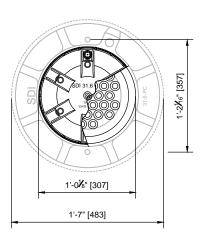


<u>ITEM</u>	PART NUMBER	DRAWING	DESCRIPTION	MATERIAL
1	71014	SDI-HD-190	SDI 31.6 ANCHOR HEAD	ASTM A 536 GR. 80-55-06
2	72013	SDI-HD-115	SDI 31.6-PC BEARING PLATE	ASTM A 536 GR. 80-55-06 (GALVANIZED)
3	76008	SDI-HD-236	O-RING SEAL	BUNA-N PER ASTM D2240, & D412
4	73007	SDI-HD-179	SDI 31.6 TRUMPET	HIGH DENSITY POLYETHYLENE PER ASTM D3350
5	74017	SDI-HD-165	STANDARD 31.6-PC SPIRAL	GRADE 60 STEEL PER ASTM A815
6	75009	SDI-HD-116	SDI 31.6-PC PERMANENT GROUT CAP	NYLON PER ASTM D5989
7	76002	SDI-HD-236	O-RING SEAL	BUNA-N PER ASTM D2240, & D412
8	77009	SDI-HD-151	(6) 1/2" x 3.5" 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	52010	SDI-HD-337	1/2" NPT BALL VALVE (TEMPORARY)	BRASS
13	52009	SDI-HD-271	1" NPT BALL VALVE (TEMPORARY)	BRASS
14	52010	SDI-HD-272	¾" NPT BALL VALVE (TEMPORARY)	BRASS
15	53013	SDI-HD-366	1" NPT FEMALE TO MALE 90° ELBOW	STEEL PER ASTM A53
16	33007	SDI-HD-216	5" (128mm) SLIP-ON DUCT COUPLER	POLYPROPYLENE PER ASTM D4101
17	37008	SDI-HD-367	KLNN HEAT SHRINK TUBING	ADHESIVE LINED POLYOLEFIN
18	33131	SDI-HD-226	SDI 5" COUPLER SLIDE HOUSING	POLYPROPYLENE PER ASTM D4101
19	33133	SDI-HD-229	SDI 5" COUPLER SEAL	BUNA-N PER ASTM D2240, & D412
20	33130	SDI-HD-225	SDI 5" COUPLER WELDED HOUSING	POLYPROPYLENE PER ASTM D4101
21	35005	SDI-HD-182	5" ID (128mm) HDPE PIPE	HIGH DENSITY POLYETHYLENE PER ASTM D2513, F1055
22	55004	SDI-HD-257	SDI GROUT PORT PLUG	POLYPROPYLENE PER ASTM D4101
23	57004	SDI-HD-172	¾" NPT WELDABLE GROUT PORT	HIGH DENSITY POLYETHYLENE PER ASTM D2513, F1055
24	53011	SDI-HD-222	½" (13mm) NPT COUPLER (TEMPORARY)	POLYPROPYLENE PER ASTM D4101
25	55022	SDI-HD-360	½″ NPT CAP	POLYPROPYLENE PER ASTM D4101
26	55001	SDI-HD-156	¾" (23mm) PLUG	POLYPROPYLENE PER ASTM D4101
27	53014	SDI-HD-365	χ " NTP MALE BARBED HOSE ADAPTOR (TEMPORARY)	BRASS
28	59001	SDI-HD-364	CLEAR HIGH TEMP. VACUUM TUBE (TEMPORARY)	FLUORINATED ETHYLENE PROPYLENE
29	33404	SDI-HD-374	ELECTRO-FUSION COUPLER DR-17	HIGH DENSITY POLYETHYLENE PER ASTM D2513, F1055
30	51003	SDI-HD-269	1" NPT PIPE NIPPLE (TEMPORARY)	STEEL PER ASTM A53
31	51005	SDI-HD-363	⅔" NPT PIPE NIPPLE (TEMPORARY)	STEEL PER ASTM A53
32	0000T	N/A	TEFLON TAPE (TEMPORARY)	TEFLON
33	0000G	N/A	COMMERCIALLY AVAILABLE/COMPATIBLE	LITHIUM
34	0000E	N/A	COMMERCIALLY AVAILABLE/COMPATIBLE EPOXY	EPOXY
* ALL	NON-FERROUS C	OMPONENTS CC	NTAIN VIRGIN MATERIAL.	

STEP-BY-	STEP SYSTEM INSTALLATION PROCEDURE
STEP 1:	HANG BEARING PLATE WITH 2 EACH 1/2" ALL THREAD. PLACE SO GRO
STEP 2:	PLACE O-RING IN LARGE CORRUGATION OF TRUMPET. (SEE NOTE: a
STEP 3:	TURN TRUMPET INTO BEARING PLATE AND ENSURE GROUT PORT H
STEP 4:	HANG SPIRAL 1" BEHIND BEARING PLATE. ENSURE SPIRAL IS CONCE
STEP 5:	CONNECT PIPE TO TRUMPET.
	IF USING SLIP COUPLER FOR CONNECTION:
	 SLIDE SLIP COUPLER OVER TRUMPET AND DUCT.
	2. INSTALL CORRECT SIZE AND LENGTH OF HEAT SHRINK PER MA
STEP 7:	PERFORM VACUUM TEST PER FDOT 462-8.2.1.2
STEP 8:	INSTALL STRAND, LEAVE SUFFICIENT STRAND FOR STRESSING EQU
STEP 9:	PLACE ANCHOR HEAD ENSURE ANCHOR HEAD WEDGE CAVITIES AR
STEP 10:	
	PUSH WEDGES OVER STRAND AND AGAINST INTO THE ANCHOR HEA
	STRESS TENDONS AFTER CONCRETE HAS REACHED REQUIRED STR
	AFTER STRESSING AND APPROVAL FROM OWNERS REPRESENTATIN
	INSTALL VENTS. (SEE NOTE b)
	INSTALL PERMANENT CAP BY TORQUEING BOLTS IN A STAR PATTER
	PERFORM PRESSURE TEST PER FDOT 462-8.2.1.2
	INSTALL TEMPORARY WAX INJECTION HARDWARE.
	INJECT WAX PER WAX INJECTION PROCEDURE.
STEP 19:	REMOVE ALL TEMPORARY HARDWARE ONCE WAXING PROCEDURE I
NOTES:	
a.	LUBRICATE ALL O-RINGS FOR EASE OF INSTALLATION.
a. b.	EPOXY IS TO BE USED ON EVERY PERMANENT GROUT HOSE/COUPL
ь.	TEMPORARY GROUT HOSE/COUPLER/PLUG THREADS. THREAD INTO
C.	MAKE SURE O-RING AND WASHER IS INSTALLED WITH GROUT CAP B
d.	VENTS SHOWN FOR REFERENCE ONLY. FOR ACTUAL LOCATION, SEE
u.	DRAIN.
e.	SEE SEGMENT COUPLER INSTALLATION PLAN FOR PARTS AND ASSE
f.	FOLLOW BUTT FUSION PROCEDURE FOR ALL BUTT JOINTS PER MAN
g.	STEP-BY-STEP INSTALLATION PROCEDURE ARE GENERIC. FOLLOW
9.	REFERENCE FDOT STANDARD PLANS 462-003 FOR POST-TENSIONIN
h.	TENDON FILLER MATERIAL IS WAX.
i.	PERMANENT CAP AND ASSOCIATED HARDWARE ARE FOR VENTING



OUT PORT IS IN 11 O'CLOCK OR 12 O'CLOCK POSITION.

OLES LINE UP. USE STRAP WRENCH IF NECESSARY. ENTRIC AND PARALLEL TO PATH OF TENDON.

ANUFACTURER'S RECOMMENDATIONS.

JIPMENT.

RE RUST FREE AND CLEAN PRIOR TO WEDGE INSTALLATION. TITION. AVOID CROSSING STRANDS. AD WEDGE CAVITIES USING A 34" PIPE. RENGTH PER DRAWINGS AND/OR SPECIFICATION. IVE, CUT STRAND TAILS 1" FROM FACE OF ANCHOR HEAD.

RN TO 20 FT-LB. (SEE NOTE c)

IS COMPLETE AND CAP OR PLUG PORTS PER DRAWINGS.

PLER/PLUG THREADS, TEFLON TAPE IS TO BE USED ON EVERY TO ALL CONNECTIONS. DO NOT INJECT THROUGH VENTS. BOLT.

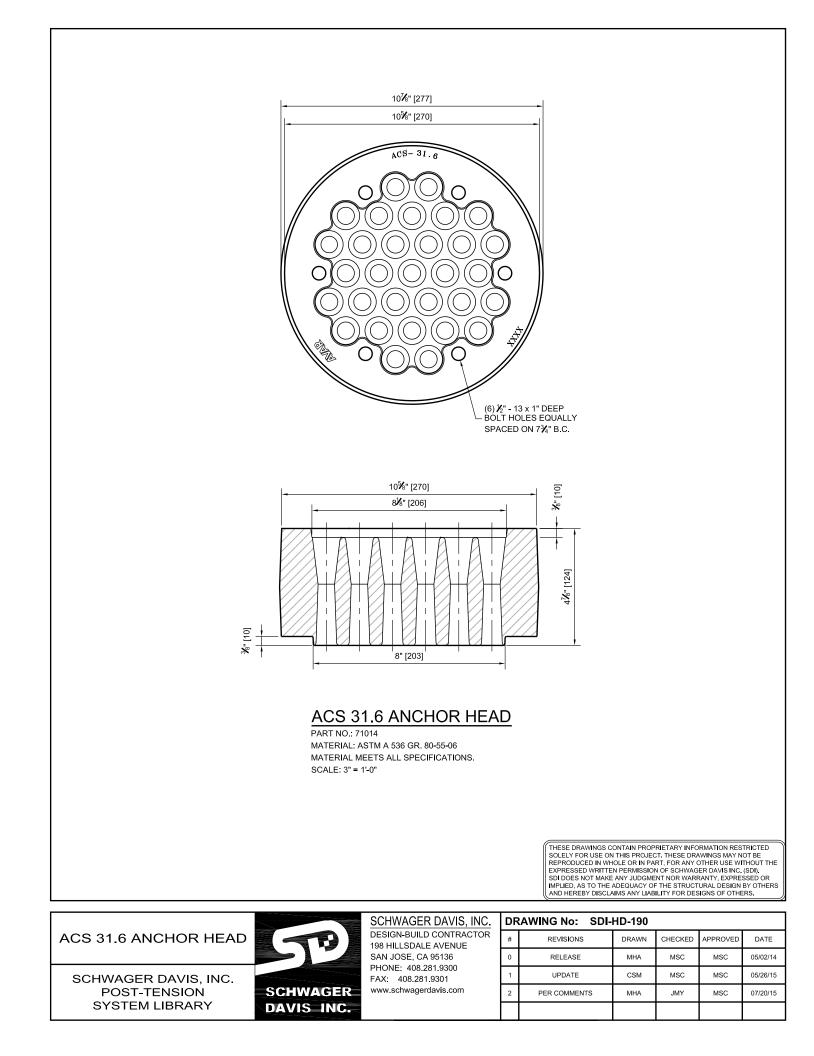
E PLACING DRAWINGS. VENT CAN BE ORIENTED TO ACT AS

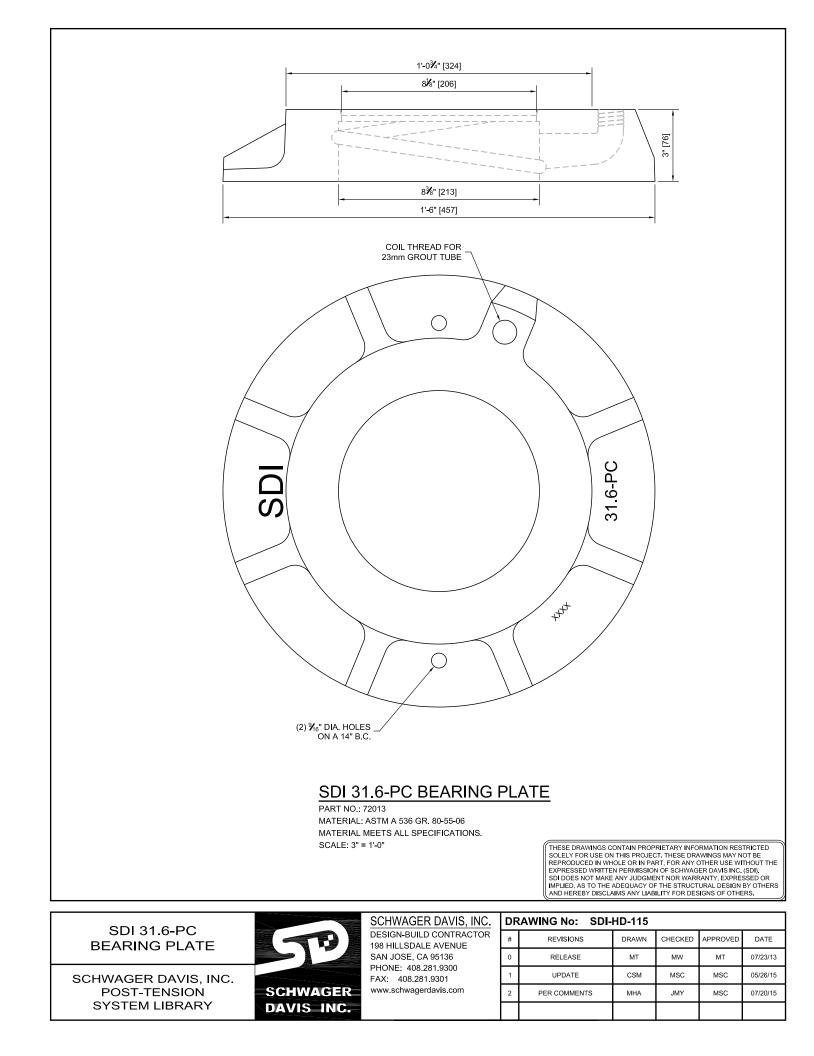
EMBLY INFORMATION. NUFACTURER'S INSTALLATION PROCEDURE. / FDOT AND PROJECT SPECIFICATION REQUIREMENTS. IG ANCHORAGE AND TENDON FILLING DETAIL.

ONLY. DO NOT INJECT THROUGH PERMANENT CAP.

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SDI 31 6 DC EXTEDNIAL LINBONDED		SCHWAGER DAVIS, INC. DRAWING No: SDI-HD-355	DRAV	/ING No: SDI-H	ID-355			
	P	DESIGN-BUILD CONTRACTOR	#	REVISIONS	DRAWN	CHECKED	DRAWN CHECKED APPROVED DATE	DATE
		198 HILLSDALE AVENUE	0	RELEASE	JSA	MSC	MSC	8/22/18
		PHONE: 408.281.9300						
SCHWAGER DAVIS, INC. POST-TENSION SYSTEM I IRBARY	SCHWAGER	FAX: 408.281.9301						
	DAVIS INC.	www.sciwagerdayis.com						





% " FRACTIONAL	PART NO.	DASH NO.	FRACTIONAL SIZE, ID x OD	ACTUAL SIZE ID x OD	WIDTH	DUROMETER
(0.139" ACTUAL)	76022	2-204	∛" × %"	0.359" x 0.637"	%" FRACTIONAL (0.139" ACTUAL)	70
(())= 8	76023	2-206	½" x ¾"	0.484" x 0.762"	⅛ " FRACTIONAL (0.139" ACTUAL)	70
Pin Pin	76019	2-339	3¼" × 3½"	3.225" x 3.645"	⅔ ₁₆ " FRACTIONAL (0.210" ACTUAL)	70
	76014	2-407	2¼" × 2¾"	2.225" x 2.775"	¼" FRACTIONAL (0.275" ACTUAL)	70
	76016	2-415	3 1⁄ 4" × 3 3⁄ 4"	3.225" x 3.775"	¼" FRACTIONAL (0.275" ACTUAL)	70
%6" FRACTIONAL (0.210" ACTUAL	76017	2-422	4 <mark>%</mark> " x 45 <mark>%</mark> "	4.100" x 4.650"	¼" FRACTIONAL (0.275" ACTUAL)	70
	76018	2-427	4⅔" x 5¼"	4.725" x 5.275"	¼" FRACTIONAL (0.275" ACTUAL)	70
	76025	2-432	5 % " x 57%"	5.350" x 5.900"	¼" FRACTIONAL (0.275" ACTUAL)	70
t	76008	2-435	5∛4" x 6¼"	5.725" x 6.275"	¼" FRACTIONAL (0.275" ACTUAL)	40
	76009	2-440	6¾" x 7¼"	6.725" x 7.275"	¼" FRACTIONAL (0.275" ACTUAL)	40
¼ " FRACTIONAL (0.275" ACTUAL)	76010	2-442	7¼" x 7¾"	7.225" x 7.775"	<mark>¼</mark> " FRACTIONAL (0.275" ACTUAL)	40
	76002	2-444	7 ⅔ " x 8 <mark>¼</mark> "	7.725" x 8.275"	<mark>2</mark> " FRACTIONAL (0.275" ACTUAL)	70
	76011	2-445	8" x 8½"	7.975" x 8.525"	¼" FRACTIONAL (0.275" ACTUAL)	40
	76026	2-446	8 ½ ″ × 9″	8.475" x 9.025"	¼" FRACTIONAL (0.275" ACTUAL)	40
	76004	2-448	9 ½ ″ x 10″	9.475" x 10.025"		70
0.256"	76024	2-452	11 ½ " x 12"	11.475" x 12.025"	¼" 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
Mail Mail Mail Mail Mail Mail Mail Mail	76029	2-228	2¼" x 2½"	2.250" x 2.500"	% ₄ " FRACTIONAL (0.139" ACTUAL)	70
	76030	2-425	4 ½ " x 5"	4.475" x 5"	¼" FRACTIONAL (0.275" ACTUAL)	70

STANDARD O-RINGS

MATERIAL: BUNA-N MATERIAL MEETS ALL SPECIFICATIONS. THESE DRAWINGS CONTAIN PROPRIETARY INFORMATION RESTRICTED SOLELY FOR USE ON THIS PROJECT. THESE DRAWINGS MAY NOT BE REPRODUCED IN WHOLE OR IN PART, FOR ANY OTHER USE WITHOUT THE EXPRESSED WRITTEN PERMISSION OF SCHWAGER DAVIS INC. (SDI). SDI DOES NOT MAKE ANY JUDGMENT NOR WARRANTY, EXPRESSED OR IMPLIED. AS TO THE ADEOUACY OF THE STRUCTURAL DESIGN BY OTHERS AND HEREBY DISCLAIMS ANY LIABILITY FOR DESIGNS OF OTHERS.

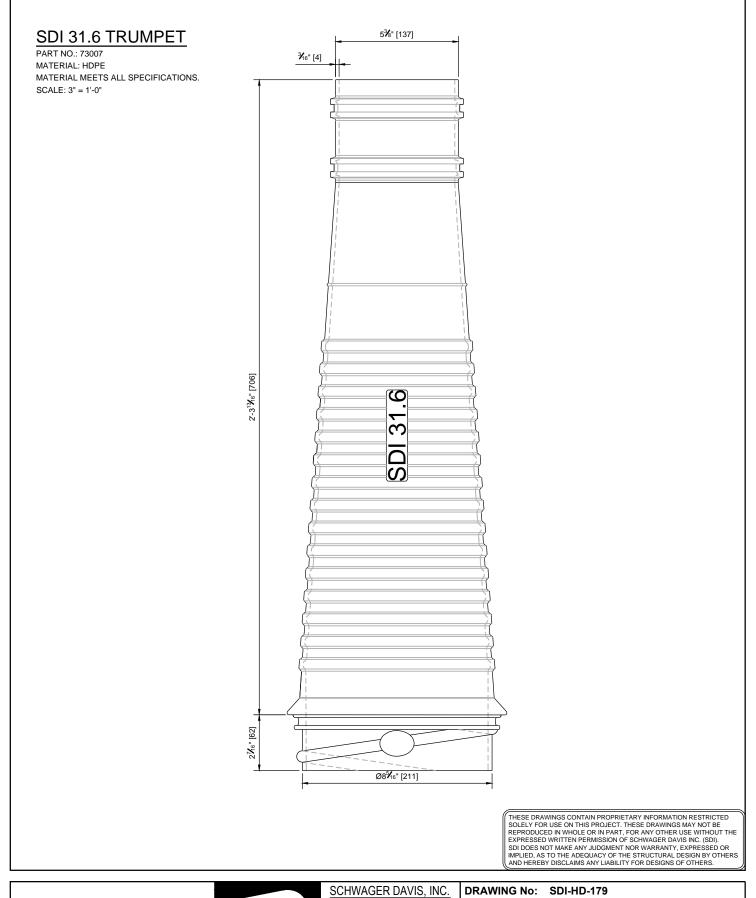
STANDARD O-RINGS

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DR	AWING No: SDI-	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			



SDI 31.6 TRUMPET

SCHWAGER DAVIS, INC. POST-TENSION SYSTEM LIBRARY



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DESIGN-BUILD CONTRACTOR 198 HILLSDALE AVENUE	#	REVISIONS	DRAWN	CHECKED
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www.schwagerdavis.com	2	UPDATE	CSM	MSC
	3	UPDATE	CSM	JSA

APPROVED

MSC

MSC

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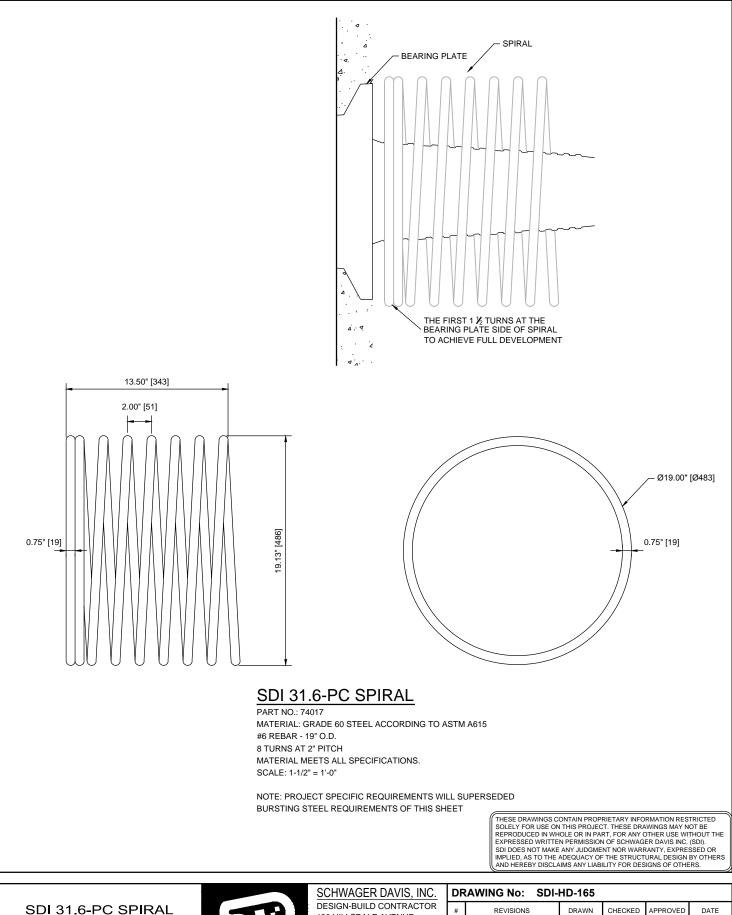
DATE

04/03/14

05/26/15

06/06/16

06/14/18

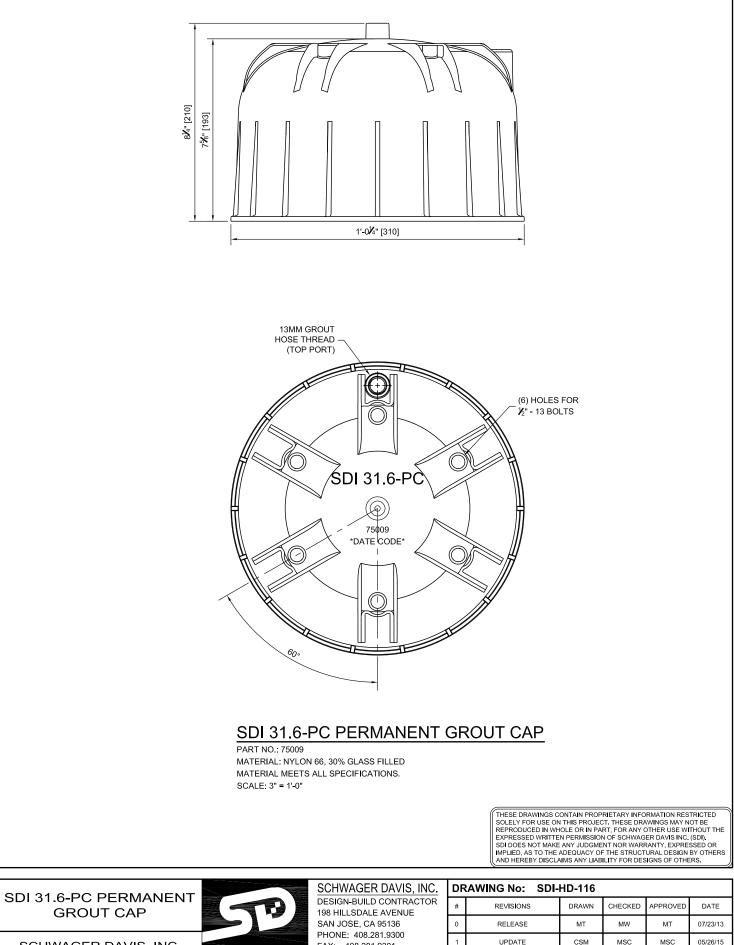




DESIGN-BUILD CONTRACTOR **198 HILLSDALE AVENUE** SAN JOSE, CA 95136 PHONE: 408.281.9300

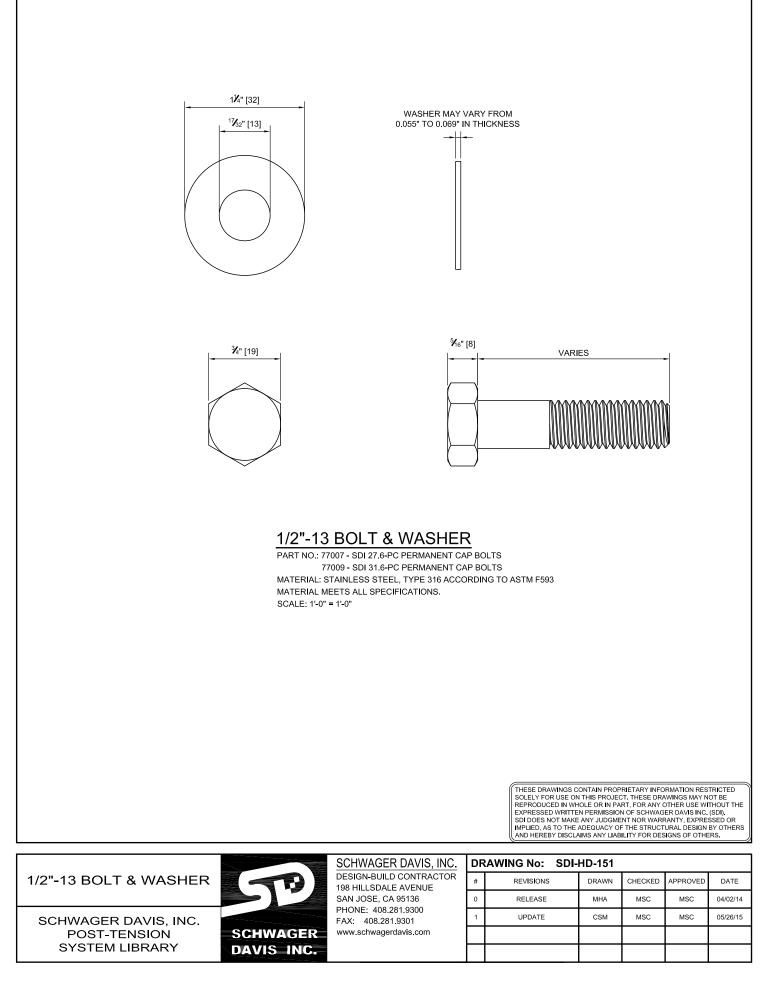
FAX: 408.281.9301 www.schwagerdavis.com

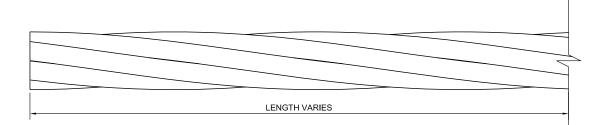
DR	AWING No: SDI-	HD-165			
#	REVISIONS	DRAWN	CHECKED	APPROVED	DATE
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1	UPDATE	CSM	MSC	MSC	04/20/15
2	UPDATE	CSM	MSC	MSC	06/08/16
3	UPDATE	JSA	MSC	MSC	08/16/18



SCHWAGER DAVIS INC.

FAX: 408.281.9301 www.schwagerdavis.com 1 UPDATE CSM MSC MSC 05/26/15







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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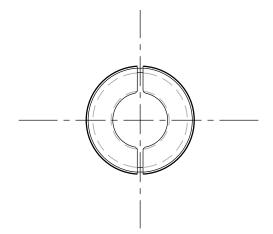
0.6" BARE STRAND

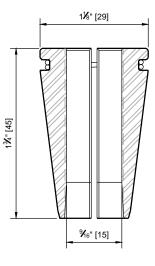
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DR	AWING No: SDI-	HD-148			
#	REVISIONS	DRAWN	CHECKED	APPROVED	DATE
0	RELEASE	MHA	MSC	MSC	04/02/14
1	UPDATE	CSM	MSC	MSC	05/26/15





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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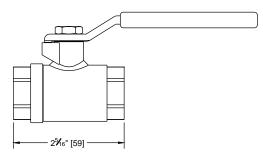
SDI 0.6" WEDGE (2-PART)

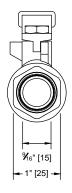
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DR	AWING No: SDI-	HD-021			
#	REVISIONS	DRAWN	CHECKED	APPROVED	DATE
0	RELEASE	MCS	GAS	MCS	03/14/11
1	COMMENTS	CMS	MCS	MCS	07/05/13
2	UPDATE	CSM	MSC	MSC	05/26/15
3	UPDATE	JSA	MSC	MSC	06/14/18





1/2" NPT BALL VALVE (TEMPORARY)

PART NO.: 52010 MATERIAL: BRASS PRESSURE RATING 150 PSI MATERIAL MEETS ALL SPECIFICATIONS. SCALE: 6" = 1'-0"

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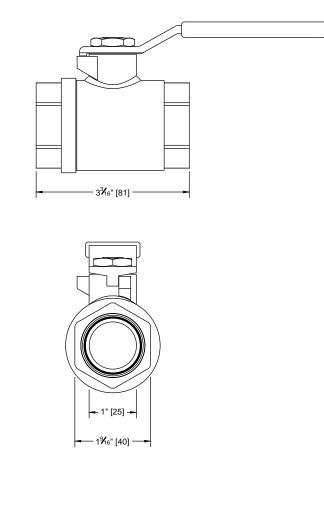
1/2" NPT BALL VALVE (BRASS)

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SCHWAGER DAVIS, INC. DESIGN-BUILD CONTRACTOR

DR	AWING 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



<u>1" NPT BALL VALVE TEMPORARY</u>

PART NO.: 52009 MATERIAL: BRASS PRESSURE RATING: 150 PSI MATERIAL MEETS ALL SPECIFICATIONS. SCALE: 6" = 1'-0"

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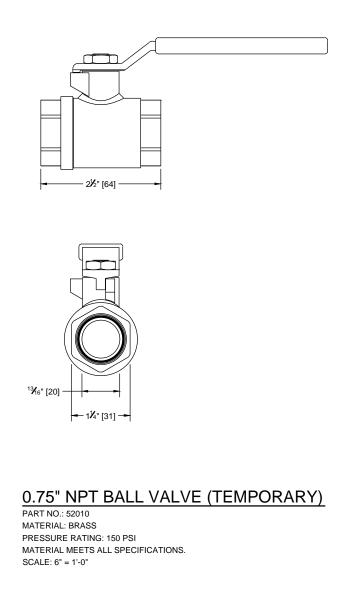
1" NPT BALL VALVE (BRASS)

SCHWAGER DAVIS, INC. POST-TENSION SYSTEM LIBRARY



SCHWAGER DAVIS, INC. DESIGN-BUILD CONTRACTOR

DR	AWING No: SDI-	HD-271			
#	REVISIONS	DRAWN	CHECKED	APPROVED	DATE
0	RELEASE	CSM	MSC	MSC	06/07/16
1	UPDATE	JSA	MSC	MSC	06/27/18



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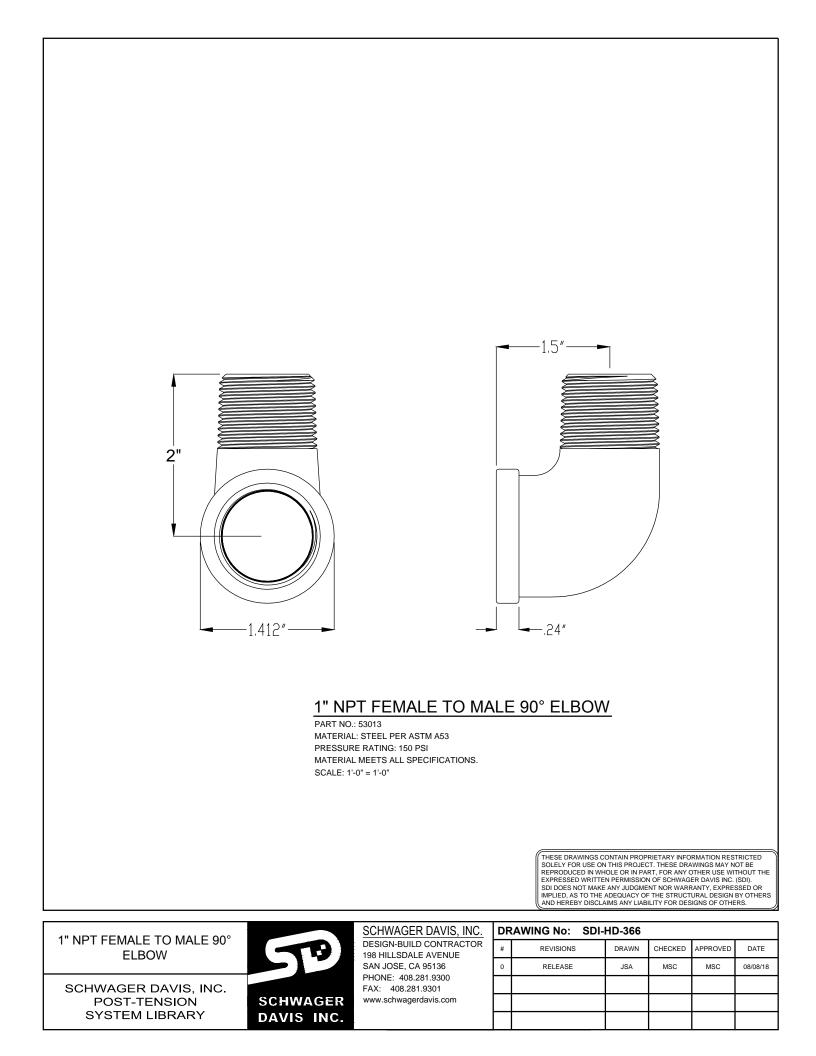
³⁄₄" NPT BALL VALVE (BRASS)

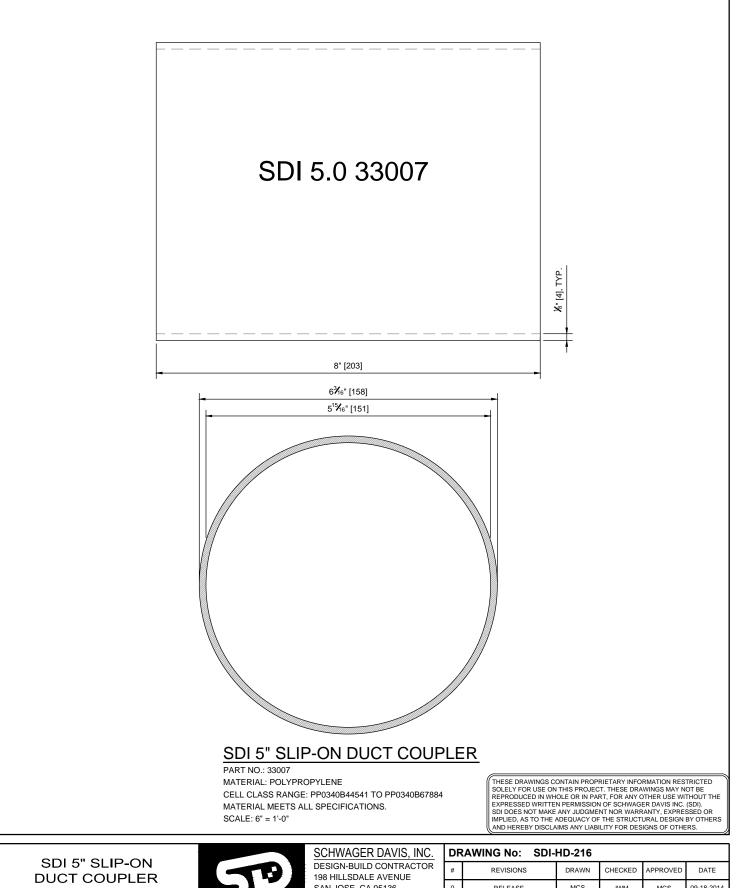
SCHWAGER DAVIS, INC. POST-TENSION SYSTEM LIBRARY



SCHWAGER DAVIS, INC. DESIGN-BUILD CONTRACTOR

DR	AWING No: SDI-	HD-272			
#	REVISIONS	DRAWN	CHECKED	APPROVED	DATE
0	RELEASE	CSM	MSC	MSC	06/07/16
1	UPDATE	JSA	MSC	MSC	06/18/18

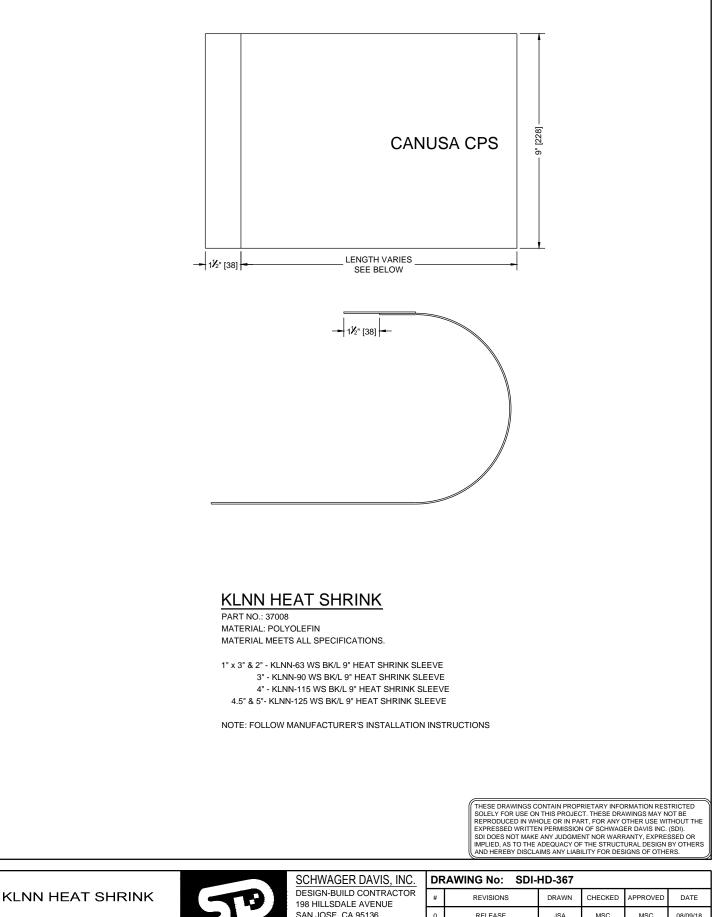






DESIGN-BUILD CONTRAC 198 HILLSDALE AVENUE SAN JOSE, CA 95136 PHONE: 408.281.9300 FAX: 408.281.9301 www.schwagerdavis.com

DR	AWING No: SDI-	HD-216			
#	REVISIONS	DRAWN	CHECKED	APPROVED	DATE
0	RELEASE	MCS	JWM	MCS	09-18-2014
1	REVISION	MCS	JWM	MCS	09-20-2014
2	UPDATE	CSM	MSC	MSC	05-26-2015
3	UPDATE	JSA	MSC	MSC	06-29-2018
	# 0 1 2	# REVISIONS 0 RELEASE 1 REVISION 2 UPDATE	0 RELEASE MCS 1 REVISION MCS 2 UPDATE CSM	# REVISIONS DRAWN CHECKED 0 RELEASE MCS JWM 1 REVISION MCS JWM 2 UPDATE CSM MSC	# REVISIONS DRAWN CHECKED APPROVED 0 RELEASE MCS JVM MCS 1 REVISION MCS JVM MCS 2 UPDATE CSM MSC MSC





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RELEASE

JSA

MSC

MSC

08/09/18

CANUSA-CPS

KLON & KLNN

One-piece protective sleeve with pre-attached closure

Product Description



Canusa WrapidSleeves^{*} are shipped precut 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.

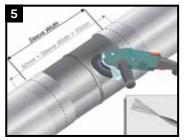
Flame Intensity & Torch Size



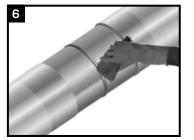
Surface Preparation



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

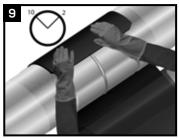


Pre-heat the joint area to the minimum required temperature. Using a temperature measuring device, ensure that the correct temperature is reached on the steel and at least 50mm (2") on each side of the sleeve.

Sleeve Installation

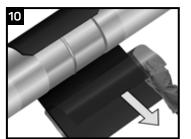


Partially remove the release liner and gently heat the underlap approximately 150 mm (6") from the edge.

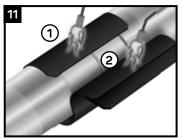


Centre the sleeve over the joint so that the sleeve overlaps between the 10 and 2 o'clock positions. Press the underlap firmly into place.

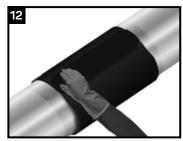
Sleeve Installation



Remove the remaining release liner.

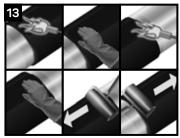


Wrap the sleeve loosely around the pipe, ensuring the appropriate overlap. Gently heat the backing of the underlap and the adhesive side of the overlap.

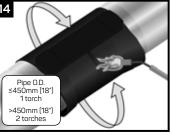


Press the closure firmly into place.

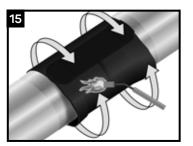
canusacps.com



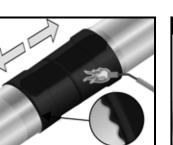
Gently heat the closure and pat it down with a gloved hand. Repeating this procedure, move from one side to the other. Smooth any wrinkles by gently working them outward from the centre of the closure with a roller.



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 pipe.

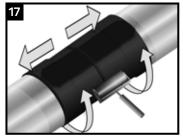


Continue heating from the centre toward one end of the sleeve until recovery is complete. In a similar manner, heat and shrink the remaining side.

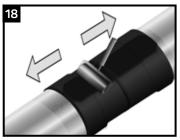


Shrinking has been completed when the adhesive begins to ooze at the sleeve edges all around the circumference. Finish shrinking the sleeve with long horizontal strokes over the entire surface to ensure a uniform bond.

Inspection



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.



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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Asia-Pacific

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

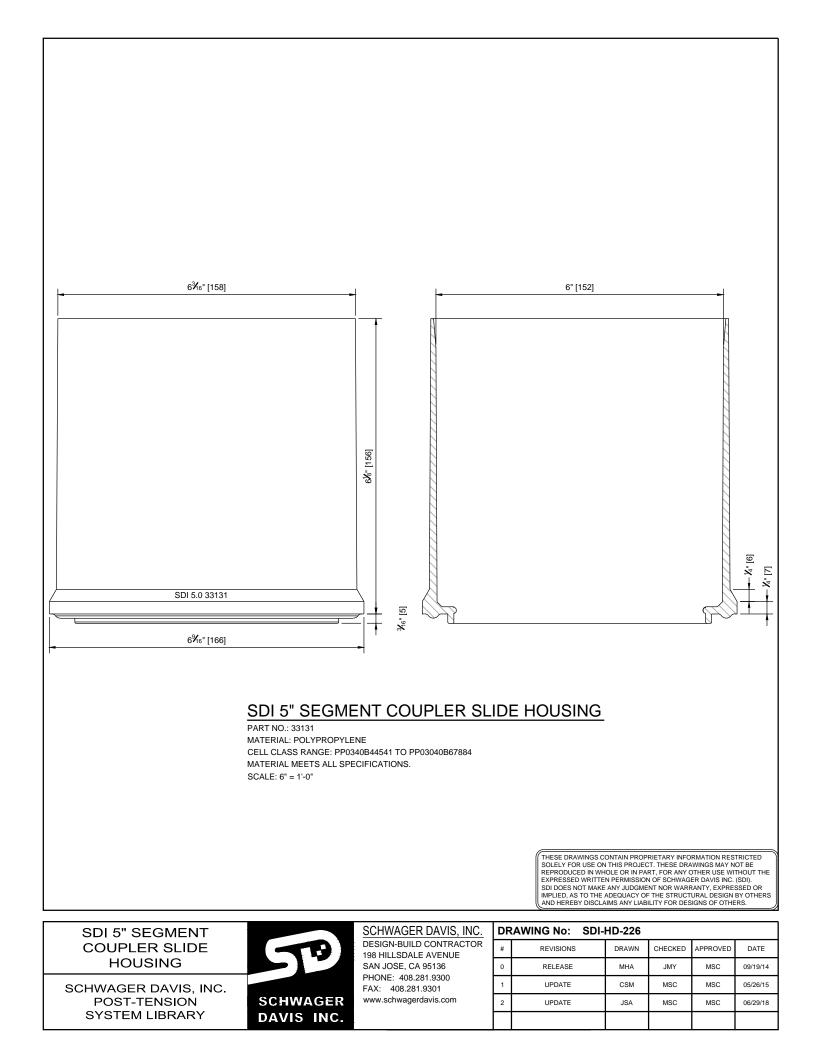
Quality Management system registered to ISO 9001

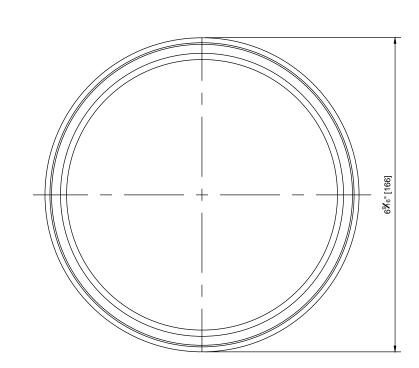
Canusa warrants that the product conforms to its chemical and physical description and is appropriate for the use stated on the installation guide when used in compliance with Canusa's written instructions. Since many installation factors are beyond our control, the user shall determine the suitability 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 guides son this product. E&OE

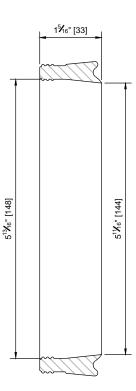
Part No. 99060-266 IG_KLON & KLNN_rev013



CANUSA-CPS







SDI 5" SEGMENT COUPLER SEAL

PART NO.: 33133 MATERIAL: BUNA-N PER ASTM D2240, & D412 MATERIAL MEETS ALL SPECIFICATIONS. SCALE: 6" = 1'-0"

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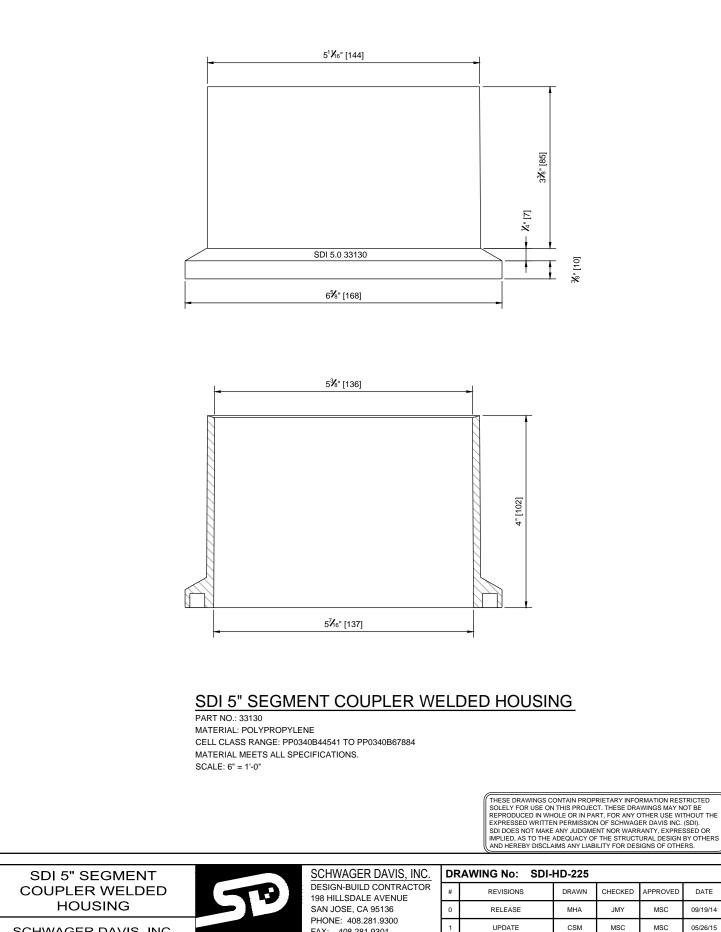
SDI 5" SEGMENT COUPLER SEAL

SCHWAGER DAVIS, INC. POST-TENSION SYSTEM LIBRARY



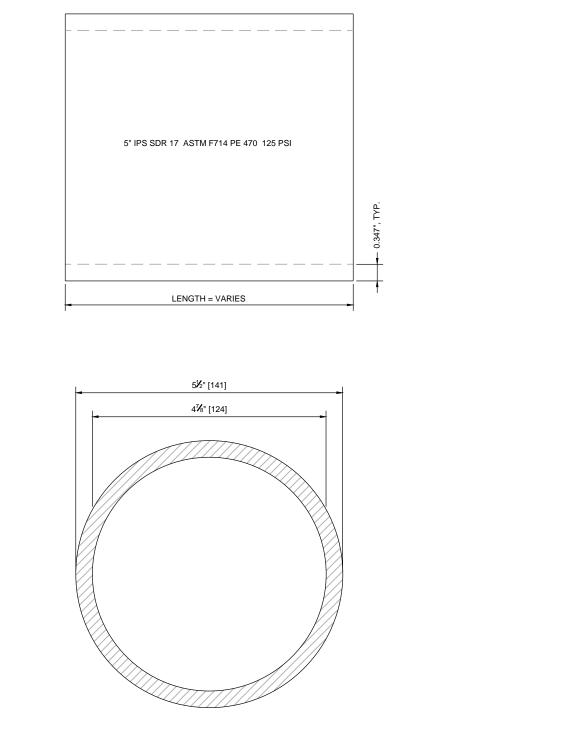
SCHWAGER DAVIS, INC. DESIGN-BUILD CONTRACTOR

DR	AWING No: SDI-	HD-229			
#	REVISIONS	DRAWN	CHECKED	APPROVED	DATE
0	RELEASE	MHA	JMY	MSC	09/19/14
1	UPDATE	CSM	MSC	MSC	05/26/15
2	MATERIAL UPDATE	CSM	JMY	MSC	06/08/16
3	MATERIAL UPDATE	JSA	JMY	MSC	06/29/18





FAX: 408.281.9301 www.schwagerdavis.com 2 UPDATE JSA MSC MSC 06/29/18



<u>5" HDPE EXTERIOR PIPE</u>

PART NO.: 35005 MATERIAL: HDPE WITH A DIMENSION RATIO (DR) OF 17 BEND RADIUS: 30 FT MATERIAL MEETS ALL SPECIFICATIONS. SCALE: 6" = 1'-0"

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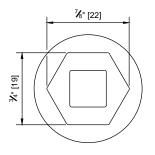
5" HDPE EXTERIOR PIPE

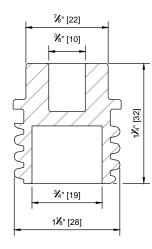
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DR	AWING No: SDI-	HD-182			
#	REVISIONS	DRAWN	CHECKED	APPROVED	DATE
0	RELEASE	MHA	MSC	MSC	04/03/14
1	UPDATE	CSM	MSC	MSC	05/26/15
2	UPDATE	JSA	MSC	MSC	08/16/18





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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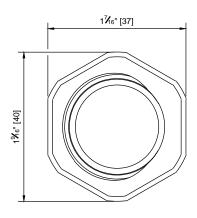
SDI GROUT PORT PLUG

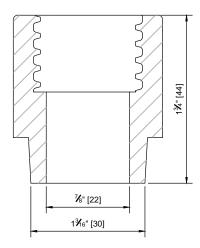
SCHWAGER DAVIS, INC. POST-TENSION SYSTEM LIBRARY



SCHWAGER DAVIS, INC. DESIGN-BUILD CONTRACTOR

C	RAWING No:				
#	# REVISIONS	DRAWN	CHECKED	APPROVED	DATE
C	RELEASE	CSM	MSC	MSC	05/26/15
1	1 UPDATE	JSA	MSC	MSC	06/19/18





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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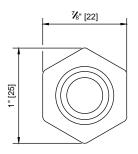
SCHWAGER DAVIS, INC. POST-TENSION SYSTEM LIBRARY

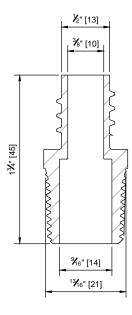


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DR	AWING No: SDI-	HD-172			
#	REVISIONS	DRAWN	CHECKED	APPROVED	DATE
0	RELEASE	MHA	MSC	MSC	03/25/14
1	UPDATE	CSM	MSC	MSC	05/26/15
2	UPDATE	JSA	MSC	MSC	07/02/18





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

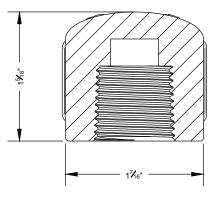
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DR	AWING No: SDI-	HD-222			
#	REVISIONS	DRAWN	CHECKED	APPROVED	DATE
0	RELEASE	MHA	MSC	MSC	10/10/14
1	UPDATE	CSM	MSC	MSC	05/26/15
2	UPDATE	JSA	MSC	MSC	06/19/18





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" POLYPROPROPYLENE NPT CAP

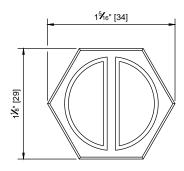
SCHWAGER DAVIS, INC. POST-TENSION SYSTEM LIBRARY

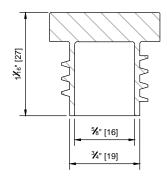


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DRAWING No: SDI-HD-360									
REVISIONS	DRAWN	CHECKED	APPROVED	DATE					
RELEASE	MHA	MSC	MSC	08/21/18					
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3/4" NOM. (23mm) GROUT TUBE PLUG

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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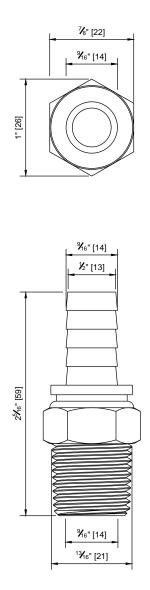
³⁄₄" NOM.(23mm) GROUT TUBE PLUG

SCHWAGER DAVIS, INC. POST-TENSION SYSTEM LIBRARY



SCHWAGER DAVIS, INC. DESIGN-BUILD CONTRACTOR

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	



1/2" MALE BARB HOSE ADAPTOR

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

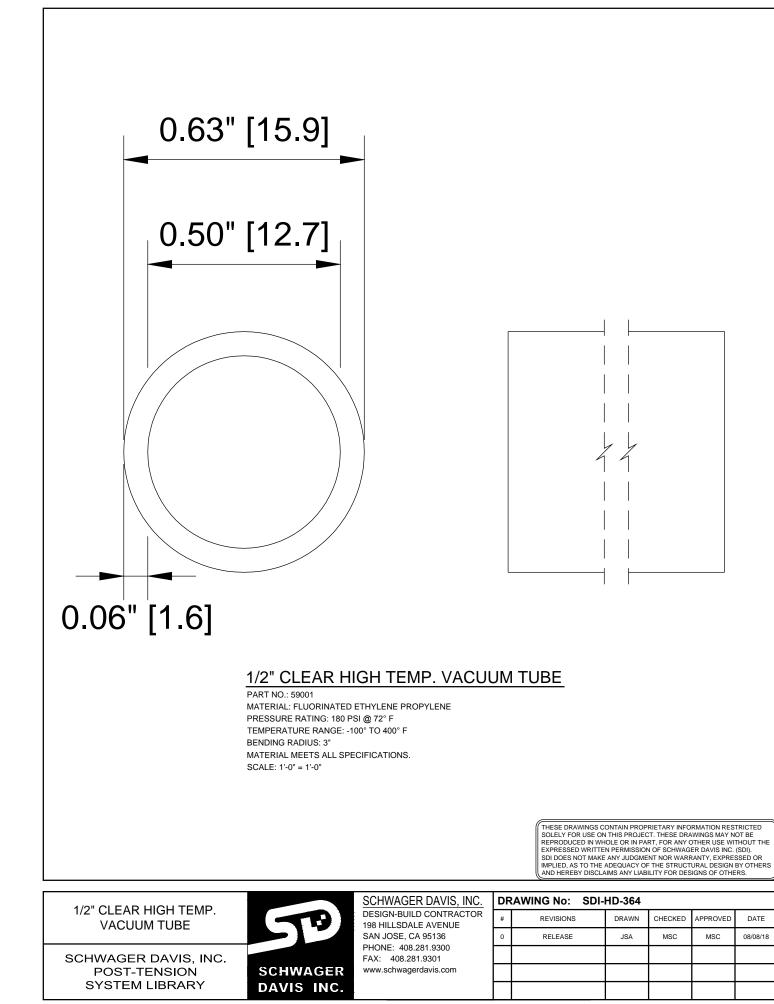
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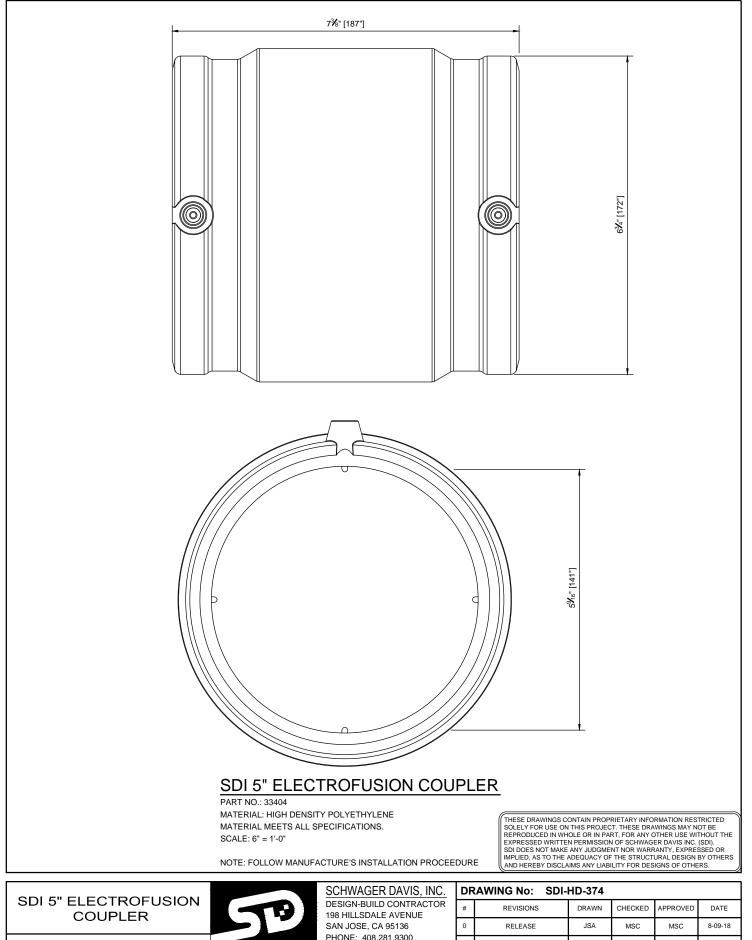
SCHWAGER DAVIS, INC. DRAWING No: SDI-HD-365 DESIGN-BUILD CONTRACTOR # REVISIONS DRAWN CHECKED APPROVED DATE 198 HILLSDALE AVENUE SAN JOSE, CA 95136 0 RELEASE JSA 08/08/18 MSC MSC PHONE: 408.281.9300 FAX: 408.281.9301 www.schwagerdavis.com

1/2" BARB HOSE ADAPTOR

SCHWAGER DAVIS, INC. POST-TENSION SYSTEM LIBRARY

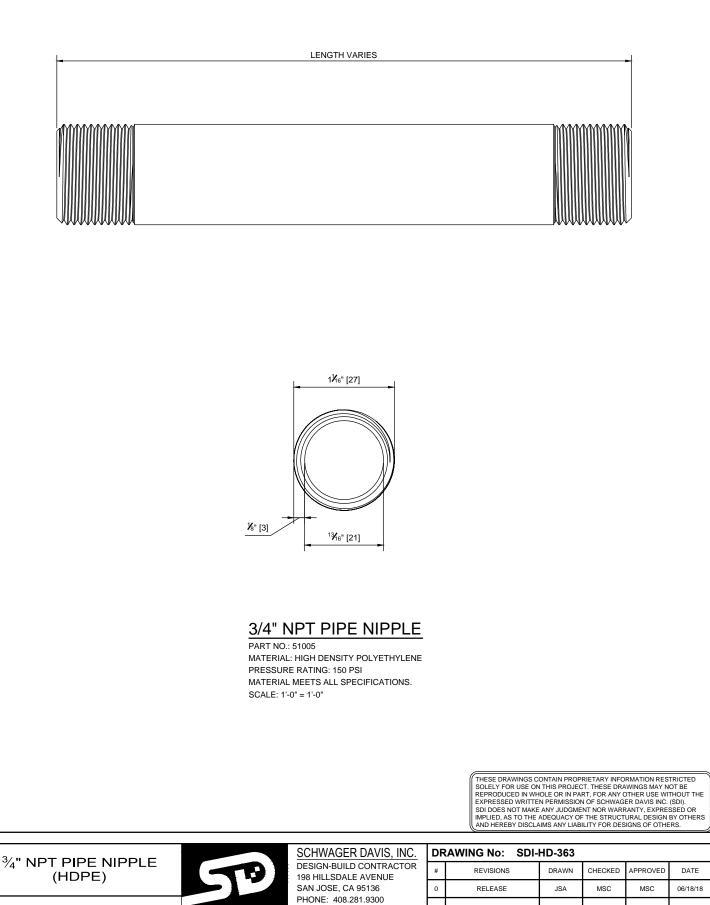






SCHWAGER DAVIS INC.

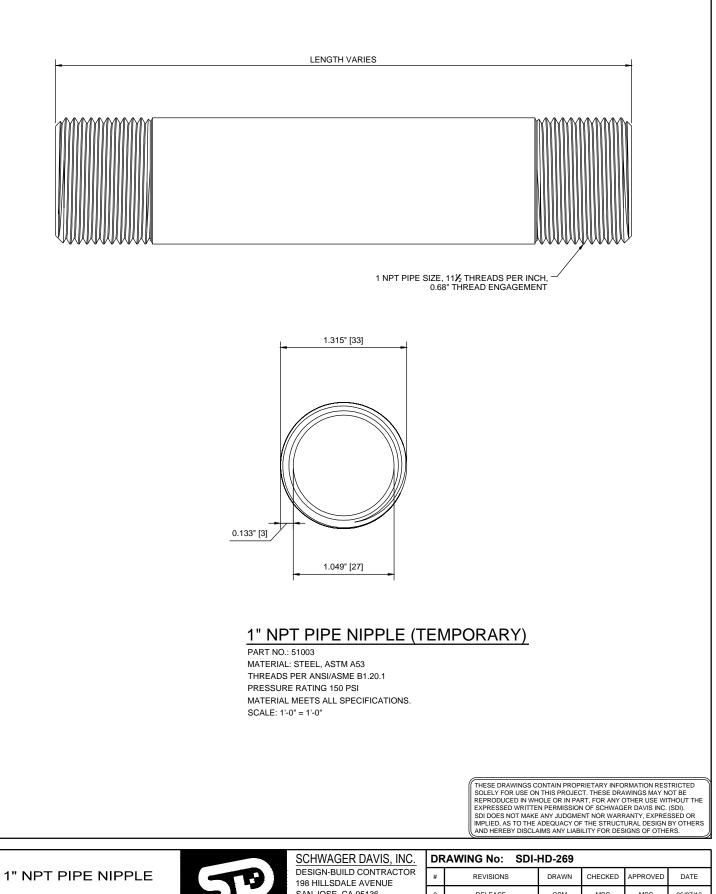
DRAWING No: SDI-HD-374									
#	REVISIONS	DRAWN	CHECKED	APPROVED	DATE				
0	RELEASE	JSA	MSC	MSC	8-09-18				





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RELEASE CSM MSC MSC 06/07/16 UPDATE JSA MSC MSC 06/18/18 www.lsc-online.com

Technical Product Information

RED-i PT CABLE COATING GREASE

RED-/ PT CABLE COATING IS SPECIALLY FORMULATED FOR THE POST TENSIONING CONSTRUCTION INDUSTRY, AND EXCEEDS THE POST TENSIONING INSTITUTE (PTI) SPECIFICATIONS IN CORROSION PROTECTION FOR UNBONDED AND SINGLE-STRAND TENDONS IN CORROSIVE SERVICE.



Product Description: RED-i PT CABLE COATING is a premium lithium grease fortified with effective corrosion inhibitors. The coating is specifically designed to provide extended protection against corrosion of metal cables or any metallic surface exposed to moisture.

Features:

- Adhesive properties protects metal surfaces from air, moisture, and sea water.
- · Excellent corrosion and rust inhibition properties.
- · Exceeds PTI specifications.
- Member Post Tensioning Institute.
- · High dropping point.
- · Contains antimicrobial agent.

Typical Uses:

- Preserves metallic cables and wires exposed to corrosive environments.
- Preserves steel reinforcement bars or rods used for concrete structures against corrosion.
- Recommended for use in marine and construction industries.

Typical Specifi	cations:	
GRADE, NLGI	2	
Penetration @ 77° F. (ASTM Worked)	265-295	-
Dropping Point, ASTM D-2265, °F.	383	
Color	Amber	
Texture	Butter	
Appearance	Smooth	
Soap Type	Lithium	
Soap, %	7.0	
Rust Test, ASTM D-1743	Pass	
Corrosion Test, ASTM B-117	Pass (No Rust)	
Soak Test, ASTM B-117 Modified	Pass	
Emulsification Of Coating	None	
Oil Separation, FTM 321.2 , Wt.%	0.5	
Flash Point, ASTM D-92, Coc, °F	350	
Water Content, ASTM D-95, Wt.%	<0.1	
Base Oil Viscosity		
cSt. @ 40° C.	321.0	
cSt. @ 100° C.	21.0	
SUS@100° F.	74	
Viscosity Index	<0.5	
Chlorides, PPM ASTM D-512	<0.1	
Nitrates, PPM, ASTM D3867	8.54	
Tensile Strength Change Of Polymer, ASTM D638		

VALUES SHOWN HERE ARE TYPICAL AND MAY VARY.

SIMPSON Strong Tie

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.



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 <u>ESR-1772</u> (formerly ICBO-ES ER-5279) (PDF) (CMU & URM)
- City of L.A. <u>RR25279</u> (PDF)
- Caltrans approved
- Florida Statewide Product Approval <u>FL11506.4</u>
- 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 <u>load tables</u> 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)
 - <u>SET-PAC-EZTM Epoxy-Tie® Anchoring Adhesive</u> Flier (PDF)
 - <u>Rebar Yield and Tensile Strength Embedments</u> 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 and another and another a
 - Adhesive Cartridge Quantity Estimator

SET High Strength Epoxy-Tie® Anchor...

reports for applicable load values.

APPLICATION

Surfaces to receive epoxy must be clean. For installations in or through standing water, see <u>Supplemental Topics for</u> <u>Adhesive Anchors</u> 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	ASTM D 695	5,065 psi (24 hours) 12,650 psi (7 days)
Compressive modulus	ASTM D 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, <u>click here</u>.

SHELF LIFE

24 months from date of manufacture in unopened side-byside 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 <u>Technical Bulletin</u> <u>T-SAS-CHEMRES08</u> (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. <u>Detailed information</u> 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	TIME	
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	
°F	°C	Load	
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. $^{\circ}C = (^{\circ}F-32) / 1.8$

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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 tapper 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:	½" x 60 "	¼" x520 "	′ ½" x260 "	¹ ∕₂"x520"	<mark>½"x1296</mark> "
P/N:	16006	16025	16030	16035	16040
Size:	³ ⁄4"x260"	³ ⁄4"x520)" 1"x26	0" 1"x520	"
P/N:	16045	16050	16055	16060	
Size:	Counter	Display	½" x260 "	1/2"x520"	¾"x520"
P/N:				16035A	
-					

 $\textbf{POLY-TEMP}^{\otimes}$ IS A REGISTERED TRADEMARK OF ANTI-SEIZE TECHNOLOGY