



**NOTES:**

1. THIS IS A UHV PART, ELECTROPOLISHING IS NEEDED BEFORE WELDING. PRIOR TO ELECTROPOLISHING, THE PART NEEDS TO GO THROUGH A MULTIPLE STEP CLEANING PROCESS INVOLVING DEGREASING, WASHING AND DRY NITROGEN BLOW DOWN.
2. CHAMBER ASSEMBLY SHALL BE LEAK TESTED USING A MASS SPECTROMETER WITH MINIMUM SENSITIVITY FOR HELIUM OF 2 X 10<sup>-10</sup> STANDARD CC/SEC PER LEAK METER DIVISION, SUCH AS:  
ALCATEL SAM-110TCL  
DU PONT CEC 24-120B  
VARIAN MS-9, MS-90 OR MS-18
3. KEEP THE PART CLEAN, AND WRAP FOR UHV PACKING WITH ALUMINUM FOIL.
4. DIMENSIONS IN [ ] ARE MILLIMETERS AND ARE FOR REFERENCE ONLY.
5. WELD SHALL BE GAS TUNGSTEN ARC (GTAW) OR TUNGSTEN INERT GAS (TIG) ON VACUUM SIDE OF JOINTS.

**SOURCE**  
MDC VACUUM PRODUCTS CORP.  
23872 CABOT BLVD.  
HAYWARD, CA 94545-1651

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 ON THE MOST SENSITIVE RANGE OF THE LEAK DETECTOR IS SENSED WITHIN 1 MIN.

ITEM	DWG/PART NUMBER	NOMENCLATURE OR DESCRIPTION	MATERIAL / SPEC	QTY
3	110021	4 1/2" O.D. NONROTATABLE FLANGE	304 SST	1
2	100021	4 1/2" O.D. ROTATABLE FLANGE	304 SST	1
1		Ø 1/2" x .065" WALL TUBING	304 SST	1

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES		LOG NUMBER		PARTS LIST		THIS DRAWING IS THE PROPERTY OF	
DECIMALS	FRACTIONS	K1320100-00		ARGONNE NATIONAL LABORATORY		ADVANCED PHOTON SOURCE	
X .01 (2.5)	0/32	DRAWN BY	DATE	CHIEF DESIGN ENGINEER	DATE	1-D BACK SCATTERING BEAMLINE WALL COLLIMATOR VACUUM NIPPLE ASSEMBLY	
.XX .005 (0.13)		CHECKED BY	DATE	DATE	DATE		
SURFACE FINISH		DESIGNER	DATE	PROJECT MGR.	DATE		
REMOVE ALL BURRS AND BRAC 3-RMP EDGES .33 MAX		CORCUERA/CHA	9/9/97	RESPONSIBLE ENGINEER	DATE		
SURFACE TEXTURE TO BE IN ACCORDANCE WITH LATEST ANSI B46.1		J. CHANG	1/21/98	APPROVE/D/RELEASED	DATE	K1-32	
DIMENSIONING & TOLERANCING IN ACCORDANCE WITH LATEST ANSI Y14.5		MATERIAL		SCALE 1:2		SIZE	
DO NOT SCALE DRAWING				SHEET 14		DRAWING NUMBER	
				C		K1-320100-00	

SYN	CHANGE DESCRIPTION	BY	CHKD	DATE