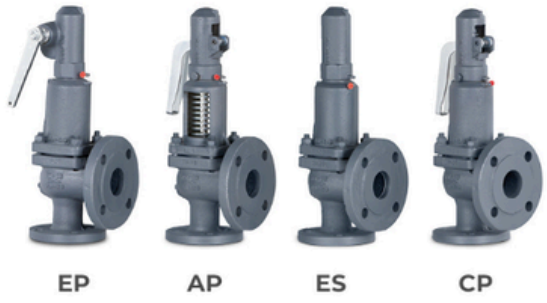
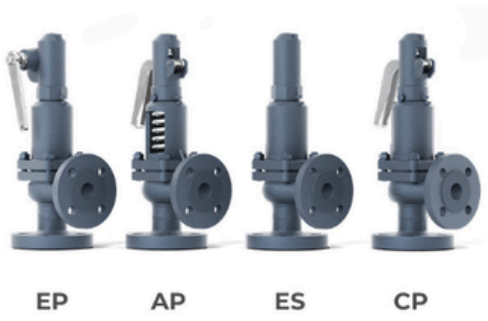
Pojistné ventily II. - model 494 a 594



Mod. 494 EN



Mod. 594 EN

Specifikace:	Mod. 494	Mod. 594
Teplotní rozsah	-60 °C / +450 °C	-60 °C / +450 °C
Maximální tlak	40 bar	95 bar
Použití	plyny, pára, kapaliny	plyny, pára, kapaliny
Rozměry	DN25 x 25 to DN200 x 200	DN-25 x 25 to DN-50 x 50
Materiál	Litina	Uhlíková ocel
	Tvárná litina	Nerezová ocel
	Uhlíková ocel	
	Nerezová ocel	

— Průtok v úhlu 90°.
— Aktivace pomocí šroubové pružiny s přímým působením.
— Jednoduchá konstrukce zajišťující minimální nároky na údržbu.
— Materiály pečlivě vybrané s ohledem na odolnost proti korozi. S výjimkou podložek a spojovacích prvků neobsahují ventily neželezné kovy.
— Vnitřní část tělesa navržena tak, aby zajišťovala příznivý průtokový profil.
— Upravené a vyvážené těsnicí plochy zajišťující vynikající těsnost, která dokonce překračuje požadavky normy EN 12266-1.
— Vysoká vypouštěcí kapacita. U kapalin odpovídá průřezům běžným u proporcionálních pojistných ventilů.
— Vybaveno vypouštěcími šrouby pro odvod kondenzátu.
— Samostředicí kuželka.
— Závitové vřeteno s pákou umožňující okamžitou ruční aktivaci.
— Zvedací mechanismus nezávislý na těsnění; navržen tak, aby usnadnil prudké otevření při expanzi páry a u jakéhokoli média zaručil naprostou přesnost otevírání i zavírání.
— Všechny ventily jsou dodávány nastavené a zaplombované na požadovaný tlak (při simulaci provozních podmínek) a procházejí přísným testováním.
— Všechny součásti jsou číslovány, evidovány a kontrolovány. Na základě předchozího požadavku jsou k ventilu přiloženy certifikáty o materiálu, odlitku, zkouškách a výkonnosti spolu s návodem k obsluze v souladu se směrnicí P.E.D. 2014/68/EU.

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Czech Republic

Normal safety valve. (AN)

Mod. 494 | EN

EP

AP

ES

CP

Operation

Thevalve 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, at the first proportional to the pressure increase, and after instantly and totally

Specifications

Size

- DN25 x 25 to DN200 x 200

Temperature range

- -60 °C to +450 °C

Applications

- Gas, steam and liquid

Materials

- Cast iron
- Nodular iron
- Carbon steel
- Stainless steel

Maximum pressure

- Up to 40 bar

Regulation

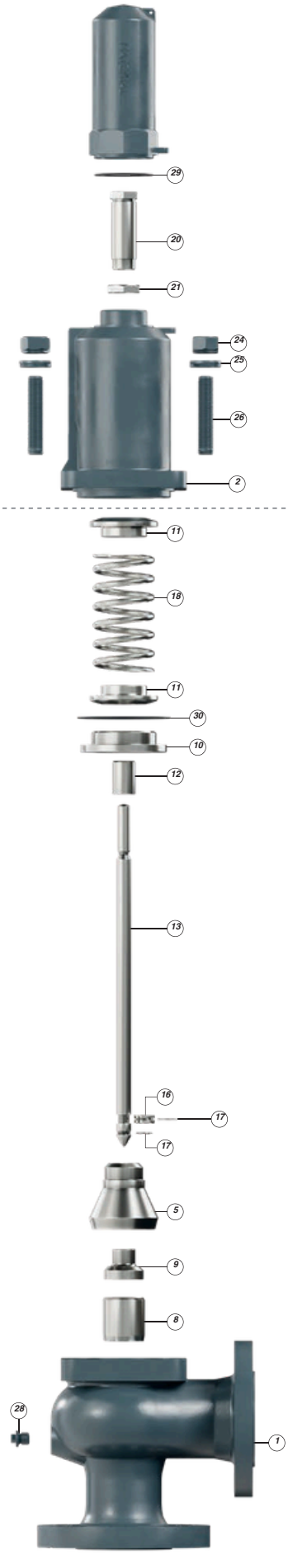
- PED2014/68/EU
- UNE-EN ISO 4126-1
- UNE-EN 12516-2
- UNE-EN 1092-1
- UNE-EN 1092-2
- UNE-EN 12266-1

Certification

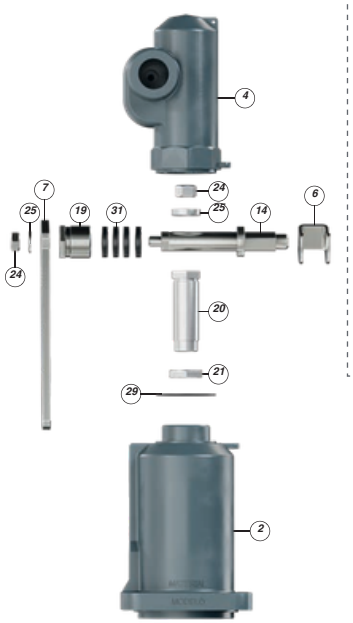
N°. PIECE	PIECE	MATERIAL			
		CAST IRON	NODULAR IRON	CARBON STEEL	STAINLESS STEEL
1	Body	Cast iron (EN-5.1301)	Nodular iron (EN-5.3106)	Cast steel (EN-1.0619+N)	Stainless steel (EN-1.4408)
2	Closed bell	Cast iron (EN-5.1301)	Nodular iron (EN-5.3106)	Nodular iron (EN-5.3106)	Stainless steel (EN-1.4408)
3	Open bell	Cast iron (EN-5.1301)	Nodular iron (EN-5.3106)	Cast steel (EN-1.0619+N)	Stainless steel (EN-1.4408)
4	Hood	Nodular iron (EN-5.3106)	Nodular iron (EN-5.3106)	Nodular iron (EN-5.3106)	Stainless steel (EN-1.4408)
5	Elevator	Nodular iron (EN-5.3106)(1)	Nodular iron (EN-5.3106)(1)	Nodular iron (EN-5.3106)(1)	Stainless steel (EN-1.4408)(5)
6	Cam	Carbon steel (EN-1.0037 St-37.2)(4)	Carbon steel (EN-1.0037 St-37.2)(4)	Carbon steel (EN-1.0037 St-37.2)(4)	Stainless steel (EN-1.4301)
7	Lever	Carbon steel (EN-1.0037 St-37.2)	Carbon steel (EN-1.0037 St-37.2)	Carbon steel (EN-1.0037 St-37.2)	Carbon steel (EN-1.0037 St-37.2)
8	Seating	Stainless steel (EN-1.4028)	Stainless steel (EN-1.4028)	Stainless steel (EN-1.4028)	Stainless steel (EN-1.4542)
9	Plug	Stainless steel (EN-1.4028)	Stainless steel (EN-1.4028)	Stainless steel (EN-1.4028)	Stainless steel (EN-1.4542)
10	Lead	Stainless steel (EN-1.4028)	Stainless steel (EN-1.4028)	Stainless steel (EN-1.4028)	Stainless steel (EN-1.4401)
11	Spring press	Carbon steel (EN-1.1191)	Carbon steel (EN-1.1191)	Carbon steel (EN-1.1191)	Stainless steel (EN-1.4305)
12	Separator	Stainless steel (EN-1.4028)	Stainless steel (EN-1.4028)	Stainless steel (EN-1.4028)	Stainless steel (EN-1.4401)
13	Rod	Stainless steel (EN-1.4028)	Stainless steel (EN-1.4028)	Stainless steel (EN-1.4028)	Stainless steel (EN-1.4401)
14	Lever shaft	Carbon steel (EN-1.1191)	Carbon steel (EN-1.1191)	Carbon steel (EN-1.1191)	Stainless steel (EN-1.4305)
15	Gudgeon	Carbon steel (EN-1.1231)	Carbon steel (EN-1.1231)	Carbon steel (EN-1.1231)	Stainless steel (EN-1.4310)
16	Ring	Stainless steel (EN-1.4028)	Stainless steel (EN-1.4028)	Stainless steel (EN-1.4028)	Stainless steel (EN-1.4401)
17	Safety ring	Stainless steel (EN-1.4310)	Stainless steel (EN-1.4310)	Stainless steel (EN-1.4310)	Stainless steel (EN-1.4310)
18	Spring	Vanadium-chrome steel (EN-1.8159)(2)	Vanadium-chrome steel (EN-1.8159) (2)	Vanadium-chrome steel (EN-1.8159) (2)	Stainless steel (EN-1.4310) (3)
19	Gland	Carbon steel (EN-1.1191)	Carbon steel (EN-1.1191)	Carbon steel (EN-1.1191)	Stainless steel (EN-1.4305)
20	Hollow screw	Stainless steel (EN-1.4305)	Stainless steel (EN-1.4305)	Stainless steel (EN-1.4305)	Stainless steel (EN-1.4305)
21	Hollow screw nut	Stainless steel (EN-1.4305)	Stainless steel (EN-1.4305)	Stainless steel (EN-1.4305)	Stainless steel (EN-1.4305)
22	Buffer nut	Stainless steel (EN-1.4305)	Stainless steel (EN-1.4305)	Stainless steel (EN-1.4305)	Stainless steel (EN-1.4305)
23	Rod check nut	Carbon steel (EN-1.1141)	Carbon steel (EN-1.1141)	Carbon steel (EN-1.1141)	Stainless steel (EN-1.4401)
24	Nut	Carbon steel (EN-1.1141)	Carbon steel (EN-1.1141)	Carbon steel (EN-1.1141)	Stainless steel (EN-1.4401)
25	Washer	Carbon steel (EN-1.1141)	Carbon steel (EN-1.1141)	Carbon steel (EN-1.1141)	Stainless steel (EN-1.4401)
26	Stud	Carbon steel (EN-1.1181)	Carbon steel (EN-1.1181)	Carbon steel (EN-1.1181)	Stainless steel (EN-1.4401)
27	Screw	Carbon steel (EN-1.1191)	Carbon steel (EN-1.1191)	Carbon steel (EN-1.1191)	Stainless steel (EN-1.4401)
28	Cap	Carbon steel (EN-1.1181)	Carbon steel (EN-1.1181)	Carbon steel (EN-1.1181)	Stainless steel (EN-1.4401)
29	Coupling	Graphite	Graphite	Graphite	PTFE (Teflon)
30	Coupling	PTFE (Teflon)	PTFE (Teflon)	PTFE (Teflon)	PTFE (Teflon)
31	Seal	Graphite	Graphite	Graphite	PTFE (Teflon)
DN1 x DN2		20 x 25 to 200 x 200			
PN		16	40	40	40
OPERATING CONDITIONS	PS [bar]	16 14 13 12 11 10	40 39 37 35 32 28	40 37 35 33 30 28 26 24 15	40 38 34 30 28 26 25 24
	MAX. TEMP. [°C]	120 150 180 230 250 300	120 150 200 250 300 350	50 100 150 200 250 300 350 400 450 50	100 150 200 250 300 350 400
	MIN. TEMP. [°C]	-10			-60

(1) DN-25x25 in stainless steel (EN-1.4408).
(2) Spring steel (EN-10270-1-SH) for wire spring Ø < 10 mm. Maximum temperature EP, ES and CP 250 °C / AP 400 °C.
(3) Vanadium chrome steel (EN-1.8159) for wire spring Ø > 10 mm.
(4) DN-25 x 25 in stainless steel (EN-1.4301).
(5) DN-32 x 32 to DN-65x65 in stainless steel (EN-1.4401).

Isometric view ES

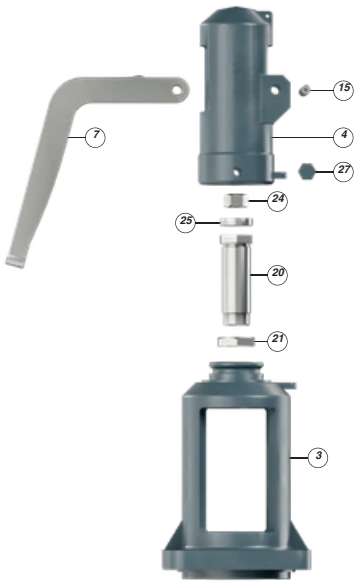


Exploded view ES

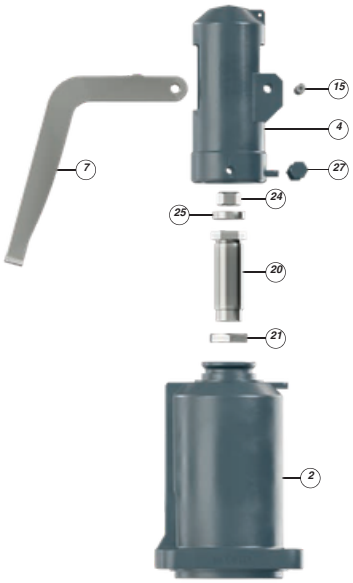


EP Hood exploded view

Lever arrangement



AP Hood exploded view



CP Hood exploded view

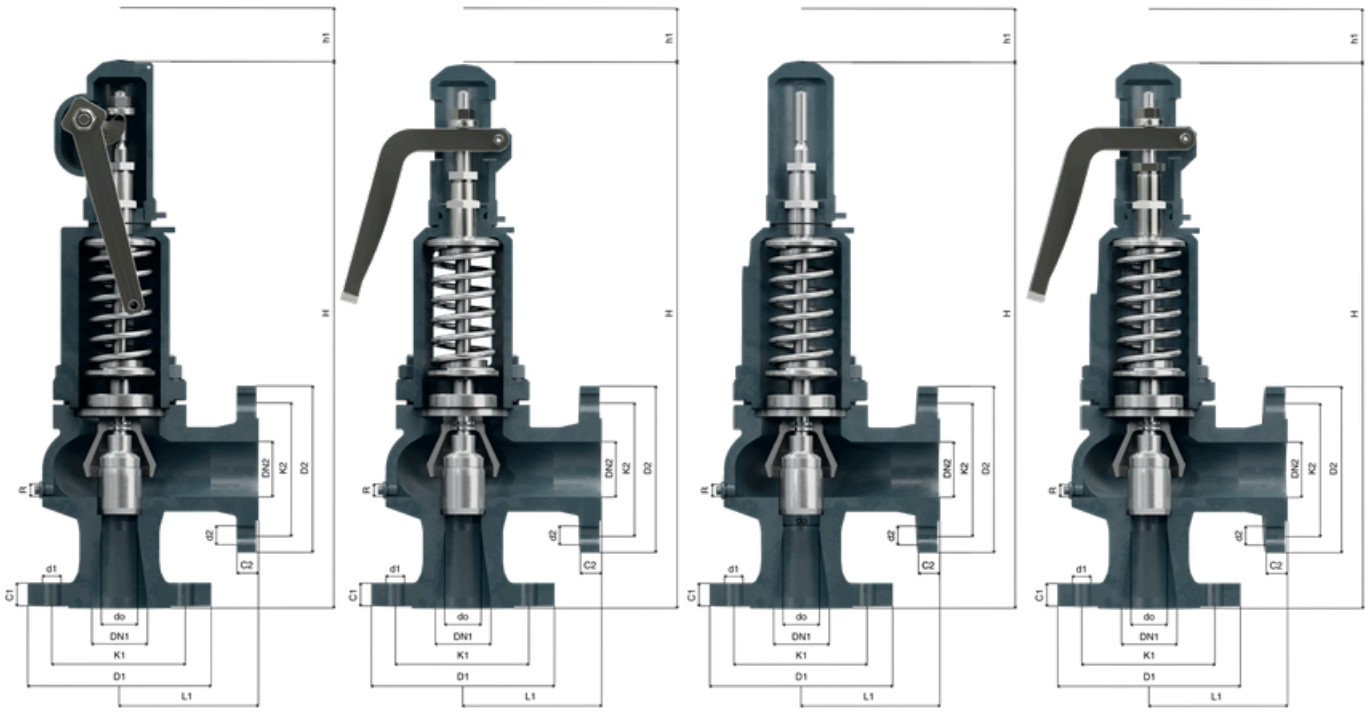
DIMMENSIONS

DN1 X DN2			25 x 25	32 x 32	40 x 40	50 x 50	65 x 65	80 x 80	100 x 100	125 x 125	150 x 150	200 x 200
do [mm]			16	20	25	32	40	50	63	77	93	110
Ao: $\frac{\pi \cdot do2}{4}$ [mm]			201	314	491	804	1257	1964	3117	4657	6793	9503
H [mm]			350	390	420	495	550	655	705	810	850	990
h1 [mm]			112	129	129	148	148	191	191	191	191	223
L1 [mm]			100	105	115	125	145	155	175	200	225	250
L2 [mm]			100	105	115	125	145	155	175	200	225	250
R			1/4"	1/4"	1/4"	1/4"	3/8"	3/8"	3/8"	1/2"	1/2"	1/2"
			Female Threads Gas Whitworth Cylindrical ISO 228/1 (DIN-259)									
INLET FLANGE	PN-10/16 EN-1092-2 (2)	D1 [mm]	115	140	150	165	185	200	220	250	285	340
		K1 [mm]	85	100	110	125	145	160	180	210	240	295
		d1 [mm]	14	19	19	19	19	19	19	19	23	23
		C1 [mm]	16	18	18	20	20	22	24	26	26	26
		SCREWS NR.	4	4	4	4	4	8	8	8	8	8
	EN-1092-2 EN-1092-1 PN-25/40 (3)	D1 [mm]	115	140	150	165	185	200	235	270	300	360
		K1[mm]	85	100	110	125	145	160	190	220	250	310
		d1[mm]	14	19(18)*	19(18)*	19(18)*	19(18)*	19(18)*	23(22)*	28(26)*	28(26)*	28(26)*
		C1[mm]	18(16)•	18	18(20)•	20	22	24	24	26	28	30
		SCREWS NR.	4	4	4	4	8	8	8	8	8	12
OUTLET FLANGE	EN-1092-2 EN-1092-1 PN-10/16 (3)	D1 [mm]	115	140	150	165	185	200	220	250	285	340
		K1 [mm]	85	100	110	125	145	160	180	210	240	295
		d1 [mm]	14	19(18)*	19(18)*	19(18)*	19(18)*	19(18)*	19(18)*	19(18)*	23(22)*	23(22)*
		C1 [mm]	16	18	18	20	20(18)*	22(20)•*	24(22)•(20)*	26(22)•*	26(24)•(22)*	26(24)•*
		SCREWS NR.	4	4	4	4	4	8	8	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	EP	AP	ES	CP	EP	AP	ES	CP	EP	AP	ES	CP
WEIGHT [kg]	CAST IRON	8,0	7,4	7,6	7,8	9,6	8,9	9,1	9,4	13,9	12,8	13,2	13,4	20,3	18,7	19,3	19,7	26,7	24,7	25,3	25,8	39,5	36,5	37,5	38,1	55,5	51,3	52,7	53,3	82,2	76,0	78,0	78,6	94,5	88,6	92,8	93,3	138,1	130,8	135,1	136,4
	NODUALR IRON	8,7	8,1	8,3	8,5	10,5	9,7	9,9	10,2	15,1	14,0	14,4	14,6	22,1	20,5	21,0	21,4	29,1	26,9	27,7	28,1	43,1	39,8	40,9	41,5	60,5	56,0	57,5	58,1	89,6	82,9	85,2	85,8	97,0	91,2	95,4	95,8	173,5	136,3	140,4	141,8
	CARBON STEEL STAINLESS STEEL	8,5	7,9	8,1	8,3	10,6	9,8	10,1	10,3	14,9	13,8	14,1	14,4	21,3	19,7	20,2	20,6	28,7	26,5	27,2	27,7	41,5	38,4	39,4	40,0	58,5	54,1	55,6	56,2	87,2	80,6	82,8	83,4	104,4	97,9	102,7	103,1	152,1	144,5	149,3	180,7
CODE	CAST IRON 2002-494.	5106	51061	51062	51063	5146	51461	51462	51463	5126	51261	51262	51263	5206	52061	52062	52063	5226	52261	52262	52263	5306	53061	53062	53063	5406	54061	54062	54063	5506	55061	55062	55063	5606	56061	56062	56063	5806	58061	58062	58063
	NODULAR IRON 2002-494.	8106	81061	81062	81063	8146	81461	81462	81463	8126	81261	81262	81263	8206	82061	82062	82063	8226	82261	82262	82263	8306	83061	83062	83063	8406	84061	84062	84063	8506	85061	85062	85063	8606	86061	86062	86063	8806	88061	88062	88063
	CARBON STEEL 2002-494.	8104	81041	81042	81043	8144	81441	81442	81443	8124	81241	81242	81243	8204	82041	82042	82043	8224	82241	82242	82243	8304	83041	83042	83043	8404	84041	84042	84043	8504	85041	85042	85043	8604	86041	86042	86043	8804	88041	88042	88043
	STAINLESS STEEL 2002-494.	8102	81021	81022	81023	8142	81421	81422	81423	8122	81221	81222	81223	8202	82021	82022	82023	8222	82221	82222	82223	8302	83021	83022	83023	8402	84021	84022	84023	8402	84021	84022	84023	8602	86021	86022	86023	8802	88021	88022	88023

(3) DN-200x200 PN-25. (1) From DN-200x200 PN-10.

* Carbon steel (EN-1.0619) and Stainless steel (EN-1.4408).



EP AP ES CP

PRESSURES AND SPRING REGULATION RANGES

DN1 X DN2			25 x 25	32 x 32	40 x 40	50 x 50	65 x 65	80 x 80	100 x 100	125 x 125	150 x 150	200x200
REGULATION PRESSURE [bar]	**MAXIMUM** (LIQUIDS AND GASES)	PN-16	16	16	16	16	16	16	16	16	12,5	10
		PN-40	40	40	40	32	32	32	25	20	12,5	10
	MAXIMUM (SATURATED STEAM)	PN-16	13	13	13	13	13	13	13	13	12,5	10
		PN-40	32	32	30	24	22	24	20	18	12,5	10
	MINIMUM	STEAM AND GASES	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,5
		LIQUIDS	0,2	0,2	0,2	0,2	0,2	0,2	0,2	0,2	0,2	0,2
SPRING REGULATION RANGES [bar]	0,20 to 0,68	CODE	**56210**	**56226**	**56242**	**56258**	**56273**	**56288**	**56303**	**56317**	56500	56511
			56390	56406	56422	56438	56453	56468	56483	56497		
	0,66 to 1,00	CODE	**56211**	**56227**	**56243**	**56259**	**56274**	**56289**	**56304**	56318	56501	56512
			56391	56407	56423	56439	56454	56469	56484			
	0,95 to 1,40	CODE	**56212**	**56228**	**56244**	**56260**	**56275**	**56290**	**56305**	56319	56502	56513
			56392	56408	56424	56440	56455	56470	56485			
	1,30 to 1,90	CODE	**56213**	**56229**	**56245**	**56261**	**56276**	**56291**	**56306**	56320	56503	56514
			56393	56409	56425	56441	56456	56471	56486			
	1,80 to 2,60	CODE	**56214**	**56230**	**56246**	**56262**	**56277**	**56292**	56307	56321	56504	56515
			56394	56410	56426	56442	56457	56472				
	2,50 to 3,60	CODE	**56215**	**56231**	**56247**	**56263**	**56278**	**56293**	56308	56322	56505	56516
			56395	56411	56427	56443	56458	56473				
	3,50 to 5,00	CODE	**56216**	**56232**	**56248**	**56264**	**56279**	56294	56309	56323	56506	56517
			56396	56412	56428	56444	56459					
	4,80 to 6,30	CODE	**56217**	**56233**	**56249**	**56265**	**56280**	56295	56310	56324	56507	56518
			56397	56413	56429	56445	56460					
	6,00 to 8,00	CODE	**56218**	**56234**	**56250**	**56266**	**56281**	56296	56311	56325	56508	56519
			56398	56414	56430	56446	56461					
	7,50 to 10,00	CODE	**56219**	**56235**	**56251**	**56267**	**56282**	56297	56312	56326	56509	56520
			56399	56415	56431	56447	56462					
	9,50 to 12,50	CODE	**56220**	**56236**	**56252**	**56268**	56283	56298	56313	56327	56510	
			56400	56416	56432	56448						
	12,00 to 16,00	CODE	**56221**	**56237**	**56253**	**56269**	56284	56299	56314	56328		
			56401	56417	56433	56449						
	15,00 to 20,00	CODE	**56222**	**56238**	**56254**	56270	56285	56300	56315	56329		
			56402	56418	56434							
	18,00 to 25,00	CODE	**56223**	**56239**	**56255**	56271	56286	56301	56316			
			56403	56419	56435							
	23,00 to 32,00	CODE	**56224**	**56240**	**56256**	56272	56287	56302				
			56404	56420	56436							
	30,00 to 40,00	CODE	**56225**	**56241**	**56257**							
			56405	56421	56437							

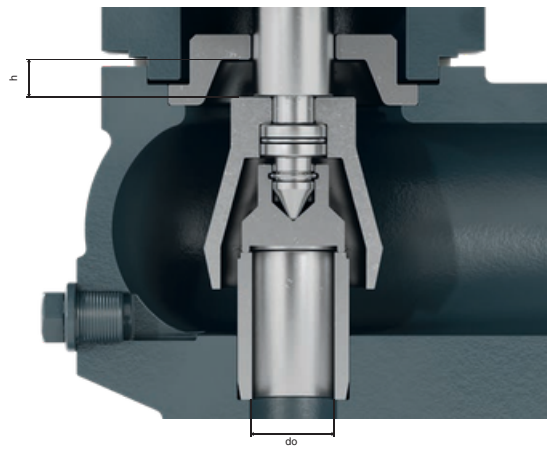
Spring steel (EN-10270-1-SH). Maximum temperature for models EP, ES and CP 250 °C / AP 400 °C.
Stainless steel (EN-1.4310).
Chrome vanadium steel (EN-1.8159).

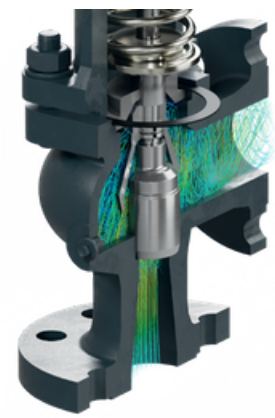
RECOMMENDED RANGES OF APPLICATION						
MODEL			EP	AP(1)	ES	CP(1)
FLUID		SATURATED STEAM	*	*		*
		GASES	*		*	
		LIQUIDS	*		*	
PERMISSIBLE BACK PRESSURE IN % OF SET PRESSURE	INTERNAL OR GENERATED	SATURATED STEAM GASES	15			
		LIQUIDS	—			
	EXTERNAL VARIABLE (1)	SATURATED STEAM	5			
		LIQUIDS	—			
	EXTERNAL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

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

OPENING, OVERPRESSURE AND RESET PRESSURES			
FLUID	OPENING PRESSURE	OVERPRESSURE	RESET PRESSURE
SATURATED STEAM AND GASES	The higher of ± 3% or ± 0,1 bar	The higher of +10% o +0,1 bar	The higher of -15% o -0,3 bar
LIQUIDS	The higher of ± 3% o ± 0,1 bar	The higher of +10% o +0,1 bar	The higher of -20% o -0,6 bar

DISCHARGE COEFFICIENT										
DN1 x DN2	25 x 25	32 x 32	40 x 40	50 x 50	65 x 65	80 x 80	100 x 100	125 x 125	150 x 150	200 x 200
do [mm]	16	20	25	32	40	50	63	77	93	110
h [mm]	2,0	2,0	2,5	3,5	5,3	5,0	6,5	8,0	9,5	11,0
h/d0 [mm]	0,13	0,10	0,10	0,11	0,13	0,10	0,10	0,10	0,10	0,10
STEAM AND GASES [Kdr]	0,30									
LIQUIDS [Kdr]	0,30									





Fluid dynamics

DISCHARGE CAPACITIES

DN1 x DN2	25 x 25			32 x 32			40 x 40			50 x 50			65 x 65			80 x 80			100 x 100			125 x 125			150 x 150			200 x 200		
d0 [mm]	16			20			25			32			40			50			63			77			93			110		
$A0=\frac{\pi \cdot do^2}{4}$ [mm²]	201			314			491			804			1257			1964			3117			4657			6793			9503		
p [bar]	I	II	III	I	II	III	I	II	III	I	II	III	I	II	III	I	II	III	I	II	III	I	II	III	I	II	III	I	II	III
0,2			1403			2192			3426			5612			8769			13702			21754			32496			47404			66319
0,5	45	57	1984	71	88	3100	110	138	4844	181	226	7937	282	353	12402	441	552	19378	701	876	30764	1047	1309	45957	1527	1909	67040	2136	2671	93789
1,0	59	76	2687	92	118	4198	144	185	6559	237	303	10747	370	473	16792	577	740	26238	917	1174	41655	1370	1754	62225	1998	2559	90772	2795	3580	126991
1,5	74	96	3291	115	149	5142	180	233	8034	295	382	13162	460	597	20566	719	933	32135	1142	1482	51017	1706	2214	76210	2489	3229	111173	3482	4518	155531
2,0	88	115	3800	138	180	5937	215	282	9276	352	462	15199	551	721	23748	860	1127	37106	1366	1790	58909	2040	2673	88000	2976	3900	128371	4164	5456	179592
2,5	102	135	4248	160	211	6638	250	330	10371	410	541	16992	640	845	26551	1000	1321	41486	1588	2097	65862	2373	3133	98387	3461	4570	143523	4842	6393	200790
3,0	117	155	4654	182	242	7271	285	379	11361	467	620	18614	730	969	29085	1140	1515	45445	1810	2405	72149	2703	3592	107778	3944	5240	157222	5517	7331	219954
3,5	131	175	5026	205	273	7854	320	427	12272	524	700	20106	818	1093	31415	1279	1708	49086	2030	2712	77930	3033	4052	116413	4424	5910	169819	6190	8269	237578
4,0	145	195	5373	227	304	8396	354	476	13119	581	779	21494	907	1217	33584	1417	1902	52476	2250	3020	83310	3361	4511	124451	4904	6581	181544	6860	9206	253982
4,5	159	215	5699	249	335	8905	389	524	13915	637	858	22798	996	1341	35622	1555	2096	55659	2470	3327	88364	3689	4970	132000	5381	7251	192557	7529	10144	269388
5,0	173	234	6008	271	366	9387	423	572	14667	694	938	24031	1084	1465	37548	1693	2290	58669	2688	3635	93144	4016	5430	139140	5858	7921	202973	8195	11082	283960
6,0	202	274	6581	315	428	10283	492	669	16067	806	1097	26325	1259	1713	41132	1968	2677	64269	3124	4250	102034	4667	6349	152421	6808	9261	222346	9525	12957	311063
7,0	230	314	7108	359	490	11107	560	766	17355	918	1255	28434	1435	1961	44428	2242	3065	69419	3559	4865	110209	5316	7268	164633	7755	10602	240161	10850	14832	335986
8,0	258	353	7599	402	552	11874	629	863	18553	1030	1414	30397	1609	2209	47495	2515	3452	74212	3992	5480	117818	5964	8187	176000	8700	11942	256742	12171	16708	359184
9,0	285	393	8060	446	614	12594	697	960	19678	1142	1573	32241	1784	2457	50377	2787	3839	78713	4425	6095	124965	6610	9106	186676	9642	13283	272317	13490	18583	380972
10,0	313	433	8496	489	676	13275	765	1057	20743	1253	1731	33985	1958	2705	53102	3059	4227	82971	4857	6711	131725	7255	10025	196774	10583	14623	287047	14806	20458	401580
12,0	369	512	9307	576	800	14542	901	1250	22723	1475	2049	37229	2305	3201	58170	3602	5002	90890	5719	7941	144297	8543	11862	215555	12462	17304	314444			
14,0	424	592	10053	663	924	15708	1036	1444	24543	1697	2366	40212	2652	3697	62831	4144	5777	98173	6579	9171	155859	9828	13700	232826						
16,0	480	671	10747	750	1048	16792	1171	1638	26238	1919	2684	42988	2999	4193	67169	4686	6552	104951	7439	10401	166620	11113	15538	248902						
18,0	535	750	11399	836	1172	17811	1307	1832	27829	2141	3001	45596	3346	4689	71243	5228	7327	111317	8299	11632	176728	12398	17376	264000						
20,0	591	830	12015	923	1296	18774	1442	2025	29335	2363	3318	48062	3693	5185	75097	5770	8102	117339	9160	12862	186287		19214	278281						
22,0	646	909	12602	1010	1420	19691	1578	2219	30767	2585	3636	50408	4040	5681	78762	6312	8876	123066	10021	14092	195380									
24,0	702	988	13162	1097	1544	20566	1714	2413	32135	2808	3953	52649		6177	82264	6855	9651	128538		15323	204067									
26,0	758	1068	13700	1184	1668	21406	1850	2607	33447		4271	54799		6673	85624		10426	133787		16553	212400									
28,0	813	1147	14217	1271	1792	22214	1986	2800	34709		4588	56868		7169	88856		11201	138837												
30,0	869	1226	14716	1358	1916	22994	2122	2994	35928		4905	58864		7665	91975		11976	143710												
32,0	925	1306	15199	1446	2040	23748		3188	37106		5223	60794		8161	94991		12751	148423												
34,0		1385	15666		2164	24479		3382	38248																					
36,0		1464	16120		2288	25188		3575	39357																					
38,0		1544	16562		2412	25878		3769	40435																					
40,0		1363	16992		2130	26551		3328	41486																					

I- Saturated steam [kg/h].

II- Air to 0 °C and 1.013 bar [Nm3/h].

III- Water to 20 °C [l/h].

For other, not so dense liquids, other than water at 20 °C apply:

$$V_L = \sqrt{\frac{\varrho_A}{\varrho_L}} \cdot V_A \text{ Ó } V_A = V_L \cdot \sqrt{\frac{\varrho_L}{\varrho_A}}$$

V_A = Water flow according to table.
V_L = Liquid flow.
ϱ_A = Water density at a 20 °C. (ϱ_A = 998 kg/m³)
ϱ_L = Liquid density.

ATTENTION: Flow rates according to UNE EN ISO 4126-7 with 10% overpressure.

Depending on demand

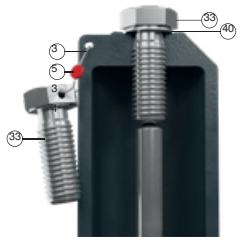
1.- Blocking screw which facilitates hydrostatic testing of the container which to be protected.
2.- Rapid limiter to reduce the coefficient of discharge.
3.- Fluorelastomer (Viton) seals, Silicone's rubber, PTFE (Teflon)... etc., achieving leakage levels less than:0,3 x 10^{-3} $\frac{Pa\ cm^3}{seg.}$

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

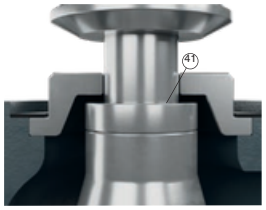
TEMPERATURE RANGE OF THE SEALS [°C]			
SEALS		MINIMUM	MAXIMUM
SILICONE'S RUBBER	S	-60	200
FLUORELASTOMER (Viton)	V	-20	200
PTFE (Teflon)	T	-200	260

4.- Flourelastomer (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.

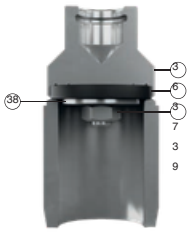
7.- Possibility of manufacture in other types of material, for special operating conditions (high temperatures, fluids, etc.).
8.- Totally free of oil and grease, to work with oxygen, avoiding possible fire risks (UV-Oxygen-VBG 62).
9.- Special springs for critical temperatures.



1 Locking screw



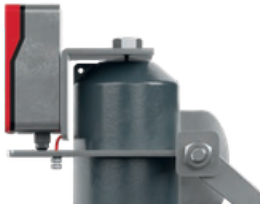
2 Rapid limiter



3 Soft sealing

33	Screw
34	Seal
35	Sealing whire
36	Plug
37	Sealing disk
38	Washer
39	Nut
40	Joint
41	Limiter
42	Membrane
43	O-ring

4 Membrane and O-ring



5 Open/closing indicator

6 Balance bellows

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 EN 12266-1 requeriments.
— 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.