

NOTES: UNLESS OTHERWISE SPECIFIED

1. INTERPRET DRAWING IAW THE GLOBAL PROFESSIONAL PUBLICATIONS "DRAWING REQUIREMENTS MANUAL", EIGHTH EDITION.

2. INTERPRET DIMENSIONS AND TOLERANCES IAW ANSI Y14.5M - 1982.

3. BREAK SHARP EDGES .002-015.

4. INTERPRET ABBREVIATIONS IAW MIL-STD-12.

5. SEE MATERIALS SCIENCE, INC. DOCUMENT NO. 251011 FOR PROPER INSTALLATION, OPERATION AND USE OF POLARIS SPUTTERING SOURCES.

6 GAS FITTING, SWAGelok (ITEM 5) IS INCLUDED WITH SOURCE. IT IS ALSO AVAILABLE FROM:  
HTTP://WWW.SWAGELOK.COM

7 WATER LINE TUBE UNIONS, (ITEM 4) ARE INCLUDED WITH SOURCE. THEY ARE ALSO AVAILABLE FROM:  
ALPHA TECHNOLOGIES  
320 PREMIER COURT, SUITE 222  
FRANKLIN, TN 37067  
TEL: (615) 771-6650  
APHA PART NUMBER 88040-04

8 USER SUPPLIED - MINIMUM 60"[1524] LONG POLYETHYLENE WATER LINES REQUIRED FOR SAFE OPERATION. DO NOT USE METAL WATER LINES TO MEET THIS REQUIREMENT - ELECTRICAL ISOLATION IS NECESSARY.

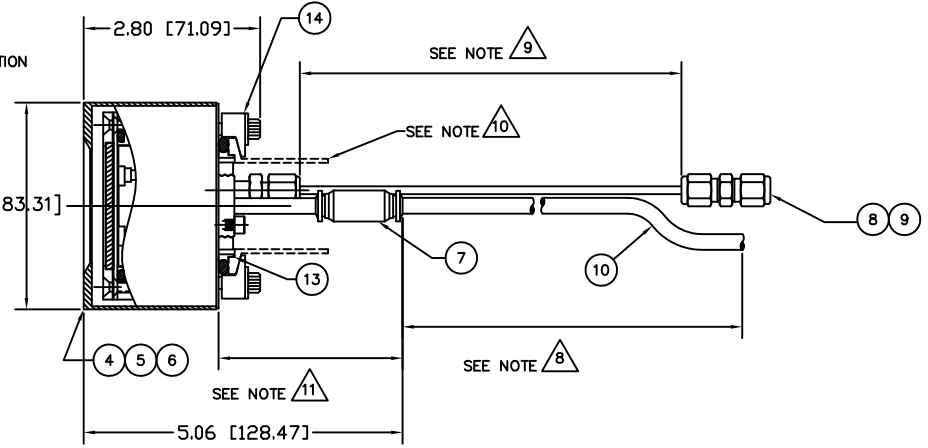
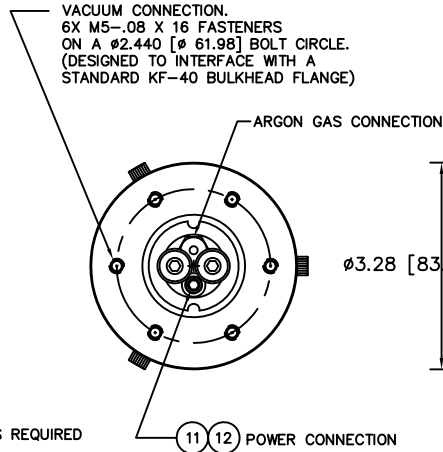
9 MINIMUM 36" [915] LONG TEFLON PFA LINE REQUIRED (36" [915] INCLUDED WITH SOURCE) FOR SAFE OPERATION. DO NOT USE METAL GAS LINES TO MEET THIS REQUIREMENT - ELECTRICAL ISOLATION IS NECESSARY.

10 THE CENTERING RING AND BULKHEAD CLAMP SET ARE INCLUDED WITH THE BASIC SPUTTERING SOURCE. FEEDTHROUGH ASSEMBLIES CAN BE PURCHASED SEPARATELY OR ARE PROVIDED BY THE USER. WATER, POWER AND GAS CONNECTIONS MUST BE MADE AT ATMOSPHERE.

11 3" [76.2] MINIMUM STRAIGHT CLEARANCE MUST BE ALLOWED FOR WATER FITTINGS PRIOR TO ANY BENDING OF BELLOWS OR RADIUS IN HARD PLUMBED FEEDTHROUGH ASSEMBLY. DO NOT LET ID OF BELLOWS RUB AGAINST WATER FITTINGS.

12. MASS OF SPUTTERING SOURCE FULLY ASSEMBLED IS 3.5 LBS [1.59 KG], DRY.

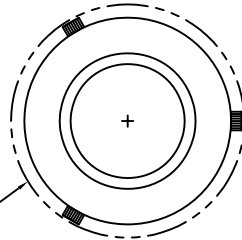
13. DIMENSIONS IN BRACKETS "[ ]" DENOTE REFERENCE DIMENSIONS IN MILLIMETERS.



-1 ASSY

TYPICAL CLAMPED TARGET ASSY SHOWN

3.7 [94.0] DIA. FASTENER CLEARANCE



QTY	UNIT	REF	NOTE	DESCRIPTION	MATERIAL SPECIFICATION	ZONE	ITEM NO		
1	1	1	10	00000016	CLAMP KIT, BULKHEAD KF-40	18-8 CRES	14		
1	1	1	10	00000100-3	CENTERING RING, KF-40, VITON O-RING	18-8 CRES	13		
1	1	1		00000070-41	SOC HD CAP SCREW, M4-.07 X 6MM LG	18-8 CRES	12		
1	1	1		000000516-2	WASHER, FLAT, M4	18-8 CRES	11		
1	1	1	8	00000074-1	TUBING, 1/4" OD X .170" ID X 60" MINIMUM	POLYETHYLENE	10		
1	1	1	9	00000038-1	TUBING, 1/8" OD X 1/16" ID X 36" MINIMUM	TEFLON PFA	9		
1	1	1	6	00000316	FITTING, SWAGelok, SS-200-6	316 CRES	8		
2	2	2	7	00000658-2	1/4 INCH OD PUSH-TO-CONNECT TUBE UNION		7		
1				00000778-3	2 INCH INTERNAL CATHODE (BONDED TARGET)		6		
	1			00000778-2	2 INCH INT CATHODE (DIRECT WATER COOLED TGT)		5		
		1		00000778-1	2 INCH INTERNAL CATHODE (CLAMPED TARGET)		4		
				00000773-3	2 INCH INTERNAL CATHODE (BONDED TARGET)		3		
				00000773-2	2 INCH INT CATHODE (DIRECT WATER COOLED TGT)		2		
				00000773-1	2 INCH INTERNAL CATHODE (CLAMPED TARGET)		1		
-3	-2	-1		CAGE CODE	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION	ZONE	ITEM NO

QUANTITY PER ASSEMBLY		DRAWN J. MILLER 07/08/14		APPROVAL		MATERIALS SCIENCE, INC. Vacuum and Thin Film Technology	
NEXT ASSEMBLY		USED ON		SCALE 1/1		REV B	
APPLICATION		DO NOT SCALE DRAWING		SHEET 1 OF 1		PARTS LIST	

# INSTALLATION CONTROL DRAWING