Pressure Control Valves

Pressure Reducing Valves XLC 310/410 (RP 115)

Pilot-operated Pressure Reducing Valve

Technical Data

Connection DN	40 - 600
Nominal Pressure PN	10, 16, 25
Inlet Pressure	up to 25 bar
Outlet Pressure	0.7 - 7 / 1,5 - 15 / 8 - 24 bar
K_{vs}-Value	20 - 3235 m^3/h
Temperature	70 °C
Medium	water

Description

Self-acting pressure reducers are simple control valves offering accurate control while being easy to install and maintain. They control the pressure downstream of the valve without requiring pneumatic or electrical control elements.

The XLC 310/410 (RP 115) pressure reducing valve is a pilot-controlled control valve consisting of main valve with position indicator, control unit, pilot valve, pressure gauge, stop valves and connecting pipes. The main valve cone is fitted with a soft seal. This valve which has been specially developed for drinking water applications, features an electrostatically deposited coating on internal and external surfaces and meets the KTW recommendation of the German Ministry for Health.

The control unit contains adjustable restrictors which allow the control characteristics of the pressure reducer to be matched to the system (closing, opening and response speeds).

The pressure reducer is completely piped. It does not require any additional pilot lines.

The pressure difference between inlet pressure and outlet pressure must be at least 0.5 bar!

The particle size of the medium shall not exceed 0.3 mm, otherwise a suitable strainer must be installed upstream of the valve.

These valves are no shut-off elements ensuring a tight closing of the valve. In accordance with DIN EN 60534-4 and/or ANSI FCI 70-2 they may feature a leakage rate in closed position in compliance with the leakage classes V.

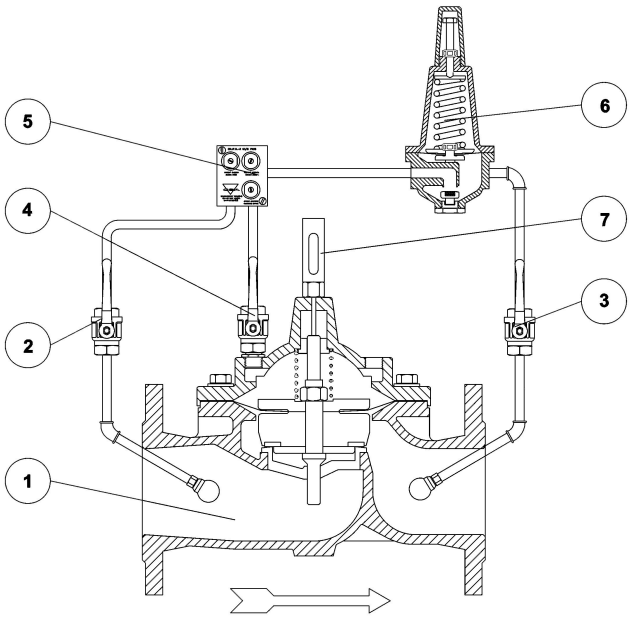
Standard

» Pressure stage PN 16
» Designed acc. to EN-1074/4
» Flanges as per EN 1092/2
» Body made of spheroidal cast iron GJS 450-10 with epoxy coating in blue RAL 5005, thickness min. 250 µm
» Internal parts, pilot valve and piping made of stainless steel 1.4301
» Coating as per DVGW W270 and KTW recommendation of the German Ministry for Health

Options

» Set pressures < 0.7 bar and also up to 25 bar
» Pressure stages PN 10, PN 25
» Body with reduced flow rate
» Throttle cone
» Anti cavitation cone
» Special designs:
  - differential pressure control valves
  - flow control valve
  - float valve
  - others on request

Operating instructions, know how and safety instructions must be observed. The pressure has always been indicated as overpressure.
We reserve the right to alter technical specifications without notice.



1 Main valve
2 Shut off valve
3 Shut off valve
4 Shut off valve
5 Control unit
6 Pilot valve
7 Vane relay

K_{vs} values see sheet No. XLC 310/410 (RP 115)/2.1.....3

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Materials - Main Valve	
Temperature	70 °C
Body	spheroidal cast iron GJS 450-10 Epoxy-coated*
Cover	spheroidal cast iron GJS 450-10 Epoxy-coated*
Internals	stainless steel 1.4301 optional 1.4404
Spring	stainless steel
Valve Seal	NBR optional EPDM
O-Ring	NBR optional EPDM
Diaphragm	NBR-Nylon-reinforced optional EPDM
Screws	stainless steel

* in accordance with KTW-recommendation and DVGW W270, thickness min. 250 µm

Materials - Pilot Circuit	
Control Unit	stainless steel
Pilot Valve	bronze, internals made of stainless steel, diaphragm made of NBR
Filter Seeve	1.4404
Sense Line	stainless steel
Fittings	brass
Shut-off Valves	brass, nickel plated

Dimensions [mm] and Weights [kg] Body Design Standard					
size	nominal diameter DN				
	40	50	65	80	100
A	230	230	290	310	350
B	162	162	194	218	260
C	83	83	93	100	118
D	233	233	255	274	316
kg	18	18	23,5	28	39

Dimensions [mm] and Weights [kg] Body Design Standard					
size	nominal diameter DN				
	150	200	250	300	400
A	480	600	730	850	1100
B	370	444	570	680	870
C	150	180	213	242	310
D	431	540	577	598	895
kg	84	138	264	405	704

Dimensions [mm] und Weights [kg] Body Design Option PN 25					
size	nominal diameter DN				
	80	100	125	150	200
A	310	350	400	480	600
B	162	218	304	260	370
C	100	118	135	150	180
D	237	273	383	326	433
kg	24	34	47	54	97

Dimensions [mm] and Weights [kg] Body Design Option PN 25					
size	nominal diameter DN				
	250	300	400	500	600
A	730	850	1100	1250	1450
B	444	570	680	870	870
C	213	242	310	365	423
D	583	653	735	920	945
kg	172	304	480	782	922

Customs Tariff Number
84811019

Special designs on request.
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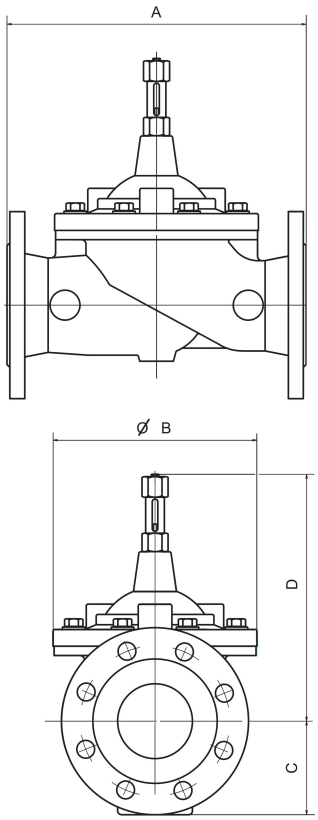
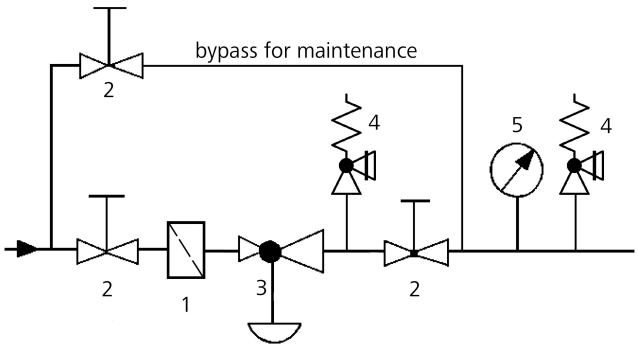
Dimensional Drawing



Recommended Installation



1 Strainer*
2 Shut-off Valves
3 Pressure Reducer*
4 Safety Valve*
5 Manometer
*Use MANKENBERG-Products

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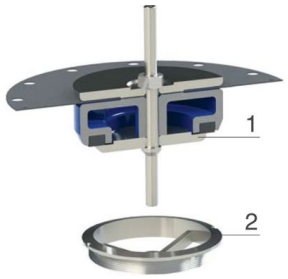
Kvs Values [m³/h] Standard Seat

body design	nominal diameter						
	40	50	65	80	100	125	150
XLC 410	40	40	65	100	165	-	410
XLC 310	-	-	-	50	115	185	195

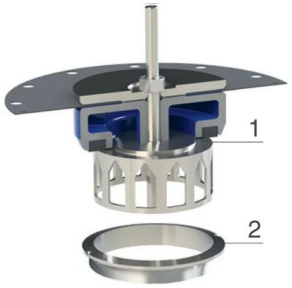
body design	nominal diameter					
	200	250	300	400	500	600
XLC 410	660	1125	1500	2675	-	-
XLC 310	485	800	1255	1740	3085	3235



Kvs Values [m³/h] Throttle Cone

body design	nominal diameter						
	40	50	65	80	100	125	150
XLC 410	30	30	55	75	130	-	310
XLC 310	-	-	-	40	90	145	150

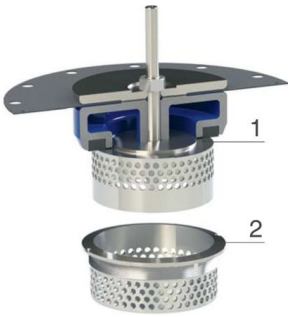
body design	nominal diameter					
	200	250	300	400	500	600
XLC 410	520	865	1170	2110	-	-
XLC 310	375	630	965	1355	2405	2585



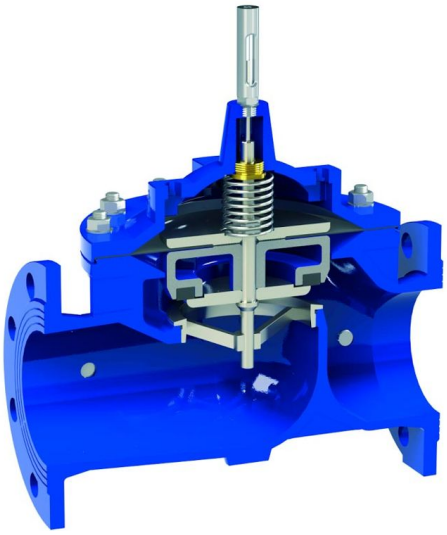
Kvs Values [m³/h] Anti Cavitation Cone

body design	nominal diameter						
	40	50	65	80	100	125	150
XLC 410	20	20	30	50	80	-	205
XLC 310	-	-	-	20	50	70	85

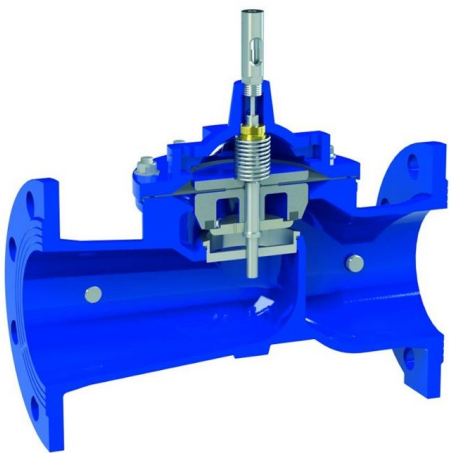
body design	nominal diameter					
	200	250	300	400	500	600
XLC 410	330	560	750	1335	-	-
XLC 310	205	360	565	780	1390	1455



Body Designs



XLC 410



XLC 310 (reduced K_{vs} values)

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