

Safety Valves

Type 21XX

Safety Valves, brass, S/G

Standard safety valve
with FKM-, VMQ-, EPDM- or PTFE-seal, open bonnet,
with discharge holes, with lifting device
Inlet: male thread type G / M / NPT

Also available in stainless steel

Part No. 21XX

Applications:

Provided as safety device for protection against excessive pressure in stationary and moveable gas cylinders and pressure vessels. Approved for saturated steam, air and similar gases.

Working temperature:

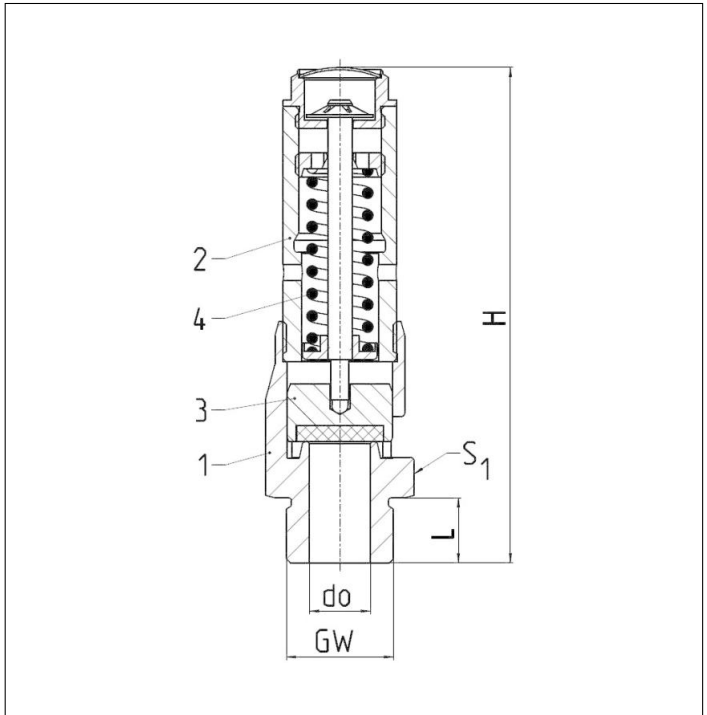
FKM: -20°C / -4°F (253K) up to +200°C / 392 °F (473K)

VMQ: -50°C / -58°F (223K) up to +200°C / 392°F (473K)

EPDM: -50°C / -58°F (223K) up to +150°C / 302°F (423K)

PTFE: -196°C / -320°F (77K) up to +250°C / 482°F (523K)

Materials	DIN EN	ASME/ASTM
1 Inlet body	CW614N	B 249 UNS C38500
2 Bonnet	CW614N	B 249 UNS C38500
3 Inner parts	CW614N	B 249 UNS C38500
4 Spring	1.4310	A 313 Grade 301



Type 21XX	Technical data							
Dimension code	21XX	2108	2110	2115	2120	2125	2132*	
Nominal size	GW	1/4 / 3/8 / 1/2	3/8 / 1/2 / 3/4	1/2 / 3/4	1 / 1 1/4	1 / 1 1/4 / 1 1/2	1 1/4 / 1 1/2	
Orifice	d ₀	8	10	15	20	25	32	
Set pressure range	bar	0.3-47	1.7-42	1.4-30	0.5-30	0.5-30	0.5-12.6	
Height	H	72-88 / 72-88 / 73-90	72-89 / 74-91 / 74-91	108-123	143-145	199	157	
Length	L ₂	10 / 10 / 12	10 / 12 / 12	16	18 / 20-31	18 / 20 / 22-34	22	
Wrench size across flats	S ₁	22-24 / 22-24 / 27	22 / 27 / 30	32	41 / 41-47	50 / 50 / 50-55	55	

Dimensions in mm. *Type 2132 is not approved acc. to ASME Code Section VIII.

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Discharge capacities

Medium:

Air in m³/h at 0°C and 1013.25 mbar

Air in SCFM at 60°F (15.6°C) and 14.7 psia (1013.25 mbar)

The capacity indicated below is for a fully opened valve.

d₀ - orifice

A₀ - flow area

Calculation of discharge capacity acc. to AD2000-Merkblatt A2 / DIN EN ISO 4126-1 resp. ASME Code Sec. VIII.

Set pressure in bar (g)	Type	2108	2110	2115	2120	2125	2132
	d ₀ (mm) A ₀ (mm ²) Medium	8.0 50.27	10.0 78.54	15.0 176.7	20.0 314.2	25.0 490.9	32.0 804.2
Air in m ³ /h							
0.5		40	46	128	255	345	778
1.0		55	67	174	346	468	995
2.0		83	107	330	563	892	1206
3.0		112	148	443	757	1198	1620
4.0		141	190	557	951	1505	2035
5.0		169	232	670	1145	1811	2449
6.0		198	275	784	1338	2118	2863
7.0		226	318	898	1532	2425	3278
8.0		255	362	1011	1726	2731	3692
9.0		284	406	1124	1920	3038	4107
10.0		313	450	1238	2114	3345	4521
12.0		371	539	1465	2501	3958	5350
14.0		428	629	1692	2889	4571	-
16.0		485	720	1919	3276	5184	-
18.0		543	811	2146	3664	5798	-
20.0		601	903	2373	4051	6411	-
22.0		659	995	2600	4439	7024	-
24.0		716	1088	2827	4827	7637	-
26.0		774	1182	3054	5214	8251	-
28.0		832	1276	3281	5602	8864	-
30.0		889	1370	3508	5989	9477	-
34.0		1000	1541	-	-	-	-
38.0		1115	1742	-	-	-	-
42.0		1229	1943	-	-	-	-
47.0		1379	-	-	-	-	-

Set pressure in psig	Type	2108	2110	2115	2120	2125
	d ₀ (inch) A ₀ (in ²) Medium	0.315 0.078	0.394 0.121	0.591 0.273	0.787 0.487	0.984 0.760
Air in SCFM						
14.5		32	40	103	204	276
29.0		49	63	195	332	526
43.5		66	87	261	447	707
58.0		83	112	329	561	888
72.5		100	132	395	676	1068
87.0		117	162	463	789	1250
101.5		133	188	530	904	1431
116.0		150	214	596	1018	1611
130.5		168	240	666	1133	1792
145.0		185	266	730	1247	1974
174.0		219	318	864	1476	2335
217.6		269	397	1065	1819	2878
261.1		320	478	1266	2162	3421
304.6		371	555	1467	2505	3963
348.1		422	642	1668	2848	4506
391.6		460	727	1863	3191	5049
435.1		525	808	2070	3534	5591
522.1		624	975	-	-	-
609.1		725	1146	-	-	-
681.6		814	-	-	-	-