



Data Sheet

# Proportional Valve Group PVG 16



The PVG 16 is a new member of the PVG family of valves. The PVG portfolio now comprises PVG 16, 32, 100 and 120 – providing flow up to 240 l/min.

A common feature is the modular build concept. This enables engineers to combine stacks of flexible slice-sections across the entire PVG family, making it possible to build up a valve group that meets precise requirements.

Furthermore, the compact external dimensions of the valve remain unchanged, no matter what combination is specified.

The PVG 16 is a hydraulic, load-sensing proportional valve, designed to give maximum flexibility in the design and build concept.

The PVG 16 is also designed as a load-sensing directional control valve, which helps improve application efficiency – reducing both cooling requirements and fuel expenses.

## Features

- 40 mm [1.575 in] PVB module width
- PVB with BSP and UNF threads
- Uncompensated basic modules
- P-channel check valve
- Shock valves
- PVM with or w/o adjustment screws
- PVH, hydraulic actuation
- PVEO and PVEA
- Combination with PVG 32, 100 and 120.

## Available spools:

- Closed or open neutral position
- Float
- Electrical/mechanical or hydraulic actuation
- 5, 10, 25, 40 or 60 l/min  
[1.32, 2.64, 6.60, 10.57 or 15.85 US gal/min].

**Technical Data**
*Technical parameters*

<b>Maximum pressure</b>	Port P continuous	350 bar <sup>1)</sup>	[5075 psi]	
	Port P intermittent	400 bar	[5800 psi]	
	Port A/B continous	380 bar	[5510 psi]	
	Port A/B intermittent	420 bar	[6090 psi]	
	Port T, static/dynamic	25/40 bar	[365/580 psi]	
<b>Oil flow rated</b>	Port P	140/230 l/min	[37/61 US gal/min]	
	Port A/B	60 l/min	[16 US gal/min]	
<b>Spool travel</b>	Deadband	± 1.5 mm	[± 0.06 in]	
	Proportional range	± 5 mm	± 0.2 in]	
	Float position	± 7.5 mm	[± 0.3 in]	
<b>Maximum internal leakage at 100 bar [1450 psi] and 21 mm<sup>2</sup>/s [102 SUS]</b>	A/B → T without shock valve	20 cm <sup>3</sup> /min	[1.85 in <sup>3</sup> /min]	
	A/B → T with shock valve (system setting 30 bar [435 psi])	25 cm <sup>3</sup> /min	[2.15 in <sup>3</sup> /min]	
<b>Oil temperature (inlet temperature)</b>	Recommended temperature	30 → 60 °C	[86 → 140 °F]	
	Minimum temperature	-30 °C	[-22 °F]	
	Maximum temperature	90 °C	[194 °F]	
<b>Ambient temperature</b>		-30 → 60 °C	[-22 → 140 °F]	
<b>Oil viscosity</b>	Operating range	12 - 75 mm <sup>2</sup> /s	[65 - 347 SUS]	
	Minimum viscosity	4 mm <sup>2</sup> /s	[39 SUS]	
	Maximum viscosity	460 mm <sup>2</sup> /s	[2128 SUS]	
<b>Filtration</b>	Maximum contamination (ISO 4406)	23/19/16		
<b>PVM regulating range</b>	Proportional	13.9°		
	Float position	22.3°		
<b>PVM operating force</b>	PVM + PVMD	Neutral position	2.2 ± 0.2 N·m	[5.0 ± 1.8 lbf·in]
		Maximum stroke	2.8 ± 0.2 N·m	[6.3 ± 1.8 lbf·in]
	PVM + PVE <sup>2)</sup>	Neutral position	2.2 ± 0.2 N·m	[5.0 ± 1.8 lbf·in]
		Maximum stroke	2.8 ± 0.2 N·m	[6.3 ± 1.8 lbf·in]
	PVM + PVH	Neutral position	2.7 ± 0.2 N·m	[23.9 ± 1.8 lbf·in]
		Maximum stroke	7.1 ± 0.2 N·m	[62.8 ± 1.8 lbf·in]
<b>PVH pressure</b>	Regulating range	5 – 15 bar	[75 – 220 psi]	
	Maximum pilot pressure	30 bar	[435 psi]	
	Maximum pressure on T-port	10 bar	[145 psi]	
<b>PVE input voltage <sup>3)</sup></b>	Supply	11 – 32 V <sub>DC</sub>		
	Regulating range	25 – 75% of supply voltage		
<b>PVE SP pin output voltage <sup>3)</sup></b>	Float	0,5 V <sub>DC</sub>		
	Flow to B-port	1.25 – 2.5 V <sub>DC</sub>		
	Neutral	2.5 V <sub>DC</sub>		
	Flow to A-port	2.5 – 3.75 V <sub>DC</sub>		
	Error	5 V <sub>DC</sub>		

<sup>1)</sup> With PVS1 end plate. Using PVS end plate maximum 300 bar [4351 psi].

<sup>2)</sup> PVE without voltage.

<sup>3)</sup> Voltage is measured between spool output pin and ground (GND).

**Technical Literature**
[PVG 16 Technical Information, L1214235.](#)

**Danfoss Power Solutions US Company**  
 2800 East 13th Street  
 Ames, IA 50010, USA  
 Phone: +1 515 239 6000

**Danfoss Power Solutions GmbH & Co. OHG**  
 Krokamp 35  
 D-24539 Neumünster, Germany  
 Phone: +49 4321 871 0

**Danfoss Power Solutions ApS**  
 Nordborgvej 81  
 DK-6430 Nordborg, Denmark  
 Phone: +45 7488 2222

**Danfoss Power Solutions**  
 22F, Block C, Yishan Rd  
 Shanghai 200233, China  
 Phone: +86 21 3418 5200

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