COMPACT SYSTEMS

Safety devices with automatic shut-off function in compact design

Production series for oil	Nominal diameter
ASS / ZAK	DN 25
ASV-P/MKA	DN 15, 20, 25

The electro-pneumatically controlled safety shut-off devices conform to DIN EN ISO 23553-1 (DIN EN 264).

The safety shut-off devices correspond to the common specifications, the DGRL 97/23/EG, AD datasheets, DIN (ASTM) standards.

Production series for gas	Nominal diameter
GSV-GASSKO	DN 100, 125, 150
GASSKO	DN 200

Corresponding to the specifications of Pressure Device Directive 97/23/EG, AD 2000 data sheets, DIN EN 161 Valve Group 2, Valve Class A and DIN (ASME) standards.

Note:

General information can be taken from the pages on “Safety quick shut-off valuves for oil” and “Safety quick shut-off valves for gas” .

ASS and ZAK Production series

A compact production design is achieved by arranging the valves face-to-face in a casing

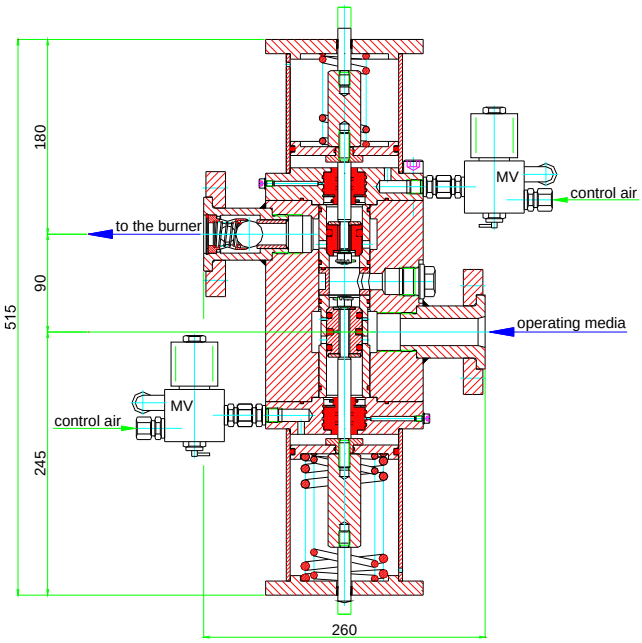
Advantages:

- Bigger KV (CV) values through favourable flow
- Safety against return pressure
- No thermally conditioned over-pressure in system
- Adjustable blow-out steam volume
- Cooling steam bypass, tightly sealed

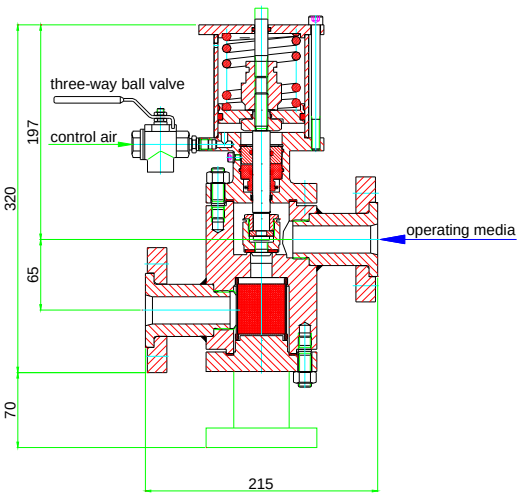
ASS Production series for oil

	DIN	ANSI
Nominal diameter:	DN25	DN1"
Nominal pressure:	PN40-100	PN300 lbs, 600 lbs
Permissible operating temp.:	max. 200° C	
Casing material:	P250GH (1.0460)	A105
Permissible operating pressure:	max. 100 bar	
Stem sealing:	Rod sealing system	
Variant:	- ASS Standard design - ASS/RV 1st valve as control valve - ASS/HV Hand valve with integrated dirt trap	

The first valve in the direction of the flow is a quick shut-off valve in relieved design. The second valve is relieved partially



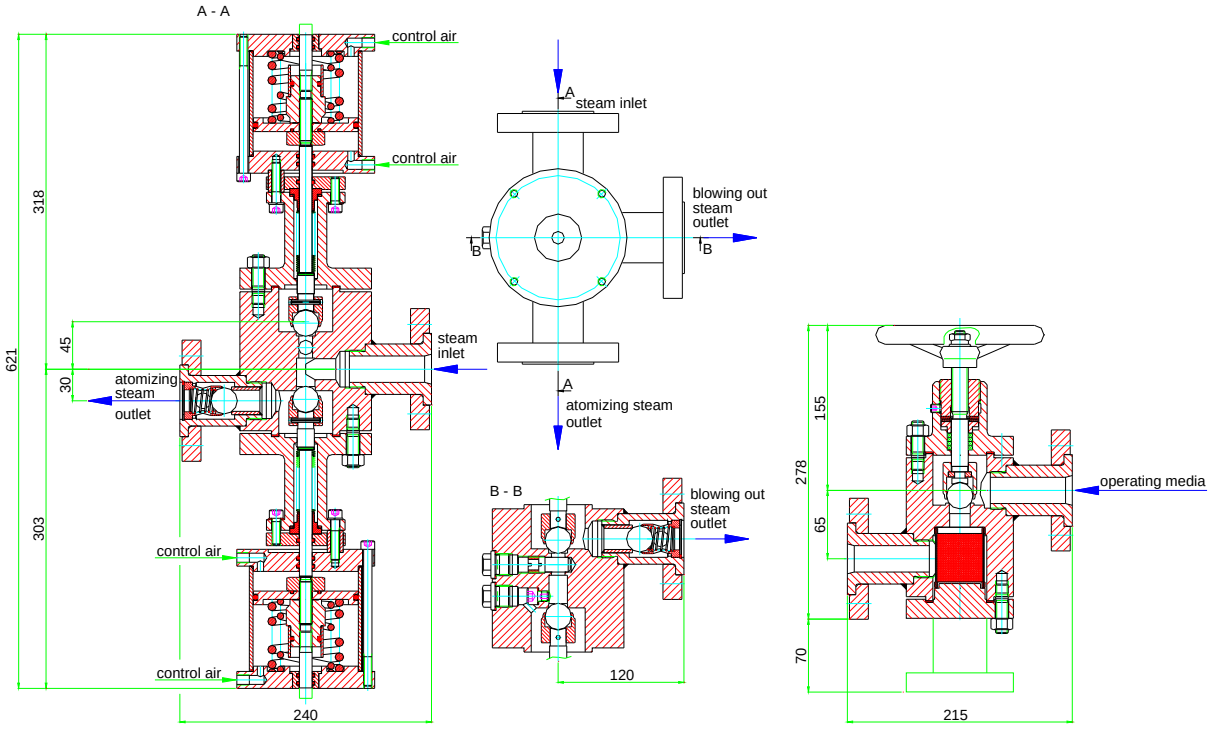
Design examples: ASS with 3/2-way solenoid valve



ASS/HV with 3-way ball valve

ZAK Production series for atomizer- and blow-out steam

	DIN	ANSI
Nominal diameter:	DN25	DN1"
Nominal pressure:	PN40	PN300 lbs
Permissible operating temp:	max. 400° C	
Casing material:	P250GH (1.0460)	A105
Permissible operating pressure:	max. 40 bar	
Stem sealing:	Stainless steel bellows	



ASS-ZAK
compact system

Burner station:
DN25 PN40

ASV-P/MKA Production series

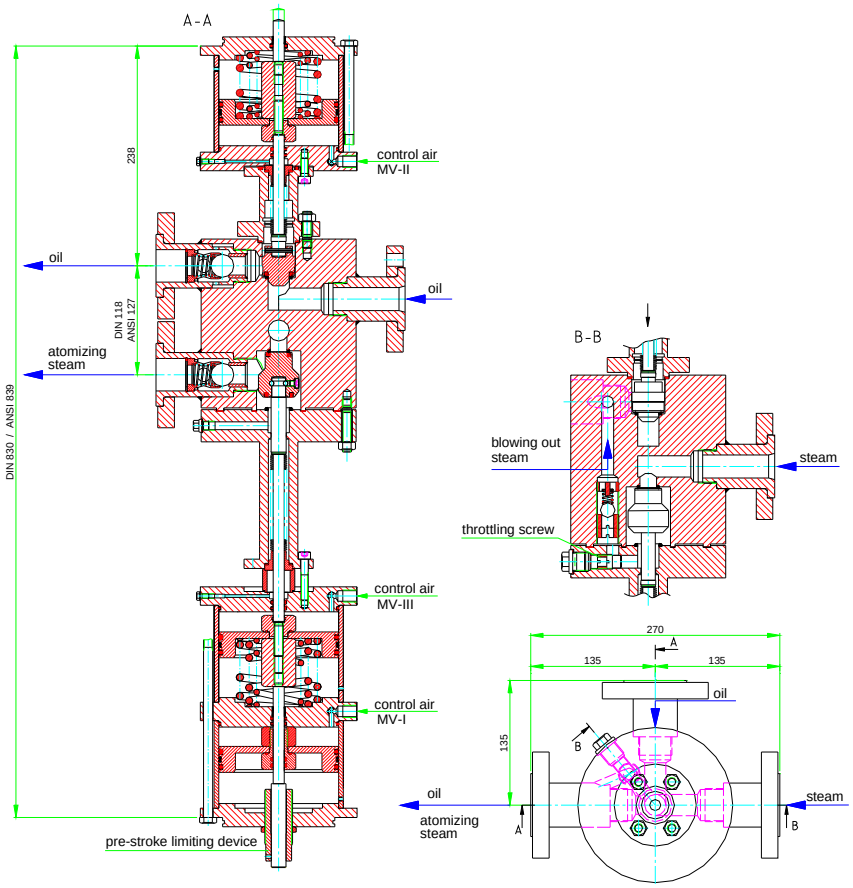
Safety quick shut-off valve combination for oil, atomizer and blow-out steam.
The most compact valve combination that is possible.

The electro-pneumatically actuated valve combination type ASV-P/MKA consists of two facing piston-controlled valves in one casing for operating media oil and steam, with integrated not-return valves on the outlet side. The casing is equipped with a separate inlet for oil and steam, as well as a separate outlet for oil and atomizer steam.

The upper side of the valve combination consists of a quick shut-off device conforming to EN 264 for oil. The lower side of the valve combination consists of a steam valve having a 2-phase design (pre-stroke and main stroke).

The control of the valve combination is realised via three solenoid valves (MV-I; MV-II and MV-III).
The solenoid valve MV-I opens the first stage (pre-stroke) of the steam valve. The solenoid valve MV-II enables a decelerated opening of the oil valve via a throttle check valve. The third solenoid valve MV-III opens the second stroke of the steam valve (main stroke).

	DIN	**ANSI**
Nominal diameter:	DN15, 20, 25	DN½", ¾", 1"
Nominal pressure:	PN40	PN300 lbs
Permissible operating temp:	max. 400° C	
Casing material:	P250GH (1.0460)	A105
Permissible operating pressure:	max. 40 bar	
Stem sealing:	Stainless steel bellows	



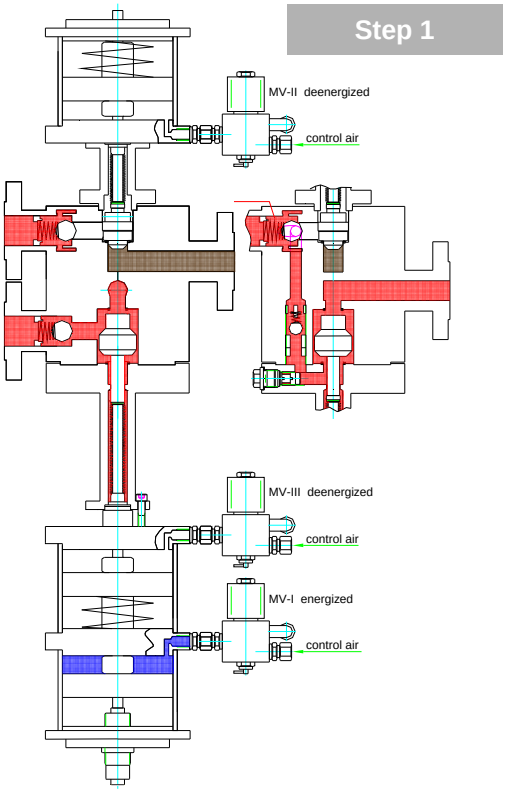
Working

Unoperated position

In idle position, the valves are closed by spring force. The control circuits of the solenoid valves are interrupted. The combination opens in two steps.

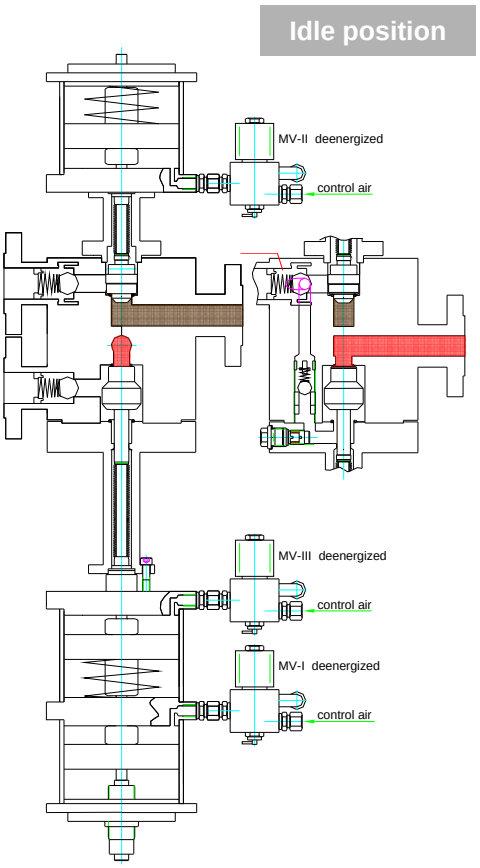
Step 1
Pre-heating / blow-out

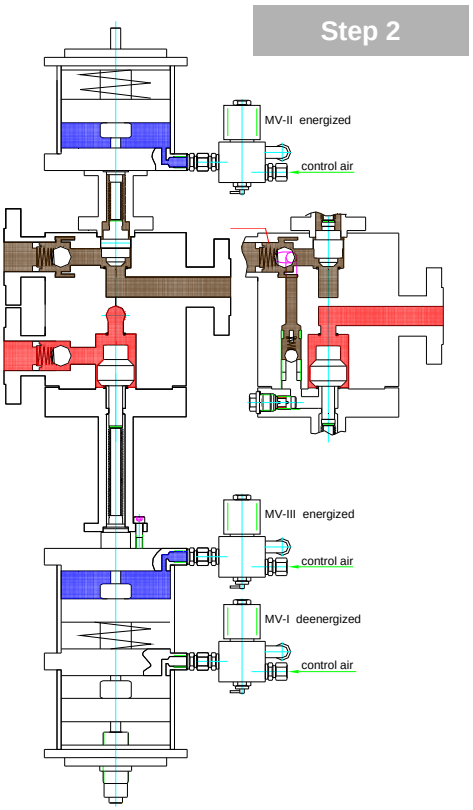
The first step of the steam valve (pre-stroke position) opens on control the solenoid valve MV-I. Steam flows into the atomizer steam outlet of the combination (pre-heating) in this position.
Simultaneously, the steam reaches the oil outlet (blow-out) through the connecting bore hole between the steam- and oil side behind the oil non-return valve.
The volume of steam can be adjusted continuously via the position of the pre-stroke. The blow-out steam volume can be adjusted with the blow-out steam throttle.



Step 2
Operating position

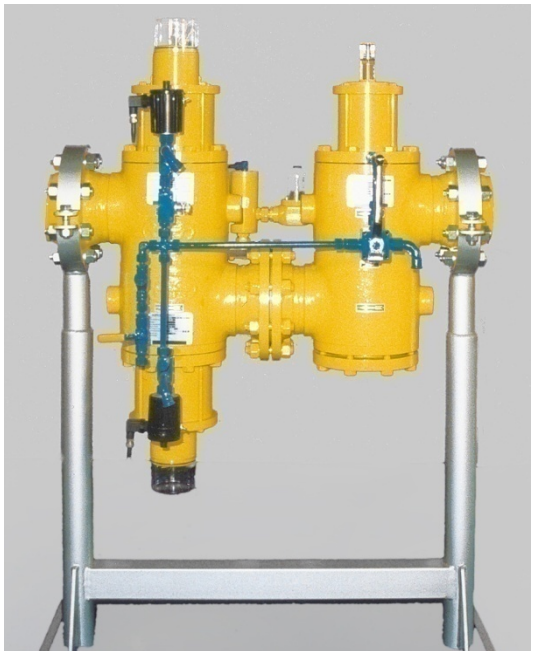
The valve of the combination opens on actuating the solenoid valve MV-II. The solenoid valve MV-III is triggered simultaneously (solenoid valve MV-I can be switched off), so that the main stroke of the steam valve opens. The blow-out steam side is shut off at this moment and only the atomizer steam side is released in the direction of the burner (operating position).



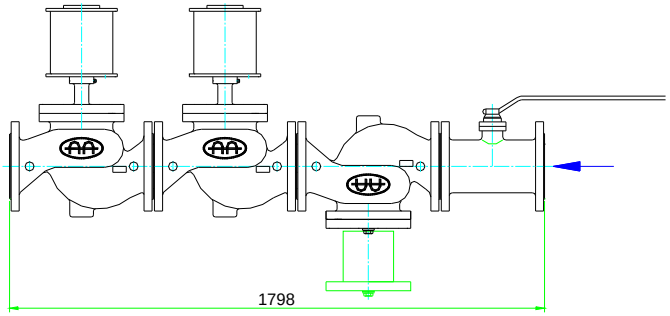


GSV-GASSKO and GASSKO Production series

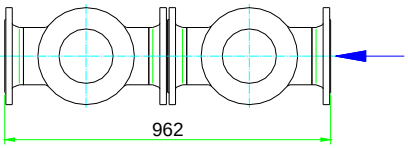
As compared to the traditional arrangement of a valve series consisting of manual shut-off, dirt trap and valve combination, the installation space required by the mentioned production series is considerably less. The versatile connection options of the Casings enable the most different connection possibilities.



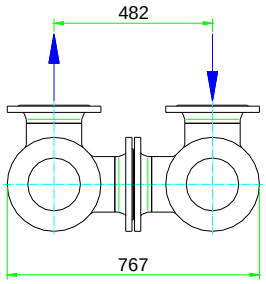
Design example
GSV-GASSKO



Traditional arrangement of a DN150 valve series



GSV-GASSKO Production Series DN150 consisting of identical components as in the traditional arrangement



Example of varying connection of casings