

SUBMITTAL



Submittal number	16.0	Date	07/09/2018
Project	TRAILS AT CROWFOOT F1 & 9	6954 N. CROWFOOT VALLEY RD. PARKER, CO 80138	
Project number	201810		
Spec section			
Subsection		Status	Open
Current action	Submitted	Ball in court	
Topic	Storm Manholes		

Submitter	
Reviewer	
Cc	

Date submitted	07/09/2018	Submission due date	07/09/2018
Released for review	07/09/2018	Review due date	07/13/2018
Date returned		Required on site date	
Date closed			

Notes



LETTER OF TRANSMITTAL

PIPELINE CONTRACTORS

8600 Verbena St.
Commerce City, CO 80022
Office 303-289-4355
Fax 303-289-4353

ISSUED TO:

Owner ATTN: Con Cockrun, Kelley Trucking

DATE:

TRANSMITTAL NO.:

REGARDING:

Project JBS Job No 0150

We are issuing you under separate cover the following (via):

- Blue Prints
- Submittals
- Change Order
- Request for Information
- Copy of a letter
- Shop Drawings

#	Copies	Item Dated	Item #	Description
	1-Electronic		A-017	Storm Manholes

- For your bid
- For Approval
- As Requested
- Returned for Correction
- For Review and Comment
- For Pricing

Prints are loaned to you and are to be returned to us by: Date: _____

Bids are due on or before: Date: _____

COMMENTS

CC:

Amie Parent

Amie Parent
JBS Pipeline Contractors



Product Submittal

Project Name: Trails at Crowfoot F. 1 & F. 9 - Storm Manholes

Location: Parker, CO

Date: 6/21/2018

Submitted by: Chris Hoganson

Phone: 303-867-6714

All product, materials, and design information provided by Forterra Precast Concepts, LLC is privileged and proprietary to Forterra Precast Concepts, LLC. In consideration of receiving said information the recipient thereof agrees that it and its employees, agents and consultants who may be made privy to said information shall be directed to hold and shall hold said information in the strictest confidence and shall treat it as privileged and proprietary to Forterra Precast Concepts, LLC. Access to said information shall be restricted to those who are required by their duties to be privy to such information.



PRECAST CONCEPTS, LLC

CONCRETE MANHOLE PRODUCT CERTIFICATION

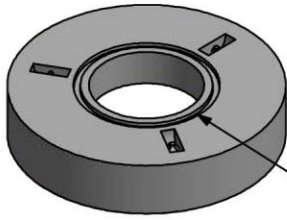
We hereby certify that the following precast concrete products are manufactured in accordance with the below referenced standard specifications and meet or exceed the minimum physical requirements established by these standards and the project specifications, most recent version.

- Precast manholes shall conform to ASTM C478 “Standard Specification for Precast Reinforced Concrete Manhole Sections”
- Steel reinforcing shall conform to ASTM C478. Rebar shall conform to ASTM A615 “Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement” and Welded Wire Reinforcement shall conform to ASTM A1064 “Carbon-Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete”
- Concrete shall conform to ASTM C478 and cement shall conform to ASTM C150 “Standard Specification for Portland Cement”
- Joints shall use rubber gaskets to conform to ASTM C443 “Joints for Concrete Pipe and Manholes, using Rubber Gaskets” or flexible joint sealant to conform to ASTM C990 “Joints for Concrete Pipe, Manholes, and Precast Box Sections, using Preformed Flexible Joints Sealants”
- Resilient Connectors (if applicable) shall conform to ASTM C923 “Resilient Connectors between Reinforced Concrete Manhole Structures, Pipe, and Laterals”
- Steps (if applicable) shall conform to ASTM C478.
- See attached product sheets and details for additional information.

All product, materials, and design information provided by Forterra Precast Concepts, LLC is privileged and proprietary to Forterra Precast Concepts, LLC. In consideration of receiving said information the recipient thereof agrees that it and its employees, agents and consultants who may be made privy to said information shall be directed to hold and shall hold said information in the strictest confidence and shall treat it as privileged and proprietary to Forterra Precast Concepts, LLC. Access to said information shall be restricted to those who are required by their duties to be privy to such information.

Ø48" ID MANHOLE COMPONENTS

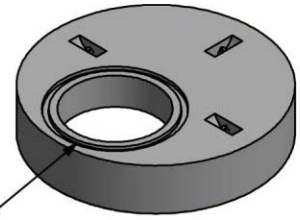
CONCENTRIC



FLAT SLAB TOPS

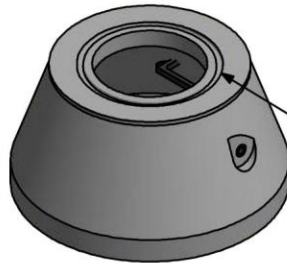
HEIGHT	ACCESS	WEIGHT	BOTTOM JOINT
12-1/4"	24"	1650 LBS	BELL
12-1/4"	30"	1500 LBS	BELL
8"	24"	1500 LBS	BUTT
8"	30"	1350 LBS	BUTT

ECCENTRIC



*INTERLOCK MATES WITH GRADE RINGS

CONCENTRIC



CONES

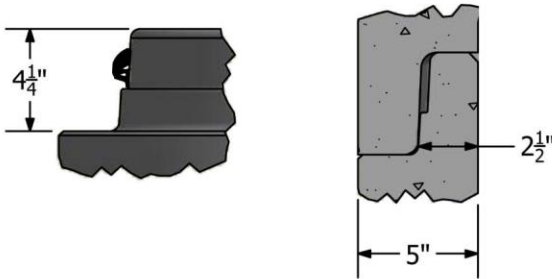
HEIGHT	ACCESS	WEIGHT	
30"	24"	2400 LBS	ECCENTRIC
30"	24"	2400 LBS	CONCENTRIC

ECCENTRIC



*INTERLOCK MATES WITH GRADE RINGS

JOINT DETAIL



RISERS

HEIGHT	WEIGHT
Ø48" X 12"	1000 LBS
Ø48" X 24"	1900 LBS
Ø48" X 36"	2750 LBS
Ø48" X 48"	3600 LBS
Ø48" X 60"	4500 LBS

BASES

- AVAILABLE WITH MONOLITHIC CAST INVERT CHANNEL
- CUSTOM INVERT CHANNELS AVAILABLE
- CUSTOM HOLE SIZES AVAILABLE
- FLEXIBLE STORM & SANITARY CONNECTIONS
- BASE HEIGHTS AVAILABLE: 24" - 54"
- SANITARY BASES WITH INVERTS ADD ABOUT 2000 LBS

STANDARD BASE SIZES

HEIGHT	BLANK BASE NO INVERT NO HOLES
24"	6200 LBS
27"	6550 LBS
30"	6950 LBS
33"	7300 LBS
36"	7650 LBS
39"	8050 LBS
41"	8300 LBS
44"	8650 LBS
45"	8750 LBS
47"	9000 LBS
48"	9150 LBS
50"	9400 LBS
51"	9500 LBS
54"	9900 LBS



NOTES:

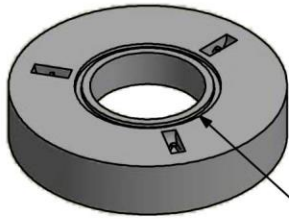
- MANHOLE COMPONENTS MEET ASTM C478 SPECIFICATIONS
- MANHOLE COMPONENTS SUITABLE FOR HS-20 LOADING
- JOINTS MEET ASTM C443
- FLEXIBLE CONNECTORS MEET ASTM C923
- ALL WEIGHTS ARE APPROXIMATE
- CAST IRON RING & COVER AND GRADE RINGS AVAILABLE



9405 ALTON COURT
HENDERSON, CO 80640
303-853-8053

Ø60" ID MANHOLE COMPONENTS

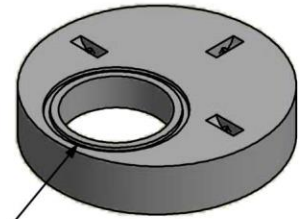
CONCENTRIC



FLAT SLAB TOPS

HEIGHT	ACCESS	WEIGHT	BOTTOM JOINT
12-3/4"	24"	2500 LBS	BELL
12-3/4"	30"	2350 LBS	BELL
12-3/4"	36"	2150 LBS	BELL
8"	24"	2350 LBS	BUTT
8"	30"	2200 LBS	BUTT
8"	36"	1950 LBS	BUTT

ECCENTRIC

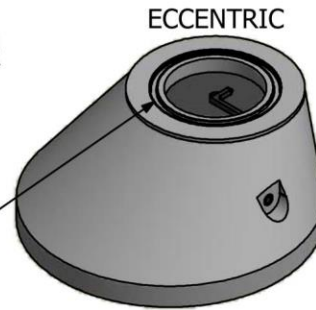


*INTERLOCK MATES WITH GRADE RINGS

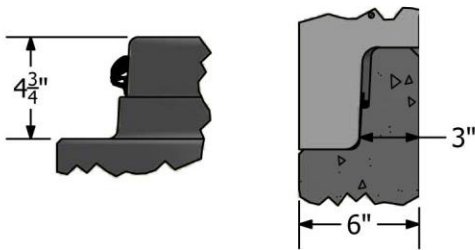
CONES

HEIGHT	ACCESS	WEIGHT	
30"	24"	3000 LBS	ECCENTRIC

*INTERLOCK MATES WITH GRADE RINGS



JOINT DETAIL



RISERS

HEIGHT	WEIGHT
Ø60" X 12"	1200 LBS
Ø60" X 24"	2500 LBS
Ø60" X 36"	3800 LBS
Ø60" X 48"	5100 LBS
Ø60" X 60"	6400 LBS

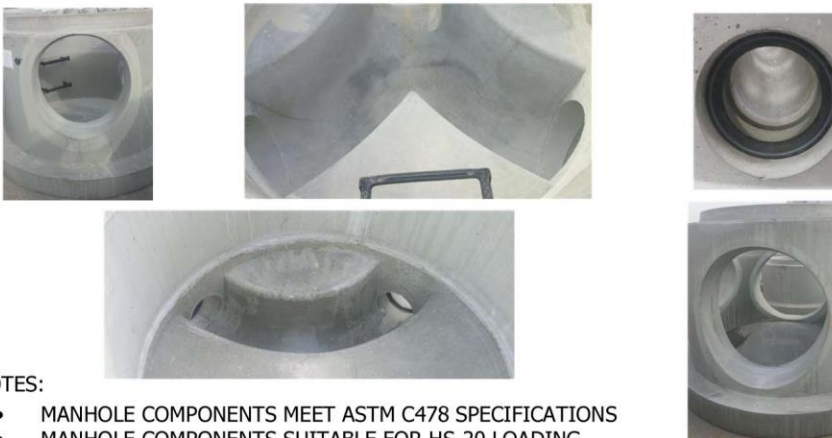


BASES

- AVAILABLE WITH MONOLITHIC CAST INVERT CHANNEL
- CUSTOM INVERT CHANNELS AVAILABLE
- CUSTOM HOLE SIZES AVAILABLE
- FLEXIBLE STORM & SANITARY CONNECTIONS
- BASE HEIGHTS AVAILABLE: 38" - 59"
- CONTACT FORTERRA PRECAST CONCEPTS FOR BASES WITH INVERTS

STANDARD BASE SIZES

HEIGHT	BLANK BASE NO INVERT NO HOLES
38"	13100 LBS
41"	13700 LBS
44"	14350 LBS
47"	15000 LBS
50"	15650 LBS
53"	16300 LBS
56"	16900 LBS
59"	17550 LBS



NOTES:

- MANHOLE COMPONENTS MEET ASTM C478 SPECIFICATIONS
- MANHOLE COMPONENTS SUITABLE FOR HS-20 LOADING
- JOINTS MEET ASTM C443
- FLEXIBLE CONNECTORS MEET ASTM C923
- ALL WEIGHTS ARE APPROXIMATE
- CAST IRON RING & COVER AND GRADE RINGS AVAILABLE

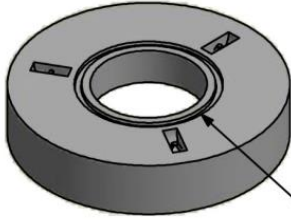


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Ø72" ID MANHOLE COMPONENTS

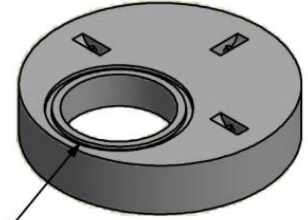
FLAT SLAB TOPS

CONCENTRIC



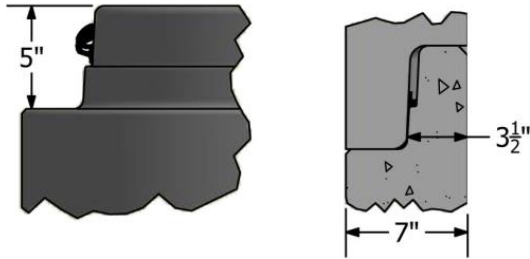
HEIGHT	ACCESS	WEIGHT	BOTTOM JOINT
13"	24"	3950 LBS	BELL
13"	30"	3750 LBS	BELL
13"	36"	3550 LBS	BELL
8"	24"	3750 LBS	BUTT
8"	30"	3550 LBS	BUTT
8"	36"	3350 LBS	BUTT

ECCENTRIC



*INTERLOCK MATES WITH GRADE RINGS

JOINT DETAIL



RISERS

HEIGHT	WEIGHT
Ø72" X 12"	1800 LBS
Ø72" X 24"	3650 LBS
Ø72" X 36"	5450 LBS
Ø72" X 48"	7250 LBS
Ø72" X 60"	9050 LBS

BASES

- CUSTOM HOLE SIZES AVAILABLE
- FLEXIBLE STORM & SANITARY CONNECTIONS
- BASE HEIGHTS AVAILABLE: 2' - 6'
- CONTACT FORTERRA PRECAST CONCEPTS ABOUT BASES WITH INVERTS

STANDARD BASE SIZES

HEIGHT	BLANK BASE NO INVERT NO HOLES
24"	9100 LBS
36"	10900 LBS
48"	12700 LBS
60"	14500 LBS
72"	16300 LBS



NOTES:

- MANHOLE COMPONENTS MEET ASTM C478 SPECIFICATIONS
- MANHOLE COMPONENTS SUITABLE FOR HS-20 LOADING
- JOINTS MEET ASTM C443
- FLEXIBLE CONNECTORS MEET ASTM C923
- ALL WEIGHTS ARE APPROXIMATE
- CAST IRON RING & COVER AND GRADE RINGS AVAILABLE



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GRADE RING COMPONENTS

INTERLOCKING



24" ID GRADE RINGS

HEIGHT	WEIGHT
2"	80 LBS
3"	120 LBS
4"	160 LBS
6"	240 LBS

- AVAILABLE WITH OR WITHOUT LOCKING GROOVE

FLAT JOINT



30" ID GRADE RINGS

HEIGHT	WEIGHT
2"	95 LBS
3"	140 LBS
4"	190 LBS
6"	285 LBS

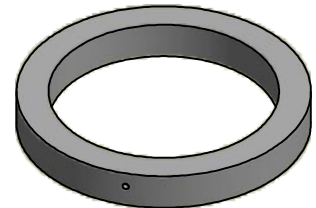
FLAT JOINT



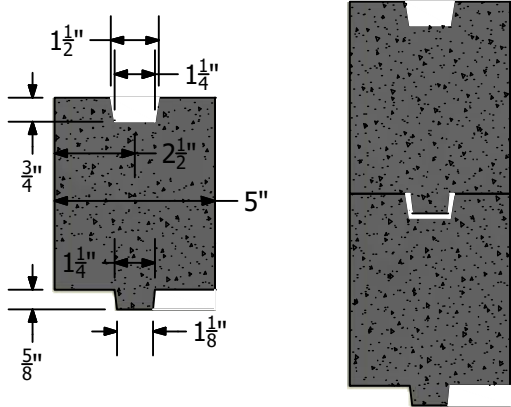
36" ID GRADE RINGS

HEIGHT	WEIGHT
2"	110 LBS
3"	165 LBS
4"	220 LBS
6"	335 LBS
12"	670 LBS

FLAT JOINT



INTERLOCKING DETAIL



SEALING OPTIONS

1. BUTYL SEALANT
2. TROWELABLE BUTYL SEALANT
3. MORTAR
4. NO SEALANT APPLIED



NOTES:

- GRADE RINGS MEET ASTM C478
- ALL WEIGHTS ARE APPROXIMATE
- ALL GRADE RINGS HAVE 5" WALL THICKNESS
- GRADE RINGS MATE WITH OTHER GRADE RINGS, CONES, AND FLAT SLAB TOPS



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TSS Series

Tylox® SuperSeal™ Pre-lubricated Profile Gaskets for Single Offset Joints on Concrete Manhole

*Say good-bye to the lube bucket and brush.
Say hello to fast, clean, simple installation.*

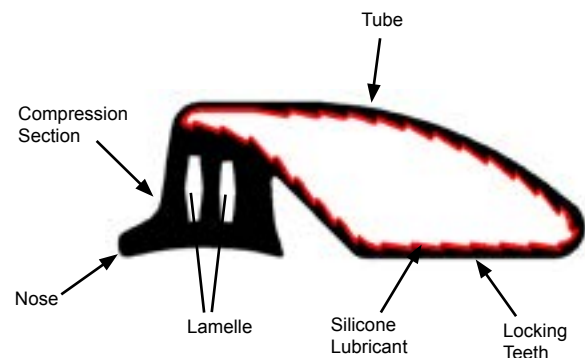
The unique design of the Tylox® SuperSeal™ manhole gasket is bringing a cost-saving revolution to the field of concrete manhole gasketing and installation.

- **Requires no field lubrication.** The Tylox® SuperSeal™ gasket has a layer of silicone lubricant installed on the inner surface of the tube during the manufacturing process; saving you time and money on the job-site.
- **Elimination of unsafe installation practices.** Since the Tylox® SuperSeal™ manhole gasket requires no lubrication, the unsafe practice of standing beneath a suspended riser section in order to lubricate the bell I.D. is no longer required.
- **Self-Contained Lubricant.** Sealed within the tube, the lubricant is impervious to mud, dirt and debris. If you drop it in the trench, simply wipe the gasket surface clean and you're ready to install. No special handling is required.
- **No equalization required.** Due to the reduced gasket stretch requirement of the unique lamelle/rolling-tube design, the Tylox® SuperSeal™ gasket requires no equalization after installation. A quick and easy installation means you save even more time and money.
- **No gasket "roll" or "twist".** Another benefit of the unique lamelle/rolling-tube design is the drastic reduction in insertion forces, virtually eliminating the gasket "roll" and "twist" associated with o-ring and standard profile gaskets.
- **Self-Centering.** The manhole bell is self-centered on the spigot due to the forces generated as the tube rolls into the annular space during the homing process.



Tylox® SuperSeal™ gaskets are available for all common combinations of annular and total annular spaces, and can be manufactured to suit any manhole size.

Tylox® SuperSeal™ manhole gaskets are available in a variety of rubber compounds, to meet or exceed the material requirements of ASTM C443, ASTM C1619, California Greenbook, and CSA A-257.3.



**Making Infrastructure Watertight Today
for a Greener, Sustainable Tomorrow**

Available Models					
Model	Body Height	Body Width	Total Width	To Suit *	
				Total	Small
165	0.682	0.791	1.780	0.446	0.146
166**	0.680	0.780	1.615	0.446	0.094
170	0.682	0.808	1.290	0.446	0.126
175	0.697	0.833	1.398	0.446	0.146
176**	0.735	0.825	1.520	0.446	0.094
200L	0.885	1.049	2.549	0.500	0.175
225	0.914	1.085	2.787	0.525	0.175
226**	0.850	1.048	2.318	0.525	0.094

* For informational purposes only. Consult your Hamilton Kent representative for sizing to suit your specific joint details.
 ** These models do not have locking teeth.

Materials and Identification

Tylox® SuperSeal™ manhole gaskets are manufactured from a variety of synthetic rubber compounds to meet the material requirements of ASTM C443 and C1619, and CSA A257.3. The applicable specification(s) and usage mode for a particular gasket are identified by a colored stripe around the periphery of the gasket:

Standard

ASTM C443, C1619 Class C and CSA A257.3 White Stripe
 California Greenbook Green Stripe

Oil-Resistant

ASTM C443, C1619 Class D and CSA A257.3 - Nitrile rubber Orange Stripe
 ASTM C443, C1619 Class D and CSA A257.3 - Neoprene rubber Yellow Stripe

The above listing covers the standard, North American, specifications. Gaskets materials are available to meet many other specifications. Please consult your Hamilton Kent representative regarding materials to meet your particular specifications.

Pressure Rating

Tylox® SuperSeal™ gaskets are suitable for use in systems with up to 13 psig (30 ft Head) pressure requirements.

Higher head pressures have been obtained with certain

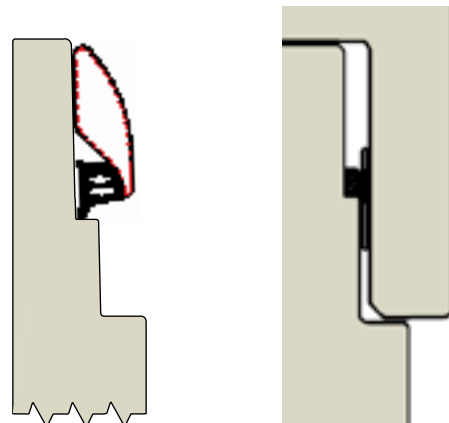
joint designs. Please consult your local Hamilton Kent Representative for gasket selection to meet your specific requirements.

Installation

1. Ensure that bell and spigot are free from cracks, chips, or other defects.
2. Brush loose dirt, debris and foreign material from the inside surface of the bell, the spigot and the gasket.
3. Stretch gasket around the spigot, with the nose against the step, and the tube laying flat against the spigot.
4. Do not lubricate the gasket or joint as this could adversely affect the performance of the gasket and the joint.
5. Align the spigot with the bell, ensuring that the gasket is in contact with the bell around the complete periphery, then allow the manhole section to home under its own weight.

The homing process will cause the lubricated tube to roll over the compression section, allowing the manhole section to slide downward.

Once fully homed, the compression section seals the total annular space and the rolling tube comes to rest within the small annular space, acting as a cushion against side loads.



TEL: (800) 268 8479

FAX: (888) 674 6960

WEB: www.hamiltonkent.com

E-MAIL: sales@hamiltonkent.com

Lit_TSS_Manhole_English_R7

Physical Properties

Ductility @ 77° F, 5cm/min 5.0 min	Softening Point 320 min.	Specific Gravity @ 77° F (25°C) 1.20 - 1.35
Flash Point >390° F		

Description

RU106 - RUBR-NEK LTM is a butyl rubber base flexible gasket-type sealant for utility vaults, sewer manholes, waste water structures, storm sewer pipe and culverts, wet wells, etc. It stays flexible and is easily applied in temperatures as low as 30°F. RU106 - RUBR-NEK LTM's formulation of 100% solids with top-quality partially vulcanized butyl rubber provides exceptional shape retention, in combination with outstanding adhesion and cohesion. The material does not shrink, harden or oxidize, and retains compressibility throughout a wide range of deflections occurring over periods of time.

Surface Preparation

Joint surfaces should be clean and dry. For maximum bond strength on horizontal pipe installations, use RUB'R-NEK™ Primer before installing RU106 - RUBR-NEK LTM. (On vertical installations, the primer is not normally required).

Trench Conditions:

Trench conditions shall be such that pipe jointing can be accomplished without getting mud, silt, gravel or other foreign matter into the joint. In general, this means that the trench should be adequately dewatered with a firm bottom free of muck.

Application

RU106 - RUBR-NEK LTM is quickly installed and no special tools are needed. It bonds instantly to joint surfaces and to itself, and is quickly formed into a continuous seal around the circumference or perimeter of the joint area.

A RU106 - RUBR-NEK LTM coil of proper size is removed from the carton and positioned on the joint and pressed in place. If necessary, a second coil is butted end-to-end against the first, and the procedure continued around the circumference or perimeter of the joint area. All protective paper wrappers can be left in place until just before coupling the joint in the ditch.

Placement on the Joint:

Dimensions and configurations of the precast concrete joint, and the tightness of the joint when "homed" determine the volume of sealant needed, and its position on the joint.

Backfilling:

Backfilling can begin as soon as jointing has been completed.

Precautions

Handling:

Pipe handling after RU106 - RUBR-NEK LTM has been affixed shall be carefully controlled to avoid bumping the gasket and thus displacing it, or covering it with dirt or other foreign material. Any gasket so disturbed shall be removed and replaced.

Pipe Alignment:

Care shall be taken to properly align the pipe before joints are forced home. During insertion of the tongue - in the case of tongue and groove pipe - the pipe shall be partially supported to maintain concentricity until the plastic gasket is properly compressed in the joint space.

Pull-up or Push-up Pressure:

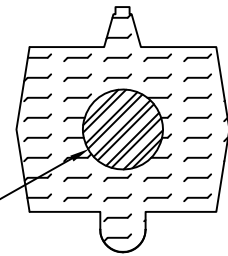
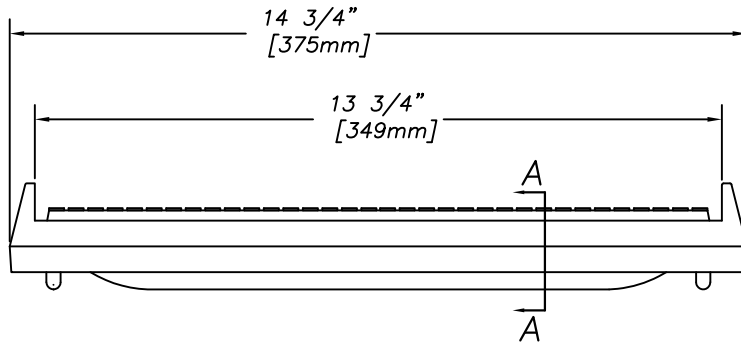
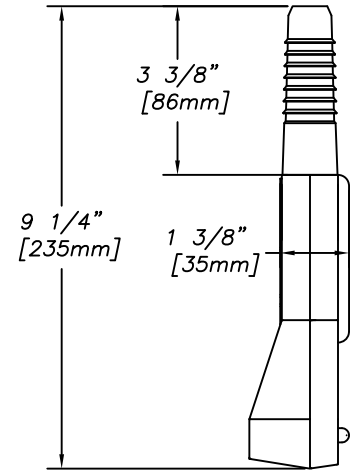
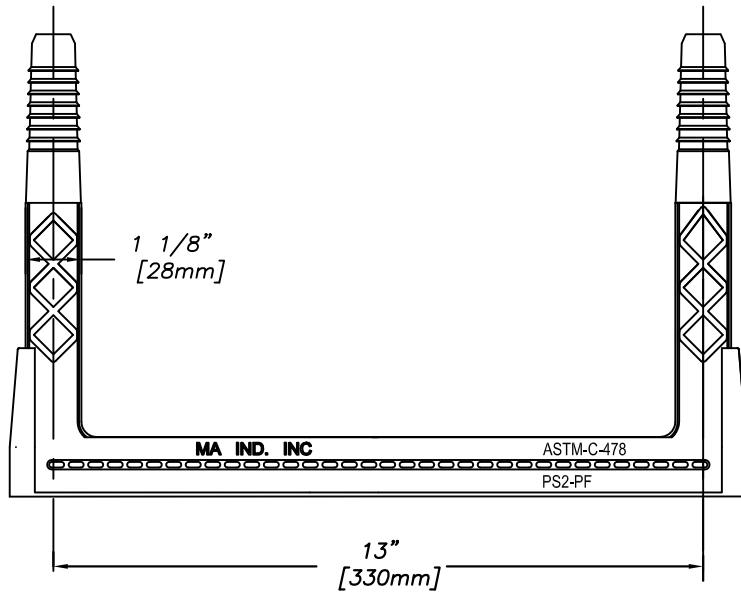
Sufficient pressure shall be applied in making the joint to assure that the joint is properly jointed.

Product Sizes

12 (1/2in x 21.75ft) COILS/CASE	8 (.75in x 18ft) COILS/CASE (32.8	6 (1in x 14.5ft) COILS/CASE
4 (1.5inx10.5FT) COILS/CASE	5 (1.25in x14.5ft) COILS/CASE	4 (2in x 7.5ft) COILS/CASE (53.6

Limited Warranty

We, the manufacturer, warrant only that this product is free of defects, since many factors which affect the results obtained from this product - such as weather, workmanship, equipment utilized and prior condition of the substrate - are all beyond our control. We will replace at no charge any product proved to be defective within 12 months of purchase provided it has been applied in accordance with our written directions for uses we recommended as suitable for this product. Proof of purchase must be provided. **DISCLAIMER OF WARRANITES:** The Limited Warranty is IN LIEU OF any other warranties express or implied including, but not limited to any implied warranty of MERCHANTABILITY or fitness for a particular purpose, and we, the manufacturer, shall have no further liability of any kind including liability for consequential or incidental damages resulting from any defects or any delays caused by replacement or otherwise.

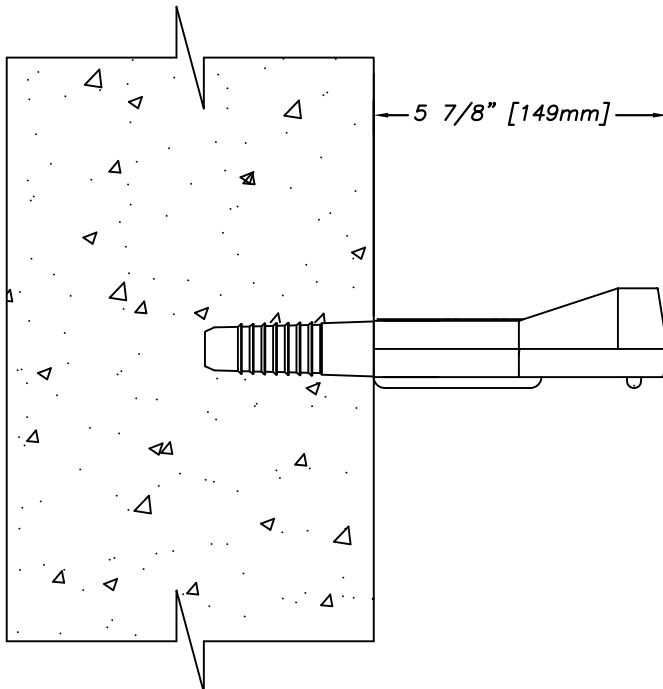


Copolymer Polypropylene Plastic

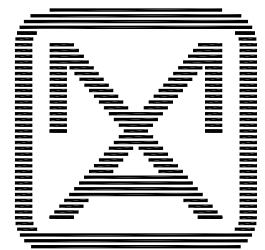
13mm
1/2"

GRADE 60 STEEL REINFORCEMENT

SECTION-A

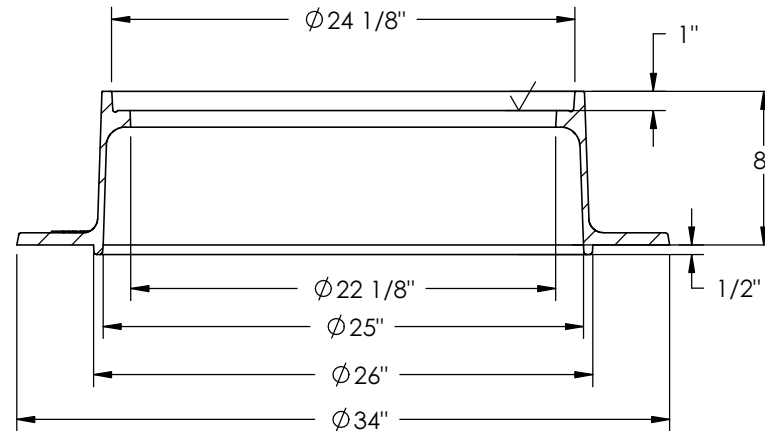
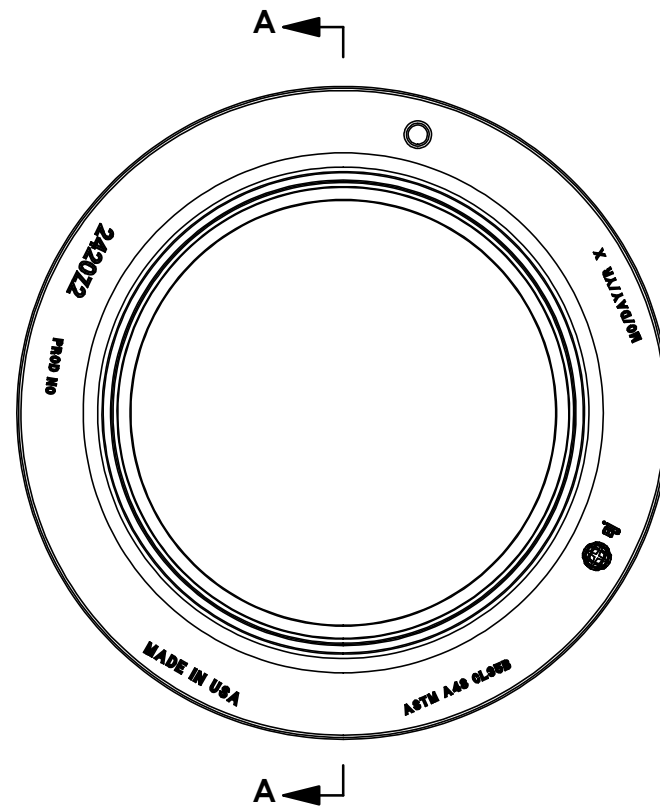


**MEETS: ASTM C-478
ASTM D-4101
ASTM A-615
AASHTO M-199**



M . A . I N D U S T R I E S , I N C .

2420Z2 Frame



SECTION A-A
SCALE 1 : 10

Product Number

00242013

Design Features

- Materials
Gray Iron (CL35B)
- Design Load
Heavy Duty
- Open Area
n/a
- Coating
Undipped
- √ Designates Machined Surface

Certification

- ASTM A48
-
-
- Country of Origin: USA

Drawing Revision

09/09/2008 Designer: DEW
10/29/2014 Revised By: DJH

Disclaimer

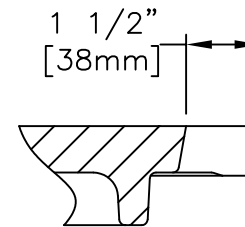
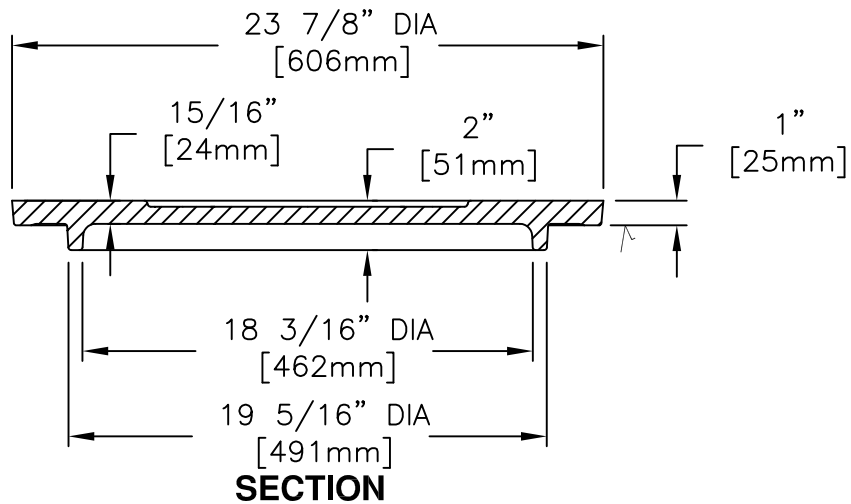
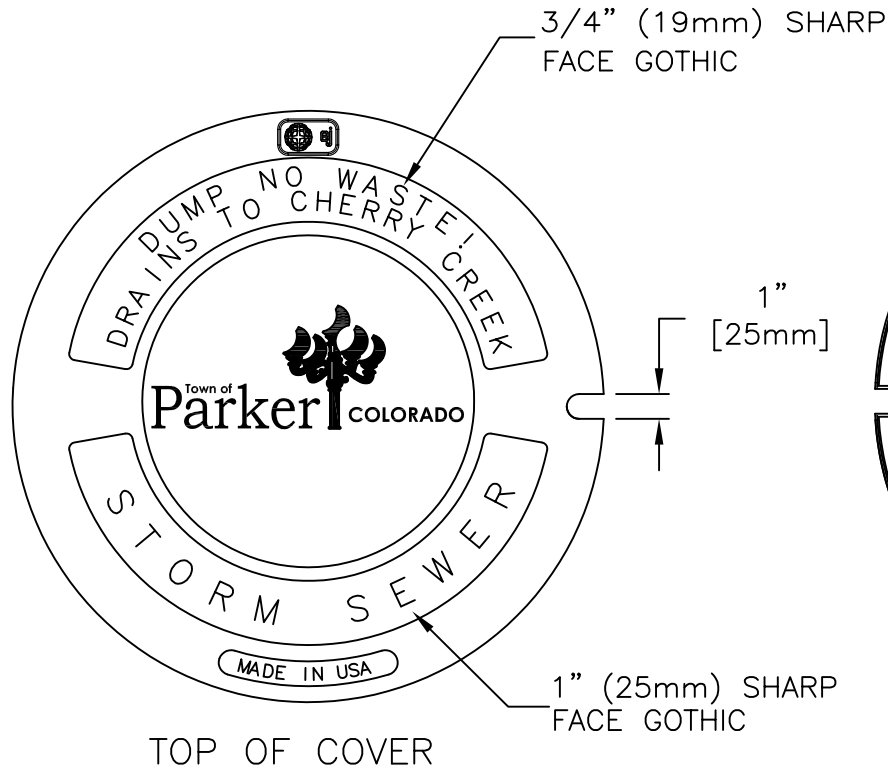
Weights (lbs/kg), dimensions (inches/mm) and drawings provided for your guidance. We reserve the right to modify specifications without prior notice.

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Contact

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ejco.com

2408A Cover



Product Number

00240849

Design Features

- Materials
Gray Iron (CL35B)
- Design Load
Heavy Duty
- Open Area
n/a
- Coating
Undipped
- √ Designates Machined Surface

Certification

- ASTM A48
-
-
- Country of Origin: USA

Drawing Revision

03/11/2003 Designer: SMH
02/29/2012 Revised By: SDC

Disclaimer

Weights (lbs./kg) dimensions (inches/mm) and drawings provided for your guidance. We reserve the right to modify specifications without prior notice.

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