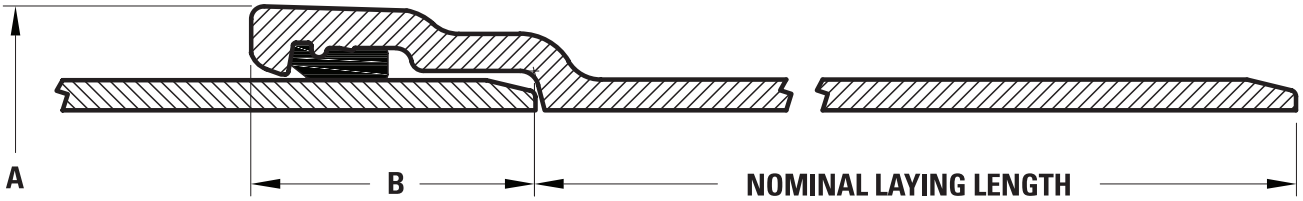
McWANE DUCTILE | IRON STRONG

DUCTILE IRON PIPE

TYTON® JOINT PIPE

14"–24"



PIPE SIZE IN.	PIPE THICKNESS IN.		NOMINAL OUTSIDE DIAMETER	*DIMENSIONS IN.	
	FROM	TO	IN.	A	B
14	.28	.51	15.30	17.80	5.00
16	.30	.52	17.40	19.98	5.00
18	.31	.53	19.50	22.00	5.00
20	.33	.54	21.60	24.12	5.25
24	.33	.56	25.80	28.43	5.50

* Nominal laying length is 18 feet.

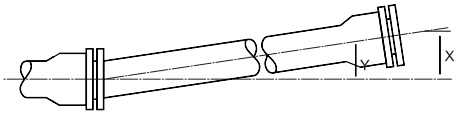
ASSEMBLY INSTRUCTIONS

STEP 1. Thoroughly clean out the bell with special attention to the gasket recess. Remove any foreign material or excess paint. Clean the spigot or beveled plain end and remove any sharp edges with a standard file.

STEP 2. After making sure that the correct gasket is being used, insert it into the recess in the bell with the small end of the gasket facing the bell face.

STEP 3. Apply lubricant to the inside surface of the gasket, making sure that the entire surface is coated. Apply a generous coating of lubricant to the beveled portion of the plain end. **Note:** Use only lube as supplied and/or approved by the manufacturer. *Currently approved lubricants provided by McWane Ductile include Phoenix XL-27 and Black Swan.*

STEP 4. Guide the plain end into the bell, and while maintaining straight alignment, push the plain end into the bell socket. Once the joint is assembled, necessary deflection can be accomplished.



PUSH-ON JOINT PIPE

MAXIMUM ALLOWABLE JOINT DEFLECTION

PIPE SIZE IN.	Y-MAXIMUM JOINT DEFLECTION IN DEGREES	X DEFLECTION IN INCHES 18 FT. LENGTH	APPROXIMATE RADIUS IN FT. OF CURVE PRODUCED BY SUCCESSION OF JOINTS 18 FT. LENGTH
14	5°	19	206
16	5°	19	206
18	5°	19	206
20	5°	19	206
24	5°	19	206

Note: If using Sure Stop 350® locking gaskets, please refer to the deflection limits for that product.

DIMENSIONS AND WEIGHTS FOR SPECIAL CLASSES OF PUSH-ON DUCTILE IRON PIPE

PIPE SIZE IN.	THICKNESS CLASS	NOMINAL THICKNESS IN.	OD* IN.	WT. OF BARREL PER FT. † LB.	TYTON® JOINT		
					WT. OF BELL LB.	WT. PER LGTH.† LB.	AVG. WT. PER FT.‡ LB.
14	50	0.33	15.30	47.5	45	900	50.0
14	51	0.36	15.30	51.7	45	975	54.2
14	52	0.39	15.30	55.9	45	1050	58.4
14	53	0.42	15.30	60.1	45	1125	62.6
14	54	0.45	15.30	64.2	45	1200	66.7
14	55	0.48	15.30	68.4	45	1275	70.9
14	56	0.51	15.30	72.5	45	1350	75.0
16	50	0.34	17.40	55.8	54	1060	58.8
16	51	0.37	17.40	60.6	54	1145	63.6
16	52	0.40	17.40	65.4	54	1230	68.4
16	53	0.43	17.40	70.1	54	1315	73.1
16	54	0.46	17.40	74.9	54	1400	77.9
16	55	0.49	17.40	79.7	54	1490	82.7
16	56	0.52	17.40	84.4	54	1575	87.4
18	50	0.35	19.50	64.4	59	1220	67.7
18	51	0.38	19.50	69.8	59	1315	73.1
18	52	0.41	19.50	75.2	59	1415	78.5
18	53	0.44	19.50	80.6	59	1510	83.9
18	54	0.47	19.50	86	59	1605	89.3
18	55	0.50	19.50	91.3	59	1700	94.6
18	56	0.53	19.50	96.7	59	1800	100.0
20	50	0.36	21.60	73.5	74	1395	77.6
20	51	0.39	21.60	79.5	74	1505	83.6
20	52	0.42	21.60	85.5	74	1615	89.6
20	53	0.45	21.60	91.5	74	1720	95.6
20	54	0.48	21.60	97.5	74	1830	101.6
20	55	0.51	21.60	103.4	74	1935	107.5
20	56	0.54	21.60	109.3	74	2040	113.4
24	50	0.38	25.80	92.9	95	1765	98.2
24	51	0.41	25.80	100.1	95	1895	105.4
24	52	0.44	25.80	107.3	95	2025	112.6
24	53	0.47	25.80	114.4	95	2155	119.7
24	54	0.50	25.80	121.6	95	2385	126.9
24	55	0.53	25.80	128.8	95	2415	134.1
24	56	0.56	25.80	135.9	95	2540	141.2

STANDARD DIMENSIONS AND WEIGHTS OF 14" THROUGH 24" PUSH-ON JOINT DUCTILE IRON PIPE

PIPE SIZE IN.	PRESSURE CLASS PSI	NOMINAL THICKNESS IN.	OD* IN.	WT. OF BARREL PER FT. † LB.	TYTON® JOINT		
					WT. OF BELL LB.	WT. PER LGTH.† LB.	AVG. WT. PER FT.‡ LB.
14	250	0.28	15.30	40.40	45.00	770	42.90
	300	0.30	15.30	43.30	45.00	825	45.80
	350	0.31	15.30	44.70	45.00	850	47.20
16	250	0.30	17.40	49.30	54.00	940	52.30
	300	0.32	17.40	52.50	54.00	1000	55.50
	350	0.34	17.40	55.80	54.00	1060	58.80
18	250	0.31	19.50	57.20	59.00	1090	60.50
	300	0.34	19.50	62.60	59.00	1185	65.90
	350	0.36	19.50	66.20	59.00	1250	69.50
20	250	0.33	21.60	67.50	74.00	1290	71.60
	300	0.36	21.60	73.50	74.00	1395	77.60
	350	0.38	21.60	77.50	74.00	1470	81.60
24	200	0.33	25.80	80.80	95.00	1550	86.10
	250	0.37	25.80	90.50	95.00	1725	95.80
	300	0.40	25.80	97.70	95.00	1855	103.00
	350	0.43	25.80	104.90	95.00	1985	110.20

* Tolerances of OD of spigot end: 14–24 in. = +0.05 in. & -0.08 in.

† Including bell; calculated weight of pipe rounded off to the nearest 5 lb.

‡ Including bell; average weight per foot, based on calculated weight of pipe before rounding.

STANDARDS APPLICABLE TO DUCTILE IRON PIPE AND FITTINGS

THICKNESS DESIGN OF DUCTILE IRON PIPE	ANSI/AWWA C150/A21.50
DUCTILE IRON PIPE FOR WATER AND OTHER LIQUIDS	ANSI/AWWA C151/A21.51, FEDERAL WWP421D, GRADE C
DUCTILE IRON PIPE FOR GRAVITY FLOW SERVICE	ANSI/ASTM A746
DUCTILE IRON FITTINGS FOR WATER AND OTHER LIQUIDS	ANSI/AWWA C110/A21.10
DUCTILE IRON COMPACT FITTINGS	ANSI/AWWA C153/A21.53
FLANGED FITTINGS	ANSI/AWWA C110/A21.10, ANSI B16.1
DUCTILE IRON PIPE WITH THREADED FLANGES	ANSI/AWWA C115/21.15
COATINGS AND LININGS	
Asphaltic	ANSI/AWWA C151/A21.51, ANSI/AWWA C110/A21.10, ANSI/AWWA C153/A21.53
Cement Lining	ANSI/AWWA C104/A21.4
Various Epoxy Linings and Coatings	MANUFACTURER'S STANDARD
Exterior Polyethylene Encasement	ANSI/AWWA C105/A21.5
JOINTS – PIPE AND FITTINGS	
Push-On and Mechanical Rubber-Gasket Joints	ANSI/AWWA C111/A21.11, FEDERAL WWP421D
Flanged	ANSI/AWWA C115/A21.15, ANSI B16.1
Grooved and Shouldered	ANSI/AWWA C606
PIPE THREADS	ANSI B2.1
INSTALLATION	ANSI/AWWA C600

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