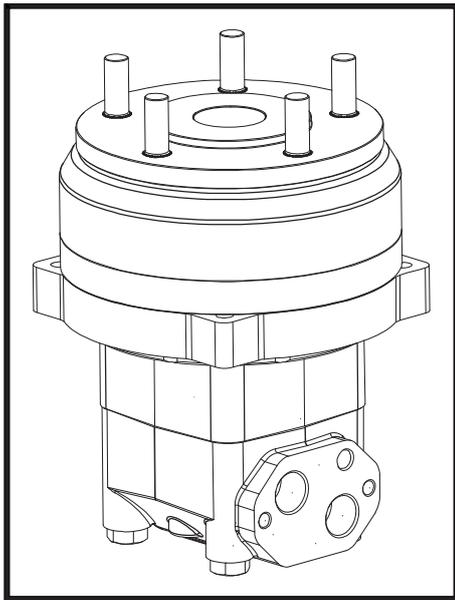
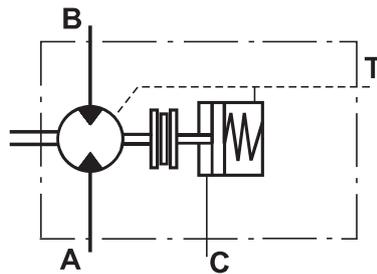
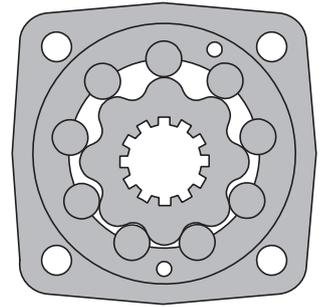


HYDRAULIC MOTOR-BRAKE MT/BX



APPLICATION

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



OPTIONS

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

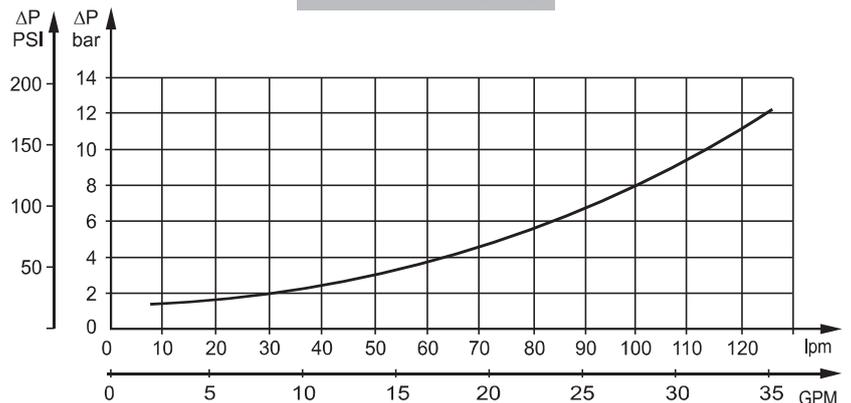
GENERAL

Max. Displacement	cm ³ /rev [in ³ /rev]	523,6 [31.95]
Max. Speed	[RPM]	780
Max. Torque	daNm [lb-in]	cont.: 122 [10780] int.: 137 [12125]
Max. Output	kW [HP]	40 [54]
Max. Pressure Drop	bar [PSI]	cont.: 200 [2900] int.: 240 [3450]
Max. Oil Flow	lpm [GPM]	150 [40]
Min. Speed	[RPM]	5
Permissible Shaft Loads	daN [lbs]	P _a =1000 [2248]
Pressure fluid		Mineral based- HLP(DIN 51524) or HM(ISO 6743/4)
Temperature range	°C [°F]	-40÷140 [-40÷284]
Optimal Viscosity range	mm ² /s [SUS]	20÷75 [98÷347]
Filtration		ISO code 20/16 (Min. recommended fluid filtration of 25 microns)

Oil flow in drain line

Pressure drop bar [PSI]	Viscosity mm ² /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/BX 160	MT/BX 200	MT/BX 250	MT/BX 315	MT/BX 400	MT/BX 500
Displacement, cm³/rev [in³/rev]		161,1 [9.83]	201,4 [12.29]	251,8 [15.36]	326,3 [19.90]	410,9 [25.06]	523,6 [31.95]
Max. Speed, [RPM]	Cont.	625	625	500	380	305	240
	Int.*	780	750	600	460	365	285
Max. Torque daNm [lb-in]	Cont.	47 [4160]	59 [5220]	73 [6460]	95 [8410]	108 [9560]	122 [10800]
	Int.*	56 [4960]	71 [6285]	88 [7790]	114 [10090]	126 [11150]	137 [12125]
Max. Output kW [HP]	Cont.	26,5 [36]	33,5 [45]	33,5 [45]	33,5 [45]	30 [40]	26,5 [36]
	Int.*	32 [43]	40 [54]	40 [54]	40 [54]	35 [45]	30 [40]
Max. Pressure Drop bar [PSI]	Cont.	200 [2900]	200 [2900]	200 [2900]	200 [2900]	180 [2600]	160 [2300]
	Int.*	240 [3450]	240 [3450]	240 [3450]	240 [3450]	210 [3050]	180 [2600]
Max. Oil Flow lpm [GPM]	Cont.	100 [26.5]	125 [33]	125 [33]	125 [33]	125 [33]	125 [33]
	Int.*	125 [33]	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]
	Int.*	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]
	Int.*	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]
Min. Starting Torque daNm [lb-in]	At max. press. drop Cont.	34 [3010]	43 [3800]	53 [4690]	74 [6550]	84 [7435]	95 [8410]
	At max. press. drop Int.*	41 [3630]	52 [4600]	63 [5580]	89 [7880]	97 [8585]	106 [9380]
Min. Speed**, [RPM]		10	9	8	7	6	5
Static Torque of Brake, daNm [lb-in]		120 [10620]					
Min. Brake Release Pressure***, bar [PSI]		12 [174]					
Max. Opening Pressure, bar [PSI]		30 [435]					
Max. Pressure in Drain Line, bar [PSI]		5 [73]					
Max. Pressure in Release Port C, bar [PSI]		75 [1088]					
Weight, kg [lb]	MT/BX A...	32,8 [72.3]	33,3 [73.4]	34,0 [74.9]	35,0 [77.2]	36,3 [80.0]	37,6 [82.9]
	MT/BX B...	32,2 [70.9]	32,8 [72.3]	33,5 [73.9]	34,5 [76.1]	35,8 [78.9]	37,1 [81.8]

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

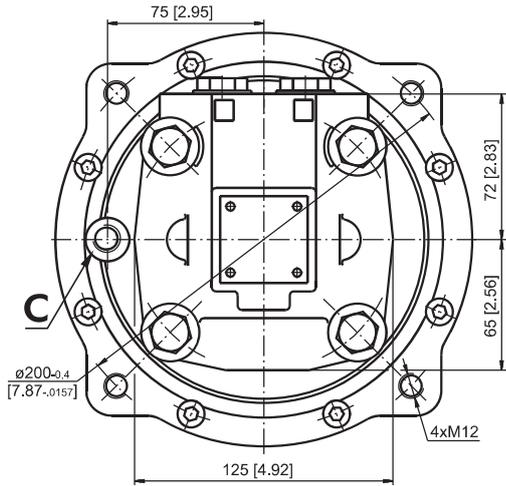
** For speeds lower than given, consult factory or your regional manager.

*** 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 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.



DIMENSIONS AND MOUNTING DATA



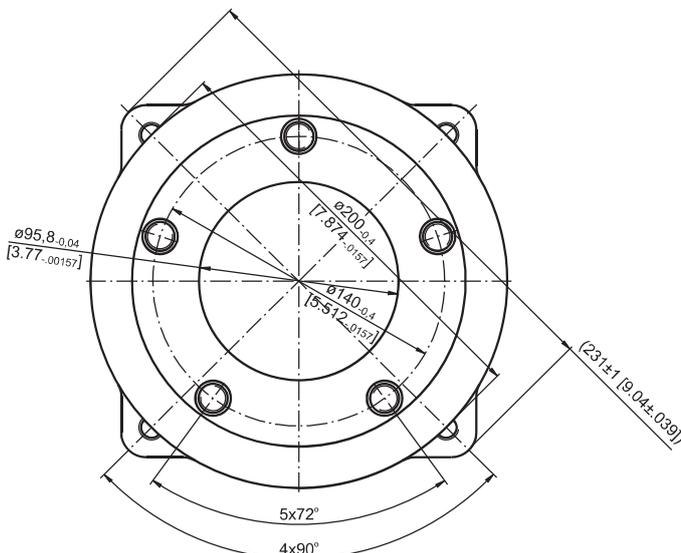
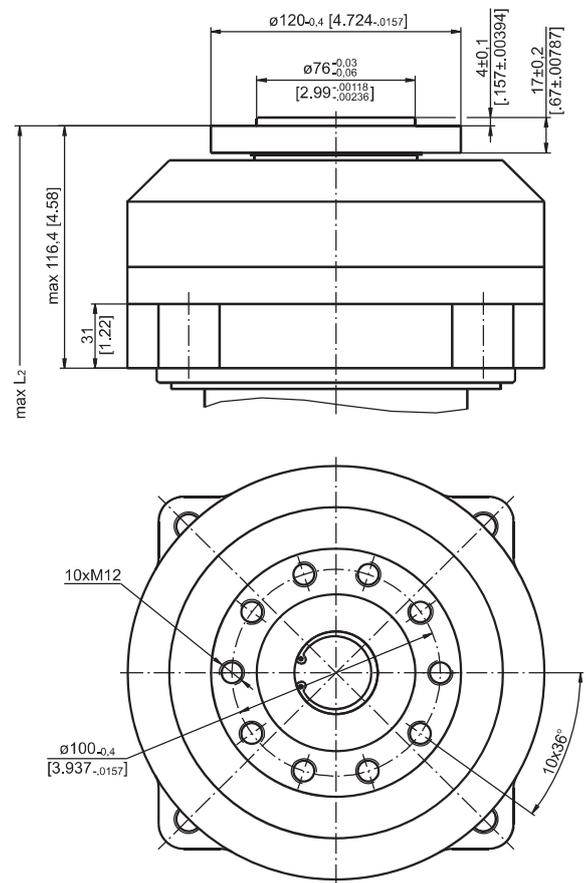
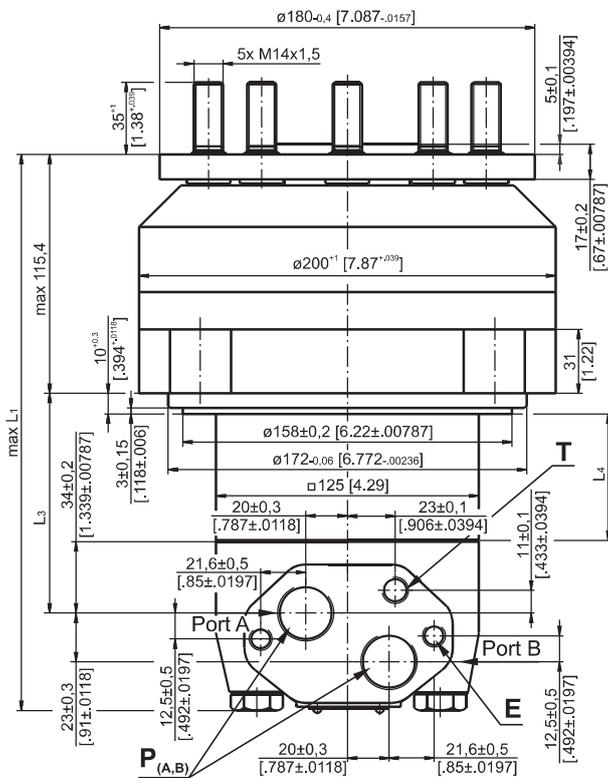
A Wheel bolt flange

Type	L1,mm [in]	L2,mm [in]	L3,mm [in]	*L4,mm [in]
MT/BX 160	227 [8.937]	228 [8.976]	62,5 [2.461]	16,5 [.649]
MT/BX 200	232 [9.134]	233 [9.173]	67,5 [2.657]	21,5 [.846]
MT/BX 250	238 [9.370]	239 [9.409]	73,8 [2.906]	27,8 [1.094]
MT/BX 315	247 [9.724]	248 [9.764]	83,0 [3.268]	37,0 [1.457]
MT/BX 400	258 [10.157]	259 [10.197]	93,5 [3.681]	47,5 [1.870]
MT/BX 500	272 [10.709]	273 [10.748]	107,5 [4.232]	61,5 [2.421]

* The width of the gerolor is 3,5 mm greater than L4.



B Threaded hole flange



	Versions	
	2	4
P _(A,B)	2xG3/4	2x1 ¹ / ₁₆ -12 UN
T - Drainage tap	G1/4	9/16-18 UNF
C - Brake release port	G1/4	9/16-18 UNF
E	2xM10	2xM10

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**

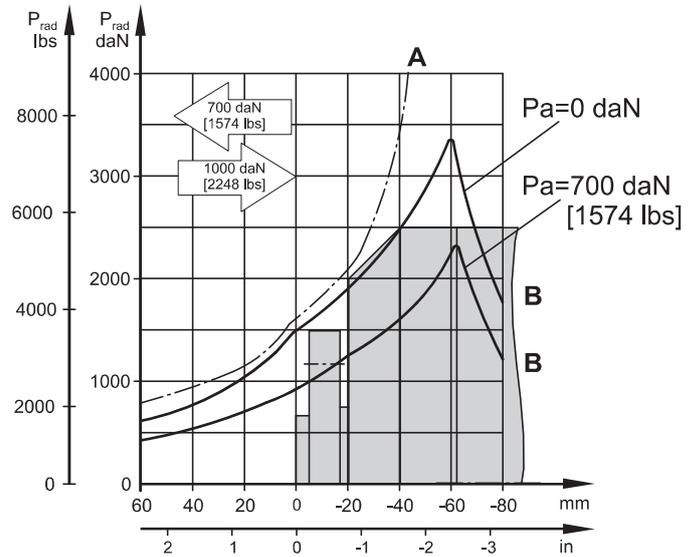
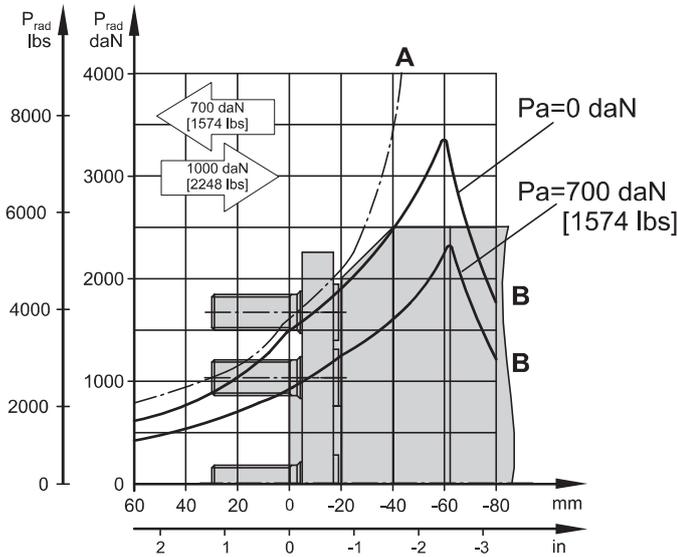


PERMISSIBLE SHAFT LOADS

The load diagram is valid for an average bearings life of 3000 hours at 50 RPM

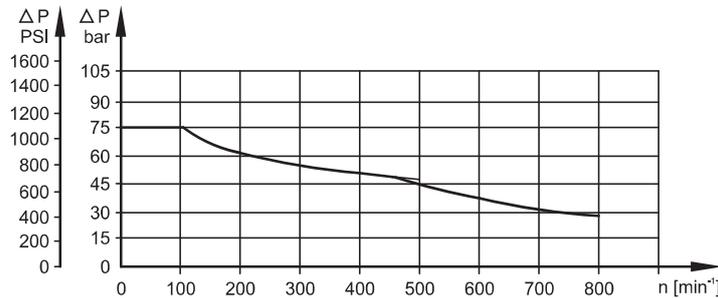
A - Permissible radial shaft load.

B - Max. radial shaft load. Any shaft load exceeding the values shown in the curve will involve a risk of breakage



Warning: Drain line should always be used.

MAX. PERMISSIBLE SHAFT SEAL PRESSURE



ORDER CODE

	1	2	3	4	5
MT / BX					

Pos.1 - Flange type

- A** - Wheel bolt flange 5xM14 on ø180
- B** - Threaded hole flange 10xM12 on ø120

Pos.2 - Displacement code

- | | |
|------------|---|
| 160 | - 161,1 cm ³ /rev [9.83 in ³ /rev] |
| 200 | - 201,4 cm ³ /rev [12.29 in ³ /rev] |
| 250 | - 251,8 cm ³ /rev [15.36 in ³ /rev] |
| 315 | - 326,3 cm ³ /rev [19.90 in ³ /rev] |
| 400 | - 410,9 cm ³ /rev [25.06 in ³ /rev] |
| 500 | - 523,6 cm ³ /rev [31.95 in ³ /rev] |

Pos.3 - Port Size/Type [standard manifold to each]

- | | |
|----------|---|
| 2 | - side ports, 2xG3/4, G1/4, BSP thread, ISO 228 |
| 4 | - side ports, 2x1 1/16-12 UN, O-ring, 9/16-18 INF |

Pos.4 - Special Features (see page 68)

Pos.5 - Design Series

omit - Factory specified

NOTES:

* Color at customer's request.

The motor-brakes are mangano-phosphatized as standard.

MOTOR-BRAKE SPECIAL FEATURES

Special Feature Description	Order Code	Motor type					
		B/MR	MT/B	MT/BX	MTM/B	SW	TW
Low Leakage	LL	○	-	○	○	-	-
Low Speed Valving	LSV	○	-	○	○	-	-
Free Running	FR	-	-	-	○		-
Reinforced Unit	HD	-	○	-	○	-	-
Reverse Rotation	R	○	○	○	○	-	-
Paint*	P	○	○	○	○	○	○
Corrosion Protected Paint*	PC	○	○	○	○	○	○
Special Paint**	PS	○	○	○	○	○	○
	PCS						
Check Valves		S	S***	S	-	S	S

O	Optional
-	Not applicable
S	Standard

* Colour at customer's request.

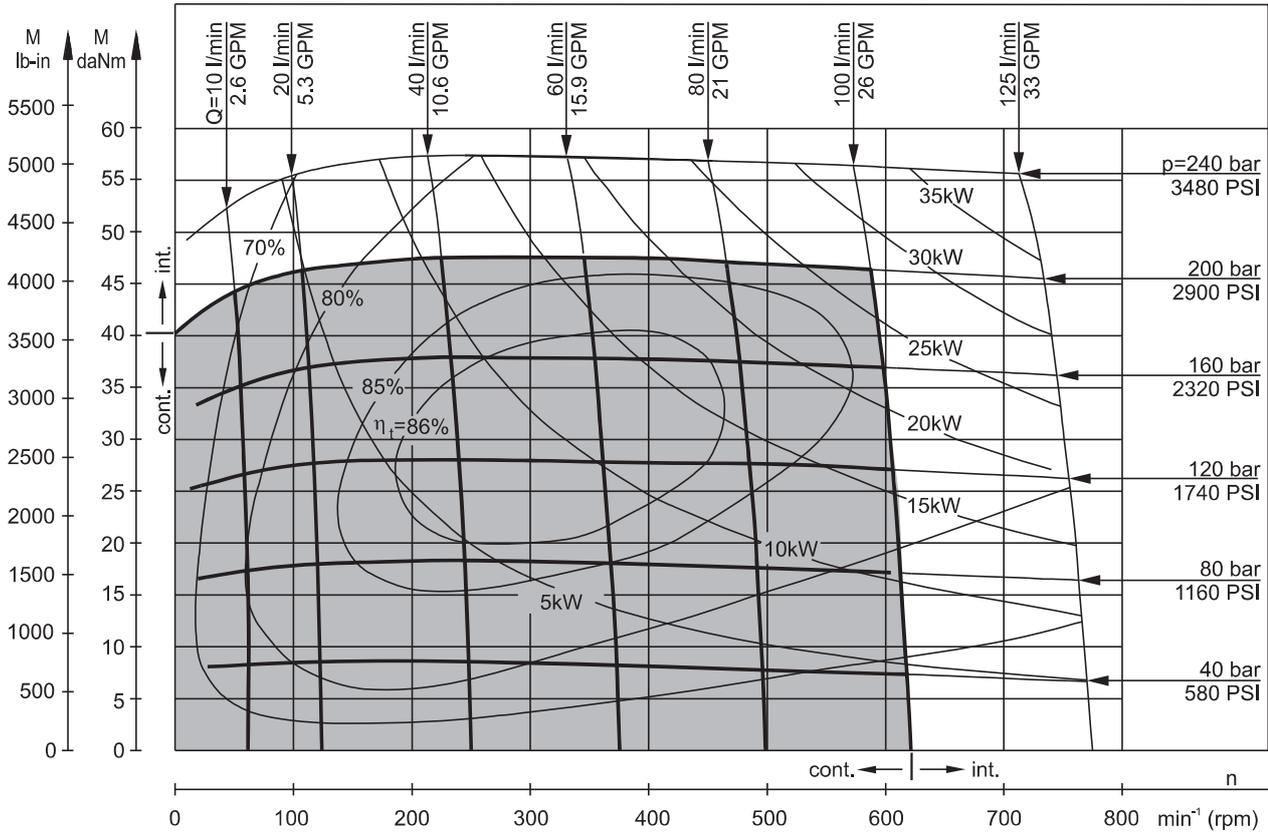
** Non painted feeding surfaces, colour at customer's request.

*** Without check valves for **HD** option.

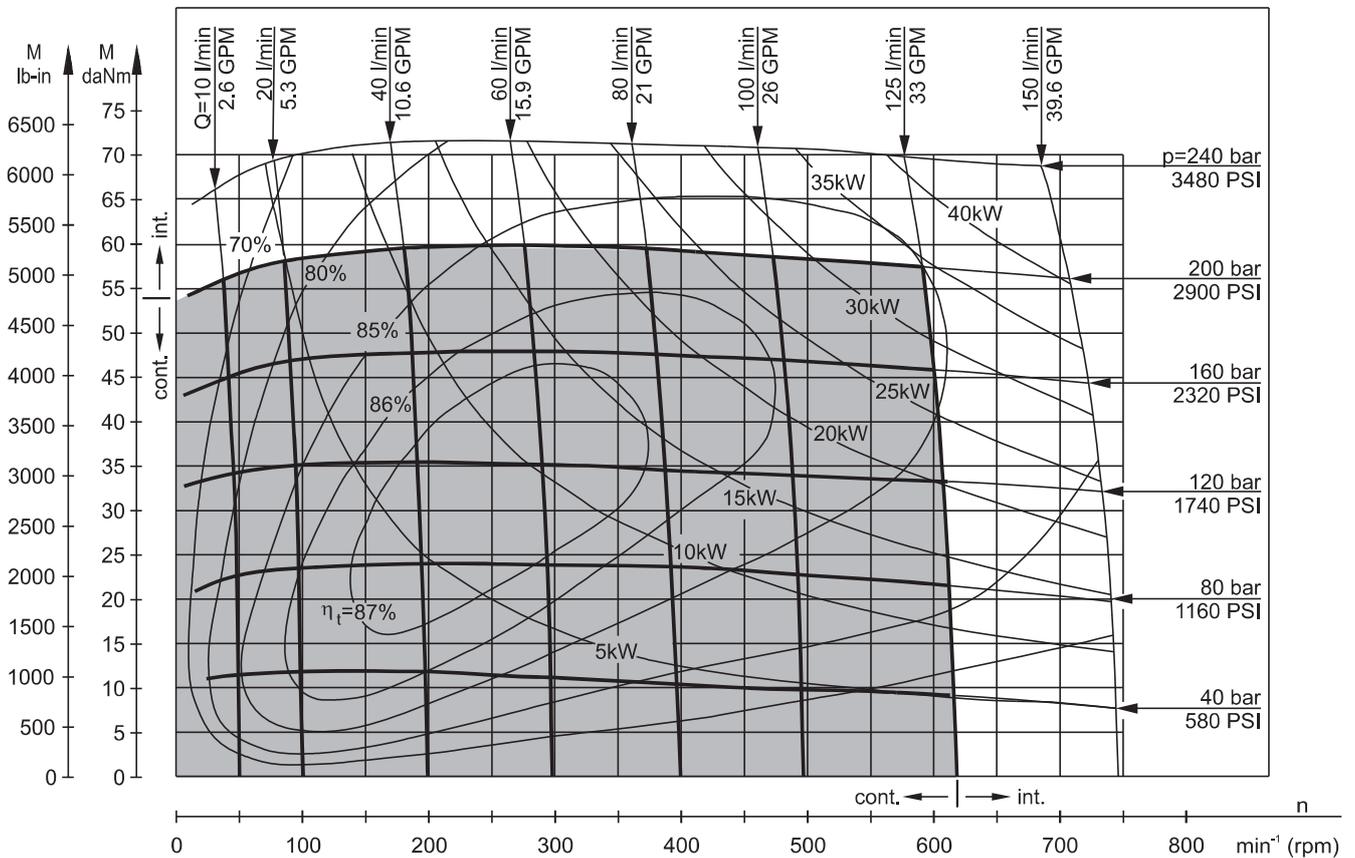


FUNCTION DIAGRAMS

MT 160



MT 200

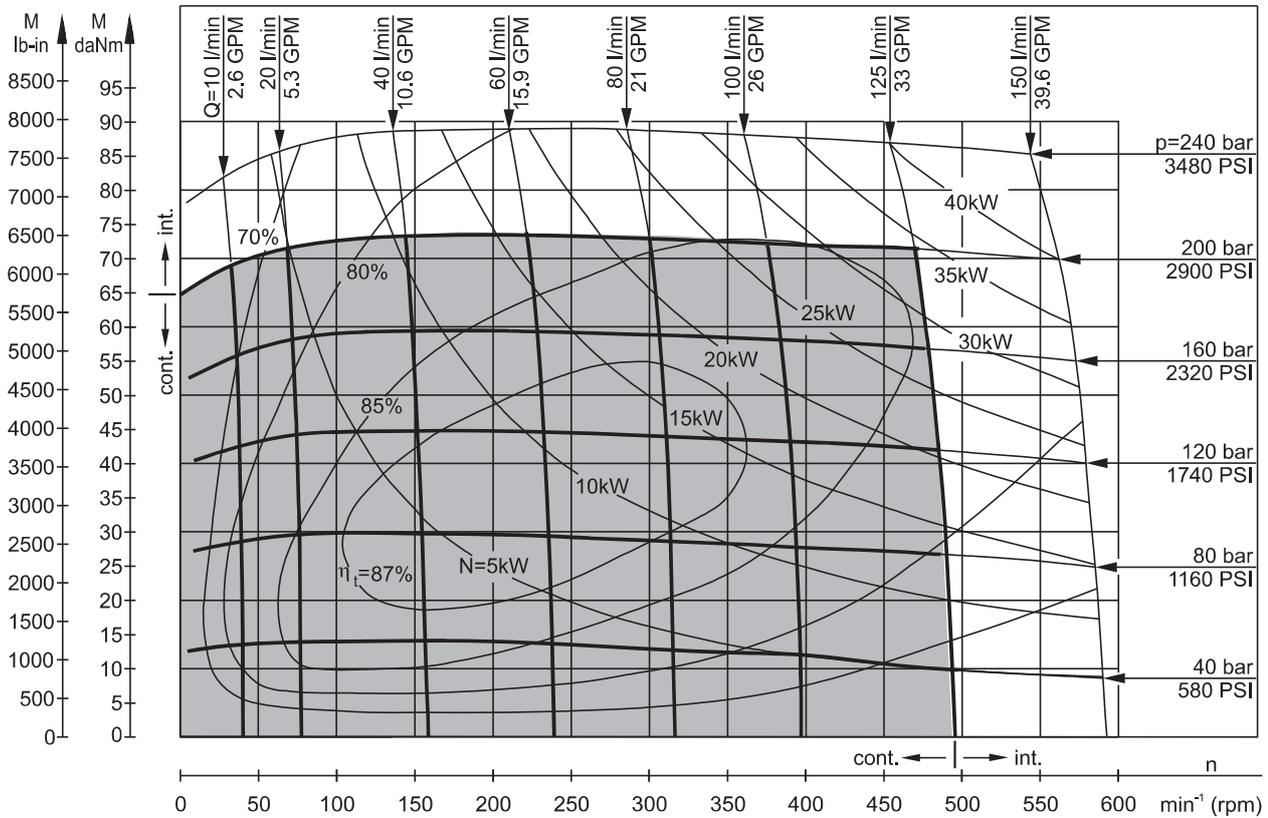


The function diagrams data is for average performance of randomly selected motors at back pressure $5 \div 10$ bar [72.5 ÷ 145 PSI] and oil with viscosity of 32 mm²/s [150 SUS] at 50°C [122°F].

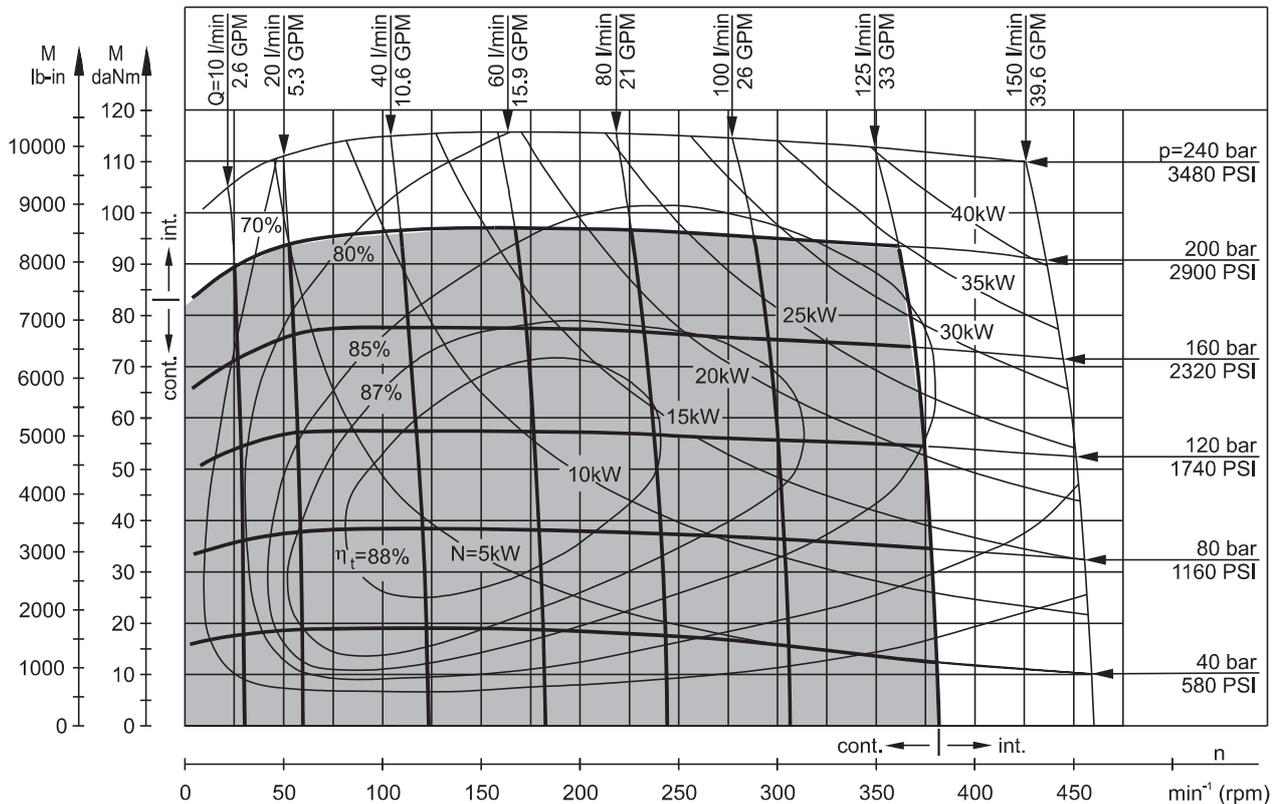


FUNCTION DIAGRAMS

MT 250



MT 315

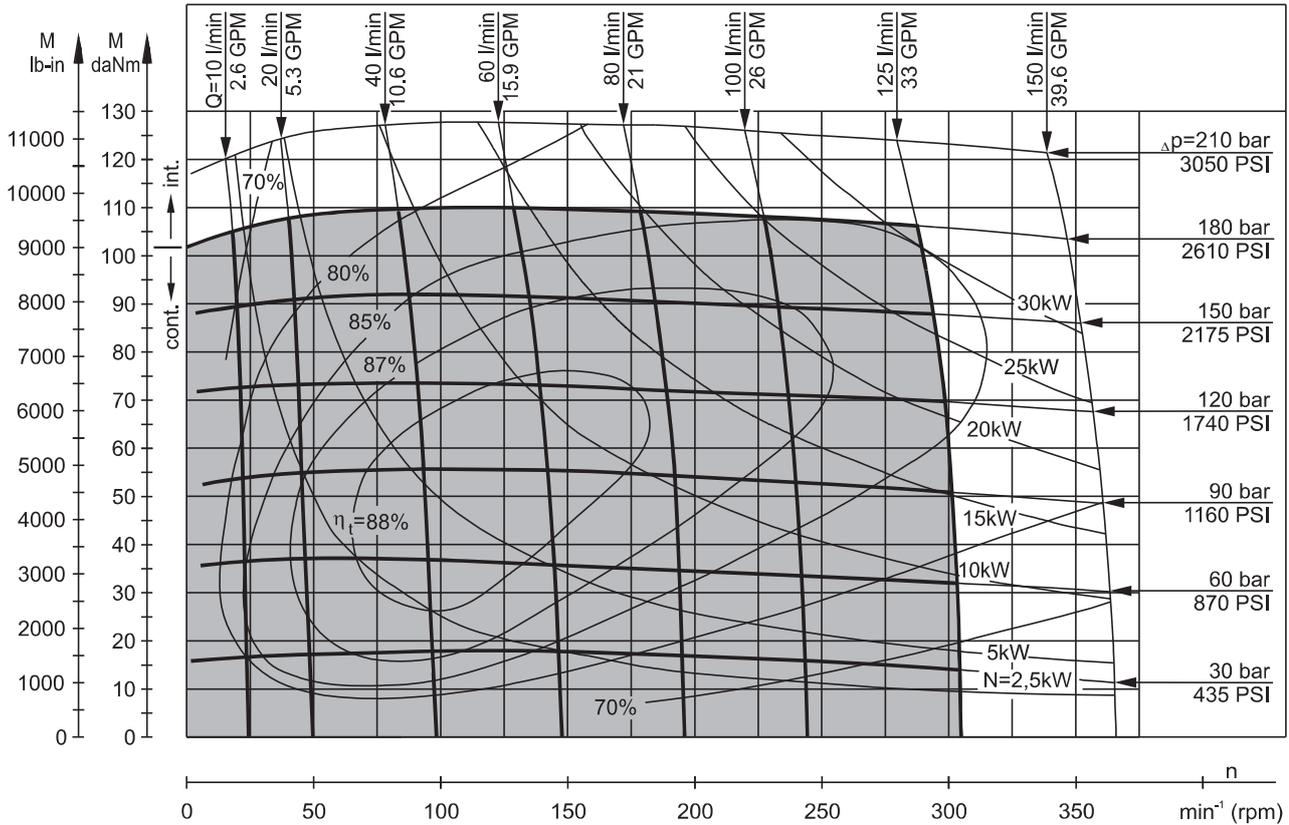


The function diagrams data is for average performance of randomly selected motors at back pressure 5÷10 bar [72.5÷145 PSI] and oil with viscosity of 32 mm²/s [150 SUS] at 50°C [122°F].

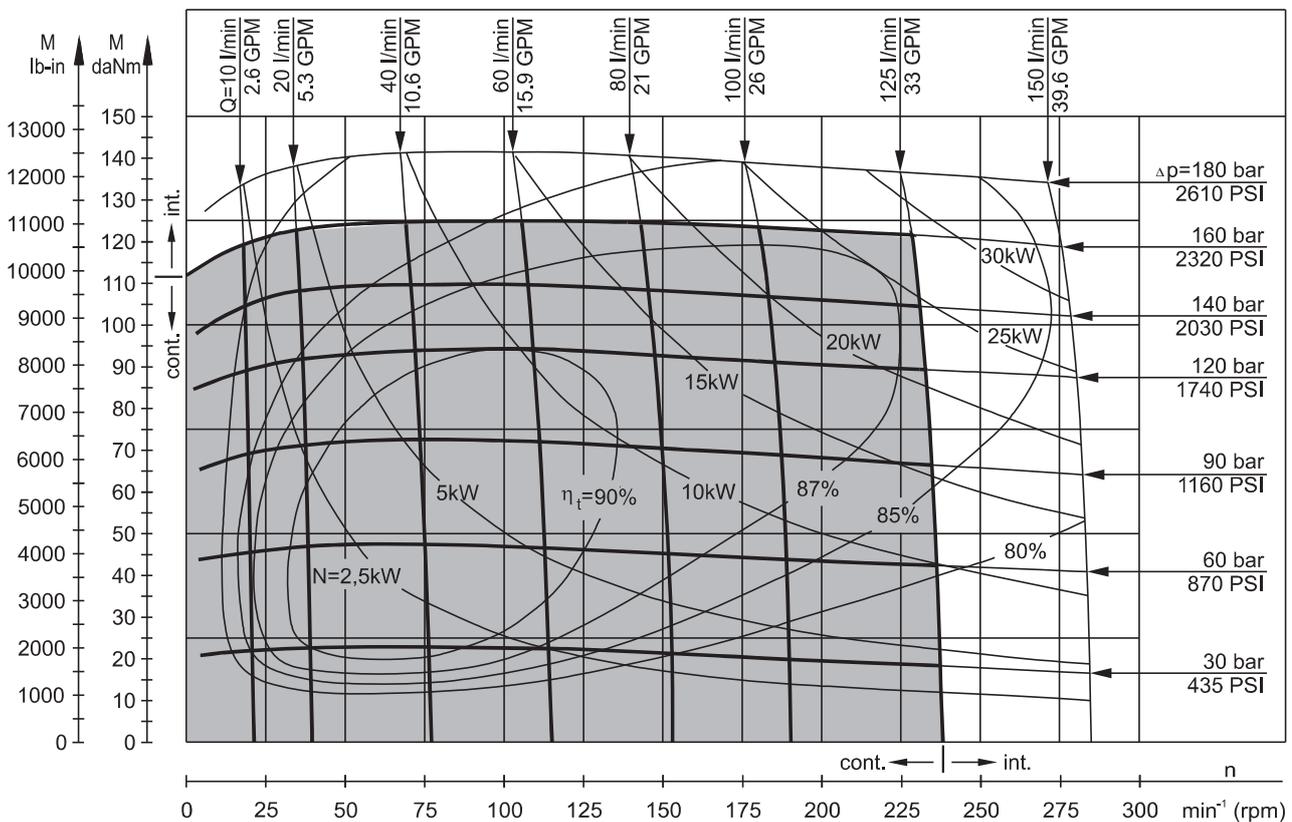


FUNCTION DIAGRAMS

MT 400



MT 500



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