

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

Comprehensive technical literature online
at powersolutions.danfoss.com



VSP program

VSP steering unit will be available in

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

VSP Specifications

Displacement:	50, 70, 80, 100, 125, 160, 200, 250, 315 and 400 cc/rev		
Max. system pressure/ max P-T port pressure	170 bar [2465 psi]; 190 bar [2755 psi] (High Spec)		
Max. back pressure/ max. T-port pressure	20 bar [290 psi]; 30 bar [435 psi] (High Spec)		
Max. flow, Open center versions	50 l/min [13.21 US gal/min]		
Input torque (for standard neutral spring kit 150-4209)	0.8 - 4 N·m [7.08-35.40 lbf·in]		
Valve functions	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)		
Port options		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
Neutral pressure drop, ON/OR versions	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]
VSP 50	125 [4.92]	6.5 [0.26]	5.2 [11.46]
VSP 70	127 [4.99]	9.1 [0.36]	5.3 [11.68]
VSP 80	128 [5.04]	10.4 [0.41]	5.3 [11.68]
VSP 100	131 [5.16]	13.0 [0.51]	5.4 [11.90]
VSP 125	134 [5.28]	16.2 [0.64]	5.5 [12.13]
VSP 160	139 [5.47]	20.8 [0.82]	5.6 [12.35]
VSP 200	144 [5.67]	26.0 [1.02]	5.8 [12.79]
VSP 250	150 [5.91]	32.5 [1.28]	6.0 [13.23]
VSP 315	159 [6.26]	40.9 [1.61]	6.2 [13.67]
VSP 400	170 [6.69]	52.0 [2.05]	7.0 [15.43]

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

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