

# orbitalum



## ORBITAL TUBE CUTTING & WELDING SYSTEMS



## Cut. Prep. Weld.



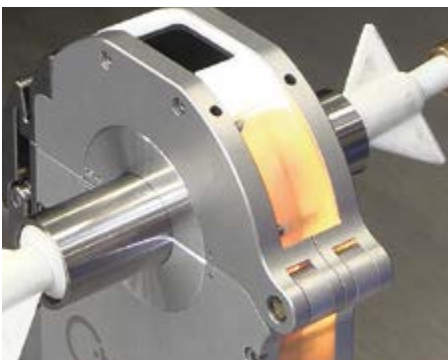
ITW Orbital Cutting & Welding  
Europe Headquarters



ITW Orbital Cutting & Welding  
U.S. Headquarters



Orbitalum Tube & Pipe Saw



Orbitalum Orbital Weld Head



### ABOUT ORBITALUM

Founded in 1960 as a subsidiary of Georg Fischer (GF) and renamed Orbitalum in 2006, we are the world's premier manufacturer of high purity tube cutting and pipe preparation machine tools and orbital welding systems.

At Orbitalum we understand the needs of process piping professionals in the aerospace, food, dairy and beverage, pharmaceutical and semiconductor industries. Every machine features robust design and ease of operation, and is constructed with high quality materials and extreme precision. German engineered and built, Orbitalum products exceed the rigorous standards of ISO 9001:2008.

### ORBITAL CUTTING

Orbitalum cutting products are the perfect complement to our orbital welding equipment. For nearly 60 years, first as GF and now as Orbitalum, we've remained the industry leader in high quality tube cutting and facing equipment. We manufacture the world's leading series of tube and pipe saws, the GF and GFX, that utilize an orbital cutting motion around a stationary workpiece.

Complimenting the GF series, RPG tube squaring machines from Orbitalum are designed to produce perfectly square, burr free preps required for critical, defect free orbital welding applications. Featuring precise micrometer feed, deformation-free quick-clamping systems, and electronic speed regulation and stabilization on electric powered models, these machines produce a perfect weld prep. Select models are also available with convenient cordless drive.

### ORBITAL WELDING

The Orbitalum orbital welding system includes the advanced OM180 SmartWelder, Orbiweld weld heads, the Orbitwin 180SW switching unit, and the versatile ORBmax digital oxygen analyzer. At Orbitalum we surpass the best features of other systems, while delivering a unique user experience with our easy to use software interface, touchscreen and convenient one touch control knob.

Engineered and built to satisfy today's welding professional who is looking for the best combination of power, features and convenience, these machines deliver precision welds and are easily transported, programmed, operated, and maintained.



GF 4 Tube & Pipe Saw

## ITW WELDING

Orbitalum Tools and E.H. Wachs are organized together as ITW Orbital Cutting & Welding, to provide our global customers One Source for the finest in pipe & tube cutting, beveling and orbital welding products. When you partner with us you're not only partnering with the industry leader in portable weld preparation machine tools and orbital welding systems, you're partnering with ITW, the industry leader in advanced welding technologies.

Orbitalum equipment is sold, serviced and rented in North and South America by E.H. Wachs, through our dealer network and conveniently located Sales, Service and Rental Centers in the US and Canada. With a large selection of Orbitalum cutting and welding equipment in stock and ready for immediate shipment, plus a nationwide fleet of rental machines, Orbitalum is the industry's best built and best supported line of high purity cutting and welding machines.

## BEST WARRANTY AVAILABLE

The best built orbital welding system should be backed up by the industry's best warranty, and with Orbitalum it is. Every OM welding power supply unit sold in the Americas includes a 1 Year Limited Warranty, with the option to add additional years to the original warranty.

## LOCAL AVAILABILITY

Orbitalum rental machines, consumables and replacement parts are also available at most ITW Orbital Cutting & Welding Sales, Service and Rental Centers. Many offer full repair and calibration services by factory trained certified service technicians. We stock a large inventory of OEM parts and consumables that are designed to keep your Orbitalum cutting and welding machines operating at peak efficiency.

## FACTORY TRAINING

The most advanced machines in the world require skilled operators to operate them. As part of our ongoing commitment to customer support, we've developed new training programs and built dedicated classroom and lab facilities to train our users to get the full potential from their state-of-the-art cutting and welding machines. Available at your facility or ours, our advanced factory training courses are tailored to your specific industry and applications.



RPG 4.5 Tube Facer

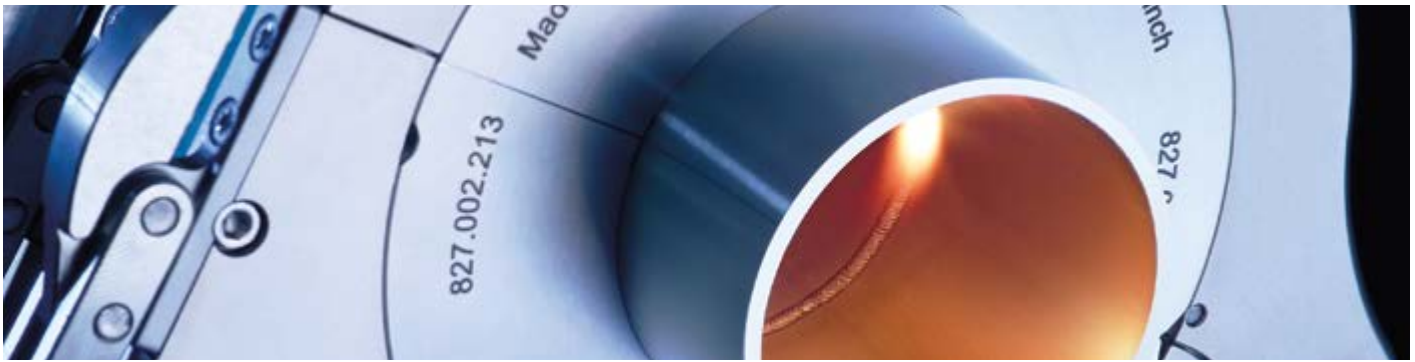


OM180 SmartWelder Power Supply



Orbiweld 76S Orbital Weld Head

# Table of Contents



<b>About Orbitalum</b>	<b>Front Cover</b>
<b>Markets</b>	<b>3</b>
Aerospace	3
Pharmaceutical	4
Semiconductor	5
Food, Dairy, & Beverage	6
<b>Orbital Cutting Machines</b>	<b>7</b>
GFX 3.0 Tube & Pipe Saw	8
GF 4, GF 6 (AVM/MVM) Tube & Pipe Saws	10
RA 8, RA 12 (AVM) Tube & Pipe Saws	12
MRA Metal Tube Cutter	14
Tube & Pipe Saw Accessories	15
<b>Tube Squaring Machines</b>	<b>19</b>
RPG ONE, RPG 1.5, RPG 2.5	20
RPG One, 1.5, & 2.5 Tube Squaring Accessories	23
RPG 4.5 & RPG 8.6 Tube Squaring Machines	24
RPG 4.5 & RPG 8.6 Tube Squaring Accessories	26
<b>Orbital Welding Systems</b>	<b>27</b>
OM180 SmartWelder Power Supply	28
Connectivity Pack	33
<b>Enclosed Orbital Weld Heads</b>	<b>34</b>
ORBIWELD 12, ORBIWELD 19 Micro Weld Heads	37
ORBIWELD 12, ORBIWELD 19 Accessories	39
ORBIWELD 38S, 76S, 115S Enclosed Orbital Weld Heads	40
ORBIWELD 170 Enclosed Orbital Weld Head	42
<b>Enclosed Orbital Weld Head Accessories</b>	<b>43</b>
Orbiweld Clamping inserts	43
Enclosed Orbital Weld Head Accessories	44
<b>Orbital Welding Accessories</b>	<b>45</b>
<b>Orbitalum Rentals</b>	<b>51</b>
<b>Orbitalum Training</b>	<b>Back Cover</b>

## Aerospace

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Orbital cutting and welding products serve a vital function in the Aerospace industry. Driven by the welding industries highest traceability and documentation requirements, companies in this industry rely on the precise, repeatable results that Orbitalum welding systems deliver.

Primarily used on Inconel, Titanium and stainless-steel engine fuel components, fuel lines and instrumentation lines, the OM180 SmartWelder power supply coupled with Orbiweld fully water-cooled fusion weld heads produce recordable, consistent and repeatable, defect free welds in a production setting for these demanding applications. The advanced connectivity features of the OM180 SmartWelder are ideal in Aerospace for weld documentation and supervisory control, allowing for seamless, end-to-end data connectivity throughout one, or many facilities.

What is truly out of this world are the capabilities of the Orbitalum equipment for the worlds most advanced Aerospace market, rockets. From low earth orbit and beyond, the reliability that Orbitalum equipment provides for our customers gives them the confidence to reach for the stars.

### ORBITALUM SOLUTIONS

- OM180 SmartWelder Power Supply
- Orbiweld Enclosed Weld Heads
- ORBMax Oxygen Analyzer

### AEROSPACE APPLICATIONS

- Airframe Hydraulic Lines
- Engine Fuel Lines
- Engine Specific Components
- Onboard HVAC



## Pharmaceutical

The Pharmaceutical industry demands the highest standards in every aspect of their manufacturing processes. Orbitalum cutting and orbital welding systems are used worldwide to meet these demands. They're specified for precision fusion welds on the stainless-steel fabrications used in tightly controlled production processes to help ensure consumer safety and satisfaction.

Orbitalum orbital welding systems exceed the necessary tolerances for performing weld preps and welds on pharmaceutical and medically sterile delivery systems. Orbitalum equipment produces welds that are recordable, repeatable and devoid of defects, critical in this industry. The advanced connectivity features of the OM180 SmartWelder are ideal for weld documentation and supervisory control.

### ORBITALUM SOLUTIONS

- GF Series Tube Saws
- RPG Series Tube Facers
- OM180 SmartWelder Power Supply
- Orbiweld Enclosed Weld Heads
- ORBMax Oxygen Analyzer

### PHARMACEUTICAL APPLICATIONS

- UHP Water Lines
- Process Lines
- Mixing Valves
- CIP Clean in Place Lines



## Semiconductor

Due to the precise nature of fabricating semiconductors, orbital welds made in Semicon are subject to the most exacting criteria and scrutiny in the most demand environments. To ensure an orbital welding system can meet these criteria, semiconductor manufacturers independently evaluate orbital welding systems in an internal audit process known as a "white paper".

Orbitalum orbital welding systems met all the requirements of this demanding audit, while providing the reliability and flexibility needed for both field and fabrication work. Orbitalum cutting and welding systems are specified for precise tube squaring and fusion welding on the stainless-steel fabrications used in the semiconductor production processes. As in other precision industries the advanced connectivity features of the OM180 SmartWelder are future ready for a paperless documentation world.

### ORBITALUM SOLUTIONS

- RPG Series Tube Facers
- OM180 SmartWelder Power Supply
- Orbiweld Enclosed Weld Heads
- ORBMax Oxygen Analyzer

### SEMICONDUCTOR APPLICATIONS

- UHP Water Lines
- Vacuum Lines
- Wafer Processing Lines
- CFOS Lines
- Component Manufacturing
- Jacketed Products
- Gas Cabinets

## Food, Dairy, & Beverage

Primarily used on stainless steel lines used in the production, processing and distribution of food, dairy and beverage products, Orbitalum cutting and orbital welding systems deliver welds on stainless steel lines that conform to the highest standard of food safety.

Broadly defined as high purity or sanitary welds, applications in the food, dairy and beverage industries dictate orbital welds that are strong and smooth, inside as well as outside, so as not to trap microscopic particles that can contribute to microbiological contamination leading to consumer foodborne illness.

One of the largest segments for high purity welding, the GF tube saws are widely used and recognized as the world standard. Increasingly specified for its ease of use and future proofed capabilities, the OM180 SmartWelder is the new industry choice.

### ORBITALUM SOLUTIONS

- GF Series Tube Saws
- RPG Series Tube Facers
- OM180 SmartWelder Power Supply
- Orbiweld Enclosed Weld Heads

### FOOD, DAIRY, & BEVERAGE APPLICATIONS

- Product Water Lines
- Jacketed Products
- CIP Clean in Place Lines
- Mixing Valves (Clusters)





# Orbital Cutting Machines



# GFX 3.0

**RENTAL  
AVAILABILITY**



Easy to handle, powerful and compact



Square, burr-free and deformation-free pipe end

## INNOVATIVE ORBITAL CUTTING TECHNOLOGY

The innovative GFX tube and pipe saw has become the new standard for orbital cutting excellence with a history of reliability and highest precision in a light weight orbital cutting saw.

- Extremely low maintenance
- Durable cast iron construction yet very light weight
- Inboard and outboard blade locations maximize cutting application potential
- Safely cut stainless steel tube and pipe
- Square, burr-free cutting
- Deformation free stainless steel contact clamping system
- Orbital cutting process minimizes "cost per cut" with low cost consumable saw blades
- Swivel cord with quick disconnect for safety, security and simple replacement
- Integrated line laser pointer to give operator exacting cut off location
- Simple manual cutter head rotation
- Powerful motor with optimal speed range (30 - 200 rpm) for all materials
- Ergonomic twin motor handle for safe and comfortable operation
- Optimized blade guard protects operator while allowing cutting of short tangent fittings

Square, burr-free and cold machining process	✓
Deformation-free clamping system for tubes and pipes	✓
Easy, light weight handling	✓
Increased productivity	✓
Low-maintenance and service friendly	✓
Second saw blade position to cut off elbows	✓

# GFX 3.0 Tube & Pipe Saw

APPLICATION RANGE		GFX 3.0
Tube OD		0.236 - 3.07in (6.0 - 78.0mm)
Wall thickness		0.031 - 0.275in (0.8 - 7.0mm)
Tube ID min. (saw blade Ø 63/2.248 in)		
OD range (saw blade Ø 63/2.248 in)		0.236 - 3.07in (6.0 - 78.0mm)
Tube ID min. (saw blade Ø 68/2.677 in)		
OD range (saw blade Ø 68/2.677 in)		0.236 - 3.07in (6.0 - 73.0mm)
Tube ID min. (saw blade Ø 80/3.149 in)		
OD range (saw blade Ø 80/3.149 in)		
Tube materials		Unalloyed, low-alloy and high-alloy steel, stainless steel, non-ferrous metal, aluminum alloy, titanium alloy, composite material and plastic
TECHNICAL DATA		GFX 3.0
Dimensions (L x W x H)		22.44 x 12.99 x 11.02in (570 x 330 x 280mm)
Weight includes vice		62.83lb (28.5kg)
Shipping Weight		97 lb (44 kg)
Power		1200W
Protection class		Class II
Built-in electronic variable cutting speed with restart inhibitor		30 - 200RPM
Part #	(1-phase AC) 230 V EU, 50/60 Hz	0T790.144.001
	(1-phase AC) 120 V US, 50/60 Hz	0T790.144.002
Vibration level (EN 50144)		< 2.5 m/s <sup>2</sup>
Noise level at the workplace (EN 23741)		79.7 dB (A)
SCOPE OF DELIVERY		GFX 3.0
• 1 Saw blade		0T790.041 035
• Quick-mounting plate (without screw clamps*)		
• Pipe cutting machine		
• Wooden transportation case		
• 1 Stainless steel cap set (already mounted)		
• Line laser with holder and fastening screws (unmounted)		
• Tool set		
• (1) Tube of GF TOP Saw blade lubricant (Part # 0T790.060.228)		
• Operating instruction manual and spare parts list		

The technical data are not binding. They are not warranted characteristics and are subject to change. Please consult our general conditions of supply.

\* The GFX 3.0 can be mounted directly on the workbench without a quick-mounting plate. Quick-mounting plates with screw clamps for GFX 3.0 are available optionally.

## Stainless steel caps

Included in the scope of delivery for the GFX 3.0, these caps are ideal for preparing stainless steel tubes. Prevents contact corrosion between tube and clamping parts. Clamping shells for thin-walled tubes are available on request.

### Includes:

- Stainless steel caps (Qty.): (6) GFX 3.0
- Countersunk screws (Qty.): (12) GFX 3.0
- Allen key (Qty.): 1

MODEL	WEIGHT	PART #
Stainless steel caps for GFX 3.0 complete	5.3 oz (150 g)	0T790.144.200

## Durable storage and shipping case

High-quality shipping case.

MODEL	WEIGHT	PART #
Durable storage and shipping case for GFX 3.0	30.4 lb (13 kg)	0T-144-000



GFX 3.0



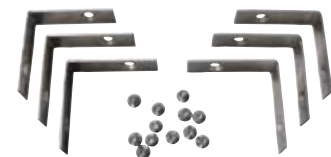
Cast iron clamping jaws with stainless steel caps



Powerful drive motor with overload protection and ergonomic handle



OEM blades offer low cost per cut



Stainless steel caps

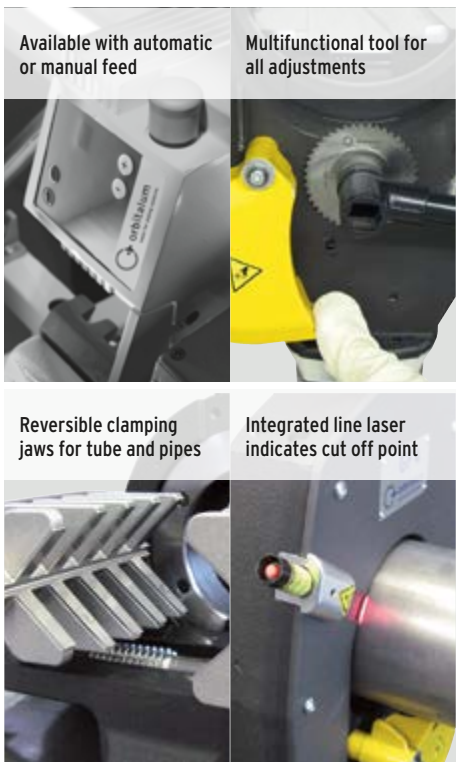


Durable storage and shipping case

# GF 4, GF 6 (AVM/MVM)

**RENTAL  
AVAILABILITY**

The GF series sets new standards in orbital pipe cutting. Ergonomic design and numerous innovative functions create significant advantages in the prefabrication of industrial pipeline systems



## PROVEN RELIABILITY AND PRECISION

The GF series orbital cutting machines have been the industry standard for decades, with a proven history of being the most reliable, highest precision orbital cutting saw ever produced.

- Safely cut stainless steel tube and pipe
- Square, burr-free cutting
- Deformation free stainless steel contact clamping system
- Orbital cutting process minimizes “cost per cut” with low cost consumable saw blades
- Non-twisting swivel cord with quick disconnect for safety, security and simple replacement
- Integrated line laser pointer to give operator exacting cut off location
- Three orbital drive systems, manual, MVM or AVM
- Locking mechanism prevents unauthorized usage or theft
- Single “Multifunction” tool for machine operation included
- Powerful motor with optimal speed range (40 - 215 rpm) for all materials
- Ergonomic twin motor handle for safe and comfortable operation
- Reversible clamping jaws maximize size range and rigidity
- Optimized blade guard protects operator while allowing cutting of short tangent fittings

Square, burr-free and cold machining process	✓
Deformation-free clamping system for tubes and pipes	✓
Sturdy design with powerful drive	✓
Unique and automated orbital cutting process	✓
Cost-effective, increasing productivity	✓
Anthraccite coated components for protection against corrosion	✓

# GF 4, GF 6 (AVM/MVM) Tube & Pipe Saws

APPLICATION RANGE	GF 4	GF 4 AVM*	GF 4 MVM*	GF 6	GF 6 AVM*	GF 6 MVM*
Tube OD	0.472 - 4.724in (12 - 120mm)	0.472 - 4.724in (12 - 120mm)	0.472 - 4.724in (12 - 120mm)	0.839 - 6.626in (21.3 - 168.3mm)	0.839 - 6.626in (21.3 - 168.3mm)	0.839 - 6.626in (21.3 - 168.3mm)
Wall thickness** (material dependent)	0.039 - 0.354in (1 - 9mm)	0.039 - 0.354in (1 - 9mm)	0.039 - 0.354in (1 - 9mm)	0.059 - 0.591in (1.5 - 15mm)	0.059 - 0.591in (1.5 - 15mm)	0.059 - 0.591in (1.5 - 15mm)
Tube ID min. blade Ø	2.480in (63 mm)	0.827in (21mm)	0.827in (21mm)	0.827in (21mm)	1.181in (30mm)	1.181in (30mm)
	2.677in (68 mm)	0.630in (16mm)	0.630in (16mm)	0.630in (16mm)	0.984in (25mm)	0.984in (25mm)
	3.150in (80 mm)	0.157in (4mm)	0.157in (4mm)	0.157in (4mm)	0.512in (13mm)	0.512in (13mm)
	3.937in (100 mm)				0mm/in	0mm/in
Tube materials:	High-quality steel (any Cr and Mo content); high-quality stainless steel (any Cr and Mo content); high-quality steel (Cr < 12% and Mo < 2.5%; Cr < 20% and Mo = 0%); case hardened steels, high-speed steels, tempering steels, bearing steels, tool steels; black and galvanized steel pipe; general structural steel; annealed cast iron pipe (GGG); aluminum; brass; copper; plastics (PE, PP, PVDE, PVC)					
TECHNICAL DATA	GF 4	GF 4 AVM*	GF 4 MVM*	GF 6	GF 6 AVM*	GF 6 MVM*
Power	2.41hp (1.8kW)	2.54hp (1.9kW)	2.41hp (1.8kW)	2.41hp (1.8kW)	2.54hp (1.9kW)	2.41hp (1.8kW)
Cutting Speed	40 - 215rpm					
Power AVM		0.07hp (0.05kW)			0.07hp (0.05kW)	
AVM Slide housing speed		0.1 - 3.9 rpm			0.3 - 3.5 rpm	
AVM Slide housing max tq		101 Nm			353 Nm	
Protection	Class II (DIN EN 60745-1)	Class I (DIN EN 60204-1)	Class II (DIN EN 60745-1)	Class II (DIN EN 60745-1)	Class I (DIN EN 60204-1)	Class II (DIN EN 60745-1)
Noise level	79 dB (A) at workpiece approximate					
Vibration level	< 2.5 m/s <sup>2</sup> (DIN EN 28662, part 1)					
Mains Fuse Rating	16A					
Dimensions (L x W x H)	18.9 x 12.8 x 26.8in (480 x 325 x 680mm)	18.9 x 12.8 x 31.9in (480 x 325 x 810mm)	18.9 x 12.8 x 30.7in (480 x 325 x 780mm)	22.6 x 13.9 x 36.2in (574 x 352.7 x 920mm)	22.6 x 13.9 x 38.3in (574 x 352.7 x 972mm)	22.6 x 13.9 x 36.2in (574 x 352.7 x 920mm)
Machine Weight approx.***	135.1 lb (61.3 kg)	155.4 lb (70.5 kg)	146.8 lb (66.6 kg)	204.4lb (92.7kg)	224.2lb (101.7kg)	215.6lb (97.8kg)
Shipping Weight	194 lb (88 kg)	216.1 lb (98 kg)	216.1 lb (98 kg)	308.6 lb (140 kg)	337.3 lb (153 kg)	324.1 lb (147 kg)
Part #	(1-phase AC) 230 V, 50/60 Hz	0T790.142.001	0T790.142.011	0T790.142.021	0T790.143.001	0T790.143.011
	(1-phase AC) 120 V, 50/60 Hz	0T790.142.002	0T790.142.012	0T790.142.022	0T790.143.002	0T790.143.012
SCOPE OF DELIVERY	GF 4	GF 4 AVM*	GF 4 MVM*	GF 6	GF 6 AVM*	GF 6 MVM*
(1) Saw blade		0T790.042.064			0T790.043.018	

- Pipe cutting and beveling machine
- Transportation case
- Set of stainless steel clamping attachments
- Mounting plate
- Line laser with fastening screw\*\*\*\*
- Tool set
- (1) Tube of Saw blade lubricant GF TOP (Part # 0T790.060.228)
- (1) Bottle Special gear oil (Part # 0T790.041.030)
- Operating instructions
- Spare parts list

The technical data are not binding. They are not warranted characteristics and are subject to change. Please consult our general conditions of supply.

\* The automatic/manual feed module AVM/MVM is already fitted to the pipe cutter upon delivery.

\*\*With automatic cutting process. Increased wall thickness possible with manual feed or by adding an additional cut (depending on the saw blade diameter).

\*\*\* Weight without packaging and accessories.

\*\*\*\* The line laser is already mounted at the GF 4 (AVM/MVM) on delivery. At the GF 6 (AVM/MVM) the line laser is supplied separately and has to be mounted on the machine prior to use.

## FEED OPTIONS:



GF 4

GF 6

GF 4 AVM

GF 6 AVM

GF 4 MVM

GF 6 MVM

**Standard Feed:**  
User manual controlled, default configuration option.

**Automatic Feed Module AVM\*:**  
Continuously controls cutting speed using torque and parameter settings, improving handling of GF and RA machines. Stops automatically after the cutting process.

**Manual Feed Module MVM\*:**  
Manual option, includes a hand wheel, enabling the machine head to rotate easily and with little effort around the pipe with a constant speed.

# RA 8, RA 12 (AVM)



The leading saw for larger tube diameters



Available with automatic feed modules



Optimized speed range

Orbital cutting technology

## LARGE DIAMETER ORBITAL CUTTING MACHINES

The RA series orbital cutting machines have been the industry standard in large diameter saws since 1960, and field proven for reliability and high precision applications.

- Safely cut stainless steel tube and pipe
- Square, burr-free cutting
- Deformation free clamping system
- Orbital cutting process minimizes "cost per cut" with low cost consumable saw blades
- Non-twisting swivel cord with quick disconnect for safety, security and simple replacement
- Integrated line laser pointer to give operator exacting cut off location
- Orbital drive systems, manual or AVM
- Locking mechanism prevents unauthorized usage or theft
- Single "Multifunction" tool for machine operation included
- Powerful motor with optimal speed range (40 - 215 rpm) for all materials
- Ergonomic twin motor handle for safe and comfortable operation
- Optimized blade guard protects operator while allowing cutting of short tangent fittings

Square, burr-free and cold machining process	✓
Deformation-free clamping system for tubes and pipes	✓
Sturdy design with powerful drive	✓
Multiple point clamping	✓
Regulated cutting speed	✓
Fast tool replacement	✓

# RA 8, RA 12 (AVM) Tube & Pipe Saws

APPLICATION RANGE	RA 8	RA 8 AVM*	RA 12 AVM*
Tube OD	4.488 - 9.055in (114 - 230mm)	4.488 - 9.055in (114 - 230mm)	6.063 - 12.795in (154 - 325mm)
Wall thickness (depends on material)**	0.079 - 0.394in (2 - 10mm)	0.079 - 0.394in (2 - 10mm)	0.079 - 0.394in (2 - 10mm)
Tube ID min. blade Ø 2.480 in (63 mm)	5.394in (137mm)	5.394in (137mm)	7.480in (190mm)
Tube ID min. blade Ø 2.677 in (68 mm)	5.197in (132mm)	5.197in (132mm)	7.283in (185mm)
Tube ID min. blade Ø 3.150 in (80 mm)	4.724in (120mm)	4.724in (120mm)	6.811in (173mm)
Tube ID min. blade Ø 3.937 in (100 mm)	3.937in (100mm)	3.937in (100mm)	6.024in (153mm)
Tube materials	High-quality steel (any Cr and Mo content); high-quality stainless steel (any Cr and Mo content); high-quality steel (Cr < 12% and Mo < 2.5%; Cr < 20% and Mo = 0%); case hardened steels, high-speed steels, tempering steels, bearing steels, tool steels; black and galvanized steel pipe; general structural steel; annealed cast iron pipe (GGG); aluminum; brass; copper; plastics (PE, PP, PVDE, PVC)		
TECHNICAL DATA	RA 8	RA 8 AVM*	RA 12 AVM*
Power	2.41hp (1.8kW)	2.54hp (1.9kW)	2.54hp (1.9kW)
Cutting speed		40 - 215rpm	
Power AVM		0.07hp (0.05kW)	0.07hp (0.05kW)
Slide housing speed with AVM		0.1 - 2.3rpm	0.1 - 1.8rpm
Slide housing torque max. with AVM		165Nm	210Nm
Protection class	II (DIN EN 60745-1)	I (DIN EN 60204-1)	I (DIN EN 60204-1)
Noise level	79 dB (A) at the workplace approx.		
Vibration level	< 2.5 m/s <sup>2</sup>		
Mains fuse by customer	16A (DIN EN 28662, part 1)		
Dimensions (L x W x H)	30.6 x 16.9 x 19.1in (778 x 430 x 485mm)	36.1 x 16.9 x 19.1in (918 x 430 x 485mm)	42.1 x 14.7 x 23.3in (1.070 x 374 x 592mm)
Machine Weight approx.***	225.9lb (102.5kg)	242.5lb (110.0kg)	322.1lb (146.1kg)
Shipping Weight	328.5 lb (149 kg)	363.8 lb (165 kg)	451.9 lb (205 kg)
Part #	(1-phase AC) 230 V, 50/60 Hz	0T790.045.095	0T790.045.001
	(1-phase AC) 120 V, 50/60 Hz	0T790.045.096	0T790.045.007

## SCOPE OF DELIVERY

- Pipe cutting and beveling machine
- Transportation case
- (1) Saw blade (Part # 0T790.043.018)
- Mounting plate

The technical data are not binding and are subject to change. Please consult our general conditions of supply.

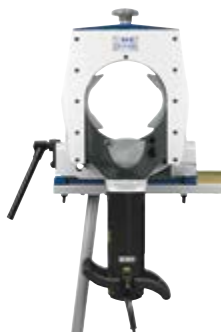
\* The automatic/manual feed module AVM is already fitted to the pipe cutter upon delivery.

\*\* With automatic cutting process. Increased wall thickness possible with manual feed or by adding an additional cut (depending on the saw blade diameter).

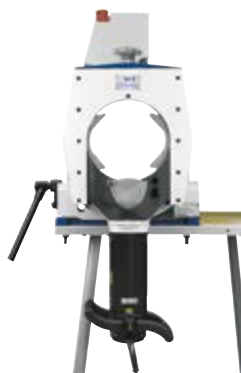
\*\*\* Weight without packaging and accessories.

All RA's are fitted with the swivel cable with a quick-disconnect coupler.

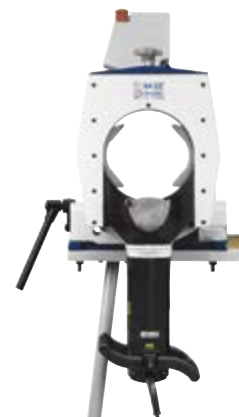
## FEED OPTIONS:



RA 8



RA 8 AVM



RA 12 AVM

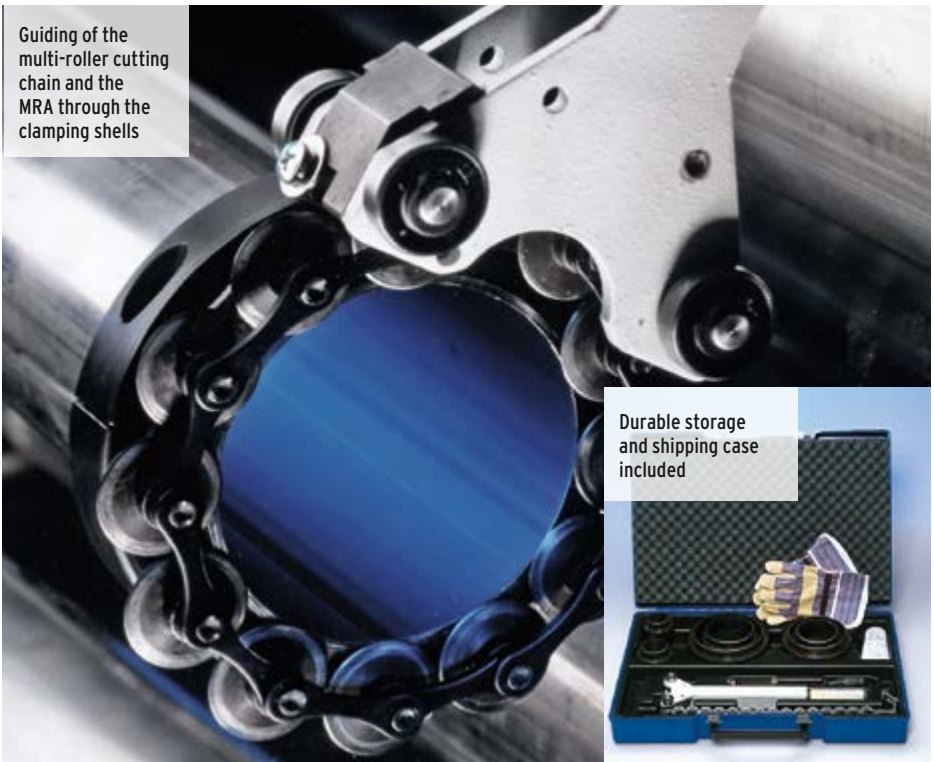
### Standard Feed:

User manual controlled, default configuration option.

### Automatic Feed Module AVM\*:

Continuously controls cutting speed using torque and parameter settings, improving handling of GF and RA machines. Stops automatically after the cutting process.

## MRA



Guiding of the multi-roller cutting chain and the MRA through the clamping shells

Durable storage and shipping case included



Multi-roller cutting chains: The cutting wheels are made from hardened steel

Diameter-specific clamping shells

## METAL TUBE CUTTER

The simple solution for cutting metal tubes manually in any position. The MRA metal tube cutter is specially designed for tight clearance where chipless cutting processes are needed.

**Easy, manual cutting of tubes in any position.**

### Features:

- The flexible multi-roller cutting chain is at a right-angle around the tube providing a deformation-free, square cut
- MRA runs on track rollers on the diameter-specific clamping shells
- Minimum hand movements
- Hardened, wear resistant steel construction ensures Long service life of the components
- No electricity required
- Requires little space, for limited access areas

### For Tube materials:

- High-alloy steel (stainless steel material e.g. no. 1.40... to 1.45... or 304/316 materials)
- Low-alloy and unalloyed steel
- Cast materials
- Non-ferrous metals

APPLICATION RANGE	
Tube OD	0.984 - 10in (25 - 254mm)
Wall thickness*	0.031 - 0.118in (0.8 - 3mm)
TECHNICAL DATA	
Dimensions	17.7 x 4.1in (450 x 105mm)
Weight	6.8 lb (3.1 kg)
Shipping Weight	17.6 lb (8 kg)
Part #	0T790.008.001
SCOPE OF DELIVERY	
<ul style="list-style-type: none"> <li>• Metal tube cutter MRA</li> <li>• Durable storage &amp; shipping case</li> <li>• Socket head key</li> <li>• Connection clamp</li> <li>• Working gloves</li> <li>• Operating instructions and spare parts list</li> </ul>	

The technical data are not binding. They are not warranted characteristics and are subject to change. Please consult our general conditions of supply. \*Depends on material. High-alloy steel, wall thickness 2-2.5mm (0.079-0.098in)



### Multi-roller cutting chains

Cutting wheels made from hardened steel.

TUBE OD	# OF WHEELS	WEIGHT	PART #
0.984 - 4.500in (25.0 - 114.3mm)	15	1.1 lb (0.5 kg)	0T790.008.018
4.500 - 10.000in (114.3 - 254.0mm)	16	2 lb (0.9 kg)	0T790.008.041

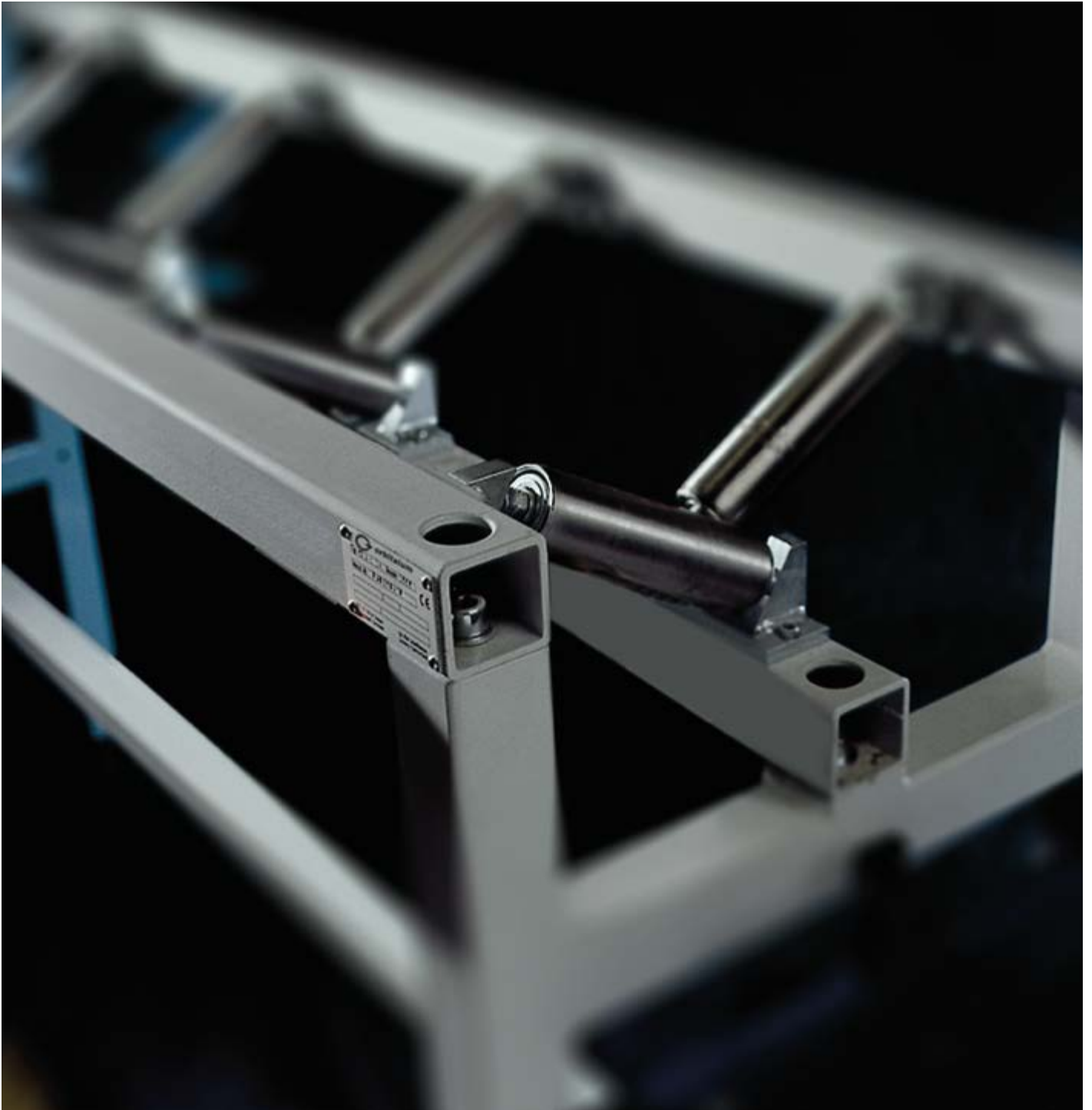
### Clamping shell pairs for MRA

Hardened steel, two-piece sets. One pair of clamping shells needed per tube size. Other sizes available on request.

TUBE OD	WEIGHT	PART #
1.0in (25.4mm)	1.4 lb (.7 kg)	0T790.008.104
1.5in (38mm)	2.1 lb (1 kg)	0T790.008.130
2.0in (50.8mm)	2.5 lb (1.1 kg)	0T790.008.165
2.5in (63.5mm)	3 lb (1.4 kg)	0T790.008.200
3.0in (76.1mm)	3.4 lb (1.6 kg)	0T790.008.230
4.0in (101.6mm)	4.5 lb (2 kg)	0T790.008.260
6.0in (152.4mm)	7.1 lb (3.2 kg)	0T790.008.335



# Tube & Pipe Saw Accessories



# Tube & Pipe Saw Accessories

## Blades & Bevel Tooling

Engineered to increase the life of the machine and the tool, these saw blades and bevel cutters are tested under the highest tolerances. Two ranges of saw blades are available.

WORKABLE PIPE MATERIALS	AL	MILD STEEL, CU, CUNI, CUZN, CUSN	INOX, V2A, V4A, 304, 316 (L)	TI, DUPLEX, INCONEL
Performance		•	•	
High Performance		•	•	•
Premium			•	

MODEL	VERSION	WALL THICKNESS	SAW BLADE Ø	WEIGHT	PART #
Saw blade	Performance	.024-.047in (0.6-1.2mm)	2.480in (63mm)	1 oz (27 g)	0T790.041.036
Saw blade	Performance	.039-.063in (1.0-1.6mm)	2.677in (68mm)	1.8 oz (50 g)	0T790.042.049
Saw blade	Performance	.039-.118in (1.0-3.0mm)	2.480in (63mm)	1.2 oz (35 g)	0T790.048.072
Saw blade	Performance	.047-.098in (1.2-2.5mm)	2.480in (63mm)	1.4 oz (40 g)	0T790.041.035
Saw blade	Performance	.047-.098in (1.2-2.5mm)	2.677in (68mm)	1.6 oz (45 g)	0T790.042.064
Saw blade	Performance**	.047-.098in (1.2-2.5mm)	3.937in (100mm)	3.7 oz (104 g)	0T790.043.036
Saw blade	Performance	.047-.118in (1.2-3.0mm)	3.268in (83mm)	2.6 oz (75 g)	0T790.043.024
Saw blade	Performance	.059-.098in (1.5-2.5mm)	3.150in (80mm)	2.3 oz (65 g)	0T790.046.022
Saw blade	Performance	.098-.217in (2.5-5.5mm)	2.480in (63mm)	1.2 oz (35 g)	0T790.041.048
Saw blade	Performance**	.098-.217in (2.5-5.5mm)	3.937in (100mm)	4.2 oz (120 g)	0T790.043.038
Saw blade	Performance	.098-.276in (2.5-7.0mm)	2.677in (68mm)	1.6 oz (45 g)	0T790.042.048
Saw blade	Performance	.098-.276in (2.5-7.0mm)	3.150in (80mm)	2.8 oz (80 g)	0T790.043.018
Saw blade	Performance	.236-.394in (6.0-10.0mm)	2.953in (80mm)	2.6 oz (75 g)	0T790.043.022
Saw blade	Performance**	.236-.591in (6.0-15.0mm)	3.937in (100mm)	3.7 oz (105 g)	0T790.047.026
Saw blade	High-Performance	.047-.098in (1.2-2.5mm)	3.150in (80mm)	2.3 oz (64 g)	0T790.046.021
Saw blade	High-Performance	.047-.098in (1.2-2.5mm)	2.480in (63mm)	1.4 oz (40 g)	0T790.041.034
Saw blade	High-Performance	.098-.267in (2.5-7.0mm)	2.677in (68mm)	1.6 oz (45 g)	0T790.042.058
Saw blade	Premium	.047-.098in (1.2-2.5mm)	2.480in (63mm)	1.2 oz (33 g)	0T790.041.049

The technical data are not binding. They are not warranted characteristics and are subject to change. Please consult our general conditions of supply.

\* applicable only for aluminum tubes

\*\* only for RA 8 and RA 12

## Bevel cutters

For V-prep profiles on pipe ends. The bevel cutter is mounted on the RA pipe cutter instead of a saw blade. Reproducible weld seam preparation in just seconds.

MODEL	BEVEL ANGLE [°]	HEIGHT OF BEVEL MAX.	BEVEL CUTTER Ø	WEIGHT	PART #
Economy	30.0	.374in (9.5mm)	2.835in (72mm)	5.8 oz (165 g)	0T790.042.045
Economy	35.0	.350in (8.9mm)	2.756in (70mm)	6 oz (170 g)	0T790.042.037
Economy	37.5	.331in (8.4mm)	2.756in (70mm)	5.7 oz (162 g)	0T790.042.036
Economy	45.0	.295in (7.5mm)	2.756in (70mm)	5.7 oz (162 g)	0T790.042.038
Performance	30.0	.374in (9.5mm)	2.835in (72mm)	5.4 oz (153 g)	0T790.042.071
Performance	30.0	.512in (13.0mm)	2.992in (76mm)	6.6 oz (187 g)	0T790.043.023
Performance	37.5	.331in (8.4mm)	2.756in (70mm)	5.7 oz (163 g)	0T790.042.070
High-Performance	30.0	.374in (9.5mm)	2.835in (72mm)	5.5 oz (157 g)	0T790.042.073

## Deburring tool

MODEL	TUBE OD MAX.	TUBE ID MAX.	WEIGHT	PART #
Deburring tool	2.126 in (54 mm)	0.394 in (10 mm)	1 lb (455 g)	0T790.052.052



Saw blade Performance



Saw blade Premium



Bevel cutter V-prep



Deburring tool

# Tube & Pipe Saw Accessories

## Saw blade lubricant GF TOP

Synthetic high-performance lubricant for cutting and beveling machines. Increases the tool life of the saw blade. Compliant with the food approval NSF H2. The screwable brush guarantees an easy and uniform application of lubricant on the saw blade.

MODEL	VERSION	WEIGHT	PART #
Saw blade lubricant GF TOP	Tube, 180 g	7.2 oz (205 g)	0T790.060.228



GF TOP



GF LUB

## Saw blade lubricant GF LUB

The chlorine-free high-performance lubricant for cutting and beveling. Increases the tool life of the saw blade. This ecologically cutting compound is the environmentally friendly replacement for ROCOL: with a new name and improved quality. GF LUB meets the latest environmental directives and ecological standards.

MODEL	VERSION	WEIGHT	PART #
Saw blade lubricant GF LUB	Tube, 160 ml	5.6 oz (160 g)	0T790.041.016

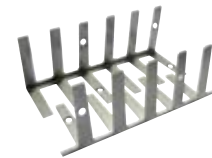


Special gear oil

## Special gear oil

For all GF and RA machines.

MODEL	VERSION	WEIGHT	PART #
Special gear oil	Bottle, 250 ml	8.3 oz (235 g)	0T790.041.030



Set of stainless steel clamping attachments

## Set of stainless steel clamping attachments

For GF 4 and GF 6 (AVM/MVM). For protection against contact corrosion. Standard part of the GF 4 and the GF 6 (AVM/MVM).

MODEL	VERSION	WEIGHT	PART #
Set of stainless steel clamping attachments for GF 4	right + left	10.9 oz (310 g)	0T790.142.241
Set of stainless steel clamping attachments for GF 6	right + left	18 oz (510 g)	0T790.143.200



Swivel cable complete

## Swivel cable

To prevent twisting of the cable. For all GF, RA and PS machines with protection class II (double insulated).

MODEL	VERSION	CABLE LENGTH	WEIGHT	PART #
Swivel cable complete	120 V, 50/60 Hz US/CA	13.12ft (4m)	23.1 oz (654 g)	0T790.142.082
Swivel cable	120 V, 50/60 Hz US/CA	13.12ft (4m)	26.1 oz (740 g)	0T790.142.077



Swivel cable

## Quick-mounting base plates with integrated screw clamps

For quickly mounting machine to work benches. Ideal for frequent changes of location.

MODEL	WEIGHT	PART #
Quick-mounting base plate for GFX 3.0	9.3 lb (4.2 kg)	0T790.041.027
Quick-mounting base plate for GF 4, GF 6, RA 8	13.6 lb (6.2 kg)	0T790.042.027



Quick-mounting base plates with integrated screw clamps

# Tube & Pipe Saw Accessories

## Pipe feeder base unit and extension unit

The pipe feeder accurately feeds long and heavy pipes into GF and RA machines. Sturdy, stable design with powder-coated frames and stainless steel rollers.

### Base unit:

Fits pipe cutting and beveling machines from Orbitalum Tools (GFX 3.0 on request). The machines can be directly mounted onto the base plate of the pipe feeder base unit, without further parts. The machines can be easily adjusted to the required cutting dimension using the handwheel-operated mechanical height adjustment. The machine is securely fastened to the base plate.

### Extension unit:

Extend base with multiple extension units, which easily bolt together.

### Floor bracket accessory:

To fasten the base unit or the extension unit to the floor. The assembly consists of 4 brackets and 8 bolts with washers.

APPLICATION RANGE/ TECHNICAL DATA	PIPE FEEDER BASE UNIT	PIPE FEEDER EXTENSION UNIT	FLOOR BRACKET ACCESSORY
Tube OD	16 - 325 mm 0.63 in - 12.8 in	16 - 325 mm 0.63 in - 12.8 in	
Dimensions approx.	185 x 105 x 50 cm 72.8 in x 41.3 in x 19.7 in	approx. 160 x 105 x 50 62.9 in x 41.3 in x 19.7 in	
Load capacity max.	400 kg 881.8 lbs	400 kg 881.8 lbs	
Height-adjustable mounting plate (adjusting range)	68 mm 2.68 in	- -	
Weight	255.7 lb (116 kg)	158.7 lb (72 kg)	4.2 lb (1.9 kg)
Part #	0T790.068.051	0T790.068.061	0T790.068.053

## Mobile workstation

For the mobile site and/or workshop. The ideal addition for Orbitalum pipe cutters.

### Advantages:

- Safe and easy transportation of machines and equipment on site
- Height-adjustable pipe support with stainless steel roller
- The tool box comes with 4 drawers for tools and equipment and is lockable
- Lifting table with height adjustment of the GF- and RA-machines to the required pipe dimension

MODEL	MOBILE WORKSTATION
Dimensions (L x W x H)	45.3 in x 16.9 in x 35.8 in (115 x 43 x 91 cm)
Load capacity max.	1488.1 lbs (675 kg)
Weight	302 lb (137 kg)
Part #	0T790.068.071

## Work benches

MODEL	COLLAPSIBLE WORK BENCH
Load capacity	1433 lb (650 kg)
Dimension (L x W x H)	100 x 70 x 85 cm 39.37 in x 27.56 in x 33.46 in
Weight	66.1 lb (30 kg)
Part #	0T790.052.030



Pipe feeder base unit



Pipe feeder extension unit

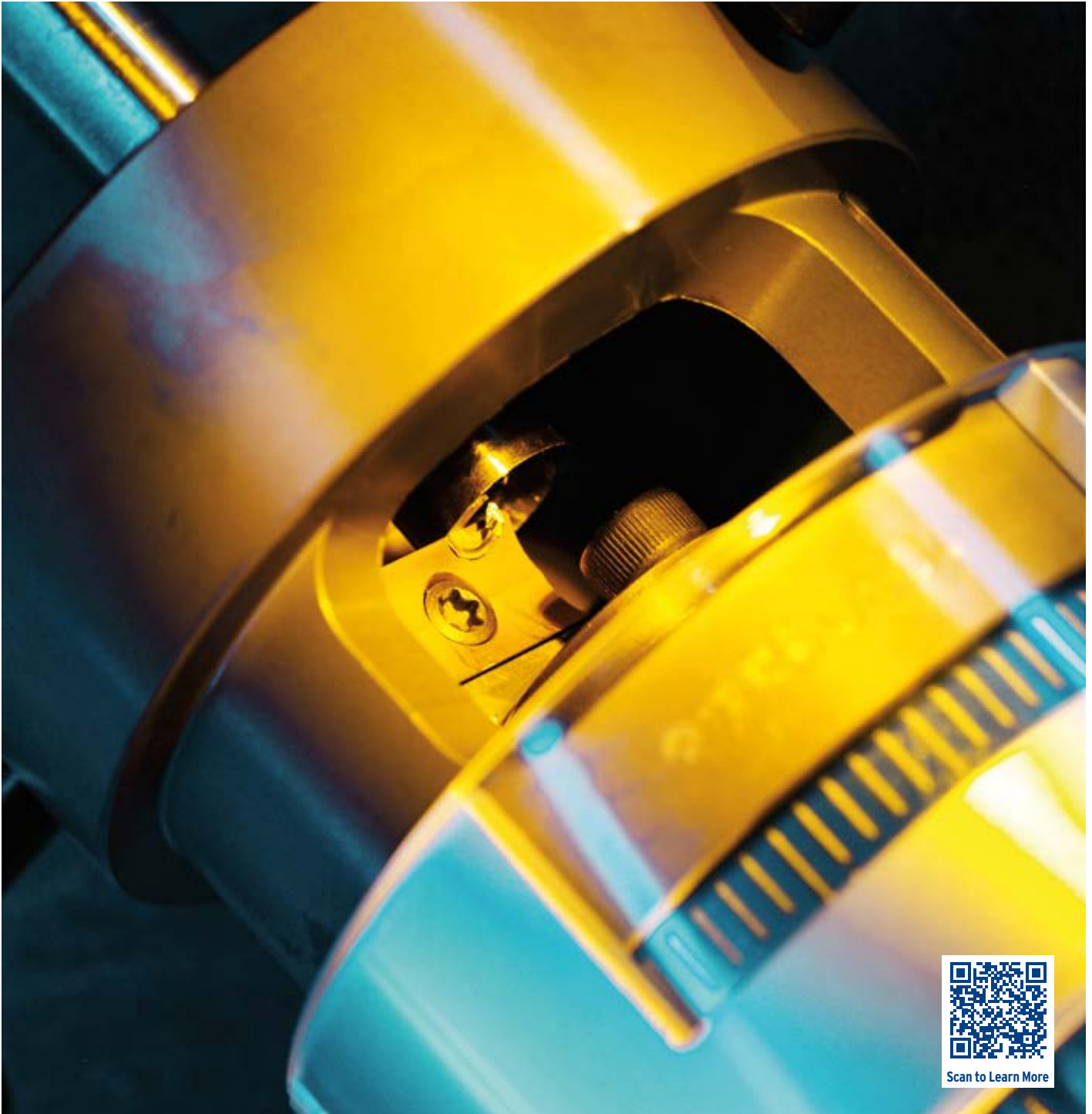


Mobile workstation



Collapsible work bench

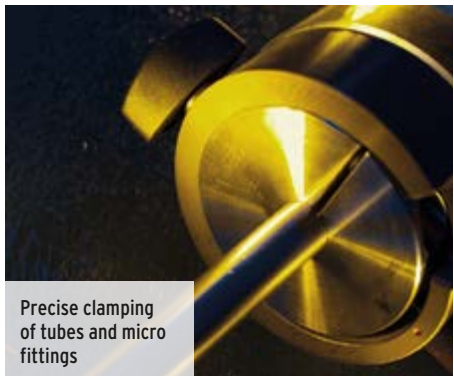
# Tube Squaring Machines



## RPG ONE, RPG 1.5, RPG 2.5



Designed for burr-free squaring and beveling of thin-walled stainless steel tubes and micro fittings. High quality tube end preparation for orbital welding.



Precise clamping of tubes and micro fittings



Built-in electronic speed regulation with speed stabilization



Powerful cordless versions with lithium-ion technology

### SMALL DIAMETER TUBE SQUARING MACHINES

The small diameter RPG series tube squaring machines have set the high purity orbital welding industry standard for safety and precision.

- Repeatable high quality burr-free tube end squaring
- Dual tool bit safety guards to maximize safe operation
- Stainless steel clamping eliminates cross contamination
- Wide range of collets for tube and micro-fittings
- No tools required for operation
- Linear micrometer feed system for high tolerance length control ( $\pm .004$ " )
- Dual cutting edge tool bit yields the best "cost per cut" in the industry

#### CORDED (120V - 230V) DRIVE MOTOR

- Built in electronic VTC speed control gives maximum power at any speed setting
- Restart protection for operation safety
- Overload protection
- Brush wear indication and shut off

#### CORDESS (18V) DRIVE MOTOR with quick charger (120V - 230V)

- Minimizes tool working area requirement (small package)
- Quick battery recharge
- Battery charge capacity display
- Overload protection

Squaring tube ends with a high-quality finish	✓
Burr-free and square	✓
Quick clamping system for tools, clamping shells and tubes	✓
Preparation of thin-walled stainless steel tubes (V4A) and micro fittings	✓
High-performance coated tool bit with two cutting edges	✓
Electric versions with built-in electronic speed stabilization	✓

# RPG One, 1.5, & 2.5 Tube Squaring Machines

APPLICATION RANGE	RPG ONE	RPG ONE CORDLESS	RPG 1.5	RPG 1.5 CORDLESS	RPG 2.5	RPG 2.5 CORDLESS
Tube OD min.-max.	0.118*-1.0in (3.0*-25.4mm)		0.118*-1.5in (3.0*-38.1mm)		0.118*-2.5in (3.0*-63.5mm)	
Wall thickness max.	0.118in (3.0mm)					
Tube materials	High-alloy, unalloyed, and low-alloy steels and aluminum. Others on request.					
Length	15.4in (390mm)	10.3 (261mm)	15.8in (400mm)	10.8in (275mm)	19.7in (500mm)	10.2in (260mm)
Width	2.8in (70mm)	3.2in (80mm)	6.3in (160mm)	3.5in (90mm)	6.7in (170mm)	12.6in (320mm)
Height	7.9in (200mm)	10in (254mm)	13.8in (350mm)	10in (254mm)	11.8in (300mm)	11.8in (300mm)
Variable cutting speed	145-380 RPM	0-400 RPM	145-380 RPM	0-400 RPM	1: 9-24 RPM 2: 27-153RPM	1: 0-24 RPM 2: 0-83 RPM
Power	1100 W		1100 W		1100 W	
Battery Voltage		18 V		18 V		18 V
Battery Capacity		2.6 Ah		2.6 Ah		2.6 Ah
Noise level at the workpiece (EN 23741)	approx. 78 dB (A)					
Vibration level (EN 50144)	< 2.5 m/s <sup>2</sup>					
Machine Weight	9.1 lb (4.1 kg)	6.3 lb (2.9 kg)	10.4 lb (4.7 kg)	7.6 lb (3.4 kg)	14.6 lb (6.6 kg)	11.8 lb (5.3 kg)
Shipping Weight	21.2 lb (9.6 kg)	18.1 lb (8.2 kg)	20.9 lb (9.5 kg)	22.3 lb (10.1 kg)	27.6 lb (12.5 kg)	25 lb (11.3 kg)
(1-phase AC) 230 V 50/60 Hz	0T790.036.031	0T790.036.021	0T790.037.001	0T790.037.011	0T790.030.001	0T790.030.011
(1-phase AC) 120 V 50/60 Hz	0T790.036.032	0T790.036.022	0T790.037.002	0T790.037.012	0T790.030.002	0T790.030.012

SCOPE OF DELIVERY	RPG ONE	RPG ONE CORDLESS	RPG 1.5	RPG 1.5 CORDLESS	RPG 2.5	RPG 2.5 CORDLESS
• Overload protection (square nut)			1	1	1	1
• Adapter clamping shell					0T790.030.094	
• Tube squaring machine						
• Durable storage and shipping case						
• (2) Rechargeable batteries (Cordless Only)						
• Battery charger (Cordless only)						
• Tool holder WH (0T790.037.152)						
• Multifunctional tool MFW (0T790.038.315)						
• Tool set						
• Operating instructions and spare parts list						
• Bench stand for cordless machines optional available (Part # 0T790.037.169)						

The technical data are not binding. They are not warranted characteristics and are subject to change. Please consult our general conditions of supply.

\* Application range with standard tool holder (Part # 0T790.037.152) is from 6.0 mm/0.236 in OD. With special tool holder (Part # 0T790.037.161) 3.0 mm/0.118 in OD is possible.

For the RPG 2.5 (battery) only with a special adapter clamping shell (included in the standard scope of delivery of the RPG 2.5).

## Cordless Version Features:

- Very short design
- Lithium-ion technology
- Motor with high performance and small size
- No memory effect
- Single cell monitoring in the cordless pack
- Electronic overload protection with integrated temperature monitor
- Robust cordless packs with capacity display
- Minimal self-discharge
- Air-cooled technology for short charging times and a long service life



RPG ONE



RPG 1.5



RPG 2.5



RPG ONE Cordless



RPG 1.5 Cordless



RPG 2.5 Cordless

# RPG One, 1.5, & 2.5 Tube Squaring Accessories

## Stainless steel clamping shells

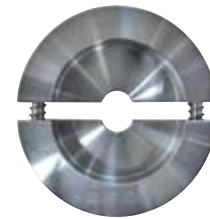
Extremely durable. Assures accurate centering and quick clamping shell change without any tools with its unique design and positive clamping shell mechanism.

Other dimensions of clamping shells are available. Please check the outer diameter of the tubes before ordering the clamping shells.

WORKS WITH	APPLICATION	TUBE OD	TUBE CLAMPING LENGTH	WEIGHT	PART #
RPG ONE	Tube	.118in (3mm)	.394in (10mm)	4 oz (118 g)	OT790.036.232
RPG ONE	Tube	.125in (3.18mm)	.394in (10mm)	4 oz (118 g)	OT790.036.201
RPG ONE	Tube	.236in (6mm)	.394in (10mm)	4 oz (118 g)	OT790.036.213
RPG ONE	Tube	.250in (6.35mm)	.394in (10mm)	4 oz (118 g)	OT790.036.202
RPG ONE	Tube	.314in (8mm)	.394in (10mm)	4 oz (118 g)	OT790.036.215
RPG ONE	Tube	.375in (9.53mm)	.394in (10mm)	4 oz (118 g)	OT790.036.203
RPG ONE	Tube	.394in (10mm)	.394in (10mm)	4 oz (118 g)	OT790.036.204
RPG ONE	Tube	.472in (12mm)	.394in (10mm)	4 oz (118 g)	OT790.036.205
RPG ONE	Tube	.500in (12.7mm)	.394in (10mm)	4 oz (118 g)	OT790.036.206
RPG ONE	Tube	.625in (15.88mm)	.394in (10mm)	4 oz (118 g)	OT790.036.211
RPG ONE	Tube	.750in (19.05mm)	.394in (10mm)	4 oz (118 g)	OT790.036.208
RPG ONE	Tube	1.0in (25.4mm)	.394in (10mm)	4 oz (118 g)	OT790.036.210
RPG ONE	Microfitting	.236in (6mm)	.157in (4mm)	2 oz (66 g)	OT790.036.304
RPG ONE	Microfitting	.250in (6.35mm)	.157in (4mm)	2 oz (66 g)	OT790.036.301
RPG ONE	Microfitting	.314in (8mm)	.157in (4mm)	2 oz (66 g)	OT790.036.307
RPG ONE	Microfitting	.375in (9.53mm)	.157in (4mm)	2 oz (66 g)	OT790.036.302
RPG ONE	Microfitting	.394in (10mm)	.157in (4mm)	2 oz (66 g)	OT790.036.305
RPG ONE	Microfitting	.472in (12mm)	.157in (4mm)	2 oz (66 g)	OT790.036.306
RPG ONE	Microfitting	.500in (12.7mm)	.157in (4mm)	2 oz (66 g)	OT790.036.303
RPG 1.5	Tube	.118in (3mm)	.591in (15mm)	11 oz (300 g)	OT790.037.220
RPG 1.5	Tube	.125in (3.18mm)	.591in (15mm)	11 oz (300 g)	OT790.037.221
RPG 1.5	Tube	.187in (4.78mm)	.591in (15mm)	11 oz (300 g)	OT790.037.223
RPG 1.5	Tube	.236in (6mm)	.591in (15mm)	11 oz (300 g)	OT790.037.225
RPG 1.5, RPG 2.5	Tube	.250in (6.35mm)	.591in (15mm)	11 oz (300 g)	OT790.037.226
RPG 1.5, RPG 2.5	Tube	.314in (8mm)	.591in (15mm)	11 oz (300 g)	OT790.037.227
RPG 1.5, RPG 2.5	Tube	.375in (9.53mm)	.591in (15mm)	11 oz (300 g)	OT790.037.228
RPG 1.5, RPG 2.5	Tube	.394in (10mm)	.591in (15mm)	11 oz (300 g)	OT790.037.229
RPG 1.5, RPG 2.5	Tube	.472in (12mm)	.591in (15mm)	11 oz (300 g)	OT790.037.230
RPG 1.5, RPG 2.5	Tube	.500in (12.7mm)	.591in (15mm)	11 oz (300 g)	OT790.037.231
RPG 1.5, RPG 2.5	DN 10	.512in (13mm)	.591in (15mm)	10 oz (270 g)	OT790.037.232
RPG 1.5, RPG 2.5	Tube	.625in (15.88mm)	.591in (15mm)	10 oz (270 g)	OT790.037.236
RPG 1.5, RPG 2.5	Tube (DN 15)	.750in (19.05mm)	.591in (15mm)	10 oz (270 g)	OT790.037.241
RPG 1.5, RPG 2.5	DN 20	.906in (23mm)	.591in (15mm)	8 oz (240 g)	OT790.037.245
RPG 1.5, RPG 2.5	Tube	1.0in (25.4mm)	.591in (15mm)	8 oz (240 g)	OT790.037.248
RPG 1.5, RPG 2.5	DN 25	1.142in (29mm)	.591in (15mm)	8 oz (240 g)	OT790.037.251
RPG 1.5, RPG 2.5	Tube	1.25in (31.8mm)	.591in (15mm)	8 oz (240 g)	OT790.037.280
RPG 1.5, RPG 2.5	1in Pipe	1.315in (33.4mm)	.591in (15mm)	8 oz (240 g)	OT790.037.281
RPG 1.5, RPG 2.5	DN 32	1.378in (35mm)	.591in (15mm)	8 oz (240 g)	OT790.037.284
RPG 1.5, RPG 2.5	Tube	1.5in (38.1mm)	.591in (15mm)	8 oz (240 g)	OT790.037.287
RPG 2.5	DN 40	1.614in (41mm)	.591in (15mm)	1.1 lb (498 g)	OT790.030.230
RPG 2.5	1 1/4in Pipe	1.660in (42.4mm)	.591in (15mm)	1.1 lb (498 g)	OT790.030.227
RPG 2.5	1 1/2in Pipe	1.900in (48.3mm)	.591in (15mm)	1.1 lb (498 g)	OT790.030.226
RPG 2.5	Tube	2.0in (50.8mm)	.591in (15mm)	1.1 lb (498 g)	OT790.030.220
RPG 2.5	DN 50	2.087in (53mm)	.591in (15mm)	1.0 lb (454 g)	OT790.030.232
RPG 2.5	2in Pipe	2.375in (60.3mm)	.591in (15mm)	14 oz (397 g)	OT790.030.222
RPG 2.5	Tube	2.5in (63.5mm)	.591in (15mm)	12 oz (340 g)	OT790.030.223
RPG 1.5	Microfitting	.118in (3mm)	.157in (4mm)	8 oz (220 g)	OT790.037.300
RPG 1.5	Microfitting	.125in (3.18mm)	.157in (4mm)	8 oz (220 g)	OT790.037.301
RPG 1.5	Microfitting	0.187 (4.78mm)	.157in (4mm)	8 oz (220 g)	OT790.037.303
RPG 1.5, RPG 2.5	Microfitting	.236in (6mm)	.157in (4mm)	8 oz (220 g)	OT790.037.305
RPG 1.5, RPG 2.5	Microfitting	.250in (6.35mm)	.157in (4mm)	8 oz (220 g)	OT790.037.306



Stainless steel clamping shells



Stainless steel clamping shell for micro fittings



# RPG One, 1.5, & 2.5 Tube Squaring Accessories

WORKS WITH	APPLICATION	TUBE OD	TUBE CLAMPING LENGTH	WEIGHT	PART #
RPG 1.5, RPG 2.5	Microfitting	.314in (8mm)	.157in (4mm)	8 oz (220 g)	OT790.037.307
RPG 1.5, RPG 2.5	Microfitting	.375in (9.53mm)	.157in (4mm)	8 oz (220 g)	OT790.037.308
RPG 1.5, RPG 2.5	Microfitting	.394in (10mm)	.157in (4mm)	8 oz (220 g)	OT790.037.309
RPG 1.5, RPG 2.5	Microfitting	.472in (12mm)	.157in (4mm)	8 oz (220 g)	OT790.037.310
RPG 1.5, RPG 2.5	Microfitting	.500in (12.7mm)	.157in (4mm)	8 oz (220 g)	OT790.037.311
RPG 1.5, RPG 2.5	Microfitting	.750in (19.05mm)	.157in (4mm)	8 oz (220 g)	OT790.037.315

## Custom Clamping Shells

Please contact us for requirements, pricing and availability on custom clamping shells.

WORKS WITH	APPLICATION	TUBE OD	PART #
RPG One	Tube	0.125" - 0.250"	OT-036-002
RPG One	Tube	0.250" - 1.250"	OT-036-001
RPG One	Microfitting	0.125" - 1.000"	OT-036-101
RPG 1.5	Tube	0.236" - 1.500"	OT-037-001
RPG 2.5	Tube	0.236" - 2.500"	OT-030-001

## Tool Holder WH

Fits multifunctional tool OT790.038.315. Includes Torx fixing screw. For max. wall thickness 3 mm (0.118 in).

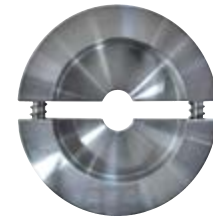
TOOL HOLDER APPLICATION	RECOMMENDED APPLICATION RANGE	RPG ONE (CORDLESS)	RPG 1.5 (CORDLESS)	RPG 2.5 (CORDLESS)	WEIGHT	PART #
WH12-1/Standard* Standard tool holder Squaring	0.236 -.5in (6 - 12.7mm)	0.236 - 1in (6 - 25.4mm)	0.236 - 1.5in (6 - 38.1mm)	0.236 - 2.5in (6 - 63.5mm)	1 oz (40 g)	OT790.037.152

\* Supplied as standard with the RPG. \*\* Only to be used with stainless steel clamping shells for micro fittings.

## Multifunctional Tool MFW

Two-sided tool bit with protective coating against tool wear. Usable for all machines of the RPG series.

MODEL	QTY	WEIGHT	PART #
Multifunctional tool MFW-P-2	10	1.6 oz (45 g)	OT790.038.315
Torx screw (RPG ONE, RPG 1.5, RPG 2.5)	1	0.1 oz (2 g)	OT790.086.220



Stainless steel clamping shell for micro fittings



Tool holder WH



Multifunctional tool MFW

## RPG 4.5 & RPG 8.6



Designed for burr-free squaring of thin-walled stainless steel tubes



### LARGE DIAMETER TUBE SQUARING MACHINES

The versatile large diameter RPG series tube squaring machines have provided the highest quality tube end squaring for the High Purity orbital welding industry for decades.

- Repeatable, high quality burr-free tube end squaring
- Safety guards to maximize safe operation
- Stainless steel clamping eliminates cross contamination
- Wide range of collets for tube and fittings
- No tools required for operation
- Linear micrometer feed system for high tolerance length control ( $\pm .004$ " )
- Dual cutting edge tool bit yields the best "cost per cut" of the industry
- Powerful (120V - 230V) drive motor
- Built in electronic VTC speed control gives maximum power at any speed setting
- Restart protection for operation safety
- Overload protection
- Brush wear indication and shut off

Squaring tube ends with a high-quality finish	✓
Burr-free and square	✓
Quick clamping system for tools, clamping shells and tubes	✓
Preparation of thin-walled stainless steel tubes (V4A)	✓
Built-in electronic speed regulation	✓
Micrometer feed for optimum results	✓

# RPG 4.5 & RPG 8.6 Tube Squaring Machines

APPLICATION RANGE	RPG 4.5	RPG 8.6
<b>Tube OD</b>	0.5 - 4.5in (12.7 - 114.3mm)	2 - 8.6in (50.8 - 219.1mm)
<b>Wall thickness max.</b>	0.118in (3.0mm)	0.142in (3.6mm)
<b>Tube materials</b>	High-alloy steels, unalloyed and low-alloy steels and aluminum. Others on request.	
<b>Machine Weight</b>	23.1 lb (10.5 kg)	45.2 lb (20.5 kg)
<b>Shipping Weight</b>	42.8 lb (19.4 kg)	70.5 lb (32 kg)
<b>230 V, 50/60 Hz EU</b>	0T790.038.001	0T790.039.001
<b>120 V, 50/60 Hz US</b>	0T790.038.002	0T790.039.002
TECHNICAL DATA	RPG 4.5	RPG 8.6
<b>Dimensions (including motor)</b>	18.1 x 10.2 x 9.1in (460 x 260 x 230mm)	19.7 x 13.8 x 13.8in (500 x 350 x 350mm)
<b>Power</b>	1100 W	
<b>Protection class</b>	Class II	
<b>Speed (max. idling speed)</b>	8 - 52 min <sup>-1</sup>	7 - 18 min <sup>-1</sup>
<b>Vibration level (EN 60745)</b>	< 2.5 m/s <sup>2</sup>	
<b>Noise level at the workplace (EN 23741)</b>	approx. 83 dB (A)	
SCOPE OF DELIVERY		
	<ul style="list-style-type: none"> <li>• Tube squaring machine</li> <li>• Storage and shipping case</li> <li>• Tool holder WH (0T790.038.320)</li> <li>• Multifunctional tool MFW (0T790.038.315)</li> <li>• Tool set</li> <li>• Operating instructions and spare parts list</li> </ul>	

The technical data are not binding. They are not warranted characteristics and are subject to change. Please consult our general conditions of supply.

## CLAMPING SHELLS

Extremely durable. The two-piece-design with click mechanism ensures accurate centering and quick clamping shell change without any tools. Other dimensions of clamping shells are available.

Please check the outer diameter of the tubes before ordering clamping shells.

WORKS WITH	VERSION	TUBE OD	WEIGHT	PART #
RPG 4.5	Tube	0.5in (12.7mm)	4.8lb (2kg)	0T790.038.438
RPG 4.5	DN 10	0.512in (13mm)	4.8lb (2kg)	0T790.038.439
RPG 4.5	Tube (DN 15)	0.75in (19.05mm)	4.8lb (2kg)	0T790.038.446
RPG 4.5	Tube	0.875in (22.22mm)	4.8lb (2kg)	0T790.038.050
RPG 4.5	DN 20	0.905in (23mm)	4.8lb (2kg)	0T790.038.450
RPG 4.5	Tube	1.in (25.4mm)	4.8lb (2kg)	0T790.038.051
RPG 4.5	DN 25	1.142in (29mm)	4.7lb (2kg)	0T790.038.402
RPG 4.5	Tube	1.25in (31.75mm)	4.6lb (2kg)	0T790.038.052
RPG 4.5	1in Pipe	1.315in (33.4mm)	4.5lb (2kg)	0T790.038.405
RPG 4.5	DN 32	1.378in (35mm)	4.5lb (2kg)	0T790.038.408
RPG 4.5	Tube	1.5in (38.1mm)	4.4lb (2kg)	0T790.038.053
RPG 4.5	DN 40	1.614in (41mm)	4.4lb (2kg)	0T790.038.412
RPG 4.5	11/4in Pipe	1.66in (42.16mm)	4.3lb (2kg)	0T790.038.414
RPG 4.5	11/2in Pipe	1.9in (48.26mm)	4.2lb (2kg)	0T790.038.420
RPG 4.5	Tube	2.in (50.8mm)	4.2lb (2kg)	0T790.038.054
RPG 4.5	DN 50	2.087in (53mm)	4.0lb (2kg)	0T790.038.456
RPG 4.5	2in Pipe	2.375in (60.3mm)	3.8lb (2kg)	0T790.038.427
RPG 4.5	Tube	2.5in (63.5mm)	3.7lb (2kg)	0T790.038.055
RPG 4.5	DN 65	2.759in (70mm)	3.5lb (2kg)	0T790.038.430



Quick clamping system for tools, clamping shells and tubes



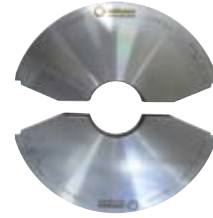
Includes storage and shipping case



Widely specified in high purity applications

# RPG 4.5 & RPG 8.6 Tube Squaring Accessories

WORKS WITH	VERSION	TUBE OD	WEIGHT	PART #
RPG 4.5	2 1/2in Pipe	2.875in (73.03mm)	3.3lb (1kg)	OT790.038.453
RPG 4.5	Tube	3.in (76.2mm)	3.1lb (1kg)	OT790.038.056
RPG 4.5	DN 80	3.346in (85mm)	2.8lb (1kg)	OT790.038.434
RPG 4.5	3in Pipe	3.5in (88.9mm)	2.5lb (1kg)	OT790.038.057
RPG 4.5	Tube	4.in (101.6mm)	1.8lb (816 g)	OT790.038.058
RPG 4.5	DN 100	4.094in (104mm)	1.7lb (771 g)	OT790.038.437
RPG 4.5	4in Pipe	4.5in (114.3mm)	15.3lb (7 g)	OT790.038.059
RPG 8.6	Tube	2.in (50.8mm)	9.92lb (4 g)	OT790.039.260
RPG 8.6	Tube	3.in (76.2mm)	9.26lb (4 g)	OT790.039.261
RPG 8.6	3in Pipe	3.5in (88.9mm)	8.82lb (4 g)	OT790.039.264
RPG 8.6	Tube	4.in (101.6mm)	8.38lb (4 g)	OT790.039.252
RPG 8.6	4in Pipe	4.5in (114.3mm)	7.72lb (4 g)	OT790.039.256
RPG 8.6	Tube	5.in (127mm)	7.54lb (3 g)	OT790.039.262
RPG 8.6	5in Pipe	5.563in (141.3mm)	6.39lb (3 g)	OT790.039.257
RPG 8.6	Tube	6.in (152.4mm)	5.95lb (3 g)	OT790.039.253
RPG 8.6	6in Pipe	6.625in (168.3mm)	5.07lb (2 g)	OT790.039.254
RPG 8.6	Tube	8.in (203.2mm)	3.0lb (1 g)	OT790.039.258
RPG 8.6	8in Pipe	8.625in (219.1mm)	1.3lb (590 g)	OT790.039.255



Stainless steel clamping shell for RPG 4.5



Aluminum clamping shells for RPG 8.6

## Custom Clamping Shells

Please contact us for requirements, pricing and availability on custom clamping shells.

WORKS WITH	APPLICATION	TUBE OD	PART #
RPG 4.5	Tube	0.500" - 4.500"	OT-038-002
RPG 8.6	Tube	2.000" - 8.600"	OT-039-001

## Tool Holder WH

Fits multifunctional tool OT790.038.315.

Incl. Torx fixing screw.

APPLICATION RANGE	APPLICATION	WEIGHT	PART #
TOOL HOLDER			
WH12-1	Squaring	0.9 oz (25 g)	OT790.038.320
Standard tool holder			



Tool holder WH

## Multifunctional Tool MFW

Two-sided tool bit with protective coating against tool wear.

Usable for all machines of the RPG series.

MODEL	QTY.	WEIGHT	PART #
Multifunctional tool MFW-P-2	10	1.6 oz (45 g)	OT790.038.315
Torx screw (RPG 4.5 RPG 8.6)	1	0.1 oz (2 g)	OT790.086.220



Multifunctional tool MFW

# Orbital Welding Systems



# OM180 SmartWelder

**RENTAL  
AVAILABILITY**



Optional Network Connectivity



Touch Screen Interface

## DIGITAL ORBITAL WELDING POWER SUPPLY

The OM180 Smartwelder is a durable, jobsite proven, compact digital controlled power supply for orbital welding. The SmartWelder is the most innovative and advanced orbital welder on the market today.

- New state-of-the-art OM180 SmartWelder
- Fab or field, proven rugged construction
- Approved for fab/clean room construction
- Simplified programming, removing the need for manual calculations
- Flow Force feature significantly shortens pre/post purge while increasing weld purge quality
- Auto program gives option to multiple weld schedule types with maximum simplicity
- Multiple operator input points offers simplicity and redundancy
- Wide input voltage variation, 90V to 260V, no dedicated power required
- Full data logging of all welding parameters, electronic or print
- High efficiency internal water cooling system
- Dual weld data printing function (onboard and external)
- Operate or program modes with redundant key or electronic actuation
- Password or key protection to select operation or program modes
- ORBmax oxygen monitor and Orbitwin switching unit integral accessories

Future-Oriented Connectivity	✓
Welding Data Documentation	✓
100% Data Recording	✓
Gas Consumable Savings	✓
Short Welding Cycles	✓
Ergonomic, Intuitive Interface	✓

# Orbital Welding

## WELD HEADS

OW 12



OW 19



OW 38S



OW 76S



OW 115S



OW 170



## POWER SUPPLIES



OM180 Remote Control  
(Coming Soon)



OM180 SmartWelder  
Orbital Welding Power Supply



OM180 Barcode Scanner



Connectivity Pack

## ACCESSORIES



Orbitalum-to-AMI  
Conversion Cable Set

Connects to customer owned  
Arc Machines (AMI) Weld Head



Orbitalum-to-AMI  
Remote Control



ORBmax Digital Oxygen Analyzer



Orbitwin Multihead Switch

## OM180 SmartWelder

**RENTAL  
AVAILABILITY**



## ORBITAL WELDING POWER SUPPLIES

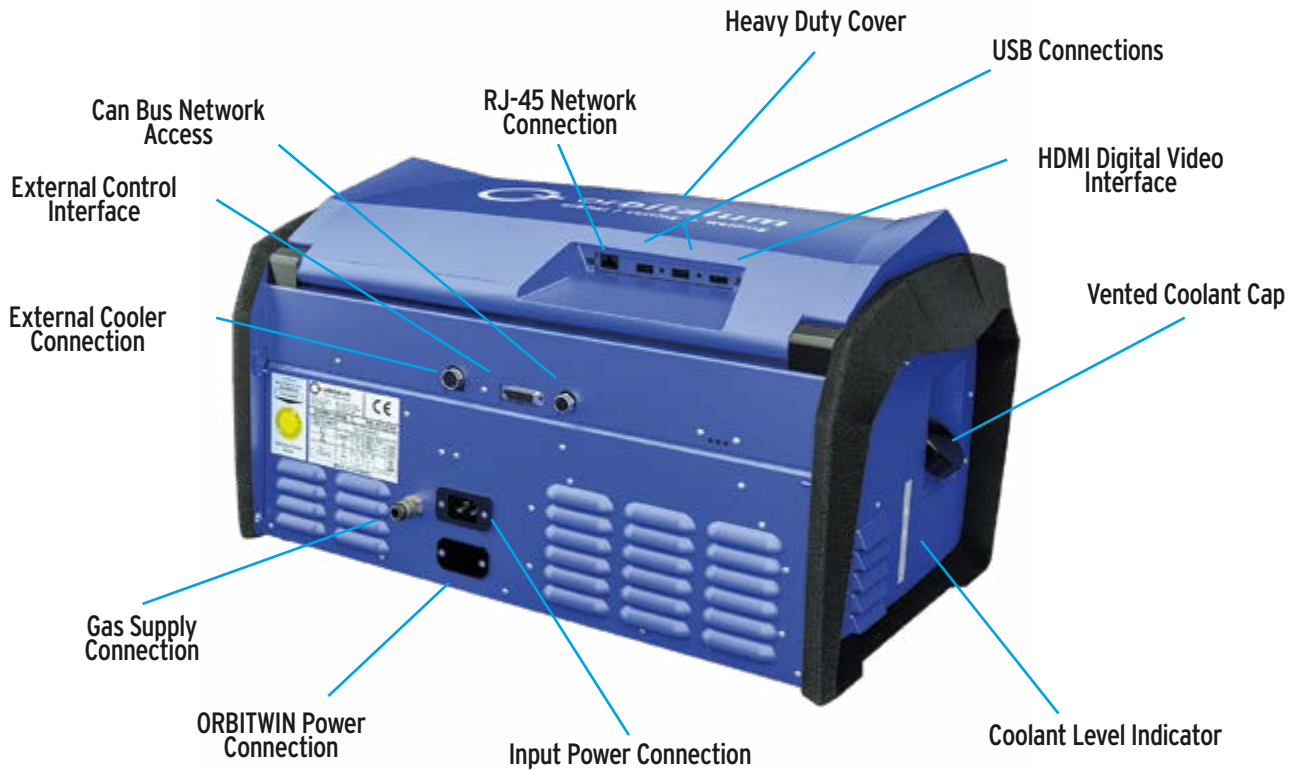
BUILT AS A DURABLE, "JOBSITE" RUGGED ORBITAL WELDING SYSTEM FOR THE FUTURE, THE OM180 SMARTWELDER IS A DIGITALLY CONTROLLED POWER SUPPLY THAT MOVES THE ORBITAL WELDING INDUSTRY FORWARD THROUGH INFORMATION, CONNECTIVITY AND COMMUNICATION TECHNOLOGY.

- Rugged construction for fab or field applications
- Intel WP approved for fab/clean room construction
- High resolution touch screen for increased operation simplicity
- Digital purge gas flow control and monitoring
- Flow Force significantly shortens pre/post purge, and increases weld purge quality
- Auto program gives option to multiple weld schedule types with maximum simplicity
- Network connectivity by IoT/Industry 4.0 technology
- Wide input voltage variation, 90V to 260V, no dedicated power required
- 100% data recording of all welding parameters, electronic or print
- High efficiency internal water cooling system
- ORBmax oxygen monitor and Orbitwin switching unit integral accessories
- Dual weld data printing function (onboard and external)
- Password to select operation or program modes



OM180

# SmartWelder



## RELIABILITY

Never Lost Data  
Secure Internal Data Storage

- 100% Data Recovery via Internally Stored Weld Records
- Continuous Data Recording
- Eliminates Lost or Incomplete Weld Data
- QC Review at Unit or Remotely Via Connected PC

## QUALITY

Digital Purge Control Precise Weld Head  
Flow Regulation

- Cleaner Welds with Minimal Gas
- Fully Digitally Recordable
- Repeatable Results
- Improves Weld Quality
- Saves Money
- Saves Gas

## PRODUCTIVITY

Flow Force Reduces Total Cycle Time  
and Increases Arc On Time

- Delivers More Welds Per Shift
- Ensures Better Gas Coverage
- Increases Productivity
- Lowers Weld Head Temperatures
- Reduces Gas Consumption

## SAFETY

Motor Torque Control Senses Rotation  
Obstruction Prevents Damage from Debris

- Helps Prevent Weld Head Damage
- Minimizes Risk of Operator Injury
- Reduces Downtime
- Increases Service Life of Weld Head

# OM180 SmartWelder Power Supply

## Features:

- 12.4in high resolution swivel monitor touch screen (GUI) for system navigation and operation
- Classic rotary control knob for secondary navigation and operation
- 90V to 260V input range for flawless operation at jobsites with extreme voltage fluctuation
- "Flow Force" purge gas control feature significantly reduces the gas pre- and post-purge flow time
- Purge gas flow settings are digitally controlled and function adjustable
- On-board memory of 5,000+ welding programs with simplified "folders/programs" management
- Auto recognition of operating weld head and parameter limits
- Weld data logging and printout of actual values
- (4) USB ports
- HDMI connection allowing large flat screen monitor
- Network connectivity via LAN, Bluetooth, and Wi-Fi connections
- Integrated and external system printer capabilities
- Integrated high efficiency water cooling system
- Digital monitoring of coolant and arc purge gas flow
- Extremely stable operating system requires no power-down sequence
- Program from 1 to 99 levels
- Navigation in 20+ languages
- Inch and Metric units

## Scope of delivery:

- OM180 SmartWelder orbital welding power supply
- Argon gas supply hose connection set
- Operating instructions with calibration certificate
- Quick Start guide
- 120V Input power cable

SPECIFICATIONS	OM 180 SMARTWELDER
Connection voltage	110 - 230 V, 50/60 Hz, single phase
Control range (Connection voltage > 160 V)	5 - 180 A
Power-on time	60% at 180 A 100% at 160 A
Dimensions	23.6in x 15.7in x 12.2in (600 x 400 x 310 mm)
Machine Weight	57.32 lb (26 kg)
Shipping Weight	90.39 lb (41 kg)
Part #	0T850.000.001



OM180 SmartWelder

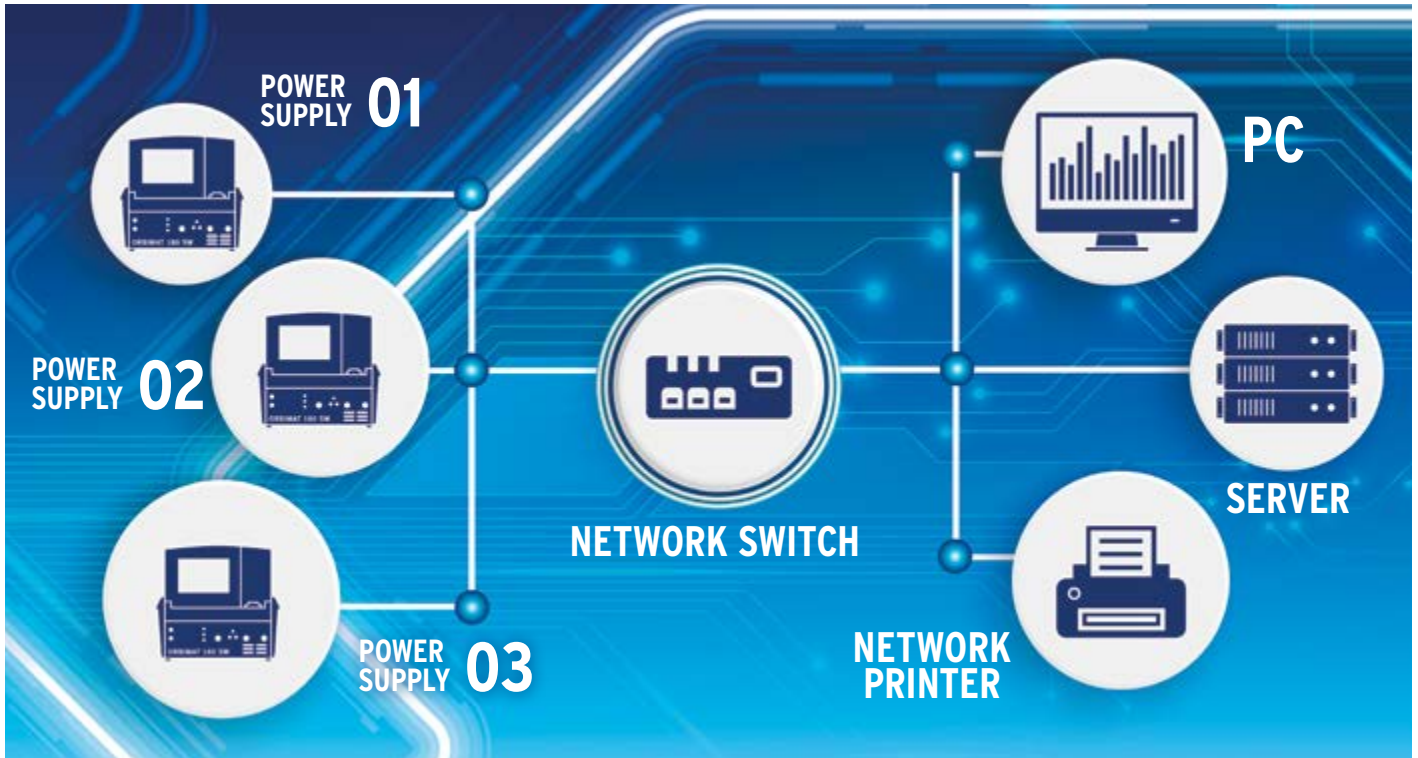


IP23 Rated housing with newer style connections and lifting handles



OM180 SmartWelder offers network connectivity

# Connectivity Pack



## FOR THE ORBIMAT OM180 SMARTWELDER

The optionally available "Connectivity Pack" enables integration of the OM180 SmartWelder into your local network (LAN). Welding programs and log files can then be shared across the network, managed, & backed up.

**The OM180 SmartWelder features an extensive, user documentation solution for digitally recording parameters prior to the welding process, such as the material and gas batch number, isometric number, weld seam position and the welder ID.**

The welding parameters entered are loaded prior to the start of the welding process. The ability to enter a parameter value once or for each weld can be individually defined.

Entries can be made either using the virtual keyboard, an external USB keyboard or by the optionally available bar code/QR code scanner.

Other documentation options applicable for the welding programs include forming and welding gas types and volumes, electrode geometries, weld head alignment and operator comments.

All information can be recorded simultaneously with the generated welding data in a digitally saved welding data. These data logs can then be copied to the network storage location automatically, backed up for the long term and edited.

In addition to network storage locations, other resources such as printers can also be accessed. This allows for outputting welding data logs and programs over the network.

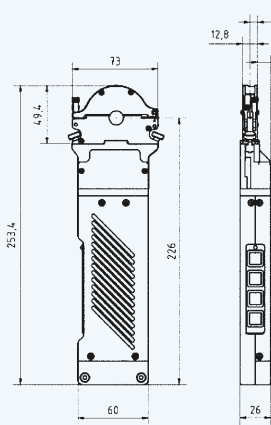
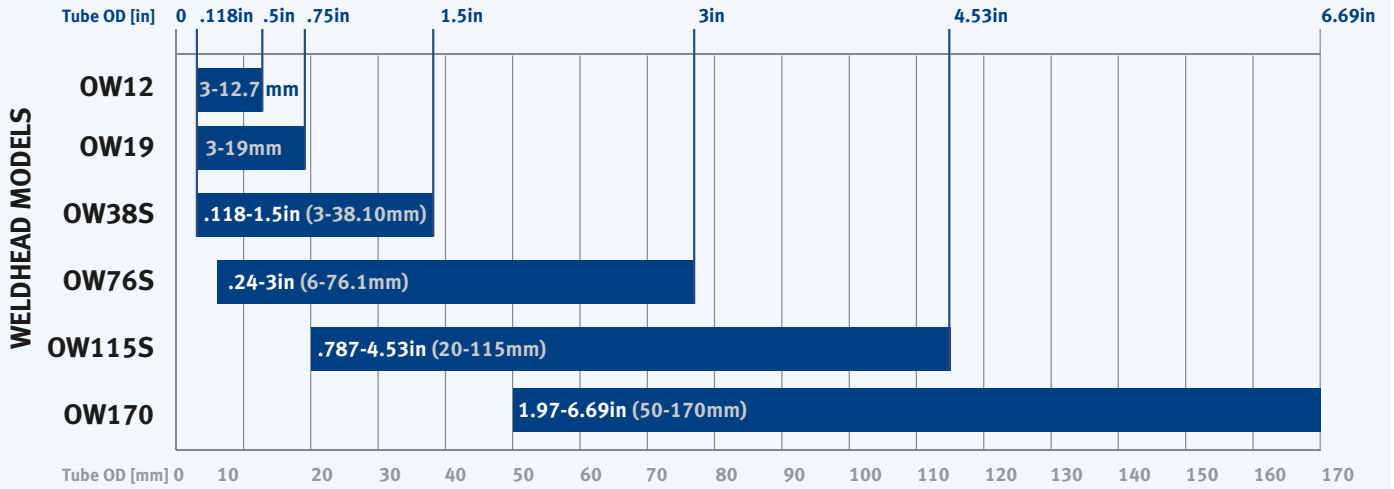
The OM180 SmartWelder uses Industry 4.0/ IoT, and can be integrated into industrial environments and "Machine-to-Machine" (M2M) communication. In this way, users can exchange various telemetry data, measurement values and parameters with one another and receive control commands for automation solutions.

The Connectivity Package is activated using a license key which can be entered directly into the power supply software. In this way, all relevant functions and interfaces can be immediately activated.

# Enclosed Orbital Weld Heads

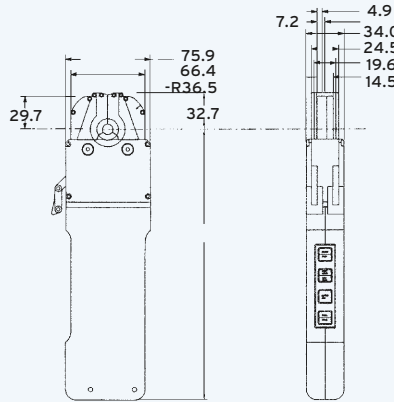


# Enclosed Orbital Weld Heads

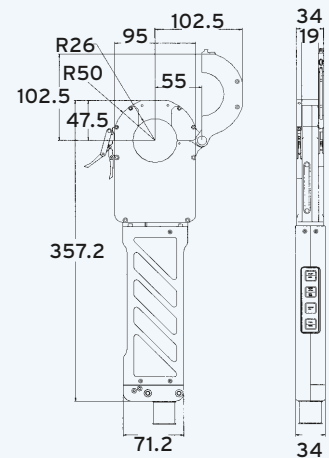


ORBIWELD 12

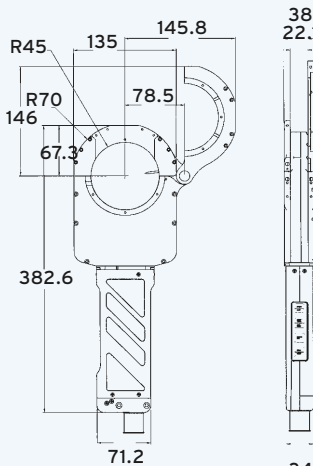
Elektrode 19.0



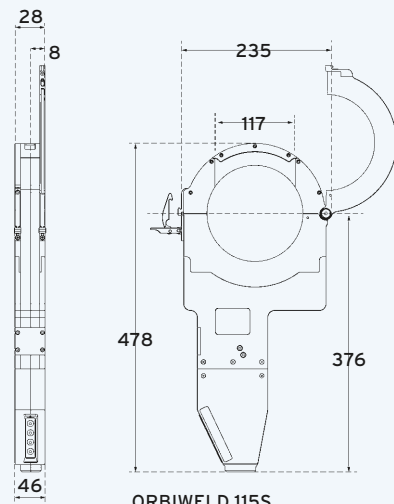
ORBIWELD 19



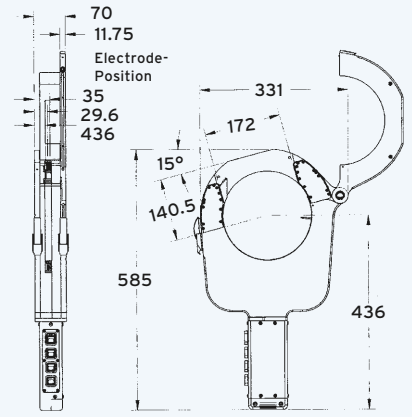
ORBIWELD 38S



ORBIWELD 76S



ORBIWELD 115S



ORBIWELD 170

## ENCLOSED WELD HEADS ORBIWELD / ORBIWELD S

MODEL	OW 12	OW 19	OW 38S	OW 76S	OW 115S	OW 170	
Part #	OT821.000.010	OT822.000.010	OT826.000.001	OT827.000.001	OT828.000.001	OT825.000.001	
Tube Ø	[mm]	3 - 12.7	3 - 19.05	3 - 39	6 - 76	20 - 115	50 - 170
	[inch]	.125 - .5	.125 - .75	.125 - 1.5	.25 - 3	.75 - 4.5	2 - 6
Rotor Ø	[mm]	40	58	82	122	191	252
	[inch]	1.58	2.28	3.23	4.80	7.52	9.92

# Enclosed Orbital Weld Heads

## ORBIWELD Replacement Tungsten Electrode Chart

### ORBIWELD OW 12 TUNGSTEN

TUBE OD (IN)	TUBE OD (MM)	PART NUMBER
.125 in	3.175 mm	TC 04-0500-010
.250 in	6.35 mm	TC 04-0450-010
.375 in	9.525 mm	TC 04-0400-010
.500 in	12.7 mm	TC 04-0350-010

### ORBIWELD OW 76S TUNGSTEN

TUBE OD (IN)	TUBE OD (MM)	PART NUMBER
.250 in	6.35 mm	TC 06-2050-020
.375 in	9.525 mm	TC 06-2000-020
.500 in	12.7 mm	TC 06-1950-020
.625 in	15.875 mm	TC 06-1900-020
.750 in	19.05 mm	TC 06-1800-020
1.0 in	25.4 mm	TC 06-1700-020
1.5 in	38.1 mm	TC 06-1450-020
2.0 in	50.8 mm	TC 06-1200-020
2.5 in	63.5 mm	TC 06-0950-020
3.0 in	76.2 mm	TC 06-0700-020

### ORBIWELD OW 19 TUNGSTEN

TUBE OD (IN)	TUBE OD (MM)	PART NUMBER
.125 in	3.175 mm	TC 06-0900-020
.250 in	6.35 mm	TC 06-0800-020
.375 in	9.525 mm	TC 06-0750-020
.500 in	12.7 mm	TC 06-0700-020
.625 in	15.875 mm	TC 06-0650-020
.750 in	19.05 mm	TC 06-0550-020

### ORBIWELD OW 115S TUNGSTEN

TUBE OD (IN)	TUBE OD (MM)	PART NUMBER
1.0 in	25.4 mm	TC 06-3050-020
1.5 in	38.1 mm	TC 06-2800-020
2.0 in	50.8 mm	TC 06-2550-020
2.5 in	63.5 mm	TC 06-2300-020
3.0 in	76.2 mm	TC 06-2050-020
4.0 in	101.6 mm	TC 06-1550-020
4.5 in	114.3 mm	TC 06-1300-020

### ORBIWELD OW 38S TUNGSTEN

TUBE OD (IN)	TUBE OD (MM)	PART NUMBER
.125 in	3.175 mm	TC 06-1350-020
.250 in	6.35 mm	TC 06-1300-020
.375 in	9.525 mm	TC 06-1200-020
.500 in	12.7 mm	TC 06-1150-020
.625 in	15.875 mm	TC 06-1100-020
.750 in	19.05 mm	TC 06-1050-020
1.0 in	25.4 mm	TC 06-0900-020
1.5 in	38.1 mm	TC 06-0650-020

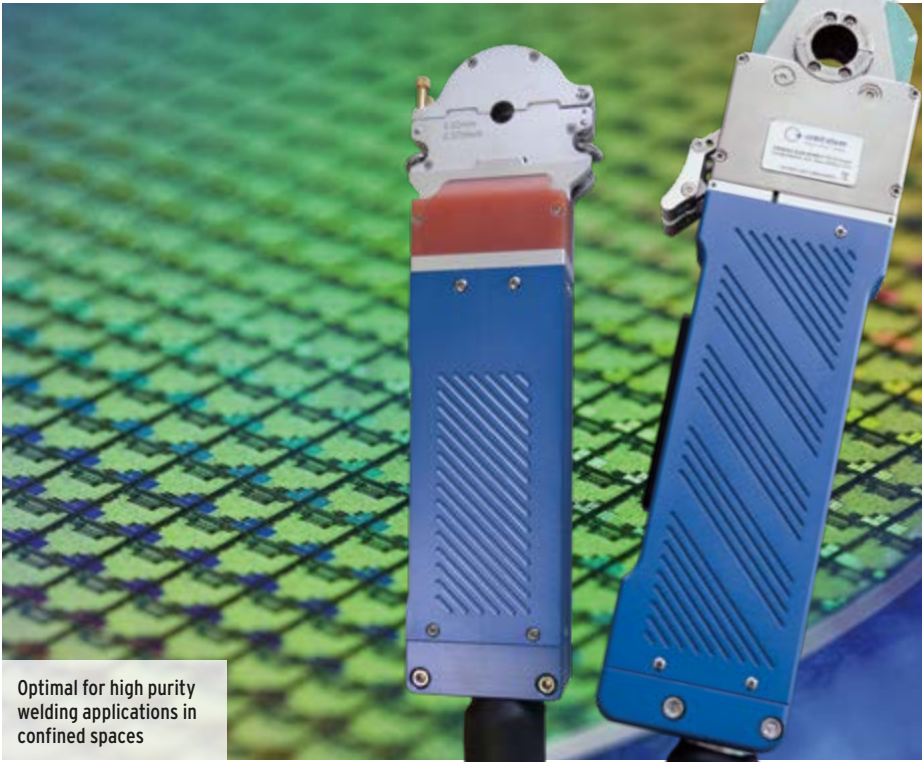
### ORBIWELD OW 170 TUNGSTEN

TUBE OD (IN)	TUBE OD (MM)	PART NUMBER
2.0 in	50.8 mm	TC 06-3750-020
2.5 in	63.5 mm	TC 06-3500-020
3.0 in	76.2 mm	TC 06-3250-020
4.0 in	101.6 mm	TC 06-2750-020
4.5 in	114.3 mm	TC 06-2500-020
6.0 in	152.4 mm	TC 06-1750-020
6.625 in	168.275 mm	TC 06-1450-020

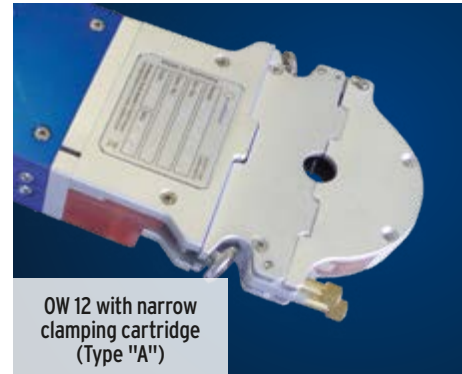
**FORMULA:** Electrode length =  $\frac{\text{Rotor } \varnothing - \text{Tube } \varnothing}{2}$  | - Electrode interval (generally 1.5 mm) - 3

# ORBIWELD 12, ORBIWELD 19

**RENTAL  
AVAILABILITY**



Optimal for high purity welding applications in confined spaces



OW 12 with narrow clamping cartridge (Type "A")



OW 19 Welds with tight clearance

## MICRO WELD HEADS

Extremely narrow highly durable design with integrated water cooling system: the small dimensions of the OW 12 and OW 19 weld heads make them ideal for applications where space is very restricted, such as the semiconductor industry, aerospace, pharmaceutical industry as well as the ultra pure water supply sectors. Particularly suitable for welding all common microfittings.

### ORBIWELD 12

- With its extremely compact design and different clamping cartridges, the OW 12 microweld head offers a unique versatility and a quick power-on time new for weld heads of this size due to the water coolant system
- Quick change system for clamping shells
- All the important commands for welding can be transmitted to the power supply via a control panel built into the robust and durable aluminum handle, so that no additional remote control is required

- Extremely narrow clamping cartridges (Type "A") for welding microfittings and for other applications with very limited clamping lengths
- Wide clamping cartridge (Type "B") with exchangeable clamping shells for standard applications
- The removable clamping cartridge enables accurate alignment with the parts to be welded, even where there is very little space

### ORBIWELD 19

- The 3-part clamping mechanism ensures that the head can be clamped in the most confined spaces, as even when open no parts protrude beyond the contour of the head. Equally, an exact alignment, with no misalignment is guaranteed with the parts to be welded
- All the important commands for welding can be transmitted to the power supply via a control panel built into the robust and durable aluminum handle, so that no additional remote control is required

Possible applications OW 12:	Microfitting-to-microfitting	Microfitting-to-tube	Tube-to-tube	Advantages
Clamping cartridges, Type "A" (narrow)	•	•	•	High flexibility thanks to narrow design

# ORBIWELD 12, ORBIWELD 19 Micro Weld Heads

## ORBIWELD Micro Weld Head Models

Clamping cartridges and clamping inserts are not included in the scope of delivery.

APPLICATION RANGE	ORBIWELD 12	ORBIWELD 19
Part #	OT821.000.010	OT822.000.010
Tube OD, min. - max.	3.0 - 12.7 mm (0.118 in - 0.500 in)	3.0 - 19.05 mm (0.118 in - 0.750 in)
Electrode Ø	1.0 mm (0.039 in)	1.0 / 1.6 mm (0.039 in / 0.063 in)
Weight	5.7 kg (12.6 lbs)	7.5 kg (16.5 lbs)
Shipping Weight	11.0 kg	14.8 kg
Hose package length	7.5 m (24.6 ft)	7.5 m (24.6 ft)

### SCOPE OF DELIVERY

Including:

- 1 Micro weld head
- 1 Durable storage and shipping case
- 1 Tool set
- 1 Operating instructions and spare parts list

Accessories (available option):

- Clamping cartridges for OW 12, Type "A" (narrow)
- Clamping cartridge for OW 12, Type "B" (wide)
- Clamping inserts for OW 12, Type "B" (wide)
- Clamping cartridges for OW 12, Type "C"
- Clamping inserts for OW 19
- ESG tungsten grinders
- ORBmax digital oxygen analyzer
- ORBIPURGE forming set
- Hose package extensions
- WS2 tungsten electrodes



OW 12 with narrow clamping cartridge (Type "A")



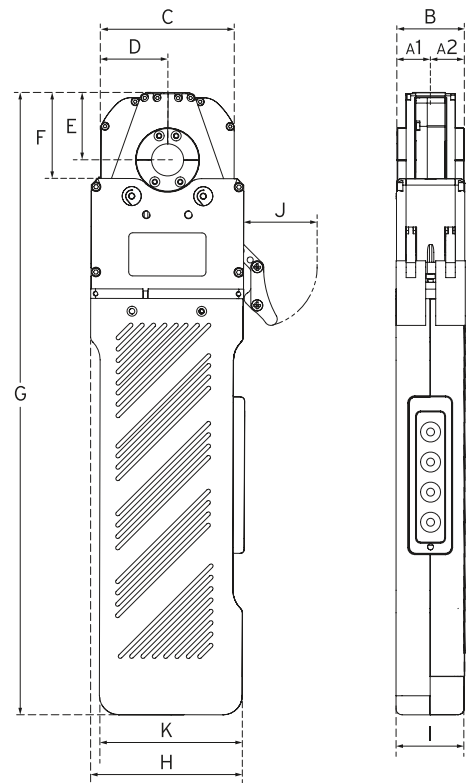
ORBIWELD 19

### ORBIWELD 12 DIMENSIONS

CARTRIDGE TYPE	ORBIWELD 12 DIMENSIONS											
	A1	A2	B	C	D	E	F	G	H	I	J	K
	0.17in 4.25mm	0.15in 3.75mm	0.3in 7.62mm	2.87in 73mm	1.44in 36.5mm	1.08in 27.5mm	1.93in 49mm	9.96in 253mm	2.32in 59mm	1.02in 26mm	1.18in 30mm	2.32in 59mm
A	0.25in 6.35mm	0.23in 5.85mm	0.48in 12.2mm									
B	0.61in 15.6mm	0.59in 15.1mm	1.21in 30.7mm									
C	0.9in 22.79mm	0.86in 21.91mm	1.76in 44.7mm									

### ORBIWELD 19 DIMENSIONS

CARTRIDGE TYPE	ORBIWELD 19 DIMENSIONS											
	A1	A2	B	C	D	E	F	G	H	I	J	K
	0.47in 12mm	0.47in 12mm	1.34in 34mm	2.6in 66mm	1.3in 33mm	1.39in 35.2mm	1.77in 45mm	12.28in 312mm	2.99in 76mm	1.34in 34mm	1.38in 35mm	2.8in 71mm
S	0.5in 12.8mm	0.46in 11.7mm	0.97in 24.5mm									
W	0.65in 16.5mm	0.69in 17.5mm	1.34in 34mm									





# ORBIWELD 12, ORBIWELD 19 Accessories

## Clamping cartridges for OW 12, Type "A" (narrow)

For type "A" a separate clamping cartridge is required for each tube diameter. Clamping cartridges with a total width of only 12.2 mm (0.48 in) can be supplied for welding of microfittings and other applications with very limited clamping lengths (Type "A").

MODEL	TUBE OD	WEIGHT	PART #
Stainless Steel clamping cartridge for OW 12, Type "A" (narrow)	.078in (2mm)	1.8 oz (50 g)	OT821.050.200
Stainless Steel clamping cartridge for OW 12, Type "A" (narrow)	.118in (3mm)	1.8 oz (50 g)	OT821.050.201
Stainless Steel clamping cartridge for OW 12, Type "A" (narrow)	.125in (3.18mm)	1.8 oz (50 g)	OT821.050.202
Stainless Steel clamping cartridge for OW 12, Type "A" (narrow)	.236in (6mm)	1.8 oz (50 g)	OT821.050.203
Stainless Steel clamping cartridge for OW 12, Type "A" (narrow)	.250in (6.35mm)	1.7 oz (48 g)	OT821.050.204
Stainless Steel clamping cartridge for OW 12, Type "A" (narrow)	.314in (8mm)	1.7 oz (48 g)	OT821.050.205
Stainless Steel clamping cartridge for OW 12, Type "A" (narrow)	.375in (9.53mm)	1.7 oz (48 g)	OT821.050.206
Stainless Steel clamping cartridge for OW 12, Type "A" (narrow)	.394in (10mm)	1.7 oz (48 g)	OT821.050.207
Stainless Steel clamping cartridge for OW 12, Type "A" (narrow)	.472in (12mm)	1.7 oz (48 g)	OT821.050.208
Stainless Steel clamping cartridge for OW 12, Type "A" (narrow)	.500in (12.7mm)	1.6 oz (45 g)	OT821.050.209



Clamping cartridges for OW 12, Type "A" (narrow)

## Clamping cartridge for OW 12, Type "B" (wide)

When using the exchangeable clamping cartridges, Type "B", one set of clamping inserts is required in addition for each tube diameter.

MODEL	WEIGHT	PART #
Clamping cartridge for OW 12, Type "B" (wide)	3.4 oz (95 g)	OT821.050.002



Clamping cartridge for OW 12, Type "B" (wide)

## Clamping inserts for OW 12, Type "B" (wide)

Aluminum, these inserts require Type "B" clamping cartridges. One clamping insert set includes 4 individual parts (2 inserts each side).

MODEL	TUBE OD	WEIGHT	PART #
Collet insert set for OW 12, Type "B" (wide), 4 pcs.	.118in (3mm)	1.9 oz (54 g)	OT821.002.220
Collet insert set for OW 12, Type "B" (wide), 4 pcs.	.125in (3.18mm)	1.9 oz (54 g)	OT821.002.222
Collet insert set for OW 12, Type "B" (wide), 4 pcs.	.187in (4.76mm)	1.9 oz (54 g)	OT821.002.225
Collet insert set for OW 12, Type "B" (wide), 4 pcs.	.236in (6mm)	1.8 oz (50 g)	OT821.002.228
Collet insert set for OW 12, Type "B" (wide), 4 pcs.	.250in (6.35mm)	1.8 oz (50 g)	OT821.002.229
Collet insert set for OW 12, Type "B" (wide), 4 pcs.	.314in (8mm)	1.8 oz (50 g)	OT821.002.233
Collet insert set for OW 12, Type "B" (wide), 4 pcs.	.375in (9.53mm)	1.8 oz (50 g)	OT821.002.235
Collet insert set for OW 12, Type "B" (wide), 4 pcs.	.394in (10mm)	1.7 oz (48 g)	OT821.002.237
Collet insert set for OW 12, Type "B" (wide), 4 pcs.	.472in (12mm)	1.7 oz (48 g)	OT821.002.243
Collet insert set for OW 12, Type "B" (wide), 4 pcs.	.500in (12.7mm)	1.7 oz (48 g)	OT821.002.245



Clamping inserts for OW 12, Type "B" (wide), 4 pcs.

## Clamping inserts for OW 19

Stainless steel, one clamping insert set includes 6 individual parts (3 inserts each side). Type "W" (wide) for standard applications.

MODEL	TUBE OD	WEIGHT	PART #
Collet insert set for OW 19, 6 pcs. Type "W" (wide)	.118in (3mm)	1.6 oz (44 g)	OT822.002.120
Collet insert set for OW 19, 6 pcs. Type "W" (wide)	.125in (3.18mm)	1.6 oz (44 g)	OT822.002.122
Collet insert set for OW 19, 6 pcs. Type "W" (wide)	.187in (4.76mm)	1.6 oz (44 g)	OT822.002.125
Collet insert set for OW 19, 6 pcs. Type "W" (wide)	.236in (6mm)	1.6 oz (44 g)	OT822.002.128
Collet insert set for OW 19, 6 pcs. Type "W" (wide)	.250in (6.35mm)	1.5 oz (42 g)	OT822.002.129
Collet insert set for OW 19, 6 pcs. Type "W" (wide)	.314in (8mm)	1.5 oz (42 g)	OT822.002.132
Collet insert set for OW 19, 6 pcs. Type "W" (wide)	.375in (9.53mm)	1.4 oz (40 g)	OT822.002.135
Collet insert set for OW 19, 6 pcs. Type "W" (wide)	.394in (10mm)	1.4 oz (40 g)	OT822.002.137
Collet insert set for OW 19, 6 pcs. Type "W" (wide)	.472in (12mm)	1.2 oz (35 g)	OT822.002.143
Collet insert set for OW 19, 6 pcs. Type "W" (wide)	.500in (12.7mm)	1.2 oz (35 g)	OT822.002.145
Collet insert set for OW 19, 6 pcs. Type "W" (wide)	.625in (15.88mm)	1.2 oz (35 g)	OT822.002.157
Collet insert set for OW 19, 6 pcs. Type "W" (wide)	.750in (19.05mm)	1.0 oz (30 g)	OT822.002.166

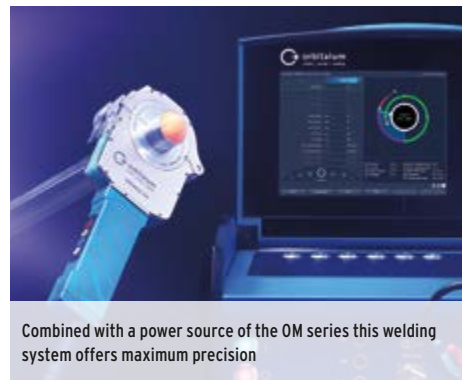


Clamping insert for OW 19 "W" (wide) 6 pcs.

# ORBIWELD 38S, 76S, 115S

RENTAL  
AVAILABILITY

Secure clamping of the parts to be welded without misalignment



Combined with a power source of the OM series this welding system offers maximum precision

## ENCLOSED ORBITAL WELD HEADS

Easier to handle, more economical, more effective - enclosed TIG orbital welding heads with outstanding characteristics: The ORBIWELD "S" series from Orbitalum is notable for its extremely narrow design and high durability by virtue of its efficient integrated water cooling system.

The small dimensions of the ORBIWELD "S" series make it ideal for applications where space is very restricted, such as the pharmaceutical and chemical industry, the semiconductor, food and beverage industry as well as aerospace.

All enclosed orbital weld heads of the ORBIWELD series are made from strong, durable materials of the finest quality and are characterized by their unique water cooling system.

The appropriate high-grade, functional and long-lasting clamping inserts are lasting longer than the inserts of many competitors.

The inserts are available in small and wide design and easily and quickly insert-able into the weld heads.

### FEATURES:

- Thanks to the extremely narrow design, parts with short straight welding lengths can also be processed
- High-quality, rugged housing and handle parts
- High durability due to completely water-cooled weld head housing
- Highly flexible hose package (Length: 7.5 m/ 24.6 ft) with strain relief to the power supply
- All the important commands for welding can be transmitted to the power supply via a control panel built into the robust and durable aluminum handle, so that no additional remote control is required
- Tool-Free Quick change system for clamping inserts that engages and releases smoothly
- Cost-effective clamping inserts
- Durable clamping connections in combination with clamping inserts available for all tube dimensions guarantee that the parts to be welded are clamped securely without misalignment
- Comprehensive and customer-specific range of accessories
- NEW: A folding cover at the weld head enables to test and/or to readjust the electrode position before the welding procedure

# ORBIWELD 38S, 76S, 115S Enclosed Orbital Weld Heads

## ORBIWELD 38S, ORBIWELD 76S, ORBIWELD 115S

Clamping inserts are not included in the scope of delivery.

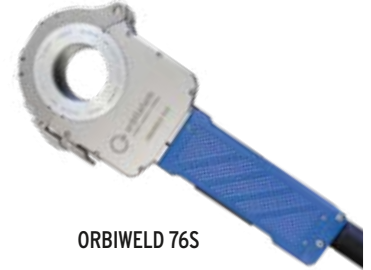
APPLICATION RANGE	ORBIWELD 38S	ORBIWELD 76S	ORBIWELD 115S
Part #	OT826.000.001	OT827.000.001	OT828.000.001
Tube OD, min. - max.	3 - 38.1 mm 1/8 in - 1.5 in	6 - 77 mm 1/4 in - 3.0 in	20 - 115 mm 3/4 in - 4.5 in
Electrode Ø	1.6/2.4 mm .063 in/.094 in	1.6/2.4 mm .063 in/.094 in	1.6/2.4 mm .063 in/.094 in
Weight	9 kg 19.8 lbs	9.4 kg 20.7 lbs	13 kg 28.7 lbs
Shipping Weight	16.5 kg	16.9 kg	18.6 kg
Hose package length	7.5 m 24.6 ft	7.5 m 24.6 ft	7.5 m 24.6 ft

### SCOPE OF DELIVERY

Includes:	Accessories (available option)s:
<ul style="list-style-type: none"> <li>• 1 Enclosed orbital weld head OW 38S, OW 76S or OW 115S</li> <li>• 1 Durable storage and shipping case</li> <li>• 1 Tool set</li> <li>• 1 Operating instructions and spare parts list</li> </ul>	<ul style="list-style-type: none"> <li>• Clamping inserts, small and wide</li> <li>• Spare pressure pieces</li> <li>• Plastic case for clamping inserts</li> <li>• Cavity inserts for moldings</li> <li>• Inserts for elbow welding</li> <li>• T-piece clamping shells</li> <li>• Electrode adapters</li> </ul>



ORBIWELD 38S



ORBIWELD 76S



ORBIWELD 115S

### ORBIWELD 38S

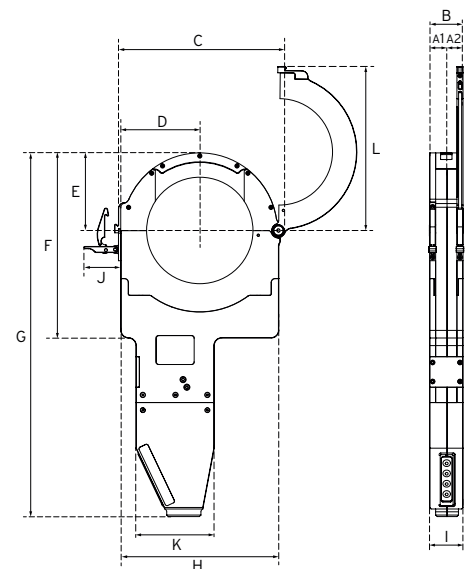
	OVERALL DIMENSION	CLAMPING INSERT TYPE [2 PAIR]
A2	0.67in (17mm)	0.69in (17.5mm)
B	1.34in (34mm)	1.38in (35mm)
C	4.41in (112mm)	
D	1.87in (47.5mm)	
E	1.85in (47mm)	
F	5.67in (144mm)	
G	14.06in (357mm)	
H	3.74in (95mm)	
I	1.34in (34mm)	
J	2.17in (55mm)	
K	2.80in (71mm)	
L	4.33in (110mm)	

### ORBIWELD 76S

	OVERALL DIMENSION	CLAMPING INSERT TYPE [2 PAIR]
A2	0.75in (19mm)	0.83 (21mm)
B	1.5in (38mm)	1.65 (42mm)
C	6.26in (159mm)	
D	2.66in (67.5mm)	
E	2.6in (66mm)	
F	7.36in (187mm)	
G	15.75in (400mm)	
H	5.32in (135mm)	
I	1.34in (34mm)	
J	2.17in (55mm)	
K	2.8in (71mm)	
L	6.02in (153mm)	

### ORBIWELD 115S

	OVERALL DIMENSION	CLAMPING INSERT TYPE	
		TYPE "S"	TYPE "W"
A1	0.9in (22.75mm)	1.01in (25.75mm)	1.8in (45.75mm)
A2	0.84in (21.25mm)	0.96in (24.25mm)	1.74in (44.25mm)
B	1.73in (44mm)	1.97in (50mm)	3.54in (90mm)
C	8.66in (220mm)		
D	4.09in (104mm)		
E	4.02in (102mm)		
F	9.61in (244mm)		
G	18.9in (480mm)		
H	8.19in (208mm)		
I	1.73in (44mm)		
J	2.17in (55mm)		
K	4.02in (102mm)		
L	8.5in (216mm)		



# ORBIWELD 170



ORBIWELD weld heads are fully water cooled for heavy duty cycles and high currents

OW 170 accommodates up to 6.6in (170mm) tube OD



## ENCLOSED ORBITAL WELD HEADS

The ORBIWELD series weld heads feature very high thermal resistance and are suitable for applications in the chemical, pharmaceutical, food and beverage industry, where increased demands are made by ever greater tube diameters and wall thicknesses.

**Coolant channels running through the entire weld head body ensuring excellent heat dissipation and enabling continuous work at high welding currents and intensive load.**

The closed design of the ORBIWELD series and the gas management system of the head ensure a complete infiltration of the weld seam during welding with inert gas, producing welds that are very low in welding colors.

### FEATURES:

- High-quality, rugged, durable, water-cooled aluminum weld head housing and handle
- Remote control panel built into handle for all important welding commands
- Quick change tool-free clamping insert system engages and releases with cost-effective inserts smoothly for all tube dimensions, ensuring parts to be welded are clamped securely without misalignment
- Highly flexible hose package with strain relief to the power supply (Length: 7.5 m/ 24.6 ft)

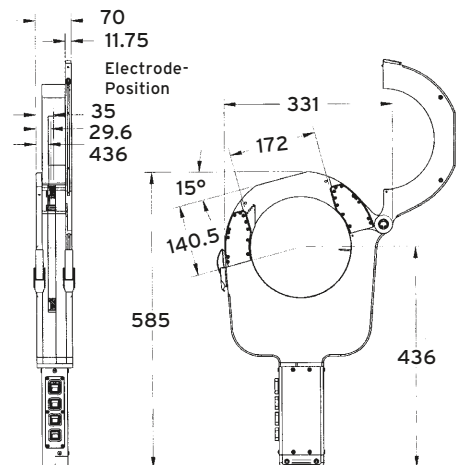


ORBIWELD 170 with integrated remote control

APPLICATION RANGE	ORBIWELD 170
Part #	0T825.000.001
Tube OD, min. - max.	1.969 in - 6.693 in (50 - 170 mm)
Electrode Ø	.063 in/.094 in (1.6/2.4 mm)
Machine Weight	45.64 lb (20.7 kg)
Shipping Weight	79.81 lb (36.2 kg)
Hose package length	24.6 ft (7.5 m)

SCOPE OF DELIVERY
• Enclosed orbital weld head
• Durable storage & shipping case (Part # 0T821.030.001)
• Tool set
• Operating instructions and spare parts list

### DIMENSIONS (mm)



# ORBIWELD CLAMPING INSERTS



APPLICATION	TUBE OD	OW 38S	OW 76S	OW 115/115S "S" (SMALL)	OW 115/115S "W" (WIDE)	OW 170 "S" (SMALL)	OW 170 "W" (WIDE)
Tube	3mm	.118in	OT826.002.120				
Tube	3.18mm	.125in	OT826.002.122				
Tube	4.78mm	.187in	OT826.002.126				
Tube	6mm	.236in	OT826.002.128	OT827.002.120			
Tube	6.35mm	.250in	OT826.002.129	OT827.002.121			
Tube	8mm	.314in	OT826.002.133	OT827.002.125			
Tube	9.53mm	.375in	OT826.002.135	OT827.002.127			
Tube	10mm	.394in	OT826.002.137	OT827.002.129			
Tube	12mm	.472in	OT826.002.143	OT827.002.135			
Tube	12.7mm	.500in	OT826.002.145	OT827.002.137	OT824.002.228		
Short Ferrule	12.7mm	.500in		OT-76F-050			
DN 10	13mm	.512in	OT826.002.146	OT827.002.138			
Tube	15.88mm	.625in	OT826.002.157	OT827.002.149			
Tube (DN 15)	19.05mm	.750in	OT826.002.166	OT827.002.158	OT824.002.227		
Short Ferrule	19.05mm	.750in		OT-76F-075			
1/2in Pipe	21.3mm	.840in	OT826.002.170	OT827.002.162	OT824.002.122	OT824.002.322	
Tube	22.22mm	.875in	OT826.002.174	OT827.002.166	OT824.002.126	OT824.002.326	
DN 20	23mm	.905in	OT826.002.176	OT827.002.168	OT824.002.128	OT824.002.328	
Tube	25.4mm	1.000in	OT826.002.181	OT827.002.173	OT824.002.133	OT824.002.333	
Short Ferrule	25.4mm	1.000in		OT-76F-100	OT-115-FK		
Standard Ferrule	25.4mm	1.000in			OT-115SF-100		
3/4in Pipe	26.7mm	1.050in	OT826.002.183	OT827.002.175	OT824.002.135	OT824.002.335	
DN 25	29mm	1.142in	OT826.002.188	OT827.002.180	OT824.002.140	OT824.002.340	
Tube	31.75mm	1.250in	OT826.002.191	OT827.002.183	OT824.002.143	OT824.002.343	
1in Pipe	33.4mm	1.315in	OT826.002.195	OT827.002.187	OT824.002.147	OT824.002.347	
DN 32	35mm	1.378in	OT826.002.198	OT827.002.190	OT824.002.150	OT824.002.350	
Tube	38.1mm	1.500in	OT826.002.201	OT827.002.193	OT824.002.153	OT824.002.353	
Short Ferrule	38.1mm	1.500in		OT-76F-150	OT-115-FK		
Standard Ferrule	38.1mm	1.500in			OT-115SF-150		
DN 40	41mm	1.614in		OT827.002.195	OT824.002.155	OT824.002.355	
1 1/4in Pipe	42.16mm	1.660in		OT827.002.197	OT824.002.157	OT824.002.357	
1 1/2in Pipe	48.26mm	1.900in		OT827.002.209	OT824.002.169	OT824.002.369	
Tube	50.8mm	2.000in		OT827.002.213	OT824.002.173	OT824.002.373	OT825.002.121
Short Ferrule	50.8mm	2.000in		OT-76F-200	OT-115-FK		OT825.002.321
Standard Ferrule	50.8mm	2.000in			OT-115SF-200		
DN 50	53mm	2.087in		OT827.002.216	OT824.002.176	OT824.002.376	OT825.002.124
2in Pipe	60.3mm	2.375in		OT827.002.221	OT824.002.181	OT824.002.381	OT825.002.129
Tube	63.5mm	2.500in		OT827.002.226	OT824.002.186	OT824.002.386	OT825.002.134
Short Ferrule	63.5mm	2.500in		OT-76F-250	OT-115-FK		
Standard Ferrule	63.5mm	2.500in			OT-115SF-250		
DN 65	70mm	2.759		OT827.002.228	OT824.002.188	OT824.002.388	OT825.002.136
2 1/2in Pipe	73mm	2.875in		OT827.002.231	OT824.002.191	OT824.002.391	OT825.002.138
Tube	76.2mm	3.000in		OT827.002.236	OT824.002.196	OT824.002.396	OT825.002.144
Short Ferrule	76.2mm	3.000in			OT-115-FK		
Standard Ferrule	76.2mm	3.000in			OT-115SF-300		
DN 80	85mm	3.346in			OT824.002.201	OT824.002.401	OT825.002.149
3in Pipe	88.9mm	3.500in			OT824.002.203	OT824.002.403	OT825.002.151
Tube	101.6mm	4.000in			OT824.002.211	OT824.002.411	OT825.002.158
Short Ferrule	101.6mm	4.000in			OT-115F-400		
Standard Ferrule	101.6mm	4.000in			OT-115SF-400		
DN 100	104mm	4.094in			OT824.002.211	OT824.002.411	OT825.002.159
4in Pipe	114.3mm	4.500in			OT824.002.215	OT824.002.415	OT825.002.164
Tube	127mm	5.000in				OT825.002.167	OT825.002.367
DN 125	129mm	5.079in				OT825.002.169	OT825.002.369
5in Pipe	141.3mm	5.563in				OT825.002.172	OT825.002.372

# Enclosed Orbital Weld Head Accessories

APPLICATION	TUBE OD		OW 38S	OW 76S	OW 115/115S "S" (SMALL)	OW 115/115S "W" (WIDE)	OW 170 "S" (SMALL)	OW 170 "W" (WIDE)
Tube	152.4mm	6.000in					OT825.002.173	OT825.002.373
DN 150	154mm	6.063in					OT825.002.174	OT825.002.374
6in Pipe	168.3mm	6.625in					OT825.002.178	OT825.002.378
Blank	Blank	Blank	OT826.002.210	OT827.002.241	OT824.002.220		OT825.002.185	

## CUSTOM CLAMPING INSERTS

Please contact us for requirements, pricing and availability on custom clamping inserts.

WORKS WITH	PART #
OW38S	OT-826-001
OW76S	OT-827-001
OW115S	OT-828-001
OW170	OT-825-001

## CLAMPING INSERT BLANKS

Ideal for special applications. Completely enclosed clamping inserts which can be drilled by customer to specific diameters.

MODEL	KG	PART #
Clamping insert blank for OW 38S, 2 pcs.		OT826.002.210
Clamping insert blank for OW 76S, 2 pcs.	9.9 oz (280 g)	OT827.002.241
Clamping insert blank for OW 115/115S "S" (small), 2 pcs.	1.3 lb (590 g)	OT824.002.220
Clamping insert blank for OW 115/115S "W" (wide), 2 pcs.	3.19 lb (1.45 kg)	OT824.002.420
Clamping insert blank for OW 170 "S" (small), 2 pcs.	2.23 lb (1.01 kg)	OT825.002.185
Clamping insert blank for OW 170 "W" (wide), 2 pcs.		OT825.002.385

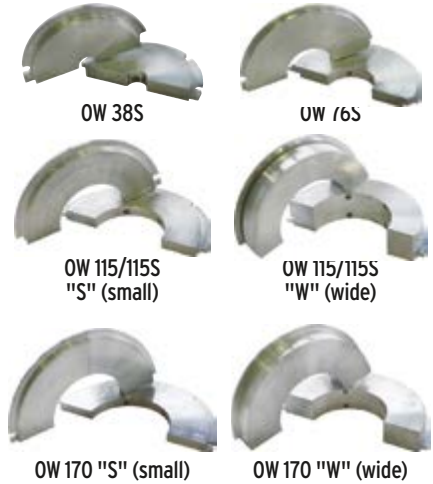
## TABLE MOUNTS

Practical and sturdy (anodized) aluminum table mounts for comfortable and secure storage of the ORBIWELD weld heads.

The mount is quickly and easily clamped to the table top using the integrated screw clamp. The weld head is firmly fixed in the holder for stationary applications - ideal for storage or temporary placement of the weld head between individual welding jobs.

SPECIFICATIONS	TABLE MOUNTS
Dimensions (L x W x H)	7.1 in x 5.5 in x 7.3 in (180 x 140 x 185 mm)
Clamping range (bottom surface of table to maximum extended screw clamp)	max. 65 mm / 2.56 in

MODEL	KG	PART #
Table mount for OW 38S, OW 76S	2.76 lb (1.25 kg)	OT826.030.006
Table mount for OW 65, OW 115, OW 115S, OW 170	2.36 lb (1.07 kg)	OT823.030.006
Heavy Duty C-Clamp	3.7 lb (1.68 kg)	OT-823-000



Short Ferrule Collets



Table mounts



Heavy Duty C-Clamp

# Orbital Welding Accessories



# Orbital Welding Accessories

## ORBITWIN 180 Switching Device

To increase productivity, the ORBITWIN switching unit is available which allows alternate operation of two weld heads on the OM180 SmartWelder. The previously assigned program is recalled automatically when the start key of the weld head is actuated. The weld head that is not being used is locked and can be prepared for the next welding operation. Includes all connecting cables and hoses.

MODEL	WORKS WITH OM	WEIGHT	PART #
ORBITWIN OM180 switching device	180 SmartWelder	19.4 lb (8.8 kg)	OT853.000.001



ORBITWIN 180SW switching device

## Connectivity Pack

Enables the connection of the OM180 SmartWelder to the network.

MODEL	PART #
Connectivity Pack	OT850.080.001



Connectivity Pack

## USB Storage Stick

Backup and store thousands of welding programs easily.

MODEL	PART #
USB stick ORBIMAT SW	OT850.030.001



USB stick

## Durable storage and shipping case

High-quality, durable shipping case.

MODEL	WEIGHT	PART #
Durable storage and shipping case for OM 165CA	30.42 lb (13.8 kg)	OT-871-001
Durable storage and shipping case for OM180 SmartWelder	30.42 lb (13.8 kg)	OT-850-000



Durable storage and shipping case

## Extension Cables

Compatible with all Orbitalum orbital weld heads. Other lengths on request.

MODEL	LENGTH	WEIGHT	PART #
Hose package extension 15 m (49 ft)	49ft (15m)	50.27 lb (22.8 kg)	OT871.050.013



Extension Cable Set

## Barcode Scanner for OM180 SmartWelder

Compatible with the ORBIMAT 180 SW. For welding data documentation or recording. Rapid scanning in of the parameters stored in the bar code/QR code (e.g. weld seam number, isometry number, welder ID, etc.) into the power supply.

MODEL	PART #
Barcode Scanner	OT850.030.005



OM180 Barcode Scanner



# Orbital Welding Accessories

## Power connector adapter set

Easy to use, safe, robust and durable.

For use with older Orbitalum welding power supplies and weld heads with green "Superior" connectors. Newer models are already equipped with the DINSE compatible connectors.

MODEL	PART #
Power connector adapter set for socket & plug	0T850.030.004
Power connector adapter for plug	0T850.030.002
Power connector adapter for socket	0T850.030.003



Power connector adapter set

## Paper rolls and ribbon cartridges

For integrated system printer. Compatible with all OM orbital welding power supplies.

1 paper roll and 1 ribbon cartridge are already included in the scope of delivery of the OM orbital welding power supplies.

MODEL	WEIGHT	PART #
Paper rolls for integrated printer, pack of 3	5.3 oz (150 g)	0T875.050.017
Ribbon cartridge for integrated printer CA	0.4 oz (10 g)	0T875.030.004



Paper rolls and ribbon cartridges for integrated printer

## Antifreeze/Coolant

Antifreeze pre-mix for OM power supplies and cooling units to avoid freezing of the cooling water. Applicable up to -15 °C (5 F) outside temperature.

MODEL	VERSION	WEIGHT	PART #
Antifreeze/Coolant	Container with 1 US Gallon (3.79l)	9.3 lb (4.22 kg)	0T875.030.015



Antifreeze/Coolant

## Dual Flow regulator

With 2 adjustable flow displays and option to connect welding and forming gas.

TECHNICAL DATA	ARGON
Max. Inlet Pressure	230 bar / 3.000 psig
Flow Indicator	up to 30 L/min /60/160 scfg
Cylinder Connection	W21.8x1/14 in /CGA 580
Hose Connection	9 1/4 / 5/8-18
Weight	4.08 lb (1.85 kg)
Part #	0T888.000.001



Dual flow regulator

## ORBmax Digital Oxygen Analyzer

### ORBmax Specifications

SPECIFICATIONS	ORBMAX
Dimensions (L x W x H)	215 x 200 x 74 mm 8.46 in x 7.87 in x 2.91 in
Weight, approx.	4.4 lbs (2kg)
Shipping Weight	10.53 lb (4.78 kg)
Part #	0T882.000.002
Protection class device	IP32
Protection class transport case	IP67
Power connection	AC 100 - 240 V, 50 - 60 Hz
Measuring range	1 - 999 ppm
Scope of delivery	1 ORBmax digital oxygen analyzer 1 Durable storage and shipping case 1 power unit supply set 100 - 240 VAC / 12 VDC 1 measuring hose (with test tip and filter) 1 SD card including evaluation software "O2_log" 1 interface cable 2 reserve filter inserts 1 operating instructions

### Accessories for ORBmax

All individual parts are already included in the scope of delivery of the ORBmax.

MODEL	WEIGHT	PART #
Measuring hose set, including: • 1 hose* • 1 filter for protecting the oxygen sensor against soiling • 2 filter inserts • 1 test tip • 1 hose connector	2.9 oz (81 g)	0T882.050.006
Hose*	1.8 oz (50 g)	0T882.012.010
Filter	0.7 oz (21 g)	0T882.020.003
Filter inserts (5 pieces per packing unit)	0.1 oz (3 g)	0T882.030.002
Test tip	0.1 oz (4 g)	0T882.012.011
Hose connector	0 oz (1 g)	0T882.012.012

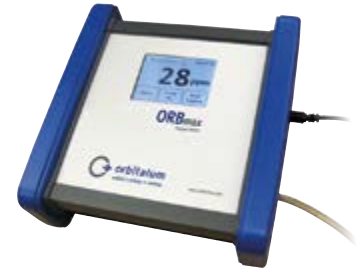
\* Please specify the hose length in meters when ordering.

### OrbiPurge ID Purge Kit

One of the most critical components of high quality stainless welding is ensuring a simple and repeatable ID purge. For orbital or hand welding applications, the OrbiPurge is a complete kit to give the best results when welding stainless tube.

- Plugs for 1.5", 2.0", 2.5" 3.0" and 4.0"
- Fitting mandrel for tees and standard ferrules
- Tacking tree for elbows and complex components
- All plugs utilize gas diffusers to maximize gas dispersion
- Exit plugs have a preset restrictor size to minimize weld over pressure
- Includes additional blank plugs for tee applications
- Teflon gas supply hose with quick disconnect and standard regulator connection
- Custom fitting storage/transport case

MODEL	WEIGHT	PART #
OrbiPurge plug set	6.94 lb (3.15 kg)	0T-881-000



ORBmax



Practical protective cover included



Measuring hose set (Individual parts)



OrbiPurge plug set

## Adapter Cables for AMI® Weld Heads

### Connect to your existing AMI® Weld Heads

Now you can use your existing AMI Weld Heads with your OM Power Supply. Simply connect one end to the weld head, connect the other to the power supply and you're ready to weld. With optional remote control, now the OM Welding Power Supply can control the AMI Weld Head at a distance.

### Arc Machines Weld Head Supported Models (AMI)

- 8-2000 Narrow Weld Heads
- 8-4000 Narrow Weld Heads
- 8-6625 Narrow Weld Heads
- 9-250 Double Clamp Fusion Weld Heads
- 9-500 / 9-500 C Double Clamp Fusion Weld Heads
- 9-750 Double Clamp Fusion Weld Heads
- 9-1500 Double Clamp Fusion Weld Heads
- 9-2500 Double Clamp Fusion Weld Heads
- 9-3500 Double Clamp Fusion Weld Heads
- 9-4500 Double Clamp Fusion Weld Heads
- 9-7500 Double Clamp Fusion Weld Heads
- M-96 Tube-to-Tubesheet Weld Heads

### Control Interface Features

- Preprogrammed settings for Arc Machines Weld Heads (AMI)
- Quick Connections
- Easy-to-use interface
- Welding Rotation Toggle Switch

### Optional Remote Control Features

- Start / Stop
- Gas Energize / DeEnergize Button
- Home Position Button
- Motor Jog button



MODEL	DESCRIPTION	PART #
AMI Adapter Water Cooled Heads	Enables use of Arc Machines International (AMI) water-cooled orbital welding weld heads on an Orbitalum Orbital Welding Automatic Power Supply such as the OM 165CA.	0T871.030.025
AMI Adapter Air Cooled Heads	Enables use of Arc Machines International (AMI) air-cooled orbital welding weld heads on an Orbitalum Orbital Welding Automatic Power Supply such as the OM 165CA.	0T871.030.026
AMI Remote for adapter cable	Optional remote control for use with AMI-to-Orbitalum Adapter sets.	0T871.050.036

AMI® is a Registered Trademark of Arc Machines, Inc. and not affiliated with Orbitalum Tools GmbH



Orbitalum-to-AMI Weld Head Cable Set



Arc Machines (AMI) Weld Head Connected to Orbitalum OM180 SmartWelder Power Supply



AMI Adapter Cable Connections feature protective sleeves



AMI Adapter Handheld Weld Head Selector (Left) with Optional Remote (Right)

## Tungsten Grinders ESG Plus, ESG Plus<sup>2</sup>

MODEL	VERSION	GRINDING ANGLES [°]	MACHINE WEIGHT	SHIPPING WEIGHT	PART #
ESG Plus	110 V, 50/60 Hz EU/US	15 / 18 / 22.5 / 30	3.15 lb (1.43 kg)	7.85 lb (3.56 kg)	0T790.052.486
ESG Plus	110 V, 50/60 Hz EU/US	15 / 30 / 45 / 60	3.15 lb (1.43 kg)	7.85 lb (3.56 kg)	0T790.052.645
ESG Plus <sup>2</sup>	110 V, 50/60 Hz EU/US	15 / 18 / 22.5 / 30	3.35 lb (1.52 kg)	8.43 lb (3.83 kg)	0T790.052.586
ESG Plus <sup>2</sup>	110 V, 50/60 Hz EU/US	15 / 30 / 45 / 60	3.35 lb (1.52 kg)	8.43 lb (3.83 kg)	0T790.052.646

### Diamond grinding wheels

Replaceable grinding wheel diamond-coated on both sides for optimal performance.

For 1.0 and 1.6 mm (0.039 in/0.063 in) electrodes we recommend the standard grinding wheel. For 2.0 and 2.4 mm (0.078 in/0.094 in) electrodes a medium grained grinding wheel and for 3.2 and 4.0 mm (0.126 in/0.157 in) a coarse grained grinding wheel is advisable.

MODEL	WORKS WITH	GRAIN	WHEEL Ø	S	WEIGHT	PART #
Diamond grinding wheel	ESG 4	Standard	1.29in (32mm)	0.047in (1.2mm)	0.2 oz (5 g)	0T790.052.460
	ESG Plus, ESG Plus <sup>2</sup>	Fine	1.319in (33.5mm)	0.087in (2.2mm)	0.4 oz (10 g)	0T790.052.487
	ESG Plus, ESG Plus <sup>2</sup>	Medium	1.319in (33.5mm)	0.087in (2.2mm)	0.4 oz (11 g)	0T790.052.488
	ESG Plus, ESG Plus <sup>2</sup>	Coarse	1.319in (33.5mm)	0.087in (2.2mm)	0.4 oz (11 g)	0T790.052.550

### Electrode holder for machining smaller electrodes.

The electrode holder for the ESG Plus or ESG Plus<sup>2</sup> includes (1) flexible collet.

MODEL	WORKS WITH	SETTING	ELECTRODE Ø	WEIGHT	PART #
Electrode holder with collet	ESG Plus, ESG Plus <sup>2</sup>	continuous	0.039 - 0.126in (1.0 - 3.2mm)	0.8 oz (23 g)	0T790.052.457
Spare collet	ESG Plus, ESG Plus <sup>2</sup>	continuous	0.039 - 0.126in (1.0 - 3.2mm)	0.1 oz (2 g)	0T790.052.481

### Wall-/table-/vice-mounting plate

Simple and rapid mounting to a wall, a table or a vice.

MODEL	WORKS WITH	WEIGHT	PART #
Wall-/table-/vice-mounting plate	ESG Plus, ESG Plus <sup>2</sup>	3.6 oz (102 g)	0T790.052.483

### Protective cover

Easy to adapt on the ESG Plus head. With integrated retainer for suction units. For use on electrodes with thorium.

MODEL	WORKS WITH	WEIGHT	PART #
Protective cover ESG Plus	ESG Plus	6 oz (170 g)	0T790.052.496
Protective cover ESG Plus <sup>2</sup>	ESG Plus <sup>2</sup>	7.8 oz (220 g)	0T790.052.596

### Double-Decker Kit

Easy to mount to the ESG Plus. This attachment makes it possible to use 2 different grinding wheels at the same time.

Including: 1 Grinding head, 1 Diamond grinding wheel (Coarse), 1 Cylinder-head screw with collar (M4x34), 1 Shaft extension

MODEL	WORKS WITH	GRINDING ANGLES [°]	WEIGHT	PART #
Double-Decker Kit	ESG Plus	15 / 18 / 22.5 / 30	5.6 oz (160 g)	0T790.052.490
Double-Decker Kit	ESG Plus	15 / 30 / 45 / 60	3.5 oz (100 g)	0T790.052.390



ESG Plus



ESG Plus2



Diamond grinding wheels



Double-Decker Kit



Electrode holder with collet (for ESG Plus, ESG Plus<sup>2</sup>)



Spare collet (for ESG Plus, ESG Plus<sup>2</sup>)



Wall-/table-/vice-mounting plate



Protective cover



GF 4 Tube & Pipe Saw

## FACTORY RENTALS FROM ORBITALUM

Factory Orbitalum rentals, direct from the people who know them best, assures your rentals are fully checked, ready to weld, and available when and where you need them. Orbitalum factory product specialists are available to help you select the best equipment for the best results.

Orbitalum manufactures the industry standard GF and GFX tube saws and RPG tube squaring machines to produce the perfectly square, burr free preps required for defect free, orbital fusion welding applications. Orbitalum orbital welding system rental options include power supplies, weld heads, Orbitwin switching unit, and the ORBmax digital oxygen analyzer, plus AMI® adapter cables for operating AMI weld heads with Orbitalum power supplies.



RPG 4.5 Tube Facer

### Ordering your Orbitalum factory rental equipment is as easy as 1-2-3.

**STEP 1** Identify Your Project. Simply identify what types of orbital cutting, facing and welding you want to do, when you want to do it, and if you know it, the project scope including clearances, diameters, materials and schedule of the tube and pipe you'll be working with.



**STEP 2** Select Your Equipment. A typical high purity project utilizes a GF saw to cut the tube, an RPG facer to square and deburr the tube, and a 165CA or 180SW power supply with appropriately sized Orbiweld weld head for fusion welding.



**STEP 3** Select Your Collets and Consumables. Orbitalum offers many choices in OEM collets and consumables, including saw blades, facing bits and pre-ground tungstens all engineered and matched to keep your equipment running at peak performance.

**To learn more or request a quote call 847.537.8800 or visit [orbitalum.us](http://orbitalum.us)**



OM180 SmartWelder Power Supply



Orbiweld 76S Orbital Weld Head

## RENT ORBITALUM

### DIRECT FROM THE MANUFACTURER

- One Source for Orbital Cutting and Welding Equipment, Accessories and Consumables
- Newest Technology Equipment on the Market
- Factory Technicians Check and Calibrate Machines in Rental Fleet Before Shipment
- Competitive Weekly and Monthly Rates
- No Hidden Service Fees
- Large Inventory for Immediate Delivery
- Localized Equipment and Support at Our Regional Service Centers
- Factory Training Available at Your Location or Ours



PORTABLE TUBE & PIPE SAWS	RENTAL PART #
GF4 120v	ROT790.142.002
GF6 120v	ROT790.143.002
GFX 3.0 120v	ROT790.144.002

RPG TUBE FACING & SQUARING MACHINES	RENTAL PART #
RPG ONE 120v	ROT790.036.032
RPG ONE Cordless	ROT790.036.022
RPG ONE Collets / Clamping Shell Inserts	ROT790.036.XXX
RPG 1.5 Cordless	ROT790.037.012
RPG 1.5 120v	ROT790.037.002
RPG 1.5/2.5 Collets / Clamping Shell Inserts	ROT790.037.XXX
RPG 2.5 120v	ROT790.030.002
RPG 2.5 Collets / Clamping Shell Inserts	ROT790.030.XXX
RPG 4.5 120v	ROT790.038.002
RPG 4.5 Collets / Clamping Shell Inserts	ROT790.038.XXX
RPG 8.6 120v	ROT790.039.002
RPG 8.6 Collets / Clamping Shell Inserts	ROT790.038.XXX

OM WELDING POWER SUPPLIES	RENTAL PART #
OM 165CA Power Supply	ROT871.000.001
OM180 SmartWelder Power Supply	ROT850.000.002

ORBIWELD WELD HEADS	RENTAL PART #
OW 12 Weld Head	ROT821.000.001
OW 12 Cartridges and Clamping Shell Inserts	ROT821.050.XXX
OW 19 Weld Head	ROT822.000.001
OW 19 Collets / Clamping Shell Inserts	ROT822.002.XXX
OW 38S Weld Head	ROT826.000.001
OW 38S Collets / Clamping Shell Inserts	ROT826.002.XXX
OW 76S Weld Head	ROT827.000.001
OW 76S Collets / Clamping Shell Inserts	ROT827.002.XXX
OW 115S Weld Head	ROT828.000.001
OW 115S Collets / Clamping Shell Inserts	ROT824.002.XXX
OW 170 Weld Head	ROT825.000.001
OW 170 Collets / Clamping Shell Inserts	ROT825.002.XXX

ORBITAL WELDING ACCESSORIES	RENTAL PART #
Dual Flow Regulator	ROT888.000.001
Extension Cable (50 ft)	ROT871.050.013
OrbiPurge Purge Plug Set	ROT-881-000
OrbiTwin OM 165CA	ROT861.000.001
OrbiTwin OM180 SW	ROT853.000.001
ORBmax Oxygen Monitor	ROT882.000.002

OTHER WELDING ACCESSORIES	RENTAL PART #
AMI Adapter (Water-Cooled Heads)	ROT871.030.025
AMI Adapter (Air-Cooled Heads)	ROT871.030.026

# Orbitalum Training



Classroom training on standard welding procedure

## TECHNOLOGY CENTER

Advanced cutting machines and orbital welding systems require skilled operators to operate them. As part of our ongoing commitment to customer support Orbitalum has recently updated our state of the art Technology Center at E.H. Wachs Lincolnshire, Illinois headquarters. The Technology Center was purpose-built for specialized training on Orbitalum's pipe cutting, weld preparation machine tools and advanced orbital welding systems.

From software to hardware to maintenance, our instructors demonstrate the proper setup, operation and typical applications encountered in the field. Including both welding theory in the classroom and hands-on cutting and welding procedures in the lab, these courses are designed to jump start productivity and realize the full potential of each machine.



Orbitalum Technology Center in Lincolnshire, IL

## FIELD TRAINING

Orbitalum also offers field training at your location that can be tailored to your specific workforce and projects. Our instructors and field technicians have years of experience in orbital cutting technology and orbital welding systems, with each having received advanced training in operation and maintenance from the factory in Singen, Germany. Training can also be conducted at our Sales, Service & Rental Centers if that is a better alternative.

We'll teach operational techniques and detailed maintenance procedures that ensure a long life from your new Orbitalum equipment. Our goal is for every Orbitalum operator to have a comprehensive understanding of the technology, a detailed knowledge of their machine's capability, and a valuable skill set.

## TRAINING BENEFITS

Orbitalum Factory Instructors

Learn Safe, Proper Operation

Instruction at our Location or Yours

Jump Start Your Productivity

Courses for New Grads  
& Seasoned Professionals

Factory Certification

GF Saw Tube Cutting; RPG Facing, Intro and Safe Operation	✓
OM Power Supply Introduction, Setup and Operating Procedure	✓
Orbital Welding Theory, Software Navigation	✓
Simplified Position-based Weld Program Development	✓
Enclosed Orbital Weld Head Setup and Operation	✓
Oxygen Monitoring and Datalogging with the ORBmax	✓
Orbitwin Switching Device, Alternate Operation of Two Heads	✓
Testing and Certification by Orbitalum	✓



Courses are offered at our Sales, Service & Rental Centers



**ITW-OCW Corporate Locations**

★ **Sales Locations**

Contact your local ITW Orbital Cutting & Welding representative for additional information or to request a product demonstration.

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