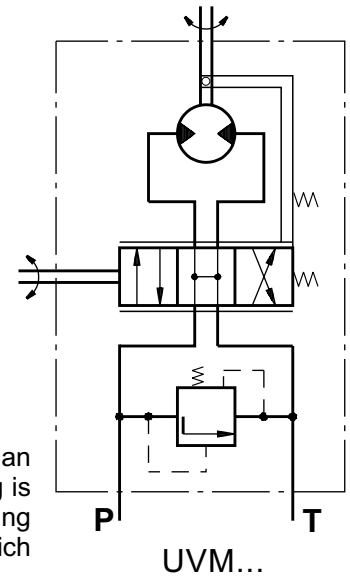


# TORQUE AMPLIFIERS TYPE UVM...



The M+S Hydraulic UVM Torque Amplifiers amplify the applied torque to the control shaft and thus ease the running. The M+S Hydraulic UVM Torque Amplifiers amplify the applied torque to the control shaft and thus ease the running of various transport vehicles such as:

- agricultural and wood working machines;
- road rollers and road cleaning machines;
- fork-lift trucks and construction machinery;



The totally transferred power in terms of output torque is up to 1.47 HP [1,1 kW].

The UVM torque amplifiers with their simple design, consisted of a pump and an amplifier, ensure 40 times higher output torque than the applied one. The amplifying is achieved as follows; by rotating the input shaft to the left or right the spool and the bushing are displaced, and the hydraulic flow enters the system turning the gerotor set, which transfers the already amplified torque to the output shaft.

One advantage of the UVM torque amplifier is that it allows manual steering in cases of engine (pump) failure.

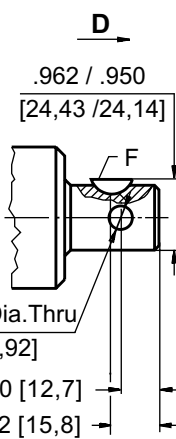
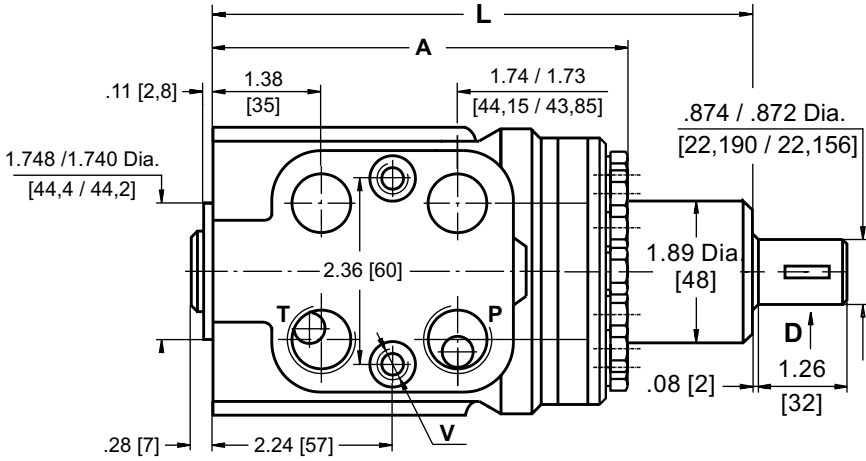
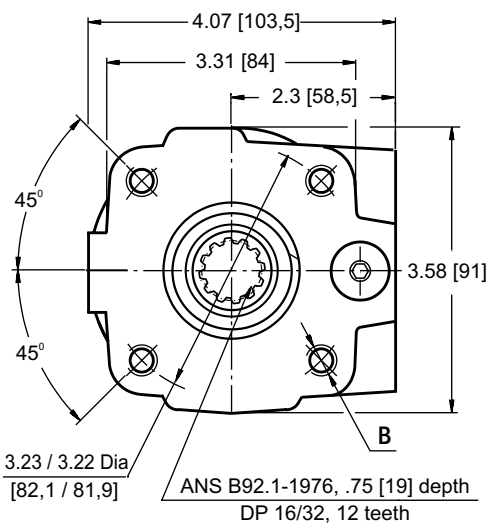
## SPECIFICATION DATA

Parameters		Type	
		UVM 100	UVM 160
Displacement	in. <sup>3</sup> /rev.	6.04	9.67
	[cm. <sup>3</sup> /rev.]	[99,0]	[158,4]
Rated Flow*	GPM	2.6	4.2
	[lpm]	[10]	[16]
Rated Pressure**	PSI	1015	1015
	[bar]	[70]	[70]
Input Torque	in - lb	31...44	31...44
	[daNm]	[0,35...0,5]	[0,35...0,5]
Max. Input Torque	in - lb	178	178
	[Nm]	[20]	[20]
Torque Output at 1015 PSI [70 bar]	in - lb	708	1062
	[Nm]	[80]	[120]
Pressure Drop between P and T at Rated Flow	PSI	14.5...29	23.2...36.3
	[bar]	[1... 2]	[1,6...2,5]
Max. Speed of Rotation at Rated Flow and Pressure	RPM	100	100
Max. Continuous Pressure in Line T	PSI	290	290
	[bar]	[20]	[20]
Weight	lb	12.8	13.7
	[kg]	[5,8]	[6,2]

\* Rated Flow at 100 RPM

\*\* Pressure Settings are at Rated Flow (as in the table ) and viscosity 105 SUS [21 mm<sup>2</sup>/s] at 122°F [50° C].

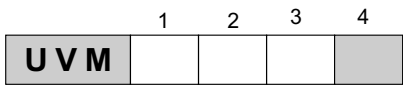
**DIMENSIONS AND MOUNTING DATA**



Dimensions	Type	
	UVM 100	UVM 160
A in. [mm]	5.64 [143,3]	5.96 [151,3]
L in. [mm]	7.13 [181,2]	7.45 [189,2]

Code	Ports - P, T Thread	Column Mounting Thread - B	Port Mounting Thread - V
A	3/4 - 16 UNF O-ring .67 [17] depth	4 x 3/8 - 16 UNC .62 [15,7] depth	2 x 3/8 - 24 UNF .56 [14,2] depth
-	G1/2 .67 [17] depth	4 x M10 .71 [18] depth	2 x M10x1 .63 [16] depth
M	M22x1,5 .67 [17] depth	4 x M10 .71 [18] depth	2 x M10x1 .63 [16] depth

**ORDER CODE**



**Pos.1 - Displacement code**

- 100** - 6.04 [99,0] in<sup>3</sup>/rev [cm<sup>3</sup>/rev]
- 160** - 9.67 [158,4] in<sup>3</sup>/rev [cm<sup>3</sup>/rev]

**Pos.2 - Ports**

- omit - BSPP (ISO 228)
- A** - SAE (ANSI B 1.1 - 1982)
- M** - Metric (ISO 262)

**Pos.3 - Option (Paint)\***

- omit - No Paint
- P** - Painted Low Gloss Color
- PC** - Corrosion Protected Paint

**Pos.4 - Design Series**

- omit - Factory specified

Notes: \* Colour at customer's request.  
The steering units are mangano-phosphatized as standard.