

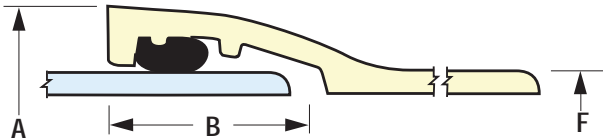


Push-On Joint Pipe

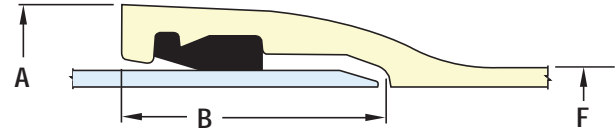
Griffin Push-On Joint Ductile Iron Pipe

The **TYTON JOINT®** and **FASTITE JOINT®** designs incorporate a single rubber sealing gasket assuring a tight, permanent seal. The “push-on” type joint is easy to assemble and fast to install. The push-on design eliminates the need for glands and fasteners. The rubber gasket fits inside the contour of the bell socket, which seats the gasket. The plain-end (spigot) of each pipe is beveled to further ease assembly.

TYTON JOINT® Pipe 3" — 24"



FASTITE JOINT® Pipe 30" — 48"



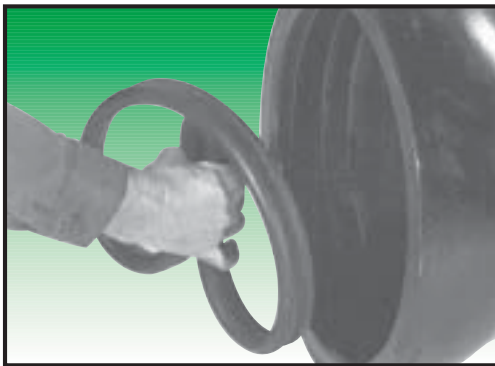
Nominal Pipe Size (inches)	“F” Pipe O.D. (inches)	“A” Pipe Bell O.D. (inches)	“B” Depth of Bell (inches)	Maximum Joint Deflection Angle (degrees)	Maximum Deflection per Joint (inches)	
					18 ft. Laying Length	20 ft. Laying Length
3	3.96	5.46	3.00	5	19	21
4	4.80	6.52	3.15	5	19	21
6	6.90	8.66	3.38	5	19	21
8	9.05	10.82	3.69	5	19	21
10	11.10	12.91	3.75	5	19	21
12	13.20	15.05	3.75	5	19	21
14	15.30	17.67	5.00	5	19	21
16	17.40	19.79	5.00	5	19	21
18	19.50	21.91	5.00	5	19	21
20	21.60	24.03	5.50	5	19	21
24	25.80	28.21	5.95	5	19	21
30	32.00	34.95	6.50	5	na	21
36	38.30	41.37	6.50	4	na	17
42	44.50	48.25	7.50	3	na	12
48	50.80	54.73	8.00	3	na	12



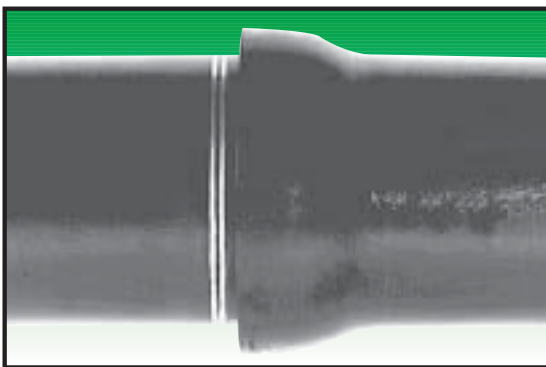
Push-On Joint Pipe

Griffin Push-On Joint Ductile Iron Pipe Push-On Joint Assembly

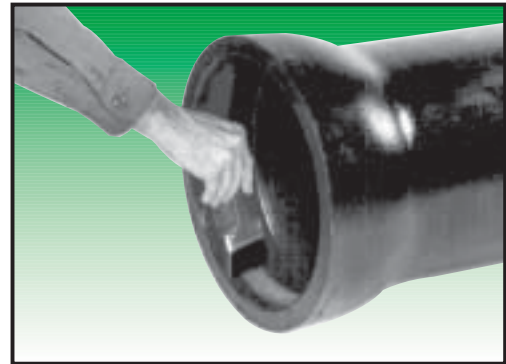
1. Thoroughly remove all traces of foreign material from the gasket groove and bell socket. Foreign material under the gasket may cause a leak. Make a small loop in the gasket and insert in socket. For pipe sizes larger than 20", it may be necessary to make 2 loops in the gasket (6 and 12 o'clock). Assure that the gasket faces the correct direction and is properly seated. **Note:** in cold weather, gaskets should be warmed to facilitate installation.



3. Make sure the plain-end is beveled per Griffin Pipe recommendations. Square or sharp edges may damage or roll the gasket causing a leak. The plain-end should be in reasonably straight alignment and carefully guided into the socket. After contacting the gasket, the joint is completed by pushing the pipe until fully seated in the socket. The spigot stripes are used for reference to indicate proper assembly.



2. Apply pipe lubricant to the exposed surface of gasket and the plain-end of the pipe. Do not apply lubricant to the bell socket or the surface of the gasket in contact with the bell socket. Make sure the plain-end does not contact the ground to avoid having dirt adhere to the lubricant. Lubricant should extend up to the spigot stripes on the plain-end.

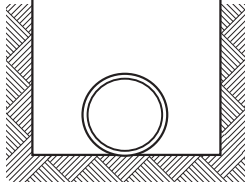


4. Small pipe can be pushed into the bell with a long bar. Larger pipe requires additional force such as a jack, come-along or backhoe. When using a backhoe the pipe can be swung into position while fastened to the backhoe bucket with a sling. The pipe can then be pulled/pushed into the socket while attached to the sling. Alternately, the sling can be removed after positioning the pipe and the backhoe bucket can be used to push on the bell face for proper insertion. Care should be taken not to damage the bell when using this method.

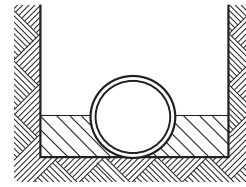


Push-On Joint Pipe

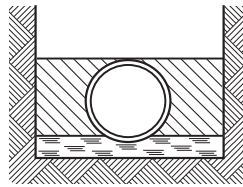
Griffin Push-On Joint Ductile Iron Pipe Standard Trench Laying Conditions



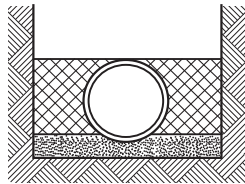
Type 1* Flat-bottom trench† with loose backfill



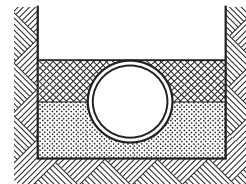
Type 2 Flat-bottom trench† with backfill lightly consolidated to centerline of pipe



Type 3 Pipe bedded in 4-in. (100-mm) minimum loose soil‡ with backfill lightly consolidated to top of pipe



Type 4 Pipe bedded in sand, gravel or crushed stone to depth of 1/8 pipe diameter, 4 in. (100mm) minimum with backfill compacted to top of pipe. (Approximately 80% Standard Proctor, AASHTO§ T-99)



Type 5 Pipe bedded to its centerline in compacted granular material, 4 in. (100mm) minimum under pipe. Compacted granular or select material‡ to top of pipe. (Approximately 90 percent Standard Proctor, AASHTO§ T-99)

Note: Consideration of the pipe-zone embedment conditions included in this figure may be influenced by factors other than pipe strength. For additional information on pipe bedding and backfill, see ANSI/AWWA C600.

* For pipe sizes 14 in. (356mm) and larger, consideration should be given to the use of laying conditions other than Type 1.

† “Flat-bottom” is defined as undisturbed earth.

‡ “Loose soil” or “select material” is defined as native soil excavated from the trench, free of rocks, foreign materials and frozen earth.

§ American Association of State Highway and Transportation Officials, 444 N. Capital St. N.W., Suite 225, Washington, DC 20001





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Push-On Joint Pipe with TYTON JOINT®
Pressure & Special Thickness Classes

Pipe Dimensions					Pipe Weights				
Nominal Pipe Size (in.)	Pressure Class	Thickness Class	Pipe Thickness (in.)	Pipe O.D. (in.)	Weight of pipe barrel per foot (lbs.)	18-foot Laying Lengths		20-foot Laying Lengths	
						Weight per length (lbs.)	Average weight per foot** (lbs.)	Weight per length (lbs.)	Average weight per foot** (lbs.)
3	350	51	0.25	3.96	8.9	168	9.3		
		52	0.28		9.9	186	10.3		
		53	0.31		10.9	204	11.3		
		54	0.34		11.8	220	12.2		
		55	0.37		12.8	238	13.2		
		56	0.40		13.7	254	14.1		
4	350	51	0.25	4.80	10.9	206	11.4		
		52	0.26		11.3	214	11.9		
		53	0.29		12.6	237	13.2		
		54	0.32		13.8	259	14.4		
		55	0.35		15.0	280	15.6		
		56	0.38		16.1	300	16.7		
6	350	50	0.25	6.90	16.0	303	16.8	335	16.8
		51	0.28		17.8	335	18.6	371	18.6
		52	0.31		19.6	368	20.4	407	20.3
		53	0.34		21.4	400	22.2	443	22.1
		54	0.37		23.2	433	24.1	479	24.0
		55	0.40		25.0	465	25.8	515	25.8
8	350	50	0.25	9.05	21.1	400	22.2	442	22.1
		51	0.27		22.8	430	23.9	476	23.8
		52	0.30		25.2	473	26.3	524	26.2
		53	0.33		27.7	518	28.8	574	28.7
		54	0.36		30.1	562	31.2	622	31.1
		55	0.39		32.5	605	33.6	670	33.5
10	350	50	0.26	11.10	27.1	514	28.6	568	28.4
		51	0.29		30.1	568	31.6	628	31.4
		52	0.32		33.2	623	34.6	690	34.5
		53	0.35		36.2	677	37.6	750	37.5
		54	0.38		39.2	731	40.6	810	40.5
		55	0.41		42.1	784	43.6	868	43.4
12	350	50	0.28	13.20	34.8	657	36.5	727	36.3
		51	0.31		38.4	722	40.1	799	40.0
		52	0.34		42.0	787	43.7	871	43.6
		53	0.37		45.6	851	47.3	943	47.1
		54	0.40		49.2	916	50.9	1015	50.8
		55	0.43		52.8	981	54.5	1087	54.3
		55	0.46		56.3	1044	58.0	1157	57.9
		56	0.49		59.9	1109	61.6	1229	61.5

Standard Dimensions and Weights per ANSI/AWWA C151

** "Average weight per foot" shown in tables includes the weight of the bell



Push-On Joint Pipe

Push-On Joint Pipe with TYTON JOINT® Pressure & Special Thickness Classes

Nominal Pipe Size (in.)	Pipe Dimensions				Pipe Weights				
	Pressure Class	Thickness Class	Pipe Thickness (in.)	Pipe O.D. (in.)	Weight of pipe barrel per foot (lbs.)	18-foot Laying Lengths		20-foot Laying Lengths	
						Weight per length (lbs.)	Average weight per foot** (lbs.)	Weight per length (lbs.)	Average weight per foot** (lbs.)
14	250		0.28	15.30	40.4	780	43.3	861	43.1
	300		0.30		43.3	832	46.2	919	45.6
	350		0.31		44.7	858	47.6	947	47.4
		50	0.33		47.5	908	50.4	1003	50.1
		51	0.36		51.7	984	54.7	1087	54.4
		52	0.39		55.9	1059	58.8	1171	58.6
		53	0.42		60.1	1135	63.0	1255	62.8
		54	0.45		64.2	1209	67.2	1337	66.9
		55	0.48		68.4	1284	71.3	1421	71.0
		56	0.51		72.5	1358	75.4	1503	75.2
16	250		0.30	17.40	49.3	948	52.6	1047	52.3
	300		0.32		52.5	1006	55.9	1111	55.6
	350	50	0.34		55.8	1065	59.2	1177	58.9
		51	0.37		60.6	1152	64.0	1273	63.7
		52	0.40		65.4	1238	61.9	1369	68.5
		53	0.43		70.1	1323	73.5	1463	73.2
		54	0.46		74.9	1409	78.3	1559	78.0
		55	0.49		79.7	1495	83.1	1655	82.8
		56	0.52		84.4	1580	87.8	1749	87.5
	18	250			0.31	19.50	57.2	1096	60.9
300			0.34	62.6	1193		66.3	1318	65.9
350			0.36	66.2	1258		69.9	1390	69.5
		50	0.35	64.4	1225		68.1	1354	67.7
		51	0.38	69.8	1322		73.4	1462	73.1
		52	0.41	75.2	1420		78.9	1570	78.5
		53	0.44	80.6	1517		84.3	1678	83.9
		54	0.47	86.0	1614		89.7	1786	89.3
		55	0.50	91.3	1709		94.9	1892	94.6
		56	0.53	96.7	1807		100.4	2000	100.0
20	250		0.33	21.60	67.5	1289	71.6	1424	71.2
	300	50	0.36		73.5	1397	77.6	1544	77.2
	350		0.38		77.5	1469	81.6	1624	81.2
		51	0.39		79.5	1505	83.6	1664	83.2
		52	0.42		85.5	1613	89.6	1784	89.2
		53	0.45		91.5	1721	95.6	1904	95.2
		54	0.48		97.5	1829	101.6	2024	101.2
		55	0.51		103.4	1936	107.6	2142	107.1
		56	0.54		109.3	2042	113.4	2260	113.0
	24	200			0.33	25.80	80.8	1542	85.7
250			0.37	90.5	1717		95.4	1898	94.9
300			0.40	97.7	1846		102.6	2042	102.1
350			0.43	104.9	1976		109.8	2186	109.3
		50	0.38	92.9	1760		97.8	1946	97.3
		51	0.41	100.1	1889		104.9	2090	104.5
		52	0.44	107.3	2019		112.2	2234	111.7
		53	0.47	114.4	2147		119.3	2376	118.8
		54	0.50	121.6	2276		126.4	2520	126.0
		55	0.53	128.8	2406		133.7	2664	133.2
	56	0.56	135.9	2534	140.8	2806	140.3		

Standard Dimensions and Weights per ANSI/AWWA C151

** "Average weight per foot" shown in tables includes the weight of the bell



Push-On Joint Pipe

Push-On Joint Pipe with FASTITE JOINT® Pressure & Special Thickness Classes

Nominal Pipe Size (in.)	Pipe Dimensions				Pipe Weights				
	Pressure Class	Thickness Class	Pipe Thickness (in.)	Pipe O.D. (in.)	Weight of pipe barrel per foot (lbs.)	18-foot Laying Lengths		20-foot Laying Lengths	
						Weight per length (lbs.)	Average weight per foot** (lbs.)	Weight per length (lbs.)	Average weight per foot** (lbs.)
30	150		0.34	32.00	103.5			2240	112.0
	200		0.38		115.5			2480	124.0
	250		0.42		127.5			2720	136.0
	300		0.45		136.5			2900	145.0
	350		0.49		148.4			3138	156.9
		50	0.39		118.5			2540	127.0
		51	0.43		130.5			2780	139.0
		52	0.47		142.5			3020	151.0
		53	0.51		154.4			3258	162.9
		54	0.55		166.3			3496	174.8
		55	0.59		178.2			3734	186.7
		56	0.63		190.0			3970	198.5
36	150		0.38	38.30	138.5			2983	149.2
	200		0.42		152.9			3271	163.6
	250		0.47		170.9			3631	181.6
	300		0.51		185.3			3919	196.0
	350		0.56		203.2			4277	213.9
		50	0.43		156.5			3343	167.2
		51	0.48		174.5			3703	185.2
		52	0.53		192.4			4061	203.1
		53	0.58		210.3			4419	221.0
		54	0.63		228.1			4775	238.8
		55	0.68		245.9			5131	256.6
		56	0.73		263.7			5487	274.3
42	150		0.41	44.50	173.8			3761	188.1
	200		0.47		198.9			4263	213.2
	250		0.52		219.9			4683	234.2
	300		0.57		240.7			5099	255.0
	350		0.63		265.7			5599	280.0
		50	0.47		198.9			4263	213.2
		51	0.53		224.0			4765	238.2
		52	0.59		249.1			5267	263.4
		53	0.65		274.0			5765	288.2
		54	0.71		298.9			6263	313.2
		55	0.77		323.7			6759	338.0
		56	0.83		348.4			7253	362.7
48	150		0.46	50.80	222.6			4836	241.8
	200		0.52		251.3			5410	270.5
	250		0.58		280.0			5984	299.2
	300		0.64		308.6			6556	327.8
	350		0.70		337.1			7126	356.3
		50	0.51		246.6			5316	265.8
		51	0.58		280.0			5984	299.2
		52	0.65		313.4			6652	332.6
		53	0.72		346.6			7316	365.8
		54	0.79		379.8			7980	399.0
		55	0.86		412.9			8642	432.1
		56	0.93		445.9			9302	465.1

Standard Dimensions and Weights per ANSI/AWWA C151

** "Average weight per foot" shown in tables includes the weight of the bell