

Bronze Compressor Safety Valves

Data Sheets



Type	Discharge	Size	Links to data below
06C02	Open discharge	6mm - 25mm / 1/4" - 1"	VIEW HERE →
06216-06217	Open discharge	15mm - 50mm / 1/2" - 2"	VIEW HERE →
06216-06217	Capped	15mm - 50mm / 1/2" - 2"	VIEW HERE →

Safety Valves

Type 06C02



Safety Valves, brass or stainless steel,
type tested TÜV-SV.1090 S/G

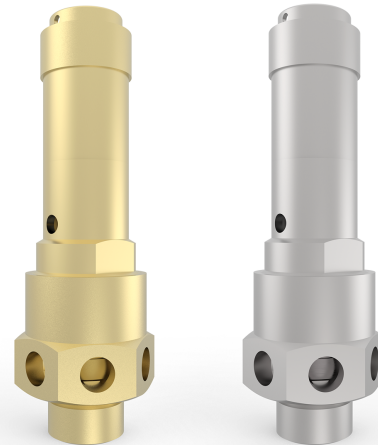
Standard safety valve
with FPM valve seal, open bonnet,
free discharge with lifting device
Inlet: male thread type G (BSPP) acc. to ISO 228/1

Part No. 06C02.A001.X - brass

Part No. 06C02.A002.X - stainless steel

Available options - on request only:

- Inlet NPT male thread



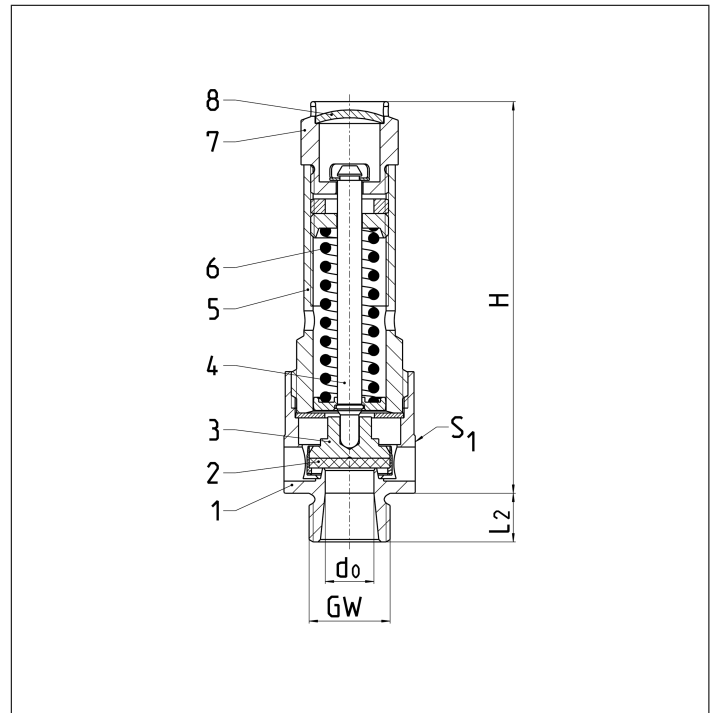
Applications:

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

Working temperature: -40°C / -40°F (233K) up to +200°C / +392°F (473K)

Materials	DIN EN	ASME/ASTM
1 Body	CW614N	B 249 UNS C38500
2 Valve seal	FPM (Viton)	
3 Disc	CW614N	B 249 UNS C38500
4 Stem	1.4301	SS304
5 Bonnet	CW614N	B 249 UNS C38500
6 Spring	1.4571/1.1200	SS316L/A 227
7 Lifting device	CW614N	B 249 UNS C38500
8 Closing cap	CW507L	B 36 UNS C26800

Materials	DIN EN	ASME/ASTM
1 Body	1.4404	SS316L
2 Valve seal	FPM (Viton)	
3 Disc	1.4404	SS316L
4 Stem	1.4301	SS304
5 Bonnet	1.4404	SS316L
6 Spring	1.4571/1.1200	SS316L/A 227
7 Lifting device	1.4401	SS316
8 Closing cap	1.4401	SS316



Type 06C02	Technical data									
Nominal size	GW	1/4	3/8	1/2	3/8	1/2	3/4	3/4	1	
Orifice	d ₀	8	8	8	10	10	10	15	18	
Set pressure range	bar	0.2-50	0.2-50	0.2-50	0.2-42	0.2-42	0.2-42	0.2-16	0.2-20	
Height	H	78	78	78	81	81	81	92	110	
Length	L ₂	10	10	12	10	12	15	15	18	
Wrench size across flats	S ₁	21	21	27	27	27	32	32	41	
Weight	ca. kg	0.14	0.15	0.18	0.18	0.20	0.25	0.31	0.53	
Coeff. of discharge from 3.0 bar*	α _w	0.70	0.70	0.70	0.61	0.61	0.61	0.60	0.60	

Dimensions in mm. * Below 3 bar the coefficient may be lower. Please pay attention to the capacity chart.

Safety Valves

Type 06C02



Discharge capacities

Calculation of flow rate acc. to AD2000-Merkblatt A2

Medium:

Air in m³/h at 0°C and 1013.25 mbar

The capacity indicated below is for a fully opened valve.

d₀ - orifice

A₀ - flow area

Set pressure in bar (g)	GW	1/4, 3/8 & 1/2	3/8, 1/2, 3/4	3/4	1
	d ₀ (mm)	8,0	10,0	15,0	18,0
A ₀ (mm ²)	50,24	78,5	176,7	254,5	
Medium	Air				
0.2		20	24	55	83
0.4		28	35	80	120
0.6		35	44	101	151
0.8		42	51	120	179
1.0		48	59	137	205
2.0		76	98	228	334
3.0		104	141	312	450
4.0		130	177	392	564
5.0		157	213	472	680
6.0		183	250	552	795
7.0		210	286	632	910
8.0		237	323	714	1028
9.0		263	359	794	1143
10.0		291	396	876	1261
12.0		344	468	1036	1492
14.0		397	541	1197	1723
16.0		450	613	1357	1954
18.0		504	686	-	2185
20.0		562	765	-	2439
22.0		616	838	-	-
24.0		670	912	-	-
26.0		723	985	-	-
28.0		777	1058	-	-
30.0		839	1142	-	-
32.0		893	1216	-	-
34.0		947	1289	-	-
36.0		1001	1363	-	-
38.0		1056	1437	-	-
40.0		1119	1524	-	-
42.0		1174	1599	-	-
45.0		1256	-	-	-
50.0		1405	-	-	-

Safety Valves

Type 06216, Type 06217



Safety Valves, brass,
type tested TÜV-SV.1090 S/G

Standard safety valve
with FPM valve seal, open bonnet, with discharge holes
Inlet: male thread type G (BSPP) acc. to ISO 228/1

Part No. 06216.X.0000

Part No. 06217.X.0000

with lifting device

Available options - on request only:

- discharge holes with protection cap
- (working temperature: -30°C / -22°F (243K) up to +130°C / +266°F (403K))
- stainless steel spring - material 1.4571
- external parts nickel plated

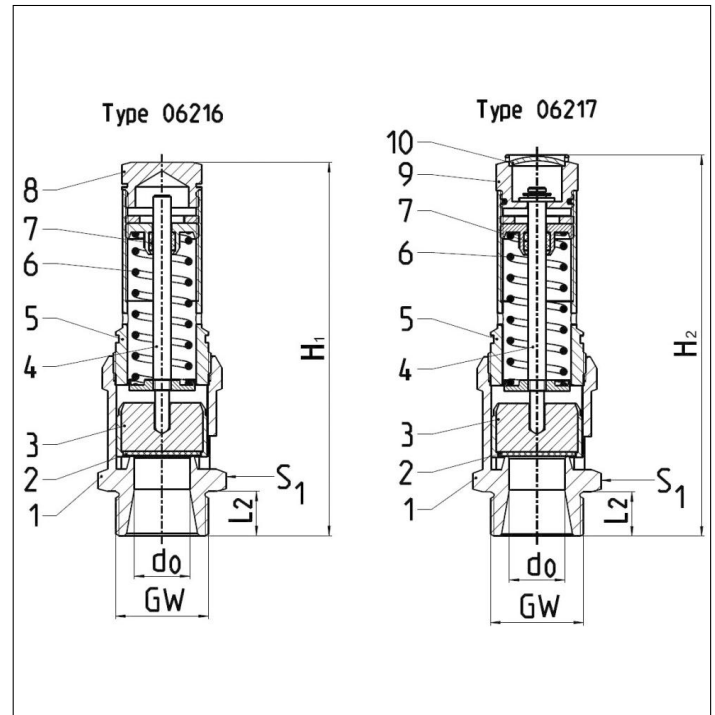
Applications:

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

Working temperature: -40°C / -40°F (233K) up to +200°C / +392°F (473K), suitable for horizontal installation



Materials	DIN EN	ASME/ASTM
1 Body	CW617N	B 283 UNS C37700
2 Valve seal	FPM (Viton-GLT)	
3 Disc	CW614N	B 455 UNS C38500
4 Stem	CW614N	B 455 UNS C38500
5 Bonnet	CW614N	B 455 UNS C38500
6 Spring	1.1200	A 227
7 Stem guide	PTFE	
8 Cap	CW614N	B 455 UNS C38500
9 Lifting device	CW614N	B 455 UNS C38500
10 Closing cap	CW507L	B 36 UNS C26800



Type 06216, Type 06217	Technical data						
Nominal size	GW	1/2	3/4	1	1-1/4	1-1/2	2
Orifice	d_0	12	15	20	25	32	40
Dimension code	.X.	0400	0600	1000	1200	1400	2000
Set pressure range	bar	0.2-25	0.2-30	0.2-30	0.2-22	0.2-16	0.2-12
Height	H_1	103	122	149	169	198	224
Height	H_2	107	126	150	172	200	228
Length	L_2	14	16	18	20	22	25
Wrench size across flats	S_1	27	32	41	50	55	70
Weight	ca. kg	0.25	0.41	0.72	1.23	1.73	3.09
Coeff. of discharge from 3.0 bar	α_w	0.83	0.83	0.73	0.71	0.69	0.66
Coeff. of discharge from 3.0 bar	rated slope	2.59	4.10	6.79	10.15	16.50	24.80

Dimensions in mm.

Safety Valves

Type 06216, Type 06217



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)	GW	1/2	3/4	1	1-1/4	1-1/2	2
	d ₀ (mm) A ₀ (mm ²) Medium	12.0 113.1	15.0 176.7	20.0 314.2	25.0 490.9	32.0 804.2	40.0 1256.6
Air in m ³ /h							
0.2		49	78	128	194	317	436
0.5		83	133	211	309	518	712
1.0		124	196	308	459	776	1085
2.0		201	317	495	752	1215	1760
3.0		276	432	675	1026	1634	2442
4.0		347	542	847	1288	2051	3065
5.0		418	654	1022	1553	2473	3696
6.0		489	764	1194	1815	2890	4320
7.0		560	874	1367	2077	3308	4944
8.0		632	988	1544	2347	3737	5585
9.0		703	1098	1717	2610	4156	6211
10.0		775	1212	1894	2879	4584	6851
11.0		846	1322	2068	3142	5003	7478
12.0		917	1433	2241	3406	5423	8105
14.0		1059	1655	2588	3933	6263	-
16.0		1201	1877	2935	4460	7102	-
18.0		1343	2099	3282	4988	-	-
20.0		1500	2343	3664	5567	-	-
22.0		1643	2567	4014	6100	-	-
25.0		1858	2903	4539	-	-	-
26.0		-	3015	4714	-	-	-
28.0		-	3239	5064	-	-	-
30.0		-	3496	5466	-	-	-

Set pressure in psig	GW	1/2	3/4	1	1-1/4	1-1/2	2
	d ₀ (inch) A ₀ (in ²) Medium	0.472 0.175	0.591 0.274	0.787 0.487	0.984 0.761	1.260 1.247	1.575 1.948
Air in SCFM							
15		85	134	222	332	540	811
20		98	155	256	383	622	935
30		124	196	324	484	787	1183
40		152	241	399	596	969	1456
50		181	286	473	707	1150	1729
60		209	331	548	819	1332	2001
70		238	376	623	931	1513	2274
80		266	421	697	1042	1695	2547
90		294	466	772	1154	1876	2820
100		323	511	847	1266	2058	3093
110		351	556	921	1377	2239	3365
120		380	601	996	1489	2421	3638
130		408	647	1071	1601	2602	3911
140		437	692	1145	1712	2784	4184
150		465	737	1220	1824	2965	4457
160		494	782	1295	1936	3147	4729
170		522	827	1370	2047	3328	5002
180		551	872	1444	2159	3510	-
190		579	917	1519	2271	3691	-
200		608	962	1594	2382	3873	-
210		636	1007	1668	2494	4054	-
220		665	1052	1743	2606	4236	-
230		693	1098	1818	2717	4417	-
240		722	1143	1892	2829	-	-
250		750	1188	1967	2940	-	-
260		779	1233	2042	3052	-	-
270		807	1278	2116	3164	-	-
280		836	1323	2191	3275	-	-
290		864	1368	2266	3387	-	-
300		893	1413	2341	3499	-	-
315		936	1481	2453	3666	-	-
330		978	1549	2565	-	-	-
350		1035	1639	2714	-	-	-
360		1064	1684	2789	-	-	-
375		-	1752	2901	-	-	-
400		-	1864	3087	-	-	-
425		-	1977	3274	-	-	-
435		-	2022	3349	-	-	-

Safety Valves

Type 06216, Type 06217 with protection cap



Safety Valves, brass,
type tested TÜV-SV.1090 S/G

Standard safety valve
with FPM valve seal, open bonnet, with discharge holes
Inlet: male thread type G (BSPP) acc. to ISO 228/1

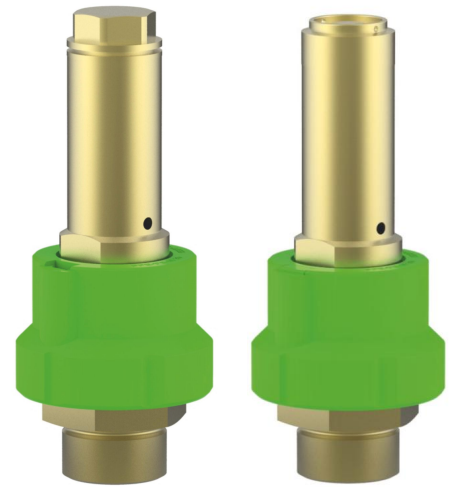
Part No. 06216.X.0001

Part No. 06217.X.0001

with lifting device and protection cap (polycarbonate)

Available options - on request only:

- stainless steel spring - material 1.4571
- external parts nickel plated

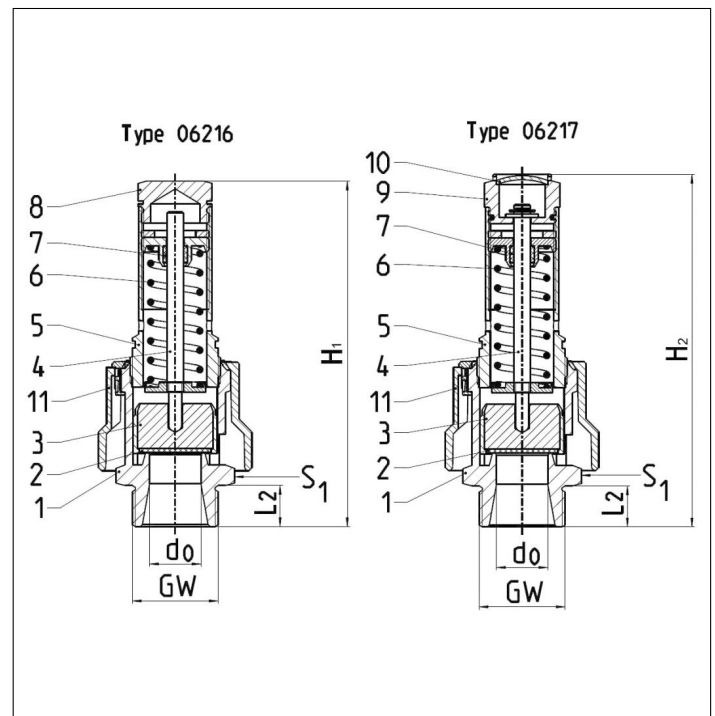


Applications:

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

Working temperature: -30°C / -22°F (243K) up to +130°C / +266°F (403K), suitable for horizontal installation

Materials	DIN EN	ASME/ASTM
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6 Spring	1.1200	A 227
7 Stem guide	PTFE	
8 Cap	CW614N	B 455 UNS C38500
9 Lifting device	CW614N	B 455 UNS C38500
10 Closing cap	CW507L	B 36 UNS C26800
11 Protection cap		



Type 06216, Type 06217	Technical data						
Nominal size	GW	1/2	3/4	1	1-1/4	1-1/2	2
Orifice	d ₀	12	15	20	25	32	40
Dimension code	.X.	0400	0600	1000	1200	1400	2000
Set pressure range	bar	0.2-25	0.2-30	0.2-30	0.2-22	0.2-16	0.2-12
Height	H ₁	103	122	149	169	198	224
Height	H ₂	107	126	150	172	200	228
Length	L ₂	14	16	18	20	22	25
Diameter	D	41.4	49.0	62.5	74.8	86.0	109.0
Wrench size across flats	S ₁	27	32	41	50	55	70
Weight	ca. kg	0.25	0.41	0.72	1.23	1.73	3.09
Coeff. of discharge from 3.0 bar	α _w	0.83	0.83	0.73	0.71	0.69	0.66
Coeff. of discharge from 3.0 bar	rated slope	2.59	4.10	6.79	10.15	16.50	24.80

Dimensions in mm.

Safety Valves

Type 06216, Type 06217 with protection cap



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)	GW	1/2	3/4	1	1-1/4	1-1/2	2
	d ₀ (mm) A ₀ (mm ²) Medium	12.0 113.1	15.0 176.7	20.0 314.2	25.0 490.9	32.0 804.2	40.0 1256.6
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10.0		775	1212	1894	2879	4584	6851
11.0		846	1322	2068	3142	5003	7478
12.0		917	1433	2241	3406	5423	8105
14.0		1059	1655	2588	3933	6263	-
16.0		1201	1877	2935	4460	7102	-
18.0		1343	2099	3282	4988	-	-
20.0		1500	2343	3664	5567	-	-
22.0		1643	2567	4014	6100	-	-
25.0		1858	2903	4539	-	-	-
26.0		-	3015	4714	-	-	-
28.0		-	3239	5064	-	-	-
30.0		-	3496	5466	-	-	-

Set pressure in psig	GW	1/2	3/4	1	1-1/4	1-1/2	2
	d ₀ (inch) A ₀ (in ²) Medium	0.472 0.175	0.591 0.274	0.787 0.487	0.984 0.761	1.260 1.247	1.575 1.948
Air in SCFM							
15		85	134	222	332	540	811
20		98	155	256	383	622	935
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170		522	827	1370	2047	3328	5002
180		551	872	1444	2159	3510	-
190		579	917	1519	2271	3691	-
200		608	962	1594	2382	3873	-
210		636	1007	1668	2494	4054	-
220		665	1052	1743	2606	4236	-
230		693	1098	1818	2717	4417	-
240		722	1143	1892	2829	-	-
250		750	1188	1967	2940	-	-
260		779	1233	2042	3052	-	-
270		807	1278	2116	3164	-	-
280		836	1323	2191	3275	-	-
290		864	1368	2266	3387	-	-
300		893	1413	2341	3499	-	-
315		936	1481	2453	3666	-	-
330		978	1549	2565	-	-	-
350		1035	1639	2714	-	-	-
360		1064	1684	2789	-	-	-
375		-	1752	2901	-	-	-
400		-	1864	3087	-	-	-
425		-	1977	3274	-	-	-
435		-	2022	3349	-	-	-