

Data Sheet

Proportional Valve

PVX

With the introduction of our new PVX proportional valve, Danfoss introduces an industry-changing advancement in valve technology for off-highway applications.

The PVX valve features a robust 2-spool hydraulic design with integrated software and sensors that enable intelligent valve configuration and superior control.

This unprecedented sophisticated valve solution will offer OEMs reduced time to market, decreased development costs, unsurpassed adaptive performance, higher energy efficiency and superior operator productivity.

To provide maximum system design flexibility, the PVX is designed as a sectional valve, supporting up to 12 functions.



Features

Main characteristics

- Max work port pressure 420 bar [6090 psi]
- Max Tank pressure 70 bar [1015 psi]
- Inlet flow rated 240 l/min [63.4 US gal]
- Oil port flow rated 180 l/min [47.5 US gal]

Inlet options

- LS pump control (PXP-CC)
- BSP threads (P and T 1")

Work section options

- BSP threads (A and B ¾", LS ¼")
- Single spool work section (PXBH)
- Two spool work section (PXBH)
- Zero leakage ports as an option (PXBZH)
- Integrated port pressure and temperature sensors
- Integrated spool position feedback
- Regenerative spool option
- Float spool option

Software controlled options

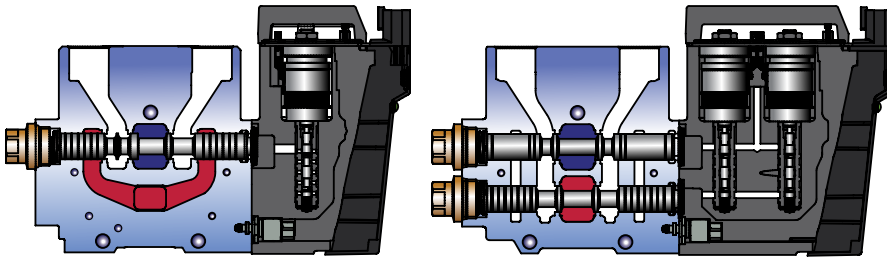
- CAN communication interface
 - J1939
 - CANOpen
- Enhanced on-board diagnostics
- Configurable margin pressure
- Flow-sharing with priority level as an option
- Active dampening feature
- Selectable operation mode
- Configurable spool functionalities
 - Progressivity, A/B port flow
- Individual LS A/B pressure limiting feature
- Meter-in/meter-out feature

Setup and Diagnostic

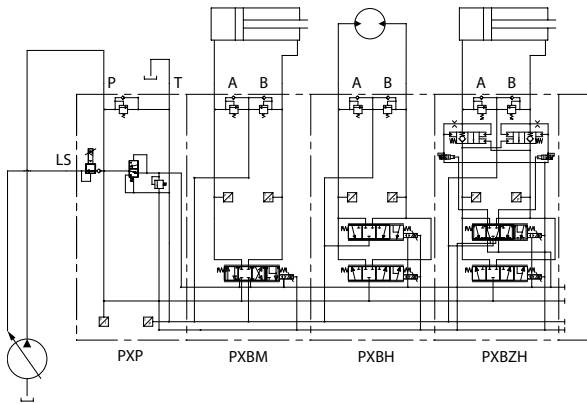
- PLUS+1[®] Compliant
- User-friendly application for easy configuration and diagnostics

Comprehensive technical literature online
at powersolutions.danfoss.com

Pictorial Cross-section Views



Hydraulic Schematic



Operation modes

Operational mode	Available in PXBM modules	Available in PXBH modules	Added feature when PXBH modules
1 - Meter-in	Yes	Yes	Adjustable back pressure
2 - Meter-out	Yes	Yes	Adjustable feed pressure
3 - Pressure control	No	Yes	
5 - Flow in/out A port	Yes	Yes	Pressure control on B port
6 - Flow in/out B port	Yes	Yes	Pressure control on A port
7 - Flow in/out A port (only one port connected)	Yes	Yes	
8 - Flow in/out B port (only one port connected)	Yes	Yes	
11 - Continuous Regen	No	Yes	
13 - Load detection Regen	No	Yes	
15 - Seperate metering (SmartMetering)	No	Yes	

Each work section can be individually configured to optimize controllability and performance.

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