

TELEMARK Quartz Crystal Feedthroughs and Sensors

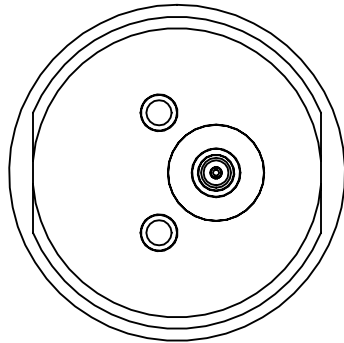
The current version of this drawing pdf can be found at

<https://telemark.com/shop/product-category/quartz-crystal/>

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- NOTES: (UNLESS OTHERWISE SPECIFIED)
1. REMOVE BURRS & BREAK ALL SHARP EDGES
.005-.015 RADIUS OR CHAMFER.
 2. ALL SURFACES $\sqrt{63}$
 3. BAG WITH PART NUMBER AND REVISION.

ECN	ZONE	REV	DESCRIPTION	BY	DATE
		A	RELEASE	GPD	6/13/2014



MICRODOT
CONNECTOR

3/16" DIAMETER
TUBES


BNC CONNECTOR

5.00

2.00

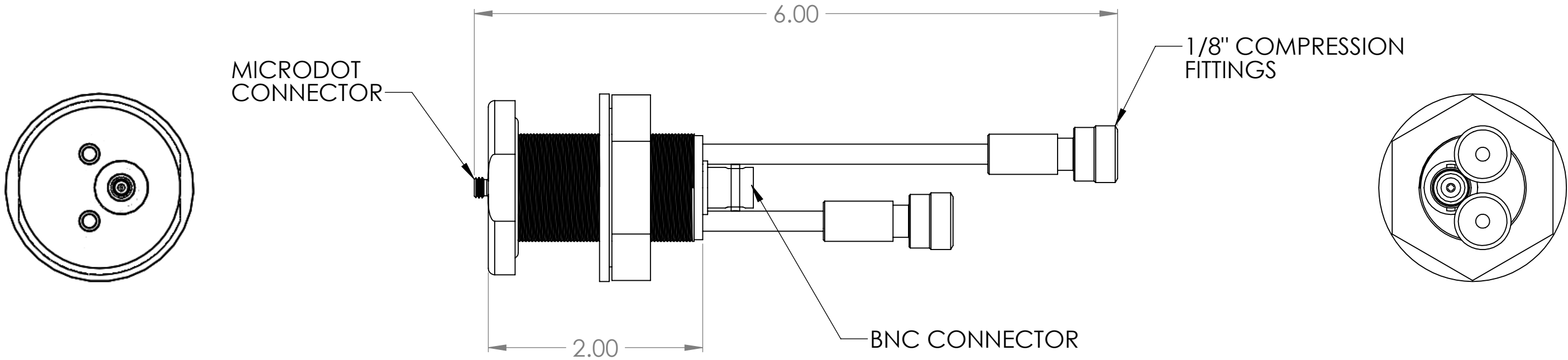
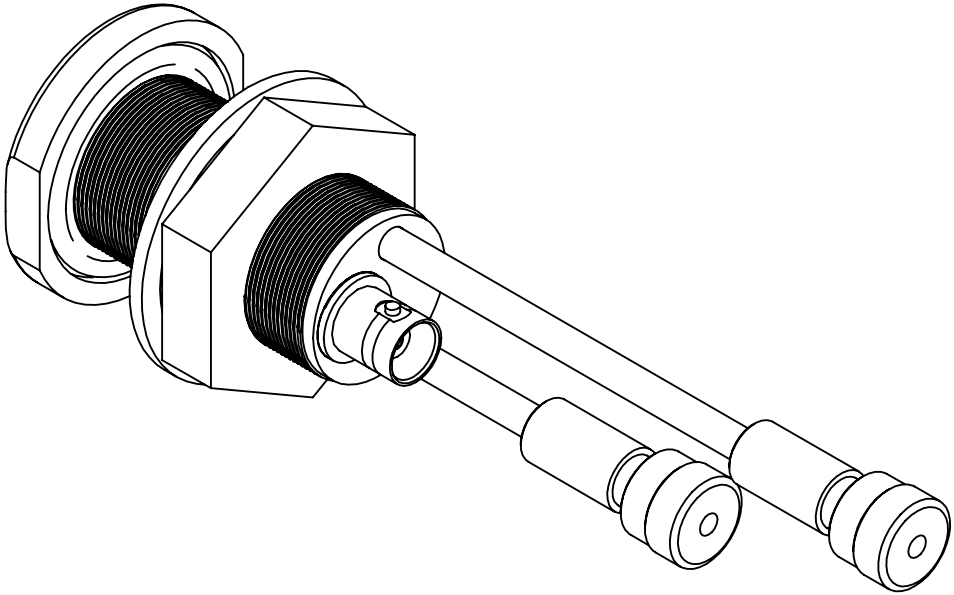
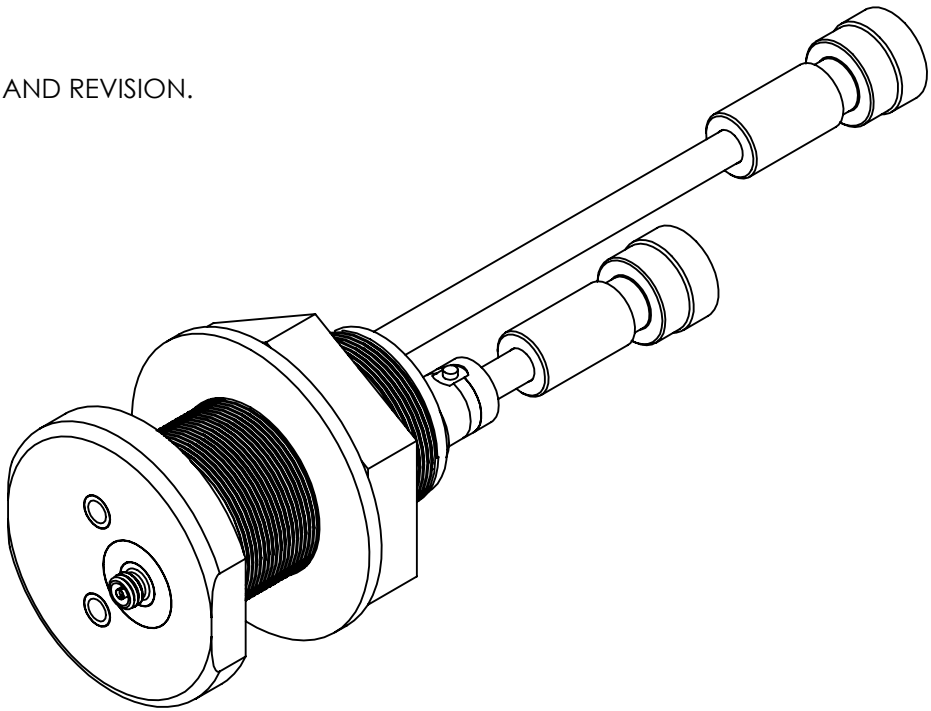
12.00

1" BOLT FEEDTHROUGH
(1) MICRODOT TO BNC CONNECTOR
(2) 3/16" DIAMETER TUBES


UNLESS OTHERWISE SPECIFIED		DWG BY G. DION DATE 6-13-2014		MATERIAL: SEE PARTS LIST		<div>TELEMARK</div> <div>Battle Ground, WA</div>	
GLOBAL TOLERANCES		CHECK BY _____ DATE _____ PROJ ENG _____ DATE _____ MFG ENG _____ DATE _____		FINISH: SEE NOTES		<div>SINGLE, MICRODOT TO BNC, 1" BOLT, (2) x 3/16" TUBES</div>	
INCHES [mm] .X +/- .03 [0.762] .XX +/- 0.01 [0.254] .XXX +/- 0.005 [0.127] ANGLES +/- .5° SURF FINISH 63 RMS		DO NOT SCALE DRAWING		THIRD ANGLE PROJECTION 			
		FILE NUMBER -					
		INITIAL PROJECT -					
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B		SCALE 1:1		DWG NO. R880-2100-1		REV A	
		SHEET 1 of 1					

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 2. ALL SURFACES $\sqrt{63}$
 3. BAG WITH PART NUMBER AND REVISION.

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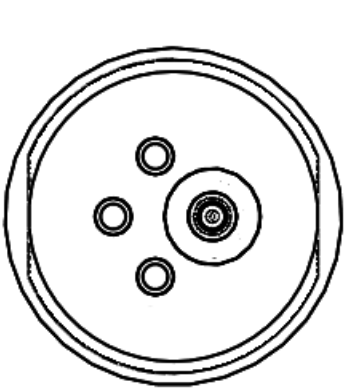
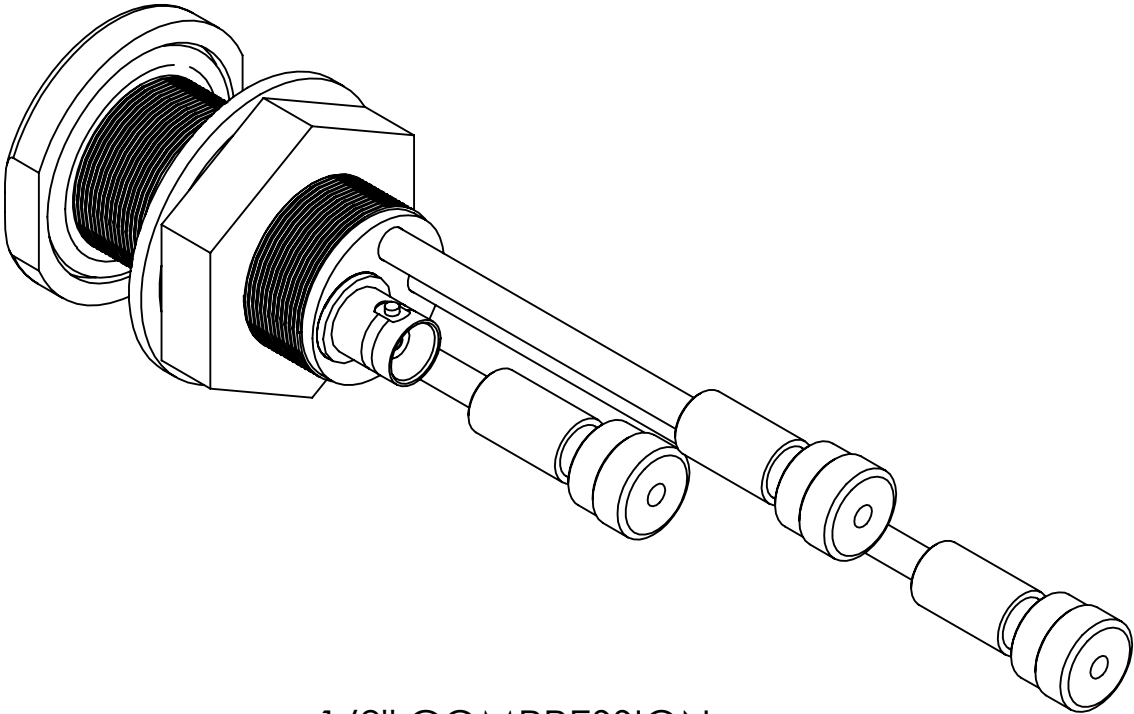
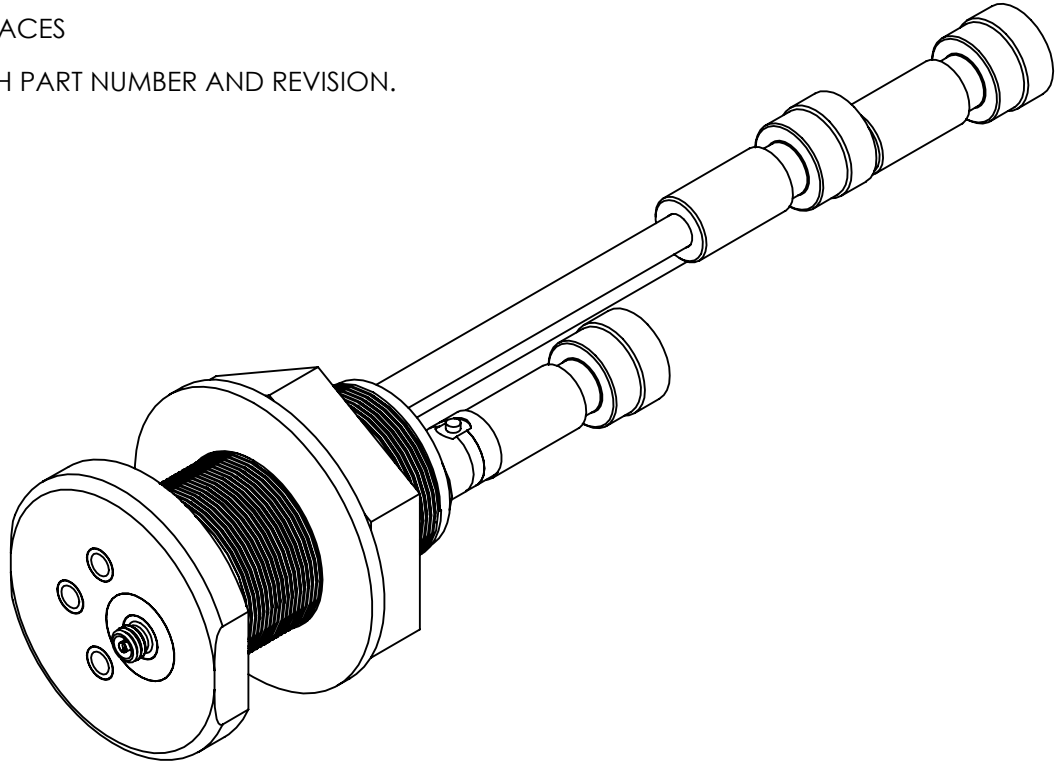


1" BOLT FEEDTHROUGH
(1), MICRODOT TO BNC CONNECTOR
(2), 1/8" COMPRESSION FITTINGS

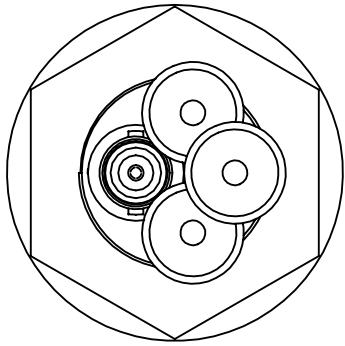
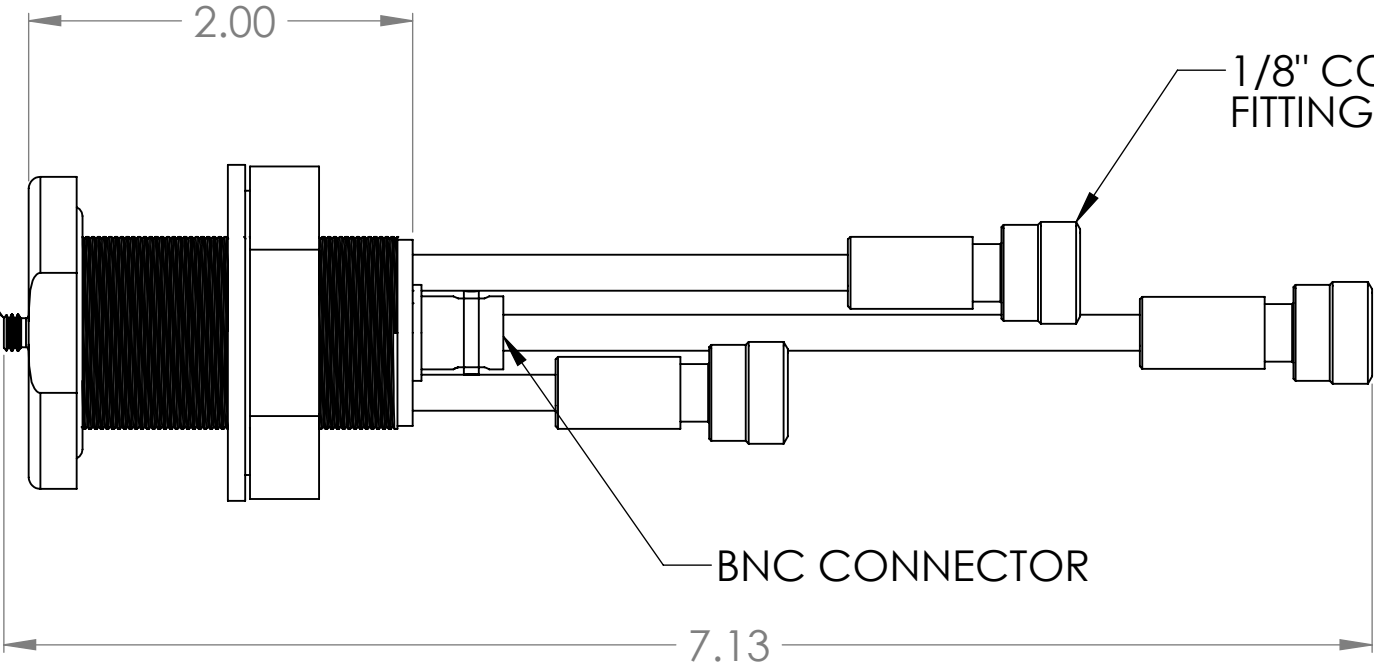
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<div>INCHES [mm]</div> <div><div>.X +/- .03 [0.762]</div><div>.XX +/- 0.01 [0.254]</div><div>.XXX +/- 0.005 [0.127]</div></div> <div>ANGLES +/- .5° SURF FINISH 63 RMS</div>		CHECK BY DATE		FINISH:		<div>SINGLE, 1" BOLT, 1/8" UT</div>	
		PROJ ENG DATE					
MFG ENG DATE		DO NOT SCALE DRAWING		<div>THIRD ANGLE PROJECTION</div> <div></div>			
FILE NUMBER - INITIAL PROJECT -							
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						<div>DWG NO. R880-2100-2</div>	
						<div>REV A</div>	

- NOTES: (UNLESS OTHERWISE SPECIFIED)
1. REMOVE BURRS & BREAK ALL SHARP EDGES
.005-.015 RADIUS OR CHAMFER.
 2. ALL SURFACES
 3. BAG WITH PART NUMBER AND REVISION.


ECN	ZONE	REV	DESCRIPTION	BY	DATE
		A	RELEASE	GPD	6/20/2014



MICRODOT
CONNECTOR

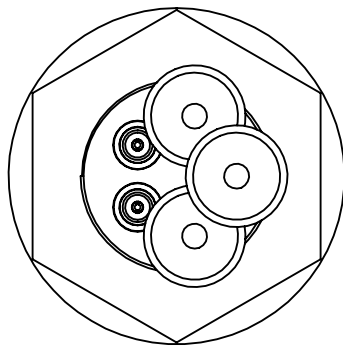
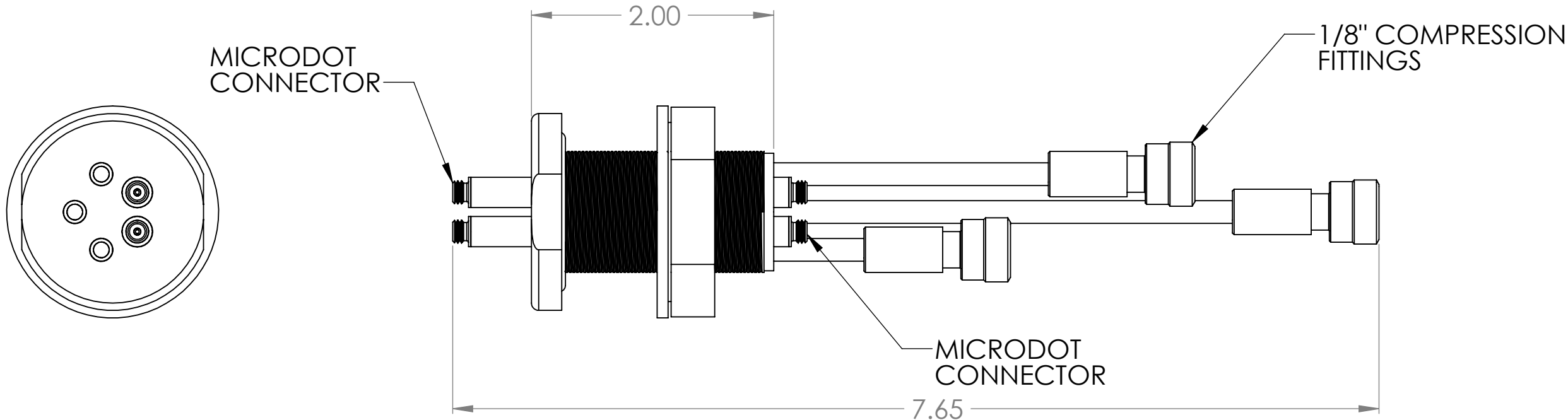
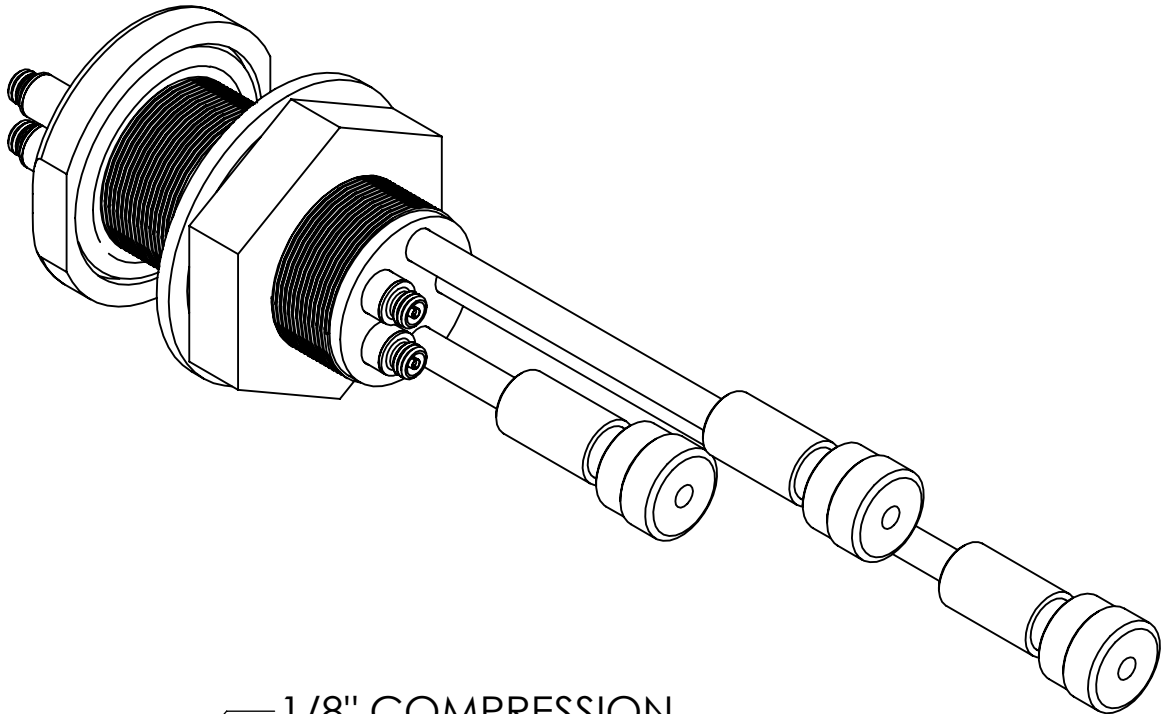
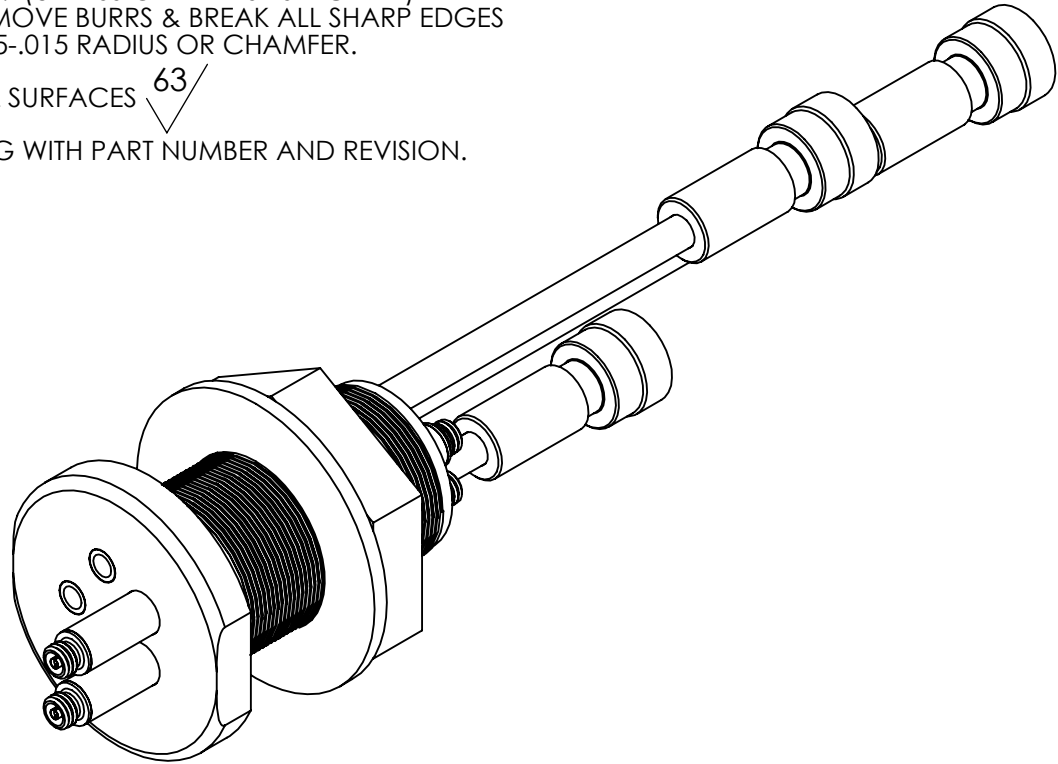


1" BOLT FEEDTHROUGH
(1) MICRODOT TO BNC CONNECTOR
(3) 1/8" COMPRESSION FITTINGS


UNLESS OTHERWISE SPECIFIED GLOBAL TOLERANCES		DWG BY G. DION DATE 6-20-2014		MATERIAL:		TELEMARK Battle Ground, WA		
INCHES [mm] .X +/- .03 [0.762] .XX +/- 0.01 [0.254] .XXX +/- 0.005 [0.127] ANGLES +/- .5° SURF FINISH 63 RMS		CHECK BY DATE PROJ ENG DATE MFG ENG DATE		FINISH:		SINGLE WITH SHUTTER 1" FEEDTHRU, UT		
		DO NOT SCALE DRAWING		THIRD ANGLE PROJECTION 				
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		INITIAL PROJECT -				SHEET 1 of 1	R880-2100-4	A

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1. REMOVE BURRS & BREAK ALL SHARP EDGES
.005-.015 RADIUS OR CHAMFER.
 2. ALL SURFACES $\sqrt{63}$
 3. BAG WITH PART NUMBER AND REVISION.

ECN	ZONE	REV	DESCRIPTION	BY	DATE
		A	RELEASE	GPD	6/20/2014



- 1" BOLT FEEDTHROUGH
(2) MICRODOT TO MICRODOT CONNECTORS
(3) 1/8" COMPRESSION FITTINGS

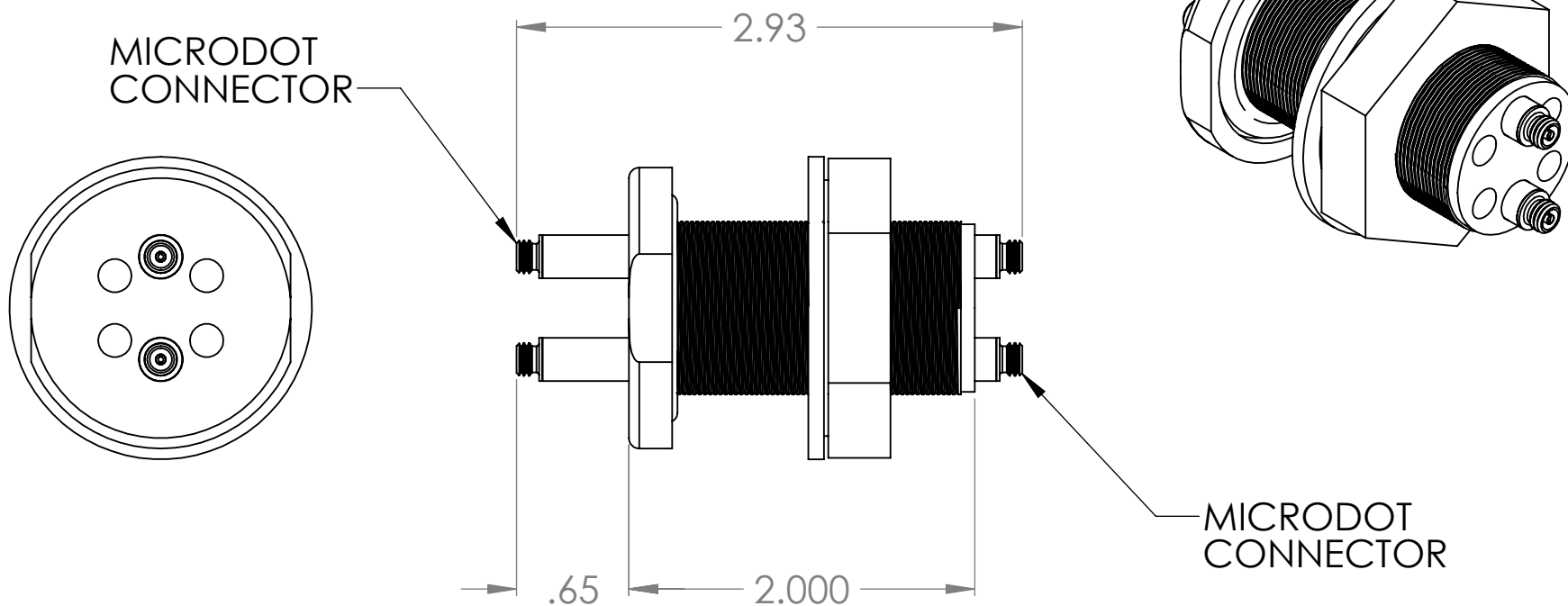
UNLESS OTHERWISE SPECIFIED		DWG BY G. DION DATE 6-20-2014		MATERIAL:		<div>TELEMARK</div> <div>Battle Ground, WA</div>		
GLOBAL TOLERANCES		CHECK BY DATE PROJ ENG DATE MFG ENG DATE		FINISH:		<div>DUAL WITH SHUTTER, 1" FEEDTHRU, MICRODOT, UT</div>		
INCHES [mm] .X +/- .03 [0.762] .XX +/- 0.01 [0.254] .XXX +/- 0.005 [0.127] ANGLES +/- .5° SURF FINISH 63 RMS		DO NOT SCALE DRAWING		THIRD ANGLE PROJECTION 				
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				<div>B</div>		<div>SCALE 1:1 SHEET 1 of 1</div>	<div>DWG NO. R880-2100-5</div>	<div>REV A</div>

NOTES: (UNLESS OTHERWISE SPECIFIED)
 1. REMOVE BURRS & BREAK ALL SHARP EDGES
 .005-.015 RADIUS OR CHAMFER.

2. ALL SURFACES $\sqrt{63}$

3. BAG WITH PART NUMBER AND REVISION.

ECN	ZONE	REV	DESCRIPTION	BY	DATE
		A	RELEASE	GPD	6/21/2018



1" BOLT FEEDTHRU
 (2) MICRODOT TO MICRODOT
 (4) 3/16" DIAMETER HOLES

UNLESS OTHERWISE SPECIFIED

GLOBAL TOLERANCES

	INCHES	[mm]
.XX	+/- 0.03	[.762]
.XXX	+/- 0.01	[0.254]
.XXXX	+/- 0.005	[0.127]

ANGLES +/- .25°
 SURF FINISH 63 RMS

DWG BY **G. DION** DATE **6-21-2018**

CHECK BY DATE
 PROJ ENG DATE
 MFG ENG DATE

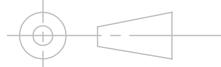
DO NOT SCALE DRAWING

FILE NUMBER -
 INITIAL PROJECT -

MATERIAL:

FINISH:

THIRD ANGLE PROJECTION



TELEMARK

Battle Ground, WA

**DUAL SINGLE SENSORS
 W/O SHUTTER, 1" BOLT,
 3/16" LINES, MICRODOT**

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A

SCALE 1:1
 SHEET 1 of 1

DWG NO.

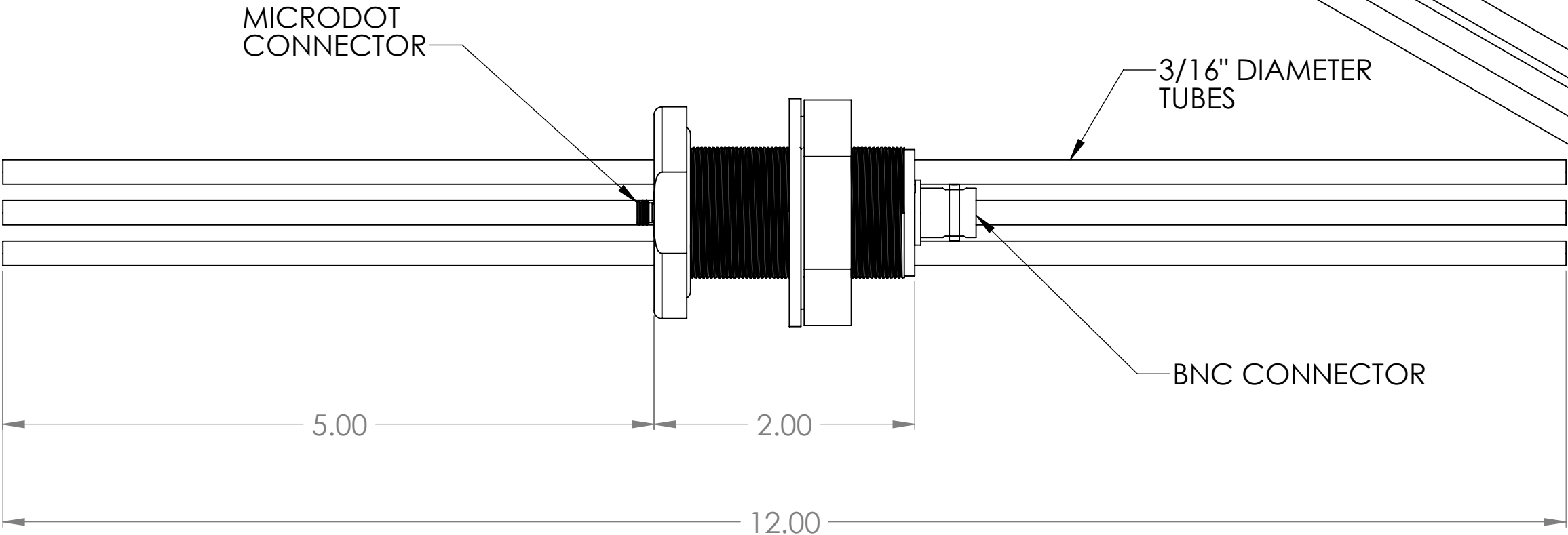
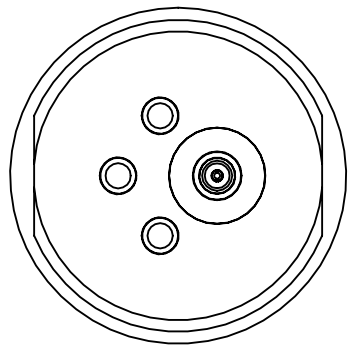
R880-2100-6

REV


A

- NOTES: (UNLESS OTHERWISE SPECIFIED)
1. REMOVE BURRS & BREAK ALL SHARP EDGES
.005-.015 RADIUS OR CHAMFER.
 2. ALL SURFACES $\sqrt{63}$
 3. BAG WITH PART NUMBER AND REVISION.

ECN	ZONE	REV	DESCRIPTION	BY	DATE
		A	RELEASE	GPD	6/30/2014

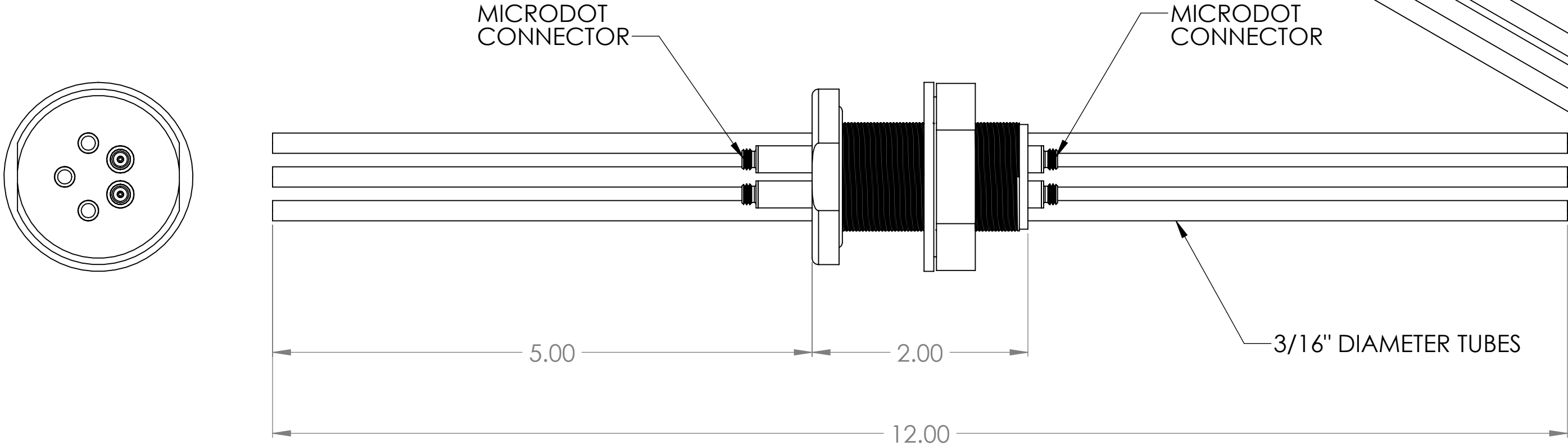


1" BOLT FEEDTHROUGH
(1) MICRODOT TO BNC CONNECTOR
(3) 3/16" DIAMETER TUBES

UNLESS OTHERWISE SPECIFIED		DWG BY G. DION DATE 6-30-2014		MATERIAL: SEE PARTS LIST		<div>TELEMARK</div> <div>Battle Ground, WA</div>	
GLOBAL TOLERANCES		CHECK BY _____ DATE _____ PROJ ENG _____ DATE _____ MFG ENG _____ DATE _____		FINISH: SEE NOTES		<div>SINGLE WITH SHUTTER, 1" FEEDTHRU</div>	
INCHES [mm] .X +/- .03 [0.762] .XX +/- 0.01 [0.254] .XXX +/- 0.005 [0.127] ANGLES +/- .5° SURF FINISH 63 RMS		DO NOT SCALE DRAWING		THIRD ANGLE PROJECTION 			
		FILE NUMBER - INITIAL PROJECT -					
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B		SCALE 1:1		DWG NO. R880-2100-7		REV A	
		SHEET 1 of 1					

- NOTES: (UNLESS OTHERWISE SPECIFIED)
1. REMOVE BURRS & BREAK ALL SHARP EDGES
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 2. ALL SURFACES $\sqrt{63}$
 3. BAG WITH PART NUMBER AND REVISION.

ECN	ZONE	REV	DESCRIPTION	BY	DATE
		A	RELEASE	GPD	6/13/2014

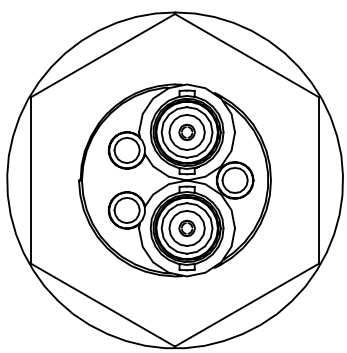
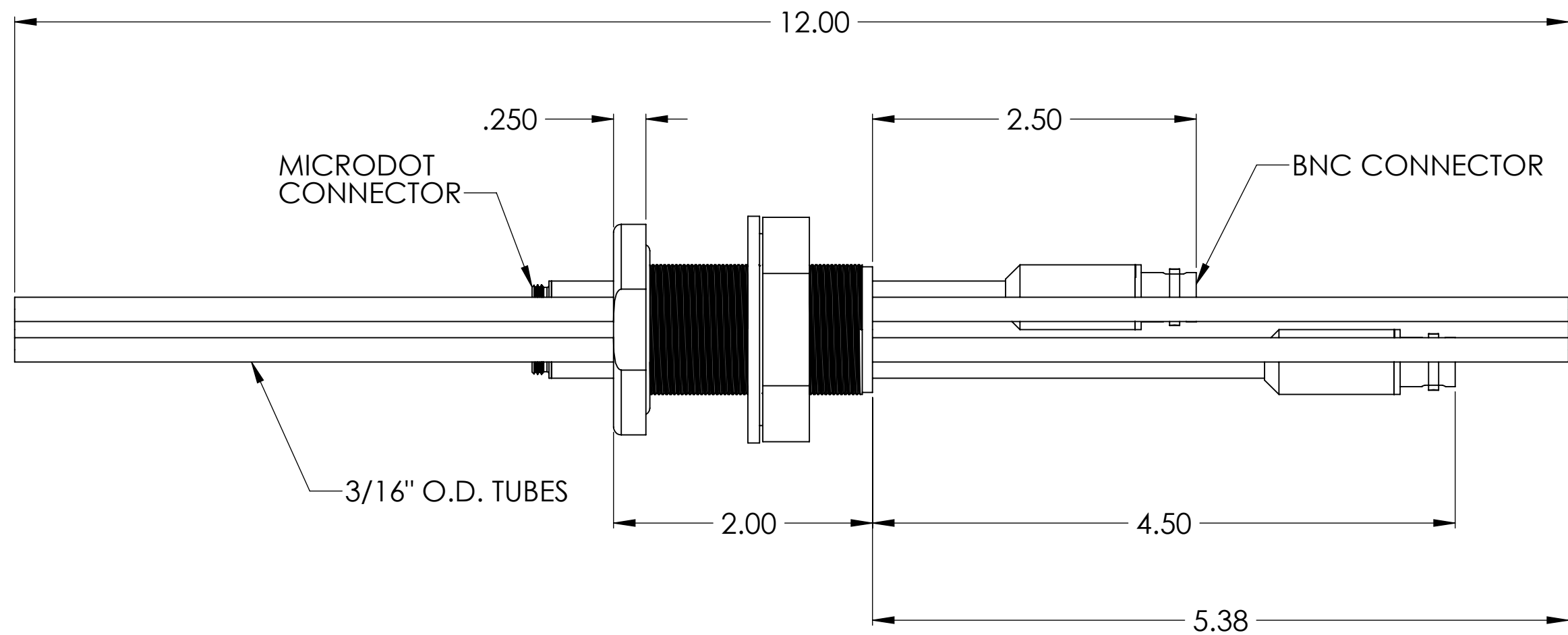
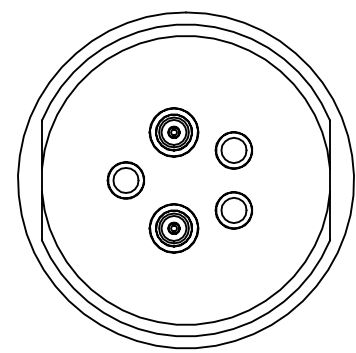
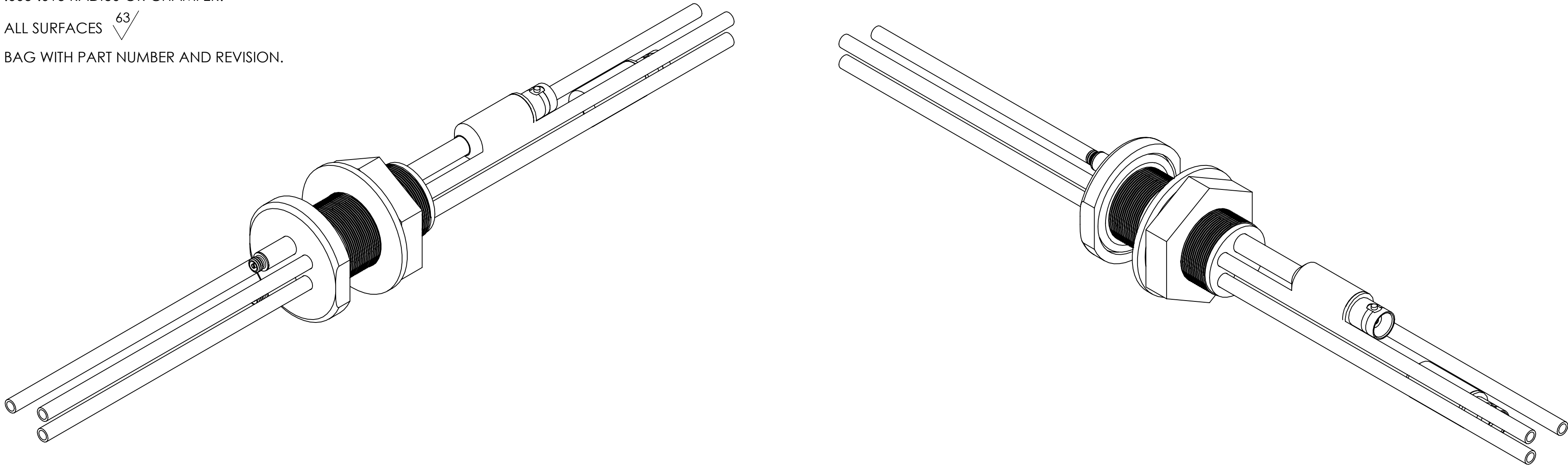


1" BOLT FEEDTHROUGH
(2) MICRODOT TO MICRODOT CONNECTORS
(3) 3/16" DIAMETER TUBES


UNLESS OTHERWISE SPECIFIED GLOBAL TOLERANCES		DWG BY G. DION DATE 6-13-2014	MATERIAL: SEE PARTS LIST	TELEMARK Battle Ground, WA	
INCHES [mm] .X +/- .03 [0.762] .XX +/- 0.01 [0.254] .XXX +/- 0.005 [0.127] ANGLES +/- .5° SURF FINISH 63 RMS		CHECK BY DATE PROJ ENG DATE MFG ENG DATE	FINISH: SEE NOTES		
		DO NOT SCALE DRAWING	THIRD ANGLE PROJECTION	DUAL WITH SHUTTER, 1" BOLT, MICRODOT	
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- NOTES: (UNLESS OTHERWISE SPECIFIED)
1. REMOVE BURRS & BREAK ALL SHARP EDGES
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 2. ALL SURFACES $\sqrt{63}$
 3. BAG WITH PART NUMBER AND REVISION.

ECN	ZONE	REV	DESCRIPTION	BY	DATE
		A	RELEASE	GPD	6/20/2014
		A1	ADDED DIMENSION	JJT	11/11/2014



1" BOLT FEEDTHROUGH
(2) MICRODOT TO BNC CONNECTORS
(3) 3/16" O.D. TUBES

UNLESS OTHERWISE SPECIFIED		DWG BY: G. DION DATE: 6-20-2014		MATERIAL:		TELEMARK		Battle Ground, WA	
GLOBAL TOLERANCES		CHECK BY: DATE		FINISH:		DUAL WITH SHUTTER, 1" FEEDTHRU			
INCHES [mm]		PROJ ENG DATE							
.X +/- .03 [0.762]		MFG ENG DATE							
.XX +/- 0.01 [0.254]		DO NOT SCALE DRAWING		THIRD ANGLE PROJECTION					
.XXX +/- 0.005 [0.127]		FILE NUMBER -							
ANGLES +/- .5°		INITIAL PROJECT -							
SURF FINISH 63 RMS									
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C		SCALE 1:1		DWG NO.		REV			
		SHEET 1 of 1		R880-2101-5		A1			

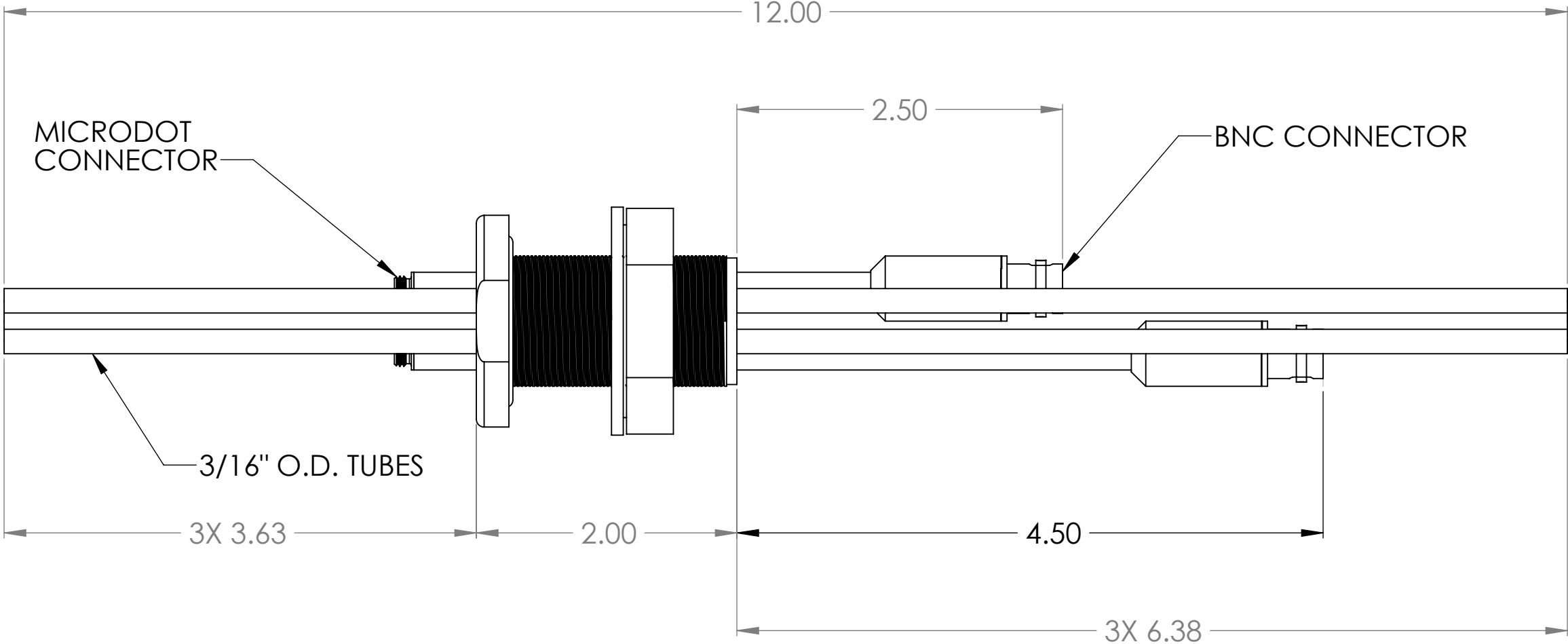
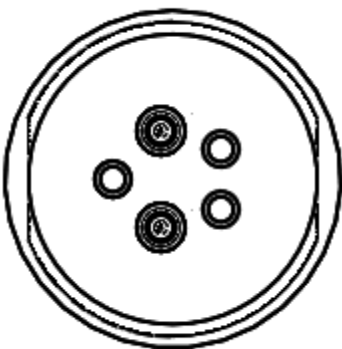
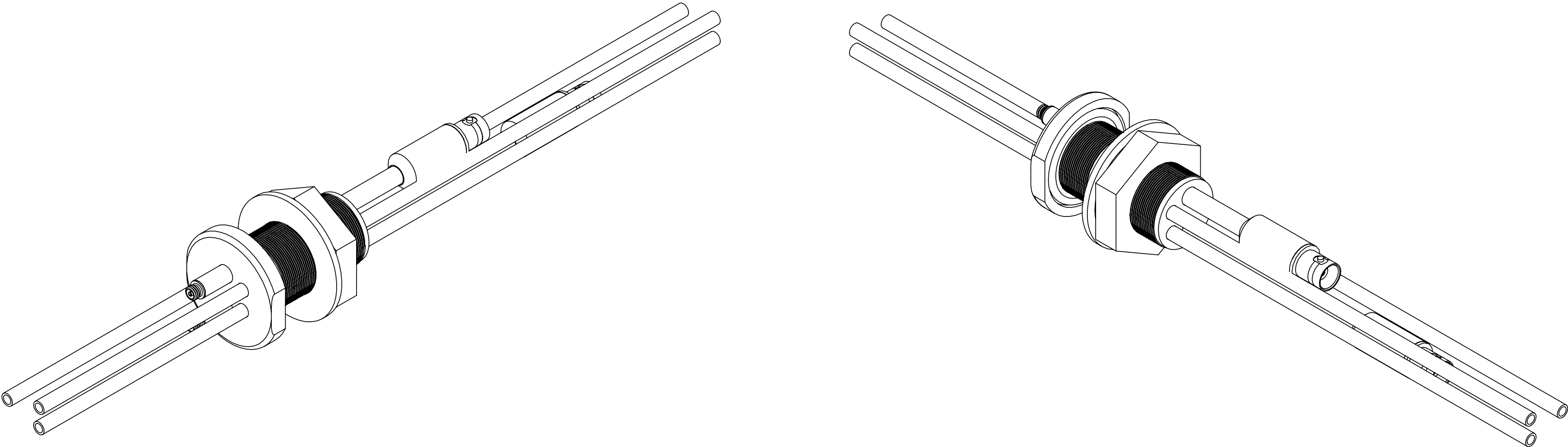
A		B		C		D		E		F		G			
NOTES: (UNLESS OTHERWISE SPECIFIED)										ECN	ZONE	REV	DESCRIPTION	BY	DATE
1. REMOVE BURRS & BREAK ALL SHARP EDGES												A	RELEASE	GPD	8/13/2014
.005-.015 RADIUS OR CHAMFER.															

1


2

3

4

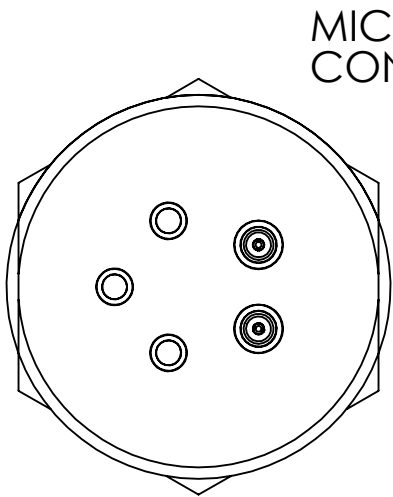
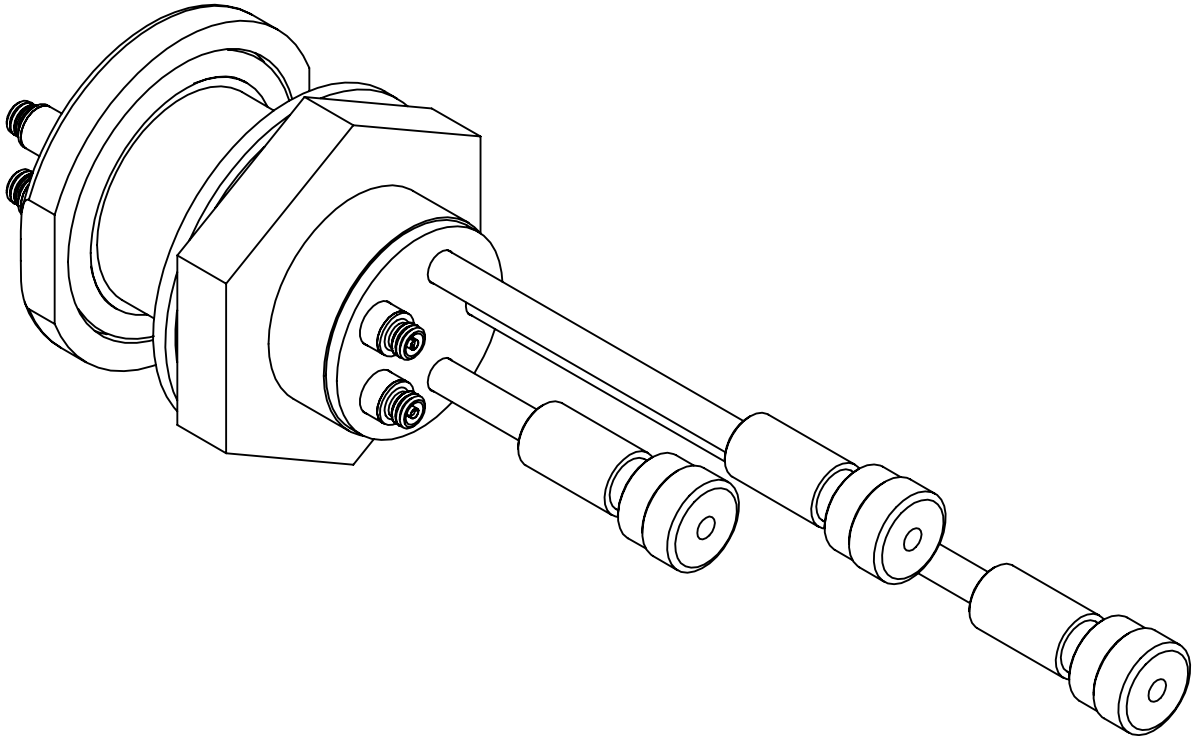
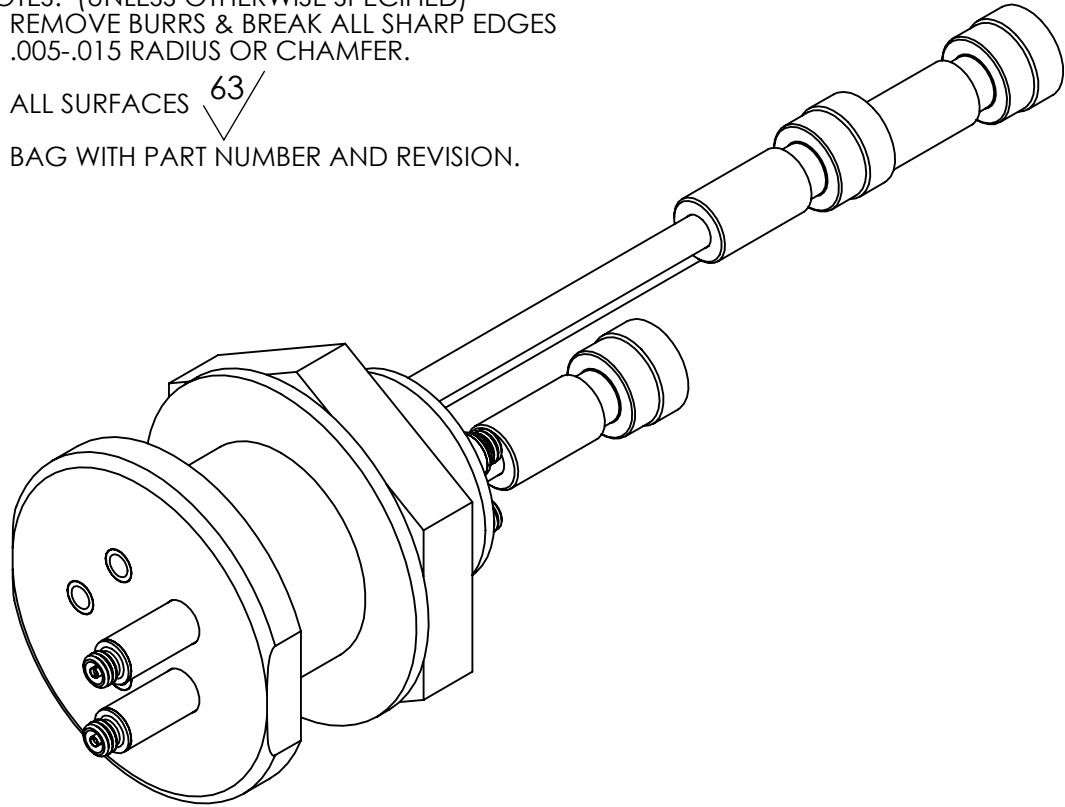


1" BOLT FEEDTHROUGH
(2) MICRODOT TO BNC CONNECTORS
(3) 3/16" O.D. TUBES

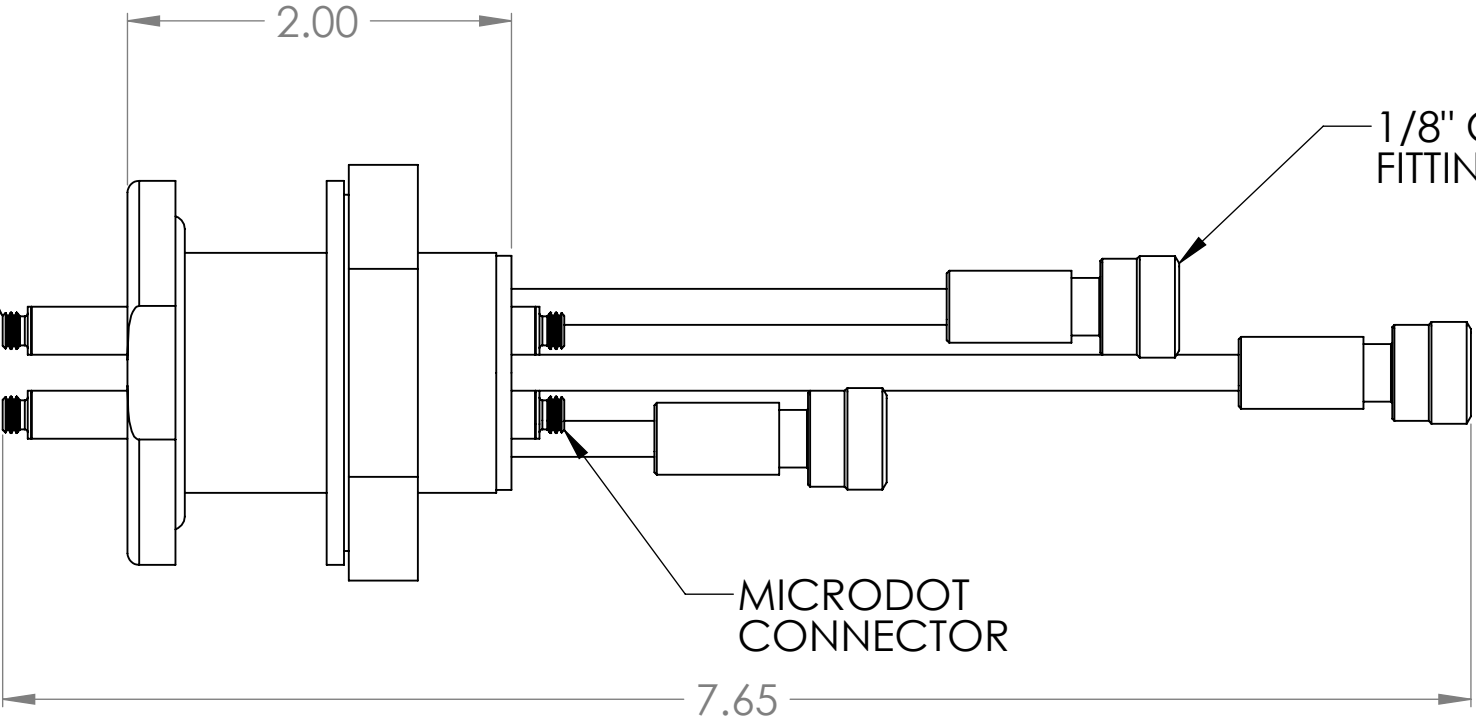
UNLESS OTHERWISE SPECIFIED		DWG BY: G. DION DATE: 8-13-2014		MATERIAL: SEE PARTS LIST		TELEMARK		Battle Ground, WA	
GLOBAL TOLERANCES		CHECK BY: DATE: MFG ENG DATE: MFG ENG DATE:		FINISH: SEE NOTES		THIRD ANGLE PROJECTION			
X +/- .03 [0.762] .XX +/- .01 [0.254] .XXX +/- .005 [0.127]		DO NOT SCALE DRAWING							
ANGLES +/- .5° SURF FINISH $\sqrt{63}$ RMS		FILE NUMBER - 880-2101-6 INITIAL PROJECT -				DUAL WITH SHUTTER, 1" FEEDTHRU			
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C		SCALE 1:1 SHEET 1 of 1		DWG NO. R880-2101-6		REV A			

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.005-.015 RADIUS OR CHAMFER.
 2. ALL SURFACES $\sqrt{63}$
 3. BAG WITH PART NUMBER AND REVISION.

ECN	ZONE	REV	DESCRIPTION	BY	DATE
		A	RELEASE	GPD	6/25/2014

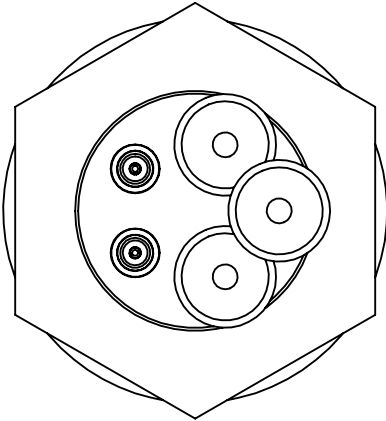


MICRODOT
CONNECTOR




1/8" COMPRESSION
FITTINGS

MICRODOT
CONNECTOR



1.25" BOLT FEEDTHROUGH
(2) MICRODOT TO MICRODOT CONNECTORS
(3) 1/8" COMPRESSION FITTINGS

UNLESS OTHERWISE SPECIFIED GLOBAL TOLERANCES		DWG BY G. DION DATE 6-25-2014		MATERIAL:		<div>TELEMARK</div> <div>Battle Ground, WA</div>	
INCHES [mm] .X +/- .03 [0.762] .XX +/- 0.01 [0.254] .XXX +/- 0.005 [0.127] ANGLES +/- .5° SURF FINISH 63 RMS		CHECK BY DATE PROJ ENG DATE MFG ENG DATE		FINISH:		<div>DUAL WITH SHUTTER, 1.25" FEEDTHRU, MICRODOT, UT</div>	
		DO NOT SCALE DRAWING		THIRD ANGLE PROJECTION			
		FILE NUMBER - INITIAL PROJECT -					
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				<div>B</div>		<div>SCALE 1:1 SHEET 1 of 1</div>	
						<div>DWG NO. R880-2300-5</div>	
						<div>REV A</div>	

- NOTES: (UNLESS OTHERWISE SPECIFIED)
1. REMOVE BURRS & BREAK ALL SHARP EDGES
.005-.015 RADIUS OR CHAMFER.
 2. ALL SURFACES $\sqrt{63}$
 3. BAG WITH PART NUMBER AND REVISION.

ECN	ZONE	REV	DESCRIPTION	BY	DATE
		A	RELEASE	GPD	7/2/2014

MICRODOT
CONNECTOR

3/16" DIAMETER
TUBES


BNC CONNECTOR

5.00

2.00

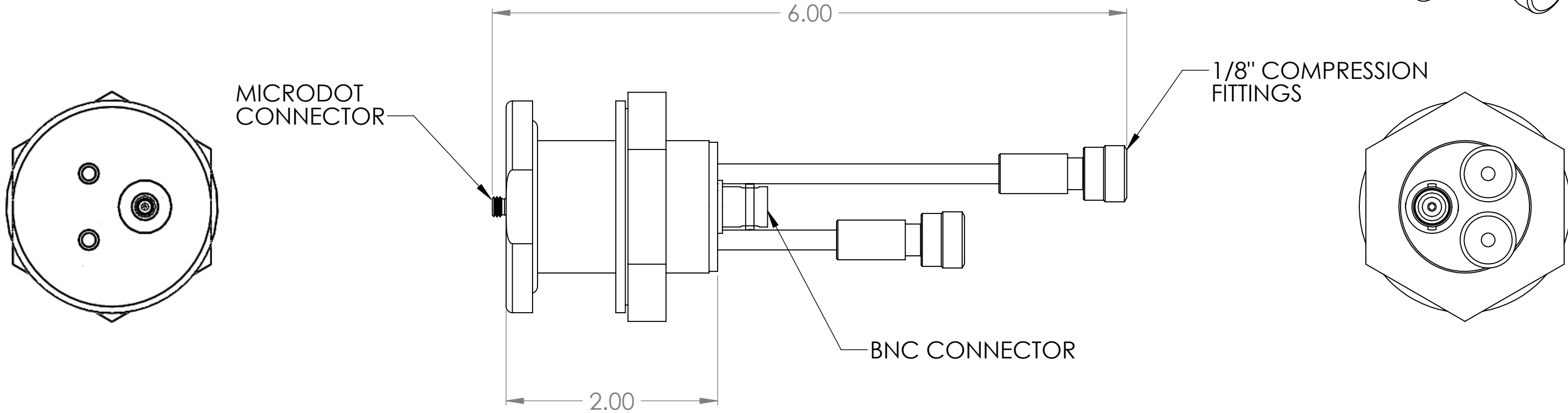
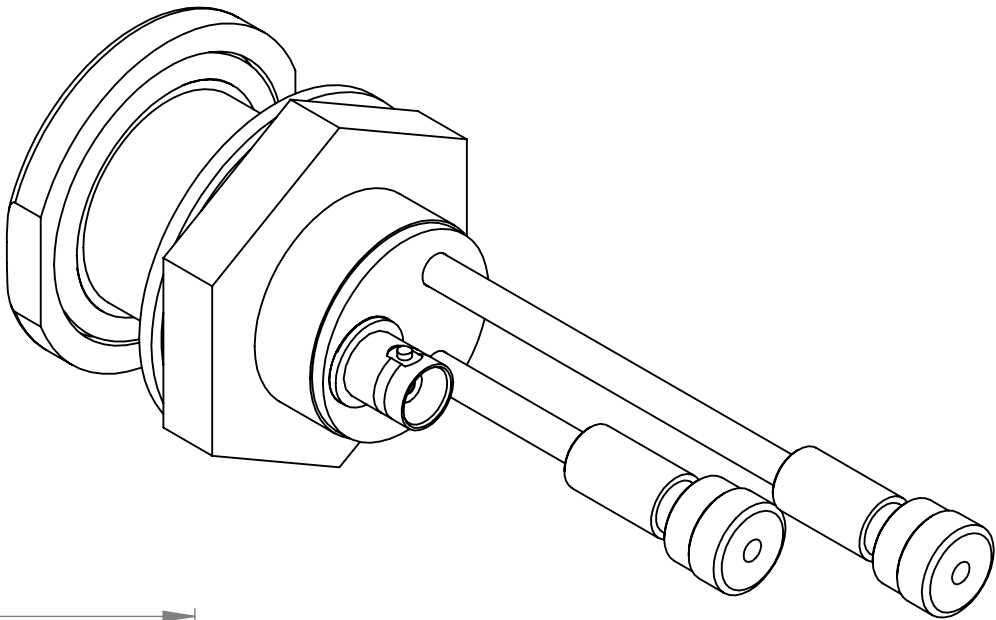
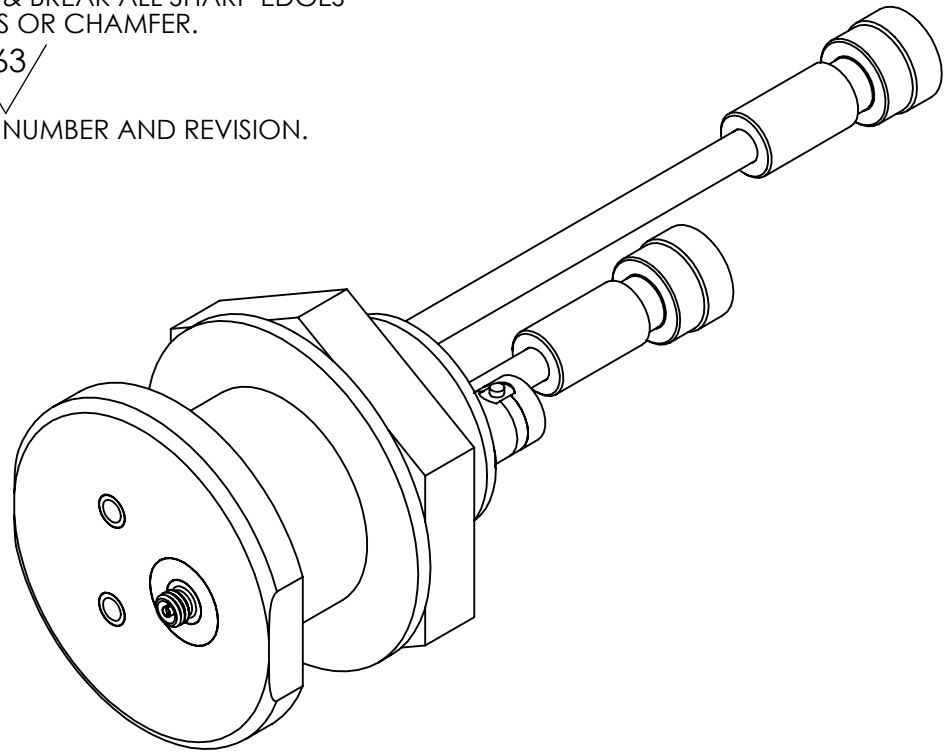
12.00

1-1/4" BOLT FEEDTHROUGH
(1) MICRODOT TO BNC CONNECTOR
(3) 3/16" DIAMETER TUBES

UNLESS OTHERWISE SPECIFIED		DWG BY G. DION DATE 7-2-2014		MATERIAL: SEE PARTS LIST		<div>TELEMARK</div> <div>Battle Ground, WA</div>	
GLOBAL TOLERANCES		CHECK BY DATE PROJ ENG DATE MFG ENG DATE		FINISH: SEE NOTES		<div>ASSEMBLY, 1.25" BOLT, SINGLE WITH SHUTTER</div>	
INCHES [mm] .X +/- .03 [0.762] .XX +/- 0.01 [0.254] .XXX +/- 0.005 [0.127]		DO NOT SCALE DRAWING		THIRD ANGLE PROJECTION			
ANGLES +/- .5° SURF FINISH 63 RMS		FILE NUMBER - INITIAL PROJECT -					
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B		SCALE 1:1		DWG NO. R880-2300-7		REV A	
		SHEET 1 of 1					

- NOTES: (UNLESS OTHERWISE SPECIFIED)
1. REMOVE BURRS & BREAK ALL SHARP EDGES
.005-.015 RADIUS OR CHAMFER.
 2. ALL SURFACES $\sqrt{63}$
 3. BAG WITH PART NUMBER AND REVISION.

ECN	ZONE	REV	DESCRIPTION	BY	DATE
		A	RELEASE	GPD	6/24/2014



1-1/4" BOLT FEEDTHROUGH
(1) MICRODOT TO BNC CONNECTOR
(2) 1/8" COMPRESSION FITTINGS

UNLESS OTHERWISE SPECIFIED		DWG BY G. DION DATE 6-24-2014		MATERIAL:		TELEMARK		Battle Ground, WA	
GLOBAL TOLERANCES		CHECK BY DATE PROJ ENG DATE MFG ENG DATE		FINISH:		SINGLE, 1.25" BOLT, 1/8" UT			
INCHES [mm] .X +/- .03 [0.762] .XX +/- 0.01 [0.254] .XXX +/- 0.005 [0.127]		DO NOT SCALE DRAWING		THIRD ANGLE PROJECTION					
ANGLES +/- .5° SURF FINISH 63 RMS		FILE NUMBER - INITIAL PROJECT -							
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B		SCALE 1:1		DWG NO. R880-2301-0		REV A			
		SHEET 1 of 1							

1

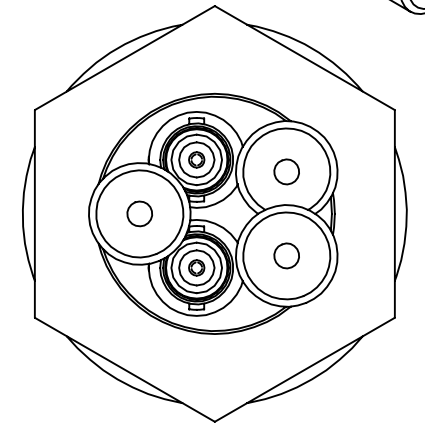
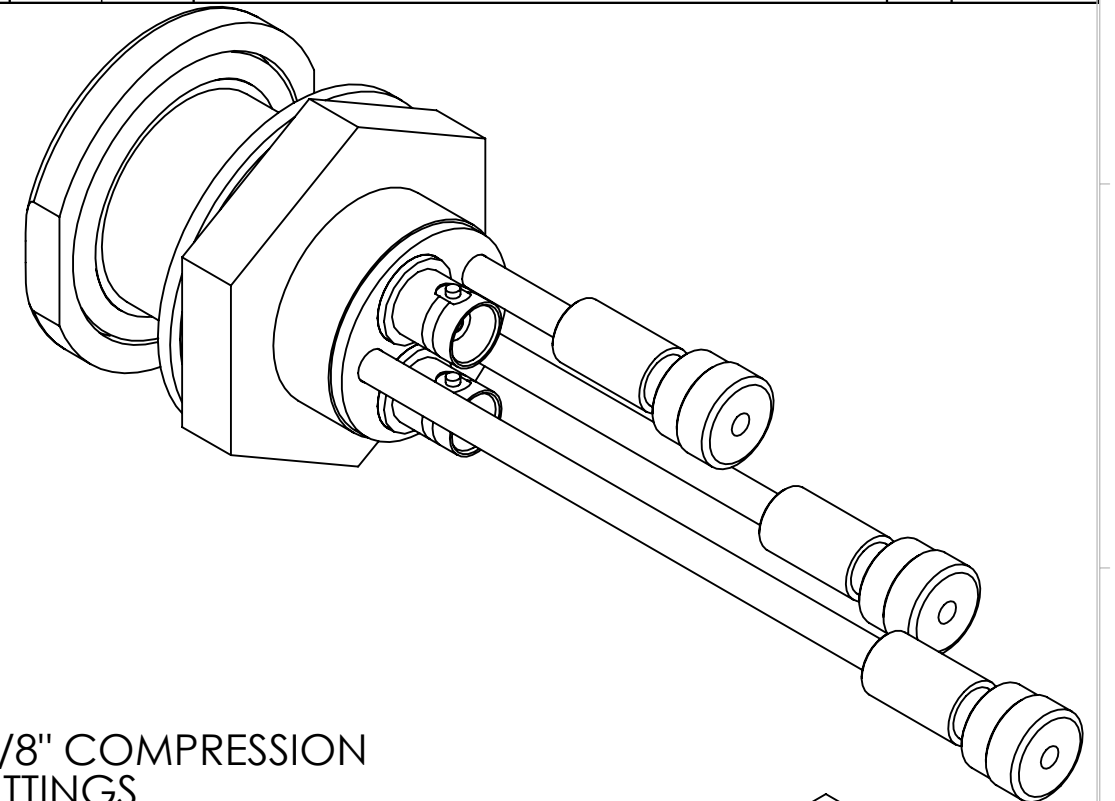



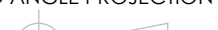
4



(2) MICRODOT TO BNC CONNECTORS
(3) 1/8" COMPRESSION FITTINGS

ECN	ZONE	REV	DESCRIPTION	BY	DATE
		A	RELEASE	GPD	6/26/2014



UNLESS OTHERWISE SPECIFIED		DWG BY G. DION DATE 6-26-2014		MATERIAL:		 Battle Ground, WA	
GLOBAL TOLERANCES		CHECK BY DATE PROJ ENG DATE MFG ENG DATE		FINISH:			
INCHES [mm] .X +/- .03 [0.762] .XX +/- 0.01 [0.254] .XXX +/- 0.005 [0.127]		DO NOT SCALE DRAWING		THIRD ANGLE PROJECTION			
ANGLES +/- .5° SURF FINISH 63 RMS		FILE NUMBER - INITIAL PROJECT -					
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						DWG NO. R880-2301-1	
						REV A	

- NOTES: (UNLESS OTHERWISE SPECIFIED)
1. REMOVE BURRS & BREAK ALL SHARP EDGES
.005-.015 RADIUS OR CHAMFER.
 2. ALL SURFACES $\sqrt{63}$
 3. BAG WITH PART NUMBER AND REVISION.

ECN	ZONE	REV	DESCRIPTION	BY	DATE
		A	RELEASE	GPD	7/2/2014

MICRODOT
CONNECTOR

3/16" DIAMETER
TUBES


BNC CONNECTOR

5.00

2.00

12.00

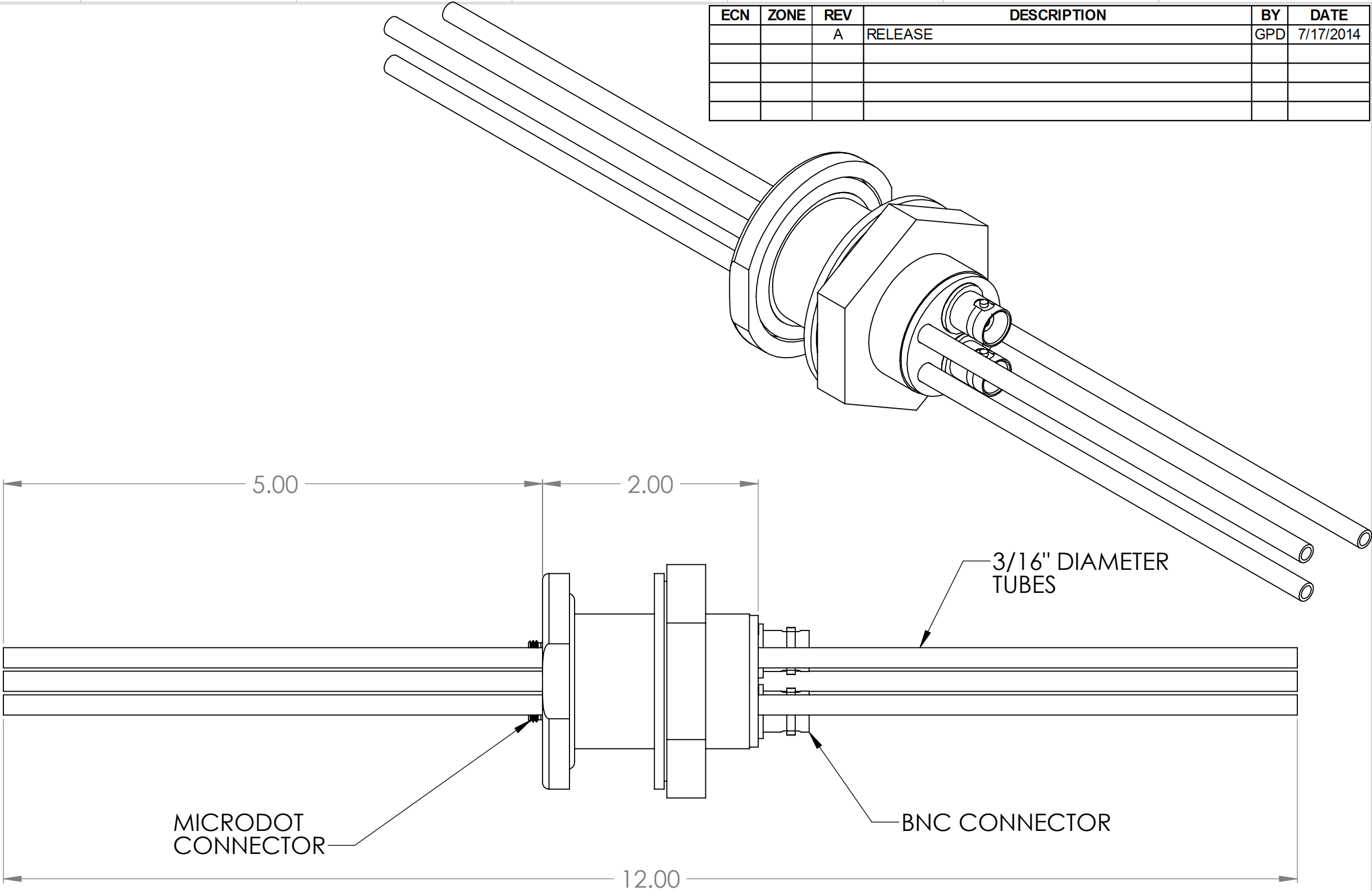
1-1/4" BOLT FEEDTHROUGH
(1) MICRODOT TO BNC CONNECTOR
(2) 3/16" DIAMETER TUBES

UNLESS OTHERWISE SPECIFIED GLOBAL TOLERANCES		DWG BY G. DION DATE 7-2-2014 CHECK BY _____ DATE _____ PROJ ENG _____ DATE _____ MFG ENG _____ DATE _____		MATERIAL: SEE PARTS LIST		<div>TELEMARK</div> <div>Battle Ground, WA</div>	
INCHES [mm] .X +/- .03 [0.762] .XX +/- 0.01 [0.254] .XXX +/- 0.005 [0.127] ANGLES +/- .5° SURF FINISH 63 RMS		DO NOT SCALE DRAWING		FINISH: SEE NOTES			
FILE NUMBER - INITIAL PROJECT -				THIRD ANGLE PROJECTION 		ASSEMBLY, FEEDTHRU, SINGLE 1.25" BOLT	
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B		SCALE 1:1		DWG NO. R880-2301-3		REV A	
		SHEET 1 of 1					


3. BAG WITH PART NUMBER AND REVISION.

- NOTES: (UNLESS OTHERWISE SPECIFIED)
1. REMOVE BURRS & BREAK ALL SHARP EDGES
.005-.015 RADIUS OR CHAMFER.
 2. ALL SURFACES $\sqrt{63}$
 3. BAG WITH PART NUMBER AND REVISION.

ECN	ZONE	REV	DESCRIPTION	BY	DATE
		A	RELEASE	GPD	7/17/2014

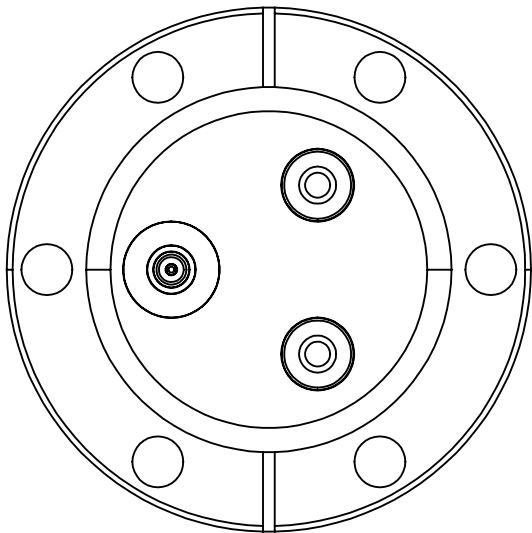
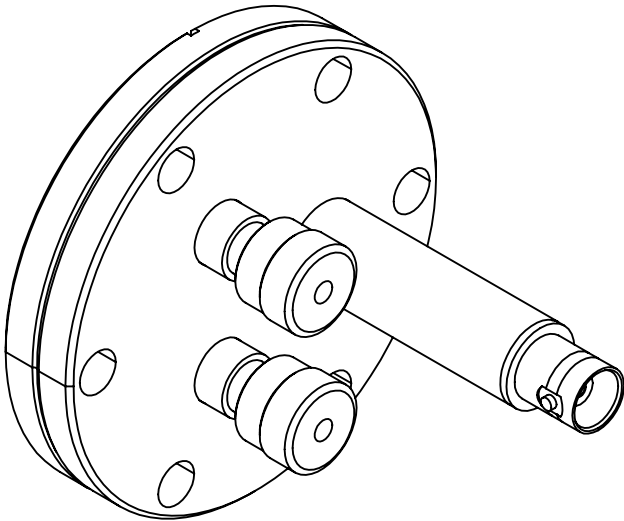
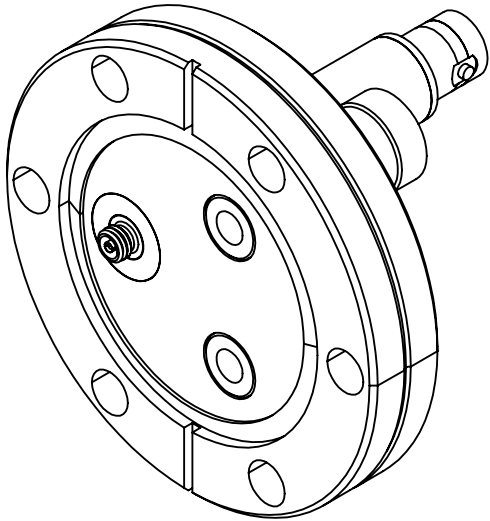


1.25" BOLT FEEDTHROUGH
(2) MICRODOT TO BNC CONNECTORS
(3) 3/16" DIAMETER TUBES

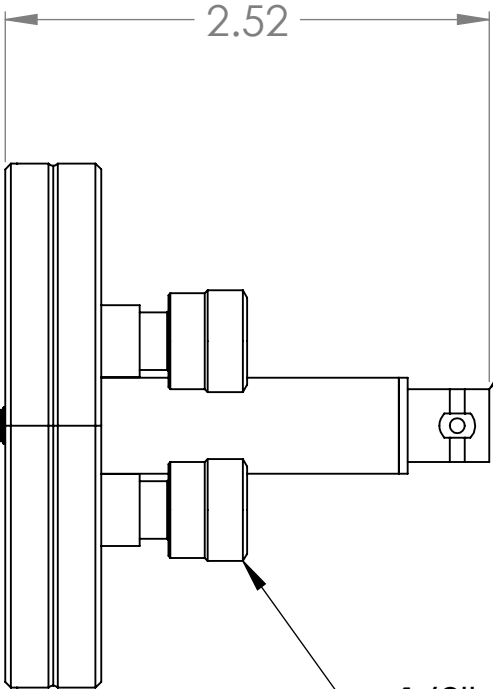
UNLESS OTHERWISE SPECIFIED		DWG BY G. DION DATE 7-17-2014		MATERIAL: SEE PARTS LIST		<div><div>TELEMARK</div><div>Battle Ground, WA</div></div>	
GLOBAL TOLERANCES		CHECK BY DATE PROJ ENG DATE MFG ENG DATE		FINISH: SEE NOTES			
INCHES [mm] .X +/- .03 [0.762] .XX +/- 0.01 [0.254] .XXX +/- 0.005 [0.127]		DO NOT SCALE DRAWING		THIRD ANGLE PROJECTION		<div>DUAL WITH SHUTTER, 1.25" FEEDTHRU, 3/16" TUBES</div>	
ANGLES +/- .5° SURF FINISH 63 RMS		FILE NUMBER - INITIAL PROJECT -					
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<div>B</div>		SCALE 1:1		DWG NO.		REV	
		SHEET 1 of 1		R880-2301-5		A	

- NOTES: (UNLESS OTHERWISE SPECIFIED)
1. REMOVE BURRS & BREAK ALL SHARP EDGES
.005-.015 RADIUS OR CHAMFER.
 2. ALL SURFACES $\sqrt{63}$
 3. BAG WITH PART NUMBER AND REVISION.

ECN	ZONE	REV	DESCRIPTION	BY	DATE
		A	RELEASE	GPD	6/23/2014

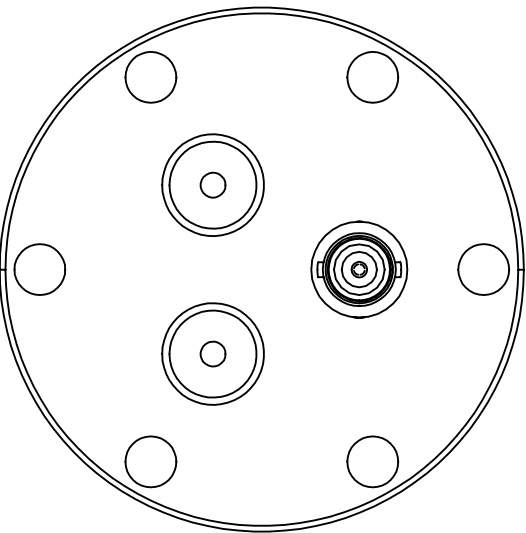


MICRODOT
CONNECTOR




BNC CONNECTOR

1/8" COMPRESSION
FITTINGS

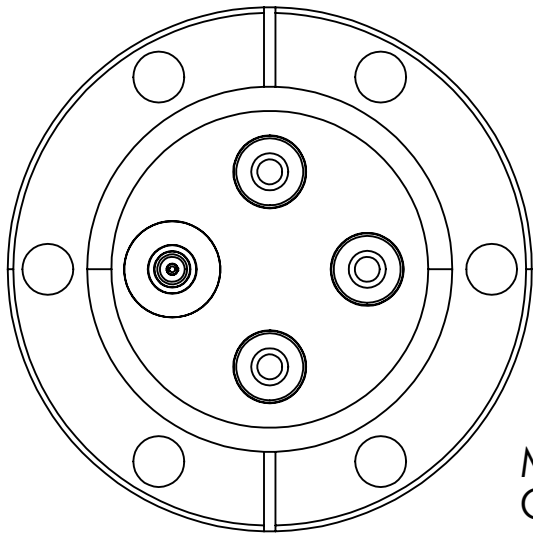
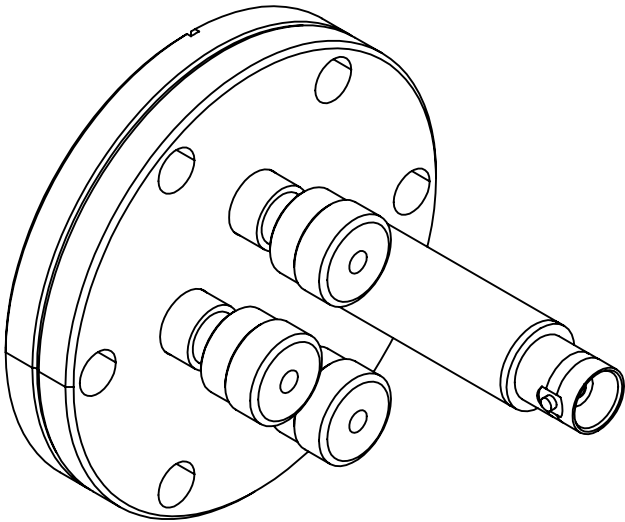
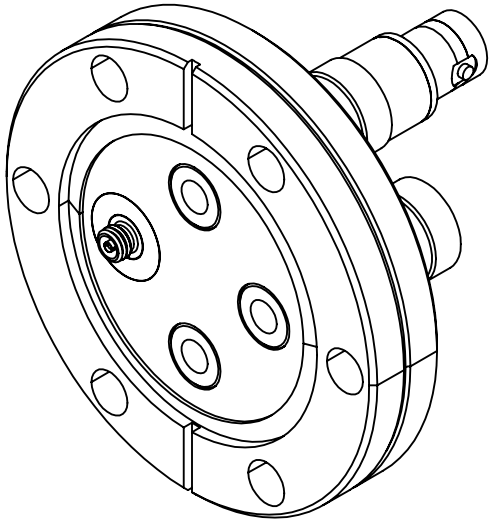


2-3/4" CONFLAT FLANGE
(1) MICRODOT TO BNC CONNECTOR
(2) 1/8" COMPRESSION FITTINGS

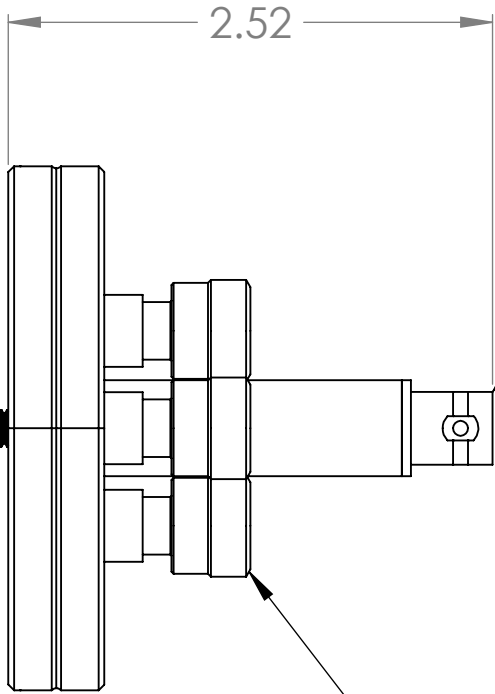
UNLESS OTHERWISE SPECIFIED		DWG BY G. DION DATE 6-23-2014		MATERIAL:		<div>TELEMARK</div> <div>Battle Ground, WA</div>	
GLOBAL TOLERANCES		CHECK BY _____ DATE _____		FINISH:		<div>SINGLE, 2-3/4"</div> <div>CFF, UT</div>	
		PROJ ENG _____ DATE _____		<div>THIRD ANGLE PROJECTION</div> <div></div>			
		MFG ENG _____ DATE _____					
<div>INCHES [mm]</div> <div>.X +/- .03 [0.762]</div> <div>.XX +/- 0.01 [0.254]</div> <div>.XXX +/- 0.005 [0.127]</div> <div>ANGLES +/- .5°</div> <div>SURF FINISH 63 RMS</div>		DO NOT SCALE DRAWING				<div>B</div> <div>SCALE 1:1</div> <div>SHEET 1 of 1</div> <div>DWG NO. R880-2400-2</div> <div>REV A</div>	
		FILE NUMBER -					
		INITIAL PROJECT -					
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- NOTES: (UNLESS OTHERWISE SPECIFIED)
1. REMOVE BURRS & BREAK ALL SHARP EDGES
.005-.015 RADIUS OR CHAMFER.
 2. ALL SURFACES $\sqrt{63}$
 3. BAG WITH PART NUMBER AND REVISION.

ECN	ZONE	REV	DESCRIPTION	BY	DATE
		A	RELEASE	GPD	6/23/2014

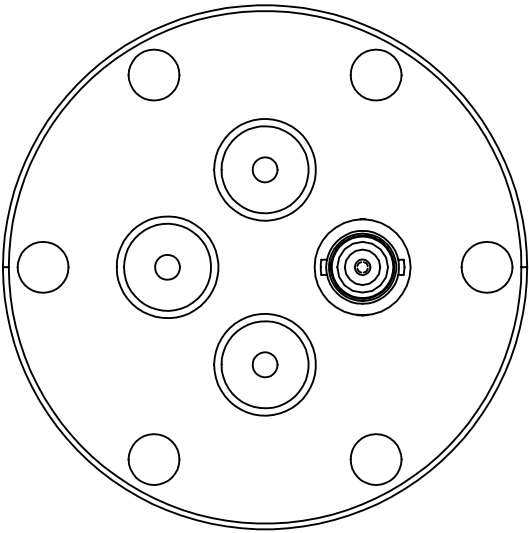


MICRODOT
CONNECTOR




BNC CONNECTOR

1/8" COMPRESSION
FITTINGS

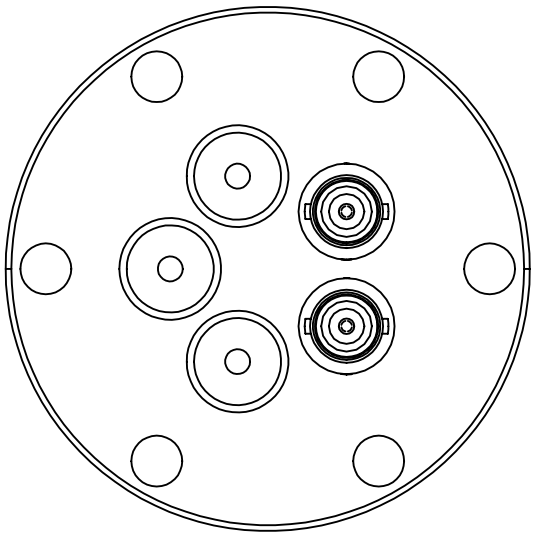
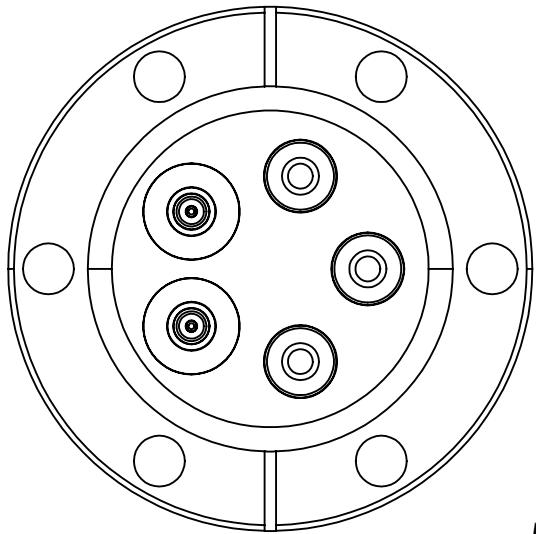
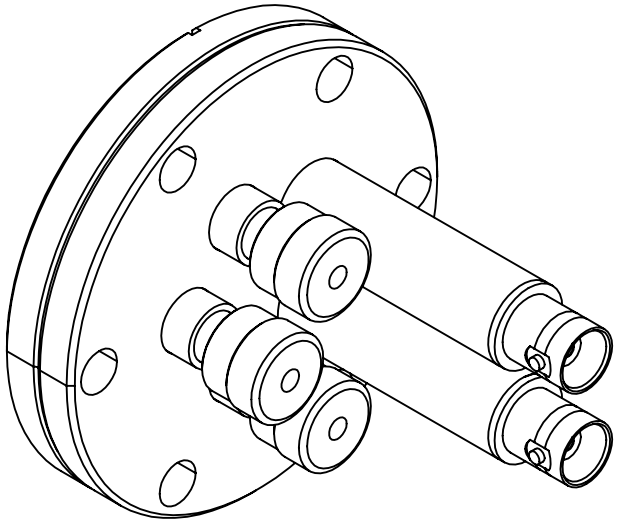
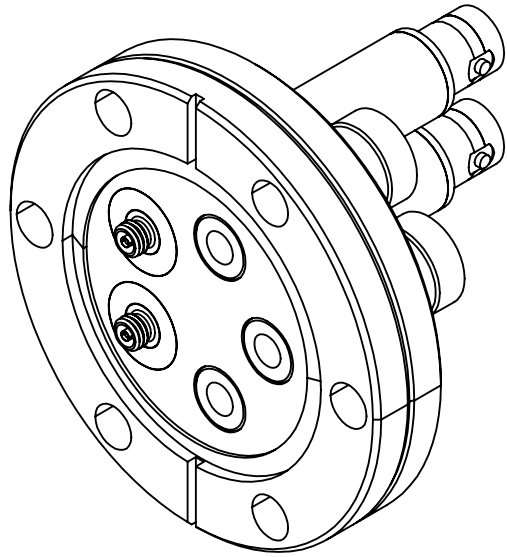


2-3/4" CONFLAT FLANGE
(1) MICRODOT TO BNC CONNECTOR
(3) 1/8" COMPRESSION FITTINGS

UNLESS OTHERWISE SPECIFIED		DWG BY G. DION DATE 6-23-2014		MATERIAL:		<div>TELEMARK</div> <div>Battle Ground, WA</div>	
GLOBAL TOLERANCES		CHECK BY _____ DATE _____		FINISH:		<div>SINGLE WITH SHUTTER, 2-3/4" CFF, UT</div>	
		PROJ ENG _____ DATE _____		THIRD ANGLE PROJECTION 			
		MFG ENG _____ DATE _____					
<div>INCHES [mm]</div> <div>.X +/- .03 [0.762]</div> <div>.XX +/- 0.01 [0.254]</div> <div>.XXX +/- 0.005 [0.127]</div> <div>ANGLES +/- .5°</div> <div>SURF FINISH 63 RMS</div>		DO NOT SCALE DRAWING					
		FILE NUMBER -					
		INITIAL PROJECT -					
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B		SCALE 1:1		DWG NO.		REV	
		SHEET 1 of 1		R880-2400-8		A	

- NOTES: (UNLESS OTHERWISE SPECIFIED)
1. REMOVE BURRS & BREAK ALL SHARP EDGES
.005-.015 RADIUS OR CHAMFER.
 2. ALL SURFACES $\sqrt{63}$
 3. BAG WITH PART NUMBER AND REVISION.

ECN	ZONE	REV	DESCRIPTION	BY	DATE
		A	RELEASE	GPD	6/23/2014




MICRODOT
CONNECTOR

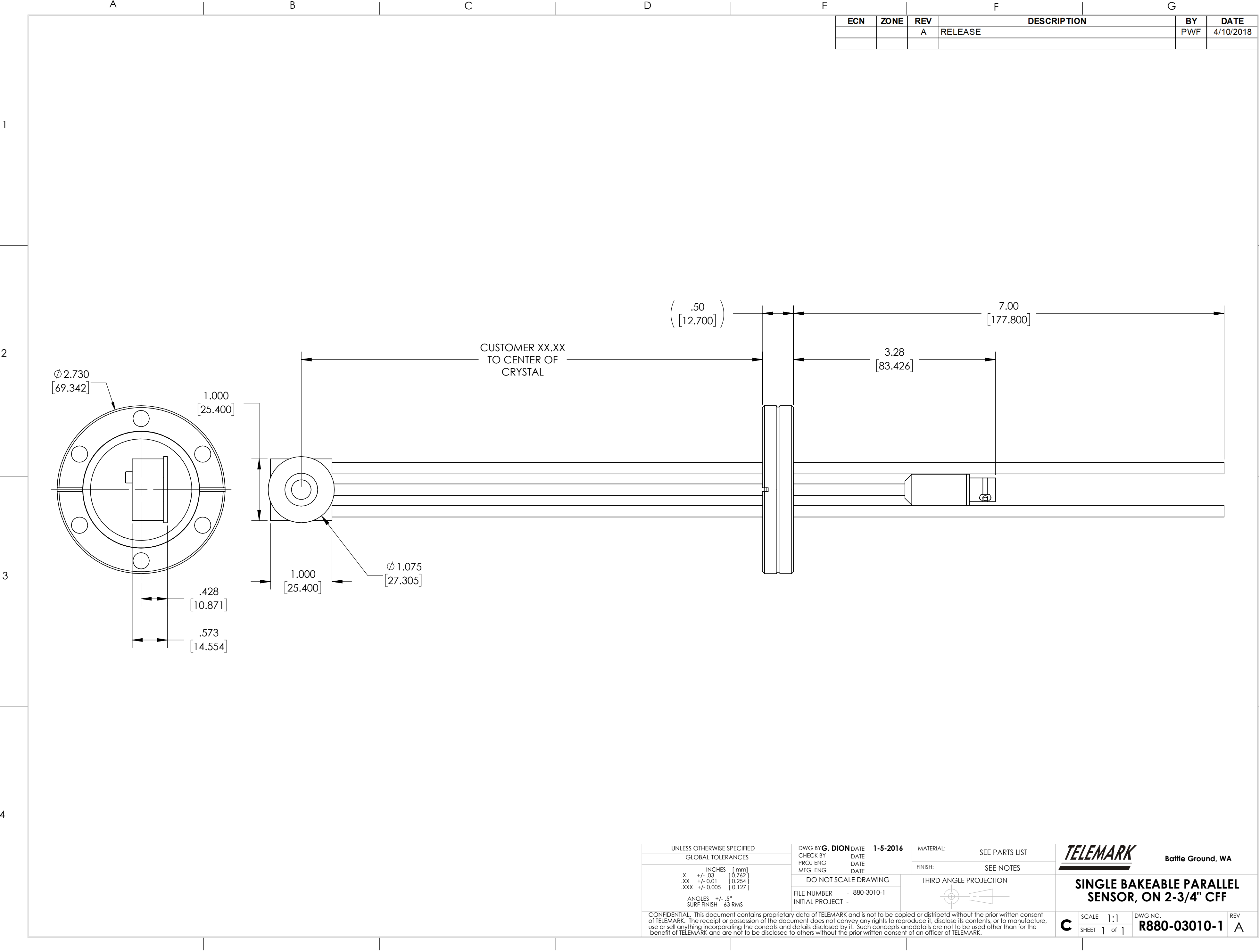
1/8" COMPRESSION
FITTINGS

BNC CONNECTOR

2.52

2-3/4" CONFLAT FLANGE
(2) MICRODOT TO BNC CONNECTORS
(3) 1/8" COMPRESSION FITTINGS

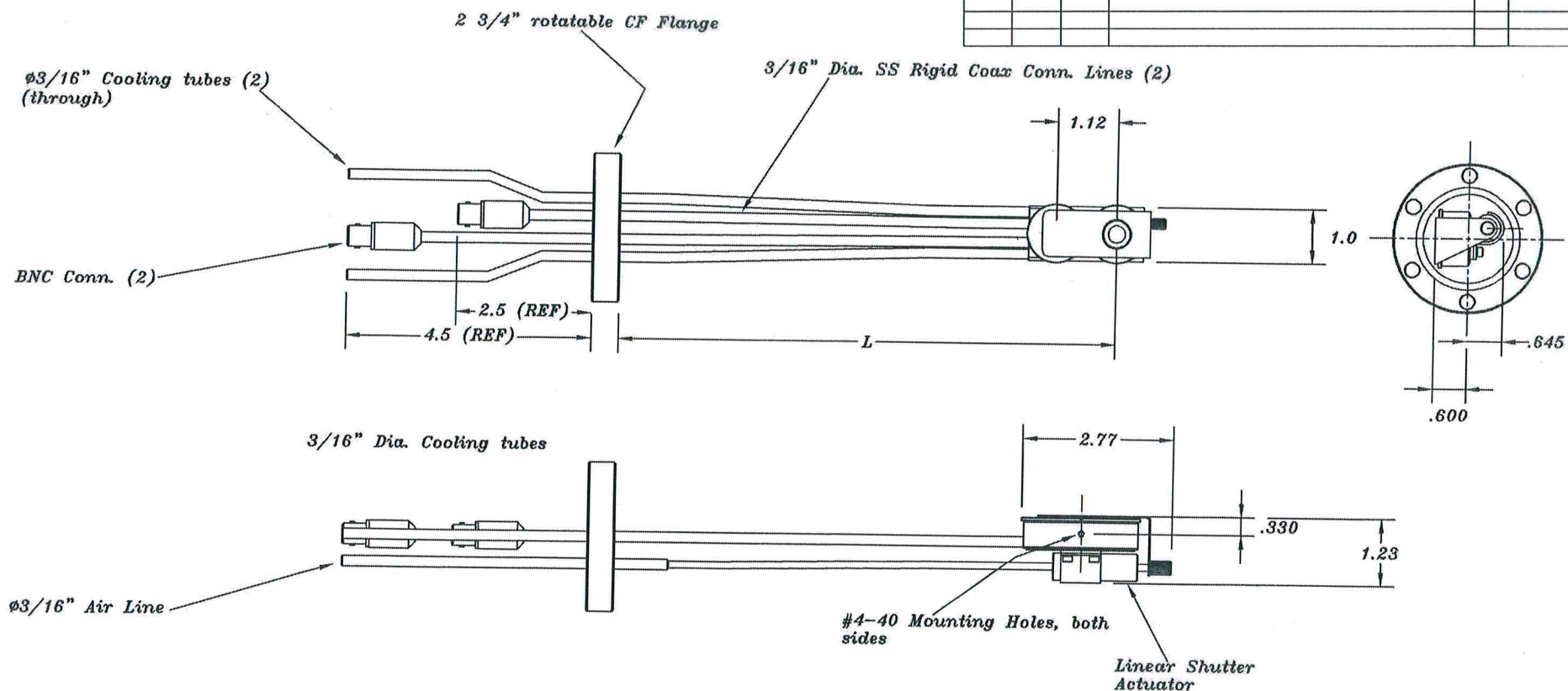
UNLESS OTHERWISE SPECIFIED		DWG BY G. DION DATE 6-23-2014		MATERIAL:		TELEMARK		Battle Ground, WA	
GLOBAL TOLERANCES		CHECK BY DATE PROJ ENG DATE MFG ENG DATE		FINISH:		DUAL WITH SHUTTER, 2-3/4" CFF, UT			
INCHES [mm] .X +/- .03 [0.762] .XX +/- 0.01 [0.254] .XXX +/- 0.005 [0.127]		DO NOT SCALE DRAWING		THIRD ANGLE PROJECTION					
ANGLES +/- .5° SURF FINISH 63 RMS		FILE NUMBER - INITIAL PROJECT -							
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B		SCALE 1:1		DWG NO.		R880-2401-5		REV A	
		SHEET 1 of 1							



ECN	ZONE	REV	DESCRIPTION	BY	DATE
		A	RELEASE	PWF	4/10/2018

UNLESS OTHERWISE SPECIFIED GLOBAL TOLERANCES		DWG BY: G. DION DATE: 1-5-2016	MATERIAL: SEE PARTS LIST	TELEMARK Battle Ground, WA
X +/- .03 [0.762] .XX +/- .01 [0.254] .XXX +/- .005 [0.127]		CHECK BY: DATE PROJ ENG DATE MFG ENG DATE	FINISH: SEE NOTES	
ANGLES +/- .5° SURF FINISH 63 RMS		DO NOT SCALE DRAWING	THIRD ANGLE PROJECTION	SINGLE BAKEABLE PARALLEL SENSOR, ON 2-3/4" CFF
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C	SCALE 1:1 SHEET 1 of 1	DWG NO. R880-03010-1	REV A	

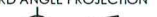
ECN	ZONE	REV	DESCRIPTION	BY	DATE



High Temperature Dual Sensor
 Bakeable to 300 c max
 Operating temp 200 c Max
 Specify "L" dimension and any bend configuration

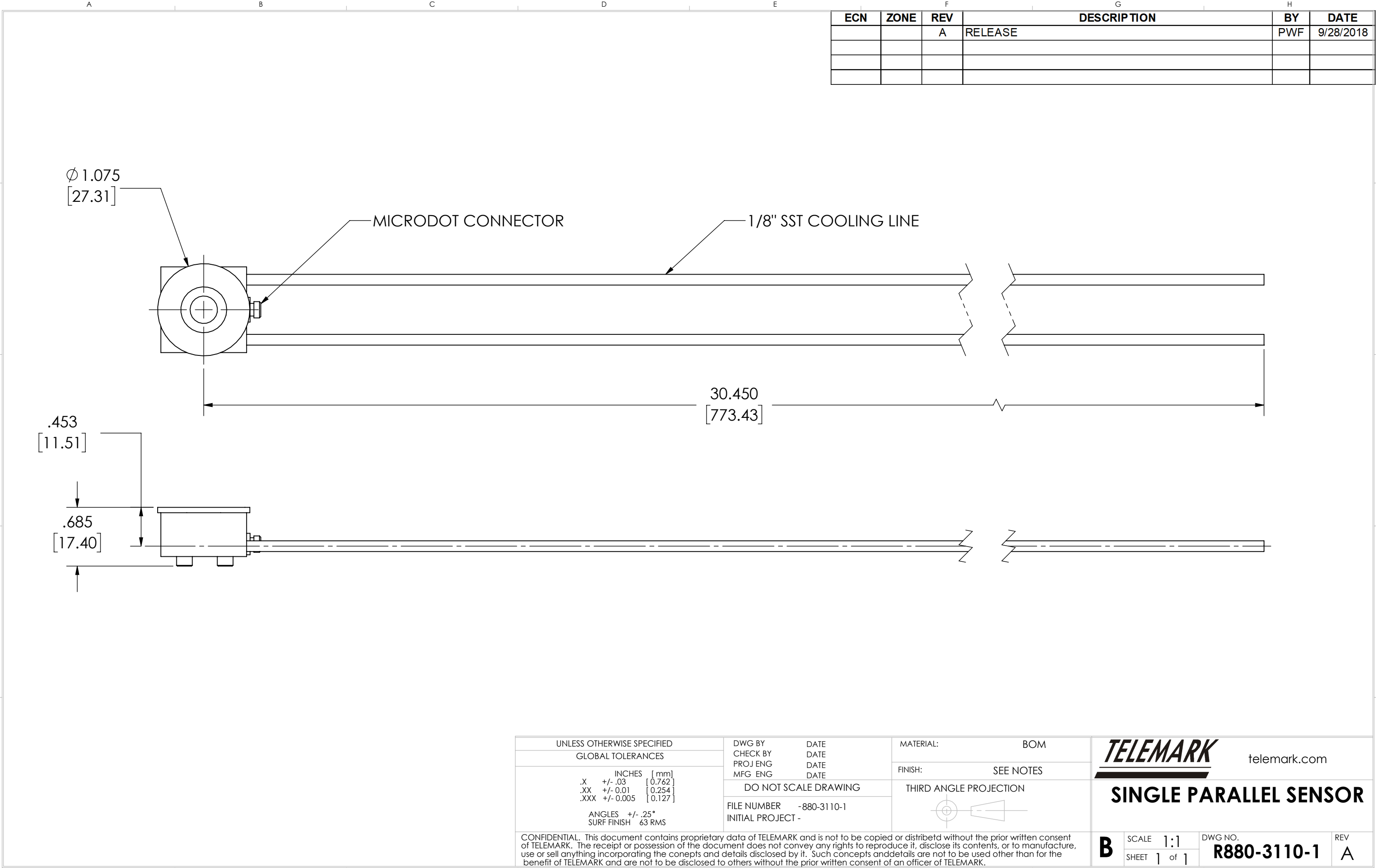
Actuator requires 80-100 PSI Air

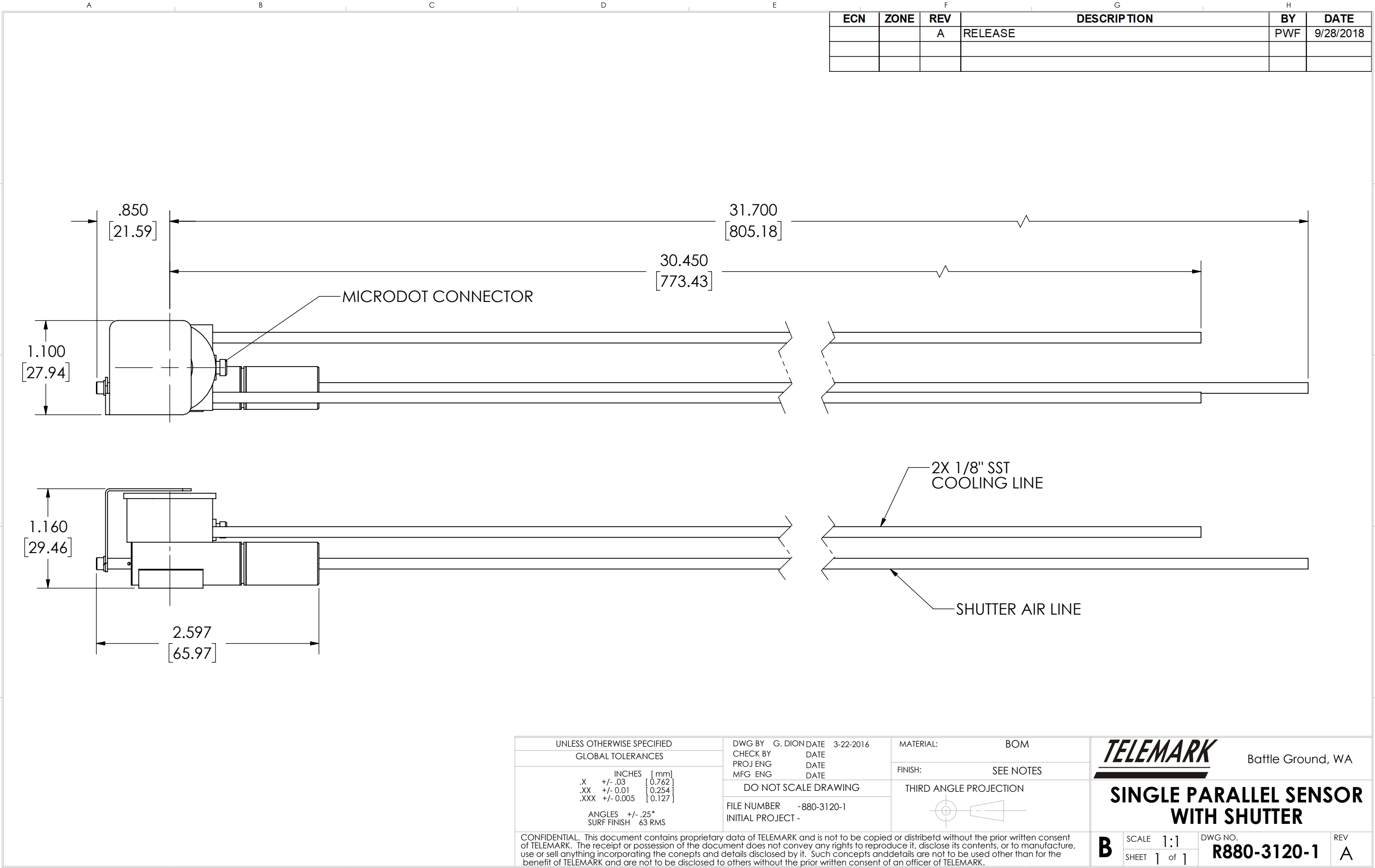
Note: It may be necessary to remove shutter bracket and crystal holders when inserting into certain port sizes

UNLESS OTHERWISE SPECIFIED		DWG BY	DATE	MATERIAL:	<div><div><div>TELEMARK</div><div>Battle Ground, WA</div></div><div>DUAL SENSOR W/SHUTTER</div></div>
GLOBAL TOLERANCES		CHECK BY	DATE	FINISH:	
<div><div>INCHES [mm]</div><div><div>.X +/- .03 [0.762]</div><div>.XX +/- .01 [0.254]</div><div>.XXX +/- .005 [0.127]</div></div></div>		PROJ ENG	DATE		
		MFG ENG	DATE		
DO NOT SCALE DRAWING				THIRD ANGLE PROJECTION	
FILE NUMBER -					
INITIAL PROJECT -					
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B	SCALE	NTS	DWG NO.	REV	
	SHEET	1 of 1	880-3030-1	A	

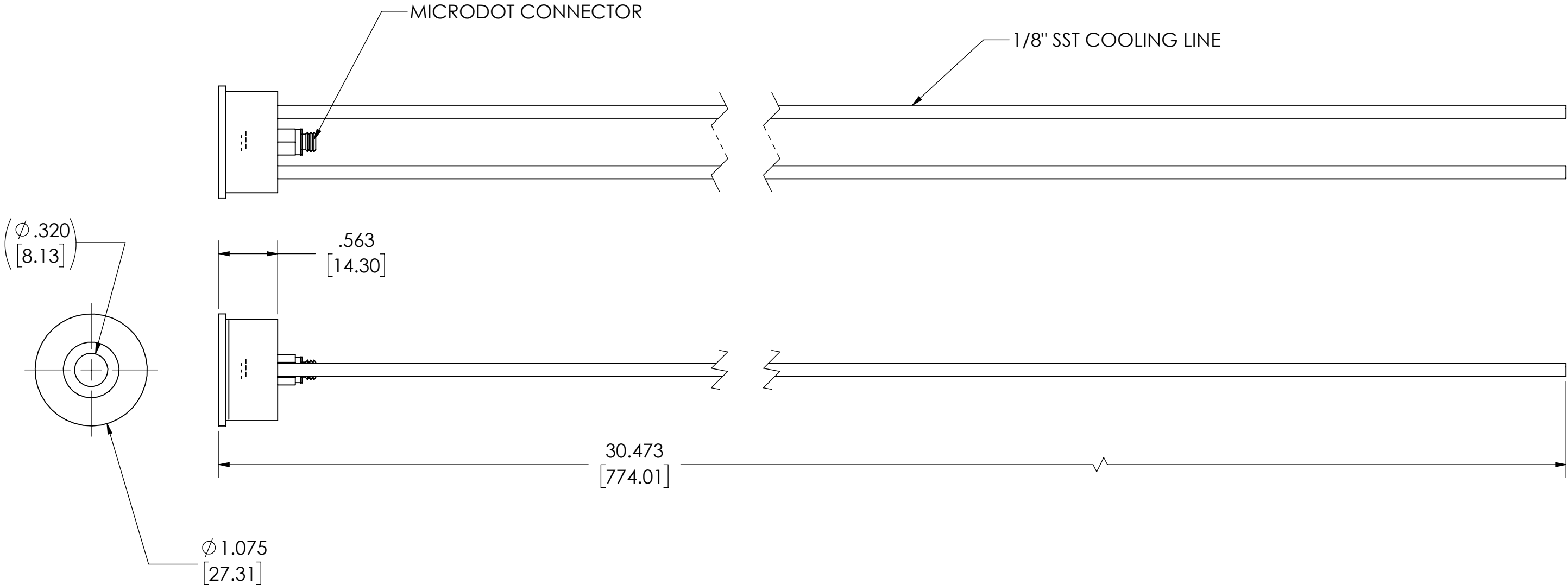
TELEMAR Battle Ground, WA


DUAL SENSOR W/SHUTTER





ECN	ZONE	REV	DESCRIPTION	BY	DATE
		A	RELEASE	PWF	9/28/2018



UNLESS OTHERWISE SPECIFIED GLOBAL TOLERANCES		DWG BY CHECK BY PROJ ENG MFG ENG	DATE DATE DATE DATE	MATERIAL: BOM	<div>TELEMARK</div> <div>telemark.com</div>
INCHES [mm] .X +/- .03 [0.762] .XX +/- 0.01 [0.254] .XXX +/- 0.005 [0.127] ANGLES +/- .25° SURF FINISH 63 RMS		DO NOT SCALE DRAWING		FINISH: SEE NOTES	
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					<div><div>B</div><div>SCALE 1:1 SHEET 1 of 1</div></div> <div>DWG NO. R880-3130-1</div> <div>REV A</div>

A

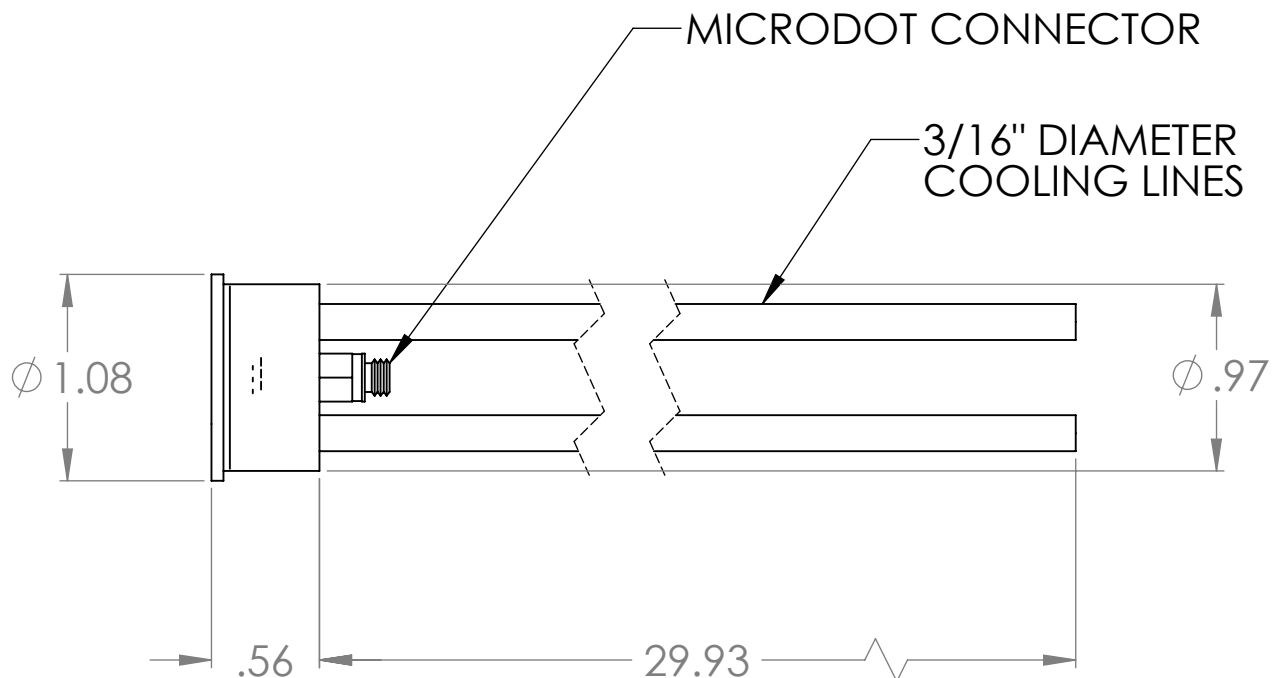
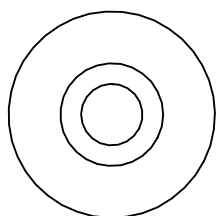
B

C

D

E

ECN	ZONE	REV	DESCRIPTION	BY	DATE
		A	RELEASE	GPD	6/21/2018



UNLESS OTHERWISE SPECIFIED

GLOBAL TOLERANCES

	INCHES	[mm]
.XX	+/- 0.03	[.762]
.XXX	+/- 0.01	[0.254]
.XXXX	+/- 0.005	[0.127]

ANGLES +/- .25°
SURF FINISH 63 RMS

DWG BY **G. DION** DATE **6-21-2018**

CHECK BY DATE
PROJ ENG DATE
MFG ENG DATE

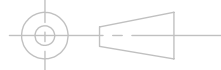
DO NOT SCALE DRAWING

FILE NUMBER - 880-3130-2
INITIAL PROJECT -

MATERIAL:

FINISH:

THIRD ANGLE PROJECTION

**TELEMARK**

Battle Ground, WA

RIGHT ANGLE SENSOR ASSEMBLY, 3/16" TUBES

A

SCALE 1:1
SHEET 1 of 1

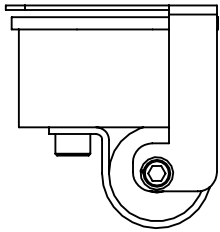
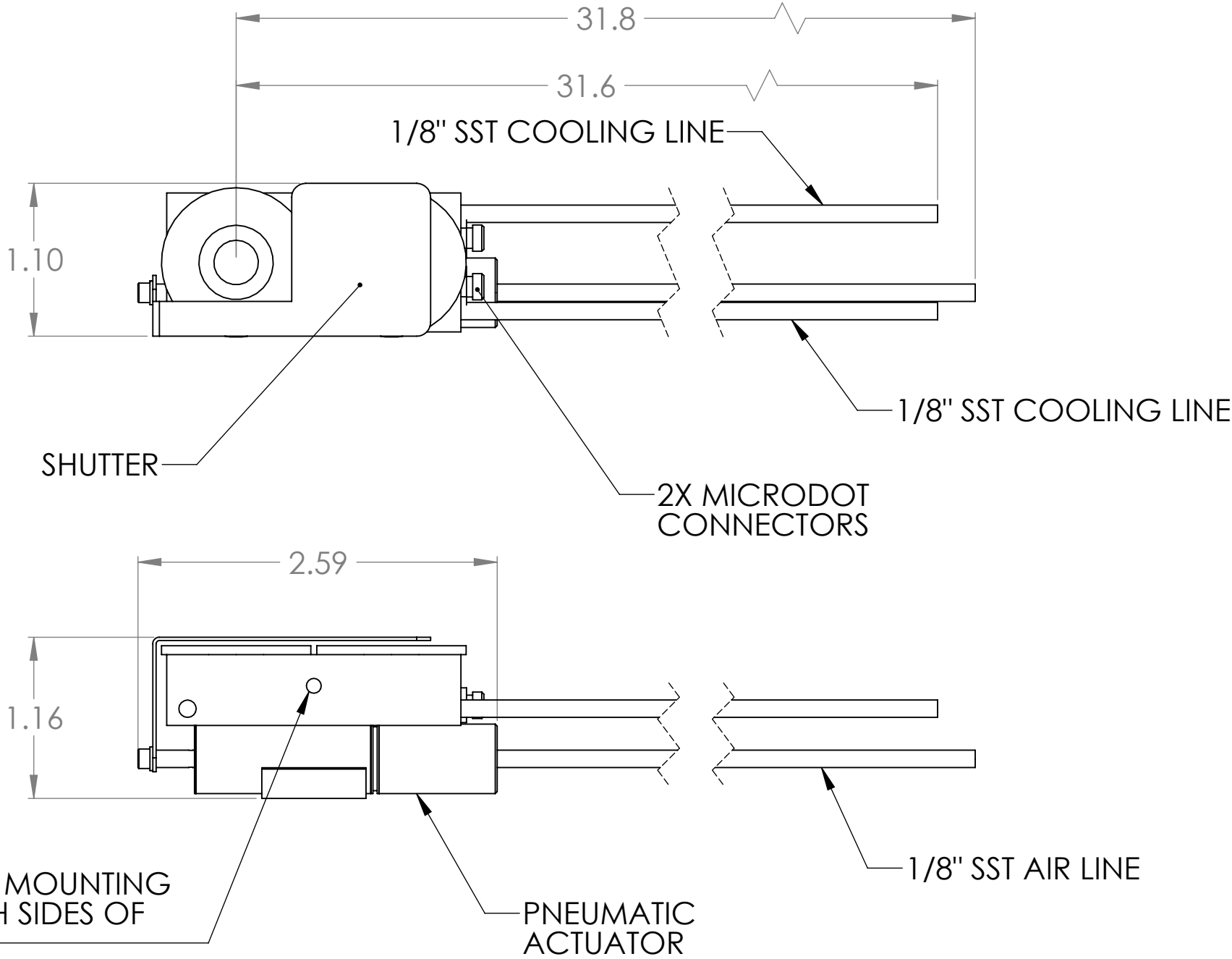
DWG NO.
R880-3130-6


REV
A

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- NOTES: (UNLESS OTHERWISE SPECIFIED)
1. REMOVE BURRS & BREAK ALL SHARP EDGES
.005-.015 RADIUS OR CHAMFER.
 2. ALL SURFACES $\sqrt{63}$
 3. BAG WITH PART NUMBER AND REVISION.

ECN	ZONE	REV	DESCRIPTION	BY	DATE
		A	RELEASE	GPD	6/6/2017



UNLESS OTHERWISE SPECIFIED		DWG BY G. DION DATE 6-6-2017		MATERIAL:		<div><div>TELEMARK</div><div>Battle Ground, WA</div></div>			
GLOBAL TOLERANCES		CHECK BY DATE PROJ ENG DATE MFG ENG DATE		FINISH:		<div><div>DUAL PARALLEL SENSOR WITH SHUTTER</div></div>			
INCHES [mm] .X +/- .03 [0.762] .XX +/- 0.01 [0.254] .XXX +/- 0.005 [0.127]		DO NOT SCALE DRAWING		THIRD ANGLE PROJECTION					
ANGLES +/- .5° SURF FINISH 63 RMS		FILE NUMBER - R880-3210-1 INITIAL PROJECT -							
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							SHEET 1 of 1	R880-3210-1	A

- NOTES: (UNLESS OTHERWISE SPECIFIED)
1. REMOVE BURRS & BREAK ALL SHARP EDGES
.005-.015 RADIUS OR CHAMFER.
 2. ALL SURFACES $\sqrt{63}$
 3. BAG WITH PART NUMBER AND REVISION.

SHUTTER

1.25

PNEUMATIC
ACTUATOR

3.75

2.88

#6-32 UNC MOUNTING
HOLE, BOTH SIDES
OF SENSOR

2X MICRO DOT
CONNECTORS

1/8" SST AIR LINE

1/8" SST COOLING LINE

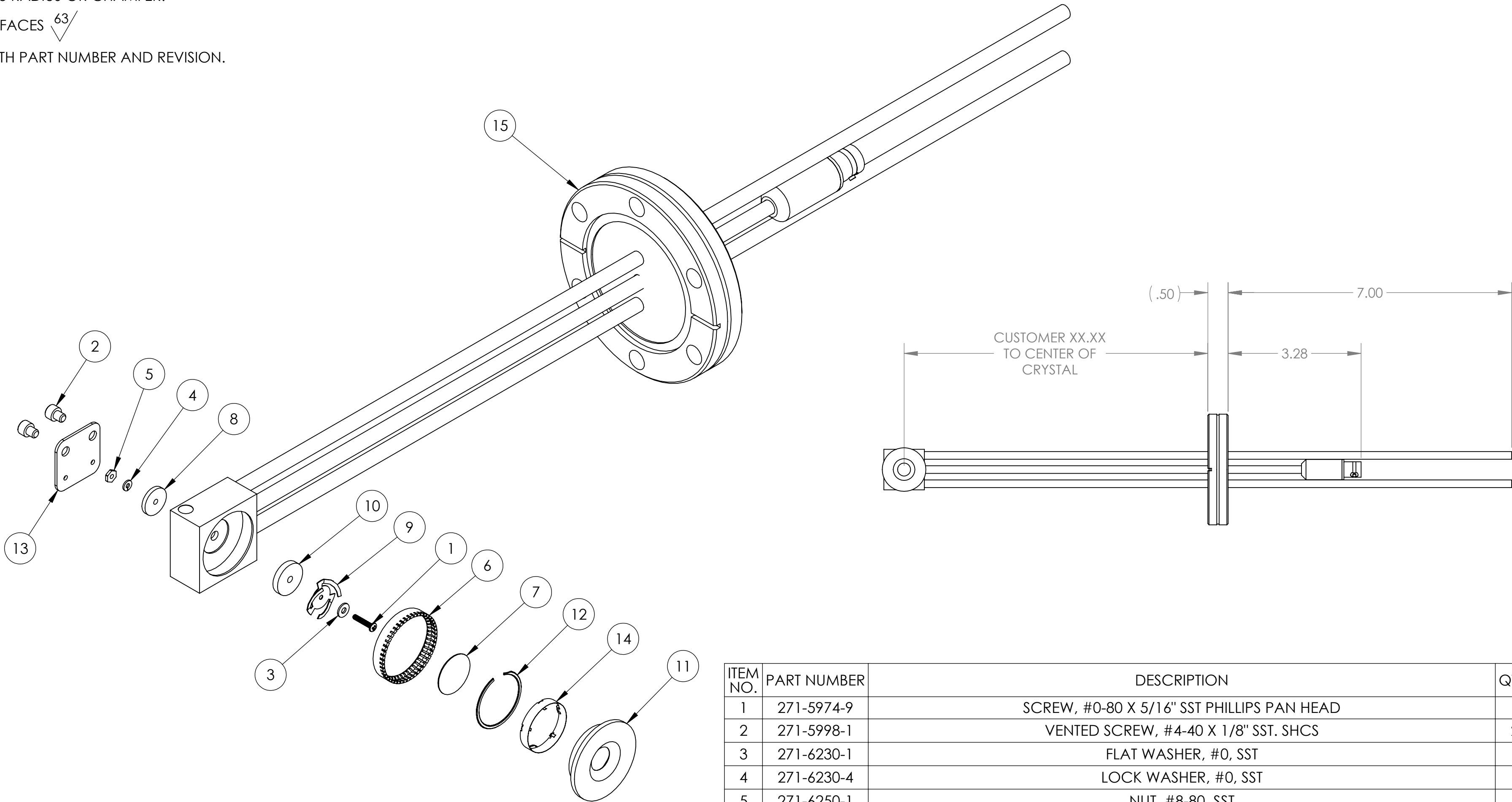
1/8" SST COOLING LINE

ECN	ZONE	REV	DESCRIPTION	BY	DATE
		B	REVISED DRAWING	GPD	8/3/2016


UNLESS OTHERWISE SPECIFIED		DWG BY G. DION DATE 8-3-2016		MATERIAL: SEE PARTS LIST		<div><div>TELEMARK</div><div>Battle Ground, WA</div></div>	
GLOBAL TOLERANCES		CHECK BY DATE PROJ ENG DATE MFG ENG DATE		FINISH: SEE NOTES		<div>ASSEMBLY, DUAL SENSOR, RIGHT ANGLE</div>	
INCHES [mm] .X +/- .03 [0.762] .XX +/- 0.01 [0.254] .XXX +/- 0.005 [0.127]		DO NOT SCALE DRAWING		THIRD ANGLE PROJECTION			
ANGLES +/- .5° SURF FINISH 63 RMS		FILE NUMBER - 880-3220-1 INITIAL PROJECT -					
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B	SCALE	1:1		DWG NO.		REV	
	SHEET	1 of 1		R880-3220-1		B	

NOTES: (UNLESS OTHERWISE SPECIFIED)
1. REMOVE BURRS & BREAK ALL SHARP EDGES
.005-.015 RADIUS OR CHAMFER.
2. ALL SURFACES $\sqrt{63}$
3. BAG WITH PART NUMBER AND REVISION.

ECN	ZONE	REV	DESCRIPTION	BY	DATE
990692		A	RELEASE	GPD	1/5/2016
		B	REVISED MODEL & PARTS LIST	GPD	3/16/2016



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	271-5974-9	SCREW, #0-80 X 5/16" SST PHILLIPS PAN HEAD	1
2	271-5998-1	VENTED SCREW, #4-40 X 1/8" SST. SHCS	2
3	271-6230-1	FLAT WASHER, #0, SST	1
4	271-6230-4	LOCK WASHER, #0, SST	1
5	271-6250-1	NUT, #8-80, SST	1
6	880-0119-1	SPRING, CRYSTAL HOLDER	1
7	880-0201-1	6MHz GOLD COATED SENSING CRYSTAL	1
8	880-0516-2	INSOLATOR, SPACER CONTACT	1
9	880-0518-1	SPRING CONTACT	1
10	880-0519-3	CERAMIC INSULATOR, RIGHT ANGLE SENSOR	1
11	880-0604-1	CRYSTAL HOLDER	1
12	880-0637-1	RETANING RING	1
13	880-0642-1	SENSOR BODY COVER	1
14	880-0639-1	SPRING, CRYSTAL	1
15	880-1031-1	WELD'T, SINGLE, ROTARY, 2-3/4" CFF, UHV	1

UNLESS OTHERWISE SPECIFIED GLOBAL TOLERANCES		DWG BY G. DION DATE 1-5-2016	MATERIAL: SEE PARTS LIST	TELEMARK Battle Ground, WA	
INCHES [mm] .X +/- .03 [0.762] .XX +/- .01 [0.254] .XXX +/- .005 [0.127] ANGLES +/- .5° SURF FINISH $\sqrt{63}$ RMS		CHECK BY: DATE PROJ ENG DATE MFG ENG DATE	FINISH: SEE NOTES	SINGLE BAKEABLE PARALLEL SENSOR, ON 2-3/4" CFF	
DO NOT SCALE DRAWING		THIRD ANGLE PROJECTION			
FILE NUMBER - 880-3010-1 INITIAL PROJECT -					
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3. BAG WITH PART NUMBER AND REVISION.

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	271-5974-9	SCREW, #0-80 X 5/16" SST PHILLIPS PAN HEAD	1
2	271-5989-9	VENTED SCREW, #2-56 X 5/16" SST SHCS	1
3	271-5998-1	VENTED SCREW, #4-40 X 1/8" SST. SHCS	2
4	271-6230-1	FLAT WASHER, #0, SST	1
5	271-6230-4	LOCK WASHER, #0, SST	1
6	271-6237-4	WASHER, LOCK, #2, SST	1
7	271-6250-1	NUT, #8-80, SST	1
8	880-0119-1	SPRING, CRYSTAL HOLDER	1
9	880-0201-1	6MHz GOLD COATED SENSING CRYSTAL	1
10	880-0516-2	INSULATOR, SPACER CONTACT	1
11	880-0518-1	SPRING CONTACT	1
12	880-0519-3	CERAMIC INSULATOR, RIGHT ANGLE SENSOR	1
13	880-0604-1	CRYSTAL HOLDER	1
14	880-0637-1	RETANING RING	1
15	880-0639-1	SPRING, CRYSTAL	1
16	880-0940-1	CLAMP BRACKET, BELLOWS ASSEMBLY	1
17	880-0941-1	SINGLE SHUTTER	1
18	880-0642-1	SENSOR BODY COVER	1
19	880-1030-1	WELD'T, SINGLE W/SHUTTER, ROTARY, 2-3/4" CFF, UHV	1

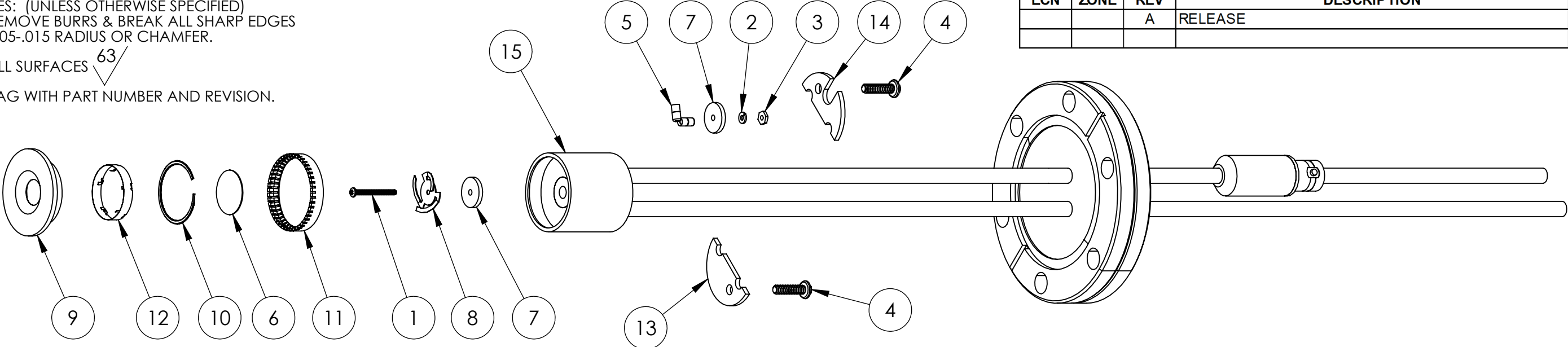
UNLESS OTHERWISE SPECIFIED		DWG BY G. DIONDATE	10-12-2015	MATERIAL:	SEE PARTS LIST	<div>TELEMARK</div> <div>Battle Ground, WA</div>
GLOBAL TOLERANCES		CHECK BY	DATE	FINISH:	SEE NOTES	
		PROJ ENG	DATE			
		MFG ENG	DATE			
INCHES [mm]		DO NOT SCALE DRAWING		THIRD ANGLE PROJECTION		
.X +/- .03	[0.762]	FILE NUMBER - 880-3015-1				
.XX +/- .001	[.254]	INITIAL PROJECT -				
.XXX +/- .0005	[.127]					
ANGLES +/- .5° SURF FINISH 63 RMS						
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SINGLE BAKEABLE PARALLEL SENSOR, w/SHUTTER ON 2-3/4" CFF						
				SCALE	1:1	DWG NO.
				C	SHEET 1 of 1	880-3015-1

NOTES: (UNLESS OTHERWISE SPECIFIED)

1. REMOVE BURRS & BREAK ALL SHARP EDGES .005-.015 RADIUS OR CHAMFER.

2. ALL SURFACES $\sqrt{63}$

3. BAG WITH PART NUMBER AND REVISION.



ECN	ZONE	REV	DESCRIPTION	BY	DATE
		A	RELEASE	GPD	8/14/2017

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	271-5978-9	Screw, #0-80 X 5/8" SST Phil Pan Head	1
2	271-6230-4	LOCK WASHER, #0, SST	1
3	271-6250-1	NUT, #8-80, SST	1
4	271-6002-7	Screw, #4-40 X 7/16" SST Phil Pan Head	2
5	568-2801-1	CERAMIC BEAD	4
6	880-0201-1	6MHz GOLD COATED SENSING CRYSTAL	1
7	880-0516-2	INSOLATOR, SPACER CONTACT	2
8	880-0518-1	SPRING CONTACT	1
9	880-0604-1	CRYSTAL HOLDER	1
10	880-0637-1	RETANING RING	1
11	880-0638-1	SPRING, CRYSTAL HOLDER	1
12	880-0639-1	SPRING, CRYSTAL	1
13	880-0642-3	SENSOR BODY COVER	1
14	880-0642-4	SENSOR BODY COVER	1
15	880-1031-2	WELD'T, SINGLE, Rt. ANGLE, 2-3/4" CFF, UHV	1

UNLESS OTHERWISE SPECIFIED

GLOBAL TOLERANCES

	INCHES	[mm]
.X	+/- .03	[0.762]
.XX	+/- 0.01	[0.254]
.XXX	+/- 0.005	[0.127]

ANGLES +/- .5°

SURF FINISH $\sqrt{63}$ RMS

DWG BY **G. DION** DATE **8-14-2017**

CHECK BY DATE

PROJ ENG DATE

MFG ENG DATE

DO NOT SCALE DRAWING

FILE NUMBER - 880-3020-1

INITIAL PROJECT -

MATERIAL: SEE PARTS LIST

FINISH: SEE NOTES

THIRD ANGLE PROJECTION

TELEMARK Battle Ground, WA

SINGLE, Rt. ANGLE, 2-3/4" CFF, UHV

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B

SCALE 3:4

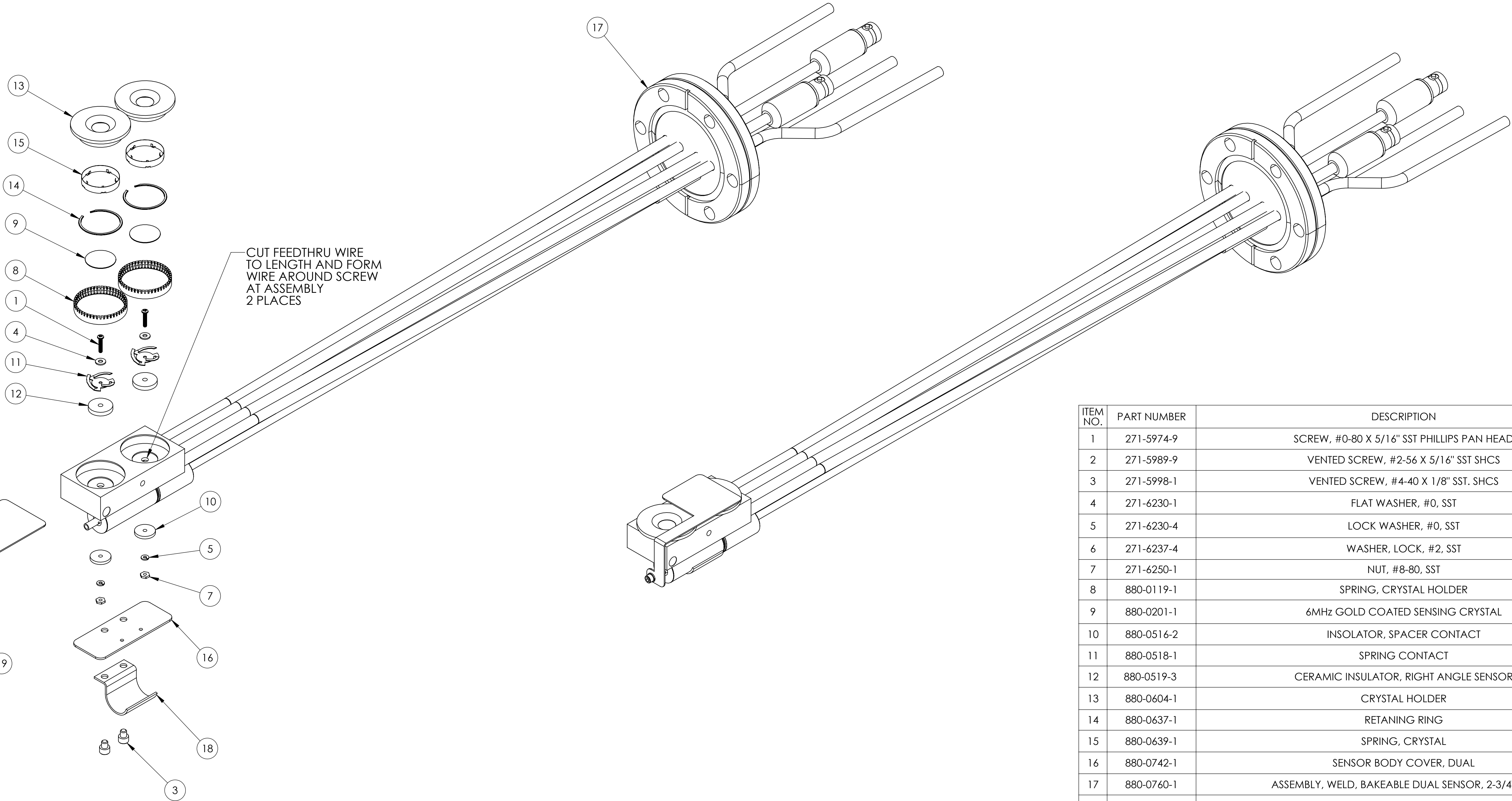
SHEET 1 of 1

DWG NO. 880-3020-1

REV A

- NOTES: (UNLESS OTHERWISE SPECIFIED)
1. REMOVE BURRS & BREAK ALL SHARP EDGES
.005-.015 RADIUS OR CHAMFER.
 2. ALL SURFACES $\sqrt{63}$
 3. BAG WITH PART NUMBER AND REVISION.

ECN	ZONE	REV	DESCRIPTION	BY	DATE
		A	RELEASE		
990692		B	REVISED MODEL & PARTS LIST	GPD	7/17/2015
990723		C	P/N FROM 880-943-1 TO 271-5989-9	GPD	3/16/2016



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	271-5974-9	SCREW, #0-80 X 5/16" SST PHILLIPS PAN HEAD	2
2	271-5989-9	VENTED SCREW, #2-56 X 5/16" SST SHCS	1
3	271-5998-1	VENTED SCREW, #4-40 X 1/8" SST. SHCS	2
4	271-6230-1	FLAT WASHER, #0, SST	2
5	271-6230-4	LOCK WASHER, #0, SST	2
6	271-6237-4	WASHER, LOCK, #2, SST	1
7	271-6250-1	NUT, #8-80, SST	2
8	880-0119-1	SPRING, CRYSTAL HOLDER	2
9	880-0201-1	6MHz GOLD COATED SENSING CRYSTAL	2
10	880-0516-2	INSULATOR, SPACER CONTACT	2
11	880-0518-1	SPRING CONTACT	2
12	880-0519-3	CERAMIC INSULATOR, RIGHT ANGLE SENSOR	2
13	880-0604-1	CRYSTAL HOLDER	2
14	880-0637-1	RETANING RING	2
15	880-0639-1	SPRING, CRYSTAL	2
16	880-0742-1	SENSOR BODY COVER, DUAL	1
17	880-0760-1	ASSEMBLY, WELD, BAKEABLE DUAL SENSOR, 2-3/4" CFF	1
18	880-0940-1	CLAMP BRACKET, BELLOWS ASSEMBLY	1
19	880-0942-1	SHUTTER, SINGLE	1

UNLESS OTHERWISE SPECIFIED:
GLOBAL TOLERANCES

.X	+/- .03	[.762]
.XX	+/- 0.01	[.254]
.XXX	+/- 0.005	[.127]

ANGLES +/- .5°
SURF FINISH 63 RMS

DWG BY: **G. DION** DATE: **7-17-2015**

CHECK BY: _____ DATE: _____

PROJ ENG _____ DATE: _____

MFG ENG _____ DATE: _____

DO NOT SCALE DRAWING

FILE NUMBER **880-3030-1**

INITIAL PROJECT -

MATERIAL: _____

FINISH: _____

THIRD ANGLE PROJECTION

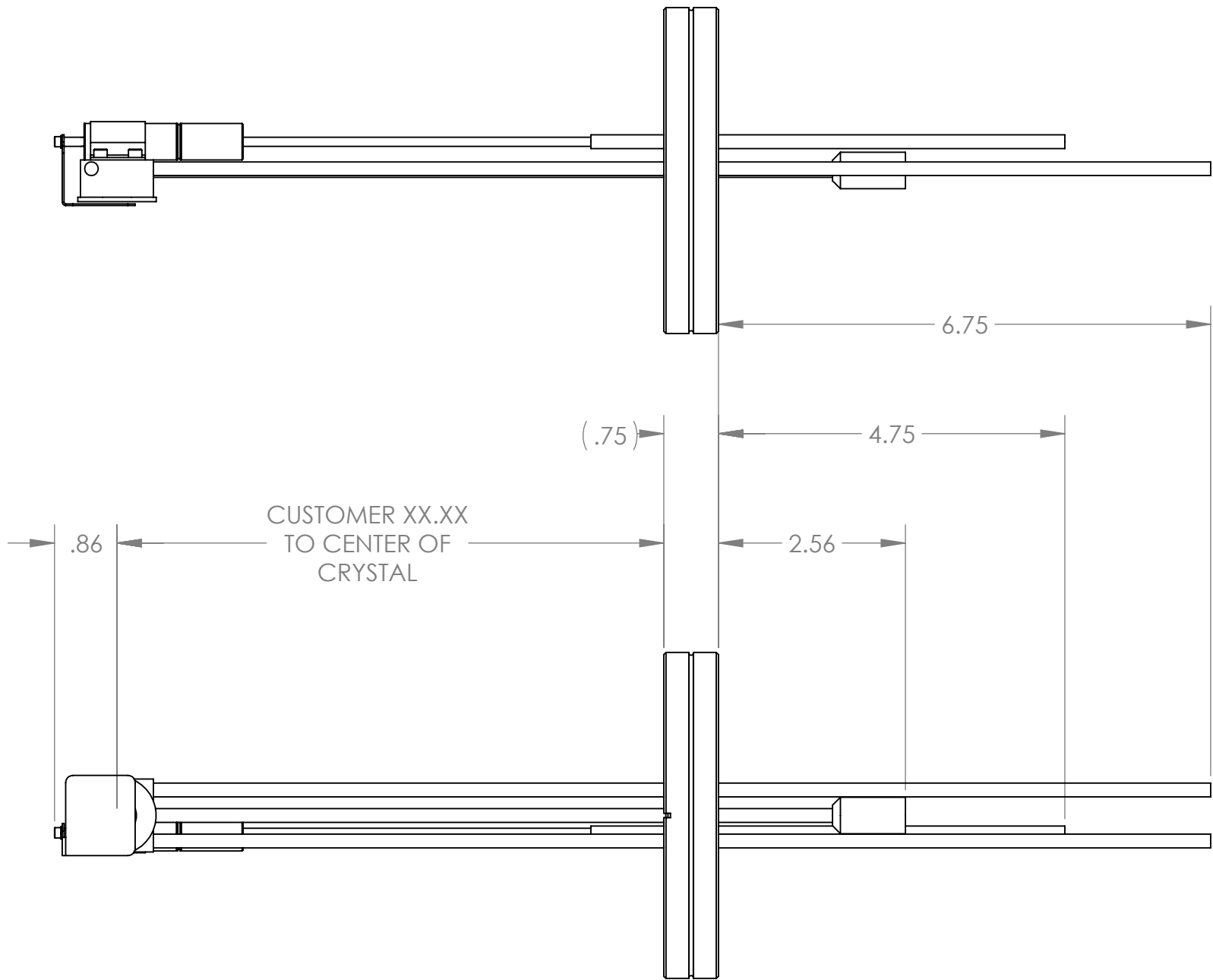
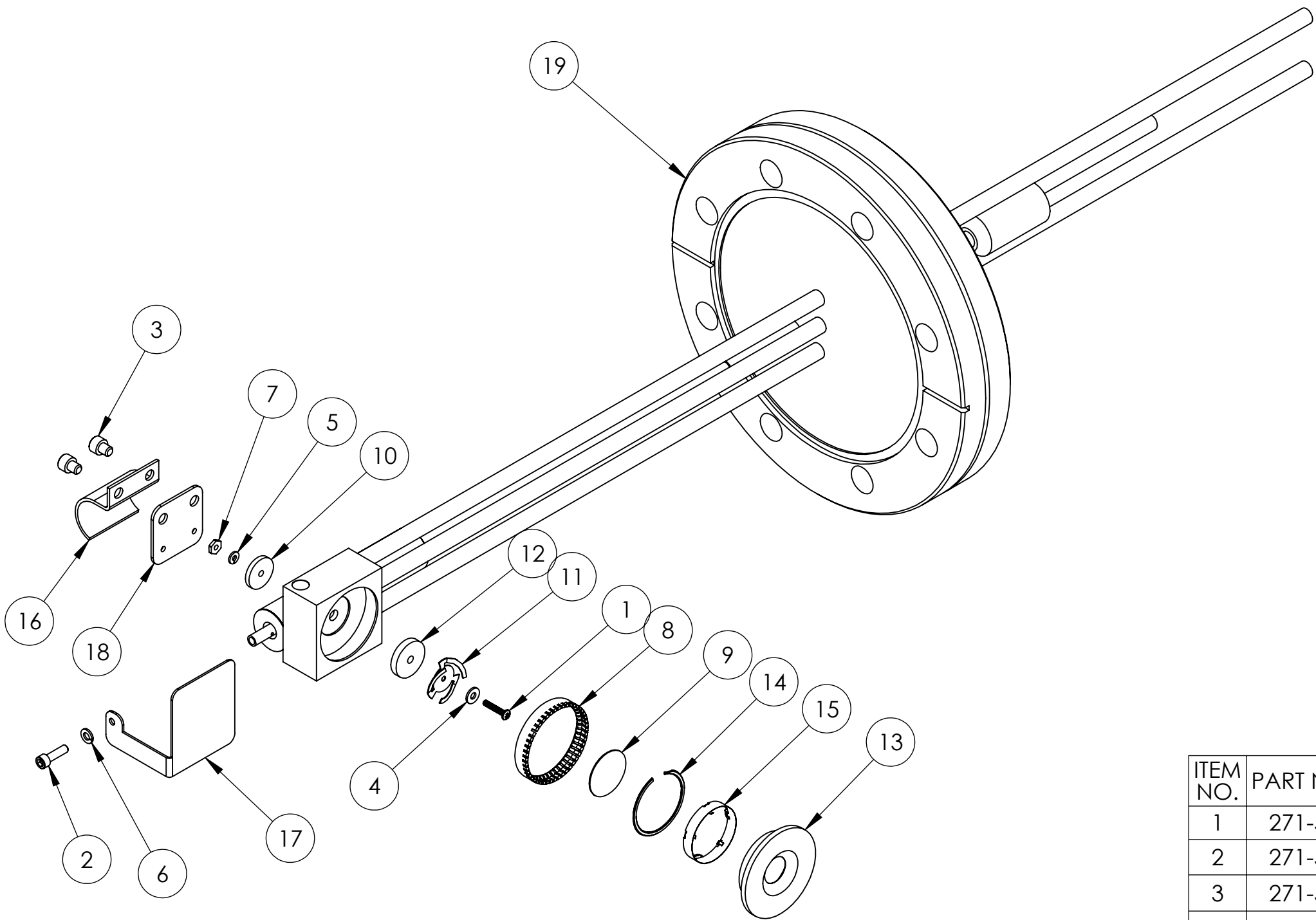
TELEMARK
Battle Ground, WA

**ASSEMBLY, DUAL SENSOR
W/SHUTTER, 2-3/4" CFF, BAKEABLE**

SCALE **1:1** DWG NO. **880-3030-1** REV **C**

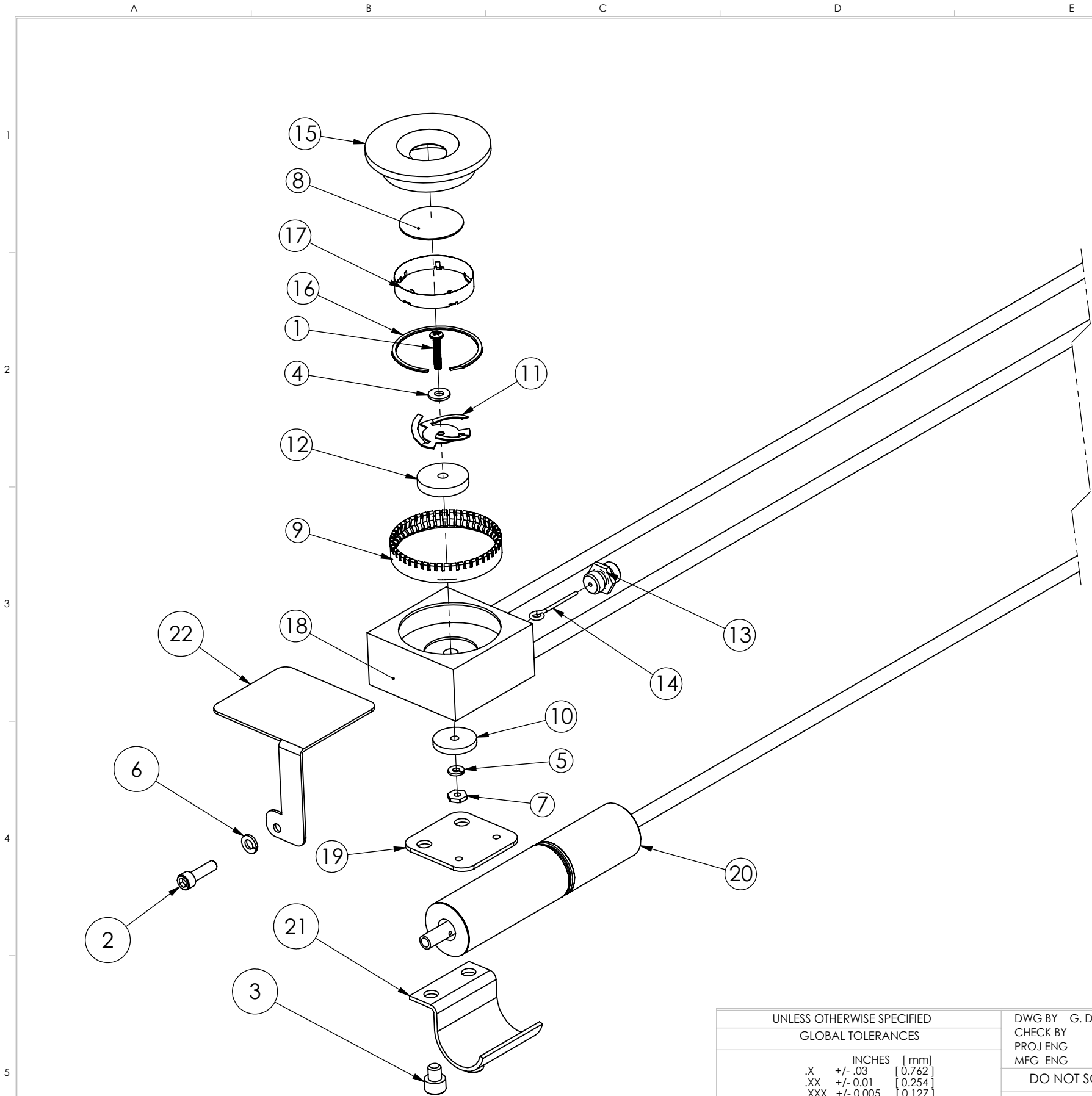
NOTES: (UNLESS OTHERWISE SPECIFIED)
1. REMOVE BURRS & BREAK ALL SHARP EDGES
.005-.015 RADIUS OR CHAMFER.
2. ALL SURFACES $\sqrt{63}$
3. BAG WITH PART NUMBER AND REVISION.

ECN	ZONE	REV	DESCRIPTION	BY	DATE
		A	RELEASE	GPD	10/12/2015
990692		B	REVISED MODEL & PARTS LIST	GPD	3/16/2016
990723		C	P/N FROM 880-943-1 TO 271-5989-9	GPD	11/8/2016



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	271-5974-9	SCREW, #0-80 X 5/16" SST PHILLIPS PAN HEAD	1
2	271-5989-9	VENTED SCREW, #2-56 X 5/16" SST SHCS	1
3	271-5998-1	VENTED SCREW, #4-40 X 1/8" SST. SHCS	2
4	271-6230-1	FLAT WASHER, #0, SST	1
5	271-6230-4	LOCK WASHER, #0, SST	1
6	271-6237-4	WASHER, LOCK, #2, SST	1
7	271-6250-1	NUT, #8-80, SST	1
8	880-0119-1	SPRING, CRYSTAL HOLDER	1
9	880-0201-1	6MHz GOLD COATED SENSING CRYSTAL	1
10	880-0516-2	INSULATOR, SPACER CONTACT	1
11	880-0518-1	SPRING CONTACT	1
12	880-0519-3	CERAMIC INSULATOR, RIGHT ANGLE SENSOR	1
13	880-0604-1	CRYSTAL HOLDER	1
14	880-0637-1	RETANING RING	1
15	880-0639-1	SPRING, CRYSTAL	1
16	880-0940-1	CLAMP BRACKET, BELLOWS ASSEMBLY	1
17	880-0941-1	SINGLE SHUTTER	1
18	880-0642-1	SENSOR BODY COVER	1
19	880-1020-1	ASSEMBLY, WELD, BAKEABLE SENSOR, 4.5" CFF	1

UNLESS OTHERWISE SPECIFIED GLOBAL TOLERANCES		DWG BY: G. DION DATE: 10-12-2015	MATERIAL: SEE PARTS LIST	TELEMARK Battle Ground, WA	
INCHES [mm] X +/- .03 [0.762] .XX +/- .01 [0.254] .XXX +/- .005 [0.127] ANGLES +/- .5° SURF FINISH $\sqrt{63}$ RMS		CHECK BY: DATE: PROJ ENG DATE: MFG ENG DATE:	FINISH: SEE NOTES		
		DO NOT SCALE DRAWING	THIRD ANGLE PROJECTION	SINGLE BAKEABLE PARALLEL SENSOR, w/SHUTTER ON 4.5" CFF	
		FILE NUMBER - 880-3045-1 INITIAL PROJECT -			
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ECN	ZONE	REV	DESCRIPTION	BY	DATE
		A	RELEASE	GPD	3/22/2016
990723		B	P/N FROM 880-0943-1 TO 271-5989-9	GPD	11/8/2016
990873		C	FLIPPED 880-0119-1 UPSIDE DOWN & REMOVED NOTES	GPD	9/10/2019

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	271-5974-9	SCREW, #0-80 X 5/16" SST PHILLIPS PAN HEAD	1
2	271-5989-9	VENTED SCREW, #2-56 X 5/16" SST SHCS	1
3	271-5998-1	VENTED SCREW, #4-40 X 1/8" SST. SHCS	2
4	271-6230-1	FLAT WASHER, #0, SST	1
5	271-6230-4	LOCK WASHER, #0, SST	1
6	271-6237-4	WASHER, LOCK, #2, SST	1
7	271-6250-1	NUT, #8-80, SST	1
8	880-0201-1	6MHz GOLD COATED SENSING CRYSTAL	1
9	880-0119-1	SPRING, CRYSTAL HOLDER	1
10	880-0516-2	INSULATOR, SPACER CONTACT	1
11	880-0518-1	SPRING CONTACT	1
12	880-0519-3	CERAMIC INSULATOR, RIGHT ANGLE SENSOR	1
13	880-0539-3	MICRODOT CONN.	1
14	880-0547-1	WIRE	1
15	880-0604-1	CRYSTAL HOLDER	1
16	880-0637-1	RETANING RING	1
17	880-0639-1	SPRING, CRYSTAL	1
18	880-0640-1	SENSOR BODY ASSEMBLY	1
19	880-0642-1	SENSOR BODY COVER	1
20	880-0910-1	ASSEMBLY, WELD, BELLOWS THIRD STAGE	1
21	880-0940-1	CLAMP BRACKET, BELLOWS ASSEMBLY	1
22	880-0941-1	SINGLE SHUTTER	1

UNLESS OTHERWISE SPECIFIED	
GLOBAL TOLERANCES	
	INCHES [mm]
.X	+/- .03 [0.762]
.XX	+/- 0.01 [0.254]
.XXX	+/- 0.005 [0.127]
ANGLES +/- .25°	
SURF FINISH 63 RMS	

DWG BY	G. DION	DATE	3-22-2016
CHECK BY		DATE	
PROJ ENG		DATE	
MFG ENG		DATE	
DO NOT SCALE DRAWING			
FILE NUMBER	-880-3120-1		
INITIAL PROJECT	-		

MATERIAL:	BOM
FINISH:	SEE NOTES
THIRD ANGLE PROJECTION	

TELEMARK
Battle Ground, WA

PARALLEL SENSOR ASSEMBLY W/SHUTTER

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B	SCALE	1:1	DWG NO.	880-3120-1	REV	C
	SHEET	1 of 1				

1

2

3

4

5

ECN	ZONE	REV	DESCRIPTION	BY	DATE
		A	RELEASE FOR PRODUCTION	PWF	9/11/2013
		B	UPDATE	PWF	3/18/2015
		C	ITEM 4 FROM 880-0519-3 TO 880-0516-2	GPD	5/27/2015
990873		D	FLIPPED 880-0119-1 UPSIDE DOWN	GPD	9/10/2019
990883		E	P/N FROM 271-5972-9 TO 271-5973-9	GPD	3/25/2020

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	271-5973-9	SCREW, PAN HD PHILLIPS, #0-80 UNC x 3/16" LONG, SST	1
2	880-0201-1	6MHZ GOLD COATED SENSING CRYSTAL	1
3	880-0119-1	SPRING, CRYSTAL HOLDER	1
4	880-0516-2	INSOLATOR, SPACER CONTACT	1
5	880-0518-1	SPRING CONTACT	1
6	880-0604-1	CRYSTAL HOLDER	1
7	880-0634-1	COAXIAL CONNECTOR ASSEMBLY	1
8	880-0637-1	RETANING RING	1
9	880-0639-1	SPRING, CRYSTAL	1
10	880-0640-2	SENSOR BODY ASSEMBLY	1

UNLESS OTHERWISE SPECIFIED
GLOBAL TOLERANCES

INCHES [mm]

.X +/- .03 [0.762]

.XX +/- 0.01 [0.254]

.XXX +/- 0.005 [0.127]

ANGLES +/- .25°

SURF FINISH 63 RMS

DWG BY
CHECK BY
PROJ ENG
MFG ENG

DATE
DATE
DATE
DATE

DO NOT SCALE DRAWING

FILE NUMBER -880-3130-1
INITIAL PROJECT -

MATERIAL: BOM

FINISH: SEE NOTES

THIRD ANGLE PROJECTION

TELEMARK

telemark.com

RT. ANGLE SENSOR
ASSEMBLY

B

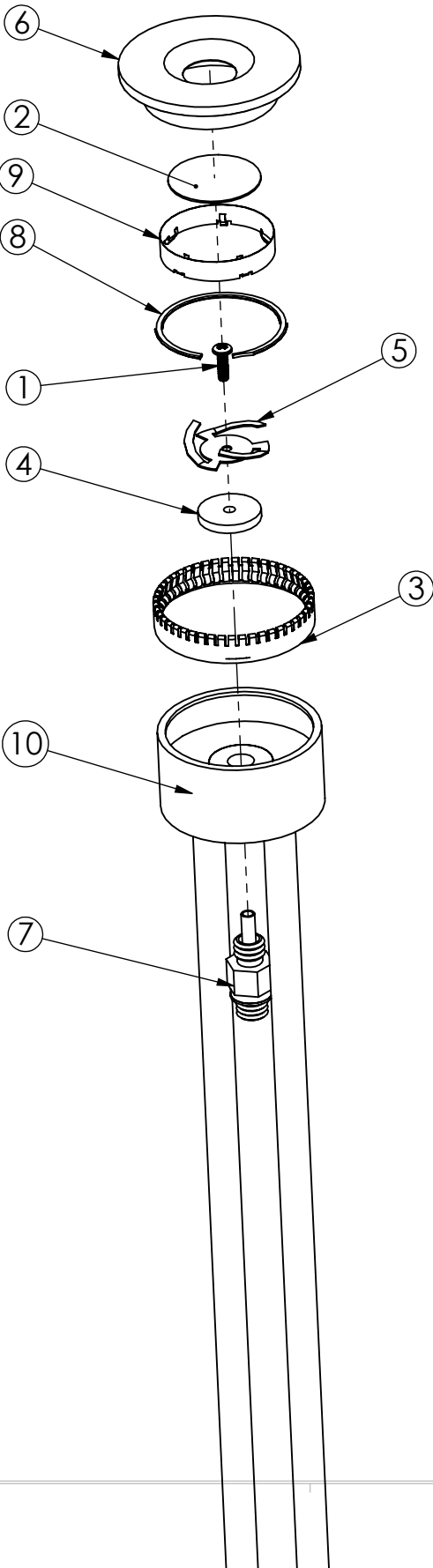
SCALE 1:1
SHEET 1 of 1

DWG NO. 880-3130-1

REV E

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A	B	C	D	E	F	G	H			
					ECN	ZONE	REV	DESCRIPTION	BY	DATE
							A	RELEASE	GPD	6/21/2018
					990873		B	FLIPPED P/N 880-0119-1 UPSIDE DOWN	GPD	9/19/2019
					990883		C	P/N FROM 271-5972-9 TO 271-5973-9	GPD	3/25/2020



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	271-5973-9	SCREW, PAN HD PHILLIPS, #0-80 UNC x 3/16" LONG, SST	1
2	880-0201-1	6MHZ GOLD COATED SENSING CRYSTAL	1
3	880-0119-1	SPRING, CRYSTAL HOLDER	1
4	880-0516-2	INSULATOR, SPACER CONTACT	1
5	880-0518-1	SPRING CONTACT	1
6	880-0604-1	CRYSTAL HOLDER	1
7	880-0634-1	COAXIAL CONNECTOR ASSEMBLY	1
8	880-0637-1	RETANING RING	1
9	880-0639-1	SPRING, CRYSTAL	1
10	880-0640-6	SENSOR BODY ASSEMBLY, RIGHT ANGLE, 3/16" TUBES	1

UNLESS OTHERWISE SPECIFIED
GLOBAL TOLERANCES

INCHES [mm]

.X +/- .03 [0.762]

.XX +/- 0.01 [0.254]

.XXX +/- 0.005 [0.127]

ANGLES +/- .25°

SURF FINISH 63 RMS

DWG BY
CHECK BY
PROJ ENG
MFG ENG

DATE
DATE
DATE
DATE

DO NOT SCALE DRAWING

FILE NUMBER -880-3130-6
INITIAL PROJECT -

MATERIAL: BOM

FINISH: SEE NOTES

THIRD ANGLE PROJECTION

TELEMARK

telemark.com

RIGHT ANGLE SENSOR ASSEMBLY, 3/16" TUBES

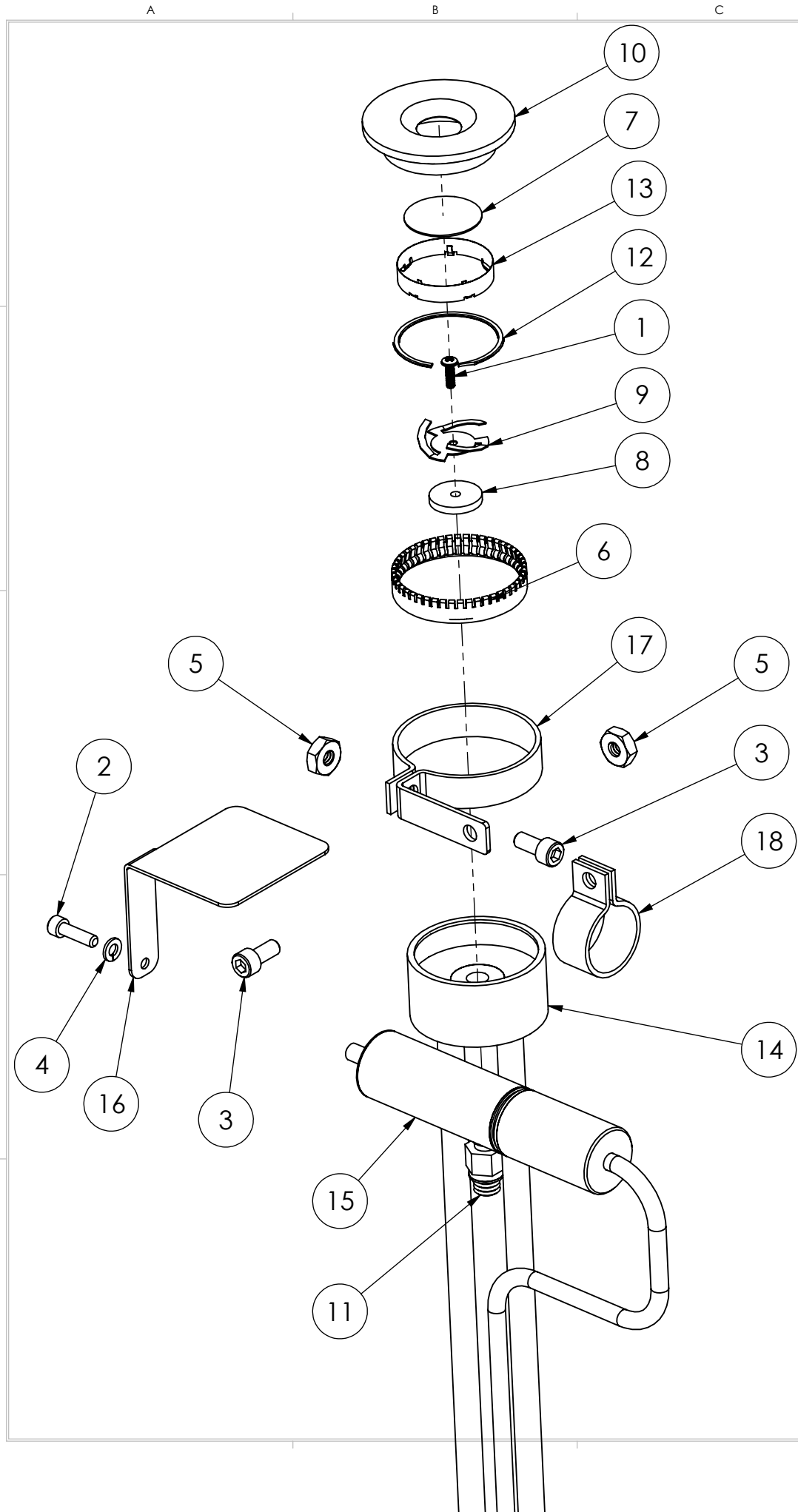
B

SCALE 1:1
SHEET 1 of 1

DWG NO. 880-3130-6

REV C

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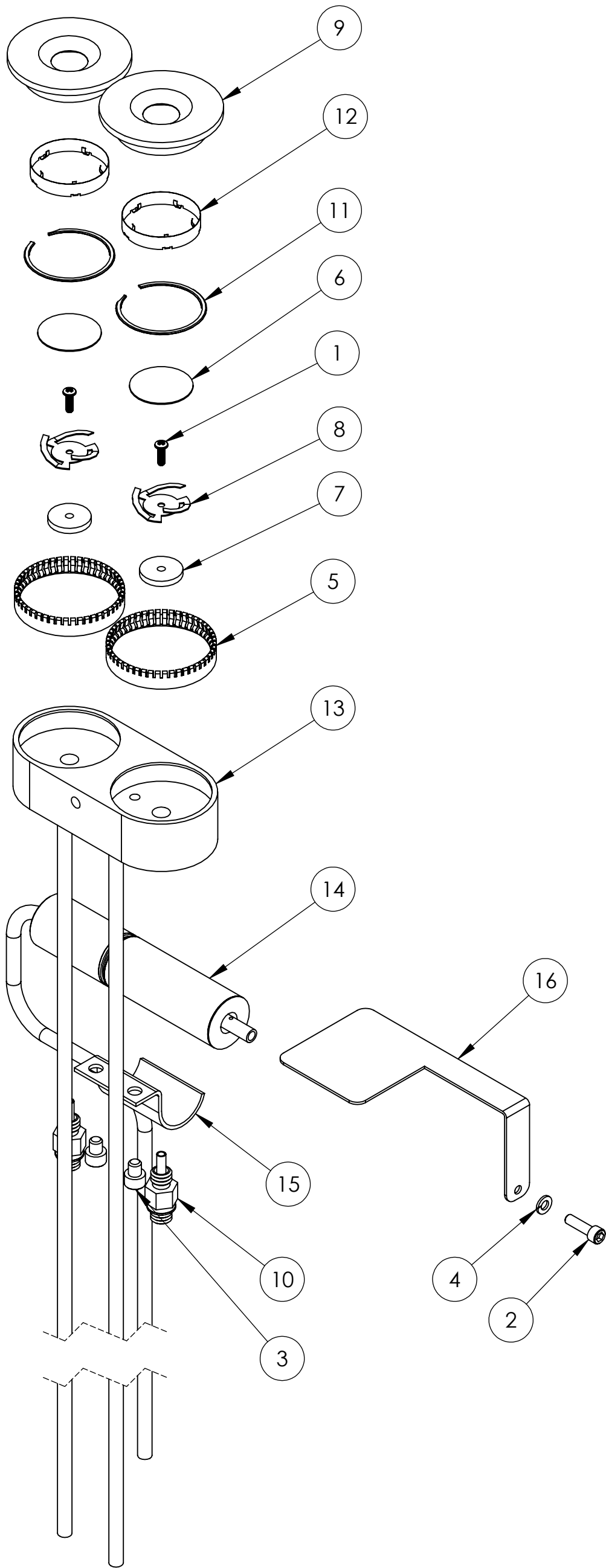


ECN	ZONE	REV	DESCRIPTION	BY	DATE
		A	RELEASE	GPD	8/14/2018
990873		B	FLIPPED P/N 880-0119-1 UPSIDE DOWN	GPD	9/10/2019
990883		C	P/N FROM 271-5972-9 TO 271-5973-9	GPD	3/25/2020

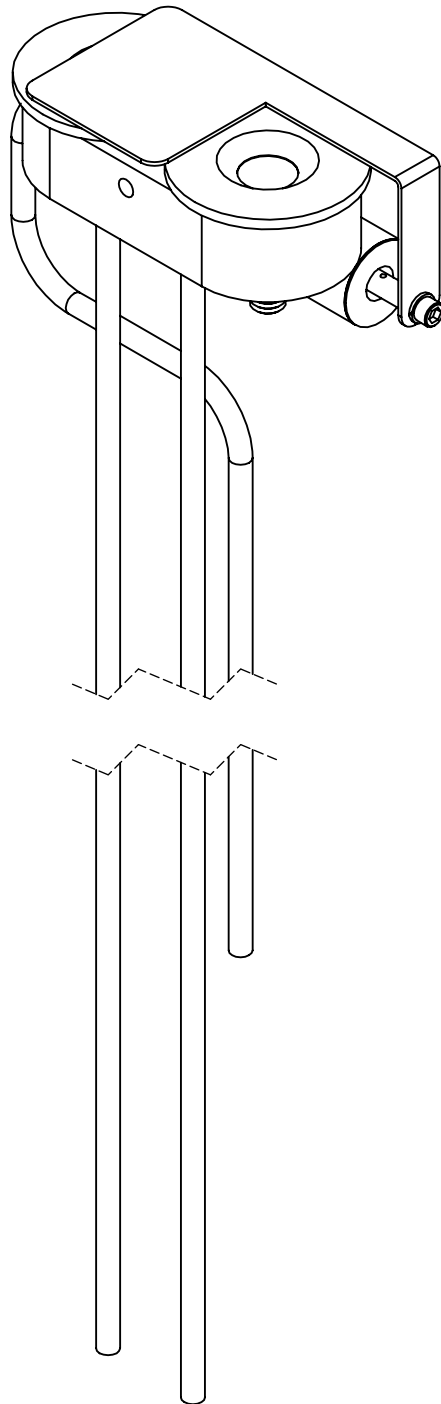
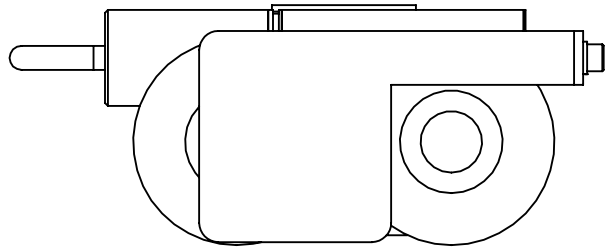
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	271-5973-9	SCREW, PAN HD PHILLIPS, #0-80 UNC x 3/16" LONG, SST	1
2	271-5989-9	VENTED SCREW, #2-56 X 5/16" SST SHCS	1
3	271-5999-1	VENTED SCREW, #4-40 UNC X 1/4" SST SHCS	2
4	271-6237-4	WASHER, LOCK, #2, SST	1
5	271-6251-1	NUT, HEX, #4-40 UNC, SST	2
6	880-0119-1	SPRING, CRYSTAL HOLDER	1
7	880-0201-1	6MHz GOLD COATED SENSING CRYSTAL	1
8	880-0516-2	INSOLATOR, SPACER CONTACT	1
9	880-0518-1	SPRING CONTACT	1
10	880-0604-1	CRYSTAL HOLDER	1
11	880-0634-1	COAXIAL CONNECTOR ASSEMBLY	1
12	880-0637-1	RETANING RING	1
13	880-0639-1	SPRING, CRYSTAL	1
14	880-0640-6	SENSOR BODY ASSEMBLY, RIGHT ANGLE, 3/16" TUBES	1
15	880-0910-4	ASSEMBLY, WELD, BELLOWS THIRD STAGE	1
16	880-0941-2	SHUTTER, SINGLE	1
17	880-0944-1	SHUTTER BRACKET A, RIGHT ANGLE SENSOR	1
18	880-0944-2	SHUTTER BRACKET B, RIGHT ANGLE SENSOR	1

UNLESS OTHERWISE SPECIFIED		DWG BY G. DION DATE 8-14-2018		MATERIAL: SEE PARTS LIST		<div><div>TELEMARK</div><div>telemark.com</div></div>					
GLOBAL TOLERANCES		CHECK BY DATE		FINISH: SEE NOTES							
<div>INCHES [mm]</div> <div>.X +/- .03 [0.762]</div> <div>.XX +/- 0.01 [0.254]</div> <div>.XXX +/- 0.005 [0.127]</div> <div>ANGLES +/- .25°</div> <div>SURF FINISH 63 RMS</div>		PROJ ENG DATE		<div>THIRD ANGLE PROJECTION</div> <div></div>		<div>RIGHT ANGLE SENSOR ASSEMBLY</div> <div>W/SHUTTER, 3/16" TUBES</div>					
		MFG ENG DATE									
		DO NOT SCALE DRAWING									
		FILE NUMBER -880-3140-1				<div>B</div> <div>SCALE 1:1</div> <div>SHEET 1 of 1</div>		<div>DWG NO.</div> <div>880-3140-1</div>		<div>REV</div> <div>C</div>	
INITIAL PROJECT -											
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NOTES: (UNLESS OTHERWISE SPECIFIED)
1. REMOVE BURRS & BREAK ALL SHARP EDGES
.005-.015 RADIUS OR CHAMFER.
2. ALL SURFACES $\sqrt{63}$
3. BAG WITH PART NUMBER AND REVISION.



ECN	ZONE	REV	DESCRIPTION	BY	DATE
		A	RELEASE	GPD	8/3/2016
990723		B	P/N FROM 880-0943-1 TO 271-5989-9	GPD	11/8/2016
990873		C	P/N FROM 880-0638-1 TO 880-0119-1	GPD	9/10/2019
990883		D	P/N FROM 271-5972-9 TO 271-5973-9	GPD	3/25/2020



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	271-5973-9	SCREW, PAN HD PHILLIPS, #0-80 UNC x 3/16" LONG, SST	2
2	271-5989-9	VENTED SCREW, #2-56 X 5/16" SST SHCS	1
3	271-5998-1	VENTED SCREW, #4-40 X 1/8" SST. SHCS	2
4	271-6237-4	WASHER, LOCK, #2, SST	1
5	880-0119-1	SPRING, CRYSTAL HOLDER	2
6	880-0201-1	6MHz GOLD COATED SENSING CRYSTAL	2
7	880-0516-2	INSULATOR, SPACER CONTACT	2
8	880-0518-1	SPRING CONTACT	2
9	880-0604-1	CRYSTAL HOLDER	2
10	880-0634-1	COAXIAL CONNECTOR ASSEMBLY	2
11	880-0637-1	RETAINING RING	2
12	880-0639-1	SPRING, CRYSTAL	2
13	880-0740-3	SENSOR BODY ASSEMBLY, DUAL, RIGHT ANGLE	1
14	880-0910-4	ASSEMBLY, WELD, BELLOWS THIRD STAGE	1
15	880-0940-1	CLAMP BRACKET, BELLOWS ASSEMBLY	1
16	880-0942-2	SHUTTER, DUAL	1

UNLESS OTHERWISE SPECIFIED
GLOBAL TOLERANCES

X	INCHES	[mm]
XX	+/- .03	[0.762]
XXX	+/- 0.01	[0.254]
	+/- 0.005	[0.127]

ANGLES +/- .5°
SURF FINISH 63 RMS

DWG BY: **G. DION** DATE: **8-3-2016**

CHECK BY: _____ DATE: _____

PROJ ENG: _____ DATE: _____

MFG ENG: _____ DATE: _____

DO NOT SCALE DRAWING

FILE NUMBER - 880-3220-1

INITIAL PROJECT -

MATERIAL: SEE PARTS LIST

FINISH: SEE NOTES

THIRD ANGLE PROJECTION

TELEMARK

Battle Ground, WA

ASSEMBLY, DUAL SENSOR, RIGHT ANGLE

C

SCALE 1:1
SHEET 1 of 1

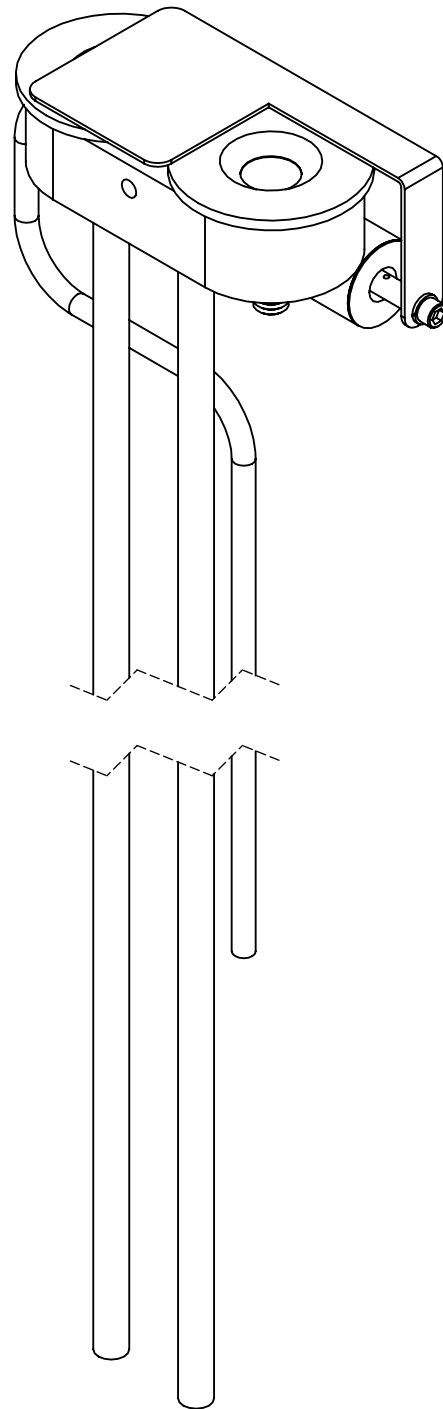
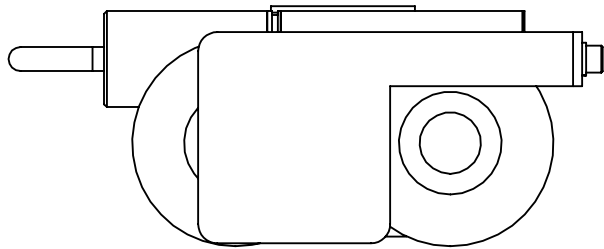
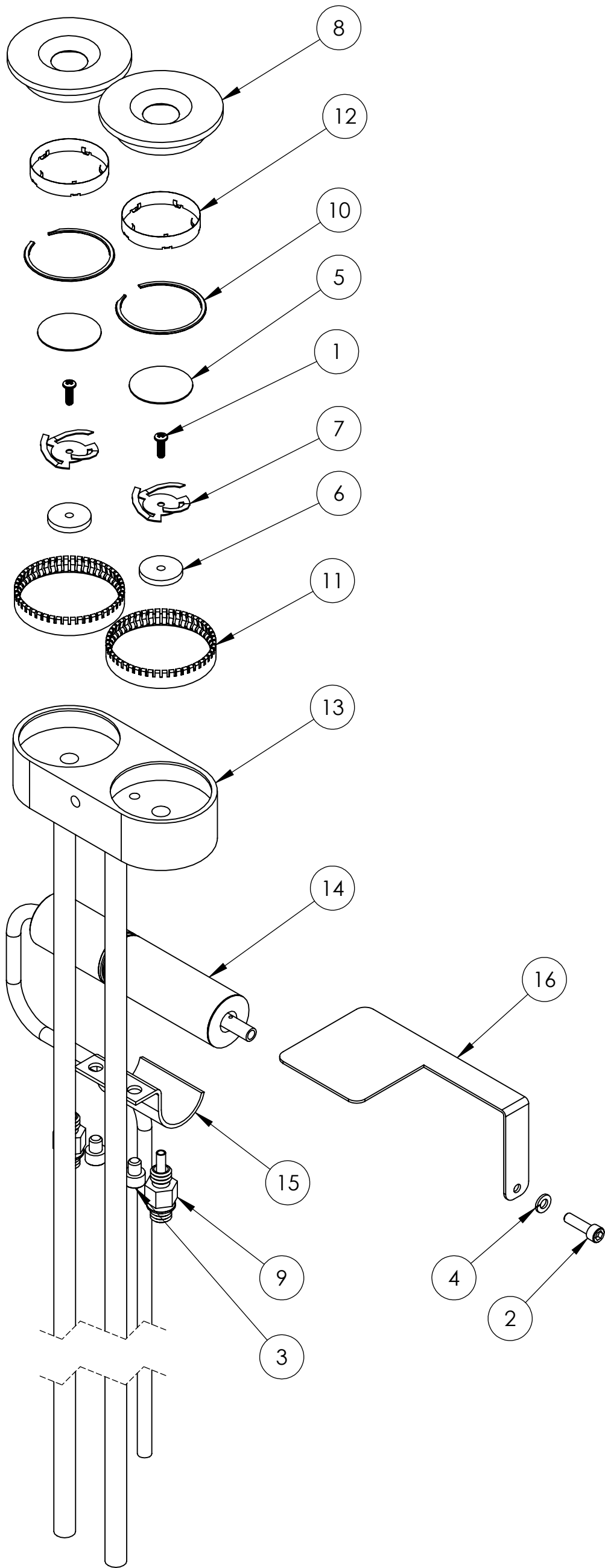
DWG NO. **880-3220-1**

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NOTES: (UNLESS OTHERWISE SPECIFIED)
1. REMOVE BURRS & BREAK ALL SHARP EDGES
.005-.015 RADIUS OR CHAMFER.
2. ALL SURFACES $\sqrt{63}$
3. BAG WITH PART NUMBER AND REVISION.

ECN	ZONE	REV	DESCRIPTION	BY	DATE
		A	RELEASE	GPD	5/19/2017
990873		B	P/N FROM 880-0638-1 TO 880-0119-1	GPD	9/10/2019
990883		C	P/N FROM 271-5972-9 TO 271-5973-9	GPD	3/25/2020



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	271-5973-9	SCREW, PAN HD PHILLIPS, #0-80 UNC x 3/16" LONG, SST	2
2	271-5989-9	VENTED SCREW, #2-56 X 5/16" SST SHCS	1
3	271-5998-1	VENTED SCREW, #4-40 X 1/8" SST. SHCS	2
4	271-6237-4	WASHER, LOCK, #2, SST	1
5	880-0201-1	6MHz GOLD COATED SENSING CRYSTAL	2
6	880-0516-2	INSULATOR, SPACER CONTACT	2
7	880-0518-1	SPRING CONTACT	2
8	880-0604-1	CRYSTAL HOLDER	2
9	880-0634-1	COAXIAL CONNECTOR ASSEMBLY	2
10	880-0637-1	RETAINING RING	2
11	880-0119-1	SPRING, CRYSTAL HOLDER	2
12	880-0639-1	SPRING, CRYSTAL	2
13	880-0740-4	SENSOR BODY ASSEMBLY, DUAL, RIGHT ANGLE, 3/16" TUBES	1
14	880-0910-4	ASSEMBLY, WELD, BELLOWS THIRD STAGE	1
15	880-0940-1	CLAMP BRACKET, BELLOWS ASSEMBLY	1
16	880-0942-2	SHUTTER, DUAL	1

UNLESS OTHERWISE SPECIFIED
GLOBAL TOLERANCES

X	INCHES	[mm]
XX	+/- .03	[0.762]
.XX	+/- 0.01	[0.254]
.XXX	+/- 0.005	[0.127]

ANGLES +/- .5°
SURF FINISH 63 RMS

DWG BY: **G. DION** DATE: **5-19-2017**
CHECK BY: DATE
PROJ ENG DATE
MFG ENG DATE

DO NOT SCALE DRAWING

FILE NUMBER - 880-3221-1
INITIAL PROJECT -

MATERIAL: SEE PARTS LIST

FINISH: SEE NOTES

THIRD ANGLE PROJECTION

TELEMARK
Battle Ground, WA

**ASSEMBLY, DUAL SENSOR,
RIGHT ANGLE, 3/16" TUBES**

C SCALE 1:1
SHEET 1 of 1

DWG NO: **880-3221-1**

REV **C**

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