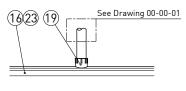
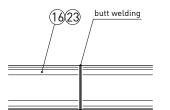
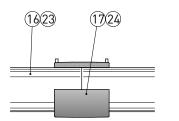
CAUTION

Assembly of anchorage and installation of tendons shall only be performed by qualified post-tensioning specialist personnel.

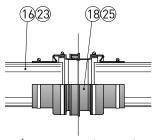
This installation procedure is generic: follow the specific procedure for each project and the FDoT specifications.







electrofused



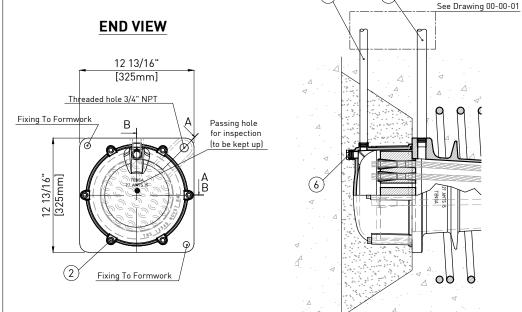
w/ segmental coupler

w/ welded port

butt welded

INTERMEDIATE COUPLING DETAILS

see installation procedures



SECTION B-B top venting and injection

		BI	ILL OF MATERIALS
ITEM	PART #	DESCRIPTION	MATERIAL
1	27-01-00	Protection Cap	Nylon S-PA0401 - according to ASTM D5989
2	27-01-01	Protection Cap Bolts	Stainless Steel GR316L - according to ASTM F593
3	27-01-02	Protection Cap O-Ring	NBR - according to FDoT Tab.2.2.1.7-1 Sec.960
4	00-01-03-M	NPT Pipe Nipple 1/2"	SCH40 steel
5	00-01-04-M	NPT Ball Valve 1/2"	SCH40 steel
6	00-01-05	NPT Plug 1/2"	High Density Polyethylene - according to ASTM D3350
7	E-IU-27-02-00	Wedge Plate	Steel AISI C1045 Normalized
8	27-03-00	Anchor	Ductil Iron ASTM A536 GR80-55-06 + Galvanization according to ASTM A123
9	00-03-01-M	NPT Pipe Nipple 3/4"	SCH40 steel
10	00-03-02-M	NPT Ball Valve 3/4"	SCH40 steel
11	00-03-03	NPT Plug 3/4"	High Density Polyethylene - according to ASTM D3350
12	00-04-00	Wedges	Steel AISI 12L14 - according to ASTM A108 + Heat treatment
13	27-05-00	Spiral	Steel GR60, #6 - according to ASTM A615
14	27-06-00	Trumpet	High Density Polyethylene - according to ASTM D3350
15	27-06-01	Compression Seal	NBR - according to FDoT Tab.2.2.1.7-1 Sec.960
16	E-IU-27-07-08	Smooth Plastic Duct 5"	High Density Polyethylene - according to ASTM D3350
17	E-IU-27-07-12	Electrofusion Duct Coupler 5"	High Density Polyethylene - according to ASTM D3350
18	27-07-03	Segmental Duct Coupler 4.5"	See proper drawing
19	00-07-04-EM	Vent Port 3/4" NPT PE	Polyethylene - according to ASTM D3350
20	E-IU-27-07-13	High Temp Heat Shrink Sleeve	Coated Polyolefin Backing - according to FDoT Tab.2.2.1.8-1 Sec.960
21	00-08-00	Strand 0.6"	Steel GR270 - according to ASTM A416
22	27-07-07	Duct Coupler 4.50" stepless	Polypropylene - according to ASTM D4101
23	E-IU-31-07-08	Smooth Plastic Duct 5.563"	High Density Polyethylene - according to ASTM D3350
24	E-IU-31-07-12	Electrofusion Duct Coupler 5.563"	High Density Polyethylene - according to ASTM D3350
25	31-07-03	Segmental Duct Coupler 5.125"	See proper drawing

Replace 3/4" pipe (00-03-01-M) with 3/4" plug (00-03-03) after injection and (13) (8) (15) (5)(4)(9)(6)(7)Replace 1/2" pipe (00-01-03-M) with 1/2" plug (00-01-05) after injection and inspection 3.45/16"[~] (12) [100mm] Passing hole for inspection 1.3/8 [35mm] 6 9/16" 9 13/16" 20 15/16" [167mm] [250mm] [532mm]

SECTION A-A

front venting and injection



NOTE: Components marked with "T" on the drawing are temporary

MISCELLANEOUS MATERIALS		
ITEM	DESCRIPTION	
26	Commercially available thread seal tape	
27	Commercially available and compatible silicone grease	

SPIRAL				
CONCRETE CLASS	4000PSI [27.5MPA]	6500 PSI [45MPA]		
LENGTH (L)	25-1/2" [649mm]	20-7/8" [529mm]		
DIAMETER (D)	18-7/8" [481mm]	15" [381mm]		
PITCH (P)	2-3/8" [60mm]			
BAR DIAMETER	#6 - 3/4" [19mm]			
N. OF TURNS 12		10		

INSTALLATION

- 1. Preassemble anchor (AN) and plastic trumpet (PT) (some silicone grease shall be used to facilitate the threading and the compression of the gasket).
- 2. Bolt the assembled AN to the pocket former using the two threaded holes located on the front surface of AN. AN shall be placed perpendicular to the tendon's axis and rotated such as the side injection hole points up.
- 3. The position of the spiral rebar (SR) shall be secured to the AN or to adjacent rebar by tack-welding or proper fixing. The SR shall be rotated such that it won't interfere with 3/4" NPT pipe attachment (if using side injection hole). Align axis of SR with AN. Seal unused port in AN.
- 4. Install the smooth duct as shown on shop drawings and insert it into PT , sealing the connection by heat shrink sleeve (or, if not possible, with heat shrink wrap) in order to prevent concrete from penetrating.
- 5. Carry out the pressure test.

Concreting can now proceed.

- 6. After completion of concrete placement, remove the pocket former and prove that duct is clear of any obstructions or damage and that all injection vents are free and secured.
- 7. Install strands by pushing or pulling individually or as a bundle into duct. Allow sufficient extra length at the active anchorage for stressing.
- 8. Check the wedge plate (WP) for rust and dirt, clean wedge holes with wire brush if necessary. Lightly grease or oil
- 9. Check wedges for rust. Discard rusty wedges and use only clean ones
- 10. Install wedge plate (keeping up the inspection hole), slip the wedges over the strands and securely place them into
- 11. Do not apply post-tensioning forces until the concrete mean compressive strength f'ci is not less than the values shown on the spiral table. These values refer to cylindrical

Stressing can now proceed.

(!) Appropriate clearance must be kept behind the hydraulic iack while stressing.

- 12. Stressing operation shall be executed according to the engineer form and requires the simultaneous reading of pressure and elongation. Check the conformity of the final elongations measurement with prescribed values.
- 13. Install the protection cap (PC) with 0-ring sealing on AN using six bolts (some silicone grease shall be used to facilitate the compression of the O-ring).
- 14. Thread 1/2" NPT pipe for injection onto the PC and the 3/4" NPT pipe onto AN. Use a 1/2" plug to secure the hole on PC not used (some thread seal tape shall be used to improve the tightness of the threadings).
- 15. Carry out the pressure test.

Injection can now proceed.

- 16. Wax shall be injected through the filler inlet until it escapes from the filler outlet. Special measures shall be applied for long tendons, for tendon paths with distinct high points or inclined tendons to avoid voids.
- 17. All vents and injection inlets/outlets have to be sealed with plugs soon after injection.
- 18. Fill holes with non-shrink grout after post injection operation and inspection are completed.

Α	08/23/19	Segmental duct c	oupler added	L.C.	T.C.
0	05/02/18	First is:	sue	L.C.	T.C.
Rev.	Date	Descrip	tion	Drawn	Checked
Mate	rial :		Treatment :		
-			-		



INTERNAL UNBONDED PT SYSTEM ASSEMBLY

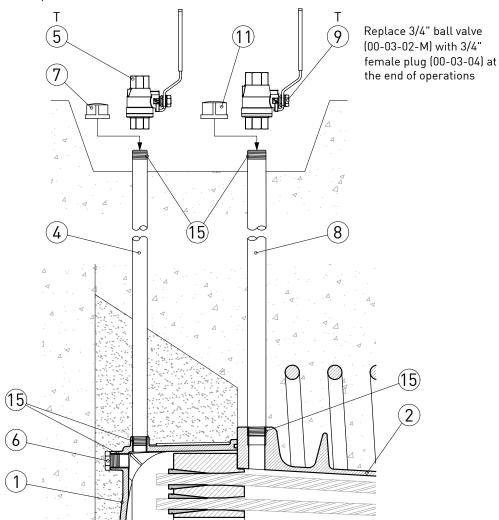
for 27AMTS15 (27-0.6")

TENSA AMERICA LLC - www.tensaamerica.com - PHONE: +1 305-866-9917 1111 KANE CONCOURSE, S.TE 200 - BAY HARBOR ISLAND - 33154 FL Drawn : L.CIVATI Checked : T.CICCONE Dimensions: INCH [mm] Part #: IU-27-00-00 Date: 08/23/2019 Code : -

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Replace 1/2" ball valve (00-01-04-M) with 1/2" female plug (00-01-06) at the end of operations

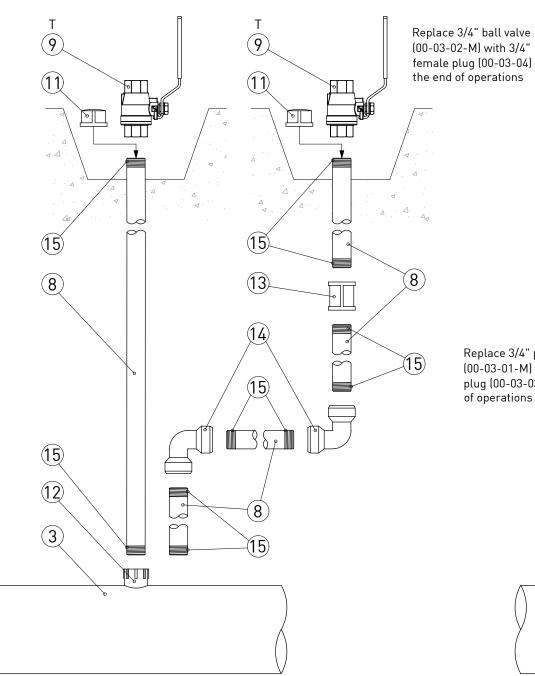


ANCHORAGE CONFIGURATION

top venting and injection

	BILL OF MATERIALS					
ITEM	PART #	DESCRIPTION	MATERIAL			
1	XX-01-00*	Protection Cap	Nylon S-PA0401 - according to ASTM D5989			
2	XX-03-00*	Anchor	Ductil Iron ASTM A536 GR80-55-06 + Galvanization according to ASTM A123			
3	E-IU-XX-07-08*	Smooth Plastic Duct	High Density Polyethylene - according to ASTM D3350			
4	00-01-03-M	NPT Pipe Nipple 1/2"	SCH40 steel			
5	00-01-04-M	NPT Ball Valve 1/2"	SCH40 steel			
6	00-01-05	NPT Plug 1/2"	High Density Polyethylene - according to ASTM D3350			
7	00-01-06	NPT Female Plug 1/2"	SCH40 steel			
8	00-03-01-M	NPT Pipe Nipple 3/4"	SCH40 steel			
9	00-03-02-M	NPT Ball Valve 3/4"	SCH40 steel			
10	00-03-03	NPT Plug 3/4"	High Density Polyethylene - according to ASTM D3350			
11	00-03-04	NPT Female Plug 3/4"	SCH40 steel			
12	00-07-04-EM	Vent Port 3/4" NPT PE	Polyethylene - according to ASTM D3350			
13	00-07-06	NPT Nipple Coupler 3/4"	SCH40 steel			
14	00-07-07	NPT Elbow 3/4"	SCH40 steel			

^{*} depending from system dimension



(00-03-02-M) with 3/4" female plug (00-03-04) at the end of operations Replace 3/4" pipe (00-03-01-M) with 3/4" plug (00-03-03) at the end of operations 9 (15)8 (12) (3)

PIPE INTERNAL CONFIGURATION

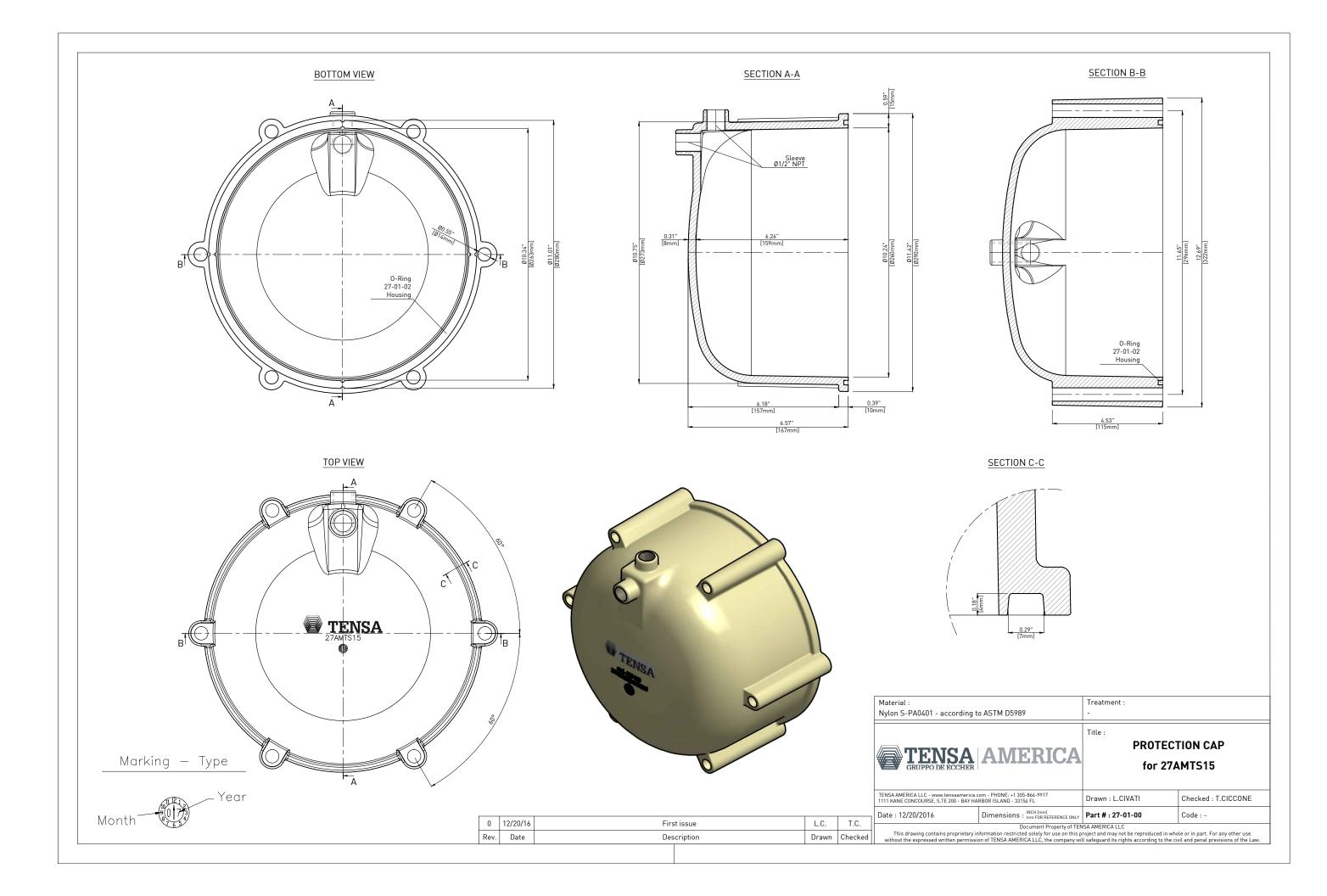
NOTE:

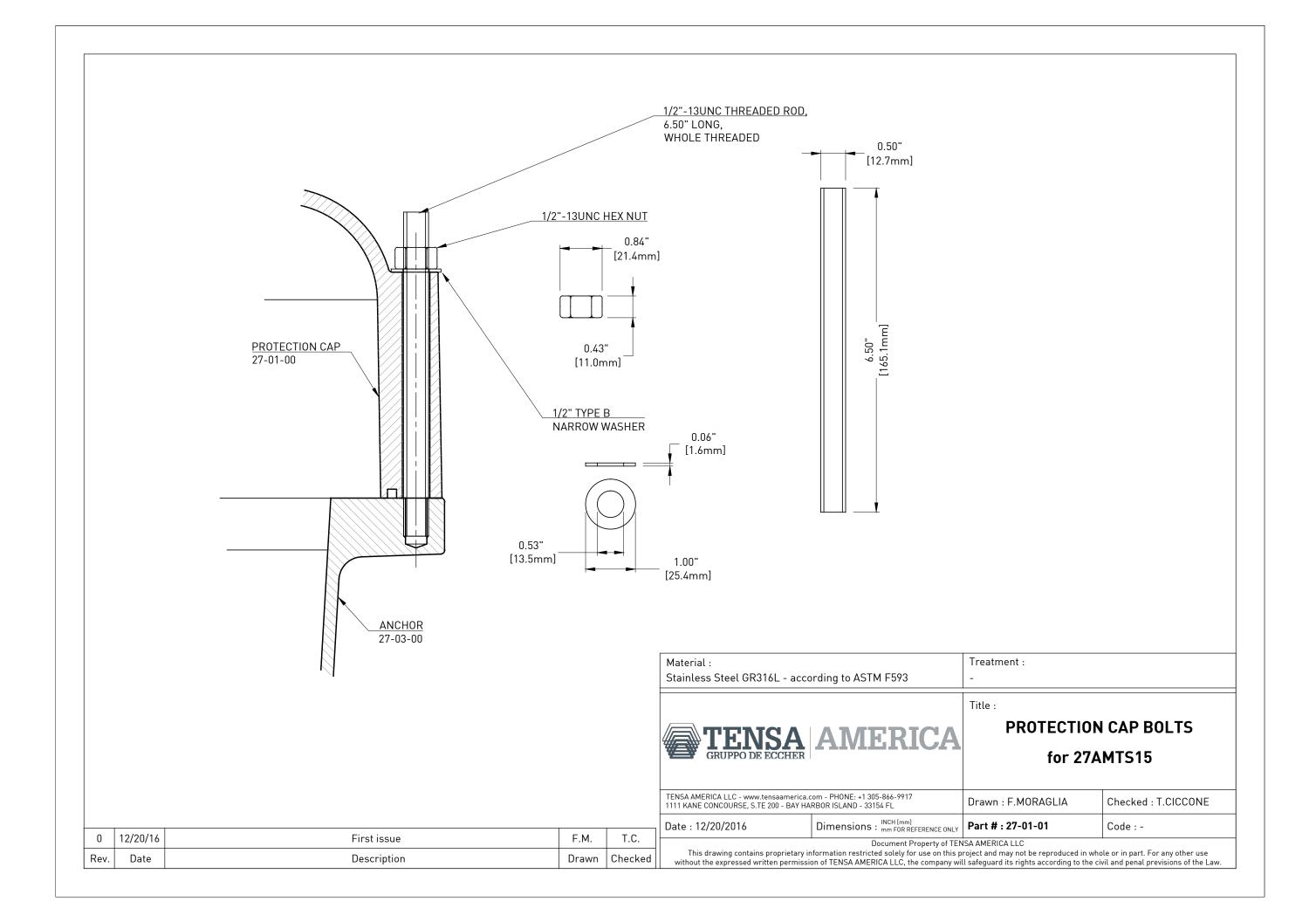
- Vent assemblies can be used as inlet, outlet or drain; when elbows are present, the vent cannot be used for injection / inspection;
- Epoxy grout shall be used to fill recessess: make reference to FDoT standard plans index 462-003 for post-tensioning anchorage and tendon filling details
- Concrete cover must meet FDoT Structures Design Guidelines Section 1.4.2
- Components marked with "T" on the drawing are temporary

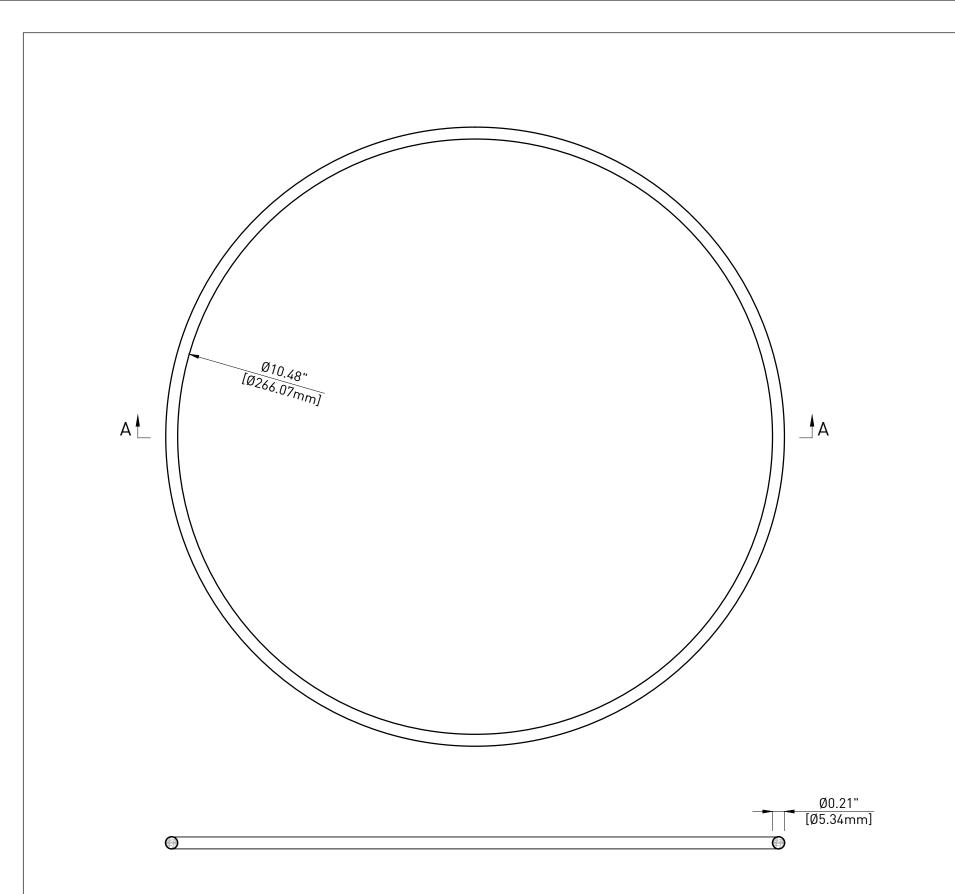
MISCELLANEOUS MATERIALS			
ITEM	DESCRIPTION		
15	Commercially available thread seal tape		

PIPE EXTERNAL CONFIGURATION

_	0//0//10		Finalia		1.0	т.с	
U	0 04/26/18 First i			sue	L.C.	T.C.	
Rev.	Rev. Date Descri			otion	Drawn	Checked	
Material :				Treatment :			
	TE	NSA DE ECCHER	AMERICA	Title: INTERNAL UNBONDED / EXTERNAL VENT ASSEMBLIES			
			om - PHONE: +1 305-866-9917 RBOR ISLAND - 33154 FL	Drawn : L.CIVATI Ch	Checked : T.CICCONE		
Date	Date: 04/26/2018 Dimensions: INCH [mm] mm FOR REFERENCE ONLY			Part # : 00-00-01 Co	Code : -		
with	Document Property of TENSA AMERICA LLC This drawing contains proprietary information restricted solely for use on this project and may not be reproduced in whole or in part. For any other use without the expressed written permission of TENSA AMERICA LLC, the company will safeguard its rights according to the civil and penal previsions of the Law.						







0	12/20/16	First issue	L.C.	T.C.		
Rev.	Date	Description	Drawn	Checked		
Mate	Material : Treatment :					

Mater

NBR - according to FDoT Tab. 2.2.1.7-1 Sec.960

TENSA AMERICA

Centro Guarnizioni TIGER s.r.l
PROTECTION CAP O-RING
for 27AMTS15 PT SYSTEM

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Drawn : L.CIVATI

Part # : 27-01-02

Checked : T.CICCONE

Date : 12/20/2016

Dimensions : INCH [mm] mm FOR REFERENCE ONLY

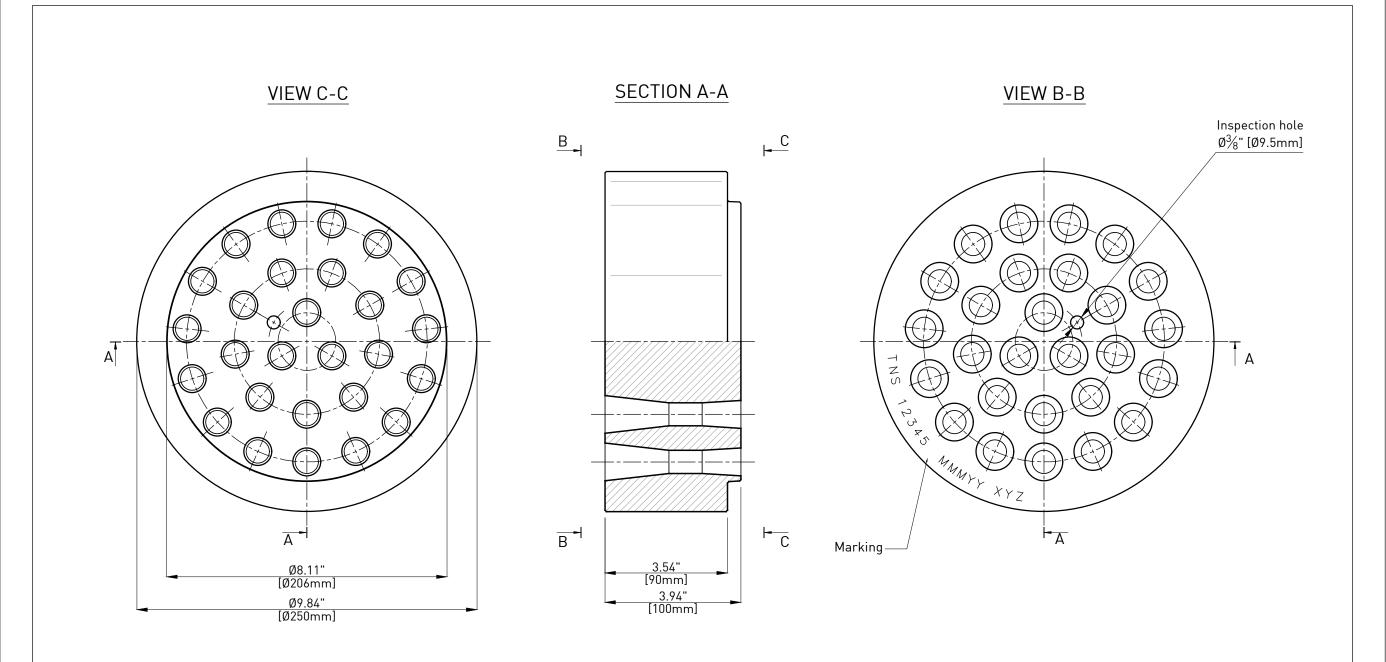
Code : OR 061050

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NOTE:

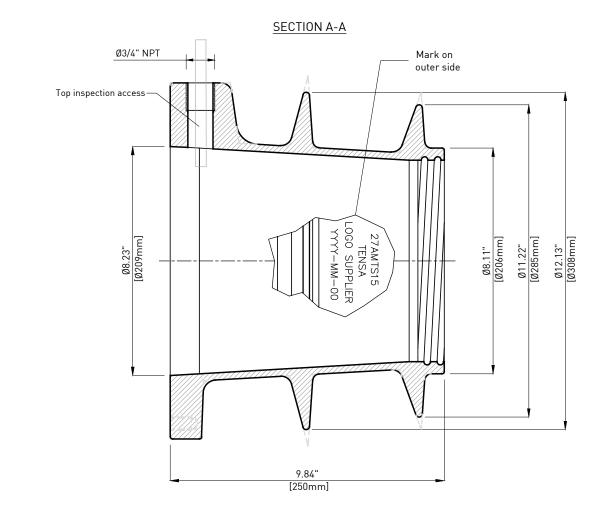
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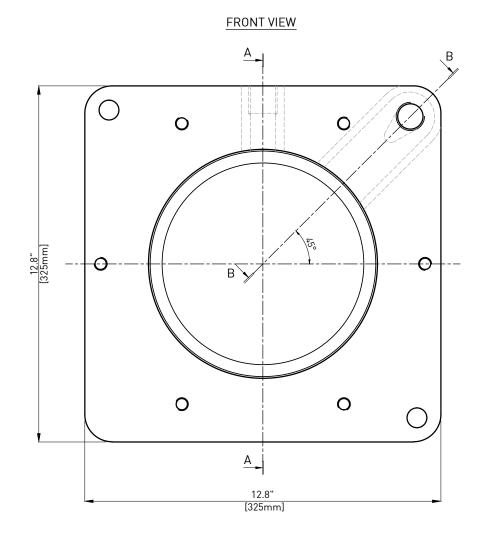


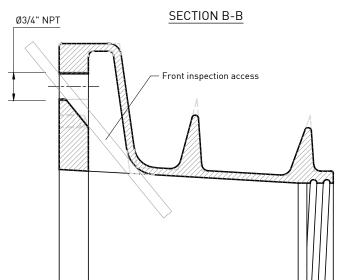
	Material : Steel AISI C1045 Normalized		Treatment :		
	TENSA GRUPPO DE ECCHER	AMERICA	WEDGE PLATE for 27AMTS15 (27-06") External and Internal Unbonded systems		
	TENSA AMERICA LLC - www.tensaamerica.c 1111 KANE CONCOURSE, S.TE 200 - BAY HAI		Drawn : L.CIVATI	Checked : T.CICCONE	
٦	Date : 12/20/2016	Dimensions : INCH [mm] mm FOR REFERENCE ONLY	Part # : E-IU-27-02-00	Code : -	
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 0
 12/20/16
 First issue
 L.C.
 T.C.

 Rev.
 Date
 Description
 Drawn
 Checked







0	12/20/16	First issue	F.M.	T.C.
Rev.	Date	Description	Drawn	Checked

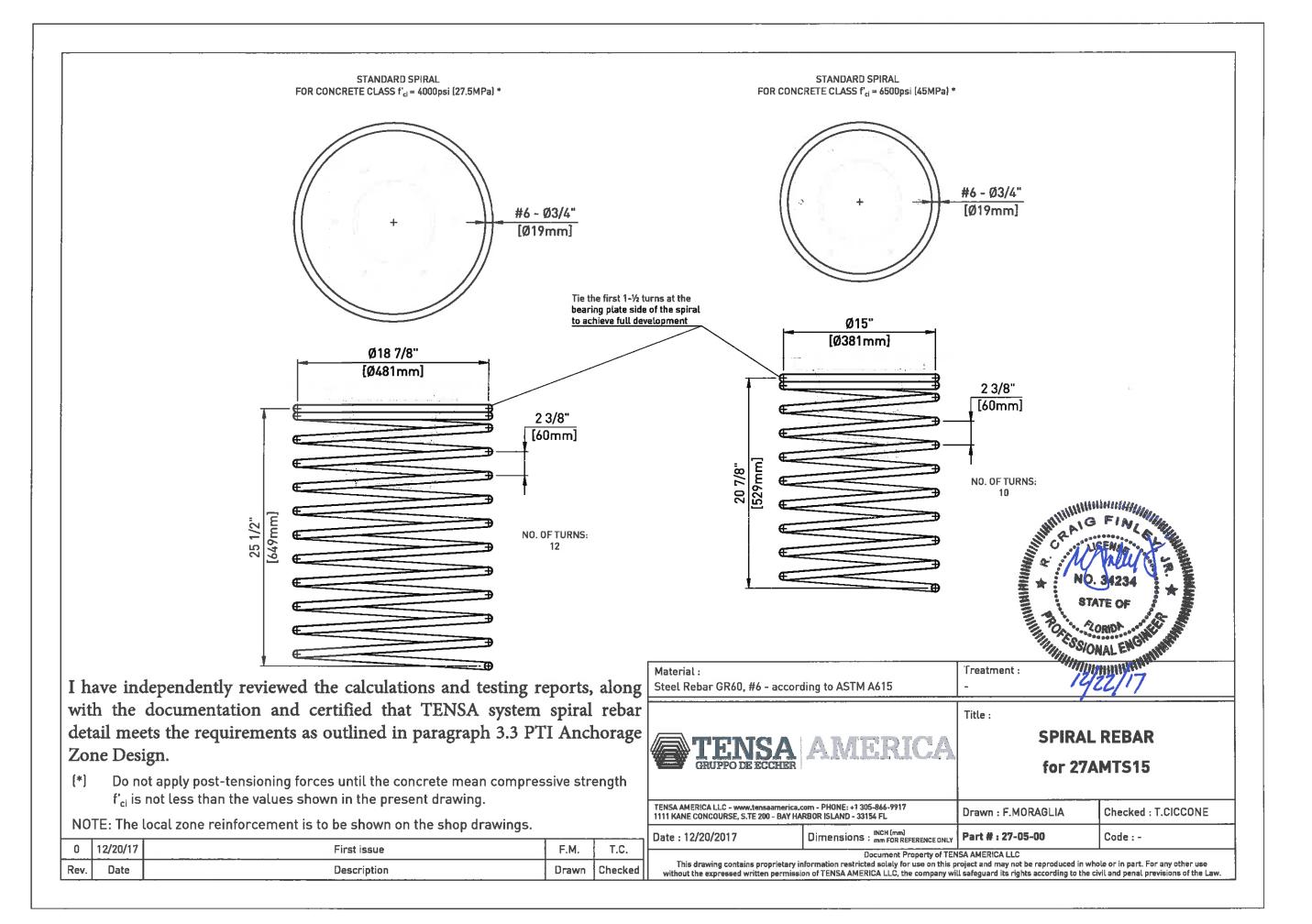
Material: Treatment : Ductil Iron ASTM A536 GR80-55-06 Galvanization according to ASTM A123 Title :

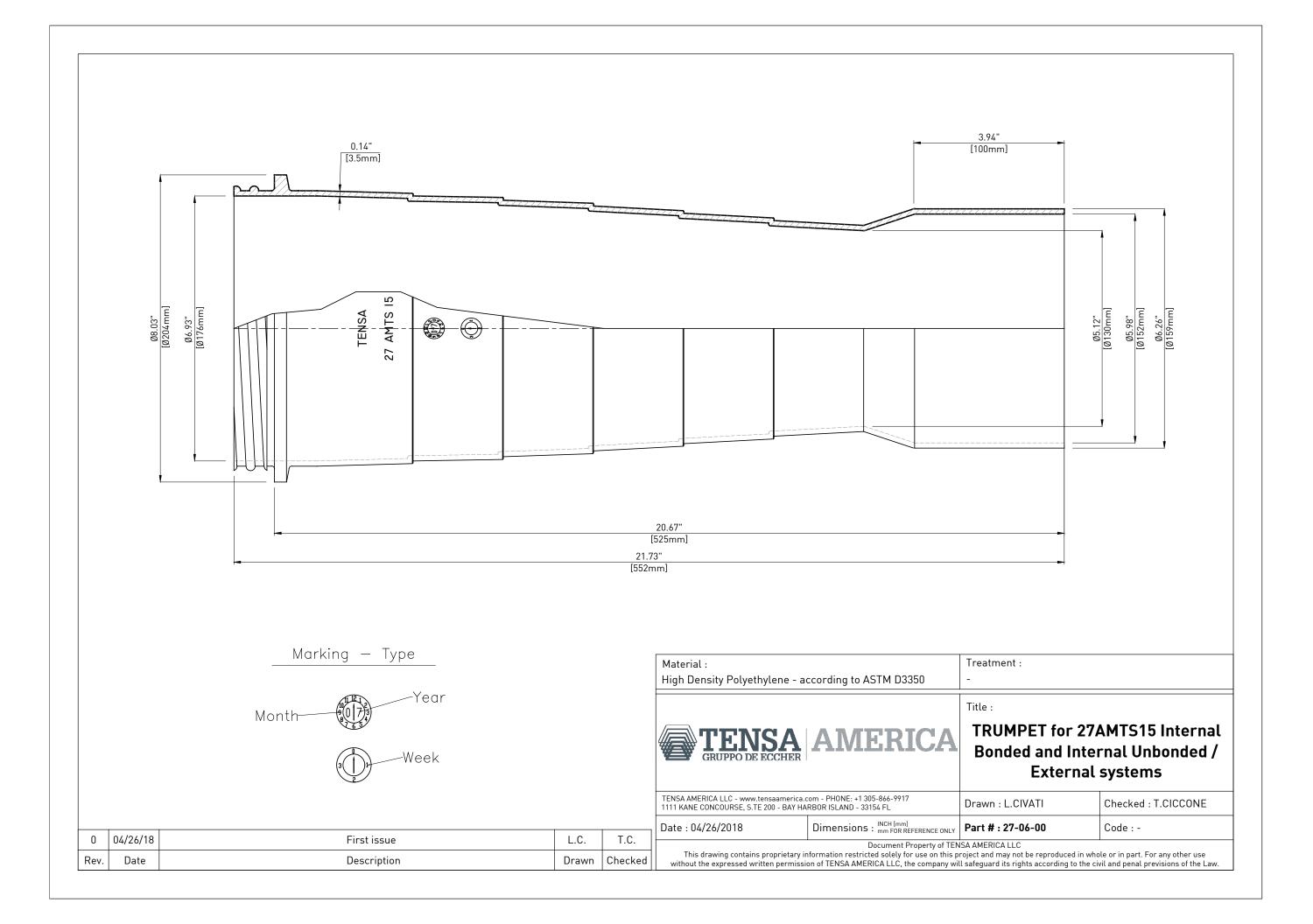


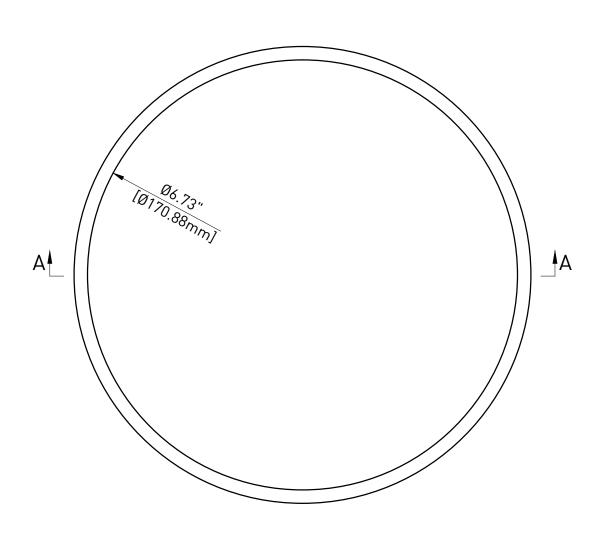
ANCHOR 27AMTS15 (27-0.6")

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0	08/23/16	First issue	L.C.	T.C.	
Rev.	Date	Description	Drawn	Checked	
	M. L. C. L. Treatment				

Material: NBR - according to FDoT Tab. 2.2.1.7-1 Sec.960 Treatment :

Ø0.21" [Ø5.34mm]

NOTE:

This drawing is not intended for manufacturing purposes.

Title : Centro Guarnizioni TIGER s.r.l **COMPRESSION SEAL** for 27AMTS15 between Anchor and Trumpet

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 ${\sf Drawn}: {\sf L.CIVATI}$

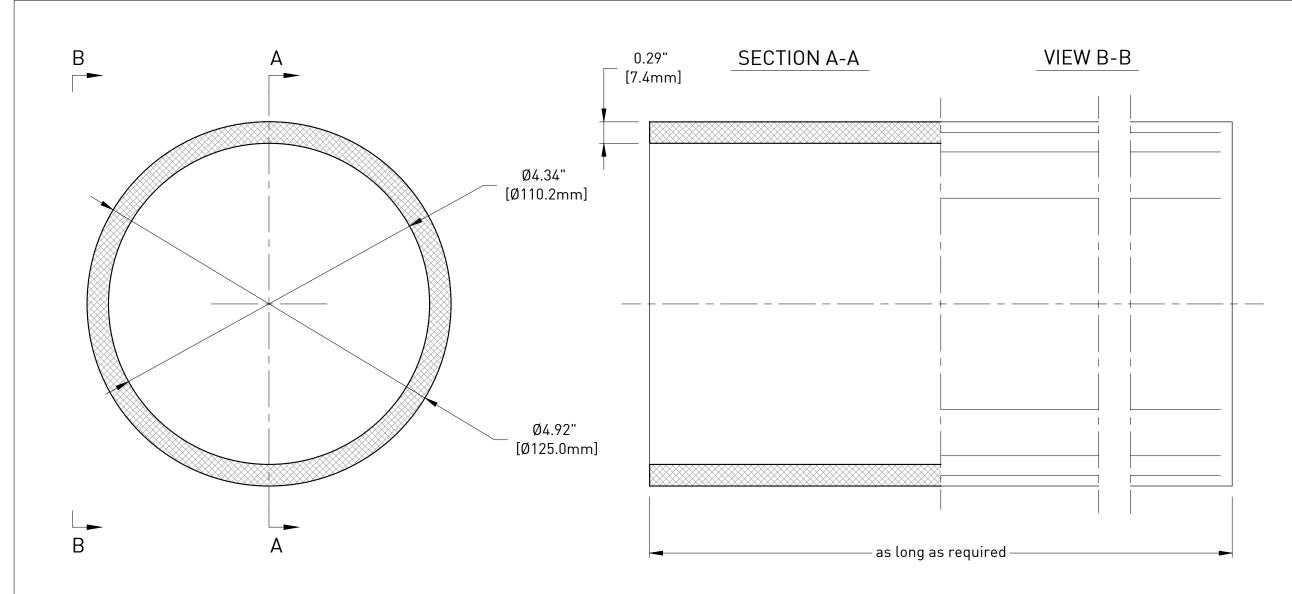
 ${\sf Checked}: {\sf T.CICCONE}$

Date: 08/23/2016

Dimensions : INCH [mm] mm FOR REFERENCE ONLY

Part #: 27-06-01 Code : OR 06670

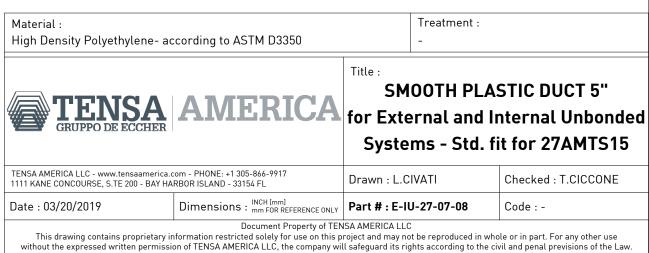
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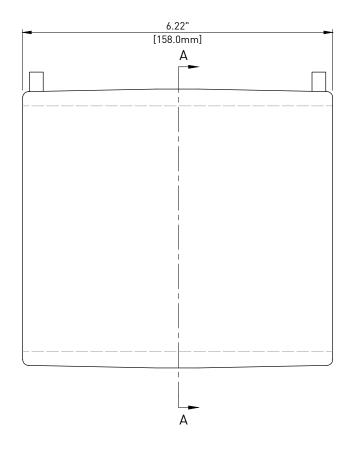


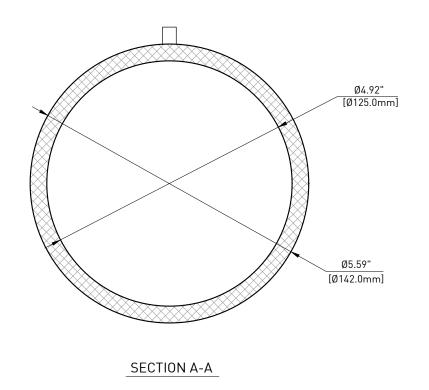
Minimum radius of curvature for prefabricated sections of duct	13 ft (3.96 m)
Minimum radius of curvature for straight sections of duct to be field bent	25 ft (7.62 m)

- This drawing is not intended for manufacturing purposes;
- Duct meets FDoT requirements (Par. 2.2.1.2 and 2.4.4 Section 960):
 - ••• maximum dimensional ratio (DR) of 17 as per ASTM D3035 or ASTM F714
- ••• 125 psi rated
- ••• minimum cell class of 445574C as per ASTM D3350
- ••• minimum OIT of 40 minutes as per ASTM D3895

0	03/20/19	First issue	L.C.	T.C.	
Rev.	Date	Description	Drawn	Checked	







INSTALLATION

Preparing the duct

- 1. Scrape the duct up to 0.4" (10mm) beyond the insertion length of the fitting.
- 2. Clean the welding area and let it dry.
- 3. Insert the duct ends straight into the fitting fot the correct length.
- 4. Install the aligners in order to keep straight position.

Welding Process

- 5. Connect the welding cables to the electrofusion coupler connectors and enter the welding parameters in the device.
- 6. At the end of the welding cycle, disconnect the cables and wait for the cooling.
- 7. Remove the aligners.

NOTE:

- The installation procedure is general; reference to manifacturer's instruction manual for the detailed installation instructions;
- This drawing is not intended for manufacturing purposes;
- Coupler meets FDoT requirements (Par. 2.2.1.5 Section 960):
 - 150 psi rated •••
 - minimum cell class of 445574C as per ASTM D3350 •••
 - minimum OIT of 40 minutes as per ASTM D3895

0	03/20/19	First issue	L.C.	T.C.
Rev.	Date	Description	Drawn	Checked

High Density Polyethylene- according to ASTM D3350

Treatment:



ELECTROFUSION COUPLER for 5" HDPE DUCT CONNECTION Standard fit for 27AMTS15

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Drawn : L.CIVATI

Title :

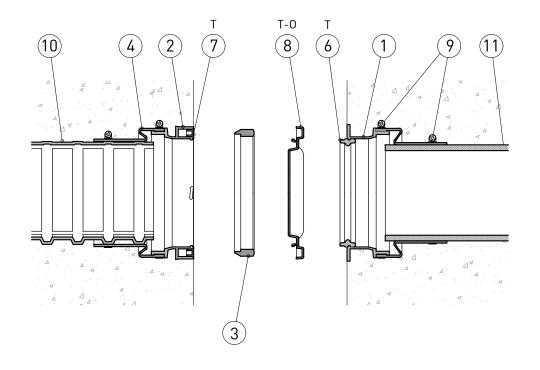
Checked : T.CICCONE

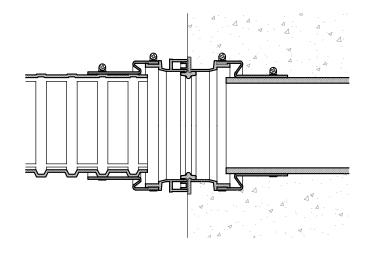
Date: 03/20/2019

Dimensions: INCH [mm] Part #: E-IU-27-07-12

Code : -

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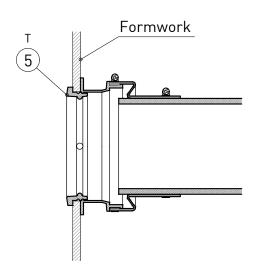




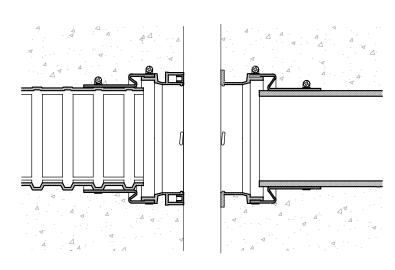
PHASE B

match-cast coupler connection

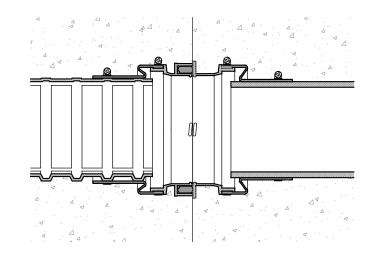
PHASE D
gasket placing and protection







PHASE C segments detachment



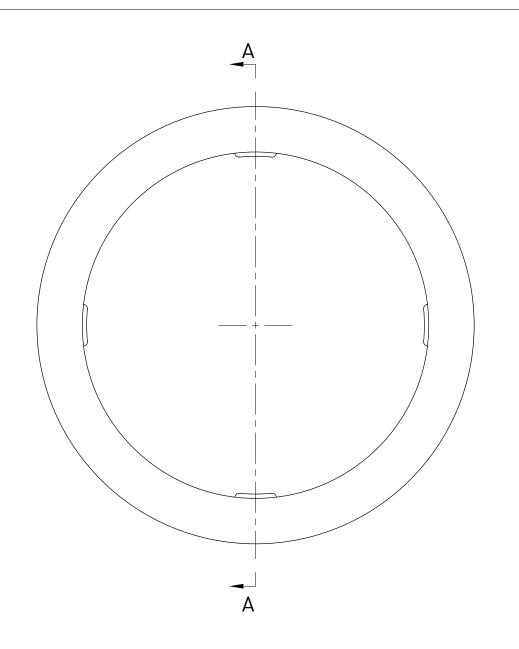
PHASE E segments connection

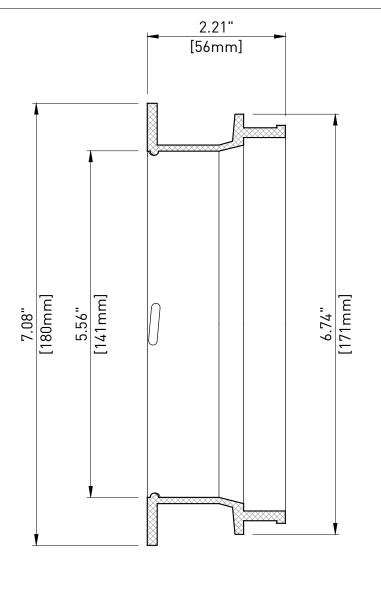
	BILL 0	F MATERIALS
PART #	DESCRIPTION	MATERIAL
XX-07-03-01	Bulkhead Coupler	Polypropylene - according to ASTM D4101
XX-07-03-02	Match-Cast Coupler	Polypropylene - according to ASTM D4101
XX-07-03-03	Sealing Gasket	TPR Blend - according to FDoT Tab.2.2.1.7-1 Sec.960
XX-07-03-04	Boot	TPR Blend - according to FDoT Tab.2.2.1.7-1 Sec.960
XX-07-03-05	Bulkhead load plug	Nylon
XX-07-03-06	Match-Cast Load Plug	Nylon
XX-07-03-07	Gasket Blockout	Polypropylene - according to ASTM D4101
XX-07-03-08	Storage Cap	Polypropylene - according to ASTM D4101
00-10-00	Band Clamp	Stainless Steel GR316 - according to ASTM A240
I-XX-07-00	Corrugated Duct	Polypropylene - according to ASTM D4101
E-IU-XX-07-08	Smooth Plastic Duct	High Density Polyethylene - according to ASTM D3350
	XX-07-03-01 XX-07-03-02 XX-07-03-03 XX-07-03-04 XX-07-03-05 XX-07-03-06 XX-07-03-07 XX-07-03-08 00-10-00 I-XX-07-00	PART # DESCRIPTION XX-07-03-01 Bulkhead Coupler XX-07-03-02 Match-Cast Coupler XX-07-03-03 Sealing Gasket XX-07-03-04 Boot XX-07-03-05 Bulkhead load plug XX-07-03-06 Match-Cast Load Plug XX-07-03-07 Gasket Blockout XX-07-03-08 Storage Cap 00-10-00 Band Clamp I-XX-07-00 Corrugated Duct

NOTE:

- Reference to manifacturer's installation manual for the detailed installation instructions;
- The representation of both smooth and corrugated duct in the same coupler is purely representative;
- Segmental duct coupler meets FDoT requirements (Par. 2.2.1.6 and 3.2.1 Section 960)
- Components marked with "T" on the drawing are temporary, components marked with "O" are optional
- In the beside table "XX" stands for the system dimension

0	03/20/19	First is	ssue		L.C.	T.C.
Rev.	Date	Descri	ption		Drawn	Checked
Mate	Material:			Treatment :		
See p	See proper drawing			-		
	TE	NSA AMERICA	Title : GTI	SEGMENTAL DUC for corrugated do smooth pip	ıct and	ER
		www.tensaamerica.com - PHONE: +1 305-866-9917 SE, S.TE 200 - BAY HARBOR ISLAND - 33154 FL	Drawn : L.C	IVATI Chec	ked : T.CIC	CONE
Date	: 03/20/201	9 Dimensions : INCH [mm] mm FOR REFERENCE ONLY	Part # : XX-	07-03 Code	: -	
1	This drawing co	9 Dimensions: "MCH Imm]	ISA AMERICA LLO roject and may no	t be reproduced in whole or in p	art. For any otl	



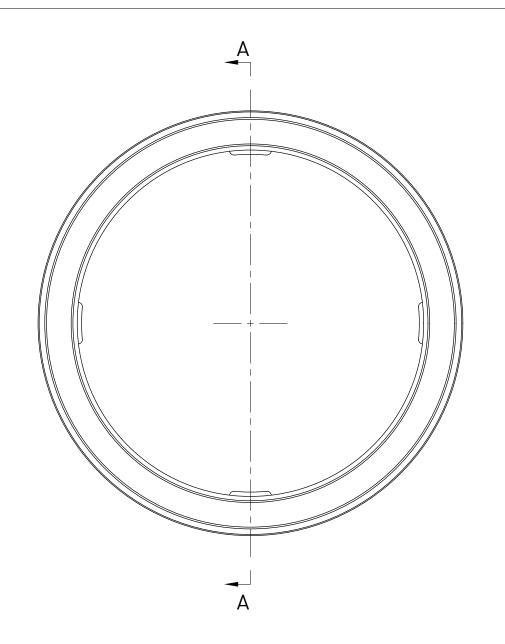


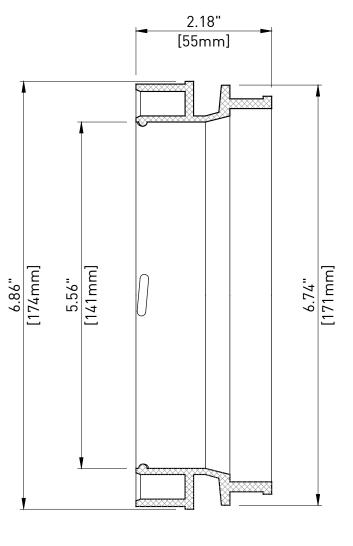
NOTE:

- All dimensions are measured;This drawing is not intended for manufacturing purposes.

0	03/20/19	First issue	L.C.	T.C.
Rev.	Date	Description	Drawn	Checked

Material :		Treatment :	
Polypropylene - according to	ASTM D4101	-	
TENSA GRUPPO DE ECCHER	AMERICA	5" sr Standard f	HEAD COUPLER 4.50" orrugated duct and mooth duct fit for 27AMTS15 fit for 19AMTS15
TENSA AMERICA LLC - www.tensaamerica. 1111 KANE CONCOURSE, S.TE 200 - BAY HA		Drawn : L. CIVATI	Checked : T. CICCONE
Date : 03/20/2019	Dimensions : INCH [mm] mm FOR REFERENCE ONLY	Part # : 27-07-03-01	Code : 220481
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NOTE:

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0	03/20/19	First issue	L.C.	T.C.
Rev.	Date	Description	Drawn	Checked

Material:
Polypropylene - according to ASTM D4101

Title: GTI SDC MATCHCAST COUPLER 4.50"
for 4.5" GTI corrugated duct and
5" smooth duct
Standard fit for 27AMTS15
Alternate fit for 19AMTS15

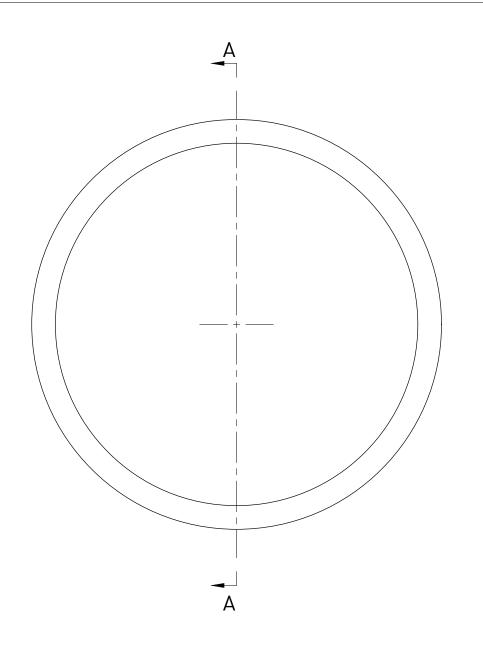
TENSA AMERICA LLC - www.tensaamerica.com - PHONE: +1 305-866-9917
1111 KANE CONCOURSE, S.TE 200 - BAY HARBOR ISLAND - 33154 FL

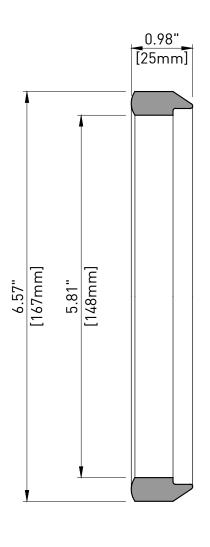
Date: 03/20/2019

Dimensions: INCH [mm] | Part #: 27-07-03-02 | Code: 220482

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NOTE:

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0	03/20/19	First issue	L.C.	T.C.
Rev.	Date	Description	Drawn	Checked

Material:
TPR Blend - according to FDoT Tab.2.2.1.7-1 Sec.960

Title: GTI SDC SEALING GASKET 4.5"
for 4.5" GTI corrugated duct and
5" smooth duct
Standard fit for 27AMTS15
Alternate fit for 19AMTS15

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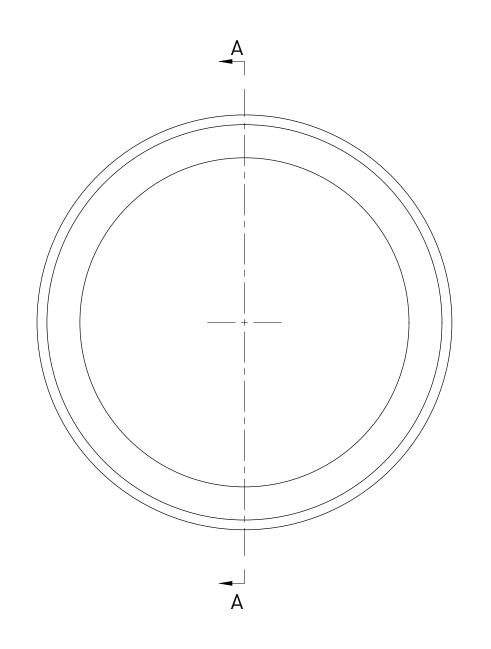
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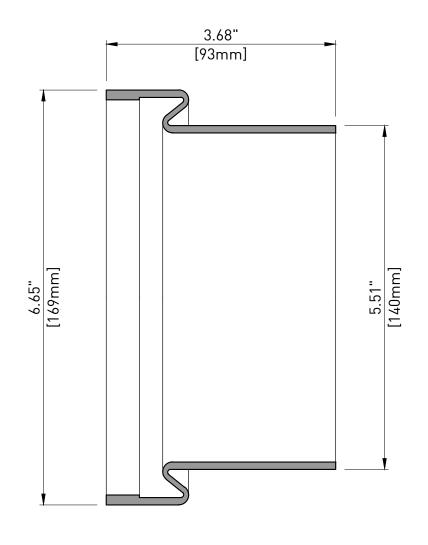
Drawn: L. CIVATI

Checked: T. CICCONE

Date: 03/20/2019

Dimensions: INCH [mm]
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0	03/20/19	First issue	L.C.	T.C.
Rev.	Date	Description	Drawn	Checked

Treatment : Material: TPR Blend - according to FDoT Tab.2.2.1.7-1 Sec.960 Title :

SECTION A-A



GTI SDC BOOT 4.5" for 4.5" GTI corrugated duct and 5" smooth duct Standard fit for 27AMTS15 Alternate fit for 19AMTS15

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Drawn : L. CIVATI

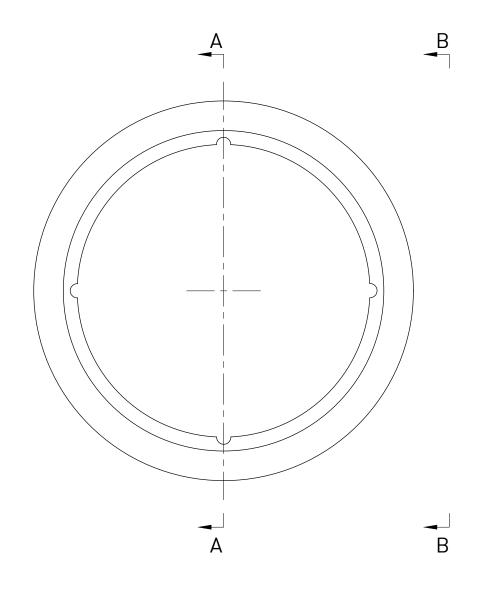
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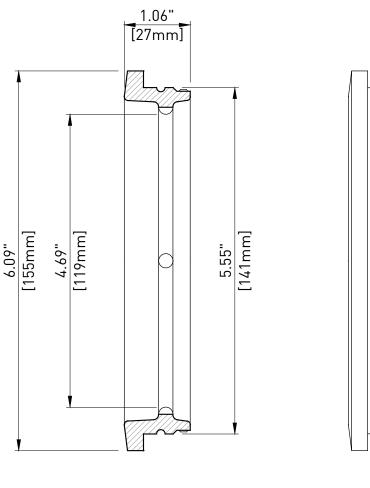
Date: 03/20/2019

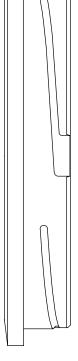
Dimensions : $\frac{\text{INCH [mm]}}{\text{mm FOR REFERENCE ONLY}}$ Part # : 27-07-03-04

Code: 220484

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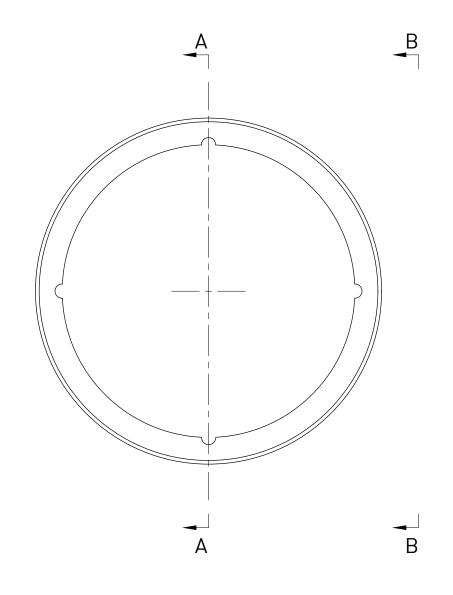
VIEW B-B

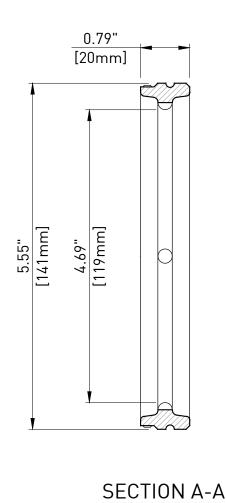
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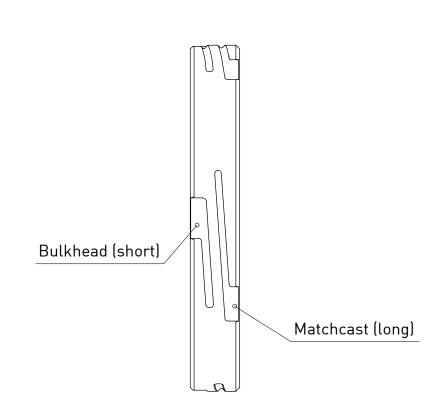
- All dimensions are measured;
 This drawing is not intended for manufacturing purposes;
 Temporary item.

0	03/20/19	First issue	L.C.	T.C.
Rev.	Date	Description	Drawn	Checked

Material : Nylon		Treatment :		
Nyton		_		
TENS. GRUPPO DE ECC	A AMERICA	for 4.5" GTI c 5" sr	IEAD LOAD PLUG 4.5" orrugated duct and nooth duct fit for 27AMTS15	
		Alternate fit for 19AMTS15		
TENSA AMERICA LLC - www.tensaar 1111 KANE CONCOURSE, S.TE 200 -	nerica.com - PHONE: +1 305-866-9917 BAY HARBOR ISLAND - 33154 FL	Drawn : L. CIVATI	Checked : T. CICCONE	
Date : 03/20/2019	Dimensions : INCH [mm]	Part # : 27-07-03-05	Code : 220493	







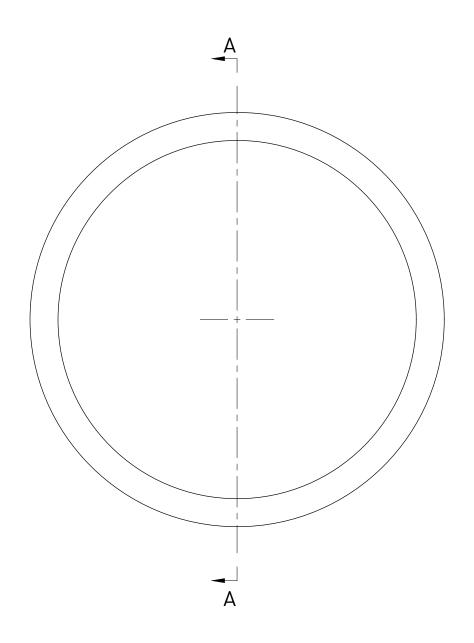
VIEW B-B

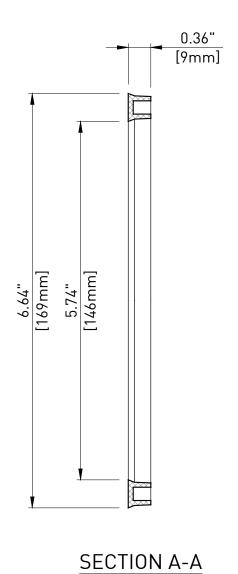
NOTE:

- All dimensions are measured;
- This drawing is not intended for manufacturing purposes;
- Temporary item.

0	03/20/19	First issue	L.C.	T.C.
Rev.	Date	Description	Drawn	Checked

Material : Treatment : Nylon $^{\sf Title}:$ GTI SDC MATCHCAST LOAD PLUG 4.5" for 4.5" GTI corrugated duct and 5" smooth duct Standard fit for 27AMTS15 Alternate fit for 19AMTS15 TENSA AMERICA LLC - www.tensaamerica.com - PHONE: +1 305-866-9917 1111 KANE CONCOURSE, S.TE 200 - BAY HARBOR ISLAND - 33154 FL Checked : T. CICCONE Drawn : L. CIVATI Dimensions: | NCH [mm] | Part #: 27-07-03-06 Date: 03/20/2019 Code: 220496 Document Property of TENSA AMERICA LLC This drawing contains proprietary information restricted solely for use on this project and may not be reproduced in whole or in part. For any other use without the expressed written permission of TENSA AMERICA LLC, the company will safeguard its rights according to the civil and penal previsions of the Law.

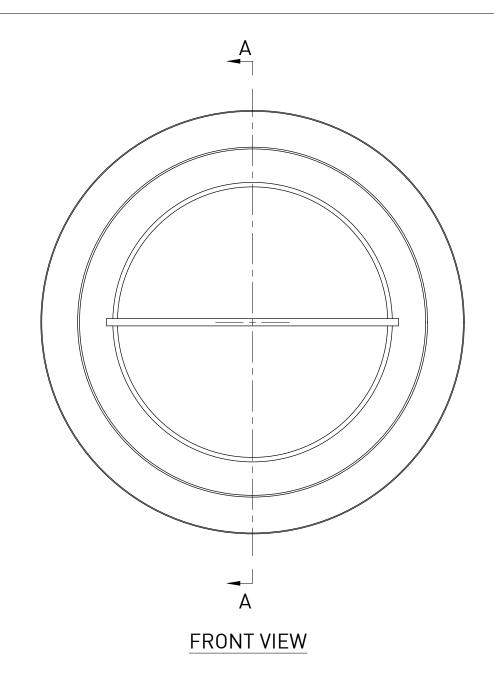


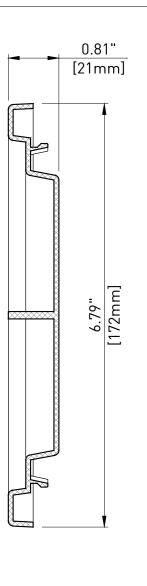


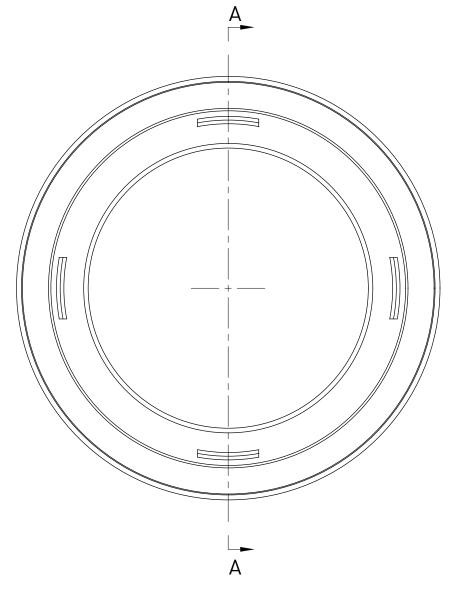
- All dimensions are measured;
 This drawing is not intended for manufacturing purposes;
- Temporary item.

0	03/20/19	First issue	L.C.	T.C.
Rev.	Date	Description	Drawn	Checked

Material : Polypropylene - according to a	ASTM D4101	Treatment :		
TENSA GRUPPO DE ECCHER	AMERICA	Title: GTI SDC GASKET BLOCKOUT 4.5" for 4.5" GTI corrugated duct and 5" smooth duct Standard fit for 27AMTS15 Alternate fit for 19AMTS15		
TENSA AMERICA LLC - www.tensaamerica.c 1111 KANE CONCOURSE, S.TE 200 - BAY HA		Drawn : L. CIVATI	Checked : T. CICCONE	
Date : 03/20/2019	Dimensions : INCH [mm] mm FOR REFERENCE ONLY	Part # : 27-07-03-07	Code : 220489	
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Material :

Polypropylene - according to ASTM D4101

REAR VIEW

Treatment :

NOTE:

- All dimensions are measured;
- This drawing is not intended for manufacturing purposes;
- Temporary item.

0	03/20/19	First issue	L.C.	T.C.
Rev.	Date	Description	Drawn	Checked

Title: GTI SDC STORAGE CAP 4.5"
for 4.5" GTI corrugated duct and
5" smooth duct
Standard fit for 27AMTS15
Alternate fit for 19AMTS15

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Title:

GTI SDC STORAGE CAP 4.5"
for 4.5" GTI corrugated duct and
5" smooth duct
Standard fit for 27AMTS15
Alternate fit for 19AMTS15

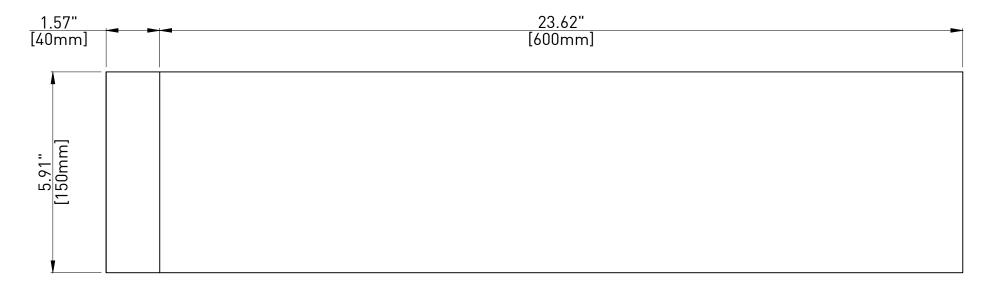
Drawn: L. CIVATI

Checked: T. CICCONE

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UNWRAPPED PLAN VIEW



UNWRAPPED LATERAL VIEW

0.08" [2mm]

NOTE:

- Thickness is type L, i.e. 0.035" [0.9 mm] backing + 0.043" [1.1 mm] adhesive;
- This drawing is not intended for manufacturing purposes;
- Heat shrink sleeve meets or exceeds FDoT requirements (Table 2.2.1.8-1 Section 960);
- For the installation make reference to manifacturer procedure

А	03/06/20	Width reduction from 300 to 150 mm	L.C.	T.C.
0	04/27/18	First issue	L.C.	T.C.
Rev.	Date	Description	Drawn	Checked

Coated Polyolefin Backing - according to FDoT Tab.2.2.1.8-1 Sec.960

Treatment:

Title :

CANUSA-CPS HIGH TEMPERATURE HEAT SHRINK SLEEVE Standard fit for 27AMTS15 and 31AMTS15 **External and Internal Unbonded Systems**

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Checked: T.CICCONE

Date: 03/06/2020

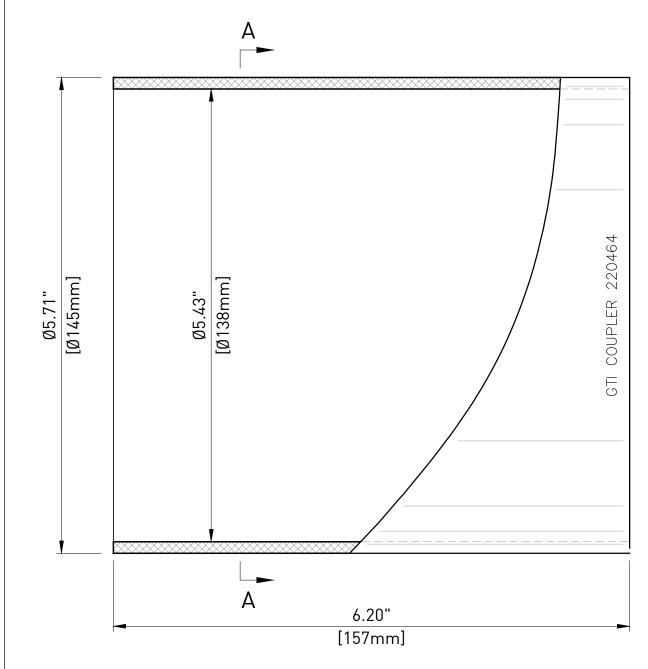
Dimensions : INCH [mm] Part # : E-IU-27-07-13

Drawn : L.CIVATI

Code: KLNN-125-150-BK

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SECTION/ELEVATION

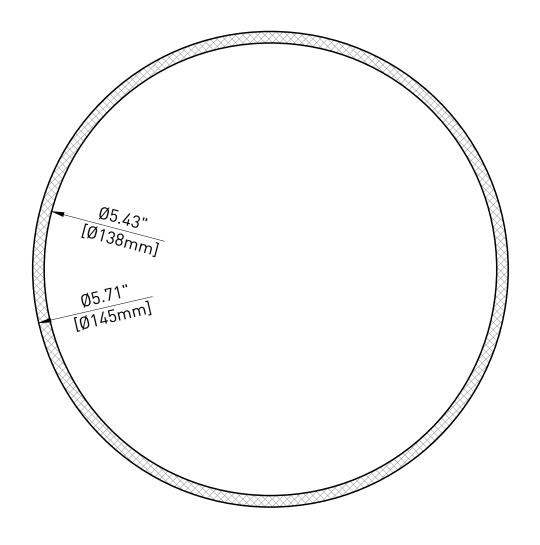


NOTE:

- This drawing is not intended for manufacturing purposes;
- Coupler meets or exceeds FDoT requirements (Section 960-2.2.1.5 and 2.4.3);
- Standard fit for 4.50" [115mm] corrugated plastic duct and 5" smooth plastic duct.

0	03/20/19	First issue	L.C.	T.C.
Rev.	Date	Description	Drawn	Checked

SECTION A-A



Material : Polypropylene - according to ASTM D4101 Treatment :

TENSA AMERICA

GTI STEPLESS COUPLER

Adaptation for 4.50" corrugated duct
and 5" smooth plastic duct
with 27AMTS15 trumpet

Code: 220464

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Drawn : L.CIVATI Checked : T.CICCONE

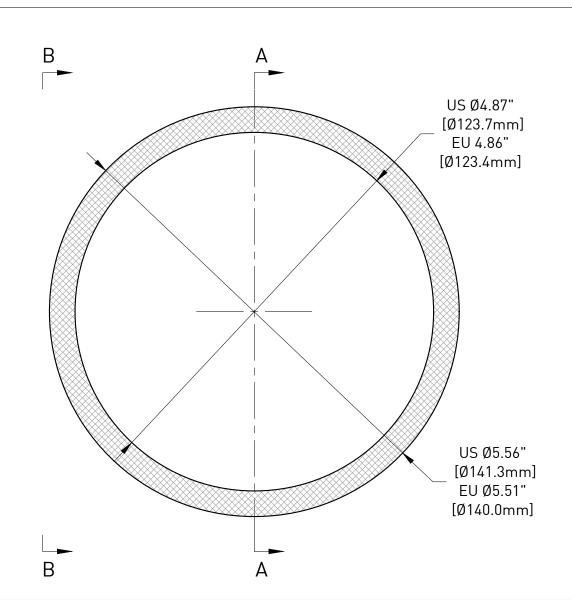
Date: 03/20/2019 Dimensions: INCH [mm] |

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Title :

Part #: 27-07-07

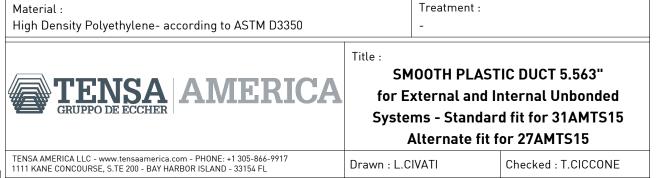


US 0.35" [8.8mm] EU 0.33" [8.3mm]	SECTION A-A	VIEW B-B	
[0.311111]			
	· 		
	as long as re	equired —	-

Minimum radius of curvature for prefabricated sections of duct	13 ft (3.96 m)
Minimum radius of curvature for straight sections of duct to be field bent	30 ft (9.14 m)

- This drawing is not intended for manufacturing purposes;
- Duct meets FDoT requirements (Par. 2.2.1.2 and 2.4.4 Section 960):
 - ••• maximum dimensional ratio (DR) of 17 as per ASTM D3035 or ASTM F714
 - ••• 125 psi rated
- ••• minimum cell class of 445574C as per ASTM D3350
- ••• minimum OIT of 40 minutes as per ASTM D3895

Α	10/08/19	Updated with measures for US and European versions	L.C.	T.C.
0	04/26/18	First issue	L.C.	T.C.
Rev.	Date	Description	Drawn	Checked



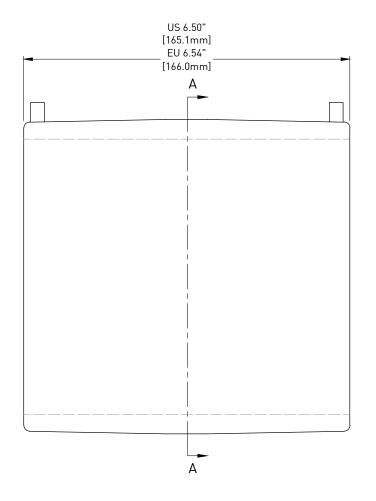
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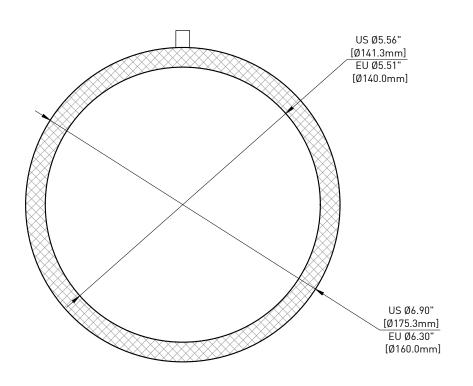
Date: 10/08/2019

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Dimensions: INCH [mm] Part #: E-IU-31-07-08

Code : -





INSTALLATION

Preparing the duct

- 1. Scrape the duct up to 0.4" (10mm) beyond the insertion length of the fitting.
- 2. Clean the welding area and let it dry.
- 3. Insert the duct ends straight into the fitting fot the correct length.
- 4. Install the aligners in order to keep straight position.

Welding Process

- 5. Connect the welding cables to the electrofusion coupler connectors and enter the welding parameters in the device.
- 6. At the end of the welding cycle, disconnect the cables and wait for the cooling.
- 7. Remove the aligners.

NOTE:

- The United States (US) coupler must be used with the corresponding US duct; the European (EU) coupler must be used with the corresponding EU duct;
- The installation procedure is general; reference to manifacturer's instruction manual for the detailed installation instructions;
- This drawing is not intended for manufacturing purposes;
- Coupler meets FDoT requirements (Par. 2.2.1.5 Section 960):
 - ••• 150 psi rated
 - ••• minimum cell class of 445574C as per ASTM D3350
 - ••• minimum OIT of 40 minutes as per ASTM D3895

Α	10/08/19	Updated with measures for US and European versions	L.C.	T.C.
0	04/26/18	First issue	L.C.	T.C.
Rev.	Date	Description	Drawn	Checked

Material : Treatment : High Density Polyethylene- according to ASTM D3350 -



Title :

ELECTROFUSION COUPLER for 5.563" HDPE DUCT CONNECTION Standard fit for 31AMTS15 Alternate fit for 27AMTS15

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Dimensions: INCH [mm] Part #: E-IU-31-07-12

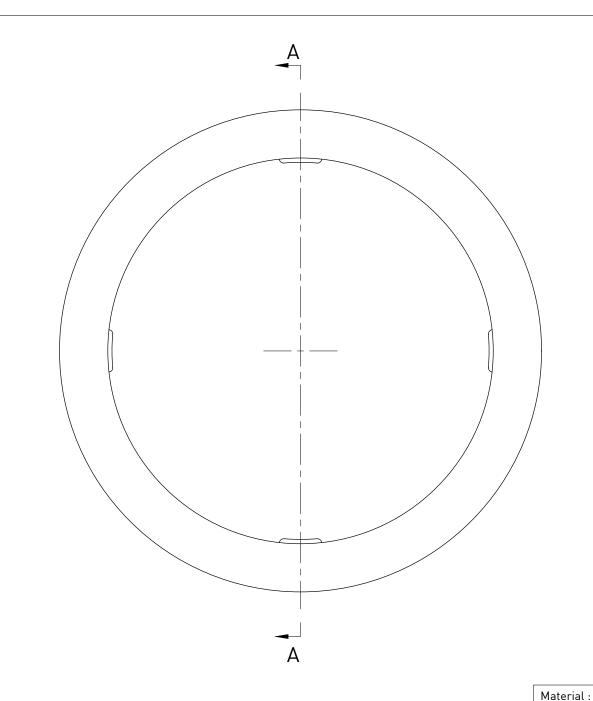
 ${\sf Drawn}: {\sf L.CIVATI}$

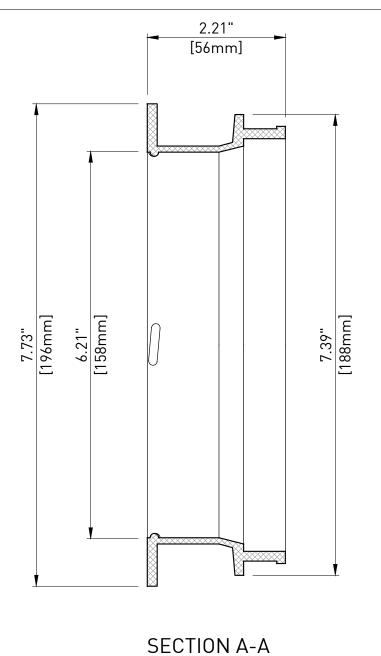
 ${\sf Checked}: {\sf T.CICCONE}$

Code : -

Date : 10/08/2019 Dimensions :

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- All dimensions are measured;
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0	03/20/19	First issue	L.C.	T.C.
Rev.	Date	Description	Drawn	Checked

Polypropylene - according to ASTM D4101

Title: GTI SDC BULKHEAD COUPLER 5.125" for 5.125" GTI corrugated duct and 5.563" smooth duct Standard fit for 31AMTS15 Alternate fit for 27AMTS15

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Drawn : L. CIVATI

Treatment :

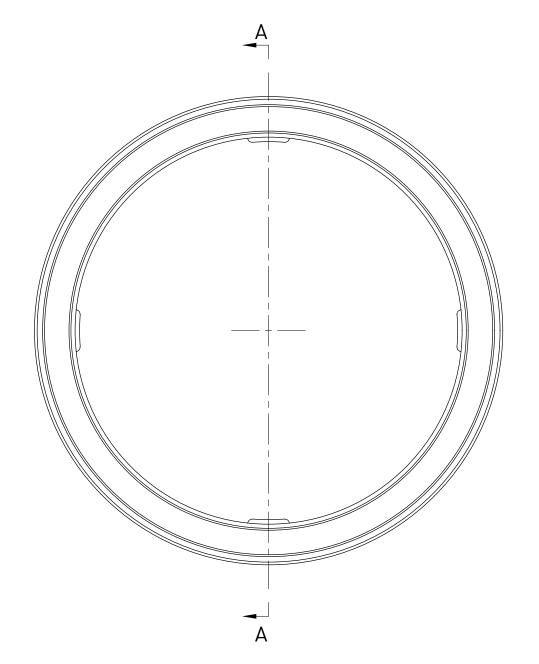
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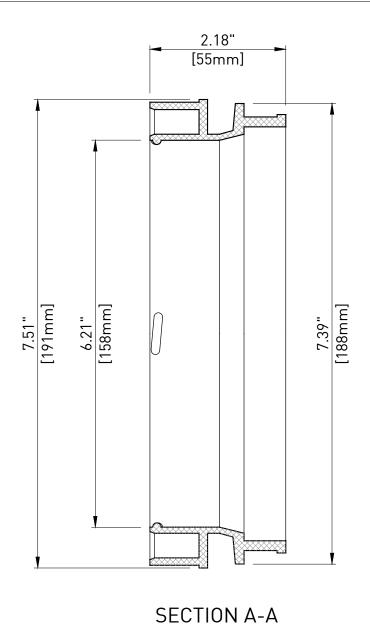
Date: 03/20/2019

Dimensions : $\frac{|NCH \ [mm]|}{mm \ FOR \ REFERENCE \ ONLY}$ | Part # : 31-07-03-01

Code: 220531

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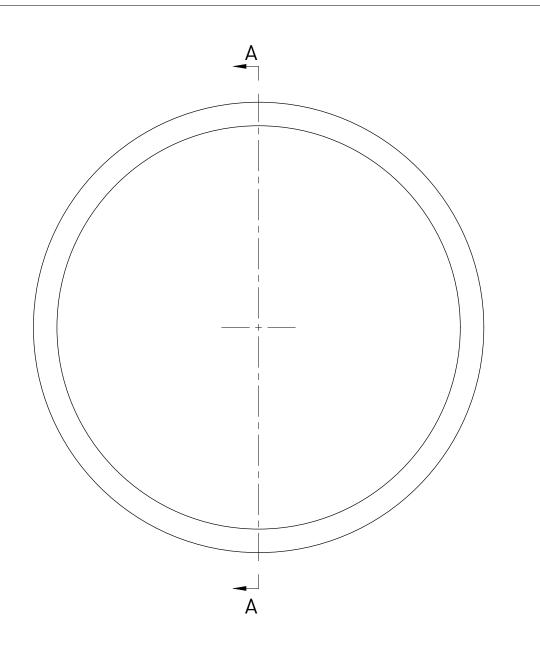


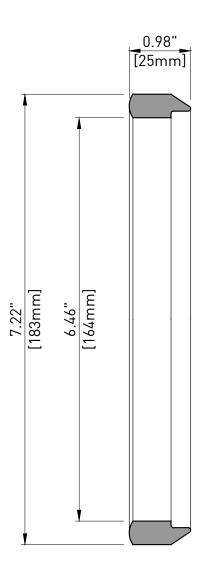


- All dimensions are measured;
- This drawing is not intended for manufacturing purposes.

0	03/20/19	First issue	L.C.	T.C.
Rev.	Date	Description	Drawn	Checked

Treatment : Material : Polypropylene - according to ASTM D4101 Title: GTI SDC MATCHCAST COUPLER 5.125" for 5.125" GTI corrugated duct and 5.563" smooth duct Standard fit for 31AMTS15 Alternate fit for 27AMTS15 TENSA AMERICA LLC - www.tensaamerica.com - PHONE: +1 305-866-9917 1111 KANE CONCOURSE, S.TE 200 - BAY HARBOR ISLAND - 33154 FL Drawn : L. CIVATI Checked : T. CICCONE Dimensions : $\frac{\text{INCH [mm]}}{\text{mm FOR REFERENCE ONLY}}$ Part # : 31-07-03-02 Date: 03/20/2019 Code: 220532 Document Property of TENSA AMERICA LLC





NOTE:

- All dimensions are measured;
- This drawing is not intended for manufacturing purposes.

0	03/20/19	First issue	L.C.	T.C.
Rev.	Date	Description	Drawn	Checked

Material : Treatment : TPR Blend - according to FDoT Tab.2.2.1.7-1 Sec.960



Title: GTI SDC SEALING GASKET 5.125" for 5.125" GTI corrugated duct and 5.563" smooth duct Standard fit for 31AMTS15 Alternate fit for 27AMTS15

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Drawn : L. CIVATI

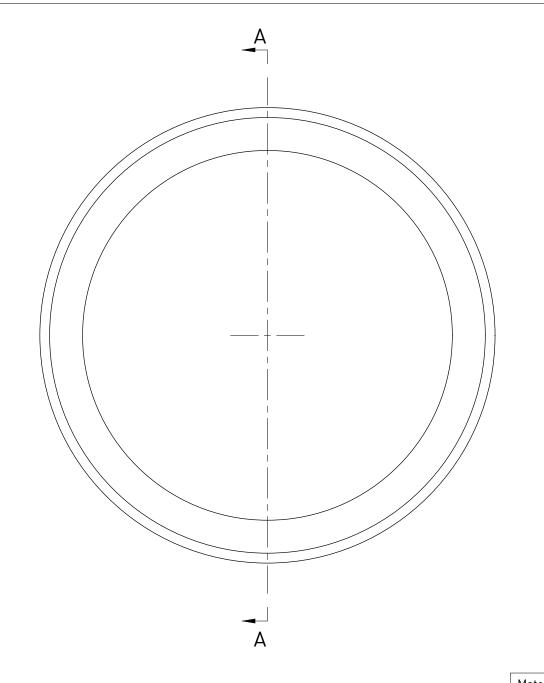
Checked : T. CICCONE

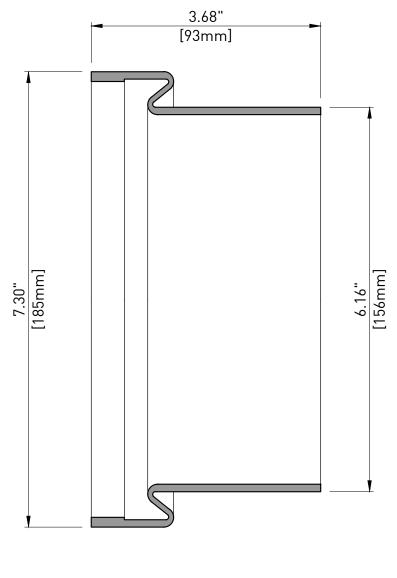
Date: 03/20/2019

Dimensions : INCH [mm] mm FOR REFERENCE ONLY Part #: 31-07-03-03

Code: 220533

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NOTE:

- All dimensions are measured;
- This drawing is not intended for manufacturing purposes.

0	03/20/19	First issue	L.C.	T.C.
Rev.	Date	Description	Drawn	Checked

Treatment : Material : TPR Blend - according to FDoT Tab.2.2.1.7-1 Sec.960



Title : **GTI SDC BOOT 5.125"** for 5.125" GTI corrugated duct and 5.563" smooth duct Standard fit for 31AMTS15 Alternate fit for 27AMTS15

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Drawn : L. CIVATI

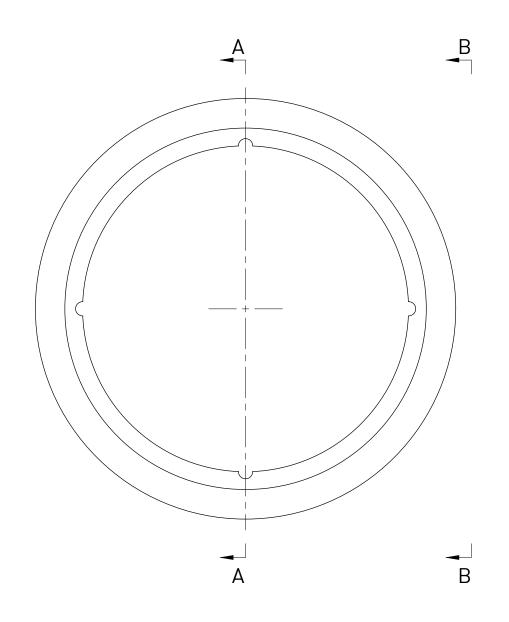
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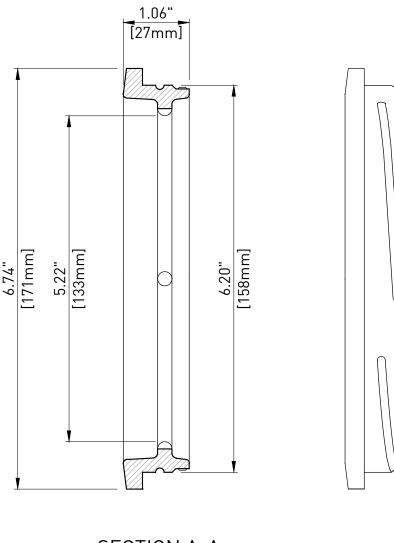
Date: 03/20/2019

Dimensions : $\frac{\text{INCH [mm]}}{\text{mm FOR REFERENCE ONLY}}$ Part # : 31-07-03-04

Code: 220534

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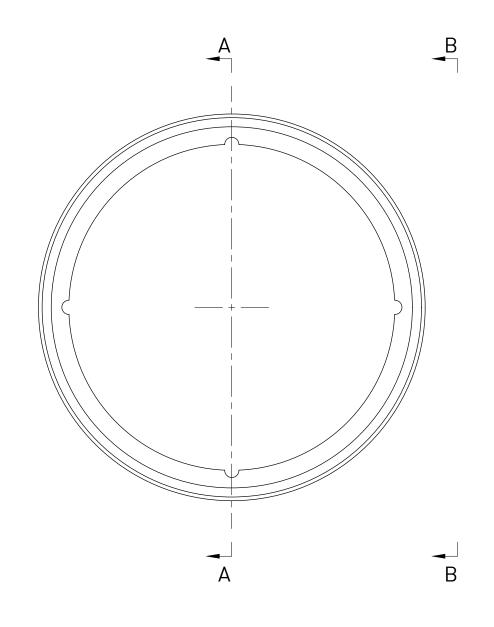
VIEW B-B

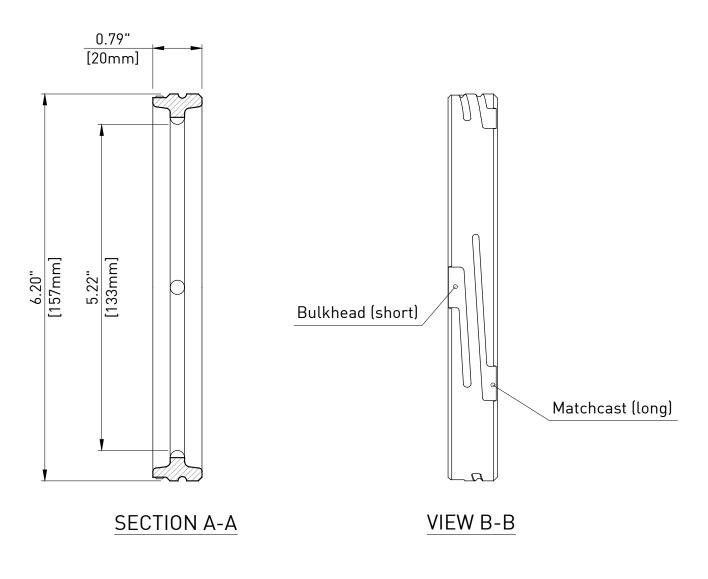
NOTE:

- All dimensions are measured;
- This drawing is not intended for manufacturing purposes;
- Temporary item.

0	03/20/19	First issue	L.C.	T.C.
Rev.	Date	Description	Drawn	Checked

Treatment : Material : Nylon Title: GTI SDC BULKHEAD LOAD PLUG 5.125" for 5.125" GTI corrugated duct and 5.563" smooth duct Standard fit for 31AMTS15 Alternate fit for 27AMTS15 TENSA AMERICA LLC - www.tensaamerica.com - PHONE: +1 305-866-9917 1111 KANE CONCOURSE, S.TE 200 - BAY HARBOR ISLAND - 33154 FL Checked : T. CICCONE Drawn : L. CIVATI Dimensions: | NCH [mm] | Part #: 31-07-03-05 Date: 03/20/2019 Code: 220543 Document Property of TENSA AMERICA LLC This drawing contains proprietary information restricted solely for use on this project and may not be reproduced in whole or in part. For any other use without the expressed written permission of TENSA AMERICA LLC, the company will safeguard its rights according to the civil and penal previsions of the Law.

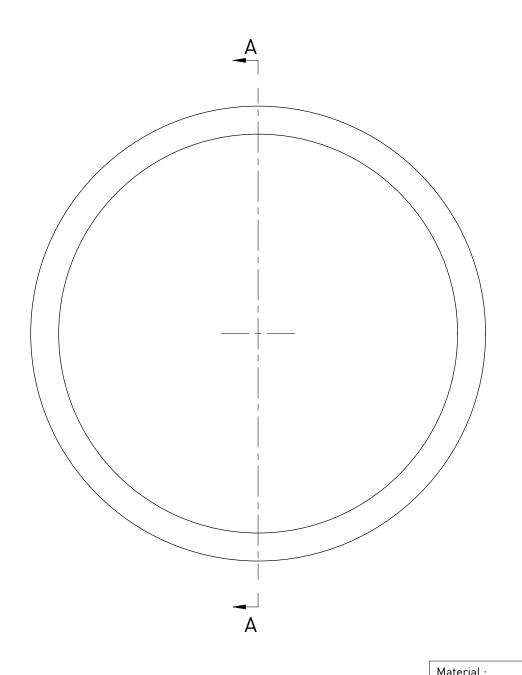


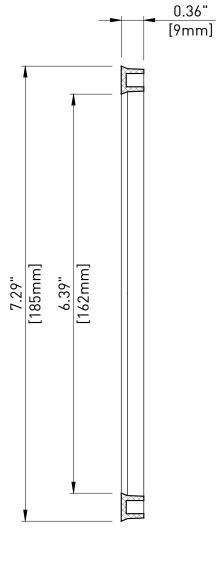


- All dimensions are measured;
- This drawing is not intended for manufacturing purposes;
- Temporary item.

0	03/20/19	First issue	L.C.	T.C.
Rev.	Date	Description	Drawn	Checked

Material :		Treatment :	
Nylon		-	
TENS GRUPPO DE ECC	A AMERICA	for 5.125" 6 5.56 Standa	HCAST LOAD PLUG 5.12 TI corrugated duct and 3" smooth duct rd fit for 31AMTS15 te fit for 27AMTS15
TENSA AMERICA LLC - www.tensaamerica.com - PHONE: +1 305-866-9917 1111 KANE CONCOURSE, S.TE 200 - BAY HARBOR ISLAND - 33154 FL		Drawn : L. CIVATI	Checked : T. CICCONE
Date : 03/20/2019	Dimensions: INCH [mm]	Part # : 31-07-03-06	Code : 220546



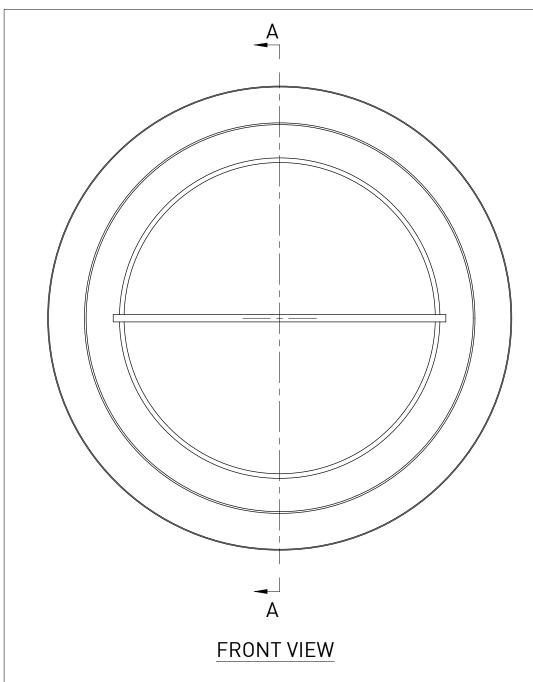


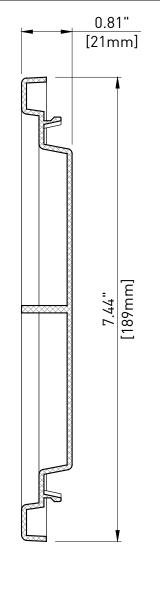
NOTE:

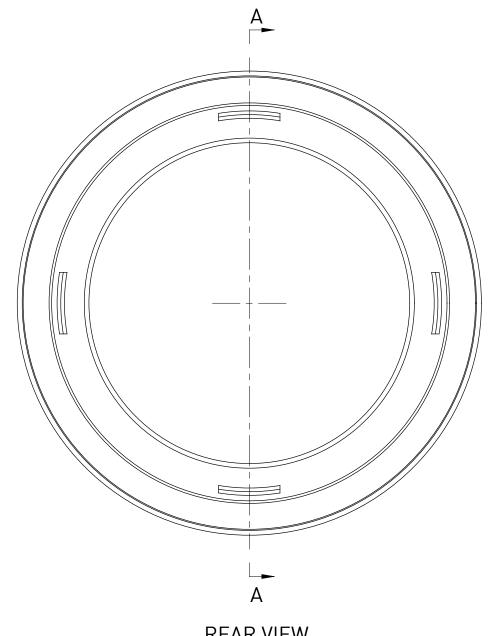
- All dimensions are measured;
- This drawing is not intended for manufacturing purposes;
- Temporary item.

0	03/20/19	First issue	L.C.	T.C.
Rev.	Date	Description	Drawn	Checked

Material :		Treatment :					
Polypropylene - according to	ASTM D4101	-					
TENSA GRUPPO DE ECCHER	AMERICA	Title: GTI SDC GASKET BLOCKOUT 5.125" for 5.125" GTI corrugated duct and 5.563" smooth duct Standard fit for 31AMTS15 Alternate fit for 27AMTS15					
TENSA AMERICA LLC - www.tensaamerica.c 1111 KANE CONCOURSE, S.TE 200 - BAY HA		Drawn : L. CIVATI Checked : T. CICCO					
Date : 03/20/2019	Dimensions: INCH [mm] mm FOR REFERENCE ONLY	Part # : 31-07-03-07	Code : 220539				
	Decument Property of TENCA AMEDICALLIC						







REAR VIEW

Treatment :

NOTE:

- All dimensions are measured;
- This drawing is not intended for manufacturing purposes;
- Temporary item.

TENSA AMERICA	Z
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GTI SDC STORAGE CAP 5.125" for 5.125" GTI corrugated duct and 5.563" smooth duct Standard fit for 31AMTS15 Alternate fit for 27AMTS15

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Drawn : L. CIVATI

Checked : T. CICCONE

Date: 03/20/2019

Dimensions : INCH [mm] Part #: 31-07-03-08

Code: 220547

Polypropylene - according to ASTM D4101

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