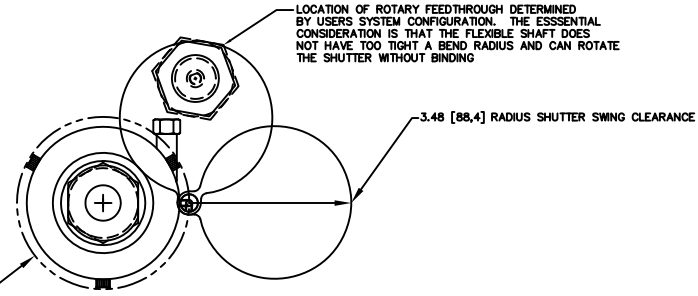


| REV             | DATE   | DESCRIPTION | BY | APP'D |
|-----------------|--------|-------------|----|-------|
| INITIAL RELEASE | 101119 |             |    |       |

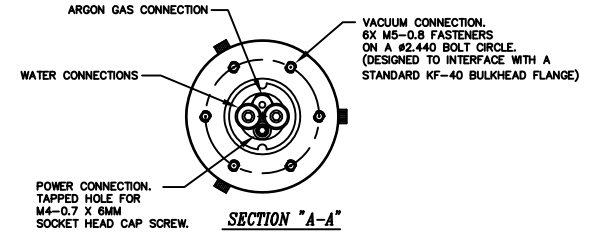
- NOTES: UNLESS OTHERWISE SPECIFIED
- INTERPRET DRAWING IAW THE GLOBAL PROFESSIONAL PUBLICATIONS "DRAWING REQUIREMENTS MANUAL", EIGHTH EDITION.
  - INTERPRET DIMENSIONS AND TOLERANCES IAW ANSI Y14.5M - 1982.
  - INTERPRET ABBREVIATIONS IAW MIL-STD-12.

- SPECIFY LOCATION AND ORIENTATION OF ROTARY FEEDTHROUGH RELATIVE TO SPUTTERING SOURCE TO ALLOW PROPER FLEXIBLE CABLE ASSEMBLY LENGTH TO BE SUPPLIED.
- LENGTH OF POWER CENTER CONDUCTOR CABLE ASSY (PART OF ITEM 4) IS FOR A STANDARD 1/2" BASEPLATE/CHAMBER WALL CONFIGURATION. PLEASE SPECIFY CHAMBER WALL THICKNESS WHEN ORDERING TO ENSURE PROPER CABLE LENGTH AT TIME OF ASSY.
- GAS FITTING (INCLUDED), SWAGELOK (ITEM 9) 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.
- SEE MATERIALS SCIENCE, INC. DOCUMENT NO. 251011 FOR PROPER INSTALLATION, OPERATION AND USE OF POLARIS SPUTTERING SOURCES.
- MASS OF SPUTTERING SOURCE FULLY ASSEMBLED IS 5 LBS., DRY.

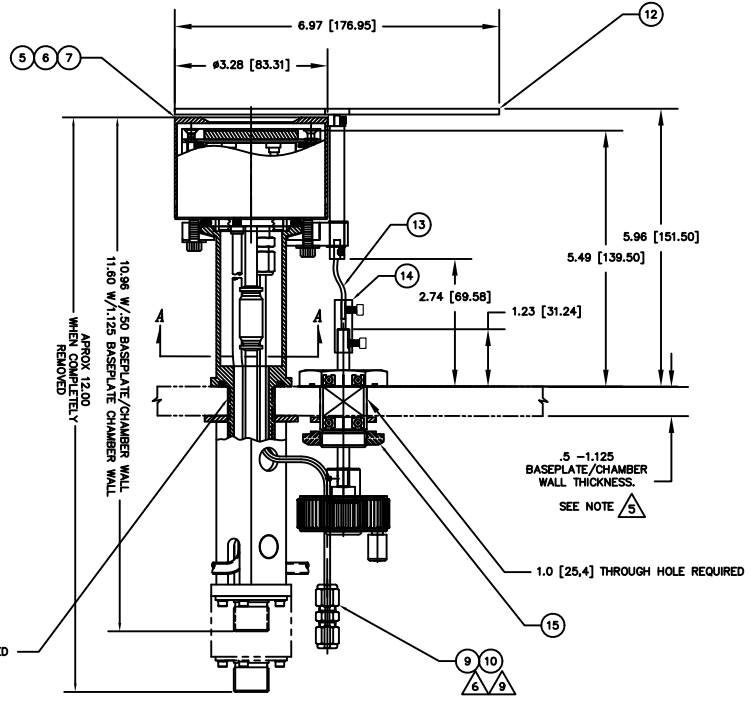
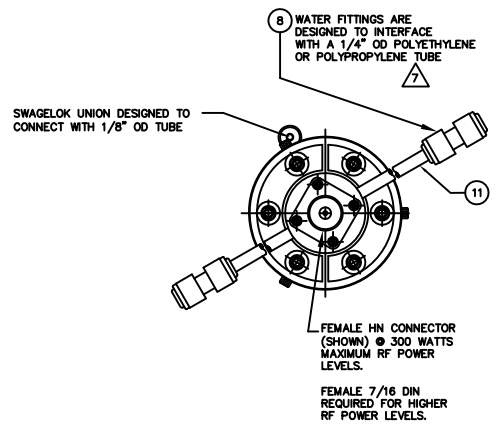


Ø3.70 [Ø93.98] FASTENER CLEARANCE

TOP VIEW



SECTION "A-A"



-1, -2, AND -3 ASSY SHOWN

INSTALLATION CONTROL DRAWING

| QTY | REV | CASE CODE | PART OR IDENTIFYING NO. | NOMENCLATURE OR DESCRIPTION              | MATERIAL SPECIFICATION | ZONE | ITEM NO |
|-----|-----|-----------|-------------------------|--|------------------------|------|---------|
| 1   | 1   |           | 00002132                | FEEDTHROUGH, ROTARY, FERROFLUID SEAL     |                        |      | 15      |
| 2   | 2   |           | 00002245                | FEEDTHROUGH SHAFT CABLE CONNECTOR        | 18-8 CRES              |      | 14      |
| 1   | 1   |           | 00002134                | FLEXIBLE CABLE ASSEMBLY                  |                        |      | 13      |
| 1   | 1   |           | Ø 00002202              | SHUTTER ASSEMBLY, 2 INCH POLARIS         |                        |      | 12      |
| 1   | 1   |           | Ø 0000074-1             | TUBING, 1/4" OD X .170" ID X 18"         | POLYETHYLENE           |      | 11      |
| 1   | 1   |           | Ø 0000038-1             | TUBING, 1/8" OD X 1/16" ID X 36" MINIMUM | TEFLON PFA             |      | 10      |
| 1   | 1   |           | 00000316                | FITTING, SWAGELOK, SS-200-6              | 316 CRES               |      | 9       |
| 2   | 2   |           | 00000281-1              | 1/4 INCH OD COUPLING, QUICK CONNECT      | P/N C1040BW            |      | 8       |
| 1   |     |           | 00000773-3              | 2 INCH POLARIS SOURCE (BONDED TARGET)    |                        |      | 7       |
|     | 1   |           | 00000773-2              | 2 INCH POLARIS SOURCE (WATER COOLED TGT) |                        |      | 6       |
|     | 1   |           | 00000773-1              | 2 INCH POLARIS SOURCE (CLAMPED TARGET)   |                        |      | 5       |
| 1   | 1   |           | 00000787-1              | RF FEEDTHROUGH ASSY, KF-40 /1" BASEPLATE |                        |      | 4       |
|     |     |           | 00002244-3              | 2 INCH POLARIS ASSEMBLY, SHUTTER         |                        |      | 3       |
|     |     |           | 00002244-2              | 2 INCH POLARIS ASSEMBLY, SHUTTER         |                        |      | 2       |
|     |     |           | 00002244-1              | 2 INCH POLARIS ASSEMBLY, SHUTTER         |                        |      | 1       |

|                       |      |           |          |      |
|-----------------------|------|-----------|----------|------|
| APPROVED FOR ASSEMBLY | DATE | BY        | DATE     | BY   |
|                       |      | J. MILLER | 10/11/18 |      |
| DESIGNED BY           | DATE | BY        | DATE     | BY   |
|                       |      |           |          |      |
| CHECKED BY            | DATE | BY        | DATE     | BY   |
|                       |      |           |          |      |
| DATE                  | BY   | DATE      | BY       | DATE |
|                       |      |           |          |      |
| DATE                  | BY   | DATE      | BY       | DATE |
|                       |      |           |          |      |
| DATE                  | BY   | DATE      | BY       | DATE |
|                       |      |           |          |      |

2" POLARIS, 1" BASEPLATE FEEDTHRU WITH SHUTTER

00002244

1/1