

- 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** WARNING:  
WATER FITTINGS HAVE A CLEAR ID OF 8MM.  
USING A SLEEVE OR SIMILAR DEVICE INSIDE THE WATER HOSE MAY CAUSE FLUID RESTRICTIONS AND INTERFERENCE WITH THE NORMAL OPERATION OF THE CATHODE AND THEREFORE IS NOT RECOMMENDED.

**5** WATER CHANNELS ARE SYMMETRICAL THROUGHOUT. ORIENTATION OF WATER INLET OR OUTLET IS NOT CRITICAL.

**6** WARNING:  
MINIMUM HOSE LENGTH OF 60" [1524MM] IS REQUIRED TO ENSURE RESISTIVITY RELATIVE TO ELECTRICAL GROUND WITHIN 50 KILO OHMS. TEST CABLE WITH AN OHM METER OR OTHER SUITABLE DEVICE BEFORE USE. DO NOT USE METAL TUBING! POLYETHYLENE RECOMMENDED.

**7** SWAGELOCK UNION FITTING, 1/8" OD TUBE IS SUPPLIED WITH SOURCE AND ALSO AVAILABLE FROM SWAGelok COMPANY [HTTP://WWW.SWAGELOK.COM](http://www.swagelok.com) OR SAN DIEGO FLUID SYSTEM TECHNOLOGIES 6350 NANCY RIDGE DRIVE, SUITE 101 SAN DIEGO, CA 92121 (658) 320-4000 SWAGelok P/N SS-200-6

SWAGelok FITTING, 1/8" OD TUBE IS WELDED TO UTILITY CONNECTION MODULE.

**8** TUBING, TEFLON, PFA IS AVAILABLE FROM:  
MC MASTER CARR  
9630 NORWALK BLVD  
SANTA FE SPRINGS, CA 90670-2932  
VOICE: (310) 692-5911  
FAX: (310) 695-2323  
MCMaster-CARR P/N 5180K51  
DO NOT USE METAL GAS LINES TO MEET THIS REQUIREMENT - ELECTRICAL ISOLATION IS NECESSARY.

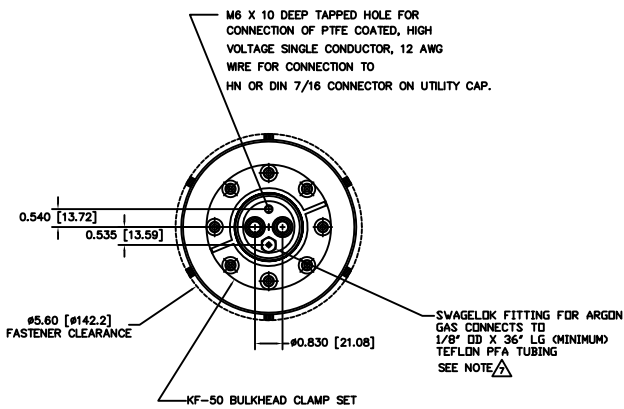
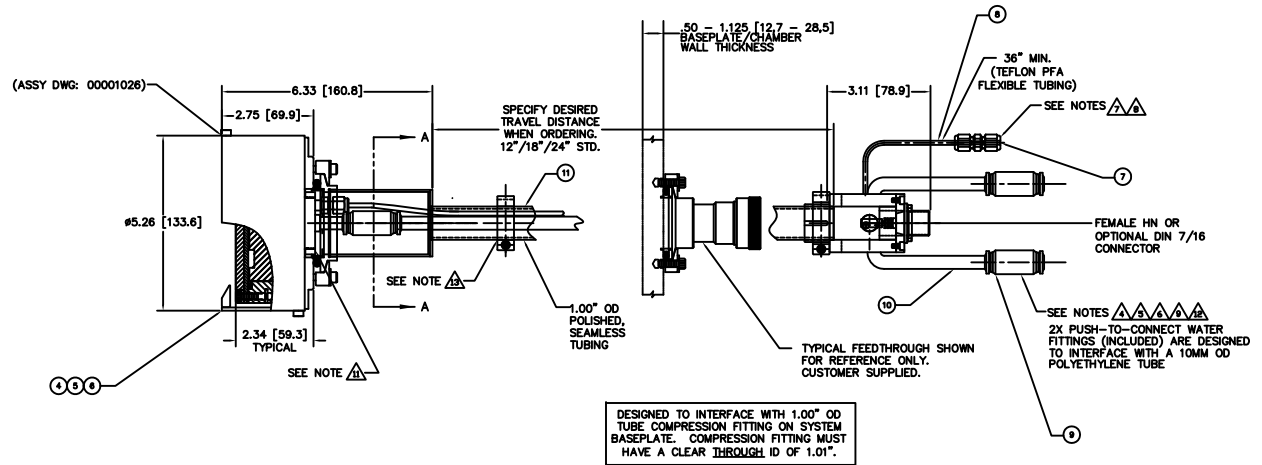
**9** WATER LINE TUBE UNION, IS AVAILABLE FROM:  
ALPHA TECHNOLOGIES  
320 PREMIER COURT, SUITE 222  
FRANKLIN, TN 37067  
TEL: (615) 771-6650  
ALPHA PART NUMBER 50040N 10

10. SEE MATERIALS SCIENCE, INC. DOCUMENT NO. 251092 FOR PROPER INSTALLATION, OPERATION AND USE OF SUNSOURCE SPUTTERING SOURCES.

**11** MATERIALS SCIENCE P/N 00000680 SPANNER WRENCH REQUIRED TO TIGHTEN NUT. FEDERAL SPEC GGG-W-665b. ADJUSTABLE UP TO 2". OVERALL LENGTH: 6 3/8" PIN DIAMETER: 3/16" PIN HEIGHT: 1/8"

**12** 10MM O.D. WATER TUBES AND PUSH-TO-CONNECT UNIONS CAN BE REPLACED WITH 3/8" O.D. WATER LINES (OR 1/2" OD FOR HIGH POWER APPLICATIONS). CONTACT FACTORY.

**13** WRAP TUBE WHERE CLAMP WILL BE LOCATED WITH TEFLON TAPE PRIOR TO TIGHTENING ITEM 6 COMPRESSION CLAMP. TAKE CARE NOT TO DING, SCRATCH OR GOUGE POLISHED SURFACE.



DESIGNED TO INTERFACE WITH 1.00" OD TUBE COMPRESSION FITTING ON SYSTEM BASEPLATE. COMPRESSION FITTING MUST HAVE A CLEAR THROUGH ID OF 1.01".

QTY	UNIT	DESCRIPTION	MATERIAL SPECIFICATION	ZONE	ITEM NO			
		00002969	RF/DC FEEDTHRU ASSY, 1" OD TUBE/KF-50		12			
1	1	1	00002969		11			
2	2	2	N/A		10			
2	2	2	TUBING, 10MM OD X 8MM ID X 1524MM LONG	POLYETHYLENE	9			
2	2	2	PUSH TO CONNECT TUBE UNION, 10MM OD TUBE	BRASS	10			
1	1	1	0000038-1	TUBING, 1/8" OD X 1/16" ID X 36" MINIMUM	TEFLON PFA	8		
1	1	1	00000316	UNION, SWAGELOK, SS-200-6	316 CRES	7		
1			00001026-3	4 INCH INTERNAL CATHODE (CLAMPED TARGET)	6			
1			00001026-2	4 INCH INT CATHODE (DIRECT WATER COOLED TGT)	5			
1			00001026-1	4 INCH INTERNAL CATHODE (BONDED TARGET)	4			
			00001088-3	4" DIA. INTERNAL SUNSOURCE, 1" OD TUBE FEEDTHRU	3			
			00001088-2	4" DIA. INTERNAL SUNSOURCE, 1" OD TUBE FEEDTHRU	2			
			00001088-1	4" DIA. INTERNAL SUNSOURCE, 1" OD TUBE FEEDTHRU	1			
-3	-2	-1	CAGE CODE	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION	ZONE	ITEM NO

APPROVED: J. MILLER 10/00/10

DATE: 10/00/10

DESIGNED BY: J. MILLER

1440

NEXT ASSEMBLY USED ON: APPLICATION

DO NOT SCALE DRAWING

SUNSOURCE, 4" DIA., 1" OD TUBE RF/DC FEEDTHROUGH ASSEMBLY

00001088

1/1

INSTALLATION CONTROL DRAWING