

Туре 546

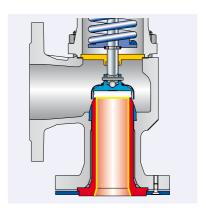


Flanged Safety Relief Valves - spring loaded

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Design features



Area of application

Developed to protect against inadmissible overpressure in pressure vessels and systems in which the use of high alloyed metals (e.g. nickel-based alloys) is necessary due to the medium properties.

Type 546 is the solution for applications in which activation of the safety valve is very unlikely due to the large difference between the operating and set pressure.

Design features

Nozzle of gas-tight sintered PTFE with low permeability of atoms, molecules and ions (low permeability) for the prevention of corrosion in the inlet of the body.

Metallic support of the nozzle prevents flowing of the PTFE under pressure.

Pore-free surface of the nozzle prevents product build-ups.

Sealing plate of BOROFLOAT glass for high chemical resistance.

Metallic support of the sealing plate of BOROFLOAT glass for high mechanical strength of the disc.

Coupling of materials PTFE-nozzle - disc with sealing plate of BOROFLOAT glass for high tightness.

Possible to protect the bonnet space and the sliding components against corrosion with balanced bellows.

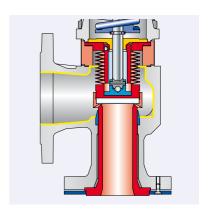
The nozzle, disc, spindle, and spring plate can be made of alternative materials in order to adapt Type 546 to the service conditions.

01/02 LWN 484.01-E

Type 5466



Design features



Area of application

Developed to protect against inadmissible overpressure in pressure vessels and systems in which the use of high alloyed metals (e.g. nickel-based alloys) is necessary due to the medium properties.

Type 5466 is the solution for applications in which activation of the safety valve rarely occurs and the protective coating together with the bellows provides adequate corrosion protection on the outlet side.

An electrostatically conductive PTFE-carbon compound with a specific resistance of $\leq 10^6 \ \Omega/cm$ is recommended for explosion prone areas.

Design features

Nozzle of gas-tight sintered PTFE-carbon compound with low permeability of atoms, molecules and ions (low permeability) for the prevention of corrosion in the inlet of the body.

Metallic support of the nozzle prevents flowing of the PTFE-carbon compound under pressure. Pore-free surface of the nozzle prevents product build-ups.

Additional corrosion protection through coating of the blow-off chamber of the body with conductive two-component paint SikaCor Zinc ZS.

Conductive PTFE-carbon compound together with the conductive two-component paint SikaCor Ainc ZS in the blow-off chamber prevent sparking from electrostatic discharge.

PTFE bellows with integrated plate hermetically seals the bonnet space and that way protects against soiling and corrosion. The set pressure range with the PTFE bellows starts at 0,5 bar.

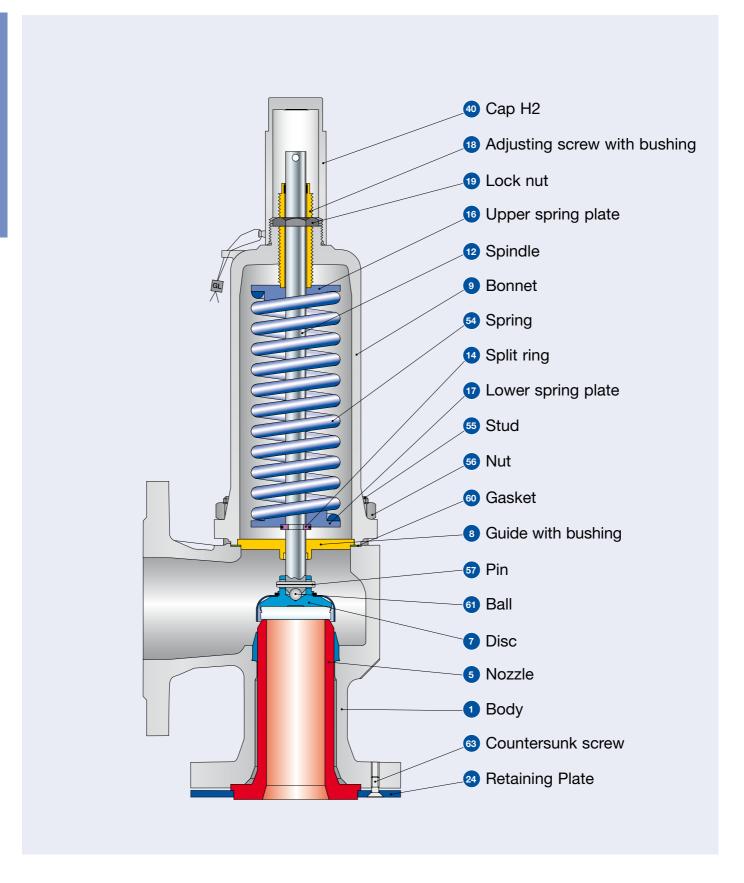
The sealing plate of PTFE + 25% carbon compound is distinguished against virgin PTFE by its higher temperature and pressure operation limits as well as improved mechanical strength due to the metallic support.

The nozzle, disc, spindle, and spring plate can be made of alternative materials in order to adapt Type 5466 to the service conditions.





Conventional design



01/04 LWN 484.01-E





Conventional design

	Materials				
Item.	Component	Type 5462	Type 5465		
1	Dodu	1.0619	0.7043		
•	Body	SA 216 WCB	Ductile Gr. 60-40-18		
5	Nozzle	Virgin PTFE	Virgin PTFE		
3	NOZZIE	PTFE-TF	PTFE-TF		
7	Disc	1.4404 / BOROFLOAT glass	1.4404 / BOROFLOAT glass		
•	Disc	316L / BOROFLOAT glass	316L / BOROFLOAT glass		
8	Guide	1.4404	1.4404		
	0.0.00	Stainless steel	Stainless steel		
9	Bonnet	0.7040	0.7040		
	Donnet	Ductile Gr. 60-40-18	Ductile Gr. 60-40-18		
12	Spindle	1.4404	1.4404		
12	Opinale	Stainless steel	Stainless steel		
14	Split ring	1.4104	1.4104		
17	Split filig	Chrome steel	Chrome steel		
16/17	Spring plate	1.0718	1.0718		
10/17	Spring plate	Steel	Steel		
18	Adjusting screw with bushing	1.4104 PTFE	1.4104 PTFE		
10		Chrome steel PTFE	Chrome steel PTFE		
19	Lock nut	1.0718	1.0718		
19	LOCK HUL	Steel	Steel		
24	Retaining Plate	1.0036	1.0036		
24	netaining Flate	Steel	Steel		
40	Cap H2	1.0718	1.0718		
40	Сар п2	12L13	12L13		
	Caring standard	1.1200, 1.8159, 1.7102	1.1200, 1.8159, 1.7102		
54	Spring, standard	Steel	Steel		
34	Spring, optional	1.4310	1.4310		
	Spring, optional	Stainless steel	Stainless steel		
55	Stud	1.1181	1.1181		
33	Stud	Steel	Steel		
56	Nut	1.0501	1.0501		
30	Nut	2H	2H		
57	Pin	1.4310	1.4310		
51	Fill	Stainless steel	Stainless steel		
60	Gasket	Graphite / 1.4401	Graphite / 1.4401		
00	Gasket	Graphite / 316	Graphite / 316		
61	Ball	1.3541	1.3541		
U I	טמוו	Hardened stainless steel	Hardened stainless steel		
63	Countersunk screw	1.4401	1.4401		
US	Countersulf Sciew	Chrome steel	Chrome steel		

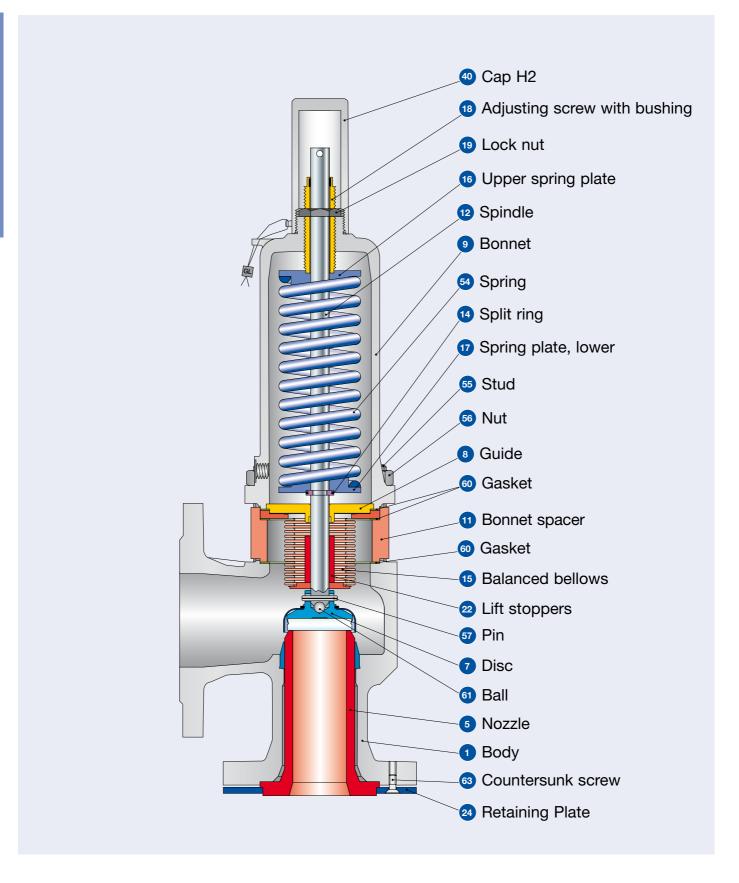
Please note:

- LESER reserves the right to make changes.
- LESER may use higher quality materials without giving prior notice.
- Each component can be replaced by another material according to the customer's specification.
- All components exposed to pressure are highlighted in bold.



LESER

Balanced bellows design



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Balanced bellows design

	Materials				
Item.	Components	Type 5462	Type 5465		
1	Body	1.0619	0.7043		
	Воцу	SA 216 WCB	Ductile Gr. 60-40-18		
5	Nozzle	Virgin PTFE	Virgin PTFE		
	NOZZIC	PTFE-TF	PTFE-TF		
7	Disc	1.4404 / BOROFLOAT glass 316L / BOROFLOAT glass	1.4404 / BOROFLOAT glass 316L / BOROFLOAT glass		
8	Guide	1.4404	1.4404		
	Galac	Stainless steel	Stainless steel		
9	Bonnet	0.7040	0.7040		
	Domet	Ductile Gr. 60-40-18	Ductile Gr. 60-40-18		
11	Bonnet spacer	1.4404	1.4404		
	Donnet spacer	Stainless steel	Stainless steel		
12	Spindle	1.4404	1.4404		
12	Оричаю	Stainless steel	Stainless steel		
14	Split ring	1.4104	1.4104		
	Ористинд	Chrome steel	Chrome steel		
15	Stainless steel	1.4571	1.4571		
	bellows	316Ti	316Ti		
16	Spring plate	1.0718	1.0718		
	Opinig plate	Steel	Steel		
18	Adjusting screw	1.4104 PTFE	1.4104 PTFE		
	with bushing	Chrome steel PTFE	Chrome steel PTFE		
19	Lock nut	1.4104	1.4104		
	Look Hat	Chrome steel	Chrome steel		
22	Lift stoppers	1.4404	1.4404		
		316L	316L		
24	Retaining Plate	1.0036	1.0036		
		Steel	Steel		
40	Cap H2	1.0718	1.0718		
-	1	12L13	12L13		
	Spring, standard	1.1200, 1.8159, 1.7102	1.1200, 1.8159, 1.7102		
54	3, 1 1 1 1 1	Steel	Steel		
	Spring, optional	1.4310	1.4310		
	1 0, 1	Stainless steel	Stainless steel		
55	Stud	1.1181	1.1181		
		Steel	Steel		
57	Pin	1.4310	1.4310		
		Stainless steel	Stainless steel		
56	Nut	1.0501	1.0501		
		2H	2H		
60	Gasket	Graphite / 1.4401	Graphite / 1.4401		
		Graphite / 316	Graphite / 316		
61	Ball	1.3541	1.3541		
		Hardened stainless steel	Hardened stainless steel		
63	Countersunk screw	1.4401	1.4401		
		Chrome steel	Chrome steel		

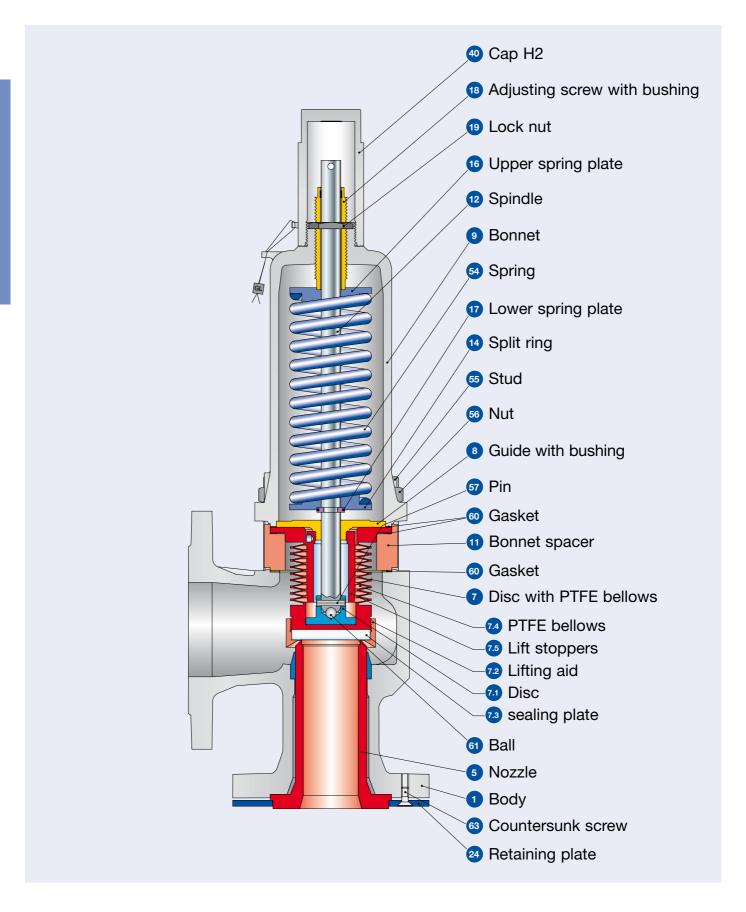
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Type 5466



Conventional design



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Conventional design

	Materials	
Item.	Components	Type 5466
1	Body	1.06191)
•	Douy	SA 216 WCB
5	Nozzle	PTFE + 25% carbon
7	Disc with	Virgin PTFE / BOROFLOAT glass
-	PTFE bellows	PTFE (TF) / BOROFLOAT glass
7.1	Disc	1.4404
		316L PTFE + 25% glass
7.2	Lifting aid	PTFE (TFM)
		PTFE + 25% carbon
7.3	sealing plate	THE F2070 outson
	DTEE L "	Virgin PTFE
7.4	PTFE bellows	PTFE (TF)
7 F	Lift atomore	1.4404
7.5	Lift stoppers	316L
8	Guide	1.4404
	Guide	Stainless steel
9	Bonnet	0.7043
	Domet	Ductile Gr. 60-40-18
11	Bonnet spacer	1.4404
		316L
12	Spindle	1.4404
	·	Stainless steel
14	Split ring	1.4104 Chrome steel
		1.0718
16/17	Spring plate	Steel
	Adjusting screw	1.4104 PTFE
18	with bushing	Chrome steel PTFE
40		1.4104
19	Lock nut	Chrome steel
04	Dataining plate	1.0036
24	Retaining plate	Steel
40	Cap H2	1.0718
	Oup 112	12L13
	Spring, standard	1.1200, 1.8159, 1.7102
54	1 0,	Steel
	Spring, optional	1.4310
		Stainless steel
55	Stud	1.4401 B8M
		1.4401
56	Nut	8M
		1.4310
57	Pin	Stainless steel
00	Ozrlii	Graphite / 1.4401
60	Gasket	Graphite / 316
64	Doll	1.3541
61	Ball	Hardened stainless steel
63	Countersunk screw	1.4401
30	Countercular R Soldw	Chrome steel

¹⁾ With SikaCor Zinc ZS coating in the outlet area

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- All components exposed to pressure are highlighted in bold.





How to order – article numbers

Тур	e 546	6						
		DN _I	25	40	50	65	80	100
		DNo	40	65	80	100	125	150
		Valve size	1" x 1 ¹ / ₂ "	1 ¹ / ₂ " x 2 ¹ / ₂ "	2" x 3"	2 ¹ / ₂ " x 4"	3" x 5SDSq	4" x 6"
Actual Orifice diameter			23	37	46	60	72	87
Actual Orifice area A ₀ [mm ²]			416	1075	1662	2827	4072	5945
Body material 0	.7043	(Ductile Gr. 60-4	0-18)					
PTFE nozzle								
Bonnet closed	H2	Art. no. 5465.	_	3722	-	3742	-	3762
	H4	Art. no. 5465.	_	3724	_	3744	_	3764
Body material 1	.0619	(WCB)						
PTFE nozzle								
Bonnet closed	H2	Art. no. 5462.	3802	_	3812	_	3822	-
	H4	Art. no. 5462.	3804	_	3814	_	3824	-

Туре	546	6						
-		DN _I	25	40	50	65	80	100
		DNo	40	65	80	100	125	150
	Valve siz		1" x 1 ¹ / ₂ "	1 ¹ / ₂ " x 2 ¹ / ₂ "	2" x 3"	2 ¹ / ₂ " x 4"	3" x 5"	4" x 6"
		Flow diameter d ₀ [mm]	23	37	46	60	72	87
Narrowest flow area A ₀ [mm²]		rowest flow area A ₀ [mm ²]	416	1075	1662	2827	4072	5945
Body material 1	.0619	(WCB)						
PTFE-carbon no	ozzle		-					
Bonnet closed	H2	Art. no. 5466.	3832	-	3842	_	_	-
	H4	Art. no. 5466.	3834	_	3844	_	-	-



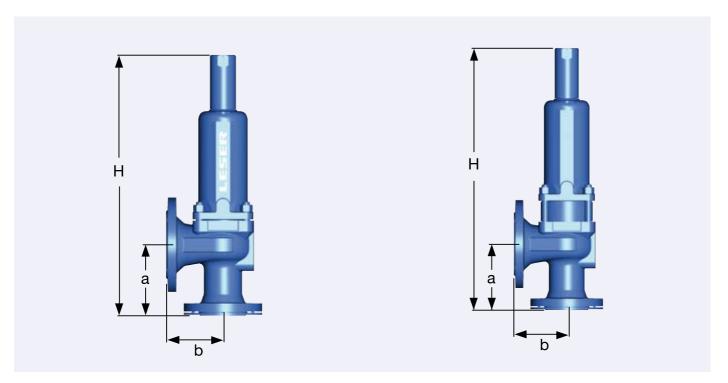


Dimensions and weights

Metric	units						
	DN _I	25	40	50	65	80	100
	DN_o	40	65	80	100	125	150
	Valve size	1" x 1 ¹ / ₂ "	1 ¹ / ₂ " x 2 ¹ / ₂ "	2" x 3"	2 ¹ / ₂ " x 4"	3" x 5"	4" x 6"
	Actual Orifice diameter d ₀ [mm]	23	37	46	60	72	87
	Actual Orifice area A₀[mm²]	416	1075	1662	2827	4072	5945
Weight		9	19	22	27	39	55
[kg]	with bellows	10	20	24	31	43	63
Centre to face	Inlet a	105	140	150	170	195	220
[mm]	Outlet b	100	115	120	140	160	180
Height (H4)	Standard H max.	327	486	538	565	743	796
[mm]	Bellows H max.	395	605	590	615	840	885

Body material 0.7043 (D	Body material 0.7043 (Ductile Gr. 60-40-18)						
DIN Flange ¹⁾	Inlet	PN 16					
	Outlet	PN 16					
Body material 1.0619 (W	(CB)						
DIN Flange ¹⁾	Inlet	PN 16					
	Outlet	PN 16					

 $^{^{\}mbox{\tiny 1)}}$ Standard flange class For other flange drillings, see page 01/16.



Conventional design

Balanced bellows design

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Pressure / temperature ratings

Metric units							
	DN _I	25	40	50	65	80	100
	DNo	40	65	80	100	125	150
	Valve size	1" x 1 ¹ / ₂ "	1 ¹ / ₂ " x 2 ¹ / ₂ "	2" x 3"	2 ¹ / ₂ " x 4"	3" x 5"	4" x 6"
Actual Orifice diameter d ₀ [mm]		23	37	46	60	72	87
Actual Orifice area A ₀ [mm²]		416	1075	1662	2827	4072	5945
Body material 0.7043 (Duc	tile Gr. 60-40-18)			Type 546	3 5		
DIN Flange	Inlet	-	PN 16	_	PN 16	-	PN 16
	Outlet	-	PN 16	-	PN 16	-	PN 16
Min. set pressure	p [bar _g] S/G/L	-	0,5	-	0,5	-	0,5
Max. set pressure	p [bar _g] S/G/L	-	10	-	10	_	10
Temperature acc to. DIN EN	min. [°C]	-	-60	-	-60	_	-60
	max. [°C]	-	+200	_	+200	_	+200

Body material 1.0619 (WCE	Type 5462						
DIN Flange	Inlet	PN 16	-	PN 16	-	PN 16	-
	Outlet	PN 16	-	PN 16	-	PN 16	-
Min. set pressure	p [bar _g] S/G/L	0,5	-	0,5	_	0,5	-
Max. set pressure	p [bar _g] S/G/L	10	-	10	-	10	-
Temperature acc to. DIN EN	min. [°C]	-85	-	-85	-	-85	-
	max. [°C]	+200	_	+200	_	+200	_

Body material 1.0619 (WCE	Type 5466						
DIN Flange	Inlet	PN 16	-	PN 16	_	-	-
	Outlet	PN 16	_	PN 16	_	-	-
Min. set pressure	p [bar _g] S/G/L	0,1	_	0,1	_	-	-
Max. set pressure	p [bar _g] S/G/L	10	-	10	_	-	-
Temperature acc to. DIN EN	min. [°C]	-85	_	-85	_	-	-
	max. [°C]	+200	_	+200	_	-	-



Available options

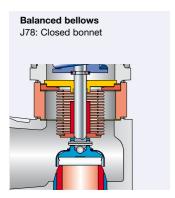
For further information, refer to "Accessories and Options", page 99/01

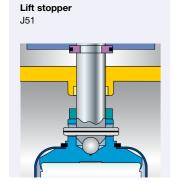












Special material

2.4610 HASTELLOY® C4

2.4380 MONEL® 400

1.4462 DUPLEX

Code Code XXXX ZZZZ

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