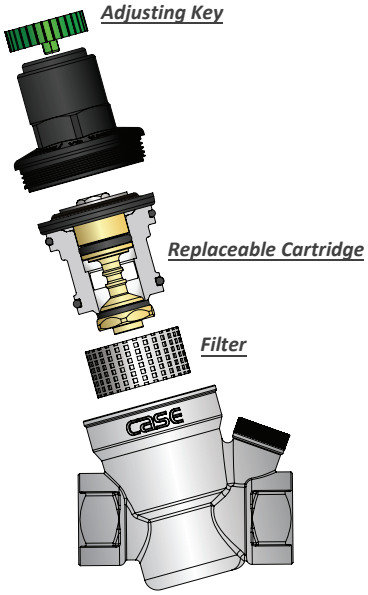
CSCASE	**WATER PRESSURE REDUCER (DK SERIES)** WITH CHANGEABLE CARTRIDGE AND FILTER	June 2024

EN 1567

PRODUCT RANGE				
Code	**Size**	**Description**	**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		

INTRODUCTION

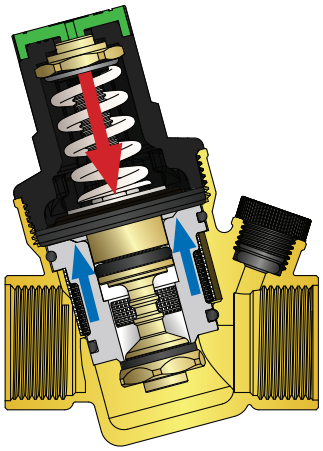


Pressure reducing valve with diaphragm, filter and changeable cartridge is designed to reduce high pressure of mains water to prevent damage to the equipments and to the devices connected to them.

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 plumbing system.
- The filter in it catches 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 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 outlet 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

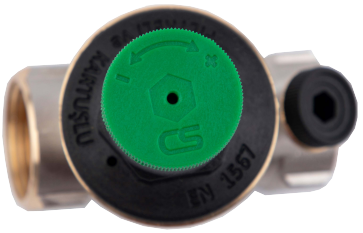
How to do Water Pressure Reducer adjustment;

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



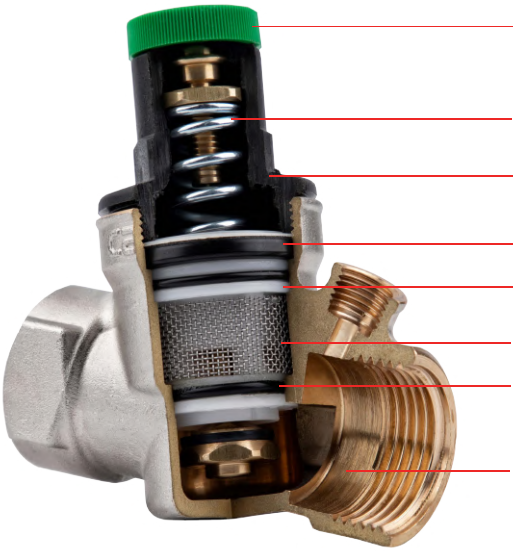
TECHNICAL SPECIFICATION

Maximum Input Pressure	:	16 bar
Pressure Setting Range	:	1 - 6,5 bar
Factory Outlet Pressure	:	3 bar
Filter Wire Range	:	660 micron
Maximum Heat	:	80° C
Fluid Used	:	Water

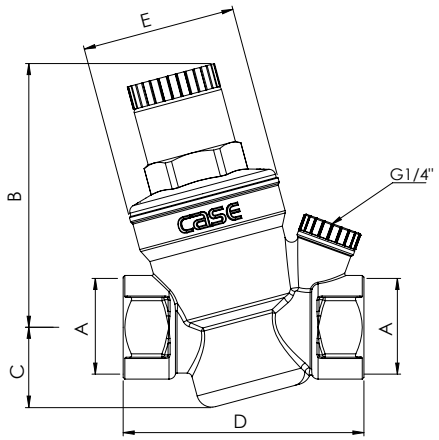
SPARE PART

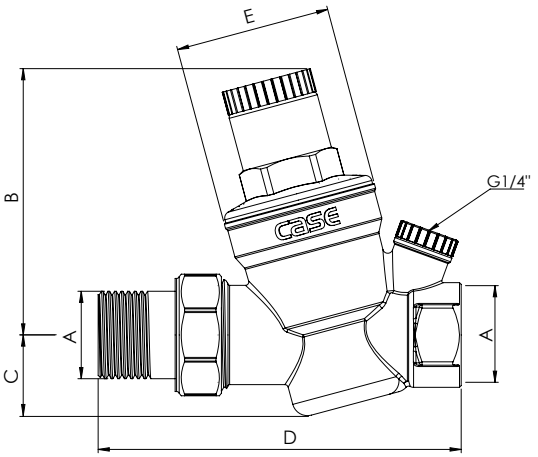
	Product Code	Name of the Spare Part	Products used	Technical Details
	2311	CARTRIDGE WITH FILTER	DK-Series Water Pressure Reducer 1/2" - 3/4" - 1"	Filter Wire Range 660 micron

MATERIAL LIST



DIMENSIONS

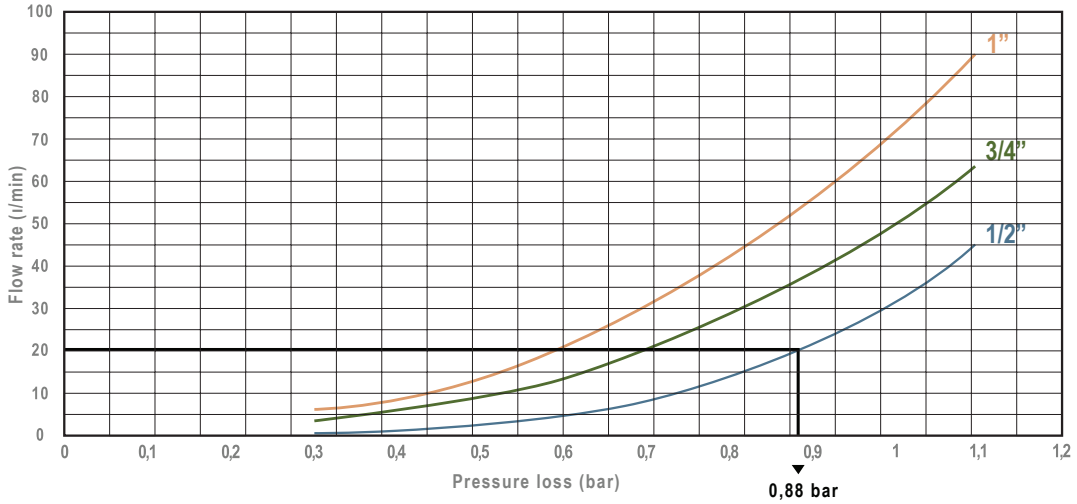




Code	A [inch]	B [mm]	C [mm]	D [mm]	E [mm]
1915	1/2"	79	24	71	64
2015	1/2"	79	24	103	64
2115	1/2"	79	24	71	64
2215	1/2"	79	24	103	64
1920	3/4"	79	24	72	64
2020	3/4"	79	24	107	64
2120	3/4"	79	24	72	64
2220	3/4"	79	24	107	64
1925	1"	79	24	87	64
2025	1"	79	24	126	64
2125	1"	79	24	87	64
2225	1"	79	24	126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

NOMINAL FLOW RATE		
Size	**Flow Rate**	
	m³ / h	l / min
1/2" - DN15	1,27	21,17
3/4" - DN20	2,27	37,83
1" - DN25	3,60	60,00

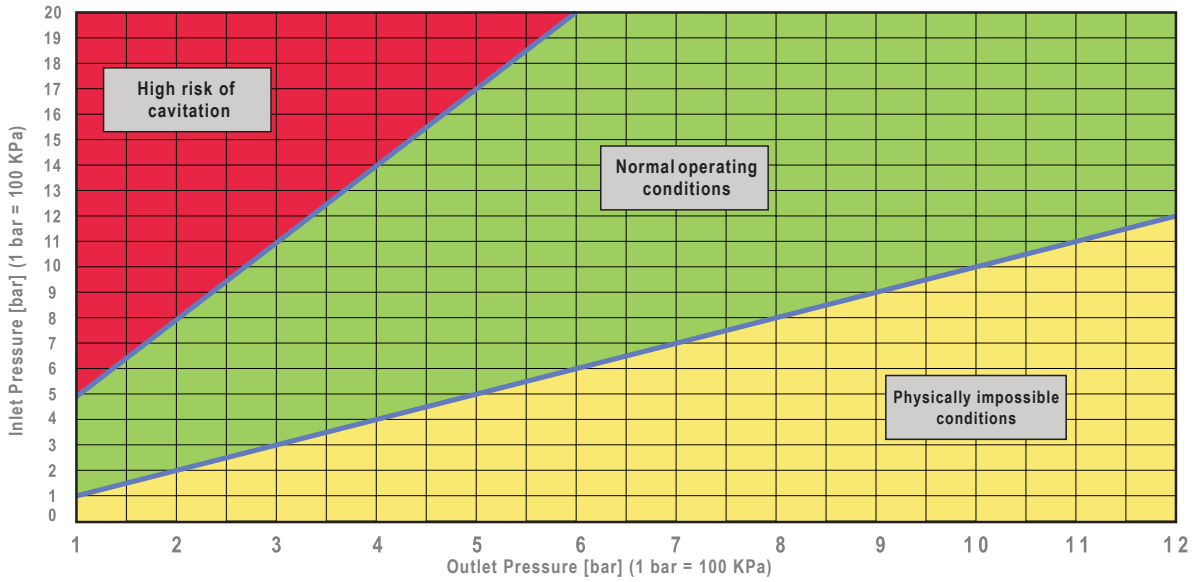
PRESSURE DROP DIAGRAM



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

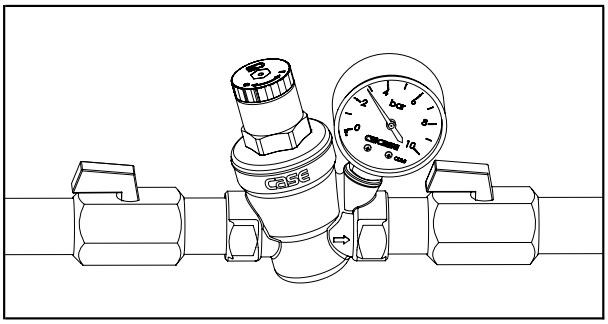
According to the diagram as the flow rate increases, the pressure loss increases and the outlet pressure decreases. EXAMPLE: Let us consider a system using a 1/2 "pressure reducer. The pressure of the water pressure reducer is P = 3 bar, Q = 20 l/min. Based on these values, the pressure variation is read as Δp = 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 (Po) = 3 - 0.88 = 2.12 bar at the flow in the installation.

CAVITATION DIAGRAM

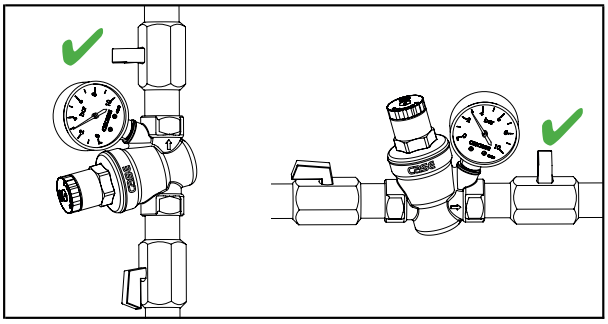


On implementations of water pressure reducer, risk of cavitation should be paid attention. In order to avoid the risk of cavitation, a gradual pressure decrease is achieved by using more than one pressure reducer. For example, an inlet pressure of 14 bar must be reduced to 3 bar. This pressure decrease 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.

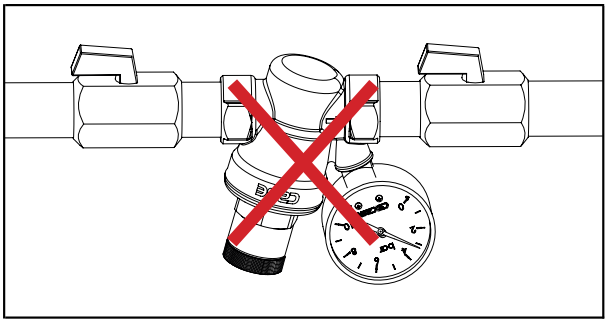
INSTALLATION



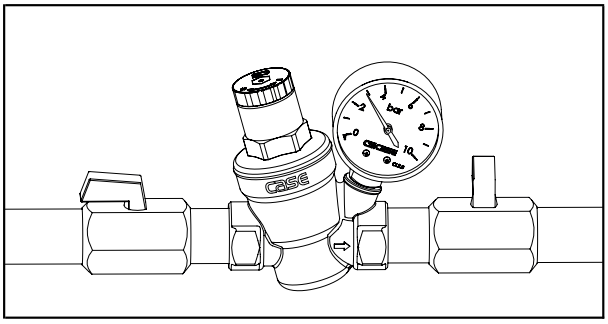
Care should be taken to ensure that the arrow mark on the product's body is in the direction of the water flow while the product is connected to the installation.



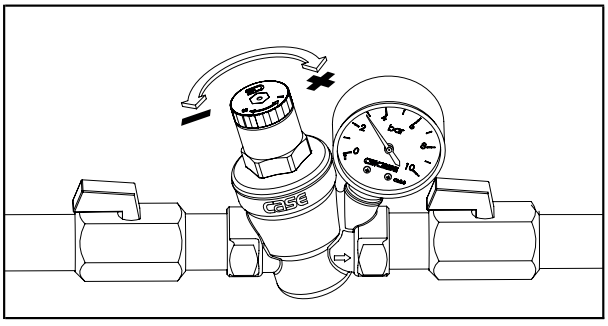
The installation of the product can be made vertical or horizontal.



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

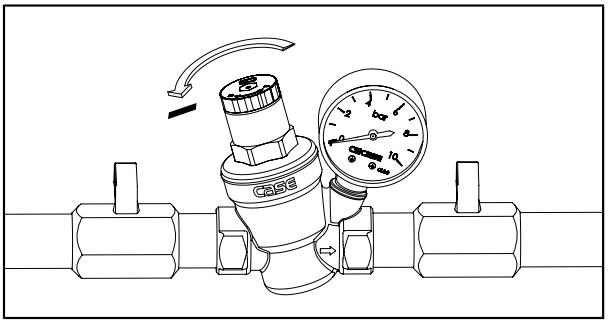


Diaphragm and Changeable Cartridge Water Pressure Reducers are set to 3 bars at factory.

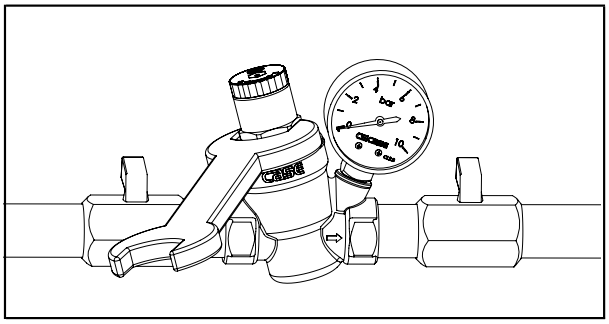


If necessary, adjust the pressure value to the desired value by turning the adjustment key clockwise (+) to increase pressure and counterclockwise (-) to decrease the pressure.

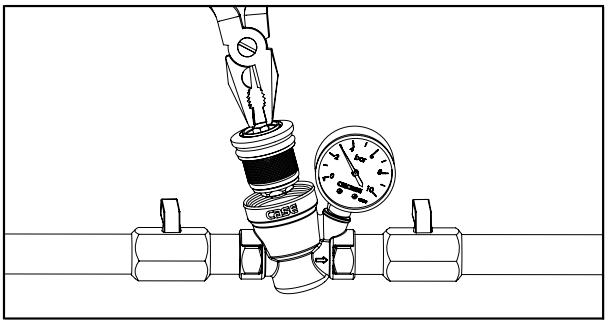
MAINTENANCE-REPAIR



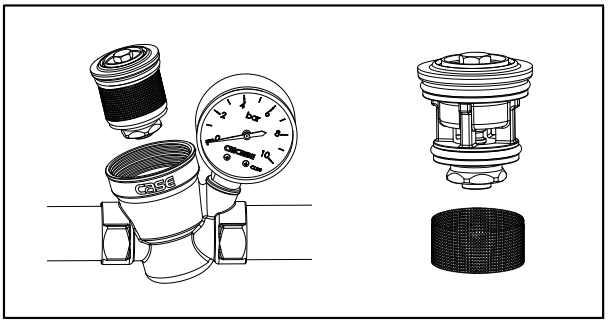
After closing the inlet and outlet valves, remove the spring pressure by turning the adjustment key in the minus (-) direction.



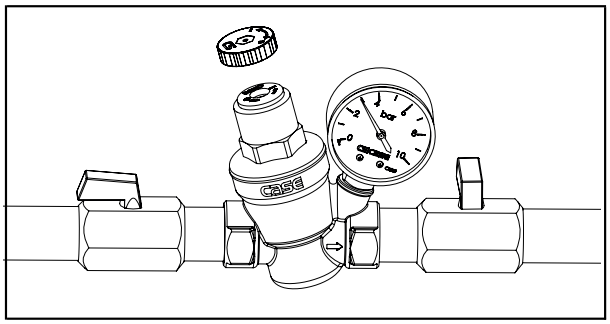
With the help of a tool such as a wrench, remove the cover by turning it clockwise.



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

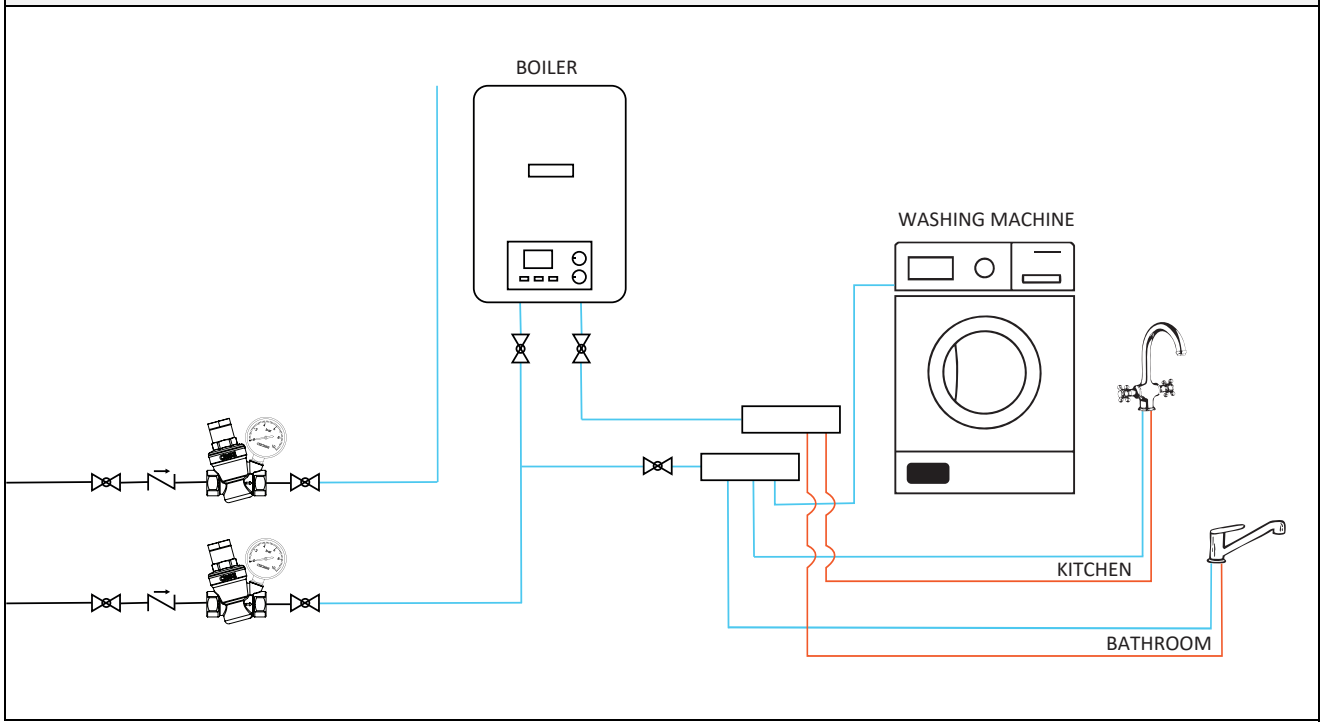


If the filter needs to be cleaned, remove the filter, clean it and put it back on the cartridge. Then insert the cartridge into the product. If the cartridge needs to be replaced, replace the old cartridge with the new cartridge you supplied.



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



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