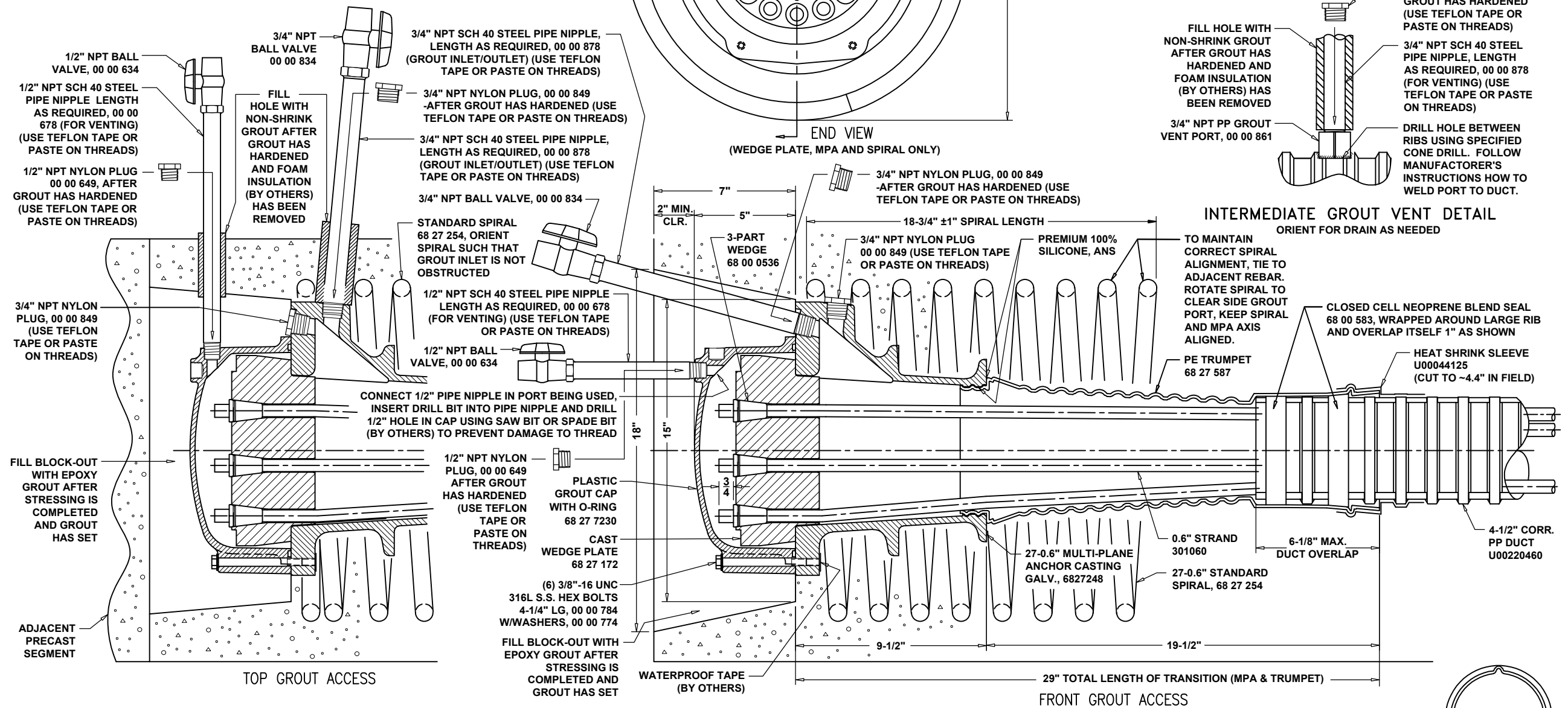
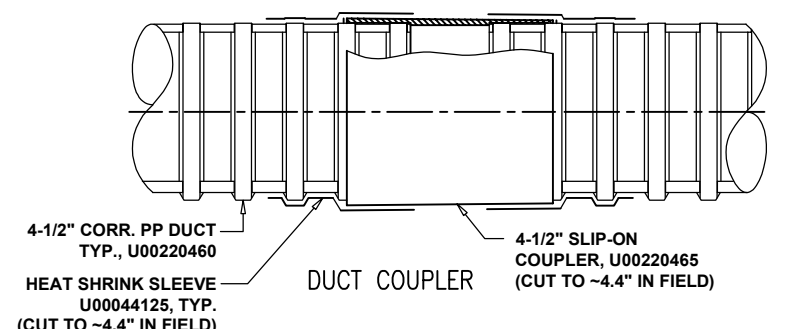
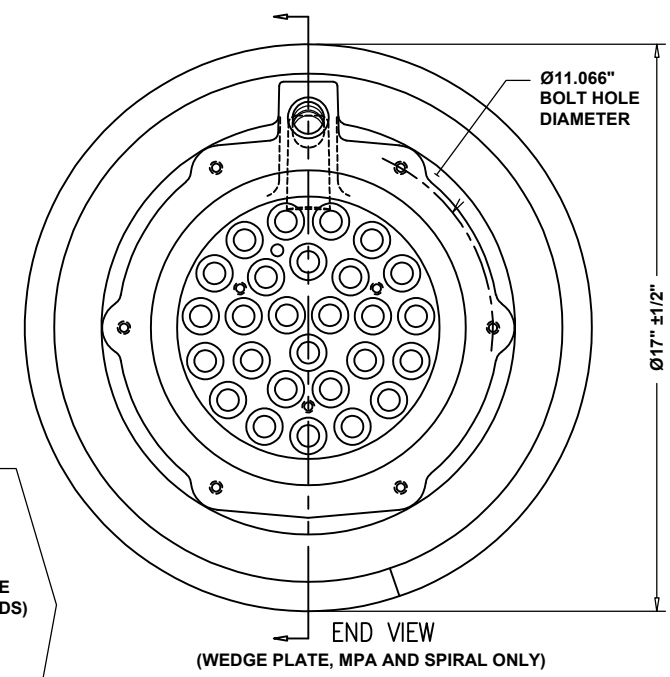


**CAUTION:** WHEN PRESSURIZING GROUT CAPS, DO NOT STAND BEHIND CAPS!

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



**INSTALLATION PROCEDURE:**  
BELOW PROCEDURE IS GENERIC. USERS SHALL REFER TO FDOT STANDARD SPECIFICATIONS AND PROJECT SPECIFIC CRITERIA

- PREASSEMBLE THE MULTI-PLANE ANCHOR, SPIRAL AND PE TRUMPET. USE PREMIUM 100% SILICONE BETWEEN MPA AND TRUMPET TO HAVE A STRONG CONNECTION. GREASE THE BOLTS TO FACILITATE REMOVAL LATER.
- BOLT THE MULTI-PLANE ANCHOR (MPA) WITH PE TRUMPET TO THE POCKET FORMER USING SOME OF THE SIX THREADED HOLES IN MPA. THE MPA SHALL BE ORIENTED SUCH THE GROUT HOLE POINTS UP. THE SPIRAL SHOULD BE ATTACHED TO ADJACENT REBARS AND ROTATED SUCH THAT IT WON'T INTERFERE WITH 3/4\"/>

- CONCRETING CAN NOW PROCEED**
- AFTER COMPLETION OF CONCRETE PLACEMENT, PROVE THAT THE DUCTS ARE CLEAR OF ANY OBSTRUCTIONS OR DAMAGE. PASS A TORPEDO THROUGH THE DUCT TO DEMONSTRATE.
  - PROVE THAT ALL GROUT VENTS ARE FREE AND SECURED.
  - AFTER THE CONCRETE HAS GAINED STRENGTH, THE STRESSING OPERATION MAY BEGIN.
  - INSTALL STRANDS BY PUSHING OR PULLING INDIVIDUALLY OR AS A BUNDLE INTO DUCTS. ALLOW SUFFICIENT TAIL LENGTH FOR STRESSING.
  - CHECK THE WEDGE PLATE FOR RUST, DIRT AND GRIT. CLEAN WEDGE HOLES WITH WIRE BRUSH IF NECESSARY. LIGHTLY GREASE OR OIL WEDGE HOLES.
  - CHECK WEDGES FOR RUST, DIRT AND GRIT. DISCARD RUSTY WEDGES. USE ONLY CLEAN WEDGES.
  - INSTALL WEDGE PLATE, SLIP THE WEDGES OVER THE STRANDS AND LOOSELY SEAT IN WEDGE HOLES.

**STRESSING CAN PROCEED WHEN CONCRETE STRENGTH HAS REACHED MIN. COMPRESSIVE STRENGTH REQUIRED IN CONTRACT DRAWING NOT LESS THAN 5250 PSI.**

- AFTER THE STRESSING OPERATION IS COMPLETED AND THE ELONGATIONS FALL WITHIN ±7%, OBTAIN APPROVAL FROM THE ENGINEER TO CUT THE STRAND TAILS APPROXIMATELY 3/4\"/>

- GROUTING CAN NOW PROCEED**
- REMOVE GROUT PORT PIPES AND INSERT PLUGS. FILL BLOCKOUT AND HOLES WITH NON-SHRINK GROUT AFTER POST GRROUTING OPERATIONS AND INSPECTIONS ARE COMPLETED.

REFER TO STANDARD PLANS 462-003 FOR PT ANCHORAGE AND TENDON FILLING DETAILS

MATERIAL LIST		
PART NO.	DESCRIPTION	MATERIAL SPECIFICATION
68 27 248	27-0.6" MULTI-PLANE ANCHOR CASTING, GALVANIZED	DUCTILE IRON ASTM A536, GRADE 65-45-12 GALV. ACC. TO ASTM A123
68 27 254	27-0.6" STANDARD SPIRAL	ASTM A615, GR. 60, #6, 2-1/4" PITCH, 17" O.D., -8 TURNS
68 27 587	27-0.6" PE TRUMPET	POLYETHYLENE
68 27 172	27-0.6" CAST WEDGE PLATE	DUCTILE IRON 80-55-06
68 27 7230	27-0.6" NYLON CAP WITH O-RING	CAP: NYLON 6, 20% GLASS FILLED O-RING: EPDM
U00220460	4-1/2" (115mm) CORR. DUCT (Rmin=44.7)	POLYPROPYLENE
U00220465	(OPTIONAL) 4-1/2" SLIP-ON COUPLER	POLYPROPYLENE
U00044125	HEAT SHRINK SLEEVE, PLA-125-450-YE	ACCORDING TO FDOT SPEC. 960-2.2.1.8
301060	0.6" STRAND	270 KSI LOW RELAX STRAND
68 00 0536	3-PART WEDGE FOR 0.6" STRAND	AISI-C12L14 HEAT TREATED

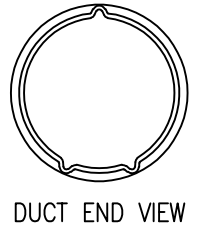
MATERIAL LIST		
PART NO.	DESCRIPTION	MATERIAL SPECIFICATION
00 00 784	(6) 3/8"-16UNC HEX BOLT 5.25" LONG (GROUT CAP)	316 STAINLESS STEEL
00 00 774	(6) SMALL DIA. WASHERS (FOR GROUT CAP)	316 STAINLESS STEEL
00 00 878	3/4" NPT PIPE NIPPLE, LENGTH AS REQ'D (TEMP.)	SCH 40 BLACK STEEL
00 00 834	3/4" NPT BALL VALVE (TEMPORARY)	PVC
00 00 849	3/4" NPT PLUG	NYLON 6, WHITE
00 00 678	1/2" NPT PIPE NIPPLE, LENGTH AS REQ'D (TEMP.)	SCH 40 BLACK STEEL
00 00 634	1/2" NPT BALL VALVE (TEMPORARY)	PVC
00 00 649	1/2" NPT PLUG	NYLON 6, WHITE
ANS	PREMIUM 100% SILICONE	SILICONE
68 00 583	1" x 1/4" SEAL	CLOSED CELL NEOPRENE BLEND
ANS	TEFLON TAPE OR PASTE FOR THREADS	--
00 00 861	(OPTIONAL) 3/4" NPT GROUT VENT PORT	POLYPROPYLENE

- NOTES:**
- REQUIRED REINFORCING BARS NOT SHOWN.
  - DUCT IS DELIVERED IN STRAIGHT SECTIONS AND IS NOT INTENDED TO BE COILED.

**INTERNAL GROUTED 27-0.6" MA ASSEMBLY DRAWING**

DATE: 08-08-19 DWG: G. MALECKI S.I. APP: S.I.

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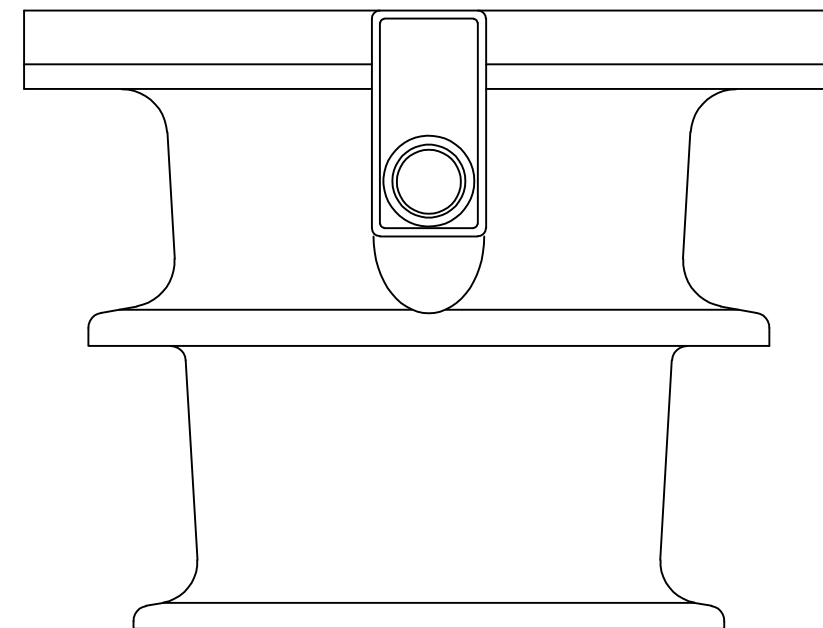
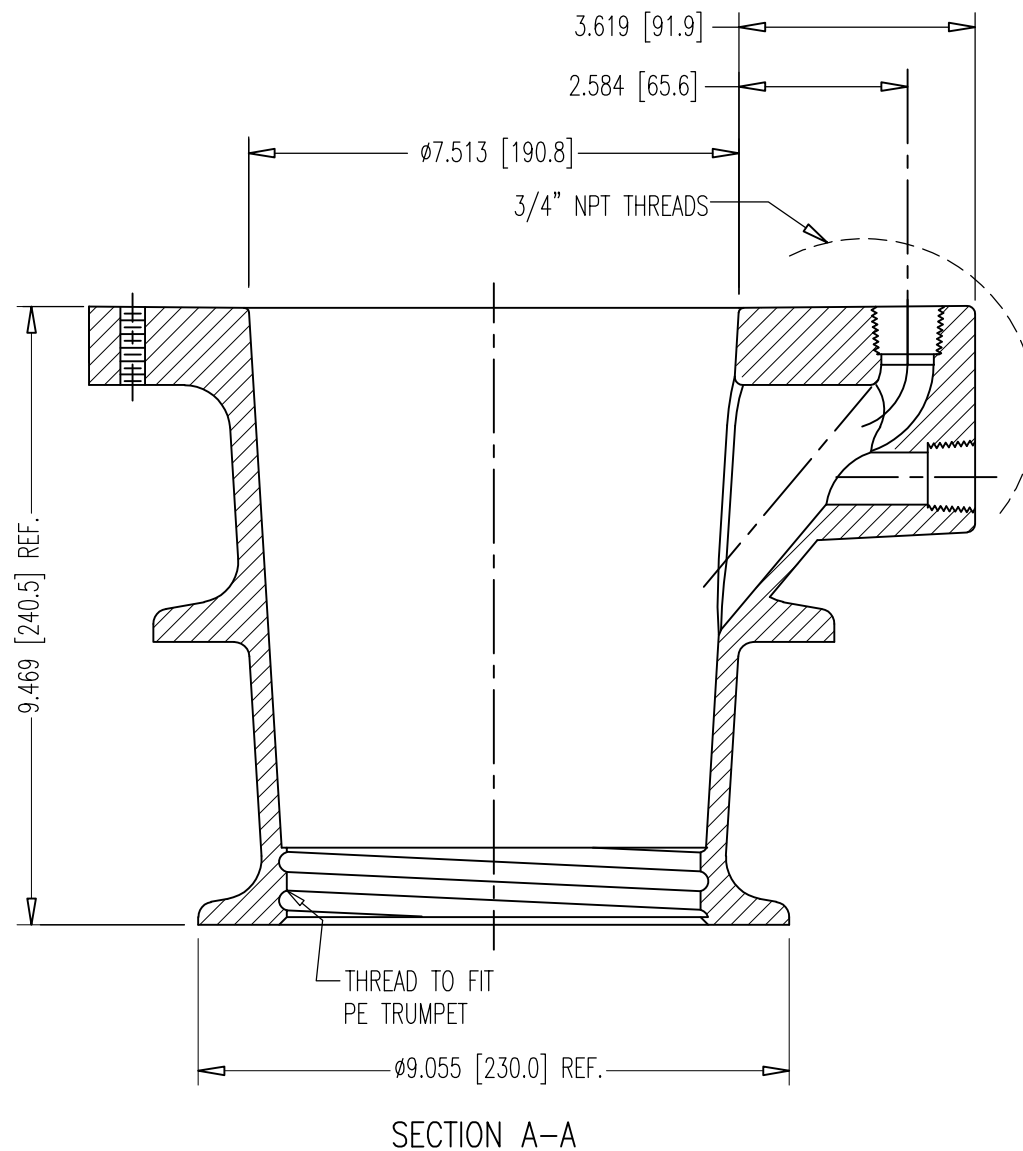
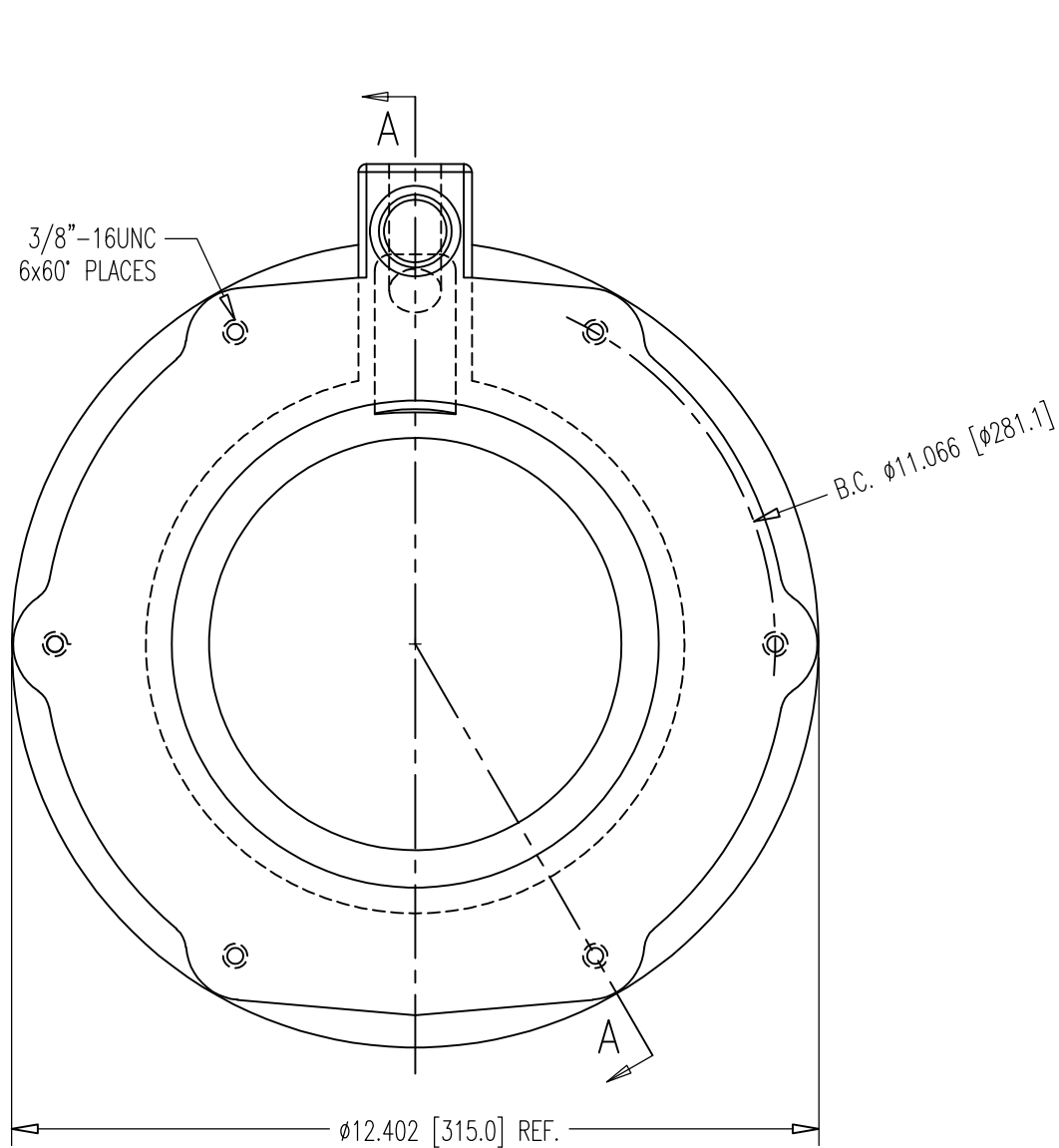


REV.	DATE	NAME	

SCALE: 1:5

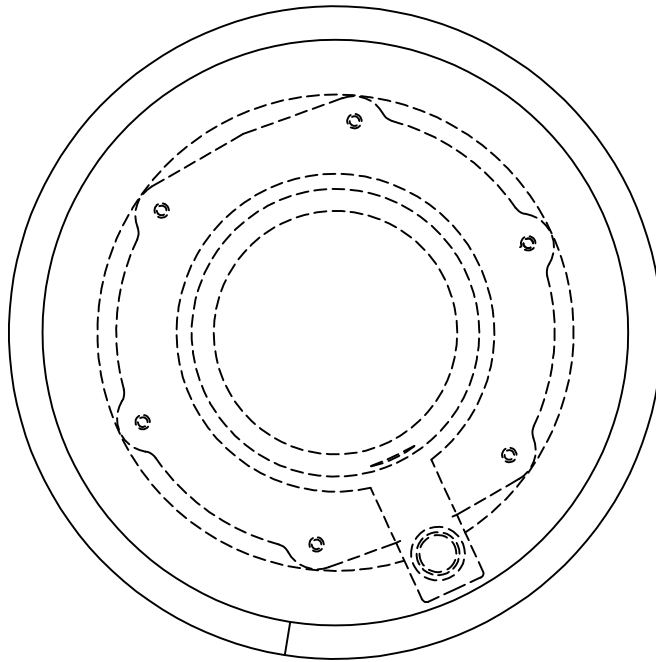
DRAWING NUMBER: MA 68 27 200

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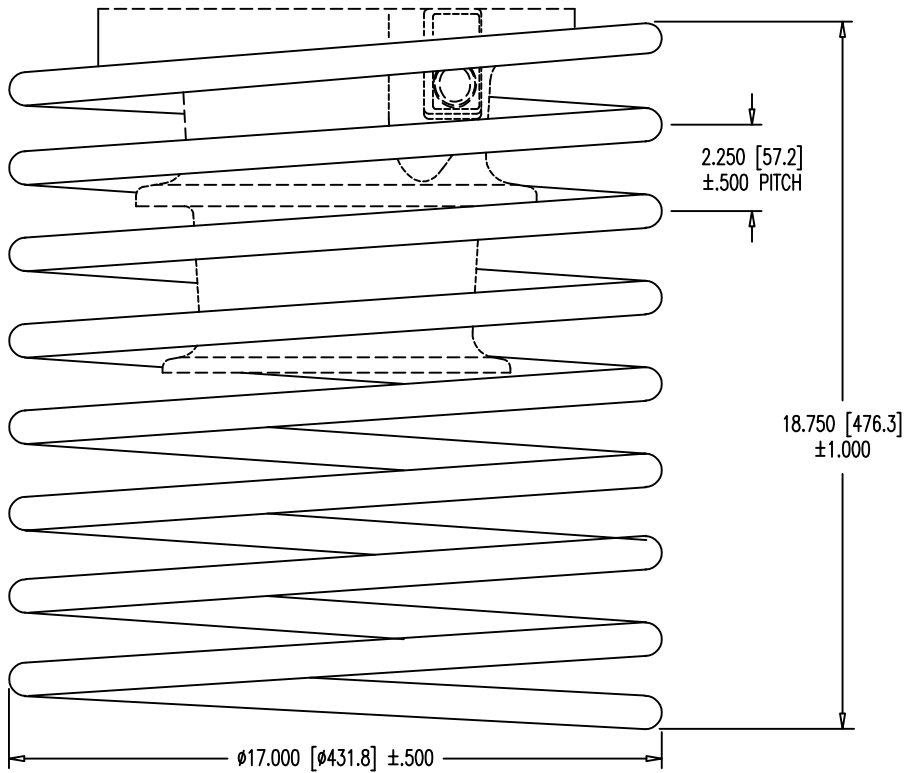
- NOTES FOR GALVANIZING PARTS:
1. GALVANIZE ACCORDING TO ASTM A123 AND TAKE CARE HOW CASTINGS ARE STORED TO PREVENT RUST.
  2. DRILL & TAP BOLT HOLES AND GROUT PORTS AND MACHINE GROOVE IN BOTTOM OF ANCHOR AND SPRAY THEM WITH ZINC RICH PAINT ACCORDING TO ASTM A780, ENSURE THREADABILITY.

DIMENSIONS: INCH [mm] mm FOR REFERENCE ONLY		QUALITY PLAN NUMBER: QS60021200C		TOLERANCES: $\pm 0.30 \pm 2^\circ$ UNLESS NOTED	WEIGHT 52 LBS.	REV.	DATE	NAME	ECRN	PART NUMBER: 68 27 248
<b>27-0.6"/37-0.5" MULTI-PLANE ANCHOR WITH TWO GROUT PORTS-GALV.</b>				MATERIAL: SEE MAT'L SPEC. PM00021200C	SCALE 1:3					DRAWING NUMBER: 68 27 216
DATE: 10-13-04	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> 320 MARMON DRIVE - BOLINGBROOK, IL 60440 PHONE: 630-739-1100 FAX: 630-739-1405						



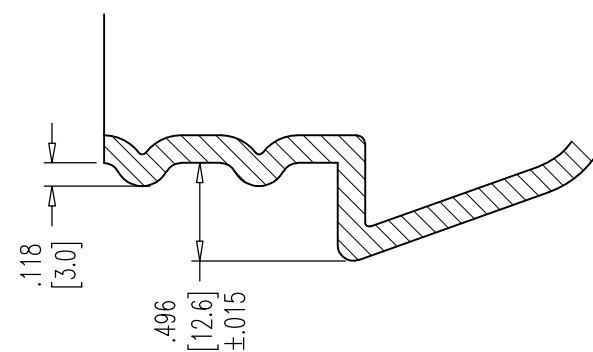
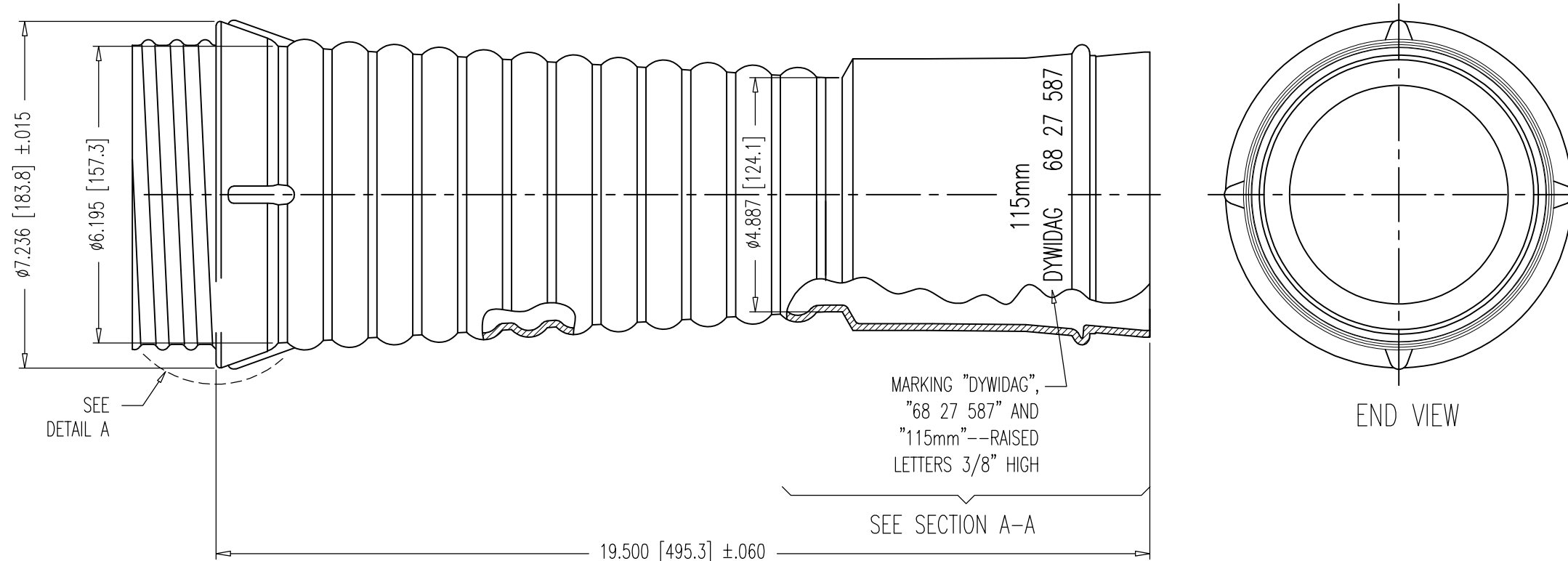
**NOTES:**

1. SPIRAL IS MADE FROM STANDARD #6 REBAR, NO PART NUMBER MARKING IS SHOWN.
2. KEEP SPIRAL AND MPA AXIS ALIGNED, IF USING SIDE PORT, ROTATE SPIRAL TO CLEAR.

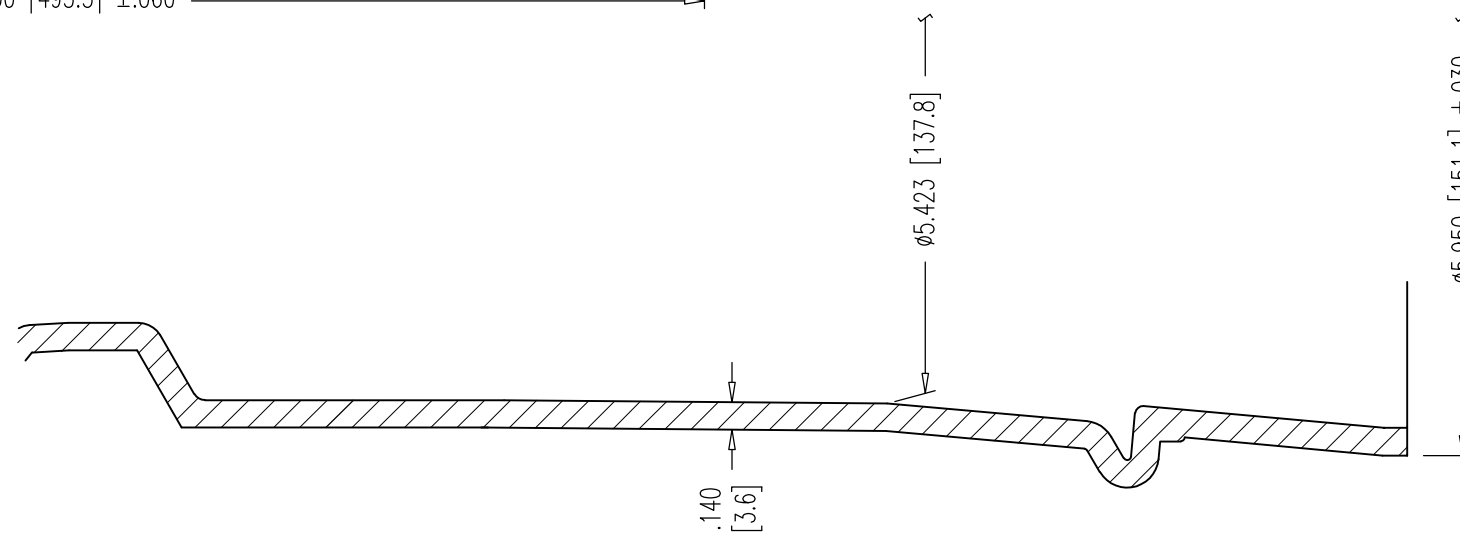


NO. OF FULL TURNS: 8  
 DEVELOPED LENGTH: 34'-1" ±.250"  
 WEIGHT: 51.2 LBS.

DIMENSIONS: INCH [mm] mm FOR REFERENCE ONLY		QUALITY PLAN NUMBER: QS60021400A		TOLERANCES: ±.020 UNLESS NOTED	WEIGHT 51.2 LBS.	REV.	DATE	NAME	PART NUMBER: <b>68 27 254</b>
<b>STANDARD SPIRAL FOR 27-0.6"/37-0.5" MPA</b>				MATERIAL: ASTM A615 SIZE #6, GR 60	SCALE 1:5				DRAWING NUMBER: <b>68 27 254</b>
				DATE: 01-23-07	DWG: G. MALECKI	CHK: S.Y.	APP: E.A.		
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DETAIL A  
 THREAD FITS INTO 27-0.6" MPA  
 CASTING (SEE DRAWING 68 27 216)

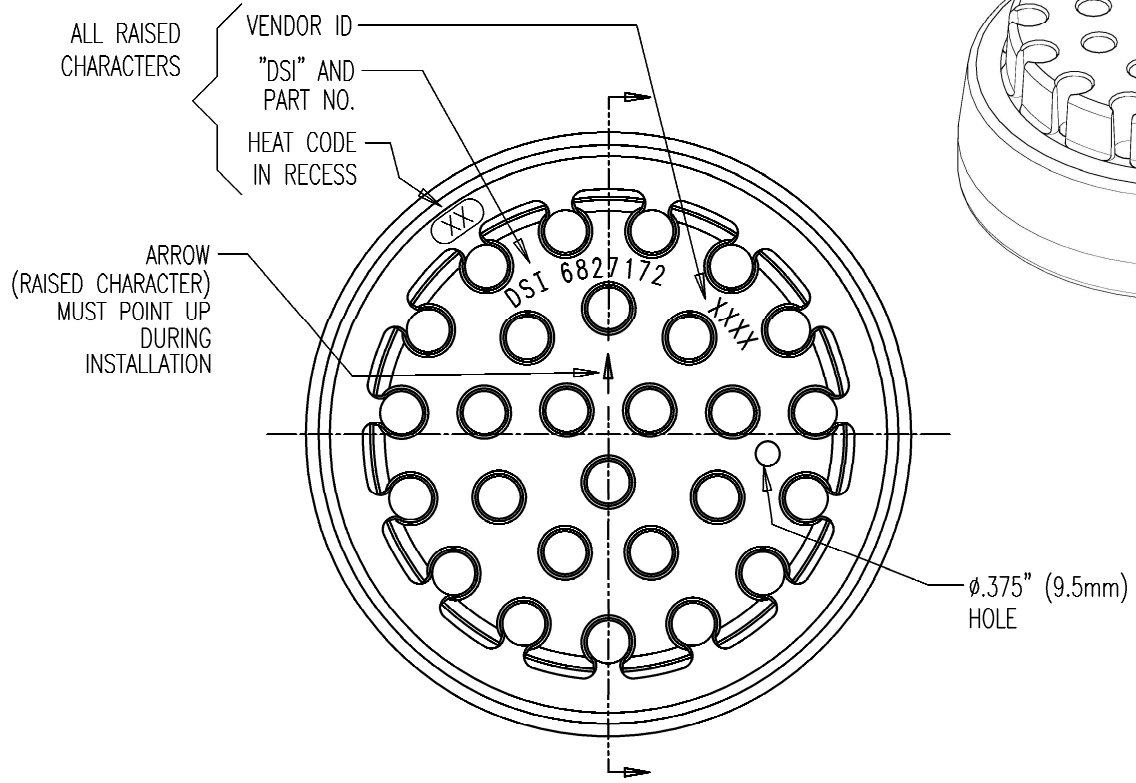
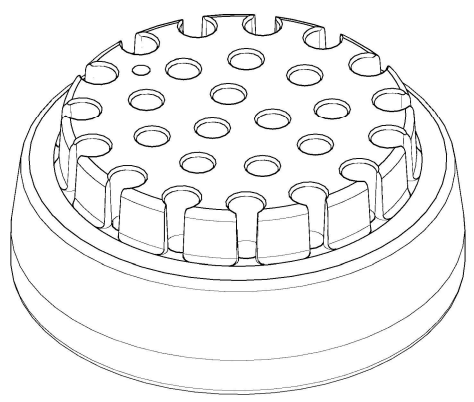
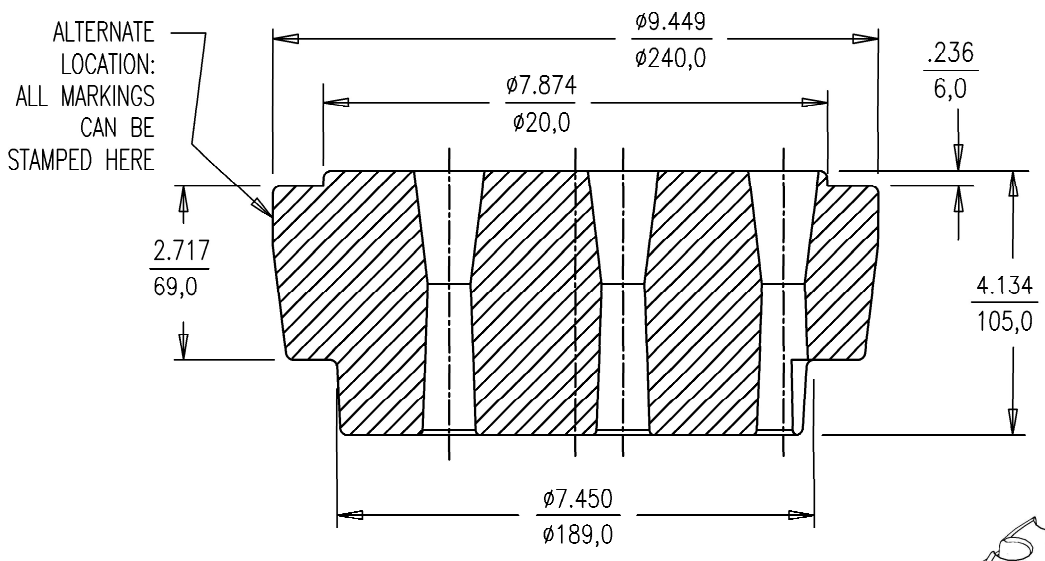


SECTION A-A

- MATERIAL SPECIFICATIONS:  
 HIGH-DENSITY POLYETHYLENE, CONFORMING TO THE FOLLOWING:
1. MEETS REQUIREMENTS OF ASTM D3350 WITH A MINIMUM CELL CLASS OF 445574C.
  2. CONTAINS ANTIOXIDANTS WITH A MINIMUM OXIDATIVE-INDUCTION TIME (OIT) ACCORDING TO ASTM D3895 OF 40 MINUTES.
  3. REMOLDED FINISHED MATERIAL HAS A MINIMUM FAILURE TIME OF 24 HOURS WHEN TESTED FOR STRESS CRACK RESISTANCE USING ASTM F2136 AT AN APPLIED STRESS OF 600 PSI.

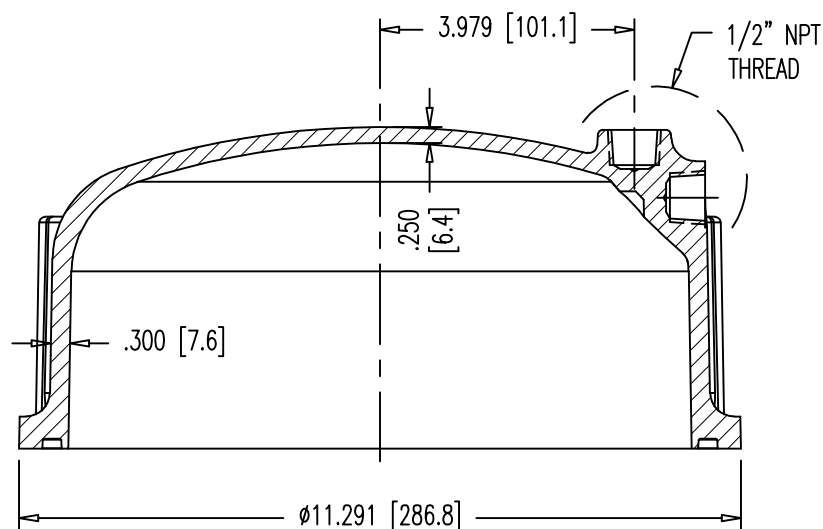
DIMENSIONS: INCH [mm] mm FOR REFERENCE ONLY		QUALITY PLAN NUMBER: QS60058800P		TOLERANCES: $\pm 0.020$ UNLESS NOTED		WEIGHT		REV. DATE NAME 01-11-19 S.I.		PART NUMBER: 68 27 587	
<b>27-0.6"/37-0.5" SHORT PE TRUMPET          FOR MPA CASTINGS</b>				MATERIAL: SEE ABOVE		SCALE 1:3 1:1				DRAWING NUMBER: 68 27 587	
DATE: 10-16-06		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 DST'S SUBMITTAL TO THE ORIGINAL RECEIVER. THEY HAVE TO BE RETURNED UPON REQUEST.			
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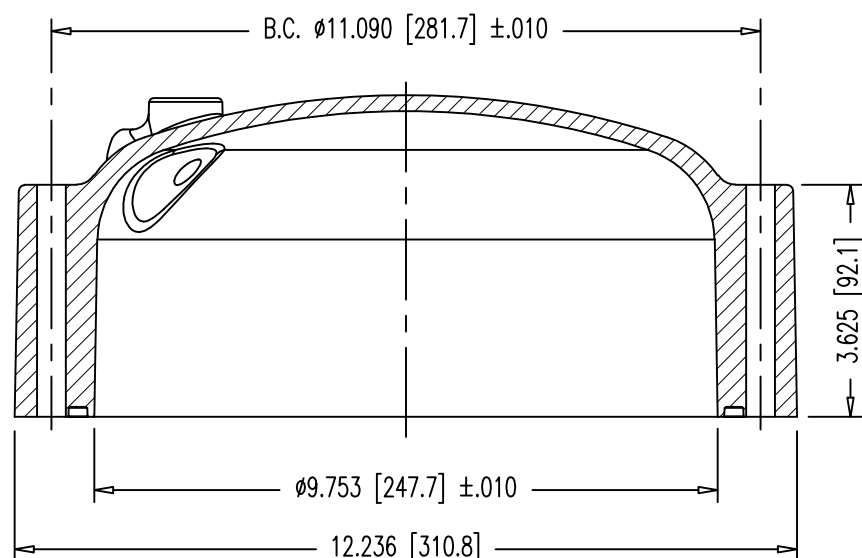


BOTTOM VIEW

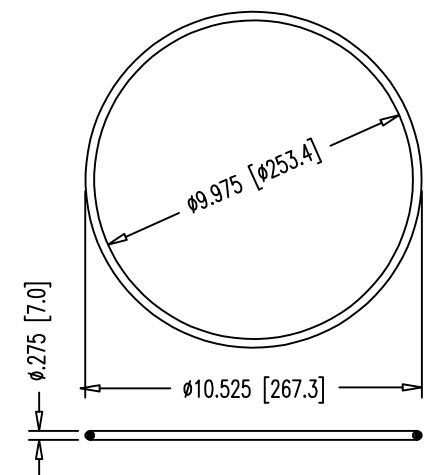
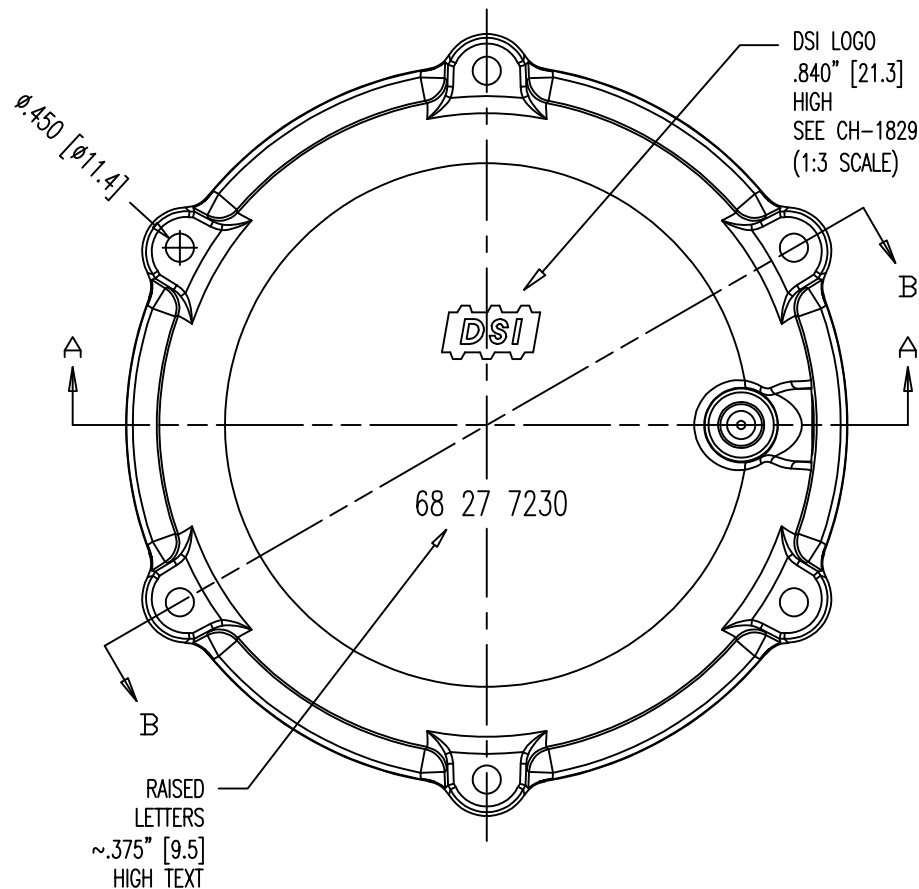
DIMENSIONS: INCH/mm mm FOR REFERENCE ONLY		QUALITY PLAN NUMBER: QS00014200F		WEIGHT 48.2 LBS.	REV. A	DATE 10-23-15	NAME S.Y.	ECRN 0314	PART NUMBER: <b>68 27 172</b>
<b>27-0.6" CAST WEDGE PLATE</b>				MATERIAL: DUCTILE IRON 80-55-06 ASTM A536	SCALE 1:3 1:4				DRAWING NUMBER: <b>68 27 172</b>
				DATE: 04-15-14	DWG: G. MALECKI	CHK: S.Y.	APP: S.E.		
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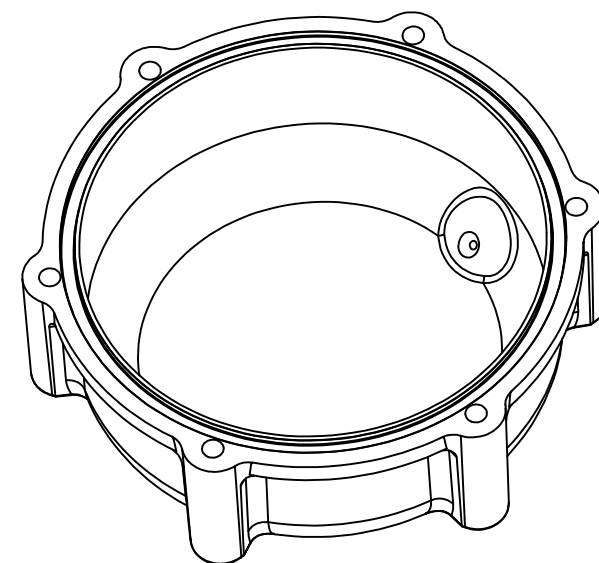
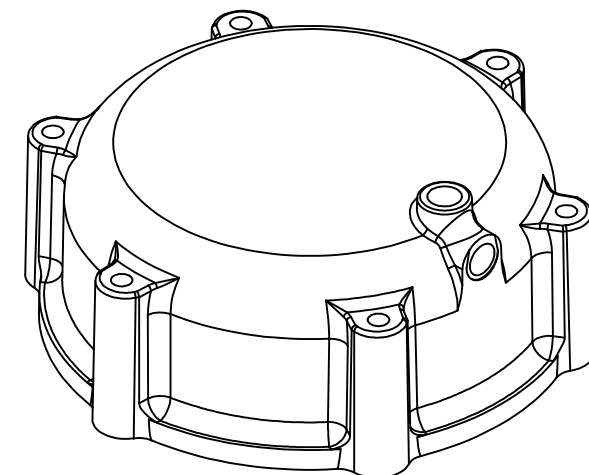
SECTION A-A



SECTION B-B



#449 O-RING 10x10-1/2x1/4  
 O-RING MATERIAL:  
 EPDM, MEETING FDOT  
 SPECIFICATIONS 960-2.2.1.7.  
 SCALE: NTS

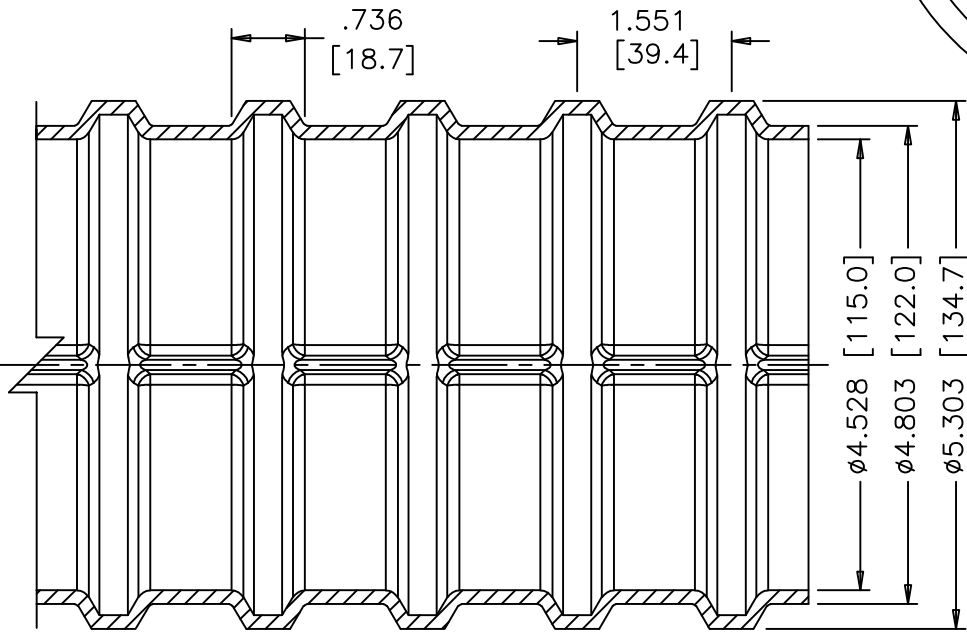
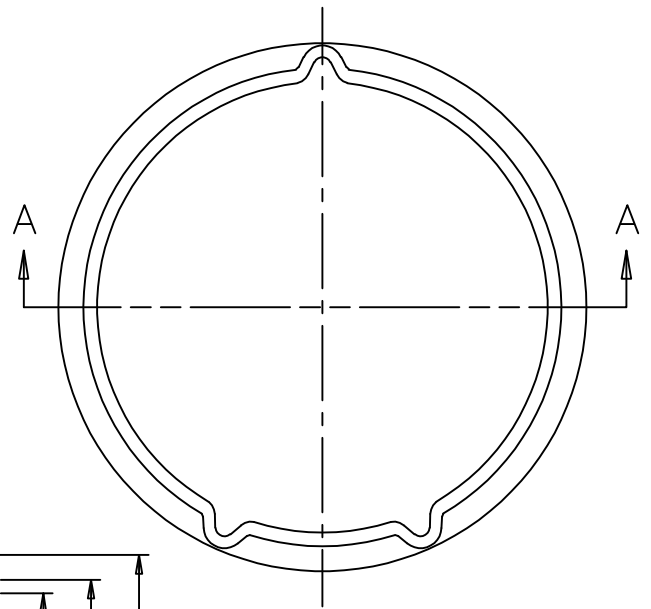
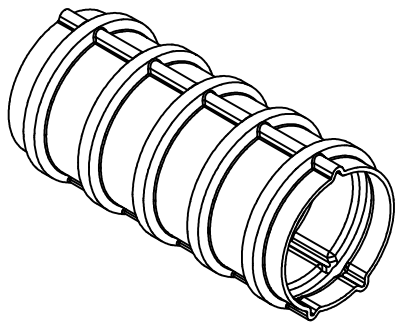


ISOMETRIC VIEWS  
 SCALE 1:4

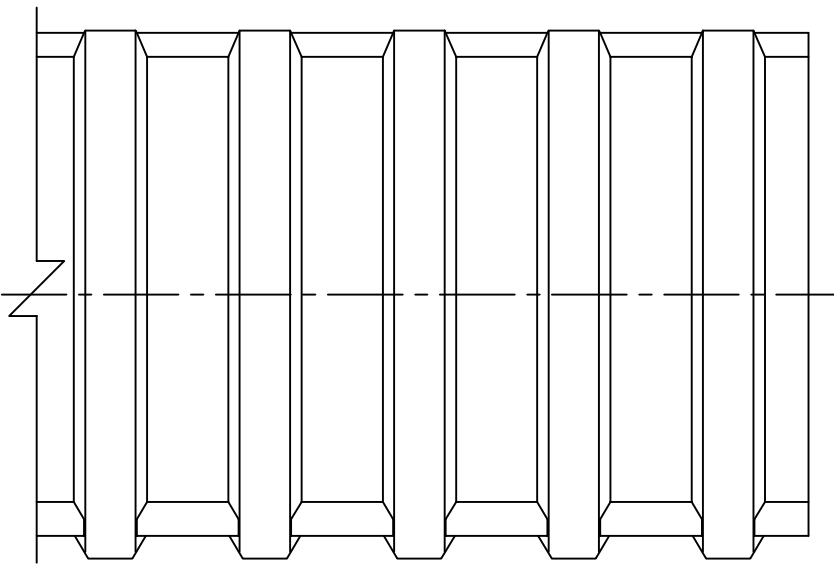
- NOTES:
- USE 3/8"-16UNC 316L S.S. HEX BOLTS, 4-1/4" LONG W/SMALL DIA. WASHER.
  - INSTALL O-RING IN GROOVE USING DROPS OF LIQUID ADHESIVE BEFORE SHIPPING. DON'T USE EXCESSIVE ADHESIVE. O-RING MUST STAY IN PLACE UNTIL INSTALLATION.
  - THE NYLON CONFORMS TO ASTM D5989, WITH CELL CLASSIFICATION S-PA0401 (ULTIMATE STRENGTH 10,000 PSI MIN., WITH UV STABILIZER ADDED).
  - 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.
  - WHEN PRESSURIZING GROUT CAPS, DO NOT STAND BEHIND CAPS!

DIMENSIONS: INCH [mm] mm FOR REFERENCE ONLY		QUALITY PLAN NUMBER: QS60072300P		TOLERANCES: ±.020 UNLESS NOTED	WEIGHT 3.95 LBS.	REV. DATE NAME ECRN	PART NUMBER: 68 27 7230	
<b>27-0.6" PLASTIC GROUT CAP</b>				MATERIAL: NYLON 6, 20% GLASS FIBER FILLED	SCALE 1:3 1:4	10/04/18 S.I.	DRAWING NUMBER: 68 27 7230	
DATE: 11-07-03		DWG: G. MALECKI		CHK: E.A.	APP: K.S.	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



NOTES:

1. MIN. BENDING RADIUS  $R_{min.} = 44.7$  FT.
2. DUCT IS DELIVERED IN STRAIGHT SECTIONS AND IS NOT INTENDED TO BE COILED.



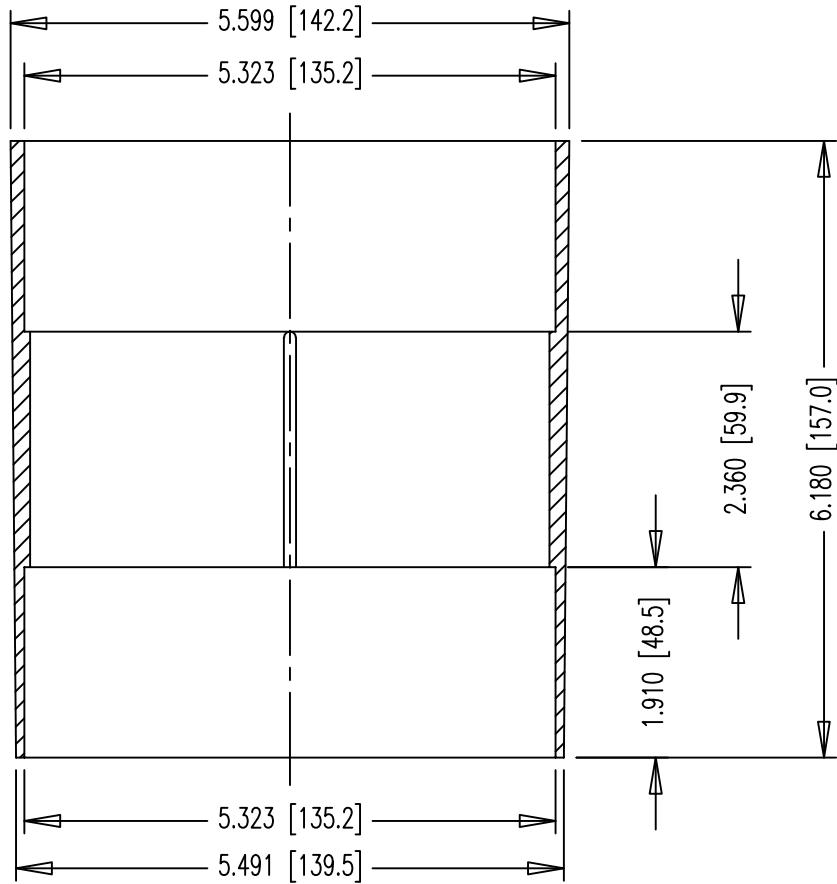
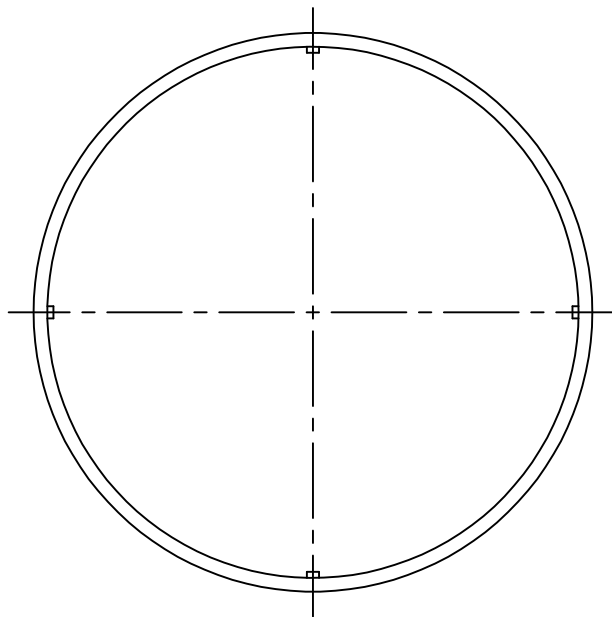
MATERIAL: POLYPROPYLENE  
 CELL CLASS RANGE: PP0340B44541  
 TO PP0340B67884, MATERIAL MEETS  
 FDOT SPECS. 960-2.4.3.

DIMENSIONS: INCH [mm] mm FOR REFERENCE ONLY		QUALITY PLAN NUMBER: QU00041110P		TOLERANCES: ±.010 UNLESS NOTED	WEIGHT 0.85 LBS/FT	REV. 1	DATE 01-11-19	NAME S.I.	PART NUMBER: U00220460
<b>4-1/2" (115mm) CORRUGATED PP DUCT WITH GROUT CHANNELS</b>				MATERIAL: SEE ABOVE	SCALE 1:2				DRAWING NUMBER: U00220460
DATE: 10-28-04	DWG: G. MALECKI	CHK: H.K.	APP: K.S.						

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▲ MATERIAL: POLYPROPYLENE  
 CELL CLASS RANGE: PP0340B44541 TO PP0340B67884  
 MATERIAL MEETS FDOT SPECS. 960-2.4.3.

DIMENSIONS: INCH [mm] mm FOR REFERENCE ONLY		QUALITY PLAN NUMBER:		TOLERANCES: ±.005 UNLESS NOTED	WEIGHT LBS.	REV. ▲	DATE 01-11-19	NAME S.I.	PART NUMBER: <b>U00220465</b>
<b>115mm SLIP-ON COUPLER FOR DUCT WITH FLOW CHANNELS</b>				MATERIAL: SEE ABOVE	SCALE 1:2				DRAWING NUMBER: <b>U00220465</b>
				DATE: 01-09-07	DWG: G. MALECKI	CHK: S.Y.	APP: K.S.		
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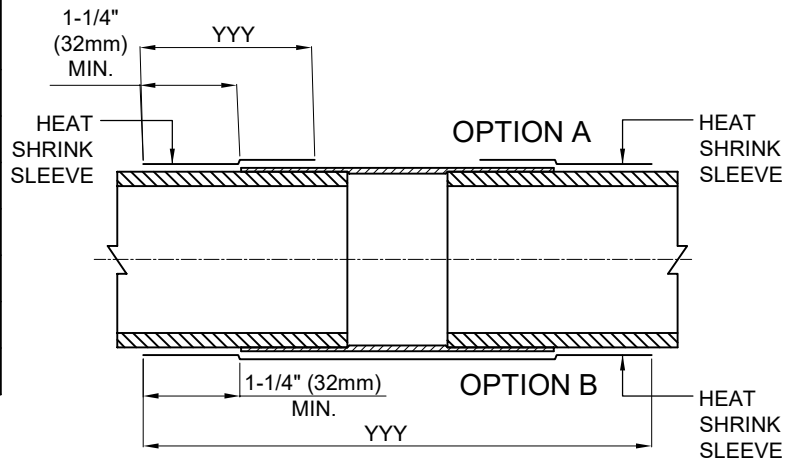


<b>DIMENSIONS &amp; ORDERING INFO</b>	P L A - XXX - YYY - ZZ	<b>STANDARD ORDERING OPTIONS</b>
	COLOR ▶	YE - YELLOW, BK - BLACK
	SLEEVE WIDTH ▶	300mm, 450mm, 600mm, 900mm (12", 18", 24", 36")
	SLEEVE SIZE ▶	63mm -315mm (2-1/2" - 12")
	ADHESIVE (thickness as supplied) ▶	A - 0.75 mm (30 mils)
	BACKING (thickness as supplied) ▶	L - 0.80 mm (31 mils)
	CONFIGURATION ▶	P - Tubular

PMA - HIGH SHRINK SLEEVE.  
 └── HIGH SHRINK TUBULAR BACKING.

TUBULAR SLEEVE	TUBULAR SLEEVE DIAMETER AS SUPPLIED	FULLY RECOVERED
PLA 63-YYY YE	3.5" [90mm]	2.5" [63mm]
PLA 90-YYY YE	4.8" [120mm]	3.3" [81mm]
PLA 115-YYY BK	5.5" [145mm]	3.8" [98mm]
PLA 125-YYY YE	6.3" [160mm]	4.3" [110mm]
PLA 160-YYY BK	7.5" [190mm]	5.2" [130mm]
PMA 90/30-YYY BK	3.5" [90mm]	1.2" [30mm]
PMA 120/40-YYY BK	4.7" [120mm]	1.6" [40mm]

YYY = SLEEVE WIDTH: 300/450/600/900/1500(mm)  
 COLOR: YE = YELLOW; BK = BLACK



**NOTE:**  
 FOLLOW MANUFACTURER'S  
 INSTALLATION INSTRUCTIONS.

**MATERIAL:**  
 POLYELEFIN FDOT SPECS 960-2.2.1.8 FOR  
 GROUTED APPLICATIONS

	DUCT SIZE	STRAND SYSTEM	BAR SYSTEM	HEAT SHRINK SLEEVE SIZE	PART NUMBER
CORRUGATED DUCT	1" x 3" (25mm x 76mm)	4-0.6"		PLA-63-450 YE	U00044063
	2-3/8" (59mm)	7-0.6"		PLA-63-450 YE	U00044063
			1", 1-1/4", 1-3/8"	PMA-90/30-450 BK	U00044030
	3" (76mm)		1 3/4"	PMA-120/40-450 BK	U00044040
	3-3/8" (85mm)	12-0.6"		PLA-90-450 YE	U00044090
	4" (100mm)		2-1/2"	PLA-90-450 YE	U00044090
	4" (100mm)	19-0.6"		PLA-115-450 BK	U00044115
	4-1/2" (115mm)	27-0.6"		PLA-125-450 YE	U00044125
5-1/8" (130mm)	31-0.6", 37-0.6"		PLA-160-450 BK	U00044160	
SMOOTH DUCT	3" SDR 17 HDPE PIPE		1-3/8"	PLA-63-450 YE	U00044063

DIMENSIONS: INCH [mm]  
 mm FOR REFERENCE ONLY

### HEAT SHRINK SLEEVE SIZES FOR INTERNAL GROUTED APPLICATIONS

DATE: 07-31-19    DWG: G. Malecki    CHK: S.I.    APP: S.I.

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REV.	DATE	NAME	ECRN
1	05-28-20	S.I.	
2	02-15-21	S.I.	

SCALE  
 NTS

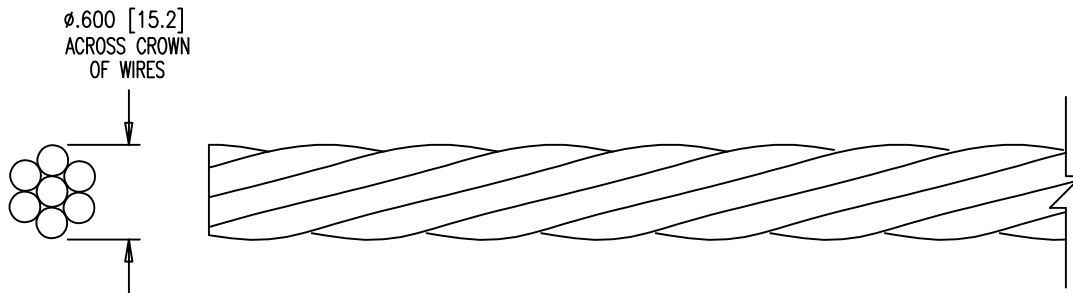
PART NUMBERS:

**SEE TABLE ABOVE**

DRAWING NUMBER:  
**U00044000**


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

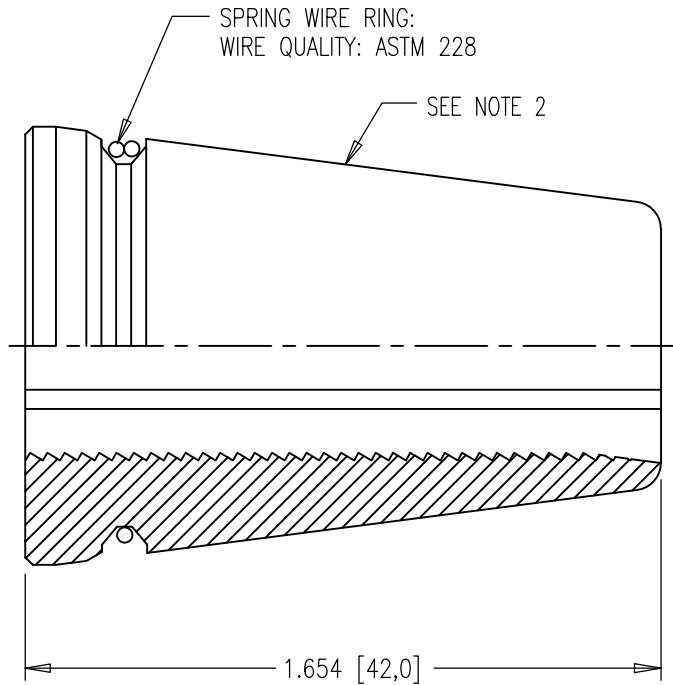
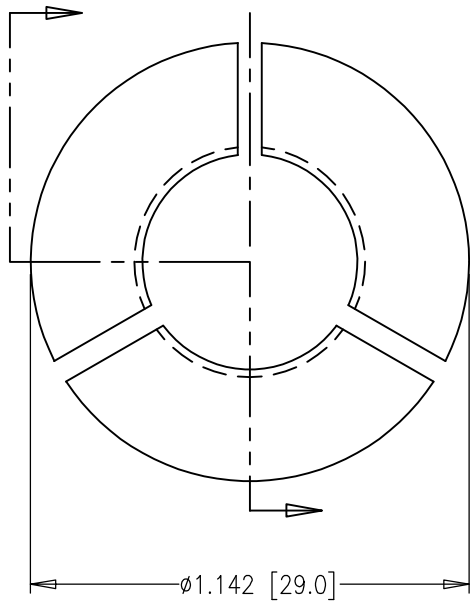




- NOTES:
1. NO PART NUMBER OR IDENTIFICATION MARKS ON STRAND.
  2. RUST PRODUCING VISIBLE PITTING TO THE UN-AIDED EYE IS NOT ALLOWED.

MATERIAL:  
0.6" 270 KSI LOW RELAX STRAND  
ASTM A416

DIMENSIONS: INCH [mm] mm FOR REFERENCE ONLY		QUALITY PLAN NUMBER: QS000301000		TOLERANCES: ±.020 UNLESS NOTED	WEIGHT .738 PER/FT	REV.	DATE	NAME	PART NUMBER: <b>301060</b>
<b>0.6" BARE 270 KSI STRAND</b>				MATERIAL: SEE ABOVE	SCALE 1:1				DRAWING NUMBER: <b>301060</b>
				DATE: 02-18-19	DWG: G. MALECKI	CHK: C.S.	APP: K.S.		
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**NOTES:**

1. SHARP EDGES MUST BE BROKEN.
2. VIBRATE TO SURFACE FINISH OF 63  $\mu$ IN. MAX.
3. DIP IN SQ70 OIL OR EQUIV. FOR CORROSION PROTECTION.
4. MAKE SURE THAT THE BUTTRESS THREAD IS ORIENTED IN THE DIRECTION SHOWN ON THIS DRAWING.
5. NO STAMPED PART NUMBER

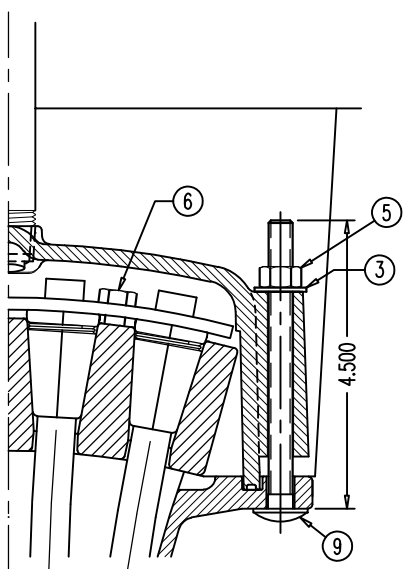
MATERIAL:  
12L14  
ALL HARDENED

DIMENSIONS: INCH/mm mm FOR REFERENCE ONLY		QUALITY PLAN NUMBER: QS00000500D		TOLERANCES: $\pm 0.010$ ; $\pm 2^\circ$ UNLESS NOTED	WEIGHT 0.19 LBS.	REV.	DATE	NAME	PART NUMBER: 68 00 0536
<b>3-PART WEDGE FOR 0.6" STRAND</b>				MATERIAL: SEE ABOVE	SCALE 2:1				DRAWING NUMBER: 68 00 0536
				DATE: 06-01-18	DWG: G. MALECKI	CHK: C.S.	APP: S.I.		

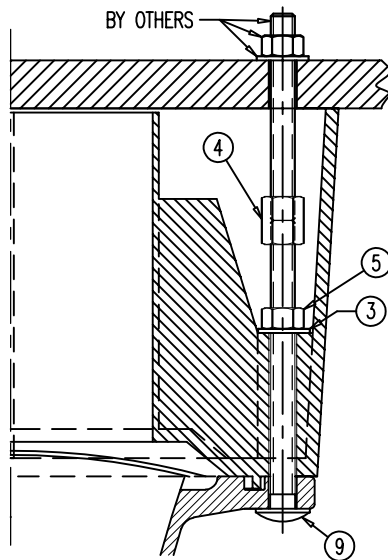
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**DYWIDAG-SYSTEMS INTERNATIONAL, USA, INC.**  
POST TENSIONING / REINFORCING UNIT PHONE: 630-739-1100  
320 MARMON DRIVE - BOLINGBROOK, IL FAX: 630-739-1405

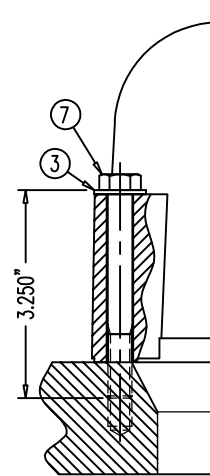




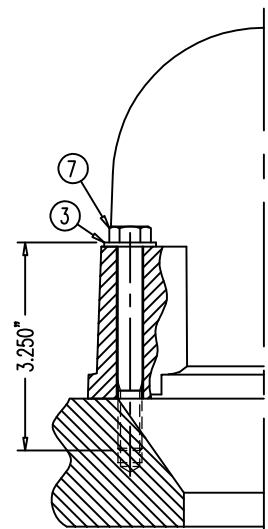
KEEPER PLATE 68 04 2637 ON  
WEDGE PLATE 68 04 2534A &  
NYLON CAP 68 04 2539 ON  
FLAT ANCHOR 68 04 2548



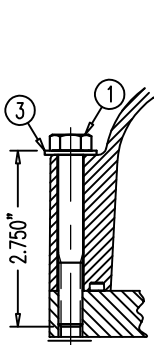
POCKET FORMER 68 04 2640  
ON FLAT ANCHOR 68 04 2548



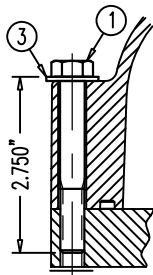
NYLON BAR CAP B36E50700 OR 50700A  
ON GALV. BEARING PLATE  
B26E22510, 22610, 22700, 22800,  
B32E22510, 22610, 22700, 22800,  
B36E22410, 22420, 22910, 22510,  
22610, 22700, 22800 & NYLON  
BAR CAP B66E50700 OR 50700A  
ON GALV. BEARING PLATE B66E22700



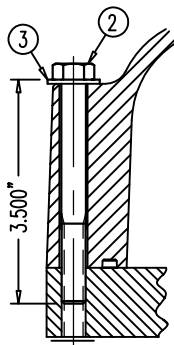
NYLON BAR CAP  
B46M50700  
OR 50700A  
ON GALV.  
BEARING PLATE  
B46E22700 &  
B46E22800



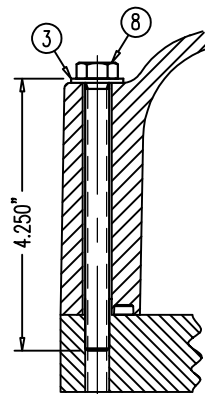
NYLON CAP  
68 07 7230 OR 7230A  
ON MPA 68 07 248



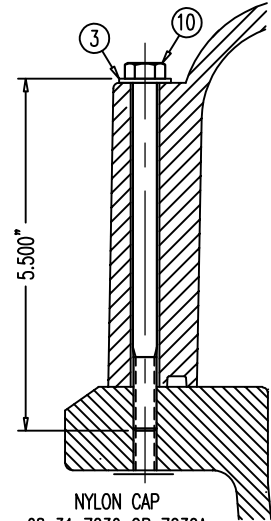
NYLON CAP  
68 12 7230 OR 7230A  
ON MPA 68 12 248



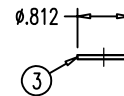
NYLON CAP  
68 19 7230 OR 7230A  
ON MPA 68 19 248



NYLON CAP  
68 27 7230 OR 7230A  
ON MPA 68 27 248



NYLON CAP  
68 31 7230 OR 7230A  
ON MPA 68 31 248



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

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

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

DIMENSIONS: INCH

QUALITY PLAN NUMBER:

## STAINLESS STEEL 316L BOLTS AND WASHER FOR NYLON CAPS

DATE: 09-10-04 DWG: G. MALECKI CHK: E.A. APP: K.S.

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SCALE  
1:3

REV.	DATE	NAME	NAME
1	05/01/19	S.I.	
2	05/28/20	S.I.	

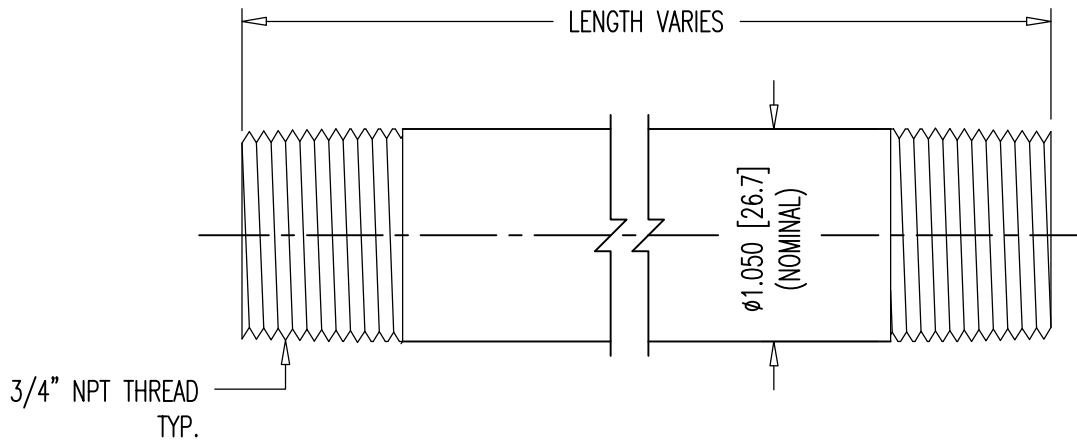
PART NUMBERS:  
SEE TABLE

DRAWING NUMBER:  
00 00 770

DYWIDAG-SYSTEMS INTERNATIONAL, USA, INC.

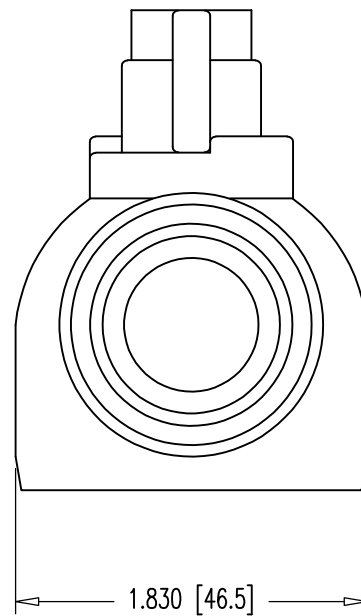
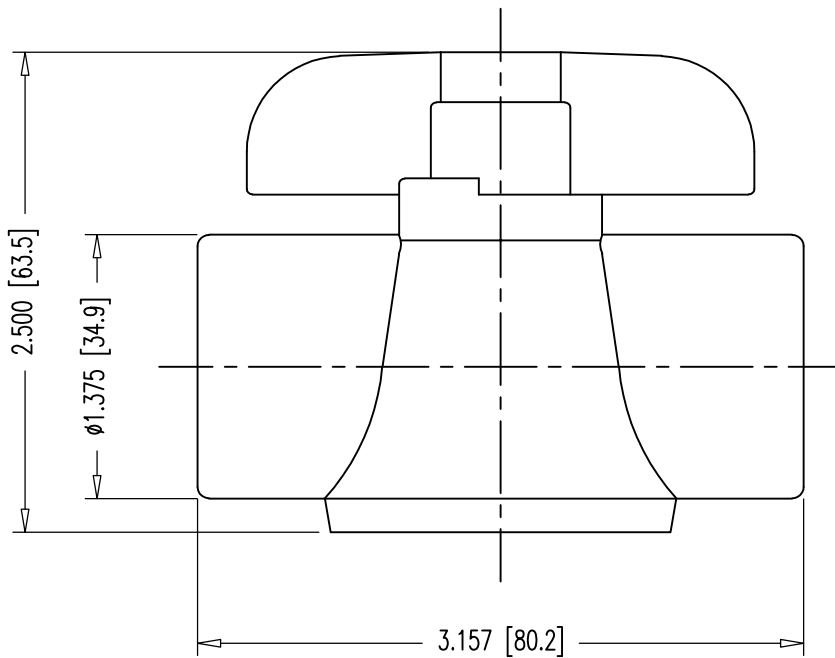
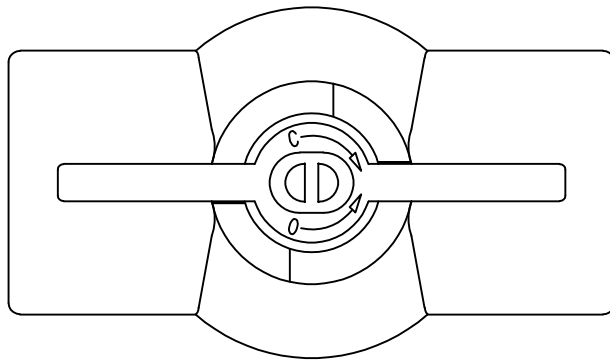
POST TENSIONING / REINFORCING UNIT PHONE: 630-739-1100  
320 MARMON DRIVE - BOLINGBROOK, IL FAX: 630-739-1405

**DYWIDAG**



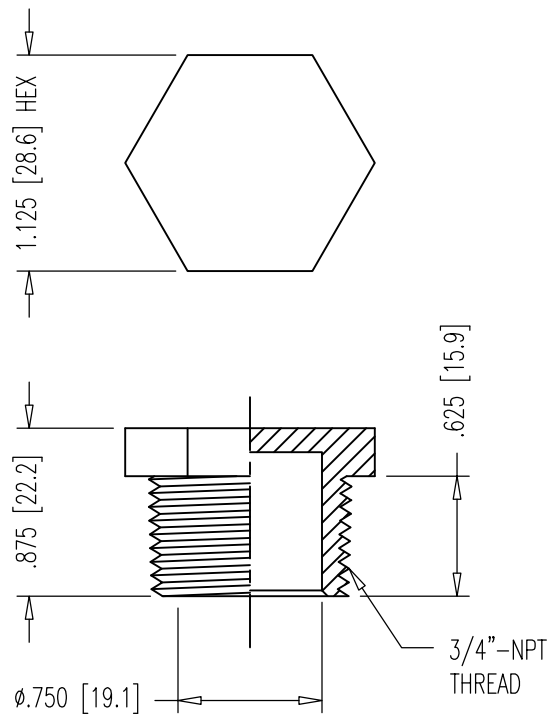
PRESSURE RATED: 150 PSI

DIMENSIONS: INCH [mm] mm FOR REFERENCE ONLY		QUALITY PLAN NUMBER: Q00000020P		REV.	DATE	NAME	ECRN	PART NUMBER: <b>00 00 878</b>
<b>3/4" NPT PIPE NIPPLES</b>				MATERIAL:	SCALE 1:1			
				DATE: 01-29-19   DWG: G. MALECKI   CHK: S.I.   APP: S.I.			SCH 40 BLACK WELDED STEEL	
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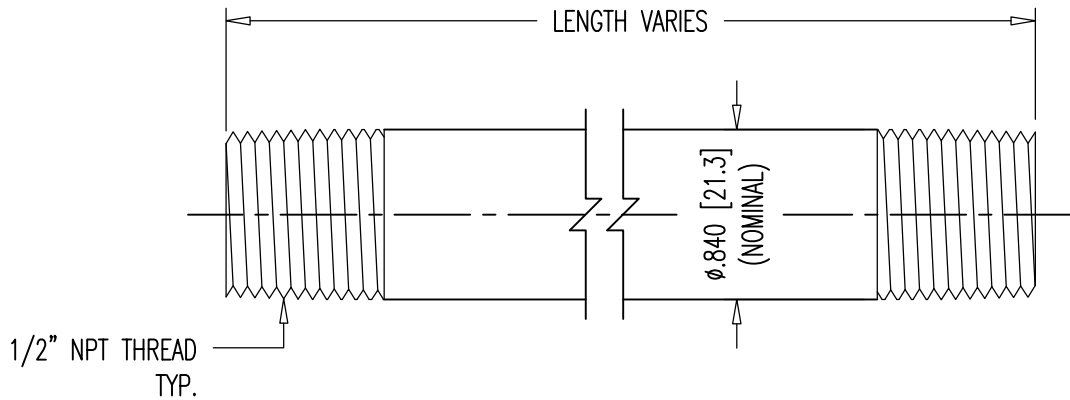
▲ NOTE:  
PRESSURE RATED: 150 PSI.

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>					SCALE 1:1	▲	01-11-19	
				DATE: 04-30-07		DWG: G. MALECKI	CHK: S.N.	APP: E.A.
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PRESSURE RATED: 150 PSI

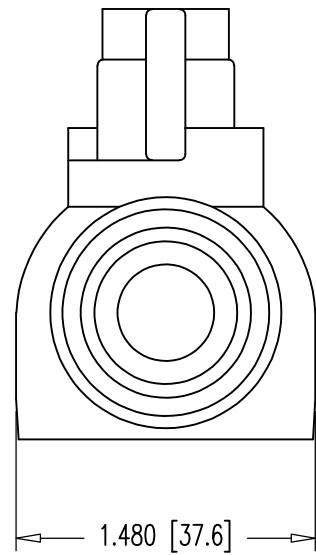
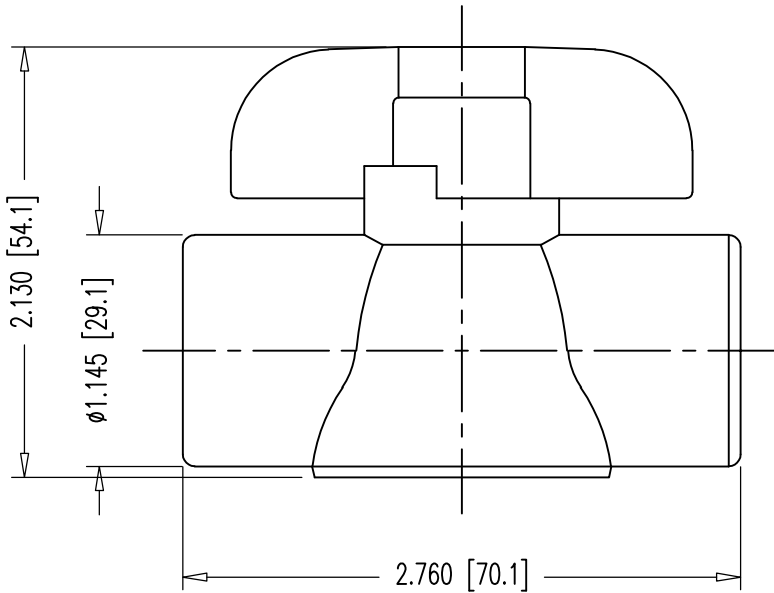
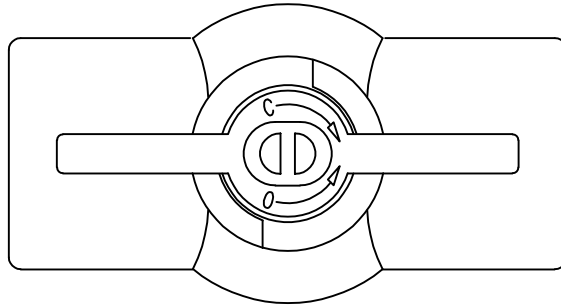
DIMENSIONS: INCH [mm] mm FOR REFERENCE ONLY		QUALITY PLAN NUMBER:		WEIGHT .009 LBS.	REV.	DATE	NAME	PART NUMBER: <b>00 00 849</b>
<b>3/4" NPT NYLON PLUG</b>								
				DATE: 03-12-19	DWG: G. MALECKI	CHK: S.I.	APP: S.I..	DYWIDAG-SYSTEMS INTERNATIONAL, USA, INC. 320 MARMON DRIVE - BOLINGBROOK, IL 60440 PHONE: 630-739-1100      FAX: 630-739-1405
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PRESSURE RATED: 150 PSI

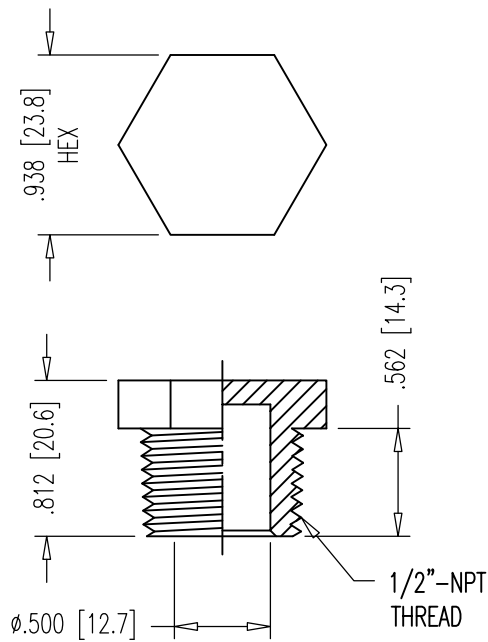
DIMENSIONS: INCH [mm] mm FOR REFERENCE ONLY		QUALITY PLAN NUMBER: Q000000020P		REV.	DATE	NAME	PART NUMBER: <b>00 00 678</b>
<b>1/2" NPT PIPE NIPPLES</b>				MATERIAL: SCH 40 BLACK WELDED STEEL	SCALE 1:1		DRAWING NUMBER: <b>00 00 678</b>
DATE: 01-29-19	DWG: G. MALECKI	CHK: S.I.	APP: S.I.				
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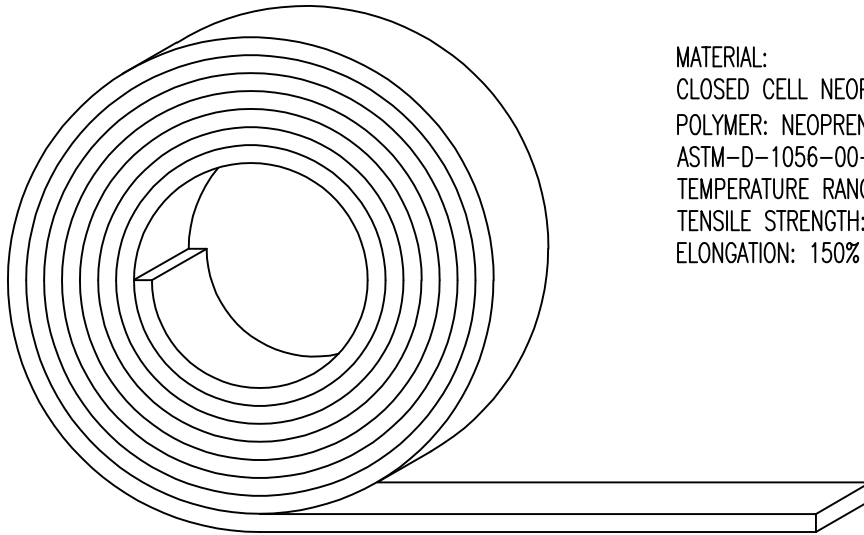
⚠ NOTE:  
PRESSURE RATED: 150 PSI.

DIMENSIONS: INCH [mm] mm FOR REFERENCE ONLY		QUALITY PLAN NUMBER:		WEIGHT 0.138 LBS.	REV. ⚠	DATE 01-11-19	NAME S.I.	PART NUMBER: <b>00 00 634</b>
<b>1/2" NPT BALL VALVE</b>								
DATE: 04-30-07	DWG: G. MALECKI	CHK: S.N.	APP: E.A.					DRAWING NUMBER: <b>00 00 634</b>
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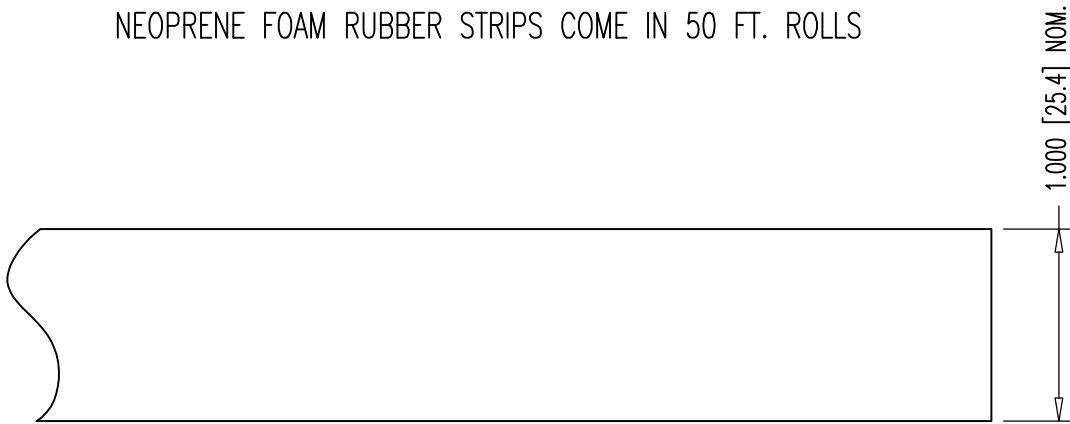
PRESSURE RATED: 150 PSI

DIMENSIONS: INCH [mm] mm FOR REFERENCE ONLY		QUALITY PLAN NUMBER:		WEIGHT .006 LBS.	REV.	DATE	NAME	ECRN	PART NUMBER: <b>00 00 649</b>
<b>1/2" NPT NYLON PLUG</b>									
				DATE: 03-12-19	DWG: G. MALECKI	CHK: S.I.	APP: S.I.	MATERIAL: NYLON 6 COLOR: WHITE	
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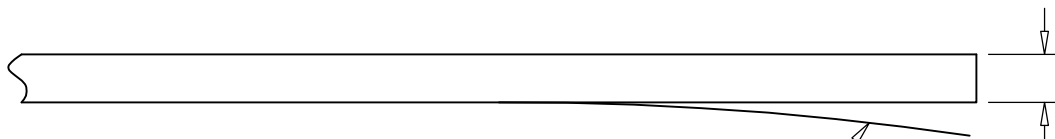


MATERIAL:  
 CLOSED CELL NEOPRENE BLEND SPONGE  
 POLYMER: NEOPRENE/EPDM/SBR  
 ASTM-D-1056-00-SA2  
 TEMPERATURE RANGE: -40 TO +200 DEG. F  
 TENSILE STRENGTH: 100 PSI  
 ELONGATION: 150%

NEOPRENE FOAM RUBBER STRIPS COME IN 50 FT. ROLLS




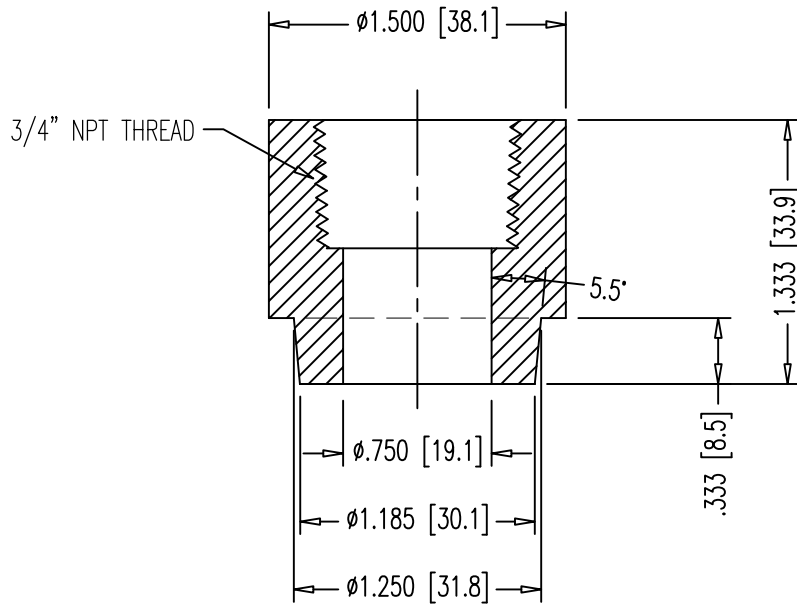
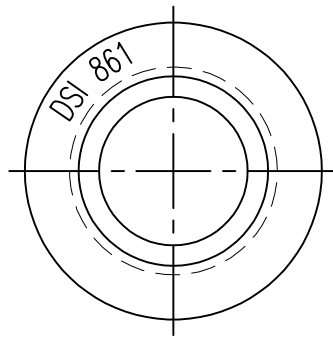
1.000 [25.4] NOM.



PAPER COVER FOR  
 ADHESIVE BACKED STRIPS

.250 [6.4] NOM.

DIMENSIONS: INCH [mm] mm FOR REFERENCE ONLY		QUALITY PLAN NUMBER:		WEIGHT .019 LBS./FT.	REV.	DATE	NAME	PART NUMBER: <b>68 00 583</b>
<b>1"x1/4" NEOPRENE FOAM RUBBER STRIPS</b>					MATERIAL: SEE ABOVE			
DATE: 12/01/06	DWG: G. MALECKI	CHK: S.Y.	APP: K.S.	SCALE 1:1 NTS				DRAWING NUMBER: <b>68 00 583</b>
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WELDING OPERATIONS:  
 DRILL A HOLE USING SPECIFIED CONE DRILL TOOL  
 WHEREVER NEEDED IN COMMON POLYPROPYLENE  
 DUCTS OF ALL BRANDS. HEAT UP POLYPROPYLENE  
 GROUT PORT AND THE HOLE IN DUCT FOR ABOUT  
 10 SECONDS USING PES-TEC WELDING EQUIPMENT.  
 RELEASE THE GROUT PORT AND PRESS INTO THE  
 HOLE IN DUCT BY HAND FOR 15 SECONDS.

MATERIAL: POLYPROPYLENE  
 USAGE: FOR CORRUGATED PP DUCTS  
 PRESSURE RATED: 150 PSI

DIMENSIONS: INCH [mm] mm FOR REFERENCE ONLY		QUALITY PLAN NUMBER:		TOLERANCES: ±.020 UNLESS NOTED	WEIGHT 0.045 LBS.	REV.	DATE	NAME	PART NUMBER: <b>00 00 861</b>
<b>3/4" NPT PP PORT</b>				MATERIAL: SEE ABOVE	SCALE 1:1				
				DATE: 01-11-19   DWG: G. MALECKI   CHK: S.I.   APP: S.I.					
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