

### Description

Type	Safety and Relief valve	
Connections / Rating	Flanged EN 1092	PN-16 / 25 / 40 / 63 / 100
Material	Nodular Iron, Carbon steel, Stainless steel and Duplex Temperature range: -28°C to +455°C	

### Technical information

Applications	Steam, gases, vapours and liquids
Min. Set pressure	0,2 barg; With bellows 2 barg
Seat	metal-metal, PTFE, Viton and Stellite
Overpressure	10% for steam, gas and vapour 20% fire exposure, 25% for liquids
Blowdown	10%
Tolerance Set pressure	± 3%

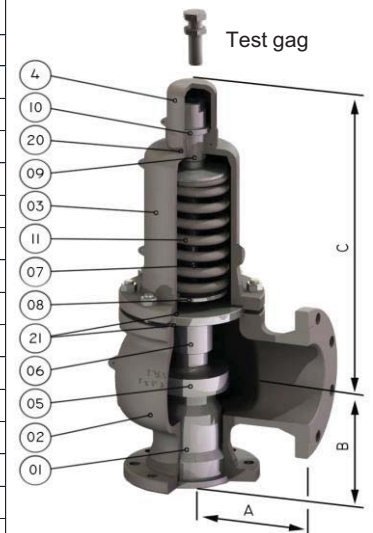
### Requirements

Calculation	EN-4126-1 / 7
Design / Size	EN-12516-1, EN-4126-1 / 7
Materials	EN / ASTM
Inspection	EN-4126-1 / 7 API 527 MSS-SP-55
Tolerances	EN-4126-1 y ASME UG-126

### Construction and materials

Item	Description	15 x 25 to 25 x 40 PN 16/25 Carbon steel	32 x 50 to 400 x 500 PN 16/25 Nodular iron	15 x 25 to 400 x 500 PN 40/63/100 carbon steel	15 x 25 to 400 x 500 PN 16 to 100 Stainless steel
1	Nozzle	AISI-316L	A351 CF-8	A351 CF-8	A351 CF-8
2	Body	C.S. 1.0619	EN-JS1030	C.S. 1.0619	1.4409
3	Bonnet	C.S. 1.0619	EN-JS1030	C.S. 1.0619	1.4409
4	Cap	A351 CF-8	A351 CF-8	A351 CF-8	A351 CF-8
5	Disc	AISI-316L	AISI-316L	AISI-316L	AISI-316L
6	Guide	AISI-304	AISI-304	AISI-304	AISI-304
7	Push Road	AISI-316L	AISI-316L	AISI-316L	AISI-316L
8	Spring Button	Carbon steel	Carbon steel	Carbon steel	AISI-303
9	Ajusting Screw	AISI-303	AISI-303	AISI-303	AISI-303
10	Lock Nut	AISI-303	AISI-303	AISI-303	AISI-303
11	Spring	1.8159 C. steel	1.8159 C. steel	1.8159 C. steel	AISI-302
12	Lever	A 351 CF 8	A 351 CF 8	A 351 CF 8	A351 CF-8
17	Release nut	AISI-303	AISI-303	AISI-303	AISI-316
18	Lever axis	AISI-303	AISI-303	AISI-303	AISI-303
19	Packing lever axis	AISI-303	AISI-303	AISI-303	AISI-303
20	Gasket cap	PTFE	PTFE	PTFE	PTFE
21	Gasket bonnet	GRAPHITE +S.S	GRAPHITE +S.S	GRAPHITE+SS	GRAPHITE+SS
22	Gasket pack. lever	Viton	Viton	Viton	Viton
27	Bellow	AISI-316 Ti	AISI-316 Ti	AISI-316 Ti	AISI-316 Ti
28	Soft seat	Viton / PTFE	Viton / PTFE	Viton / PTFE	Viton / PTFE

 Recommended spare parts



### Options

Lifting device



Sealed packing lever



Open bonnet



Soft seat



Bellows




**CHRYSSAFIDIS**
**TOSACA**
**Model 1400**
**Dimensions**

	Orif. (mm)	Area (mm <sup>2</sup> )	PN 16				PN 25				PN 40			
			(mm)			Weight (kg)	(mm)			Weight (kg)	(mm)			Weight (kg)
			A	B	C	W	A	B	C	W	A	B	C	W
15 x 25	13	133	95	95	275	10	95	95	275	10	95	95	275	10
20 x 25	13	133	95	95	275	10	95	95	275	10	95	95	275	10
25 x 40	23,8	445	100	105	280	12	100	105	280	12	100	105	280	12
32 x 50	29,5	683	110	115	325	15	110	115	325	15	110	115	325	15
40 x 65	36	1018	115	140	325	19	115	140	325	19	115	140	325	19
50 x 80	46	1662	120	150	460	29	120	150	460	29	120	150	460	29
65 x 100	60	2827	140	170	460	36	140	170	460	36	140	170	460	36
80 x 125	72	4072	160	195	590	58	160	195	590	58	160	195	590	58
100 x 150	90	6362	180	220	630	85	180	220	630	85	180	220	630	85
125 x 200	105	8659	200	250	690	140	200	250	690	140	200	250	690	140
150 x 200	125	12.272	•	•	•	•	•	•	•	•	241	240	695	160
150 x 250	125	12.272	225	285	715	150	225	285	715	150	•	•	•	•
200 x 250	153	18.385	•	•	•	•	•	•	•	•	279	276	815	195
200 x 300	153	18.385	300	290	815	200	•	•	•	•	•	•	•	•
250 x 350	200	31.415	406	305	1.390	750	•	•	•	•	•	•	•	•
300 x 400	228	40.828	406	359	1.432	850	•	•	•	•	•	•	•	•
400 x 500	304	72.950	533	432	1.943	900	•	•	•	•	•	•	•	•

	Orif. (mm)	Area (mm <sup>2</sup> )	PN 63				PN 100					
			(mm)			Weight (kg)	(mm)			Weight (kg)		
			A	B	C	W	A	B	C	W		
15 x 25	9,6 /13	71/133	95	95	275	11	9,6 /13	71/133	95	95	275	11
20 x 25	9,6 /13	71/133	95	95	275	11	9,6 /13	71/133	95	95	275	11
25 x 50	20	314	140	105	315	25	16	201	140	105	315	25
32 x 50	23,8	445	140	105	315	30	20	314	140	105	315	30
40 x 65	26	531	165	124	430	30	23,8	445	165	124	430	30
50 x 80	32	804	162	154	400	35	32	804	162	154	400	35
65 x 100	48	1.809	140	170	460	66	39	1.194	140	170	460	66

Model 1400

Capacity AIR / Caudal de aire (N)



CHRYSSAFIDIS

**TOSACA**  
 Safety relief valves

Set Press (barg)	Flanges / Bidas EN-1092-1											
	15 x 25	20 x 25	25 x 40	32 x 50	40 x 65	50 x 80	65x100	80x125	100x150	125x200	150x250	200x300
Set Press (barg)	Orifice / Orificio (mm)											
	13	13	23,8	29,5	36	46	60	72	90	105	125	153
	Area (mm <sup>2</sup> )											
	133	133	445	683	1.018	1.662	2.827	4.072	6.362	8.659	12.272	18.385
0,2	69	69	230	354	527	861	1.464	2.109	3.295	4.485	6.356	9.522
0,5	87	87	292	449	668	1.091	1.856	2.673	4.177	5.685	8.057	12.070
1	118	118	395	607	903	1.475	2.509	3.614	5.646	7.685	10.892	16.318
2	179	179	600	922	1.374	2.243	3.816	5.495	8.586	11.686	16.562	24.812
3	240	240	806	1.238	1.844	3.011	5.122	7.376	11.525	15.687	22.232	33.307
4	302	302	1.012	1.554	2.314	3.779	6.429	9.257	14.464	19.688	27.902	41.802
5	363	363	1.217	1.870	2.785	4.546	7.735	11.138	17.404	23.688	33.572	50.297
6	424	424	1.423	2.186	3.255	5.314	9.041	13.020	20.343	27.689	39.242	58.792
7	486	486	1.628	2.501	3.725	6.082	10.348	14.901	23.282	31.690	44.912	67.286
8	547	547	1.834	2.817	4.195	6.850	11.654	16.782	26.222	35.691	50.582	75.781
9	608	608	2.039	3.133	4.666	7.618	12.961	18.663	29.161	39.692	56.252	84.276
10	670	670	2.245	3.449	5.136	8.386	14.267	20.544	32.101	43.692	61.922	92.771
11	731	731	2.450	3.765	5.606	9.154	15.573	22.426	35.040	47.693	67.592	101.265
12	792	792	2.656	4.080	6.077	9.922	16.880	24.307	37.979	51.694	73.262	109.760
13	854	854	2.861	4.396	6.547	10.689	18.186	26.188	40.919	55.695	78.933	118.255
14	915	915	3.067	4.712	7.017	11.457	19.492	28.069	43.858	59.696	84.603	126.750
15	976	976	3.273	5.028	7.488	12.225	20.799	29.950	46.797	63.696	90.273	135.244
16	1.038	1.038	3.478	5.344	7.958	12.993	22.105	31.832	49.737	67.697	95.943	143.739
17	1.099	1.099	3.684	5.659	8.428	13.761	23.412	33.713	52.676	71.698	101.613	152.234
18	1.160	1.160	3.889	5.975	8.898	14.529	24.718	35.594	55.615	75.699	107.283	160.729
19	1.222	1.222	4.095	6.291	9.369	15.297	26.024	37.475	58.555	79.700	112.953	169.223
20	1.283	1.283	4.300	6.607	9.839	16.064	27.331	39.356	61.494	83.700	118.623	177.718
22	1.406	1.406	4.711	7.238	10.780	17.600	29.944	43.119	67.373	91.702	129.963	194.708
24	1.528	1.528	5.123	7.870	11.720	19.136	32.556	46.881	73.252	99.704	141.303	211.697
26	1.651	1.651	5.534	8.502	12.661	20.672	35.169	50.643	79.130	107.705	152.644	228.687
28	1.774	1.774	5.945	9.133	13.601	22.207	37.782	54.406	85.009	115.707	163.984	245.676
30	1.896	1.896	6.356	9.765	14.542	23.743	40.395	58.168	90.888	123.708	175.324	262.666
32	2.019	2.019	6.767	10.396	15.483	25.279	43.007	61.931	96.767	131.710	186.664	279.655
34	2.142	2.142	7.178	11.028	16.423	26.815	45.620	65.693	102.645	139.712	198.004	296.645
36	2.264	2.264	7.589	11.660	17.364	28.350	48.233	69.455	108.524	147.713	209.344	313.635
38	2.387	2.387	8.000	12.291	18.304	29.886	50.846	73.218	114.403	155.715	220.684	330.624
40	2.510	2.510	8.411	12.923	19.245	31.422	53.458	76.985	120.282	163.717	232.025	347.614
50	3.123	3.123	10.467									
55	3.429	3.429	11.495									
60	3.736	3.736	12.522									
65	4.043	4.043	13.550									
70	4.349	4.349	14.578									
75	4.656	4.656	15.606									
80	4.963	4.963	16.633									
85	5.269	5.269	17.661									
90	5.576	5.576	18.689									
95	5.883	5.883	19.717									
100	6.189	6.189	20.745									

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Flow capacity / Caudal de aire (Nm<sup>3</sup>/h)

Overpressure / Sobrepresión 10%

Temperature / Temperatura 0° C

Calculation according / Calculos según ISO EN 4126-1 / API 520



## Model 1400

## Capacity WATER / Caudal de Agua (kg/h)

**TOSACA**  
 Safety relief valves

Set Press (barg)	Flanges / Bridas EN-1092-1											
	15 x 25	20 x 25	25 x 40	32 x 50	40 x 65	50 x 80	65x100	80x125	100x150	125x200	150x250	200x300
Set Press (barg)	Orifice / Orificio (mm)											
	13	13	23,8	29,5	36	46	60	72	90	105	125	153
	Area (mm <sup>2</sup> )											
	133	133	445	683	1.018	1.662	2.827	4.072	6.362	8.659	12.272	18.385
<b>0,2</b>	1.585	1.585	5.312	8.161	12.154	19.844	33.761	48.615	75.962	103.392	146.531	219.529
<b>0,5</b>	2.506	2.506	8.399	12.904	19.217	31.376	53.380	76.868	120.106	163.477	231.686	347.106
<b>1</b>	3.544	3.544	11.878	18.249	27.177	44.372	75.491	108.707	169.855	231.192	327.653	490.882
<b>2</b>	5.012	5.012	16.798	25.808	38.434	62.752	106.761	153.736	240.212	326.955	463.372	694.212
<b>3</b>	6.138	6.138	20.574	31.608	47.072	76.855	130.755	188.287	294.198	400.436	567.512	850.233
<b>4</b>	7.088	7.088	23.756	36.498	54.354	88.744	150.983	217.415	339.711	462.384	655.306	981.764
<b>5</b>	7.924	7.924	26.560	40.806	60.769	99.219	168.804	243.077	379.808	516.961	732.655	1.097.646
<b>6</b>	8.680	8.680	29.095	44.701	66.569	108.689	184.915	266.278	416.059	566.303	802.583	1.202.411
<b>7</b>	9.376	9.376	31.427	48.282	71.903	117.398	199.731	287.613	449.395	611.677	866.889	1.298.752
<b>8</b>	10.023	10.023	33.596	51.616	76.868	125.503	213.522	307.471	480.424	653.910	926.743	1.388.424
<b>9</b>	10.631	10.631	35.634	54.747	81.531	133.116	226.474	326.122	509.566	693.576	982.959	1.472.646
<b>10</b>	11.206	11.206	37.562	57.708	85.941	140.317	238.724	343.763	537.130	731.094	1.036.130	1.552.305
<b>11</b>	11.753	11.753	39.395	60.525	90.135	147.166	250.376	360.542	563.347	766.777	1.086.703	1.628.072
<b>12</b>	12.276	12.276	41.147	63.216	94.143	153.709	261.509	376.574	588.396	800.873	1.135.024	1.700.465
<b>13</b>	12.777	12.777	42.827	65.798	97.988	159.986	272.188	391.950	612.422	833.575	1.181.370	1.769.901
<b>14</b>	13.260	13.260	44.444	68.281	101.687	166.025	282.463	406.746	635.541	865.042	1.225.966	1.836.713
<b>15</b>	13.725	13.725	46.004	70.678	105.256	171.852	292.376	421.022	657.847	895.403	1.268.995	1.901.178
<b>16</b>	14.175	14.175	47.513	72.996	108.707	177.488	301.965	434.830	679.422	924.768	1.310.613	1.963.528
<b>17</b>	14.611	14.611	48.975	75.242	112.053	182.951	311.259	448.212	700.332	953.229	1.350.949	2.023.959
<b>18</b>	15.035	15.035	50.395	77.424	115.302	188.255	320.282	461.207	720.635	980.865	1.390.115	2.082.636
<b>19</b>	15.447	15.447	51.776	79.545	118.461	193.414	329.059	473.845	740.383	1.007.743	1.428.207	2.139.705
<b>20</b>	15.848	15.848	53.121	81.612	121.539	198.438	337.607	486.155	759.616	1.033.922	1.465.309	2.195.291
<b>22</b>	16.622	16.622	55.713	85.595	127.471	208.124	354.086	509.883	796.692	1.084.387	1.536.830	2.302.441
<b>24</b>	17.361	17.361	58.191	89.401	133.139	217.378	369.830	532.556	832.118	1.132.605	1.605.166	2.404.821
<b>26</b>	18.070	18.070	60.567	93.052	138.575	226.254	384.932	554.301	866.096	1.178.853	1.670.710	2.503.017
<b>28</b>	18.752	18.752	62.853	96.564	143.806	234.795	399.462	575.226	898.790	1.223.353	1.733.778	2.597.504
<b>30</b>	19.410	19.410	65.059	99.954	148.854	243.036	413.483	595.415	930.336	1.266.291	1.794.630	2.688.672
<b>32</b>	20.047	20.047	67.193	103.232	153.736	251.007	427.043	614.942	960.847	1.307.820	1.853.486	2.776.848
<b>34</b>	20.664	20.664	69.261	106.409	158.467	258.732	440.186	633.868	990.419	1.348.070	1.910.530	2.862.310
<b>36</b>	21.263	21.263	71.269	109.494	163.061	266.233	452.948	652.245	1.019.132	1.387.152	1.965.919	2.945.293
<b>38</b>	21.845	21.845	73.222	112.494	167.529	273.528	465.360	670.118	1.047.059	1.425.164	2.019.790	3.026.000
<b>40</b>	22.413	22.413	75.124	115.417	171.882	280.634	477.449	687.526	1.074.260	1.462.187	2.072.261	3.104.611
<b>50</b>	25.058	25.058	92.390									
<b>55</b>	26.281	26.281	96.900									
<b>60</b>	27.450	27.450	101.208									
<b>65</b>	28.571	28.571	105.341									
<b>70</b>	29.650	29.650	109.318									
<b>75</b>	30.690	30.690	113.154									
<b>80</b>	31.697	31.697	116.865									
<b>85</b>	32.672	32.672	120.462									
<b>90</b>	33.619	33.619	123.954									
<b>95</b>	34.541	34.541	127.351									
<b>100</b>	35.438	35.438	130.659									

E 2019

Flow capacity / Caudal (kg/h)

Overpressure / Sobrepresión 10%

Calculation according / Calculos según ISO EN 4126-1 / API 520

