

- NOTES:
- REQUIRED REINFORCING BARS ARE NOT SHOWN ON THIS DRAWING.
  - MAXIMUM ANGULAR MISALIGNMENT WHEN USING ANCHOR NUT: ±2°.
  - CENTER TO CENTER, END AND EDGE DISTANCE DEPENDS ON THE LOCATION OF THE BAR AND CONCRETE STRENGTH, (SEE TABLE).
  - C/C DISTANCE = 2 X END DISTANCE - 2 X CONCRETE COVER (2" ASSUMED). TIGHTER C/C DISTANCE SHOULD BE EVALUATED.
  - GTI DUCT IS DELIVERED IN STRAIGHT SECTIONS AND IS NOT INTENDED TO BE COILED.
  - BURSTING REINFORCEMENT IS NOT SHOWN AND WILL BE INCLUDED WITH THE SHOP DRAWINGS.

Plate Type	fci, ksi	Depth, D (in)	Minimum distances, in	
			End dist, E	c/c dist, C
Square	5.5	11.0	5.89	7.78
	5.0	12.0	6.41	8.83
	4.5	13.0	6.98	9.95
Rectangular	4.0	15.0	8.03	12.05
	5.0	9.0	8.55	13.10
	4.5	10.0	9.50	15.00
4.0	12.0	11.40	18.80	

Plate Type	Part No	Width, in	Length, in	Thickness, in
Square	B36E22510	7	7.5	1.75
Rectangular	B36E22610	5	9.5	2

APPROVED BY FDOT 9-22-08

PART NUMBER	DESCRIPTION	MATERIAL SPECIFICATION
B36E22510 OR B36E22610	7"x7.5"x1.75" SQ. OR 5"x9.5"x2" RECT. BEARING PL. W/EXIT 2 1/4" x 3/16" WALL 5 1/2" LONG MECHANICAL TUBING PIPE & BOLT HOLES, GALV.	STEEL PLATE, ASTM A36, GALVANIZED
B36E50700	BAR GROUT CAP WITH O-RING	NYLON 6, 20% GLASS FIBER FILLED CAP
00 00 783 00 00 774	3/8"-16UNC HEX BOLT 3-1/4" LONG NARROW WASHER	316L STAINLESS STEEL
B36E24210	1-3/8" GROUTABLE ANCHOR NUT	FORGING, NORMALIZED C1045
00 00 647	1/2" BT PLUG (NIAGARA PLASTICS #BT0500)	NYLON
00 00 672/4/6	1/2" NPT NIPPLE, LENGTH AS REQUIRED	SCH 40 BLACK WELDED STEEL
00 00 847	3/4" BT PLUG (NIAGARA PLASTICS #BT0750)	NYLON
00 00 872/4/6	3/4" NPT NIPPLE, LENGTH AS REQUIRED	SCH 40 BLACK WELDED STEEL
00 00 634	1/2" NPT VALVE	PVC
00 00 834	3/4" NPT VALVE	PVC
U00220200	59mm CORRUGATED DUCT	PPEX3 PLASTIC
U00220205	59mm DUCT COUPLER	HDPE
PMA-90/30-150-YE	HEAT SHRINK TUBING, 4" (102mm) LONG	ACCORD. TO FDOT SPEC. P.T. SEC. 462-4.2,6,3
B36E CUT	1-3/8" THREADBAR	ASTM A722 TYPE II STEEL

OWNER:

CONTRACTOR:

PROJECT:

**1-3/8" THREADBAR PT BAR SYSTEM 100 FOR BLOCKOUT AND/OR SURFACE MOUNT**

DATE: 08-13-07 DWG: A.T./G.M. CHK: S. N. APP: E. A.

THIS DRAWING, THE PERTINENT ENCLOSURES, DESCRIPTIONS, CALCULATIONS ETC. AND THEIR CONTENTS ARE THE PROPERTY OF DYWIDAG SYSTEMS INTERNATIONAL, USA, INC. THEY ARE NOT ALLOWED TO BE DUPLICATED WITHOUT OUR PERMISSION. THEY ARE ALSO NOT TO BE SHOWN OR EXPLAINED FOR ANY REASON TO A THIRD PARTY OTHER THAN FOR REASONS EXPRESSLY INTENDED BY DSI'S SUBMITTAL TO THE ORIGINAL RECEIVER. THEY HAVE TO BE RETURNED UPON REQUEST.

DYWIDAG SYSTEMS INTERNATIONAL, USA INC. DOES NOT ASSUME ANY LIABILITY FOR THE DESIGN OF THIS STRUCTURE. THIS SHOP DRAWING IS INTENDED TO PROVIDE POST TENSIONING DETAILS ONLY.

REV.	DATE	ISSUE DESCRIPTION	NAME	CHKD.	JOB NUMBER
1	11-07-07	FOR APPROVAL	G.M.	S.N.	
2	12-11-07	FOR APPROVAL	G.M.	S.N.	
3	08-15-08	FOR APPROVAL	G.M.	S.N.	

SCALE: 1:3

DRAWING NUMBER: PT 36E 024

DYWIDAG-SYSTEMS INTERNATIONAL, USA, INC.  
 POST TENSIONING / REINFORCING UNIT PHONE: 630-739-1100  
 320 MARMON DRIVE - BOLINGBROOK, IL FAX: 630-739-6155

**CAUTION** WHEN USING HIGH STRENGTH DYWIDAG THREADBAR® (GRADE 150,160 & 178)  
 DO NOT WELD TO BAR.  
 DO NOT USE BAR AS GROUND CONNECTION FOR WELDING.  
 DO NOT ALLOW HOT SLAG OR SPARKS TO TOUCH BAR.  
 DO NOT DAMAGE BAR SURFACE.  
 DO NOT USE BARS WITH KINKS OR SHARP BENDS.  
 FAILURE TO HEED THIS WARNING COULD CAUSE BAR TO BREAK RESULTING IN INJURY OR DAMAGE

**WARNING:** READ AND COMPLY WITH ALL APPLICABLE SAFETY AND OPERATING INSTRUCTIONS AND WARNINGS FOR THREADBAR STRESSING BEFORE STARTING ANY WORK OR OPERATION.

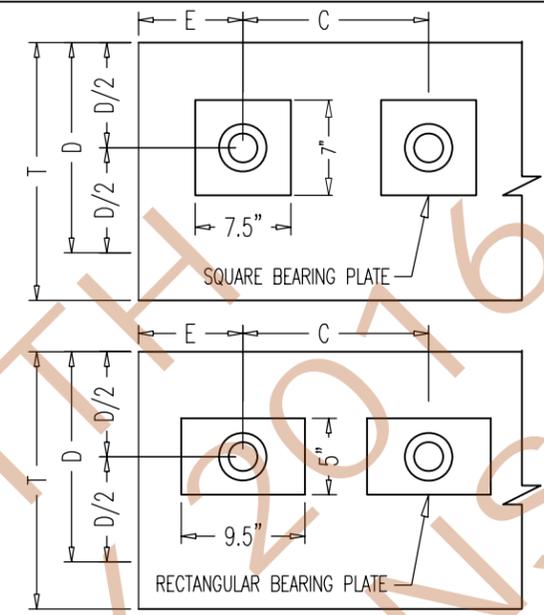
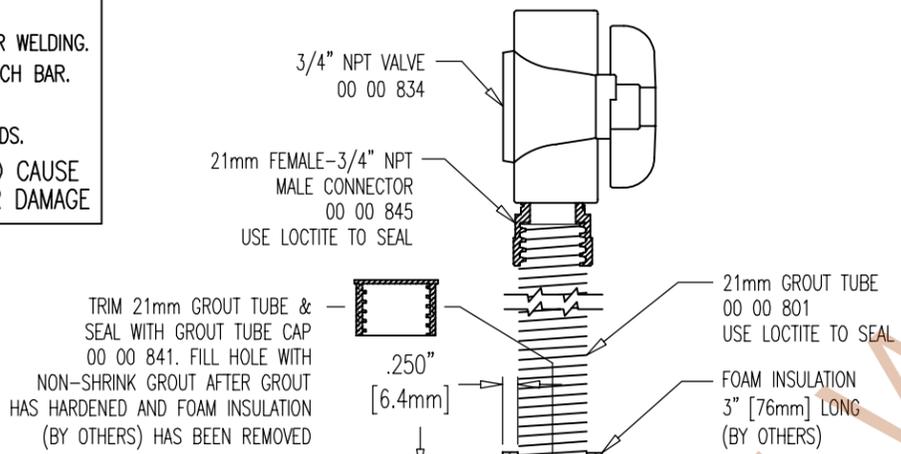
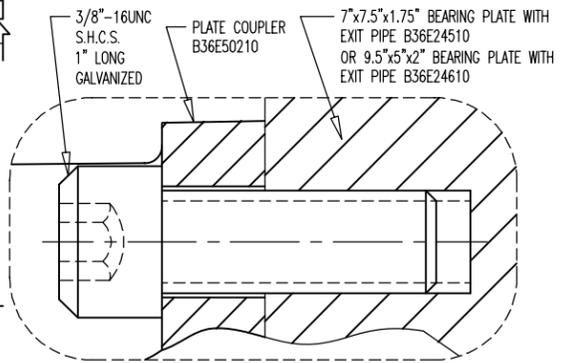
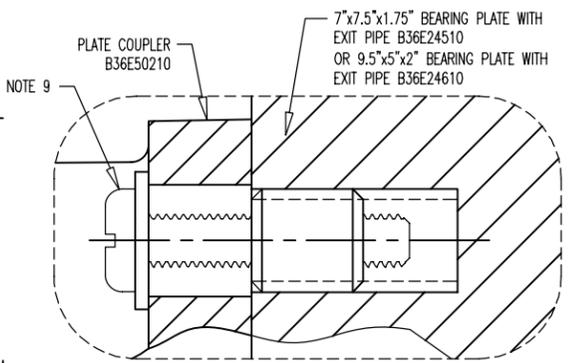
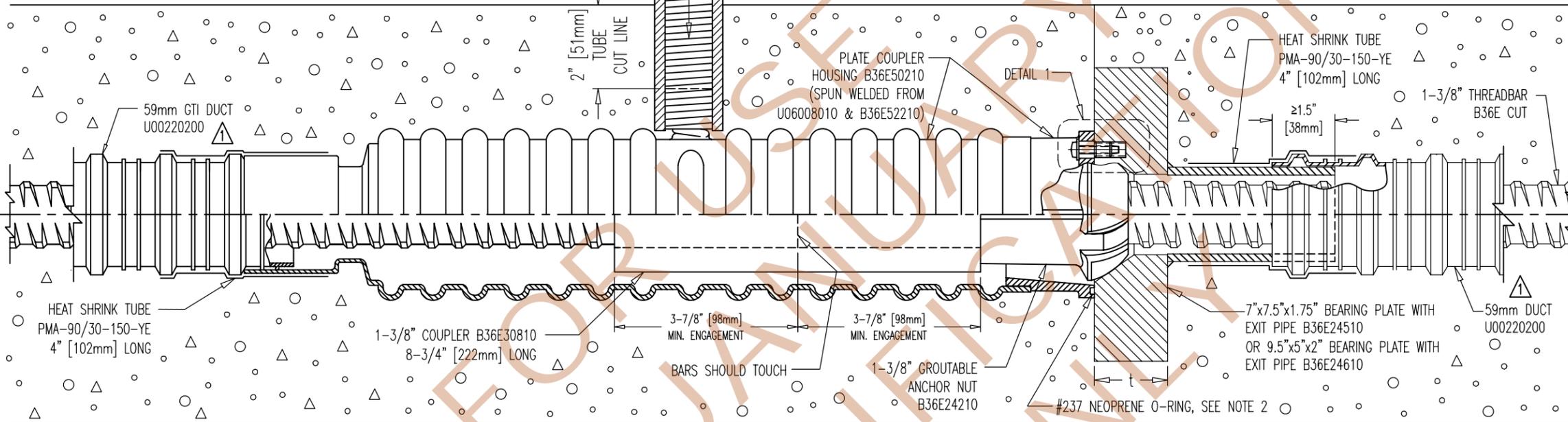


Plate Type	fci, ksi	Depth, D (in)	Minimum distances, in	
			End dist, E	c/c dist, C
Square	5.5	11.0	5.89	7.78
	5.0	12.0	6.41	8.83
	4.5	13.0	6.98	9.95
	4.0	15.0	8.03	12.05
Rectangular	5.0	9.0	8.55	13.10
	4.5	10.0	9.50	15.00
4.0	12.0	11.40	18.80	

Plate Type	Part No	Width, in	Length, in	Thickness, in
Square	B36E24510	7	7.5	1.75
Rectangular	B36E24610	5	9.5	2



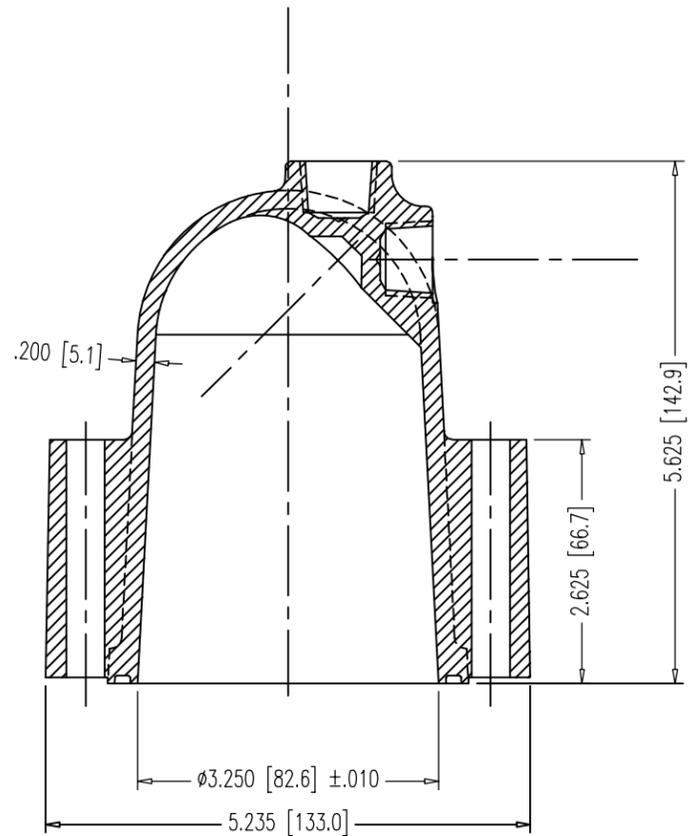
PART NUMBER	DESCRIPTION	MATERIAL SPECIFICATION
B36E CUT	1-3/8" Ø THREADBAR	ASTM A722 TYPE II STEEL
B36E24510 OR B36E24610	7"x7.5"x1.75" BEARING PLATE W/EXIT PIPE 5"x9.5"x2" BEARING PLATE W/EXIT PIPE	STEEL PLATE, ASTM A36, HOT DIPPED GALVANIZED
B36E50210	PLATE COUPLER HOUSING W/O-RING	POLYETHYLENE (U06008010 & B36E52210) W/NEOPRENE O-RING
B36E30810	1-3/8" COUPLER	STEEL BAR, COLD DRAWN, AISI 1117
B36E24210	1-3/8" GROUTABLE ANCHOR NUT	STEEL FORGING, ASTM A521-76 (1987) NORMALIZED BHN=180-220
U00220200	59mm CORRUGATED DUCT	PPEX3 PLASTIC
PMA-90/30-150-YE	HEAT SHRINK TUBING 4" (102mm) LONG	ACCORD. TO FDOT SPEC. P.T. SEC. 462-4,2,6,3
00 00 801	21mm GROUT TUBE	POLYETHYLENE (HARD, BLACK)
00 00 845	21mm FEMALE-3/4" NPT MALE CONNECTOR	20% GLASS FILLED NYLON
00 00 834	3/4" NPT VALVE	PVC
00 00 841	21mm GROUT TUBE CAP	H.D.P.E.
BY OTHERS	FOAM INSULATION	FOAM RUBBER
ANS	THREADED INSERT (2 REQ'D)	BLACK-FINISH STEEL, McMASTER-CARR #90248A068
ANS	10/32 PAN HEAD SLOTTED 1" (2 REQ'D)	NYLON, McMASTER-CARR #93135A833
ANS	3/8"-16UNC S.H.C.S. 1" LONG (4) REQ'D	ULTRA-COATED ALLOY, McM CARR #91274A308 OR EQUIV. (CIP CONCRETE)
ANS	10/32 WASHER (2) REQ'D	NYLON

- NOTES:
- REINFORCING BARS ARE NOT SHOWN ON THIS DRAWING.
  - MAXIMUM ANGULAR MISALIGNMENT WHEN USING ANCHOR NUT: ±1°.
  - CENTER TO CENTER, END AND EDGE DISTANCE DEPENDS ON THE LOCATION OF THE BAR AND CONCRETE STRENGTH, (SEE TABLE).
  - C/C DISTANCE = 2 X END DISTANCE - 2 X CONCRETE COVER (2" ASSUMED). TIGHTER C/C DISTANCE SHOULD BE EVALUATED.
  - GTI DUCT IS DELIVERED IN STRAIGHT SECTIONS AND IS NOT INTENDED TO BE COILED.
  - BURSTING REINFORCEMENT IS NOT SHOWN AND WILL BE INCLUDED WITH THE SHOP DRAWINGS.
  - PART B36E52210 IS CONNECTED TO U06008010 TO CREATE PART B36E50210.
  - INSTALL #237 NEOPRENE O-RING IN GROOVE USING DROPS OF LIQUID ADHESIVE BEFORE SHIPPING.
  - FOR PRE-CAST SEGMENTS, USE (2) THREADED INSERTS WITH 3/8"-16UNC OD, 10-32 ID, .406" LONG, McMASTER CARR #90248A068 OR EQUIVALENT. ALSO USE (2) 10-32 NYLON 6/6 PAN HEAD SLOTTED SCREWS, 1" LONG, McMASTER CARR #93135A833 OR EQUIVALENT WITH NYLON WASHERS. THESE SCREWS ARE RIPPED OUT WHEN SEGMENT IS SEPARATED. REMOVE INSERTS AFTER THE SEGMENTS ARE SEPARATED AND RE-USE.

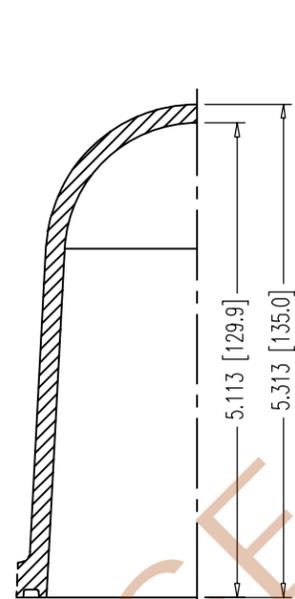
**APPROVED BY FDOT 9-22-08**

OWNER:		DYWIDAG SYSTEMS INTERNATIONAL, USA INC. DOES NOT ASSUME ANY LIABILITY FOR THE DESIGN OF THIS STRUCTURE. THIS SHOP DRAWING IS INTENDED TO PROVIDE POST TENSIONING DETAILS ONLY.						
CONTRACTOR:		WEIGHT	REV.	DATE	ISSUE DESCRIPTION	NAME	CHKD.	JOB NUMBER
PROJECT:		WEIGHT	1	08-15-08	FOR APPROVAL	G.M.	S.N.	
DATE: 12-11-07		SCALE						
DWG: TIRA/G.M.		1:3						
CHK: SN								
APP: EA								
THIS DRAWING, THE PERTINENT ENCLOSURES, DESCRIPTIONS, CALCULATIONS ETC. AND THEIR CONTENTS ARE THE PROPERTY OF DYWIDAG SYSTEMS INTERNATIONAL, USA, INC. THEY ARE NOT ALLOWED TO BE DUPLICATED WITHOUT OUR PERMISSION. THEY ARE ALSO NOT TO BE SHOWN OR EXPLAINED FOR ANY REASON TO A THIRD PARTY OTHER THAN FOR REASONS EXPRESSLY INTENDED BY DSI'S SUBMITTAL TO THE ORIGINAL RECEIVER. THEY HAVE TO BE RETURNED UPON REQUEST.								
DYWIDAG-SYSTEMS INTERNATIONAL, USA, INC. POST TENSIONING / REINFORCING UNIT PHONE: 630-739-1100 320 MARMON DRIVE - BOLINGBROOK, IL FAX: 630-739-1405								

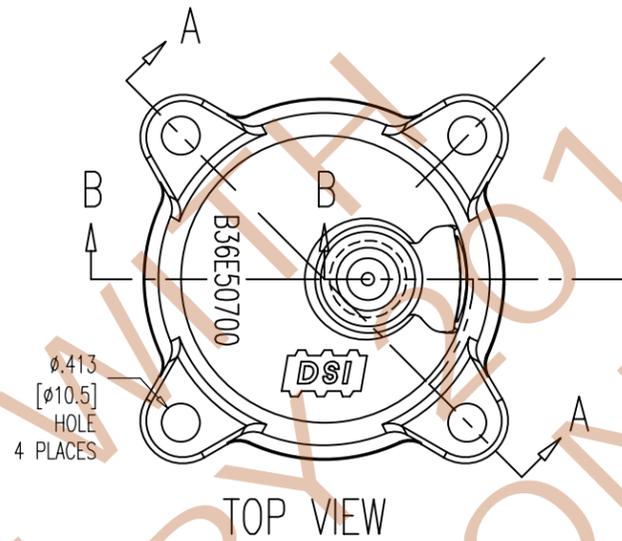




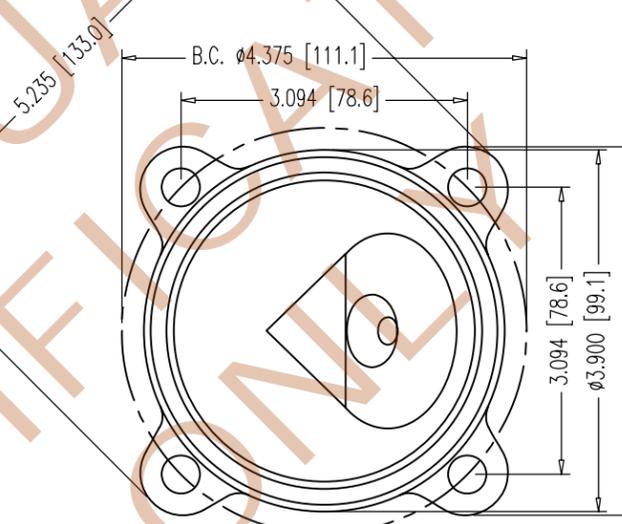
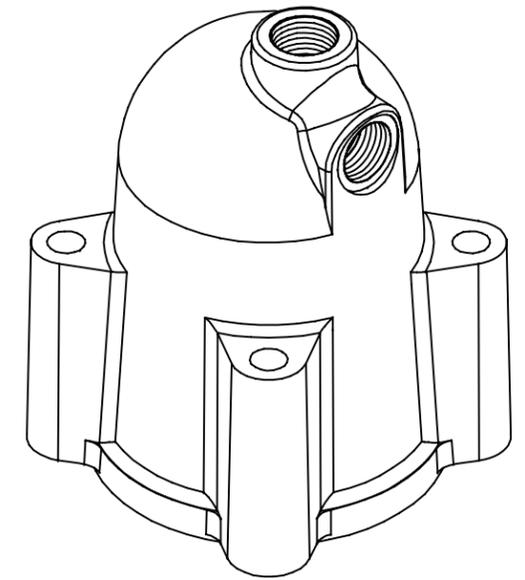
SECTION A-A



SECTION B-B



TOP VIEW



BOTTOM VIEW

NOTES:

1. USE 3/8"-16UNC 316L S.S. HEX BOLTS, 3-1/4" LONG 00 00 783 W/SMALL DIA. WASHER 00 00 774.
2. INSTALL O-RING IN GROOVE USING DROPS OF LIQUID ADHESIVE BEFORE SHIPPING.
3. THE NYLON CELL CLASSIFICATION SHALL CONFORM TO ASTM D5989 AND SHALL BE S-PA0141 (WEATHER RESISTANT), S-PA0231 OR S-PA0401 (TENSILE STRENGTH, YIELD 15000 PSI MIN., WITH UV STABILIZER ADDED).
4. INSTALL #237 O-RING 3-3/8"x3-5/8"x1/8" IN CAP (SEE O-RING SPECIFICATIONS).
5. DRILL 1/2" [12.7] HOLE IN PORT BEING USED-CAUTION-RECOMMEND USING HOLE SAW BIT OR SPADE BIT (BY OTHERS), BE CAREFULL TO PREVENT DAMAGE TO THREADS OR CAP.
6. WHEN PRESSURIZING GROUT CAPS, DO NOT STAND BEHIND CAPS!

Furnish O-ring materials conforming to the following requirements:

Mechanical Properties:

- Shore hardness A ASTM D2240 30 -75
- Ultimate elongation % ASTM D412 > 300
- Tension Set @ 100%, 200% & ultimate elongation ASTM D412 < 5
- Tear Strength Die T , pli ASTM D624 110

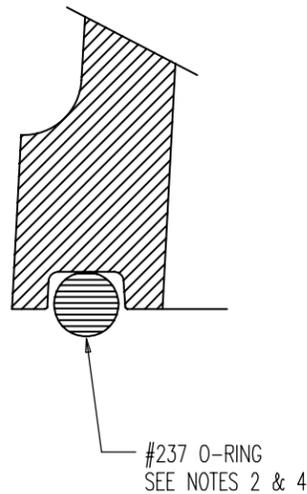
Accelerated Testing:

- Thermal Deterioration 70 hours @ 125 C ASTM D573
- Change in tensile strength % < 3
- Change of elongation % < 25
- Change of hardness % < 5
- Compression Set 22 hours @ 125 C % ASTM D573 < 20
- Volume change due to absorption of H<sub>2</sub>O for 70 hours @ 257<sup>o</sup> F (125<sup>o</sup>C) ASTM D471 ≤ 5 percent

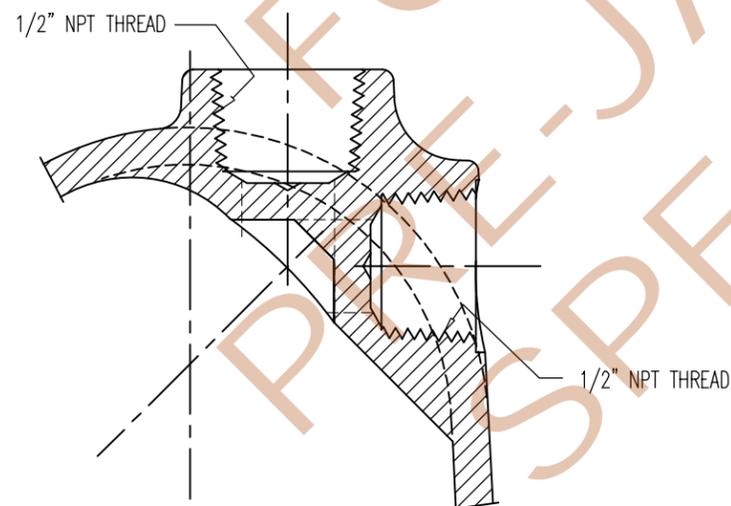
Environmental Resistance

- Ozone Resistance 70 hours @ 40 C & 50 MPa partial ozone pressure ASTM D1149 No Cracks
- Low Temp. @ -20 C ASTM D746 Not Brittle Pass

APPROVED BY FDOT 9-22-08



GROOVE DETAIL  
SCALE 5:1 IN COMPUTER

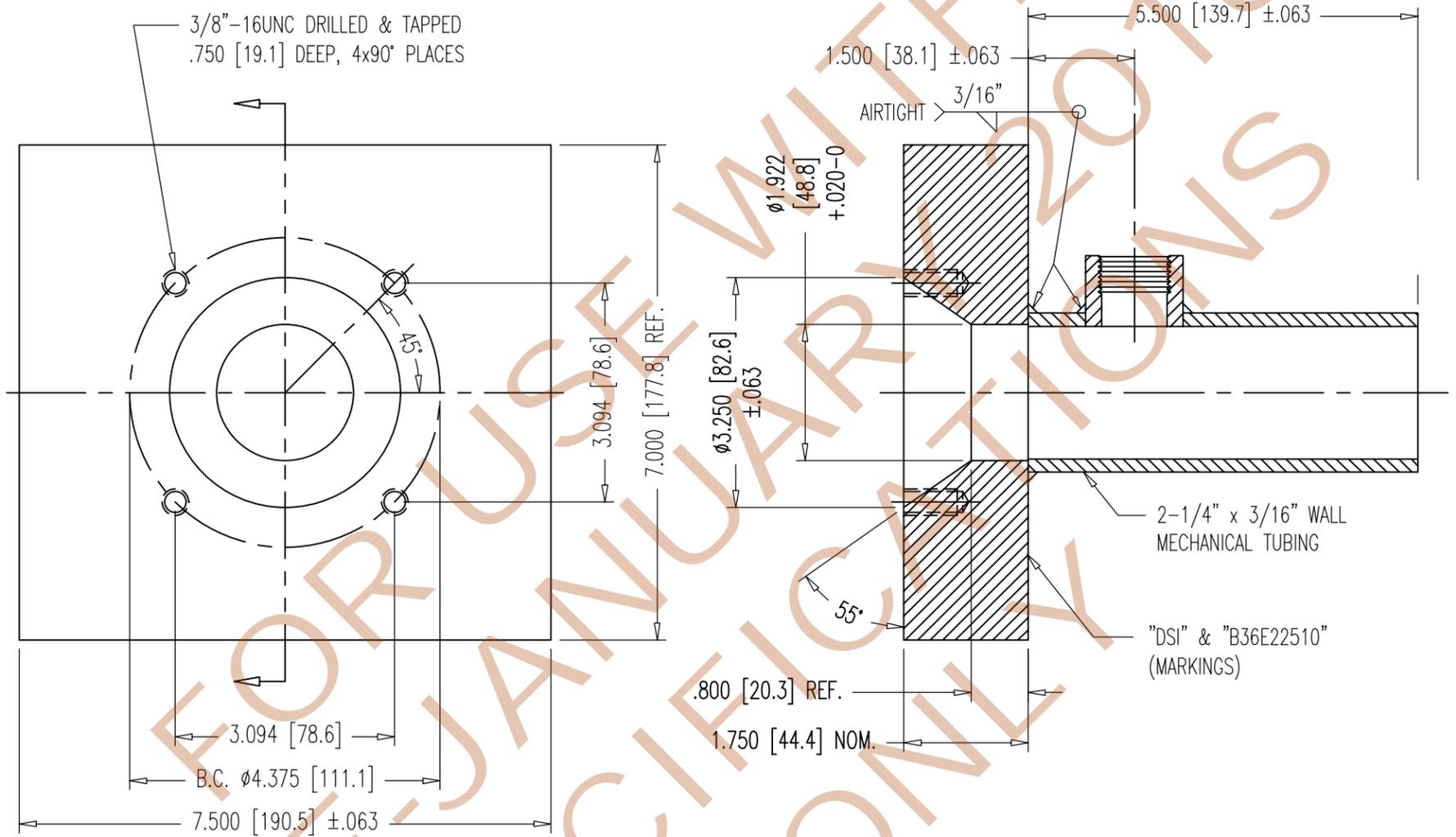


GROUT PORT DETAIL  
SCALE 2:1 IN COMPUTER

**Tolerance Note:**  
All tolerances are based on SP/SPE and should be as follows unless specified otherwise:

Dim.	Tolerance
0-1" =	+/- 0.005"
1-2" =	+/- 0.007"
2-3" =	+/- 0.009"
3-4" =	+/- 0.011"
4-5" =	+/- 0.013"
5-6" =	+/- 0.015"

DIMENSIONS: INCH [mm] mm FOR REFERENCE ONLY		QUALITY PLAN NUMBER: QS60072300P		TOLERANCES: SEE TOLERANCE NOTE		WEIGHT 0.817 LBS.		REV.	DATE	NAME	PART NUMBER: <b>B36E50700</b>
<b>BAR GROUT CAP WITH O-RING FOR ALL 1" &amp; 1-1/4" NUTS AND 1-3/8" ANCHOR NUT</b>				MATERIAL: NYLON 6 20% GLASS FIBER FILLED COLOR: BLACK		SCALE 1:2 UNLESS NOTED					DRAWING NUMBER: <b>B36E50700</b>
DATE: 10-02-06 DWG: G. MALECKI CHK: E.A. APP: K.S.				THIS DRAWING, THE PERTINENT ENCLOSURES, DESCRIPTIONS, CALCULATIONS ETC. AND THEIR CONTENTS ARE THE PROPERTY OF DYWIDAG SYSTEMS INTERNATIONAL, USA, INC. THEY ARE NOT ALLOWED TO BE DUPLICATED WITHOUT OUR PERMISSION. THEY ARE ALSO NOT TO BE SHOWN OR EXPLAINED FOR ANY REASON TO A THIRD PARTY OTHER THAN FOR REASONS EXPRESSLY INTENDED BY DSI'S SUBMITTAL TO THE ORIGINAL RECEIVER, THEY HAVE TO BE RETURNED UPON REQUEST.		DYWIDAG-SYSTEMS INTERNATIONAL, USA, INC. 320 MARMON DRIVE - BOLINGBROOK, IL 60440 PHONE: 630-739-1100 FAX: 630-739-1405					



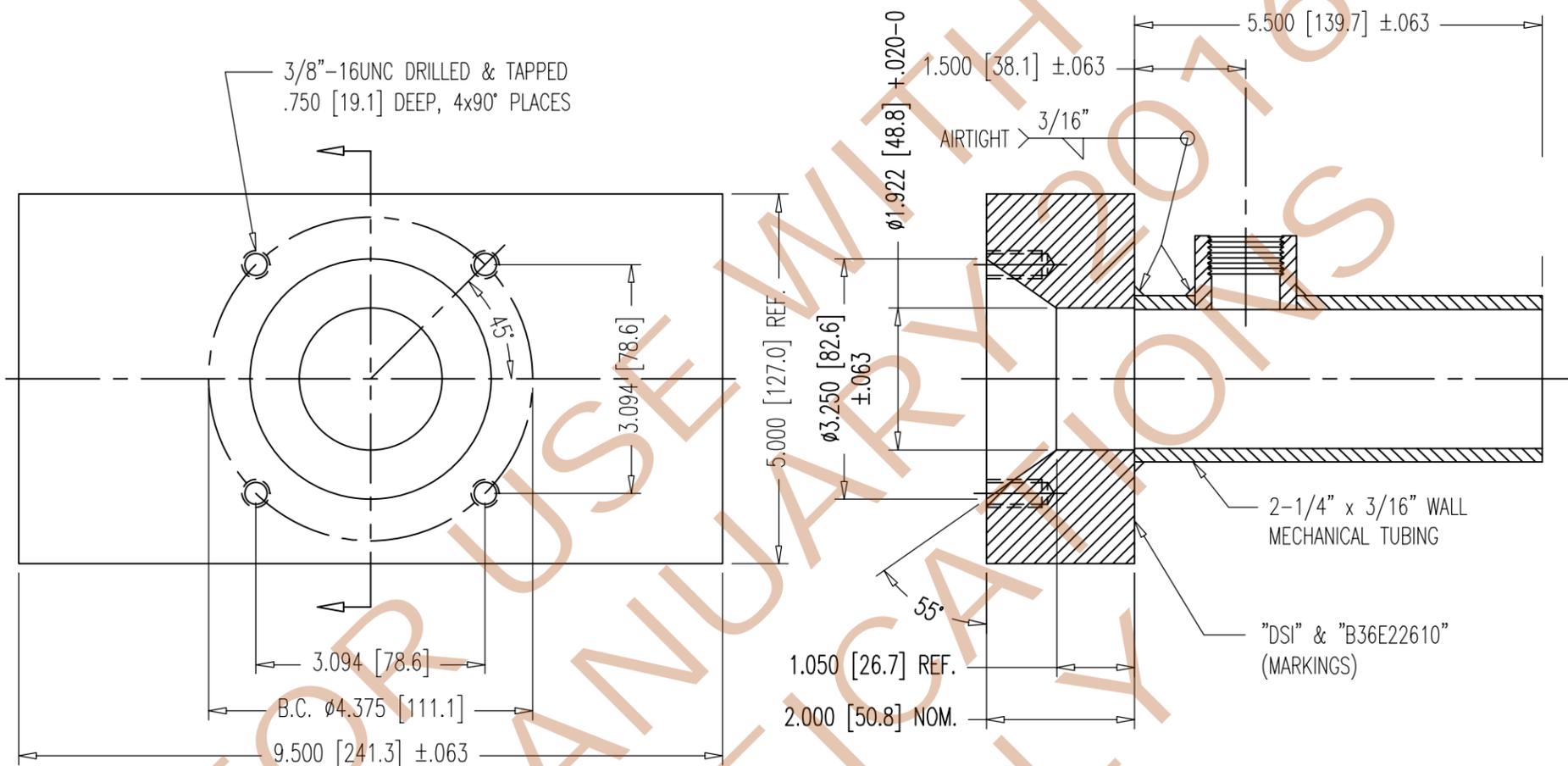
- NOTES:
1. ALSO SUITABLE FOR GR 160 THREADBAR.
  2. PLATE AND PIPE GALVANIZED ACCORDING TO ASTM A123 AFTER WELDING.
  3. 59mm DUCT U00220400 FITS OVER TUBING.
  4. SEE DRAWING B00E21191 FOR RAW MATERIAL PLATE WITHOUT HOLES.

MECHANICAL TUBE MATERIAL SHALL BE A512, A513 OR A519.

APPROVED BY FDOT 9-22-08

DIMENSIONS: INCH [mm] mm FOR REFERENCE ONLY		QUALITY PLAN NUMBER: QBE0021200L		TOLERANCES: ±.020 UNLESS NOTED	WEIGHT: 25.8 LBS.	REV.	DATE	NAME	PART NUMBER: <b>B36E22510</b>
<b>SQUARE BEARING PLATE WITH EXIT PIPE FOR 1-3/8" THREADBAR</b>				PLATE MATERIAL: SEE MAT'L SPEC. PME0021100P	SCALE 1:3				DRAWING NUMBER: <b>B36E22510</b>
DATE: 08-16-07	DWG: G. MALECKI	CHK: S.N.	APP: E.A.	TUBE MATERIAL: SEE ABOVE					
THIS DRAWING, THE PERTINENT ENCLOSURES, DESCRIPTIONS, CALCULATIONS ETC. AND THEIR CONTENTS ARE THE PROPERTY OF <b>DYWIDAG SYSTEMS INTERNATIONAL, USA, INC.</b> THEY ARE NOT ALLOWED TO BE DUPLICATED WITHOUT OUR PERMISSION. THEY ARE ALSO NOT TO BE SHOWN OR EXPLAINED FOR ANY REASON TO A THIRD PARTY OTHER THAN FOR REASONS EXPRESSLY INTENDED BY <b>DSI's</b> SUBMITTAL TO THE ORIGINAL RECEIVER. THEY HAVE TO BE RETURNED UPON REQUEST.						<b>DYWIDAG-SYSTEMS INTERNATIONAL, USA, INC.</b> 320 MARMON DRIVE - BOLINGBROOK, IL 60440 PHONE: 630-739-1100      FAX: 630-739-1405			





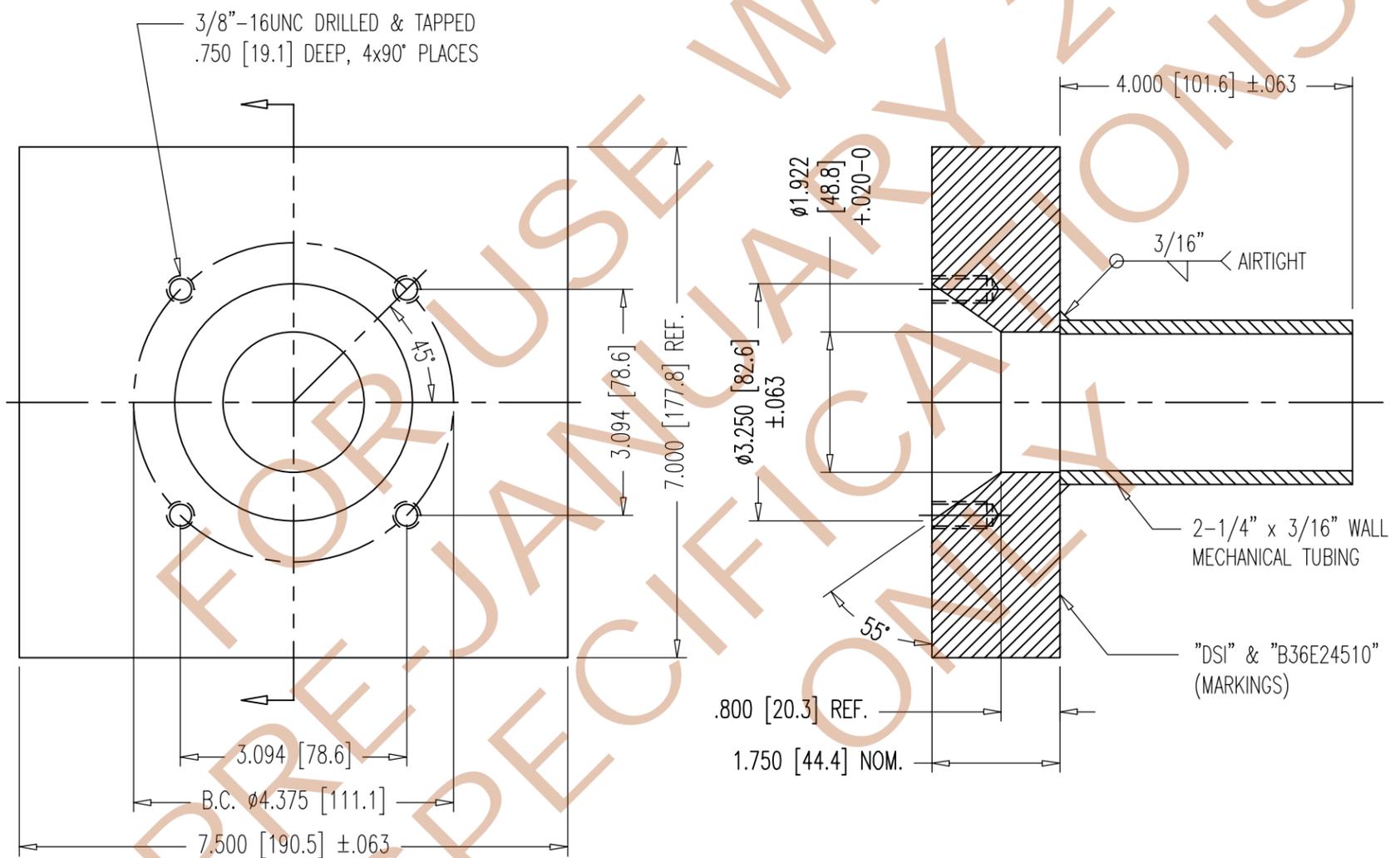
NOTES:

1. ALSO SUITABLE FOR GR 160 THREADBAR.
2. PLATE AND PIPE GALVANIZED ACCORDING TO ASTM A123 AFTER WELDING.
3. 59mm DUCT U00220400 FITS OVER TUBING.
4. SEE DRAWING B00E21192 FOR RAW MATERIAL PLATE WITHOUT HOLES.

MECHANICAL TUBE MATERIAL  
SHALL BE A512, A513 OR A519.

APPROVED BY FDOT 9-22-08

DIMENSIONS: INCH [mm] mm FOR REFERENCE ONLY		QUALITY PLAN NUMBER: QBE0021200L		TOLERANCES: $\pm$ .020 UNLESS NOTED	WEIGHT: 26.5 LBS.	REV.	DATE	NAME	PART NUMBER: <b>B36E22610</b>	
<b>RECT. BEARING PLATE WITH EXIT PIPE FOR 1-3/8" THREADBAR</b>				PLATE MATERIAL: SEE MAT'L SPEC. PME0021100P	SCALE 1:3				DRAWING NUMBER: <b>B36E22610</b>	
DATE: 08-16-07	DWG: G. MALECKI	CHK: S.N.	APP: E.A.	TUBE MATERIAL: SEE ABOVE						
THIS DRAWING, THE PERTINENT ENCLOSURES, DESCRIPTIONS, CALCULATIONS ETC. AND THEIR CONTENTS ARE THE PROPERTY OF <b>DYWIDAG SYSTEMS INTERNATIONAL, USA, INC.</b> THEY ARE NOT ALLOWED TO BE DUPLICATED WITHOUT OUR PERMISSION. THEY ARE ALSO NOT TO BE SHOWN OR EXPLAINED FOR ANY REASON TO A THIRD PARTY OTHER THAN FOR REASONS EXPRESSLY INTENDED BY <b>DSI's</b> SUBMITTAL TO THE ORIGINAL RECEIVER. THEY HAVE TO BE RETURNED UPON REQUEST.				<b>DYWIDAG-SYSTEMS INTERNATIONAL, USA, INC.</b> 320 MARMON DRIVE - BOLINGBROOK, IL 60440 PHONE: 630-739-1100      FAX: 630-739-1405						

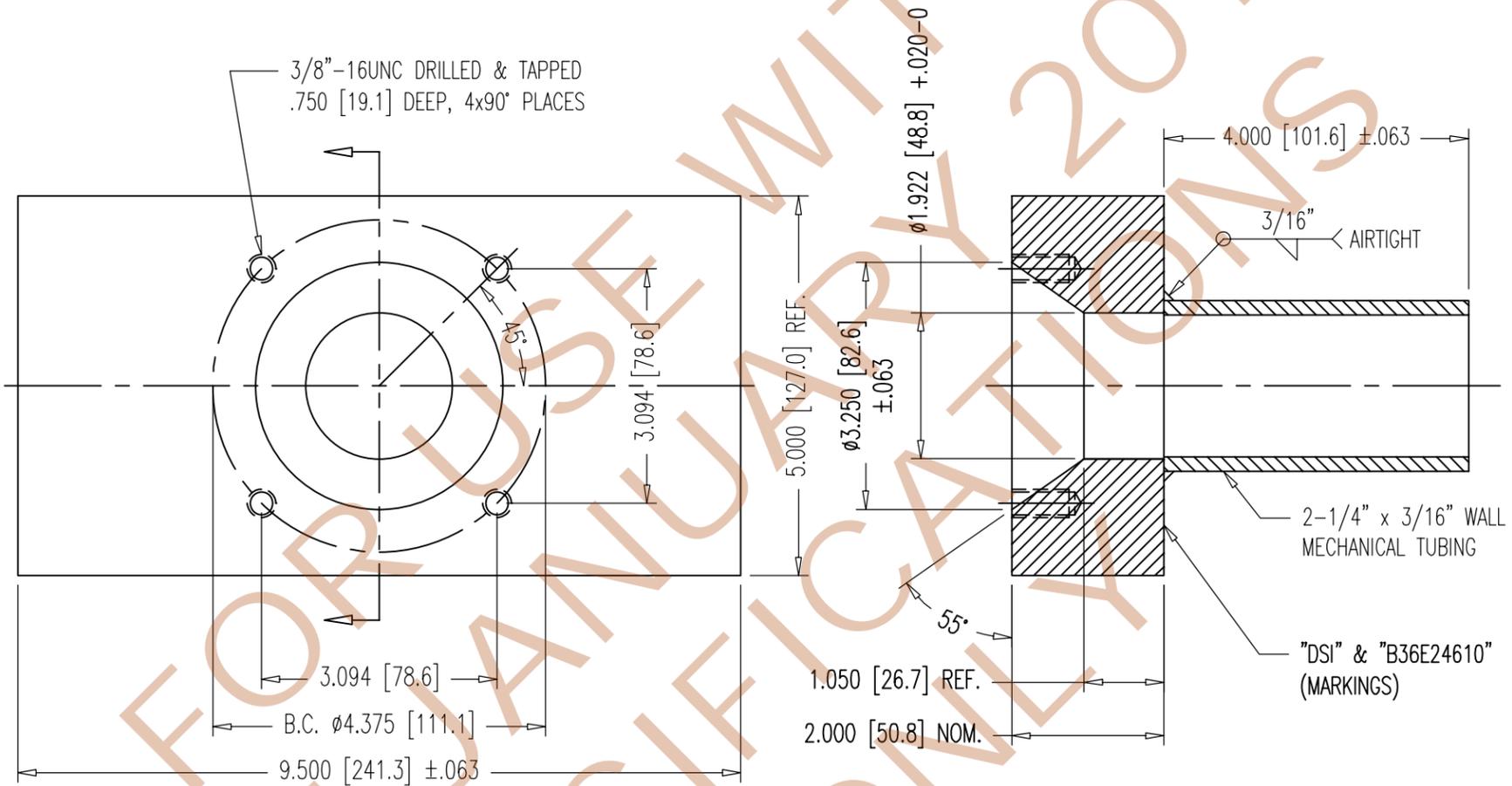


- NOTES:
1. ALSO SUITABLE FOR GR 160 THREADBAR.
  2. PLATE AND PIPE GALVANIZED ACCORDING TO ASTM A123 AFTER WELDING.
  3. 59mm DUCT U00220400 FITS OVER TUBING.
  4. SEE DRAWING B00E21191 FOR RAW MATERIAL PLATE WITHOUT HOLES.

MECHANICAL TUBE MATERIAL  
SHALL BE A512, A513 OR A519.

APPROVED BY FDOT 9-22-08

DIMENSIONS: INCH [mm] mm FOR REFERENCE ONLY		QUALITY PLAN NUMBER: QBE0021200L		TOLERANCES: ±.020 UNLESS NOTED	WEIGHT: 25.8 LBS.	REV.	DATE	NAME	PART NUMBER: <b>B36E24510</b>	
<b>SQUARE BEARING PLATE WITH EXIT PIPE FOR 1-3/8" THREADBAR</b>				PLATE MATERIAL: SEE MAT'L SPEC. PME0021100P	SCALE 1:3				DRAWING NUMBER: <b>B36E24510</b>	
DATE: 12-04-07	DWG: G. MALECKI	CHK: S.N.	APP: E.A.	TUBE MATERIAL: SEE ABOVE						
THIS DRAWING, THE PERTINENT ENCLOSURES, DESCRIPTIONS, CALCULATIONS ETC. AND THEIR CONTENTS ARE THE PROPERTY OF <b>DYWIDAG SYSTEMS INTERNATIONAL, USA, INC.</b> THEY ARE NOT ALLOWED TO BE DUPLICATED WITHOUT OUR PERMISSION. THEY ARE ALSO NOT TO BE SHOWN OR EXPLAINED FOR ANY REASON TO A THIRD PARTY OTHER THAN FOR REASONS EXPRESSLY INTENDED BY <b>DSI's</b> SUBMITTAL TO THE ORIGINAL RECEIVER. THEY HAVE TO BE RETURNED UPON REQUEST.				DYWIDAG-SYSTEMS INTERNATIONAL, USA, INC. 320 MARMON DRIVE - BOLINGBROOK, IL 60440 PHONE: 630-739-1100			FAX: 630-739-1405			



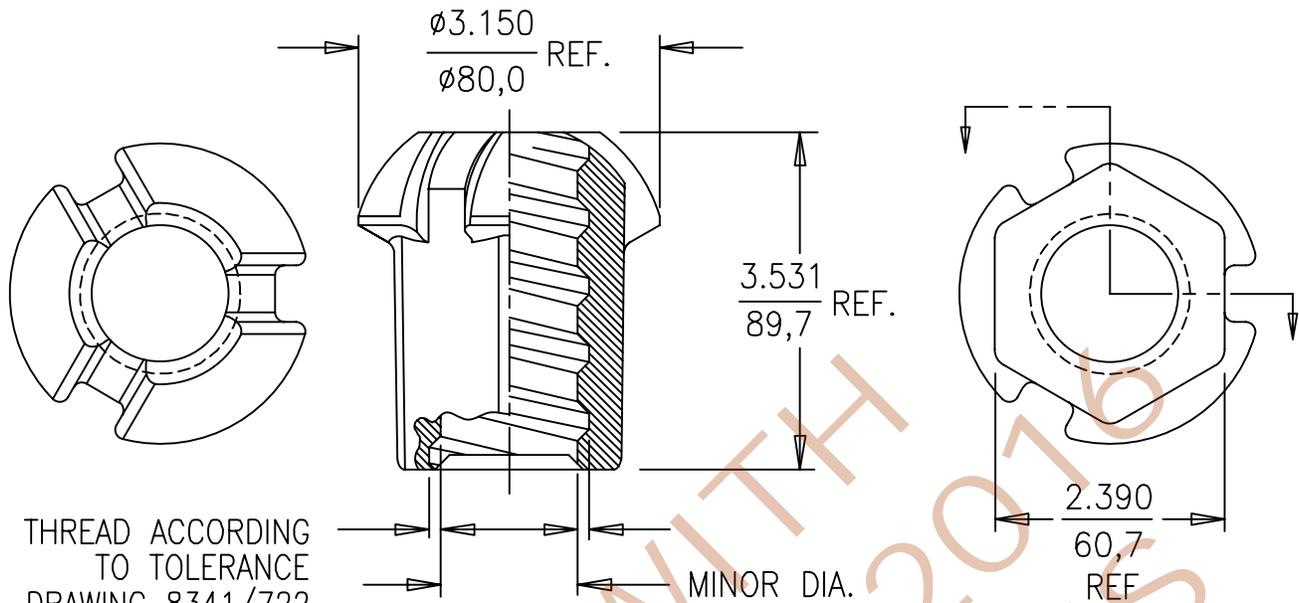
PRE-SAMPLE WITH 2016 FOR SPECIFICATION ONLY

- NOTES:
1. ALSO SUITABLE FOR GR 160 THREADBAR.
  2. PLATE AND PIPE GALVANIZED ACCORDING TO TO ASTM A123 AFTER WELDING.
  3. 59mm DUCT U00220400 FITS OVER TUBING.
  4. SEE DRAWING B00E21192 FOR RAW MATERIAL PLATE WITHOUT HOLES.

MECHANICAL TUBE MATERIAL SHALL BE A512, A513 OR A519.

APPROVED BY FDOT 9-22-08

DIMENSIONS: INCH [mm] mm FOR REFERENCE ONLY	QUALITY PLAN NUMBER: QBE0021200L	TOLERANCES: ±.020 UNLESS NOTED	WEIGHT: 26 LBS.	REV.	DATE	NAME	PART NUMBER: <b>B36E24610</b>
<b>RECT. BEARING PLATE WITH EXIT PIPE FOR 1-3/8" THREADBAR</b>		PLATE MATERIAL: SEE MAT'L SPEC. PME0021100P	SCALE 1:3				DRAWING NUMBER: <b>B36E24610</b>
DATE: 12-04-07	DWG: G. MALECKI	CHK: S.N.	APP: E.A.				
THIS DRAWING, THE PERTINENT ENCLOSURES, DESCRIPTIONS, CALCULATIONS ETC. AND THEIR CONTENTS ARE THE PROPERTY OF <b>DYWIDAG SYSTEMS INTERNATIONAL, USA, INC.</b> THEY ARE NOT ALLOWED TO BE DUPLICATED WITHOUT OUR PERMISSION. THEY ARE ALSO NOT TO BE SHOWN OR EXPLAINED FOR ANY REASON TO A THIRD PARTY OTHER THAN FOR REASONS EXPRESSLY INTENDED BY <b>DSI's</b> SUBMITTAL TO THE ORIGINAL RECEIVER. THEY HAVE TO BE RETURNED UPON REQUEST.				<b>DYWIDAG-SYSTEMS INTERNATIONAL, USA, INC.</b> 320 MARMON DRIVE - BOLINGBROOK, IL 60440 PHONE: 630-739-1100      FAX: 630-739-1405			



THREAD ACCORDING TO TOLERANCE DRAWING 8341/722 EXCEPT FOR MINOR DIA. SPECIFIED BELOW

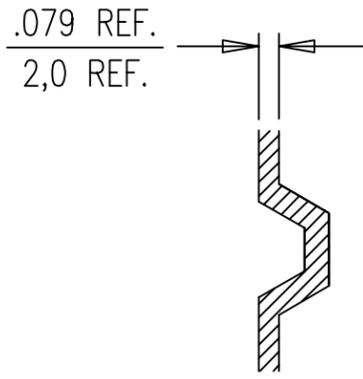
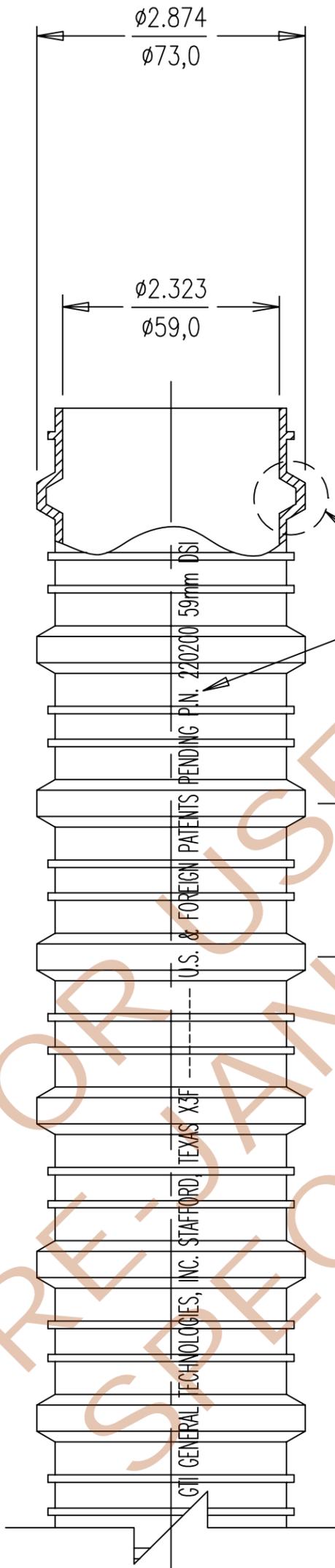
- NOTES:
1. ALL DIMENSIONS ARE FOR UNCOATED PARTS.
  2. I.D. DEVIATES FROM STANDARD THREADFORM DRAWING.

PART NUMBER	HEAT TREATMENT	APPLICATION	MINOR DIA. IN. (mm)
B36E24210	NORMALIZED BHN = 180-220	FOR USE WITH UNCOATED BAR NOT REUSABLE	1.429-1.433 (36.30-36.40)
B36E24220	QUENCHED & TEMPERED BHN = 269-302	FOR USE WITH UNCOATED BAR REUSABLE NUT	1.434-1.438 (36.42-36.53)
B36E24251	QUENCHED & TEMPERED BHN = 269-302	RAW MATERIAL FOR B36E24255 & B36E24258	1.450-1.454 (36.83-36.93)
B36E24255	QUENCHED & TEMPERED BHN = 269-302	PART IS EPOXY COATED EXCEPT FOR THREAD, FOR USE WITH EPOXY COATED BAR	1.450-1.454 (36.83-36.93)
B36E24258	QUENCHED & TEMPERED BHN = 269-302	PART IS HOT DIPPED GALVANIZED EXCEPT FOR THREAD, FOR USE WITH GALVANIZED BAR (ASTM A123)	1.450-1.454 (36.83-36.93)

COATING SPECIFICATIONS		
	EPOXY COATING	GALVANIZING
HARDWARE	ASTM A775 OR AASHTO M284 7-12 MIL OR ASTM A934	ASTM A153
THREADBAR		ASTM A123

APPROVED BY FDOT 9-22-08

DIMENSIONS: INCH/mm mm FOR REFERENCE ONLY		QUALITY PLAN NUMBER: QBE0020100F		TOLERANCES: ±.035 UNLESS NOTED	WEIGHT 3±2 LBS.	REV. 1 2	DATE 03-23-06 11-09-07	NAME C.S. S.Y.	PART NUMBER: <b>SEE TABLE</b>
<b>1-3/8" GROUTABLE ANCHOR NUTS FOR THREADBAR GR. 150</b>				MATERIAL: SEE DRAWING B36E24290	SCALE 1:2				DRAWING NUMBER: <b>B36E24200</b>
DATE: 06-07-05	DWG: G. MALECKI	CHK: H.K.	APP: K.S.	THIS DRAWING, THE PERTINENT ENCLOSURES, DESCRIPTIONS, CALCULATIONS ETC. AND THEIR CONTENTS ARE THE PROPERTY OF <b>DYWIDAG SYSTEMS INTERNATIONAL, USA, INC.</b> THEY ARE NOT ALLOWED TO BE DUPLICATED WITHOUT OUR PERMISSION. THEY ARE ALSO NOT TO BE SHOWN OR EXPLAINED FOR ANY REASON TO A THIRD PARTY OTHER THAN FOR REASONS EXPRESSLY INTENDED BY DSI'S SUBMITTAL TO THE ORIGINAL RECEIVER. THEY HAVE TO BE RETURNED UPON REQUEST.					
				DYWIDAG-SYSTEMS INTERNATIONAL, USA, INC. 320 MARMON DRIVE - BOLINGBROOK, IL 60440 PHONE: 630-739-1100 FAX: 630-739-1405					



DETAIL  
SCALE 1:1

SEE DETAIL

RUNNING LATEX PRINT: 1  
 "GTI GENERAL TECHNOLOGIES, INC. STAFFORD, TEXAS X3F ----- U.S. & FOREIGN PATENTS PENDING P.N. 220200 59mm DSI"  
 (----- = BATCH NUMBER).

MATERIAL SPECIFICATIONS:  
 MANUFACTURE DUCTS FROM NON-COLORED, UNFILLED POLYPROPYLENE MEETING THE REQUIREMENTS OF ASTM D4101 WITH A CELL CLASSIFICATION RANGE OF PP0340B14541 TO PP0340B67884. THE DUCT SHALL BE WHITE IN COLOR CONTAINING ANTIOXIDANT(S) WITH A MINIMUM OXIDATION INDUCTION TIME (OIT) ACCORDING TO ASTM D 3895 OF 20 MINUTES AND CONTAINING A NON-YELLOWING LIGHT STABILIZER.

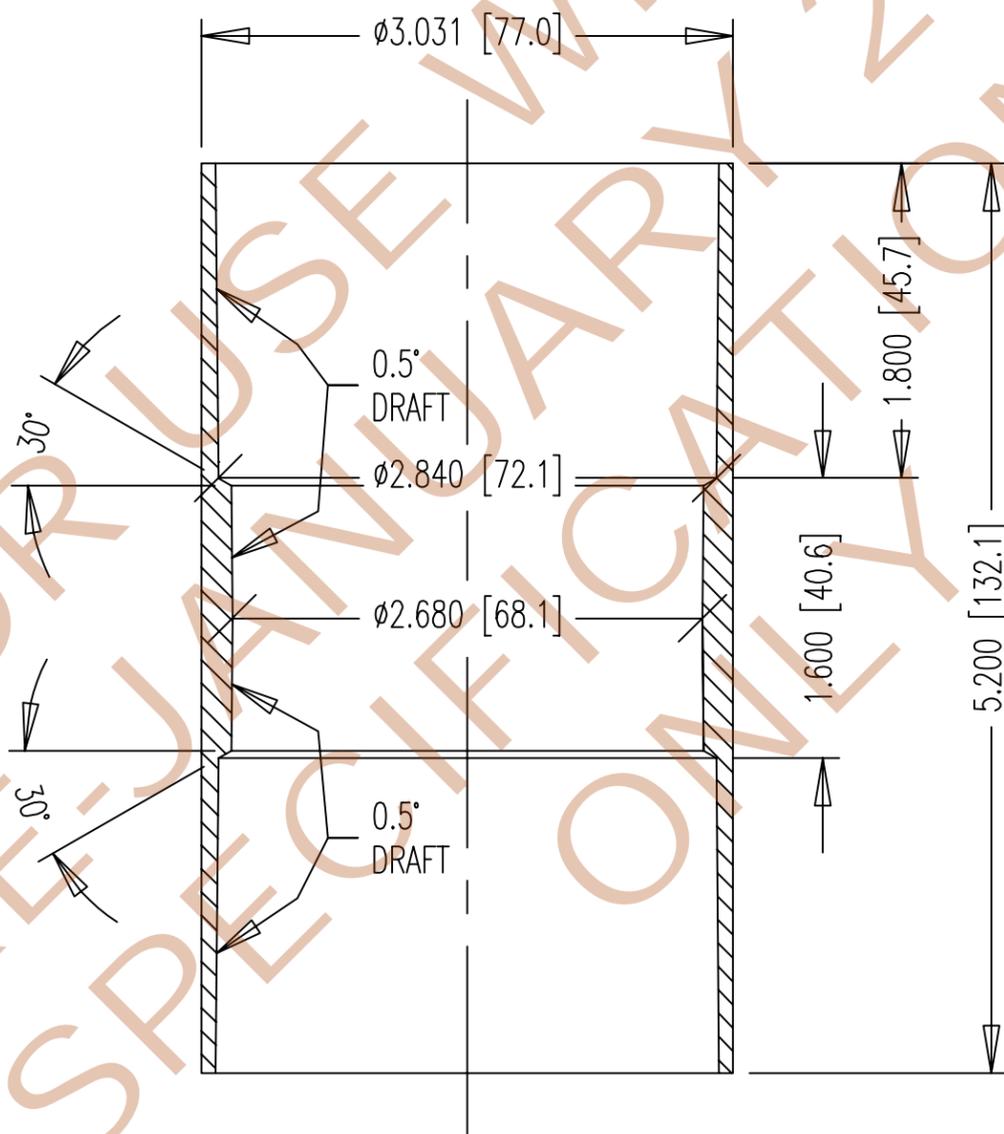
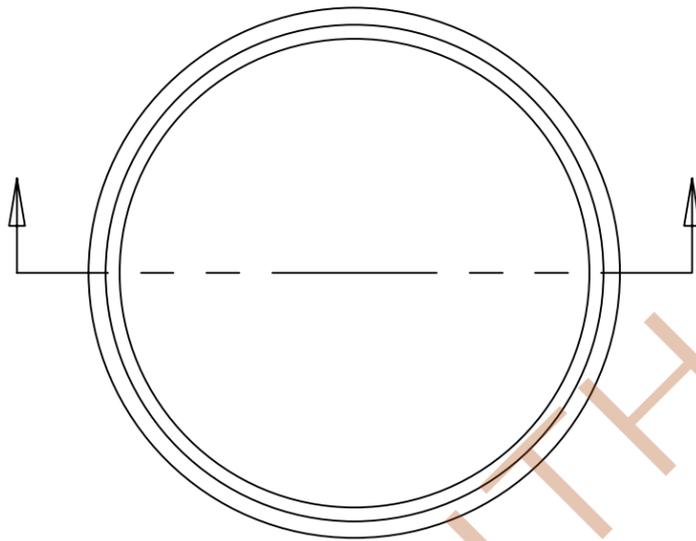
NOTES:

1. GTI GENERAL TECHNOLOGIES, INC. STAFFORD, TEXAS X3F ----- U.S. & FOREIGN PATENTS PENDING P.N. 220200 59mm DSI (----- IS BATCH NO.).
2. REFERENCE GTI DRAWING 220200.
- 1 3. STANDARD FIT FOR 5-0.6", 7-0.5", 7-0.6" AND 9-0.5" STRANDS.
4. THIS DRAWING IS NOT INTENDED FOR MANUFACTURING PURPOSES.
5. Min. BENDING RADIUS,  $R_{min} = 22.8$  FT.
6. DUCT IS DELIVERED IN STRAIGHT SECTIONS AND IS NOT INTENDED TO BE COILED.

1 → PART WAS U00220400.

APPROVED BY FDOT 9-22-08

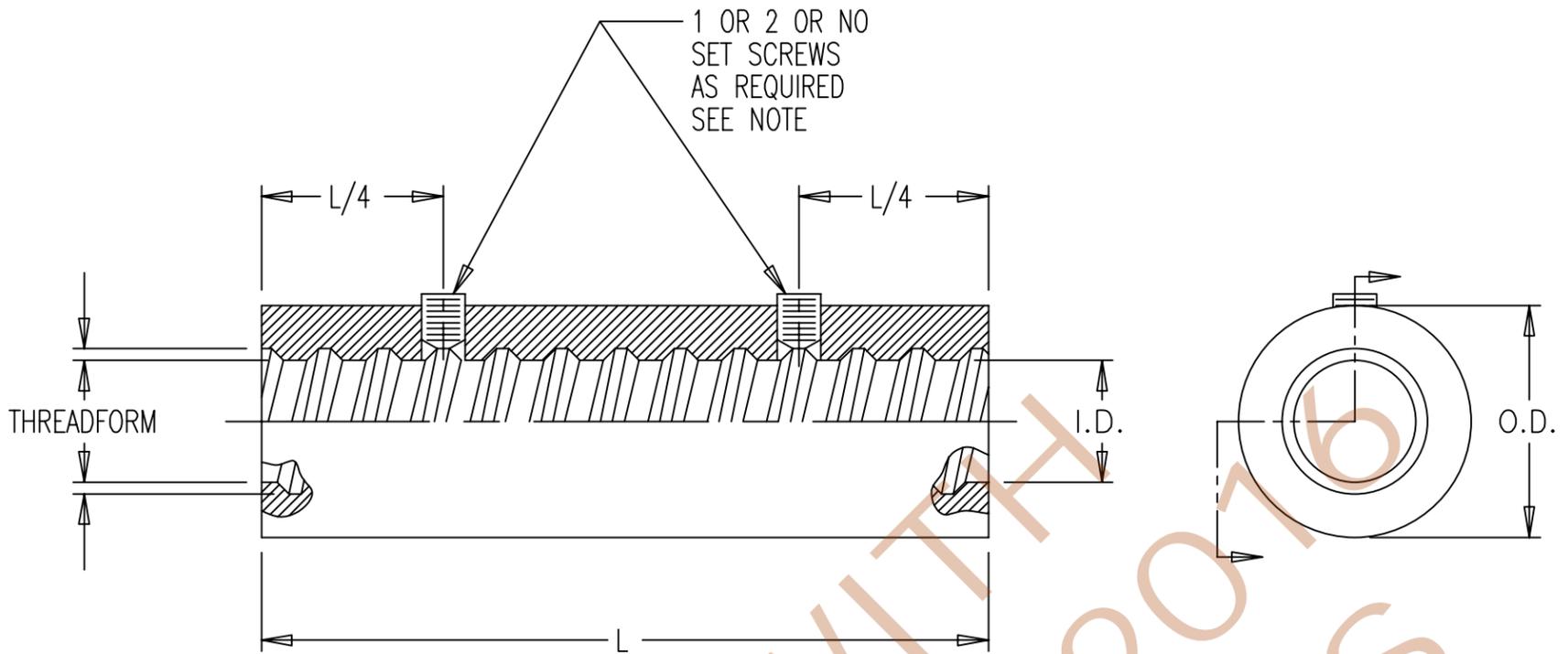
DIMENSIONS: INCH [mm] mm FOR REFERENCE ONLY		QUALITY PLAN NUMBER: QU00041110P		TOLERANCES: ±.020 UNLESS NOTED	WEIGHT 0.296 LBS/FT	REV. 1	DATE 08-04-08	NAME S.N.	PART NUMBER: <b>U00220200</b>
<b>2-3/8" (59mm) CORRUGATED PP DUCT</b>				MATERIAL: SEE ABOVE	SCALE 1:2				DRAWING NUMBER: <b>U00220200</b>
DATE: 09-14-07	DWG: G. MALECKI	CHK: H.K.	APP: K.S.	THIS DRAWING, THE PERTINENT ENCLOSURES, DESCRIPTIONS, CALCULATIONS ETC. AND THEIR CONTENTS ARE THE PROPERTY OF <b>DYWIDAG SYSTEMS INTERNATIONAL, USA, INC.</b> THEY ARE NOT ALLOWED TO BE DUPLICATED WITHOUT OUR PERMISSION. THEY ARE ALSO NOT TO BE SHOWN OR EXPLAINED FOR ANY REASON TO A THIRD PARTY OTHER THAN FOR REASONS EXPRESSLY INTENDED BY <b>DSI's</b> SUBMITTAL TO THE ORIGINAL RECEIVER. THEY HAVE TO BE RETURNED UPON REQUEST.					
<b>DYWIDAG-SYSTEMS INTERNATIONAL, USA, INC.</b> POST TENSIONING / REINFORCING UNIT PHONE: 630-739-1100 320 MARMON DRIVE - BOLINGBROOK, IL FAX: 630-739-1405									



PART WAS U00220440. REFERENCE GTI DWG 220205.

APPROVED BY FDOT 9-22-08

DIMENSIONS: INCH [mm] mm FOR REFERENCE ONLY		QUALITY PLAN NUMBER: QSA0028000P		TOLERANCES: ±.005 UNLESS NOTED	WEIGHT 0.23 LBS.	REV. 1	DATE 08-12-08	NAME S.N.	PART NUMBER: <b>U00220205</b>
<b>Ø2-3/8" (59mm) DUCT COUPLER</b>				MATERIAL: HDPE	SCALE 2:3				DRAWING NUMBER: <b>U00220205</b>
				DATE: 10-25-99	DWG: G. MALECKI	CHK: S.Y.	APP: K.S.	DYWIDAG-SYSTEMS INTERNATIONAL, USA, INC. 320 MARMON DRIVE - BOLINGBROOK, IL 60440 PHONE: 630-739-1100      FAX: 630-739-1405	
THIS DRAWING, THE PERTINENT ENCLOSURES, DESCRIPTIONS, CALCULATIONS ETC. AND THEIR CONTENTS ARE THE PROPERTY OF <b>DYWIDAG SYSTEMS INTERNATIONAL,          USA, INC.</b> THEY ARE NOT ALLOWED TO BE DUPLICATED WITHOUT OUR PERMISSION. THEY ARE ALSO NOT TO BE SHOWN OR EXPLAINED FOR ANY REASON TO A THIRD PARTY OTHER THAN FOR REASONS EXPRESSLY INTENDED BY <b>DSI's</b> SUBMITTAL TO THE ORIGINAL RECEIVER, THEY HAVE TO BE RETURNED UPON REQUEST.									



**NOTES:**

1. ALL COUPLERS ALSO SUITABLE FOR GRADE 160 THREADBARS.
2. LOCATE TAPPED HOLE FOR SET SCREW ON CENTER OF MAJOR DIA OF THREAD.

NOMINAL SIZE	1"	1-1/4"	1-3/8"		
PART NUMBERS FOR COUPLERS:	26mm	32mm	36mm		
WITHOUT SET SCREWS	B26E30810	B32E30810	B36E30810		
WITH 1 SET SCREW	B26E30811	B32E30811	B36E30811		
WITH 2 SET SCREWS	B26E30815	B32E30815	B36E30815		
O.D. (IN./mm)	2.000/50,8	2.375/60,3	2.750/69,9		
I.D. (IN./mm)	1.049/26,6	1.272/32,3	1.433/36,4		
L (IN./mm)	6.250/158,8	6.750/171,4	8.750/222,3		
THREADFORM: 8341/	496	754	722		
SET SCREW SIZE	3/8-16UNC	3/8-16UNC	3/8-16UNC		
TOLERANCE FOR:					
O.D. (IN.)	+0/-0.003	+0/-0.003	+0/-0.004		
I.D. (IN.)	+0/-0.004	+0/-0.004	+0/-0.004		
L (IN.)	±1/16	±1/16	±1/16		
WEIGHT (LBS.)	3.74	5.70	12.20		

APPROVED BY FDOT 9-22-08

DYWIDAG POST-TENSIONING SYSTEMS

DIMENSIONS: INCH/mm  
mm FOR REFERENCE ONLY

QUALITY PLAN NUMBER:  
QB00030800S

DRAWING NUMBER  
B00E30810

FULL LOAD COUPLERS  
FOR GRADE 150 THREADBAR

DATE: 04-10-90 | DWG: G. MALECKI | CHK: | APP:

This drawing, the pertinent enclosures, descriptions, calculations etc. and their contents are the property of DYWIDAG SYSTEMS INTERNATIONAL, USA, INC. They are not allowed to be duplicated with-out our permission. They are also not to be shown or explained for any reason to a third party other than for reasons expressly intended by the original receiver. They have to be returned on request.

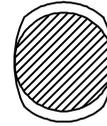
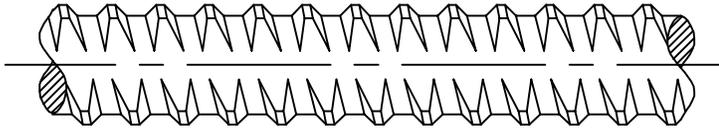
MATERIAL:  
PME0020700B

SCALE  
1:1  
FOR  
1"

REV.	DATE	NAME
4	11-15-94	K.L.
5	03-27-96	C.S.
6	08-12-98	A.W.
7	12-14-98	A.W.
8	08-08-00	A.W.
9	08-09-04	H.K.

DYWIDAG-SYSTEMS INTERNATIONAL, USA, INC.

RIGHT HAND THREAD



	<u>PART NUMBERS</u>	<u>SPECIFICATIONS</u>
FOR BARE BAR:	B36E CUT	ASTM A722 TYPE II
FOR EPOXY COATED BAR:	B36E COAT	ASTM A775 OR AASHTO M284
FOR GALVANIZED BAR:	B36E GALV	ASTM A123, A143 AND DWG PME0000058B

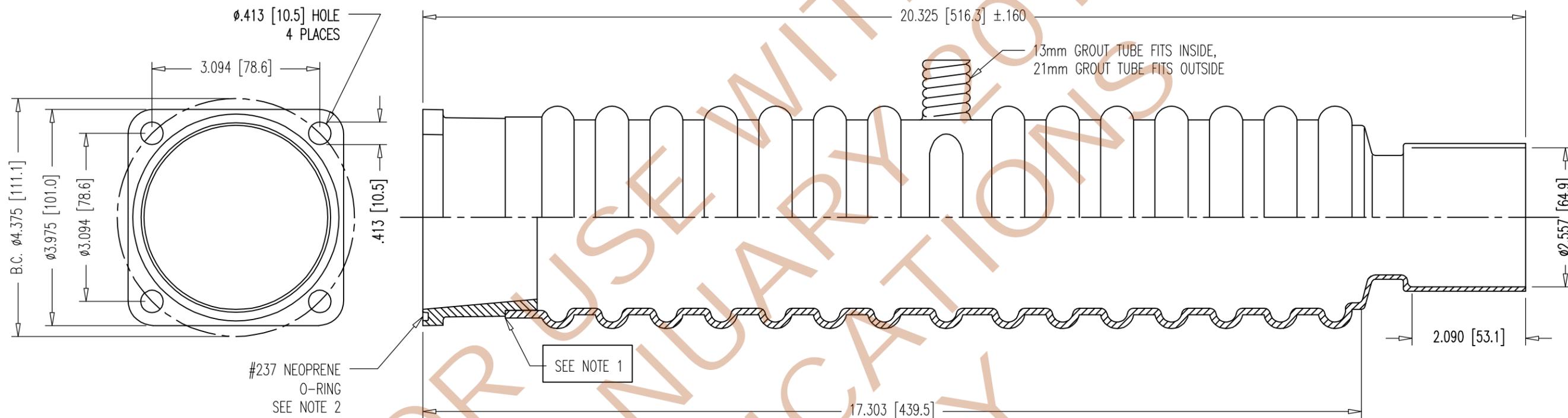
<u>PHYSICAL PROPERTIES</u>	
EFFECTIVE AREA:	1.58 SQ.IN. (1019 SQ.mm)
ULTIMATE STRENGTH:	150 KSI (1034 N/SQ.mm)
ULTIMATE LOAD:	237 KIPS (1054 KN)
YIELD LOAD:	191.2 KIPS (851 KN)
WEIGHT:	5.56 LBS./FT. (8.27 Kg/m)
MAX. BAR $\phi$ INCL. RIBS:	1.63 IN. (41.4mm)
AVERAGE CORE $\phi$ :	1.40 IN. (35.6mm)
PITCH:	0.709 IN. (18.0mm)

NOTE:  
ALL DIMENSIONS APPLY TO BARE BARS ONLY.

**APPROVED BY FDOT 9-22-08**

  $\rightarrow$  METRIC VALUES ADDED.

DYWIDAG POST-TENSIONING SYSTEMS				DIMENSIONS: INCH [mm] mm FOR REFERENCE ONLY		Q.A.		QUALITY PLAN NUMBER: QB00000050B		DRAWING NUMBER B36E00000	
1-3/8" $\phi$ THREADBAR GRADE 150 KSI								REV.	DATE	NAME	
								1	12-11-98	A.W.	
								2	06-13-03	H.K.	
DATE: 12-23-91   DWG: G. MALECKI   CHK: H.K.   APP: K.S.				MATERIAL: SEE ABOVE		SCALE NTS					
This drawing, the pertinent enclosures, descriptions, calculations etc. and their contents are the property of DYWIDAG SYSTEMS INTERNATIONAL, USA, INC. They are not allowed to be duplicated with-out our permission. They are also not to be shown or explained for any reason to a third party other than for reasons expressly intended by the original receiver. They have to be returned on request.								DYWIDAG-SYSTEMS INTERNATIONAL, USA, INC. 			

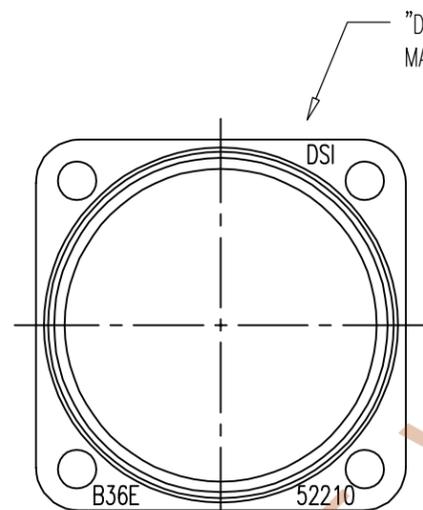
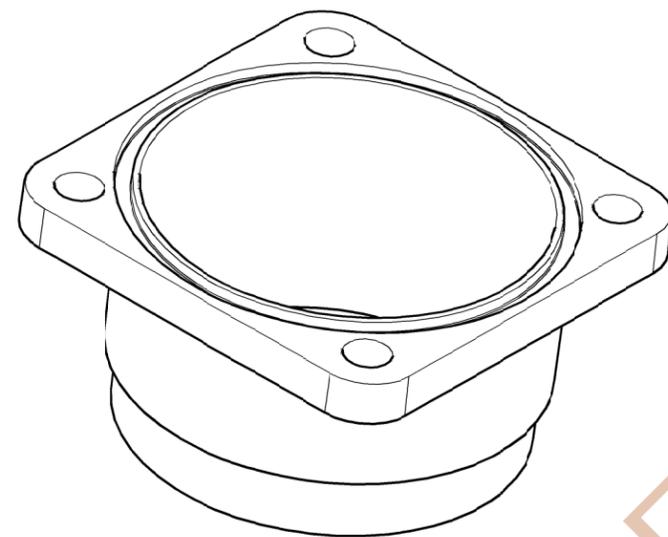
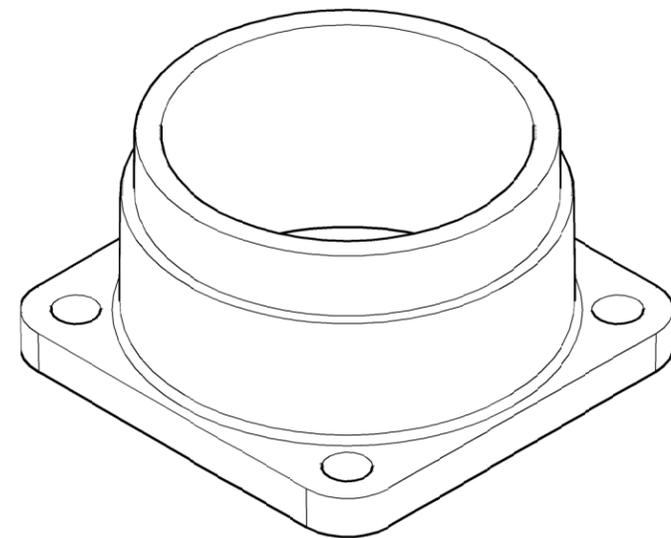


NOTES:

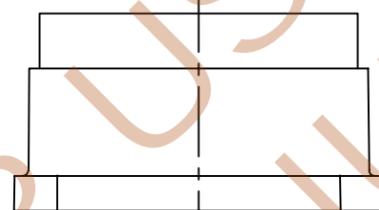
1. PART B36E52210 (PLATE COUPLER CONNECTOR) IS CONNECTED TO U06008010 (CORR. COUPLER HOUSING) TO CREATE PART B36E50210 (PLATE COUPLER HOUSING).
2. INSTALL #237 NEOPRENE O-RING IN GROOVE USING DROPS OF LIQUID ADHESIVE BEFORE SHIPPING.
3. FOR MATERIAL SPECIFICATIONS, SEE DRAWINGS U06008010 AND B36E52210.

APPROVED BY FDOT 9-22-08

DIMENSIONS: INCH [mm] mm FOR REFERENCE ONLY		QUALITY PLAN NUMBER:		WEIGHT	REV.	DATE	NAME	PART NUMBER:
<b>PLATE COUPLER HOUSING</b>				LBS.				<b>B36E50210</b>
				MATERIAL: SEE DRAWINGS U06008010 AND B36E52210	SCALE 1:2			DRAWING NUMBER: <b>B36E50210</b>
DATE: 11-21-07	DWG: G. MALECKI	CHK: E.A.	APP: K.S.					
THIS DRAWING, THE PERTINENT ENCLOSURES, DESCRIPTIONS, CALCULATIONS ETC. AND THEIR CONTENTS ARE THE PROPERTY OF DYWIDAG SYSTEMS INTERNATIONAL, USA, INC. THEY ARE NOT ALLOWED TO BE DUPLICATED WITHOUT OUR PERMISSION. THEY ARE ALSO NOT TO BE SHOWN OR EXPLAINED FOR ANY REASON TO A THIRD PARTY OTHER THAN FOR REASONS EXPRESSLY INTENDED BY DSI'S SUBMITTAL TO THE ORIGINAL RECEIVER. THEY HAVE TO BE RETURNED UPON REQUEST.				DYWIDAG-SYSTEMS INTERNATIONAL, USA, INC. 320 MARMON DRIVE - BOLINGBROOK, IL 60440 PHONE: 630-739-1100 FAX: 630-739-1405				

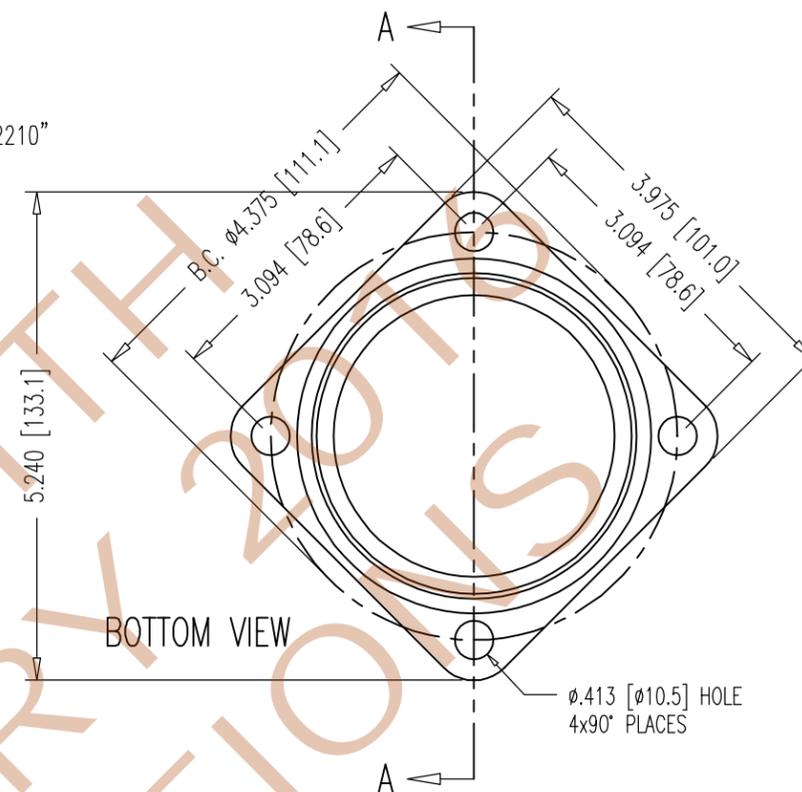


TOP VIEW

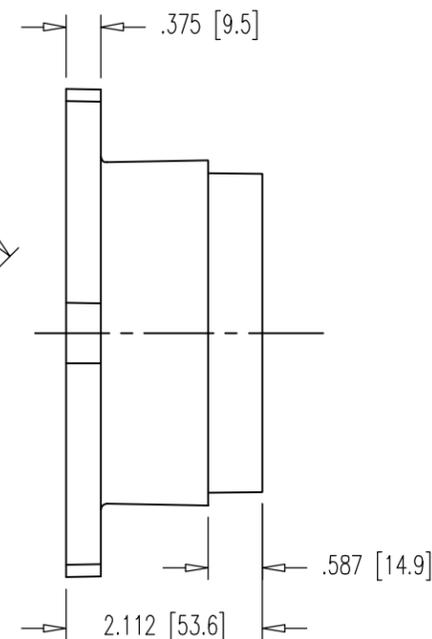


SIDE VIEW

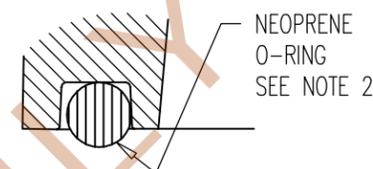
"DSI", "B36E" & "52210"  
MARKINGS



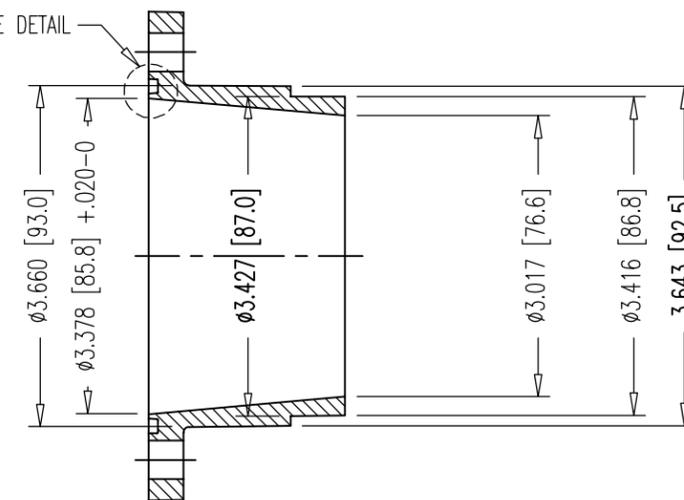
BOTTOM VIEW



SEE GROOVE DETAIL



NEOPRENE  
O-RING  
SEE NOTE 2



GROOVE DETAIL

SECTION A-A

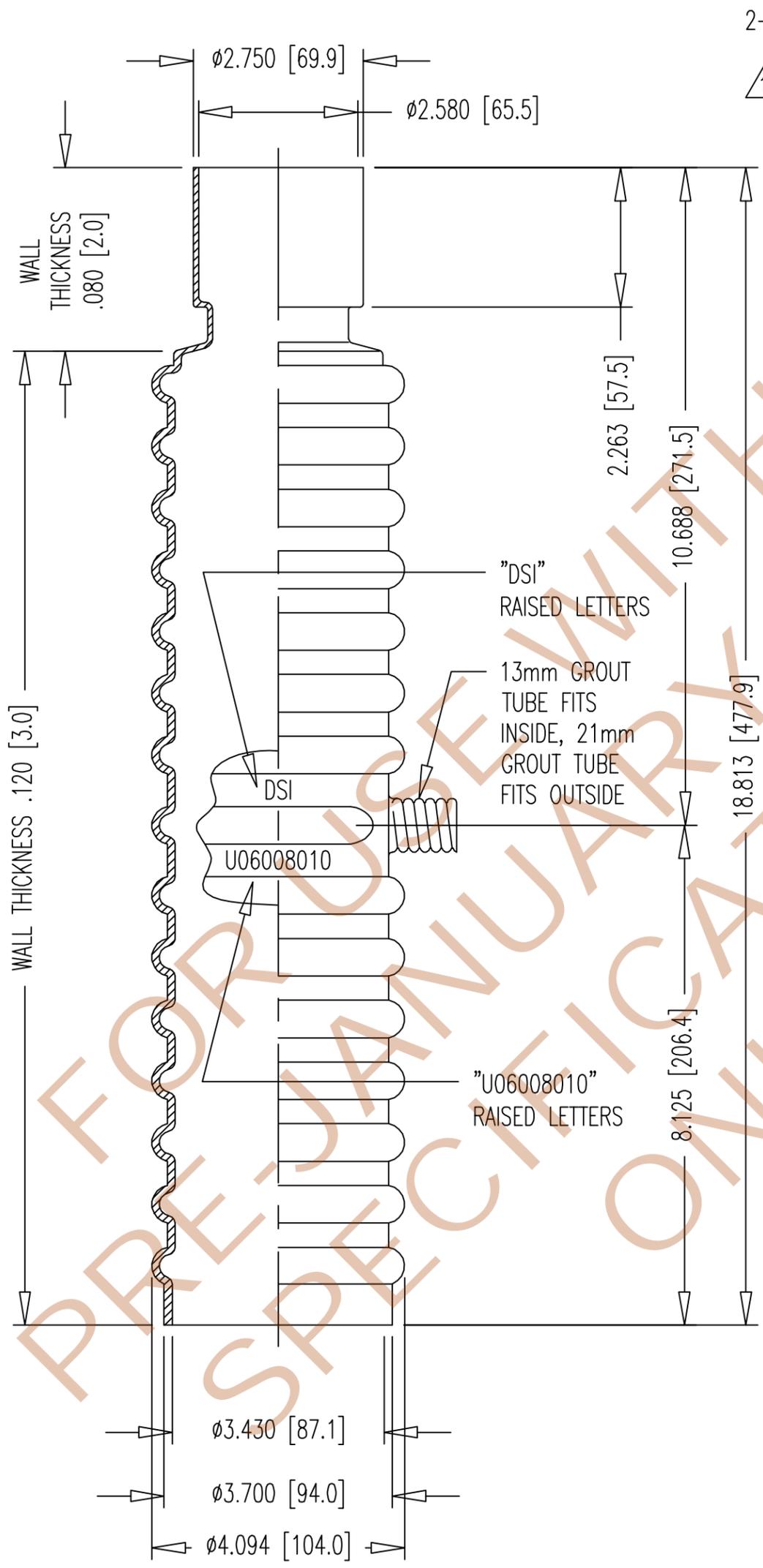
APPROVED BY FDOT 9-22-08

MATERIAL SPECIFICATIONS:  
MANUFACTURE PLATE COUPLER CONNECTOR FROM NON-COLORED, UNFILLED POLYETHYLENE MEETING THE REQUIREMENTS OF ASTM D4976. THE PLATE COUPLER CONNECTOR SHALL CONTAIN ANTIOXIDANT(S) WITH A MINIMUM OXIDATION INDUCTION TIME (OIT) ACCORDING TO ASTM D 3895 OF 20 MINUTES AND CONTAINING A NON-YELLOWING LIGHT STABILIZER. THE STRESS CRACK RESISTANCE TEST OF THE PLATE COUPLER CONNECTOR SHALL RESULT IN A MINIMUM FAILURE TIME OF 3 HOURS ACCORDING TO ASTM F 2136 AT AN APPLIED STRESS OF 348 PSI

NOTES:

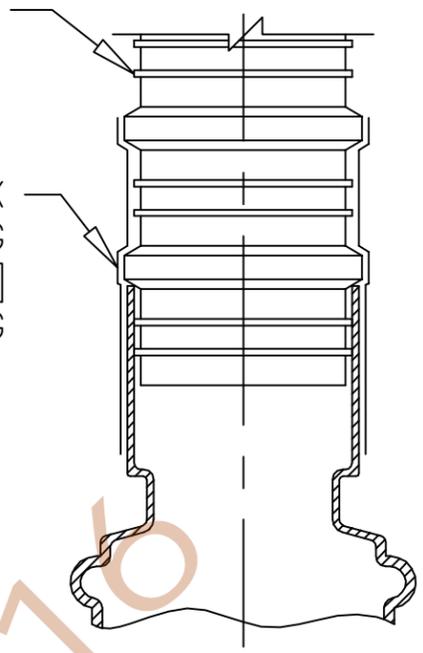
1. USE 3/8"-16UNC GALV. S.H.C.S. BOLTS, 1" LONG.
2. INSTALL #237 NEOPRENE O-RING 3-3/8"x3-5/8"x1/8" IN GROOVE IN CAP USING DROPS OF LIQUID ADHESIVE BEFORE SHIPPING.

DIMENSIONS: INCH [mm] mm FOR REFERENCE ONLY		QUALITY PLAN NUMBER:		TOLERANCES: ±.020 UNLESS NOTED	WEIGHT XX LBS.	REV.	DATE	NAME	PART NUMBER: <b>B36E52210</b>
<b>PLATE COUPLER CONNECTOR</b>				MATERIAL: SEE ABOVE	SCALE 1:2 2:3 5:2 5:1				DRAWING NUMBER: <b>B36E52210</b>
				DATE: 10-15-07 DWG: G. MALECKI CHK: E.A. APP: K.S.		DYWIDAG-SYSTEMS INTERNATIONAL, USA, INC. 320 MARMON DRIVE - BOLINGBROOK, IL 60440 PHONE: 630-739-1100 FAX: 630-739-1405			
THIS DRAWING, THE PERTINENT ENCLOSURES, DESCRIPTIONS, CALCULATIONS ETC. AND THEIR CONTENTS ARE THE PROPERTY OF DYWIDAG SYSTEMS INTERNATIONAL, USA, INC. THEY ARE NOT ALLOWED TO BE DUPLICATED WITHOUT OUR PERMISSION. THEY ARE ALSO NOT TO BE SHOWN OR EXPLAINED FOR ANY REASON TO A THIRD PARTY OTHER THAN FOR REASONS EXPRESSLY INTENDED BY DSI'S SUBMITTAL TO THE ORIGINAL RECEIVER. THEY HAVE TO BE RETURNED UPON REQUEST.									



2-3/8" [59mm]  
PP DUCT  
U00220200

HEAT SHRINK TUBING  
~4" [102mm] LONG

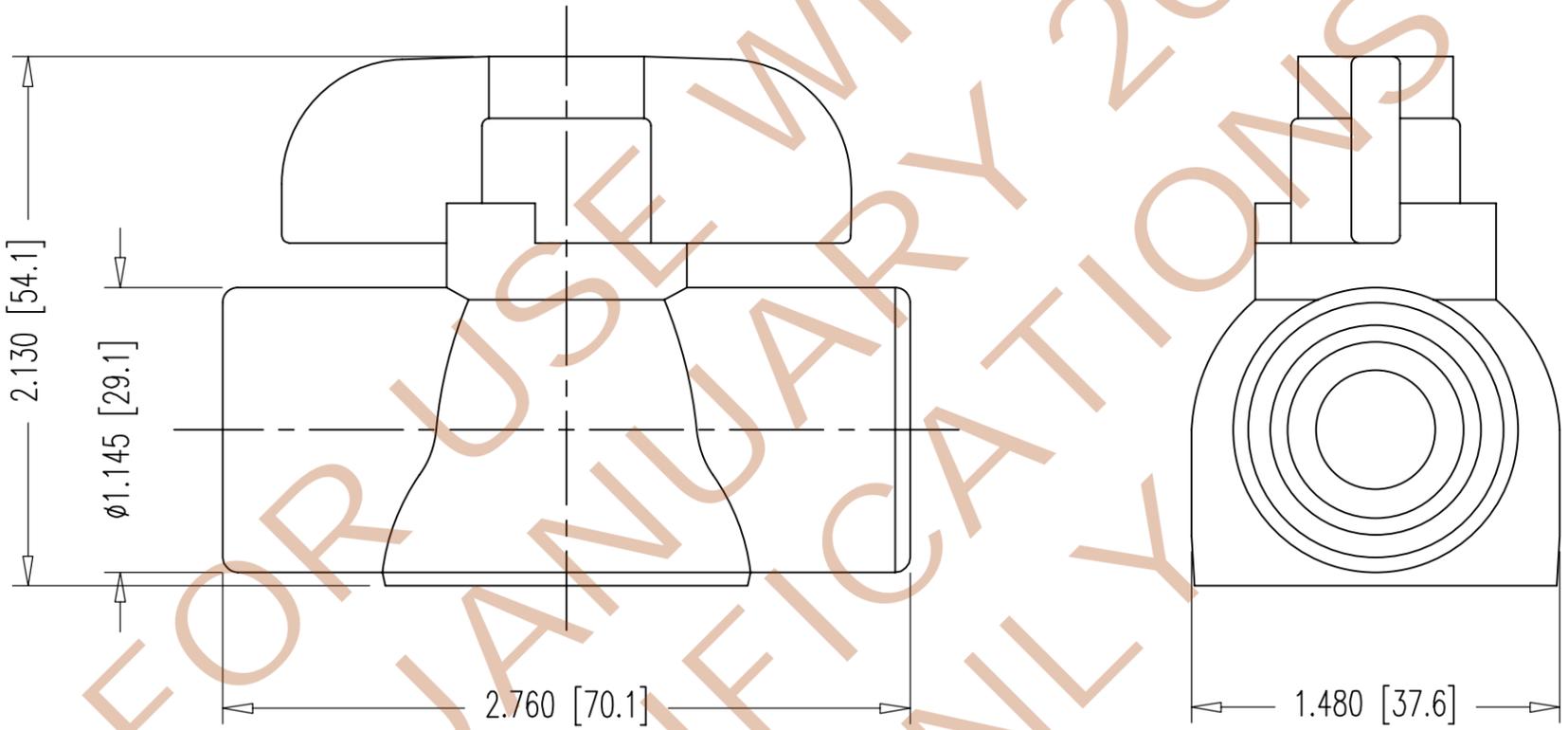
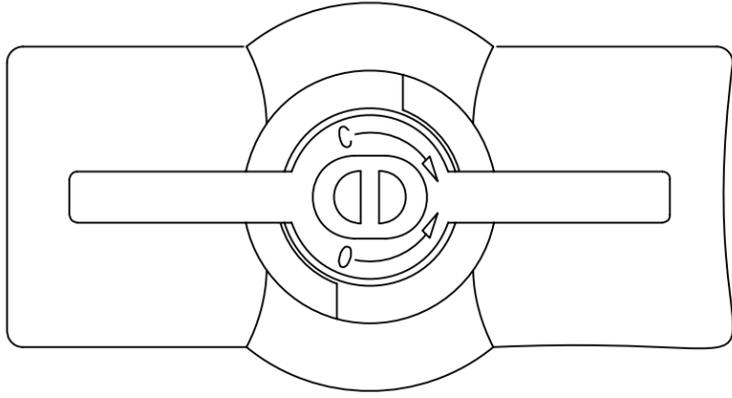


MATERIAL SPECIFICATIONS:  
MANUFACTURE COUPLER HOUSING FROM NON-COLORED, UNFILLED POLYETHYLENE MEETING THE REQUIREMENTS OF ASTM D4976. THE COUPLER HOUSING SHALL BE WHITE IN COLOR CONTAINING ANTIOXIDANT(S) WITH A MINIMUM OXIDATION INDUCTION TIME (OIT) ACCORDING TO ASTM D 3895 OF 20 MINUTES AND CONTAINING A NON-YELLOWING LIGHT STABILIZER. THE STRESS CRACK RESISTANCE TEST OF THE COUPLER HOUSING SHALL RESULT IN A MINIMUM FAILURE TIME OF 3 HOURS ACCORDING TO F 2136 AT AN APPLIED STRESS OF 348 PSI

NOTES:  
1. WALL THICKNESS AS SHOWN  
2. ALL DIMENSIONS MEASURED.

APPROVED BY FDOT 9-22-08

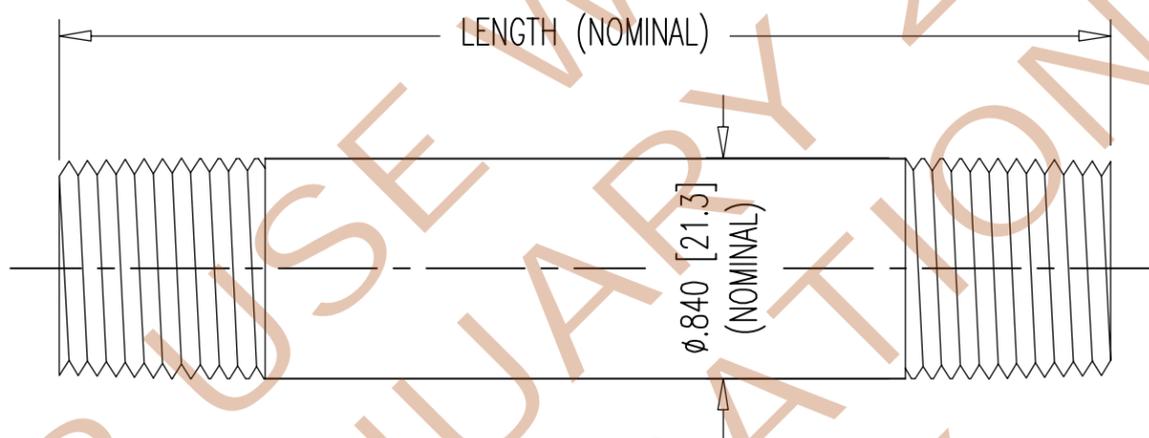
DIMENSIONS: INCH [mm] mm FOR REFERENCE ONLY		QUALITY PLAN NUMBER: QUA0060810P		TOLERANCES: ±.060 UNLESS NOTED	WEIGHT 0.49 LBS.	REV. 1	DATE 09-23-08	NAME S.N.	PART NUMBER: <b>U06008010</b>	
<b>CORRUGATED PE COUPLER HOUSING</b>				MATERIAL: SEE ABOVE	SCALE 1:3				DRAWING NUMBER: <b>U06008010</b>	
DATE: 09-04-01	DWG: G. MALECKI	CHK: S.Y.	APP: K.S.	THIS DRAWING, THE PERTINENT ENCLOSURES, DESCRIPTIONS, CALCULATIONS ETC. AND THEIR CONTENTS ARE THE PROPERTY OF <b>DYWIDAG SYSTEMS INTERNATIONAL, USA, INC.</b> THEY ARE NOT ALLOWED TO BE DUPLICATED WITHOUT OUR PERMISSION. THEY ARE ALSO NOT TO BE SHOWN OR EXPLAINED FOR ANY REASON TO A THIRD PARTY OTHER THAN FOR REASONS EXPRESSLY INTENDED BY <b>DSI's</b> SUBMITTAL TO THE ORIGINAL RECEIVER. THEY HAVE TO BE RETURNED UPON REQUEST.						
				<b>DYWIDAG-SYSTEMS INTERNATIONAL, USA, INC.</b> 320 MARMON DRIVE - BOLINGBROOK, IL 60440 PHONE: 630-739-1100 FAX: 630-739-1405						



NOTE:  
 ALL DIMENSION MEASURED.  
 SPECIAL ORDER: NO STAMPED PART NUMBER.  
 SUPPLIER: KING BROTHERS  
 SUPPLIER PART NO. EBV-0500-T

APPROVED BY FDOT 09-14-07

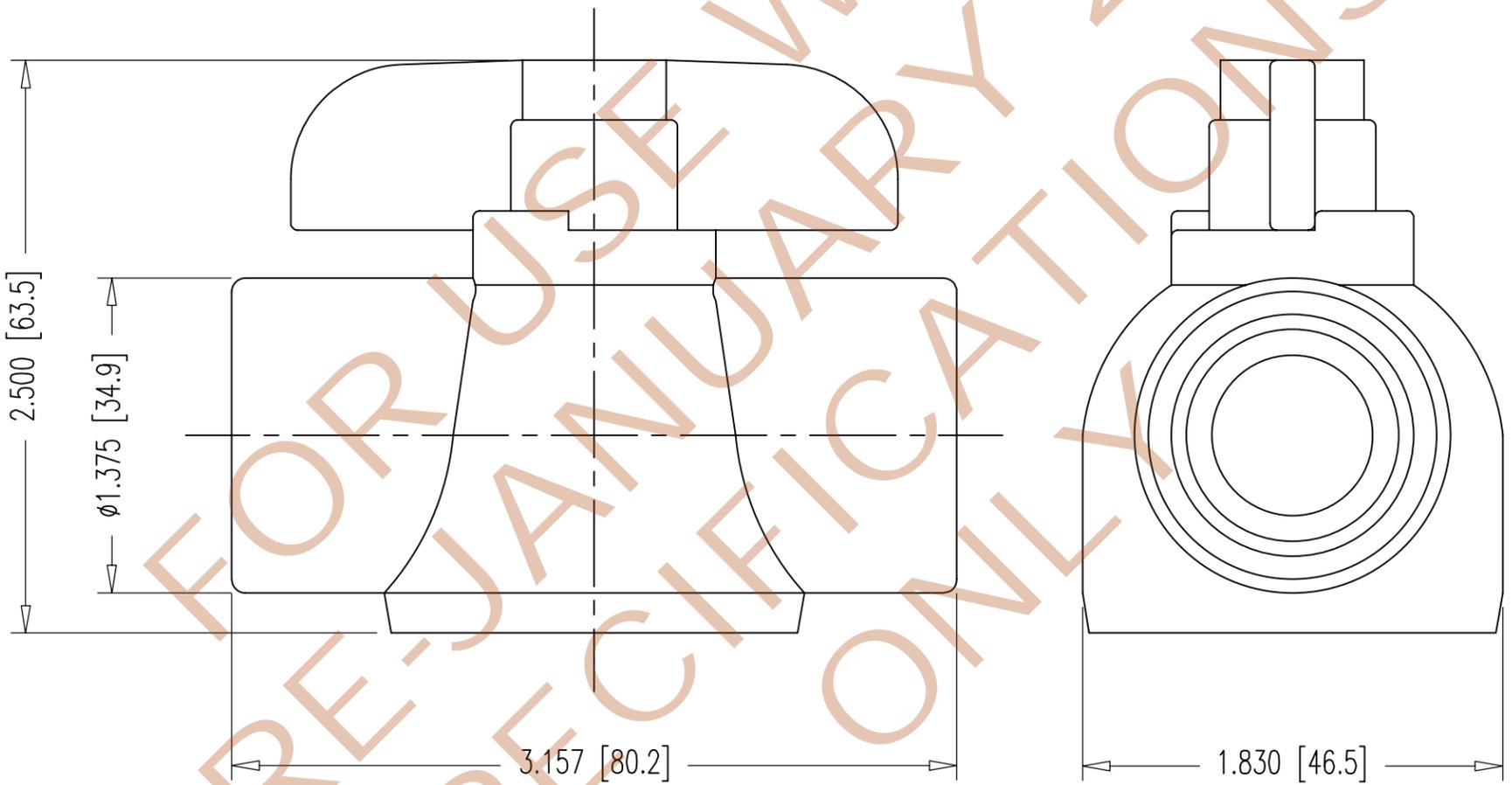
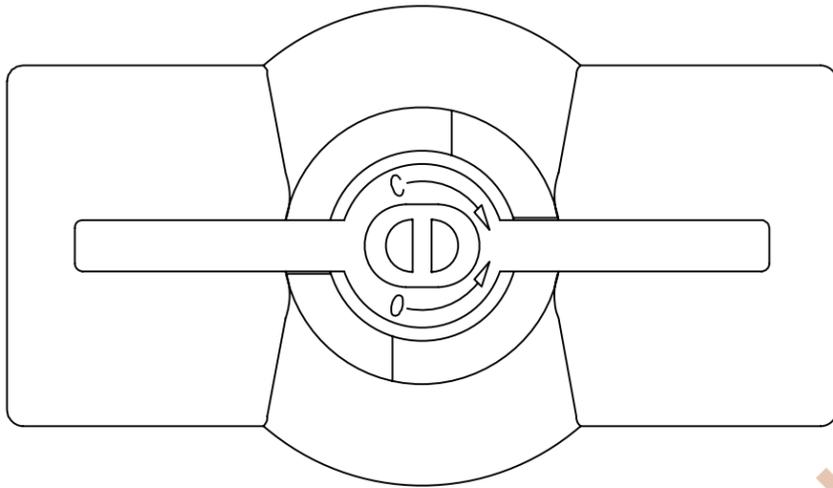
DIMENSIONS: INCH [mm] mm FOR REFERENCE ONLY		QUALITY PLAN NUMBER:		WEIGHT 0.138 LBS.	REV.	DATE	NAME	PART NUMBER: <b>00 00 634</b>
<b>1/2" NPT BALL VALVE</b>								
DATE: 09-14-07	DWG: G. MALECKI	CHK: S.N.	APP: E.A.	DYWIDAG-SYSTEMS INTERNATIONAL, USA, INC. 320 MARMON DRIVE - BOLINGBROOK, IL 60440 PHONE: 630-739-1100      FAX: 630-739-1405				
THIS DRAWING, THE PERTINENT ENCLOSURES, DESCRIPTIONS, CALCULATIONS ETC. AND THEIR CONTENTS ARE THE PROPERTY OF <b>DYWIDAG SYSTEMS INTERNATIONAL,          USA, INC.</b> THEY ARE NOT ALLOWED TO BE DUPLICATED WITHOUT OUR PERMISSION. THEY ARE ALSO NOT TO BE SHOWN OR EXPLAINED FOR ANY REASON TO A THIRD PARTY OTHER THAN FOR REASONS EXPRESSLY INTENDED BY <b>DSI's</b> SUBMITTAL TO THE ORIGINAL RECEIVER. THEY HAVE TO BE RETURNED UPON REQUEST.								



PART NUMBER	LENGTH	WEIGHT
00 00 672	4" [101.6mm]	0.28 LBS.
00 00 674	6" [152.4mm]	0.43 LBS.
00 00 676	12" [304.8mm]	0.85 LBS.

APPROVED BY FDOT 09-14-07

DIMENSIONS: INCH [mm] mm FOR REFERENCE ONLY		QUALITY PLAN NUMBER:		REV.		DATE	NAME	PART NUMBER: <b>00 00 672</b> <b>00 00 674</b> <b>00 00 676</b>	
<b>1/2" PIPE NIPPLES</b>				MATERIAL: SCH 40 BLACK WELDED STEEL		SCALE 1:1		DRAWING NUMBER: <b>00 00 676</b>	
				DATE: 09-14-07		DWG: G. MALECKI		CHK: S.N.	
THIS DRAWING, THE PERTINENT ENCLOSURES, DESCRIPTIONS, CALCULATIONS ETC. AND THEIR CONTENTS ARE THE PROPERTY OF <b>DYWIDAG SYSTEMS INTERNATIONAL, USA, INC.</b> THEY ARE NOT ALLOWED TO BE DUPLICATED WITHOUT OUR PERMISSION. THEY ARE ALSO NOT TO BE SHOWN OR EXPLAINED FOR ANY REASON TO A THIRD PARTY OTHER THAN FOR REASONS EXPRESSLY INTENDED BY <b>DSI's</b> SUBMITTAL TO THE ORIGINAL RECEIVER, THEY HAVE TO BE RETURNED UPON REQUEST.				<b>DYWIDAG-SYSTEMS INTERNATIONAL, USA, INC.</b> 320 MARMON DRIVE - BOLINGBROOK, IL 60440 PHONE: 630-739-1100      FAX: 630-739-1405					

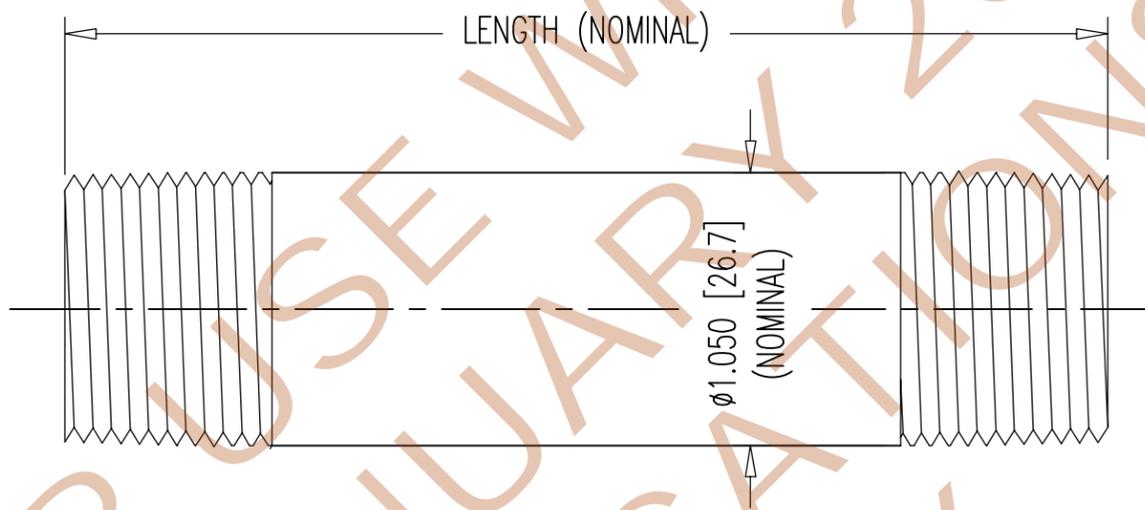


NOTE:  
ALL DIMENSION MEASURED.

SUPPLIER: KING BROTHERS  
SUPPLIER PART NO. EBV-0750-T

APPROVED BY FDOT 09-14-07

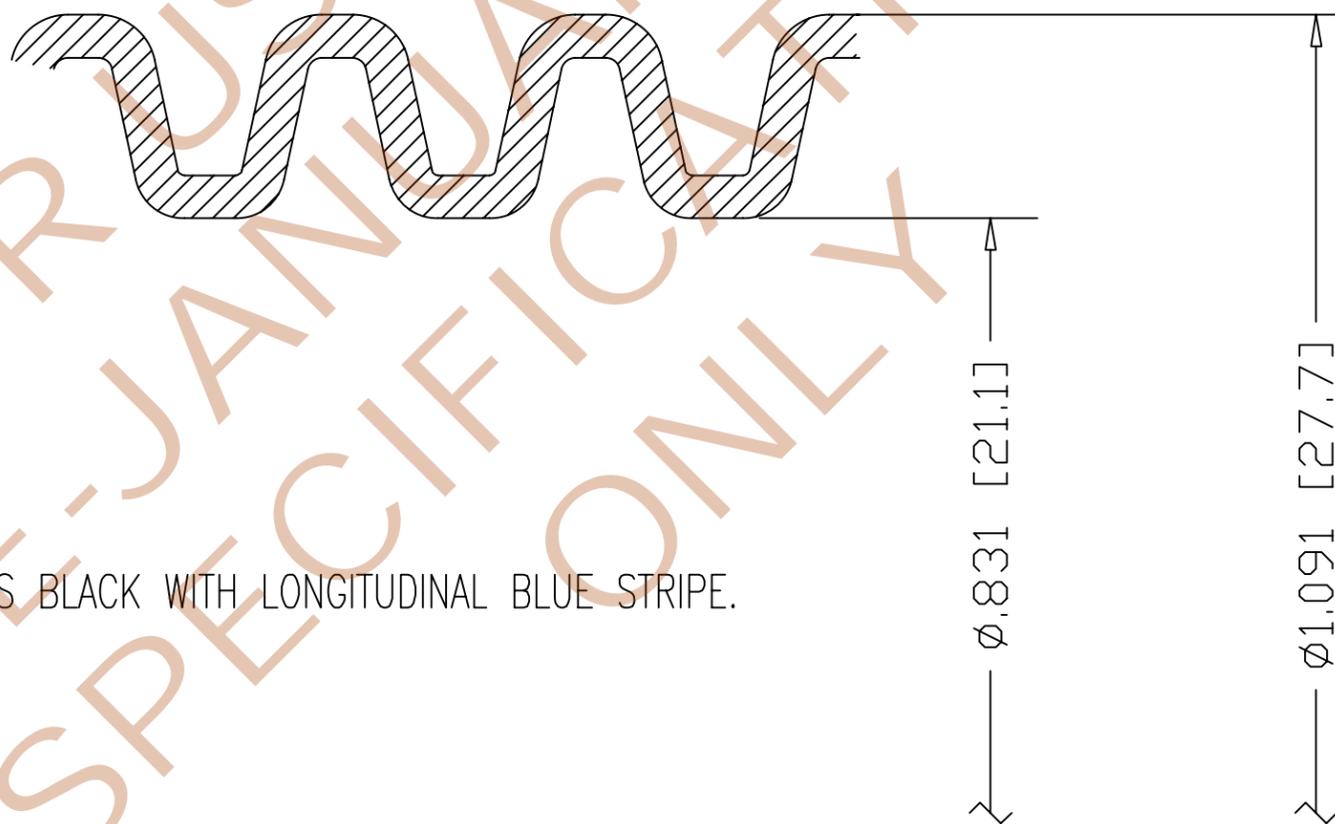
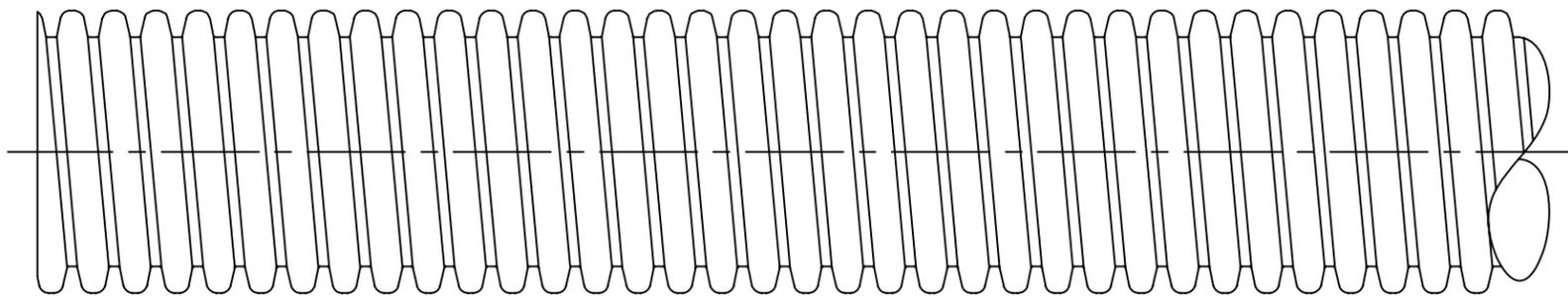
DIMENSIONS: INCH [mm] mm FOR REFERENCE ONLY		QUALITY PLAN NUMBER:		WEIGHT 0.213 LBS.	REV.	DATE	NAME	PART NUMBER: <b>00 00 834</b>
<b>3/4" NPT BALL VALVE</b>								
DATE: 09-14-07	DWG: G. MALECKI	CHK: S.N.	APP: E.A.	DYWIDAG-SYSTEMS INTERNATIONAL, USA, INC. 320 MARMON DRIVE - BOLINGBROOK, IL 60440 PHONE: 630-739-1100      FAX: 630-739-1405				
THIS DRAWING, THE PERTINENT ENCLOSURES, DESCRIPTIONS, CALCULATIONS ETC. AND THEIR CONTENTS ARE THE PROPERTY OF <b>DYWIDAG SYSTEMS INTERNATIONAL, USA, INC.</b> THEY ARE NOT ALLOWED TO BE DUPLICATED WITHOUT OUR PERMISSION. THEY ARE ALSO NOT TO BE SHOWN OR EXPLAINED FOR ANY REASON TO A THIRD PARTY OTHER THAN FOR REASONS EXPRESSLY INTENDED BY <b>DSI's</b> SUBMITTAL TO THE ORIGINAL RECEIVER. THEY HAVE TO BE RETURNED UPON REQUEST.								



PART NUMBER	LENGTH	WEIGHT
00 00 872	4" [101.6mm]	0.38 LBS.
00 00 874	6" [152.4mm]	0.57 LBS.
00 00 876	12" [304.8mm]	1.13 LBS.

APPROVED BY FDOT 09-14-07

DIMENSIONS: INCH [mm] mm FOR REFERENCE ONLY		QUALITY PLAN NUMBER:		REV.		DATE	NAME	PART NUMBER: <b>00 00 872</b> <b>00 00 874</b> <b>00 00 876</b>	
<b>3/4" PIPE NIPPLES</b>				MATERIAL: SCH 40 BLACK WELDED STEEL		SCALE 1:1		DRAWING NUMBER: <b>00 00 876</b>	
				DATE: 09-14-07		DWG: G. MALECKI		CHK: S.N.	
THIS DRAWING, THE PERTINENT ENCLOSURES, DESCRIPTIONS, CALCULATIONS ETC. AND THEIR CONTENTS ARE THE PROPERTY OF <b>DYWIDAG SYSTEMS INTERNATIONAL, USA, INC.</b> THEY ARE NOT ALLOWED TO BE DUPLICATED WITHOUT OUR PERMISSION. THEY ARE ALSO NOT TO BE SHOWN OR EXPLAINED FOR ANY REASON TO A THIRD PARTY OTHER THAN FOR REASONS EXPRESSLY INTENDED BY <b>DSI's</b> SUBMITTAL TO THE ORIGINAL RECEIVER. THEY HAVE TO BE RETURNED UPON REQUEST.				<b>DYWIDAG-SYSTEMS INTERNATIONAL, USA, INC.</b> 320 MARMON DRIVE - BOLINGBROOK, IL 60440 PHONE: 630-739-1100      FAX: 630-739-1405					



NOTES:

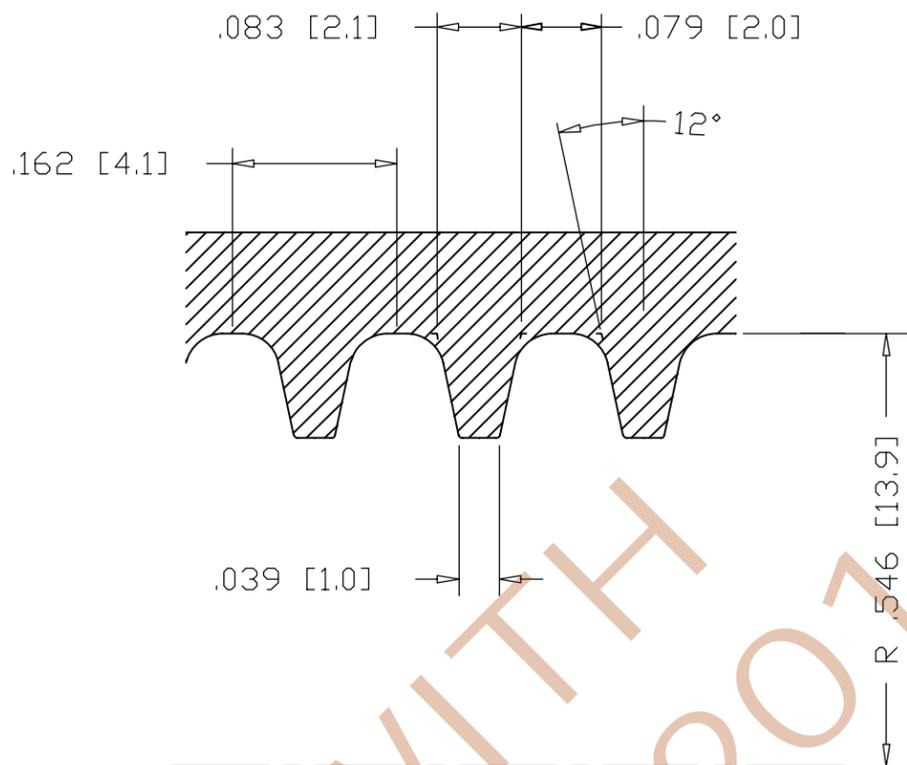
1. GROUT TUBE IS BLACK WITH LONGITUDINAL BLUE STRIPE.

MANUFACTURER: DSI

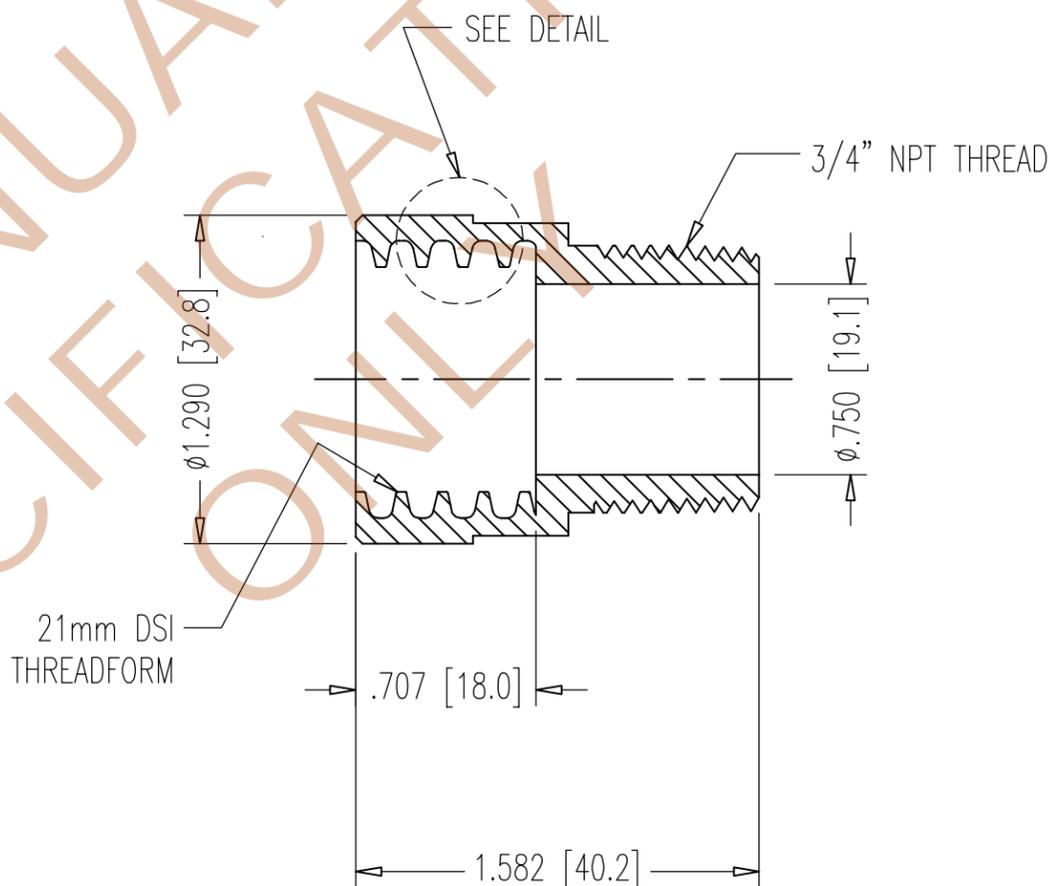
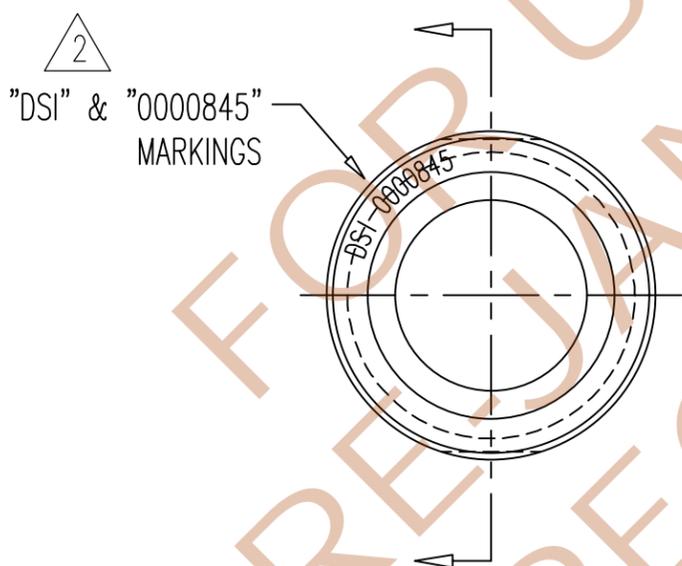
MANUFACTURER'S PART NUMBER: 00 00 801

APPROVED BY FDOT 09-14-07

DIMENSIONS: INCH [mm] IN. FOR REFERENCE ONLY		QUALITY PLAN NUMBER:		TOLERANCES: ±.020 UNLESS NOTED		REV.	DATE	NAME	PART NUMBER: <b>00 00 801</b>
<b>21mm GROUT TUBE, STANDARD DUTY</b>				MATERIAL: HDPE MEETING OIT REQUIREMENTS		SCALE 1:1 6:1			DRAWING NUMBER: <b>00 00 801</b>
				DATE: 09-14-07   DWG: G. MALECKI   CHK: S.Y.   APP: K.S.		DYWIDAG-SYSTEMS INTERNATIONAL, USA, INC. 320 MARMON DRIVE - BOLINGBROOK, IL 60440 PHONE: 630-739-1100   FAX: 630-739-1405			
<small>THIS DRAWING, THE PERTINENT ENCLOSURES, DESCRIPTIONS, CALCULATIONS ETC. AND THEIR CONTENTS ARE THE PROPERTY OF DYWIDAG SYSTEMS INTERNATIONAL, USA, INC. THEY ARE NOT ALLOWED TO BE DUPLICATED WITHOUT OUR PERMISSION. THEY ARE ALSO NOT TO BE SHOWN OR EXPLAINED FOR ANY REASON TO A THIRD PARTY OTHER THAN FOR REASONS EXPRESSLY INTENDED BY DSI'S SUBMITTAL TO THE ORIGINAL RECEIVER. THEY HAVE TO BE RETURNED UPON REQUEST.</small>									



20% GLASS FILLED NYLON  
 WITH A CELL CLASS S-PA 0141,  
 S-PA 0231 OR S-PA 0401  
 COLOR: BLACK

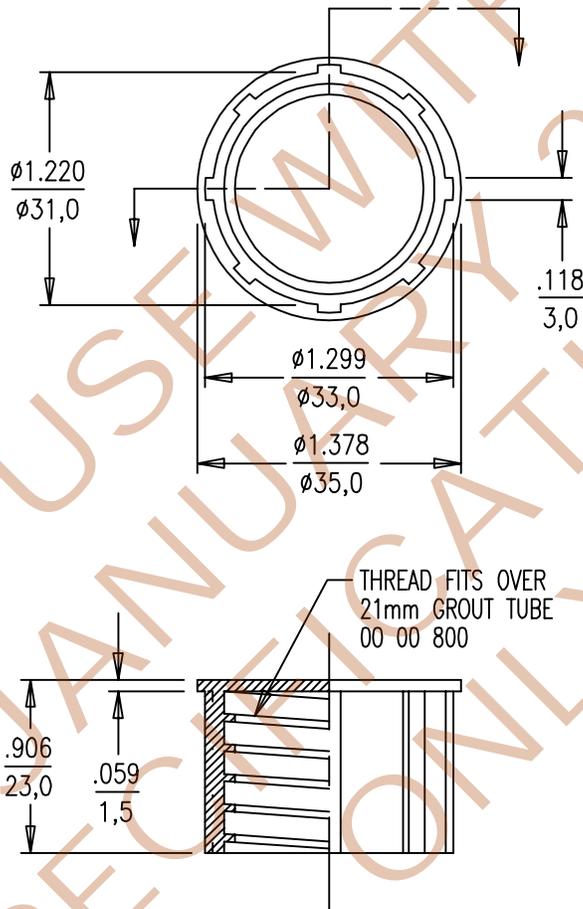


NOTE:  
 PART FOR USE WITH 21mm GROUT TUBES  
 00 00 801 OR 00 00 802.

MANUFACTURER: DSI  
 MANUFACTURER'S PART NUMBER: 00 00 845

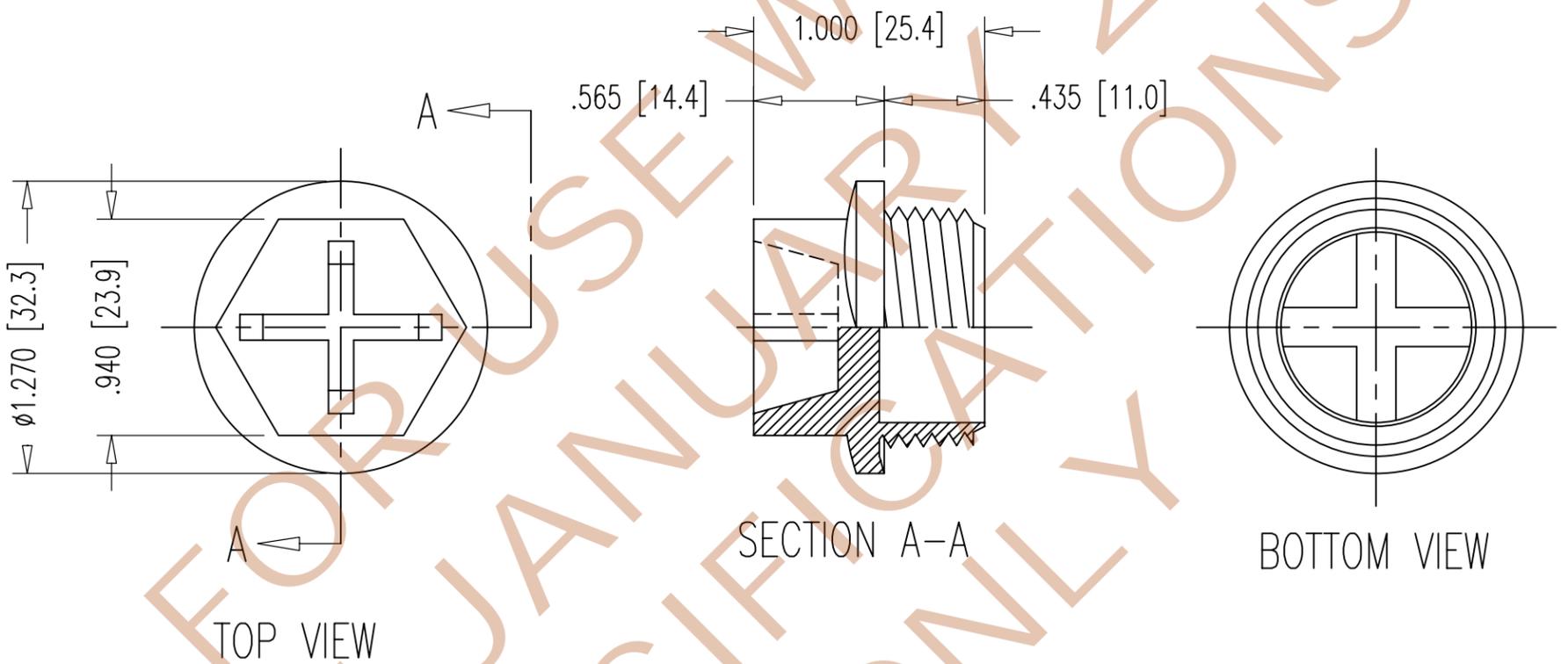
APPROVED BY FDOT 09-14-07

DIMENSIONS: INCH [mm] mm FOR REFERENCE ONLY		QUALITY PLAN NUMBER: Q00000020P		TOLERANCES: ±.020 UNLESS NOTED	WEIGHT 0.06 LBS.	REV.	DATE	NAME	PART NUMBER: <b>00 00 845</b>
<b>21mm FEMALE-3/4" NPT MALE CONNECTOR</b>				MATERIAL: SEE ABOVE	SCALE 1:1 4:1	1	12-18-06	S.N.	DRAWING NUMBER: <b>00 00 845</b>
						2	05-09-07	S.N.	
DATE: 09-14-07	DWG: G.MALECKI	CHK: E.A.	APP: K.S.			3	12-05-07	S.Y.	
THIS DRAWING, THE PERTINENT ENCLOSURES, DESCRIPTIONS, CALCULATIONS ETC. AND THEIR CONTENTS ARE THE PROPERTY OF <b>DYWIDAG SYSTEMS INTERNATIONAL, USA, INC.</b> THEY ARE NOT ALLOWED TO BE DUPLICATED WITHOUT OUR PERMISSION. THEY ARE ALSO NOT TO BE SHOWN OR EXPLAINED FOR ANY REASON TO A THIRD PARTY OTHER THAN FOR REASONS EXPRESSLY INTENDED BY <b>DSI's</b> SUBMITTAL TO THE ORIGINAL RECEIVER. THEY HAVE TO BE RETURNED UPON REQUEST.				<b>DYWIDAG-SYSTEMS INTERNATIONAL, USA, INC.</b> 320 MARMON DRIVE - BOLINGBROOK, IL 60440 PHONE: 630-739-1100 FAX: 630-739-1405					



APPROVED BY FDOT 9-22-08

DYWIDAG POST-TENSIONING SYSTEMS		DIMENSIONS: INCH/mm mm FOR REFERENCE ONLY		REV.	DATE	NAME	PART NUMBER 00 00 841	
21mm GROUT TUBE CAP		TOLERANCES: ±.020 UNLESS NOTED	WEIGHT					
DATE: 10-19-94    DRAWN: G. MALECKI    APPROVED:		MATERIAL: H.D.P.E.	SCALE 1:1				DRAWING NUMBER 00 00 841	
This drawing, the pertinent enclosures, descriptions, calculations etc. and their contents are the property of DYWIDAG SYSTEMS INTERNATIONAL, USA, INC. They are not allowed to be duplicated without our permission. They are also not to be shown or explained for any reason to a third party other than for reasons expressly intended by the original receiver. They have to be returned on request.							DYWIDAG SYSTEMS INTERNATIONAL, USA, INC. 	

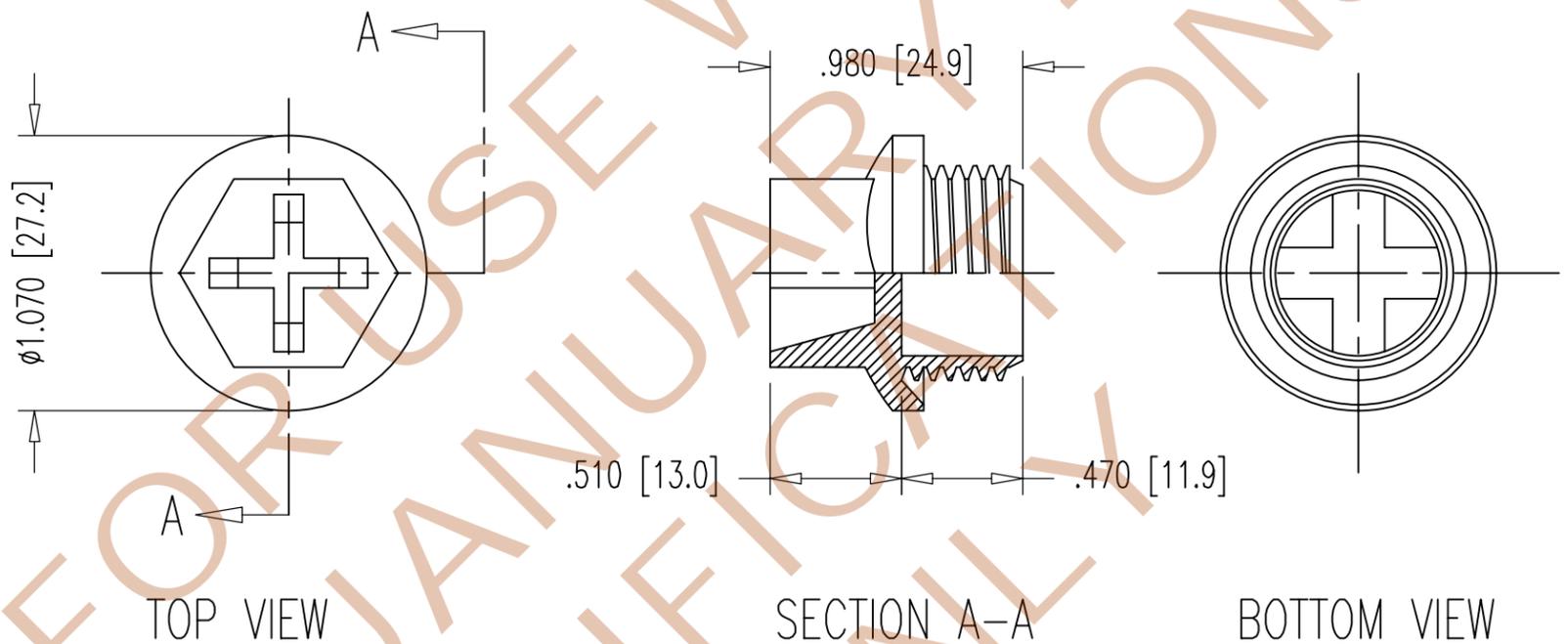


NOTE:  
 ALL DIMENSIONS MEASURED.  
 SPECIAL ORDER: NO STAMPED PART NUMBER.

SUPPLIER:  
 NIAGARA PLASTICS  
 SUPPLIER PART # : BT 0750

**APPROVED BY FDOT 05-31-07**

DIMENSIONS: INCH [mm] mm FOR REFERENCE ONLY		QUALITY PLAN NUMBER: Q000000040P		TOLERANCES: $\pm .010$ UNLESS NOTED	WEIGHT LBS.	REV.	DATE	NAME	PART NUMBER: <b>00 00 847</b>	
<b>BT 0750 (3/4") NPT NYLON PLUG</b>				MATERIAL: NYLON 6 COLOR: BLACK	SCALE 1:1				DRAWING NUMBER: <b>00 00 847</b>	
DATE: 05-31-07	DWG: G. MALECKI	CHK: S.Y.	APP: K.S.	DYWIDAG-SYSTEMS INTERNATIONAL, USA, INC. 320 MARMON DRIVE - BOLINGBROOK, IL 60440 PHONE: 630-739-1100 FAX: 630-739-1405						
THIS DRAWING, THE PERTINENT ENCLOSURES, DESCRIPTIONS, CALCULATIONS ETC. AND THEIR CONTENTS ARE THE PROPERTY OF DYWIDAG SYSTEMS INTERNATIONAL, USA, INC. THEY ARE NOT ALLOWED TO BE DUPLICATED WITHOUT OUR PERMISSION. THEY ARE ALSO NOT TO BE SHOWN OR EXPLAINED FOR ANY REASON TO A THIRD PARTY OTHER THAN FOR REASONS EXPRESSLY INTENDED BY DSI'S SUBMITTAL TO THE ORIGINAL RECEIVER. THEY HAVE TO BE RETURNED UPON REQUEST.								<b>DSI</b>		

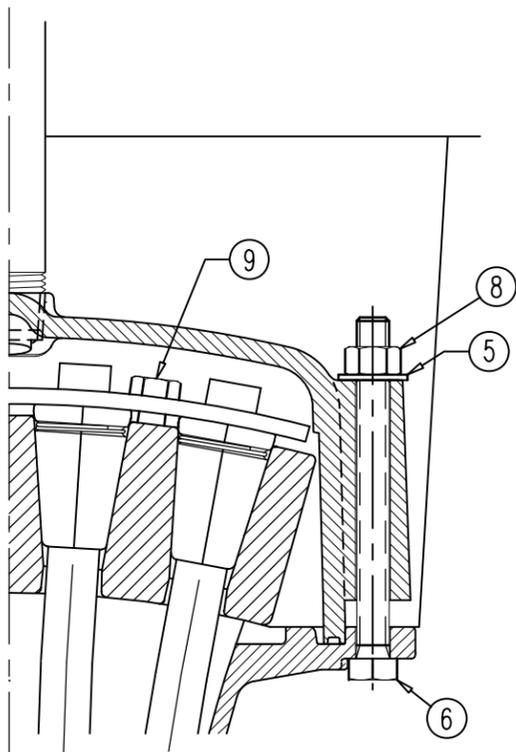


NOTE:  
 ALL DIMENSIONS FROM NIAGARA PLASTICS TABLE.  
 SPECIAL ORDER: NO STAMPED PART NUMBER.

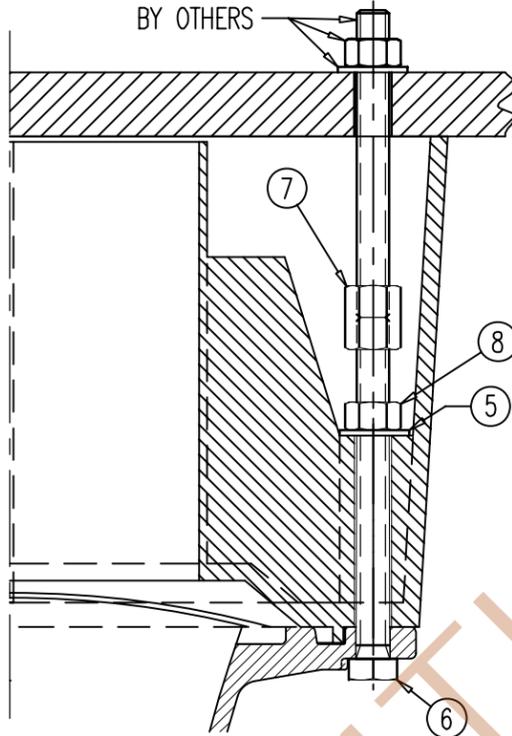
SUPPLIER:  
 NIAGARA PLASTICS  
 SUPPLIER PART # : BT 0500

APPROVED BY FDOT 12-12-07

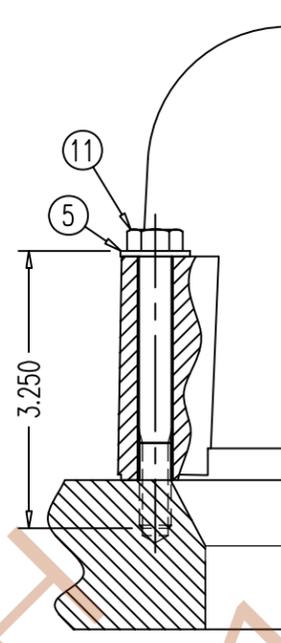
DIMENSIONS: INCH [mm] mm FOR REFERENCE ONLY		QUALITY PLAN NUMBER: Q000000040P		TOLERANCES: ±.020 UNLESS NOTED	WEIGHT 0.019 LBS.	REV.	DATE	NAME	PART NUMBER: <b>00 00 647</b>	
<b>BT 0500 (1/2") NYLON PLUG</b>				MATERIAL: NYLON 6 COLOR: YELLOW	SCALE 1:1				DRAWING NUMBER: <b>00 00 647</b>	
				DATE: 01-17-07	DWG: G. MALECKI	CHK: S.Y.	APP: K.S.			
THIS DRAWING, THE PERTINENT ENCLOSURES, DESCRIPTIONS, CALCULATIONS ETC. AND THEIR CONTENTS ARE THE PROPERTY OF <b>DYWIDAG SYSTEMS INTERNATIONAL, USA, INC.</b> THEY ARE NOT ALLOWED TO BE DUPLICATED WITHOUT OUR PERMISSION. THEY ARE ALSO NOT TO BE SHOWN OR EXPLAINED FOR ANY REASON TO A THIRD PARTY OTHER THAN FOR REASONS EXPRESSLY INTENDED BY <b>DSI's</b> SUBMITTAL TO THE ORIGINAL RECEIVER. THEY HAVE TO BE RETURNED UPON REQUEST.				<b>DYWIDAG-SYSTEMS INTERNATIONAL, USA, INC.</b> 320 MARMON DRIVE - BOLINGBROOK, IL 60440 PHONE: 630-739-1100 FAX: 630-739-1405						



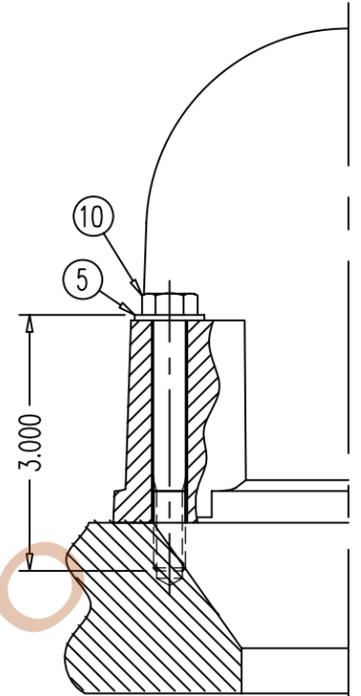
KEEPER PLATE 68 04 2637 ON  
WEDGE PLATE 68 04 2534A &  
GROUT CAP 68 04 2539 ON  $\Delta$   
FLAT ANCHOR 68 04 2531



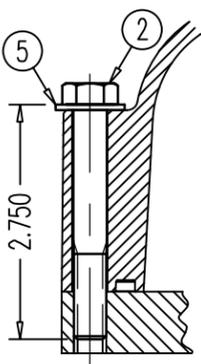
POCKET FORMER 68 04 2640  
ON FLAT ANCHOR 68 04 2531



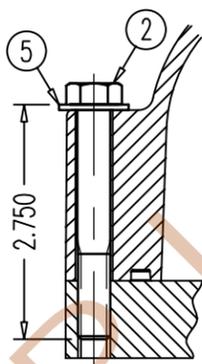
BAR GROUT CAP  
B36E50700 & B65E50700



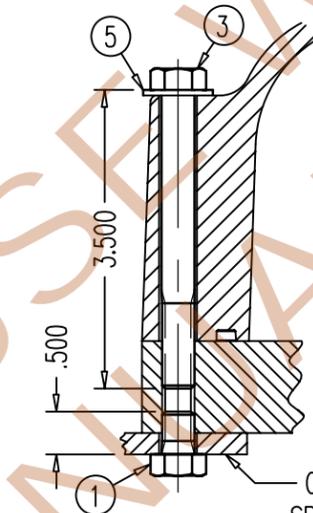
BAR GROUT CAP  
B46E50700



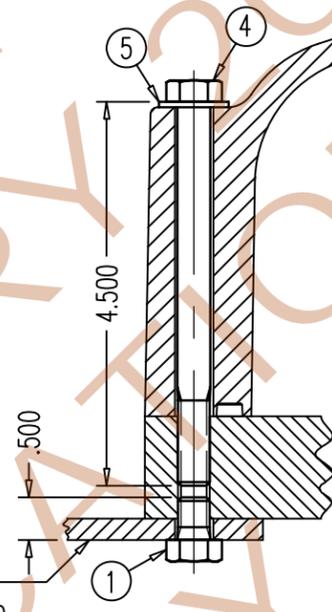
GROUT CAP 68 07 7230  
ON MPA 68 07 216



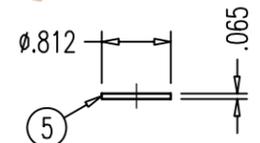
GROUT CAP 68 12 7230  
ON MPA 68 12 216



GROUT CAP 68 19 7230  
ON MPA 68 19 216



GROUT CAP 68 27 7230  
ON MPA 68 27 216



TYPE A NARROW WASHER  
FOR 3/8"-UNC BOLT

POS.	PART NUMBER	DISCRIPTION (ALL PARTS 316L STAINLESS STEEL UNLESS NOTED)
①	00 00 770	3/8"-16UNC HEX BOLT, 1/2" LONG, ZINC PLATED
②	00 00 771	3/8"-16UNC HEX BOLT, 2-3/4" LONG (1" LONG THREAD)
③	00 00 772	3/8"-16UNC HEX BOLT, 3-1/2" LONG (1" LONG THREAD)
④	00 00 773	3/8"-16UNC HEX BOLT, 4-1/2" LONG (1" LONG THREAD)
⑤	00 00 774	TYPE A NARROW WASHER FOR 3/8"-UNC BOLT
⑥	00 00 775	3/8"-16UNC HEX BOLT, 4" LONG (FULL THREAD)
⑦	00 00 776	3/8"-16UNC COUPLER, ZINC COATED
⑧	00 00 777	3/8"-16UNC HEX NUT
⑨	00 00 778	5/16"-18UNC HEX BOLT, 7/8" LONG, ZINC PLATED
⑩	00 00 782	3/8"-16UNC HEX BOLT, 3" LONG (1" LONG THREAD)
⑪	00 00 783	3/8"-16UNC HEX BOLT, 3-1/4" LONG (1" LONG THREAD)

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

APPROVED BY FDOT 09-14-07

DIMENSIONS: INCH

QUALITY PLAN NUMBER:

## STAINLESS STEEL 316L BOLTS AND WASHER FOR PLASTIC GROUT CAPS

DATE: 09-14-07 DWG: G. MALECKI CHK: E.A. APP: K.S.

THIS DRAWING, THE PERTINENT ENCLOSURES, DESCRIPTIONS, CALCULATIONS ETC. AND THEIR CONTENTS ARE THE PROPERTY OF **DYWIDAG SYSTEMS INTERNATIONAL, USA, INC.** THEY ARE NOT ALLOWED TO BE DUPLICATED WITHOUT OUR PERMISSION. THEY ARE ALSO NOT TO BE SHOWN OR EXPLAINED FOR ANY REASON TO A THIRD PARTY OTHER THAN FOR REASONS EXPRESSLY INTENDED BY **DSI's** SUBMITTAL TO THE ORIGINAL RECEIVER. THEY HAVE TO BE RETURNED UPON REQUEST.

REV.	DATE	NAME	PART NUMBERS:
			00 00 770 00 00 776
			00 00 771 00 00 777
			00 00 772 00 00 778
			00 00 773 00 00 782
			00 00 774 00 00 783
			00 00 775

SCALE  
1:3

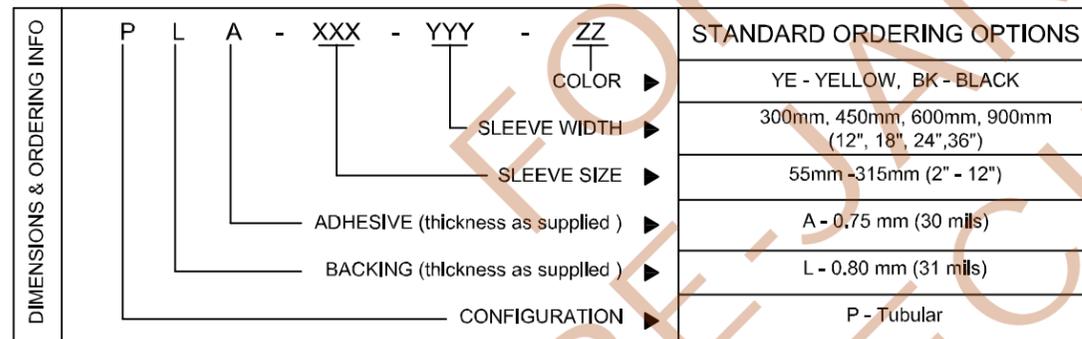
DRAWING NUMBER:  
**00 00 770**

**DYWIDAG-SYSTEMS INTERNATIONAL, USA, INC.**  
POST TENSIONING / REINFORCING UNIT PHONE: 630-739-1100  
320 MARMON DRIVE - BOLINGBROOK, IL FAX: 630-739-1405

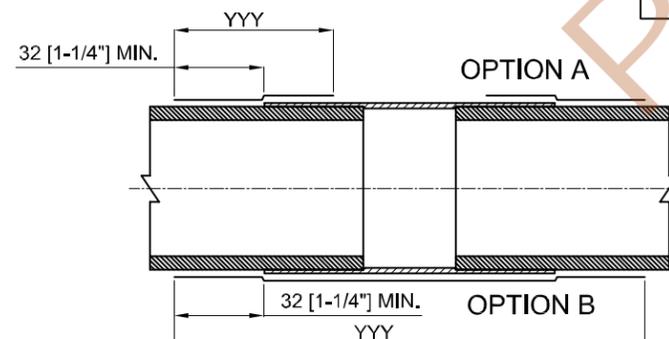


## HEAT SHRINK SLEEVES - PLA TYPE UNO

TENDON SIZE		1 x 0.6"	3 x 0.6"	4 x 0.6"	1 x 0.6"	7 x 0.6" 1 3/8"	9 x 0.6" 1 3/4"	12 x 0.6" 1 3/4"	15, 19 x 0.6"	27 x 0.6"	37 x 0.6"
DUCT	ID	0.90" [23 mm] x 1.50" [38 mm]	0.827" [21 mm] x 2.835" [72 mm]	0.984" [25 mm] x 2.992" [76 mm]	Ø 0.94" [23.879 mm]	Ø 2.323" [59 mm]	Ø 2.99" [75.9 mm]	Ø 3.346" [85.0 mm]	Ø 3.937" [100 mm]	Ø 4.528" [115.0 mm]	Ø 5.039" [128.0 mm]
	OD <sub>1</sub>	1.45" [37] x 2.05" [52 mm]	1.378" [35] x 3.386" [86 mm]	1.554" [39.5 mm] x 3.551" [90.2 mm]	Ø 1.48" [37.6 mm]	Ø 2.874" [73 mm]	Ø 3.58" [90.9 mm]	Ø 3.946" [100.2 mm]	Ø 4.573" [116.2 mm]	Ø 5.303" [134.7 mm]	Ø 5.96" [151.0 mm]
	OD <sub>2</sub>		0.984" [25] x 2.992" [76 mm]	1.142" [29 mm] x 3.15" [80 mm]	Ø 1.06" [26.9 mm]	Ø 2.480" [63 mm]	Ø 3.35" [85.1 mm]	Ø 3.546" [90.1 mm]	Ø 4.173" [106.0 mm]	Ø 4.803" [122.0 mm]	Ø 5.36" [136.0 mm]
GTI COUPLER Max. OD		1.63" [41 mm] x 2.23" [57 mm]	1.565" [39.8 mm] x 3.565" [90.55 mm]	1.714" [43.54 mm] x 3.674" [93.32 mm]	Ø 1.7" [43.2 mm]	Ø 3.031" [77 mm]	Ø 3.738" [94.9 mm]	Ø 4.134" [105 mm]	Ø 4.698" [119.3 mm]	Ø 5.599" [142.2 mm]	Ø 6.151" [156.2 mm]
ORDER PART #	OPTION A	N/A	<b>PLA-55-112-YE</b>	<b>PLA-55-112-YE</b>	N/A	<b>PLA-55-112-YE</b>	N/A	N/A	N/A	N/A	N/A
	OPTION B	N/A	<b>PLA-55-225-YE</b>	<b>PLA-55-225-YE</b>	N/A	<b>PLA-55-225-YE</b>	<b>PLA-90-225-YE</b>	N/A	N/A	N/A	N/A
DSI COUPLER Max. OD		N/A	N/A	N/A	N/A	Ø 3.701" [94 mm]	N/A	Ø 4.824" [122.5 mm]	Ø 5.5" [139.7 mm]	Ø 6.278" [159.5 mm]	N/A
ORDER PART #	OPTION A	N/A	N/A	N/A	N/A	<b>PLA-55-150-YE</b>	N/A	<b>PLA-90-150-YE</b>	<b>PLA-100-150-BK</b>	<b>PLA-125-150-YE</b>	N/A
	OPTION B	N/A	N/A	N/A	N/A	<b>PLA-55-450-YE</b>	N/A	<b>PLA-90-450-YE</b>	<b>PLA-100-450-BK</b>	<b>PLA-125-450-YE</b>	N/A
COLOR		YE	YE	YE	BK	YE	YE	YE	BK	YE	BK
SLEEVE SIZE		<b>PMA-90/30</b>	<b>55</b>	<b>55</b>	<b>PMA-70/25</b>	<b>55</b>	<b>90</b>	<b>90</b>	<b>100</b>	<b>125</b>	<b>160</b>



\*PMA - HIGH SHRINK SLEEVE.  
 - SPCCS. SAME AS PLA.  
 - EXPENSIVE THAN PLA (NEEDS LONGER LEAD TIME).  
 - HIGH SHRINK TUBULAR BACKING.



**MATERIAL:**

ACCORDING TO FDOT SPECIFICATION  
 POST TENSIONING, SECTION 462 - 4, 2, 6, 3.

**NOTES:**

1. ORDER DIRECT FROM CANUSA  
 TEL. 281 367 - 8866  
 FAX. 281 367 - 4304
2. ABOVE TABLE APPLIES TO INTERNAL USE ONLY.
3. SELECT ORDER LENGTH AS A MULTIPLE OF THE ACTUAL LENGTH. SEE OPTION A OR B.
4. \*NO CONNECTION DETAILS DEVELOPED.
5. OTHER COLORS SLEEVE MAY BE AVAILABLE UPON REQUEST.
6. OD<sub>1</sub> IS MAX. OD W/ RIBS AND OD<sub>2</sub> IS MAX. OD W/O RIBS
7. N/A MEANS NOT AVAILABLE OR NOT ASSIGNED YET.
8. ALWAYS HEAT THE DUCT ENDS FIRST.

**APPROVED BY FDOT 05-31-07**

TUBULAR SLEEVE	TUBULAR SLEEVE DIAMETER	
	AS SUPPLIED	FULLY RECOVERED
PLA 55-YYY ZZ	3.5" [90mm]	2.3" [55mm]
PLA 63-YYY ZZ	3.5" [90mm]	2.5" [63mm]
PLA 90-YYY ZZ	4.8" [120mm]	3.3" [81mm]
PLA 100-YYY ZZ	5" [130mm]	3.5" [90mm]
PLA 115-YYY ZZ	5.5" [145mm]	3.8" [98mm]
PLA 125-YYY ZZ	6.3" [160mm]	4.3" [110mm]
PLA 160-YYY ZZ	7.5" [190mm]	5.2" [130mm]
PLA 170-YYY ZZ	8" [205mm]	5.5" [140mm]
PLA 230-YYY ZZ	10" [260mm]	7" [180mm]
PLA 280-YYY ZZ	12.3" [315mm]	8.3" [211mm]
PLA 315-YYY ZZ	14" [360mm]	9.5" [245mm]
PMA 90/30	3.5" [90mm]	1.2" [30mm]
PMA 70/25	2.8" [70mm]	1.0" [25mm]

DIMENSIONS: INCH [mm] mm FOR REFERENCE ONLY		REV.   DATE   NAME		PART NUMBERS:	
<b>HEAT SHRINK SLEEVE SIZES FOR INTERNAL APPLICATIONS</b>				SEE TABLE ABOVE	
DATE: 05-31-07	DWG: I.TIRA	CHK: E.A.	APP: K.S.	DRAWING NUMBER: <b>PLA-0-0-0</b>	
THIS DRAWING, THE PERTINENT ENCLOSURES, DESCRIPTIONS, CALCULATIONS ETC. AND THEIR CONTENTS ARE THE PROPERTY OF DWYDAG SYSTEMS INTERNATIONAL, USA, INC. THEY ARE NOT ALLOWED TO BE DUPLICATED WITHOUT OUR PERMISSION. THEY ARE ALSO NOT TO BE SHOWN OR EXPLAINED FOR ANY REASON TO A THIRD PARTY OTHER THAN FOR REASONS EXPRESSLY INTENDED BY DSI'S SUBMITTAL TO THE ORIGINAL RECEIVER. THEY HAVE TO BE RETURNED UPON REQUEST.				DWYDAG-SYSTEMS INTERNATIONAL, USA, INC. 320 MARMON DRIVE - BOLINGBROOK, IL 60440 PHONE: 630-739-1100      FAX: 630-739-1405	

