





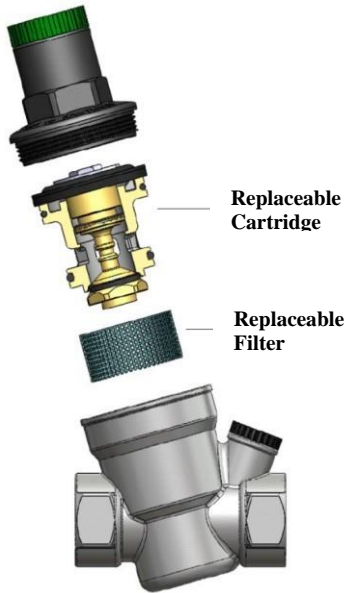
PRODUCTS

Product	Connection Size	Range of Products	Max. Input Pressure	Pressure Setting Range
1915	1/2"	-	16 bar [1600 kPa]	1 - 6,5 bar [100 - 650 kPa]
2015	1/2"	with Coupling		
2115	1/2"	with Manometer		
2215	1/2"	with Coupling + Manometer		
1920	3/4"	-		
2020	3/4"	with Coupling		
2120	3/4"	with Manometer		
2220	3/4"	with Coupling + Manometer		
1925	1"	-		
2025	1"	with Coupling		
2125	1"	with Manometer		
2225	1"	with Coupling + Manometer		

SPARE PARTS

	Product Code	Name of the Spare Part	Products used	Technical Details
	2311	CARTRIDGE	DK-Series Water Pressure Reducer 1/2" - 3/4" - 1"	Filter Wire Range; 660 micron
	2411	FILTER	DK-Series Water Pressure Reducer 1/2" - 3/4" - 1"	Filter Wire Range; 660 micron

INTRODUCTION

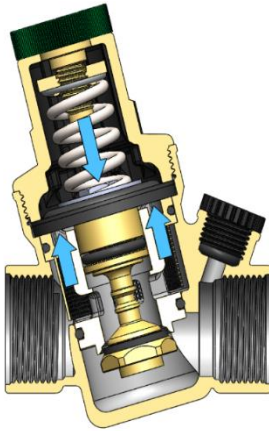


Diaphragm, filter and changeable cartridge water pressure reducer is designed to reduce the pressure of high pressure mains water to prevent damage to the equipment and to the devices connected to the equipment.

The Design Features of the Diaphragm and Changeable Cartridge Water Pressure Reducer

- Thanks to its replaceable cartridge mechanism, in case of any malfunction, the problem can be solved by replacing the cartridge without having to remove the product from the plumbing system.
- The filter in it prevents sand, gravel, debris etc. from entering parts of the product that can prevent it from functioning properly.
- The filter can be removed and cleaned at any time and periodic maintenance can be performed.
- The diaphragm used provides resistance to sudden pressure changes and wear.
- The water passages are made from materials that prevent oxidation and corrosion.
- Thanks to its special design;
 - It is long-lasting.
 - It has a more precise setting mechanism.
 - It operates in a more stable manner at set pressure and there will not be any fluctuations in output pressure.
 - Provides low acoustic values during water passage.
- Due to the inclined body design and inclined manometer connection, it is small in size. This feature provides ease of installation in tight spaces

OPERATING PRINCIPLE



The operating system of water pressure reducers is based on the balance of two opposing forces.

These forces:

- 1- The pressure force of the compressed spring
- 2- The pressure of the water pressure on the diaphragm

If the pressure force of the spring is greater than the pressure applied to the diaphragm, the piston moves downwards, if it is smaller, the piston moves upwards and the output pressure is adjusted in a controlled manner.

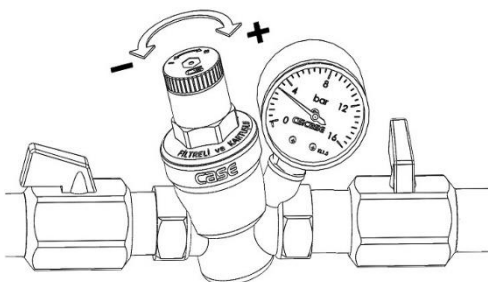
Product introduction and detailed explanation video:

<https://www.youtube.com/watch?v=-lz4R9ctPCA&t=125s>

CALIBRATION

How to do Water Pressure Reducer adjustment;

Water pressure reducers are calibrated to 3 bar of factory setting pressure. The setting pressure can be changed by the user with the help of adjustment key placed on cover.



By turning the adjustment key;

- clockwise to increase (+)
- anticlockwise to decrease it (-) ,

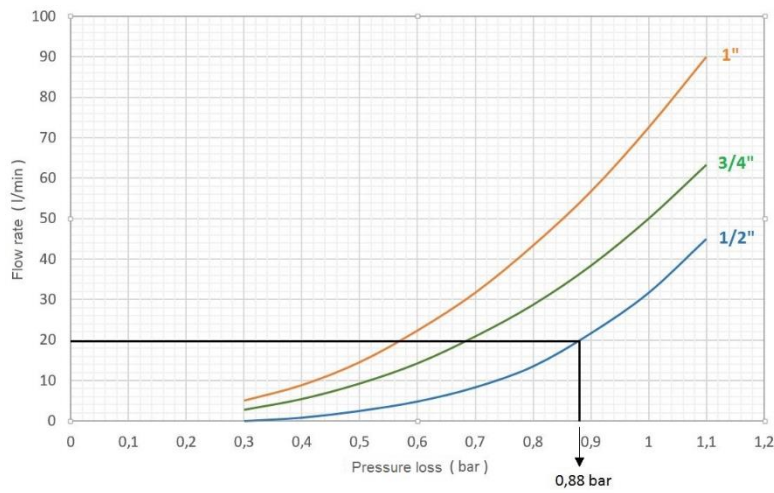
the setting pressure is calibrated to the desired pressure

NOMINAL FLOW RATE

Size	Flow Rate	
	m ³ / h	l / min
½" DN15	1,27	21,17
¾" DN20	2,27	37,83
1" DN25	3,6	60

These flow rates are equal to 2 m/s rate.

THE LOSS OF PRESSURE ACCORDING TO THE CHANGE OF THE FLOW RATE

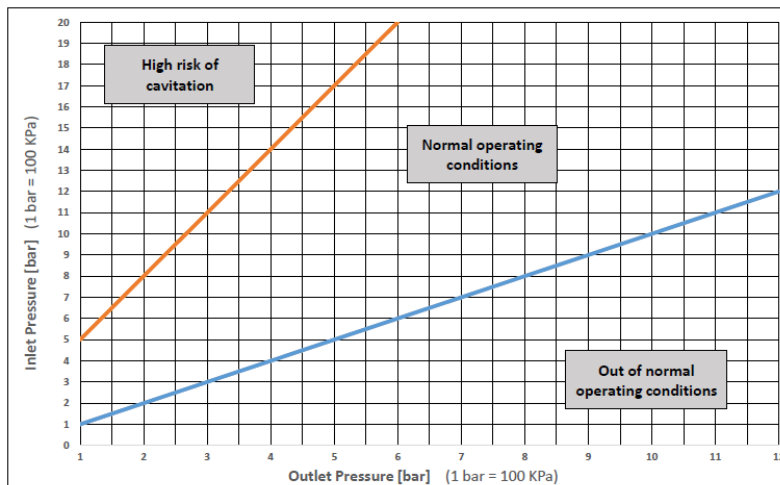


The graphic is prepared according to the conditions specified in EN 1567 standard.
(Input pressure 8 bar - Output pressure 3 bar)

According to the diagram as the flow rate increases, the pressure loss increases and the outlet pressure decreases.

EXAMPLE: Let us consider a system using a 1/2 "pressure reducer. The pressure of the water pressure reducer is $P = 3$ bar, $Q = 20$ l/min. Based on these values, the pressure variation is read as $\Delta p = 0.88$ bar when the $Q = 20$ l / min in the diagram and the point at which the curve intersects the "pressure change (Δp)" point. In this case it is expected that the pressure (P_o) = $3 - 0.88 = 2.12$ bar at the flow in the installation.

CAVITATION DIAGRAM



On implementations of water pressure reducer, risk of cavitation should be paid attention. In order to avoid the risk of cavitation, a gradual pressure decrease is achieved by using more than one pressure reducer. For example, an inlet pressure of 14 bar must be reduced to 3 bar. This pressure decrease corresponds to the "High Cavitation Risk" region. According to these conditions, a gradual pressure decrease should be carried out to avoid the risk of cavitation. At first, with a pressure reducer number 1, the inlet pressure of 14 bar is reduced to 6 bar, then with a pressure reducer number 2, a pressure of 6 bar is reduced to 3 bar. In this way, safe pressure decrease ensured.

MATERIAL LIST



Adjusting Key

Cover

Cartridge

Filter

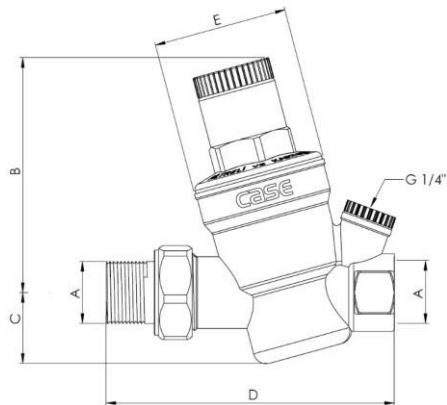
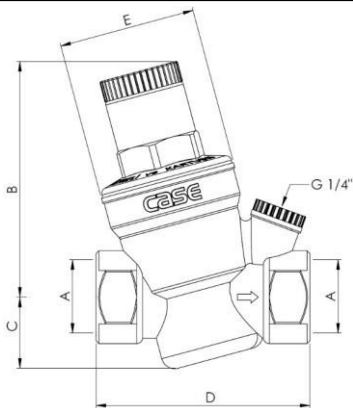
Body

Body	:	Brass CW 617N EN 12165
Coating	:	Ni
Cover	:	PA66 GFR30
Adjusting Key	:	PP
Cartridge	:	POM
Filter	:	INOX
Diaphragm	:	EPDM
Gasket and O-rings	:	EPDM - NBR
Spring	:	STEEL 10270-1

TECHNICAL SPECIFICATIONS

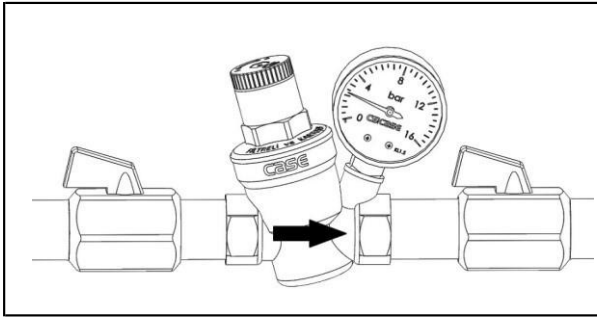
Maximum Input Pressure	:	16 bar
Pressure Setting Range	:	1 - 6,5 bar
Factory Outlet Pressure	:	3 bar
Filter Wire Range	:	660 micron
Maximum Heat	:	40° C
The Fluid Used	:	Water

DIMENSIONING

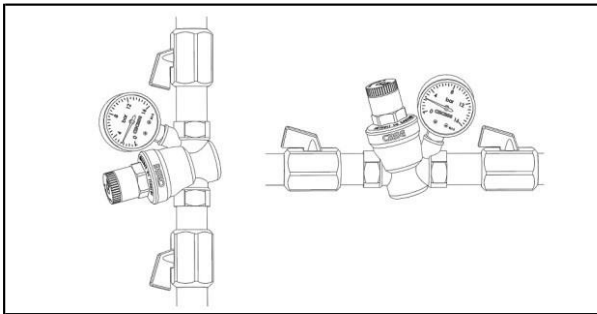


Product Code	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]
1915	1/2"	79	24	71	64
2015	1/2"	79	24	103	64
2115	1/2"	79	24	71	64
2215	1/2"	79	24	103	64
1920	3/4"	79	24	72	64
2020	3/4"	79	24	107	64
2120	3/4"	79	24	72	64
2220	3/4"	79	24	107	64
1925	1"	79	24	87	64
2025	1"	79	24	126	64
2125	1"	79	24	87	64
2225	1"	79	24	126	64

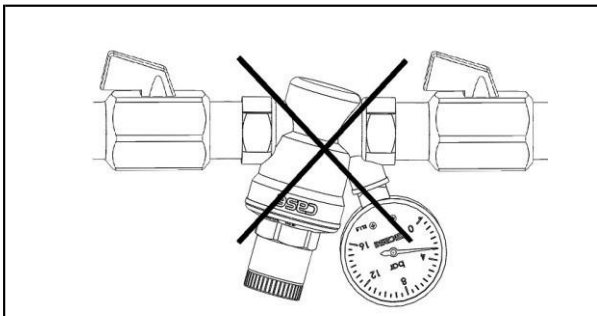
INSTALLATION



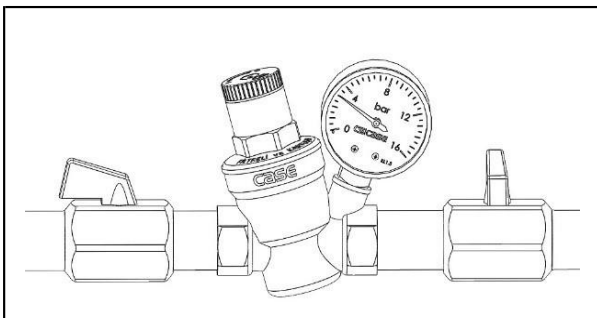
Care should be taken to ensure that the arrow mark on the product's body is in the direction of the water flow while the product is connected to the installation.



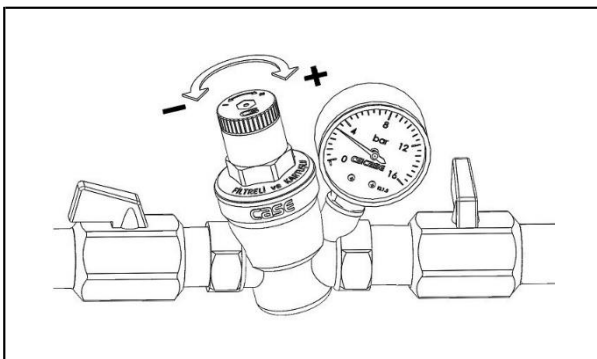
The installation of the product can be made vertical or horizontal.



Mounting the product upside down during the connection prevents the product from working properly.

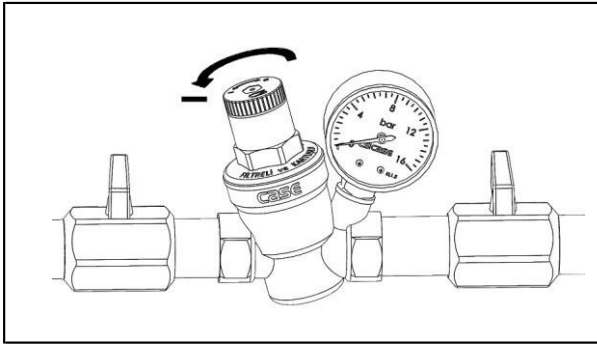


Diaphragm and Changeable Cartridge Water Pressure Reducers are set to 3 bars at factory.

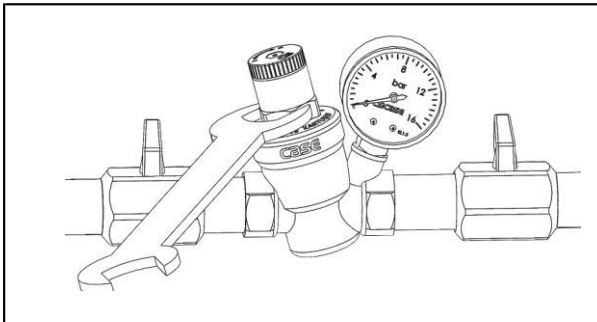


If necessary, adjust the pressure value to the desired value by turning the adjustment key clockwise (+) to increase pressure and counterclockwise (-) to decrease the pressure.

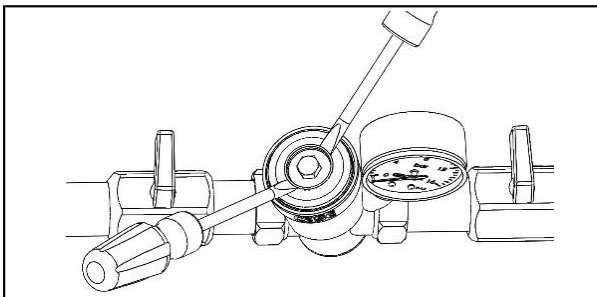
MAINTENANCE - REPAIR



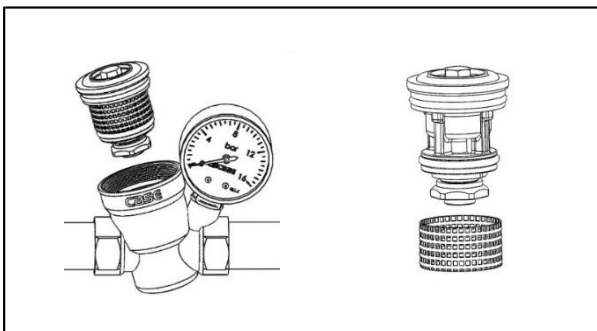
After closing the inlet and outlet valves, remove the spring pressure by turning the adjustment key in the minus (-) direction.



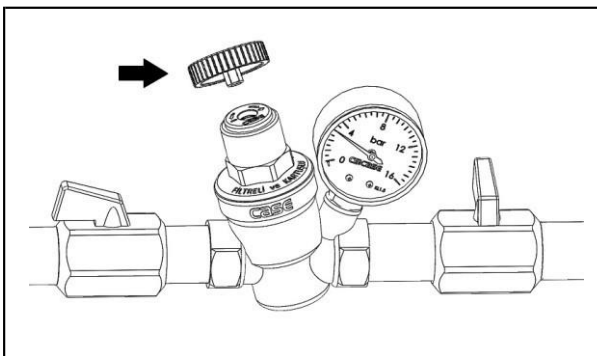
With the help of a tool such as a wrench, remove the cover by turning it clockwise.



Remove the cartridge by lifting it from under the metal disc with the help of two screwdrivers or with a similar device.

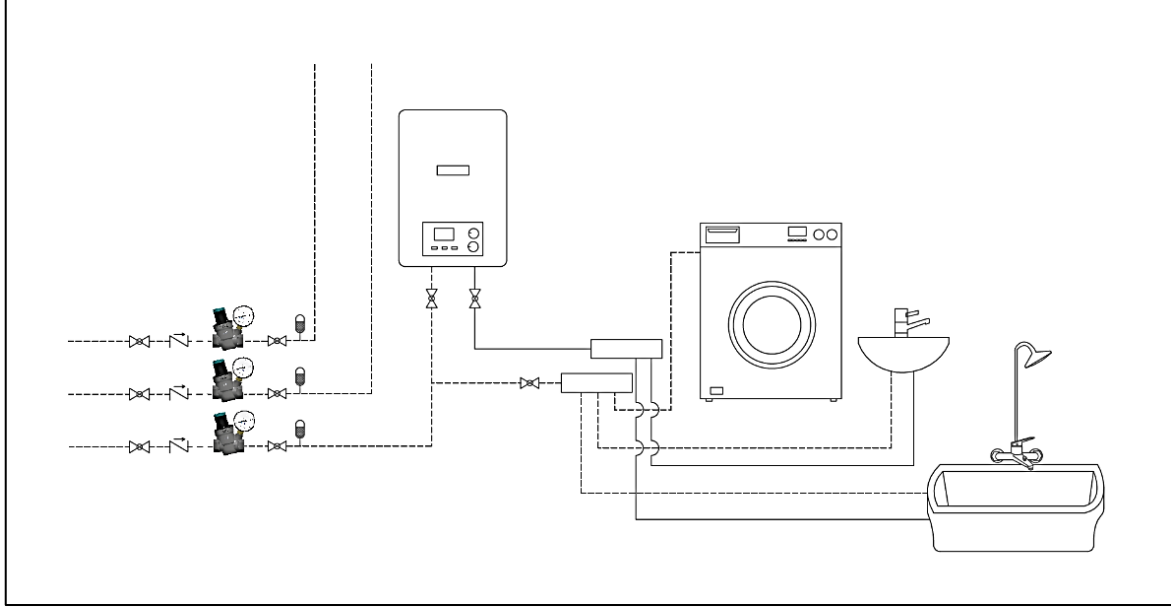


If the filter needs to be cleaned, remove the filter, clean it and put it back on the cartridge. Then insert the cartridge into the product. If the cartridge needs to be replaced, replace the old cartridge with the new cartridge you supplied.



Re-insert the pieces you have previously removed and tighten the cover with the wrench. Observe the manometer and adjust it with the adjusting key to the desired pressure value.

APPLICATION DIAGRAM



We reserve the right to make changes related data in this publication, at any time and without prior notice.