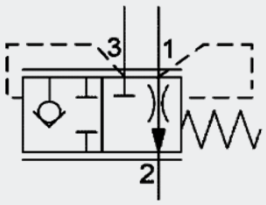
HYDAC INTERNATIONAL

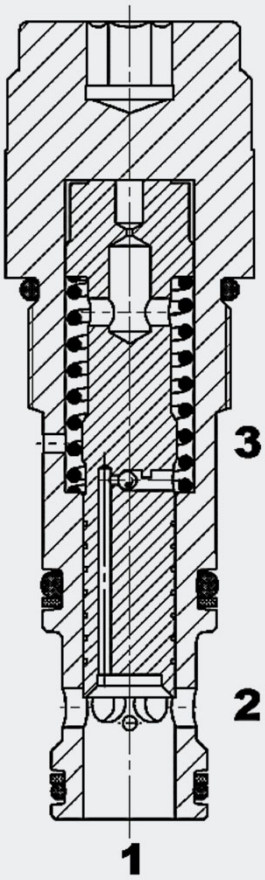


up to 60 l/min
up to 350 bar

2-way downstream pressure compensator
DWM10130RS-2.

normally open
spool type, direct-acting
Metric Cartridge – 350 bar

FUNCTION



PRODUCT ADVANTAGES

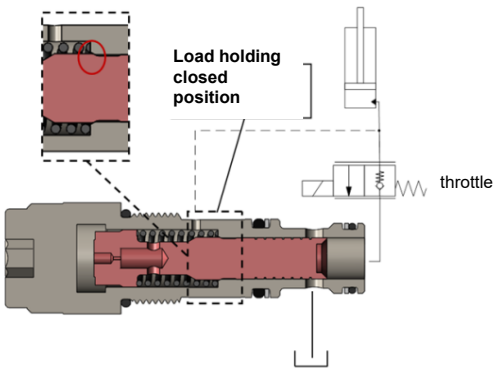
- Optimal for use in lifting and lowering applications
- Leakage-free load holding in combination with a directional poppet valve
- Leak-free gauge port when the pressure compensator is in closed position
- Very low hysteresis for precise movement of loads
- Very good compensation characteristics
- A range of damping characteristic designs are possible
- Optional control pressure differential (3, 5 or 11 bar)
- Exposed surfaces zinc-nickel plated for increased corrosion protection (1,000 h salt spray test)

FUNCTION DESCRIPTION

The pressure compensator is a direct-acting, spring-loaded, normally open spool valve.

Its task is to keep the difference between the inlet pressure and outlet pressure of an throttle at ports 3 and 1 of the pressure compensator constant. This also keeps the flow rate through the throttle constant – independent of the load pressure. As soon as the pressure differential exceeds the value pre-set by the spring force, the control spool reduces an throttle cross-section. The downstream pressure compensator can, for example, be used when lowering variable loads at the same velocity. Together with a flow control valve it can be used as a flow regulator.
When the throttle is closed, the pressure compensator moves into the closed poppet position, which prevents the loads being lowered due to leakage in the pressure compensator's valve.

Leakage-free load holding

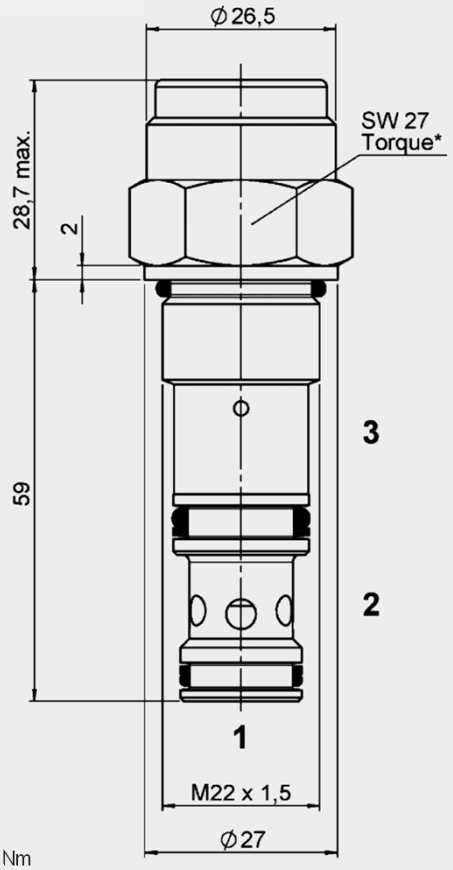


SPECIFICATIONS*

Operating pressure	max. 350 bar	
Flow rate	max. 60 l/min	
Internal leakage	10 ml/min. (port 3 to 2 in control position) 0.25 ml/min. (port 3 to 3 in poppet position at 200 bar)	
Media operating temperature range	NBR: min. -30 °C to max. +100 °C FKM: min. -20 °C to max. +100 °C	
Ambient temperature range	NBR: min. -30 °C to max. +100 °C FKM: min. -20 °C to max. +100 °C	
Operating fluid	Hydraulic oil to DIN 51524 Part 1, 2 and 3	
Viscosity range	min. 10 mm²/s to max. 420 mm²/s	
Filtration (to ISO 4406)	p ≤ 210 bar: min. class 20/18/15 p > 210 bar: min. class 19/17/14	
MTTFd	150 – 1200 years, measurement according to DIN EN ISO 13849-1	
Installation	No orientation restrictions	
Materials	Valve body Spool Seals Back-up rings	steel hardened and ground steel NBR (standard) FKM PTFE
Cavity	10130	
Weight	0.2 kg	

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

DIMENSIONS

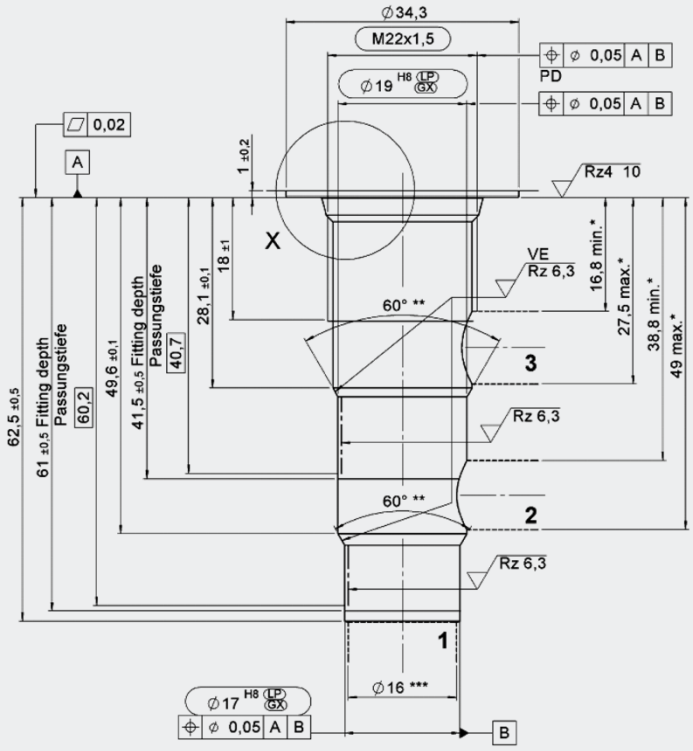


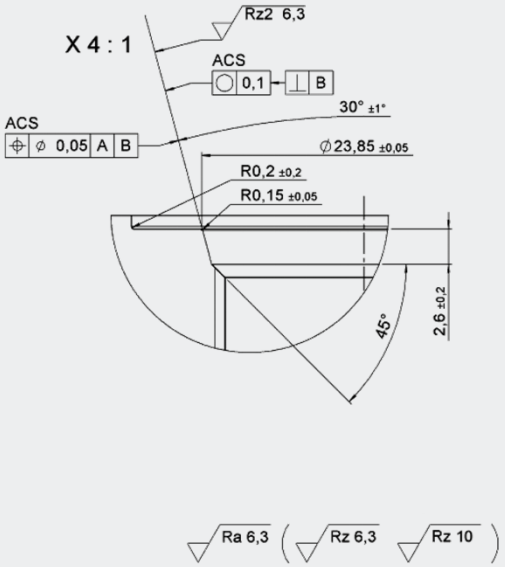
*Torque:
Steel manifold (ultimate tensile strength > 360 N/mm²): 55 Nm
Aluminium manifold (ultimate tensile strength > 330 N/mm²): 45 Nm
(With tool in acc. with DIN EN ISO 6789, tool type II class A or B)
For further information see “Conditions and Instructions for Valves” in brochure 53.000

Millimetre (inch)
Subject to technical modifications.

CAVITY

10130 metric





VE = Visual Examination
* Permitted drilling zone (for manifold design)
** Sharp edges should be avoided by rounding to a radius of 0.1 mm to 0.2 mm
*** Largest pre-drilling diameter (nominal tool diameter)

Millimetre (inch)
Subject to technical modifications.

MODEL CODE

DWM10130RS - 22 - C - N - 05

Basic model
2-way downstream pressure compensator, metric

Type
22 = with damping
23 = with strong damping

Body and ports
C = cartridge only

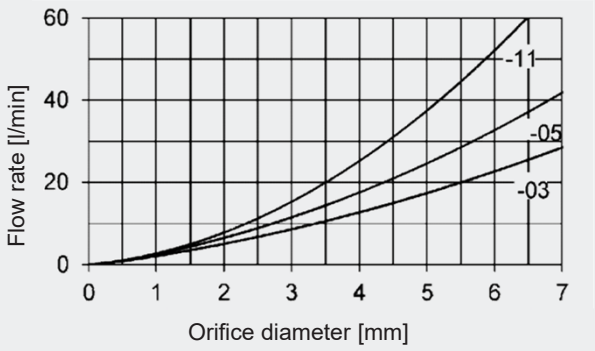
Sealing material
N = NBR (standard)
V = FKM

Control pressure differential
03 = 3 bar
05 = 5 bar
11 = 11 bar

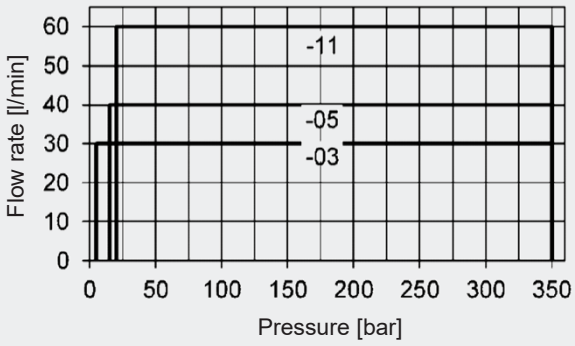
TYPICAL PERFORMANCE

measured at 33 mm²/s and T_{oil} = 46°C

Flow rate depending on orifice diameter for each control pressure differential
at 15 bar load pressure

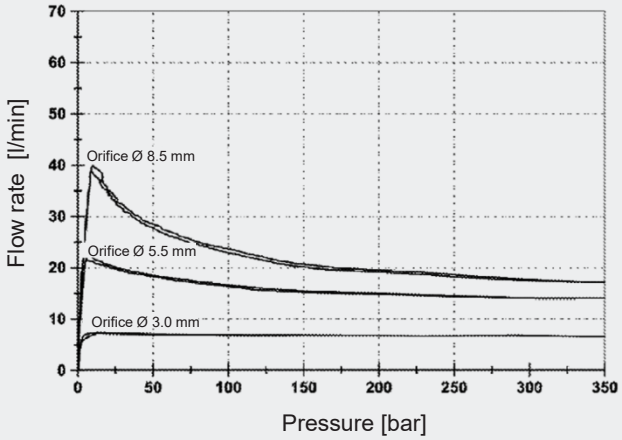


Operating limits for each control pressure differential

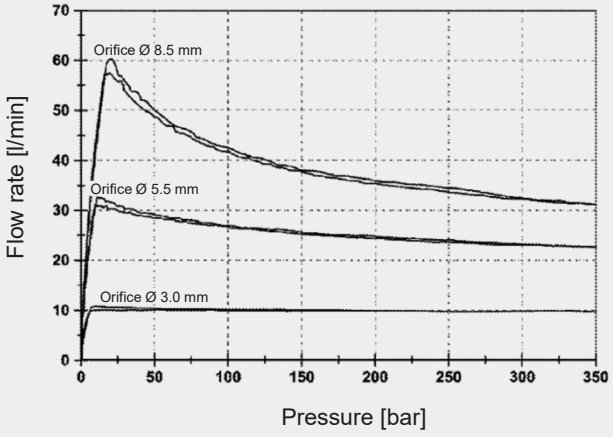


Flow rate depending on orifice diameter at different load pressures

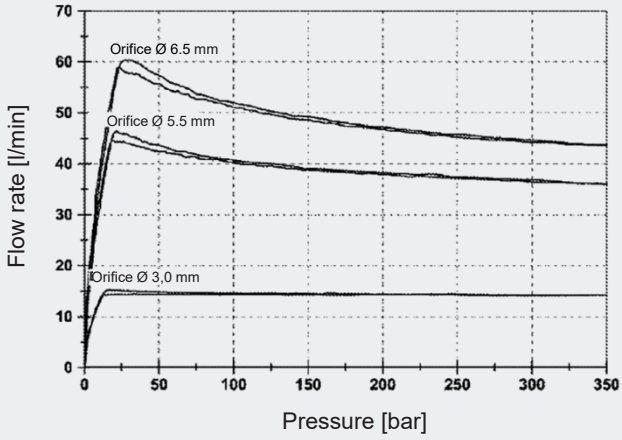
DWM10130RS-22-C-N-03



DWM10130RS-22-C-N-05



DWM10130RS-22-C-N-11



MATERIAL OVERVIEW

Standard models

Model code	Part no.
DWM10130RS-22-C-N-05	4193484
DWM10130RS-22-C-N-11	4245598
DWM10130RS-23-C-N-05	4274488

Other versions on request

Spare parts, seal kits

Code	Material	Part no.
FS METRISCH 1013./N	NBR	4079549
FS METRISCH 1013./V	FKM	4079594

Accessories, standard in-line bodies

Code	Material	Ports	Pressure	Part no.
R10130-01X-01	Steel, zinc-plated	G1/2“	350 bar	395238
R10130-01X-02	Steel, zinc-plated	M22x1.5	350 bar	395239

Other standard in-line bodies on request

Accessories, form tools for cavity

Tool	Part no.
Countersink	161826
Reamer	163911

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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