



Type 441 ANSI 442 ANSI

Flanged Safety Relief Valves
- spring loaded

US Units



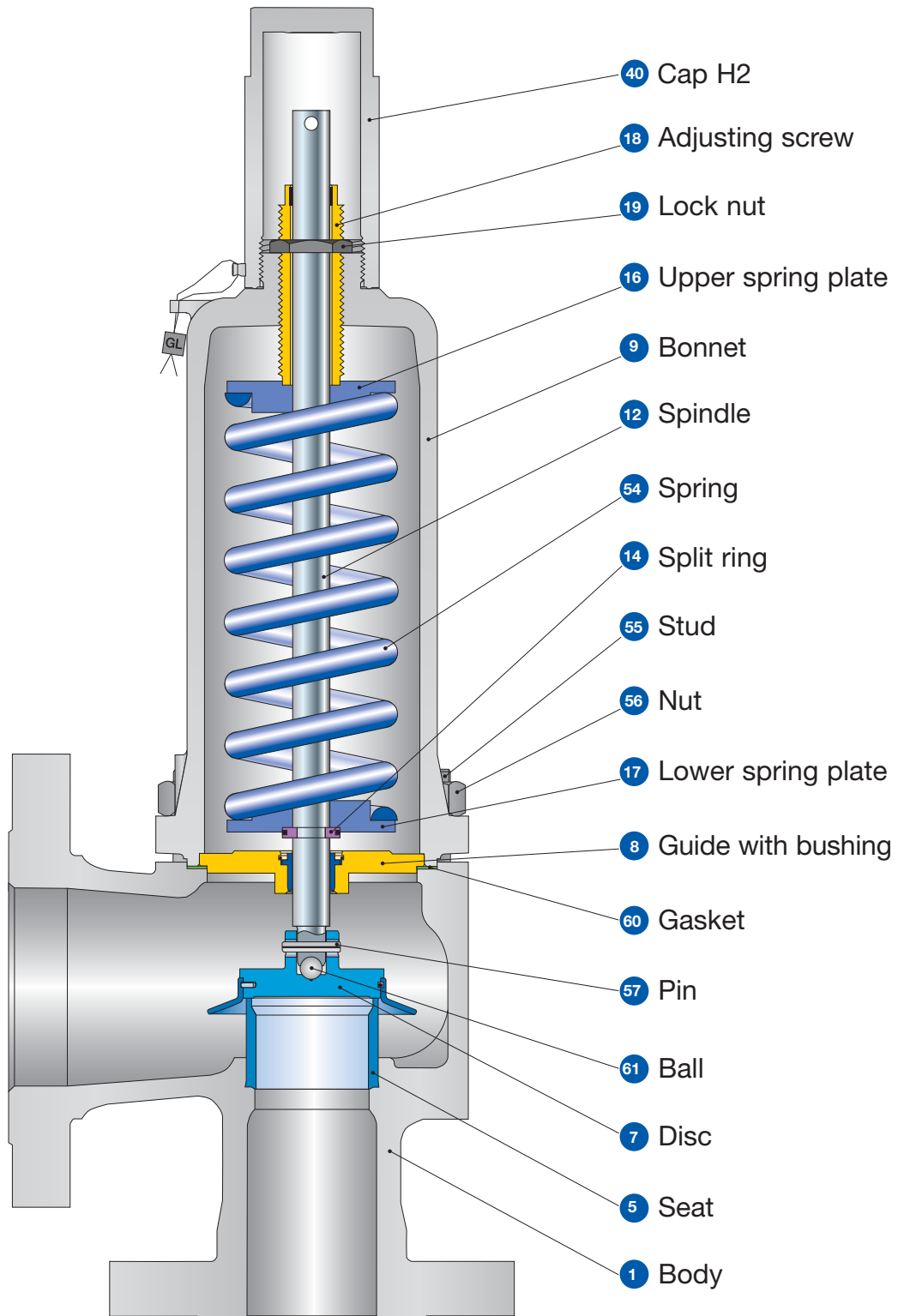
Facts

LESER

The-Safety-Valve.com

Type 441, 442 ANSI
Conventional design

Type 441, 442
 ANSI



Type 441, 442 ANSI

Conventional design

Materials

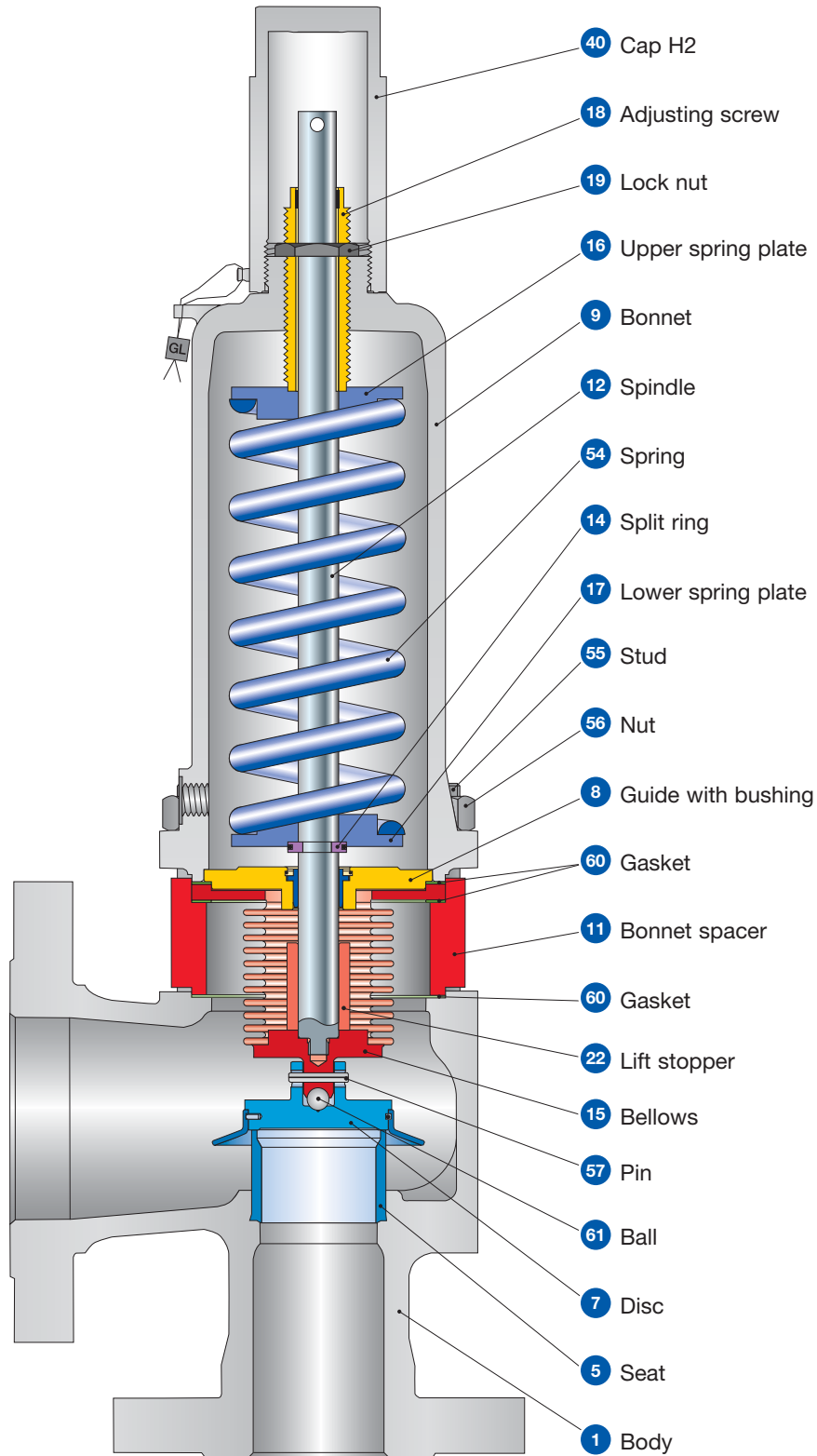
Item	Component	Type 4412 / 4422 ANSI	Type 4414 ANSI
1	Body	1.0619	1.4408
		SA 216 WCB	SA 351 CF8M
5	Seat	1.4404	1.4404
		316L	316L
7	Disc	1.4122	1.4404
		Hardened stainless steel	316L
8	Guide with bushing	1.4104, 1.0501, 0.7040	1.4404
		Chrome or carbon steel	316L
		1.4104 tenifer	-
		Chrome steel tenifer	-
9	Bonnet	0.7040, 0.7043, 1.0619	1.4408, 1.4404, 1.4571
		Ductile Gr. 60-40-18, SA 216 WCB	SA 351 CF8M, SA 479 316L, SA 479 316Ti
12	Spindle	1.4021	1.4404
		420	316L
14	Split ring	1.4104	1.4404
		Chrome steel	316L
16 / 17	Spring plate	1.0718	1.4404
		Steel	316L
18	Adjusting screw with bushing	1.4104 PTFE	1.4404 PTFE
		Chrome steel PTFE	316L PTFE
19	Lock nut	1.0718	1.4404
		Steel	316L
40	Cap H2	1.0460 or 0.7043	1.4404
		SA 105 or Gr. 60-40-18	316L
54	Spring standard	1.1200, 1.8159, 1.7102	1.4310
		Carbon steel	Stainless steel
54	Spring optional	1.4310	-
		Stainless steel	-
55	Stud	1.1181	1.4401
		Steel	B8M
56	Nut	1.0501	1.4401
		2H	8M
57	Pin	1.4310	1.4310
		Stainless steel	Stainless steel
60	Gasket	Graphite / 1.4401	Graphite / 1.4401
		Graphite / 316	Graphite / 316
61	Ball	1.3541	1.4401
		Hardened stainless steel	316

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.

Type 441, 442 ANSI
Balanced bellows design

Type 441, 442
 ANSI



Type 441, 442 ANSI

Balanced bellows design

Materials

Item	Component	Type 4412 / 4422 ANSI	Type 4414 ANSI
1	Body	1.0619	1.4408
		SA 216 WCB	SA 351 CF8M
5	Seat	1.4404	1.4404
		316L	316L
7	Disc	1.4122	1.4404
		Hardened stainless steel	316L
8	Guide with bushing	1.4104, 1.0501, 0.7040	1.4404
		Chrome steel or carbon steel	316L
		1.4104 tenifer	-
		Chrome steel tenifer	-
9	Bonnet	0.7040, 0.7043, 1.0619	1.4408, 1.4404, 1.4571
		Ductile Gr. 60-40-18, SA 216 WCB	SA 351 CF8M, SA 479 316L, SA 479 316Ti
11	Bonnet spacer	1.4404	1.4404
		316L	316L
12	Spindle	1.4404	1.4404
		316L	316L
14	Split ring	1.4104	1.4404
		Chrome steel	316L
15	Bellows	1.4571	1.4571
		316Ti	316Ti
16 / 17	Spring plate	1.0718	1.4404
		Steel	316L
18	Adjusting screw with bushing	1.4104 PTFE	1.4404 PTFE
		Chrome steel PTFE	316L PTFE
19	Lock nut	1.0718	1.4404
		Steel	316L
22	Lift stopper	1.4404	1.4404
		316L	316L
40	Cap H2	1.0460 or 0.7043	1.4404
		SA 105 or Gr. 60-40-18	316L
54	Spring standard	1.1200, 1.8159, 1.7102	1.4310
		Carbon steel	Stainless steel
54	Spring optional	1.4310	-
		Stainless steel	-
55	Stud	1.4401	1.4401
		B8M	B8M
56	Nut	1.4401	1.4401
		8M	8M
57	Pin	1.4310	1.4310
		Stainless steel	Stainless steel
60	Gasket	Graphite / 1.4401	Graphite / 1.4401
		Graphite / 316	Graphite / 316
61	Ball	1.3541	1.4401
		Hardened stainless steel	316

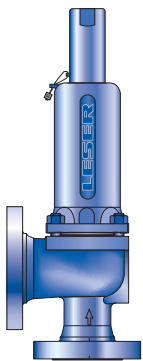
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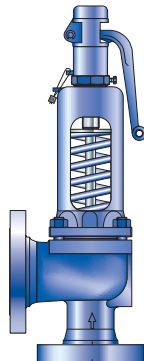
Type 441, 442 ANSI
Article numbers

Type 441, 442
ANSI

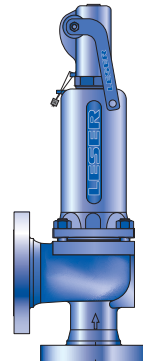
Valve size			1" x 2"	1½" x 2"	1½" x 2½"	2" x 3"	3" x 4"	4" x 6"
Actual Orifice diameter d_o [mm]			23	29	37	46	60	92
Actual Orifice area A_o [mm ²]			416	661	1075	1662	2827	6648
Body material: 1.0619 (WCB)								
Bonnet closed	H2	Art. No. 4412.	4812	4822	4832	4842	4862	4872
	H3	Art. No. 4412.	4813	4823	4833	4843	4863	4873
	H4	Art. No. 4412.	4814	4824	4834	4844	4864	4874
open	H3	Art. No. 4422.	4815	4825	4835	4845	4865	4875
Body material: 1.4408 (CF8M)								
Bonnet closed	H2	Art. No. 4414.	7912	–	7932	7942	7962	7972
	H4	Art. No. 4414.	7914	–	7934	7944	7964	7974



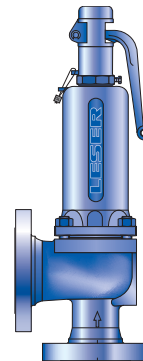
Type 441
 Cap H2
 Closed bonnet
 Conventional design



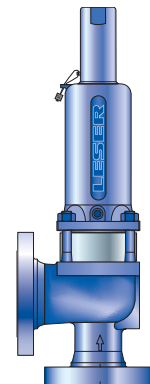
Type 442
 Plain lever H3
 Bonnet open
 Conventional design



Type 441
 Packed lever H4
 Closed bonnet
 Conventional design



Type 441
 Plain lever H3
 Closed bonnet
 Conventional design



Type 441
 Cap H2
 Closed bonnet
 Balanced bellows design

Type 441, 442 ANSI

Dimensions and weights

US Units

Type 441, 442
ANSI

Valve size	1" x 2"	1½" x 2"	1½" x 2½"	2 x 3"	3 x 4"	4 x 6"
Actual Orifice diameter d_0 [inch]	0.91	1.14	1.46	1.81	2.36	3.62
Actual Orifice area A_0 [inch ²]	0.644	1.024	1.667	2.576	4.383	10.304
Weight [lbs]	22	29	35	49	73	165
with bellows	23	30	38	52	81	183
Center to face [inch]						
Inlet a	4 1/8	4 7/8	4 7/8	5 3/8	6 1/8	7 1/8
Outlet b	4 1/2	4 3/4	4 3/4	4 7/8	6 1/2	9
Height (H4) [inch]						
Standard H max.	13 11/32	17 29/32	19 17/32	21 1/16	26 31/32	33 7/32
Bellows H max.	14 7/8	19 9/16	21 1/32	23 11/16	29 3/16	35 1/2
Support brackets [inch]						
A						11
B						6 1/4
(drilled only on request, option code H42)						Ø 3/4
D						9 7/8
E						25

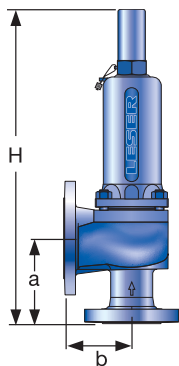
Body material: 1.0619 (WCB)

ANSI Flange Class¹⁾	Inlet	CL150 or CL300
	Outlet	CL150

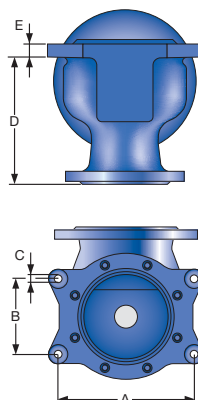
Body material: 1.4408 (CF8M)

ANSI Flange Class¹⁾	Inlet	CL150 or CL300	-	CL150 or CL300
	Outlet	CL150	-	CL150

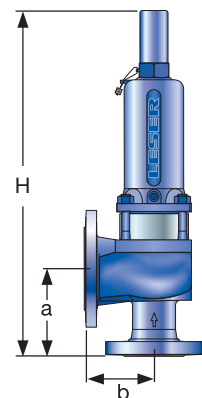
¹⁾Standard flange rating. For other flange drillings and facings please refer to page 31.



Conventional design



Support brackets

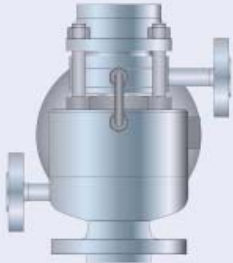


Balanced bellows design

Series 441, Series 441 Full nozzle Available options

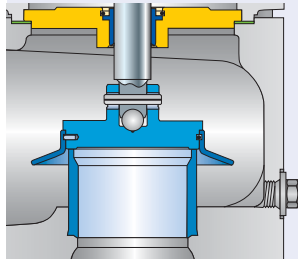
Heating jacket

H29, H30: Couplings G $\frac{3}{8}$ ", G $\frac{3}{4}$ "
H31, H32: Flanges DN 15, DN 25



Drain hole

J18: G $\frac{1}{4}$ "
J19: G $\frac{1}{2}$ "



Open bonnet

See article number

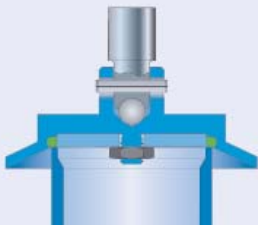


Change of nominal diameter with welding flange

I28: DN 40, 1 1/2" - Inlet
I29: DN 80, 3" - Outlet
I30: DN 150, 6" - Outlet

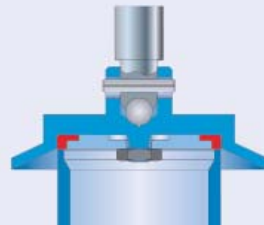
O-ring disc

J20: FFKM "C"
J21: CR "K"
J22: EPDM "D"
J23: FKM "L"



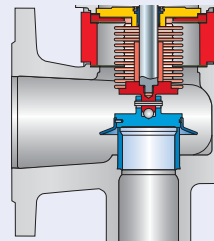
Disc with inserted sealing plate

J44: PTFE-FDA
J48: PCTFE
J49: SP

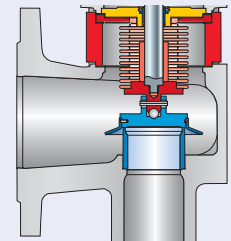


Stainless steel bellows

J68: Open bonnet
J78: Closed bonnet

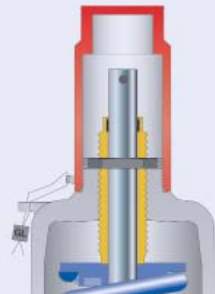


Conversion kit for stainless steel bellows



Screwed cap H2

H2



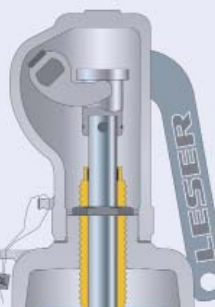
Plain lever H3

H3



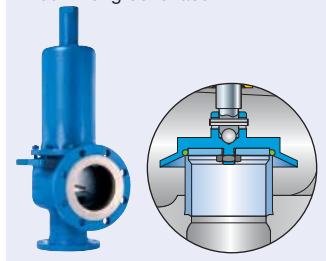
Packed lever H4

H4



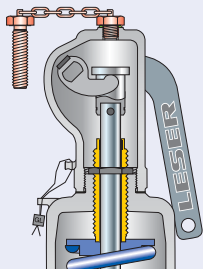
Type 441 for industrial refrigeration

H91: Outlet groove face D
H93: Inlet groove face D



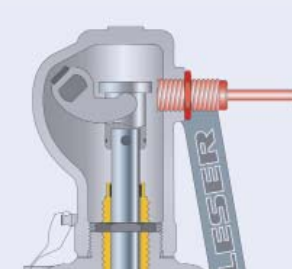
Test gag

J69: H4
J70: H2



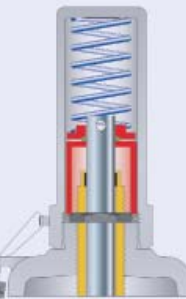
Lift indicator

J39: Adaptor H4
J93: Lift indicator



O-ring damper H2

J65



O-ring damper H4

J66

