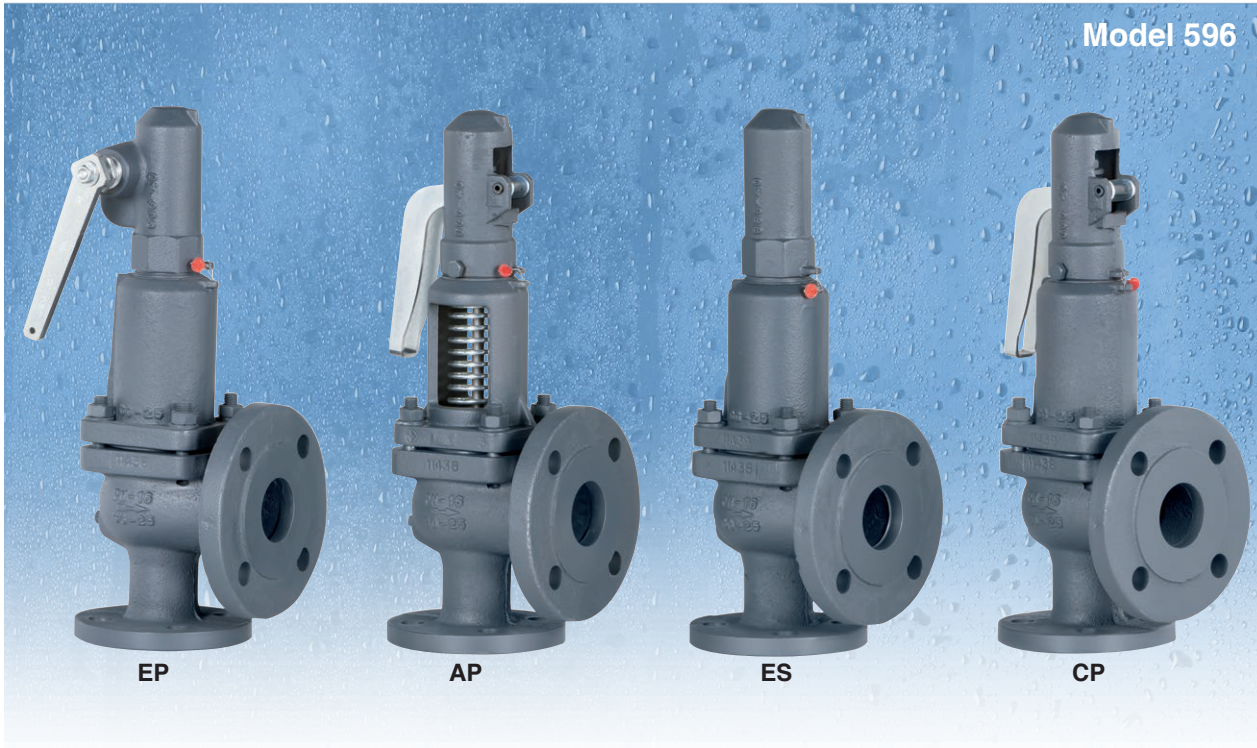


# Full lift safety valve with spring loading. (AIT)



EN

Model 596



The valve works as an automatic pressure releasing regulator activated by the static pressure existing at the entrance to the valve and is characterized by its ability to open instantly and totally.

Design in accordance with "International Standard ISO 4126-1 Safety Valves".

In accordance with the requirements of the pressure equipment directive 2014/68/EU.

EC valve verification certified by: TÜV Internacional Grupo TÜV Rheinland, S.L. EC 0035.

Type (Module D) EC examination report n° 33530455 certified by: TÜV Internacional Grupo TÜV Rheinland, S.L.

In compliance with the ATEX 2014/34/EU directive "Protective equipment and systems for use in potentially explosive atmospheres".

Other authorisations: ISCIR, ITI, NASTHOL,EAC,..etc.

## Specifications

- 90° angular flow.
- Activated by direct pressure for their resistance to corrosion. With the exception of washers and couplings, the valves are free of non-ferric materials.
- Internal body designed to offer favourable flow profile.
- Sealing surfaces treated and balanced, making them extremely tightness, even exceeding EN 12266-1 requirements.
- Great discharge capacity. For liquids typically used with openings similar to proportional safety valves.
- Equipped with draining screws for removing condensation.
- Auto-centering plug.
- Threaded shaft with lever positioner facilitating immediate manual action.
- Elevator, independent of the seal, designed facilitate sudden opening when the steam expands and, with any fluid, guarantees absolute opening and closing precision.
- All the valves are supplied sealed at the set pressure requested, simulating operational conditions, and are vigorously tested.
- All components are numbered, registered and checked. If requested in advance, material, casting, test and efficiency certificates will be enclosed with the valve, and the instruction manual, in accordance with P.E.D. 2014/68/EU.

**IMPORTANT**

Depending on demand:

- 1.- Blocking screw which facilitates hydrostatic testing of the container which to beprotected.
- 2.- Rapid limiter to reduce the coefficient of discharge
- 3.- Fluorelastomer (Vitón) seals, Silicone's rubber, PTFE (Teflón)... etc.,achieving leakage levels less than

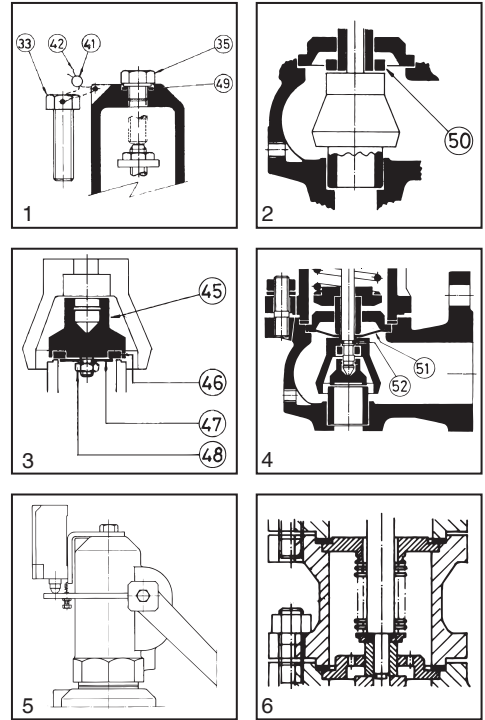
$$0,3 \times 10^{-3} \frac{\text{Pa cm}^3}{\text{seg.}}$$

The ranges of application allow certain flexibility although we recommend limiting them to:

RANGE OF APPLICATION FOR THE SEALS					
FLUID	SET PRESSURE IN bar				
	0,2	1,8	4,0	7,0	30,0 62,0
Saturated	S	V	T		
Liquids and gases	S		V		T
SEALS	TEMPERATURE IN °C				
		ACCORDING TO MANUFACTURERS		RECOMMENDED BY VVC	
		MINIMUM	MAXIMUM	MINIMUM	MAXIMUM
Silicone's rubber	S	-60	+200	-50	+115
Fluorelastomer (Vitón)	V	-40	+250	-30	+150
PTFE (Teflón)	T	-265	+260	-80	+230 (1)

(1) For temperatures exceeding 230°C apply metallic seal only

- 4.- Fluorelastomer (Vitón) membrane and O-ring isolating the rotating or sliding parts from the working fluid.
- 5.- Electrical contact indicating open/closed.
- 6.- Balance bellows to:
  - Protect the spring from atmospheric influences.
  - Ensure outside of valve body is totally tightness.
  - Level out external or self-generated back pressure.
- 7.- Possibility of manufacture in other types of material, for special operating conditions (high temperatures, fluids, etc.).
- 8.- Totally free of oil and grease, to work with oxygen, avoiding possible fire risks (UV-Oxygen-VBG 62).
- 9.- Special springs for critical temperatures.



N.º PIECE	PIECE	MATERIAL	
		CAST STEEL	STAINLESS STEEL
1	Body	Cast steel (EN-1.0619+N)	Stainless steel (EN-1.4408)
2	Closed bell	Nodular iron (EN-5.3106)	Stainless steel (EN-1.4408)
3	Open bell	Cast steel (EN-1.0619+N)	Stainless steel (EN-1.4408)
4, 5, 6	Hood	Nodular iron (EN-5.3106)	Stainless steel (EN-1.4408)
7	Elevator	Nodular iron (EN-5.3106) (1)	Stainless steel (EN-1.4408)(7)
8	Cam	Carbon steel (EN-1.0037 St-37.2) (6)	Stainless steel (EN-1.4301)
9, 10	Lever	Carbon steel (EN-1.0037 St-37.2)	Carbon steel (EN-1.0037 St-37.2)
11	Seating	Stainless steel (EN-1.4028)	Stainless steel (EN-1.4542)
12	Plug	Stainless steel (EN-1.4028)	Stainless steel (EN-1.4542)
13	Lead	Stainless steel (EN-1.4028) (4)	Stainless steel (EN-1.4401) (5)
14	Spring press	Carbon steel (EN-1.1191)	Stainless steel (EN-1.4305)
15	Separator	Stainless steel (EN-1.4028)	Stainless steel (EN-1.4401)
16	Rod	Stainless steel (EN-1.4028)	Stainless steel (EN-1.4401)
17	Lever shaft	Carbon steel (EN-1.1191)	Stainless steel (EN-1.4305)
18	Gudgeon	Carbon steel (EN-1.1231)	Stainless steel (EN-1.4310)
19	Ring	Stainless steel (EN-1.4028)	Stainless steel (EN-1.4401)
20, 21	Safety ring	Stainless steel (EN-1.4310)	Stainless steel (EN-1.4310)
22	Spring	Vanadium chrome steel (EN-1.8159) (2)	Stainless steel (EN-1.4310) (3)
23	Gland	Carbon steel (EN-1.1191)	Stainless steel (EN-1.4305)
24	Hollow screw	Stainless steel (EN-1.4305)	Stainless steel (EN-1.4305)
25	Hollow screw nut	Stainless steel (EN-1.4305)	Stainless steel (EN-1.4305)
26	Buffer nut	Stainless steel (EN-1.4305)	Stainless steel (EN-1.4305)
27	Rod check nut	Carbon steel (EN-1.1141)	Stainless steel (EN-1.4401)
28, 29, 48	Nut	Carbon steel (EN-1.1141)	Stainless steel (EN-1.4401)
30, 31	Washer	Carbon steel (EN-1.1141)	Stainless steel (EN-1.4401)
32	Stud	Carbon steel (EN-1.1181)	Stainless steel (EN-1.4401)
33, 34, 35	Screw	Carbon steel (EN-1.1191)	Stainless steel (EN-1.4401)
36	Cap	Carbon steel (EN-1.1181)	Stainless steel (EN-1.4401)
38	Coupling	Graphite	PTFE (Teflón)
39	Coupling	PTFE (Teflón)	PTFE (Teflón)
40	Seal	Graphite	PTFE (Teflón)
41	Seal	Plastic	Plastic
42	Sealing wire	Sealing wire	Sealing wire
43	Characteristic plate	Stainless steel (EN-1.4301)	Stainless steel (EN-1.4301)
45	Plug	Stainless steel (EN-1.4401)	Stainless steel (EN-1.4401)
46	Sealing disk	PTFE (Teflón)	PTFE (Teflón)
		Silicone's rubber	Silicone's rubber
		Fluorelastomer (Vitón)	Fluorelastomer (Vitón)
47	Washer	Stainless steel (EN-1.4401)	Stainless steel (EN-1.4401)
49	Coupling	Copper	PTFE (Teflón)
50	Limiter	Stainless steel (EN-1.4028)	Stainless steel (EN-1.4401)
51	Membrane	Fluorelastomer (Vitón)	Fluorelastomer (Vitón)
52	O-ring	Fluorelastomer (Vitón)	Fluorelastomer (Vitón)
	DN1x DN2	25x32 a 400x500	
	PN	160	
OPERATING CONDITIONS	PRESSURE IN bar	62	62
	MAX. TEMP. IN °C	450°C	400°C
	MIN. TEMP. IN °C	-10	-60

(1) DN-25x32 in stainless steel (1.4408).

(2) DN-32x50 a DN-65x100 in stainless steel (1.4401).

(3) From DN-150x250 to DN-400x500 in stainless steel (DIN-1.4027).

(4) From DN-150x250 to DN-400x500 in stainless steel (1.4408).

(5) DN-25x32 from 38,00 to 50,00 bar in Spring steel (EN-10270-1-SH).

Vanadium-chrome (1.8159) from 400°C, EP, ES and CP over 400°C, especial spring.

(6) DN-25x32 from 38,00 to 50,00 and from 48,00 to 62,00 bar in Stainless steel (1.4310).

DN-25x40 from 38,00 to 50,00 and from 48,00 to 62,00 bar in Stainless steel (1.4310).

Rest of them in Vanadium-chrome (1.8159)

## FULL LIFT SAFETY VALVE WITH SPRING LOADING (AIT) MODEL 596 - AP AND CP.

### 1. Disassembly and assembly.

#### 1.1 Disassembly.

To replace the spring (22) or clean any of the internal components of the valve, proceed in the following manner:

A - Withdraw the clip (18), using a punching tool, until the lever (10) comes free.

B - Loosen the screws (34) and take the cap (6) off.

C - Holding the spindle (16) steady, loosen the hollow screw nut (25) and the hollow screw (24) until you note a releasing of the spring (22).

D - Mark on the spindle (16) the position of the spindle lock-nut (27) and the adjusting nut (26). Loosen them and remove them.

E - Unscrew the nuts (29) and remove them, together with the studs (32) and their washers (30).

F - Lift the cover (3) or (2) and you will have access to all of the components.

#### 1.2 Assembly.

A - Place the safety-ring (20) on the spindle (16) and press it against the gasket (12).

B - In the spindle channel (16) connect the ring (19) and fix it to the security-ring (21). Introduce the elevator (7) into the upper part of the spindle (16) and press this against the previously described pieces.

C - Enter the guide (13), the separator (15), the spring-press (14), the spring (22), the spring-press (14) through the upper part of the spindle (16) and press this against the previously described pieces.

D - Replace the assembly (38) and the cover (3) or (2).

E - Place the washers (30) on the studs (32) and make up the nuts (29) diagonally, checking the correct alignment of the cover (3) or (2).

F - Adjust the firing pressure with the hollow screw (24) and fix the adjustment position with the hollow screw nut (25).

G - Turn the spindle lock-nut (27) and the adjusting nut (26) to the position marked (see 1.1.D) and make up against each other.

H - Introduce the cap (6) and tighten the screws (34).

I - Place the lever (10) and fix it with the fastener (18).

### 2. Adjusting the firing pressure.

A - Proceed according to points 1.1.A, 1.1.B, 1.1.C.

B - Proceed according to points 1.2.F, 1.2.H, 1.2.I.

## FULL LIFT SAFETY VALVE WITH SPRING LOADING (AIT) MODEL 596 - EP.

### 1. Disassembly and assembly.

#### 1.1 Disassembly.

To replace the spring (22), or clean any of the internal components of the valve, proceed in the following manner:

A - Move the lever (9) in direction C as far as the constructive catcher.

B - Unscrew the cap (4) and remove.

C - Holding the spindle (16) steady, loosen the hollow screw nut (25) and the hollow screw (24) until you note a releasing of the spring (22).

D - Mark on the spindle (16) the position of the spindle lock-nut (27) and the adjusting nut (26). Loosen them and remove them.

E - Unscrew the nuts (29) and remove them, together with the studs (32) and their washers (30).

F - Lift the cover (2) and you will have access to all of the components.

#### 1.2 Assembly.

A - Place the safety-ring (20) on the spindle (16) and press it against the gasket (12).

B - In the spindle channel (16) connect the ring (19) and fix it to the security-ring (21). Introduce the elevator (7) into the upper part of the spindle (16) and press this against the previously described pieces.

C - Enter the guide (13), the separator (15), the spring-press (14), the spring (22), the spring-press (14) through the upper part of the spindle (16) in a correlative manner.

D - Replace the assembly (38) and the cover (2).

E - Place the washers (30) on the studs (32) and make up the nuts (29) diagonally, checking the correct alignment of the cover (2).

F - Adjust the firing pressure with the hollow screw (24) and fix the adjustment position with the hollow screw nut (25).

G - Turn the spindle lock-nut (27) and the adjusting nut (26) to the position marked (see 1.1.D) and make up against each other.

H - Change the coupling (39) and lightly tighten the cap (4). Move the lever (9) towards position A as far as the constructive catcher. Definitely tighten the cap (4).

### 2. Adjusting the firing pressure.

A - Proceed according to points 1.1.A, 1.1.B, 1.1.C.

B - Proceed according to points 1.2.F, 1.2.H.

## FULL LIFT SAFETY VALVE WITH SPRING LOADING (AIT) MODEL 596 - ES.

### 1. Disassembly and assembly.

#### 1.1 Disassembly.

To replace the spring (22), or clean any of the internal components of the valve, proceed in the following manner:

A - Unscrew the cap (5) and remove.

B - Holding the spindle (16) steady, loosen the hollow screw nut (25) and the hollow screw (24) until you note a releasing of the spring (22).

C - Unscrew the nuts (29) and remove them, together with the studs (32) and their washers (30).

F - Lift the cover (2) and you will have access to all of the components.

#### 1.2 Assembly.

A - Place the safety-ring (20) on the spindle (16) and press it against the gasket (12).

B - In the spindle channel (16) connect the ring (19) and fix it to the security-ring (21).

Introduce the elevator (7) into the upper part of the spindle (16) and press this against the previously described pieces.

C - Enter the guide (13), the separator (15), the spring-press (14), the spring (22), the spring-press (14) through the upper part of the spindle (16) in a correlative manner.

D - Replace the washers (38) and the cover (2).

E - Place the washers (30) on the studs (32) and make up the nuts (29) diagonally, checking the correct alignment of the cover (2).

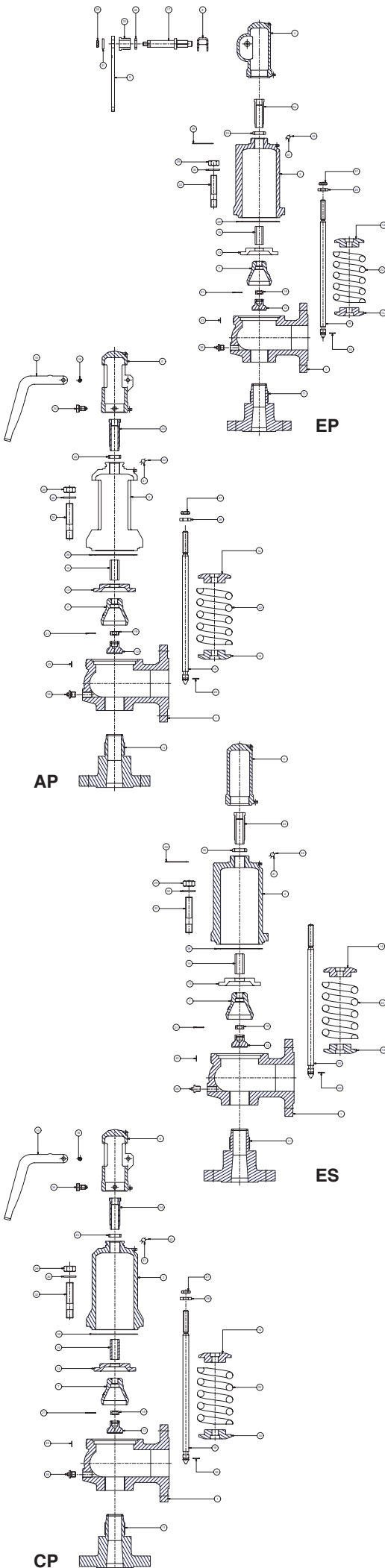
F - Adjust the firing pressure with the hollow screw (24) and fix the adjustment position with the hollow screw nut (25).

G - Change the coupling (39) and tighten the cap (5).

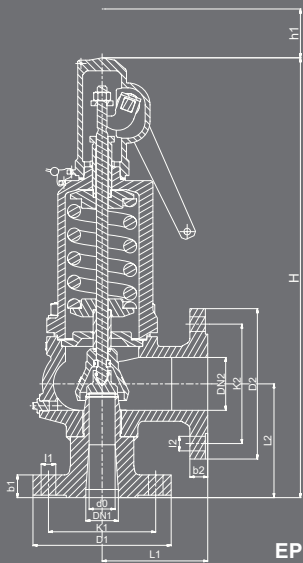
### 2. Adjusting the firing pressure.

A - Proceed according to points 1.1.A, 1.1.B.

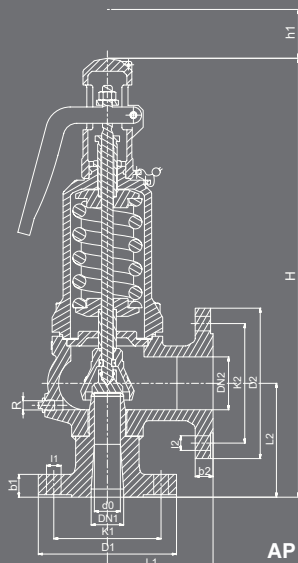
B - Proceed according to points 1.2.F, 1.2.G. B - Proceed conforme al punto 1.2.F, 1.2.G.



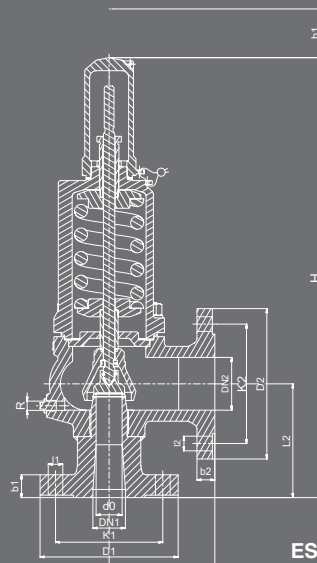
DN1x DN2		25x32	25x40	32x50	40x65	50x80	65x100	80x125																					
do		16	20	25	32	40	50	63																					
Ao		201	314	491	804	1257	1964	3117																					
H		395	415	470	540	660	685	795																					
h1		150	150	175	175	225	225	225																					
L1		95	100	110	130	145	155	190																					
L2		110	110	115	140	150	160	180																					
R		1/4"	1/4"	1/4"	1/4"	1/4"	3/8"	3/8"																					
Whitworth gas-tight cylindrical female																													
INTAKE FLANGE	PN-160 EN 1092-1 (1) (2) (3) (4)	D1	140	140	155	170	195	220	230																				
		K1	100	100	110	125	145	170	180																				
		l1	18	18	22	22	26	26	26																				
		b1	22	22	24	25	27	31	33																				
		DRILLS N°	4	4	4	4	4	8	8																				
ESCAPE FLANGE	PN-40 EN 1092-1 (1) (2)	D2	140	150	165	185	200	235	270																				
		K2	100	110	125	145	160	190	220																				
		l2	18	18	18	18	18	22	26																				
		b2	18	18	20	22	24	24	26																				
		DRILLS N°	4	4	4	4	8	8	8																				
MODEL		EP	AP	ES	CP	EP	AP	ES	CP	EP	AP	ES	CP	EP	AP	ES	CP	EP	AP	ES	CP	EP	AP	ES	CP				
WEIGHT IN kgs.	CAST STEEL STAINLESS STEEL	12,00	11,40	11,60	11,80	14,00	13,40	13,60	13,80	19,00	18,40	18,60	18,80	28,00	27,40	27,60	27,80	40,00	39,40	39,60	39,80	50,00	49,40	49,60	49,80	80,00	79,40	79,60	79,80
		0344	03441	03442	03443	0104	01041	01042	01043	0144	01441	01442	01443	0124	01241	01242	01243	0204	02041	02042	02043	0224	02241	02242	02243	0304	03041	03042	03043
CODE	CAST STEEL 2002-596.	0342	03421	03422	03423	0102	01021	01022	01023	0142	01421	01422	01423	0122	01221	01222	01223	0202	02021	02022	02023	0222	02221	02222	02223	0302	03021	03022	03023
	STAINLESS STEEL 2002-596.																												



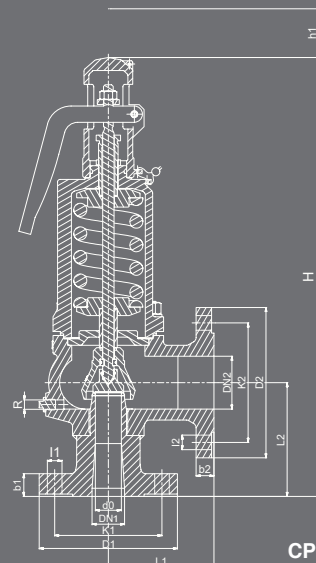
EP



AP



ES



CP

	100x150	125x200	150x250	200x300	250x350	300x400	400x500	<b>Escape flange</b> (1) DN-125x200 PN-25 (2) From DN-150x200 to DN-400x500 PN-10																											
	77	93	110	155	180	220	280																												
	4657	6793	9503	18870	25450	38010	61575																												
	835	990	1185	1285	1400	1575	1900																												
	225	300	385	400	420	522	590																												
	210	215	225	265	300	335	375																												
	200	220	245	290	340	370	415																												
	3/8"	1/2"	1/2"	1/2"	3/4"	3/4"	3/4"																												
Metric thread ISO 228/1 1978 (DIN-259)																																			
	250	295	300	360	425	485	620																												
	200	240	250	310	370	430	550																												
	26	30	26	26	30	30	36																												
	27	34	28	30	32	34	40																												
	8	8	8	12	12	16	16																												
	300	360	395	445	505	565	670																												
	250	310	350	400	460	515	620																												
	26	26	22	22	22	26	26																												
	28	30	26	26	26	26	28																												
	8	12	12	12	16	16	20																												
	EP	AP	ES	CP	EP	AP	ES	CP	<b>Intake flange</b> (1) DN-32x50 and DN-80x125 PN-100 (2) From DN-100x150 to DN-125x200 PN-63 (3) DN-150x200 PN-40 (4) From DN-200x300 PN-25																										
0402	0404	0401	0402	0403	0502	0504	0501	0502		0503	0602	0604	0601	0602	0603	0802	0804	0801	0802	0803	0002	0004	0001	0002	0003	0022	0024	0021	0022	0023	0062	0064	0061	0062	0063
	126,00	125,40	125,60	125,80	135,00	134,40	134,60	134,80		170,00	169,40	169,60	169,80	270,00	269,40	269,60	269,80	370,00	369,40	369,60	369,80	480,00	479,40	479,60	479,80	660,00	659,40	659,60	659,80						

RECOMMENDED RANGES OF APPLICATION						
MODEL		EP	AP <sup>(1)</sup>	ES	CP <sup>(1)</sup>	
FLUID	SATURATED STEAM	*	*		*	
	GASES	*		*		
	LIQUIDS	*		*		
PERMISSIBLE BACK PRESSURE IN % OF SET PRESSURE	INTERNAL OR GENERATED	SATURATED STEAM GASES				15
		LIQUIDS				—
EXTERNAL VARIABLE (1)	SATURATED STEAM GASES					5
	LIQUIDS					—
EXTERNAL CONSTANT (1) (2) (3)	SATURATED STEAM GASES					50
	LIQUIDS					90
% OVERPRESSURE	SATURATED STEAM GASES					10
	LIQUIDS					25

OPEN AND CLOSED PRESSURES IN % OF SET PRESSURE			
FLUID	PRESSURE IN bar	OPENING PRESSURE	CLOSING PRESSURE
SATURATED STEAM	<3	+5%	- 0,3 bar
	≥3	+5%	- 10 %
LIQUIDS	<3	+10%	- 0,6 bar
	≥3	+10%	- 20 %

- If external backpressure exists, the AP and CP model cannot be used.
- With external constant backpressure, the spring is adjusted deducting the backpressure from the set pressure.
- If the set pressure < 3 bar we must consider the total atmospheric pressure (1 bar) as external constant backpressure being freely released.

If  $p_a > 0,25p$ , we must limit plug speed with the consequent reduction of the ad coefficient of discharge.  
 With the new reduced coefficient we determine the  $d_0$ , in order to remove the necessary volume.

$p_a$  = Backpressure permitted [bar] absolute  
 $p$  = Set pressure [bar] absolute.  
 $ad$  = Coefficient of discharge.

**DISCHARGE CAPACITY**

DN1 x DN2	25x32			25x40			32x50			40x65			50x80		
do	16			20			25			32			40		
$Ao = \frac{\pi \cdot do^2}{4}$	201			314			491			804			1257		
p [bar]	I - Saturated steam in Kg/h.. II - Air at 0°C and 1,013 bar in [Nm3/h]. III - Water at 20°C in l/h.														
	$V_L = \sqrt{\frac{Q_A}{Q_L}} \cdot V_A \quad \text{ó} \quad V_A = V_L \cdot \sqrt{\frac{Q_L}{Q_A}}$														
	$V_A =$ Water flow according to table. $V_L =$ Liquid flow. $V_A =$ Water density at a 20°C. ( $V_A = 998$ Kg/m3). $V_L =$ Liquid density.														
SET PRESSURES IN bar	I	II	III	I	II	III	I	II	III	I	II	III	I	II	III
0,2															
0,5															
1,0															
1,5															
2,0															
2,5															
3,0															
3,5															
4,0															
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18,0															
20,0															
22,0															
24,0															
25,0															
26,0															
28,0															
30,0										10241	12006	93662	16011	18770	146435
32,0										10566	12780	96735	16520	19981	151239
34,0										10882	13555	99714	17013	21192	155896
36,0										11188	14329	102606	17492	22403	160417
38,0	2872	3776	26355	4486	5899	41171	7015	9224	64379	11487	15104	105418	17959	23614	164814
40,0	2944	3970	27039	4600	6201	42241	7192	9697	66052	11778	15878	108158	18413	24825	169098
42,0	3015	4163	27707	4711	6504	43284	7366	10170	67683	12061	16653	110830	18857	26036	173275
44,0	3085	4357	28360	4819	6806	44303	7535	10643	69277	12339	17428	113439	19291	27247	177354
46,0	3152	4551	28997	4925	7109	45299	7701	11116	70834	12610	18202	115989	19715	28458	181341
48,0	3219	4744	29621	5028	7411	46274	7863	11589	72358	12875	18977	118484	20130	29669	185242
50,0	3284	4938	30232	5130	7714	47228	8022	12062	73850	13136	19751	120928	20537	30880	189063
52,0	3348	5131	30831	5230	8016	48164	8178	12535	75313	13391	20526	123324	20935	32091	192808
54,0	3410	5325	31418	5327	8319	49081	8330	13008	76748	13641	21300	125673	21327	33302	196482
56,0	3472	5519	31995	5423	8621	49982	8481	13481	78157	13887	22075	127980	21711	34513	200088
58,0	3532	5712	32562	5518	8924	50867	8628	13954	79541	14128	22850	130246	22089	35724	203631
60,0	3591	5906	33118	5610	9226	51737	8773	14427	80901	14366	23624	132473	22460	36935	207113
62,0	3650	6100	33666	5702	9529	52592	8916	14900	82238	14599	24399	134663	22825	38146	210537







### SET PRESSURES AND REGULATING RANGES

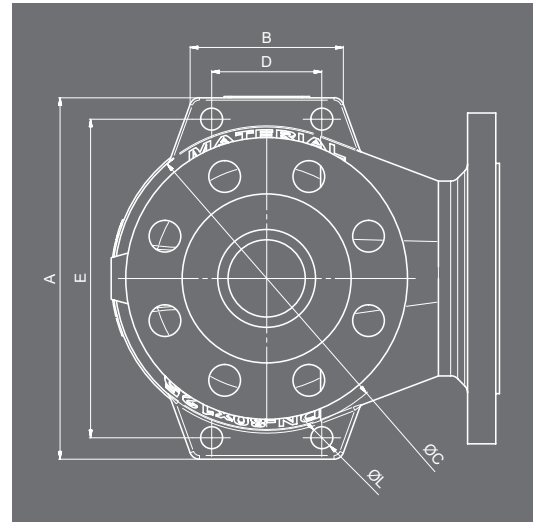
DN <sub>1</sub> x DN <sub>2</sub>		25x32	25x40	32x50	40x65	50x80	65x100	80x125	100x150	125x200	150x250	200x300	
SET PRESSURES IN bar	MAXIMUM (LIQUIDS AND GASES)	PN-160	62	62	62	62	62	50	40	25	20	10	
	MAXIMUM (SATURATED STEAM)	PN-160	62	62	62	62	62	50	40	25	20	10	
	MINIMUM	STEAM AND GASES	38	38	38	30	30	30	23	18	12	9,5	7,5
		LIQUIDS	38	38	38	30	30	30	23	18	12	9,5	7,5
SPRING REGULATING RANGE IN bar	7,50 to 10,00	CODE										56569	
	9,50 to 12,50	CODE									56566		
	12,00 to 16,00	CODE							56563	56567			
	15,00 to 20,00	CODE							56564	56568			
	18,00 to 25,00	CODE							56560	56565			
	23,00 to 32,00	CODE						56557	56561				
	30,00 to 40,00	CODE				56548	56551	56554	56558	56562			
	38,00 to 50,00	CODE	56542	56544	56546	56549	56552	56555	56559				
			56620	56622									
48,00 to 62,00	CODE	56543	56545	56547	56550	56553	56556						
		56621	56623										

Spring steel EN-10270-1-SH

Vanadium-chrome steel EN-1.8159

Stainless steel EN-1.4310

DN <sub>1</sub> x DN <sub>2</sub>		250x350	300x400	400x500	
SET PRESSURES IN bar	MAXIMUM (LIQUIDS AND GASES)	PN-160	8	7	6
	MAXIMUM (SATURATED STEAM)	PN-160	8	7	6
	MINIMUM	STEAM AND GASES	0,5	0,5	0,5
		LIQUIDS	0,2	0,2	0,2
SPRING REGULATING RANGE IN bar	0,20 to 0,68	CODE	56570	56579	56588
	0,66 to 1,00	CODE	56571	56580	56589
	0,95 to 1,40	CODE	56572	56581	56590
	1,30 to 1,90	CODE	56573	56582	56591
	1,80 to 2,60	CODE	56574	56583	56592
	2,50 to 3,60	CODE	56575	56584	56593
	3,50 to 5,00	CODE	56576	56585	56594
	4,80 to 6,30	CODE	56577	56586	56595
	6,00 to 8,00	CODE	56578	56587	



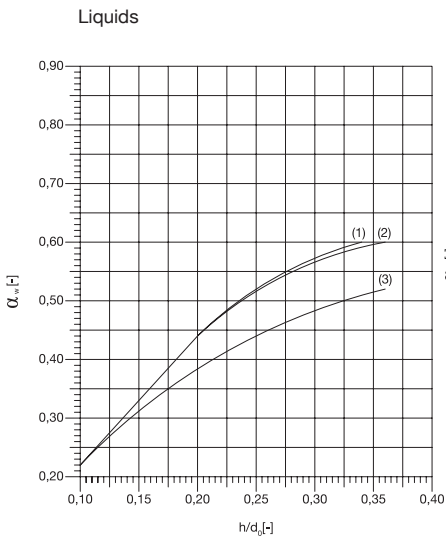
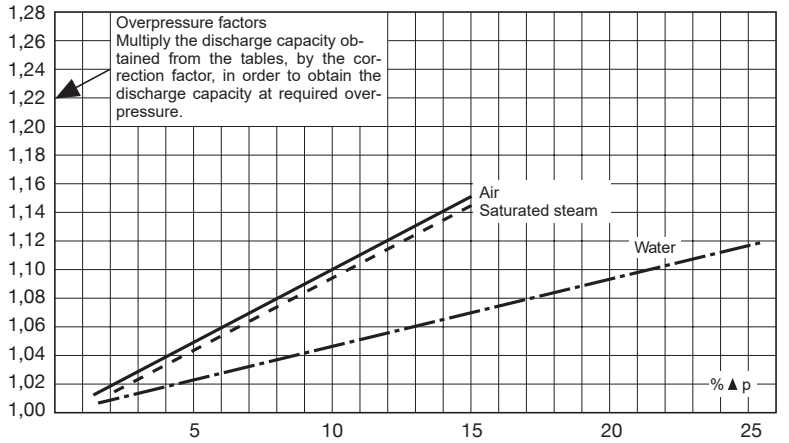
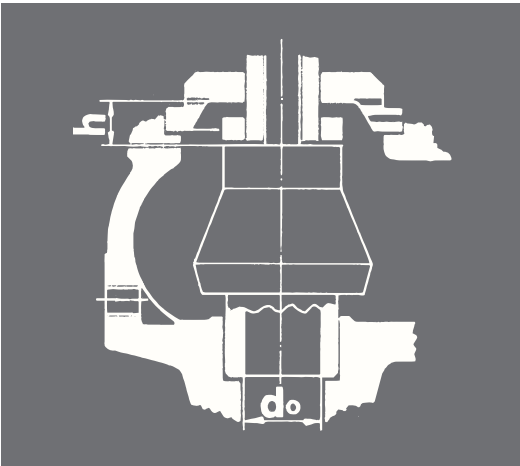
### SUPPORT BRACKETS DIMENSIONS

DN1xDN2	A	B	C	D	E	L	THICKNESS	DRILLS N°
40x65	186	96	147	70	156	14	13,5	4xM12
50x80	210	98	166	70	180	14	14	4xM12
65x100	250	100	200	70	220	14	14	4xM12
80x125	295	125	248	90	260	18	16	4xM16
100x150	344	129	292	90	309	18	17	4xM16
125x200	374	129	309	90	339	18	17	4xM16
150x250	440	184	370	120	400	18	20	4xM16
200x300	530	188	459	130	494	23	20	4xM20
250x350	664	195	581	160	624	23	20	4xM20
300x400	710	215	616	180	655	23	23	4xM20
400x500	880	238	760	200	820	23	23	4xM20

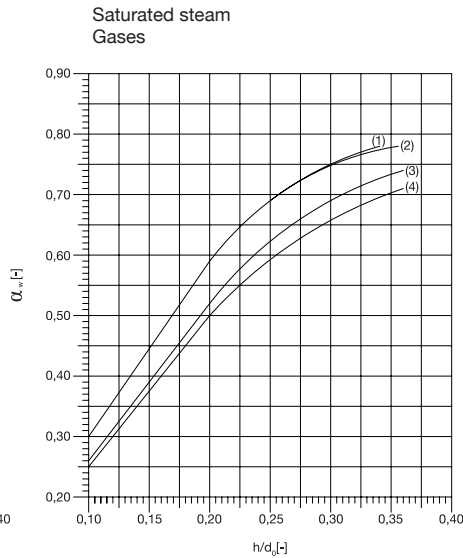
Support brackets will only be drilled if specified by the customer

COEFFICIENT OF DISCHARGE

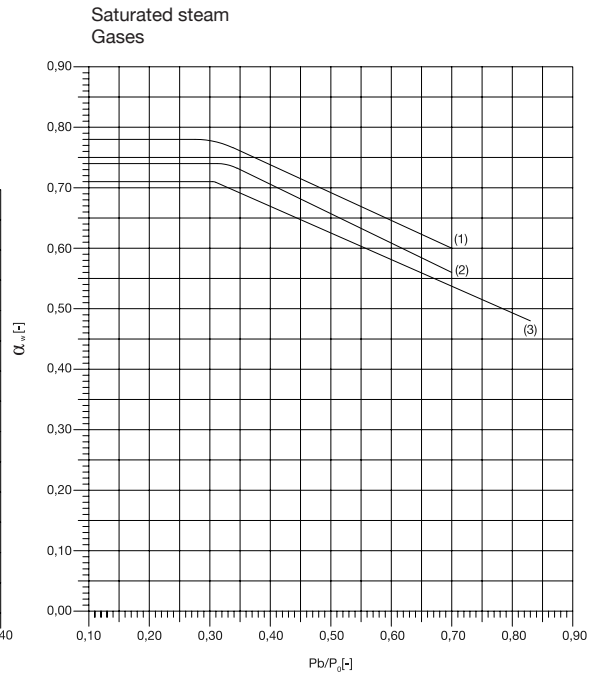
DN1x DN2	25x32	25x40	32x50	40x65	50x80	65x100	80x125	100x150	125x200	150x250	200x300	250x350	300x400	400x500	
do	16	20	25	32	40	50	63	77	93	110	155	180	220	280	
h	7,00	9,00	12,00	12,00	18,00	18,00	20,00	29,00	34,40	36,80	56,15	64,80	79,20	100,80	
h1	2,60	3,20	4,00	5,20	6,50	8,00	10,00	12,50	16,74	19,80	27,90	32,4	39,6	50,4	
h/do	0,44	0,45	0,48	0,38	0,45	0,36	0,32	0,38	0,37	0,33	0,36	0,36	0,36	0,36	
h1/do (1)	0,16	0,16	0,16	0,16	0,16	0,16	0,16	0,16	0,18	0,18	0,18	0,18	0,18	0,18	
COEFFICIENT OF DISCHARGE kd	SATURATED STEAM GASES	0,78										0,74		0,71	
	LIQUIDS	0,60						0,52				-			
	LIQUIDS WITH RAPID LIMITER (1)	0,36										-			



- (1) d<sub>0</sub> 16-63
- (2) d<sub>0</sub> 77
- (3) d<sub>0</sub> 93-155



- (1) d<sub>0</sub> 16-77
- (2) d<sub>0</sub> 93-110
- (3) d<sub>0</sub> 155-180
- (4) d<sub>0</sub> 220-280



- (1) d<sub>0</sub> 16-110
- (2) d<sub>0</sub> 155-180
- (3) d<sub>0</sub> 220-280