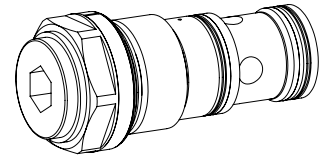


**Pressure compensator cartridge**

- ◆ 2- and 3-way function
- ◆  $Q_{max} = 100 \text{ l/min}$
- ◆  $p_{max} = 350 \text{ bar}$

**M33 x 2**  
**ISO 7789**



**DESCRIPTION**

Pressure compensator valve with fixed setting in screw-in cartridge construction for cavity according to ISO 7789. The task of the pressure compensator is to keep the pressure drop via a throttle point (e.g. control edge of a spool valve) almost constant. It ensures that a determined amount of oil, independent of the load pressure, flows through the spool valve when the control spool is in a specific position. Pressure compensating valves are mostly used in conjunction with proportional valves.

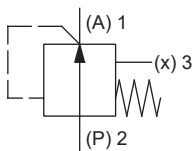
**APPLICATION**

**2-way pressure compensation valve:** Volume flow changes due to pressure or load changes at the consumer are corrected. Cylinder or motor speeds remain constant. If several consumers are operating in parallel, the full system pressure is available to each one.

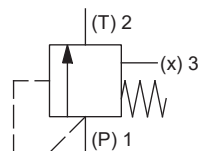
**3-way pressure compensator valve:** Excess pump flow rate is fed to the return system. Especially in the mobile area, where the necessary cooling surfaces are missing, this prevents the hydraulic system from overheating. Parallel operation is not possible. If there are several consumers, the pump pressure is adapted to the highest working pressure. For machining the cartridge cavity in steel and aluminum blocks, cavity tools are available (hire or purchase). Please refer to the data sheets in register 2.13.

**SYMBOL**

2-way function



3-way function



**ACTUATION**

Fixed adjustment construction. Other differential pressures on request.

**TYPE CODE**

2-way-pressure compensator valve	<input type="checkbox"/>	Z	U	<input type="checkbox"/>	F	PM33	-	<input type="checkbox"/>	#	<input type="checkbox"/>
3-way-pressure compensator valve	<input type="checkbox"/>	D								
Type of adjustment	Fixed adjustment									
Screw-in cartridge M33 x 2										
Sealing material	NBR		<input type="checkbox"/>							
	FKM (Viton)		<input type="checkbox"/>							
Design index (subject to change)										

2.5-650

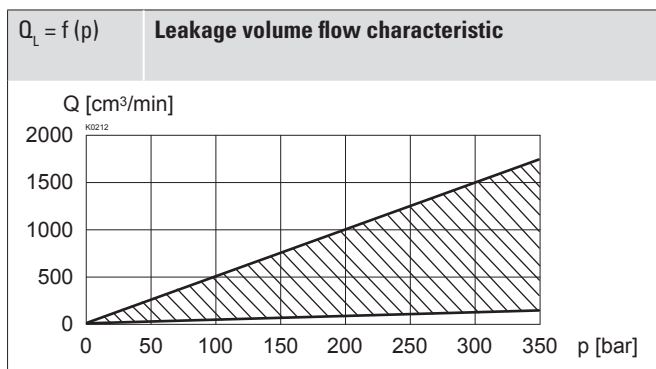
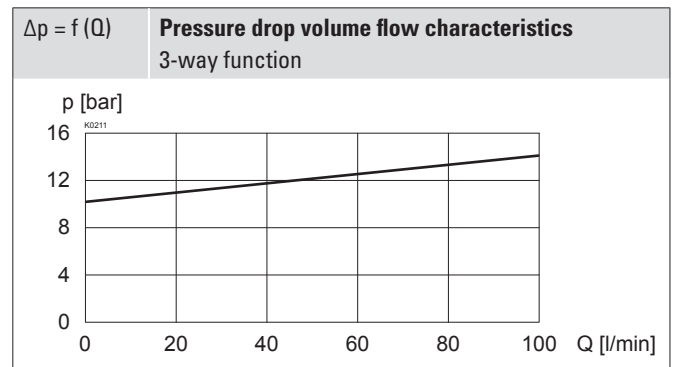
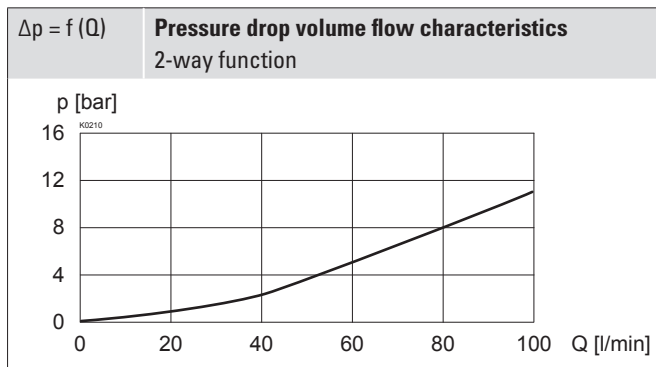
## GENERAL SPECIFICATIONS

Designation	2- and 3-way pressure compensator valve
Mounting	Screw-in cartridge construction
Nominal size	M33 x 2 according to ISO 7789
Ambient temperature	-25...+70 °C (NBR) -20...+70 °C (FKM)
Weight	0,52 kg (2-way function) 0,42 kg (3-way function)
MTTFd	150 years

## HYDRAULIC SPECIFICATIONS

Working pressure	$p_{max} = 350 \text{ bar}$
Differenzdruck	$\Delta p = 10 \text{ bar}$ Other differential pressures on request
Maximum volume flow	$Q_{max} = 100 \text{ l/min}$
Leakage oil	See characteristics
Fluid	Mineral oil, other fluid on request
Viscosity range	12 mm <sup>2</sup> /s...320 mm <sup>2</sup> /s
Temperature range fluid	-25...+70 °C (NBR) -20...+70 °C (FKM)
Contamination efficiency	Class 18 / 16 / 13
Filtration	Required filtration grade $\beta_{6...10} \geq 75$ , see data sheet 1.0-50

## PERFORMANCE SPECIFICATIONS

 Oil viscosity  $\nu = 30 \text{ mm}^2/\text{s}$ 


## SEALING MATERIAL

NBR or FKM (Viton) as standard, choice in the type code

## SURFACE TREATMENT

♦ All external parts of the cartridge are zinc-nickel coated

## INSTALLATION NOTES

Mounting type	Screw-in cartridge M33 x 2
Mounting position	Any, preferably horizontal
Tightening torque	$M_D = 80 \text{ Nm}$ screw-in cartridge

**Attention!** Pressure compensations are intended for open loop circuits only!

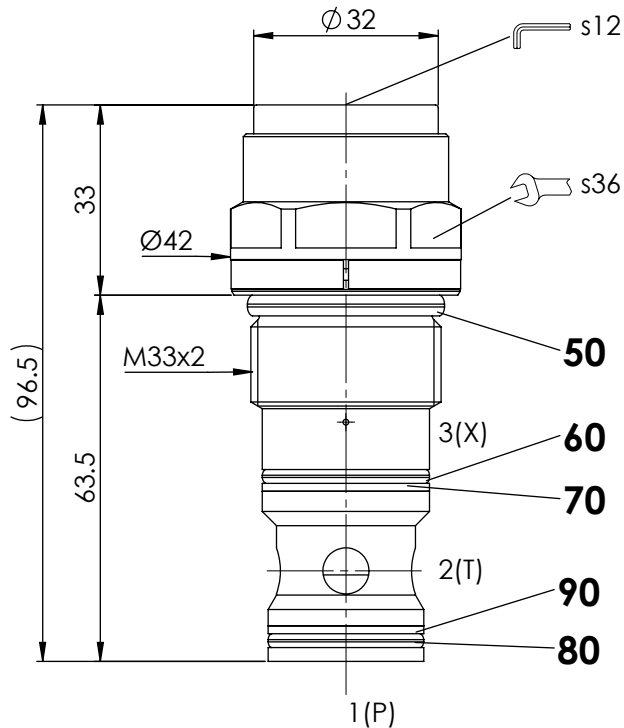


## STANDARDS

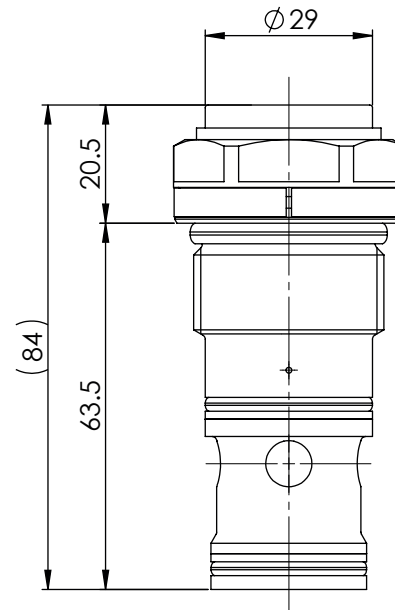
Cartridge cavity	ISO 7789
Contamination efficiency	ISO 4406

**DIMENSIONS**

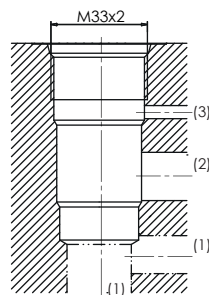
2-way function



3-way function


**HYDRAULIC CONNECTION**

Cavity drawing according to ISO 7789-33-06-0-98


**Note!**


For detailed cavity drawing and cavity tools see data sheet 2.13-1011

**PARTS LIST**

Position	Article	Description
50	160.2298	O-ring ID 29,82 x 2,62 (NBR)
	160.6296	O-ring ID 29,82 x 2,62 (FMK)
60	160.2252	O-ring ID 25,12 x 1,78 (NBR)
	160.6252	O-ring ID 25,12 x 1,78 (FKM)
70	049.3296	Back-up ring rd 26,1 x 29,4 x 1,4
80	160.2236	O-ring ID 23,52 x 1,78 (NBR)
	160.6236	O-ring ID 23,52 x 1,78 (FKM)
90	049.3276	Back-up ring rd 24,1 x 27 x 1,4

**ACCESSORIES**

Sandwich plate NG10	Data sheet 2.5-860
Technical explanations	Data sheet 1.0-100
Filtration	Data sheet 1.0-50