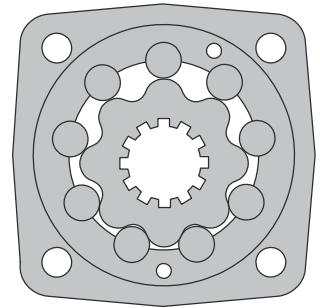
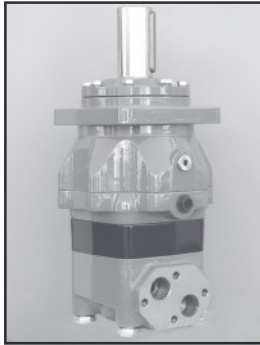


# HYDRAULIC MOTOR-BRAKE MT/B

## APPLICATION

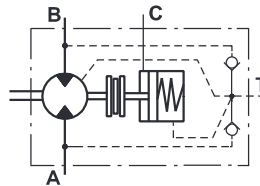
- » Conveyors
- » Metal working machines
- » Agricultural machines
- » Road building machines
- » Mining machinery
- » Food industries
- » Special vehicles
- » Plastic and rubber machinery etc.



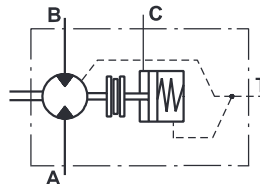
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With check valves



Without check valves "1"



## OPTIONS

- » Model - Disc valve, roll-gerotor;
- » Fully integrated friction disk brake;
- » Side ports;
- » Shafts - straight, splined and tapered;
- » BSPP ports
- » Other special features

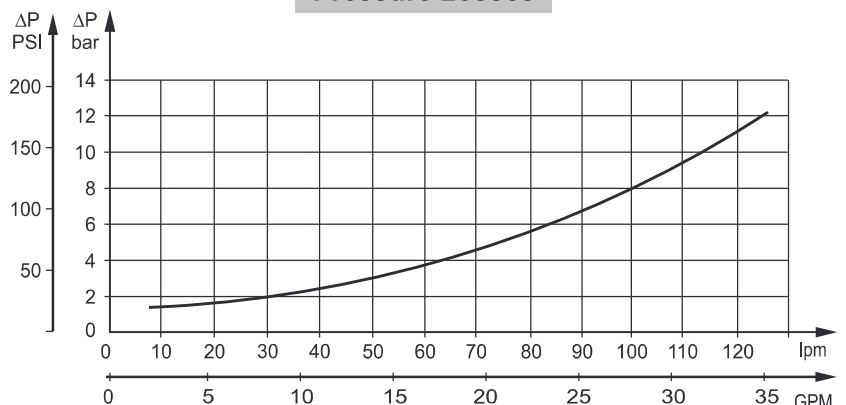
## GENERAL

<b>Max. Displacement,</b> cm <sup>3</sup> /rev [in <sup>3</sup> /rev]	724,3 [44.2]
<b>Max. Speed,</b> [RPM]	780
<b>Max. Torque,</b> daNm [lb-in]	cont.: 130 [11505] int.: 148 [13100]
<b>Max. Output,</b> kW [HP]	40 [54]
<b>Max. Pressure Drop,</b> bar [PSI]	cont.: 200 [2900] int.: 240 [3450]
<b>Max. Oil Flow,</b> lpm [GPM]	150 [40]
<b>Min. Speed,</b> [RPM]	5
<b>Permissible Shaft Loads,</b> daN [lbs]	P <sub>a</sub> =1000 [2248]
<b>Pressure fluid</b>	Mineral based- HLP(DIN 51524) or HM(ISO 6743/4)
<b>Temperature range,</b> °C [°F]	-40÷140 [-40÷284]
<b>Optimal Viscosity range,</b> mm <sup>2</sup> /s [SUS]	20÷75 [98÷347]
<b>Filtration</b>	ISO code 20/16 (Min. recommended fluid filtration of 25 microns)

### Oil flow in drain line

Pressure drop bar [PSI]	Viscosity mm <sup>2</sup> /s [SUS]	Oil flow in drain line lpm [GPM]
140 [2030]	20 [98]	2,5 [.66]
	35 [164]	1,5 [.39]
210 [3045]	20 [98]	5 [1.32]
	35 [164]	3 [.79]

### Pressure Losses



**SPECIFICATION DATA**

Type		MT/B 160	MT/B 200	MT/B 250	MT/B 315	MT/B 400	MT/B 500	MT/B 630	MT/B 725
Displacement, cm <sup>3</sup> /rev [in <sup>3</sup> /rev]		161,1	201,4	251,8	326,3	410,9	523,6	631,2	724,3
		[9.83]	[12.29]	[15.36]	[19.90]	[25.06]	[31.95]	[38.5]	[44.2]
Max. Speed, [RPM]	Cont.	625	625	500	380	305	240	197	172
	Int.*	780	750	600	460	365	285	234	209
Max. Torque daNm [lb-in]	Cont.	47 [4160]	59 [5220]	73 [6460]	95 [8410]	108 [9560]	122 [10800]	130 [11505]	127 [11240]
	Int.*	56 [4960]	71 [6285]	88 [7790]	114 [10090]	126 [11150]	137 [12125]	148 [13100]	147 [13010]
Max. Output kW [HP]	Cont.	26,5 [36]	33,5 [45]	33,5 [45]	33,5 [45]	30 [40]	26,5 [36]	24,3 [33]	20,2 [27]
	Int.*	32 [43]	40 [54]	40 [54]	40 [54]	35 [45]	30 [40]	27,5 [37]	26,8 [36]
Max. Pressure Drop bar [PSI]	Cont.	200 [2900]	200 [2900]	200 [2900]	200 [2900]	180 [2600]	160 [2300]	140 [2030]	120 [1740]
	Int.*	240 [3450]	240 [3450]	240 [3450]	240 [3450]	210 [3050]	180 [2600]	160 [2300]	140 [2030]
Max. Oil Flow lpm [GPM]	Cont.	100 [26.5]	125 [33]	125 [33]	125 [33]	125 [33]	125 [33]	125 [33]	125 [33]
	Int.*	125 [33]	150 [40]	150 [40]	150 [40]	150 [40]	150 [40]	150 [40]	150 [40]
Max. Inlet Pressure bar [PSI]	Cont.	210 [3050]	210 [3050]	210 [3050]	210 [3050]	210 [3050]	210 [3050]	210 [3050]	210 [3050]
	Int.*	250 [3600]	250 [3600]	250 [3600]	250 [3600]	250 [3600]	250 [3600]	250 [3600]	250 [3600]
Max. Return Pressure with Drain Line, bar [PSI]	Cont.	140 [2030]	140 [2030]	140 [2030]	140 [2030]	140 [2030]	140 [2030]	140 [2030]	140 [2030]
	Int.*	175 [2540]	175 [2540]	175 [2540]	175 [2540]	175 [2540]	175 [2540]	175 [2540]	175 [2540]
Max. Starting Pressure with Unloaded Shaft, bar [PSI]		10 [150]	10 [150]	10 [150]	10 [150]	10 [150]	10 [150]	10 [150]	10 [150]
Min. Starting Torque daNm [lb-in]	At max. pressure drop Cont.	34 [3010]	43 [3800]	53 [4690]	74 [6550]	84 [7435]	95 [8410]	95 [8410]	95 [8410]
	At max. pressure drop Int.*	41 [3630]	52 [4600]	63 [5580]	89 [7880]	97 [8585]	106 [9380]	110 [9735]	115 [10180]
Min. Speed**, [RPM]		10	9	8	7	6	5	5	5
Static Torque of Brake, daNm [lb-in]		143 [12657]							
Min. Brake Release Pressure***, bar [PSI]		32-35 [464-507]							
Max. Opening Pressure, bar [PSI]		280 [4060]							
Max. Pressure in Drain Line, bar [PSI]		5 [73]							
Weight, kg [lb]		27,5 [60.6]	28 [61.7]	28,5 [62.8]	29,5 [65]	30,5 [67.2]	31,5 [69.4]	31 [68.3]	32 [70.5]

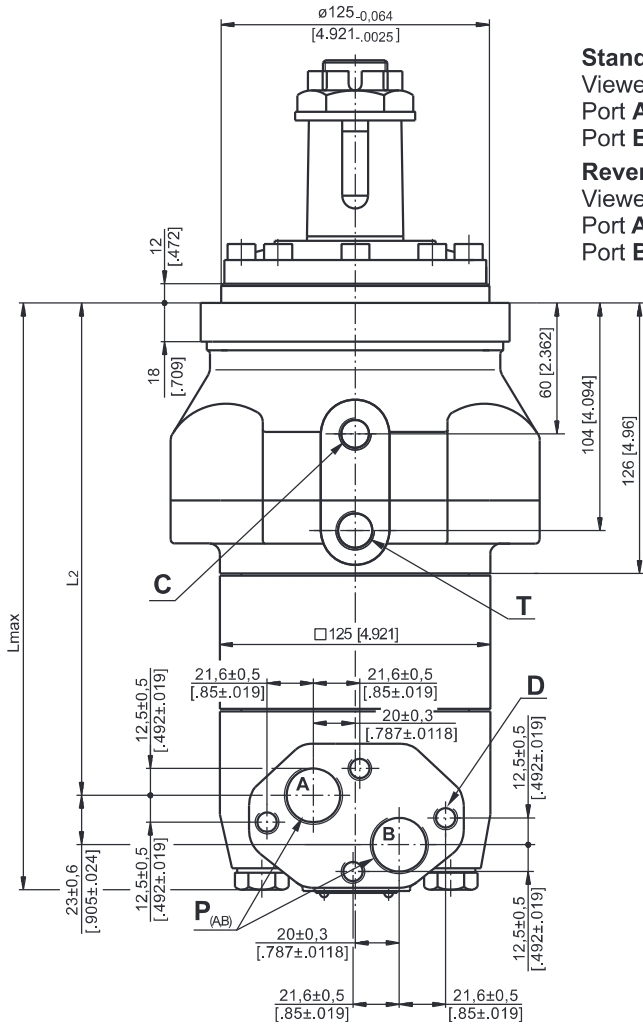
\* Intermittent operation: the permissible values may occur for max. 10% of every minute.

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

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

- Intermittent speed and intermittent pressure must not occur simultaneously.
- Recommended filtration is per ISO cleanliness code 20/16. A nominal filtration of 25 micron or better.
- Recommend using a premium quality, anti-wear type mineral based hydraulic oil HLP(DIN51524) or HM (ISO 6743/4).  
If using synthetic fluids consult the factory for alternative seal materials.
- Recommended minimum oil viscosity 13 mm<sup>2</sup>/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.

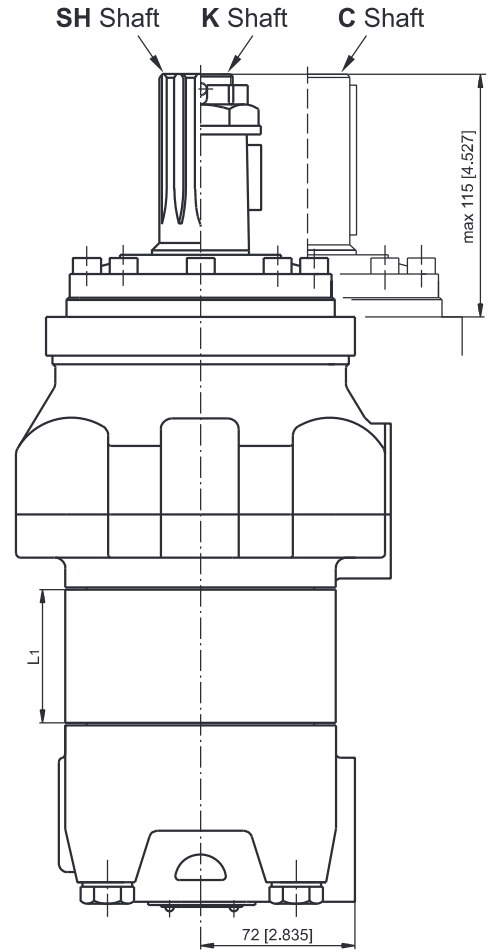
**DIMENSIONS AND MOUNTING DATA**



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

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

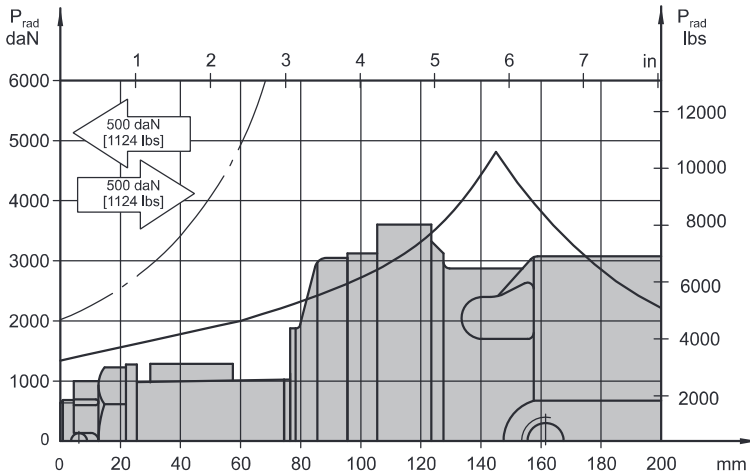
Shaft Dim.  
See Page 30



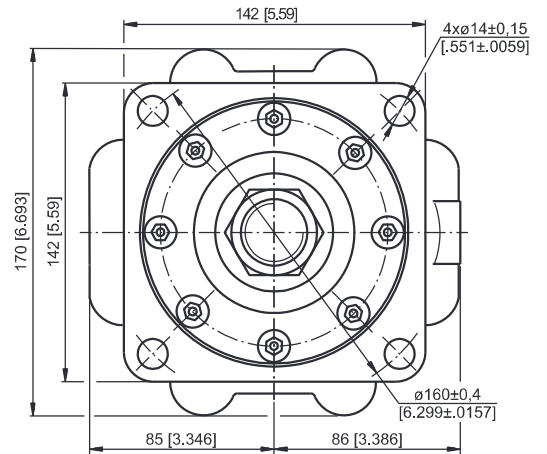
- P<sub>(A,B)</sub>** - 2xG3/4, 17 mm [.669] depth
- C** - Brake release port, G1/4, 12 mm [.472 in] depth
- T** - Drainage tap, G3/8, 13 mm [.512] depth
- D** - 4xM10, 10 mm [.394] depth

**PERMISSIBLE SHAFT LOADS**

The curve applies to a B10 bearing life of 3000 hours at 200 RPM.  
Max. permissible radial shaft load with a safety factor of 3:1.



Warning: Drain line should always be used.

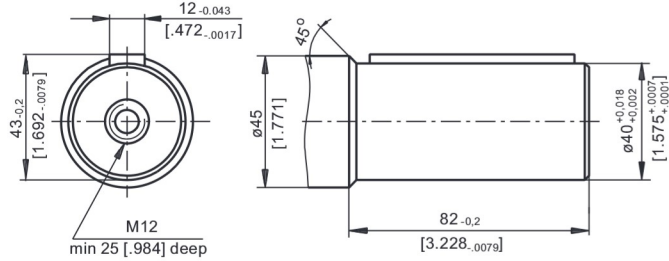


Type	*L1, mm [in]	L2, mm [in]	Lmax, mm [in]
MT/B 160	17 [.67]	178 [7.01]	228 [8.98]
MT/B 200	22 [.87]	183 [7.21]	233 [9.17]
MT/B 250	28,3 [1.11]	189,3 [7.45]	239 [9.41]
MT/B 315	37,5 [1.48]	198,5 [7.81]	248 [9.76]
MT/B 400	48 [1.89]	209 [8.23]	259 [10.2]
MT/B 500	62 [2.44]	223 [8.78]	273 [10.8]
MT/B 630	58 [2.28]	219 [8.62]	269 [10.6]
MT/B 725	67 [2.64]	228 [8.98]	278 [10.9]

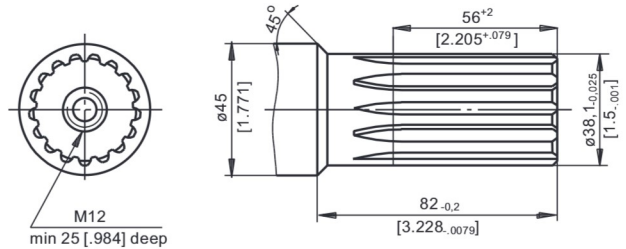
\* The width of the gerotor is  
3,5 mm [.138 in] greater than L<sub>1</sub>.

**SHAFT EXTENSIONS**

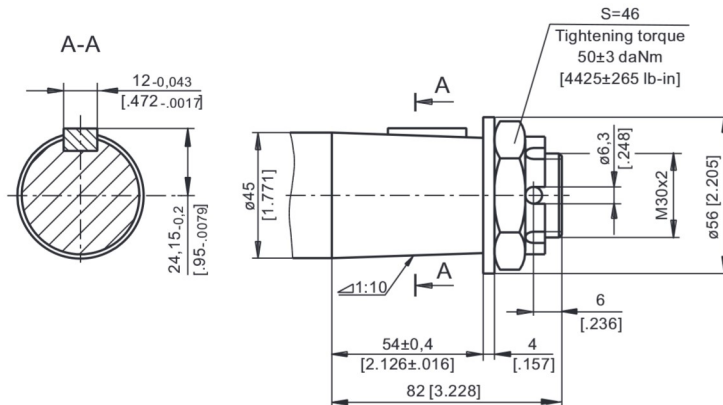
**C** - $\varnothing$ 40 straight, Parallel key A12x8x70 DIN 6885  
Max. Torque 123 daNm [10886 lb-in]



**SH** - $\varnothing$ 1½" splined 17T, DP 12/24 ANSI B92.1-1976  
Max. Torque 123 daNm [10886 lb-in]



**K** -tapered 1:10, Parallel key B12x8x28 DIN 6885  
Max. Torque 210 daNm [18587 lb-in]



**ORDER CODE**

	1	2	3	4	5
<b>MT/B</b>					

**Pos.1 - Displacement code**

<b>160</b>	- 161,1 cm <sup>3</sup> /rev [ 9.83 in <sup>3</sup> /rev]
<b>200</b>	- 201,4 cm <sup>3</sup> /rev [12.29 in <sup>3</sup> /rev]
<b>250</b>	- 251,8 cm <sup>3</sup> /rev [15.36 in <sup>3</sup> /rev]
<b>315</b>	- 326,3 cm <sup>3</sup> /rev [19.90 in <sup>3</sup> /rev]
<b>400</b>	- 410,9 cm <sup>3</sup> /rev [25.06 in <sup>3</sup> /rev]
<b>500</b>	- 523,6 cm <sup>3</sup> /rev [31.95 in <sup>3</sup> /rev]
<b>630</b>	- 631,2 cm <sup>3</sup> /rev [38.50 in <sup>3</sup> /rev]
<b>725</b>	- 724,3 cm <sup>3</sup> /rev [44.20 in <sup>3</sup> /rev]

**Pos.2 - Shaft Extensions\***

<b>C</b>	- $\varnothing$ 40 straight, Parallel key A12x8x70 DIN6885
<b>SH</b>	- $\varnothing$ 1½" splined 17 DP12/24 ANS B922.1-76
<b>K</b>	- $\varnothing$ 45 tapered 1:10, Parallel key B12x8x28 DIN 6885

**Pos.3 - Check Valves**

omit	- with check valves
<b>1</b>	- without check valves

**Pos.4 - Special Features (see page 68)**

**Pos.5 - Design Series**

omit	- Factory specified
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**NOTES:**

\* The permissible output torque for shafts must not be exceeded!

The motor-brakes are mangano-phosphatized as standard.