

# Safety valves overview



*First for Steam Solutions*

EXPERTISE | SOLUTIONS | SUSTAINABILITY

**spirax**  
**sarco**

## The most important requirement in the plant - safety

Designed for maximum security and performance, we offer a wide range of safety valves to suit your requirements.

We understand that the protection of employees is the most important requirement in the plant environment and so we ensure our safety valves are manufactured for secure, long-lasting protection against excess pressure.

Designed to be compact, we offer a variety of body materials, features and sizes, so whatever the application, you can be sure that your people, process and equipment are safeguarded with safety valves from Spirax Sarco.

### Why do you need a safety valve?

If a steam system is subjected to excess pressure, it may result in damage to equipment, and process interruption. This may lead to product spoilage, and, if an environment becomes hazardous it might cause injury to employees.

This type of overpressure may occur due to equipment malfunction – a failure in a cooling system for example, or, if there is a power cut or a fire. There are many situations that may lead to excess pressure but with a safety valve in place, the pressure is released securely.

### Examples of applications include:

- Steam boilers
- Steam processing equipment
- Air service
- Autoclaves
- Chemical plants
- Food and beverage production
- Heat exchangers
- Heating and ventilation systems
- Pharmaceutical production
- Pulp and paper mills
- Refineries





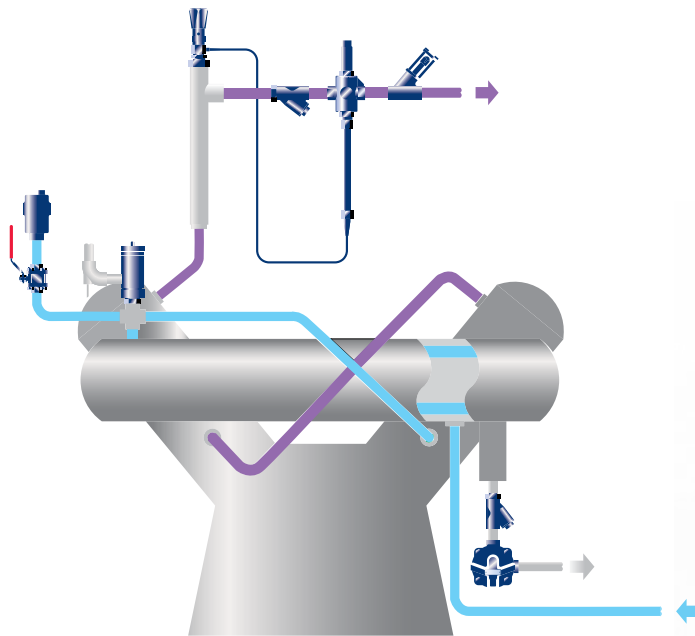
## SV405 and SV406

Designed for protection against overpressure in general process applications such as sterilisers, small compressors and pressure vessels.

The **SV405** has a brass body, 304 stainless steel nozzle and Viton 'O' ring seat seal as standard.

The **SV406** has a stainless steel body, 316 stainless steel nozzle and Viton 'O' ring seat seal as standard.

### Application illustration



### Range table

Model	Material	Maximum operating pressure	Connections		Approvals
			Inlet	Outlet	
<b>SV405</b>	Brass EN 121640 CW617N	CHT 20 bar g	Screwed ½" or ¾" BSP taper male BS 21 R or NPT*	Screwed ¾" BSP parallel female BS 21 Rp or NPT*	Seat tightness complies with API standard 527. This product fully complies with the requirements of the European Pressure Equipment Directive 97 / 23 / EC, fall within Category 4 for Group 2 gases and carries the mark
<b>SV406</b>	Stainless steel 1.4409	CHT 20 bar g	Screwed ½" or ¾" BSP taper male BS 21 R or NPT*	Screwed ¾" BSP parallel female BS 21 Rp or NPT*	



# SV405X and SV405P

## SV405X

Designed for applications where enhanced corrosion resistance is required.

The **SV405X** has a brass body, 316 stainless steel nozzle and Viton 'O' ring seat seal as standard.



### Range table

Model	Material	Maximum operating pressure	Connections		Approvals
			Inlet	Outlet	
<b>SV405X</b>	Brass EN 121640 CW617N	CHT 20 bar g	Screwed ½" or ¾" BSP taper male BS 21 R or NPT*	Screwed ¾" BSP parallel female BS 21 Rp or NPT*	Seat tightness complies with API standard 527. This product fully complies with the requirements of the European Pressure Equipment Directive 97 / 23 / EC, fall within Category 4 for Group 2 gases and carries the mark

## SV405P

Designed with a ring-pull device in place of a lever, this safety valve is recommended for installations where space is limited.

The **SV405P** has a brass body, 304 stainless steel nozzle and Viton 'O' ring seat seal as standard. It is available with screwed BSP connections only and pressure ranges starting from 1.65 bar g. The **SV405P** safety valve **is not available unset**.

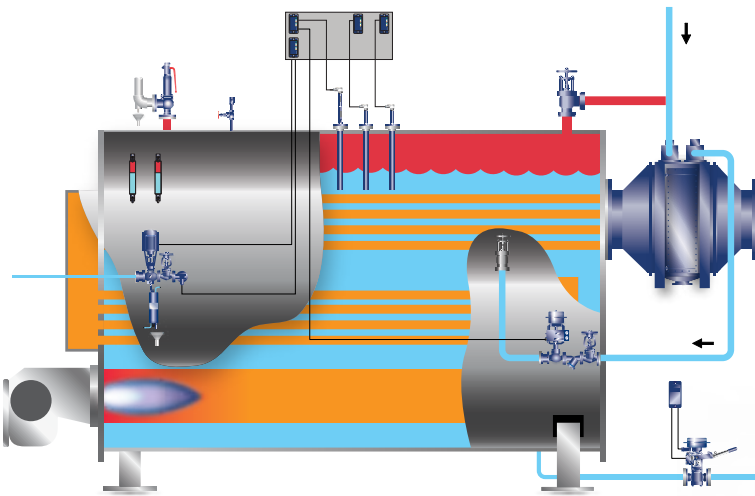
### Range table

Model	Material	Maximum operating pressure	Connections		Approvals
			Inlet	Outlet	
<b>SV405P</b>	Brass EN 121640 CW617N	CHT 20 bar g	Screwed ½" or ¾" BSP taper male	Screwed ¾" BSP parallel female	Seat tightness complies with API standard 527. This product fully complies with the requirements of the European Pressure Equipment Directive 97 / 23 / EC, fall within Category 4 for Group 2 gases and carries the mark

# SV615

Suitable for the protection of steam or hot water boilers, generators, vessels, receivers and air compressors, autoclaves, downstream of pressure reducing valves and for general pressure relief applications.

## Application illustration



## Range table

Model	Material	Maximum operating pressure	Connections		Sizes	Approvals
			Inlet	Outlet		
<b>SV615</b>	Bronze BS EN 1982 CC491KM	CHT 37.5 bar g	Screwed BSP (BS 21 parallel) or NPT female connections. 1" Sanitary clamp compatible (DN15, DN20 and DN25 sizes only) BS 4825 / ISO 2852 / DIN 32676	Screwed BSP (BS 21 parallel) or NPT female connection	Inlet: DN15, DN20, DN25, DN32, DN40 and DN50	The SV615 complies with the requirements of EN ISO 4126:2004 and carries the CE mark indicating full compliance with the requirements of the European Pressure Equipment Directive 97 / 23 / EC. The Approval Authority and Notified Body is the Royal and Sun Alliance. Seat tightness complies with ASME / API STD 527- Revision 2002

# SV60

Suitable for the protection of steam boilers, pipelines, pressure vessels, compressors and receivers and most general process industry applications.



## Range table

Model	Material	Maximum operating pressure	Connections		Sizes	Approvals
			Inlet	Outlet		
SV604	Carbon steel	CHT 60 bar g	PN40	PN16	Inlet: DN20, DN25, DN32, DN40, DN50, DN65, DN80, DN100, DN125 and DN150	The SV60 carries the mark CE and complies with the requirements of the European Pressure Equipment Directive 97 /23 / EC falling within Category 4 for Group 2 gases. Seat tightness to ASME / API Standard 527-1992. Lloyds Register (LR) type approval - Certificate number 01 / 00125 (E2). The SV604 (PN flanged) is approved by the TÜV to AD-Merkblatt A2, AD-Merkblatt A4, TRD 421, Vd TÜV 100, 100 / 4.
			ASME 300	ASME 150		
SV607	SG iron	"PN25 CHT 38 bar g	PN16 (DN65 to DN150 only)	PN16		
			PN25	PN16		

## SV60H

Designed to protect hot water generators from overpressure in accordance with DIN 4751, Side 2, for temperatures up to 120°C.



### Range table

Model	Material	Maximum operating pressure	Connections		Sizes	Approvals
			Inlet	Outlet		
<b>SV604H</b>	Carbon steel	PN40 CHT 60 bar g	PN40	PN16	Inlet: DN20, DN25, DN32, DN40, DN50, DN65, DN80, DN100, DN125 and DN150	The SV60H carries the CE mark and complies with the requirements of the European Pressure Equipment Directive 97/23/EC and falls within Category 4 for Group 2 gases. The SV60H is approved by the TÜV to TRD 421, TRD 721 and Vd TÜV Merkblatt SV100 and 100/ 4.
<b>SV607H</b>	SG iron	PN25 CHT 38 bar g	PN16 (DN65 to DN150 only)	PN16		
		PN16 CHT 24 bar g	PN25	PN16		



# SVL606

Suitable for the overpressure protection of steam boilers, pipelines, pressure vessels and most general process industry applications. Particularly useful where a valve of all stainless steel construction is required to minimise contamination of the process media or where hygienic considerations and aesthetic qualities are prerequisites.

This valve is also suitable for cryogenic service

- **SVL606-B** with a sealed cap for liquid service.
- **SVL606-C** with a packed easing lever for steam (or other services where a lever is specified).



## Range table

Model	Material	Maximum operating pressure	Connections		Sizes	Approvals
			Inlet	Outlet		
<b>SVL606-B</b>	Stainless steel 1.4408	CHT 60 bar g	DN25, DN32, DN40, DN50, DN65, DN80, DN100, DN125, DN150 and Flanged EN1092 PN40	DN40, DN50, DN65, DN80, DN100, DN125, DN150, DN200, DN250 and Flanged EN1092 PN16	As per connectors	Approved by the TÜV to AD Merkblatt A2, TRD 421. The requirements of the European Pressure Equipment Directive, 97/23/EC have been satisfied and the valve belongs to Category 4, having been designed for use with fluids in Group 1 and 2 (gases and liquids). Always consult Spirax Sarco for fluid compatibility.
<b>SVL606-C</b>						

# SV73

Primarily intended for use on power boilers and unfired pressure vessels where ASME Section I and VIII stamped valves are required.

The SV73 cast iron series valves are built in conformance to Section I and VIII of the ASME Boiler and Pressure Vessel Code.

## Applications

Protection of steam systems downstream of pressure regulating stations, on inlet to such equipment as air coils, heat exchangers and process vessels. Also for use on flash recovery vessels on condensate return systems to protect vessels. Air systems to protect accumulation vessels and air equipment from overpressurisation. Steam boilers and generators.

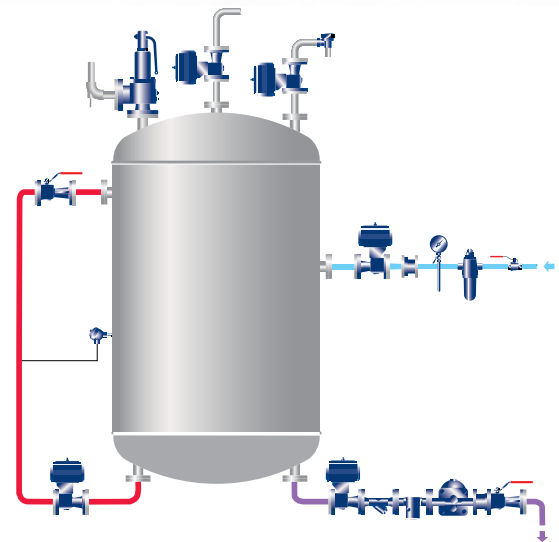
## Available types

The SV73 is available with cast iron body and stainless steel trim in orifice sizes from 'J' to 'R'. It has an open bonnet and easing lever and is available with screwed or flanged connections.

## Range table



## Application illustration



Model	Material	Maximum operating pressure	Connections		Sizes	Approvals
			Inlet	Outlet		
<b>SV73</b>	Cast iron ASTM A126 Class B	CHT 41 bar g (600Psi)	See TI-S13-25	See TI-S13-25	As per connections	Approved by National Board of Boiler and Pressure Vessel Inspectors to ASME Boiler and Pressure Vessel Code Sections I and VIII. Seat tightness is in accordance with ANSI/API STD 527-1992. If National Board 'V' or 'UV' stamp is required, then this must be specified at the time of ordering. Important note: SV73 safety valves are not CE marked and therefore not to be used within the EEA

## SV74

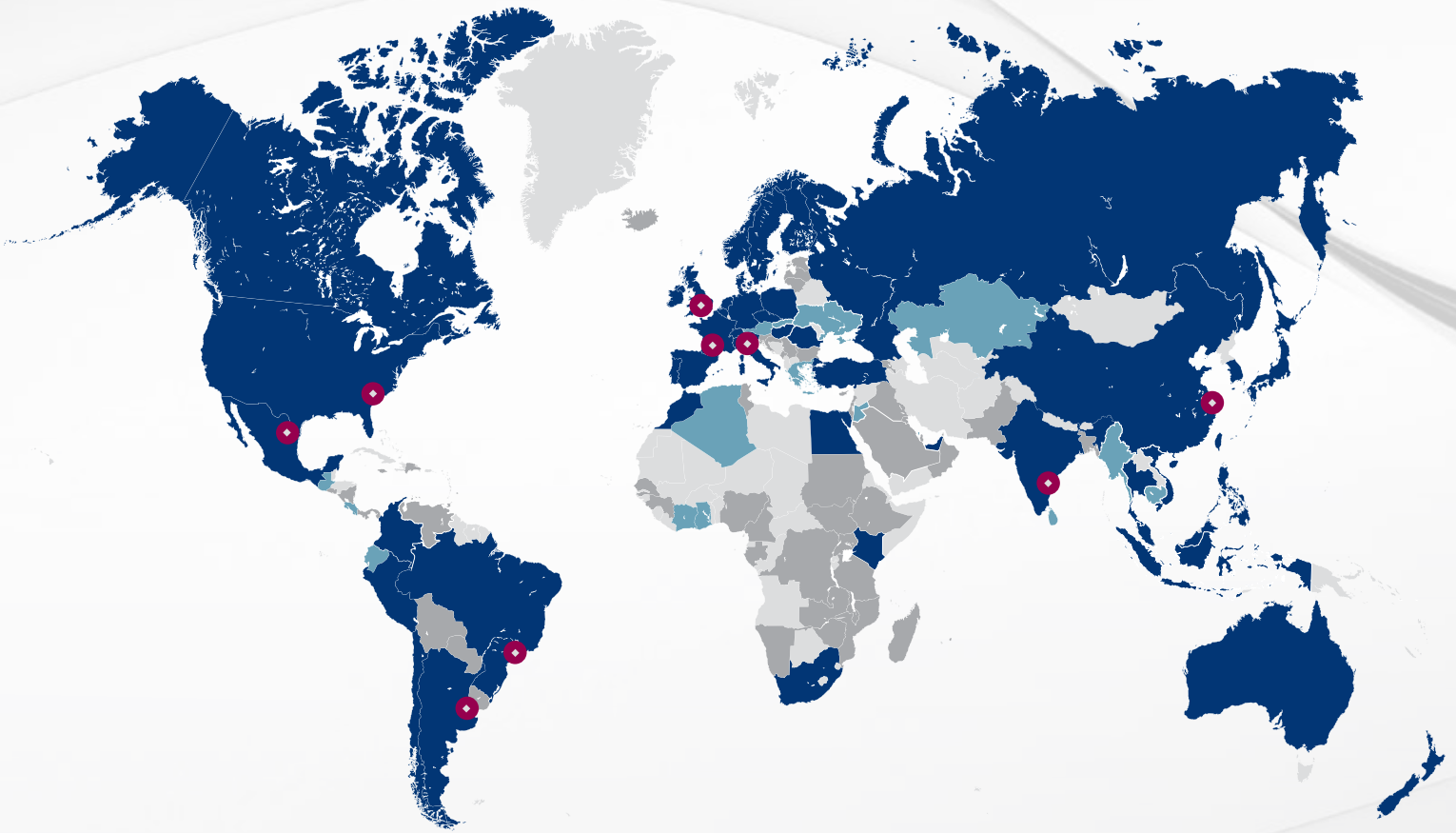
Designed for protection of steam systems downstream of pressure regulating stations, on inlet to such equipment as air coils, heat exchangers and process vessels. Also for use on flash recovery vessels on condensate return systems to protect vessels. Air systems to protect accumulation vessels and air equipment from over pressurisation. Steam boilers and generators.

The SV74 is available with carbon steel body and stainless steel trim in orifice sizes from 'F' to 'R'. It has an open bonnet and easing lever and flanged connections.



### Range table

Model	Material	Maximum operating pressure	Connections		Sizes	Approvals
			Inlet	Outlet		
<b>SV74</b>	Carbon steel ASME SA 216 Gr. WCB	CHT 70 bar g	Flanged ANSI class 300 RF	Flanged ANSI class 150 RF	1½" x 2" to 6" x 8	Approved by National Board of Boiler and Pressure Vessel Inspectors to ASME Boiler and Pressure Vessel Ccode Sections I and VIII. Seat tightness is in accordance with ANSI /API STD 527-1992. If National Board 'V' or 'UV' stamp is required, then this must be specified at the time of ordering. The SV74 fully complies with the requirements of the European Pressure Equipment Directive 97/23/EC and carries the CE mark when so required



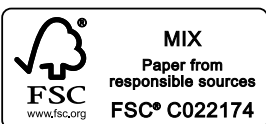
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**spirax**  
**sarco**

Spirax-Sarco Limited, Charlton House, Cheltenham,  
Gloucestershire, GL53 8ER, UK  
T +44 (0)1242 521361  
F +44 (0)1242 573342  
E [enquiries@uk.spiraxsarco.com](mailto:enquiries@uk.spiraxsarco.com)