

# Model 1400



## Description

Type	Safety and Relief valve
Connections	Flanged EN 1092
Rating	PN-16 / 25 / 40 / 63 / 100
Material	Nodular Iron, Carbon steel Stainless steel
Temperature range	-28°C to +350°C

## 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	15x25 & 20x25	25x40-250x350	All DN	All DN
		PN 16/25	PN 16/25	PN 40/63/100	PN 16 a 100
		Carbon steel	Nodular iron	carbon steel	S.S
1	Nozzle	AISI-304	A351 CF-8	A351 CF-8	A351 CF-8
2	Body	A.C. 1.0619	EN-JS1030	A.C. 1.0619	1.4409
3	Bonnet	A.C. 1.0619	EN-JS1030	A.C. 1.0619	1.4409
4	Cap	A351 CF-8	A351 CF-8	A351 CF-8	A351 CF-8
5	O Disc	AISI-316L	AISI-316L	AISI-316L	AISI-316L
6	Guide	AISI-304	A351 CF-8	A351 CF-8	AISI-316L
7	Push Road	AISI-420	AISI-420	AISI-420	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	O Spring	Carbon steel	Carbon steel	carbon 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	O Lever axis	AISI-303	AISI-303	AISI-303	AISI-303
19	Packing lever axis	AISI-303	AISI-303	AISI-303	AISI-303
20	O Gasket cap	NBR+MF	NBR+MF	NBR+MF	PTFE
21	O Gasket bonnet	NBR+MF	NBR+MF	NBR+MF	PTFE
22	O Gasket pack. lever	Viton	Viton	Viton	Viton
27	O Bellow	AISI-316 TI	AISI-316 TI	AISI-316 TI	AISI-316 TI
28	O Soft seat	Viton / PTFE	Viton / PTFE	Viton / PTFE	Viton / PTFE

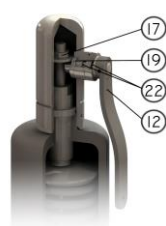
○ Recommended spare parts

## Technical information

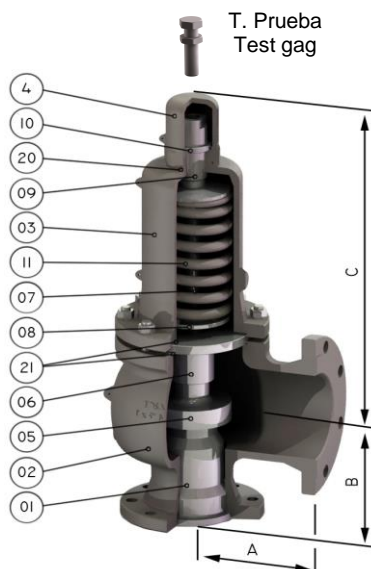
Applications	Steam, gases, vapours and liquids
Min. Set pressure	0,2 barg
Seat	metal-metal, PTFE, Viton, Nozzle SS+Stellite
Overpressure	10% for steam, gas and vapour 20% for fire exposure 25% for liquid on thermal relief
Blowdown	7%
Tolerance Set pressure	± 3%
Discharge coefficients	k= 0,64 for gases k= 0,5 for liquids



Palanca manual  
Lifting device



Palanca estanca  
Sealed packing lever



Open bonnet



Obturador o-ring  
Soft seat



Fuelle  
Bellows



## Dimensions

DN	Model	DN Inlet x Outlet	EN 1092 Flanges		Orif. (mm)	Area (mm <sup>2</sup> )	(mm)			Weight (kg) W
			PN Inlet	PN Outlet			A	B	C	
15	1400 PN 16	15 x 25	16	16	13	133	95	95	275	7
	1400 PN 25	15 x 25	25	16	13	133	95	95	275	7
	1400 PN 40	15 x 25	40	16	13	133	95	95	275	7
	1400 PN 63	15 x 25	63	16	13	133	95	95	275	9
	1400 PN100	15 x 25	100	16	13	133	95	95	275	9
20	1400 PN 16	20 x 25	16	16	13	133	95	95	275	7
	1400 PN 25	20 x 25	25	16	13	133	95	95	275	7
	1400 PN 40	20 x 25	40	16	13	133	95	95	275	7
	1400 PN 63	20 x 25	63	16	13	133	95	95	275	9
	1400 PN100	20 x 25	100	16	13	133	95	95	275	9
25	1400 PN 16	25 x 40	16	16	23,8	445	100	105	275	12
	1400 PN 25	25 x 40	25	16	23,8	445	100	105	275	12
	1400 PN 40	25 x 40	40	16	23,8	445	100	105	275	12
	1400 PN 63	25 x 50	63	16	20	314	115	105	305	18
	1400 PN100	25 x 50	100	16	16	201	115	105	305	25
32	1400 PN 16	32 x 50	16	16	29,5	683	110	115	325	14
	1400 PN 25	32 x 50	25	16	29,5	683	110	115	325	14
	1400 PN 40	32 x 50	40	16	29,5	683	110	115	325	16
	1400 PN 63	32 x 50	63	16	23,8	445	110	115	325	25
	1400 PN100	32 x 50	100	16	20	314	110	115	325	30
40	1400 PN 16	40 x 65	16	16	36	1018	115	140	325	14
	1400 PN 25	40 x 65	25	16	36	1018	115	140	325	14
	1400 PN 40	40 x 65	40	16	36	1018	115	140	325	14
	1400 PN 63	40 x 65	63	16	26	531	115	140	325	28
	1400 PN100	40 x 65	100	16	23,8	445	115	140	325	30
50	1400 PN 16	50 x 80	16	16	46	1662	120	150	400	25
	1400 PN 25	50 x 80	25	16	46	1662	120	150	400	25
	1400 PN 40	50 x 80	40	16	46	1662	120	150	400	25
	1400 PN 63	50 x 80	63	16	32	804	120	150	400	32
	1400 PN100	50 x 80	100	16	32	804	120	150	400	35
65	1400 PN 16	65 x100	16	16	60	2827	140	170	450	36
	1400 PN 25	65 x100	25	16	60	2827	140	170	450	36
	1400 PN 40	65 x100	40	16	60	2827	140	170	450	36
	1400 PN 63	65 x100	63	16	48	1810	140	170	450	62
	1400 PN100	65 x100	100	16	39	1195	140	170	450	66
80	1400 PN 16	80 x 125	16	16	72	4072	160	195	625	58
	1400 PN 25	80 x 125	25	16	72	4072	160	195	625	58
	1400 PN 40	80 x 125	40	16	72	4072	160	195	625	58
100	1400 PN 16	100 x 150	16	16	90	6362	180	220	663	85
	1400 PN 25	100 x 150	25	16	90	6362	180	220	663	85
	1400 PN 40	100 x 150	40	16	90	6362	180	220	663	85
125	1400 PN 16	125 x 200	16	16	105	8659	200	250	760	140
	1400 PN 25	125 x 200	25	16	105	8659	200	250	760	140
	1400 PN 40	125 x 200	40	16	105	8659	200	250	760	140
150	1400 PN 16	150 x 250	16	16	125	12272	225	285	760	150
	1400 PN 25	150 x 250	25	16	125	12272	225	285	760	150
	1400 PN 40	150 x 200	40	16	125	12272	241	240	695	160
200	1400 PN 16	200 x 300	16	16	153	18385	300	290	795	200
	1400 PN 40	200 x 250	40	16	153	18385	279	276	795	195
250	1400 PN 16	250 x 350	16	16	200	31415	406	305	1390	750
	1400 PN 40	250 x 350	40	16	200	31415	406	305	1390	800
300	1400 PN 16	300 x 400	16	16	228	40828	406	359	1432	850
	1400 PN 40	300 x 400	40	16	228	40828	406	359	1432	900
400	1400 PN 16	400 x 500	16	16	304	72950	533	432	1943	1850
	1400 PN 40	400 x 500	40	16	304	72950	533	432	1943	2100

**Model 1400**  
**Capacity AIR / Caudal de aire (kg/h)**



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	125	125	298	457	681	1.112	1.892	2.725	4.257	5.794	8.212	12.303
0,5	158	158	377	580	863	1.410	2.398	3.454	5.396	7.345	10.410	15.596
1	214	214	510	784	1.167	1.906	3.242	4.669	7.295	9.930	14.073	21.084
2	325	325	776	1.192	1.775	2.898	4.930	7.100	11.093	15.099	21.399	32.060
3	437	437	1.041	1.600	2.383	3.890	6.618	9.530	14.891	20.269	28.725	43.036
4	548	548	1.307	2.008	2.990	4.882	8.306	11.961	18.689	25.438	36.052	54.011
5	660	660	1.573	2.416	3.598	5.874	9.994	14.392	22.487	30.607	43.378	64.987
6	771	771	1.838	2.824	4.206	6.867	11.682	16.822	26.285	35.777	50.704	75.963
7	883	883	2.104	3.232	4.813	7.859	13.370	19.253	30.083	40.946	58.030	86.939
8	994	994	2.369	3.640	5.421	8.851	15.058	21.684	33.881	46.115	65.356	97.915
9	1.105	1.105	2.635	4.048	6.029	9.843	16.746	24.114	37.679	51.285	72.682	108.891
10	1.217	1.217	2.900	4.456	6.636	10.835	18.434	26.545	41.476	56.454	80.009	119.867
11	1.328	1.328	3.166	4.864	7.244	11.827	20.122	28.976	45.274	61.623	87.335	130.843
12	1.440	1.440	3.432	5.272	7.852	12.819	21.810	31.406	49.072	66.793	94.661	141.819
13	1.551	1.551	3.697	5.680	8.459	13.812	23.498	33.837	52.870	71.962	101.987	152.795
14	1.663	1.663	3.963	6.088	9.067	14.804	25.186	36.268	56.668	77.132	109.313	163.771
15	1.774	1.774	4.228	6.496	9.675	15.796	26.874	38.698	60.466	82.301	116.640	174.747
16	1.886	1.886	4.494	6.904	10.282	16.788	28.562	41.129	64.264	87.470	123.966	185.723
17	1.997	1.997	4.760	7.312	10.890	17.780	30.250	43.560	68.062	92.640	131.292	196.698
18	2.108	2.108	5.025	7.720	11.498	18.772	31.938	45.990	71.860	97.809	138.618	207.674
19	2.220	2.220	5.291	8.129	12.105	19.764	33.626	48.421	75.658	102.978	145.944	218.650
20	2.331	2.331	5.556	8.537	12.713	20.757	35.314	50.851	79.455	108.148	153.271	229.626
22	2.554	2.554	6.088	9.353	13.928	22.741	38.689	55.713	87.051	118.486	167.923	251.578
24	2.777	2.777	6.619	10.169	15.144	24.725	42.065	60.574	94.647	128.825	182.575	273.530
26	3.000	3.000	7.150	10.985	16.359	26.709	45.441	65.435	102.243	139.164	197.228	295.482
28	3.223	3.223	7.681	11.801	17.574	28.694	48.817	70.297	109.839	149.503	211.880	317.434
30	3.446	3.446	8.212	12.617	18.790	30.678	52.193	75.158	117.434	159.841	226.532	339.385
32	3.668	3.668	8.743	13.433	20.005	32.662	55.569	80.019	125.030	170.180	241.185	361.337
34	3.891	3.891	9.275	14.249	21.220	34.646	58.945	84.881	132.626	180.519	255.837	383.289
36	4.114	4.114	9.806	15.065	22.435	36.631	62.321	89.742	140.222	190.857	270.490	405.241
38	4.337	4.337	10.337	15.881	23.651	38.615	65.697	94.603	147.818	201.196	285.142	427.193
40	4.560	4.560	10.868	16.697	24.866	40.599	69.073	99.465	155.413	211.535	299.794	449.145
50	5.674	5.674	13.524									
55	6.231	6.231	14.852									
60	6.788	6.788	16.180									
65	7.346	7.346	17.508									
70	7.903	7.903	18.836									
75	8.460	8.460	20.164									
80	9.017	9.017	21.492									
85	9.574	9.574	22.820									
90	10.131	10.131	24.148									
95	10.689	10.689	25.476									
100	11.246	11.246	26.804									

**E 2016**

Flow capacity / Caudal de aire (kg/h)  
 Overpressure / Sobrepresión 10%  
 Temperature / Temperatura 20° C  
 Calculation according / Calculos según ISO EN 4126-1 / API 520

**Model 1400**

**Capacity AIR / Caudal de aire (Nm<sup>3</sup>/h)**



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
<b>0,2</b>	97	97	230	354	527	861	1.464	2.109	3.295	4.485	6.356	9.522
<b>0,5</b>	123	123	292	449	668	1.091	1.856	2.673	4.177	5.685	8.057	12.070
<b>1</b>	166	166	395	607	903	1.475	2.509	3.614	5.646	7.685	10.892	16.318
<b>2</b>	252	252	600	922	1.374	2.243	3.816	5.495	8.586	11.686	16.562	24.812
<b>3</b>	338	338	806	1.238	1.844	3.011	5.122	7.376	11.525	15.687	22.232	33.307
<b>4</b>	424	424	1.012	1.554	2.314	3.779	6.429	9.257	14.464	19.688	27.902	41.802
<b>5</b>	511	511	1.217	1.870	2.785	4.546	7.735	11.138	17.404	23.688	33.572	50.297
<b>6</b>	597	597	1.423	2.186	3.255	5.314	9.041	13.020	20.343	27.689	39.242	58.792
<b>7</b>	683	683	1.628	2.501	3.725	6.082	10.348	14.901	23.282	31.690	44.912	67.286
<b>8</b>	769	769	1.834	2.817	4.195	6.850	11.654	16.782	26.222	35.691	50.582	75.781
<b>9</b>	856	856	2.039	3.133	4.666	7.618	12.961	18.663	29.161	39.692	56.252	84.276
<b>10</b>	942	942	2.245	3.449	5.136	8.386	14.267	20.544	32.101	43.692	61.922	92.771
<b>11</b>	1.028	1.028	2.450	3.765	5.606	9.154	15.573	22.426	35.040	47.693	67.592	101.265
<b>12</b>	1.114	1.114	2.656	4.080	6.077	9.922	16.880	24.307	37.979	51.694	73.262	109.760
<b>13</b>	1.201	1.201	2.861	4.396	6.547	10.689	18.186	26.188	40.919	55.695	78.933	118.255
<b>14</b>	1.287	1.287	3.067	4.712	7.017	11.457	19.492	28.069	43.858	59.696	84.603	126.750
<b>15</b>	1.373	1.373	3.273	5.028	7.488	12.225	20.799	29.950	46.797	63.696	90.273	135.244
<b>16</b>	1.459	1.459	3.478	5.344	7.958	12.993	22.105	31.832	49.737	67.697	95.943	143.739
<b>17</b>	1.546	1.546	3.684	5.659	8.428	13.761	23.412	33.713	52.676	71.698	101.613	152.234
<b>18</b>	1.632	1.632	3.889	5.975	8.898	14.529	24.718	35.594	55.615	75.699	107.283	160.729
<b>19</b>	1.718	1.718	4.095	6.291	9.369	15.297	26.024	37.475	58.555	79.700	112.953	169.223
<b>20</b>	1.804	1.804	4.300	6.607	9.839	16.064	27.331	39.356	61.494	83.700	118.623	177.718
<b>22</b>	1.977	1.977	4.711	7.238	10.780	17.600	29.944	43.119	67.373	91.702	129.963	194.708
<b>24</b>	2.149	2.149	5.123	7.870	11.720	19.136	32.556	46.881	73.252	99.704	141.303	211.697
<b>26</b>	2.322	2.322	5.534	8.502	12.661	20.672	35.169	50.643	79.130	107.705	152.644	228.687
<b>28</b>	2.494	2.494	5.945	9.133	13.601	22.207	37.782	54.406	85.009	115.707	163.984	245.676
<b>30</b>	2.667	2.667	6.356	9.765	14.542	23.743	40.395	58.168	90.888	123.708	175.324	262.666
<b>32</b>	2.839	2.839	6.767	10.396	15.483	25.279	43.007	61.931	96.767	131.710	186.664	279.655
<b>34</b>	3.012	3.012	7.178	11.028	16.423	26.815	45.620	65.693	102.645	139.712	198.004	296.645
<b>36</b>	3.184	3.184	7.589	11.660	17.364	28.350	48.233	69.455	108.524	147.713	209.344	313.635
<b>38</b>	3.357	3.357	8.000	12.291	18.304	29.886	50.846	73.218	114.403	155.715	220.684	330.624
<b>40</b>	3.529	3.529	8.411	12.923	19.245	31.422	53.458	76.985	120.282	163.717	232.025	347.614
<b>50</b>	4.392	4.392	10.467									
<b>55</b>	4.823	4.823	11.495									
<b>60</b>	5.254	5.254	12.522									
<b>65</b>	5.685	5.685	13.550									
<b>70</b>	6.116	6.116	14.578									
<b>75</b>	6.548	6.548	15.606									
<b>80</b>	6.979	6.979	16.633									
<b>85</b>	7.410	7.410	17.661									
<b>90</b>	7.841	7.841	18.689									
<b>95</b>	8.272	8.272	19.717									
<b>100</b>	8.704	8.704	20.745									

**E 2016**

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 AIR / Caudal de aire (S.C.F.M.)**



**US Units**

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 (inch)											
	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>15</b>	105	105	250	384	571	933	1.587	2.285	3.570	4.860	6.887	10.318
<b>20</b>	123	123	294	451	672	1.097	1.866	2.688	4.200	5.716	8.101	12.137
<b>30</b>	160	160	382	586	873	1.426	2.426	3.493	5.458	7.429	10.529	15.774
<b>40</b>	197	197	470	722	1.075	1.755	2.985	4.299	6.717	9.142	12.957	19.412
<b>50</b>	234	234	558	857	1.276	2.083	3.545	5.104	7.976	10.856	15.385	23.049
<b>60</b>	271	271	646	992	1.477	2.412	4.104	5.910	9.234	12.569	17.813	26.687
<b>70</b>	308	308	734	1.127	1.679	2.741	4.664	6.715	10.493	14.282	20.241	30.324
<b>80</b>	345	345	822	1.263	1.880	3.070	5.223	7.521	11.752	15.995	22.669	33.962
<b>90</b>	382	382	910	1.398	2.082	3.399	5.782	8.327	13.010	17.708	25.097	37.600
<b>100</b>	419	419	998	1.533	2.283	3.728	6.342	9.132	14.269	19.422	27.525	41.237
<b>120</b>	493	493	1.174	1.803	2.686	4.385	7.461	10.743	16.786	22.848	32.381	48.512
<b>140</b>	566	566	1.350	2.074	3.089	5.043	8.579	12.354	19.304	26.274	37.237	55.787
<b>160</b>	640	640	1.526	2.344	3.491	5.700	9.698	13.965	21.821	29.701	42.093	63.062
<b>180</b>	714	714	1.702	2.615	3.894	6.358	10.817	15.576	24.338	33.127	46.949	70.337
<b>200</b>	788	788	1.878	2.885	4.297	7.016	11.936	17.187	26.855	36.553	51.804	77.612
<b>220</b>	862	862	2.054	3.156	4.700	7.673	13.055	18.799	29.373	39.980	56.660	84.887
<b>240</b>	936	936	2.230	3.426	5.102	8.331	14.173	20.410	31.890	43.406	61.516	92.162
<b>260</b>	1.010	1.010	2.406	3.697	5.505	8.988	15.292	22.021	34.407	46.832	66.372	99.437
<b>280</b>	1.083	1.083	2.582	3.967	5.908	9.646	16.411	23.632	36.925	50.259	71.228	106.712
<b>300</b>	1.157	1.157	2.758	4.238	6.311	10.304	17.530	25.243	39.442	53.685	76.084	113.987
<b>320</b>	1.231	1.231	2.934	4.508	6.713	10.961	18.649	26.854	41.959	57.111	80.940	121.262
<b>340</b>	1.305	1.305	3.110	4.778	7.116	11.619	19.767	28.465	44.477	60.538	85.796	128.537
<b>360</b>	1.379	1.379	3.286	5.049	7.519	12.276	20.886	30.076	46.994	63.964	90.652	135.813
<b>380</b>	1.453	1.453	3.462	5.319	7.922	12.934	22.005	31.687	49.511	67.390	95.508	143.088
<b>400</b>	1.527	1.527	3.638	5.590	8.325	13.592	23.124	33.298	52.029	70.817	100.364	150.363
<b>420</b>	1.600	1.600	3.814	5.860	8.727	14.249	24.243	34.909	54.546	74.243	105.220	157.638
<b>440</b>	1.674	1.674	3.990	6.131	9.130	14.907	25.361	36.520	57.063	77.669	110.076	164.913
<b>460</b>	1.748	1.748	4.167	6.401	9.533	15.564	26.480	38.132	59.581	81.096	114.932	172.188
<b>480</b>	1.822	1.822	4.343	6.672	9.936	16.222	27.599	39.743	62.098	84.522	119.787	179.463
<b>500</b>	1.896	1.896	4.519	6.942	10.338	16.880	28.718	41.354	64.615	87.948	124.643	186.738
<b>600</b>	2.265	2.265	5.399	8.294	12.352	20.168	34.312	49.409	77.202	105.080	148.923	223.113
<b>700</b>	2.634	2.634	6.279	9.647	14.366	23.456	39.906	57.465	89.788	122.212	173.203	259.488
<b>800</b>	3.004	3.004	7.159									
<b>900</b>	3.373	3.373	8.039									
<b>1000</b>	3.742	3.742	8.920									
<b>1100</b>	4.112	4.112	9.800									
<b>1200</b>	4.481	4.481	10.680									
<b>1300</b>	4.850	4.850	11.560									
<b>1400</b>	5.219	5.219	12.440									
<b>1500</b>	5.589	5.589	13.320									
<b>1500</b>	5.589	5.589	13.320									

**E 2016**

Flow capacity / Caudal de aire (S.C.F.M.)  
 Overpressure / Sobrepresión 10%  
 Temperature / Temperatura 60° F  
 Calculation according / Calculos según ISO EN 4126-1 / API 520

**Model 1400**

**Capacity SATURATED STEAM / Caudal Vapor saturado (kg/h)**



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	77	77	184	283	422	689	1.171	1.687	2.636	3.587	5.084	7.617
0,5	98	98	234	359	535	873	1.485	2.138	3.341	4.547	6.445	9.655
1	133	133	316	485	723	1.180	2.007	2.891	4.517	6.148	8.713	13.053
2	202	202	480	738	1.099	1.794	3.052	4.395	6.868	9.348	13.248	19.848
3	270	270	645	990	1.475	2.408	4.097	5.900	9.219	12.548	17.784	26.643
4	339	339	809	1.243	1.851	3.023	5.142	7.405	11.570	15.749	22.320	33.439
5	408	408	974	1.496	2.227	3.637	6.187	8.910	13.922	18.949	26.855	40.234
6	477	477	1.138	1.748	2.604	4.251	7.232	10.415	16.273	22.149	31.391	47.029
7	546	546	1.302	2.001	2.980	4.865	8.277	11.920	18.624	25.350	35.927	53.824
8	615	615	1.467	2.254	3.356	5.480	9.323	13.424	20.976	28.550	40.462	60.620
9	684	684	1.631	2.506	3.732	6.094	10.368	14.929	23.327	31.751	44.998	67.415
10	753	753	1.796	2.759	4.109	6.708	11.413	16.434	25.678	34.951	49.534	74.210
11	822	822	1.960	3.011	4.485	7.322	12.458	17.939	28.030	38.151	54.069	81.005
12	891	891	2.125	3.264	4.861	7.937	13.503	19.444	30.381	41.352	58.605	87.801
13	960	960	2.289	3.517	5.237	8.551	14.548	20.949	32.732	44.552	63.141	94.596
14	1.029	1.029	2.453	3.769	5.613	9.165	15.593	22.453	35.083	47.752	67.676	101.391
15	1.098	1.098	2.618	4.022	5.990	9.779	16.638	23.958	37.435	50.953	72.212	108.186
16	1.167	1.167	2.782	4.275	6.366	10.393	17.683	25.463	39.786	54.153	76.748	114.982
17	1.236	1.236	2.947	4.527	6.742	11.008	18.728	26.968	42.137	57.354	81.283	121.777
18	1.305	1.305	3.111	4.780	7.118	11.622	19.773	28.473	44.489	60.554	85.819	128.572
19	1.374	1.374	3.276	5.032	7.494	12.236	20.818	29.978	46.840	63.754	90.355	135.367
20	1.443	1.443	3.440	5.285	7.871	12.850	21.863	31.482	49.191	66.955	94.890	142.162
22	1.581	1.581	3.769	5.790	8.623	14.079	23.953	34.492	53.894	73.355	103.962	155.753
24	1.719	1.719	4.098	6.295	9.375	15.307	26.043	37.502	58.596	79.756	113.033	169.343
26	1.857	1.857	4.427	6.801	10.128	16.536	28.133	40.511	63.299	86.157	122.104	182.934
28	1.995	1.995	4.755	7.306	10.880	17.764	30.223	43.521	68.001	92.558	131.176	196.524
30	2.133	2.133	5.084	7.811	11.633	18.993	32.313	46.531	72.704	98.958	140.247	210.115
32	2.271	2.271	5.413	8.316	12.385	20.221	34.403	49.540	77.407	105.359	149.318	223.705
34	2.409	2.409	5.742	8.822	13.137	21.450	36.493	52.550	82.109	111.760	158.390	237.296
36	2.547	2.547	6.071	9.327	13.890	22.678	38.583	55.560	86.812	118.161	167.461	250.886
38	2.685	2.685	6.400	9.832	14.642	23.907	40.673	58.569	91.514	124.561	176.532	264.477
40	2.823	2.823	6.729	10.337	15.395	25.135	42.763	61.579	96.217	130.962	185.604	278.067
50	3.513	3.513	8.373									
55	3.858	3.858	9.195									
60	4.203	4.203	10.017									
65	4.548	4.548	10.839									
70	4.893	4.893	11.661									
75	5.238	5.238	12.484									
80	5.583	5.583	13.306									
85	5.927	5.927	14.128									
90	6.272	6.272	14.950									

**E 2016**

Flow capacity / Caudal (kg/h)

Overpressure / Sobrepresión 10%

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

**Model 1400**

**Capacity SATURATED STEAM / Caudal Vapor saturado (lb/h)**



**US Units**

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 (psig)	Orifice / Orificio (inch)											
	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>15</b>	297	297	709	1.089	1.621	2.647	4.503	6.485	10.132	13.791	19.546	29.283
<b>20</b>	350	350	833	1.281	1.907	3.114	5.297	7.628	11.919	16.223	22.991	34.445
<b>30</b>	455	455	1.083	1.664	2.479	4.047	6.885	9.914	15.491	21.085	29.883	44.770
<b>40</b>	559	559	1.333	2.048	3.050	4.980	8.473	12.201	19.064	25.948	36.774	55.095
<b>50</b>	664	664	1.583	2.432	3.622	5.913	10.061	14.487	22.636	30.811	43.666	65.419
<b>60</b>	769	769	1.833	2.816	4.193	6.847	11.648	16.774	26.209	35.673	50.557	75.744
<b>70</b>	874	874	2.083	3.200	4.765	7.780	13.236	19.060	29.782	40.536	57.449	86.069
<b>80</b>	979	979	2.332	3.584	5.337	8.713	14.824	21.347	33.354	45.399	64.340	96.393
<b>90</b>	1.083	1.083	2.582	3.967	5.908	9.647	16.412	23.633	36.927	50.261	71.232	106.718
<b>100</b>	1.188	1.188	2.832	4.351	6.480	10.580	18.000	25.919	40.499	55.124	78.123	117.043
<b>120</b>	1.398	1.398	3.332	5.119	7.623	12.446	21.175	30.492	47.644	64.849	91.906	137.692
<b>140</b>	1.608	1.608	3.831	5.886	8.766	14.313	24.351	35.065	54.789	74.574	105.689	158.341
<b>160</b>	1.817	1.817	4.331	6.654	9.910	16.179	27.526	39.638	61.934	84.300	119.472	178.991
<b>180</b>	2.027	2.027	4.831	7.422	11.053	18.046	30.702	44.211	69.080	94.025	133.255	199.640
<b>200</b>	2.236	2.236	5.330	8.189	12.196	19.913	33.878	48.784	76.225	103.750	147.038	220.289
<b>220</b>	2.446	2.446	5.830	8.957	13.339	21.779	37.053	53.357	83.370	113.476	160.821	240.939
<b>240</b>	2.656	2.656	6.330	9.725	14.482	23.646	40.229	57.930	90.515	123.201	174.604	261.588
<b>260</b>	2.865	2.865	6.829	10.492	15.626	25.512	43.404	62.502	97.660	132.926	188.387	282.237
<b>280</b>	3.075	3.075	7.329	11.260	16.769	27.379	46.580	67.075	104.805	142.651	202.170	302.887
<b>300</b>	3.285	3.285	7.829	12.028	17.912	29.245	49.756	71.648	111.950	152.377	215.953	323.536
<b>320</b>	3.494	3.494	8.328	12.795	19.055	31.112	52.931	76.221	119.095	162.102	229.736	344.186
<b>340</b>	3.704	3.704	8.828	13.563	20.198	32.978	56.107	80.794	126.240	171.827	243.519	364.835
<b>360</b>	3.914	3.914	9.328	14.331	21.342	34.845	59.282	85.367	133.386	181.553	257.302	385.484
<b>380</b>	4.123	4.123	9.827	15.098	22.485	36.711	62.458	89.940	140.531	191.278	271.085	406.134
<b>400</b>	4.333	4.333	10.327	15.866	23.628	38.578	65.634	94.512	147.676	201.003	284.868	426.783
<b>420</b>	4.542	4.542	10.827	16.634	24.771	40.445	68.809	99.085	154.821	210.728	298.651	447.432
<b>420</b>	4.542	4.542	10.827	16.634	24.771	40.445	68.809	99.085	154.821	210.728	298.651	447.432
<b>440</b>	4.752	4.752	11.326	17.401	25.915	42.311	71.985	103.658	161.966	220.454	312.434	468.082
<b>460</b>	4.962	4.962	11.826	18.169	27.058	44.178	75.160	108.231	169.111	230.179	326.217	488.731
<b>480</b>	5.171	5.171	12.326	18.937	28.201	46.044	78.336	112.804	176.256	239.904	340.000	509.380
<b>500</b>	5.381	5.381	12.825	19.704	29.344	47.911	81.512	117.377	183.401	249.630	353.783	530.030
<b>600</b>	6.429	6.429	15.324	23.543	35.060	57.244	97.390	140.241	219.127	298.256	422.698	633.277
<b>700</b>	7.477	7.477	17.822									
<b>800</b>	8.526	8.526	20.320									
<b>900</b>	9.574	9.574	22.819									
<b>1000</b>	10.622	10.622	25.317									
<b>1100</b>	11.670	11.670	27.815									
<b>1200</b>	12.718	12.718	30.314									
<b>1300</b>	13.767	13.767	32.812									

**E 2016**

Flow capacity / Caudal (lb/h)

Overpressure / Sobrepresión 10%

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

**Model 1400**  
**Capacity WATER / Caudal de Agua (kg/h)**



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>	2.029	2.029	5.312	8.161	12.154	19.844	33.761	48.615	75.962	103.392	146.531	219.529
<b>0,5</b>	3.208	3.208	8.399	12.904	19.217	31.376	53.380	76.868	120.106	163.477	231.686	347.106
<b>1</b>	4.536	4.536	11.878	18.249	27.177	44.372	75.491	108.707	169.855	231.192	327.653	490.882
<b>2</b>	6.415	6.415	16.798	25.808	38.434	62.752	106.761	153.736	240.212	326.955	463.372	694.212
<b>3</b>	7.857	7.857	20.574	31.608	47.072	76.855	130.755	188.287	294.198	400.436	567.512	850.233
<b>4</b>	9.072	9.072	23.756	36.498	54.354	88.744	150.983	217.415	339.711	462.384	655.306	981.764
<b>5</b>	10.143	10.143	26.560	40.806	60.769	99.219	168.804	243.077	379.808	516.961	732.655	1.097.646
<b>6</b>	11.111	11.111	29.095	44.701	66.569	108.689	184.915	266.278	416.059	566.303	802.583	1.202.411
<b>7</b>	12.002	12.002	31.427	48.282	71.903	117.398	199.731	287.613	449.395	611.677	866.889	1.298.752
<b>8</b>	12.830	12.830	33.596	51.616	76.868	125.503	213.522	307.471	480.424	653.910	926.743	1.388.424
<b>9</b>	13.609	13.609	35.634	54.747	81.531	133.116	226.474	326.122	509.566	693.576	982.959	1.472.646
<b>10</b>	14.345	14.345	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>	15.045	15.045	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>	15.714	15.714	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>	16.355	16.355	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>	16.973	16.973	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>	17.569	17.569	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>	18.145	18.145	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>	18.703	18.703	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>	19.245	19.245	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>	19.773	19.773	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>	20.286	20.286	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>	21.277	21.277	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>	22.223	22.223	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>	23.130	23.130	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>	24.003	24.003	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>	24.846	24.846	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>	25.661	25.661	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>	26.450	26.450	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>	27.217	27.217	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>	27.963	27.963	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>	28.689	28.689	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>	32.076	32.076	92.390									
<b>55</b>	33.641	33.641	96.900									
<b>60</b>	35.137	35.137	101.208									
<b>65</b>	36.572	36.572	105.341									
<b>70</b>	37.952	37.952	109.318									
<b>75</b>	39.285	39.285	113.154									
<b>80</b>	40.573	40.573	116.865									
<b>85</b>	41.822	41.822	120.462									
<b>90</b>	43.034	43.034	123.954									
<b>95</b>	44.213	44.213	127.351									
<b>100</b>	34.021	34.021	130.659									

**E 2016**

Flow capacity / Caudal (kg/h)

Overpressure / Sobrepresión 10%

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



**Model 1400**  
**Capacity WATER / Caudal de Agua (gpm)**



**US Units**

Set Press (psig)	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
	Orifice / Orificio (inch)											
	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>15</b>	20	20	58	90	134	219	372	535	837	1.139	1.614	2.418
<b>20</b>	23	23	68	104	155	252	429	618	966	1.315	1.863	2.792
<b>30</b>	29	29	83	127	189	309	526	757	1.183	1.610	2.282	3.419
<b>40</b>	33	33	96	147	219	357	607	874	1.366	1.859	2.635	3.948
<b>50</b>	37	37	107	164	244	399	679	977	1.527	2.079	2.946	4.414
<b>60</b>	41	41	117	180	268	437	744	1.071	1.673	2.277	3.227	4.835
<b>70</b>	44	44	126	194	289	472	803	1.157	1.807	2.460	3.486	5.222
<b>80</b>	47	47	135	208	309	505	859	1.236	1.932	2.629	3.727	5.583
<b>90</b>	50	50	143	220	328	535	911	1.311	2.049	2.789	3.953	5.922
<b>100</b>	52	52	151	232	346	564	960	1.382	2.160	2.940	4.166	6.242
<b>120</b>	57	57	165	254	379	618	1.052	1.514	2.366	3.220	4.564	6.838
<b>140</b>	62	62	179	275	409	668	1.136	1.636	2.556	3.478	4.930	7.386
<b>160</b>	66	66	191	294	437	714	1.214	1.749	2.732	3.719	5.270	7.896
<b>180</b>	70	70	203	311	464	757	1.288	1.855	2.898	3.944	5.590	8.375
<b>200</b>	74	74	214	328	489	798	1.358	1.955	3.055	4.158	5.892	8.828
<b>220</b>	78	78	224	344	513	837	1.424	2.050	3.204	4.360	6.180	9.258
<b>240</b>	81	81	234	359	535	874	1.487	2.141	3.346	4.554	6.455	9.670
<b>260</b>	85	85	244	374	557	910	1.548	2.229	3.483	4.740	6.718	10.065
<b>280</b>	88	88	253	388	578	944	1.606	2.313	3.614	4.919	6.972	10.445
<b>300</b>	91	91	262	402	599	977	1.663	2.394	3.741	5.092	7.216	10.812
<b>320</b>	94	94	270	415	618	1.009	1.717	2.473	3.864	5.259	7.453	11.166
<b>340</b>	97	97	279	428	637	1.040	1.770	2.549	3.983	5.421	7.682	11.510
<b>360</b>	99	99	287	440	656	1.071	1.821	2.623	4.098	5.578	7.905	11.843
<b>380</b>	102	102	294	452	674	1.100	1.871	2.695	4.210	5.731	8.122	12.168
<b>400</b>	105	105	302	464	691	1.128	1.920	2.765	4.320	5.880	8.333	12.484
<b>420</b>	107	107	310	476	708	1.156	1.967	2.833	4.426	6.025	8.539	12.792
<b>420</b>	107	107	310	476	708	1.156	1.967	2.833	4.426	6.025	8.539	12.792
<b>440</b>	110	110	317	487	725	1.184	2.014	2.900	4.531	6.167	8.740	13.093
<b>460</b>	112	112	324	498	741	1.210	2.059	2.965	4.632	6.305	8.936	13.388
<b>480</b>	115	115	331	508	757	1.236	2.103	3.029	4.732	6.441	9.128	13.676
<b>500</b>	117	117	338	519	773	1.262	2.146	3.091	4.830	6.574	9.316	13.958
<b>600</b>	128	128	370	568	846	1.382	2.351	3.386	5.291	7.201	10.206	15.290
<b>700</b>	139	139	400									
<b>800</b>	148	148	427									
<b>900</b>	157	157	453									
<b>1000</b>	166	166	478									
<b>1100</b>	174	174	501									
<b>1200</b>	182	182	523									
<b>1300</b>	189	189	545									
<b>1400</b>	196	196	565									
<b>1500</b>	203	203	585									

**E 2016**

Flow capacity / Caudal (gpm)

Overpressure / Sobrepresión 10%

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