

ITEM	PART NUMBER	DRAWING	DESCRIPTION	MATERIAL
1	71022	SDI-HD-376	SDI 4.6A FLEXIBLE FILLER ANCHORAGE	ASTM A 536 GR. 80-55-06 (GALVANIZED)
2	76007	SDI-HD-238	GASKET	BUNA-N PER ASTM D2240 & D412
3	73011	SDI-HD-231	SDI 4.6A ROUND TRUMPET	POLYPROPYLENE PER ASTM D4101
4	74001	SDI-HD-258	BURSTING REINFORCING	GRADE 60 STEEL PER ASTM A815
5	74001	SDI-HD-258	BURSTING REINFORCING SUPPORT BAR	GRADE 60 STEEL PER ASTM A815
6	75008	SDI-HD-070	SDI 4.6A-PC PERMANENT GROUT CAP	NYLON PER ASTM D5989
7	76019	SDI-HD-236	O-RING SEAL	BUNA-N PER ASTM D2240, & D412
8	77008	SDI-HD-149	(2) 3/8" x 2.5" BOLTS & WASHERS	STAINLESS STEEL, TYPE 316
9	76022	SDI-HD-236	O-RING SEAL	BUNA-N PER ASTM D2240, & D412
10	21001	SDI-HD-148	0.6" STRAND	270KSI STEEL PER ASTM A416, LOW RELAXATION
11	81001	SDI-HD-021	SDI 0.6" STANDARD 2-PART WEDGE	AISI 11L17 OR 12L14
12	52011	SDI-HD-337	1/2" NPT BALL VALVE (TEMPORARY)	BRASS
13	52010	SDI-HD-272	3/4" NPT BALL VALVE (TEMPORARY)	BRASS
14	53014	SDI-HD-365	1/2" NPT MALE BARBED HOSE ADAPTOR (TEMPORARY)	BRASS
15	51006	SDI-HD-363	1/2" NPT PIPE NIPPLE	STEEL PER ASTM A53
16	51004	SDI-HD-270	3/4" NPT PIPE NIPPLE	STEEL PER ASTM A53
17	37008	SDI-HD-367	KLNN HEAT SHRINK TUBING	ADHESIVE LINED POLYOLEFIN
18	59001	SDI-HD-364	CLEAR HIGH TEMP. VACUUM TUBE (TEMPORARY)	FLUORINATED ETHYLENE PROPYLENE
19	55023	SDI-HD-361	3/4" NPT CAP	POLYPROPYLENE PER ASTM D4101
20	55022	SDI-HD-360	1/2" NPT CAP	POLYPROPYLENE PER ASTM D4101
21	35007	SDI-HD-235	2" (50mm) ID HDPE PIPE	HIGH DENSITY POLYETHYLENE PER ASTM D2513, F1055
22	57004	SDI-HD-172	3/4" (23mm) WELDABLE GROUT PORT	HIGH DENSITY POLYETHYLENE PER ASTM D2513, F1055
23	53011	SDI-HD-222	1/2" (13mm) NPT COUPLER (TEMPORARY)	POLYPROPYLENE PER ASTM D4101
24	76026	SDI-HD-268	4.6A SLAP-ON GASKET	BUNA-N PER ASTM D2240, & D412
25	0000E	N/A	COMMERCIALY AVAILABLE/COMPATIBLE EPOXY	EPOXY
26	0000T	N/A	TEFLON TAPE (TEMPORARY)	TEFLON

* ALL NON-FERROUS COMPONENTS CONTAIN VIRGIN MATERIAL.

STEP-BY-STEP SYSTEM INSTALLATION PROCEDURE

- STEP 1: HANG ANCHORAGE WITH 2 EACH 3/8" ALL THREAD.
- STEP 2: INSTALL TRUMPET. MAKE SURE GASKET IS INSTALLED BETWEEN TRUMPET AND ANCHORAGE.
- STEP 3: PLACE BURSTING STEEL 1" BEHIND ANCHORAGE. ENSURE BURSTING STEEL IS CONCENTRIC AND PARALLEL TO PATH OF TENDON.
- STEP 4: SLIDE DUCT INSIDE TRUMPET.
- STEP 5: HEAT SHRINK TO TRUMPET.
- STEP 6: PERFORM VACUUM TEST PER FDOT 462-8.2.1.2
- STEP 7: INSTALL STRAND, LEAVE SUFFICIENT STRAND FOR STRESSING EQUIPMENT.
- STEP 8: ENSURE WEDGE CAVITIES ARE RUST FREE AND CLEAN PRIOR TO WEDGE INSTALLATION.
- STEP 9: PUSH WEDGES OVER STRAND AND AGAINST THE ANCHORAGE USING A 3/4" PIPE.
- STEP 10: STRESS TENDONS AFTER CONCRETE HAS REACHED REQUIRED STRENGTH PER DRAWINGS AND/OR SPECIFICATION.
- STEP 11: AFTER STRESSING AND APPROVAL FROM OWNERS REPRESENTATIVE, CUT STRAND TAILS 1" FROM FACE OF ANCHORAGE.
- STEP 12: INSTALL VENTS. (SEE NOTE: b)
- STEP 13: INSTALL PERMANENT CAP BY TORQUEING BOLTS TO 20 FT-LB
- STEP 14: PERFORM PRESSURE TEST PER FDOT 462-8.2.1.2
- STEP 15: INSTALL TEMPORARY FLEX FILLER INJECTION HARDWARE.
- STEP 16: INJECT FLEX FILLER PER FLEX FILLER INJECTION PROCEDURE.
- STEP 17: REMOVE ALL TEMPORARY HARDWARE ONCE FLEX FILLER PROCEDURE IS COMPLETE AND CAP OR PLUG PORTS PER DRAWINGS.

NOTES:

- a. LUBRICATE ALL O-RINGS FOR EASE OF INSTALLATION.
- b. EPOXY IS TO BE USED ON EVERY PERMANENT HOSE/COUPLER/PLUG THREADS. TEFLON TAPE IS TO BE USED ON EVERY TEMPORARY HOSE/COUPLER/PLUG THREADS. THREAD INTO ALL CONNECTIONS. DO NOT INJECT THROUGH VENTS.
- c. MAKE SURE O-RING AND WASHER ARE INSTALLED WITH PERMANENT CAP BOLT.
- d. VENTS SHOWN FOR REFERENCE ONLY. FOR ACTUAL LOCATION, SEE PLACING DRAWINGS.
- e. STEP-BY-STEP INSTALLATION PROCEDURE ARE GENERIC, FOLLOW FDOT SPECIFICATIONS AND PROJECT SPECIFIC REQUIREMENTS.
- f. TENDON FILLER MATERIAL IS FLEX FILLER.

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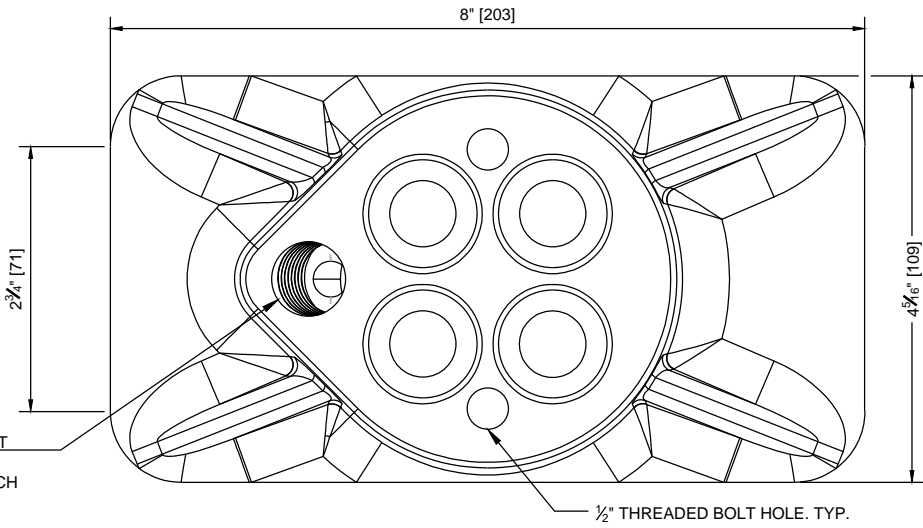
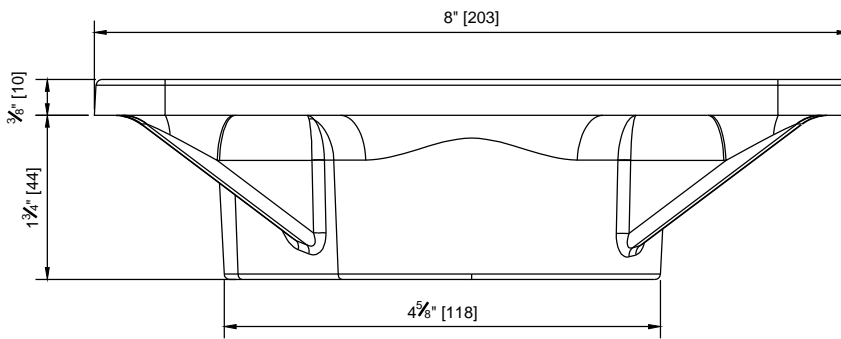
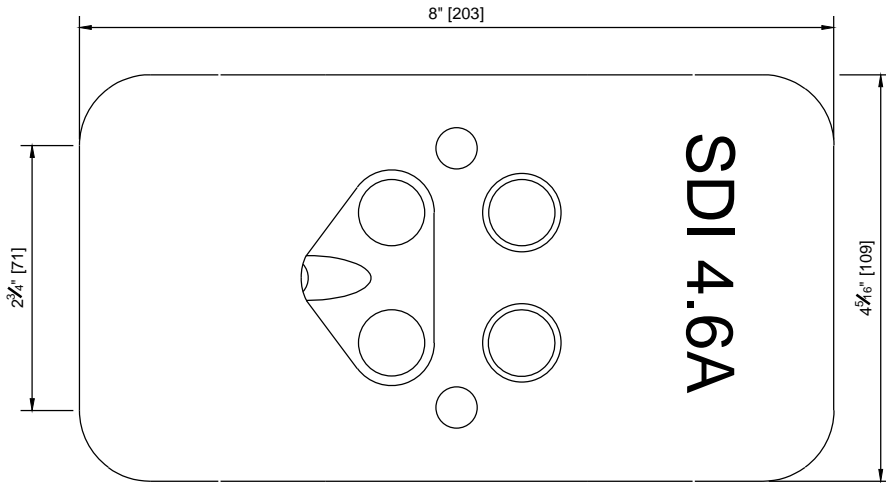
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SDI 4.6A INTERNAL UNBONDED FLEX FILLER SYSTEM

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DRAWING No: SDI-HD-340

#	REVISIONS	DRAWN	CHECKED	APPROVED	DATE
0	RELEASE	JSA	MSC	MSC	10/11/18



INLET/OUTLET/VENT
 1/2" NTP PIPE SIZE
 14 THREADS PER INCH

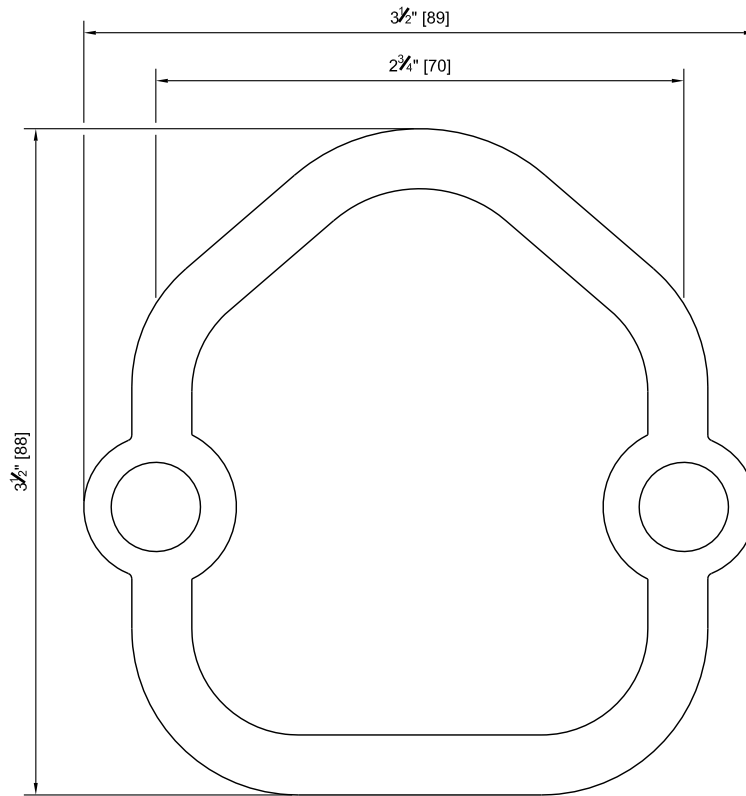
1/2" THREADED BOLT HOLE. TYP.

SDI 4.6A FLEXIBLE FILLER ANCHORAGE

PART NO.: 71022
 MATERIAL: ASTM A 536 GR. 80-55-06 (GALVANIZED)
 MATERIAL MEETS ALL SPECIFICATIONS.
 SCALE: 6" = 1'-0"

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SDI 4.6A TRUMPET GASKET

PART NO.: 76007

MATERIAL: 1/8" THICK - BUNA-N PER ASTM D2240 & D412

MATERIAL MEETS ALL SPECIFICATIONS.

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

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**SDI 4.6A TRUMPET
GASKET**

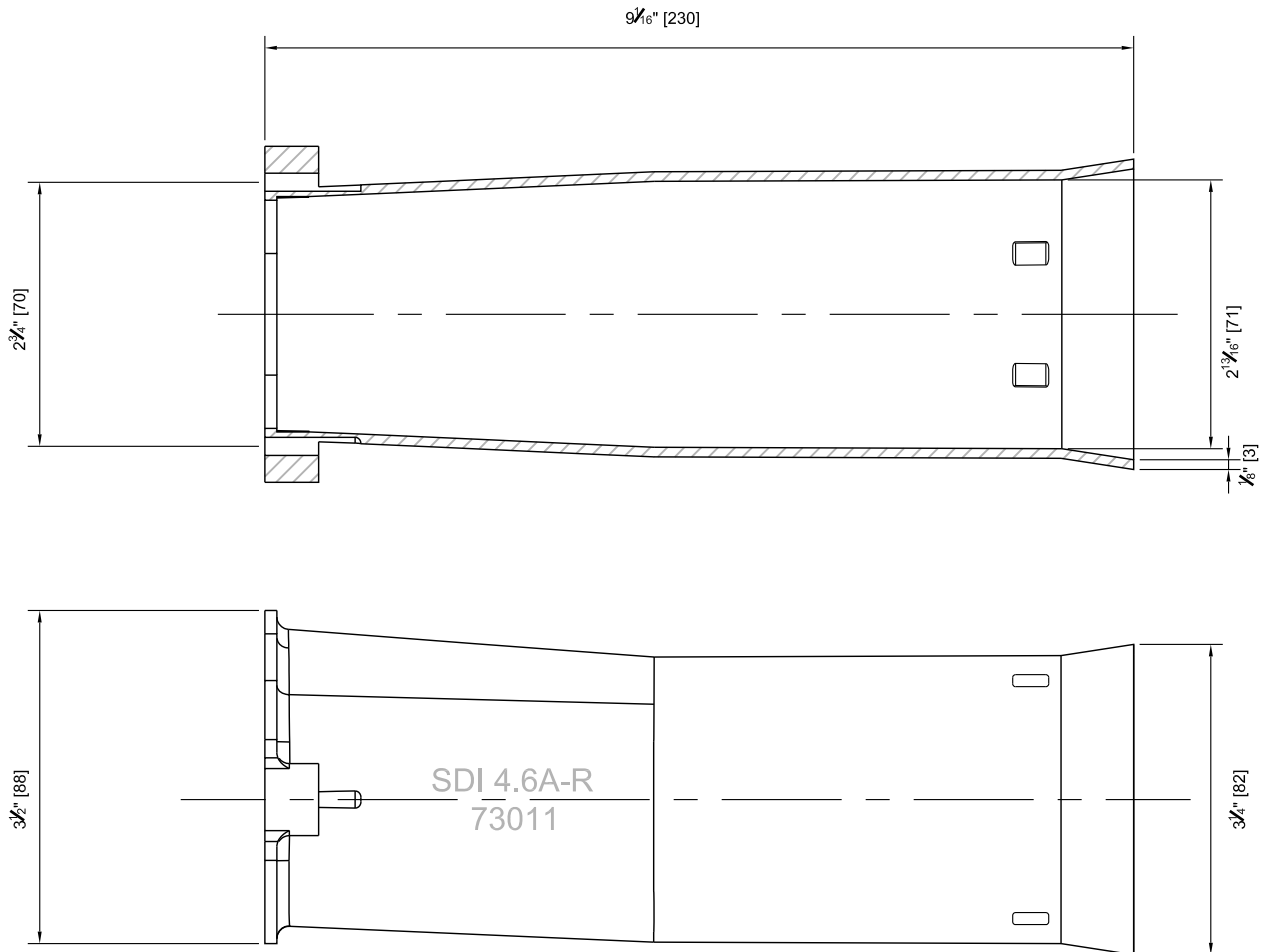
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DRAWING No: SDI-HD-238

#	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	06/19/18



SDI 4.6A ROUND TRUMPET

PART NO.: 73011
 MATERIAL: POLYPROPYLENE PER ASTM D4101
 CELL CLASS RANGE: PP0340B44541 TO PP0304B67884
 MATERIAL MEETS ALL SPECIFICATIONS.
 SCALE: 6" = 1'-0"

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SDI 4.6A ROUND TRUMPET

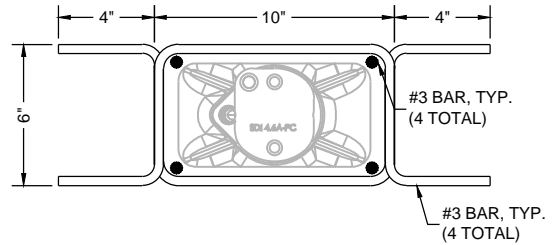
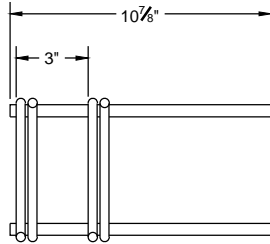
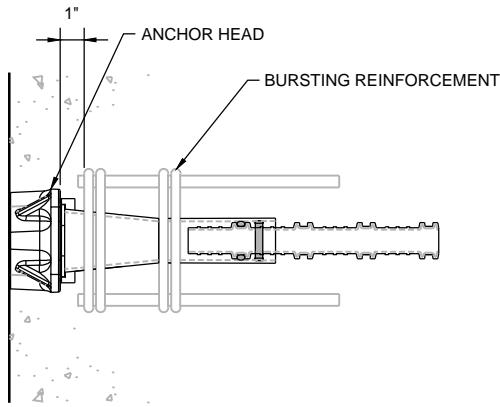
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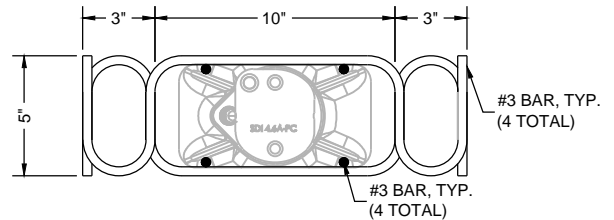
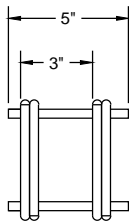
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DRAWING No: SDI-HD-231

#	REVISIONS	DRAWN	CHECKED	APPROVED	DATE
0	RELEASE	CSM	MCS	MCS	12-10-14
1	UPDATE	CSM	MCS	MCS	05-28-15
2	UPDATE	JSA	MCS	MCS	06-14-18



SDI 4.6A STANDARD BURSTING REINFORCEMENT



SDI 4.6A ALTERNATIVE BURSTING REINFORCEMENT

FOR USE IN DECKS THAT REQUIRE MORE CONCRETE COVER

SDI 4.6A BURSTING REINFORCEMENT

PART NO.: 74001
 MATERIAL: GRADE 60 STEEL ACCORDING TO ASTM A615
 #3 REBAR, 2EA SETS OF BENT BARS
 #3 REBAR, 4EA STRAIGHT BARS
 MATERIAL MEETS ALL SPECIFICATIONS.
 SCALE: 1-1/2" = 1'-0"

NOTE: PROJECT SPECIFIC REQUIREMENTS SUPERSEDE BURSTING STEEL REQUIREMENTS OF THIS SHEET

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SDI 4.6A-PC BURSTING REINFORCEMENT

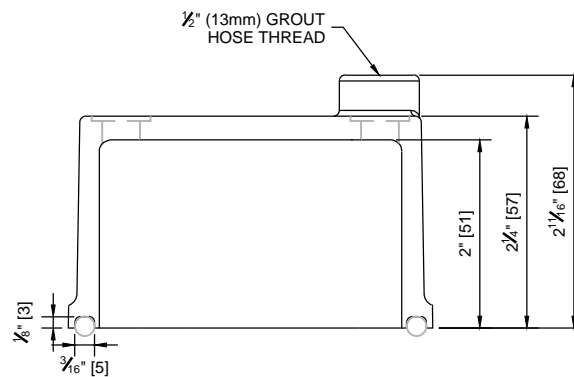
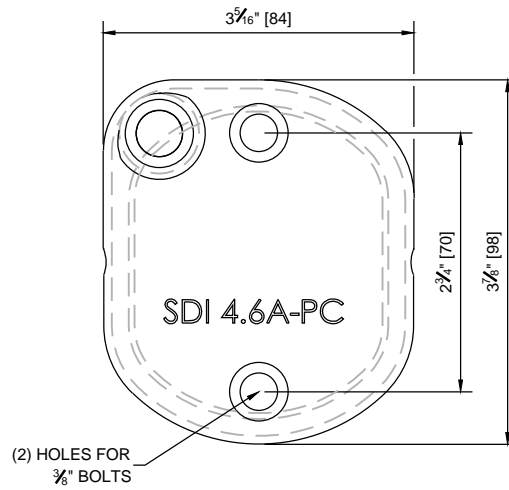
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DRAWING No: SDI-HD-258

#	REVISIONS	DRAWN	CHECKED	APPROVED	DATE
0	RELEASE	CSM	MSC	MSC	05/29/15
1	UPDATE	JSA	MSC	MSC	08/16/18



SDI 4.6A-PC PERMANENT GROUT CAP

PART NO.: 75008

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

MATERIAL MEETS ALL SPECIFICATIONS.

SCALE: 6" = 1'-0"

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SDI 4.6A-PC PERMANENT
GROUT CAP

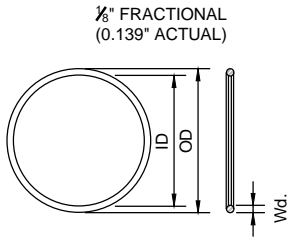
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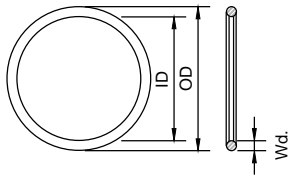
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DRAWING No: SDI-HD-070

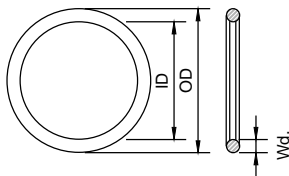
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3	UPDATE	CSM	MSC	MSC	05/26/15
4	UPDATE	JSA	MSC	MSC	06/15/18



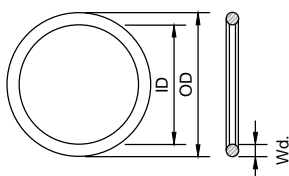
3/16" FRACTIONAL
(0.210" ACTUAL)



1/4" FRACTIONAL
(0.275" ACTUAL)



0.256"



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 35/64"	3.225" x 3.645"	3/16" FRACTIONAL (0.210" ACTUAL)	70
76014	2-407	23/4" x 23/4"	2.225" x 2.775"	1/4" FRACTIONAL (0.275" ACTUAL)	70
76016	2-415	33/4" x 33/4"	3.225" x 3.775"	1/4" FRACTIONAL (0.275" ACTUAL)	70
76017	2-422	45/8" x 45/8"	4.100" x 4.650"	1/4" FRACTIONAL (0.275" ACTUAL)	70
76018	2-427	43/4" x 53/4"	4.725" x 5.275"	1/4" FRACTIONAL (0.275" ACTUAL)	70
76025	2-432	55/8" x 55/8"	5.350" x 5.900"	1/4" FRACTIONAL (0.275" ACTUAL)	70
76008	2-435	53/4" x 63/4"	5.725" x 6.275"	1/4" FRACTIONAL (0.275" ACTUAL)	40
76009	2-440	63/4" x 73/4"	6.725" x 7.275"	1/4" FRACTIONAL (0.275" ACTUAL)	40
76010	2-442	73/4" x 73/4"	7.225" x 7.775"	1/4" FRACTIONAL (0.275" ACTUAL)	40
76002	2-444	73/4" x 83/4"	7.725" x 8.275"	1/4" FRACTIONAL (0.275" ACTUAL)	70
76011	2-445	8" x 81/2"	7.975" x 8.525"	1/4" FRACTIONAL (0.275" ACTUAL)	40
76026	2-446	81/2" x 9"	8.475" x 9.025"	1/4" FRACTIONAL (0.275" ACTUAL)	40
76004	2-448	91/2" x 10"	9.475" x 10.025"	1/4" FRACTIONAL (0.275" ACTUAL)	70
76024	2-452	111/2" 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	23/4" x 21/2"	2.250" x 2.500"	9/64" FRACTIONAL (0.139" ACTUAL)	70
76030	2-425	41/2" 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

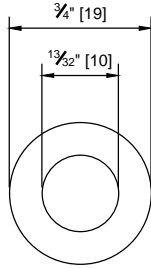
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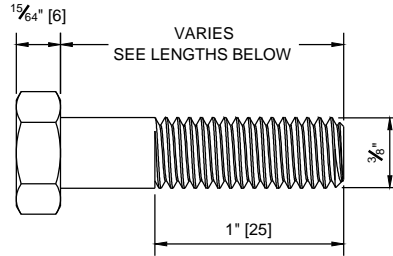
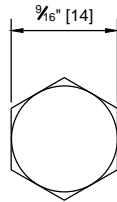
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DRAWING No: SDI-HD-236

#	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



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= 2.5")
 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



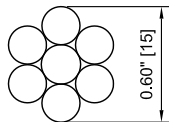
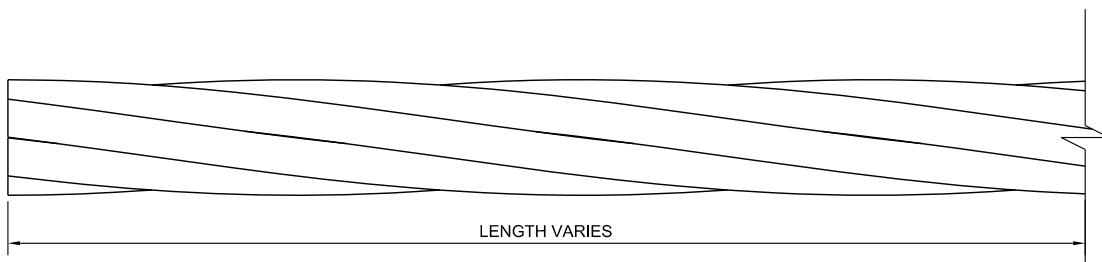
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DRAWING No: SDI-HD-149

#	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	10/11/18



0.6" BARE STRAND

PART NO.: 21001
 MATERIAL: 270 KSI LOW RELAXATION STEEL ACCORDING TO ASTM A416
 MATERIAL MEETS ALL SPECIFICATIONS.
 SCALE: 1'-0" = 1'-0"

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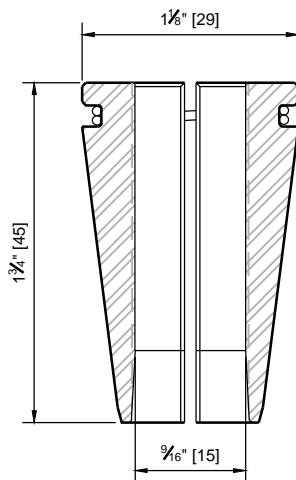
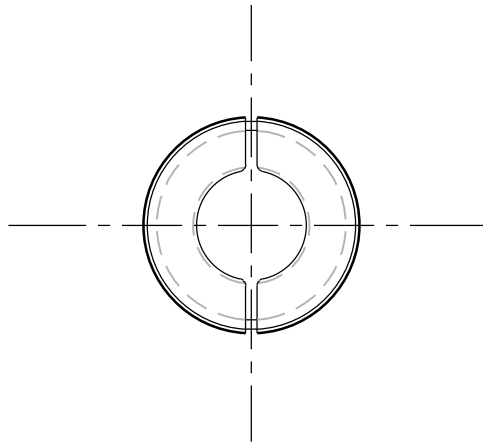
0.6" BARE STRAND

SCHWAGER DAVIS, INC.
 POST-TENSION
 SYSTEM LIBRARY



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 198 HILLSDALE AVENUE
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DRAWING No: SDI-HD-148					
#	REVISIONS	DRAWN	CHECKED	APPROVED	DATE
0	RELEASE	MHA	MSC	MSC	04/02/14
1	UPDATE	CSM	MSC	MSC	05/26/15

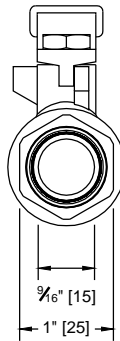
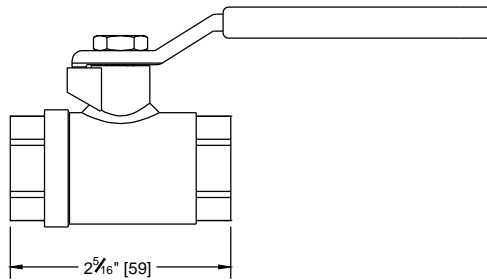


SDI 0.6" WEDGE (2-PART)

PART NO.: 81001
 MATERIAL: AISI 11L17 OR 12L14
 MATERIAL MEETS ALL SPECIFICATIONS.
 PART IDENTIFICATION MARKED ON CONTAINER
 SCALE: 1'-0" = 1'-0"

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<p>SDI 0.6" WEDGE (2-PART)</p>	 <p>SCHWAGER DAVIS INC.</p>	<p>SCHWAGER DAVIS, INC. DESIGN-BUILD CONTRACTOR 198 HILLSDALE AVENUE SAN JOSE, CA 95136 PHONE: 408.281.9300 FAX: 408.281.9301 www.schwagerdavis.com</p>	<p>DRAWING No: SDI-HD-021</p>																												
<p>SCHWAGER DAVIS, INC. POST-TENSION SYSTEM LIBRARY</p>			<table border="1"> <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>GAS</td> <td>MCS</td> <td>03/14/11</td> </tr> <tr> <td>1</td> <td>COMMENTS</td> <td>CMS</td> <td>MCS</td> <td>MCS</td> <td>07/05/13</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>06/14/18</td> </tr> </tbody> </table>	#	REVISIONS	DRAWN	CHECKED	APPROVED	DATE	0	RELEASE	MCS	GAS	MCS	03/14/11	1	COMMENTS	CMS	MCS	MCS	07/05/13	2	UPDATE	CSM	MSC	MSC	05/26/15	3	UPDATE	JSA	MSC
#	REVISIONS	DRAWN	CHECKED	APPROVED	DATE																										
0	RELEASE	MCS	GAS	MCS	03/14/11																										
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2	UPDATE	CSM	MSC	MSC	05/26/15																										
3	UPDATE	JSA	MSC	MSC	06/14/18																										



1/2" NPT BALL VALVE (TEMPORARY)

PART NO.: 52011
 MATERIAL: BRASS
 PRESSURE RATING 150 PSI
 MATERIAL MEETS ALL SPECIFICATIONS.
 SCALE: 6" = 1'-0"

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1/2" NPT BALL VALVE
(BRASS)

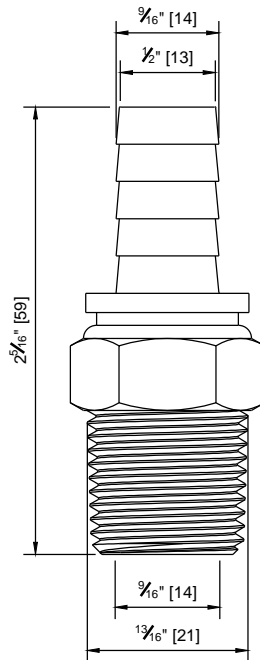
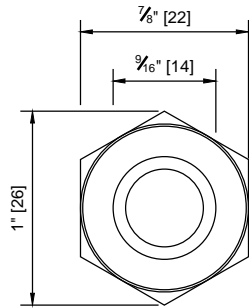
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DRAWING No: SDI-HD-337

#	REVISIONS	DRAWN	CHECKED	APPROVED	DATE
0	RELEASE	CSM	MSC	MSC	06/07/16
1	RELEASE	JSA	MSC	MSC	06/28/18



1/2" MALE BARB HOSE ADAPTOR

PART NO.: 53014
 MATERIAL: BRASS
 PRESSURE RATING: 150 PSI
 MATERIAL MEETS ALL SPECIFICATIONS.
 SCALE: 1'-0" = 1'-0"

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1/2" BARB HOSE
 ADAPTOR

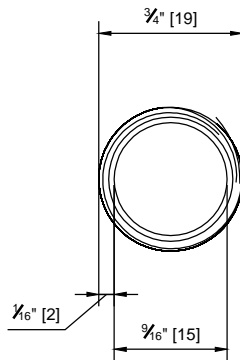
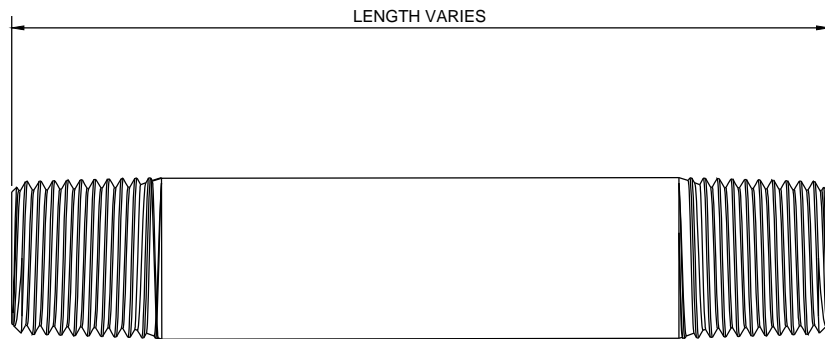
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DRAWING No: SDI-HD-365

#	REVISIONS	DRAWN	CHECKED	APPROVED	DATE
0	RELEASE	JSA	MSC	MSC	08/08/18



1/2" NPT PIPE NIPPLE

PART NO.: 51006
 MATERIAL: STEEL PER ASTM A53
 PRESSURE RATING: 150 PSI
 MATERIAL MEETS ALL SPECIFICATIONS.
 SCALE: 1'-0" = 1'-0"

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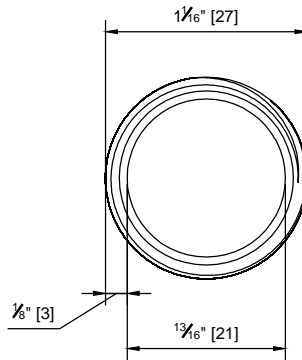
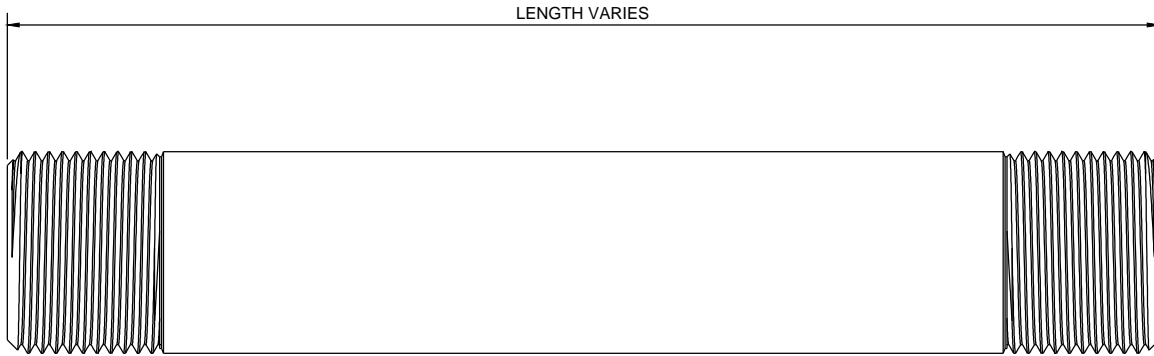
1/2" NPT PIPE NIPPLE
 STEEL

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DRAWING No: SDI-HD-363					
#	REVISIONS	DRAWN	CHECKED	APPROVED	DATE
0	RELEASE	JSA	MSC	MSC	09/05/18



0.75" NPT PIPE NIPPLE

PART NO.: 51004
 MATERIAL: STEEL
 MATERIAL MEETS ALL SPECIFICATIONS.
 SCALE: 1'-0" = 1'-0"

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3/4" NPT PIPE NIPPLE

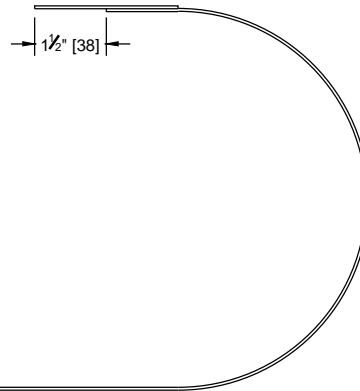
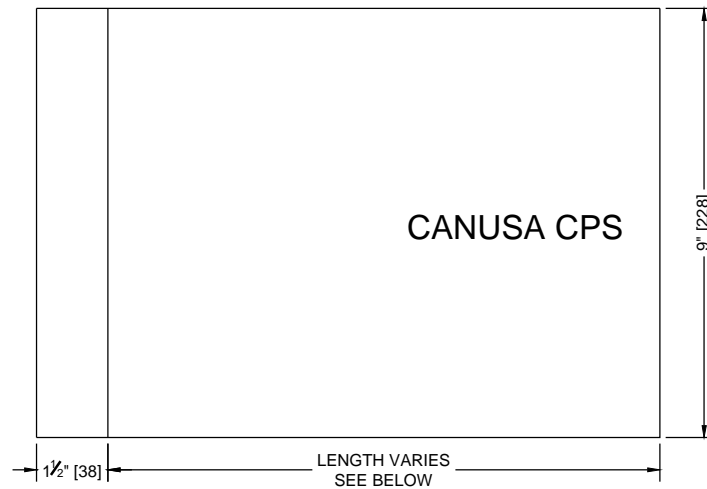
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DRAWING No: SDI-HD-270

#	REVISIONS	DRAWN	CHECKED	APPROVED	DATE
0	RELEASE	CSM	MSC	MSC	06/07/16



KLNN HEAT SHRINK

PART NO.: 37008

MATERIAL: POLYOLEFIN

MATERIAL MEETS ALL SPECIFICATIONS.

1" x 3" & 2" - KLNN-63 WS BK/L 9" HEAT SHRINK SLEEVE

3" - KLNN-90 WS BK/L 9" HEAT SHRINK SLEEVE

4" - KLNN-115 WS BK/L 9" HEAT SHRINK SLEEVE

4.5" & 5" - KLNN-125 WS BK/L 9" HEAT SHRINK SLEEVE

NOTE: FOLLOW MANUFACTURER'S INSTALLATION INSTRUCTIONS

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KLNN HEAT SHRINK

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DRAWING No: SDI-HD-367

#	REVISIONS	DRAWN	CHECKED	APPROVED	DATE
0	RELEASE	JSA	MSC	MSC	08/09/18

KLON & KLNN

One-piece protective sleeve with pre-attached closure

Product Description



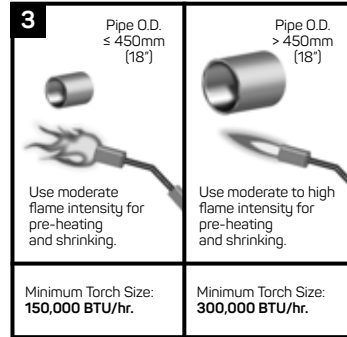
Canusa WrapidSleeves[®] are shipped pre-cut with a pre-attached closure. The adhesive is protected from contamination by an inner liner.

Equipment List

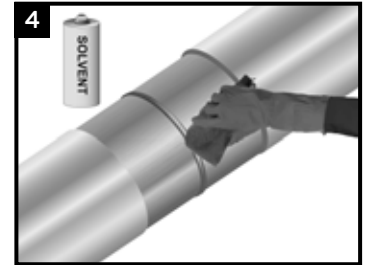


Propane tank, hose, torch & regulator; Appropriate tools for surface abrasion; Knife, roller, rags & approved solvent cleanser; Digital thermometer with suitable probe; Standard safety equipment; gloves, goggles, hard hat, etc.

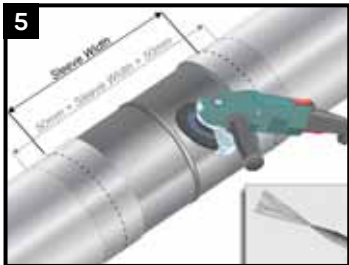
Flame Intensity & Torch Size



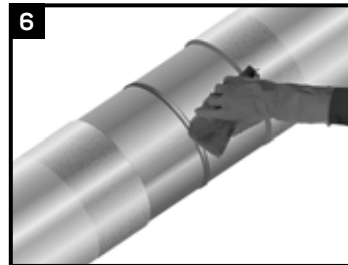
Surface Preparation



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.

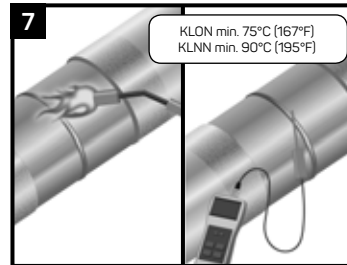


Ensure that the pipe is dry before cleaning. Using a power wire brush, abrade the pipe to a minimum of St3/SP3 (abrasive blast to Sa2.5/SP10 recommended). Lightly abrade the pipe coating adjacent to the cutback area to a distance of 50mm (2") beyond each end of the sleeve width.



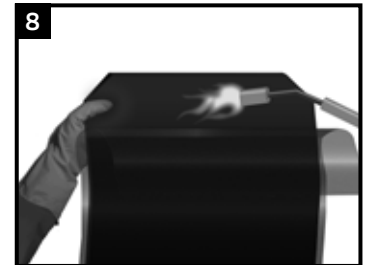
Wipe clean or air blast the steel and pipe coating to remove foreign contaminants.

Pre-Heat

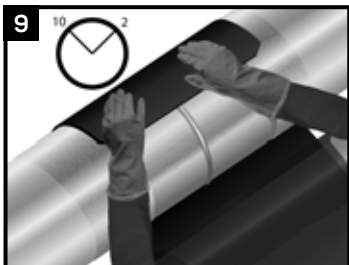


Pre-heat the joint area to the minimum required temperature. Using a temperature measuring device, ensure that the correct temperature is reached on the steel and at least 50mm (2") on each side of the sleeve.

Sleeve Installation

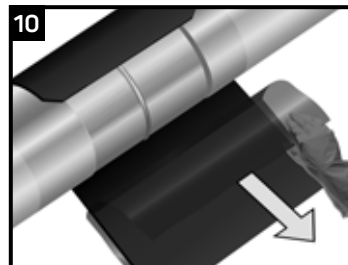


Partially remove the release liner and gently heat the underlap approximately 150 mm (6") from the edge.

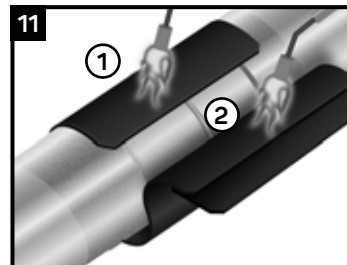


Centre the sleeve over the joint so that the sleeve overlaps between the 10 and 2 o'clock positions. Press the underlap firmly into place.

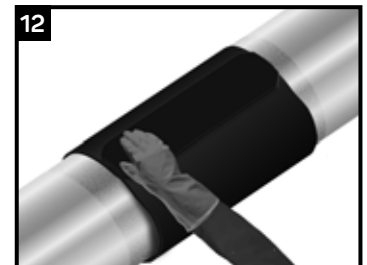
Sleeve Installation



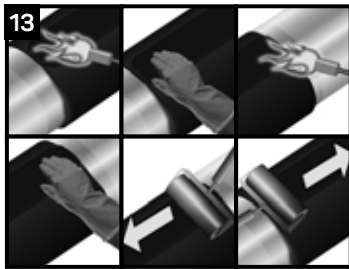
Remove the remaining release liner.



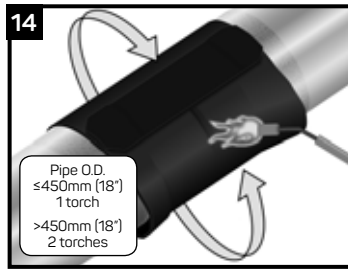
Wrap the sleeve loosely around the pipe, ensuring the appropriate overlap. Gently heat the backing of the underlap and the adhesive side of the overlap.



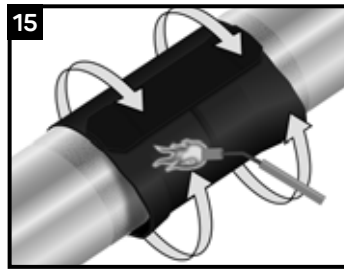
Press the closure firmly into place.



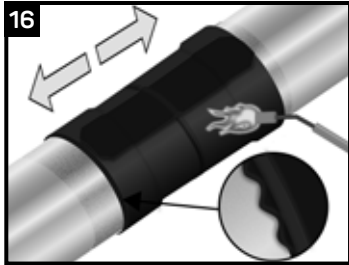
Gently heat the closure and pat it down with a gloved hand. Repeating this procedure, move from one side to the other. Smooth any wrinkles by gently working them outward from the centre of the closure with a roller.



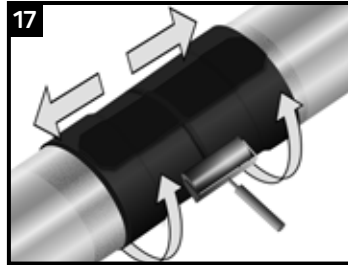
Using the appropriate torch, begin at the centre of the sleeve and heat circumferentially around the pipe. Use broad strokes. If utilizing two torches, operators should work on opposite sides of the pipe.



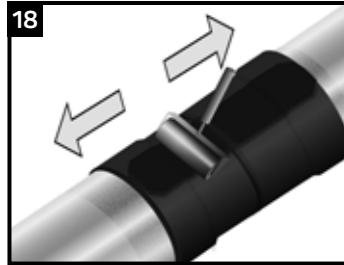
Continue heating from the centre toward one end of the sleeve until recovery is complete. In a similar manner, heat and shrink the remaining side.



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 gently 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.



Continue the procedure by also firmly rolling the closure with long horizontal strokes from the weld outwards.

Inspection



Visually inspect the installed patch 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.

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.

These installation instructions are intended as a guide for standard products. Consult your Canusa representative for specific projects or unique applications.

Canusa-CPS A division of Shawcor Ltd.

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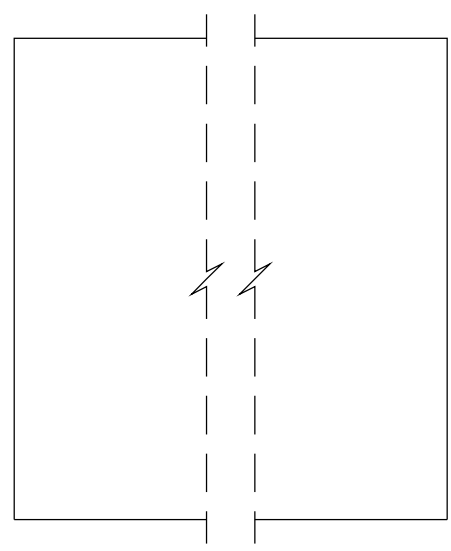
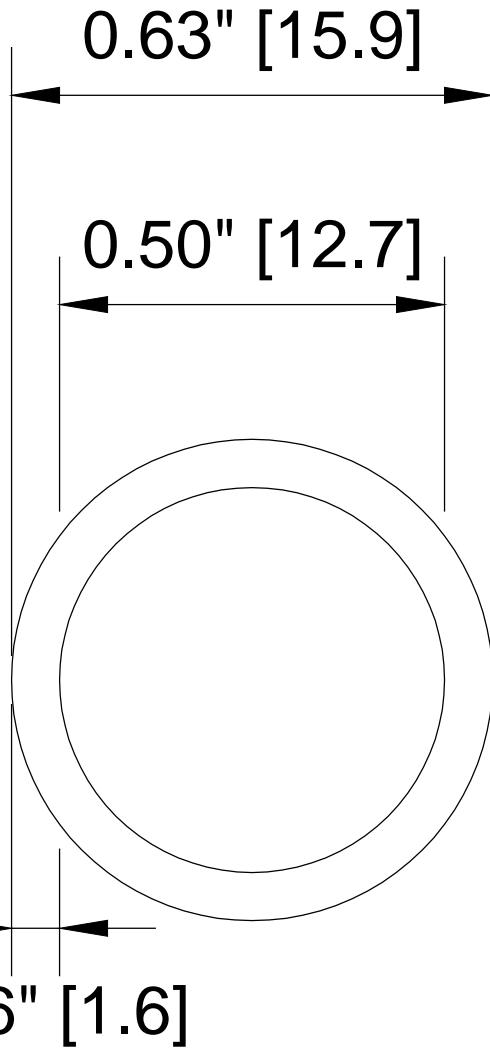
101 Thomson Road,
#11-03 United Square
307591 Singapore
Tel: +65 6749 8918
Fax: +65 6749 8919

Quality Management system registered to ISO 9001

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

Part No. 99060-266

IG_KLON & KLNN_rev013



1/2" CLEAR HIGH TEMP. VACUUM TUBE

PART NO.: 59001
 MATERIAL: FLUORINATED ETHYLENE PROPYLENE
 PRESSURE RATING: 180 PSI @ 72° F
 TEMPERATURE RANGE: -100° TO 400° F
 BENDING RADIUS: 3"
 MATERIAL MEETS ALL SPECIFICATIONS.
 SCALE: 1'-0" = 1'-0"

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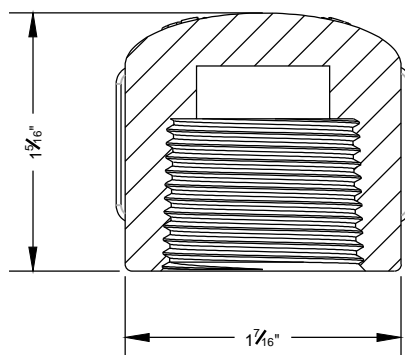
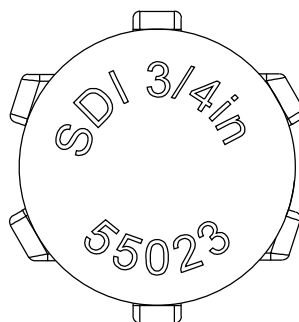
1/2" CLEAR HIGH TEMP.
 VACUUM TUBE



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DRAWING No: SDI-HD-364					
#	REVISIONS	DRAWN	CHECKED	APPROVED	DATE
0	RELEASE	JSA	MSC	MSC	08/08/18

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 POST-TENSION
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3/4" POLYPROPYLENE NPT CAP

PART NO.: 55023
 MATERIAL: POLYPROPYLENE
 PRESSURE RATING: 150 PSI
 MATERIAL MEETS ALL SPECIFICATIONS.
 SCALE: 1'-0" = 1'-0"

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SDI 3/4" POLYPROPYLENE
 NPT CAP



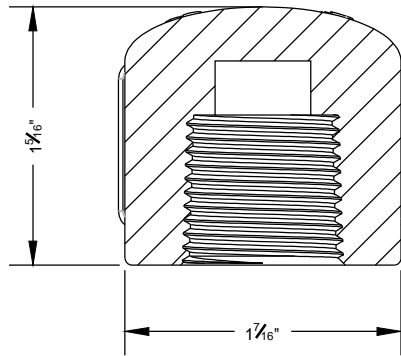
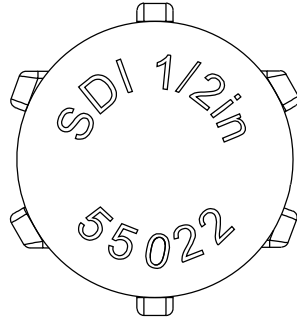
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 SAN JOSE, CA 95136
 PHONE: 408.281.9300
 FAX: 408.281.9301
 www.schwagerdavis.com

DRAWING No: SDI-HD-361

#	REVISIONS	DRAWN	CHECKED	APPROVED	DATE
0	RELEASE	MHA	MSC	MSC	08/21/18



1/2" POLYPROPYLENE NPT CAP

PART NO.: 55022
 MATERIAL: POLYPROPYLENE
 PRESSURE RATING: 150 PSI
 MATERIAL MEETS ALL SPECIFICATIONS.
 SCALE: 1'-0" = 1'-0"

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1/2" POLYPROPYLENE
 NPT CAP

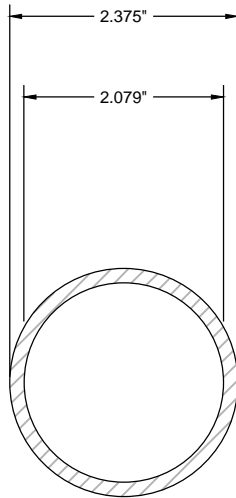
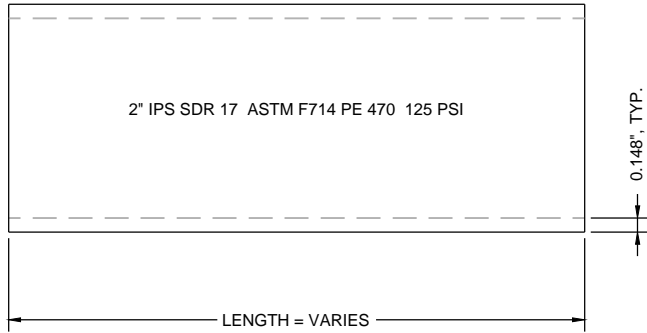
SCHWAGER DAVIS, INC.
 POST-TENSION
 SYSTEM LIBRARY



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DRAWING No: SDI-HD-360

#	REVISIONS	DRAWN	CHECKED	APPROVED	DATE
0	RELEASE	MHA	MSC	MSC	08/21/18



2" HDPE EXTERIOR PIPE

PART NO.: 35007
 MATERIAL: HDPE WITH A DIMENSION RATIO (DR) OF 17
 PRESSURE RATING: 125 PSI
 MINIMUM BEND RADIUS: 12 FT
 MATERIAL MEETS ALL SPECIFICATIONS.
 SCALE: 6" = 1'-0"

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2 INCH HDPE EXTERIOR PIPE

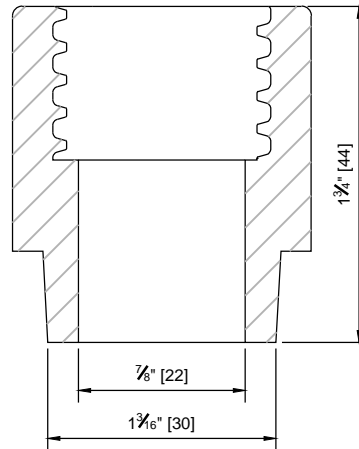
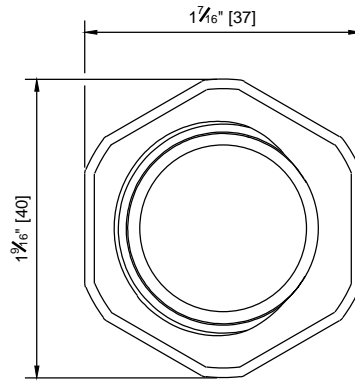


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DRAWING No: SDI-HD-235

#	REVISIONS	DRAWN	CHECKED	APPROVED	DATE
0	RELEASE	MHA	MSC	MSC	01-15-15
1	UPDATE	JSA	MSC	MSC	09-05-18

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HDPE WELDABLE GROUT PORT WITH 3/4" NOM. (23mm) GROUT THREAD

PART NO.: 57004

MATERIAL: HDPE

PRESSURE RATING: 150 PSI

MATERIAL MEETS ALL SPECIFICATIONS.

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

NOTE: FOLLOW MANUFACTURE'S INSTALLATION INSTRUCTIONS.

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HDPE WELDABLE GROUT PORT WITH
3/4" NOM. (23mm) GROUT THREAD



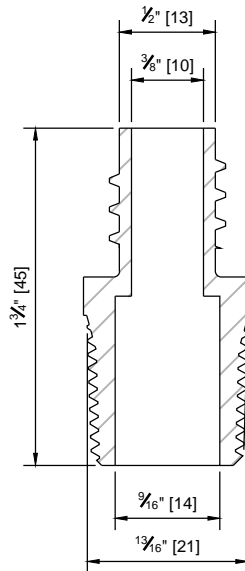
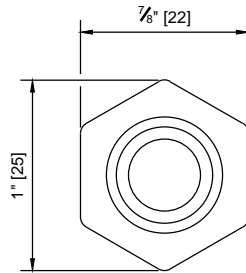
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DRAWING No: SDI-HD-172

#	REVISIONS	DRAWN	CHECKED	APPROVED	DATE
0	RELEASE	MHA	MSC	MSC	03/25/14
1	UPDATE	CSM	MSC	MSC	05/26/15
2	UPDATE	JSA	MSC	MSC	07/02/18



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

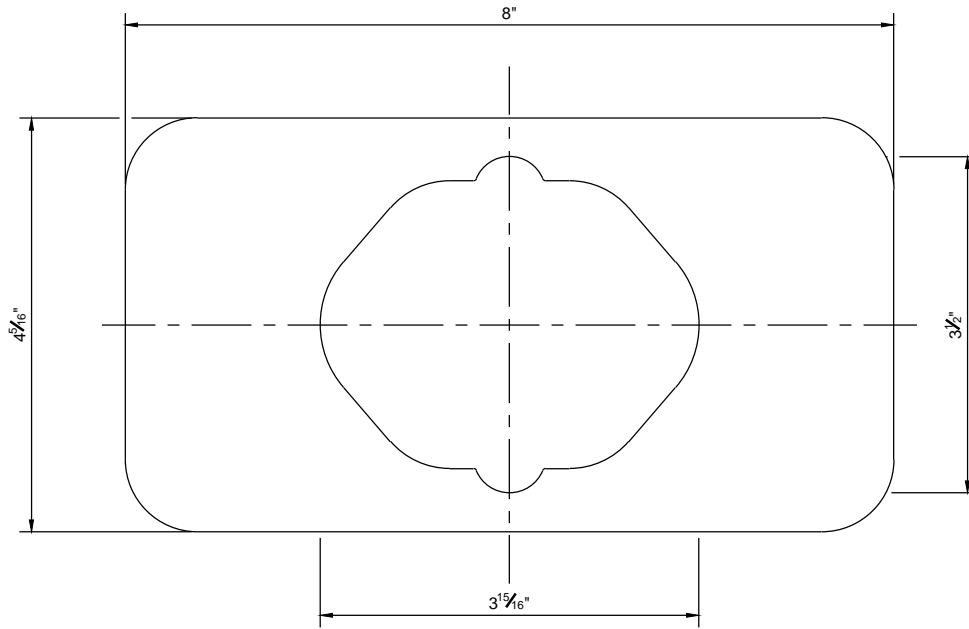
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DRAWING No: SDI-HD-222

#	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



SDI 4.6A SLAP-ON GASKET

PART NO.: 76026

MATERIAL: ADHESIVE-BACK, WEATHER RESISTANT

BUNA-N, 3/8" THICK

MATERIAL MEETS ALL SPECIFICATIONS.

SCALE: 6" = 1'-0"

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SDI 4.6A
SLAP-ON GASKET

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DRAWING No: SDI-HD-268

#	REVISIONS	DRAWN	CHECKED	APPROVED	DATE
0	RELEASE	CSM	MSC	MSC	4/1/16
1	Material Update	JSS	MSC	MSC	9/18/18

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 ▲



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

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847-455-2300 • www.antiseize.com