

XCEL⁴⁵ Steering Control Unit

XCEL 45-100

Product Nr. 401-1512-01

Serial Nr. 140312552



Steering Control Units

The Steering Control Unit (SCU) is fully fluid linked. This means there is no mechanical connection between the steering unit, the pump and the steering cylinders. The unit consists of a manually operated directional control servo valve and feedback meter element in a single body. It is used principally for fluid linked power steering systems but it can be used for some

servo-type applications or any application where visual positioning is required. The close coupled, rotary action valve performs all necessary fluid directing functions with a small number of moving parts. The manually actuated valve is coupled with the mechanical drive to the meter gear. The control is lubricated and protected by the power fluid in the system and can operate in many environments.

Advantages

Steering control units offer the following advantages:

- Minimizes steering linkage—reduces cost, provides flexibility in design.
- Provides complete isolation of load forces from the control station—provides operator comfort.
- Provides continuous, unlimited control action with very low input torque.

- Provides a wide selection of control circuits and meter sizes.
- Can work with many kinds of power steering pumps or fluid supply.

Features

- Open Center
- Load Sensing
- Close Center
- Q-amp
- Bolt on priority
- Dual Gerotor
- Integral Valves
- Cylinder Dampening

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The XCEL⁴⁵ steering unit is an innovative steering platform that provides smooth and reliable steering.

The XCEL⁴⁵ is designed for mid-range flow applications.

The XCEL⁴⁵ has robust housing design which provides 190 bar max [2755 psi] system pressure capability for all models

Applications

- Construction Machinery
- Agriculture Machinery
- Heavy-Duty Equipment
- Marine
- Forestry Machinery
- Mining Equipment

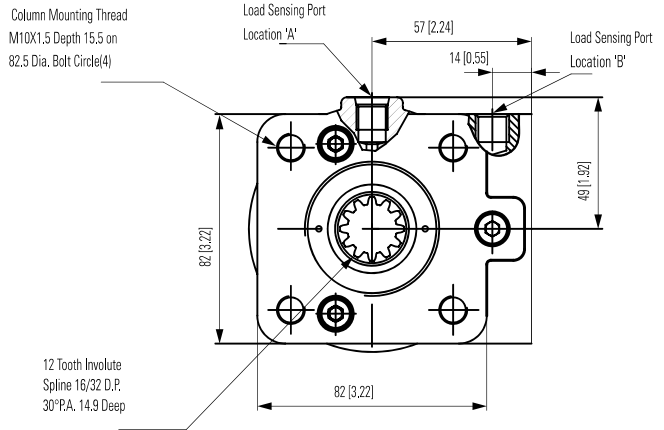
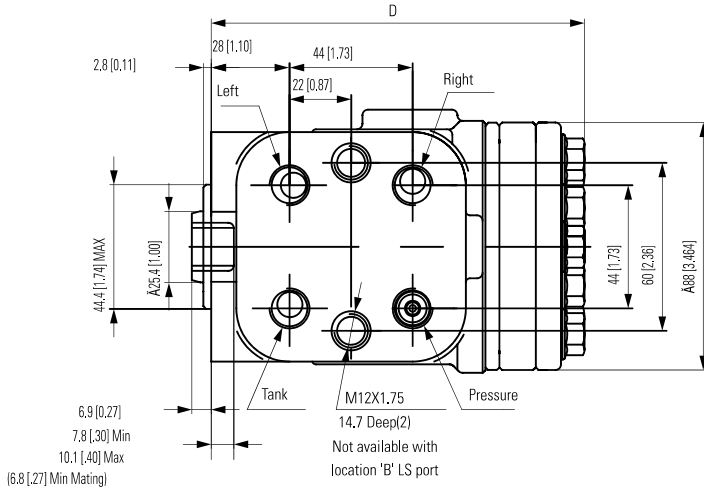
Specification Data

Max. System Pressure	190 bar	[2755 psi]
Max. Back Pressure	35 bar	[500 psi]
Rated Flow		
50 - 125cc/r	7.5-15 LPM	[2-4 GPM]
160 - 250cc/r	15-30 LPM	[4-8 GPM]
320 - 500cc/r	30-45 LPM	[8-12 GPM]
Input Torque		
Powered Standard	1.7-2.8 Nm	
Powered Low Torque	1.3-2.2 Nm	
Powered Supper Low Torque	<1.4 Nm	
Non-powered	136 Nm	
Max. System Operating Temperature	93°C	[200°F]
Max. Differential Between Steering Unit and Other System Temperature	28°C	[50°F]
Fluid		
ATF Type A and Most Petroleum Based Fluids See Eaton Technical Bulletin 3-401		
Recommended Filtration:		
ISO 20/18/13 cleanliness level		

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Installation Dimensions

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Load Sensing Port Options:

Option A- Only used for LS units with LS relief valve in priority valve

Option B- Only used for LS units with LS relief valve in steering unit

Port	Load Sensing Thread	Flange Thread	Displacement cm ³ /rev	Dimension B mm
M18X1.5	M12X1.5	M10X1.5	50	126.5
M18X1.5 O-ring	M12X1.5 O-ring	M10X1.5	63	128
M20X1.5	M12X1.5	M10X1.5	80	130.5
M20X1.5 O-ring	M12X1.5 O-ring	M10X1.5	100	133
G-1/2 BSP	G-1/4-19 BSP	M10X1.5	125	136
3/4-16 UNF	7/16-20 UNF	M10X1.5	160	141
3/4-16 UNF	7/16-20 UNF	3/8-16 UNC	200	146
			250	152
			320	162
			400	172
			500	184