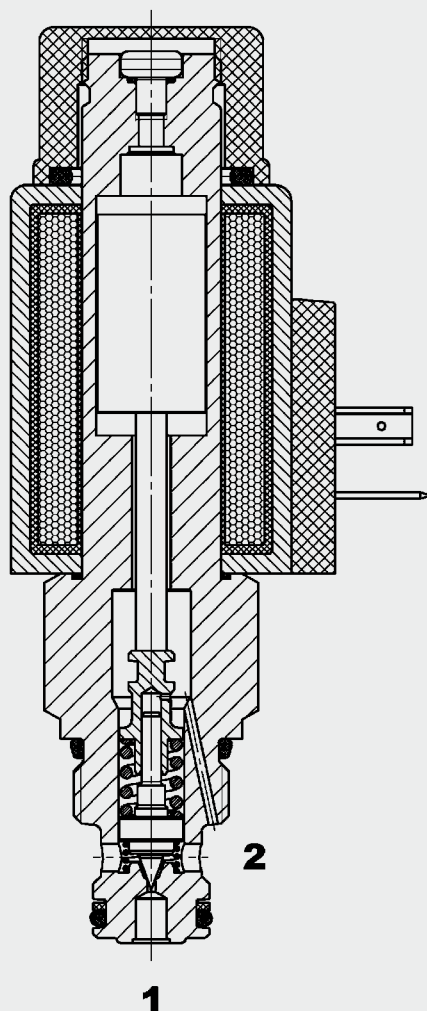


Up to 10 l/min
Up to 350 bar

FUNCTION



The PDBM06020 is a direct-acting, poppet type proportional pressure relief valve.

If the pressure at port 1 exceeds the setting defined by the electrical signal, the valve opens and allows flow from port 1 to tank port 2. As a function of the electrical signal, the relief pressure at port 1 can be changed steplessly.

Proportional Pressure Relief Valve Poppet Type, Direct-Acting, Metric Cartridge – 350 bar

PDBM06020

FEATURES

- Excellent stability throughout the entire flow range
- Excellent dynamic performance
- External surfaces zinc-plated and corrosion-proof
- Hardened and ground valve components to ensure minimal wear and extended service life
- Low pressure drop due to CFD optimized flow path
- Patented design for guided poppet
- Excellent dynamic performance
- Screen-protected metering orifice enhances safety

SPECIFICATIONS

Operating pressure:	max. 350 bar
Nominal flow:	Pressure range 070 bar...max. 10 l/min Pressure range 210 bar...max. 6 l/min Pressure range 350 bar...max. 4 l/min
Internal leakage:	< 0.1 cm ³ /min at 80% nominal pressure
Media operating temperature range:	min. -20 °C to max. +100 °C
Ambient temperature range:	min. -20 °C to max. +60 °C
Operating fluid:	Hydraulic oil to DIN 51524 Part 1 and 2
Viscosity range:	min. 7.4 mm ² /s to max. 420 mm ² /s
Filtration:	Class19/17/14 according to ISO 4406 or cleaner
Installation:	No orientation restrictions
MTTF _d :	150 years (see "Conditions and instructions for valves" in brochure 5.300)
Material:	Valve body: free-cutting steel Poppet: hardened and ground steel Seals: NBR (standard) FKM (optional, media temperature range -20 °C to +120 °C) Back-up rings: PTFE Coil: steel / polyamide
Cavity:	06020 metric
Weight:	Valve complete 0.44 kg Coil only: 0.22 kg

Electronic data:

Control currents:	850 mA; 18 Ohm (24V) 1750 mA; 4.1 Ohm (12V)
PWM frequency:	160 - 250 Hz
Hysteresis with dither:	2-4% of I _{max}
Repeatability:	≤ 1.5% of max. pressure range
Hysteresis:	≤ 2-4 % of I _{max}
Response sensitivity:	≤ 1% of I _{max}
Coil type:	Coil...-50-1836

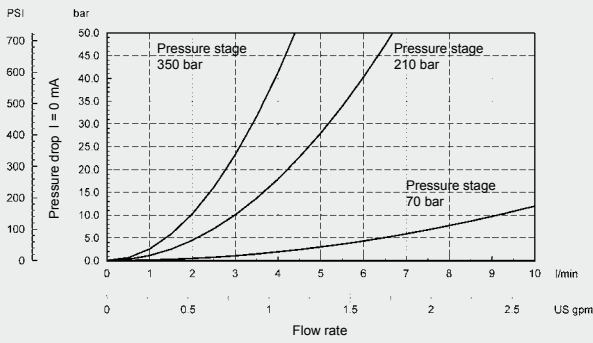
Note:

The PDBM06020 can also be supplied with an emergency pressure adjustment (version -02M). This allows a manual pressure adjustment of the valve if the electrical signal is interrupted. This adjustment should be used only in the case of electrical failure since the manual setting would be additive to the electrical setting and the system could be damaged when power is restored. In order to achieve optimal function, any trapped air should be vented using the venting screw on the face of the pole tube (not fitted to version -02M).

PERFORMANCE

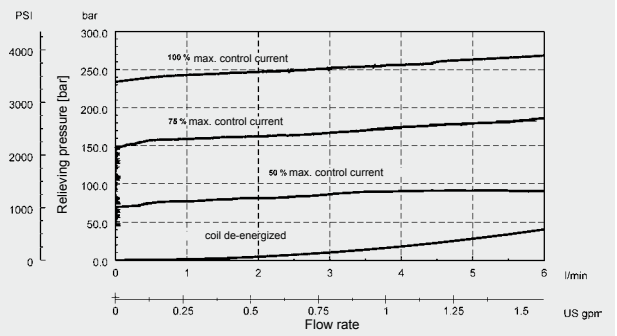
Δp -Q curve

Measured at $v = 34 \text{ mm}^2/\text{s}$, $T_{\text{oil}} = 46 \text{ }^\circ\text{C}$



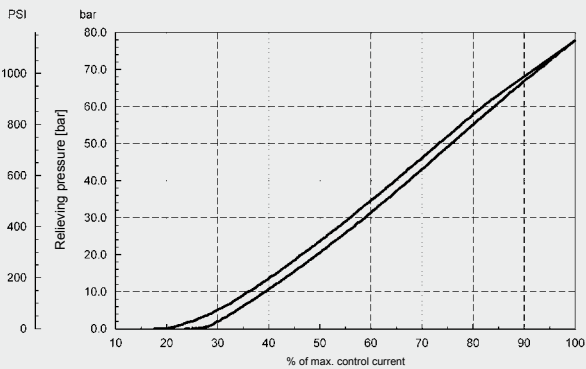
p-Q curve, Pressure range 210 bar

Measured at $v = 34 \text{ mm}^2/\text{s}$, $T_{\text{oil}} = 46 \text{ }^\circ\text{C}$



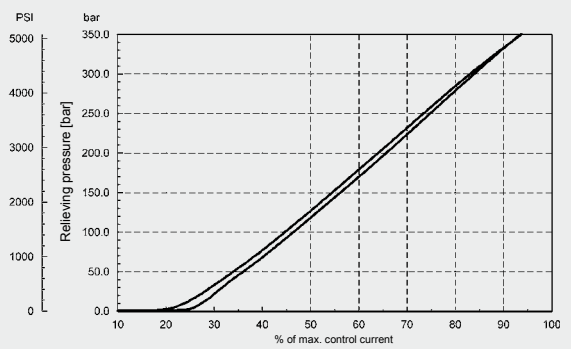
p-I curve, Pressure range 70 bar

Measured at $v = 34 \text{ mm}^2/\text{s}$, $T_{\text{oil}} = 46 \text{ }^\circ\text{C}$



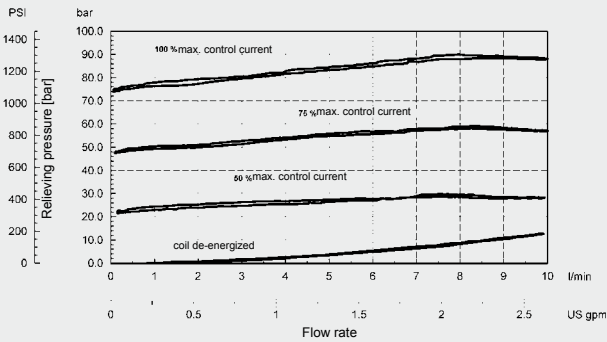
p-I curve, Pressure range 350 bar

Measured at $v = 34 \text{ mm}^2/\text{s}$, $T_{\text{oil}} = 46 \text{ }^\circ\text{C}$



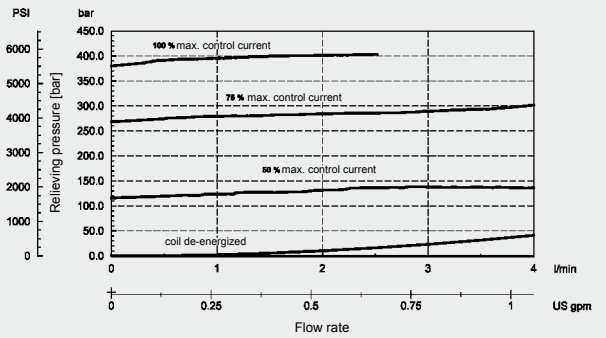
Q curve, Pressure range 70 bar

Measured at $v = 34 \text{ mm}^2/\text{s}$, $T_{\text{oil}} = 46 \text{ }^\circ\text{C}$



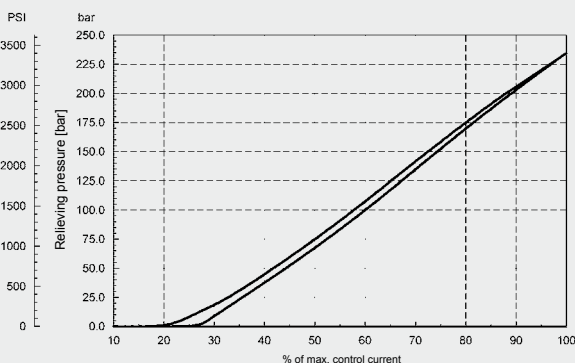
p-Q curve, Pressure range 350 bar

Measured at $v = 34 \text{ mm}^2/\text{s}$, $T_{\text{oil}} = 46 \text{ }^\circ\text{C}$



p-I curve, Pressure range 210 bar

Measured at $v = 34 \text{ mm}^2/\text{s}$, $T_{\text{oil}} = 46 \text{ }^\circ\text{C}$



NOTE

The information in this brochure relates to the operating conditions and applications described. For applications or operating conditions not described, please contact the relevant technical department. Subject to technical modifications.

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