



LETTER OF TRANSMITTAL

DATE: 07/15/2025

TO: Manuel Maldonado

ATTENTION: Manuel Maldonado

Architect / Principal _____

RE: Fire 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	7/15/2025	2	Fire 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 <input checked="" type="checkbox"/> | Make Correction Noted <input type="checkbox"/> |
| Rejected <input type="checkbox"/> | Revise and Resubmit <input type="checkbox"/> |
| No Action Required <input type="checkbox"/> | Intermediate Submittal Required <input type="checkbox"/> |

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"	DR 51 – 80 psi DR 41 – 100 psi DR 32.5 – 125 psi DR 25 – 165 psi DR 21 – 200 psi	DR 18 – 235 psi (185 psi)** DR 14 – 305 psi (250 psi)**
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.



napcopipe.com | 1.855.624.7473

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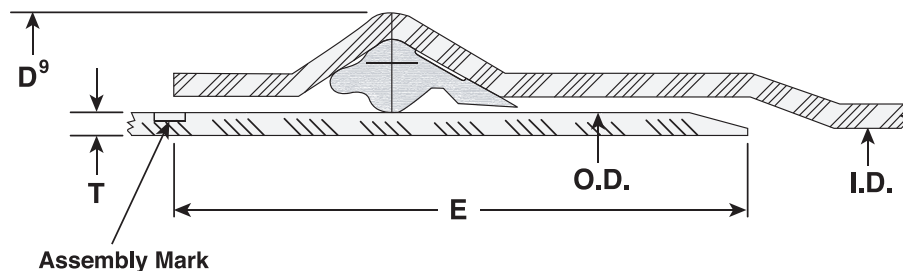
BLUE BRUTE™

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

JCM 432 All Stainless Steel Tapping Sleeve

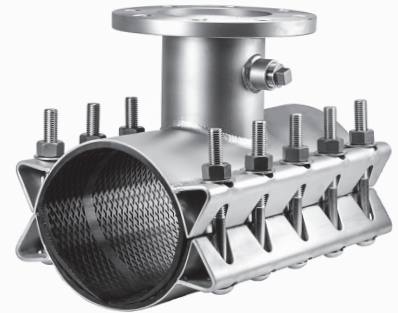
JCM 462 Stainless Steel Tapping Sleeve with Carbon Steel Flange

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:

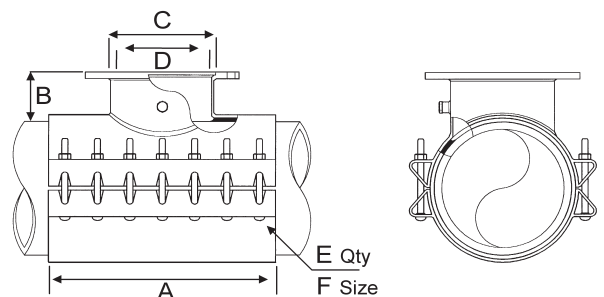
Body:	Stainless Steel, 18-8 Type 304
Bolts:	Stainless Steel, Type 304
Branch Outlet:	Schedule 10 Stainless Steel Pipe
Gasket:	Full circumferential gasket compounded for use with water, salt solutions, mild acids, bases and sewage.
432 Flange:	18-8 Type 304 Stainless Steel per ANSI/AWWA C228 Class SD. 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

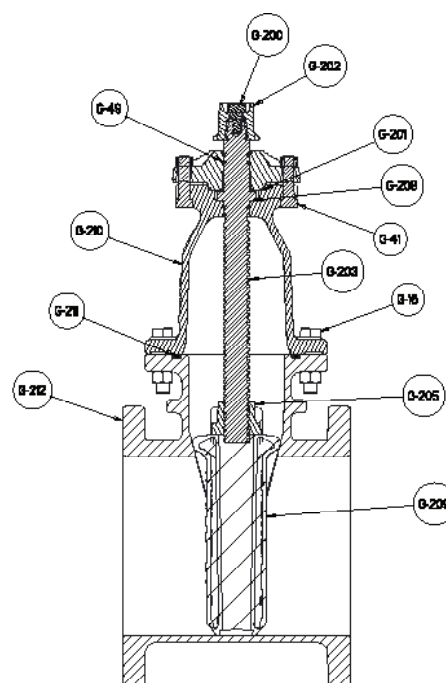
*Fully encapsulated in molded rubber with no iron exposed;

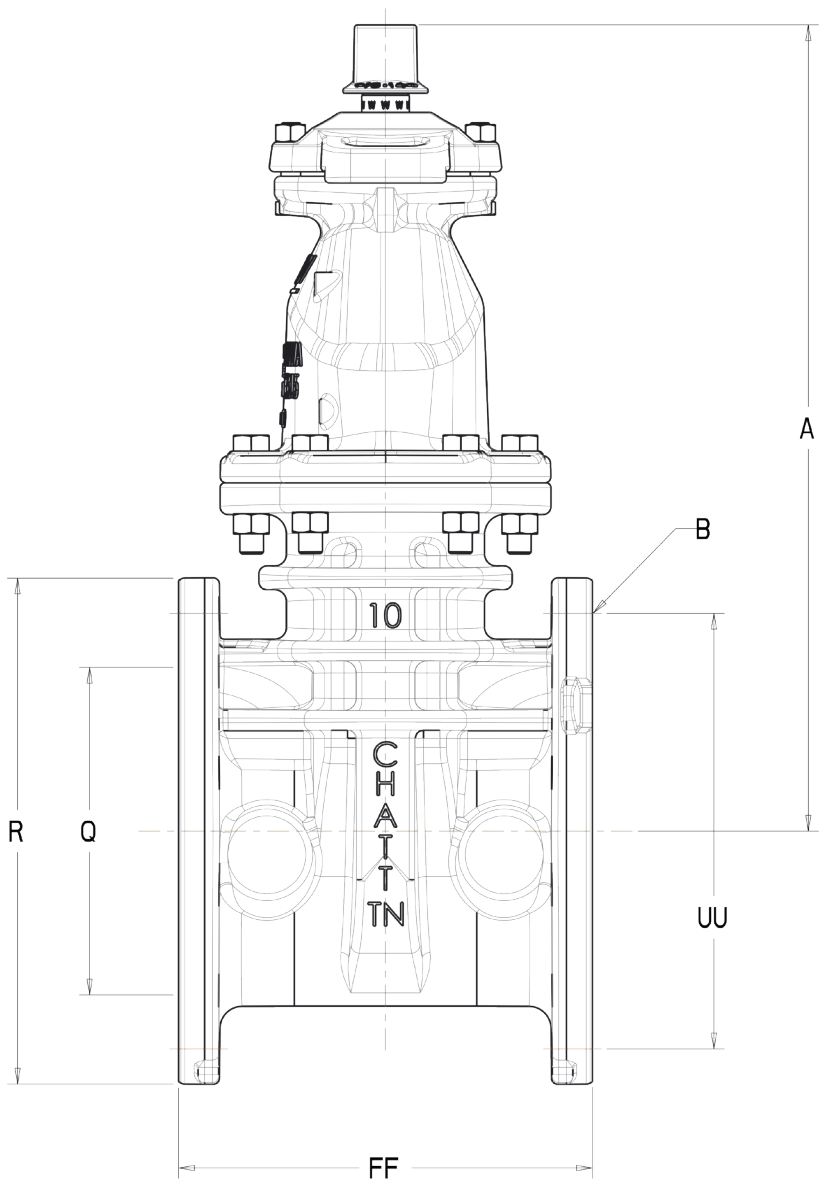
▼ Material strength ASTM A536 65-45 minimum

** 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	14.19	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.

NON ASBESTOS GASKET

SUBMITTAL SPECIFICATIONS

GASKETS MEET THE PRESSURE RATINGS, DRILLING AND DIMENSIONS OF ANSI / ASME B16.21

TECHNICAL DATA

PRODUCT	STYLE	COLOR	BINDER	TEMP MAX	PRESSURE MAX	PRESS X TEMP MAX	COMPRESS ASTM F-36	RECOVERY ASTM F-36	TENSILE STRENGTH ASTM F152	FLEXIBILITY	CREEP RELAXATION ASTM F-78
TEADIT/PARASEAL	NA 1006	GRN	NBR	575°	1160 PSI	425	7-17%	50%	1300	-	25

AVAILABILITY

☐ Full Face
 ☐ Ring
 ☐ 1/16"
 ☐ 1/8"
 ☐ 1/4"

GENERAL DESCRIPTION: Manufactured from a non-asbestos material formulated for services in most sealing applications as a universal replacement gasket. The synthetic fiber content is Aramid Bound by Nitrile Rubber (NBR). These gaskets have a non-stick coating. These Gasket materials meet the pressure ratings, drilling and dimensional requirements of ANSI/ASME B16.2.1 and AWWA C207-94.

****Domestically manufactured in the USA****

G05

CHRISTY®

COVER

Style:	Flush
Material:	Cast Iron
Model:	11" Dia.
Weight:	14 lbs
Options:	Special Markings
Surface:	Skid Resistant & Marked*
Coefficient of Friction:	>0.6 ASTM 1028
Performance:	H20, AASHTO

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

BODY

Material:	Reinforced Concrete with Steel Frame
Model:	14" Dia.
Weight:	58 lbs
Wall Type:	Straight
Mouseholes:	0
Performance:	H20, AASHTO

GRADE RING

Material:	Cast Iron
Grade Options:	1" Height 1-1/2" Height 2" Height

LOAD RATING / NOTES



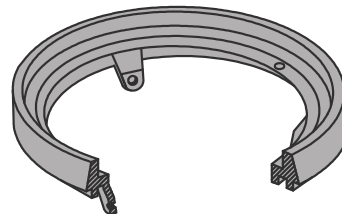
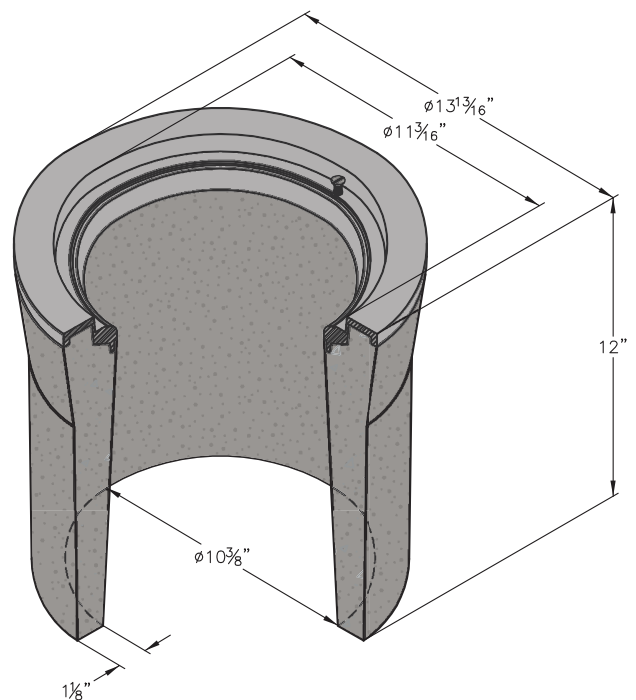
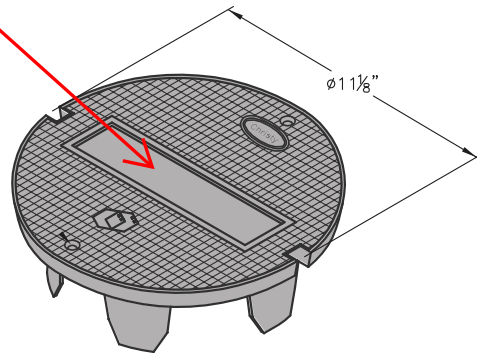
TRAFFIC RATED
AASHTO H20

Actual load rating is determined by the box and cover combination.

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

All information contained on this sheet is current at the time of publication.
Oldcastle reserves the right to discontinue or update product information without notice.

Marked 'Fire'





Model WBR

In Building Riser

Application

ZURN WILKINS Model WBR In Building Risers are designed for use to connect a water supply line from outside the building to the water system inside the building. May be used in potable water applications.

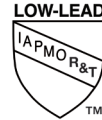
Approvals

- UL ® Listed
- ULC ® Listed
- FM® Approved
- Certified to NSF/ANSI 372* by IAPMO R&T

*(0.25% MAX. WEIGHTED AVERAGE LEAD CONTENT)



LEAD FREE



Materials

Main Body	304 Stainless Steel ASTM A 312
Gasket	SBR - UL Listed
Test Plug	Iron
Grooved Coupling	Ductile Iron
Coupling Gasket	EPDM

Options

- ☐ - with grooved outlet connection coupling and test plug with 1" NPT TAP (standard)
- ☐ F - with flanged outlet connection
- ☐ 6x8.5 - with extended 8.5 FT (102 IN) vertical leg (grooved outlet connection only)

Features

Sizes: 4", 6", 8", 10"

Maximum working water pressure 200 PSI

Maximum working water temperature 140°F

Designed to meet NFPA 13 & 24

Brackets on inlet side provide attachment points for pipe installation equipment. Loops provided for lifting and key-in to concrete thrust block

End Connections

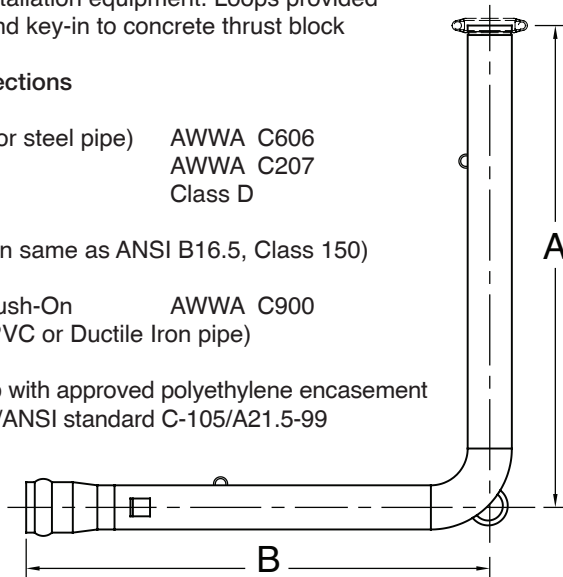
OUTLET

(Grooved for steel pipe)	AWWA C606
(Flanged)	AWWA C207 Class D

(Bolt pattern same as ANSI B16.5, Class 150)

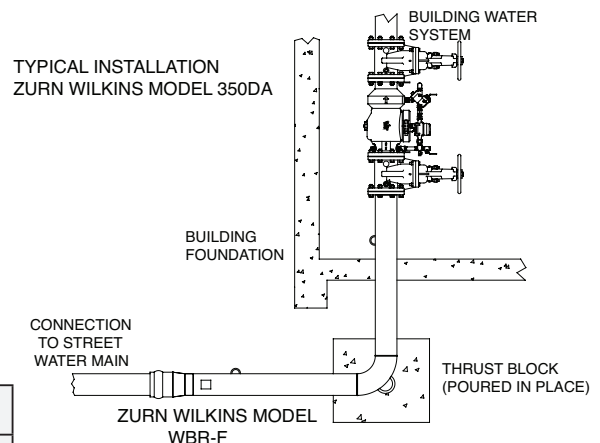
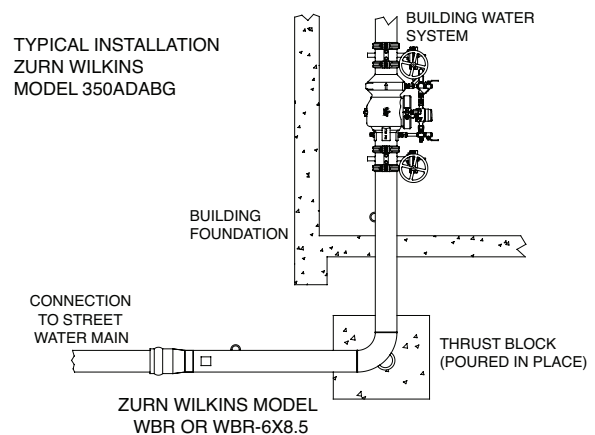
INLET Push-On AWWA C900
(PVC or Ductile Iron pipe)

Note: Wrap with approved polyethylene encasement per AWWA/ANSI standard C-105/A21.5-99



Dimensions & Weights (do not include pkg.)

SIZE	DIMENSIONS (approximate)				WEIGHT				WBR MATERIAL	
	A		B		GROOVED		FLANGED		SCHEDULE	WALL THICKNESS
	in.	mm	in.	mm	lbs.	kg	lbs.	kg		
4	72	1829	72	1829	77	35	80	37	10	.120
6	72	1829	72	1829	123	56	123	56	10	.134
8	72	1829	72	1829	139	63	136	62	5	.109
10	72	1829	72	1829	199	91	197	90	5	.134
4	102	2590	72	1829	90	41	n/a	n/a	10	.120
6	102	2590	72	1829	143	65	n/a	n/a	10	.134
8	102	2590	72	1829	175	79	n/a	n/a	5	.109
10	102	2590	72	1829	268	122	n/a	n/a	5	.134



Typical Installation

Local codes shall govern installation requirements. To be installed in accordance with the manufacturers' instructions and prevailing government and industry standards and codes.



AGAVE WIRE

Toll-Free (800) 690-3408

An ISO 9001 Management System

Fax: (469) 547-4242

PRODUCT GROUP DATA SHEET

PRODUCT OVERVIEW: CPT/ACPT Cathodic Protection Cable

CONSTRUCTION: One Bare Copper HMW/PE Insulated Conductor

APPROVALS: HMW/PE ASTM Standards for Cathodic Protection Cable

APPLICATION: Direct Burial for Cathodic Protection

CONSTRUCTION PARAMETERS:

CONDUCTOR: Solid or Stranded Bare Copper

NUMBER OF CONDUCTORS: 1

INSULATION MATERIAL: HMWPE (High Molecular Weight Polyethylene)

ELECTRICAL & ENVIRONMENTAL PROPERTIES:

TEMPERATURE RATING: 75c

OPERATING VOLTAGE: 600v

INSULATION COLOR: All Colors Available

PRINT LEGEND:

“*** HMWPE Cathodic Protection Cable (UL) E246360”

**Print Line will show gauge specific to product.

Part Number	AWG	Conductor Stranding	Weight per 1000 ft (lbs.)	Insulation Thickness (nom)	Finished O.D. (nom)
CPT-1401	14	Solid	21.97	0.060"	0.186"
CPT-1201	12	Solid	46.25	0.110"	0.302"
CPT-1001	10	Solid	61.01	0.110"	0.324"
CPT-0801	8	Solid	83.12	0.110"	0.350"
ACPT-0807	8	7x.0508	93	0.110"	0.362"
ACPT-0607	6	7x.0640	135	0.110"	0.398"
ACPT-0407	4	7x.0772	190	0.110"	0.445"
ACPT-0207	2	7x.0974	275	0.110"	0.503"
ACPT-0119	1/0	19 Strand	440	0.125"	0.681"

On special orders, the customer will accept all mil lengths and +/- 10% of total order requested. The information presented here is, to the best of our knowledge, is true and accurate. However, since conditions of use are beyond our control, all recommendations or suggestions are presented without guarantee or responsibility on our part. We disclaim all liability in connection with the use of information contained herein or otherwise.

This specification is proprietary intellectual property of Agave Wire. Any information contained herein shall not be disclosed to any party without written consent of Agave Wire.

Proudly Manufactured in the U.S.A.

NORTHTOWN COMPANY

Pipeline Protection Products

SIZES FOR POLYWRAP SPEC PER AWWA C-105-10

Pipe Size	Lay Flat Width	Lay Flat Roll Size & Style
2-3"	12"	500' Clear Tube (non-perf'd)
3-4"	16"	500' Clear Sleeve (perf'd every 20') 440' Black Sleeve (perf'd every 22')
6-8"	20"	340' Black or Clear Sleeve (perf'd every 20') 350' Clear Tube (non-perf'd) 350' Green Tube (non-perf'd) 350' Blue Tube (non-perf'd) 350' Purple Tube (non-perf'd) 440' Black or Clear Sleeve (perf'd every 22')
10-12"	27"	340' Black or Clear Sleeve (perf'd every 20') 350' Clear Tube (non-perf'd) 350' Green Tube (non-perf'd) 350' Blue Tube (non-perf'd) 350' Purple Tube (non-perf'd) 440' Black or Clear Sleeve (perf'd every 22')
14-18"	37"	340' Black or Clear Sleeve (perf'd every 20') 350' Clear Tube (non-perf'd) 350' Green Tube (non-perf'd) 350' Blue Tube (non-perf'd) 350' Purple Tube (non-perf'd) 220' Black or Clear Sleeve (perf'd every 22')
20-24"	54"	340' Black or Clear Sleeve (perf'd every 20') 350' Clear Tube (non-perf'd) 350' Green Tube (non-perf'd) 350' Blue Tube (non-perf'd) 350' Purple Tube (non-perf'd) 220' Black or Clear Sleeve (perf'd every 22')
30"	67"	180' Black Sleeve (perf'd every 20') 180' Green Tube (non-perf'd) 180' Blue Tube (non-perf'd) 180' Purple Tube (non-perf'd) 220' Black or Clear Sleeve (perf'd every 22')
36-42"	81"	180' Black Sleeve (perf'd every 20') 180' Green Tube (non-perf'd) 180' Blue Tube (non-perf'd) 180' Purple Tube (non-perf'd) 220' Black or Clear Sleeve (perf'd every 22')
48"	95"	180' Black Tube (non-perf'd) 220' Black or Clear Sleeve (perf'd every 22')
54-60"	108"	180' Black Tube (non-perf'd) 220' Black Sleeve (perf'd every 22')
Fittings		3'x100' Clear Sheet

Custom lay flat widths & roll lengths available on request.

**GENERAL DESCRIPTION:**

WELD-ON® P-70™ is an industrial grade, low VOC emission, non-bodied, fast acting, primer. The strong, aggressive action of P-70 primer rapidly softens and dissolves the joining surfaces of PVC and CPVC pipe and fittings. The benefit of this priming action is especially noticeable on parts being joined together in cold weather. Available in clear and purple; the latter allows easy identification when used on the joining surfaces.

APPLICATION:

WELD-ON P-70 primer, when used in conjunction with appropriate WELD-ON solvent cements, will make consistently strong, well-fused joints. It is essential that the joining surfaces of pipe and fittings be softened and remains softened prior to assembly. The main function of the primer is to expedite the penetration and softening of the surfaces. Its rate of penetration into the joining surfaces is more rapid than that of solvent cement alone. P-70 primer is suitable for use with all types, classes and schedules of PVC and CPVC pipe and fittings. It is specially recommended for use on Schedule 80 and large pipe size.

Detailed directions on making solvent cemented joints are printed on the container label. An installation DVD/CD covering solvent cementing is available. It not only describes the basic principles of solvent cementing, but also covers the handling, storage and use of our products. It is highly recommended that the installer review the instructions supplied by the pipe and fitting manufacturer.

NOTE: WELD-ON solvent cements must never be used in a CPVC system using or being tested by compressed air or gases; including air-over-water booster.

AVAILABILITY:

Both WELD-ON P-70 clear and purple primers are available in ¼ pint (118 ml), ½ pint (237 ml), pint (473 ml), quart (946 ml) and gallon (3.785 l) metal cans. For detailed information on containers and applicators, see our current Price List.

STANDARDS AND CERTIFICATION LISTINGS:

- Meets ASTM F 656 Standard
- Meets SCAQMD Rule 1168/316A
- Compliant with LEED® (Leadership in Energy and Environmental Design). When using this WELD-ON low VOC product, credit can be claimed for LEED Green Building Rating System – Indoor Environmental Quality.
- Listed by NSF International for compliance with ASTM F 656, NSF/ANSI Standard 14, and NSF/ANSI Standard 61 for use on potable water, drain, waste, vent and sewer applications.
- **WELD-ON P-70 Purple Only** - Listed by IAPMO for compliance with ASTM F 656 and applicable sections of the latest edition of the Uniform Plumbing Code®.

SPECIFICATIONS:

COLOR: Clear or Purple
SPECIFIC GRAVITY: 0.858 ± 0.040
BROOKFIELD VISCOSITY: Water Thin

SHELF LIFE:

3 years in tightly sealed containers. The date code of manufacture is stamped on the bottom of the container. Stability of the product is limited by the evaporation of the solvent when the container is opened. Adding of solvents is not recommended and may significantly change the properties of the primer.

QUALITY ASSURANCE:

WELD-ON P-70 primer is carefully evaluated to assure that consistent high quality is maintained. Fourier transform infrared spectroscopy, gas chromatography, and additional in depth testing ensures each batch is manufactured to exacting standards. A batch identification code is stamped on each can and assures traceability of all materials and processes used in manufacturing this product.

SHIPPING:**For One Liter and Above**

Proper Shipping Name: Flammable Liquid
n.o.s. (Methyl Ethyl Ketone, Tetrahydrofuran)
Hazard Class: 3
Identification Number: UN 1993
Packing Group: II
Label Required: Flammable Liquid

For Less than One Liter

Proper Shipping Name: Consumer Commodity
Hazard Class: ORM-D

SAFETY AND ENVIRONMENTAL PRECAUTIONS:

This product is flammable and considered a hazardous material. In conformance with the Federal Hazardous Substances Labeling Act, the following hazards and precautions are given. Purchasers who repackage this product must also conform to all local, state and federal labeling, safety and other regulations. VOC emissions do not exceed 550 grams per liter.

PIPE MARKING TAPE

MODELS LVPMTD - LVPMTND

(DETECTABLE) (NON-DETECTABLE)

UNIFORM COLOR CODE

WHITE - Proposed excavation

PINK - Temporary survey markings

RED - Electric power lines, cables, conduit and lighting cables

YELLOW - Gas, oil, steam, petroleum or gaseous materials

ORANGE - Communication, alarm or signal lines, cables or conduit

BLUE - Potable water

PURPLE - Reclaimed water, irrigation and slurry lines

GREEN - Sewers and drain lines

FEATURES:

Lansdale's Pipe Tape provides easy detection and identification of buried pipe and our LVPMTND tape provides identification of non buried pipe.

Custom tapes are available if needed and include custom colors, logos, wording, symbols, phone numbers etc.

DATA SHEET			
	DETECTABLE TAPE		NON- DETECTABLE TAPE
COLOR & LEGEND	APWA		APWA
Length (Ft)	1000 FT		1000 FT
Tolerance	± 5%		± 5%
Width (In)	2", 3", 4", 6", 12"		2", 3", 4", 6", 12"
Width Tolerance	± 2%		± 2%
Thickness (Mil)	5 mil - D2103		2 mil/4mil - D2103
Thickness Tolerance	± 5%		± 5%
Core Inside Diameter (mm)	76 mm		76 mm
Material	.35 Mil Aluminum Foil + 8 Mil Clear Bopp Film + 3.75 Mil Clear PE* Film		PE*
Yield Strength	MD	52lbf -D882	N/A
	TD	49lbf-D882	N/A
Break Strength	MD	66lbf-D882	N/A
	PSI	7800 PSI-D882	N/A
	TD	50lbf-D882	N/A
	PSI	7800 PSI-D882	N/A
Elongation	MD	80%-D882	803% - D882**
	TD	140%-D882	>1080% - D882**
Tongue Tear	MD	2lb-D1938	N/A
	TD	6lb-D1938	N/A
Tensile Strength	MD	50.8 lbs/in-D882	N/A
	TD	50.0 lbs/10-D882	N/A



PROJECT	APPROVAL STAMP
PROJECT:	<input type="checkbox"/> APPROVED
ADDRESS:	<input type="checkbox"/> APPROVED AS NOTED
ENGINEER:	<input type="checkbox"/> NOT APPROVED
SUBMITTAL DATA:	REMARKS:
NOTES 1:	
NOTES 2:	

DETECTABLE TAPE (5.0 MIL)

Solid Aluminum Foil Core • Virgin Clear Polypropylene Film Laminated Top Structure
Virgin Clear Polyethylene Film Laminated Base Structure • Reverse Printed Polypropylene Structure
Acid, Alkali, Chemical, and Oil Resistant • Direct Burial Rated • Made in the USA



Applications and Information

- **Pro-Line's Detectable Marking Tape** is used for detecting, locating, identifying, and protecting buried utility lines for gas, water, sewer, telecommunication, and electrical markets. The width of tape used, is determined by the size of, and depth at which the underground utility line is buried. The depth at which detectable tape is buried, is determined by the width of the tape used.
- **DETECT:** Aluminum core is detected through means of inductive locating.
- **LOCATE:** Line is located and marked after inductive locating is performed.
- **IDENTIFY:** Utility type is identified by both the APWA color-code and utility legend printed on the marking tape.
- **PROTECT:** Detectable tape works 24 hours a day and year round, even if tape is not inductively located during excavation, the tape provides a "stop-sign" effect that is highly visible.

Standards and References

Pro-Line's Detectable Marking Tape meets or exceeds all applicable ASTM specifications.

- ASTM D2103-08: Standard Specification for Polyethylene Films and Sheeting.
- ASTM D882-09: Standard Test Method for Tensile Properties and Elongation of Thin Plastic Sheeting.
- ASTM D2578-08: Standard Test Method for Wetting Tension of Polyethylene and Polypropylene Films.
- ASTM D792-08: Standard Test Methods for Density of Plastics by Displacement.
- ASTM D671-93: Standard Test Method for Flexural Fatigue of Plastics.

Construction

Pro-Line's Detectable Marking Tape consists of a minimum 5.0 mil overall thickness. Construction is 0.8 mil clear virgin polypropylene film, reverse printed and laminated to a 0.35 solid aluminum foil core and then laminated to a 3.75 mil clear virgin polyethylene film. Tape is printed with our APWA Color-Coded, patented "Diagonally Striped" design with big, bold, black lettering to identify a specific buried utility line.

Specifications

DETECTABLE UNDERGROUND MARKING TAPE

Underground marking tape shall be a (2", 3", 4", 6", or 12" width), detectable marking tape, with a minimum 5.0 mil overall thickness. Tape shall be manufactured using a 0.8 mil clear virgin polypropylene film, reverse printed and laminated to a **0.35 mil solid aluminum foil core**, and then laminated to a 3.75 mil clear virgin polyethylene film. Tape shall be printed using a diagonally striped design for maximum visibility, and meet the APWA Color-Code standard for identification of buried utilities. Detectable marking tape shall be **Pro-Line Safety Products** or approved equal and made in the USA.

TABLE 1: DETECTABLE TAPE CONSTRUCTION (Polypropylene, Aluminum Foil, and Polyethylene)

PROPERTY	2" WIDTH	3" WIDTH	4" WIDTH	6" WIDTH	12" WIDTH
Nominal Overall Thickness	5.0 mil	5.0 mil	5.0 mil	5.0 mil	5.0 mil
Aluminum Foil Core Thickness	0.35 mil	0.35 mil	0.35 mil	0.35 mil	0.35 mil
Polyethylene Film Thickness	3.75 mil	3.75 mil	3.75 mil	3.75 mil	3.75 mil
Polypropylene Film Thickness	0.80 mil	0.80 mil	0.80 mil	0.80 mil	0.80 mil
Polypropylene Print Method	Reverse Printed	Reverse Printed	Reverse Printed	Reverse Printed	Reverse Printed
Print Design #1 (Patented)	Diagonal Striped	Diagonal Striped	Diagonal Striped	Diagonal Striped	Diagonal Striped
Print Design #2 (Custom)	Solid Block	Solid Block	Solid Block	Solid Block	Solid Block
Print Design #3 (Custom)	Solid Flood	Solid Flood	Solid Flood	Solid Flood	Solid Flood
Print Design Color-Code	APWA Color-Code	APWA Color-Code	APWA Color-Code	APWA Color-Code	APWA Color-Code
<i>*Diagonal striped design is a PATENTED design of Pro-Line Safety Products that enhances tape visibility for superior protection.</i>					
<i>*Please note that there may be a nominal + or - 10% difference throughout the overall thickness.</i>					

TABLE 2: TESTING SPECIFICATIONS (Physical and Mechanical Properties)

TEST DESCRIPTION	STANDARD	2" WIDTH	3" WIDTH	4" WIDTH	6" WIDTH	12" WIDTH
Aluminum Foil Core	MFG. SPECS	Virgin Grade	Virgin Grade	Virgin Grade	Virgin Grade	Virgin Grade
Polyethylene Film	MFG. SPECS	Virgin Grade	Virgin Grade	Virgin Grade	Virgin Grade	Virgin Grade
Polypropylene Film	MFG. SPECS	Virgin Grade	Virgin Grade	Virgin Grade	Virgin Grade	Virgin Grade
Adhesive Type	MFG. SPECS	AV1257/CA100	AV1257/CA100	AV1257/CA100	AV1257/CA100	AV1257/CA100
Adhesive Bond Strength	BOILING WATER	5 hrs W/O Peel	5 hrs W/O Peel	5 hrs W/O Peel	5 hrs W/O Peel	5 hrs W/O Peel
Printed Inks	MFG. SPECS	Chromabond	Chromabond	Chromabond	Chromabond	Chromabond
Print Repeat	MFG. SPECS	Varies by Legend	Varies by Legend	Varies by Legend	Varies by Legend	Varies by Legend
Coefficient Friction	ASTM D4521-96	0.247 Static	0.247 Static	0.247 Static	0.247 Static	0.247 Static
Density	ASTM D792-66	1.09 g/cm ³	1.09 g/cm ³	1.09 g/cm ³	1.09 g/cm ³	1.09 g/cm ³
Elongation (MD)	ASTM D882-80A	139%	139%	139%	139%	139%
Elongation (TD)	ASTM D882-80A	80%	80%	80%	80%	80%
Flexural Fatigue	ASTM D671-93	Pliable Hand	Pliable Hand	Pliable Hand	Pliable Hand	Pliable Hand
Printability	ASTM D2578-08	45 Dynes	45 Dynes	45 Dynes	45 Dynes	45 Dynes
Tensile Strength	ASTM D882-09	15,000 psi	15,000 psi	15,000 psi	15,000 psi	15,000 psi

WEIGHTS, MEASUREMENTS AND PACKAGING

PRODUCT PART NO.	SIZE (WIDTH)	NOMINAL OVERALL THICKNESS	NOMINAL THICKNESS OF STRUCTURAL MATERIALS			RECOMMENDED BURIAL DEPTHS FOR DETECTION	PRODUCT WEIGHT PER ROLL	STANDARD PACKAGING
			ALUMINUM FOIL THICKNESS	POLYETHYLENE THICKNESS	POLYPROPYLENE THICKNESS			
10311XXX3	2" x 1000'	5.0 MIL	0.35 MIL	3.75 MIL	0.80 MIL	6-9 inches	4.75 lbs	9 / CARTON
10312XXX3	3" x 1000'	5.0 MIL	0.35 MIL	3.75 MIL	0.80 MIL	9-12 inches	7.13 lbs	6 / CARTON
10313XXX3	4" x 1000'	5.0 MIL	0.35 MIL	3.75 MIL	0.80 MIL	12-15 inches	9.50 lbs	4 / CARTON
10314XXX3	6" x 1000'	5.0 MIL	0.35 MIL	3.75 MIL	0.80 MIL	15-18 inches	14.25 lbs	3 / CARTON
10316XXX3	12" x 1000'	5.0 MIL	0.35 MIL	3.75 MIL	0.80 MIL	18-24 inches	28.50 lbs	1 / CARTON

****FOR CUSTOM LEGENDS OR SIZES CALL 800.554.3424****

PRINT LEGEND	PART #
CAUTION BURIED CHILLED WATER LINE BELOW	103
CAUTION BURIED GEOTHERMAL LINE BELOW	128
CAUTION BURIED POTABLE WATER LINE BELOW	115
CAUTION BURIED WATER LINE BELOW	125
CAUTION BURIED FORCE MAIN BELOW	208
CAUTION BURIED FORCE MAIN BELOW	308
CAUTION BURIED SANITARY SEWER LINE BELOW	318
CAUTION BURIED SEWER LINE BELOW	319
CAUTION BURIED STORM DRAIN LINE BELOW	321
CAUTION BURIED STORM SEWER LINE BELOW	322

PRINT LEGEND	PART #
CAUTION BURIED CATV LINE BELOW	402
CAUTION BURIED COMMUNICATION LINE BELOW	404
CAUTION BURIED FIBER OPTIC CABLE BELOW	406
CAUTION BURIED TELEPHONE LINE BELOW	423
CAUTION BURIED NON-POTABLE WATER LINE	512
CAUTION BURIED RECLAIMED WATER LINE BELOW	517
CAUTION BURIED ELECTRIC LINE BELOW	605
CAUTION BURIED HIGH VOLTAGE LINE BELOW	610
CAUTION BURIED GAS LINE BELOW	809
CAUTION BURIED PIPELINE BELOW	814



PRO-LINE SAFETY PRODUCTS COMPANY
 1099 ATLANTIC DRIVE, UNIT 1 • WEST CHICAGO, IL 60185
TOLL FREE: 800.554.3424



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NOTES 2:	