

## Data Sheet

# Load Independent Proportional Valve

## PVG 100

PVG 100 is a load independent proportional valve with flow up to 180 l/min [48 gpm] and pressures up to 350 bar [5076 psi]. It offers equitable flow sharing for precise control of multiple machine functions under varying load conditions and pressure requirements.

Building on the modular, flexible, and proven Danfoss load-sensing proportional valve concept, PVG 100 offers easy, fast configuration, thereby helping vehicle designers meet tight time-to-market deadlines. The new valve is positioned between the existing Danfoss PVG 32 and PVG 120 with flows up to 130 l/min [34.4 gal/min] and 240 l/min [63.4 gal/min] respectively.

PVG 100 optimizes system design for engineers who must incorporate new emissions restrictions by providing a more efficient hydraulic system that maximizes power and conserves energy. Typical applications include backhoes, telehandlers, wheel loaders, forklifts, and forestry equipment.



### Features

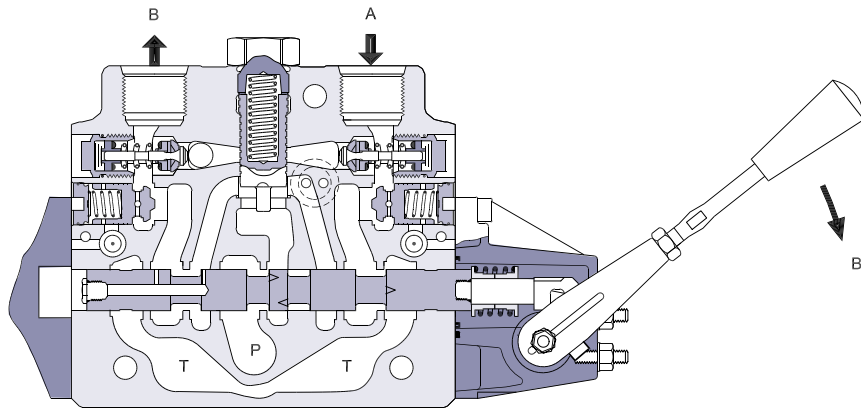
- Flow sharing for maximum controllability and safety. All sections will continue to function regardless of load differences and pump flow.
- Load-independent flow control for smooth operation and improved productivity.
- Load-sensing technology for higher efficiency, safety, reduced energy consumption, and longer system lifetime.
- Configurable as advanced electrically controlled proportional valve as well as load-sensing directional control valve.
- Modular design providing a wide range of configuration possibilities.
- Up to eight different sections per valve group. Maximum flow per section: 180 l/min [48 gpm].
- Can be configured in combination with our range of HIC hybrid modules and/or PVG 32 for maximum flexibility.
- Mechanical, hydraulic, and electrical actuation options.

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Comprehensive technical literature online  
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## Sectional Drawing PVB



157-749.10

## Technical Data PVG 100

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|---------------------------------------------------------------------------------------------------------------------------|-------------------------------|----------------------------|-----------------------------|
| Max. pressure                                                                                                             | Port P continuous             | 350 bar                    | [5075 psi]                  |
|                                                                                                                           | Port A/B                      | 350 bar                    | [5075 psi]                  |
|                                                                                                                           | Port T, static / dynamic      | 25 bar/40 bar              | [365/580 psi]               |
|                                                                                                                           | Port T0, static / dynamic     | 5 bar/10 bar               | [75/145 psi]                |
| Oil flow, rated (See characteristics,                                                                                     | Port P                        | 250 l/min                  | [66 US gal/min]             |
|                                                                                                                           | Port A/B, with press. comp.   | 180 l/min                  | [47.6 US gal/min]           |
| Spool travel                                                                                                              | Standard                      | ± 7 mm                     | [±0.28 in]                  |
| Spool travel, float position spool<br>P→B→F                                                                               | Proportional range            | 5.5 mm                     | [±0.22 in]                  |
|                                                                                                                           | Float position                | 8 mm                       | [±0.32 in]                  |
| Dead band, flow control spools                                                                                            | Standard                      | ± 1.5 mm                   | [±0.06 in]                  |
| Max. spool leakage at 100 bar [1450 psi] and 21 mm <sup>2</sup> /s [102 SUS]                                              | A/B to T, without shock valve | 20 cm <sup>3</sup> /min    | [1.85 in <sup>3</sup> /min] |
|                                                                                                                           | A/B to T, with shock valve    | 25 cm <sup>3</sup> /min    | [2.15 in <sup>3</sup> /min] |
| Max. internal leakage shock valve<br>pilot operated check valve at 200 bar [2900 psi] and 21 mm <sup>2</sup> /s [102 SUS] | A/B to T, without shock valve | 1 cm <sup>3</sup> /min     | [0.06 in <sup>3</sup> /min] |
|                                                                                                                           | A/B to T, with shock valve    | 6 cm <sup>3</sup> /min     | [0.37 in <sup>3</sup> /min] |
| Oil temperature (inlet temperature)                                                                                       | Recommended temperature       | 30 to 60°C                 | 30 to 60°C                  |
|                                                                                                                           | Min. temperature              | -30°C                      | [-22°F]                     |
|                                                                                                                           | Max. temperature              | +90°C                      | [194°F]                     |
| Ambient temperature                                                                                                       |                               | -30 to +60°C               | [-22 to +140°F]             |
| Oil viscosity                                                                                                             | Operating range               | 12 - 75 mm <sup>2</sup> /s | [65 - 347 SUS]              |
|                                                                                                                           | Min. viscosity                | 4 mm <sup>2</sup> /s       | [39 SUS]                    |
|                                                                                                                           | Max. viscosity                | 460 mm <sup>2</sup> /s     | [2128 SUS]                  |
| Filtration                                                                                                                | Max. contamination (ISO 4406) | 23/19/16                   | 23/19/16                    |