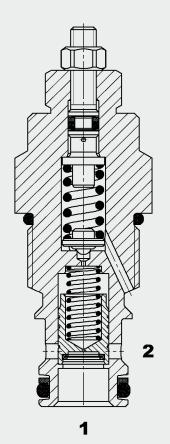
# E 5.167.5/01.13

## HYDAC

## DAC INTERNATIONAL

Up to 100 l/min Up to 350 bar

#### **FUNCTION**



The pressure relief valve DB10120A is a pilot-operated, spring-loaded poppet valve. Its function is to relieve pressure in the system. It is normally closed. If the pressure at port 1 exceeds the pre-set spring tension, the pilot stage opens and oil flows from behind the main piston to tank port 2. The resulting pressure differential causes the main piston to move against the return spring and allows oil to flow from port 1 to port 2. This continues until the system pressure is equal to the spring tension and the valve closes again.

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 safety function of the valve is disabled.

# Pressure Relief Valve Poppet Type, Pilot-Operated Metric Cartridge – 350 bar DB10120A

#### **FEATURES**

- Excellent stability throughout the entire flow range
- Low hysteresis and accurate pressure control
- External surfaces zinc-plated and corrosion-proof
- Hardened and ground internal valve components to ensure minimal wear and extended service life
- Low pressure drop by CFD optimized flow path
- Various pressure ranges up to 350 bar

### **SPECIFICATIONS**

Mominal flow:  Pressure setting ranges:  5 to 100 bar 5 to 250 bar 5 to 350 bar  Leakage:  Leakage-free  Media operating temperature range:  Media operature range:  Min20 °C to max. +120 °C  Ambient temperature range:  Min20 °C to max. +120 °C  Operating fluid:  Hydraulic oil to DIN 51524 Part 1 and 2  Viscosity range:  Filtration:  Class 21/19/16 according to ISO 4406 or	Operating pressure:	min. 5 to max. 350 bar	
Pressure setting ranges:  5 to 100 bar 5 to 250 bar 5 to 350 bar  Leakage:  Leakage-free  Media operating temperature range:  min20 °C to max. +120 °C  Ambient temperature range:  min20 °C to max. +120 °C  Operating fluid:  Hydraulic oil to DIN 51524 Part 1 and 2  Viscosity range:  min. 7.4 mm²/s to max. 420 mm²/s  Filtration:  Class 21/19/16 according to ISO 4406 or			
5 to 250 bar 5 to 350 bar  Leakage:  Leakage-free  Media operating temperature range:  Min20 °C to max. +120 °C  Ambient temperature range:  Min20 °C to max. +120 °C  Operating fluid:  Hydraulic oil to DIN 51524 Part 1 and 2  Viscosity range:  Min. 7.4 mm²/s to max. 420 mm²/s  Filtration:  Class 21/19/16 according to ISO 4406 or	Nominal flow:	max. 100 l/min	
Leakage:  Leakage-free  Media operating temperature range:  Ambient temperature range:  Operating fluid:  Viscosity range:  Filtration:  Sto 350 bar  Leakage-free  min20 °C to max. +120 °C  min20 °C to max. +120 °C  Hydraulic oil to DIN 51524 Part 1 and 2  min. 7.4 mm²/s to max. 420 mm²/s  Class 21/19/16 according to ISO 4406 or	Pressure setting ranges:	5 to 100 bar	
Leakage:  Media operating temperature range:  Ambient temperature range:  Operating fluid:  Viscosity range:  Filtration:  Leakage-free  min20 °C to max. +120 °C  min20 °C to max. +120 °C  Hydraulic oil to DIN 51524 Part 1 and 2  min. 7.4 mm²/s to max. 420 mm²/s  Class 21/19/16 according to ISO 4406 or			
Media operating temperature range:min20 °C to max. +120 °CAmbient temperature range:min20 °C to max. +120 °COperating fluid:Hydraulic oil to DIN 51524 Part 1 and 2Viscosity range:min. 7.4 mm²/s to max. 420 mm²/sFiltration:Class 21/19/16 according to ISO 4406 or		5 to 350 bar	
Ambient temperature range: min20 °C to max. +120 °C  Operating fluid: Hydraulic oil to DIN 51524 Part 1 and 2  Viscosity range: min. 7.4 mm²/s to max. 420 mm²/s  Filtration: Class 21/19/16 according to ISO 4406 or	Leakage:	Leakage-free	
Operating fluid: Hydraulic oil to DIN 51524 Part 1 and 2 Viscosity range: min. 7.4 mm²/s to max. 420 mm²/s Filtration: Class 21/19/16 according to ISO 4406 or	Media operating temperature range:	min20 °C to	max. +120 °C
Viscosity range: min. 7.4 mm²/s to max. 420 mm²/s Filtration: Class 21/19/16 according to ISO 4406 or	Ambient temperature range:	min20 °C to	max. +120 °C
Filtration: Class 21/19/16 according to ISO 4406 or	Operating fluid:	Hydraulic oil t	o DIN 51524 Part 1 and 2
	Viscosity range:	min. 7.4 mm²/	/s to max. 420 mm²/s
cleaner	Filtration:	Class 21/19/1 cleaner	6 according to ISO 4406 or
MTTF <sub>d</sub> : 150 years (see "Conditions and	MTTF:		e "Conditions and
instructions for valves" in brochure 5.300)			
Installation: No orientation restrictions	Installation:	No orientation restrictions	
Materials: Valve body: high tensile steel	Materials:	Valve body:	high tensile steel
Piston: hardened and ground steel		Piston:	hardened and ground steel
Seals: FKM (standard)		Seals:	FKM (standard)
NBR (optional, media			NBR (optional, media
temperature range			temperature range
-30 °C to +100 °C)			-30 °C to +100 °C)
Back-up rings: PTFE		Back-up rings: PTFE	
Cavity: 10120A	Cavity:	10120A	
Weight: 0.13 kg	Weight:	0.13 kg	

Pressure setting range

100 = 5 to 100 bar 250 = 5 to 250 bar 350 = 5 to 350 bar

Other pressure ranges on request

Type of adjustment

= Allen head

= can be lead-sealed, adjustable with tool

Other types of adjustment on request

Opening pressure setting

No details.= no setting, spring relaxed
210 = opening pressure in bar, factory-set Other pressure settings on request

(Pre-set versions are factory-set at a flow rate of 6 l/min)

#### Standard models

Model code	Part No.
DB10120A-02X-100V	561040
DB10120A-02X-250V	561041
DB10120A-02X-350V	561076

Other models on request

#### Standard in-line bodies

Code	Part No.	Material	Ports	Pressure
R10120A-01X-01	395232	Steel, zinc-plated	G1/2	420 bar
R10120A-01X-02	395233	Steel, zinc-plated	M 22 x 1.5	420 bar

Other line bodies on request

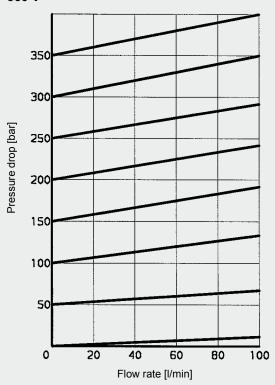
#### Seal kits

Code	Material	Part No.
SEAL KIT DB10120A	NBR	3085499
SEAL KIT DB10120A	FKM	560222

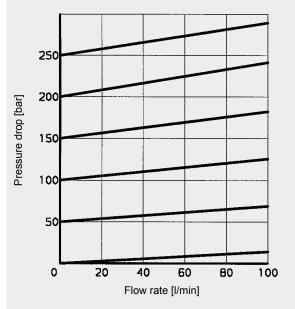
### **PERFORMANCE**

Measured at v=36 mm<sup>2</sup>/s,  $T_{oil}=50$  °C

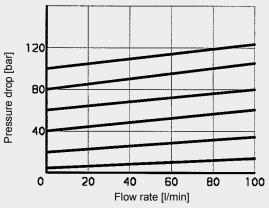
350 V

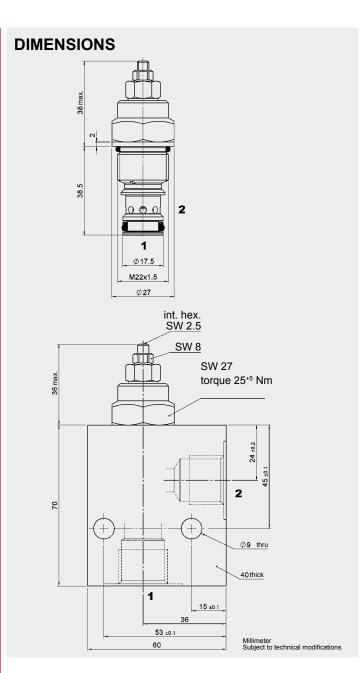


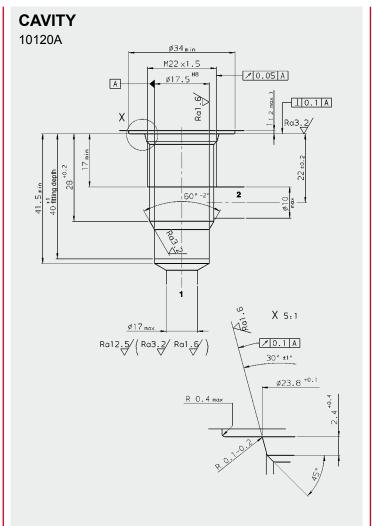
250 V











#### Form tools

Tool	Part No.
Countersink HE25	166284
Reamer MK2	166285
Тар	1002627
Plug gauge	166286
<u> </u>	

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.

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