API

Flanged Safety Relief Valves
Series 526 CC

CATALOG

LESER

The-Safety-Valve.com

General Information

Overview

API 526 CC safety valves are flanged, spring loaded safety valves that meet all the requirements of API 526 standard such as orifices and center-to-face dimensions. Their robust construction makes them especially suitable for API market.

LESER's API 526 CC Series safety valves present the perfect safe solution for heavy duty applications, such as crude oil extraction, transportation and processing in

- Refineries
- Chemical industry
- Petrochemical industry
- Oil and gas – Onshore and Offshore
- Vessels and piping systems
- Blow-down systems
- Storage tank farms
- Nonferrous metal industry, etc. alumina

LESER offers the full range of safety valves according to API 526 in China. Especially for the requirements of the Chinese market – LESER API 526 CC that is based on these requirements in the following areas:

- Approvals (ASME UV and AQSIQ TS)
- Materials
- Fast delivery time, we can change our delivery time according to different customer requirements

The following table shows the product range configuration:

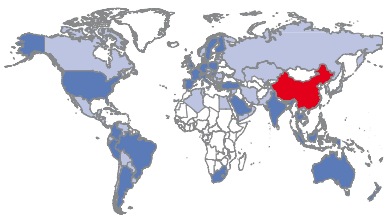
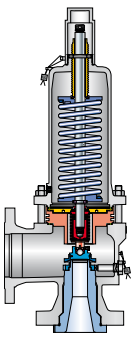
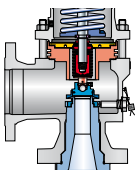
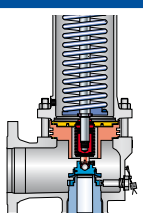
Type 526 CC Configuration	
Inlet flange pressure rating	CL150 – CL2500
Body material	WCB, CF8M, CF3M, LCB
Pressure range	0.3 – 414 bar
Size	1" x 2" – 8" x 10"
Orifice	D – T
Overpressure	10%
Blowdown	7% (S/G), 20% (L)
Approvals	• UV stamp acc. to ASME Section VIII Division 1, National Board certified capacities • TS Certification Level A1 according to TSG ZF001-2006

ASME UV

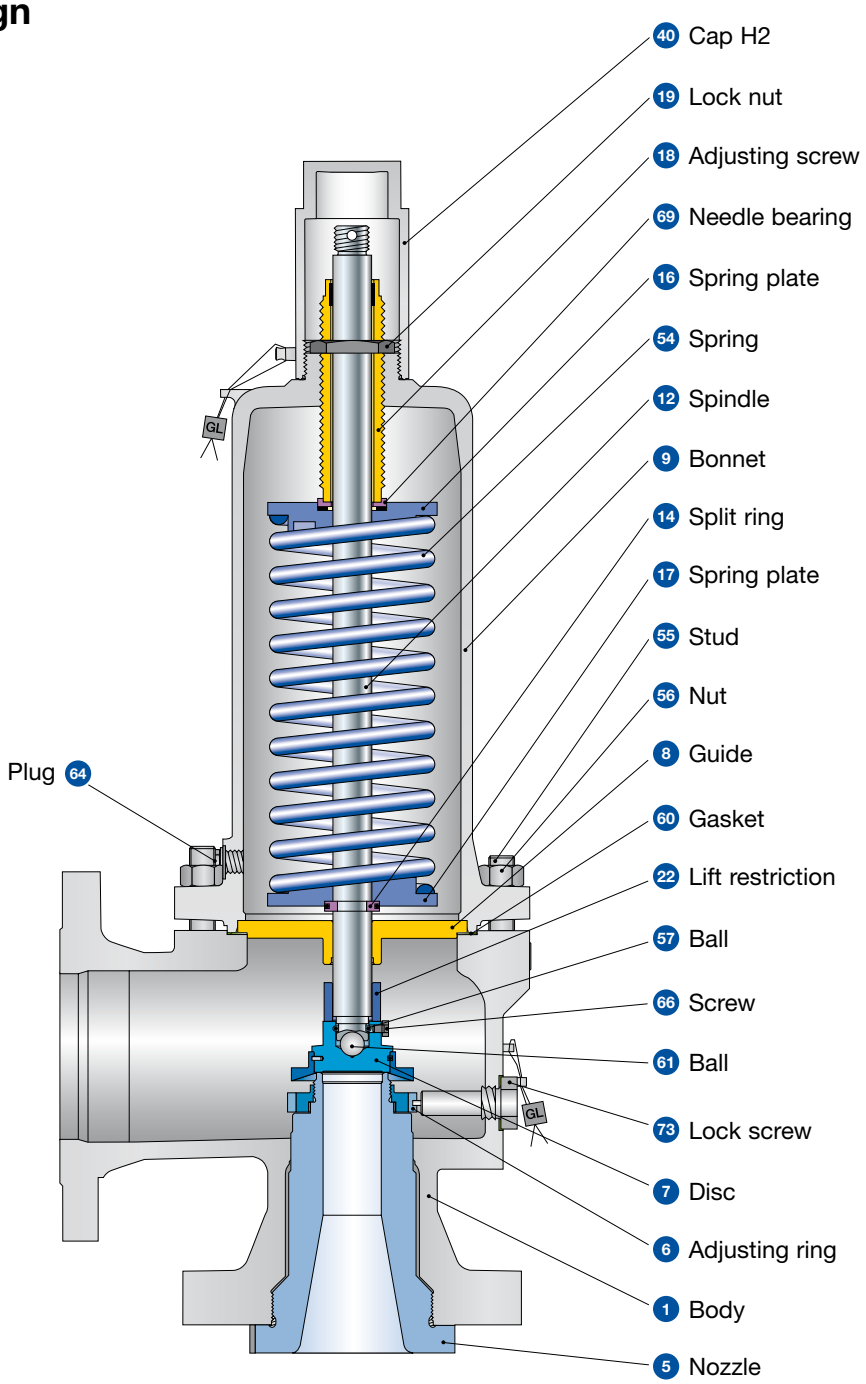
TS

Advantages

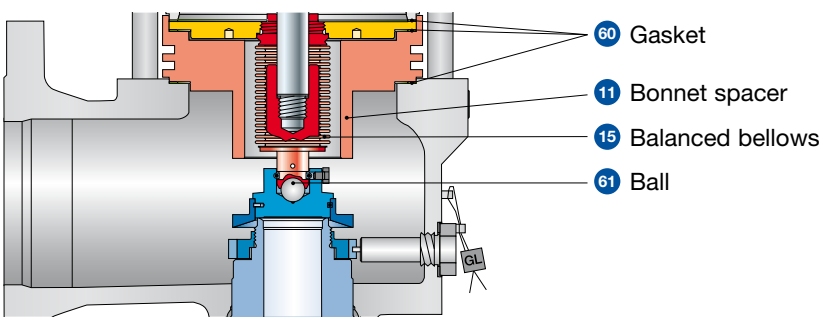
LESER Type 526 is a globally proven safety valve with German technology and it is available in a configuration especially for Chinese requirements (Chinese configuration, CC). It represents an advanced design concept for API valves with the benefits shown in the table below.

	Feature	Function	Benefit
Worldwide global references			
	Recognition in the market	LESER API safety valves are used by leading companies worldwide	Satisfied users are proof that LESER fulfills the demands of leading companies for quality, delivery and price.
“Approved”	Approved by customers	LESER API valves are listed on the Approved Vendor Lists of more than 100 End Users and EPCs	
Reliable valve function			
	Durable Design	• Bellows are calculated for extended operating cycles and protected against turbulences during discharge by the bellows shield • Material combinations and surface treatment in guiding zones to avoid wear • The body is designed to be self-draining to avoid residues	Durable Design ensures the long-term reliable function of the safety valve and can lead to extended maintenance intervals
	Tight Finish	• Tightness better than API 527 • Optional soft seals for zero bubbles	For each application, there is a sealing concept to minimize medium loss and emissions
Low lifecycle costs			
	Single Trim	• Use of identical trim parts for gas, steam and liquid services. • No change of trim parts is necessary when changing the use of the safety valve.	Reduced number of spare parts
Services around the safety valve			
Quick supply	Quick and reliable supply chains	Fast delivery time	Our factory in Wuqing has a high inventory with a state of the art production. Delivery times depend on customer needs: 1 week to 4 weeks.

Type 526 CC
Conventional design



Balanced Bellows Design



Type 526 CC
Materials

Item	Component	Standard Service F1D	Corrosive Service F1Q	Corrosive Service FE7	Low Temp. Service F1W
1	Body	SA 216 WCB	SA 351 CF8M	SA 351 CF3M	SA 352 LCB
5	Nozzle	SA 351 CF8M	SA 351 CF8M	SA 351 CF3M	SA 351 CF8M
6	Adjusting ring	CF8M	CF8M	CF8M	CF8M
7	Disc	Hardened stainless steel	316L stellited	316L stellited	Hardened stainless steel
8	Guide	CF8M or 316L	CF8M or 316L	CF8M or 316L	CF8M or 316L
9	Bonnet	SA 216 WCB	SA 351 CF8M	SA 351 CF3M	SA 352 LCB
12	Spindle	420	316L	316L	420
14	Split ring	316	316	316	316
16 / 17	Spring plate	Steel	316	316	Steel / 316
18	Adjusting screw	316	316	316	316
	with bushing	PTFE	PTFE	PTFE	PTFE
19	Lock nut	316	316	316	316
22	Lift restriction	316	316	316	316
40	Cap H2	WCB	CF8M	CF3M	CF8M
54	Spring	High temp. alloy steel	Stainless steel	Stainless steel	High temp. alloy steel or SS
55	Stud	B7	B8M	B8M	B8M
56	Nut	2H	8M	8M	8M
57	Ball	316	316	316	316
60	Gasket	Graphite / 316L	Graphite / 316L	Graphite / 316L	Graphite / 316L
61	Ball	316	316	316	316
64	Plug	316L	316L	316L	316L
66	Screw	SS	SS	SS	SS
69	Needle bearing	Steel	Steel	Steel	Steel
73	Lock screw	316L	316L	316L	316L

Balanced Bellows Design

11*	Bonnet spacer	316L	316L	316L	316L
15*	Bellows / End pieces	Inconel 625 / 316L	Inconel 625 / 316L	Inconel 625 / 316L	Inconel 625 / 316L

Please notice:
- Modifications reserved by LESER.
- If several materials are specified LESER defines the material.
- LESER can upgrade materials without notice.
- Every part can be replaced by other material acc. to customer specification.

* Marked applicable for balanced bellows design.

Type 526 CC
Article numbers
System for configuration

Basic Valve Configuration

1	2	3	4	5
Type	**Orifice size and flange rating**	**Material configuration**	**Options**	**Set Pressure**
Type 526	D-orifice, 1"x 2", CL150 x CL150	Standard Service (carbon steel)	Lifting Lever H4	10 bar
5260.	**0012**	**F1D**	**FF3**	**10 bar**
See article number table below		see Materials, page 5	see Available Options, page 10	specify

Type 526 CC country configuration China body materials WCB, CF8M, CF3M, LCB

Type	Orifice	d_0	Inlet flange rating class						
			150	300L	300	600	900	1500	2500
5260	**D**	14	**0012**	use CL300 valve	**0032**	**0042**	use CL1500 valve	**0062**	**0072**
			1" x 2"				1½" x 2"		1½ x 3"
5260	**E**	14	**0082**	use CL300 valve	**0102**	**0112**	use CL1500 valve	**0132**	**0142**
			1" x 2"				1½" x 2"		1½" x 3"
5260	**F**	18	**0152**	**0162**	**0172**	**0182**	use CL1500 valve	**0202**	**0212**
			1½" x 2"		1½" x 2"		1½" x 3"		1½" x 3"
5260	**G**	22.5	**0222**	**0232**	**0242**	**0252**	**0262**	**0272**	**0282**
			1½" x 3"		1½" x 3"		1½" x 3"	2" x 3"	
5260	**H**	28.3	**0292**	**0302**	**0312**	**0322**	**0332**	**0342**	
			1½" x 3"		2" x 3"	2" x 3"	2" x 3"		
5260	**J**	36	**0352**	**0362**	**0372**	**0382**	**0392**	**0402**	
			2" x 3"		3" x 4"		3" x 4"		
5260	**K**	43	**0412**	use CL300 valve	**0432**	**0442**	**0452**	**0462**	
			3" x 4"			3" x 4"	3" x 6"		
5260	**L**	53.5	**0472**	**0482**	**0492**	**0502**	**0512**	**0522**	
			3" x 4"		4" x 6"	4" x 6"	4" x 6"		
5260	**M**	60.3	**0532**	use CL300 valve	**0552**	**0562**	**0572**		
			4" x 6"			4" x 6"	4" x 6"		
5260	**N**	66	**0582**	use CL300 valve	**0602**	**0612**	**0622**		
			4" x 6"			4" x 6"			
5260	**P**	80	**0632**	**0642**	**0652**	**0662**	**0672**		
			4" x 6"		4" x 6"				
5260	**Q**	105.5	**0682**	use CL300 valve	**0702**	**0712**			
			6" x 8"						
5260	**R**	126.5	**0722**	**0732**	**0742**	**0752**			
			6" x 8"		6" x 10"				
5260	**T**	161.5	**0762**	use CL300 valve	**0782**				
			8" x 10"						

Type 526
Weights
Metric units

	Bonnet	all						
	Lifting device	all						
Flange class		**150 x 150**	**300L x 150**	**300 x 150**	**600 x 150**	**900 x 300**	**1500 x 300**	**2500 x 300**
Valve size		1 D 2	1 D 2	1 D 2	1 D 2	1 ½ D 2	1 ½ D 2	1 ½ D 3
D	Weight [kg]	17.3	17.3	17.3	17.3	31.1	31.1	41.8
	with bellows [kg]	18.4	18.4	18.4	18.4	33.1	33.1	44.6
		1 E 2	1 E 2	1 E 2	1 E 2	1 ½ E 2	1 ½ E 2	1 ½ E 3
E	Weight [kg]	17.3	17.3	17.3	17.3	31.1	31.1	41.8
	with bellows [kg]	18.4	18.4	18.4	18.4	33.1	33.1	44.6
		1 ½ F 2	1 ½ F 2	1 ½ F 2	1 ½ F 2	1 ½ F 3	1 ½ F 3	1 ½ F 3
F	Weight [kg]	30.6	30.6	32.5	32.5	36.3	36.3	41.8
	with bellows [kg]	33.1	33.1	35.0	35.0	38.6	38.6	44.6
		1 ½ G 3	1 ½ G 3	1 ½ G 3	1 ½ G 3	1 ½ G 3	2 G 3	2 G 3
G	Weight [kg]	30.6	30.6	32.5	32.5	36.3	69.9	69.9
	with bellows [kg]	33.1	33.1	35.0	35.0	38.6	72.5	72.5
Flange class		**150 x 150**	**300L x 150**	**300 x 150**	**600 x 150**	**900 x 150**	**1500 x 300**	
Valve size		1 ½ H 3	1 ½ H 3	2 H 3	2 H 3	2 H 3	2 H 3	
H	Weight [kg]	30.6	30.6	44.6	62.2	62.2	62.2	
	with bellows [kg]	33.1	33.1	48.4	65.3	65.3	65.3	
		2 J 3	2 J 3	3 J 4	3 J 4	3 J 4	3 J 4	
J	Weight [kg]	44.6	44.6	77.7	77.7	100.2	100.2	
	with bellows [kg]	48.4	48.4	83.2	83.2	105.7	105.7	
		3 K 4	3 K 4	3 K 4	3 K 4	3 K 6	3 K 6	
K					Other / WC6			
	Weight [kg]	70.1	70.1	70.1	77.7 / 70.1	127.5	127.5	
	with bellows [kg]	75.7	75.7	75.7	83.2 / 75.7	134.1	134.1	
Flange class		**150 x 150**	**300L x 150**	**300 x 150**	**600 x 150**	**900 x 150**	**1500 x 150**	
Valve size		3 L 4	3 L 4	4 L 6	4 L 6	4 L 6	4 L 6	
L	Weight [kg]	70.1	70.1	112.2	122.0	134.1	127.5	
	with bellows [kg]	75.7	75.7	118.8	128.6	140.7	134.1	
		4 M 6	4 M 6	4 M 6	4 M 6	4 M 6		
M	Weight [kg]	112.1	112.1	112.1	122.0	134.1		
	with bellows [kg]	118.7	118.7	118.7	128.6	140.7		
		4 N 6	4 N 6	4 N 6	4 N 6	4 N 6		
N	Weight [kg]	128.6	128.6	128.6	134.1	134.1		
	with bellows [kg]	135.2	135.2	135.2	140.7	140.7		
		4 P 6	4 P 6	4 P 6	4 P 6	4 P 6		
P	Weight [kg]	107.7	107.7	164.0	164.0	164.0		
	with bellows [kg]	114.8	114.8	172.0	172.0	172.0		
		6 Q 8	6 Q 8	6 Q 8	6 Q 8			
Q	Weight [kg]	221.0	221.0	221.0	221.0			
	with bellows [kg]	230.0	230.0	230.0	230.0			
		6 R 8	6 R 8	6 R 10	6 R 10			
R	Weight [kg]	221.0	221.0	277.0	277.0			
	with bellows [kg]	230.0	230.0	288.0	288.0			
		8 T 10	8 T 10	8 T 10				
T	Weight [kg]	287.0	287.0	287.0				
	with bellows [kg]	298.0	298.0	298.0				

Type 526 CC
Dimensions
Metric units

Safety valve dimensions		[mm]	a	b	s	$H_{max.}$	$H_{max.}$ with bellows	a	b	s	$H_{max.}$	$H_{max.}$ with bellows	a	b	s	$H_{max.}$	$H_{max.}$ with bellows
Support brackets		[mm]	A	B	C	D	E	A	B	C	D	E	A	B	C	D	E
Flange rating class			**150 x 150**					**300L x 150**					**300 x 150**				
Valve size			1 D 2					1 D 2					1 D 2				
D	d_0 [mm]	14.0	105	114	30	440	465	Please see 1 D 2 300 x 150					105	114	30	440	465
	A_0 [mm²]	154	130	–	Ø 14	132	16						130	–	Ø 14	132	16
Valve size			1 E 2					1 E 2					1 E 2				
E	d_0 [mm]	14.0	105	114	30	440	465	Please see 1 E 2 300 x 150					105	114	30	440	465
	A_0 [mm²]	154	130	–	Ø 14	132	16						130	–	Ø14	132	16
Valve size			1 ½ F 2					1 ½ F 2					1 ½ F 2				
F	d_0 [mm]	18.0	124	121	32	536	561	124	121	32	536	561	124	152	35	536	561
	A_0 [mm²]	254	162	–	Ø 14	148	16	162	–	Ø 14	148	16	162	–	Ø 14	148	16
Valve size			1 ½ G 3					1 ½ G 3					1 ½ G 3				
G	d_0 [mm]	22.5	124	121	32	536	574	124	121	32	536	574	124	152	35	536	574
	A_0 [mm²]	398	162	–	Ø 14	148	16	162	–	Ø 14	148	16	162	–	Ø 14	148	16
Flange rating class			**150 x 150**					**300L x 150**					**300 x 150**				
Valve size			1 ½ H 3					1 ½ H 3					2 H 3				
H	d_0 [mm]	28.3	130	124	38	542	580	130	124	38	542	580	130	124	43	666	692
	A_0 [mm²]	629	162	–	Ø 14	155	16	162	–	Ø 14	155	16	184	110	Ø 14	177	16
Valve size			2 J 3					2 J 3					3 J 4				
J	d_0 [mm]	36.0	137	124	49	673	722	137	124	49	673	722	184	181	49	786	824
	A_0 [mm²]	1018	184	110	Ø 14	184	16	184	110	Ø 14	184	16	238	140	Ø 18	234	25
Valve size			3 K 4					3 K 4					3 K 4				
K **WCB, LCB, CF8M (WC6)**	d_0 [mm]	43.0	156	162	49	758	796	Please see 3 K 4 300 x 150					156	162	49	758	796
	A_0 [mm²]	1452	238	140	Ø 18	206	25						238	140	Ø 18	206	25
WC6																	
Flange rating class			**150 x 150**					**300L x 150**					**300 x 150**				
Valve size			3 L 4					3 L 4					4 L 6				
L	d_0 [mm]	53.5	156	165	49	758	796	156	165	49	758	796	179	181	49	853	886
	A_0 [mm²]	2248	238	140	Ø 18	206	25	238	140	Ø 18	206	25	278	160	Ø 18	262	25
Valve size			4 M 6					4 M 6					4 M 6				
M	d_0 [mm]	60.3	178	184	48	852	885	Please see 4 M 6 300 x 150					178	184	48	852	885
	A_0 [mm²]	2856	278	160	Ø 18	260	25						278	160	Ø 18	260	25
Valve size			4 N 6					4 N 6					4 N 6				
N	d_0 [mm]	66.0	197	210	48	871	904	Please see 4 N 6 300 x 150					197	210	48	871	904
	A_0 [mm²]	3421	278	160	Ø 18	280	25						278	160	Ø 18	280	25
Valve size			4 P 6					4 P 6					4 P 6				
P	d_0 [mm]	80.0	181	229	48	855	888	181	229	48	855	888	225	254	62	1079	1138
	A_0 [mm²]	5027	278	160	Ø 18	262	25	278	160	Ø 18	262	25	370	210	Ø 18	306	25
Valve size			6 Q 8					6 Q 8					6 Q 8				
Q	d_0 [mm]	105.5	240	241	68	1120	1200	Please see 6 Q 8 300 x 150					240	241	68	1120	1200
	A_0 [mm²]	8742	370	210	Ø 18	346	25						370	210	Ø 18	346	25
Valve size			6 R 8					6 R 8					6 R 10				
R	d_0 [mm]	126.0	240	241	68	1120	1200	240	241	68	1120	1200	240	267	68	1426	1426
	A_0 [mm²]	12568	370	210	Ø 18	346	25	370	210	Ø 18	346	25	470	150	Ø 18	460	25
Valve size			8 T 10					8 T 10					8 T 10				
T	d_0 [mm]	161.5	276	279	62	1462	1462	Please see 8 T 10 300 x 150					276	279	62	1462	1462
	A_0 [mm²]	20485	470	150	Ø 18	497	25						470	150	Ø 18	497	25

d_0 = Actual orifice diameter
A_0 = Actual orifice area

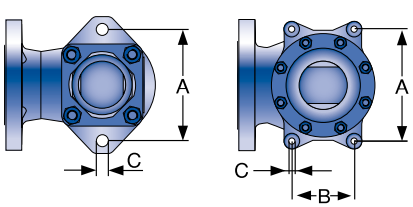
a	b	s	$H_{max.}$	$H_{max.}$ with bellows
A	B	C	D	E
600 x 150				
1 D 2				
105	114	30	440	465
130	–	Ø 14	132	16
1 E 2				
105	114	30	440	465
130	–	Ø 14	132	16
1 ½ F 2				
124	152	35	536	561
162	–	Ø 14	148	16
1 ½ G 3				
124	152	35	536	574
162	–	Ø 14	148	16
600 x 150				
2 H 3				
154	162	56	691	717
184	110	Ø 14	202	16
3 J 4				
184	181	49	786	824
238	140	Ø 18	234	25
3 K 4				
184	181	49	786	824
238	140	Ø 18	234	25
156	162	49	758	796
238	140	Ø 18	206	25
600 x 150				
4 L 6				
179	203	57	853	886
278	160	Ø 18	262	25
4 M 6				
178	203	56	852	885
278	160	Ø 18	260	25
4 N 6				
197	222	72	871	904
278	160	Ø 18	280	25
4 P 6				
225	254	62	1079	1138
370	210	Ø 18	306	25
6 Q 8				
240	241	68	1120[1)]	1200[2)]
370	210	Ø 18	346	25
6 R 10				
240	267	68	1426	1426
470	150	Ø 18	460	25
		–		
		–		
		–		

a	b	s	$H_{max.}$	$H_{max.}$ with bellows
A	B	C	D	E
900 x 300				
1 ½ D 2				
Please see 1 ½ D 2 1500 x 300				
1 ½ E 2				
Please see 1 ½ E 2 1500 x 300				
1 ½ F 3				
Please see 1 ½ F 3 1500 x 300				
1 ½ G 3				
124	165	44	560	573
162	–	Ø 14	174	16
900 x 150				
2 H 3				
154	162	56	691	717
184	110	Ø 14	202	16
3 J 4				
184	181	65	786	824
238	140	Ø 18	234	25
3 K 6				
198	216	67	880	880
278	160	Ø 18	288	25
900 x 150				
4 L 6				
197	222	72	871	904
278	160	Ø 18	280	25
4 M 6				
197	222	72	871	904
278	160	Ø 18	280	25
4 N 6				
197	222	72	871	904
278	160	Ø 18	280	25
4 P 6				
225	254	62	1079	1138
370	210	Ø 18	306	25

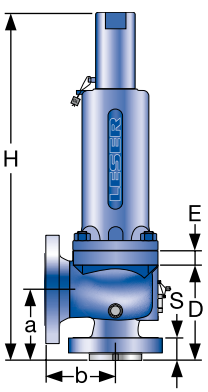
a	b	s	$H_{max.}$	$H_{max.}$ with bellows
A	B	C	D	E
1500 x 300				
1 ½ D 2				
105	140	44	517	542
162	–	Ø 14	129	16
1 ½ E 2				
105	140	44	517	542
162	–	Ø 14	129	16
1 ½ F 3				
124	165	44	560	560
162	–	Ø 14	174	16
2 G 3				
156	172	68	688	705
184	110	Ø 14	198	16
1500 x 300				
2 H 3				
154	162	56	691	717
184	110	Ø 14	202	16
3 J 4				
184	181	65	786	824
238	140	Ø 18	234	25
3 K 6				
197	216	65	879	879
278	160	Ø 18	287	25
1500 x 150				
4 L 6				
197	222	72	871	904
278	160	Ø 18	280	25

a	b	s	$H_{max.}$	$H_{max.}$ with bellows
A	B	C	D	E
2500 x 300				
1 ½ D 3				
140	178	57	576	576
162	–	Ø 14	189	16
1 ½ E 3				
140	178	57	576	576
162	–	Ø 14	189	16
1 ½ F 3				
140	178	57	576	576
162	–	Ø 14	189	16
2 G 3				
156	172	68	688	705
184	110	Ø 14	198	16

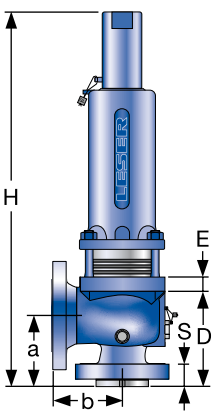
[1)] Type 526 high pressure design: 1202
[2)] Type 526 high pressure design: 1282



Support brackets



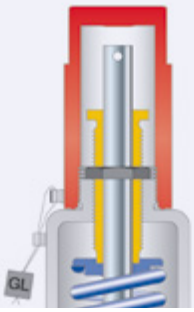
Conventional design



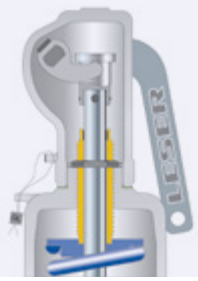
Balanced bellows design

Type 526 CC
Available options

Screwed cap H2
FF2

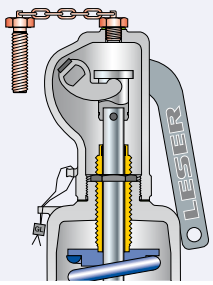


Packed lever H4
FF3

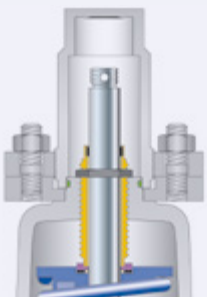


Open bonnet
F7C

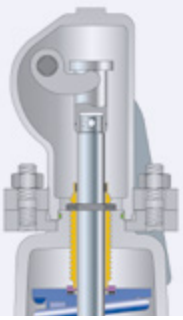
Test gag
F5H



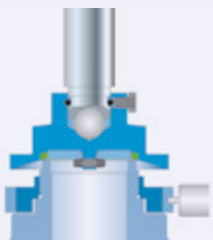
Bolted cap
F2H



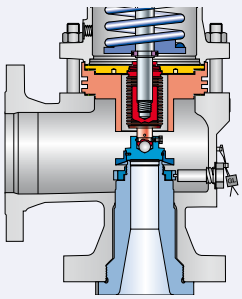
Bolted lifting device
F4H



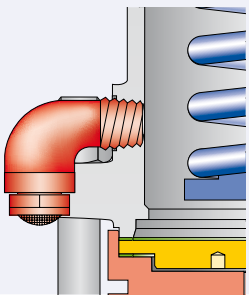
O-ring disc
FW3: CR “K”
FW9: EPDM “D”
FB1: FKM “L”
FW2: FFKM “C”



Inconel bellows
J83/J82



Bug screen
M70



INCONEL X-750 spring
X08

NACE sour gas application
N77, N78

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With our 100% focus on safety valves, we are your expert for all technical requirements. Since more than 25 years we are successfully operating in the Chinese market with constantly increasing investments. With our 3 regional offices in Tianjin, Beijing and Shanghai and further sales and service teams in Wuhan and Shenzhen, we offer expert consultation at your site in Chinese.

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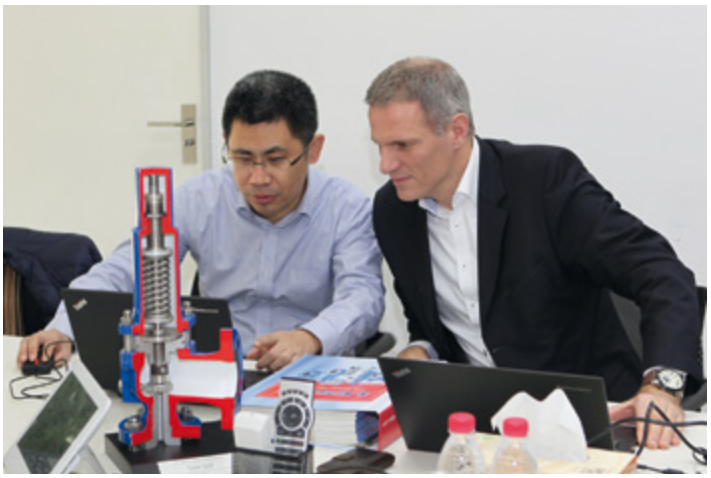


Fast and reliable delivery from production in Tianjin

To be close to our customers in China we built a certified local production site in Tianjin with high quality machinery just as in Germany. With our high stock level of raw material and deep vertical integration we ensure quick delivery times.

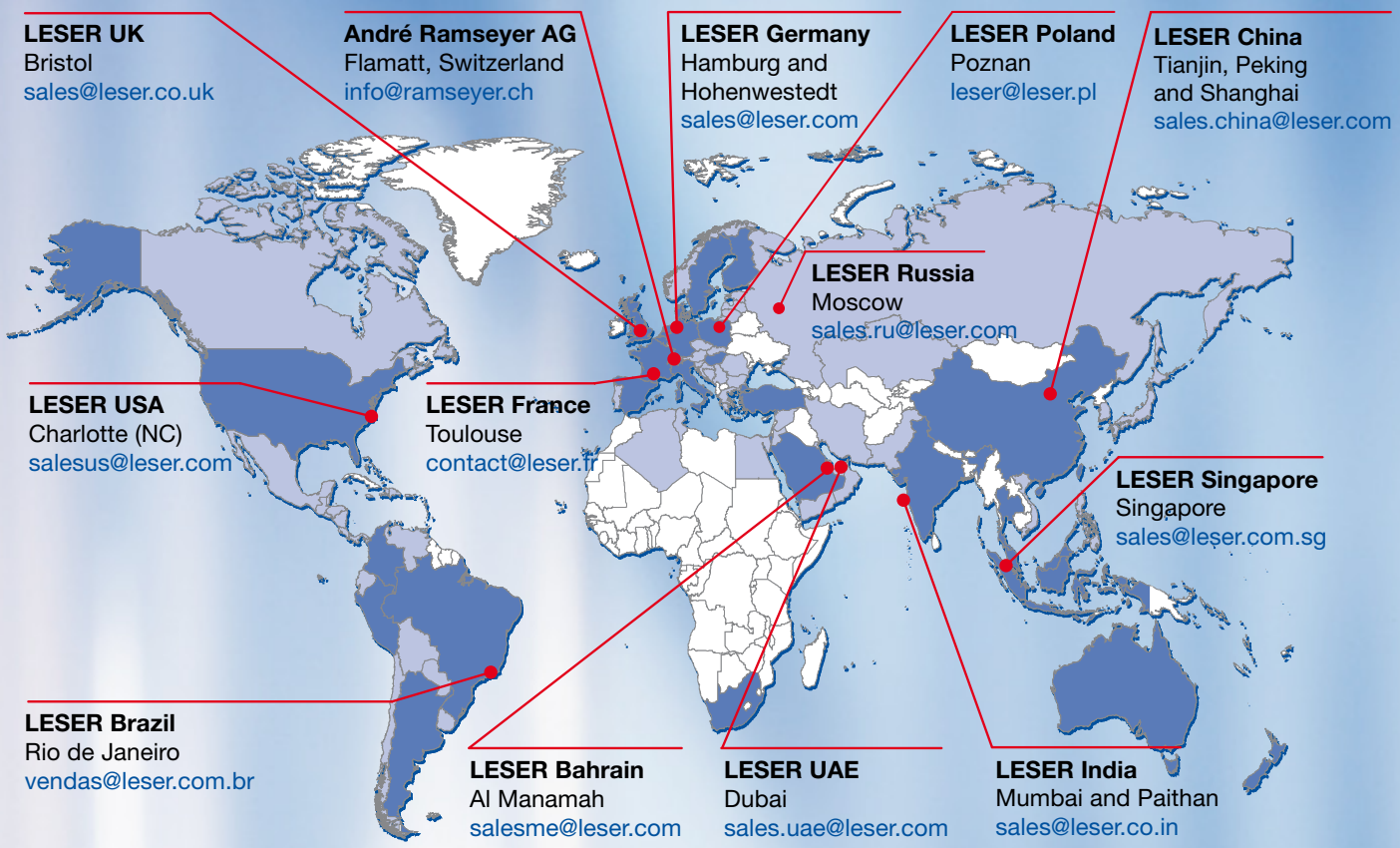
Our after-sales service provides quick support of safety valves for plant emergencies, or spare parts as needed for your hight plant up time and availablity.

References

Our references in China are global players from chemical, petrochemical and pharma industry and local Chinese customers. For further information please refer to our LESER Reference book.

ASME UV TS

LESER worldwide



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LESER stock and local assembly

API 526 CC, Edition April 2017

LESER

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