

Full lift safety valve with spring loading.(AIT)

Model 485



ASME
SI Units

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 "ASME code section VIII". Materials according ASME code section II and ASTM.

Connections according ASME B1.20.1 standard.

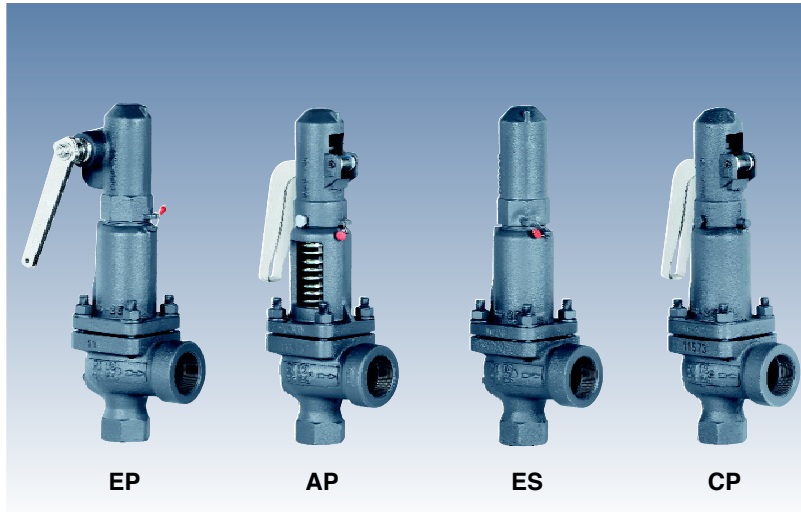
In accordance with the requirements of directive 97/23/EC.

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

Type (Module D) EC examination report nº 33530455 certified by: TÜV Internacional Grupo TÜV Rheinland, S.L.

In compliance with the ATEX 94/9/CE directive "Protective equipment and systems for use in potentially explosive atmospheres".

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



Specifications

- 90° angular flow.
- Activated by direct action helicoid spring.
- Simplicity of construction ensuring minimum maintenance.
- Materials carefully selected 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 API-527 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.97/23 EC.

IMPORTANT

Depending on demand:

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

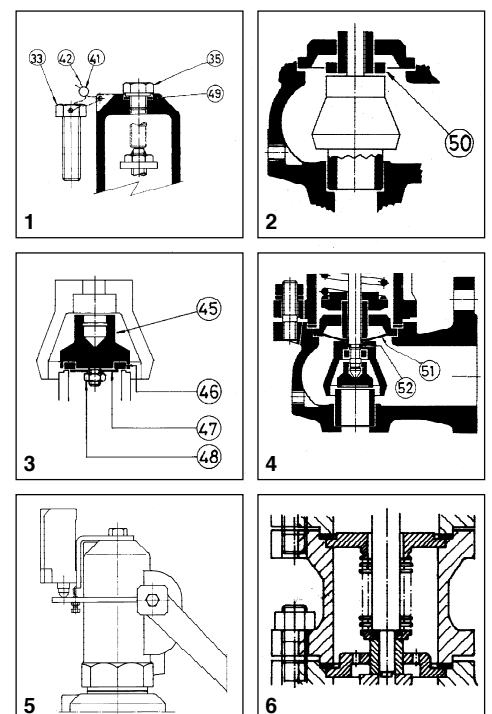
$$0,3 \times 10^{-3} \frac{\text{Pa} \cdot \text{cm}^3}{\text{seg.}}$$

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	4,8	7,0	30,0	40,0
Saturated steam		S	V		T			
Liquids and gases		S		V		T		
SEALS		TEMPERATURE IN °C						
		ACCORDING TO MANUFACTURERS		RECOMMENDED BY VYG				
		MINIM	MAXIM	MINIM	MAXIM			
Silicone's rubber	S	-60	+200	-50	+115			
Fluorelastomer (Viton)	V	-40	+250	-30	+150			
PTFE (Teflon)	T	-265	+260	-80	+230 (1)			

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

- 4.- Fluorelastomer (Viton) 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.



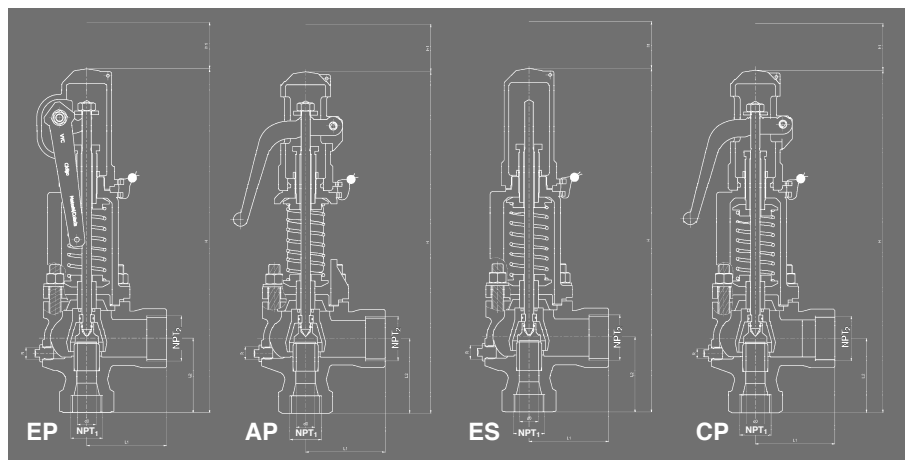
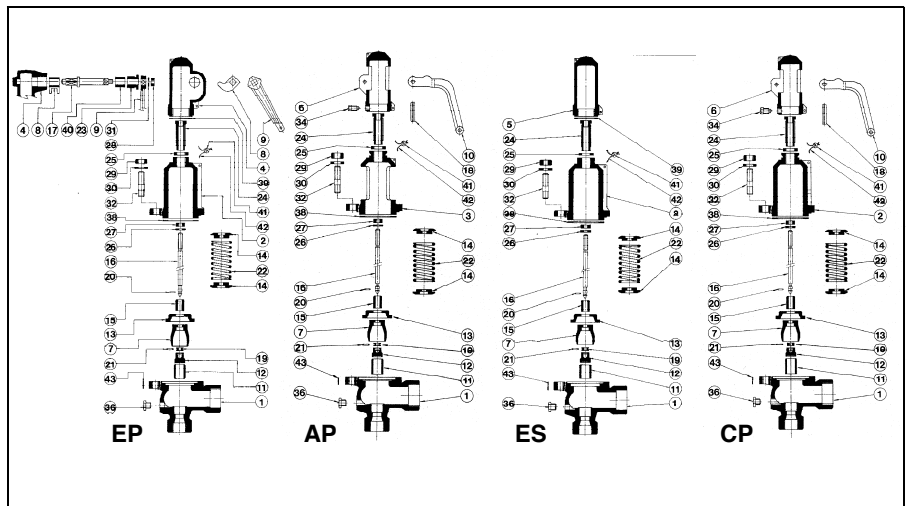
Nº. PIECE	PIECE	MATERIAL										
		CAST STEEL						STAINLESS STEEL				
1	Body	ASTM A216 - WCB						ASTM A 351 - CF8M				
2	Closed bell	ASTM A536 65 - 45 - 12						ASTM A 351 - CF8M				
3	Open bell	ASTM A 216 - WCB						ASTM A 351 - CF8M				
4, 5, 6	Hood	ASTM A 536 65 - 45 - 12						ASTM A 351 - CF8M				
7	Elevator	ASTM A 536 65 - 45 - 12 (1)						ASTM A 351 - CF8M				
8	Cam	ASTM A 570 - 36 (3)						AISI 304				
9, 10	Lever	ASTM A 570 - 36						ASTM A 570 - 36				
11	Seating	AISI 420						AISI 630				
12	Plug	AISI 420						AISI 630				
13	Lead	AISI 420						AISI 316				
14	Spring press	AISI 1045						AISI 303				
15	Separator	AISI 420						AISI 316				
16	Rod	AISI 420						AISI 316				
17	Lever shaft	AISI 1045						AISI 303				
18	Gudgeon	AISI 1070						AISI 301				
19	Ring	AISI 420						AISI 316				
20, 21	Safety ring	AISI 301						AISI 301				
22	Spring	AISI 6150 (2)						AISI 301				
23	Gland	AISI 1045						AISI 303				
24	Hollow screw	AISI 303						AISI 303				
25	Hollow screw nut	AISI 303						AISI 303				
26	Buffer nut	AISI 303						AISI 303				
27	Rod check nut	AISI 1015						AISI 316				
28, 29, 48	Nut	AISI 1015						AISI 316				
30, 31	Washer	AISI 1015						AISI 316				
32	Stud	AISI 1035						AISI 316				
33, 34, 35	Screw	AISI 1045						AISI 316				
36	Cap	AISI 1035						AISI 316				
38	Coupling	Graphite						PTFE (Teflon)				
39	Coupling	PTFE (Teflon)						PTFE (Teflon)				
40	Seal	Graphite						PTFE (Teflon)				
41	Seal	Plastic						Plastic				
42	Sealing wire	Sealing wire						Sealing wire				
43	Characteristic plate	AISI 304						AISI 304				
45	Plug	AISI 316						AISI 316				
46	Sealing disk	PTFE (Teflon)						PTFE (Teflon)				
		Silicone's rubber						Silicone's rubber				
		Fluorelastomer (Viton)						Fluorelastomer (Viton)				
47	Washer	AISI 316						AISI 316				
49	Coupling	Copper						Copper				
50	Limit	AISI 420						AISI 316				
51	Membrane	Fluorelastomer						Fluorelastomer (Viton)				
52	O-ring	Fluorelastomer						Fluorelastomer (Viton)				
FNPT ₁ x FNPT ₂		3/4" x 1 1/4" a 1" x 1 1/2"										
Class		300 lbs						300 lbs				
OPERATING CONDITIONS	PRESSURE IN bar	46,00	43,80	41,90	39,80	37,60	34,70	28,27	40,72	35,70	31,60	28,80
	MAX. TEMP. IN °C	120	200	250	300	350	400	426,67	120	200	300	450
	MIN. TEMP. IN °C	-29						-29				

(1) 3/4" FNPT x 1 1/4" FNPT in stainless steel (ASTM A351 CF8M)

(2) Maximum temperature EP, ES and CP 250°C / AP 400°C

(3) 3/4" FNPT x 1 1/4" FNPT in Stainless steel (AISI 304)

FNPT ₁ X FNPT ₂		3/4" x 1 1/4"				1" x 1 1/2"				
CONNECTIONS		Female thread NPT ASME B1.20.1								
API Orifice Letter		D-E				F				
do		16				20				
Ao		201				314				
H		320				370				
h ¹		112				129				
L ₁		80				85				
L ₂		65				80				
R		1/4"				1/4"				
Whitworth cylindrical female thread ISO 228/1 de 1978 (DIN-259)										
MODELO		EP	AP	ES	CP	EP	AP	ES	CP	
WEIGHT IN Kgs	CAST STEEL STAINLESS STEEL	5,65	5,01	5,22	5,42	7,50	6,70	6,97	7,17	
CODE	CAST STEEL 2002-485	300 lbs	8344D	83441D	83442D	83443D	8104F	81041F	81042F	81043F
		300 lbs	8342D	83421D	83422D	83423D	8102F	81021F	81022F	81023F
		300 lbs	8342D	83421D	83422D	83423D	8102F	81021F	81022F	81023F
		300 lbs	8342D	83421D	83422D	83423D	8102F	81021F	81022F	81023F
	300 lbs	8342D	83421D	83422D	83423D	8102F	81021F	81022F	81023F	
	300 lbs	8342D	83421D	83422D	83423D	8102F	81021F	81022F	81023F	
	300 lbs	8342D	83421D	83422D	83423D	8102F	81021F	81022F	81023F	
	300 lbs	8342D	83421D	83422D	83423D	8102F	81021F	81022F	81023F	



Recommended ranges of application.

Open and closed pressures in % of set pressure.

Set pressures and regulating ranges.

Coefficient of discharge.

Discharge capacity.

See brochure Model 486 in International System Units (SI).

Model 485 FNPT 3/4"x1 1/4" = Model 486 NPS - 3/4"x1 1/4"do = 16

Model 485 FNPT 1" x 1 1/2" = Model 486 NPS - 1" x 1 1/2"do = 20

VYC industrial, sa
Founded in 1914

www.vycindustrial.com

Avenc del Daví, 22 Pol. Ind. Can Petit 08227 TERRASSA (Barcelona) SPAIN

+34 93 735 76 90

+34 93 735 81 35

119

@info@vycindustrial.com

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ENGS189365/14