

Data Sheet

# Hydraulic Steering Unit

## OSPU

The OSPU is the latest addition to the Danfoss dual displacement steering product line, complementing the OSPD for responsive, easily maneuverable machines of most sizes. Each unit in the complete steering range combines superior performance with the highest standards of safety, operator comfort and low noise levels.

Danfoss has designed the OSPU as an alternative to dual displacement steering units. Due to its unique flow-amplifying capability (up to 1:4), the unit delivers best-in-class manual steering over a wide application range – the compact design easing installation.

A new progressive displacement option secures smooth steering performance in both slow and fast steering modes, while maintaining optimal controllability, precision and operator comfort. The steadily increasing flow, which corresponds to steering speed, contributes to reduced operating costs.



### Features

#### Linear amplification versions

- Displacement independent of steering speed
- Amplification factors: 1:2, 1:3 or 1:4

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

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#### Progressive amplification versions

- Steady increase in progressive flow at higher steering speed
- Increases productivity and driver comfort

#### Installation Benefits

- Small installation dimensions

#### Applications

- Tractors
- Backhoe loaders
- Combines
- Telescopic handlers
- Wheel loaders etc.



**OSPU program**

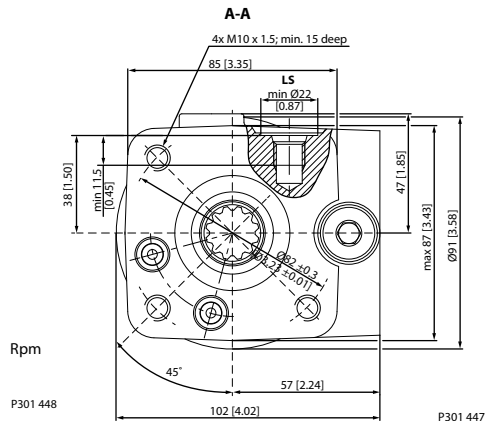
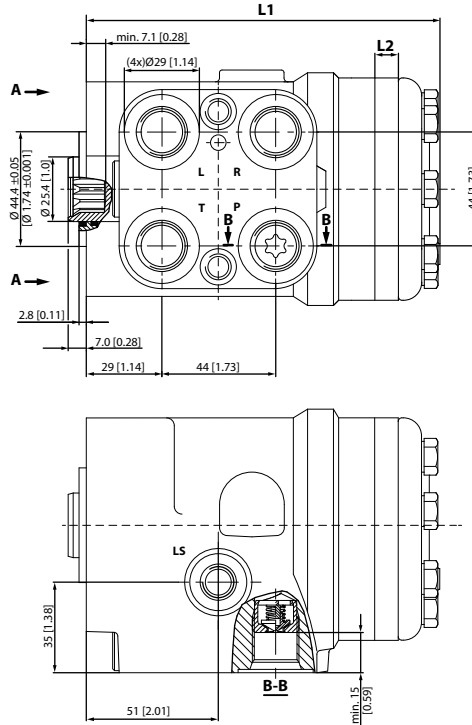
- LS Dynamic (Load Sensing Non Reaction)

*OSPU specifications*

<b>Displacement, gear sets (Emergency steer)</b>	60, 70, 80, 100 or 125 cm <sup>3</sup> /rev		
<b>Amplification factors</b>	Linear	1:2, 1:3 or 1:4	
	Progressive	1:2 (at 100 rpm steering wheel speed)	
<b>Displacement amplified</b>	120 - 500 cm <sup>3</sup> /rev [7.32 - 30.51 in <sup>3</sup> /rev]		
<b>Max. system pressure/ max. P-T port pressure</b>	210 bar [3045 psi]*		
<b>Max. back pressure / max T-port pressure</b>	40 bar [580 psi]		
<b>Max. steering flow</b>	50 l/min [13.21 US gal/min]		
<b>Input torque</b>	0.8 - 4 N·m [7.08-35.40 lbf·in]		
<b>Valve functions possible</b>	Pressure relief valve Shock and suction valves Check valve in P Check valve function in LS		
<b>Port options</b>		P, T, L, R	LS
	DIN 3852-2	G 1/2	G 1/4
	ISO 6149-1	M18x1.5	M12x1.5
	ISO 11926-1	3/4-16 UNF	7/16-20 UNF

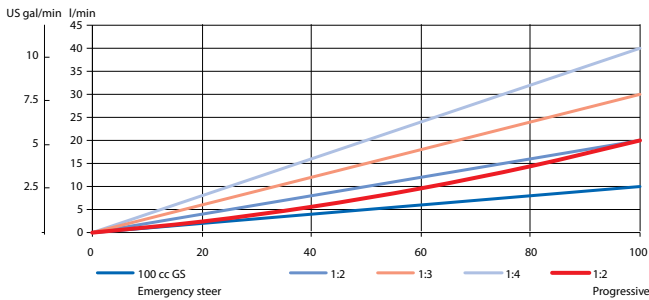
\* OSPU with small gear wheel set and high pressure will have relative high slippage values (slippage will be on level, for example, with OSPC with same gear wheel set)

Type	L <sub>1</sub> mm [in]	L <sub>2</sub> mm [in]	Weight kg [lb]
60/xxx	137 [5.39]	7.8 [0.31]	5.3 [11.68]
70/xxx	138 [5.43]	9.1 [0.36]	5.4 [11.90]
80/xxx	139 [5.47]	10.4 [0.41]	5.5 [12.13]
100/xxx	142 [5.59]	13.0 [0.51]	5.6 [12.35]
125/xxx	145 [5.71]	16.2 [0.64]	5.8 [12.79]



**OSPU characteristic**

Metered out flow for OSPU 100 shown with amplification factors possible.



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