

STAINLESS STEEL NIPPLES

**SCHEDULE 40 WELDED**

Stainless steel pipe nipples are manufactured from stainless steel pipe that conforms to specification ASTM A312/SA312.

All stainless steel nipples conform to specification ASTM A733. Threads conform to the requirements of ANSI B1.20.1.

304

The basic alloy. Type 304 (18-8) is an austenitic steel possessing a minimum of 18% chromium and 8% nickel, combined with a maximum of 0.08% carbon. It is a nonmagnetic steel which cannot be hardened by heat treatment, but instead, must be cold worked to obtain higher tensile strengths.

Because of its ability to withstand the corrosive action of various acids found in fruits, meats, milk, and vegetables, Type 304 is especially suited for all types of dairy equipment piping and valves, the brewing industry, the citrus and fruit juice industry, and in food processing applications. Also used for the dye tanks, pipelines buckets, dippers, etc. that come in contact with the lormic, acetic, and other organic acids used in the dyeing industry.

In the marine environment, because of its slightly higher strength and wear resistance than type 316 it is also used for nuts, bolts, screws, and other fasteners. It is also used for springs, cogs, and other components where both wear and corrosion resistance is needed.

PRICING FILE AVAILABLE ONLINE

Both #304 and #316 nipples are NSF/ANSI 372 and NSF/ANSI 61 compliant.

**SCHEDULE 80 SEAMLESS**

- SEAMLESS FOR UNRESTRICTED FLOW
- USE WITH AIR, WATER, OIL, NATURAL GAS, STEAM
- FITTINGS: USE THREADED CLASS 3000 HIGH-PRESSURE STAINLESS STEEL.
- ASTM A733 • ASTM A312 • ANSI/ ASME B1.20.1
- PSI 3000

316

For severe environments. Of course, there are many industrial processes that require a higher level of resistance to corrosion than Type 304 can offer. For these applications, Type 316 is the answer.

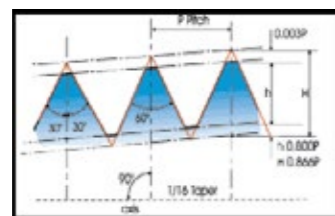
In type 316, the nickel content is increased slightly. What distinguishes Type 316 from Type 304 is the addition of molybdenum up to a maximum of 3%.

Molybdenum increases the corrosion resistance of this chromium-nickel alloy to withstand attack by many industrial chemicals and solvents, and, in particular, inhibits pitting caused by chlorides. As such, molybdenum is one of the single most useful alloying additives in the fight against corrosion.

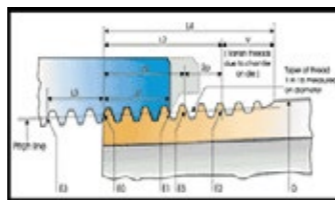
Type 316 can withstand corrosive attack by sodium and calcium brines, hypochlorite solutions, phosphoric acid; and the sulfite liquors and sulfurous acids used in the paper pulp industry. This alloy, therefore, is specified for industrial equipment that handles the corrosive process chemicals used to produce inks, rayons, photographic chemicals, paper, textiles, bleaches, and rubber. Type 316 is also used extensively for surgical implants within the hostile environment of the body.

Type 316 is the main stainless used in the marine environment, with the exception of fasteners and other items where strength and wear resistance are needed, then Type 304 (18-8) is typically used.

Basic Dimension for American Standard Pipe Threads



Taper thread
 $H = 0.866025 p = 0.866025/n$
 $h = 0.800 p = 0.800/n$



Parallel thread
 $L2 = (0.8D + 6.8) / n = (0.8D + 6.8)p$

Nominal Pipe Size (inches)	O.D. of Pipe (D)	Threads /in (N)	Pitch of Thread (P)	Pitch Dia. at Beginning of External Thread (E0)	Handtight Engagement		Effective Thread, External			Depth of Thread h	
					Length ² (L1)		Diam. ³ (E1)	Length ⁴ (L2)			Diam. (E2)
					Inch	Thread		Inch	Thread		
1/8	0.405	27.0	0.03704	0.36351	0.1615	4.36	0.37360	0.2639	7.12	0.38000	0.029
1/4	0.540	18.0	0.05556	0.47739	0.2278	4.10	0.49163	0.4018	7.23	0.50250	0.044
3/8	0.675	18.0	0.05556	0.61201	0.2400	4.32	0.62701	0.4078	7.34	0.63750	0.044
1/2	0.840	14.0	0.07143	0.75843	0.3200	4.48	0.77843	0.5337	7.47	0.79179	0.057
3/4	1.050	14.0	0.07143	0.96768	0.3390	4.75	0.98887	0.5457	7.64	1.00179	0.057
1	1.315	11.5	0.08696	1.21363	0.4000	4.60	1.23863	0.6826	7.85	1.25630	0.069
1 1/4	1.660	11.5	0.08696	1.55713	0.4200	4.83	1.58338	0.7068	8.13	1.60130	0.069
1 1/2	1.900	11.5	0.08696	1.79609	0.4200	4.83	1.82234	0.7235	8.32	1.84130	0.069
2	2.375	8.0	0.12500	2.26902	0.4360	5.01	2.29627	0.7565	8.70	2.31630	0.069
2 1/2	2.875	8.0	0.12500	2.71953	0.6820	5.46	2.76216	1.31375	9.10	2.79062	0.100
3	3.500	8.0	0.12500	3.34062	0.7660	6.13	3.38850	1.2000	9.60	3.41562	0.100
3 1/2	4.000	8.0	0.12500	3.83750	0.8210	6.57	3.88881	1.2500	10.00	3.91562	0.100
4	4.500	8.0	0.12500	4.33438	0.8440	6.75	4.38712	1.3000	10.40	4.41562	0.100
5	5.563	8.0	0.12500	5.39073	0.9370	7.50	5.44929	1.4063	11.25	5.47862	0.100
6	6.625	8.0	0.12500	6.44609	0.9580	7.66	6.50597	1.5125	12.10	6.54062	0.100

Nominal Pipe Size (inches)	Length, L1 Plane to L2 Plane External Thread (L2-L1)		Wrench Makeup Length for Internal Thread ⁷		Diam. (E3)	Vanish Thread (V)		Overall ⁸ Length External Thread (L4)	Nominal Complete External Thread ⁵		Height of Thread (h)	Increase in Diam./Thread (0.0625/n)	Basic ⁶ Minor Diam. At Small End of Pipe (K0)
	Inch	Thread	Inch	Thread		Inch	Thread		Length (L5)	Diam. (E5)			
1/8	0.1024	2.76	0.1111	3	0.35656	0.1285	3.47	0.3924	0.1898	0.37537	0.02963	0.00231	0.3339
1/4	0.1740	3.13	0.1667	3	0.46697	0.1928	3.47	0.5946	0.2907	0.49556	0.04444	0.00347	0.4329
3/8	0.1678	3.02	0.1667	3	0.60160	0.1928	3.47	0.6006	0.2967	0.63056	0.04444	0.00347	0.5676
1/2	0.2137	2.99	0.2143	3	0.74504	0.2478	3.47	0.7815	0.3909	0.78286	0.05714	0.00446	0.7013
3/4	0.2067	2.89	0.2143	3	0.95429	0.2478	3.47	0.7935	0.4029	0.99286	0.05714	0.00446	0.9105
1	0.2828	3.25	0.2609	3	1.19733	0.3017	3.47	0.9845	0.5089	1.24543	0.06957	0.00543	1.1441
1 1/4	0.2868	3.30	0.2609	3	1.54083	0.3017	3.47	1.0085	0.5329	1.59043	0.06957	0.00543	1.4876
1 1/2	0.3035	3.49	0.2609	3	1.77978	0.3017	3.47	1.0252	0.5496	1.83043	0.06957	0.00543	1.7265
2	0.3205	3.69	0.2609	3	2.25272	0.3017	3.47	1.0582	0.5826	2.30543	0.06957	0.00543	2.1995
2 1/2	0.4555	3.64	0.2500	2	2.70391	0.4337	3.47	1.5712	0.8875	2.77500	0.10000	0.00781	2.6195
3	0.4340	3.47	0.2500	2	3.32500	0.4337	3.47	1.6337	0.9500	3.40000	0.10000	0.00781	3.2406
3 1/2	0.4290	3.43	0.2500	2	3.82188	0.4337	3.47	1.6837	1.0000	3.90000	0.10000	0.00781	3.7375
4	0.4560	3.65	0.2500	2	4.31875	0.4337	3.47	1.7337	1.0500	4.40000	0.10000	0.00781	4.2344
5	0.4693	3.75	0.2500	2	5.37511	0.4337	3.47	1.8400	1.1563	5.46300	0.10000	0.00781	5.2907
6	0.5545	4.44	0.2500	2	6.43047	0.4337	3.47	1.9462	1.2625	6.52500	0.10000	0.00781	6.3461

Note: This information is selected from the International Standard for Pipe Threads, ASME B1.20.1.



Basic Dimension for British and Din Standard Pipe Threads

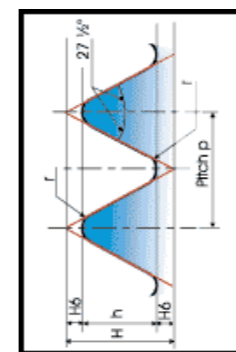


Fig 1 - Parallel thread
 $H = 0.960491 p$
 $h = 0.640327 p$
 $r = 0.137329 p$

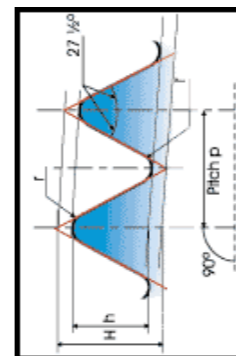
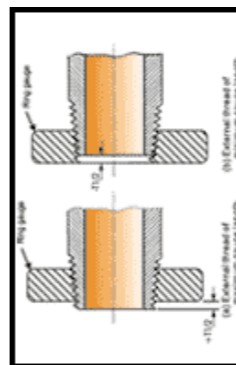


Fig 2 - Taper thread
 $H = 0.960237 p$
 $h = 0.640327 p$
 $r = 0.137278 p$



(a) External thread of maximum gauge length
 (b) External thread of minimum gauge length

International Standard ISO 7/1, Pipe Threads Dimensions

Designations of thread size	Number of threads in 25.4 mm	Pitch P	Height of thread h	Diameters at gauge plane			Gauge Length (external thread)		Tolerance on position of gauge			Length of useful external thread not less than			
				Major (gauge diameter) d	Pitch d2	Minor d1	Nominal	Tolerance ±T/2		Minimum	Tolerance ±T/2		For Nominal gauge length	For maximum gauge length	For minimum gauge length
								Turns of threads	Turns of threads		Turns of threads	Turns of threads			
1/8	28	0.907	0.581	9.728	9.147	8.566	4	0.9	1	1.1	1.1	6.5	7.4	5.6	
1/4	19	1.337	0.856	13.157	12.301	11.445	6	1.3	1	1.7	1.7	9.7	11	8.4	
3/8	19	1.337	0.856	16.662	15.806	14.95	6.4	1.3	1	1.7	1.7	10.1	11.4	8.8	
1/2	14	1.814	1.162	20.955	19.793	18.631	8.2	1.8	1	2.3	2.3	13.2	15	11.4	
3/4	14	1.814	1.162	26.441	25.279	24.117	9.5	1.8	1	2.3	2.3	14.5	16.3	12.7	
1	11	2.309	1.479	33.249	31.77	30.291	10.4	2.3	1	2.9	2.9	16.8	19.1	14.5	
1 1/4	11	2.309	1.479	41.91	40.431	38.952	12.7	2.3	1	2.9	2.9	19.1	21.4	16.8	
1 1/2	11	2.309	1.479	47.803	46.324	44.845	12.7	2.3	1	2.9	2.9	19.1	21.4	16.8	
2	11	2.309	1.479	59.614	58.135	56.656	15.9	2.3	1	3.5	3.5	23	25.7	21.1	
2 1/2	11	2.309	1.479	75.184	73.705	72.226	17.5	3.5	1	3.5	3.5	26.7	30.2	23.2	
3	11	2.309	1.479	87.884	86.405	84.926	20.6	3.5	1	3.5	3.5	29.8	33.3	26.3	
4	11	2.309	1.479	113.03	111.551	110.072	25.4	3.5	1	3.5	3.5	35.8	39.3	32.3	
5	11	2.309	1.479	138.43	136.951	135.472	28.6	3.5	1	3.5	3.5	40.1	43.6	36.6	
6	11	2.309	1.479	163.83	162.351	160.872	28.6	3.5	1	3.5	3.5	40.1	43.6	36.6	

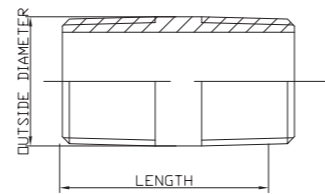
Note: This information is selected from the International Standard ISO 7/1:2000. Pipe threads where pressure - tight joints, Table 1



Steel Pipe Nipple with British/Din Standard



Material : BS EN 10241
 Dimensions : BS EN 10241
 Threads : ISO7/1
 Schedule : Medium/Heavy



Carbon Steel Pipe Nipple Medium/Heavy ,Welded/Seamless																		
Pipe Size	Pipe O.D.	Length Close	Pipe Nipple Lengths (mm)															
mm	mm	mm																
6	10.3	19	30	40	50	60	80	100	120	150	180	200	250	300	350	400	450	500
8	13.7	27	30	40	50	60	80	100	41/2	150	180	200	250	300	350	400	450	500
10	17.1	28	30	40	50	60	80	100	41/2	150	180	200	250	300	350	400	450	500
15	21.3	37	X	40	50	60	80	100	41/2	150	180	200	250	300	350	400	450	500
20	26.7	39	X	40	50	60	80	100	41/2	150	180	200	250	300	350	400	450	500
25	33.4	46	X	X	50	60	80	100	41/2	150	180	200	250	300	350	400	450	500
32	42.2	51	X	X	50	60	80	100	41/2	150	180	200	250	300	350	400	450	500
40	48.3	51	X	X	50	60	80	100	41/2	150	180	200	250	300	350	400	450	500
50	60.3	60	X	X	X	60	80	100	41/2	150	180	200	250	300	350	400	450	500
65	76.1	69	X	X	X	X	80	100	41/2	150	180	200	250	300	350	400	450	500
80	88.9	75	X	X	X	X	80	100	41/2	150	180	200	250	300	350	400	450	500
100	114.3	87	X	X	X	X	X	100	41/2	150	180	200	250	300	350	400	450	500
125	141.3	96	X	X	X	X	X	X	120	150	180	200	250	300	350	400	450	500
150	168.3	96	X	X	X	X	X	X	120	150	180	200	250	300	350	400	450	500

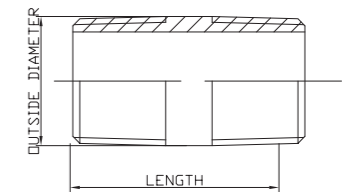
Noted: Other lengths and size available. Grooved end, SQ end and Bevel end available. Contact us for details.



Stainless Steel Nipple with American Standard



Material : ASTM A312/A312M
 Dimensions : ASTM A733
 Threads : ASME B1.20.1
 Schedule : 40/80



Stainless Steel Nipple Sch.40/80, Welded/Seamless																		
Pipe Size	Pipe O.D.	Length Close	Pipe Nipple Lengths (In)															
In	In	In																
1/8	0.405	3/4	1 1/2	2	2 1/2	3	3 1/2	4	4 1/2	5	5 1/2	6	7	8	9	10	11	12
1/4	0.540	7/8	1 1/2	2	2 1/2	3	3 1/2	4	4 1/2	5	5 1/2	6	7	8	9	10	11	12
3/8	0.675	1	1 1/2	2	2 1/2	3	3 1/2	4	4 1/2	5	5 1/2	6	7	8	9	10	11	12
1/2	0.840	1 1/8	1 1/2	2	2 1/2	3	3 1/2	4	4 1/2	5	5 1/2	6	7	8	9	10	11	12
3/4	1.050	1 3/8	1 1/2	2	2 1/2	3	3 1/2	4	4 1/2	5	5 1/2	6	7	8	9	10	11	12
1	1.315	1 1/2	1 1/2	2	2 1/2	3	3 1/2	4	4 1/2	5	5 1/2	6	7	8	9	10	11	12
1-1/4	1.660	1 5/8	X	2	2 1/2	3	3 1/2	4	4 1/2	5	5 1/2	6	7	8	9	10	11	12
1-1/2	1.900	1 3/4	X	2	2 1/2	3	3 1/2	4	4 1/2	5	5 1/2	6	7	8	9	10	11	12
2	2.375	2	X	2	2 1/2	3	3 1/2	4	4 1/2	5	5 1/2	6	7	8	9	10	11	12
2-1/2	2.875	2 1/2	X	X	2 1/2	3	3 1/2	4	4 1/2	5	5 1/2	6	7	8	9	10	11	12
3	3.500	2 5/8	X	X	X	3	3 1/2	4	4 1/2	5	5 1/2	6	7	8	9	10	11	12
4	4.500	2 7/8	X	X	X	3	3 1/2	4	4 1/2	5	5 1/2	6	7	8	9	10	11	12
5	5.563	3	X	X	X	3	3 1/2	4	4 1/2	5	5 1/2	6	7	8	9	10	11	12
6	6.625	3 1/8	X	X	X	X	3 1/2	4	4 1/2	5	5 1/2	6	7	8	9	10	11	12
8	8.625	3 1/2	X	X	X	X	3 1/2	4	4 1/2	5	5 1/2	6	7	8	9	10	11	12

Noted: Other lengths and size available. Grooved end, SQ end and Bevel end available. Contact us for details.

