

Type 455, 456

Flanged Safety Relief Valves
– spring loaded

Metric Units

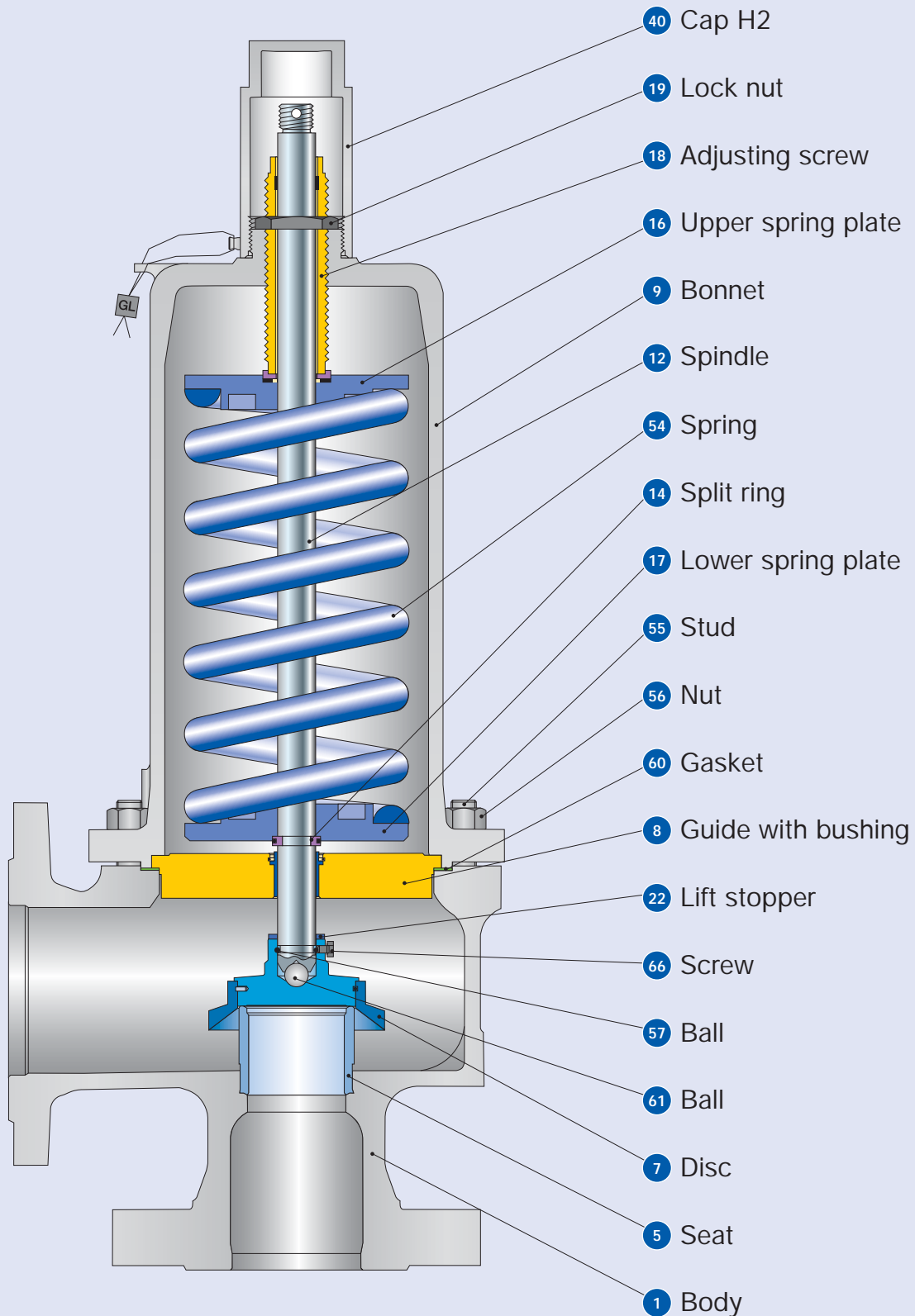


Facts

LESER

The-Safety-Valve.com

Conventional design



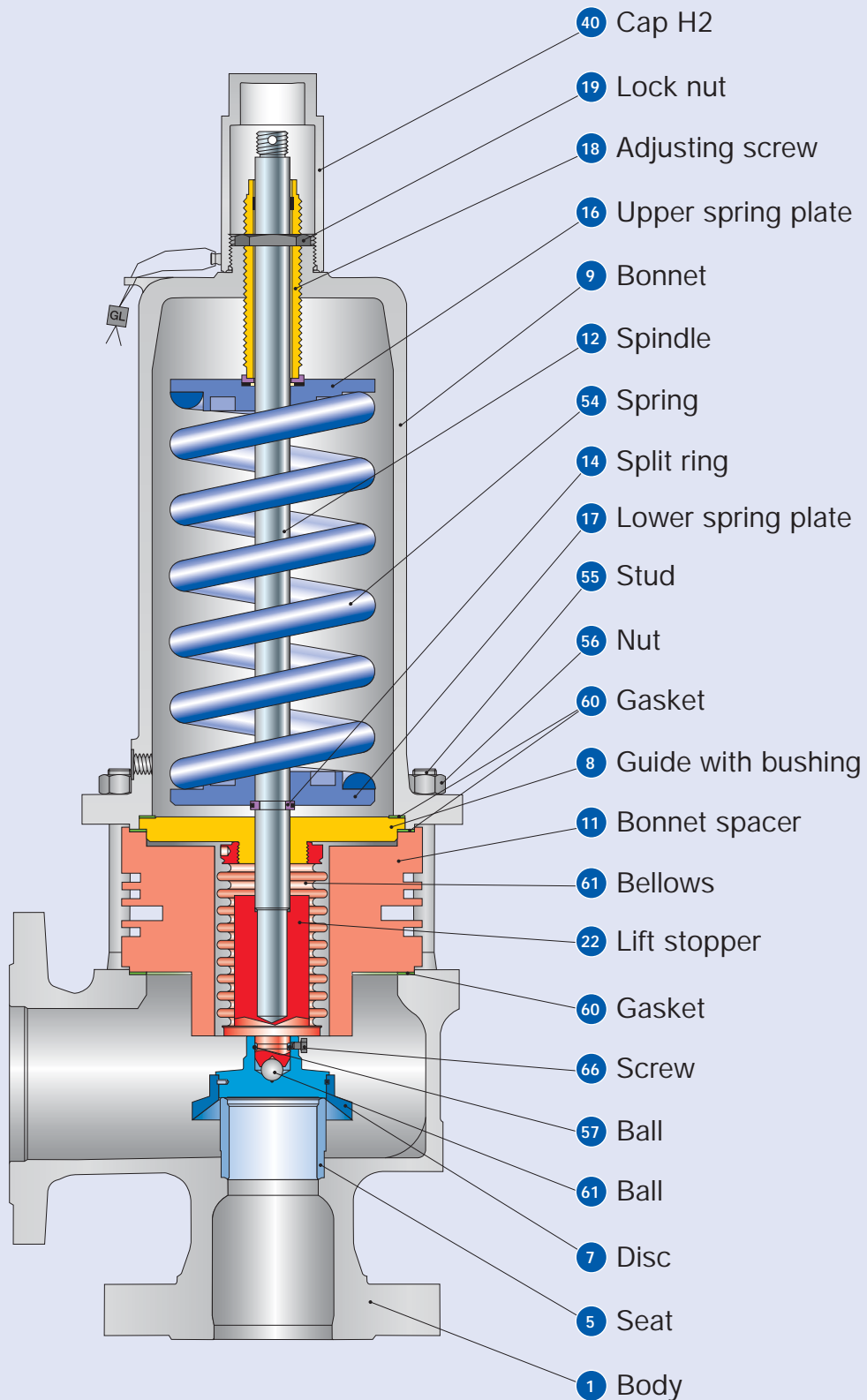
Conventional design

Materials			
Item	Component	Type 4552 / 4562	Type 4564
1	Body	1.0619	1.4581
		SA 216 WCB	SA 351 CF10M
5	Seat	1.4404	1.4404
		316L	316L
7	Disc	1.4122	1.4404
		Hardened stainless steel	316L
8	Guide with bushing	1.0501, 0.7040	1.4404
		Chrome or carbon steel	316L
		1.4104 tenifer	-
		Chrome steel	-
9	Bonnet	0.7043 (Open bonnet 0.7040), 1.0619	1.4408, 1.4404, 1.4571
		Ductile Gr. 60-40-18, SA 216 WCB	SA 351 CF8M, SA 479 316L, 316Ti
12	Spindle	1.4404	1.4404
		316L	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
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	-
55	Stud	1.1181	1.4401
		Steel	B8M
56	Nut	1.0501	1.4401
		2H	8M
57	Ball	1.4401	1.4401
		316	316
60	Gasket	Graphite / 1.4401	Graphite / 1.4401
		Graphite / 316	Graphite / 316
61	Ball	1.3541	1.4401
		Hardened stainless steel	316
66	Screw	1.4401	1.4401
		B8M	B8M

Please notice:

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

Balanced bellows design



Balanced bellows design

Materials		Type 4552 / 4562	Type 4564
1	Body	1.0619	1.4581
		SA 216 WCB	SA 351 CF10M
5	Seat	1.4404	1.4404
		316L	316L
7	Disc	1.4122	1.4404
		Hardened stainless steel	316L
8	Guide with bushing	1.0501, 0.7040	1.4404
		Chrome or carbon steel	316L
		1.4104 tenifer	-
		Chrome steel	-
9	Bonnet	0.7043 or 1.0619	1.4408, 1.4404, 1.4571
		Ductile Gr. 60-40-18 or SA 216 WCB	SA 351 CF8M, SA 479 316L, 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
		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	1.0718	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	Ball	1.4401	1.4401
		316	316
60	Gasket	Graphite / 1.4401	Graphite / 1.4401
		Graphite / 316	Graphite / 316
61	Ball	1.3541	1.4401
		Hardened stainless steel	316
66	Screw	1.4401	1.4401
		B8M	B8M

Please notice:

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

How to order – Article numbers

Article numbers			25 x 50	50 x 80	80 x 100	100 x 150
	DN _{I+O}		25 x 50	50 x 80	80 x 100	100 x 150
	Valve size		1" x 2"	2" x 3"	3" x 4"	4" x 6"
	Actual Orifice diameter d ₀ [mm]		20	40	60	74
	Actual Orifice area A ₀ [mm ²]		314	1257	2827	4301
Body material: 1.0619 (WCB)						
closed	Bonnet H2	Art.-No. 4562.	6012	6022	6032	6042
	H3	Art.-No. 4562.	6013	6023	6033	-
	H4	Art.-No. 4562.	6014	6024	6034	6044
open	H3	Art.-No. 4552.	6015	6025	6035	6045
Body material: 1.4581 (CF10M)						
closed	Bonnet H2	Art.-No. 4564.	6052	6062	6072	6082
	H4	Art.-No. 4564.	6054	6064	6074	6084

Dimensions and weights

Metric Units

	DN _{i,o}	25 x 50	50 x 80	80 x 100	100 x 150
Valve size		1" x 2"	2" x 3"	3" x 4"	4" x 6"
Actual Orifice diameter d ₀ [mm]		20	40	60	74
Actual Orifice area A ₀ [mm ²]		314	1257	2827	4301
Weight [kg]		18	43	85	154
	with bellows	20	46	102	185
Center to face [mm]	Inlet a	122	155	168	205
	Outlet b (PN 40)	120	145	180	235
	Outlet b (PN 63)	120	145	205	265
Measure [mm]	Used to find bolt length s for inlet flange	28	38	38	45
Height (H4) [mm]	Standard H max.	493	684	807	1059
	Bellows H max.	528	764	905	1150
Support brackets [mm]	A	140	184	278	364
	B	–	110	160	210
(drilled only on request)	C	Ø 14	Ø 14	Ø 18	Ø 18
	D	149	194	225	288
	E	18	18	27	32

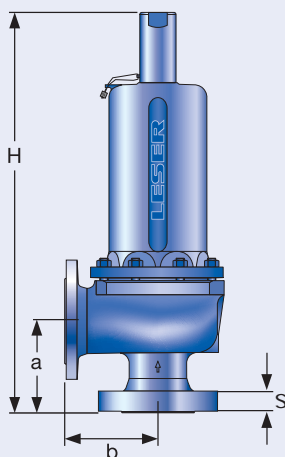
Body material: 1.0619 (WCB)

DIN Flange¹⁾	Inlet	PN 63 – 160	
	Outlet	PN 40 – 63	PN 40

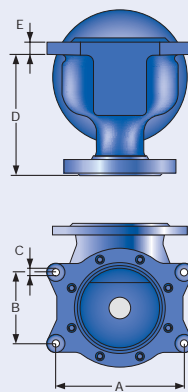
Body material: 1.4581 (CF10M)

DIN Flange¹⁾	Inlet	PN 63 – 160	
	Outlet	PN 40 – 63	PN 40

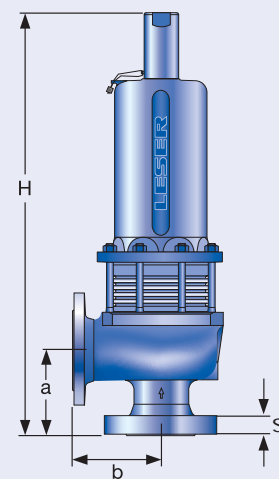
¹⁾ Standard flange rating. For other flange drillings and facings please refer to 08/14.



Conventional design



Support brackets



Balanced bellows design

Pressure temperature ratings

Metric Units

DN _{r,o}	25 x 50	50 x 80	80 x 100	100 x 150
Valve size	1" x 2"	2" x 3"	3" x 4"	4" x 6"
Actual Orifice diameter d ₀ [mm]	20	40	60	74
Actual Orifice area A ₀ [mm ²]	314	1257	2827	4301

Body material: 1.0619 (WCB)

DIN Flange	Inlet		PN 63 – 100		
	Outlet		PN 40 – 63	PN 40	
Minimum set pressure	p [bar _g] S/G/L	2,5	2,5	2,5	2,5
Min. set pressure ¹⁾ standard bellows	p [bar _g] S/G/L	13,5	2,5	10	5
Min. set pressure low press. bellows	p [bar _g] S/G/L		on request		
Maximum set pressure	p [bar _g] S/G/L	100	98	63	53
Max. set pressure with special spring	p [bar _g] S/G/L	100	100	63	63
Temperature acc. to DIN EN	min. [°C]	-85			
	max. [°C]	+450			
Temperature acc. to ASME	min. [°C]	-29			
	max. [°C]	+427			

Body material: 1.4581 (CF10M)

DIN Flange	Inlet		PN 63 – 100		
	Outlet		PN 40 – 63	PN 40	
Minimum set pressure	p [bar _g] S/G/L	2,5	2,5	2,5	2,5
Min. set pressure ¹⁾ standard bellows	p [bar _g] S/G/L	13,5	2,5	10	5
Min. set pressure low press. bellows	p [bar _g] S/G/L		on request		
Maximum set pressure	p [bar _g] S/G/L	100	61	35	16,9
Max. set pressure with special spring	p [bar _g] S/G/L	100	65	43	43
Temperature acc. to DIN EN	min. [°C]	-85			
	max. [°C]	+550			
Temperature acc. to ASME	min. [°C]	-29			
	max. [°C]	+538			

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

Available Options

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

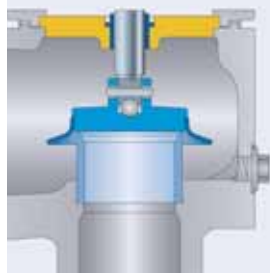
Heating jacket

H29, H30: Couplings G 3/8, G 3/4
H31, H32: Flanges DN 15, DN 25



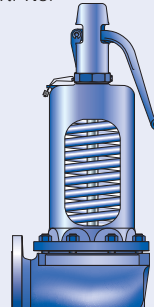
Drain hole

J18: G 1/4
J19: G 1/2



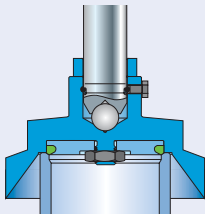
Open bonnet

See Art.-No.



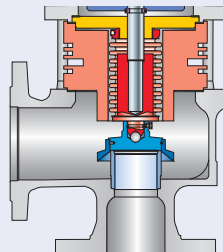
O-ring-disc

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

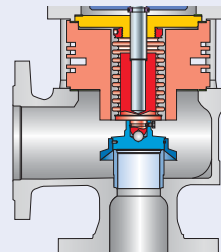


Stainless steel bellows

J68: Open bonnet
J78: Closed bonnet



Conversion kit for stainless steel bellows on request



Screwed cap H2



Plain lever H3



Packed lever H4



Test gag

J69: H4
J70: H2



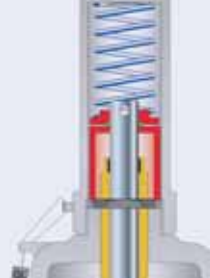
Lift indicator

J39: Adaptor H4
J93: Lift indicator



O-ring-damper H2

J65



O-ring-damper H4

J66

