

# Inclined micro pressure reducing valve for special applications

series 533H



## Function

Pressure reducing valves are installed in residential plumbing systems to reduce and stabilise inlet pressure from the water mains supply which is generally too high and variable for domestic systems to function properly.

The 533...H series of micro pressure reducing valves has been specially created for applications where it is necessary to reduce and precisely stabilise the pressure arriving from the mains in the presence of low flow rate values.

The 533...H series is typically installed for service in appliances that also have important dimensions and intermittent operation.

The performance of this series of micro pressure reducing valves complies with the requirements of standard EN 1567, for use with cold water and hot water up to 80°C.

The typical applications of these micro pressure reducing valves are appliances for dispensing water, beverages and coffee machines.

## Product range

Series 533430H Inclined micro pressure reducing valve with pressure gauge connection \_\_\_\_\_ DN 8 (3/8") F  
Series 533230H Inclined micro pressure reducing valve with pressure gauge \_\_\_\_\_ DN 8 (3/8") F

## Technical specifications

### Materials

Body: Dezincification resistant alloy **CR** EN 12165 CW724R  
Cover: PA6G30  
Control stem: Dezincification resistant alloy **CR** EN 12165 CW724R  
Spring: steel EN 10270-1  
Cartridge: PPSG40  
Diaphragm: EPDM  
Seals: EPDM  
Strainer: stainless steel EN 10088-2 (AISI304L)

### Performance

Medium: water  
Max. pressure upstream: 16 bar  
Downstream pressure setting range: 0,8–4 bar  
Factory setting: 3 bar  
Strainer mesh size: Ø 0.2 mm  
Max. working temperature: 80°C  
Pressure gauge scale: 0–10 bar  
Performance to standard: EN 1567

### Connections

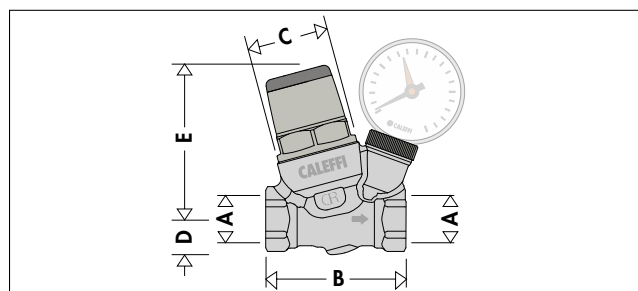
Main connections: 3/8" F (ISO 228-1)  
Pressure gauge connection: 1/4" F (ISO 228-1)

### Recommended flow rates

For an average flow velocity of 2 m/s, the recommended flow rate is as follows:

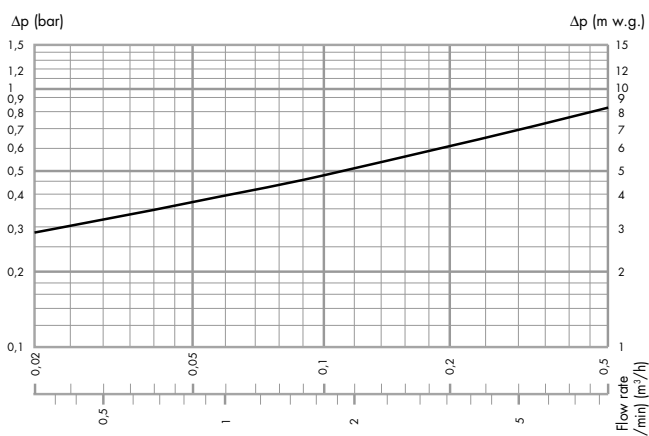
Flow rate: 0,36 m³/h  
6 l/min

## Dimensions



Code	DN	A	B	C	D	E	Mass (kg)
533430H	8	3/8"	52	Ø32	14	57,5	0,19
533230H	8	3/8"	52	Ø32	14	57,5	0,24

## Hydraulic characteristics: Graph (pressure drop)

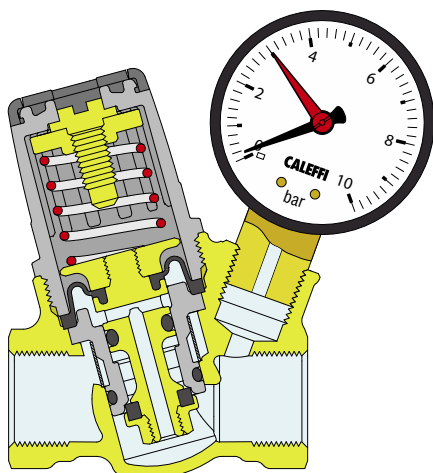


Reference conditions: upstream pressure = 8 bar  
downstream pressure = 3 bar

## Construction details

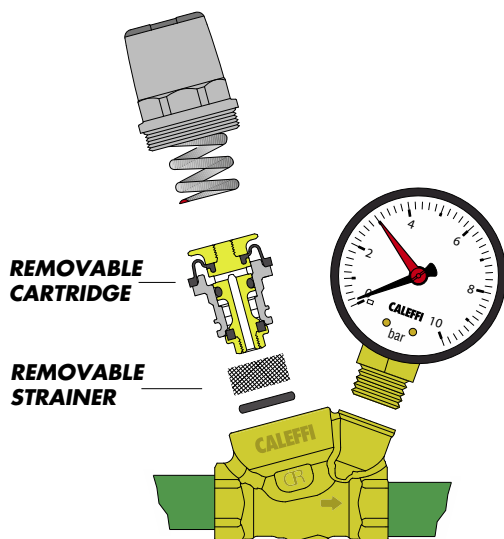
### Contoured membrane

The membrane is designed with a special shape to assure more accurate pressure regulation in accordance with downstream pressure fluctuations. This feature extends the valve life, as the diaphragm is more resistant to sudden pressure fluctuations and to normal wear.



### Extractable cartridge

The internal cartridges in Caleffi 533...H series micro pressure reducing valves can be removed for periodic cleaning and maintenance.



### Inspectable strainer

The 533...H series of micro pressure reducing valves are equipped with an inspectable strainer. In this way it is possible to perform inspections and maintenance.

### Pressure gauge

The 533...H series of micro pressure reducing valves are available in a version with a pressure gauge in order to have an immediate display of the downstream regulated pressure value.

## Certification

The micro pressure reducing valves have performance complying with standard EN 1567.

## Fluid dynamics

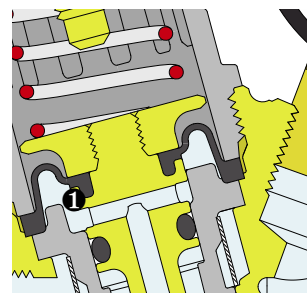
Thanks to the large chamber at the outlet of the pressure reducing valve, there is a low speed area; this feature allows the optimisation of the hydraulic characteristics linked to the passage of fluid during pressure reduction. For the best result, a pressure reduction ratio of less than 3:1 between inlet and outlet is recommended.

## Compact dimensions

The "inclined" configuration makes for more compact dimensions of 533...H series micro pressure reducing valves with consequent easy installation.

## Non-sticking materials

The central support ①, containing moving parts, is made using plastic with a low adhesion coefficient. This solution minimises the chance of lime scale formation, the main cause of malfunctions.

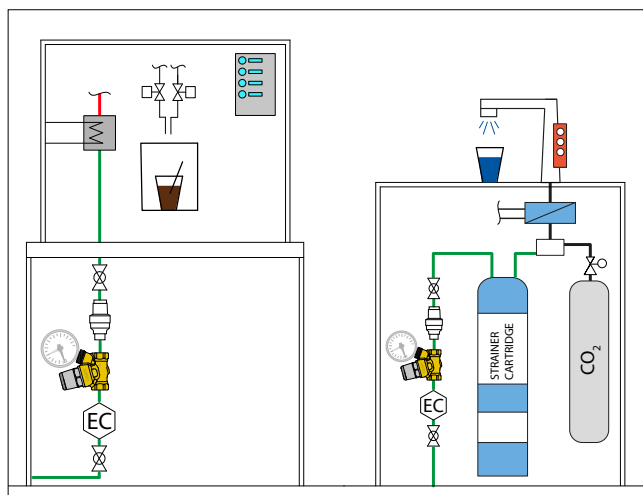


## Dezincification resistant material with very low lead contents (Low Lead)

The material used to make the mixing valve body is perfectly in line with the new normative provision concerning contact with potable water. This is an innovative alloy with very low lead contents and dezincification resistant properties.

## Typical applications

The 533...H series of micro pressure reducing valves are particularly suitable for installations on coffee machines or on appliances for dispensing water and beverages. In these appliances it is necessary to work with very low flow rates and to regulate the pressure precisely.



## SPECIFICATION SUMMARY

### 533...H series

Inclined micro pressure reducing valve for special applications with pressure gauge (with pressure gauge connection). Size DN 8. Threaded connections 3/8" F. Dezincification resistant alloy body. Dezincification resistant alloy control spindle. PA6G30 cover. Diaphragm and seals in EPDM. Maximum working temperature 80°C. Maximum upstream pressure 16 bar. Downstream pressure setting range from 0,8 to 4 bar. Extractable cartridge and strainer for maintenance operation.

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