

Data Sheet

# Hydraulic Steering Unit

## VSP

For small, low HP tractors, or any application needing a steering unit with standard options, good performance and manual steering capabilities.

The VSP steering product combines low cost with good performance, high quality and reliable delivery.

VSP meets vehicle requirements with the same high support and service level as any other Danfoss product. This means you can reduce vehicles cost, without jeopardizing Quality, Delivery and Support.

#### Applications:

- Tractors
- Forklift trucks
- Backhoe loaders
- Telehandlers
- Combines

#### Features

- Variants: ON, OR, LS
- Displacements: 50-400 cc/rev
- One or more built-in valve functions: pressure relief, shock, suction and check valve in pump connection and in LS line
- Port threads as required to DIN, ISO or SAE standards
- Low steering torque
- Low pressure drop



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Comprehensive technical literature online  
at [powersolutions.danfoss.com](http://powersolutions.danfoss.com)

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**VSP program**

VSP steering unit will be available in

- Open center
- Load sensing
- Reaction and non reaction versions

**VSP Specifications**

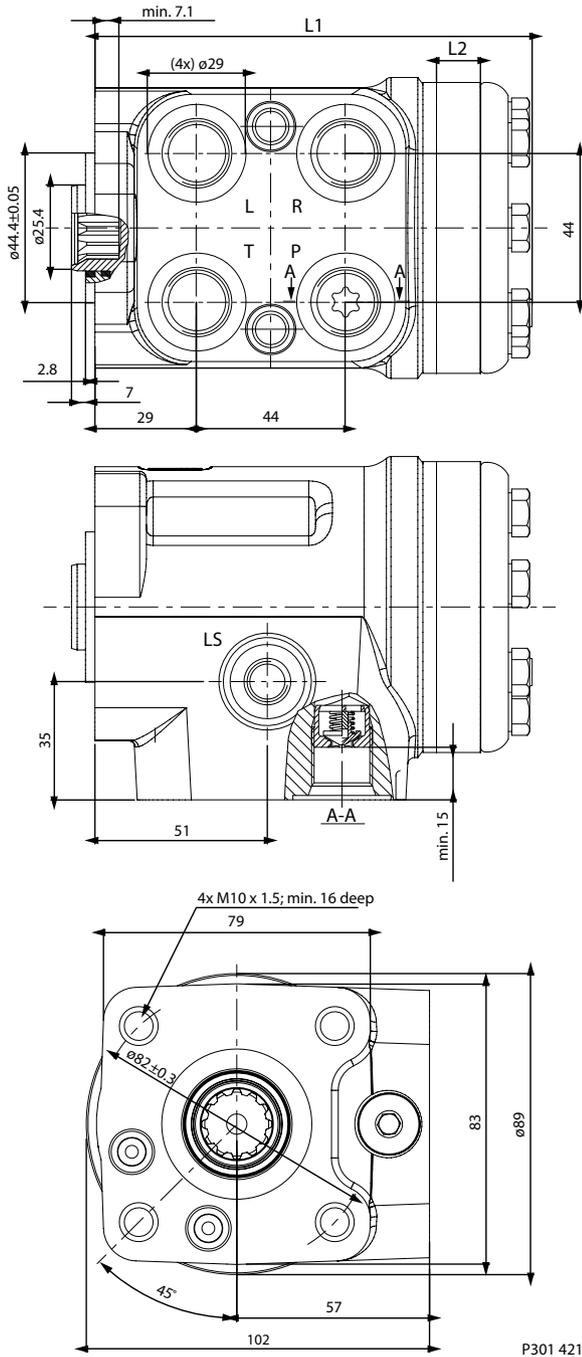
<b>Displacement:</b>	50, 70, 80, 100, 125, 160, 200, 250, 315 and 400 cc/rev		
<b>Max. system pressure/ max P-T port pressure</b>	170 bar [2465 psi]; 190 bar [2755 psi] (High Spec)		
<b>Max. back pressure/ max. T-port pressure</b>	20 bar [290 psi]; 30 bar [435 psi] (High Spec)		
<b>Max. flow, Open center versions</b>	50 l/min [13.21 US gal/min]		
<b>Input torque (for standard neutral spring kit 150-4209)</b>	0.8 - 4 N·m [7.08-35.40 lbf·in]		
<b>Valve functions</b>	Check valve for manual steering standard on all versions. Possibility of pressure relief, shock and suction valves, check valve in P and in LS (dynamic only)		
<b>Port options</b>		P, T, L, R	LS
	DIN 3852-2	BSP G 1/2"	G 1/4"
	ISO 6149-1	M18x1.5	M12x1.5
	ISO 11926-1	3/4-16 UNF	7/16 -20 UNF
<b>Neutral pressure drop, ON/OR versions</b>	3 bar [43.5 psi] at 20 l/min [5.28 US gal/min] and at viscosity 21 cSt		

**VSP Dimensions**

Type	L1, mm [in]	L2, mm [in]	Weight kg [lb]
<b>VSP 50</b>	125 [4.92]	6.5 [0.26]	5.2 [11.46]
<b>VSP 70</b>	127 [4.99]	9.1 [0.36]	5.3 [11.68]
<b>VSP 80</b>	128 [5.04]	10.4 [0.41]	5.3 [11.68]
<b>VSP 100</b>	131 [5.16]	13.0 [0.51]	5.4 [11.90]
<b>VSP 125</b>	134 [5.28]	16.2 [0.64]	5.5 [12.13]
<b>VSP 160</b>	139 [5.47]	20.8 [0.82]	5.6 [12.35]
<b>VSP 200</b>	144 [5.67]	26.0 [1.02]	5.8 [12.79]
<b>VSP 250</b>	150 [5.91]	32.5 [1.28]	6.0 [13.23]
<b>VSP 315</b>	159 [6.26]	40.9 [1.61]	6.2 [13.67]
<b>VSP 400</b>	170 [6.69]	52.0 [2.05]	7.0 [15.43]

For higher maximum back pressure as stated, please contact Danfoss Sales Organization.

SVP Dimensions



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