



PRESSURE REDUCING VALVE WITH DIAPHRAGM **TWIST** WITH INCORPORATED FILTER AND ADJUSTMENT KNOB WITH COMPENSATED SYSTEM, IN DZR BRASS

CONNECTIONS:

DISMANTLING FITTINGS MALE



DESCRIPTION

The pressure reducing valve with diaphragm **TWIST** is an automatic valve that reduces and stabilizes the pressure of a fluid in a water distribution conduit to a preset value. The use of this device is necessary to limit the operating pressure in the pipes for the distribution of water, in cases where there is the possibility that the maximum static pressure, at any point of the water supply system, reaches or exceeds the relative maximum allowable operating pressure. The pressure reducer is also necessary if devices and equipment that can only be operated at a pressure lower than the supply pressure are connected. The filter cartridge inside the reducing valve is designed to separate from the water the foreign particles in suspension such as sand, rust flakes, calcareous fragments, etc. by means of a physical barrier. The dirt transported by water could cause corrosion in the water pipeline and wear down the pressure reducing valves or any other device installed downstream. The enhanced mechanical strength of the shell and its internal components renders this valve particularly suitable for the use in water supply systems inside and outside buildings (EN 805) where the water pressure may reach values as high as 25 bar. Further, the compensated seat nullifies the influence that variations in upstream pressure may have on the downstream pressure. The pre-shaped EPDM perox rubber diaphragm with high mechanical strength fabric reinforcement and the use of dynamic anti stick-slip o-rings in EPDM perox rubber allows a precise and long-lasting pressure regulation. The broad internal cavities with high finishing surface have been designed to create a minimum flow resistance, limiting vibrations and load loss. The cavities profile ensures a low noise level even in extreme terms of use. The innovative regulation knob with indicator allows to simply and quickly set the device, with no need of tools. The graduating scale, in bar or psi, repeated 3 times on the knob, allows to easily read the value in any installation condition. The pressure reducing valve **TWIST** is available with outlet pressure setting range 1÷6 bar or 1÷12 bar. The pressure reducing valve **TWIST** is easy to be disassembled and reassembled for the periodical maintenance, such as cleaning or substitution of the incorporated strainer. The **TWIST** pressure reducing valve with diaphragm is used in air conditioning systems, sanitary installations for water supply, irrigation systems, compressed air (not oil mist) supply systems, water supply for human consumption within buildings, according to EN 806-2, and for fire extinguisher networks. (PS. It should nevertheless be borne in mind that local government standards for fire protection must always be observed.). This product adheres to the standards set forth by the European health authorities for the transport of alimentary fluids and drinking water and it is approved WRAS (UK Water Regulations Advisory Scheme).

ATTENTION: THE PRESSURE GAUGE INSTALLABLE ON THE PRESSURE REDUCING VALVE INDICATES THE ALREADY-REDUCED PRESSURE (Ps) OF THE OUTGOING LIQUID. The pressure reducing valve is available with or without gauge.

TECHNICAL FEATURES

Pressure:	25 bar
maximum allowable working pressure	1 ÷ 6 bar o 1 ÷ 12 bar depending on the model
outlet settings (Ps)	3 bar (pressure reducing valve with setting range 1 ÷ 6 bar)
Ps value set during testing	6 bar (pressure reducing valve with setting range 1 ÷ 12 bar) according to EN 1567
outlet Ps set tolerance on varying inlet pressure	
Temperature:	
maximum working temperature (Ts)	0°C (excluding ice) ÷ 80°C
Compatible fluids:	
water	
glycol solutions	glycol max 50%
compressed air	(not oil mist)
Threading:	
pipeline connection threads	dismantling fittings conic male according to EN 10226-1
gauge connection	cylindrical female threading 1/4" according to EN 10226-1
Filtration rating:	
referenced filtering capacity (S)	< 500 µm
Tests and inspections:	
according to EN 1567, DVGW W570-1	
Acoustic group:	I - Lap [dB (A)] < 20'

DESIGN

Body and plug	brass DZR
Bonnet	glass fiber reinforced polyamide
Cartridge	resin POM
Filtering Unit	stainless steel
Calibration spring	galvanized steel
Nuts and other components not in contact with water	brass
Dismantling fittings and other components in contact with water	brass DZR
Diaphragm	Perox EPDM rubber, polyamide reinforced
Seat gaskets and O-ring	Perox EPDM rubber
Dismantling fittings washers	pressed fibre

PRODUCT CODES

0216.015	1/2"	1÷6 bar without pressure gauge	0216.115	1/2"	1÷6 bar with pressure gauge	0216.016	1/2"	1÷12 bar without pressure gauge
0216.020	3/4"	1÷6 bar without pressure gauge	0216.120	3/4"	1÷6 bar with pressure gauge	0216.021	3/4"	1÷12 bar without pressure gauge
0216.025	1"	1÷6 bar without pressure gauge	0216.125	1"	1÷6 bar with pressure gauge	0216.026	1"	1÷12 bar without pressure gauge
0216.033	1 1/4"	1÷6 bar without pressure gauge	0216.133	1 1/4"	1÷6 bar with pressure gauge	0216.034	1 1/4"	1÷12 bar without pressure gauge
0216.042	1 1/2"	1÷6 bar without pressure gauge	0216.142	1 1/2"	1÷6 bar with pressure gauge	0216.043	1 1/2"	1÷12 bar without pressure gauge
0216.050	2"	1÷6 bar without pressure gauge	0216.150	2"	1÷6 bar with pressure gauge	0216.051	2"	1÷12 bar without pressure gauge

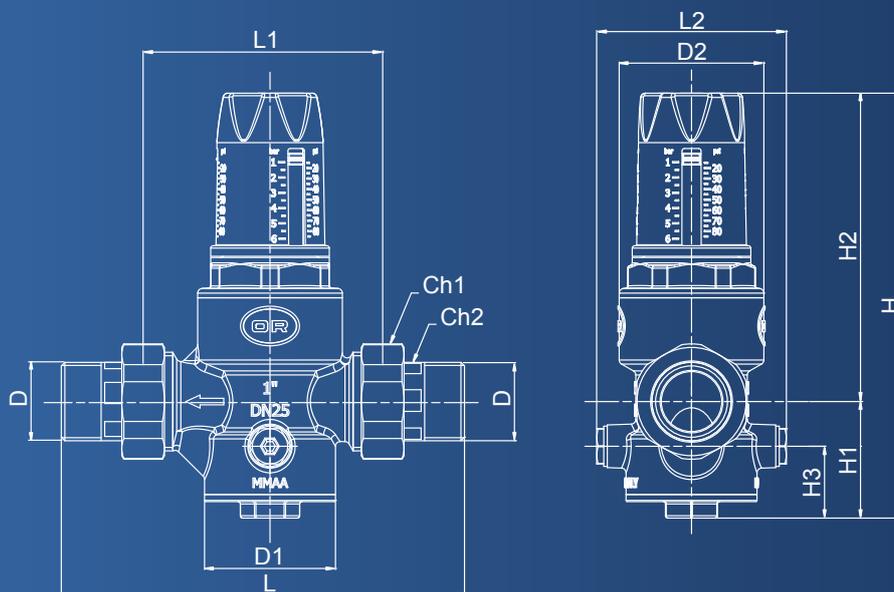


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0216 • 1/2" ÷ 2"

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FEATURES

Code	D	D1 [mm]	D2 [mm]	L [mm]	L1 [mm]	L2 [mm]	H [mm]	H1 [mm]	H2 [mm]	H3 [mm]	Ch1 [mm]	Ch2 [mm]
0216.015/0216.115/0216.016	R 1/2"	Ø42	Ø50	140	80	63	149	45	104	29	30	20
0216.020/0216.120/0216.021	R 3/4"	Ø42	Ø50	160	90	63	149	45	104	29	37	25
0216.025/0216.125/0216.026	R 1"	Ø55	Ø61	180	100	80	181	50	131	31	46	31
0216.033/0216.133/0216.034	R 1"1/4	Ø55	Ø61	200	105	80	189	59	130	31	52	39
0216.042/0216.142/0216.043	R 1"1/2	Ø70	Ø81	225	130	99	239	72	167	40	64	45
0216.050/0216.150/0216.051	R 2"	Ø70	Ø81	255	140	99	246	82	164	42	83	56

*dimension 1"1/4: II - Lap [db (A)] - 30

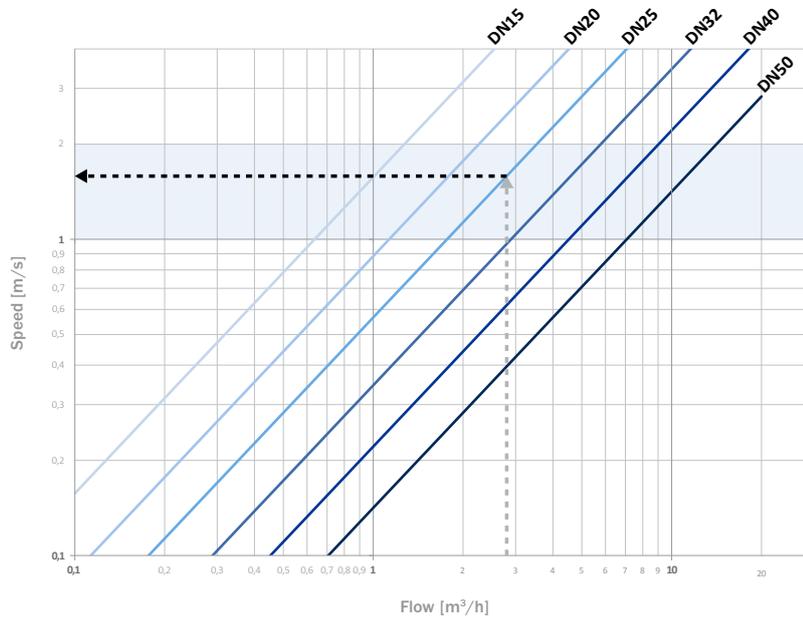
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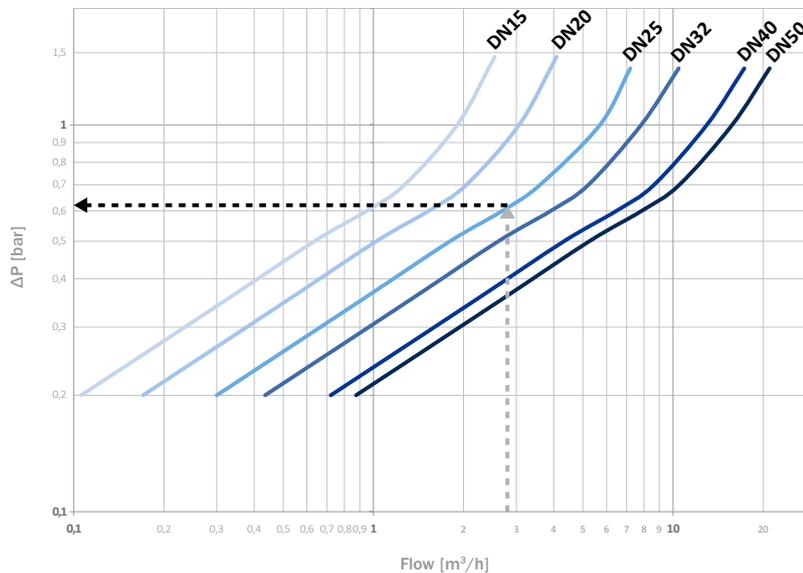
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FLOW-SPEED DIAGRAM



FLOW DIAGRAM - ΔP



Operating conditions : P_{in} = 8 bar ; P_{set} = 3 bar

PRODUCT SPECIFICATIONS

Series 0216 PN25 diaphragm pressure reducing valve with compensated seat, 500µm stainless steel filter and removable cartridge for maintenance. Diameter from DN15 (available up to DN50). Connections with 1/2" unions (available up to 2" M). Pressure gauge connections 1/4" F. Downstream pressure adjustable by knob with graduated scale from 1 to 6 bar (or from 1 to 12 bar depending on the model). Maximum working temperature 80°C. Body and metal parts in dezincification resistant brass. Diaphragm, gaskets and o-rings in EPDM Perox, cartridge in POM and bonnet in glass fiber reinforced polyamide. Galvanized steel spring. Acoustic classification Gr.I (<20dB) sizes DN15, DN20, DN25. EN1567 compliant. Available with or without pressure gauge depending on the model.