This installation procedure is generic: follow the specific Assembly of anchorage and installation of tendons shall.

- Install the smooth duct as shown on shop drawings and insert into PT, sealing the connection by heat shrink sleeve. Fix, if possible, with high-strength wrap in order to prevent concrete from penetrating.
- Carry out the pressure test.
- Coating can now proceed.
- After completion of concrete placement, remove the pocket former and prove that duct is clear of any obstructions and damage that all injection vents are free and secured.
- Install strands by pushing or pulling individually or as a bundle into duct. Allow sufficient extra length at the active exchangers for stressing.
- Check the wedge plate (MPI) for rust and dirt, clean wedge slots with wire brush if necessary, then install oil or seal wedge bolts.
- Check wedges for rust. Discard rusty wedges and use only clean ones.
- Install wedge plate (killing the injection hole), slip the wedges over the strands and securely place them into wedge holes.
- Do not apply post-tensioning forces until the concrete mean compressive strength f'c is not less than the values shown on the spiral table. These values refer to cylindrical strength.
- Stressing can now proceed.
- If the bar size exceeds the allowable height, the protective cap (PC) should be used instead of the protective cap. The protective cap shall be rotated such that it won't interfere with the AN or to adjacent rebar by tack-welding or proper fixing.
- Wax shall be injected through the filler inlet until it fills the voids or all injection vents are free and secured.
- The SR shall be rotated such that it won't interfere with the AN or to adjacent rebar by tack-welding or proper fixing.
- Stressing operation shall be executed according to the engineer form and requires the simultaneous reading of pressure and elongation. Check the conformity of final elongations measurement with prescribed values.
- Install the protective cap (PC) with ½" O.D. seating on AN using six bolts (same silicone grease shall be used to facilitate the compression of the (0-ring).
- Install the smooth duct as shown on shop drawings and insert into PT, sealing the connection by heat shrink sleeve. Fix, if possible, with high-strength wrap in order to prevent concrete from penetrating.
- Carry out the pressure test.
- Injection can now proceed.
- Wax shall be injected through the filler inlet until it escapes from the filler outlet. Special measures shall be applied for long tendons, for tendons paths with high or inclined tendons to avoid voids.
- All vents and injection circulations have to be sealed with plugs soon after injection.
- If the holes have non-shrink grout post injection operation and inspection are completed.

**NOTE:** Components marked with "T" on the drawing are temporary.
Replace 3/4" ball valve (00-03-02-M) with 3/4" female plug (00-03-04) at the end of operations

**PIPE INTERNAL CONFIGURATION**

- 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 recesses: 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.

**PIPE EXTERNAL CONFIGURATION**

**ANCHORAGE CONFIGURATION**

- Top venting and injection.

**BILL OF MATERIALS**

<table>
<thead>
<tr>
<th>ITEM</th>
<th>PART #</th>
<th>DESCRIPTION</th>
<th>MATERIAL</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>XX-01-00*</td>
<td>Protection Cap</td>
<td>Nylon 5, PA601 - according to ASTM D5989</td>
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<tr>
<td>2</td>
<td>XX-03-00*</td>
<td>Anchor</td>
<td>Steel from ASTM A536 GR1B + Galvanization according to ASTM A123</td>
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<tr>
<td>3</td>
<td>00-01-01-00*</td>
<td>Smooth Plastic Duct</td>
<td>High Density Polyethylene - according to ASTM D3350</td>
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<tr>
<td>5</td>
<td>00-01-01-M</td>
<td>NPT Pipe 1/2&quot;</td>
<td>SCH40 steel</td>
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<td>6</td>
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<td>NPT Ball Valve 1/2&quot;</td>
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<td>7</td>
<td>00-01-03-M</td>
<td>NPT Plug 1/2&quot;</td>
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<tr>
<td>8</td>
<td>00-01-04-M</td>
<td>NPT Female Plug 1/2&quot;</td>
<td>SCH40 steel</td>
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<td>9</td>
<td>00-01-05-M</td>
<td>NPT Pipe 3/4&quot;</td>
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<td>10</td>
<td>00-01-06-M</td>
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<td>NPT Plug 4&quot;</td>
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<td>27</td>
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**MISCELLANEOUS MATERIALS**

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<tr>
<th>ITEM</th>
<th>DESCRIPTION</th>
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<tbody>
<tr>
<td>15</td>
<td>Commercially available thread seal tape</td>
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</table>
PROTECTION CAP
for 19AMTS15

Material:
Nylon S-PA66/6T - according to ASTM D638

Dimensions: [mm]

0.39" [10mm]
5.04" [128mm]
5.43" [138mm]
0.31" [8mm]
5.12" [130mm]

Sleeve

0.29" [7mm]
0.18" [4mm]

 checkpoints:
T.C.:
08/23/16
L.C.:

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1111 KANE CONCOURSE, S.TE 200 - BAY HARBOR ISLAND - 33154 FL
WEDGE PLATE for 19AMTS15 [19-06"] External and Internal Unbonded systems

Material: Steel AISI C1045 Normalized

Title: WEDGE PLATE for 19AMTS15 [19-06"] External and Internal Unbonded systems

Material: Steel AISI C1045 Normalized

Dimensions:
- Ø7.87" [Ø200mm]
- Ø6.26" [Ø159mm]
- 3.15" [80mm]
- 2.91" [74mm]
- Ø3/8" [Ø9.5mm]

Description:
- Inspection hole
- Marking

Part #: E-1U-19-02-00
Code: -

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Drawn: L.CIVATI
Checked: T.CICCONE

Date: 08/23/2016

Revision: 0

First issue

Code:

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Material: Ductile Iron ASTM A536 GR80-55-06
Treatment: Galvanization according to ASTM A123
Title: ANCHOR 19AMTS15 (19-0.6")

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I have independently reviewed the calculations and testing reports, along with the documentation and certified that TENSA system spiral rebar detail meets the requirements as outlined in paragraph 3.3 PTI Anchorage Zone Design.

(*) Do not apply post-tensioning forces until the concrete mean compressive strength $f'_c$ is not less than the values shown in the present drawing.

NOTE: The local zone reinforcement is to be shown on the shop drawings.
### Title
Centro Guarnizioni TIGER s.r.l
COMPRESSION SEAL for 19AMTS15 between Anchor and Trumpet

### Description
- **Part #:** 19-06-01
- **Code:** OR 0213

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

### Dimensions
- **Ø 0.21"** (Ø 5.34mm)
- **Ø 5.27"** (Ø 134.50mm)

### Additional Notes
- This drawing is not intended for manufacturing purposes.

---

### Table

<table>
<thead>
<tr>
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<th>Date</th>
<th>Description</th>
<th>Drawn</th>
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<tr>
<td></td>
<td>08/23/16</td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

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**SECTION A-A**
NOTE:

- 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 445774C as per ASTM D3350
  - minimum OIT of 40 minutes as per ASTM D3895

Material: High Density Polyethylene according to ASTM D3350

Title: SMOOTH PLASTIC DUCT 4.50" for External and Internal Unbonded Systems - Std. fit for 19AMTS15
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 manufacturer’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

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 for the correct length.
4. Install the aligners in order to keep straight position.

The 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:
- 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 manufacturer procedure

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

Part #: E-IU-19-07-13

Date: 07/04/2018

Dimensions: mm

Treatment:

CANUSA-CPS
HIGH TEMPERATURE HEAT SHRINK SLEEVE
Standard fit for 19AMTS15 External and Internal Unbonded Systems

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Code: KLNN-115-300-BK

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