

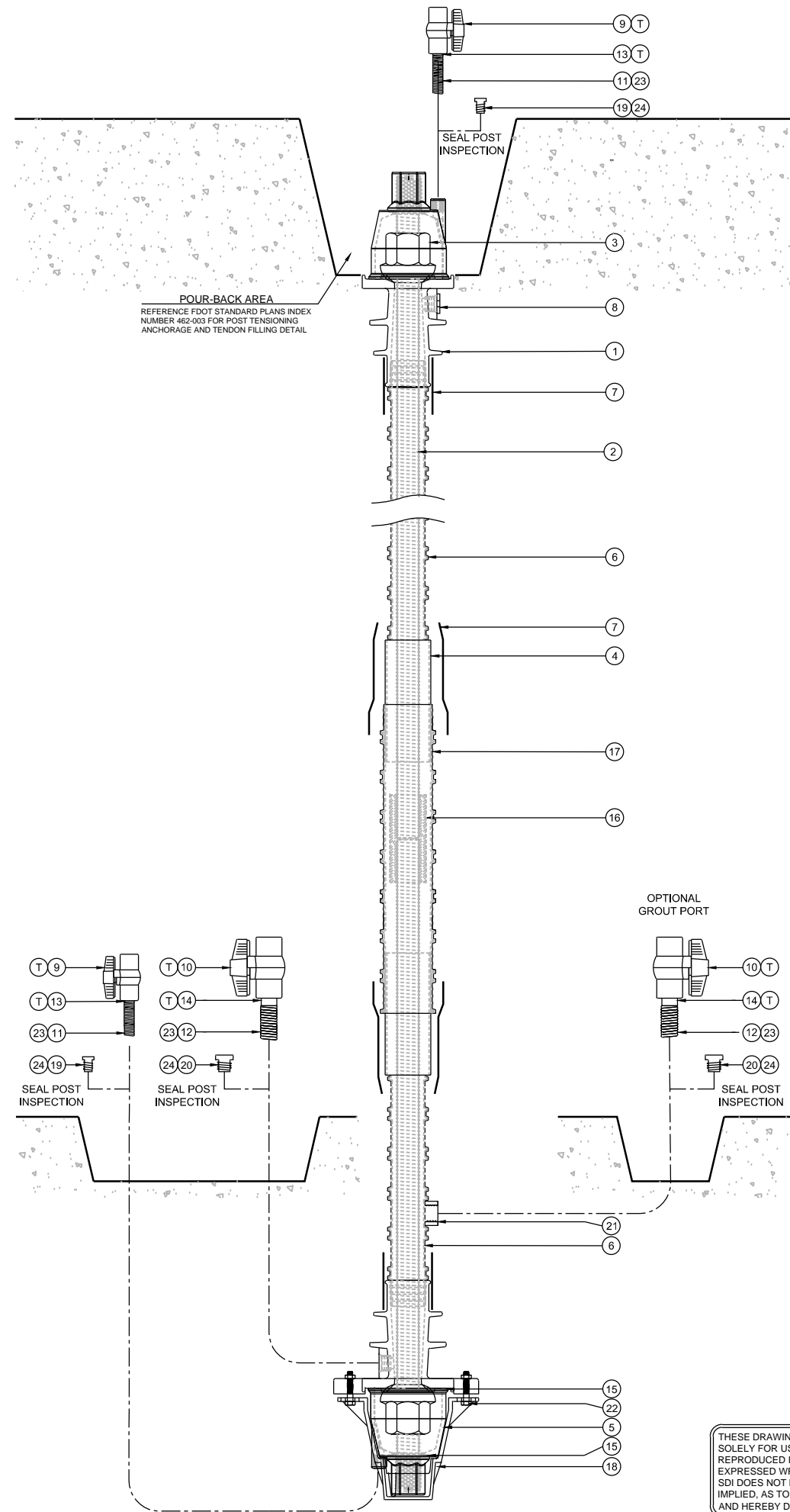
ITEM	PART NUMBER	DRAWING	DESCRIPTION	MATERIAL
1	65007	SDI-HD-334	SDI 1.38" HS BAR SPHERICAL BEARING PLATE	ASTM A 536 GR. 80-55-06 (GALVANIZED)
2	61003	SDI-HD-173	WMS. 1.38" HS BAR	ASTM A 722, TYPE II, 150KSI
3	62009	SDI-HD-232	WMS. 1.38" SPHERICAL NUT	ASTM A 536
4	33003	SDI-HD-040	2" NOM. (50mm) SLIP-ON DUCT COUPLER	POLYPROPYLENE PER ASTM D4101
5	66001, 66002	SDI-HD-090	SDI 1.38" PERMANENT GROUT CAP & NUT	NYLON PER ASTM D5989
6	32003	SDI-HD-034	2" NOM. (50mm) CORRUGATED DUCT	POLYPROPYLENE PER ASTM D4101
7	37002	SDI-HD-185	HEAT SHRINK TUBING (PLA-63-YE)	ADHESIVE LINED POLYOLEFIN
8	55004	SDI-HD-257	SDI GROUT PORT PLUG	POLYPROPYLENE PER ASTM D4101
9	52008	SDI-HD-153	1/2" BALL VALVE (TEMPORARY)	POLYVINYL CHLORIDE
10	52006	SDI-HD-152	1" BALL VALVE (TEMPORARY)	POLYVINYL CHLORIDE
11	51002	SDI-HD-188	1/2" NOM. (13mm) GROUT HOSE	HIGH DENSITY POLYETHYLENE PER ASTM D3350
12	51001	SDI-HD-189	3/4" NOM. (23mm) GROUT HOSE	HIGH DENSITY POLYETHYLENE PER ASTM D3350
13	53011	SDI-HD-222	1/2" NOM.(13mm) NPT COUPLER (TEMPORARY)	POLYPROPYLENE PER ASTM D4101
14	53005	SDI-HD-223	3/4" NOM. (23mm) NPT COUPLER (TEMPORARY)	POLYPROPYLENE PER ASTM D4101
15	76029, 76030	SDI-HD-236	O-RING SEALS	BUNA-N PER ASTM D2240, & D412
16	64003	SDI-HD-111	WMS. 1.38" HS BAR COUPLER	ASTM A 29, GR. C1045
17	32004	SDI-HD-035	3" (100mm) CORRUGATED DUCT	POLYPROPYLENE PER ASTM D4101
18	66006	SDI-HD-194	SDI BAR CAP RETAINER	NYLON PER ASTM D5989
19	55003	SDI-HD-155	1/2" NOM. (13mm) GROUT HOSE PLUG	POLYPROPYLENE PER ASTM D4101
20	55001	SDI-HD-156	3/4" NOM. (23mm) GROUT HOSE PLUG	POLYPROPYLENE PER ASTM D4101
21	57003	SDI-HD-147	3/4" NOM. (23mm) WELDABLE GROUT PORT	POLYPROPYLENE PER ASTM D4101
22	77010	SDI-HD-149	3/8"-16 BOLT	STAINLESS STEEL, TYPE 316 PER ASTM F593
23	0000T	N/A	TEFLON TAPE (TEMPORARY)	TEFLON
24	0000E	N/A	COMMERCIALLY AVAILABLE/COMPATIBLE EPOXY	EPOXY

*ALL NON-FERROUS COMPONENTS CONTAIN VIRGIN MATERIAL.

STEP-BY-STEP SYSTEM INSTALLATION PROCEDURE

- STEP 1: HANG BEARING PLATE WITH 2 EACH 1/2" ALL THREAD. PLACE SO GROUT PORT IS IN 12 O'CLOCK POSITION.
- STEP 2: PLACE HS BAR NUT CORRESPONDING TO BAR SIZE.
- STEP 3: PLACE DUCT 1/2" MINIMUM INSIDE BEARING PLATE.
- STEP 4: INSTALL CORRECT SIZE HEAT SHRINK OVER DUCT/COUPLER OR DUCT/BEARING PLATE CONNECTION PER MANUFACTURER'S RECOMMENDATIONS.
- STEP 5: INSTALL HS BAR CAP BASE AND HS BAR CAP NUT CORRESPONDING TO BAR SIZE.
- STEP 6: INSTALL VENTS. (SEE NOTE a)
- STEP 7: PLACE BAR RETAINER CAP OVER GROUT CAP IF REQUIRED. (REQUIRED WHEN COMPLETE ANCHORAGE IS EMBEDDED IN CONCRETE PRIOR TO STRESSING)

- NOTES:
- a. EPOXY EVERY PERMANENT GROUT HOSE/COUPLER/PLUG, THEN THREAD INTO ALL CONNECTIONS.
 - b. TENDON FILLER MATERIAL IS GROUT.
 - c. STEP-BY-STEP INSTALLATION PROCEDURE ARE GENERIC, FOLLOW FDOT SPECIFICATIONS AND PROJECT SPECIFIC REQUIREMENTS.
 - d. SDI BAR CAP RETAINER IS ONLY USED WHEN COMPLETE ANCHORAGE IS EMBEDDED IN CONCRETE.
 - e. TEMPORARY ITEMS DESIGNATED WITH (T)



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DRAWING No: SDI-HD-329F

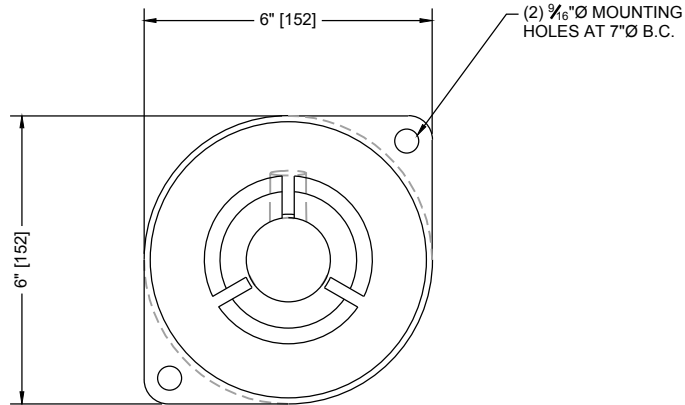
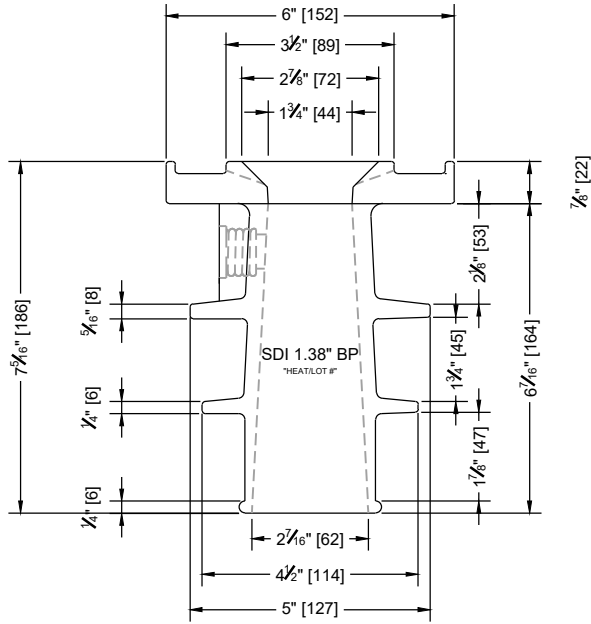
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0	RELEASE	MSC	JMY	MSC	4-1-18
1	UPDATE	JSA	MSC	MSC	5-18-18
2	UPDATE MATERIALS	JSA	MSC	MSC	2-25-19

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SDI 1.38" HS BAR ANCHORAGE SYSTEM (SPHERICAL)

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SDI 1.38" HS BAR SPHERICAL BEARING PLATE

PART NO.: 65007

MATERIAL: ASTM A 536 GR. 80-55-06 (GALVANIZED)

MATERIAL MEETS ALL SPECIFICATIONS.

SCALE: 3" = 1'-0"

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SDI 1.38 IN HS BAR
SPHERICAL BEARING
PLATE



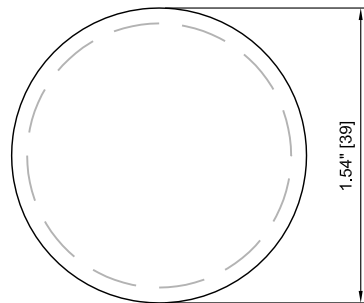
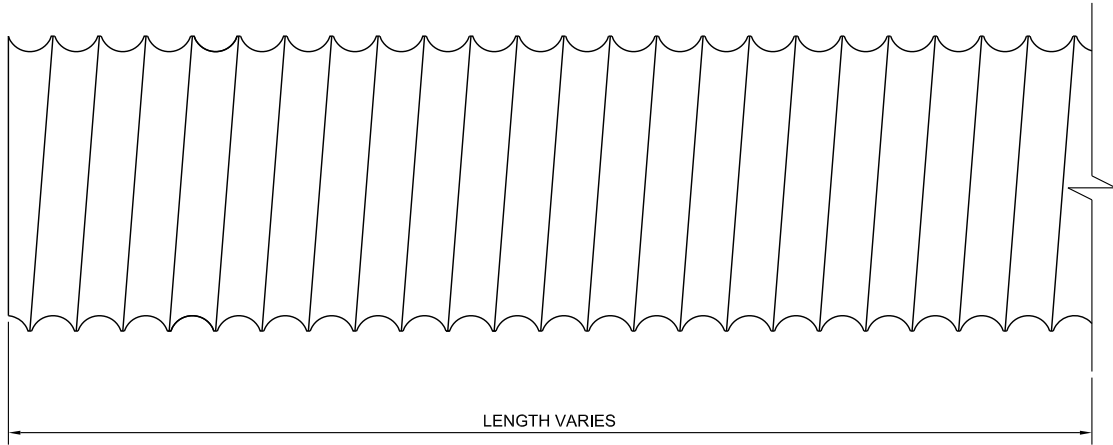
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DRAWING No: SDI-HD-334

#	REVISIONS	DRAWN	CHECKED	APPROVED	DATE
0	RELEASE	MCS	JMY	MCS	4-1-18

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WMS. 1.38" HS BAR

PART NO.: 61003
 MATERIAL: GRADE 150 HIGH STRENGTH, COARSE THREAD BAR
 ACCORDING TO ASTM A722, TYPE II
 MATERIAL MEETS ALL SPECIFICATIONS.
 SCALE: 1'-0" = 1'-0"

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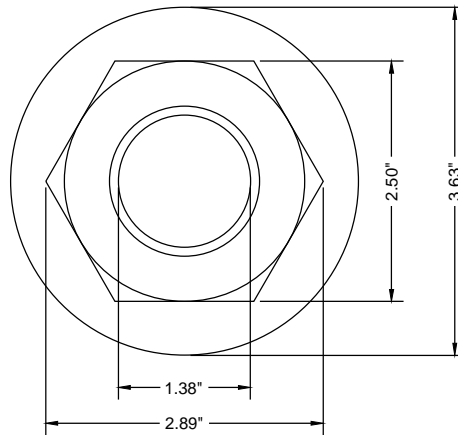
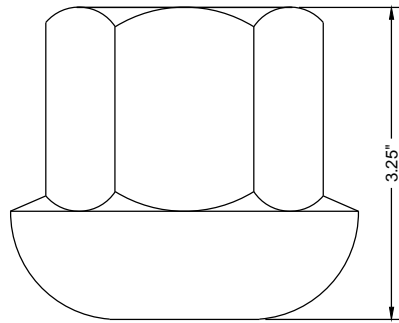
WMS. 1.38" HS BAR

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DRAWING No: SDI-HD-173					
#	REVISIONS	DRAWN	CHECKED	APPROVED	DATE
0	RELEASE	MHA	MSC	MSC	04/02/14
1	UPDATE	CSM	MSC	MSC	06/02/15



1.38" NOM. HS BAR SPHERICAL HEX NUT

PART NO.: 62009
 MATERIAL: ASTM A 536
 MATERIAL MEETS ALL SPECIFICATIONS.
 SCALE: 1" = 1"

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1.38 IN HS BAR SPHERICAL NUT

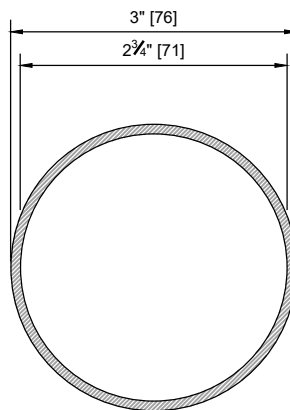
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DRAWING No: SDI-HD-232

#	REVISIONS	DRAWN	CHECKED	APPROVED	DATE
0	RELEASE	CMS	MSC	MSC	12-11-14
1	UPDATE MATERIAL	JSS	MSC	MSC	2-25-19



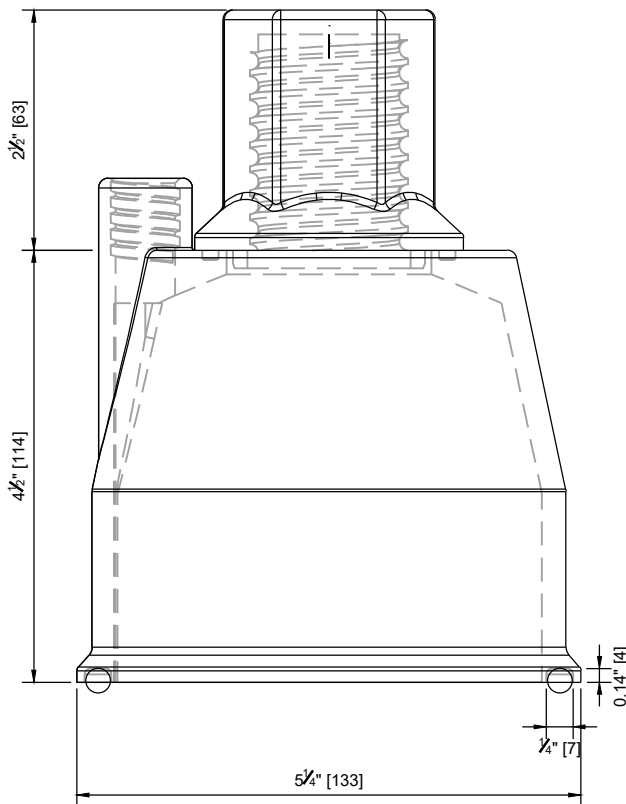
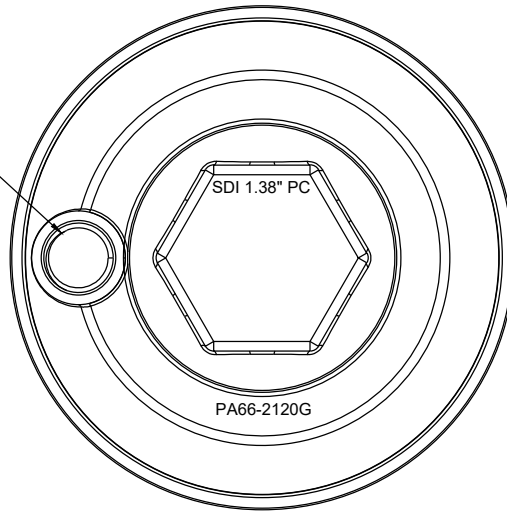
SDI 2" SLIP-ON DUCT COUPLER

PART NO.: 33003
 MATERIAL: POLYPROPYLENE
 CELL CLASS RANGE: PP0340B44541 TO PP0340B67884
 MATERIAL MEETS ALL SPECIFICATIONS.
 SCALE: 6" = 1'-0"

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1/2" GROUT HOSE
THREAD



SDI 1.38" HS BAR PERMANENT GROUT CAP

PART NO.: 66001 - SDI HS BAR PERMANENT GROUT CAP BASE
 66002 - SDI 1.38" HS BAR PERMANENT GROUT CAP NUT
 MATERIAL: NYLON MEETING S-PA0141, S-PA0231, OR S-PA0401
 MATERIAL MEETS ALL SPECIFICATIONS.
 SCALE: 6" = 1'-0"

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SDI 1.38" HS BAR
PERMANENT GROUT CAP

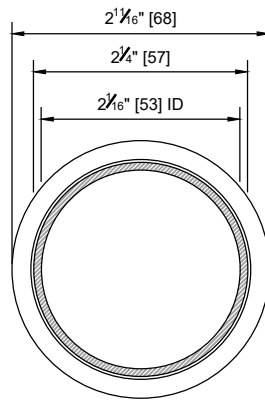
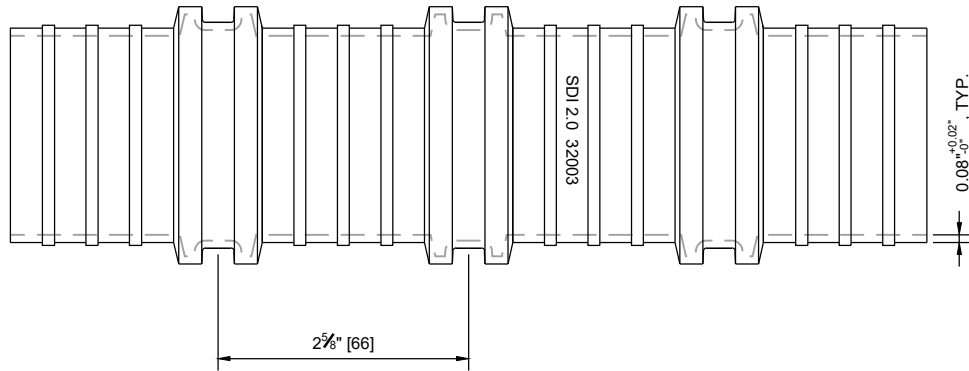
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DRAWING No: SDI-HD-090

#	REVISIONS	DRAWN	CHECKED	APPROVED	DATE
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1	UPDATE	CSM	MSC	MSC	6/2/15
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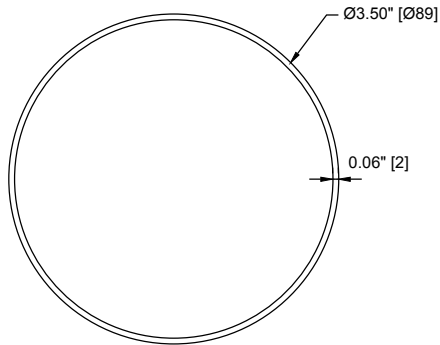
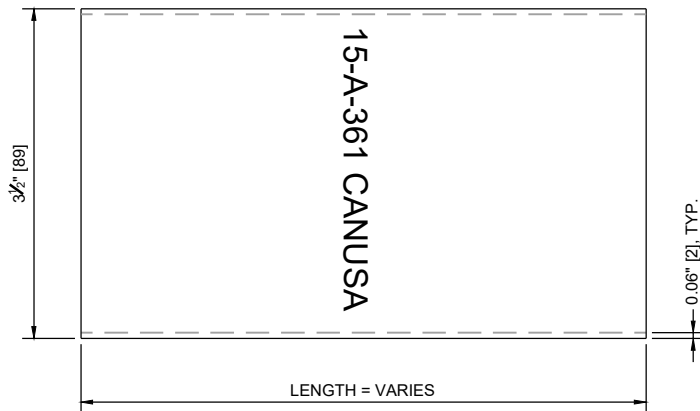


SDI 2" CORRUGATED PLASTIC DUCT

PART NO.: 32003
 MATERIAL: POLYPROPYLENE
 CELL CLASS RANGE: PP0340B44541 TO PP0340B67884
 MATERIAL MEETS ALL SPECIFICATIONS.
 MINIMUM BENDING RADIUS: 8 FT
 SCALE: 6" = 1'-0"

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2 INCH CORRUGATED POLYPROPYLENE DUCT	 SCHWAGER DAVIS INC.	SCHWAGER DAVIS, INC. DESIGN-BUILD CONTRACTOR 198 HILLSDALE AVENUE SAN JOSE, CA 95136 PHONE: 408.281.9300 FAX: 408.281.9301 www.schwagerdavis.com	DRAWING No: SDI-HD-034 <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 5px;"> <thead> <tr> <th>#</th> <th>REVISIONS</th> <th>DRAWN</th> <th>CHECKED</th> <th>APPROVED</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>RELEASE</td> <td>MCS</td> <td>JWM</td> <td>MCS</td> <td>8-8-11</td> </tr> <tr> <td>1</td> <td>REVISED</td> <td>MCS</td> <td>JWM</td> <td>MCS</td> <td>11-11-11</td> </tr> <tr> <td>2</td> <td>UPDATE</td> <td>CSM</td> <td>MSC</td> <td>MSC</td> <td>05-26-15</td> </tr> <tr> <td>3</td> <td>UPDATE</td> <td>JSA</td> <td>MSC</td> <td>MSC</td> <td>06-12-18</td> </tr> </tbody> </table>	#	REVISIONS	DRAWN	CHECKED	APPROVED	DATE	0	RELEASE	MCS	JWM	MCS	8-8-11	1	REVISED	MCS	JWM	MCS	11-11-11	2	UPDATE	CSM	MSC	MSC	05-26-15	3	UPDATE	JSA	MSC	MSC	06-12-18
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2	UPDATE	CSM	MSC	MSC	05-26-15																												
3	UPDATE	JSA	MSC	MSC	06-12-18																												
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HEAT SHRINK TUBING (PLA-63-YE)

PART NO.: 37002

MATERIAL: POLYOLEFIN

TUBULAR SLEEVE DIAMETER: 3.50" [89mm] AS SUPPLIED
2.50" [64mm] FULLY RECOVERED

MATERIAL MEETS ALL SPECIFICATIONS.

SCALE: 6" = 1'-0"

NOTE: INSTALL PER MANUFACTURE'S RECOMMENDATION

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HEAT SHRINK TUBING
(PLA-63-YE)

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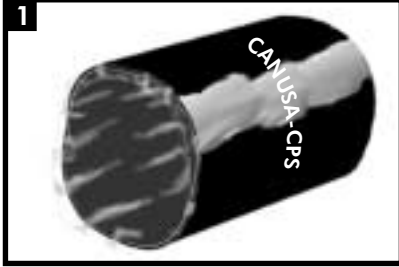
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DRAWING No: SDI-HD-185					
#	REVISIONS	DRAWN	CHECKED	APPROVED	DATE
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1	UPDATE	CSM	MSC	MSC	05/26/15
2	UPDATE	JSA	MSC	MSC	06/12/18

CanusaTube™ - PLA

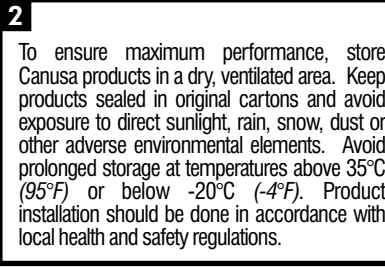
Tubular sleeve for pipeline corrosion protection

Product Description



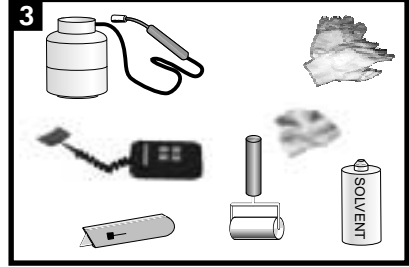
CanusaTubes™ are shipped with an inner release liner for protection from contamination.

Storage & Safety Guidelines

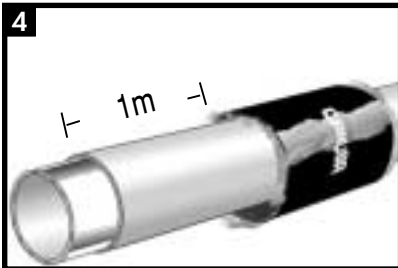


To ensure maximum performance, store Canusa products in a dry, ventilated area. Keep products sealed in original cartons and avoid exposure to direct sunlight, rain, snow, dust or other adverse environmental elements. Avoid prolonged storage at temperatures above 35°C (95°F) or below -20°C (-4°F). Product installation should be done in accordance with local health and safety regulations.

Equipment List

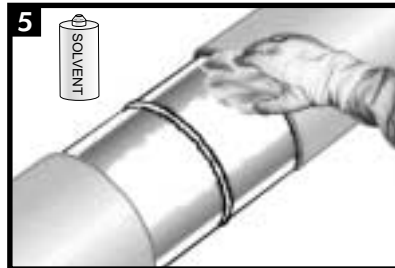


Propane tank, hose, torch & regulator
Appropriate tools for surface abrasion
Knife, roller, rags & approved solvent cleanser
Digital thermometer with suitable probe
Standard safety equipment; gloves, goggles, hard hat, etc.

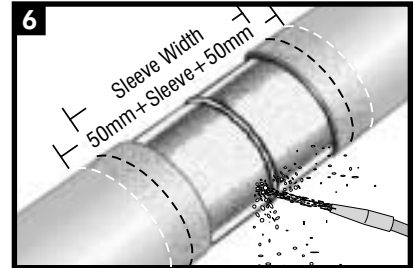


Before welding together the carrier pipe, slide the CanusaTube sleeve at least 1 m away from the cutback area of the joint

Surface Preparation



Ensure that the PE coating edges are beveled to 30°. Clean exposed steel and adjacent pipe coating with a solvent cleanser to remove the presence of oil, grease, and other contaminants.



Ensure that the pipe dry before cleaning. Prepare the steel joint area to a minimum of St3 /SP3. Lightly abrade the pipe coating adjacent to the weld area to a distance of 50mm (2") beyond each end of the sleeve width.



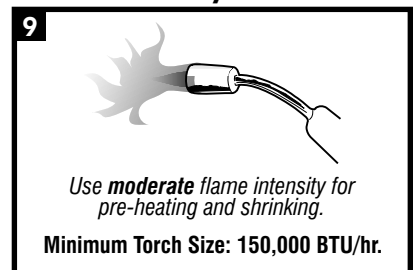
Wipe clean or air blast the steel and pipe coating to remove foreign contaminants.

Sleeve Installation

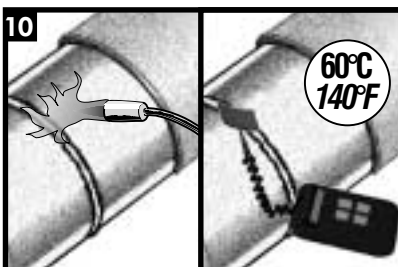


Ensure that there is no dirt or moisture inside the tube and that the tube is not cut. If the sleeve is not useable, a one-piece Wrapid Sleeve or Canusa Wrap sleeve should be used.

Flame Intensity & Torch Size



Pre-Heat

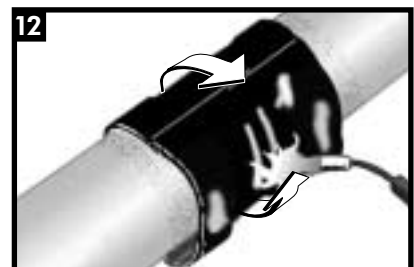


Pre-Heat the joint area to a minimum of 60°C (140°F). Using a temperature measuring device, ensure the correct temperature is reached on the steel and at least 50mm (2") on each side of the sleeve.

Sleeve Installation



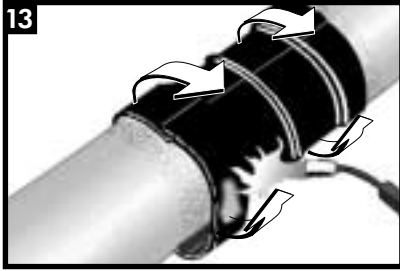
Completely remove the inner release liner from the sleeve and centre the sleeve over the area to be sealed.



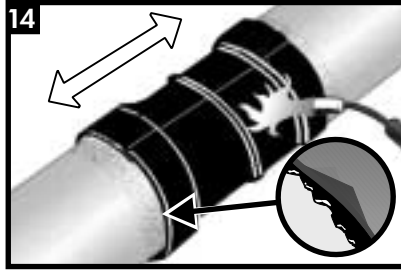
Using the appropriate sized torch, begin at the centre of the sleeve and heat circumferentially around the pipe. Use broad strokes.

CanusaTube™ - PLA

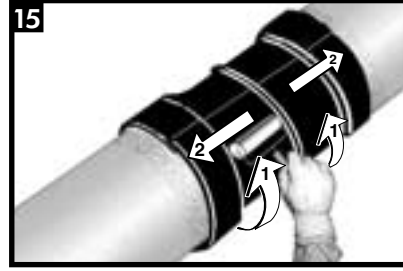
Sleeve Installation



Continue heating from the centre toward one end of the sleeve until recovery is complete. In a similar manner, heat and shrink the remaining side. With a yellow backing, a pink-orange shade will appear when the proper temperature has been reached.



Shrinking has been completed when the adhesive begins to ooze at the sleeve edges all around the circumference. Finish shrinking the sleeve with long horizontal strokes over the entire surface to ensure a uniform bond.



While the sleeve is still hot and soft, use a hand roller to firmly roll the sleeve surface and push any trapped air up and out of the sleeve, as shown above. If necessary, reheat to roll out air.

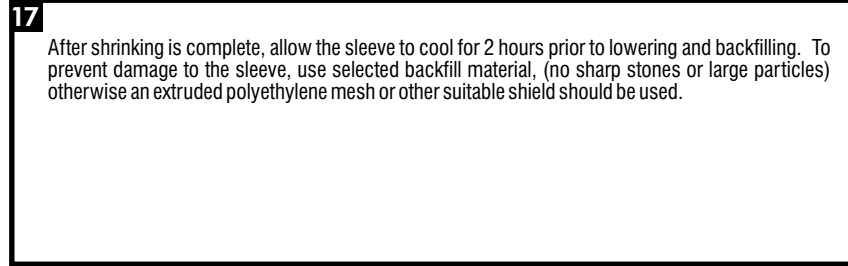
Inspection



Visually inspect the installed sleeve for the following:

- Sleeve is in full contact with the steel joint.
- Adhesive flows beyond both sleeve edges.
- No cracks or holes in sleeve backing.

Backfilling Guidelines



After shrinking is complete, allow the sleeve to cool for 2 hours prior to lowering and backfilling. To prevent damage to the sleeve, use selected backfill material, (no sharp stones or large particles) otherwise an extruded polyethylene mesh or other suitable shield should be used.



A SHAWCOR COMPANY

Canada

CANUSA-CPS
a division of SHAWCOR LTD.
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M9W 1M7,
Canada
Tel: +1 (416) 743-7111
Fax: +1 (416) 743-5927

U.S.A./Latin America

CANUSA-CPS
a division of SHAWCOR INC.
2408 Timberloch Place
Building C-8
The Woodlands, Texas
77380, U.S.A.
Tel: +1 (281) 367-8866
Fax: +1 (281) 367-4304

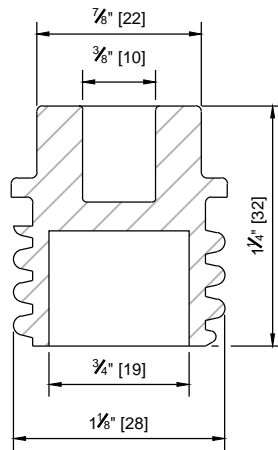
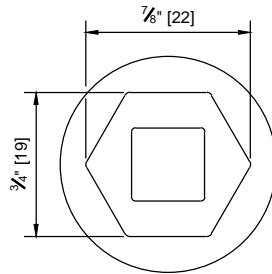
Europe/Middle East

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Unit 3, Sterling Park
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Crawley, West Sussex
England RH10 9QT
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CANUSA-CPS
BrederoShaw (S) Pte Ltd
101 Thomson Road
#17-01/02, United Square
Singapore
307591
Tel +65-6732-2355
Fax +65-6732-9073

Canusa warrants that the product conforms to its chemical and physical description and is appropriate for the use stated on the installation guide when used in compliance with Canusa's written instructions. Since many installation factors are beyond our control, the user shall determine the suitability of the products for the intended use and assume all risks and liabilities in connection therewith. Canusa's liability is stated in the standard terms and conditions of sale. Canusa makes no other warranty either expressed or implied. All information contained in this installation guide is to be used as a guide and is subject to change without notice. This installation guide supersedes all previous installation guides on this product. E&OE



SDI GROUT PORT PLUG

PART NO.: 55004
 MATERIAL: POLYPROPYLENE
 CELL CLASS RANGE: PP0340B44541 TO PP0340B67884
 PRESSURE RATING: 150 PSI
 MATERIAL MEETS ALL SPECIFICATIONS.
 SCALE: 1'-0" = 1'-0"

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SDI GROUT PORT PLUG

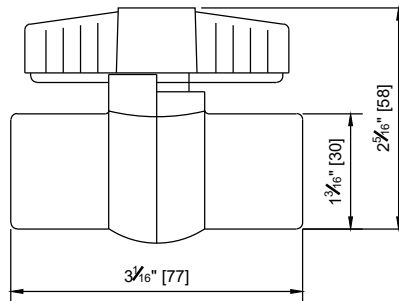
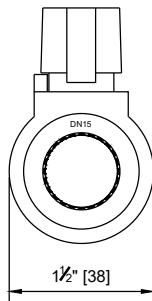
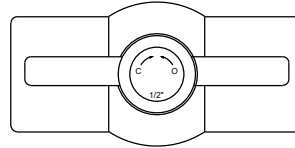
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DRAWING No: SDI-HD-257

#	REVISIONS	DRAWN	CHECKED	APPROVED	DATE
0	RELEASE	CSM	MSC	MSC	05/26/15
1	UPDATE	JSA	MSC	MSC	06/19/18



1/2" DIAMETER BALL VALVE (TEMPORARY)

PART NO.: 52008
 MATERIAL: PVC
 PRESSURE RATING: 150 PSI
 MATERIAL MEETS ALL SPECIFICATIONS.
 SCALE: 6" = 1'-0"

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1/2" DIAMETER BALL VALVE (TEMPORARY)

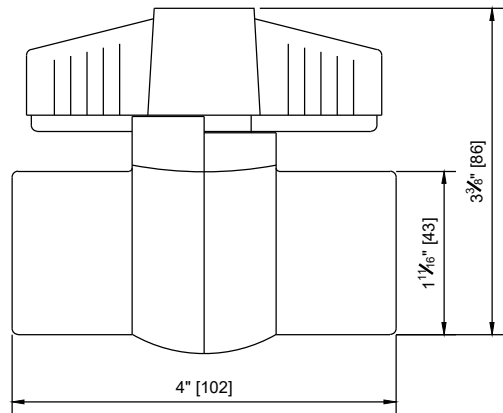
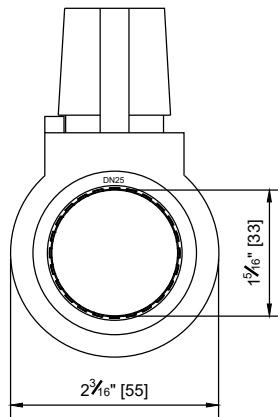
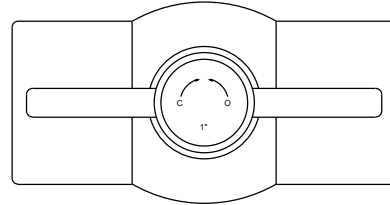
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DRAWING No: SDI-HD-153

#	REVISIONS	DRAWN	CHECKED	APPROVED	DATE
0	RELEASE	MHA	MSC	MSC	04/02/14
1	UPDATE	CSM	MSC	MSC	05/26/15
2	UPDATE	JSA	MSC	MSC	06/18/18



1" DIAMETER BALL VALVE (TEMPORARY)

PART NO.: 52006
 MATERIAL: PVC
 PRESSURE RATING: 150 PSI
 THREAD SIZE: 1" NPT
 MATERIAL MEETS ALL SPECIFICATIONS.
 SCALE: 6" = 1'-0"

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1" DIAMETER BALL VALVE (TEMPORARY)

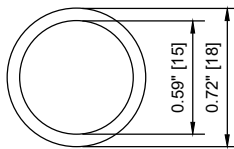
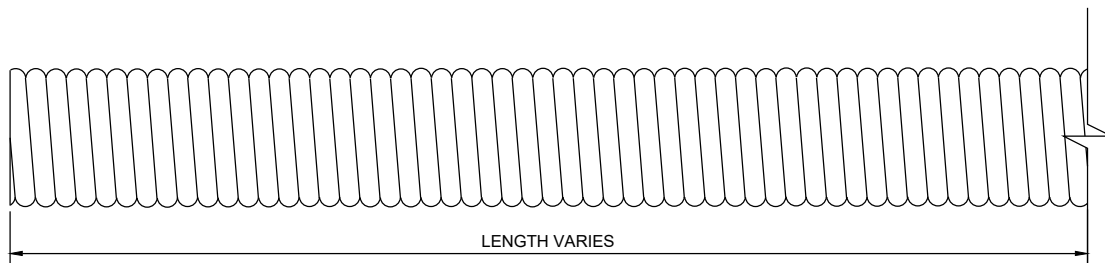
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DRAWING No: SDI-HD-152

#	REVISIONS	DRAWN	CHECKED	APPROVED	DATE
0	RELEASE	MHA	MSC	MSC	04/02/14
1	UPDATE	CSM	MSC	MSC	05/26/15
2	UPDATE	JAS	MSC	MSC	06/12/18



1/2" NOM. (13mm) GROUT HOSE

PART NO.: 51002
 MATERIAL: HDPE
 PRESSURE RATING: 150 PSI
 MATERIAL MEETS ALL SPECIFICATIONS.
 SCALE: 1'-0" = 1'-0"

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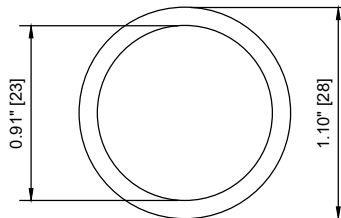
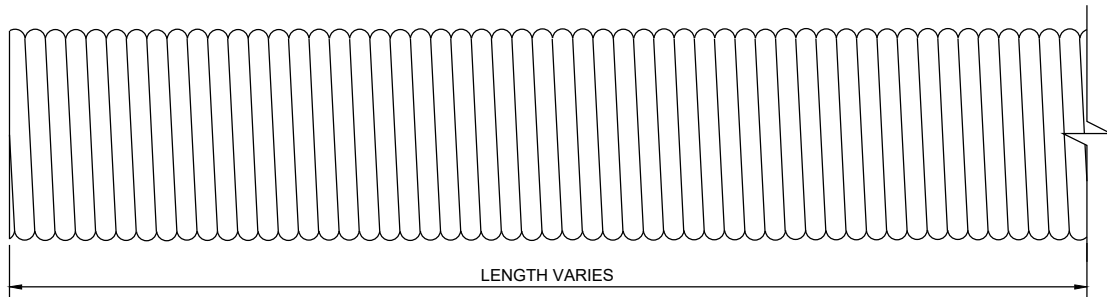
1/2" NOM. 13mm GROUT HOSE

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DRAWING No: SDI-HD-188					
#	REVISIONS	DRAWN	CHECKED	APPROVED	DATE
0	RELEASE	MHA	MSC	MSC	04/03/14
1	UPDATE	CSM	MSC	MSC	05/26/15
2	UPDATE	JSA	MSC	MSC	06/12/18



3/4" NOM. (23mm) GROUT HOSE

PART NO.: 51001
 MATERIAL: HDPE
 PRESSURE RATING: 150 PSI
 MATERIAL MEETS ALL SPECIFICATIONS.
 SCALE: 1'-0" = 1'-0"

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3/4" NOM. (23mm) GROUT HOSE

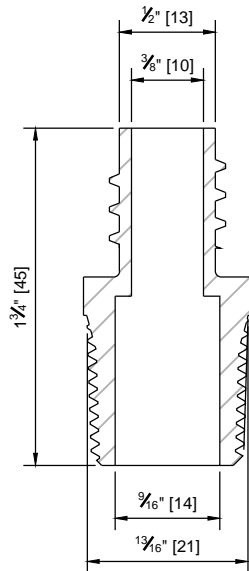
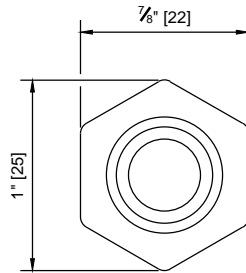
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DRAWING No: SDI-HD-189

#	REVISIONS	DRAWN	CHECKED	APPROVED	DATE
0	RELEASE	MHA	MSC	MSC	04/03/14
1	UPDATE	CSM	MSC	MSC	05/26/15
2	UPDATE	JSA	MSC	MSC	06/18/18



1/2" NOM. (13mm) NPT COUPLER

PART NO.: 53011
 MATERIAL: POLYPROPYLENE
 CELL CLASS RANGE: PP0340B44541 TO PP0340B67884
 PRESSURE RATING: 150 PSI
 MATERIAL MEETS ALL SPECIFICATIONS.
 SCALE: 1'-0" = 1'-0"

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1/2" NOM. (13mm) NPT
 COUPLER

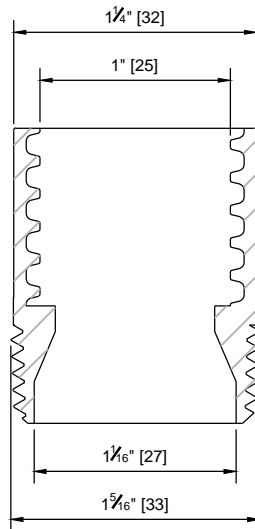
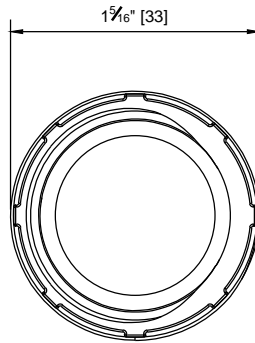
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DRAWING No: SDI-HD-222

#	REVISIONS	DRAWN	CHECKED	APPROVED	DATE
0	RELEASE	MHA	MSC	MSC	10/10/14
1	UPDATE	CSM	MSC	MSC	05/26/15
2	UPDATE	JSA	MSC	MSC	06/19/18



3/4" NOM. (23mm) NPT COUPLER

PART NO.: 53005

MATERIAL: POLYPROPYLENE

CELL CLASS RANGE: PP0340B44541 TO PP0340B67884

PRESSURE RATING: 150 PSI

MATERIAL MEETS ALL PROJECT SPECIFICATIONS.

SCALE: 1'-0" = 1'-0"

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3/4" NOM. (23mm) NPT
COUPLER

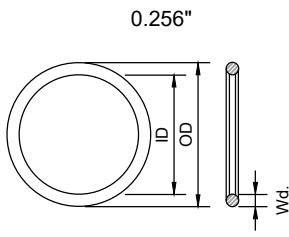
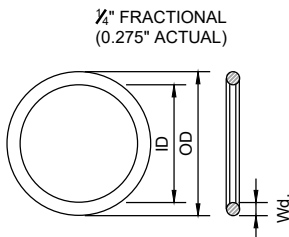
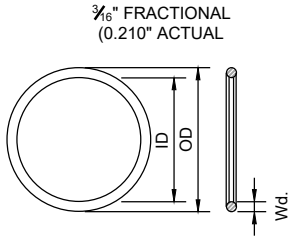
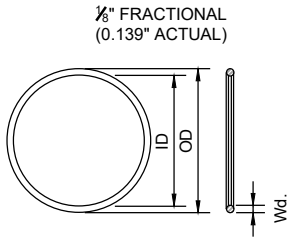
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DRAWING No: SDI-HD-223

#	REVISIONS	DRAWN	CHECKED	APPROVED	DATE
0	RELEASE	MHA	MSC	MSC	10/10/14
1	UPDATE	CSM	MSC	MSC	05/26/15
2	UPDATE	MHA	JMY	JMY	06/30/15
3	UPDATE	JSA	MSC	MSC	06/19/18



PART NO.	DASH NO.	FRACTIONAL SIZE, ID x OD	ACTUAL SIZE ID x OD	WIDTH	DUROMETER
76022	2-204	3/8" x 5/8"	0.359" x 0.637"	1/8" FRACTIONAL (0.139" ACTUAL)	70
76023	2-206	1/2" x 3/4"	0.484" x 0.762"	1/8" FRACTIONAL (0.139" ACTUAL)	70
76019	2-339	3/4" x 3 5/8"	3.225" x 3.645"	3/16" FRACTIONAL (0.210" ACTUAL)	70
76014	2-407	2 1/4" x 2 3/4"	2.225" x 2.775"	1/4" FRACTIONAL (0.275" ACTUAL)	70
76016	2-415	3 1/4" x 3 3/4"	3.225" x 3.775"	1/4" FRACTIONAL (0.275" ACTUAL)	70
76017	2-422	4 1/8" x 4 5/8"	4.100" x 4.650"	1/4" FRACTIONAL (0.275" ACTUAL)	70
76018	2-427	4 3/4" x 5 1/4"	4.725" x 5.275"	1/4" FRACTIONAL (0.275" ACTUAL)	70
76025	2-432	5 3/8" x 5 7/8"	5.350" x 5.900"	1/4" FRACTIONAL (0.275" ACTUAL)	70
76008	2-435	5 3/4" x 6 1/4"	5.725" x 6.275"	1/4" FRACTIONAL (0.275" ACTUAL)	40
76009	2-440	6 3/4" x 7 1/4"	6.725" x 7.275"	1/4" FRACTIONAL (0.275" ACTUAL)	40
76010	2-442	7 1/4" x 7 3/4"	7.225" x 7.775"	1/4" FRACTIONAL (0.275" ACTUAL)	40
76002	2-444	7 3/4" x 8 1/4"	7.725" x 8.275"	1/4" FRACTIONAL (0.275" ACTUAL)	70
76011	2-445	8" x 8 1/2"	7.975" x 8.525"	1/4" FRACTIONAL (0.275" ACTUAL)	40
76026	2-446	8 1/2" x 9"	8.475" x 9.025"	1/4" FRACTIONAL (0.275" ACTUAL)	40
76004	2-448	9 1/2" x 10"	9.475" x 10.025"	1/4" FRACTIONAL (0.275" ACTUAL)	70
76024	2-452	11 1/2" x 12"	11.475" x 12.025"	1/4" FRACTIONAL (0.275" ACTUAL)	70
76003	CUSTOM	-	8.747" x 9.259"	0.256"	70
76005	CUSTOM	-	10.226" x 10.738"	0.256"	70
76029	2-228	2 1/4" x 2 1/2"	2.250" x 2.500"	9/64" FRACTIONAL (0.139" ACTUAL)	70
76030	2-425	4 1/2" x 5"	4.475" x 5"	1/4" FRACTIONAL (0.275" ACTUAL)	70

STANDARD O-RINGS

MATERIAL: BUNA-N
MATERIAL MEETS ALL SPECIFICATIONS.

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STANDARD O-RINGS

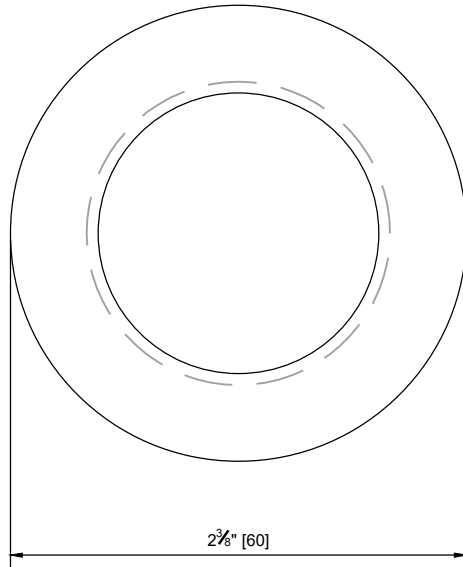
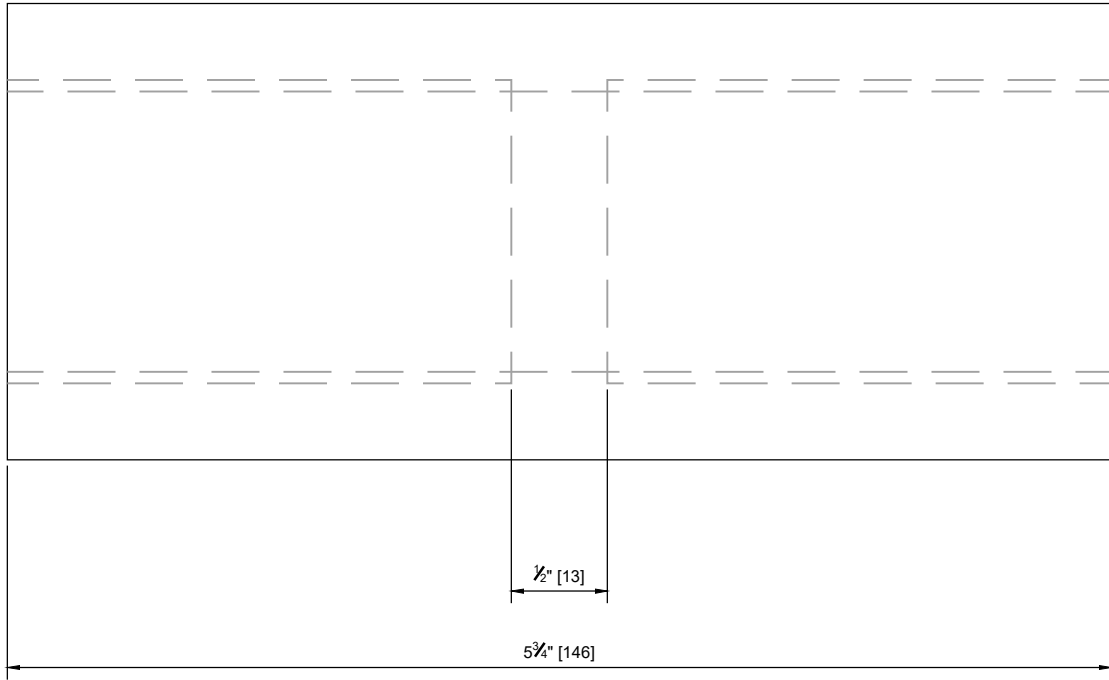
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DRAWING No: SDI-HD-236

#	REVISIONS	DRAWN	CHECKED	APPROVED	DATE
0	RELEASE	MHA	MSC	MSC	01/15/15
1	UPDATE	CSM	MSC	MSC	05/26/15
2	UPDATE	CSM	MSC	MSC	06/07/16
3	UPDATE	JSA	MSC	MSC	06/20/18



WMS. 1.38" HS BAR COUPLER

PART NO.: 64003
 MATERIAL: ASTM A 29 GR. C1045
 MATERIAL MEETS ALL SPECIFICATIONS.
 SCALE: 1'-0" = 1'-0"

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WMS. 1.38" HS BAR
 COUPLER

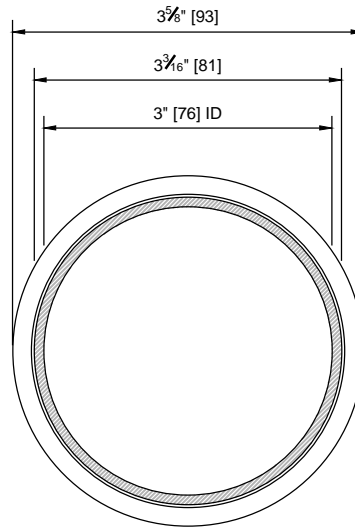
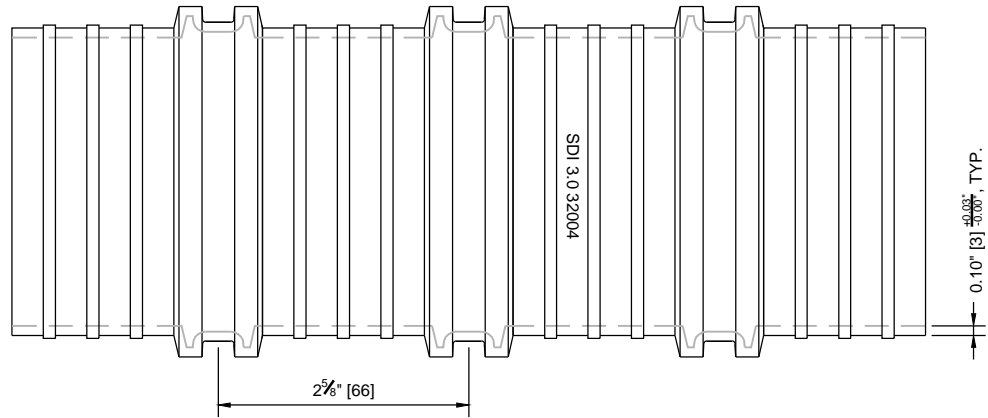
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DRAWING No: SDI-HD-111

#	REVISIONS	DRAWN	CHECKED	APPROVED	DATE
0	RELEASE	CMS	MCS	MCS	6-21-13
1	COMMENTS	CMS	MCS	MCS	9-9-13
2	COMMENTS	CMS	MCS	MCS	9-16-13
3	UPDATE	CSM	MSC	MSC	6-2-15



SDI 3" CORRUGATED PLASTIC DUCT

PART NO.: 32004
 MATERIAL: POLYPROPYLENE
 CELL CLASS RANGE: PP0340B44541 TO PP0340B67884
 BENDING RADIUS: 8 FT
 MATERIAL MEETS ALL SPECIFICATIONS.
 SCALE: 6" = 1'-0"

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SDI 3" CORRUGATED
 PLASTIC DUCT

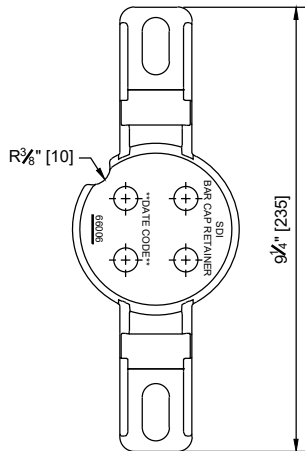
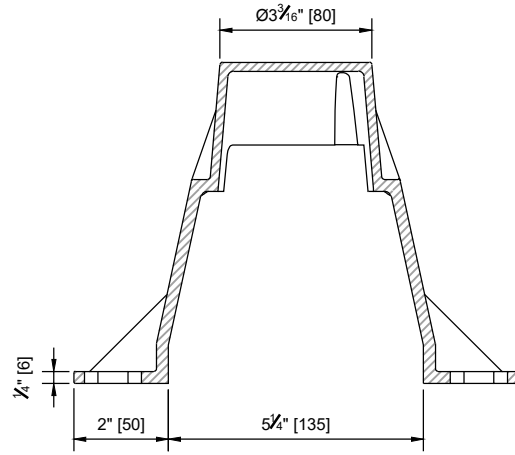
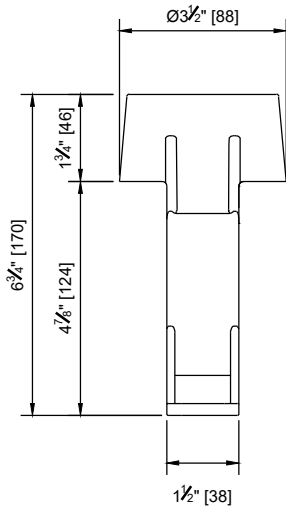
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DRAWING No: SDI-HD-035

#	REVISIONS	DRAWN	CHECKED	APPROVED	DATE
0	RELEASE	MCS	JWM	MCS	08/08/11
1	REVISED	MCS	JWM	MCS	11/11/11
2	UPDATE	CSM	MSC	MSC	05/26/15
3	UPDATE	JSA	MSC	MSC	07/02/18



SDI BAR CAP RETAINER

PART NO.: 66006

MATERIAL: NYLON MEETING S-PA0141, S-PA0231, OR S-PA0401

MATERIAL MEETS ALL SPECIFICATIONS.

SCALE: 6" = 1'-0"

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SDI BAR CAP RETAINER

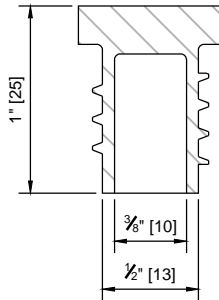
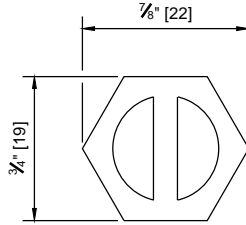
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DRAWING No: SDI-HD-194

#	REVISIONS	DRAWN	CHECKED	APPROVED	DATE
0	RELEASE	MHA	MSC	MSC	07/28/14
1	UPDATE	CSM	MSC	MSC	06/02/15
2	UPDATE	JSA	MSC	MSC	06/19/18



1/2" NOM. (13mm) GROUT TUBE PLUG

PART NO.: 55003
 MATERIAL: POLYPROPYLENE
 CELL CLASS RANGE: PP0340B44541 TO PP0340B67884
 PRESSURE RATING: 150 PSI
 MATERIAL MEETS ALL SPECIFICATIONS.
 SCALE: 1'-0" = 1'-0"

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1/2" NOM. (13mm) GROUT
TUBE PLUG

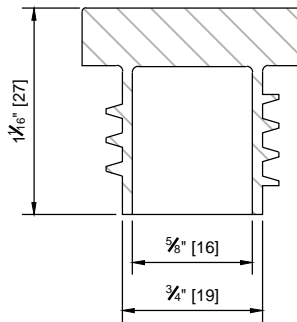
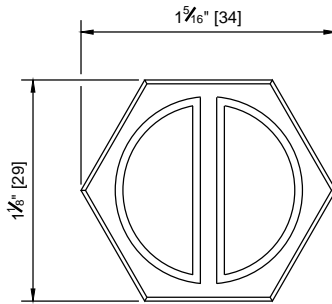
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DRAWING No: SDI-HD-155

#	REVISIONS	DRAWN	CHECKED	APPROVED	DATE
0	RELEASE	MHA	MSC	MSC	04/02/14
1	UPDATE	CSM	MSC	MSC	05/26/15
2	UPDATE	JSA	MSC	MSC	06/18/18



3/4" NOM. (23mm) GROUT TUBE PLUG

PART NO.: 55001
 MATERIAL: POLYPROPYLENE
 CELL CLASS RANGE: PP0340B44541 TO PP0340B67884
 PRESSURE RATING: 150 PSI
 MATERIAL MEETS ALL SPECIFICATIONS.
 SCALE: 1'-0" = 1'-0"

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**3/4" NOM.(23mm) GROUT
TUBE PLUG**

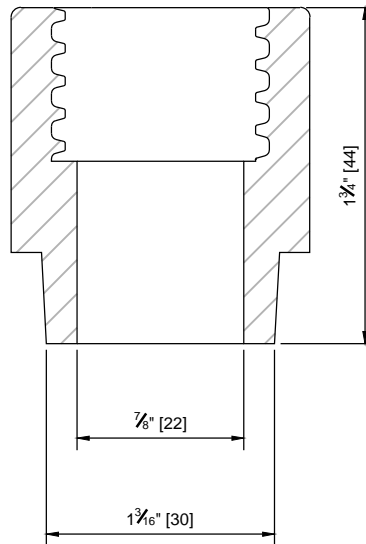
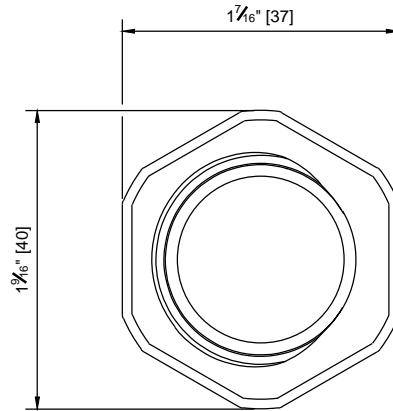
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DRAWING No: SDI-HD-156

#	REVISIONS	DRAWN	CHECKED	APPROVED	DATE
0	RELEASE	MHA	MSC	MSC	04/02/14
1	UPDATE	CSM	MSC	MSC	05/26/15
2	UPDATE	JSA	MSC	MSC	06/19/18



PP WELDABLE GROUT PORT WITH 3/4" (23mm) GROUT THREAD

PART NO.: 57003
 MATERIAL: POLYPROPYLENE
 CELL CLASS: PP0340B44541 TO PP0340B67884
 PRESSURE RATING: 150 PSI
 MATERIAL MEETS ALL SPECIFICATIONS.
 SCALE: 1'-0" = 1'-0"

NOTE: FOLLOW MANUFACTURE'S INSTALLATION INSTRUCTIONS

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PP WELDABLE GROUT PORT
 WITH 3/4" (23mm) GROUT THREAD



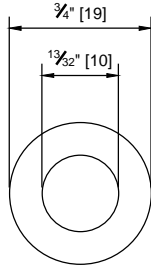
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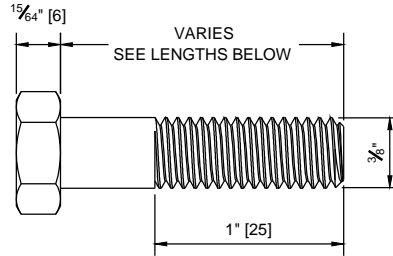
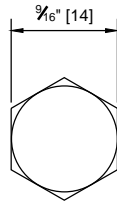
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DRAWING No: SDI-HD-147

#	REVISIONS	DRAWN	CHECKED	APPROVED	DATE
0	RELEASE	MHA	MSC	MSC	03/25/14
1	UPDATE	CSM	MSC	MSC	05/26/14
2	UPDATE	JSA	MSC	MSC	06/20/18



WASHER MAY VARY FROM
0.04" TO 0.06" IN THICKNESS



3/8"-16 BOLT & WASHER

- PART NO.: 77002 - SDI 2.6A-PC PERMANENT CAP BOLTS (L= 5")
 77004 - SDI 12.6-PC PERMANENT CAP BOLTS (L= 2.5")
 77006 - SDI 22.6-PC PERMANENT CAP BOLTS (L= 3")
 77008 - SDI 4.6A-PC PERMANENT CAP BOLTS (L= 5")
 77010 - SDI 1.38-PC PERMANENT CAP BOLTS (L= 1.5")

MATERIAL: STAINLESS STEEL, TYPE 316 ACCORDING TO ASTM F593
 MATERIAL MEETS ALL SPECIFICATIONS.
 SCALE: 1'-0" = 1'-0"

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3/8"-16 BOLT & WASHER



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DRAWING No: SDI-HD-149

#	REVISIONS	DRAWN	CHECKED	APPROVED	DATE
0	RELEASE	MHA	MSC	MSC	04/02/14
1	UPDATE	CSM	MSC	MSC	05/26/15
2	UPDATE	JSA	MSC	MSC	06/14/18



POLY-TEMP[®] MD MEDIUM DENSITY THREAD SEAL TAPE

WWW.ANTISEIZE.COM

Product Description

POLY-TEMP[®] MD Medium Density Thread Seal Tape is a general purpose PTFE Thread Seal Tape designed to be used on all types of metal and plastic pipe threads.

Our **POLY-TEMP[®]** Tapes are made from 99.9% virgin PTFE resins for optimum purity and performance. **POLY-TEMP[®] MD** Medium Density Thread Seal Tape is malleable to easily conform to thread profiles to ensure a positive seal.

Because **POLY-TEMP[®] MD** Medium Density Thread Seal Tape is composed of pure PTFE, it touts an extremely broad range of chemical compatibilities and is unaffected by most chemicals and concentrations.

POLY-TEMP[®] MD Medium Density Thread Seal Tape is our most popular grade of thread sealing tape and has been Industry Leader for over 30 years.

Features & Benefits

- Meets FDA and USDA requirements
- UL Listed
- Ideal for all taper thread connections
- PTFE's high lubricity makes for easy assembly
- Only 3 wraps need for most applications
- Chemically inert, non-Toxic
- Suitable for oxygen service
- Our most popular grade of Thread Seal Tape
- Easy to handle and apply
- Temperature range from -400F to 550F (-240C to 287C)
- Pressures up to 10,000psi (Liquid), 2000 psi (Gas)
- Connections can be put into service right away, no dry time
- Never dries out and an unlimited shelf life.
- Meets MIL-T-27730A
- Extremely versatile.

Typical Properties

Property	Value
Color	White
Thickness	3.5 mils
Specific Gravity	0.7 to 0.8g/cc
Toxicity	Non toxic
RoHS	Compliant

Cautions

Read all information on labels and Material Safety Data Sheets prior to use. All products should be tested and evaluated for a particular purpose prior to use.

Product Limited Warranty

This information is based on information we believe to be reliable and accurate, but no guarantee of its accuracy is made for a particular application. We urge and recommend that Users pretest their application prior to incorporating the product into use and assume that the User will conduct such testing. Also see warranty statement on website.

Available In:

Size: 1/2"x 60" 1/4"x520" 1/2"x260" 1/2"x520" 1/2"x1296"
P/N: 16006 16025 16030 16035 16040

Size: 3/4"x260" 3/4"x520" 1"x260" 1"x520"
P/N: 16045 16050 16055 16060

Size: Counter Display 1/2"x260" 1/2"x520" 3/4"x520"
P/N: 16030A 16035A 16050A

POLY-TEMP[®] IS A REGISTERED TRADEMARK OF ANTI-SEIZE TECHNOLOGY

ANTI-SEIZE TECHNOLOGY

2345 N. 17th AVE. • FRANKLIN PARK, IL 60131-3432
847-455-2300 • www.antiseize.com

SET High Strength Epoxy-Tie® Anchoring Adhesive

SET Epoxy-Tie® epoxy is a two-component, 1:1 ratio, high solids, epoxy-based adhesive for use as a high strength, non-shrink anchor grouting material. Resin and hardener are dispensed and mixed simultaneously through the mixing nozzle. SET meets or exceeds the requirements of ASTM C-881 specification for Type I, II, IV and V, Grade 3, Class B and C.

GALLERY: ROLL OVER IMAGES BELOW TO SEE

LARGER IMAGE



SET22



EMN22i



EDT22B



SET-PAC EZ™

Adhesive
U.S. Patent
6,634,524



SET56



SET1.7KTA



USES

- Threaded-rod anchoring
- Rebar doweling
- Bonding hardened concrete to hardened concrete
- Pick-proof sealant around doors, windows and fixtures
- Paste-over for crack injection

CODE REPORTS

- ICC Evaluation Service [ESR-1772](#) (formerly ICBO-ES ER-5279) (PDF) (CMU & URM)
- City of L.A. [RR25279](#) (PDF)
- Caltrans approved
- Florida Statewide Product Approval [FL11506.4](#)
- [multiple DOT listings](#)
- [NSF/ANSI Standard 61 \(216 in²/1000 gal\)](#) (PDF), except SET1.7KTA
- SET-PAC EZ™ adhesive covered by ICC-ES, City of L.A. and NSF/ANSI listings only



The [load tables](#) list values based upon results from the most recent testing and may not reflect those in current code reports. Where code jurisdictions apply, consult the current

LINKS:

- [Supplemental Topics for Adhesive Anchors](#)
- [Estimating Guide](#)
- [Limited Warranty Information](#)
- [Tension and Shear Load Tables](#)
- [Load-Adjustment Factors](#)
- Documents:
 - [Anchor Catalog Section](#) (PDF)
 - [Product Submittal](#) (PDF)
 - [Material Safety Data Sheet: SET](#) (PDF)
 - [Material Safety Data Sheet: SET en Español](#) (PDF)
 - [SET-PAC-EZ™ Epoxy-Tie® Anchoring Adhesive Flier](#) (PDF)
 - [Rebar Yield and Tensile Strength Embedments Technical Bulletin](#) (PDF)
 - [Rebar Yield and Tensile Strength Embedments \(Canada\) Technical Bulletin](#) (PDF)
 - [Anchor Tension Loads in Masonry Chair Block Technical Bulletin](#) (PDF)
- Free Softw are:
 - [Anchor Designer](#)
 - [Adhesive Cartridge Quantity Estimator](#)

reports for applicable load values.

APPLICATION

Surfaces to receive epoxy must be clean. For installations in or through standing water, see Supplemental Topics for Adhesive Anchors for details. The base material temperature must be 40° F or above at the time of installation. For best results, material should be 70° - 80° F at the time of application. Cartridges should not be immersed in water to facilitate warming. To warm cold material, the cartridges should be stored in a warm, uniformly heated area or storage container for a sufficient time to allow epoxy to warm completely. Mixed material in nozzle can harden in 5-7 minutes at a temperature of 40° F or above.

TEST CRITERIA

Anchors installed with SET Epoxy-Tie® adhesive have been tested in accordance with ICC-ES's *Acceptance Criteria for Adhesive Anchors (AC58)* for the following:

- Seismic/wind loading
- Long-term creep at elevated-temperature
- Static loading at elevated-temperature
- Damp and water-filled holes
- Freeze-thaw conditions
- Critical and minimum edge distance and spacing

In addition, anchors installed with SET Epoxy-Tie® adhesive have been tested in accordance with ICC-ES's *Acceptance Criteria for Unreinforced Masonry Anchors (AC60)*.

PROPERTY	TEST METHOD	RESULTS
Consistency	ASTMC 881	Non-sag/ thixotropic paste
Heat deflection	ASTMD 648	136° F (58° C)
Bond strength (moist cure)	ASTMC 882	3,218 psi (2 days) 3,366 psi (14 days)
Water absorption	ASTMD 570	0.110% (24 hrs)
Compressive yield strength	ASTMD 695	5,065 psi (24 hours) 12,650 psi (7 days)
Compressive modulus	ASTMD 695	439,000 psi (7 days)
Gel time (75° F)	ASTMC 881	30 min - 60 gram mass 60 min - thin film

ACCESSORIES / RELATED PRODUCTS

- Dispensing Tools
- Mixing Nozzles
- Plastic Anchoring Screens
- Steel Anchoring Screens
- Hole Cleaning Brushes

SUGGESTED SPECIFICATIONS

Anchoring adhesive shall be a two-component high-solids epoxy based system supplied in manufacturer's standard cartridge and dispensed through a static-mixing nozzle supplied by the manufacturer. Epoxy shall meet the minimum requirements of ASTM C-881 specification for Type I, II, IV, and V, Grade 3, Class B and C and must develop a minimum 12,650 psi compressive yield strength after 7 day cure. Epoxy must have a heat deflection temperature of a minimum 136°F (58°C). Adhesive shall be SET Epoxy-Tie® adhesive from Simpson Strong-Tie, Pleasanton, CA. Anchors shall be installed per Simpson Strong-Tie instructions for SET Epoxy-Tie® adhesive.

ASD DESIGN EXAMPLE

For design example, [click here](#).

INSTALLATION

IMPORTANT For installation instructions, [click here](#).

SHELF LIFE

24 months from date of manufacture in unopened side-by-side cartridge. SET-PAC EZ™ cartridge - 24 months from date of manufacture, unopened.

STORAGE CONDITIONS

For best results store between 45° F - 90° F. To store partially used cartridges, leave hardened nozzle in place. To re-use, attach new nozzle.

COLOR

Resin – white, hardener – black
When properly mixed SET adhesive will be a uniform light gray color.

CLEAN UP

Uncured material – Wipe up with cotton cloths. If desired scrub area with abrasive, waterbased cleaner and flush with water. If approved, solvents such as ketones (MEK, acetone, etc.), lacquer thinner or adhesive remover can be used. **DO NOT USE SOLVENTS TO CLEAN ADHESIVE FROM SKIN.** Take appropriate precautions when handling flammable solvents. Solvents may damage surfaces to which they are applied. Cured material – Chip or grind off surface.

CHEMICAL RESISTANCE

Very good to excellent against distilled water, inorganic acids and alkalis. Fair to good against organic acids and alkalis, and many organic solvents. Poor against ketones. For more detailed information download [Technical Bulletin T-SAS-CHEMRES08](#) (PDF).

SET Cartridge Systems

Model No.	Capacity ounces (cubic inches)	Cartridge Type	Carton Quantity	Dispensing Tool(s)	Mixing ⁴ Nozzle
SET1.7KTA	1.7 (3.1)	side-by-side	12	Adaptor included for standard caulking tool	EMN1.7 (2 included)
SET-PAC-EZ	8.5 (16.2)	single	12	CDT10 or high quality standard caulking tool	2 included
SET22	22 (39.7)	side-by-side	10	EDT22B, EDT22AP, or EDT22CKT	EMN22i
SET56	56 (101.1)	side-by-side	6	EDT56AP	EMN22i or EMN50

1. Bulk containers also available, [contact Simpson Strong-Tie](#) for details.
2. [Cartridge and bulk estimation guides](#) are available.
3. [Detailed information](#) on dispensing tools, mixing nozzles and other adhesive accessories is available.
4. Use only appropriate Simpson Strong-Tie mixing nozzle in accordance with Simpson's instructions. Modification or improper use of mixing nozzle may impair epoxy performance.

Cure Schedule

Base Material Temperature		Cure Time
°F	°C	
40	4	72 hrs.
65	18	24 hrs.
85	29	20 hrs.
90	32	16 hrs.

In-Service Temperature Sensitivity

Base Material Temperature		Percent Allowable Load
°F	°C	
40	4	100%
70	21	100%
110	43	100%
135	57	75%
150	66	44%
180	82	20%

1. Refer to temperature sensitivity chart for allowable bond strength reduction for temperature. See [Supplemental Topics for Adhesive Anchors](#).
2. Percent allowable load may be linearly interpolated for intermediate base material temperatures.
3. $^{\circ}\text{C} = (^{\circ}\text{F} - 32) / 1.8$

top ▲