | 85,4 [7560] | 78,0 [6903] | 82,0 [7257] |
| Max. Leistungsabgabe <i>Max. Output</i> kW [HP] | Dauerbetrieb <i>Continuous working</i> | 10,1 [13.5] | 10,0 [13.5] | 7,5 [10.0] | 5,8 [7.9] | 4,6 [6.2] | 3,5 [4.7] | 3,3 [4.4] |
| | Intermittierend* <i>Intermittent *</i> | 12,1 [16.2] | 12,0 [16.1] | 12,0 [16.1] | 9,0 [12.1] | 7,8 [10.5] | 7,2 [9.7] | 5,6 [7.5] |
| Max. Druckgefälle <i>Max. Pressure drop</i> bar [PSI] | Dauerbetrieb <i>Continuous working</i> | 140 [2030] | 140 [2030] | 110 [1600] | 90 [1300] | 70 [1015] | 60 [870] | 55 [800] |
| | Intermittierend* <i>Intermittent *</i> | 175 [2540] | 175 [2540] | 175 [2540] | 140 [2030] | 115 [1665] | 90 [1305] | 80 [1160] |
| | Spitze ** <i>Peak **</i> | 225 [3260] | 225 [3260] | 225 [3260] | 225 [3260] | 180 [2610] | 130 [1885] | 110 [1740] |
| Max. Ölstrom <i>Max. Oil flow</i> l/min <i>lpm</i> [GPM] | Dauerbetrieb <i>Continuous working</i> | 60 [15.9] | 60 [15.9] | 60 [15.9] | 60 [15.9] | 60 [15.9] | 60 [15.9] | 60 [15.9] |
| | Intermittierend* <i>Intermittent *</i> | 75 [19.8] | 75 [19.8] | 75 [19.8] | 75 [19.8] | 75 [19.8] | 75 [19.8] | 75 [19.8] |
| Max. Eingangsdruck <i>Max. Inlet pressure</i> bar [PSI] | Dauerbetrieb <i>Continuous working</i> | 175 [2540] | 175 [2540] | 175 [2540] | 175 [2540] | 175 [2540] | 140 [2030] | 140 [2030] |
| | Intermittierend* <i>Intermittent *</i> | 200 [2900] | 200 [2900] | 200 [2900] | 200 [2900] | 200 [2900] | 175 [2540] | 175 [2540] |
| | Spitze ** <i>Peak **</i> | 225 [3260] | 225 [3260] | 225 [3260] | 225 [3260] | 225 [3260] | 225 [3260] | 225 [3260] |
| Max. Rücklaufdruck mit Leckölleitung <i>Max. Return pressure with drain line</i> bar [PSI] | Dauerbetrieb <i>Continuous working</i> | 175 [2540] | 175 [2540] | 175 [2540] | 175 [2540] | 175 [2540] | 140 [2030] | 140 [2030] |
| | Intermittierend* <i>Intermittent *</i> | 200 [2900] | 200 [2900] | 200 [2900] | 200 [2900] | 200 [2900] | 175 [2540] | 175 [2540] |
| | Spitze ** <i>Peak **</i> | 225 [3260] | 225 [3260] | 225 [3260] | 225 [3260] | 225 [3260] | 225 [3260] | 225 [3260] |
| Max. Anlaufdruck mit unbelasteter Welle <i>Max. starting pressure with unloaded shaft</i> | bar [PSI] | 8 [116] | 7 [100] | 6 [87] | 5 [73] | 5 [73] | 5 [73] | 5 [73] |
| Min. Anlaufmoment bei max. Druckgefälle <i>Min. starting torque at max. pressure</i> drop daNm [lb-in] | Dauerbetrieb <i>Continuous working</i> | 28,2 [2500] | 33,5 [2950] | 33,6 [2970] | 34,4 [3045] | 34,5 [3050] | 36,0 [3180] | 41,5 [3670] |
| | Intermittierend* <i>Intermittent *</i> | 35,5 [3140] | 42,6 [3770] | 54,2 [4795] | 61,9 [5480] | 60,8 [5390] | 54,0 [4780] | 62,0 [5480] |
| Min. Drehzahl *** <i>Min speed ***</i> | U/min <i>RPM</i> | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Gewicht <i>Weight</i> kg [lb] | EPM (F) (N) | 6,4 [14.1] | 6,6 [14.6] | 6,8 [15.0] | 7,1 [15.6] | 7,6 [16.8] | 8,9 [20.0] | 9,5 [21.4] |
| | EPM-W (N) | 6,1 [13.5] | 6,3 [13.9] | 6,5 [14.3] | 6,8 [15.0] | 7,2 [15.9] | 8,6 [19.0] | 9,2 [20.3] |
| Für Hintenanschluss <i>For rear ports</i> +0,450 [992] | EPM-Q (N) | 5,8 [12.8] | 6,0 [13.2] | 6,2 [13.7] | 6,5 [14.3] | 6,8 [15.0] | 8,3 [18.3] | 9,0 [19.8] |

* Intermittierend: Betrieb max. 10% pro Minute

** Spitze: max. 1% pro Minute

*** Für Drehzahlen kleiner der min. Drehzahl sprechen Sie uns bitte an.

- Intermittierende Druckgefälle und Ölströme dürfen nicht gleichzeitig erreicht werden.

- Minimale Viskosität 13 mm²/s [70 SUS] bei 50° C [122° F]

- Maximale Öltemperatur während des Betriebs 82° C [180° F]

- Die Lebensdauer der Motoren kann erhöht werden, wenn die Antriebswelle 10-15 Minuten vor voller Belastung frei läuft.

* Intermittent: Working max. 10% per minute

** Peak: max. 1% per minute

*** For speeds lower than given, please consult us.

- Intermittent speed and pressure should not occur simultaneously.

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

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

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

Technische Daten *Technical datas*

Für EPM Motoren mit CB, KB, OB und HB Wellen (Dichtungsdurchmesser Ø35)
For EPM motors with CB, KB, OB and HB shafts (sealing diameter Ø35)

| Typ <i>Type</i> | | EPM 25 | EPM 32 | EPM 40 | EPM 50 | EPM 80 | EPM 100 | EPM 125 |
|---|---|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|
| Schluckvolumen <i>Displacement</i> cm ³ /U <i>ccm/rev</i> [in ³ /rev] | | 25,0 [1.52] | 32,0 [1.95] | 40,0 [2.44] | 49,5 [3.02] | 79,2 [4.83] | 99,0 [6.04] | 123,8 [7.55] |
| Max. Drehzahl <i>Max. Speed</i> U/min <i>RPM</i> | Dauerbetrieb <i>Continuous working</i> | 1600 | 1560 | 1500 | 1210 | 755 | 605 | 486 |
| | Intermittierend* <i>Intermittent *</i> | 1815 | 1720 | 1750 | 1515 | 945 | 755 | 605 |
| Max. Drehmoment <i>Max. Torque</i> daNm [lb-in] | Dauerbetrieb <i>Continuous working</i> | 3,3 [290] | 4,3 [380] | 6,2 [550] | 9,4 [835] | 15,1 [1340] | 19,3 [1710] | 23,7 [2100] |
| | Intermittierend* <i>Intermittent *</i> | 4,7 [415] | 6,1 [540] | 8,2 [730] | 11,9 [1050] | 19,5 [1725] | 23,7 [2100] | 29,8 [2640] |
| | Spitze ** <i>Peak **</i> | 6,7 [595] | 8,6 [760] | 10,7 [950] | 14,3 [1285] | 22,4 [1985] | 27,5 [2435] | 36,5 [3235] |
| Max. Leistungsabgabe <i>Max. Output</i> kW [HP] | Dauerbetrieb <i>Continuous working</i> | 4,5 [6.0] | 5,8 [7.8] | 8,4 [11.5] | 10,1 [13.5] | 10,2 [13.7] | 10,5 [14.1] | 10,2 [13.7] |
| | Intermittierend* <i>Intermittent *</i> | 6,1 [8.2] | 7,8 [10.5] | 11,6 [15.5] | 12,2 [16.1] | 12,5 [16.8] | 12,8 [17.1] | 12,0 [16.1] |
| Max. Druckgefälle <i>Max. Pressure drop</i> bar [PSI] | Dauerbetrieb <i>Continuous working</i> | 100 [1450] | 100 [1450] | 120 [1750] | 140 [2030] | 140 [2030] | 140 [2030] | 140 [2030] |
| | Intermittierend* <i>Intermittent *</i> | 140 [2030] | 140 [2030] | 155 [2250] | 175 [2540] | 175 [2540] | 175 [2540] | 175 [2540] |
| | Spitze ** <i>Peak **</i> | 225 [3260] | 225 [3260] | 225 [3260] | 225 [3260] | 225 [3260] | 225 [3260] | 225 [3260] |
| Max. Ölstrom <i>Max. Oil flow</i> l/min <i>lpm</i> [GPM] | Dauerbetrieb <i>Continuous working</i> | 40 [10.5] | 50 [13.2] | 60 [15.9] | 60 [15.9] | 60 [15.9] | 60 [15.9] | 60 [15.9] |
| | Intermittierend* <i>Intermittent *</i> | 45 [11.9] | 55 [14.5] | 70 [18.5] | 75 [19.8] | 75 [19.8] | 75 [19.8] | 75 [19.8] |
| Max. Eingangsdruck <i>Max. Inlet pressure</i> bar [PSI] | Dauerbetrieb <i>Continuous working</i> | 175 [2540] | 175 [2540] | 175 [2540] | 175 [2540] | 175 [2540] | 175 [2540] | 175 [2540] |
| | Intermittierend* <i>Intermittent *</i> | 200 [2900] | 200 [2900] | 200 [2900] | 200 [2900] | 200 [2900] | 200 [2900] | 200 [2900] |
| | Spitze ** <i>Peak **</i> | 225 [3260] | 225 [3260] | 225 [3260] | 225 [3260] | 225 [3260] | 225 [3260] | 225 [3260] |
| Max. Rücklaufdruck mit Leckölleitung <i>Max. Return pressure with drain line</i> bar [PSI] | Dauerbetrieb <i>Continuous working</i> | 175 [2540] | 175 [2540] | 175 [2540] | 175 [2540] | 175 [2540] | 175 [2540] | 175 [2540] |
| | Intermittierend* <i>Intermittent *</i> | 200 [2900] | 200 [2900] | 200 [2900] | 200 [2900] | 200 [2900] | 200 [2900] | 200 [2900] |
| | Spitze ** <i>Peak **</i> | 225 [3260] | 225 [3260] | 225 [3260] | 225 [3260] | 225 [3260] | 225 [3260] | 225 [3260] |
| Max. Anlaufdruck mit unbelasteter Welle <i>Max. starting pressure with unloaded shaft</i> | bar [PSI] | 10 [145] | 10 [145] | 10 [145] | 10 [145] | 10 [145] | 10 [145] | 9 [131] |
| Min. Anlaufmoment bei max. Druckgefälle <i>Min. starting torque at max. pressure</i> <i>drop</i> daNm [lb-in] | Dauerbetrieb <i>Continuous working</i> | 3,0 [265] | 4,0 [355] | 5,4 [480] | 7,8 [690] | 13,2 [1170] | 16,6 [1470] | 20,7 [1830] |
| | Intermittierend* <i>Intermittent *</i> | 4,2 [370] | 5,6 [500] | 6,8 [600] | 10,0 [885] | 16,8 [1490] | 21,0 [1860] | 26,6 [2360] |
| Min. Drehzahl *** <i>Min speed ***</i> | U/min <i>RPM</i> | 20 | 15 | 10 | 10 | 10 | 10 | 10 |
| Gewicht <i>Weight</i> kg [lb] | | 5,6 [12.3] | 5,6 [12.3] | 5,7 [12.6] | 5,9 [13.0] | 6,0 [13.2] | 6,2 [13.7] | 6,3 [13.9] |
| Für Hintenanschluss <i>For rear ports</i> +0,450 [992] | EPM (F) ... B | | | | | | | |

* Intermittierend: Betrieb max. 10% pro Minute

** Spitze: max. 1% pro Minute

*** Für Drehzahlen kleiner der min. Drehzahl sprechen Sie uns bitte an.

- Intermittierende Druckgefälle und Ölströme dürfen nicht gleichzeitig erreicht werden.

- Minimale Viskosität 13 mm²/s [70 SUS] bei 50° C [122° F]

- Maximale Öltemperatur während des Betriebs 82° C [180° F]

- Die Lebensdauer der Motoren kann erhöht werden, wenn die Antriebswelle 10-15 Minuten vor voller Belastung frei läuft.

* Intermittent: Working max. 10% per minute

** Peak: max. 1% per minute

*** For speeds lower than given, please consult us.

- Intermittent speed and pressure should not occur simultaneously.

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

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

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

Technische Daten *Technical datas*

Für EPM Motoren mit CB, KB, OB und HB Wellen (Dichtungsdurchmesser Ø35)
For EPM motors with CB, KB, OB and HB shafts (sealing diameter Ø35)

| Typ <i>Type</i> | | EPM 160 | EPM 200 | EPM 250 | EPM 315 | EPM 400 | EPM 500 | EPM 630 |
|--|---|-----------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Schluckvolumen <i>Displacement</i> cm ³ /U <i>ccm/rev</i> [in ³ /rev] | | 158,4 [9.66] | 198,0 [12.10] | 247,5 [15.10] | 316,8 [19.30] | 396,0 [24.16] | 495,0 [30.20] | 623,6 [38.05] |
| Max. Drehzahl <i>Max. Speed</i> U/min <i>RPM</i> | Dauerbetrieb <i>Continuous working</i> | 378 | 303 | 242 | 190 | 150 | 120 | 95 |
| | Intermittierend* <i>Intermittent *</i> | 472 | 378 | 303 | 236 | 189 | 150 | 120 |
| Max. Drehmoment <i>Max. Torque</i> daNm [lb-in] | Dauerbetrieb <i>Continuous working</i> | 31,3 [2770] | 36,6 [3240] | 47,0 [4160] | 48,0 [4360] | 50,0 [4415] | 39,0 [3452] | 44,0 [3895] |
| | Intermittierend* <i>Intermittent *</i> | 37,8 [3345] | 45,6 [4035] | 58,3 [5160] | 56,0 [4960] | 59,0 [5240] | 57,0 [5045] | 64,0 [5665] |
| | Spitze ** <i>Peak **</i> | 43,8 [3880] | 55,0 [4870] | 68,5 [6060] | 85,0 [7505] | 85,4 [7560] | 78,0 [6903] | 82,0 [7257] |
| Max. Leistungsabgabe <i>Max. Output</i> kW [HP] | Dauerbetrieb <i>Continuous working</i> | 10,1 [13.5] | 10,0 [13.5] | 9,0 [12.1] | 7,6 [10.2] | 6,2 [8.3] | 3,5 [4.7] | 3,3 [4.4] |
| | Intermittierend* <i>Intermittent *</i> | 12,1 [16.2] | 12,0 [16.1] | 12,0 [16.1] | 9,0 [12.1] | 7,8 [10.5] | 7,2 [9.7] | 5,6 [7.5] |
| Max. Druckgefälle <i>Max. Pressure drop</i> bar [PSI] | Dauerbetrieb <i>Continuous working</i> | 140 [2030] | 140 [2030] | 140 [2030] | 120 [1740] | 95 [1400] | 60 [870] | 55 [800] |
| | Intermittierend* <i>Intermittent *</i> | 175 [2540] | 175 [2540] | 175 [2540] | 140 [2030] | 115 [1665] | 90 [1305] | 80 [1160] |
| | Spitze ** <i>Peak **</i> | 225 [3260] | 225 [3260] | 225 [3260] | 225 [3260] | 180 [2610] | 130 [1885] | 110 [1740] |
| Max. Ölstrom <i>Max. Oil flow</i> l/min <i>lpm</i> [GPM] | Dauerbetrieb <i>Continuous working</i> | 60 [15.9] | 60 [15.9] | 60 [15.9] | 60 [15.9] | 60 [15.9] | 60 [15.9] | 60 [15.9] |
| | Intermittierend* <i>Intermittent *</i> | 75 [19.8] | 75 [19.8] | 75 [19.8] | 75 [19.8] | 75 [19.8] | 75 [19.8] | 75 [19.8] |
| Max. Eingangsdruck <i>Max. Inlet pressure</i> bar [PSI] | Dauerbetrieb <i>Continuous working</i> | 175 [2540] | 175 [2540] | 175 [2540] | 175 [2540] | 175 [2540] | 140 [2030] | 140 [2030] |
| | Intermittierend* <i>Intermittent *</i> | 200 [2900] | 200 [2900] | 200 [2900] | 200 [2900] | 200 [2900] | 175 [2540] | 175 [2540] |
| | Spitze ** <i>Peak **</i> | 225 [3260] | 225 [3260] | 225 [3260] | 225 [3260] | 225 [3260] | 225 [3260] | 225 [3260] |
| Max. Rücklaufdruck mit Leckölleitung <i>Max. Return pressure with drain line</i> bar [PSI] | Dauerbetrieb <i>Continuous working</i> | 175 [2540] | 175 [2540] | 175 [2540] | 175 [2540] | 175 [2540] | 140 [2030] | 140 [2030] |
| | Intermittierend* <i>Intermittent *</i> | 200 [2900] | 200 [2900] | 200 [2900] | 200 [2900] | 200 [2900] | 175 [2540] | 175 [2540] |
| | Spitze ** <i>Peak **</i> | 225 [3260] | 225 [3260] | 225 [3260] | 225 [3260] | 225 [3260] | 225 [3260] | 225 [3260] |
| Max. Anlaufdruck mit unbelasteter Welle <i>Max. starting pressure with unloaded shaft</i> | bar [PSI] | 8 [116] | 7 [100] | 6 [87] | 5 [73] | 5 [73] | 5 [73] | 5 [73] |
| Min. Anlaufmoment bei max. Druckgefälle <i>Min. starting torque at max. pressure</i> drop daNm [lb-in] | Dauerbetrieb <i>Continuous working</i> | 28,2 [2500] | 33,5 [2950] | 42,8 [3790] | 45,8 [4050] | 46,8 [4140] | 36,0 [3180] | 41,5 [3670] |
| | Intermittierend* <i>Intermittent *</i> | 35,5 [3140] | 42,6 [3770] | 54,2 [4795] | 61,9 [5480] | 60,8 [5390] | 54,0 [4780] | 62,0 [5480] |
| Min. Drehzahl *** <i>Min speed ***</i> | U/min <i>RPM</i> | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Gewicht <i>Weight</i> kg [lb] | | 6,5 [14.3] | 6,7 [14.8] | 6,9 [15.2] | 7,2 [15.9] | 7,7 [17.0] | 9,0 [19.9] | 9,6 [21.2] |
| Für Hintenanschluss <i>For rear ports</i> +0,450 [992] | EPM (F) ... B | | | | | | | |

* Intermittierend: Betrieb max. 10% pro Minute

** Spitze: max. 1% pro Minute

*** Für Drehzahlen kleiner der min. Drehzahl sprechen Sie uns bitte an.

- Intermittierende Druckgefälle und Ölströme dürfen nicht gleichzeitig erreicht werden.

- Minimale Viskosität 13 mm²/s [70 SUS] bei 50° C [122° F]

- Maximale Öltemperatur während des Betriebs 82° C [180° F]

- Die Lebensdauer der Motoren kann erhöht werden, wenn die Antriebswelle 10-15 Minuten vor voller Belastung frei läuft.

* Intermittent: Working max. 10% per minute

** Peak: max. 1% per minute

*** For speeds lower than given, please consult us.

- Intermittent speed and pressure should not occur simultaneously.

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

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

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

Bestellcode EPM® Ordercode EPM®

| | | | | | | | | | | |
|-----|---|---|---|---|---|---|---|---|---|----|
| EPM | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|-----|---|---|---|---|---|---|---|---|---|----|

| | |
|------------------|--|
| Pos. 1 | Montageflansch <i>Mounting flange</i> |
| frei omit | Ovalflansch, zwei Befestigungslöcher <i>Oval mount, two holes</i> |
| F | Ovalflansch, vier Befestigungslöcher <i>Oval mount, four holes</i> |
| Q | Quadratflansch, vier Gewindebohrungen <i>Square mount, four bolts</i> |
| W | Radflansch <i>Wheel mount</i> |

| | |
|------------------|---|
| Pos. 2 | Lagerung <i>Bearing</i> |
| frei omit | Ohne Lager <i>Without bearing</i> |
| N* | Mit Radialnadellager <i>With needle bearings</i> |

| | |
|------------------|--------------------------------------|
| Pos. 3 | Anschlusstyp <i>Port type</i> |
| frei omit | Seitenanschluss <i>Side ports</i> |
| E | Hintenanschluss <i>Rear ports</i> |

| | |
|---------------|---------------------------------------|
| Pos. 4 | Schluckvolumen <i>Displacement</i> |
| 25* | 25,0 cm³/U ccm/rev [1.52 in³/rev] |
| 32* | 32,0 cm³/U ccm/rev [1.95 in³/rev] |
| 40* | 40,0 cm³/U ccm/rev [2.44 in³/rev] |
| 50 | 49,5 cm³/U ccm/rev [3.02 in³/rev] |
| 80 | 79,2 cm³/U ccm/rev [4.83 in³/rev] |
| 100 | 99,0 cm³/U ccm/rev [6.04 in³/rev] |
| 125 | 123,8 cm³/U ccm/rev [7.55 in³/rev] |
| 160 | 158,4 cm³/U ccm/rev [9.66 in³/rev] |
| 200 | 198,0 cm³/U ccm/rev [12.10 in³/rev] |
| 250 | 247,5 cm³/U ccm/rev [15.10 in³/rev] |
| 315 | 316,8 cm³/U ccm/rev [19.30 in³/rev] |
| 400 | 396,0 cm³/U ccm/rev [24.16 in³/rev] |
| 500 | 495,0 cm³/U ccm/rev [30.20 in³/rev] |
| 630 | 623,6 cm³/U ccm/rev [38.05 in³/rev] |

| | |
|---------------|--|
| Pos. 5 | Abtriebswelle ** <i>Shaft **</i> |
| C | Zylindrisch Ø25, Passfeder A8x7x32 DIN 6885 <i>Cylindrical Ø25, parallel key A8x7x32 DIN 6885</i> |
| VC | Zylindrisch Ø25, Passfeder A8x7x32 DIN 6885 mit korrosionsbeständiger Buchse <i>Cylindrical Ø25, parallel key A8x7x32 DIN 6885 with corrosion resistant bushing</i> |
| CO | Zylindrisch Ø1", Passfeder 1/4" x 1/4" x 1 1/4" BS46 <i>Cylindrical Ø1", parallel key 1/4" x 1/4" x 1 1/4" BS46</i> |
| VCO | Zylindrisch Ø1", Passfeder 1/4" x 1/4" x 1 1/4" BS46 mit korrosionsbeständiger Buchse <i>Cylindrical Ø1", parallel key 1/4" x 1/4" x 1 1/4" BS46 with corrosion resistant bushing</i> |
| SH | Verzahnt Ø25,32, BS2059 (SAE 6 B) <i>Splined Ø25.32, BS2059 (SAE 6 B)</i> |

| | |
|------------|--|
| VSH | Verzahnt Ø25,32, BS2059 (SAE 6 B) mit korrosionsbeständiger Buchse <i>Splined Ø25.32, BS2059 (SAE 6 B) with corrosion resistant bushing</i> |
| K | Konisch 1:10 Ø28,56, Passfeder B5x5x14 DIN 6885 <i>Tapered 1:10 Ø28.56, parallel key B5x5x14 DIN 6885</i> |
| SA | Verzahnt Ø24,5, B 25x22 DIN 5482 <i>Splined Ø24.5, B 25x22 DIN 5482</i> |
| VSA | Verzahnt Ø24,5, B 25x22 DIN 5482 mit korrosionsbeständiger Buchse <i>Splined Ø24.5, B 25x22 DIN 5482 with corrosion resistant bushing</i> |
| CB | Zylindrisch Ø32, Passfeder A10x8x45 DIN 6885 <i>Cylindrical Ø32, parallel key A10x8x45 DIN 6885</i> |
| KB | Konisch 1:10 Ø35, Passfeder B6x6x20 DIN 6885 <i>Tapered 1:10 Ø35, parallel key B6x6x20 DIN 6885</i> |
| SB | Verzahnt A 25x22 DIN 5482 <i>Splined A 25x22 DIN 5482</i> |
| OB | Konisch 1:8 Ø1 1/4", Passfeder 5/16" x 5/16" x 1 1/4" BS46 <i>Tapered 1:8 Ø1 1/4", parallel key 5/16" x 5/16" x 1 1/4" BS46</i> |
| HB | Verzahnt Ø1 1/4" 14T ANSI B92.1 - 1976 <i>Splined Ø1 1/4" 14T ANSI B92.1 - 1976</i> |

| | |
|------------------|--|
| Pos. 6 | Wellendichtung <i>Shaft seal</i> |
| frei omit | Für niedrigen Druck oder "...B" Wellen <i>For low pressure or "...B" shafts</i> |
| D | Für hohen Druck <i>For high pressure</i> |
| U | Für Höchstdruck (ohne Rückschlagventile) <i>For highest pressure (without check valves)</i> |

| | |
|------------------|---|
| Pos. 7 | Leckölanschluss <i>Drain port</i> |
| frei omit | Mit Leckölanschluss <i>With drain port</i> |
| 1 | Ohne Leckölanschluss <i>Without drain port</i> |

| | |
|------------------|----------------------------|
| Pos. 8 | Anschlüsse <i>Ports</i> |
| frei omit | BSPP (ISO 228) |
| M | Metrisch metric (ISO 262) |

| | |
|---------------|---|
| Pos. 9 | Sonderausführungen <i>Special features</i> |
| RS | Drehzahlsensor <i>Speed sensor</i> |
| LL | Geringeres Lecköl <i>Low Leakage</i> |
| LSV | Ventil für geringe Drehzahlen (nur für EPM-W) <i>Low speed valve (only for EPM-W)</i> |
| FR | Leichtlaufausführung (nicht für EPM-N) <i>Free running (not for EPM-N)</i> |
| R | Drehrichtung umgedreht <i>Reverse rotation</i> |
| P | Lackiert (Farbe auf Anfrage) <i>Paint (Colour on request)</i> |
| PC | Korrosionsschutzfarbe (Farbe auf Anfrage) <i>Corrosion protected paint (Colour on request)</i> |

| | |
|------------------|--|
| Pos. 10 | Design Serie <i>Design series</i> |
| frei omit | Betriebsspezifisch <i>Factory specified</i> |

* Nur mit Hochdruckdichtung (Pos. 6 Option D oder U) erhältlich
Only with high pressure seal (pos. 6 option D or U) available

** Zulässige Momentabgabe darf nicht überschritten werden
Permissible output torque should not be exceeded

Die folgenden Kombinationen sind nicht erhältlich:

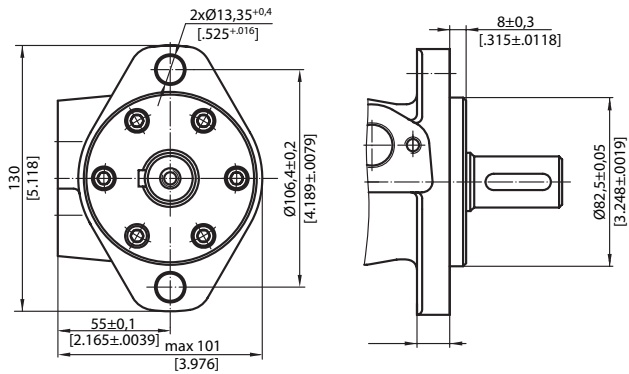
- Q-Flansch mit ... B-Wellen
- W-Flansch mit ... B-Wellen oder Hintenanschluss
- Option N mit ... B-Wellen (nur mit Hochdruckdichtung erhältlich)
- ... B-Wellen mit D oder U Wellendichtungen

The following combinations are not available:

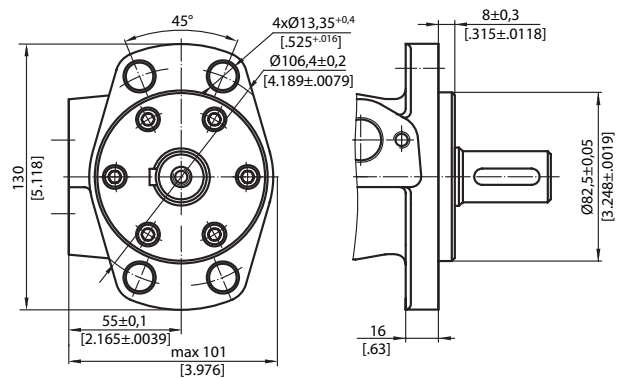
- Q-Flange with ... B-shafts
- W-Flange with ... B-shafts or rear port
- Option N with ... B-shafts (only with high pressure seal available)
- ... B-shafts with D or U shaftseals

Pos. 1 Montageflansch *Mounting flange*

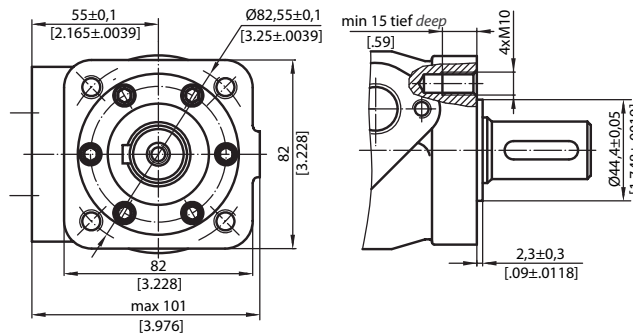
Standard: Ovalflansch, zwei Befestigungslöcher
Standard: Oval mount, two holes



Option F: Ovalflansch, vier Befestigungslöcher
Option F: Oval mount, four holes

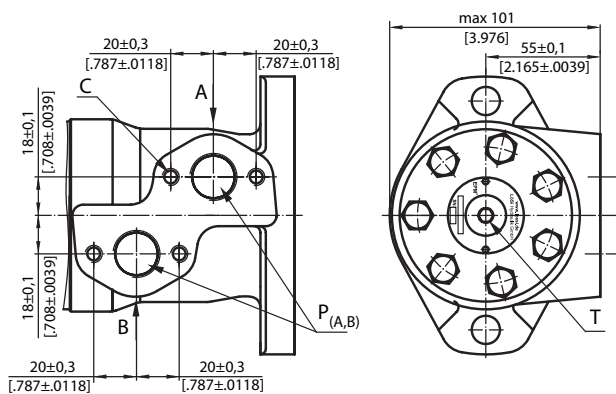


Option Q: Quadratflansch, vier Gewindebohrungen
Option Q: Square mount, four bolts

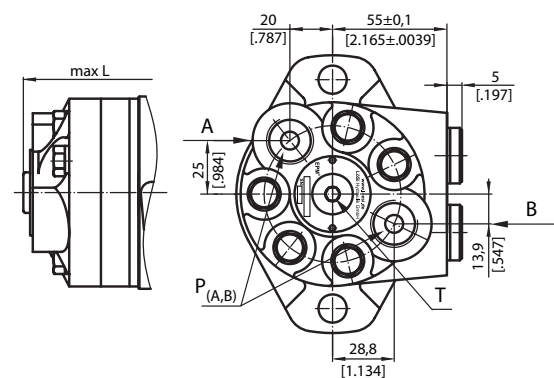


Pos. 3 Anschlussstyp *Port type*

Standard: Seitenanschluss
Standard: Side ports



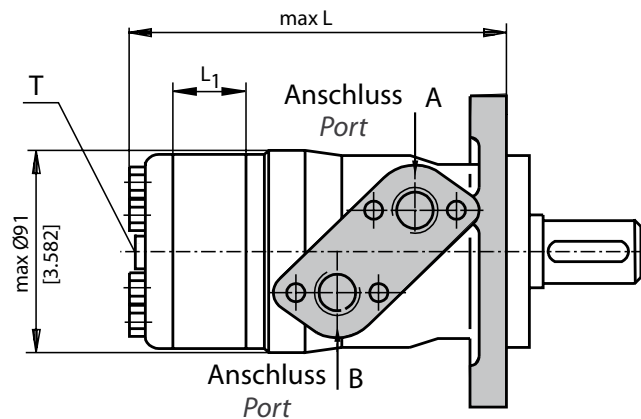
Option E: Hintenanschluss
Option E: Rear ports



- C: 4xM8 - 13mm [.51 in] tief *deep*
- P (A,B): 2xG1/2 oder or 2xM22x1,5 - 15mm [.59 in] tief *deep*
- T: G1/4 oder or M14x1,5 - 12 mm [.47 in] tief *deep*



Pos. 4 Schluckvolumen *Displacement*



Standarddrehung

mit Blick auf Abtriebswelle
Druck auf Anschluss **A** - rechtsdrehend
Druck auf Anschluss **B** - linksdrehend

Standard rotation

Viewed from shaft end
Port **A** pressurized- right running
Port **B** pressurized- left running

Reversierdrehung (Pos. 9 - Option R)

mit Blick auf Abtriebswelle
Druck auf Anschluss **A** - linksdrehend
Druck auf Anschluss **B** - rechtsdrehend

Reversierdrehung (Pos. 9 - Option R)

Viewed from shaft end
Port **A** pressurized- left running
Port **B** pressurized- right running

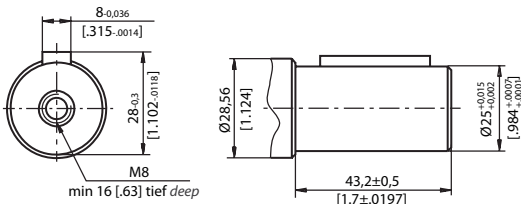
Einbaumaße mm [in.]

Dimensions mm [in.]

| Typ Type | L mm [in] | Typ Type | L mm [in] | Typ Type | L mm [in] | Typ Type | L mm [in] | L ₁ mm [in] |
|----------------|-----------------|--------------|-----------------|------------------|-----------------|----------------|-----------------|---------------------------|
| EPM (F) 25 | 134,0 [5.28] | EPM-Q 25 | 140,5 [5.53] | EPM (F) E 25 | 151,5 [5.96] | EPM-Q-E 25 | 158,0 [6.22] | 5,20 [.21] |
| EPM (F) 32 | 135,0 [5.31] | EPM-Q 32 | 141,5 [5.57] | EPM (F) E 32 | 152,5 [6.00] | EPM-Q-E 32 | 159,0 [6.26] | 6,30 [.25] |
| EPM (F) 40 | 136,5 [5.37] | EPM-Q 40 | 142,5 [5.61] | EPM (F) E 40 | 154,0 [6.06] | EPM-Q-E 40 | 160,0 [6.30] | 7,40 [.29] |
| EPM (F) 50 | 135,5 [5.33] | EPM-Q 50 | 142,0 [5.59] | EPM (F) E 50 | 153,0 [6.02] | EPM-Q-E 50 | 159,5 [6.28] | 6,67 [.26] |
| EPM (F) 80 | 139,5 [5.49] | EPM-Q 80 | 146,0 [5.75] | EPM (F) E 80 | 157,0 [6.18] | EPM-Q-E 80 | 163,0 [6.42] | 10,67 [.42] |
| EPM (F) 100 | 142,0 [5.59] | EPM-Q 100 | 148,5 [5.85] | EPM (F) E 100 | 160,0 [6.30] | EPM-Q-E 100 | 166,0 [6.54] | 13,33 [.52] |
| EPM (F) 125 | 145,5 [5.73] | EPM-Q 125 | 152,0 [5.98] | EPM (F) E 125 | 163,0 [6.42] | EPM-Q-E 125 | 169,5 [6.67] | 16,67 [.66] |
| EPM (F) 160 | 150,0 [5.91] | EPM-Q 160 | 156,5 [6.16] | EPM (F) E 160 | 168,0 [6.61] | EPM-Q-E 160 | 174,0 [6.85] | 21,33 [.84] |
| EPM (F) 200 | 155,5 [6.12] | EPM-Q 200 | 162,0 [6.38] | EPM (F) E 200 | 173,0 [6.81] | EPM-Q-E 200 | 179,5 [7.07] | 26,67 [1.05] |
| EPM (F) 250 | 162,0 [6.38] | EPM-Q 250 | 168,5 [6.63] | EPM (F) E 250 | 180,0 [7.09] | EPM-Q-E 250 | 186,0 [7.32] | 33,33 [1.31] |
| EPM (F) 315 | 171,5 [6.75] | EPM-Q 315 | 178,0 [7.01] | EPM (F) E 315 | 189,0 [7.44] | EPM-Q-E 315 | 195,5 [7.70] | 42,67 [1.68] |
| EPM (F) 400 | 182,0 [7.17] | EPM-Q 400 | 188,5 [7.42] | EPM (F) E 400 | 200,0 [7.87] | EPM-Q-E 400 | 206,0 [8.11] | 53,33 [2.10] |
| EPM (F) 500 | 195,5 [7.70] | EPM-Q 500 | 202,0 [7.95] | EPM (F) E 500 | 213,0 [8.39] | EPM-Q-E 500 | 219,5 [8.64] | 66,63 [2.62] |
| EPM (F) 630 | 213,0 [8.39] | EPM-Q 630 | 219,0 [8.62] | EPM (F) E 630 | 230,5 [9.07] | EPM-Q-E 630 | 236,5 [9.31] | 84,00 [3.31] |

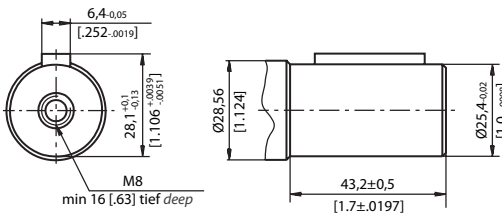
Pos. 5 Abtriebswelle Shaft

Option C: Zylindrisch Ø25 mm Option C: Cylindrical Ø25 mm



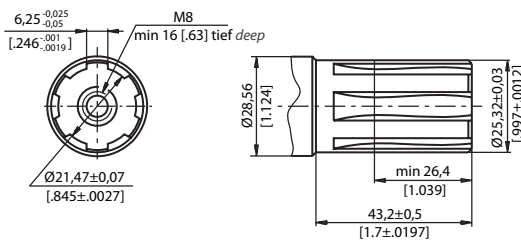
Max. Drehmomentabgabe 34 daNm [3010 lb-in]
Max. Torque 34 daNm [3010 lb-in]

Option CO: Zylindrisch Ø1" Option CO: Cylindrical Ø1"



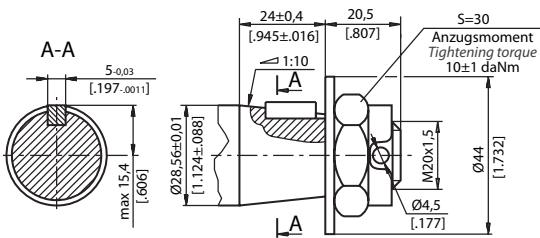
Max. Drehmomentabgabe 34 daNm [3010 lb-in]
Max. Torque 34 daNm [3010 lb-in]

Option SH: Verzahnt BS 2059 Option SH: Splined BS 2059



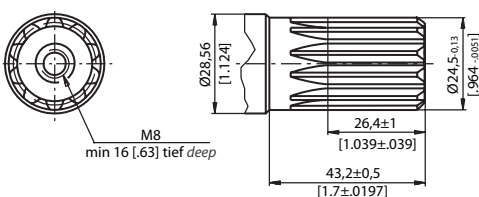
Max. Drehmomentabgabe 40 daNm [3540 lb-in]
Max. Torque 40 daNm [3540 lb-in]

Option K: Konisch 1:10 Option K: Tapered 1:10



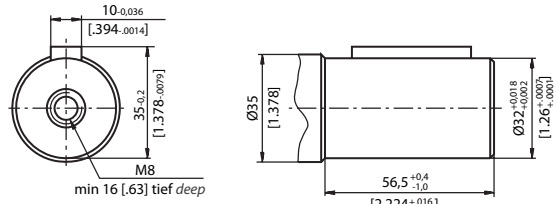
Max. Drehmomentabgabe 40 daNm [3540 lb-in]
Max. Torque 40 daNm [3540 lb-in]

Option SA: Verzahnt B 25x22 DIN 5482 Option SA: Splined B 25x22 DIN 5482



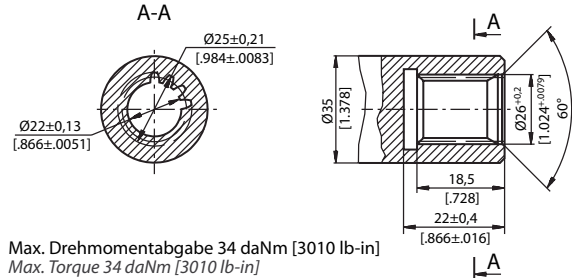
Max. Drehmomentabgabe 40 daNm [3540 lb-in]
Max. Torque 40 daNm [3540 lb-in]

Option CB: Zylindrisch Ø32 mm Option CB: Cylindrical Ø32 mm



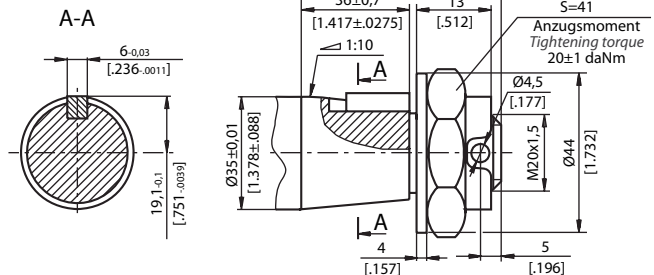
Max. Drehmomentabgabe 77 daNm [6815 lb-in]
Max. Torque 77 daNm [6815 lb-in]

Option SB: Verzahnt A 25x22 DIN 5482 Option SB: Splined A 25x22 DIN 5482



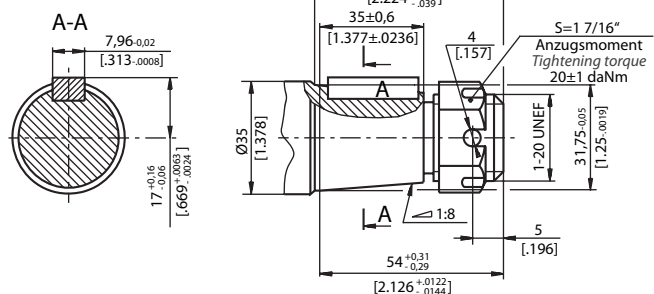
Max. Drehmomentabgabe 34 daNm [3010 lb-in]
Max. Torque 34 daNm [3010 lb-in]

Option KB: Konisch 1:10 Option KB: Tapered 1:10



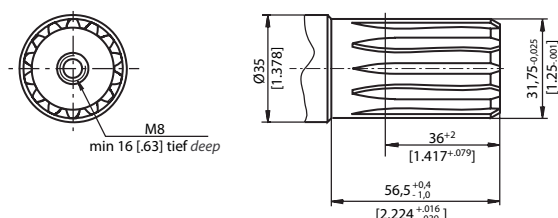
Max. Drehmomentabgabe 77 daNm [6815 lb-in]
Max. Torque 77 daNm [6815 lb-in]

Option OB: Konisch 1:8 Option OB: Tapered 1:8



Max. Drehmomentabgabe 77 daNm [6815 lb-in]
Max. Torque 77 daNm [6815 lb-in]

Option HB: Verzahnt ANSI B92.1-1976 Option HB: Splined ANSI B92.1-1976



Max. Drehmomentabgabe 77 daNm [6815 lb-in]
Max. Torque 77 daNm [6815 lb-in]



Pos. 6

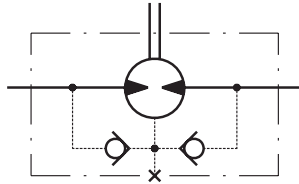
+

Pos. 7

Wellendichtung und Leckölschluss Shaft seal and drain connection

Schaltzeichen *Graphic symbol*

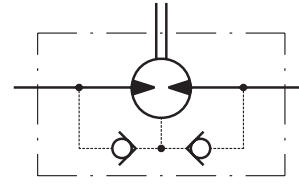
Standard oder Option D
Standard or Option D



EPM mit Wellendichtung für niedrigen Druck oder für hohen Druck mit Leckölschluss
Der Druck auf die Wellendichtung entspricht dem Druck in der Leckölschleife.

EPM with shaft seal for low pressure or high pressure with drain connection
The shaft seal pressure equals the pressure in the drain line.

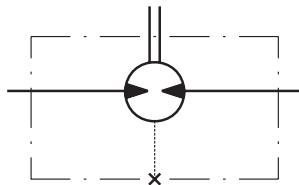
Standard oder Option D und Option 1
Standard or Option D and Option 1



EPM mit Wellendichtung für niedrigen Druck oder für hohen Druck ohne Leckölschluss
Der Druck auf die Wellendichtung übersteigt nie den Druck in der Rücklaufleitung.

EPM with shaft seal for low pressure or high pressure without drain connection
The shaft seal pressure never exceeds the pressure in the return line.

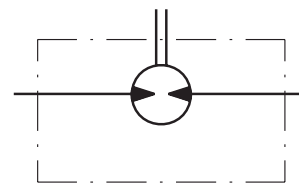
Option U
Option U



EPM mit Wellendichtung für Höchstdruck ohne Rückschlagventile mit Leckölschluss
Der Druck auf die Wellendichtung entspricht dem Druck in der Leckölschleife.

EPM with shaft seal for highest pressure without check valves with drain connection
The shaft seal pressure equals the pressure in the drain line.

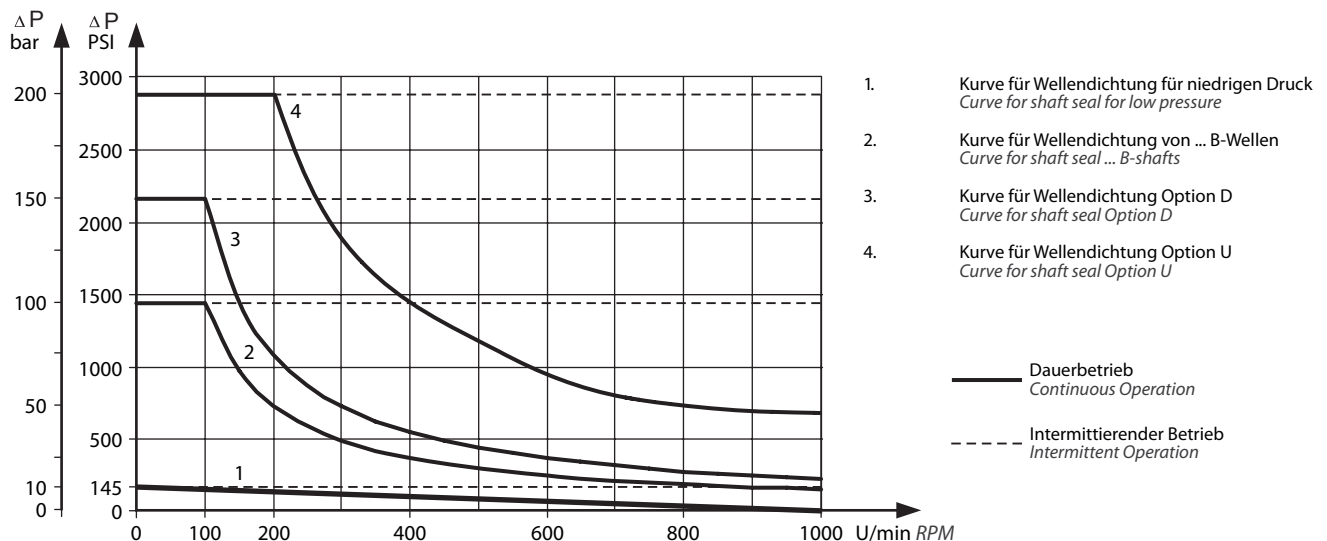
Option U und Option 1
Option U and Option 1



EPM mit Wellendichtung für Höchstdruck ohne Leckölschluss
Der Druck auf die Wellendichtung entspricht dem Durchschnitt von Eingangsdruck und Rücklaufdruck.

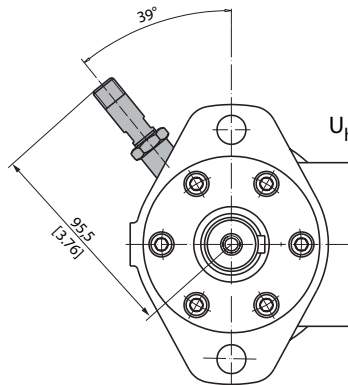
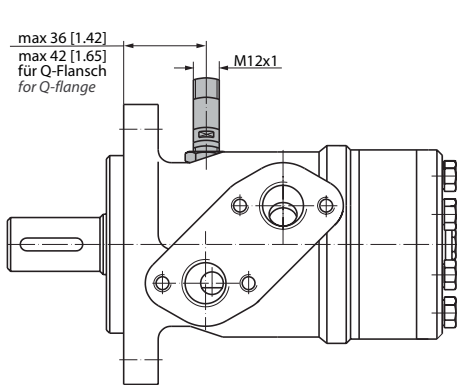
EPM with shaft seal for highest pressure without drain connection
The shaft seal pressure equals the average of input pressure and return pressure.

Max. Rücklaufdruck ohne Leckölschleife oder max. Druck in der Leckölschleife Max. return pressure without drain line or max. pressure in the drain line

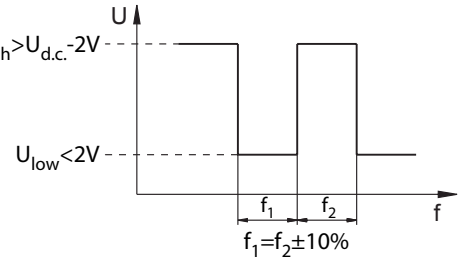


Pos. 9 Sonderausführungen *Special features*

Option RS: Drehzahlsensor Option RS: Speed sensor



Ausgangssignal
Output signal

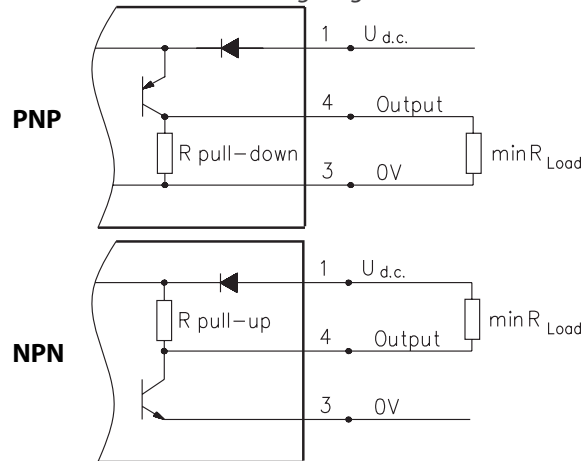


Load max: $I_{high} = I_{low} < 50\text{mA}$

Technische Daten Technical data

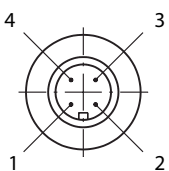
| | |
|--|-----------------------------|
| Frequenzbereich Frequency range | 0 - 15000 Hz |
| Ausgang Output | PNP, NPN |
| Spannungsversorgung Power supply | 10 - 36 VDC |
| Stromaufnahme Current input | 20 mA (@24 VDC) |
| Umgebungstemperatur Ambient temperature | -40 - 125° C [-40 - 257° F] |
| Schutzart Protection | IP 67 |
| Steckverbindung Plug connector | M12-Serie Series |
| Montageverfahren Mounting principle | ISO 6149 |
| Impulse pro Umdrehung Pulses per revolution | 36 |

Schaltplan Wiring diagram



$$R_{load}[\text{k}\Omega] = U_{d.c.}[\text{V}] / I_{max}[\text{mA}]$$

Anschluss Belegung Stick type



| Anschluss Nr. Terminal No. | Belegung Connection | Ausgangsleitung Cable Output |
|-------------------------------|---------------------------------|---------------------------------|
| 1 | U _{d.c.} | Braun Brown |
| 2 | Keine Belegung No connection | Weiß White |
| 3 | 0V | Blau Blue |
| 4 | Ausgangssignal Output signal | Schwarz Black |

Bestellcode für Drehzahlsensor Order code for speed sensor

| Sensor Code | Ausgang Output | Elektrische Verbindung Electric connection |
|-------------|-------------------|--|
| RSN | NPN | Kabelstecker M12 Plug connector M12 |
| RSP | PNP | Kabelstecker M12 Plug connector M12 |
| RSNL5 | NPN | Anschlusskabel 3x0,25; 5m [196 in] lang Cable output 3x0.25; 5m [196 in] long |
| RSPL5 | PNP | Anschlusskabel 3x0,25; 5m [196 in] lang Cable output 3x0.25; 5m [196 in] long |

Der Drehzahlsensor wird nicht montiert geliefert. Der Sensor befindet sich in einer Plastiktüte in der Umverpackung des Motors. Für eine Installation beachten Sie bitte die beiliegende Montageanleitung.

The speed sensor will be delivered not fitted, but is supplied in a plastic bag with the motor. For installation see the enclosed mounting instructions.

Option LL: Geringes Lecköl
Option LL: Low Leakage

Die Hydraulikmotoren der LL Reihe sind für den Einsatz im ganzen Anwendungsbereich (Druckabfall und Drehzahl) entworfen. Sie haben jedoch erheblich geringere Verluste in den Verdrängungsräumen. Diese Motoren sind geeignet für hydraulische Systeme bei denen die Motoren in Reihe geschaltet sind und geringe Leckölverluste gefordert sind.

LL series hydraulic motors are designed to operate at the whole standard range of working conditions (pressure drop and frequency of rotation), but with considerable decreased volumetric losses in the drain ports. These motors are suitable for hydraulic system with series-connected motors with demands for low leakage.

Option LSV: Ventil für geringe Drehzahlen (nur für EPM-W)
Option LSV: Low speed valve (only for EPM-W)

Option LSV optimiert den Motor für den Betrieb bei kleinen Drehzahlen. LSV Motoren sind für den Betrieb mit standardmäßigen Höchstwerten des Druckabfalls und mit stoß freiem Betrieb bei niedrigen Drehzahlen (bis zu 200 U/min) ausgelegt. Ihre höchste Effektivität erreichen diese Motoren bei 20-50 U/min. Motoren mit diesem Ventil haben einen höheren Anlaufdruck. Der Druckabfall sollte größer als 40 bar [580 PSI] sein.

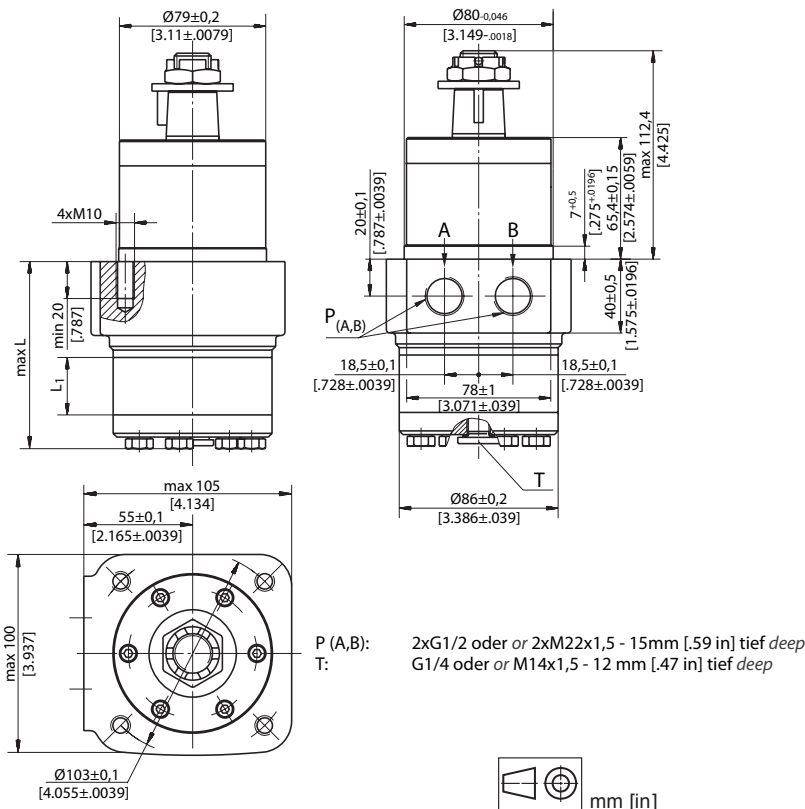
LSV option optimizes the motor for low speed performance. Motors with this valving provide very low speed while maintaining high torque. They are designed to run continuously at low speed (up to 200 RPM) at normal pressure drop and reduced flow. Optimal run is guaranteed at frequency of rotation from 20 to 50 RPM. Motors with this valving have an increased starting pressure and are not recommended for using at pressure drop less than 40 bar [580 PSI].

Option FR: Leichtlaufausführung (nicht für EPM-N)
Option FR: Free running (not for EPM-N)

FR Motoren haben größere Abstände zwischen den rotierenden Teilen im Planetensatz. Dadurch lässt sich die Abtriebswelle mit weniger mechanischem Widerstand drehen. Der größere Abstand verbessert auch die Schmierung der Abnutzungsflächen im Planetensatz. Weitere Vorteile ist eine längere Lebensdauer bei hohen Drehzahlen (größer 300 U/min) und geringem Druckabfall. Der volumetrische Wirkungsgrad kann bei diesen Motoren etwas geringer ausfallen.

FR motors are with increased clearance at all friction parts, allowing the shaft to rotate more freely with less mechanical drag. The increased clearance also improves lubrication of the wear surfaces of gear set and friction parts. Additional advantages of FR versions are prolonging of the life of the hydraulic motors at high speeds, as well as the possibility to use them in systems with wide variation of loading. FR series motors are designed to operate with high speed (over than 300 RPM) and low pressure drop. Volumetric efficiency may be reduced slightly.

Einbaumaße EPM-W
Dimensions EPM-W



| Typ Type | L mm [in] | L ₁ mm [in] |
|-----------|--------------|------------------------|
| EPM-W 25 | 77,0 [3.03] | 5,20 [.21] |
| EPM-W 32 | 78,0 [3.07] | 6,30 [.25] |
| EPM-W 40 | 79,5 [3.13] | 7,40 [.29] |
| EPM-W 50 | 78,5 [3.09] | 6,67 [.26] |
| EPM-W 80 | 82,5 [3.25] | 10,67 [.42] |
| EPM-W 100 | 85,0 [3.35] | 13,33 [.52] |
| EPM-W 125 | 88,5 [3.48] | 16,67 [.66] |
| EPM-W 160 | 93,0 [3.66] | 21,33 [.84] |
| EPM-W 200 | 98,5 [3.88] | 26,67 [1.05] |
| EPM-W 250 | 105,0 [4.13] | 33,33 [1.31] |
| EPM-W 315 | 114,5 [4.51] | 42,67 [1.68] |
| EPM-W 400 | 125,0 [4.92] | 53,33 [2.10] |
| EPM-W 500 | 138,5 [5.45] | 66,63 [2.62] |
| EPM-W 630 | 156,0 [6.14] | 84,00 [3.31] |

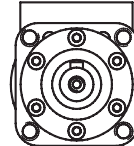
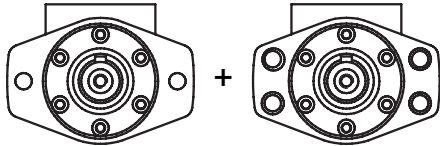
Weitere Technische Informationen Further technical informations

Zulässige Wellenbelastung für EPM und EPM-N Permissible shaft load for EPM and EPM-N

Die zulässige Wellenbelastung P_{rad} hängt ab von den Drehzahlen (n) und Abstand (L) zwischen dem Angriffspunkt der Last und dem Befestigungsflansch.

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

Montageflansch Mounting flange



Für Wellenoptionen C, CO, K und SH:
For shaft options C, CO, K and SH:

$$P_{rad} = \frac{800}{n} \times \frac{25000}{95+L} \text{ ,[daN*]}$$

$$P_{rad} = \frac{800}{n} \times \frac{2215}{3.74+L} \text{ ,[lbs*]}$$

Für Wellenoptionen CB und HB:
For shaft options CB and HB:

$$P_{rad} = \frac{800}{n} \times \frac{18750}{95+L} \text{ ,[daN*]}$$

$$P_{rad} = \frac{800}{n} \times \frac{1660}{3.74+L} \text{ ,[lbs*]}$$

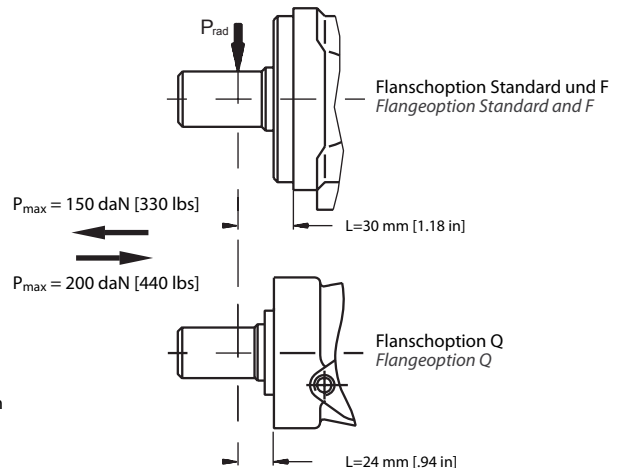
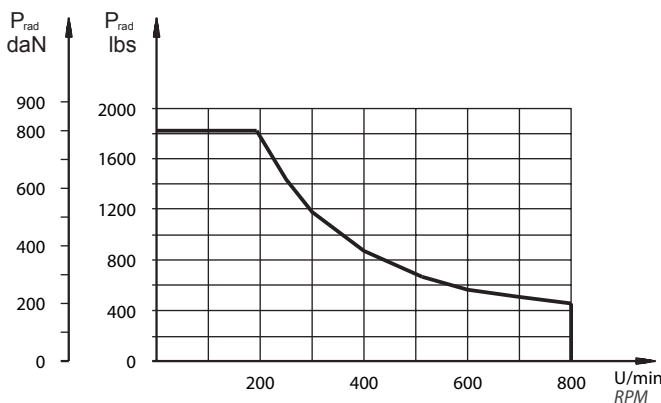
Für Wellenoptionen C und CO:
For shaft options C and CO:

$$P_{rad} = \frac{800}{n} \times \frac{25000}{101+L} \text{ ,[daN*]}$$

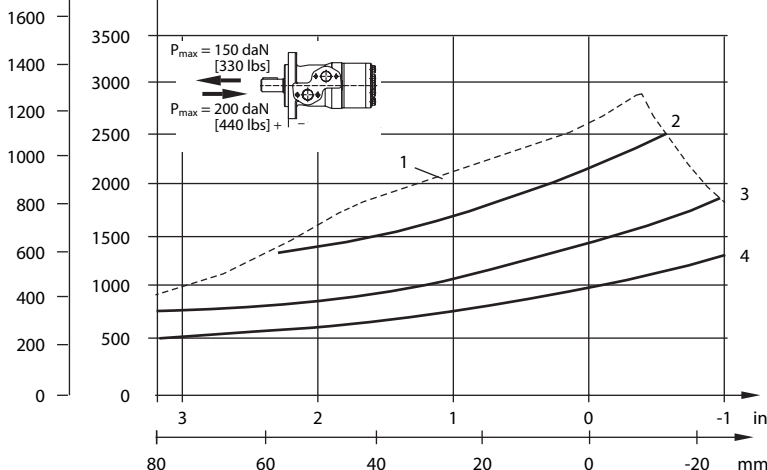
$$P_{rad} = \frac{800}{n} \times \frac{2215}{3.98+L} \text{ ,[lbs*]}$$

* $n \leq 200$ U/min RPM: Max $P_{rad} = 800$ daN [1800 lbs]
 $n \geq 200$ U/min RPM: $L < 55$ mm [2.2 in]

Radiale Wellenbelastung P_{rad} für Wellenoptionen C und CO bei $L=30$ mm [1.18 in] (24 mm [.94 in])
Radial shaft load P_{rad} for shaft options C and CO at $L=30$ mm [1.18 in] (24 mm [.94 in])

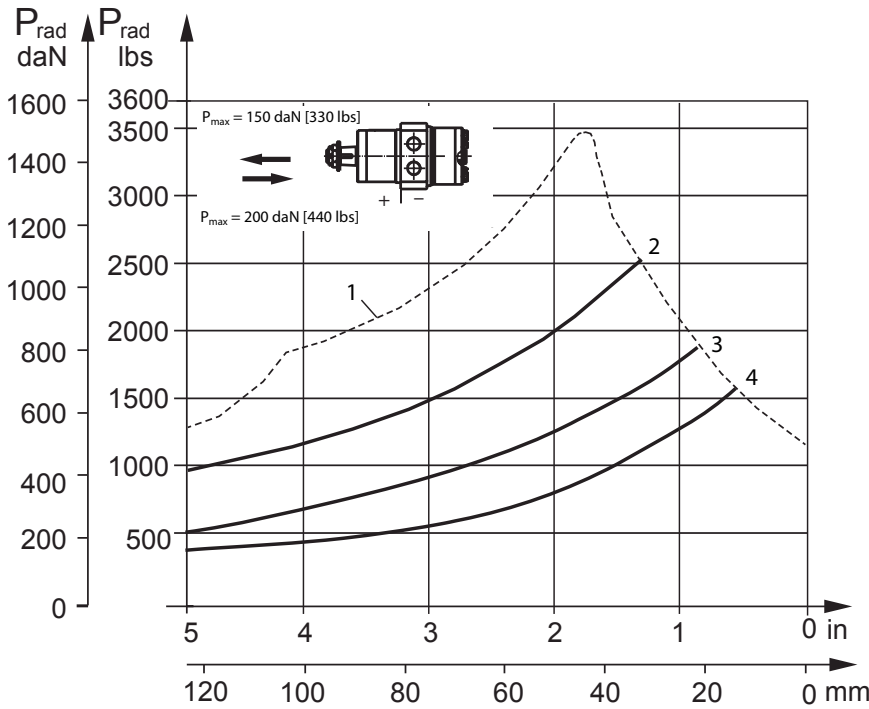


Die Kurven gelten für eine B10-Lebensdauer der Lager von 2000 Stunden
The curves apply to a B10 bearing life of 2000 hours



1. Max. radiale Wellenbelastung
Max. radial shaft load
2. $n = 50$ U/min
 $n = 50$ RPM
3. $n = 200$ U/min
 $n = 200$ RPM
4. $n = 800$ U/min
 $n = 800$ RPM

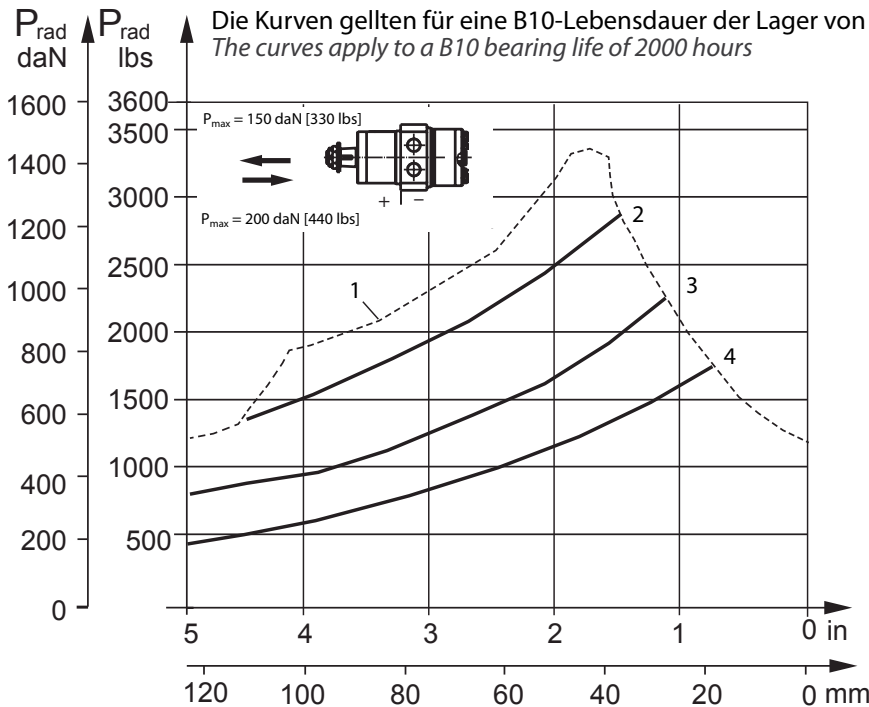
Zulässige Wellenbelastung für EPM-W
Permissible shaft load for EPM-W



1. Max. radiale Wellenbelastung
Max. radial shaft load
2. $n = 300 \text{ U/min}$
 $n = 300 \text{ RPM}$
3. $n = 500 \text{ U/min}$
 $n = 500 \text{ RPM}$
4. $n = 800 \text{ U/min}$
 $n = 800 \text{ RPM}$

Zulässige Wellenbelastung für EPM-W-N
Permissible shaft load for EPM-W-N

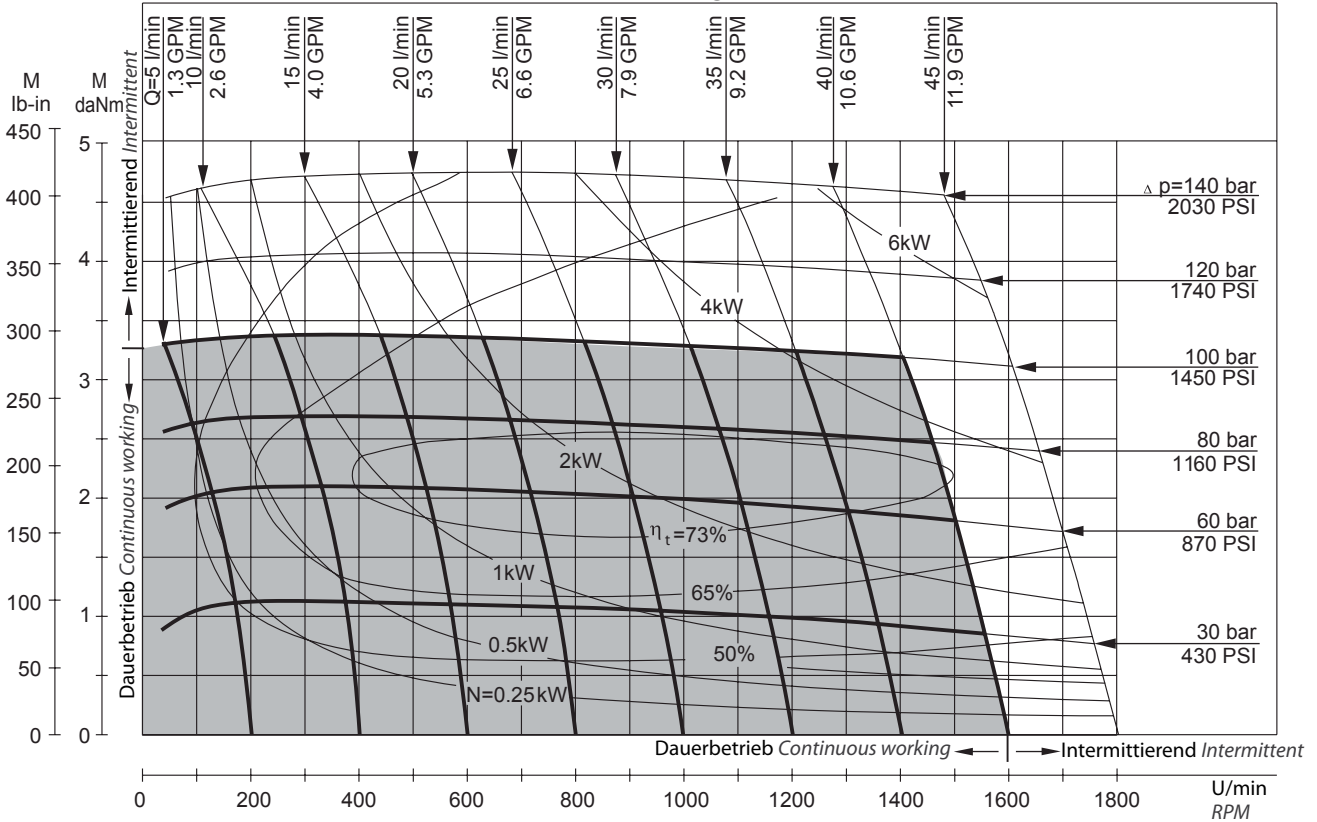
Die Kurven gelten für eine B10-Lebensdauer der Lager von 2000 Stunden
 The curves apply to a B10 bearing life of 2000 hours



1. Max. radiale Wellenbelastung
Max. radial shaft load
2. $n = 50 \text{ U/min}$
 $n = 50 \text{ RPM}$
3. $n = 200 \text{ U/min}$
 $n = 200 \text{ RPM}$
4. $n = 800 \text{ U/min}$
 $n = 800 \text{ RPM}$

Leistungsdiagramme *Function diagrams*

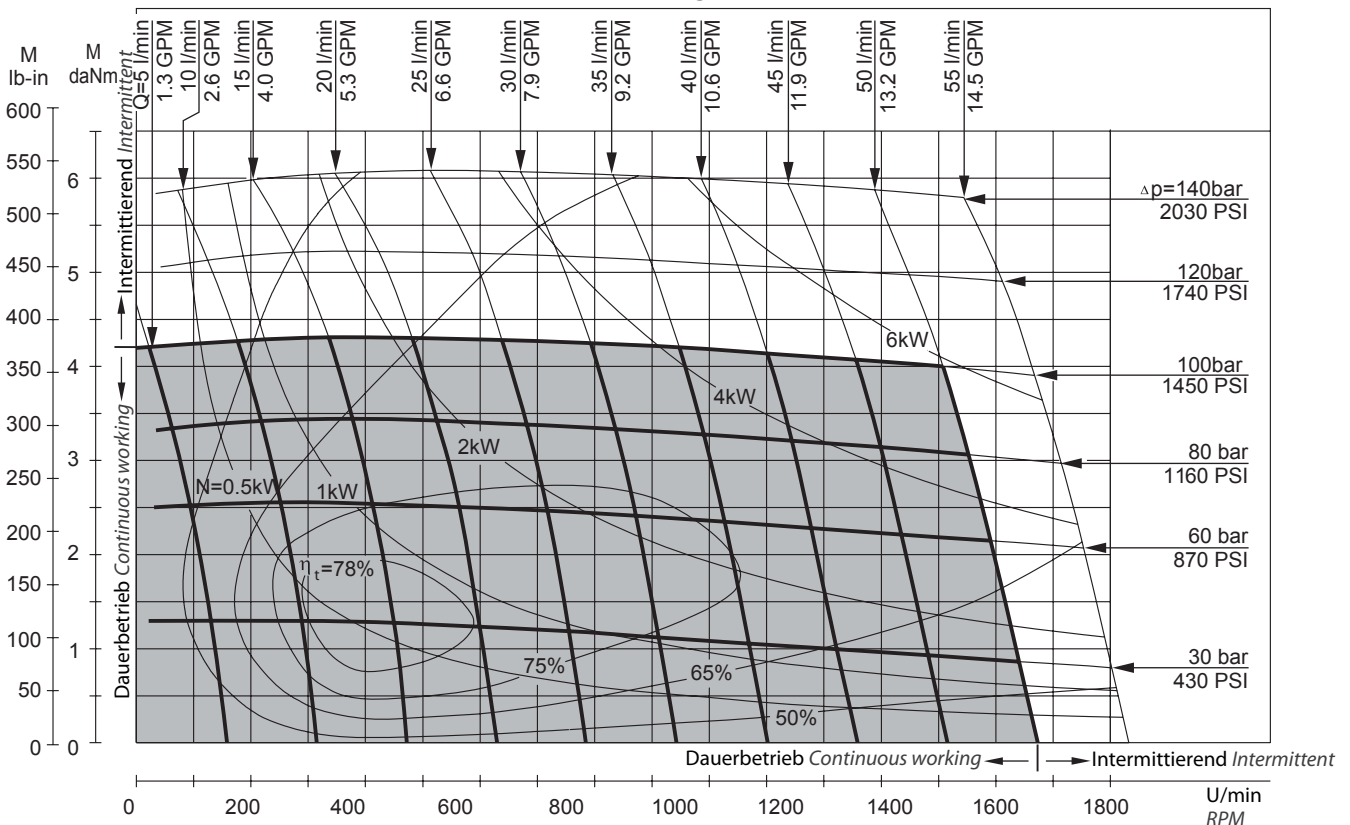
EPM 25



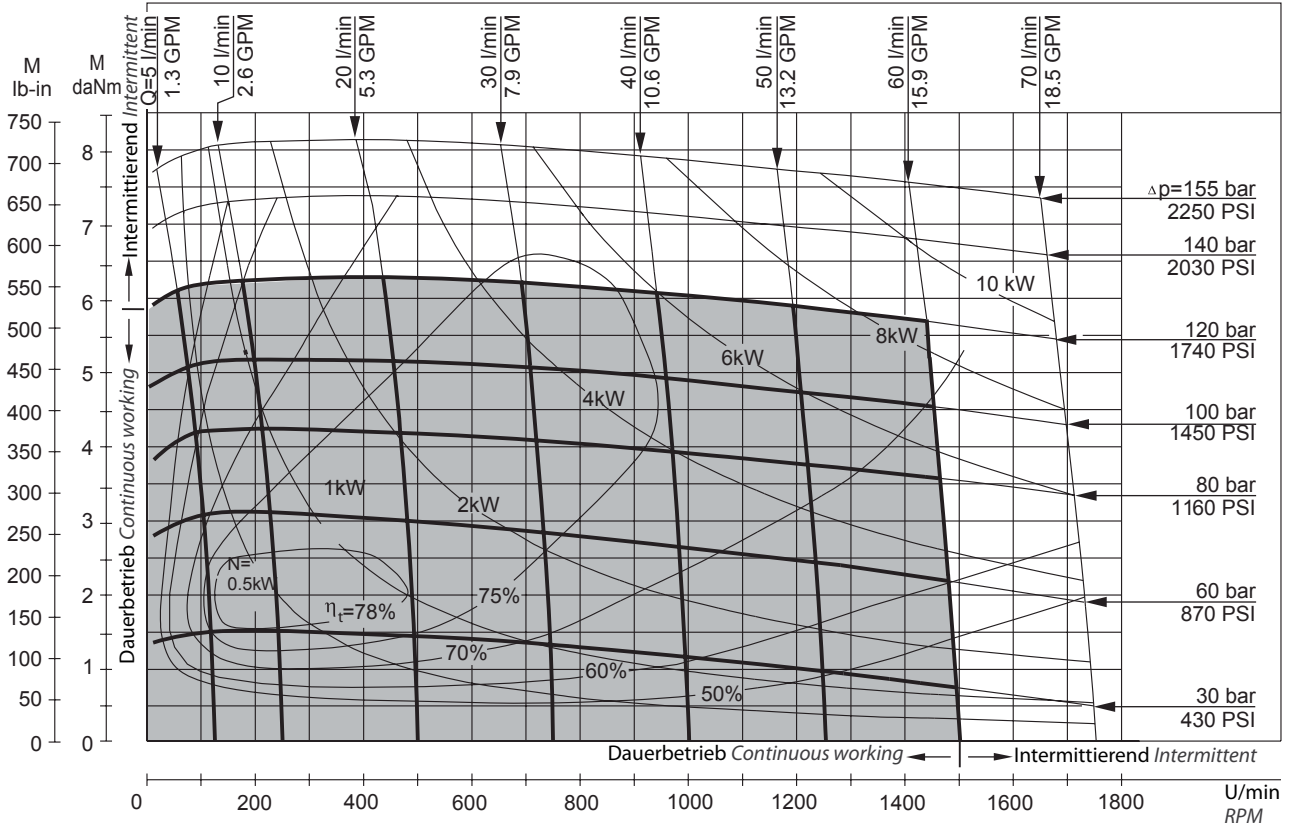
Die Leistungsdiagramme werden bei einem Rücklaufdruck von 5-10 bar [72.5-145 PSI] erreicht. Kinematische Viskosität des Hydrauliköls 32 mm²/s [150 SUS] bei 50° C [122° F]

The function diagrams data is for average performance of randomly selected motors at back pressure 5-10 bar [72.5-145 PSI] and oil viscosity of 32 mm²/s [150 SUS] at 50° C [122° F]

EPM 32



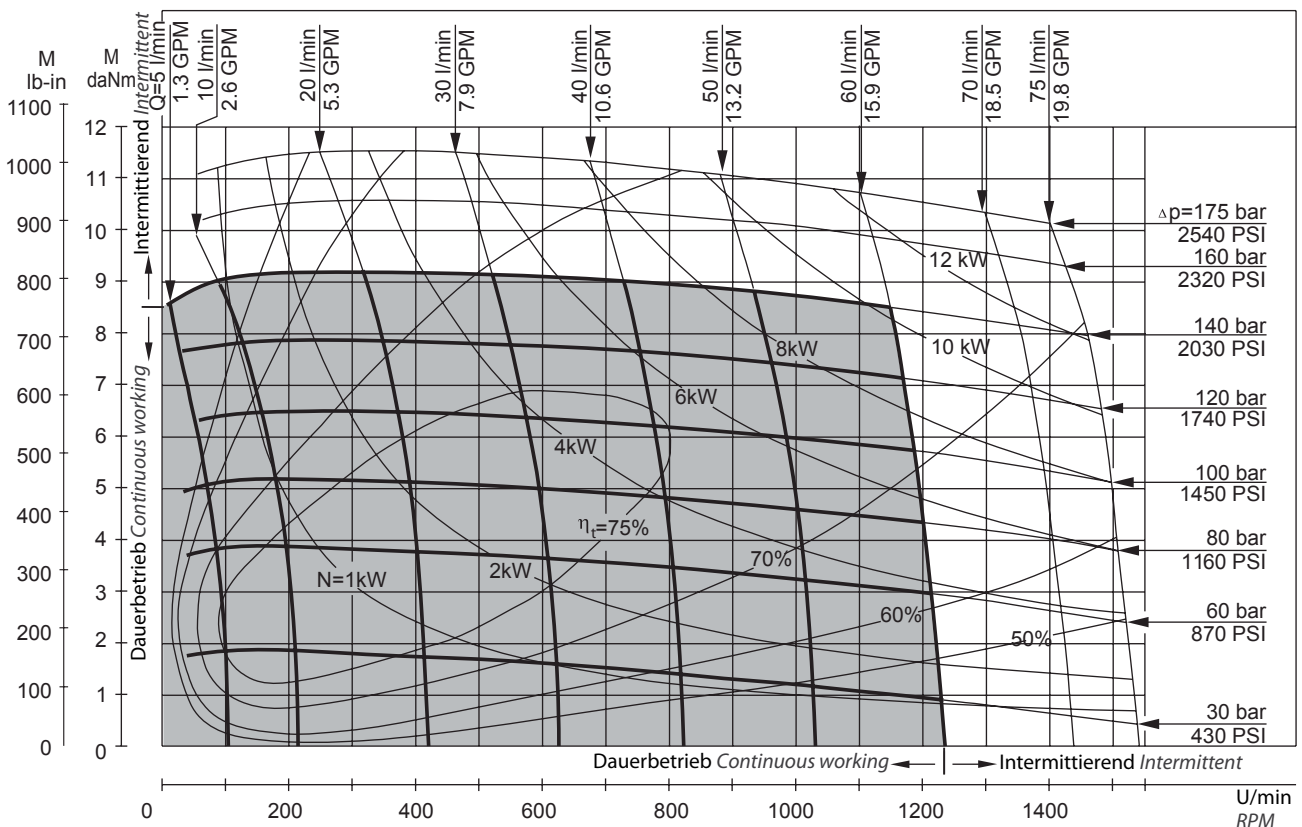
EPM 40



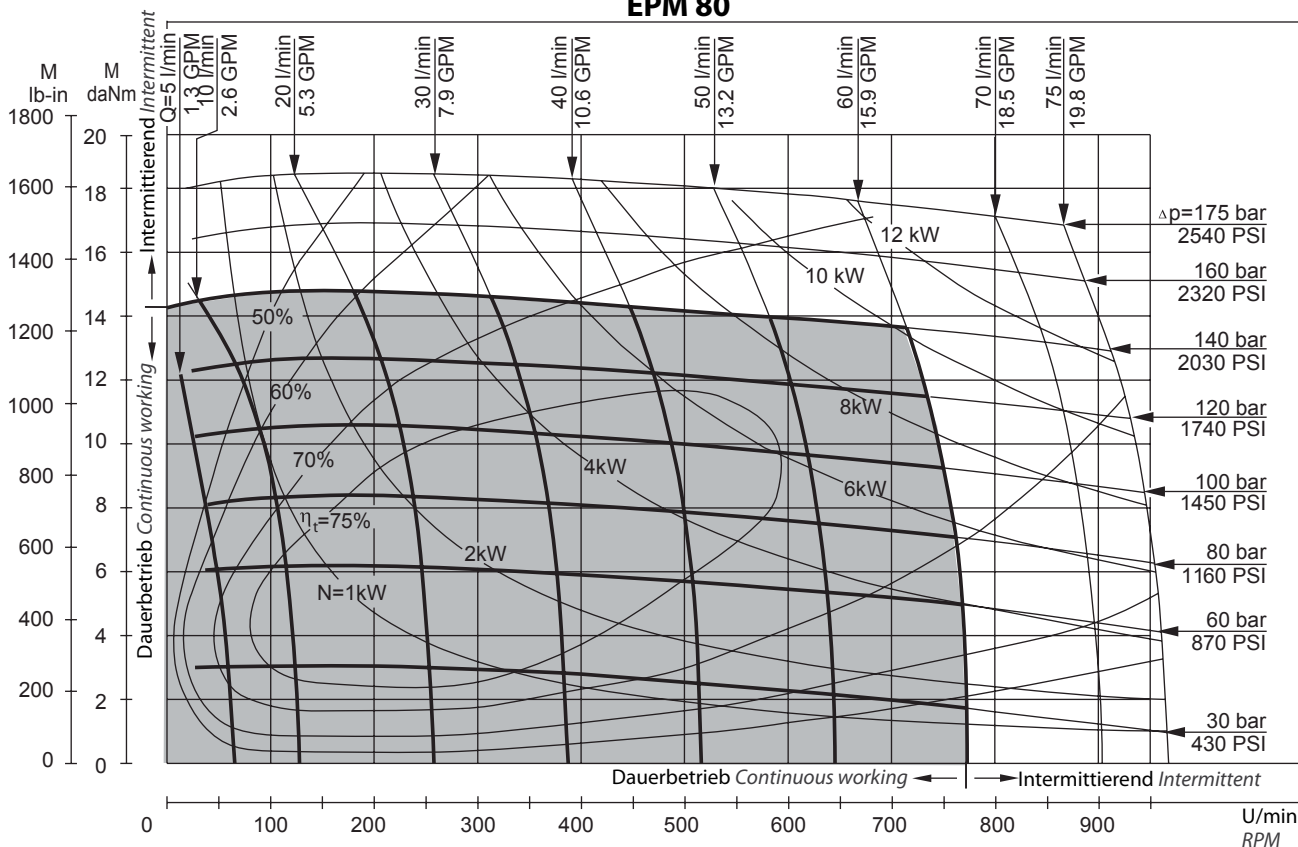
Die Leistungsdiagramme werden bei einem Rücklaufdruck von 5-10 bar [72.5-145 PSI] erreicht. Kinematische Viskosität des Hydrauliköls 32 mm²/s [150 SUS] bei 50° C [122° F]

The function diagrams data is for average performance of randomly selected motors at back pressure 5-10 bar [72.5-145 PSI] and oil viscosity of 32 mm²/s [150 SUS] at 50° C [122° F]

EPM 50



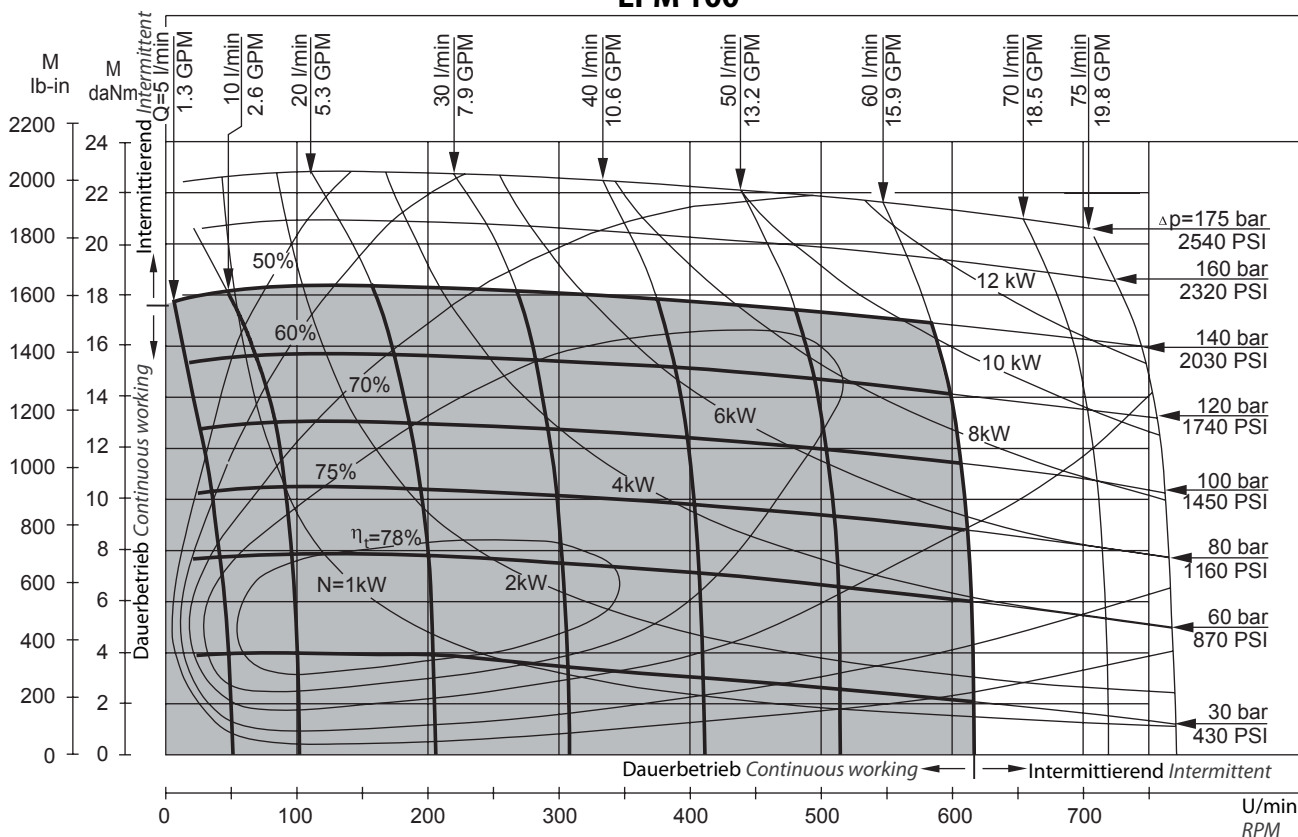
EPM 80



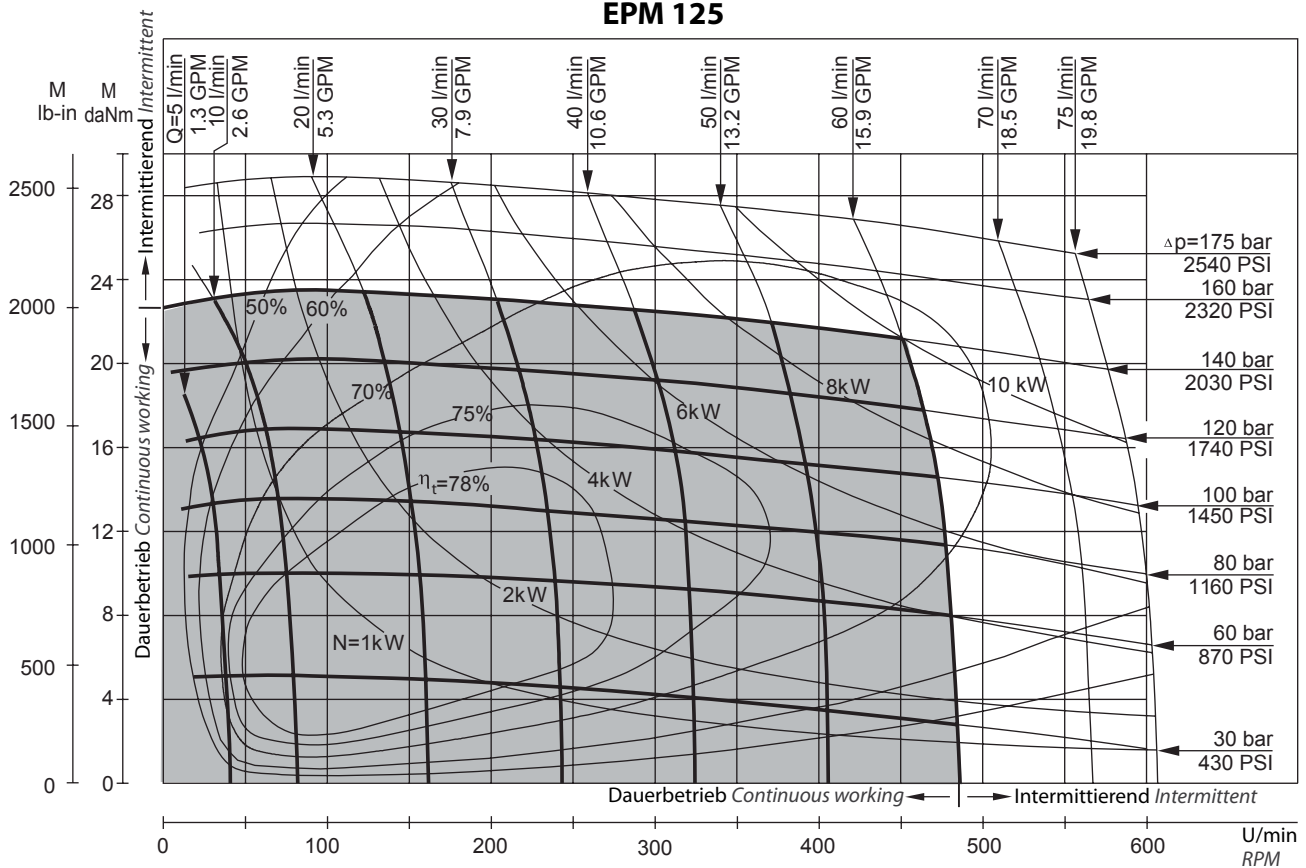
Die Leistungsdiagramme werden bei einem Rücklaufdruck von 5-10 bar [72.5-145 PSI] erreicht. Kinematische Viskosität des Hydrauliköls 32 mm²/s [150 SUS] bei 50° C [122° F]

The function diagrams data is for average performance of randomly selected motors at back pressure 5-10 bar [72.5-145 PSI] and oil viscosity of 32 mm²/s [150 SUS] at 50° C [122° F]

EPM 100



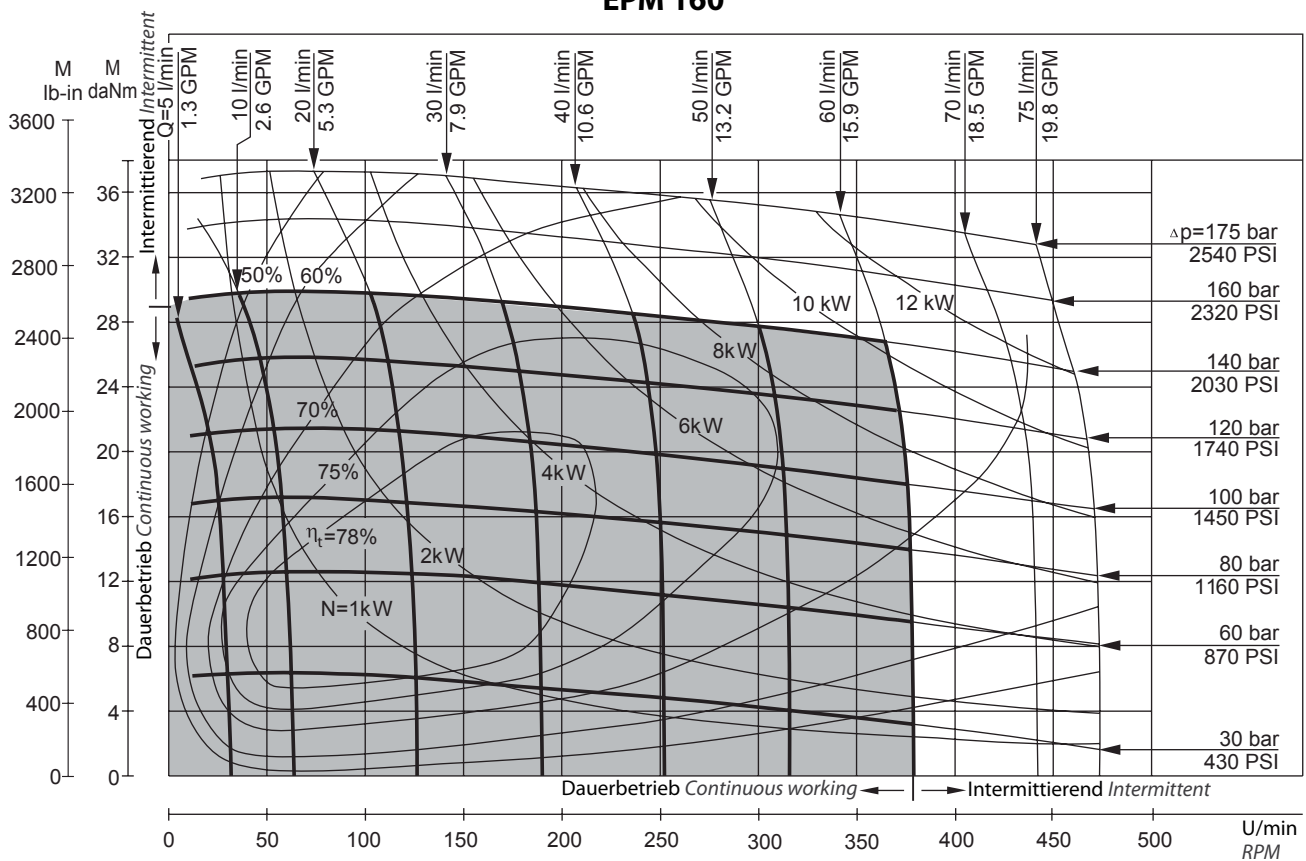
EPM 125



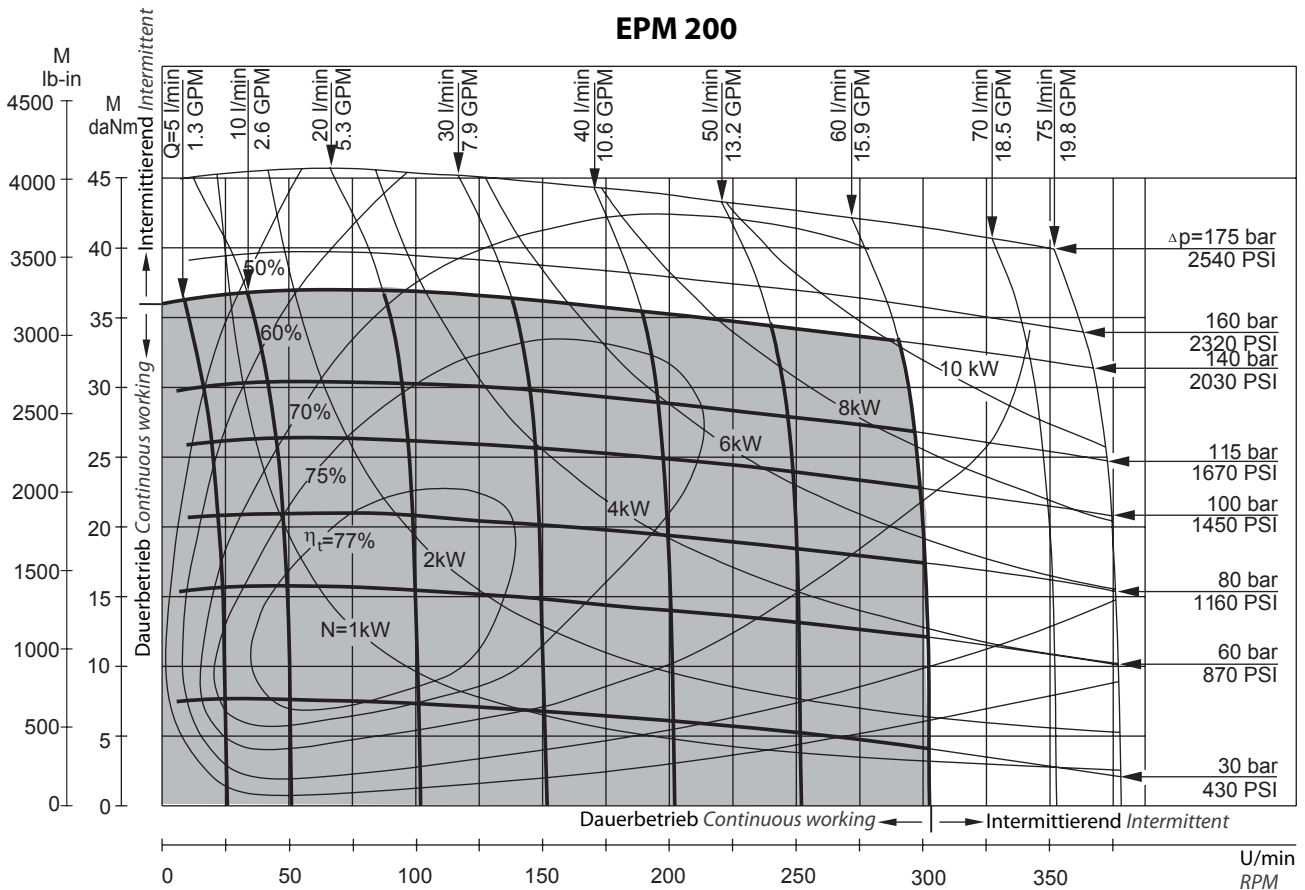
Die Leistungsdiagramme werden bei einem Rücklaufdruck von 5-10 bar [72.5-145 PSI] erreicht. Kinematische Viskosität des Hydrauliköls 32 mm²/s [150 SUS] bei 50° C [122° F]

The function diagrams data is for average performance of randomly selected motors at back pressure 5-10 bar [72.5-145 PSI] and oil viscosity of 32 mm²/s [150 SUS] at 50° C [122° F]

EPM 160



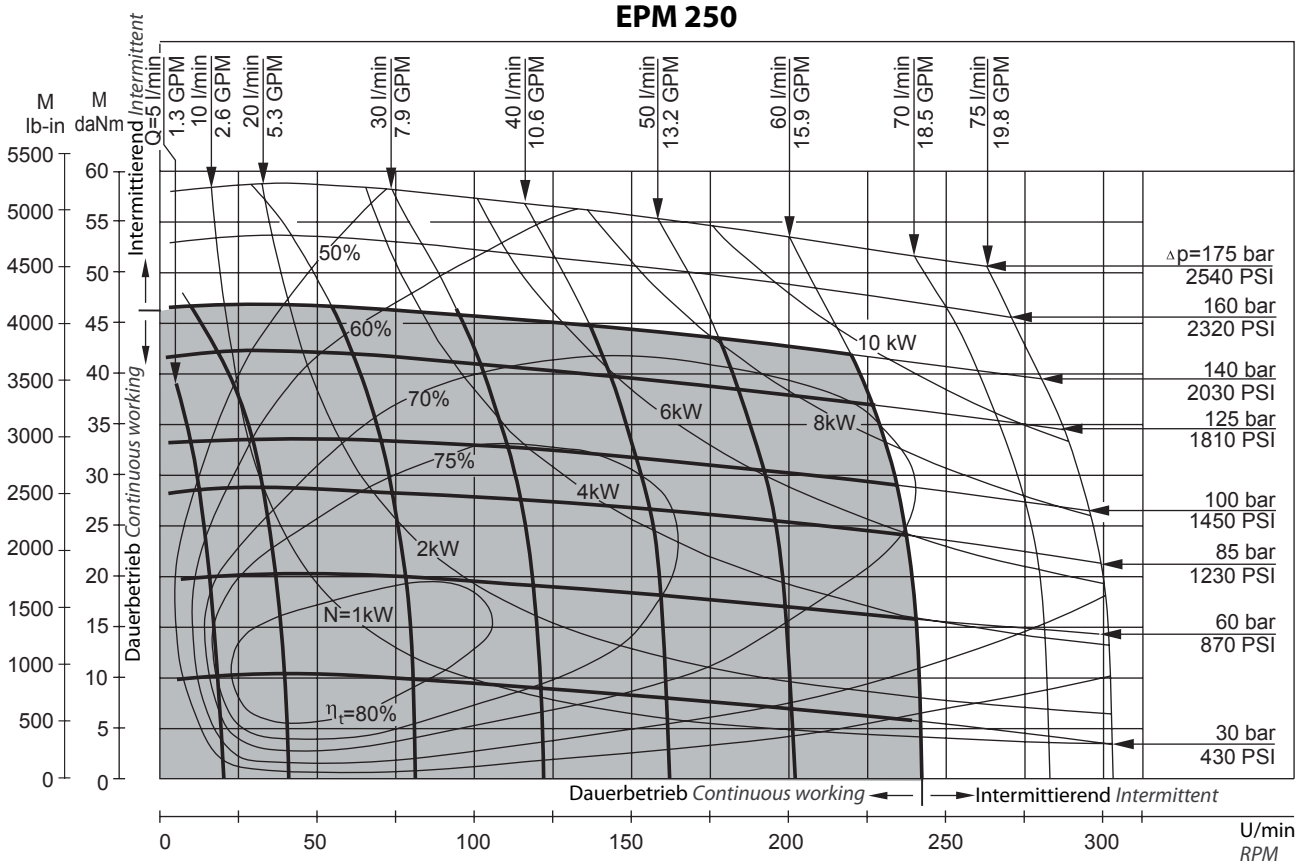
EPM 200



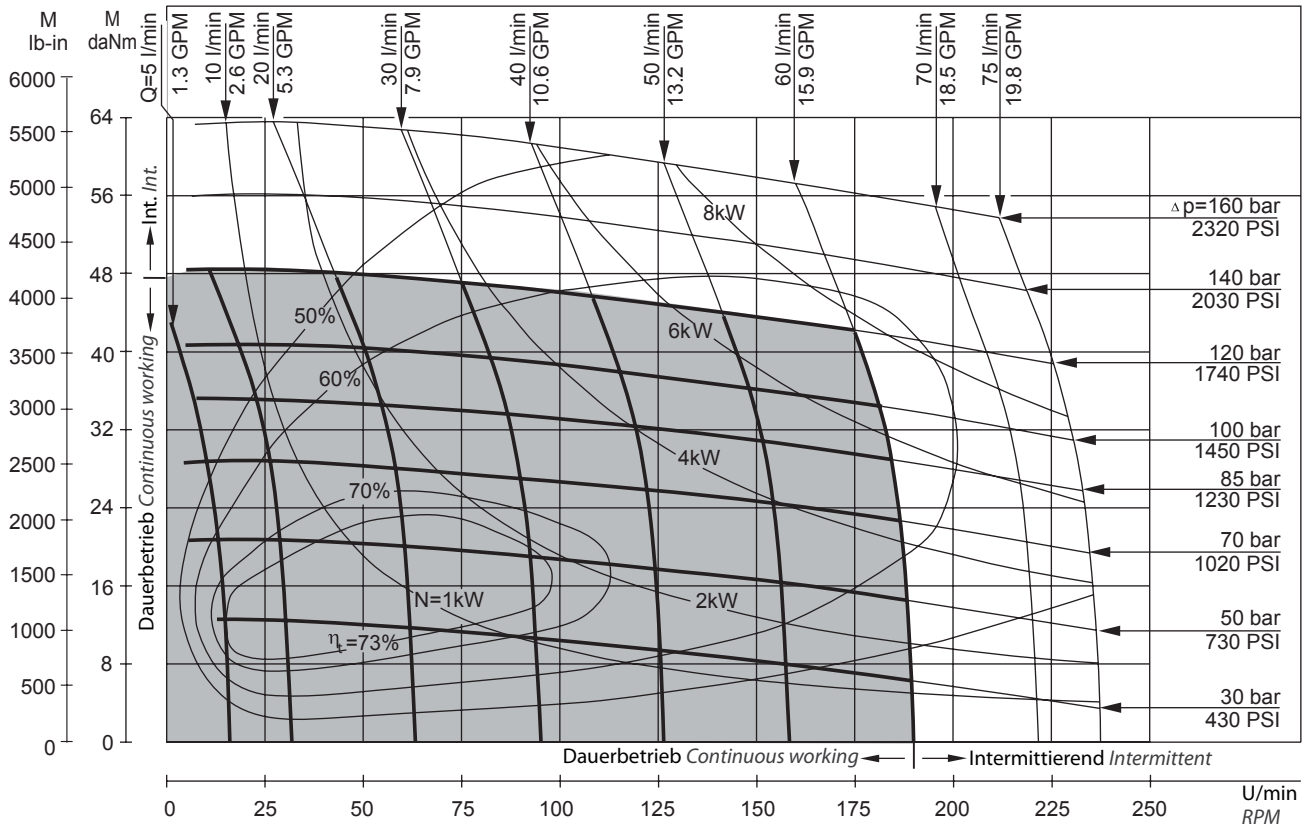
Die Leistungsdiagramme werden bei einem Rücklaufdruck von 5-10 bar [72.5-145 PSI] erreicht. Kinematische Viskosität des Hydrauliköls 32 mm²/s [150 SUS] bei 50° C [122° F]

The function diagrams data is for average performance of randomly selected motors at back pressure 5-10 bar [72.5-145 PSI] and oil viscosity of 32 mm²/s [150 SUS] at 50° C [122° F]

EPM 250



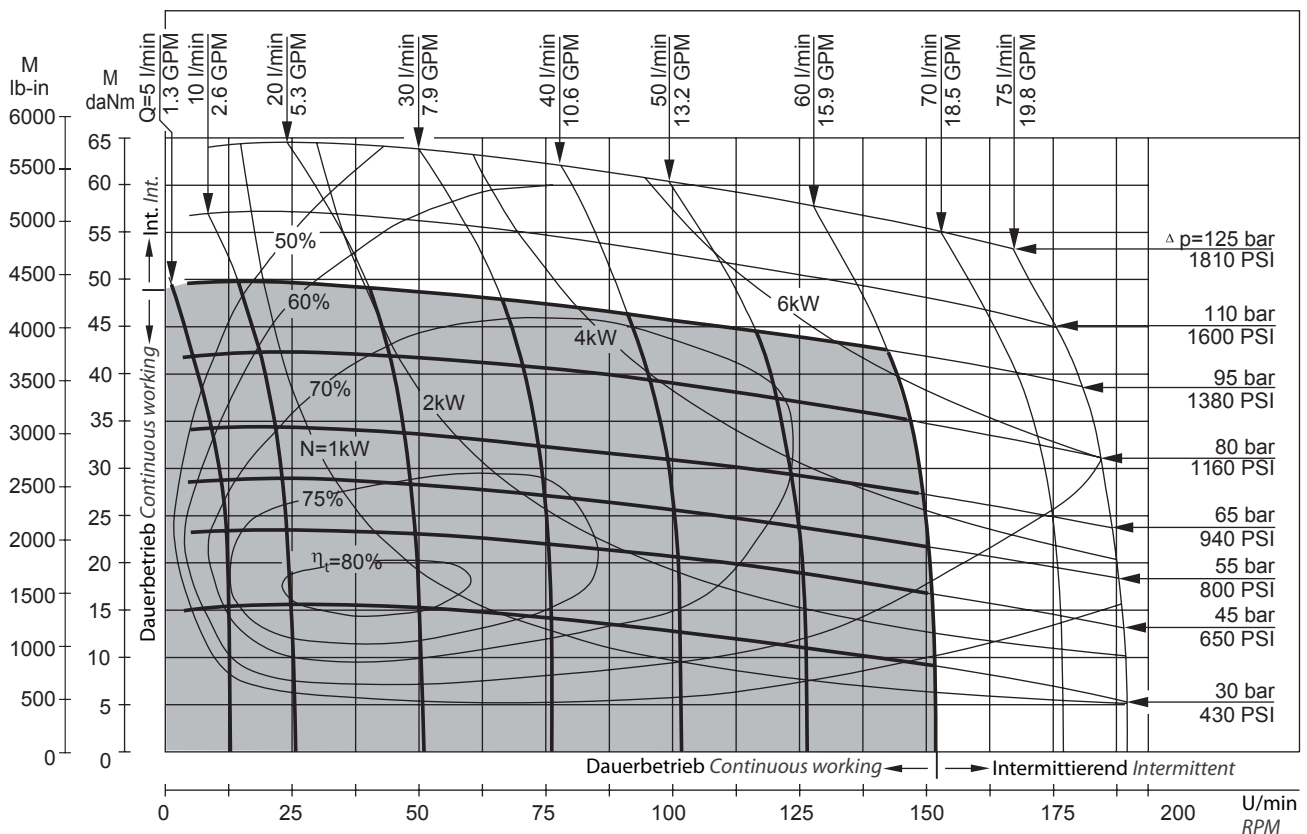
EPM 315



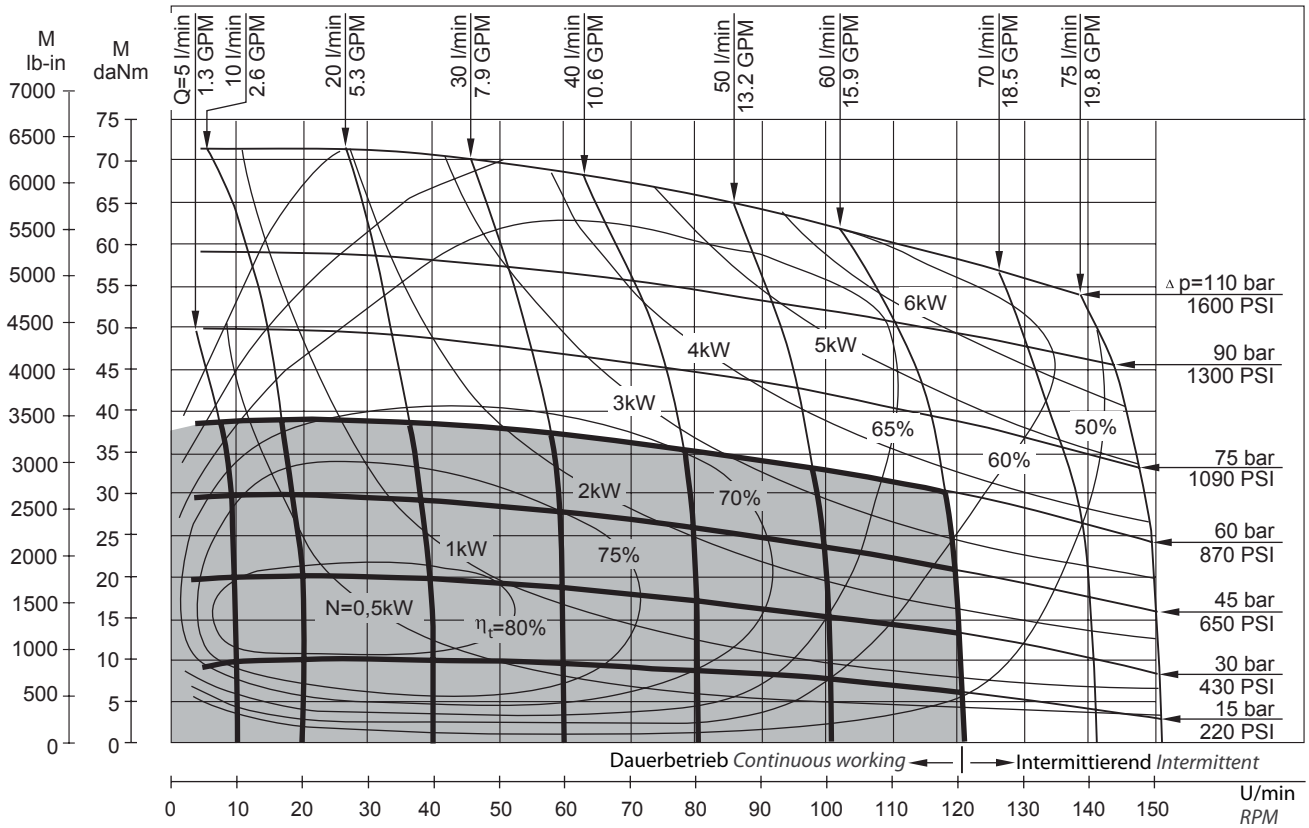
Die Leistungsdiagramme werden bei einem Rücklaufdruck von 5-10 bar [72.5-145 PSI] erreicht. Kinematische Viskosität des Hydrauliköls 32 mm²/s [150 SUS] bei 50° C [122° F]

The function diagrams data is for average performance of randomly selected motors at back pressure 5-10 bar [72.5-145 PSI] and oil viscosity of 32 mm²/s [150 SUS] at 50° C [122° F]

EPM 400



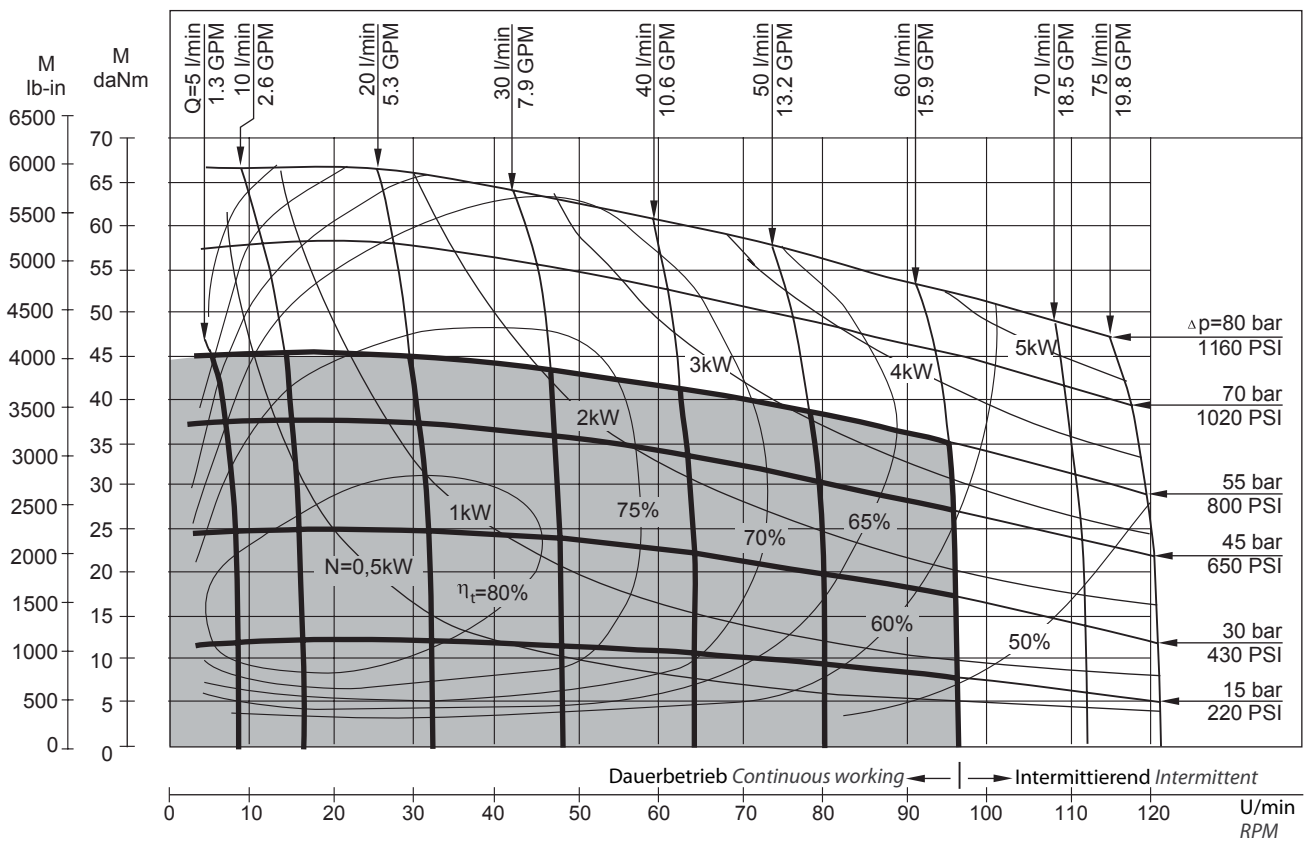
EPM 500



Die Leistungsdiagramme werden bei einem Rücklaufdruck von 5-10 bar [72.5-145 PSI] erreicht. Kinematische Viskosität des Hydrauliköls 32 mm²/s [150 SUS] bei 50° C [122° F]

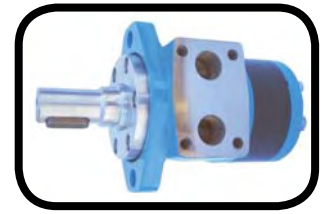
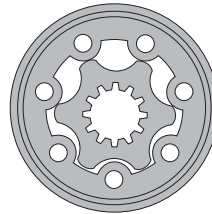
The function diagrams data is for average performance of randomly selected motors at back pressure 5-10 bar [72.5-145 PSI] and oil viscosity of 32 mm²/s [150 SUS] at 50° C [122° F]

EPM 630



Planetenmotor EPM®-K

Planetarymotor EPM®-K



Anwendung

- Förderbänder
- Fördertechnik für Roboter
- Textilmaschinen
- Werkzeugmaschinen
- Nahrungsmittelindustrie
- Landmaschinen
- u.a.

Bauweise und Ausführungen

- Modell: Längsschieberventil, Planetensatz
- Flansch: Ovalflansch
- Anschlüsse: Seitlich, metrisches oder BSPP Gewinde
- Lagerung: Konisches Wälzlager
- Wellen: Zylindrisch, konisch oder verzahnt
- Sonderausführungen

Application

- Conveyors
- Feeding mechanism of robots and manipulators
- Textile machines
- Machine tools
- Food industries
- Agriculture machines
- etc.

Construction and options

- Model: Spool valve, gerotor
- Mounting: Ovalflange
- Ports: Side ports, metric or BSPP threaded ports
- Bearing: Antifriction conical bearing
- Shafts: Cylindrical, tapered or splined
- Other special features

Übersicht Overview

| | | | | | |
|----------------------|-------------------------|--------------------|---------|------------------------|--|
| Max. Schluckvolumen | Max. Displacement | cm ³ /U | ccm/rev | [in ³ /rev] | 49,5 - 396,0 [3.02 - 24.16] |
| Max. Drehzahl | Max. Speed | U/min | RPM | | 1010 |
| Max. Drehmoment | Max. Torque | daNm | | [in-lb] | 55,6 [4921] |
| Max. Leistungsabgabe | Max. Output | kW | | [HP] | 8,6 [11.5] |
| Max. Druckgefälle | Max. Pressure drop | bar | | [PSI] | 140 [2030] |
| Max. Ölstrom | Max. Oil flow | l/min | lpm | [GPM] | 50 [13.2] |
| Min. Drehzahl | Min. Speed | U/min | RPM | | 10 |
| Hydrauliköl | Pressure fluid | | | | HLP (DIN 51524) oder or HM (ISO 6743/4) |
| Öltemperatur | Temperature range | °C | | [°F] | -40 - 140 [-40 - 284] |
| Optimalviskosität | Optimal viscosity range | mm ² /s | | [SUS] | 20 - 75 [98 - 347] |
| Filtrierung | Filtration | | | | ISO Code 20/16 (min. empfohlene Filtrierung recommended filtration 25 µm) |

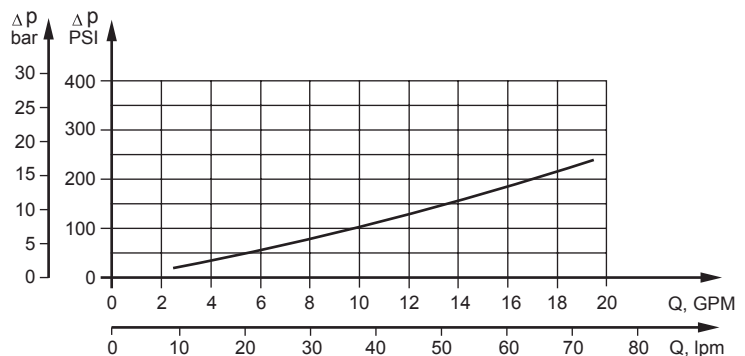
Ölstrom in der Leckölleitung

Oil flow in drain line

| Druckgefälle Pressure drop bar [PSI] | Viskosität Viscosity mm ² /s [SUS] | Ölstrom Oilflow l/min 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] |

Druckverlust

Pressure losses



Technische Daten *Technical datas*

| Type | Type | EPM-K 50 | EPM-K 80 | EPM-K 100 | EPM-K 125 | EPM-K 160 | EPM-K 200 | EPM-K 250 | EPM-K 315 | EPM-K 400 |
|---|---|----------------|----------------|----------------|-----------------|-----------------|------------------|------------------|------------------|------------------|
| Schluckvolumen <i>Displacement cm³/U ccm/rev [in³/rev]</i> | | 49,5 [3.02] | 79,2 [4.83] | 99,0 [6.04] | 123,8 [7.55] | 158,4 [9.66] | 198,0 [12.10] | 247,5 [15.10] | 316,8 [19.30] | 396,0 [24.16] |
| Max. Drehzahl <i>Max. Speed U/min RPM</i> | Dauerbetrieb <i>Continuous working</i> | 808 | 505 | 404 | 323 | 252 | 202 | 160 | 126 | 100 |
| | Intermittierend* <i>Intermittent *</i> | 1010 | 630 | 505 | 403 | 315 | 252 | 202 | 157 | 126 |
| Max. Drehmoment <i>Max. Torque daNm [lb-in]</i> | Dauerbetrieb <i>Continuous working</i> | 7,0 [619] | 10,8 [956] | 14,4 [1274] | 17,0 [1504] | 22,0 [1974] | 27,5 [2434] | 30,1 [2664] | 31,7 [2805] | 40,8 [3611] |
| | Intermittierend* <i>Intermittent *</i> | 9,2 [814] | 14,6 [1292] | 18,3 [1619] | 22,9 [2026] | 29,3 [2593] | 36,6 [3239] | 37,6 [3328] | 44,0 [3894] | 55,6 [4921] |
| | Spitze** <i>Peak **</i> | 13,6 [1203] | 21,4 [1894] | 26,1 [2310] | 32,6 [2885] | 41,8 [3700] | 52,2 [4620] | 51,5 [4588] | 64,3 [5691] | 80,0 [7080] |
| Max. Leistungsabgabe <i>Max. Output kW [HP]</i> | Dauerbetrieb <i>Continuous working</i> | 5,2 [7.0] | 5,2 [7.0] | 5,2 [7.0] | 5,2 [7.0] | 5,2 [7.0] | 5,2 [7.0] | 4,6 [6.2] | 3,4 [4.6] | 3,4 [4.6] |
| | Intermittierend* <i>Intermittent *</i> | 8,6 [11.5] | 8,6 [11.5] | 8,6 [11.5] | 8,6 [11.5] | 8,6 [11.5] | 8,6 [11.5] | 7,0 [9.3] | 5,8 [7.8] | 5,8 [7.8] |
| Max. Druckgefälle <i>Max. Pressure drop bar [PSI]</i> | Dauerbetrieb <i>Continuous working</i> | 105 [1520] | 105 [1520] | 105 [1520] | 105 [1520] | 105 [1520] | 105 [1520] | 90 [1305] | 70 [1015] | 70 [1015] |
| | Intermittierend* <i>Intermittent *</i> | 140 [2030] | 140 [2030] | 140 [2030] | 140 [2030] | 140 [2030] | 140 [2030] | 115 [1665] | 105 [1520] | 105 [1520] |
| | Spitze** <i>Peak **</i> | 215 [3120] | 215 [3120] | 215 [3120] | 215 [3120] | 215 [3120] | 215 [3120] | 170 [2470] | 170 [2470] | 170 [2470] |
| Max. Ölstrom <i>Max. Oil flow l/min lpm [GPM]</i> | Dauerbetrieb <i>Continuous working</i> | 40 [10.5] | 40 [10.5] | 40 [10.5] | 40 [10.5] | 40 [10.5] | 40 [10.5] | 40 [10.5] | 40 [10.5] | 40 [10.5] |
| | Intermittierend* <i>Intermittent *</i> | 50 [13.2] | 50 [13.2] | 50 [13.2] | 50 [13.2] | 50 [13.2] | 50 [13.2] | 50 [13.2] | 50 [13.2] | 50 [13.2] |
| Max. Eingangsdruck <i>Max. Inlet pressure bar [PSI]</i> | Dauerbetrieb <i>Continuous working</i> | 140 [2030] | 140 [2030] | 140 [2030] | 140 [2030] | 140 [2030] | 140 [2030] | 140 [2030] | 140 [2030] | 140 [2030] |
| | Intermittierend* <i>Intermittent *</i> | 175 [2540] | 175 [2540] | 175 [2540] | 175 [2540] | 175 [2540] | 175 [2540] | 175 [2540] | 175 [2540] | 175 [2540] |
| | Spitze** <i>Peak **</i> | 225 [3260] | 225 [3260] | 225 [3260] | 225 [3260] | 225 [3260] | 225 [3260] | 225 [3260] | 225 [3260] | 225 [3260] |
| Max. Rücklaufdruck (mit Leckölleitung) oder max. Druck in der Leckölleitung <i>Max. return pressure with drain line or max. pressure in drain line bar [PSI]</i> | Dauerb. <i>Continuous</i> 0-100 U/min RPM | 150 [2180] | 150 [2180] | 150 [2180] | 150 [2180] | 150 [2180] | 150 [2180] | 150 [2180] | 150 [2180] | 150 [2180] |
| | Dauerb. <i>Continuous</i> 100-300 U/min RPM | 75 [1090] | 75 [1090] | 75 [1090] | 75 [1090] | 75 [1090] | 75 [1090] | 75 [1090] | 75 [1090] | 75 [1090] |
| | Dauerb. <i>Continuous</i> 300-600 U/min RPM | 50 [725] | 50 [725] | 50 [725] | 50 [725] | 50 [725] | 50 [725] | 50 [725] | 50 [725] | 50 [725] |
| | Dauerb. <i>Continuous</i> > 600 U/min RPM | 20 [290] | 20 [290] | 20 [290] | 20 [290] | 20 [290] | 20 [290] | 20 [290] | 20 [290] | 20 [290] |
| | Int.* <i>Int. *</i> 0-max. U/min RPM | 15 [220] | 15 [220] | 15 [220] | 15 [220] | 15 [220] | 15 [220] | 15 [220] | 15 [220] | 15 [220] |
| Max. Anlaufdruck mit unbelasteter Welle <i>Max. starting pressure with unloaded shaft</i> | bar [PSI] | 10 [145] | 10 [145] | 10 [145] | 10 [145] | 10 [145] | 10 [145] | 10 [145] | 10 [145] | 10 [145] |
| Min. Anlaufmoment <i>Min. starting torque</i> | daNm [lb-in] | 5,8 [513] | 9,1 [805] | 12,2 [1079] | 14,5 [1283] | 19,5 [1725] | 24,8 [2195] | 27,5 [2433] | 29,0 [2567] | 35,9 [3278] |
| Min. Drehzahl*** <i>Min speed ***</i> | U/min RPM | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Gewicht <i>Weight</i> | kg [lb] | 5,0 [11.1] | 5,1 [11.2] | 5,3 [11.7] | 5,4 [11.9] | 5,6 [12.3] | 5,8 [12.8] | 6,0 [13.2] | 6,3 [13.9] | 6,8 [15.0] |

* Intermittierend: Betrieb max. 10% pro Minute

** Spitze: max. 1% pro Minute

*** Für Drehzahlen kleiner der min. Drehzahl sprechen Sie uns bitte an.

- Intermittierende Druckgefälle und Ölströme dürfen nicht gleichzeitig erreicht werden.

- Minimale Viskosität 13 mm²/s [70 SUS] bei 50° C [122° F]

- Maximale Öltemperatur während des Betriebs 82° C [180° F]

- Die Lebensdauer der Motoren kann erhöht werden, wenn die Antriebswelle 10-15 Minuten vor voller Belastung frei läuft.

* *Intermittent: Working max. 10% per minute*

** *Peak: max. 1% per minute*

*** *For speeds lower than given, please consult us.*

- *Intermittent speed and pressure should not occur simultaneously.*

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

- *Recommended maximum system operating temperature is 82° C [180° F]*

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

Bestellcode EPM®-K Ordercode EPM®-K

| | | | | | |
|--------------|----------|----------|----------|----------|----------|
| EPM-K | 1 | 2 | 3 | 4 | 5 |
|--------------|----------|----------|----------|----------|----------|

| | |
|---------------|--|
| Pos. 1 | Schluckvolumen <i>Displacement</i> |
| 50 | 49,5 cm ³ /U <i>ccm/rev</i> [3.02 in ³ /rev] |
| 80 | 79,2 cm ³ /U <i>ccm/rev</i> [4.83 in ³ /rev] |
| 100 | 99,0 cm ³ /U <i>ccm/rev</i> [6.04 in ³ /rev] |
| 125 | 123,8 cm ³ /U <i>ccm/rev</i> [7.55 in ³ /rev] |
| 160 | 158,4 cm ³ /U <i>ccm/rev</i> [9.66 in ³ /rev] |
| 200 | 198,0 cm ³ /U <i>ccm/rev</i> [12.10 in ³ /rev] |
| 250 | 247,5 cm ³ /U <i>ccm/rev</i> [15.10 in ³ /rev] |
| 315 | 316,8 cm ³ /U <i>ccm/rev</i> [19.30 in ³ /rev] |
| 400 | 396,0 cm ³ /U <i>ccm/rev</i> [24.16 in ³ /rev] |

| | |
|---------------|--|
| Pos. 2 | Abtriebswelle * <i>Shaft *</i> |
| C | Zylindrisch Ø25, Passfeder A8x7x32 DIN 6885 <i>Cylindrical Ø25, parallel key A8x7x32 DIN 6885</i> |
| CO | Zylindrisch Ø1", Passfeder 1/4" x 1/4" x 1 1/4" BS46 <i>Cylindrical Ø1", parallel key 1/4" x 1/4" x 1 1/4" BS46</i> |
| SH | Verzahnt Ø25,32, BS2059 (SAE 6 B) <i>Splined Ø25.32, BS2059 (SAE 6 B)</i> |
| K | Konisch 1:10 Ø28,56, Passfeder B5x5x14 DIN 6885 <i>Tapered 1:10 Ø28.56, parallel key B5x5x14 DIN 6885</i> |
| SA | Verzahnt Ø24,5, B 25x22 DIN 5482 <i>Splined Ø24.5, B 25x22 DIN 5482</i> |

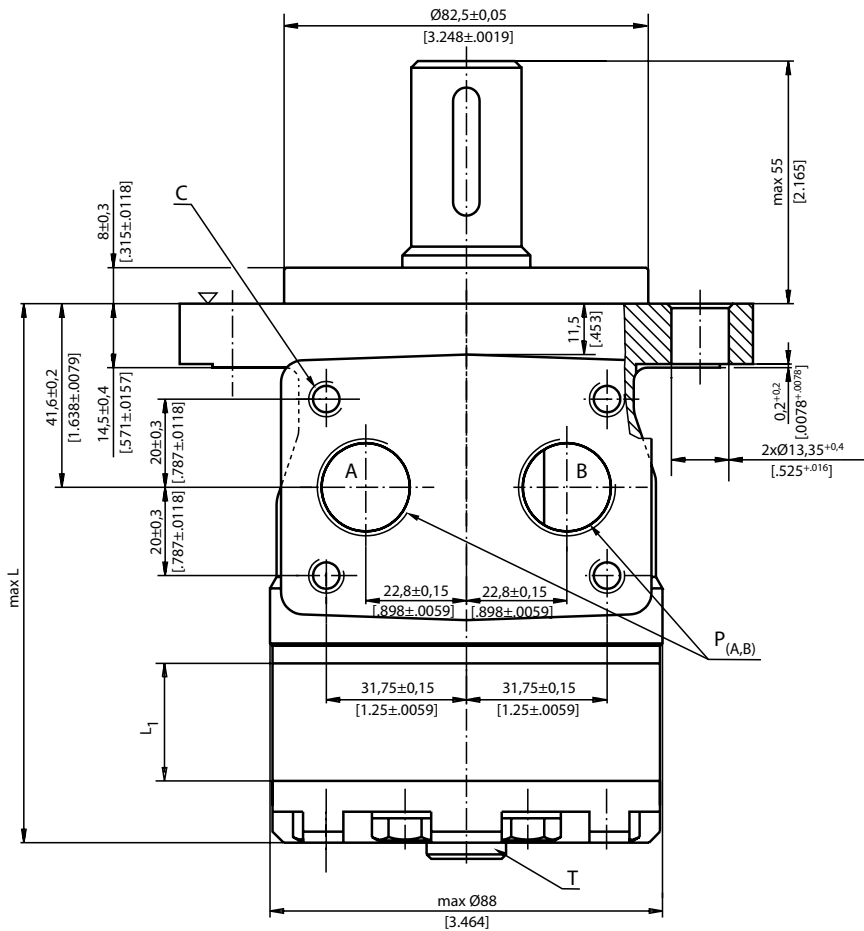
| | |
|----------------------|----------------------------------|
| Pos. 3 | Anschlüsse <i>Ports</i> |
| frei omit | BSPP (ISO 228) |
| M | Metrisch <i>metric</i> (ISO 262) |

| | |
|---------------|---|
| Pos. 4 | Sonderausführungen <i>Special features</i> |
| LL | Geringeres Lecköl <i>Low Leakage</i> |
| LSV | Ventil für geringe Drehzahlen <i>Low speed valve</i> |
| FR | Leichtlaufausführung <i>Free running</i> |
| R | Drehrichtung umgedreht <i>Reverse rotation</i> |
| P | Lackiert (Farbe auf Anfrage) <i>Paint (Colour on request)</i> |
| PC | Korrosionsschutzfarbe (Farbe auf Anfrage) <i>Corrosion protected paint (Colour on request)</i> |

| | |
|----------------------|--|
| Pos. 5 | Design Serie <i>Design series</i> |
| frei omit | Betriebsspezifisch <i>Factory specified</i> |

* Zulässige Momentabgabe darf nicht überschritten werden
Permissible output torque should not be exceeded

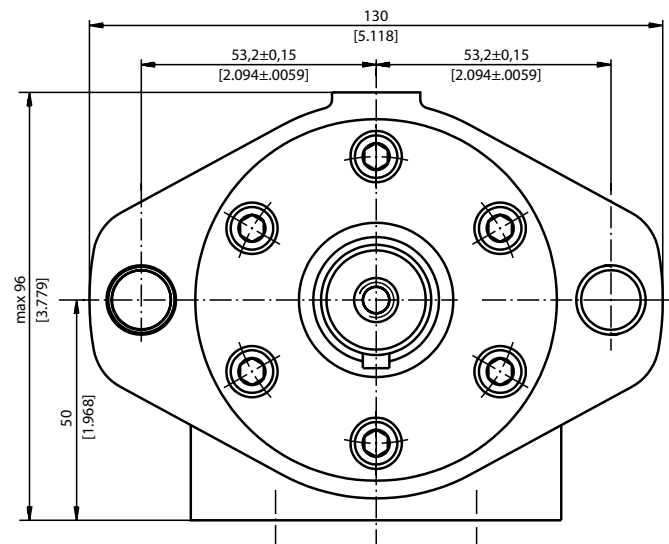
Pos. 1 Schluckvolumen *Displacement*



Einbaumaße mm [in.]
Dimensions mm [in.]

| Typ Type | L mm [in] | L ₁ mm [in] |
|--------------|-----------------|---------------------------|
| EPM-K 50 | 102,5 [4.04] | 6,67 [.26] |
| EPM-K 80 | 106,5 [4.19] | 10,67 [.42] |
| EPM-K 100 | 109,0 [4.29] | 13,33 [.52] |
| EPM-K 125 | 112,5 [4.43] | 16,67 [.66] |
| EPM-K 160 | 117,0 [4.61] | 21,33 [.84] |
| EPM-K 200 | 122,5 [4.82] | 26,67 [1.05] |
| EPM-K 250 | 129,0 [5.08] | 33,33 [1.31] |
| EPM-K 315 | 138,5 [5.45] | 42,67 [1.68] |
| EPM-K 400 | 149,0 [5.87] | 53,33 [2.10] |

- C: 4xM8 - 13mm [.51 in] tief *deep*
P (A,B): 2xG1/2 oder or 2xM22x1,5 - 15mm [.59 in] tief *deep*
T: G1/4 oder or M14x1,5 - 8,5 mm [.33 in] tief *deep*



Standarddrehung
mit Blick auf Abtriebswelle
Druck auf Anschluss **A** - rechtsdrehend
Druck auf Anschluss **B** - linksdrehend

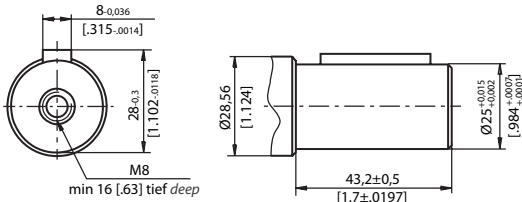
Standard rotation
Viewed from shaft end
Port **A** pressurized- right running
Port **B** pressurized- left running

Reversierdrehung (Pos. 4 - Option R)
mit Blick auf Abtriebswelle
Druck auf Anschluss **A** - linksdrehend
Druck auf Anschluss **B** - rechtsdrehend

Reversierdrehung (Pos. 4 - Option R)
Viewed from shaft end
Port **A** pressurized- left running
Port **B** pressurized- right running

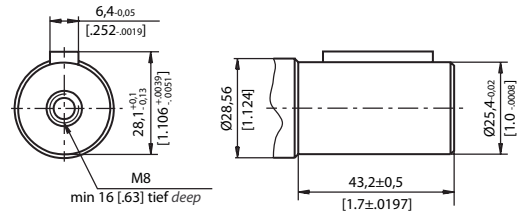
Pos. 2 Abtriebswelle *Shaft*

Option C: Zylindrisch Ø25 mm Option C: Cylindrical Ø25 mm



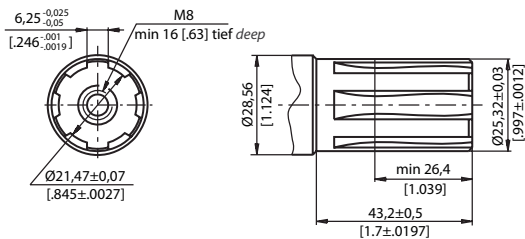
Max. Drehmomentabgabe 34 daNm [3010 lb-in]
Max. Torque 34 daNm [3010 lb-in]

Option CO: Zylindrisch Ø1" Option C: Cylindrical Ø1"



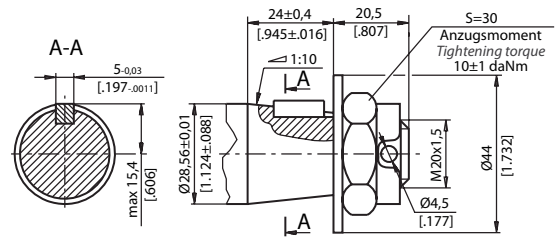
Max. Drehmomentabgabe 34 daNm [3010 lb-in]
Max. Torque 34 daNm [3010 lb-in]

Option SH: Verzahnt BS 2059 Option SH: Splined BS 2059



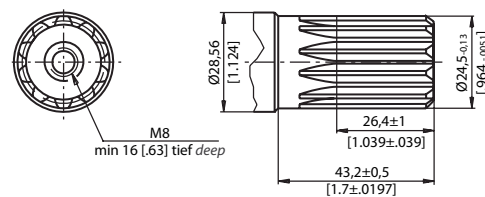
Max. Drehmomentabgabe 40 daNm [3540 lb-in]
Max. Torque 40 daNm [3540 lb-in]

Option K: Konisch 1:10 Option K: Tapered 1:10



Max. Drehmomentabgabe 40 daNm [3540 lb-in]
Max. Torque 40 daNm [3540 lb-in]

Option SA: Verzahnt B 25x22 DIN 5482 Option SA: Splined B 25x22 DIN 5482



Max. Drehmomentabgabe 40 daNm [3540 lb-in]
Max. Torque 40 daNm [3540 lb-in]



Pos. 4 Sonderausführungen *Special features*

Option LL: Geringes Lecköl

Option LL: Low Leakage

Die Hydraulikmotoren der LL Reihe sind für den Einsatz im ganzen Anwendungsbereich (Druckabfall und Drehzahl) entworfen. Sie haben jedoch erheblich geringere Verluste in den Verdrängungsräumen. Diese Motoren sind geeignet für hydraulische Systeme bei denen die Motoren in Reihe geschaltet sind und geringe Leckölverluste gefordert sind.

LL series hydraulic motors are designed to operate at the whole standard range of working conditions (pressure drop and frequency of rotation), but with considerable decreased volumetric losses in the drain ports. These motors are suitable for hydraulic system with series-connected motors with demands for low leakage.

Option LSV: Ventil für geringe Drehzahlen

Option LSV: Low speed valve

Option LSV optimiert den Motor für den Betrieb bei kleinen Drehzahlen. LSV Motoren sind für den Betrieb mit standardmäßigen Höchstwerten des Druckabfalls und mit stoß freiem Betrieb bei niedrigen Drehzahlen (bis zu 200 U/min) ausgelegt. Ihre höchste Effektivität erreichen diese Motoren bei 20-50 U/min. Motoren mit diesem Ventil haben einen höheren Anlaufdruck. Der Druckabfall sollte größer als 40 bar [580 PSI] sein.

LSV option optimizes the motor for low speed performance. Motors with this valving provide very low speed while maintaining high torque. They are designed to run continuously at low speed (up to 200 RPM) at normal pressure drop and reduced flow. Optimal run is guaranteed at frequency of rotation from 20 to 50 RPM. Motors with this valving have an increased starting pressure and are not recommended for using at pressure drop less than 40 bar [580 PSI].

Option FR: Leichtlaufausführung

Option FR: Free running

FR Motoren haben größere Abstände zwischen den rotierenden Teilen im Planetensatz. Dadurch lässt sich die Abtriebswelle mit weniger mechanischem Widerstand drehen. Der größere Abstand verbessert auch die Schmierung der Abnutzungsflächen im Planetensatz. Weitere Vorteile ist eine längere Lebensdauer bei hohen Drehzahlen (größer 300 U/min) und geringem Druckabfall. Der volumetrische Wirkungsgrad kann bei diesen Motoren etwas geringer ausfallen.

FR motors are with increased clearance at all friction parts, allowing the shaft to rotate more freely with less mechanical drag. The increased clearance also improves lubrication of the wear surfaces of gear set and friction parts. Additional advantages of FR versions are prolonging of the life of the hydraulic motors at high speeds, as well as the possibility to use them in systems with wide variation of loading. FR series motors are designed to operate with high speed (over than 300 RPM) and low pressure drop. Volumetric efficiency may be reduced slightly.

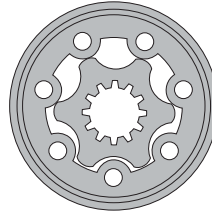
Weitere Technische Informationen ***Furter technical informations***

Angaben zu Wellenbelastungen, Wellendichtungsdrücken und Leistungsdiagramme entnehmen Sie bitte unserem EPM-Katalog.

For informations about permissible shaft loads, permissible shaft seal pressure and function diagrams, please check our EPM-catalogue.

Planetenmotor EPML

Planetarymotor EPML



Anwendung

- Förderbänder
- Fördertechnik für Roboter
- Textilmaschinen
- Werkzeugmaschinen
- Nahrungsmittelindustrie
- Landmaschinen
- u.a.

Bauweise und Ausführungen

- Modell: Längsschieberventil, Planetensatz
- Flansch: SAE A oder Magnetoflansch
- Anschlüsse: Seitlich, metrisches oder BSPP Gewinde
- Lagerung: Konisches Wälzlager
- Wellen: Zylindrisch, konisch oder verzahnt
- Sonderausführungen

Application

- Conveyors
- Feeding mechanism of robots and manipulators
- Textile machines
- Machine tools
- Food industries
- Agriculture machines
- etc.

Construction and options

- Model: Spool valve, gerotor
- Mounting: SAE A or Magnetoflange
- Ports: Side ports, metric or BSPP threaded ports
- Bearing: Antifriction conical bearing
- Shafts: Cylindrical, tapered or splined
- Other special features

Übersicht Overview

| | | | | | |
|----------------------|-------------------------|--------------------|---------|------------------------|---|
| Max. Schluckvolumen | Max. Displacement | cm ³ /U | ccm/rev | [in ³ /rev] | 49,5 - 396,0 [3.02 - 24.16] |
| Max. Drehzahl | Max. Speed | U/min | RPM | | 1515 |
| Max. Drehmoment | Max. Torque | daNm | | [in-lb] | 59 [5222] |
| Max. Leistungsabgabe | Max. Output | kW | | [HP] | 17,5 [23.5] |
| Max. Druckgefälle | Max. Pressure drop | bar | | [PSI] | 175 [2540] |
| Max. Ölstrom | Max. Oil flow | l/min | lpm | [GPM] | 75 [20] |
| Min. Drehzahl | Min. Speed | U/min | RPM | | 10 |
| Hydrauliköl | Pressure fluid | | | | HLP (DIN 51524) oder or HM (ISO 6743/4) |
| Öltemperatur | Temperature range | °C | | [°F] | -40 - 140 [-40 - 284] |
| Optimalviskosität | Optimal viscosity range | mm ² /s | | [SUS] | 20 - 75 [98 - 347] |
| Filtrierung | Filtration | | | | ISO Code 20/16 (min. empfohlene Filtrierung recommended filtration 25 µm) |

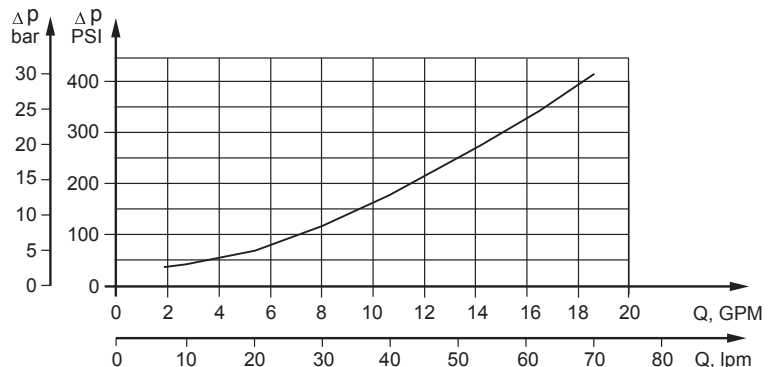
Ölstrom in der Leckölleitung

Oil flow in drain line

| Druckgefälle Pressure drop bar [PSI] | Viskosität Viscosity mm ² /s [SUS] | Ölstrom Oilflow l/min 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] |

Druckverlust

Pressure losses



Technische Daten *Technical datas*

| Typ <i>Type</i> | EPML 50 | EPML 80 | EPML 100 | EPML 125 | EPML 160 | EPML 200 | EPML 250 | EPML 315 | EPML 400 | |
|--|---|----------------|----------------|-----------------|-----------------|------------------|------------------|------------------|------------------|----------------|
| Schluckvolumen <i>Displacement cm³/U ccm/rev [in³/rev]</i> | 49,5 [3.02] | 79,2 [4.83] | 99,0 [6.04] | 123,8 [7.55] | 158,4 [9.66] | 198,0 [12.10] | 247,5 [15.10] | 316,8 [19.30] | 396,0 [24.16] | |
| Max. Drehzahl <i>Max. Speed</i> U/min <i>RPM</i> | Dauerbetrieb <i>Continuous working</i> | 1210 | 755 | 605 | 485 | 378 | 303 | 242 | 190 | 150 |
| | Intermittierend* <i>Intermittent *</i> | 1515 | 945 | 755 | 605 | 472 | 378 | 303 | 236 | 189 |
| Max. Drehmoment <i>Max. Torque</i> daNm [lb-in] | Dauerbetrieb <i>Continuous working</i> | 9,4 [832] | 15,1 [1336] | 19,3 [1708] | 23,7 [2100] | 31,3 [2770] | 36,6 [3240] | 47,0 [4160] | 48,6 [4300] | 50,0 [4425] |
| | Intermittierend* <i>Intermittent *</i> | 11,9 [1054] | 19,5 [1725] | 23,7 [2097] | 29,8 [2637] | 37,8 [3345] | 45,6 [4035] | 58,3 [5160] | 56,0 [4956] | 59,0 [5222] |
| | Spitze ** <i>Peak **</i> | 14,0 [1240] | 22,0 [1947] | 27,0 [2390] | 36,5 [3230] | 42,0 [3717] | 53,0 [4700] | 67,0 [5930] | 85,0 [7523] | 85,4 [7560] |
| Max. Leistungsabgabe <i>Max. Output</i> kW [HP] | Dauerbetrieb <i>Continuous working</i> | 9,9 [13.3] | 9,9 [13.3] | 9,9 [13.3] | 9,9 [13.3] | 11,7 [15.7] | 10,3 [13.8] | 9,8 [13.1] | 7,6 [10.2] | 6,6 [8.9] |
| | Intermittierend* <i>Intermittent *</i> | 12,5 [16.8] | 12,5 [16.8] | 12,5 [16.8] | 12,5 [16.8] | 12,5 [16.8] | 15,5 [20.8] | 17,5 [23.5] | 8,2 [11.0] | 9,2 [12.3] |
| Max. Druckgefälle <i>Max. Pressure drop</i> bar [PSI] | Dauerbetrieb <i>Continuous working</i> | 140 [2030] | 140 [2030] | 140 [2030] | 140 [2030] | 140 [2030] | 140 [2030] | 140 [2030] | 120 [1300] | 95 [1015] |
| | Intermittierend* <i>Intermittent *</i> | 175 [2540] | 175 [2540] | 175 [2540] | 175 [2540] | 175 [2540] | 175 [2540] | 175 [2540] | 140 [2030] | 115 [1665] |
| | Spitze ** <i>Peak **</i> | 225 [3260] | 225 [3260] | 225 [3260] | 225 [3260] | 225 [3260] | 225 [3260] | 225 [3260] | 225 [3260] | 180 [2610] |
| Max. Ölstrom <i>Max. Oil flow</i> l/min <i>lpm</i> [GPM] | Dauerbetrieb <i>Continuous working</i> | 60 [16] | 60 [16] | 60 [16] | 60 [16] | 60 [16] | 60 [16] | 60 [16] | 60 [16] | 60 [16] |
| | Intermittierend* <i>Intermittent *</i> | 75 [20] | 75 [20] | 75 [20] | 75 [20] | 75 [20] | 75 [20] | 75 [20] | 75 [20] | 75 [20] |
| Max. Eingangsdruck <i>Max. Inlet pressure</i> bar [PSI] | Dauerbetrieb <i>Continuous working</i> | 175 [2540] | 175 [2540] | 175 [2540] | 175 [2540] | 175 [2540] | 175 [2540] | 175 [2540] | 175 [2540] | 175 [2540] |
| | Intermittierend* <i>Intermittent *</i> | 200 [2900] | 200 [2900] | 200 [2900] | 200 [2900] | 200 [2900] | 200 [2900] | 200 [2900] | 200 [2900] | 200 [2900] |
| | Spitze ** <i>Peak **</i> | 225 [3260] | 225 [3260] | 225 [3260] | 225 [3260] | 225 [3260] | 225 [3260] | 225 [3260] | 225 [3260] | 225 [3260] |
| Max. Rücklaufdruck (ohne Leck- ölleitung) oder max. Druck in der Leckölleitung <i>Max. return pressure without drain line</i> or <i>max. pressure in drain line</i> bar [PSI] | Dauerb. <i>Continuous</i> 0-100 U/min <i>RPM</i> | 100 [1450] | 100 [1450] | 100 [1450] | 100 [1450] | 100 [1450] | 100 [1450] | 100 [1450] | 100 [1450] | 100 [1450] |
| | Dauerb. <i>Continuous</i> 100-300 U/min <i>RPM</i> | 50 [725] | 50 [725] | 50 [725] | 50 [725] | 50 [725] | 50 [725] | 50 [725] | 50 [725] | 50 [725] |
| | Dauerb. <i>Continuous</i> 300-600 U/min <i>RPM</i> | 25 [365] | 25 [365] | 25 [365] | 25 [365] | 25 [365] | 25 [365] | 25 [365] | 25 [365] | 25 [365] |
| | Dauerb. <i>Continuous</i> > 600 U/min <i>RPM</i> | 15 [220] | 15 [220] | 15 [220] | 15 [220] | 15 [220] | 15 [220] | 15 [220] | 15 [220] | 15 [220] |
| | Int.* <i>Int. *</i> 0-max. U/min <i>RPM</i> | 100 [1450] | 100 [1450] | 100 [1450] | 100 [1450] | 100 [1450] | 100 [1450] | 100 [1450] | 100 [1450] | 100 [1450] |
| Max. Rücklaufdruck mit Leckölleit- ung <i>Max. Inlet pressure with drain line</i> bar [PSI] | Dauerbetrieb <i>Continuous working</i> | 175 [2540] | 175 [2540] | 175 [2540] | 175 [2540] | 175 [2540] | 175 [2540] | 175 [2540] | 175 [2540] | 175 [2540] |
| | Intermittierend* <i>Intermittent *</i> | 200 [2900] | 200 [2900] | 200 [2900] | 200 [2900] | 200 [2900] | 200 [2900] | 200 [2900] | 200 [2900] | 200 [2900] |
| | Spitze ** <i>Peak **</i> | 225 [3260] | 225 [3260] | 225 [3260] | 225 [3260] | 225 [3260] | 225 [3260] | 225 [3260] | 225 [3260] | 225 [3260] |
| Max. Anlaufdruck mit unbelasteter Welle <i>Max. starting pressure with unloaded shaft</i> | bar [PSI] | 10 [145] | 10 [145] | 10 [145] | 9 [131] | 8 [116] | 7 [100] | 6 [87] | 5 [73] | 5 [73] |
| Min. Anlaufmoment <i>Min. starting torque</i> | daNm [lb-in] | 7,7 [681] | 13,0 [1150] | 16,8 [1487] | 21,0 [1860] | 28,0 [2478] | 32,2 [2850] | 41,4 [3665] | 43,0 [3805] | 44,0 [3900] |
| Min. Drehzahl *** <i>Min speed ***</i> | U/min <i>RPM</i> | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| Gewicht <i>Weight</i> | kg [lb] | 8,4 [18.5] | 8,5 [18.7] | 8,8 [19.4] | 8,9 [19.6] | 9,1 [20.0] | 9,5 [20.9] | 10,0 [22.0] | 10,7 [23.6] | 11,4 [25.1] |

* Intermittierend: Betrieb max. 10% pro Minute

** Spitze: max. 1% pro Minute

*** Für Drehzahlen kleiner der min. Drehzahl sprechen Sie uns bitte an.

- Intermittierende Druckgefälle und Ölströme dürfen nicht gleichzeitig erreicht werden.

- Minimale Viskosität 13 mm²/s [70 SUS] bei 50° C [122° F]

- Maximale Öltemperatur während des Betriebs 82° C [180° F]

- Die Lebensdauer der Motoren kann erhöht werden, wenn die Antriebswelle 10-15 Minuten vor voller Belastung frei läuft.

* *Intermittent: Working max. 10% per minute*

** *Peak: max. 1% per minute*

*** *For speeds lower than given, please consult us.*

- *Intermittent speed and pressure should not occur simultaneously.*

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

- *Recommended maximum system operating temperature is 82° C [180° F]*

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

Bestellcode EPML Ordercode EPML

| | | | | | | |
|------|---|---|---|---|---|---|
| EPML | 1 | 2 | 3 | 4 | 5 | 6 |
|------|---|---|---|---|---|---|

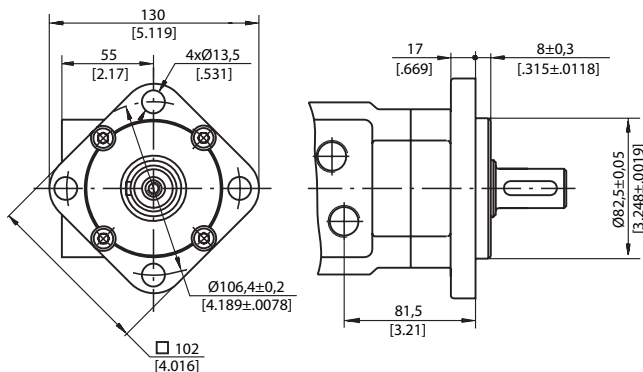
| | |
|------------------|--|
| Pos. 1 | Montageflansch <i>Mounting flange</i> |
| frei omit | SAE A-4, vier Befestigungslöcher <i>SAE A-4, four holes</i> |
| F | Magnetoflansch, vier Befestigungslöcher <i>Magnetoflange, vour holes</i> |
| Pos. 2 | Schluckvolumen <i>Displacement</i> |
| 50 | 49,5 cm ³ /U <i>ccm/rev</i> [3.02 in ³ /rev] |
| 80 | 79,2 cm ³ /U <i>ccm/rev</i> [4.83 in ³ /rev] |
| 100 | 99,0 cm ³ /U <i>ccm/rev</i> [6.04 in ³ /rev] |
| 125 | 123,8 cm ³ /U <i>ccm/rev</i> [7.55 in ³ /rev] |
| 160 | 158,4 cm ³ /U <i>ccm/rev</i> [9.66 in ³ /rev] |
| 200 | 198,0 cm ³ /U <i>ccm/rev</i> [12.10 in ³ /rev] |
| 250 | 247,5 cm ³ /U <i>ccm/rev</i> [15.10 in ³ /rev] |
| 315 | 316,8 cm ³ /U <i>ccm/rev</i> [19.30 in ³ /rev] |
| 400 | 396,0 cm ³ /U <i>ccm/rev</i> [24.16 in ³ /rev] |
| Pos. 3 | Abtriebswelle * <i>Shaft *</i> |
| C | Zylindrisch Ø25, Passfeder A8x7x30 DIN 6885 <i>Cylindrical Ø25, parallel key A8x7x30 DIN 6885</i> |
| CO | Zylindrisch Ø1", Passfeder 1/4" x 1/4" x 1 1/4" BS46 <i>Cylindrical Ø1", parallel key 1/4" x 1/4" x 1 1/4" BS46</i> |
| SH | Verzahnt Ø25,3, BS2059 (SAE 6 B) <i>Splined Ø25.3, BS2059 (SAE 6 B)</i> |

| | |
|------------------|--|
| SA | Verzahnt Ø24, B 25x22 DIN 5482 <i>Splined Ø24, B 25x22 DIN 5482</i> |
| CB | Zylindrisch Ø32, Passfeder A10x8x40 DIN 6885 <i>Cylindrical Ø32, parallel key A10x8x40 DIN 6885</i> |
| HB | Verzahnt Ø1 1/4", 14 Zähne ANSI B92.1-1976 <i>Splined Ø1 1/4", 14T ANSI B92.1-1976</i> |
| KB | Konisch 1:10 Ø35, Scheibenfeder 6x9 DIN 6888 <i>Tapered 1:10 Ø35, woodruff key 6x9 DIN 6888</i> |
| Pos. 4 | Anschlüsse <i>Ports</i> |
| frei omit | BSP (ISO 228) |
| M | Metrisch <i>metric</i> (ISO 262) |
| Pos. 5 | Sonderausführungen <i>Special features</i> |
| LL | Geringeres Lecköl <i>Low Leakage</i> |
| LSV | Ventil für geringe Drehzahlen <i>Low speed valve</i> |
| FR | Leichtlaufausführung <i>Free running</i> |
| R | Drehrichtung umgedreht <i>Reverse rotation</i> |
| P | Lackiert (Farbe auf Anfrage) <i>Paint (Colour on request)</i> |
| PC | Korrosionsschutzfarbe (Farbe auf Anfrage) <i>Corrosion protected paint (Colour on request)</i> |
| Pos. 6 | Design Serie <i>Design series</i> |
| frei omit | Betriebsspezifisch <i>Factory specified</i> |

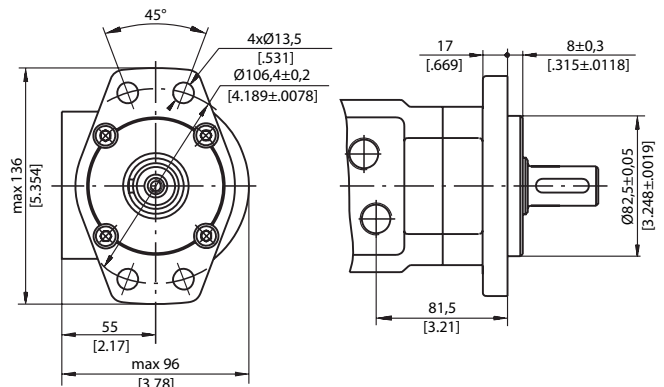
* Zulässige Momentabgabe darf nicht überschritten werden
Permissible output torque should not be exceeded

Pos. 1 Montageflansch *Mounting flange*

Standard: SAE A-4, vier Befestigungslöcher
Standard: SAE A-4, four holes

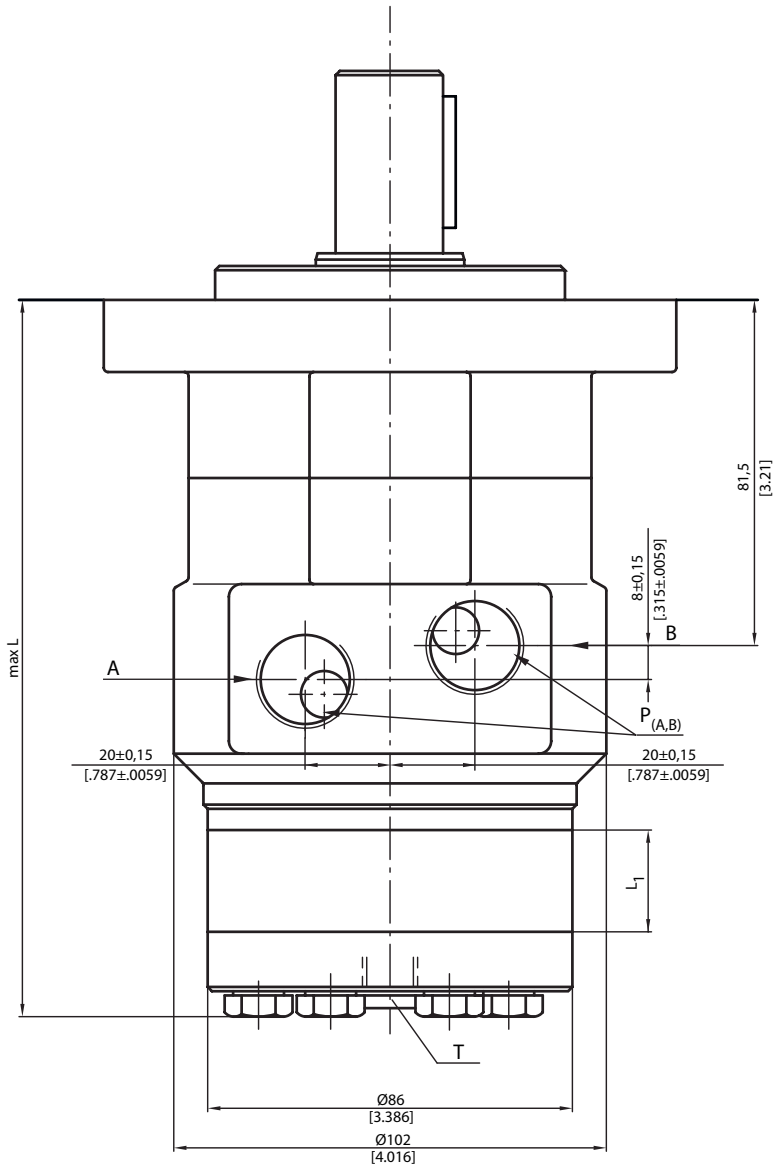


Option F: Magnetoflansch, vier Befestigungslöcher
Option F: Magnetoflange, four holes



Pos. 2 Schluckvolumen *Displacement*

Einbaumaße EPML mm [in.]
 Dimensions EPML mm [in.]



| Typ Type | L mm [in.] | L ₁ mm [in.] |
|-------------|---------------|----------------------------|
| EPML 50 | 148 [5.83] | 6,67 [.26] |
| EPML 80 | 152 [5.98] | 10,67 [.42] |
| EPML 100 | 155 [6.10] | 13,33 [.52] |
| EPML 125 | 158 [6.22] | 16,67 [.66] |
| EPML 160 | 163 [6.42] | 21,33 [.84] |
| EPML 200 | 168 [6.61] | 26,67 [1.05] |
| EPML 250 | 175 [6.89] | 33,33 [1.31] |
| EPML 315 | 184 [7.24] | 42,67 [1.68] |
| EPML 400 | 195 [7.68] | 53,33 [2.10] |

P (A,B): 2xG1/2 oder or 2xM22x1,5 - 15mm [.59 in] tief deep
 T: G1/4 oder or M14x1,5 - 12 mm [.47 in] tief deep

Standarddrehung

mit Blick auf Abtriebswelle
 Druck auf Anschluss **A** - rechtsdrehend
 Druck auf Anschluss **B** - linksdrehend

Reversierdrehung (Pos. 5 - Option R)

mit Blick auf Abtriebswelle
 Druck auf Anschluss **A** - linksdrehend
 Druck auf Anschluss **B** - rechtsdrehend

Standard rotation

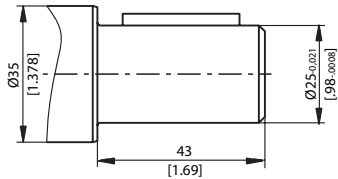
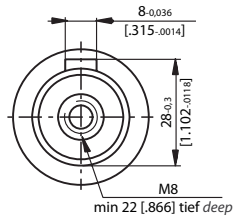
Viewed from shaft end
 Port **A** pressurized- right running
 Port **B** pressurized- left running

Reversierdrehung (Pos. 5 - Option R)

Viewed from shaft end
 Port **A** pressurized- left running
 Port **B** pressurized- right running

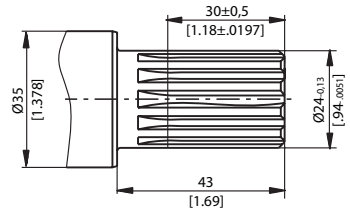
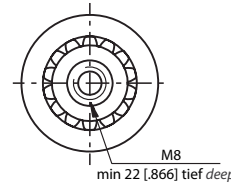
Pos. 3 Abtriebswelle Shaft

Option C: Zylindrisch Ø25 mm Option C: Cylindrical Ø25 mm



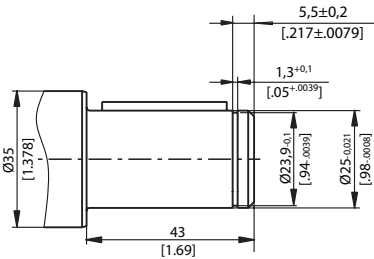
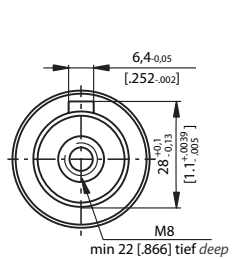
Max. Drehmomentabgabe 34 daNm [3010 lb-in]
Max. Torque 34 daNm [3010 lb-in]

Option SA: Verzahnt B 25x22 DIN 5482 Option SA: Splined B 25x22 DIN 5482



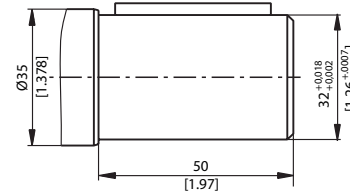
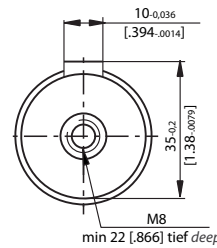
Max. Drehmomentabgabe 40 daNm [3540 lb-in]
Max. Torque 40 daNm [3540 lb-in]

Option CO: Zylindrisch Ø1" Option CO: Cylindrical Ø1"



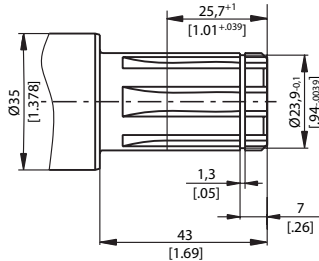
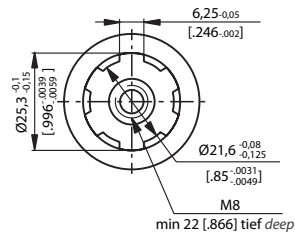
Max. Drehmomentabgabe 34 daNm [3010 lb-in]
Max. Torque 34 daNm [3010 lb-in]

Option CB: Zylindrisch Ø32 mm Option CB: Cylindrical Ø32 mm



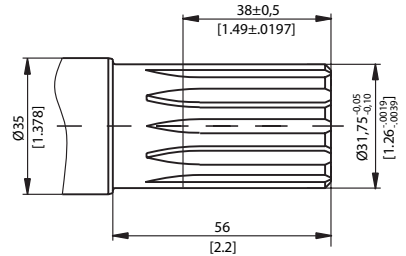
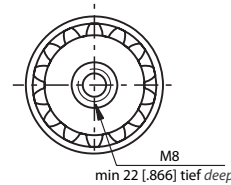
Max. Drehmomentabgabe 77 daNm [6815 lb-in]
Max. Torque 77 daNm [6815 lb-in]

Option SH: Verzahnt BS 2059 Option SH: Splined BS 2059



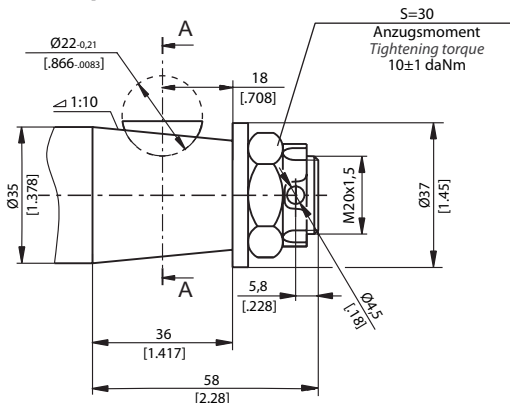
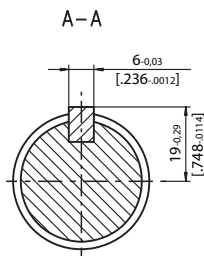
Max. Drehmomentabgabe 40 daNm [3540 lb-in]
Max. Torque 40 daNm [3540 lb-in]

Option HB: Verzahnt ANSI B92.1-1976 Option HB: Splined ANSI B92.1-1976



Max. Drehmomentabgabe 95 daNm [8410 lb-in]
Max. Torque 95 daNm [8410 lb-in]

Option KB: Konisch 1:10 Option KB: Tapered 1:10



Max. Drehmomentabgabe 95 daNm [8410 lb-in]
Max. Torque 95 daNm [8410 lb-in]



Pos. 5 Sonderausführungen *Special features*

Option LL: Geringes Lecköl

Option LL: *Low Leakage*

Die Hydraulikmotoren der LL Reihe sind für den Einsatz im ganzen Anwendungsbereich (Druckabfall und Drehzahl) entworfen. Sie haben jedoch erheblich geringere Verluste in den Verdrängungsräumen. Diese Motoren sind geeignet für hydraulische Systeme bei denen die Motoren in Reihe geschaltet sind und geringe Leckölverluste gefordert sind.

LL series hydraulic motors are designed to operate at the whole standard range of working conditions (pressure drop and frequency of rotation), but with considerable decreased volumetric losses in the drain ports. These motors are suitable for hydraulic system with series-connected motors with demands for low leakage.

Option LSV: Ventil für geringe Drehzahlen

Option LSV: *Low speed valve*

Option LSV optimiert den Motor für den Betrieb bei kleinen Drehzahlen. LSV Motoren sind für den Betrieb mit standardmäßigen Höchstwerten des Druckabfalls und mit stoß freiem Betrieb bei niedrigen Drehzahlen (bis zu 200 U/min) ausgelegt. Ihre höchste Effektivität erreichen diese Motoren bei 20-50 U/min. Motoren mit diesem Ventil haben einen höheren Anlaufdruck. Der Druckabfall sollte größer als 40 bar [580 PSI] sein.

LSV option optimizes the motor for low speed performance. Motors with this valving provide very low speed while maintaining high torque. They are designed to run continuously at low speed (up to 200 RPM) at normal pressure drop and reduced flow. Optimal run is guaranteed at frequency of rotation from 20 to 50 RPM. Motors with this valving have an increased starting pressure and are not recommended for using at pressure drop less than 40 bar [580 PSI].

Option FR: Leichtlaufausführung

Option FR: *Free running*

FR Motoren haben größere Abstände zwischen den rotierenden Teilen im Planetensatz. Dadurch lässt sich die Abtriebswelle mit weniger mechanischem Widerstand drehen. Der größere Abstand verbessert auch die Schmierung der Abnutzungsflächen im Planetensatz. Weitere Vorteile ist eine längere Lebensdauer bei hohen Drehzahlen (größer 300 U/min) und geringem Druckabfall. Der volumetrische Wirkungsgrad kann bei diesen Motoren etwas geringer ausfallen.

FR motors are with increased clearance at all friction parts, allowing the shaft to rotate more freely with less mechanical drag. The increased clearance also improves lubrication of the wear surfaces of gear set and friction parts. Additional advantages of FR versions are prolonging of the life of the hydraulic motors at high speeds, as well as the possibility to use them in systems with wide variation of loading. FR series motors are designed to operate with high speed (over than 300 RPM) and low pressure drop. Volumetric efficiency may be reduced slightly.

Weitere Technische Informationen

Furter technical informations

Angaben zu Wellendichtungsdrücken und Leistungsdiagramme entnehmen Sie bitte unserem EPM-Katalog.

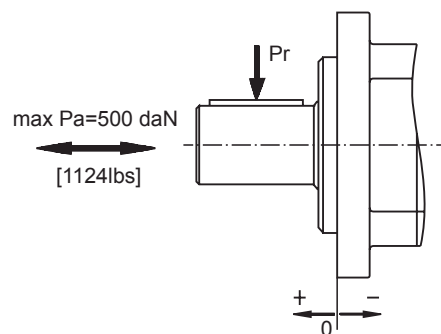
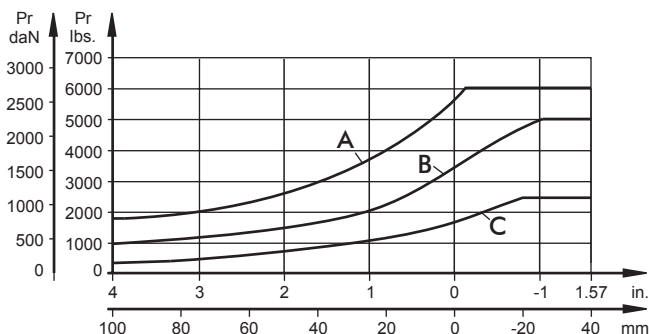
For informations about permissible shaft seal pressure and function diagrams, please check our EPM-catalogue.

Zulässige Wellenbelastung für EPML

Permissible shaft load for EPML

Die Kurven gelten für eine durchschnittliche Lebensdauer der Lager von 1600 Stunden bei 200 U/min.

The curves are valid for an average bearings life of 1600 hours at 200 RPM.



- A** Max statische Belastung
Max. static load
- B** Max. radiale Belastung bei einer axialen Belastung von Pa = 200 daN [450 lbs]
Max. radial load at an axial load of Pa = 200 daN [450 lbs]
- C** Max. radiale Belastung bei einer axialen Belastung von Pa = 500 daN [1124 lbs]
Max. radial load at an axial load of Pa = 500 daN [1124 lbs]