

Ratings calculated (see below the table) according ASME B31.3-2002 Table K-1 for plain end standard seamless carbon steel pipes and tubes spec. no. A-53 B, A-106 B, A333, A334 and API 5L. Temperatures ranging 100 of - 700 of.

Size (in)	Outside Diameter (in)	Wall Thickness (in)	Inside Diameter (in)	Schedule	Temperature (° F)							
					100	200	300	400	500	600	650	700
					Allowable Stress (psi)							
					23300	21300	20700	20000	18900	17300	16900	16800
Maximum Allowable Pressure (psi)												
1/2	0.84	0.109	0.622	40 ¹⁾	6,747	6,168	5,994	5,792	5,473	5,010	4,894	4,865
		0.147	0.546	80 ²⁾	9,483	8,669	8,424	8,140	7,692	7,041	6,878	6,837
		0.188	0.464	160	12,704	11,614	11,287	10,905	10,305	9,433	9,215	9,160
		0.294	0.252		22,653	20,708	20,125	19,444	18,375	16,819	16,431	16,333
3/4	1.05	0.113	0.824	40	5,487	5,016	4,875	4,710	4,451	4,074	3,980	3,957
		0.154	0.742	80	7,743	7,079	6,879	6,647	6,281	5,749	5,616	5,583
		0.219	0.612	160	11,666	10,665	10,364	10,014	9,463	8,662	8,462	8,412
		0.308	0.434		17,861	16,328	15,868	15,331	14,488	13,261	12,955	12,878
1	1.315	0.133	1.049	40	5,128	4,688	4,556	4,402	4,160	3,808	3,720	3,698
		0.179	0.957	80	7,118	6,507	6,324	6,110	5,774	5,285	5,163	5,133
		0.25	0.815	160	10,448	9,552	9,283	8,969	8,475	7,758	7,578	7,534
		0.358	0.599		16,219	14,827	14,409	13,922	13,156	12,042	11,764	11,694
1 1/4	1.66	0.14	1.38	40	4,214	3,853	3,744	3,618	3,419	3,129	3,057	3,039
		0.191	1.278	80	5,905	5,398	5,246	5,069	4,790	4,385	4,283	4,258
		0.25	1.16	160	7,979	7,295	7,089	6,849	6,473	5,925	5,788	5,753
		0.382	0.896		13,143	12,015	11,677	11,282	10,661	9,759	9,533	9,477
1 1/2	1.9	0.145	1.61	40	3,788	3,462	3,365	3,251	3,072	2,812	2,747	2,731
		0.2	1.5	80	5,356	4,897	4,759	4,598	4,345	3,977	3,885	3,862
		0.281	1.338	160	7,817	7,146	6,944	6,710	6,341	5,804	5,670	5,636
		0.4	1.1		11,797	10,785	10,481	10,127	9,570	8,759	8,557	8,506
2	2.375	0.109	2.157	10	2,220	2,030	1,972	1,906	1,801	1,648	1,610	1,601
		0.154	2.067	40	3,187	2,913	2,831	2,736	2,585	2,366	2,312	2,298
		0.218	1.939	80	4,616	4,220	4,101	3,963	3,745	3,428	3,348	3,329
		0.25	1.875		5,356	4,897	4,759	4,598	4,345	3,977	3,885	3,862
		0.281	1.813		6,090	5,567	5,410	5,227	4,940	4,522	4,417	4,391
		0.344	1.687	160	7,634	6,979	6,782	6,553	6,193	5,668	5,537	5,505
2 1/2	2.875	0.436	1.503		10,027	9,167	8,908	8,607	8,134	7,445	7,273	7,230
		0.12	2.635	10	2,012	1,840	1,788	1,727	1,632	1,494	1,460	1,451
		0.203	2.469	40	3,487	3,188	3,098	2,993	2,829	2,589	2,529	2,514
		0.216	2.443		3,725	3,405	3,309	3,197	3,022	2,766	2,702	2,686
		0.25	2.375		4,355	3,981	3,869	3,738	3,533	3,234	3,159	3,140
		0.276	2.323	80	4,846	4,430	4,305	4,159	3,931	3,598	3,515	3,494
3	3.5	0.375	2.125	160	6,786	6,204	6,029	5,825	5,505	5,039	4,922	4,893
		0.552	1.771		10,571	9,664	9,391	9,074	8,575	7,849	7,667	7,622
		0.12	3.26		1,643	1,502	1,459	1,410	1,333	1,220	1,192	1,184
		0.156	3.188		2,154	1,969	1,913	1,849	1,747	1,599	1,562	1,553
		0.172	3.156		2,384	2,179	2,118	2,046	1,934	1,770	1,729	1,719
		0.188	3.124		2,615	2,391	2,324	2,245	2,122	1,942	1,897	1,886
		0.216	3.068	40	3,025	2,766	2,688	2,597	2,454	2,246	2,194	2,181
		0.25	3		3,530	3,227	3,136	3,030	2,864	2,621	2,561	2,545
		0.281	2.938		3,998	3,655	3,552	3,432	3,243	2,969	2,900	2,883
		0.3	2.9	80	4,288	3,920	3,810	3,681	3,479	3,184	3,110	3,092
3 1/2	4	0.438	2.624	160	6,480	5,924	5,757	5,563	5,257	4,812	4,700	4,673
		0.6	2.3		9,258	8,464	8,225	7,947	7,510	6,874	6,715	6,675
		0.12	3.76	10	1,432	1,309	1,273	1,230	1,162	1,064	1,039	1,033
		0.226	3.548	140	2,758	2,521	2,450	2,367	2,237	2,047	2,000	1,988
		0.25	3.5		3,066	2,803	2,724	2,632	2,487	2,276	2,224	2,211
		0.281	3.438		3,469	3,171	3,082	2,977	2,814	2,575	2,516	2,501
4	4.5	0.318	3.364	80	3,956	3,617	3,515	3,396	3,209	2,938	2,870	2,853
		0.636	2.728		8,489	7,761	7,542	7,287	6,886	6,303	6,157	6,121
		0.12	4.26	10	1,270	1,161	1,128	1,090	1,030	943	921	916
		0.156	4.188		1,662	1,519	1,476	1,426	1,348	1,234	1,205	1,198
		0.188	4.124		2,014	1,841	1,789	1,729	1,634	1,495	1,461	1,452
		0.203	4.094		2,181	1,994	1,938	1,872	1,769	1,619	1,582	1,572
		0.219	4.062		2,360	2,157	2,096	2,026	1,914	1,752	1,712	1,701
		0.237	4.026	40	2,562	2,342	2,276	2,199	2,078	1,902	1,858	1,847
		0.25	4		2,709	2,477	2,407	2,326	2,198	2,012	1,965	1,953
		0.281	3.938	60	3,063	2,800	2,721	2,629	2,485	2,274	2,222	2,208
		0.312	3.876		3,421	3,127	3,039	2,936	2,775	2,540	2,481	2,466
		0.337	3.826	80	3,712	3,394	3,298	3,186	3,011	2,756	2,693	2,677
		0.438	3.624	120	4,919	4,497	4,370	4,222	3,990	3,652	3,568	3,547
		0.531	3.438	160	6,072	5,551	5,394	5,212	4,925	4,508	4,404	4,378
5	5.563	0.674	3.152		7,930	7,249	7,045	6,807	6,432	5,888	5,752	5,718
		0.188	5.187		1,619	1,480	1,438	1,389	1,313	1,202	1,174	1,167
		0.219	5.125		1,894	1,732	1,683	1,626	1,536	1,406	1,374	1,366
		0.258	5.047	40	2,244	2,052	1,994	1,927	1,821	1,667	1,628	1,618
		0.281	5.001		2,453	2,242	2,179	2,106	1,990	1,821	1,779	1,769
		0.312	4.939		2,736	2,501	2,431	2,349	2,220	2,032	1,985	1,973
		0.344	4.875		3,032	2,771	2,693	2,602	2,459	2,251	2,199	2,186
		0.375	4.813	80	3,320	3,035	2,950	2,850	2,693	2,465	2,408	2,394

Ratings calculated (see below the table) according ASME B31.3-2002 Table K-1 for plain end standard seamless carbon steel pipes and tubes spec. no. A-53 B, A-106 B, A333, A334 and API 5L. Temperatures ranging 100 of - 700 of.

Size (in)	Outside Diameter (in)	Wall Thickness (in)	Inside Diameter (in)	Schedule	Temperature (° F)							
					100	200	300	400	500	600	650	700
					Allowable Stress (psi)							
					23300	21300	20700	20000	18900	17300	16900	16800
Maximum Allowable Pressure (psi)												
		0.5	4.563	120	4,513	4,126	4,009	3,874	3,661	3,351	3,273	3,254
		0.625	4.313	160	5,753	5,259	5,111	4,938	4,666	4,271	4,172	4,148
		0.75	4.063		7,042	6,438	6,256	6,045	5,712	5,229	5,108	5,078
6	6.625	0.109	6.407	5	777	710	690	667	630	577	564	560
		0.134	6.357	10	958	876	851	822	777	711	695	691
		0.156	6.313		1,118	1,022	994	960	907	830	811	806
		0.188	6.249		1,353	1,237	1,202	1,161	1,098	1,005	981	976
		0.203	6.219		1,464	1,338	1,300	1,256	1,187	1,087	1,062	1,055
		0.219	6.187		1,582	1,446	1,406	1,358	1,283	1,175	1,148	1,141
		0.25	6.125		1,813	1,658	1,611	1,556	1,471	1,346	1,315	1,307
		0.28	6.065	40	2,038	1,863	1,811	1,750	1,653	1,514	1,479	1,470
		0.312	6.001		2,281	2,085	2,026	1,958	1,850	1,693	1,654	1,644
		0.344	5.937		2,525	2,308	2,243	2,167	2,048	1,874	1,831	1,820
		0.375	5.875		2,763	2,526	2,455	2,372	2,241	2,051	2,004	1,992
		0.432	5.761	80	3,206	2,931	2,848	2,752	2,601	2,380	2,325	2,312
		0.5	5.625		3,743	3,422	3,325	3,213	3,036	2,779	2,715	2,699
		0.562	5.501	120	4,241	3,877	3,768	3,640	3,440	3,149	3,076	3,058
		0.625	5.375		4,755	4,347	4,224	4,082	3,857	3,531	3,449	3,429
		0.719	5.187	160	5,538	5,063	4,920	4,754	4,492	4,112	4,017	3,993
		0.864	4.897		6,785	6,203	6,028	5,824	5,504	5,038	4,922	4,892
1	4.625		8,000	7,313	7,107	6,867	6,489	5,940	5,803	5,768		
1.125	4.375		9,157	8,371	8,135	7,860	7,428	6,799	6,642	6,603		
8	8.625	0.188	8.25		1,034	945	918	887	839	768	750	745
		0.203	8.219		1,118	1,022	993	960	907	830	811	806
		0.219	8.187		1,208	1,104	1,073	1,037	980	897	876	871
		0.237	8.151		1,309	1,197	1,163	1,124	1,062	972	950	944
		0.25	8.125	20	1,383	1,264	1,228	1,187	1,122	1,027	1,003	997
		0.277	8.071	30	1,536	1,404	1,365	1,319	1,246	1,141	1,114	1,108
		0.312	8.001		1,736	1,587	1,542	1,490	1,408	1,289	1,259	1,252
		0.322	7.981	40	1,793	1,639	1,593	1,539	1,455	1,332	1,301	1,293
		0.344	7.937		1,920	1,755	1,706	1,648	1,557	1,425	1,393	1,384
		0.375	7.875		2,099	1,919	1,865	1,802	1,703	1,559	1,523	1,514
		0.406	7.813	60	2,279	2,084	2,025	1,957	1,849	1,692	1,653	1,644
		0.438	7.749		2,467	2,255	2,191	2,117	2,001	1,831	1,789	1,779
		0.5	7.625	80	2,833	2,590	2,517	2,432	2,298	2,103	2,055	2,043
		0.562	7.501		3,203	2,928	2,846	2,750	2,598	2,379	2,324	2,310
		0.594	7.437	100	3,396	3,105	3,017	2,915	2,755	2,522	2,464	2,449
		0.625	7.375		3,585	3,277	3,185	3,077	2,908	2,662	2,600	2,585
		0.719	7.187	120	4,162	3,805	3,698	3,573	3,376	3,090	3,019	3,001
0.812	7.001	140	4,744	4,337	4,215	4,073	3,849	3,523	3,441	3,421		
0.875	6.875		5,145	4,703	4,571	4,416	4,174	3,820	3,732	3,710		
0.906	6.813	160	5,344	4,885	4,748	4,587	4,335	3,968	3,876	3,853		
10	10.75	0.188	10.374		827	756	734	709	670	614	599	596
		0.203	10.374		893	817	794	767	725	663	648	644
		0.219	10.312		965	882	857	828	783	717	700	696
		0.237	10.276		1,046	956	929	898	848	777	759	754
		0.25	10.25	20	1,104	1,009	981	948	896	820	801	796
		0.279	10.192		1,235	1,129	1,097	1,060	1,002	917	896	891
		0.307	10.136	30	1,362	1,245	1,210	1,169	1,105	1,011	988	982
		0.344	10.062		1,530	1,399	1,360	1,314	1,241	1,136	1,110	1,103
		0.365	10.02	40	1,626	1,487	1,445	1,396	1,319	1,208	1,180	1,173
		0.375	10		1,672	1,529	1,486	1,435	1,356	1,242	1,213	1,206
		0.438	9.874		1,963	1,794	1,744	1,685	1,592	1,457	1,424	1,415
		0.5	9.75	60	2,251	2,058	2,000	1,932	1,826	1,671	1,633	1,623
		0.562	9.626		2,543	2,324	2,259	2,182	2,062	1,888	1,844	1,833
		0.594	9.562	80	2,694	2,463	2,393	2,312	2,185	2,000	1,954	1,942
		0.625	9.5		2,841	2,598	2,524	2,439	2,305	2,110	2,061	2,049
		0.719	9.312	100	3,293	3,010	2,926	2,827	2,671	2,445	2,388	2,374
		0.812	9.126		3,746	3,425	3,328	3,216	3,039	2,782	2,717	2,701
0.844	9.062	120	3,904	3,569	3,468	3,351	3,167	2,899	2,832	2,815		
1	8.75	140	4,683	4,281	4,161	4,020	3,799	3,477	3,397	3,377		
1.125	8.5	160	5,322	4,865	4,728	4,569	4,317	3,952	3,860	3,838		
		0.188	12.374		695	636	618	597	564	516	504	501
		0.203	12.374		752	687	668	645	610	558	545	542
		0.219	12.312		812	742	721	697	658	603	589	585
		0.237	12.276		879	804	781	755	713	653	638	634
		0.25	12.25	20	928	849	825	797	753	689	673	669
		0.281	12.188		1,045	956	929	897	848	776	758	754
		0.312	12.126		1,163	1,063	1,033	998	943	864	844	839
		0.33	12.09	30	1,232	1,126	1,094	1,057	999	914	893	888

Ratings calculated (see below the table) according ASME B31.3-2002 Table K-1 for plain end standard seamless carbon steel pipes and tubes spec. no. A-53 B, A-106 B, A333, A334 and API 5L. Temperatures ranging 100 of - 700 of.

Size (in)	Outside Diameter (in)	Wall Thickness (in)	Inside Diameter (in)	Schedule	Temperature (° F)							
					100	200	300	400	500	600	650	700
					Allowable Stress (psi)							
					23300	21300	20700	20000	18900	17300	16900	16800
Maximum Allowable Pressure (psi)												
12	12.75	0.344	12.062		1,285	1,175	1,142	1,103	1,042	954	932	927
		0.375	12		1,404	1,283	1,247	1,205	1,139	1,042	1,018	1,012
		0.406	11.938	40	1,523	1,392	1,353	1,307	1,235	1,131	1,104	1,098
		0.438	11.874		1,646	1,505	1,462	1,413	1,335	1,222	1,194	1,187
		0.5	11.75		1,887	1,725	1,676	1,619	1,530	1,401	1,368	1,360
		0.562	11.626	60	2,129	1,946	1,892	1,828	1,727	1,581	1,544	1,535
		0.625	11.5		2,378	2,173	2,112	2,041	1,929	1,765	1,724	1,714
		0.688	11.374	80	2,628	2,402	2,335	2,256	2,132	1,951	1,906	1,895
		0.75	11.25		2,877	2,630	2,556	2,469	2,333	2,136	2,086	2,074
		0.844	11.062	100	3,257	2,978	2,894	2,796	2,642	2,418	2,363	2,349
		1	10.75	120	3,900	3,565	3,464	3,347	3,163	2,895	2,828	2,812
		1.125	10.5	140	4,424	4,044	3,930	3,797	3,589	3,285	3,209	3,190
1.312	10.126	160	5,225	4,777	4,642	4,485	4,239	3,880	3,790	3,768		
14	14	0.25	13.5	10	844	772	750	725	685	627	612	609
		0.281	13.438		951	869	845	816	771	706	689	685
		0.312	13.376	20	1,057	967	939	908	858	785	767	762
		0.344	13.312		1,168	1,068	1,038	1,003	947	867	847	842
		0.375	13.25	30	1,276	1,166	1,133	1,095	1,035	947	925	920
		0.406	13.188		1,383	1,265	1,229	1,188	1,122	1,027	1,003	998
		0.438	13.124	40	1,495	1,367	1,328	1,284	1,213	1,110	1,085	1,078
		0.459	13.082		1,569	1,434	1,394	1,347	1,273	1,165	1,138	1,131
		0.5	13		1,713	1,566	1,522	1,471	1,390	1,272	1,243	1,235
		0.562	12.876	60	1,933	1,767	1,717	1,659	1,568	1,435	1,402	1,394
		0.594	12.812		2,047	1,871	1,818	1,757	1,660	1,520	1,484	1,476
		0.625	12.75		2,157	1,972	1,917	1,852	1,750	1,602	1,565	1,556
		0.688	12.624	80	2,384	2,179	2,118	2,046	1,934	1,770	1,729	1,719
		0.75	12.5		2,608	2,384	2,317	2,239	2,116	1,937	1,892	1,881
		0.812	12.376		2,834	2,591	2,518	2,433	2,299	2,104	2,056	2,044
		0.938	12.124	100	3,299	3,016	2,931	2,832	2,676	2,449	2,393	2,379
1.094	11.812	120	3,884	3,551	3,451	3,334	3,151	2,884	2,817	2,801		
1.25	11.5	140	4,481	4,096	3,981	3,846	3,635	3,327	3,250	3,231		
1.406	11.188	160	5,089	4,652	4,521	4,368	4,128	3,778	3,691	3,669		
16	16	0.188	15.624		553	505	491	474	448	410	401	399
		0.203	15.594		597	546	531	513	485	443	433	431
		0.219	15.562		645	590	573	554	523	479	468	465
		0.237	15.526		699	639	621	600	567	519	507	504
		0.25	15.5	10	737	674	655	633	598	547	535	532
		0.281	15.438		830	759	737	713	673	616	602	599
		0.312	15.376	20	923	844	820	792	749	685	670	666
		0.344	15.312		1,019	932	906	875	827	757	739	735
		0.375	15.25	30	1,113	1,018	989	955	903	826	807	803
		0.406	15.188		1,207	1,103	1,072	1,036	979	896	875	870
		0.438	15.124		1,304	1,192	1,159	1,120	1,058	968	946	940
		0.469	15.062		1,399	1,279	1,243	1,201	1,135	1,039	1,015	1,009
		0.5	15	40	1,494	1,365	1,327	1,282	1,212	1,109	1,083	1,077
		0.562	14.876		1,684	1,540	1,496	1,446	1,366	1,250	1,222	1,214
		0.625	14.75		1,879	1,718	1,669	1,613	1,524	1,395	1,363	1,355
		0.656	14.688	60	1,975	1,806	1,755	1,696	1,602	1,467	1,433	1,424
		0.688	14.624		2,075	1,897	1,844	1,781	1,683	1,541	1,505	1,496
		0.75	14.5		2,269	2,075	2,016	1,948	1,841	1,685	1,646	1,636
		0.812	14.376	80	2,465	2,253	2,190	2,116	2,000	1,830	1,788	1,777
		1.031	13.938	100	3,166	2,894	2,813	2,718	2,568	2,351	2,296	2,283
1.219	13.562	120	3,781	3,456	3,359	3,245	3,067	2,807	2,742	2,726		
1.438	13.124	140	4,513	4,125	4,009	3,874	3,660	3,351	3,273	3,254		
1.594	12.812	160	5,045	4,612	4,482	4,330	4,092	3,746	3,659	3,637		
18	18	0.219	17.562		573	523	509	491	464	425	415	413
		0.237	17.526		620	567	551	532	503	460	450	447
		0.25	17.5		654	598	581	562	531	486	475	472
		0.281	17.438		737	673	654	632	598	547	534	531
		0.312	17.376	20	819	749	728	703	664	608	594	591
		0.344	17.312		904	827	803	776	734	672	656	652
		0.375	17.25		987	903	877	847	801	733	716	712
		0.406	17.188		1,070	979	951	919	868	795	776	772
		0.438	17.124	30	1,156	1,057	1,027	993	938	859	839	834
		0.469	17.062		1,240	1,134	1,102	1,064	1,006	921	899	894
		0.5	17		1,324	1,210	1,176	1,136	1,074	983	960	955
		0.562	16.876	40	1,492	1,364	1,326	1,281	1,210	1,108	1,082	1,076
		0.625	16.75		1,664	1,521	1,479	1,429	1,350	1,236	1,207	1,200
		0.688	16.624	60	1,837	1,680	1,632	1,577	1,490	1,364	1,333	1,325
		0.75	16.5		2,009	1,836	1,784	1,724	1,629	1,491	1,457	1,448

Ratings calculated (see below the table) according ASME B31.3-2002 Table K-1 for plain end standard seamless carbon steel pipes and tubes spec. no. A-53 B, A-106 B, A333, A334 and API 5L. Temperatures ranging 100 of - 700 of.

Size (in)	Outside Diameter (in)	Wall Thickness (in)	Inside Diameter (in)	Schedule	Temperature (° F)							
					100	200	300	400	500	600	650	700
					Allowable Stress (psi)							
					23300	21300	20700	20000	18900	17300	16900	16800
Maximum Allowable Pressure (psi)												
		0.812	16.376		2,181	1,994	1,938	1,872	1,769	1,619	1,582	1,572
		0.938	16.124	80	2,534	2,317	2,251	2,175	2,055	1,881	1,838	1,827
		1.156	15.688	100	3,155	2,884	2,803	2,708	2,559	2,342	2,288	2,275
		1.275	15.25	120	3,499	3,199	3,109	3,004	2,838	2,598	2,538	2,523
		1.562	14.876	140	4,346	3,973	3,861	3,730	3,525	3,227	3,152	3,133
		1.781	14.438	160	5,007	4,577	4,448	4,298	4,062	3,718	3,632	3,610

¹⁾ STD (standard) = schedule 40

²⁾ XS (extra strong) = schedule 80

The calculations of allowable pressure in the table above are made with the ANSI/ASME Piping Code B31.1 equation:

$$P = 2 SE (t_m - A) / (D_o - 2 y (t_m - A)) \quad (1)$$

where

P = allowable pressure (psi)

SE = maximum allowable stress in pipe wall (psi)

t_m = wall thickness (in)

A = additional thickness depending of type of pipe (in) ($A = 0$ for the calculations above)

y = a coefficient depending on material and temperature range ($y = 0.4$ for the calculations above)

D_o = outside diameter (in)