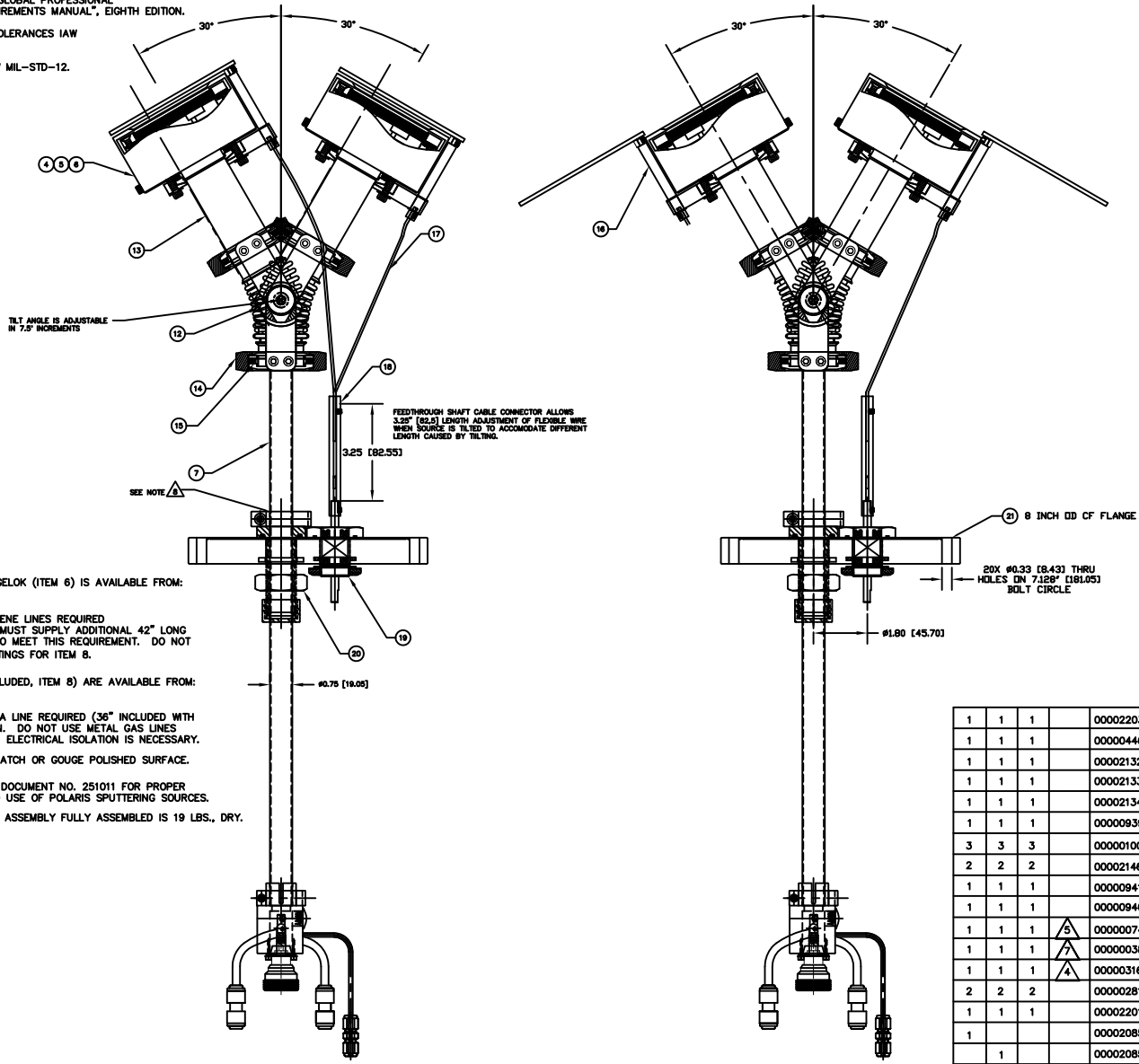


REV	DESCRIPTION	DATE	APPROVED
INITIAL RELEASE		100831	

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.



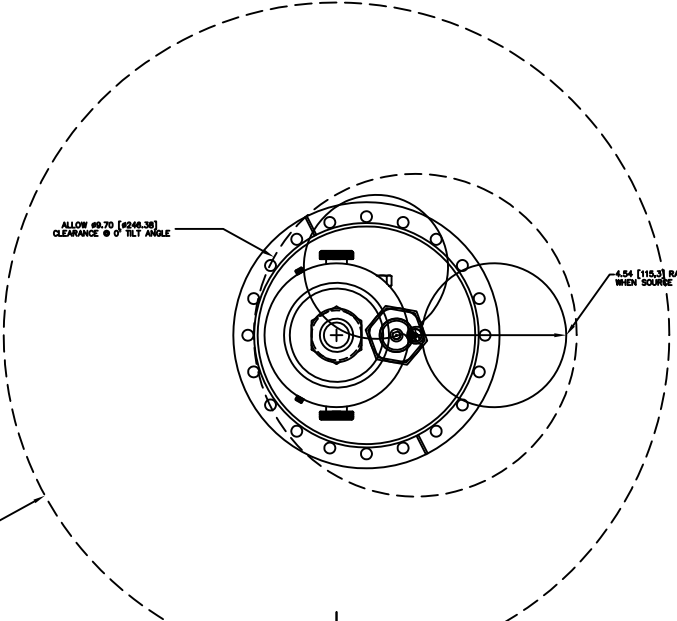
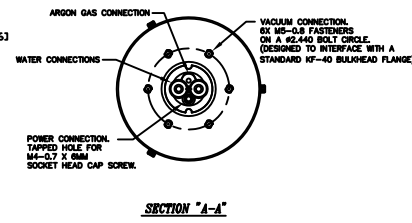
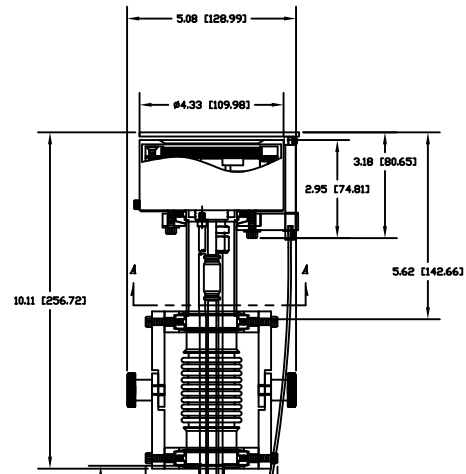
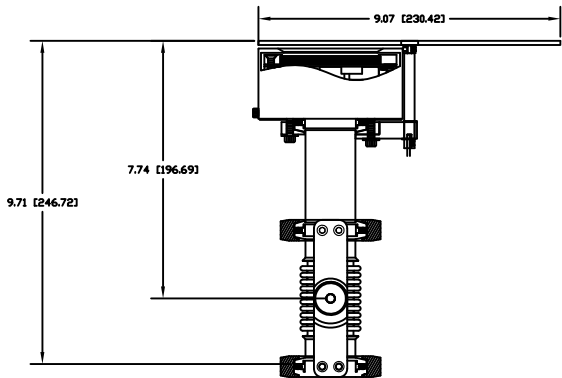
- ▲ GAS FITTING (INCLUDED), SWAGelok (ITEM 6) IS AVAILABLE FROM: [HTTP://WWW.SWAGELOK.COM](http://www.swagelok.com)
 - ▲ MINIMUM 60" LONG POLYETHYLENE LINES REQUIRED FOR SAFE OPERATION. USER MUST SUPPLY ADDITIONAL 42" LONG POLYETHYLENE WATER LINES TO MEET THIS REQUIREMENT. DO NOT SUBSTITUTE METAL WATER FITTINGS FOR ITEM 8.
 - ▲ WATER LINE CONNECTORS (INCLUDED, ITEM 8) ARE AVAILABLE FROM: [HTTP://WWW.JOHNQUEST.COM](http://www.johnguest.com)
 - ▲ 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.
 - ▲ 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 19 LBS., DRY.

QTY	REV	DESCRIPTION	MATERIAL SPECIFICATION	ZONE	ITEM NO	
1	1	1	00002203	8 INCH CF FLANGE, MODIFIED	304 CRES	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	▲ 00000074-1	TUBING, 1/4" OD X .170" ID X 18"	POLYETHYLENE	11
1	1	1	▲ 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	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
1			00002157-3	3" POLARIS SOURCE, VARIABLE, TILT & SHUTTER		3
1			00002157-2	3" POLARIS SOURCE, VARIABLE, TILT & SHUTTER		2
1			00002157-1	3" POLARIS SOURCE, VARIABLE, TILT & SHUTTER		1

INSTALLATION CONTROL DRAWING

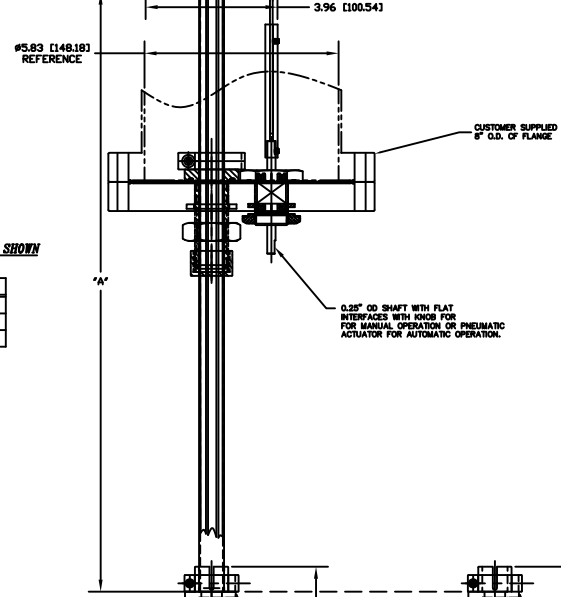
QUANTITY FOR ASSEMBLY	-3	-2	-1	CAGE CODE	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION	ZONE	ITEM NO
APPLICATION									
USED ON									
DO NOT SCALE DRAWING									

DATE: 10/08/81
 DRAWN BY: J. MILLER
 CHECKED BY: [Signature]
 APPROVED BY: [Signature]
 MATERIALS SCIENCE, INC.
 Vacuum and Thin Film Technology
 3" POLARIS, VARIABLE POSITION TILT, SHUTTER - 8" CF FLANGE
 PART NO: 00002157
 REV: 1/1
 SHEET 2 OF 2

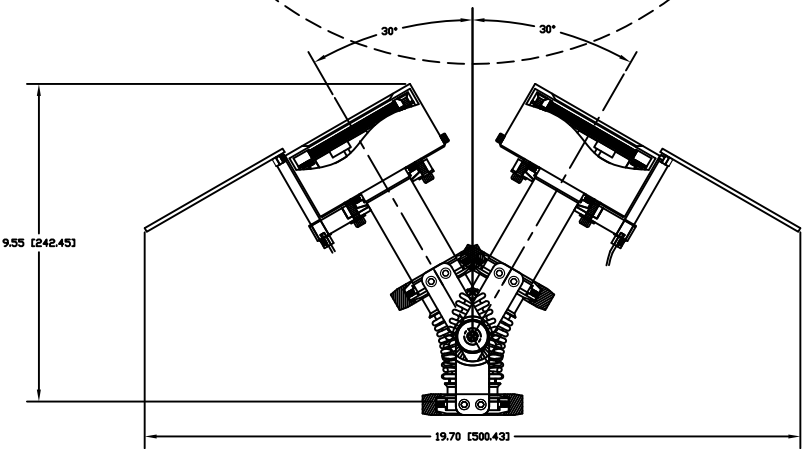


-1, -2, AND -3 ASSY SHOWN

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



ALLOW Ø0.00 [Ø0.00] CLEARANCE @ 30° TILT ANGLE



⑩ WATER FITTINGS ARE DESIGNED TO INTERFACE WITH A 1/4" OD POLYETHYLENE OR POLYPROPYLENE TUBE. SEE NOTES A, B, C.

FEMALE 1/8" CONNECTOR @ 500 WATTS MAXIMUM IF POWER LEVELS.

⑪ SEE NOTE A, B, C.

FEMALE DN 7/16 CONNECTOR @ GREATER THAN 500 WATTS IF POWER LEVELS.

00002157