

# Z/ZSC

Pilot regulator  
Inlet pressure 100 bar



## Applications

High pressure reducing service  
Back pressure and relief service

## Brief information

The use of pilot regulators adds precision and flexibility to pressure regulation. This pilot regulator is used to pressure balance a main valve diaphragm for positive positioning of the main line valve with respect to flow. It will provide fast, accurate and stable pressure regulation. It is also used for spring loaded regulators where the outlet pressure exceeds the practical limits of spring loading. All forged parts of this pilot are brass for maximum strength. The unit is approved as part of the AFV by DVGW according to the Pressure Equipment Directive 97/23/EC (PED) in conjunction with EN 334. Registration number: CE-0085BN0509.

**Type ZSC pilot regulator:** Type ZSC has double diaphragms which decouples control pressure and pilot outlet pressure giving accurate control. It is designed for applications where a secondary control pressure is used to operate the main valve.

**Type ZSC 150 back pressure and relief service:** The ZSC 150 is a normally closed pilot opening on increasing pressure applied to its external sense connection or can be used as a differential device, when the upper chamber is connected to a second pressure.

**Type Z pilot regulator:** Type Z pilot has a single diaphragm and controls its own output pressure. It is used for maintaining the inlet pressure for a control pilot. This reduces the inlet pressure dependency of the control system and is especially recommended for installations where large pressure reductions are required, and where there is a considerable variation in the inlet pressure.

### Ordering example:

Type  
Size of orifice  
Inlet pressure  
Outlet pressure or spring range/number

Pressure ratings	
Maximum allowable operating pressure MOP	100 bar
Maximum outlet pressure – see spring range (ZSC 100/ZSC 320-100)	22.4/41.4 bar

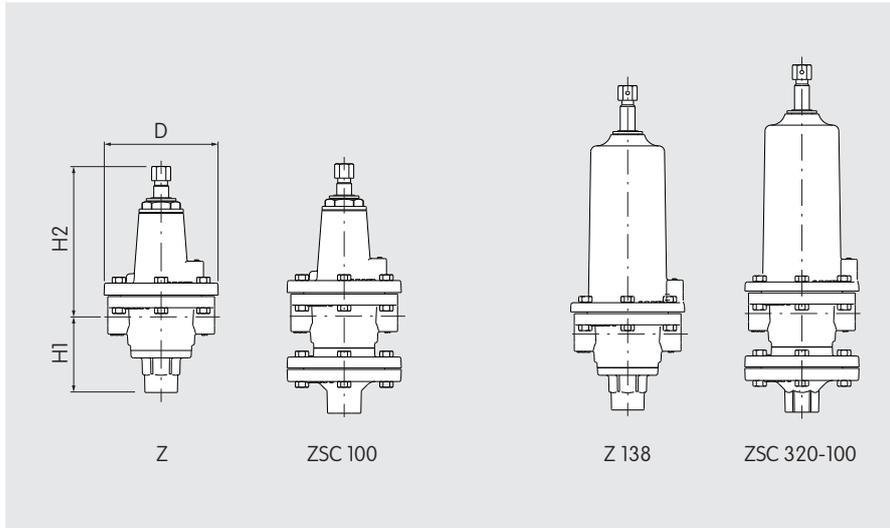
## Main features

- Spring loaded
- Modular design
- Provide fast, accurate, stable pressure control
- Operating temperature -20 °C to +60 °C

### Types

- Type Z and Z 138 load limit regulator used to maintain the inlet pressure for a control pilot
- Type ZSC 100 and ZSC 320-100 used for secondary pressure control
- Type ZSC 150 and ZSC 320-150 used for back pressure and relief service

## Z/ZSC: Pilot regulator, inlet pressure 100 bar



Materials	
Body	Brass EN 12164
Sense chamber	Brass EN 12164
Valve seat	Buna N
Diaphragm	Buna N
O rings	Buna N

Dimensions & weights									
Type	Application	Connection	Dimensions [mm]			Valve size	Weight [kg]	P <sub>0</sub> max.	P <sub>d</sub> max.
			D	H1	H2				
Z	Stabilizing regulator	NPT 1/4"	98	73	136	3/32" or 1/8"	2.3	100 bar	22.4
Z 138	Stabilizing regulator	NPT 1/4"	98	73	231	3/32" or 1/8"	4.1	100 bar	41.4
ZSC 100 and ZSC 150	Pilot regulator	NPT 1/4"	98	83	136	3/32" or 1/8"	3.6	100 bar	22.4
ZSC 320-100 and ZSC 320-150	Pilot regulator	NPT 1/4"	98	83	231	3/32" or 1/8"	5.4	100 bar	41.4

### Load limit regulator Z, pilot regulator ZSC 100 and relief pilot ZSC 150

Pressure spring ranges		
Spring range	Colour code	Order No.
70 – 350 mbar	Green	71411 P010
0.14 – 0.7 bar	Brown/blue	71411 P043
0.2 – 2.1 bar	Yellow	71411 P011
0.7 – 5.2 bar	Red	71411 P012
1.7 – 10.4 bar	Blue	71411 P014
6.9 – 15.5 bar	White	71411 P009
13.8 – 22.4 bar	White/red	71411 P046

max. inlet pressure 100 bar

### Load limit regulator Z 138, pilot regulator ZSC 320-100 and relief pilot ZSC 320-150

Pressure spring ranges		
Spring range	Spring colour	Order No.
10.3 – 41.4 bar	-	71421P008

max. inlet pressure 100 bar

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