

# Product Specifications

## Type 22

## HEROSE Safety Valve Type 22

### Safety Valves, angle type, bronze

Type tested, 2014/68/EU DEKRA, Steam / Gas

### Specification highlights

- Standard safety valve
- Soft seated
- Various sealing options
- Gastight cap
- Inlet: male & female thread type G (BSPP) acc. to ISO 228/1, various inlet connection sizes
- Outlet: male & female thread type G (BSPP) acc. to ISO 228/1, various inlet connection sizes

### Applications & branches

#Pressure Vessels	#Gas Cylinders	#Food
#Medical	#Compressed Air	#Steam
#Chemical	#General Industry	#Pharma

### Working temperature

FKM soft valve seal: -20°C (233K / -4°F) to +200°C (473K / +392°F)
NBR soft valve seal: -30°C (243K / -22°F) to +120°C (393K / +248°F)
VMQ soft valve seal: -50°C (223K / -58°F) to +200°C (473K / +392°F)
EPDM soft valve seal: -50°C (223K / -58°F) to +150°C (423K / +302°F)
PTFE soft valve seal: -196°C (77K / -320°F) to +250°C (523K / +482°F)

### Max. pressure | 22

All models	(Pmax 30.0 bar) all sealing types
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### Certifications & Quality standards

- 2014/68/EU DEKRA.  
Type tested Steam / Gas
- ISO 228/1  
Inlet, male & female thread type G and outlet, male & female thread type G (BSPP)
- **Discharge capacity**  
Calculation of flow rate acc. to AD2000-Merkblatt / DIN EN ISO 4126-1 resp. ASME Code Sec. VIII



- 2014/68/EU (PED)  
Standard marking acc. to Pressure Equipment Directive.
- ASME Code Section VIII



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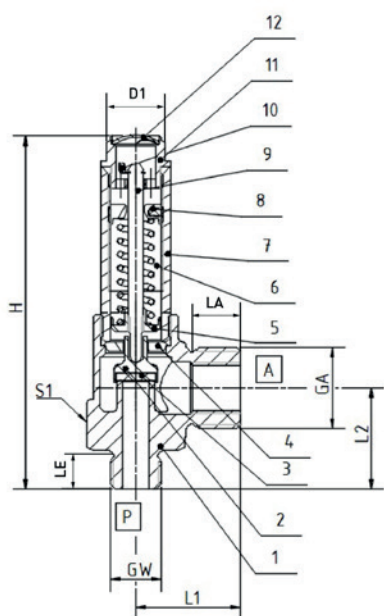
## Materials and spare parts

Provided as safety device for protection against excessive pressure in gas cylinders and pressure vessels. Approved for gases and vapours.

### Essentials

! Valves are delivered at a set pressure, therefore when ordering please confirm set pressure.

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	Materials	DIN EN	ASME/ASTM
1	Body	1.4404 X2CrNiMo17-12-2 A4	A 351 Grade 316
2	Disc	1.4404 X2CrNiMo17-12-2 A4	A 276 Grade 316L
3	Valve seal	FKM, EPDM, NBR, VMQ, PTFE	
4	Guide	1.4404 X2CrNiMo17-12-2 A4	A 276 Grade 316L
5	Spring plate	1.4404 X2CrNiMo17-12-2 A4	A 276 Grade 316L
6	Spring	1.4310 X5CrNi18-8	A 313 Grade 316TI
7	Bonnet	1.4404 X2CrNiMo17-12-2 A4	A 276 Grade 316L
8	Adjusting screw	1.4404 X2CrNiMo17-12-2 A4	A 276 Grade 316L
9	Stem	1.4404 X2CrNiMo17-12-2 A4	A 276 Grade 316L
10	Washer	1.4404 X2CrNiMo17-12-2 A4	A 276 Grade 316L
11	Lifting device	1.4301 X5CrNi10-10 A2	A 276 Grade 304
12	Closing cap	1.4301 X5CrNi10-10 A2	A 276 Grade 304

Also available as brass version.





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### Discharge capacities

**!** Calculation of flow rate acc. to AD2000-Merkblatt A2 / DIN EN ISO 4126-1

The capacity indicated below is for a fully opened valve.

### Medium

Air in m<sup>3</sup>/h at 0°C and 1013,25 mbar

Saturated steam in kg/h

Set pressure in bar (g)	GW 1/4 + 3/8 + 1/2		GW 3/8 + 1/2		GW 1/2 + 3/4	
	d <sub>0</sub> in mm 7		d <sub>0</sub> in mm 12		d <sub>0</sub> in mm 15	
	A <sub>0</sub> in mm <sup>2</sup> 38.48		A <sub>0</sub> in mm <sup>2</sup> 113.1		A <sub>0</sub> in mm <sup>2</sup> 176.7	
0,5	23,7	18	73,4	46	60,3	61
0,6	25,4	19	78,6	50	68,7	65
0,8	28,8	22	89,0	57	84,9	74
1	32,1	25	99,5	63	102,7	83
1,5	40,5	31	125,5	78	157,8	102
2	69,1	52	151,6	114	224,8	170
2,5	80,9	61	177,6	133	263,4	198
3	92,8	69	203,7	152	302,1	226
3,5	104,6	78	229,7	172	340,7	255
4	116,5	87	255,8	190	379,3	282
4,5	128,4	96	281,8	210	418,0	311
5	140,3	104	307,9	228	456,6	338
5,5	152,1	113	333,9	247	495,2	367
6	164,0	121	360,0	266	533,9	394
6,5	175,9	130	386,0	284	572,5	422
7	187,8	138	412,1	303	611,1	449
7,5	199,6	147	438,1	322	649,7	477
8	211,5	155	464,2	340	688,4	505
8,5	223,4	164	490,2	359	727,0	532
9	235,2	172	516,3	378	765,7	560
9,5	247,1	180	542,3	396	804,3	587

Set pressure in bar (g)	GW 1/4 + 3/8 + 1/2		GW 3/8 + 1/2		GW 1/2 + 3/4	
	d <sub>0</sub> in mm 7		d <sub>0</sub> in mm 12		d <sub>0</sub> in mm 15	
	A <sub>0</sub> in mm <sup>2</sup> 38.48		A <sub>0</sub> in mm <sup>2</sup> 113.1		A <sub>0</sub> in mm <sup>2</sup> 176.7	
10	259,0	189	568,4	415	842,9	615
11	282,7	206	620,5	452	920,2	670
12	306,4	223	672,6	489	997,5	725
13	330,2	239	724,7	526	1074,7	779
14	353,9	256	776,8	563	1152,0	834
15	377,6	273	828,9	600	1229,3	889
16	401,4	290	881,0	636	1306,6	944
17	425,1	307	933,1	674	1383,8	999
18	448,9	324	985,2	710	1461,1	1054
19	472,6	341	1037,3	747	1538,4	1108
20	496,4	357	1089,4	784	1615,6	1163
21	520,1	361	1141,5	793	1692,9	1176
22	543,8	385	1193,6	845	1770,2	1252
23	567,6	396	1245,7	868	1847,4	1287
24	591,3	420	1297,8	922	1924,7	1367
25	615,1	430	1349,9	944	2002,0	1401
26	638,8	455	1402,0	999	2079,2	1482
27	662,5	465	1454,1	1021	2156,5	1515
28	686,3	491	1506,2	1077	2233,8	1598
29	710,0	501	1558,3	1099	2311,1	1629
30	733,7	511	1610,4	1122	2388,3	1665

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### Discharge capacities

Calculation of flow rate acc. to ASME Code Sec. VIII

The capacity indicated below is for a fully opened valve.

### Medium

Air in m<sup>3</sup>/h at 0°C and 1013,25 mbar

Set pressure in psi (g)	GW 1/4 + 3/8 + 1/2	GW 3/8 + 1/2	GW 1/2 + 3/4
	d <sub>0</sub> in inch 0.276	d <sub>0</sub> in inch 0.472	d <sub>0</sub> in inch 0.591
	A <sub>0</sub> in in <sup>2</sup> : 0.060	A <sub>0</sub> in in <sup>2</sup> : 0.175	A <sub>0</sub> in in <sup>2</sup> : 0.274
15	21	59	65
30	32	89	98
50	47	130	142
60	54	150	164
70	61	170	186
80	68	190	209
87	74	204	224
90	76	210	231
100	83	230	253
120	98	271	297
123	100	277	304
130	105	291	319
140	112	311	341
150	119	331	364
160	127	352	386
174	137	380	417
180	141	392	430

Set pressure in psi (g)	GW 1/4 + 3/8 + 1/2	GW 3/8 + 1/2	GW 1/2 + 3/4
	d <sub>0</sub> in inch 0.276	d <sub>0</sub> in inch 0.472	d <sub>0</sub> in inch 0.591
	A <sub>0</sub> in in <sup>2</sup> : 0.060	A <sub>0</sub> in in <sup>2</sup> : 0.175	A <sub>0</sub> in in <sup>2</sup> : 0.274
190	148	412	452
200	156	432	474
217	168	467	512
220	170	473	519
229	177	491	538
232	179	497	545
240	185	513	563
260	199	553	607
280	214	594	651
300	228	634	696
319	242	672	738
340	258	715	784
363	274	761	835
380	287	796	873
400	301	836	917
420	316	876	961
435	327	907	995