



Steel Pipe, Duct or Tube

#	Length (*)	Inside Diameter (*)	Flow (l/s)	Total Pressure Loss (m Fluid)	Economic Velocity (m/s)	In Stagnation Pressure (m Flui	In Velocity (m/s)	Out Stagnation Pressure (m Flu
-790	0.5 m	303.3 mm	112.20	0.0031	2.17	44.726	1.55	44.723
-789	0.5 m	303.3 mm	112.22	0.0031	2.17	17.273	1.55	17.270
-788	10 mm	254.5 mm	112.20	0.0002	2.17	44.723	2.21	44.722
-787	0.347 m	303.3 mm	112.20	0.0026	2.17	44.460	1.55	44.457
-786	0.508 m	202.7 mm	112.20	0.0310	2.17	44.392	3.48	44.361
-785	0.23 m	303.3 mm	112.20	0.0017	2.17	44.491	1.55	44.489
-784	3.29 m	202.7 mm	112.20	0.2005	2.17	44.069	3.48	46.649
-783	2.93 m	202.7 mm	112.20	0.1785	2.17	46.502	3.48	43.544
-782	1.09 m	202.7 mm	112.20	0.0664	2.17	42.955	3.48	42.889
-781	0 m	202.7 mm	112.20	0.0001	2.17	43.101	3.48	43.101
-780	0 m	202.7 mm	112.20	0.0001	2.17	43.398	3.48	43.398
-779	0.75 m	40.9 mm	3.27	0.1807	2.08	20.406	2.49	19.476
-778	7.05 m	202.7 mm	108.93	0.4052	2.17	39.757	3.38	37.552
-777	3.58 m	202.7 mm	112.20	0.2182	2.17	42.597	3.48	42.379
-776	1.675 m	202.7 mm	100.62	0.0823	2.18	37.125	3.12	37.043
-775	0 m	77.9 mm	4.15	0.0000	2.10	33.372	0.87	33.372
-774	2.5 m	202.7 mm	97.87	0.1163	2.18	36.638	3.03	36.522
-773	0.15 m	52.5 mm	2.75	0.0070	2.06	20.156	1.27	20.299
-772	0.55 m	202.7 mm	87.16	0.0203	2.18	36.202	2.70	36.181
-771	0.4 m	202.7 mm	84.85	0.0140	2.19	35.708	2.63	35.694
-770	1.4 m	26.6 mm	2.31	1.6339	2.04	23.546	4.16	22.112
-769	0.9 m	202.7 mm	56.13	0.0140	2.20	35.367	1.74	35.353
-768	0.17 m	77.9 mm	16.21	0.0331	2.19	21.839	3.40	21.806
-767	0.375 m	77.9 mm	0.78	0.0002	1.92	21.216	0.16	21.216
-766	2.2 m	202.7 mm	87.16	0.0814	2.18	36.093	2.70	36.012
-765	2 m	202.7 mm	39.92	0.0160	2.20	35.285	1.24	35.269
-764	0.1 m	202.7 mm	39.92	0.0008	2.20	35.232	1.24	35.231
-763	0.825 m	154.1 mm	39.92	0.0272	2.20	35.219	2.14	35.192

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-762	1.075 m	154.1 mm	34.22	0.0262	2.20	35.035	1.84	35.009
-761	0.17 m	77.9 mm	5.70	0.0042	2.12	21.160	1.20	21.325
-760	0.825 m	154.1 mm	34.22	0.0201	2.20	34.927	1.84	34.907
-759	2.8 m	154.1 mm	33.95	0.0670	2.20	34.752	1.82	34.685
-758	1.1 m	77.9 mm	0.28	0.0001	1.80	34.907	0.06	33.806
-757	1.075 m	154.1 mm	31.03	0.0216	2.20	34.557	1.66	34.535
-756	0.2 m	52.5 mm	2.92	0.0105	2.07	21.438	1.35	21.627
-755	2.5 m	154.1 mm	18.46	0.0182	2.19	34.489	0.99	34.471
-754	1.4 m	154.1 mm	18.46	0.0102	2.19	34.459	0.99	34.449
-753	2.95 m	154.1 mm	11.35	0.0084	2.17	34.432	0.61	34.423
-752	0.55 m	52.5 mm	7.10	0.1653	2.14	22.230	3.28	22.315
-751	0 m	52.5 mm	4.88	0.0001	2.11	21.994	2.25	21.994
-750	0 m	52.5 mm	4.28	0.0001	2.10	21.927	1.98	21.927
-749	0.45 m	21 mm	2.20	1.6625	2.04	33.754	6.34	32.092
-748	1.75 m	154.1 mm	7.07	0.0020	2.14	34.417	0.38	34.415
-747	0.2 m	21 mm	2.20	0.7389	2.04	25.795	6.34	25.056
-746	0.2 m	21 mm	2.20	0.7389	2.04	31.574	6.34	30.835
-745	3.85 m	154.1 mm	18.46	0.0281	2.19	21.674	0.99	21.646
-744	1.925 m	154.1 mm	31.03	0.0386	2.20	21.601	1.66	21.562
-743	0.625 m	154.1 mm	33.95	0.0150	2.20	21.519	1.82	21.504
-742	0.8 m	202.7 mm	34.23	0.0047	2.20	21.269	1.06	21.264
-741	1.4 m	202.7 mm	39.93	0.0112	2.20	21.248	1.24	21.237
-740	0.25 m	202.7 mm	84.86	0.0088	2.19	21.003	2.63	20.994
-739	2.6 m	202.7 mm	97.88	0.1209	2.18	20.458	3.03	20.337
-738	3.25 m	202.7 mm	100.63	0.1597	2.18	20.202	3.12	20.043
-737	0.3 m	154.1 mm	2.20	0.0000	2.04	21.695	0.12	21.695
-736	1.6 m	154.1 mm	2.20	0.0002	2.04	34.414	0.12	34.414
-735	0.625 m	154.1 mm	6.47	0.0006	2.13	21.694	0.35	21.694
-734	1.12 m	254.5 mm	112.20	0.0210	2.17	44.518	2.21	44.497

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-733	5.1 m	303.3 mm	112.22	0.0386	2.17	18.062	1.55	17.273
-732	0.1 m	21 mm	2.20	0.3695	2.04	24.538	6.34	24.168
-731	0.1 m	21 mm	2.20	0.3695	2.04	24.038	6.34	23.669
-730	27.35 m	202.7 mm	108.93	1.5720	2.17	41.878	3.38	40.306
-729	0.347 m	303.3 mm	112.22	0.0026	2.17	17.407	1.55	17.405
-728	0.75 m	303.3 mm	112.22	0.0057	2.17	17.375	1.55	18.120
-727	3.288 m	202.7 mm	112.22	0.2004	2.17	17.725	3.48	17.525
-726	0.51 m	202.7 mm	112.22	0.0311	2.17	18.048	3.48	18.017
-725	1.09 m	202.7 mm	112.22	0.0664	2.17	18.412	3.48	18.346
-724	6.23 m	202.7 mm	112.22	0.3797	2.17	19.084	3.48	18.704
-723	27.6 m	202.7 mm	108.94	1.5866	2.17	20.837	3.38	19.250
-722	5.275 m	202.7 mm	108.94	0.3032	2.17	19.616	3.38	21.112
-721	0 m	77.9 mm	16.21	0.0002	2.19	21.670	3.40	21.840
-720	0 m	77.9 mm	16.21	0.0002	2.19	21.840	3.40	21.839
-719	0 m	77.9 mm	0.78	0.0000	1.92	21.216	0.16	21.216
-718	0.6 m	52.5 mm	4.28	0.0664	2.10	21.394	1.98	21.927
-717	0 m	52.5 mm	4.28	0.0001	2.10	21.927	1.98	21.927
-716	4.8 m	77.9 mm	12.57	0.5648	2.18	21.191	2.64	21.726
-715	3.075 m	202.7 mm	87.17	0.1138	2.18	20.892	2.70	20.779
-714	0.6 m	52.5 mm	4.88	0.0859	2.11	21.480	2.25	21.994
-713	0 m	52.5 mm	4.88	0.0001	2.11	21.994	2.25	21.994
-712	1.375 m	202.7 mm	40.70	0.0114	2.20	21.214	1.26	21.203
-711	4.225 m	154.1 mm	11.35	0.0121	2.17	21.692	0.61	21.680
-710	0.25 m	202.7 mm	0.00	0.0000	2.19	10.332	0.00	10.332
-709	0.75 m	40.9 mm	3.27	0.1807	2.08	42.248	2.49	42.818
-708	7.15 m	40.9 mm	3.27	1.7225	2.08	42.707	2.49	40.984
-707	0.5 m	40.9 mm	3.27	0.1205	2.08	40.827	2.49	40.707
-706	2.815 m	40.9 mm	3.27	0.6782	2.08	40.690	2.49	40.012
-705	1.55 m	40.9 mm	3.27	0.3734	2.08	39.934	2.49	39.560

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-704	3.2 m	40.9 mm	3.27	0.7709	2.08	39.325	2.49	38.554
-703	3.05 m	40.9 mm	3.27	0.7349	2.08	24.484	2.49	23.749
-702	4.165 m	40.9 mm	3.27	1.0035	2.08	23.514	2.49	22.510
-701	0.35 m	40.9 mm	3.27	0.0843	2.08	22.493	2.49	22.409
-700	0.16 m	40.9 mm	3.27	0.0386	2.08	21.869	2.49	21.831
-699	1.845 m	40.9 mm	3.27	0.4446	2.08	22.331	2.49	21.886
-698	5.125 m	40.9 mm	3.27	1.2349	2.08	21.752	2.49	20.517
-697	1.5 m	52.5 mm	10.71	1.0166	2.17	35.639	4.95	34.552
-696	0.25 m	77.9 mm	8.31	0.0130	2.15	37.497	1.74	37.214
-695	0.5 m	77.9 mm	8.31	0.0261	2.15	36.799	1.74	36.292
-694	12.02 m	77.9 mm	8.31	0.6273	2.15	36.065	1.74	42.458
-693	0.1 m	77.9 mm	8.31	0.0052	2.15	42.041	1.74	42.036
-692	1.91 m	77.9 mm	8.31	0.0997	2.15	41.960	1.74	41.861
-691	1.2 m	77.9 mm	4.16	0.0163	2.10	41.847	0.87	41.831
-690	0.67 m	77.9 mm	4.15	0.0090	2.10	41.847	0.87	41.838
-689	0.7 m	62.7 mm	2.08	0.0063	2.03	41.251	0.67	40.275
-688	0.22 m	77.9 mm	4.15	0.0030	2.10	41.828	0.87	41.605
-687	0.85 m	77.9 mm	2.08	0.0031	2.03	41.602	0.44	41.599
-686	0.7 m	62.7 mm	2.08	0.0062	2.03	41.381	0.67	40.275
-685	0.55 m	77.9 mm	2.08	0.0020	2.03	41.827	0.44	41.825
-684	0.7 m	62.7 mm	2.08	0.0062	2.03	41.373	0.67	40.267
-683	0.47 m	77.9 mm	2.08	0.0017	2.03	41.824	0.44	41.352
-682	0.57 m	77.9 mm	2.08	0.0021	2.03	41.823	0.44	41.251
-681	0.22 m	77.9 mm	2.08	0.0008	2.03	41.602	0.44	41.381
-680	0.22 m	77.9 mm	2.08	0.0008	2.03	41.594	0.44	41.373
-679	0 m	77.9 mm	2.08	0.0000	2.03	33.349	0.44	33.349
-678	1 m	77.9 mm	8.31	0.0522	2.15	31.601	1.74	33.029
-677	0.45 m	77.9 mm	8.31	0.0235	2.15	33.185	1.74	28.542
-676	0.55 m	77.9 mm	8.31	0.0287	2.15	28.504	1.74	33.096

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-675	0.5 m	77.9 mm	8.32	0.0261	2.15	19.697	1.74	19.671
-674	0 m	77.9 mm	2.08	0.0000	2.03	33.346	0.44	33.346
-673	0.7 m	62.7 mm	2.08	0.0063	2.03	41.352	0.67	40.276
-672	0 m	77.9 mm	2.08	0.0000	2.03	33.383	0.44	33.383
-671	0 m	77.9 mm	2.08	0.0000	2.03	33.343	0.44	33.343
-670	0 m	77.9 mm	2.08	0.0000	2.03	33.378	0.44	33.378
-669	0 m	77.9 mm	2.08	0.0000	2.03	33.376	0.44	33.376
-668	0.65 m	62.7 mm	8.31	0.0786	2.15	33.095	2.69	33.016
-667	1.9 m	77.9 mm	8.31	0.0992	2.15	33.016	1.74	32.917
-666	0.28 m	77.9 mm	8.32	0.0146	2.15	24.004	1.74	23.709
-665	2.5 m	77.9 mm	12.57	0.2941	2.18	23.791	2.64	20.997
-664	0.25 m	77.9 mm	0.00	0.0000	2.05	10.332	0.00	10.332
-663	11.65 m	77.9 mm	12.57	1.3706	2.18	34.409	2.64	24.739
-662	0.3 m	77.9 mm	0.00	0.0000	2.05	10.332	0.00	10.332
-661	0.25 m	77.9 mm	0.00	0.0000	2.05	10.332	0.00	10.332
-660	1 m	77.9 mm	8.32	0.0522	2.15	25.543	1.74	24.011
-659	0.28 m	77.9 mm	8.31	0.0146	2.15	32.862	1.74	31.608
-658	3.14 m	77.9 mm	8.32	0.1639	2.15	23.654	1.74	20.831
-657	1.3 m	77.9 mm	12.57	0.1530	2.18	20.652	2.64	20.500
-656	7.2 m	77.9 mm	12.57	0.8472	2.18	15.011	2.64	21.364
-655	0.25 m	52.5 mm	2.75	0.0117	2.06	37.011	1.27	36.749
-654	0.75 m	52.5 mm	2.75	0.0350	2.06	36.745	1.27	35.960
-653	4.35 m	52.5 mm	2.75	0.2029	2.06	35.899	1.27	35.546
-652	0.65 m	52.5 mm	2.05	0.0171	2.03	35.528	0.95	34.861
-651	0.6 m	52.5 mm	2.05	0.0158	2.03	34.859	0.95	34.243
-650	0.2 m	52.5 mm	0.70	0.0007	1.91	35.544	0.33	35.543
-649	1.4 m	26.6 mm	0.70	0.1584	1.91	35.535	1.27	35.376
-648	11.62 m	26.6 mm	0.70	1.3144	1.91	35.230	1.27	38.685
-647	0.1 m	26.6 mm	0.70	0.0113	1.91	38.621	1.27	38.810

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-646	2.53 m	52.5 mm	2.05	0.0665	2.03	34.209	0.95	41.273
-645	0.78 m	52.5 mm	2.75	0.0364	2.06	19.416	1.27	20.160
-644	1.39 m	52.5 mm	2.75	0.0648	2.06	25.181	1.27	19.457
-643	0.22 m	52.5 mm	2.75	0.0103	2.06	32.883	1.27	38.533
-642	3.3 m	52.5 mm	2.75	0.1539	2.06	32.928	1.27	32.924
-641	0.65 m	52.5 mm	2.05	0.0171	2.03	32.348	0.95	32.981
-640	0.6 m	52.5 mm	2.05	0.0158	2.03	31.766	0.95	32.350
-639	12.565 m	52.5 mm	2.05	0.3300	2.03	39.246	0.95	31.856
-638	0.2 m	52.5 mm	0.70	0.0007	1.91	32.931	0.33	32.930
-637	1.4 m	40.9 mm	0.70	0.0172	1.91	37.917	0.54	32.930
-636	9.705 m	40.9 mm	0.70	0.1192	1.91	38.063	0.54	37.944
-635	0.27 m	52.5 mm	0.70	0.0009	1.91	38.064	0.33	38.063
-634	0.8 m	52.5 mm	0.70	0.0028	1.91	38.067	0.33	38.064
-633	1 m	26.6 mm	0.70	0.1131	1.91	38.768	1.27	39.565
-632	0.2 m	52.5 mm	10.71	0.1355	2.17	36.037	4.95	35.702
-631	0.6 m	52.5 mm	0.70	0.0021	1.91	38.912	0.33	38.070
-630	0.25 m	52.5 mm	10.71	0.1695	2.17	20.863	4.95	20.943
-629	0.64745 m	52.5 mm	10.71	0.4388	2.17	32.111	4.95	31.673
-628	9.9 m	52.5 mm	10.71	6.7097	2.17	29.615	4.95	22.905
-627	0.25 m	52.5 mm	10.71	0.1695	2.17	21.075	4.95	20.925
-626	0.2 m	26.6 mm	2.31	0.2334	2.04	35.605	4.16	35.172
-625	0.2 m	26.6 mm	2.31	0.2334	2.04	35.119	4.16	34.786
-624	11.32 m	40.9 mm	2.31	1.3766	2.04	32.696	1.76	28.519
-623	0.2 m	52.5 mm	2.31	0.0066	2.04	28.515	1.07	28.508
-622	1.4 m	40.9 mm	2.31	0.1703	2.04	34.680	1.76	33.010
-621	0.1 m	52.5 mm	2.31	0.0033	2.04	28.494	1.07	37.811
-620	12.09 m	40.9 mm	2.31	1.4705	2.04	20.609	1.76	23.689
-619	0.675 m	40.9 mm	2.31	0.0821	2.04	30.793	1.76	21.041
-618	0.2 m	26.6 mm	2.31	0.2334	2.04	23.632	4.16	23.599

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-617	0.375 m	77.9 mm	0.78	0.0002	1.92	35.499	0.16	35.329
-616	0.675 m	77.9 mm	0.78	0.0004	1.92	35.328	0.16	31.348
-615	12.8 m	21 mm	0.78	6.0851	1.92	31.336	2.25	25.251
-614	0.22 m	21 mm	0.00	0.0000	0.00	10.332	0.00	10.332
-613	1 m	21 mm	0.78	0.4754	1.92	24.871	2.25	24.396
-612	0.5 m	21 mm	0.78	0.2377	1.92	24.330	2.25	24.772
-611	1.39 m	21 mm	0.78	0.6608	1.92	24.384	2.25	22.923
-610	11.85 m	21 mm	0.78	5.6339	1.92	22.595	2.25	16.482
-609	0.1 m	21 mm	0.78	0.0475	1.92	22.659	2.25	22.612
-608	0 m	77.9 mm	0.78	0.0000	1.92	21.046	0.16	21.216
-607	0.675 m	77.9 mm	0.78	0.0004	1.92	16.467	0.16	21.046
-606	0.17 m	77.9 mm	16.21	0.0331	2.19	35.144	3.40	34.941
-605	2.43 m	77.9 mm	16.21	0.4725	2.19	34.914	3.40	35.211
-604	14.39 m	77.9 mm	16.21	2.7983	2.19	34.210	3.40	32.802
-603	0 m	77.9 mm	7.00	0.0000	2.14	32.763	1.47	34.263
-602	1.5 m	77.9 mm	9.22	0.0958	2.16	32.735	1.93	32.639
-601	0.55 m	52.5 mm	9.22	0.2768	2.16	32.535	4.26	32.259
-600	0.55 m	52.5 mm	7.00	0.1604	2.14	34.230	3.23	34.070
-599	1.4 m	77.9 mm	9.22	0.0894	2.16	31.495	1.93	31.615
-598	1.4 m	77.9 mm	7.00	0.0521	2.14	33.922	1.47	29.839
-597	1.5 m	77.9 mm	9.22	0.0958	2.16	31.569	1.93	29.973
-596	0.1 m	77.9 mm	7.00	0.0037	2.14	29.813	1.47	29.809
-595	0.1 m	77.9 mm	16.21	0.0194	2.19	29.771	3.40	29.651
-594	0.88 m	77.9 mm	16.13	0.1694	2.19	30.761	3.38	30.592
-593	0.88 m	77.9 mm	16.13	0.1694	2.19	30.565	3.38	30.396
-592	1.42 m	77.9 mm	0.08	0.0000	1.65	30.968	0.02	32.388
-591	0.1 m	77.9 mm	0.08	0.0000	1.65	32.388	0.02	32.388
-590	0 m	26.6 mm	0.08	0.0000	1.65	32.387	0.15	32.157
-589	0.78 m	77.9 mm	0.08	0.0000	1.65	31.195	0.02	31.195

#	Length (*)	Inside Diameter (*)	Flow (l/s)	Total Pressure Loss (m Fluid)	Economic Velocity (m/s)	In Stagnation Pressure (m Fluid)	In Velocity (m/s)	Out Stagnation Pressure (m Fluid)
-588	0.1 m	77.9 mm	0.08	0.0000	1.65	31.195	0.02	31.195
-587	1.42 m	77.9 mm	0.08	0.0000	1.65	31.195	0.02	29.775
-586	0 m	26.6 mm	0.08	0.0000	1.65	30.966	0.15	31.196
-585	0.78 m	77.9 mm	0.08	0.0000	1.65	32.388	0.02	32.388
-584	6.14 m	77.9 mm	16.21	1.1940	2.19	29.222	3.40	30.968
-583	14.89 m	77.9 mm	16.21	2.8956	2.19	29.775	3.40	22.840
-582	2.43 m	77.9 mm	16.21	0.4726	2.19	21.839	3.40	21.697
-581	0.17 m	77.9 mm	5.70	0.0042	2.12	35.166	1.20	34.992
-580	2.03 m	77.9 mm	5.70	0.0506	2.12	34.988	1.20	32.908
-579	1.03 m	77.9 mm	5.70	0.0257	2.12	20.199	1.20	21.203
-578	4.85 m	77.9 mm	5.70	0.1210	2.12	32.872	1.20	30.681
-577	0.6 m	77.9 mm	5.70	0.0150	2.12	30.678	1.20	30.384
-576	4.225 m	77.9 mm	5.70	0.1054	2.12	30.312	1.20	30.207
-575	0.5 m	77.9 mm	5.70	0.0125	2.12	30.203	1.20	30.191
-574	1.1 m	77.9 mm	5.70	0.0274	2.12	30.137	1.20	39.390
-573	0.35 m	77.9 mm	5.70	0.0087	2.12	19.529	1.20	19.700
-572	5.17 m	77.9 mm	5.70	0.1290	2.12	26.426	1.20	19.618
-571	0.4 m	77.9 mm	5.70	0.0100	2.12	19.657	1.20	20.217
-570	0.2 m	77.9 mm	0.12	0.0000	1.70	33.468	0.03	33.468
-569	0.3 m	77.9 mm	0.28	0.0000	1.80	33.807	0.06	33.437
-568	1 m	77.9 mm	0.28	0.0001	1.80	33.437	0.06	33.436
-567	4.078 m	77.9 mm	0.28	0.0004	1.80	33.436	0.06	39.636
-566	0.45 m	77.9 mm	0.28	0.0000	1.80	39.635	0.06	33.885
-565	0 m	77.9 mm	0.12	0.0000	1.70	33.886	0.03	34.136
-564	0.15 m	52.5 mm	0.15	0.0000	1.73	33.886	0.07	33.886
-563	0.2 m	26.6 mm	0.00	0.0000	0.00	10.332	0.00	10.332
-562	0 m	49.2 mm	0.12	0.0000	1.70	39.634	0.06	39.634
-561	0.5 m	52.5 mm	0.15	0.0001	1.73	33.884	0.07	39.634
-560	0.225 m	52.5 mm	0.12	0.0000	1.70	34.136	0.06	34.111

#	Length (*)	Inside Diameter (*)	Flow (l/s)	Total Pressure Loss (m Fluid)	Economic Velocity (m/s)	In Stagnation Pressure (m Fluid)	In Velocity (m/s)	Out Stagnation Pressure (m Fluid)
-559	0.15 m	52.5 mm	0.12	0.0000	1.70	34.110	0.06	34.110
-558	0.15 m	52.5 mm	0.12	0.0000	1.70	34.111	0.06	34.111
-557	4.05 m	52.5 mm	0.15	0.0009	1.73	33.885	0.07	33.884
-556	0.35 m	52.5 mm	0.15	0.0001	1.73	39.619	0.07	33.744
-555	0.275 m	52.5 mm	0.15	0.0001	1.73	33.744	0.07	34.069
-554	0.6 m	52.5 mm	0.00	0.0000	0.00	10.332	0.00	10.332
-553	1.1 m	77.9 mm	0.12	0.0000	1.70	34.568	0.03	33.468
-552	0.35 m	77.9 mm	0.12	0.0000	1.70	39.617	0.03	34.567
-551	0 m	77.9 mm	0.12	0.0000	1.70	33.468	0.03	33.468
-550	0.3 m	77.9 mm	0.12	0.0000	1.70	33.468	0.03	33.468
-549	0 m	77.9 mm	0.12	0.0000	1.70	33.468	0.03	33.468
-548	0.2 m	77.9 mm	0.15	0.0000	1.73	33.618	0.03	33.468
-547	0.05 m	52.5 mm	0.15	0.0000	1.73	33.918	0.07	33.618
-546	0.275 m	52.5 mm	0.15	0.0001	1.73	34.069	0.07	34.069
-545	0.77 m	77.9 mm	0.28	0.0001	1.80	20.580	0.06	21.350
-544	0.15 m	52.5 mm	0.15	0.0000	1.73	34.069	0.07	33.919
-543	7.65 m	77.9 mm	0.28	0.0007	1.80	33.468	0.06	31.217
-542	1.3 m	77.9 mm	0.28	0.0001	1.80	31.218	0.06	39.617
-541	0.95 m	77.9 mm	0.28	0.0001	1.80	26.080	0.06	19.580
-540	1.65 m	77.9 mm	0.28	0.0002	1.80	19.580	0.06	20.580
-539	0.2 m	52.5 mm	2.92	0.0105	2.07	34.649	1.35	34.439
-538	0.4 m	52.5 mm	2.92	0.0210	2.07	34.166	1.35	33.775
-537	16.7 m	52.5 mm	2.92	0.8760	2.07	33.637	1.35	21.061
-536	0.68 m	26.6 mm	2.92	1.2650	2.07	21.047	5.26	19.102
-535	0.5 m	26.6 mm	2.92	0.9302	2.07	13.459	5.26	12.209
-534	0.775 m	26.6 mm	2.92	1.4418	2.07	11.149	5.26	10.207
-533	14.2 m	52.5 mm	2.92	0.7451	2.07	10.192	1.35	18.946
-532	3.6 m	52.5 mm	2.92	0.1889	2.07	18.830	1.35	21.711
-531	7.43 m	77.9 mm	8.32	0.3878	2.15	20.641	1.74	19.704

#	Length (*)	Inside Diameter (*)	Flow (l/s)	Total Pressure Loss (m Fluid)	Economic Velocity (m/s)	In Stagnation Pressure (m Flui	In Velocity (m/s)	Out Stagnation Pressure (m Flu
-530	0.3 m	77.9 mm	0.00	0.0000	2.05	10.332	0.00	10.332
-529	0.55 m	77.9 mm	8.32	0.0287	2.15	25.408	1.74	25.619
-528	0.55 m	77.9 mm	8.31	0.0287	2.15	32.990	1.74	32.722
-527	0.2 m	77.9 mm	8.31	0.0104	2.15	33.202	1.74	33.192
-526	0.3 m	77.9 mm	12.57	0.0353	2.18	14.586	2.64	13.001
-525	5.6 m	77.9 mm	12.57	0.6589	2.18	12.570	2.64	15.961
-524	0.7 m	77.9 mm	7.10	0.0268	2.14	34.409	1.49	33.682
-523	6.175 m	52.5 mm	7.10	1.8560	2.14	29.949	3.28	21.918
-522	0.2 m	77.9 mm	7.10	0.0077	2.14	33.379	1.49	32.921
-521	6.1 m	77.9 mm	7.10	0.2339	2.14	32.866	1.49	29.982
-520	0.2 m	52.5 mm	7.10	0.0601	2.14	20.305	3.28	20.045
-519	0.625 m	52.5 mm	4.14	0.0649	2.10	19.793	1.91	19.728
-518	0.15 m	52.5 mm	4.14	0.0156	2.10	19.682	1.91	19.515
-517	0.15 m	52.5 mm	7.10	0.0451	2.14	19.910	3.28	19.865
-516	1.25 m	52.5 mm	2.96	0.0673	2.07	19.828	1.37	18.566
-515	0.31 m	52.5 mm	2.96	0.0167	2.07	15.144	1.37	15.427
-514	4.35 m	52.5 mm	2.96	0.2341	2.07	18.448	1.37	16.314
-513	0.15 m	52.5 mm	4.14	0.0156	2.10	18.505	1.91	15.466
-512	0.3 m	52.5 mm	4.14	0.0312	2.10	15.420	1.91	15.388
-511	3.54 m	52.5 mm	2.96	0.1905	2.07	15.785	1.37	15.215
-510	4.25 m	52.5 mm	7.10	1.2775	2.14	23.112	3.28	22.285
-509	13.9 m	52.5 mm	7.10	4.1785	2.14	15.316	3.28	23.787
-508	0.6 m	52.5 mm	4.28	0.0664	2.10	34.346	1.98	33.679
-507	7.75 m	52.5 mm	4.28	0.8577	2.10	33.549	1.98	29.032
-506	1.1 m	52.5 mm	4.28	0.1217	2.10	31.034	1.98	30.762
-505	0.15 m	52.5 mm	4.28	0.0166	2.10	30.664	1.98	30.647
-504	2.885 m	52.5 mm	4.28	0.3193	2.10	28.787	1.98	31.067
-503	2 m	52.5 mm	4.28	0.2214	2.10	21.790	1.98	19.594
-502	1 m	52.5 mm	4.28	0.1107	2.10	19.545	1.98	19.434

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-501	5.2 m	52.5 mm	4.28	0.5755	2.10	22.099	1.98	21.524
-500	4.045 m	52.5 mm	4.28	0.4477	2.10	19.424	1.98	22.161
-499	0.69 m	52.5 mm	4.88	0.0988	2.11	34.314	2.25	34.015
-498	0.69 m	52.5 mm	4.88	0.0988	2.11	34.002	2.25	32.723
-497	5.3 m	52.5 mm	4.88	0.7591	2.11	32.596	2.25	27.687
-496	1.45 m	52.5 mm	3.96	0.1380	2.09	27.621	1.83	26.033
-495	2.05 m	52.5 mm	3.96	0.1950	2.09	25.949	1.83	25.464
-494	0.5 m	52.5 mm	3.96	0.0476	2.09	24.962	1.83	24.255
-493	0.875 m	52.5 mm	3.96	0.0833	2.09	24.171	1.83	23.952
-492	0.15 m	26.6 mm	0.92	0.0284	1.94	27.624	1.65	27.555
-491	0.125 m	52.5 mm	3.96	0.0119	2.09	16.359	1.83	14.934
-490	8.68 m	26.6 mm	0.92	1.6414	1.94	27.308	1.65	23.707
-489	0.15 m	26.6 mm	0.92	0.0284	1.94	17.530	1.65	17.603
-488	5.5 m	26.6 mm	0.92	1.0402	1.94	17.532	1.65	16.491
-487	0.15 m	26.6 mm	0.92	0.0284	1.94	17.568	1.65	17.540
-486	2.15 m	26.6 mm	0.92	0.4066	1.94	16.280	1.65	17.773
-485	0.15 m	26.6 mm	0.92	0.0284	1.94	17.773	1.65	17.745
-484	0.2 m	52.5 mm	3.96	0.0190	2.09	14.803	1.83	15.183
-483	0.5 m	52.5 mm	3.96	0.0476	2.09	14.892	1.83	14.845
-482	1.45 m	52.5 mm	3.96	0.1380	2.09	16.807	1.83	17.619
-481	2.1 m	52.5 mm	3.96	0.1998	2.09	14.682	1.83	16.582
-480	2 m	52.5 mm	3.96	0.1903	2.09	16.539	1.83	16.849
-479	4.55 m	52.5 mm	4.88	0.6517	2.11	17.552	2.25	21.050
-478	1 m	52.5 mm	4.88	0.1432	2.11	20.859	2.25	21.493
-477	0.8 m	202.7 mm	56.91	0.0128	2.20	35.512	1.76	35.500
-476	2.8 m	154.1 mm	34.23	0.0681	2.20	21.350	1.84	21.282
-475	0.23 m	77.9 mm	2.08	0.0008	2.03	41.827	0.44	41.826
-474	0 m	52.5 mm	9.22	0.0005	2.16	32.212	4.26	32.212
-473	0 m	52.5 mm	7.00	0.0003	2.14	34.043	3.23	35.283

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-472	0 m	77.9 mm	9.22	0.0001	2.16	32.593	1.93	32.593
-471	0 m	77.9 mm	7.00	0.0000	2.14	34.263	1.47	34.263
-470	0.45 m	202.7 mm	56.91	0.0072	2.20	35.557	1.76	35.550
-469	0.5 m	102.3 mm	27.94	0.0687	2.20	35.498	3.40	35.929
-468	2.9 m	102.3 mm	27.94	0.3984	2.20	35.787	3.40	35.389
-467	3 m	77.9 mm	8.91	0.1792	2.16	34.144	1.87	36.965
-466	5 m	77.9 mm	8.91	0.2987	2.16	34.487	1.87	34.188
-465	3 m	77.9 mm	9.29	0.1947	2.16	34.607	1.95	37.412
-464	4.25 m	102.3 mm	18.20	0.2505	2.19	35.139	2.21	34.889
-463	3 m	77.9 mm	9.74	0.2137	2.16	35.314	2.04	38.100
-462	0 m	77.9 mm	2.18	0.0000	2.04	38.829	0.46	38.829
-461	0 m	77.9 mm	2.10	0.0000	2.03	38.829	0.44	38.829
-460	0 m	77.9 mm	2.94	0.0000	2.07	38.829	0.62	38.829
-459	0 m	77.9 mm	2.52	0.0000	2.05	38.829	0.53	38.829
-458	0 m	77.9 mm	9.74	0.0001	2.16	38.829	2.04	38.829
-457	0.15 m	52.5 mm	2.18	0.0044	2.04	38.833	1.01	38.829
-456	0.15 m	52.5 mm	2.10	0.0041	2.03	38.833	0.97	38.829
-455	2.13 m	77.9 mm	4.28	0.0305	2.10	38.684	0.90	38.883
-454	0.75 m	77.9 mm	2.10	0.0028	2.03	38.880	0.44	38.217
-453	0.55 m	77.9 mm	9.74	0.0392	2.16	38.163	2.04	38.724
-452	0.45 m	77.9 mm	5.47	0.0103	2.12	38.700	1.15	38.240
-451	0.15 m	52.5 mm	2.52	0.0059	2.05	38.835	1.17	38.829
-450	0.82 m	77.9 mm	2.52	0.0043	2.05	38.225	0.53	38.221
-449	0.15 m	52.5 mm	2.94	0.0080	2.07	38.837	1.36	38.829
-448	1.4 m	52.5 mm	2.18	0.0414	2.04	38.875	1.01	38.833
-447	1.15 m	77.9 mm	2.18	0.0045	2.04	38.879	0.46	38.875
-446	1.4 m	52.5 mm	2.10	0.0387	2.03	38.872	0.97	38.833
-445	0.7 m	77.9 mm	2.10	0.0026	2.03	38.214	0.44	38.872
-444	1.4 m	52.5 mm	2.94	0.0745	2.07	38.911	1.36	38.837

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-443	0.25 m	77.9 mm	2.94	0.0017	2.07	38.233	0.62	38.911
-442	1.4 m	52.5 mm	2.52	0.0552	2.05	38.890	1.17	38.835
-441	0.65 m	77.9 mm	2.52	0.0034	2.05	38.214	0.53	38.890
-440	0.75 m	77.9 mm	18.20	0.1834	2.19	34.859	3.82	34.676
-439	0.3 m	77.9 mm	9.74	0.0214	2.16	29.358	2.04	29.336
-438	0.4 m	77.9 mm	9.74	0.0285	2.16	29.304	2.04	29.276
-437	1.69 m	77.9 mm	9.74	0.1204	2.16	29.224	2.04	29.104
-436	1.52 m	52.5 mm	9.74	0.8541	2.16	29.104	4.50	28.249
-435	1.8 m	77.9 mm	9.74	0.1282	2.16	28.250	2.04	28.121
-434	0.9 m	77.9 mm	9.74	0.0641	2.16	28.018	2.04	27.953
-433	5.3 m	102.3 mm	27.94	0.7283	2.20	26.867	3.40	26.138
-432	0.46 m	77.9 mm	7.12	0.0177	2.14	27.422	1.49	27.404
-431	0.75 m	102.3 mm	8.91	0.0109	2.16	27.476	1.08	27.465
-430	4.9 m	102.3 mm	18.20	0.2889	2.19	27.405	2.21	27.116
-429	0.94 m	77.9 mm	9.74	0.0670	2.16	27.009	2.04	26.942
-428	0.49 m	77.9 mm	7.12	0.0189	2.14	27.469	1.49	27.450
-427	0.1 m	52.5 mm	7.12	0.0302	2.14	27.559	3.29	27.529
-426	0.1 m	52.5 mm	7.12	0.0302	2.14	27.704	3.29	27.674
-425	0.4 m	77.9 mm	7.12	0.0154	2.14	27.754	1.49	27.738
-424	1.2 m	77.9 mm	7.12	0.0462	2.14	27.868	1.49	27.821
-423	0.46 m	77.9 mm	7.12	0.0177	2.14	27.913	1.49	27.895
-422	2.525 m	202.7 mm	56.92	0.0404	2.20	21.180	1.76	21.139
-421	0.5 m	102.3 mm	27.94	0.0687	2.20	25.997	3.40	21.198
-420	0.15 m	52.5 mm	2.62	0.0064	2.06	27.319	1.21	27.312
-419	4.15 m	77.9 mm	8.91	0.2479	2.16	27.734	1.87	27.486
-418	0.15 m	52.5 mm	2.62	0.0064	2.06	27.924	1.21	27.918
-417	1 m	52.5 mm	2.62	0.0425	2.06	27.581	1.21	27.539
-416	3 m	77.9 mm	9.74	0.2137	2.16	27.283	2.04	27.069
-415	0.125 m	52.5 mm	2.99	0.0069	2.07	22.040	1.38	22.033

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-414	1 m	52.5 mm	2.62	0.0425	2.06	27.698	1.21	27.656
-413	0.4 m	52.5 mm	0.00	0.0000	2.08	10.332	0.00	10.332
-412	0.23 m	303.3 mm	185.87	0.0047	2.14	44.726	2.57	44.721
-411	1.12 m	254.5 mm	185.87	0.0568	2.14	44.702	3.65	44.645
-410	6.6 m	303.3 mm	298.11	0.3429	2.10	17.540	4.13	19.377
-409	7 m	254.5 mm	131.44	0.1789	2.16	44.693	2.58	44.514
-408	0.2 m	202.7 mm	131.44	0.0167	2.16	44.479	4.07	44.462
-407	40.532 m	202.7 mm	131.44	3.3793	2.16	44.054	4.07	39.025
-406	1.35 m	77.9 mm	9.74	0.0961	2.16	38.067	2.04	38.371
-405	0.4 m	77.9 mm	4.28	0.0057	2.10	38.710	0.90	38.704
-404	1 m	52.5 mm	2.25	0.0315	2.04	28.132	1.04	28.101
-403	3 m	77.9 mm	9.29	0.1947	2.16	27.785	1.95	27.590
-402	1 m	52.5 mm	2.25	0.0315	2.04	28.046	1.04	28.015
-401	0.15 m	52.5 mm	2.25	0.0047	2.04	28.298	1.04	28.294
-400	19.225 m	202.7 mm	131.44	1.6029	2.16	36.826	4.07	36.923
-399	0.275 m	154.1 mm	31.90	0.0058	2.20	22.964	1.71	23.234
-398	3.05 m	202.7 mm	99.55	0.1467	2.18	36.975	3.08	36.828
-397	0.65 m	77.9 mm	11.20	0.0609	2.17	23.080	2.35	23.669
-396	2.3 m	202.7 mm	88.35	0.0874	2.18	36.825	2.74	36.738
-395	2.2 m	202.7 mm	54.44	0.0322	2.20	27.127	1.69	27.095
-394	0.7 m	202.7 mm	80.75	0.0223	2.19	36.737	2.50	36.715
-393	0.15 m	52.5 mm	2.25	0.0047	2.04	27.853	1.04	27.849
-392	2.35 m	202.7 mm	62.46	0.0451	2.20	36.708	1.94	36.663
-391	2.85 m	202.7 mm	62.46	0.0547	2.20	36.618	1.94	36.563
-390	0.2 m	154.1 mm	10.84	0.0005	2.17	7.424	0.58	7.524
-389	6.9 m	202.7 mm	38.77	0.0521	2.20	36.576	1.20	36.524
-388	0.46 m	77.9 mm	7.05	0.0174	2.14	28.323	1.48	28.305
-387	3.4 m	202.7 mm	38.77	0.0257	2.20	36.507	1.20	36.481
-386	5.15 m	102.3 mm	18.68	0.3194	2.19	35.435	2.27	34.415

#	Length (*)	Inside Diameter (*)	Flow (l/s)	Total Pressure Loss (m Fluid)	Economic Velocity (m/s)	In Stagnation Pressure (m Flui	In Velocity (m/s)	Out Stagnation Pressure (m Flu
-385	2.55 m	202.7 mm	20.09	0.0054	2.19	36.474	0.62	36.469
-384	0.4 m	102.3 mm	20.10	0.0287	2.19	24.303	2.44	24.674
-383	0.4 m	21 mm	0.00	0.0000	2.08	10.332	0.00	10.332
-382	0.5 m	21 mm	0.00	0.0000	2.08	10.332	0.00	10.332
-381	10.3 m	202.7 mm	38.77	0.0777	2.20	24.306	1.20	24.229
-380	1.2 m	77.9 mm	7.05	0.0453	2.14	28.278	1.48	28.233
-379	1.75 m	102.3 mm	8.72	0.0245	2.15	8.597	1.06	7.043
-378	0.5 m	102.3 mm	18.29	0.0298	2.19	22.439	2.22	23.979
-377	5.2 m	202.7 mm	62.47	0.0998	2.20	24.139	1.94	24.039
-376	2.3 m	202.7 mm	88.35	0.0874	2.18	23.849	2.74	23.762
-375	3.05 m	202.7 mm	99.55	0.1467	2.18	23.667	3.08	23.520
-374	59.35 m	202.7 mm	131.45	4.9491	2.16	23.217	4.07	18.218
-373	0.4 m	77.9 mm	7.05	0.0151	2.14	28.167	1.48	28.151
-372	0.8 m	202.7 mm	0.00	0.0000	2.08	10.332	0.00	10.332
-371	0.5 m	21 mm	0.00	0.0000	2.08	10.332	0.00	10.332
-370	0 m	52.5 mm	0.00	0.0000	2.08	10.332	0.00	10.332
-369	0 m	52.5 mm	0.00	0.0000	2.08	10.332	0.00	10.332
-368	0.8 m	202.7 mm	0.00	0.0000	2.08	10.332	0.00	10.332
-367	0.2 m	52.5 mm	0.00	0.0000	2.08	10.332	0.00	10.332
-366	0.1 m	52.5 mm	7.05	0.0296	2.14	28.118	3.26	28.089
-365	0.1 m	52.5 mm	7.05	0.0296	2.14	27.976	3.26	27.946
-364	0.49 m	77.9 mm	7.05	0.0185	2.14	27.887	1.48	27.869
-363	0.407 m	202.7 mm	131.46	0.0339	2.16	18.018	4.07	17.984
-362	0.2 m	202.7 mm	131.46	0.0167	2.16	17.576	4.07	17.559
-361	5.5 m	254.5 mm	131.46	0.1406	2.16	17.517	2.58	17.376
-360	0.23 m	303.3 mm	131.46	0.0024	2.16	17.367	1.82	17.365
-359	0.94 m	77.9 mm	9.29	0.0610	2.16	27.535	1.95	27.474
-358	0.75 m	303.3 mm	243.67	0.0261	2.12	17.069	3.37	17.793
-357	1.245 m	102.3 mm	8.72	0.0174	2.15	19.932	1.06	19.644

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-356	0.46 m	77.9 mm	7.05	0.0174	2.14	27.841	1.48	27.824
-355	0.9 m	77.9 mm	9.29	0.0584	2.16	28.421	1.95	28.362
-354	1.8 m	77.9 mm	9.29	0.1168	2.16	28.632	1.95	28.515
-353	1.52 m	52.5 mm	9.29	0.7776	2.16	29.409	4.29	28.632
-352	1.69 m	77.9 mm	9.29	0.1097	2.16	29.519	1.95	29.409
-351	0.4 m	77.9 mm	9.29	0.0260	2.16	29.592	1.95	29.566
-350	0.4 m	77.9 mm	4.43	0.0061	2.10	38.149	0.93	38.143
-349	1.35 m	77.9 mm	9.29	0.0876	2.16	37.383	1.95	37.695
-348	0.3 m	77.9 mm	9.29	0.0195	2.16	29.641	1.95	29.622
-347	0.65 m	77.9 mm	2.25	0.0027	2.04	37.629	0.47	38.306
-346	1.4 m	52.5 mm	2.25	0.0440	2.04	38.306	1.04	38.262
-345	0.25 m	77.9 mm	2.62	0.0014	2.06	37.645	0.55	38.323
-344	1.4 m	52.5 mm	2.62	0.0594	2.06	38.323	1.21	38.264
-343	0.7 m	77.9 mm	2.10	0.0026	2.03	37.643	0.44	38.300
-342	1.4 m	52.5 mm	2.10	0.0388	2.03	38.300	0.97	38.261
-341	1.15 m	77.9 mm	2.32	0.0051	2.04	38.314	0.49	38.309
-340	1.4 m	52.5 mm	2.32	0.0470	2.04	38.309	1.07	38.262
-339	0.15 m	52.5 mm	2.62	0.0064	2.06	38.264	1.21	38.257
-338	0.3 m	202.7 mm	54.44	0.0044	2.20	17.437	1.69	17.432
-337	8.8225 m	202.7 mm	54.43	0.1292	2.20	43.725	1.69	43.170
-336	0 m	52.5 mm	7.15	0.0003	2.14	26.220	3.30	26.220
-335	0.25 m	202.7 mm	54.43	0.0037	2.20	44.048	1.69	43.794
-334	8.8225 m	202.7 mm	54.43	0.1292	2.20	42.929	1.69	45.244
-333	0.82 m	77.9 mm	2.25	0.0034	2.04	37.638	0.47	37.635
-332	0.855 m	202.7 mm	54.44	0.0125	2.20	26.484	1.69	27.196
-331	0.15 m	52.5 mm	2.25	0.0047	2.04	38.262	1.04	38.257
-330	0.45 m	77.9 mm	4.87	0.0083	2.11	38.108	1.02	37.650
-329	0.55 m	77.9 mm	9.29	0.0357	2.16	37.600	1.95	38.165
-328	0.65 m	52.5 mm	4.12	0.0668	2.10	37.278	1.90	36.691

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-327	3.505 m	202.7 mm	54.44	0.0514	2.20	19.697	1.69	17.980
-326	0.75 m	77.9 mm	2.10	0.0028	2.03	38.308	0.44	37.645
-325	0.505 m	202.7 mm	54.44	0.0074	2.20	26.222	1.69	26.215
-324	0.765 m	202.7 mm	54.44	0.0112	2.20	26.180	1.69	26.169
-323	2.13 m	77.9 mm	4.43	0.0326	2.10	38.121	0.93	38.319
-322	15.109 m	202.7 mm	54.44	0.2214	2.20	17.808	1.69	17.506
-321	0.15 m	52.5 mm	2.10	0.0042	2.03	38.261	0.97	38.257
-320	0.3 m	154.1 mm	23.69	0.0036	2.20	35.972	1.27	35.968
-319	0.275 m	154.1 mm	31.90	0.0058	2.20	36.162	1.71	35.882
-318	1.62 m	154.1 mm	31.90	0.0343	2.20	35.805	1.71	36.081
-317	3.15 m	154.1 mm	31.90	0.0668	2.20	35.974	1.71	35.907
-316	3.575 m	154.1 mm	24.75	0.0461	2.20	35.904	1.33	35.858
-315	5.525 m	154.1 mm	7.13	0.0065	2.14	35.840	0.38	35.833
-314	0.85 m	77.9 mm	7.13	0.0328	2.14	36.710	1.50	37.527
-313	4.3 m	77.9 mm	7.13	0.1660	2.14	35.815	1.50	36.849
-312	0.4 m	77.9 mm	7.13	0.0154	2.14	37.459	1.50	37.718
-311	5.65 m	77.9 mm	7.15	0.2196	2.14	35.643	1.50	37.774
-310	0.353 m	77.9 mm	17.62	0.0809	2.19	36.076	3.70	35.995
-309	0.525 m	77.9 mm	7.15	0.0204	2.14	37.577	1.50	37.556
-308	0.475 m	77.9 mm	7.15	0.0185	2.14	37.488	1.50	37.295
-307	2.3 m	77.9 mm	17.62	0.5273	2.19	35.072	3.70	36.728
-306	3.85 m	154.1 mm	7.13	0.0045	2.14	23.747	0.38	23.742
-305	2.45 m	77.9 mm	17.62	0.5617	2.19	23.824	3.70	24.463
-304	2.375 m	77.9 mm	17.62	0.5445	2.19	24.404	3.70	24.499
-303	3.2 m	154.1 mm	24.75	0.0413	2.20	23.691	1.33	23.650
-302	3.228 m	77.9 mm	7.15	0.1255	2.14	26.159	1.50	23.383
-301	0.4 m	77.9 mm	7.15	0.0155	2.14	23.299	1.50	23.684
-300	0.15 m	52.5 mm	2.32	0.0050	2.04	38.262	1.07	38.257
-299	0.325 m	77.9 mm	17.62	0.0745	2.19	36.313	3.70	36.413

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-298	0.425 m	77.9 mm	7.13	0.0164	2.14	26.860	1.50	27.169
-297	3.15 m	77.9 mm	7.13	0.1216	2.14	27.085	1.50	26.963
-296	0.525 m	77.9 mm	7.13	0.0203	2.14	26.840	1.50	26.820
-295	0 m	52.5 mm	7.13	0.0003	2.14	26.929	3.29	26.929
-294	0.45 m	77.9 mm	7.13	0.0174	2.14	26.792	1.50	26.375
-293	4.075 m	77.9 mm	7.13	0.1574	2.14	26.307	1.50	23.899
-292	1.4 m	77.9 mm	7.13	0.0541	2.14	23.844	1.50	23.790
-291	0.35 m	154.1 mm	31.90	0.0074	2.20	22.748	1.71	23.041
-290	6.32 m	154.1 mm	31.90	0.1339	2.20	23.599	1.71	22.855
-289	0 m	77.9 mm	9.29	0.0001	2.16	38.257	1.95	38.257
-288	0.4 m	77.9 mm	7.15	0.0155	2.14	26.298	1.50	26.283
-287	0 m	52.5 mm	7.15	0.0003	2.14	26.248	3.30	26.248
-286	1.675 m	77.9 mm	7.15	0.0651	2.14	26.372	1.50	26.382
-285	0 m	77.9 mm	2.25	0.0000	2.04	38.257	0.47	38.257
-284	0 m	77.9 mm	2.62	0.0000	2.06	38.257	0.55	38.257
-283	0 m	77.9 mm	2.10	0.0000	2.03	38.257	0.44	38.257
-282	0.475 m	77.9 mm	17.62	0.1089	2.19	24.502	3.70	24.818
-281	0.3 m	77.9 mm	17.62	0.0688	2.19	24.740	3.70	24.671
-280	0 m	52.5 mm	17.62	0.0018	2.19	25.111	8.14	25.110
-279	0.95 m	77.9 mm	17.62	0.2178	2.19	26.359	3.70	25.491
-278	0 m	52.5 mm	17.62	0.0018	2.19	25.283	8.14	25.281
-277	0 m	77.9 mm	2.32	0.0000	2.04	38.257	0.49	38.257
-276	3.475 m	77.9 mm	17.62	0.7967	2.19	30.049	3.70	27.202
-275	0 m	77.9 mm	8.91	0.0001	2.16	37.711	1.87	37.711
-274	0.3 m	77.9 mm	8.91	0.0179	2.16	29.793	1.87	29.775
-273	0.4 m	77.9 mm	8.91	0.0239	2.16	29.748	1.87	29.724
-272	2 m	102.3 mm	17.62	0.1106	2.19	32.110	2.14	30.077
-271	0.81 m	77.9 mm	11.20	0.0759	2.17	36.061	2.35	35.185
-270	0.2 m	77.9 mm	11.20	0.0187	2.17	35.117	2.35	35.098

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-269	3.36 m	77.9 mm	11.20	0.3149	2.17	34.931	2.35	31.266
-268	10.275 m	77.9 mm	11.20	0.9629	2.17	30.650	2.35	31.587
-267	1.69 m	77.9 mm	8.91	0.1010	2.16	29.681	1.87	29.580
-266	0.75 m	77.9 mm	8.21	0.0381	2.15	31.606	1.72	31.568
-265	0.175 m	77.9 mm	8.21	0.0089	2.15	31.369	1.72	31.285
-264	1.52 m	52.5 mm	8.91	0.7151	2.16	29.580	4.11	28.865
-263	4.3 m	52.5 mm	2.99	0.2366	2.07	31.326	1.38	26.815
-262	1.8 m	77.9 mm	8.91	0.1075	2.16	28.865	1.87	28.757
-261	5.5 m	52.5 mm	2.99	0.3027	2.07	26.694	1.38	26.392
-260	0.25 m	52.5 mm	2.99	0.0138	2.07	26.387	1.38	26.378
-259	0.9 m	77.9 mm	8.91	0.0538	2.16	28.670	1.87	28.617
-258	1.425 m	77.9 mm	8.21	0.0725	2.15	31.478	1.72	31.405
-257	0.46 m	77.9 mm	6.51	0.0149	2.13	28.172	1.37	28.157
-256	0.825 m	77.9 mm	8.21	0.0420	2.15	25.755	1.72	24.918
-255	0.49 m	77.9 mm	6.51	0.0158	2.13	28.211	1.37	28.195
-254	0.114 m	77.9 mm	8.21	0.0058	2.15	23.571	1.72	23.565
-253	0.1 m	77.9 mm	8.21	0.0051	2.15	24.844	1.72	24.759
-252	0.1 m	52.5 mm	6.51	0.0253	2.13	28.287	3.01	28.261
-251	0.1 m	52.5 mm	6.51	0.0253	2.13	28.408	3.01	28.383
-250	1.2 m	77.9 mm	8.21	0.0610	2.15	24.669	1.72	23.608
-249	7.277 m	52.5 mm	2.99	0.4005	2.07	21.022	1.38	20.372
-248	3.51 m	52.5 mm	2.99	0.1932	2.07	20.202	1.38	23.509
-247	1.114 m	77.9 mm	11.20	0.1044	2.17	23.458	2.35	23.353
-246	0.225 m	77.9 mm	11.20	0.0211	2.17	23.216	2.35	23.195
-245	9.3 m	77.9 mm	11.20	0.8716	2.17	21.366	2.35	20.494
-244	3.56 m	77.9 mm	11.20	0.3337	2.17	20.152	2.35	23.368
-243	0.55 m	77.9 mm	11.20	0.0515	2.17	23.200	2.35	23.148
-242	0.4 m	77.9 mm	6.51	0.0129	2.13	28.450	1.37	28.437
-241	0.94 m	52.5 mm	2.99	0.0517	2.07	22.008	1.38	21.027

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-240	0.4 m	102.3 mm	7.60	0.0043	2.15	36.312	0.92	35.908
-239	0.35 m	102.3 mm	7.60	0.0037	2.15	35.898	0.92	35.894
-238	12.9 m	102.3 mm	7.60	0.1381	2.15	35.870	0.92	35.731
-237	4.605 m	102.3 mm	7.60	0.0493	2.15	35.710	0.92	35.661
-236	0.216 m	77.9 mm	7.60	0.0094	2.15	35.656	1.59	35.646
-235	1.2 m	77.9 mm	6.51	0.0388	2.13	28.545	1.37	28.506
-234	4.7 m	77.9 mm	7.60	0.2056	2.15	35.615	1.59	32.709
-233	0.5 m	77.9 mm	7.60	0.0219	2.15	32.632	1.59	32.311
-232	0.46 m	77.9 mm	6.51	0.0149	2.13	28.583	1.37	28.568
-231	0.15 m	52.5 mm	2.40	0.0054	2.05	28.085	1.11	28.080
-230	0.25 m	77.9 mm	7.60	0.0109	2.15	32.216	1.59	32.205
-229	0.086 m	77.9 mm	4.12	0.0011	2.10	32.064	0.86	32.062
-228	0 m	77.9 mm	3.48	0.0000	2.08	32.067	0.73	32.067
-227	0.55 m	52.5 mm	4.12	0.0565	2.10	31.988	1.90	32.282
-226	6.625 m	52.5 mm	4.12	0.6811	2.10	32.251	1.90	37.370
-225	0.35 m	52.5 mm	3.48	0.0258	2.08	32.382	1.61	32.356
-224	0.36 m	52.5 mm	3.48	0.0265	2.08	32.059	1.61	32.382
-223	0.165 m	52.5 mm	4.12	0.0170	2.10	32.051	1.90	32.034
-222	5.8 m	52.5 mm	3.48	0.4274	2.08	32.335	1.61	37.707
-221	0.15 m	52.5 mm	2.40	0.0054	2.05	28.592	1.11	28.587
-220	2 m	52.5 mm	3.48	0.1474	2.08	37.641	1.61	36.844
-219	1 m	52.5 mm	2.40	0.0357	2.05	28.305	1.11	28.269
-218	3.94 m	77.9 mm	8.91	0.2354	2.16	28.056	1.87	27.820
-217	1 m	52.5 mm	2.40	0.0357	2.05	28.403	1.11	28.367
-216	0 m	77.9 mm	4.18	0.0000	2.10	37.711	0.88	37.711
-215	4.85 m	52.5 mm	4.12	0.4986	2.10	31.264	1.90	25.956
-214	1.275 m	52.5 mm	0.12	0.0001	1.70	34.110	0.06	39.635
-213	0.3 m	52.5 mm	4.12	0.0308	2.10	25.866	1.90	25.835
-212	0 m	77.9 mm	4.73	0.0000	2.11	37.711	0.99	37.711

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-211	4.54 m	52.5 mm	3.48	0.3346	2.08	30.995	1.61	27.081
-210	0.325 m	77.9 mm	4.12	0.0043	2.10	25.805	0.86	25.801
-209	0 m	52.5 mm	4.12	0.0001	2.10	25.826	1.90	25.825
-208	1.54 m	52.5 mm	3.48	0.1135	2.08	27.017	1.61	25.803
-207	0.325 m	77.9 mm	3.48	0.0031	2.08	25.782	0.73	25.779
-206	0 m	52.5 mm	3.48	0.0001	2.08	25.797	1.61	25.797
-205	0 m	49.2 mm	0.12	0.0000	1.70	39.617	0.06	39.617
-204	0.15 m	52.5 mm	4.18	0.0158	2.10	37.726	1.93	37.711
-203	0.925 m	77.9 mm	7.60	0.0405	2.15	25.735	1.59	25.694
-202	0.525 m	77.9 mm	7.60	0.0230	2.15	25.663	1.59	25.640
-201	0.4 m	77.9 mm	7.60	0.0175	2.15	21.564	1.59	21.547
-200	0.55 m	77.9 mm	8.91	0.0329	2.16	37.170	1.87	37.737
-199	3.016 m	77.9 mm	7.60	0.1319	2.15	21.484	1.59	23.227
-198	0.45 m	77.9 mm	4.73	0.0078	2.11	37.720	0.99	37.262
-197	6.259 m	102.3 mm	7.60	0.0670	2.15	23.219	0.92	23.456
-196	0.15 m	52.5 mm	4.73	0.0202	2.11	37.731	2.19	37.711
-195	12.55 m	102.3 mm	7.60	0.1344	2.15	23.414	0.92	23.279
-194	0.35 m	102.3 mm	7.60	0.0037	2.15	23.255	0.92	23.251
-193	0.4 m	102.3 mm	7.60	0.0043	2.15	23.241	0.92	23.636
-192	9.278 m	40.9 mm	0.38	0.0357	1.84	34.263	0.29	36.081
-191	1.4 m	52.5 mm	4.18	0.1478	2.10	37.874	1.93	37.726
-190	0.15 m	40.9 mm	0.38	0.0006	1.84	23.396	0.29	23.396
-189	3.28 m	77.9 mm	4.18	0.0448	2.10	37.689	0.88	37.874
-187	0.3 m	102.3 mm	18.29	0.0179	2.19	36.143	2.22	35.825
-186	0.5 m	102.3 mm	18.29	0.0298	2.19	35.684	2.22	35.085
-185	1.05 m	102.3 mm	18.29	0.0625	2.19	34.902	2.22	35.144
-184	11.1 m	102.3 mm	17.91	0.6339	2.19	34.819	2.18	34.185
-183	0.2 m	102.3 mm	18.29	0.0119	2.19	22.512	2.22	22.500
-182	6.375 m	102.3 mm	17.91	0.3641	2.19	34.127	2.18	36.613

#	Length (*)	Inside Diameter (*)	Flow (l/s)	Total Pressure Loss (m Fluid)	Economic Velocity (m/s)	In Stagnation Pressure (m Flui	In Velocity (m/s)	Out Stagnation Pressure (m Flu
-181	0.25 m	102.3 mm	17.91	0.0143	2.19	36.379	2.18	36.364
-180	0.1 m	102.3 mm	17.91	0.0057	2.19	36.229	2.18	36.223
-179	0.1 m	102.3 mm	17.91	0.0057	2.19	36.165	2.18	36.159
-178	1.4 m	52.5 mm	4.73	0.1888	2.11	37.920	2.19	37.731
-177	0.3 m	40.9 mm	0.38	0.0012	1.84	34.891	0.29	34.590
-176	0.15 m	40.9 mm	0.38	0.0006	1.84	34.589	0.29	34.274
-175	0.25 m	77.9 mm	4.73	0.0043	2.11	37.244	0.99	37.920
-174	1.47 m	77.9 mm	0.00	0.0000	0.00	10.332	0.00	10.332
-173	1.35 m	77.9 mm	8.91	0.0806	2.16	36.938	1.87	37.257
-172	0.4 m	77.9 mm	4.18	0.0055	2.10	37.724	0.88	37.718
-171	0.3 m	102.3 mm	17.91	0.0171	2.19	33.054	2.18	26.342
-170	1.5 m	303.3 mm	298.07	0.0779	2.10	44.804	4.13	44.726
-169	0.75 m	333.3 mm	298.12	0.0188	2.10	10.342	3.42	10.823
-168	0.725 m	102.3 mm	17.91	0.0414	2.19	26.373	2.18	26.702
-167	0.3 m	102.3 mm	17.91	0.0171	2.19	26.226	2.18	26.509
-166	0.75 m	303.3 mm	197.82	0.0173	2.13	46.528	2.74	46.510
-165	0.4 m	254.5 mm	100.27	0.0060	2.18	10.803	1.97	10.797
-164	0.125 m	102.3 mm	17.91	0.0071	2.19	26.526	2.18	26.519
-163	0 m	254.5 mm	100.27	0.0000	2.18	10.750	1.97	10.750
-162	0 m	254.5 mm	99.23	0.0000	2.18	10.618	1.95	10.618
-161	15.505 m	102.3 mm	17.91	0.8856	2.19	21.842	2.18	23.131
-160	0.2 m	102.3 mm	17.91	0.0114	2.19	22.838	2.18	22.522
-159	2.189 m	40.9 mm	0.38	0.0084	1.84	23.392	0.29	25.209
-158	0.4 m	254.5 mm	98.61	0.0058	2.18	10.372	1.94	10.366
-157	8.4 m	40.9 mm	0.38	0.0323	1.84	25.208	0.29	21.776
-156	0.15 m	40.9 mm	0.38	0.0006	1.84	21.771	0.29	22.086
-154	1.5 m	333.3 mm	298.12	0.0478	2.10	10.544	3.42	10.996
-153	0.75 m	303.3 mm	197.82	0.0173	2.13	46.635	2.74	46.618
-152	0.3 m	40.9 mm	0.38	0.0012	1.84	22.086	0.29	22.284

#	Length (*)	Inside Diameter (*)	Flow (l/s)	Total Pressure Loss (m Fluid)	Economic Velocity (m/s)	In Stagnation Pressure (m Fluid)	In Velocity (m/s)	Out Stagnation Pressure (m Fluid)
-151	0.7 m	202.7 mm	80.75	0.0223	2.19	23.930	2.50	23.908
-150	0.3 m	102.3 mm	18.29	0.0179	2.19	23.838	2.22	24.120
-149	2.35 m	202.7 mm	100.25	0.1146	2.18	48.339	3.11	46.485
-148	5.2 m	77.9 mm	3.92	0.0630	2.09	34.147	0.82	34.084
-147	2.35 m	202.7 mm	99.22	0.1123	2.18	48.977	3.07	47.125
-146	2.35 m	202.7 mm	98.60	0.1109	2.18	49.134	3.06	47.283
-145	0.4 m	154.1 mm	23.69	0.0047	2.20	36.396	1.27	35.992
-144	0.8 m	154.1 mm	23.69	0.0095	2.20	35.926	1.27	35.917
-143	8 m	154.1 mm	23.69	0.0948	2.20	35.897	1.27	27.803
-142	5.24 m	154.1 mm	19.56	0.0427	2.19	27.803	1.05	22.520
-141	3.486 m	154.1 mm	19.56	0.0284	2.19	22.480	1.05	22.452
-140	0.2 m	52.5 mm	4.14	0.0207	2.10	27.535	1.91	27.515
-139	5.225 m	52.5 mm	4.14	0.5413	2.10	18.481	1.91	16.164
-138	3.925 m	52.5 mm	4.14	0.4066	2.10	27.505	1.91	28.524
-137	0.34 m	202.7 mm	100.25	0.0166	2.18	48.933	3.11	48.576
-136	0.34 m	202.7 mm	99.22	0.0162	2.18	49.566	3.07	49.210
-135	0.34 m	202.7 mm	98.60	0.0160	2.18	49.719	3.06	49.363
-134	0.2 m	303.3 mm	98.60	0.0012	2.18	46.957	1.36	46.956
-133	2.6 m	202.7 mm	98.60	0.1227	2.18	47.170	3.06	47.048
-132	0.6 m	52.5 mm	4.14	0.0622	2.10	28.294	1.91	28.231
-131	0.95 m	303.3 mm	298.07	0.0493	2.10	45.703	4.13	44.803
-130	0 m	202.7 mm	100.25	0.0000	2.18	49.889	3.11	49.889
-129	1.2 m	154.1 mm	19.56	0.0098	2.19	22.438	1.05	22.429
-128	0.895 m	154.1 mm	19.56	0.0073	2.19	22.415	1.05	21.523
-127	2.35 m	102.3 mm	8.72	0.0329	2.15	6.973	1.06	7.535
-126	0.575 m	154.1 mm	8.72	0.0010	2.15	21.464	0.47	20.888
-125	0.2 m	154.1 mm	10.84	0.0005	2.17	21.462	0.58	21.461
-124	0.31 m	102.3 mm	8.72	0.0043	2.15	20.883	1.06	20.579
-123	0.66 m	102.3 mm	8.72	0.0092	2.15	20.547	1.06	19.987

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-122	0 m	202.7 mm	99.22	0.0000	2.18	50.502	3.07	50.502
-121	0 m	202.7 mm	98.60	0.0000	2.18	50.644	3.06	50.644
-120	0.2 m	102.3 mm	10.84	0.0043	2.17	21.454	1.32	21.450
-119	0.05 m	102.3 mm	10.84	0.0011	2.17	21.400	1.32	21.399
-118	0.335 m	202.7 mm	98.60	0.0158	2.18	49.960	3.06	49.945
-117	0.3 m	102.3 mm	10.84	0.0064	2.17	21.378	1.32	21.371
-116	0.115 m	202.7 mm	100.25	0.0056	2.18	50.011	3.11	50.006
-115	0.4 m	154.1 mm	23.69	0.0047	2.20	23.815	1.27	24.210
-114	0.115 m	202.7 mm	99.22	0.0055	2.18	50.622	3.07	50.617
-113	0.335 m	202.7 mm	100.25	0.0163	2.18	49.182	3.11	49.166
-112	0.335 m	202.7 mm	99.22	0.0160	2.18	49.810	3.07	49.794
-111	0.05 m	154.1 mm	8.72	0.0001	2.15	7.526	0.47	7.526
-110	0.115 m	202.7 mm	98.60	0.0054	2.18	50.762	3.06	50.757
-109	2.954 m	102.3 mm	10.84	0.0630	2.17	10.278	1.32	7.282
-108	0.235 m	102.3 mm	10.84	0.0050	2.17	7.239	1.32	7.438
-107	0.65 m	154.1 mm	19.56	0.0053	2.19	7.496	1.05	7.976
-106	0.551 m	154.1 mm	100.25	0.1121	2.18	50.231	5.38	50.119
-105	0.175 m	154.1 mm	19.56	0.0014	2.19	7.948	1.05	8.042
-104	2.275 m	154.1 mm	19.56	0.0186	2.19	8.013	1.05	10.270
-103	12.2 m	154.1 mm	19.56	0.0995	2.19	10.229	1.05	16.029
-102	0.551 m	154.1 mm	99.22	0.1098	2.18	50.837	5.32	50.727
-101	0.551 m	154.1 mm	98.60	0.1085	2.18	50.974	5.29	50.866
-100	8 m	154.1 mm	23.69	0.0948	2.20	16.006	1.27	23.911
-99	0.15 m	154.1 mm	23.69	0.0018	2.20	23.836	1.27	23.834
-98	1 m	154.1 mm	23.69	0.0118	2.20	23.890	1.27	23.878
-97	4.3 m	303.3 mm	298.07	0.2233	2.10	46.129	4.13	45.906
-96	0.175 m	154.1 mm	100.25	0.0356	2.18	50.966	5.38	50.930
-95	0.175 m	154.1 mm	99.22	0.0349	2.18	51.557	5.32	51.522
-94	0.2 m	52.5 mm	4.14	0.0207	2.10	16.183	1.91	16.162

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-93	0.45 m	52.5 mm	4.14	0.0466	2.10	15.889	1.91	16.192
-92	1.3 m	303.3 mm	197.82	0.0300	2.13	46.755	2.74	46.725
-91	0.175 m	154.1 mm	98.60	0.0345	2.18	51.686	5.29	51.651
-90	2.5 m	254.5 mm	100.27	0.0375	2.18	10.991	1.97	10.954
-89	0.425 m	202.7 mm	100.27	0.0207	2.18	10.585	3.11	10.564
-88	1.35 m	77.9 mm	14.75	0.2178	2.18	34.079	3.10	33.861
-87	0.715 m	77.9 mm	3.92	0.0087	2.09	34.878	0.82	34.869
-86	0.105 m	102.3 mm	3.92	0.0003	2.09	34.149	0.48	34.148
-85	0.17 m	102.3 mm	18.68	0.0105	2.19	35.592	2.27	35.582
-84	5.015 m	77.9 mm	3.92	0.0607	2.09	34.076	0.82	33.615
-83	0.425 m	202.7 mm	99.23	0.0203	2.18	10.456	3.08	10.436
-82	0.476 m	77.9 mm	3.92	0.0058	2.09	33.587	0.82	34.056
-81	1.5 m	77.9 mm	3.92	0.0182	2.09	33.613	0.82	33.595
-80	0.4 m	77.9 mm	3.92	0.0048	2.09	34.888	0.82	34.883
-79	0.425 m	202.7 mm	98.61	0.0201	2.18	10.161	3.06	10.141
-78	1.5 m	102.3 mm	0.00	0.0000	0.00	10.332	0.00	10.332
-77	0.1 m	77.9 mm	0.00	0.0000	1.99	10.332	0.00	10.332
-76	0.125 m	52.5 mm	3.92	0.0117	2.09	34.964	1.81	35.025
-75	0.125 m	52.5 mm	0.00	0.0000	1.99	10.332	0.00	10.332
-74	0.18 m	77.9 mm	3.92	0.0022	2.09	34.824	0.82	34.974
-73	5.39 m	77.9 mm	3.92	0.0653	2.09	24.596	0.82	24.131
-72	0.425 m	52.5 mm	3.92	0.0397	2.09	33.600	1.81	33.561
-71	0.975 m	52.5 mm	0.00	0.0000	1.99	10.332	0.00	10.332
-70	0 m	26.6 mm	0.00	0.0000	1.99	10.332	0.00	10.332
-69	0 m	26.6 mm	0.00	0.0000	1.99	10.332	0.00	10.332
-68	0.524 m	52.5 mm	3.92	0.0489	2.09	34.984	1.81	34.935
-67	0.375 m	52.5 mm	3.92	0.0350	2.09	33.900	1.81	33.865
-66	0 m	52.5 mm	3.92	0.0001	2.09	34.907	1.81	34.907
-65	0.2 m	52.5 mm	3.92	0.0187	2.09	33.837	1.81	33.818

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-64	0.55 m	52.5 mm	0.00	0.0000	1.99	10.332	0.00	10.332
-63	0.45 m	52.5 mm	0.00	0.0000	1.99	10.332	0.00	10.332
-62	4.15 m	52.5 mm	3.92	0.3875	2.09	33.354	1.81	35.790
-61	0.105 m	102.3 mm	14.75	0.0041	2.18	34.103	1.79	34.099
-60	0.575 m	202.7 mm	100.27	0.0281	2.18	10.729	3.11	10.701
-59	3.94 m	77.9 mm	14.75	0.6358	2.18	33.506	3.10	28.945
-58	8.95 m	77.9 mm	14.75	1.4443	2.18	24.772	3.10	20.680
-57	0.575 m	202.7 mm	99.23	0.0275	2.18	10.598	3.08	10.570
-56	0.2 m	77.9 mm	0.01	0.0000	1.35	20.192	0.00	20.192
-55	2.696 m	77.9 mm	14.75	0.4347	2.18	19.277	3.09	17.286
-54	0 m	102.3 mm	0.01	0.0000	1.35	19.917	0.00	19.917
-53	0.39 m	77.9 mm	0.01	0.0000	1.35	20.192	0.00	20.192
-52	0.265 m	77.9 mm	0.01	0.0000	1.35	20.192	0.00	20.192
-51	0.575 m	202.7 mm	98.61	0.0271	2.18	10.301	3.06	10.274
-50	0 m	254.5 mm	98.61	0.0000	2.18	10.321	1.94	10.321
-49	0.505 m	77.9 mm	0.01	0.0000	1.35	20.192	0.00	19.917
-48	0.3 m	102.3 mm	0.00	0.0000	0.00	10.332	0.00	10.332
-47	0.3 m	77.9 mm	14.75	0.0484	2.18	20.680	3.09	20.332
-46	1.871 m	77.9 mm	14.75	0.3017	2.18	19.977	3.09	19.675
-45	0.185 m	102.3 mm	14.75	0.0072	2.18	19.649	1.79	19.641
-44	0.185 m	102.3 mm	14.75	0.0072	2.18	19.303	1.79	19.296
-43	0.1 m	102.3 mm	0.01	0.0000	1.35	17.801	0.00	17.799
-42	3.875 m	77.9 mm	0.01	0.0000	1.35	17.799	0.00	18.370
-41	0.225 m	77.9 mm	0.01	0.0000	1.35	18.370	0.00	18.370
-40	2.16 m	77.9 mm	14.75	0.3483	2.18	16.813	3.09	18.614
-39	0.225 m	77.9 mm	0.01	0.0000	1.35	18.370	0.00	18.370
-38	0.375 m	77.9 mm	0.01	0.0000	1.35	18.370	0.00	18.370
-37	4.065 m	77.9 mm	14.75	0.6560	2.18	18.077	3.10	19.575
-36	0.4 m	254.5 mm	99.23	0.0059	2.18	10.670	1.95	10.664

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-35	4.98 m	77.9 mm	14.75	0.8037	2.18	19.338	3.10	23.504
-34	3.05 m	77.9 mm	14.75	0.4922	2.18	23.213	3.10	24.646
-33	2.1 m	77.9 mm	3.92	0.0254	2.09	24.623	0.82	24.598
-32	0.8 m	77.9 mm	3.92	0.0097	2.09	25.753	0.82	25.190
-31	1.275 m	77.9 mm	14.75	0.2058	2.18	24.409	3.10	24.203
-30	0.105 m	102.3 mm	3.92	0.0003	2.09	24.049	0.48	24.049
-29	0.71 m	102.3 mm	18.68	0.0440	2.19	24.087	2.27	24.743
-28	3.7 m	102.3 mm	18.68	0.2295	2.19	24.679	2.27	24.450
-27	0.4 m	102.3 mm	18.68	0.0248	2.19	24.228	2.27	24.604
-26	0.17 m	102.3 mm	18.68	0.0105	2.19	24.303	2.27	24.292
-25	0.105 m	102.3 mm	14.75	0.0041	2.18	24.176	1.79	24.172
-24	0.56 m	77.9 mm	3.92	0.0068	2.09	25.188	0.82	24.632
-23	0.86 m	254.5 mm	99.23	0.0126	2.18	10.772	1.95	10.759
-22	7.35 m	77.9 mm	3.92	0.0890	2.09	28.341	0.82	25.778
-21	0.33 m	333.3 mm	100.27	0.0012	2.18	11.000	1.15	10.999
-20	16 m	303.3 mm	298.11	0.8311	2.10	19.096	4.13	11.282
-19	1.5 m	303.3 mm	298.11	0.0779	2.10	19.174	4.13	19.096
-18	0.4 m	102.3 mm	20.10	0.0287	2.19	31.312	2.44	30.883
-17	0.175 m	102.3 mm	20.10	0.0125	2.19	30.810	2.44	30.797
-16	17.85 m	102.3 mm	20.10	1.2791	2.19	30.627	2.44	24.398
-15	0.4 m	102.3 mm	20.10	0.0287	2.19	23.590	2.44	23.561
-14	0.6 m	102.3 mm	20.10	0.0430	2.19	21.522	2.44	21.479
-13	0.175 m	102.3 mm	20.10	0.0125	2.19	24.389	2.44	24.377
-12	16.85 m	102.3 mm	20.10	1.2076	2.19	20.818	2.44	24.560
-11	2.55 m	202.7 mm	20.10	0.0054	2.19	24.350	0.62	24.345
-10	1.5 m	333.3 mm	298.12	0.0478	2.10	10.344	3.42	10.342
-9	0.86 m	254.5 mm	98.61	0.0125	2.18	10.473	1.94	10.460
-8	2.8 m	333.3 mm	199.50	0.0403	2.13	11.040	2.29	11.000
-7	0.4 m	102.3 mm	18.67	0.0248	2.19	36.144	2.27	35.719

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-6	0.854 m	77.9 mm	3.92	0.0103	2.09	34.054	0.82	34.897
-5	4.7 m	77.9 mm	14.75	0.7584	2.18	28.655	3.10	25.127
-4	5.9 m	77.9 mm	3.92	0.0715	2.09	24.122	0.82	24.051
-3	0 m	202.7 mm	54.44	0.0000	2.20	17.432	1.69	17.432
-2	0 m	52.5 mm	7.13	0.0003	2.14	26.901	3.29	26.901
-1	0.86 m	254.5 mm	100.27	0.0129	2.18	10.907	1.97	10.894

Flexible Pipe, Duct, Tube or Hose

#	Length (*)	Inside Diameter (*)	Flow (l/s)	Total Pressure Loss (m Fluid)	Economic Velocity (m/s)	In Stagnation Pressure (m Flui)	In Velocity (m/s)	Out Stagnation Pressure (m Flu)
-188	0.4 m	16 mm	0.38	0.1512	1.65	36.081	1.88	38.135
-155	0.4 m	16 mm	0.38	0.1512	1.65	27.237	1.88	23.396

Centrifugal Pump

#	Elevation (*)	Duty Flow (l/s)	Duty Pressure Rise (m Fluid)	Duty Efficiency (%)	Duty Power (Watt)	Duty NPSH Required (m Fluid)	Duty NPSH Available (m Fluid a)	In Stagnation Pressure (m Flui)	Out Stagnation Pressure (m Flu)
1	0 m	100.27	40.4114	0.00	0.0	5.6954	10.390	10.564	50.975
9	0 m	99.23	41.1310	0.00	0.0	5.6065	10.262	10.436	51.567
11	0 m	98.61	41.5545	0.00	0.0	5.5540	9.967	10.141	51.695

Connector

#	Elevation (*)	Stagnation Pressure (m Fluid a	Temperature (C)
2	2.93 m	44.726	15.0
64	2.18 m	17.432	15.0
85	2.93 m	44.804	15.0
142	2.93 m	17.273	15.0
143	2.93 m	44.723	15.0
182	5.93 m	32.382	15.0
219	2.206 m	36.081	15.0
252	3.69 m	23.396	15.0
299	4.73 m	21.839	15.0
303	4.73 m	21.840	15.0
304	4.73 m	21.216	15.0
309	4.73 m	21.216	15.0
310	4.73 m	21.927	15.0
311	4.73 m	21.994	15.0
314	4.73 m	21.927	15.0
315	4.73 m	21.994	15.0
408	-1.07 m	41.352	15.0
409	-0.97 m	41.251	15.0
410	-1.1 m	41.381	15.0
411	-1.1 m	41.373	15.0
420	0 m	33.095	15.0
421	0 m	33.016	15.0
424	1.52 m	0.156	15.0
425	1.52 m	0.162	15.0
481	1.24 m	34.263	15.0
533	6.15 m	33.468	15.0
535	6.15 m	33.468	15.0
597	10.258 m	17.773	15.0

#	Elevation (*)	Stagnation Pressure (m Fluid a)	Temperature (C)
612	0 m	38.829	15.0
621	0 m	38.829	15.0
622	0 m	38.829	15.0
623	0 m	38.829	15.0
624	0 m	38.829	15.0
631	0 m	38.833	15.0
632	0 m	38.875	15.0
633	0 m	38.833	15.0
634	0 m	38.872	15.0
635	0 m	38.837	15.0
636	0 m	38.911	15.0
637	0 m	38.835	15.0
638	0 m	38.890	15.0
642	0 m	29.104	15.0
643	0 m	28.250	15.0
667	0 m	29.409	15.0
668	0 m	28.632	15.0
678	0 m	38.257	15.0
683	0 m	38.257	15.0
684	0 m	38.257	15.0
685	0 m	38.257	15.0
686	0 m	38.257	15.0
693	0 m	38.262	15.0
694	0 m	38.309	15.0
695	0 m	38.261	15.0
696	0 m	38.300	15.0
697	0 m	38.264	15.0
698	0 m	38.323	15.0
699	0 m	38.262	15.0

#	Elevation (*)	Stagnation Pressure (m Fluid a)	Temperature (C)
700	0 m	38.306	15.0
705	0 m	29.580	15.0
706	0 m	28.865	15.0
722	0 m	37.711	15.0
723	0 m	37.711	15.0
724	0 m	37.711	15.0
727	0 m	37.726	15.0
728	0 m	37.874	15.0
729	0 m	37.731	15.0
730	0 m	37.920	15.0

Bend

#	Elevation (*)	Flow (l/s)	Total Pressure Loss (m Fluid)	In Stagnation Pressure (m Flui)	Out Stagnation Pressure (m Flu)
3	2.88 m	0.00	0.0000	10.332	10.332
12	0 m	100.27	0.0469	10.954	10.907
15	4.58 m	131.44	2.1999	39.026	36.826
24	2.88 m	62.46	0.0454	36.663	36.618
25	0 m	298.11	0.2035	19.377	19.173
28	2.88 m	38.77	0.0176	36.524	36.507
34	2.88 m	0.00	0.0000	10.332	10.332
44	2.93 m	131.46	0.2000	18.218	18.018
48	2.08 m	197.82	0.0899	46.618	46.528
55	0 m	98.61	0.1128	10.274	10.161
56	0 m	99.23	0.1142	10.570	10.456
57	0 m	100.27	0.1166	10.701	10.585
59	2.08 m	98.60	0.1127	47.283	47.170
62	2.08 m	298.07	0.2035	45.906	45.703
70	9.4 m	2.99	0.0242	22.033	22.008
73	3.98 m	3.92	0.0085	34.084	34.076
74	3.605 m	54.43	0.2418	43.170	42.929
78	0.435 m	54.44	0.0691	27.196	27.127
81	0 m	98.60	0.1127	50.757	50.644
82	0.435 m	54.44	0.0345	26.215	26.180
83	0 m	99.22	0.1142	50.617	50.502
84	0 m	100.25	0.1165	50.006	49.889
87	0 mm	98.60	0.2255	49.945	49.719
88	2.1 m	54.44	0.1728	17.981	17.808
91	2.845 m	31.90	0.1072	36.081	35.974
96	1.645 m	7.13	0.1396	36.849	36.710
98	0.495 m	7.15	0.1966	37.773	37.577
103	0 mm	99.22	0.2283	49.794	49.566

#	Elevation (*)	Flow (l/s)	Total Pressure Loss (m Fluid)	In Stagnation Pressure (m Flui	Out Stagnation Pressure (m Flu
104	4.045 m	17.62	0.6751	24.499	23.824
107	3.245 m	7.15	0.0843	23.384	23.299
109	0.487 m	17.62	0.3375	36.413	36.076
110	0.195 m	7.13	0.0837	27.169	27.085
115	2.845 m	7.13	0.0558	23.900	23.844
119	3.455 m	31.90	0.1072	22.855	22.748
120	0 mm	100.25	0.2331	49.166	48.933
123	0.595 m	7.15	0.0843	26.382	26.298
124	2.08 m	197.82	0.0899	46.725	46.635
125	0.5 m	298.12	0.2790	10.823	10.544
126	0 m	98.61	0.0453	10.366	10.321
128	5.11 m	17.62	0.1688	24.671	24.502
132	0 m	99.23	0.0459	10.664	10.618
133	4.46 m	17.62	0.8438	27.203	26.359
134	0 m	100.27	0.0469	10.797	10.750
135	0 m	99.22	0.6854	51.522	50.837
136	0 m	98.60	0.6769	51.651	50.974
137	0 m	100.25	0.6998	50.930	50.231
139	3.68 m	11.20	0.0685	35.186	35.117
141	7.03 m	11.20	0.6165	31.267	30.650
147	9.405 m	2.99	0.1211	26.815	26.694
148	2.93 m	112.20	0.0291	44.489	44.460
151	4.73 m	2.20	0.5182	32.092	31.574
153	5.13 m	8.21	0.0369	31.405	31.369
155	6 m	8.21	0.0738	24.918	24.844
158	2.93 m	112.20	0.2917	44.361	44.069
159	0.15 m	112.20	0.1459	46.648	46.502
160	7.08 m	8.21	0.0369	23.608	23.571
161	10.58 m	2.99	0.1696	20.372	20.202

#	Elevation (*)	Flow (l/s)	Total Pressure Loss (m Fluid)	In Stagnation Pressure (m Flui	Out Stagnation Pressure (m Flu
162	7.08 m	11.20	0.1370	23.353	23.216
164	7.08 m	11.20	0.3425	20.494	20.151
166	3.53 m	11.20	0.0685	23.148	23.080
167	2.93 m	112.20	0.1459	43.101	42.955
170	3.28 m	7.60	0.0107	35.908	35.898
172	3.28 m	7.60	0.0213	35.731	35.710
174	3.28 m	7.60	0.0317	35.646	35.615
179	6.28 m	7.60	0.0950	32.311	32.216
183	0.13 m	4.12	0.0913	37.369	37.278
187	6.28 m	4.12	0.0456	32.034	31.988
188	0.13 m	3.48	0.0651	37.706	37.641
189	2.93 m	108.93	0.5501	40.307	39.757
191	2.93 m	112.20	0.2917	42.889	42.597
195	5.459 m	4.12	0.0913	25.957	25.866
199	4.359 m	3.48	0.0652	27.082	27.017
204	5.459 m	7.60	0.0317	25.695	25.663
207	5.459 m	7.60	0.0634	21.547	21.484
212	3.28 m	7.60	0.0426	23.456	23.414
215	3.28 m	7.60	0.0107	23.251	23.241
220	3.69 m	0.38	0.0033	23.396	23.392
223	3.75 m	18.29	0.1829	35.085	34.902
225	3.445 m	17.91	0.0585	34.185	34.127
226	4.75 m	18.29	0.0610	22.500	22.439
227	0.595 m	17.91	0.2339	36.612	36.379
229	0.595 m	17.91	0.0585	36.223	36.165
231	4.73 m	39.92	0.0373	35.269	35.232
233	4.06 m	0.38	0.0111	34.274	34.263
234	4.73 m	87.16	0.0882	36.181	36.093
238	4.73 m	34.22	0.0822	35.009	34.927

#	Elevation (*)	Flow (l/s)	Total Pressure Loss (m Fluid)	In Stagnation Pressure (m Flui	Out Stagnation Pressure (m Flu
239	7.29 m	17.91	0.1169	26.343	26.226
244	6.62 m	17.91	0.1754	26.702	26.526
248	4.445 m	17.91	0.2924	23.131	22.838
250	4.73 m	18.46	0.0121	34.471	34.459
251	5.265 m	0.38	0.0045	21.776	21.771
261	3.28 m	23.69	0.0198	35.992	35.972
262	3.28 m	23.69	0.0198	35.917	35.897
264	16.52 m	19.56	0.0406	22.521	22.480
265	16.52 m	19.56	0.0135	22.452	22.438
271	4.73 m	2.20	0.5183	25.056	24.538
273	9.855 m	4.14	0.2300	28.523	28.293
277	16.52 m	19.56	0.0135	22.429	22.415
283	2.18 m	112.22	0.0581	18.120	18.062
286	18.83 m	8.72	0.0560	19.988	19.932
288	17.405 m	10.84	0.0215	21.399	21.378
289	2.93 m	112.22	0.2918	18.017	17.725
294	20.63 m	8.72	0.0700	7.043	6.973
295	2.93 m	112.22	0.2918	18.704	18.412
296	2.93 m	108.94	0.2751	21.112	20.837
297	20.339 m	10.84	0.0431	7.282	7.239
300	19.55 m	19.56	0.0271	7.975	7.948
302	17.18 m	19.56	0.0406	10.270	10.229
306	3.28 m	23.69	0.0198	23.910	23.890
307	3.28 m	23.69	0.0198	23.834	23.815
313	11.63 m	4.14	0.2760	16.165	15.889
317	2.18 m	3.27	0.1110	42.818	42.707
318	3.98 m	14.75	0.3555	33.861	33.506
322	2.18 m	3.27	0.1569	40.984	40.827
325	4.38 m	3.92	0.0085	33.595	33.587

#	Elevation (*)	Flow (l/s)	Total Pressure Loss (m Fluid)	In Stagnation Pressure (m Flui	Out Stagnation Pressure (m Flu
328	2.18 m	3.27	0.0785	40.012	39.934
329	3.277 m	0.00	0.0000	10.332	10.332
330	2.827 m	3.92	0.0414	35.025	34.984
333	2.18 m	3.27	0.2354	39.560	39.325
334	2.827 m	3.92	0.2070	33.561	33.354
342	3.277 m	0.00	0.0000	10.332	10.332
345	3.28 m	18.68	0.0636	24.292	24.228
349	2.18 m	3.27	0.2355	23.749	23.514
350	15.179 m	14.75	0.4737	17.286	16.813
353	13.323 m	0.01	0.0000	20.192	20.192
355	13.323 m	0.01	0.0000	20.192	20.192
357	13.623 m	14.75	0.3552	20.332	19.977
358	2.18 m	3.27	0.0785	22.409	22.330
363	13.029 m	0.01	0.0000	18.370	18.370
366	13.029 m	0.01	0.0000	18.370	18.370
367	2.18 m	3.27	0.0785	21.831	21.752
368	10.875 m	14.75	0.2370	19.575	19.338
372	3.98 m	14.75	0.2370	24.646	24.409
373	3.98 m	3.92	0.0085	24.131	24.122
375	3.28 m	18.68	0.0636	24.743	24.679
378	3.58 m	3.92	0.0085	24.632	24.623
380	2.477 m	3.92	0.0256	25.778	25.753
381	2.18 m	3.27	0.1111	20.517	20.406
383	5.48 m	8.31	0.2273	36.293	36.065
384	3.28 m	20.10	0.0735	30.883	30.810
386	8.23 m	20.10	0.8089	24.399	23.590
388	8.23 m	20.10	0.6619	21.479	20.818
389	3.28 m	20.10	0.0735	24.377	24.303
392	-1.54 m	8.31	0.0758	42.036	41.960

#	Elevation (*)	Flow (l/s)	Total Pressure Loss (m Fluid)	In Stagnation Pressure (m Flui	Out Stagnation Pressure (m Flu
394	3.28 m	18.68	0.1271	35.720	35.592
395	3.052 m	3.92	0.0085	34.897	34.888
396	10.675 m	14.75	0.3555	25.128	24.772
399	0.195 m	7.13	0.0279	26.820	26.792
401	-1.54 m	4.15	0.0096	41.838	41.828
403	-1.32 m	2.08	0.0049	41.599	41.594
405	-1.54 m	2.08	0.0024	41.825	41.823
407	0 m	2.08	0.0024	33.346	33.343
417	0 m	2.08	0.0024	33.378	33.376
418	-0.24 m	8.31	0.0379	33.028	32.990
419	4.62 m	8.31	0.0379	28.542	28.504
429	15.53 m	12.57	0.3447	20.997	20.652
430	4.18 m	8.32	0.1895	20.831	20.641
433	5.73 m	2.75	0.0614	35.960	35.899
436	7.13 m	2.05	0.0342	34.243	34.209
439	5.88 m	0.70	0.1467	35.376	35.230
441	0.91 m	0.70	0.0419	38.810	38.768
444	5.66 m	2.75	0.0409	19.457	19.416
446	5.66 m	2.75	0.0409	32.924	32.883
449	7.06 m	2.05	0.0911	31.857	31.766
451	0.84 m	0.70	0.0264	37.944	37.917
454	0.84 m	0.70	0.0028	38.070	38.067
456	5 m	10.71	2.4417	34.553	32.111
458	5 m	10.71	1.8315	22.906	21.075
462	9.33 m	2.31	0.0145	28.508	28.494
463	6.53 m	2.31	0.3146	33.010	32.696
465	9.68 m	2.31	0.4326	21.042	20.609
469	8.88 m	0.78	0.0129	31.348	31.336
472	8.88 m	0.78	0.0659	24.396	24.330

#	Elevation (*)	Flow (l/s)	Total Pressure Loss (m Fluid)	In Stagnation Pressure (m Flui)	Out Stagnation Pressure (m Flu)
473	9.48 m	0.78	0.0151	16.482	16.467
475	9 m	0.78	0.2638	22.923	22.659
479	4.13 m	16.21	1.0009	35.211	34.210
482	2.74 m	9.22	0.0465	32.639	32.593
487	2.53 m	9.22	0.0465	31.615	31.569
488	4.03 m	7.00	0.0269	29.840	29.813
490	4.13 m	16.21	0.4290	29.651	29.222
494	-0.23 m	0.08	0.0000	32.388	32.388
495	-0.23 m	0.08	0.0000	31.195	31.195
501	5.23 m	16.21	1.0011	22.840	21.839
504	6.93 m	5.70	0.0358	32.908	32.872
508	9.28 m	5.70	0.0716	30.384	30.312
510	9.28 m	5.70	0.0537	30.191	30.137
511	6.68 m	5.70	0.0895	19.618	19.529
513	5.93 m	5.70	0.0179	20.217	20.199
515	6.2 m	0.28	0.0001	33.437	33.437
516	6.2 m	0.28	0.0002	33.436	33.436
517	0 m	0.28	0.0000	39.635	39.635
520	5.75 m	0.15	0.0002	33.884	33.884
524	5.525 m	0.12	0.0000	34.111	34.111
525	5.525 m	0.12	0.0001	34.110	34.110
528	5.875 m	0.15	0.0001	33.745	33.744
532	5.05 m	0.12	0.0000	34.568	34.568
534	5.55 m	0.15	0.0001	34.069	34.069
541	8.4 m	0.28	0.0002	31.218	31.218
543	6.5 m	0.28	0.0002	19.581	19.580
545	5.3 m	2.92	0.1384	33.775	33.636
548	18 m	2.92	1.0600	12.209	11.149
550	8 m	2.92	0.1154	18.945	18.830

#	Elevation (*)	Flow (l/s)	Total Pressure Loss (m Fluid)	In Stagnation Pressure (m Flui	Out Stagnation Pressure (m Flu
554	-0.24 m	8.32	0.0758	25.619	25.543
557	5.83 m	12.57	0.1724	21.363	21.191
558	17.08 m	12.57	0.4309	13.001	12.570
562	5.88 m	7.10	0.0554	32.921	32.866
564	14.905 m	7.10	0.1348	20.045	19.910
565	14.905 m	4.14	0.0461	19.728	19.682
568	16.1 m	2.96	0.1184	18.566	18.448
570	18.38 m	2.96	0.0710	15.215	15.144
571	18.08 m	4.14	0.0461	15.466	15.420
574	5.43 m	7.10	0.6738	23.786	23.112
576	8.99 m	4.28	0.2459	29.033	28.787
577	6.54 m	4.28	0.0984	30.762	30.664
580	8.515 m	4.28	0.0492	19.594	19.545
582	5.33 m	4.28	0.0620	22.161	22.099
585	6.11 m	4.88	0.1276	32.724	32.596
587	11.71 m	3.96	0.0844	26.034	25.949
589	12.66 m	3.96	0.0844	24.255	24.171
591	10.3 m	0.92	0.2471	27.555	27.308
592	14.208 m	3.96	0.0422	14.934	14.892
594	12.158 m	0.92	0.0353	17.603	17.568
595	12.158 m	0.92	0.2119	16.492	16.280
599	14.208 m	3.96	0.0422	14.845	14.803
601	11.208 m	3.96	0.0422	16.849	16.807
602	11.708 m	3.96	0.0422	16.581	16.539
603	6.108 m	4.88	0.1915	21.050	20.859
605	4.73 m	56.91	0.0377	35.550	35.512
607	-1.54 m	2.08	0.0024	41.826	41.824
610	2.93 m	112.20	0.1459	43.544	43.398
611	2.93 m	112.22	0.0291	17.405	17.375

#	Elevation (*)	Flow (l/s)	Total Pressure Loss (m Fluid)	In Stagnation Pressure (m Flui	Out Stagnation Pressure (m Flu
613	4.23 m	27.94	0.1418	35.929	35.787
615	4.23 m	8.91	0.0434	34.188	34.144
618	0 m	9.29	0.0549	27.590	27.535
626	0.66 m	2.10	0.0025	38.217	38.214
628	0.68 m	2.52	0.0071	38.221	38.214
641	0 m	9.74	0.0519	29.276	29.224
644	0 m	9.74	0.1038	28.121	28.018
646	0 m	7.12	0.0278	27.895	27.868
651	0 m	7.12	0.0278	27.450	27.422
653	0 m	27.94	0.1418	26.139	25.997
654	0 m	8.91	0.0869	27.820	27.734
661	0 m	9.74	0.0604	27.070	27.009
663	0 m	2.62	0.0745	27.656	27.581
664	0.83 m	9.74	0.2076	38.371	38.163
665	0.23 m	4.28	0.0203	38.704	38.684
666	0 m	9.29	0.0472	29.566	29.519
669	0 m	9.29	0.0945	28.515	28.421
671	0 m	7.05	0.0273	28.305	28.278
676	0 m	7.05	0.0273	27.869	27.841
681	0 m	2.25	0.0548	28.101	28.046
688	0.66 m	2.10	0.0025	37.645	37.643
690	0.68 m	2.25	0.0057	37.635	37.629
702	0.83 m	9.29	0.0945	37.695	37.600
703	0.23 m	4.43	0.0217	38.143	38.121
704	0 m	8.91	0.0434	29.724	29.681
707	0 m	8.91	0.0869	28.757	28.670
709	0 m	6.51	0.0233	28.568	28.545
714	0 m	6.51	0.0233	28.195	28.172
718	0 m	2.40	0.0624	28.367	28.305

#	Elevation (*)	Flow (l/s)	Total Pressure Loss (m Fluid)	In Stagnation Pressure (m Flui	Out Stagnation Pressure (m Flu
732	0.83 m	8.91	0.0869	37.257	37.170
733	0.23 m	4.18	0.0290	37.718	37.689

Diffuser/Reducer

#	Elevation (*)	Reducer Type	Reducer Length (*)	Flow (l/s)	Total Pressure Loss (m Fluid)	In Stagnation Pressure (m Flui	Out Stagnation Pressure (m Flu
4	2.93 m	Concentric	0.2 m	185.87	0.0192	44.721	44.702
7	2.93 m	Concentric	0.2 m	131.44	0.0357	44.514	44.479
35	2.88 m	Concentric	0.2 m	0.00	0.0000	10.332	10.332
37	2.88 m	Concentric	0.2 m	0.00	0.0000	10.332	10.332
38	2.88 m	Concentric	0.2 m	0.00	0.0000	10.332	10.332
39	2.88 m	Concentric	0.2 m	0.00	0.0000	10.332	10.332
46	2.93 m	Concentric	0.2 m	131.46	0.0424	17.559	17.517
47	2.93 m	Concentric	0.2 m	131.46	0.0092	17.376	17.367
52	0 m	Concentric	0.2 m	98.61	0.0201	10.321	10.301
53	0 m	Concentric	0.2 m	99.23	0.0203	10.618	10.598
54	0 m	Concentric	0.2 m	100.27	0.0208	10.750	10.729
58	0 m	Concentric	0.2 m	100.27	0.0078	10.999	10.991
63	0 m	Concentric	0.2 m	98.60	0.1039	50.866	50.762
65	0 m	Concentric	0.2 m	99.22	0.1052	50.727	50.622
66	0 m	Concentric	0.2 m	100.25	0.1074	50.119	50.011
94	2.845 m	Concentric	0.2 m	7.13	0.0179	35.833	35.815
100	2.08 m	Concentric	0.2 m	98.60	0.0911	47.048	46.957
111	0.195 m	Concentric	0.2 m	7.13	0.0341	26.963	26.929
112	0.195 m	Concentric	0.2 m	7.13	0.0606	26.901	26.840
116	2.845 m	Concentric	0.2 m	7.13	0.0433	23.790	23.747
117	0.595 m	Concentric	0.2 m	7.15	0.0610	26.220	26.159
121	0.595 m	Concentric	0.2 m	7.15	0.0344	26.283	26.248
129	5.11 m	Concentric	0.2 m	17.62	0.3699	25.110	24.740
130	5.11 m	Concentric	0.2 m	17.62	0.2085	25.491	25.283
138	2.41 m	Concentric	0.2 m	17.62	0.0279	30.077	30.049
152	2.93 m	Concentric	0.2 m	112.20	0.0656	44.457	44.392
154	2.93 m	Concentric	0.2 m	112.20	0.0067	44.497	44.491
175	3.28 m	Concentric	0.2 m	7.60	0.0052	35.661	35.656

#	Elevation (*)	Reducer Type	Reducer Length (*)	Flow (l/s)	Total Pressure Loss (m Fluid)	In Stagnation Pressure (m Flui	Out Stagnation Pressure (m Flu
181	6.28 m	Concentric	0.2 m	4.12	0.0114	32.062	32.051
185	6.28 m	Concentric	0.2 m	3.48	0.0081	32.067	32.059
198	5.459 m	Concentric	0.2 m	4.12	0.0202	25.825	25.805
202	5.459 m	Concentric	0.2 m	3.48	0.0144	25.797	25.782
210	3.584 m	Concentric	0.2 m	7.60	0.0071	23.226	23.219
235	4.73 m	Concentric	0.2 m	39.92	0.0124	35.231	35.219
270	4.73 m	Concentric	0.2 m	2.20	0.6596	34.414	33.754
279	4.73 m	Concentric	0.2 m	2.20	1.9743	23.669	21.694
280	17.98 m	Concentric	0.2 m	8.72	0.0047	20.888	20.883
281	17.405 m	Concentric	0.2 m	10.84	0.0072	21.461	21.454
284	2.93 m	Concentric	0.2 m	112.22	0.1179	17.525	17.407
293	20.035 m	Concentric	0.2 m	8.72	0.0085	7.535	7.526
298	20.135 m	Concentric	0.2 m	10.84	0.0131	7.438	7.424
320	3.98 m	Concentric	0.2 m	3.92	0.0014	34.148	34.147
331	3.1 m	Concentric	0.2 m	0.00	0.0000	10.332	10.332
332	2.9 m	Concentric	0.2 m	3.92	0.0103	34.974	34.964
335	3.277 m	Concentric	0.2 m	0.00	0.0000	10.332	10.332
337	3.277 m	Concentric	0.2 m	0.00	0.0000	10.332	10.332
344	3.98 m	Concentric	0.2 m	14.75	0.0196	34.099	34.079
356	13.598 m	Concentric	0.2 m	0.01	0.0000	19.917	19.917
359	13.623 m	Concentric	0.2 m	14.75	0.0267	19.675	19.649
361	13.623 m	Concentric	0.2 m	14.75	0.0196	19.296	19.277
362	13.6 m	Concentric	0.2 m	0.01	0.0000	17.799	17.799
377	3.98 m	Concentric	0.2 m	14.75	0.0267	24.203	24.176
397	3.98 m	Concentric	0.2 m	3.92	0.0019	24.051	24.049
438	5.88 m	Concentric	0.2 m	0.70	0.0082	35.543	35.535
450	5.81 m	Concentric	0.2 m	0.70	0.0004	32.931	32.931
452	0.84 m	Concentric	0.2 m	0.70	0.0003	38.063	38.063
460	5.03 m	Concentric	0.2 m	2.31	0.1059	34.786	34.680

#	Elevation (*)	Reducer Type	Reducer Length (*)	Flow (l/s)	Total Pressure Loss (m Fluid)	In Stagnation Pressure (m Flui	Out Stagnation Pressure (m Flu
461	9.33 m	Concentric	0.2 m	2.31	0.0048	28.520	28.515
466	5.13 m	Concentric	0.2 m	2.31	0.0564	23.689	23.632
499	-0.23 m	Concentric	0.2 m	0.08	0.0006	31.196	31.195
500	-0.23 m	Concentric	0.2 m	0.08	0.0002	32.388	32.387
519	5.5 m	Concentric	0.2 m	0.12	0.0000	34.136	34.136
536	6 m	Concentric	0.2 m	0.15	0.0000	33.618	33.618
563	8.53 m	Concentric	0.2 m	7.10	0.0339	29.983	29.949
606	4.73 m	Concentric	0.2 m	34.23	0.0125	21.282	21.269
608	2.74 m	Concentric	0.2 m	9.22	0.0571	32.593	32.535
609	1.24 m	Concentric	0.2 m	7.00	0.0329	34.263	34.230
639	4.23 m	Concentric	0.2 m	18.20	0.0298	34.889	34.859
648	0 m	Concentric	0.2 m	7.12	0.0341	27.738	27.704
650	0 m	Concentric	0.2 m	7.12	0.0604	27.529	27.468
652	0 m	Concentric	0.2 m	8.91	0.0097	27.486	27.476
673	0 m	Concentric	0.2 m	7.05	0.0334	28.151	28.118
675	0 m	Concentric	0.2 m	7.05	0.0592	27.946	27.887
682	0 mm	Concentric	0.2 m	0.12	0.0000	39.634	39.634
701	0 mm	Concentric	0.2 m	0.12	0.0000	39.617	39.617
711	0 m	Concentric	0.2 m	6.51	0.0285	28.437	28.408
713	0 m	Concentric	0.2 m	6.51	0.0505	28.261	28.211

T Junction

#	Channel Flow (l/s)	Branch Flow (l/s)	Branch K (based on channel flo	Branch Loss (m Fluid)	Straight Flow (l/s)	Straight K (based on channel f	Straight Loss (m Fluid)	Channel Stagnation Pressure (m)
5	185.87	54.43	0.8770	0.5970	131.44	-0.0711	-0.0484	44.645
6	298.11	54.44	-0.1244	-0.1080	243.67	0.2913	0.2528	17.540
13	298.12	98.61	0.8789	0.5232	199.50	-0.0741	-0.0441	10.996
14	298.11	0.00	0.0000	0.0000	298.11	0.0000	0.0000	19.096
16	131.44	31.90	0.8996	0.7610	99.55	-0.0606	-0.0513	36.923
17	131.45	31.90	0.0199	0.0168	99.55	0.3583	0.3031	23.217
18	99.55	11.20	1.5803	0.7667	88.35	0.0051	0.0025	36.828
19	99.55	11.20	0.0050	0.0024	88.35	0.1961	0.0951	23.667
20	88.35	7.60	1.1140	0.4257	80.75	0.0030	0.0011	36.738
21	88.35	7.60	-0.5568	-0.2128	80.75	0.1549	0.0592	23.849
22	80.75	18.29	1.7905	0.5716	62.46	0.0205	0.0065	36.715
26	62.46	23.69	0.8722	0.1666	38.77	-0.0695	-0.0133	36.563
27	19.56	10.84	0.5002	0.0280	8.72	0.5415	0.0304	7.496
30	38.77	18.67	4.5764	0.3368	20.09	0.0928	0.0068	36.481
31	38.77	18.68	4.0391	0.2973	20.10	0.5183	0.0381	24.306
32	20.10	20.10	0.0000	0.0000	0.00	0.0000	0.0000	31.312
33	20.10	20.10	16.4139	0.3245	0.00	0.0000	0.0000	24.350
43	199.50	99.23	0.8547	0.2279	100.27	-0.0026	-0.0007	11.000
60	298.07	100.25	0.4099	0.3557	197.82	0.4392	0.3812	46.129
61	197.82	99.22	0.9703	0.3709	98.60	0.5255	0.2009	46.755
72	18.68	18.68	0.0000	0.0000	0.00	0.0000	0.0000	34.415
92	31.90	7.15	1.7699	0.2640	24.75	0.0201	0.0030	35.907
93	24.75	17.62	8.7611	0.7864	7.13	0.2027	0.0182	35.858
105	24.75	17.62	8.5950	0.7715	7.13	0.5683	0.0510	23.691
106	31.90	7.15	0.5662	0.0845	24.75	0.3391	0.0506	23.599
146	11.20	2.99	0.9269	0.2610	8.21	-0.0665	-0.0187	31.587
156	11.20	2.99	0.1799	0.0507	8.21	0.3823	0.1076	23.458
177	112.20	108.93	0.8618	0.5007	3.27	0.4135	0.1306	42.379

#	Channel Flow (l/s)	Branch Flow (l/s)	Branch K (based on channel flo	Branch Loss (m Fluid)	Straight Flow (l/s)	Straight K (based on channel f	Straight Loss (m Fluid)	Channel Stagnation Pressure (m)
178	112.22	3.27	1.2404	0.3920	108.94	0.2873	0.1669	19.084
180	7.60	7.60	0.0000	0.0000	0.00	0.0000	0.0000	32.205
192	108.94	100.62	0.8618	0.4272	8.31	0.3542	0.0550	37.552
193	108.94	100.63	0.8618	0.4273	8.32	0.3542	0.0550	19.616
194	100.62	97.87	0.8618	0.4042	2.75	0.3889	0.0320	37.043
196	100.63	2.75	1.1666	0.0960	97.88	0.2873	0.1347	20.202
200	97.87	87.16	0.8618	0.3206	10.71	0.3889	0.4851	36.522
201	7.60	3.48	0.3416	0.0443	4.12	0.5085	0.0659	25.735
208	97.88	87.17	0.8618	0.3206	10.71	0.3889	0.4852	20.458
209	87.16	84.85	0.8618	0.3038	2.31	0.4617	0.4066	36.012
211	87.17	2.31	1.3851	1.2200	84.86	0.2873	0.1013	20.892
213	56.91	56.13	0.8618	0.1330	0.78	0.3542	0.0005	35.500
216	56.92	16.21	1.0627	0.6269	40.70	0.2873	0.0233	21.180
217	56.13	39.92	0.8618	0.0673	16.21	0.3542	0.2089	35.353
221	40.70	0.78	1.0627	0.0014	39.93	0.2873	0.0224	21.214
224	18.29	18.29	0.9988	0.0000	0.00	0.4135	0.0000	35.144
236	39.92	34.22	0.9132	0.1568	5.70	0.3542	0.0258	35.192
237	39.93	5.70	1.0627	0.0775	34.23	0.2873	0.0165	21.248
240	34.22	33.95	0.9132	0.1542	0.28	0.3542	0.0001	34.907
241	34.23	33.95	0.9132	0.1543	0.28	0.3542	0.0001	21.350
243	33.95	31.03	0.9132	0.1288	2.92	0.3889	0.0361	34.685
246	33.95	2.92	1.1666	0.1084	31.03	0.3044	0.0430	21.519
247	31.03	18.46	0.9132	0.0456	12.57	0.3542	0.1256	34.535
249	18.29	0.38	-0.9012	-0.2275	17.91	0.0404	0.0102	22.512
253	31.03	18.46	0.9132	0.0456	12.57	0.3542	0.1256	21.601
256	80.75	18.29	0.5938	0.1896	62.47	0.3415	0.1090	23.930
257	18.46	11.35	0.9132	0.0173	7.10	0.3542	0.0401	34.449
259	18.46	7.10	1.1666	0.6405	11.35	0.3044	0.0058	21.674
260	11.35	7.07	0.9132	0.0067	4.28	0.3889	0.0774	34.423

#	Channel Flow (l/s)	Branch Flow (l/s)	Branch K (based on channel flo	Branch Loss (m Fluid)	Straight Flow (l/s)	Straight K (based on channel f	Straight Loss (m Fluid)	Channel Stagnation Pressure (m)
263	23.69	4.14	3.2631	0.2685	19.56	0.0122	0.0010	27.804
266	11.35	4.88	1.1666	0.3021	6.47	0.3044	0.0019	21.692
268	7.07	2.20	0.9132	0.0006	4.88	0.3889	0.1007	34.415
269	6.47	4.28	1.1666	0.2324	2.20	0.3044	0.0002	21.694
275	112.20	112.20	0.8224	0.2040	0.00	0.0000	0.0000	44.518
278	19.56	19.56	0.0000	0.0000	0.00	0.0000	0.0000	21.523
291	62.47	23.69	0.3688	0.0705	38.77	0.4679	0.0894	24.139
305	23.69	4.14	1.9005	0.1564	19.56	0.2814	0.0232	16.006
319	3.92	3.92	0.0000	0.0000	0.00	0.0000	0.0000	34.869
341	3.92	3.92	0.0000	0.0000	0.00	0.0000	0.0000	33.818
348	14.75	0.01	0.9997	0.4884	14.75	0.0000	0.0000	20.680
365	14.75	14.75	1.0995	0.5371	0.01	0.5999	0.2931	18.077
374	18.68	3.92	-0.1448	-0.0381	14.75	0.3235	0.0852	24.087
393	8.31	8.31	1.0627	0.0000	0.00	0.3542	0.0000	41.861
398	243.67	112.22	0.3465	0.2010	131.46	0.5097	0.2956	17.069
400	4.16	4.16	1.0627	0.0000	0.00	0.3542	0.0000	41.831
402	4.15	4.15	1.0627	0.0000	0.00	0.3542	0.0000	41.605
416	4.15	2.08	1.0627	0.0103	2.08	0.3542	0.0034	33.372
422	8.31	8.31	0.0000	0.0000	0.00	0.0000	0.0000	32.917
423	8.32	8.32	0.0000	0.0000	0.00	0.0000	0.0000	23.709
434	2.75	2.75	1.1666	0.0000	0.00	0.3889	0.0000	35.546
447	2.75	2.05	1.1666	0.0531	0.70	0.3889	0.0021	32.928
470	0.78	0.78	1.4757	0.3805	0.00	0.0000	0.0000	24.871
480	16.21	16.21	1.0627	0.0000	0.00	0.3542	0.0000	32.802
489	16.21	9.22	1.0627	0.2026	7.00	0.3542	0.0389	29.771
491	16.21	0.08	1.0627	0.0000	16.13	0.3542	0.2068	30.968
493	16.21	16.13	1.0627	0.6205	0.08	0.3542	0.0000	29.775
518	0.28	0.28	1.1666	0.0000	0.00	0.3542	0.0000	33.886
529	0.15	0.15	1.1666	0.0003	0.00	0.0000	0.0000	34.069

#	Channel Flow (l/s)	Branch Flow (l/s)	Branch K (based on channel flo	Branch Loss (m Fluid)	Straight Flow (l/s)	Straight K (based on channel f	Straight Loss (m Fluid)	Channel Stagnation Pressure (m)
531	0.12	0.12	1.0627	0.0000	0.00	0.0000	0.0000	33.468
537	0.28	0.15	1.0627	0.0001	0.12	0.3542	0.0000	33.468
567	7.10	7.10	1.1666	0.0000	0.00	0.3889	0.0000	19.865
572	7.10	2.96	1.1666	0.1112	4.14	0.3889	0.0726	15.316
586	4.88	4.88	1.3851	0.0000	0.00	0.3889	0.0000	27.688
598	4.88	0.92	1.3851	0.1923	3.96	0.3889	0.0664	17.552
614	84.85	56.91	0.8618	0.1367	27.94	0.3329	0.1962	35.694
619	18.20	8.91	1.0627	0.1892	9.29	0.3542	0.0686	34.676
620	27.94	18.20	0.9988	0.2497	9.74	0.3542	0.0755	35.389
627	4.28	4.28	1.0627	0.0000	0.00	0.3542	0.0000	38.883
629	9.74	9.74	1.0627	0.0000	0.00	0.3542	0.0000	38.724
630	5.47	2.52	1.0627	0.0152	2.94	0.3542	0.0069	38.240
645	9.74	9.74	1.1666	0.0000	0.00	0.3542	0.0000	27.954
655	9.74	7.12	1.0627	0.1209	2.62	0.3889	0.0291	27.283
656	18.20	8.91	0.9988	0.0598	9.29	0.3542	0.0687	27.405
657	27.94	18.20	0.9988	0.2497	9.74	0.3542	0.0755	26.867
658	84.86	56.92	0.8618	0.1367	27.94	0.3329	0.1962	21.003
670	9.29	2.25	1.1666	0.0640	7.05	0.3542	0.0395	28.362
677	9.29	2.25	1.1666	0.0640	7.05	0.3542	0.0395	27.785
689	4.43	2.10	1.0627	0.0106	2.32	0.3542	0.0043	38.319
691	9.29	4.87	1.0627	0.0565	4.43	0.3542	0.0156	38.165
692	4.87	2.25	1.0627	0.0120	2.62	0.3542	0.0055	37.650
708	8.91	8.91	1.1666	0.0000	0.00	0.3542	0.0000	28.617
715	8.91	6.51	1.0627	0.1011	2.40	0.3889	0.0243	28.056
725	8.91	8.91	1.0627	0.0000	0.00	0.3542	0.0000	37.737
726	4.73	0.00	0.0000	0.0000	4.73	0.3542	0.0178	37.244

Butterfly Valve

#	Elevation (*)	Flow (l/s)	Total Pressure Loss (m Fluid)	In Stagnation Pressure (m Flui	Out Stagnation Pressure (m Flu
8	2.93 m	131.44	0.4082	44.462	44.054
23	3.18 m	18.29	0.1412	23.979	23.838
45	2.93 m	131.46	0.4083	17.984	17.576
49	0 m	98.61	0.0882	10.460	10.372
50	0 m	99.23	0.0893	10.759	10.670
51	0 m	100.27	0.0912	10.894	10.803
67	0.34 m	98.60	0.2297	49.363	49.134
68	0.34 m	99.22	0.2326	49.210	48.977
69	0.34 m	100.25	0.2374	48.577	48.339
75	3.18 m	54.43	0.0700	43.795	43.725
89	2.18 m	54.44	0.0700	17.507	17.436
90	3.155 m	31.90	0.0762	35.882	35.805
95	0.795 m	7.13	0.0679	37.527	37.459
101	0.495 m	7.15	0.0683	37.556	37.488
108	0.662 m	17.62	0.4145	36.727	36.313
114	0.595 m	7.13	0.0679	26.375	26.307
118	3.155 m	31.90	0.0763	23.041	22.964
127	4.685 m	17.62	0.4145	24.818	24.404
140	3.68 m	11.20	0.1675	35.098	34.931
144	5.13 m	8.21	0.0899	31.568	31.478
157	6.08 m	8.21	0.0899	24.759	24.669
165	3.53 m	11.20	0.1675	23.367	23.200
171	3.28 m	7.60	0.0244	35.894	35.870
173	2.93 m	112.20	0.2974	43.398	43.101
176	5.98 m	7.60	0.0771	32.709	32.632
214	3.28 m	7.60	0.0244	23.279	23.255
222	3.18 m	18.29	0.1411	35.825	35.684
228	0.595 m	17.91	0.1353	36.364	36.229

#	Elevation (*)	Flow (l/s)	Total Pressure Loss (m Fluid)	In Stagnation Pressure (m Flui	Out Stagnation Pressure (m Flu
242	6.99 m	17.91	0.1354	26.509	26.373
258	3.28 m	23.69	0.0421	35.968	35.926
282	18.28 m	8.72	0.0321	20.579	20.547
287	17.405 m	10.84	0.0496	21.450	21.400
292	2.93 m	112.22	0.2975	18.346	18.048
301	19.455 m	19.56	0.0287	8.042	8.013
308	3.28 m	23.69	0.0421	23.878	23.836
321	3.28 m	18.68	0.1472	35.582	35.435
346	7.905 m	14.75	0.2906	28.946	28.655
352	13.323 m	0.01	0.0000	20.192	20.192
364	13.029 m	0.01	0.0000	18.370	18.370
369	5.905 m	14.75	0.2906	23.504	23.213
376	3.28 m	18.68	0.1472	24.450	24.303
385	3.28 m	20.10	0.1704	30.797	30.627
390	3.28 m	20.10	0.1704	24.560	24.389
440	1.11 m	0.70	0.0636	38.685	38.621
468	4.9 m	0.78	0.0008	35.329	35.328
505	4.9 m	5.70	0.0434	21.203	21.160
512	6.5 m	5.70	0.0434	19.700	19.657
514	5.83 m	0.28	0.0001	33.807	33.807
544	5.5 m	0.28	0.0001	20.580	20.580
575	5.33 m	4.28	0.1301	33.680	33.549
583	5.33 m	4.28	0.1301	21.524	21.393
647	0 m	7.12	0.0677	27.821	27.754
672	0 m	7.05	0.0663	28.233	28.167
710	0 m	6.51	0.0566	28.506	28.449

Known Pressure Boundary

#	Elevation (*)	Pressure (*)	Temperature (*)	Fluid	Solids	Flow (l/s)	Density (kg/m3)	Viscosity (cP)
10	6.938 m	1 atm	15 C	water		298.12	999.10	1.138
41	0 m	1 atm	15 C	water		0.00	1000.00	0.000
80	1 m	1 atm	15 C	water		298.12	999.10	1.138

Straight Globe Valve

#	Elevation (*)	Flow (l/s)	Total Pressure Loss (m Fluid)	In Stagnation Pressure (m Flui	Out Stagnation Pressure (m Flu
29	1.23 m	0.00	0.0000	10.332	10.332

Gate Valve

#	Elevation (*)	Flow (l/s)	Total Pressure Loss (m Fluid)	In Stagnation Pressure (m Flui	Out Stagnation Pressure (m Flu
36	2.88 m	0.00	0.0000	10.332	10.332
40	2.88 m	0.00	0.0000	10.332	10.332
184	5.93 m	4.12	0.0307	32.282	32.251
186	5.93 m	3.48	0.0218	32.356	32.335
254	1.865 m	0.38	0.0007	25.209	25.208
326	3.052 m	3.92	0.0052	34.883	34.878
336	3.277 m	0.00	0.0000	10.332	10.332
338	2.827 m	3.92	0.0278	34.935	34.907
339	2.827 m	3.92	0.0278	33.865	33.837
579	6.39 m	4.28	0.0331	31.067	31.034
616	1.23 m	9.74	0.0322	38.099	38.067
617	1.23 m	9.29	0.0293	37.412	37.383
640	0 m	9.74	0.0322	29.336	29.304
662	0 m	9.29	0.0293	29.622	29.592
720	0 m	8.91	0.0269	29.775	29.748
721	1.23 m	8.91	0.0269	36.965	36.938

Generic Kf

#	Elevation (*)	Kf (L/D)	Kf Component Name	Flow (l/s)	Total Pressure Loss (m Fluid)	In Stagnation Pressure (m Flui	Out Stagnation Pressure (m Flu
42	6.983 m	100	Screen Box - Clean	298.12	0.9379	11.282	10.344
483	2.74 m	100	Screen Box - Clean	9.22	0.7173	32.212	31.494

Swing Type Check Valve

#	Elevation (*)	Flow (l/s)	Total Pressure Loss (m Fluid)	In Stagnation Pressure (m Flui	Out Stagnation Pressure (m Flu
71	0 m	99.22	0.6923	50.502	49.810
77	0 m	100.25	0.7068	49.889	49.182
79	0 m	98.60	0.6837	50.644	49.960
272	4.73 m	2.20	5.0409	30.835	25.794

Sharp Edged Orifice

#	Elevation (*)	Orifice Size (*)	Flow (l/s)	Total Pressure Loss (m Fluid)	Corner Tap Loss (m Fluid)	In Stagnation Pressure (m Flui	Out Stagnation Pressure (m Flu
76	1.16 m	74 mm	54.43	18.7625	22.0729	45.244	26.481

Generic Kv

#	Elevation (*)	Kv Component Name	Flow (l/s)	Total Pressure Loss (m Fluid)	In Stagnation Pressure (m Flui	Out Stagnation Pressure (m Flu
86	0.435 m	Mallinckrodt Chiller	54.44	6.4728	26.169	19.696
150	9.4 m	4" Angle Valve	2.99	4.3391	26.378	22.039
163	7.08 m	4" Angle Valve	11.20	1.8300	23.195	21.365
190	0.78 m	4" Angle Valve	3.48	5.8498	36.844	30.994
206	5.459 m	4" Angle Valve	7.60	4.0759	25.640	21.564
245	6.62 m	4" Angle Valve	17.91	4.6783	26.519	21.841
343	2.827 mm	4" Angle Valve	3.92	7.4496	35.790	28.340
347	2.18 m	4" Angle Valve	3.27	14.0721	38.554	24.482
412	0 mm	4" Angle Valve	2.08	6.9284	40.276	33.348
413	0 mm	4" Angle Valve	2.08	6.9299	40.275	33.345
414	0 mm	4" Angle Valve	2.08	6.8936	40.275	33.382
415	0 mm	4" Angle Valve	2.08	6.8902	40.267	33.377
427	0 m	4" Angle Valve	8.31	7.3150	32.722	25.407
437	0 mm	4" Angle Valve	0.70	0.6530	39.565	38.912
442	0 mm	4" Angle Valve	2.05	2.0255	41.271	39.246
445	0 m	4" Angle Valve	2.75	13.3520	38.532	25.180
464	9.33 mm	4" Angle Valve	2.31	7.0173	37.810	30.792
498	0 m	4" Angle Valve	0.08	1.1920	32.157	30.965
506	0 mm	4" Angle Valve	5.70	12.9631	39.388	26.425
542	0 m	4" Angle Valve	0.28	13.5377	39.616	26.078
578	6.54 m	4" Angle Valve	4.28	8.8586	30.647	21.789
590	12.795 m	4" Angle Valve	3.96	7.5942	23.952	16.358
593	12.26 m	4" Angle Valve	0.92	6.1784	23.707	17.529
625	0 mm	4" Angle Valve	9.74	9.4723	38.829	29.357
687	0 mm	4" Angle Valve	9.29	8.6173	38.257	29.640
719	0 mm	4" Angle Valve	8.91	7.9187	37.711	29.792

Shell and Tube Heat Exchanger

#	Elevation (*)	Pressure Loss Model	Flow (l/s)	Total Pressure Loss (m Fluid)	In Stagnation Pressure (m Flui	Out Stagnation Pressure (m Flu
97	0.52 m	Standard Relationshi	7.13	10.8598	37.718	26.859
99	0.487 m	Standard Relationshi	17.62	3.8853	35.995	32.110
102	0.67 m	Standard Relationshi	7.15	10.9235	37.295	26.371
145	5.205 m	Standard Relationshi	8.21	5.5308	31.285	25.754
230	0.595 m	Standard Relationshi	17.91	3.1057	36.159	33.053
274	9.855 m	Manufacturer Loss Da	4.14	9.7519	28.231	18.479
285	19.1 m	Standard Relationshi	8.72	11.0485	19.644	8.596
290	17.405 m	Manufacturer Loss Da	10.84	11.0942	21.371	10.277
351	13.598 m	Standard Relationshi	0.01	2.1164	19.917	17.801
360	13.623 m	Standard Relationshi	14.75	0.3379	19.641	19.303
387	8.23 m	Standard Relationshi	20.10	2.0392	23.561	21.522
457	5 m	Standard Relationshi	10.71	2.0580	31.673	29.615
474	8.2 m	Standard Relationshi	0.78	0.3885	24.772	24.383
547	17.68 m	Standard Relationshi	2.92	5.6446	19.102	13.458
555	15.53 m	Standard Relationshi	12.57	5.9139	20.500	14.586
566	15.056 m	Standard Relationshi	4.14	1.0103	19.515	18.505
569	18 m	Standard Relationshi	2.96	0.5288	16.314	15.785

Ball Valve

#	Elevation (*)	Flow (l/s)	Total Pressure Loss (m Fluid)	In Stagnation Pressure (m Flui)	Out Stagnation Pressure (m Flu)
113	0.195 m	7.13	0.0278	26.929	26.901
122	0.595 m	7.15	0.0280	26.248	26.220
131	5.11 m	17.62	0.1697	25.281	25.111
149	9.405 m	2.99	0.0049	26.392	26.387
168	10.33 m	2.99	0.0049	21.027	21.022
197	5.459 m	4.12	0.0093	25.835	25.826
203	5.459 m	3.48	0.0066	25.803	25.797
232	3.745 m	0.38	0.0002	34.590	34.589
255	4.95 m	0.38	0.0002	22.086	22.086
267	11.28 m	4.14	0.0094	27.515	27.505
276	4.73 m	2.20	0.1303	24.169	24.038
312	11.28 m	4.14	0.0094	16.192	16.183
323	4.38 m	3.92	0.0016	33.615	33.613
324	3.905 m	3.92	0.0016	34.056	34.054
327	2.18 m	3.27	0.0169	40.707	40.690
354	2.18 m	3.27	0.0169	22.510	22.493
370	3.58 m	3.92	0.0016	24.598	24.596
371	3.03 m	3.92	0.0016	25.190	25.188
379	2.18 m	3.27	0.0169	21.886	21.869
404	4.98 m	2.75	0.0041	36.749	36.745
406	4.93 m	2.31	0.0525	35.172	35.119
426	1.24 m	8.31	0.0071	31.608	31.601
428	1.24 m	8.32	0.0071	24.011	24.004
435	6.53 m	2.05	0.0023	34.861	34.859
443	4.88 m	2.75	0.0041	20.160	20.156
448	6.46 m	2.05	0.0023	32.350	32.348
453	0.84 m	0.70	0.0003	38.064	38.064
455	4.93 m	10.71	0.0627	35.702	35.639

#	Elevation (*)	Flow (l/s)	Total Pressure Loss (m Fluid)	In Stagnation Pressure (m Flui)	Out Stagnation Pressure (m Flu)
459	4.98 m	10.71	0.0627	20.925	20.863
467	4.93 m	2.31	0.0525	23.599	23.546
476	9 m	0.78	0.0164	22.612	22.595
477	4.9 m	0.78	0.0001	21.046	21.046
478	4.9 m	16.21	0.0270	34.941	34.914
485	2.74 m	9.22	0.0464	32.259	32.212
486	1.24 m	7.00	0.0268	34.070	34.043
492	1.19 m	16.13	0.0267	30.592	30.565
496	-0.23 m	0.08	0.0000	32.388	32.388
497	-0.23 m	0.08	0.0000	31.195	31.195
502	4.9 m	16.21	0.0270	21.697	21.670
503	4.9 m	5.70	0.0033	34.992	34.988
507	9 m	5.70	0.0033	30.682	30.678
509	9.28 m	5.70	0.0033	30.207	30.203
546	17 m	2.92	0.0155	21.063	21.047
549	17.5 m	2.92	0.0155	10.207	10.192
552	4.73 m	8.32	0.0071	19.704	19.697
553	1.52 m	0.00	0.0000	10.332	10.332
556	0 m	8.31	0.0071	33.192	33.185
573	4.98 m	7.10	0.0552	22.285	22.230
581	8.515 m	4.28	0.0100	19.434	19.424
584	4.93 m	4.88	0.0130	34.015	34.002
596	12.158 m	0.92	0.0083	17.540	17.532
604	5.33 m	4.88	0.0130	21.493	21.480

Inline Filter

#	Elevation (*)	Filter Name	Flow (l/s)	Total Pressure Loss (m Fluid)	In Stagnation Pressure (m Flui	Out Stagnation Pressure (m Flu
169	0.435 m	Round Wire Screen	54.44	0.8729	27.095	26.222
340	2.827 m	Round Wire Screen	3.92	1.0077	34.907	33.899

Pipe Coil

#	Elevation (*)	Coil Diameter (*)	Coil Length (*)	Flow (l/s)	Total Pressure Loss (m Fluid)	In Stagnation Pressure (m Flui	Out Stagnation Pressure (m Flu
205	0.65 m	2.2 m	52.8 m	4.12	5.4282	36.691	31.263
218	0 m	1.5 m	22.5 m	0.38	10.8996	38.135	27.235
484	0 m	1.612 m	14.5 m	7.00	1.3614	35.283	33.921
522	0 m	2.14 m	51.36 m	0.15	0.0139	39.632	39.619
523	0 m	2.6 m	68.12 m	0.12	0.0166	39.634	39.617

Open Pipe Boundary

#	Elevation (*)	Flow (l/s)	Total Pressure Loss (m Fluid)	In Stagnation Pressure (m Flui	Out Stagnation Pressure (m Flu
316	0 mm	0.00	0.0000	10.332	10.332
471	9 m	0.00	0.0000	10.332	10.332
521	0 m	0.00	0.0000	10.332	10.332
530	0 m	0.00	0.0000	10.332	10.332
731	0 m	0.00	0.0000	10.332	10.332

Diaphragm Valve

#	Elevation (*)	Flow (l/s)	Total Pressure Loss (m Fluid)	In Stagnation Pressure (m Flui	Out Stagnation Pressure (m Flu
382	5 m	8.31	0.4155	37.214	36.798
391	-1.54 m	8.31	0.4155	42.457	42.041
431	13.03 m	12.57	0.9498	24.741	23.791
526	5.525 m	0.12	0.0005	34.111	34.110
527	5.75 m	0.15	0.0008	33.886	33.885
538	4.93 m	2.92	0.2730	34.439	34.166
539	6.15 m	0.12	0.0001	33.468	33.468
540	5.7 m	0.15	0.0008	33.919	33.918
551	4.93 m	2.92	0.2731	21.711	21.438
559	13.03 m	12.57	0.9499	15.961	15.011
560	5.43 m	7.10	0.3033	33.682	33.379
561	14.705 m	7.10	1.6140	21.919	20.305
588	12 m	3.96	0.5019	25.464	24.962
600	13.808 m	3.96	0.5020	15.183	14.681
659	0 m	2.62	0.2200	27.539	27.319
660	0 m	2.62	0.2200	27.918	27.698
679	0 m	2.25	0.1613	28.015	27.853
680	0 m	2.25	0.1613	28.294	28.132
716	0 m	2.40	0.1839	28.269	28.085
717	0 m	2.40	0.1839	28.587	28.403

Cross Junction

#	Elevation (*)	Channel Flow (l/s)	Straight Flow (l/s)	Straight Loss (m Fluid)	Side 1 Flow (l/s)	Side 1 Loss (m Fluid)	Side 2 Flow (l/s)	Side 2 Loss (m Fluid)	Stagnation Pressure (m Fluid a)	Temperature (C)
432	0 m	8.31	2.08	0.1465	4.15	0.1699	2.08	0.1410	33.202	15.0

Needle Valve

#	Elevation (*)	Flow (l/s)	Total Pressure Loss (m Fluid)	In Stagnation Pressure (m Flui	Out Stagnation Pressure (m Flu
649	0 m	7.12	0.1150	27.674	27.559
674	0 m	7.05	0.1127	28.089	27.976
712	0 m	6.51	0.0961	28.383	28.287