

Safety Valves

Type 06850, Type 06855 - Sealing plate



Safety Valves, angle type, stainless steel, type tested, TÜV-SV.1130. G/L

standard safety valve
 with soft valve seal, "cleaned and degreased"
 closed bonnet, gastight cap or lifting device
 Inlet: male thread type G (BSPP) acc. to ISO 228/1
 Outlet: female thread type G (BSPP) acc. to ISO 228/1

Part No. 06850.X.000001L (Pmax 150.0 bar)

with gastight cap

Part No. 06855.X.000001L (Pmax 150.0 bar)

with lifting device

Available options - on request only:

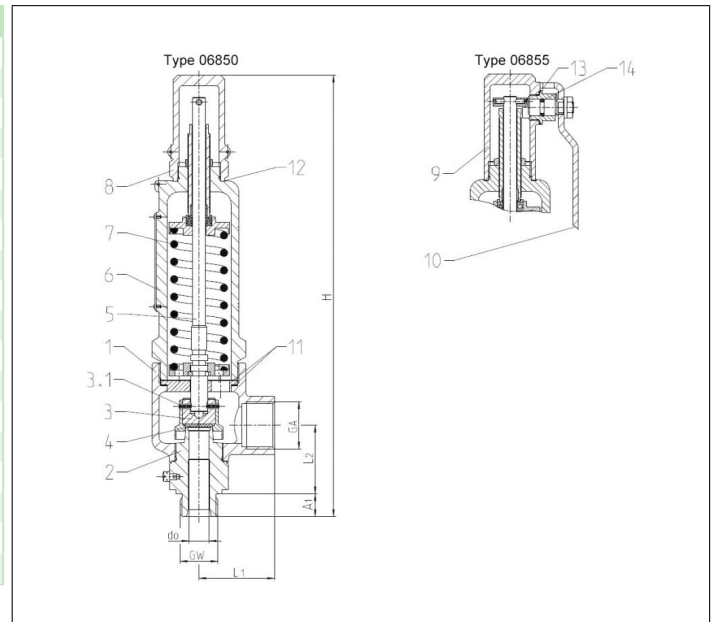
- Flange-, NPT- or Tri-Clamp connection for in- and outlet



Applications:

Provided as safety device for protection against excessive pressure in gas cylinders and pressure vessels.
 Approved for gases and liquids. Working temperature: -270°C / -454°F (3K) up to +300°C / +572°F (573K)
 Pressure-temperature must be observed, suitable for horizontal installation from 20 bar

Materials	DIN EN	ASME/ASTM
1 Outlet body	1.4408	A 351 CF8M
2 Inlet body	1.4571	A 276 Grade 316Ti
3 Disc	1.4571	A 276 Grade 316Ti
4 Sealing plate	VESPEL	
5 Stem	1.4404	A 276 Grade 316L
6 Bonnet	1.4408	A 351 CF8M
7 Spring	1.4571	A 313 Grade 316Ti
8 Cap	1.4408	A 351 CF8M
9 Lifting cap	1.4408	A 351 CF8M
10 Lever	1.4301	A 276 Grade 304
Spare Parts		
2 Inlet body	1.4571	316Ti
3.1 Split pin	1.4571	316Ti
4 Sealing plate	VESPEL	
11 Gasket	1.4404 Graphite	316L Graphite
12 Gasket	PTFE	
13 Gasket	PTFE	
14 O-ring	FPM (VITON)	



Typ 06850, 06855	Technical data	Orifice [mm]			Orifice [mm]						
		10	10	14	10	14	14	14	14	14	14
Inlet	GW	1/2	3/4	1	3/4	3/4	3/4	1	1	1	
Outlet	GW	1	1	1	1	1-1/4	1-1/2	1	1-1/4	1-1/2	
Dimension code	.X.	1024	1034	1044	1434	1435	1436	1444	1445	1446	
Height	H	305.0	307.0	309.0	310.5	310.5	310.5	312.5	312.5	312.5	
Length	L1	53.0	53.0	53.0	55.0	55.0	55.0	55.0	55.0	55.0	
Length	L2	44.5	44.5	44.5	48.2	48.2	48.2	48.2	48.2	48.2	
Length	A1	14.0	16.0	18.0	16.0	16.0	16.0	18.0	18.0	18.0	
Weight 06850	ca. kg	3.2	3.2	3.2	3.4	3.4	3.4	3.4	3.4	3.4	
Weight 06855	ca. kg	3.4	3.4	3.4	3.6	3.6	3.6	3.6	3.6	3.6	
Coefficient of discharge	$\alpha_w S/G$	0.84	0.84	0.84	0.70	0.70	0.70	0.70	0.70	0.70	
Coefficient of discharge	$\alpha_w L$	0.68	0.68	0.68	*	*	*	*	*	*	
Min. set pressure	bar-g	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
Max. set pressure	bar-g	150.0	150.0	150.0	120.0	120.0	120.0	120.0	120.0	120.0	
Min. temperature	°C	-270	-270	-270	-270	-270	-270	-270	-270	-270	
Max. temperature	°C	+300	+300	+300	+300	+300	+300	+300	+300	+300	

Dimensions in mm. * 0.20-11.50 bar=0.50 / 11.51-74.99 bar=0.49 / 75.00-120.00 bar=0.46

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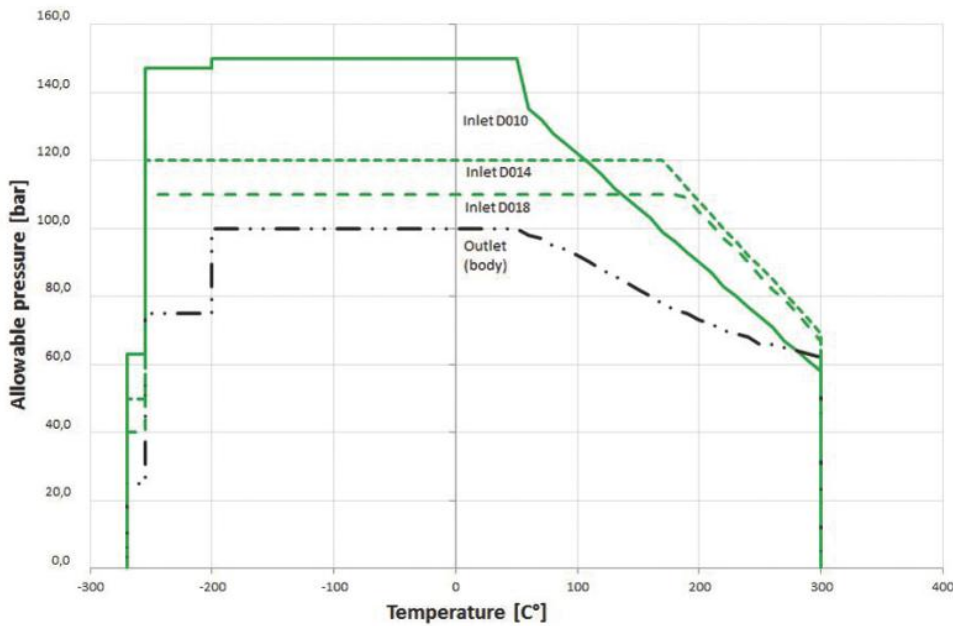


Type 06850, 06855		Technical data					
Orifice	[mm]	18					
Inlet	GW	1	1	1-1/4	1-1/4	1-1/2	1-1/2
Outlet	GW	1-1/2	2	1-1/2	2	1-1/2	2
Dimension code	.X.	1846	1847	1856	1857	1866	1867
Height	H	304.0	304.0	304.0	304.0	306.0	306.0
Length	L1	60.0	63.0	60.0	63.0	60.0	63.0
Length	L2	49.0	53.0	49.0	53.0	49.0	53.0
Length	A1	18.0	18.0	20.0	20.0	22.0	22.0
Weight 06850	ca. kg	3.9	4.1	3.9	4.1	4.0	4.2
Weight 06855	ca. kg	4.1	4.3	4.1	4.3	4.2	4.4
Coefficient of discharge	$\alpha_{wS/G}$	0.76	0.76	0.76	0.76	0.76	0.76
Coefficient of discharge	α_{wL}	0.50	0.50	0.50	0.50	0.50	0.50
Min. set pressure	bar-g	0.5	0.5	0.5	0.5	0.5	0.5
Max. set pressure	bar-g	110.0	110.0	110.0	110.0	110.0	110.0
Min. temperature	°C	-270	-270	-270	-270	-270	-270
Max. temperature	°C	+300	+300	+300	+300	+300	+300

Dimensions in mm.

Pressure-Temperature Rating

Maximum allowable set pressure safety valve Type 0685X



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Discharge capacities

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

Medium:

A = Saturated steam in kg/h*

B = Air in m³/h at 0°C and 1013,25 mbar

C = Water in kg/h at 20°C

The capacity indicated below is for a fully opened valve.

d₀ - orifice

A₀ - flow area

Set pressure in bar (g)	GW	1/2, 3/4 & 1			3/4 & 1			1, 1-1/4 & 1-1/2		
	d ₀ (mm)	10.0			14.0			18.0		
	A ₀ (mm ²)	78.5			153.94			254.0		
	Medium	A	B	C	A	B	C	A	B	C
0.5	-	56	2075	-	96	3035	-	152	5018	
1.0	-	88	2852	-	146	4110	-	242	6794	
2.0	-	143	4033	-	236	5813	-	407	9608	
3.0	-	194	4940	-	317	7119	-	570	11768	
4.0	-	244	5704	-	398	8220	-	715	13588	
5.0	-	294	6377	-	480	9190	-	862	15192	
6.0	-	344	6986	-	561	10068	-	1007	16642	
7.0	-	393	7545	-	642	10874	-	1153	17976	
8.0	-	444	8066	-	726	11625	-	1302	19217	
9.0	-	494	8556	-	807	12330	-	1448	20383	
10.0	-	545	9018	-	890	12997	-	1598	21485	
15.0	-	794	11045	-	1297	15590	-	2328	26298	
20.0	-	1054	12754	-	1721	18013	-	3089	30385	
30.0	-	1572	15620	-	2568	22062	-	4609	37213	
40.0	-	2099	18037	-	3428	25475	-	6152	42970	
45.0	-	2355	19131	-	3847	27020	-	6904	45577	
50.0	-	2634	20166	-	4302	28481	-	7720	-	
60.0	-	3175	22091	-	5186	-	-	9308	-	
65.0	-	3436	22993	-	5612	-	-	10072	-	
70.0	-	3723	-	-	6081	-	-	10914	-	
80.0	-	4277	-	-	6985	-	-	12537	-	
90.0	-	4835	-	-	7898	-	-	14174	-	
100.0	-	5397	-	-	8814	-	-	15820	-	
110.0	-	5931	-	-	9688	-	-	17387	-	
120.0	-	6513	-	-	10637	-	-	-	-	
140.0	-	7642	-	-	-	-	-	-	-	
150.0	-	8184	-	-	-	-	-	-	-	

*not suitable for water steam!