



LETTER OF TRANSMITTAL

DATE: 07/15/2025

TO: Manuel Maldonado

ATTENTION: Manuel Maldonado

Architect / Principal

RE: Domestic Water

Ordiz-Melby Architects

5500 Ming Ave. Unit 280, Bakersfield CA. 93309

JOB NO: 2037

WE ARE SENDING YOU:

- | | | | |
|--|---------------------------------------|--------------------------------|--|
| <input checked="" type="checkbox"/> Attached | <input type="checkbox"/> Mailed | <input type="checkbox"/> Faxed | <input type="checkbox"/> Hand Delivered |
| <input type="checkbox"/> Shop Drawings | <input type="checkbox"/> Prints | <input type="checkbox"/> Plans | <input type="checkbox"/> Samples |
| <input type="checkbox"/> Copy of Letter | <input type="checkbox"/> Change Order | <input type="checkbox"/> Other | <input checked="" type="checkbox"/> Specifications |

COPIES	DATE	NO.	DESCRIPTION
1	7/15/25	1	Domestic Water

THESE ARE TRANSMITTED as checked below:

- | | |
|--|---|
| <input checked="" type="checkbox"/> For Approval & Execution | <input type="checkbox"/> Approved as Submitted |
| <input type="checkbox"/> For Your Use | <input type="checkbox"/> Approved as Noted |
| <input type="checkbox"/> As Requested | <input type="checkbox"/> Returned for Corrections |
| <input type="checkbox"/> For Review & Comment | <input type="checkbox"/> Other: _____ |
| <input type="checkbox"/> FOR BIDS DUE: _____ | |

Afinar
Civil Engineers / Surveyors / Planners / Construction Managers
214 Bernard Street, Bakersfield, CA 93305
Phone (661) 716-7443

No Exceptions Taken ☒ Make Correction Noted ☐
Rejected ☐ Revise and Resubmit ☐
No Action Required ☐ Intermediate Submittal Required ☐

Checking is only for general conformance with the design concept of the project and general compliance with the information given in the Contract Documents. Any action shown is subject to requirements of the plans and specifications. Contractor is responsible for dimensions which shall be confirmed and correlated at the jobsite: fabrication, process and techniques of construction: coordination with all other trades and satisfactory performance of their work. See attached Submittal Checklist for comments.

REMARKS: _____

X *BOS*

8-4-25

COPY TO: _____ SIGNED: Jesse Baeza, Project Manager
Your Name, Title



MUNICIPAL PRODUCT SPECIFICATION

AWWA C900/IB PVC Pressure Pipe | Gasketed Integral Bell

NAPCO's AWWA C900 Gasketed Integral Bell PVC Pipe product line is manufactured to meet the needs of modern municipal water, wastewater, and reclaimed water systems. With top quality raw materials and modern processing technology, our C900 pipe meets all industry standards in addition to our own rigorous quality control requirements.

Our C900 pipe utilizes Rieber style gaskets throughout the entire product offering to create a leak-free joint.



Short Form Specification	
Pipe Standard:	AWWA C900-16
Diameter Std.:	Cast Iron Outside Diameter (CIOD)
Nominal Sizes:	4", 6", 8", 10", 12", 14", 16", 18", 20", 24", 30", 36"
Dimension Ratios & Pressure Ratings"	<div>DR 51 – 80 psi</div> <div>DR 41 – 100 psi</div> <div>DR 32.5 – 125 psi</div> <div>DR 25 – 165 psi</div> <div>DR 21 – 200 psi</div> <div>DR 18 – 235 psi (185 psi)**</div> <div>DR 14 – 305 psi (250 psi)**</div>
Lay Length:	20' [6.1m]
Pipe Compound:	ASTM D1784 Cell Class 12454
Pipe Joint Std.:	ASTM D3139
Max. Angular Joint Deflection:†	1°
Gasket Standard:	ASTM F477, UL 157
Gasket Material Offerings:	Standard – SBR Optional – NBR or EPDM
Installation Std.:	AWWA C605

Applications	Potable Water	Waste-water	Reclaimed Water
Color:	Blue	Green	Purple
Certifications:*	NSF 14, NSF 61 CSA B137.3* UL 1285 FM 1612** BNQ 3624-250 (24in)*, BNQ 3660-950 (24in)	CSA B137.3*	CSA B137.3*

*See Certification Letter for full explanation and list of exceptions.

**FM 1612 calculates pressure ratings differently than AWWA for 4"-12" only with DR 18 as 185 psi and DR 14 as 250 psi.

†See Installation Guide for more information.



Only products
bearing the NSF
Mark are Certified



napcopipe.com | 1.855.624.7473

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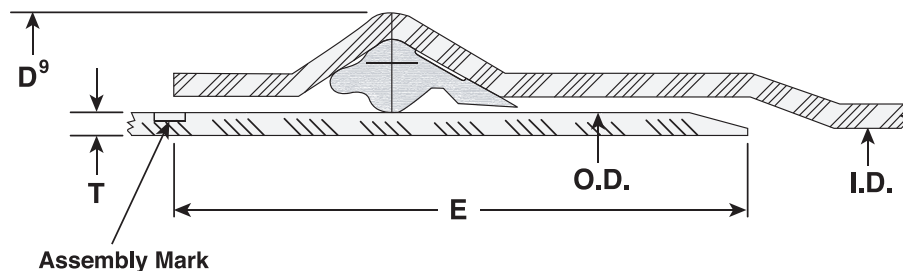
BLUE BRUTE™

SUBMITTAL AND DATA SHEET

PIPE SIZE (IN)	AVERAGE O.D. (IN)	NOM. I.D. (IN)	MIN. T. (IN)	MIN. E (IN)	APPROX. D ⁹ (IN)	APPROX. WEIGHT (LBS/FT)
PRESSURE CLASS 165 psi (DR 25)						
4	4.80	4.39	0.192	5.25	5.57	1.9
6	6.90	6.31	0.276	6.40	8.00	3.9
8	9.05	8.28	0.362	7.05	10.50	6.7
10	11.10	10.16	0.444	8.20	12.88	10.1
12	13.20	12.08	0.528	8.80	15.31	14.4
PRESSURE CLASS 235 psi (DR 18)*						
4	4.80	4.23	0.267	5.25	5.87	2.6
6	6.90	6.09	0.383	6.40	8.43	5.3
8	9.05	7.98	0.503	7.05	11.06	9.2
10	11.10	9.79	0.617	8.20	13.57	13.9
12	13.20	11.65	0.733	8.80	16.13	19.7
PRESSURE CLASS 305 psi (DR 14)*						
4	4.80	4.07	0.343	5.25	6.17	3.2
6	6.90	5.86	0.493	6.40	8.87	6.7
8	9.05	7.68	0.646	7.05	11.63	11.6
10	11.10	9.42	0.793	8.20	14.27	17.6
12	13.20	11.20	0.943	8.80	16.97	25.1

Consult JM Eagle™ for CSA and other listing availability prior to shipment.

Note: *FM Approvals Pressure Class 150 psi for DR 18 and 200 psi for DR 14.



I.D. : Inside Diameter
O.D. : Outside Diameter
T. : Wall Thickness
D⁹ : Bell Outside Diameter
E : Distance between Assembly Mark to
the end of spigot.

Product Standard: ANSI/AWWA C900
Pipe Compound: ASTM D1784 Cells Class 12454 ASTM
Gasket: F477
Integral Bell Joint: ASTM D3139
Certifications: ANSI/NSF Standard 61
UL Standard 1285
Pipe Length: 20 feet (+/- 1") laying length
Installation: AWWA C605
JM Eagle™ Installation Guide



Ductile Iron Push-On Fittings

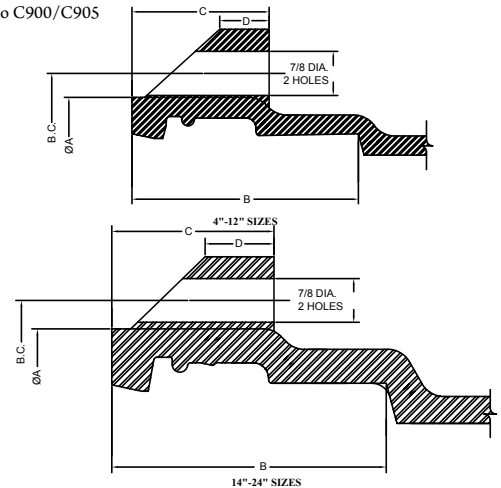
ANSI/AWWA C153/A21.53

GENERAL SPECIFICATIONS

MATERIAL:	Ductile iron per ASTM A536
PRESSURE:	350 PSI rating for 4" - 24" sizes. Pressure rating applies to fittings only and does not apply to restraining lugs or external restrainers
TESTING:	In accordance with ANSI/AWWA C153/A21.53 and UL requirements
LAYING LENGTH:	In accordance with ANSI/AWWA C153/A21.53 (fittings not listed in ANSI/AWWA have dimensions per Star design as noted in the catalog)
WEIGHTS:	Are in pounds, unless noted otherwise and do not include accessories, cement lining and coating
FLANGES:	Flanged ends on fittings match ANSI/AWW C115/A21.15 and ANSI B16.1 class 125 flanges
CEMENT LINING:	In accordance with ANSI/AWWA C104/A21.4 -- sizes 4" - 24" double thickness
COATING:	Asphaltic seal coat inside and out in accordance with ANSI/AWWA C104/A21.4 and referenced in ANSI/AWWA C153/A21.53
GASKETS:	Dual hardness SBR in accordance with ANSI/AWWA C111/A21.11
APPROVALS:	4" - 12" Underwriters Laboratories Listed. Please consult factory for detail listing and approvals. 4" and greater are UL/NSF-61
DIMENSIONS:	All dimensions are in inches unless noted otherwise.
INSTALLATION:	Per ANSI/AWWA C600 and C111 using DIP conforming to C150/C151 and PVC pipe conforming to C900/C905



SUBMITTAL INFORMATION

PROJECT NAME:**ENGINEER:****CONTRACTOR:****SPEC. SECTION:**

PUSH-ON JOINT DIMENSIONS

NOM. SIZE	ØA	B.C.	B	C	D
4	6.38	7.50	4.02	2.17	1.12
6	8.52	9.56	4.02	2.17	1.12
8	10.80	11.82	4.49	2.72	1.12
10	12.91	14.00	4.49	2.91	1.12
12	15.05	16.25	5.00	2.99	1.12
14	17.89	18.75	5.50	3.12	1.25
16	20.05	21.00	5.50	3.25	1.25
18	22.35	23.25	5.50	3.25	1.25
20	24.47	25.50	5.50	3.25	1.25
24	28.79	30.00	6.00	3.25	1.25

Please note: All fittings are standard with two (2) restraining lugs. Bends 45° & 90° in sizes 4" - 12" are also available with four (4) restraining lugs.

SIZE RANGE (Please specify):

Size Range _____

LINING OPTIONS (Please check one):

Standard: Cement-lined and asphalt seal coat per ANSI/AWWA C104/A21.4 and UL/NSF-61
Optional: FBE (Fusion Bonded Epoxy) per ANSI/AWWA C116/A21.15 and UL/NSF-61 - ID & OD Only
Optional: P401 (Protecto 401) Ceramic Epoxy - sewer applications only. Not NSF-61
Optional: Other (specify) _____

COATING OPTIONS (Please check one):

Standard: Asphaltic seal coat per ANSI/AWWA C104/A21.4
Optional: FBE (Fusion Bonded Epoxy) per ANSI/AWWA C116/A21.15 and UL/NSF-61 - ID & OD Only
Optional: Other (specify) _____





Ductile Iron Flanged Fittings

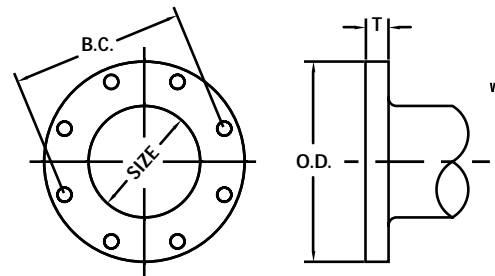
ANSI/AWWA C110/A21.10

GENERAL SPECIFICATIONS

MATERIAL:	Ductile iron per ASTM A536
PRESSURE:	250 PSI rating for 1" - 48" sizes and 150 PSI rating for 54" - 64"
TESTING:	In accordance with ANSI/AWWA C110/A21.10, UL and FM requirements
LAYING LENGTH:	2" - 48" sizes in accordance with ANSI/AWWA C110/A21.10 and ANSI B16.1 and 54" - 64" sizes in accordance with ANSI/AWWA C153/A21.53 (fittings not listed in ANSI/AWWA have dimensions per Star design as noted in the catalog)
WEIGHTS:	Are in pounds, unless noted otherwise and do not include accessories, cement lining and coatings
DRILLING:	In accordance with ANSI/AWWA C110/A21.10, ANSI/AWWA C153/A21.53 and ANSI B16.1 Class 125 Flanges
CEMENT LINING:	In accordance with ANSI/AWWA C104/A21.4 -- sizes 1" - 3" single thickness and sizes 4" - 64" double thickness
COATING:	Asphaltic seal coat inside in accordance with ANSI/AWWA C104/A21.4 and prime coat outside
APPROVALS:	2" - 12" Underwriters Laboratories and ULC Listed and Factory Mutual approved for 300 PSI rating. Please consult factory for detail listing and approvals. 2" and greater are UL/NSF-61.
DIMENSIONS:	All dimensions are in inches unless noted otherwise.
INSTALLATION:	Per ANSI/AWWA C110 and C111



SUBMITTAL INFORMATION

PROJECT NAME: ENGINEER: CONTRACTOR: SPEC. SECTION: 

FLANGE DETAILS

NOM. SIZE	O.D.	B.C.	T	BOLT HOLE DIA.	BOLTS	
					SIZE	NO.
1	4.25	3.12	0.44	0.62	1/2 x 2	4
1 1/2	5.00	3.88	0.56	0.62	1/2 x 2	4
2	6.00	4.75	0.62	0.75	5/8 x 2 1/4	4
2 1/2	7.00	5.50	0.69	0.75	5/8 x 2 1/2	4
3	7.50	6.00	0.75	0.75	5/8 x 2 1/2	4
4	9.00	7.50	0.94	0.75	5/8 x 3	8
5	10.00	8.50	0.94	0.88	3/4 x 3	8
6	11.00	9.50	1.00	0.88	3/4 x 3 1/2	8
8	13.50	11.75	1.12	0.88	3/4 x 3 1/2	8
10	16.00	14.25	1.19	1.00	7/8 x 4	12
12	19.00	17.00	1.25	1.00	7/8 x 4	12
14	21.00	18.75	1.38	1.13	1 x 4 1/2	12
16	23.50	21.25	1.44	1.13	1 x 4 1/2	16
18	25.00	22.75	1.56	1.25	1 1/8 x 5	16
20	27.50	25.00	1.69	1.25	1 1/8 x 5	20
24	32.00	29.50	1.88	1.38	1 1/4 x 5 1/2	20
30	38.75	36.00	2.12	1.38	1 1/4 x 6 1/2	28
36	46.00	42.75	2.38	1.63	1 1/2 x 7	32
42	53.00	49.50	2.62	1.63	1 1/2 x 7 1/2	36
48	59.50	56.00	2.75	1.63	1 1/2 x 8	44
54	66.25	62.75	3.00	2.00	1 3/4 x 8 1/2	44
60	73.00	69.25	3.12	2.00	1 3/4 x 9	52
64	80.00	76.00	3.38	2.00	1 3/4 x 9	52

SIZE RANGE (Please specify):

Size Range

LINING OPTIONS (Please check one):

Standard: Cement-lined and asphalt seal coat per ANSI/AWWA C104/A21.4 and UL/NSF-61
Optional: FBE (Fusion Bonded Epoxy) per ANSI/AWWA C116/A21.15 and UL/NSF-61 - ID & OD Only
Optional: P401 (Protecto 401) Ceramic Epoxy - sewer applications only. Not NSF-61
Optional: Other (specify)

COATING OPTIONS (Please check one):

Standard: Red Prime Coat
Optional: Asphaltic seal coat per ANSI/AWWA C104/A21.4
Optional: FBE (Fusion Bonded Epoxy) per ANSI/AWWA C116/A21.15 and UL/NSF-61 - ID & OD Only
Optional: Other (specify)

UCAT15.01-SUB
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www.starpipeproducts.com

JCM 432 All Stainless Steel Tapping Sleeve

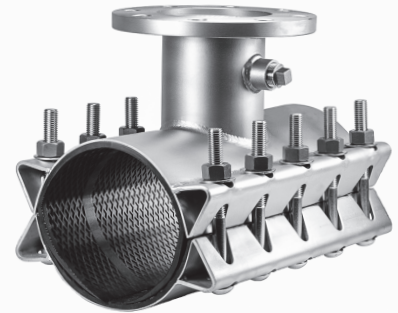
JCM 462 Stainless Steel Tapping Sleeve with Carbon Steel Flange

EXTRA BOLTING POWER...The true tapping sleeve design of this sleeve incorporates replaceable, self-aligning bolts, which facilitate conversion of high bolt torques to high gasket pressure, can be torqued to 125 ft. lbs. This increases gasket sealing pressure and pressure holding capability.

FULL CIRCUMFERENTIAL SEAL...The extra bolting power assures the gasket will seal the full circumference of the pipe. This provides insurance against beam breaks in size on size taps. Molded in recessed bridge plate assures even gasket pressure throughout the range of the sleeve.

STRONGER YET LIGHTER THAN CAST SLEEVES...Extra strength eliminates possible cracking of the sleeve or flange. Reduced weight speeds installation and reduces the load placed on the pipe.

EXTRA WIDE FOR SUPPORT AND STABILITY...Extra width and heavier neck and body material provide extra reinforcement of the outlet and extra stability during the tapping process.



JCM 432 - All stainless construction provides extra corrosion resistance. The stainless steel flange, outlet and body join as one unit of similar metals for highest structural strength and corrosion resistance.

JCM 462 - Stainless steel body/neck construction joins with a strong, economical carbon steel flange. Coated steel flange is to AWWA C207, Class D standard with recess for tapping alignment.

Sleeve pressure rating with standard stainless steel flange:

Sleeves 4" - 24" nominal pipe sizes: 150 PSI working pressure, per ANSI/AWWA C228 Class SD

Sleeve pressure rating with optional ANSI stainless steel flange:

Sleeves 4" - 12" nominal pipe sizes: 250 PSI working pressure, hydrostatic test pressure of 300 PSI.

Sleeves 14" - 24" nominal pipe sizes: 200 PSI working pressure, hydrostatic test pressure of 250 PSI

MATERIAL SPECIFICATIONS - JCM 432 and 462 TAPPING SLEEVES:

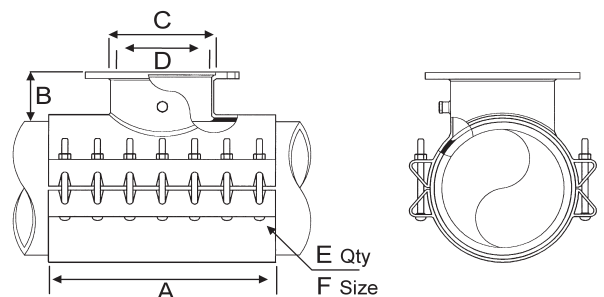
Body:	Stainless Steel, 18-8 Type 304
Bolts:	Stainless Steel, Type 304
Branch Outlet:	Schedule 10 Stainless Steel Pipe
Gasket:	Full circumferential gasket compounded for use with water, salt solutions, mild acids, bases and sewage.
432 Flange:	18-8 Type 304 Stainless Steel per ANSI/AWWA C228 Class SD. ANSI 150lb. Drilling, recessed for tapping valve per MSS-SP 60.
462 Flange:	AWWA C207 Class D, ANSI 150lb. Drilling, recessed for tapping valve MSS-SP60.



JCM Tapping Sleeves meet or exceed the ANSI/AWWA C-223 and the MSS-SP 124 Standards as applicable.

JCM 432 & 462 STAINLESS STEEL TAPPING SLEEVE DIMENSIONS

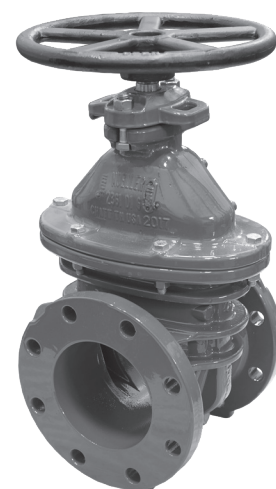
FLANGE SIZE	A	B	C	D	E	F
2	15	5	3-1/32	2.16	10	5/8
3	15	5-1/8	4-1/32	3.26	10	5/8
4	15	5-1/4	5-1/32	4.26	10	5/8
6	15	5-3/8	7-1/32	6.35	10	5/8
8	21	5-3/8	9-1/32	8.32	14	5/8
10	27	5-3/8	11-1/16	10.42	18	5/8
12	30	5-3/8	13-1/16	12.39	20	5/8



Rev. 5-18 Shaded area indicates changes

- ☐ Catalog number
A-2361-6 flanged ends
- ☐ Sizes – 3", 4", 6", 8", 10", 12"
- ☐ Meets or exceeds all applicable requirements of ANSI/AWWA C515*** Standard, UL 262 Listed, FM 1120/1130 Approved, and certified to ANSI/NSF 61 & 372
- ☐ Flanged end drilling complies with ASME/ANSI B16.1 Class 125**
- ☐ Iron body with nominal 10 mils Mueller Pro-Guard® Fusion Bonded Epoxy Coated interior and exterior surfaces
- ☐ Epoxy coating meets or exceeds all applicable requirements of ANSI/AWWA C550 Standard
- ☐ Iron wedge, symmetrical and fully encapsulated with molded rubber; no exposed iron
- ☐ Non-rising stem (NRS)
- ☐ Triple O-ring seal (2 above the thrust collar and 1 below)
- ☐ 350 psig (2400 kPa/24 barg) maximum working pressure; 700 psig (4800 kPa/48 barg) static test pressure
- ☐ UL Listed, FM Approved: 350 psig (2400 kPa/24 barg)
- ☐ Designed for potable water applications

† Approved for backflow prevention devices by USC (for 4" - 10" sizes)


A-2361-6 shown

Options

See page 10.54 for more information on Resilient Wedge Gate Valve options

- ☐ Position indicators
- ☐ Stainless steel stem: Type 304, Type 316
- ☐ Low zinc, silicon bronze ASTM B98-C66100/H02 stem
- ☐ 2" square wrench nut
- ☐ P/N 10/16 Drilling
- ☐ EPDM Disc and O-rings

Resilient wedge gate valve parts

Catalog Part Number	Description	Material	Material Standard
G-16	Bonnet Bolts & Nuts	316 Stainless Steel	ASTM F593 (bolt) ASTM F594 (nut)
G-41	Stuffing Box Bolts & Nuts	316 Stainless Steel	ASTM F593 (bolt) ASTM F594 (nut)
G-49	Stem O-rings (3)	Nitrile	ASTM D2000
G-200	Wrench Nut Cap Screw	316 Stainless Steel	ASTM F593
G-201	Stuffing Box O-ring	Nitrile	ASTM D2000
G-202	Wrench Nut	Ductile Iron	ASTM A536 ▼
G-203	Stem	Bronze	ASTM B138
G-204	Hand Wheel	Cast Iron +	ASTM A126 CL.B
G-205	Stem Nut	Bronze	ASTM B584
G-206	Guide Cap Bearings	Acetal	-
G-207	Stuffing Box with dirt seal	Ductile Iron Nitrile	ASTM A536 ▼ ASTM D2000
G-208	Anti-friction Washers (2)	Acetal	-
G-209	Wedge, Rubber Encapsulation	Ductile Iron* SBR	ASTM A536 ▼ ASTM D2000
G-210	Bonnet	Ductile Iron	ASTM A536 ▼
G-211	Bonnet O-ring +++	Nitrile	ASTM D2000
G-212	Body	Ductile Iron	ASTM A536 ▼

+++ 3" valves use a bonnet gasket

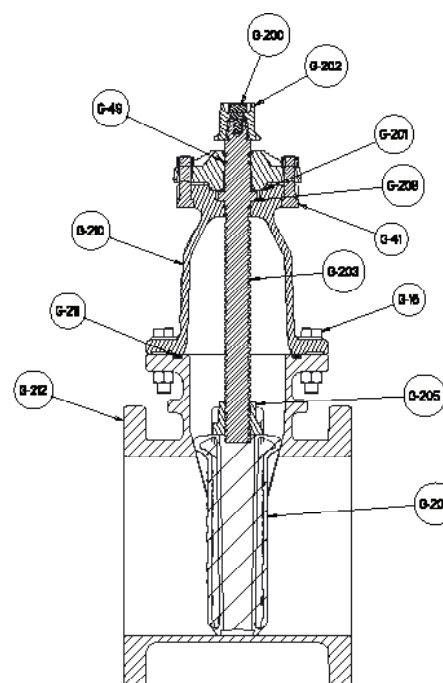
*Fully encapsulated in molded rubber with no iron exposed;

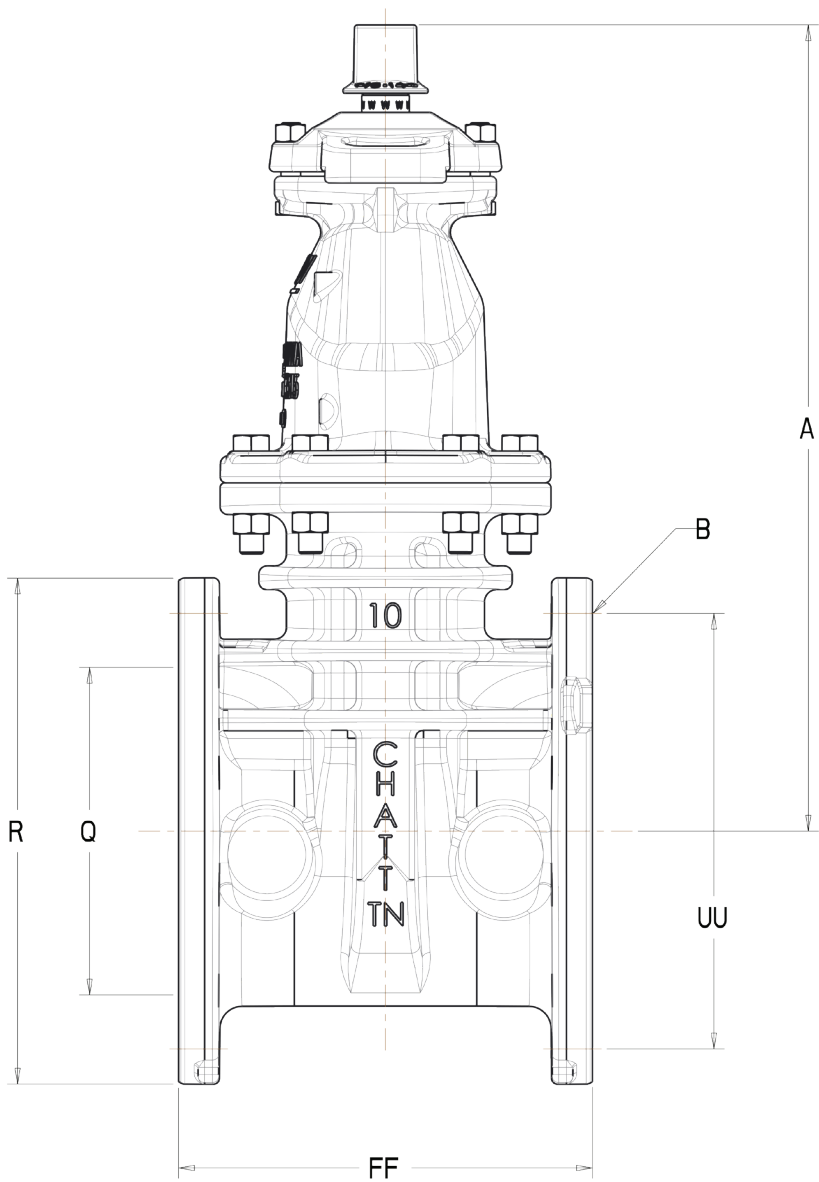
▼ Material strength ASTM A536 65-45 minimum

** Per ANSI/AWWA C111 working pressure above 250psi requires the use of a special gasket rated for higher pressure.

+ Manufacturer's option to change material to ductile iron ASTM A536

*** 3" valves meet or exceed all applicable requirements of ANSI/AWWA C509 Standard





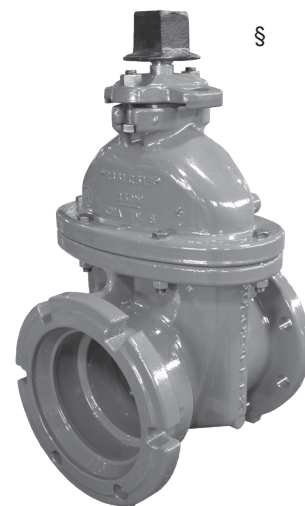
Dimensions

Dimension	Nominal Size					
	3"	4"	6"	8"	10"	12"
A	12.38	18.00	21.50	25.50	28.62	
R	7.50	9.00	11.00	13.50	16.00	19.00
FF	8.00	9.00	10.50	11.50	13.00	14.00
Q (bore)	3.30	4.30	6.30	8.30	10.30	12.30
UU (bolt circle diameter)	6.00	7.50	9.50	11.75	14.25	17.00
B (number and size of holes)	4--.75	8--.75	8--.88	8--.88	12--1.00	12--1.00
Turns to open	11	14	20.5	26.5	33	38.5
Weight*	73	81	136	213	326	440

*All dimensions are in inches. All weights are in pounds and are approximate.

Rev. 5-18 Shaded area indicates changes

- ☐ Catalog number
A-2361-16 mechanical joint x flanged ends (with accessories unassembled)
A-2361-19 mechanical joint x flanged ends (less accessories)
- ☐ Sizes – 3", 4", 6", 8", 10", 12"
- ☐ Meets or exceeds all applicable requirements of ANSI/AWWA C515*** Standard, UL 262 Listed, FM 1120/130 Approved, and certified to ANSI/NSF 61 & 372
- ☐ Flanged end drilling complies with ASME/ANSI B16.1 Class 125**
- ☐ Mechanical joint end complies with ANSI/AWWA C111 Standard
- ☐ Iron body with nominal 10 mils Mueller Pro-Guard® Fusion Bonded Epoxy Coated interior and exterior surfaces
- ☐ Epoxy coating meets or exceeds all applicable requirements of ANSI/AWWA C550 Standard
- ☐ Iron wedge, symmetrical and fully encapsulated with molded rubber; no exposed iron
- ☐ Non-rising stem (NRS)
- ☐ Triple O-ring seal (2 above the thrust collar and 1 below)
- ☐ 2" square wrench nut - open left or open right
- ☐ 350 psig (2400 kPa/24 barg) maximum working pressure; 700 psig (4800 kPa/48 barg) static test pressure
- ☐ UL Listed, FM Approved – 350 psig (2400 kPa/24 barg)
- ☐ Designed for potable water applications



A-2361-16 shown
 M.J. accessories shipped unassembled

Options

See page 10.54 for more information on Resilient Wedge Gate Valve options

- ☐ Position indicators
- ☐ Low zinc, silicon bronze ASTM B98-C66100/H02 stem
- ☐ Stainless steel stem: Type 304, Type 316
- ☐ Handwheel
- ☐ EPDM Disc and o-rings

Resilient wedge gate valve parts

Catalog Part Number	Description	Material	Material Standard
G-16	Bonnet Bolts & Nuts	316 Stainless Steel	ASTM F593 (bolt) ASTM F594 (nut)
G-41	Stuffing Box Bolts & Nuts	316 Stainless Steel	ASTM F593 (bolt) ASTM F594 (nut)
G-49	Stem O-rings (3)	Nitrile	ASTM D2000
G-200	Wrench Nut Cap Screw	316 Stainless Steel	ASTM F593
G-201	Stuffing Box O-ring	Nitrile	ASTM D2000
G-202	Wrench Nut	Ductile Iron	ASTMA536 ▼
G-203	Stem	Bronze	ASTM B138
G-204	Hand Wheel (not shown)	Cast Iron +	ASTM A126 CL.B
G-205	Stem Nut	Bronze	ASTM B584
G-206	Guide Cap Bearings	Acetal	-
G-207	Stuffing Box with dirt seal	Ductile Iron Nitrile	ASTMA536 ▼ ASTM D2000
G-208	Anti-friction Washers (2)	Acetal	-
G-209	Wedge, Rubber Encapsulation	Ductile Iron* SBR	ASTMA536 ▼ ASTM D2000
G-210	Bonnet	Ductile Iron	ASTMA536 ▼
G-211	Bonnet O-ring +++	Nitrile	ASTM D2000
G-212	Body	Ductile Iron	ASTMA536 ▼

+++ 3" valves use a bonnet gasket

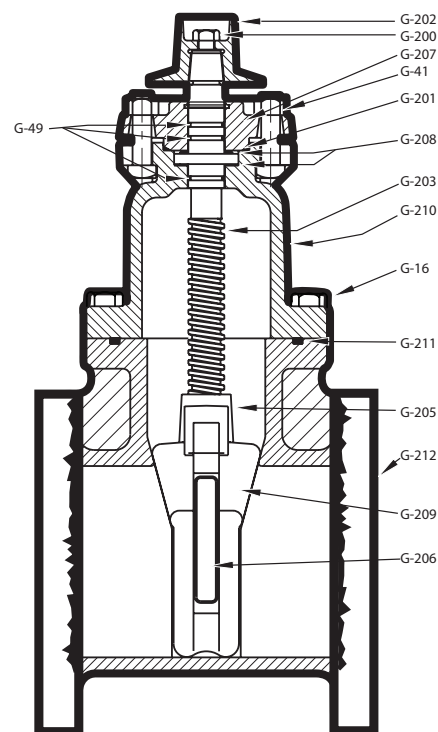
*Fully encapsulated in molded rubber with no iron exposed;

▼ Material strength ASTM A536 65-45 minimum

** Per ANSI/AWWA C111 working pressure above 250psi requires the use of a special gasket rated for higher pressure.

+ Manufacturer's option to change material to ductile iron ASTM A536

*** 3" valves meet or exceed all applicable requirements of ANSI/AWWA C509 Standard

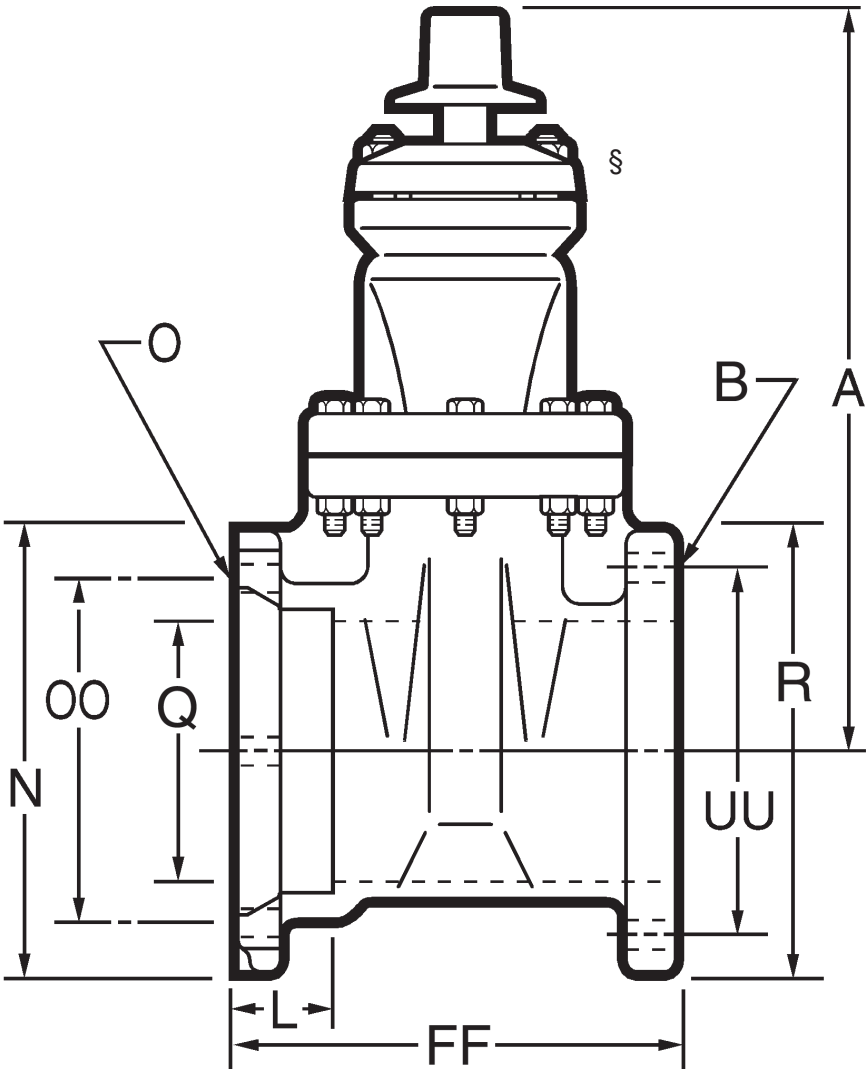


3" - 12" A-2361 RESILIENT WEDGE
GATE VALVES - M.J. x FL.



10.11

Shaded area indicates change Rev. 5-18



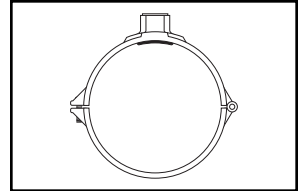
Dimensions

Dimension	Nominal Size					
	3"	4"	6"	8"	10"	12"
A	12.38	14.19	18.00	21.50	25.50	28.62
L	2.50	2.50	2.50	2.50	2.50	2.50
N	7.50	9.12	11.12	13.37	15.62	17.88
O	4--.88	4--.88	6--.88	6--.88	8--.88	8--.88
Q (bore)	3.30	4.30	6.30	8.30	10.30	12.30
OO (bolt circle diameter)	6.19	7.50	9.50	11.75	14.00	16.25
R (number and size of holes)	7.50	9.00	11.00	13.50	16.00	19.00
UU	5.50	7.50	9.50	11.75	14.25	17.00
FF	8.80	9.50	11.06	12.09	13.94	14.50
B	4--.75	8--.75	8--.88	8--.88	12--1.00	12--1.00
Turns to open	11	14	20.5	26.5	33	38.5
Weight*	67	80	136	198	299	398

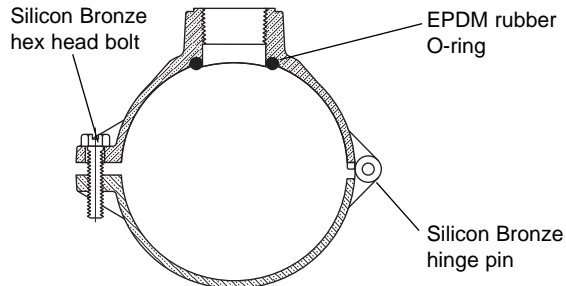
* All dimensions are in inches. All weights include accessories are in pounds and are approximate.

SUBMITTAL INFORMATION

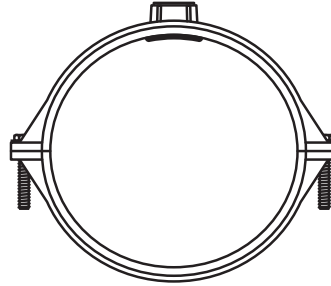
Brass Saddles For C900 PVC - (S90-xxx style)



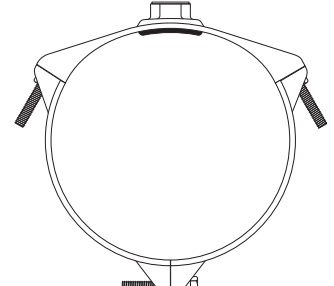
S90 BRASS SADDLES WITH AWWA TAPS FOR C900 PVC PIPE



Style A (Hinged Design)



Style B 2-Piece (Bolted Design)



Style C 3-Piece (Bolted Design)

PVC PIPE SIZE	ACTUAL O.D.	TAP SIZE	APPROX. WT. LBS.	CATALOG NUMBER	STYLE	✓ SUBMITTED ITEM(S)
2"	2.50	1/2"	.9	S90-201	A	
		3/4"	1.1	S90-203	A	
4"	4.80	1/2"	1.8	S90-401	A	
		3/4"	1.8	S90-403	A	
		1"	2.0	S90-404	A	
		1-1/2"	6.5	S90-406	A	
		2"	6.4	S90-407	A	
6"	6.90	1/2"	3.0	S90-601	A	
		3/4"	2.6	S90-603	A	
		1"	2.6	S90-604	A	
		1-1/2"	8.9	S90-606	A	
		2"	7.3	S90-607	A	
8"	9.05	1/2"	2.8	S90-801	A	
		3/4"	2.8	S90-803	A	
		1"	3.2	S90-804	A	
		1-1/2"	8.0	S90-806	A	
		2"	8.5	S90-807	A	
10"	11.10	3/4"	9.3	S90-1003	B	
		1"	9.1	S90-1004	B	
		1-1/2"	10.5	*S70-S90-1006	C	
		2"	10.5	*S70-S90-1007	C	
12"	13.20	3/4"	11.1	S90-1203	B	
		1"	11.0	S90-1204	B	
		1-1/2"	11.5	*S70-S90-1206	C	
		2"	11.0	*S70-S90-1207	C	

* These saddles will cover Steel size PVC and C900 PVC O.D. range.

FEATURES

- All brass conforms to AWWA Standard C800 (ASTM B62 and ASTM B584, UNS NO C83600 - 85-5-5-5)
- Style A saddle body and strap permanently held together with silicon bronze pin for saddles sized 2" thru 8"
- Bolt is 5/16" slotted hex head silicon bronze for saddles sized 2" thru 8"
- A three-piece bolted design is used for S90 saddles sized 10" and 12" with 1-1/2" and 2" taps, two-piece for 3/4" and 1" taps
- All 10" and 12" saddles are held together with 1/2" silicon bronze bolts (3/4" hex head)
- 150 psi working pressure rating

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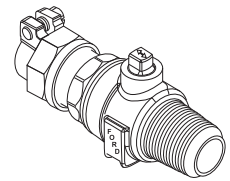
The Ford Meter Box Company, Inc.
P.O. Box 443, Wabash, Indiana U.S.A. 46992-0443
Phone: 260-563-3171 / Fax: 800-826-3487
Overseas Fax: 260-563-0167
www.fordmeterbox.com

06/24/15

Submitted By:

SUBMITTAL INFORMATION

Ballcorp Corporation Stops - (FB1000-xx-NL style)



AWWA/CC TAPER THREAD INLET BY PACK JOINT FOR COPPER OR PLASTIC TUBING (CTS) OUTLET

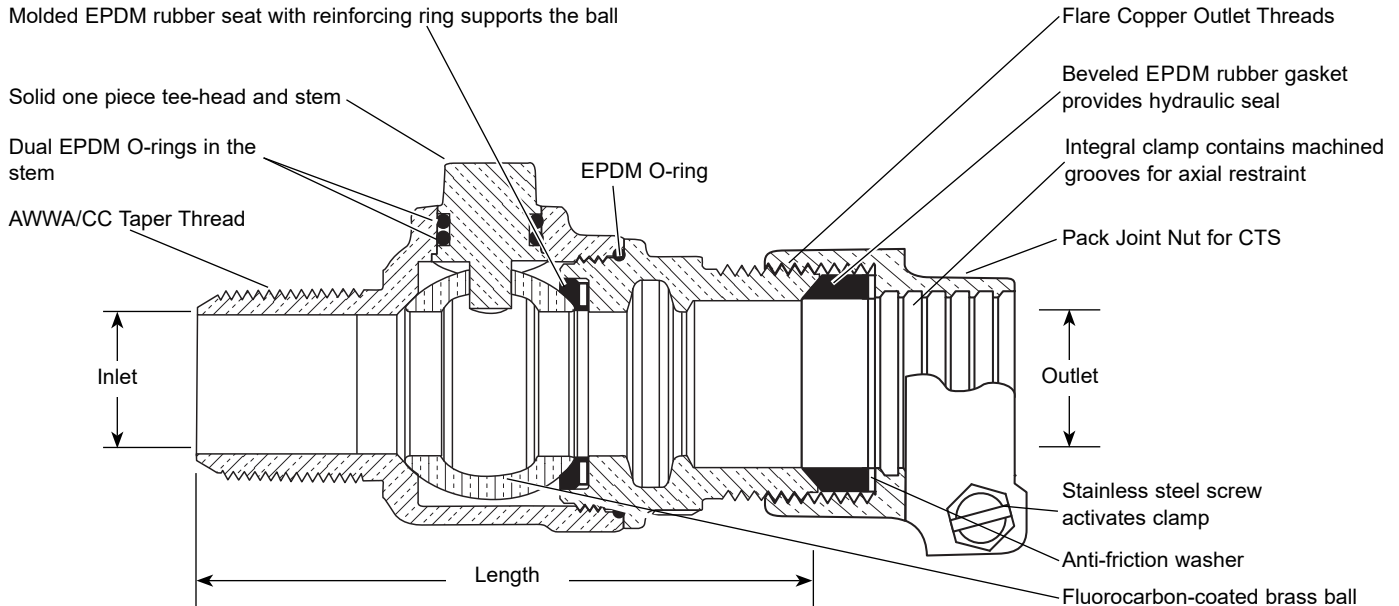


Image shown above is an FB1000-4-NL

VALVE SIZE	INLET SIZE	OUTLET SIZE	VALVE LENGTH	BODY OUTLET THREADS	APPROX. Wt. LBS	PART NUMBER	✓ SUBMITTED ITEM(S)
3/4"	3/4"	3/4"	4-19/64"	3/4" Flare Copper	2.1	FB1000-3-NL	
3/4"	3/4"	1"	4-7/16"	1" Flare Copper	2.1	FB1000-34-NL	
1"	1"	1"	4-1/2"	1" Flare Copper	2.6	FB1000-4-NL	
1"	1"	1-1/4"	4-5/16"	1-1/4" Flare Copper	2.8	FB1000-45-NL	
1-1/4"	1-1/4"	1-1/4"	5-25/32"	1-1/4" Flare Copper	4.6	FB1000-5-NL	
1-1/4"	1-1/4"	1-1/2"	5-39/64"	1-1/2" Flare Copper	5.2	FB1000-56-NL	
1-1/2"	1-1/2"	1-1/2"	6-13/32"	1-1/2" Flare Copper	6.3	FB1000-6-NL	
1-1/2"	1-1/2"	2"	6-29/64"	2" Flare Copper	7.4	FB1000-67-NL	
2"	2"	2"	7-1/2"	2" Flare Copper	11.5	FB1000-7-NL	

Note: Ford recommends using insert stiffeners with plastic pipe or tubing.

FEATURES

- All brass that comes in contact with potable water conforms to AWWA Standard C800 (ASTM B584, UNS C89833)
- The product has the letters "NL" cast into the main body for lead-free identification
- Certified to NSF/ANSI Standard 61 and NSF/ANSI Standard 372 where applicable
- Brass components that do not come in contact with potable water conform to AWWA Standard C800 (ASTM B62 and ASTM B584, UNS C83600, 85-5-5-5)
- Ends are integral or secured with adhesive to prevent unintentional disassembly
- 300 PSI working pressure

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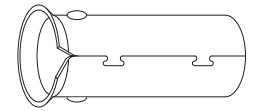
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P.O. Box 443, Wabash, Indiana U.S.A. 46992-0443
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06/02/17

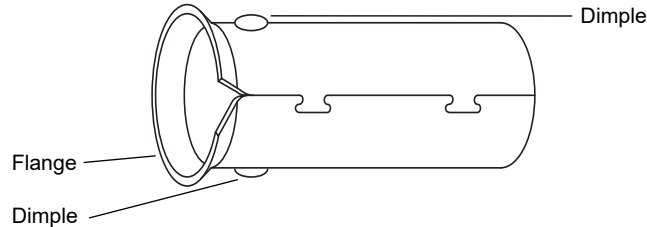
Submitted By:

SUBMITTAL INFORMATION

Stainless Steel Inserts - (*INSERT-xx style*)



STAINLESS STEEL INSERTS FOR POLYETHYLENE PIPE (SIDR7 PEP) OR TUBING (PET)



70 Series For Polyethylene Pipe (PEP)

CATALOG NUMBER	NOMINAL SIZE	PEP ID	LENGTH	✓ SUBMITTED ITEM(S)
INSERT-71	3/4"	0.824	1-11/16"	
** INSERT-53-72	1"	1.049	2-5/16"	
♦*** INSERT-53-72-Q	1"	1.049	1-31/32"	
INSERT-73	1-1/4"	1.380	2-5/16"	
INSERT-74	1-1/2"	1.610	2-59/64"	
INSERT-75	2"	2.067	2-15/16"	

50 series For Polyethylene Tubing (PET)

CATALOG NUMBER	NOMINAL SIZE	PET ID	LENGTH	✓ SUBMITTED ITEM(S)
INSERT-51	3/4"	0.681	1-35/64"	
INSERT-52	1"	0.875	1-43/64"	
** INSERT-53-72	1-1/4"	1.069	2-5/16"	
♦*** INSERT-53-72-Q	1-1/4"	1.069	1-31/32"	
INSERT-54	1-1/2"	1.263	2-15/16"	
INSERT-55	2"	1.653	2-15/16"	
♦ INSERT-54-Q	1-1/2"	1.263	2-7/16"	
♦ INSERT-55-Q	2"	1.653	2-7/16"	

** INSERT-53-72 fits 1-1/4" plastic tubing (1.069 I.D.), 1" plastic pipe (1.049 I.D.), and 1" IPS HDPE (1.055 I.D.).

*** INSERT-53-72-Q fits 1-1/4" plastic tubing (1.069 I.D.) and 1" plastic pipe (1.049 I.D.).

♦ These inserts are specifically designed and required for Quick Joint fittings. They are not interchangeable with other Compression Fittings.

FEATURES

- Certified to NSF/ANSI Standard 61 and NSF/ANSI Standard 372 where applicable
- Insert stiffeners conform to the AWWA Standard C901 for Polyethylene (PE) Pressure Pipe and Tubing
- Insert stiffeners are solid 304 tubular stainless steel (ASTM 240-92B)
- Dimpled and flanged to retain placement within the service line
- Key lock construction with a minimum of two key locks to maintain solid structural integrity
- Manufactured in the United States of America

Note: Consult pipe or tubing manufacturer for specific installation requirements. Ford recommends using insert stiffeners when using plastic pipe or tubing

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www.fordmeterbox.com

11/28/18

Submitted By:

ADS POTABLE WATER SERVICE TUBING (CTS) PIPE SPECIFICATIONS

Scope

This specification describes ADS Potable Water Service Tubing (CTS) pipe SDR 9 for use in potable water service applications.

Pipe Requirements

ADS potable water service tubing shall meet the requirements of ASTM D2737, AWWA C901 and NSF Standards 14 and 61. Pipe dimensions shall meet Copper Tubing Size (CTS) standards.

Material Properties

Tubing material shall be high-density polyethylene conforming to the minimum requirements of cell classification 445574C or 445574E as defined and described in ASTM D3350. The resin shall have a material designation code of PE4710 by the Plastic Pipe Institute.

Disinfection/Maintenance

The active chlorine content of disinfecting solutions shall not exceed 12%. All disinfecting solution must be flushed from all lines within the system. Industry accepted procedures, like ANSI/AWWA C651 *Disinfecting Water Mains*, should be followed for both new and repaired potable water lines.

Installation

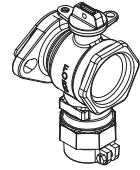
Installation is similar to other flexible tubing/pipe products. Methods including direct bury, plowing or pulling are applicable per local, state or federal guidelines for the application.

Tubing Properties

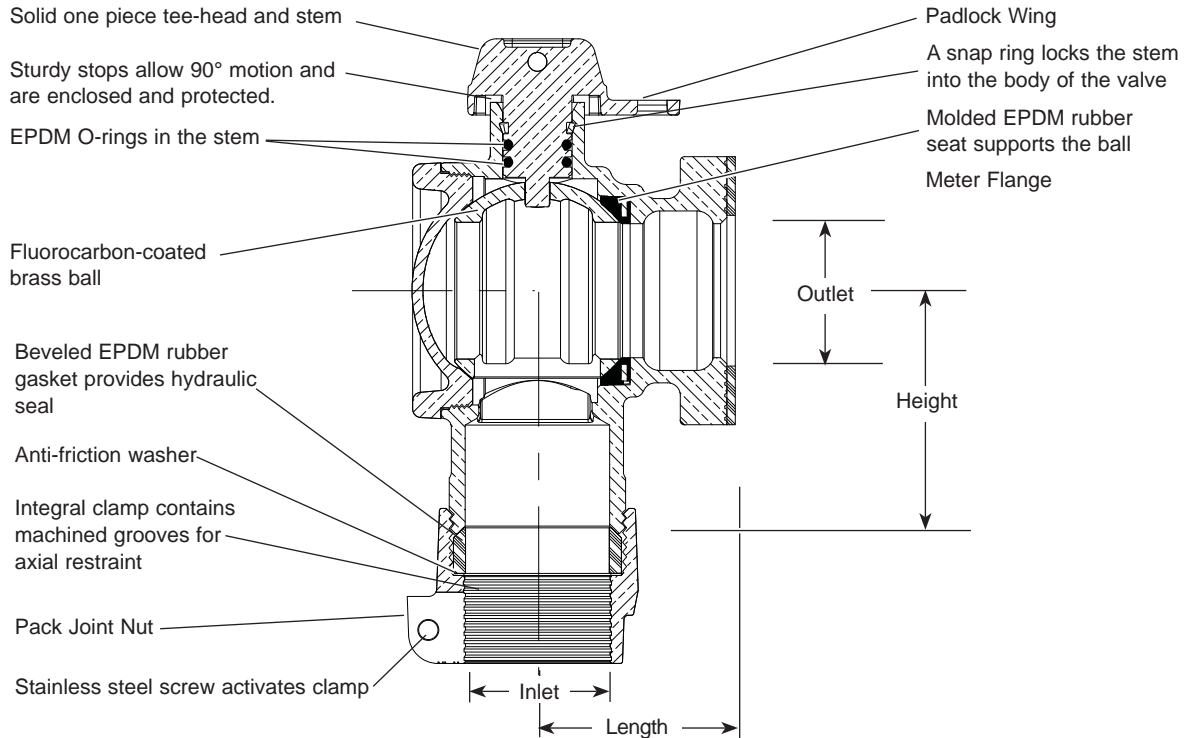
		3/4"	1"	1 1/4"	1 1/2"	2"
SDR 9	Outside Diameter, in (mm)	0.875 ±0.004 (22.2 ±0.10)	1.125 ±0.005 (28.6 ±0.13)	1.375 ±0.005 (34.9 ±0.13)	1.625 ±0.006 (41.3 ±0.15)	2.125 ±0.006 (54.0 ±0.51)
	Wall Thickness, in (mm)	0.097 +0.010 (2.5 +0.25)	0.125 +0.012 (3.2 +0.30)	0.153 +0.015 (3.9 +0.38)	0.181 +0.018 (4.6 +0.46)	0.236 +0.024 (6.0 +0.61)
	Pressure Rating @ 73°F, psi (kPa)	250 (1724)	250 (1724)	250 (1724)	250 (1724)	250 (1724)
	Weight, gm/ft (gm/m)	46 ±2 (151 ±7)	78 ±3 (256 ±10)	125 ±4 (410 ±13)	162 ±4 (531 ±13)	275 ±5 (902 ±16)

SUBMITTAL INFORMATION

Angle Ball Flange Meter Valves - (BFA43-xxxW-NL style)



PACK JOINT FOR COPPER OR PLASTIC TUBING (CTS) INLET BY METER FLANGE OUTLET



VALVE SIZE	SERVICE LINE SIZE INLET	METER SIZE OUTLET	LENGTH	HEIGHT	APPROX. Wt. LBS	PART NUMBER	✓ SUBMITTED ITEM(S)
1-1/2"	1-1/2"	1-1/2"	2-1/2"	3-13/32"	7.8	BFA43-666W-NL	
2"	2"	2"	2-13/16"	3-5/8"	10.8	BFA43-777W-NL	

Note: Ford recommends using insert stiffeners with plastic pipe or tubing.

FEATURES

- All brass that comes in contact with potable water conforms to AWWA Standard C800 (UNS No. C89833)
 - The product has the letters "NL" cast into the main body for lead-free identification
 - Certified to NSF/ANSI Standard 61 and NSF/ANSI Standard 372 where applicable
 - Brass components that do not come in contact with potable water conform to AWWA Standard C800 (ASTM B62 and ASTM B584, UNS No. C83600, 85-5-5-5)
 - Padlock Wing for locking valve in closed position
 - Hole for attaching handle is provided in the tee head
 - 300 PSI working pressure
 - Includes EPDM drop-in style meter gasket
 - Suitable for customer side shut off (outlet side of meter) up to 300 PSI
 - Slotted holes are standard on 2" Flanged Meter Valves, allowing 1-1/2" Flange Meter connection
- Optional:** Full 360° tee head rotation. Insert "R" into the part number. Example: BFA43-777WR-NL
 Meter support brackets. Insert "-MSB" into the part number
 Example: BFA43-777W-MSB-NL

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03/28/14

Submitted By:

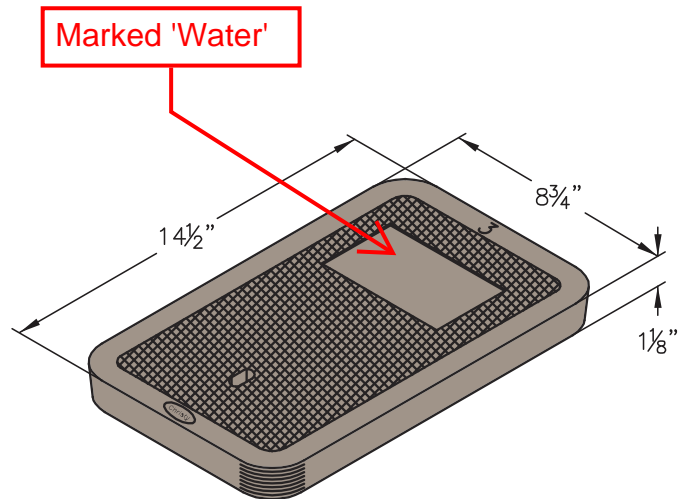
B03

CHRISTY®

COVER

Style:	Flush
Material:	Reinforced Concrete
Model:	9" x 14"
Weight:	12 lbs
Options:	Special Markings
Surface:	Skid Resistant & Marked*
Coefficient of Friction:	>0.6 ASTM 1028
Performance:	ASTM C 857, WUC 3.6

Cover comes standard with permanent markings for manufacturer, load rating, model size and manufacturing location.

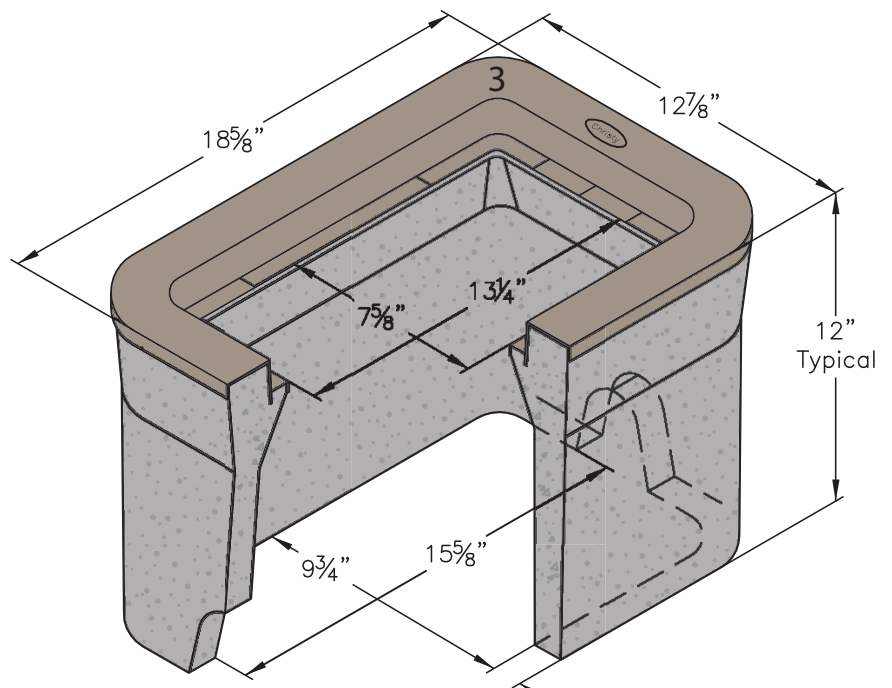


BODY

Material:	Reinforced Concrete with Composite Cap
Model:	9" x 14"
Weight:	74 lbs
Wall Type:	Straight
Mouseholes:	0 - 2
Performance:	ASTM C 857, WUC 3.6

EXTENSION

Material:	Reinforced Concrete
Depth:	12"
Weight:	87 lbs



LOAD RATING / NOTES



LIGHT DUTY
PEDESTRIAN / GREENBELT

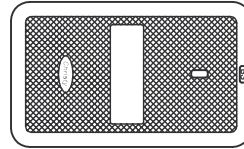
For use in non-vehicular traffic situations only.
Weights and dimensions may vary slightly.
Actual load rating is determined by the box and cover combination.

B03

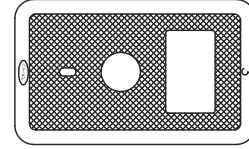
CHRISTY®

COVER OPTIONS

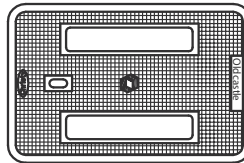
Concrete, Flush Solid
Concrete, Flush Solid with AMR Opening
Cast Iron, Flush Solid
Steel Checker Plate, Solid



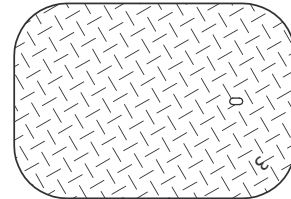
Concrete
Flush



Concrete
with AMR Opening



Cast Iron
Flush



Steel Checker
Plate

COVER OPTIONS

Galvanizing (Steel Covers)

 **WARNING:** Cancer and Reproductive Harm - www.P65Warnings.ca.gov

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Revision 12/04/18
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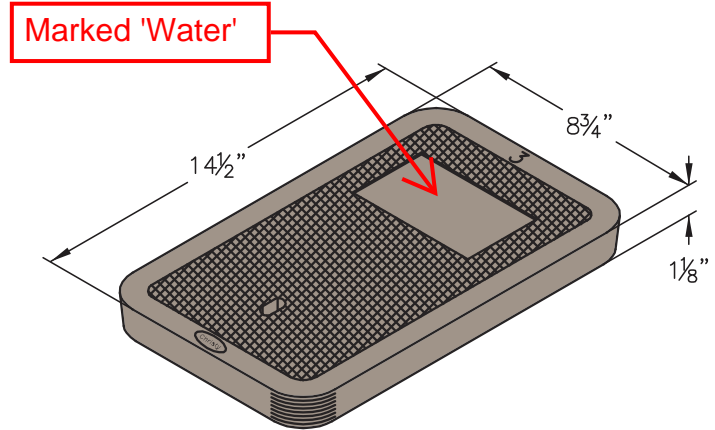
B03

CHRISTY®

COVER

Style:	Flush
Material:	Reinforced Concrete
Model:	9" x 14"
Weight:	12 lbs
Options:	Special Markings
Surface:	Skid Resistant & Marked*
Coefficient of Friction:	>0.6 ASTM 1028
Performance:	ASTM C 857, WUC 3.6

Cover comes standard with permanent markings for manufacturer, load rating, model size and manufacturing location.



BODY

Material:	Reinforced Concrete with Composite Cap
Model:	9" x 14"
Weight:	74 lbs
Wall Type:	Straight
Mouseholes:	0 - 2
Performance:	ASTM C 857, WUC 3.6

EXTENSION

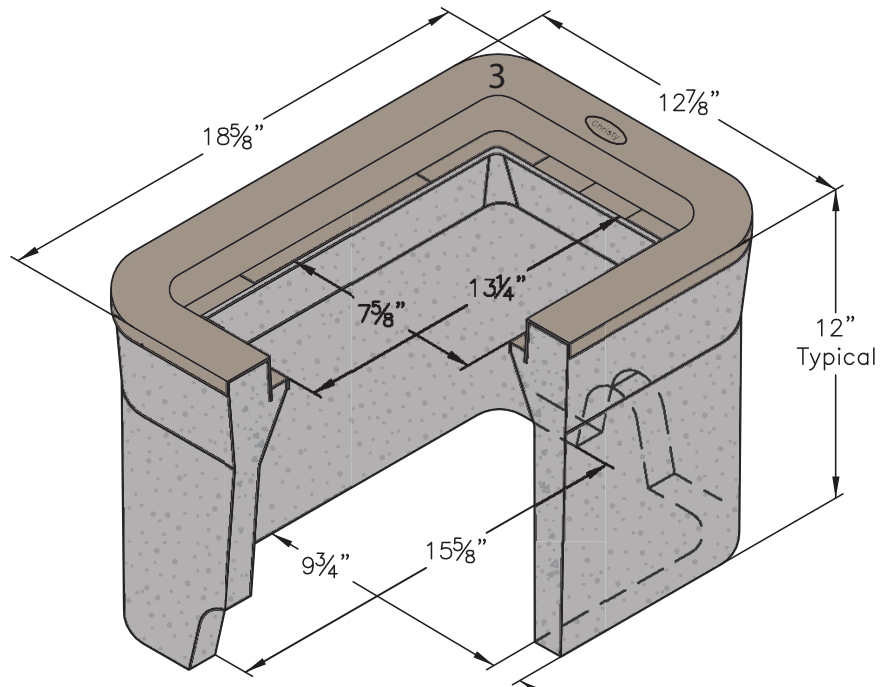
Material:	Reinforced Concrete
Depth:	12"
Weight:	87 lbs

LOAD RATING / NOTES



LIGHT DUTY
PEDESTRIAN / GREENBELT

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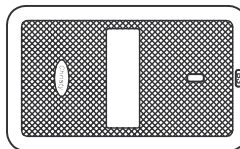


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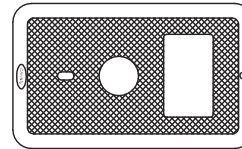
CHRISTY®

COVER OPTIONS

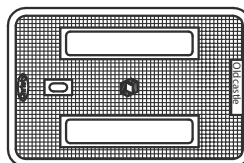
Concrete, Flush Solid
Concrete, Flush Solid with AMR Opening
Cast Iron, Flush Solid
Steel Checker Plate, Solid



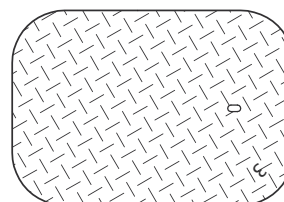
Concrete
Flush



Concrete
with AMR Opening



Cast Iron
Flush



Steel Checker
Plate

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