



Type 546
Packed lever H4
Bonnet closed
Conventional design

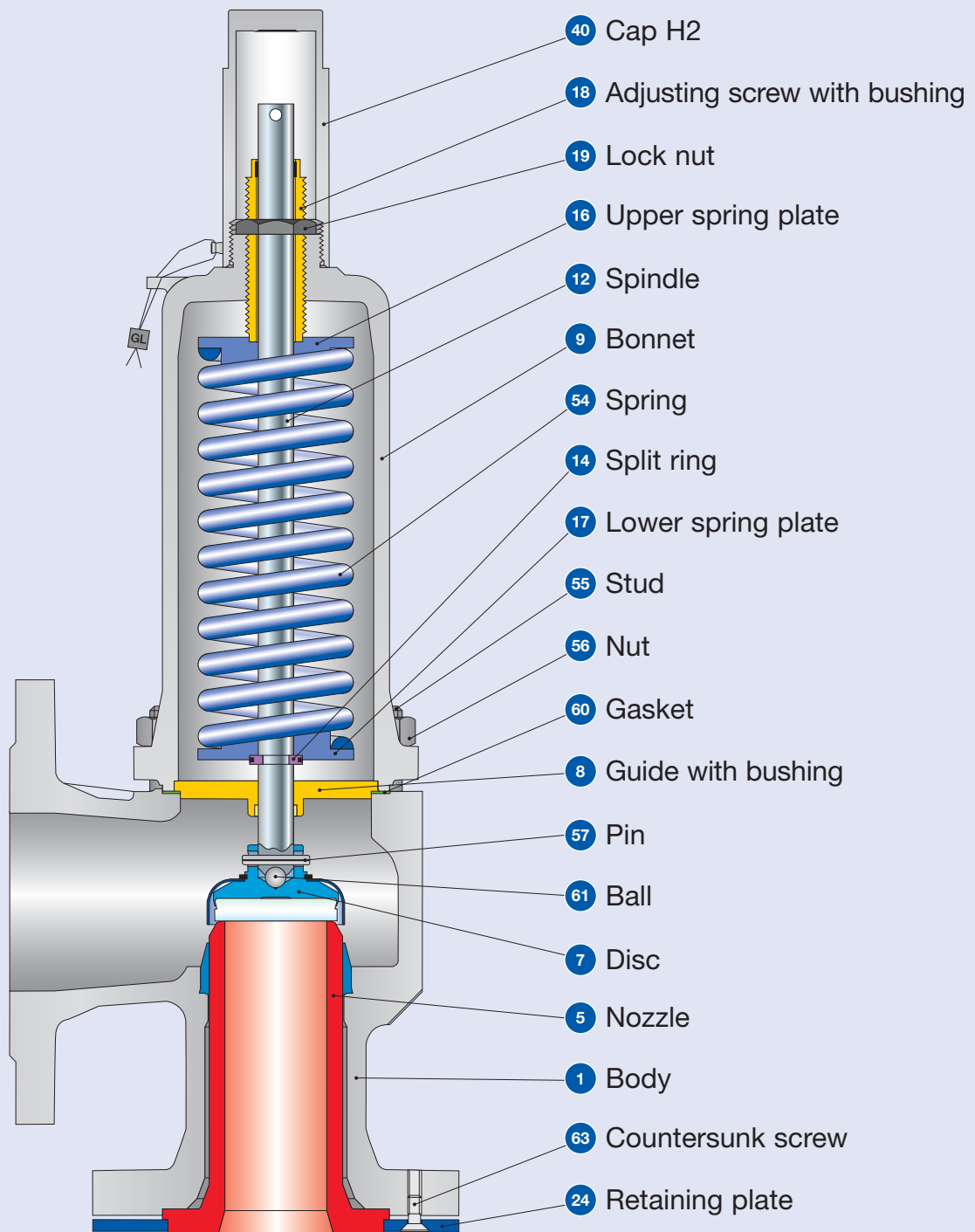
Type 546, 5466

Flanged Safety Relief Valve
 – spring loaded

Contents	Page
Materials – Type 546	
• Conventional design – Level 1	38
• Balanced bellows design – Level 1	40
Materials – Type 5466	
• PTFE bellows design – Level 2	42
How to order	
• Article numbers	44
Dimensions and weights	
• Metric units	46
Pressure temperature ratings	
• Metric units	47
Order information	
• Flange drillings	48
• Spare parts	49
Available options	50
Approvals	51
Capacities	
Type 546 – Metric units	52
• Steam, Air, Water	
Type 5466 – Metric units	53
• Steam, Air, Water	
Determination of coefficient of discharge K_{dr} / α_w	54

Conventional design – Level 1

Type 546



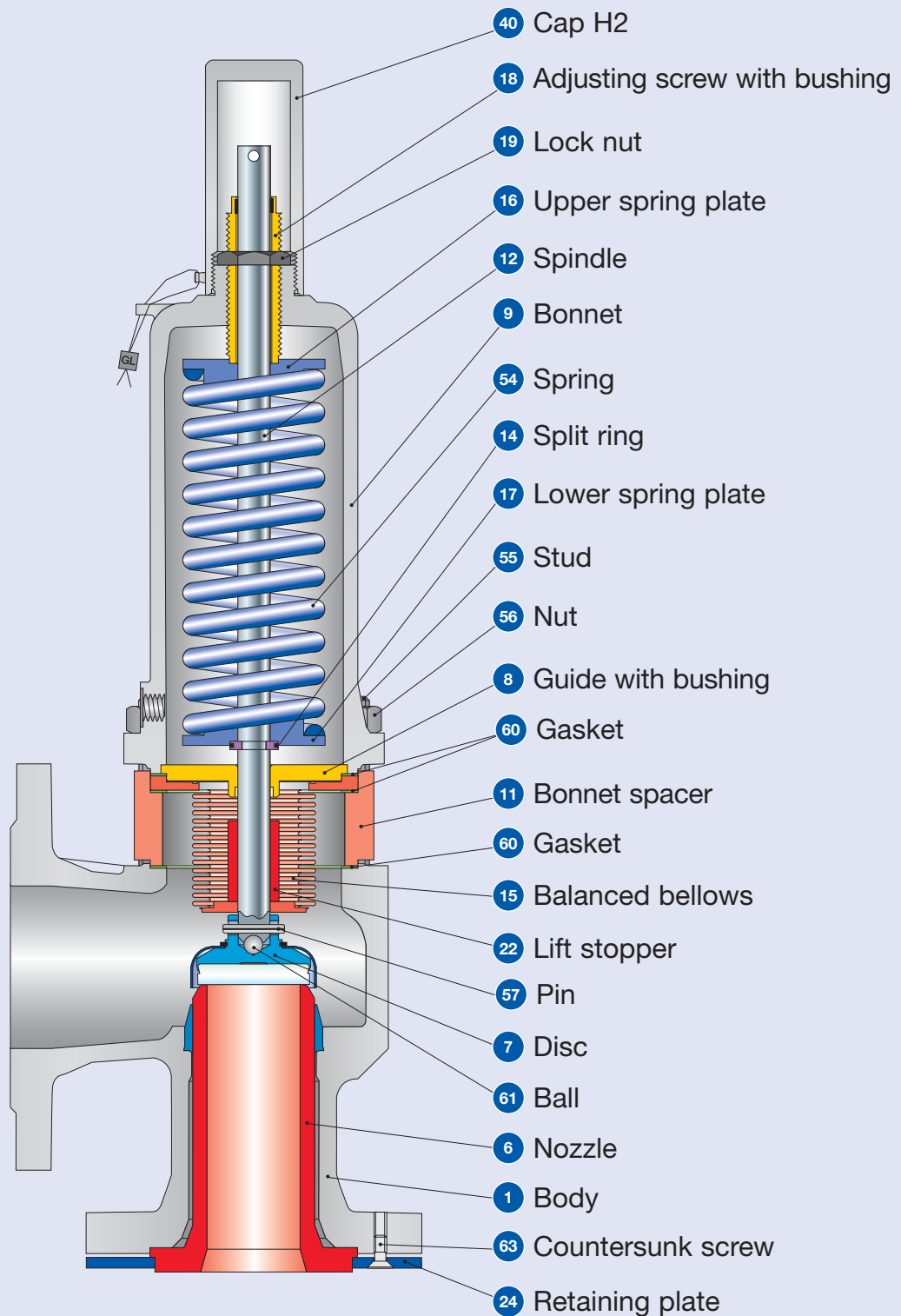
Conventional design – Level 1

Materials		Type 5462	Type 5465
1	Body	1.0619 SA 216 WCB	0.7043 Ductile Gr. 60-40-18
5	Nozzle	Virgin PTFE PTFE-TF	Virgin PTFE PTFE-TF
7	Disc	1.4404 / BOROFLOAT glass 316L / BOROFLOAT glass	1.4404 / BOROFLOAT glass 316L / BOROFLOAT glass
8	Guide	1.4404 Stainless steel	1.4404 Stainless steel
9	Bonnet	0.7040 Ductile Gr. 60-40-18	0.7040 Ductile Gr. 60-40-18
12	Spindle	1.4404 Stainless steel	1.4404 Stainless steel
14	Split ring	1.4104 Chrome steel	1.4104 Chrome steel
16/17	Spring plate	1.0718 Steel	1.0718 Steel
18	Adjusting screw with bushing	1.4104 PTFE Chrome steel PTFE	1.4104 PTFE Chrome steel PTFE
19	Lock nut	1.0718 Steel	1.0718 Steel
24	Retaining plate	1.0036 Steel	1.0036 Steel
40	Cap H2	1.0460 SA 105	1.0460 SA 105
54	Spring, standard	1.1200, 1.8159, 1.7102 Steel	1.1200, 1.8159, 1.7102 Steel
	Spring, optional	1.4310 Stainless steel	1.4310 Stainless steel
55	Stud	1.1181 Steel	1.1181 Steel
56	Nut	1.0501 2H	1.0501 2H
57	Pin	1.4310 Stainless steel	1.4310 Stainless steel
60	Gasket	Graphite / 1.4401 Graphite / 316	Graphite / 1.4401 Graphite / 316
61	Ball	1.3541 Hardened stainless steel	1.3541 Hardened stainless steel
63	Countersunk screw	1.4401 Chrome steel	1.4401 Chrome steel

Please observe:

- 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.

Balanced bellows design 546 – Level 1



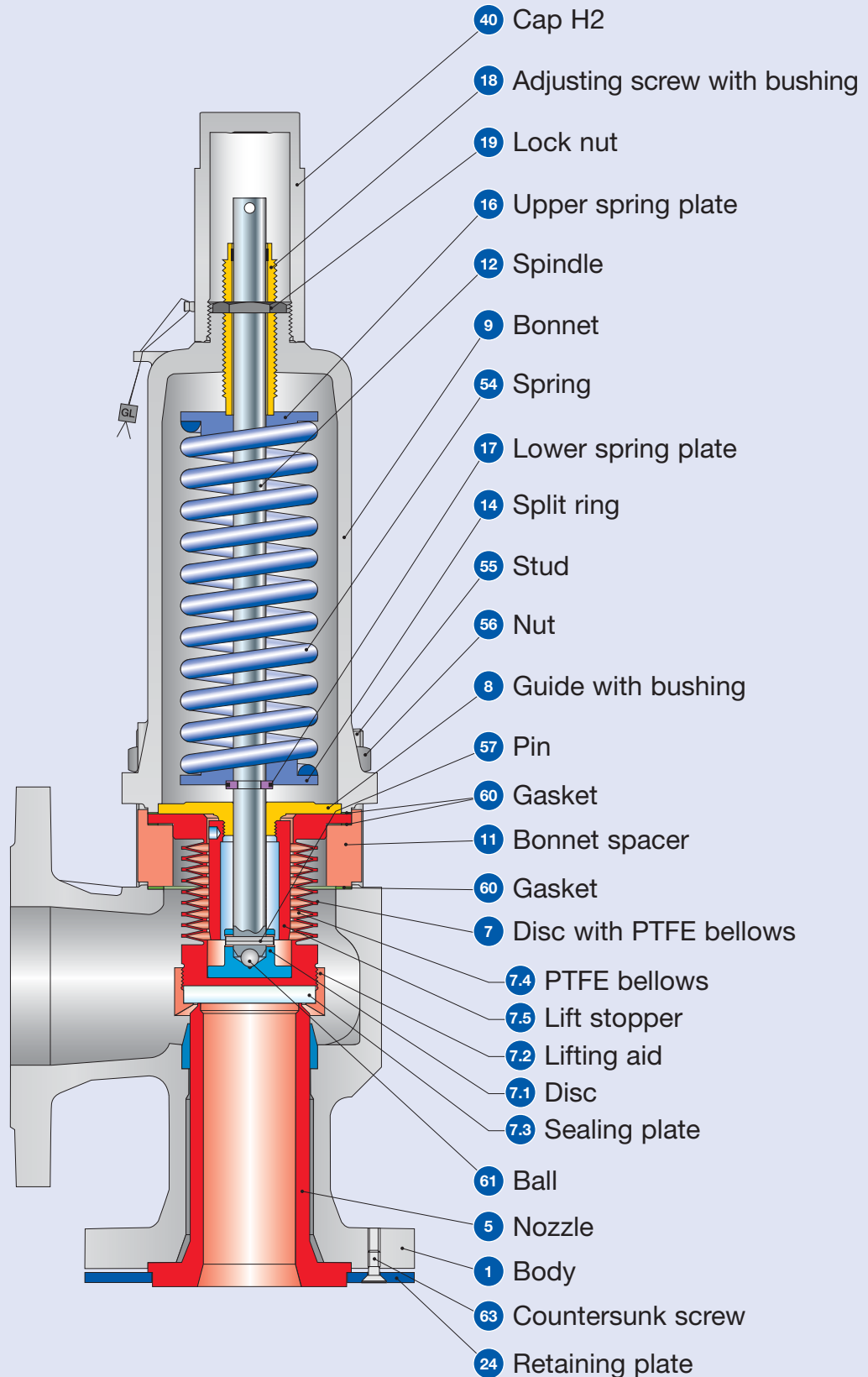
Balanced bellows design 546 – Level 1

Materials		Type 5462	Type 5465
1	Body	1.0619 SA 216 WCB	0.7043 Ductile Gr. 60-40-18
5	Nozzle	Virgin PTFE PTFE-TF	Virgin PTFE PTFE-TF
7	Disc	1.4404 / BOROFLOAT glass 316L / BOROFLOAT glass	1.4404 / BOROFLOAT glass 316L / BOROFLOAT glass
8	Guide	1.4404 Stainless steel	1.4404 Stainless steel
9	Bonnet	0.7040 Ductile Gr. 60-40-18	0.7040 Ductile Gr. 60-40-18
11	Bonnet spacer	1.4404 Stainless steel	1.4404 Stainless steel
12	Spindle	1.4404 Stainless steel	1.4404 Stainless steel
14	Split ring	1.4104 Chrome steel	1.4104 Chrome steel
15	Stainless steel bellows	1.4571 316Ti	1.4571 316Ti
16/17	Spring plate	1.0718 Steel	1.0718 Steel
18	Adjusting screw with bushing	1.4104 PTFE Chrome steel PTFE	1.4104 PTFE Chrome steel PTFE
19	Lock nut	1.4104 Chrome steel	1.4104 Chrome steel
22	Lift stopper	1.4404 316L	1.4404 316L
24	Retaining plate	1.0036 Steel	1.0036 Steel
40	Cap H2	1.0460 SA 105	1.0460 SA 105
54	Spring, standard	1.1200, 1.8159, 1.7102 Steel	1.1200, 1.8159, 1.7102 Steel
	Spring, optional	1.4310 Stainless steel	1.4310 Stainless steel
55	Stud	1.1181 Steel	1.1181 Steel
57	Pin	1.4310 Stainless steel	1.4310 Stainless steel
56	Nut	1.0501 2H	1.0501 2H
60	Gasket	Graphite / 1.4401 Graphite / 316	Graphite / 1.4401 Graphite / 316
61	Ball	1.3541 Hardened stainless steel	1.3541 Hardened stainless steel
63	Countersunk screw	1.4401 Chrome steel	1.4401 Chrome steel

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- All components exposed to pressure are highlighted in bold.

PTFE bellows design 5466 – Level 2



Type 5466

PTFE bellows design 5466 – Level 2

Materials		Type 5466
Item	Components	Type 5466
1	Body	1.0619 ¹⁾ SA 216 WCB
5	Nozzle	PTFE-TFM + 25 % carbon
7	Disc with PTFE bellows	1.4404 / PTFE 1.4404 / PTFE
7.1	Disc	1.4404 316L
7.2	Lifting aid	PTFE-TFM + 25% glass
7.3	Sealing plate	PTFE-TFM + 25% carbon
7.4	PTFE bellows	PTFE-TFM
7.5	Lift stopper	1.4404 316L
8	Guide	1.4404 Stainless steel
9	Bonnet	0.7043 Ductile Gr. 60-40-18
11	Bonnet spacer	1.4404 316L
12	Spindle	1.4404 Stainless steel
14	Split ring	1.4104 Chrome steel
16/17	Spring plate	1.0718 Steel
18	Adjusting screw with bushing	1.4104 PTFE Chrome steel PTFE
19	Lock nut	1.4104 Chrome steel
24	Retaining plate	1.0036 Steel
40	Cap H2	1.0460 SA 105
54	Spring, standard	1.1200, 1.8159, 1.7102 Steel
	Spring, optional	1.4310 Stainless steel
55	Stud	1.4401 B8M
56	Nut	1.4401 8M
57	Pin	1.4310 Stainless steel
60	Gasket	Graphite / 1.4401 Graphite / 316
61	Ball	1.3541 Hardened stainless steel
63	Countersunk screw	1.4401 Chrome steel

¹⁾ With SikaCor Zinc ZS coating in the outlet area.

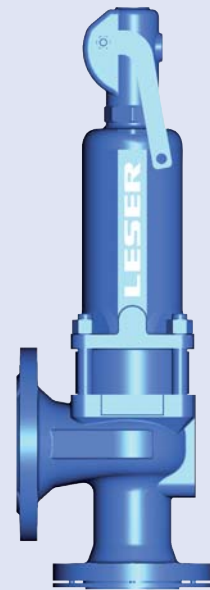
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How to order – Article numbers



Cap H2
Closed bonnet
Conventional design



Type 546
Packed lever H4
Closed bonnet
Balanced bellows design



Type 5466
Packed lever H4
Closed bonnet
PTFE bellows design

Article numbers

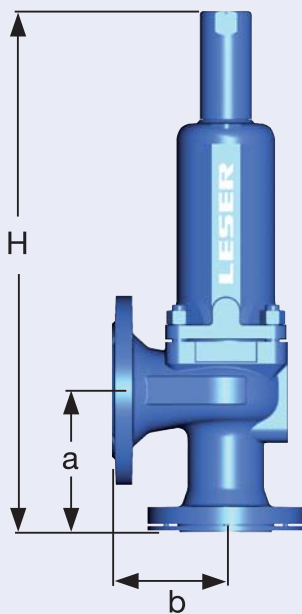
Type 546								
DN _i		25	40	50	65	80	100	
DN _o		40	65	80	100	125	150	
Valve size		1" x 1 1/2"	1 1/2" x 2 1/2"	2" x 3"	2 1/2" x 4"	3" x 5"	4" x 6"	
Actual Orifice diameter d ₀ [mm]		23	37	46	60	72	87	
Actual Orifice area A ₀ [mm ²]		416	1075	1662	2827	4072	5945	
Body material: 0.7043 (Ductile Gr. 60-40-18)								
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	-

Type 5466							
DN _i		25	50				
DN _o		40	80				
Valve size		1" x 1 1/2"	2" x 3"				
Actual Orifice diameter d ₀ [mm]		23	46				
Actual Orifice area A ₀ [mm ²]		416	1662				
Body material: 1.0619 (WCB)							
PTFE-carbon nozzle							
Bonnet closed	H2	Art.-No. 5466.	3832	3842			
	H4	Art.-No. 5466.	3834	3844			

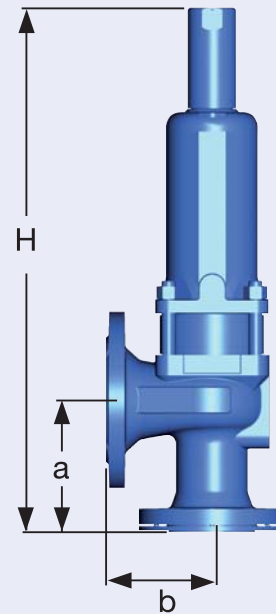
Dimensions and weights

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 A ₀ [mm ²]	416	1075	1662	2827	4072	5945
Weight							
[kg]		9	19	22	27	39	55
	with bellows	10	20	24	31	43	63
Centre to face							
[mm]	Inlet a	105	140	150	170	195	220
	Outlet b	100	115	120	140	160	180
Height (H4)							
[mm]	Standard H max.	327	486	538	565	743	796
	Bellows H max.	395	605	590	615	840	885
Body material: 0.7043 (Ductile Gr. 60-40-18)							
DIN Flange¹⁾	Inlet						PN 16
	Outlet						PN 16
Body material: 1.0619 (WCB)							
DIN Flange¹⁾	Inlet						PN 16
	Outlet						PN 16

¹⁾ Standard flange class For other flange drillings, see page 48.



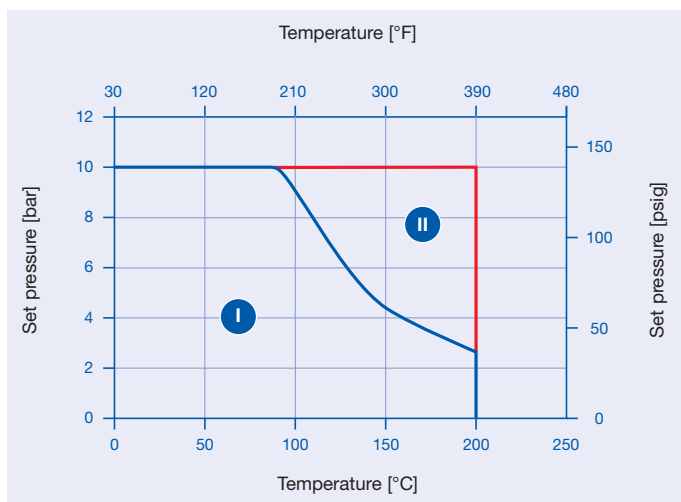
Conventional design



Balanced bellows design

Pressure temperature ratings

Metric Units							
	DN _E	25	40	50	65	80	100
	DN _A	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 [mm ²]	416	1075	1662	2827	4072	5945
Body material: 0.7043 (Ductile Gr. 60-40-18)				Type 5465			
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 (WCB)				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 (WCB)				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	–	–	–



Pressure temperature ratings

The pressure/temperature functional ranges of Type 546 and Type 5466 are dependent on the PTFE components in the safety valve. The chart shows the application ranges for:

- I Standard design.
Type 5466 can be used only in the area I.
- II For Type 546 nickel-base alloys must be used for nozzle and sealing plate.

Order information – Flange drillings

Flange drillings								
	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 _o [mm]	23	37	46	60	72	87	
	Actual Orifice area A _o [mm ²]	416	1075	1662	2827	4072	5945	
Body material: 0.7043 (Ductile Gr. 60-40-18) Type 5465								
Inlet	DIN EN 1092	PN 10	–	H44	–	H44	–	H44
		PN 16	–	*	–	*	–	*
	ASME B16.5	CL 150	–	(H64)	–	(H64)	–	(H64)
Outlet	DIN EN 1092	PN 10	–	H50	–	H50	–	H50
		PN 16	–	*	–	*	–	*
	ASME B16.5	CL 150	–	(H79)	–	(H79)	–	(H79)
Body material: 1.0619 (WCB) Type 5462								
Inlet	DIN EN 1092	PN 10	H44	–	H44	–	H44	–
		PN 16	*	–	*	–	*	–
	ASME B16.5	CL 150	(H64)	–	(H64)	–	(H64)	–
Outlet	DIN EN 1092	PN 10	H50	–	H50	–	H50	–
		PN 16	*	–	*	–	*	–
	ASME B16.5	CL 150	(H79)	–	(H79)	–	(H79)	–
Body material: 1.0619 (WCB) Type 5466								
Inlet	DIN EN 1092	PN 10	H44	–	H44	–	–	–
		PN 16	*	–	*	–	–	–
	ASME B16.5	CL 150	(H64)	–	(H64)	–	–	–
Outlet	DIN EN 1092	PN 10	H50	–	H50	–	–	–
		PN 16	*	–	*	–	–	–
	ASME B16.5	CL 150	(H79)	–	(H79)	–	–	–

Definitions as well as sign and symbols please refer to page 15.

Order information – Spare parts

Spare parts							
	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 A ₀ [mm ²]	416	1075	1662	2827	4072	5945
Material no. / Art.-No.							
Nozzle (Item 5): Type 5462 + 5465	PTFE-TF	206.4659.0000	206.4759.0000	206.4859.0000	206.4959.0000	206.5059.0000	206.5159.0000
Nozzle (Item 5): Type 5466	PTFE-TFM + 25% carbon	207.1869.0000	–	207.1769.0000	–	–	–
Disc (Item 7): Type 546 Detachable lifting aid 1.4404 with sealing plate (BOROFLOAT glass)		220.2949.0000	220.3149.0000	220.3049.0000	220.3249.0000	220.3349.0000	220.3449.0000
Disc (Item 7): Type 5466 Detachable lifting aid 1.4404 with sealing plate (PTFE-TFM + 25% carbon)		220.3559.0000	–	220.3659.0000	–	–	–
Bellows (Item 15): Type 546	1.4571	400.2949.0000	400.3049.0000	400.3149.0000	400.3249.0000	400.3349.0000	400.3449.0000
Bellows conversion kit ¹⁾	1.4571	5021.1081	–	5021.1082	–	–	–
Bellows (Item. 7): Type 5466	PTFE-TFM	224.3059.0000	–	224.1759.0000	–	–	–
Gasket (Item 7.3) Body / Bonnet	Graphite + 1.4401	500.0607.0000	500.1007.0000	500.1207.0000	500.1207.0000	500.1607.0000	500.1907.0000
Option code L68	Gylon (PTFE compliance)	500.0605.0000	500.1005.0000	500.1205.0000	500.1205.0000	500.1605.0000	500.1905.0000
Ball (Item 61)	Ball Ø [mm]	6	9	9	9	12	12
	1.4401	510.0104.0000	510.0204.0000	510.0204.0000	510.0204.0000	510.0304.0000	510.0304.0000
Split ring (Item 14)	Spindle Ø [mm]	12	16	16	16	20	24
	1.4404	251.0149.0000	251.0249.0000	251.0249.0000	251.0249.0000	251.0349.0000	251.0449.0000
Roll pin (Item 57)	1.4310	480.0705.0000	480.2305.0000	480.2305.0000	480.2305.0000	480.1005.0000	480.1005.0000

¹⁾ Pressure range, see page 47.

A conversion kit includes the following components:

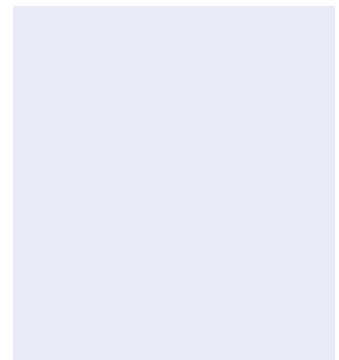
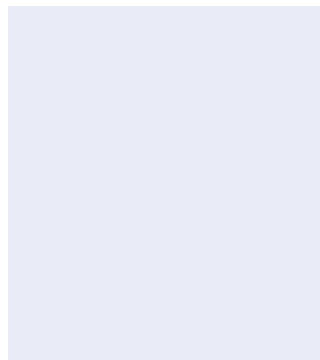
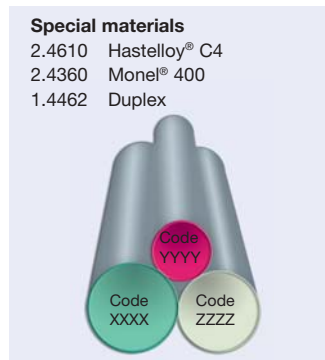
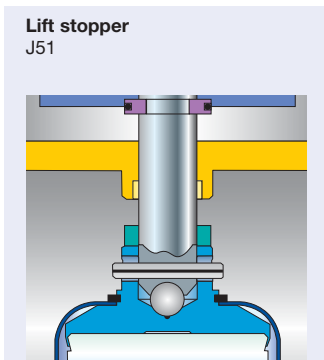
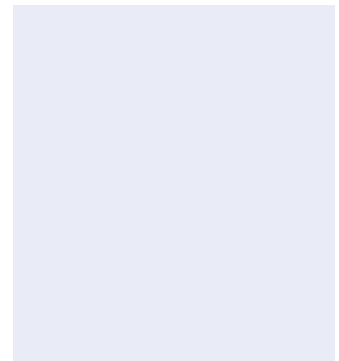
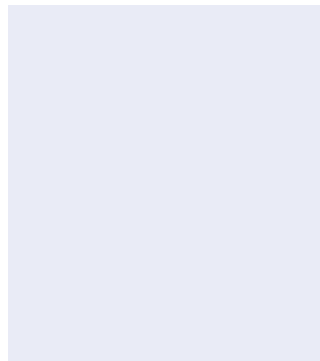
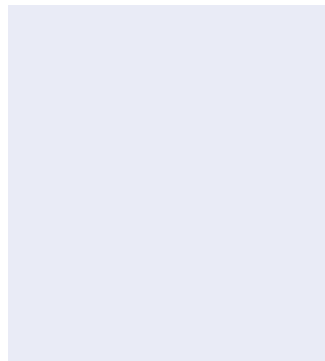
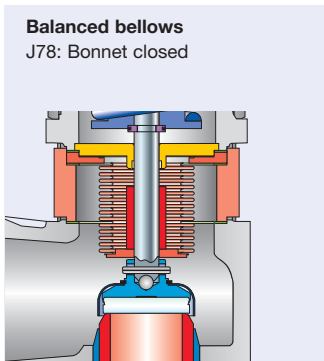
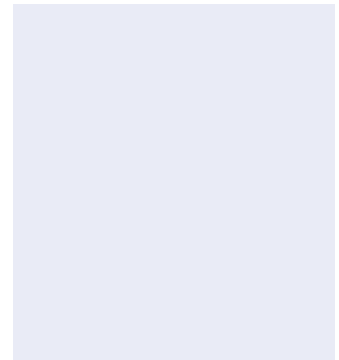
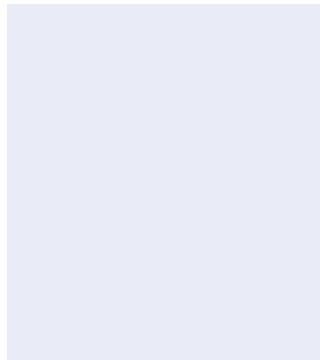
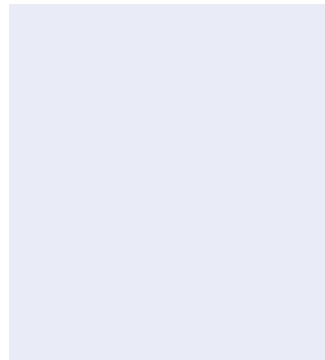
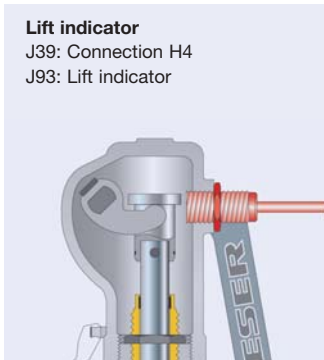
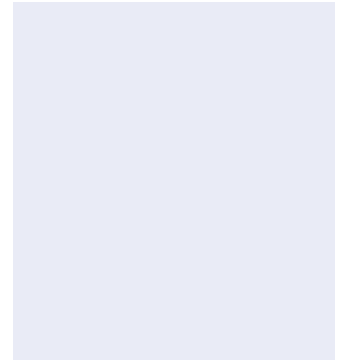
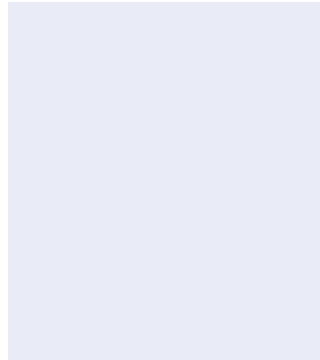
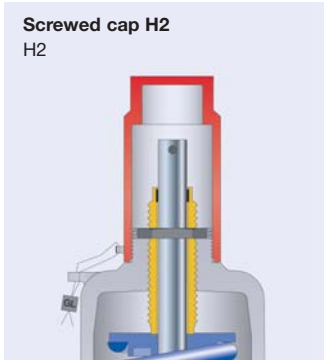
Item	Components	No.
8	Guide with bushing	1
11	Bonnet spacer	1
12	Spindle	1
15	Bellows	1
55	Stud	4
60	Gasket	3
–	Installation instruction WI_3037.05	1

Refer to page 40.

Available options

For further information, refer to "Accessories and options", page 61

Type 546, Type 5466



Approvals

Approvals							
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 A ₀ [mm ²]	416	1075	1662	2827	4072	5945	
Europe				Coefficient of discharge K_{dr}			
PED/DIN EN ISO 4126-1	Approval no.			072020111Z0008/0/19			
Type 5462 + 5465 S/G	0,73	0,68	0,68	0,68	0,64	0,64	
5466 S/G	0,76	–	0,69	–	–	–	
Type 5462 + 5465 L	0,46	0,43	0,43	0,43	0,40	0,40	
5466 L	0,51	–	0,46	–	–	–	
Germany				Coefficient of discharge α_w			
PED/AD 2000-Merkblatt A2	Approval no.			TÜV SV 496			
Type 5462 + 5465 S/G	0,73	0,68	0,68	0,68	0,64	0,64	
5466 S/G	0,76	–	0,69	–	–	–	
Type 5462 + 5465 L	0,46	0,43	0,43	0,43	0,40	0,40	
5466 L	0,51	–	0,46	–	–	–	
China				Coefficient of discharge α_w			
AQSIQ	Approval no.			For current approval no. see www.leser.com			
Type 546 S/G	0,73	0,68	0,68	0,68	0,64	0,64	
Type 546 L	0,46	0,43	0,43	0,43	0,40	0,40	
Eurasian Custom Union				Coefficient of discharge α_w			
EAC	Approval no.			For current approval no. see www.leser.com			
Type 546 S/G	0,73	0,68	0,68	0,68	0,64	0,64	
Type 546 L	0,46	0,43	0,43	0,43	0,40	0,40	
Classification societies							
On request							

Type 546 – Capacities acc. to AD 2000-Merkblatt A2

Calculation of the capacity for steam, air and water acc. to. AD 2000-Merkblatt A2 with 10% overpressure at 0 °C and 1013 mbar (air) or alternatively 20 °C (water). Capacities at 1 bar and lower are calculated at 0,1 bar overpressure.

Metric units		AD 2000-Merkblatt A2																	
		Steam						Air						Water					
DN _i	DN _o	25	40	50	65	80	100	25	40	50	65	80	100	25	40	50	65	80	100
Actual Orifice diameter d ₀ [mm]	Actual Orifice area A ₀ [mm ²]	23	37	46	60	72	87	23	37	46	60	72	87	23	37	46	60	72	87
LEO _{S/G/L} *) [inch ²]	Set pressure	0,482	1,162	1,797	3,057	4,143	6,048	0,482	1,162	1,797	3,057	4,143	6,048	0,304	0,775	1,136	1,933	2,589	3,780
		Capacity [kg/h]						Capacity [m _n ³ /h]						Capacity [10 ³ kg/h]					
0,5	250	615	951	951	2110	3081	293	722	1116	1899	2477	3616	7,53	18,22	28,20	47,90	64,20	93,90	
0,6	272	668	1033	1033	2303	3363	320	788	1218	2072	2715	3964	8,13	19,67	30,40	51,70	69,30	101,2	
0,7	292	717	1108	1108	2480	3621	346	849	1312	2231	2935	4286	8,69	21,03	32,50	55,30	74,10	108,2	
0,8	311	762	1178	1178	2646	3863	369	905	1399	2380	3142	4587	9,22	22,31	34,50	58,70	78,60	114,7	
0,9	330	807	1247	1247	2809	4101	392	960	1484	2524	3341	4878	9,72	23,52	36,30	61,80	82,80	120,9	
1,0	348	851	1315	1315	2969	4335	415	1014	1567	2666	3538	5166	10,2	24,7	38,1	64,9	86,9	126,8	
1,1	368	899	1389	1389	3143	4589	439	1073	1658	2820	3752	5478	10,7	25,9	40,0	68,0	91,1	133,0	
1,2	388	946	1463	1463	3317	4843	464	1131	1749	2974	3965	5790	11,2	27,0	41,8	71,0	95,2	139,0	
1,3	408	993	1535	1535	3488	5092	488	1189	1838	3127	4806	6098	11,6	28,1	43,5	73,9	99,1	144,6	
1,4	428	1040	1607	1607	3658	5341	513	1247	1928	3279	4387	6406	12,7	29,2	45,1	76,7	103,0	150,1	
1,5	447	1086	1679	1679	3828	5589	537	1305	2017	3431	4597	6713	12,5	30,2	46,7	79,4	106,0	155,4	
1,6	467	1133	1751	1751	3996	5835	561	1362	2105	3581	4806	7017	12,9	31,2	48,2	82,0	110,0	160,5	
1,7	486	1179	1822	1822	4164	6079	585	1419	2194	3731	5014	7320	13,3	32,2	49,7	84,6	113,0	165,4	
1,8	505	1224	1892	1892	4329	6321	609	1476	2281	3881	5220	7621	13,7	33,1	51,1	87,0	117,0	170,2	
1,9	524	1270	1962	1962	4495	6563	633	1533	2369	4030	5426	7923	14,1	34,0	52,5	89,4	120,0	174,8	
2,0	543	1315	2033	2033	4661	6805	657	1589	2457	4179	5633	8225	14,4	34,9	53,9	91,7	123,0	179,4	
2,1	562	1360	2102	2102	4825	7044	680	1646	2544	4328	5838	8524	14,8	35,7	55,2	94,0	126,0	183,8	
2,2	581	1405	2172	2172	4989	7284	704	1702	2631	4476	6043	8823	15,1	36,6	56,5	96,2	129,0	188,1	
2,3	600	1450	2241	2241	5152	7522	728	1758	2718	4624	6247	9121	15,5	37,4	57,8	98,4	132,0	192,4	
2,4	619	1495	2310	2310	5315	7760	751	1814	2804	4771	6452	9420	15,8	38,2	59,1	100,5	135,0	196,5	
2,5	638	1539	2379	2379	5477	7997	775	1870	2891	4918	6655	9717	16,1	39,0	60,3	102,5	137,0	200,6	
2,6	657	1584	2448	2448	5639	8233	798	1926	2977	5065	6858	10013	16,4	39,8	61,5	104,6	140,0	204,5	
2,7	675	1628	2517	2517	5801	8470	822	1982	3064	5212	7062	10311	16,8	40,5	62,6	106,6	143,0	208,4	
2,8	694	1672	2585	2585	5960	8701	845	2038	3149	5358	7262	10602	17,1	41,3	63,8	108,5	145,0	212,3	
2,9	712	1716	2652	2652	6144	8927	868	2092	3234	5502	7457	10887	17,4	42,1	64,9	110,4	148,0	216,0	
3	730	1759	2719	2719	6269	9153	891	2147	3319	5646	7652	11172	17,7	42,7	66,0	112,3	150,0	219,7	
4							1118	2695	4165	7086	9603	14021	20,4	49,3	76,2	129,7	174,0	254,0	
5							1345	3242	5011	8526	11555	16870	22,8	55,2	85,2	145,0	194,0	284,0	
6							1572	3790	5857	9965	13506	19719	25,0	60,4	93,4	158,9	213,0	311,0	
7							1799	4337	6704	11405	15457	22569	27,0	65,3	100,9	171,6	230,0	336,0	
8							2026	4884	7550	12845	17409	25418	28,8	69,8	107,8	183,4	246,0	359,0	
9							2253	5432	8396	14285	19360	28267	30,6	74,0	114,4	194,6	261,0	381,0	
10							2481	5980	9242	15725	21312	31116	32,2	78,0	120,6	205,1	275,0	402,0	

Application not possible due to the pressure and temperature ranges of the PTFE nozzle.

*) LEO_{S/G/L} = LESER Effective Orifice steam/gases/liquids see page 18/19. "How to use" capacity tables, see page 16.

Type 5466 – Capacities acc. to AD 2000-Merkblatt A2

Calculation of the capacity for steam, air and water acc to. AD 2000-Merkblatt A2 with 10% overpressure at 0 °C and 1013 mbar (air) or alternatively 20 °C (water). Capacities at 1 bar and lower are calculated at 0,1 bar overpressure.

Metric units		AD 2000-Merkblatt A2					
		Steam		Air		Water	
DN _E		25	50	25	50	25	50
DN _A		40	80	40	80	40	80
Actual Orifice diameter d ₀ [mm]		23	46	23	46	23	46
Actual Orifice area A ₀ [mm ²]		416	1662	416	1662	416	1662
LEO _{S/G/L} ^{*)} [inch ²]		0,482	1,797	0,482	1,797	0,304	1,136
Set pressure		Capacity [kg/h]		Capacity [m ³ /h]		Capacity [10 ³ kg/h]	
0,1		133	513	153	590	4,35	16,30
0,2		168	645	194	747	5,32	19,90
0,3		198	759	231	883	6,15	23,00
0,4		225	860	263	1005	6,87	25,70
0,5		250	951	293	1116	7,53	28,20
0,6		272	1033	320	1218	8,13	30,40
0,7		292	1108	346	1312	8,69	32,50
0,8		311	1178	369	1399	9,22	34,50
0,9		330	1247	392	1484	9,72	36,30
1,0		348	1315	415	1567	10,2	38,1
1,1		368	1389	439	1658	10,7	40,0
1,2		388	1463	464	1749	11,2	41,8
1,3		408	1535	488	1838	11,6	43,5
1,4		428	1607	513	1928	12,7	45,1
1,5		447	1679	537	2017	12,5	46,7
1,6		467	1751	561	2105	12,9	48,2
1,7		486	1822	585	2194	13,3	49,7
1,8		505	1892	609	2281	13,7	51,1
1,9		524	1962	633	2369	14,1	52,5
2,0		543	2033	657	2457	14,4	53,9
2,1		562	2102	680	2544	14,8	55,2
2,2		581	2172	704	2631	15,1	56,5
2,3		600	2241	728	2718	15,5	57,8
2,4		619	2310	751	2804	15,8	59,1
2,5		638	2379	775	2891	16,1	60,3
2,6		657	2448	798	2977	16,4	61,5
2,7		675	2517	822	3064	16,8	62,6
2,8		694	2585	845	3149	17,1	63,8
2,9		712	2652	868	3234	17,4	64,9
3,0		730	2719	891	3319	17,7	66,0
4,0				1118	4165	20,4	76,2
5,0				1345	5011	22,8	85,2
6,0				1572	5857	25,0	93,4
7,0				1799	6704	27,0	100,9
8,0				2026	7550	28,8	107,8
9,0				2253	8396	30,6	114,4
10				2481	9242	32,2	120,6

Application not possible due to the pressure and temperature ranges of the PTFE nozzle.

*) LEO_{S/G/L} = LESER Effective Orifice steam/gases/liquids see page 18/19. "How to use" capacity tables, see page 16.

Type 5466

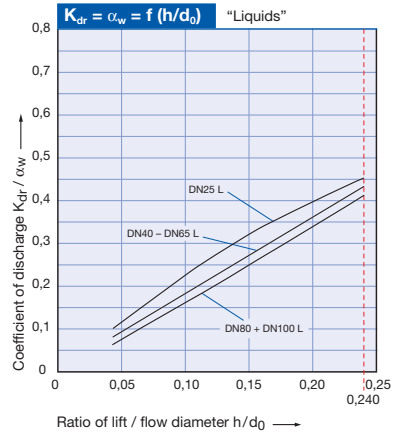
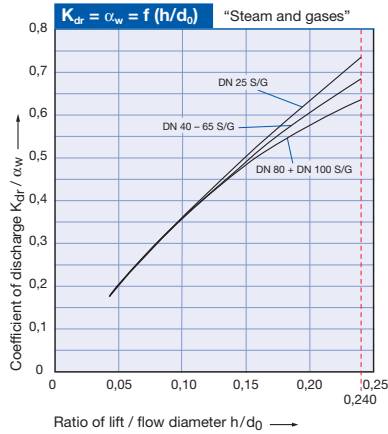
Determination of coefficient of discharge in case of lift restriction or back pressure

Legend

h	= Lift [mm]
d_0	= Actual Orifice diameter [mm] of the selected safety valve, see „Article numbers“ table
h/d_0	= Ratio of lift / narrowest flow diameter
p_{a0}	= Back pressure [bar _a]
p_0	= Set pressure [bar _a]
p_{a0}/p_0	= Ratio of absolute back pressure / absolute set pressure
K_{dr}	= Coefficient of discharge acc. to DIN EN ISO 4126-1
α_w	= Coefficient of discharge acc. to AD 2000-Merkblatt A2
K_b	= Correction for back pressure acc. to API 520 Section 3.3

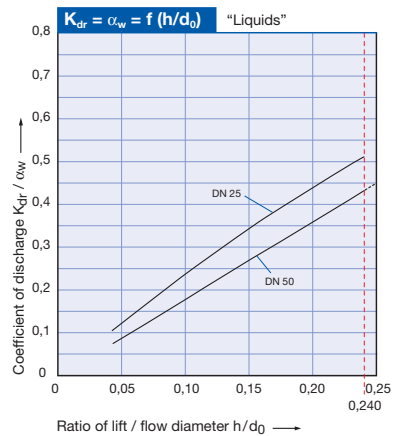
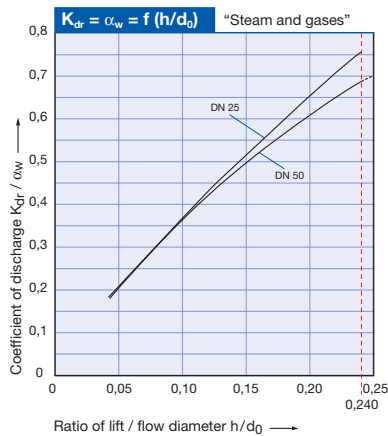
Type 546

Diagram for evaluation of ratio of lift / flow diameter (h/d_0) in reference to the coefficient of discharge (K_{dr}/α_w)



Type 5466

Diagram for evaluation of ratio of lift / flow diameter (h/d_0) in reference to the coefficient of discharge (K_{dr}/α_w)



Type 546

Diagram for evaluation of the coefficient of discharge (K_{dr}/α_w) or K_b in reference with the ratio of absolute back pressure/set pressure (p_{a0}/p_0)

