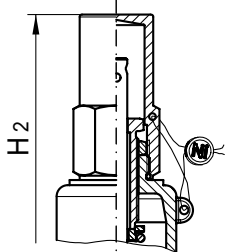


# Normal-Sicherheitsventil, federbelastet Standard-Safety-Valve, springloaded

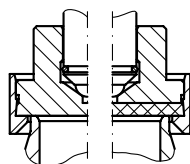
## Typ 31

für Dämpfe, Gase und Flüssigkeiten mit geschlossener Haube  
for steam, gases and liquids in closed completion

Typ 31.1 BG I : Wst. / Material 1.0460 / 0.7043  
 Typ 31.1 BG II+III : Wst. / Material 1.0460 / 1.0619  
 Typ 31.1 BG IV : Wst. / Material 1.0619 / 1.0619  
 Typ 31.2 : Wst. / Material 1.4571, 1.4581 / 1.4581  
 Typ 31.7 : Wst. / Material 1.4571 / 1.4308



Kopf C / head C  
gasdichte Kappe  
gastight cap



metallisch dichtend  
metal seated  
weich dichtend  
soft seated

### Bauteilkennzeichen / TÜV - Approval

BG I: TÜV • SV • XX-713 • do • D/G/F •  $\alpha_w$  • p  
 BG II: TÜV • SV • XX-820 • do • D/G/F •  $\alpha_w$  • p  
 BG III: TÜV • SV • XX-896 • do • D/G/F •  $\alpha_w$  • p  
 BG IV: TÜV • SV • XX-902 • do • D/G/F •  $\alpha_w$  • p

### Verwendung / Use

Betriebstemperatur / operating temperature

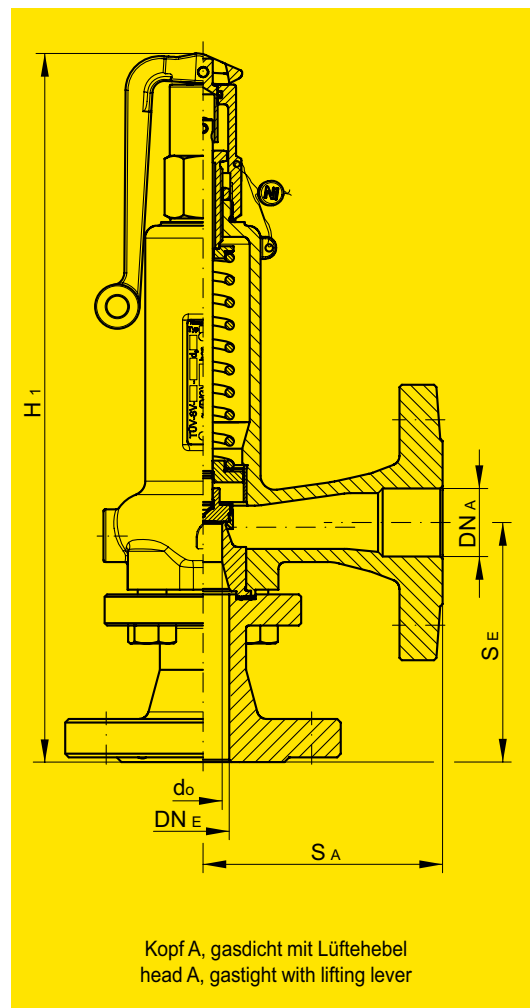
### Kegel metallisch dichtend / disc metal seated

Typ 31.1 BG I : -10°C bis / to 280°C (350°C<sup>1)</sup>)  
 Typ 31.1 BG II - IV : -10°C bis / to 350°C  
 Typ 31.2 BG I : -60°C bis / to 280°C (400°C<sup>1)</sup>)  
 Typ 31.2 BG II - IV : -60°C bis / to 350°C (400°C<sup>1)</sup>)  
 Typ 31.7 BG I - IV : -200°C bis / to 280°C (300°C<sup>1)</sup>)

### Kegel weich dichtend / disc soft seated

siehe techn. Anhang: KWD-1 / see techn. appendix: KWD-1

Einbaulage: senkrecht  
 Installation position: vertical



Kopf A, gasdicht mit Lüftehebel  
head A, gastight with lifting lever

BG Size	Eintritt Inlet (DIN / ANSI)				Austritt Outlet (DIN / ANSI)			Baumaße Dimensions		Ausflussziffer Coefficient		Ansprechdruck Set pressure		Gewicht Weight [kg]		
	DN <sub>E</sub> / NPS	PN <sub>E</sub> / [bar]	do	S <sub>E</sub> <sup>2)</sup>	DN <sub>A</sub> / NPS	PN <sub>A</sub> / [bar]	S <sub>A</sub> <sup>2)</sup>	H1	H2	$\alpha_{w \max}$	$\alpha_w$	p <sub>min</sub>	p <sub>max</sub>			
	[mm]	class	[mm]	[mm]	[mm]	class	[mm]	[mm]	[mm]	D/G	F	[bar(g)]	[bar(g)]			
I	15	1/2	16-63	12,5	90	20	3/4	16-40	95	282	268	0,45	0,32	0,1	40	4,3
	20	3/4	150-600	16	95	25	1	150-300	100	287	273	0,38	0,29	0,1	40	4,5
	20	3/4	150-600	18	95	25	1	150-300	100	287	273	0,28	0,22	0,1	20	4,6
II	25	1	16-63	20	105	32	1 1/4	16-40	105	395	375	0,43	0,34	0,1	40	9,6
	32	1 1/4	150-600	25	115	40	1 1/2	150-300	115	405	385	0,41	0,32	0,1	40	10,0
III	40	1 1/2	16-63	32	125	50	2	16-40	125	450	430	0,39	0,28	0,05	40	15,0
	50	2	150-600	40	145	65	2 1/2	150-300	145	470	450	0,31	0,23	0,05	35	19,3
IV	65	2 1/2	16-63	50	155	80	3	16-40	155	700	620	0,46	0,33	0,05	25	36,8
	80	3	150-600	60	175	100	4	150	175	730	650	0,44	0,30	0,05	18	40,5

1) Höhere Temperaturen auf Anfrage / higher temperatures on request

2) Maß nach DIN EN 558-1 Grundreihe 8, andere auf Anfrage /  
measure according to DIN EN 558-1 row 8, other on request

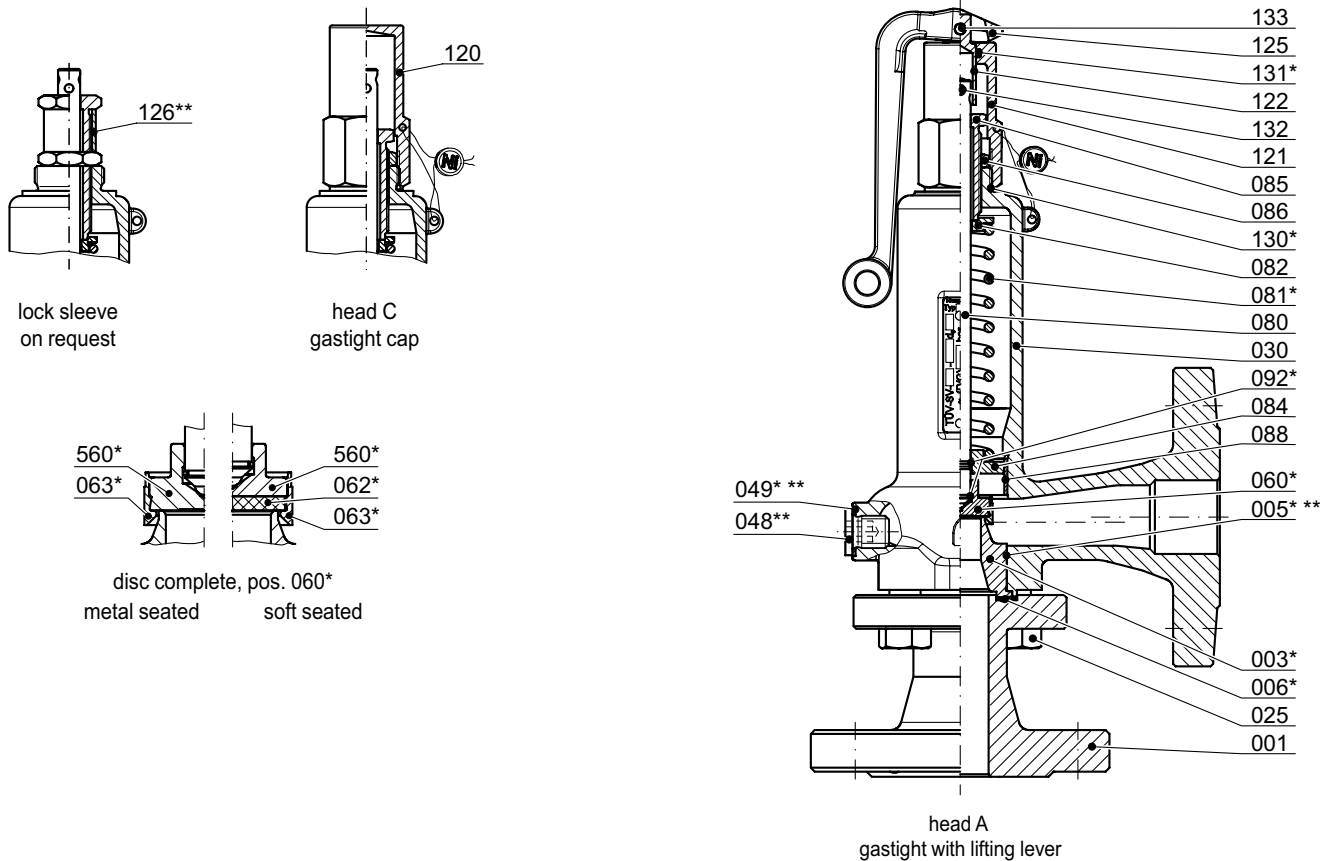
# Normal-Sicherheitsventil, federbelastet Standard-Safety-Valve, springloaded

## Typ 31

für Dämpfe, Gase und Flüssigkeiten mit geschlossener Haube  
for steam, gases and liquids in closed completion

Typ 31.1: Wst. / Material 1.0460 / 0.7043  
Typ 31.2: Wst. / Material 1.4571 / 1.4581  
Typ 31.7: Wst. / Material 1.4571 / 1.4308

DN 15/20  
DN 20/25



Item	Description	Material			Item	Description	Material		
		31.1	31.2	31.7			31.1	31.2	31.7
001	1 inlet body	1.0460	1.4571	1.4571	120	1 cap (only head C)	1.0718	1.4581	1.4571
003*	1 seat	1.4104	1.4571	1.4571	121	1 lifting cap (only head A)	1.4104	1.4581	
006*	1 packing ring	TESNIT	BAU	PTFE	122	1 coupling	1.4305	1.4305	
025	4 screw	A2	A2	A2	125	1 lifting lever	3.2581	3.2581	
030	1 spring bonnet	0.7043	1.4581	1.4308	130*	1 o-ring	NBR	FPM	EPDM
060*	1 disc, complete				131*	1 o-ring	NBR	FPM	
560*	1 disc	1.4571	1.4571	1.4571	132	1 groove pin	A4	A4	
062*	1 soft sealing	see techn. appendic: KWD-1			133	1 groove pin	A4	A4	
063*	1 disc ring	1.4571	1.4571	1.4571		on request			
080	1 spindel	1.4104	1.4571	1.4571	005**	1 o-ring	NBR	FPM	EPDM
081*	1 spring	1.4310	1.4310	1.4310	048**	1 drainage screw	A4	A4	A4
082	1 springplate, upper	1.0718	1.4305	1.4305	049**	1 packing ring	Cu	PTFE	PTFE
084	1 springplate, lower	1.4571	1.4571	1.4571	126**	1 lock sleeve	1.4305	1.4305	
085	1 adjusting screw	1.4305	1.4305	1.4571					
086	1 lock nut	1.0718	1.4305	1.4305					
088 <sup>2)</sup>	1 guide bush	1.4571							
092*	2 lock ring	1.4571	1.4571	1.4571					

\* expendable parts  
\*\* optional design, on request

<sup>2)</sup> only in type 31.1

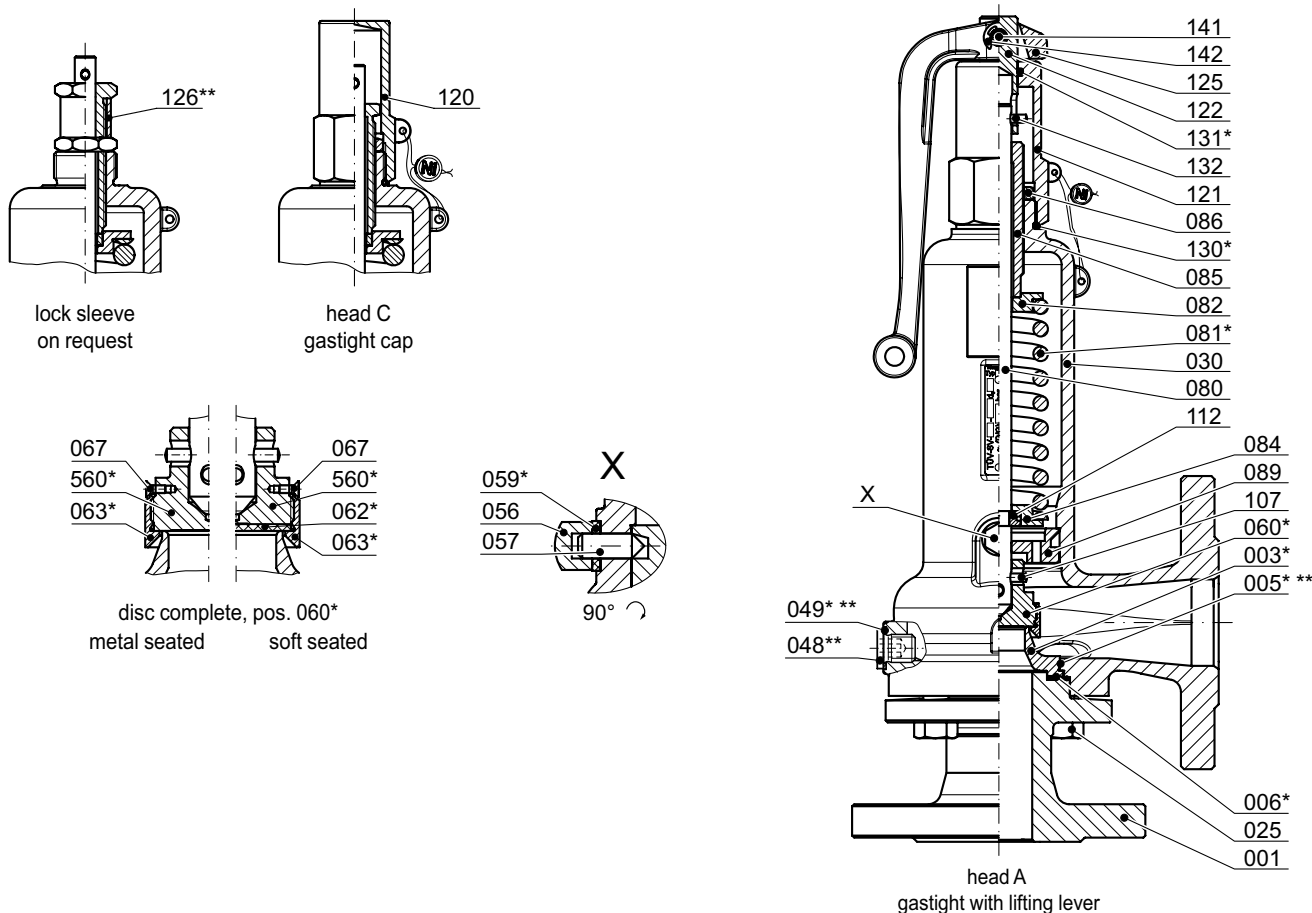
# Normal-Sicherheitsventil, federbelastet Standard-Safety-Valve, springloaded

## Typ 31

für Dämpfe, Gase und Flüssigkeiten mit geschlossener Haube  
for steam, gases and liquids in closed completion

Typ 31.1 : Wst. / Material 1.0460 / 1.0619  
Typ 31.2 : Wst. / Material 1.4571 / 1.4581  
Typ 31.7 : Wst. / Material 1.4571 / 1.4308

DN 25/32  
DN 32/40



Item	Description	Material			Item	Description	Material		
		31.1	31.2	31.7			31.1	31.2	31.7
001	1 inlet body	1.0460	1.4571	1.4571	107	1 spring pin	A2	A2	A2
003*	1 seat	1.4571	1.4571	1.4571	112	1 split ring	1.4305	1.4305	1.4305
006*	1 packing ring	TESNIT BAU	PTFE		120	1 cap (only head C)	1.0718	1.4581	1.4571
025	4 screw	A2	A2	A2	121	1 lifting cap (only head A)	1.4104	1.4581	
030	1 spring bonnet	1.0619	1.4581	1.4308	122	1 coupling	1.4305	1.4305	
056	2 lock nut	A4	A4	A4	125	1 lifting lever	3.2581	3.2581	
057	2 screwed pin	A2	A2	A2	130*	1 o-ring	NBR	FPM	EPDM
059*	2 packing ring	PTFE	PTFE	PTFE	131*	1 o-ring	NBR	FPM	
060*	1 disc, complete				132	1 groove pin	A4	A4	
560*	1 disc	1.4571	1.4571	1.4571	141	1 bolt	1.4305	1.4305	
062*	1 soft sealing	see techn. appendic: KWD-1			142	2 stop washer	A2	A2	
063*	1 disc ring	1.4571	1.4571	1.4571					
067	1 security screw	A2	A2	A2		on request			
080	1 spindle	1.4104	1.4571	1.4571	005* **	1 o-ring	NBR	FPM	EPDM
081*	1 spring	1.4310	1.4310	1.4310	048**	1 drainage screw	A4	A4	A4
082	1 springplate, upper	1.4305	1.4305	1.4305	049* **	1 packing ring	Cu	PTFE	PTFE
084	1 springplate, lower	1.0718	1.4305	1.4305	126**	1 lock sleeve	1.4305	1.4305	
085	1 adjusting screw	1.4305	1.4305	1.4305					
086	1 lock nut	1.4305	1.4305	1.4305					
089	1 guide plate	1.4571	1.4571	1.4571					

\* expendable parts  
\*\* optional design, on request

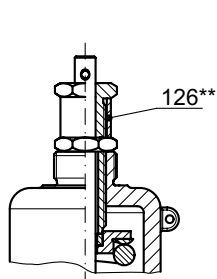
# Normal-Sicherheitsventil, federbelastet Standard-Safety-Valve, springloaded

## Typ 31

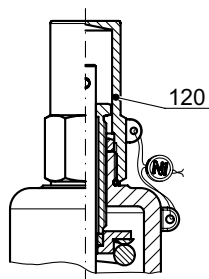
für Dämpfe, Gase und Flüssigkeiten mit geschlossener Haube  
for steam, gases and liquids in closed completion

Typ 31.1 : Wst. / Material 1.0460, 1.0619 / 1.0619  
Typ 31.2 : Wst. / Material 1.4571, 1.4581 / 1.4581  
Typ 31.7 : Wst. / Material 1.4571 / 1.4308

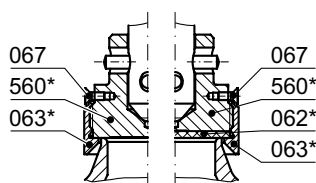
DN 40/50  
DN 50/65



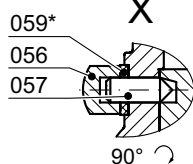
lock sleeve  
on request



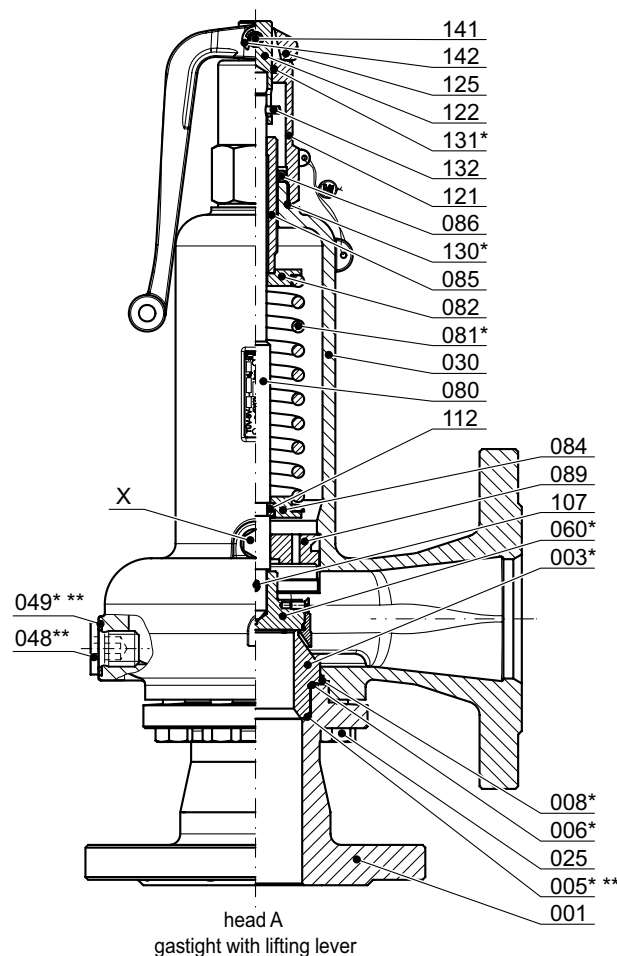
head C  
gastight cap



disc complete, pos. 060\*  
metal seated      soft seated



90°



Item	Description	Material			Item	Description	Material		
		31.1	31.2	31.7			31.1	31.2	31.7
001	1 inlet body	1.0460 <sup>1)</sup>	1.4581 <sup>2)</sup>	1.4571	089	1 guide plate	1.4571	1.4571	1.4571
003*	1 seat	1.4571	1.4571	1.4571	107	1 spring pin	A2	A2	A2
006*	1 packing ring	TESNIT BAU	PTFE		112	1 split ring	1.4305	1.4305	1.4305
008*	1 packing ring	TESNIT BAU	PTFE		120	1 cap (only head C)	1.0718	1.4581	1.4571
025	8 screw	A2	A2	A2	121	1 lifting cap (only head A)	1.4104	1.4581	
030	1 spring bonnet	1.0619	1.4581	1.4308	122	1 coupling	1.4305	1.4305	
056	2 lock nut	A4	A4	A4	125	1 lifting lever	3.2581	3.2581	
057	2 screwed pin	A2	A2	A2	130*	1 o-ring	NBR	FPM	EPDM
059*	2 packing ring	PTFE	PTFE	PTFE	131*	1 o-ring	NBR	FPM	
060*	1 disc, complete				132	1 groove pin	A4	A4	
560*	1 disc	1.4571	1.4571	1.4571	141	1 bolt	1.4305	1.4305	
062*	1 soft sealing	see techn. appendic: KWD-1			142	2 stop washer	A2	A2	
063*	1 disc ring	1.4571	1.4571	1.4571					
067	1 security screw	A2	A2	A2					
080	1 spindle	1.4104	1.4571	1.4571					
081*	1 spring	1.4310	1.4310	1.4310	005* **	1 o-ring	NBR	FPM	EPDM
082	1 springplate, upper	1.0718	1.4305	1.4305	048**	1 drainage screw	A4	A4	A4
084	1 springplate, lower	1.0718	1.4305	1.4305	049* **	1 packing ring	Cu	PTFE	PTFE
085	1 adjusting screw	1.4305	1.4305	1.4305	126**	1 lock sleeve	1.4305	1.4305	
086	1 lock nut	1.4305	1.4305	1.4305					
						on request			

\* expendable parts  
\*\* optional design, on request

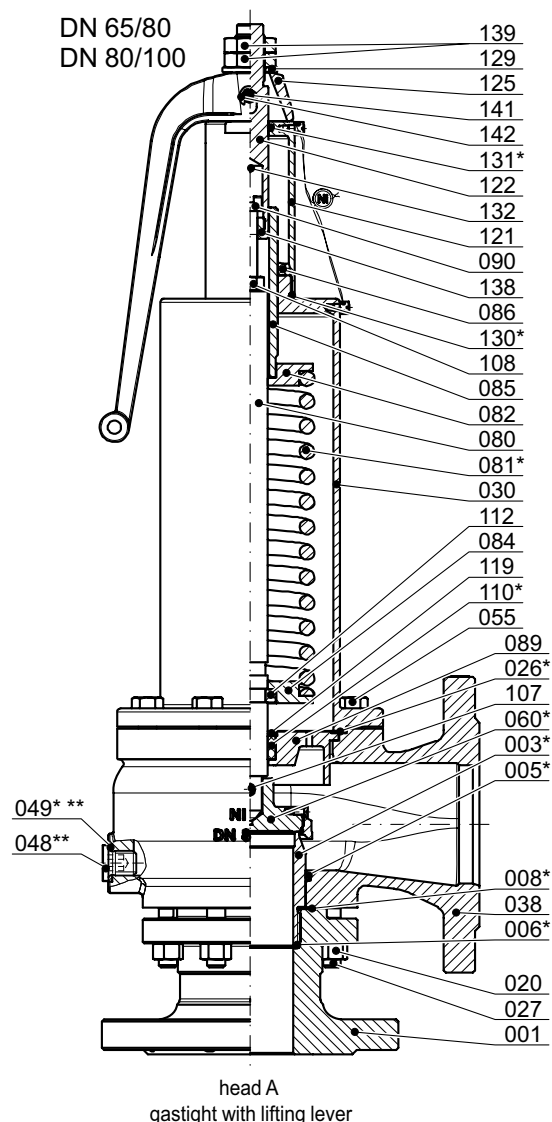
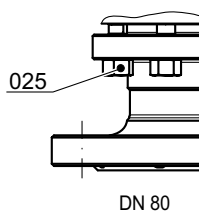
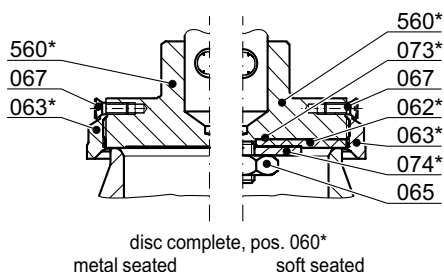
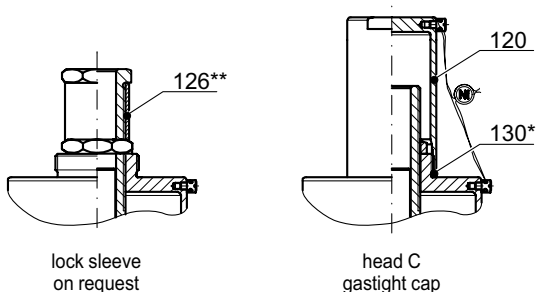
<sup>1)</sup> alternative 1.0619  
<sup>2)</sup> alternative 1.4571

# Normal-Sicherheitsventil, federbelastet Standard-Safety-Valve, springloaded

## Typ 31

für Dämpfe, Gase und Flüssigkeiten mit geschlossener Haube  
for steam, gases and liquids in closed completion

Typ 31.1 : Wst. / Material 1.0619 / 1.0619  
Typ 31.2 : Wst. / Material 1.4581 / 1.4581  
Typ 31.7 : Wst. / Material 1.4571 / 1.4308



Item	Description	Material			Item	Description	Material		
		31.1	31.2	31.7			31.1	31.2	31.7
001	1 inlet body	1.0619	1.4581	1.4571	086	1 lock nut	1.4305	1.4305	1.4305
003*	1 seat	1.4571	1.4571	1.4571	089	1 guide plate	1.0460	1.4571	1.4571
005*	1 o-ring	NBR	FPM	EPDM	090	1 screw	A2	A2	A2
006*	1 packing ring	PTFE	PTFE	PTFE	107	1 spring pin	A2	A2	A2
008*	1 packing ring	PTFE	PTFE	PTFE	108	1 nut	A2	A2	A2
020	8 nut	A2	A2	A2	110*	1 bush	PTFE-Gr.	PTFE-Gr.	PTFE-Gr.
025	8 screw	A2	A2	A2	112	1 split ring	1.4305	1.4305	1.4305
026*	1 packing ring	TESNIT BAU	PTFE		119	1 locking ring	A2	A2	A2
027	8 stud bolt	A2	A2	A2	120	1 cap (only head C)	1.0254	1.4571	1.4571
030	1 spring bonnet	1.0254	1.4571	1.4571	121	1 lifting cap	1.0254	1.4571	
038	1 outlet body	1.0619	1.4581	1.4308	122	1 coupling	1.4305	1.4305	
055	8 screw	A2	A2	A2	125	1 lifting lever	3.2581	3.2581	
060*	1 disc, complete				129	1 pressure plate	A2	A2	
560*	1 disc	1.4571	1.4571	1.4571	130*	1 o-ring	NBR	FPM	EPDM
062*	1 soft sealing	see techn. appendic: KWD-1			131*	1 o-ring	NBR	FPM	
063*	1 disc ring	1.4571	1.4571	1.4571	132	1 groove pin	A4	A4	
065	1 disc bolt	A4	A4	A4	138	1 screw	1.4305	1.4305	
067	1 security screw	A2	A2	A2	139	2 nut	A2	A2	
073*	1 o-ring	NBR	FPM	PTFE	141	1 bolt	1.4305	1.4305	
074*	1 disc plate	1.4571	1.4571	1.4571	142	2 stop washer	A2	A2	
080	1 spindle	1.4104	1.4571	1.4571		on request			
081*	1 spring	1.4310	1.4310	1.4310	048**	1 drainage screw	A4	A4	A4
082	1 springplate, upper	1.0718	1.4305	1.4305	049**	1 packing ring	Cu	PTFE	PTFE
084	1 springplate, lower	1.0718	1.4305	1.4305	126**	1 lock sleeve	1.4305	1.4305	
085	1 adjusting screw	1.4305	1.4305	1.4305					

\* expendable parts  
\*\* optional design, on request

M 31-127 BGIV\_engl 07'09

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