

Data Sheet

Steering

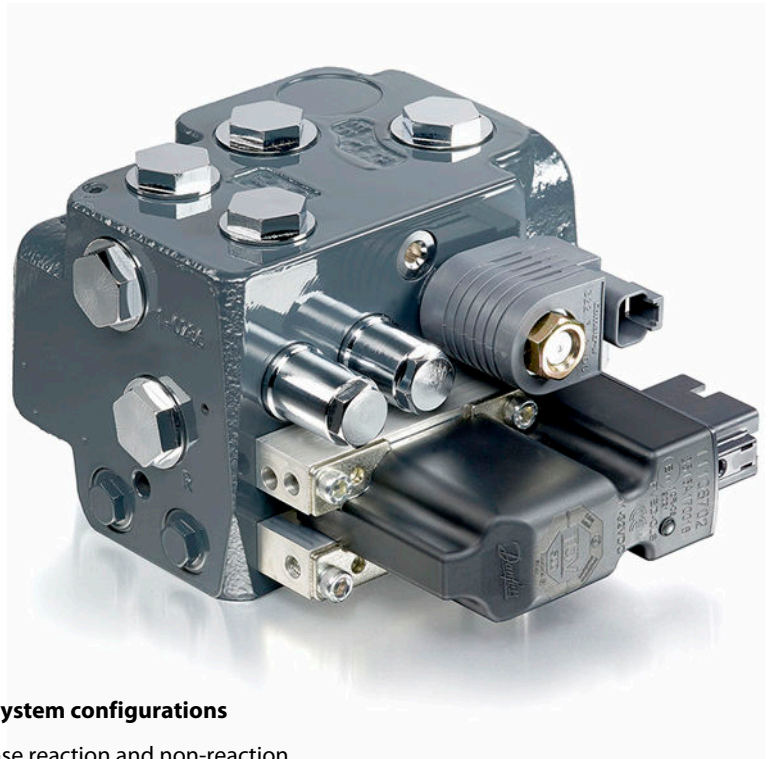
EHi Steering Valve

Danfoss Electrohydraulic In-line Steering Valve (EHi) is intended for off-road use. The EHi is designed for easy integration in new vehicles, as well as upgrading existing vehicles.

EHi with PVED-CLS actuator module form a fail-safe steering valve, category 3 according to ISO 13849-1. EHi fitted with PVED-CLS actuator, as well as a full steering subsystem specification, has a 3rd party certification available.

The EHi is a flexible alternative to Danfoss OSPE, for vehicles where space around the steering unit is particularly limited.

The EHi may be applied for fail-safe Steer-by-Wire applications, joystick or mini wheel for slow moving vehicles. Four-wheel steering, the EHi may be applied for steering the rear axle, for vehicles where fail-safe operation is acceptable.



Features

Valve options

- Integrated priority valve, 45 or 90 l/min
- Flow range selections 12, 20, 30, 40, 50 or 70 l/min
- Port thread metric DIN 6149-1

Control options

- Full feature steering and safety controller PVED-CLS
 - Auto guidance ISO 11783 – Variable displacement / quick steering
 - Joystick interface – Mini wheel interface
 - Safety functions – PLd / SIL2
 - Hydraulic disengage – CAT 3 fail-safe steering
- CAN bus - flow command PVED-CC
- Analogue ratio-metric PVES

Hydraulic system configurations

- Load sense reaction and non-reaction
- Load sense static and dynamic
- Open center reaction and non-reaction
- Closed center

Compliance (with PVED-CLS)

- IEC 61508-1(ed.2) (SIL2)
- IEC 61508-2(ed.2) (SIL2)
- IEC 61508-3(ed.2) (SIL2)
- ISO 25119-1:2018
- ISO 25119-2:2019
- ISO 25119-3:2018
- ISO 25119-4:2018
- ISO 13849-1:2008 (up to Cat 3, PLd)
- ISO 13849-2:2012 (up to Cat 3, PLd)

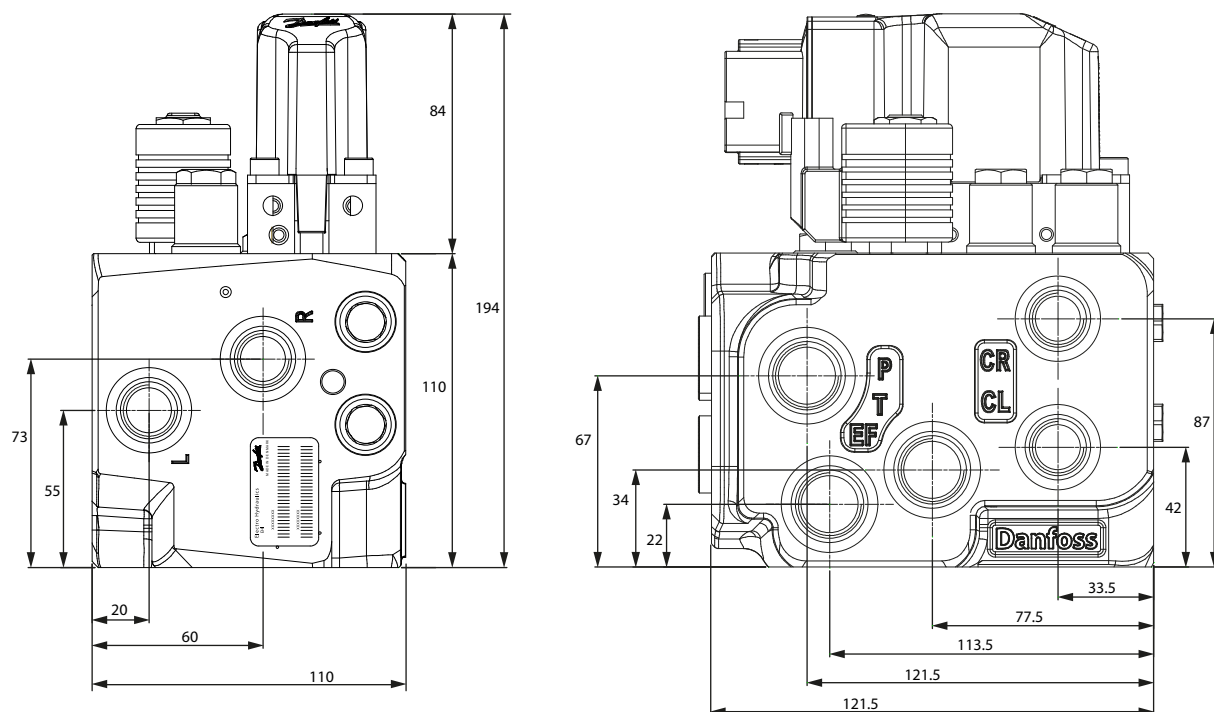
Comprehensive technical literature is online at www.danfoss.com

Data Sheet

EHi Steering Valve

Dimensions

Outline dimensions in millimeters



rp1484516161594

Technical data

Steering flow	12, 20, 30, 40, 50, 70 l/min
Max. system pressure	210 bar (280 bar)
Max. back pressure (T-port)	25 bar
Priority valve flow	45 and 90 l/min
PVE actuators	PVED-CLS, PVED-CC, PVES
Weight	11.2 kg (24.7 lbs).

[illegible]

Contact your local Danfoss Power Solutions representative.

EHi standard configurations

- OEM installation
- SBW fail-safe
- Rear axle / 4WS
- GPS universal

Configurations	OEM installation						SBW / 4WS	4WS	GPS Universal	
	EHi-1	EHi-2	EHi-3*	EHi-4	EHi-5	EHi-6	EHi-7	EHi-8	EHi-9 ¹	EHi-10 ¹
Hydraulic Circuit	Load Sensing	Open Center	Closed Center	Load Sensing	Load Sensing Reaction	Load Sensing Reaction	SBW fail-safe / 4 Wheel Steering	4 Wheel Steering	Load Sensing (Static and Dynamic) With/Without Reaction	Open Center With/Without Reaction
Feature										
EH w. PVES, D CC, CLS	•	•	•	•	•	•	•	•	•	•
Cut-off valve	•	•	•	•	•	•	•	•	•	•
Relief valve	•	•	•	•	•	•	•	•	•	•
Priority valve		•	•	•	•		•	•		•
Shock-suction valves					•	•	•	•	•	•
PVFC LS resolver valve	•			•	•	•			•	•
Reaction Switch Valve for reaction (RSV)					•	•			•	•
OSP override on RSV					•	•			•	•
LS shuttle (SBW or 2WS)								•		
EF and T internally connected				•						
Disengage without SASA (hydraulic disengage)**									•	•
Electrical disengage, for example, by SASA	•	•	•	•	•	•	•	•		

* Contact Danfoss Power Solutions for information.

** Variable steer mode is not available when using hydraulic disengage.