Serie1216

Capacity AIR / *Caudal de aire*

TOSACA

	BSP / NPT								
	1/2" x 3/4"	1/2" x 1"	3/4" x 1"	1" x 1"	1" x 1 1/4"	1" x 2"	1 1/4"x1 1/4"	1 1/2" x 2"	2" x 2"
Set pressure	Orifice / *Orificio* (mm)								
Presión	13	13	14	16	16	22	18	28	32
manometro	Area (mm^2)								
(barg)	133	133	154	201	201	380	254	616	804
0,5	97	97	112	147	147	277	186	449	586
1	131	131	152	198	198	375	251	607	793
1,5	165	165	191	250	250	472	316	765	999
2	199	199	231	301	301	570	381	923	1.205
2,5	233	233	270	353	353	667	447	1.081	1.412
3	267	267	310	404	404	765	512	1.239	1.618
3,5	301	301	349	456	456	862	577	1.397	1.824
4	335	335	389	508	508	960	642	1.555	2.030
4,5	369	369	428	559	559	1.057	708	1.712	2.237
5	403	403	468	611	611	1.155	773	1.870	2.443
5,5	437	437	507	662	662	1.252	838	2.028	2.649
6	471	471	547	714	714	1.350	904	2.186	2.856
6,5	505	505	586	765	765	1.447	969	2.344	3.062
7	539	539	626	817	817	1.545	1.034	2.502	3.268
7,5	573	573	665	869	869	1.642	1.099	2.660	3.475
8	607	607	705	920	920	1.740	1.165	2.818	3.681
8,5	642	642	744	972	972	1.837	1.230	2.976	3.887
9	676	676	784	1.023	1.023	1.935	1.295	3.134	4.093
9,5	710	710	823	1.075	1.075	2.032	1.360	3.292	4.300
10	744	744	862	1.127	1.127	2.130	1.426	3.450	4.506
11	812	812	941	1.230	1.230	2.325	1.556	3.766	4.919
12	880	880	1.020	1.333	1.333	2.520	1.687	4.082	5.331
13	948	948	1.099	1.436	1.436	2.715	1.817	4.398	5.744
14	1.016	1.016	1.178	1.539	1.539	2.910	1.948	4.714	6.157
15	1.084	1.084	1.257	1.642	1.642	3.105	2.079	5.029	6.569
16	1.152	1.152	1.336	1.745	1.745	3.300	2.209	5.345	6.982
17	1.220	1.220	1.415	1.849	1.849	3.495	2.340	5.661	7.394
18	1.288	1.288	1.494	1.952	1.952	3.690	2.470	5.977	7.807
19	1.357	1.357	1.573	2.055	2.055	3.885	2.601	6.293	8.220
20	1.425	1.425	1.652	2.158	2.158	4.080	2.731	6.609	8.632
21	1.493	1.493	1.731	2.261	2.261	4.275	2.862	6.925	9.045
22	1.561	1.561	1.810	2.364	2.364	4.470	2.992	7.241	9.457
23	1.629	1.629	1.889	2.468	2.468	4.665	3.123	7.557	9.870
24	1.697	1.697	1.968	2.571	2.571	4.860	3.253	7.873	10.283
25	1.765	1.765	2.047	2.674	2.674	5.055	3.384	8.189	10.695
26	1.833	1.833	2.126	2.777	2.777	5.250	3.515	8.504	11.108
27	1.901	1.901	2.205	2.880	2.880	5.445	3.645	8.820	11.520
28	1.969	1.969	2.284	2.983	2.983	5.640	3.776	9.136	11.933
29	2.038	2.038	2.363	3.086	3.086	5.835	3.906	9.452	12.346
30	2.106	2.106	2.442	3.190	3.190	6.030	4.037	9.768	12.758
31	2.174	2.174	2.521	3.293	3.293	6.225	4.167	10.084	13.171
32	2.242	2.242	2.600	3.396	3.396	6.420	4.298	10.400	13.584
33	2.310	2.310	2.679	3.499	3.499	6.615	4.428	10.716	13.996
34	2.378	2.378	2.758	3.602	3.602	6.810	4.559	11.032	14.409
35	2.446	2.446	2.837	3.705	3.705	7.005	4.690	11.348	14.821
36	2.514	2.514	2.916	3.808	3.808	7.200	4.820	11.664	15.234
37	2.582	2.582	2.995	3.912	3.912	7.395	4.951	11.979	15.647
38	2.650	2.650	3.074	4.015	4.015	7.590	5.081	12.295	16.059
39	2.718	2.718	3.153	4.118	4.118	7.786	5.212	12.611	16.472
40									

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

Serie1216 HP

Capacity AIR / *Caudal de aire*

TOSACA

	BSP / NPT									
	PN-250	**PN-250**	**PN-250**	**PN-400**	**PN-400**	**PN-400**	**PN-100**	**PN-100**	**PN-100**	**PN-100**
	1/2" x 3/4"	3/4" x 3/4"	1" x 1"	1/2" x 3/4"	3/4" x 3/4"	1" x 1"	1" x 2"	1 1/4" x 2	1 1/2" x 2"	2" x 2"
Set pressure	Orifice / *Orificio* (mm)									
Presión	9	9	9	6	6	6	16	18	20	22
manometro	Area (mm^2)									
(barg)	64	64	64	28	28	28	201	254	314	380
40	1.336	1.336	1.336	594	594	594	4.221	5.342	6.595	7.981
45	1.499	1.499	1.499	666	666	666	4.737	5.995	7.401	8.956
50	1.662	1.662	1.662	739	739	739	5.253	6.648	8.207	9.931
55	1.825	1.825	1.825	811	811	811	5.768	7.301	9.013	10.906
60	1.988	1.988	1.988	884	884	884	6.284	7.953	9.819	11.881
65	2.152	2.152	2.152	956	956	956	6.800	8.606	10.625	12.856
70	2.315	2.315	2.315	1.029	1.029	1.029	7.316	9.259	11.431	13.831
75	2.478	2.478	2.478	1.101	1.101	1.101	7.831	9.912	12.237	14.806
80	2.641	2.641	2.641	1.174	1.174	1.174	8.347	10.564	13.043	15.781
85	2.804	2.804	2.804	1.246	1.246	1.246	8.863	11.217	13.848	16.757
90	2.967	2.967	2.967	1.319	1.319	1.319				
95	3.131	3.131	3.131	1.391	1.391	1.391				
100	3.294	3.294	3.294	1.464	1.464	1.464				
105	3.457	3.457	3.457	1.536	1.536	1.536				
110	3.620	3.620	3.620	1.609	1.609	1.609				
115	3.783	3.783	3.783	1.682	1.682	1.682				
120	3.947	3.947	3.947	1.754	1.754	1.754				
125	4.110	4.110	4.110	1.827	1.827	1.827				
130	4.273	4.273	4.273	1.899	1.899	1.899				
135	4.436	4.436	4.436	1.972	1.972	1.972				
140	4.599	4.599	4.599	2.044	2.044	2.044				
145	4.763	4.763	4.763	2.117	2.117	2.117				
150	4.926	4.926	4.926	2.189	2.189	2.189				
160	5.252	5.252	5.252	2.334	2.334	2.334				
170	5.579	5.579	5.579	2.479	2.479	2.479				
180	5.905	5.905	5.905	2.624	2.624	2.624				
190				2.769	2.769	2.769				
200				2.915	2.915	2.915				
210				3.060	3.060	3.060				
220				3.205	3.205	3.205				
230				3.350	3.350	3.350				
240				3.495	3.495	3.495				
250				3.640	3.640	3.640				
260				3.785	3.785	3.785				
270				3.930	3.930	3.930				
280				4.075	4.075	4.075				
290				4.220	4.220	4.220				
300				4.365	4.365	4.365				
310				4.510	4.510	4.510				
320				4.655	4.655	4.655				
330				4.800	4.800	4.800				
340				4.945	4.945	4.945				
350				5.090	5.090	5.090				
360				5.235	5.235	5.235				
370				5.381	5.381	5.381				
380										
390										
400										

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

Serie 1216 B

Capacity AIR / *Caudal de aire*

TOSACA

	Flanges / *Bridas* 150# & 300#			Flanges / *Bridas* PN-16 & PN-40		
	1/2" x 1"	3/4" x 1"	1" x 1"	15 x 25	20 x 25	25 x 25
Set pressure	Orificio (mm)			Orificio (mm)		
Presión	13	14	16	13	14	16
manometro	Area (mm^2)			Area (mm^2)		
(barg)	133	154	201	133	154	201
0,5	97	112	147	97	112	147
1	131	152	198	131	152	198
1,5	165	191	250	165	191	250
2	199	231	301	199	231	301
2,5	233	270	353	233	270	353
3	267	310	404	267	310	404
3,5	301	349	456	301	349	456
4	335	389	507	335	389	508
4,5	369	428	559	369	428	559
5	403	468	611	403	468	611
5,5	437	507	662	437	507	662
6	471	547	714	471	547	714
6,5	505	586	765	505	586	765
7	539	626	817	539	626	817
7,5	573	665	868	573	665	869
8	607	705	920	607	705	920
8,5	642	744	971	642	744	972
9	676	784	1.023	676	784	1.023
9,5	710	823	1.075	710	823	1.075
10	744	862	1.126	744	862	1.127
11	812	941	1.229	812	941	1.230
12	880	1.020	1.332	880	1.020	1.333
13	948	1.099	1.436	948	1.099	1.436
14	1.016	1.178	1.539	1.016	1.178	1.539
15	1.084	1.257	1.642	1.084	1.257	1.642
16	1.152	1.336	1.745	1.152	1.336	1.745
17	1.220	1.415	1.848	1.220	1.415	1.849
18	1.288	1.494	1.951	1.288	1.494	1.952
19	1.357	1.573	2.054	1.357	1.573	2.055
20	1.425	1.652	2.157	1.425	1.652	2.158
21	1.493	1.731	2.261	1.493	1.731	2.261
22	1.561	1.810	2.364	1.561	1.810	2.364
23	1.629	1.889	2.467	1.629	1.889	2.468
24	1.697	1.968	2.570	1.697	1.968	2.571
25	1.765	2.047	2.673	1.765	2.047	2.674
26	1.833	2.126	2.776	1.833	2.126	2.777
27	1.901	2.205	2.879	1.901	2.205	2.880
28	1.969	2.284	2.982	1.969	2.284	2.983
29	2.038	2.363	3.085	2.038	2.363	3.086
30	2.106	2.442	3.189	2.106	2.442	3.190
31	2.174	2.521	3.292	2.174	2.521	3.293
32	2.242	2.600	3.395	2.242	2.600	3.396
33	2.310	2.679	3.498	2.310	2.679	3.499
34	2.378	2.758	3.601	2.378	2.758	3.602
35	2.446	2.837	3.704	2.446	2.837	3.705
36	2.514	2.916	3.807	2.514	2.916	3.808
37	2.582	2.995	3.910	2.582	2.995	3.912
38	2.650	3.074	4.014	2.650	3.074	4.015
39	2.718	3.153	4.117	2.718	3.153	4.118
40						

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

	Clamp x BSP / NPT o Clamp x Clamp			
	15 x 1"	20 x 1"	25 x 1"	40 x 2"
	15 x 25	20 x 25	25 x 25	40 x 40
Set pressure	Orifice / *Orificio* (mm)			
Presión	9,5	15	18	32
manometro	Area (mm^2)			
(barg)	71	177	254	804
0,5	52	129	186	586
1	70	174	251	793
1,5	88	219	316	999
2	106	265	381	1.205
2,5	124	310	447	1.412
3	143	355	512	1.618
3,5	161	401	577	1.824
4	179	446	642	2.030
4,5	197	491	708	2.237
5	215	537	773	2.443
5,5	233	582	838	2.649
6	252	627	904	2.856
6,5	270	673	969	3.062
7	288	718	1.034	3.268
7,5	306	763	1.099	3.475
8	324	809	1.165	3.681
8,5	343	854	1.230	3.887
9	361	899	1.295	4.093
9,5	379	945	1.360	4.300
10	397	990	1.426	4.506

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

Serie1400

Capacity AIR / *Caudal de aire*

TOSACA TOSACA

	Flanges / *Bridas* EN-1092-1											
	15 x 25	20 x 32	25 x 40	32 x 50	40 x 65	50 x 80	65x100	80x125	100x150	125x200	150x250 150x200	200x300 200x250
Set pressure	Orifice / *Orificio* (mm)											
Presión	16	18	23,8	29,5	36	46	60	72	90	105	125	153
manometro	Area (mm^2)											
(barg)	201	254	445	683	1.018	1.662	2.827	4.072	6.362	8.659	12.272	18.385
0,5	171	216	377	580	863	1.410	2.398	3.454	5.396	7.345	10.410	15.596
1	231	292	510	784	1.167	1.906	3.242	4.669	7.295	9.930	14.073	21.084
1,5	291	368	643	988	1.471	2.402	4.086	5.884	9.194	12.515	17.736	26.572
2	351	444	776	1.192	1.775	2.898	4.930	7.100	11.093	15.099	21.399	32.060
2,5	411	520	909	1.396	2.079	3.394	5.774	8.315	12.992	17.684	25.062	37.548
3	471	596	1.041	1.600	2.383	3.890	6.618	9.530	14.891	20.269	28.725	43.036
3,5	531	672	1.174	1.804	2.686	4.386	7.462	10.746	16.790	22.853	32.388	48.524
4	591	748	1.307	2.008	2.990	4.882	8.306	11.961	18.689	25.438	36.052	54.011
4,5	651	824	1.440	2.212	3.294	5.378	9.150	13.176	20.588	28.023	39.715	59.499
5	711	899	1.573	2.416	3.598	5.874	9.994	14.392	22.487	30.607	43.378	64.987
5,5	771	975	1.705	2.620	3.902	6.370	10.838	15.607	24.386	33.192	47.041	70.475
6	831	1.051	1.838	2.824	4.206	6.867	11.682	16.822	26.285	35.777	50.704	75.963
6,5	891	1.127	1.971	3.028	4.509	7.363	12.526	18.038	28.184	38.361	54.367	81.451
7	951	1.203	2.104	3.232	4.813	7.859	13.370	19.253	30.083	40.946	58.030	86.939
7,5	1.011	1.279	2.237	3.436	5.117	8.355	14.214	20.468	31.982	43.531	61.693	92.427
8	1.071	1.355	2.369	3.640	5.421	8.851	15.058	21.684	33.881	46.115	65.356	97.915
8,5	1.131	1.431	2.502	3.844	5.725	9.347	15.902	22.899	35.780	48.700	69.019	103.403
9	1.191	1.507	2.635	4.048	6.029	9.843	16.746	24.114	37.679	51.285	72.682	108.891
9,5	1.251	1.583	2.768	4.252	6.332	10.339	17.590	25.330	39.578	53.869	76.346	114.379
10	1.311	1.659	2.900	4.456	6.636	10.835	18.434	26.545	41.476	56.454	80.009	119.867
11	1.431	1.811	3.166	4.864	7.244	11.827	20.122	28.976	45.274	61.623	87.335	130.843
12	1.551	1.963	3.432	5.272	7.852	12.819	21.810	31.406	49.072	66.793	94.661	141.819
13	1.671	2.115	3.697	5.680	8.459	13.812	23.498	33.837	52.870	71.962	101.987	152.795
14	1.791	2.267	3.963	6.088	9.067	14.804	25.186	36.268	56.668	77.132	109.313	163.771
15	1.911	2.419	4.228	6.496	9.675	15.796	26.874	38.698	60.466	82.301	116.640	174.747
16	2.031	2.571	4.494	6.904	10.282	16.788	28.562	41.129	64.264	87.470	123.966	185.723
17	2.151	2.722	4.760	7.312	10.890	17.780	30.250	43.560	68.062	92.640	131.292	196.698
18	2.271	2.874	5.025	7.720	11.498	18.772	31.938	45.990	71.860	97.809	138.618	207.674
19	2.391	3.026	5.291	8.129	12.105	19.764	33.626	48.421	75.658	102.978	145.944	218.650
20	2.511	3.178	5.556	8.537	12.713	20.757	35.314	50.851	79.455	108.148	153.271	229.626
21	2.631	3.330	5.822	8.945	13.321	21.749	37.001	53.282	83.253	113.317	160.597	240.602
22	2.751	3.482	6.088	9.353	13.928	22.741	38.689	55.713	87.051	118.486	167.923	251.578
23	2.871	3.634	6.353	9.761	14.536	23.733	40.377	58.143	90.849	123.656	175.249	262.554
24	2.991	3.786	6.619	10.169	15.144	24.725	42.065	60.574	94.647	128.825	182.575	273.530
25	3.111	3.938	6.884	10.577	15.751	25.717	43.753	63.005	98.445	133.994	189.901	284.506
26	3.231	4.090	7.150	10.985	16.359	26.709	45.441	65.435	102.243	139.164	197.228	295.482
27	3.351	4.242	7.416	11.393	16.967	27.701	47.129	67.866	106.041	144.333	204.554	306.458
28	3.471	4.394	7.681	11.801	17.574	28.694	48.817	70.297	109.839	149.503	211.880	317.434
29	3.591	4.545	7.947	12.209	18.182	29.686	50.505	72.727	113.636	154.672	219.206	328.409
30	3.712	4.697	8.212	12.617	18.790	30.678	52.193	75.158	117.434	159.841	226.532	339.385
31	3.832	4.849	8.478	13.025	19.397	31.670	53.881	77.589	121.232	165.011	233.859	350.361
32	3.952	5.001	8.743	13.433	20.005	32.662	55.569	80.019	125.030	170.180	241.185	361.337
33	4.072	5.153	9.009	13.841	20.612	33.654	57.257	82.450	128.828	175.349	248.511	372.313

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

	PN-63						PN-100					
	Flanges / *Bridas* EN-1092-1						Flanges / *Bridas* EN-1092-1					
	15 x 25 20 x 32	25 x 50	32 x 50	40 x 65	50 x 80	65 x100	15 x 25 20 x 32	25 x 50	32 x 50	40 x 65	50 x 80	65 x100
Set pressure	*Orifice* / Orificio (mm)						Orfice / *Orificio* (mm)					
Presión	13	20	23,8	26	32	48	13	16	20	23,8	32	39
manometro	Area (mm^2)						Area (mm^2)					
(barg)	133	314	445	531	804	1.810	133	201	314	445	804	1.195
33	2.688	6.362	9.009	10.752	16.286	36.644	2.688	4.072	6.362	9.009	16.286	24.191
34	2.767	6.549	9.275	11.069	16.767	37.725	2.767	4.192	6.549	9.275	16.767	24.904
35	2.846	6.737	9.540	11.385	17.247	38.805	2.846	4.312	6.737	9.540	17.247	25.617
36	2.926	6.925	9.806	11.702	17.727	39.885	2.926	4.432	6.925	9.806	17.727	26.331
37	3.005	7.112	10.071	12.019	18.207	40.966	3.005	4.552	7.112	10.071	18.207	27.044
38	3.084	7.300	10.337	12.336	18.687	42.046	3.084	4.672	7.300	10.337	18.687	27.757
39	3.163	7.487	10.603	12.653	19.167	43.126	3.163	4.792	7.487	10.603	19.167	28.470
40	3.243	7.675	10.868	12.970	19.647	44.206	3.243	4.912	7.675	10.868	19.647	29.183
42	3.401	8.050	11.399	13.604	20.608	46.367	3.401	5.152	8.050	11.399	20.608	30.609
44	3.560	8.425	11.931	14.238	21.568	48.528	3.560	5.392	8.425	11.931	21.568	32.036
46	3.718	8.800	12.462	14.872	22.528	50.688	3.718	5.632	8.800	12.462	22.528	33.462
48	3.876	9.175	12.993	15.506	23.488	52.849	3.876	5.872	9.175	12.993	23.488	34.888
50	4.035	9.550	13.524	16.140	24.449	55.009	4.035	6.112	9.550	13.524	24.449	36.315
52	4.193	9.925	14.055	16.774	25.409	57.170	4.193	6.352	9.925	14.055	25.409	37.741
54							4.352	6.592	10.300	14.586	26.369	39.167
56							4.510	6.832	10.676	15.118	27.329	40.594
58							4.669	7.072	11.051	15.649	28.290	42.020
60							4.827	7.312	11.426	16.180	29.250	43.446
62							4.986	7.553	11.801	16.711	30.210	44.873
64							5.144	7.793	12.176	17.242	31.170	46.299
66							5.303	8.033	12.551	17.774	32.131	47.725
68							5.461	8.273	12.926	18.305	33.091	49.152
70							5.620	8.513	13.301	18.836	34.051	50.578
72							5.778	8.753	13.676	19.367	35.011	52.004
74							5.937	8.993	14.051	19.898	35.972	53.431
76							6.095	9.233	14.427	20.429	36.932	54.857
78							6.254	9.473	14.802	20.961	37.892	56.283
80							6.412	9.713	15.177	21.492	38.852	57.710
82							6.571	9.953	15.552	22.023	39.813	59.136

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

Serie 1415 150#

Capacity AIR / *Caudal de aire*

TOSACA

	Flanges / *Brida* s ANSI B16.5													
	1/2" x 1" 3/4" x 1" 1" x 1" 1" x 2"	1/2" x 1" 3/4" x 1" 1" x 1" 1" x 2"	11/2"x2"	11/2"x3"	11/2"x3"	2" x 3"	3" x 4"	3" x 4"	4" x 6"	4" x 6"	4" x 6"	6"x 8"	6" x 8"	8" x 10
	D	**E**	**F**	**G**	**H**	**J**	**K**	**L**	**M**	**N**	**P**	**Q**	**R**	**T**
	Orifice / *Orificio* (mm)													
	9,5	13	16	21	26	32,5	39	49	55	60	73	96	115	147
Set pressure	Area (mm^2)													
Presión	71	133	201	346	531	830	1.195	1.886	2.376	2.827	4.185	7.238	10.387	16.972
manometro	Area (pulgadas cuadradas)													
(barg)	0,11	0,196	0,307	0,503	0,785	1,287	1,838	2,853	3,6	4,34	6,38	11,05	16	26
0,5	92	172	260	448	686	1.072	1.544	2.437	3.070	3.654	5.409	9.354	13.423	21.932
1	124	232	351	605	928	1.449	2.087	3.294	4.151	4.940	7.312	12.645	18.146	29.650
1,5	156	292	443	763	1.169	1.827	2.630	4.152	5.231	6.225	9.215	15.937	22.870	37.368
2	188	353	534	920	1.410	2.204	3.173	5.009	6.311	7.511	11.119	19.228	27.593	45.085
2,5	221	413	626	1.078	1.652	2.581	3.717	5.867	7.392	8.797	13.022	22.520	32.316	52.803
3	253	473	717	1.235	1.893	2.958	4.260	6.725	8.472	10.083	14.925	25.811	37.040	60.521
3,5	285	534	808	1.393	2.135	3.336	4.803	7.582	9.553	11.368	16.828	29.103	41.763	68.238
4	317	594	900	1.550	2.376	3.713	5.346	8.440	10.633	12.654	18.732	32.394	46.486	75.956
4,5	349	654	991	1.708	2.618	4.090	5.890	9.297	11.713	13.940	20.635	35.686	51.209	83.674
5	382	715	1.083	1.865	2.859	4.467	6.433	10.155	12.794	15.226	22.538	38.977	55.933	
5,5	414	775	1.174	2.023	3.100	4.844	6.976	11.012	13.874	16.511	24.441	42.269	60.656	
6	446	835	1.266	2.180	3.342	5.222	7.519	11.870	14.954	17.797	26.345	45.560	65.379	
6,5	478	896	1.357	2.338	3.583	5.599	8.062	12.727	16.035	19.083	28.248	48.852	70.103	
7	511	956	1.448	2.495	3.825	5.976	8.606	13.585	17.115	20.369	30.151	52.143	74.826	
7,5	543	1.017	1.540	2.653	4.066	6.353	9.149	14.442	18.196	21.654	32.054	55.435		
8	575	1.077	1.631	2.810	4.308	6.731	9.692	15.300	19.276	22.940	33.958	58.727		
8,5	607	1.137	1.723	2.968	4.549	7.108	10.235	16.157	20.356	24.226	35.861	62.018		
9	640	1.198	1.814	3.125	4.790	7.485	10.779	17.015	21.437	25.512	37.764	65.310		
9,5	672	1.258	1.906	3.283	5.032	7.862	11.322	17.872	22.517	26.797	39.667	68.601		
10	704	1.318	1.997	3.440	5.273	8.240	11.865	18.730	23.598	28.083	41.571	71.893		
11	768	1.439	2.180	3.755	5.756	8.994	12.952	20.445	25.758	30.655	45.377	78.476		
12	833	1.560	2.363	4.070	6.239	9.749	14.038	22.160	27.919	33.226	49.184			
13	897	1.680	2.546	4.385	6.722	10.503	15.124	23.875	30.080	35.798	52.990			
14	962	1.801	2.728	4.700	7.205	11.258	16.211	25.590	32.241	38.369	56.797			
15	1.026	1.922	2.911	5.015	7.688	12.012	17.297	27.305	34.401	40.940	60.603			
16	1.091	2.043	3.094	5.330	8.171	12.767	18.384	29.020	36.562	43.512	64.410			
18	1.220	2.284	3.460	5.960	9.136	14.276	20.557	32.450	40.884	48.655	72.023			
20	1.349	2.526	3.826	6.590	10.102	15.784	22.730	35.880	45.205	53.798	79.636			

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

Serie 1415 300#

Capacity AIR / *Caudal de aire*

TOSACA

	Flanges / *Brida* s ANSI B16.5													
	1/2" x 1" 3/4" x 1" 1" x 1" 1" x 2"	1/2" x 1" 3/4" x 1" 1" x 1" 1" x 2"	1 1/2"x2"	1 1/2"x3"	1 1/2"x3" 2" x 3"	2" x 3" 3" x 4"	3" x 4"	3" x 4" 4" x 6"	4" x 6"	4" x 6"	4" x 6"	6"x 8"	6" x 8" 6" x 10"	8" x 10
	D	**E**	**F**	**G**	**H**	**J**	**K**	**L**	**M**	**N**	**P**	**Q**	**R**	**T**
	Orifice / *Orificio* (mm)													
	9,5	13	16	21	26	32,5	39	49	55	60	73	96	115	147
Set pressure	Area (mm^2)													
Presión	71	133	201	346	531	830	1.195	1.886	2.376	2.827	4.185	7.238	10.387	16.972
manometro	Area (pulgadas cuadradas)													
(barg)	0,11	0,196	0,307	0,503	0,785	1,287	1,838	2,853	3,6	4,34	6,38	11,05	16	26
0,5	92	172	260	448	686	1.072	1.544	2.437	3.070	3.654	5.409	9.354	13.423	21.932
1	124	232	351	605	928	1.449	2.087	3.294	4.151	4.940	7.312	12.645	18.146	29.650
1,5	156	292	443	763	1.169	1.827	2.630	4.152	5.231	6.225	9.215	15.937	22.870	37.368
2	188	353	534	920	1.410	2.204	3.173	5.009	6.311	7.511	11.119	19.228	27.593	45.085
2,5	221	413	626	1.078	1.652	2.581	3.717	5.867	7.392	8.797	13.022	22.520	32.316	52.803
3	253	473	717	1.235	1.893	2.958	4.260	6.725	8.472	10.083	14.925	25.811	37.040	60.521
3,5	285	534	808	1.393	2.135	3.336	4.803	7.582	9.553	11.368	16.828	29.103	41.763	68.238
4	317	594	900	1.550	2.376	3.713	5.346	8.440	10.633	12.654	18.732	32.394	46.486	75.956
4,5	349	654	991	1.708	2.618	4.090	5.890	9.297	11.713	13.940	20.635	35.686	51.209	83.674
5	382	715	1.083	1.865	2.859	4.467	6.433	10.155	12.794	15.226	22.538	38.977	55.933	91.391
5,5	414	775	1.174	2.023	3.100	4.844	6.976	11.012	13.874	16.511	24.441	42.269	60.656	99.109
6	446	835	1.266	2.180	3.342	5.222	7.519	11.870	14.954	17.797	26.345	45.560	65.379	106.827
6,5	478	896	1.357	2.338	3.583	5.599	8.062	12.727	16.035	19.083	28.248	48.852	70.103	114.545
7	511	956	1.448	2.495	3.825	5.976	8.606	13.585	17.115	20.369	30.151	52.143	74.826	122.262
7,5	543	1.017	1.540	2.653	4.066	6.353	9.149	14.442	18.196	21.654	32.054	55.435	79.549	129.980
8	575	1.077	1.631	2.810	4.308	6.731	9.692	15.300	19.276	22.940	33.958	58.727	84.273	137.698
8,5	607	1.137	1.723	2.968	4.549	7.108	10.235	16.157	20.356	24.226	35.861	62.018	88.996	145.415
9	640	1.198	1.814	3.125	4.790	7.485	10.779	17.015	21.437	25.512	37.764	65.310	93.719	153.133
9,5	672	1.258	1.906	3.283	5.032	7.862	11.322	17.872	22.517	26.797	39.667	68.601	98.443	160.851
10	704	1.318	1.997	3.440	5.273	8.240	11.865	18.730	23.598	28.083	41.571	71.893	103.166	168.568
11	768	1.439	2.180	3.755	5.756	8.994	12.952	20.445	25.758	30.655	45.377	78.476	112.613	184.004
12	833	1.560	2.363	4.070	6.239	9.749	14.038	22.160	27.919	33.226	49.184	85.059	122.059	199.439
13	897	1.680	2.546	4.385	6.722	10.503	15.124	23.875	30.080	35.798	52.990	91.642	131.506	214.875
14	962	1.801	2.728	4.700	7.205	11.258	16.211	25.590	32.241	38.369	56.797	98.225	140.953	230.310
15	1.026	1.922	2.911	5.015	7.688	12.012	17.297	27.305	34.401	40.940	60.603	104.808	150.399	245.745
16	1.091	2.043	3.094	5.330	8.171	12.767	18.384	29.020	36.562	43.512	64.410	111.391		261.181
18	1.220	2.284	3.460	5.960	9.136	14.276	20.557	32.450	40.884	48.655	72.023	124.557		292.051
20	1.349	2.526	3.826	6.590	10.102	15.784	22.730	35.880	45.205	53.798	79.636	137.723		322.922
22	1.478	2.767	4.191	7.220	11.068	17.293	24.903	39.310	49.527	58.941	87.249			
24	1.607	3.008	4.557	7.850	12.034	18.802	27.075	42.740	53.848	64.084	94.862			
26	1.735	3.250	4.923	8.480	12.999	20.311	29.248	46.170	58.170	69.227	102.475			
28	1.864	3.491	5.289	9.110	13.965	21.820	31.421	49.601	62.491	74.370	110.088			
30	1.993	3.733	5.654	9.740	14.931	23.329	33.594	53.031	66.813	79.513	117.701			
32	2.122	3.974	6.020	10.370	15.896	24.838	35.767	56.461	71.134	84.656	125.314			
34	2.251	4.216	6.386	11.000	16.862	26.347	37.940	59.891	75.456	89.799	132.927			
36	2.380	4.457	6.751	11.630	17.828	27.856	40.113	63.321	79.778	94.942	140.540			
38	2.509	4.698	7.117	12.260	18.794	29.365	42.286	66.751	84.099	100.085				
40	2.638	4.940	7.483	12.890	19.759	30.874	44.459	70.181	88.421	105.228				
42	2.767	5.181	7.849	13.520	20.725	32.383	46.632	73.611	92.742	110.371				
44	2.896	5.423	8.214	14.150	21.691	33.892	48.805	77.041	97.064	115.514				
46	3.025	5.664	8.580	14.780	22.657	35.401	50.977	80.471	101.385	120.657				
48	3.154	5.906	8.946	15.410	23.622	36.910	53.150	83.901	105.707	125.800				
50	3.283	6.147	9.311	16.040	24.588	38.419	55.323	87.332	110.028	130.943				

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

Serie 1415 600#

Capacity AIR / *Caudal de aire*

TOSACA

	Flanges/ *Bridas* ANSI B16.5												
	1/2" x 1" 3/4" x 1" 1" x 1" 1" x 2"	1/2" x 1" 3/4" x 1" 1" x 1" 1" x 2"	11/2"x2"	11/2"x3"	2" x 3"	3" x 4"	3" x 4"	4" x 6"	4" x 6"	4" x 6"	4" x 6"	6" x 8"	6" x 8" 6" x 10"
	D	**E**	**F**	**G**	**H**	**J**	**K**	**L**	**M**	**N**	**P**	**Q**	**R**
	Orifice / Orificio (mm)												
	9,5	13	16	21	26	32,5	39	49	55	60	73	96	115
Set pressure *Presión manometro* (barg)	Area (mm^2)												
	71	133	201	346	531	830	1.195	1.886	2.376	2.827	4.185	7.238	10.387
	Area (pulgadas al cuadrado)												
	0,11	0,196	0,307	0,503	0,785	1,287	1,838	2,853	3,6	4,34	6,38	11,05	16
40	2.638	4.940	7.483	12.890	19.759	30.874	44.459	70.181	88.421	105.228	155.766	269.383	
41	2.702	5.061	7.666	13.205	20.242	31.629	45.545	71.896	90.581	107.799	159.573	275.966	
42	2.767	5.181	7.849	13.520	20.725	32.383	46.632	73.611	92.742	110.371	163.379	282.549	
43	2.831	5.302	8.031	13.835	21.208	33.138	47.718	75.326	94.903	112.942	167.186	289.132	
44	2.896	5.423	8.214	14.150	21.691	33.892	48.805	77.041	97.064	115.514	170.992	295.715	
45	2.960	5.543	8.397	14.465	22.174	34.647	49.891	78.756	99.224	118.085	174.799	302.298	
46	3.025	5.664	8.580	14.780	22.657	35.401	50.977	80.471	101.385	120.657	178.605	308.881	
47	3.089	5.785	8.763	15.095	23.140	36.156	52.064	82.186	103.546	123.228	182.412	315.464	
48	3.154	5.906	8.946	15.410	23.622	36.910	53.150	83.901	105.707	125.800	186.219	322.047	
49	3.218	6.026	9.129	15.725	24.105	37.664	54.237	85.616	107.867	128.371	190.025	328.630	
50	3.283	6.147	9.311	16.040	24.588	38.419	55.323	87.332	110.028	130.943	193.832	335.213	
52	3.412	6.388	9.677	16.670	25.554	39.928	57.496	90.762	114.350	136.086	201.445	348.379	
54	3.541	6.630	10.043	17.301	26.520	41.437	59.669	94.192	118.671	141.229	209.058	361.545	
56	3.669	6.871	10.409	17.931	27.485	42.946	61.842	97.622	122.993	146.372	216.671	374.711	
58	3.798	7.113	10.774	18.561	28.451	44.455	64.015	101.052	127.314	151.515	224.284	387.877	
60	3.927	7.354	11.140	19.191	29.417	45.964	66.188	104.482	131.636	156.658	231.897	401.044	
62	4.056	7.596	11.506	19.821	30.383	47.473	68.361	107.912	135.957	161.801	239.510	414.210	
64	4.185	7.837	11.872	20.451	31.348	48.982	70.534	111.342	140.279	166.944	247.123		
66	4.314	8.079	12.237	21.081	32.314	50.491	72.707	114.772	144.601	172.087	254.736		
68	4.443	8.320	12.603	21.711	33.280	52.000	74.879	118.202	148.922	177.230	262.349		
70	4.572	8.561	12.969	22.341	34.246	53.509	77.052	121.632	153.244	182.373	269.962		
72	4.701	8.803	13.334	22.971	35.211	55.018	79.225		157.565				
74	4.830	9.044	13.700	23.601	36.177	56.527	81.398		161.887				
76	4.959	9.286	14.066	24.231	37.143	58.036	83.571		166.208				
78	5.088	9.527	14.432	24.861	38.108	59.544	85.744						
80	5.217	9.769	14.797	25.491	39.074	61.053	87.917						
82	5.346	10.010	15.163	26.121	40.040	62.562	90.090						
84	5.475	10.251	15.529	26.751	41.006	64.071	92.263						
86	5.603	10.493	15.895	27.381	41.971	65.580	94.436						
88	5.732	10.734	16.260	28.011	42.937	67.089	96.609						
90	5.861	10.976	16.626	28.641	43.903	68.598	98.782						
92	5.990	11.217	16.992	29.271	44.869	70.107	100.954						
94	6.119	11.459	17.357	29.901	45.834	71.616	103.127						
96	6.248	11.700	17.723	30.531	46.800	73.125	105.300						
98	6.377	11.941	18.089	31.161	47.766	74.634	107.473						
100	6.506	12.183	18.455	31.791	48.732	76.143	109.646						
102	6.635	12.424	18.820	32.421	49.697	77.652							

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

Serie1216

Capacity saturated steam/ *Caudal vapor saturado*

TOSACA

	BSP / NPT								
	1/2" x 3/4"	1/2" x 1"	3/4" x 1"	1" x 1"	1" x 1 1/4"	1" x 2"	1 1/4"x1 1/4"	1 1/2" x 2"	2" x 2"
Set pressure	Orifice / *Orificio* (mm)								
Presión	13	13	14	16	16	22	18	28	32
manometro	Area (mm^2)								
(barg)	133	133	154	201	201	380	254	616	804
0,5	60	60	69	91	91	172	115	278	363
1	81	81	94	123	123	232	155	376	491
1,5	102	102	118	155	155	292	196	473	618
2	123	123	143	187	187	353	236	571	746
2,5	144	144	167	218	218	413	276	669	874
3	165	165	192	250	250	473	317	767	1.002
3,5	186	186	216	282	282	534	357	865	1.129
4	207	207	241	314	314	594	398	962	1.257
4,5	229	229	265	346	346	655	438	1.060	1.385
5	250	250	290	378	378	715	479	1.158	1.512
5,5	271	271	314	410	410	775	519	1.256	1.640
6	292	292	338	442	442	836	559	1.354	1.768
6,5	313	313	363	474	474	896	600	1.451	1.896
7	334	334	387	506	506	956	640	1.549	2.023
7,5	355	355	412	538	538	1.017	681	1.647	2.151
8	376	376	436	570	570	1.077	721	1.745	2.279
8,5	397	397	461	602	602	1.137	761	1.843	2.407
9	418	418	485	634	634	1.198	802	1.940	2.534
9,5	439	439	510	666	666	1.258	842	2.038	2.662
10	460	460	534	697	697	1.319	883	2.136	2.790
11	503	503	583	761	761	1.439	964	2.331	3.045
12	545	545	632	825	825	1.560	1.044	2.527	3.301
13	587	587	681	889	889	1.681	1.125	2.723	3.556
14	629	629	730	953	953	1.802	1.206	2.918	3.812
15	671	671	778	1.017	1.017	1.922	1.287	3.114	4.067
16	713	713	827	1.081	1.081	2.043	1.368	3.309	4.322
17	756	756	876	1.144	1.144	2.164	1.448	3.505	4.578
18	798	798	925	1.208	1.208	2.285	1.529	3.701	4.833
19	840	840	974	1.272	1.272	2.405	1.610	3.896	5.089
20	882	882	1.023	1.336	1.336	2.526	1.691	4.092	5.344
21	924	924	1.072	1.400	1.400	2.647	1.772	4.287	5.600
22	966	966	1.121	1.464	1.464	2.767	1.853	4.483	5.855
23	1.008	1.008	1.170	1.528	1.528	2.888	1.933	4.678	6.111
24	1.051	1.051	1.218	1.592	1.592	3.009	2.014	4.874	6.366
25	1.093	1.093	1.267	1.655	1.655	3.130	2.095	5.070	6.621
26 +250ºC	1.135	1.135	1.316	1.719	1.719	3.250	2.176	5.265	6.877
27	1.177	1.177	1.365	1.783	1.783	3.371	2.257	5.461	7.132
28	1.219	1.219	1.414	1.847	1.847	3.492	2.338	5.656	7.388
29	1.261	1.261	1.463	1.911	1.911	3.613	2.418	5.852	7.643
30	1.304	1.304	1.512	1.975	1.975	3.733	2.499	6.047	7.899
31	1.346	1.346	1.561	2.039	2.039	3.854	2.580	6.243	8.154
32	1.388	1.388	1.610	2.102	2.102	3.975	2.661	6.439	8.410
33	1.430	1.430	1.659	2.166	2.166	4.096	2.742	6.634	8.665
34	1.472	1.472	1.707	2.230	2.230	4.216	2.823	6.830	8.921
35	1.514	1.514	1.756	2.294	2.294	4.337	2.903	7.025	9.176
36	1.557	1.557	1.805	2.358	2.358	4.458	2.984	7.221	9.431
37	1.599	1.599	1.854	2.422	2.422	4.579	3.065	7.416	9.687
38	1.641	1.641	1.903	2.486	2.486	4.699	3.146	7.612	9.942
39	1.683	1.683	1.952	2.549	2.549	4.820	3.227	7.808	10.198
40									

Flow capacity / *Caudal* (kg/h)

Overpressure / *Sobrepresión 10%*

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

Serie1216 HP

Capacity saturated steam/ *Caudal vapor saturado*

TOSACA TOSACA

	BSP / NPT									
	PN-250	**PN-250**	**PN-250**	**PN-400**	**PN-400**	**PN-400**	**PN-100**	**PN-100**	**PN-100**	**PN-100**
	1/2" x 3/4"	3/4" x 3/4"	1" x 1"	1/2" x 3/4"	3/4" x 3/4"	1" x 1"	1" x 2"	1 1/4" x 2	1 1/2" x 2"	2" x 2"
Set pressure	Orifice / *Orificio* (mm)									
Presión	9	9	9	6	6	6	16	18	20	22
manometro	Area (mm^2)									
(barg)	64	64	64	28	28	28	201	254	314	380
40	827	827	827	367	367	367	2.613	3.307	4.083	4.941
45	928	928	928	412	412	412	2.933	3.712	4.582	5.544
50	1.029	1.029	1.029	457	457	457	3.252	4.116	5.081	6.148
55	1.130	1.130	1.130	502	502	502	3.571	4.520	5.580	6.752
60	1.231	1.231	1.231	547	547	547	3.891	4.924	6.079	7.356
65	1.332	1.332	1.332	592	592	592				
70	1.433	1.433	1.433	637	637	637				
75	1.534	1.534	1.534	682	682	682				
80	1.635	1.635	1.635	727	727	727				
85	1.736	1.736	1.736	772	772	772				
90	1.837	1.837	1.837	817	817	817				
95	1.938	1.938	1.938	861	861	861				
100	2.039	2.039	2.039	906	906	906				
105	2.140	2.140	2.140	951	951	951				
110	2.241	2.241	2.241	996	996	996				
115	2.342	2.342	2.342	1.041	1.041	1.041				
120	2.443	2.443	2.443	1.086	1.086	1.086				
125	2.544	2.544	2.544	1.131	1.131	1.131				
130	2.645	2.645	2.645	1.176	1.176	1.176				
135										
140										
145										
150										
160										
170										
180										
190										
200										
210										
220										
230										
240										
250										
260										
270										
280										
290										
300										
310										
320										
330										
340										
350										
360										
370										
380										
390										
400										

Flow capacity / *Caudal* (kg/h)

Overpressure / *Sobrepresión 10%*

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

Serie 1216 B

Capacity saturated steam/ *Caudal vapor saturado*

TOSACA

	Flanges / *Bridas* 150# & 300#			Flanges / *Bridas* PN-16 & PN-40		
	1/2" x 1"	3/4" x 1"	1" x 1"	15 x 25	20 x 25	25 x 25
Set pressure	Orificio (mm)			Orificio (mm)		
Presión	13	14	16	13	14	16
manometro	Area (mm^2)			Area (mm^2)		
(barg)	133	154	201	133	154	201
0,5	60	69	91	60	69	91
1	81	94	123	81	94	123
1,5	102	118	155	102	118	155
2	123	143	186	123	143	187
2,5	144	167	218	144	167	218
3	165	192	250	165	192	250
3,5	186	216	282	186	216	282
4	207	241	314	207	241	314
4,5	229	265	346	229	265	346
5	250	290	378	250	290	378
5,5	271	314	410	271	314	410
6	292	338	442	292	338	442
6,5	313	363	474	313	363	474
7	334	387	506	334	387	506
7,5	355	412	538	355	412	538
8	376	436	570	376	436	570
8,5	397	461	601	397	461	602
9	418	485	633	418	485	634
9,5	439	510	665	439	510	666
10	460	534	697	460	534	697
11	503	583	761	503	583	761
12	545	632	825	545	632	825
13	587	681	889	587	681	889
14	629	730	953	629	730	953
15	671	778	1.016	671	778	1.017
16	713	827	1.080	713	827	1.081
17	756	876	1.144	756	876	1.144
18	798	925	1.208	798	925	1.208
19	840	974	1.272	840	974	1.272
20	882	1.023	1.336	882	1.023	1.336
21	924	1.072	1.399	924	1.072	1.400
22	966	1.121	1.463	966	1.121	1.464
23	1.008	1.170	1.527	1.008	1.170	1.528
24	1.051	1.218	1.591	1.051	1.218	1.592
25	1.093	1.267	1.655	1.093	1.267	1.655
26 +250ºC	1.135	1.316	1.719	1.135	1.316	1.719
27	1.177	1.365	1.783	1.177	1.365	1.783
28	1.219	1.414	1.846	1.219	1.414	1.847
29	1.261	1.463	1.910	1.261	1.463	1.911
30	1.304	1.512	1.974	1.304	1.512	1.975
31	1.346	1.561	2.038	1.346	1.561	2.039
32	1.388	1.610	2.102	1.388	1.610	2.102
33	1.430	1.659	2.166	1.430	1.659	2.166
34	1.472	1.707	2.229	1.472	1.707	2.230
35	1.514	1.756	2.293	1.514	1.756	2.294
36	1.557	1.805	2.357	1.557	1.805	2.358
37	1.599	1.854	2.421	1.599	1.854	2.422
38	1.641	1.903	2.485	1.641	1.903	2.486
39	1.683	1.952	2.549	1.683	1.952	2.549
40						

Flow capacity / *Caudal* (kg/h)
Overpressure / *Sobrepresión 10%*
Calculation according / *Calculos según* ISO EN 4126-1 / API 520

Serie 1216 C

Capacity saturated steam/ *Caudal vapor saturado*

	Clamp x BSP / NPT o Clamp x Clamp			
	15 x 1"	20 x 1"	25 x 1"	40 x 2"
	15 x 25	20 x 25	25 x 25	40 x 40
Set pressure	Orifice / *Orificio* (mm)			
Presión	9,5	15	18	32
manometro	Area (mm^2)			
(barg)	71	177	254	804
0,5	32	80	115	363
1	43	108	155	491
1,5	55	136	196	618
2	66	164	236	746
2,5	77	192	276	874
3	88	220	317	1.002
3,5	100	248	357	1.129
4	111	276	398	1.257
4,5	122	304	438	1.385
5	133	332	479	1.512
5,5	145	360	519	1.640
6	156	388	559	1.768
6,5	167	417	600	1.896
7	178	445	640	2.023
7,5	190	473	681	2.151
8	201	501	721	2.279
8,5	212	529	761	2.407
9	223	557	802	2.534
9,5	235	585	842	2.662
10	246	613	883	2.790

Flow capacity / *Caudal* (kg/h)
Overpressure / *Sobrepresión 10%*
Calculation according / *Calculos según* ISO EN 4126-1 / API 520

Serie1400

Capacity saturated steam/ *Caudal vapor saturado*

TOSACA

	Flanges / *Bridas* EN-1092-1											
	15 x 25	20 x 32	25 x 40	32 x 50	40 x 65	50 x 80	65x100	80x125	100x150	125x200	150x250 150x200	200x300 200x250
Set pressure	Orifice / *Orificio* (mm)											
Presión	16	18	23,8	29,5	36	46	60	72	90	105	125	153
manometro	Area (mm^2)											
(barg)	201	254	445	683	1.018	1.662	2.827	4.072	6.362	8.659	12.272	18.385
0,5	106	134	234	359	535	873	1.485	2.138	3.341	4.547	6.445	9.655
1	143	181	316	485	723	1.180	2.007	2.891	4.517	6.148	8.713	13.053
1,5	180	228	398	612	911	1.487	2.530	3.643	5.692	7.748	10.980	16.451
2	217	275	480	738	1.099	1.794	3.052	4.395	6.868	9.348	13.248	19.848
2,5	254	322	562	864	1.287	2.101	3.575	5.148	8.044	10.948	15.516	23.246
3	291	369	645	990	1.475	2.408	4.097	5.900	9.219	12.548	17.784	26.643
3,5	329	416	727	1.117	1.663	2.715	4.620	6.653	10.395	14.149	20.052	30.041
4	366	463	809	1.243	1.851	3.023	5.142	7.405	11.570	15.749	22.320	33.439
4,5	403	510	891	1.369	2.039	3.330	5.665	8.158	12.746	17.349	24.587	36.836
5	440	557	974	1.496	2.227	3.637	6.187	8.910	13.922	18.949	26.855	40.234
5,5	477	604	1.056	1.622	2.416	3.944	6.710	9.662	15.097	20.549	29.123	43.632
6	514	651	1.138	1.748	2.604	4.251	7.232	10.415	16.273	22.149	31.391	47.029
6,5	551	698	1.220	1.875	2.792	4.558	7.755	11.167	17.449	23.750	33.659	50.427
7	589	745	1.302	2.001	2.980	4.865	8.277	11.920	18.624	25.350	35.927	53.824
7,5	626	792	1.385	2.127	3.168	5.172	8.800	12.672	19.800	26.950	38.194	57.222
8	663	839	1.467	2.254	3.356	5.480	9.323	13.424	20.976	28.550	40.462	60.620
8,5	700	886	1.549	2.380	3.544	5.787	9.845	14.177	22.151	30.150	42.730	64.017
9	737	933	1.631	2.506	3.732	6.094	10.368	14.929	23.327	31.751	44.998	67.415
9,5	774	980	1.713	2.633	3.920	6.401	10.890	15.682	24.503	33.351	47.266	70.813
10	812	1.027	1.796	2.759	4.109	6.708	11.413	16.434	25.678	34.951	49.534	74.210
11	886	1.121	1.960	3.011	4.485	7.322	12.458	17.939	28.030	38.151	54.069	81.005
12	960	1.215	2.125	3.264	4.861	7.937	13.503	19.444	30.381	41.352	58.605	87.801
13	1.034	1.309	2.289	3.517	5.237	8.551	14.548	20.949	32.732	44.552	63.141	94.596
14	1.109	1.403	2.453	3.769	5.613	9.165	15.593	22.453	35.083	47.752	67.676	101.391
15	1.183	1.497	2.618	4.022	5.990	9.779	16.638	23.958	37.435	50.953	72.212	108.186
16	1.257	1.591	2.782	4.275	6.366	10.393	17.683	25.463	39.786	54.153	76.748	114.982
17	1.332	1.685	2.947	4.527	6.742	11.008	18.728	26.968	42.137	57.354	81.283	121.777
18	1.406	1.780	3.111	4.780	7.118	11.622	19.773	28.473	44.489	60.554	85.819	128.572
19	1.480	1.874	3.276	5.032	7.494	12.236	20.818	29.978	46.840	63.754	90.355	135.367
20	1.555	1.968	3.440	5.285	7.871	12.850	21.863	31.482	49.191	66.955	94.890	142.162
21	1.629	2.062	3.604	5.538	8.247	13.465	22.908	32.987	51.542	70.155	99.426	148.958
22	1.703	2.156	3.769	5.790	8.623	14.079	23.953	34.492	53.894	73.355	103.962	155.753
23	1.778	2.250	3.933	6.043	8.999	14.693	24.998	35.997	56.245	76.556	108.497	162.548
24	1.852	2.344	4.098	6.295	9.375	15.307	26.043	37.502	58.596	79.756	113.033	169.343
25	1.926	2.438	4.262	6.548	9.752	15.922	27.088	39.006	60.948	82.956	117.569	176.139
26	2.001	2.532	4.427	6.801	10.128	16.536	28.133	40.511	63.299	86.157	122.104	182.934
27	2.075	2.626	4.591	7.053	10.504	17.150	29.178	42.016	65.650	89.357	126.640	189.729
28	2.149	2.720	4.755	7.306	10.880	17.764	30.223	43.521	68.001	92.558	131.176	196.524
29	2.223	2.814	4.920	7.559	11.256	18.379	31.268	45.026	70.353	95.758	135.711	203.320
30	2.298	2.908	5.084	7.811	11.633	18.993	32.313	46.531	72.704	98.958	140.247	210.115
31	2.372	3.002	5.249	8.064	12.009	19.607	33.358	48.035	75.055	102.159	144.783	216.910
32	2.446	3.096	5.413	8.316	12.385	20.221	34.403	49.540	77.407	105.359	149.318	223.705
33	2.521	3.190	5.578	8.569	12.761	20.836	35.448	51.045	79.758	108.559	153.854	230.500

Flow capacity / *Caudal* (kg/h)
Overpressure / *Sobrepresión 10%*
Calculation according / *Calculos según* ISO EN 4126-1 / API 520

Serie 1400 PN-63 & PN-100

Capacity saturated steam/ *Caudal vapor saturado*

TOSACA

	PN-63						PN-100					
	Flanges / *Bridas* EN-1092-1						Flanges / *Bridas* EN-1092-1					
	15 x 25 20 x 32	25 x 50	32 x 50	40 x 65	50 x 80	65 x100	15 x 25 20 x 32	25 x 50	32 x 50	40 x 65	50 x 80	65 x100
Set pressure	*Orifice* / Orificio (mm)						Orfice / *Orificio* (mm)					
Presión	13	20	23,8	26	32	48	13	16	20	23,8	32	39
manometro	Area (mm^2)						Area (mm^2)					
(barg)	133	314	445	531	804	1.810	133	201	314	445	804	1.195
33	1.664	3.939	5.578	6.656	10.083	22.687	1.664	2.521	3.939	5.578	10.083	14.977
34	1.713	4.055	5.742	6.853	10.380	23.356	1.713	2.595	4.055	5.742	10.380	15.418
35	1.762	4.171	5.906	7.049	10.677	24.024	1.762	2.669	4.171	5.906	10.677	15.860
36	1.811	4.287	6.071	7.245	10.975	24.693	1.811	2.744	4.287	6.071	10.975	16.301
37	1.860	4.403	6.235	7.441	11.272	25.362	1.860	2.818	4.403	6.235	11.272	16.743
38	1.909	4.519	6.400	7.637	11.569	26.031	1.909	2.892	4.519	6.400	11.569	17.184
39	1.958	4.635	6.564	7.834	11.866	26.700	1.958	2.967	4.635	6.564	11.866	17.626
40	2.007	4.751	6.729	8.030	12.164	27.368	2.007	3.041	4.751	6.729	12.164	18.067
42 +250ºC	2.106	4.984	7.057	8.422	12.758	28.706	2.106	3.190	4.984	7.057	12.758	18.950
44	2.204	5.216	7.386	8.815	13.353	30.044	2.204	3.338	5.216	7.386	13.353	19.833
46	2.302	5.448	7.715	9.207	13.947	31.381	2.302	3.487	5.448	7.715	13.947	20.717
48	2.400	5.680	8.044	9.600	14.542	32.719	2.400	3.635	5.680	8.044	14.542	21.600
50	2.498	5.913	8.373	9.992	15.136	34.057	2.498	3.784	5.913	8.373	15.136	22.483
52	2.596	6.145	8.702	10.385	15.731	35.394	2.596	3.933	6.145	8.702	15.731	23.366
54							2.694	4.081	6.377	9.031	16.325	24.249
56							2.792	4.230	6.609	9.359	16.920	25.132
58							2.891	4.379	6.841	9.688	17.514	26.015
60							2.989	4.527	7.074	10.017	18.109	26.898
62							3.087	4.676	7.306	10.346	18.703	27.781
64							3.185	4.824	7.538	10.675	19.298	28.664
66							3.283	4.973	7.770	11.004	19.892	29.547
68						+250ºC	3.381	5.122	8.003	11.333	20.487	30.430
70							3.479	5.270	8.235	11.661	21.081	31.313
72							3.577	5.419	8.467	11.990	21.676	32.196
74							3.675	5.568	8.699	12.319	22.270	33.079
76							3.774	5.716	8.932	12.648	22.865	33.962
78							3.872	5.865	9.164	12.977	23.459	34.845
80							3.970	6.013	9.396	13.306	24.054	35.728
82							4.068	6.162	9.628	13.635	24.648	36.611

Flow capacity / *Caudal* (kg/h)
Overpressure / *Sobrepresión 10%*
Calculation according / *Calculos según* ISO EN 4126-1 / API 520

Serie 1415 150#

Capacity saturated steam/ *Caudal vapor saturado*

TOSACA

	Flanges / *Brida* s ANSI B16.5													
	1/2" x 1" 1/2" x 1" 3/4" x 1" 3/4" x 1" 1" x 1" 1" x 1" 1" x 2"	1" x 2"	11/2"x2"	11/2"x3"	11/2"x3"	2" x 3"	3" x 4"	3" x 4"	4" x 6"	4" x 6"	4" x 6"	6"x 8"	6" x 8"	8" x 10
	D	**E**	**F**	**G**	**H**	**J**	**K**	**L**	**M**	**N**	**P**	**Q**	**R**	**T**
	Orifice / *Orificio* (mm)													
	9,5	13	16	21	26	32,5	39	49	55	60	73	96	115	147
Set pressure	Area (mm^2)													
Presión	71	133	201	346	531	830	1.195	1.886	2.376	2.827	4.185	7.238	10.387	16.972
manometro	Area (pulgadas cuadradas)													
(barg)	0,11	0,196	0,307	0,503	0,785	1,287	1,838	2,853	3,6	4,34	6,38	11,05	16	26
0,5	57	106	161	277	425	664	956	1.509	1.901	2.262	3.349	5.791	8.310	13.578
1	77	144	217	375	574	897	1.292	2.040	2.570	3.058	4.527	7.829	11.234	18.356
1,5	97	181	274	472	724	1.131	1.628	2.570	3.239	3.854	5.705	9.867	14.159	23.134
2	117	218	331	570	873	1.364	1.965	3.101	3.907	4.650	6.884	11.904	17.083	27.913
2,5	137	256	387	667	1.023	1.598	2.301	3.632	4.576	5.446	8.062	13.942	20.007	32.691
3	156	293	444	765	1.172	1.831	2.637	4.163	5.245	6.242	9.240	15.980	22.931	37.469
3,5	176	330	500	862	1.322	2.065	2.974	4.694	5.914	7.038	10.418	18.018	25.856	42.247
4	196	368	557	960	1.471	2.299	3.310	5.225	6.583	7.834	11.597	20.056	28.780	47.025
4,5	216	405	614	1.057	1.621	2.532	3.646	5.756	7.252	8.630	12.775	22.093	31.704	51.803
5	236	443	670	1.155	1.770	2.766	3.983	6.287	7.921	9.426	13.953	24.131	34.628	+427ºC
5,5	256	480	727	1.252	1.920	2.999	4.319	6.818	8.590	10.222	15.132	26.169	37.552	
6	276	517	784	1.350	2.069	3.233	4.655	7.349	9.258	11.018	16.310	28.207	40.477	
6,5	296	555	840	1.447	2.218	3.466	4.992	7.879	9.927	11.814	17.488	30.244	43.401	
7	316	592	897	1.545	2.368	3.700	5.328	8.410	10.596	12.610	18.667	32.282	46.325	+232ºC
7,5	336	629	953	1.642	2.517	3.933	5.664	8.941	11.265	13.406	19.845	34.320		
8	356	667	1.010	1.740	2.667	4.167	6.000	9.472	11.934	14.202	21.023	36.358		
8,5	376	704	1.067	1.837	2.816	4.401	6.337	10.003	12.603	14.998	22.202	38.396		
9	396	741	1.123	1.935	2.966	4.634	6.673	10.534	13.272	15.794	23.380	40.433		
9,5	416	779	1.180	2.032	3.115	4.868	7.009	11.065	13.940	16.590	24.558	42.471		
10	436	816	1.236	2.130	3.265	5.101	7.346	11.596	14.609	17.386	25.737	44.509		
11	476	891	1.350	2.325	3.564	5.568	8.018	12.657	15.947	18.978	28.093	48.585		
12	516	966	1.463	2.520	3.863	6.035	8.691	13.719	17.285	20.570	30.450			
13	556	1.040	1.576	2.715	4.162	6.503	9.364	14.781	18.623	22.162	32.806			
14	596	1.115	1.689	2.910	4.461	6.970	10.036	15.843	19.960	23.754	35.163			
15	635	1.190	1.802	3.105	4.759	7.437	10.709	16.905	21.298	25.346	37.520			
16	675	1.265	1.916	3.300	5.058	7.904	11.381	17.966	22.636	26.938	39.876			
18	755	1.414	2.142	3.690	5.656	8.838	12.727	20.090	25.311	30.122	44.590			
20	835	1.564	2.368	4.080	6.254	9.772	14.072	22.214	27.987	33.307	49.303			

Flow capacity / *Caudal* (kg/h)
Overpressure / *Sobrepresión 10%*
Calculation according / *Calculos según* ISO EN 4126-1 / API 520

Serie 1415 300#

Capacity saturated steam/ *Caudal vapor saturado*

TOSACA

	Flanges / *Brida* s ANSI B16.5													
	1/2" x 1" 3/4" x 1" 1" x 1" 1" x 2"	1/2" x 1" 3/4" x 1" 1" x 1" 1" x 2"	11/2"x2"	11/2"x3"	11/2"x3" 2" x 3"	2" x 3" 3" x 4"	3" x 4"	3" x 4" 4" x 6"	4" x 6"	4" x 6"	4" x 6"	6"x 8"	6" x 8" 6" x 10"	8" x 10
	D	**E**	**F**	**G**	**H**	**J**	**K**	**L**	**M**	**N**	**P**	**Q**	**R**	**T**
	Orifice / *Orificio* (mm)													
	9,5	13	16	21	26	32,5	39	49	55	60	73	96	115	147
Set pressure	Area (mm^2)													
Presión	71	133	201	346	531	830	1.195	1.886	2.376	2.827	4.185	7.238	10.387	16.972
manometro	Area (pulgadas cuadradas)													
(barg)	0,11	0,196	0,307	0,503	0,785	1,287	1,838	2,853	3,6	4,34	6,38	11,05	16	26
0,5	57	106	161	277	425	664	956	1.509	1.901	2.262	3.349	5.791	8.310	13.578
1	77	144	217	375	574	897	1.292	2.040	2.570	3.058	4.527	7.829	11.234	18.356
1,5	97	181	274	472	724	1.131	1.628	2.570	3.239	3.854	5.705	9.867	14.159	23.134
2	117	218	331	570	873	1.364	1.965	3.101	3.907	4.650	6.884	11.904	17.083	27.913
2,5	137	256	387	667	1.023	1.598	2.301	3.632	4.576	5.446	8.062	13.942	20.007	32.691
3	156	293	444	765	1.172	1.831	2.637	4.163	5.245	6.242	9.240	15.980	22.931	37.469
3,5	176	330	500	862	1.322	2.065	2.974	4.694	5.914	7.038	10.418	18.018	25.856	42.247
4	196	368	557	960	1.471	2.299	3.310	5.225	6.583	7.834	11.597	20.056	28.780	47.025
4,5	216	405	614	1.057	1.621	2.532	3.646	5.756	7.252	8.630	12.775	22.093	31.704	51.803
5	236	443	670	1.155	1.770	2.766	3.983	6.287	7.921	9.426	13.953	24.131	34.628	56.581
5,5	256	480	727	1.252	1.920	2.999	4.319	6.818	8.590	10.222	15.132	26.169	37.552	61.359
6	276	517	784	1.350	2.069	3.233	4.655	7.349	9.258	11.018	16.310	28.207	40.477	66.137
6,5	296	555	840	1.447	2.218	3.466	4.992	7.879	9.927	11.814	17.488	30.244	43.401	70.915
7	316	592	897	1.545	2.368	3.700	5.328	8.410	10.596	12.610	18.667	32.282	46.325	75.693
7,5	336	629	953	1.642	2.517	3.933	5.664	8.941	11.265	13.406	19.845	34.320	49.249	80.471
8	356	667	1.010	1.740	2.667	4.167	6.000	9.472	11.934	14.202	21.023	36.358	52.174	85.249
8,5	376	704	1.067	1.837	2.816	4.401	6.337	10.003	12.603	14.998	22.202	38.396	55.098	90.027
9	396	741	1.123	1.935	2.966	4.634	6.673	10.534	13.272	15.794	23.380	40.433	58.022	94.805
9,5	416	779	1.180	2.032	3.115	4.868	7.009	11.065	13.940	16.590	24.558	42.471	60.946	99.583
10	436	816	1.236	2.130	3.265	5.101	7.346	11.596	14.609	17.386	25.737	44.509	63.871	104.361
11	476	891	1.350	2.325	3.564	5.568	8.018	12.657	15.947	18.978	28.093	48.585	69.719	113.917
12	516	966	1.463	2.520	3.863	6.035	8.691	13.719	17.285	20.570	30.450	52.660	75.567	123.474
13	556	1.040	1.576	2.715	4.162	6.503	9.364	14.781	18.623	22.162	32.806	56.736	81.416	133.030
14	596	1.115	1.689	2.910	4.461	6.970	10.036	15.843	19.960	23.754	35.163	60.811	87.264	142.586
15	635	1.190	1.802	3.105	4.759	7.437	10.709	16.905	21.298	25.346	37.520	64.887	93.113	152.142
16	675	1.265	1.916	3.300	5.058	7.904	11.381	17.966	22.636	26.938	39.876	68.962		161.698
18	755	1.414	2.142	3.690	5.656	8.838	12.727	20.090	25.311	30.122	44.590	77.114		180.810
20	835	1.564	2.368	4.080	6.254	9.772	14.072	22.214	27.987	33.307	49.303	85.265		199.922
22	915	1.713	2.595	4.470	6.852	10.706	15.417	24.337	30.662	36.491	54.016			
24	995	1.863	2.821	4.860	7.450	11.641	16.763	26.461	33.338	39.675	58.729			
26	1.074	2.012	3.048	5.250	8.048	12.575	18.108	28.584	36.013	42.859	63.443			
28	1.154	2.161	3.274	5.640	8.646	13.509	19.453	30.708	38.689	46.043	68.156			
30	1.234	2.311	3.501	6.030	9.244	14.443	20.798	32.831	41.364	49.227	72.869			
32	1.314	2.460	3.727	6.420	9.842	15.377	22.144	34.955	44.040	52.411	77.582			
34	1.394	2.610	3.953	6.810	10.439	16.312	23.489	37.079	46.715	55.595	82.296			
36	1.474	2.759	4.180	7.200	11.037	17.246	24.834	39.202	49.391	58.779	87.009			
38	1.553	2.909	4.406	7.590	11.635	18.180	26.179	41.326	52.066	61.963				
40	1.633	3.058	4.633	7.980	12.233	19.114	27.525	43.449	54.742	65.147				
42	1.713	3.208	4.859	8.371	12.831	20.048	28.870	45.573	57.417	68.331				
44	1.793	3.357	5.086	8.761	13.429	20.983	30.215	47.697	60.092	71.515				
46	1.873	3.507	5.312	9.151	14.027	21.917	31.560	49.820	62.768	74.699				
48	1.952	3.656	5.538	9.541	14.625	22.851	32.906	51.944	65.443	77.883				
50	2.032	3.806	5.765	9.931	15.223	23.785	34.251	54.067	68.119	81.067				

+427ºC

+232ºC

Flow capacity / *Caudal* (kg/h)

Overpressure / *Sobrepresión 10%*

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

Serie 1415 600#

Capacity saturated steam/ *Caudal vapor saturado*

TOSACA

	Flanges/ *Bridas* ANSI B16.5												
	1/2" x 1" 3/4" x 1" 1" x 1" 1" x 2"	1/2" x 1" 3/4" x 1" 1" x 1" 1" x 2"	11/2"x2"	11/2"x3"	2" x 3"	3" x 4"	3" x 4"	4" x 6"	4" x 6"	4" x 6"	4" x 6"	6" x 8"	6" x 8" 6" x 10"
	D	**E**	**F**	**G**	**H**	**J**	**K**	**L**	**M**	**N**	**P**	**Q**	**R**
	Orifice / Orificio (mm)												
	9,5	13	16	21	26	32,5	39	49	55	60	73	96	115
Set pressure	Area (mm^2)												
Presión	71	133	201	346	531	830	1.195	1.886	2.376	2.827	4.185	7.238	10.387
manometro	Area (pulgadas al cuadrado)												
(barg)	0,11	0,196	0,307	0,503	0,785	1,287	1,838	2,853	3,6	4,34	6,38	11,05	16
40	1.633	3.058	4.633	7.980	12.233	19.114	27.525	43.449	54.742	65.147	96.436	166.776	+427ºC
41	1.673	3.133	4.746	8.176	12.532	19.581	28.197	44.511	56.079	66.739	98.792	170.852	Max. 21 barg
42	1.713	3.208	4.859	8.371	12.831	20.048	28.870	45.573	57.417	68.331	101.149	174.927	
43	1.753	3.282	4.972	8.566	13.130	20.516	29.542	46.635	58.755	69.923	103.505	179.003	
44	1.793	3.357	5.086	8.761	13.429	20.983	30.215	47.697	60.092	71.515	105.862	183.078	
45	1.833	3.432	5.199	8.956	13.728	21.450	30.888	48.758	61.430	73.107	108.219	187.154	
46	1.873	3.507	5.312	9.151	14.027	21.917	31.560	49.820	62.768	74.699	110.575	191.230	
47	1.913	3.581	5.425	9.346	14.326	22.384	32.233	50.882	64.106	76.291	112.932	195.305	
48	1.952	3.656	5.538	9.541	14.625	22.851	32.906	51.944	65.443	77.883	115.289	199.381	
49	1.992	3.731	5.652	9.736	14.924	23.318	33.578	53.005	66.781	79.475	117.645	203.456	
50	2.032	3.806	5.765	9.931	15.223	23.785	34.251	54.067	68.119	81.067	120.002	207.532	
52	2.112	3.955	5.991	10.321	15.820	24.720	35.596	56.191	70.794	84.251	124.715	215.683	
54	2.192	4.105	6.218	10.711	16.418	25.654	36.941	58.314	73.470	87.435	129.428	223.834	
56	2.272	4.254	6.444	11.101	17.016	26.588	38.287	60.438	76.145	90.619	134.142	231.985	
58	2.352	4.404	6.670	11.491	17.614	27.522	39.632	62.562	78.821	93.803	138.855	240.136	
60	2.431	4.553	6.897	11.881	18.212	28.456	40.977	64.685	81.496	96.987	143.568	248.288	
62	2.511	4.702	7.123	12.271	18.810	29.391	42.322	66.809	84.172	100.171	148.281	256.439	
64	2.591	4.852	7.350	12.661	19.408	30.325	43.668	68.932	86.847	103.355	152.995		+232ºC
66	2.671	5.001	7.576	13.051	20.006	31.259	45.013	71.056	89.523	106.539	157.708		
68	2.751	5.151	7.803	13.441	20.604	32.193	46.358	73.179	92.198	109.723	162.421		
70	2.831	5.300	8.029	13.831	21.202	33.127	47.703	75.303	94.874	112.908	167.135		
72	2.910	5.450	8.255	14.221	21.799	34.062	49.049		97.549				
74	2.990	5.599	8.482	14.611	22.397	34.996	50.394		100.225				
76	3.070	5.749	8.708	15.001	22.995	35.930	51.739		102.900				
78	3.150	5.898	8.935	15.391	23.593	36.864	53.084						
80	3.230	6.048	9.161	15.781	24.191	37.798	54.430						
82	3.309	6.197	9.388	16.171	24.789	38.733	55.775						
84	3.389	6.347	9.614	16.561	25.387	39.667	57.120						
86	3.469	6.496	9.840	16.952	25.985	40.601	58.465						
88	3.549	6.646	10.067	17.342	26.583	41.535	59.811						
90	3.629	6.795	10.293	17.732	27.180	42.469	61.156						
92	3.709	6.945	10.520	18.122	27.778	43.404	62.501						
94	3.788	7.094	10.746	18.512	28.376	44.338	63.847						
96	3.868	7.244	10.972	18.902	28.974	45.272	65.192						
98	3.948	7.393	11.199	19.292	29.572	46.206	66.537						
100	4.028	7.542	11.425	19.682	30.170	47.140	67.882						
102	4.108	7.692	11.652	20.072	30.768	48.075	69.228						

Flow capacity / *Caudal* (kg/h)

Overpressure / *Sobrepresión 10%*

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

Serie1216

Capacity water / *Caudal de agua*

TOSACA

	BSP / NPT								
	1/2" x 3/4"	1/2" x 1"	3/4" x 1"	1" x 1"	1" x 1 1/4"	1" x 2"	1 1/4"x1 1/4"	1 1/2" x 2"	2" x 2"
Set pressure	Orifice / *Orificio* (mm)								
Presión	13	13	14	16	16	22	18	28	32
manometro	Area (mm^2)								
(barg)	133	133	154	201	201	380	254	616	804
0,5	2.406	2.406	2.790	3.644	3.644	6.890	4.612	11.160	14.576
1	3.402	3.402	3.946	5.154	5.154	9.743	6.522	15.783	20.614
1,5	4.167	4.167	4.832	6.312	6.312	11.933	7.988	19.330	25.247
2	4.811	4.811	5.580	7.288	7.288	13.779	9.224	22.320	29.153
2,5	5.379	5.379	6.239	8.148	8.148	15.406	10.313	24.955	32.594
3	5.893	5.893	6.834	8.926	8.926	16.876	11.297	27.336	35.705
3,5	6.365	6.365	7.382	9.641	9.641	18.228	12.202	29.527	38.566
4	6.804	6.804	7.891	10.307	10.307	19.487	13.045	31.565	41.228
4,5	7.217	7.217	8.370	10.932	10.932	20.669	13.836	33.480	43.729
5	7.607	7.607	8.823	11.524	11.524	21.787	14.585	35.291	46.095
5,5	7.979	7.979	9.253	12.086	12.086	22.850	15.296	37.014	48.344
6	8.334	8.334	9.665	12.624	12.624	23.866	15.977	38.660	50.494
6,5	8.674	8.674	10.060	13.139	13.139	24.841	16.629	40.238	52.556
7	9.001	9.001	10.439	13.635	13.635	25.779	17.257	41.757	54.540
7,5	9.317	9.317	10.806	14.114	14.114	26.683	17.862	43.223	56.454
8	9.623	9.623	11.160	14.576	14.576	27.559	18.448	44.640	58.306
8,5	9.919	9.919	11.504	15.025	15.025	28.407	19.016	46.014	60.100
9	10.206	10.206	11.837	15.461	15.461	29.230	19.567	47.348	61.842
9,5	10.486	10.486	12.161	15.884	15.884	30.031	20.104	48.646	63.537
10	10.759	10.759	12.477	16.297	16.297	30.811	20.626	49.909	65.188
11	11.284	11.284	13.086	17.092	17.092	32.315	21.633	52.345	68.369
12	11.785	11.785	13.668	17.852	17.852	33.752	22.594	54.673	71.410
13	12.267	12.267	14.226	18.581	18.581	35.130	23.517	56.905	74.325
14	12.730	12.730	14.763	19.283	19.283	36.456	24.405	59.054	77.131
15	13.176	13.176	15.282	19.960	19.960	37.736	25.261	61.126	79.838
16	13.609	13.609	15.783	20.614	20.614	38.974	26.090	63.131	82.457
17	14.027	14.027	16.268	21.249	21.249	40.173	26.893	65.074	84.994
18	14.434	14.434	16.740	21.865	21.865	41.338	27.672	66.960	87.458
19	14.830	14.830	17.199	22.464	22.464	42.471	28.431	68.795	89.855
20	15.215	15.215	17.646	23.047	23.047	43.574	29.169	70.582	92.189
21	15.591	15.591	18.081	23.616	23.616	44.650	29.890	72.325	94.466
22	15.957	15.957	18.507	24.172	24.172	45.701	30.593	74.027	96.689
23	16.316	16.316	18.923	24.716	24.716	46.728	31.281	75.691	98.862
24	16.667	16.667	19.330	25.247	25.247	47.733	31.953	77.319	100.988
25	17.011	17.011	19.728	25.768	25.768	48.717	32.612	78.914	103.071
26	17.348	17.348	20.119	26.278	26.278	49.682	33.258	80.476	105.112
27	17.678	17.678	20.502	26.779	26.779	50.628	33.892	82.009	107.114
28	18.002	18.002	20.879	27.270	27.270	51.557	34.514	83.514	109.080
29	18.321	18.321	21.248	27.753	27.753	52.470	35.124	84.993	111.011
30	18.634	18.634	21.611	28.227	28.227	53.367	35.725	86.445	112.908
31	18.942	18.942	21.969	28.694	28.694	54.249	36.315	87.874	114.775
32	19.245	19.245	22.320	29.153	29.153	55.117	36.897	89.281	116.611
33	19.544	19.544	22.666	29.605	29.605	55.972	37.469	90.665	118.419
34	19.838	19.838	23.007	30.050	30.050	56.813	38.032	92.028	120.200
35	20.127	20.127	23.343	30.489	30.489	57.643	38.587	93.372	121.955
36	20.413	20.413	23.674	30.921	30.921	58.460	39.135	94.696	123.685
37	20.694	20.694	24.001	31.348	31.348	59.267	39.674	96.002	125.391
38	20.972	20.972	24.323	31.769	31.769	60.062	40.207	97.291	127.074
39	21.246	21.246	24.641	32.184	32.184	60.848	40.733	98.563	128.735
40									

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

Serie1216 HP

Capacity water / *Caudal de agua*

TOSACA TOSACA

	BSP / NPT									
	PN-250	**PN-250**	**PN-250**	**PN-400**	**PN-400**	**PN-400**	**PN-100**	**PN-100**	**PN-100**	**PN-100**
	1/2" x 3/4"	3/4" x 3/4"	1" x 1"	1/2" x 3/4"	3/4" x 3/4"	1" x 1"	1" x 2"	1 1/4" x 2	1 1/2" x 2"	2" x 2"
Set pressure	Orifice / *Orificio* (mm)									
Presión	9	9	9	6	6	6	16	18	20	22
manometro	Area (mm^2)									
(barg)	64	64	64	28	28	28	201	254	314	380
40	10.313	10.313	10.313	4.584	4.584	4.584	32.594	41.252	50.928	61.623
45	10.938	10.938	10.938	4.862	4.862	4.862	34.571	43.754	54.017	65.361
50	11.530	11.530	11.530	5.125	5.125	5.125	36.441	46.121	56.939	68.896
55	12.093	12.093	12.093	5.375	5.375	5.375	38.220	48.372	59.718	72.259
60	12.631	12.631	12.631	5.614	5.614	5.614	39.919	50.523	62.374	75.472
65	13.146	13.146	13.146	5.843	5.843	5.843	41.549	52.586	64.921	78.554
70	13.643	13.643	13.643	6.063	6.063	6.063	43.118	54.571	67.371	81.519
75	14.122	14.122	14.122	6.276	6.276	6.276	44.631	56.486	69.736	84.380
80	14.585	14.585	14.585	6.482	6.482	6.482	46.095	58.339	72.023	87.148
85	15.033	15.033	15.033	6.682	6.682	6.682	47.513	60.134	74.239	89.830
90	15.469	15.469	15.469	6.875	6.875	6.875				
95	15.893	15.893	15.893	7.064	7.064	7.064				
100	16.306	16.306	16.306	7.247	7.247	7.247				
105	16.709	16.709	16.709	7.426	7.426	7.426				
110	17.102	17.102	17.102	7.601	7.601	7.601				
115	17.486	17.486	17.486	7.772	7.772	7.772				
120	17.862	17.862	17.862	7.939	7.939	7.939				
125	18.231	18.231	18.231	8.103	8.103	8.103				
130	18.592	18.592	18.592	8.263	8.263	8.263				
135	18.946	18.946	18.946	8.420	8.420	8.420				
140	19.294	19.294	19.294	8.575	8.575	8.575				
145	19.635	19.635	19.635	8.727	8.727	8.727				
150	19.971	19.971	19.971	8.876	8.876	8.876				
160	20.626	20.626	20.626	9.167	9.167	9.167				
170	21.261	21.261	21.261	9.449	9.449	9.449				
180	21.877	21.877	21.877	9.723	9.723	9.723				
190				9.990	9.990	9.990				
200				10.249	10.249	10.249				
210				10.502	10.502	10.502				
220				10.749	10.749	10.749				
230				10.991	10.991	10.991				
240				11.227	11.227	11.227				
250				11.459	11.459	11.459				
260				11.686	11.686	11.686				
270				11.908	11.908	11.908				
280				12.127	12.127	12.127				
290				12.341	12.341	12.341				
300				12.552	12.552	12.552				
310				12.760	12.760	12.760				
320				12.964	12.964	12.964				
330				13.165	13.165	13.165				
340				13.363	13.363	13.363				
350				13.558	13.558	13.558				
360				13.751	13.751	13.751				
370				13.940	13.940	13.940				
380										
390										
400										

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

Serie 1216 B

Capacity water / *Caudal de agua*

TOSACA

	Flanges / *Bridas* 150# & 300#			Flanges / *Bridas* PN-16 & PN-40		
	1/2" x 1"	3/4" x 1"	1" x 1"	15 x 25	20 x 25	25 x 25
Set pressure	Orificio (mm)			Orificio (mm)		
Presión	13	14	16	13	14	16
manometro	Area (mm^2)			Area (mm^2)		
(barg)	133	154	201	133	154	201
0,5	2.406	2.790	3.643	2.406	2.790	3.644
1	3.402	3.946	5.152	3.402	3.946	5.154
1,5	4.167	4.832	6.310	4.167	4.832	6.312
2	4.811	5.580	7.286	4.811	5.580	7.288
2,5	5.379	6.239	8.146	5.379	6.239	8.148
3	5.893	6.834	8.923	5.893	6.834	8.926
3,5	6.365	7.382	9.638	6.365	7.382	9.641
4	6.804	7.891	10.304	6.804	7.891	10.307
4,5	7.217	8.370	10.929	7.217	8.370	10.932
5	7.607	8.823	11.520	7.607	8.823	11.524
5,5	7.979	9.253	12.082	7.979	9.253	12.086
6	8.334	9.665	12.620	8.334	9.665	12.624
6,5	8.674	10.060	13.135	8.674	10.060	13.139
7	9.001	10.439	13.631	9.001	10.439	13.635
7,5	9.317	10.806	14.109	9.317	10.806	14.114
8	9.623	11.160	14.572	9.623	11.160	14.576
8,5	9.919	11.504	15.020	9.919	11.504	15.025
9	10.206	11.837	15.456	10.206	11.837	15.461
9,5	10.486	12.161	15.879	10.486	12.161	15.884
10	10.759	12.477	16.292	10.759	12.477	16.297
11	11.284	13.086	17.087	11.284	13.086	17.092
12	11.785	13.668	17.847	11.785	13.668	17.852
13	12.267	14.226	18.576	12.267	14.226	18.581
14	12.730	14.763	19.277	12.730	14.763	19.283
15	13.176	15.282	19.953	13.176	15.282	19.960
16	13.609	15.783	20.608	13.609	15.783	20.614
17	14.027	16.268	21.242	14.027	16.268	21.249
18	14.434	16.740	21.858	14.434	16.740	21.865
19	14.830	17.199	22.457	14.830	17.199	22.464
20	15.215	17.646	23.040	15.215	17.646	23.047
21	15.591	18.081	23.609	15.591	18.081	23.616
22	15.957	18.507	24.165	15.957	18.507	24.172
23	16.316	18.923	24.708	16.316	18.923	24.716
24	16.667	19.330	25.239	16.667	19.330	25.247
25	17.011	19.728	25.760	17.011	19.728	25.768
26	17.348	20.119	26.270	17.348	20.119	26.278
27	17.678	20.502	26.770	17.678	20.502	26.779
28	18.002	20.879	27.262	18.002	20.879	27.270
29	18.321	21.248	27.744	18.321	21.248	27.753
30	18.634	21.611	28.218	18.634	21.611	28.227
31	18.942	21.969	28.685	18.942	21.969	28.694
32	19.245	22.320	29.144	19.245	22.320	29.153
33	19.544	22.666	29.596	19.544	22.666	29.605
34	19.838	23.007	30.041	19.838	23.007	30.050
35	20.127	23.343	30.479	20.127	23.343	30.489
36	20.413	23.674	30.912	20.413	23.674	30.921
37	20.694	24.001	31.338	20.694	24.001	31.348
38	20.972	24.323	31.759	20.972	24.323	31.769
39	21.246	24.641	32.174	21.246	24.641	32.184
40						

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

	Clamp x BSP / NPT o Clamp x Clamp			
	15 x 1"	20 x 1"	25 x 1"	40 x 2"
	15 x 25	20 x 25	25 x 25	40 x 40
Set pressure	Orifice / *Orificio* (mm)			
Presión	9,5	15	18	32
manometro	Area (mm^2)			
(barg)	71	177	254	804
0,5	1.285	3.203	4.612	14.576
1	1.817	4.529	6.522	20.614
1,5	2.225	5.547	7.988	25.247
2	2.569	6.406	9.224	29.153
2,5	2.873	7.162	10.313	32.594
3	3.147	7.845	11.297	35.705
3,5	3.399	8.474	12.202	38.566
4	3.634	9.059	13.045	41.228
4,5	3.854	9.608	13.836	43.729
5	4.063	10.128	14.585	46.095
5,5	4.261	10.623	15.296	48.344
6	4.450	11.095	15.977	50.494
6,5	4.632	11.548	16.629	52.556
7	4.807	11.984	17.257	54.540
7,5	4.976	12.404	17.862	56.454
8	5.139	12.811	18.448	58.306
8,5	5.297	13.206	19.016	60.100
9	5.450	13.588	19.567	61.842
9,5	5.600	13.961	20.104	63.537
10	5.745	14.323	20.626	65.188

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

	Flanges / *Bridas* EN-1092-1											
	15 x 25	20 x 32	25 x 40	32 x 50	40 x 65	50 x 80	65x100	80x125	100x150	125x200	150x250 150x200	200x300 200x250
Set pressure	Orifice / *Orificio* (mm)											
Presión	16	18	23,8	29,5	36	46	60	72	90	105	125	153
manometro	Area (mm^2)											
(barg)	201	254	445	683	1.018	1.662	2.827	4.072	6.362	8.659	12.272	18.385
0,5	3.796	4.804	8.399	12.904	19.217	31.376	53.380	76.868	120.106	163.477	231.686	347.106
1	5.368	6.794	11.878	18.249	27.177	44.372	75.491	108.707	169.855	231.192	327.653	490.882
1,5	6.575	8.321	14.548	22.350	33.285	54.345	92.458	133.139	208.030	283.151	401.292	601.205
2	7.592	9.608	16.798	25.808	38.434	62.752	106.761	153.736	240.212	326.955	463.372	694.212
2,5	8.488	10.743	18.781	28.854	42.970	70.158	119.362	171.882	268.565	365.547	518.065	776.153
3	9.298	11.768	20.574	31.608	47.072	76.855	130.755	188.287	294.198	400.436	567.512	850.233
3,5	10.043	12.711	22.222	34.141	50.843	83.013	141.231	203.373	317.770	432.521	612.983	918.356
4	10.737	13.588	23.756	36.498	54.354	88.744	150.983	217.415	339.711	462.384	655.306	981.764
4,5	11.388	14.413	25.197	38.712	57.651	94.127	160.141	230.603	360.318	490.432	695.057	1.041.318
5	12.004	15.192	26.560	40.806	60.769	99.219	168.804	243.077	379.808	516.961	732.655	1.097.646
5,5	12.590	15.934	27.857	42.798	63.735	104.062	177.043	254.942	398.346	542.193	768.415	1.151.221
6	13.150	16.642	29.095	44.701	66.569	108.689	184.915	266.278	416.059	566.303	802.583	1.202.411
6,5	13.686	17.322	30.283	46.526	69.288	113.127	192.466	277.151	433.048	589.426	835.355	1.251.509
7	14.203	17.976	31.427	48.282	71.903	117.398	199.731	287.613	449.395	611.677	866.889	1.298.752
7,5	14.702	18.607	32.530	49.977	74.427	121.518	206.741	297.708	465.168	633.146	897.315	1.344.336
8	15.184	19.217	33.596	51.616	76.868	125.503	213.522	307.471	480.424	653.910	926.743	1.388.424
8,5	15.651	19.808	34.630	53.204	79.233	129.366	220.093	316.934	495.209	674.035	955.265	1.431.155
9	16.105	20.383	35.634	54.747	81.531	133.116	226.474	326.122	509.566	693.576	982.959	1.472.646
9,5	16.546	20.941	36.611	56.247	83.765	136.764	232.680	335.059	523.529	712.582	1.009.895	1.513.000
10	16.976	21.485	37.562	57.708	85.941	140.317	238.724	343.763	537.130	731.094	1.036.130	1.552.305
11	17.805	22.534	39.395	60.525	90.135	147.166	250.376	360.542	563.347	766.777	1.086.703	1.628.072
12	18.596	23.536	41.147	63.216	94.143	153.709	261.509	376.574	588.396	800.873	1.135.024	1.700.465
13	19.356	24.497	42.827	65.798	97.988	159.986	272.188	391.950	612.422	833.575	1.181.370	1.769.901
14	20.086	25.422	44.444	68.281	101.687	166.025	282.463	406.746	635.541	865.042	1.225.966	1.836.713
15	20.791	26.314	46.004	70.678	105.256	171.852	292.376	421.022	657.847	895.403	1.268.995	1.901.178
16	21.473	27.177	47.513	72.996	108.707	177.488	301.965	434.830	679.422	924.768	1.310.613	1.963.528
17	22.134	28.013	48.975	75.242	112.053	182.951	311.259	448.212	700.332	953.229	1.350.949	2.023.959
18	22.776	28.825	50.395	77.424	115.302	188.255	320.282	461.207	720.635	980.865	1.390.115	2.082.636
19	23.400	29.615	51.776	79.545	118.461	193.414	329.059	473.845	740.383	1.007.743	1.428.207	2.139.705
20	24.008	30.385	53.121	81.612	121.539	198.438	337.607	486.155	759.616	1.033.922	1.465.309	2.195.291
21	24.601	31.135	54.432	83.627	124.540	203.339	345.945	498.160	778.375	1.059.455	1.501.495	2.249.504
22	25.179	31.868	55.713	85.595	127.471	208.124	354.086	509.883	796.692	1.084.387	1.536.830	2.302.441
23	25.745	32.584	56.966	87.519	130.336	212.801	362.043	521.343	814.598	1.108.758	1.571.369	2.354.188
24	26.299	33.285	58.191	89.401	133.139	217.378	369.830	532.556	832.118	1.132.605	1.605.166	2.404.821
25	26.841	33.971	59.391	91.245	135.884	221.861	377.456	543.537	849.277	1.155.960	1.638.266	2.454.410
26	27.373	34.644	60.567	93.052	138.575	226.254	384.932	554.301	866.096	1.178.853	1.670.710	2.503.017
27	27.894	35.304	61.721	94.824	141.215	230.564	392.264	564.861	882.595	1.201.309	1.702.536	2.550.698
28	28.406	35.952	62.853	96.564	143.806	234.795	399.462	575.226	898.790	1.223.353	1.733.778	2.597.504
29	28.909	36.588	63.966	98.274	146.352	238.951	406.533	585.408	914.699	1.245.007	1.764.466	2.643.481
30	29.403	37.213	65.059	99.954	148.854	243.036	413.483	595.415	930.336	1.266.291	1.794.630	2.688.672
31	29.889	37.829	66.135	101.606	151.314	247.053	420.318	605.257	945.715	1.287.223	1.824.296	2.733.116
32	30.368	38.434	67.193	103.232	153.736	251.007	427.043	614.942	960.847	1.307.820	1.853.486	2.776.848
33	30.838	39.030	68.235	104.832	156.119	254.898	433.664	624.477	975.745	1.328.097	1.882.224	2.819.903

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

	PN-63						PN-100					
	Flanges / *Bridas* EN-1092-1						Flanges / *Bridas* EN-1092-1					
	15 x 25 20 x 32	25 x 50	32 x 50	40 x 65	50 x 80	65 x100	15 x 25 20 x 32	25 x 50	32 x 50	40 x 65	50 x 80	65 x100
Set pressure	*Orifice* / Orificio (mm)						Orfice / *Orificio* (mm)					
Presión	13	20	23,8	26	32	48	13	16	20	23,8	32	39
manometro	Area (mm^2)						Area (mm^2)					
(barg)	133	314	445	531	804	1.810	133	201	314	445	804	1.195
33	20.358	48.185	68.235	81.433	123.353	277.545	20.358	30.838	48.185	68.235	123.353	183.223
34	20.664	48.910	69.261	82.657	125.208	281.719	20.664	31.302	48.910	69.261	125.208	185.979
35	20.966	49.624	70.272	83.864	127.036	285.832	20.966	31.759	49.624	70.272	127.036	188.694
36	21.263	50.328	71.269	85.054	128.838	289.887	21.263	32.210	50.328	71.269	128.838	191.370
37	21.557	51.022	72.252	86.227	130.616	293.885	21.557	32.654	51.022	72.252	130.616	194.010
38	21.846	51.707	73.222	87.384	132.369	297.830	21.846	33.092	51.707	73.222	132.369	196.614
39	22.132	52.383	74.179	88.527	134.099	301.723	22.132	33.525	52.383	74.179	134.099	199.185
40	22.414	53.050	75.124	89.654	135.808	305.567	22.414	33.952	53.050	75.124	135.808	201.722
42	22.967	54.360	76.979	91.868	139.161	313.113	22.967	34.790	54.360	76.979	139.161	206.704
44	23.508	55.639	78.791	94.030	142.436	320.482	23.508	35.609	55.639	78.791	142.436	211.568
46	24.036	56.890	80.561	96.144	145.637	327.684	24.036	36.409	56.890	80.561	145.637	216.323
48	24.553	58.113	82.294	98.211	148.770	334.732	24.553	37.192	58.113	82.294	148.770	220.976
50	25.059	59.312	83.991	100.237	151.838	341.635	25.059	37.959	59.312	83.991	151.838	225.532
52	25.555	60.486	85.654	102.222	154.845	348.400	25.555	38.711	60.486	85.654	154.845	229.999
54							26.042	39.449	61.638	87.286	157.794	234.380
56							26.520	40.172	62.769	88.888	160.690	238.681
58							26.990	40.884	63.881	90.461	163.534	242.906
60							27.451	41.582	64.973	92.008	166.330	247.058
62							27.905	42.270	66.047	93.529	169.079	251.142
64							28.351	42.946	67.103	95.025	171.785	255.161
66							28.791	43.612	68.144	96.498	174.448	259.117
68							29.224	44.268	69.169	97.950	177.072	263.013
70							29.650	44.914	70.178	99.380	179.657	266.853
72							30.071	45.551	71.174	100.789	182.205	270.639
74							30.486	46.180	72.156	102.180	184.718	274.372
76							30.895	46.799	73.124	103.551	187.198	278.055
78							31.299	47.411	74.080	104.905	189.645	281.690
80							31.698	48.015	75.024	106.241	192.061	285.278
82							32.091	48.612	75.956	107.561	194.447	288.822

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

Serie 1415 150#

Capacity water / *Caudal de agua*

TOSACA

	Flanges / *Brida* s ANSI B16.5													
	1/2" x 1" 1/2" x 1" 3/4" x 1" 3/4" x 1" 1" x 1" 1" x 1" 1" x 2"	1" x 2"	11/2"x2"	11/2"x3"	11/2"x3"	2" x 3"	3" x 4"	3" x 4"	4" x 6"	4" x 6"	4" x 6"	6"x 8"	6" x 8"	8" x 10
	D	**E**	**F**	**G**	**H**	**J**	**K**	**L**	**M**	**N**	**P**	**Q**	**R**	**T**
	Orifice / *Orificio* (mm)													
	9,5	13	16	21	26	32,5	39	49	55	60	73	96	115	147
Set pressure	Area (mm^2)													
Presión	71	133	201	346	531	830	1.195	1.886	2.376	2.827	4.185	7.238	10.387	16.972
manometro	Area (pulgadas cuadradas)													
(barg)	0,11	0,196	0,307	0,503	0,785	1,287	1,838	2,853	3,6	4,34	6,38	11,05	16	26
0,5	1.713	3.208	4.859	8.370	12.830	20.047	28.868	45.570	57.414	68.327	101.143	174.917	251.007	410.132
1	2.422	4.536	6.871	11.837	18.145	28.351	40.826	64.446	81.195	96.629	143.038	247.370	354.977	580.015
1,5	2.967	5.556	8.416	14.497	22.223	34.723	50.001	78.930	99.443	118.346	175.184	302.965	434.756	710.370
2	3.426	6.415	9.718	16.740	25.661	40.095	57.736	91.141	114.827	136.654	202.286	349.834	502.013	820.265
2,5	3.830	7.172	10.865	18.716	28.689	44.827	64.551	101.898	128.381	152.784	226.162	391.126	561.268	917.084
3	4.196	7.857	11.902	20.502	31.428	49.106	70.712	111.624	140.634	167.366	247.748	428.457	614.838	1.004.615
3,5	4.532	8.486	12.855	22.145	33.946	53.040	76.378	120.568	151.902	180.776	267.599	462.787	664.101	1.085.108
4	4.845	9.072	13.743	23.674	36.290	56.702	81.651	128.892	162.390	193.258	286.075	494.740	709.954	1.160.029
4,5	5.139	9.623	14.576	25.110	38.491	60.142	86.604	136.711	172.241	204.981	303.428	524.751	753.020	1.230.397
5	5.417	10.143	15.365	26.468	40.573	63.395	91.289	144.106	181.558	216.069	319.842	553.136	793.752	
5,5	5.681	10.638	16.115	27.760	42.553	66.489	95.745	151.139	190.419	226.615	335.453	580.134	832.494	
6	5.934	11.111	16.831	28.995	44.445	69.446	100.002	157.860	198.887	236.691	350.369	605.930	869.512	
6,5	6.176	11.565	17.519	30.179	46.260	72.282	104.085	164.306	207.008	246.356	364.676	630.672	905.017	
7	6.409	12.002	18.180	31.318	48.006	75.010	108.015	170.508	214.822	255.656	378.442	654.479	939.180	
7,5	6.634	12.423	18.818	32.417	49.691	77.643	111.806	176.493	222.362	264.629	391.724	677.450		
8	6.852	12.830	19.435	33.480	51.321	80.189	115.472	182.281	229.654	273.308	404.571	699.668		
8,5	7.063	13.225	20.033	34.511	52.901	82.657	119.026	187.891	236.722	281.719	417.022	721.201		
9	7.267	13.609	20.614	35.511	54.434	85.054	122.477	193.338	243.585	289.887	429.113	742.110		
9,5	7.466	13.981	21.179	36.484	55.926	87.384	125.833	198.636	250.260	297.830	440.871	762.445		
10	7.660	14.345	21.729	37.432	57.379	89.654	129.102	203.796	256.761	305.567	452.324	782.252		
11	8.034	15.045	22.790	39.259	60.179	94.030	135.403	213.743	269.294	320.482	474.402	820.433		
12	8.392	15.714	23.803	41.005	62.855	98.211	141.424	223.248	281.268	334.732	495.497			
13	8.734	16.355	24.775	42.679	65.422	102.222	147.199	232.364	292.753	348.400	515.729			
14	9.064	16.973	25.710	44.290	67.891	106.080	152.756	241.135	303.804	361.552	535.197			
15	9.382	17.569	26.613	45.845	70.274	109.804	158.117	249.599	314.467	374.242	553.982			
16	9.690	18.145	27.486	47.348	72.579	113.405	163.303	257.784	324.780	386.515	572.150			
18	10.278	19.245	29.153	50.220	76.982	120.284	173.209	273.422	344.482	409.961	606.857			
20	10.833	20.286	30.730	52.937	81.146	126.790	182.578	288.212	363.115	432.137	639.683			

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

Serie 1415 300#

Capacity water / *Caudal de agua*

TOSACA TOSACA

	Flanges / *Brida* s ANSI B16.5													
	1/2" x 1" 1/2" x 1" 3/4" x 1" 3/4" x 1" 1" x 1" 1" x 1" 1" x 2"	1" x 1" 1" x 2"	11/2"x2"	11/2"x3"	11/2"x3" 2" x 3"	2" x 3" 3" x 4"	3" x 4"	3" x 4" 4" x 6"	4" x 6"	4" x 6"	4" x 6"	6"x 8"	6" x 8" 6" x 10"	8" x 10
	D	**E**	**F**	**G**	**H**	**J**	**K**	**L**	**M**	**N**	**P**	**Q**	**R**	**T**
	Orifice / *Orificio* (mm)													
	9,5	13	16	21	26	32,5	39	49	55	60	73	96	115	147
Set pressure	Area (mm^2)													
Presión	71	133	201	346	531	830	1.195	1.886	2.376	2.827	4.185	7.238	10.387	16.972
manometro	Area (pulgadas cuadradas)													
(barg)	0,11	0,196	0,307	0,503	0,785	1,287	1,838	2,853	3,6	4,34	6,38	11,05	16	26
0,5	1.713	3.208	4.859	8.370	12.830	20.047	28.868	45.570	57.414	68.327	101.143	174.917	251.007	410.132
1	2.422	4.536	6.871	11.837	18.145	28.351	40.826	64.446	81.195	96.629	143.038	247.370	354.977	580.015
1,5	2.967	5.556	8.416	14.497	22.223	34.723	50.001	78.930	99.443	118.346	175.184	302.965	434.756	710.370
2	3.426	6.415	9.718	16.740	25.661	40.095	57.736	91.141	114.827	136.654	202.286	349.834	502.013	820.265
2,5	3.830	7.172	10.865	18.716	28.689	44.827	64.551	101.898	128.381	152.784	226.162	391.126	561.268	917.084
3	4.196	7.857	11.902	20.502	31.428	49.106	70.712	111.624	140.634	167.366	247.748	428.457	614.838	1.004.615
3,5	4.532	8.486	12.855	22.145	33.946	53.040	76.378	120.568	151.902	180.776	267.599	462.787	664.101	1.085.108
4	4.845	9.072	13.743	23.674	36.290	56.702	81.651	128.892	162.390	193.258	286.075	494.740	709.954	1.160.029
4,5	5.139	9.623	14.576	25.110	38.491	60.142	86.604	136.711	172.241	204.981	303.428	524.751	753.020	1.230.397
5	5.417	10.143	15.365	26.468	40.573	63.395	91.289	144.106	181.558	216.069	319.842	553.136	793.752	1.296.952
5,5	5.681	10.638	16.115	27.760	42.553	66.489	95.745	151.139	190.419	226.615	335.453	580.134	832.494	1.360.255
6	5.934	11.111	16.831	28.995	44.445	69.446	100.002	157.860	198.887	236.691	350.369	605.930	869.512	1.420.740
6,5	6.176	11.565	17.519	30.179	46.260	72.282	104.085	164.306	207.008	246.356	364.676	630.672	905.017	1.478.753
7	6.409	12.002	18.180	31.318	48.006	75.010	108.015	170.508	214.822	255.656	378.442	654.479	939.180	1.534.575
7,5	6.634	12.423	18.818	32.417	49.691	77.643	111.806	176.493	222.362	264.629	391.724	677.450	972.144	1.588.436
8	6.852	12.830	19.435	33.480	51.321	80.189	115.472	182.281	229.654	273.308	404.571	699.668	1.004.026	1.640.529
8,5	7.063	13.225	20.033	34.511	52.901	82.657	119.026	187.891	236.722	281.719	417.022	721.201	1.034.926	1.691.019
9	7.267	13.609	20.614	35.511	54.434	85.054	122.477	193.338	243.585	289.887	429.113	742.110	1.064.930	1.740.044
9,5	7.466	13.981	21.179	36.484	55.926	87.384	125.833	198.636	250.260	297.830	440.871	762.445	1.094.112	1.787.725
10	7.660	14.345	21.729	37.432	57.379	89.654	129.102	203.796	256.761	305.567	452.324	782.252	1.122.535	1.834.167
11	8.034	15.045	22.790	39.259	60.179	94.030	135.403	213.743	269.294	320.482	474.402	820.433	1.177.325	1.923.691
12	8.392	15.714	23.803	41.005	62.855	98.211	141.424	223.248	281.268	334.732	495.497	856.914	1.229.676	2.009.230
13	8.734	16.355	24.775	42.679	65.422	102.222	147.199	232.364	292.753	348.400	515.729	891.905	1.279.887	2.091.273
14	9.064	16.973	25.710	44.290	67.891	106.080	152.756	241.135	303.804	361.552	535.197	925.573	1.328.202	2.170.216
15	9.382	17.569	26.613	45.845	70.274	109.804	158.117	249.599	314.467	374.242	553.982	958.059	1.374.819	2.246.387
16	9.690	18.145	27.486	47.348	72.579	113.405	163.303	257.784	324.780	386.515	572.150	989.479		2.320.059
18	10.278	19.245	29.153	50.220	76.982	120.284	173.209	273.422	344.482	409.961	606.857	1.049.501		2.460.794
20	10.833	20.286	30.730	52.937	81.146	126.790	182.578	288.212	363.115	432.137	639.683	1.106.272		2.593.904
22	11.362	21.277	32.230	55.521	85.106	132.979	191.489	302.279	380.839	453.229	670.906			
24	11.867	22.223	33.663	57.989	88.891	138.892	200.004	315.720	397.773	473.383	700.738			
26	12.352	23.130	35.037	60.357	92.520	144.563	208.171	328.612	414.015	492.712	729.351			
28	12.818	24.003	36.360	62.636	96.013	150.020	216.029	341.017	429.644	511.312	756.884			
30	13.268	24.846	37.636	64.834	99.383	155.286	223.612	352.986	444.724	529.258	783.449			
32	13.703	25.661	38.870	66.960	102.642	160.378	230.945	364.562	459.309	546.615	809.142			
34	14.125	26.450	40.067	69.021	105.801	165.314	238.053	375.782	473.445	563.438	834.045			
36	14.535	27.217	41.228	71.022	108.869	170.107	244.954	386.676	487.170	579.773	858.225			
38	14.933	27.963	42.358	72.968	111.852	174.768	251.666	397.272	500.520	595.660				
40	15.321	28.689	43.458	74.864	114.757	179.309	258.204	407.593	513.523	611.134				
42	15.699	29.398	44.532	76.713	117.591	183.737	264.581	417.658	526.204	626.227				
44	16.069	30.090	45.580	78.518	120.359	188.060	270.807	427.487	538.587	640.963				
46	16.430	30.766	46.604	80.283	123.064	192.287	276.893	437.095	550.692	655.369				
48	16.783	31.428	47.606	82.009	125.711	196.423	282.849	446.495	562.536	669.464				
50	17.129	32.076	48.588	83.700	128.303	200.473	288.681	455.703	574.136	683.269				

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

Serie 1415 600#

Capacity water / *Caudal de agua*

TOSACA

	Flanges/ *Bridas* ANSI B16.5												
	1/2" x 1" 3/4" x 1" 1" x 1" 1" x 2"	1/2" x 1" 3/4" x 1" 1" x 1" 1" x 2"	1 1/2"x2"	1 1/2"x3"	2" x 3"	3" x 4"	3" x 4"	4" x 6"	4" x 6"	4" x 6"	4" x 6"	6" x 8"	6" x 8" 6" x 10"
	D	**E**	**F**	**G**	**H**	**J**	**K**	**L**	**M**	**N**	**P**	**Q**	**R**
	Orifice / Orificio (mm)												
	9,5	13	16	21	26	32,5	39	49	55	60	73	96	115
Set pressure	Area (mm^2)												
Presión	71	133	201	346	531	830	1.195	1.886	2.376	2.827	4.185	7.238	10.387
manometro	Area (pulgadas al cuadrado)												
(barg)	0,11	0,196	0,307	0,503	0,785	1,287	1,838	2,853	3,6	4,34	6,38	11,05	16
40	15.321	28.689	43.458	74.864	114.757	179.309	258.204	407.593	513.523	611.134	904.649	1.564.504	
41	15.511	29.046	43.998	75.794	116.183	181.536	261.412	412.656	519.902	618.727	915.887	1.583.940	
42	15.699	29.398	44.532	76.713	117.591	183.737	264.581	417.658	526.204	626.227	926.989	1.603.140	
43	15.885	29.746	45.059	77.621	118.983	185.911	267.712	422.601	532.432	633.638	937.960	1.622.113	
44	16.069	30.090	45.580	78.518	120.359	188.060	270.807	427.487	538.587	640.963	948.804	1.640.866	
45	16.250	30.430	46.095	79.405	121.719	190.185	273.867	432.317	544.673	648.206	959.525	1.659.407	
46	16.430	30.766	46.604	80.283	123.064	192.287	276.893	437.095	550.692	655.369	970.128	1.677.744	
47	16.607	31.099	47.108	81.151	124.394	194.366	279.887	441.820	556.645	662.454	980.616	1.695.882	
48	16.783	31.428	47.606	82.009	125.711	196.423	282.849	446.495	562.536	669.464	990.993	1.713.829	
49	16.957	31.753	48.100	82.859	127.013	198.458	285.780	451.123	568.366	676.402	1.001.263	1.731.589	
50	17.129	32.076	48.588	83.700	128.303	200.473	288.681	455.703	574.136	683.269	1.011.428	1.749.169	
52	17.468	32.711	49.550	85.358	130.844	204.443	294.398	464.727	585.506	696.801	1.031.458	1.783.809	
54	17.801	33.334	50.494	86.984	133.336	208.338	300.006	473.580	596.660	710.074	1.051.107	1.817.790	
56	18.128	33.946	51.421	88.580	135.783	212.161	305.511	482.270	607.608	723.104	1.070.395	1.851.146	
58	18.449	34.547	52.331	90.148	138.186	215.916	310.919	490.807	618.363	735.903	1.089.341	1.883.913	
60	18.764	35.137	53.226	91.689	140.549	219.607	316.234	499.197	628.934	748.484	1.107.964	1.916.119	
62	19.074	35.718	54.105	93.205	142.872	223.237	321.462	507.449	639.331	760.856	1.126.279	1.947.792	
64	19.379	36.290	54.971	94.696	145.158	226.809	326.606	515.569	649.561	773.031	1.144.300		
66	19.680	36.852	55.823	96.165	147.409	230.326	331.669	523.562	659.632	785.016	1.162.042		
68	19.976	37.406	56.663	97.611	149.625	233.790	336.657	531.436	669.552	796.822	1.179.518		
70	20.268	37.952	57.490	99.036	151.810	237.203	341.572	539.195	679.327	808.455	1.196.738		
72	20.555	38.491	58.306	100.441	153.963	240.568	346.417		688.963				
74	20.839	39.022	59.110	101.826	156.087	243.886	351.196		698.466				
76	21.118	39.546	59.903	103.193	158.182	247.160	355.910		707.842				
78	21.394	40.063	60.686	104.542	160.250	250.391	360.563						
80	21.667	40.573	61.460	105.874	162.292	253.581	365.156						
82	21.936	41.077	62.223	107.189	164.308	256.731	369.692						
84	22.202	41.575	62.977	108.488	166.299	259.843	374.174						
86	22.465	42.067	63.723	109.772	168.267	262.918	378.602						
88	22.724	42.553	64.459	111.041	170.213	265.958	382.979						
90	22.981	43.034	65.188	112.296	172.136	268.963	387.306						
92	23.235	43.510	65.908	113.537	174.038	271.935	391.586						
94	23.486	43.980	66.621	114.764	175.920	274.875	395.820						
96	23.735	44.445	67.326	115.979	177.782	277.784	400.008						
98	23.981	44.906	68.023	117.181	179.624	280.662	404.154						
100	24.224	45.362	68.714	118.370	181.448	283.512	408.257						
102	24.465	45.813	69.398	119.548	183.253	286.333	412.319						

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