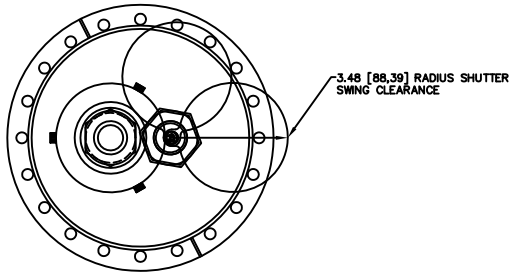
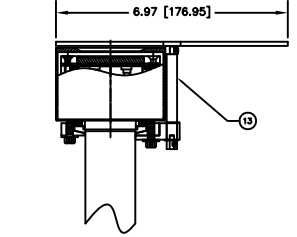
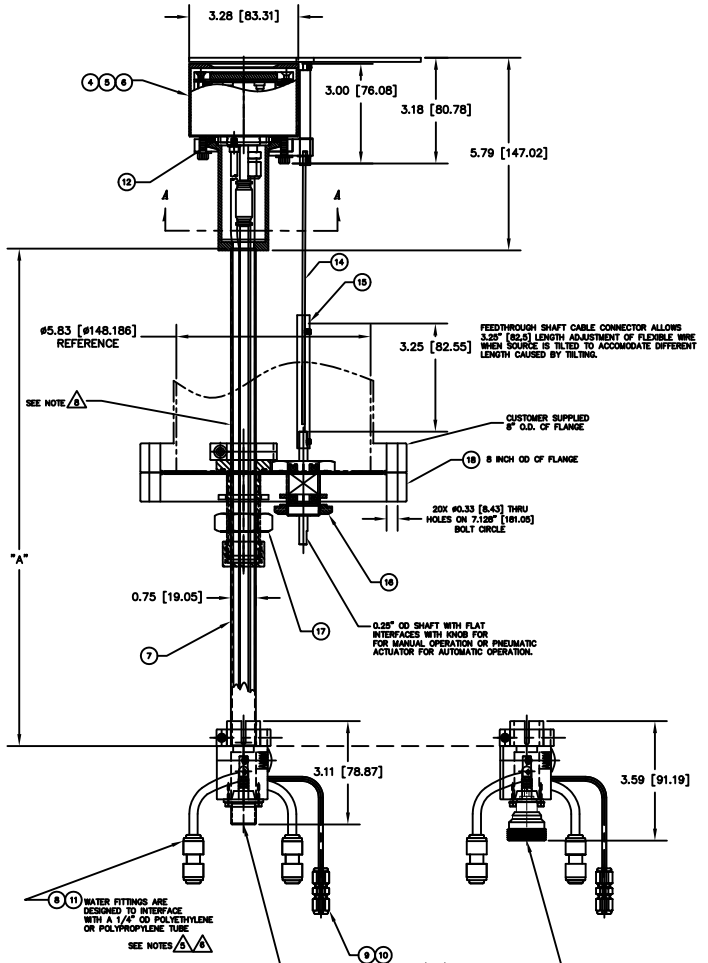


REV	DATE	BY	APP
INITIAL RELEASE	100805		
A NEW SHUTTER MECHANISM 1001017		J. MILLER	

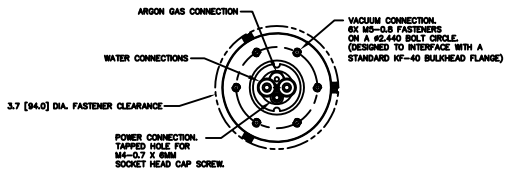
- NOTES: UNLESS OTHERWISE SPECIFIED
- INTERPRET DRAWING IAW THE GLOBAL PROFESSIONAL PUBLICATIONS "DRAWING REQUIREMENTS MANUAL", EIGHTH EDITION.
  - INTERPRET DIMENSIONS AND TOLERANCES IAW ANSI Y14.5M - 1982.
  - INTERPRET ABBREVIATIONS IAW MIL-STD-12.

- 4. GAS FITTING (INCLUDED), SWAGelok (ITEM 6) IS AVAILABLE FROM: [HTTP://WWW.SWAGELOK.COM](http://www.swagelok.com)
- 5. MINIMUM 60" LONG POLYETHYLENE LINES REQUIRED FOR SAFE OPERATION. USER MUST SUPPLY ADDITIONAL 42" LONG POLYETHYLENE WATER LINES TO MEET THIS REQUIREMENT. DO NOT SUBSTITUTE METAL WATER FITTINGS FOR ITEM 8.
- 6. WATER LINE CONNECTORS (INCLUDED, ITEM 8) ARE AVAILABLE FROM: [HTTP://WWW.JOHNQUEST.COM](http://www.johnguest.com)
- 7. MINIMUM 36" LONG TEFLON PFA LINE REQUIRED (36" INCLUDED WITH SOURCE) FOR SAFE OPERATION. DO NOT USE METAL GAS LINES TO MEET THIS REQUIREMENT - ELECTRICAL ISOLATION IS NECESSARY.
- 8. TAKE CARE NOT TO DING, SCRATCH OR GOUGE POLISHED SURFACE.
- 9. SEE MATERIALS SCIENCE, INC. DOCUMENT NO. 251011 FOR PROPER INSTALLATION, OPERATION AND USE OF POLARIS SPUTTERING SOURCES.
- 10. MASS OF SPUTTERING SOURCE ASSEMBLY FULLY ASSEMBLED IS 15 LBS., DRY.



-1, -2, AND -3 ASST SHOWN

DASH NO	DIM "A"
-1	12"
-2	18"
-3	24"



FEMALE HV CONNECTOR @ 300 WATTS MAXIMUM RF POWER LEVELS

FEMALE DN 7/16 CONNECTOR @ GREATER THAN 300 WATTS RF POWER LEVELS

QTY	UNIT	DESCRIPTION	MATERIAL SPECIFICATION	ZONE	ITEM NO		
1	1	1	00002203	8 INCH CF FLANGE, MODIFIED	19		
1	1	1	0000446	FEEDTHROUGH, 1" BASEPLATE TO 3/4" OD TUBE	17		
1	1	1	00002132	FEEDTHROUGH, ROTARY, FERROFLUID SEAL	16		
1	1	1	00002133	FEEDTHROUGH SHAFT CABLE CONNECTOR	304 CRES	15	
1	1	1	00002134	FLEXIBLE CABLE ASSEMBLY	304 CRES	14	
1	1	1	00002202	SHUTTER ASSEMBLY, 2 INCH POLARIS	304 CRES	13	
3	3	3	0000100-3	CENTERING RING, KF-40		12	
1	1	1	5	00000074-1	TUBING, 1/4" OD X .170" ID X 18"	POLYETHYLENE	11
1	1	1	7	00000038-1	TUBING, 1/8" OD X 1/16" ID X 36" MINIMUM	TEFLON PFA	10
1	1	1	00000316	FITTING, SWAGelok, SS-200-6	316 CRES	9	
2	2	2	00000281-1	1/4 INCH OD COUPLING, QUICK CONNECT	P/N C1040BW	8	
1	1	1	00000789	3/4 INCH TUBE FEEDTHROUGH ASSEMBLY	304 CRES	7	
1			00000773-1	2 INCH INTERNAL CATHODE (CLAMPED TARGET)		6	
1			00000773-2	2 INCH INT CATHODE (DIRECT WATER COOLED TGT)		5	
1			00000773-3	2 INCH INTERNAL CATHODE (BONDED TARGET)		4	
			00000931-3	2" POLARIS SOURCE, VARIABLE POSITION & TILT		3	
			00000931-2	2" POLARIS SOURCE, VARIABLE POSITION & TILT		2	
			00000931-1	2" POLARIS SOURCE, VARIABLE POSITION & TILT		1	

INSTALLATION CONTROL DRAWING

DATE: 10/10/10	BY: J. MILLER	APP: 10/10/10
MATERIALS SCIENCE, INC. Vacuum and Thin Film Technology		
2" POLARIS, VARIABLE POSITION & SHUTTER, 8" OD OF FLANGE		
NEXT ASSEMBLY	USED ON	DATE CODE: 00000931
APPLICATION	DO NOT SCALE DRAWING	SCALE: 1/1