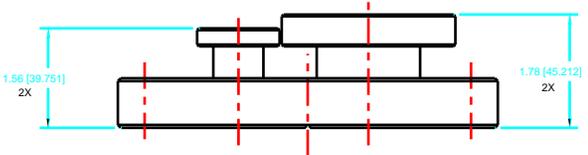


- NOTES:
- THIS IS A ULTRA-HIGH VACUUM COMPONENT (UHV).
 - WHEN MACHINING VACUUM PARTS, USE OF SILICONE AND SULPHUR-BASED CUTTING FLUIDS IS PROHIBITED. USE ONE OF THE FOLLOWING:
 - A) CIMCOOL 5 STAR 49
 - B) TRIM SOL
 - ELECTROPOLISHING IS NEEDED BEFORE WELDING. PRIOR TO ELECTROPOLISHING, THE CHAMBER NEEDS TO GO THROUGH A MULTIPLE STEP CLEANING PROCESS INVOLVING DEGREASING, WASHING AND DRY NITROGEN BLOWDOWN. THE CHAMBER VACUUM SIDE SURFACE ROUGHNESS SHALL BE BETTER THAN 63 MICRORINCH RMS AFTER ELECTROPOLISHING.
 - WELDS SHALL BE GAS TUNGSTEN ARC (GTAW) OR TUNGSTEN INERT GAS (TIG) ON VACUUM SIDE OF JOINTS.
 - VACUUM CHAMBER SHALL BE LEAK TESTED USING A MASS SPECTROMETER WITH MINIMUM SENSITIVITY FOR HELIUM OF 2 x 10⁻¹⁰ 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 LEAK DETECTOR IS SENSED WITHIN 1 MIN.
 - KEEP THE PART CLEAN AND WRAP FOR UHV PACKING WITH ALUMINUM FOIL.
 - MODIFY FROM PURCHASED PART. ENLARGED THE HOLES FROM Ø.375 & Ø.510 TO Ø.562 & Ø.645 RESPECTIVELY.
 - ALL DIMENSIONS IN [] ARE MILLIMETERS AND ARE FOR REFERENCE ONLY.



Ø.562 [14.2748] THRU
Ø.645 [16.3830] x .31 [7.874]
2X - FAR SIDE

Ø.562 [39.6748] THRU
Ø.645 [41.7830] x .31 [7.874]
2X - FAR SIDE

ITEM	DWG/PART NUMBER	NOMENCLATURE OR DESCRIPTION	MATERIAL / SPEC	QTY
5		TUBING 1.625 O.D. x .062 WALL x CUT TO FIT	SST 304	2
4		TUBING .625 O.D. x .045 WALL x CUT TO FIT	SST 304	2
3		FLANGE, 1-1/3" O.D. NOM.	MDC #130004	2
2	P4102010104-240001-00	FLANGE, MODIFIED		2
1		FLANGE, 6" O.D. NOM.	MDC #110025	1

UNLESS OTHERWISE SPECIFIED:
ALL DIMENSIONS ARE IN INCHES
TOLERANCES:
DECIMALS ANGLE
X .010 .010
XX .005 .010
XXX .002 .005

SURFACE ROUGHNESS 125
REMOVE ALL BURRS AND BREAK SHARP EDGES (R&M)
SURFACE TEXTURE TO BE IN ACCORDANCE WITH LATEST AMS-B4
DIMENSIONING & TOLERANCING IN ACCORDANCE WITH LATEST ANSI Y14.5

LOG NUMBER
A11912

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ARGONNE NATIONAL LABORATORY

DRAWN BY: RICK KRAKORA DATE: 4/93
DESIGNED BY: J.W. DATE: 8/31/93
DESIGNER: D. SHU DATE: 8/31/93
RESPONSIBLE ENGINEER: D. SHU DATE: 8/31/93

DATE: 8/31/93
DATE: 8/31/93
DATE: 8/31/93

TITLE: ADVANCED PHOTON SOURCE
B1 ID FRONT END
FIRST BEAM POSITION MONITOR
CONNECTING FLANGE
WELDMENT

SCALE: 1:1
SHEET: 1 of 1

DRAWING NUMBER: P4102010104-240100-00

SEE B.O.M.

BY	CHANGE DESCRIPTION	BY	CHKD	DATE