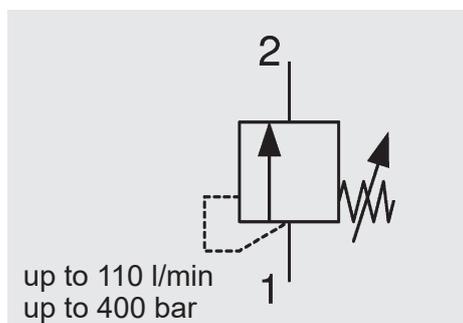
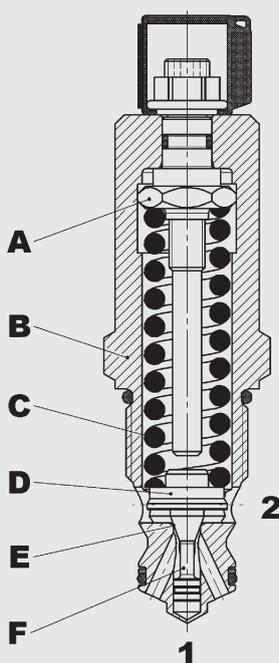


HYDAC**INTERNATIONAL**

Pressure Relief Valve poppet type, direct-acting Metric Cartridge – 400 bar DB12120A-CE + TÜV Type Approved

**FUNCTION**

The pressure relief valve is a direct-acting, spring-loaded poppet valve with CE mark and TÜV SV.

Its function is to relieve pressure in the system. The spring exerts a force on the closing poppet and presses it on the valve seat. If the hydraulic pressure force is below the pre-set spring tension, the valve remains closed. Only if the hydraulic force exceeds the pre-set spring tension does the valve open and flow is diverted to the tank via port 2. To ensure that stable operation is maintained, the poppet is securely located in the damping piston which produces a damping force, opposing the direction of movement, and this has a stabilizing effect.

Caution:

The valve DB12120A-CE is classified as a safety valve according to PED. Always follow the operating instructions supplied with the valve.

The key points are stated below:

- Tank pressure (port 2) must be $p_{2\ max} = 0\ \text{bar}$
- If the connections are incorrect, the safety function of the valve is disabled
- The pressure setting must not be altered
- The valve must not be disassembled

GENERAL

- CE valve according to Pressure Equipment Directive (PED) 2014/68/EU
- TÜV type approved
- Low hysteresis and accurate pressure control
- Excellent stability throughout the entire flow range
- Various pressure ranges up to 400 bar
- External surfaces with advanced corrosion protection due to Zn-Ni coating (1,000 h salt spray test)

TECHNICAL DATA*

Operating pressure:	Max. 400 bar Max. 0 bar at port 2 (tank)
Nominal flow:	Max. 110 l/min (depending on the pressure range – see flow curves)
Setting ranges:	10 to 150 bar 20 to 250 bar 30 to 350 bar 40 to 400 bar
Leakage:	Max. 5 drops/min (0.25 cm ³ /min) at 80% of pressure setting
Temperature range of operating fluid:	min. -20 °C to max. +80 °C
Ambient temperature range:	min. -20 °C to max. +80 °C
Operating fluid:	Hydraulic oil according to DIN 51524 part 1, 2 and 3
Viscosity range:	Min. 8 mm ² /s to max. 350 mm ² /s
Filtration:	Permitted operating fluid contamination level according to ISO 4406 Class 21/19/16 or better
Installation position:	No orientation restrictions
Materials:	Valve body: Steel Closing element: Hardened and polished steel Seals: FKM (standard) Back-up rings: PTFE
Cavity:	12120A
Weight:	0.42 kg

* See "Conditions and Instructions for Valves" in brochure 53.000

MODEL CODE

DB12120A - 01 1 - CExxxx.ENISO4126.6L. xxx. xxx

Basic model

Pressure relief valve

Design

Series

(specified by manufacturer)

Type approval code

xxx identification number of the notified body and CE to ENISO 4126

Max. permitted flow rate

065 = 65 l/min

Rate depends on the pressure range (see performance curves)

Cracking pressure setting

030 = 30 bar, cracking pressure in bar, factory-set (see permitted flow range chart)

Hint: Opening pressure setting available in 5 bar steps, e.g.: ... 95; 100; 105 ... bar

TYPE APPROVAL CODE

TÜV.SV.XX-981.6.F. XXX. XXX

Type approval code

Year of type approval test

Flow rate, l/min

Cracking pressure setting, bar

Standard models

Designation	Part no.
DB12120A-011-CExxxx.ENISO4126.6L.065.030	3109740
DB12120A-011-CExxxx.ENISO4126.6L.095.100	3108618
DB12120A-011-CExxxx.ENISO4126.6L.110.150	3108621
DB12120A-011-CExxxx.ENISO4126.6L.110.200	3108625
DB12120A-011-CExxxx.ENISO4126.6L.110.250	3108629
DB12120A-011-CExxxx.ENISO4126.6L.110.300	3108632
DB12120A-011-CExxxx.ENISO4126.6L.110.350	3087728
DB12120A-011-CExxxx.ENISO4126.6L.110.400	3108636

Inline connection housings

Designation	Part no.	Material	Ports	Pressure
R12120A-01X-01	396489	Steel, zinc-plated	G 3/4"	400 bar

Other housing upon request

Seal kits

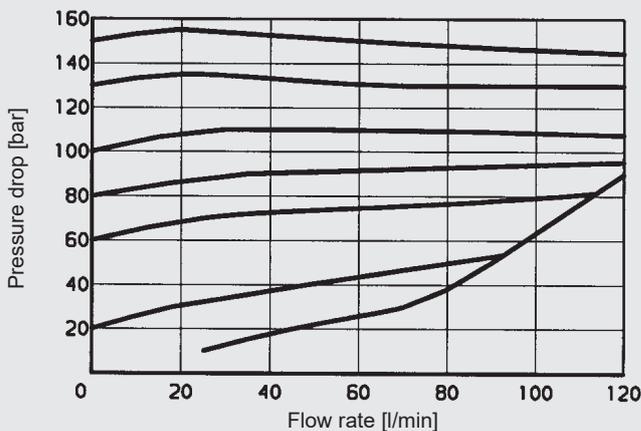
Designation	Material	Part no.
FS METRISCH 121..A/V	FKM	3651611

DOCUMENTATION

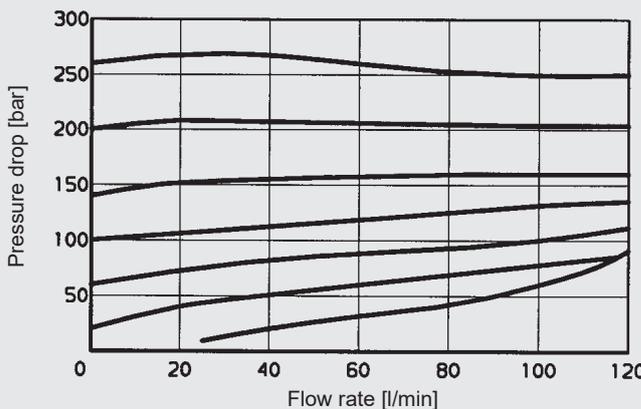
Each valve is supplied with an Operating Manual in accordance with the Pressure Equipment Directive.

FLOW RATE CHARACTERISTICS

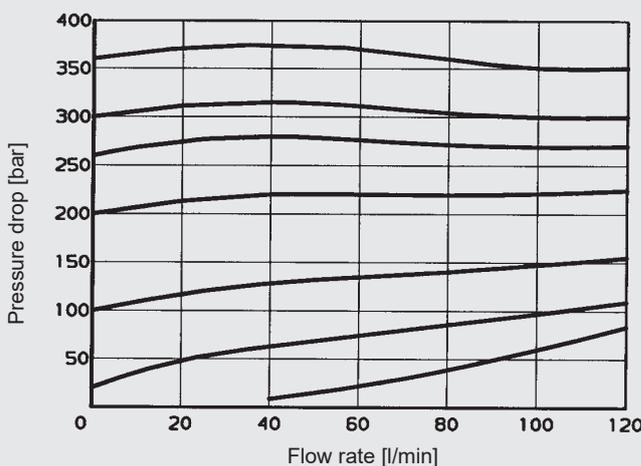
Pressure range ... 150 bar



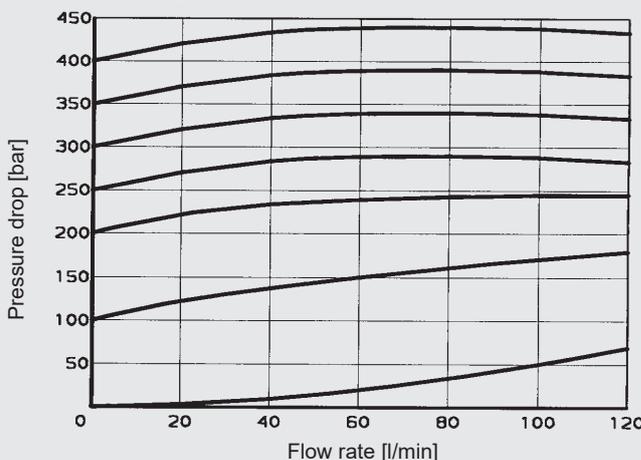
Pressure range ... 250 bar



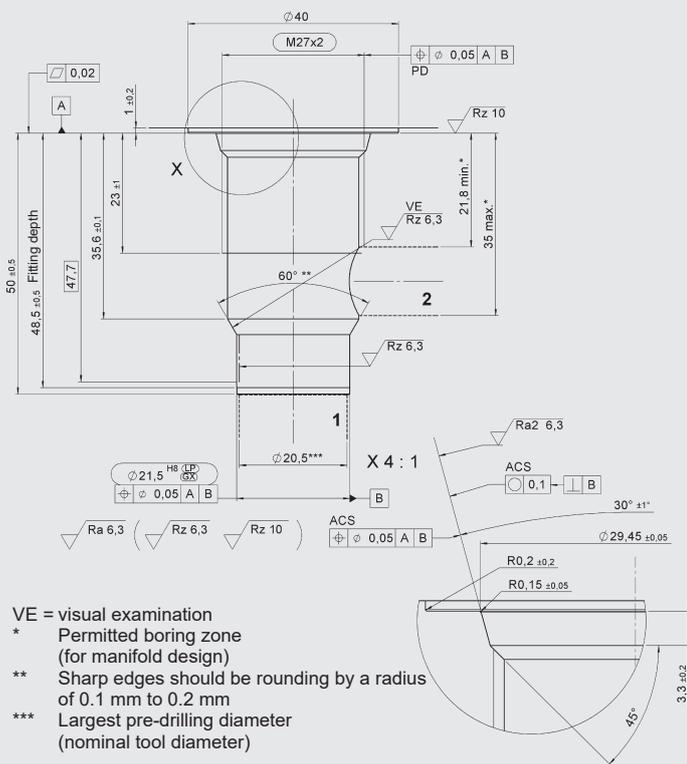
Pressure range ... 350 bar



Pressure range ... 400 bar



CAVITY
12120A



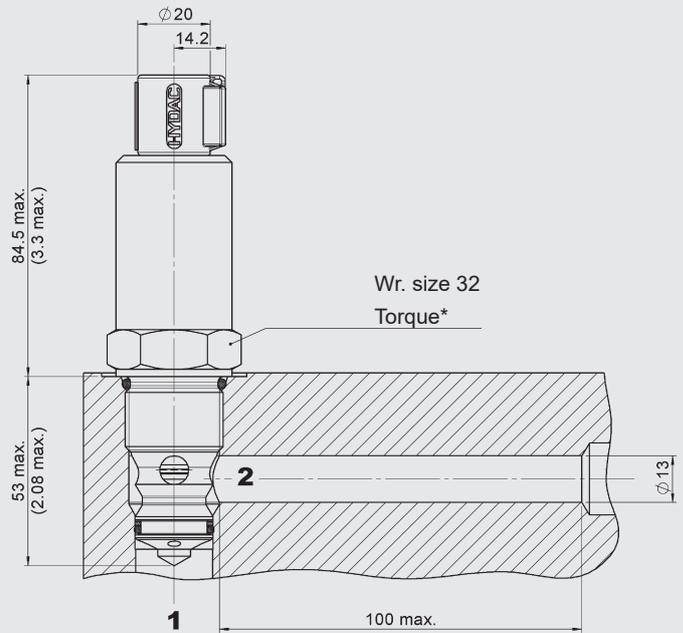
VE = visual examination
* Permitted boring zone (for manifold design)
** Sharp edges should be rounding by a radius of 0.1 mm to 0.2 mm
*** Largest pre-drilling diameter (nominal tool diameter)

Form tools

Tool	Part no.
Countersink	173958
Reamer	174874
Tap	1002625

Millimetres
Subject to technical modifications

DIMENSIONS



*Torque:
Steel housing (burst strength > 360 N/mm²): 65 Nm
Aluminium housing (burst strength > 330 N/mm²): 55 Nm
(With torque tool in acc. with DIN EN ISO 6789, tool type II, class A or B)
For more information see "Operating conditions and instructions for valves" in brochure 53.000

Millimetres
Subject to technical modifications

PERMISSIBLE FLOW RATE RANGE

Cracking pressure [bar]	Max. Flow rate [l/min]
30 - 39	65
40 - 49	72
50 - 55	80
56 - 89	80
90 - 94	80
95 - 99	90
100 - 109	95
110 - 150	110
151 - 259	110
260 - 350	110
351 - 400	110

Note

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

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