### Material List

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
<th>Material Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>B36E40001</td>
<td>1-3/8&quot; (36mm) Threadbar</td>
<td>ASTM A722 Type E Steel</td>
</tr>
<tr>
<td>B36E50700</td>
<td>Nylon Bar GROUT CAP with O-RING</td>
<td>CAP: NYLON 6, 20% GLASS FIBER FILLED; O-RING: EPDM</td>
</tr>
<tr>
<td>B36E24210</td>
<td>1-3/8&quot; GROUTABLE ANCHOR NUT</td>
<td>FORGING, NORMALIZED C1045</td>
</tr>
<tr>
<td>B36E30710</td>
<td>1-3/8&quot; BAR COUPLER C1026 CD SEAMLESS MECH. TUBE ASTM A519</td>
<td></td>
</tr>
<tr>
<td>00 00 649</td>
<td>1/2&quot; NPT PLUG</td>
<td>NYLON 6, WHITE</td>
</tr>
<tr>
<td>00 00 678</td>
<td>1/2&quot; NPT NIPPLE, LENGTH AS REQ'D (TEMPORARY)</td>
<td>PVC</td>
</tr>
<tr>
<td>00 00 878</td>
<td>3/4&quot; NPT NIPPLE, LENGTH AS REQ'D (TEMPORARY)</td>
<td>PVC</td>
</tr>
<tr>
<td>00 00 849</td>
<td>3/4&quot; NPT PLUG</td>
<td>NYLON 6, WHITE</td>
</tr>
<tr>
<td>00 00 634</td>
<td>1/2&quot; NPT BALL VALVE (TEMPORARY)</td>
<td>PVC</td>
</tr>
<tr>
<td>00 00 834</td>
<td>3/4&quot; NPT BALL VALVE (TEMPORARY)</td>
<td>PVC</td>
</tr>
<tr>
<td>U00044063</td>
<td>Heat Shrink Sleeve, PLA-63-450-YE, 17.7&quot; WIDE</td>
<td>ACCORD. TO FDOT SPEC. P.T. SEC. 960-2.2.1.8</td>
</tr>
</tbody>
</table>

### Notes:
1. USERS SHALL REFER TO FDOT STANDARD SPECIFICATIONS AND PROJECT SPECIFIC CRITERIA FOR TENSION INSTALLATION, STRESSING, & GROUTING.
2. REQUIRED REINFORCING BARS ARE NOT SHOWN ON THIS DRAWING.
3. MAXIMUM ANGULAR MISALIGNMENT WHEN USING ANCHOR NUT: ±2°.
4. CENTER TO CENTER, END AND EDGE DISTANCE DEPENDS ON THE LOCATION OF THE BAR AND CONCRETE COVER (2" ASSUMED). TIGHTER C/C DISTANCE SHOULD BE EVALUATED.
5. DUCT IS DELIVERED IN STRAIGHT SECTIONS AND IS NOT INTENDED TO BE COILED.
6. BURSTING REINFORCEMENT IS NOT SHOWN AND WILL BE INCLUDED WITH THE SHOP DRAWINGS. BARS ARE STRESSED FROM ONE END ONLY.

---

**WARNING:**
- Do not use with high speed devices.
- Do not use with high vacuum devices.
- Do not use with high frequency devices.
- Do not use with high pressure devices.

---

**KEY:**
- HDPE PIPE COUPLING
- BAR COUPLING
- ALTERNATE HDPE PIPE COUPLING

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**Surface Mount Detail**

**DIYDAG SYSTEMS INTERNATIONAL, USA, INC.**

**ALTERNATE HDPE PIPE COUPLING**

**HDPE PIPE COUPLING**

**CAP END VIEW**

**BLOCKOUT DETAIL**

**External Grouted System for 1-3/8" (36mm) Threadbar Assembly**
## RIGHT HAND THREAD

### PART NUMBERS

**FOR BARE BAR:** B36E CUT

**SPECIFICATIONS**

ASTM A722 TYPE II

### PHYSICAL PROPERTIES

- **EFFECTIVE AREA:** 1.58 SQ.IN. (1019 SQ.mm)
- **ULTIMATE STRENGTH:** 150 KSI (1034 N/SQ.mm)
- **ULTIMATE LOAD:** 237 KIPS (1054 KN)
- **YIELD LOAD:** 191.2 KIPS (851 KN)
- **WEIGHT:** 5.56 LBS./FT. (8.27 Kg/m)
- **MAX. BAR Ø INCL. RIBS:** 1.63 IN. (41.4mm)
- **AVERAGE CORE Ø:** 1.40 IN. (35.6mm)
- **PITCH:** 0.709 IN. (18.0mm)
NOTES:
1. PLATE & PIPE GALVANIZED ACCORDING TO ASTM A123 AFTER WELDING.
2. DIMENSIONS AND TOLERANCES APPLY TO UNCOATED PLATES.
3. ENSURE THREADABILITY OF TAPPED HOLES IN COATED PLATES.
4. 3" SDR 17 HDPE PIPE U00055112 FITS OVER TUBING.

RECTANGULAR BEARING PLATE WITH EXIT PIPE FOR
1-3/8" (36mm) THREADBAR TO BE USED WITH HDPE PIPE

DYWIDAG-SYSTEMS INTERNATIONAL, USA, INC.
POST TENSIONING / REINFORCING UNIT | PHONE: 630-739-1100
320 MARMON DRIVE - BOLINGBROOK, IL | FAX: 630-739-1405
NOTES:
1. PLATE & PIPE GALVANIZED ACCORDING TO ASTM A123 AFTER WELDING.
2. DIMENSIONS AND TOLERANCES APPLY TO UNCOATED PLATES.
3. ENSURE THREADABILITY OF TAPPED HOLES IN COATED PLATES.
4. 3” SDR 17 HDPE PIPE U00055112 FITS OVER TUBING.
NOTES:
1. PLATE & PIPE GALVANIZED ACCORDING TO ASTM A123 AFTER WELDING.
2. DIMENSIONS AND TOLERANCES APPLY TO UNCOATED PLATES.
3. ENSURE THREADABILITY OF TAPPED HOLES IN COATED PLATES.
4. 3" SDR 17 HDPE PIPE U00055112 FITS OVER TUBING.
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320 MARMON DRIVE - BOLINGBROOK, IL  60440
PHONE: 630-739-1100 FAX: 630-739-1405

NOTES:
1. USE 3/8"-16UNC 316L S.S. HEX BOLTS. 3-1/4" LONG. GO NO. 783 W/SMALL DIA. WASHER GO NO. 774.
2. INSTALL O-RING IN GROOVE USING GLOPS OF LIQUID ADHESIVE BEFORE SHIPPING.
3. THE NYLON CONFORMS TO ASTM 55916, WITH CELL CLASSIFICATION S-6A-4G1 (ULTIMATE STRENGTH 10,000 PSI, MIN, WITH UV STABILIZER ADDED).
4. DRILL 1/2" [12.7] HOLE IN PORT BEING USED—CAUTION—RECOMMEND USING HOLE SAW BIT OR HOLE DRILL BIT (BY OTHERS). BE CAREFUL TO PREVENT DAMAGE TO THREADS OR CAP.
5. WHEN PRESSURIZING GROUT CAPS, DO NOT STAND BEHIND CAPS.

O-RING MATERIAL:
EPDM MEETING MS-221717.

#237 O-RING
3-3/8" x 3-5/8" x 1/8"

SCALE 1:5

BAR GROUT CAP WITH O-RING
FOR ALL 1" & 1-1/4" NUTS AND 1-3/8" ANCHOR NUT

DYWIDAG SYSTEMS INTERNATIONAL USA, INC.
320 MARMON DRIVE - BOLINGBROOK, IL 60440
PHONE: 630-739-1100 FAX: 630-739-1405
WASHER FOR NYLON CAPS

STAINLESS STEEL 316L BOLTS AND WASHER FOR NYLON CAPS

<table>
<thead>
<tr>
<th>POS.</th>
<th>PART NUMBER</th>
<th>DESCRIPTION (ALL PARTS 316L STAINLESS STEEL UNLESS NOTED)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>00 00 771</td>
<td>3/8&quot;-16UNC HEX BOLT, 2-3/4&quot; LONG (1&quot; LONG THREAD)</td>
</tr>
<tr>
<td>2</td>
<td>00 00 772</td>
<td>3/8&quot;-16UNC HEX BOLT, 3-1/2&quot; LONG (1&quot; LONG THREAD)</td>
</tr>
<tr>
<td>3</td>
<td>00 00 774</td>
<td>TYPE A NARROW WASHER FOR 3/8&quot;-UNC BOLT</td>
</tr>
<tr>
<td>4</td>
<td>00 00 776</td>
<td>3/8&quot;-16UNC COUPLER, ZINC COATED</td>
</tr>
<tr>
<td>5</td>
<td>00 00 777</td>
<td>3/8&quot;-16UNC HEX NUT</td>
</tr>
<tr>
<td>6</td>
<td>00 00 778</td>
<td>5/16&quot;-18UNC HEX BOLT, 7/8&quot; LONG, ZINC PLATED</td>
</tr>
<tr>
<td>7</td>
<td>00 00 783</td>
<td>3/8&quot;-16UNC HEX BOLT, 3-1/4&quot; LONG (1&quot; LONG THREAD)</td>
</tr>
<tr>
<td>8</td>
<td>00 00 784</td>
<td>3/8&quot;-16UNC HEX BOLT, 4-1/4&quot; LONG (FULL THREAD)</td>
</tr>
<tr>
<td>9</td>
<td>00 00 789</td>
<td>3/8&quot;-16UNC CARRIAGE BOLT, 4-1/2&quot; LONG</td>
</tr>
<tr>
<td>10</td>
<td>00 00 790</td>
<td>3/8&quot;-16UNC CARRIAGE BOLT, 5-1/2&quot; LONG</td>
</tr>
</tbody>
</table>

NOTE:

THE 316L S.S. BOLTS ARE SPECIAL ORDER.
ALL WASHERS, HEX NUTS & COUPLERS HAVE NO MARKINGS.

FAX: 630-739-1405
PHONE: 630-739-1100
320 MARMON DRIVE - BOLINGBROOK, IL

POST TENSIONING / REINFORCING UNIT
1-3/8" GROUTABLE ANCHOR NUTS FOR THREADBAR GR. 150

THREAD ACCORDING TO TOLERANCE
DRAWING 8341/722
MINOR DIAMETER:
1.429 - 1.433
(36.30 - 36.40)

MINOR DIA.

2.390
60.7

3.531
89.7

\( \phi 3.150 \)
\( \phi 80.0 \)
**NOTES:**

1. COUPLERS ALSO SUITABLE FOR GRADE 160 THREADBARS.
2. I.D. DEVIATES FROM STANDARD THREADFORM DRAWING.

<table>
<thead>
<tr>
<th>NOMINAL SIZE</th>
<th>1-3/8&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>PART NUMBERS FOR COUPLERS:</td>
<td>36mm</td>
</tr>
<tr>
<td>WITHOUT SET SCREWS</td>
<td>B36E30710</td>
</tr>
<tr>
<td>O.D. (IN./mm)</td>
<td>2.500/63.5</td>
</tr>
<tr>
<td>I.D. (IN./mm)</td>
<td>1.433/36.4</td>
</tr>
<tr>
<td>L (IN./mm)</td>
<td>8.750/222.3</td>
</tr>
<tr>
<td>THREADFORM: 8341/722</td>
<td></td>
</tr>
<tr>
<td>TOLERANCE FOR:</td>
<td></td>
</tr>
<tr>
<td>O.D. (IN.)</td>
<td>+.250/0</td>
</tr>
<tr>
<td>I.D. (IN.)</td>
<td>±.004</td>
</tr>
<tr>
<td>L (IN.)</td>
<td>±.1/16</td>
</tr>
<tr>
<td>WEIGHT (LBS.)</td>
<td>10.00</td>
</tr>
</tbody>
</table>

**DIMENSIONS:** INCH [mm]  
**QUALITY PLAN NUMBER:**  
**REV.**  DATE  NAME  ECRN  **PART NUMBER:** B36E30710  
**DRAWING NUMBER:** B36E30710  

**MATERIAL:** C1020 CD SEAMLESS MECHANICAL TUBE ASTM A519  
**SCALE NTS:**
1/2" NPT NYLON PLUG

PRESSURE RATED: 150 PSI
1/2" NPT PIPE NIPPLES

LENGTH VARIES

1/2" NPT THREAD TYP.

PRESSURE RATED: 150 PSI

DYWIDAG-SYSTEMS INTERNATIONAL, USA, INC.
320 MARMON DRIVE - BOLINGBROOK, IL 60440
PHONE: 630-739-1100  FAX: 630-739-1405
3/4" NPT PIPE NIPPLES

MATERIAL: SCH 40 BLACK WELDED STEEL

SCALE 1:1

PRESSURE RATED: 150 PSI
**3/4" NPT NYLON PLUG**

<table>
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</thead>
<tbody>
<tr>
<td>03-12-19</td>
<td></td>
<td></td>
<td></td>
<td>1 1/4&quot; [2.8] HEX</td>
<td>00 00 849</td>
<td>NYLON 6</td>
<td>WHITE</td>
<td>1:1</td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<td></td>
<td></td>
<td>8 7/8&quot; [22.2]</td>
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<td>0.625 [5.9]</td>
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<td>0.750 [19.1]</td>
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<td></td>
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</tr>
</tbody>
</table>

PRESSURE RATED: 150 PSI
1/2" NPT BALL VALVE

NOTE:
PRESSURE RATED: 150 PSI.
**3/4" NPT BALL VALVE**

**NOTE:**
PRESSURE RATED: 150 PSI.
MATERIAL: 3" SDR 17 HDPE PIPE.

SPECIFICATIONS:
1. PIPE SHALL BE OF HIGH-DENSITY POLYETHYLENE AND SHALL HAVE A MAXIMUM DIMENSION RATIO (DR) OF 17 AS ESTABLISHED BY EITHER ASTM D3035 OR ASTM F714, AS APPROPRIATE FOR MANUFACTURING PROCESS USED.
2. PIPE SHALL HAVE A MINIMUM PRESSURE RATING OF 125 PSI.
3. MEETS REQUIREMENTS OF ASTM D3350 WITH A MINIMUM CELL CLASS OF 445574C.
4. CONTAINS ANTIOXIDANTS WITH A MINIMUM OXIDATIVE-INDUCTION TIME (OIT) ACCORDING TO ASTM D3895 OF 40 MINUTES.
5. REMOLDED FINISHED MATERIAL HAS A MINIMUM FAILURE TIME OF THREE HOURS WHEN TESTED FOR STRESS CRACK RESISTANCE USING ASTM F2136 AT AN APPLIED STRESS OF 348 PSI.
6. MINIMUM BEND RADIUS = 20 FT.
INSTALLATION PROCEDURE:

(SEE MANUFACTURER INSTRUCTION MANUAL FOR DETAILED INSTRUCTIONS)

1. CUT PIPE ENDS PRECiSELY AT RIGHT ANGLES TO THE PIPE AXIS.
2. CLEAN BOTH PIPE ENDS CAREFULLY.
3. SCRAP BOTH PIPE ENDS AS REQUIRED TO REMOVE THE OXIDE LAYER COMPLETELY.
4. CLEAN BOTH PIPE ENDS WITH CONCENTRATED ISOPROPYL ALCOHOL.
5. USE REROUNDING TOOLS TO CORRECT OVAL PIPE IF NEEDED.
6. USE ALIGNMENT CLAMPS TO SECURE THE ALIGNMENT OF CONNECTED PIPES.
7. PROVIDE SUPPORT TO THE PIPE AND COUPLER TO PREVENT ANY MOVEMENT.
8. ENSURE THERE IS NO EXISTING GAPS BETWEEN COUPLER AND PIPE FACE.
9. ATTACH LEADS OF THE FUSION PROCESSOR TO THE COUPLER.
10. SCAN THE BARCODE ON THE COUPLER AND CONFIRM THE COUPLER'S SIZE ON THE PROCESSOR SCREEN.
11. INITIATE FUSION PROCESS.
12. UNPLUG THE LEADS AS SOON AS THE FUSION PROCESS ENDS.
13. CHECK COOLING TIME OF THE PROVIDED COUPLER BASED ON COUPLER'S SIZE.
14. DO NOT ALLOW MOVEMENT OR APPLIED PRESSURE ON THE JOINTS BEFORE COOLING TIME ENDS.
**Tubular Sleeve**

<table>
<thead>
<tr>
<th>COLOR</th>
<th>SIZE</th>
<th>BACKING</th>
</tr>
</thead>
<tbody>
<tr>
<td>YE - YELLOW</td>
<td>300mm, 450mm, 600mm, 900mm (12&quot;, 18&quot;, 24&quot;, 36&quot;)</td>
<td>A - 0.75 mm (30 mils)</td>
</tr>
<tr>
<td>BK - BLACK</td>
<td>63mm - 115mm (2-1/2&quot; - 12&quot;)</td>
<td>L - 0.80 mm (31 mils)</td>
</tr>
</tbody>
</table>

**Standard Ordering Options**

- A - 0.75 mm (30 mils)
- L - 0.80 mm (31 mils)

**Configuration**

- P - Tubular

**Notes:**

1. Order direct from CANUSA
   - Tel.: 281-367-8866
   - Fax.: 281-367-4304
2. Select order length as a multiple of the actual length.
3. Other colors sleeve may be available upon request.
4. Always heat the duct ends first.

**MATERIAL:**

According to FDOT Specification Post Tensioning, Section 462 - 4, 2, 6, 3.

**NOTES:**

- 1-1/4" (32mm) min.

**Standard Ordering Options**

- ZZ
- YYY
- XXX
- A
- L
- P

**Heat Shrink Sleeve**

- PMA - HIGH SHRINK SLEEVE
- HIGH SHRINK TUBULAR BACKING

**Material:**

According to FDOT Specification Post Tensioning, Section 462 - 4, 2, 6, 3.

**Notes:**

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   - Tel.: 281-367-8866
   - Fax.: 281-367-4304
2. Select order length as a multiple of the actual length.
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4. Always heat the duct ends first.

**Heat Shrink Sleeve Sizes for Internal Grouted Applications**

<table>
<thead>
<tr>
<th>DUCT SIZE</th>
<th>STRAND SYSTEM</th>
<th>BAR SYSTEM</th>
<th>HEAT SHRINK SLEEVE SIZE</th>
<th>PART NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>1&quot; x 3&quot; (25mm x 76mm)</td>
<td>4 - 0.6&quot;</td>
<td>1 - 3/4&quot;</td>
<td>PLA-63-450 YE</td>
<td>U00044063</td>
</tr>
<tr>
<td>2 - 3/8&quot; (58mm)</td>
<td>7 - 0.6&quot;</td>
<td>PMA-90/30-450 BK</td>
<td>U00044030</td>
<td></td>
</tr>
<tr>
<td>3&quot; (76mm)</td>
<td>PMA-120/40-450 BK</td>
<td>U00044040</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 - 3/8&quot; (58mm)</td>
<td>12 - 0.6&quot;</td>
<td>PLA-90-450 YE</td>
<td>U00044090</td>
<td></td>
</tr>
<tr>
<td>4&quot; (100mm)</td>
<td>2 - 1/2&quot;</td>
<td>PLA-115-450 BK</td>
<td>U00044115</td>
<td></td>
</tr>
<tr>
<td>4 - 1/2&quot; (110mm)</td>
<td>19 - 0.6&quot;</td>
<td>PLA-125-450 YE</td>
<td>U00044125</td>
<td></td>
</tr>
<tr>
<td>5 - 1/8&quot; (130mm)</td>
<td>27 - 0.6&quot;</td>
<td>PLA-160-450 BK</td>
<td>U00044160</td>
<td></td>
</tr>
<tr>
<td>3&quot; SDR 17 HDPE PIPE</td>
<td>31 - 0.6&quot;, 37 - 0.8&quot;</td>
<td>PLA-63-450 YE</td>
<td>U00044063</td>
<td></td>
</tr>
</tbody>
</table>

**Dimensions:**

Inches (mm) for reference only.

**Heat Shrink Sleeve Sizes for Internal Grouted Applications**

<table>
<thead>
<tr>
<th>Date: 05-30-20</th>
<th>Name: S1L</th>
<th>Part Numbers: SEE TABLE ABOVE</th>
<th>Drawing Number: U00044000</th>
</tr>
</thead>
</table>

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