

Product Tech News

Hydraulic motors type MEW

INTRODUCTION

M+S Hydraulic introduces a new hydraulic motor, type MEW, useful for a variety of small vehicle and industrial applications.

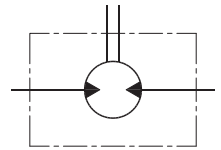
Standard version - The advantage by this motor lies in the high speed area. When the flow exceeds 40 l/min this motor is to it is also suitable for a wide range of other applications that require a motor that is both compact and gives high efficiency.

OPTIONS

- » Disc valve, Roll-gerotor
- » Wheel mount
- » Compact design
- » Low weight
- » High total efficiency
- » High starting torque
- » Smooth low speed performance
- » Larger bearing capacity
- » High pressure shaft seal
- » No drain line

APPLICATION

- » Walk-behind mowers
- » Ride on mowers
- » Scissor lifts
- » Sweepers
- » Road rollers



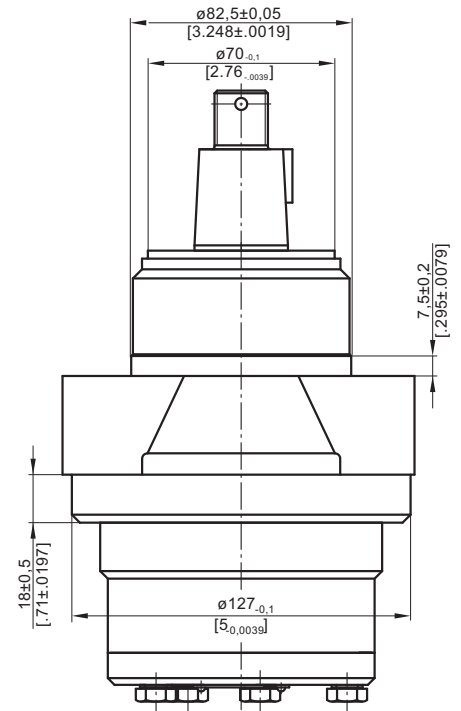
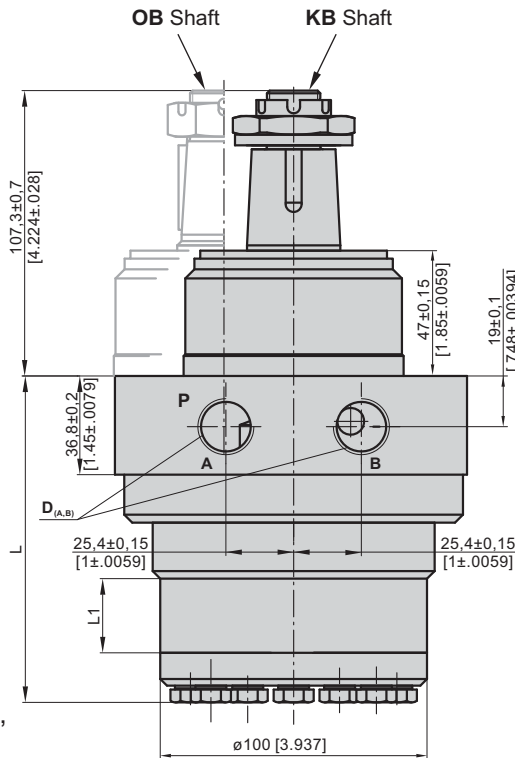
P - The high pressured port

$D_{(A,B)2}$: 2xG1/2,

15 mm [.59 in] min depth

$D_{(A,B)4}$: 2x7/8-14UNF SAE J1926,

16 mm [.63 in] min depth



Type	L, mm	L1, mm
MEW 100	111,3 [4.38]	17,4 [.69]
MEW 125	111,3 [4.38]	17,4 [.69]
MEW 160	115,7 [4.56]	21,8 [.86]
MEW 200	121,7 [4.79]	27,8 [1.09]
MEW 250	128,7 [5.07]	34,8 [1.37]
MEW 315	137,4 [5.41]	43,5 [1.71]

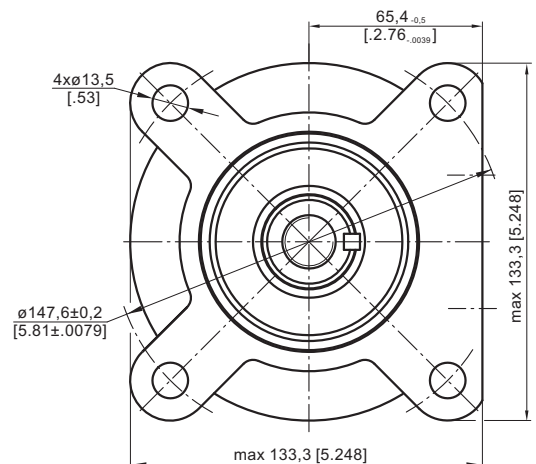


CW version (clockwise rotation)

1. By clockwise rotation: The shaft seal pressure equals the return pressure.
2. By counter clockwise rotation: The shaft seal pressure equals the input pressure.

CCW version (counter clockwise rotation)

1. By counter clockwise rotation: The shaft seal pressure equals the return pressure.
2. By clockwise rotation: The shaft seal pressure equals the input pressure.



SPECIFICATION DATA

Type		MEW 100	MEW 125	MEW 160	MEW 200	MEW 250	MEW 315
Displacement, cm³/rev [in³/rev]		99,8 [6.09]	122,5 [7.48]	153,6 [9.37]	195,8 [11.95]	245 [14.95]	306 [18.67]
Max. Speed, [RPM]	Cont.	600	480	380	300	240	190
	Int.*	750	600	480	375	300	240
Max. Torque, daNm [lb-in]	Cont.	25 [2213]	31,5 [2788]	40,5 [3585]	46,4 [4107]	50,5 [4470]	51,5 [4558]
	Int.*	27 [2390]	33,5 [2965]	42,5 [3762]	50,5 [4470]	56,5 [5000]	63,5 [5620]
	Peak**	29 [2566]	35,5 [3142]	45,5 [4027]	56,5 [5000]	63,5 [5620]	73 [6461]
Max. Output, kW [HP]	Cont.	12 [16]	12 [16]	12 [16]	11 [15]	10 [13]	8 [10]
	Int.*	15 [20]	15 [20]	15 [20]	14 [19]	12 [16]	10 [13]
Max. Pressure Drop, bar [PSI]	Cont.	200 [2900]	200 [2900]	200 [2900]	185 [2680]	160 [2320]	130 [1885]
	Int.*	210 [3045]	210 [3045]	210 [3045]	200 [2900]	180 [2610]	160 [2320]
	Peak**	225 [3260]	225 [3260]	225 [3260]	225 [3260]	200 [2900]	185 [2680]
Max. Oil Flow, lpm [GPM]	Cont.	60 [15.9]	60 [15.9]	60 [15.9]	60 [15.9]	60 [15.9]	60 [15.9]
	Int.*	75 [19.8]	75 [19.8]	75 [19.8]	75 [19.8]	75 [19.8]	75 [19.8]
Max. Inlet Pressure, bar [PSI]	Cont.	200 [2900]	200 [2900]	200 [2900]	200 [2900]	200 [2900]	200 [2900]
	Int.*	210 [3045]	210 [3045]	210 [3045]	210 [3045]	210 [3045]	210 [3045]
	Peak**	225 [3260]	225 [3260]	225 [3260]	225 [3260]	225 [3260]	225 [3260]
Max. Return Pressure, bar [PSI]	Cont.	200 [2900]	200 [2900]	200 [2900]	200 [2900]	200 [2900]	200 [2900]
	Int.*	210 [3045]	210 [3045]	210 [3045]	210 [3045]	210 [3045]	210 [3045]
	Peak**	225 [3260]	225 [3260]	225 [3260]	225 [3260]	225 [3260]	225 [3260]
Max. Starting Pressure with Unloaded Shaft, bar [PSI]		10 [145]	7 [102]	7 [102]	7 [102]	7 [102]	7 [102]
Min. Starting Torque, daNm [lb-in]	At max.press. drop Cont.	23 [2035]	28,5 [2522]	35,5 [3142]	41,5 [3673]	45,5 [4027]	46,5 [4115]
	At max.press. drop Int.*	24 [2125]	30 [2655]	38 [3360]	46 [4070]	52 [4600]	57 [5045]
Min. Speed***, [RPM]		10	9	7	5	5	5

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

** Peak load: the permissible values may occur for max. 1% for every minute.

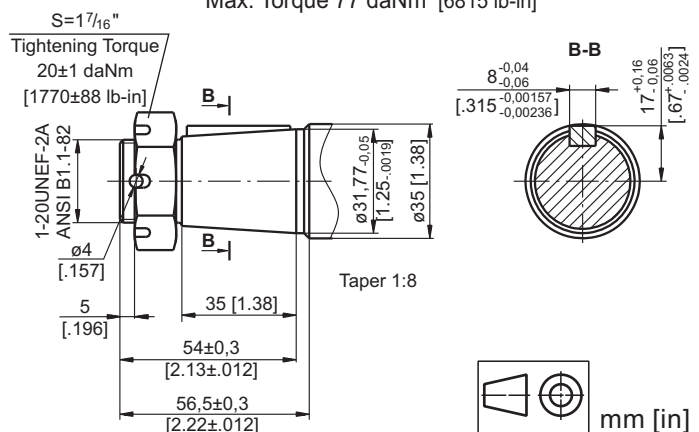
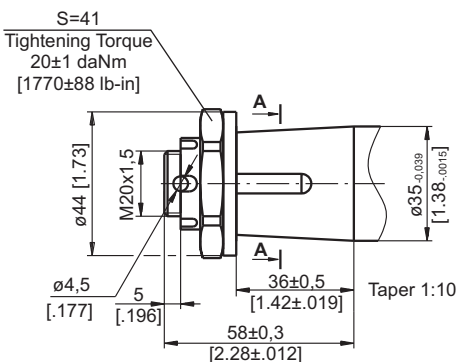
*** Operation at lower speeds may be slightly less smooth.

1. Intermittent speed and intermittent pressure drop must not occur simultaneously!
2. Recommended filtration is per ISO cleanliness code 20/16. A nominal filtration of 25 micron or better.
3. Recommended 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 mm²/s at operating temperatures.
5. Recommended maximum system operating temperature - 82°C.
6. To assure optimum motor life fill with fluid prior to loading and run at moderate load and speed for 10-15 min.

SHAFT EXTENSIONS

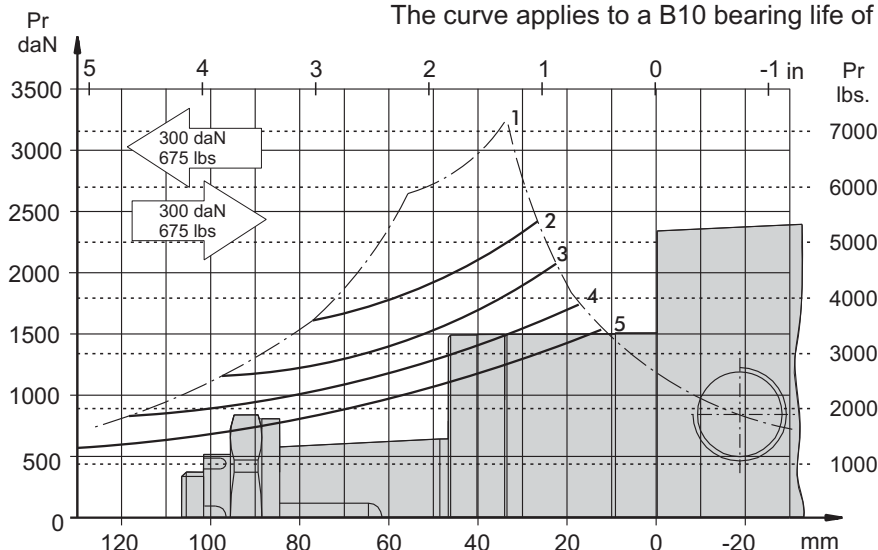
KB - tapered 1:10, Parallel key B6x6x20 DIN 6885
Max. Torque 77 daNm [6815 lb-in]

OB - tapered 1:8 SAE J501, Parallel key 5/16"x5/16"x1 1/4" BS46
Max. Torque 77 daNm [6815 lb-in]



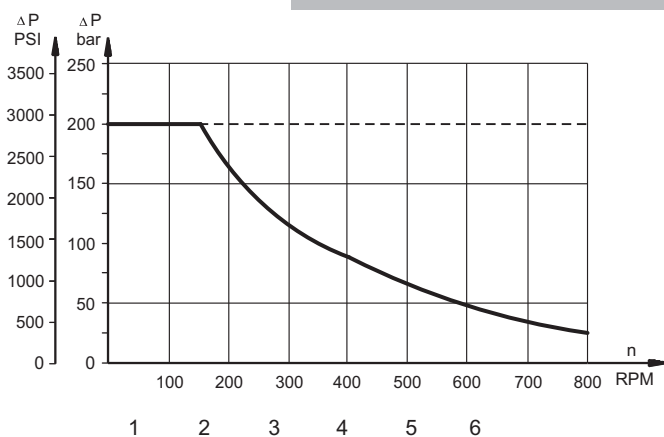
PERMISSIBLE SHAFT LOADS

The curve applies to a B10 bearing life of 2000 hours.



1. Permissible radial shaft load
2. Drawing by n= 50 rpm
3. Drawing by n=100 rpm
4. Drawing by n=200 rpm
5. Drawing by n=400 rpm

MAX. PERMISSIBLE SHAFT SEAL PRESSURE



- - continuous operations
- - - - - intermittent operations

If the application requires the motor rotation in one direction mainly we recommend selecting the relevant motor with standard rotation **CW version** (clockwise rotation) or reverse rotation **CCW version** (counter clockwise rotation). Please note that the **B**-port is connected to the area of the shaft seal.

MEW

Pos.1 - Displacement code

- 100** - 99,8 cm³/rev [6.09 in³/rev]
- 125** - 122,5 cm³/rev [7.48 in³/rev]
- 160** - 153,6 cm³/rev [9.37 in³/rev]
- 200** - 195,8 cm³/rev [11.95 in³/rev]
- 250** - 245,0 cm³/rev [14.95 in³/rev]
- 315** - 306,0 cm³/rev [18.67 in³/rev]

Pos.2 - Shaft Extensions

- KB** - ø35 tapered 1:10, Parallel key 6x6x20 DIN6888
- OB** - ø1¹/₄" tapered, Parallel key ⁵/₁₆"x⁵/₁₆"x1¹/₄" BS46

Pos.3 - Port Size/Type

- 2** - G1/2, ISO 228
- 4** - 7/8-14UNF-2B, SAE J1926-1

Pos.4 - Rotation

- omit - Standard Rotation
- R** - Reverse Rotation

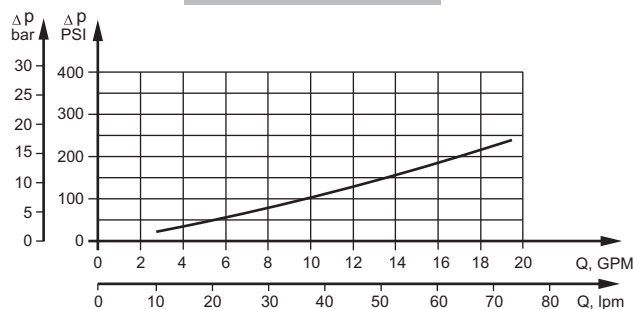
Pos.5 - Option (Paint)*

- omit - no Paint
- P** - Painted
- PC** - Corrosion Protected Paint

Pos.6 - Design Series

- omit - Factory specified

Pressure Losses



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

NOTE:

The hydraulic motors are manganophosphatized as standard.



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