(E) PLOT SCALE: 1=1 | DWG. SCALE: .5 | A2138502

NOTE:

1. THIS IS A ULTRA-HIGH VACUUM CHAMBER (UHV).

2. WHEN MACHINING VACUUM PARTS, USE OF SILICONE AND SULPHUR-BASED CUTTING FLUIDS IS PROHIBITED. USE ONE OF THE FOLLOWING:
A) CIMCOOL 5 STAR 49
B) TRIM SOL

3. ELECTROPOLISHING IS NEEDED BEFORE WELDING. PRIOR TO ELECTROPOLISHING, THE CHAMBER NEEDS TO GO THROUGH A MULTIPLE STEP CLEANING PROCESS INVOLVING DEGREASING, WASHING AND DRY NITROGEN BLOW DOWN. THE CHAMBER VACUUM SIDE SURFACE ROUGHNESS SHALL BE BETTER THAN 63 MICROINCH RMS AFTER ELECTROPOLISHING.

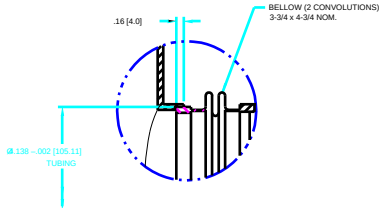
4. WELD SHALL BE GAS TUNGSTEN ARC (GTAW) OR TUNGSTEN INERT GAS (TIG) ON VACUUM SIDE OF JOINTS.

5. VACUUM CHAMBER SHALL BE LEAK TESTED USING A MASS SPECTROMETER WITH MINIMUM SENSITIVITY FOR HELIUM OF 2 x 10 STANDARD CC/SEC PER LEAK METER DIVISION, SUCH AS:
ALCATEL ASM-110TCL
VARIAN NCR 925 OR 936
VEECO MS-9, MS-90 OR MS-18
DuPONT CEC 24-120B
CALIBRATION OF THE LEAK DETECTOR SENSITIVITY SHALL BE PERFORMED JUST PRIOR TO TESTING.
FINAL TEST WILL CONSIST OF SURROUNDING THE CHAMBER (BAGGING) WITH HELIUM, THE CHAMBER WILL BE REJECTED IF A 2% DEFLECTION IN THE MOST SENSITIVE RANGE OF THE LEAK DETECTOR IS SENSED WITHIN 1 MIN.

6. ALL DIMENSIONS IN [ ] ARE MILLIMETERS AND ARE FOR REFERENCE ONLY.

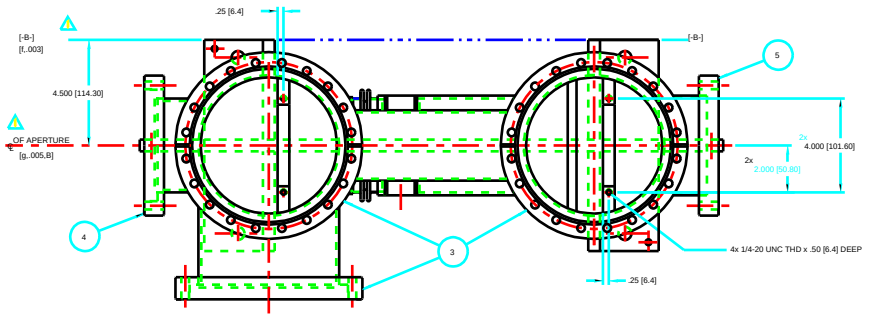
7. MACHINE FINISH FOR ALL VACUUM SURFACE BEFORE ELECTROPOLISHING. 63

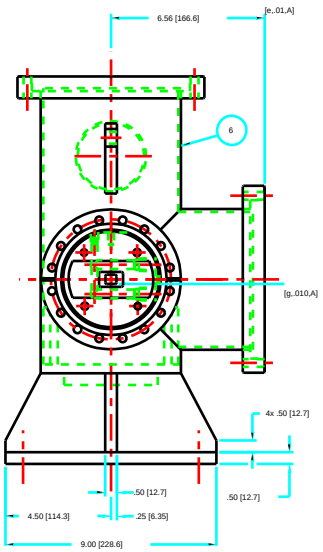
8. ALL MATERIAL IS 304 SST UNLESS OTHERWISE SPECIFIED.

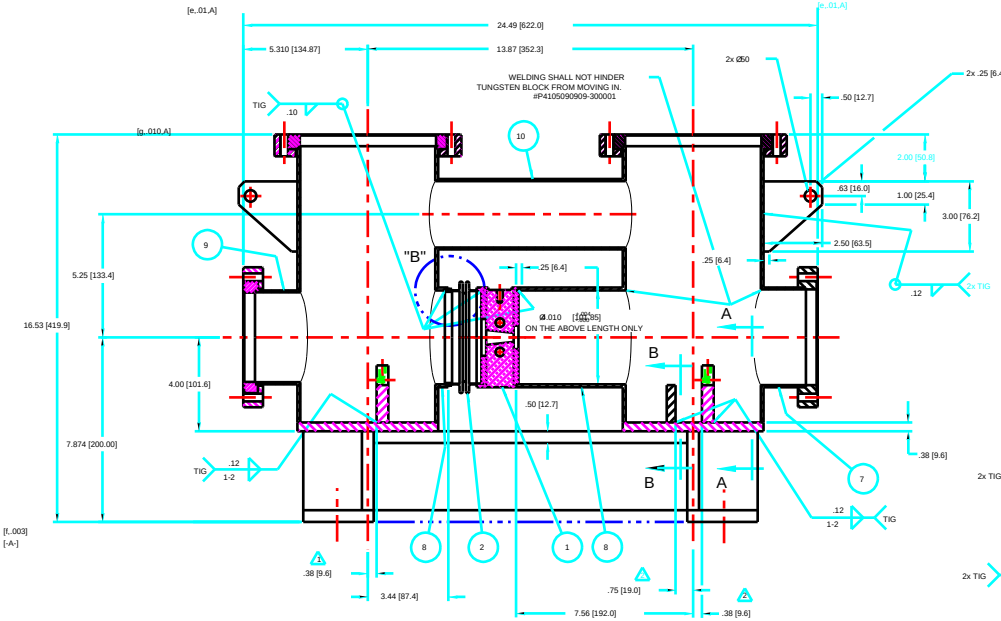


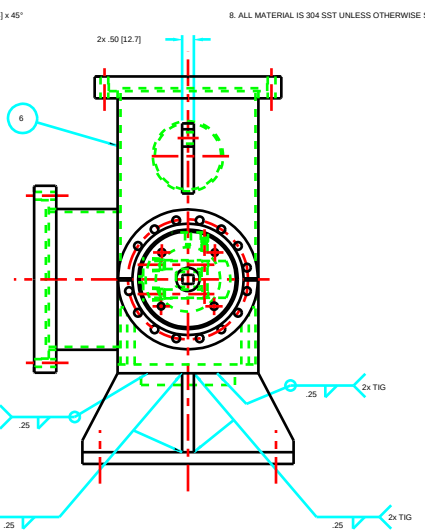
ENLARGED VIEW "B"

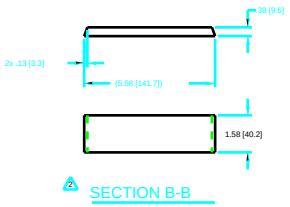
SCALE 2:1



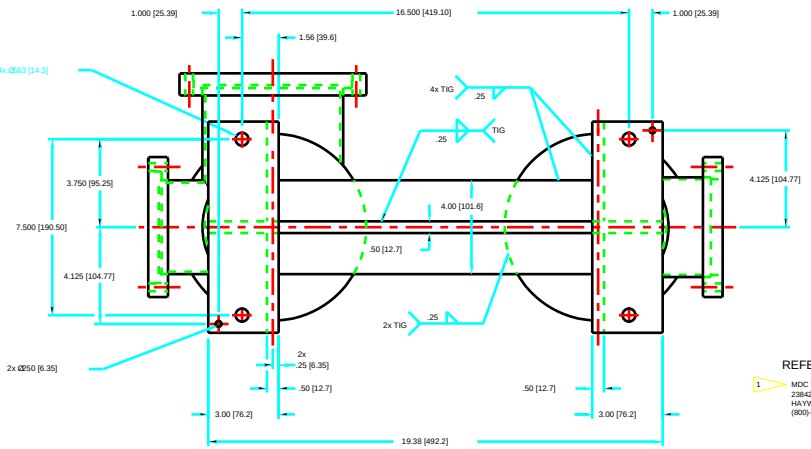


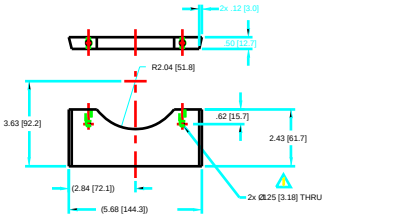






SECTION B-B





SECTION A-A

2-PLACES

REFERENCE SOURCE

1 MDC VACUUM PRODUCTS CORP.
23842 CABOT BOULEVARD
HAYWARD, CA. 94545-1651
(800)-443-8817

ITEM	PART NUMBER	DESCRIPTION	MATERIAL / SIZE	QTY
10		TUBING 3.00 O.D. x .083 WALL	304 SST	1
9		TUBING 4.00 O.D. x .083 WALL	304 SST	1
8		TUBING 4.25 O.D. x .120 WALL	304 SST	2
7		TUBING 4.25 O.D. x .083 WALL	304 SST	1
6		TUBING 6.00 O.D. x .120 WALL	304 SST	3
5	MDC#110025	FLANGE 6" NOM. NONROTATABLE	304 SST	1
4	MDC#100026	FLANGE 6" NOM. ROTATABLE	304 SST	1
3	MDC#100031	FLANGE 6" NOM. ROTATABLE	304 SST	3
2	P4105090909-310001	P9-30 BELLOW WELDMENT		1
1	P4105090909-310002	P9-30 COOLING BLOCK		1

REV	DESCRIPTION	BY	CHK	DATE
2	SECTION B-B ADDED;	J.G.	J.C.	1/26/96
1	.38 WAS 1.00; .75 WAS 1.00; Ø1.25 & GEOM. TOL. ADDED;	J.G.	J.C.	1/26/96 6/15/95

DRAWING NO. A2138502

ARGONNE NATIONAL LABORATORY

ADVANCED PHOTON SOURCE

P9-30 INTEGRAL SHUTTER (D) CHAMBER WELDMENT

DRAWN	J.GOGOL	11/3/95
DESIGNED	J.CHANG	1/13/95
TRACED	J.GOGOL/J.CHANG	11/3/95
CHECKED	J.CHANG	1/13/95
ENGINEER APPROVAL	T.M.KUZAY	1/18/95
PROJECT APPROVAL	D.SHU	1/18/95

SEE NOTE 8

SCALE 1:2 | SIZE E | P4105090909-310000-02

Plotted: DEC 11,1995 6:02 PM