

# ORBITAL CUTTING & BEVELING

Orbital cutting & beveling machines for high-purity process piping





## New products



### PS 4.5 Plus | Portable tube saw

The "Plus" in its name says it: With the PS 4.5 Plus Orbitalum Tools presents the redesign of our existing conceptually flexible light tube saw for burr-free cutting of tubes and elbows and is focusing on even higher quality and increased service life through even more rugged sliding elements. At the same time its problem-free and simple usage as well as its unbeatable price remain the prime factors among its users. The most important advantages:

- Refined technology with new design
- The lightest machine in this field of application on the market
- Reduced price - despite additional advantages
- Integrated line laser to determine the cut off point
- Feeding and sawing in a single pass
- New tripod made of aluminum (optional) - now space-saving storage in the PS transport case possible

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### GFX 6.6 | Pipe cutting and beveling machine

New, innovative saw from Orbitalum Tools for cutting and beveling of tubes and elbows in just seconds. The perfect preparation for orbital welding!

#### ADVANTAGES:

- Square, burr-free and cold machining process
- Deformation-free clamping system especially applicable for thin-walled tubes
- Easy handling through light weight
- Simultaneous or separate cutting and beveling
- Increased productivity

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### ESG MAX | Tungsten grinder

Precisely and rapidly cutting, grinding and planning electrodes which are used in WIG/TIG welding machines.

#### ADVANTAGES:

- Lateral adjustment of the head for increased service life of the grinding wheel
- Grinding head with 72 holes: 36 holes for the grinding wheel with coarse grain, 36 holes for the grinding wheel with fine grain and cutting edge
- Continuously adjustable cutting device from 9.0 to 34.5 mm (0.354" - 1.358") (available option)
- Including dust protection against grinding dust
- Adapter for extraction device for up to 96% less grinding dust particles (available option)
- Table mount included

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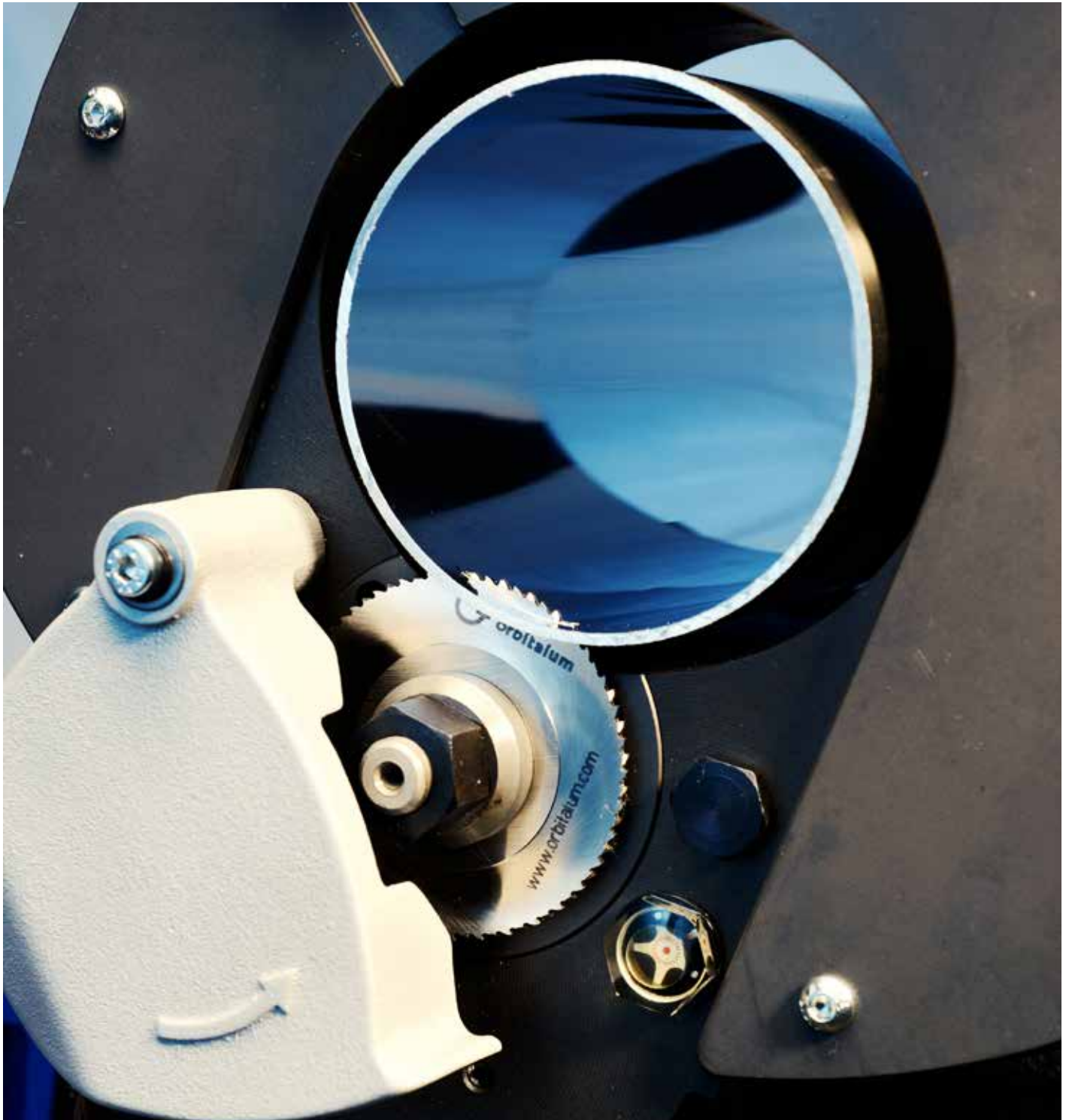


## Markets and Applications

ITW Orbital Cutting & Welding manufactures the world's most complete line of portable, powered tube and pipe cutting, facing and beveling weld preparation machine tools. In addition we build a complete line of advanced orbital welding systems used in high purity, process piping and specialized heat exchanger applications. ITW Orbital Cutting & Welding products are widely used in the following industries:

APPLICATIONS	E.G.	ORBITALUM PRODUCTS
Heat Exchanger	<ul style="list-style-type: none"> <li>• Shell &amp; tube</li> <li>• Box header</li> <li>• HVAC</li> <li>• Seal weld (autogenous)</li> <li>• Strength weld (wire)</li> <li>• Gas cabinets</li> <li>• Component manufacturing</li> </ul>	<ul style="list-style-type: none"> <li>• RPG Tube squaring machines</li> <li>• BRB Boiler pipe preparation machines</li> <li>• ORBIMAT Orbital welding power supplies</li> <li>• ORBIWELD Orbital weld heads</li> <li>• P16, P20 Tube-to-tube-sheet orbital weld heads</li> <li>• HX16 Orbital weld heads</li> <li>• ORBmax Residual oxygen meter</li> </ul>
Pharmacy and Chemistry	<ul style="list-style-type: none"> <li>• UHP water lines</li> <li>• Process lines</li> <li>• Mixing valves</li> <li>• CIP clean in place lines</li> </ul>	<ul style="list-style-type: none"> <li>• GF, PS, RA &amp; GFX Pipe cutting &amp; beveling machines</li> <li>• RPG Tube squaring machines</li> <li>• ORBIMAT Orbital welding power supplies</li> <li>• ORBIWELD Orbital weld heads</li> <li>• ORBmax Residual oxygen meter</li> </ul>
Semicon	<ul style="list-style-type: none"> <li>• UHP water lines</li> <li>• Vacuum lines</li> <li>• Wafer processing lines</li> <li>• CFOS lines</li> <li>• Jacketed product</li> <li>• Gas cabinets</li> <li>• Component manufacturing</li> </ul>	<ul style="list-style-type: none"> <li>• RPG Tube squaring machines</li> <li>• ORBIMAT Orbital welding power supplies</li> <li>• ORBIWELD Orbital weld heads</li> <li>• ORBmax Residual oxygen meter</li> </ul>
Aerospace	<ul style="list-style-type: none"> <li>• Airframe hydraulic lines</li> <li>• Engine fuel lines</li> <li>• Engine specific components</li> <li>• Onboard HVAC</li> </ul>	<ul style="list-style-type: none"> <li>• GF, PS, RA &amp; GFX Pipe cutting &amp; beveling machines</li> <li>• RPG Tube squaring machines</li> <li>• ORBIMAT Orbital welding power supplies</li> <li>• ORBIWELD Orbital weld heads</li> <li>• ORBmax Residual oxygen meter</li> </ul>
Food & Dairy	<ul style="list-style-type: none"> <li>• Product water lines</li> <li>• Jacketed product</li> <li>• Mixing valves</li> <li>• CIP clean in place lines</li> </ul>	<ul style="list-style-type: none"> <li>• GF, PS, RA &amp; GFX Pipe cutting &amp; beveling machines</li> <li>• RPG Tube squaring machines</li> <li>• ORBIMAT Orbital welding power supplies</li> <li>• ORBIWELD Orbital weld heads</li> <li>• ORBmax Residual oxygen meter</li> </ul>
APPLICATIONS	E.G.	E.H. WACHS PRODUCTS
Oil & Gas	<ul style="list-style-type: none"> <li>• Piping &amp; delivery systems</li> <li>• Heat exchangers</li> <li>• Flange maintenance</li> <li>• Casing cutting</li> <li>• Wellhead maintenance</li> <li>• Valve operation</li> </ul>	<ul style="list-style-type: none"> <li>• SDSF Small Diam. Split Frames (Pipe cutting &amp; beveling machines)</li> <li>• LCSF Low Clearance Split Frames (Pipe cutting &amp; beveling machines)</li> <li>• DynaPrep MDSF Split Frames (Pipe cutting &amp; beveling machines)</li> <li>• EP424 Bevelers</li> <li>• Guillotine Portable pipe saws</li> <li>• ECC &amp; EICC Casing cutters</li> <li>• RS-2 Rising stem valve operators</li> </ul>
Power Generation	<ul style="list-style-type: none"> <li>• Storage tanks &amp; drain systems</li> <li>• Safety &amp; coolant injection systems</li> <li>• Hydrogen off gas systems</li> <li>• Instrument lines &amp; nozzles</li> <li>• Reactor, feed water, &amp; steam piping systems</li> <li>• Steam generator (SGRP) &amp; turbines</li> </ul>	<ul style="list-style-type: none"> <li>• SDSF Small Diam. Split Frames (Pipe cutting &amp; beveling machines)</li> <li>• DynaPrep MDSF Split Frames (Pipe cutting &amp; beveling machines)</li> <li>• LCSF Low Clearance Split Frames (Pipe cutting &amp; beveling machines)</li> <li>• EP424, SDB, &amp; FF Bevelers</li> <li>• Boiler tube beveler boiler pipe preparation machines</li> <li>• Valve operators</li> </ul>
Pipelines	<ul style="list-style-type: none"> <li>• New construction &amp; expansion</li> <li>• Pipeline repair &amp; decommissioning</li> <li>• Pipeline tie ins</li> <li>• Flange, trap door, &amp; valve replacement</li> <li>• Casing cutting</li> <li>• Wellhead maintenance</li> </ul>	<ul style="list-style-type: none"> <li>• LCSF Low Clearance Split Frames (Pipe cutting &amp; beveling machines)</li> <li>• HDSF Heavy Duty Split Frames (Pipe cutting &amp; beveling machines)</li> <li>• LDSF Large Diameter Split Frame (Pipe cutting &amp; beveling machines)</li> <li>• Trav-L-Cutter (Portable Milling Machines)</li> <li>• Goliath Guillotine Portable pipe saws</li> <li>• ECC &amp; EICC Casing cutters</li> </ul>

# Pipe Cutting and Beveling Technology





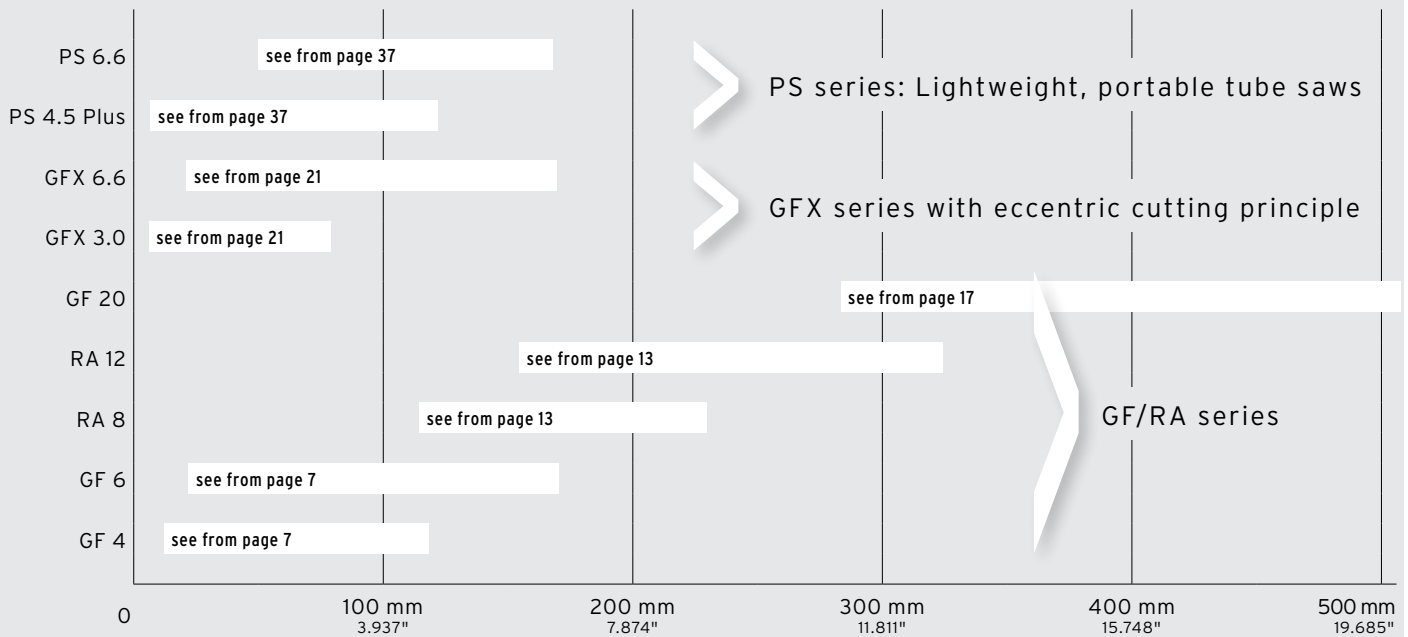
## Quick overview pipe cutting and beveling technology

Our products offer a wide range of applications. Regardless of whether you want to prepare large, small, thin-walled or thick-walled, high-alloyed or low-alloyed tubes and pipes, we can certainly offer you a suitable solution. This quick overview shows you the various application possibilities of our pipe cutting and beveling machines. Would you like a personal consultation?

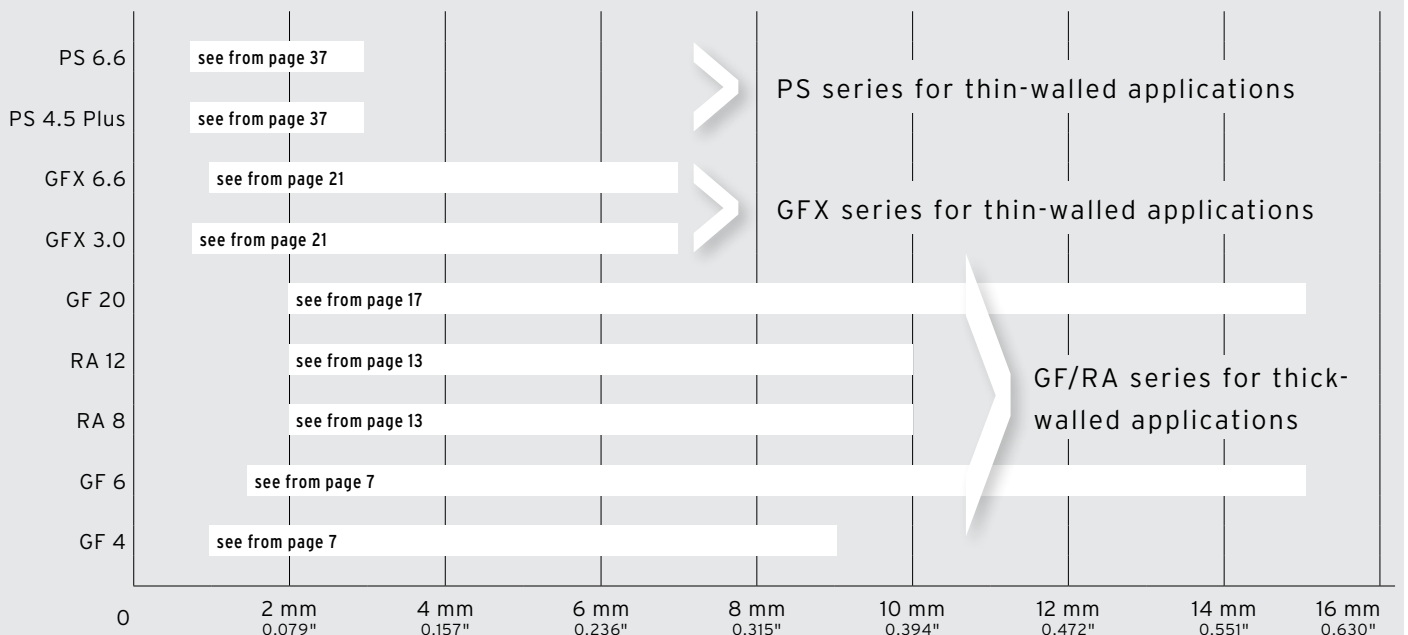
Then simply contact us by phone +49 (0) 77 31 792-0 or by e-mail to [tools@orbitalum.com](mailto:tools@orbitalum.com).

Our team will gladly help you finding the suitable solution for your individual application.

### Tube outer diameter OD



### Tube wall thicknesses



# GF 4, GF 6 (AVM/MVM)

## Pipe cutting and beveling machines

This saw has been designed for precise cutting of tubes and pipes in just seconds.

For more than 40 years construction companies rely on the standard set by Orbitalum in the industrial prefabrication of pipeline systems: From the chemical, biotechnology, pharmaceutical, food and beverage industry to the energy plant construction and shipbuilding.



The GF series sets new standards in orbital pipe machining. Numerous innovative functions combined with an ergonomic design create significant advantages for you in the industrial prefabrication of pipeline systems

Available with automatic or manual feed modules AVM/MVM

Multifunctional tool for all adjustments on the machine

Reversible clamping jaws for preparing thin- or thick-walled pipes

Integrated line laser to determine the cut off point

**The basic requirement for the productive and high-quality welding of pipes with automated welding technology is a precise, right-angled and burr-free cut as well as a perfectly beveled pipe end.**

**The GF series cuts and bevels high-alloy steel (stainless steel), low- and unalloyed steel, plastics, casting materials and non-ferrous metals easily and in just seconds, using the "Planetary Cutting" method.**

**The powerful clamping is effected without any deformation of the workpiece.**

Besides the completely manual operation, users also have the possibility to choose between manual operation with manual feed module (MVM) or automatic feed module (AVM) - both optional. The latter option optimizes the cutting result, increases the tool life and reduces the operator impact. The result: Maximum safety and productivity.

- Square, burr-free and cold machining process
- Deformation-free clamping system for tubes and pipes
- Optimum preparation for the automated welding process
- Sturdy design with powerful drive
- Unique and automated orbital cutting process
- Simultaneous or separate cutting and beveling
- Cost-effective, increasing productivity
- Long tool life
- Anthracite-colored coated components for improved sliding properties and protection against corrosion
- Stainless steel clamping attachments for protection against contact corrosion included
- Reduced operator impact by optional feed module AVM or MVM for an automated or manual cutting process
- Locking mechanism prevents unauthorized usage and theft
- An ergonomically-designed motor handle for a safe and comfortable operating position, which also enables easy cutting of elbows
- Integrated line laser to determine the cut off point
- 2 position clamping jaws to reduce chatter and enable smaller length of pipe to be machined
- Multifunctional tool for all adjustments on the machine
- Optimized speed range (40-215 rpm), ideal for cutting high-performance materials (Hastelloy®, P91, etc.)
- Swivel cable with a quick-disconnect coupler: for easy and comfortable replacement of the power cable
- Optimized saw blade guard protects the user against flying chips and comes with a measuring port (for GF 4 only)

APPLICATION RANGE		GF 4	GF 4 AVM*	GF 4 MVM*	GF 6	GF 6 AVM*	GF 6 MVM*
Code	[230 V] [120 V]	790 142 001 790 142 002	790 142 011 790 142 012	790 142 021 790 142 022	790 143 001 790 143 002	790 143 011 790 143 012	790 143 021 790 143 022
Tube OD	[mm] [inch]	12 - 120 0.472 - 4.724	12 - 120 0.472 - 4.724	12 - 120 0.472 - 4.724	21.3 - 168.3 0.839 - 6.626	21.3 - 168.3 0.839 - 6.626	21.3 - 168.3 0.839 - 6.626
Wall thickness (depends on material)**	[mm] [inch]	1 - 9 0.039 - 0.354	1 - 9 0.039 - 0.354	1 - 9 0.039 - 0.354	1.5 - 15 0.059 - 0.591	1.5 - 15 0.059 - 0.591	1.5 - 15 0.059 - 0.591
Tube ID min. (saw blade Ø 63 mm)	[mm]	21	21	21	30	30	30
Tube ID min. (saw blade Ø 2.480")	[inch]	0.827	0.827	0.827	1.181	1.181	1.181
Tube ID min. (saw blade Ø 68 mm)	[mm]	16	16	16	25	25	25
Tube ID min. (saw blade Ø 2.677")	[inch]	0.630	0.630	0.630	0.984	0.984	0.984
Tube ID min. (saw blade Ø 80 mm)	[mm]	4	4	4	13	13	13
Tube ID min. (saw blade Ø 3.150")	[inch]	0.157	0.157	0.157	0.512	0.512	0.512
Tube ID min. (saw blade Ø 100 mm)	[mm]	-	-	-	0	0	0
Tube ID min. (saw blade Ø 3.937")	[inch]	-	-	-	0	0	0
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	[kW] [hp]	1.8 2.41	1.9 2.54	1.8 2.41	1.8 2.41	1.9 2.54	1.8 2.41
Power AVM	[kW] [hp]	-	0.05 0.07	-	-	0.05 0.07	-
Built-in electronic variable cutting speed with restart inhibitor	[rpm]	40 - 215	40 - 215	40 - 215	40 - 215	40 - 215	40 - 215
Slide housing speed with AVM	[rpm]	-	0.1 - 3.9	-	-	0.3 - 3.5	-
Slide housing torque max. with AVM	[Nm]	-	101	-	-	353	-
Protection class	[class]	II (DIN EN 60745-1)	I (DIN EN 60204-1)	II (DIN EN 60745-1)	II (DIN EN 60745-1)	I (DIN EN 60204-1)	II (DIN EN 60745-1)
Noise level at the workplace approx.	[dB (A)]	79	79	79	79	79	79
Vibration level (according to DIN EN 28662, part 1)	[m/s²]	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5
Mains fuse by customer	[A]	16	16	16	16	16	16
Dimensions (lxwxh)	[mm] [inch]	480 x 325 x 680 18.9 x 12.8 x 26.8	480 x 325 x 810 18.9 x 12.8 x 31.9	480 x 325 x 780 18.9 x 12.8 x 30.7	574 x 352.7 x 920 22.6 x 13.9 x 36.2	574 x 352.7 x 972 22.6 x 13.9 x 38.3	574 x 352.7 x 920 22.6 x 13.9 x 36.2
Weight of machine approx.***	[kg] [lbs]	55.0 121.2	64.5 142.2	60.0 132.2	92.7 204.4	101.7 224.2	97.8 215.6
Versions (single-phase AC)	[V, Hz]	230 V, 50/60 Hz 120 V, 50/60 Hz	230 V, 50/60 Hz 120 V, 50/60 Hz	230 V, 50/60 Hz 120 V, 50/60 Hz	230 V, 50/60 Hz 120 V, 50/60 Hz	230 V, 50/60 Hz 120 V, 50/60 Hz	230 V, 50/60 Hz 120 V, 50/60 Hz
SCOPE OF DELIVERY		GF 4	GF 4 AVM*	GF 4 MVM*	GF 6	GF 6 AVM*	GF 6 MVM*
Pipe cutting and beveling machine	Pc.	1	1	1	1	1	1
Transportation case	Pc.	1	1	1	1	1	1
Set of stainless steel clamping attachments	Pc.	1	1	1	1	1	1
Saw blade (Code 790 ...)	Pc.	1 (...042 064)	1 (...042 064)	1 (...042 064)	1 (...043 018)	1 (...043 018)	1 (...043 018)
Mounting plate	Pc.	1	1	1	1	1	1
Line laser with fastening screw****	Pc.	1	1	1	1	1	1
Tool set	Set	1	1	1	1	1	1
Saw blade lubricant GF TOP (Code 790 060 228)	Tube	1	1	1	1	1	1
Special gear oil (Code 790 041 030)	Bottle	1	1	1	1	1	1
Operating instructions and spare parts list	Set	1	1	1	1	1	1

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 before commissioning

## FEED VERSIONS:

Pipe cutting and beveling machine with **automatic feed module AVM\***: This intelligent solution continuously controls the cutting speed depending on the torque and the parameter settings. The AVM improves the handling of the GF and RA machine and stops automatically after the cutting process.

Pipe cutting and beveling machines **with manual feed module MVM\***: This manually operated feed module facilitates the cutting and beveling of pipes. With the help of a hand wheel, the machine head rotates easily and with little effort around the pipe with a constant speed.





## Pipe cutting and beveling machines

### GF 4, GF 6 (AVM/MVM)

Features, application range, technical data and scope of delivery, see from page 7.

ARTICLE	VERSION	CODE		WEIGHT OF MACHINE KG	DISPATCH WEIGHT KG
GF 4	230 V, 50/60 Hz EU	790 142 001		61.300	88.000
GF 4	120 V, 50/60 Hz EU/US	790 142 002		61.300	88.000
GF 4 AVM	230 V, 50/60 Hz EU	790 142 011		70.500	98.000
GF 4 AVM	120 V, 50/60 Hz EU/US	790 142 012		70.500	98.000
GF 4 MVM	230 V, 50/60 Hz EU	790 142 021		66.600	98.000
GF 4 MVM	120 V, 50/60 Hz EU/US	790 142 022		66.600	98.000
GF 6	230 V, 50/60 Hz EU	790 143 001		92.700	140.000
GF 6	120 V, 50/60 Hz EU/US	790 143 002		92.700	140.000
GF 6 AVM	230 V, 50/60 Hz EU	790 143 011		101.700	153.000
GF 6 AVM	120 V, 50/60 Hz EU/US	790 143 012		101.700	153.000
GF 6 MVM	230 V, 50/60 Hz EU	790 143 021		97.800	147.000
GF 6 MVM	120 V, 50/60 Hz EU/US	790 143 022		97.800	147.000

### Suitable accessories

- Saw blades and bevel cutters, see from page 29
- High-performance lubricants for cutting and beveling, see page 25
- Special gear oil, see page 25
- Swivel cable, see page 26
- Quick-mounting base plates with integrated screw clamps, see page 26
- Pipe feeder base unit and extension unit, see from page 27
- Mobile workstation, see page 28
- Collapsible work bench, see page 90
- Pipe vice, see page 90



GF 4, GF 6



GF 4 AVM, GF 6 AVM



GF 4 MVM, GF 6 MVM

## Simply rent and stay flexible.

We supply equipment over a short and long term rental condition - a cost effective alternative to purchasing. We take care of our rental equipment so it is in top condition for you and we can help you to match the right rental equipment to your specific projects.

Renting from Orbitalum is the ideal opportunity to try out a model you're thinking of purchasing.

Your benefits of renting:

- Reducing need for storage
- Eliminating repair costs
- Conserving your capital
- Having the most up-to-date technology
- Minimizing down-time

Our rental and used machine service includes:

- Weekly rental charges
- Hire purchase
- Long-term rental

Please ask us for our favorable rental and rent-to-buy conditions:

Tel. +49 (0) 77 31 792-0  
or per e-mail to  
[tools@orbitalum.com](mailto:tools@orbitalum.com)

# RA 8, RA 12 (AVM/MVM)

## Pipe cutting and beveling machines

Perform economical cutting and beveling with technology made by Orbitalum Tools!

Cutting and beveling high-alloy steel (stainless steel), low- and unalloyed steel, plastics, casting materials and non-ferrous metals in just seconds, using the "Planetary Cutting" method.



The perfect preparation for orbital welding



Available with automatic or manual feed modules AVM/MVM

Optimized speed range

Planetary cutting technology

**"Enhanced safety due to stationary tube - rotating tool". The tested process of planetary cutting is another important feature, which characterizes all ORBITALUM pipe cutting machines.** The saw blade rises into the cutting area and is driven orbitally around the tube. The advantage is that a small saw blade can cut a large tube diameter, without heating the tube.

An innovative clamping principle which clamps the tube at several points: Thanks to the deformation-free clamping system, pipes with a wall-thickness of 2 up to 10 mm (0.079" - 0.394") can be prepared easily and quickly. It is possible to cut all high-alloyed, un- and low-alloyed steels, black and galvanized steel pipes, general structural steels, annealed cast iron pipes (GGG), aluminum, brass, copper and plastics.

Besides the completely manual operation, users

also have the possibility to choose between manual operation with manual feed module (MVM) or automatic feed module (AVM) = both optional. The latter option optimizes the cutting result, increases the tool life and reduces the operator impact. The result: Maximum safety and productivity.

- Square, burr-free and cold machining process
- Deformation-free clamping system for tubes and pipes
- Optimum preparation for the automated welding process
- Sturdy design with powerful drive
- Unique and automated orbital cutting process
- Multiple point clamping
- Reduced operator impact by optional feed module AVM or MVM for an automated or manual cutting process
- Fast adjustment of dimensions
- Regulated cutting speed

- Optimal tool contact
- Fast tool replacement
- Optimized speed range (40-215 rpm), ideal for cutting high-performance materials (Hastelloy®, P91, etc.)
- An ergonomically-designed motor handle for a safe and comfortable operating position
- Cutting in seconds
- Simultaneous or separate cutting and beveling
- Increased productivity
- Increased service life of tools
- More corrosion protection through clamping jaw attachments (included)



APPLICATION RANGE		RA 8	RA 8 AVM*	RA 8 MVM*	RA 12	RA 12 AVM*	RA 12 MVM*
Code	[230 V] [120 V]	790 045 095 790 045 096	790 045 001 790 045 007	790 045 069 790 045 082	790 047 095 790 047 096	790 047 001 790 047 007	790 047 069 790 047 082
Tube OD	[mm] [inch]	114 - 230 4.488 - 9.055	114 - 230 4.488 - 9.055	114 - 230 4.488 - 9.055	154 - 325 6.063 - 12.795	154 - 325 6.063 - 12.795	154 - 325 6.063 - 12.795
Wall thickness (depends on material)**	[mm] [inch]	2 - 10 0.079 - 0.394	2 - 10 0.079 - 0.394	2 - 10 0.079 - 0.394	2 - 10 0.079 - 0.394	2 - 10 0.079 - 0.394	2 - 10 0.079 - 0.394
Tube ID min. (saw blade Ø 63 mm)	[mm]	137	137	137	190	190	190
Tube ID min. (saw blade Ø 2.480")	[inch]	5.394	5.394	5.394	7.480	7.480	7.480
Tube ID min. (saw blade Ø 68 mm)	[mm]	132	132	132	185	185	185
Tube ID min. (saw blade Ø 2.677")	[inch]	5.197	5.197	5.197	7.283	7.283	7.283
Tube ID min. (saw blade Ø 80 mm)	[mm]	120	120	120	173	173	173
Tube ID min. (saw blade Ø 3.150")	[inch]	4.724	4.724	4.724	6.811	6.811	6.811
Tube ID min. (saw blade Ø 100 mm)	[mm]	100	100	100	153	153	153
Tube ID min. (saw blade Ø 3.937")	[inch]	3.937	3.937	3.937	6.024	6.024	6.024
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, 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 8 MVM*	RA 12	RA 12 AVM*	RA 12 MVM*
Power	[kW] [hp]	1.8 2.41	1.9 2.54	1.8 2.41	1.8 2.41	1.9 2.54	1.8 2.41
Power AVM	[kW] [hp]	-	0.05 0.07	-	-	0.05 0.07	-
Built-in electronic variable cutting speed with restart inhibitor	[rpm]	40 - 215	40 - 215	40 - 215	40 - 215	40 - 215	40 - 215
Slide housing speed with AVM	[rpm]	-	0.1 - 2.3	-	-	0.1 - 1.8	-
Slide housing torque max. with AVM	[Nm]	-	165	-	-	210	-
Protection class	[class]	II (DIN EN 60745-1)	I (DIN EN 60204-1)	II (DIN EN 60745-1)	II (DIN EN 60745-1)	I (DIN EN 60204-1)	II (DIN EN 60745-1)
Noise level at the workplace approx.	[dB (A)]	79	79	79	79	79	79
Vibration level (according to DIN EN 28662, part 1)	[m/s <sup>2</sup> ]	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5
Mains fuse by customer	[A]	16	16	16	16	16	16
Dimensions (lxwxh)	[mm] [inch]	778 x 430 x 485 30.6 x 16.9 x 19.1	918 x 430 x 485 36.1 x 16.9 x 19.1	788 x 430 x 485 31.0 x 16.1 x 19.1	940 x 374 x 592 37.0 x 14.7 x 23.3	1.070 x 374 x 592 42.1 x 14.7 x 23.3	1.090 x 374 x 592 42.9 x 14.7 x 23.3
Weight of machine approx.***	[kg] [lbs]	102.5 225.9	110.0 242.5	104.6 230.6	138.6 305.6	146.1 322.1	140.7 310.2
Versions (single-phase AC)	[V, Hz]	230 V, 50/60 Hz 120 V, 50/60 Hz	230 V, 50/60 Hz 120 V, 50/60 Hz	230 V, 50/60 Hz 120 V, 50/60 Hz	230 V, 50/60 Hz 120 V, 50/60 Hz	230 V, 50/60 Hz 120 V, 50/60 Hz	230 V, 50/60 Hz 120 V, 50/60 Hz
SCOPE OF DELIVERY		RA 8	RA 8 AVM*	RA 8 MVM*	RA 12	RA 12 AVM*	RA 12 MVM*
Pipe cutting and beveling machine	Pc.	1	1	1	1	1	1
Transportation case	Pc.	1	1	1	1	1	1
Saw blade (Code 790 043 018)	Pc.	1	1	1	1	1	1
Mounting plate	Pc.	1	1	1	1	1	1
Tool set	Set	1	1	1	1	1	1
Saw blade lubricant GF TOP (Code 790 060 228)	Tube	1	1	1	1	1	1
Special gear oil (Code 790 041 030)	Bottle	1	1	1	1	1	1
Operating instructions and spare parts list	Set	1	1	1	1	1	1

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).

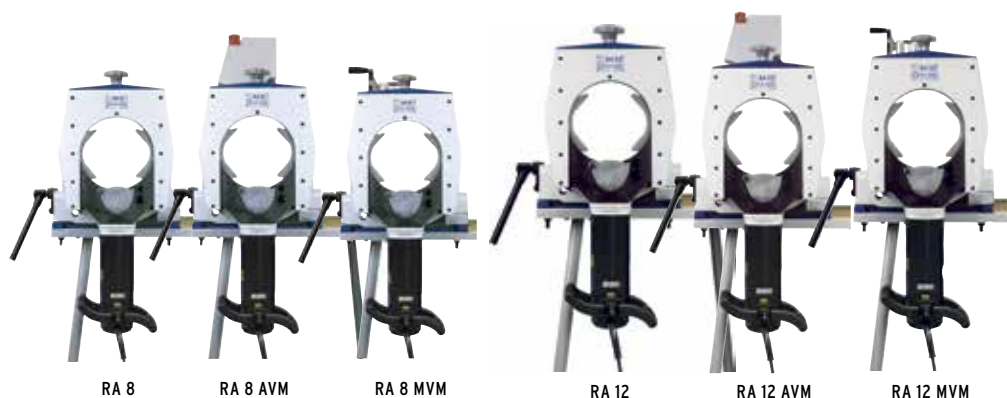
\*\*\* Weight without packaging and accessories.

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

## FEED VERSIONS:

Pipe cutting and beveling machine with **automatic feed module AVM\***: This intelligent solution continuously controls the cutting speed depending on the torque and the parameter settings. The AVM improves the handling of the GF and RA machine and stops automatically after the cutting process.

Pipe cutting and beveling machines **with manual feed module MVM\***: This manually operated feed module facilitates the cutting and beveling of pipes. With the help of a hand wheel, the machine head rotates easily and with little effort around the pipe with a constant speed.



## Pipe cutting and beveling machines

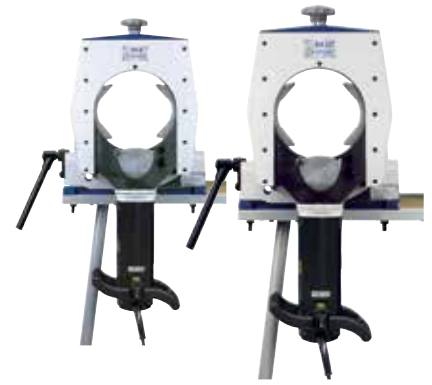
### RA 8, RA 12 (AVM/MVM)

Features, application range, technical data and scope of delivery, see from page 11.

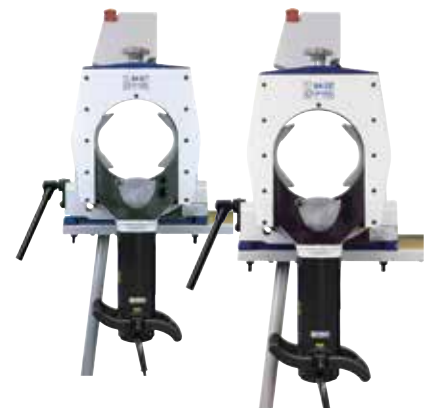
ARTICLE	VERSION	CODE		WEIGHT OF MACHINE KG	DISPATCH WEIGHT KG
RA 8	230 V, 50/60 Hz EU	790 045 095		102.500	149.000
RA 8	120 V, 50/60 Hz EU/US	790 045 096		102.500	149.000
RA 8 AVM	230 V, 50/60 Hz EU	790 045 001		110.000	165.000
RA 8 AVM	120 V, 50/60 Hz EU/US	790 045 007		110.000	165.000
RA 8 MVM	230 V, 50/60 Hz EU	790 045 069		103.000	153.000
RA 8 MVM	120 V, 50/60 Hz EU/US	790 045 082		103.000	153.000
RA 12	230 V, 50/60 Hz EU	790 047 095		138.600	177.000
RA 12	120 V, 50/60 Hz EU/US	790 047 096		138.600	177.000
RA 12 AVM	230 V, 50/60 Hz EU	790 047 001		146.000	205.000
RA 12 AVM	120 V, 50/60 Hz EU/US	790 047 007		146.000	205.000
RA 12 MVM	230 V, 50/60 Hz EU	790 047 069		140.700	200.000
RA 12 MVM	120 V, 50/60 Hz EU/US	790 047 082		140.700	200.000

### Suitable accessories

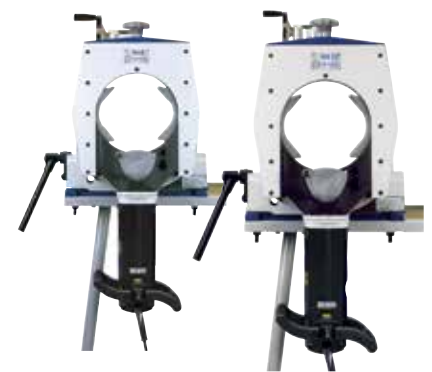
- Aluminum clamping shells and clamping jaws, see page 24
- Continuous cooling system, see page 18
- Saw blades and bevel cutters, see from page 29
- High-performance lubricants for cutting and beveling, see page 25
- Special gear oil, see page 25
- Intermediate gearbox retrofit kit, see page 25
- Swivel cable, see page 26
- Quick-mounting base plates with integrated screw clamps, see page 26
- Pipe feeder base unit and extension unit, see from page 27
- Mobile workstation, see page 28
- Collapsible work bench, see page 90
- Pipe vice, see page 90



RA 8, RA 12



RA 8 AVM, RA 12 AVM



RA 8 MVM, RA 12 MVM

# Our aim is to provide full satisfaction.

We care not only about your concerns prior to purchase. Even after the sale has been made you can fully rely on us.

**Quality****Competence****Service****Consultation****Experience****Performance****Reliability****Customer  
support****Satisfaction**

## Our wide range of services:

### Technical support:

- Repairs, maintenance, replacement
- Advance cost estimates
- On-site service
- Service training for our customers
- Cost-effective replacement devices on request

### Spare parts service:

- Approx. 2,000 spare parts always in stock
- State-of-the-art logistics systems

### Rental/used machine service:

- Weekly rental charges
- Hire purchase
- Long-term rental
- Rental with operator on request

### Further support services:

- Pick-up service from the customer
- Used machines with warranty

Would you like to request any repair service?

Do you require any spare parts, consumables or are you just looking for a machine suited to your individual situation? Please contact us, we will be glad to help you find a solution:

**Service hotline:**  
**+49 (0) 77 31 792-789**



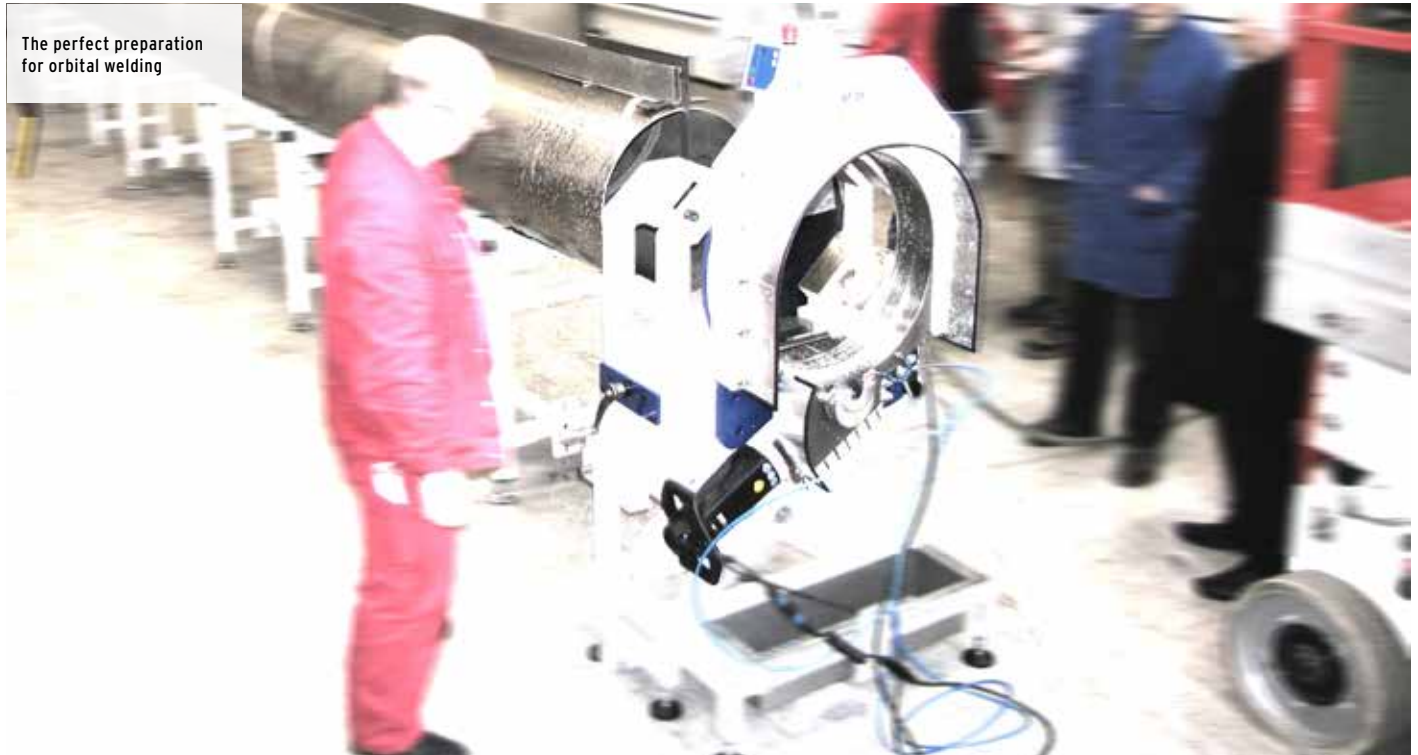
# GF 20 AVM

## Pipe cutting and beveling machine

A strong machine for demanding applications!

Cutting and beveling high-alloy steel (stainless steel), low- and unalloyed steel, plastics, casting materials and non-ferrous metals in just seconds, using the "Planetary Cutting" method.

Automatic feed module AVM included.



The saw blade rises into the cutting area and is driven orbitally around the tube. The advantage is that a small saw blade can cut a large tube diameter, without heating the tube.

**An innovative clamping principle which clamps the tube at several points:** Thanks to the deformation-free clamping system, tubes with a wall-thickness of max. 15 mm (0.59") can be prepared easily and quickly. It is possible to cut steel, stainless steel, copper, cast, iron, aluminum and synthetic materials.

The intelligent control of the AVM continuously controls the cutting speed depending on the torque and the parameter settings. The AVM improves the handling of the machine and stops automatically after the cutting process. This optimizes the cutting result, increases the tool life and reduces the operator impact. The result: Maximum safety and productivity.

The GF 20 AVM is fitted with the swivel cable with a quick-disconnect coupler.

- Square, burr-free and cold machining process
- Optimum preparation for the automated welding process
- Sturdy design with powerful drive
- Including a height-adjustable and robust lifting bench with a container for swarf collection
- Unique and automated orbital cutting process
- An ergonomically-designed motor handle for a safe and comfortable operating position
- Multifunctional tool for all adjustments on the machine
- High rotational moment for optimal cutting and beveling processes
- Optimal speed range of 30 - 163 rpm, ideal for cutting high-performance materials (Hastelloy®, P91, etc.)

- Optimized saw blade guard protects the user against flying chips
- An even higher operating life of the tools is guaranteed by the continual cooling system (available as special accessory)



Automatic feed module  
AVM\*\* included



Including a height-adjustable and robust lifting bench with a container for swarf collection



Included: Cutting lubrication KSS-TOP, saw blade lubricant GF TOP and special gear oil



An even higher operating life of the tools is guaranteed by the continual cooling system (available option)



Extension unit  
(available option)



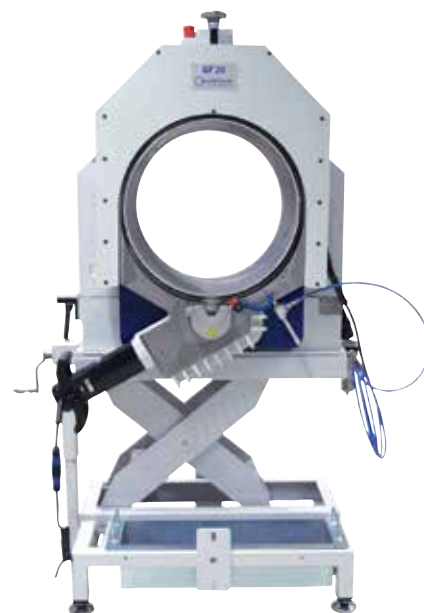
Aluminum clamping shells for clamping thin-walled tubes (available option)

APPLICATION RANGE / TECHNICAL DATA		GF 20 AVM
Code	[230 V]	790 050 001
	[120 V]	790 050 002
Tube OD	[mm]	283 - 508
	[inch]	11.14 - 20
Tube ID min. (saw blade Ø 80 mm/3.150")	[mm]	295
	[inch]	11.6
Tube ID min. (saw blade Ø 100 mm/3.937")	[mm]	275
	[inch]	10.8
Wall thickness max.	[mm]	15
	[inch]	0.59
Pipe materials		Steel, stainless steel, copper, cast, iron, aluminum, synthetic
Power (Power AVM)	[kW]	1.9 (0.05)
	[hp]	2.54 (0.07)
Built-in electronic speed regulation with speed stabilisation	[rpm]	30 - 163
Slide housing speed with AVM	[rpm]	0.1 - 1.1
Protection class	[class]	I (EN 60204-1)
Noise level at the workplace approx.	[dB (A)]	79
Vibration level (according to DIN EN 28662, part 1)	[m/s <sup>2</sup> ]	< 2.5
Dimensions GF 20 incl. lifting bench (lxwxh) approx.	[cm]	94 x 63 x 145 - 171
	[inch]	37 x 24.8 x 57.1 - 67.3
Dimensions lifting bench min.-max. (lxwxh) approx.	[cm]	94 x 63 x 44.5 - 70.5
	[inch]	37 x 24.8 x 17.5 - 27.8
Load capacity lifting bench max.	[kg]	1.200
	[lbs]	2,645.5
Weight of machine approx.*	[kg]	482.0
	[lbs]	1,062.6
Versions (single-phase AC)	[V, Hz]	230 V, 50/60 Hz
		120 V, 50/60 Hz
SCOPE OF DELIVERY		GF 20 AVM
Pipe cutting and beveling machine GF 20 AVM**	Pc.	1
Transportation case	Pc.	1
Lifting bench (Code 790 050 051)	Pc.	1
Saw blade (Code 790 047 026)	Pc.	1
Mounting plate	Pc.	1
Tool set	Set	1
Special gear oil (Code 790 041 030)	Bottle	1
Cutting lubrication KSS-TOP (Code 790 060 226)	Spray pump	1
Operating instructions and spare parts list	Set	1

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

\* Weight without packaging and accessories.

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



GF 20 AVM with lifting bench

# Pipe cutting and beveling machine

## GF 20 AVM

Features, application range, technical data and scope of delivery, see page 15.

ARTICLE	VERSION	CODE		WEIGHT OF MACHINE KG*	DISPATCH WEIGHT KG
GF 20 AVM	230 V, 50/60 Hz EU	790 050 001		482.000	554.000
GF 20 AVM	120 V, 50/60 Hz EU/US	790 050 002		482.000	554.000

\* Weight including lifting bench

## Lifting bench

For GF 20 AVM (supplied as standard).  
Also for use with the pipe cutting and beveling machine RA 12.  
On the RA 12, fastening with quick-mounting plate only.  
Mechanical height adjustment using a handwheel.  
Very sturdy and robust design with steel construction.  
Swarf collector included.

TECHNICAL DATA	LIFTING BENCH
Dimensions lifting bench min.-max. (lxwxh) approx.	94 x 63 x 44.5 - 70.5 cm 37" x 24.8" x 17.5" - 27.8"
Load capacity max.	1,200 kg / 2,645.52 lbs

ARTICLE	CODE		KG
Lifting bench for GF 20 AVM and RA 12	790 050 051		170.000

## Extension unit

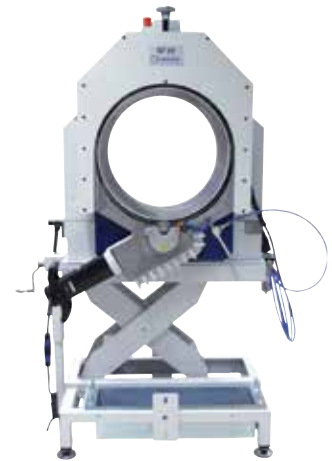
For GF 20 AVM. Not included in the scope of delivery.  
The extension unit accurately feeds long and heavy pipes into the pipe cutter.

Very robust and sturdy design with 2V supports and stainless steel bearings.  
Modular construction.

Application with 2 extension units is recommended.

TECHNICAL DATA	EXTENSION UNIT
Tube OD max.	508 mm / 20"
Dimensions approx.	110 x 50 x 95 cm / approx. 43.3" x 19.7" x 37.4"
Load capacity max.	400 kg / 881.8 lbs

ARTICLE	CODE		KG
Extension unit for GF 20 AVM	790 050 061		67.000



GF 20 AVM with lifting bench

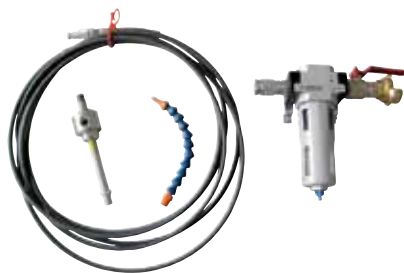


Lifting bench



Extension unit





Continuous cooling system



Aluminum clamping shells

## Continuous cooling system

For GF 20 AVM. For GF 4, GF 6, RA 8 and RA 12 on request.  
To increase the service life of the saw blade and for improved surface finish to the pipe.  
The system is cooled with compressed air fed through a vortex tube.  
The cooling air rate can be configured to the optimum level for your application.  
Also suitable for cutting plastic pipes. Cooling without coolants. The saw blade is constantly cooled during the cutting process with cold air (to -37 °C).

ARTICLE	VERSION	CODE		KG
Continuous cooling system	Compressed air (5.5 - 8.0 bar required)	<b>790 050 773</b>		0.600

## Aluminum clamping shells

For GF 20 AVM. Ideal for clamping thin-walled pipes.  
Further clamping shells for customized outer diameters are available on request.

When ordering, please indicate the outside diameter of the tube to be worked on.

### Comes with:

- 4 Clamping shells
- 8 Cylinder head screws
- 8 Cylinder head pins

ARTICLE	TUBE OD [MM]	TUBE OD [INCH]	CODE		KG
Aluminum clamping shells for GF 20 AVM	508.00	20.000	<b>790 050 800</b>		3.700
Aluminum clamping shells for GF 20 AVM	457.20	18.000	<b>790 050 802</b>		3.700
Aluminum clamping shells for GF 20 AVM	406.40	16.000	<b>790 050 803</b>		3.700
Aluminum clamping shells for GF 20 AVM	355.60	14.000	<b>790 050 804</b>		3.700

## Other accessories

- Saw blades and bevel cutters, see from page 29
- High-performance lubricants for cutting and beveling, see page 25
- Cutting lubrication KSS-TOP, see page 70
- Special gear oil, see page 25
- Swivel cable, see page 26
- Pipe feeder base unit and extension unit, see from page 27
- Collapsible work bench, see page 90
- Pipe vice, see page 90

# GFX 3.0, GFX 6.6

## Pipe cutting and beveling machines

Innovative saws from Orbitalum Tools for cutting and beveling of tubes and elbows (also for thin-walled stainless steel) in just seconds. The perfect preparation for orbital welding!

Easy to use, powerful and compact saw with low weight - our new GFX provides even more outstanding features.



The GFX series: Easy to handle, powerful and compact



Square, burr-free and deformation-free pipe end - ideal for press-fitting applications

**Our GFX series is the ideal solution for cutting of thin-walled tubes. The rugged design for a long product life makes the saws especially economical. Furthermore, the long tool lives thereby increase the productivity.**

The GFX series is extremely low-maintenance and service-friendly and offers a large range of applications. Materials which can be processed are unalloyed, low-alloy and high-alloy steels, stainless steels, non-ferrous metals, aluminum alloys, titanium alloys, composite materials and plastics.

As is characteristic for the ORBITALUM pipe saws, the saw allows convenient marking of the cut-off point on the tube with the help of a line laser.

A second saw blade clamping point enables tube elbows to be cut off.

The powerful motor is equipped with overload protection and ergonomic handles and is available for the voltages 230 V, 50/60 Hz or 120 V, 50/60 Hz.

The cable connection with a quick-release screw coupler enables simple, convenient replacement of the flexible swivel cable.

The applications lie mainly in the food processing, beverage, pharmaceutical and chemical industries.

- Square, burr-free and cold machining process
- Deformation-free clamping system especially applicable for thin-walled tubes
- Easy handling through light weight
- Simultaneous or separate cutting and beveling
- Increased productivity
- Low-maintenance and service friendly
- Second saw blade position to cut off elbows

- Ideal for pressfitting applications
- Optimized chip flow due to a new vice design
- Cast iron clamping jaws
- Integrated line laser to determine the cut off point
- Ergonomically designed motor handle
- Powerful drive with 1.2 kW and adjustable speed control for cutting several materials and extended tool life
- Electronic overload protection with integrated temperature monitor and electronic speed regulation
- Increased durability of tools due to the new drive GF10
- Ergonomically positioned speed control adjusting wheel
- Swivel cable with a quick-disconnect coupler: For easy and quick replacement of power cables
- Direct mounting on workbench possible with GFX 3.0



Second saw blade position to cut off elbows



Cast iron clamping jaws with stainless steel caps



Integrated line laser to determine the cut off point



Powerful drive with electronic overload protection and ergonomically designed motor handle



Saw blade lubricant GF TOP included



Tripod made of aluminum and high-quality padded blue shipping case for GFX 3.0 optional available

APPLICATION RANGE		GFX 3.0	GFX 6.6
Code	[230 V]	790 144 001	790 146 001
	[120 V]	790 144 002	790 146 002
Tube OD	[mm]	6.0 - 78.0	21.3 - 168.3
	[inch]	0.236 - 2.874	0.838 - 6.659
Wall thickness	[mm]	0.8 - 7.0	0.8 - 7.0
	[inch]	0.031 - 0.275	0.031 - 0.275
Tube ID min. (saw blade Ø 63/2.248")	[mm]	0	23.0
	[inch]	0	0.905
OD range (saw blade Ø 63/2.248")	[mm]	6.0 - 78.0	24.6 - 168.3
	[inch]	0.236 - 2.874	1.008 - 6.659
Tube ID min. (saw blade Ø 68/2.677")	[mm]	0	18
	[inch]	0	0.708
OD range (saw blade Ø 68/2.677")	[mm]	6.0 - 73.0	21.3 - 168.3
	[inch]	0.236 - 2.874	0.838 - 6.659
Tube ID min. (saw blade Ø 80/3.149")	[mm]	-	6.0
	[inch]	-	0.236
OD range (saw blade Ø 80/3.149")	[mm]	-	21.3 - 156.0
	[inch]	-	0.838 - 2.205
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	GFX 6.6
Dimensions (l x w x h)	[mm]	570 x 330 x 280	575 x 350 x 671
	[inch]	22.44 x 12.99 x 11.02	22.64 x 13.78 x 26.42
Weight incl. vice, without clamping shells	[kg]	28.5	74.4
	[lbs]	62.83	164.02
Power	[W]	1200	1200
Protection class	[class]	II	II
Built-in electronic variable cutting speed with restart inhibitor	[rpm]	30 - 200	30 - 200
Versions (single-phase AC)	[V, Hz]	230 V, 50/60 Hz EU	230 V, 50/60 Hz EU
	[V, Hz]	120 V, 50/60 Hz US	120 V, 50/60 Hz US
Vibration level (EN 50144)	[m/s <sup>2</sup> ]	< 2.5	< 2.5
Noise level at the workplace (EN 23741)	[dB (A)]	79.7	79.7
SCOPE OF DELIVERY		GFX 3.0	GFX 6.6
Pipe cutting and beveling machine	Pc.	1	1
Wooden transportation case	Pc.	1	1
Saw blade (Code 790 ...)	Pc.	1 (...041 035)	1 (...042 064)
Quick-mounting plate without screw clamps*	Pc.	-	1
Stainless steel caps**	Set	1	1
Line laser with holder and fastening screws***	Pc.	1	1
Tool set	Set	1	1
Saw blade lubricant GF TOP (Code 790 060 228)	Tube	1	1
Operating instructions and spare parts list	Set	1	1



GFX 3.0, GFX 6.6

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 and GFX 6.6 are available optionally.

\*\* Already mounted on the sliding clamping jaws of the GFX at delivery.

\*\*\* The line laser has to be mounted on the GFX before commissioning.



## Pipe cutting and beveling machines

### GFX 3.0, GFX 6.6

Features, application range, technical data and scope of delivery, see page 19.

ARTICLE	VERSION	CODE		WEIGHT OF MACHINE KG	DISPATCH WEIGHT KG
GFX 3.0	230 V, 50/60 Hz EU	790 144 001		28.000	44.000
GFX 3.0	120 V, 50/60 Hz US	790 144 002		28.000	44.000
GFX 6.6	230 V, 50/60 Hz EU	790 146 001		74.400	104.000
GFX 6.6	120 V, 50/60 Hz US	790 146 002		74.400	104.000



GFX 3.0, GFX 6.6

### Stainless steel caps

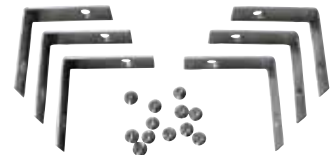
Already included on delivery of the GFX series.

Ideal for preparing stainless steel tubes.  
Prevents contact corrosion between tube and clamping parts.

#### Set comes with:

- Stainless steel caps (Qty.): 6 (GFX 3.0) / 4 (GFX 6.6)
- Countersunk screws (Qty.): 12 (GFX 3.0) / 16 (GFX 6.6)
- Allen key (Qty.): 1

ARTICLE	CODE		KG
Stainless steel caps for GFX 3.0 complete	790 144 200		0.150
Stainless steel caps for GFX 6.6 complete	790 146 200		0.792



Stainless steel caps

### Durable storage and shipping case

High-quality padded blue shipping case. Particularly sturdy design.

ARTICLE	CODE		KG
Durable storage and shipping case for GFX 3.0	790 144 019		12.500



Durable storage and shipping case

### Other accessories

- Saw blades and bevel cutters, see from page 29
- High-performance lubricants for cutting and beveling, see page 25
- Special gear oil, see page 25
- Swivel cable, see page 26
- Quick-mounting base plates with integrated screw clamps, see page 26
- Pipe feeder base unit and extension unit, see from page 27
- Mobile workstation, see page 28
- Tripod, see page 37
- Collapsible work bench, see page 90
- Pipe vice, see page 90

#### PIPE CUTTING AND BEVELING TECHNOLOGY

## Comprehensive training program.

We as Orbitalum emphasize on the safe operation of our equipment as it has the utmost priority.

We generally recommend a product safety and user training to clearly understand the proper usage of the equipment and in order to avoid any possible dangers and accidents.

We offer:

- Training on daily or weekly basis
- At any location
- Skilled trainers
- Certification after successful participation
- Fully equipped training centre in Singen
- State-of-the-art training equipment

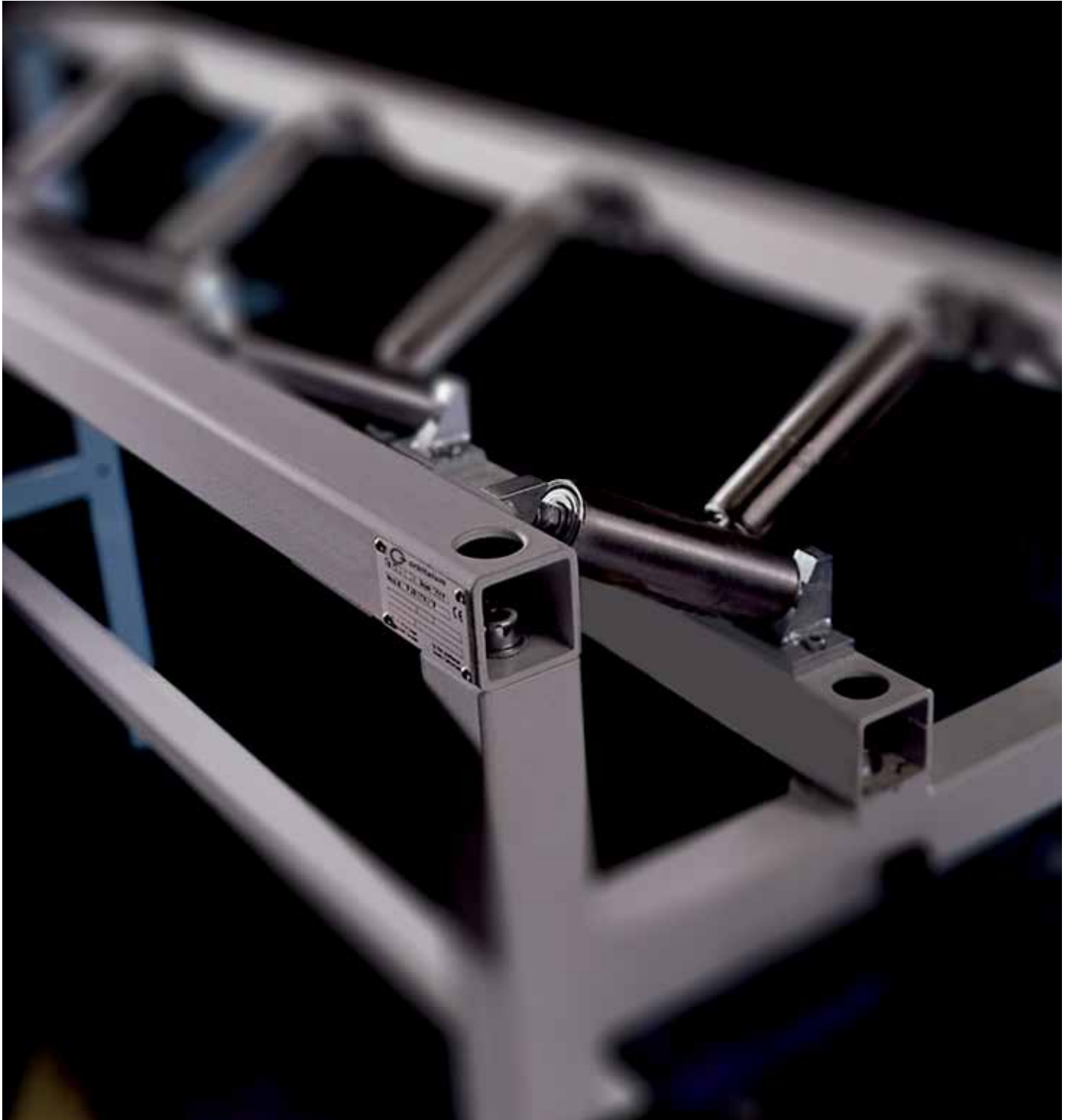
If you would like to learn more about our comprehensive training program or if you need information about our next user trainings then please contact our service team.  
Via phone:

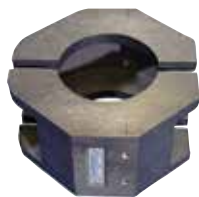
**+49 (0) 77 31 792-200**

Or per e-mail to:

**training@itw-ocw.com**

# Accessories for GF and RA machines





Aluminum clamping shells

## Accessories for GF and RA machines

### Aluminum clamping shells

For RA 8 and RA 12.

Customized aluminum clamping shells for deformation-free clamping of thin-walled tubes. When ordering, please indicate the outside diameter and/or inside diameter and the wall thickness of the tube to be worked on.

Scope of delivery:

- 4 Cylinder head screws
- 1 Set of clamping shells

When ordering clamping shells for RA 8 you will also receive:

- 1 Drilling jig for the assembly of the clamping shells
- 2 Cylinder head screws for the drilling jig

Other dimensions are available.

ARTICLE	VERSION	TUBE OD [MM]	TUBE OD [INCH]	CODE		KG
Aluminum clamping shells	for RA 8	129.0	5.079	<b>790 045 216</b>		4.300
Aluminum clamping shells	for RA 8	139.1	5.476	<b>790 045 219</b>		4.700
Aluminum clamping shells	for RA 8	167.0	6.575	<b>790 045 218</b>		4.000
Aluminum clamping shells	for RA 8	168.3	6.626	<b>790 045 220</b>		3.600
Aluminum clamping shells	for RA 8	210.0	8.268	<b>790 045 217</b>		2.900
Aluminum clamping shells	for RA 12	204.0	8.030	<b>790 047 222</b>		-
Aluminum clamping shells	for RA 12	209.0	8.230	<b>790 047 221</b>		11.500
Aluminum clamping shells	for RA 12	219.0	8.620	<b>790 047 220</b>		11.200
Aluminum clamping shells	for RA 12	254.0	10.000	<b>790 047 216</b>		9.200
Aluminum clamping shells	for RA 12	273.0	10.750	<b>790 047 219</b>		8.400
Aluminum clamping shells	for RA 12	300.0	11.810	<b>790 047 224</b>		9.100
Aluminum clamping shells	for RA 12	324.0	12.760	<b>790 047 218</b>		5.800
Aluminum clamping shells	for RA 12	306.0	12.047	<b>790 047 225</b>		5.800



Special clamping jaws for RA 2 and RA 21 S

### Clamping jaws

In pairs. Retrofit.  
While stock last.

ARTICLE	CODE		KG
Special clamping jaws for RA 2 and RA 21 S	<b>790 041 323</b>		1.035
Aluminum clamping jaws for RA 4 and RA 41 Plus	<b>790 046 250</b>		2.600



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).

ARTICLE	VERSION	CODE		KG
Set of stainless steel clamping attachments for GF 4	right + left	<b>790 142 241</b>		0.310
Set of stainless steel clamping attachments for GF 6	right + left	<b>790 143 200</b>		0.510

### Continuous cooling system

On request for GF 4, GF 6, RA 8 and RA 12 available. For details, see page 18.



## 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.

ARTICLE	VERSION	CODE		KG
Saw blade lubricant GF TOP	Tube, 180 g	790 060 228		0.205



GF TOP

## Saw blade lubricant GF LUB

### 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: just with a new name and improved quality.

GF LUB meets the latest environmental directives and ecological standards.

ARTICLE	VERSION	CODE		KG
Saw blade lubricant GF LUB	Tube, 160 ml	790 041 016		0.160



GF LUB

## Special gear oil

For all GF and RA machines.

ARTICLE	VERSION	CODE		KG
Special gear oil	Bottle, 250 ml	790 041 030		0.235



Special gear oil

## Intermediate gearbox retrofit kit

### To convert a standard pipe cutting and beveling RA machine (RA) to RA H (with intermediate gear) with the former FE 680 Motor (150 - 270 rpm).

The intermediate gearbox reduces the cutting speed of the RA machine to 40 - 70 rpm and increases torque.

For cutting high-performance materials e.g. Hastelloy® and Inconel.

Fits all RA 2, RA 4, RA 41, RA 41 Plus, RA 6, RA 8 and RA 12 machines.

The kit includes all parts necessary for retrofitting as well as additional gear oil.

ARTICLE	CODE		KG
Intermediate gearbox retrofit kit	790 041 063		2.000



Intermediate gearbox retrofit kit



Swivel cable



Swivel cable complete



Quick-mounting base plates with integrated screw clamps

## Swivel cable

To prevent twisting of the cable.

For all GF, RA and PS machines with protection class II (double insulated).

ARTICLE	VERSION	CABLE LENGTH		CODE		KG
		[M]	[FT]			
Swivel cable complete	230 V, 50/60 Hz EU	4	13.12	<b>790 142 081</b>		0.680
Swivel cable complete	120 V, 50/60 Hz US/CA	4	13.12	<b>790 142 082</b>		0.654
Swivel cable complete	230 V, 50/60 Hz CH	4	13.12	<b>790 142 083</b>		0.595
Swivel cable complete	230 V, 50/60 Hz AU	4	13.12	<b>790 142 084</b>		0.655
Swivel cable complete	120 V, 50/60 Hz GB	4	13.12	<b>790 142 087</b>		0.740
Swivel cable	230 V, 50/60 Hz EU	4	13.12	<b>790 142 076</b>		0.560
Swivel cable	120 V, 50/60 Hz US/CA	4	13.12	<b>790 142 077</b>		0.740
Swivel cable	230 V, 50/60 Hz CH	4	13.12	<b>790 142 078</b>		0.520
Swivel cable	120 V, 50/60 Hz GB	4	13.12	<b>790 142 079</b>		0.630
Swivel cable	230 V, 50/60 Hz AU	4	13.12	<b>790 142 080</b>		0.560

## Quick-mounting base plates with integrated screw clamps

For quick mounting of the machine on work benches.

Ideal for frequent changes of location.

ARTICLE	CODE		KG
Quick-mounting base plate for GFX 3.0, RA 2, RA 21 S	<b>790 041 027</b>		4.230
Quick-mounting base plate for GF 4, GF 6, GFX 6.6, RA 4, RA 6, RA 8, RA 41 Plus	<b>790 042 027</b>		6.165
Quick-mounting base plate for PS 4.5, PS 4.5 Plus and PS 6.6	<b>790 048 334</b>		2.600

## Pipe feeder base unit and extension unit

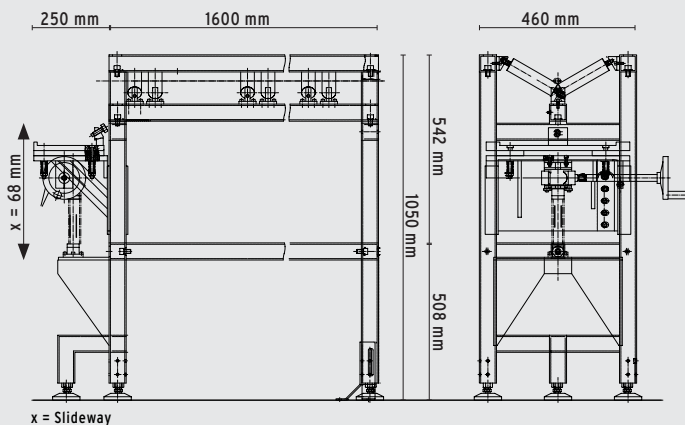
The pipe feeder accurately feeds long and heavy pipes into GF and RA machines. Very sturdy and stable design with powder-coated frames and stainless steel rollers.

### Advantages:

- Extremely stable and sturdy
- Fast adjustment of dimensions
- Centerline of tubes and pipes adjust easily in seconds
- Steel frame coated for maintenancefree finish
- Rollers made of stainless steel
- Extension of the pipe feeder possible with extension unit
- Saves time and money
- Perfect for all kinds of steel

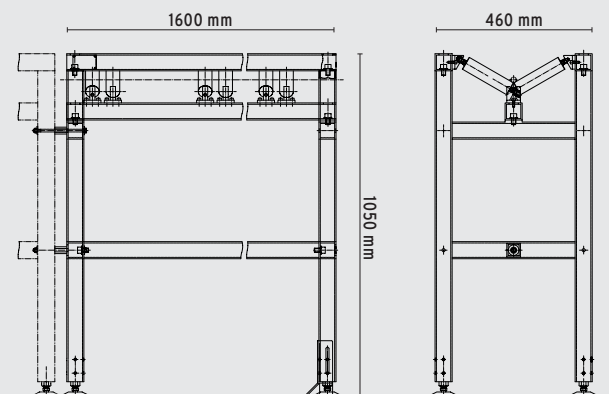
### Base unit:

Fits all pipe cutting and beveling machines from Orbitalum Tools (except the RA 21 S and GF 20 AVM. RA 2, GFX 3.0, PS 4.5, PS 4.5 Plus and PS 6.6 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:

To extend the base unit, can be used singularly or in multiples, easily bolted together.



Pipe feeder base unit



Pipe feeder extension unit

### 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	
Tube OD	16 - 325 mm 0.63" - 12.8"	16 - 325 mm 0.63" - 12.8"	
Dimensions approx.	185 x 105 x 50 cm 72.8" x 41.3" x 19.7"	approx. 160 x 105 x 50 62.9" x 41.3" x 19.7"	
Load capacity max.	400 kg 881.8 lbs	400 kg 881.8 lbs	
Height-adjustable mounting plate (adjusting range)	68 mm 2.68"	- -	
ARTICLE	CODE		KG
Pipe feeder base unit	790 068 051		116.000
Pipe feeder extension unit	790 068 061		72.000
Floor bracket accessory	790 068 053		1.900



Mobile workstation

### Mobile workstation

**For the mobile site and/or workshop. The ideal addition for all Orbitalum pipe cutters (with exception of GF 20 AVM, RA 2, PS 4.5, PS 4.5 Plus, PS 6.6 on request).**

#### Advantages:

- Safe and easy transportation of machines and equipment on site
- Flexible operation at each working station
- Elimination of material handling and setting up of the machines e.g. no requirement to mount the machines to benches
- 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
- Accurate and clean work by swarf collection tray

TECHNICAL DATA	MOBILE WORKSTATION		
Dimensions (l x w x h)	115 x 43 x 91 cm 45.3" x 16.9" x 35.8"		
Load capacity max.	675 kg 1488.1 lbs		
ARTICLE	CODE		KG
Mobile workstation	790 068 071		137.000

### Other accessories

- Saw blades and bevel cutters, see from page 29
- Collapsible work bench, see page 90
- Pipe vice, see page 90



# Saw blades and bevel cutters

## For GF and RA machines

These saw blades and bevel cutters are especially designed for our pipe cutters for highest requirements and longest service life. 4 different ranges of saw blades are available.



Burr-free and deformation-free



Square



Cutting and beveling



- **Economy** range for low and non-alloy steels and cast iron pipes
- **Performance** range for high-alloy steels (stainless steel)
- **High-Performance** range for high-performance materials and high-alloy steels
- **Premium** range especially made for stainless steel applications with extra long durability

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

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



Saw blade Economy



Saw blade Performance



Saw blade High-Performance



Saw blade Premium



Saw blades with additional borehole

## Saw blades and bevel cutters for GF and RA machines

### Saw blades

Features and application ranges, see page 29.  
Minimum purchase: 5 blades.

ARTICLE	VERSION	WALL THICKNESS		SAW BLADE Ø		CODE		KG
		[MM]	[INCH]	[MM]	[INCH]			
Saw blade	Economy*	1.5 - 6.0	.059 - .236	68	2.677	790 042 063		0.036
Saw blade	Economy	2.0 - 5.5	.079 - .217	63	2.480	790 041 020		0.032
Saw blade	Economy*	5.0 - 12.0	.197 - .472	80	2.953	790 043 030		0.075
Saw blade	Economy*	6.0 - 15.0	.236 - .591	100	3.937	790 047 030		0.117
Saw blade	Performance	0.6 - 1.2	.024 - .047	63	2.480	790 041 036		0.027
Saw blade	Performance	1.0 - 1.6	.039 - .063	68	2.677	790 042 049		0.050
Saw blade	Performance	1.0 - 3.0	.039 - .118	63	2.480	790 048 072		0.035
Saw blade	Performance	1.2 - 2.5	.047 - .098	63	2.480	790 041 035		0.040
Saw blade	Performance	1.2 - 2.5	.047 - .098	68	2.677	790 042 064		0.045
Saw blade	Performance**	1.2 - 2.5	.047 - .098	100	3.937	790 043 036		0.104
Saw blade	Performance	1.2 - 3.0	.047 - .118	83	3.268	790 043 024		0.075
Saw blade	Performance	1.5 - 2.5	.059 - .098	80	3.150	790 046 022		0.065
Saw blade	Performance	2.5 - 5.5	.098 - .217	63	2.480	790 041 048		0.035
Saw blade	Performance**	2.5 - 5.5	.098 - .217	100	3.937	790 043 038		0.120
Saw blade	Performance	2.5 - 7.0	.098 - .276	68	2.677	790 042 048		0.045
Saw blade	Performance	2.5 - 7.0	.098 - .276	80	3.150	790 043 018		0.080
Saw blade	Performance	6.0 - 10.0	.236 - .394	80	2.953	790 043 022		0.075
Saw blade	Performance**	6.0 - 15.0	.236 - .591	100	3.937	790 047 026		0.105
Saw blade	High-Performance	1.2 - 2.5	.047 - .098	80	3.150	790 046 021		0.064
Saw blade	High-Performance	1.2 - 2.5	.047 - .098	63	2.480	790 041 034		0.040
Saw blade	High-Performance	2.5 - 7.0	.098 - .267	68	2.677	790 042 058		0.045
Saw blade	Premium	1.2 - 2.5	.047 - .098	63	2.480	790 041 049		0.033

\* applicable only for aluminum tubes

\*\* only for GF 6, RA 6, RA 8, RA 12 and GF 20 AVM

### Saw blades with additional borehole

Features and application ranges, see page 29.  
Minimum purchase: 5 blades.

ARTICLE	VERSION	WALL THICKNESS		SAW BLADE Ø		CODE		KG
		[MM]	[INCH]	[MM]	[INCH]			
Saw blade with borehole	Performance	1.0 - 2.0	.039 - .079	63	2.480	790 048 472		0.035
Saw blade with borehole	Performance	1.2 - 2.5	.047 - .098	63	2.480	790 041 435		0.030
Saw blade with borehole	Performance	1.2 - 2.5	.047 - .098	68	2.677	790 042 464		0.047
Saw blade with borehole	Performance	1.5 - 2.5	.059 - .098	80	3.150	790 046 422		0.052
Saw blade with borehole	Performance	2.5 - 7.0	.098 - .276	68	2.677	790 042 448		0.036

## Saw blade/bevel cutter combinations

Features and application ranges, see page 29.  
 Simultaneous cutting and beveling of pipes in just seconds.

### Weld-prep saw blade/bevel cutter combinations (V-prep)

Consisting of one saw blade and one bevel cutter.  
 It is possible to order the individual parts separately.

VERSION	WALL THICKNESS		BEVELING ANGLE [°]	HEIGHT OF BEVEL MAX.		SAW BLADE Ø		CODE		KG
	[MM]	[INCH]		[MM]	[INCH]	[MM]	[INCH]			
Performance	1.2 - 3.0	.047 - .118	30	3	.118	63	2.480	790 044 050		0.100
Performance	2.5 - 7.0	.098 - .276	30	7	.276	68	2.677	790 042 161		0.108
High-Performance	2.5 - 5.0	.098 - .197	35	5	.197	68	2.677	790 042 015		0.120
High-Performance	2.5 - 6.0	.098 - .236	45	4	.157	68	2.677	790 042 023		0.135
High-Performance	2.5 - 7.0	.098 - .276	30	7	.276	68	2.677	790 042 013		0.108



Weld-prep saw blade/bevel cutter combination (V-prep)

### Replacement parts for weld-prep saw blade/bevel cutter combinations (V-prep)

ARTICLE	VERSION	CODE		KG
Saw blade for 790 044 050	Performance	790 044 040		0.027
Bevel cutter 30° for 790 044 050	Performance	790 044 049		0.065
Saw blade for 790 042 155, 790 042 157 and 790 042 161	Performance	790 042 153		0.040
Bevel cutter 30° for 790 042 161	Performance	790 042 160		0.060
Saw blade for 790 042 018, 790 042 015, 790 042 023, 790 042 013	High-Performance	790 042 016		0.040
Bevel cutter 30° for 790 042 013	High-Performance	790 042 021		0.077

### Support disc for saw blade/bevel cutter combinations

We recommend the use of 1 support disc for the saw blade/bevel cutter combination.

ARTICLE	CODE		KG
Support disc	790 046 188		0.068

### Press fitting saw blade/bevel cutter combinations

Consisting of one saw blade and one bevel cutter. Especially for stainless steel press fitting systems. It is possible to order the individual parts separately.

VERSION	WALL THICKNESS		BEVELING ANGLE [°]	HEIGHT OF BEVEL MAX.		SAW BLADE Ø		CODE		KG
	[MM]	[INCH]		[MM]	[INCH]	[MM]	[INCH]			
Performance	1.0 - 2.0	.039 - .079	45 / 70	0.4/1.0	.016/.039	63	2.480	790 044 046		0.090



Press fitting saw blade/bevel cutter combination

### Replacement parts for press fitting saw blade/bevel cutter combinations

ARTICLE	VERSION	CODE		KG
Saw blade for 790 044 046	Performance	790 044 040		0.027
Saw blade for 790 044 047	High-Performance	790 044 041		0.030

#### PIPE CUTTING AND BEVELING TECHNOLOGY



Bevel cutter V-prep

## Bevel cutters

Features and application ranges, see page 29.

### For V-prep profiles on pipe ends.

The bevel cutter is mounted on the GF/RA pipe cutter instead of a saw blade. Reproducible weld seam preparation in just seconds.

### Bevel cutters V-prep

ARTICLE	BEVELING ANGLE [°]	HEIGHT OF BEVEL MAX.		BEVEL CUTTER Ø		CODE		KG
		[MM]	[INCH]	[MM]	[INCH]			
Economy	30.0	9.5	.374	72	2.835	790 042 045		0.165
Economy	35.0	8.9	.350	70	2.756	790 042 037		0.170
Economy	37.5	8.4	.331	70	2.756	790 042 036		0.162
Economy	45.0	7.5	.295	70	2.756	790 042 038		0.162
Performance	30.0	9.5	.374	72	2.835	790 042 071		0.153
Performance	30.0	13.0	.512	76	2.992	790 043 023		0.187
Performance	37.5	8.4	.331	70	2.756	790 042 070		0.163
High-Performance	30.0	9.5	.374	72	2.835	790 042 073		0.157



GF TOP

## 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.

ARTICLE	VERSION	CODE		KG
Saw blade lubricant GF TOP	Tube, 180 g	790 060 228		0.205



GF LUB

## Saw blade lubricant GF LUB

### 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: just with a new name and improved quality. GF LUB meets the latest environmental directives and ecological standards.

ARTICLE	VERSION	CODE		KG
Saw blade lubricant GF LUB	Tube, 160 ml	790 041 016		0.160



## Saw blades for SCORP machines

### Saw blade TCT

#### APPLICATION RANGE SCORP 360 WITH TCT SAW BLADE

Plastic pipe OD		Saw blade Ø 140 mm/5.512" max. wall thickness	
[mm]	[inch]	[mm]	[inch]
75	2.953	15.1	0.594
90	3.543	11.4	0.449
100	3.937	10.1	0.398
110	4.331	9.3	0.366
115	4.528	9.1	0.358
125	4.921	8.8	0.346
140	5.512	8.7	0.343
160	6.299	9.1	0.358
165	6.496	9.3	0.366
180	7.087	9.9	0.390
190	7.480	10.4	0.409
200	7.874	10.9	0.429
215	8.465	11.8	0.465
225	8.858	12.4	0.488
240	9.449	13.4	0.528
250	9.843	14.0	0.551
270	10.630	15.4	0.606
280	11.024	16.0	0.630
315	12.402	18.3	0.720
320	12.598	18.6	0.732
355	13.976	20.4	0.803

ARTICLE	FOR PIPE MATERIALS	SAW BLADE Ø		RPM MAX.	CODE		KG
		[MM]	[INCH]				
Saw blade TCT	Steel, copper, aluminum, all kinds of plastic	140	5.512	4.200	790 014 055		0.154

### Cutting blade Diamond

ARTICLE	FOR PIPE MATERIALS	SAW BLADE Ø		RPM MAX.	CODE		KG
		[MM]	[INCH]				
Cutting blade Diamond	Cast iron	140	5.512	4.200	790 014 057		0.173
Cutting blade Diamond*	Cast iron	155	6.102	4.200	790 014 059		0.215

\* only for SCORP 360. While stock last.

### Saw blade Cermet

ARTICLE	FOR PIPE MATERIALS	SAW BLADE Ø		RPM MAX.	CODE		KG
		[MM]	[INCH]				
Saw blade Cermet	Stainless steel	140	5.512	4.200	790 014 056		0.153



Saw blade TCT



Cutting blade Diamond



Saw blade Cermet

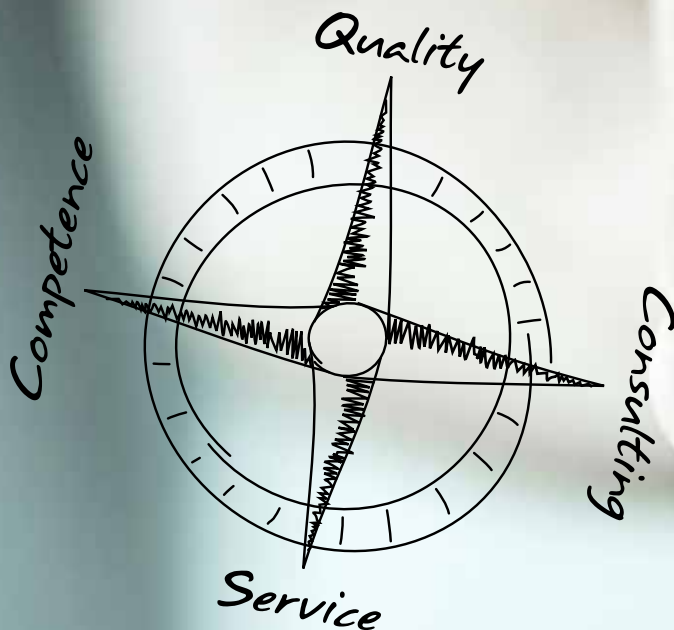
## Quality products from Orbitalum Tools - always a good decision!



For our products we choose only the best materials and suitable manufacturing methods and attach great importance during the development phase to ensure a high level of product quality and durability.

Our machines and tools are assembled, configured, tested and packed by hand, with the highest care by our qualified and motivated employees in Singen (Germany).

Our staff are standing for this aim with their expertise and experience.



# PS 4.5 Plus, PS 6.6

## Portable tube saws

A mobile, powerful and flexible tube cutting machine for use on construction sites, that's what the PS series from Orbitalum Tools stands for. These tube saws convince not only with their burr-free, right-angled and deformation-free cutting results, but also with their low weight. At the same time its problem-free and simple usage as well as its unbeatable price are the prime factors among its users.

Simple and convenient to use:  
The PS saws can be mounted quickly with minimum space requirements and transported and operated by a single person

### The new PS 4.5 Plus with many advantages:

- ✓ Refined technology with new design
- ✓ The lightest machine in this field of application on the market
- ✓ Reduced price – despite additional advantages
- ✓ Integrated line laser to determine the cut off point
- ✓ Feeding and sawing in a single pass
- ✓ Improved quality and increased service life through even more rugged sliding elements
- ✓ Tripod (optional) made of aluminum – now space-saving storage in the PS transport case possible

No rework necessary because of a burr-free and square cut

Currently one of the lightest machines available on the market

Deformation-free clamping of thin-walled tubes

Integrated line laser to determine the cut off point



### Tube cutting made easy! Cutting thin-walled stainless-steel tubes and elbows using the superior "Planetary cutting technology".

For its field of applications, the PS 4.5 Plus (23 kg) as well as the PS 6.6 (26 kg) are amongst the lightest in their class available machines on the market today.

"Enhanced safety due to stationary tube - rotating tool." The tested process of planetary cutting is another important feature, which characterizes all ORBITALUM pipe cutting machines. The saw blade rises into the cutting area and is driven orbitally around the pipe. The advantage is that a small saw blade can cut a large tube diameter, without heating the tube.

As is characteristic for the ORBITALUM pipe saws, the saw allows convenient marking of the cut-off point on the tube with the help of a line laser. A second saw blade clamping point enables tube elbows to be cut off.

The powerful motor is equipped with over-load protection and ergonomic handles and is available for the voltages 230 V, 110 V or 120 V, 50/60 Hz.

The slide housing as well as the self-centering clamping jaws were produced from high-quality aluminum alloys, which measure up to the highest requirements for construction sites.

- Lightweight and easily transportable machine to provide flexibility for on-site applications
- Deformation-free clamping of thin-walled tubes
- For cutting of thin-walled tubes and elbows
- No rework necessary because of a burr-free and square cut
- Cold cutting process prevents corrosion
- Integrated line laser to determine the cut off point
- Orbital cutting process saves time
- Multiple point clamping
- Fast adjustment of the pipe dimension
- Long saw blade service life
- Press fitting saw blade combinations can be used\*
- Speed controlled single-phase AC motor with restart inhibitor

\* Only with saw blade/bevel cutter combinations of Orbitalum Tools: Code 790 044 046 or 790 044 047. Especially for stainless steel press fitting systems. Consisting of one saw blade and one bevel cutter. It is possible to order the individual parts separately. Workable wall thickness: 1 - 2 mm (0.039" - 0.079"), beveling angle: 45°/70°, height of bevel: max. 0.4/1 mm (0.016"/0.039").



Supplied in a durable storage and shipping case with compartments for accessories, for example the mounting plate, tools and now also for the tripod (optional available)



Self-centering vice made of high-quality aluminum alloy



Tried-and-tested planetary cutting technology: The saw blade immerses into the cut and is guided orbitally around the tube



Included: "Performance" saw blade (790 048 072) and saw blade lubricant GF TOP



Second saw blade position to cut off elbows



Tripod made of aluminum optional available. Can be dismantled in a few steps - for space-saving storage, for example in the PS transport case

APPLICATION RANGE		PS 4.5 Plus	PS 6.6
Code	[230 V]	790 048 001	790 049 001
	[110 V]	790 048 002	790 049 002
	[120 V]	790 048 003	790 049 003
Tube OD	[mm]	6 - 120	50* - 170
	[inch]	0.236 - 4.724	1.969* - 6.693
Elbow OD	[mm]	30 - 120	50* - 170
	[inch]	1.181 - 4.724	1.969* - 6.693
Wall thickness max.	[mm]	3	3
	[inch]	0.118	0.118
TECHNICAL DATA		PS 4.5 Plus	PS 6.6
Dimensions	[mm]	480 x 230 x 600	480 x 230 x 660
	[inch]	20.9 x 9.1 x 23.6	20.9 x 9.1 x 26
Power	[W]	1100	1100
	[hp]	1.5	1.5
Protection class (DIN VDE 0740, isolated)	[class]	II	II
Speed	[rpm]	30 - 165	30 - 165
Vibration level (DIN EN 28662, part 1)	[m/s <sup>2</sup> ]	< 2.5	< 2.5
Noise level at the workplace approx.	[dB (A)]	78	78
SCOPE OF DELIVERY		PS 4.5 Plus	PS 6.6
Portable tube saw	Pc.	1	1
Cast aluminum clamping jaws	Set	1	1
Durable storage and shipping case	Pc.	1	1
Saw blade (Code 790 048 072)	Pc.	1	1
Tool bag equipped with tools	Pc.	1	1
Saw blade lubricant GF TOP (Code 790 060 228)	Tube	1	1
Operating instructions and spare parts list	Set	1	1



PS 4.5 Plus, PS 6.6

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

\* It is possible to cut tubes with an outer diameter min. 30 mm (1.181") with the PS 6.6 by using additional clamping jaws (accessory, Code 790 048 380). These clamping jaws are delivered as a standard with the PS 4.5 Plus.



## Portable tube saws

### PS 4.5 Plus, PS 6.6

Features, application range, technical data and scope of delivery, see page 35.

ARTICLE	VERSION	CODE		WEIGHT OF MACHINE KG	DISPATCH WEIGHT KG
PS 4.5 Plus	230 V, 50/60 Hz EU	790 048 001		23.600	37.000
PS 4.5 Plus	110 V, 50/60 Hz EU	790 048 002		23.600	37.000
PS 4.5 Plus	120 V, 50/60 Hz US	790 048 003		23.600	37.000
PS 6.6	230 V, 50/60 Hz EU	790 049 001		26.300	41.000
PS 6.6	110 V, 50/60 Hz EU	790 049 002		26.300	41.000
PS 6.6	120 V, 50/60 Hz US	790 049 003		26.300	41.000



PS 4.5 Plus, PS 6.6

### Quick-mounting base plates with integrated screw clamps

Quick and easy mounting of the machine to the bench with no drilling.  
Including 4 socket head screws to fix the PS to the quick-mounting base plate.

ARTICLE	CODE	KG
Quick-mounting base plates with integrated screw clamps	790 048 334	2.600



Quick-mounting base plates with integrated screw clamps

### Saw blades

Performance range for high-alloy steels (stainless steel).  
Recommended saw blades (only Ø 63 mm/2.480") for PS 4.5 Plus and PS 6.6.

ARTICLE	VERSION	WALL THICKNESS		SAW BLADE Ø		CODE		KG
		[MM]	[INCH]	[MM]	[INCH]			
Saw blade	Performance	1.0 - 3.0	0.039 - 0.118	63	2.480	790 048 072		0.035
Saw blade	Performance	0.6 - 1.2	0.024 - 0.047	63	2.480	790 041 036		0.027



Saw blade Performance

### Tripod

Made of aluminum. Suitable for PS 4.5, PS 4.5 Plus, PS 6.6 and GFX 3.0.  
For easy mounting of machines directly on the tripod with no base plate.  
Can be dismantled in a few steps. NEW: Storage in the PS transport case possible.  
Space saving = fast application = easy handling.

ARTICLE	CODE	KG
Tripod for PS 4.5, PS 4.5 Plus, PS 6.6, GFX 3.0	790 048 390	7.400



Tripod

### Clamping jaws replacement set

Made from coated cast aluminum.  
Extends the dimension range of the PS 6.6 to OD min. 30 mm (1.181").

ARTICLE	CODE	KG
Clamping jaws replacement set for PS 4.5 Plus and extension jaws for PS 6.6	790 048 380	2.030



Clamping jaws replacement set

#### PIPE CUTTING AND BEVELING TECHNOLOGY



Laser retrofitting kit

## Laser retrofitting kit

Line laser to identify the cutting point on the tube.  
Easy mounting on the swivel on the PS machines.  
Kit contains 1 line laser, 1 laser holder with 2 fixing screws, replacement batteries,  
1 set of assembly instructions.

ARTICLE	CODE		KG
Laser retrofitting kit for PS 4.5, PS 4.5 Plus and PS 6.6	<b>790 048 060</b>		0.110

## Other accessories

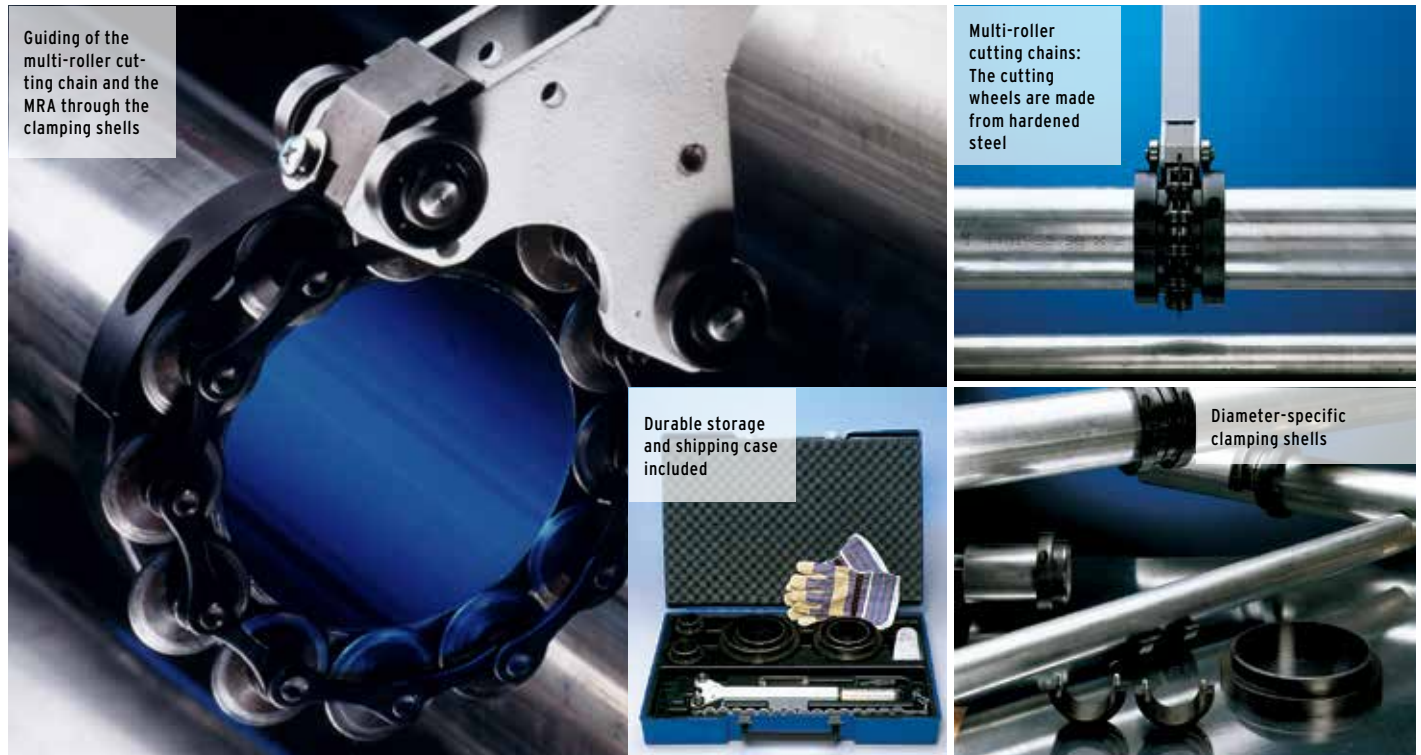
- High-performance lubricants for cutting and beveling, see page 25
- Swivel cable, see page 26
- Quick-mounting base plates with integrated screw clamps, see page 26
- Pipe feeder base unit and extension unit, see from page 27
- Mobile workstation, see page 28
- Collapsible work bench, see page 90
- Pipe vice, see page 90

# MRA

## Metal tube cutter

The clever solution for cutting metal tubes manually in any position.

This metal tube cutter is especially designed for cramped working places and for chipless cutting processes.



**For manual cutting of metal tubes in any position. Easy to use – first-rate cutting technology.**

The patented cutting technique used in designing the MRA is based on the diameter-specific clamping shells and the flexible multi-roller cutting chain. Both these components are made of hardened, wear resistant steel and provide the following advantages:

- Long service life of the components
- The cutting chain is at a right-angle around the tube
- The MRA runs on track rollers on the clamping shells
- Minimum hand movements
- Tubes made of stainless steel can be cut

### FURTHER ADVANTAGES:

- Deformation-free and square cut
- No electricity required
- Requires little space, for use in 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		MRA
Code		790 008 001
Tube OD	[mm] [inch]	25.0 - 254.0 0.984 - 10.000
Wall thickness*	[mm] [inch]	0.8 - 3.0 0.031 - 0.118
TECHNICAL DATA		MRA
Dimensions	[mm] [inch]	450 x 105 17.7 x 4.1
SCOPE OF DELIVERY		MRA
Metal tube cutter MRA	Pc.	1
Durable storage & shipping case	Pc.	1
Socket head key	Pc.	1
Connection clamp	Pc.	1
Working gloves	Pair	1
Operating instructions and spare parts list	Set	1

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. For high-alloy steels, the max. wall thickness which can be processed is 2.0 - 2.5 mm (0.079 - 0.098")



MRA



Multi-roller cutting chain



Clamping shells

## Metal tube cutter

### MRA

Features, application range, technical data and scope of delivery, see page 39.

Multi-roller cutting chains and clamping shells must be ordered separately.

ARTICLE	CODE		WEIGHT OF MACHINE KG	DISPATCH WEIGHT KG
Metal tube cutter MRA	790 008 001		3.100	8.000

## Multi-roller cutting chains

Cutting wheels made from hardened steel.

ARTICLE	TUBE OD		CUTTING WHEELS [QTY]	CODE		KG
	[MM]	[INCH]				
Multi-roller cutting chain MRA	25.0 - 114.3	0.984 - 4.500	15	790 008 018		0.500
Multi-roller cutting chain MRA	114.3 - 254.0	4.500 - 10.000	16	790 008 041		0.900

## Clamping shells

Set of two pieces, made from hardened steel. One pair of clamping shells needed for each tube size. Further dimensions of clamping shells are available on request.

ARTICLE	TUBE OD		CODE		KG
	[MM]	[INCH]			
Clamping shells MRA	25.0	0.984	790 008 102		0.650
Clamping shells MRA	25.4	1.000	790 008 104		0.655
Clamping shells MRA	29.0	1.142	790 008 103		0.705
Clamping shells MRA	33.7	1.330	790 008 105		0.885
Clamping shells MRA	38.1	1.500	790 008 130		0.955
Clamping shells MRA	40.0	1.575	790 008 135		0.955
Clamping shells MRA	42.4	1.670	790 008 140		1.005
Clamping shells MRA	44.5	1.752	790 008 150		1.052
Clamping shells MRA	48.3	1.900	790 008 155		1.100
Clamping shells MRA	50.0	1.970	790 008 160		1.130
Clamping shells MRA	50.8	2.000	790 008 165		1.140
Clamping shells MRA	52.0	2.050	790 008 175		1.190
Clamping shells MRA	53.0	2.087	790 008 180		1.150
Clamping shells MRA	54.0	2.125	790 008 185		1.100
Clamping shells MRA	57.0	2.244	790 008 190		1.210
Clamping shells MRA	60.3	2.375	790 008 195		1.315
Clamping shells MRA	63.5	2.500	790 008 200		1.375
Clamping shells MRA	65.0	2.559	790 008 203		1.375
Clamping shells MRA	70.0	2.755	790 008 215		1.445
Clamping shells MRA	73.0	2.874	790 008 220		1.480
Clamping shells MRA	75.0	2.950	790 008 225		1.600
Clamping shells MRA	76.1	2.996	790 008 230		1.560
Clamping shells MRA	80.0	3.150	790 008 233		1.375
Clamping shells MRA	84.0	3.300	790 008 240		1.690
Clamping shells MRA	85.0	3.350	790 008 245		1.750
Clamping shells MRA	88.9	3.500	790 008 250		1.780
Clamping shells MRA	100.0	3.937	790 008 255		1.970
Clamping shells MRA	101.6	4.000	790 008 260		2.025
Clamping shells MRA	104.0	4.095	790 008 270		1.925

### PIPE CUTTING AND BEVELING TECHNOLOGY

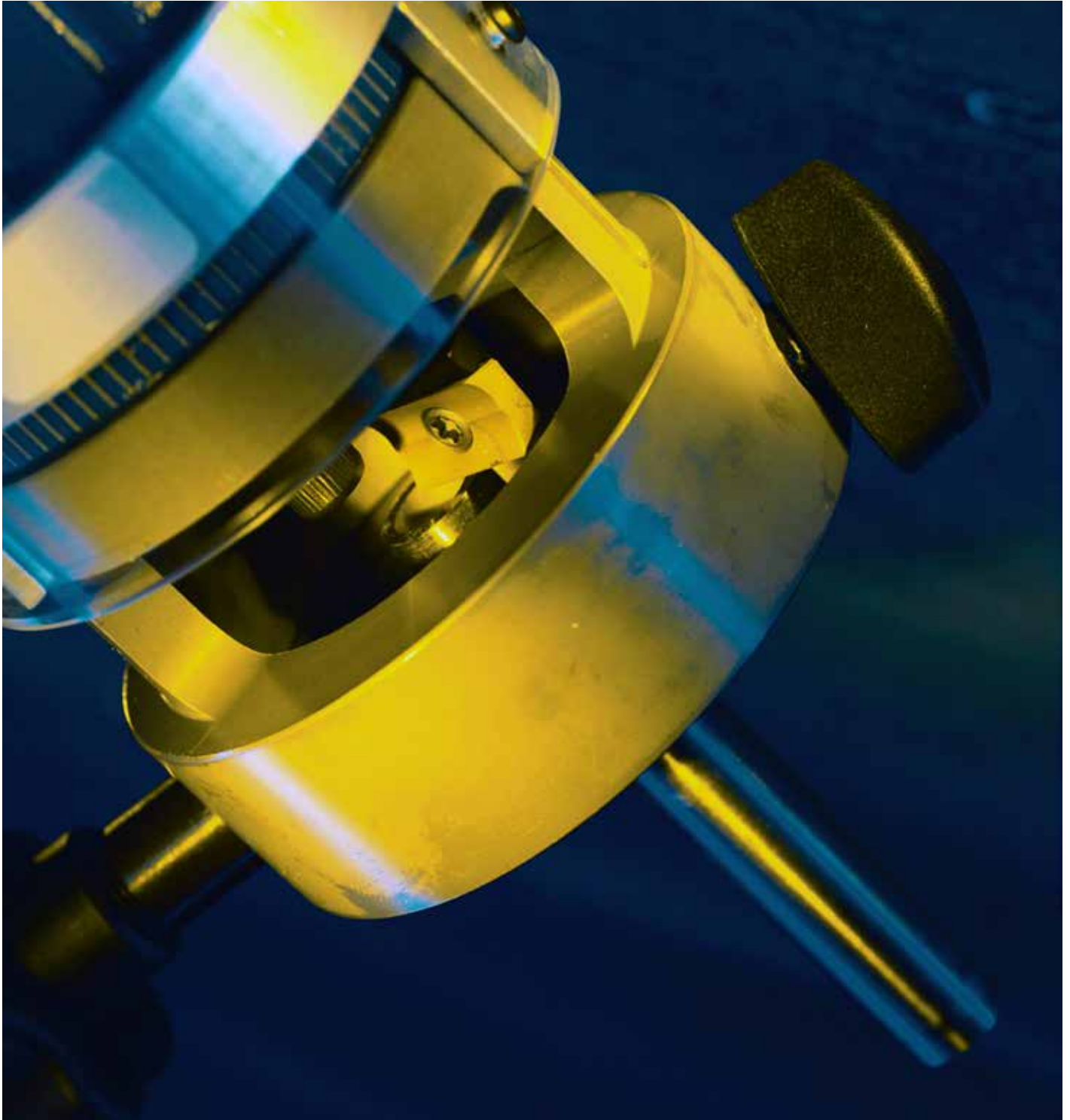


ARTICLE	TUBE OD		CODE		KG
	[MM]	[INCH]			
Clamping shells MRA	108.0	4.252	<b>790 008 280</b>		2.100
Clamping shells MRA	110.0	4.330	<b>790 008 285</b>		2.150
Clamping shells MRA	114.3	4.500	<b>790 008 290</b>		2.295
Clamping shells MRA	129.0	5.080	<b>790 008 315</b>		2.800
Clamping shells MRA	139.7	5.500	<b>790 008 325</b>		3.000
Clamping shells MRA	150.0	5.906	<b>790 008 333</b>		3.375
Clamping shells MRA	152.4	6.000	<b>790 008 335</b>		3.232
Clamping shells MRA	154.0	6.060	<b>790 008 340</b>		3.365
Clamping shells MRA	160.0	6.300	<b>790 008 355</b>		3.520
Clamping shells MRA	165.0	6.496	<b>790 008 360</b>		4.125
Clamping shells MRA	168.3	6.625	<b>790 008 365</b>		3.600
Clamping shells MRA	204.0	8.030	<b>790 008 380</b>		4.375
Clamping shells MRA	219.1	8.625	<b>790 008 385</b>		4.680
Clamping shells MRA	228.6	9.000	<b>790 008 387</b>		4.890
Clamping shells MRA	254.0	10.000	<b>790 008 390</b>		5.420

## Other accessories

- Collapsible work bench, see page 90
- Pipe vice, see page 90

# Tube Squaring Technology

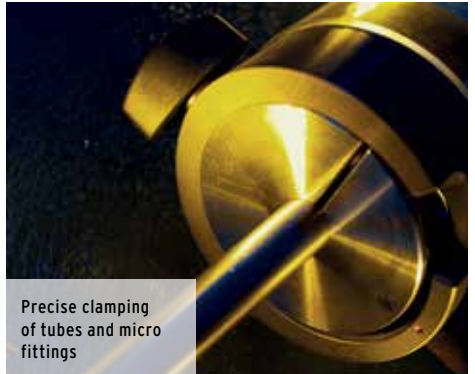


# RPG XS, RPG ONE, RPG 1.5, RPG 2.5

## Tube squaring machines (Electric/Cordless)

The RPG series represent ease of use and particularly economical clamping. The capabilities of our RPG range include squaring (I-seam) thin-walled stainless steel tubes and micro-fittings, as well as unalloyed and low-alloyed steels, aluminum and titanium. The machines fit excellently in the hand as their size and weight can hardly be surpassed. Users can select the appropriate clamping shells from the range of accessories for each diameter.

Designed for burr-free squaring and beveling of thin-walled stainless steel tubes and micro fittings. For the required, high quality tube end preparation for orbital welding!



**Pipe and installation manufacturers from the high-purity gas, electronics, pharmaceuticals, food processing, beverages, solar and chemical industries benefit from the mobile, high-quality and burr-free processing of pipe ends.**

Due to the quick tool change system, tools, clamping shells and tubes can be easily changed without using any additional equipment. All multifunctional tools (MFW) are two-sided tool bits with protective coating against tool wear. This enables the preparation of tubes made of high-alloy, unalloyed and low-alloy steels and aluminum with high precision very quickly and efficiently.

With the **cordless version**, we offer the optimal solution, which is independent of an electricity supply, for extending or repairing an existing plant with limited space availability. The cordless drive was designed to meet customer requirements.

The machines and accessories are supplied in a handy, durable storage and shipping case - the cordless versions additionally with a 230 V charger for the European market or a 120 V charger for the American market.

- Squaring tube ends with a high-quality finish
- Burr-free and square
- Beveling possible with a special tool holder
- 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
- Micrometer feed for optimum results
- No additional tools required for operation
- Space saving, light weight and portable machine for a mobile and secure application
- Modular design, ensuring compatibility within the RPG series

- The special adaptor clamping shell allows the RPG 2.5 to be used with the clamping shells for the RPG 1.5 machines.

### ADDITIONAL FEATURES OF THE ELECTRIC VERSIONS:

- Machine with rotating/removable drive
- Built-in electronic speed regulation with speed stabilization: Vario-Tachometer-Constamatic (VTC) full wave electronics
- Restart protection to prevent the machine from starting in an uncontrolled way after it has been re-connected to the electric mains or after the voltage supply has been reestablished after a power failure
- RPM regulator
- Sturdy marathon motor
- Overload protection
- Shut-off carbon brushes
- Carbon wear indicator

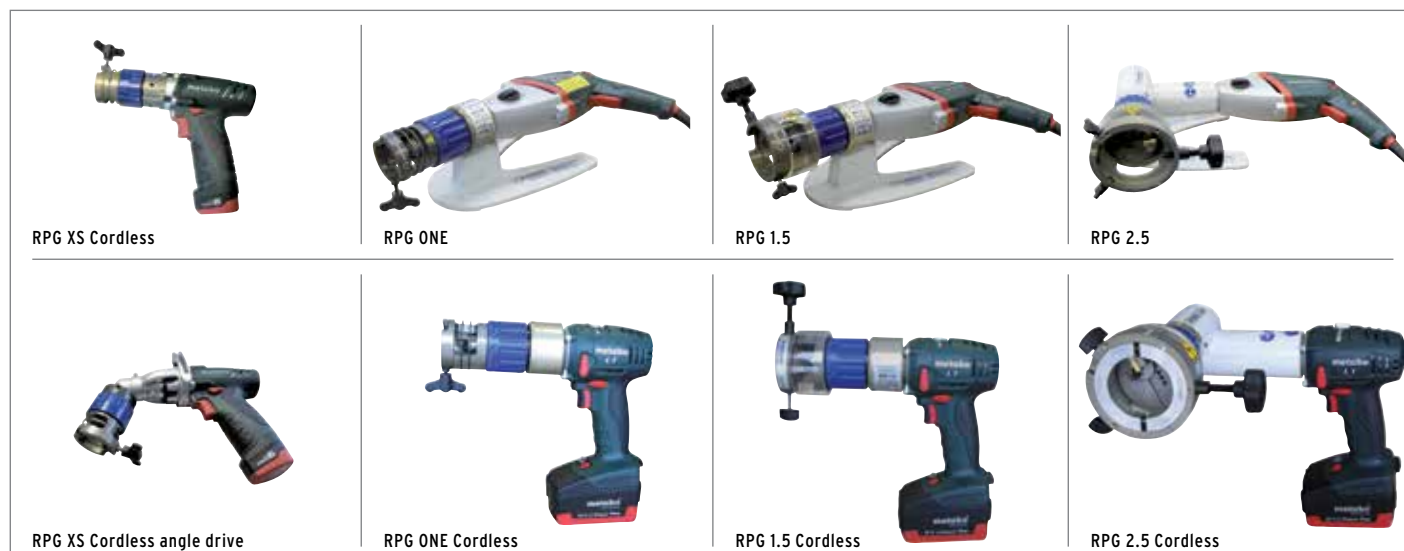
APPLICATION RANGE		RPG XS CORDLESS	RPG ONE	RPG ONE CORDLESS	RPG 1.5	RPG 1.5 CORDLESS	RPG 2.5	RPG 2.5 CORDLESS
Code	[230 V]	790 033 001 Angle drive: 790 033 011	790 036 031	790 036 021	790 037 001	790 037 011	790 030 001	790 030 011
	[115 V]	790 033 002 Angle drive: 790 033 012	-	790 036 022	-	790 037 012	-	-
	[120 V]	-	790 036 032	-	790 037 002	-	790 030 002	-
	[110 V]	-	790 036 033	-	790 037 003	-	790 030 003	790 030 012
Tube OD min.-max.	[mm]	3.0* - 19.05	3.0* - 25.4	3.0* - 25.4	3.0* - 38.1	3.0* - 38.1	3.0* - 63.5	3.0* - 63.5
	[inch]	0.118* - 0.75	0.118* - 1.0	0.118* - 1.0	0.118* - 1.5	0.118* - 1.5	0.118* - 2.5	0.118* - 2.5
Wall thickness max.	[mm]	2.0	3.0	3.0	3.0	3.0	3.0	3.0
	[inch]	0.079	0.118	0.118	0.118	0.118	0.118	0.118
Tube materials		High-alloy steels (stainless steel material no. 1.40... to 1.45... as per DIN 17455 and DIN 17456), unalloyed and low-alloy steels, aluminum.						
TECHNICAL DATA		RPG XS	RPG ONE	RPG ONE CORDLESS	RPG 1.5	RPG 1.5 CORDLESS	RPG 2.5	RPG 2.5 CORDLESS
Dimensions (lxwxh)	[mm]	217 x 53 x 187	390 x 70 x 200	261 x 80 x 255	400 x 160 x 350	275 x 90 x 255	500 x 170 x 300	260 x 320 x 300
	[inch]	8.5 x 2.1 x 7.4	15.4 x 2.8 x 7.9	10.3 x 3.2 x 10	15.8 x 6.3 x 13.8	10.8 x 3.5 x 10	19.7 x 6.7 x 11.8	10.2 x 12.6 x 11.8
Built-in electronic variable cutting speed	[rpm]	0 - 350	145 - 380	0 - 500	145 - 380	0 - 500	1. speed: 9 - 52 2. speed: 27 - 153	1. speed: 0 - 29 2. speed: 0 - 100
Power	[W]	-	1100	-	1100	-	1100	-
Voltage of rechargeable battery	[V]	10.8	-	18	-	18	-	18
Capacity	[Ah]	1.5	-	4.0	-	4.0	-	4.0
Noise level at the workplace (EN 23741)	[dB (A)]	approx. 78	approx. 78	approx. 78	approx. 78	approx. 78	approx. 78.2	approx. 78.2
Vibration level (EN 50144)	[m/s <sup>2</sup> ]	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5
SCOPE OF DELIVERY		RPG XS	RPG ONE	RPG ONE CORDLESS	RPG 1.5	RPG 1.5 CORDLESS	RPG 2.5	RPG 2.5 CORDLESS
Tube squaring machine	Pc.	1	1	1	1	1	1	1
Durable storage and shipping case	Pc.	1	1	1	1	1	1	1
Rechargeable batteries	Pc.	2	-	2	-	2	-	2
Battery charger	Pc.	1	-	1	-	1	-	1
Overload protection (square nut)	Pc.	-	-	-	1	1	1	1
Tool holder WH (Code 790 ...)	Pc.	1 (... 033 150)	1 (... 037 152)	1 (... 037 152)	1 (... 037 152)	1 (... 037 152)	1 (... 037 152)	1 (... 037 152)
Multifunctional tool MFW (Code 790 038 314)	Pc.	1	1	1	1	1	1	1
Adapter clamping shell (Code 790 030 094)	Pc.	-	-	-	-	-	1	1
Tool set	Set	1	1	1	1	1	1	1
Tongs	Pc.	1	-	-	-	-	-	-
Operating instructions and spare parts list	Set	1	1	1	1	1	1	1
Bench stand for cordless machines optional available (Code 790 037 169)								

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 (Code 790 037 152) is from 6.0 mm/0.236" OD. With special tool holder (Code 790 037 161) 3.0 mm/0.118" 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).

#### ADDITIONAL FEATURES OF THE CORDLESS VERSIONS:

- 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
- Environmentally friendly
- AIR-COOLED technology for short charging times and a long service life





## Tube squaring machines

### RPG XS, RPG ONE, RPG 1.5, RPG 2.5 (Cordless)

Features, application range, technical data and scope of delivery, see page 43.

Stainless steel clamping shells must be ordered separately.

ARTICLE	VERSION	CODE		WEIGHT OF MACHINE KG	DISPATCH WEIGHT KG
RPG XS Cordless (10.8 V)	230 V, 50/60 Hz EU	790 033 001		1.320	4.300
RPG XS Cordless (10.8 V)	115 V, 60 Hz US	790 033 002		1.320	4.300
RPG XS Cordless angle drive (10.8 V)	230 V, 50/60 Hz EU	790 033 011		1.520	6.300
RPG XS Cordless angle drive (10.8 V)	115 V, 60 Hz US	790 033 012		1.520	6.300
RPG ONE	230 V, 50/60 Hz EU	790 036 031		4.140	9.600
RPG ONE	120 V, 50/60 Hz US	790 036 032		4.140	9.600
RPG ONE	110 V, 50/60 Hz EU	790 036 033		4.140	9.600
RPG ONE Cordless (18 V)	230 V, 50/60 Hz EU	790 036 021		2.880	8.200
RPG ONE Cordless (18 V)	115 V, 60 Hz US	790 036 022		2.880	8.200
RPG 1.5	230 V, 50/60 Hz EU	790 037 001		4.700	9.500
RPG 1.5	120 V, 50/60 Hz US	790 037 002		4.700	9.500
RPG 1.5	110 V, 50/60 Hz EU	790 037 003		4.700	9.500
RPG 1.5 Cordless (18 V)	230 V, 50/60 Hz EU	790 037 011		3.440	10.100
RPG 1.5 Cordless (18 V)	115 V, 60 Hz US	790 037 012		3.440	10.100
RPG 2.5	230 V, 50/60 Hz EU	790 030 001		6.600	12.500
RPG 2.5	120 V, 50/60 Hz US	790 030 002		6.600	12.500
RPG 2.5	110 V, 50/60 Hz EU	790 030 003		6.600	12.500
RPG 2.5 Cordless (18 V)	230 V, 50/60 Hz EU	790 030 011		5.340	11.320
RPG 2.5 Cordless (18 V)	110 V, 60 Hz US	790 030 012		5.340	11.320



RPG XS Cordless / RPG XS Cordless angle drive



RPG ONE / RPG ONE Cordless



RPG 1.5 / RPG 1.5 Cordless



RPG 2.5 / RPG 2.5 Cordless



Angle drive

### Angle drive for RPG ONE (cordless) and RPG 1.5 (cordless)

The angle drive is an available option and can be subsequently mounted on the following RPG machines:

RPG ONE; RPG ONE cordless; RPG 1.5; RPG 1.5 cordless

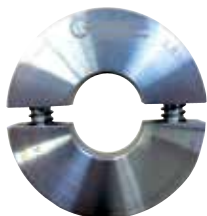
The squaring machine reduces the design length to 200 mm (7.874").  
Technical characteristics remain unchanged.

ARTICLE	CODE	KG
Angle drive for RPG ONE and RPG 1.5 (cordless)	790 037 400	0,475

## 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. Further dimensions of clamping shells are available.

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



Stainless steel clamping shells



Stainless steel clamping shell for micro fittings

APPLICABLE WITH	APPLICABLE FOR	TUBE OD		TUBE CLAMPING LENGTH		CODE		KG
		[MM]	[INCH]	[MM]	[INCH]			
RPG XS	Tubes	6.35	0.250	10.00	0.394	790 033 202		0.083
RPG XS	Tubes	8.00	0.315	10.00	0.394	790 033 203		0.082
RPG XS	Tubes	9.53	0.375	10.00	0.394	790 033 204		0.080
RPG XS	Tubes	10.00	0.394	10.00	0.394	790 033 205		0.080
RPG XS	Tubes	12.70	0.500	10.00	0.394	790 033 206		0.076
RPG XS	Tubes	13.50	0.531	10.00	0.394	790 033 207		0.075
RPG XS	Tubes	19.05	0.750	10.00	0.394	790 033 209		0.065
RPG XS	Micro fittings	6.35	0.250	4.00	0.157	790 033 301		0.049
RPG ONE	Tubes	3.00	0.118	10.00	0.394	790 036 232		0.118
RPG ONE	Tubes	3.18	0.125	10.00	0.394	790 036 201		0.119
RPG ONE	Tubes	6.00	0.236	10.00	0.394	790 036 213		0.117
RPG ONE	Tubes	6.35	0.250	10.00	0.394	790 036 202		0.118
RPG ONE	Tubes	7.00	0.276	10.00	0.394	790 036 214		0.118
RPG ONE	Tubes	8.00	0.315	10.00	0.394	790 036 215		0.116
RPG ONE	Tubes	9.53	0.375	10.00	0.394	790 036 203		0.115
RPG ONE	Tubes	10.00	0.394	10.00	0.394	790 036 204		0.115
RPG ONE	Tubes	10.10	0.398	10.00	0.394	790 036 222		0.114
RPG ONE	Tubes	11.00	0.433	10.00	0.394	790 036 226		0.112
RPG ONE	Tubes	12.00	0.472	10.00	0.394	790 036 205		0.112
RPG ONE	Tubes	12.10	0.476	10.00	0.394	790 036 223		0.111
RPG ONE	Tubes	12.70	0.500	10.00	0.394	790 036 206		0.111
RPG ONE	Tubes	13.50	0.531	10.00	0.394	790 036 227		0.110
RPG ONE	Tubes	14.00	0.551	10.00	0.394	790 036 228		0.108
RPG ONE	Tubes	14.10	0.555	10.00	0.394	790 036 224		0.107
RPG ONE	Tubes	15.00	0.590	10.00	0.394	790 036 216		0.107
RPG ONE	Tubes	15.60	0.614	10.00	0.394	790 036 225		0.105
RPG ONE	Tubes	15.88	0.625	10.00	0.394	790 036 211		0.105
RPG ONE	Tubes	16.00	0.630	10.00	0.394	790 036 212		0.104
RPG ONE	Tubes	17.00	0.670	10.00	0.394	790 036 221		0.103
RPG ONE	Tubes	17.20	0.677	10.00	0.394	790 036 207		0.104
RPG ONE	Tubes	18.00	0.709	10.00	0.394	790 036 217		0.102
RPG ONE	Tubes	19.05	0.750	10.00	0.394	790 036 208		0.100
RPG ONE	Tubes	20.00	0.787	10.00	0.394	790 036 230		0.096
RPG ONE	Tubes	21.30	0.839	10.00	0.394	790 036 209		0.094
RPG ONE	Tubes	21.70	0.854	10.00	0.394	790 036 220		0.093
RPG ONE	Tubes	22.00	0.866	10.00	0.394	790 036 218		0.093
RPG ONE	Tubes	23.00	0.906	10.00	0.394	790 036 219		0.085
RPG ONE	Tubes	25.00	0.984	10.00	0.394	790 036 231		0.081
RPG ONE	Tubes	25.40	1.000	10.00	0.394	790 036 210		0.083
RPG ONE	Micro fittings	6.00	0.236	4.00	0.157	790 036 304		0.066
RPG ONE	Micro fittings	6.35	0.250	4.00	0.157	790 036 301		0.066
RPG ONE	Micro fittings	8.00	0.315	4.00	0.157	790 036 307		0.065
RPG ONE	Micro fittings	9.53	0.375	4.00	0.157	790 036 302		0.064
RPG ONE	Micro fittings	10.00	0.394	4.00	0.157	790 036 305		0.065
RPG ONE	Micro fittings	12.00	0.472	4.00	0.157	790 036 306		0.064
RPG ONE	Micro fittings	12.70	0.500	4.00	0.157	790 036 303		0.062
RPG 1.5	Tubes	3.00	0.118	15.00	0.591	790 037 220		0.300
RPG 1.5	Tubes	3.18	0.125	15.00	0.591	790 037 221		0.308
RPG 1.5	Tubes	4.00	0.157	15.00	0.591	790 037 222		0.310
RPG 1.5	Tubes	4.78	0.188	15.00	0.591	790 037 223		0.310
RPG 1.5	Tubes	5.00	0.197	15.00	0.591	790 037 224		0.308
RPG 1.5	Tubes	6.00	0.236	15.00	0.591	790 037 225		0.310
RPG 1.5, RPG 2.5	Tubes	6.35	0.250	15.00	0.591	790 037 226		0.306
RPG 1.5, RPG 2.5	Tubes	7.00	0.276	15.00	0.591	790 037 257		0.306
RPG 1.5, RPG 2.5	Tubes	8.00	0.314	15.00	0.591	790 037 227		0.299
RPG 1.5, RPG 2.5	Tubes	9.00	0.354	15.00	0.591	790 037 254		0.280
RPG 1.5, RPG 2.5	Tubes	9.53	0.375	15.00	0.591	790 037 228		0.297
RPG 1.5, RPG 2.5	Tubes	10.00	0.394	15.00	0.591	790 037 229		0.298
RPG 1.5, RPG 2.5	Tubes	11.00	0.433	15.00	0.591	790 037 293		0.252
RPG 1.5, RPG 2.5	Tubes	11.11	0.437	15.00	0.591	790 037 255		0.295
RPG 1.5, RPG 2.5	Tubes	12.00	0.472	15.00	0.591	790 037 230		0.293
RPG 1.5, RPG 2.5	Tubes	12.70	0.500	15.00	0.591	790 037 231		0.292

### TUBE SQUARING TECHNOLOGY

APPLICABLE WITH	APPLICABLE FOR	TUBE OD		TUBE CLAMPING LENGTH		CODE		KG
		[MM]	[INCH]	[MM]	[INCH]			
RPG 1.5, RPG 2.5	Tubes	13.00	0.512	15.00	0.591	<b>790 037 232</b>		0.295
RPG 1.5, RPG 2.5	Tubes	13.20	0.520	15.00	0.591	<b>790 037 263</b>		0.290
RPG 1.5, RPG 2.5	Tubes	13.50	0.531	15.00	0.591	<b>790 037 233</b>		0.290
RPG 1.5, RPG 2.5	Tubes	14.00	0.551	15.00	0.591	<b>790 037 234</b>		0.288
RPG 1.5, RPG 2.5	Tubes	14.30	0.563	15.00	0.591	<b>790 037 253</b>		0.289
RPG 1.5, RPG 2.5	Tubes	14.70	0.579	15.00	0.591	<b>790 037 290</b>		0.287
RPG 1.5, RPG 2.5	Tubes	15.00	0.591	15.00	0.591	<b>790 037 235</b>		0.287
RPG 1.5, RPG 2.5	Tubes	15.30	0.602	15.00	0.591	<b>790 037 259</b>		0.287
RPG 1.5, RPG 2.5	Tubes	15.70	0.618	15.00	0.591	<b>790 037 291</b>		0.284
RPG 1.5, RPG 2.5	Tubes	15.88	0.625	15.00	0.591	<b>790 037 236</b>		0.285
RPG 1.5, RPG 2.5	Tubes	16.00	0.630	15.00	0.591	<b>790 037 237</b>		0.285
RPG 1.5, RPG 2.5	Tubes	17.00	0.669	15.00	0.591	<b>790 037 256</b>		0.280
RPG 1.5, RPG 2.5	Tubes	17.08	0.672	15.00	0.591	<b>790 037 260</b>		0.281
RPG 1.5, RPG 2.5	Tubes	17.20	0.677	15.00	0.591	<b>790 037 238</b>		0.300
RPG 1.5, RPG 2.5	Tubes	18.00	0.709	15.00	0.591	<b>790 037 239</b>		0.280
RPG 1.5, RPG 2.5	Tubes	19.00	0.748	15.00	0.591	<b>790 037 240</b>		0.275
RPG 1.5, RPG 2.5	Tubes	19.05	0.750	15.00	0.591	<b>790 037 241</b>		0.274
RPG 1.5, RPG 2.5	Tubes	20.00	0.787	15.00	0.591	<b>790 037 242</b>		0.272
RPG 1.5, RPG 2.5	Tubes	21.00	0.827	15.00	0.591	<b>790 037 294</b>		0.270
RPG 1.5, RPG 2.5	Tubes	21.30	0.839	15.00	0.591	<b>790 037 243</b>		0.270
RPG 1.5, RPG 2.5	Tubes	21.70	0.854	15.00	0.591	<b>790 037 261</b>		0.270
RPG 1.5, RPG 2.5	Tubes	22.00	0.866	15.00	0.591	<b>790 037 244</b>		0.264
RPG 1.5, RPG 2.5	Tubes	22.22	0.875	15.00	0.591	<b>790 037 292</b>		0.270
RPG 1.5, RPG 2.5	Tubes	23.00	0.906	15.00	0.591	<b>790 037 245</b>		0.255
RPG 1.5, RPG 2.5	Tubes	24.00	0.945	15.00	0.591	<b>790 037 246</b>		0.256
RPG 1.5, RPG 2.5	Tubes	25.00	0.984	15.00	0.591	<b>790 037 247</b>		0.252
RPG 1.5, RPG 2.5	Tubes	25.40	1.000	15.00	0.591	<b>790 037 248</b>		0.240
RPG 1.5, RPG 2.5	Tubes	26.90	1.059	15.00	0.591	<b>790 037 249</b>		0.260
RPG 1.5, RPG 2.5	Tubes	27.00	1.063	15.00	0.591	<b>790 037 264</b>		0.260
RPG 1.5, RPG 2.5	Tubes	27.20	1.071	15.00	0.591	<b>790 037 262</b>		0.260
RPG 1.5, RPG 2.5	Tubes	28.00	1.102	15.00	0.591	<b>790 037 250</b>		0.240
RPG 1.5, RPG 2.5	Tubes	29.00	1.142	15.00	0.591	<b>790 037 251</b>		0.232
RPG 1.5, RPG 2.5	Tubes	30.00	1.181	15.00	0.591	<b>790 037 252</b>		0.228
RPG 1.5, RPG 2.5	Tubes	31.80	1.250	15.00	0.591	<b>790 037 280</b>		0.230
RPG 1.5, RPG 2.5	Tubes	32.00	1.260	15.00	0.591	<b>790 037 258</b>		0.226
RPG 1.5, RPG 2.5	Tubes	33.40	1.315	15.00	0.591	<b>790 037 281</b>		0.220
RPG 1.5, RPG 2.5	Tubes	33.70	1.327	15.00	0.591	<b>790 037 282</b>		0.218
RPG 1.5, RPG 2.5	Tubes	34.00	1.339	15.00	0.591	<b>790 037 283</b>		0.215
RPG 1.5, RPG 2.5	Tubes	35.00	1.377	15.00	0.591	<b>790 037 284</b>		0.210
RPG 1.5, RPG 2.5	Tubes	36.00	1.417	15.00	0.591	<b>790 037 285</b>		0.204
RPG 1.5, RPG 2.5	Tubes	38.00	1.496	15.00	0.591	<b>790 037 286</b>		0.199
RPG 1.5, RPG 2.5	Tubes	38.10	1.500	15.00	0.591	<b>790 037 287</b>		0.194
RPG 2.5	Tubes	40.00	1.575	15.00	0.591	<b>790 030 234</b>		0.565
RPG 2.5	Tubes	41.00	1.614	15.00	0.591	<b>790 030 230</b>		0.560
RPG 2.5	Tubes	42.00	1.654	15.00	0.591	<b>790 030 117</b>		0.483
RPG 2.5	Tubes	42.40	1.669	15.00	0.591	<b>790 030 227</b>		0.483
RPG 2.5	Tubes	42.70	1.681	15.00	0.591	<b>790 030 224</b>		0.483
RPG 2.5	Tubes	43.00	1.693	15.00	0.591	<b>790 030 231</b>		0.544
RPG 2.5	Tubes	44.50	1.752	15.00	0.591	<b>790 030 228</b>		0.483
RPG 2.5	Tubes	48.30	1.902	15.00	0.591	<b>790 030 226</b>		4.990
RPG 2.5	Tubes	50.80	2.000	15.00	0.591	<b>790 030 220</b>		0.483
RPG 2.5	Tubes	51.00	2.008	15.00	0.591	<b>790 030 233</b>		0.482
RPG 2.5	Tubes	52.00	2.047	15.00	0.591	<b>790 030 225</b>		0.483
RPG 2.5	Tubes	53.00	2.087	15.00	0.591	<b>790 030 232</b>		0.457
RPG 2.5	Tubes	54.00	2.126	15.00	0.591	<b>790 030 221</b>		0.452
RPG 2.5	Tubes	55.00	2.165	15.00	0.591	<b>790 030 235</b>		0.440
RPG 2.5	Tubes	57.00	2.244	15.00	0.591	<b>790 030 229</b>		0.419
RPG 2.5	Tubes	60.30	2.374	15.00	0.591	<b>790 030 222</b>		0.386
RPG 2.5	Tubes	63.50	2.500	15.00	0.591	<b>790 030 223</b>		0.350
RPG 2.5	Tubes	65.00	2.559	15.00	0.591	<b>790 030 236</b>		0.330
RPG 1.5	Micro fittings	3.00	0.118	4.00	0.157	<b>790 037 300</b>		0.225
RPG 1.5	Micro fittings	3.18	0.125	4.00	0.157	<b>790 037 301</b>		0.227
RPG 1.5	Micro fittings	4.00	0.157	4.00	0.157	<b>790 037 302</b>		0.226
RPG 1.5	Micro fittings	4.78	0.188	4.00	0.157	<b>790 037 303</b>		0.234
RPG 1.5	Micro fittings	5.00	0.197	4.00	0.157	<b>790 037 304</b>		0.228
RPG 1.5	Micro fittings	6.00	0.236	4.00	0.157	<b>790 037 305</b>		0.220
RPG 1.5, RPG 2.5	Micro fittings	6.35	0.250	4.00	0.157	<b>790 037 306</b>		0.460
RPG 1.5, RPG 2.5	Micro fittings	8.00	0.314	4.00	0.157	<b>790 037 307</b>		0.223
RPG 1.5, RPG 2.5	Micro fittings	9.53	0.375	4.00	0.157	<b>790 037 308</b>		0.300
RPG 1.5, RPG 2.5	Micro fittings	10.00	0.394	4.00	0.157	<b>790 037 309</b>		0.222
RPG 1.5, RPG 2.5	Micro fittings	12.00	0.472	4.00	0.157	<b>790 037 310</b>		0.220
RPG 1.5, RPG 2.5	Micro fittings	12.50	0.492	4.00	0.157	<b>790 037 317</b>		0.220
RPG 1.5, RPG 2.5	Micro fittings	12.70	0.500	4.00	0.157	<b>790 037 311</b>		0.220

## TUBE SQUARING TECHNOLOGY

APPLICABLE WITH	APPLICABLE FOR	TUBE OD		TUBE CLAMPING LENGTH		CODE		KG
		[MM]	[INCH]	[MM]	[INCH]			
RPG 1.5, RPG 2.5	Micro fittings	17.20	0.678	4.00	0.157	<b>790 037 312</b>		0.220
RPG 1.5, RPG 2.5	Micro fittings	19.00	0.748	4.00	0.157	<b>790 037 314</b>		0.216
RPG 1.5, RPG 2.5	Micro fittings	19.05	0.750	4.00	0.157	<b>790 037 315</b>		0.215
RPG 1.5, RPG 2.5	Micro fittings	21.20	0.835	4.00	0.157	<b>790 037 313</b>		0.213
RPG 1.5, RPG 2.5	Micro fittings	21.30	0.839	4.00	0.157	<b>790 037 318</b>		0.212



Tool holder WH

## Tool holder WH

Fits multifunctional tool 790 038 314. Incl. Torx fixing screw.  
For max. wall thickness 3 mm (0.118").

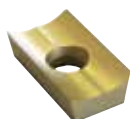
Application range Tool holder	Possible application		Beveling angle [°]		Recommend- ed application range	Tube OD			
	Squaring	Beveling				RPG XS Cordless	RPG ONE (Cordless)	RPG 1.5 (Cordless)	RPG 2.5 (Cordless)
WH12-I/Standard* Code 790 037 152	x	-	-	[mm] [inch]	6.0 - 12.7 0.236 - 0.5	-	6.0 - 25.4 0.236 - 1.0	6.0 - 38.1 0.236 - 1.5	6.0 - 63.5 0.236 - 2.5
WH12-I Code 790 037 161	x	-	-	[mm] [inch]	3.0 - 6.0 0.118 - 0.236	-	3.0 - 6.0 0.118 - 0.236	3.0 - 6.0 0.118 - 0.236	3.0 - 6.0 0.118 - 0.236
WH12-I/Micro fittings** Code 790 037 156	x	-	-	[mm] [inch]	- -	-	-	3.0 - 21.2 0.118 - 0.84	6.35 - 21.2 0.25 - 0.84
WH3-V-30 Code 790 037 158	-	x	30°	[mm] [inch]	- -	-	-	max. 35.0 max. 1.378	max. 60.3 max. 2.374
WH3-V-35 Code 790 037 159	-	x	35°	[mm] [inch]	- -	-	-	max. 33.7 max. 1.327	max. 59.3 max. 2.335
WH3-V-45*** Code 790 037 157	-	x	45°	[mm] [inch]	- -	-	-	max. 33.7 max. 1.327	max. 59.0 max. 2.3
WH-I Code 790 033 150	x	-	-	[mm] [inch]	3.0 - 12.0 0.118 - 0.472	3.0 - 19.05 0.118 - 0.75	-	-	-
WH-I Code 790 033 151	x	-	-	[mm] [inch]	12.0 - 19.05 0.472 - 0.75	12.0 - 19.05 0.472 - 0.75	-	-	-

ARTICLE	CODE	KG
Standard tool holder WH12-I*	<b>790 037 152</b>	0.040
Special tool holder WH12-I	<b>790 037 161</b>	0.026
Special tool holder micro fittings WH12-I**	<b>790 037 156</b>	0.100
Tool holder WH3-V-30	<b>790 037 158</b>	0.024
Tool holder WH3-V-35	<b>790 037 159</b>	0.024
Tool holder WH3-V-45***	<b>790 037 157</b>	0.022
Tool holder WH-I	<b>790 033 150</b>	0.020
Tool holder WH-I	<b>790 033 151</b>	0.020

\* Supplied as standard with the RPG.

\*\* Only to be used with stainless steel clamping shells for micro fittings.

\*\*\* Not applicable with the RPG XS and the RPG ONE.



Multifunctional tool MFW

## Multifunctional tool MFW

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

ARTICLE	QTY	CODE	KG
Multifunctional tool MFW-P-2	1	<b>790 038 314</b>	0.003
Multifunctional tool MFW-P-2	10	<b>790 038 315</b>	0.045
Torx screw (RPG ONE, RPG 1.5, RPG 2.5)	1	<b>790 086 220</b>	0.002
Torx screw (RPG XS)	1	<b>790 086 217</b>	0.002

## Other accessories

- Collapsible work bench, see page 90
- Pipe vice, see page 90

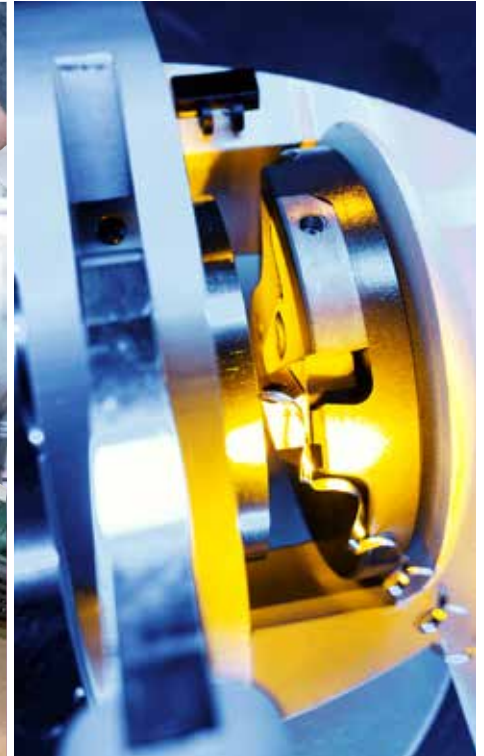
### TUBE SQUARING TECHNOLOGY



# RPG 4.5, RPG 4.5 S, RPG 8.6

## Tube squaring machines

In manual welding technology, quality pipe end processing is absolutely essential from an economic perspective. A high quality of pipe-end machining is absolutely required from a technical viewpoint in automated welding, the so-called "orbital welding". Orbitalum has developed the squaring tube machines RPG 4.5, RPG 4.5 S and RPG 8.6. The perfect solution for the demanding, quality preparation of pipe ends for orbital welding!



**With high-precision, the user is able to prepare tubes with the RPG 4.5 up to 114.4 mm (4.5") and with the RPG 8.6 up to 219.1 mm (8.6") tube outer diameters quickly, burr-free and absolutely square.**

Low operating costs for processing tubes are a big advantage. Our symmetric, exchangeable stainless steel and aluminum clamping shells (not for RPG 4.5 S) allow for a quick and easy tool change without any tool. A dimension change no longer requires a lot of time. The operator can work comfortably thanks to the ergonomic design of the machine, and can also save time.

All multifunctional tools (MFW) are two-sided tool bits with protective coating against tool wear. This enables the preparation of tubes made of high-alloy, unalloyed and low-alloy steels and aluminum with high precision very quickly and efficiently.

Clean and secure working area with a clear view of the cutting head.

The RPG 4.5 (S) and RPG 8.6 are equipped with a high-quality, powerful drive with 230 Volt and/or 120 Volt.

The machines and accessories are supplied in a handy, durable storage and shipping case.

- Squaring tube ends with a high-quality finish
- Burr-free and square
- Beveling possible with a special tool holder (not with RPG 4.5 S)
- Quick clamping system for tools, clamping shells and tubes
- Preparation of thin-walled stainless steel tubes (V4A)
- High-performance coated tool bit with two cutting edges
- Built-in electronic speed regulation

- Micrometer feed for optimum results
- Space saving, light weight and portable machine for a mobile and secure application
- Machine with rotating/removable bench stand

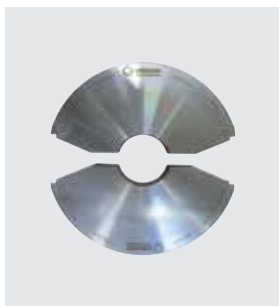
### ADDITIONAL FEATURES OF THE RPG 4.5 S:

The tube squaring machine RPG 4.5 S is characterized by its universal vice-clamping system. With this particularly economical alternative to other conventional dimension-specific clamping shells, tubes can be centered, clamped and processed in the easiest way possible.

- Integrated clamping jaws made from coated cast aluminum for different tube diameters
- Cost-effective as no dimension-specific clamping shells required
- Multi-point clamping of the tube



Including durable storage and shipping case



Wide range of stainless steel clamping shells



Including tool holder WH and multifunctional tool MFW



Quick clamping system for tools, clamping shells and tubes



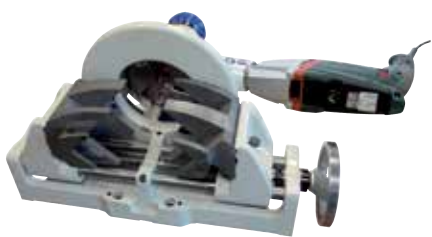
Application area: Process plant builders for the high-purity gas, electronic, pharmaceutical, food, beverage, solar as well as the chemical industry

APPLICATION RANGE		RPG 4.5	RPG 4.5 S	RPG 8.6
Code	[230 V]	790 038 001	790 038 011	790 039 001
	[110 V]	790 038 003	-	790 039 003
	[120 V]	790 038 002	790 038 012	790 039 002
Tube OD	[mm]	12.7 - 114.3	12.7 - 114.3	50.8 - 219.1
	[inch]	0.5 - 4.5	0.5 - 4.5	2 - 8.6
Wall thickness max.	[mm]	3.0	3.0	3.6
	[inch]	0.118	0.118	0.142
Tube materials		High-alloy steels, unalloyed and low-alloy steels and aluminum. Others on request.		
TECHNICAL DATA		RPG 4.5	RPG 4.5 S	RPG 8.6
Dimensions (including motor)	[mm]	460 x 260 x 230	610 x 380 x 270	500 x 350 x 350
	[inch]	18.1 x 10.2 x 9.1	24 x 15 x 10.6	19.7 x 13.8 x 13.8
Power	[W]	1100	1100	1100
Protection class	[class]	II	II	II
Speed (max. idling speed)	[min <sup>-1</sup> ]	8 - 52	8 - 52	7 - 18
Vibration level (EN 60745)	[m/s <sup>2</sup> ]	< 2.5	< 2.5	< 2.5
Noise level at the workplace (EN 23741)	[dB (A)]	Idle running approx. 83	Idle running approx. 83	Idle running approx. 83
SCOPE OF DELIVERY		RPG 4.5	RPG 4.5 S	RPG 8.6
Tube squaring machine	Pc.	1	1	1
Durable storage and shipping case	Pc.	1	1	1
Tool holder WH (Code 790 038 320)	Pc.	1	1	1
Multifunctional tool MFW (Code 790 038 314)	Pc.	1	1	1
Tool set	Set	1	1	1
Operating instructions and spare parts list	Set	1	1	1

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



RPG 4.5



RPG 4.5 S



RPG 8.6

## Tube squaring machines

### RPG 4.5, RPG 4.5 S, RPG 8.6

Features, application range, technical data and scope of delivery, see page 49.

Clamping shells must be ordered separately.

ARTICLE	VERSION	CODE		WEIGHT OF MACHINE KG	DISPATCH WEIGHT KG
RPG 4.5	230 V, 50/60 Hz EU	790 038 001		10.500	19.400
RPG 4.5	110 V, 50/60 Hz EU	790 038 003		10.500	19.400
RPG 4.5	120 V, 50/60 Hz US	790 038 002		10.500	19.400
RPG 4.5 S	230 V, 50/60 Hz EU	790 038 011		23.000	34.000
RPG 4.5 S	120 V, 50/60 Hz US	790 038 012		23.000	34.000
RPG 8.6	230 V, 50/60 Hz EU	790 039 001		20.500	32.000
RPG 8.6	110 V, 50/60 Hz EU	790 039 003		20.500	32.000
RPG 8.6	120 V, 50/60 Hz US	790 039 002		20.500	32.000

### Clamping shells

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

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

APPLICABLE WITH	VERSION	TUBE OD		CODE		KG
		[MM]	[INCH]			
RPG 4.5	Stainless steel	12.00	0.472	790 038 454		2.170
RPG 4.5	Stainless steel	12.70	0.500	790 038 438		2.177
RPG 4.5	Stainless steel	13.00	0.512	790 038 439		2.176
RPG 4.5	Stainless steel	13.50	0.531	790 038 440		2.175
RPG 4.5	Stainless steel	14.00	0.551	790 038 441		2.174
RPG 4.5	Stainless steel	16.00	0.630	790 038 442		2.168
RPG 4.5	Stainless steel	17.20	0.677	790 038 443		2.164
RPG 4.5	Stainless steel	18.00	0.709	790 038 444		2.161
RPG 4.5	Stainless steel	19.00	0.748	790 038 445		2.150
RPG 4.5	Stainless steel	19.05	0.750	790 038 446		2.157
RPG 4.5	Stainless steel	20.00	0.787	790 038 447		2.153
RPG 4.5	Stainless steel	21.30	0.839	790 038 448		2.100
RPG 4.5	Stainless steel	22.00	0.866	790 038 449		2.144
RPG 4.5	Stainless steel	22.22	0.875	790 038 050		2.195
RPG 4.5	Stainless steel	23.00	0.906	790 038 450		2.140
RPG 4.5	Stainless steel	24.00	0.945	790 038 451		2.133
RPG 4.5	Stainless steel	25.00	0.984	790 038 452		2.127
RPG 4.5	Stainless steel	25.25	0.994	790 038 049		2.180
RPG 4.5	Stainless steel	25.40	1.000	790 038 051		2.180
RPG 4.5	Stainless steel	26.90	1.059	790 038 400		2.090
RPG 4.5	Stainless steel	27.20	1.071	790 038 468		2.165
RPG 4.5	Stainless steel	28.00	1.102	790 038 401		2.110
RPG 4.5	Stainless steel	29.00	1.142	790 038 402		2.105
RPG 4.5	Stainless steel	30.00	1.181	790 038 403		2.095
RPG 4.5	Stainless steel	31.75	1.250	790 038 052		1.865
RPG 4.5	Stainless steel	31.80	1.252	790 038 404		2.080
RPG 4.5	Stainless steel	32.00	1.260	790 038 455		2.080
RPG 4.5	Stainless steel	33.00	1.299	790 038 465		2.120
RPG 4.5	Stainless steel	33.40	1.315	790 038 405		2.040
RPG 4.5	Stainless steel	33.70	1.327	790 038 406		2.060
RPG 4.5	Stainless steel	34.00	1.339	790 038 407		2.115
RPG 4.5	Stainless steel	35.00	1.378	790 038 408		2.050

#### TUBE SQUARING TECHNOLOGY



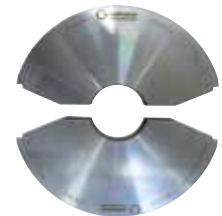
RPG 4.5



RPG 4.5 S



RPG 8.6



Stainless steel clamping shell for RPG 4.5



Aluminum clamping shells for RPG 8.6

APPLICABLE WITH	VERSION	TUBE OD		CODE		KG
		[MM]	[INCH]			
RPG 4.5	Stainless steel	36.00	1.417	790 038 409		2.044
RPG 4.5	Stainless steel	38.00	1.496	790 038 410		2.025
RPG 4.5	Stainless steel	38.10	1.500	790 038 053		2.020
RPG 4.5	Stainless steel	40.00	1.575	790 038 411		2.000
RPG 4.5	Stainless steel	41.00	1.614	790 038 412		1.990
RPG 4.5	Stainless steel	42.00	1.654	790 038 413		1.976
RPG 4.5	Stainless steel	42.16	1.660	790 038 414		1.950
RPG 4.5	Stainless steel	42.40	1.669	790 038 415		1.965
RPG 4.5	Stainless steel	42.70	1.681	790 038 416		1.950
RPG 4.5	Stainless steel	44.45	1.750	790 038 417		1.955
RPG 4.5	Stainless steel	44.50	1.752	790 038 418		1.955
RPG 4.5	Stainless steel	45.00	1.772	790 038 419		1.948
RPG 4.5	Stainless steel	48.00	1.890	790 038 464		1.960
RPG 4.5	Stainless steel	48.26	1.900	790 038 420		1.880
RPG 4.5	Stainless steel	48.30	1.902	790 038 421		1.905
RPG 4.5	Stainless steel	48.60	1.913	790 038 422		1.875
RPG 4.5	Stainless steel	50.00	1.969	790 038 456		1.880
RPG 4.5	Stainless steel	50.80	2.000	790 038 054		1.895
RPG 4.5	Stainless steel	51.00	2.008	790 038 423		1.870
RPG 4.5	Stainless steel	52.00	2.047	790 038 424		1.850
RPG 4.5	Stainless steel	53.00	2.087	790 038 425		1.835
RPG 4.5	Stainless steel	54.00	2.126	790 038 426		1.827
RPG 4.5	Stainless steel	57.00	2.244	790 038 457		1.780
RPG 4.5	Stainless steel	60.00	2.362	790 038 469		1.780
RPG 4.5	Stainless steel	60.30	2.375	790 038 427		1.700
RPG 4.5	Stainless steel	60.45	2.380	790 038 428		1.726
RPG 4.5	Stainless steel	60.50	2.382	790 038 429		1.695
RPG 4.5	Stainless steel	63.00	2.480	790 038 461		1.725
RPG 4.5	Stainless steel	63.50	2.500	790 038 055		1.670
RPG 4.5	Stainless steel	65.00	2.559	790 038 463		1.700
RPG 4.5	Stainless steel	70.00	2.756	790 038 430		1.545
RPG 4.5	Stainless steel	73.03	2.875	790 038 453		1.460
RPG 4.5	Stainless steel	73.15	2.880	790 038 431		1.482
RPG 4.5	Stainless steel	75.00	2.953	790 038 462		1.490
RPG 4.5	Stainless steel	76.10	2.996	790 038 432		1.420
RPG 4.5	Stainless steel	76.20	3.000	790 038 056		1.420
RPG 4.5	Stainless steel	76.30	3.004	790 038 433		1.390
RPG 4.5	Stainless steel	80.00	3.150	790 038 466		1.390
RPG 4.5	Stainless steel	85.00	3.346	790 038 434		1.220
RPG 4.5	Stainless steel	85.90	3.382	790 038 435		1.124
RPG 4.5	Stainless steel	88.90	3.500	790 038 057		1.130
RPG 4.5	Stainless steel	89.10	3.508	790 038 436		1.100
RPG 4.5	Stainless steel	90.00	3.543	790 038 467		1.150
RPG 4.5	Stainless steel	101.60	4.000	790 038 058		0.800
RPG 4.5	Stainless steel	104.00	4.094	790 038 437		0.740
RPG 4.5	Stainless steel	108.00	4.252	790 038 458		0.620
RPG 4.5	Stainless steel	114.30	4.500	790 038 059		0.435
RPG 8.6	Aluminum	50.80	2.000	790 039 260		4.500
RPG 8.6	Aluminum	57.00	2.244	790 039 265		4.000
RPG 8.6	Aluminum	76.20	3.000	790 039 261		4.200
RPG 8.6	Aluminum	88.90	3.500	790 039 264		4.000
RPG 8.6	Aluminum	101.60	4.000	790 039 252		3.800
RPG 8.6	Aluminum	108.00	4.252	790 039 266		3.750
RPG 8.6	Aluminum	114.30	4.500	790 039 256		3.500
RPG 8.6	Aluminum	127.05	5.002	790 039 262		3.420
RPG 8.6	Aluminum	133.00	5.236	790 039 267		2.980
RPG 8.6	Aluminum	139.70	5.500	790 039 259		3.100
RPG 8.6	Aluminum	141.30	5.563	790 039 257		2.900
RPG 8.6	Aluminum	152.40	6.000	790 039 253		2.700
RPG 8.6	Aluminum	159.00	6.260	790 039 268		2.500
RPG 8.6	Aluminum	168.30	6.625	790 039 254		2.300
RPG 8.6	Aluminum	193.70	7.626	790 039 269		3.500
RPG 8.6	Aluminum	197.00	7.756	790 039 263		1.530
RPG 8.6	Aluminum	203.20	8.000	790 039 258		1.350
RPG 8.6	Aluminum	219.10	8.625	790 039 255		0.600
RPG 8.6	Stainless steel	101.60	4.000	790 039 287		5.000
RPG 8.6	Stainless steel	114.30	4.500	790 039 280		4.950
RPG 8.6	Stainless steel	141.30	5.563	790 039 281		4.500

#### TUBE SQUARING TECHNOLOGY

APPLICABLE WITH	VERSION	TUBE OD		CODE		KG
		[MM]	[INCH]			
RPG 8.6	Stainless steel	152.40	6.000	<b>790 039 283</b>		4.400
RPG 8.6	Stainless steel	168.30	6.625	<b>790 039 284</b>		6.000
RPG 8.6	Stainless steel	203.20	8.000	<b>790 039 286</b>		3.240
RPG 8.6	Stainless steel	219.10	8.625	<b>790 039 285</b>		1.500

## Tool holder WH

Fits multifunctional tool 790 038 314.  
Incl. Torx fixing screw.

Beveling with the RPG 4.5 S is not recommended.

Application range Tool holder	Possible application		Beveling angle [°]
	Squaring	Beveling	
Tool holder WH12-I	x	-	-
Tool holder WH12-V-30°	-	x	30
Tool holder WH12-V-35°	-	x	35
Tool holder WH12-V-45°	-	x	45
Tool holder WH12-U-20°	-	x	20

ARTICLE	CODE	KG
Tool holder WH12-I	<b>790 038 320</b>	0.025
Tool holder WH12-V-30°	<b>790 038 329</b>	0.034
Tool holder WH12-V-35°	<b>790 038 282</b>	0.054
Tool holder WH12-V-45°	<b>790 038 280</b>	0.044
Tool holder WH12-U-20°	<b>790 038 326</b>	0.031

## Multifunctional tool MFW

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

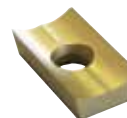
ARTICLE	QTY.	CODE	KG
Multifunctional tool MFW-P-2	1	<b>790 038 314</b>	0.003
Multifunctional tool MFW-P-2	10	<b>790 038 315</b>	0.045

## Other accessories

- Collapsible work bench, see page 90
- Pipe vice, see page 90



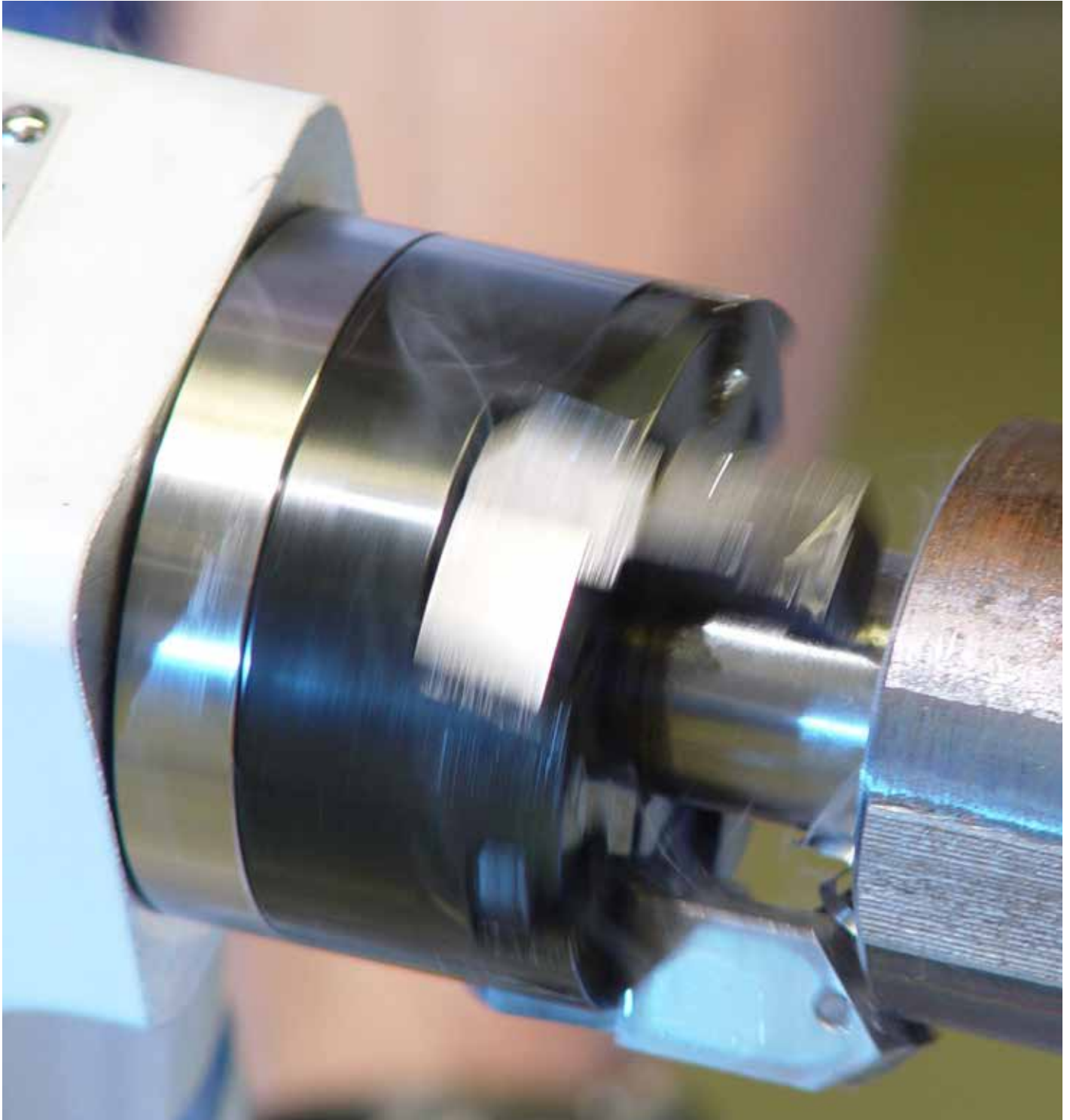
Tool holder WH



Multifunctional tool MFW



# Pipe Beveling Technology



# BRB 2 FullAuto

## Boiler pipe preparation machine

The highest level of boiler pipe processing! The pneumatically-operated BRB 2 FullAuto pipe processing machine is particularly economical and ensures the highest levels of precision and quality when shortening and welding in of thousands of pipes on heat exchangers. The machine provides users the same precision and efficiency during maintenance and service - defective pipes can be easily cut out of the pipe sheet.

The ideal machine for shortening heat exchanger pipes and for cutting pipes out of heat exchanger walls



**For standard-compliant, precise and reproducible weld seam preparations. The perfect addition to Orbitalum's WIG pipe-in-sheet weld heads!**

The cutting system for exact squaring and beveling works with up to four, extremely low cost, cutting bits. Automatic hydro pneumatics are started when the touch control is activated: The BRB 2 FullAuto clamps and centers itself in the pipe using compressed air. The cutting process begins with hydraulic soft start. In addition, rapid traverse can be used for faster working.

Unlike conventional machines with additional ballast such as an external control box and foot pedal, the BRB 2 FullAuto is much more convenient and cost-efficient, as all of the control elements are easier to operate because they are integrated in to the machine. Initially, the speed is ideally adapted to heat exchanger

use, but it can be conveniently varied using a control valve. The feed can also be controlled continuously with a voltage divider. The very robust, length-adjustable end switch also stops the shortening process exactly at the desired position.

Further special features are the balance setting, which is integrated into the handle for easy operation between the processing cycles. Also a very clever solution for the compressed air outlet for quality and value, the exhaust air ring can be rotated, which allows the air flow to be kept away from the workpiece and operator. The advantage is that an oil film does not form on the workpiece. This unwanted effect is often the cause for errors (pores and cavities) forming in the weld metal, which can be difficult to avoid in the machines with rigid front air outlets which are commercially available.

The BRB 2 FullAuto is equipped with a high-quality, powerful compressed air motor. The machine and accessories are supplied in a durable storage and shipping case.

- Ideal for shortening heat exchanger pipes and for cutting pipes out of heat exchanger walls
- Starting of the working process, automatic feeding and automatic clamping by using one tip switch only
- Standard-compliant, precise and reproducible weld seam preparation
- Rapid processing, ideal for serial processing
- Handy, ergonomic and compact design, all control elements for operating the machine are integrated in it, no external control box or pedal required
- Continuous adjustment of the feed speed
- Integrated rapid feed sensing device



Exact squaring and beveling through the use of up to four extremely inexpensive tool bits (available optionally)



Handy, ergonomic and compact design



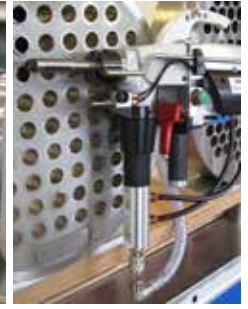
The "NC" clamping system cannot be lost thanks to its clamping wedges anchored in the mandrel



Automatic starting of the working process (pipe clamping and machining) with only one tip switch



Standard-compliant, precise and reproducible weld seam preparation



Integrated balancer device for safe, relaxed and fatigue-free working, also during longer working periods

APPLICATION RANGE		BRB 2 FULLAUTO
Code		790 185 052
Tube ID*	[mm]	19.1 - 47.0
	[inch]	0.75 - 1.85
Wall thickness	[mm]	1.2 - 3.0
	[inch]	0.047 - 0.118
Tube materials		Unalloyed and low-alloy steels, high-alloy steels (high-grade steel, material no. 1.40. - 1.45. in accordance with DIN 17 455 and DIN 17 456), aluminum. Others on request.
TECHNICAL DATA		BRB 2 FULLAUTO
Dimensions (lxwxh)	[mm]	515 x 105 x 400
	[inch]	20.3 x 4.1 x 15.7
Weight gross/net, approx.	[kg]	21.6 / 12.1
	[lbs]	47.6 / 26.7
Power (pneumatic power drive)	[kW]	0.38
	[hp]	0.51
Air consumption (at 6 bar)	[m³/min]	0.7
Speed max. idling speed	[min⁻¹]	139
Noise level at the workplace (EN 23741)	[dB (A)]	approx. 83 (mid-range speed)
Vibration level (EN 60745)	[m/s²]	> 2.5
SCOPE OF DELIVERY		BRB 2 FULLAUTO
Boiler pipe preparation machine	Pc.	1
Durable storage and shipping case	Pc.	1
Clamping sets	Pc.	9 (for dimensions, please see the table below)
Mandrel (Ø 19.05 mm/0.75")	Pc.	1
Tool holder for tool bits**	Pc.	1
Cutting lubrication KSS-TOP (Code 790 060 226)	Spray pump	1
Tool set	Set	1
Operating instructions and spare parts list	Set	1

\* Smaller dimensions on request

\*\* Tool bits must be ordered separately, see catalogue, page 67

#### FURTHER ADVANTAGES:

- Very robust length-adjustable end switch. Terminates the process of shortening exactly at the desired final size
- Integrated length stop for easier positioning of the machine in the pipe, protects the cutting edges
- Compressed-air motor with speed regulation and low-maintenance gearing with grease lubrication
- Optimized speed range, ideal for heat exchanger applications
- The exhaust air ring can be rotated, which allows the air flow to be kept away from the workpiece and user
- Integrated balancer device for safe, relaxed and fatigue-free working, also during longer working periods
- The perfect addition to Orbitalum's WIG pipe-in-sheet weld heads

Manufacturer's warranty can only be given when using a mobile air unit. We recommend the mobile air unit from Orbitalum Tools, Code 790 093 060.

A tool retainer for working with the conventional tool combination (WH/MFW) continues to be available optionally.

CLAMPING SETS FOR PIPE ID			CLAMPING RANGE		MANDREL Ø	
[MM]	[INCH]	CODE	[MM]	[INCH]	[MM]	[INCH]
19.1 - 23.0	0.75 - 0.91	<b>790 086 390</b>	19.1 - 47.0	0.75 - 1.85	19.05	0.750
22.0 - 26.0	0.87 - 1.02	<b>790 086 391</b>				
25.0 - 29.0	0.98 - 1.14	<b>790 086 392</b>				
28.0 - 32.0	1.10 - 1.26	<b>790 086 393</b>				
31.0 - 35.0	1.22 - 1.38	<b>790 086 394</b>				
34.0 - 38.0	1.34 - 1.50	<b>790 086 395</b>				
37.0 - 41.0	1.46 - 1.61	<b>790 086 396</b>				
40.0 - 44.0	1.57 - 1.73	<b>790 086 397</b>				
43.0 - 47.0	1.69 - 1.85	<b>790 086 398</b>				

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



## Boiler pipe preparation machine

### BRB 2 FullAuto

Application range, technical data and scope of delivery, see page 55.

Tool holder, multifunctional tools and tool bits must be ordered separately, see from page 66.

ARTICLE	VERSION	CODE		WEIGHT OF MACHINE KG	DISPATCH WEIGHT KG
BRB 2 FullAuto	Pneumatic	790 185 052		12.100	21.600



BRB 2 FullAuto

### Suitable accessories

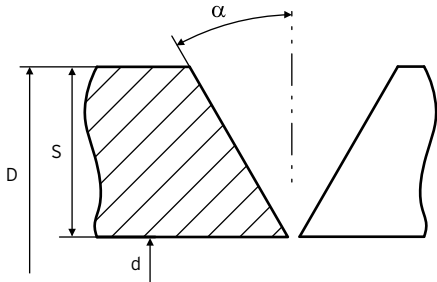
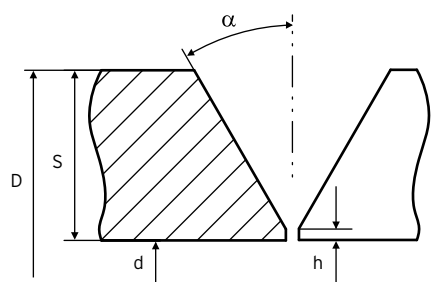
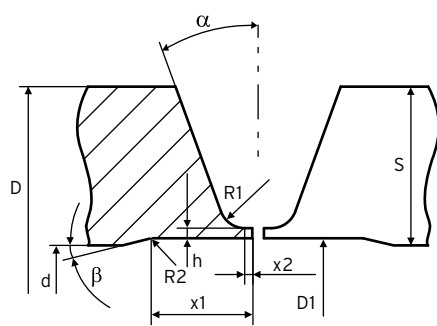
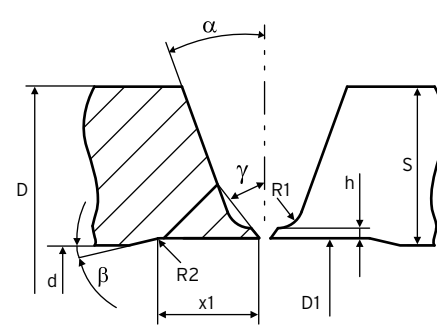
- Tool bits TB, see page 67
- Tool holder for tool bits, see page 68
- Tool holder WH, see page 66
- Multifunctional tools MFW, see page 67
- Tool retainer for tool combinations WH/MFW, see page 68
- Combination possibilities of tool holder and multifunctional tools, see page 72
- Bevel cutter heads for BRB 2 (V-/Y-prep), see page 69
- Balancer spring, see page 69
- Mobile air unit DWE 10 and air hose with quick coupling, see page 70
- Cutting lubrication KSS-TOP, see page 70
- Collapsible work bench, see page 90
- Pipe vice, see page 90

# The correct tooling for your individual application

We will gladly help you find the suitable tools for your specific application.

To offer you the relevant tool holders and multifunctional tools for our BRB and REB machines we need some information from you.

Please use the following form and let us know your needs (if known):

<p><b>V-prep</b></p>  <table border="1" data-bbox="614 504 762 656"> <tr><td>D:</td></tr> <tr><td>d:</td></tr> <tr><td>S:</td></tr> <tr><td><math>\alpha</math>:</td></tr> </table>	D:	d:	S:	$\alpha$ :	<p><b>Y-prep</b></p>  <table border="1" data-bbox="1276 504 1425 692"> <tr><td>D:</td></tr> <tr><td>d:</td></tr> <tr><td>S:</td></tr> <tr><td>h:</td></tr> <tr><td><math>\alpha</math>:</td></tr> </table>	D:	d:	S:	h:	$\alpha$ :													
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<p><b>U-prep (1)</b></p>  <table border="1" data-bbox="614 887 762 1294"> <tr><td>D:</td></tr> <tr><td>d:</td></tr> <tr><td>S:</td></tr> <tr><td>h:</td></tr> <tr><td>R1:</td></tr> <tr><td>R2:</td></tr> <tr><td>x1:</td></tr> <tr><td>x2:</td></tr> <tr><td><math>\alpha</math>:</td></tr> <tr><td><math>\beta</math>:</td></tr> <tr><td>D1:</td></tr> </table>	D:	d:	S:	h:	R1:	R2:	x1:	x2:	$\alpha$ :	$\beta$ :	D1:	<p><b>U-prep (2)</b></p>  <table border="1" data-bbox="1276 887 1425 1294"> <tr><td>D:</td></tr> <tr><td>d:</td></tr> <tr><td>S:</td></tr> <tr><td>h:</td></tr> <tr><td>R1:</td></tr> <tr><td>R2:</td></tr> <tr><td>x1:</td></tr> <tr><td><math>\alpha</math>:</td></tr> <tr><td><math>\beta</math>:</td></tr> <tr><td><math>\gamma</math>:</td></tr> <tr><td>D1:</td></tr> </table>	D:	d:	S:	h:	R1:	R2:	x1:	$\alpha$ :	$\beta$ :	$\gamma$ :	D1:
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Your contact details:

Company name:		
Customer no.:	Date:	Contact person:
Phone:		Fax:
Address:		Signature and stamp
Remarks:		

Please return the completed form by **Fax to +49 (0) 77 31 792-524** or per E-Mail to **tools@orbitalum.com**.



# BRB 2, BRB 4

## Boiler pipe preparation machines

The solution when space is limited! Only very limited space is often available between welded boiler pipes. The compact body design of BRB machines is optimized for the application in question to provide the operator with the best possible access in every position and is therefore the best solution for pipe end and tube sheet joint preparations in boiler, tank and apparatus construction.



**Powerful und robust boiler prep machine!** The BRB series from Orbitalum, developed for boiler applications with the lowest space availability, makes precise welding preparations possible using optimal torque, together with low weight.

With the Orbitalum patented Quick-Tool-Change (QTC®), tools can be replaced easily and quickly. All multifunctional tools (MFW) are multi-edge tool bits with protective coating against tool wear. Thus pipe-ends made from unalloyed, low-alloy and high-alloy steels, with a high percentage of chromium and nickel, can be processed quickly, cost-effectively, and very precisely.

The machines and accessories are supplied in a durable storage and shipping case.

- Handy, ergonomic and compact design
- Precise and reproducible weld seam preparation

- Fast application with the BRB Pneumatic/Auto by means of pneumatic clamping, ideal for continuous production e.g. boiler and heat exchanger applications
- High performance and lightweight
- High-performance coated tool bits with up to 4 cutting edges
- Quick clamping system for tools with easy adjustment
- Adjustable air outlet
- Easy to change tools
- Tools adaptable on all BRB machines
- Up to 3 tools can be used simultaneously

### THE VARIOUS CLAMPING SYSTEMS:

The **"NC" clamping system** with its clamping wedges anchored in the mandrel is ideal for applications in which foreign objects may not enter the pipe inside or a tank. The "NC" clamping system provides additional certainty in particular at vertical applications.

The **"Standard" clamping system** has proven itself in many years of use through its stability and reliability. You can continue to use this system.

### DRIVE VERSIONS:

**Electric:** 230 V, 50/60 Hz or 120 V, 50/60 Hz; Single-phase AC motor, Protection class II; Built-in electronic variable cutting speed.

**Pneumatic:** Pneumatic power drive.

**Pneumatic/Auto:** Pneumatic multi-disc motor with additional pneumatic clamping system. Time is of the essence when installing or repairing boiler pipes, the pneumatic clamping system greatly reduces the time to both clamp and release the machine, improving efficiency. The machine centers itself on the inside diameter of the pipe and then clamps automatically by using the toggle switch, likewise the toggle switch releases the clamping after the machining operation. This is why the BRB with automatic pneumatic clamping is ideal for continuous production e.g. boiler and heat exchanger applications.

Manufacturer's warranty can only be given when using a mobile air unit. We recommend the mobile air unit from Orbitalum Tools, Code 790 093 060.

TECHNICAL DATA		BRB 2	BRB 2	BRB 2	BRB 4	BRB 4	BRB 4
Drive version		Electric	Pneumatic	Pneum./Auto	Electric	Pneumatic	Pneum./Auto
Power	[kW]	0.5	0.38	0.38	1.5	1.0	1.0
Speed	[rpm]	18 - 118	0 - 120	0 - 120	12 - 37	0 - 110	0 - 110
Air consumption (at 6 bar)	[m³/min]	-	0.7	0.7	-	1.0	1.0
Noise level Laeq 1 m (EN 23741), approx.	[dB (A)]	76	82	82	82	84	84
Vibration level (EN 28662, part 1)	[m/s²]	2.5	2.5	2.5	2.5	2.5	2.5

APPLICATION RANGE		BRB 2	BRB 2	BRB 4	BRB 4
		KIT 1	KIT 2	KIT 3	KIT 5
Clamping system		Standard	NC	NC	NC
Code	[230 V]	790 085 011	790 185 012	790 186 013	790 186 015
	[120 V]	790 085 021	790 185 022	790 186 023	790 186 025
	[Pneumatic]	790 085 007	790 185 002	790 186 003	790 186 005
	[Pneu./Auto]	790 085 041	790 185 042	790 186 033	790 186 035
Tube ID / Clamping range Ø	[mm]	12.75 - 25.5	19.1 - 47.0	35.0 - 108.0	19.1 - 108.0
	[inch]	0.502 - 1.004	0.752 - 1.850	1.378 - 4.252	0.752 - 4.252
Tool retainer Ø	[mm]	50.0 / 12.75	50.0 / 16.0	120.0 / 27.0	68.0 / 19.0
					68.0 / 27.0
	[inch]	1.969 / 0.502	1.969 - 0.630	4.724 / 1.063	2.677 / 0.748
Mandrel Ø	[mm]	12.75	19.05	34.5	2.677 / 1.063
					4.724 / 1.063
	[inch]	0.502	0.750	1.358	0.750
Tube OD	[mm]	16.75 - 41.5	23.0 - 62.0	38.5 - 114.3	23.0 - 114.3
	[inch]	0.659 - 1.634	0.906 - 2.441	1.516 - 4.50	0.906 - 4.50
Wall thickness* min. - max.	[mm]	2 - 8	2 - 8	2 - 15	2 - 15
	[inch]	0.079 - 0.315	0.079 - 0.315	0.079 - 0.590	0.079 - 0.590
SCOPE OF DELIVERY		BRB 2	BRB 2	BRB 4	BRB 4
		KIT 1	KIT 2	KIT 3	KIT 5
Boiler pipe preparation machine	Pc.	1	1	1	1
Durable storage and shipping case	Pc.	1	1	1	1
Tool retainers (For dimensions, please see the table above)	Pc.	1	1	1	3
Clamping sets (For dimensions, please see the table above)	Set	6	6	18 (8+10)	24 (14+10)
Mandrel (For dimensions, please see the table above)	Pc.	1	1	1	2
Cutting lubrication KSS-TOP (Code 790 060 226)	Spray pump	1	1	1	1
Tool set	Set	1	1	1	1
Operating instructions and spare parts list	Set	1	1	1	1

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

\* Depending on pipe material and dimension. With BRB 4: Aluminum up to 15 mm/0.59" wall thickness. Stainless steel up to 8 mm/0.315" wall thickness. Steel up to 10 mm/0.39" wall thickness



BRB 2 Electric with clamping system "Standard"



BRB 2 Pneumatic with clamping system "Standard"



BRB 2 Pneumatic/Auto with clamping system "Standard"



BRB 2 and BRB 4 Electric with clamping system "NC"



BRB 2 and BRB 4 Pneumatic with clamping system "NC"



BRB 2 and BRB 4 Pneum./Auto with clamping system "NC"

## Boiler pipe preparation machines

### BRB 2, BRB 4

Features, application range, technical data and scope of delivery, see from page 59.

Tool holder, multifunctional tools and tool bits must be ordered separately, see from page 66.



e.g. BRB 2 and BRB 4 Pneumatic/Auto with clamping system "NC"

ARTICLE	VERSION	CLAMPING SYSTEM	CODE		WEIGHT OF MACHINE KG	DISPATCH WEIGHT KG
BRB 2 EL, Kit 1	230 V, 50/60 Hz EU	Standard	790 085 011		4.100	12.200
BRB 2 EL, Kit 1	120 V, 50/60 Hz EU/US	Standard	790 085 021		4.100	12.200
BRB 2 P, Kit 1	Pneumatic	Standard	790 085 007		3.800	11.900
BRB 2 Pneu./Auto, Kit 1	Pneumatic/Auto	Standard	790 085 041		4.600	13.300
BRB 2 EL, Kit 2	230 V, 50/60 Hz EU	NC	790 185 012		4.900	13.000
BRB 2 EL, Kit 2	120 V, 50/60 Hz EU/US	NC	790 185 022		4.900	13.000
BRB 2 P, Kit 2	Pneumatic	NC	790 185 002		4.400	12.500
BRB 2 Pneu./Auto, Kit 2	Pneumatic/Auto	NC	790 185 042		5.100	13.800
BRB 4 EL, Kit 3	230 V, 50/60 Hz EU	NC	790 186 013			23.300
BRB 4 EL, Kit 3	120 V, 50/60 Hz EU/US	NC	790 186 023			23.300
BRB 4 P, Kit 3	Pneumatic	NC	790 186 003			22.200
BRB 4 Pneu./Auto, Kit 3	Pneumatic/Auto	NC	790 186 033			23.400
BRB 4 EL, Kit 5	230 V, 50/60 Hz EU	NC	790 186 015		11.400	26.400
BRB 4 EL, Kit 5	120 V, 50/60 Hz EU/US	NC	790 186 025		11.400	26.000
BRB 4 P, Kit 5	Pneumatic	NC	790 186 005			25.500
BRB 4 Pneu./Auto, Kit 5	Pneumatic/Auto	NC	790 186 035			26.000

### Suitable accessories

- Tool bits TB, see page 67
- Tool holder for tool bits, see page 68
- Tool holder WH, see page 66
- Multifunctional tools MFW, see page 67
- Combination possibilities of tool holder and multifunctional tools, see page 72
- Tool retainer for tool combinations WH/MFW, see page 68
- Upgrade sets BRB 2 for dimension extension, see page 68
- Feed ratchet for BRB 4, see page 68
- Bevel cutter heads for BRB 2 (V-/Y-prep), see page 69
- Bevel cutter heads for BRB 4 (V-prep), see page 69
- Balancer spring, see page 69
- Adjustable spacer, see page 70
- Mobile air unit DWE 10 and air hose with quick coupling, see page 70
- Cutting lubrication KSS-TOP, see page 70
- Collapsible work bench, see page 90
- Pipe vice, see page 90

## The different weld prep profiles:



Facing / I-prep



V-prep



Y-prep



J-prep / U-prep



Counterboring / ID-prep

## Description of the tools made by Orbitalum Tools:

Samples::

Multifunctional tool MFW for working on the pipe OD (**MFW 30-V/I-4-R5**):

Multifunctional tool	Max. workable wall thickness in mm	Weld prep profiles	Number of cutting edges	Prep radius in mm
<b>MFW</b>	<b>30</b>	<b>V/I</b>	<b>4</b>	<b>R5</b>

Multifunctional tool MFW for working on the pipe ID (**MFW 10-ID-2-R0.8**):

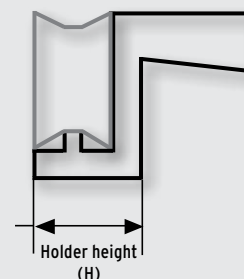
Multifunctional tool	Max. length on the counterbore / bevel	For working on the inner diameter	Number of cutting edges	Prep radius in mm
<b>MFW</b>	<b>10</b>	<b>ID</b>	<b>2</b>	<b>R0.8</b>

Tool holder WH for beveling (**WH 30-V-30°**):

Tool holder	Max. workable wall thickness in mm	Weld prep profile	Prep angle
<b>WH</b>	<b>30</b>	<b>V</b>	<b>30°</b>

Tool holder WH for facing (**WH 30-I-H27**):

Tool holder	Max. workable wall thickness in mm	Weld prep profile	Holder height in mm
<b>WH</b>	<b>30</b>	<b>I</b>	<b>H27</b>



Tool holder WH for counterboring (**WH 10-ID-14°**):

Tool holder	Max. length on the counterbore / bevel	For working on the inner diameter	Counterbore angle
<b>WH</b>	<b>10</b>	<b>ID</b>	<b>14°</b>

Do you need any support in finding the right weld prep tools? Then please contact us using the contact form on page 58.

# REB 6, REB 14

## Pipe end preparation machines

The portable pipe end preparation machines REB are setting new standards in the weld prepping of metal pipes. Take advantage of this latest technology to reduce your tool and manufacturing costs and to increase your productivity when making precise and reproduceable weld prep profiles, both on site and in the prefab workshop.

Compact design for precise and reproducible weld prep profiles



**The powerful pipe end preparation solution. Counterboring and axial turning of pipes made from high-alloy steel (stainless steel), low-alloy and carbon steel with the unique tool system QTC®. Up to 4 tools can be used at the same time.**

With the Orbitalum patented Quick-Tool-Change (QTC®), tools can be replaced easily and quickly. All multifunctional tools (MFW) are multi-edge tool bits with protective coating against tool wear. Thus pipe-ends made from unalloyed, low-alloy and high-alloy steels, with a high percentage of chromium and nickel, can be processed quickly, cost-effectively, and very precisely.

- Compact design for precise and reproducible weld prep profiles
- Quick-Tool-Change QTC®
- Square and burr-free
- High-performance coated tool bit with two or four cutting edges
- Sturdy construction
- Tools adaptable on all REB machines
- Optimized performance and ergonomic drive system
- Portable with an integral carrying handle

The REB machines are available in the following drive versions:

- **Electric:** 230 V, 50/60 Hz or 120 V, 50/60 Hz.
- **Pneumatic** power drive.

The machines and accessories are supplied in a durable storage and shipping case.





Quick-Tool-Change QTC®



Fast adjustment of the pipe dimension



Available with compressed air or electric drive



Cutting lubrication KSS-TOP included



A wide range of tool holder and multifunctional tools (available option)



Mobile air unit (available option)

Manufacturer's warranty can only be given when using a mobile air unit. We recommend the mobile air unit from Orbitalum Tools, Code 790 093 060.

APPLICATION RANGE*		REB 6	REB 6	REB 14	REB 14
		PNEUMATIC	ELECTRIC	PNEUMATIC	ELECTRIC
Code	[Pneum.]	790 093 001	-	790 094 001	-
	[230 V]	-	790 093 002	-	790 094 002
	[120 V]	-	790 093 005	-	790 094 005
Tube ID	[mm]	49 - 159	49 - 159	92 - 320	92 - 320
	[inch]	1.93 - 6.26	1.93 - 6.26	3.62 - 12.60	3.62 - 12.60
Wall thickness	[mm]	3 - 22	3 - 22	4 - 30	4 - 22
	[inch]	0.12 - 0.87	0.12 - 0.87	0.16 - 1.18	0.16 - 0.87
Tube OD	[mm]	56 - 168	56 - 168	100 - 355.6	100 - 355.6
	[inch]	2.20 - 6.61	2.20 - 6.61	3.94 - 14.00	3.94 - 14.00
Tube materials		Unalloyed and low-alloyed steels, high-alloyed steels (stainless steel), aluminum			
TECHNICAL DATA		REB 6	REB 6	REB 14	REB 14
		PNEUMATIC	ELECTRIC	PNEUMATIC	ELECTRIC
Dimensions	[mm]	560 x 260 x 400	640 x 260 x 420	625 x 375 x 490	700 x 375 x 510
	[inch]	22 x 10.2 x 15.8	25.2 x 10.2 x 16.5	24.6 x 14.8 x 19.3	27.6 x 14.8 x 20
Power	[kW]	1.8	1.2	1.8	1.2
Air consumption (at 6 bar)	[m³/min]	2.0	-	2.0	-
Speed	[min⁻¹]	0 - 26	10 - 32	0 - 13	5 - 16
Vibration level (EN 28662, part 1)	[m/s²]	< 2.5	< 2.5	< 2.5	< 2.5
Noise level at the workplace (average speed range), approx.	[dB (A)]	At idle-speed: 75 Under load: 77	At idle-speed: 75 Under load: 77	At idle-speed: 75 Under load: 77	At idle-speed: 75 Under load: 77
SCOPE OF DELIVERY		REB 6	REB 6	REB 14	REB 14
		PNEUMATIC	ELECTRIC	PNEUMATIC	ELECTRIC
Pipe end preparation machine	Pc.	1	1	1	1
Transportation case	Pc.	1	1	1	1
Clamping chuck	Pc.	1	1	1	1
Clamping sets each with 3 clamping wedges	Pc.	5	5	6	6
Cutting lubrication KSS-TOP (Code 790 060 226)	Spray pump	1	1	1	1
Tool set	Set	1	1	1	1
Operating instructions and spare parts list	Set	1	1	1	1



REB on the workbench



Portable with an integral carrying handle

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

\* It is possible to extend the dimensions by using the optional clamping wedges (accessories).



REB 6 Pneumatic



REB 6 Electric



REB 14 Pneumatic



REB 14 Electric

## Pipe end preparation machines

### REB 6, REB 14

Features, application range, technical data and scope of delivery, see from page 63.

Tool holder and multifunctional tools must be ordered separately, see from page 66.

ARTICLE	VERSION	CODE		WEIGHT OF MACHINE KG	DISPATCH WEIGHT KG
REB 6	Pneumatic	790 093 001		32.000	52.000
REB 6	230 V, 50/60 Hz EU	790 093 002		35.000	55.000
REB 6	120 V, 50/60 Hz US	790 093 005		35.000	55.000
REB 14	Pneumatic	790 094 001		61.000	90.000
REB 14	230 V, 50/60 Hz EU	790 094 002		64.000	93.000
REB 14	120 V, 50/60 Hz US	790 094 005		64.000	93.000

### Suitable accessories

- Tool holder WH, see page 66
- Multifunctional tools MFW, see page 67
- Combination possibilities of tool holder and multifunctional tools, see page 72
- Mobile air unit DWE 10 and air hose with quick coupling, see page 70
- Cutting lubrication KSS-TOP, see page 70
- Elbow clamping system, see page 70
- Clamping sets, see page 71
- Plastic (POM) clamping shell segments, see page 71
- ID tracking for REB 14, see page 71
- Collapsible work bench, see page 90
- Pipe vice, see page 90



REB 6 Electric



REB 14 Pneumatic

## Accessories for BRB and REB machines

### Tool holder WH

With Torx screw. Combination possibilities of tool holder and multifunctional tools, see page 72.

ARTICLE	WELD PREP PROFILE	APPLICABLE WITH	HEIGHT [MM]	HEIGHT [INCH]	CODE		KG
WH5-I	I	BRB 2 / REB	10	0.394	790 085 230		0.005
WH4-I*	I	BRB 2	10	0.394	790 085 234		0.033
WH12-I	I	BRB 4	20	0.787	790 086 210		0.035
WH12-I / short	I	BRB 2 / BRB 4	14	0.551	790 086 281		0.032
WH15-I	I	BRB 4 / REB	20	0.787	790 092 202		0.100
WH15-I	I	BRB 4 / REB	27	1.063	790 092 204		0.100
WH15-I**	I	BRB 4 / REB	16.5 - 23	0.650 - 0.906	790 093 410		0.247
WH30-I	I	REB	20	0.787	790 093 202		0.166
WH30-I	I	REB	27	1.063	790 093 204		0.235
WH5-V-30°	V/Y	BRB 2	-	-	790 085 236		0.015
WH12-V-30°	V/Y	BRB 4	-	-	790 086 214		0.040
WH12-V-30° / short	V	BRB 2 / BRB 4	-	-	790 086 282		0.036
WH12-V-37.5°	V/Y	BRB 4	-	-	790 086 216		0.040
WH12-V-45°	V/Y	BRB 4	-	-	790 086 474		0.052
WH12-V-80°	V/Y	BRB 4 / REB	-	-	790 093 462		0.115
WH12-V-35°	V/Y	BRB 4	-	-	790 086 272		0.048
WH15-V-30°	V/Y	BRB 4 / REB	-	-	790 092 210		0.100
WH15-V-37.5°	V/Y	BRB 4 / REB	-	-	790 092 216		0.100
WH12-V-37.5° / short	V	BRB 2 / BRB 4	-	-	790 086 283		0.035
WH15-V-45°	V/Y	BRB 4 / REB	-	-	790 092 218		0.144
WH15-V-60°	V/Y	BRB 4 / REB	-	-	790 092 212		0.100
WH30-V-15°	V/Y	REB	-	-	790 093 468		0.200
WH30-V-25°	V/Y	REB	-	-	790 093 476		0.209
WH30-V-30°	V/Y	REB	-	-	790 093 210		0.192
WH30-V-32.5°	V/Y	REB	-	-	790 093 424		0.234
WH30-V-37.5°	V/Y	REB	-	-	790 093 216		0.199
WH30-V-40°	V/Y	REB	-	-	790 093 510		0.237
WH30-V-45°	V/Y	REB	-	-	790 093 404		0.204
WH5-U-20°	U	BRB 2	-	-	790 085 228		0.014
WH12-U-10°	U	BRB 4	-	-	790 086 208		0.044
WH12-U-15°	U	BRB 4 / REB	-	-	790 086 213		0.044
WH12-U-20°	U	BRB 4	-	-	790 086 224		0.047
WH12-U-20° / large clamping surface	U	BRB 4 / REB	-	-	790 086 476		0.091
WH12-U-25°	U	BRB 4	-	-	790 086 212		0.051
WH30-U-5°	U	REB	-	-	790 093 509		0.210
WH30-U-7°	U	BRB 4 / REB	-	-	790 093 408		0.206
WH30-U-10°	U	BRB 4 / REB	-	-	790 093 220		0.174
WH30-U-14°	U	REB	-	-	790 093 474		0.190
WH30-U-20°	U	BRB 4 / REB	-	-	790 093 218		0.184
WH30-U-25°	U	REB	-	-	790 093 478		0.165
WH5-ID-14° / 10 mm (0.394") deep	ID	BRB 2	-	-	790 085 232		0.017
WH5-ID-14°	ID	BRB 4 / REB	-	-	790 093 406		0.139
WH5-ID-45°***	ID	BRB 2 / BRB 4 / REB	-	-	790 086 218		0.055
WH10-ID-5° / short	ID	BRB 4 / REB	-	-	790 093 398		0.135
WH10-ID-5° / long	ID	BRB 4 / REB	-	-	790 093 400		0.152
WH10-ID-14°	ID	BRB 4 / REB	-	-	790 093 402		0.160
WH10-ID-14° / 30 mm (1.181") deep	ID	BRB 4 / REB	-	-	790 093 466		0.265
WH12-ID-10° / from ID 50 (1.969")	ID	BRB 4 / REB	-	-	790 086 280		0.060
WH10-ID-30°	ID	BRB 4 / REB	-	-	790 093 493		0.100
WH10-ID-45°	ID	REB	-	-	790 093 494		0.107
WH10-ID-80°***	ID	BRB 2 / BRB 4	-	-	790 086 275		0.075

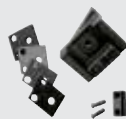
\* Special tool holder for facing pipes in pipe plates.

\*\* Adjustable tool holder WH for I-prep. Comes with adjustable tool holder, multifunctional tool MFW15-V/I-4 (Code 790 093 037), Torx screws and adjusting plates.

\*\*\* Special tool holder WH for cutting tubes from tube sheets.



WH12-I



WH15-I\*\*



WH15-V-30°



WH12-U-15°



WH5-ID-14°

## Multifunctional tools MFW "Economy"

**Two- or four-sided tool bits without coating.**

For low-alloy steel, carbon steel, aluminum and cast iron pipes.

ARTICLE	VERSION	FOR WALL THICKNESS		APPLICABLE WITH TOOL HOLDER / FOR WELD PREP PROFILE	APPLICABLE WITH	CODE		KG
		[MM]	[INCH]					
MFW15-V/I-4	Economy	2 - 15	0.079-0.591	V, Y, I	BRB 4 / REB	790 093 047		0.033
MFW30-V/I-4	Economy	2 - 30	0.079-1.181	V, Y, I	REB	790 093 043		0.055

## Multifunctional tools MFW "High-Performance"

**Two- and/or four-sided tool bits with high-performance protective coating against tool wear.**

For high-alloy steel (stainless steel) low-alloy steel, carbon steel, aluminum and cast iron pipes.

ARTICLE	VERSION	FOR WALL THICKNESS		APPLICABLE WITH TOOL HOLDER / FOR WELD PREP PROFILE	APPLICABLE WITH	CODE		KG
		[MM]	[INCH]					
MFW5-U-2-R0.4	High-Performance	max. 6	max. 0.236	WH5-I and WH5-U-20° radius 0.4 mm	BRB 2	790 085 030		0.002
MFW5-U-2-R2	High-Performance	max. 6	max. 0.236	WH5-I and WH5-U-20° radius 2 mm	BRB 2	790 085 032		0.002
MFW30-V / I-4	High-Performance	2 - 30	0.079 - 1.181	V, Y, I	REB	790 093 033		0.055
MFW30-U-4-R5	High-Performance	2 - 30	0.079 - 1.181	V, Y, I, U radius 5 mm	REB	790 093 034		0.055
MFW30-U-4-R2	High-Performance	2 - 30	0.079 - 1.181	V, Y, I, U radius 2 mm	REB	790 093 035		0.060
MFW30-U-4-R0.4	High-Performance	2 - 30	0.079 - 1.181	V, Y, I, U radius 0.4 mm	REB	790 093 042		0.060
MFW4-I-2	High-Performance	max. 4	max. 0.157	WH4-I-2 (special holder)	BRB 2	790 085 031		0.002
MFW15-V / I-4	High-Performance	2 - 15	0.079 - 0.591	V, Y, I	BRB 4 / REB	790 093 037		0.055
MFW12-V / I-2	High-Performance	2 - 12	0.079 - 0.472	V, Y, I, U radius 1.2 mm	BRB 4	790 086 060		0.003
MFW12-U-2-R2	High-Performance	2 - 12	0.079 - 0.472	V, Y, I, U radius 2 mm	BRB 4	790 086 064		0.003
MFW5-ID-2-R0.4 (14°)	High-Performance	-	-	WH5-ID-14° radius 0.4 mm	BRB 4 / REB	790 093 039		0.003
MFW5-ID-2-R0.4 (45°)	High-Performance	-	-	WH5-ID-45° radius 0.4 mm	BRB 4 / REB	790 086 061		0.002
MFW10-ID-2-R0.4 (80°)	High-Performance	-	-	WH10-ID-80° radius 0.4 mm	BRB 4	790 086 062		0.002
MFW10-ID-2-R0.8 (14°)	High-Performance	-	-	WH10-ID-14° radius 0.8 mm	REB	790 093 038		0.002
MFW10-ID-2-R3 (14°)	High-Performance	-	-	WH10-ID-14° radius 3 mm	REB	790 093 041		0.004

## Tool bits TB

Can only be used with the BRB 2 and BRB 2 FullAuto.

With a width of only 4.5 mm (0.177") the tool bits are ideal for shortening heat exchanger pipes. This allows even heat exchangers with minimal pipe spacing to be processed without problems. The opposing tool holders or cutting edges furthermore ensure improved force transmission.

The corresponding **tool retainer for tool bits** is already included in the scope of delivery at the BRB 2 FullAuto. At the BRB 2 it has to be ordered separately (see below).

ARTICLE	WELD PREP PROFILE	APPLICABLE WITH	WIDTH [MM]	WIDTH [INCH]	PREP ANGLE [°]	CODE		KG
TB4.5-I	I	BRB 2 / BRB 2 FullAuto	4.5	0.177	-	790 085 500		0.012
TB4.5-V-30°	V	BRB 2 / BRB 2 FullAuto	4.5	0.177	30	790 085 501		0.014
TB4.5-V-37.5°	V	BRB 2 / BRB 2 FullAuto	4.5	0.177	37.5	790 085 502		0.015
TB4.5-V-45°	V	BRB 2 / BRB 2 FullAuto	4.5	0.177	45	790 085 503		0.015
TB6-REMOVE-45°	-	BRB 2 / BRB 2 FullAuto	6.0	0.236	45	790 085 504		0.012



MFW15-V/I-4 "Economy"



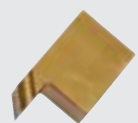
MFW30-U-4-R1



MFW15-V / I-4



MFW5-ID-2-R0.4 (14°)



Tool bits TB



Tool holder for tool bits TB


Tool retainer for tool combinations  
WH/MFW


Upgrade set BRB Standard "dimension extension"



Feed ratchet for BRB 4

## Tool holder for tool bits TB

Already included in the scope of delivery of the **BRB 2 FullAuto**.  
This tool retainer is available separately for the **BRB 2**.

Depending on the application (for example the processing of heat exchangers) the use of tool bits (page 67) as well as the corresponding tool retainer is required.  
This retainer can be mounted on the BRB 2 and BRB 2 FullAuto in just a few steps.

ARTICLE	CODE		KG
Tool holder for tool bits	790 085 510		0.235

## Tool retainer for tool combinations WH/MFW

Already included in the scope of delivery of the **BRB 2**.  
This tool retainer is available separately for the **BRB 2 FullAuto**.

Depending on the application, the use of conventional tool holders (see page 66) and multifunctional tools (page 67) as well as the associated tool retainer is required. This holder can be mounted on the BRB 2 and BRB 2 FullAuto in just a few steps.

Advantages:

- Only one multifunctional tool required for different types of processing (beveling, squaring), different pipe wall thickness and different pipe materials
- High-performance coated tool bits with up to 4 cutting edges
- Up to 3 tools can be used simultaneously

ARTICLE	CODE		KG
Tool retainer for tool combinations WH/MFW	790 085 261		0.300

## Upgrade sets BRB 2 for dimension extension

For dimension extension of BRB 2 machines through upgrading from Kit 2 to Kit 1 (BRB 2 Standard) or from Kit 1 to Kit 2 (BRB 2 NC).

MACHINE, CLAMPING SYSTEM	UPGRADING FROM KIT TO KIT	MANDREL Ø		TOOL RETAINER Ø		DIMENSION EXTENSION TO			
						TUBE ID		TUBE OD	
		[MM]	[INCH]	[MM]	[INCH]	[MM]	[INCH]	[MM]	[INCH]
BRB 2, Standard	Kit 2 > Kit 1	12.75	0.500	50.0	1.968	12.75 - 25.5	0.500 - 1.004	16.75 - 41.5	0.659 - 1.634
BRB 2, NC	Kit 1 > Kit 2	19.05	0.750	50.0 / 16.0	1.969 / 0.630	19.1 - 47.0	0.752 - 1.850	23.0 - 62.0	0.906 - 2.441

ARTICLE	CODE		KG
Upgrade set BRB 2, Standard "Kit 2 to Kit 1"	790 085 017		0.800
Upgrade set BRB 2, NC "Kit 1 to Kit 2"	790 185 018		1.870

## Feed ratchet for BRB 4

Especially designed for cramped working spaces, for example when cutting out finned tubes.

ARTICLE	CODE		KG
Feed ratchet for BRB 4	790 086 127		0.420



## Balancer spring and hoist brackets

For load-free hanging of BRB machines with a balancer. Ideal for series machining! Using a balancer enables optimal machining results from relaxed and fatigue-free work with longer work duration, and at the same time ensures more safety for the user (machine is safeguarded from falling).

### Hoist brackets

BRB machines which have been manufactured up to October 2009 can be retrofitted with the suitable hoist brackets. All new models are already equipped with the hoist bracket.



Balancer spring and hoist bracket

ARTICLE	CODE		KG
Balancer spring	832 030 002		3.800
Hoist bracket for BRB 4	790 086 310		0.270
Hoist bracket for BRB 2	790 085 310		0.185

## Bevel cutter heads for BRB 2 (V-/Y-prep)

**Optimized work, smoother and steadier cutting.** Including adjustable tool holder. The bevel cutter heads can be replaced like a tool mounting plate. They are available for several prep angles. The bevel cutter heads can be adapted to all machines (even older models).

### Scope of delivery:

- 2 Multifunctional tools (MFW-12-V/I-2, Code 790 086 060)
- 2 Tool bits (tool bit R4.5-I, Code 790 085 390)
- 2 Torx screws
- 6 Threaded pins
- 3 Fastening screws each, M5x16



Bevel cutter heads for BRB 2

ARTICLE	APPLICATION RANGE				CODE		KG
	KIT 1 (ID MIN. – OD MAX.)		KIT 2 (ID MIN. – OD MAX.)				
	[MM]	[INCH]	[MM]	[INCH]			
Bevel cutter head 30°	16 - 46	0.630 - 1.810	-	-	790 085 380		-
Bevel cutter head 37.5°	16 - 36	0.630 - 1.420	-	-	790 085 381		0.316
Bevel cutter head 45°	16 - 33	0.630 - 1.300	-	-	790 085 382		0.330
Bevel cutter head 30°	-	-	19 - 43	0.750 - 1.690	790 085 383		0.360
Bevel cutter head 37.5°	-	-	19 - 39	0.750 - 1.540	790 085 384		-
Bevel cutter head 45°	-	-	19 - 36	0.750 - 1.420	790 085 385		0.356

## Bevel cutter heads for BRB 4 (V-prep)

**The bevel cutter heads with 3 cutting edges provide considerable advantages for heavy chip removal, e.g. for welded material.** The bevel cutter heads can be replaced like a tool mounting plate. They are available for various prep angles and can be adapted to all machines (even older models).

### Scope of delivery:

- 3 Multifunctional tools (MFW-12-V/I-2, Code 790 086 060; MFW-P-2, Code 790 038 314 on request)
- 3 Torx screws
- 3 Fastening screws each, M6x16



Bevel cutter heads for BRB 4

ARTICLE	APPLICATION RANGE	WALL THICKNESS MAX.		CODE		KG
		[MM]	[INCH]			
Bevel cutter head 30°	ID 36 mm to OD 78 mm (1.417 - 3.071") in 3 steps of 5 mm (0.197") distance	10	0.394	790 086 500		0.465
Bevel cutter head 45°	ID 45 mm to OD 73 mm (1.772 - 2.874") in 2 steps of 5 mm (0.197") distance	10	0.394	790 086 459		0.515

### PIPE BEVELING TECHNOLOGY



Adjustable spacer



Mobile air unit DWE 10



Air hose with quick coupling



Cutting lubrication KSS-TOP



Elbow clamping system

## Adjustable spacer

**For BRB machines. The adjustable spacer ensures a constant and repeatable depth machining of boiler pipes, etc.** Flexibly adjustable.

ARTICLE	CODE		KG
Adjustable spacer for BRB 2	790 085 055		0.513

## Mobile air unit DWE 10

**Lubricator and air filter adjustable pressure range 0-10 bar, flow max. 2.6 m<sup>3</sup>/min (91.8 cfm).** Air inlet side: 1/2" clutch coupling (DIN 3481). Air outlet side: 1/2" quick coupling. Suitable for air hose 790 093 061.

ARTICLE	CODE		KG
Mobile air unit DWE 10	790 093 060		4.200

## Air hose with quick coupling

**To connect the REB or BRB machine with the mobile air unit DWE 10.** Length: 4 m (157.5"). ID: 19.1 mm (0.752"). Air inlet side: 1/2" quick coupling. Air outlet side: 90° angle screw with 1/2" quick coupling and a nipple to screw into the speed regulation handle on REB or BRB.

ARTICLE	CODE		KG
Air hose with quick coupling	790 093 061		2.000

## Cutting lubrication KSS-TOP

**The water soluble, fully synthetic cooling fluid extends the tool life of the tool bits.** Is well corrosion resistant. Developed conforming to drinking water requirements according to DVGW work sheet W521 (thread cutting compounds for drinking water installations) and basically complies with these specifications. Is biologically degradable (OECD 302 B).

ARTICLE	VERSION	CODE		KG
Cutting lubrication KSS-TOP	Spray pump with 500 ml	790 060 226		0.630
Cutting lubrication KSS-TOP refill canister	Canister with 10 l	790 060 227		11.000

## Elbow clamping system

For preparing elbows with the REB 6 with an ID of 75 - 157 mm (2.95" - 6.18").

### Scope of delivery:

- 1 Durable storage and shipping case
- 1 Mandrel with clamping mechanism for elbows
- 1 Straightening tool
- 8 Sets with 3 pins for dimension range 75 - 157 mm (2.953" - 6.181")

ARTICLE	CODE		KG
Elbow clamping system for REB 6 complete	790 093 015		9.900

## PIPE BEVELING TECHNOLOGY

## Optional clamping wedges

To extend the dimension of the REB standard machines.

ARTICLE	APPLICABLE WITH	TUBE ID [MM]	TUBE ID [INCH]	CODE		KG
Clamping sets	REB 6	155 - 166	6.102 - 6.535	<b>790 093 295</b>		1.300
Clamping sets	REB 14	320 - 339	12.598 - 13.346	<b>790 094 189</b>		3.600
Clamping sets	REB 14	331 - 350	13.031 - 13.780	<b>790 094 190</b>		3.850



Optional clamping wedges

## Plastic (POM) clamping shell segments

**Customized plastic (POM) clamping shell segments for REB 6 and REB 14 for thin-walled pipes. Deformation-free clamping system.** These clamping shell segments are especially manufactured for an individual ID of a pipe and can be utilized only for this diameter. Please specify the exact pipe ID with your order.

### Scope of delivery:

- 6 Cylinder head screws
- 3 Clamping wedges
- 3 Plastic (POM) clamping shell segments



Plastic (POM) clamping shell segments

ARTICLE	APPLICABLE WITH	TUBE ID [MM]	TUBE ID [INCH]	CODE		KG
Plastic clamping shell segment	REB 6	108.2 - 110.1	4.260 - 4.335	<b>790 093 297</b>		1.600
Plastic clamping shell segment	REB 6	147.0 - 149.0	5.787 - 5.866	<b>790 093 298</b>		1.905
Plastic clamping shell segment	REB 14	160.0	6.299	<b>790 094 203</b>		3.700
Plastic clamping shell segment	REB 14	161.5 - 162.7	6.358 - 6.406	<b>790 094 202</b>		3.800
Plastic clamping shell segment	REB 14	211.6 - 213.5	8.331 - 8.401	<b>790 094 206</b>		5.600
Plastic clamping shell segment	REB 14	227.58	8.960	<b>790 094 198</b>		5.880
Plastic clamping shell segment	REB 14	250.0	9.843	<b>790 094 208</b>		5.600
Plastic clamping shell segment	REB 14	264.7 - 266.2	10.421 - 10.480	<b>790 094 210</b>		5.600
Plastic clamping shell segment	REB 14	314.7 - 315.9	12.390 - 12.437	<b>790 094 222</b>		4.100
Plastic clamping shell segment	REB 14	342.9	13.500	<b>790 094 226</b>		4.800
Plastic clamping shell segment	REB 14	347.7	13.689	<b>790 094 224</b>		4.750

## ID tracking for REB 14

**The REB ID tracking can be used to prepare thin-walled, large-scale pipes for welding, where precise pipe end preparation and an exact base height are required.** The module measures the pipe ID. The force of the spring on the inside diameter ensures that the roller "tracks" any irregularities of the pipe, producing a weld prep exactly in accordance with the ID. Thus maintaining a perfect weld prep. All weld preparations such as V-, Y- and U-preps can be realized with the ID tracking module.

### Scope of delivery:

- ID tracking module
- Mount for plane
- Assembly instructions



ID tracking for REB 14

APPLICATION RANGE	[MM]	[INCH]
Tube ID	150 - 320	5.910 - 12.600
Wall thickness max.	15	0.591

ARTICLE	CODE		KG
ID tracking for REB 14	<b>790 094 013</b>		5.750

## PIPE BEVELING TECHNOLOGY

# Combination possibilities of tool holder WH and multifunctional tools MFW for REB and BRB machines

CODE	TOOL HOLDER	TORX SCREWS	SUITABLE MULTIFUNCTIONAL TOOLS
<b>Tools for "I-prep"</b>			
790 085 234	WH 4-I	790 085 244	790 085 031 with R 0
790 085 230	WH 5-I	790 093 224	790 085 030 with R 0.4
790 086 210	WH 12-I-H 20 mm	790 086 220	790 086 060 with R 1.2
790 086 281	WH 12-I / short	790 086 220	790 086 060 with R 1.2
790 092 202	WH 15-I-H 20 mm	790 093 226	790 093 037 with R 0
790 092 204	WH 15-I-H 27 mm	790 093 226	790 093 037 with R 0
790 093 202	WH 30-I-H 20 mm	790 093 226	790 093 033 with R 0
790 093 204	WH 30-I-H 27 mm	790 093 226	790 093 033 with R 0
790 093 410	WH 15-I-H 16.5-23 mm (adjustable)	790 093 226 / 790 093 425	790 093 037 with R 0
<b>Tools for "V-prep" and "Y-prep"</b>			
790 085 236	WH 5-V-30°	790 093 224	790 085 030 with R 0.4
790 086 214	WH 12-V-30°	790 086 220	790 086 060 with R 1.2
790 086 282	WH 12-V-30° / short	790 086 220	790 086 060 with R 1.2
790 086 272	WH 12-V-35°	790 086 220	790 086 060 with R 1.2
790 086 216	WH 12-V-37.5°	790 086 220	790 086 060 with R 1.2
790 086 283	WH 12-V-37.5° / short	790 086 220	790 086 060 with R 1.2
790 086 474	WH 12-V-45°	790 086 022	790 086 060 with R 1.2
790 093 462	WH 12-V-80°	790 086 220	790 086 060 with R 1.2
790 092 210	WH 15-V-30°	790 093 226	790 093 037 with R 0 / 790 093 047
790 092 216	WH 15-V-37.5°	790 093 226	790 093 037 with R 0 / 790 093 047
790 092 218	WH 15-V-45°	790 093 226	790 093 037 with R 0 / 790 093 047
790 092 212	WH 15-V-60°	790 093 226	790 093 037 with R 0 / 790 093 047
790 093 468	WH 30-V-15°	790 093 226	790 093 033 with R 0 / 790 093 043
790 093 476	WH 30-V/U-25°	790 093 226	790 093 033 with R 0 / 790 093 043
790 093 210	WH 30-V-30°	790 093 226	790 093 033 with R 0 / 790 093 043
790 093 424	WH 30-V-32.5°	790 093 226	790 093 033 with R 0 / 790 093 043
790 093 216	WH 30-V-37.5°	790 093 226	790 093 033 with R 0 / 790 093 043
790 093 404	WH 30-V-45°	790 093 226	790 093 033 with R 0 / 790 093 043
790 093 470	WH 30-V-50°	790 093 226	790 093 033 with R 0 / 790 093 043
790 093 472	WH 30-V-55°	790 093 226	790 093 033 with R 0 / 790 093 043
<b>Tools for "U-prep"</b>			
790 085 228	WH 5-U-20°	790 093 224	790 085 030 with R 0.4
790 086 208	WH 12-U-10°	790 086 220	790 086 060 with R 1.2 / 790 086 064 with R 2
790 086 213	WH 12-U-15°	790 086 220	790 086 060 with R 1.2 / 790 086 064 with R 2
790 086 224	WH 12-U-20°	790 086 220	790 086 060 with R 1.2 / 790 086 064 with R 2
790 086 476	WH 12-U-20° large clamping surface	790 086 220	790 086 060 with R 1.2 / 790 086 064 with R 2
790 086 212	WH 12-U-25°	790 086 220	790 086 060 with R 1.2 / 790 086 064 with R 2
790 093 408	WH 30-U-7°	790 093 226	790 093 034 with R 5 / 790 093 035 with R 2
790 093 220	WH 30-U-10°	790 093 226	790 093 034 with R 5 / 790 093 035 with R 2
790 093 474	WH 30-U-14°	790 093 226	790 093 034 with R 5 / 790 093 035 with R 2
790 093 468	WH 30-V/U-15°	790 093 226	790 093 034 with R 5 / 790 093 035 with R 2
790 093 218	WH 30-U-20°	790 093 226	790 093 034 with R 5 / 790 093 035 with R 2
790 093 478	WH 30-U-25°	790 093 226	790 093 034 with R 5 / 790 093 035 with R 2
<b>Tools for "beveling / counterboring"</b>			
790 085 232	WH 5-ID-14°	790 093 224	790 093 039 with R 0.4
790 093 406	WH 5-ID-14°	790 093 224	790 093 039 with R 0.4
790 086 218	WH 5-ID-45°	790 093 224	790 086 061 with R 0.4
790 093 398	WH 10-ID-5° / short	790 093 225	790 093 038 with R 0.8 / 790 093 041 with R 3
790 093 400	WH 10-ID-5° / long	790 093 225	790 093 038 with R 0.8 / 790 093 041 with R 3
790 093 402	WH 10-ID-14°	790 093 225	790 093 038 with R 0.8 / 790 093 041 with R 3
790 093 466	WH 10-ID-14° / 30 mm (1.181") deep	790 093 225	790 093 038 with R 0.8 / 790 093 041 with R 3
790 086 296	WH 10-ID-60°	790 093 225	790 093 038 with R 0.8 / 790 093 041 with R 3
790 086 275	WH 10-ID-80°	790 086 220	790 086 062 with R 0.4
790 086 280	WH 12-ID-10° / from ID 50 (1.969")	790 086 217	790 086 060 with R 1.2
790 093 494	WH 10-ID-45°	790 086 220	790 093 040 with R 0.8
790 093 493	WH 10-ID-30°	790 086 220	790 093 040 with R 0.8

## Application range of tool holder for J-prep

		BRB 2 Mandrel Ø 12.7 WZT Ø 51		BRB 2 Mandrel Ø 19 WZT Ø 51		BRB 4 Mandrel Ø 19 WZT Ø 68		BRB 4 Mandrel Ø 32 WZT Ø 68		BRB 4 Mandrel Ø 32 WZT Ø 90		BRB 4 Mandrel Ø 32 WZT Ø 120		REB 6 Mandrel Ø 40 WZT Ø 183		REB 14 Mandrel Ø 63 WZT Ø 375	
Max. ID with a height of land 1 mm (0.039")																	
Code	Description	ID max. [mm]	ID min. [mm]	ID max. [mm]	ID min. [mm]	ID max. [mm]	ID min. [mm]	ID max. [mm]	ID min. [mm]	ID max. [mm]	ID min. [mm]	ID max. [mm]	ID min. [mm]	ID max. [mm]	ID min. [mm]	ID max. [mm]	ID min. [mm]
790 085 228	WH 5-U-20°	34	15	38	21	-	-	-	-	-	-	104	34	159	49	320	65
790 093 220	WH 30-U-10°	-	-	-	-	-	-	-	-	-	-	58	34	121	49	313	65
790 093 474	WH 30-U-14°	-	-	-	-	-	-	-	-	-	-	58	34	121	49	313	65
790 093 468	WH 30-V/U-15°	-	-	-	-	-	-	-	-	-	-	58	34	121	49	313	65
790 093 218	WH 30-U-20°	-	-	-	-	-	-	-	-	-	-	58	34	121	49	313	65
790 093 478	WH 30-U-25°	-	-	-	-	-	-	-	-	-	-	58	34	121	49	313	65
790 093 408	WH 30-U-7°	-	-	-	-	-	-	-	-	-	-	58	34	121	49	313	65
790 086 208	WH 12-U-10°	-	-	-	-	32	21	-	-	54	34	84	34	147	49	320	65
790 086 224	WH 12-U-20°	-	-	-	-	32	21	-	-	54	34	84	34	147	49	320	65
790 086 212	WH 12-U-25°	-	-	-	-	32	21	-	-	54	34	84	34	147	49	320	65

## Application range of tool holders for counterboring

Counterboring		BRB 2 Mandrel Ø 12.7 WZT Ø 51		BRB 2 Mandrel Ø 19 WZT Ø 51		BRB 4 Mandrel Ø 19 WZT Ø 68		BRB 4 Mandrel Ø 32 WZT Ø 68		BRB 4 Mandrel Ø 32 WZT Ø 90		BRB 4 Mandrel Ø 32 WZT Ø 120		REB 6 Mandrel Ø 40 WZT Ø 183		REB 14 Mandrel Ø 63 WZT Ø 375	
Workable pipe inner diameter (0.5 mm / 0.020" safe distance to mandrel)																	
Code	Description	ID max. [mm]	ID min. [mm]	ID max. [mm]	ID min. [mm]	ID max. [mm]	ID min. [mm]	ID max. [mm]	ID min. [mm]	ID max. [mm]	ID min. [mm]	ID max. [mm]	ID min. [mm]	ID max. [mm]	ID min. [mm]	ID max. [mm]	ID min. [mm]
790 085 232	WH 5-ID-14°/ 10 mm deep	38	27	38	36	55	36	55	42	77	42	107	42	159	53	320	92
790 093 398	WH 10-ID-5° / short	-	-	-	-	-	-	-	-	72	59	105	61	159	71	320	95
790 093 400	WH 10-ID-5° / long	-	-	-	-	-	-	-	-	72	59	105	61	159	71	320	95
790 093 402	WH 10-ID-14°	-	-	-	-	-	-	-	-	72	59	105	61	159	71	320	95
790 093 406	WH 5-ID-14°	-	-	-	-	-	-	-	-	60	39	96	43	159	60	320	92
790 093 466	WH 10-ID-14° / 30 mm (1.181") deep	-	-	-	-	-	-	-	-	61	53	105	61	159	78	320	101
790 086 218	WH 5-ID-45°	24	20*	37	24	49	27	49	37	40	40	107	37	159	58	320	92
Application range of tool holders for facing																	
790 086 275	WH 10-ID-80°	41	37	41	43	58	43	58	56	80	56	110	56	159	64	320	92

\* With diameter 20 mm: max. length of bevel 4 - 5 mm (0.157" - 0.197").

### Abbreviations:

WH = Tool holder

WZT = Tool support / Tool retainer



## Length of land with the use of tool holder for facing 790 092 202 / 790 093 202 and 790 086 210

Code	Description (X)	MFW 12-V/I-2- R1.2 790 086 060	MFW 30-U-4- R2 790 093 035	MFW 30-U-4- R5 790 093 034
		Length of land (X1)		
790 085 228	WH 5-U-20°	-	-	-
790 093 218	WH 30-U-20°	-	1.4 mm	0 mm
790 093 220	WH 30-U-10°	-	2.5 mm	0.5 mm
790 093 408	WH 30-U-7°	-	3.8 mm	1.1 mm
790 093 474	WH 30-U-14°	-	2.3 mm	0 mm
790 093 478	WH 30-U-25°	-	1.1 mm	0 mm
790 086 208	WH 12-U-10°	1.5 mm	-	-
790 086 212	WH 12-U-25°	1.5 mm	-	-
790 086 224	WH 12-U-20°	1.5 mm	-	-

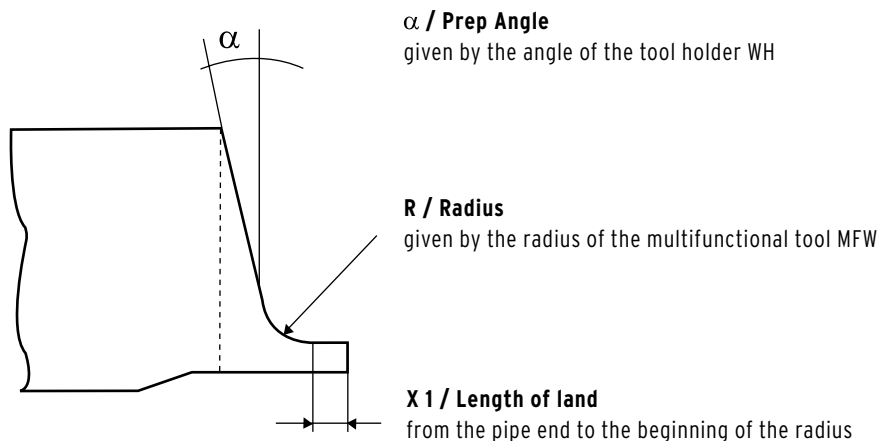
## Length of land with the use of tool holder for facing 790 093 410 (adjustable)

Code	Description (X)	MFW 12-V/I-2- R1.2 790 086 060	MFW 30-U-4- R2 790 093 035	MFW 30-U-4- R5 790 093 034
		Length of land (X1)		
790 093 408	WH 30-U-7°	-	1 - 7 mm	0 - 2.5 mm
790 093 220	WH 30-U-10°	-	0 - 6 mm	0 - 3 mm
790 093 474	WH 30-U-14°	-	0 - 6.5 mm	0 - 1 mm
790 093 218	WH 30-U-20°	-	0 - 5 mm	0 - 3.5 mm
790 093 478	WH 30-U-25°	-	0 - 5 mm	0 - 1 mm
790 086 208	WH 12-U-10°	0 - 5 mm	-	-
790 086 224	WH 12-U-20°	0 - 5 mm	-	-
790 086 212	WH 12-U-25°	0 - 5 mm	-	-

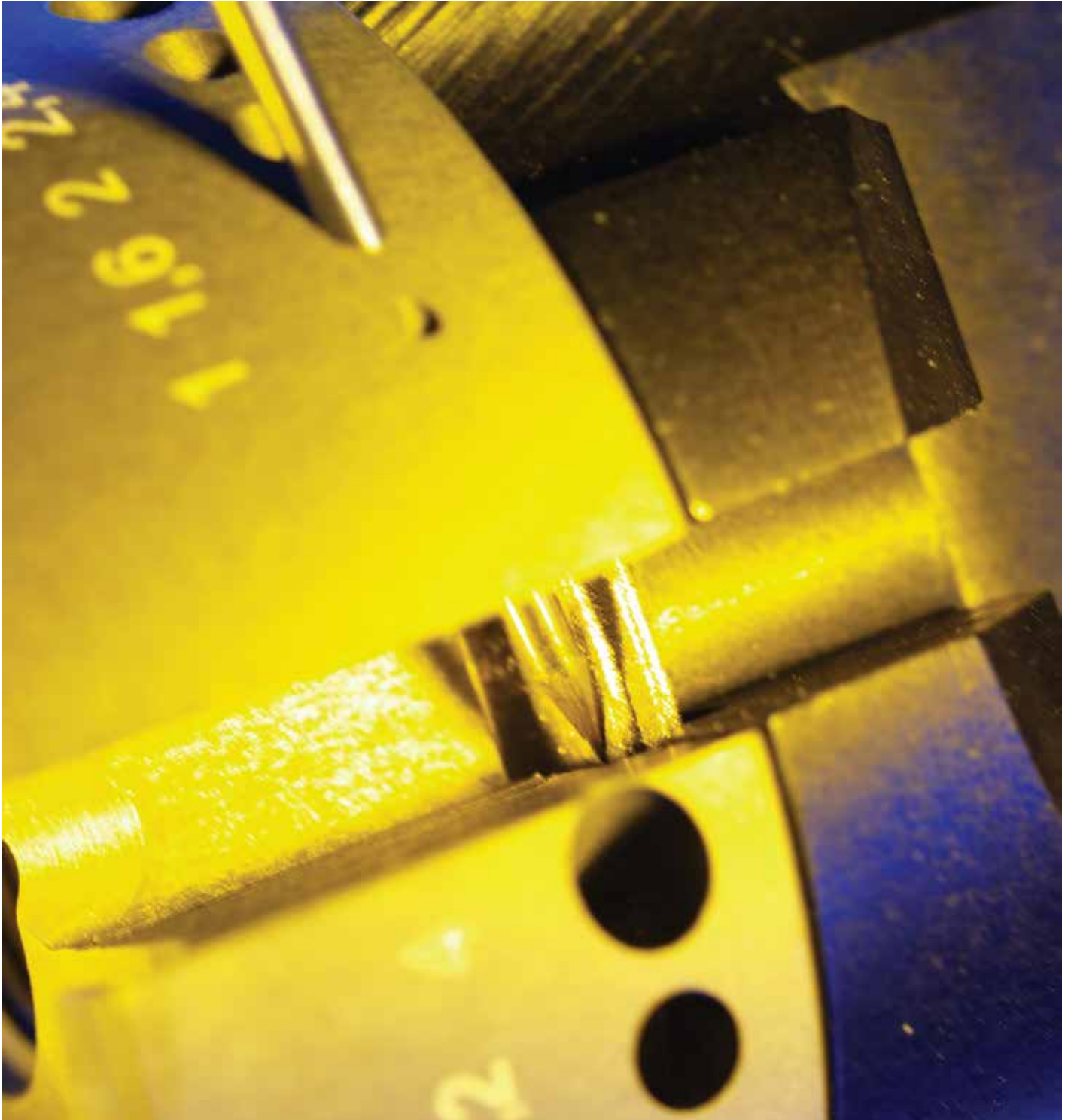
### Abbreviations:

WH = Tool holder

WZT = Tool support / Tool retainer



# Tungsten Grinding Technology



## Orbital welding systems and accessories for high-purity process piping from Orbitalum Tools.



E.g. compact power supplies for mechanized TIG orbital welding with a currently unique operating concept and a whole series of other special technical features. In connection with an ORBITALUM orbital weld head, the user is being offered an extremely innovative and economical welding system.

Please ask for our separate catalogue to learn more about this and other products for orbital welding.

# ESG MAX, ESG Plus, ESG Plus<sup>2</sup>

## Tungsten grinders

The best solution for a precise and fast preparation of tungsten electrodes.

The perfect hand-held grinder for cutting, grinding and planing electrodes which are used in WIG/TIG welding machines. Consider country-specific regulations, standards and guidelines when using tungsten electrodes with thorium.



### The powerful hand-tungsten-grinder for grinding, facing and cutting.

One machine - complete electrode preparation:

- Grinding electrodes:
  - 4 different angles
  - 6 different electrode sizes
- Facing electrodes
- Cutting electrodes

The machines are available with a high-quality and powerful drive with 230 Volt and/or 110 Volt. Machines and accessories are delivered in a durable storage and shipping case.

- Repeatable points every time due to preset grinding angles
- Easy and fast to use
- Optimum preparation for orbital and manual welding
- Longitudinal grinding for optimum arc ignition

- and excellent arc stability
- Guarantees longer tool life and ease of ignition of the tungsten electrode
- Specially designed for one-off jobs on site
- Compact design, optimum resilience and perfect reproducibility
- Solid, functional design
- Precise orbital grinding
- Facility for easy trimming of the electrodes (optional)
- External dust extractor can be easily adapted
- Short preparation times with high grinding performance
- No adjustment needs to be done before operation

### ADDITIONAL FEATURES ESG MAX:

- Lateral adjustment of the head for increased service life of the grinding wheel
- Grinding head with 72 holes: 36 holes for the

grinding wheel with coarse grain, 36 holes for the grinding wheel with fine grain and cutting edge

- Continuously adjustable cutting device from 9.0 to 34.5 mm / 0.354" to 1.358" (available option)
- Including dust protection against grinding dust
- Adapter for extraction device for up to 96% less grinding dust particles (available option)
- Table mount included

### ADDITIONAL FEATURES ESG PLUS<sup>2</sup> AND ESG MAX:

- Portable tungsten grinder with two different grinding wheels. This allows the electrode to be pre-ground with the coarse diamond wheel then finished with the fine diamond wheel.





SCOPE OF DELIVERY / APPLICATION RANGE		ESG MAX	ESG PLUS	ESG PLUS²
Code	[230 V]	790 052 591	790 052 485 (15°/18°/22.5°/30°) 790 052 545 (15°/30°/45°/60°)	790 052 585 (15°/18°/22.5°/30°) 790 052 546 (15°/30°/45°/60°)
	[110 V]	790 052 592	790 052 486 (15°/18°/22.5°/30°) 790 052 645 (15°/30°/45°/60°)	790 052 586 (15°/18°/22.5°/30°) 790 052 646 (15°/30°/45°/60°)
Tungsten grinder	Pc.	1	1	1
Durable storage and shipping case	Pc.	1	1	1
Grinding head for electrodes Ø 1.0 - 1.6 - 2.0 - 2.4 - 3.2 - 4.0 mm* (0.04" - 1/16" - 0.08" - 3/32" - 1/8" - 5/32")*	Pc.	1	1	1
Grinding head for grinding angle 15° - 18° - 22.5° - 30° - 45° - 60°	Pc.	1	-	-
Grinding head for grinding angle 15° - 18° - 22.5° - 30° or 15° - 30° - 45° - 60°	Pc.	-	1	1
Diamond grinding wheel Fine (790 052 517)	Pc.	1	-	-
Diamond grinding wheel Coarse (790 052 518)	Pc.	1	-	-
Diamond grinding wheel Fine (790 052 487)	Pc.	-	-	1
Diamond grinding wheel Medium (790 052 488)	Pc.	-	1	-
Diamond grinding wheel Coarse (790 052 550)	Pc.	-	-	1
Table mounting plate	Pc.	1	-	-
Tool to replace the grinding wheel	Pc.	1	1	1
Operating instructions and spare parts list	Set	1	1	1
TECHNICAL DATA		ESG MAX	ESG PLUS	ESG PLUS²
Dimensions (including motor)	[mm]	Ø 65 x 350	Ø 65 x 350	Ø 65 x 350
	[inch]	Ø 2.56 x 13.78	Ø 2.56 x 13.78	Ø 2.56 x 13.78
Power	[W]	500	500	500
Power-on time	[%]	100	100	100
Speed (Rotary speed)	[rpm]	30.000	30.000	30.000
Main supply cable (length)	[m]	3	3	3
	[inch]	118.1	118.1	118.1
Vibration level (EN 28662, part 1)	[m/s²]	< 2.5	< 2.5	< 2.5
Noise level at the workplace (Idle running), approx.	[dB (A)]	83	83	83

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

\* An electrode holder is required to grind electrodes with 4.0 mm (5/32") diameter (available option).

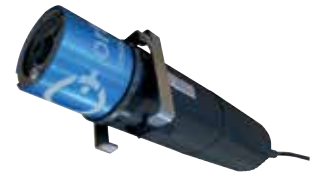


## Tungsten grinders ESG

### ESG MAX, ESG Plus, ESG Plus<sup>2</sup>

Features, application range, technical data and scope of delivery, see from page 75.

ARTICLE	VERSION	GRINDING ANGLES [°]	CODE		WEIGHT OF MACHINE KG	DISPATCH WEIGHT KG
ESG MAX	230 V, 50/60 Hz EU	15 / 18 / 22.5 / 30 / 45 / 60	790 052 591		1.560	3.680
ESG MAX	110 V, 50/60 Hz EU/US	15 / 18 / 22.5 / 30 / 45 / 60	790 052 592		1.560	3.680
ESG Plus	230 V, 50/60 Hz EU	15 / 18 / 22.5 / 30	790 052 485		1.430	3.560
ESG Plus	110 V, 50/60 Hz EU/US	15 / 18 / 22.5 / 30	790 052 486		1.430	3.560
ESG Plus	230 V, 50/60 Hz EU	15 / 30 / 45 / 60	790 052 545		1.430	3.560
ESG Plus	110 V, 50/60 Hz EU/US	15 / 30 / 45 / 60	790 052 645		1.430	3.560
ESG Plus <sup>2</sup>	230 V, 50/60 Hz EU	15 / 18 / 22.5 / 30	790 052 585		1.520	3.825
ESG Plus <sup>2</sup>	110 V, 50/60 Hz EU/US	15 / 18 / 22.5 / 30	790 052 586		1.520	3.825
ESG Plus <sup>2</sup>	230 V, 50/60 Hz EU	15 / 30 / 45 / 60	790 052 546		1.520	3.825
ESG Plus <sup>2</sup>	110 V, 50/60 Hz EU/US	15 / 30 / 45 / 60	790 052 646		1.520	3.825



ESG MAX



ESG Plus



ESG Plus<sup>2</sup>

### Diamond grinding wheels

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

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

ARTICLE	APPLICABLE WITH	GRAIN	WHEEL Ø		S		CODE		KG
			[MM]	[INCH]	[MM]	[INCH]			
Diamond grinding wheel	ESG MAX	Fine	40.00	1.574	2.1	0.083	790 052 517		0.017
Diamond grinding wheel	ESG MAX	Coarse	37.00	1.574	2.2	0.087	790 052 518		0.016
Diamond grinding wheel	ESG 4	Standard	32.00	1.290	1.2	0.047	790 052 460		0.005
Diamond grinding wheel	ESG Plus, ESG Plus <sup>2</sup>	Fine	33.50	1.319	2.2	0.087	790 052 487		0.010
Diamond grinding wheel	ESG Plus, ESG Plus <sup>2</sup>	Medium	33.50	1.319	2.2	0.087	790 052 488		0.011
Diamond grinding wheel	ESG Plus, ESG Plus <sup>2</sup>	Coarse	33.50	1.319	2.2	0.087	790 052 550		0.011



Diamond grinding wheels

### Cutting devices

For simple separating of the electrodes.

Electrode minimum length for grinding with ESG MAX:

15°	= 24.8 mm (0.976")
18°	= 22.3 mm (0.878")
22.5°	= 20.6 mm (0.811")
30°	= 19.1 mm (0.752")
45°	= 18.6 mm (0.733")
60°	= 19.5 mm (0.768")



Cutting device for ESG MAX

ARTICLE	APPLICABLE WITH	SETTING	CUTTING LENGTHS		CODE		KG
			[MM]	[INCH]			
Cutting device	ESG MAX	continuous	9.0 - 34.5	0.354 - 1.358	790 052 613		0.033
Cutting device	ESG Plus, ESG Plus <sup>2</sup>	fixed*	12.0	0.472	790 052 513		0.030
			13.0	0.512			
			15.0	0.591			
			17.0	0.669			

\* Further cutting lengths possible on request.

#### TUNGSTEN GRINDING TECHNOLOGY



Electrode holder with 6 collets (for ESG MAX)



Electrode holder with collet (for ESG Plus, ESG Plus²)



Spare collet (for ESG Plus, ESG Plus²)



Wall-/table-/vice-mounting plate



Adapter for extraction device



Protective cover

## Electrode holder

### For machining smaller electrodes.

The electrode holder for the ESG MAX is available in a set including collets for 6 different electrode diameters.

The electrode holder for the ESG Plus or ESG Plus² is supplied including 1 flexible collet.

ARTICLE	APPLICABLE WITH	SETTING	ELECTRODE Ø		CODE		KG
			[MM]	[INCH]			
Electrode holder with 6 collets	ESG MAX	fixed	1.0	0.039	<b>790 052 614</b>		0.027
			1.6	1/16			
			2.0	0.080			
			2.4	3/32			
			3.2	1/8			
			4.0	5/32			
Electrode holder with collet	ESG Plus, ESG Plus²	continuous	1.0 - 3.2	0.039 - 0.126	<b>790 052 457</b>		0.023
Spare collet	ESG Plus, ESG Plus²	continuous	1.0 - 3.2	0.039 - 0.126	<b>790 052 481</b>		0.002

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

For stationary use of the ESG Plus and ESG Plus².  
Simple and rapid mounting to a wall, a table or a vice.

ARTICLE	APPLICABLE WITH	CODE		KG
Wall-/table-/vice-mounting plate	ESG Plus, ESG Plus²	<b>790 052 483</b>		0.102

## Adapter for extraction device

This adapter for an extraction device can be placed rapidly and simply on the ESG MAX grinding head and reduces grinding dust by up to 96% less particles.  
For use on electrodes with thorium.  
Consider country-specific regulations, standards and guidelines.

ARTICLE	APPLICABLE WITH	CODE		KG
Adapter for extraction device ESG MAX	ESG MAX	<b>790 052 612</b>		0.047

## Protective cover

Easy to adapt on the ESG Plus head.  
With integrated retainer for suction units. For use on electrodes with thorium.  
Consider country-specific regulations, standards and guidelines.

ARTICLE	APPLICABLE WITH	CODE		KG
Protective cover ESG Plus	ESG Plus	<b>790 052 496</b>		0.170
Protective cover ESG Plus²	ESG Plus²	<b>790 052 596</b>		0.220

## Double-decker kits

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



Double-decker kit

ARTICLE	APPLICABLE WITH	GRINDING ANGLES [°]	CODE		KG
Double-decker kit	ESG Plus	15 / 18 / 22.5 / 30	<b>790 052 490</b>		0.160
Double-decker kit	ESG Plus	15 / 30 / 45 / 60	<b>790 052 390</b>		0.100

## Portable weld prep machine tools for industrial applications

**WACHS** **E.H. WACHS®**  
Superior Equipment. Complete Support.

e.g. **Pipe cutting and beveling machines**  
("Split Frames") **LCSF.**

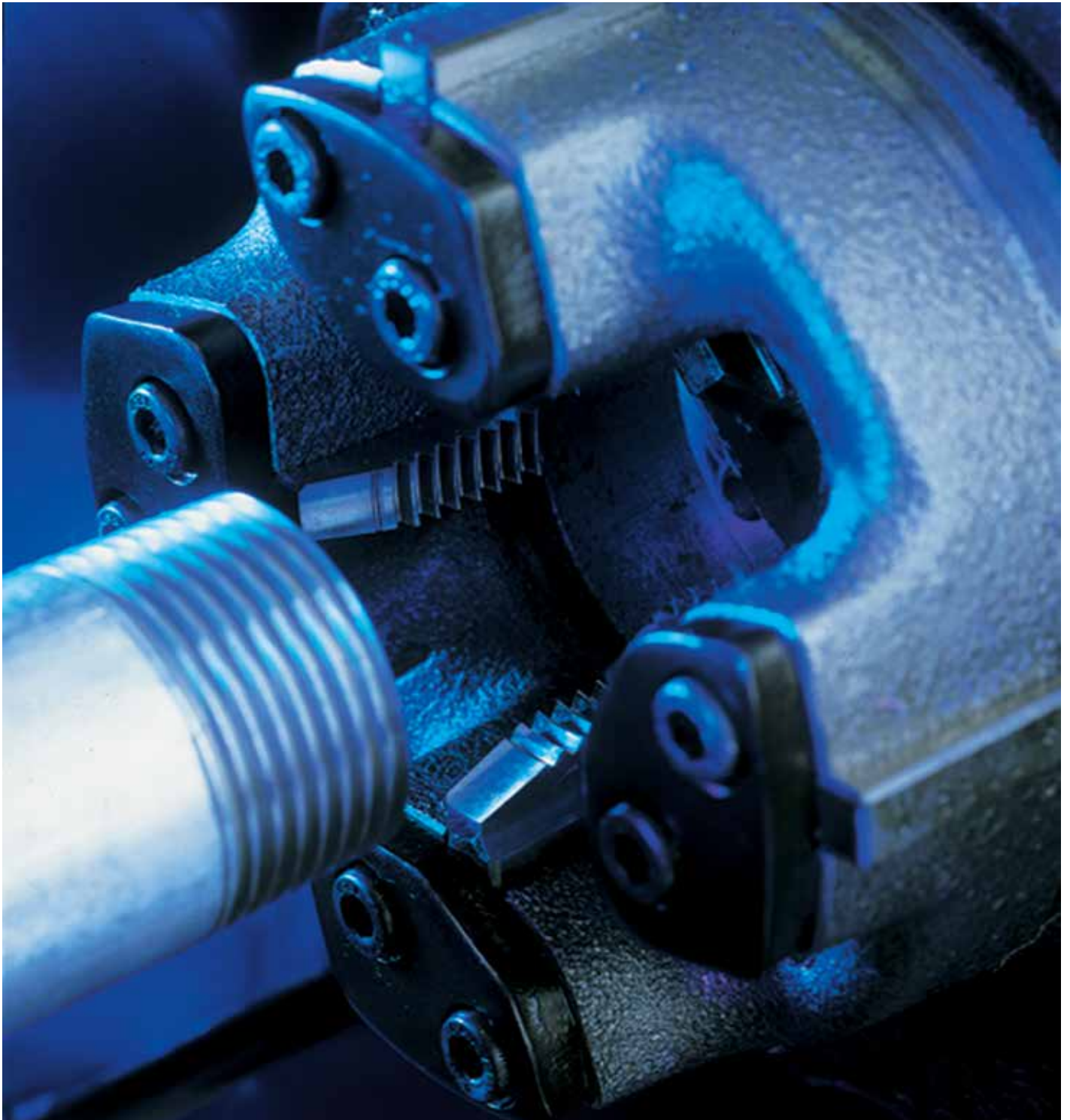
WACHS LCSF Low Clearance Split Frame is the world's most versatile and comprehensive line of lightweight split frame, clam-shell style portable machine tools on the market today.

Designed to cut, bevel, single point, counterbore and face flanges on pipe and tubing ranging from OD DN 50 to 1200 (OD 2" - 48") on most wall thicknesses and materials, WACHS slim yet rugged LCSF design is ideal where radial and axial clearances are restricted.

Please ask for our separate E.H. WACHS catalogue to learn more about this and other products for industrial applications.



# Threading, Jointing and Sealing Technology







Replacement set of threading chasers for ASK



Nipple holder



Thread cutting compound NORMOLIC Red®

## Accessories for Pipe Threading Technology

### Replacement sets of threading chasers

for Whitworth pipe threads according to DIN 2999.  
Made of HSS (high-speed steel). Right-handed.

ARTICLE	VERSION	CODE		KG
Replacement set of threading chasers for ASK	R 3/8	790 003 503		0.100
Replacement set of threading chasers for ASK	R 1/2	790 003 504		0.145
Replacement set of threading chasers for ASK	R 3/4	790 003 505		0.130
Replacement set of threading chasers for ASK	R 1	790 003 506		0.170
Replacement set of threading chasers for ASK	R 1 1/4	790 003 507		0.145
Replacement set of threading chasers for ASK	R 1 1/2*	790 003 508		0.205
Replacement set of threading chasers for ASK	R 2*	790 003 509		0.260

\* not for TGA

### Nipple holder

With internal clamping. Self-clamping. For pipes according to DIN 2440.

ARTICLE	VERSION	THREAD	CODE		KG
Nipple holder	DN 15	R 1/2	790 002 101		0.345
Nipple holder	DN 20	R 3/4	790 002 102		0.566
Nipple holder	DN 25	R 1	790 002 103		0.740
Nipple holder	DN 32	R 1 1/4	790 002 104		1.120
Nipple holder	DN 40*	R 1 1/2	790 002 105		1.420
Nipple holder	DN 50*	R 2	790 002 106		2.120

\* not for TGA

### Thread cutting compound NORMOLIC Red®

**Normolic Red is a DVGW-tested (German Technical and Scientific Association for Gas and Water) thread cutting compound for drinking water installations.** Coloured red. Free from mineral oils. Water-soluble. Easily rinsed out without affecting the appearance, taste and smell of the drinking water when rinsed according to DIN 1988. Dyn. viscosity: at 20 °C: > 20 mPas (ISO 3104).

ARTICLE	VERSION	CODE		KG
NORMOLIC Red®	Canister with 10 l	790 051 263		11.500

## Thread Jointing Technology

### Thread jointing compound PARALIQ® PM 35

**For gas, air and water up to 130 °C.**

Approved by the DVGW/SGW/ÖVGW in accordance with DIN EN 751, part 2 (DIN 30 660) in the house installation, especially for drinking-water installations.

For use with flax.



Thread jointing compound PARALIQ® PM 35

ARTICLE	VERSION	CODE	KG
Thread jointing compound PARALIQ® PM 35	Can of 600 g	790 060 102	0.690

### Flax dispenser "Sales Display Package"

**Cardboard box including 10 flax bobbins.**

Innovative and unique retail pack for the presentable display of flax bobbins at the sales counter.



ARTICLE	VERSION	CODE	KG
Flax dispenser, sales display package	including 10 flax bobbins	790 052 716	0.780

### Flax dispenser

**Empty (without flax bobbin). For mounting on a wall or a work bench.**

Ideal for single-dosage use of flax bobbins.

Including fixing plate for mounting on wall or work bench.

Easy to use, no waste, optimal proportioning.



Flax dispenser

ARTICLE	VERSION	CODE	KG
Flax dispenser	without flax bobbin	790 052 701	0.304

### Flax dispenser "Flachsi"

**Empty (without flax bobbin). For the fitters pocket.**

Ideal for single-dosage use of flax bobbins.

Easy to use, no waste, optimal proportioning.



Flax dispenser "Flachsi"

ARTICLE	VERSION	CODE	KG
Flax dispenser "Flachsi"	without flax bobbin	790 052 708	0.135

#### THREADING, JOINTING AND SEALING TECHNOLOGY



Seal dispenser

## Seals

### Seal dispenser

**For gas and water installations. Approved by the DVGW in accordance with DIN 3535, Part 6.**

With 225 asbestos-free seals. Including transparent labeled protective cover. Very robust, shock-proof and break-proof seal dispenser block made of elastic material that protects the seals against moisture, falling out or damage. The seals can be removed singly and are always at hand.

ARTICLE	CODE		KG
Seal dispenser	790 052 721		0.682
Seal dispenser, empty	790 052 722		0.335
Protective covering for seal dispenser	790 052 723		0.049



## Seals

### IT-seals, asbestos-free.

Explanations

R = Raccord (union/fittings)

RV = Radiator valve

H = Dutchman seal

HK = Dutchman seal, small

HG = Dutchman seal, large

ARTICLE	VERSION	DIMEN- SION	QTY. PER PACK	CODE		KG
Seals	R 1/4	10 x 6	100	790 052 726		0.001
Seals	R 3/8	14 x 10	100	790 052 727		0.002
Seals	R 3/8	15 x 8	100	790 052 728		0.002
Seals	R 3/8	15 x 10	100	790 052 729		0.002
Seals	R 1/2	18 x 10	100	790 052 730		0.002
Seals	R 1/2	18 x 11	100	790 052 731		0.002
Seals	R 1/2	18 x 12	100	790 052 732		0.002
Seals	R 3/4	23 x 17	100	790 052 733		0.002
Seals	R 3/4	24 x 15	100	790 052 734		0.002
Seals	R 1	30 x 22	100	790 052 735		0.003
Seals	R 1 1/4	37 x 29	100	790 052 736		0.002
Seals	R 1 1/4	39 x 32	100	790 052 737		0.002
Seals	R 1 1/2	44 x 37	100	790 052 738		0.003
Seals	R 2	56 x 48	50	790 052 739		0.002
Seals	Leather 3/4	23 x 16	100	790 052 740		0.002
Seals	RV 3/4	23 x 17	100	790 052 741		0.002
Seals	H 3/4	38 x 27	100	790 052 742		0.002
Seals	H 1	44 x 32	100	790 052 743		0.002
Seals	H 1 1/4	55 x 42	50	790 052 744		0.004
Seals	H 1 1/2	62 x 46	50	790 052 745		0.002
Seals	H 2	78 x 60	50	790 052 746		0.007
Seals	HK 3/8	24 x 17	100	790 052 747		0.002
Seals	HK 1/2	30 x 21	100	790 052 748		0.003
Seals	HG 3/8	27 x 19	100	790 052 749		0.002
Seals	HG 1/2	34 x 23	100	790 052 750		0.002

\* Weight per seal

# Copper Pipe Installation Technology





Clamp holder with carbon V-electrode



Carbon V-electrode



Stick electrode

## Accessories for LAM 1500, LAM 1600

### Clamp holder with carbon V-electrode

Made of stainless steel.

ARTICLE	CODE		KG
Clamp holder with carbon V-electrode	790 057 020		0.038

### Carbon V-electrode

Minimum purchase: 10 pieces.

ARTICLE	CODE		KG
Carbon V-electrode	790 057 025		0.010

### Stick electrode

Minimum purchase: 6 pieces.

ARTICLE	CODE		KG
Stick electrode	790 057 026		0.020



# Accessories for Workshop and Site





Collapsible work bench



Pipe vice for plastic and stainless steel pipes



Deburring tool

## Collapsible work bench, pipe vice, deburring tool

### Collapsible work bench

Can only be used for saws with an application range of up to 4.5" pipe outer diameter. From 6", please use the pipe feeder (Code 790 068 051) or mobile workstation (Code 790 068 071) - please see from page 27.

DIMENSIONS	COLLAPSIBLE WORK BENCH
Dimension (l x w x h)	100 x 70 x 85 cm / 39.37" x 27.56" x 33.46"

ARTICLE	CODE		KG
Collapsible work bench, load capacity: 650 kg	790 052 030		30.000

### Pipe vice

APPLICATION RANGE	PIPE VICE FOR PLASTIC AND STAINLESS STEEL PIPES
Tube OD	20 - 250 mm / 0.8" - 9.8"

ARTICLE	CODE		KG
Pipe vice for plastic and stainless steel pipes	790 052 231		5.500
Spare belt (930 x 28 mm / 36.6 x 1.1 inch) for pipe vice	790 052 247		0.100

### Deburring tool

APPLICATION RANGE	DEBURRING TOOL
Tube OD max.	54 mm / 2.126"
Tube ID max.	10 mm / 0.394"

ARTICLE	CODE		KG
Deburring tool	790 052 052		0.455

#### ACCESSORIES FOR WORKSHOP AND SITE



## About us

### For the finest in pipe & tube cutting, beveling and orbital welding products.

For more than 40 years construction companies rely on the standard in the industrial prefabrication of pipeline systems set by the market leader Orbitalum.

Orbitalum Tools based in Singen, Germany and E.H. Wachs based in Lincolnshire, Illinois, USA are operating jointly as **ITW Orbital Cutting & Welding**, a division of the US industrial group ITW.

**Orbitalum Tools** is a global leader in providing complete solutions for the industrial prefabrication, installation and maintenance of pipeline systems – for everything from cutting pipes and preparing weld seams to orbital welding for process and plant engineering.

With its high-quality, nearly indestructible, portable and user-friendly pipe processing machines for cutting and beveling, **E.H. Wachs** has established itself in many industries. For example, in the oil and gas industry, the chemical industry and in pipeline and ship construction – in the preproduction, maintenance, repair and dismantling of installations.

**ITW** (Illinois Tool Works, www.itw.com) is a US Fortune 200 global industrial manufacturer of consumables, specialty equipment and related service businesses headquartered in Glenview, Illinois. ITW Orbital Cutting & Welding is part of the ITW Welding Group, which is world market leader in welding products (e.g. MILLER ELECTRIC, HOBART BROTHERS).

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.

### The ITW Orbital Cutting & Welding group stands for the best, most efficient technology for all aspects of orbital cutting and welding around the globe.

As ITW OCW we provide an almost unique product availability, a worldwide customer service and technical support as well as a sales network at local level. A partnership with ITW OCW involves:

- Acclaimed state-of-the-art technology, competent contact partners
- Fast, comprehensive delivery service
- Reliable product support
- Large stocks at local level
- Comprehensive OEM spare parts and consumables
- Strategically ideal located sales locations, service and rental centers
- Excellently factory-trained and certified technicians
- Practical trainings – at our site or at your location
- Certified company

ITW Orbital Cutting & Welding continues the Orbitalum and E.H. WACHS tradition of offering world class products, combined with exceptional service and support, to keep ITW-OCW the supplier of choice for tools used to cut - prep - weld - all from one source.

### Waste disposal / environmental protection



Disposal of electrical (electronic) devices

(RL 2002/96/EC)

Electrical (electronic) devices which are marked with the symbol above, may not be disposed of with household waste in accordance to the EU directive 2002/96/EC.

By actively using the offered return and collection systems, you actively contribute to the reuse, recycling and utilisation of electrical (electronic) devices.

Electrical (electronic) used devices contain parts which must be handled selectively according to the EU directive. Separate collection and selective treatment is the basis for environment-friendly disposal and the protection of human health.

Our products that were sold to you after August 13th, 2005 are taken back and treated according to legal standards. These products have to be sent free of charge.

The return of used devices which pose a health or safety risk for human beings due to contamination during use may be refused.

The legally compliant disposal of electrical (electronic) devices that were placed on the market before August 13th, 2005 are in the responsibility of the end-user.



Returning of batteries

Some of our products work with batteries. Batteries which are marked with the symbol above may not be disposed of together with household waste according to the applicable EU directive 91/157/EEC. With batteries containing hazardous substances, the chemical symbol for the heavy metal content is indicated below the waste bin:

Cd = Cadmium  
Hg = Mercury  
Pb = Lead

The ITW ORBITAL CUTTING & WELDING group provides global customers one source for the finest in pipe & tube cutting, beveling and orbital welding products.

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## NORTH AMERICA

### USA

E.H. Wachs  
600 Knightsbridge Parkway  
Lincolnshire, IL 60069, USA  
Tel. +1 847 537 8800  
Fax +1 847 520 1147  
Toll Free 800 323 8185

Gulf States Service & Rental Center  
2220 South Philippe Avenue  
Gonzales, LA 70737, USA  
Tel. +1 225 644 7780  
Fax +1 225 644 7785

West Coast Sales & Rental Center  
5130 Fulton Drive, Unit J  
Fairfield, California 94534, USA  
Tel. +1 707 439 3763  
Fax +1 707 439 3766

Wachs Subsea LLC  
E.H. Wachs  
11050 West Little York  
Building N  
Houston, TX 77041, USA  
Tel. +1 713 983 0784  
Fax +1 713 983 0703

### CANADA

Wachs Canada Ltd  
Eastern Canada Sales & Service Center  
1166 Gorham Street, Unit 8  
Newmarket, Ontario L3Y 8W4, Canada  
Tel. +1 905 830 8888  
Fax +1 905 830 6050  
Toll Free 888 785 2000

Wachs Canada Ltd  
Western Canada Sales & Service Center  
5411 82nd Avenue  
Edmonton, Alberta T6B 2J6, Canada  
Tel. +1 780 469 6402  
Fax +1 780 463 0654  
Toll Free 800 661 4235

## EUROPE

### GERMANY

Orbitalum Tools GmbH  
Josef-Schuetz-Str. 17  
78224 Singen  
Germany  
Tel. +49 (0) 77 31 - 792 0  
Fax +49 (0) 77 31 - 792 500

### UNITED KINGDOM

Wachs UK  
UK Sales, Rental & Service Centre  
Units 4 & 5 Navigation Park  
Road One, Winsford Industrial Estate  
Winsford, Cheshire CW7 3 RL  
United Kingdom  
Tel. +44 (0) 1606 861 423  
Fax +44 (0) 1606 556 364

## AFRICA & MIDDLE EAST

### UNITED ARAB EMIRATES

Wachs Middle East & Africa Operations  
PO Box 262543  
Free Zone South FZS 5, AC06  
Jebel Ali Free Zone (South-5), Dubai  
United Arab Emirates  
Tel. +971 4 88 65 211  
Fax +971 4 88 65 212

## ASIA

### CHINA

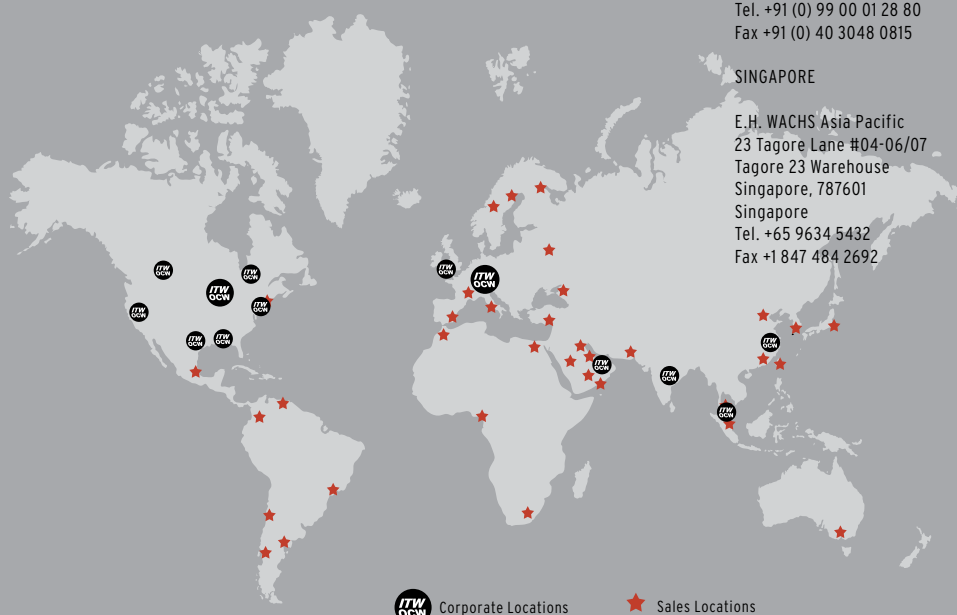
Orbitalum Tools  
New Caohejing International  
Business Centre  
Room 2801-B, Building B  
No 391 Gui Ping Road  
Shanghai 200052  
China  
Tel. +86 (0) 21 52 30 37-51  
Fax +86 (0) 21 52 30 37-58

### INDIA

ITW India Limited  
4A/19, IDA, Phase - 1  
Patancheru Medak District  
Andhra Pradesh 502 319  
India  
Tel. +91 (0) 99 00 01 28 80  
Fax +91 (0) 40 3048 0815

### SINGAPORE

E.H. WACHS Asia Pacific  
23 Tagore Lane #04-06/07  
Tagore 23 Warehouse  
Singapore, 787601  
Singapore  
Tel. +65 9634 5432  
Fax +1 847 484 2692



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★ Sales Locations

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