



Type

441, 442

Full nozzle DIN

Flanged Safety Relief Valves
- spring loaded

US Units



Facts

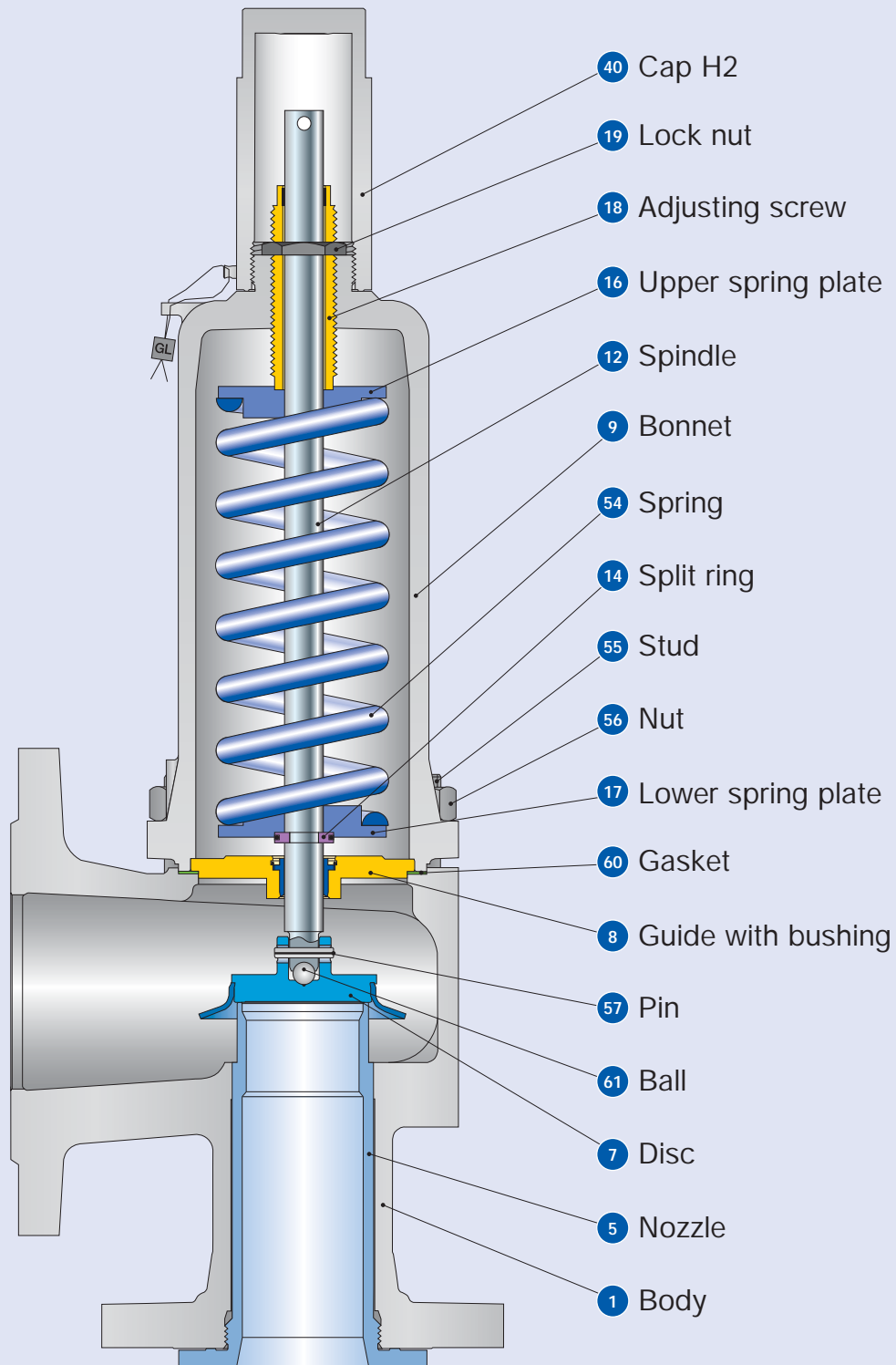
LESER

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Type 441, 442 Full Nozzle DIN **LESER**

Conventional design

Type 441, 442 Full nozzle DIN



Type 441, 442 Full Nozzle DIN **LESER**

Conventional design

Materials			
Item	Component	Type 4412 / 4422 Full nozzle DIN	Type 4414 Full nozzle DIN
1	Body	1.0619	1.4408
		SA 216 WCB	SA 351 CF8M
5	Nozzle	1.4404	1.4404
		316L	316L
7	Disc	1.4122	1.4404
		Hardened stainless steel	316L
8	Guide with bushing	1.0501	1.4404
		Carbon steel	316L
		1.4104 tenifer	-
		Chrome steel	-
9	Bonnet	0.7040, 0.7043, 1.0619	1.4408 or 1.4571
		Ductile Gr. 60-40-18, SA 216 WCB	SA CF8M or 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
		12L13	316L
18	Adjusting screw with bushing	1.4104 PTFE	1.4404
		Chrome steel PTFE	316L PTFE
19	Lock nut	1.0718	1.4404
		Steel	316L
40	Cap H2	1.0718	1.4404
		12L13	316L
54	Spring standard	1.1200, 1.8159, 1.7102	1.4310
		Carbon steel	Stainless steel
	Spring optional	1.4310	-
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

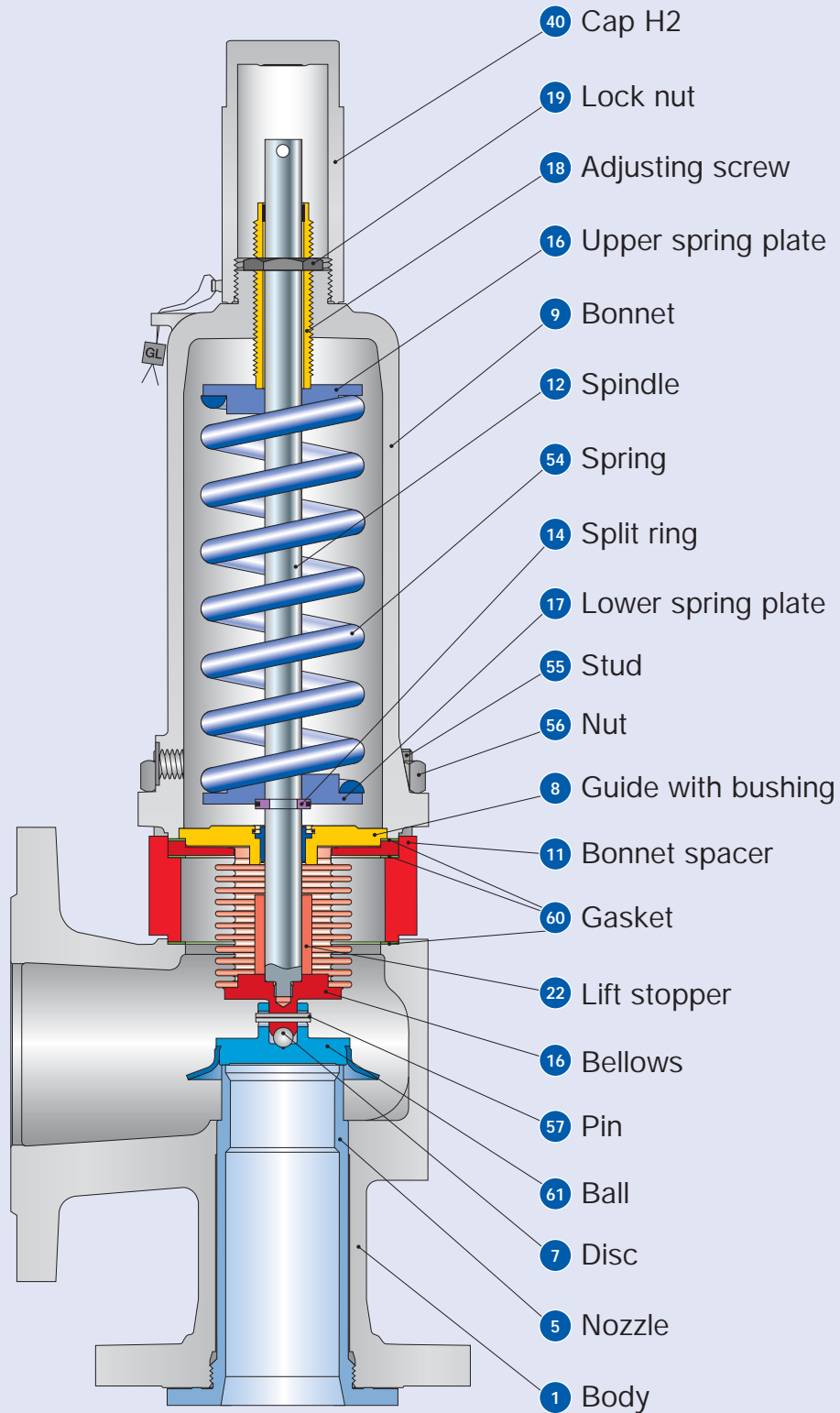
Please notice:

- Modifications reserved by LESER.
- LESER can upgrade materials without notice.
- Every part can be replaced by other material acc. to customer specification.

Type 441, 442 Full nozzle DIN **LESER**

Balanced bellows design

Type 441, 442 Full nozzle DIN



Type 441, 442 Full nozzle DIN **LESER**

Balanced bellows design

Materials			
Item	Component	Type 4412 / 4422 Full nozzle DIN	Type 4414 Full nozzle DIN
1	Body	1.0619	1.4408
		SA 216 WCB	SA 351 CF8M
5	Nozzle	1.4404	1.4404
		316L	316L
7	Disc	1.4122	1.4404
		Hardened stainless steel	316L
8	Guide with bushing	1.0501	1.4404
		Carbon steel	316L
		1.4104 tenifer	-
		Chrome steel	-
9	Bonnet	0.7040, 0.7043, 1.0619	1.4408 or 1.4571
		Ductile Gr. 60-40-18, SA 216 WCB	SA 351 CF8M or SA 479 316Ti
11	Bonnet spacer	1.0460	1.4404
		Carbon steel	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
		12L13	316L
18	Adjusting screw with bushing	1.4104 PTFE	1.4404
		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	1.0718	1.4404
		12L13	316L
54	Spring standard	1.1200, 1.8159, 1.7102	1.4310
		Carbon steel	Stainless steel
	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:

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- LESER can upgrade materials without notice.
- Every part can be replaced by other material acc. to customer specification.

Type 441, 442 Full nozzle DIN **LESER**

How to order – Article numbers

Article numbers					
	DN _i		25	40	50
	DN _o		40	65	80
	Actual Orifice diameter d ₀ [mm]		23	37	46
	Actual Orifice area A ₀ [mm ²]		416	1075	1662
Body material: 1.0619 (WCB)					
Bonnet	H2	Art.-No. 4412.	0572	0582	0592
closed	H3	Art.-No. 4412.	0573	0583	0593
	H4	Art.-No. 4412.	0574	0584	0594
open	H3	Art.-No. 4422.	0575	0585	0595
Body material: 1.4408 (CF8M)					
Bonnet	H2	Art.-No. 4414.	0952	0962	0972
closed	H4	Art.-No. 4414.	0954	0964	0974

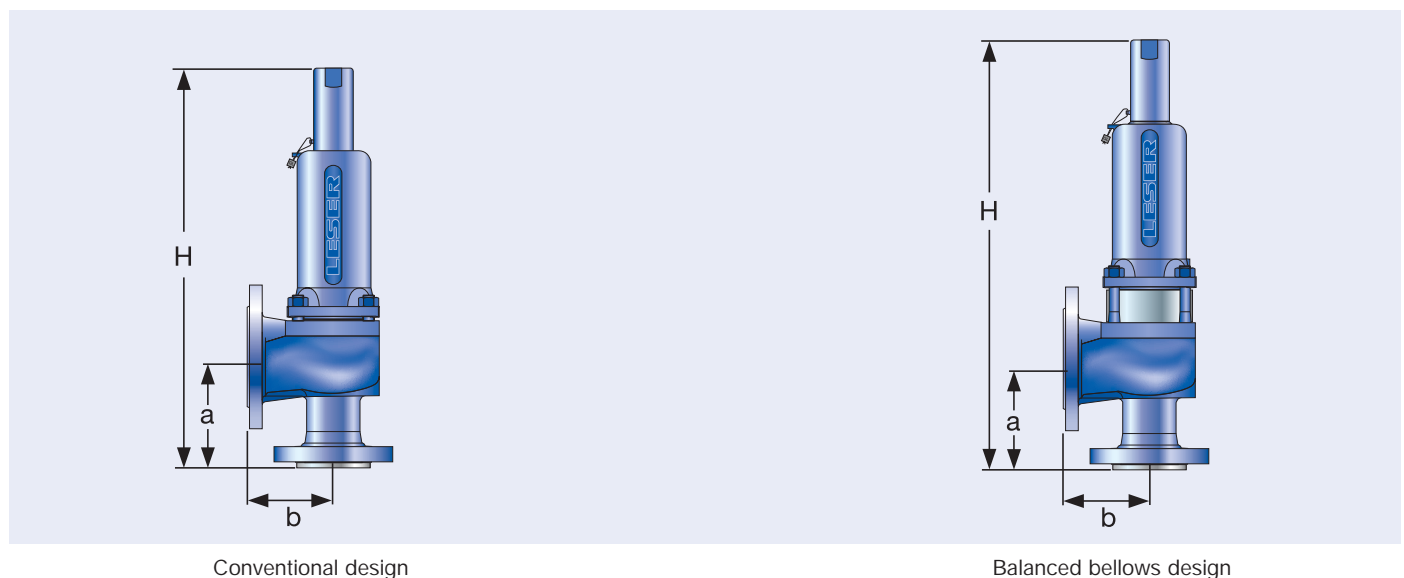
For sizes DN 80/3" and above please select Series 526 valves, DIN drilled or 441 Full nozzle ANSI, DIN drilled.

Type 441, 442 Full nozzle DIN **LESER**

Dimensions and weights

US Units				
	DN _i	25	40	50
	DN _o	50	65	80
	Actual Orifice diameter d _o [inch]	0,91	1,46	1,81
	Actual Orifice area A _o [inch ²]	0,644	1,667	2,576
Weight				
[lbs]		20	35	49
	with bellows	21	38	52
Center to face	Inlet a	4 3/8	5 5/8	6 1/16
[inch]	Outlet b	3 15/16	4 1/2	4 3/4
Height (H4)	Standard H max.	9 3/16	13	14 5/8
[inch]	Bellows H max.	10 11/16	14	16 1/8
Body material: 1.0619 (WCB)				
DIN Flange¹⁾	Inlet		PN 40 or 16	
	Outlet		PN 16	
Body material: 1.4408 (CF8M)				
DIN Flange¹⁾	Inlet		PN 40 or 16	
	Outlet		PN 16	

¹⁾ Standard flange rating. For other flange drillings and facings please refer to page 06/14.



Conventional design

Balanced bellows design

Type 441, 442 Full nozzle DIN **LESER**

Pressure temperature ratings

US Units				
	DN _i	25	40	50
	DN _o	50	65	80
	Actual Orifice diameter d _o [inch]	0,91	1,46	1,81
	Actual Orifice area A _o [inch ²]	0,644	1,667	2,576
Body material: 1.0619 (WCB)				
DIN Flange	Inlet	PN 40 or 16		
	Outlet	PN 16		
Minimum set pressure	p [psig] S/G/L	1,5	1,5	1,5
Min. set pressure¹⁾ standard bellows	p [psig] S/G/L	43,5	43,5	43,5
Min. set pressure low press. bellows	p [psig] S/G/L	14	16	26
Maximum set pressure	p [psig] S/G/L	580	580	580
Max. set pressure with special spring	p [psig] S/G/L	580	580	580
Temperature acc. to DIN EN	min. [°F]	-121		
	max. [°F]	+842		
Temperature acc. to ASME	min. [°F]	-20		
	max. [°F]	+800		
Body material: 1.4408 (CF8M)				
DIN Flange	Inlet	PN 40 or 16		
	Outlet	PN 16		
Minimum set pressure	p [psig] S/G/L	1,5	1,5	1,5
Min. set pressure¹⁾ standard bellows	p [psig] S/G/L	43,5	43,5	43,5
Min. set pressure low press. bellows	p [psig] S/G/L	14	16	26
Maximum set pressure	p [psig] S/G/L	580	580	479
Max. set pressure with special spring	p [psig] S/G/L	580	580	537
Temperature acc. to DIN EN	min. [°F]	-454		
	max. [°F]	+752		
Temperature acc. to ASME	min. [°F]	-450		
	max. [°F]	+1000		

¹⁾ Min. set pressure standard bellows = Max. set pressure low pressure bellows.

Type 441, 442 Full nozzle DIN **LESER**

Available Options

For further information refer to
"Accessories and Options", page 99/01

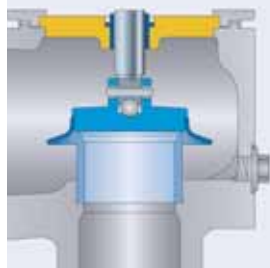
Heating jacket

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 $\frac{1}{2}$



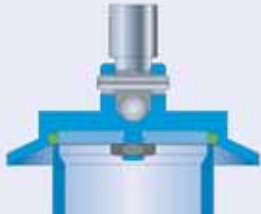
Open bonnet

See Art.-No.



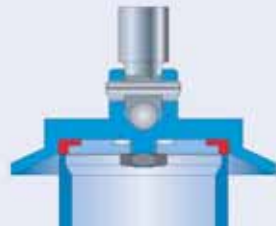
O-ring-disc

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



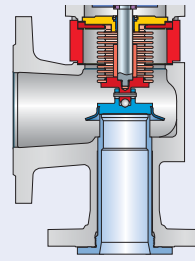
Disc with inserted sealing plate

J44: PTFE-FDA
J48: PCTFE
J49: SP



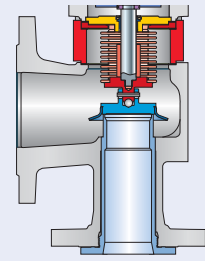
Stainless steel bellows

J68: Open bonnet
J78: Closed bonnet



Conversion kit for stainless steel bellows

See Art.-No. page 06/15



Screwed cap H2

H2



Plain lever H3

H3



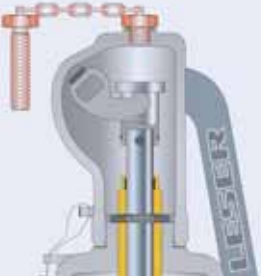
Packed lever H4

H4



Test gag

J69: H4
J70: H2



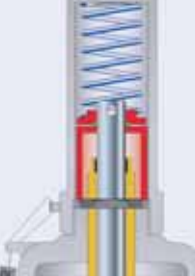
Lift indicator

J39: Adaptor H4
J93: Lift indicator



O-ring-damper H2

J65



O-ring-damper H4

J66

