

SEAMLESS PIPING

Pressure/temperature ratings for Seamless Carbon Steel Pipe to ASTM A106 Grade B*

		Temperature, Degrees F →		-20 to 650	700	750	775
		Allowable stress "S" lb/in ² →		15,000	14,350	12,950	11,875
Nominal bore and (OD) ins	Schedule number	Wall designation	Wall thickness inches	Maximum working pressure, lb/in ²			
½ (0.840)	40	STD	0.109	1103	1055	952	873
	80	XS	0.147	2434	2328	2101	1927
	160		0.188	3947	3776	3408	3125
		XXS	0.294	8389	8026	7243	6641
¾ (1.050)	40	STD	0.113	997	954	861	790
	80	XS	0.154	2113	2021	1824	1673
	160		0.219	4017	3843	3468	3180
		XXS	0.308	6941	6640	5993	5495
1 (1.315)	40	STD	0.133	1200	1148	1036	950
	80	XS	0.179	2222	2125	1918	1759
	160		0.250	3873	3705	3344	3066
		XXS	0.358	6658	6369	5748	5271
1¼ (1.660)	40	STD	0.140	1078	1032	931	855
	80	XS	0.191	1939	1855	1674	1534
	160		0.250	3006	2876	2595	2380
		XXS	0.382	5585	5343	4821	4421
1½ (1.900)	40	STD	0.145	1005	962	868	796
	80	XS	0.200	1821	1742	1572	1442
	160		0.281	3093	2959	2671	2449
		XXS	0.400	5114	4893	4415	4049
2 (2.375)	40	STD	0.154	905	866	781	717
	80	XS	0.218	1661	1589	1434	1315
	160		0.344	3237	3097	2795	2563
		XXS	0.436	4480	4286	3868	3547
2½ (2.875)	40	STD	0.203	1217	1164	1051	963
	80	XS	0.276	1942	1858	1677	1537
	160		0.375	2980	2831	2555	2343
		XXS	0.552	4934	4720	4260	3906
3 (3.500)	40	STD	0.216	1094	1046	944	866
	80	XS	0.300	1778	1701	1535	1407
	160		0.438	2939	2812	2538	2327
		XXS	0.600	4407	4216	3804	3489
3½ (4.000)	40	STD	0.226	1025	980	885	811
	80	XS	0.318	1669	1596	1440	1321
4 (4.500)	40	STD	0.237	1433	1371	1237	1134
	80	XS	0.337	2076	1986	1792	1643
	120		0.438	2740	2621	2365	2169
	160		0.531	3379	3233	2917	2675
		XXS	0.674	4394	4203	3793	3478
5 (5.563)	40	STD	0.258	1259	1205	1087	997
	80	XS	0.375	1856	1776	1602	1469
	120		0.500	2520	2411	2176	1995
	160		0.625	3201	3062	2764	2534
		XXS	0.750	3905	3736	3372	3092
6 (6.625)	40	STD	0.280	1143	1094	987	905
	80	XS	0.432	1793	1715	1548	1420
	120		0.562	2368	2266	2045	1875
	160		0.719	3082	2948	2661	2440
		XXS	0.864	3767	3604	3252	2982
8 (8.625)	20		0.250	777	744	671	615
	30		0.277	861	824	743	682
	40	STD	0.322	1007	963	869	797
	60		0.406	1277	1221	1102	1011
	80	XS	0.500	1588	1519	1371	1257
	100		0.594	1900	1818	1640	1504
	120		0.719	2323	2222	2006	1839
	140		0.312	2647	2533	2286	2096
	160	XXS	0.875	2868	2743	2476	2270
			0.906	2977	2848	2570	2357
10 (10.750)	20		0.250	621	594	536	492
	30		0.307	766	733	661	606
	40	STD	0.365	912	872	787	722
	60	XS	0.500	1263	1209	1091	1000

*Section 1 of Code for Pressure Piping allows the use of Seamless Pipe to ASTM A-53 up to 600 lb/in² max.

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		Temperature, Degrees F →						
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		Allowable stress "S" lb/in ² →	15,000	14,350	12,950	11,875		
Nominal bore and (OD) ins	Schedule number	Wall designation	Wall thickness inches	Maximum working pressure, lb/in ²				
10 (10.750)	80	XXS	0.594	1510	1444	1303	1195	
	100		0.719	1842	1762	1590	1458	
	120		0.844	2182	2088	1884	1728	
	140		1.000	2612	2499	2255	2068	
	160		1.125	2963	2835	2558	2346	
12 (12.750)	20	STD	0.250	522	500	451	414	
	30		0.330	693	663	598	548	
	40		0.375	788	754	680	624	
			0.406	854	817	738	676	
	60		XS	0.500	1060	1014	915	839
	80	0.562	1195	1143	1031	946		
	100	XXS	0.688	1472	1408	1271	1165	
	120		0.844	1823	1744	1574	1443	
	140		1.000	2178	2084	1881	1725	
	160		1.125	2468	2361	2130	1953	
	1.312		2911	2785	2513	2304		
14 (14.000)	10	STD	0.250	475	455	410	376	
	20		0.312	594	569	513	470	
	30		0.375	716	685	618	567	
	40		0.438	839	803	724	664	
	60		XS	0.500	963	921	831	762
		0.594	1148	1099	991	909		
	80	0.750	1460	1397	1261	1156		
	100	0.938	1846	1766	1594	1461		
	120	1.094	2169	2075	1873	1717		
	140	1.250	2500	2392	2159	1979		
160	1.406	2835	2712	2448	2244			
16 (16.000)	10	STD	0.250	415	397	358	329	
	20		0.312	519	496	448	411	
	30		0.375	625	598	540	495	
	40		XS	0.500	840	803	725	665
	60		0.656	1108	1060	957	877	
	80	0.844	1439	1376	1242	1139		
	100	1.031	1771	1694	1529	1402		
	120	1.219	2113	2022	1824	1673		
	140	1.438	2517	2408	2173	1993		
	160	1.594	2812	2690	2427	2226		
18 (18.000)	10	STD	0.250	369	353	318	292	
	20		0.312	461	441	398	365	
	30		0.375	555	531	479	439	
	40		XS	0.438	649	621	561	514
	60		0.500	744	712	643	589	
	80	0.562	838	802	724	664		
	100	0.750	1126	1077	972	891		
	120	0.938	1420	1359	1226	1124		
	140	1.156	1766	1690	1525	1398		
	160	1.375	2118	2027	1829	1677		
20 (20.000)	10	STD	0.250	331	317	286	262	
	20		0.375	499	477	430	395	
	30		XS	0.500	669	640	577	529
	40		0.594	797	762	688	631	
	60		0.812	1098	1050	948	869	
	80	1.031	1404	1343	1212	1111		
	100	1.281	1760	1684	1520	1394		
	120	1.500	2079	1989	1795	1646		
	140	1.750	2446	2340	2112	1937		
	160	1.969	2776	2655	2396	2197		
24 (24.000)	10	STD	0.250	276	264	238	218	
	20		XS	0.375	415	397	358	328
	30		0.500	556	532	480	440	
	40		0.562	625	598	540	495	
	60		0.688	768	735	663	608	
	80	0.969	1091	1044	942	864		
	100	1.219	1383	1323	1194	1095		
	120	1.531	1753	1677	1514	1388		
	140	1.812	2093	2003	1807	1657		
	160	2.062	2399	2295	2071	1899		
	2.344	2752	2633	2376	2178			

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