



# ORBITAL CUTTING

Orbital pipe cutting machines for high-purity process installations





## Highlights



PS 4.5 Plus battery

### PS 4.5 Plus (battery) | Portable pipe saw

With their wide range of applications, low weight and simple operation, the portable pipe saws in the PS Plus series are ideal for use on construction sites. Optimum cutting results are now also possible wirelessly with the newly developed battery-powered version. Here too, the Orbitalum virtues of innovation, simplicity and durability have been taken to heart:

...More from "PS 4.5 Plus" on page 31



GF 8

GF 8 AVM

GF 8 MVM



GF 12

GF 12 AVM

GF 12 MVM

### GF 8, GF 12 (AVM/MVM) | Pipe cutting and beveling machines

The pipe saw for precise cutting in seconds. For more than 40 years installation manufacturers have been relying on the standard set by Orbitalum in industrial pipe end preparation: From the chemical industry, biotechnology industry, pharmaceutical industry, food processing and beverage industry to energy plant engineering and shipbuilding.

...More from page 9



RPG 3.0 battery

### RPG 3.0 (battery) | Tube squaring machine

We are very happy to present the new tube squaring machine RPG 3.0 (battery) for squaring thin-walled stainless-steel pipes.

The RPG 3.0 (battery) completes the RPG series, fitting the dimension range of the OW76S orbital weld head and the GFX 3.0 orbital saw.

The RPG 3.0 (battery) can machine pipes with an outer diameter of 6.0 mm - 77.0 mm and a wall thickness of up to 3.0 mm.

The new RPG 3.0 (battery) produces the best right-angled and burr-free pipe end processing as perfect preparation for orbital welding.

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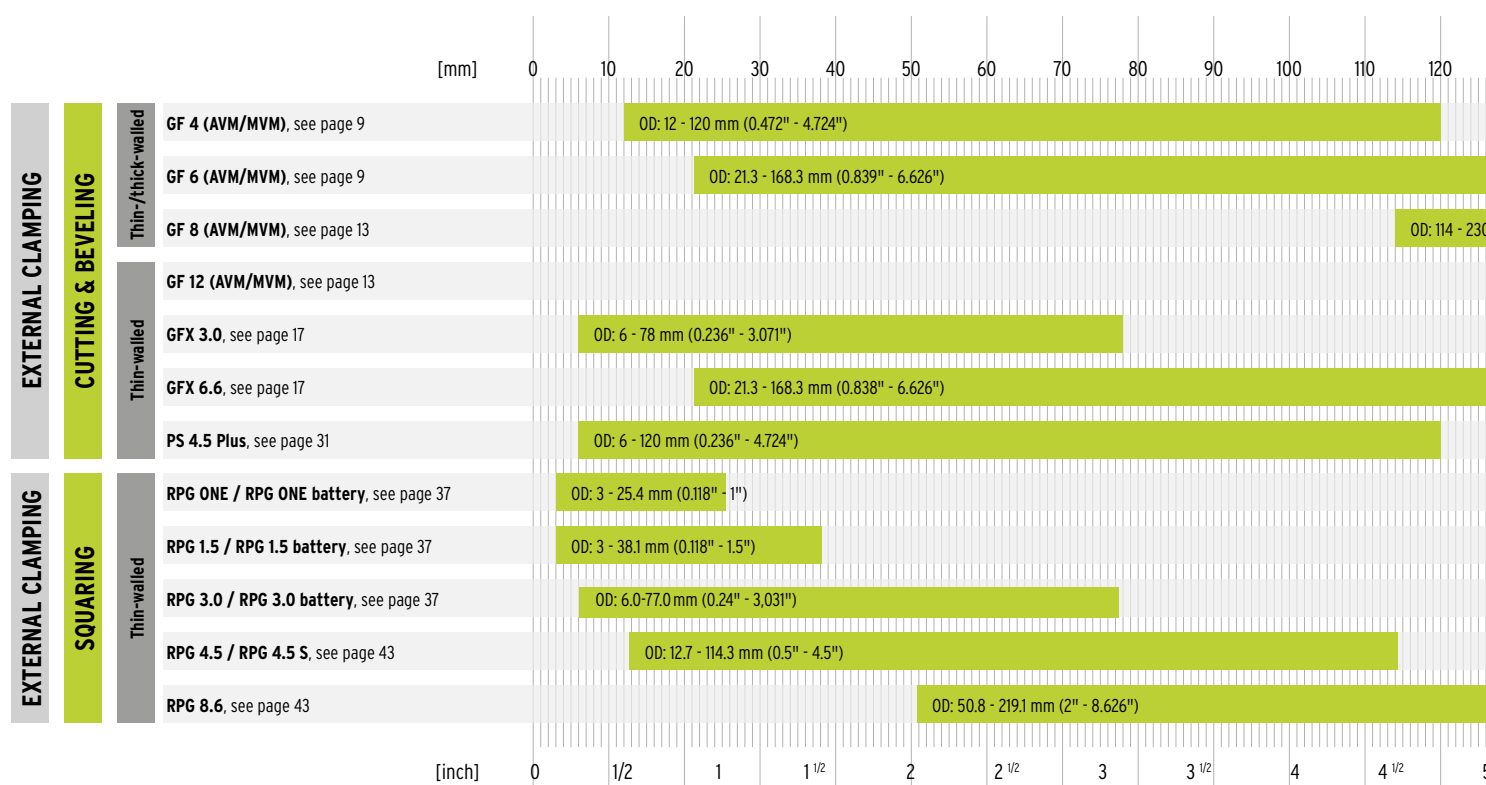
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## Our solutions

Our products offer a wide application range. Whether you want to machine large, small, thin-walled or thick-walled, high-alloyed or low-alloyed pipes; we definitely have the right solution. This quick reference shows the wide range of application possibilities of our machines.

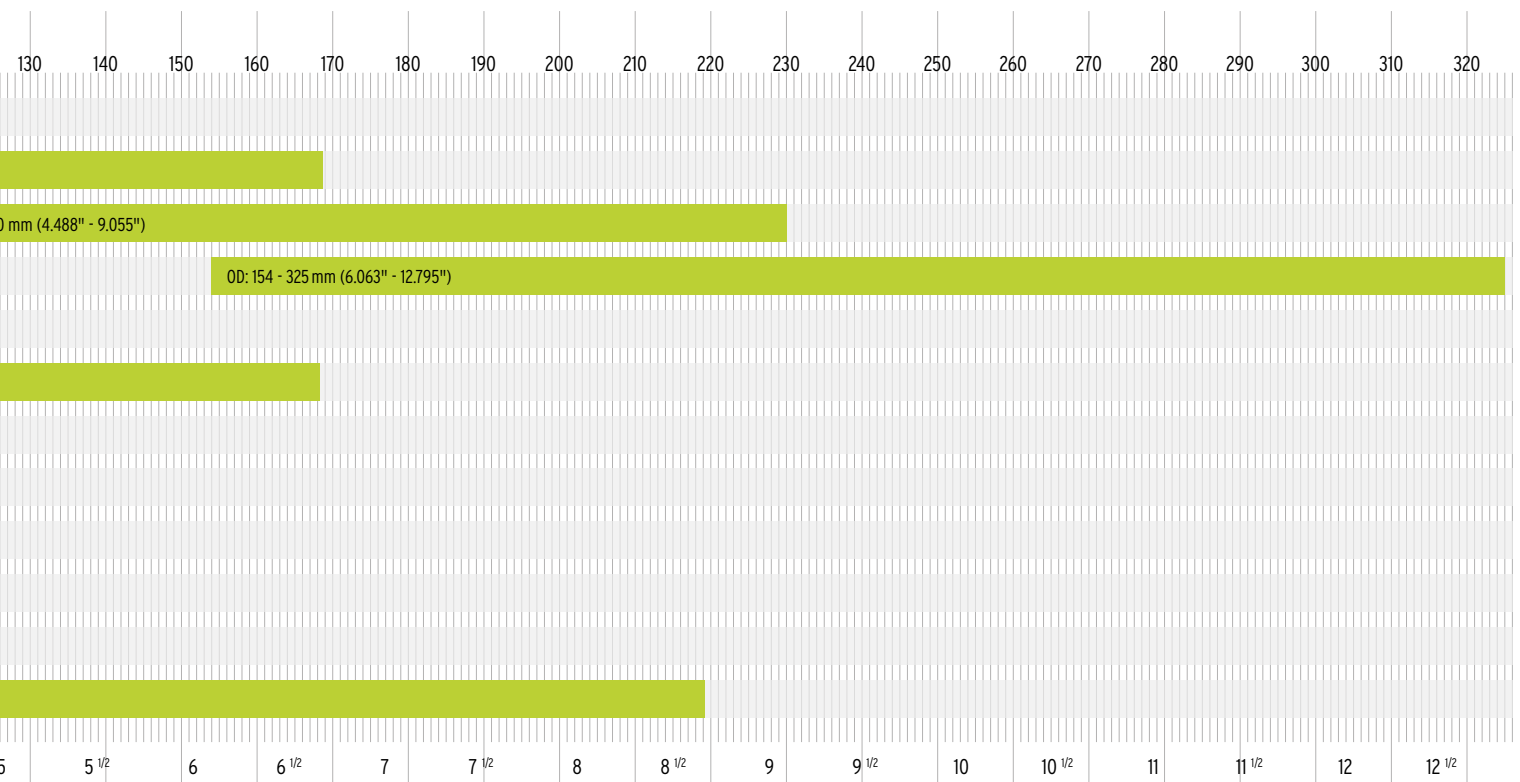




## At a glance

Interested in a personal consultation?

Then contact us at +49 (0) 77 31 792-0 or send an email to [tools@orbitalum.com](mailto:tools@orbitalum.com). Our team is happy to find a suitable product for your individual requirements.





## Markets and applications

Orbitalum is a global leader for portable, powerful pipe cutting, squaring and beveling machines for industrial weld seam preparation. In addition Orbitalum offers a wide range of orbital welding systems for high-purity, process as well as heat exchanger applications. Orbitalum products have a wide range of applications in the following fields:

| Application                                    | e.g.                                                                                                                                                                                                                                                | Products                                                                                                                                                                                                                                                                                 |
|------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Boilers & heat exchangers                      | <ul style="list-style-type: none"> <li>• Pipe bundle heat exchangers</li> <li>• Box headers</li> <li>• Boilers</li> <li>• HVAC blade heat exchangers</li> </ul>                                                                                     | <ul style="list-style-type: none"> <li>• RPG tube squaring machines</li> <li>• ORBIMAT welding power sources</li> <li>• ORBIWELD weld heads</li> <li>• P16 pipe-in-sheet weld heads</li> <li>• HX weld heads</li> <li>• TX weld heads</li> <li>• ORBmax residual oxygen meter</li> </ul> |
| Pharmaceuticals & chemical industry            | <ul style="list-style-type: none"> <li>• HP High-Purity</li> <li>• Process lines</li> <li>• Mixing valves</li> <li>• CIP "Cleaning in Place" lines</li> </ul>                                                                                       | <ul style="list-style-type: none"> <li>• GF, PS &amp; GFX pipe cutting and beveling machines</li> <li>• RPG tube squaring machines</li> <li>• ORBIMAT welding power sources</li> <li>• ORBIWELD weld heads</li> <li>• ORBmax residual oxygen meter</li> </ul>                            |
| Semi-conductor                                 | <ul style="list-style-type: none"> <li>• HP High-Purity</li> <li>• UHP Ultra High-Purity</li> <li>• Process lines</li> <li>• Gas cabinets</li> <li>• Component production</li> <li>• CFOS gas supply</li> <li>• PCW cooling water supply</li> </ul> | <ul style="list-style-type: none"> <li>• RPG tube squaring machines</li> <li>• ORBIMAT welding power sources</li> <li>• ORBIWELD weld heads</li> <li>• ORBmax residual oxygen meter</li> </ul>                                                                                           |
| Aerospace technology                           | <ul style="list-style-type: none"> <li>• Hydraulic</li> <li>• Fuel supply</li> <li>• Engine components</li> <li>• Air conditioning</li> </ul>                                                                                                       | <ul style="list-style-type: none"> <li>• GF, PS &amp; GFX pipe cutting and beveling machines</li> <li>• RPG tube squaring machines</li> <li>• ORBIMAT welding power sources</li> <li>• ORBIWELD weld heads</li> <li>• ORBmax residual oxygen meter</li> </ul>                            |
| Food processing, dairy and beverage industries | <ul style="list-style-type: none"> <li>• HP High-Purity</li> <li>• Process lines</li> <li>• Mixing valves</li> <li>• CIP "Cleaning in Place" lines</li> </ul>                                                                                       | <ul style="list-style-type: none"> <li>• GF, PS &amp; GFX pipe cutting and beveling machines</li> <li>• RPG tube squaring machines</li> <li>• ORBIMAT welding power sources</li> <li>• ORBIWELD weld heads</li> <li>• ORBmax residual oxygen meter</li> </ul>                            |

# Pipe cutting and beveling technology



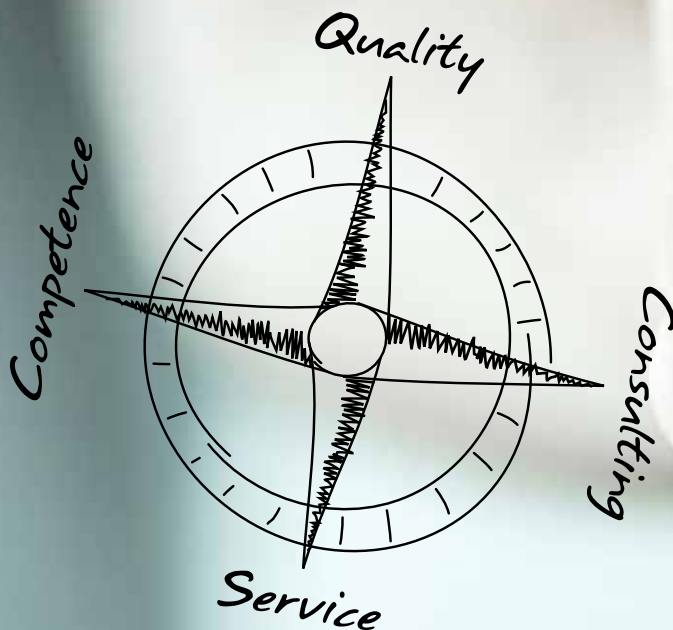
## Quality products from Orbitalum Tools - always a good decision!



For our products we select the best materials and suitable production processes and already during development place particular on a high degree of quality and durability.

Our machines and tools are assembled, set, controlled and packed by hand by qualified and motivated employees with great care in Singen/Htwl. (Germany).

Our employees guarantee this with their knowledge and their experience.



# GF 4, GF 6 (AVM/MVM)

## Pipe cutting and beveling machines

The pipe saw for precise cutting in seconds. For more than 50 years installation manufacturers have been relying on the standard set by Orbitalum in industrial pipe end preparation:

From the chemical industry, biotechnology industry, pharmaceutical industry, food processing and beverage industry to energy plant engineering and shipbuilding.

The GF series sets standards in orbital pipe processing! Numerous innovative functions combined with an ergonomic design give you considerable advantages in industrial preproduction of pipeline systems



|                                                                                      |   |
|--------------------------------------------------------------------------------------|---|
| Right-angled, burr-free and cold processing process                                  | ✓ |
| Deformation-free clamping system for thin-walled and thick-walled pipes              | ✓ |
| Optimum preparation for the automated welding process                                | ✓ |
| Robust design with powerful drive                                                    | ✓ |
| Unique, automatically guided immersion process                                       | ✓ |
| Beveling of pipe ends during the cutting process or separately                       | ✓ |
| High cost effectiveness, increased productivity                                      | ✓ |
| Long tool service lives                                                              | ✓ |
| Anthracite, coated parts offer better slide characteristics and corrosion protection | ✓ |

**Prerequisite for productive and high quality welding of pipes with automated orbital joining technology is a precise, right-angled and burr-free cut as well as perfect beveling of the pipe end. Easy to handle and precise cutting in seconds, the GF series machines pipe materials made of high-alloyed steel (stainless steel), low-alloyed and unalloyed steel, cast materials, plastics and non-ferrous metals according to the procedure of "planetary cutting". In the process the powerful clamping is carried out without any deformation of the workpiece.**

Optionally the user, apart from pure manual actuation, has the choice between a manual (MVM) and an automatic (AVM) feeding module. The latter optimizes the cutting result, increases the service life of the tools, and reduces physical strain for the operator. The result: maximum reliability and productivity.

### ADDITIONAL ADVANTAGES:

- Set of stainless steel caps to avoid contact corrosion included
- Optionally with feeding module AVM or MVM for automatic or mechanized separation cut, thus lower physical strain for the operator.
- Locking of the rotary movement protects against unauthorized use and theft
- Ergonomically optimized motor handle allows improved operator position as well as cutting of tube elbows without conversion
- Integrated line laser to mark the cut-off point
- Clamping jaws for changing to cut short hose pieces and for vibration-free cutting of smaller pipe dimensions (only for GF 4)
- Multifunctional keys for all settings at the machine
- Optimized speed control (40-215 rpm), ideal for cutting high-performance materials (Hastelloy®, P91, etc.)
- Plug connection with a quick-disconnect coupler: easy and quick replacement of the power cable

- Optimized chips guard protects against chips flying off; chips guard for GF 4 with opening for folding rule to measure the pipe length

### FEED VARIANTS:

Pipe cutting and beveling machine with **automated feeding module AVM\***: The intelligent control of the AVM continuously monitors the feed force as a function of the required output. After completion of the cutting process the AVM switches off automatically. An inadvertent startup is prevented by a restart inhibitor. Pipe cutting and beveling machines **with manual feeding module MVM\***: An add-on module at the machine makes it easier to process pipes through a manually operated handwheel. This ensures that the machine head rotates easily around the pipe user-friendly with little effort and constant feed.



| APPLICATION AREA                                                                 |                     | GF 4                                                                                                                                                                                                                                                                                                                                                                                                  | GF 4 AVM*                             | GF 4 MVM*                             | GF 6                                    | GF 6 AVM*                               | GF 6 MVM*                               |
|----------------------------------------------------------------------------------|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|---------------------------------------|-----------------------------------------|-----------------------------------------|-----------------------------------------|
| Code                                                                             | [230 V]<br>[120 V]  | 790 142 001<br>790 142 002                                                                                                                                                                                                                                                                                                                                                                            | 790 142 011<br>790 142 012            | 790 142 021<br>790 142 022            | 790 143 001<br>790 143 002              | 790 143 011<br>790 143 012              | 790 143 021<br>790 143 022              |
| Pipe OD                                                                          | [mm]<br>[inch]      | 12 - 120<br>0.472 - 4.724                                                                                                                                                                                                                                                                                                                                                                             | 12 - 120<br>0.472 - 4.724             | 12 - 120<br>0.472 - 4.724             | 21.3 - 168.3<br>0.839 - 6.626           | 21.3 - 168.3<br>0.839 - 6.626           | 21.3 - 168.3<br>0.839 - 6.626           |
| Wall-thickness depending on material                                             | [mm]<br>[inch]      | 1 - 9<br>0.039 - 0.354                                                                                                                                                                                                                                                                                                                                                                                | 1 - 9<br>0.039 - 0.354                | 1 - 9<br>0.039 - 0.354                | 1.5 - 15<br>0.059 - 0.591               | 1.5 - 15<br>0.059 - 0.591               | 1.5 - 15<br>0.059 - 0.591               |
| Pipe ID min. (saw blade Ø 63 mm)                                                 | [mm]                | 21                                                                                                                                                                                                                                                                                                                                                                                                    | 21                                    | 21                                    | 30                                      | 30                                      | 30                                      |
| Pipe ID min. (saw blade Ø 2.480")                                                | [inch]              | 0.827                                                                                                                                                                                                                                                                                                                                                                                                 | 0.827                                 | 0.827                                 | 1.181                                   | 1.181                                   | 1.181                                   |
| Pipe ID min. (saw blade Ø 68 mm)                                                 | [mm]                | 16                                                                                                                                                                                                                                                                                                                                                                                                    | 16                                    | 16                                    | 25                                      | 25                                      | 25                                      |
| Pipe ID min. (saw blade Ø 2.677")                                                | [inch]              | 0.630                                                                                                                                                                                                                                                                                                                                                                                                 | 0.630                                 | 0.630                                 | 0.984                                   | 0.984                                   | 0.984                                   |
| Pipe ID min. (saw blade Ø 80 mm)                                                 | [mm]                | 4                                                                                                                                                                                                                                                                                                                                                                                                     | 4                                     | 4                                     | 13                                      | 13                                      | 13                                      |
| Pipe ID min. (saw blade Ø 3.150")                                                | [inch]              | 0.157                                                                                                                                                                                                                                                                                                                                                                                                 | 0.157                                 | 0.157                                 | 0.512                                   | 0.512                                   | 0.512                                   |
| Pipe ID min. (saw blade Ø 100 mm)                                                | [mm]                | -                                                                                                                                                                                                                                                                                                                                                                                                     | -                                     | -                                     | 0                                       | 0                                       | 0                                       |
| Pipe ID min. (saw blade Ø 3.937")                                                | [inch]              | -                                                                                                                                                                                                                                                                                                                                                                                                     | -                                     | -                                     | 0                                       | 0                                       | 0                                       |
| Materials                                                                        |                     | Special steel (any Cr- and Mo-content); special steel stainless (any Cr- and Mo-content); special steel (Cr < 12% and Mo < 2.5%; Cr < 20% and Mo = 0%); Case hardening steels, high-speed steels, heat-treated steels, rolling bearing steels, tool steels; black and galvanized steel pipe; general structural steel; annealed cast pipe (GGG); aluminum; brass; copper; plastic (PE, PP, PVDE, PVC) |                                       |                                       |                                         |                                         |                                         |
| TECHNICAL SPECIFICATIONS                                                         |                     | GF 4                                                                                                                                                                                                                                                                                                                                                                                                  | GF 4 AVM*                             | GF 4 MVM*                             | GF 6                                    | GF 6 AVM*                               | GF 6 MVM*                               |
| Power                                                                            | [kW]<br>[hp]        | 1.8<br>2.41                                                                                                                                                                                                                                                                                                                                                                                           | 1.9<br>2.54                           | 1.8<br>2.41                           | 1.8<br>2.41                             | 1.9<br>2.54                             | 1.8<br>2.41                             |
| Power AVM                                                                        | [kW]<br>[hp]        | -                                                                                                                                                                                                                                                                                                                                                                                                     | 0.05<br>0.07                          | -                                     | -                                       | 0.05<br>0.07                            | -                                       |
| Built-in electronic speed regulation with speed stabilization                    | [rpm]               | 40 - 215                                                                                                                                                                                                                                                                                                                                                                                              | 40 - 215                              | 40 - 215                              | 40 - 215                                | 40 - 215                                | 40 - 215                                |
| Rotary speed machine head with AVM                                               | [rpm]               | -                                                                                                                                                                                                                                                                                                                                                                                                     | 0.1 - 3.9                             | -                                     | -                                       | 0.3 - 3.5                               | -                                       |
| Torque machine head 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)                     |
| Sound pressure 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 on site                                                               | [A]                 | 16                                                                                                                                                                                                                                                                                                                                                                                                    | 16                                    | 16                                    | 16                                      | 16                                      | 16                                      |
| Dimensions (LxWxH)                                                               | [mm]<br>[inch]      | 480 x 325 x 680<br>18.9 x 12.8 x 26.8                                                                                                                                                                                                                                                                                                                                                                 | 480 x 325 x 810<br>18.9 x 12.8 x 31.9 | 480 x 325 x 780<br>18.9 x 12.8 x 30.7 | 574 x 352.7 x 920<br>22.6 x 13.9 x 36.2 | 574 x 352.7 x 972<br>22.6 x 13.9 x 38.3 | 574 x 352.7 x 920<br>22.6 x 13.9 x 36.2 |
| Machine weight approx.**                                                         | [kg]<br>[lbs]       | 55.0<br>121.2                                                                                                                                                                                                                                                                                                                                                                                         | 64.5<br>142.2                         | 60.0<br>132.2                         | 92.7<br>204.4                           | 101.7<br>224.2                          | 97.8<br>215.6                           |
| Versions (single-phase alternating current)                                      | [V, Hz]             | 230 V, 50/60 Hz<br>120 V, 50/60 Hz                                                                                                                                                                                                                                                                                                                                                                    | 230 V, 50/60 Hz<br>120 V, 50/60 Hz    | 230 V, 50/60 Hz<br>120 V, 50/60 Hz    | 230 V, 50/60 Hz<br>120 V, 50/60 Hz      | 230 V, 50/60 Hz<br>120 V, 50/60 Hz      | 230 V, 50/60 Hz<br>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                                                | PCS                 | 1                                                                                                                                                                                                                                                                                                                                                                                                     | 1                                     | 1                                     | 1                                       | 1                                       | 1                                       |
| Transportation case                                                              | PCS                 | 1                                                                                                                                                                                                                                                                                                                                                                                                     | 1                                     | 1                                     | 1                                       | 1                                       | 1                                       |
| Set of stainless steel caps                                                      | PCS                 | 1                                                                                                                                                                                                                                                                                                                                                                                                     | 1                                     | 1                                     | 1                                       | 1                                       | 1                                       |
| Saw blade (Code 790 ...)                                                         | PCS                 | 1 (...042 064)                                                                                                                                                                                                                                                                                                                                                                                        | 1 (...042 064)                        | 1 (...042 064)                        | 1 (...043 018)                          | 1 (...043 018)                          | 1 (...043 018)                          |
| Mounting plate                                                                   | PCS                 | 1                                                                                                                                                                                                                                                                                                                                                                                                     | 1                                     | 1                                     | 1                                       | 1                                       | 1                                       |
| Line laser with fastening screws and 10 button cells 1.5 V (Code 790 142 124)*** | PCS                 | 1                                                                                                                                                                                                                                                                                                                                                                                                     | 1                                     | 1                                     | 1                                       | 1                                       | 1                                       |
| Tool key set with accessories                                                    | set                 | 1                                                                                                                                                                                                                                                                                                                                                                                                     | 1                                     | 1                                     | 1                                       | 1                                       | 1                                       |
| Special gear oil (Code 790 041 030)                                              | Bottle              | 1                                                                                                                                                                                                                                                                                                                                                                                                     | 1                                     | 1                                     | 1                                       | 1                                       | 1                                       |
| Saw blade lubricant GF TOP (Code 790 060 228)                                    | Tube                | 1                                                                                                                                                                                                                                                                                                                                                                                                     | 1                                     | 1                                     | 1                                       | 1                                       | 1                                       |
| Operating instructions and spare part list                                       | set                 | 1                                                                                                                                                                                                                                                                                                                                                                                                     | 1                                     | 1                                     | 1                                       | 1                                       | 1                                       |

Technical specifications are non-binding. They do not constitute any assurance of properties. We reserve the right to make changes.

\* The automatic or manual feeding module AVM/MVM is already mounted on the pipe saw on delivery.

\*\* Weight without packaging and accessories.

\*\*\* With the GF 4 and the GF 6 (AVM/MVM) the line laser is delivered separately and has to be mounted on the machine before commissioning.



## Pipe cutting and beveling machines

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

Properties, application area, technical specifications and delivery scope, see from page 99.

| ITEM     | VERSION               | CODE        | MACHINE WEIGHT KG | SHIPPING 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 26
- High quality lubricants for sawing and milling, see page 22
- Special gear oil, see page 22
- Replacement cable with rotary contact, see page 23
- Quick-mounting plates with screw clamps, see page 23
- Mobile workstation, see page 23
- Pipe feed basic unit and extension unit, see from page 24



GF 4, GF 6



GF 4 AVM, GF 6 AVM



GF 4 MVM, GF 6 MVM

## Just rent and stay flexible.

We offer rental machines for short-term and long-term rental - as a cost-effective alternative to purchasing.

Our rental machines are serviced regularly and are thus always in top condition. We are happy to help to find suitable machines for your individual application. By the way renting is an excellent opportunity to test a machine before you buy it.

Advantages of renting:

- Lower storage costs
- No repair costs
- Small investment
- Always the newest technology in use
- Minimum downtimes

Our rental and used machine service includes:

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- Hire purchase
- Long-term rental

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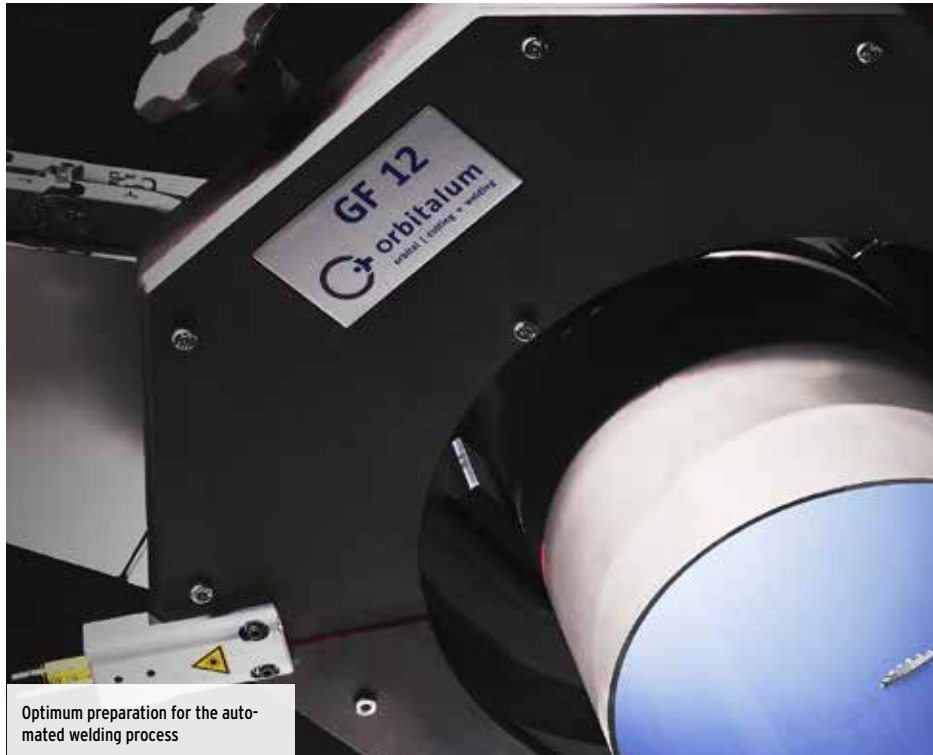
Or via email under  
[customerservice@orbitalum.com](mailto:customerservice@orbitalum.com)

# GF 8, GF 12 (AVM/MVM)

## Pipe cutting and beveling machines

Cost effective pipe processing with top technology by Orbitalum Tools!

Cutting and beveling in seconds of pipes made of high-alloyed steel (special steel), low-alloyed and unalloyed steel, cast materials, plastics and non-ferrous metals according to the procedure of the "planetary cutting".



Optimum preparation for the automated welding process

|                                                                         |   |
|-------------------------------------------------------------------------|---|
| Right-angled, burr-free and cold processing process                     | ✓ |
| Deformation-free clamping system for thin-walled and thick-walled pipes | ✓ |
| Optimum preparation for the automated welding process                   | ✓ |
| Robust design with powerful drive                                       | ✓ |
| Unique, automatically guided immersion process                          | ✓ |
| Multipoint clamping of the pipe                                         | ✓ |
| Quick setting of the pipe dimension                                     | ✓ |
| Cutting speed regulation                                                | ✓ |
| Quick tool change                                                       | ✓ |

**"Increased safety through standing pipe - rotating tool". The tried-and-tested procedure of "planetary cutting" is an important feature which is characteristic for ORBITALUM pipe saws.**

The saw blade immerses into the cut and is guided orbitally around the pipe. The advantage of this is that a small saw blade allows cutting a large pipe diameter without heating up the pipe.

**Innovative clamping principle through multipoint clamping of the pipe:** Deformation-free clamping allows pipes to be cut easily and quickly material-dependently with a wall thickness of 2 up to 10 mm (0.079" - 0.394"). You can machine all high-alloyed, unalloyed and low-alloyed steels, aluminum, copper, brass, annealed cast pipe, general structural steel, black and galvanized steel pipe and plastic. Optionally the user, apart from pure manual actuation, has the choice between a manual (MVM) and an automatic (AVM) feeding module. The latter optimizes the cutting result, increases the service life of the tools, and reduces physical strain for the operator. The result: maximum reliability and productivity.

### ADDITIONAL ADVANTAGES:

- Optionally with feeding module AVM or MVM for automatic or mechanized separation cut, thus lower physical strain for the operator.
- Optimum tool action at only one point of the pipe respectively.
- Optimized speed control (40-215 rpm), ideal for cutting high-performance materials (Hastelloy®, P91, etc.)
- Ergonomically designed motor handle, therefore safe operator position
- Separate cutting in seconds
- Beveling of pipe ends during the cutting process or separately
- Increased productivity
- Increased service life of the tools
- More corrosion protection through stainless steel clamping jaw attachments (included)
- Cable incl. plug connection with a quick-disconnect coupler for easy and quick replacement of power cables

### FEED VARIANTS:

Pipe cutting and beveling machine with **automated feeding module AVM\***: The intelligent control of the AVM continuously monitors the feed force as a function of the required output. After completion of the cutting process the AVM switches off automatically. An inadvertent startup is prevented by a restart inhibitor. Pipe cutting and beveling machines **with manual feeding module MVM\***: An add-on module at the machine makes it easier to process pipes through a manually operated handwheel. This ensures that the machine head rotates easily around the pipe user-friendly with little effort and constant feed.



Optional with feeding module AVM or MVM



Feeding module MVM



Optimized speed range through new motor



Planetary cutting principle

| APPLICATION AREA                                                              |                                                                                                                                                                                                                                                                                                                                                                                                       | GF 8                | GF 8 AVM*          | GF 8 MVM*           | GF 12               | GF 12 AVM*         | GF 12 MVM*          |
|-------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|--------------------|---------------------|---------------------|--------------------|---------------------|
| Code                                                                          | [230 V]                                                                                                                                                                                                                                                                                                                                                                                               | 790 045 095         | 790 045 001        | 790 045 069         | 790 047 095         | 790 047 001        | 790 047 069         |
|                                                                               | [120 V]                                                                                                                                                                                                                                                                                                                                                                                               | 790 045 096         | 790 045 007        | 790 045 082         | 790 047 096         | 790 047 007        | 790 047 082         |
| Pipe OD                                                                       | [mm]                                                                                                                                                                                                                                                                                                                                                                                                  | 114 - 230           | 114 - 230          | 114 - 230           | 157 - 325           | 157 - 325          | 157 - 325           |
|                                                                               | [inch]                                                                                                                                                                                                                                                                                                                                                                                                | 4.488 - 9.055       | 4.488 - 9.055      | 4.488 - 9.055       | 6.181 - 12.795      | 6.181 - 12.795     | 6.181 - 12.795      |
| Wall-thickness depending on material                                          | [mm]                                                                                                                                                                                                                                                                                                                                                                                                  | 2 - 10              | 2 - 10             | 2 - 10              | 2 - 10              | 2 - 10             | 2 - 10              |
|                                                                               | [inch]                                                                                                                                                                                                                                                                                                                                                                                                | 0.079 - 0.394       | 0.079 - 0.394      | 0.079 - 0.394       | 0.079 - 0.394       | 0.079 - 0.394      | 0.079 - 0.394       |
| Pipe ID min. (saw blade Ø 63 mm)                                              | [mm]                                                                                                                                                                                                                                                                                                                                                                                                  | 137                 | 137                | 137                 | 190                 | 190                | 190                 |
| Pipe ID min. (saw blade Ø 2.480")                                             | [inch]                                                                                                                                                                                                                                                                                                                                                                                                | 5.394               | 5.394              | 5.394               | 7.480               | 7.480              | 7.480               |
| Pipe ID min. (saw blade Ø 68 mm)                                              | [mm]                                                                                                                                                                                                                                                                                                                                                                                                  | 132                 | 132                | 132                 | 185                 | 185                | 185                 |
| Pipe ID min. (saw blade Ø 2.677")                                             | [inch]                                                                                                                                                                                                                                                                                                                                                                                                | 5.197               | 5.197              | 5.197               | 7.283               | 7.283              | 7.283               |
| Pipe ID min. (saw blade Ø 80 mm)                                              | [mm]                                                                                                                                                                                                                                                                                                                                                                                                  | 120                 | 120                | 120                 | 173                 | 173                | 173                 |
| Pipe ID min. (saw blade Ø 3.150")                                             | [inch]                                                                                                                                                                                                                                                                                                                                                                                                | 4.724               | 4.724              | 4.724               | 6.811               | 6.811              | 6.811               |
| Pipe ID min. (saw blade Ø 100 mm)                                             | [mm]                                                                                                                                                                                                                                                                                                                                                                                                  | 100                 | 100                | 100                 | 153                 | 153                | 153                 |
| Pipe ID min. (saw blade Ø 3.937")                                             | [inch]                                                                                                                                                                                                                                                                                                                                                                                                | 3.937               | 3.937              | 3.937               | 6.024               | 6.024              | 6.024               |
| Materials                                                                     | Special steel (any Cr- and Mo-content); special steel stainless (any Cr- and Mo-content); special steel (Cr < 12% and Mo < 2.5%; Cr < 20% and Mo = 0%); Case hardening steels, high-speed steels, heat-treated steels, rolling bearing steels, tool steels; black and galvanized steel pipe; general structural steel; annealed cast pipe (GGG); aluminum; brass; copper; plastic (PE, PP, PVDE, PVC) |                     |                    |                     |                     |                    |                     |
| TECHNICAL SPECIFICATIONS                                                      |                                                                                                                                                                                                                                                                                                                                                                                                       | GF 8                | GF 8 AVM*          | GF 8 MVM*           | GF 12               | GF 12 AVM*         | GF 12 MVM*          |
| Power                                                                         | [kW]                                                                                                                                                                                                                                                                                                                                                                                                  | 1.8                 | 1.9                | 1.8                 | 1.8                 | 1.9                | 1.8                 |
|                                                                               | [hp]                                                                                                                                                                                                                                                                                                                                                                                                  | 2.41                | 2.54               | 2.41                | 2.41                | 2.54               | 2.41                |
| Power AVM                                                                     | [kW]                                                                                                                                                                                                                                                                                                                                                                                                  | -                   | 0.05               | -                   | -                   | 0.05               | -                   |
|                                                                               | [hp]                                                                                                                                                                                                                                                                                                                                                                                                  | -                   | 0.07               | -                   | -                   | 0.07               | -                   |
| Built-in electronic speed regulation with speed stabilization                 | [rpm]                                                                                                                                                                                                                                                                                                                                                                                                 | 40 - 215            | 40 - 215           | 40 - 215            | 40 - 215            | 40 - 215           | 40 - 215            |
| Rotary speed machine head with AVM                                            | [rpm]                                                                                                                                                                                                                                                                                                                                                                                                 | -                   | 0.1 - 2.3          | -                   | -                   | 0.1 - 1.8          | -                   |
| Torque machine head 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) |
| Sound pressure 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 on site                                                            | [A]                                                                                                                                                                                                                                                                                                                                                                                                   | 16                  | 16                 | 16                  | 16                  | 16                 | 16                  |
| Dimensions (LxWxH)                                                            | [mm]                                                                                                                                                                                                                                                                                                                                                                                                  | 778 x 430 x 485     | 918 x 430 x 485    | 788 x 430 x 485     | 940 x 374 x 592     | 1,070 x 374 x 592  | 1,090 x 374 x 592   |
|                                                                               | [inch]                                                                                                                                                                                                                                                                                                                                                                                                | 30.6 x 16.9 x 19.1  | 36.1 x 16.9 x 19.1 | 31.0 x 16.1 x 19.1  | 37.0 x 14.7 x 23.3  | 42.1 x 14.7 x 23.3 | 42.9 x 14.7 x 23.3  |
| Machine weight approx.**                                                      | [kg]                                                                                                                                                                                                                                                                                                                                                                                                  | 102.5               | 110.0              | 104.6               | 138.6               | 146.1              | 140.7               |
|                                                                               | [lbs]                                                                                                                                                                                                                                                                                                                                                                                                 | 225.9               | 242.5              | 230.6               | 305.6               | 322.1              | 310.2               |
| Versions (single-phase alternating current)                                   | [V, Hz]                                                                                                                                                                                                                                                                                                                                                                                               | 230 V, 50/60 Hz     | 230 V, 50/60 Hz    | 230 V, 50/60 Hz     | 230 V, 50/60 Hz     | 230 V, 50/60 Hz    | 230 V, 50/60 Hz     |
|                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                       | 120 V, 50/60 Hz     | 120 V, 50/60 Hz    | 120 V, 50/60 Hz     | 120 V, 50/60 Hz     | 120 V, 50/60 Hz    | 120 V, 50/60 Hz     |
| SCOPE OF DELIVERY                                                             |                                                                                                                                                                                                                                                                                                                                                                                                       | GF 8                | GF 8 AVM*          | GF 8 MVM*           | GF 12               | GF 12 AVM*         | GF 12 MVM*          |
| Pipe cutting and beveling machine                                             | PCS                                                                                                                                                                                                                                                                                                                                                                                                   | 1                   | 1                  | 1                   | 1                   | 1                  | 1                   |
| Transportation case                                                           | PCS                                                                                                                                                                                                                                                                                                                                                                                                   | 1                   | 1                  | 1                   | 1                   | 1                  | 1                   |
| Saw blade (Code 790 043 018)                                                  | PCS                                                                                                                                                                                                                                                                                                                                                                                                   | 1                   | 1                  | 1                   | 1                   | 1                  | 1                   |
| Mounting plate                                                                | PCS                                                                                                                                                                                                                                                                                                                                                                                                   | 1                   | 1                  | 1                   | 1                   | 1                  | 1                   |
| Line laser with fastening screws and 10 button cells 1.5 V (Code 790 142 124) | PCS                                                                                                                                                                                                                                                                                                                                                                                                   | 1                   | 1                  | 1                   | 1                   | 1                  | 1                   |
| Tool key 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 with spare parts list                                  | set                                                                                                                                                                                                                                                                                                                                                                                                   | 1                   | 1                  | 1                   | 1                   | 1                  | 1                   |

Technical specifications are non-binding. They do not constitute any assurance of properties. We reserve the right to make changes.

\* The automatic or manual feeding module AVM/MVM is already mounted on the pipe saw on delivery.

\*\* Weight without packaging and accessories.



GF 8

GF 8 AVM

GF 8 MVM



GF 12

GF 12 AVM

GF 12 MVM

## Pipe cutting and beveling machines

### GF 8. GF 12 (AVM/MVM)

Properties, application area, technical specifications and delivery scope, see from page 13.

| ITEM      | VERSION               | CODE               | MACHINE WEIGHT KG | SHIPPING WEIGHT KG |
|-----------|-----------------------|--------------------|-------------------|--------------------|
| GF 8      | 230 V. 50/60 Hz EU    | <b>790 045 095</b> | 102.500           | 149.000            |
| GF 8      | 120 V. 50/60 Hz EU/US | <b>790 045 096</b> | 102.500           | 149.000            |
| GF 8 AVM  | 230 V. 50/60 Hz EU    | <b>790 045 001</b> | 110.000           | 165.000            |
| GF 8 AVM  | 120 V. 50/60 Hz EU/US | <b>790 045 007</b> | 110.000           | 165.000            |
| GF 8 MVM  | 230 V. 50/60 Hz EU    | <b>790 045 069</b> | 103.000           | 153.000            |
| GF 8 MVM  | 120 V. 50/60 Hz EU/US | <b>790 045 082</b> | 103.000           | 153.000            |
| GF 12     | 230 V. 50/60 Hz EU    | <b>790 047 095</b> | 138.600           | 177.000            |
| GF 12     | 120 V. 50/60 Hz EU/US | <b>790 047 096</b> | 138.600           | 177.000            |
| GF 12 AVM | 230 V. 50/60 Hz EU    | <b>790 047 001</b> | 146.000           | 205.000            |
| GF 12 AVM | 120 V. 50/60 Hz EU/US | <b>790 047 007</b> | 146.000           | 205.000            |
| GF 12 MVM | 230 V. 50/60 Hz EU    | <b>790 047 069</b> | 140.700           | 200.000            |
| GF 12 MVM | 120 V. 50/60 Hz EU/US | <b>790 047 082</b> | 140.700           | 200.000            |

### Suitable accessories:

- Saw blades and bevel cutters, see from page 26
- High quality lubricants for sawing and milling, see page 22
- Special gear oil, see page 22
- Replacement cable with rotary contact, see page 23
- Quick-mounting plates with screw clamps, see page 23
- Mobile workstation, see page 23
- Pipe feed basic unit and extension unit, see from page 24



GF 8, GF 12



GF 8 AVM, GF 12 AVM



GF 8 MVM, GF 12 MVM



## Comprehensive service and maintenance offer

**We not only care about your concerns before the purchase. You can rely completely on us after your purchase as well.**

### Our products are extremely robust and reliable.

To ensure the performance in the long run, the recommended service and maintenance intervals should be performed regularly. All service and maintenance work is performed with great care by qualified and motivated employees. They analyze your situation to find the best long-term solution.

We offer competent service via branches as well as our worldwide network of authorized partners. These are carefully selected and are regularly trained by our experts to always be up-to-date with regard to products and technologies.

## Why maintenance?

### "Prevention is better than cure"

Better not wait until your machine sooner or later breaks down completely because of a lack of service or maintenance! Small causes can often have large effects, and failures or malfunctions could have been avoided with timely control or maintenance.

When did you have your machine serviced the last time?  
Better to arrange a meeting now:



**+49 (0) 77 31 792-786**



**customerservice@itw-ocw.com**

### Do not forget: Fill out the service form!

The service form can be downloaded under: [www.orbitalum.de/service.html](http://www.orbitalum.de/service.html)

## Our services:

- Repairing, replacing
- Cost quotation
- Proactive maintenance
- Service training for customers
- Rental machines for bridging repair periods with special conditions
- Collection service for machines
- Visual and functional test
- Determination and measurement technical parameters
- Discussion with customer about maintenance result
- Functional test of the system components
- Cleaning and maintenance work
- Exchange defined wear parts as well as defective components
- Implementation of modifications, in as far as this serves the technical improvements of the device
- Required adjustment and set-up tasks including calibration and new inspection

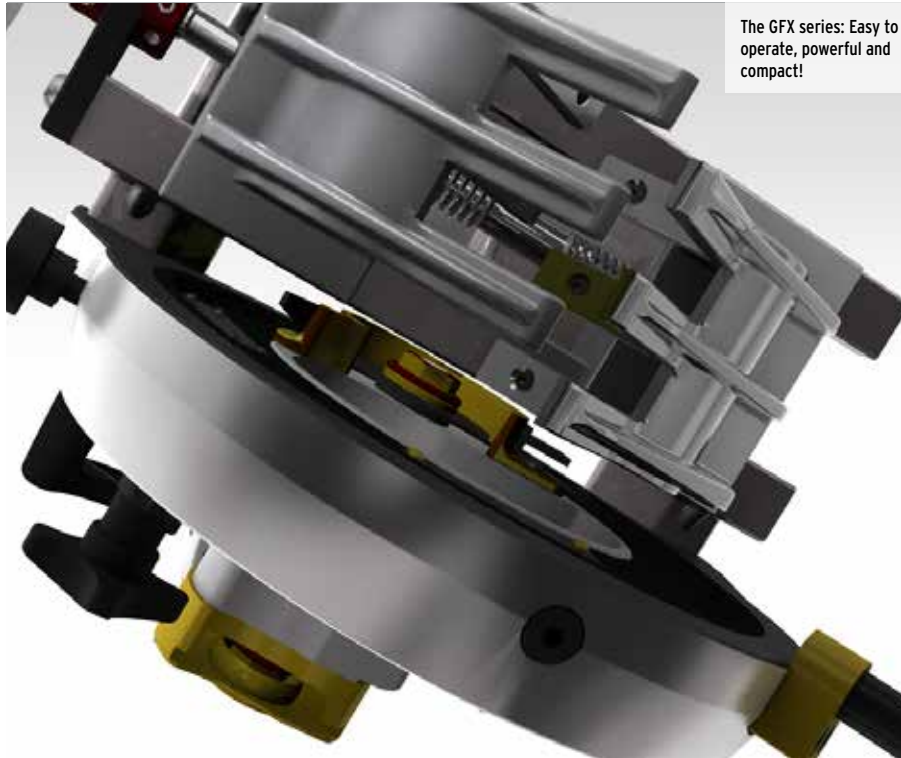
## Your advantages:

- Service directly by the manufacturer or authorized partner
- Reduced downtimes
- Long-term functioning of your machines and plants
- Ensuring high availability
- Wear discovered at an early stage avoids unnecessary and expensive repairs
- Reducing the failure susceptibility
- Value preservation of your machines and plants
- Regular services ensure reliable machine operation - even after years
- Relief of in-house service employees

# GFX 3.0, GFX 6.6

## Pipe cutting and beveling machines

Innovative saws by Orbitalum Tools for cutting and beveling pipes and for cutting off tube elbows (even for thin-walled special steel) in just seconds. Optimum preparation for the automated welding process! The GFX is an easy to operate, powerful and compact saw with low weight - convince yourself of the many outstanding features of this machine.



The GFX series: Easy to operate, powerful and compact!

|                                                                |   |
|----------------------------------------------------------------|---|
| Right-angled, burr-free and cold processing process            | ✓ |
| Deformation-free clamping, even for thin-walled pipes          | ✓ |
| Good handling thanks to its low weight                         | ✓ |
| Beveling of pipe ends during the cutting process or separately | ✓ |
| Increased productivity                                         | ✓ |
| Low-maintenance and service-friendly                           | ✓ |
| Environment-friendly and long product life                     | ✓ |
| Additional saw blade position to cut off tube elbows           | ✓ |
| Ideal for press fitting applications                           | ✓ |

**Our GFX series is ideal for cutting thin-walled tubes. Due to the rugged design for a long product the saws are especially economical; long tool lives also increase productivity.**

The GFX is low-maintenance and service-friendly and offers a large area of application. Processable materials include unalloyed, low-alloyed and high-alloyed steel, special steel, non-ferrous metal aluminum alloys and titanium alloys.

As is meanwhile characteristic for the ORBITALUM pipe saws, they allow convenient marking of the cut-off point on the tube with 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.

### ADDITIONAL ADVANTAGES:

- Optimized chip flow due to new vice design
- Steel sliding clamping jaws with sets of stainless steel caps
- Integrated line laser to mark the cut-off point
- Ergonomically designed motor handle
- Drive with high performance (1,200 W) and adjustable speed range for cutting a wide range of materials
- Electronic overload protection with integrated temperature monitor and tachometer control
- Increased service life of the tools through the new GF10 drive

- Ergonomically positioned speed adjusting wheel
- Plug connection with a quick-disconnect coupler: easy and quick replacement of the swivel cable
- Direct mounting on workbench possible at GFX 3.0



Including second saw blade position to cut off tube elbows



Including steel sliding clamping jaws with sets of stainless steel caps



Integrated line laser for cut-off marking on the pipe



Powerful motor with overload protection and ergonomic handles



Including GF TOP saw blade lubricant



Right-angled and burr-free processing - ideal for press fitting applications

| APPLICATION AREA                                                                           |                                                                                                                                          | GFX 3.0               | GFX 6.6               |
|--------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|
| Code                                                                                       | [230 V]                                                                                                                                  | 790 144 001           | 790 146 001           |
|                                                                                            | [120 V]                                                                                                                                  | 790 144 002           | 790 146 002           |
| Pipe OD                                                                                    | [mm]                                                                                                                                     | 6.0 - 78.0            | 21.3 - 168.3          |
|                                                                                            | [inch]                                                                                                                                   | 0.236 - 3.071         | 0.838 - 6.659         |
| Wall thickness                                                                             | [mm]                                                                                                                                     | 0.8 - 7.0             | 0.8 - 7.0             |
|                                                                                            | [inch]                                                                                                                                   | 0.031 - 0.275         | 0.031 - 0.275         |
| Pipe 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 - 3.071         | 1.008 - 6.659         |
| Pipe 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         |
| Pipe 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         |
| Materials                                                                                  | Unalloyed, low-alloyed and high-alloyed steel, special steel, non-ferrous metal aluminum alloys and titanium alloys, composites, plastic |                       |                       |
| TECHNICAL SPECIFICATIONS                                                                   |                                                                                                                                          | GFX 3.0               | GFX 6.6               |
| Dimensions (LxWxH)                                                                         | [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                                                                          | [kg]                                                                                                                                     | 28.5                  | 74.4                  |
|                                                                                            | [lbs]                                                                                                                                    | 62.83                 | 164.02                |
| Power                                                                                      | [W]                                                                                                                                      | 1200                  | 1200                  |
| Protection class                                                                           | [Class]                                                                                                                                  | II                    | II                    |
| Built-in electronic speed regulation with speed stabilization                              | [rpm]                                                                                                                                    | 30 - 200              | 30 - 200              |
| Versions (single-phase alternating current)                                                | [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/s²]                                                                                                                                   | < 2.5                 | < 2.5                 |
| Sound pressure 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                                                          | PCS                                                                                                                                      | 1                     | 1                     |
| Transportation case                                                                        | PCS                                                                                                                                      | 1                     | 1                     |
| Saw blade (Code 790 ...)                                                                   | PCS                                                                                                                                      | 1 (...041 035)        | 1 (...042 064)        |
| Quick-mounting plate without screw clamps*                                                 | PCS                                                                                                                                      | -                     | 1                     |
| Line laser with holder and fastening screws and 10 button cells 1.5 V (Code 790 142 124)** | PCS                                                                                                                                      | 1                     | 1                     |
| Tool key set                                                                               | set                                                                                                                                      | 1                     | 1                     |
| Saw blade lubricant GF TOP (Code 790 060 228)                                              | Tube                                                                                                                                     | 1                     | 1                     |
| Operating instructions with spare parts list                                               | set                                                                                                                                      | 1                     | 1                     |



GFX 3.0, GFX 6.6

Technical specifications are non-binding. They do not constitute any assurance of properties. We reserve the right to make changes.

\* 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.

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

## Pipe cutting and beveling machines

### GFX 3.0, GFX 6.6

Properties, application area, technical specifications and delivery scope, see page 17.

| ITEM    | VERSION            | CODE               | MACHINE WEIGHT<br>KG | SHIPPING WEIGHT<br>KG |
|---------|--------------------|--------------------|----------------------|-----------------------|
| GFX 3.0 | 230 V, 50/60 Hz EU | <b>790 144 001</b> | 28.000               | 44.000                |
| GFX 3.0 | 120 V, 50/60 Hz US | <b>790 144 002</b> | 28.000               | 44.000                |
| GFX 6.6 | 230 V, 50/60 Hz EU | <b>790 146 001</b> | 74.400               | 104.000               |
| GFX 6.6 | 120 V, 50/60 Hz US | <b>790 146 002</b> | 74.400               | 104.000               |



GFX 3.0, GFX 6.6

### Hard-sided transport case

High-quality, blue transport case with insert. Especially robust design.

| ITEM                                  | CODE               | KG     |
|---------------------------------------|--------------------|--------|
| Hard-sided transport case for GFX 3.0 | <b>790 144 019</b> | 12.500 |



Hard-sided transport case

## Other accessories

- Saw blades and bevel cutters, see from page 26
- High quality lubricants for sawing and milling, see page 22
- Replacement cable with rotary contact, see page 23
- Quick-mounting plates with screw clamps, see page 23
- Mobile workstation, see page 23
- Pipe feed basic unit and extension unit, see from page 24
- Tripod, see page 34

# Accessories for GF machines





GF TOP



GF LUB



Special gear oil

## Accessories for GF machines

### Saw blade lubricant GF TOP

**Synthetic high quality lubricant for sawing and milling.**

Increases the service life of the saw blade.

Fulfills the requirements for H2 lubricants.

Thanks to the screw-on brush, simple and even lubrication of the saw blade is ensured.

| ITEM                       | VERSION     | CODE               | KG    |
|----------------------------|-------------|--------------------|-------|
| Saw blade lubricant GF TOP | Tube, 180 g | <b>790 060 228</b> | 0.205 |

### Saw blade lubricating paste GF LUB

**Chlorine-free high quality lubricant for sawing and milling.**

Increases the service life of the saw blade.

The ecological lubricating paste is the environment-friendly successor of ROCOL; with new name and improved quality.

GF LUB complies with latest environmental guidelines and ecological standards.

| ITEM                               | VERSION      | CODE               | KG    |
|------------------------------------|--------------|--------------------|-------|
| Saw blade lubricating paste GF LUB | Tube, 160 ml | <b>790 041 016</b> | 0.160 |

### Special gear oil

**For all GF and RA types.**

| ITEM             | VERSION        | CODE               | KG    |
|------------------|----------------|--------------------|-------|
| Special gear oil | Bottle, 250 ml | <b>790 041 030</b> | 0.235 |

## Replacement cable with rotary contact

Prevents twisting of the cable.

For all GF, GFX, RA and PS machines with protection class II.

| ITEM                  | 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 |



Swivel cable complete



Swivel cable

## Quick-mounting plates with screw clamps

For fast mounting of the machines on workbenches.

Ideal for frequently changing operation locations.

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



Quick-mounting plate with screw clamps

## Mobile workstation

For mobile construction site and workshop use.

The ideal supplement for all Orbitalum pipe saws (excluded PS 4.5 Plus).

### Advantages:

- Safe transport of the machines to the construction side
- Flexible work on the respective work stations
- Elimination of setup times, e.g. mounting the pipe saw on workbenches
- Height-adjustable roller pipe support with stainless steel roller for supporting the pipes
- Lockable toolbox with 4 compartments for tool and accessories
- Threaded lifting table to adjust the height of the machines to the respective pipe dimension
- Collection tray for chips



Mobile workstation

| TECHNICAL SPECIFICATIONS | MOBILE WORKSTATION                        |
|--------------------------|-------------------------------------------|
| Dimensions (LxWxH)       | 115 x 43 x 91 cm<br>45.3" x 16.9" x 35.8" |
| Load capacity max.       | 675 kg<br>1488.1 lbs                      |

| ITEM               | CODE               | KG      |
|--------------------|--------------------|---------|
| Mobile workstation | <b>790 068 071</b> | 137.000 |

### PIPE CUTTING AND BEVELING TECHNOLOGY



Pipe feeder basic unit



Pipe feeder extension unit

## Pipe feeder basic unit and extension unit

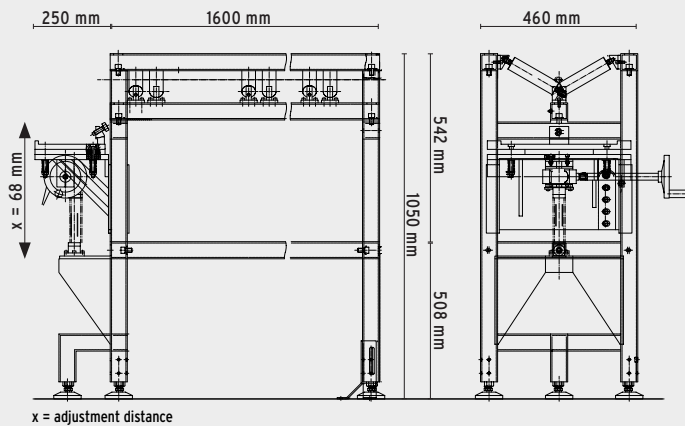
The pipe feeder allows you to feed long and heavy pipes effortlessly and coaxially to the GF machines. Very robust and stable design with powder-coated frame and stainless steel rollers.

### Advantages:

- Extreme stability and structural stability
- Rapid adjustment of dimensions
- Centering of pipes in seconds
- Specially coated, maintenance-free steel frame
- Stainless-steel rollers
- Extension of pipe feeder possible with add-on module
- Saves time and money
- Suitable for all steels

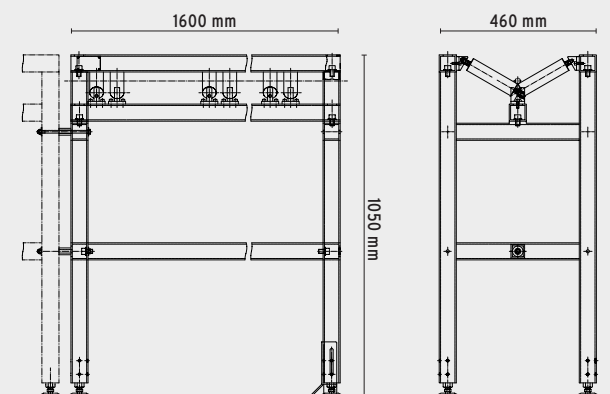
### Basic unit:

Fitting for all pipe cutting and beveling machines by Orbitalum Tools (excluded PS 4.5 Plus). The machines can be mounted directly and without special accessories on the mounting plate of the basic unit. Thanks to mechanical height-adjustment by means of a handwheel, the machine can be easily adjusted to the outer diameter of the pipe to be cut. The machine is spring-loaded on the mounting plate.



### Extension unit:

For individual extension of the basic unit. Can be connected directly to the basic unit.



### Floor bracket assembly:

For attaching the basic and extension unit to the floor. The assembly consists of 4 bracket elements and 8 screws with flat washers.

### PIPE CUTTING AND BEVELING TECHNOLOGY

| APPLICATION AREA/<br>TECHNICAL SPECIFICATIONS                   | PIPE FEED<br>BASIC UNIT                    | PIPE FEED<br>EXTENSION UNIT                     |
|-----------------------------------------------------------------|--------------------------------------------|-------------------------------------------------|
| Pipe OD                                                         | 16 - 325 mm<br>0.63" - 12.8"               | 16 - 325 mm<br>0.63" - 12.8"                    |
| Dimensions approx.                                              | 185 x 105 x 50 cm<br>72.8" x 41.3" x 19.7" | Approx. 160 x 105 x 50<br>62.9" x 41.3" x 19.7" |
| Load capacity max.                                              | 400 kg<br>881.8 lbs                        | 400 kg<br>881.8 lbs                             |
| Height-adjustable quick-mounting plate<br>(adjustment distance) | 68 mm<br>2.68"                             | -<br>-                                          |

| ITEM                       | CODE               | KG      |
|----------------------------|--------------------|---------|
| Pipe feeder basic unit     | <b>790 068 051</b> | 116.000 |
| Pipe feeder extension unit | <b>790 068 061</b> | 72.000  |
| Floor bracket assembly     | <b>790 068 053</b> | 1.900   |

## Other accessories

- Saw blades and bevel cutters, see from page 26

# Saw blades and bevel cutters

## for GF and GFX machines

The saw blades are developed specifically for our pipe saws for extreme demands and maximum service life. For the different applications 4 different saw blades and bevel cutter designs are available.



- **Economy** series for low-alloyed and unalloyed steels as well as cast materials
- **Performance** series for high-alloyed steels (special steel)
- **High-Performance** series for high-performance materials and high-alloyed steels
- **Premium** series specifically for special steel applications with extra high service life

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

Technical specifications are non-binding. They do not constitute any assurance of properties. We reserve the right to make changes.

# Saw blades and bevel cutters for GF and GFX machines

## Saw blades

Properties and areas of application, see page 26.

**Some saw blades are available in economical packs of 10 (with individual packaging) - meaning that you can save on the normal list price buying these value packs!**

When ordering please note that the pack of 10 has a different code number.



Saw blade Economy



Saw blade Performance



Saw blade High-Performance



Saw blade Premium



Saw blade with additional hole

| ITEM                | VERSION          | PIPE WALL THICKNESS |               | SAW BLADE Ø |        | PACK WITH 1 PC |       | PACK WITH 10 PCS |
|---------------------|------------------|---------------------|---------------|-------------|--------|----------------|-------|------------------|
|                     |                  | [MM]                | [INCH]        | [MM]        | [INCH] | CODE           | KG    | CODE             |
| Saw blade           | Economy*         | 1.5 - 6.0           | 0.059 - 0.236 | 68          | 2.677  | 790 042 063    | 0.036 | 792 042 063      |
| Saw blade           | Economy          | 2.0 - 5.5           | 0.079 - 0.217 | 63          | 2.480  | 790 041 020    | 0.032 | 792 041 020      |
| Saw blade           | Economy*         | 5.0 - 12.0          | 0.197 - 0.472 | 80          | 2.953  | 790 043 030    | 0.075 | 792 043 030      |
| Saw blade           | Performance      | 0.6 - 1.2           | 0.024 - 0.047 | 63          | 2.480  | 790 041 036    | 0.027 | 792 041 036      |
| Saw blade           | Performance      | 1.0 - 1.6           | 0.039 - 0.063 | 68          | 2.677  | 790 042 049    | 0.050 | 792 042 049      |
| Saw blade           | Performance      | 1.0 - 3.0           | 0.039 - 0.118 | 63          | 2.480  | 790 048 072    | 0.035 | 792 048 072      |
| Saw blade           | Performance      | 1.2 - 2.5           | 0.047 - 0.098 | 63          | 2.480  | 790 041 035    | 0.040 | 792 041 035      |
| Saw blade           | Performance      | 1.2 - 2.5           | 0.047 - 0.098 | 68          | 2.677  | 790 042 064    | 0.045 | 792 042 064      |
| Saw blade           | Performance**    | 1.2 - 2.5           | 0.047 - 0.098 | 100         | 3.937  | 790 043 036    | 0.104 | 792 043 036      |
| Saw blade           | Performance      | 1.2 - 3.0           | 0.047 - 0.118 | 83          | 3.268  | 790 043 024    | 0.075 | 792 043 024      |
| Saw blade           | Performance      | 1.5 - 2.5           | 0.059 - 0.098 | 80          | 3.150  | 790 046 022    | 0.065 | 792 046 022      |
| Saw blade           | Performance      | 2.5 - 5.5           | 0.098 - 0.217 | 63          | 2.480  | 790 041 048    | 0.035 | 792 041 048      |
| Saw blade           | Performance**    | 2.5 - 5.5           | 0.098 - 0.217 | 100         | 3.937  | 790 043 038    | 0.120 | 792 043 038      |
| Saw blade           | Performance      | 2.5 - 7.0           | 0.098 - 0.276 | 68          | 2.677  | 790 042 048    | 0.045 | 792 042 048      |
| Saw blade           | Performance      | 2.5 - 7.0           | 0.098 - 0.276 | 80          | 3.150  | 790 043 018    | 0.080 | 792 043 018      |
| Saw blade           | Performance      | 6.0 - 10.0          | 0.236 - 0.394 | 80          | 2.953  | 790 043 022    | 0.075 | 792 043 022      |
| Saw blade           | Performance**    | 6.0 - 15.0          | 0.236 - 0.591 | 100         | 3.937  | 790 047 026    | 0.105 | 792 047 026      |
| Saw blade           | High-Performance | 1.2 - 2.5           | 0.047 - 0.098 | 80          | 3.150  | 790 046 021    | 0.064 |                  |
| Saw blade           | High-Performance | 1.2 - 2.5           | 0.047 - 0.098 | 63          | 2.480  | 790 041 034    | 0.040 |                  |
| Saw blade           | High-Performance | 2.5 - 7.0           | 0.098 - 0.267 | 68          | 2.677  | 790 042 058    | 0.045 |                  |
| Saw blade with hole | Performance      | 1.0 - 3.0           | 0.039 - 0.118 | 63          | 2.480  | 790 048 472    | 0.035 | 792 048 472      |
| Saw blade with hole | Performance      | 1.2 - 2.5           | 0.047 - 0.098 | 63          | 2.480  | 790 041 435    | 0.030 | 792 041 435      |
| Saw blade with hole | Performance      | 1.2 - 2.5           | 0.047 - 0.098 | 68          | 2.677  | 790 042 464    | 0.047 | 792 042 464      |
| Saw blade with hole | Performance      | 1.5 - 2.5           | 0.059 - 0.098 | 80          | 3.150  | 790 046 422    | 0.052 | 792 046 422      |
| Saw blade with hole | Performance      | 2.5 - 7.0           | 0.098 - 0.276 | 68          | 2.677  | 790 042 448    | 0.036 | 792 042 448      |
| Saw blade with hole | Performance      | 2.5 - 7.0           | 0.098 - 0.276 | 80          | 2.953  | 790 043 418    | 0.067 | 792 043 418      |

\* Can only be used for aluminum pipes

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



Weld seam saw blade bevel cutter combination (V-seam)

## Saw blade bevel cutter combinations

Properties and areas of application, see page 26.  
Simultaneous cutting and beveling in just seconds.

## Weld seam saw blade bevel cutter combinations (V-seam)

Consisting of one saw blade and one bevel cutter each.  
Individual parts can also be ordered separately.

| VERSION          | PIPE WALL THICKNESS |             | BEV-ELING<br>ANGLE<br>[°] | BEVELING HEIGHT<br>MAX. |        | SAW BLADE Ø |        | CODE               | KG    |
|------------------|---------------------|-------------|---------------------------|-------------------------|--------|-------------|--------|--------------------|-------|
|                  | [MM]                | [INCH]      |                           | [MM]                    | [INCH] | [MM]        | [INCH] |                    |       |
| Performance      | 2.5 - 7.0           | .098 - .276 | 30                        | 7                       | .276   | 68          | 2.677  | <b>790 042 161</b> | 0.108 |
| High-Performance | 2.5 - 5.0           | .098 - .197 | 35                        | 5                       | .197   | 68          | 2.677  | <b>790 042 015</b> | 0.120 |

## Individual parts to weld seam saw blade bevel cutter combinations (V-seam)

| ITEM                                                             | VERSION          | CODE               | KG    |
|------------------------------------------------------------------|------------------|--------------------|-------|
| Saw blade for 790 044 050                                        | Performance      | <b>790 044 040</b> | 0.027 |
| Bevel cutter 30° for 790 044 050                                 | Performance      | <b>790 044 049</b> | 0.065 |
| Saw blade for 790 042 155, 790 042 157 and 790 042 161           | Performance      | <b>790 042 153</b> | 0.040 |
| Bevel cutter 30° for 790 042 161                                 | Performance      | <b>790 042 160</b> | 0.060 |
| Saw blade for 790 042 018, 790 042 015, 790 042 023, 790 042 013 | High-Performance | <b>790 042 016</b> | 0.040 |
| Bevel cutter 30° for 790 042 013                                 | High-Performance | <b>790 042 021</b> | 0.077 |
| Bevel cutter 35° for 790 042 015                                 | High-Performance | <b>790 042 014</b> | 0.060 |

## Supporting ring for saw blade bevel cutter combinations

We recommend using 1 ring for the saw blade bevel cutter combinations.

| ITEM            | CODE               | KG    |
|-----------------|--------------------|-------|
| Supporting ring | <b>790 046 188</b> | 0.068 |



Press fitting saw blade bevel cutter combination

## Press fitting saw blade bevel cutter combinations

Consisting of one saw blade and one bevel cutter each.  
Especially suitable for pipes of metal press fitting systems.  
Individual parts can also be ordered separately.

| VERSION     | PIPE WALL THICKNESS |             | BEV-ELING<br>ANGLE<br>[°] | BEVELING HEIGHT<br>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  | <b>790 044 046</b> | 0.090 |

## Individual parts for press fitting saw blade bevel cutter combinations

| ITEM                         | VERSION     | CODE               | KG    |
|------------------------------|-------------|--------------------|-------|
| Saw blade for 790 044 046    | Performance | <b>790 044 040</b> | 0.027 |
| Bevel cutter for 790 044 046 | Performance | <b>790 044 042</b> | 0.064 |

### Chamfer cutter

Properties and areas of application, see page 26.

**For realizing V-seam welding joints at pipe ends.**  
Instead of the saw blade the chamfer cutter is mounted on the GF/GFX pipe saw.  
Reproducible weld seam preparation in just seconds.

#### Chamfer cutter V-seam

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



Chamfer cutter V-seam

### Saw blade lubricant GF TOP

**Synthetic high quality lubricant for sawing and milling.**  
Increases the service life of the saw blade.  
Fulfills the requirements for H2 lubricants.  
Thanks to the screw-on brush, simple and even lubrication of the saw blade is ensured.

| ITEM                       | VERSION     | CODE               | KG    |
|----------------------------|-------------|--------------------|-------|
| Saw blade lubricant GF TOP | Tube, 180 g | <b>790 060 228</b> | 0.205 |



GF TOP

### Saw blade lubricating paste GF LUB

**Chlorine-free high quality lubricant for sawing and milling.**  
Increases the service life of the saw blade.  
The ecological lubricating paste is the environment-friendly successor of ROCOL; with new name and improved quality.  
GF LUB complies with latest environmental guidelines and ecological standards.

| ITEM                               | VERSION      | CODE               | KG    |
|------------------------------------|--------------|--------------------|-------|
| Saw blade lubricating paste GF LUB | Tube, 160 ml | <b>790 041 016</b> | 0.160 |



GF LUB



TCT Saw Blade



Diamond Cutting Blade



Cermet Saw Blade

## Saw blades for SCORP machines

### TCT saw blade

#### AREA OF APPLICATION SCORP 360 WITH TCT SAW BLADES

| 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  |

| ITEM          | CUTTABLE MATERIALS               | SAW BLADE Ø |        | RPM MAX. | CODE               | KG    |
|---------------|----------------------------------|-------------|--------|----------|--------------------|-------|
|               |                                  | [MM]        | [INCH] |          |                    |       |
| TCT Saw Blade | Steel, copper, aluminum, plastic | 140         | 5.512  | 4.200    | <b>790 014 055</b> | 0.154 |

### Diamond cutting blade

| ITEM                   | CUTTABLE MATERIALS | SAW BLADE Ø |        | RPM MAX. | CODE               | KG    |
|------------------------|--------------------|-------------|--------|----------|--------------------|-------|
|                        |                    | [MM]        | [INCH] |          |                    |       |
| Diamond Cutting Blade* | Cast pipe          | 155         | 6.102  | 4.200    | <b>790 014 059</b> | 0.215 |

\* Only for SCORP 360. Only while supplies last.

### Cermet saw blade

| ITEM             | CUTTABLE MATERIALS | SAW BLADE Ø |        | RPM MAX. | CODE               | KG    |
|------------------|--------------------|-------------|--------|----------|--------------------|-------|
|                  |                    | [MM]        | [INCH] |          |                    |       |
| Cermet Saw Blade | Stainless steel    | 140         | 5.512  | 4.200    | <b>790 014 056</b> | 0.153 |

# PS 4.5 Plus

## Portable pipe saw (electric/battery)

Burr-free, right-angled and deformation-free cutting results, low weight and ease of use at an unbeatable price are the recipe for success of the PS 4.5 Plus. The proven mobile pipe cutting machine is now also available as a battery-powered version.

The PS machine can be mounted quickly and in a space-saving manner and can be transported conveniently and operated by one person



|                                                                                                  |   |
|--------------------------------------------------------------------------------------------------|---|
| Integrated line laser for marking cut-off points                                                 | ✓ |
| Infeed and sawing in a single operation                                                          | ✓ |
| High quality and long service life thanks to robust sliding elements                             | ✓ |
| Mobility thanks to low machine weight, making it ideal for flexible use on the construction site | ✓ |
| Deformation-free clamping thanks to integrated reversible clamping jaws                          | ✓ |
| For cutting thin-walled pipes and for cutting pipe bends                                         | ✓ |
| No reworking required thanks to burr-free and right-angled cut                                   | ✓ |
| Electric versions with speed-controlled electric motor with constant speed control               | ✓ |
| Battery versions with powerful and environmentally friendly lithium-ion technology               | ✓ |

**Cutting thin-walled stainless steel pipes and pipe bends using the "flat cutting principle" is easier than ever before! Weighing just 23 kg, the PS 4.5 Plus is already one of the lightest machines available on the market in this application area. With the new battery-powered version, it is now just 22 kg.**

"Increased safety thanks to stationary pipe and rotating tool". The proven "planetary cutting" process is an important feature that characterizes ORBITALUM pipe saws. The saw blade plunges into the cut and is guided orbitally around the pipe. The advantage of this is that a large pipe diameter can be cut with a small saw blade without heating the pipe.

A second saw blade clamping point enables pipe bends to be cut. The powerful electric motor is equipped with overload protection and is available in the voltage variants 230 V, 120 V and 110 V, 50/60 Hz. The chargers for the new battery versions are available in 230 V for the European market or 110 V for the US market.

### FURTHER ADVANTAGES:

- The rotating body and the self-centering vice are made of high-quality aluminum alloys
- Corrosion prevention through cold machining process
- Multi-point clamping of the pipe
- Quick adjustment of the pipe dimension
- Long tool life
- Use of pressfitting-saw blade combinations possible\*
- Speed-controlled single-phase AC motor with restart interlock
- Supplied in a handy transport case

### ELECTRIC VERSIONS:

- Rotatable and removable drive
- Speed-controlled electric motor with speed stabilization
- Vario-Tacho-Constamatic (VTC) full-shaft electronics
- Setting wheel for preselecting the speed
- Robust Marathon motor

- Overload protection
- Cut-off carbon brushes
- Carbon wear indicator

### BATTERY VERSIONS:

- Short overall length
- Lithium-ion technology
- Brushless motor with high performance
- No memory effect
- Individual cell monitoring in the battery pack
- Electronic overload protection with integrated temperature monitoring
- Robust battery packs with capacity indicator
- Low self-discharge
- Environmentally friendly
- AIR COOLED technology for short charging times and a long service life

\* Only with the Orbitalum saw blade bevel cutter combinations, Code 790 044 046 or Code 790 044 047. Especially suitable for pipes of metal press fitting systems. Consisting of one saw blade and one bevel cutter each. Individual parts can also be ordered separately. Processable wall thickness: 1-2 mm, beveling angle: 45°/70°, beveling height: max. 0.4/1.0 mm.



Supply in hard-sided transport case with compartments for accessories, e.g. for mounting plate, tools and now also for tripods (available optionally)



Self-centering vice made of high quality aluminum alloy



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



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



Additional saw blade position for cutting off tube elbows



Tripod made of aluminum available optionally. Dismountable in few steps - for space-saving storage, e.g. in PS transport case

| APPLICATION AREA                                           |          | PS 4.5 Plus       | PS 4.5 Plus battery                   |
|------------------------------------------------------------|----------|-------------------|---------------------------------------|
| Code                                                       | [230 V]  | 790 048 001       |                                       |
|                                                            | [110 V]  | 790 048 002       |                                       |
|                                                            | [120 V]  | 790 048 003       |                                       |
|                                                            | [230 V]  |                   | 790 048 004                           |
|                                                            | [115 V]  |                   | 790 048 005                           |
| Outer Ø D0 pipes                                           | [mm]     | 6 - 120           |                                       |
|                                                            | [inch]   | 0.236 - 4.724     |                                       |
| Outer Ø D0 tube elbows                                     | [mm]     | 30 - 120          |                                       |
|                                                            | [inch]   | 1.181 - 4.724     |                                       |
| Wall thickness min. - max.                                 | [mm]     | 0,6 - 3,0         |                                       |
|                                                            | [inch]   | 0.024 - 0.118     |                                       |
| TECHNICAL SPECIFICATIONS                                   |          |                   |                                       |
| Dimensions                                                 | [mm]     | 480 x 230 x 600   | 480 x 420 x 450                       |
|                                                            | [inch]   | 20.9 x 9.1 x 23.6 | 18.9 x 16.5 x 17.7                    |
| Power                                                      | [W]      | 1100              | 1100                                  |
|                                                            | [hp]     | 1.5               | 1.5                                   |
| Protection class (DIN VDE 0740, protective insulated)      | [Class]  | II                | II                                    |
| Speed                                                      | [rpm]    | 30 - 182          | 1st gear: 0 - 32<br>2nd gear: 0 - 118 |
| Vibration level (DIN EN 28662, Part 1)                     | [m/s²]   | < 2,5             | < 2,5                                 |
| Sound pressure level at the workplace approx.              | [dB (A)] | 78                | 78                                    |
| SCOPE OF DELIVERY                                          |          |                   |                                       |
| Portable pipe saw                                          | PCS      | 1                 | 1                                     |
| Clamping jaws made of hardened cast aluminum               | Set      | 1                 | 1                                     |
| Exchangeable batteries                                     | PCS      |                   | 2                                     |
| Charger                                                    | PCS      |                   | 1                                     |
| Hard-sided transport case                                  | PCS      | 1                 | 1                                     |
| Line laser*                                                | PCS      | 1                 | 1                                     |
| Saw blade (Code 790 048 072)                               | PCS      | 1                 | 1                                     |
| Tool bag incl. accessories (roll-up case Code 790 048 345) | PCS      | 1                 | 1                                     |
| Saw blade lubricant GF TOP (Code 790 060 228)              | Tube     | 1                 | 1                                     |
| Operating instructions with spare parts list               | set      | 1                 | 1                                     |

Technical specifications are non-binding. They do not constitute any assurance of properties. We reserve the right to make changes.

\*Line laser already mounted at machine on delivery



PS 4.5 Plus



PS 4.5 Plus battery



PS 4.5 Plus battery, side view

## Portable pipe saw

### PS 4.5 Plus (electric/battery)

Properties, application area, technical specifications and delivery scope, see page 31.

| ITEM                | VERSION            | CODE        | MACHINE WEIGHT<br>KG | SHIPPING WEIGHT<br>KG |
|---------------------|--------------------|-------------|----------------------|-----------------------|
| PS 4.5 Plus         | 230 V, 50/60 Hz EU | 790 048 001 | 23,600               | 39,50                 |
| PS 4.5 Plus         | 110 V, 50/60 Hz EU | 790 048 002 | 23,600               | 39,50                 |
| PS 4.5 Plus         | 120 V, 50/60 Hz US | 790 048 003 | 23,600               | 39,50                 |
| PS 4.5 Plus battery | 230 V, 50/60 Hz EU | 790 048 004 | 22,000               | 39,00                 |
| PS 4.5 Plus battery | 115 V, 50/60 Hz US | 790 048 005 | 22,000               | 39,00                 |



PS 4.5 Plus

### Quick-mounting plate with screw clamps

Simple and rapid mounting at workbenches without drilling.  
Incl. 4 hexagon socket head screws for mounting the PS on the quick-mounting plate.

| ITEM                                   | CODE        | KG    |
|----------------------------------------|-------------|-------|
| Quick-mounting plate with screw clamps | 790 048 334 | 2,600 |



PS 4.5 Plus battery

### Saw blades

Performance series for high-alloyed steels (special steel).  
Recommended saw blades (only Ø 63 mm/2.480") for the portable pipe saws  
PS 4.5 Plus.

| ITEM      | VERSION     | PIPE 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 |



Quick-mounting plate with screw clamps



Saw blade Performance



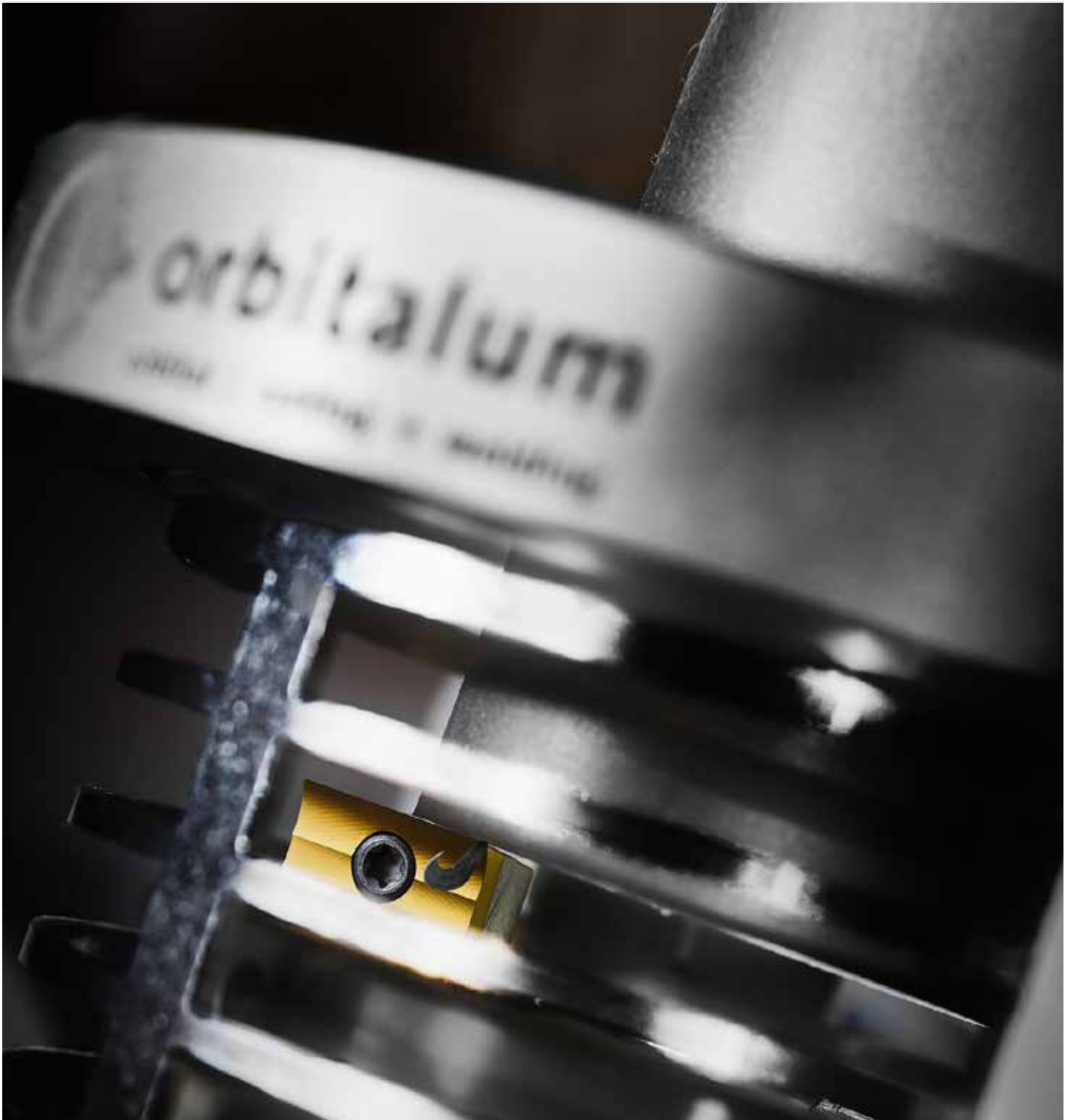
Tripod

## Tripod

Made of aluminum. Suitable for PS 4.5 Plus and GFX 3.0.  
Simple mounting of the saws directly on the tripod without mounting plate.  
Dismountable in a few steps. Storage in PS transport case possible. Space-saving - usable quickly - good handling.

| ITEM                            | CODE               | KG    |
|---------------------------------|--------------------|-------|
| Tripod for PS 4.5 Plus, GFX 3.0 | <b>790 048 390</b> | 7.400 |

# Tube squaring technology



# Comprehensive training program.

We attach great importance to the safe operation of our machines - this has the highest priority for us.

Therefore we recommend participation in a product training to learn correct and safe handling of our machines and avoid possible dangers and accidents already in advance.



If you would like to learn more about our comprehensive training program or would like information on upcoming dates for users, please contact our training team under the phone number:

+49 (0) 77 31 792-200

Or send us an e-mail to:

[training@itw-ocw.com](mailto:training@itw-ocw.com)

# RPG ONE, RPG 1.5

## Tube squaring machines (electric/battery)

The RPG series stands for ease of use and particularly economical processing.

The domains of the RPG XS series include squaring (I-seam) thin-walled stainless steel pipes and micro-fittings, as well as unalloyed and low-alloyed steels, aluminum, titanium. The machines fit excellently in the hand and its size and weight can hardly be surpassed. Users can select the appropriate clamping collars from the range of accessories for each diameter.

For burr-free and right angled squaring and beveling of thin-walled stainless steel pipes and micro-fittings. The required, high-quality pipe end preparation, including for orbital welding!



|                                                                                 |   |
|---------------------------------------------------------------------------------|---|
| Generates a tube squaring surface with very high surface finish                 | ✓ |
| Burr-free and right-angled                                                      | ✓ |
| Beveling possible with special holder (only RPG 1.5)                            | ✓ |
| Quick change system for tools, clamping collars and pipes                       | ✓ |
| Machining of thin-walled stainless steel pipes (V4A) and micro-fittings         | ✓ |
| Base plate with 2 cutting edges and high-performance coating                    | ✓ |
| Electric versions with speed controlled electric motor with speed stabilization | ✓ |
| Battery versions with powerful and environment-friendly lithium-ion technology  | ✓ |
| Portable and light machine for mobile and safe use                              | ✓ |

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 with our RPG series.

Tools, clamping shells and pipes can be replaced with the quick change system easily and without additional accessories.

All multifunctional tools (MFW) have up to 2 cutting edges and a high-performance coating against wear. This way pipes made of unalloyed, low-alloyed and high-alloyed steels and aluminum can be processed rapidly and economically with high precision.

In case of an extension or repair of an existing plant we offer the optimum, network-independent solution for tight spaces with the **battery variant**. The battery drive has been adapted to the requirements of the customer.

The machine and accessories are supplied in a handy

transport case, including a 230 V charger for the European market or a 110 V charger for the American market.

### ADDITIONAL ADVANTAGES:

- Feed with millimeter graduation for an optimum result
- No additional tools required for processing
- Modular design enables compatibility within the RPG series

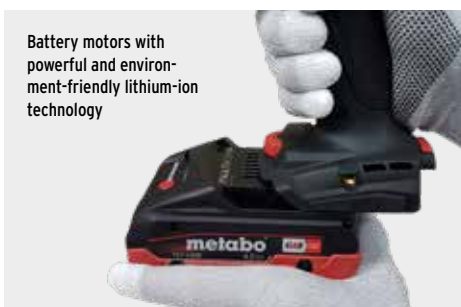
### ELECTRIC VERSIONS:

- Rotatable and removable drive
- Speed-controlled electric motor with speed stabilization
- Vario-Tacho-Constamatic (VTC) full-wave electronic control
- Inhibitor protection prevents an inadvertent start-up of the machine after repeated power supply or in case of voltage recovery after power failure
- Adjustment wheel for speed selection
- Robust marathon motor

- Overload protection
- Cut-off carbon brushes
- Carbon wear display

### BATTERY VERSIONS:

- Short overall length
- Lithium-ion technology
- Brushless motor with high performance
- No memory effect
- Single cell monitoring in rechargeable battery pack
- Electronic overload protection with integrated temperature monitor
- Robust rechargeable battery packs with capacity indicator
- Low self-discharge
- Environmentally friendly
- AIR COOLED technology for short charging times and a long service life



Technical specifications are non-binding. They do not constitute any assurance of properties. We reserve the right to make changes.

| APPLICATION AREA                                                                      |                     | RPG ONE                                                                                                                                              | RPG ONE BATTERY | RPG 1.5           | RPG 1.5 BATTERY |
|---------------------------------------------------------------------------------------|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-------------------|-----------------|
| Code                                                                                  | [230 V]             | 790 036 031                                                                                                                                          | 790 036 021     | 790 037 001       | 790 037 011     |
|                                                                                       | [115 V]             | -                                                                                                                                                    | 790 036 022     | -                 | 790 037 012     |
|                                                                                       | [120 V]             | 790 036 032                                                                                                                                          | -               | 790 037 002       | -               |
|                                                                                       | [110 V]             | 790 036 033                                                                                                                                          | -               | 790 037 003       | -               |
| Pipe OD min. - max.                                                                   | [mm]                | 3.0* - 25.4                                                                                                                                          | 3.0* - 25.4     | 3.0* - 38.1       | 3.0* - 38.1     |
|                                                                                       | [inch]              | 0.118* - 1.0                                                                                                                                         | 0.118* - 1.0    | 0.118* - 1.5      | 0.118* - 1.5    |
| Wall thickness max.                                                                   | [mm]                | 2.0                                                                                                                                                  | 2.0             | 3.0               | 3.0             |
|                                                                                       | [inch]              | 0.079                                                                                                                                                | 0.079           | 0.118             | 0.118           |
| Materials                                                                             |                     | High-alloyed steels (special steel material no. 1.40... - 1.45... according to DIN 17455 and DIN 17456), unalloyed and low-alloyed steels, aluminum. |                 |                   |                 |
| TECHNICAL SPECIFICATIONS                                                              |                     | RPG ONE                                                                                                                                              | RPG ONE BATTERY | RPG 1.5           | RPG 1.5 BATTERY |
| Dimensions (LxWxH)                                                                    | [mm]                | 390 x 70 x 200                                                                                                                                       | 252 x 77 x 255  | 400 x 160 x 350   | 266 x 87 x 255  |
|                                                                                       | [inch]              | 15.4 x 2.8 x 7.9                                                                                                                                     | 9.9 x 3.0 x 10  | 15.8 x 6.3 x 13.8 | 10.5 x 3.4 x 10 |
| Tool speed                                                                            | [rpm]               | 145 - 380                                                                                                                                            | 0 - 500         | 145 - 380         | 0 - 500         |
| Power                                                                                 | [W]                 | 1100                                                                                                                                                 | -               | 1100              | -               |
| Exchangeable battery voltage                                                          | [V]                 | -                                                                                                                                                    | 18              | -                 | 18              |
| Capacity                                                                              | [Ah]                | -                                                                                                                                                    | 4.0             | -                 | 4.0             |
| Sound pressure level at the workplace (EN 23741)                                      | [dB (A)]            | Approx. 78                                                                                                                                           | Approx. 78      | Approx. 78        | Approx. 78      |
| Vibration level (EN 50144)                                                            | [m/s <sup>2</sup> ] | < 2.5                                                                                                                                                | < 2.5           | < 2.5             | < 2.5           |
| SCOPE OF DELIVERY                                                                     |                     | RPG ONE                                                                                                                                              | RPG ONE BATTERY | RPG 1.5           | RPG 1.5 BATTERY |
| Tube squaring machine                                                                 | PCS                 | 1                                                                                                                                                    | 1               | 1                 | 1               |
| transport case                                                                        | PCS                 | 1                                                                                                                                                    | 1               | 1                 | 1               |
| Exchangeable batteries                                                                | PCS                 | -                                                                                                                                                    | 2               | -                 | 2               |
| Charger                                                                               | PCS                 | -                                                                                                                                                    | 1               | -                 | 1               |
| Overload fuse (square nut)                                                            | PCS                 | -                                                                                                                                                    | -               | -                 | -               |
| Tool holder WH (Code 790 ...)                                                         | PCS                 | 1 (... 037 152)                                                                                                                                      | 1 (... 037 152) | 1 (... 037 152)   | 1 (... 037 152) |
| Tool key                                                                              | set                 | 1                                                                                                                                                    | 1               | 1                 | 1               |
| Operating instructions and spare part list                                            | set                 | 1                                                                                                                                                    | 1               | 1                 | 1               |
| Base plate for battery machines is optionally available on request (Code 790 037 169) |                     |                                                                                                                                                      |                 |                   |                 |

\* Field of application with standard tool holder (Code 790 037 152) as of 6.0mm/0.236" possible. With special tool holder (Code 790 037 161) as of 3.0mm/0.118".



RPG ONE



RPG 1.5



RPG ONE battery



RPG 1.5 battery

## Tube squaring machines

### RPG ONE, RPG 1.5

Properties, application area, technical specifications and delivery scope, see page 37.

Special-steel clamping collars have to be ordered separately.

| ITEM                   | VERSION            | CODE               | MACHINE WEIGHT<br>KG | SHIPPING WEIGHT<br>KG |
|------------------------|--------------------|--------------------|----------------------|-----------------------|
| RPG ONE                | 230 V, 50/60 Hz EU | <b>790 036 031</b> | 4.140                | 9.600                 |
| RPG ONE                | 120 V, 50/60 Hz US | <b>790 036 032</b> | 4.140                | 9.600                 |
| RPG ONE                | 110 V, 50/60 Hz EU | <b>790 036 033</b> | 4.140                | 9.600                 |
| RPG ONE battery (18 V) | 230 V, 50/60 Hz EU | <b>790 036 021</b> | 2.880                | 8.200                 |
| RPG ONE battery (18 V) | 115 V, 60 Hz US    | <b>790 036 022</b> | 2.880                | 8.200                 |
| RPG 1.5                | 230 V, 50/60 Hz EU | <b>790 037 001</b> | 4.700                | 9.500                 |
| RPG 1.5                | 120 V, 50/60 Hz US | <b>790 037 002</b> | 4.700                | 9.500                 |
| RPG 1.5                | 110 V, 50/60 Hz EU | <b>790 037 003</b> | 4.700                | 9.500                 |
| RPG 1.5 battery (18 V) | 230 V, 50/60 Hz EU | <b>790 037 011</b> | 3.440                | 10.100                |
| RPG 1.5 battery (18 V) | 115 V, 60 Hz US    | <b>790 037 012</b> | 3.440                | 10.100                |



RPG ONE / RPG ONE battery



RPG 1.5 / RPG 1.5 battery

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

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

RPG ONE; RPG ONE battery; RPG 1.5; RPG 1.5 battery

The angle drive can be used to reduce the overall length to 200 mm (7.874"). The technical specifications remain unchanged.

| ITEM                                          | CODE               | KG    |
|-----------------------------------------------|--------------------|-------|
| Angle drive for RPG ONE and RPG 1.5 (battery) | <b>790 037 400</b> | 0.475 |



Angle drive

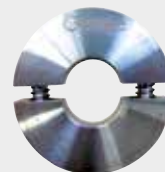
## Special-steel clamping collars

Extremely resistant. Ensure a precise clamping of pipes and micro-fittings and a rapid clamping collar change without tools through a unique design with forcibly actuated clamping shell mechanism.

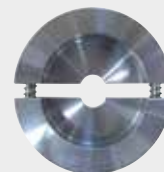
Further clamping collar dimensions are available.

Please check the outer diameter of the pipes before ordering the clamping collars.

| Machine model: | Clamping length for pipes: | Clamping length for micro-fittings: |
|----------------|----------------------------|-------------------------------------|
| RPG ONE        | 10.0 mm (0,394")           | 4.0 mm (0,157")                     |
| RPG 1.5        | 15.0 mm (0,591")           | 4.0 mm (0,157")                     |



Stainless-steel clamping collar  
For pipes



Stainless-steel clamping collar  
For micro-fittings

| MACHINE TYPE |        | RPG ONE        |       |                |       | RPG 1.5        |              |                |       |
|--------------|--------|----------------|-------|----------------|-------|----------------|--------------|----------------|-------|
| PIPE OD      |        | PIPES          |       | MICRO-FITTINGS |       | PIPES          |              | MICRO-FITTINGS |       |
| [MM]         | [INCH] | 790...         | KG    | 790...         | KG    | 790...         | KG           | 790...         | KG    |
| 3.00         | 0.118  | <b>036 232</b> | 0.118 | -              | -     | <b>037 220</b> | <b>0.300</b> | <b>037 300</b> | 0.225 |
| 3.18         | 0.125  | <b>036 201</b> | 0.119 | -              | -     | <b>037 221</b> | <b>0.308</b> | <b>037 301</b> | 0.227 |
| 4.00         | 0.157  | -              | -     | -              | -     | <b>037 222</b> | <b>0.310</b> | <b>037 302</b> | 0.226 |
| 4.78         | 0.188  | -              | -     | -              | -     | <b>037 223</b> | <b>0.310</b> | <b>037 303</b> | 0.234 |
| 5.00         | 0.197  | -              | -     | -              | -     | <b>037 224</b> | <b>0.308</b> | <b>037 304</b> | 0.228 |
| 6.00         | 0.236  | <b>036 213</b> | 0.117 | <b>036 304</b> | 0.066 | <b>037 225</b> | <b>0.310</b> | <b>037 305</b> | 0.220 |
| 6.35         | 0.250  | <b>036 202</b> | 0.118 | <b>036 301</b> | 0.066 | <b>037 226</b> | <b>0.306</b> | <b>037 306</b> | 0.460 |
| 7.00         | 0.276  | <b>036 214</b> | 0.118 | -              | -     | <b>037 257</b> | 0.306        | <b>037 333</b> | -     |
| 8.00         | 0.315  | <b>036 215</b> | 0.118 | <b>036 307</b> | 0.065 | <b>037 227</b> | 0.299        | <b>037 307</b> | 0.223 |
| 9.00         | 0.354  | -              | -     | -              | -     | <b>037 254</b> | 0.280        | -              | -     |
| 9.53         | 0.375  | <b>036 203</b> | 0.115 | <b>036 302</b> | 0.064 | <b>037 228</b> | 0.297        | <b>037 308</b> | 0.300 |
| 10.00        | 0.394  | <b>036 204</b> | 0.115 | <b>036 305</b> | 0.065 | <b>037 229</b> | 0.298        | <b>037 309</b> | 0.222 |
| 10.10        | 0.398  | <b>036 222</b> | 0.114 | -              | -     | -              | -            | -              | -     |
| 11.00        | 0.433  | <b>036 226</b> | 0.112 | -              | -     | <b>037 293</b> | 0.252        | -              | -     |
| 11.11        | 0.437  | -              | -     | -              | -     | <b>037 255</b> | 0.295        | -              | -     |
| 12.00        | 0.472  | <b>036 205</b> | 0.112 | <b>036 306</b> | 0.064 | <b>037 230</b> | 0.293        | <b>037 310</b> | 0.220 |
| 12.10        | 0.476  | <b>036 223</b> | 0.111 | -              | -     | -              | -            | -              | -     |
| 12.50        | 0.492  | -              | -     | -              | -     | -              | -            | <b>037 317</b> | 0.220 |
| 12.70        | 0.500  | <b>036 206</b> | 0.111 | <b>036 303</b> | 0.062 | <b>037 231</b> | 0.292        | <b>037 311</b> | 0.220 |
| 13.00        | 0.512  | -              | -     | -              | -     | <b>037 232</b> | 0.295        | -              | -     |
| 13.20        | 0.520  | -              | -     | -              | -     | <b>037 263</b> | 0.290        | -              | -     |
| 13.50        | 0.531  | <b>036 227</b> | 0.110 | -              | -     | <b>037 233</b> | 0.290        | -              | -     |
| 14.00        | 0.551  | <b>036 228</b> | 0.108 | -              | -     | <b>037 234</b> | 0.288        | -              | -     |
| 14.10        | 0.555  | <b>036 224</b> | 0.107 | -              | -     | -              | -            | -              | -     |
| 14.30        | 0.563  | -              | -     | -              | -     | <b>037 253</b> | 0.289        | -              | -     |
| 14.70        | 0.579  | -              | -     | -              | -     | <b>037 290</b> | 0.287        | -              | -     |
| 15.00        | 0.591  | <b>036 216</b> | 0.107 | -              | -     | <b>037 235</b> | 0.287        | -              | -     |
| 15.30        | 0.602  | -              | -     | -              | -     | <b>037 259</b> | 0.287        | -              | -     |
| 15.60        | 0.614  | <b>036 225</b> | 0.105 | -              | -     | -              | -            | -              | -     |
| 15.70        | 0.618  | -              | -     | -              | -     | <b>037 291</b> | 0.284        | -              | -     |
| 15.88        | 0.625  | <b>036 211</b> | 0.105 | -              | -     | <b>037 236</b> | 0.285        | -              | -     |
| 16.00        | 0.630  | <b>036 212</b> | 0.104 | -              | -     | <b>037 237</b> | 0.285        | -              | -     |
| 17.00        | 0.670  | <b>036 221</b> | 0.103 | -              | -     | <b>037 256</b> | 0.280        | -              | -     |
| 17.08        | 0.672  | -              | -     | -              | -     | <b>037 260</b> | 0.281        | -              | -     |
| 17.20        | 0.677  | <b>036 207</b> | 0.104 | -              | -     | <b>037 238</b> | 0.300        | <b>037 312</b> | 0.220 |
| 18.00        | 0.709  | <b>036 217</b> | 0.102 | -              | -     | <b>037 239</b> | 0.280        | -              | -     |
| 19.00        | 0.748  | -              | -     | -              | -     | <b>037 240</b> | 0.275        | <b>037 314</b> | 0.216 |
| 19.05        | 0.750  | <b>036 208</b> | 0.100 | -              | -     | <b>037 241</b> | 0.274        | <b>037 315</b> | 0.215 |
| 20.00        | 0.787  | <b>036 230</b> | 0.096 | -              | -     | <b>037 242</b> | 0.272        | -              | -     |
| 21.00        | 0.827  | -              | -     | -              | -     | <b>037 294</b> | 0.270        | -              | -     |
| 21.20        | 0.835  | -              | -     | -              | -     | -              | -            | <b>037 313</b> | 0.213 |
| 21.30        | 0.839  | <b>036 209</b> | 0.094 | <b>036 317</b> | 0.057 | <b>037 243</b> | 0.270        | <b>037 318</b> | 0.212 |
| 21.70        | 0.854  | <b>036 220</b> | 0.093 | -              | -     | <b>037 261</b> | 0.270        | -              | -     |
| 22.00        | 0.866  | <b>036 218</b> | 0.093 | -              | -     | <b>037 244</b> | 0.264        | -              | -     |
| 22.22        | 0.875  | -              | -     | -              | -     | <b>037 292</b> | 0.270        | -              | -     |
| 23.00        | 0.906  | <b>036 219</b> | 0.085 | -              | -     | <b>037 245</b> | 0.255        | -              | -     |
| 24.00        | 0.945  | -              | -     | -              | -     | <b>037 246</b> | 0.256        | -              | -     |
| 25.00        | 0.984  | <b>036 231</b> | 0.081 | -              | -     | <b>037 247</b> | 0.252        | -              | -     |
| 25.40        | 1.000  | <b>036 210</b> | 0.083 | -              | -     | <b>037 248</b> | 0.240        | -              | -     |
| 26.90        | 1.059  | -              | -     | -              | -     | <b>037 249</b> | 0.260        | -              | -     |
| 27.00        | 1.063  | -              | -     | -              | -     | <b>037 264</b> | 0.260        | -              | -     |

### TUBE SQUARING TECHNOLOGY

| MACHINE TYPE |        | RPG ONE |    |                |    | RPG 1.5 |       |                |    |
|--------------|--------|---------|----|----------------|----|---------|-------|----------------|----|
| PIPE OD      |        | PIPES   |    | MICRO-FITTINGS |    | PIPES   |       | MICRO-FITTINGS |    |
| [MM]         | [INCH] | 790...  | KG | 790...         | KG | 790...  | KG    | 790...         | KG |
| 27.20        | 1.071  | -       | -  | -              | -  | 037 262 | 0.260 | -              | -  |
| 28.00        | 1.102  | -       | -  | -              | -  | 037 250 | 0.240 | -              | -  |
| 29.00        | 1.142  | -       | -  | -              | -  | 037 251 | 0.232 | -              | -  |
| 30.00        | 1.181  | -       | -  | -              | -  | 037 252 | 0.228 | -              | -  |
| 31.75        | 1.250  | -       | -  | -              | -  | 037850  | 0.229 | -              | -  |
| 31.80        | 1.252  | -       | -  | -              | -  | 037 280 | 0.230 | -              | -  |
| 32.00        | 1.260  | -       | -  | -              | -  | 037 258 | 0.226 | -              | -  |
| 33.40        | 1.315  | -       | -  | -              | -  | 037 281 | 0.220 | -              | -  |
| 33.70        | 1.327  | -       | -  | -              | -  | 037 282 | 0.218 | -              | -  |
| 34.00        | 1.339  | -       | -  | -              | -  | 037 283 | 0.215 | -              | -  |
| 35.00        | 1.377  | -       | -  | -              | -  | 037 284 | 0.210 | -              | -  |
| 36.00        | 1.417  | -       | -  | -              | -  | 037 285 | 0.204 | -              | -  |
| 38.00        | 1.496  | -       | -  | -              | -  | 037 286 | 0.199 | -              | -  |
| 38.10        | 1.500  | -       | -  | -              | -  | 037 287 | 0.194 | -              | -  |



Tool holder WH

## Tool holder WH

For max. wall thickness 3 mm.

| Application area<br>Tool holder             | Machine method |          | Beveling<br>angle<br>[°] |                | Pipe OD                    |                            |
|---------------------------------------------|----------------|----------|--------------------------|----------------|----------------------------|----------------------------|
|                                             | Squaring       | Beveling |                          |                | RPG ONE<br>(battery)       | RPG 1.5<br>(battery)       |
| WH12-I/Standard*<br>Code 790 037 152        | x              | -        | -                        | [mm]<br>[inch] | 6.0 - 25.4<br>0.236 - 1.0  | 6.0 - 38.1<br>0.236 - 1.5  |
| WH12-I<br>Code 790 037 161                  | x              | -        | -                        | [mm]<br>[inch] | 3.0 - 6.0<br>0.118 - 0.236 | 3.0 - 6.0<br>0.118 - 0.236 |
| WH12-I/Micro-fittings**<br>Code 790 037 156 | x              | -        | -                        | [mm]<br>[inch] | -<br>-                     | 3.0 - 21.2<br>0.118 - 0.84 |
| WH3-V-30***<br>Code 790 037 158             | -              | x        | 30°                      | [mm]<br>[inch] | -<br>-                     | max. 35.0<br>max. 1,378    |
| WH3-V-35***<br>Code 790 037 159             | -              | x        | 35°                      | [mm]<br>[inch] | -<br>-                     | max. 33.7<br>max. 1,327    |
| WH3-V-45***<br>Code 790 037 157             | -              | x        | 45°                      | [mm]<br>[inch] | -<br>-                     | max. 33.7<br>max. 1,327    |

| ITEM                                        | 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 |

\* Included in the standard scope of delivery.

\*\* Only to be used with special steel clamping collars for micro-fittings.

\*\*\* Cannot be used with the RPG ONE.



Multifunctional tool MFW

## Multifunctional tool MFW

With 2 cutting edges and process-specific tool wear protective coating.  
Can be used with all the machines of the RPG series.

| ITEM                         | QUAN-<br>TITY | CODE               | KG    |
|------------------------------|---------------|--------------------|-------|
| Multifunctional tool MFW-P-2 | 10            | <b>790 038 315</b> | 0.045 |
| Torx screw                   | 1             | <b>790 086 220</b> | 0.002 |

# RPG 3.0 (battery), RPG 4.5 (S), RPG 8.6

## Tube squaring machines

In manual welding technology a high quality pipe end processing is desirable for economical reasons. In automated welding, also called "orbital welding", the high quality of pipe end processing is required for technical reasons. For this weld seam preparation Orbitalum has developed the tube squaring machines RPG 3.0 (battery), RPG 4.5, RPG 4.5 S and RPG 8.6. The optimum solution for the required, high quality pipe end preparation for orbital welding.



|                                                                 |   |
|-----------------------------------------------------------------|---|
| Generates a tube squaring surface with very high surface finish | ✓ |
| Burr-free and right-angled                                      | ✓ |
| Beveling possible with special holder (not with RPG 4.5 S)      | ✓ |
| Quick change system for tools, clamping collars and pipes       | ✓ |
| Machining of thin-walled stainless steel pipes (V4A)            | ✓ |
| Base plate with 2 cutting edges and high-performance coating    | ✓ |
| Speed-controlled electric motor                                 | ✓ |
| Feed with millimeter graduation for an optimum result           | ✓ |
| Portable and light machine for mobile and safe use              | ✓ |

**With the RPG 3.0 (battery) the user can process pipes with an outer diameter of 6.0 mm – 77.0 mm with high precision. The RPG 4.5 can process pipe ends rapidly, burr-free and absolutely right-angled up to 114.4 mm (4.5") and the RPG 8.6 up to 219.1 mm (8.6").**

Low operating costs are a huge advantage when processing pipes. The symmetrical, exchangeable special steel and aluminum clamping collars (not for RPG 4.5 S) can be easily and rapidly exchanged in a short amount of time and without tools. A dimension exchange does not require much more time. Thanks to the ergonomic machine design the user can work in a convenient and time-saving manner.

The multifunctional tools (MFW) have 2 cutting edges and a high-performance coat-

ing against wear. This way pipes made of unalloyed, low-alloyed and high-alloyed steels and aluminum can be processed rapidly and economically with high precision. The system enables clean and safe working.

The RPG 3.0, RPG 4.5 (S) and RPG 8.6 is equipped with a high-quality powerful drive in 230 volt, 120 volt and 110 volt versions.

The RPG 3.0 is also available as battery versions (230 V or 115 V), with powerful and environmentally-friendly lithium-ion technology. Machine and accessories are supplied in a robust hard-sided transport case.

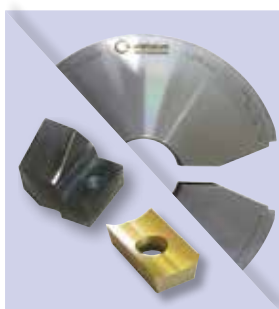
### ADDITIONAL SPECIFICATIONS OF THE RPG 4.5 S:

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

- Integrated clamping jaws made of annealed cast aluminum for different pipe diameters
- High cost effectiveness, since no dimension-specific clamping collars required
- Multipoint clamping of the pipe



Delivery in hard-sided transport case



Including tool holder WH and multi-functional tool MFW. Large selection of clamping collars is available – separately.



Burr-free and right-angled



Quick change system for tools, clamping collars and pipes



Application: Pipe and plant manufacturers for high-purity gas, electronics, pharmaceuticals, food processing, beverages, solar as well as chemical industries

| APPLICATION AREA                                 |                      | RPG 3.0                                                                                                                                                                   | RPG3.0 AKKU              | RPG 4.5                  | RPG 4.5 S                | RPG 8.6                  |
|--------------------------------------------------|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Code                                             | [230 V]              | 790 031 001                                                                                                                                                               | 790 031 011              | 790 038 001              | 790 038 011              | 790 039 001              |
|                                                  | [110 V]              | 790 031 003                                                                                                                                                               | -                        | 790 038 003              | -                        | 790 039 003              |
|                                                  | [120 V]              | 790 031 002                                                                                                                                                               | -                        | 790 038 002              | 790 038 012              | 790 039 002              |
|                                                  | [115 V]              | -                                                                                                                                                                         | 790 031 012              | -                        | -                        | -                        |
| Pipe OD                                          | [mm]                 | 6.0 - 77.0                                                                                                                                                                | 6.0 - 77.0               | 12.7 - 114.3             | 12.7 - 114.3             | 50.8 - 219.1             |
|                                                  | [inch]               | 0.24 - 3.0                                                                                                                                                                | 0.24 - 3.0               | 0.5 - 4.5                | 0.5 - 4.5                | 2 - 8.6                  |
| Wall thickness max.                              | [mm]                 | 3.0                                                                                                                                                                       | 3.0                      | 3.0                      | 3.0                      | 3.6                      |
|                                                  | [inch]               | 0.118                                                                                                                                                                     | 0.118                    | 0.118                    | 0.118                    | 0.142                    |
| Materials                                        |                      | High-alloyed steels (special steel material no. 1.40... - 1.45... according to DIN 17 455 and DIN 17 456), unalloyed and low-alloyed steels, aluminum. Others on request. |                          |                          |                          |                          |
| TECHNICAL SPECIFICATIONS                         |                      | RPG 3.0                                                                                                                                                                   | RPG3.0 AKKU              | RPG 4.5                  | RPG 4.5 S                | RPG 8.6                  |
| Dimensions (with drive)                          | [mm]                 | 460 x 245 x 185                                                                                                                                                           | 316 x 242 x 185          | 460 x 260 x 230          | 610 x 380 x 270          | 500 x 350 x 350          |
|                                                  | [inch]               | 18,1 x 9,6 x 7,3                                                                                                                                                          | 12,4 x 9,5 x 7,3         | 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                     | 1100                     |
| Protection class                                 | [Class]              | II                                                                                                                                                                        | II (charger)             | II                       | II                       | II                       |
| Speed (max. idle speed)                          | [min <sup>-1</sup> ] | 8 - 52                                                                                                                                                                    | 0-30 (1st gear)          | 8 - 52                   | 8 - 52                   | 7 - 18                   |
| Vibration level (EN 60745)                       | [m/s <sup>2</sup> ]  | < 2,5                                                                                                                                                                     | < 2,5                    | < 2,5                    | < 2,5                    | < 2,5                    |
| Sound pressure level at the workplace (EN 23741) | [dB (A)]             | During idling approx. 83                                                                                                                                                  | During idling approx. 83 | During idling approx. 83 | During idling approx. 83 | During idling approx. 83 |
| SCOPE OF DELIVERY                                |                      | RPG3.0                                                                                                                                                                    | RPG3.0 AKKU              | RPG 4.5                  | RPG 4.5 S                | RPG 8.6                  |
| Tube squaring machine                            | PCS                  | 1                                                                                                                                                                         | 1                        | 1                        | 1                        | 1                        |
| Hard-sided transport case                        | PCS                  | 1                                                                                                                                                                         | 1                        | 1                        | 1                        | 1                        |
| Tool holder WH (Code 790 038 320)                | PCS                  | 1                                                                                                                                                                         | 1                        | 1                        | 1                        | 1                        |
| Overload fuse (square nut)                       | PCS                  | 1                                                                                                                                                                         | 1                        | 1                        | 1                        | 1                        |
| Tool key                                         | set                  | 1                                                                                                                                                                         | 1                        | 1                        | 1                        | 1                        |
| Operating instructions and spare part list       | set                  | 1                                                                                                                                                                         | 1                        | 1                        | 1                        | 1                        |

Technical specifications are non-binding. They do not constitute any assurance of properties. We reserve the right to make changes.



RPG 4.5



RPG 4.5 S



RPG 8.6



RPG 3.0



RPG 3.0 battery

## Tube squaring machines

### RPG 3.0 (battery), RPG 4.5, RPG 4.5 S, RPG 8.6

Properties, application area, technical specifications and delivery scope, see page 43.

Clamping collars have to be ordered separately.

| ITEM            | VERSION                    | CODE        | MACHINE WEIGHT KG | SHIPPING WEIGHT KG |
|-----------------|----------------------------|-------------|-------------------|--------------------|
| RPG 3.0         | 230 V, 50/60 Hz EU         | 790 031 001 | 7.800             | 16.300             |
| RPG 3.0         | 110 V, 50/60 Hz EU         | 790 031 003 | 7.800             | 16.300             |
| RPG 3.0         | 120 V, 50/60 Hz US         | 790 031 002 | 7.800             | 16.300             |
| RPG 3.0 battery | (18 V), 230 V, 50/60 Hz EU | 790 031 011 | 7.100             | 16.800             |
| RPG 3.0 battery | (18 V), 115 V, 50/60 Hz US | 790 031 012 | 7.100             | 16.800             |
| 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             |



RPG 4.5



RPG 4.5 S



RPG 8.6

#### TUBE SQUARING TECHNOLOGY

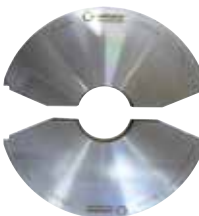
## Clamping collars

Extremely resistant. The clamping collar with click mechanism guarantees precise clamping of pipes and rapid clamping collar change without tools. Further clamping collar dimensions are available.

Please check the outer diameter of the pipes before ordering the clamping collars.



Special-steel clamping collar for RPG 3.0 (battery)



Special-steel clamping collar for RPG 4.5



Aluminum clamping collar for RPG 8.6

| Machine model: | Clamping lengths: |
|----------------|-------------------|
| RPG 3.0        | 19.9 mm (0,783")  |
| RPG 4.5        | 24.9 mm (0,980")  |
| RPG 8.6        | 39.9 mm (1,571")  |

| CAN BE USED WITH: |        | RPG 3.0 (BATTERY) |       | RPG 4.5         |       | RPG 8.6  |    |
|-------------------|--------|-------------------|-------|-----------------|-------|----------|----|
| PIPE OD           |        | STAINLESS STEEL   |       | STAINLESS STEEL |       | ALUMINUM |    |
| [MM]              | [INCH] | CODE              | KG    | CODE            | KG    | CODE     | KG |
| 6.35              | 0.25   | 790 031 239       | -     | -               | -     | -        | -  |
| 10.00             | 0.394  | 790 031 243       | 1,300 | -               | -     | -        | -  |
| 12.00             | 0.472  | 790 031 244       | 1,300 | 790 038 454     | 2,170 | -        | -  |
| 12.70             | 0.500  | 790 031 232       | 1,245 | 790 038 438     | 2,177 | -        | -  |
| 13.00             | 0.512  | 790 031 259       | 1,300 | 790 038 439     | 2,176 | -        | -  |
| 13.50             | 0.531  | 790 031 267       | 1,300 | 790 038 440     | 2,175 | -        | -  |
| 14.00             | 0.551  | 790 031 272       | -     | 790 038 441     | 2,174 | -        | -  |
| 16.00             | 0.630  | 790 031 273       | -     | 790 038 442     | 2,168 | -        | -  |
| 17.20             | 0.677  | 790 031 260       | 1,300 | 790 038 443     | 2,164 | -        | -  |
| 18.00             | 0.709  | 790 031 274       | -     | 790 038 444     | 2,161 | -        | -  |
| 19.00             | 0.748  | 790 031 264       | 1,200 | 790 038 445     | 2,150 | -        | -  |
| 19.05             | 0.750  | 790 031 233       | 1,225 | 790 038 446     | 2,157 | -        | -  |
| 20.00             | 0.787  | 790 031 275       | -     | 790 038 447     | 2,153 | -        | -  |
| 21.30             | 0.839  | 790 031 245       | 1,200 | 790 038 448     | 2,100 | -        | -  |
| 22.00             | 0.866  | 790 031 268       | 1,300 | 790 038 449     | 2,144 | -        | -  |
| 22.22             | 0.875  | -                 | -     | 790 038 050     | 2,195 | -        | -  |
| 23.00             | 0.906  | 790 031 265       | -     | 790 038 450     | 2,140 | -        | -  |
| 24.00             | 0.945  | -                 | -     | 790 038 451     | 2,133 | -        | -  |
| 25.00             | 0.984  | 790 031 231       | -     | 790 038 452     | 2,127 | -        | -  |
| 25.25             | 0.994  | -                 | -     | 790 038 049     | 2,180 | -        | -  |
| 25.40             | 1.000  | 790 031 234       | 1,195 | 790 038 051     | 2,180 | -        | -  |
| 26.90             | 1.059  | 790 031 246       | 1,200 | 790 038 400     | 2,090 | -        | -  |
| 27.20             | 1.071  | -                 | -     | 790 038 468     | 2,165 | -        | -  |
| 28.00             | 1.102  | 790 031 263       | -     | 790 038 401     | 2,110 | -        | -  |
| 29.00             | 1.142  | 790 031 261       | 1200  | 790 038 402     | 2,105 | -        | -  |
| 30.00             | 1.181  | -                 | -     | 790 038 403     | 2,095 | -        | -  |
| 31.75             | 1.250  | 790 031 241       | 1,200 | 790 038 052     | 1,865 | -        | -  |
| 31.80             | 1.252  | -                 | -     | 790 038 404     | 2,080 | -        | -  |
| 32.00             | 1.260  | -                 | -     | 790 038 455     | 2,080 | -        | -  |
| 33.00             | 1.299  | -                 | -     | 790 038 465     | 2,120 | -        | -  |
| 33.40             | 1.315  | 790 031 254       | 1,130 | 790 038 405     | 2,040 | -        | -  |
| 33.70             | 1.327  | 790 031 247       | 1,200 | 790 038 406     | 2,060 | -        | -  |
| 34.00             | 1.339  | 790 031 269       | 1,300 | 790 038 407     | 2,115 | -        | -  |
| 35.00             | 1.377  | 790 031 266       | -     | 790 038 408     | 2,050 | -        | -  |
| 36.00             | 1.417  | -                 | -     | 790 038 409     | 2,044 | -        | -  |
| 38.00             | 1.496  | 790 031 250       | 1,200 | 790 038 410     | 2,025 | -        | -  |
| 38.10             | 1.500  | 790 031 225       | 1,200 | 790 038 053     | 2,020 | -        | -  |
| 40.00             | 1.575  | 790 031 270       | 1,300 | 790 038 411     | 2,000 | -        | -  |
| 41.00             | 1.614  | 790 031 220       | 1,160 | 790 038 412     | 1,990 | -        | -  |
| 42.00             | 1.654  | -                 | -     | 790 038 413     | 1,976 | -        | -  |
| 42.16             | 1.660  | 790 031 255       | -     | 790 038 414     | 1,950 | -        | -  |
| 42.40             | 1.669  | 790 031 221       | 1,100 | 790 038 415     | 1,965 | -        | -  |
| 42.70             | 1.681  | -                 | -     | 790 038 416     | 1,950 | -        | -  |
| 44.45             | 1.750  | -                 | -     | 790 038 417     | 1,955 | -        | -  |
| 44.50             | 1.752  | 790 031 229       | 1,045 | 790 038 418     | 1,955 | -        | -  |
| 45.00             | 1.772  | -                 | -     | 790 038 419     | 1,948 | -        | -  |
| 48.00             | 1.890  | 790 031 262       | -     | 790 038 464     | 1,960 | -        | -  |
| 48.26             | 1.900  | 790 031 256       | -     | 790 038 420     | 1,880 | -        | -  |
| 48.30             | 1.902  | 790 031 222       | 1,100 | 790 038 421     | 1,905 | -        | -  |
| 48.60             | 1.913  | -                 | -     | 790 038 422     | 1,875 | -        | -  |
| 50.00             | 1.969  | 790 031 251       | 1,050 | 790 038 456     | 1,880 | -        | -  |

### TUBE SQUARING TECHNOLOGY

| CAN BE USED WITH: |        | RPG 3.0 (BATTERY) |       | RPG 4.5         |       | RPG 8.6     |       |
|-------------------|--------|-------------------|-------|-----------------|-------|-------------|-------|
| PIPE OD           |        | STAINLESS STEEL   |       | STAINLESS STEEL |       | ALUMINUM    |       |
| [MM]              | [INCH] | CODE              | KG    | CODE            | KG    | CODE        | KG    |
| 50.80             | 2.000  | 790 031 223       | 0,975 | 790 038 054     | 1,895 | 790 039 260 | 4,500 |
| 51.00             | 2.008  | 790 031 248       | 1,200 | 790 038 423     | 1,870 | -           | -     |
| 52.00             | 2.047  | -                 | -     | 790 038 424     | 1,850 | -           | -     |
| 53.00             | 2.087  | 790 031 224       | 1,0   | 790 038 425     | 1,835 | -           | -     |
| 54.00             | 2.126  | 790 031 258       | 1,200 | 790 038 426     | 1,827 | -           | -     |
| 55.00             | 2.165  | 790 031 228       | 0,910 | -               | -     | -           | -     |
| 57.00             | 2.244  | 790 031 230       | 0,895 | 790 038 457     | 1,780 | 790 039 265 | 4,000 |
| 60.00             | 2.362  | -                 | -     | 790 038 469     | 1,780 | -           | -     |
| 60.30             | 2.374  | 790 031 227       | 0,850 | 790 038 427     | 1,700 | -           | -     |
| 60.45             | 2.380  | -                 | -     | 790 038 428     | 1,726 | -           | -     |
| 60.50             | 2.382  | -                 | -     | 790 038 429     | 1,695 | -           | -     |
| 63.00             | 2.480  | -                 | -     | 790 038 461     | 1,725 | -           | -     |
| 63.50             | 2.500  | 790 031 226       | 0,805 | 790 038 055     | 1,670 | -           | -     |
| 65.00             | 2.559  | -                 | -     | 790 038 463     | 1,700 | -           | -     |
| 70.00             | 2.756  | 790 031 237       | 0,700 | 790 038 430     | 1,545 | -           | -     |
| 73.03             | 2.875  | 790 031 257       | 0,645 | 790 038 453     | 1,460 | -           | -     |
| 73.15             | 2.880  | -                 | -     | 790 038 431     | 1,482 | -           | -     |
| 75.00             | 2.953  | -                 | -     | 790 038 462     | 1,490 | -           | -     |
| 76.10             | 2.996  | 790 031 238       | 0,590 | 790 038 432     | 1,420 | -           | -     |
| 76.20             | 3.000  | 790 031 236       | 0,600 | 790 038 056     | 1,420 | 790 039 261 | 4,200 |
| 76.30             | 3.004  | -                 | -     | 790 038 433     | 1,390 | -           | -     |
| 80.00             | 3.150  | -                 | -     | 790 038 466     | 1,390 | 790 039 308 | -     |
| 85.00             | 3.346  | -                 | -     | 790 038 434     | 1,220 | -           | -     |
| 85.90             | 3.382  | -                 | -     | 790 038 435     | 1,124 | -           | -     |
| 88.90             | 3.500  | -                 | -     | 790 038 057     | 1,130 | 790 039 264 | 4,000 |
| 89.10             | 3.508  | -                 | -     | 790 038 436     | 1,100 | -           | -     |
| 90.00             | 3.543  | -                 | -     | 790 038 467     | 1,150 | -           | -     |
| 101.60            | 4.000  | -                 | -     | 790 038 058     | 0,800 | 790 039 252 | 3,800 |
| 104.00            | 4.094  | -                 | -     | 790 038 437     | 0,740 | 790 039 309 | 2,500 |
| 108.00            | 4.252  | -                 | -     | 790 038 458     | 0,620 | 790 039 266 | 3,750 |
| 114.30            | 4.500  | -                 | -     | 790 038 059     | 0,435 | 790 039 256 | 3,500 |
| 127.05            | 5.002  | -                 | -     | -               | -     | 790 039 262 | 3,420 |
| 133.00            | 5.236  | -                 | -     | -               | -     | 790 039 267 | 2,980 |
| 139.70            | 5.500  | -                 | -     | -               | -     | 790 039 259 | 3,100 |
| 141.30            | 5.563  | -                 | -     | -               | -     | 790 039 257 | 2,900 |
| 152.40            | 6.000  | -                 | -     | -               | -     | 790 039 253 | 2,700 |
| 159.00            | 6.260  | -                 | -     | -               | -     | 790 039 268 | 2,500 |
| 168.30            | 6.625  | -                 | -     | -               | -     | 790 039 254 | 2,300 |
| 193.70            | 7.626  | -                 | -     | -               | -     | 790 039 269 | 3,500 |
| 197.00            | 7.756  | -                 | -     | -               | -     | 790 039 263 | 1,530 |
| 203.20            | 8.000  | -                 | -     | -               | -     | 790 039 258 | 1,350 |
| 219.10            | 8.625  | -                 | -     | -               | -     | 790 039 255 | 0,600 |

## TUBE SQUARING TECHNOLOGY



Tool holder WH

## Tool holder WH

Incl. Torx fastening screw M4x10 (790 086 220).

Beveling with the RPG 4.5 S is not recommended.

| Application area<br>Tool holder | Machine method |          | Beveling angle<br>[°] |
|---------------------------------|----------------|----------|-----------------------|
|                                 | 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                    |

| ITEM                   | CODE        | KG    |
|------------------------|-------------|-------|
| Tool holder WH12-I     | 790 038 320 | 0.025 |
| Tool holder WH12-V-30° | 790 038 329 | 0.034 |
| Tool holder WH12-V-35° | 790 038 282 | 0.054 |
| Tool holder WH12-V-45° | 790 038 280 | 0.044 |
| Tool holder WH12-U-20° | 790 038 326 | 0.031 |



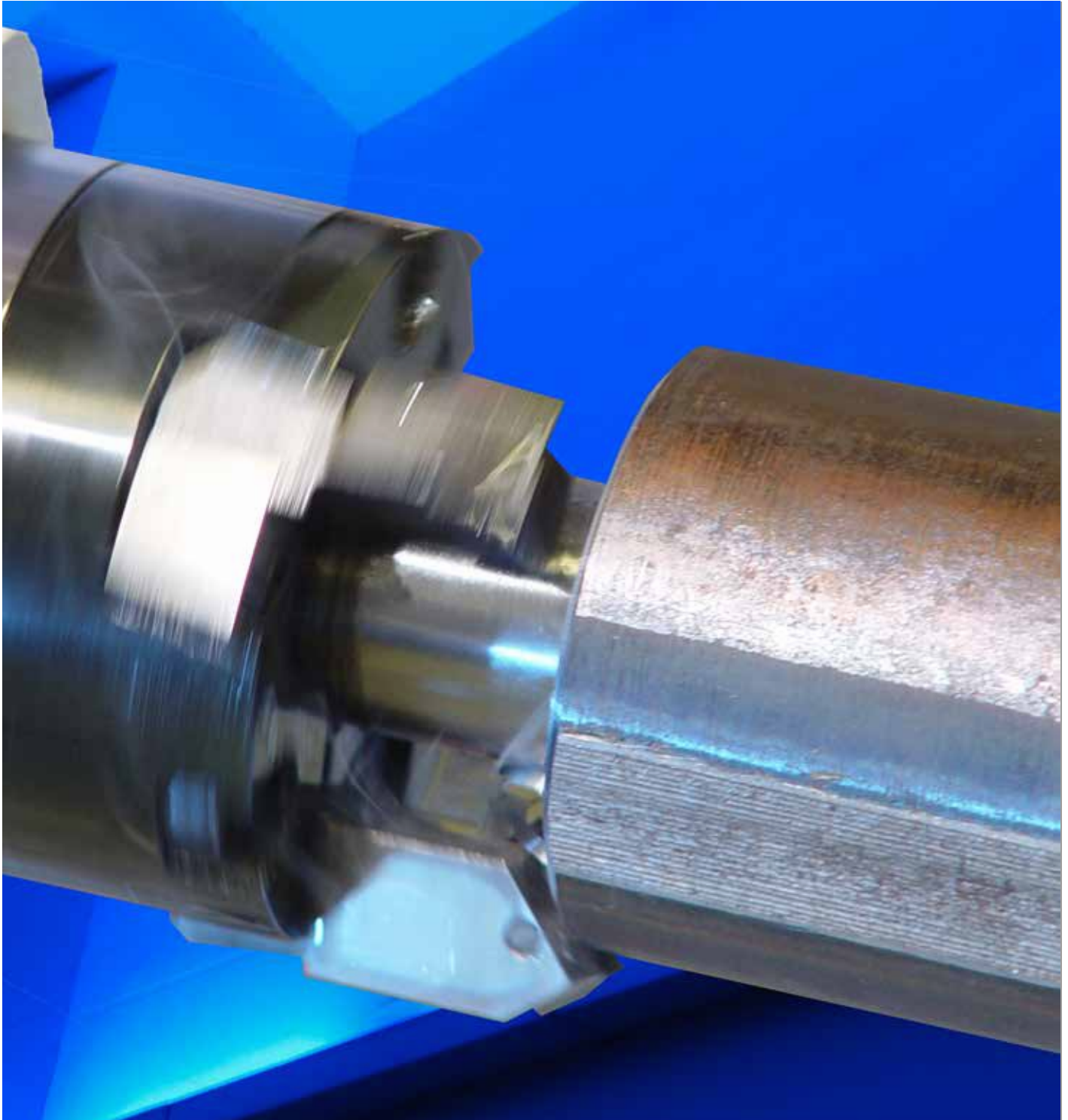
Multifunctional tool MFW

## Multifunctional tool MFW

With 2 cutting edges and process-specific tool wear protective coating.  
Can be used with all the machines of the RPG series.

| ITEM                         | QUAN-<br>TITY | CODE        | KG    |
|------------------------------|---------------|-------------|-------|
| Multifunctional tool MFW-P-2 | 10            | 790 038 315 | 0.045 |
| Torx screw                   | 1             | 790 086 220 | 0.002 |

# Technique de chanfreinage



# Accessories for BRB and REB machines

## Tool holder WH

Incl. Torx screw. Combination possibilities of tool holders and multifunctional tools, see page 53.

| ITEM                                | WELD | CAN BE USED WITH MACHINE | HEIGHT [MM] | HEIGHT [INCH] | CODE               | KG    |
|-------------------------------------|------|--------------------------|-------------|---------------|--------------------|-------|
| WH12-I                              | I    | BRB 4                    | 20          | 0.787         | <b>790 086 210</b> | 0.035 |
| WH12-I / short                      | I    | BRB 4                    | 14          | 0.551         | <b>790 086 281</b> | 0.032 |
| WH15-I                              | I    | BRB 4 / REB              | 20          | 0.787         | <b>790 092 202</b> | 0.100 |
| WH15-I                              | I    | BRB 4 / REB              | 27          | 1.063         | <b>790 092 204</b> | 0.100 |
| WH15-I**                            | I    | BRB 4 / REB              | 16.5 - 23   | 0.650 - 0.906 | <b>790 093 410</b> | 0.247 |
| WH30-I                              | I    | REB                      | 20          | 0.787         | <b>790 093 202</b> | 0.166 |
| WH30-I                              | I    | REB                      | 27          | 1.063         | <b>790 093 204</b> | 0.235 |
| WH12-V-30°                          | V/Y  | BRB 4                    | -           | -             | <b>790 086 214</b> | 0.040 |
| WH12-V-30° / short                  | V    | BRB 4                    | -           | -             | <b>790 086 282</b> | 0.036 |
| WH12-V-37.5°                        | V/Y  | BRB 4                    | -           | -             | <b>790 086 216</b> | 0.040 |
| WH12-V-45°                          | V/Y  | BRB 4                    | -           | -             | <b>790 086 474</b> | 0.052 |
| WH12-V-80°                          | V/Y  | BRB 4 / REB              | -           | -             | <b>790 093 462</b> | 0.115 |
| WH12-V-35°                          | V/Y  | BRB 4                    | -           | -             | <b>790 086 272</b> | 0.048 |
| WH15-V-30°                          | V/Y  | BRB 4 / REB              | -           | -             | <b>790 092 210</b> | 0.100 |
| WH15-V-37.5°                        | V/Y  | BRB 4 / REB              | -           | -             | <b>790 092 216</b> | 0.100 |
| WH12-V-37.5° / short                | V    | BRB 4                    | -           | -             | <b>790 086 283</b> | 0.035 |
| WH15-V-45°                          | V/Y  | BRB 4 / REB              | -           | -             | <b>790 092 218</b> | 0.144 |
| WH15-V-60°                          | V/Y  | BRB 4 / REB              | -           | -             | <b>790 092 212</b> | 0.100 |
| WH30-V-15°                          | V/Y  | REB                      | -           | -             | <b>790 093 468</b> | 0.200 |
| WH30-V-30°                          | V/Y  | REB                      | -           | -             | <b>790 093 210</b> | 0.192 |
| WH30-V-37.5°                        | V/Y  | REB                      | -           | -             | <b>790 093 216</b> | 0.199 |
| WH30-V-40°                          | V/Y  | REB                      | -           | -             | <b>790 093 510</b> | 0.237 |
| WH30-V-45°                          | V/Y  | REB                      | -           | -             | <b>790 093 404</b> | 0.204 |
| WH12-U-10°                          | U    | BRB 4                    | -           | -             | <b>790 086 208</b> | 0.044 |
| WH12-U-15°                          | U    | BRB 4 / REB              | -           | -             | <b>790 086 213</b> | 0.044 |
| WH12-U-20°                          | U    | BRB 4                    | -           | -             | <b>790 086 224</b> | 0.047 |
| WH12-U-20° / large clamping surface | U    | BRB 4 / REB              | -           | -             | <b>790 086 476</b> | 0.091 |
| WH12-U-25°                          | U    | BRB 4                    | -           | -             | <b>790 086 212</b> | 0.051 |
| WH30-U-7°                           | U    | BRB 4 / REB              | -           | -             | <b>790 093 408</b> | 0.206 |
| WH30-U-10°                          | U    | BRB 4 / REB              | -           | -             | <b>790 093 220</b> | 0.174 |
| WH30-U-14°                          | U    | REB                      | -           | -             | <b>790 093 474</b> | 0.190 |
| WH30-U-20°                          | U    | BRB 4 / REB              | -           | -             | <b>790 093 218</b> | 0.184 |
| WH30-U-25°                          | U    | REB                      | -           | -             | <b>790 093 478</b> | 0.165 |
| WH5-ID-14°                          | ID   | BRB 4 / REB              | -           | -             | <b>790 093 406</b> | 0.139 |
| WH5-ID-45°***                       | ID   | BRB 4 / REB              | -           | -             | <b>790 086 218</b> | 0.055 |
| WH10-ID-5° / long                   | ID   | BRB 4 / REB              | -           | -             | <b>790 093 400</b> | 0.152 |
| WH10-ID-14°                         | ID   | BRB 4 / REB              | -           | -             | <b>790 093 402</b> | 0.160 |
| WH10-ID-14° / 30 mm deep            | ID   | BRB 4 / REB              | -           | -             | <b>790 093 466</b> | 0.265 |
| WH12-ID-10° / from ID 50            | ID   | BRB 4 / REB              | -           | -             | <b>790 086 280</b> | 0.060 |
| WH10-ID-30°                         | ID   | BRB 4 / REB              | -           | -             | <b>790 093 493</b> | 0.100 |
| WH10-ID-45°                         | ID   | REB                      | -           | -             | <b>790 093 494</b> | 0.107 |
| WH10-ID-80°***                      | ID   | BRB 4                    | -           | -             | <b>790 086 275</b> | 0.075 |
| WH10-AD-10°                         | OD   | BRB 4                    | -           | -             | <b>790 086 276</b> |       |

\* Special holder for squaring pipes in pipe sheets.

\*\* Tool holder WH, adjustable for I-seam. The scope of delivery includes: Adjustable tool holder, multifunctional tool MFW 15-V /I-4 (Code 790 093 037), Torx screws, adjustment plates.

\*\*\* Tool holder WH for cutting pipes from pipe sheets.



WH12-I



WH15-I\*\*



WH15-V-30°



WH12-U-15°



WH5-ID-14°

## Multifunctional tools MFW "High-Performance"

**Turning plate tools with 2 or 4 cutting edges coated with a high-performance tool wear protective coating.** Can be used for pipes made of high-alloyed steel (special steel), low-alloy and unalloyed steel, aluminum as well as cast materials.

| ITEM                  | VERSION          | FOR WALL THICKNESSES |               | CAN BE USED WITH WH/FOR JOINT FORM    | CAN BE USED WITH | CODE               | KG    |
|-----------------------|------------------|----------------------|---------------|---------------------------------------|------------------|--------------------|-------|
|                       |                  | [MM]                 | [INCH]        |                                       |                  |                    |       |
| MFW5-U-2-R0,4         | High-Performance | max. 6               | max. 0.236    | WH5-I and WH5-U-20° with radius 0.4mm | BRB 2            | <b>790 085 030</b> | 0.002 |
| MFW5-U-2-R2           | High-Performance | max. 6               | max. 0.236    | WH5-I and WH5-U-20° with radius 2 mm  | BRB 2            | <b>790 085 032</b> | 0.002 |
| MFW30-V /I-4          | High-Performance | 2 - 30               | 0,079 - 1,181 | V, Y, I                               | REB              | <b>790 093 033</b> | 0.055 |
| MFW30-U-4-R5          | High-Performance | 2 - 30               | 0,079 - 1,181 | V, Y, I, U with radius 5 mm           | REB              | <b>790 093 034</b> | 0.055 |
| MFW30-U-4-R2          | High-Performance | 2 - 30               | 0,079 - 1,181 | V, Y, I, U with radius 2 mm           | REB              | <b>790 093 035</b> | 0.060 |
| MFW30-U-4-R0,4        | High-Performance | 2 - 30               | 0,079 - 1,181 | V, Y, I, U with radius 0.4mm          | REB              | <b>790 093 042</b> | 0.060 |
| MFW4-I-2              | High-Performance | max. 4               | max. 0.157    | WH4-I-2 (special bracket)             | BRB 2            | <b>790 085 031</b> | 0.002 |
| MFW15-V /I-4          | High-Performance | 2 - 15               | 0,079 - 0,591 | V, Y, I                               | BRB 4 / REB      | <b>790 093 037</b> | 0.055 |
| MFW12-V /I-2          | High-Performance | 2 - 12               | 0,079 - 0,472 | V, Y, I, U with radius 1.2 mm         | BRB 4            | <b>790 086 060</b> | 0.003 |
| MFW12-U-2-R2          | High-Performance | 2 - 12               | 0,079 - 0,472 | V, Y, I, U with radius 2 mm           | BRB 4            | <b>790 086 064</b> | 0.003 |
| MFW5-ID-2-R0,4 (14°)  | High-Performance | -                    | -             | WH5-ID-14° with radius 0.4mm          | BRB 4 / REB      | <b>790 093 039</b> | 0.003 |
| MFW5-ID-2-R0,4 (45°)  | High-Performance | -                    | -             | WH5-ID-45° with radius 0.4mm          | BRB 4 / REB      | <b>790 086 061</b> | 0.002 |
| MFW10-ID-2-R0,4 (80°) | High-Performance | -                    | -             | WH10-ID-80° with radius 0.4mm         | BRB 4            | <b>790 086 062</b> | 0.002 |
| MFW10-ID-2-R0,8 (14°) | High-Performance | -                    | -             | WH10-ID-14° with radius 0.8 mm        | REB              | <b>790 093 038</b> | 0.002 |
| MFW10-ID-2-R3 (14°)   | High-Performance | -                    | -             | WH10-ID-14° with radius 3 mm          | REB              | <b>790 093 041</b> | 0.004 |



Feed ratchet for BRB 4



Balancer spring



Cooling cutting material KSS-TOP



Pipe elbow clamp



Clamping wedge set optional

## Feed ratchet for BRB 4

Specifically for use in tight spaces, such as when cutting finned pipes.

| ITEM                   | CODE        | KG    |
|------------------------|-------------|-------|
| Feed ratchet for BRB 4 | 790 086 127 | 0.420 |

## Balancer spring

For load-free hanging of BRB machines. Ideal for series processing! Using a balancer enables optimal processing 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).

| ITEM            | CODE        | KG    |
|-----------------|-------------|-------|
| Balancer spring | 832 030 002 | 3.800 |

## Cooling cutting material KSS-TOP

**The water-soluble, fully synthetic fluid increases the tool service lives of the turning plates.** Has good corrosion protection characteristics. Was developed to drinking water requirements in accordance with the DVGW work sheet W521 (thread-cutting materials for drinking water installation) and corresponds in essential respects to these specifications. Is biologically readily degradable (OECD 302 B).

| ITEM                                             | VERSION                  | CODE        | KG     |
|--------------------------------------------------|--------------------------|-------------|--------|
| Cooling cutting material KSS-TOP                 | Pump sprayer with 500 ml | 790 060 226 | 0.630  |
| Cooling cutting material KSS-TOP refill canister | Canister with 10 l       | 790 060 227 | 11.000 |

## Tube elbow tensioner

For processing pipe elbows with the REB 6 with an ID of 75 to 157 mm (2.953" - 6.181").

### Scope of delivery:

- 1 hard-sided transport case
- 1 mast with clamping device for pipe elbows
- 1 aligning tool
- 8 clamping inserts with 3 pins each for the dimension range 75 - 157 mm (2.953" - 6.181")

| ITEM                                    | CODE        | KG    |
|-----------------------------------------|-------------|-------|
| Tube elbow tensioner for REB 6 complete | 790 093 015 | 9.900 |

## Clamping wedge sets optional

For extending the dimension of the standard REB machines.

| ITEM                | CAN BE USED WITH | PIPE ID [MM] | PIPE ID [INCH] | CODE        | KG    |
|---------------------|------------------|--------------|----------------|-------------|-------|
| Clamping wedge sets | REB 6            | 155 - 166    | 6.102 - 6.535  | 790 093 295 | 1.300 |

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

## Tools for weld seam preparation "I-seam"

| CODE        | TOOL HOLDER                       | TORX SCREWS               | FITTING MFWs           |
|-------------|-----------------------------------|---------------------------|------------------------|
| 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   |

## Tools for weld seam preparation "V-seam" and "Y-seam"

| CODE        | TOOL HOLDER           | TORX SCREWS | FITTING MFWs                       |
|-------------|-----------------------|-------------|------------------------------------|
| 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               |
| 790 092 216 | WH 15-V-37.5°         | 790 093 226 | 790 093 037 with R 0               |
| 790 092 218 | WH 15-V-45°           | 790 093 226 | 790 093 037 with R 0               |
| 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 |                                    |
| 790 093 210 | WH 30-V-30°           | 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 |

## Tools for weld seam preparation "U-seam"

| CODE        | TOOL HOLDER                        | TORX SCREWS | FITTING MFWs                                  |
|-------------|------------------------------------|-------------|-----------------------------------------------|
| 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   |

## Tools for "Beveling/inside turning"

| CODE        | TOOL HOLDER               | TORX SCREWS | FITTING MFWs                                  |
|-------------|---------------------------|-------------|-----------------------------------------------|
| 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                        |
| 790 093 400 | 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 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 | 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                        |

## Tools for "outer processing"

| CODE        | TOOL HOLDER  | TORX SCREWS | FITTING MFWs           |
|-------------|--------------|-------------|------------------------|
| 790 086 276 | WH 10-AD-10° | 790 086 220 | 790 086 062 with R 0.4 |

## Areas of application of tool holders for U-seam

|                                             |               | BRB 4<br>Mast Ø 19<br>WZT Ø 68 |                 | BRB 4<br>Mast Ø 32<br>WZT Ø 68 |                 | BRB 4<br>Mast Ø 32<br>WZT Ø 120 |                 | REB 6<br>Mast Ø 40<br>WZT Ø 183 |                 |
|---------------------------------------------|---------------|--------------------------------|-----------------|--------------------------------|-----------------|---------------------------------|-----------------|---------------------------------|-----------------|
| Maximum inner diameter for 1mm lip strength |               |                                |                 |                                |                 |                                 |                 |                                 |                 |
| Code                                        | Designation   | ID max.<br>[mm]                | ID min.<br>[mm] | ID max.<br>[mm]                | ID min.<br>[mm] | ID max.<br>[mm]                 | ID min.<br>[mm] | ID max.<br>[mm]                 | ID min.<br>[mm] |
| 790 085 228                                 | WH 5-U-20°    | -                              | -               | -                              | -               | 104                             | 34              | 159                             | 49              |
| 790 093 220                                 | WH 30-U-10°   | -                              | -               | -                              | -               | 58                              | 34              | 121                             | 49              |
| 790 093 474                                 | WH 30-U-14°   | -                              | -               | -                              | -               | 58                              | 34              | 121                             | 49              |
| 790 093 468                                 | WH 30-V/U-15° | -                              | -               | -                              | -               | 58                              | 34              | 121                             | 49              |
| 790 093 218                                 | WH 30-U-20°   | -                              | -               | -                              | -               | 58                              | 34              | 121                             | 49              |
| 790 093 478                                 | WH 30-U-25°   | -                              | -               | -                              | -               | 58                              | 34              | 121                             | 49              |
| 790 093 408                                 | WH 30-U-7°    | -                              | -               | -                              | -               | 58                              | 34              | 121                             | 49              |
| 790 086 208                                 | WH 12-U-10°   | 32                             | 21              | -                              | -               | 84                              | 34              | 147                             | 49              |
| 790 086 224                                 | WH 12-U-20°   | 32                             | 21              | -                              | -               | 84                              | 34              | 147                             | 49              |
| 790 086 212                                 | WH 12-U-25°   | 32                             | 21              | -                              | -               | 84                              | 34              | 147                             | 49              |

## Areas of application of tool holders for pipe inner processing

| Inside turning                                                       |                           | BRB 4<br>Mast Ø 19<br>WZT Ø 68 |                 | BRB 4<br>Mast Ø 32<br>WZT Ø 68 |                 | BRB 4<br>Mast Ø 32<br>WZT Ø 120 |                 | REB 6<br>Mast Ø 40<br>WZT Ø 183 |                 |
|----------------------------------------------------------------------|---------------------------|--------------------------------|-----------------|--------------------------------|-----------------|---------------------------------|-----------------|---------------------------------|-----------------|
| Processable pipe inner diameter (0.5 mm safety distance to the mast) |                           |                                |                 |                                |                 |                                 |                 |                                 |                 |
| Code                                                                 | Designation               | ID max.<br>[mm]                | ID min.<br>[mm] | ID max.<br>[mm]                | ID min.<br>[mm] | ID max.<br>[mm]                 | ID min.<br>[mm] | ID max.<br>[mm]                 | ID min.<br>[mm] |
| 790 093 400                                                          | WH 10-ID-5° / long        | -                              | -               | -                              | -               | 105                             | 61              | 159                             | 71              |
| 790 093 402                                                          | WH 10-ID-14°              | -                              | -               | -                              | -               | 105                             | 61              | 159                             | 71              |
| 790 093 406                                                          | WH 5-ID-14°               | -                              | -               | -                              | -               | 96                              | 43              | 159                             | 60              |
| 790 093 466                                                          | WH 10-ID-14° / 30 mm deep | -                              | -               | -                              | -               | 105                             | 61              | 159                             | 78              |
| 790 086 218                                                          | WH 5-ID-45°               | 49                             | 27              | 49                             | 37              | 107                             | 37              | 159                             | 58              |
| Areas of application of tool holders for pipe sheet processing       |                           |                                |                 |                                |                 |                                 |                 |                                 |                 |
| 790 086 275                                                          | WH 10-ID-80°              | 58                             | 43              | 58                             | 56              | 110                             | 56              | 159                             | 64              |

\* For diameter 20mm: maximum chamfer width 4 - 5 mm

### Abbreviations:

WH = Tool holder

WZT = Tool carrier/holder

## Lip lengths for use of plane holders 790 092 202 / 790 093 202 or 790 086 210

| Code        | Designation (C) | MFW 12-V/1-2-<br>R1.2<br>790 086 060 | MFW 30-U-4-<br>R2<br>790 093 035 | MFW 30-U-4-<br>R5<br>790 093 034 |
|-------------|-----------------|--------------------------------------|----------------------------------|----------------------------------|
|             |                 | Lip length (X1)                      |                                  |                                  |
| 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                               | -                                | -                                |

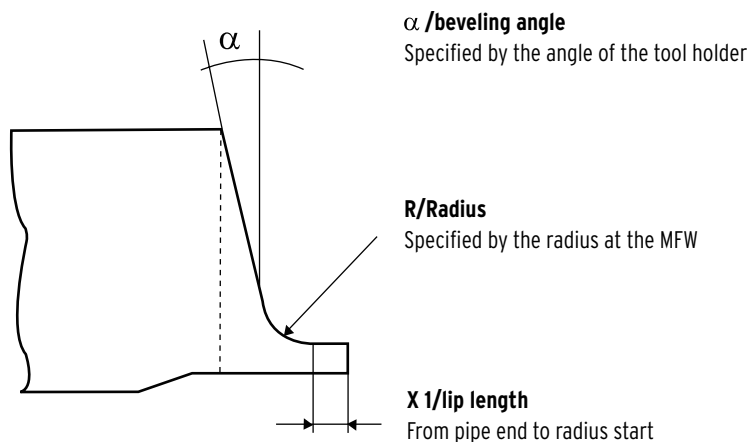
## Lip lengths for use of plane holders 790 093 410 (adjustable)

| Code        | Designation (C) | MFW 12-V/1-2-<br>R1.2<br>790 086 060 | MFW 30-U-4-<br>R2<br>790 093 035 | MFW 30-U-4-<br>R5<br>790 093 034 |
|-------------|-----------------|--------------------------------------|----------------------------------|----------------------------------|
|             |                 | Lip length (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                             | -                                | -                                |

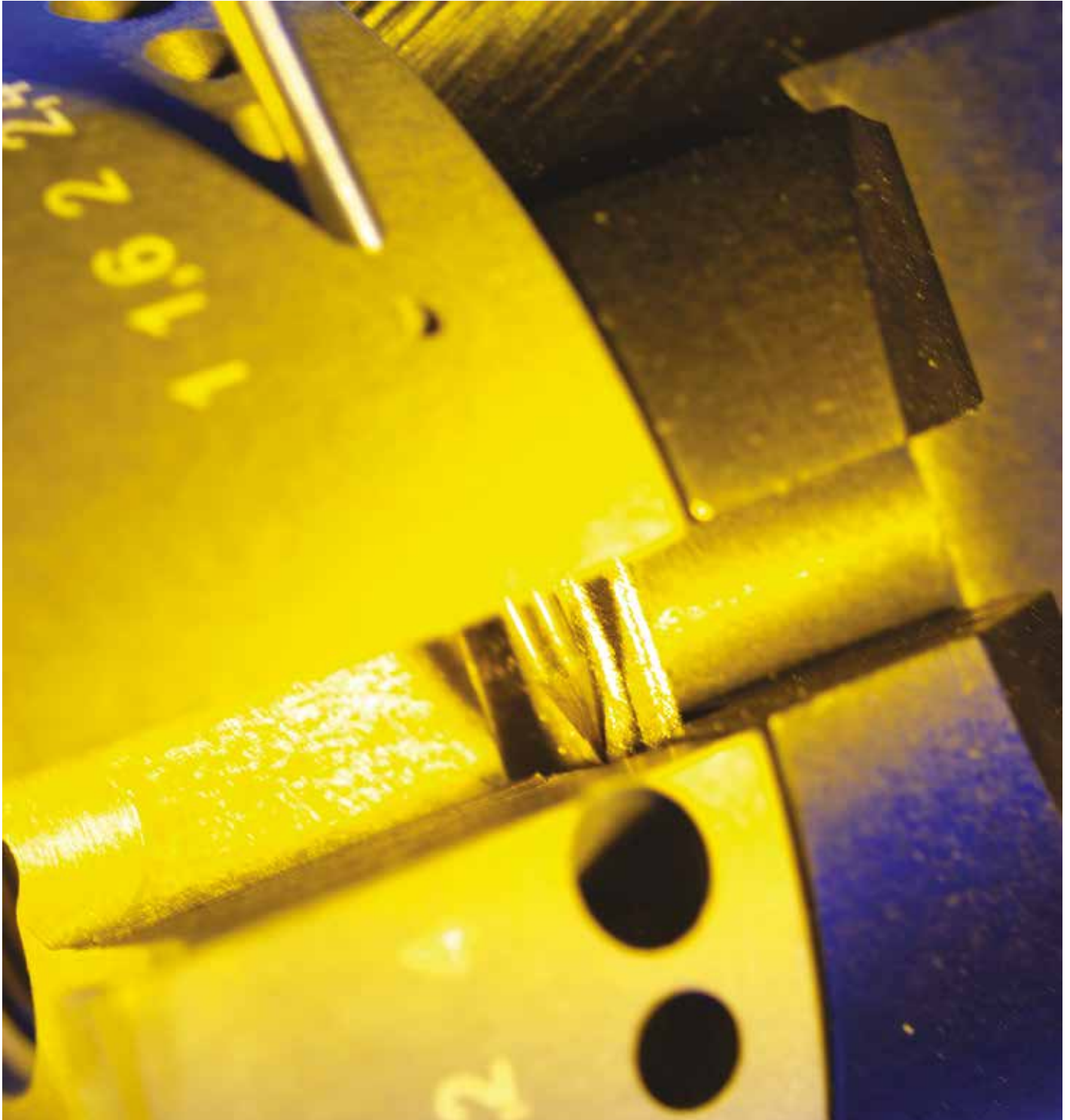
### Abbreviations:

WH = Tool holder

WZT = Tool carrier/holder



# Electrode processing technology



# Orbital welding systems and accessories by Orbitalum Tools for high-purity process installations.



E.g. compact power source for mechanized TIG orbital welding with unique operating concept and a series of further technical features. In connection with an orbital weld head from ORBITALUM TOOLS the user receives an especially innovative as well economical welding system.

You can find more information about these and other products for orbital welding in our **"Orbital welding systems and accessories for high-purity process installations" catalog**

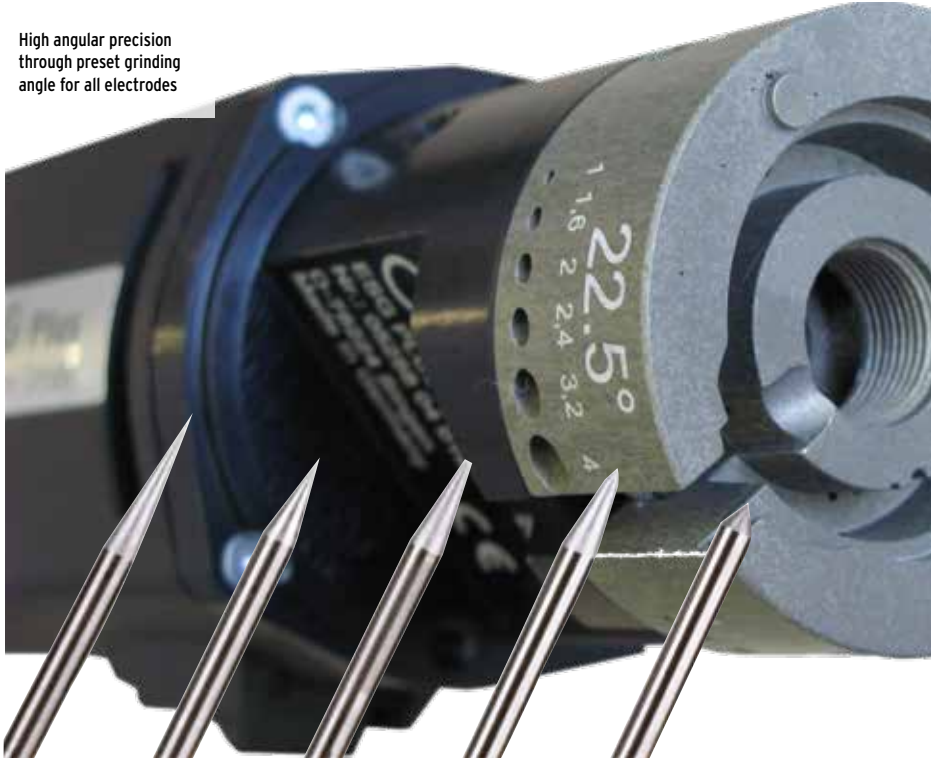
# ESG Plus, ESG Plus<sup>2</sup>

## Electrode grinders

The optimum solution for precise and quick working of weld electrodes.

For working, grinding and cutting weld electrodes which are used in the TIG welding machines.

High angular precision  
through preset grinding  
angle for all electrodes



|                                                                                        |   |
|----------------------------------------------------------------------------------------|---|
| High angular precision through preset grinding angle for all electrodes                | ✓ |
| Light and rapid processing                                                             | ✓ |
| Optimum preparation for orbital or manual welding                                      | ✓ |
| Grinding in the longitudinal direction for optimal arc ignition and high arc stability | ✓ |
| Guarantees a higher service life and ignition ease of the tungsten electrode           | ✓ |
| Specially for small batch production directly on the building site                     | ✓ |
| Compact version, optimal resistance and perfect repeatability                          | ✓ |
| Functional design                                                                      | ✓ |
| Precise cylindrical grinding                                                           | ✓ |

### The powerful hand-held electrode grinding units for grinding, squaring and cutting.

One unit - complete electrode machining:

- Grinding electrodes:
  - 4 different angles
  - 6 different electrode diameters
- Squaring an electrode tip
- Cutting electrodes

The devices are equipped with a high-quality, powerful drive in 230 or 110 Volt design. Machine and accessories are supplied in a robust transport case.

### ADDITIONAL ADVANTAGES:

- Device for easy cutting of the electrodes (optional)
- External vacuum cleaners can be adapted easily
- Short machining times through the high grinding capacity
- Reduced work required without setup time

### ADDITIONAL CHARACTERISTICS ESG PLUS<sup>2</sup>:

- Portable electrode grinders with 2 different grinding wheels. This way the electrode can be pre-sanded with the rough diamond grinding wheel without any effort and sharpened with the fine diamond grinding wheel.



Grinding electrodes: – 4 different angles, 6 different electrode diameters

Squaring an electrode tip

Cutting electrodes

Interchangeable, diamond grinding wheels coated on both sides for an optimum operational performance



| SCOPE OF DELIVERY/AREA OF APPLICATION                                                                               |                     | ESG PLUS                        | ESG PLUS <sup>2</sup>           |
|---------------------------------------------------------------------------------------------------------------------|---------------------|---------------------------------|---------------------------------|
| Code                                                                                                                | [230 V]             | 790 052 485 (15°/18°/22.5°/30°) | 790 052 585 (15°/18°/22.5°/30°) |
|                                                                                                                     |                     | 790 052 545 (15°/30°/45°/60°)   | 790 052 546 (15°/30°/45°/60°)   |
|                                                                                                                     | [110 V]             | 790 052 486 (15°/18°/22.5°/30°) | 790 052 586 (15°/18°/22.5°/30°) |
|                                                                                                                     |                     | 790 052 645 (15°/30°/45°/60°)   | 790 052 646 (15°/30°/45°/60°)   |
| Electrode grinder                                                                                                   | PCS                 | 1                               | 1                               |
| transport case                                                                                                      | PCS                 | 1                               | 1                               |
| Weld head for electrode Ø<br>1.0 - 1.6 - 2.0 - 2.4 - 3.2 - 4.0 mm<br>(0.04" - 1/16" - 0.08" - 3/32" - 1/8" - 5/32") | PCS                 | 1                               | 2                               |
| Grinding angle:<br>15° - 18° - 22.5° - 30° or 15° - 30° - 45° - 60°                                                 |                     |                                 |                                 |
| Diamond grinding wheel fine (790 052 487)                                                                           | PCS                 | -                               | 1                               |
| Diamond grinding wheel medium (790 052 488)                                                                         | PCS                 | 1                               | -                               |
| Diamond grinding wheel rough (790 052 550)                                                                          | PCS                 | -                               | 1                               |
| Table mount                                                                                                         | PCS                 | -                               | -                               |
| Tool to change the grinding wheel                                                                                   | PCS                 | 1                               | 1                               |
| Operating instructions and spare part list                                                                          | set                 | 1                               | 1                               |
| TECHNICAL SPECIFICATIONS                                                                                            |                     | ESG PLUS                        | ESG PLUS <sup>2</sup>           |
| Dimensions (with drive)                                                                                             | [mm]                | Ø 65 x 350                      | Ø 65 x 350                      |
|                                                                                                                     | [inch]              | Ø 2.56 x 13.78                  | Ø 2.56 x 13.78                  |
| Power                                                                                                               | [W]                 | 500                             | 500                             |
| Duty cycle                                                                                                          | [%]                 | 100                             | 100                             |
| Speed (idle speed)                                                                                                  | [rpm]               | 30.000                          | 30.000                          |
| Power cable (length)                                                                                                | [m]                 | 3                               | 3                               |
|                                                                                                                     | [inch]              | 118.1                           | 118.1                           |
| Vibration level (EN 28662, part 1)                                                                                  | [m/s <sup>2</sup> ] | < 2.5                           | < 2.5                           |
| Noise pressure level at the workplace (during idling), approx.                                                      | [dB (A)]            | 83                              | 83                              |

Technical specifications are non-binding. They do not constitute any assurance of properties. We reserve the right to make changes.

## ESG electrode grinders

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

Properties, application area, technical specifications and delivery scope, see from page 58.



ESG Plus



ESG Plus<sup>2</sup>



Diamond grinding wheels



Cut to length device

| ITEM                  | VERSION               | GRINDING ANGLE [°] | CODE               | MACHINE WEIGHT KG | SHIPPING WEIGHT KG |
|-----------------------|-----------------------|--------------------|--------------------|-------------------|--------------------|
| ESG Plus              | 230 V, 50/60 Hz EU    | 15/18/22.5/30      | <b>790 052 485</b> | 1.430             | 3.560              |
| ESG Plus              | 110 V, 50/60 Hz EU/US | 15/18/22.5/30      | <b>790 052 486</b> | 1.430             | 3.560              |
| ESG Plus              | 230 V, 50/60 Hz EU    | 15/30/45/60        | <b>790 052 545</b> | 1.430             | 3.560              |
| ESG Plus              | 110 V, 50/60 Hz EU/US | 15/30/45/60        | <b>790 052 645</b> | 1.430             | 3.560              |
| ESG Plus <sup>2</sup> | 230 V, 50/60 Hz EU    | 15/18/22.5/30      | <b>790 052 585</b> | 1.520             | 3.825              |
| ESG Plus <sup>2</sup> | 110 V, 50/60 Hz EU/US | 15/18/22.5/30      | <b>790 052 586</b> | 1.520             | 3.825              |
| ESG Plus <sup>2</sup> | 230 V, 50/60 Hz EU    | 15/30/45/60        | <b>790 052 546</b> | 1.520             | 3.825              |
| ESG Plus <sup>2</sup> | 110 V, 50/60 Hz EU/US | 15/30/45/60        | <b>790 052 646</b> | 1.520             | 3.825              |

### Diamond grinding wheels

**Interchangeable, diamond grinding wheels coated on both sides for an optimum operational performance.**

For 1.0 and 1.6 mm electrodes we recommend the fine grinding wheel grains.  
For 2.0 mm and 2.4 mm electrodes an average grinding wheel grain is recommended and for 3.2 mm and 4.0 mm a rough grinding wheel grain.

| ITEM                   | CAN BE USED WITH                | GRAIN    | WHEEL Ø |        | S    |        | CODE               | KG    |
|------------------------|---------------------------------|----------|---------|--------|------|--------|--------------------|-------|
|                        |                                 |          | [MM]    | [INCH] | [MM] | [INCH] |                    |       |
| Diamond grinding wheel | ESG 4                           | Standard | 32.00   | 1.290  | 1.2  | 0.047  | <b>790 052 460</b> | 0.005 |
| Diamond grinding wheel | ESG Plus, ESG Plus <sup>2</sup> | Fine     | 33.50   | 1.319  | 2.2  | 0.087  | <b>790 052 487</b> | 0.010 |
| Diamond grinding wheel | ESG Plus, ESG Plus <sup>2</sup> | Medium   | 33.50   | 1.319  | 2.2  | 0.087  | <b>790 052 488</b> | 0.011 |
| Diamond grinding wheel | ESG Plus, ESG Plus <sup>2</sup> | Rough    | 33.50   | 1.319  | 2.2  | 0.087  | <b>790 052 550</b> | 0.011 |

### Cut to length devices

**For simple separating of the electrodes.**

Can be used up to an electrode diameter of 2.4 mm (0.094").

| ITEM                 | SETTING | CUTTING LENGTHS |        | CODE               | KG    |
|----------------------|---------|-----------------|--------|--------------------|-------|
|                      |         | [MM]            | [INCH] |                    |       |
| Cut to length device | fix     | 12.0            | 0.472  | <b>790 052 513</b> | 0.030 |
|                      |         | 13.0            | 0.512  |                    |       |
|                      |         | 15.0            | 0.591  |                    |       |
|                      |         | 17.0            | 0.669  |                    |       |

## Electrode holder

### For processing smaller electrodes.

The electrode holder is delivered including 1 flexible collet.

| ITEM                         | SETTING    | ELECTRODE Ø |               | CODE               | KG    |
|------------------------------|------------|-------------|---------------|--------------------|-------|
|                              |            | [MM]        | [INCH]        |                    |       |
| Electrode holder with collet | continuous | 1.0 - 3.2   | 0.039 - 0.126 | <b>790 052 457</b> | 0.023 |
| Spare collet                 | continuous | 1.0 - 3.2   | 0.039 - 0.126 | <b>790 052 481</b> | 0.002 |



Electrode holder with collet



Spare collet

## Wall, table, vise mount

For stationary use of the ESG Plus and ESG Plus<sup>2</sup>.

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

| ITEM                    | CODE               | KG    |
|-------------------------|--------------------|-------|
| Wall, table, vise mount | <b>790 052 483</b> | 0.102 |



Wall, table, vise mount

## Dust protection

Easy to mount on the ESG grinding head.

With integrated mounting for extraction systems with Ø 31 mm (1.220").

To be used for electrodes containing thorium.

Country-specific regulations, standards and guidelines have to be observed.

| ITEM                                  | CODE               | KG    |
|---------------------------------------|--------------------|-------|
| Dust protection ESG Plus              | <b>790 052 496</b> | 0.170 |
| Dust protection ESG Plus <sup>2</sup> | <b>790 052 596</b> | 0.220 |



Dust protection

## Double-decker kit

Easy to mount for the ESG Plus. This mount allows simultaneous working with 2 different grinding wheels.

Including:

- 1 grinding head
- 1 diamond grinding wheel (rough)
- 1 cylinder-head screw with collar (M4x34)
- 1 shaft extension

| ITEM              | CAN BE USED WITH | GRINDING ANGLE [°] | 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 |



Double-decker kit





## About Orbitalum

### The best in the field of pipe cutting and beveling as well as orbital welding technology from a single source.

For more than 50 years installation manufacturers have been relying on the standard set by the market leader Orbitalum Tools in industrial pipe end preparation.

Orbitalum Tools GmbH (Singen, Germany) and E.H. Wachs (Lincolnshire, Illinois, USA) together form the "ITW Orbital Cutting & Welding" group (for short: ITW OCW), a business division of the US-American industrial group ITW.

Orbitalum Tools is a worldwide provider of complete solutions in industrial preproduction, installation and servicing of pipeline systems for everything from cutting pipes and preparing weld seams to orbital welding in process and plant engineering. E.H. Wachs with its high-quality, nearly indestructible, portable and user-friendly pipe processing machines for cutting and beveling, has established itself in many industries: 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), with headquarters in Glenview, Illinois/US is a US-listed "Fortune 200" company and a manufacturer operating worldwide for special production, special plants as well as provider for related services. Organizationally ITW Orbital Cutting & Welding belongs to the ITW Welding Group which is among the world leading providers for welding units (e.g. MILLER ELECTRIC, HOBART BROTHERS).

With us as a partner you not only work with the industry leader for portable pipe processing machines and orbital welding systems, you also cooperate with ITW the global leader for demanding and future-oriented welding technologies.

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

As ITW OCW we offer a nearly unique product availability, technical support worldwide as well as a sales network down to the local level.

A partnership with ITW OCW includes:

- Recognized top technology, competent contact partner
- Quick, comprehensive delivery service
- Reliable product service
- Large inventories on a local level
- Comprehensive OEM spare parts and special production
- Strategically optimized positioned sales locations, service and rental centers
- Excellent technicians trained and certified in the factory
- Practical training courses - at our location or yours
- Certified company

ITW Orbital Cutting & Welding banks on excellent product solutions from Orbitalum and E.H. WACHS company. In combination with excellent service and advisory service, ITW OCW is the primary supplier for machines and tools for cutting, beveling and welding - all from a single source.

### Environment and disposal instructions



Disposal of electric devices

(as per RL 2012/19/EU)

Electrical and electronic devices marked with the symbol above may not be disposed of with household garbage as per EU directive. By actively using the offered return and collection systems, you are doing your part to reuse and recycle used electrical and electronic devices. Used electric and electronic devices contain parts which must be handled specially as per EU directives. Separate collection and selective treatment are the basis for environmentally responsible disposal and protection of human health. We will properly dispose of devices and machines from us purchased from August 13th, 2005 if they are sent to us postage-paid. In the case of used devices which may represent a risk to human health or safety due to contamination during use, we have the option of refusing return. The user is responsible for disposing of used devices purchased before August 13th, 2005. For this purpose, please contact a professional disposal company in your area.

**Important note for Germany:** Our devices and machines may not be disposed of at communal dumps, as they are only used in the commercial sector.



Return of accumulators

Some of our devices are operated with accumulators. Accumulators and batteries that are marked with the above symbol may not be disposed of with household garbage as per EU Directive 2006/66/EC. In the case of accumulators containing hazardous materials the chemical sign for the heavy metal contained is specified below the refuse bin:

Cd = Cadmium  
Hg = Quicksilver  
Pb = Lead

**Applies for Germany:** The end consumer is obliged to return defective or used batteries to the distributor or to the returning facilities set up to this purpose.

Orbitalum Tools GmbH offers global customers the best in the field of pipe cutting and beveling as well as orbital welding technology from a single source.



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Josef-Schuetzler-Str. 17  
78224 Singen  
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ITW OCN Corporate Locations

★ Sales Locations

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