



API

**Flanged Safety Relief Valves
Series 526**

**TOS
TOBS**

Shanghai Xiazhao Valve Co.,Ltd.

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MODEL :

TOS-4C2-01~25-1 1/2F2/1 1/2F3

TOS-4C3-01~25-1 1/2F2/1 1/2F3

TOS-4N8-01~25-1 1/2F2/1 1/2F3

Spring fall lift closed safety valve

Program Highlights

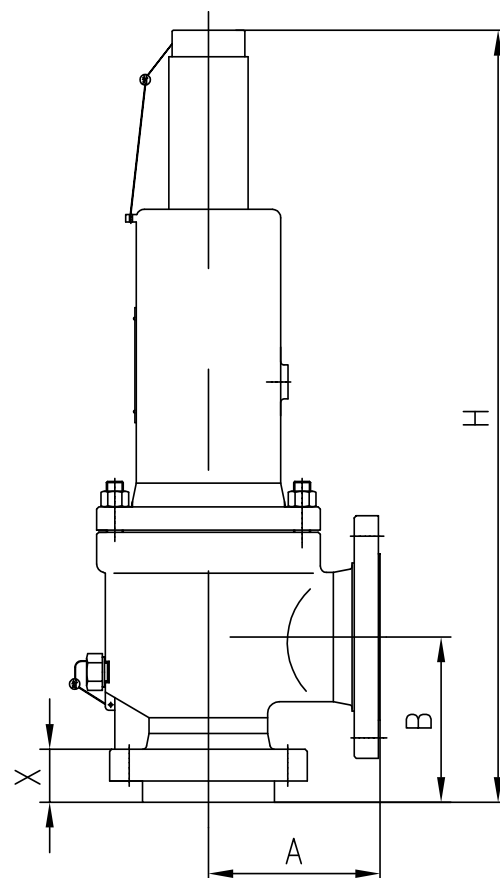
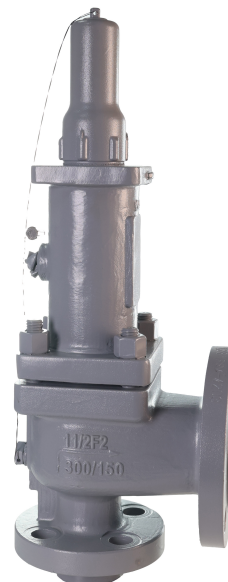
SIZING

Sizing of safety valves in accordance with the leading global standards and codes (Safety valve according to API 526 with standardized capacities, installation dimensions and materials.)

Calculates twophase flow in accordance with API 520 Appendix C and fire case according to API 521

Calculates inlet pressure loss, back pressure, reaction forces, and noise level.

- The solid nozzle screws into the body its maintenance is easy.
- The shape of the disc holder has been designed to enhance the effect of the fluid thrust for an instant lift of the disc.
- Blowdown control is provided with adjustable nozzle ring only.
- The adequate materials and clearance between disc holder and guide, spindle and adjusting screw assures disc to lift successfully.
- The surface of both the disc and the nozzle seat is deposited with Stellite. Excellent flatness and surface finish of the seating surfaces by precision machining and lapping assure safety valve to have high degree of seat tightness and long using life.
- The bellows of balanced bellows safety valves not only can avoid an effect of variable back pressure in the system, but also can protect spring and other trim components from corrosive media.
- The choice of materials is careful. The manufacture of the spring and the bellows has strict technological process. Each of them is tested and checked strictly

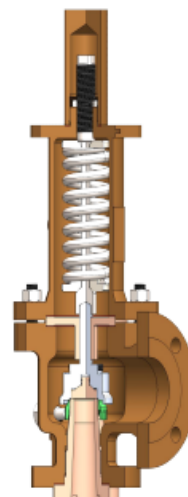


Orifice Area cm ²	Inlet Flange Class	Type	Size (inch) Inlet×Orifice×Outlet	Connections		Maximum Set Pressure (MPa)						Back pressure limit 38℃		Material		Inlet Temp. Range (℃)
						Inlet Temperature										
				Inlet	Outlet	-268~-60	-59~29	-29℃~38℃	38℃~232℃	233℃~427℃	427~538	T0S-402	T0BS-402	Body	Spring	
1.981 (F)	1	T0S-01	11/2F2	150LB	150LB			1.96	1.27	0.55		1.96	1.58	Carbon Steel.	Alloy Steel.	-29~427
	2	T0S-03	11/2F2	300LB	150LB			1.96	1.96	1.96		1.96	1.58			
	3	T0S-03a	11/2F2	300LB	150LB			5.10	4.24	2.82		1.96	1.58			
	4	T0S-06	11/2F2	600LB	150LB			10.20	8.51	5.68		1.96	1.58			
	5	T0S-09	11/2F3	900LB	300LB			15.30	12.72	8.51		5.10	3.44			
	6	T0S-15	11/2F3	1500LB	300LB			25.54	21.23	14.20		5.10	3.44			
	9	T0S-25	11/2F3	2500LB	300LB			34.47	34.47	23.64		5.10	3.44			
	3	T0S-03a	11/2F2	300LB	150LB					3.51	1.48	1.96	1.58	Chrome Molybde-num Steel.	Alloy Steel.	428~538
	4	T0S-06	11/2F2	600LB	150LB					6.99	2.96	1.96	1.58			
	5	T0S-09	11/2F3	900LB	300LB					10.51	4.48	5.10	3.44			
	6	T0S-15	11/2F3	1500LB	300LB					17.51	7.44	5.10	3.44			
	7	T0S-25	11/2F3	2500LB	300LB					29.16	12.41	5.10	3.44			
	1	T0S-01	11/2F2	150LB	150LB	1.89	1.89	1.89	1.24	0.55	0.13	1.89	1.58	Austenitic Stainless Steel.	Alloy Steel. Stainless Steel.	-268~538
	2	T0S-03	11/2F2	300LB	150LB	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.58			
	3	T0S-03a	11/2F2	300LB	150LB	4.96	4.96	4.96	3.41	2.89	2.41	1.89	1.58			
	4	T0S-06	11/2F2	600LB	150LB	9.92	9.92	9.92	6.72	5.82	4.82	1.89	1.58			
	5	T0S-09	11/2F3	900LB	300LB	14.89	14.89	14.89	10.23	8.72	7.23	4.13	3.44			
	6	T0S-15	11/2F3	1500LB	300LB	15.16	24.82	24.82	17.09	14.54	12.06	4.13	3.44			
	7	T0S-25	11/2F3	2500LB	300LB	23.44	34.47	34.47	28.47	24.26	20.09	4.96	3.44			

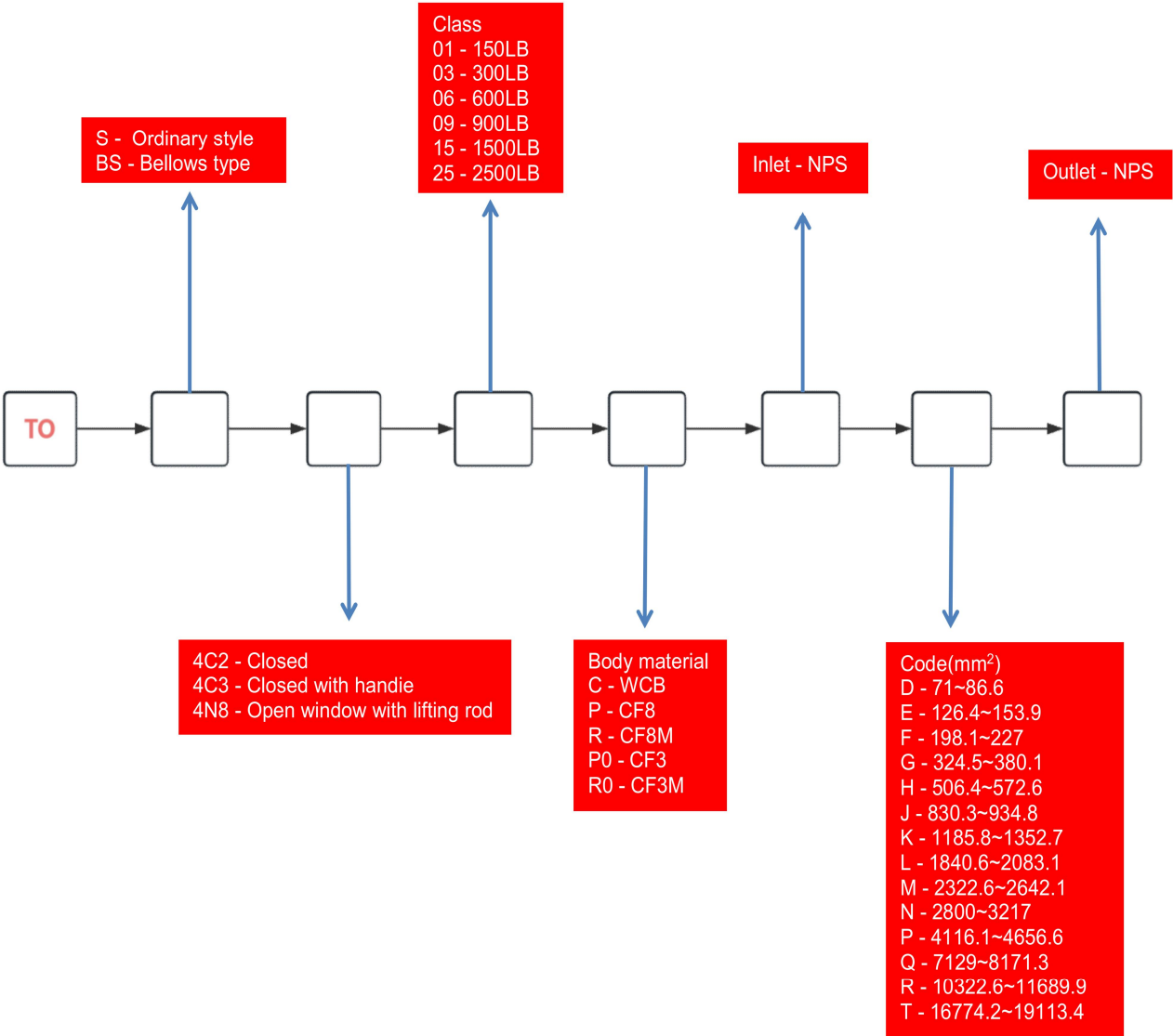
Type		ANSI Flange Class		Center to Face		Total Thickness of Flange and Nozzle	Approximate height H		
				outlet	Inlet		Cap Type		
		Inlet	Outlet	A	B	X	4C2	4N8	4C3
T0S-01	11/2F2	150	150	120.5	124.0	44	470	525	535
T0S-03	11/2F2	300	150	120.5	124.0	44	470	525	535
T0S-03a	11/2F2	300	150	152.5	124.0	44	505	560	570
T0S-06	11/2F2	600	150	152.5	124.0	44	505	560	570
T0S-09	11/2F3	900	300	165.0	124.0	44	525	580	590
T0S-15	11/2F3	1500	300	165.0	124.0	44	525	580	590
T0S-25	11/2F3	2500	300	178.0	139.5	64	575	630	640

Technical data API Safety valves

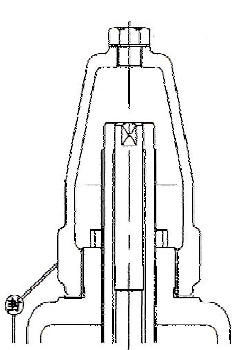
Set pressure	0.2-400 barg / 2-5,802 psig
Temperature	-273-550° C / -450-1,000° F
Connections DIN EN 1952	DN25 to DN200
Connections ASME B16.5	NPS1 to NPS8
Body material	Carbon steel, heat resistant Carbon steel, Stainless steel



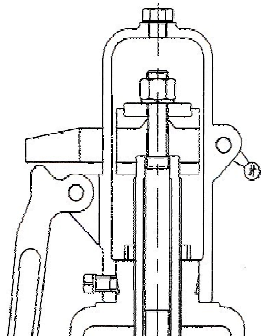
Model numbering



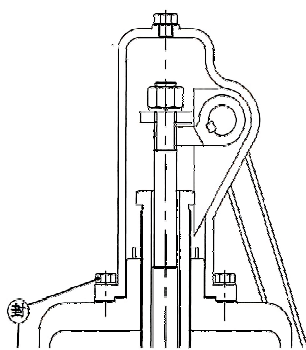
4C2 Closed

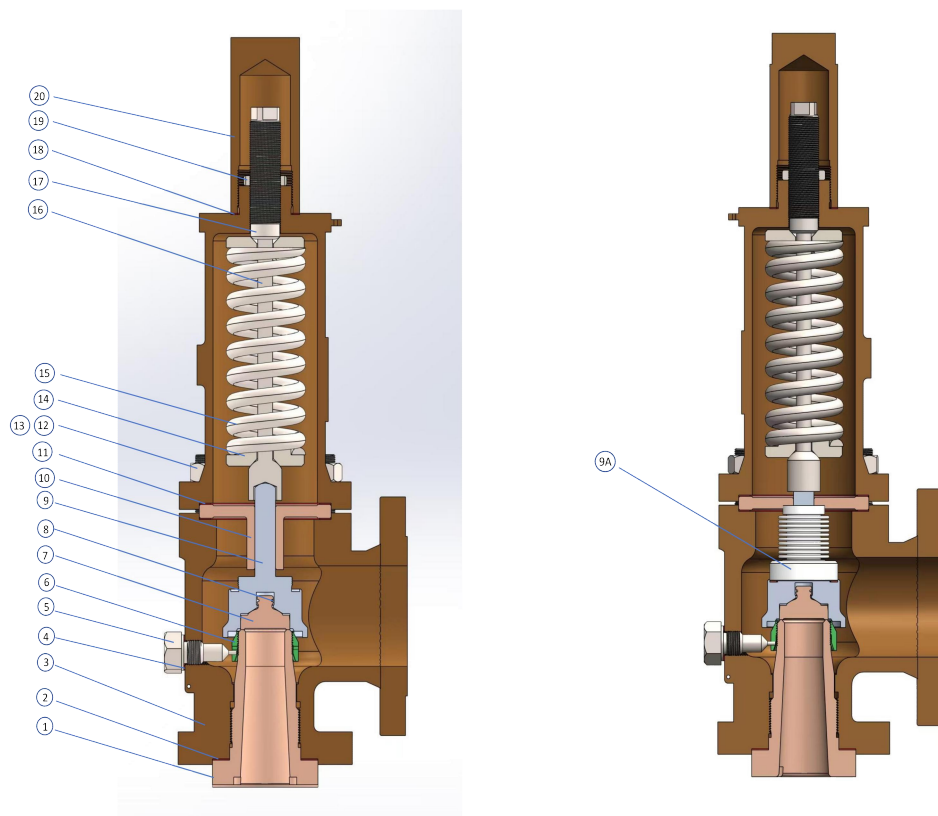


4N8 Open window with lifting rod



4C3 Closed with handie





Item	Component	Type TOS NACE	Type TOBS NACE
1	Nozzle	316 Stainless Steel	316 Stainless Steel
2	Nozzle Gasket	Flexible Graphite/Stainless Steel	Flexible Graphite/Stainless Steel
3	Body	ASME SA216 GR WCB	ASME SA351 GR CF8M
4	Set Screw Gasket	Stainless Steel	Stainless Steel
5	Set Screw	Stainless Steel	316 Stainless Steel
6	Nozzle Ring	Stainless Steel	316 Stainless Steel
7	Disc	Stainless Steel	316 Stainless Steel
8	Retention Clip	Stainless Steel	Stainless Steel
9	Disc Holder	Stainless Steel	316 Stainless Steel
9A	Bellows	/	316L Stainless Steel
10	Guide	Stainless Steel	316 Stainless Steel
11	Guide Gasket	Stainless Steel	Stainless Steel
12	Bonnet Stud	ASME SA193 GR. B7	ASME SA193 GR. B8M
13	Bonnet Stud Nut	ASME SA194 CL 2H	ASME SA194 CL 8M
14	Spring Washers	Carbon Steel	Stainless Steel
15	Spring	Alloy Steel	Alloy Steel Corrosion Resistant Coating
16	Spindle	420 Stainless Steel	316 Stainless Steel
17	Adjusting Bolt	Stainless Steel	Stainless Steel
18	Cap Gasket	Stainless Steel	Stainless Steel
19	Adjusting Bolt Nut	Stainless Steel	Stainless Steel
20	Threaded Cap	Stainless Steel	Stainless Steel