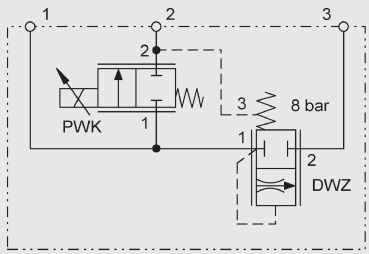
HYDAC INTERNATIONAL

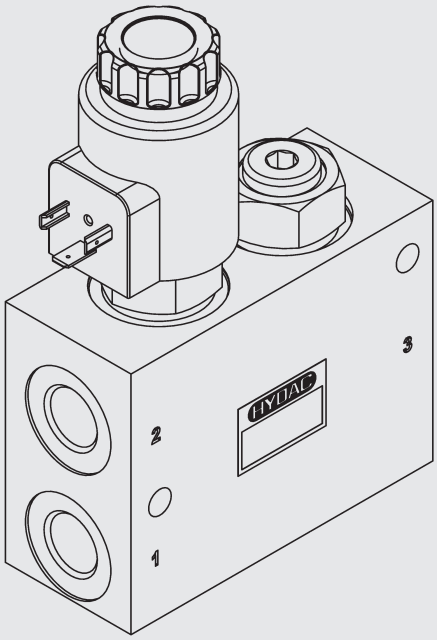



Up to 55 l/min
Up to 210 bar

# Proportional flow regulator Normally closed, in inline connection housing – 210 bar

PSRW12-301

## FUNCTION




The proportional flow regulator PSRW12-301 consists of the proportional needle valve PWK12120W in combination with the pressure compensator DWM12121Z in a shared housing.

It smoothly controls the flow from port 1 to port 2, independently of the pressure.

The energisation of the coil reduces or increases an orifice cross-section and thus controls the effective oil flow. The pressure compensator measures the pressure upstream and downstream from the throttling point and uses a closed-loop control process to keep the pressure loss constant across the needle valve.

## FEATURES

- Stepless adjustment of the effective oil flow, depending on the coil current
- Excellent stability throughout the entire flow range
- Low hysteresis
- Excellent dynamic performance
- External surfaces zinc-nickel plated or zinc-plated and corrosion-proof
- Hardened and ground internal valve components to ensure minimal wear and extended service life
- Low pressure drop due to CFD-optimised flow path

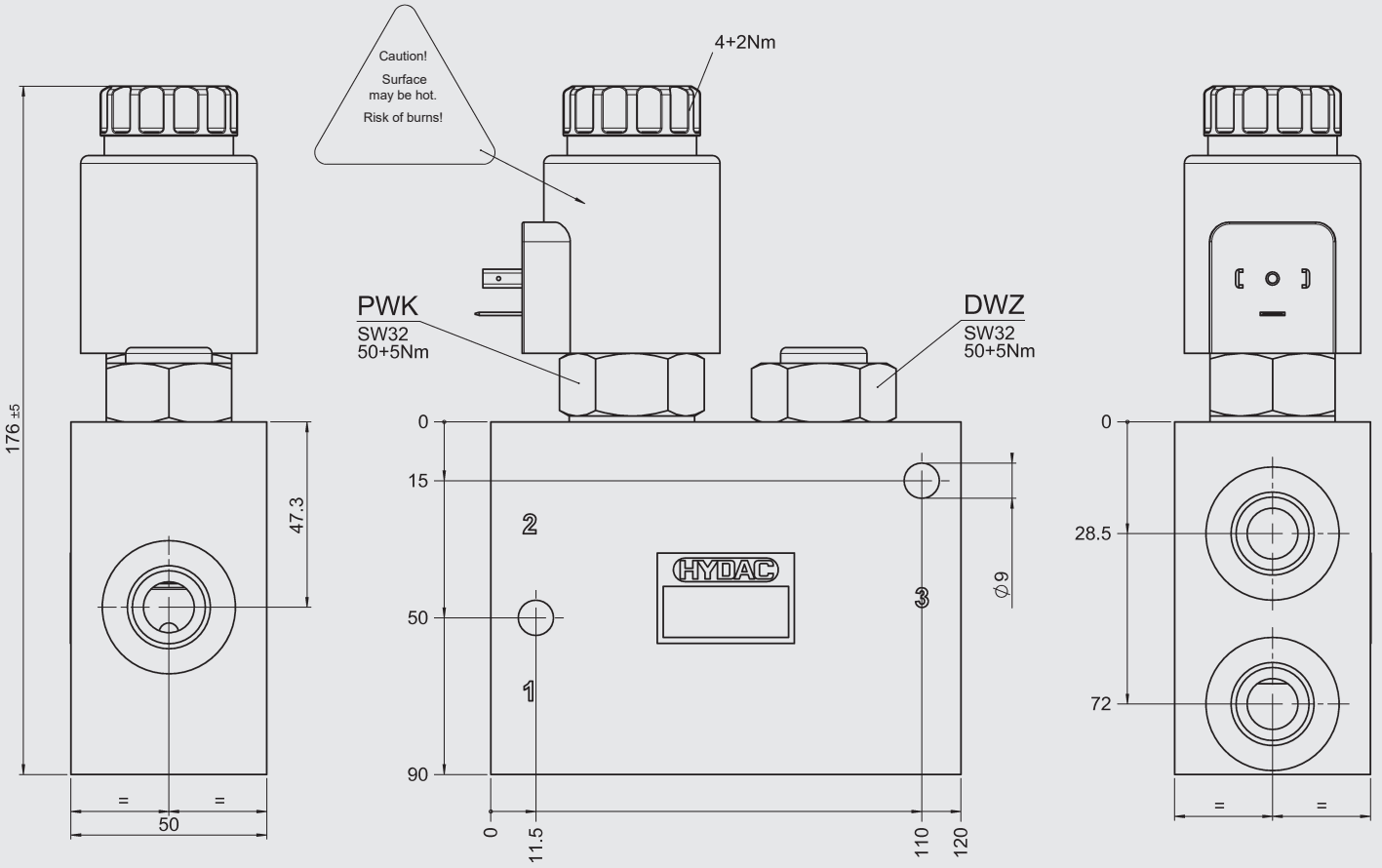
## SPECIFIACTIONS*

| | | |
|---|---|---|
| Operating pressure: | max. 210 bar | |
| Nominal flow: | max. 55 l/min | |
| Internal leakage: | max. 900 ml/min at 210 bar | |
| Media operating temperature range: | min. –20 °C to max. +120 °C | |
| Ambient temperature range: | min. –20 °C to max. +60 °C | |
| Operating fluid: | Hydraulic oil acc. to DIN 51524 Part 1 + Part 2 | |
| Viscosity range: | min. 10 mm²/s to max. 420 mm²/s | |
| Filtration: | Class 19/17/14 acording to ISO 4406 or cleaner | |
| $MTTF_d$: | 150 years | |
| Mounting position: | No orientation restrictions | |
| Materials: | Valve body: | High tensile steel |
| | Spool: | hardened and ground steel |
| | Seals: | FKM (standard)<br>NBR (optional, media temperature range -20 °C to +100 °C) |
| | Back-up rings: | PTFE |
| | Coil: | Polyamide / steel, zinc-plated |
| Cavity: | 12120 metric | |
| Weight: | Complete valve: | approx. 1.3 kg |
| | Coil: | approx. 0.35 kg |
| **Electronics** | | |
| Control currents: | 800 mA, 19.2 ohm (24 volt)<br>1600 mA 5.0 ohm (12 volt) | |
| Dither frequency: | approx. 120 Hz | |
| Coil duty rating: | 100% | |
| Hysteresis with dither: | ≤ 5 % at $I_{nom}$ | |
| Repeatability: | ≤ 1 % of $I_{nom}$ | |
| Reversal error: | ≤ 1 % of $I_{nom}$ | |
| Response sensitivity: | ≤ 1 % of $I_{nom}$ | |

**NOTICE:** In order to achieve optimal function, any trapped air should be vented using the air bleed screw on the face of the pole tube of the prop. needle valve.

* see “Conditions and Instructions for Valves” in brochure 53.000

## DIMENSIONS




Subject to technical modifications.

## MODEL CODE

**PSRW12 – 301 – 01 – V – 12 PG**

**Basic model**
Proportional flow regulator
(PWK12120W + DWM12121Z)
in inline connection housing

**Version**
301 = 3-way flow controller

**Type**
01 = standard, threaded connection 1/2“

**Seals**
V = FKM (standard)
N = NBR (optional)

**Coil voltage (Prop. needle valve)**
12 = 12 volt DC (5.0 ohm)
24 = 24 volt DC (19.2 ohm)
Other voltages on request

**Coil connectors 40-1836**
PG = DIN connector acc. to EN175301-803
PU = AMP Junior Timer, 2-pin, axial
PN = Deutsch connector, 2-pin, axial

**Standard models**

| Model code | Part no. |
|---|---|
| PSRW12-301-01-V-12PG | 3475759 |

Other versions on request

**Seal kits**

| Code | Part no. |
|---|---|
| For proportional needle valve | |
| SEAL KIT 12120-FKM | 3651611 |
| SEAL KIT 12120-NBR | 3651609 |
| For pressure compensator | |
| SEAL KIT 12121-FKM | 4080086 |
| SEAL KIT 12121-NBR | 3651335 |

## 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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