

TELEMARK 221 Multi Pocket E-Beam Source Drawings

The current version of this drawing pdf can be found at

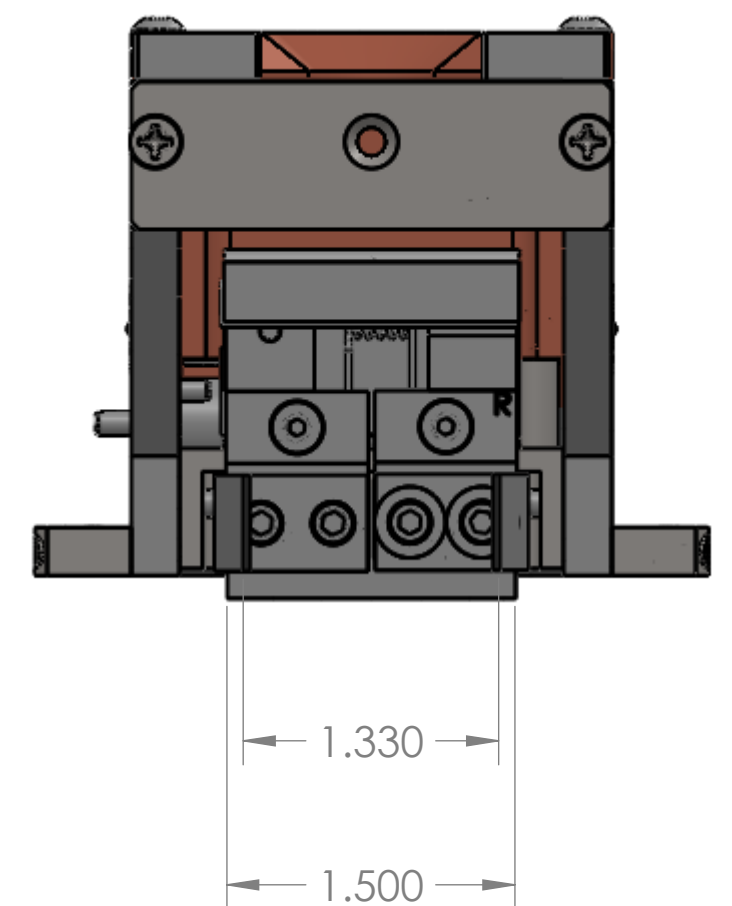
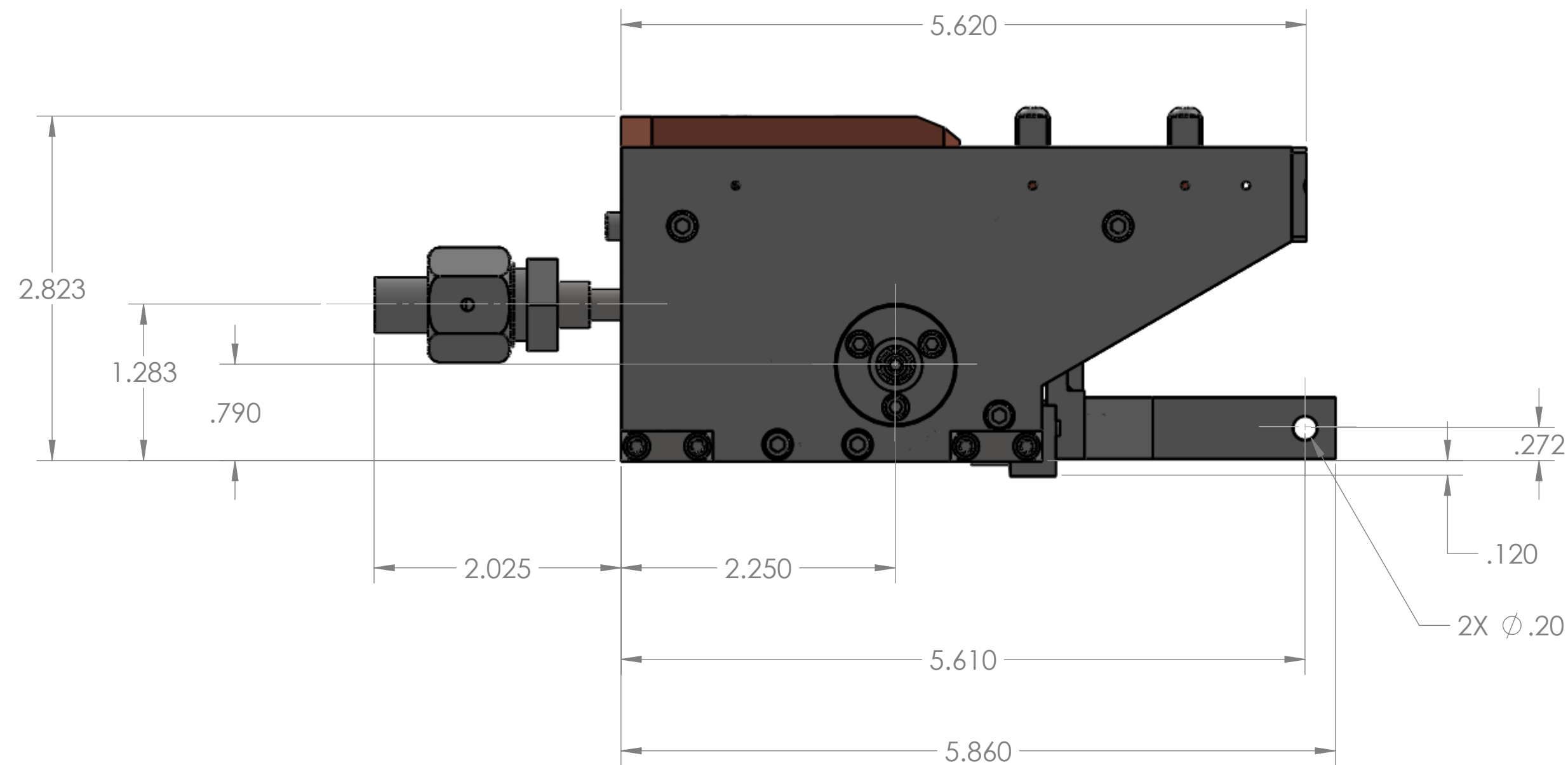
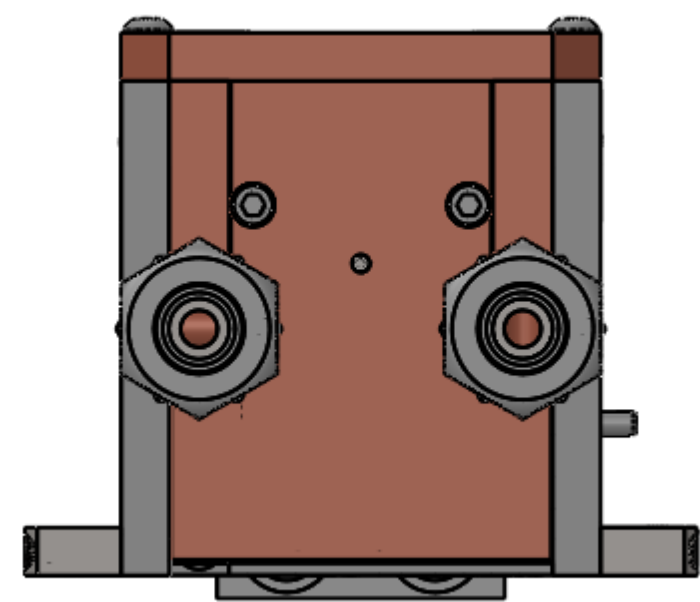
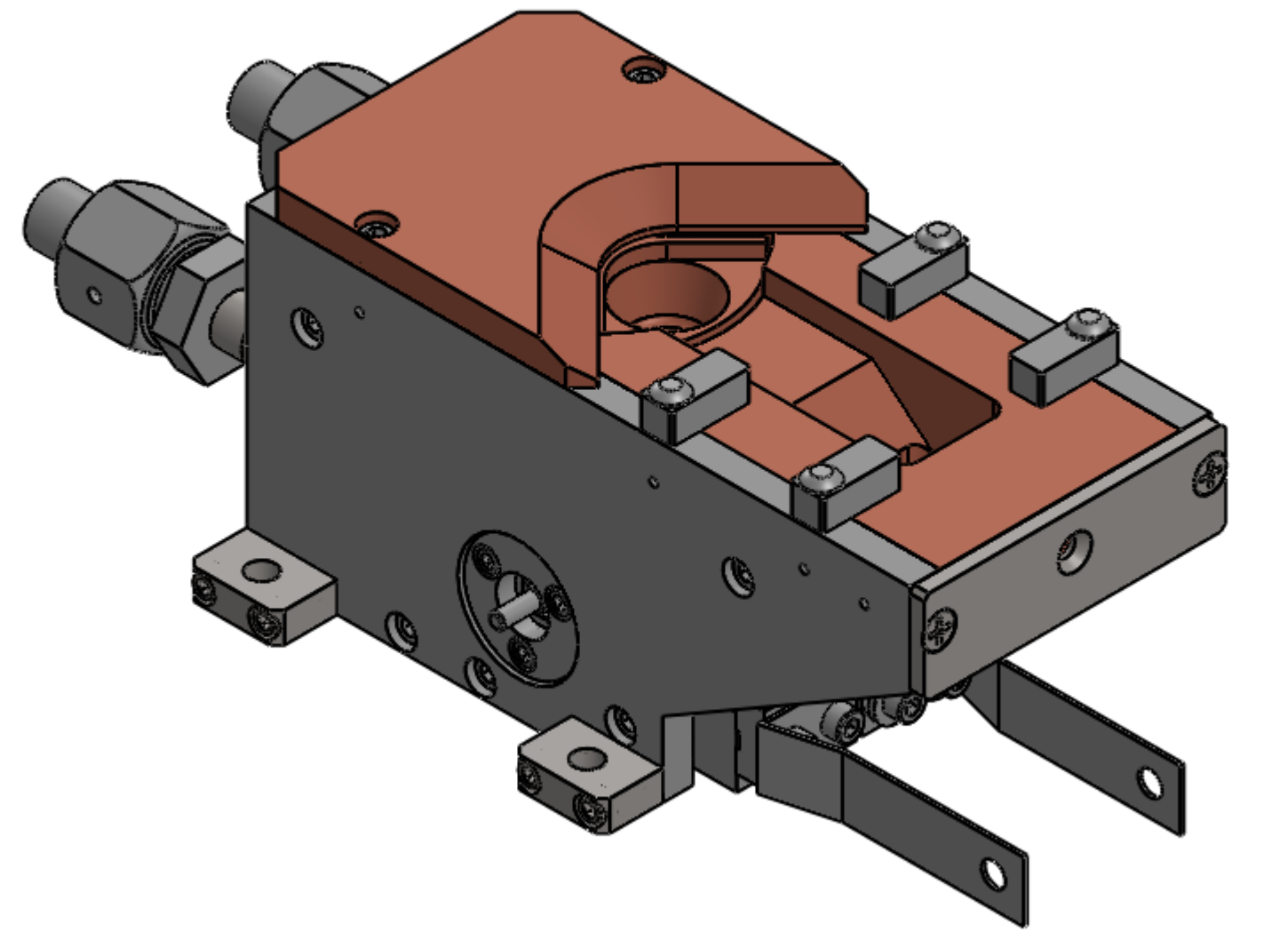
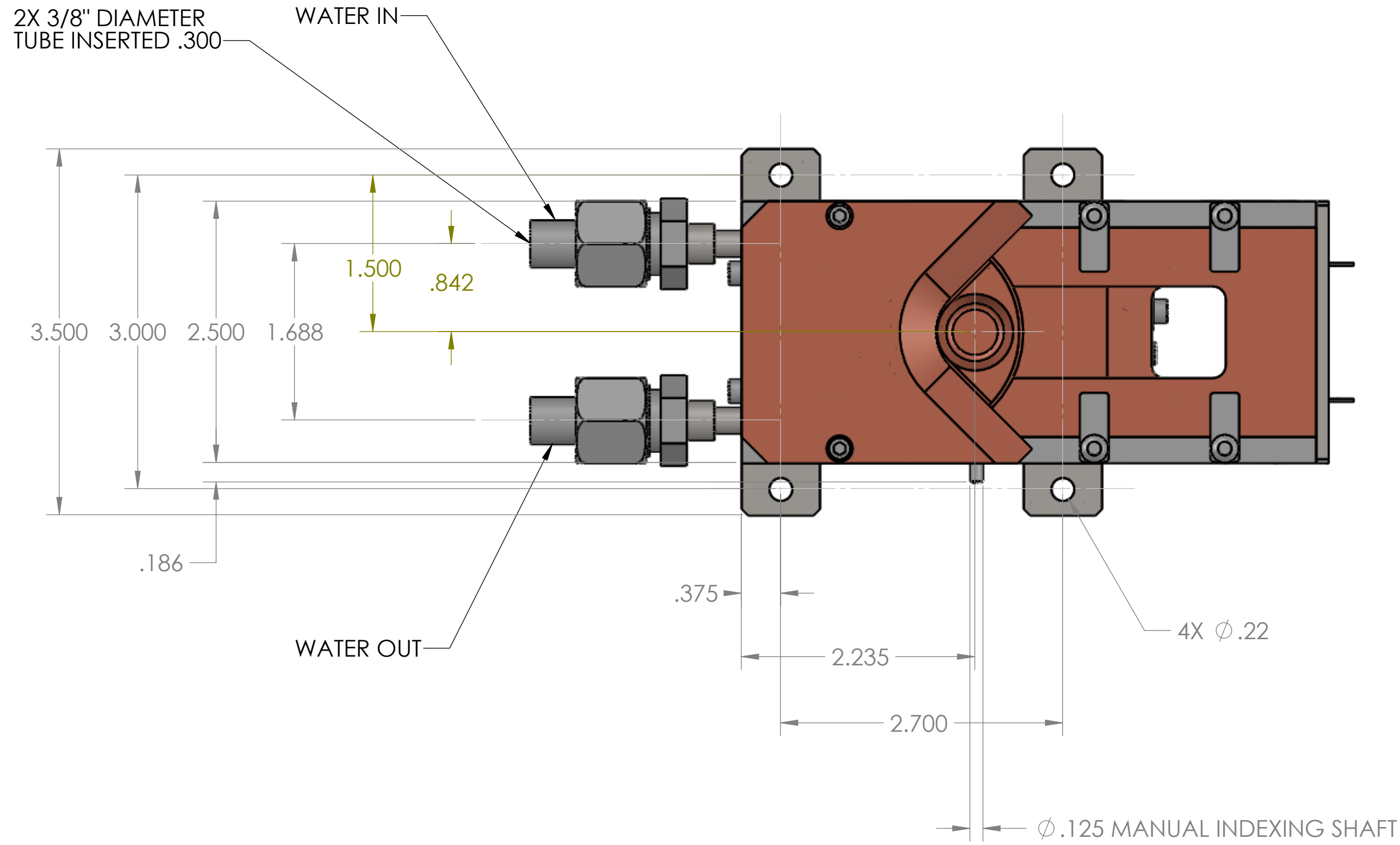
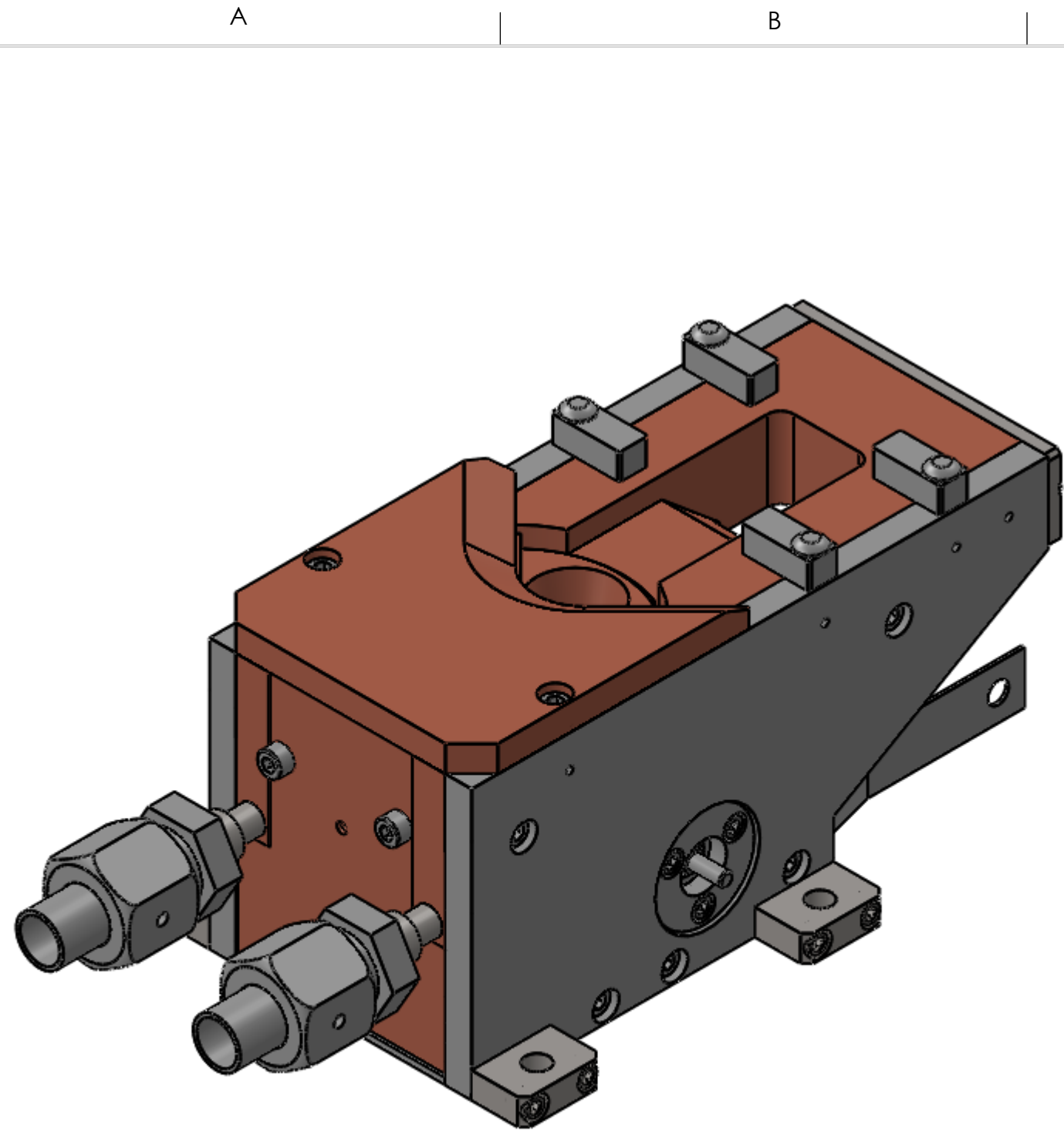
<https://telemark.com/electron-beam-sources/r-and-d-multi-pocket-sources/>


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Reference Dimensions

E-Beam Source



UNLESS OTHERWISE SPECIFIED		DWG BY: G. DION	DATE: 10-14-2013	MATERIAL:	
GLOBAL TOLERANCES		CHECK BY:	DATE:	FINISH:	
		PROJ ENG	DATE:	THIRD ANGLE PROJECTION	
		MFG ENG	DATE:	DO NOT SCALE DRAWING	
		FILE NUMBER			
		INITIAL PROJECT			

1

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A

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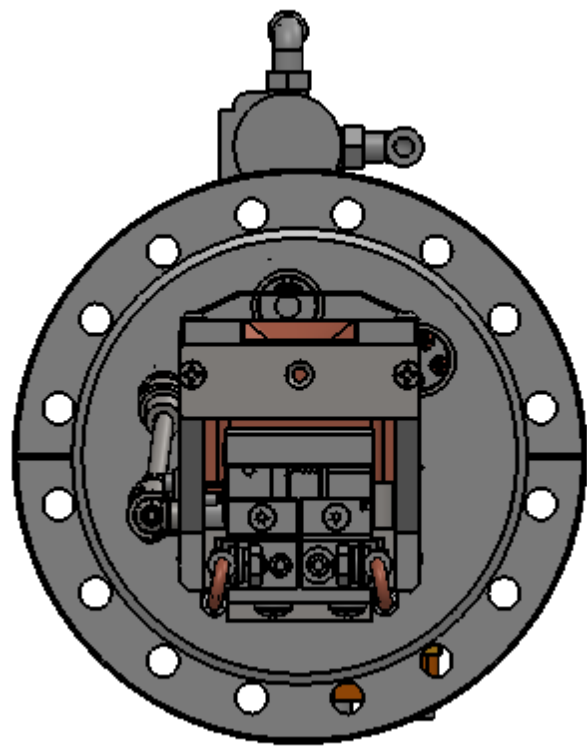
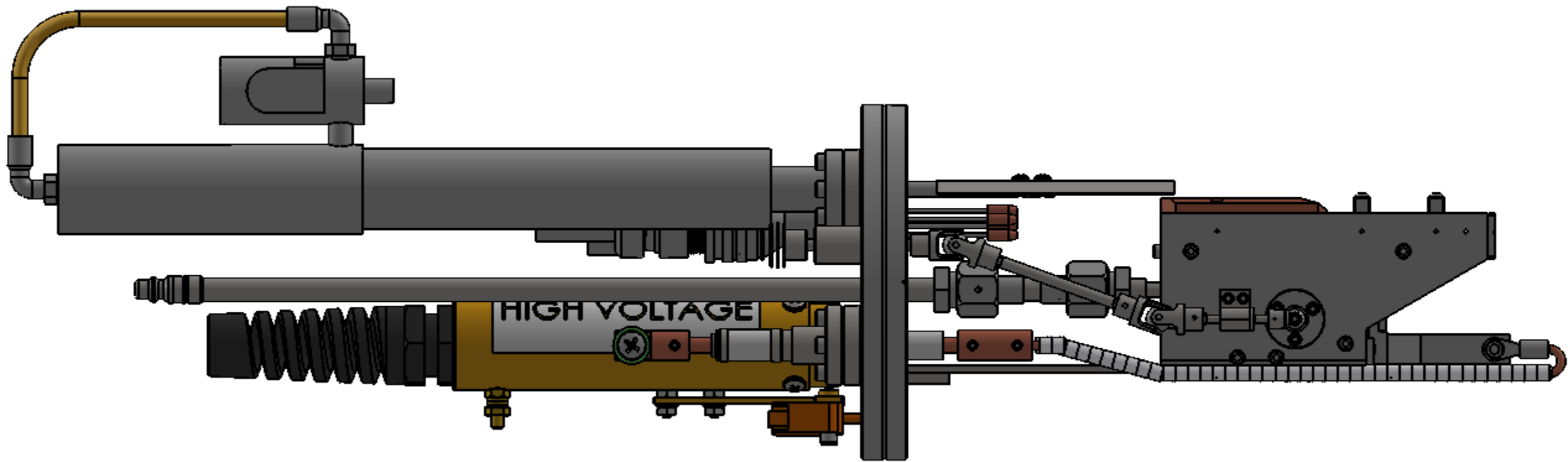
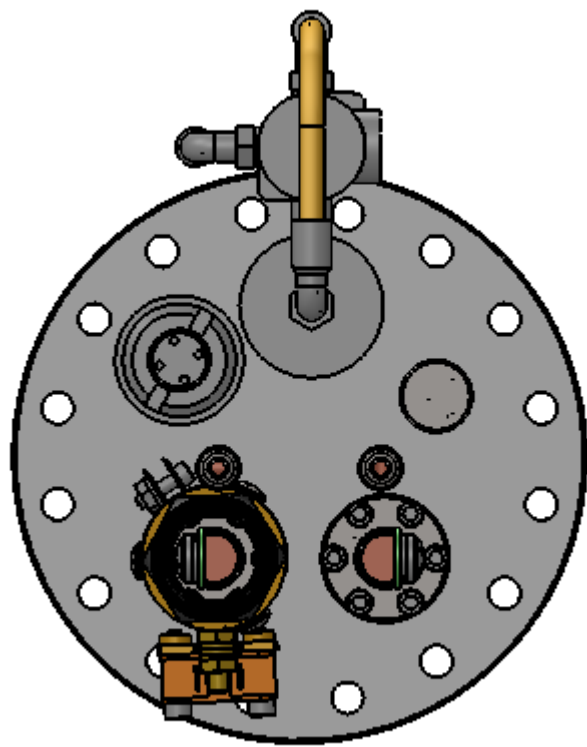
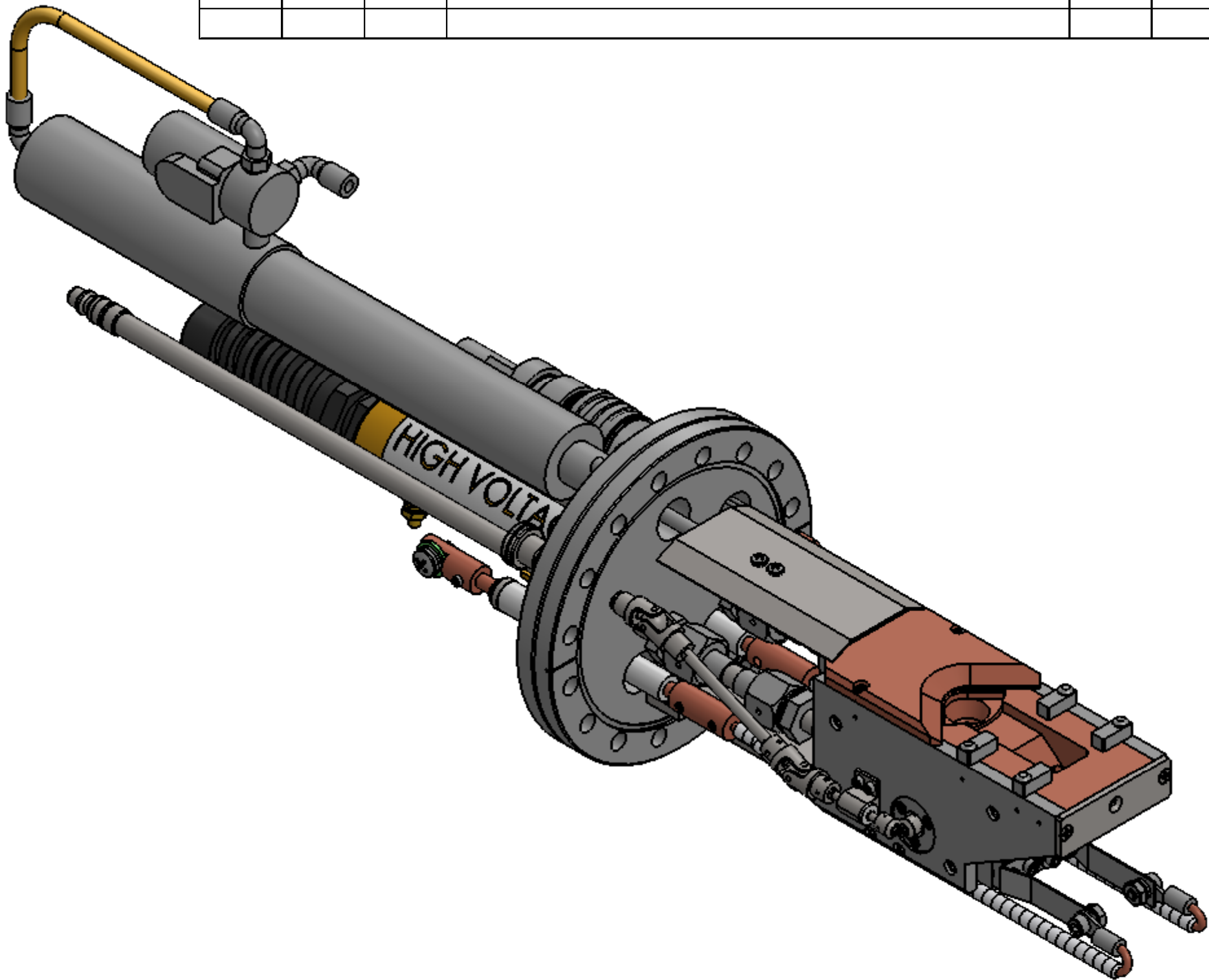
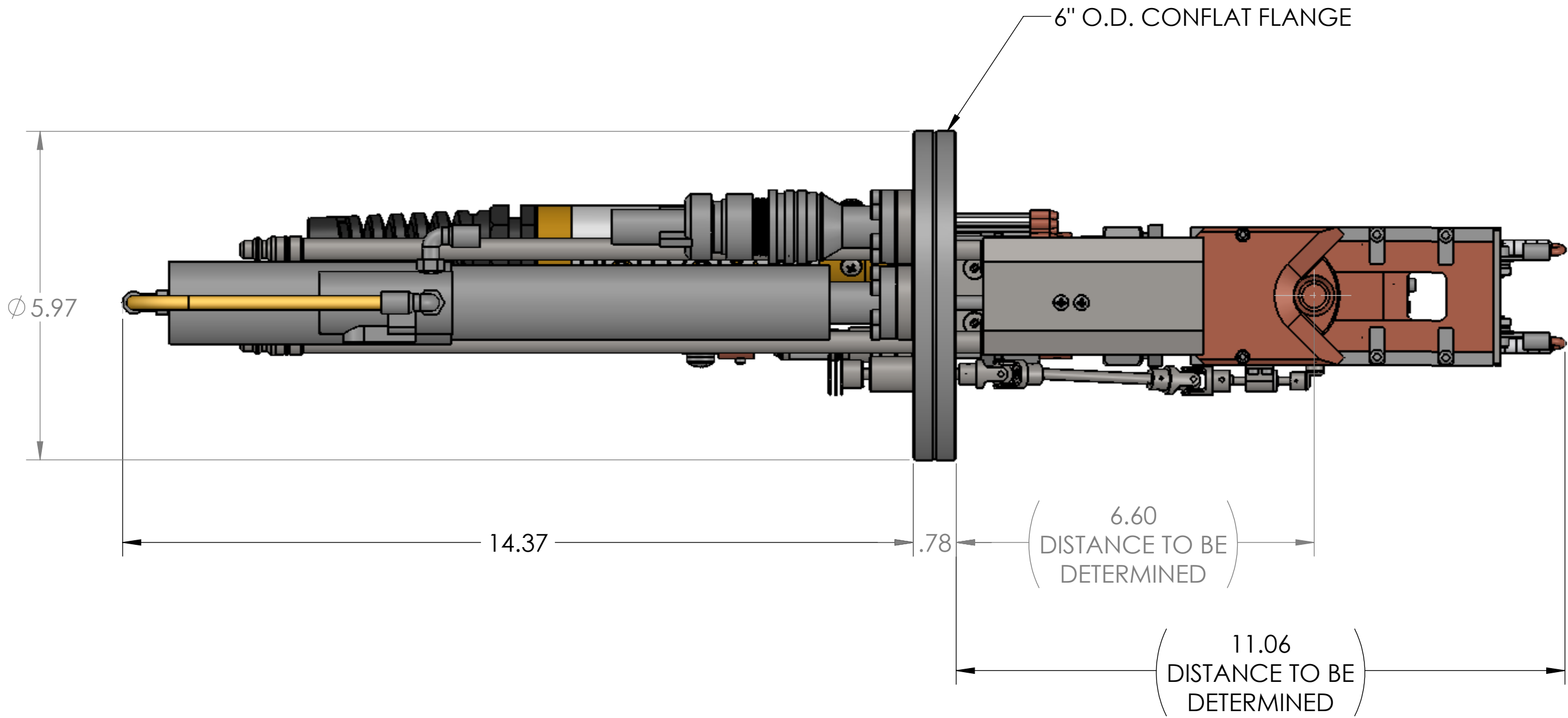
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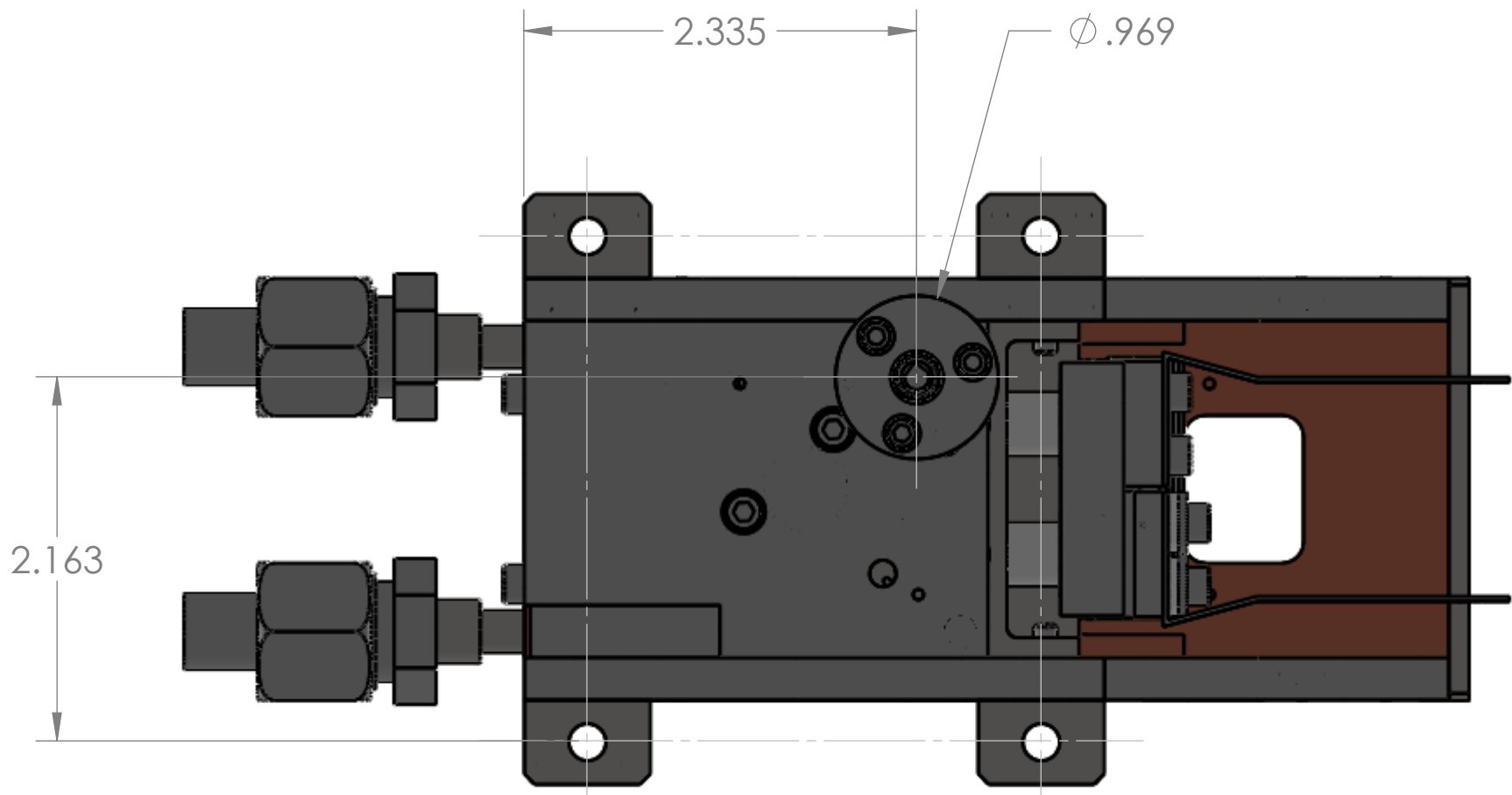
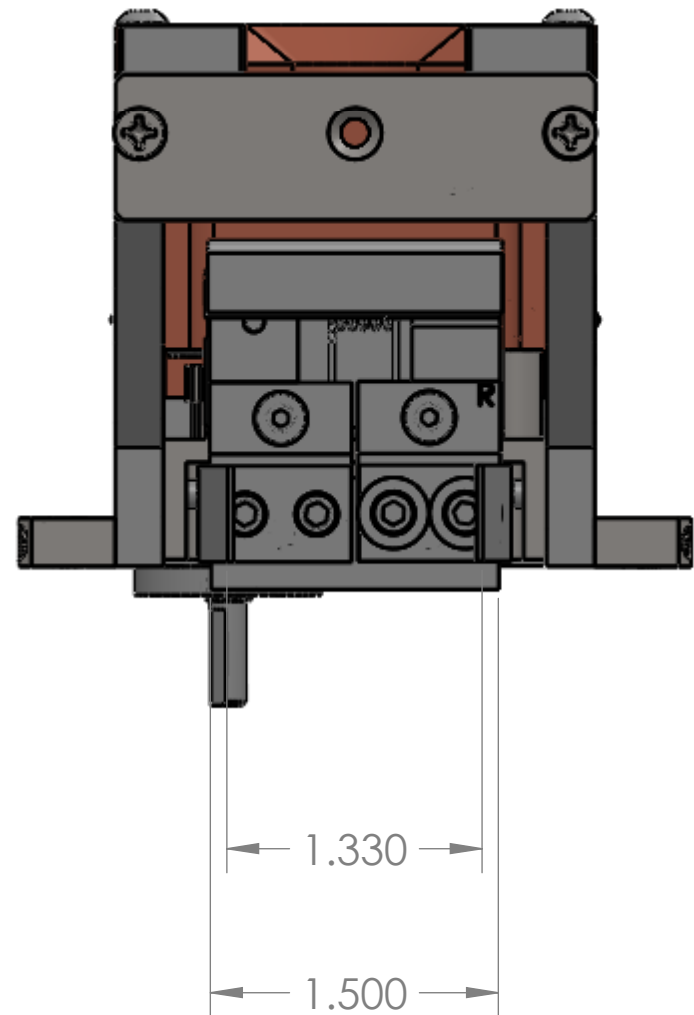
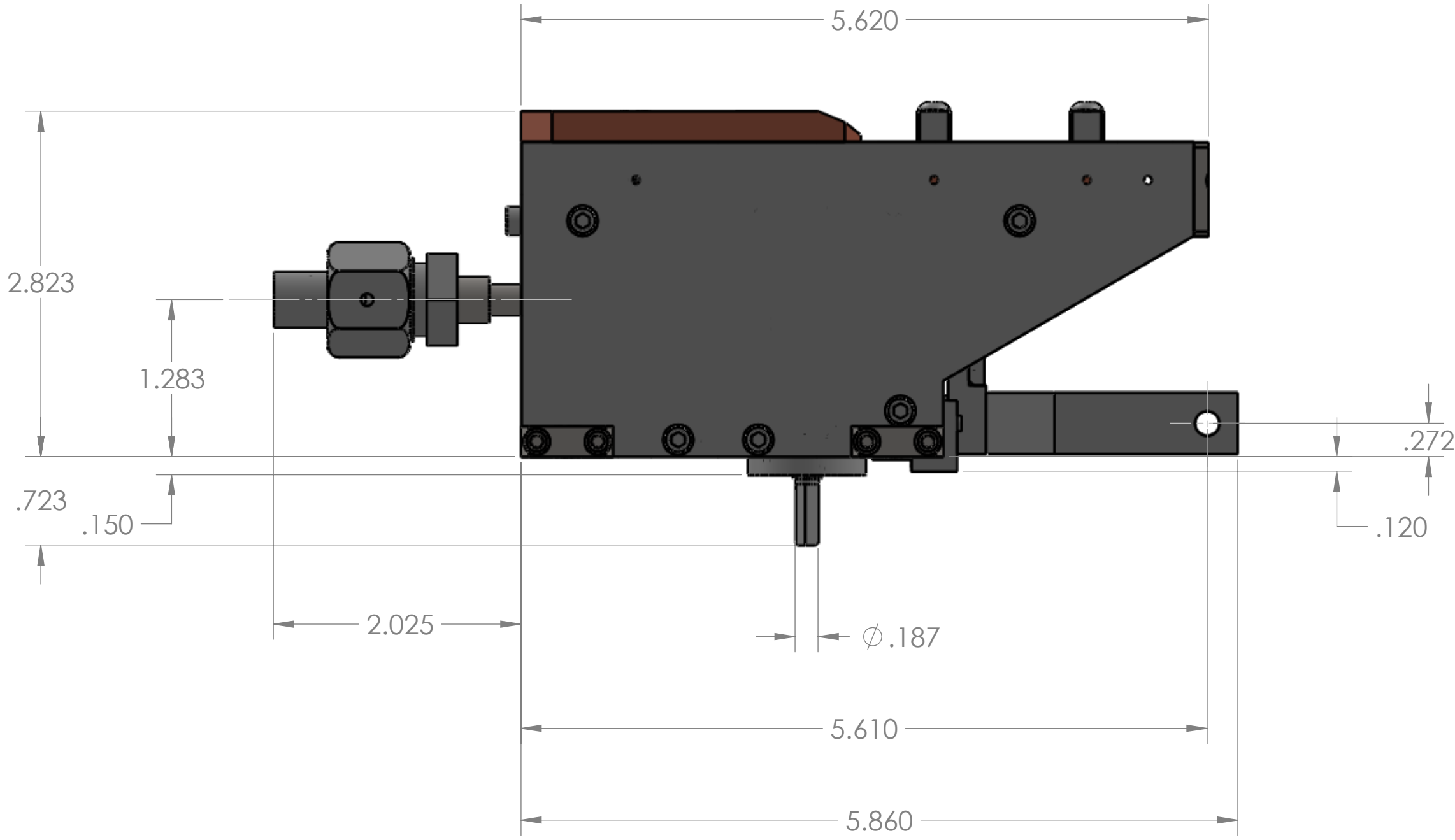
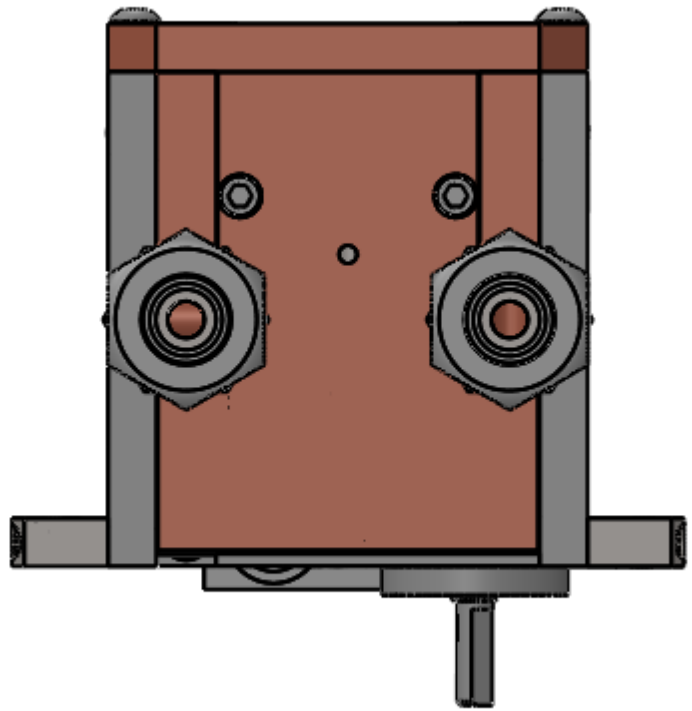
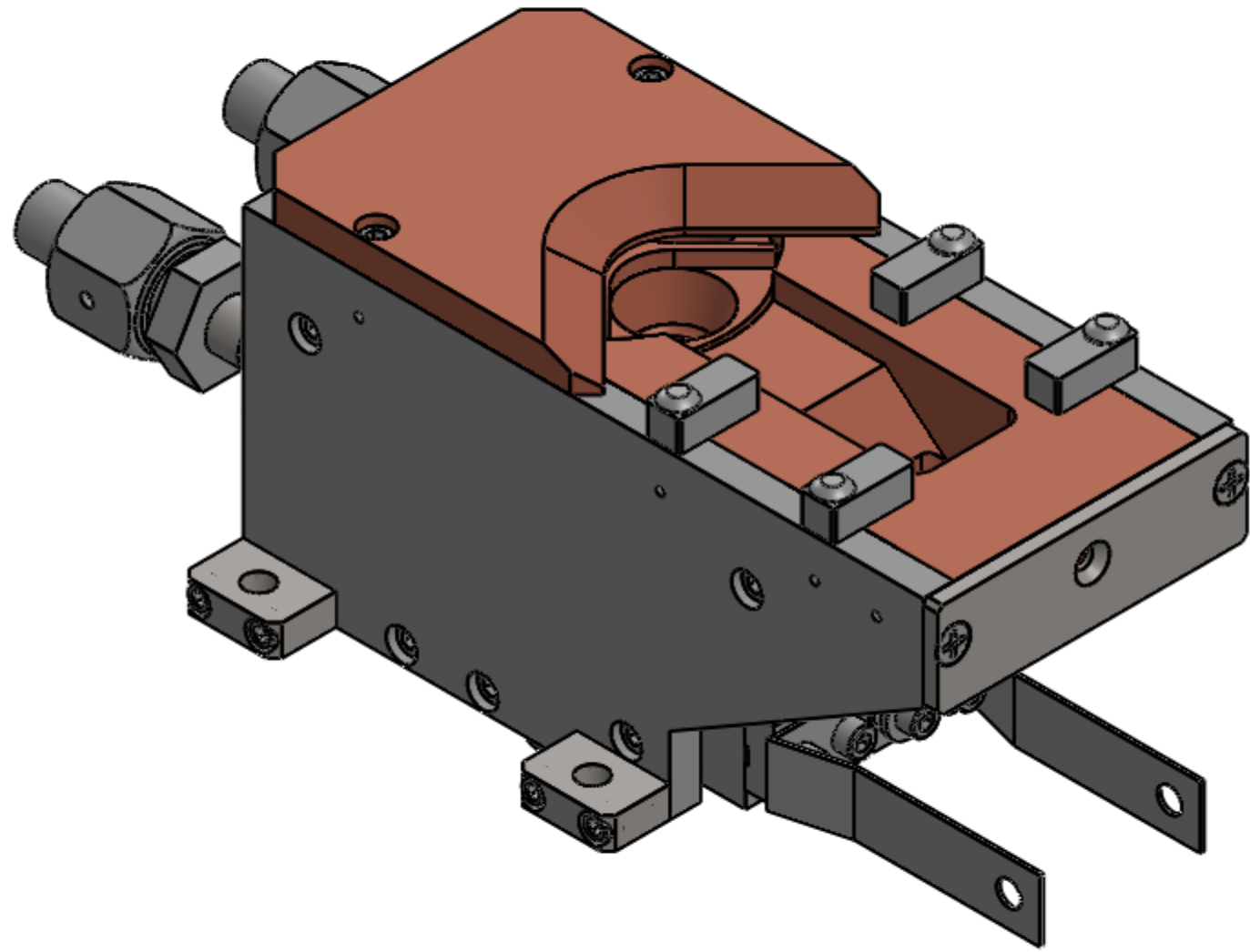
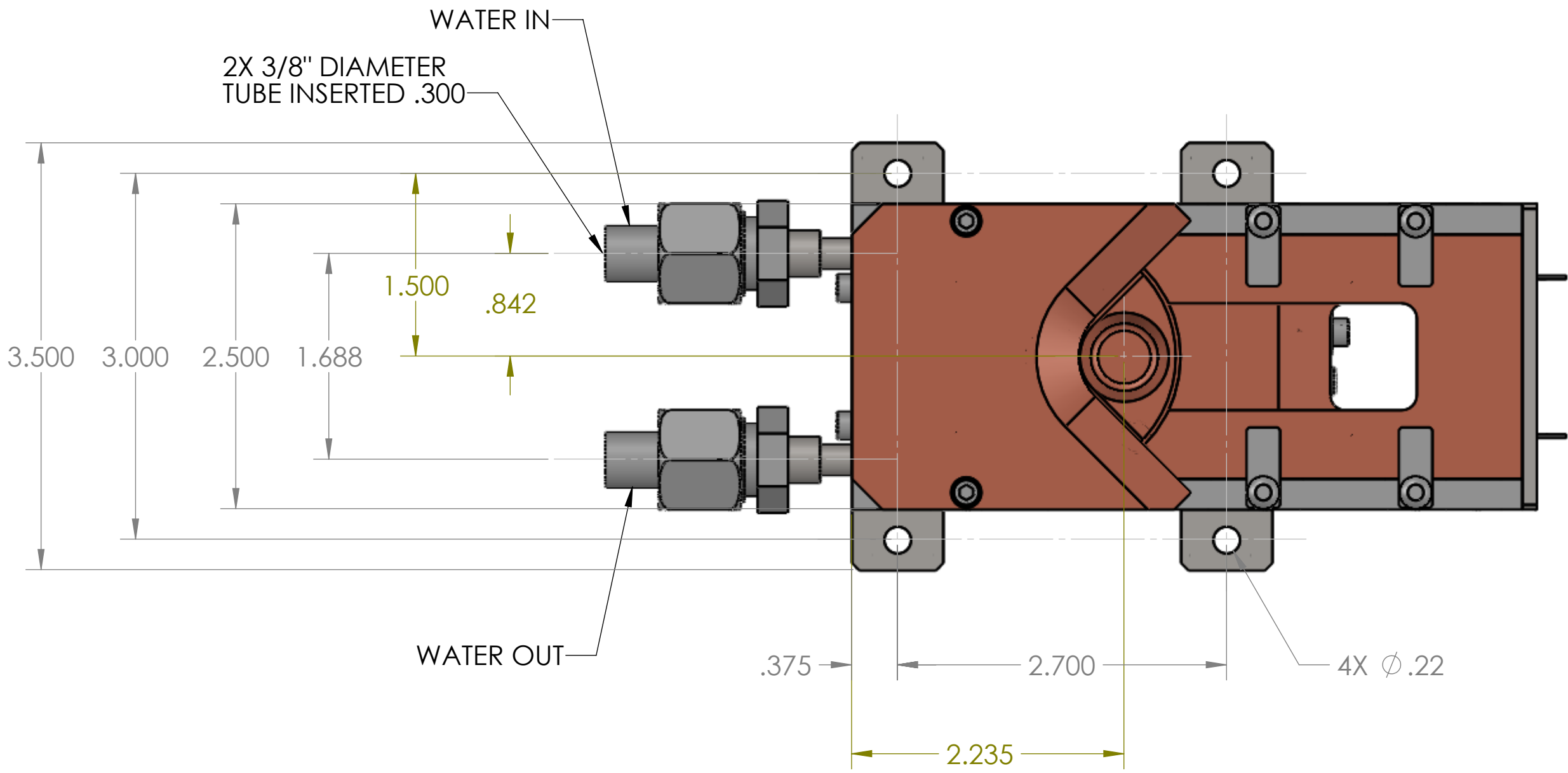
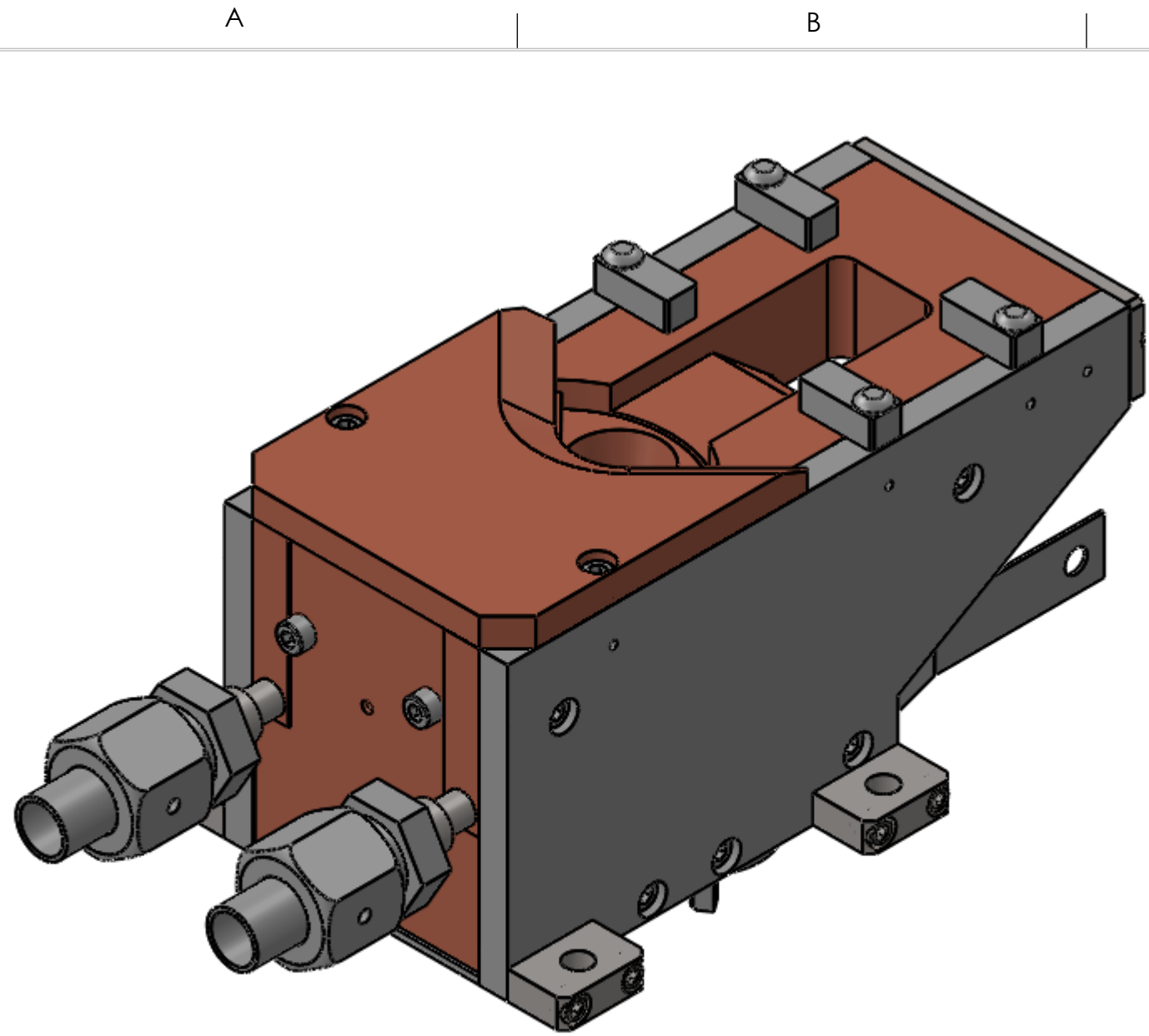
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ECN	ZONE	REV	DESCRIPTION	BY	DATE
		A	RELEASE	GPD	11/18/2013
		A1	REVISED DESCRIPTION & P/N	GPD	10/30/2014



UNLESS OTHERWISE SPECIFIED		DWG BY: G. DION DATE: 11-18-2013		MATERIAL:	
GLOBAL TOLERANCES		CHECK BY: DATE:		FINISH:	
INCHES [mm]		PROJ ENG DATE:		THIRD ANGLE PROJECTION	
XX +/- .001 [0.254]		MFG ENG DATE:			
XXX +/- .005 [0.127]		DO NOT SCALE DRAWING			
ANGLES +/- .5°		FILE NUMBER -			
SURF FINISH 63 RMS		INITIAL PROJECT -			
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				TELEMAR Battle Ground, WA	
				MODEL 221-05 EB SOURCE, 4 PKT, 2cc, LEFT S/D, SIDE MOUNT ON 6" CFF	
D	SCALE 1:2	DWG NO. R221-0005-6		REV A	
SHEET 1	of 1				



G		H		I	
ECN	ZONE	REV	DESCRIPTION	BY	DATE
		A	RELEASE	GPD	8/22/2013
		B	UPDATED SOURCE	GPD	4/21/2014
		B1	REVISED DESCRIPTION	GPD	10/30/2014

UNLESS OTHERWISE SPECIFIED
GLOBAL TOLERANCES

	INCHES	[mm]
.X	+/- .03	[0.762]
.XX	+/- .001	[0.254]
.XXX	+/- .0005	[0.127]
ANGLES	+/- .5°	
SURF FINISH	63 RMS	

DWG BY: **G. DION** DATE: **8-22-2013**

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

**MODEL 221-06 EB SOURCE,
4 PKT, 2cc, B/D**

D

SCALE: **1:1**

SHEET: **1** of **1**

DWG NO.: **R221-0006-2**

REV: **B1**

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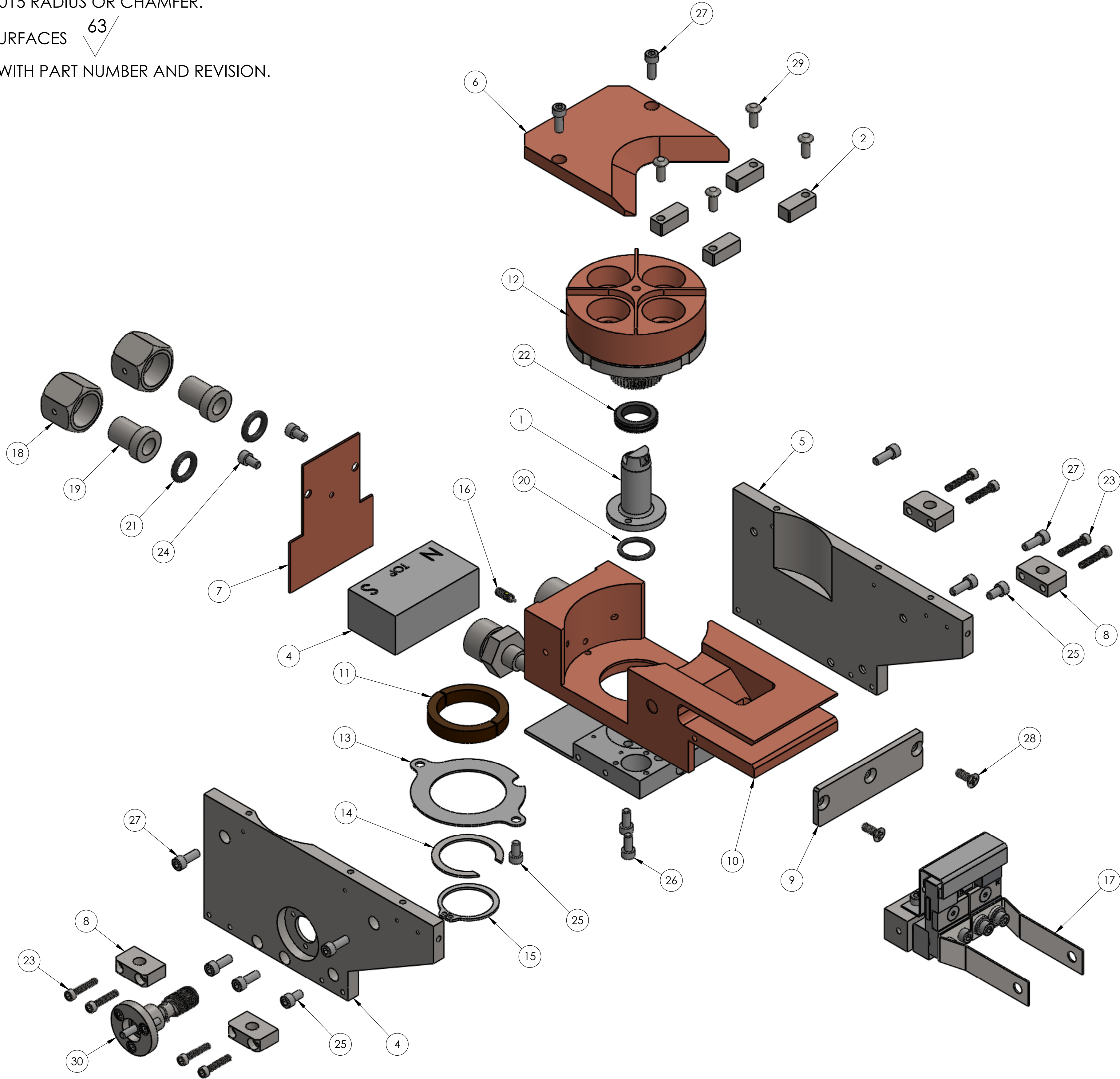
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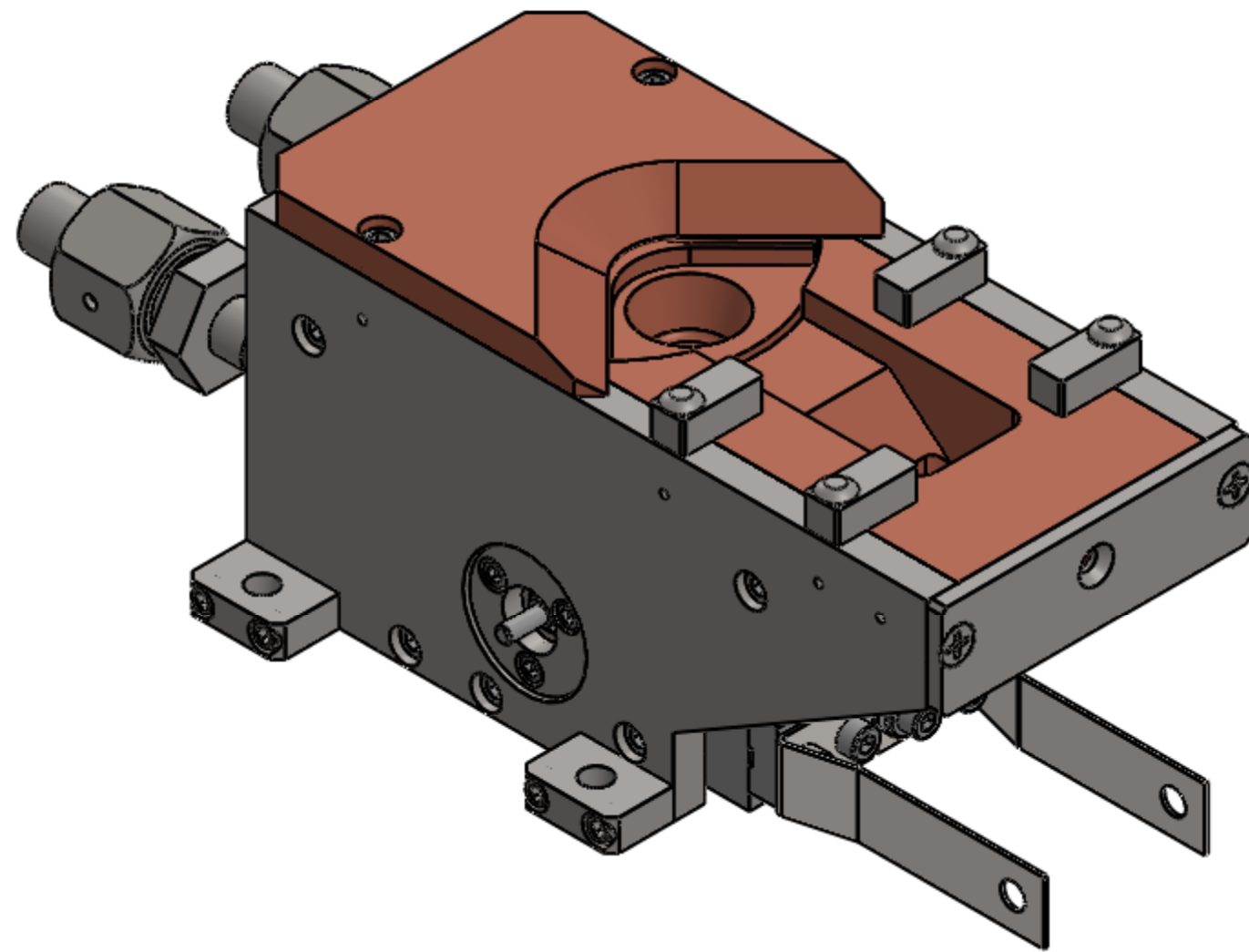
Model Assemblies

E-Beam Sources

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



ECN	ZONE	REV	DESCRIPTION	BY	DATE
		A	RELEASE	GPD	8/21/2013
		B	REMOVING P/N 271-6073-9 QTY. (4) & P/N 271-2123-1 QTY. (1). REVISING CRUCIBLE ASSEMBLY	GPD	10/30/2013
		C	REMOVING DETENT PARTS 221-0077-1, 271-6220-2 & 271-6225-3, REVISING CRUCIBLE ASSEMBLY & SIDE ARMS, ADDING SPRING PLUNGER	GPD	4/1/2014
		C1	REVISED DESCRIPTION	GPD	10/30/2014
		D	P/N FROM 221-0111-1 TO 224-0111-1 & 221-0500-1 TO 224-0501-1	GPD	12/7/2016



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	221-0042-1	ASSEMBLY, PIVOT SHAFT	1
2	221-0053-1	POLE PIECE	4
4	221-0055-1	PERMANENT MAGNET	1
4	221-0058-2	MAGNET ARM, LEFT	1
5	221-0059-1	MAGNET ARM, RIGHT	1
6	221-0073-1	COVER, 4 POCKET	1
7	221-0084-1	REAR SHIELD	1
8	221-0088-1	MOUNTING BLOCK	4
9	221-0096-1	COIL BLANKOFF PLATE	1
10	224-0111-1	ASSEMBLY, WELD, MAIN BLOCK	1
11	221-0300-1	BEARING	1
12	224-0501-1	ASSEMBLY, WELD, CRUCIBLE BASE	1
13	221-0656-1	BEARING STRAP	1
14	221-0657-1	BEARING CLAMP PLATE	1
15	221-0700-1	RETAINING RING, EXTERNAL, 15/16", SST	1
16	221-0701-1	SPRING PLUNGER, LONG NOSE, #6-32 UNC, SST	1
17	223-0150-1	EMITTER ASSEMBLY	1
18	271-0650-2	WATER FITTING NUT	2
19	271-0651-2	WATER FITTING GLAND	2
20	271-2014-1	O-RING, VITON, ID 1/2", W 1/16"	1
21	271-2110-1	O-RING, VITON, ID 3/8", W 3/32"	2
22	271-4206-1	QUAD RING, VITON, ID 1/2", W 1/8"	1
23	271-6002-8	SCREW, #4-40 X 9/16" SST, SHCS	8
24	271-6030-1	VENTED SCREW, #6-32 UNC X 1/4" SHCS	2
25	271-6030-9	SCREW, #6-32 UNC X 1/4" SST, SHCS	4
26	271-6040-9	SCREW, #6-32 UNC X 5/16 SST, SHCS	2
27	271-6050-1	VENTED SCREW, #6-32 UNC X 3/8" SHCS	9
28	271-6052-6	SCREW, #6-32 UNC X 3/8" SST, PHILLIPS FLAT HEAD, SILVER	2
29	271-6053-9	SCREW, #6-32 UNC X 3/8 SST, BUTTON HEAD CS	4
30	221-0125-2	ASSEMBLY, SIDE DRIVE	1

UNLESS OTHERWISE SPECIFIED
GLOBAL TOLERANCES

.X	+/- .03	[.762]
.XX	+/- .001	[.0254]
.XXX	+/- .0005	[.0127]

ANGLES +/- .5°
SURF FINISH 63 RMS

DWG BY: **G. DION** DATE: **8-21-2013**

CHECK BY: _____ DATE: _____
PROJ ENG _____ DATE: _____
MFG ENG _____ DATE: _____

DO NOT SCALE DRAWING

FILE NUMBER _____
INITIAL PROJECT _____

MATERIAL: _____

SEE PARTS LIST

SEE NOTES

THIRD ANGLE PROJECTION

TELEMARK
Battle Ground, WA

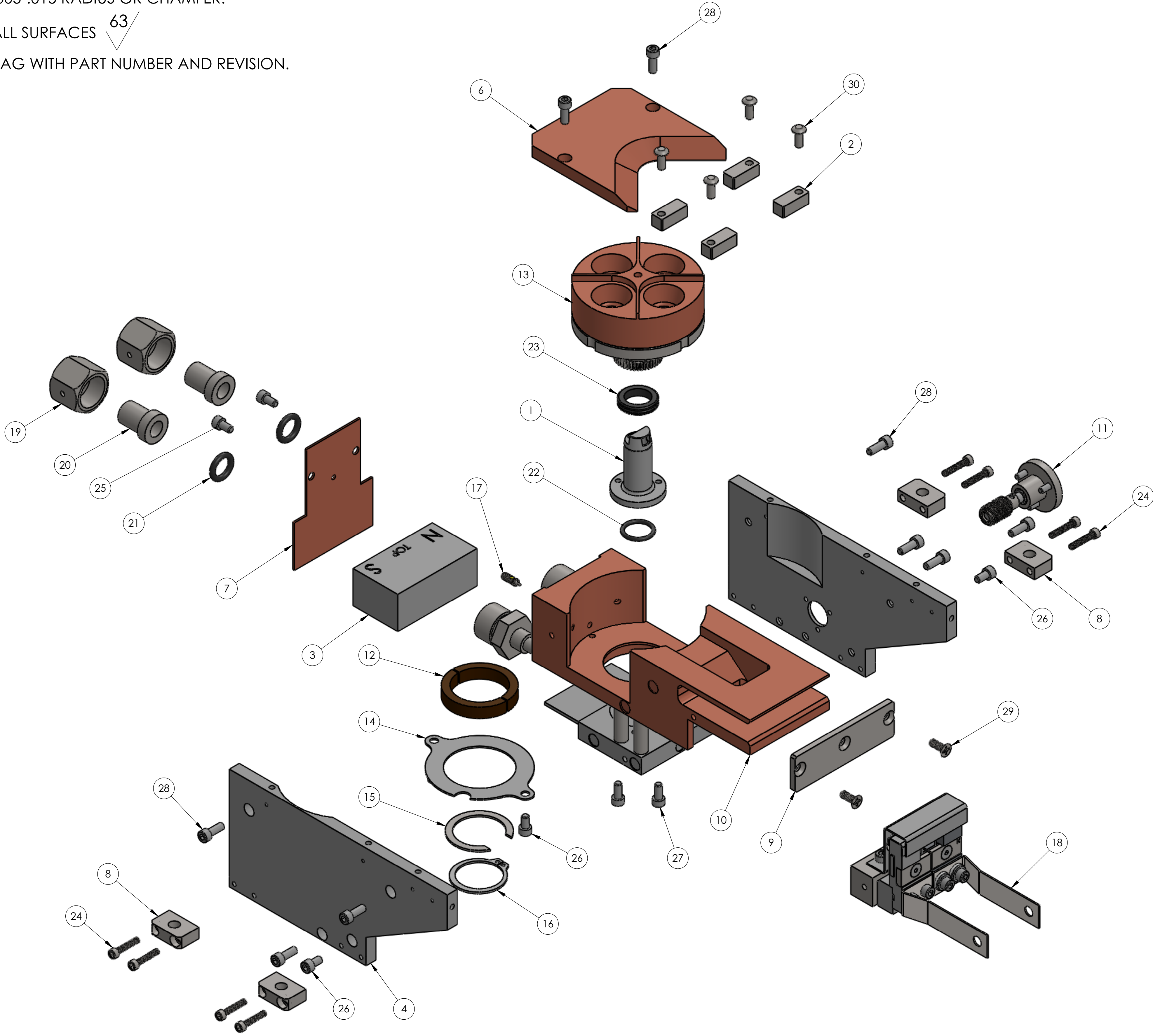
**MODEL 221-05, EB SOURCE,
4 PKT, 2cc LEFT S/D**

SCALE **1:1**
SHEET **1** of **1**

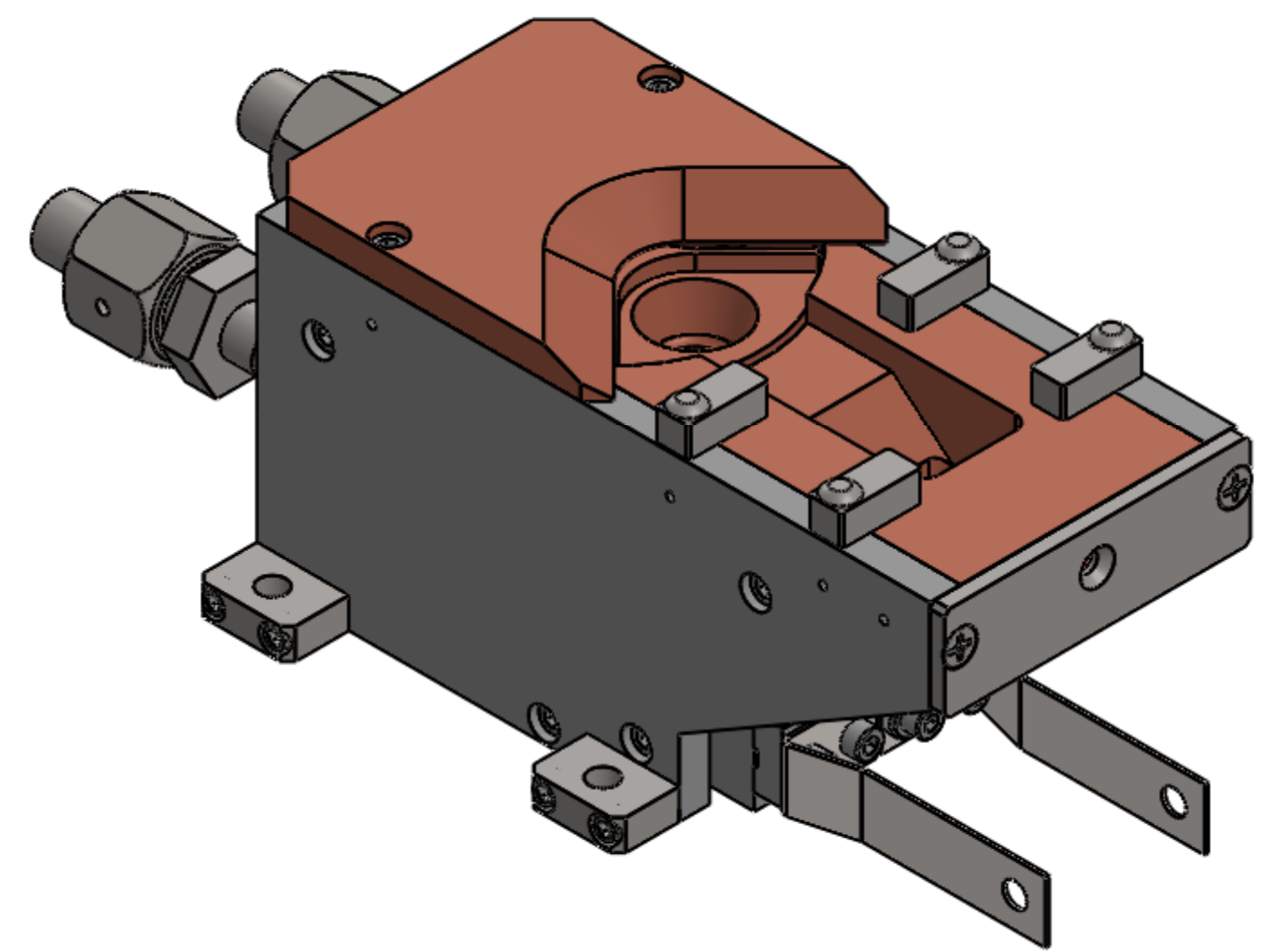
DWG NO. **221-9905-2**

REV _____

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



ECN	ZONE	REV	DESCRIPTION	BY	DATE
		A	RELEASE	GPD	8/21/2013
		B	ITEM 1 P/N FROM 221-0042-1 TO 221-0042-4	GPD	10/4/2013
		C	REVISING CRUCIBLE ASSEMBLY & SIDE ARMS, REMOVING DETENT PARTS 221-0077-1, 271-6220-2 & 271-6225-3, ADDING SPRING PLUNGER	GPD	3/31/2014
		C1	REVISED DESCRIPTION	GPD	10/30/2014
		D	P/N FROM 221-0111-2 TO 224-0111-2 & 221-0500-1 TO 224-0501-1	GPD	12/7/2016



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	221-0042-4	ASSEMBLY, PIVOT SHAFT	1
2	221-0053-1	POLE PIECE	4
3	221-0055-1	PERMANENT MAGNET	1
4	221-0058-3	MAGNET ARM, LEFT	1
5	221-0059-2	MAGNET ARM, RIGHT	1
6	221-0073-1	COVER, 4 POCKET	1
7	221-0084-1	REAR SHIELD	1
8	221-0088-1	MOUNTING BLOCK	4
9	221-0096-1	COIL BLANKOFF PLATE	1
10	224-0111-2	ASSEMBLY, WELD, MAIN BLOCK	1
11	221-0125-2	ASSEMBLY, SIDE DRIVE	1
12	221-0300-1	BEARING	1
13	224-0501-1	ASSEMBLY, WELD, CRUCIBLE BASE	1
14	221-0656-1	BEARING STRAP	1
15	221-0657-1	BEARING CLAMP PLATE	1
16	221-0700-1	RETAINING RING, EXTERNAL, 15/16", SST	1
17	221-0701-1	SPRING PLUNGER, LONG NOSE, #6-32 UNC, SST	1
18	223-0150-1	EMITTER ASSEMBLY	1
19	271-0650-2	WATER FITTING NUT	2
20	271-0651-2	WATER FITTING GLAND	2
21	271-2110-1	O-RING, VITON, ID 3/8", W 3/32"	2
22	271-2014-1	O-RING, VITON, ID 1/2", W 1/16"	1
23	271-4206-1	QUAD RING, VITON, ID 1/2", W 1/8"	1
24	271-6002-8	SCREW, #4-40 X 9/16" SST, SHCS	8
25	271-6030-1	VENTED SCREW, #6-32 UNC X 1/4" SHCS	2
26	271-6030-9	SCREW, #6-32 UNC X 1/4" SST, SHCS	4
27	271-6040-9	SCREW, #6-32 UNC X 5/16 SST, SHCS	2
28	271-6050-1	VENTED SCREW, #6-32 UNC X 3/8" SHCS	9
29	271-6052-6	SCREW, #6-32 UNC X 3/8" SST, PHILLIPS FLAT HEAD, SILVER	2
30	271-6053-9	SCREW, #6-32 UNC X 3/8 SST, BUTTON HEAD CS	4

UNLESS OTHERWISE SPECIFIED
GLOBAL TOLERANCES

.X	+/- .03	[0.762]
.XX	+/- .001	[0.254]
.XXX	+/- .0005	[0.127]

ANGLES +/- .5°
SURF FINISH 63 RMS

DWG BY: **G. DION** DATE: **8-21-2013**

CHECK BY: DATE:
PROJ ENG DATE:
MFG ENG DATE:
DO NOT SCALE DRAWING

FILE NUMBER:
INITIAL PROJECT:

MATERIAL:
FINISH:
THIRD ANGLE PROJECTION

SEE PARTS LIST
SEE NOTES

TELEMARK
Battle Ground, WA

**MODEL 221-05 EB SOURCE,
4 PKT, 2cc RIGHT S/D**

SCALE: **1:1**
SHEET **1** of **1**

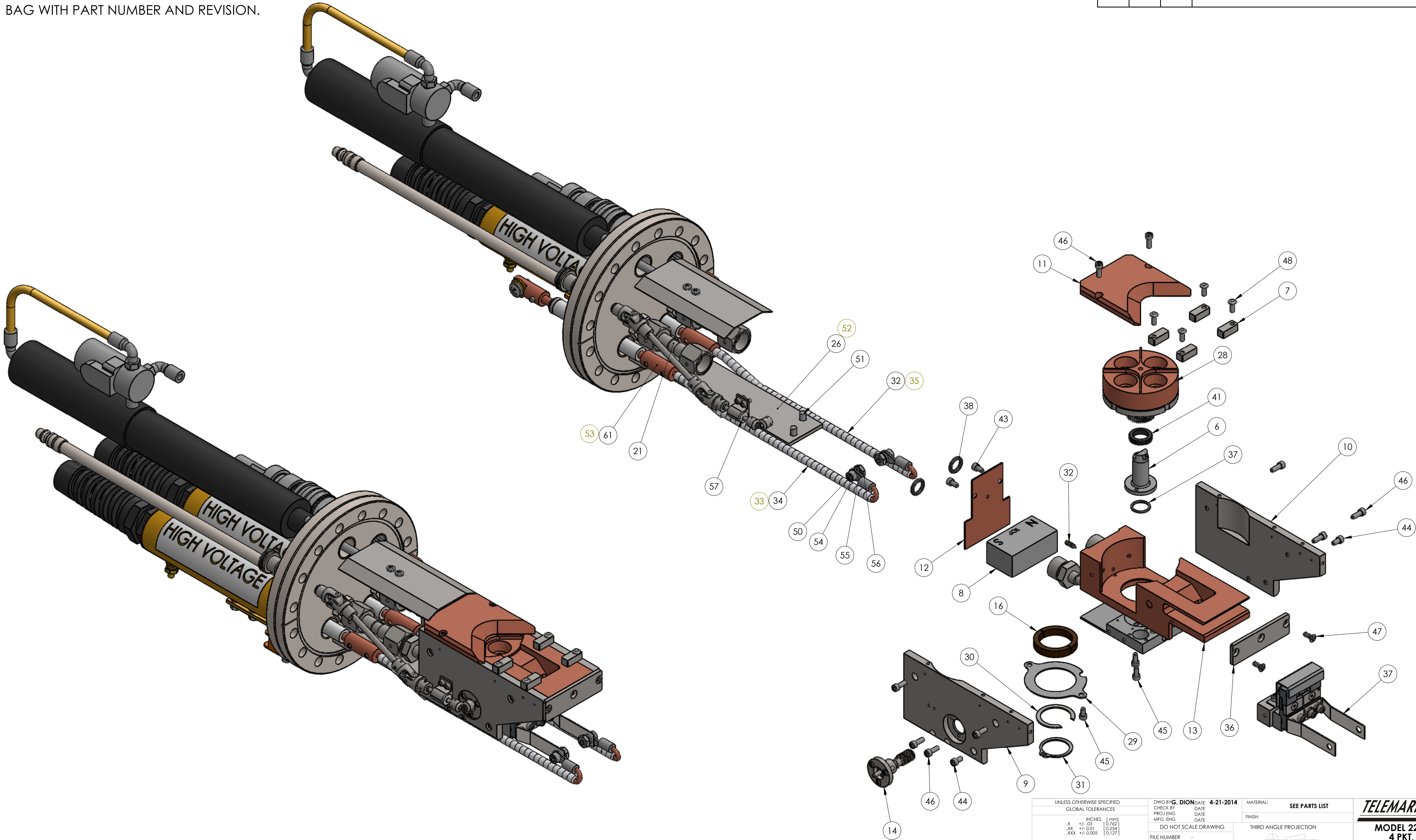
DWG NO. **221-9905-4**

REV **D**

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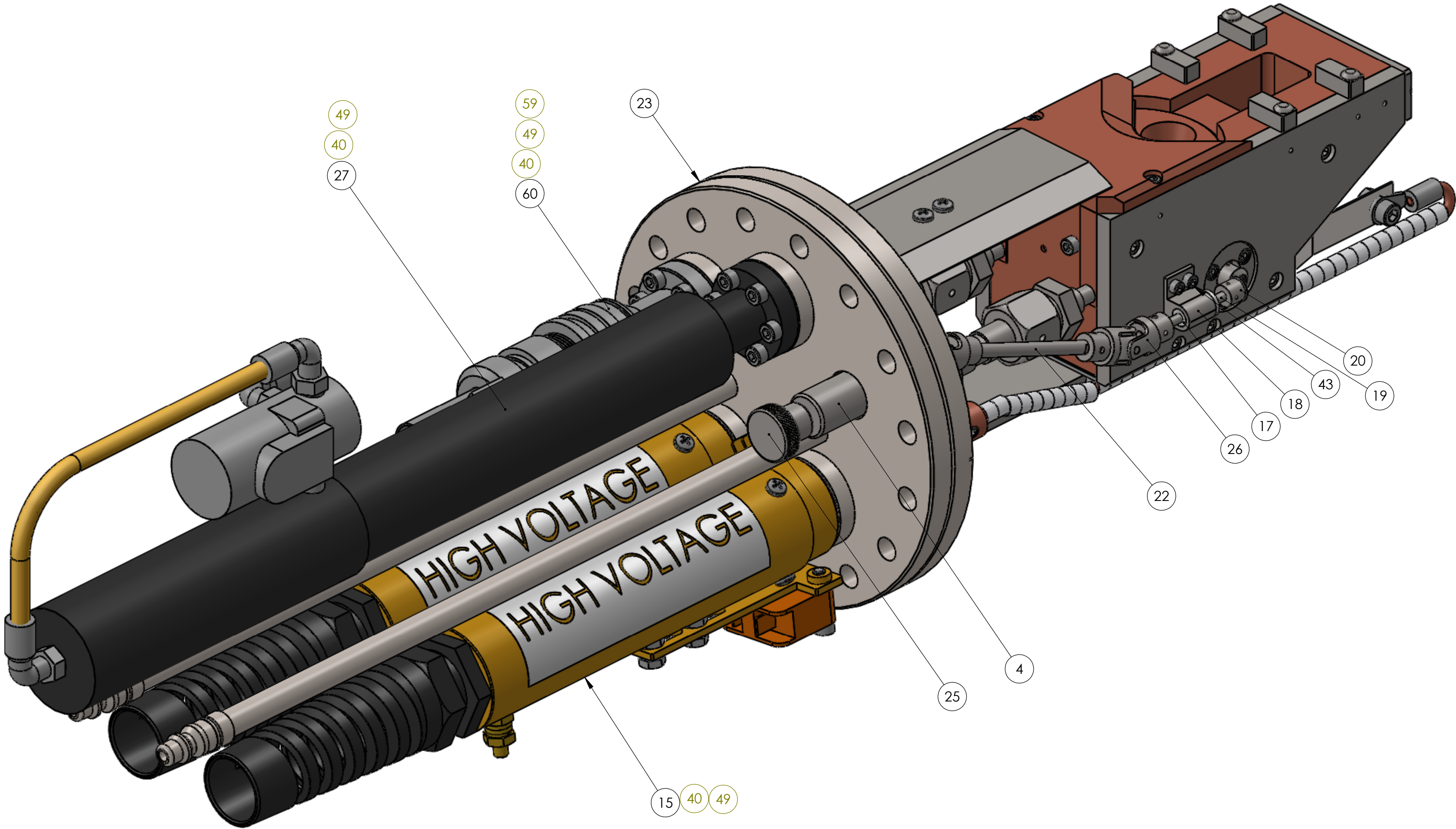
- NOTES: (UNLESS OTHERWISE SPECIFIED)
1. REMOVE BURRS & BREAK ALL SHARP EDGES
.005-.015 RADIUS OR CHAMFER.
 2. ALL SURFACES $\sqrt{63}$
 3. BAG WITH PART NUMBER AND REVISION.


ECN	ZONE	REV	DESCRIPTION	BY	DATE
		A	RELEASE	GPD	4/21/2014
		B	REVISED DESCRIPTION & P/N, REMOVED SWEEP COIL	GPD	10/30/2014
		C	P/N FROM 221-0111-1 TO 224-0111-1 & 221-0500-1 TO 224-0501-1	GPD	12/7/2016



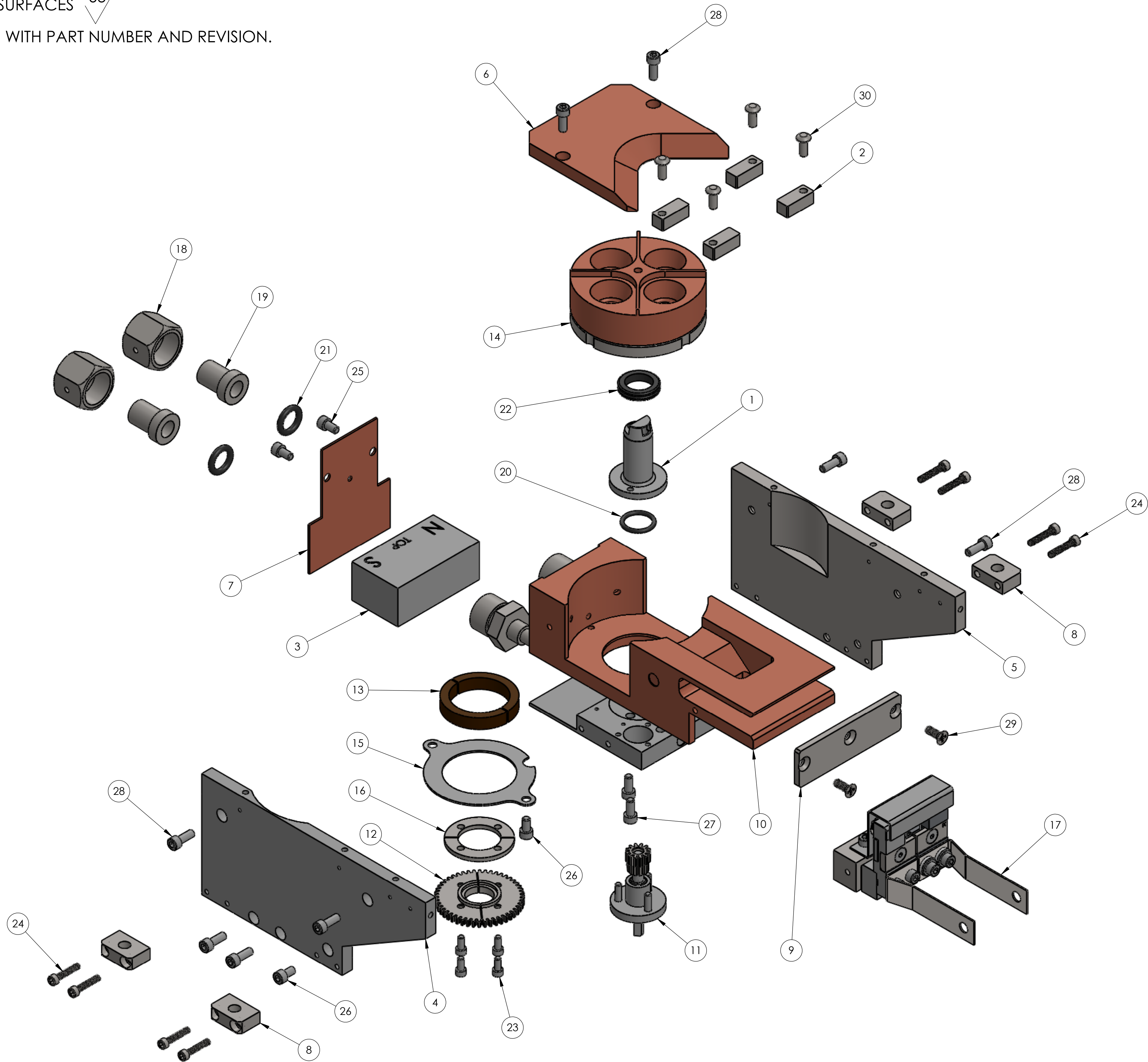
UNLESS OTHERWISE SPECIFIED		DWG BY: G. DION	DATE: 4-21-2014	MATERIAL: SEE PARTS LIST	TELEMARK Battle Ground, WA	
GLOBAL TOLERANCES		CHECK BY: PROJ ENG	DATE: -	FINISH: -	THIRD ANGLE PROJECTION	
INCHES [mm]		PROJ ENG	DATE: -	INITIAL PROJECT: -		
.X +/- .03 [0.762]		MFG ENG	DATE: -		DO NOT SCALE DRAWING	
.XX +/- .001 [0.254]						
.XXX +/- .0005 [0.127]					FILE NUMBER -	
ANGLES +/- .5°						
SURF FINISH 63 RMS					DWG NO. 221-9905-6	
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	A	B	
	ITEM NO.	PART NUMBER	DESCRIPTION
1	1	110-5203-2	SCREW, 1/4-20 UNC X 1/2, BRASS, PHILLIPS PAN HD
	2	110-7404-1	WASHER, 1/4, BRASS, LOCK, SPLIT
	3	110-7406-1	WASHER, 1/4, BRASS, FLAT
	4	221-0002-1	FEEDTHRU, ROTARY, INSTRUMENT, FERRO TYPE, 3/16" SHAFT
	5	221-0019-1	FEEDTHRU, HIGH VOLTAGE, 12kv AT 180 AMPS, 1.33 CFF
	6	221-0042-1	ASSEMBLY, PIVOT SHAFT
	7	221-0053-1	POLE PIECE
	8	221-0055-1	PERMANENT MAGNET
	9	221-0058-4	MAGNET ARM, LEFT
	10	221-0059-3	MAGNET ARM, RIGHT
	11	221-0073-2	COVER, 4 POCKET
	12	221-0084-1	REAR SHIELD
	13	224-0111-1	ASSEMBLY, WELD, MAIN BLOCK
2	14	221-0125-2	ASSEMBLY, SIDE DRIVE
	15	221-0211-1	ASSEMBLY, HIGH VOLTAGE COVER, 1.33 CFF
	16	221-0300-1	BEARING
	17	221-0301-1	BEARING, SIDE DRIVE
	18	221-0302-1	BEARING HOUSING, SIDE DRIVE
	19	221-0303-2	SHAFT, SIDE DRIVE INDEXING
	20	221-0304-1	MITER GEAR SET, 72 PITCH, 1:1 RATIO, 24 TEETH, SST
	21	221-0305-2	ASSEMBLY, WELD, WATER ADAPTER
	22	221-0307-1	SHAFT, MANUAL INDEXING
	23	221-0310-1	ASSEMBLY, WELD, MODEL 221 SIDE MOUNT, 6" CFF
	24	221-0312-2	SUPPORT PLATE
	25	221-0313-1	KNOB, 3/16" BORE, SST
	26	221-0314-1	COUPLING, UNIVERSAL JOINT, 3/16" SHAFT, SST
3	27	221-0388-2	SHUTTER ASSEMBLY
	28	224-0501-1	ASSEMBLY, WELD, CRUCIBLE BASE
	29	221-0656-1	BEARING STRAP
	30	221-0657-1	BEARING CLAMP PLATE
	31	221-0700-1	RETAINING RING, EXTERNAL, 15/16", SST
	32	221-0701-1	SPRING PLUNGER, LONG NOSE, #6-32 UNC, SST
	33	221-2801-1	INSULATOR BEAD
	34	221-3039-3	ASSEMBLY, HIGH VOLTAGE LEAD
	35	221-3039-4	ASSEMBLY, HIGH VOLTAGE LEAD
	36	221-0096-1	COIL BLANKOFF PLATE
	37	223-0150-1	EMITTER ASSEMBLY
	38	271-2014-1	O-RING, VITON, ID 1/2", W 1/16"
	39	271-2110-1	O-RING, VITON, ID 3/8", W 3/32"
4	40	271-3581-1	GASKET, CFF 1.33"
	41	271-4206-1	QUAD RING, VITON, ID 1/2", W 1/8"
	42	271-5999-1	VENTED SCREW, #4-40 UNC X 1/4" SST SHCS
	43	271-6030-1	VENTED SCREW, #6-32 UNC X 1/4" SHCS
	44	271-6030-9	SCREW, #6-32 UNC X 1/4" SST, SHCS
	45	271-6040-9	SCREW, #6-32 UNC X 5/16 SST, SHCS
	46	271-6050-1	VENTED SCREW, #6-32 UNC X 3/8" SHCS
	47	271-6052-6	SCREW, #6-32 UNC X 3/8" SST, PHILLIPS FLAT HEAD, SILVER
	48	271-6053-9	SCREW, #6-32 UNC X 3/8 SST, BUTTON HEAD CS
	49	271-6132-9	SCREW, #8-32 UNC X 9/16" SHCS.
	50	224-0111-1	ASSEMBLY, WELD, MAIN BLOCK
	51	271-6146-4	SCREW, #10-32 UNF X 3/8" PHIL PAN HEAD, SST
	52	271-6152-9	SCREW, #10-32 UNF X 5/16" LONG, FLAT HD SOC, SST
5	53	271-6200-2	SET SCREW, #8-32 UNC X 1/4 SST.
	54	271-6245-1	FLAT WASHER, #10 SST.
	55	271-6245-2	LOCK WASHER, #10 SST.
	56	271-6255-1	NUT, #10-32 UNF, SST
	57	271-6280-3	C-CLIP, 1/8", SST
	58	275-0014-2	PIN CONNECTION
	66	275-0014-3	4 PIN INSTRUMENT FEEDTHRU, CFF
	60	275-0014-5	4 PIN CIRCULAR CONNECTOR
	61	275-0119-1	HV LUG (8 AWG)
	62	275-0119-3	HV LUG, EXTERNAL

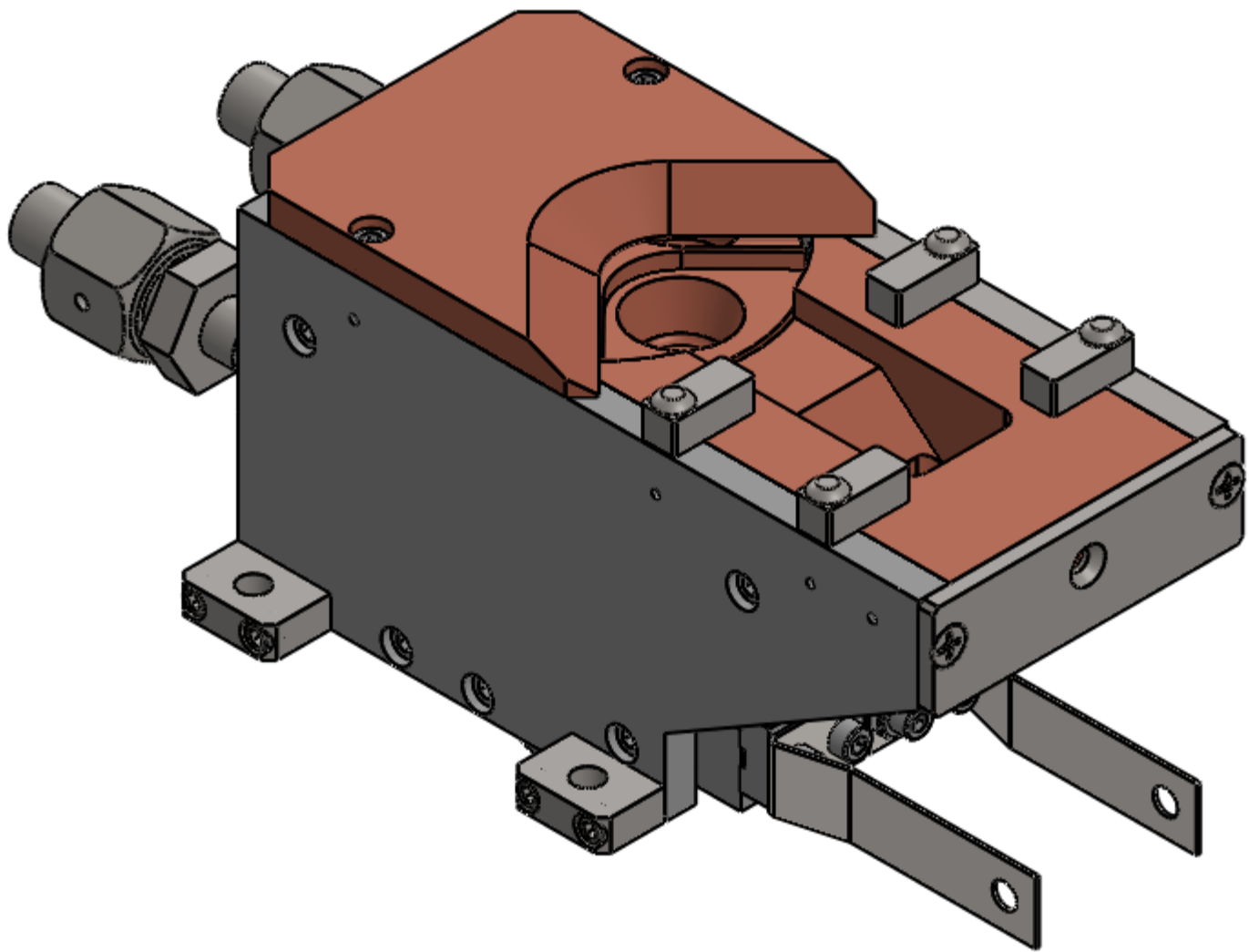


UNLESS OTHERWISE SPECIFIED			DWG BY: G. DION DATE: 4-21-2014		MATERIAL: SEE PARTS LIST		TELEMARK		Battle Ground, WA	
GLOBAL TOLERANCES			CHECK BY: PROJ ENG DATE: 4-21-2014		FINISH: SEE PARTS LIST				MODEL 221-05 EB SOURCE, 4 PT, 2 CC, LEFT S/D, SIDE MOUNT ON 6" CFF	
			MFG ENG DATE: 4-21-2014							
			DO NOT SCALE DRAWING							
			FILE NUMBER: -							
			INITIAL PROJECT: -							
										</

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



ECN	ZONE	REV	DESCRIPTION	BY	DATE
		A	RELEASE	GPD	8/13/2013
		B	REVISED CRUCIBLE ASSEMBLY & SIDE ARMS	GPD	3/31/2014
		B1	REVISED DESCRIPTION	GPD	10/30/2014
		C	P/N FROM 221-0111-1 TO 224-0111-1 & 221-0500-2 TO 224-0501-2	GPD	12/7/2016



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	221-0042-1	ASSEMBLY, PIVOT SHAFT	1
2	221-0053-1	POLE PIECE	4
3	221-0055-1	PERMANENT MAGNET	1
4	221-0058-1	MAGNET ARM, LEFT	1
5	221-0059-1	MAGNET ARM, RIGHT	1
6	221-0073-1	COVER, 4 POCKET	1
7	221-0084-1	REAR SHIELD	1
8	221-0088-1	MOUNTING BLOCK	4
9	221-0096-1	COIL BLANKOFF PLATE	1
10	224-0111-1	ASSEMBLY, WELD, MAIN BLOCK	1
11	221-0127-1	ASSEMBLY, BOTTOM DRIVE	1
12	221-0149-1	SPUR GEAR, 48 TEETH	1
13	221-0300-1	BEARING	1
14	224-0501-2	ASSEMBLY, CRUCIBLE BASE	1
15	221-0656-1	BEARING STRAP	1
16	221-0658-1	BEARING CLAMP PLATE	1
17	223-0150-1	EMITTER ASSEMBLY	1
18	271-0650-2	WATER FITTING NUT	2
19	271-0651-2	WATER FITTING GLAND	2
20	271-2014-1	O-RING, VITON, ID 1/2", W 1/16"	1
21	271-2110-1	O-RING, VITON, ID 3/8", W 3/32"	2
22	271-4206-1	QUAD RING, VITON, ID 1/2", W 1/8"	1
23	271-5999-1	VENTED SCREW, #4-40 UNC X 1/4" SST SHCS	4
24	271-6002-8	SCREW, #4-40 X 9/16" SST, SHCS	8
25	271-6030-1	VENTED SCREW, #6-32 UNC X 1/4" SHCS	2
26	271-6030-9	SCREW, #6-32 UNC X 1/4" SST, SHCS	4
27	271-6040-9	SCREW, #6-32 UNC X 5/16 SST, SHCS	2
28	271-6050-1	VENTED SCREW, #6-32 UNC X 3/8" SHCS	9
29	271-6052-6	SCREW, #6-32 UNC X 3/8" SST, PHILLIPS FLAT HEAD, SILVER	2
30	271-6053-9	SCREW, #6-32 UNC X 3/8 SST, BUTTON HEAD CS	4

UNLESS OTHERWISE SPECIFIED

GLOBAL TOLERANCES

.X

+/- .03

[.762]

.XX

+/- .001

[.0254]

.XXX

+/- .0005

[.0127]

ANGLES

+/- .5°

SURF FINISH

63 RMS

DWG BY: G. DION

CHECK BY:

PROJ ENG

MFG ENG

DATE

DATE

DATE

DO NOT SCALE DRAWING

FILE NUMBER

INITIAL PROJECT

MATERIAL:

SEE PARTS LIST

FINISH:

SEE NOTES

THIRD ANGLE PROJECTION

TELEMARK

Battle Ground, WA

MODEL 221-06 EB SOURCE,
4 PKT, 2cc, B/D

D

SCALE 1:1

SHEET 1 of 1

DWG NO. 221-9906-2

REV C

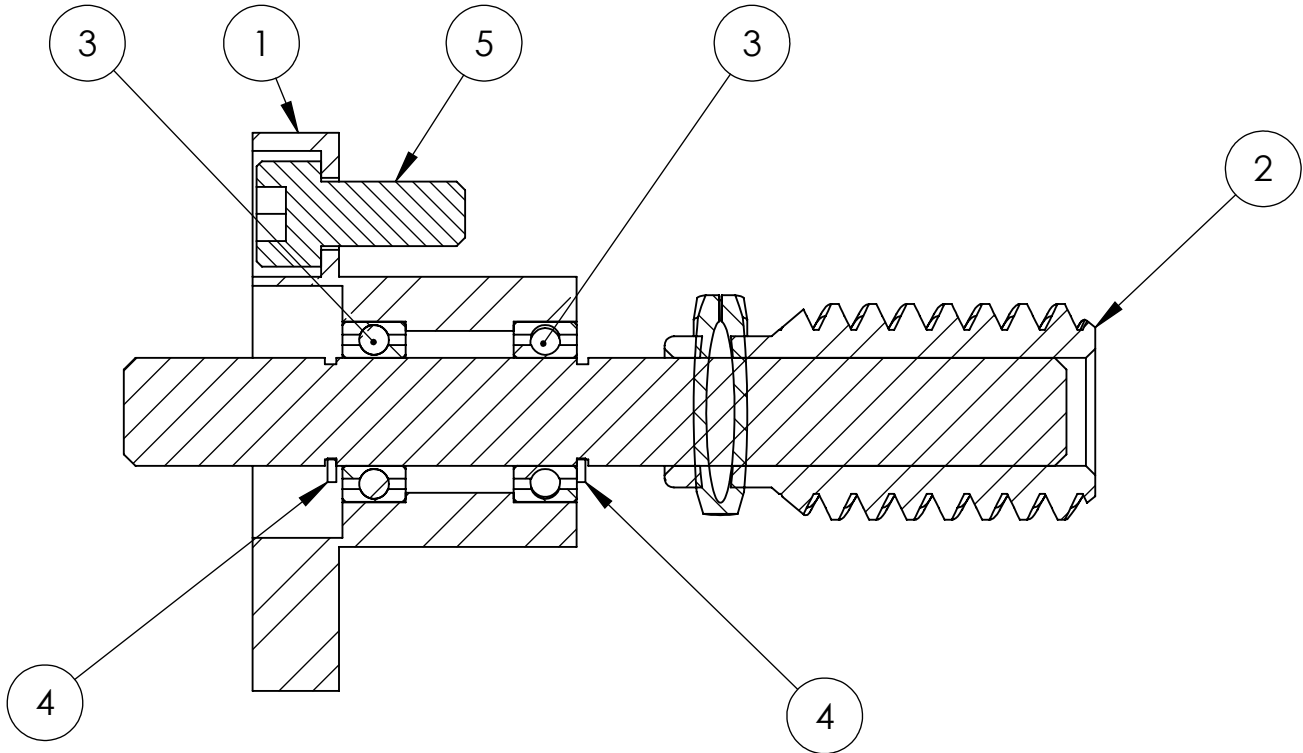
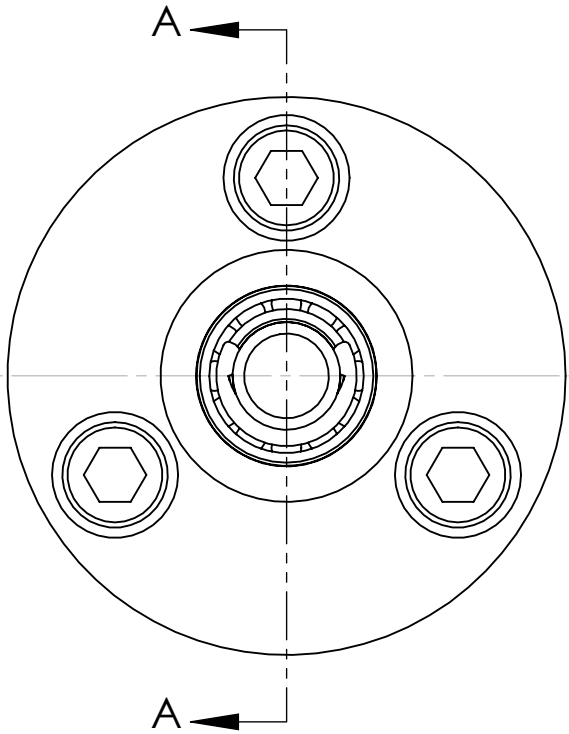


Common Assemblies

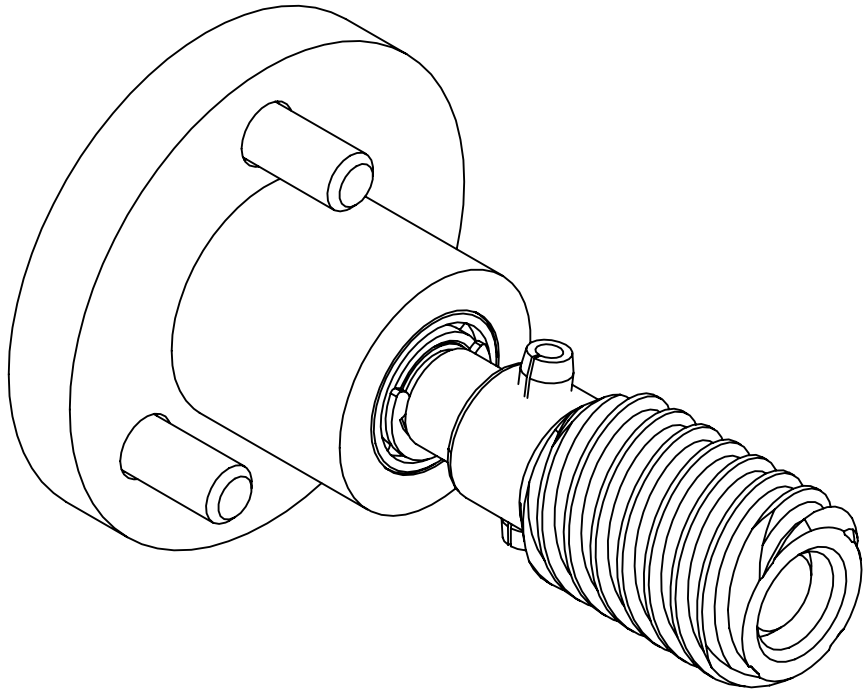
E-Beam Source

- 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	10/21/2013

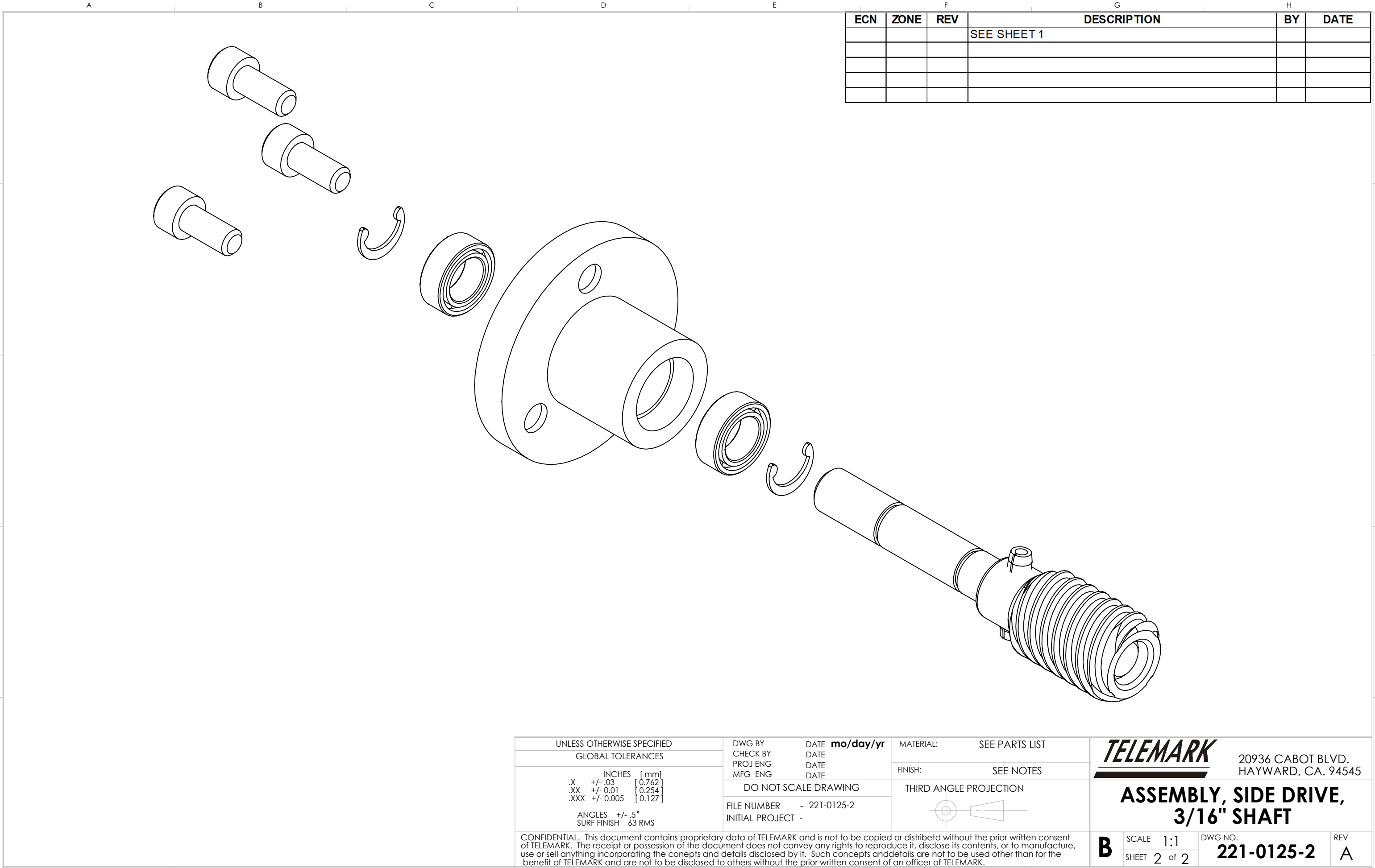


SECTION A-A
SCALE 3 : 1



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	221-0010-2	HOUSING, SIDE DRIVE	1
2	221-0011-7	SHAFT ASSEMBLY, SIDE DRIVE	1
3	221-0152-1	BEARING, 3/16" I.D. X 5/16" O.D. X .109 THICK, SST	2
4	271-6280-2	C-CLIP, 3/16", SST	2
5	271-5999-1	VENTED SCREW, #4-40 UNC X 1/4" SST SHCS	3

UNLESS OTHERWISE SPECIFIED		DWG BY G. DION DATE 10-21-2013		MATERIAL: SEE PARTS LIST		TELEMARK		Battle Ground, WA	
GLOBAL TOLERANCES		CHECK BY _____ DATE _____ PROJ ENG _____ DATE _____ MFG ENG _____ DATE _____		FINISH: SEE NOTES		ASSEMBLY, SIDE DRIVE, 3/16" SHAFT			
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 - 221-0125-2 INITIAL PROJECT -							
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B		SCALE 3:1 SHEET 1 of 2		DWG NO. 221-0125-2		REV A			

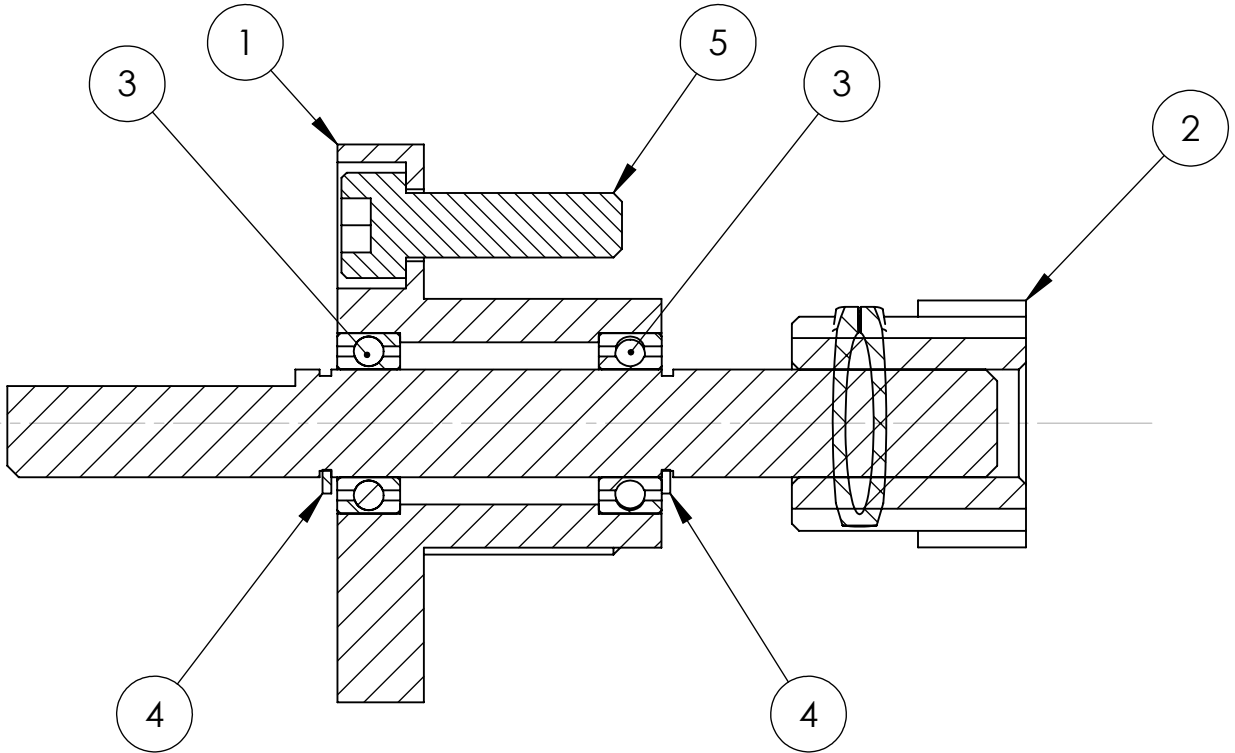
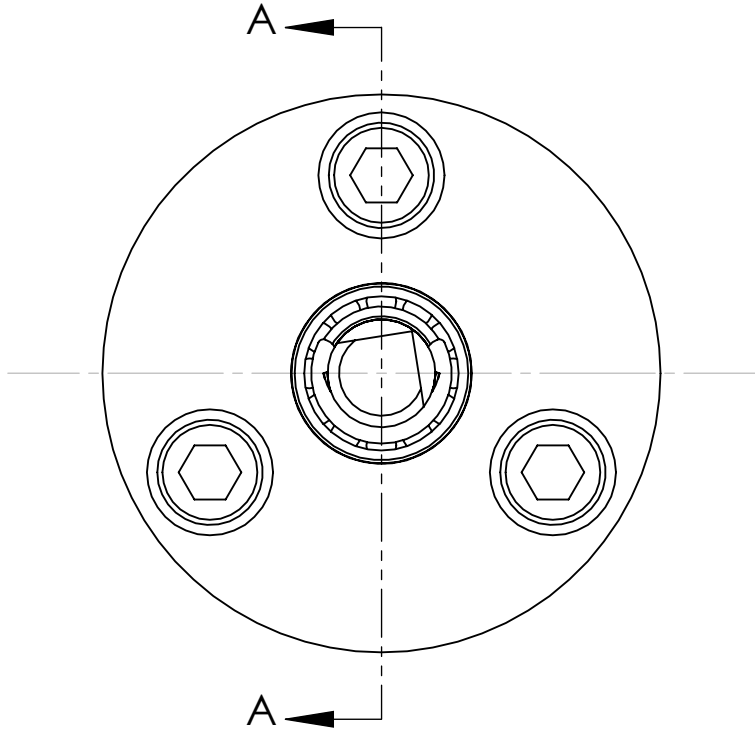


ECN	ZONE	REV	DESCRIPTION	BY	DATE
			SEE SHEET 1		

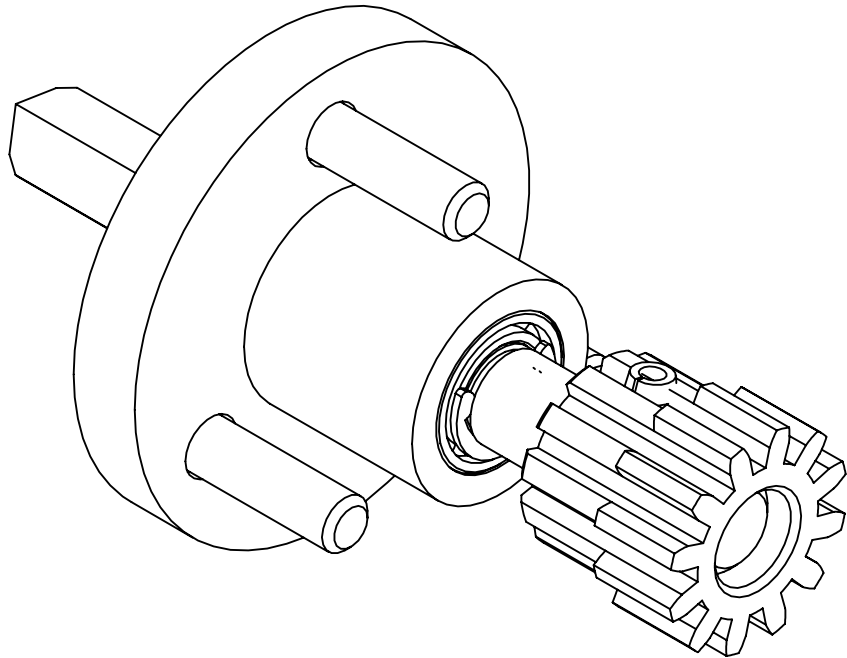
UNLESS OTHERWISE SPECIFIED GLOBAL TOLERANCES		DWG BY CHECK BY PROJ ENG MFG ENG	DATE mo/day/yr DATE DATE DATE	MATERIAL: SEE PARTS LIST	<div>TELEMARK</div> <div>20936 CABOT BLVD. HAYWARD, CA. 94545</div>		
INCHES [mm] .X +/- .03 [0.762] .XX +/- 0.01 [0.254] .XXX +/- 0.005 [0.127] ANGLES +/- .5° SURF FINISH 63 RMS		DO NOT SCALE DRAWING		FINISH: SEE NOTES			
FILE NUMBER - 221-0125-2 INITIAL PROJECT -		THIRD ANGLE PROJECTION					
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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	8/12/2013

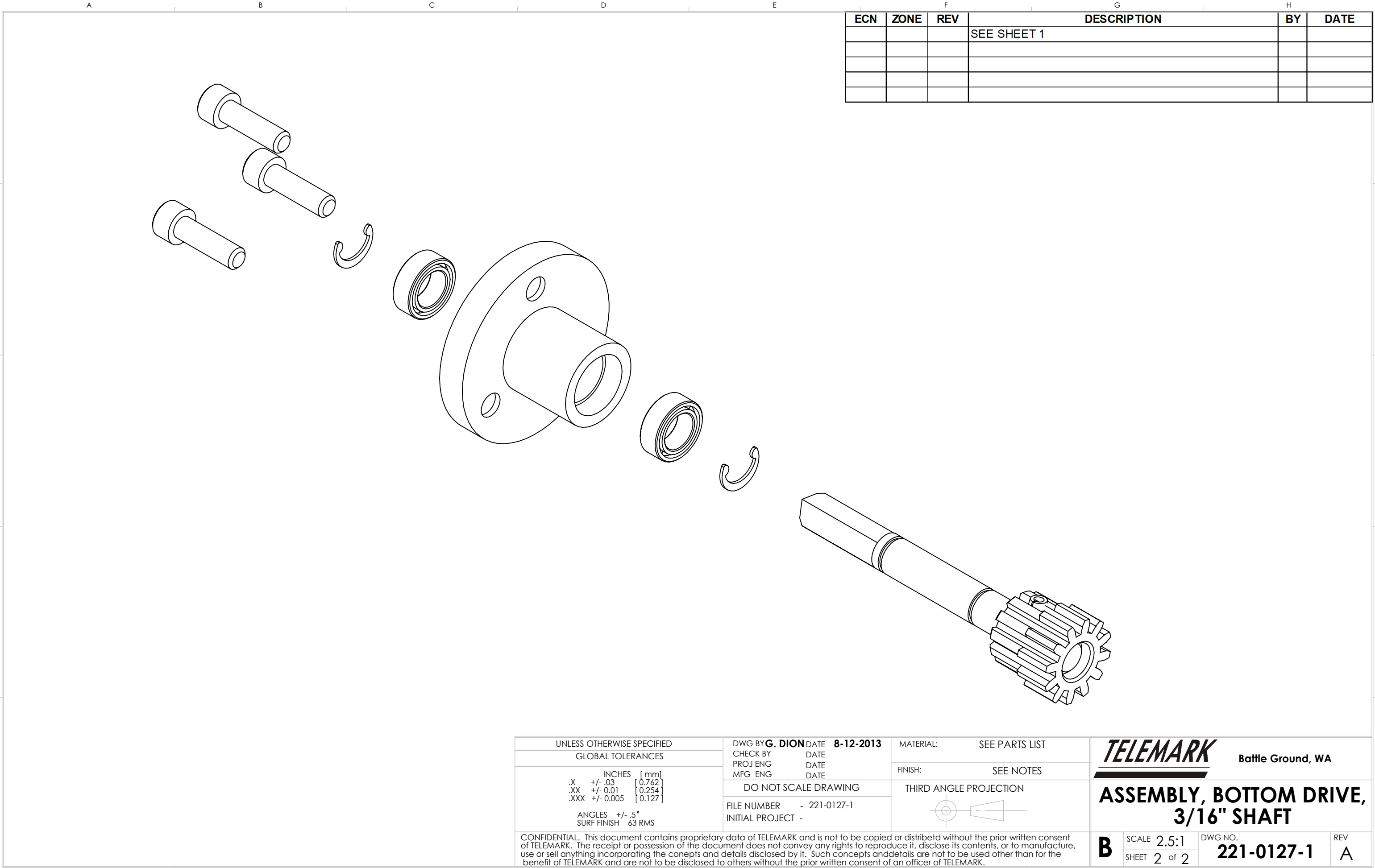


SECTION A-A
SCALE 3 : 1

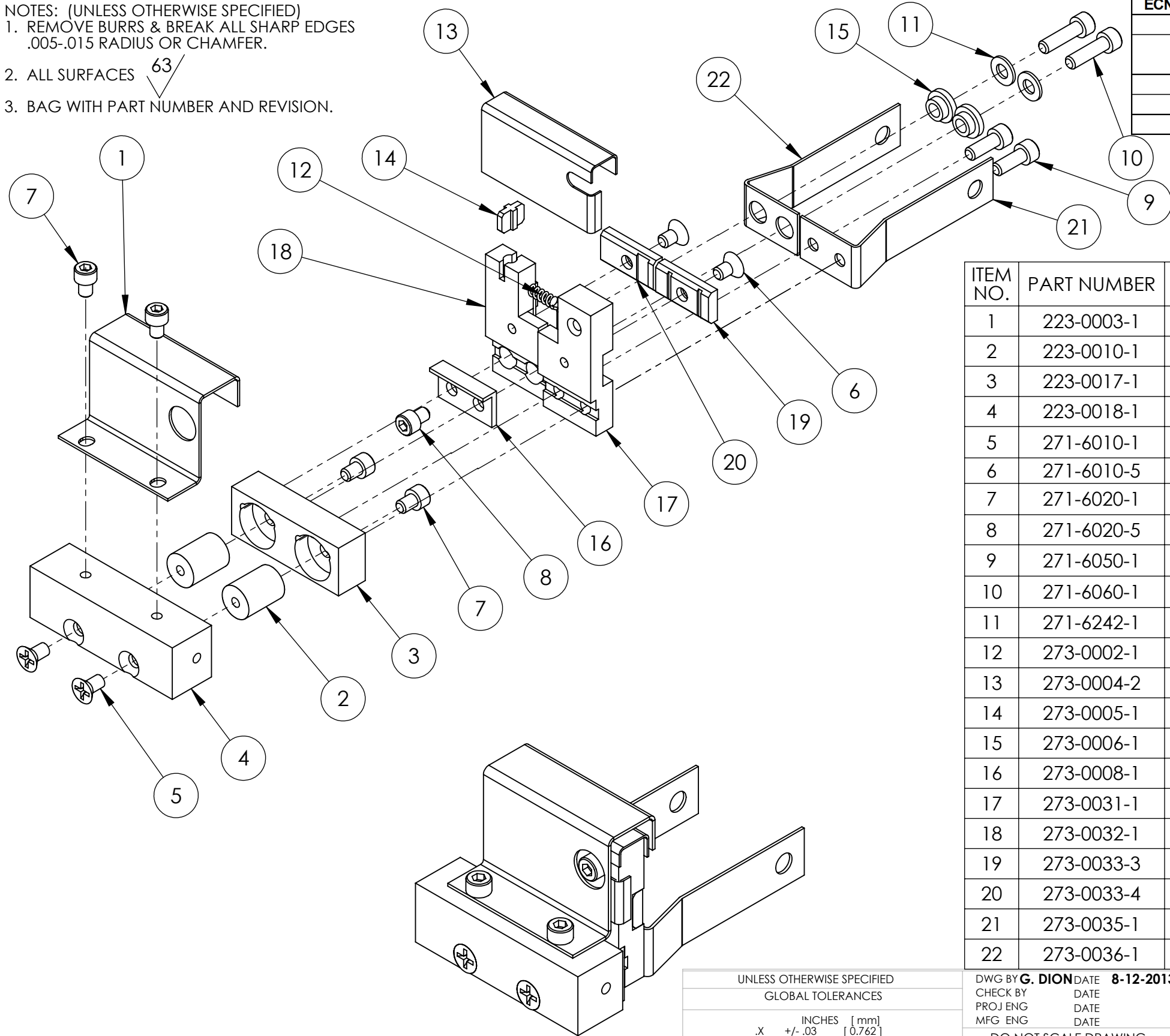


ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	221-0010-1	HOUSING, BOTTOM DRIVE	1
2	221-0011-5	SHAFT ASSEMBLY, BOTTOM DRIVE	1
3	221-0152-1	BEARING, 3/16" I.D. X 5/16" O.D. X .109 THICK, SST	2
4	271-6280-2	C-CLIP, 3/16", SST	2
5	271-6000-9	SCREW, #4-40 X 3/8" SST SHCS	3

UNLESS OTHERWISE SPECIFIED GLOBAL TOLERANCES		DWG BY G. DION DATE 8-12-2013 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 FILE NUMBER - 221-0127-1 INITIAL PROJECT -	FINISH: SEE NOTES THIRD ANGLE PROJECTION 	<div>ASSEMBLY, BOTTOM DRIVE,</div> <div>3/16" SHAFT</div>		
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				<div>B</div> <div>SCALE 3:1 SHEET 1 of 2</div>	<div>DWG NO.</div> <div>221-0127-1</div>	<div>REV</div> <div>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	8/12/2013
		A1	ITEM 20 FROM 271-6052-6 TO 271-6010-9 & ITEM 23 FROM 271-6030-9 TO 271-6020-9	GPD	10/2/2013
		B	REVISED HARDWARE	GPD	5/31/2017

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	223-0003-1	ANODE	1
2	223-0010-1	HV INSULATOR	2
3	223-0017-1	MOUNTING BRACKET	1
4	223-0018-1	SUPPORT BRACKET	1
5	271-6010-1	VENTED SCREW, #6-32 UNC X 1/4" LONG, SST, FLAT HEAD	2
6	271-6010-5	SCREW, #6-32 X 1/4" SLOT FLAT HEAD, Ti	2
7	271-6020-1	VENTED SCREW, #6-32 X 3/16" SST SHCS	4
8	271-6020-5	SCREW, #6-32 X 3/16" TI SHCS	1
9	271-6050-1	VENTED SCREW, #6-32 UNC X 3/8" SHCS	2
10	271-6060-1	VENTED SCREW, #6-32 X 1/2" SST SHCS	2
11	271-6242-1	FLAT WASHER, #6 SST	2
12	273-0002-1	FILAMENT, 5-1/2 TURN	1
13	273-0004-2	BEAM FORMER	1
14	273-0005-1	INSULATOR, CROSS	1
15	273-0006-1	INSULATOR, COLLAR	2
16	273-0008-1	L INSULATOR	1
17	273-0031-1	CATHODE BLOCK, LEFT	1
18	273-0032-1	CATHODE BLOCK, RIGHT	1
19	273-0033-3	FILAMENT CLAMP, LEFT	1
20	273-0033-4	FILAMENT CLAMP, RIGHT	1
21	273-0035-1	EMITTER BUS BAR, LEFT	1
22	273-0036-1	FILAMENT BUS BAR, RIGHT	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 **8-12-2013**
CHECK BY _____ DATE _____
PROJ ENG _____ DATE _____
MFG ENG _____ DATE _____

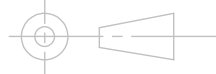
DO NOT SCALE DRAWING

FILE NUMBER - 223-0150-1
INITIAL PROJECT -

MATERIAL: SEE PART LIST

FINISH: SEE NOTES

THIRD ANGLE PROJECTION



TELEMARK

Battle Ground, WA

EMITTER ASSEMBLY

B

SCALE 7:8
SHEET 1 of 1

DWG NO.
223-0150-1

REV
B

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