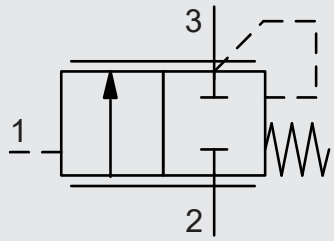
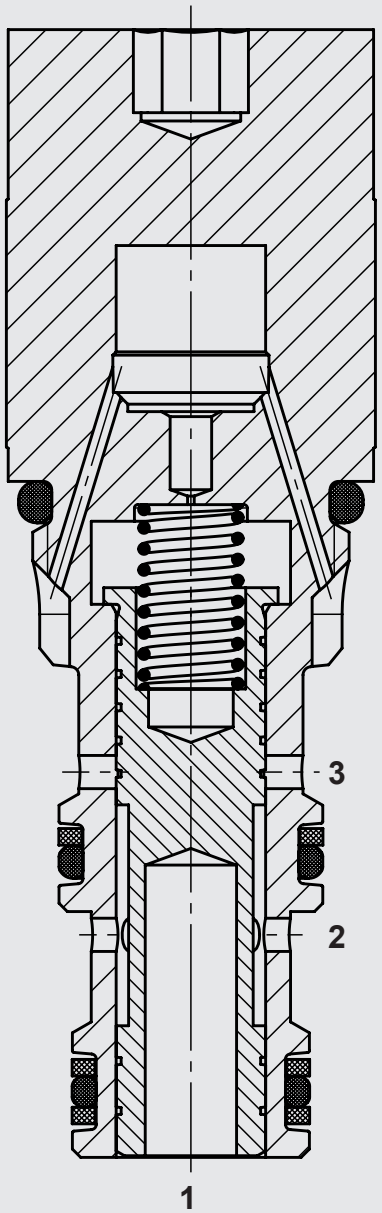



up to 30 l/min
up to 350 bar

# Pressure compensator
# DW08B-01

## Spool Design, Direct-Acting Cartridge Valve, Metric – 350 bar

## FUNCTION



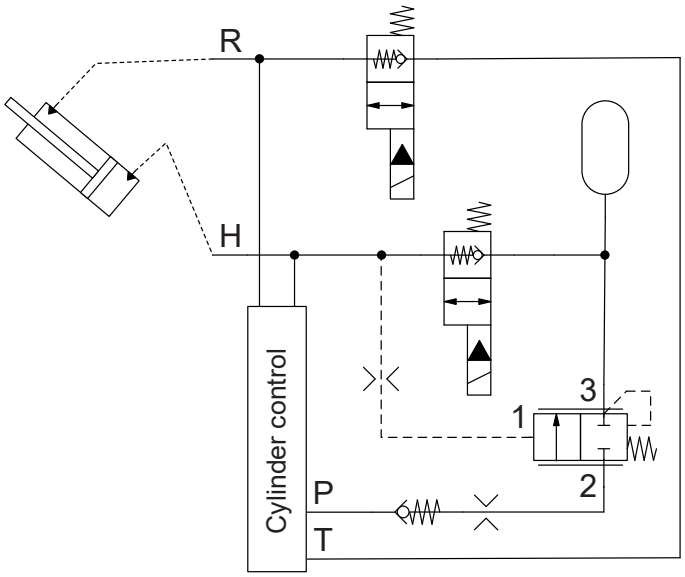

## PRODUCT ADVANTAGES

- Can be used as sequence valve
- Very good dynamic performance
- Hardened and ground valve components to ensure minimal wear and extended service life
- Electromagnetic blocking version possible on request
- External surfaces with advanced corrosion protection due to ZnNi coating (1,000 h salt spray test)

## DESCRIPTION OF FUNCTION

The DW08B-01 pressure compensator is a normally closed, direct-acting, spring-loaded spool-type valve.
It compares the pressure between ports 3 and 1. If the pressure at port 1 exceeds the pressure at port 3 including the spring force (switching pressure), then this valve allows oil flow from 2 → 3. This allows pressure to be compensated between 1 and 3. Thanks to the low-leakage direct-acting design, the hydraulic balance is realised almost without any oil loss at port 1.

This function makes the valve particularly suitable for use in ride control applications such as wheel loaders and telescopic handlers. See example of application.
On request, the valve can be expanded with integrated electromagnetic remote control for blocking of the sequence function.




Example of application, ride control

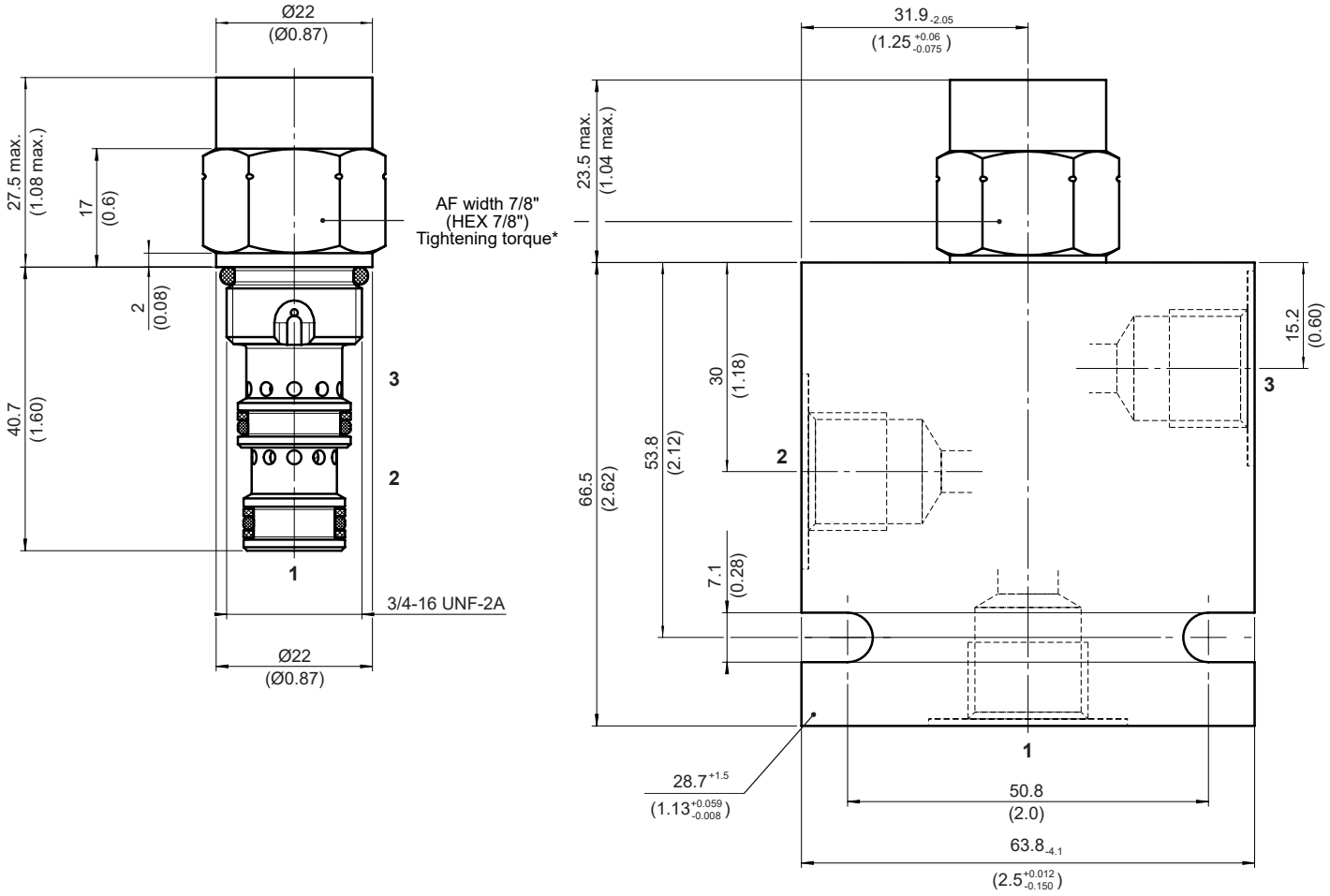
## TECHNICAL CHARACTERISTICS[1)]

| | | |
|---|---|---|
| Operating pressure | max. 350 bar / 5075 psi | |
| Flow rate | max. 30 l/min / 7.9 gpm from port 2→3 | |
| Internal leakage | max. 50 ml/min at port 1 at 300 bar Δp (ν = 32 mm²/s) | |
| Switching pressure | Δp1→3 = 2.4 ±0.5 bar / 35 ±7 psi<br>@Q 2→3 = 1 l/min / 0.25 gpm | |
| Pressure fluid | Hydraulic oil to DIN 51524 Part 1, 2 and 3 | |
| Ambient temperature range | NBR: min. -30 °C to max. +100 °C<br>FKM: min. -20 °C to max. +120 °C | |
| Temperature range of operating fluid | NBR: min. -30 °C to max. +100 °C<br>FKM: min. -20 °C to max. +120 °C | |
| Viscosity range | min. 7.4 mm²/s to max. 420 mm²/s | |
| Filtration (to ISO 4406) | p ≤ 210 bar: min. Class 20/18/15<br>p > 210 bar: min. Class 19/17/14 | |
| $MTTF_D$ | 150 - 1200 years, assessment according to DIN EN ISO 13849-1:2016, Table C.1,<br>Confirmation of ISO 13849-2:2013; Tables C.1 and C.2 | |
| Installation position | User-definable | |
| Material | Valve bodies: | Steel, zinc-plated |
| | Spools: | Steel, hardened and polished |
| | Seals: | NBR (standard)<br>FKM (optional) |
| | Support rings: | PTFE |
| Cavity | FC08-3 | |
| Weight | 0.13 kg | |

[1)] See “Conditions and Instructions for Valves” in brochure 53.000

## DIMENSIONS

**Versions:**

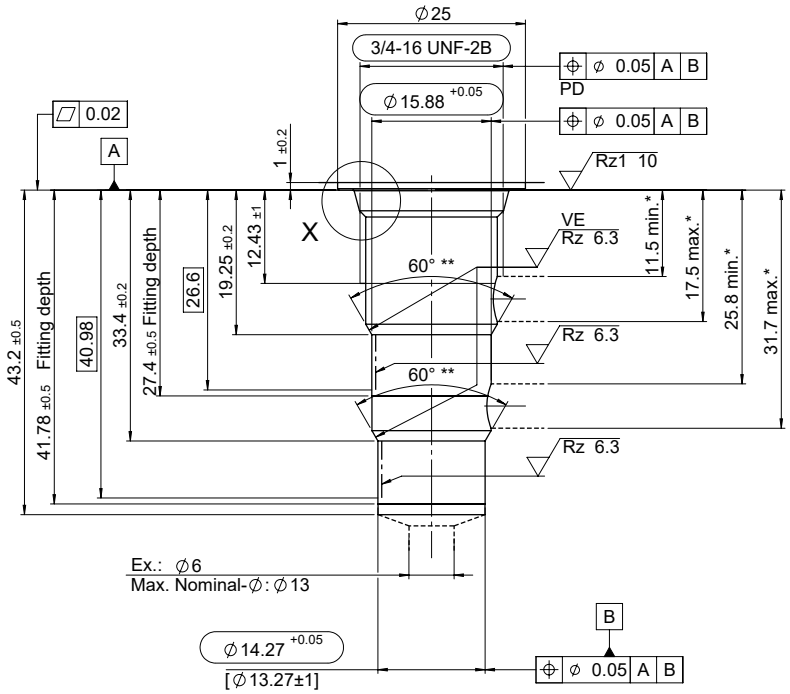



* Tightening torque:
Steel housing (burst strength > 360 N/mm²): 35 Nm
Aluminium housing (burst strength > 330 N/mm²): 30 Nm
(With torque tool according to DIN EN ISO 6789, tool type II class A or B).

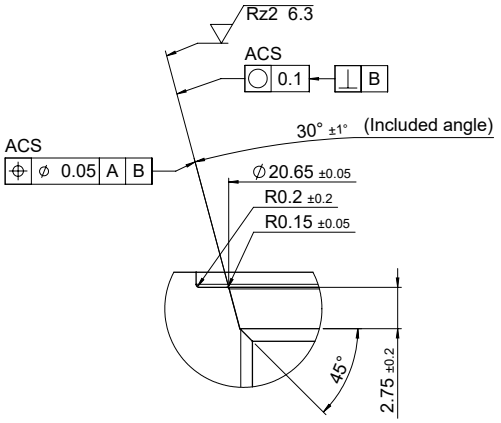
Millimetre (inch)
Subject to technical modifications.

## CAVITY

**FC08-3**




X 4 : 1




VE = Visual Examination

Ra 6.3 ( Rz 6.3 Rz 10 )

* Permitted boring zone (for block design)

** Sharp edges should be avoided by using a radius of 0.1 mm to 0.2 mm

*** Largest pre-drilling diameter (nominal tool diameter)

Millimetre

Subject to technical modifications.

## MODEL CODE

**DW08B – 01 – C – N – 035**

**Designation**

Pressure compensator

**Design**

01 = standard

**Body and ports**

C = cartridge valve

**Sealing material**

N = NBR (standard)

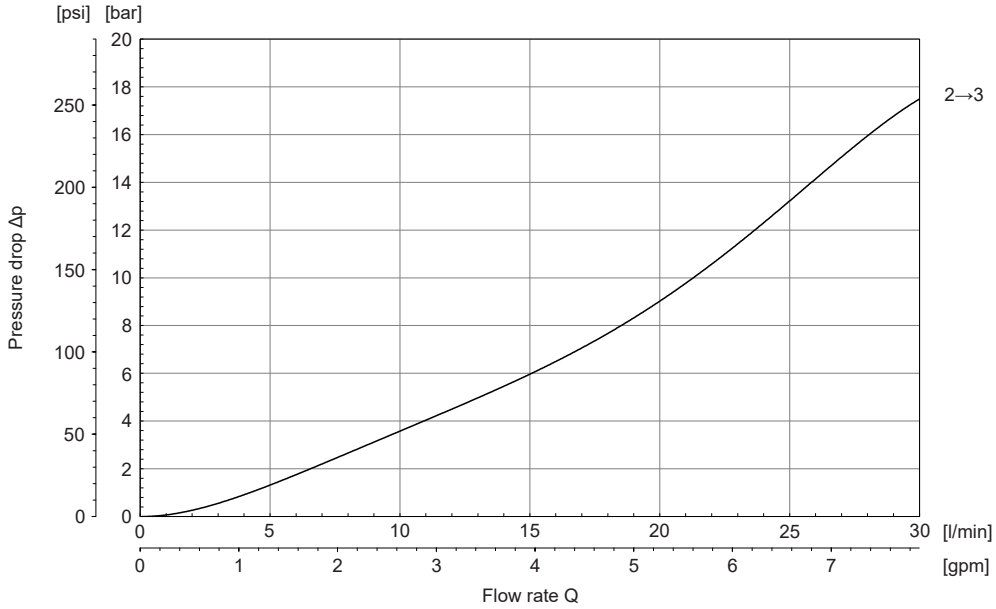
V = FKM

**Switching pressure**

035 = 2.4 bar (35 psi)

## TYPICAL PERFORMANCE

**Δp/Q characteristics 2→3** measured at ν = 32 mm²/s, $T_{Oil}$ = 40 °C, $\Delta p_{1\rightarrow3}$ = 10 bar




## MATERIAL OVERVIEW

### Standard models

| Designation | Part no. |
|---|---|
| DW08B-01-C-N-035 | 4647974 |

Other versions on request.

### Spare parts, seal kits

| Designation | Material | Code | Part no. |
|---|---|---|---|
| Seal kit | NBR | FS UNF 08/N | 3651385 |
| Seal kit | FKM | FS UNF 08/V | 3651356 |

### Housing

| Designation | Material | Code | Pressure | Connections | Weight | Part no. |
|---|---|---|---|---|---|---|
| Inline connection housing | Steel, zinc-plated | FH083-SB3 | 350 bar | G3/8" | 0.47 kg | 560922 |
| Inline connection housing | Aluminium, anodised | FH083-AB3 | 210 bar | G3/8" | 0.25 kg | 3011427 |

### Cavity tools

| Designation | Part no. |
|---|---|
| Countersink | 175644 |
| Reamer | 175645 |

## NOTE

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

Subject to technical modifications.

Documents are only valid if they have been obtained via the website and are up-to-date.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