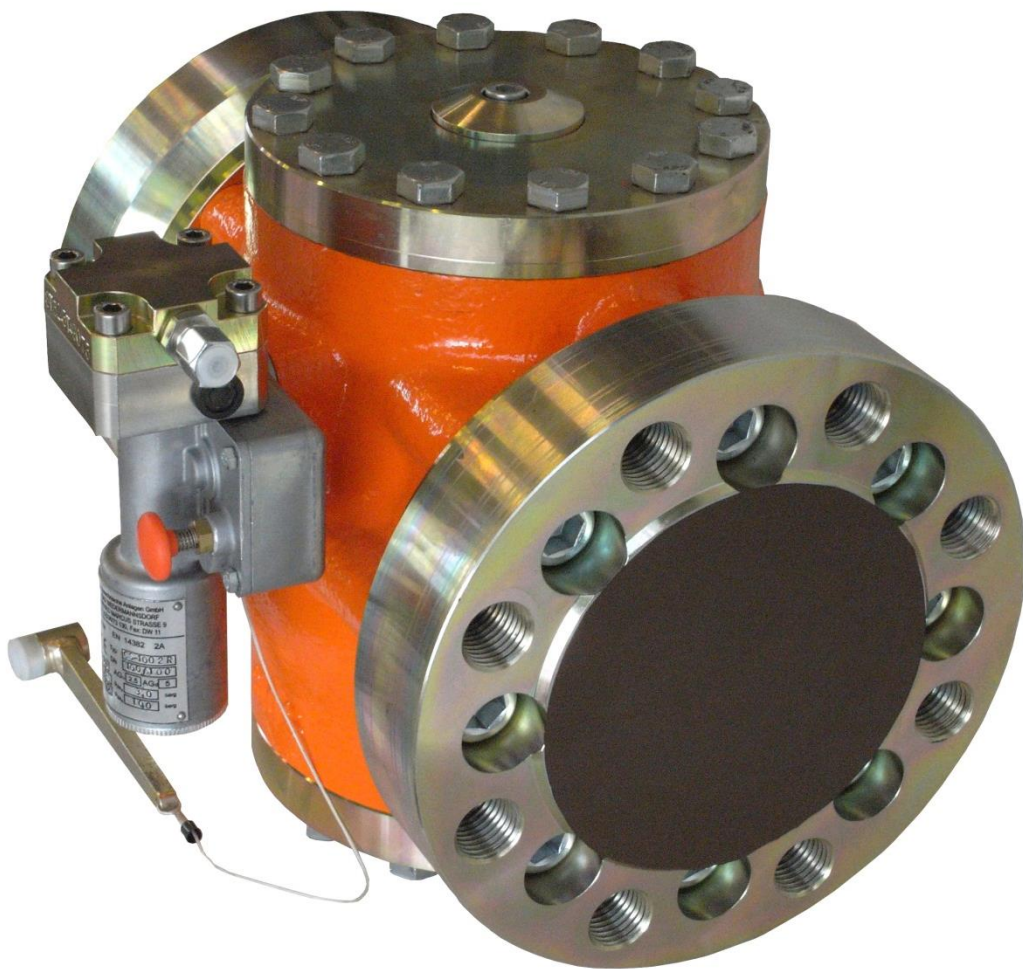




Sigurnosni zaporni ventil
Safety Shut-off Valve
CITYSTOP CS



The Experts in Energy Supply

CITYSTOP CS

OPĆENITO

GENERAL

Sigurnosni zaporni ventil **CITYSTOP CS** (**EN 14382**) je zaporni ventil namijenjen za stanice za regulaciju tlaka plina sukladno normama **EN 12186** i **EN 12279**.

The **CITYSTOP CS** is a safety shut-off valve (**EN 14382**) for gas pressure regulating stations as defined in **EN 12186** and **EN 12279**.

PREDNOSTI

BENEFITS

- Široko područje za postavljanje gornje i donje granične vrijednosti
- Zatvaranje u vremenu kraćem od sekunde
- Raznovrsni prirubnički spojevi
- Dizajniran i ispitan sukladno DVGW
- Jednostavno održavanje

- Large range for setting upper and lower trip
- Closes in less than 1 second
- Variable flange connections
- Designed and tested in accordance with DVGW
- Easy to maintain

Ventil se može koristiti za prirodni plin i ostale neagresivne plinove. Opcijski je moguće isporučiti izvedbu za kisele plinove.

The valve can be used with natural gas and other non-aggressive gases. Optionally, a design suitable for acid gas may be supplied.

Dostupne izvedbe prema nazivnom tlaku:

The series is designed to accommodate the following nominal pressure stages:

PN 16 / ANSI 150,
PN 40 / ANSI 300,
PN 100 / ANSI 600

PN 16 / ANSI 150,
PN 40 / ANSI 300,
PN 100 / ANSI 600.

Dostupne dvije izvedbe za različite odzivne tlakove: za izlazne tlakove ≤ 16 bara (slika 1) i > 16 bar (slika 2).

Two designs are available to cover different response pressures: for downstream pressures ≤ 16 bar (Fig. 1) and > 16 bar (Fig. 2).

Sigurnosni zaporni ventil **CITYSTOP CS** je posebno dizajniran za komunalne i industrijske sustave za opskrbu plinom.

The safety shut-off valve **CITYSTOP CS** has been developed specifically for use in municipal and industrial gas supply systems.

Sigurnosni zaporni ventil je dizajniran i dimenzioniran sukladno direktivi za opremu pod tlakom **PED 97/23/EC** i normi **EN 14382**. CE izjava o sukladnosti je standardna.

The safety shut-off valve is designed and dimensioned in accordance with the Pressure Equipment Directive **PED 97/23/EC** and the standard **EN 14382**. An EC declaration of conformity is provided as a standard.

Izvedba zapornog ventila **CITYSTOP CS** je idealna za korištenje za plinske plamenike.

Its structure makes the safety shut-off valve **CITYSTOP CS** ideal for use in gas burners.

Raznovrsne opcije priključaka uključujući verzije s različitim prirubnicama na ulaznoj i izlaznoj strani, omogućuju izvedbe s dodatnim prednostima pred konkurencijom. Jednostavno rukovanje, održavanje i male dimenzije dodatne su prednosti **CITYSTOP CS** serije.

Multiple connection options, including versions with different intake and outlet flanges, provide the design with an edge over its competitors. Simple operation, service-friendliness and small dimensions are further advantages of the **CITYSTOP CS** series.

Uređaj je pogodan za previsoki kao i za preniski tlak. Ventil je izveden s ručicom za ponovno otvaranje i gumbom za jednostavno ručno aktiviranje. Opcijski su dostupne granične sklopke za potvrdu aktiviranja i mogućnost daljinske aktivacije (dodatkom elektromagnetskog ventila)

The device is suitable for excess pressure as well as insufficient pressure. The valve is provided with a manual clip-on lever for re-opening and a simple pushbutton-operated manual trip. Limit switches to acknowledge tripping and an electric remote trip (by an add-on solenoid valve) are available optionally.

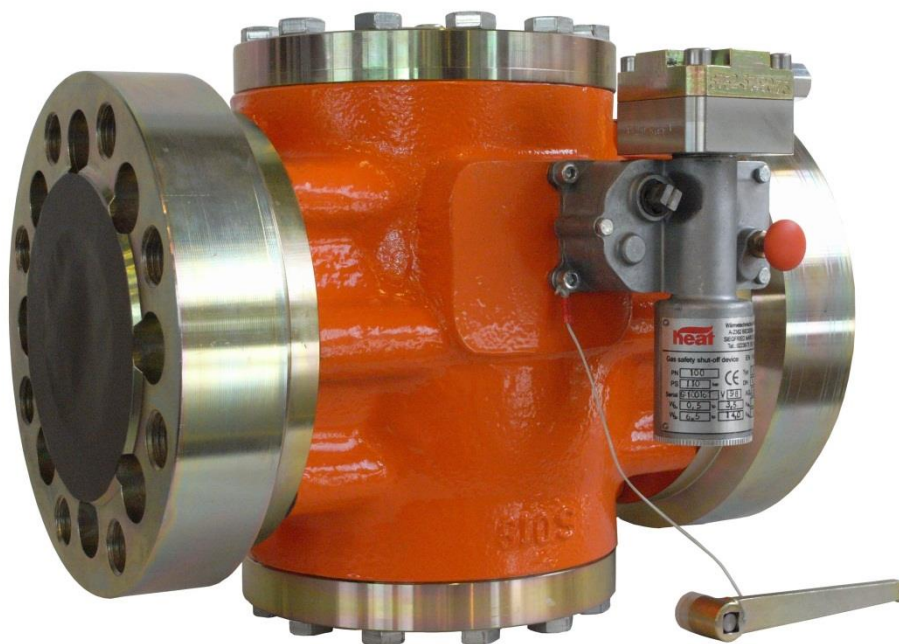
SLIKA 1

FIGURE 1

Sigurnosni zaporni ventil $p_{iz} \leq 16$ barSafety shut-off valve $p_{oi} \leq 16$ bar

SLIKA 2

FIGURE 2

Sigurnosni zaporni ventil $p_{iz} > 16$ barSafety shut-off valve $p_{oi} > 16$ bar

CITYSTOP CS

OPIS I PRINCIP RADA

Sigurnosni zaporni ventil **CITYSTOP CS** se u osnovi sastoji od dvije komponente: osnovni uređaj uključuje prirubničke priključke zaporne jedinice i sjedište ventila i aktivacijski uređaj zapornog ventila.

Osnovna izvedba je s prirubnicama za klase tlaka (PN 16 – PN 100). Aktivacijski mehanizam je za tlakove aktiviranja \leq PN 16 izveden s membranom i kao blok za tlakove $>$ PN 16.

PRINCIP RADA CITYSTOP CS

Sila zatvorne opruge (1) se prenosi preko košuljice (2) na pladanj (3) sigurnosno zapornog ventila. Zatvaranje ventila se pomoću poluge (4) tako dugo potiskuje dok je aktivacijski uređaj sigurnosno zapornog ventila (7) blokiran. Pokretanjem aktivacijskog uređaja, okreće se poluga (4) i oslobađa košuljicu i pladanj ventila (3). Sigurnosni zaporni ventil zatvara bez vanjskog utjecaja. Zatvaranje se također može aktivirati ručno pomoću gumba (5).

Sigurnosni zaporni ventil se može ponovno otvoriti pomoću ručice koja se postavlja na pravokutnu osovinu. Okretom ručice preko košuljice (2) pomiče pladanj ventila u početni blokirani položaj. Okretom ručice započinje unutarnja kompenzacija tlaka.

SETUP AND FUNCTION

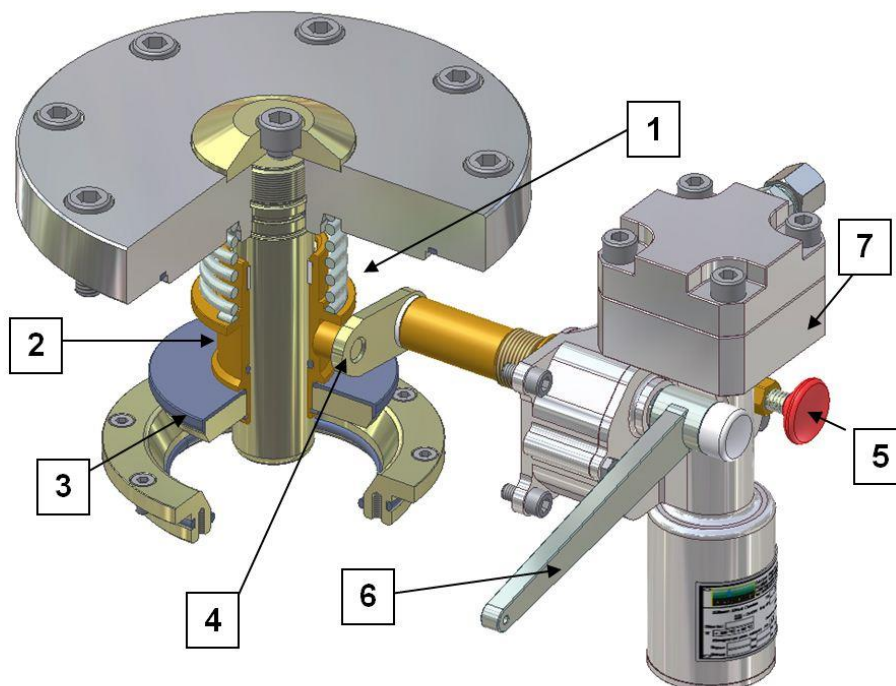
The safety shut-off valve type **CITYSTOP CS** essentially consists of two components: the basic device which includes the flange connections of the closing unit and the valve seat, and the SSV trip.

The basic device is fitted with the flanges required for the pressure stage (PN 16 – PN 100). The SSV trip is designed with a diaphragm for trip pressures \leq PN 16 and as a block for pressures $>$ PN 16.

FUNCTION OF THE CITYSTOP CS

The load of closing spring (1) is applied, via sleeve (2), to valve disk (3) of the safety shut-off valve in the closing direction. A cam lever (4) prevents the valve from closing for as long as the SSV trip (7) is interlocked. Once the SSV trips, cam lever (4) rotates and releases the sleeve and valve disk (3). The SSV closes without the application of any external force. It may be tripped manually by an external pushbutton (5).

The safety shut-off valve is re-opened by applying lever (6) to the rectangular tube. Operating the lever moves the valve disk (3) via sleeve (2) into the original interlocking position. The start of the movement initiates the internal pressure compensation.



TEHNIČKI PODACI

TECHNICAL DATA

Medij : prirodni plin, neagresivni plinovi, odorizirani prirodni plin, propan butan

Maksimalni radni tlak: 16 bar, 40 bar, 100 bar

Temperaturno područje: -20 / (-40) ÷ +60 °C

Dimenzioniranje sjedišta: preporučeno do 60 m/s

Dimenzije priključaka: prema tablici 2

Priključci ventila:
Prirubnice sukladno EN 1092-1:
PN 16 / PN 40 / PN 63 / PN 100
ASME B16.5:
ANSI 150 RF / ANSI 300 RF / ANSI 600 RF
Ermeto-S-cijevne spojnice

SZV područja podešavanja:

Tip N: pdsu 0,013 ÷ 0,90 bar
pdsu 0,005 ÷ 0,27 bar

Tip R: pdsu 0,70 ÷ 2,80 bar
pdsu 0,15 ÷ 2,50 bar

Tip 2R: pdsu 2,6 ÷ 10,0 bar
pdsu 2,0 ÷ 7,0 bar

Tip 3R: pdsu 10,0 ÷ 20,0 bar
pdsu 7,2 ÷ 14,0 bar

Klasa točnosti SZV:

pdsu AG 1 / 2,5
pdsu AG 5

Medium: natural gas, odourised non-aggressive gases, natural gas and propane butane gas

Max. operating pressure: 16 bar, 40 bar, 100 bar

Temperature range: -20 / (-40) ÷ +60°C

Seat dimensioning: recommended up to 60 m/s

Connection sizes: see table 2

Valve connections:
Connection flanges acc. to EN 1092-1:
PN 16 / PN 40 / PN 63 / PN 100
ASME B16.5:
ANSI 150 RF / ANSI 300 RF / ANSI 600 RF
Ermeto-S-tube fittings

SSV setting ranges:

Type N: pdsu 0.013 ÷ 0.90 bar
pdsu 0.005 ÷ 0.27 bar

Type R: pdsu 0.70 ÷ 2.80 bar
pdsu 0.15 ÷ 2.50 bar

Type 2R: pdsu 2.6 ÷ 10.0 bar
pdsu 2.0 ÷ 7.0 bar

Type 3R: pdsu 10.0 ÷ 20.0 bar
pdsu 7.2 ÷ 14.0 bar

SSV accuracy group:

pdsu AG 1 / 2,5
pdsu AG 5

MATERIJALI

MATERIAL QUALITY

Kućište: G20Mn5, lijevani čelik S355J2, čelik

Priključci: C 22.3, P265GH

Kućište membrane: lijevani aluminij, čelik

Unutarnji dijelovi: čelik, aluminij, mesing

Membrana: EFFBE 7010 N AG 550-0.7 AF

Brtve: NBR70, B2/H3 EN 549

Body: cast steel G20Mn5 S355J2, steel

Connections: C22.3, P265GH

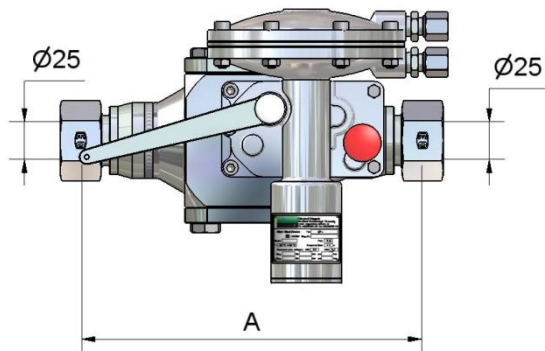
Diaphragm housing: cast aluminium, steel

Inside parts: steel, aluminium, brass

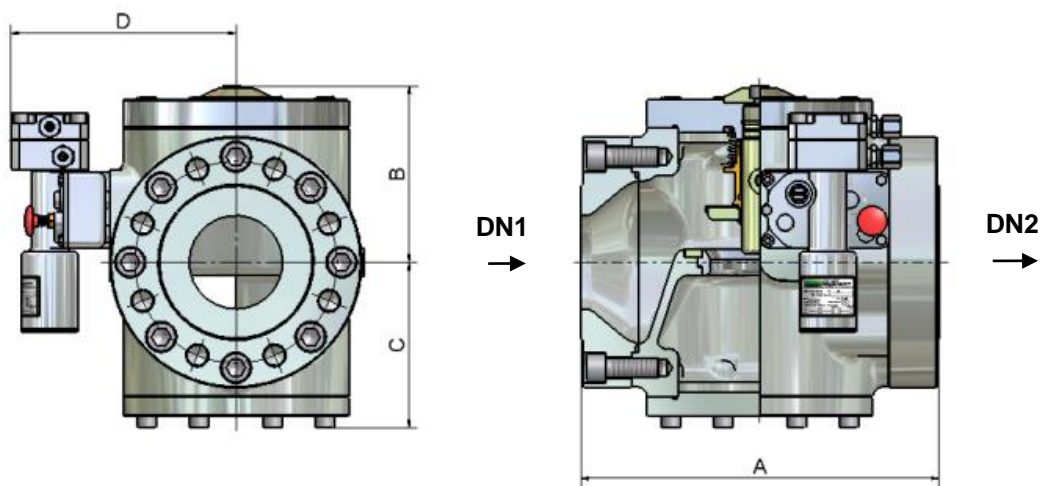
Diaphragm: EFFBE 7010 N AG 550-0.7 AF

Seals: NBR70, B2/H3 EN 549

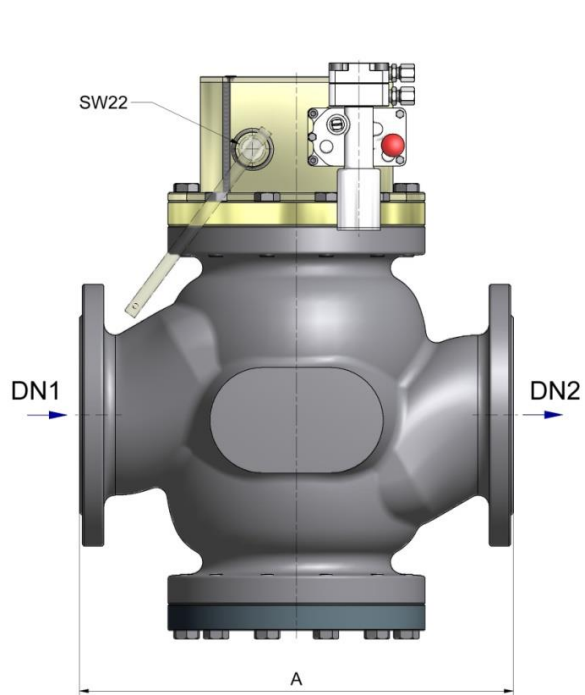
CS 15



CS 15 – CS 100



CS 150



Dimenzije prema tablici

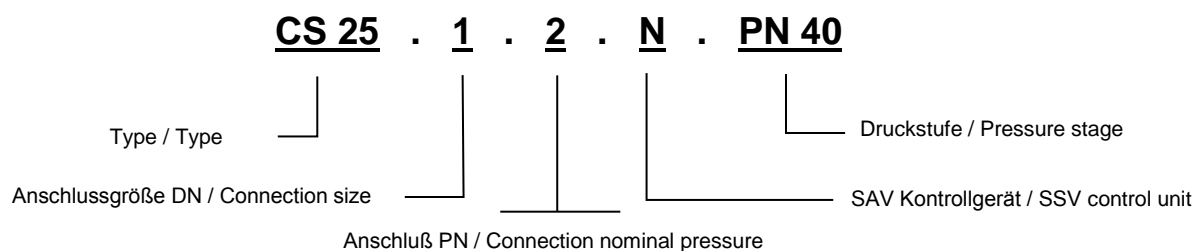
For dimensions see table

Izbor / Selection	SZV upravljačka jedinica / SSV Control unit			
oznaka	N	R	2R	3R
pdso [bar]	0,013 -0,900	0,7 – 2,8	2,6 -10,0	10,0 – 20,0
pdsu [bar]	0,005 -0,270	0,150 – 2,5	2,0 – 7,0	7,2 -14,0

otvor Orifice Ø	max. Bm ³ /h	Tip Type	Dimenzije priključka Connection-Size		Dužina A / Length A						B	C	D
			Kod.	DN1/DN2	oznaka 1 PN16	oznaka 2 PN 25/40	oznaka 3 ANSI 150	oznaka 4 ANSI 300	oznaka 5 PN 63	oznaka 6 ANSI 600			
19		CS15	1.	25 / 25	184	197	184	197	210	210	70	70	180
			2.	50 / 25	219	232	219	232	248	248			
35		CS25	1.	25 / 25	184	197	184	197	210	210	102	100	189
			2.	50 / 25	219	232	219	232	248	248			
			3.	80 / 25	241	257	241	257	274	274			
48		CS40	1.	50 / 50	254	267	254	267	286	286	121	114	197
			2.	80 / 50	276	292	276	292	312	312			
			3.	100 / 50	303	317	303	317	340	340			
82		CS80	1.	80 / 80	298	317	298	317	337	337	163	148	221
			2.	100 / 80	325	343	325	343	366	366			
			3.	150 / 80	374	395	374	395	423	423			
98		CS100	1.	100 / 100	352	368	352	368	394	394	159	155	200
			2.	150 / 100	401	421	401	421	451	451			
150		CS150	1.	150 / 150	473	473	473	473	508	508	383	244	192

* dužine za PN63 i PN100 prema EN14382 – TB1
 ** posebne izvedbe s EO25-S, DIN 2353

Length of PN63 and PN100 as per EN14382 – TB1
 Special design with EO25-S, DIN 2353



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