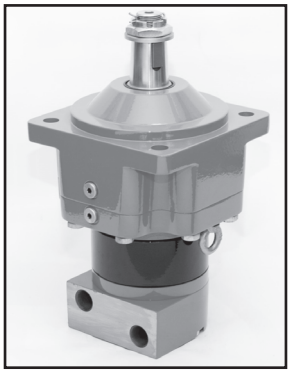
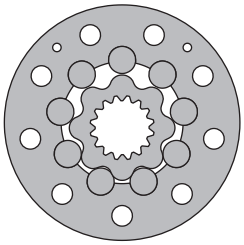
HYDRAULIC MOTOR-BRAKE MTM/B



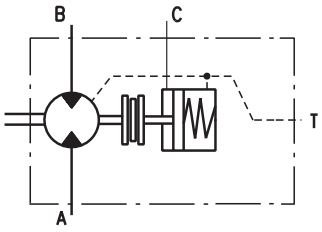
APPLICATION

» Skid Steer Loaders
» Metal working machines
» Trenchers
» Augers
» Agricultural machines
» Road building machines
» Special vehicles
» Mine machines
» Woodworking and sawmill machinery
» Conveyors etc.



CONTENTS

Specification data 45
Dimensions and mounting ... 46÷47
Shaft extensions 48
Permissible shaft loads 49
Order code 49



OPTIONS

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

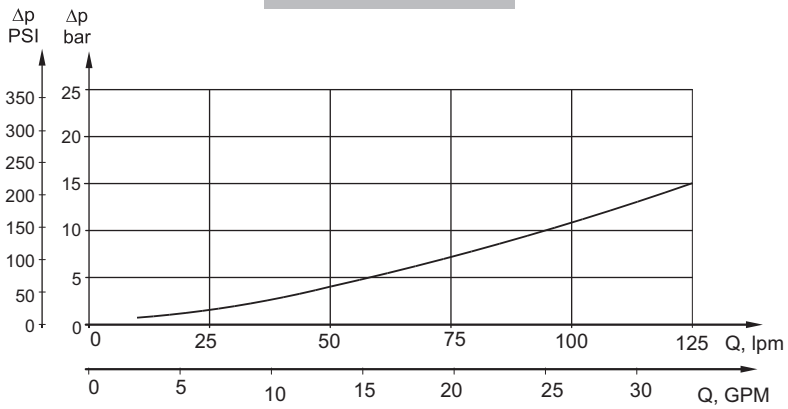
GENERAL

Max. Displacement,	cm^3/rev [in^3/rev]	724,3 [44.2]
Max. Speed,	[RPM]	780
Max. Torque,	daNm [lb-in]	cont.: 175 [15490] int.: 215 [16030]
Max. Output,	kW [HP]	70 [94]
Max. Pressure Drop,	bar [PSI]	cont.: 250 [3600] int.: 350 [5080]
Max. Oil Flow,	lpm [GPM]	150 [40]
Permissible Shaft Loads,	daNm [lb-in]	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]
200 [2900]	20 [98]	2,5 [.660]
	35 [164]	1,5 [.400]
275 [3990]	20 [98]	4 [1.057]
	35 [164]	2,5 [.660]

Pressure Losses



SPECIFICATION DATA

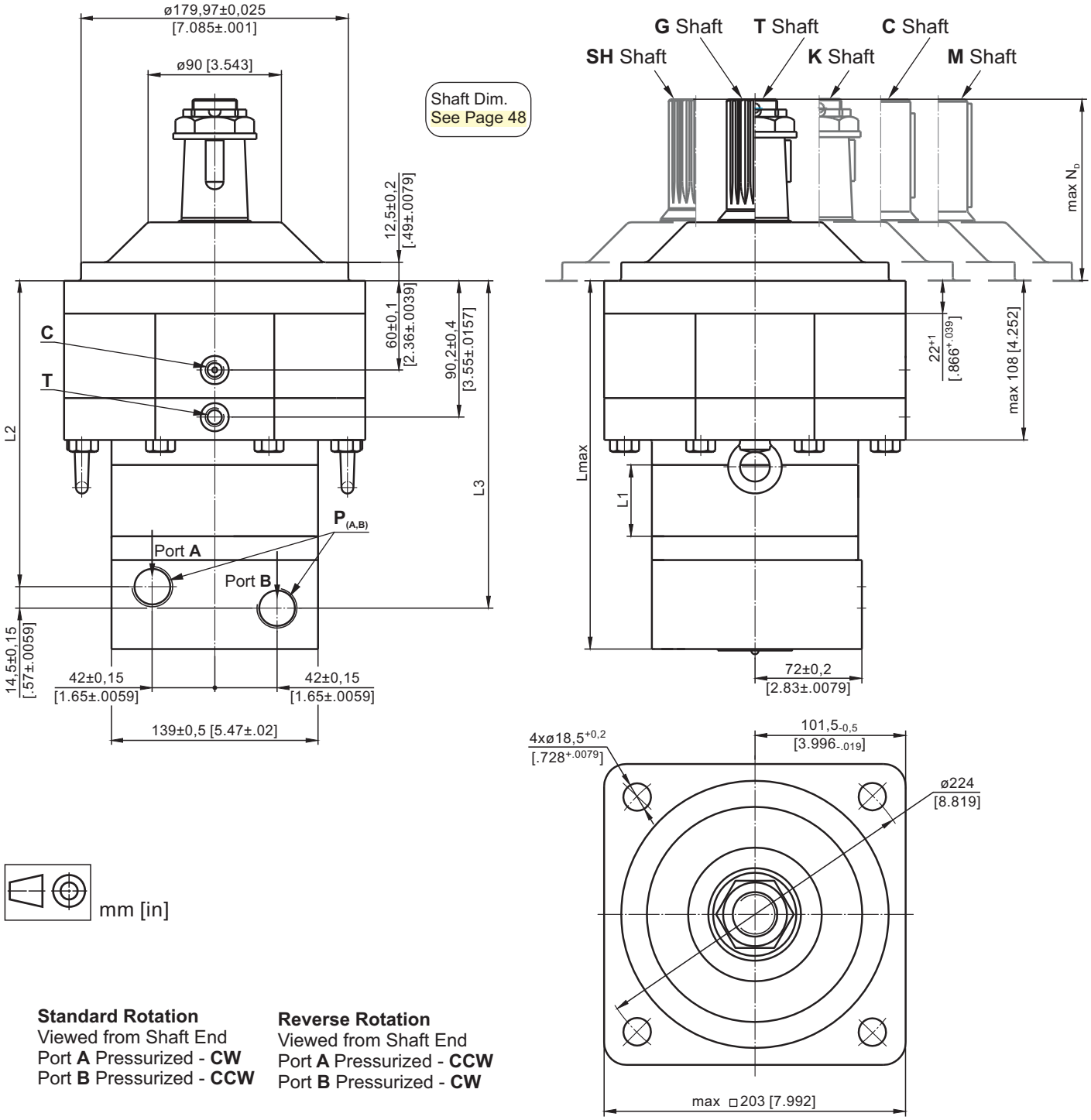
Type		MTM/B 200	MTM/B 250	MTM/B 315	MTM/B 400	MTM/B 470	MTM/B 500	MTM/B 630	MTM/B 725
Displacement, cm^3/rev [in^3/rev]		201,4 [12.29]	251,8 [15.36]	326,3 [19.9]	410,9 [25.06]	475 [28.97]	494,9 [30.17]	631,2 [38.5]	724,3 [44.2]
Max. Speed, [RPM]	Cont.	625	500	380	305	260	250	196	170
	Int.*	750	600	460	365	315	300	235	215
Max. Torque, daNm [lb-in]	Cont.	72 [6375]	90 [7965]	116 [10265]	147 [13010]	171 [15135]	172 [15225]	175 [15490]	160 [14160]
	Int.*	102 [9030]	128 [11330]	163 [14425]	206 [18232]	215 [16030]	215 [16030]	215 [16030]	192 [17000]
	Peak**	115 [10180]	144 [12745]	186 [16460]	235 [20800]	240 [21240]	240 [21240]	255 [22570]	240 [21240]
Max. Output, kW [HP]	Cont.	41 [55]	41 [55]	41 [55]	41 [55]	41 [55]	37,5 [50]	29 [39]	26 [35]
	Int.*	65 [87]	70 [94]	70 [94]	70 [94]	55 [74]	51 [68]	45 [60]	40 [54]
Max. Pressure Drop, bar [PSI]	Cont.	250 [3600]	250 [3600]	250 [3600]	250 [3600]	250 [3600]	230 [3340]	185 [2680]	160 [2320]
	Int.*	350 [5080]	350 [5080]	350 [5080]	350 [5080]	315 [4570]	280 [4060]	225 [3260]	210 [3045]
	Peak**	400 [5800]	400 [5800]	400 [5800]	400 [5800]	350 [5080]	320 [4640]	270 [3985]	260 [3770]
Max. Inlet Pressure, bar [PSI]	Cont.	270 [3920]	270 [3920]	270 [3920]	270 [3920]	270 [3920]	270 [3920]	270 [3920]	270 [3920]
	Int.*	370 [5370]	370 [5370]	370 [5370]	370 [5370]	370 [5370]	370 [5370]	370 [5370]	370 [5370]
	Peak**	420 [6100]	420 [6100]	420 [6100]	420 [6100]	420 [6100]	420 [6100]	420 [6100]	420 [6100]
Max. Oil Flow, lpm [GPM]	Cont.	125 [33]	125 [33]	125 [33]	125 [33]	125 [33]	125 [33]	125 [33]	125 [33]
	Int.*	150 [40]	150 [40]	150 [40]	150 [40]	150 [40]	150 [40]	150 [40]	150 [40]
Max. Starting Pressure with Unloaded Shaft, bar [PSI]		6 [87]	6 [87]	6 [87]	6 [87]	6 [87]	6 [87]	6 [87]	6 [87]
Min. Starting Torque, daNm [lb-in]		60 [5310]	75 [6640]	97 [8585]	122 [10800]	142 [12570]	143 [12655]	144 [12745]	148 [13100]
Static Torque of Brake, daNm [lb-in]		200 [17700]							
Min. Brake Release Pressure***, bar [PSI]		14 [203]							
Full Opening Pressure, bar [PSI]		40 [580]							
Max. Pressure in Release Port C, bar [PSI]		120 [1740]							
Weight, kg [lb]		37,5 [82.7]	37,9 [83.6]	39,1 [86.2]	41,3 [91.1]	44,1 [97.2]	46,0 [101.4]	49,1 [108.2]	52,0 [114.6]

* Intermittent operation: the permissible values may occur for max. 10% of every minute.
** Peak load: the permissible values may occur for max. 1% of every minute.
*** Motor-brakes must always have a drain line. The brake release pressure is the difference between the pressure in the brake release line and the pressure in the drain line.

1. Intermittent speed and intermittent pressure must not occur simultaneously.
2. Recommended filtration is per ISO cleanliness code 20/16. A nominal filtration of 25 micron or better.
3. 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.
4. Recommended minimum oil viscosity 13 mm^2/s [70 SUS] at 50°C [122°F].
5. Recommended maximum system operating temperature is 82°C [180°F].
6. To assure optimum motor life fill with fluid prior to loading and run at moderate load and speed for 10-15 minutes.

DIMENSIONS and MOUNTING DATA - MTM/B D

D Bolt flange 4xø18.5 mm [.73 in]
spigot diameter 180 mm [7.086 in]



mm [in]

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

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

Type	L, mm [in]	L2, mm [in]	L3, mm [in]	L1, mm [in]
MTM/B D 200	226,0 [8.90]	184,0 [7.24]	198,5 [7.86]	25,0 [.98]
MTM/B D 250	232,5 [9.15]	190,0 [7.48]	204,5 [8.05]	31,3 [1.23]
MTM/B D 315	241,5 [9.51]	199,5 [7.85]	214,0 [8.43]	40,5 [1.59]
MTM/B D 400	252,0 [9.92]	210,0 [8.27]	224,5 [8.84]	51,0 [2.01]
MTM/B D 470	260,0 [10.24]	218,0 [8.58]	232,5 [9.15]	59,0 [2.32]
MTM/B D 500	249,0 [9.80]	207,0 [8.15]	221,5 [8.72]	48,0 [1.89]
MTM/B D 630	262,0 [10.32]	220,0 [8.66]	234,5 [9.23]	61,0 [2.40]
MTM/B D 725	271,0 [10.67]	229,0 [9.02]	243,5 [9.59]	70,0 [2.76]

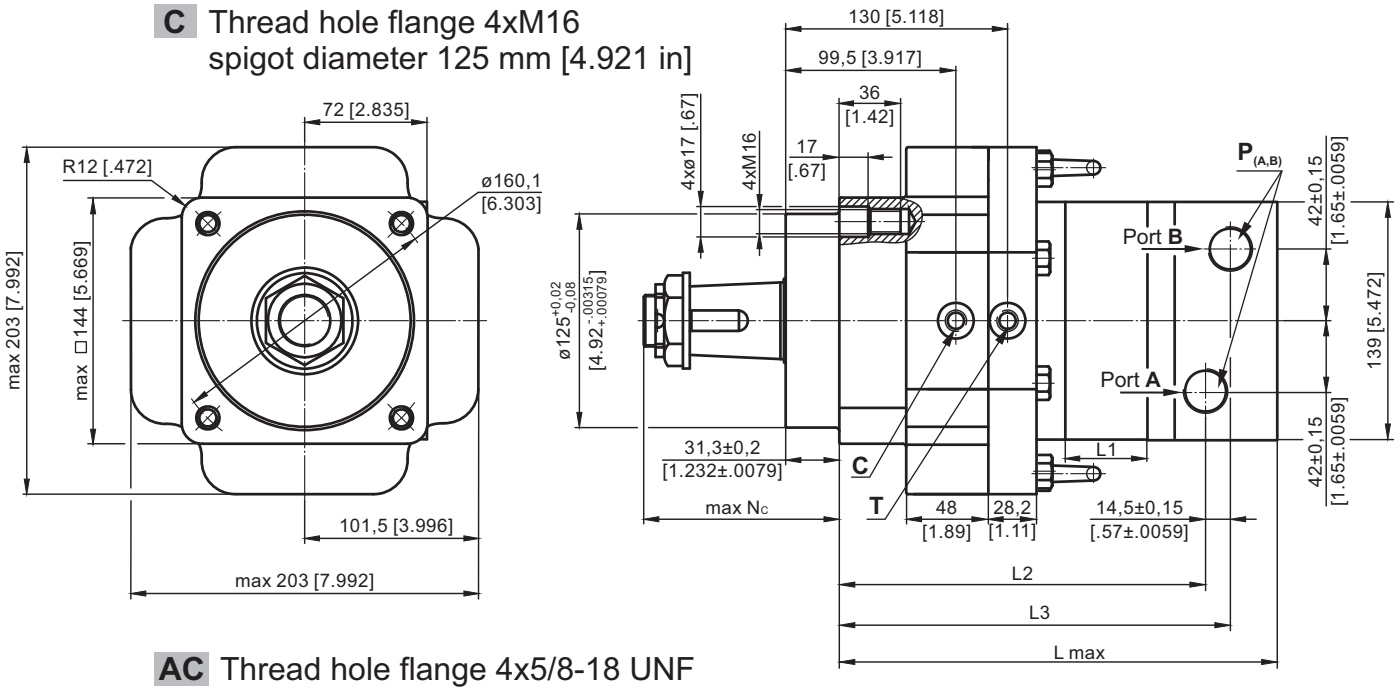
Note: For N_D see page 39

C: Brake release port
T: Drainage tap

	Versions	
	2	4
P(A,B)	2xG¾	2x1 1/16-12UN
T	G¼	9/16-18 UNF
C	G¼	7/16-20 UNF

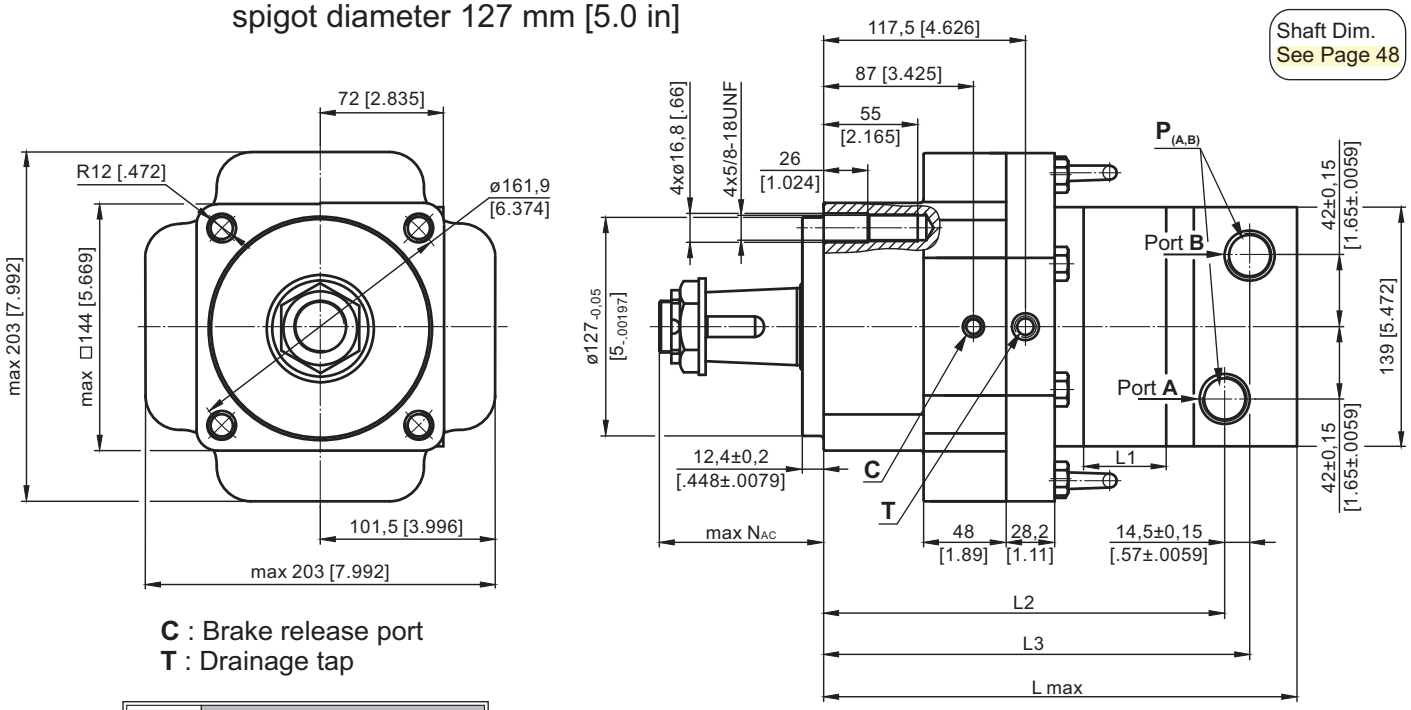
DIMENSIONS and MOUNTING DATA MTM/B C and MTM/B AC

C Thread hole flange 4xM16
spigot diameter 125 mm [4.921 in]



AC Thread hole flange 4x5/8-18 UNF
spigot diameter 127 mm [5.0 in]

Shaft Dim.
See Page 48



C : Brake release port
T : Drainage tap

	Versions	
	2	4
P (A,B)	2xG¾	2x1 1/16-12UN
T	G¼	9/16-18UNF
C	G¼	7/16-20 UNF

Note: For N_C and N_{AC} see page 39

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

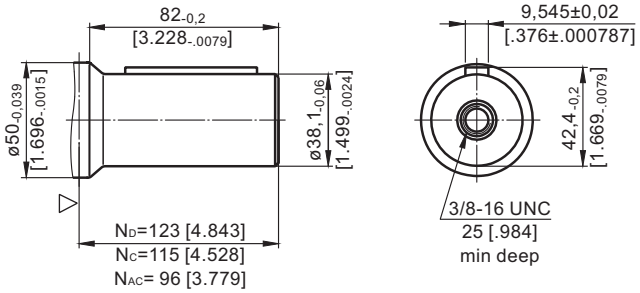
Reverse Rotation
Viewed from Shaft End
Port **A** Pressurized - **CCW**
Port **B** Pressurized - **CW**

mm [in]

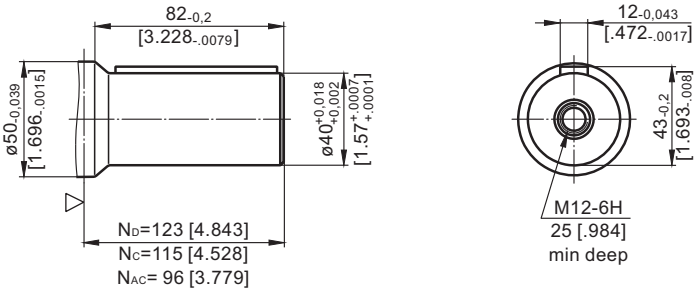
Type	L, mm [in]	L2, mm [in]	L3, mm [in]	Type	L, mm [in]	L2, mm [in]	L3, mm [in]	L1, mm [in]
MTM/B C 200	233,0 [9.17]	191,0 [7.92]	205,5 [8.09]	MTM/B AC 200	252,0 [9.92]	210,0 [8.27]	224,5 [8.84]	25,0 [.98]
MTM/B C 250	239,3 [9.42]	197,3 [7.77]	211,8 [8.34]	MTM/B AC 250	258,5 [10.18]	216,5 [8.25]	231,0 [9.09]	31,3 [1.23]
MTM/B C 315	248,5 [9.48]	206,5 [8.13]	221,0 [8.70]	MTM/B AC 315	267,5 [10.53]	225,5 [8.88]	240,0 [9.45]	40,5 [1.59]
MTM/B C 400	259,0 [10.19]	217,0 [8.54]	231,5 [9.11]	MTM/B AC 400	278,0 [10.94]	236,0 [9.29]	250,5 [9.19]	51,0 [2.01]
MTM/B C 470	267,0 [10.51]	225,0 [8.86]	239,5 [9.43]	MTM/B AC 470	286,0 [11.26]	244,0 [9.61]	258,5 [10.18]	59,0 [2.32]
MTM/B C 500	256,0 [10.08]	214,0 [8.43]	228,5 [8.99]	MTM/B AC 500	275,0 [10.83]	233,0 [9.17]	247,5 [9.74]	48,0 [1.89]
MTM/B C 630	269,0 [10.59]	227,0 [8.94]	241,5 [9.51]	MTM/B AC 630	288,0 [11.34]	246,0 [9.68]	260,5 [10.26]	61,0 [2.40]
MTM/B C 725	278,0 [10.94]	236,0 [9.29]	250,5 [9.86]	MTM/B AC 725	297,0 [11.69]	255,0 [10.04]	269,5 [10.61]	70,0 [2.76]

SHAFT EXTENSIONS

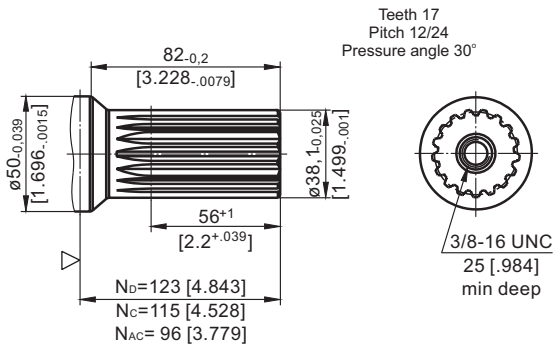
C - 1½" [38,1] srtaight, Parallel key ⅜"x⅜"x 2¼" BS46
Max. Torque 133 daNm [11770 lb-in]



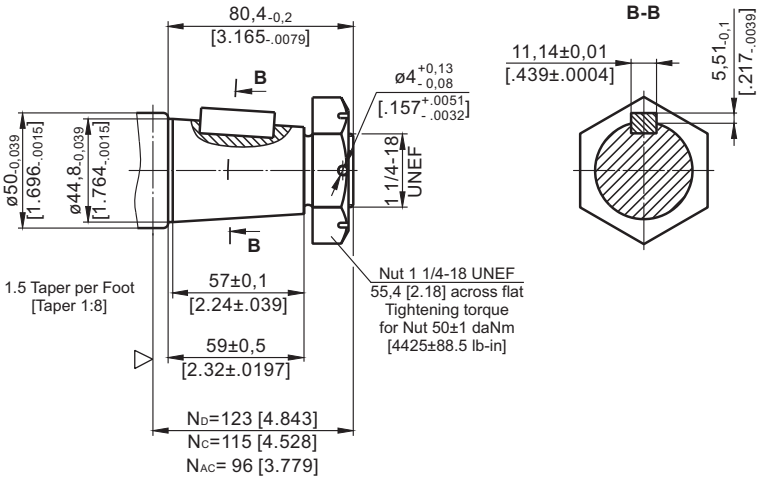
M - ø40 srtaight, Parallel key A12x8x70
Max. Torque 133 daNm [11770 lb-in]



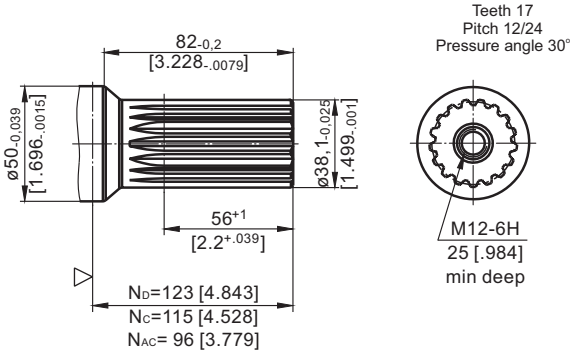
G - 17T Splined, 1½" [38,1] ANS B92.1-1976
Max. Torque 210 daNm [18580 lb-in]



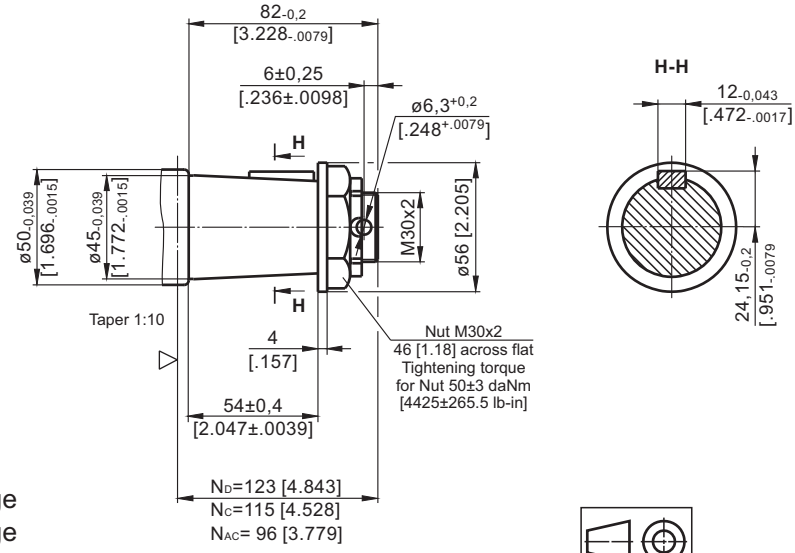
T - 1¾" [44,5] SAE J501 Tapered 1:8
Parallel key 7⁄16"x 1¼" BS46
Max. Torque 210 daNm [18580 lb-in]



SH - 17T Splined, 1½" [38,1] ANS B92.1-1976
Max. Torque 210 daNm [18580 lb-in]



K - ø45 Tapered 1:10, Parallel key 12x8x28 DIN 6885
Max. Torque 210 daNm [18580 lb-in]



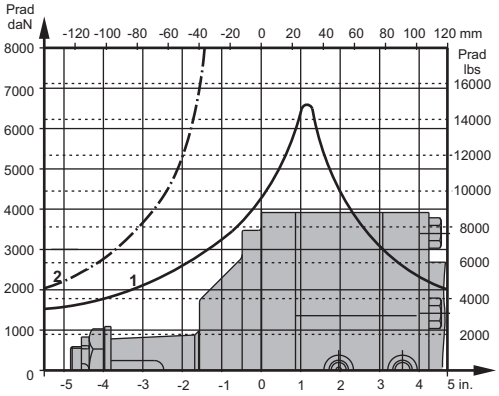
▽ - Motor Mounting Surface

N_D - for **D** flange
N_C - for **C** flange
N_{AC} - for **AC** flange

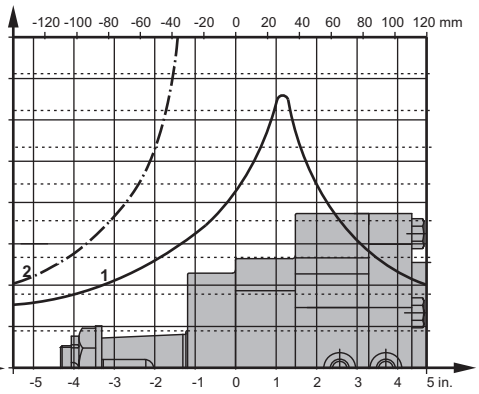
mm [in]

PERMISSIBLE RADIAL SHAFT LOADS

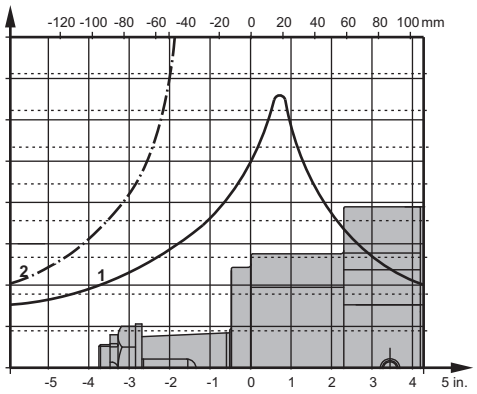
MTM/B D...



MTM/B C...



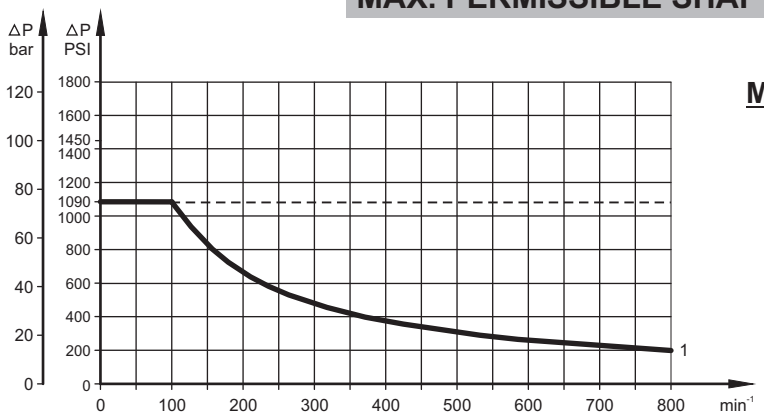
MTM/B AC...



1 - Bearing curve: The curve applies to a B10 bearing life of 2000 hours at 100 RPM.

2 - Shaft curve: The curve represents Max. permissible radial shaft load with safety factor 2:1.

MAX. PERMISSIBLE SHAFT SEAL PRESSURE



Max. return pressure without drain line or max. pressure in the drain line

1: Drawing for Standard Shaft Seal

——— - continuous operations

- - - - - - intermittent operations

ORDER CODE

	1	2	3	4	5	6
M T M / B						

Pos.1 - Mounting Flange

AC	- Flange 4x5/8-18 UNC, spigot dia. ø127 mm [5 in]
C	- Flange 4xM16, spigot dia. ø125 mm [4.92 in]
D	- Flange 4xø18,5 [.73], spigot dia. ø180 mm [7.09 in]

Pos.2 - Displacement code

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]
470	- 475,0 cm^3/rev [28.97 in^3/rev]
500	- 494,9 cm^3/rev [30.17 in^3/rev]
630	- 631,2 cm^3/rev [38.52 in^3/rev]
725	- 724,3 cm^3/rev [44.20 in^3/rev]

Pos.3 - Shaft Extensions*

C	- 1½" [38,1] straight, Parallel key 3/8x3/8x2 1/4"
G	- 1½" [38,1] 17T Splined (3/8-16 UNC)
M	- 40 mm straight, Parallel key 12x8x70
T	- 1:8 Tapered, Parallel key 7/16x7/16x1 1/4"
SH	- 1½" [38,1] 17T Splined (M12)
K	- 1:10 Tapered, Parallel key 12x8x28

Pos.4 - Port Size/Type

2	- side ports, 2xG 3/4, G1/4, BSP thread, ISO 228
4	- side ports, 2x$1^1/_{16}$-12 UN, O-ring, $^9/_{16}$-18 UNF, 7/16-20UNF

Pos.5 - Additional Options

HD	- Reinforced motor **HD**** (always)

For Other **Additional Options** see page 77

Pos.6 - Design Series

omit - Factory specified

Notes: * The permissible output torque for shafts must not be exceeded!
** The drain line must always be opened!

The motor-brakes are mangano-phosphatized as standard.