



NOTES:

- THIS IS A UHV PART. A MULTIPLE STEP CLEANING PROCESS INVOLVING DEGREASING, WASHING AND DRY NITROGEN BLOW DOWN IS NEEDED BEFORE WELDING. ELECTROPOLISHING IS NEEDED FOR TUBING & END PLATE AFTER CLEANING BEFORE WELDING.
- KEEP THE PART CLEAN. AND WRAP FOR UHV PACKING WITH ALUMINUM FOIL.
- DEVICE SHALL BE LEAK TESTED USING A MASS SPECTROMETER WITH MINIMUM SENSITIVITY FOR HELIUM OF 2X 10<sup>-10</sup> 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  
 Du PONT 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.
- FLANGE HOLES HAVE TO LINE UP WITHIN -5°
  - THE BELLOW & FLANGES ASSEMBLY SHALL BE LEAK TESTED FOR 14.7 PSI EXTERNAL PRESSURE APPLICATION. IT SHALL BE DESIGNED FOR 500,000 CYCLES LIFETIME.
  - ALL DIMENSIONS WITH  $\varnothing$  ARE MILLIMETERS
  - THE OPERATING STROKE IS 1.299 IN. (33mm)

REFERENCE SOURCE:

- STANDARD BELLOW CO.  
 375 TURNPIKE AVE.  
 WINDSOR LOCKS CONN. 06096  
 PHONE: (203) 623-2307
- MDC MANUFACTURING INC.  
 23842 CABOT BLVD.  
 HAYWARD, CA 94545  
 PHONE: 1-800-443-8817

01	DIM. 4.850 WAS 4.870	RK			
01	DIM. 1.50 WAS 1.25	RK			
SYM	CHANGE DESCRIPTION	BY	CHKD	DATE	

5	#11 GA. (.120) THK END PLATE	304 SST	1
4	TUBING	304 SST	1
3	325-225-4-AA 33 mm STROKE BELLOW	AM 350	1
2	P/N 130018 4.50 ØNOM. NON-ROT. FLANGE (MDC)	304 SST	1
1	P/N 110030 8" ØNOM. NON-ROTATABLE FLANGE (MDC)	304 SST	1

  

LOG NUMBER		PARTS LIST	
A18175		ARGONNE NATIONAL LABORATORY	
DRAWN BY	DATE	CHIEF DESIGN ENGINEER	DATE
J.G.	7/7/93	D. SHU	7/8/93
DESIGNED BY	DATE	PROJECT MGR.	DATE
J. CHANG	7/8/93	T.M. KUZAY	7/8/93
DESIGNER	DATE	APPROVED/RELEASED	
J.G.	7/8/93	J. CHANG	7/8/93
RESPONSIBLE ENGINEER	DATE		
J. CHANG	7/8/93		

  

UNLESS OTHERWISE SPECIFIED: ALL DIMENSIONS ARE IN INCHES		THIS DRAWING IS THE PROPERTY OF	
TOLERANCES:		ARGONNE NATIONAL LABORATORY	
INCHES	ANGULAR		
3/16 - .03	12° - 25°		
.03 - .05			
.05 - .125			
.125 - .500			
.500 - 1.000			
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