

Full lift safety valve with spring loading. (AIT)

Model 495



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 line with the "AD-MERKBLATT A2 Specifications sheet" and "Technical safety instructions for TRD-421 steam boilers".

In accordance with UNE 9-100-86 "Safety valves" (Steam boilers).

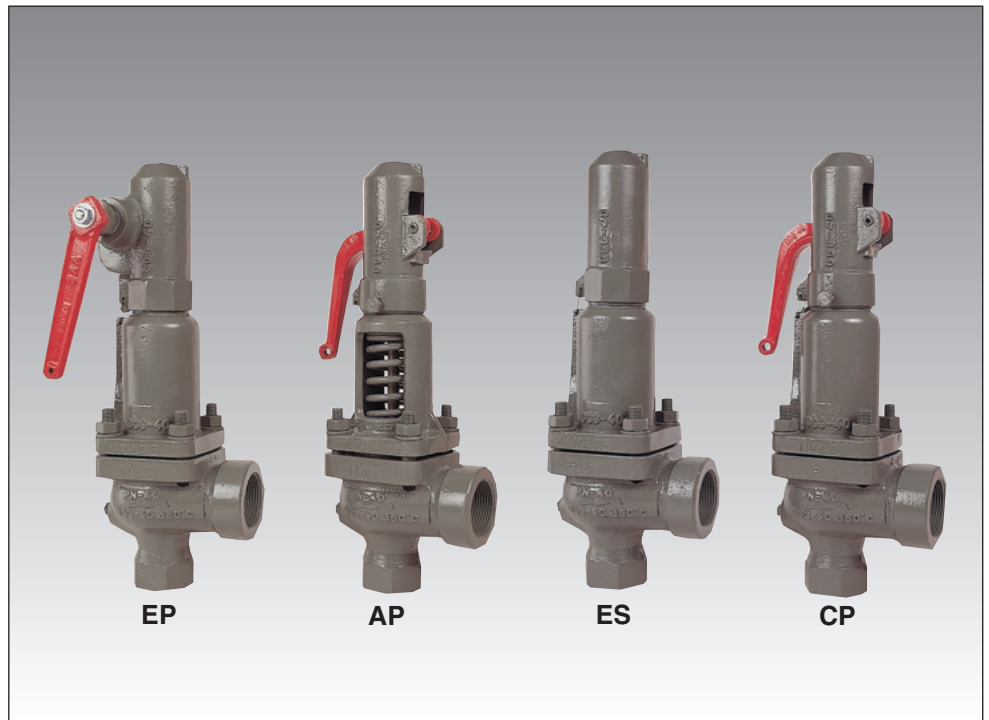
Component test stamp: TÜV Rheinland (German technical supervision authority).

Licence N.º:

PENDING ALLOCATION

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 DIN-3230 requirements. Page 3.
- 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.



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 (Vitón) seals, Silicone's rubber, PTFE (Teflón)... etc., achieving leakage levels less than

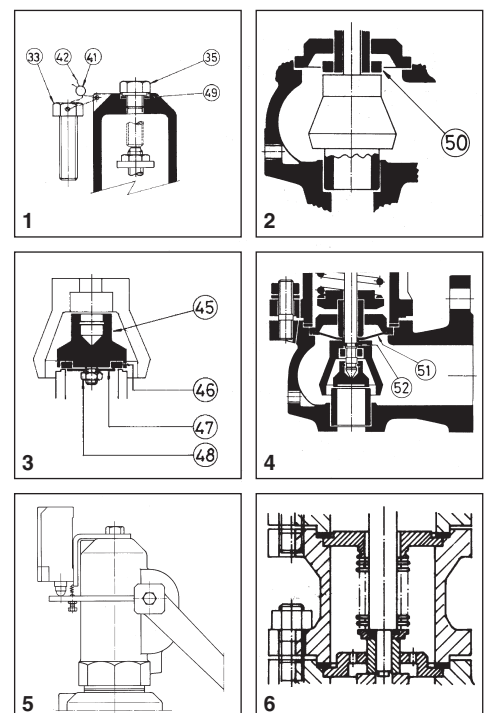
$$0,3 \times 10^{-3} \frac{\text{Pa cm}^3}{\text{sec.}}$$

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 VYC	
		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.



Nº. PIECE	PIECE	MATERIAL																			
		CAST IRON				NODULAR IRON				CAST STEEL				STAINLESS STEEL							
1	Body	Cast iron (DIN-0.6025 GG-25)				Nodular iron (DIN-0.7040 GGG-40)				Cast steel (DIN-1.0619.01 GS-C 25N)				Stainless steel (DIN-1.4408) (ASTM A351 CF8M)							
2	Closed bell	Cast iron (DIN-0.6025 GG-25)				Nodular iron (DIN-0.7040 GGG-40)				Nodular iron (DIN-0.7040 GGG-40)				Stainless steel (DIN-1.4408) (ASTM A351 CF8M)							
3	Open bell	Cast iron (DIN-0.6025 GG-25)				Nodular iron (DIN-0.7040 GGG-40)				Cast steel (DIN-1.0619.01 GS-C 25N)				Stainless steel (DIN-1.4408) (ASTM A351 CF8M)							
4, 5, 6	Hood	Nodular iron (DIN-0.7040 GGG-40)				Nodular iron (DIN-0.7040 GGG-40)				Nodular iron (DIN-0.7040 GGG-40)				Stainless steel (DIN-1.4408) (ASTM A351 CF8M)							
7	Elevator	Nodular iron (DIN-0.7040 GGG-40) (1)				Nodular iron (DIN-0.7040 GGG-40) (1)				Nodular iron (DIN-0.7040 GGG-40) (1)				Stainless steel (DIN-1.4408) (ASTM A351 CF8M)							
8	Cam	Nodular iron (DIN-0.7040 GGG-40) (1)				Nodular iron (DIN-0.7040 GGG-40) (1)				Nodular iron (DIN-0.7040 GGG-40) (1)				Stainless steel (DIN-1.4408) (ASTM A351 CF8M)							
9, 10	Lever	Nodular iron (DIN-0.7040 GGG-40)				Nodular iron (DIN-0.7040 GGG-40)				Nodular iron (DIN-0.7040 GGG-40)				Nodular iron (DIN-0.7040 GGG-40)							
11	Seating	Stainless steel (DIN-1.4028) (AISI-420)				Stainless steel (DIN-1.4028) (AISI-420)				Stainless steel (DIN-1.4028) (AISI-420)				Stainless steel (DIN-1.4542) (AISI-630) (17-4PH)							
12	Plug	Stainless steel (DIN-1.4028) (AISI-420)				Stainless steel (DIN-1.4028) (AISI-420)				Stainless steel (DIN-1.4028) (AISI-420)				Stainless steel (DIN-1.4542) (AISI-630) (17-4PH)							
13	Lead	Stainless steel (DIN-1.4028) (AISI-420)				Stainless steel (DIN-1.4028) (AISI-420)				Stainless steel (DIN-1.4028) (AISI-420)				Stainless steel (DIN-1.4401) (AISI-316)							
14	Spring press	Carbon steel (DIN-1.1191 Ck-45)				Carbon steel (DIN-1.1191 Ck-45)				Carbon steel (DIN-1.1191 Ck-45)				Stainless steel (DIN-1.4305) (AISI-303)							
15	Separator	Stainless steel (DIN-1.4028) (AISI-420)				Stainless steel (DIN-1.4028) (AISI-420)				Stainless steel (DIN-1.4028) (AISI-420)				Stainless steel (DIN-1.4401) (AISI-316)							
16	Rod	Stainless steel (DIN-1.4028) (AISI-420)				Stainless steel (DIN-1.4028) (AISI-420)				Stainless steel (DIN-1.4028) (AISI-420)				Stainless steel (DIN-1.4401) (AISI-316)							
17	Lever shaft	Carbon steel (DIN-1.1191 Ck-45)				Carbon steel (DIN-1.1191 Ck-45)				Carbon steel (DIN-1.1191 Ck-45)				Stainless steel (DIN-1.4305) (AISI-303)							
18	Guideon	Carbon steel (DIN-1.1231 Ck-67)				Carbon steel (DIN-1.1231 Ck-67)				Carbon steel (DIN-1.1231 Ck-67)				Stainless steel (DIN-1.4310) (AISI-301)							
19	Ring	Stainless steel (DIN-1.4028) (AISI-420)				Stainless steel (DIN-1.4028) (AISI-420)				Stainless steel (DIN-1.4028) (AISI-420)				Stainless steel (DIN-1.4401) (AISI-316)							
20, 21	Safety ring	Stainless steel (DIN-1.4300) (AISI-302)				Stainless steel (DIN-1.4300) (AISI-302)				Stainless steel (DIN-1.4300) (AISI-302)				Stainless steel (DIN-1.4300) (AISI-302)							
22	Spring	Vanadium-chrome steel (DIN-1.8159 50CrV4) (2)				Vanadium-chrome steel (DIN-1.8159 50CrV4) (2)				Vanadium-chrome steel (DIN-1.8159 50CrV4) (2)				Stainless steel (DIN-1.4300) (AISI-302)							
23	Gland	Carbon steel (DIN-1.1191 Ck-45)				Carbon steel (DIN-1.1191 Ck-45)				Carbon steel (DIN-1.1191 Ck-45)				Stainless steel (DIN-1.4305) (AISI-303)							
24	Hollow screw	Stainless steel (DIN-1.4305) (AISI-303)				Stainless steel (DIN-1.4305) (AISI-303)				Stainless steel (DIN-1.4305) (AISI-303)				Stainless steel (DIN-1.4305) (AISI-303)							
25	Hollow screw nut	Stainless steel (DIN-1.4305) (AISI-303)				Stainless steel (DIN-1.4305) (AISI-303)				Stainless steel (DIN-1.4305) (AISI-303)				Stainless steel (DIN-1.4305) (AISI-303)							
26	Buffer nut	Stainless steel (DIN-1.4305) (AISI-303)				Stainless steel (DIN-1.4305) (AISI-303)				Stainless steel (DIN-1.4305) (AISI-303)				Stainless steel (DIN-1.4305) (AISI-303)							
27	Rod check nut	Carbon steel (DIN-1.1141 Ck-15)				Carbon steel (DIN-1.1141 Ck-15)				Carbon steel (DIN-1.1141 Ck-15)				Stainless steel (DIN-1.4401) (AISI-316)							
28, 29, 48	Nut	Carbon steel (DIN-1.1141 Ck-15)				Carbon steel (DIN-1.1141 Ck-15)				Carbon steel (DIN-1.1141 Ck-15)				Stainless steel (DIN-1.4401) (AISI-316)							
30, 31	Washer	Carbon steel (DIN-1.1141 Ck-15)				Carbon steel (DIN-1.1141 Ck-15)				Carbon steel (DIN-1.1141 Ck-15)				Stainless steel (DIN-1.4401) (AISI-316)							
32	Stud	Carbon steel (DIN-1.1181 Ck-35)				Carbon steel (DIN-1.1181 Ck-35)				Carbon steel (DIN-1.1181 Ck-35)				Stainless steel (DIN-1.4401) (AISI-316)							
33, 34, 35	Screw	Carbon steel (DIN-1.1191 Ck-45)				Carbon steel (DIN-1.1191 Ck-45)				Carbon steel (DIN-1.1191 Ck-45)				Stainless steel (DIN-1.4401) (AISI-316)							
36	Cap	Carbon steel (DIN-1.1181 Ck-35)				Carbon steel (DIN-1.1181 Ck-35)				Carbon steel (DIN-1.1181 Ck-35)				Stainless steel (DIN-1.4401) (AISI-316)							
38	Coupling	Klingerit cardboard				Klingerit cardboard				Klingerit cardboard				PTFE (Teflon)							
39, 49	Coupling	Copper				Copper				Copper				PTFE (Teflon)							
40	Seal	Graphite				Graphite				Graphite				PTFE (Teflon)							
41	Seal	Lead				Lead				Lead				PTFE (Teflon)							
42	Sealing wire	Sealing wire				Sealing wire				Sealing wire				Sealing wire							
43	Characteristic plate	Aluminium				Aluminium				Aluminium				Aluminium							
44	Rivets	Carbon steel (DIN-1.1141 Ck-15)				Carbon steel (DIN-1.1141 Ck-15)				Carbon steel (DIN-1.1141 Ck-15)				Carbon steel (DIN-1.1141 Ck-15)							
45	Plug	Stainless steel (DIN-1.4401) (AISI-316)				Stainless steel (DIN-1.4401) (AISI-316)				Stainless steel (DIN-1.4401) (AISI-316)				Stainless steel (DIN-1.4401) (AISI-316)							
46	Sealing disk	PTFE (Teflon)				PTFE (Teflon)				PTFE (Teflon)				PTFE (Teflon)							
47	Washer	Silicone's rubber				Silicone's rubber				Silicone's rubber				Silicone's rubber							
50	Limiter	Fluorelastomer (Vitón)				Fluorelastomer (Vitón)				Fluorelastomer (Vitón)				Fluorelastomer (Vitón)							
51	Membrane	Stainless steel (DIN-1.4401) (AISI-316)				Stainless steel (DIN-1.4401) (AISI-316)				Stainless steel (DIN-1.4401) (AISI-316)				Stainless steel (DIN-1.4401) (AISI-316)							
52	O-ring	Stainless steel (DIN-1.4028) (AISI-420)				Stainless steel (DIN-1.4028) (AISI-420)				Stainless steel (DIN-1.4028) (AISI-420)				Stainless steel (DIN-1.4028) (AISI-420)							
		Fluorelastomer (Vitón)				Fluorelastomer (Vitón)				Fluorelastomer (Vitón)				Fluorelastomer (Vitón)							
	$R_1 \times R_2$	$3/4" \times 1 1/4"$ to $1" \times 1 1/2"$																			
	PN	16																			
OPERATING CONDITIONS	PRESSURE IN bar	16	13	13	13	40	35	32	28	24	40	35	32	28	24	21	20	40	34	32	29
	MAX. TEMP. IN °C	120	200	250	300	120	200	250	300	350	120	200	250	300	350	400	450	120	200	300	400
	MIN. TEMP. IN °C	-10				-10				-10				-60							

(1) R.3/4 x 1 1/4 in stainless steel (DIN-1.4408) (ASTM A351 CF8M).

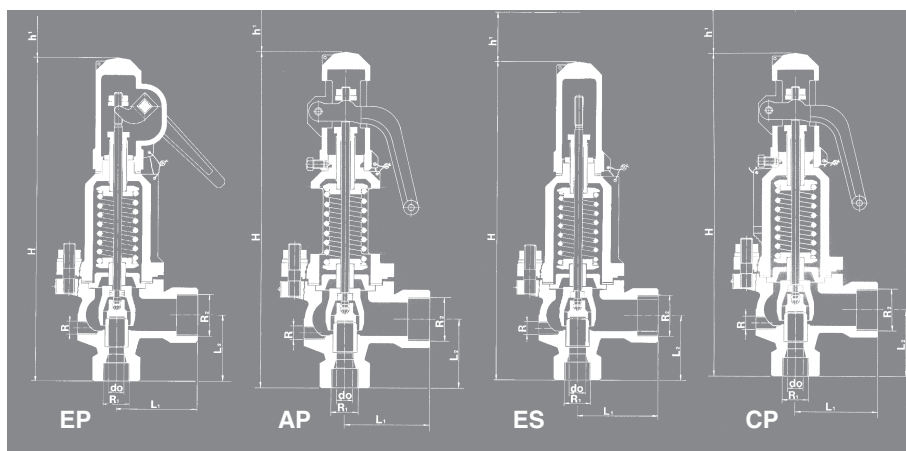
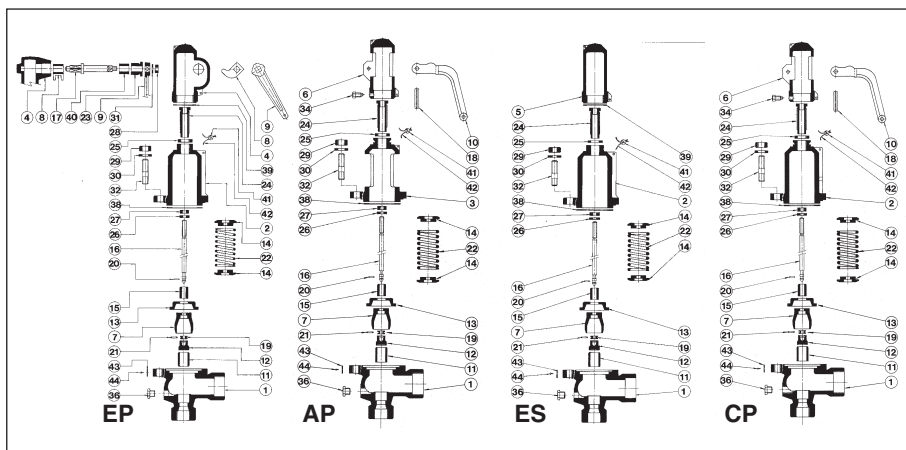
(2) Spring steel (DIN-1.0600 GRADE B) for wire spring Ø < 8 mm. Maximum temperature 250°C.

$R_1 \times R_2$	$3/4" \times 1 1/4"$	$1" \times 1 1/2"$						
CONNECTIONS	Whitworth cylindrical female thread ISO 228/1 de 1978 (DIN-259)							
do	16	20						
$A_o = \frac{\pi \cdot do^2}{4}$	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)							
MODEL	EP	AP	ES	CP				
WEIGHT IN Kgs.								
CAST IRON	5,24	4,64	4,84	5,04	6,60	5,88	6,12	6,32
NODULAR IRON	5,97	5,31	5,53	5,73	7,47	6,68	6,94	7,14
CAST STEEL	5,65	5,01	5,22	5,42	7,50	6,70	6,97	7,17
STAINLESS STEEL								
CODE								
CAST IRON 2002-495.	8346	83461	83462	83463	8106	81061	81062	81063
NODULAR IRON 2002-495.	8346	83461	83462	83463	8106	81061	81062	81063
CAST STEEL 2002-495.	8344	83441	83442	83443	8104	81041	81042	81043
STAINLESS STEEL 2002-495.	8342	83421	83422	83423	8102	81021	81022	81023

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 496.

Model 495 R.3/4" x 1 1/4" = Model 496 DN - 20x32. do = 16.
 Model 495 R. 1" x 1 1/2" = Model 496 DN - 25x40. do = 20.



Informative brochure, without obligation and subject to our General Sales Conditions.

VYC industrial, sa 

Founded in 1914

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