

# Tabelle di saturazione dell'acqua

Tratto da VDI Atlas/ed. Verein Deutscher Ingenieure. - Düsseldorf: VDI-Verl., 1993

P (bar)	T (°C)	liquido saturo			vapore saturo			liquido saturo			vapore saturo			liquido saturo			vapore saturo		
		$v_L$ (m³/kg)	$v_L-v_v$ (m³/kg)	$v_v$ (m³/kg)	$h_L$ (kJ/kg)	$h_L-h_v$ (kJ/kg)	$h_v$ (kJ/kg)	$s_L$ (kJ/kgK)	$s_L-s_v$ (kJ/kgK)	$s_v$ (kJ/kgK)	$s_L$ (kJ/kgK)	$s_L-s_v$ (kJ/kgK)	$s_v$ (kJ/kgK)	$s_L$ (kJ/kgK)	$s_L-s_v$ (kJ/kgK)	$s_v$ (kJ/kgK)	$s_L$ (kJ/kgK)	$s_L-s_v$ (kJ/kgK)	$s_v$ (kJ/kgK)
0.00611	0.001	0.0010002	206.1619	206.1629	0.0	2501.6	2501.6	0.0000	9.1575	9.1575									
0.01	6.98	0.0010001	129.2097	129.2107	29.3	2485.0	2514.4	0.1060	8.8706	8.9767									
0.02	17.51	0.0010012	67.0106	67.0116	73.5	2460.2	2533.6	0.2606	8.4640	8.7246									
0.03	24.10	0.0010027	45.6690	45.6700	101.0	2444.6	2545.6	0.3543	8.2242	8.5785									
0.04	28.98	0.0010040	34.8023	34.8033	121.4	2433.1	2554.5	0.4225	8.0530	8.4755									
0.05	32.90	0.0010052	28.1935	28.1945	137.8	2423.8	2561.6	0.4763	7.9197	8.3960									
0.06	36.18	0.0010064	23.7396	23.7406	151.5	2416.0	2567.5	0.5209	7.8103	8.3312									
0.07	39.03	0.0010074	20.5294	20.5304	163.4	2409.2	2572.6	0.5591	7.7176	8.2767									
0.08	41.54	0.0010084	18.1028	18.1038	173.9	2403.2	2577.1	0.5926	7.6370	8.2295									
0.09	43.79	0.0010094	16.2024	16.2034	183.3	2397.9	2581.1	0.6224	7.5657	8.1881									
0.10	45.83	0.0010102	14.6727	14.6737	191.8	2392.9	2584.8	0.6493	7.5018	8.1511									
0.15	54.00	0.0010140	10.0211	10.0221	226.0	2373.2	2599.2	0.7549	7.2544	8.0093									
0.20	60.09	0.0010172	7.6482	7.6492	251.5	2358.4	2609.9	0.8321	7.0773	7.9094									
0.25	64.99	0.0010199	6.2030	6.2040	272.0	2346.4	2618.3	0.8933	6.9390	7.8323									
0.30	69.13	0.0010223	5.2280	5.2290	289.3	2336.1	2625.4	0.9441	6.8254	7.7695									
0.35	72.71	0.0010245	4.5245	4.5255	304.3	2327.2	2631.5	0.9878	6.7288	7.7166									
0.40	75.89	0.0010265	3.9922	3.9932	317.7	2319.2	2636.9	1.0261	6.6448	7.6709									
0.45	78.74	0.0010284	3.5751	3.5761	329.6	2312.0	2641.7	1.0603	6.5703	7.6306									
0.50	81.35	0.0010301	3.2391	3.2401	340.6	2305.4	2646.0	1.0912	6.5035	7.5947									
0.60	85.95	0.0010333	2.7307	2.7317	359.9	2293.6	2653.6	1.1455	6.3872	7.5327									
0.70	89.96	0.0010361	2.3637	2.3647	376.8	2283.3	2660.1	1.1921	6.2883	7.4804									
0.80	93.51	0.0010387	2.0859	2.0869	391.7	2274.0	2665.8	1.2330	6.2022	7.4352									
0.90	96.71	0.0010412	1.8681	1.8691	405.2	2265.6	2670.9	1.2696	6.1258	7.3954									
1.00	99.63	0.0010434	1.6927	1.6937	417.5	2257.9	2675.4	1.3027	6.0571	7.3598									
1.01325	100.00	0.0010437	1.6720	1.6730	419.1	2256.9	2676.0	1.3069	6.0485	7.3554									
1.20	104.81	0.0010476	1.4271	1.4281	439.4	2244.1	2683.4	1.3609	5.9375	7.2984									
1.40	109.32	0.0010513	1.2352	1.2363	458.4	2231.9	2690.3	1.4109	5.8356	7.2465									
1.60	113.32	0.0010547	1.0900	1.0911	475.4	2220.9	2696.2	1.4550	5.7467	7.2017									
1.80	116.93	0.0010579	0.97612	0.9772	490.7	2210.8	2701.5	1.4944	5.6677	7.1622									
2.00	120.23	0.0010608	0.88434	0.8854	504.7	2201.6	2706.3	1.5301	5.5967	7.1268									
2.50	127.43	0.0010676	0.71733	0.7184	535.4	2181.0	2716.4	1.6072	5.4448	7.0520									
3.00	133.54	0.0010735	0.60446	0.6055	561.4	2163.2	2724.7	1.6717	5.3192	6.9909									
3.50	138.88	0.0010789	0.52289	0.5240	584.3	2147.3	2731.6	1.7273	5.2118	6.9392									
4.00	143.63	0.0010839	0.46112	0.4622	604.7	2132.9	2737.6	1.7764	5.1179	6.8943									
4.50	147.92	0.0010885	0.41264	0.4137	623.2	2119.7	2742.9	1.8204	5.0342	6.8547									
5.00	151.85	0.0010928	0.37357	0.3747	640.1	2107.4	2747.5	1.8604	4.9588	6.8192									
6.00	158.84	0.0011009	0.31436	0.3155	670.4	2085.0	2755.5	1.9308	4.8267	6.7575									
7.00	164.96	0.0011082	0.27157	0.2727	697.1	2064.9	2762.0	1.9918	4.7134	6.7052									
8.00	170.41	0.0011150	0.23915	0.2403	720.9	2046.5	2767.5	2.0457	4.6139	6.6596									
9.00	175.36	0.0011213	0.21370	0.2148	742.6	2029.5	2772.1	2.0941	4.5251	6.6192									
10.00	179.88	0.0011274	0.19317	0.1943	762.6	2013.6	2776.2	2.1382	4.4447	6.5828									
11.00	184.06	0.0011331	0.17626	0.1774	781.1	1991.6	2779.7	2.1786	4.3712	6.5498									
12.00	187.96	0.0011386	0.16207	0.1632	798.4	1984.3	2782.7	2.2160	4.3034	6.5194									
13.00	191.60	0.0011438	0.15000	0.1511	814.7	1970.7	2785.4	2.2509	4.2404	6.4913									
14.00	195.04	0.0011489	0.13958	0.1407	830.1	1957.7	2787.8	2.2836	4.1815	6.4651									
15.00	198.28	0.0011538	0.13052	0.1317	844.6	1945.3	2789.9	2.3144	4.1262	6.4406									
16.00	201.37	0.0011586	0.12254	0.1237	858.5	1933.2	2791.7	2.3436	4.0740	6.4176									
17.00	204.30	0.0011633	0.11548	0.1166	871.8	1921.6	2793.4	2.3712	4.0246	6.3958									
18.00	207.11	0.0011678	0.10916	0.1103	884.5	1910.3	2794.8	2.3976	3.9776	6.3751									
19.00	209.79	0.0011723	0.10350	0.1047	896.8	1899.3	2796.1	2.4227	3.9327	6.3555									
20.00	212.37	0.0011766	0.0983724	0.099549	908.6	1888.7	2797.2	2.4468	3.8899	6.3367									
25.00	223.94	0.0011972	0.0787178	0.079915	961.9	1839.0	2800.9	2.5542	3.6994	6.2537									
30.00	233.84	0.0012163	0.0654157	0.066632	1008.3	1794.0	2802.3	2.6455	3.5383	6.1838									
35.00	242.54	0.0012345	0.0557935	0.057028	1049.7	1752.2	2802.0	2.7252	3.3976	6.1229									
40.00	250.33	0.0012521	0.0484969	0.049749	1087.4	1712.9	2800.3	2.7965	3.2720	6.0685									
45.00	257.41	0.0012691	0.0427659	0.044035	1122.1	1675.6	2797.7	2.8612	3.1579	6.0191									
50.00	263.92	0.0012858	0.0381392	0.039425	1154.5	1639.7	2794.2	2.9207	3.0528	5.9735									
55.00	269.94	0.0013023	0.0343217	0.035624	1184.9	1605.0	2789.9	2.9758	2.9551	5.9309									
60.00	275.56	0.0013187	0.0311143	0.032433	1213.7	1571.3	2785.0	3.0274	2.8633	5.8907									
65.00	280.83	0.0013350	0.0283790	0.029714	1241.2	1538.3	2779.5	3.0760	2.7766	5.8526									
70.00	285.80	0.0013514	0.0260166	0.027368	1267.5	1506.0	2773.4	3.1220	2.6941	5.8161									
75.00	290.51	0.0013678	0.0239552	0.025323	1292.7	1474.1	2766.9	3.1658	2.6152	5.7810									
80.00	294.98	0.0013843	0.0221367	0.023521	1317.2	1442.7	2759.9	3.2077	2.5393	5.7470									
85.00	299.24	0.0014010	0.0205220	0.021923	1340.8	1411.6	2752.4	3.2480	2.4661	5.7141									
90.00	303.31	0.0014179	0.0190751	0.020493	1363.8	1380.8	2744.6	3.2867	2.3952	5.6820									
95.00	307.22	0.0014351	0.0177709	0.019206	1386.2	1350.2	2736.3	3.3242	2.3264	5.6506									
100.00	310.96	0.0014526	0.0169574	0.018410	1408.1	1319.7	2727.7	3.3606	2.2592	5.6198									
110.00	318.04	0.0014887	0.0145183	0.016007	1450.6	1258.8	2709.3	3.4304	2.1292	5.5596									
120.00	324.64	0.0015267	0.0127583	0.014285	1491.7	1197.5	2689.2	3.4971	2.0032	5.5003									
130.00	330.81	0.0015671	0.0112329	0.012800	1531.9	1135.1	2667.0	3.5614	1.8795	5.4409									
140.00	336.63	0.0016105	0.0098875	0.011498	1571.5	1070.9	2642.4	3.6241	1.7564	5.3804									

# Tabelle di saturazione dell'acqua

Tratto da VDI Atlas/ed. Verein Deutscher Ingenieure. - Düsseldorf: VDI-Verl., 1993

		liquido saturo		vapore saturo		liquido saturo		vapore saturo		liquido saturo		vapore saturo	
T (°C)	P (bar)	v <sub>L</sub> (m³/kg)	v <sub>L</sub> -v <sub>v</sub> (m³/kg)	v <sub>v</sub> (m³/kg)	h <sub>L</sub> (kJ/kg)	h <sub>L</sub> -h <sub>v</sub> (kJ/kg)	h <sub>v</sub> (kJ/kg)	s <sub>L</sub> (kJ/kgK)	s <sub>L</sub> -s <sub>v</sub> (kJ/kgK)	s <sub>v</sub> (kJ/kgK)			
0.01	0.006112	0.001000	206.162	206.163	0.0	2501.6	2501.6	0.0000	9.1575	9.1575			
2	0.007055	0.001000	179.922	179.923	8.4	2496.8	2505.2	0.0306	9.0741	9.1047			
4	0.008129	0.001000	157.271	157.272	16.8	2492.1	2508.9	0.0611	8.9915	9.0526			
6	0.009345	0.001000	137.779	137.78	25.2	2487.4	2512.6	0.0913	8.9102	9.0015			
8	0.01072	0.001000	120.965	120.966	33.6	2482.6	2516.2	0.1213	8.8300	8.9513			
10	0.01227	0.001000	106.429	106.43	42.0	2477.9	2519.9	0.1510	8.7510	8.9020			
15	0.017139	0.001001	77.977	77.978	62.9	2466.1	2529.1	0.2243	8.5582	8.7826			
20	0.023366	0.001002	57.837	57.838	83.9	2454.3	2538.2	0.2963	8.3721	8.6684			
25	0.03166	0.001003	43.401	43.402	104.8	2442.5	2547.3	0.3670	8.1922	8.5592			
30	0.042415	0.001004	32.928	32.929	125.7	2430.7	2556.4	0.4365	8.0181	8.4546			
35	0.056216	0.001006	25.244	25.245	146.6	2418.8	2565.4	0.5049	7.8495	8.3543			
40	0.07375	0.001008	19.545	19.546	167.5	2406.9	2574.4	0.5721	7.6861	8.2583			
45	0.09582	0.001010	15.275	15.276	188.4	2394.9	2583.3	0.6383	7.5277	8.1661			
50	0.12335	0.001012	12.045	12.046	209.3	2382.9	2592.2	0.7035	7.3741	8.0776			
55	0.15741	0.001015	9.5779	9.5789	230.2	2370.8	2601.0	0.7677	7.2248	7.9925			
60	0.1992	0.001017	7.6775	7.6785	251.1	2358.6	2609.7	0.8310	7.0798	7.9108			
65	0.25009	0.001020	6.2013	6.2023	272.0	2346.3	2618.4	0.8933	6.9388	7.8321			
70	0.31162	0.001023	5.0453	5.0463	293.0	2334.0	2626.9	0.9548	6.8017	7.7565			
75	0.38549	0.001026	4.1331	4.1341	313.9	2321.5	2635.4	1.0154	6.6681	7.6835			
80	0.4736	0.001029	3.4081	3.4091	334.9	2308.8	2643.8	1.0753	6.5380	7.6133			
85	0.57803	0.001033	2.8278	2.8288	355.9	2296.1	2652.0	1.1343	6.4111	7.5454			
90	0.70109	0.001036	2.3603	2.3613	376.9	2283.2	2660.1	1.1925	6.2873	7.4798			
95	0.84526	0.001040	1.9812	1.9822	398.0	2270.2	2668.1	1.2501	6.1665	7.4166			
100	1.01325	0.001044	1.672	1.673	419.1	2256.9	2676.0	1.3069	6.0485	7.3554			
105	1.208	0.001048	1.4183	1.4193	440.2	2243.6	2683.7	1.3630	5.9331	7.2962			
110	1.4327	0.001052	1.2089	1.2099	461.3	2230.0	2691.3	1.4185	5.8203	7.2388			
115	1.6906	0.001056	1.0353	1.0363	482.5	2216.2	2698.7	1.4733	5.7099	7.1832			
120	1.9854	0.001061	0.89046	0.89152	503.7	2202.2	2706.0	1.5276	5.6017	7.1293			
125	2.321	0.001065	0.76917	0.77023	525.0	2188.0	2713.0	1.5813	5.4957	7.0769			
130	2.7013	0.001070	0.66707	0.66814	546.3	2173.6	2719.9	1.6344	5.3917	7.0261			
135	3.1308	0.001075	0.58074	0.58181	567.7	2158.9	2726.6	1.6869	5.2897	6.9766			
140	3.6138	0.001080	0.50741	0.50849	589.1	2144.0	2733.1	1.7390	5.1894	6.9284			
145	4.1552	0.001085	0.44489	0.44597	610.6	2128.7	2739.3	1.7906	5.0910	6.8815			
150	4.76	0.001091	0.39136	0.39245	632.1	2113.2	2745.4	1.8416	4.9941	6.8358			
155	5.4333	0.001096	0.34555	0.34644	653.8	2097.4	2751.2	1.8923	4.8989	6.7911			
160	6.1806	0.001102	0.30566	0.30676	675.5	2081.3	2756.7	1.9425	4.8050	6.7473			
165	7.0077	0.001108	0.27129	0.2724	697.3	2064.8	2762.0	1.9923	4.7126	6.7048			
170	7.9202	0.001115	0.24144	0.24255	719.1	2047.9	2767.1	2.0416	4.6214	6.6630			
175	8.9244	0.001121	0.21542	0.21654	741.1	2030.7	2771.8	2.0906	4.5314	6.6221			
180	10.027	0.001128	0.19267	0.1938	763.1	2013.2	2776.3	2.1393	4.4426	6.5819			
185	11.233	0.001134	0.17263	0.17386	785.3	1995.2	2780.4	2.1876	4.3548	6.5424			
190	12.551	0.001142	0.15518	0.15632	807.5	1976.7	2784.3	2.2356	4.2680	6.5036			
195	13.987	0.001149	0.13969	0.14084	829.9	1957.9	2787.8	2.2833	4.1821	6.4654			
200	15.549	0.001157	0.12601	0.12716	852.4	1938.6	2790.9	2.3307	4.0971	6.4278			
205	17.243	0.001164	0.11387	0.11503	875.0	1918.8	2793.8	2.3778	4.0128	6.3906			
210	19.077	0.001173	0.10307	0.10424	897.7	1898.5	2796.2	2.4247	3.9293	6.3539			
215	21.06	0.001181	0.09345	0.094625	920.6	1877.6	2798.3	2.4713	3.8463	6.3176			
220	23.198	0.001190	0.08485	0.086038	943.7	1856.2	2799.9	2.5178	3.7639	6.2817			
225	25.501	0.001199	0.07715	0.078349	966.9	1834.3	2801.2	2.5641	3.6820	6.2461			
230	27.976	0.001209	0.07024	0.07145	990.3	1811.7	2802.0	2.6102	3.6006	6.2107			
235	30.632	0.001219	0.06403	0.064245	1013.8	1788.5	2802.3	2.6561	3.5194	6.1756			
240	33.478	0.001229	0.05842	0.059645	1037.6	1764.6	2802.2	2.7020	3.4386	6.1406			
245	36.523	0.001240	0.05137	0.054606	1061.6	1740.0	2801.6	2.7478	3.3579	6.1057			
250	39.776	0.001251	0.04879	0.050037	1085.8	1714.7	2800.4	2.7935	3.2773	6.0708			
255	43.246	0.001263	0.04879	0.045896	1110.2	1688.5	2798.7	2.8392	3.1968	6.0359			
260	46.943	0.001276	0.04086	0.04213	1134.9	1661.5	2796.4	2.8848	3.1161	6.0010			
265	50.877	0.001289	0.03743	0.03871	1159.9	1633.5	2793.5	2.9306	3.0353	5.9658			
270	55.058	0.001303	0.03429	0.035588	1185.2	1604.6	2789.9	2.9763	2.9541	5.9304			
275	59.496	0.001317	0.03142	0.032736	1210.9	1574.7	2785.5	3.0222	2.8725	5.8947			
280	64.202	0.001332	0.0288	0.030126	1236.8	1543.6	2780.4	3.0683	2.7903	5.8586			
285	69.186	0.001349	0.02638	0.027733	1263.2	1511.3	2774.5	3.1146	2.7074	5.8220			
290	74.461	0.001366	0.02417	0.025535	1290.0	1477.6	2767.6	3.1611	2.6237	5.7848			
295	80.037	0.001384	0.02213	0.023513	1317.3	1442.6	2759.8	3.2079	2.5389	5.7469			
300	85.927	0.001404	0.02025	0.021649	1345.1	1406.0	2751.0	3.2552	2.4529	5.7081			
305	92.144	0.001425	0.01841	0.019927	1373.4	1367.7	2741.1	3.3029	2.3656	5.6685			
310	98.7	0.001443	0.01688	0.018334	1402.4	1327.6	2730.0	3.3512	2.2766	5.6278			
315	105.61	0.001473	0.01509	0.016856	1432.1	1285.5	2717.6	3.4002	2.1856	5.5858			
320	112.89	0.001500	0.01398	0.01548	1462.6	1241.1	2703.7	3.4500	2.0923	5.5423			
325	120.56	0.001529	0.01267	0.014195	1494.0	1194.0	2688.0	3.5008	1.9961	5.4969			
330	128.63	0.001562	0.01143	0.012989	1526.5	1143.6	2670.2	3.5528	1.8962	5.4490			
335	137.12	0.001598	0.01026	0.011854	1560.3	1089.5	2649.7	3.6063	1.7916	5.3979			
340	146.05	0.001639	0.00914	0.01078	1595.5	1030.7	2626.2	3.6616	1.6811	5.3427			
345	155.45	0.001686	0.00807	0.009763	1632.5	966.4	2598.9	3.7193	1.5636	5.2828			
350	165.35	0.001741	0.00706	0.008799	1671.9	895.7	2567.7	3.7800	1.4376	5.2177			
355	175.77	0.001809	0.00605	0.007859	1716.6	813.8	2530.4	3.8489	1.2953	5.1442			
360	186.75	0.001896	0.00504	0.006939	1764.2	721.3	2485.4	3.9210	1.1390	5.0600			
365	198.33	0.002016	0.00399	0.006011	1818.0	610.0	2428.0	4.0021	0.9558	4.9579			
370	210.54	0.002214	0.00276	0.004972	1890.2	452.6	2342.8	4.1108	0.7036	4.8144			
374	220.81	0.002843	0.00063	0.003465	2046.7	109.5	2156.2	4.3493	0.1692	4.5185			
374.15	221.2	0.003170	0	0.003170	2107.4	0.0	2107.4	4.4429	0.0000	4.4429			