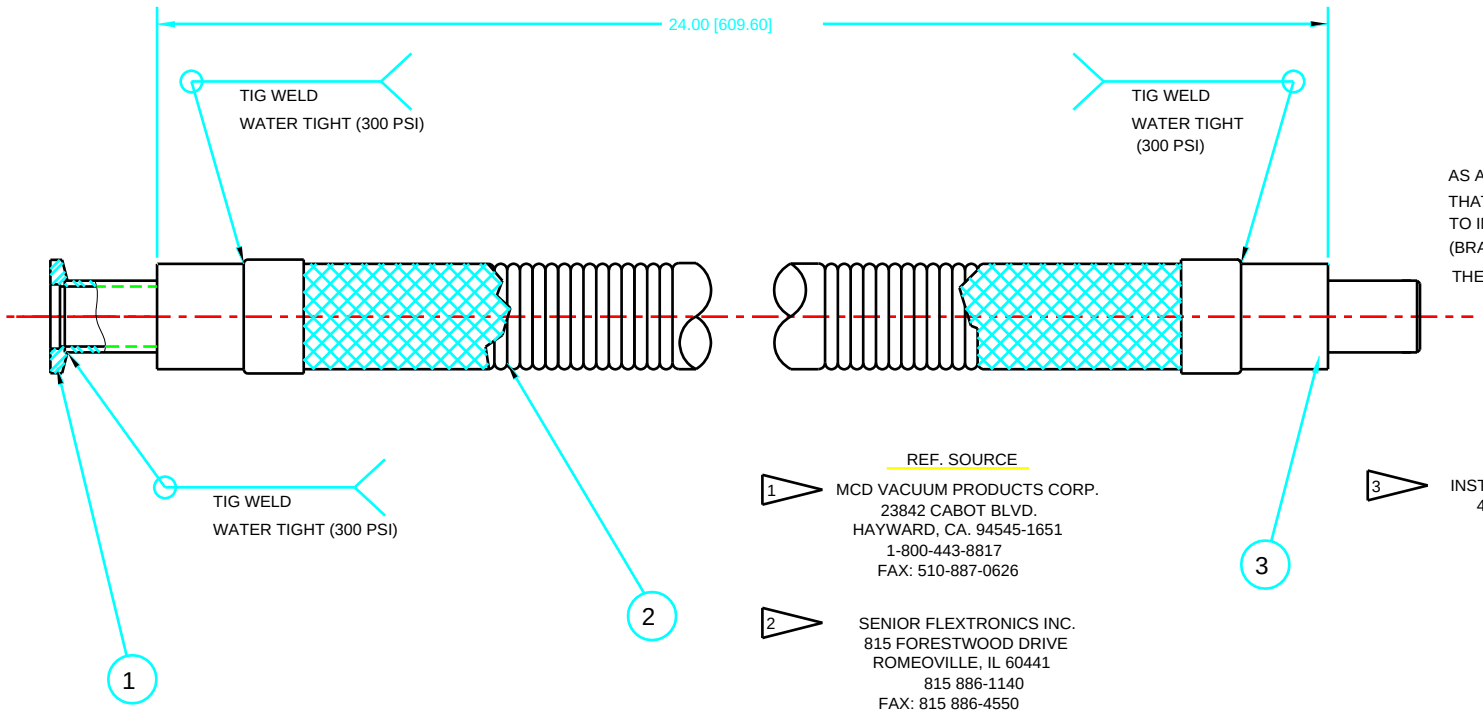

AS AGREED BY THE MIRROR VENDER;
THAT IT IS THEIR RESPONSIBILITY
TO INSTALL AND SECURE
(BRAIDED CORRUGATED HOSE) AND
THE SUITABILITY OF ITEM 3.

REF. SOURCE

1 MCD VACUUM PRODUCTS CORP.
23842 CABOT BLVD.
HAYWARD, CA. 94545-1651
1-800-443-8817
FAX: 510-887-0626

2 SENIOR FLEXTRONICS INC.
815 FORESTWOOD DRIVE
ROMEOVILLE, IL 60441
815 886-1140
FAX: 815 886-4550

3 INSTRUMENT INC. ASSOCIATES
4833 W. 128th PLACE
ALSIP, IL 60658
708 597-9880
FAX: 708 597-1608

NOTES:

1. THIS IS A ULTRA - HIGH - VACUUM ASSEMBLY (UHV)
   KEEP THE UHV PARTS CLEAN DURING ASSEMBLY, AND
   AND WRAP UP FOR PACKING WITH ALUMINUM FOIL

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. THIS IS A UHV PART, ELECTROPOLISHING
   IS NEEDED BEFORE WELDING. PRIOR TO
   ELECTROPOLISHING, THE PART MUST GO
   THROUGH A MULTIPLE STEP CLEANING PROCESS
   INVOLVING DEGREASING, WASHING AND DRY
   NITROGEN BLOW DOWN.

4. WATER PRESSURE TEST AT 300 PSI
   AFTER ASSEMBLY.

5. DIMENSIONS IN [ ] ARE MILLIMETERS AND
   FOR REF. ONLY

ITEM	DWG/PART NUMBER	NOMENCLATURE OR DESCRIPTION	MATERIAL / SPEC	QTY
3	12-3/4 T2HW2-SS	.75 TUBE ADPT. TO MALE PIPE WELD (CPI)	SST	2
2	#461	CORRUGATED FLEX. METAL HOSE BRAIDED	SST	1
1	#713007	.75 TUBE ISO KWIK-FLANGE	SST	1

PARTS LIST

SYM	CHANGE DESCRIPTION	BY	CHKD	DATE

REVISIONS

UNLESS OTHERWISE SPECIFIED:
ALL DIMENSIONS ARE IN INCHES

TOLERANCES

DECIMALS		ANGULAR
.X –	.1 [2.5]	– 0°30'
.XX –	.01 [0.25]	
.XXX –	.005 [0.13]	

SURFACE ROUGHNESS 125

REMOVE ALL BURRS AND
BREAK SHARP EDGES .03 MAX.

SURFACE TEXTURE TO BE IN
ACCORDANCE WITH LATEST ANSI B46.1

DIMENSIONING & TOLERANCING IN
ACCORDANCE WITH LATEST ANSI Y14.5

DO NOT SCALE DRAWING

LOG NUMBER
A2187800

THIS DRAWING IS THE PROPERTY OF
ARGONNE NATIONAL LABORATORY

DRAWN BY	FUHRMANN	DATE	12/8/94	CHIEF DESIGN ENGINEER	D. SHU	DATE	3/5/95
CHECKED BY	W. YUN	DATE	2/23/95	GP LEADER	T.M. KUZAY	DATE	3/6/95
DESIGNER	D.SHU/FUHRMANN	DATE		PROJECT MGR.		DATE	
RESPONSIBLE ENGINEER	D. SHU	DATE	3/5/95	APPROVED/RELEASED		DATE	

TITLE
ADVANCED PHOTON SOURCE
Y2 LONG COOLED HORIZONTALLY
DEFLECTING X-RAY MIRROR
BRAIDED CORRUGATED HOSE
WELDMENT

MATERIAL
SEE PARTS LIST

SCALE 1:1
SHEET 1 of 1
SIZE C
DRAWING NUMBER
P4105091202-300600-00