

Jordan TOF Products, Inc.

Formerly R. M. Jordan Co., Inc.

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ANGULAR REFLECTRON D-850

Designed for the researcher who requires higher resolution than can be obtained using our linear instruments. Modular construction from standard vacuum hardware makes custom variations or later modifications easy. Although this type of equipment is complicated in theory, it is mechanically quite simple and easy to use. Reports indicate that our customers spend very little time getting their systems up and running.

Resolution of 1500 has been obtained without extensive tweaking or other techniques to enhance initial performance. Resolution of over 4000 has been obtained when used with our Shroud, Skimmer, Pulsed Valve and EGUN. Sensitivity has so far been good with both pulsed beam and surface ablation experiments. This is probably due to the use of high (1,200) drift velocities.

BELOW ITEM NUMBERS REFER TO DRAWING AREFLILL

- 1. C-870 Ion Source Assy** consists of Repeller Plate, Extraction Grid, Acceleration Grid, Einsel Lenses and Steering plates. It is designed to protrude into the vacuum chamber approximately 6 inches from the face of an 8" O.D. CONFLAT flange.
- 3. C-854 Offset Adaptor Assy** is the chamber to Flight tube adaptor which provides the correct offset from the Reflector centerline and serves as a mounting base for the 40mm MCP Detector (item #3) and its 50 ohm Anode.
- 5. C-726 40mm Detector Assy** with 50 ohm anode can be furnished in dual (standard) or Z-gap configuration for additional sensitivity with high mass ions.
- 6. C-855 Flight Tube Assy** fabricated from 8" tubing with 10" O.D. CONFLAT flanges on each end. A 6.0" CONFLAT port can be used for differential or supplemental pumping. A 2.75" CONFLAT port is available for pressure gage, or midrange access to the ion beam.
- 8. C-852 Reflector Assy** is composed of an entry grid which is normally at ground or Flight Tube potential. Behind this is the first Repeller Grid, followed by several plates that give a uniform repelling field. More plates are used than are actually required in order to guarantee uniformity and prevent ion scattering and loss of sensitivity. The last element is the Repeller Grid which can run at reflection potential, or grounded to enable the ions to pass through and be detected by the 18mm Linear Mode Detector (item #6).
- 9. C-701 18mm MCP Detector Assy** is mounted on a 6" O.D. CONFLAT flange with 50 ohm Anode. It is used to detect ions when the instrument is used in the linear mode. It will also detect more energetic ions that pass through the Repeller Grid, while less energetic ions are reflected.

AREF POWER SUPPLY D-803

The Angular Reflectron (AREF) Power Supply was designed to be a single, compact source for the voltages used in a typical angular reflectron spectrometer. Choice of this unit should curtail instrument clutter in the immediate vicinity of the experiment. All six voltages are monitored by the same meter. A voltage is only displayed while its monitor button is held down. Each end of every cable is labeled to match the receptacle to which it connects.

PHYSICAL SPECIFICATIONS

Cabinet Size	19.0"W. X 14.5"D. X 5.25"H.
Cabinet Weight	20.5 Lb.

SERVICE REQUIREMENTS

Input Power	100/120/220/240 Volts 1 Phase, 50-60 Hz
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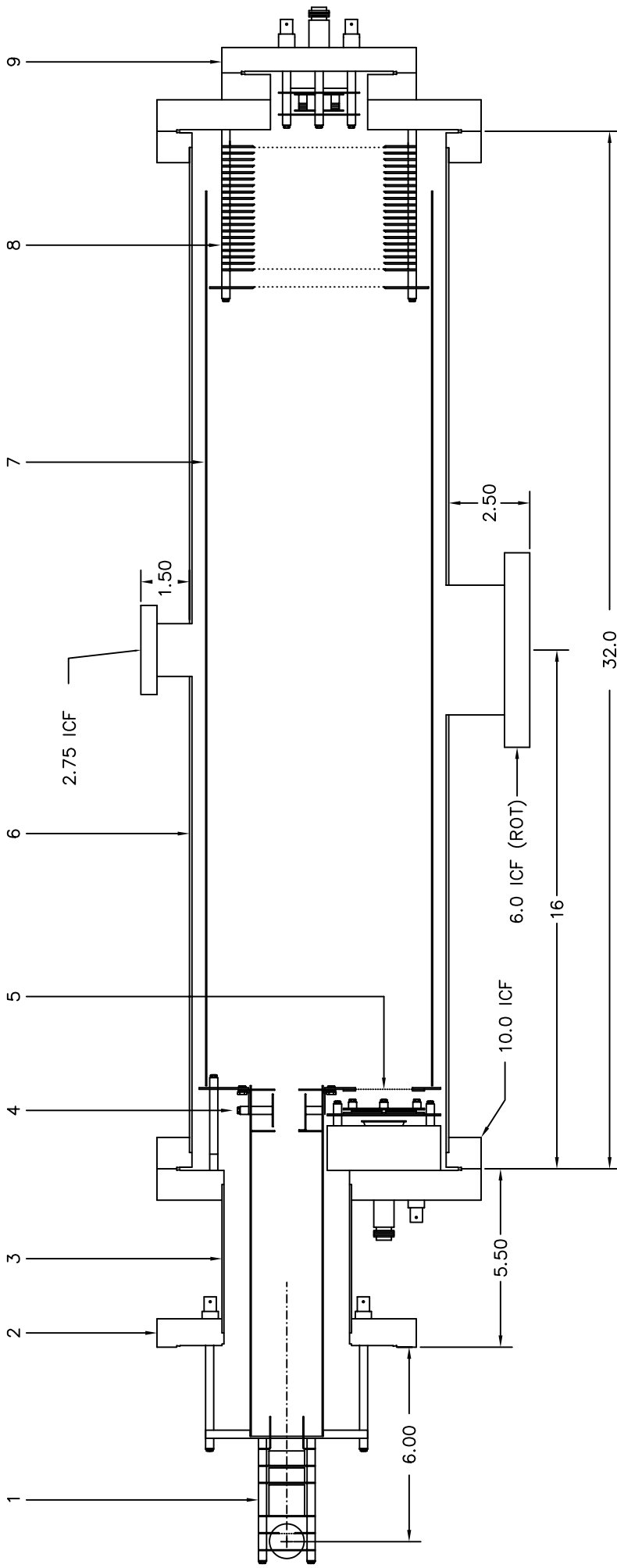
ELECTRICAL SPECIFICATIONS

Output Voltages	<u>VD.</u> 0 to -5000 Volts to Detector Divider Box
	<u>VA1.</u> 0 to +4500 Volts D.C. to Repeller A1
	<u>VA 2.</u> 0 to +4500 Volts D.C. to Extraction Grid A2
	<u>VXY.</u> 0 to +4500 Volts D.C. to Steering Plate_XY
	<u>VR1.</u> 0 to +4500 Volts D.C. to Reflector R1
	<u>VR2.</u> 0 to +4500 Volts D.C. to Reflector R2

Cables are furnished for all outputs. Those to the Source elements are 8' long. Those to the Detector Divider Box and Reflector are 10' long. Short (8") cables are furnished to connect the Detector with the Divider Box.

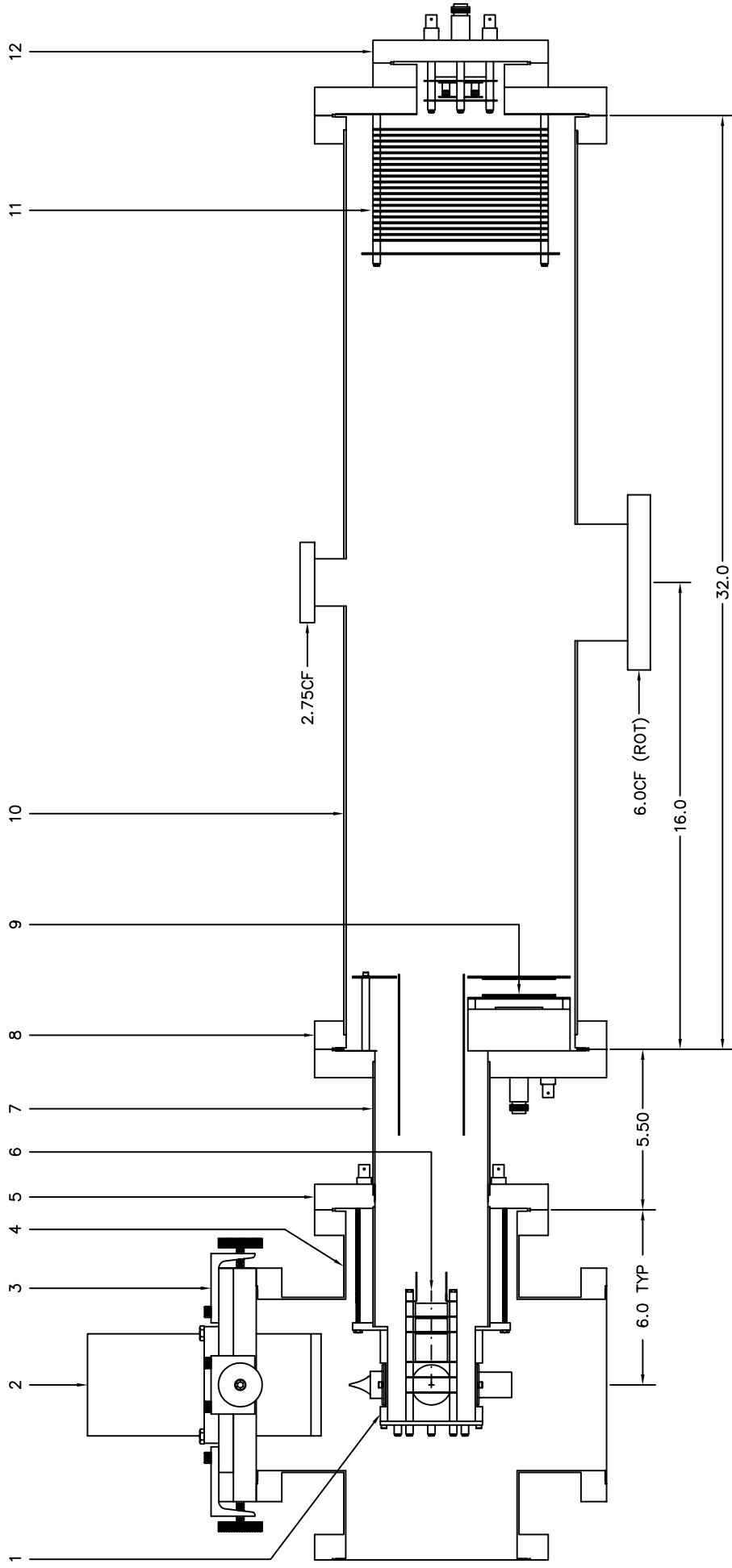
Polarity of the above voltages can be reversed by replacing the internal module with one of negative polarity.

Output Stability and Maximum Ripple	5mv at 5KV.
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1. C-870 ION SOURCE ASSY.
2. 6.0CF OR LARGER (ROT) SOURCE FLANGE
3. C-854 OFFSET ADAPTOR ASSY.
4. C-872 MASS GATE ASSY. (SHOWN 90 DEG.)
5. C-726 40MM MCP DETECTOR
6. C-855 FLIGHT TUBE ASSY.
7. D-679 FLIGHT TUBE LINER
8. C-852 REFLECTOR
9. C-701 18MM MCP DETECTOR

AREF/LINER/MASS GATE
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- 1. B-682 SHROUD/SKIMMER/DIFFERENTIAL PUMPING
- 2. C-211 PULSE VALVE
- 3. C-224 THREE AXIS MOUNT
- 4. TEST CHAMBER (PER QUOTE)
- 5. 8.0CF (ROT) SOURCE MOUNTING FLANGE
- 6. C-870S ION SOURCE ASSY
- 7. C-854 OFFSET ADAPTOR
- 8. 10.0CF FLANGE
- 9. C-726 40MM MCP DETECTOR
- 10. C-855 FLIGHT TUBE ASSY
- 11. C-852 REFLECTOR ASSY
- 12. C-701 18MM MCP DETECTOR

AREF/SHROUD/PSV
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NOTES:
MATERIAL = 2 X 2 X .062 STEEL TUBE
AND 1 X 2 X .094 STEEL TUBE
TOP CROSS MEMBERS ARE ADJUSTABLE

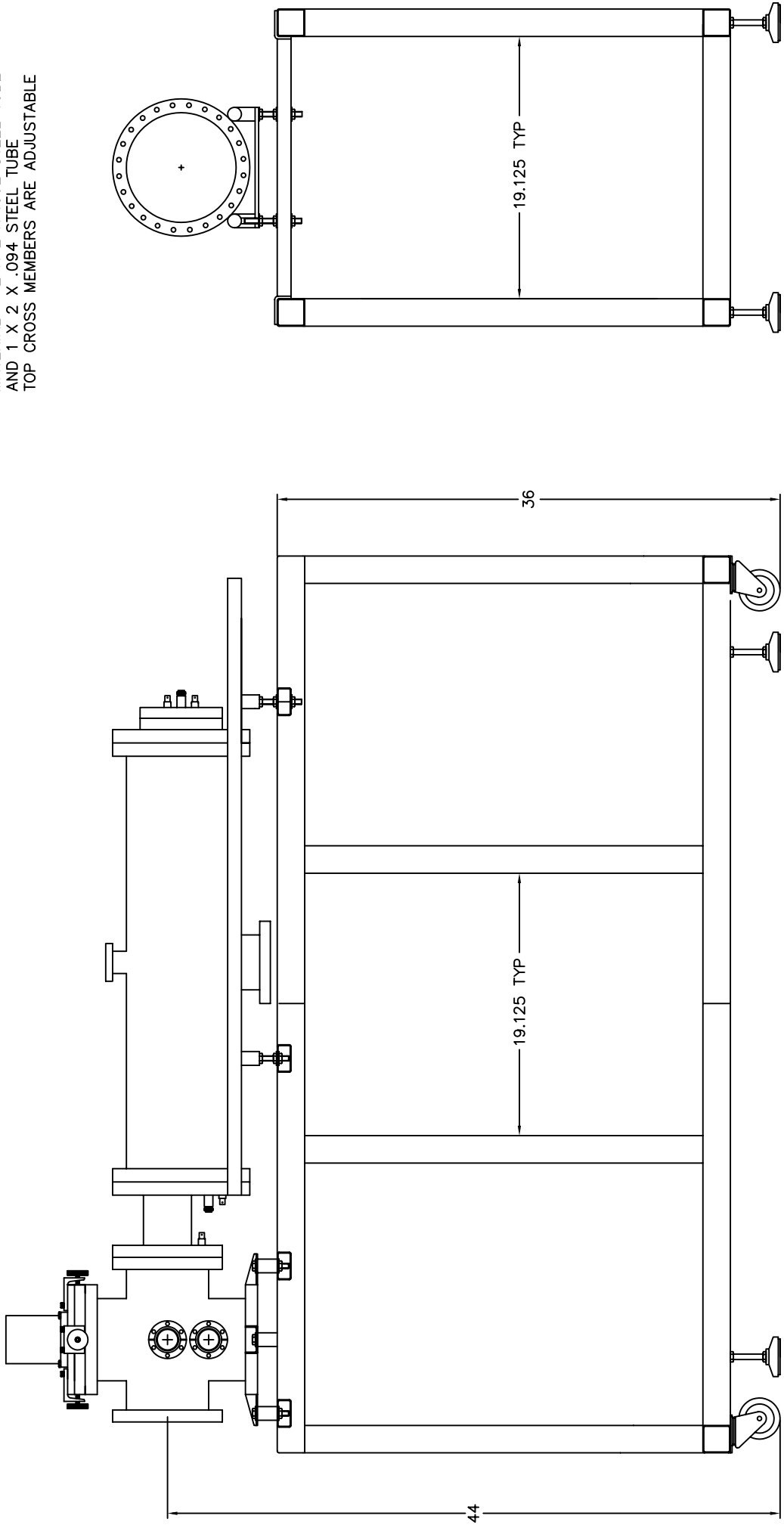


ILLUSTRATION DRAWING/AREFS
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