



**Torque Values
ANSI Class 150**

1/16" Durlon 9000/9000N Filled PTFE

Pipe Size (in)	1/16" Durlon 9000, Class 150 Ring Torque, ft-lbs, Lubricated with Never-Seize							1/16" Durlon 9000, Class 150 Full Face Torque, ft-lbs, Lubricated with Never-Seize							# Bolts & Diameter
	Min. torque required @ internal pressure				Max. Torque			Min. torque required @ internal pressure				Max. Torque			
	100 psi	150 psi	200 psi	285 psi	A193- B8, B8M	A193-B8, B8M CI 2	A193-B7	100 psi	150 psi	200 psi	285 psi	A193- B8, B8M	A193-B8, B8M CI 2	A193-B7	
1/2	3	3	3	4	14	14	14	24	27	28	30	19**	51	56	4 @ 1/2"
3/4	4	5	5	5	16	20	20	30	33	35	37	19**	51	56	4 @ 1/2"
1	6	6	7	7	16	27	27	36	39	41	41	19**	51	56	4 @ 1/2"
1-1/2	11	12	13	15	16	51	55	47	51	54	31*	19**	51	56	4 @ 1/2"
2	23	25	27	29	32	102	111	83	91	96	103	38**	110	113	4 @ 5/8"
3	39	43	46	50	38	102	113	122	132	140	148	38**	119*	113	4 @ 5/8"
4	27	30	33	35	35	102	113	83	90	95	101	38**	110	113	8 @ 5/8"
6	52	57	61	67	67**	154	202	123	132	138	145	67**	154	202	8 @ 3/4"
8	70	78	83	91	67**	154	202	174	186	194	203	67**	180*	202	8 @ 3/4"
10	67	74	79	86	93	249	324	170	183	190	198	109**	249	327	12 @ 7/8"
12	89	98	105	115	109**	249	327	249	268	280	293	109**	293*	327	12 @ 7/8"
14	110	122	131	143	164**	375	492	350	377	394	413	164**	437*	492	12 @ 1"
16	105	116	124	137	164**	375	492	317	342	358	376	164**	437*	493	16 @ 1"
18	160	177	190	207	209	557	731	349	372	387	400	244**	557	731	16@1-1/8"
20	141	156	167	188	209	557	686	328	350	363	374	244**	557	731	20@1-1/8"
24	203	224	240	282	296	790	985	458	487	505	520	345**	790	1036	20@1-1/4"

Note: It is assumed that new studs, nuts and hardened steel washers are used and studs, nuts and nut facings are lubricated with a never-seize paste using proper installation and bolt tightening practices. The maximum torque is based on the higher of the maximum allowable material stress or a bolt yield of 60% unless indicated otherwise. The above was calculated using the proposed ASME Gasket Constants (ROTT Testing, TTRL (Ecole Polytechnique), University of Montreal).

** 70% of bolt yield.

Gasket Resources Inc.
 P.O. Box 565
 Exton, PA 19341-565
 Toll Free: (866) 707-7300
 Technical Services:
 (713) 467-1316
 e-mail: tech@durlon.com
Website: www.gasketresources.com



**Torque Values
ANSI Class 150**

1/8" Durlon 9000/9000N Filled PTFE

Pipe Size (in)	1/8" Durlon 9000, Class 150 Ring Torque, ft-lbs, Lubricated with Never-Seize							1/8" Durlon 9000, Class 150 Full Face Torque, ft-lbs, Lubricated with Never-Seize							# Bolts & Diameter
	Min. torque required @ internal pressure				Max. Torque			Min. torque required @ internal pressure				Max. Torque			
	100 psi	150 psi	200 psi	285 psi	A193- B8, B8M	A193-B8, B8M CI 2	A193-B7	100 psi	150 psi	200 psi	285 psi	A193- B8, B8M	A193-B8, B8M CI 2	A193-B7	
1/2	2	2	3	3	14	14	14	18	20	21	22	19**	51	56	4 @ 1/2"
3/4	3	4	4	4	16	20	20	23	13	26	28	19**	51	56	4 @ 1/2"
1	4	5	5	6	16	27	27	27	29	31	33	19**	51	56	4 @ 1/2"
1-1/2	9	9	10	12	16	51	55	36	39	41	43	19**	51	56	4 @ 1/2"
2	17	19	21	23	32	102	111	63	68	72	77	38**	110	113	4 @ 5/8"
3	30	33	36	38	38	102	113	92	99	103	64*	38**	119*	113	4 @ 5/8"
4	21	23	26	30	35	102	113	62	67	71	80	38**	110	113	8 @ 5/8"
6	40	45	51	61	67**	154	202	92	100	111	126	67**	154	202	8 @ 3/4"
8	54	64	73	77	67**	154	202	129	145	161	184	67**	184*	202	8 @ 3/4"
10	53	63	73	88	93	249	324	127	146	163	188	109**	249	327	12 @ 7/8"
12	71	86	99	102	109**	249	327	186	211	236	272	109**	291	327	12 @ 7/8"
14	90	109	127	154	164**	375	492	261	297	331	382	164**	437*	492	12 @ 1"
16	86	106	122	148	164**	375	492	237	271	303	351	164**	437*	493	16 @ 1"
18	130	158	183	222	209	557	731	266	312	350	408	244**	557	731	16@1-1/8"
20	117	143	166	203	209	557	686	252	296	333	388	244**	557	731	20@1-1/8"
24	172	212	247	304	296	790	985	359	423	477	559	345**	790	1036	20@1-1/4"

Note: It is assumed that new studs, nuts and hardened steel washers are used and studs, nuts and nut facings are lubricated with a never-seize paste using proper installation and bolt tightening practices. The maximum torque is based on the higher of the maximum allowable material stress or a bolt yield of 60% unless indicated otherwise. The above was calculated using the proposed ASME Gasket Constants (ROTT Testing, TTRL (Ecole Polytechnique), University of Montreal).

* 70% of bolt yield.

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**Torque Values
ANSI Class 300**

Durlon 9000/9000N Filled PTFE

Pipe Size (in)	1/16" Durlon 9000, Class 300 Ring Torque, ft-lbs, Lubricated with Never-Seize							1/8" Durlon 9000, Class 300 Ring Torque, ft-lbs, Lubricated with Never-Seize							# Bolts & Diameter
	Min. torque required @ internal pressure				Max. Torque			Min. torque required @ internal pressure				Max. Torque			
	200 psi	300 psi	500 psi	740 psi	A193- B8, B8M	A193-B8, B8M CI 2	A193-B7	200 psi	300 psi	500 psi	740 psi	A193- B8, B8M	A193-B8, B8M CI 2	A193-B7	
1/2	3	4	4	5	14	14	14	3	3	4	4	3	14	14	4 @ 1/2"
3/4	6	7	8	9	25	25	25	5	5	7	8	25	25	25	4 @ 5/8"
1	8	9	10	11	32	34	34	6	7	9	11	32	34	34	4 @ 5/8"
1-1/2	20	22	25	28	58	82	82	15	18	22	27	58	82	82	4 @ 3/4"
2	14	15	17	19	32	55	55	10	12	15	18	32	55	55	8 @ 5/8"
3	28	30	34	38	58	113	113	21	25	32	40	58	113	113	8 @ 3/4"
4	39	43	49	56	67**	160	160	31	37	47	59	67**	160	160	8 @ 3/4"
6	41	45	51	65	65**	154	168	34	41	54	68	67**	168	168	12 @ 3/4"
8	65	71	87	112	112**	249	266	57	69	92	117	109**	266	266	12 @ 7/8"
10	68	75	100	130	141	278	278	63	78	105	135	141	278	278	16 @ 1"
12	101	112	153	201	209	415	415	95	119	161	208	209	415	415	16@1-1/8"
14	88	99	139	184	209	362	362	86	107	146	190	209	362	362	20@1-1/8"
16	124	142	199	264	296	510	510	122	153	209	273	296	510	510	20@1-1/4"
18	141	157	220	290	321	576	576	135	169	231	300	345**	576	576	24@1-1/4"
20	155	180	255	338	345**	635	625	154	194	267	349	345**	635	635	24@1-1/4"
24	240	292	416	555	627**	985	985	247	314	435	572	627	985	985	24@1-1/2"

Note: It is assumed that new studs, nuts and hardened steel washers are used and studs, nuts and nut facings are lubricated with a never-seize paste using proper installation and bolt tightening practices. The maximum torque is based on the higher of the maximum allowable material stress or a bolt yield of 60% unless indicated otherwise. The above was calculated using the proposed ASME Gasket Constants (ROTT Testing, TTRL (Ecole Polytechnique), University of Montreal).

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