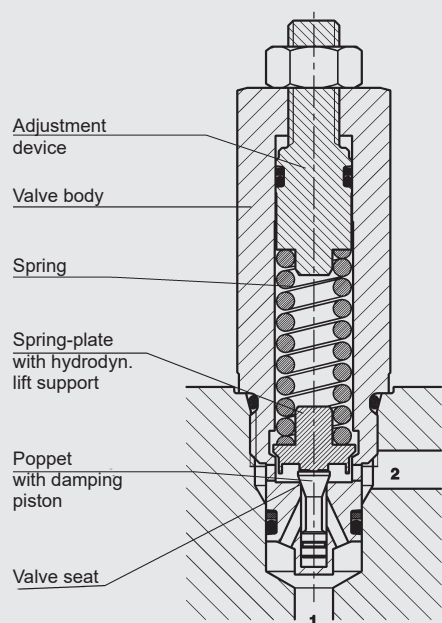


up to 30 l/min  
up to 630 bar

## FUNCTION



The pressure relief valve is a direct-acting, spring-loaded poppet valve. Its function is to relieve pressure in the system. The spring exerts a force on the poppet and presses it onto the valve seat. If the hydraulic pressure is below the pre-set spring tension, the valve is closed. When the hydraulic force exceeds the pre-set spring tension, the valve opens and allows flow to the tank via port 2.

Important: Pressures at port 2 are additive to the opening pressure! If the connections are incorrect or if the pressure has been set above the operating pressure, the function of the valve is disabled.

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.

## FEATURES

- Excellent stability throughout the entire flow range
- Low hysteresis and good repeatability
- Various pressure ranges with wide adjustability, up to 630 bar high pressure
- Large choice of adjustment options
- Exposed surfaces zinc-nickel plated for increased corrosion protection (1.000 h salt spray test)

## SPECIFICATIONS\*

Operating pressure:	max. 630 bar
Tank pressure:	max. 100 bar
Nominal flow:	30 l/min
Operating pressure ranges:	4 to 30 bar 10 to 100 bar 10 to 200 bar 10 to 250 bar 20 to 350 bar 30 to 630 bar
Internal leakage:	max. 5 drops/min (0,25 cm <sup>3</sup> /min) at 80% of setting pressure
Media operating temperature range:	min. -20 °C to max. +120 °C
Ambient temperature range:	min. -20 °C to max. +120 °C
Operating fluid:	Hydraulic fluids according to DIN 51524 Part 1, 2 and 3
Viscosity range:	min. 7.4 mm <sup>2</sup> /s to max. 420 mm <sup>2</sup> /s
Filtration:	Class 21/19/16 according to ISO 4406 or cleaner
MTTF <sub>d</sub> :	150 - 1200 years according to DIN EN ISO 13849-1
Installation:	No orientation restrictions
Materials:	Valve body: steel Piston: hardened and ground steel Seals: FKM (standard) NBR (optional, media temperature range -30 °C to +100 °C) Back-up rings: PTFE
Cavity:	06020
Weight:	0.16 kg

\* see "Conditions and instructions for valves" in brochure 53.000

## MODEL CODE

DB4E - 01 X - 350 F 315

### Basic model

Pressure relief valve, metric

### Type

01 = standard

### Series

determined by the manufacturer

### Setting pressure range

30 = 4 to 30 bar

100 = 10 to 100 bar

200 = 10 to 200 bar

250 = 10 to 250 bar

350 = 20 to 350 bar

630 = 30 to 630 bar

Other pressure ranges on request

### Type of adjustment

V = Allen head (standard)

F = fixed setting, cannot be adjusted

P = can be lead-sealed, adjustable with tool

M = maximum pressure relief, adjustable with tool

S = plastic knob, adjustable by hand, no scale

A = adjustable, with locking E10, cyl. lock 2H

FP = adjustable, with colored plastic cap

Other types of adjustment on request

### Opening pressure setting

No details = no setting, spring relaxed

315 = opening pressure in bar, factory pre-set,

Setting on request

## Standard models

Code	Part No.
DB4E-01X-30V	716000
DB4E-01X-100V	716001
DB4E-01X-200V	716002
DB4E-01X-250V	716143
DB4E-01X-350V	716003
DB4E-01X-630V	716004

Other models on request

## Standard in-line bodies

Code	Part No.	Material	Ports	Pressure
R06020-01X-01	275266	Steel, zinc-plated	G 3/8	420 bar

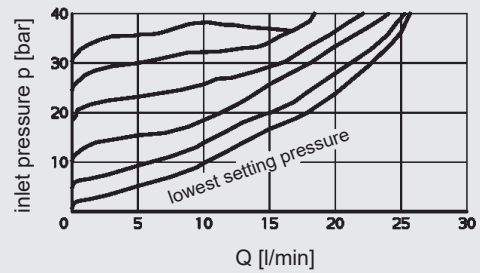
Other line bodies on request

## Seal kits

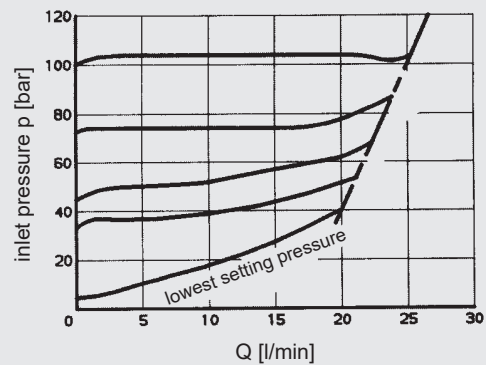
Code	Part No.
SEAL KIT 06020-FKM	3262477
SEAL KIT 06020-NBR	3119017

## TYPICAL PERFORMANCE

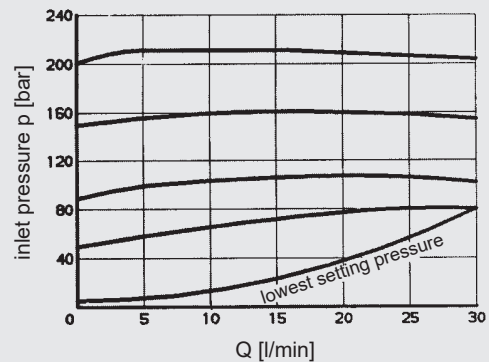
### Pressure range ... 30 bar



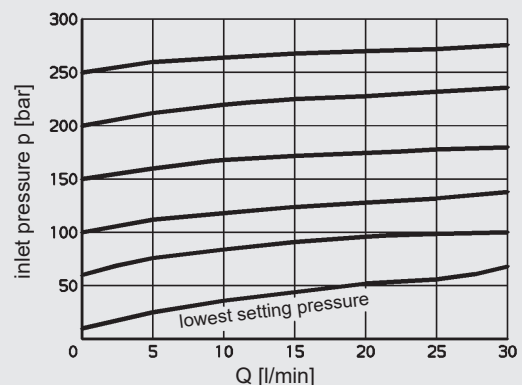
### Pressure range ... 100 bar



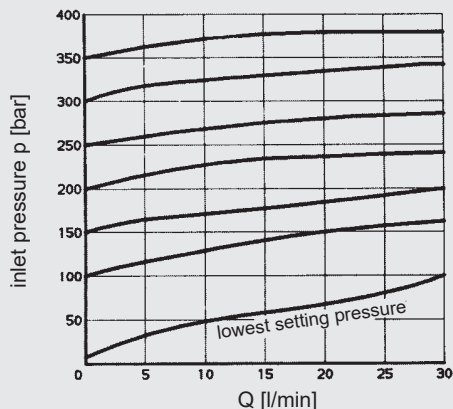
### Pressure range ... 200 bar



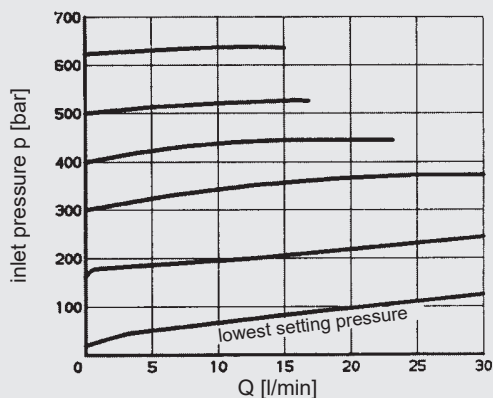
### Pressure range ... 250 bar



### Pressure range ... 350 bar

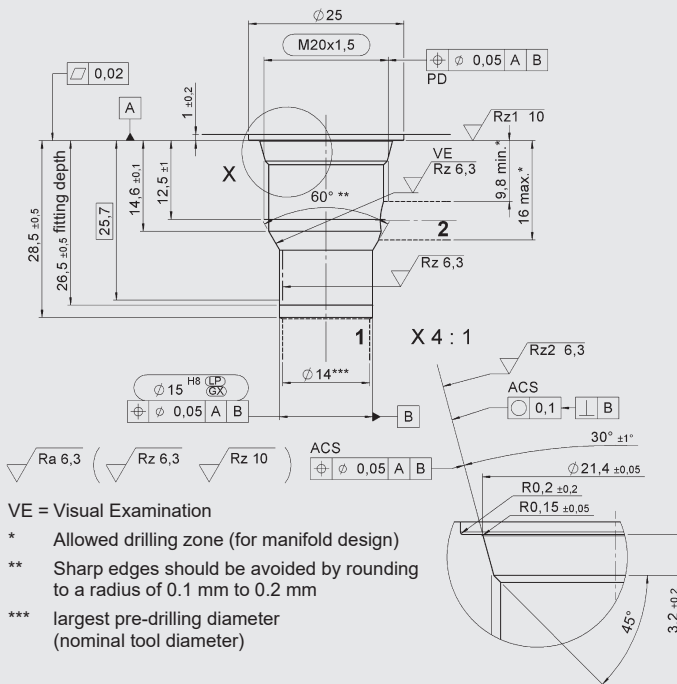


### Pressure range ... 630 bar



## CAVITY

### 06020



VE = Visual Examination

\* Allowed 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)

### Form tools

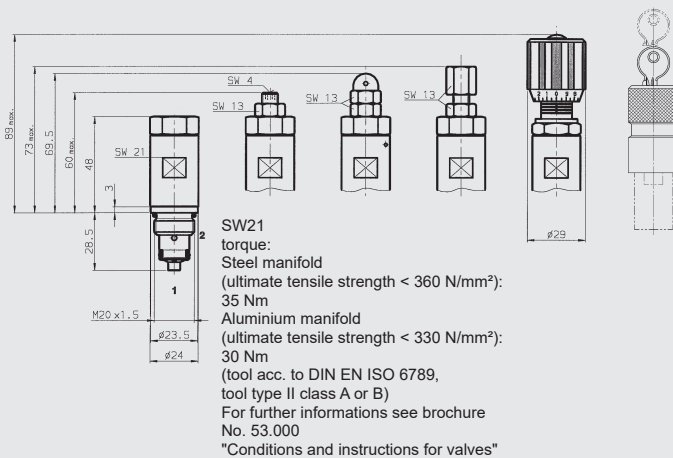
Tool	Part No.
Countersink	170033
Reamer	1000768
Tap	1002648
Plug gauge	168840

Millimeter  
Subject to technical modifications

## DIMENSIONS

### Type of adjustment

F V P M S A



SW 21  
torque:  
Steel manifold  
(ultimate tensile strength < 360 N/mm<sup>2</sup>):  
35 Nm  
Aluminium manifold  
(ultimate tensile strength < 330 N/mm<sup>2</sup>):  
30 Nm  
(tool acc. to DIN EN ISO 6789,  
tool type II class A or B)  
For further informations see brochure  
No. 53.000  
"Conditions and instructions for valves"

Millimeter  
Subject to technical modifications

### 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.

**HYDAC Fluidtechnik GmbH**  
Justus-von-Liebig-Str.  
D-66280 Sulzbach/Saar  
Tel: 0 68 97 / 509-01  
Fax: 0 68 97 / 509-598  
E-Mail: valves@hydac.com

