

RE 26 850/02.03

Replaces: 05.02

**Pressure reducing valve,
pilot operated,
Type DR 10 K**

Nominal size 10

Series 3X

Maximum operating pressure 315 bar

Maximum flow 100 L/min



Type DR 10 K5-3X/...YM...

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Features

- Cartridge valve
- 4 pressure stages
- 4 adjustment elements:
 - Rotary knob
 - Sleeve with hexagon and protective cap
 - Lockable rotary knob with scale
 - Rotary knob with scale

Ordering details

DR	10	K	- 3X/	Y	M	*
Pressure reducing valve	= DR					Further details in clear text
Nominal size 10	= 10					No code = NBR seals
Cartridge valve		= K				V = FKM seals (other seals on request)
Adjustment element						⚠ Attention! The compatibility of the seals and pressure fluid has to be taken into account!
Rotary knob					= 4	
Sleeve with hexagon and protective cap					= 5	
Lockable rotary knob with scale					= 6 ¹⁾	
Rotary knob with scale					= 7	
Series 30 to 39 (30 to 39: unchanged installation and connection dimensions)					= 3X	
						M = Without check valve
						Y = Internal pilot oil supply, external pilot oil drain
						50 = Secondary pressure up to 50 bar
						100 = Secondary pressure up to 100 bar
						200 = Secondary pressure up to 200 bar
						315 = Secondary pressure up to 315 bar

¹⁾ H-key with Material No. **R900008158** is included within the scope of supply.



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Preferred types (readily available)

Type	Material number
DR 10 K5-3X/50YM	R900422568
DR 10 K5-3X/100YM	R900459508
DR 10 K5-3X/200YM	R900438134
DR 10 K5-3X/315YM	R900430682

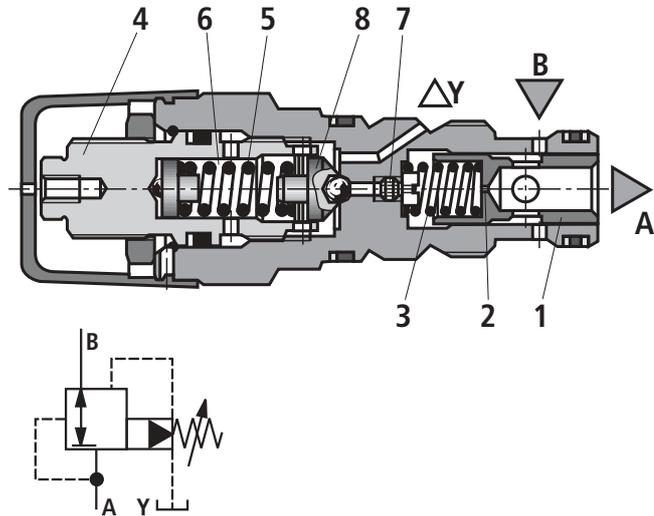
Further preferred types and standard units can be found in the EPS (Standard Price List).

Function, section, symbol

Pressure reducing valves type DR 10 K.. are pilot operated valves for installation in manifolds. They are used to reduce a system pressure. The reduced pressure is set by the pressure adjustment element (4).

At rest, the valve is normally open and pressure fluid can flow unhindered from port B to port A. Pressure in port A simultaneously acts on the main spool (1) and via orifice (2), on the spring loaded inner side of the main spool (1). The pressure is also present via orifice (7) on the pilot pressure poppet (8). When the pressure in port A exceeds the pressure level set at spring (5), the pilot poppet (8) opens. Pressure fluid then flows from the spring chamber (3) via orifice (7), the pilot poppet (8) and spring chamber (6) into port Y. The main spool (1) moves to the control position and holds the pressure set at spring (5) in port A constant.

Pilot oil return from spring chamber (6) is always externally via port Y.



Technical data (for applications outside these parameters, please consult us!)

General		
Installation		Optional
Ambient temperature range	°C	-30 to +80 with NBR seals -20 to +80 with FKM seals
Weight	kg	Approx. 0.2
Hydraulic		
Pressure fluid		Mineral oil (HL, HLP) to DIN 51 524 ¹⁾ ; Fast bio-degradable pressure fluids to VDMA 24 568 (also see RE 90 221); HETG (rape seed oil) ¹⁾ ; HEPG (polyglycols) ²⁾ ; HEES (synthetic ester) ²⁾ ; other fluids on request
Cleanliness class to ISO code		Maximum permissible degree of contamination of the pressure fluid is to ISO 4406 (C) class 20/18/15 ³⁾
Pressure fluid temperature range	°C	-30 to +80 with NBR seals -20 to +80 with FKM seals
Viscosity range	mm ² /s	10 to 800
Max. operating pressure (B)	bar	Up to 315
Secondary pressure, (A)	bar	50; 100; 200; 315
Back pressure (Y)	bar	Up to 160
Max. flow	L/min	Up to 100

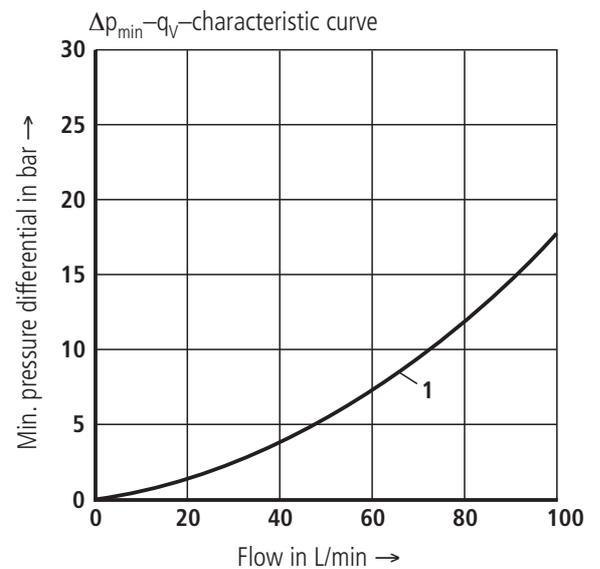
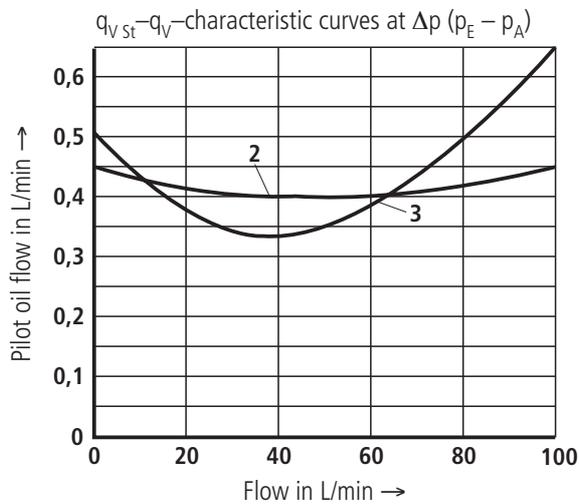
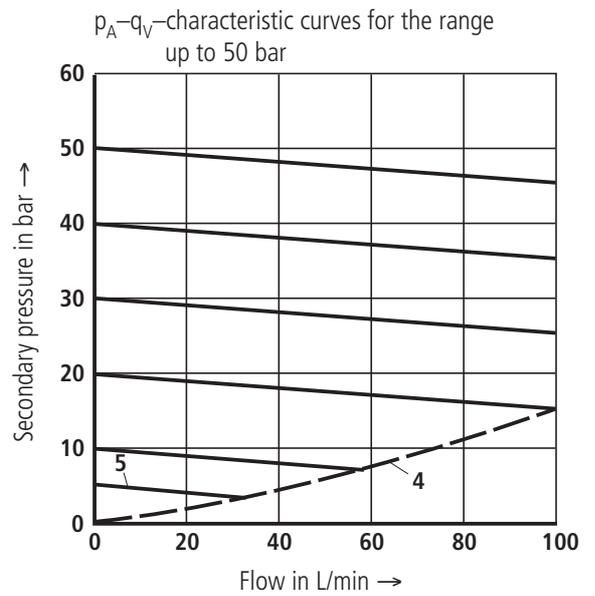
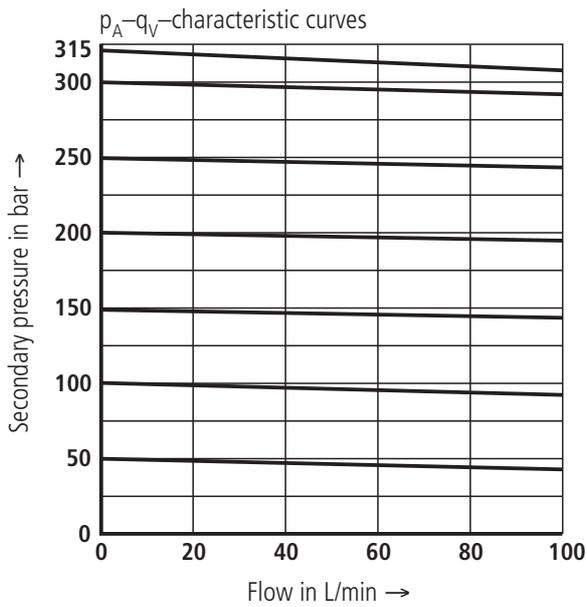
¹⁾ Suitable for NBR **and** FKM seals

²⁾ **Only** suitable for FKM seals

³⁾ The cleanliness class stated for the components must be adhered to in hydraulic systems. Effective filtration prevents faults from occurring and at the same time increases the component service life.

For the selection of filters see catalogue sheets RE 50 070, RE 50 076 and RE 50 081.

Characteristic curves (measured with HLP46, $\vartheta_{oil} = 40\text{ °C} \pm 5\text{ °C}$)



- 1 B to A
- 2 $\Delta p = 50$ bar
- 3 $\Delta p = 250$ bar
- 4 User resistance, system related
- 5 Lowest settable secondary pressure p_A for all pressure ratings

