

by EXEL Orbital Systems

# Orbital Welding Catalog

Version 2, November 2005



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# Power Supply

# EPS-2000 Power Supply



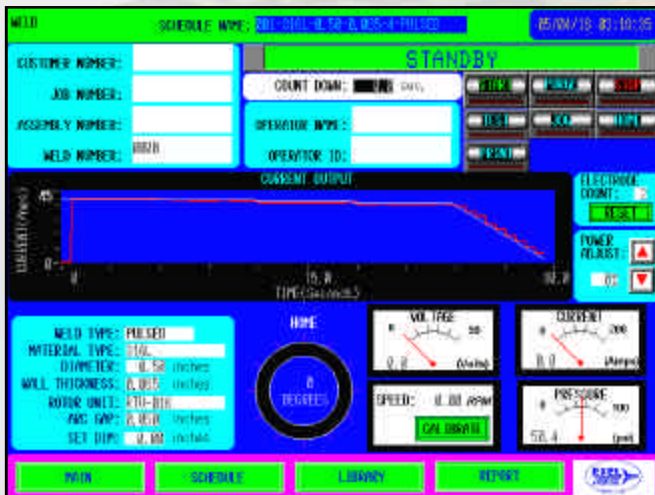
# EPS-2000

## EXEL Blue Power Supply



EPS-2000 Power Supply

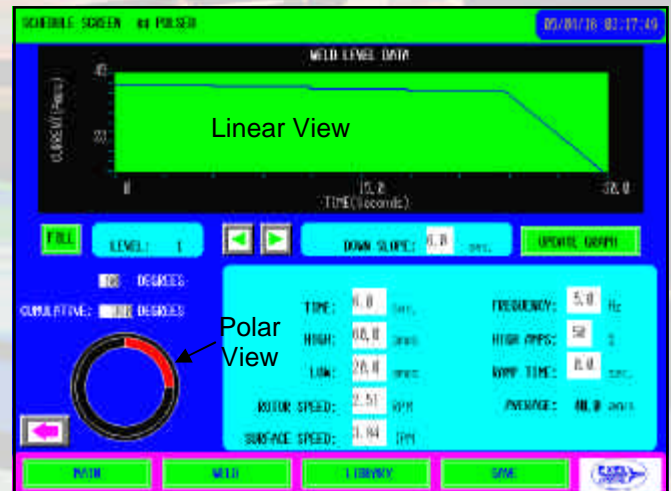
The **EPS-2000 Power Supply** is a DC Orbital Welding Power Supply with 200 amp capability, when using 3 phase. The 12" touch screen controller has patented and proprietary software than makes developing weld schedules and making welds easy and intuitive. Designed to operate not only EXEL Orbital's Welding Equipment but a number of other manufacturers of orbital welding heads, the EPS-2000 is the most versatile orbital welding power supply in the world. The EPS-2000 is the only power supply that can not only perform pulsed, non-



Weld Operation Screen with Real Time Display

pulsed, single level or multi-level but EXEL's new S<sup>3</sup> welding which has a patent pending. An on board pressure transducer displays purge pressure at all times alarming if the shielding purge supply goes below a critical threshold.

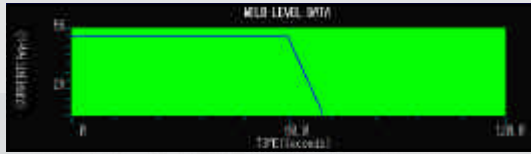
The easy to read graphical display makes monitoring all aspect of welding easy and precise. When developing a schedule the



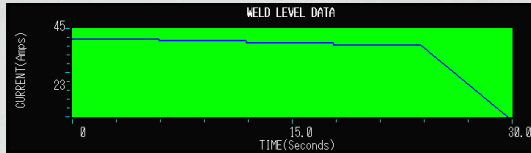
Weld Program Screen

weld is graphed in a Polar and Linear Views. The Polar View shows the quadrant covered when a certain speed and time are programmed. The Linear View shows the programmed current and time in graph form. Enter either RPM or IPM and the controller automatically calculates speed and position.

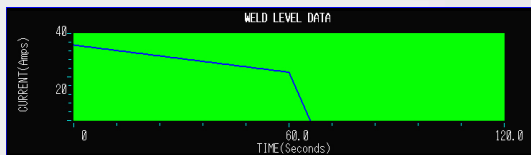
# Any type of weld is possible...



Single Level Weld

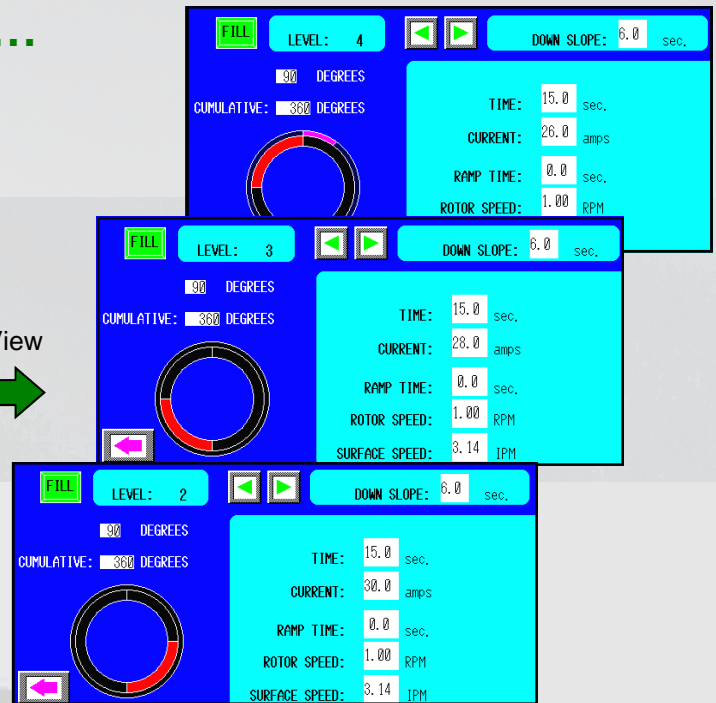


Multi-Level Weld



S<sup>3</sup> Single Slope Single Pass Weld\*\*

Polar View



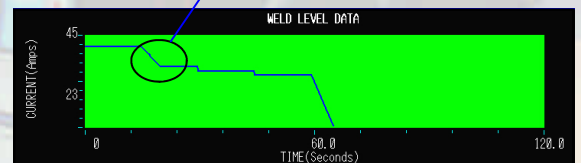
Regardless of the type of weld desired programming is assisted with the Linear View which shows the weld time on the 'X' axis and weld current on the 'Y' axis. The polar view shows the angular increment the electrode will cover given the programmed speed and time.



Pulsed and Non-Pulsed

Welds with pulsed, non pulsed power are easily programmed. EXEL's patent pending S<sup>3</sup>\*\* welding makes multi level welding as easy as selecting 2 points.

Program slopes between levels



Sloping Between Levels

## Standard Features:

1. 200 Amp Output Capability
2. 12" Touch Screen Controller
3. EXEL's Patented and Proprietary Software
4. Onboard Printer
5. Onboard Data Card to Save Weld Schedules
6. Internal Memory Saves Weld Schedules
7. Pressure Transducer with Analog and Digital Display
8. Capable of Operating Other Manufacturers Weld Heads
9. EXEL Rotor Driver Remote Control
10. Multiple Language Selection
11. Ships with Water Tight Roll Along Case

\*\* Patents Pending

Page 3

# Technical and Ordering Information

## INPUTS:

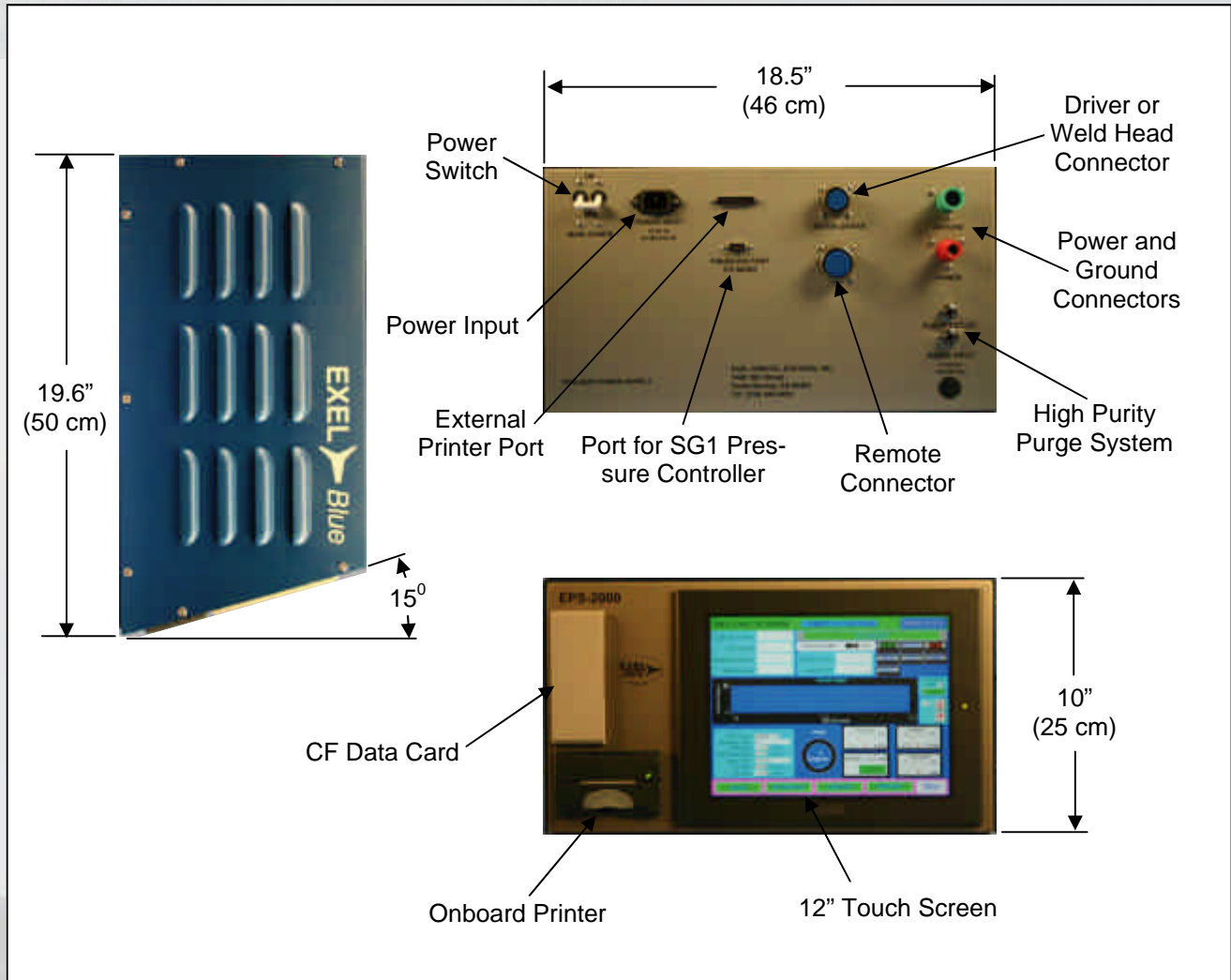
Power: 85 - 265 Volts, Single Phase  
 Frequency: 47 - 63 Hz  
 Purge: 30 - 120 psi (200 - 800 kPa) Argon

## OTHER:

Weight: 57 lbs. (26 Kg)

## OUTPUTS:

Current: 175 Amps at 17 Volts, 60% Duty  
 Volts: 15 Volts  
 Frequency: 0 - 10 Hz, Square Wave  
 Motor Control: Up to 30 Volt Drive with Ta-  
 chometer Feedback and Home Limit Switch



Power Supply Dimensions

PART NUMBER	DESCRIPTION
EPS-2000	EXEL Power Supply, Blue Series, 200 amp capability
EPS-CASE	Waterproof Roll Along Carrying Case

# EPS-2000 Accessories



Exel SG1 Pressure Controller

The SG1 EXEL Pressure Controller can be adapted to the EPS-2000 Power Supply with that communication cable provided. This cable allows automatic initiation of the standby command of the Pressure Controller between welds. This means the operator can repeatedly make welds without pushing the Start/Stop button on the Pressure Controller.

**POWER INPUTS:**

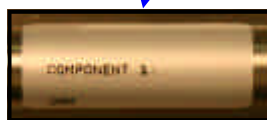
85 - 265 Volts, Single Phase  
47 - 63 Hz

**CONTROL RANGE:**

0.2 - 9 in H<sup>2</sup>O, 5 - 230 mm H<sup>2</sup>O  
3 - 1000 SCFH Ar, 1.5 - 475 lpm



Label Printer



The EXEL Label Printer comes with all the necessary software to interface with the EPS-2000 Power Supply and automatically create labels which identify the components being welded as well as the weld. The label printer creates 4 different labels at once. Component 1, Component 2, Weld Quality Report and a QC Weld Sticker.



Water Cooler

The EXEL Water Cooler is used with the EPS-2000 Power Supply to supply water cooling when using other manufacturers weld heads that require water cooling. This light weight water cooler can dissipate up to 14,000 BTU in one hour.

**POWER INPUTS:**

115 or 230 Volts, Single Phase  
50 - 60 Hz

**WEIGHT:**

39 lbs (18 kg)

**TANK CAPACITY:**

3 Gal (11.4 L)

**DIMENSIONS:**

23 in (584mm) x 12 in (305 mm) x  
13-<sup>1</sup>/<sub>4</sub> in (337 mm)

**FLOW:**

1.25 qt/min (1.2 L/min)

PART NUMBER	DESCRIPTION
SG1	EXEL Pressure Controller
ELP	EXEL Label Printer with Software
EWC	EXEL Water Cooler

# Rotor Driver

## RDR-05 Rotor Driver





# RDR-05

## Universal Rotor Driver For EXEL Rotor Units



R3-001 Rotor Driver

The **RDR-05 Rotor Driver** is the universal platform from which all EXEL Rotor Units can operate. Designed to have any Rotor Unit inserted into it, the Rotor Driver makes all necessary electrical and mechanical connections and is extremely easy to use. The Driver comes with standard connections that allow it to be run either on the EPS-2000 EXEL Blue Power Supply or Arc Machines power supply without adjustment. The new Homing Option Switch allows for quicker homing when welding with large Rotor Units on the Arc Machines power supply.

### RDR-05 Rotor Driver

- Rugged machined Delrin housing.
- Universal Connectors
- Homing Option Switch
- Built in Remote with Status Lights
- 100 amp Average 150 amp Spike Capability
- Swiveling Strain Relief
- Convenient Electrode Cut and Set Card



R3 Driver with RTU-008 being inserted



Rotor Units and Driver

The new integrated remote control on the driver make operation when welding far from the EPS-2000 Power Supply easy.

The RDR-05 Rotor Driver is compatible with 7 different Rotor Units with a size capability from 1/8" to 4-1/2" diameter.

- RTU-004            1/8 to 1/4
- RTU-008SL       1/8 to 1/2
- RTU-008           1/8 to 5/8
- RTU-008-2000   1/8 to 5/8
- RTU-016SL       1/2 to 1
- RTU-016-FMJ     1/2 to 1
- RTU-032-FMJ     1 to 2-1/2

# RDR-05 Technical Information

Home Option Connector

Copper Power Connector

Drive Gear

Gas Connector

Rotor Unit Ejector

Electrode Cut and Set Card

Swiveling Strain Relief

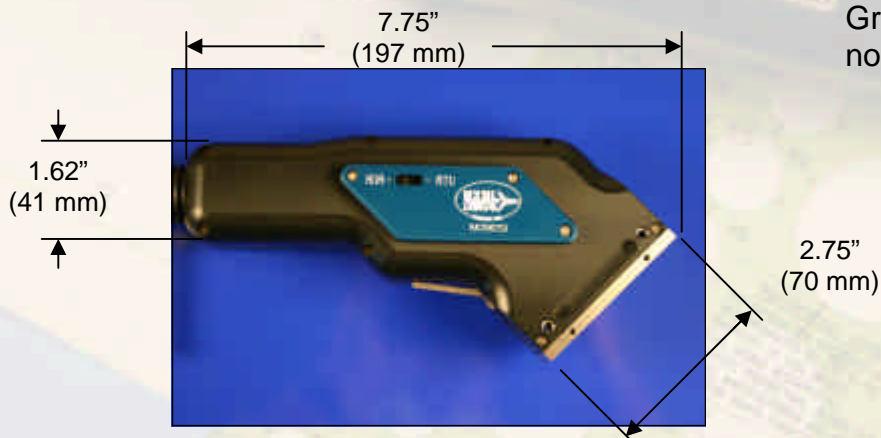


Home Option Switch

Universal Connectors



## DIMENSIONAL INFORMATION



Note: The RDR-05 Rotor Driver comes with a Ground Locking Clamp not shown.

# Ordering Information

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PART NUMBER	DESCRIPTION
<b>RDR-05</b>	Rotor Driver for Rotor Units, Standard for EXEL Orbital and Arc Machines Power Supplies
<b>EXT-CBL-37.5</b>	Extension Cable 37.5 ft (11.4 m)
<b>EXT-CBL-12</b>	Extension Cable 12 ft (3.6 m)

PART NUMBER	DESCRIPTION
<b>ADPT-WL</b>	Adapter Cable for Weld Logic
<b>ADPT-AST</b>	Adapter Cable for Astro Arc
<b>ADPT-STI</b>	Adapter Cable for STI or MK
<b>ADPT-DI</b>	Adapter Cable for Dimetrics
<b>ADPT-MAG</b>	Adapter Cable for Magnatech

Note: By attaching an adapter cable (above) the RDR-05 Rotor Driver can be run with many makes of power supplies.



# RTU-008

## Rotor Unit for 1/8 - 1/2 Diameter



RTU-008 Rotor Unit and Fixtures

The **RTU-008 Rotor Unit** is designed to be compatible with the **RDR-05 Rotor Driver**. Developed to be extremely versatile and have a high duty cycle the RTU-008 is capable of accomplishing welding jobs in some instances in 50% of the time of other equipment.



### Rotor Unit RTU-008-2000

- Ultra high temperature Vespel housing
- Low friction track and groove alignment of Rotor
- Large electrode clamping surface.
- High temperature high duty cycle.
- Internal purging manifold.
- No electrode setting
- Quick connections to the RDR-05 Rotor Driver
- High reliability



RTU-008-2000 in Rotor Driver

RTU-008



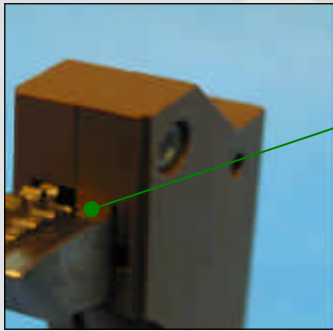
EF8-T00 and EF8-FIS

### Fixture EF8-T00 and EF8-FIS

- High tensile 6061T6 Aluminum construction.
- High force cam past center clamp.
- Tethered Center Gauge.
- High temperature high duty cycle.
- Changeable Tube Inserts of 303 Stainless Steel for 1/8", 1/4", 3/8", 1/2" and 5/8" Diameter.
- VCR Mandrels for 1/4 and 1/2" VCR Male and Female Glands.
- Changeable Fitting Inserts for 1/8", 1/4", 3/8" and 1/2" Microfittings<sup>R</sup>.

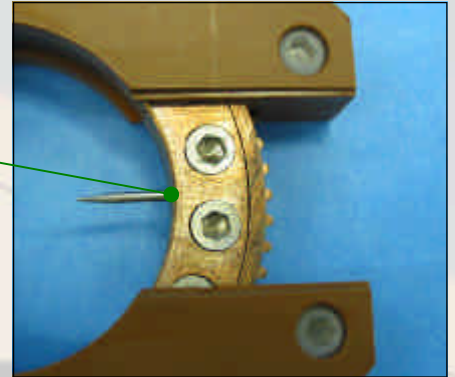
Microfitting is a registered trademark of Swagelok Corp.

# RTU-008 Technical Information



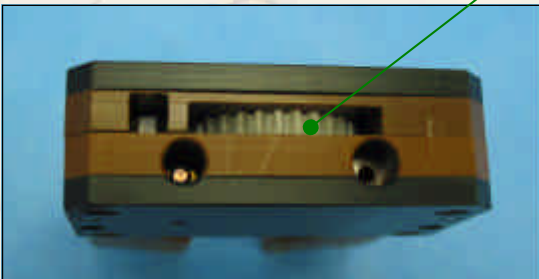
Track and Groove

The low friction Track and Groove alignment of the Rotor give precise and stable control of the electrode.



Large Electrode Clamping Surface

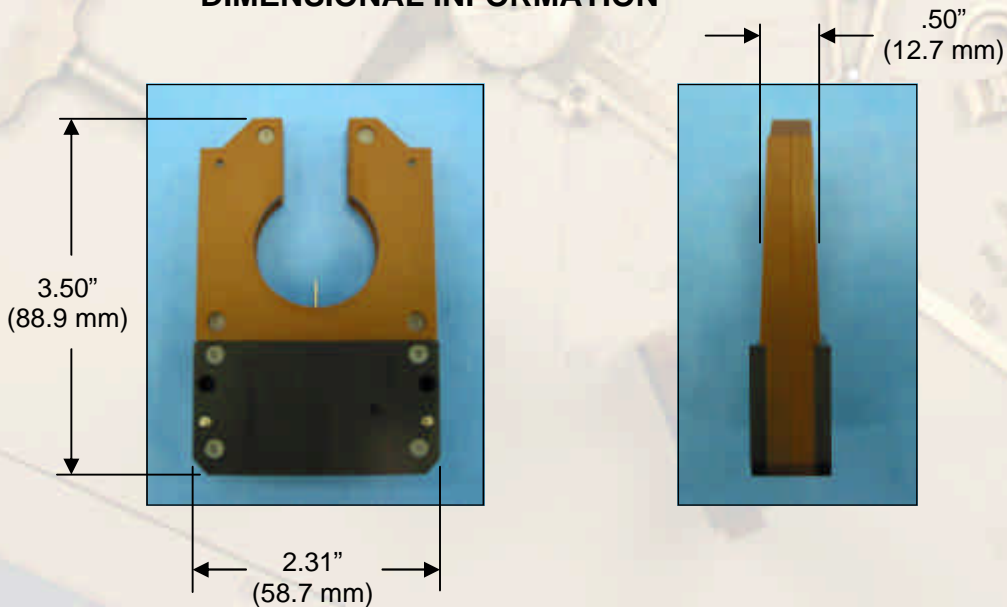
The electrode is held with a large clamping surface to allow the best electrical conductivity. Large cap screws secure the clamp for maximum service life. There is no setting of the electrode required. When an electrode of prescribed length is used, simply slide it into the clamp and the arc gap is established.



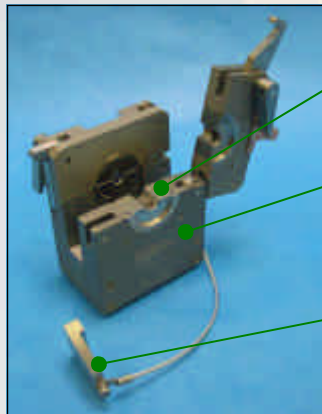
Quick Connections

The drive, power and purge connections are automatically made when the Rotor Unit is inserted into the Driver.

## DIMENSIONAL INFORMATION

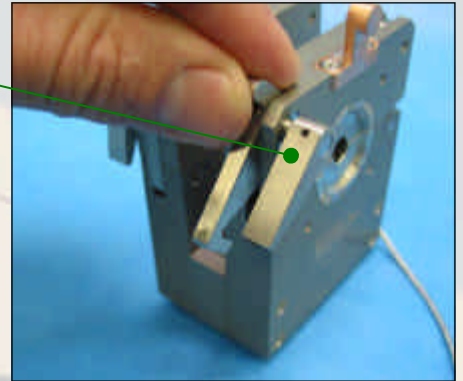


# EF8-T00 and EF8-FIX Technical Information

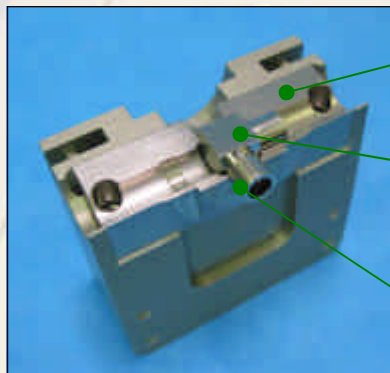


Changeable Inserts  
 High Tensile Aluminum Construction  
 Tethered Center Gauge

Cam Past Center Clamp

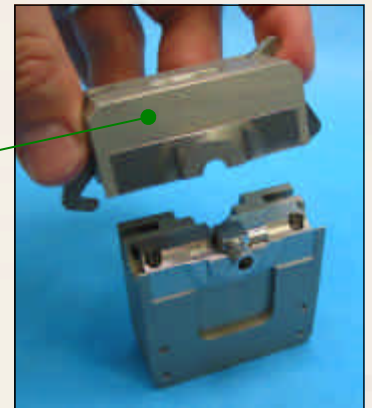


EF8-T00 Tube Fixture Assembly



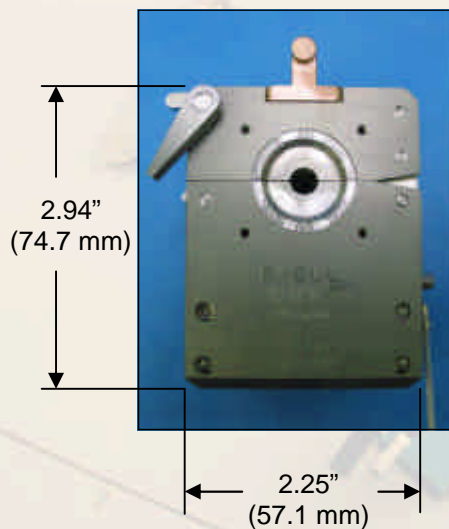
Changeable Inserts  
 Accommodates the fittings of most major manufacturers  
 Insert holds securely the diameter of the fitting.

Quick Clamp Top

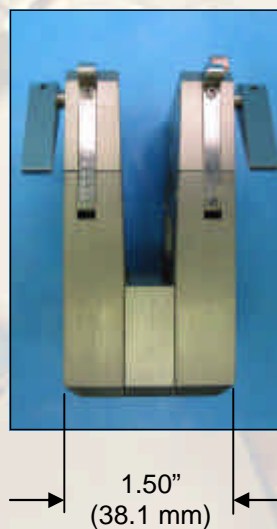


EF8-FIS Fitting Fixture

## DIMENSIONAL INFORMATION

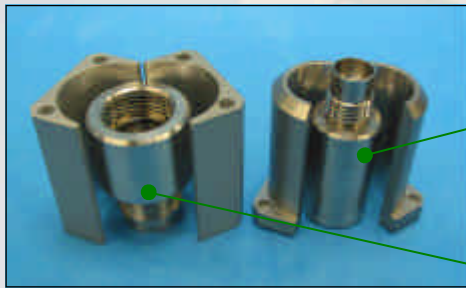


EF8-T00 Tube Fixture Assembly



EF8-FIX Fitting Fixture Side

# Accessories and Ordering Information



EI8-VCR8 and EI8-VCR4

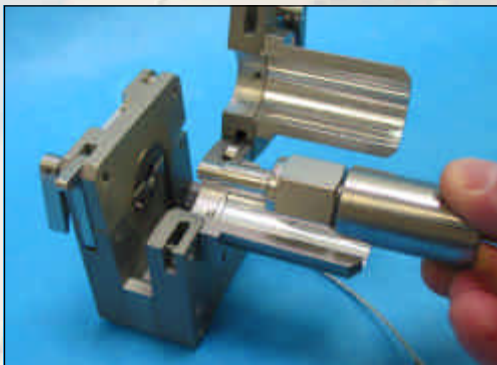
1/4" VCR Mandrel and Clamshell

3/8" and 1/2" VCR Mandrel and Clamshell



VCR Gland

Mandrel for 1/4" VCR's



Fixture the VCR<sup>R</sup> by placing the Mandrel with VCR into the Clamshell and locking the fixture.

The gland is fixtured on the outer flange and the polished toroid is never touched. Female glands are fixtured on one side of the mandrel and male on the other.



Above are 2 pieces of 1/4" diameter Tube and Fitting Inserts. There are 2 pieces per set.

Note: There are 2 tube insert sets required to weld tube to tube of a particular diameter.

## ORDERING INFORMATION

PART NUMBER	DESCRIPTION
RTU-008	Rotor Unit, 1/8" (3.17 mm) thru 5/8" (15.9 mm) capacity
EF8-T00	Tube Fixture Assembly
EF8-FIS	Fitting Fixture Side
EI8-04	Tube Insert Set for 1/4" Diameter
EI8-06	Tube Insert Set for 3/8" Diameter
EI8-08	Tube Insert Set for 1/2" Diameter
EI8-10	Tube Insert Set for 5/8" Diameter
EI8-F04	Fitting Insert Set for 1/4"
EI8-F06	Fitting Insert Set for 3/8"

PART NUMBER	DESCRIPTION
EI8-F08	Fitting Insert Set for 1/2"
EI8-VCR4	Fixture for 1/4 male and female VCR's
EI8-VCR8	Fixture for 3/8 and 1/2 male and female VCR's
EL-08-04	Electrode for 1/4 Diameter (.035 gap)
EL-08-06	Electrode for 3/8 Diameter (.035 gap)
EL-08-08	Electrode for 1/2 Diameter (.035 gap)
EL-08-10	Electrode for 5/8 Diameter (.035 gap)

Note: Metric sizes available upon request.



# Rotor Unit & Fixtures

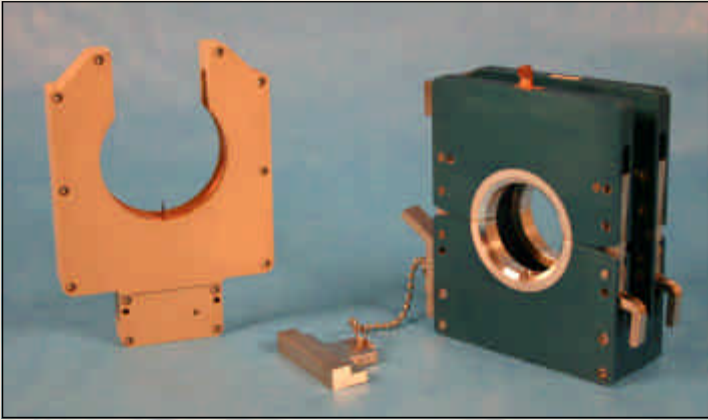
## RTU-032 Rotor Unit



11	2	RTU04-013	50 WIRE BEAM
10	3	RTU04-010	1 INCH WIRE BEAM
			ROLLER BEAM
9	2	RTU04-012	1/2 INCH WIRE BEAM
13	1	RTU04-013	50 WIRE BEAM
12	1	RTU04-013	1/2 INCH WIRE BEAM
7	2	RTU04-003	1/2 INCH WIRE BEAM
			POWER SIDE
8	1	RTU04-004	1/2 INCH WIRE BEAM
			SWITCH RECEPTOR SIDE
5	1	RTU04-011	1/2 INCH WIRE BEAM
			SWITCH RECEPTOR SIDE
4	1	RTU04-002	1/2 INCH WIRE BEAM
1	1	RTU04-003	1/2 INCH WIRE BEAM
			MOUNT
2	2	RTU04-003	1/2 INCH WIRE BEAM
1	1	RTU04-003	1/2 INCH WIRE BEAM

# RTU-032

## Rotor Unit for 1/2' - 2" Diameter



RTU-032 Rotor Unit and Fixture

The **RTU-032 Rotor Unit** is designed to be compatible with the **RDR-05 Rotor Driver**. Developed to be extremely versatile and have a high duty cycle the RTU-032 is capable of accomplishing welding jobs in some instances in 50% of the time of other equipment. One of the narrowest fixtures allows easy access to even the tightest weld configurations.



RTU-032

### Rotor Unit RTU-032

- Ultra high temperature PEE housing
- Low friction track and groove alignment of Rotor
- Large electrode clamping surface.
- High temperature high duty cycle.
- Internal purging manifold.
- No electrode setting
- Quick connections to the RDR-05 Rotor Driver
- High reliability



RTU-032-2000 in Rotor Driver



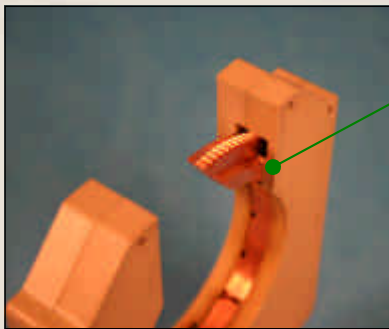
EF32-T00

### Fixture EF8-T00 and EF8-FIX

- Unique Fixture Stabilizing Lock\*\* keeps weld joint closed.
- High tensile 6061T6 Aluminum construction.
- Tethered Center Gauge.
- High temperature, high duty cycle.
- Changeable Tube Inserts of 303 Stainless Steel for 1/2", 3/4", 1", 1-1/2" and 2" Diameter, metric sizes available.
- Adjustable fixture clamp accommodates variations in tube diameter and provides high load to secure weld joint.
- Fixture backstop to maintain fixture center of gravity.

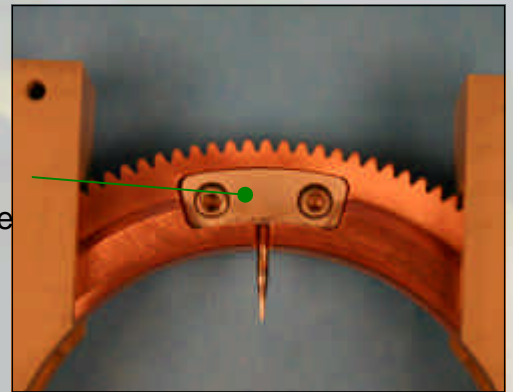
\*\* Patents Pending

# RTU-032 Technical Information



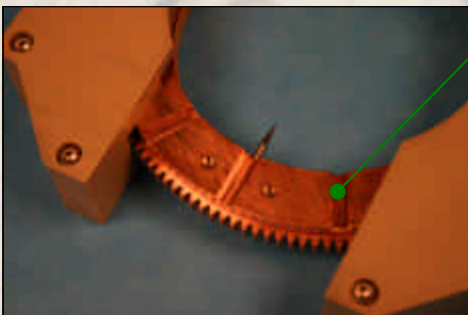
Track and Groove

The low friction Track and Groove alignment of the Rotor give precise and stable control of the



Large Electrode Clamping Surface

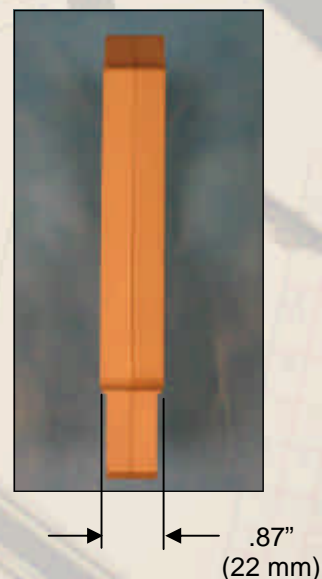
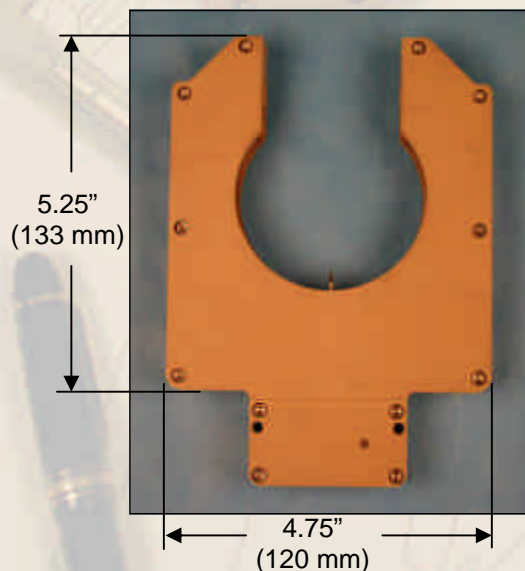
The electrode is held with a large clamping surface to allow the best electrical conductivity. Large cap screws secure the clamp for maximum service life. There is no setting of the electrode required. When an electrode of prescribed length is used, simply slide it into the clamp and the arc gap is established.



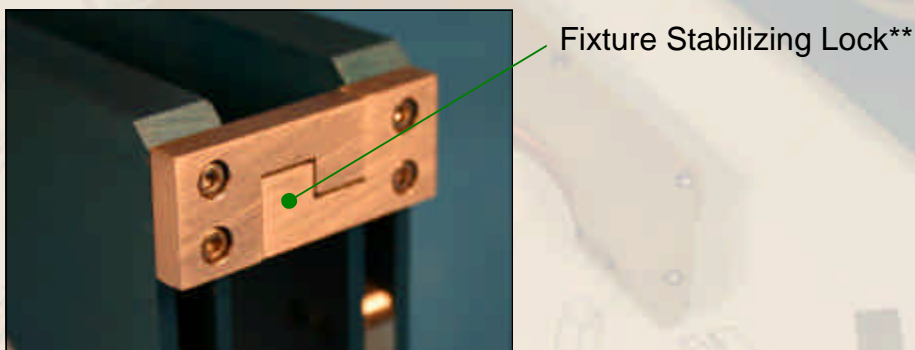
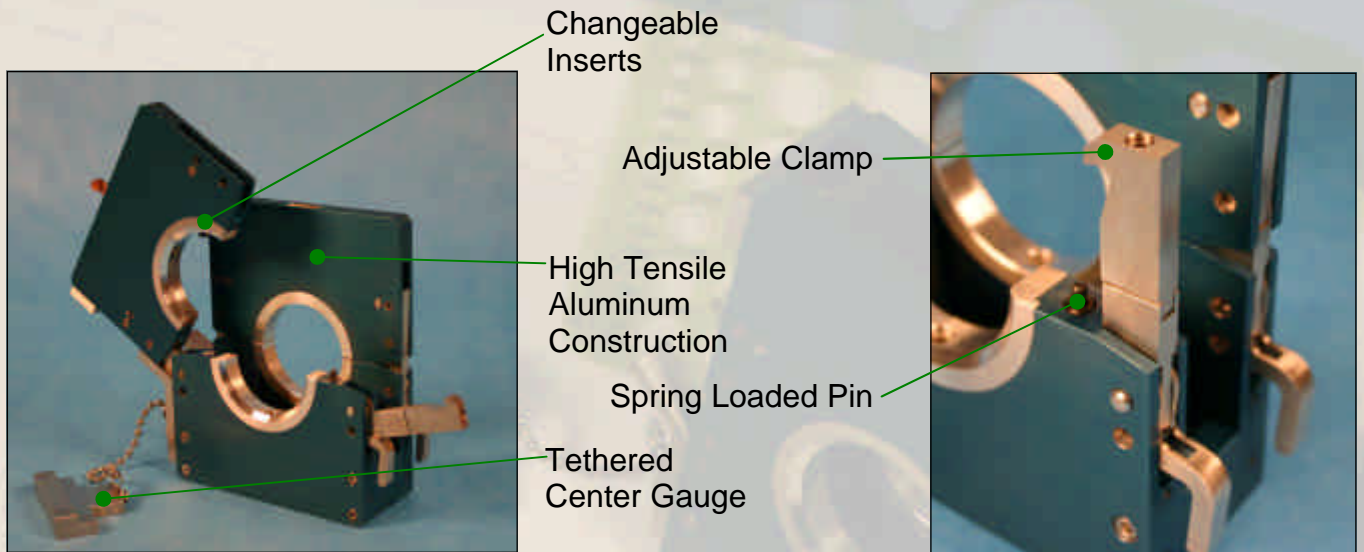
Internal Purge Manifold

The internal purge manifold is cut into the rotor to allow delivery of Argon directly to the weld site.

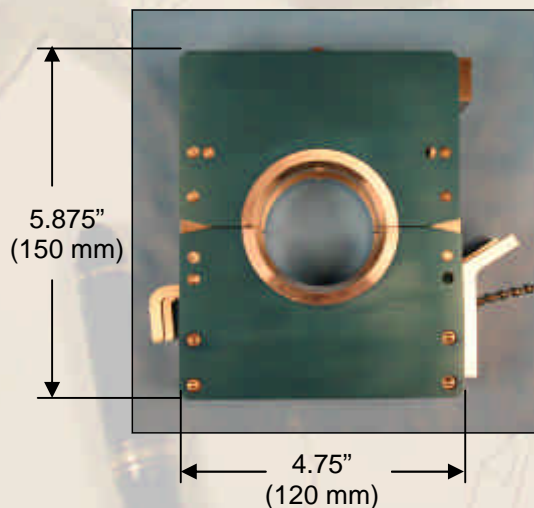
## DIMENSIONAL INFORMATION



# EF32-T00 Technical Information



## DIMENSIONAL INFORMATION



\*\*\* Note: Because the tube inserts have a 45° relief cut on the back face, the effective clamping width of the fixture is 1.500" (38mm) or .75" (18mm) from center of the fixture.

1.87" (47 mm)  
\*\*\*1.50" (38mm)

# RTU-032 Ordering Information

PART NUMBER	DESCRIPTION
RTU-032	Rotor Unit, 1/2" (12.7 mm) thru 2" (50.8 mm) capacity
EF32-T00	Tube Fixture Assembly
EI32-08	Tube Insert for 1/2"
EI32-12	Tube Insert for 3/4"
EI32-16	Tube Insert for 1"
EI32-24	Tube Insert for 1-1/2"
EI32-32	Tube Insert for 2"
EI32-P08	Tube Insert for 1/2" Pipe
EI32-P12	Tube Insert for 3/4" Pipe
EI32-P16	Tube Insert for 1" Pipe
EI32-P20	Tube Insert for 1-1/4" Pipe
EI32-P24	Tube Insert for 1-1/2" Pipe

Note: Metric and custom sizes available.

## Electrode Ordering Information

**EL32-X-YY**

Electrode for RTU-032

T - Tube  
P - Pipe

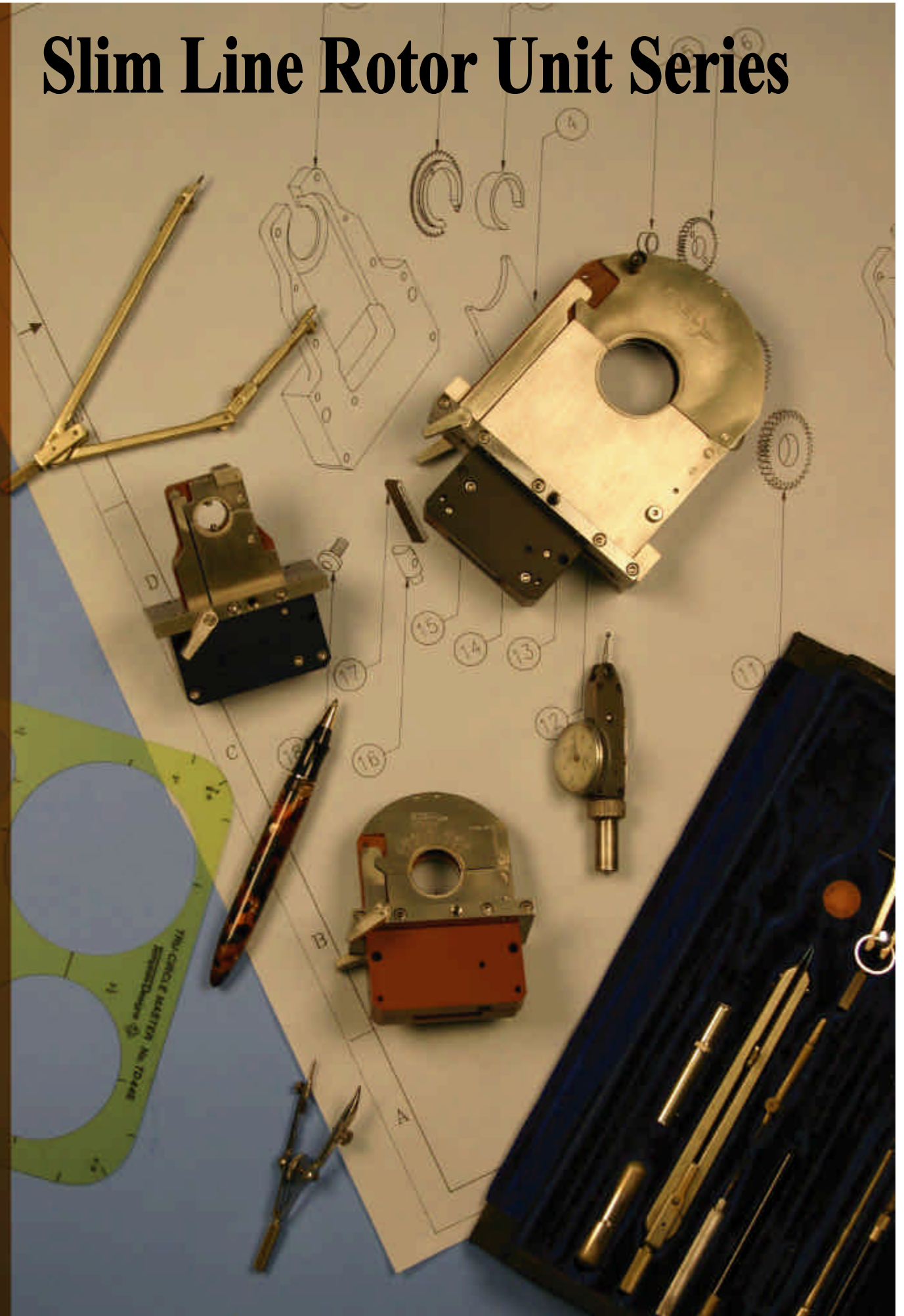
The last 2 digits represent the diameter of the component being welded. See table below.

	DIAMETER
08	1/2"
12	3/4"
16	1"
20	1-1/4"
24	1-1/2"
32	2"

Note: Standard arc gap for tube is .050" and .070 for pipe.

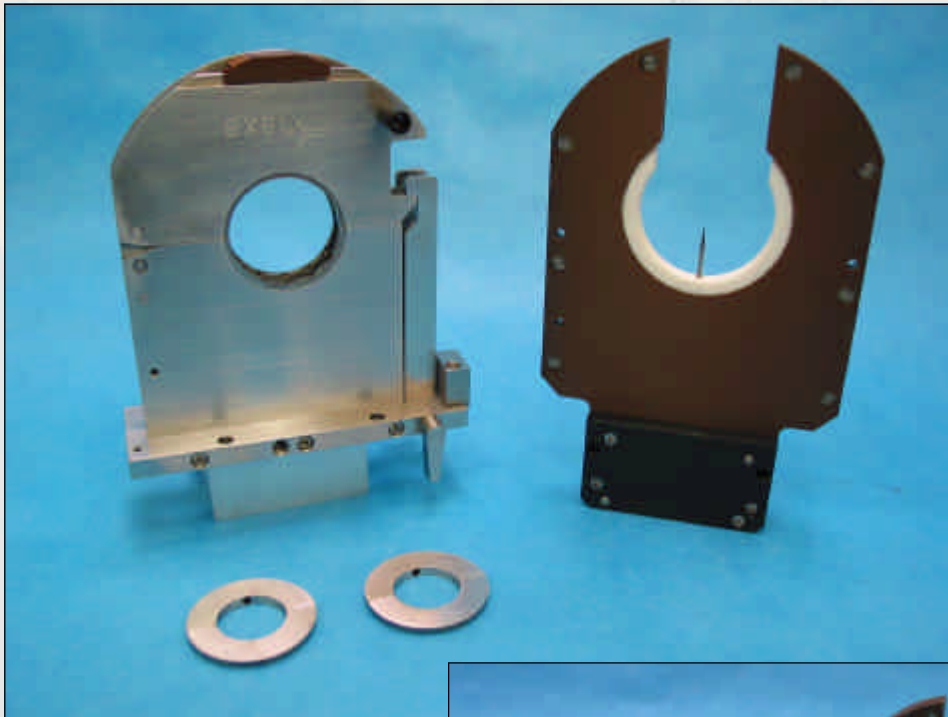
# Rotor Unit & Fixtures

# Slim Line Rotor Unit Series



# Slim Line Rotor Unit Series

## Rotor Units for R3 Rotor Driver



RTU-016SL (1/2" to 1" Diameter)

The **Slim Line Rotor Unit Series** is the worlds narrowest series of orbital welding heads capable of welding from 1/8" (3.2mm) to 1" inch (25.mm) diameter components. All of these Rotor Units are designed to be compatible with the **R3 Rotor Driver**. The simple one fixture design permits one set up to weld many different kinds of components without the need to retool. The quick clamping design makes rapidly fixturing components possible.



RTU-008SL (1/8" to 1/2" Diameter)



RTU-004 (1/8" to 1/4" Diameter)

# Features

## Rotor Unit Slim Line Series

- Ultra high temperature Vespel housing
- Low friction track and groove alignment of Rotor
- Large electrode clamping surface..
- No electrode setting
- Quick connections to the R3 Rotor Driver



RTU-016SL, Welds 1/2" to 1"



RTU-008SL, Welds 1/8" to 1/2"



RTU-004, Welds 1/8" to 1/4"



RTU-016SL Rotor Unit with EF16SL-FIX Fixture Attached



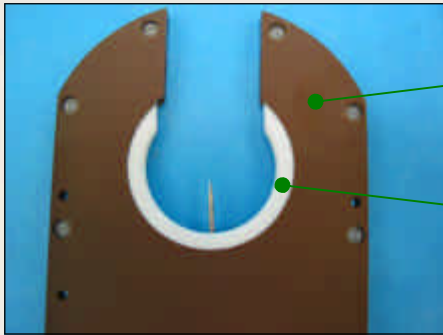
RTU-016SL in R3 Rotor Driver

## Slimline Series Fixture

- High tensile S303 Stainless Steel construction.
- High force cam past center clamp.
- High temperature high duty cycle.
- Changeable Tube Inserts of 303 Stainless Steel for 1/8" thru 1" Diameter.
- Extremely narrow design allows the closest welding possible up to 1" diameter.

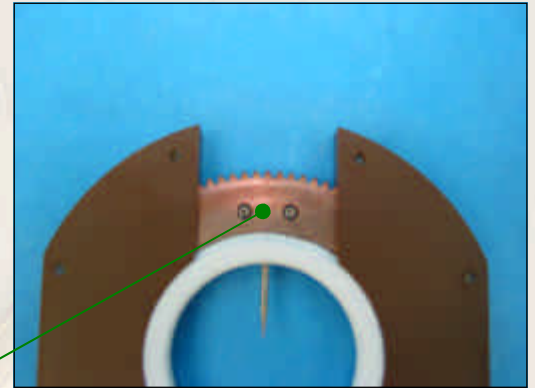


# Technical Information



High Temperature Vespel Housing

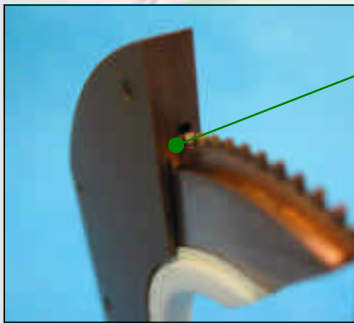
High Temperature Ceramic Liner



Large Electrode Clamping Surface

High temperature materials used in construction for maximum duty cycle.

The electrode is held with a large clamping surface to allow the best electrical conductivity. Cap screws secure the clamp for maximum service life. There is no setting of the electrode required. When an electrode of prescribed length is used, simply slide it into the clamp and the arc gap is established.



Track and Groove

The low friction Track and Groove alignment of the Rotor gives precise and stable control of the electrode.

## Miniature Welding

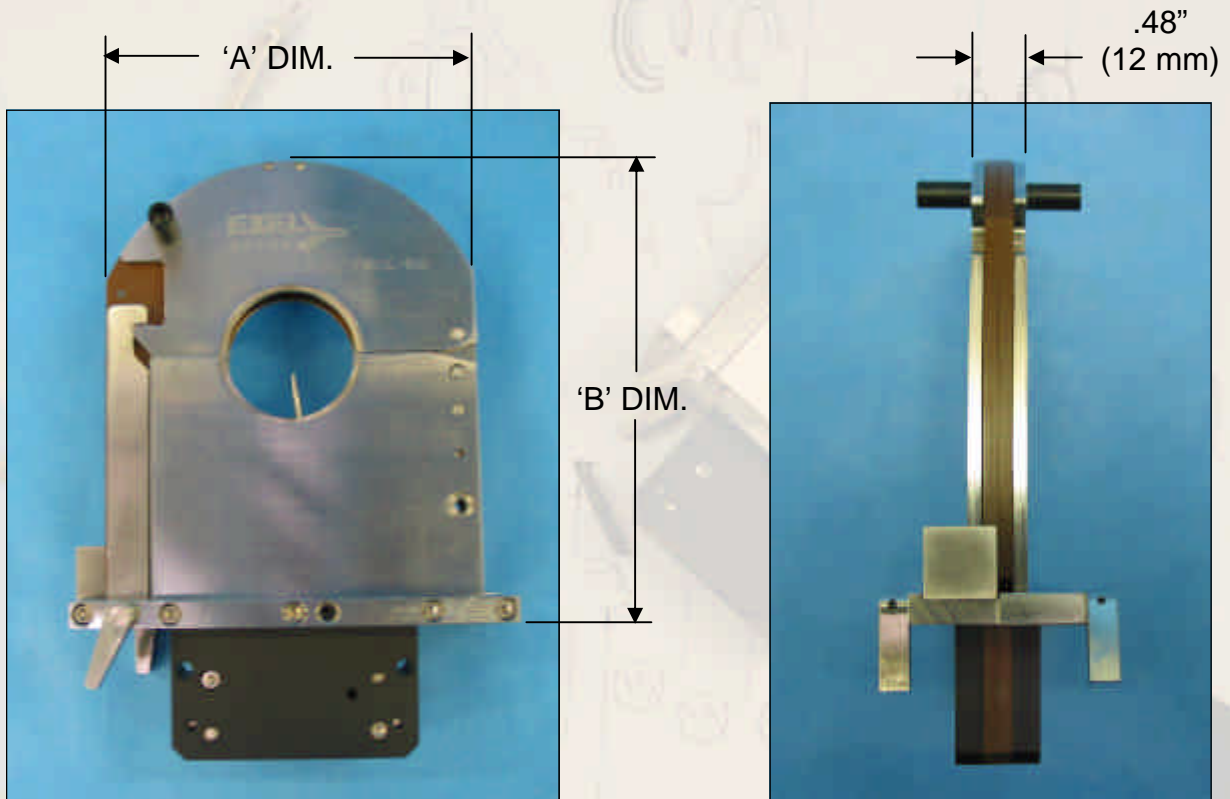


Cube of 1/4" Microfit, Tribows<sup>R</sup>

The Slimline Series welding heads are capable of welding in extremely close proximity. For diameters from 1/8" to 1" all that is required to weld is a 1/4" tube stub from the component. This allows extreme accessibility and flexibility in the design of miniature fluid systems.

Tribow is a registered trademark of Swagelok Corp.

# Dimensional Information



	<b>'A' Dimension</b>	<b>'B' Dimension</b>
<b>RTU-016SL</b>	3.56" (90.4mm)	4.56" (115.8mm)
<b>RTU-008SL</b>	2.31" (58.7mm)	2.25" (57.1mm)
<b>RTU-004</b>	1.20" (30.5mm)	2.06" (52.3mm)

# Pressure Controller

# SG1 Pressure Controller



# SG1 Pressure Controller

## Internal Weld Pressure Controller



SG1 Pressure Controller

EXEL's new SG1 Pressure Controller\*\* is the first automatic pressure controller for orbital tube welding of 1/8" to 6" diameter tube or pipe. Prior to the SG1 pressure calibration and control has been accomplished manually. This manual interaction often occurs during the welding process. This presents many opportunities for errors to be made which often results in the failure of a weld, in many case destroying very expensive components. By tasking the orbital welder with the job of controlling pressure during the weld they are not available to monitor the welding process or even improve efficiency by preparing the next weld joint.

The SG1 Pressure operates on a closed loop controlled, high speed iris valve. This valve is tied to the on board micro-processor which constantly monitors the internal pressure of the weld using an extremely sensitive pressure transducer.



Iris Valve Adjusting From Small to Large Orifice

The SG1 Pressure Controller has several modes of operation:

1. P1 Mode
2. P2 Mode
3. PS Mode



SG1 Pressure Controller Mode Selection

These modes allow simple pressure control or calibration at the weld site or communication with the EPS-2000 Power Supply. Although communication with the EXEL Power Supply is possible, the SG1 Pressure Controller is a stand alone unit that can be used with any manufacturers welding equipment.



Controlling Pressure on 1/2" Weld

Because the SG1 Pressure Controller constantly monitors pressure, poorly fixtured or aligned weld joints can be identified.

\*\* Patents Pending

# Technical Information



Controller with P2 Transducer

In P2 Transducer Mode a calibration transducer is placed at the weld joint and the Pressure Controller measures the pressure change from the controller to the weld site. The P2 Transducer is removed and the weld is made using only the controller.

## POWER INPUTS:

Power: 85 - 265 Volts, Single Phase

Frequency: 47 - 63 Hz

## CONTROL RANGE:

Pressure: 0.2 in H<sub>2</sub>O - 9 in H<sub>2</sub>O (230 mm H<sub>2</sub>O - 5 mm H<sub>2</sub>O)

Flow Range: 3 SCFH - 1000 SCFH (1.5 lpm - 475 lpm)

Tube Size Range: 1/8" - 6" (3mm - 152 mm)

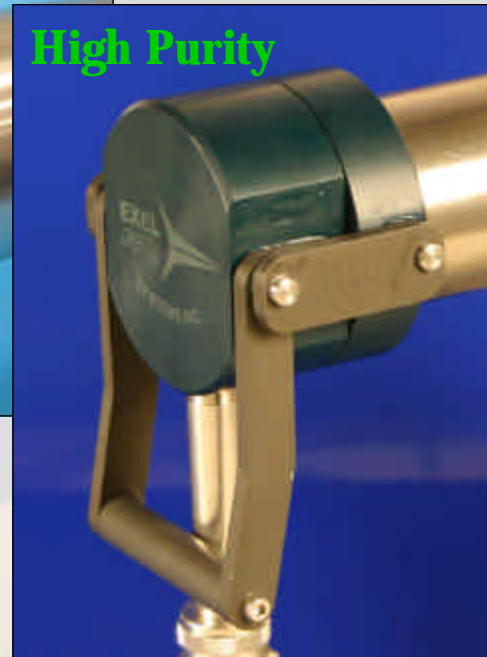
# Purge Fittings

# EPF Exel Purge Fitting



# EPF EXEL Purge Fitting

## Fitting for Weld ID Purge



EPF-E32 and EPF-U32 2" End and Union Purge Fitting

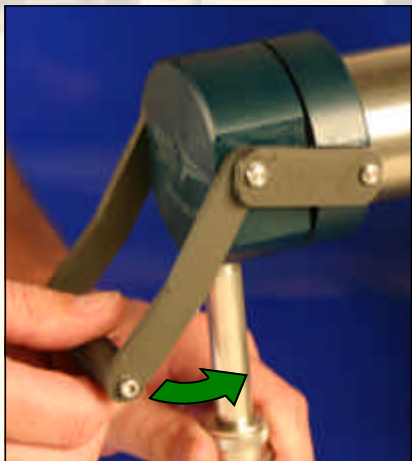
Shown EPF-E32, 2" Exel Purge Fitting with purge being supplied with 1/2" compression fitting union.

The **EXEL Purge Fitting\*\*** is designed by the makers of orbital welding equipment for the users of orbital welding equipment. If you are tired of searching for the proper size compression seal fittings or using a series of these fittings to arrive at the proper purge fitting; or worse yet use a plastic cap to connect to the component, then you should be using the **EXEL**

### Purge Fitting .

The **EXEL Purge Fitting** can be attached to common sizes of purge lines greatly simplifying the purge connection process. The recessed O-Ring Seat protects the seal from abrasion of the tube being inserted. The gas tight seal prevents air from contaminating the internal purge as well as preventing purge gas from escaping.

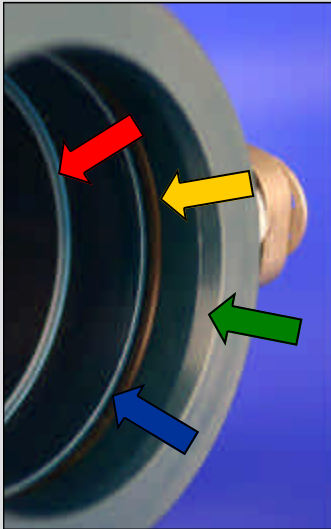
The **EXEL Purge Fitting** is complemented by the **Purge Union** for calibrating internal pressure at the weld site. Once calibrated simply remove the **Purge Union** and weld.







Simply rotate the handle down to seal.

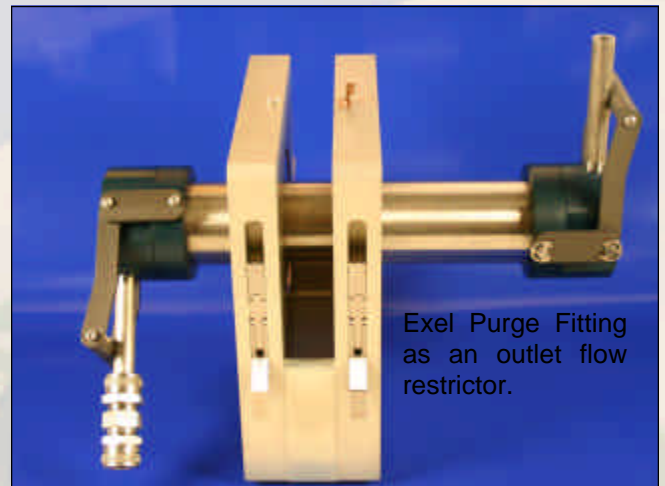
\*\* Patents Pending

# Technical Information



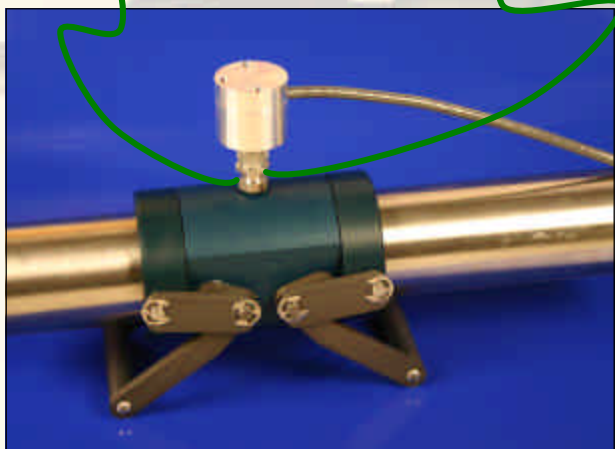
-  Tapered lead-in for easy component insertion.
-  Flexible seal creates a gas tight seal on the outside of the component
-  Positive location stop for the component to seat against.
-  Seal recessed behind metal lip to prevent damage.

Use Exel's P2 Transducer with SG1 Pressure Controller or use a Magnehelic to calibrate pressure at the weld site.



Exel Purge Fitting as an outlet flow restrictor.

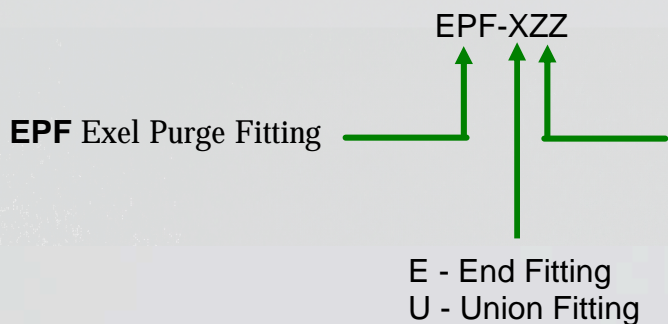
The Exel Purge Fitting can be used to provide an outlet flow restriction as well as a purge inlet. This prevents back diffusion of air to the weld site and a positive internal pressure. Also by introducing purge from the bottom and exhausting out the top greater cleanliness can be achieved.



Shown EPF-U32, 2" to 2" Exel Purge Union with Exel's SG1 Pressure Controller P2 Transducer.



# Ordering Information



The last 2 digits represent the tube size, see table to the right.

<b>24</b>	1-1/2 inch diameter
<b>32</b>	2 inch diameter
<b>48</b>	3 inch diameter
<b>64</b>	4 inch diameter
<b>96</b>	6 inch diameter

*Note: Custom and metric sizes and configurations available upon request.*

Tube Diameter	Inlet Tube Size
1-1/2"	1/2"
2"	1/2"
3"	3/4"
4"	1"
6"	1"

Table of Tube Inlet Sizes