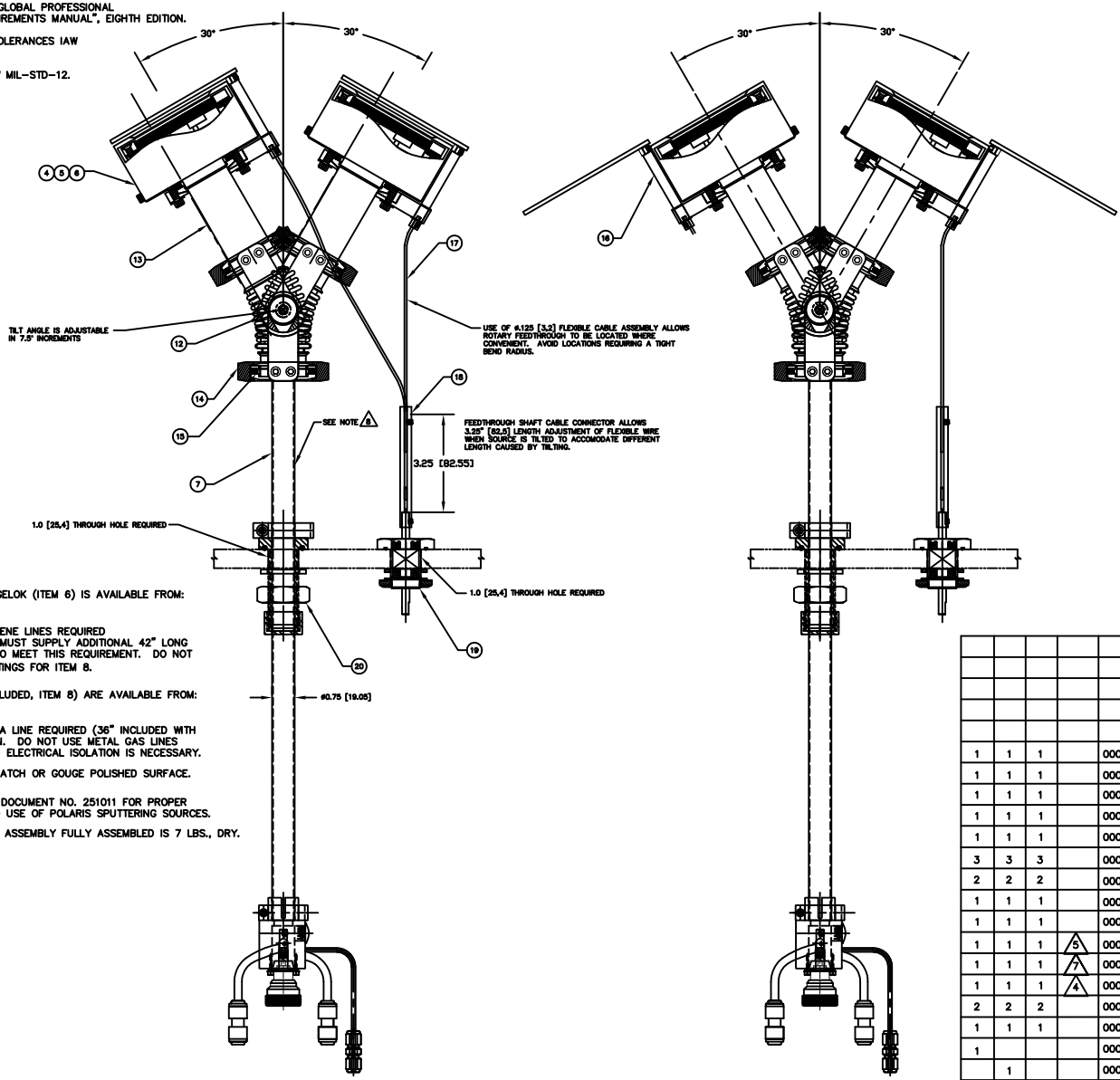


REV	DESCRIPTION	DATE	APPROVED
INITIAL RELEASE		100805	

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. INTERPRET ABBREVIATIONS IAW MIL-STD-12.

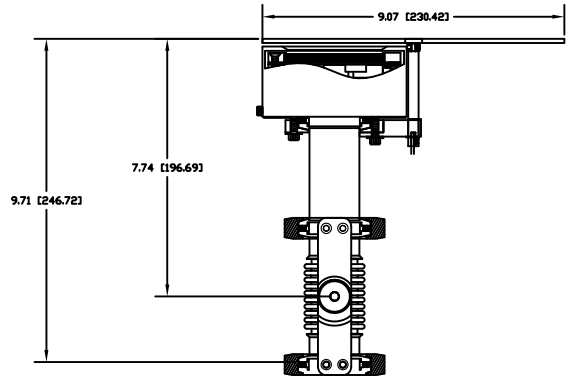


- A** GAS FITTING (INCLUDED), SWAGELOK (ITEM 6) IS AVAILABLE FROM: [HTTP://WWW.SWAGELOK.COM](http://www.swagelok.com)
 - 5** MINIMUM 60" LONG POLYETHYLENE LINES REQUIRED FOR SAFE OPERATION. USER MUST SUPPLY ADDITIONAL 42" LONG POLYETHYLENE WATER LINES TO MEET THIS REQUIREMENT. DO NOT SUBSTITUTE METAL 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 7 LBS., DRY.

QTY	UNIT	QTY	UNIT	CASE CODE	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION	ZONE	ITEM NO
									25
									24
									23
									22
									21
1	1	1			00000446	FEEDTHROUGH, 1" BASEPLATE TO 3/4" OD TUBE			20
1	1	1			00002132	FEEDTHROUGH, ROTARY, FERROFLUID SEAL			19
1	1	1			00002133	FEEDTHROUGH SHAFT CABLE CONNECTOR	304 CRES		18
1	1	1			00002134	FLEXIBLE CABLE ASSEMBLY	304 CRES		17
1	1	1			00000939	SHUTTER ASSEMBLY, 3 INCH POLARIS	304 CRES		16
3	3	3			00000100-3	CENTERING RING, KF-40			15
2	2	2			00002146	CLAMP, KF-40, STAINLESS STEEL	304 CRES		14
1	1	1			00000941	NIPPLE, KF-40 X 3.20 LONG	316 CRES		13
1	1	1			00000940	TILT MECHANISM ASSEMBLY, POLARIS GEN II			12
1	1	1		A	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		A	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			00002201	3/4 INCH TUBE FEEDTHROUGH ASSEMBLY	304 CRES		7
1					00002085-3	3 INCH INTERNAL CATHODE (CLAMPED TARGET)			6
1					00002085-2	3 INCH INT CATHODE (DIRECT WATER COOLED TGT)			5
1					00002085-1	3 INCH INTERNAL CATHODE (BONDED TARGET)			4
					00002118-3	3" POLARIS SOURCE, VARIABLE, TILT & SHUTTER			3
					00002118-2	3" POLARIS SOURCE, VARIABLE, TILT & SHUTTER			2
					00002118-1	3" POLARIS SOURCE, VARIABLE, TILT & SHUTTER			1
-3	-2	-1							

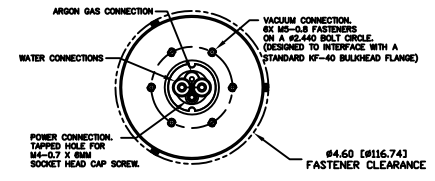
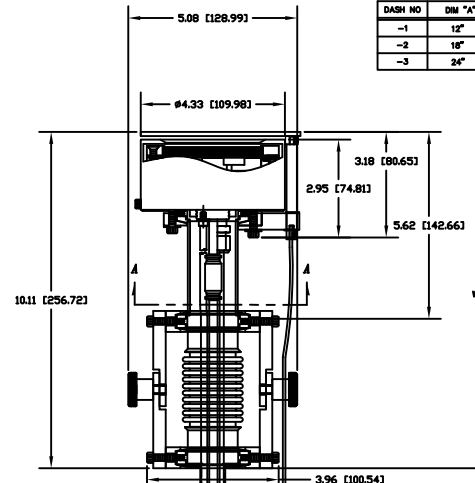
INSTALLATION CONTROL DRAWING

QUANTITY FOR ASSEMBLY	CASE CODE	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION	ZONE	ITEM NO
412			3" POLARIS, VARIABLE POSITION TILT, SHUTTER - 1" FEEDTHRU			00002118
APPLICATION	USED ON	DO NOT SCALE DRAWING	DATE: 10/08/00 DRAWN BY: J. MILLER CHECKED BY: J. MILLER APPROVED BY: J. MILLER MATERIALS SCIENCE, INC. Vacuum and Thin Film Technology			

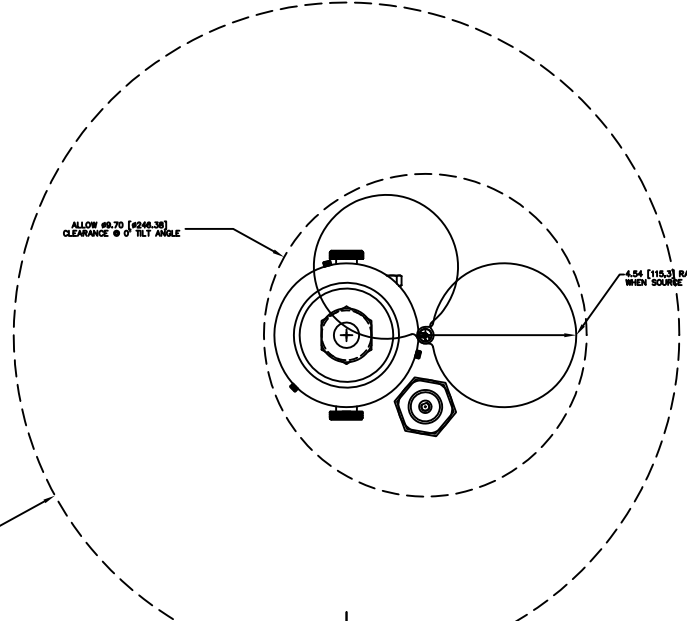


-1, -2, AND -3 ASSY SHOWN

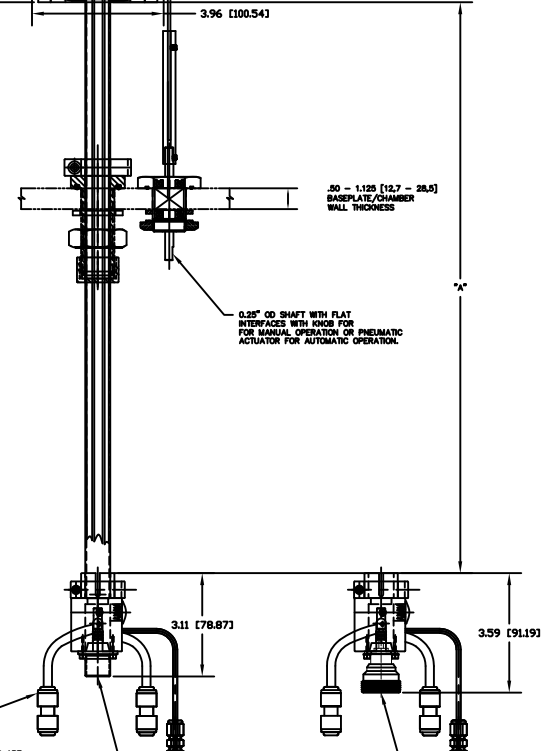
DASH NO	DIM "A"
-1	12"
-2	18"
-3	24"



SECTION "A-A"



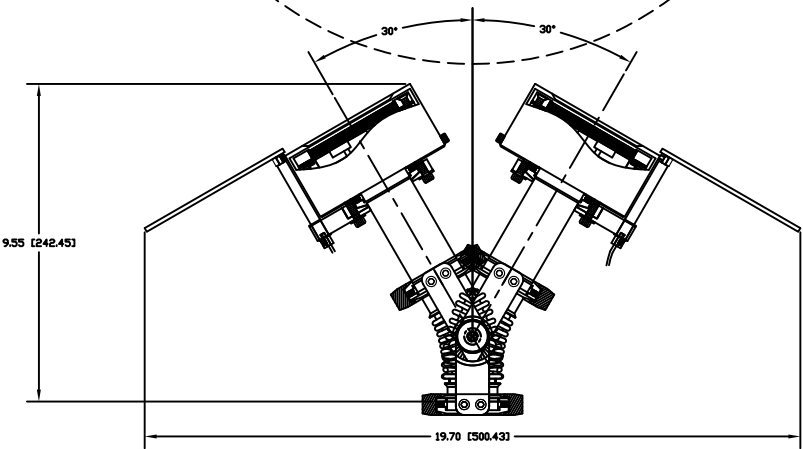
TOP VIEW



⑧ ⑩ WATER FITTINGS ARE DESIGNED TO INTERFACE WITH A 1/4" OD POLYETHYLENE OR POLYPROPYLENE TUBE. SEE NOTES A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z.

⑨ FEMALE HN CONNECTOR @ 300 WATTS MAXIMUM RF POWER LEVELS.

⑩ FEMALE DIN 7/16 CONNECTOR @ GREATER THAN 300 WATTS RF POWER LEVELS.



00002118