# 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 bur-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 key 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:**
ipe 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.

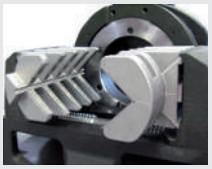
# Technical specifications



Optionally available with AVM/MVM feed module



Multifunctional key for all settings on the machine



Reversible clamping jaws for machining thin- and thick-walled pipes (GF 4 only)



Integrated line laser for marking the cutting points on the pipe

| APPLICATION | | GF 4 | GF 4 AVM* | GF 4 MVM* | GF 6 | GF 6 AVM* | GF 6 MVM* |
|---|---|---|---|---|---|---|---|
| Code | [230 V] | 790142001 | 790142011 | 790142021 | 790143001 | 790143011 | 790143021 |
| | [120 V] | 790142002 | 790142012 | 790142022 | 790143002 | 790143012 | 790143022 |
| Pipe OD | [mm] | 12 - 120 | 12 - 120 | 12 - 120 | 21.3 - 168.3 | 21.3 - 168.3 | 21.3 - 168.3 |
| | [inch] | 0.472 - 4.724 | 0.472 - 4.724 | 0.472 - 4.724 | 0.839 - 6.626 | 0.839 - 6.626 | 0.839 - 6.626 |
| Wall thickness Depends on material | [mm] | 1 - 9 | 1 - 9 | 1 - 9 | 1.5 - 15 | 1.5 - 15 | 1.5 - 15 |
| | [inch] | 0.039 - 0.354 | 0.039 - 0.354 | 0.039 - 0.354 | 0.059 - 0.591 | 0.059 - 0.591 | 0.059 - 0.591 |
| Pipe ID min. (saw blade Ø 63 mm) Min. pipe ID (saw blade Ø 2.480") | [mm] | 21 | 21 | 21 | 30 | 30 | 30 |
| | [inch] | 0.827 | 0.827 | 0.827 | 1.181 | 1.181 | 1,181 |
| Pipe ID min. (saw blade Ø 68 mm) Min. pipe ID (saw blade Ø 2.677") | [mm] | 16 | 16 | 16 | 25 | 25 | 25 |
| | [inch] | 0.630 | 0.630 | 0.630 | 0.984 | 0.984 | 0.984 |
| Pipe ID min. (saw blade Ø 80 mm) Min. pipe ID (saw blade Ø 3,150") | [mm] | 4 | 4 | 4 | 13 | 13 | 13 |
| | [inch] | 0.157 | 0.157 | 0.157 | 0.512 | 0.512 | 0.512 |
| Pipe ID min. (saw blade Ø 100 mm) Min. pipe ID (saw blade Ø 3.937") | [mm] | – | – | – | 0 | 0 | 0 |
| | [inch] | – | – | – | 0 | 0 | 0 |
| Materials | | Stainless steel (any Cr and Mo content); stainless steel (any Cr and Mo content); stainless steel (Cr < 12% and Mo < 2.5%; Cr < 20% and Mo = 0%): case-hardened steels, high-speed steels, heat-treatable steels, roller bearing steels, tool steels; black and galvanized steel pipe; general structural steel; annealed cast iron pipe (GGG); aluminum; brass; copper; plastic (PE, PP, PVDE, PVC) | | | | | |

| TECHNICAL SPECIFICATION | | 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] | –<br> | 0.05<br>0.07 | – | – | 0.05<br>0.07 | – |
| Stepless electric speed control with restart lock | [rpm] | 40 - 215 | 40 - 215 | 40 - 215 | 40 - 215 | 40 - 215 | 40 - 215 |
| Speed Rotating body with AVM | [rpm] | – | 0.1 - 3.9 | – | | 0.3 - 3.5 | – |
| Torque Rotating body 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 work-place approx. | [dB (A)] | 79 | 79 | 79 | 79 | 79 | 79 |
| Vibration level (according to DIN EN 28662, Part 1) | [m/s2] | < 2.5 | < 2.5 | < 2.5 | < 2.5 | < 2.5 | < 2.5 |
| Mains fuse provided by customer | [A] | 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 chamfering machine | ST | 1 | 1 | 1 | 1 | 1 | 1 |
| Transport Box | ST | 1 | 1 | 1 | 1 | 1 | 1 |
| Stainless steel clamping attachment | ST | 1 | 1 | 1 | 1 | 1 | 1 |
| Saw Blade (Code 790...) | ST | 1 (...042064) | 1 (...042064) | 1 (...042064) | 1 (...043018) | 1 (...043018) | 1 (...043018) |
| Mounting plate | ST | 1 | 1 | 1 | 1 | 1 | 1 |
| Line laser with mounting screws and 10 button cells 1.5 V (code 790142124)*** | ST | 1 | 1 | 1 | 1 | 1 | 1 |
| Tool key set with accessories | Set | 1 | 1 | 1 | 1 | 1 | 1 |
| Special Gear Oil (Code 790041030) | Bottle | 1 | 1 | 1 | 1 | 1 | 1 |
| Saw Blade Lubricant GF TOP (Code 790060228) | Tube | 1 | 1 | 1 | 1 | 1 | 1 |
| General safety instructions Pipe cutting and chamfering machines | ST | 1 | 1 | 1 | 1 | 1 | 1 |
| Operating Instructions & Spare Parts List<br>Download link PDF:<br>https://www.orbitalum.com/de/download.html | PDF | 1 | 1 | 1 | 1 | 1 | 1 |

*The technical specification is non-binding. It does not constitute a guarantee of properties. Subject to change without notice.*
** The automatic or manual feed module AVM/MVM is already mounted on the pipe saw upon delivery.*
*** Weight without packaging and accessories.*
**** For the GF 4 and GF 6 (AVM/MVM), the line laser is supplied separately and must be mounted on the machine before commissioning.*



*Illustration: GF 4, GF 6*



*Illustration: GF 4, GF 6 MVM*



*Illustration: GF 4, GF 6 AVM*

| ITEM | VERSION | CODE | KG | SHIPPING WEIGHT KG |
|---|---|---|---|---|
| GF 4 | 230 V, 50/60 Hz EU | 790142001 | 61,30 | 88,00 |
| GF 4 | 120 V, 50/60 Hz EU/ US | 790142002 | 61,30 | 88,00 |
| GF 4 AVM | 230 V, 50/60 Hz EU | 790142011 | 70,50 | 98,00 |
| GF 4 AVM | 120 V, 50/60 Hz EU/ US | 790142012 | 70,50 | 98,00 |
| GF 4 MVM | 230 V, 50/60 Hz EU | 790142021 | 66,60 | 98,00 |
| GF 4 MVM | 120 V, 50/60 Hz EU/ US | 790142022 | 66,60 | 98,00 |
| GF 6 | 230 V, 50/60 Hz EU | 790143001 | 92,70 | 140,00 |
| GF 6 | 120 V, 50/60 Hz EU/ US | 790143002 | 92,70 | 140,00 |
| GF 6 AVM | 230 V, 50/60 Hz EU | 790143011 | 101,70 | 153,00 |
| GF 6 AVM | 120 V, 50/60 Hz EU/ US | 790143012 | 101,70 | 153,00 |
| GF 6 MVM | 230 V, 50/60 Hz EU | 790143021 | 97,80 | 147,00 |
| GF 6 MVM | 120 V, 50/60 Hz EU/ US | 790143022 | 97,80 | 147,00 |

**Suitable accessories:**

- Saw blades and bevel cutters
- Accessories for GF, GFX and PS machines