maija Frästechnik GmbH

MILLING instead of GRINDING

using the hand angle miller

Version 2025-1

History of the milling disc

The challenge:

Grinding with flap discs, scrubbing discs and cutting discs creates a dust-air mixture in the workshop/factory hall that makes it almost impossible to breathe. Both the employees and all tools, machines and equipment, even containers for food and drinks are covered with dust from this work. In the 21st century, so-called pneumoconiosis, and even more chromium-nickel particles in the urine and lungs, are often diagnosed as carcinogenic. Chrome and nickel in particular are triggers for lung diseases such as COPD and cancer.

The idea:

To solve this problem, the idea arose to use the hand angle grinder, which has been known for about 70 years, to mill either electrically or pneumatically by hand. By that time, milling was only possible with stationary CNC machines or rotary cutters.

The solution:

Over a period of several years, the first carbide milling discs have been developed in application tests and finally patented in 2000. After the focus was on the aluminum construction before patenting, the milling discs have been steadily developed since then, especially for the usage with other materials, such as steel, stainless steel and titanium.

The result:

The discs are made of carbide, and have been developed as single and double-sided versions. While the single-sided milling disc is used for chamfering, deburring and removing weld seams, the double-sided milling disc is used to open and prepare weld seams. In 2019 the development of a new version of double-sided milling discs which can be used for both, chamfering and weld seam opening, has been finished.

Diverse and flexible:

The milling disc is currently available in standard dimensions 70 mm, 116 mm, 125 mm and 150 mm, the diameters 180 mm and 230 mm are in development.
Various toothings were developed for the milling discs, spread from rough to fine, adapted to the various materials. If necessary, further toothing and shapes may also be developed to tailor them to individual applications, materials or customer requirements.
Through the use with a manual angle grinder / manual angle miller, the location-independent application is possible on ton-heavy constructions. Among other things, this ensures cost and time savings for an attraction of logistically complex transport of the constructions for the processing location.

Gentle:

In addition to the health relief of the workers, both by the absence of dust, as well as by less vibration, the environment is also protected. Already painted finished parts in the direct environment get preserved, as the chip contains neither high energy nor temperature.

DEUTSCHER ROHSTOFFEFFIZIENZ-PREIS 2015

(German prize for resource efficiency 2015)

The Federal Ministry of Economics and Technology honored Maija-Frästechnik GmbH for the efficient use of limited resource in 2015.

Ministry and experts were convined about the recyclability of the milling chips, which - other than conductive swarf - can be reused without major effort.

"Milling instead of grinding", even Sigmar Gabriel subsribes this.
(German Federal Minister 2013-2017).

Contents

MILLING instead of GRINDING

Example:
STEEL MACHINING

Milling

- hardly / no sparks
- chips instead of swarf
- max. 40-60°C temperatur in the material
- 40% reduction of noise
- requires minimum protection of persons and environment
- no structural changes in the material due to heat
- no material discoloration
- metallic bright (no cavaties while welding)
- no release of respirable particles when processing stainless steel
- due to the special tooth geometry, chips can be touched and disposed without protective gloves
- the removed material is completely recyclable

Grinding

- generates sparks
- generates dust
- generates heat
- generates noise
- requires protection of persons and environment against sparks
- structural changes in the material due to heat
- material discoloration at high temperature
- Introduction of corundes, glass fibers and synthetic resin, unsuitable for the weld preparation (favours shrinking / cavaties)
- Stainless steel processing:
  when processing stainless steels, carcinogenic chrome/nickel particles are released and get respirable as a dust-air mixture

1000-times proven
for more than 20 years
using the well known hand angle miller,
up to 70% time saving !

Why MILLING instead of GRINDING?

The bare metal preparation of FE&NE materials is a guarantee
- for any welding work -
that they will be carried out free of cavities and without introducing foreign substances

Chips instead of swarf - the benefit for health, economy and ecology

Dust is a thing of the past; Efficiency and productivity should make manual machine work much easier for people in the 21st century, recycling should protect the environment.

Health

- no release of harmful microparticles such as chrome/nickel
- no formation of a flammable dust-air mixture
- significantly more concentrated work possible
  - decrease sources of danger, like heat or flying sparks, when working with the milling discs
- less vibrations (white finger disease / VWF, vascular spasm)

Economy

- significantly less effort for the worker
  - the milling disc takes over the machining process
  - no need to apply pressure as with grinding
- little storage space required for the milling discs
  - a milling disc for aluminum, for example, has a service life of up to 3000 grinding wheels
- efficiency: 40% faster removal rate than with the common grinding wheels
- processing in closed rooms
  - low fire protection effort for the user and the environment (e.g. warehouse goods)

Ecology/Environmental protection

- less machine wear
  - no dust caused by the work gets into the machine
- avoidance of waste as the carbide milling discs can be resharpened up to 7 times
  - complete recycling of the carbide if it can no longer be regrinded

Spreading

The milling discs are already in use worldwide.
Well-known customers include:

- Abeking & Rasmussen
- Kessler & Co.
- Meyer Werft
- Siemens
- Stadler

Abeking & Rasmussen provided us this radiograph of a Weld seam according to DIN-EN-ISO 10042 evaluation group -B-, on which a cavity-free weld seam connection of two aluminum sheets (ALMG 4.5) can be seen.

Security

General

The milling tools should be subjected to regular sound tests.
A defective milling disc can burst while working and cause injuries.

Environment

Before starting work, the environment must be secured in such a way that no third party can unintentionally enter the danger area during the milling work.

It must be ensured that there are no open containers with highly flammable substances in the vicinity of the milling work. Cover, close or remove existing containers from the danger area before starting work.
It is advisable to cover surfaces that are too gentle in the immediate vicinity during the milling work to protect against chips and parts loosened by the milling.

Personal

When working with the milling tools, the operational regulations for personal protective equipment must always be observed.
Under certain circumstances, these must be adapted to work with the milling tools.

The precautions to be observed include in particular:

Head protection
Use of a appropriate safety helmet
- Working at head height can cause head injuries

Ear protection
Use of a appropriate hearing protection
- Over time, noise can damage hearing

Hand protection
Use of appropriate protective gloves
- the teeth of the milling discs can lead to injuries if touched

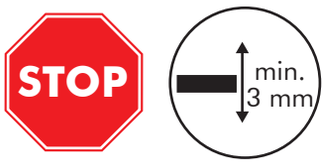
Eye protection
Use of appropriate protective goggles
- chips resulting from milling can cause eye injuries
- parts of the product loosened by milling can cause eye injuries
- liquids used during milling (e.g. lubricants) can cause eye injuries

Foot protection
Use of appropriate safety shoes
- parts that have been loosened and fallen during the milling process can cause injuries to the feet

Operation

Information on material selection and any necessary preparations

We recommend prior sanding if the material is sandblasted.
The fine sand residues on the material surface cause excessive wear of the milling tools.



No processing of sheet metal with a material thickness of less than 3 mm.
If the material is too thin, the risk of the milling tools jamming increases.
To prevent injury from the machine overturning, no materials less than 3mm thick may be milled by hand with our milling discs.

Use of a welding tractor

for a consistent feed when leveling a weld seam.

Milling discs

Milling disc - Single-sided milling disc

Chamfering	✓
Removing/flatten welding seams	✓
Grooving welding seams	✓
Open welding seams	X

Milling disc - Double-sided milling disc

Chamfering	X
Removing/flatten welding seams	X
Grooving welding seams	X
Open welding seams	✓

Milling disc - DoubleWorker

Chamfering	✓
Removing/flatten welding seams	✓
Grooving welding seams	✓
Open welding seams	✓

Shapes double-sided milling disc and DoubleWorker

Shapes

70mm / 10mm
125mm / 10mm

Shapes

70mm / 12mm
116mm / 14mm
125mm / 14mm
150mm / 14mm

Shapes

125mm / 13mm
150mm / 16mm

Milling discs

Milling disc - RocketCutter

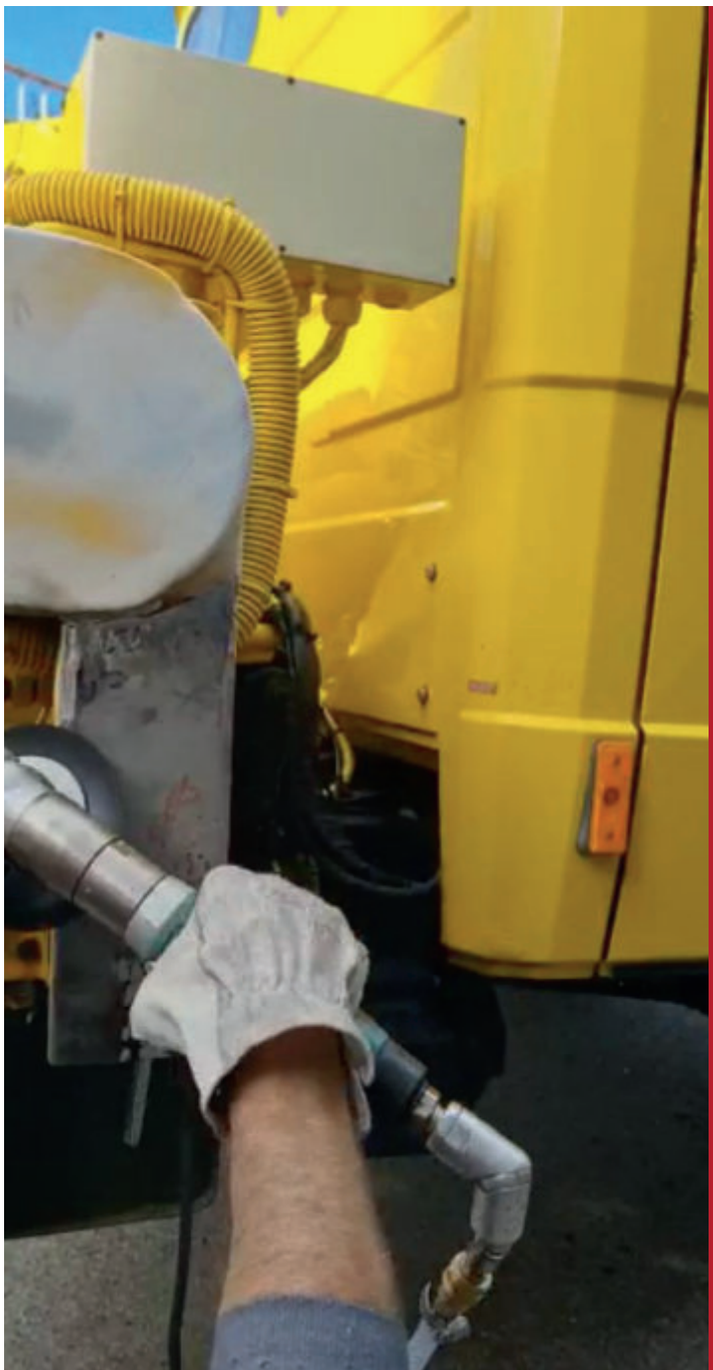
Chamfering	✓
Removing/flatten welding seams	✓
Grooving welding seams	✓
Open welding seams	X

Milling disc - Weld bevel preparator "trapezoidal shape"

Opening / removing weld seams at joints, especially between web / flange (I or double T), where one side must not be damaged.	✓

Work result of the various toothings:

	Coarse (few teeth)	Average	Fine (many teeth)
Removal	+	o	-
Surface	-	o	+



Repair work on a truck (Ruthmann Cargoloader)

The work as video (YouTube):

Single-sided milling discs (SMD)

Single-sided milling disc

The single-sided milling disc is suitable for the following tasks:

- chamfering
- removing material
- flatten / levelling weld seams
- grooving weld seams

Applications:

	Single-sided milling disc
Chamfering	✓
Removing / flatten weld seams or material	✓
Grooving weld seams	✓
Open weld seams	X

Work result of the various toothings:

	Coarse (few teeth)	Average	Fine (many teeth)
Removal	+	o	-
Surface	-	o	+

Single-sided milling discs - Applications

Chamfering

Note:
As a support, the guard can be used as a guide.

Removing / Flatten

Removal of solid material or levelling of weld seams.

Grooving weld seams

Note:
For opening weld seams, see double-sided milling disc or DoubleWorker.

Video of the single-sided milling disc in various applications

Single-sided milling disc pat. for aluminum

- chips instead of swarf
- no heat
- usage with hand angle miller
- 50% faster than grinding
- low vibrations, easy handling

Can be resharpened up to 7 times

Diameter	Toothing	Max. speed	Article No.
70 mm	36 teeth	15.300 rpm	010070015
70 mm	40 teeth	15.300 rpm	010070014
116 mm	50 teeth	12.000 rpm	010116017
116 mm	55 teeth	12.000 rpm	010116016
116 mm	65 teeth	12.000 rpm	010116014
125 mm	43 teeth	12.000 rpm	010125017
125 mm	48 teeth	12.000 rpm	010125019
125 mm	55 teeth	12.000 rpm	010125016
125 mm	75 teeth	12.000 rpm	010125013
150 mm	48 teeth	8.500 rpm	010150019
150 mm	55 teeth	8.500 rpm	010150015

Details/Application

Aluminum, aluminum-alloys

Chamfering, remove/flatten weld seams, grooving weld seams

Workability/Notes

from AlMn up to AlZnMgCu

We advice the usage of **Maija Baux-Fluid** to prevent built up edges (See page 75).

Information about patents and trademarks: www.maija-fraestechnik.de/patent_en

Single-sided milling disc pat. for steel

- chips instead of swarf
- no heat
- usage with hand angle miller
- metallic blank welding seam preparation
- smooth operation, good handling
- burr-free machining

Can be resharpened up to 7 times

Diameter	Toothing	Max. speed	Article no.
70 mm	60 teeth	3.200 rpm	020070015.IN
116 mm	85 teeth	1.800 rpm	020116015.IN
116 mm	100 teeth	1.800 rpm	020116013.IN
125 mm	56 teeth	1.800 rpm	020125018.IN
125 mm	85 teeth	1.800 rpm	020125013.IN
125 mm	100 teeth	1.800 rpm	020125015.IN
150 mm	70 teeth	1.800 rpm	020150014.IN

Details/Application

Steel, steel alloys

Chamfering, remove/flatten weld seams, grooving weld seams

Workability/Notes

Metal / steel up to Rockwell (HR) 53

We advice the usage of **Maija Ferrum-Fluid** for improved chip removal (See page 75).



Information on patents and trademarks: www.maija-fraestechnik.de/patent_en

Single-sided milling disc pat. for stainless steel

- chips instead of swarf - no respirable chrome/nickle particles
- no heat
- usage with hand angle miller
- metallic blank welding seam preparation
- massive reduction of noise emissions
- burr-free machining

Can be resharpened up to 7 times

Diameter	Toothing	Max. speed	Article no.
70 mm	60 teeth	3.200 rpm	021070016.IN
116 mm	85 teeth	1.800 rpm	021116015.IN
116 mm	100 teeth	1.800 rpm	021116016.IN
116 mm	110 teeth	1.800 rpm	021125014.IN
125 mm	85 teeth	1.800 rpm	021125016.IN
125 mm	100 teeth	1.800 rpm	021125018.IN
150 mm	70 teeth	1.800 rpm	021150015.IN

Details/Application

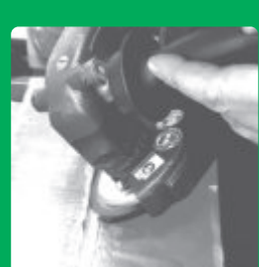
Stainless steel, stainless steel alloys

Chamfering, remove/flatten weld seams, grooving weld seams

Workability/Notes

V2A, V4A, Hastelloy/Inconel

We advice the usage of **Maija Ferrum-Fluid** for improved chip removal (See page 75).



Information on patents and trademarks: www.maija-fraestechnik.de/patent_en

Single-sided milling disc pat. for titanium

- chips instead of swarf
- no heat
- usage with hand angle miller
- metallic blank welding seam preparation
- burr-free machining

Can be resharpened up to 7 times

Diameter	Toothing	Max. speed	Article no.
70 mm	42 teeth	3.200 rpm	040070024.IN
125 mm	60 teeth	1.250 rpm	040125017.IN
125 mm	80 teeth	1.250 rpm	040125018.IN

Details/Application

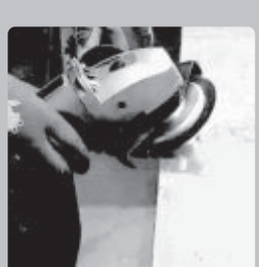
Titanium, titanium alloys

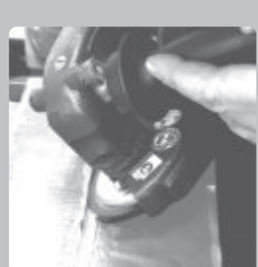
Chamfering, remove/flatten weld seams, grooving weld seams

Workability/Notes

Minimal spark formation, easy detection of inclusions like cavaties and hot cracks.
Contact us for further information.

We advice the usage of **Maija Ferrum-Fluid** for improved chip removal (See page 75).





Information on patents and trademarks: www.maija-fraestechnik.de/patent_en

Single-sided milling disc pat. for magnesium

- chips instead of swarf
- no heat
- usage with hand angle miller
- 50% faster than grinding
- low vibrations, easy handling

Can be resharpened up to 7 times

Diameter	Toothing	Max. speed	Article no.
116 mm	55 teeth	3.000 rpm	041116016.H
125 mm	55 teeth	3.000 rpm	041125016.H

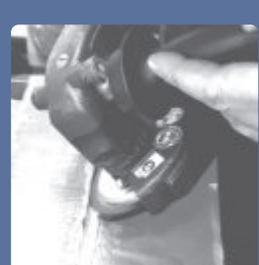
Details/Application

Magnesium alloys

Chamfering, remove/flatten weld seams, grooving weld seams

Workability/Notes

We advice the usage of **Maija Baux-Fluid** to prevent built up edges (See page 75).



Information on patents and trademarks: www.maija-fraestechnik.de/patent_en

Single-sided milling disc pat. for copper

- chips instead of swarf
- no heat
- usage with hand angle miller
- very smooth milling texture on the surface
- very smooth processing possible
- almost burr-free

Can be resharpened up to 7 times

Diameter	Toothing	Max. speed	Article no.
125 mm	56 teeth	2.800 rpm	011125016.IN

Details/Application

Copper, copper-alloys

Chamfering, remove/flatten weld seams, grooving weld seams

Workability/Notes

Standard copper-alloys e.g. processing power rails and the preparation for welding.
Contact us for further information.

Generally we recommend a self-test.

We advice the usage of **Maija Baux-Fluid** for improved chip removal (See page 75).

Information on patents and trademarks: www.maija-fraestechnik.de/patent_en

Single-sided milling disc pat. for CFRP/GRP

- chips/floculation instead of dust
- no heat
- usage with hand angle miller
- fewer noise emissionsruhiger
- smooth run

Can be resharpened up to 7 times

Diameter	Toothing	Max. speed	Article no.
70 mm	34 teeth	3.200 rpm	030070015.IN
116 mm	60 teeth	1.800 rpm	030116014.IN
125 mm	60 teeth	1.800 rpm	030125014.IN

Details/Application

CFRP, GRP, PE & PP

Chamfering, working out faulty areas, level off overhanging material

Workability/Notes

good handling
little vibrations

Information on patents and trademarks: www.maija-fraestechnik.de/patent_en

Single-sided milling disc pat. for wood

- chips instead of swarf
- no heat
- usage with hand angle miller

Can be resharpened up to 7 times

Diameter	Toothing	Max. speed	Article no.
70 mm	34 teeth	15.300 rpm	050070011
116 mm	55 teeth	12.000 rpm	050116011
125 mm	51 teeth	12.000 rpm	050125011

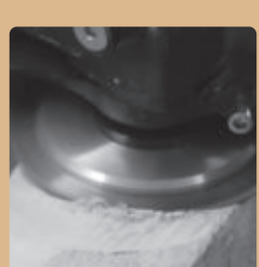
Details/Application

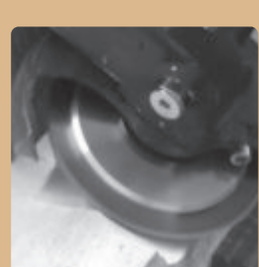
Wood

Deburring, sculptures, sculptor / craftmanship

Workability/Notes

especially suitable for hardwood

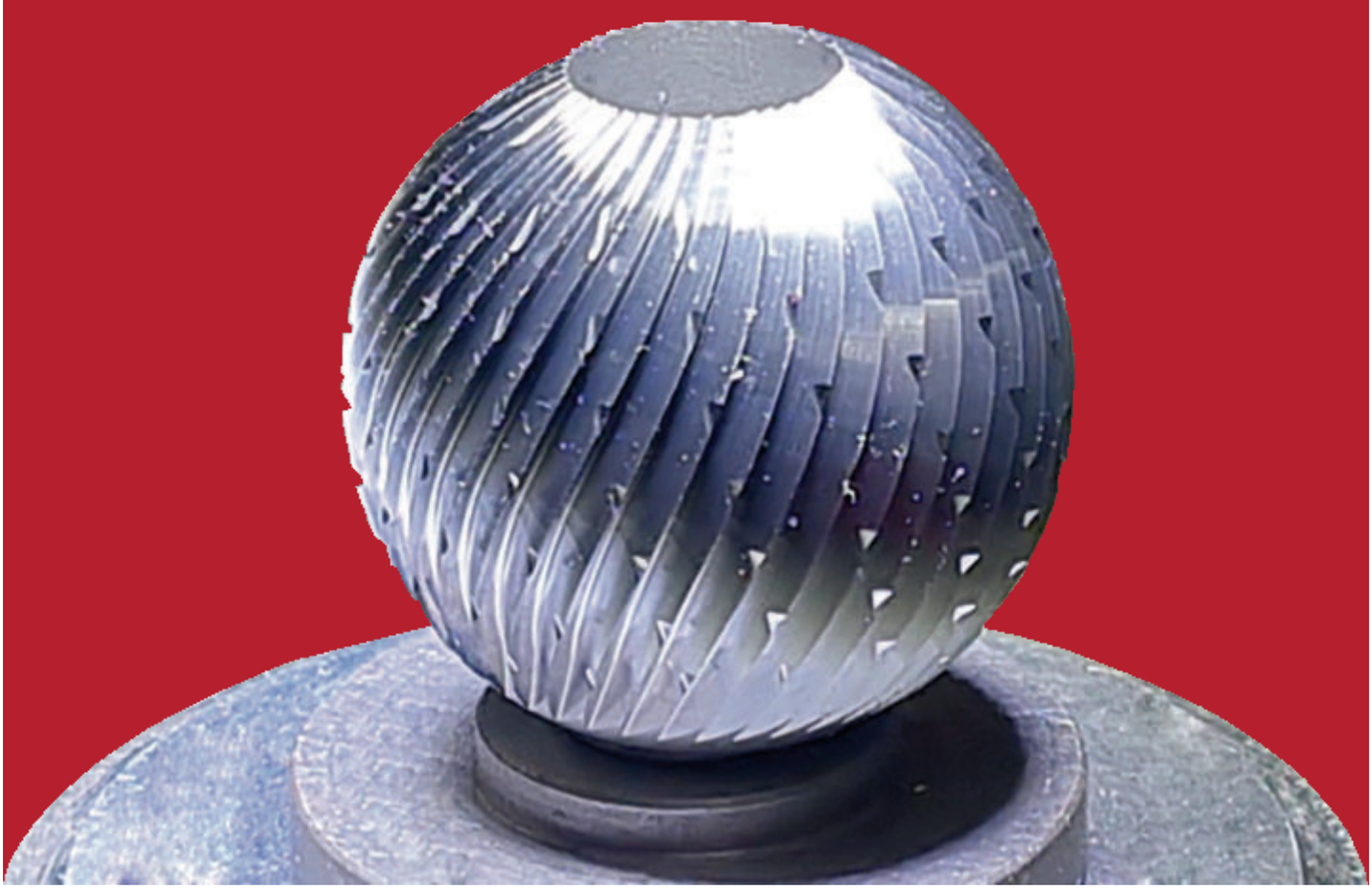




Information on patents and trademarks: www.maija-fraestechnik.de/patent_en

Milling ball for steel processing

Available diameters: 30 mm, 40 mm and 50 mm



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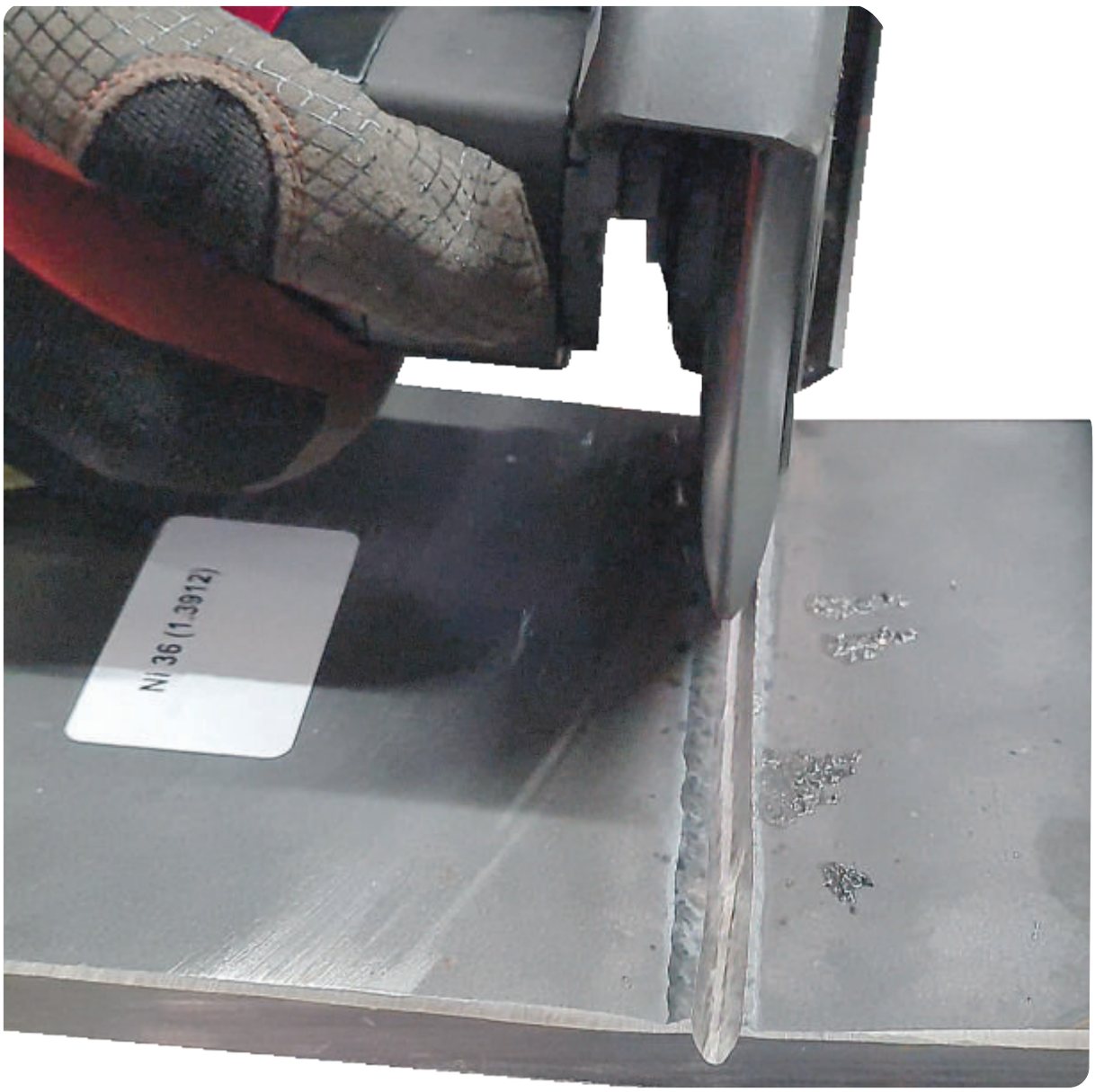


Double-sided milling disc (DMD)

Double-sided milling disc (DMD)

The double-sided milling disc is suitable for the following tasks:

- open weld seams
- preparing weld seams

Applications:

	Double-sided milling disc (DMD)
Chamfering	X
Removing / flatten weld seams or material	X
Grooving weld seams	X
Open weld seams	✓

Work result of the various toothings:

	Coarse (few teeth)	Average	Fine (many teeth)
Removal	+	o	-
Surface	-	o	+

Shapes of double-sided milling discs

Shapes

70mm / 10mm
125mm / 10mm

Shapes

70mm / 12mm
116mm / 14mm
125mm / 14mm
150mm / 14mm

Shapes

125mm / 13mm
150mm / 16mm

Double-sided milling disc - Applications

Open

Weld seams or imperfections. Inclusions and imperfections remain visible as there is no smearing.

Preparing / Cleaning

Material, layers, counter layers. Crossing out possible if necessary.

Accessibility

Opening / cleaning even in hard-to-reach places such as tee joints.

Video of the double-sided milling disc in various applications ➡

V Double-sided milling disc pat. for aluminum

- chips instead of swarf
- no heat
- usage with hand angle miller
- 50% faster than grinding
- low vibrations, easy handling

Can be resharpened up to 7 times

Diameter / thickness	Toothing	Max. speed	Article no.
70 mm / 12 mm	36 teeth	15.300 rpm	010070214
70 mm / 10 mm	36 teeth	15.300 rpm	010070215
116 mm / 14 mm	55 teeth	12.000 rpm	010116214
125 mm / 14 mm	55 teeth	12.000 rpm	010125213
125 mm / 10 mm	55 teeth	12.000 rpm	010125212
150 mm / 14 mm	43 teeth	8.500 rpm	010150214
150 mm / 14 mm	55 teeth	8.500 rpm	010150215

Details/Application

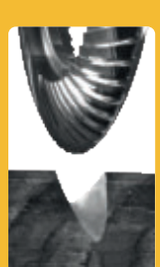
Aluminum, Aluminum alloys

open weld seams

Workability/Notes

from AlMn up to AlZnMgCu

We advice the usage of **Maija Baux-Fluid** to prevent built up edges (See page 75).



Information on patents and trademarks: www.maija-fraestechnik.de/patent_en

V Double-sided milling disc pat. for steel

- chips instead of swarf
- no heat
- usage with hand angle miller
- metallic blank welding seam preparation
- smooth operation, good handling
- burr-free machining

Can be resharpened up to 7 times

Diameter / thickness	Toothing	Max. speed	Article no.
70 mm / 12 mm	50 teeth	3.200 rpm	020070215.IN
70 mm / 10 mm	50 teeth	3.200 rpm	020070216.IN
116 mm / 14 mm	85 teeth	1.800 rpm	020116220.IN
116 mm / 14 mm	100 teeth	1.800 rpm	020116216.IN
125 mm / 14 mm	85 teeth	1.800 rpm	020125212.IN
125 mm / 14 mm	100 teeth	1.800 rpm	020125214.IN
125 mm / 10 mm	85 teeth	1.800 rpm	020125232.IN
125 mm / 10 mm	100 teeth	1.800 rpm	020125215.IN
150 mm / 16 mm	100 teeth	1.800 rpm	020150215.IN

Details/Application

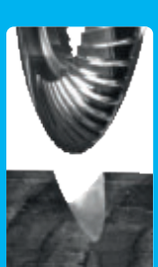
Steel, steel alloys

open weld seams

Workability/Notes

Metal / steel up to Rockwell (HR) 53

We advice the usage of **Maija Ferrum-Fluid** for improved chip removal (See page 75).



Information on patents and trademarks: www.maija-fraestechnik.de/patent_en

V Double-sided milling disc pat. for stainless steel

- chips instead of swarf - no respirable chrome/nickle particles
- no heat
- usage with hand angle miller
- metallic blank welding seam preparation
- massive reduction of noise emissions
- burr-free machining

Can be resharpened up to 7 times

Diameter / thickness	Toothing	Max. speed	Article no.
70 mm / 12 mm	50 teeth	3.200 rpm	021070216.IN
70 mm / 10 mm	50 teeth	3.200 rpm	021070219.IN
116 mm / 14 mm	85 teeth	1.800 rpm	021116212.IN
116 mm / 14 mm	100 teeth	1.800 rpm	021116217.IN
116 mm / 14 mm	110 teeth	1.800 rpm	021116215.IN
125 mm / 14 mm	85 teeth	1.800 rpm	021125218.IN
125 mm / 14 mm	100 teeth	1.800 rpm	021125220.IN
125 mm / 10 mm	85 teeth	1.800 rpm	021125217.IN
125 mm / 10 mm	100 teeth	1.800 rpm	021125231.IN
150 mm / 16 mm	100 teeth	1.800 rpm	021150219.IN

Details/Application

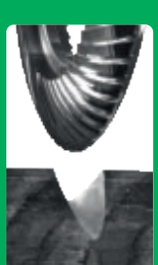
Stainless steel, stainless steel alloys

open weld seams

Workability/Notes

V2A, V4A, Hastelloy/Inconel

We advice the usage of **Maija Ferrum-Fluid** for improved chip removal (See page 75).



Information on patents and trademarks: www.maija-fraestechnik.de/patent_en

V Double-sided milling disc pat. for titanium

- chips instead of swarf
- no heat
- usage with hand angle miller
- metallic blank welding seam preparation
- burr-free machining

Can be resharpened up to 7 times

Diameter / thickness	Toothing	Max. speed	Article no.
125 mm / 14 mm	60 teeth	1.250 rpm	040125215.IN

Details/Application

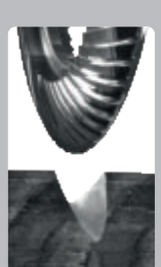
Titanium, titanium alloys

open weld seams

Workability/Notes

Minimal spark formation, easy detection of inclusions like cavaties and hot cracks.
Contact us for further information.

We advice the usage of **Maija Ferrum-Fluid** for improved chip removal (See page 75).




Information on patents and trademarks: www.maija-fraestechnik.de/patent_en

V Double-sided milling disc pat. for magnesium

- chips instead of swarf
- no heat
- usage with hand angle miller
- 50% faster than grinding
- low vibrations, easy handling

Can be resharpened up to 7 times

Diameter / thickness	Toothing	Max. speed	Article no.
116 mm / 14 mm	55 teeth	3.000 rpm	041116214.H
125 mm / 14 mm	55 teeth	3.000 rpm	041125213.H
125 mm / 10 mm	55 teeth	3.000 rpm	041125212.H

Details/Application

Magnesium alloys

open weld seams

Workability/Notes

We advice the usage of **Maija Baux-Fluid** for improved chip removal (See page 75).




Information on patents and trademarks: www.maija-fraestechnik.de/patent_en

V Double-sided milling disc pat. for copper

- chips instead of swarf
- no heat
- usage with hand angle miller
- very smooth milling texture on the surface
- very smooth processing possible
- almost burr-free

Can be resharpened up to 7 times

Diameter / thickness	Toothing	Max. speed	Article no.
125 mm / 14 mm	60 teeth	2.800 rpm	011125214.IN
150 mm / 16 mm	43 teeth	2.800 rpm	011150214.IN

Details/Application

Copper, copper-alloys

open weld seams

Workability/Notes

Standard copper-alloys e.g. processing power rails and the preparation for welding.
Contact us for further information.

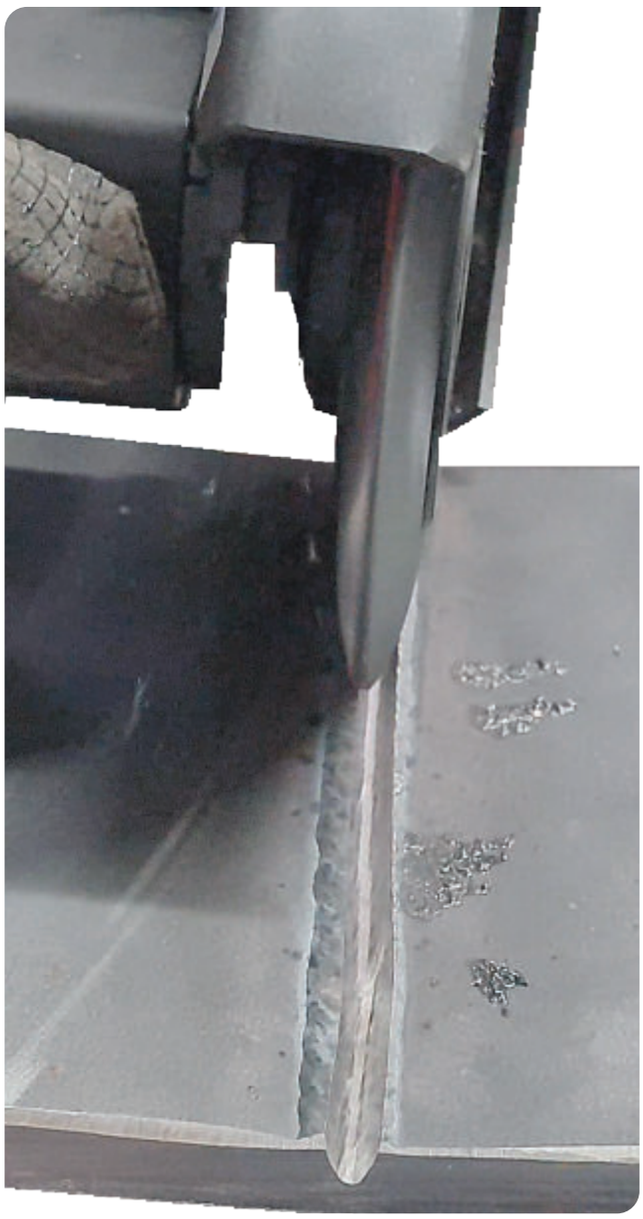
Generally we recommend a self-test.

We advice the usage of **Maija Baux-Fluid** for improved chip removal (See page 75).




Information on patents and trademarks: www.maija-fraestechnik.de/patent_en


GATX 19721
GATX 19721
1
2
3



DoubleWorker (DW)

DoubleWorker

Th DoubleWorker is suitable for the following tasks:

- chamfering
- removing material
- flatten / levelling weld seams
- grooving weld seams
- open weld seams
- preparing weld seams

Applications:

	DoubleWorker
Chamfering	✓
Removing / flatten weld seams or material	✓
Grooving weld seams	✓
Open weld seams	✓

Work result of the various toothings:

	Coarse (few teeth)	Average	Fine (many teeth)
Removal	+	o	-
Surface	-	o	+

Shapes of double-sided milling discs

Shapes

70mm / 10mm
125mm / 10mm

Shapes

70mm / 12mm
116mm / 14mm
125mm / 14mm
150mm / 14mm

Shapes

125mm / 13mm
150mm / 16mm

DoubleWorker - Applications

Chamfering

Note:
As a support, the guard can be used as a guide.

Removing / Flatten

Removal of solid material or levelling of weld seams.

Grooving weld seams

Note:
For opening weld seams, see double-sided milling disc or DoubleWorker.

Open

Weld seams or imperfections. Inclusions and imperfections remain visible as there is no smearing.

Preparing / Cleaning

Material, layers, counter layers. Crossing out possible if necessary.

Accessibility

Opening / cleaning even in hard-to-reach places such as tee joints.

Video of the DoubleWorker in various applications ➡

DoubleWorker pat. for aluminum

- chips instead of swarf
- no heat
- usage with hand angle miller
- 50% faster than grinding
- low vibrations, easy handling

Can be resharpened up to 7 times

Diameter / thickness	Toothing	Max. speed	Article no.
70 mm / 12 mm	36 teeth	15.300 rpm	010070217
70 mm / 10 mm	36 teeth	15.300 rpm	010070218
70 mm / 8 mm	36 teeth	15.300 rpm	010070219
116 mm / 14 mm	55 teeth	12.000 rpm	010116217
125 mm / 14 mm	55 teeth	12.000 rpm	010125216
125 mm / 13 mm	55 teeth	12.000 rpm	010125223
125 mm / 10 mm	55 teeth	12.000 rpm	010125218
150 mm / 16 mm	43 teeth	8.500 rpm	010150216

Details/Application

Aluminum, Aluminum alloys

Chamfering, removing/flatten weld seams, grooving weld seams, open weld seams

Workability/Notes

from AlMn up to AlZnMgCu

We advice the usage of **Maija Baux-Fluid** to prevent built up edges (See page 75).

Information on patents and trademarks: www.maija-fraestechnik.de/patent_en

DoubleWorker pat. for steel

- chips instead of swarf
- no heat
- usage with hand angle miller
- metallic blank welding seam preparation
- smooth operation, good handling
- burr-free machining

Can be resharpened up to 7 times

Diameter / thickness	Toothing	Max. speed	Article no.
70 mm / 12 mm	45 teeth	3.200 rpm	020070222.IN
116 mm / 14 mm	85 teeth	1.800 rpm	020116221.IN
125 mm / 14 mm	70 teeth	1.800 rpm	020125220.IN
125 mm / 14 mm	85 teeth	1.800 rpm	020125224.IN
125 mm / 14 mm	100 teeth	1.800 rpm	020125227.IN
125 mm / 10 mm	70 teeth	1.800 rpm	020125222.IN
125 mm / 10 mm	85 teeth	1.800 rpm	020125221.IN
125 mm / 10 mm	100 teeth	1.800 rpm	020125229.IN
150 mm / 16 mm	70 teeth	1.800 rpm	020150216.IN
150 mm / 16 mm	80 teeth	1.800 rpm	020150217.IN
150 mm / 14 mm	80 teeth	1.800 rpm	020150219.IN

Details/Application

Steel, steel alloys

Chamfering, removing/flatten weld seams, grooving weld seams, open weld seams

Workability/Notes

Metal / steel up to Rockwell (HR) 53

We advice the usage of **Maija Ferrum-Fluid** for improved chip removal (See page 75).

Information on patents and trademarks: www.maija-fraestechnik.de/patent_en

DoubleWorker pat.
for stainless steel

- chips instead of swarf - no respirable chrome/nickle particles
- no heat
- usage with hand angle miller
- metallic blank welding seam preparation
- massive reduction of noise emissions
- burr-free machining

Can be resharpened up to 7 times

Diameter / thickness	Toothing	Max. speed	Article no.
70 mm / 12 mm	60 teeth	3.200 rpm	021070218.IN
116 mm / 14 mm	85 teeth	1.800 rpm	021116219.IN
125 mm / 14 mm	70 teeth	1.800 rpm	021125221.IN
125 mm / 14 mm	85 teeth	1.800 rpm	021125225.IN
125 mm / 14 mm	100 teeth	1.800 rpm	021125228.IN
125 mm / 10 mm	70 teeth	1.800 rpm	021125232.IN
125 mm / 10 mm	85 teeth	1.800 rpm	021125223.IN
125 mm / 10 mm	100 teeth	1.800 rpm	021125224.IN
150 mm / 16 mm	70 teeth	1.800 rpm	021150215.IN
150 mm / 16 mm	80 teeth	1.800 rpm	021150216.IN
150 mm / 14 mm	80 teeth	1.800 rpm	021150217.IN

Details/Application

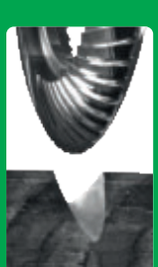
Stainless steel, stainless steel alloys

Chamfering, removing/flatten weld seams, grooving weld seams, open weld seams

Workability/Notes

V2A, V4A, Hastelloy/Inconel

We advice the usage of **Maija Ferrum-Fluid** for improved chip removal (See page 75).



Information on patents and trademarks: www.maija-fraestechnik.de/patent_en

DoubleWorker pat.
for titanium

- chips instead of swarf
- no heat
- usage with hand angle miller
- metallic blank preparation
- burr-free machining

Can be resharpened up to 7 times

Diameter / thickness	Toothing	Max. speed	Article no.
125 mm / 14 mm	60 teeth	1.250 rpm	040125216.IN

Details/Application

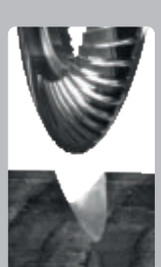
Titanium, titanium alloys

Chamfering, removing/flatten weld seams, grooving weld seams, open weld seams

Workability/Notes

Minimal spark formation, easy detection of inclusions like cavaties and hot cracks.
Contact us for further information.

We advice the usage of **Maija Ferrum-Fluid** for improved chip removal (See page 75).



Information on patents and trademarks: www.maija-fraestechnik.de/patent_en

Doubleworker pat. for magnesium

- chips instead of swarf
- no heat
- usage with hand angle miller
- 50% faster than grinding
- low vibrations, easy handling

Can be resharpened up to 7 times

Diameter / thickness	Toothing	Max. speed	Article no.
116 mm / 14 mm	55 teeth	3.000 rpm	041116217.H
125 mm / 14 mm	55 teeth	3.000 rpm	041125216.H
125 mm / 10 mm	55 teeth	3.000 rpm	041125218.H

Details/Application

Magnesium alloys

Chamfering, removing/flatten weld seams, grooving weld seams, open weld seams

Workability/Notes

We advice the usage of **Maija Baux-Fluid** to prevent built up edges (See page 75).




Information on patents and trademarks: www.maija-fraestechnik.de/patent_en

DoubleWorker pat. for copper

- chips instead of swarf
- no heat
- usage with hand angle miller
- very smooth milling texture on the surface
- very smooth processing possible
- almost burr-free

Can be resharpened up to 7 times

Diameter / thickness	Toothing	Max. speed	Article no.
150 mm / 16 mm	43 teeth	2.800 rpm	011150216.IN
150 mm / 14 mm	43 teeth	2.800 rpm	011150217.IN

Details/Application

Copper, copper-alloys

Chamfering, removing/flatten weld seams, grooving weld seams, open weld seams

Workability/Notes

Standard copper-alloys e.g. processing power rails and the preparation for welding.
Contact us for further information.

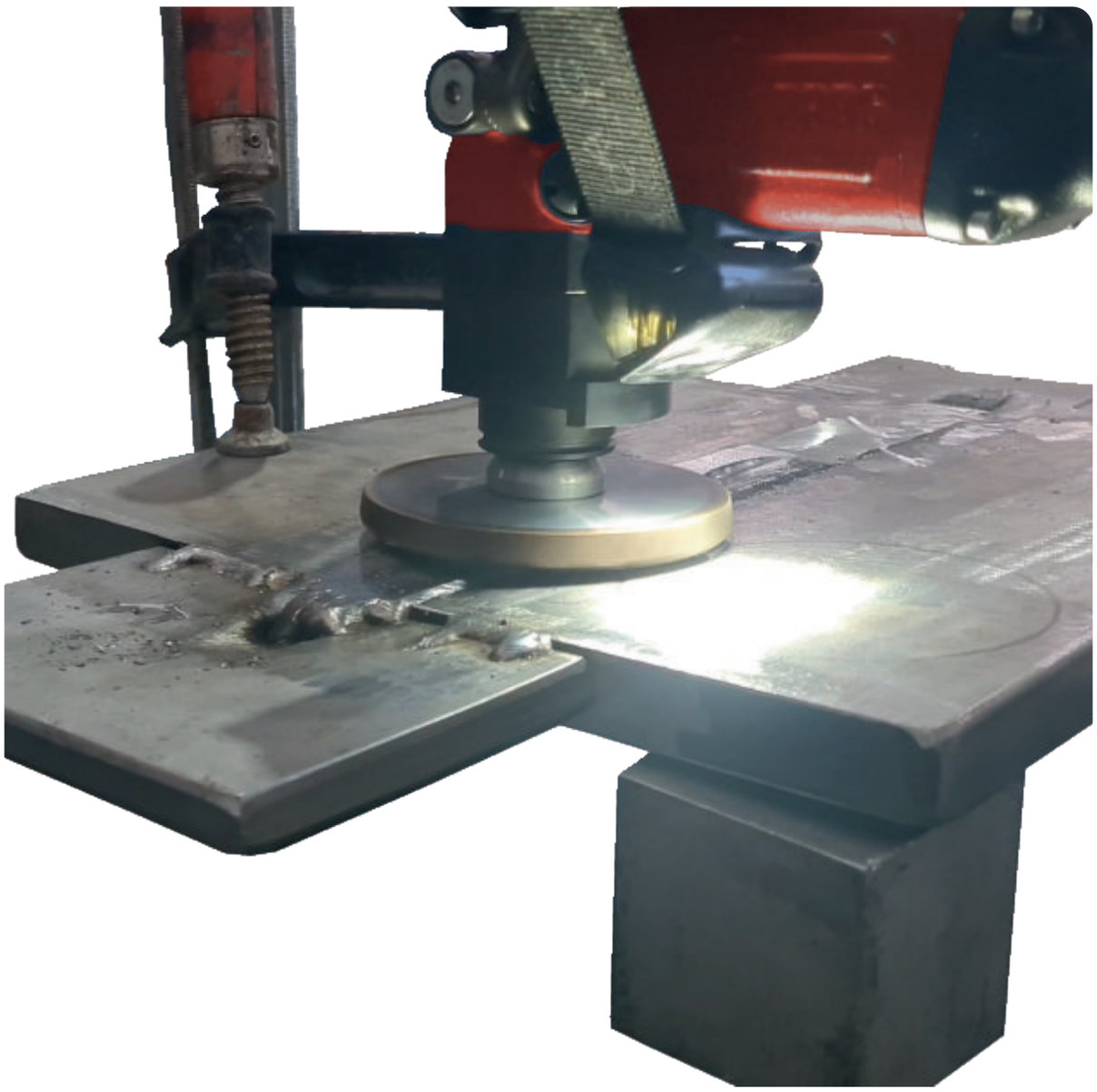
Generally we recommend a self-test.

We advice the usage of **Maija Baux-Fluid** for improved chip removal (See page 75).




Information on patents and trademarks: www.maija-fraestechnik.de/patent_en

Aluminum processing in shipbuilding



RocketCutter (RC)

RocketCutter

The RocketCutter is suitable for the following tasks:

- chamfering
- removing material
- flatten / levelling weld seams
- grooving weld seams

Applications:

	RocketCutter
Chamfering	✓
Removing / flatten weld seams or material	✓
Grooving weld seams	✓
Open weld seams	X

RocketCutter - Applications

Chamfering

Note:
As a support, the guard can be used as a guide.

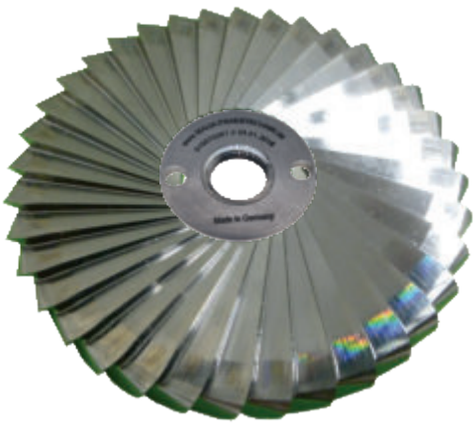
Removing / Flatten

Removal of solid material or levelling of weld seams.

Grooving weld seams

Note:
For opening weld seams, see double-sided milling disc or DoubleWorker.

Video of the RocketCutter in various applications



RocketCutter pat. for aluminum

- chips instead of swarf
- no heat
- usage with hand angle miller
- 50% faster than grinding
- low vibrations, easy handling

Can be resharpened up to 7 times

Diameter	Toothing	Max. speed	Article no.
100 mm	36 teeth	12.000 rpm	010100016

Details/Application

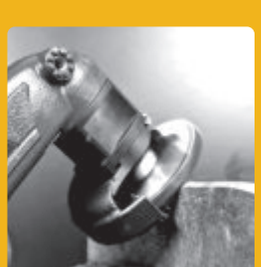
Aluminum, aluminum-alloys

Chamfering, remove/flatten weld seams, grooving weld seams

Workability/Notes

from AlMn up to AlZnMgCu

We advice the usage of **Maija Baux-Fluid** to prevent built up edges (See page 75).



Information on patents and trademarks: www.maija-fraestechnik.de/patent_en

RocketCutter pat. for steel

- chips instead of swarf
- no heat
- usage with hand angle miller
- metallic blank welding seam preparation
- smooth operation, good handling
- burr-free machining

Can be resharpened up to 7 times

Diameter	Toothing	Max. speed	Article no.
100 mm	40 teeth	1.800 rpm	020100010.IN

Details/Application

Steel, steel alloys

Chamfering, remove/flatten weld seams, grooving weld seams

Workability/Notes

Metal / steel up to Rockwell (HR) 53

We advice the usage of **Maija Ferrum-Fluid** for improved chip removal (See page 75).

RocketCutter pat. for stainless steel

- chips instead of swarf - no respirable chrome/nickle particles
- no heat
- usage with hand angle miller
- metallic blank welding seam preparation
- massive reduction of noise emissions
- burr-free machining

Can be resharpened up to 7 times

Diameter	Toothing	Max. speed	Article no.
100 mm	40 teeth	1.800 rpm	021100010.IN

Details/Application

Stainless steel, stainless steel alloys

Chamfering, remove/flatten weld seams, grooving weld seams

Workability/Notes

V2A, V4A, Hastelloy/Inconel

We advice the usage of **Maija Ferrum-Fluid** for improved chip removal (See page 75).

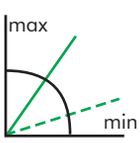
Information on patents and trademarks: www.maija-fraestechnik.de/patent_en

Weld bevel preparator "trapezoidal shape" (WBP)

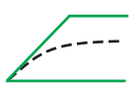
Weld bevel preparator "trapezoidal shape"

The weld bevel preparator "trapezoidal shape" is suitable for the following work:

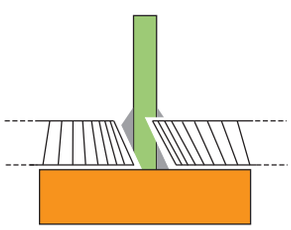
Opening / removing weld seams at joints, especially between web / flange (I or double T), where one side must not be damaged.



An opening angle of up to 55° is possible (larger angles on request).
The minimum angle depends on the diameter of the disc.

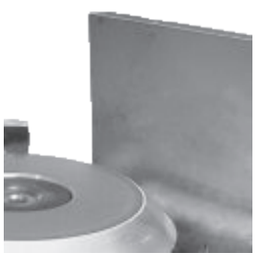


The trapezoidal discs do not have a curvature / tulip shape, as is the case with milling discs.

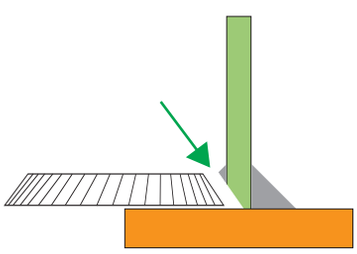


The centre bar allows the direction of the toothing to be adjusted depending on the area of application.
! Attention ! The direction must be known before the toothing is applied, simple rotation is not possible.

Weld bevel preparator "trapezoidal shape" - areas of application

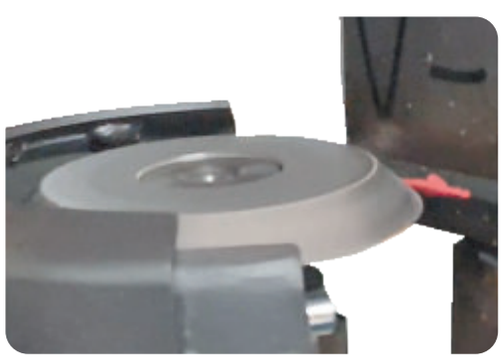


Opening / removal of weld seams at joints



By only using the toothing on the bevelled edge, components above or below are not damaged.

Left - toothing



Right - toothing

Video of the weld bevel preparator "trapezoidal shape" in various applications

Weld bevel preparator "trapezoidal shape" pat. for steel

- chips instead of swarf
- no heat
- usage with hand angle miller
- metallic blank welding seam preparation
- smooth operation, good handling
- burr-free machining

Can be resharpened up to 7 times

Diameter	Opening angle	Toothing direction	Toothing	Max. speed	Article no.
100 mm	45 °	right	46 teeth	1.800 rpm	020100210.IN
100 mm	55 °	left	46 teeth	1.800 rpm	020100211.IN

Details/Application

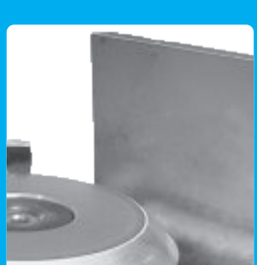
Steel, steel alloys

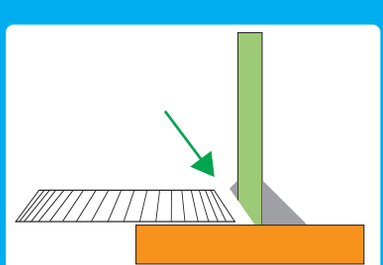
Opening / removal of weld seams at joints

Workability/Notes

Metal / steel up to Rockwell (HR) 53

We advice the usage of **Maija Ferrum-Fluid** for improved chip removal (See page 75).





Information on patents and trademarks: www.maija-fraestechnik.de/patent_en

Weld bevel preparator "trapezoidal shape" pat. for stainless steel

- chips instead of swarf - no respirable chrome/nickle particles
- no heat
- usage with hand angle miller
- metallic blank welding seam preparation
- massive reduction of noise emissions
- burr-free machining

Can be resharpened up to 7 times

Diameter	Opening angle	Toothing direction	Toothing	Max. speed	Article no.
100 mm	45 °	right	46 teeth	1.800 rpm	021100210.IN
100 mm	55 °	left	46 teeth	1.800 rpm	021100211.IN

Details/Application

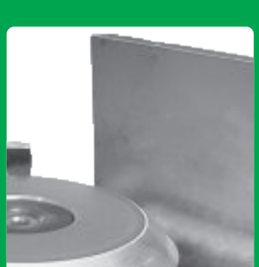
Stainless steel, stainless steel alloys

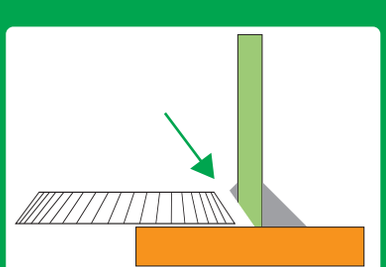
Opening / removal of weld seams at joints

Workability/Notes

V2A, V4A, Hastelloy/Inconel

We advice the usage of **Maija Ferrum-Fluid** for improved chip removal (See page 75).





Information on patents and trademarks: www.maija-fraestechnik.de/patent_en

Fully automated usage - combination with a robot

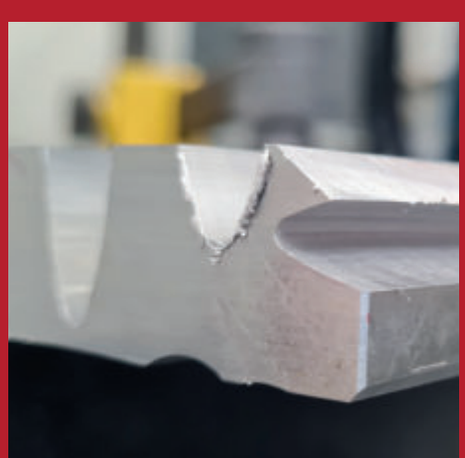


Steel processing:

Preparation of a weld seam (1)
Simultaneous leveling of several weld beads (2)+(3)

A video of the leveling process (YouTube)





Aluminum processing:

Chamfer (1)
Open throat (2)
Result (3)

A video of the processing (YouTube):

COMPRESSED AIR - HAND ANGLE MILLER · 70 mm

GA 607 "BauxTeen"

Handy
Compact design with high performance. A small angle head makes it possible to reach places that are difficult to access.

Optimized
Speed adapted for use with the Maija milling discs.

Ergonomic
Low-vibration, quiet and an ergonomic handle for non-tiring work.

Safe
Reinforced guard for even more safety when working with the Maija milling discs.

Flexible
Suitable for left- and right-handers. Guard and handle can be adjusted accordingly.

Approved system
EC Declaration of Conformity for use with MAIJA milling discs.

CE

Article No.	MF810062
Model	GA 607-050 BXS/S3
Ø	70 mm
Field of application	aluminum
Drive	Vane motor
Power	500 W
Speed	15.300 rpm
Air pressure	6,3 bar
Air flow rate	850 l/min.
Air inlet thread	1/4"
Tool holder	M14
Weight (plus disc)	1,3 kg
Hose diameter (inner)	7 mm

Suitable accessories

Ball joint connection 1/4" p. 88
Gear oil p. 86

COMPRESSED AIR - HAND ANGLE MILLER · 70 mm

FerrumMaster Teen DY70

Handy
Compact design with high performance. A small angle head makes it possible to reach places that are difficult to access.

Optimized
Low speed, suitable speed for use with the Maija milling discs.

Ergonomic
Low-vibration, quiet and an ergonomic handle for non-tiring work.

Safe
Reinforced guard for even more safety when working with the Maija milling discs.

Flexible
Suitable for left- and right-handers. Guard and handle can be adjusted accordingly.

Approved system
EC Declaration of Conformity for use with MAIJA milling discs.

Article No.	MF810067
Ø	70 mm
Field of application	steel stainless steel titanium copper CFRP / GRP wood
Drive	Vane motor
Power	298 W
Speed	3.200 rpm
Air pressure	6,3 bar
Air flow rate	680 l/min.
Air inlet thread	1/4"
Tool holder	3/8"
Weight (plus disc)	1,1 kg
Hose diameter (inner)	7 mm

Suitable accessories

Guard	p. 82
Ball joint connection 1/4"	p. 88
Tool holder	p. 68
Gear oil	p. 85

COMPRESSED AIR - HAND ANGLE MILLER · 116 mm - 125 mm

GAT 812 "BauxMaster"

Article No.	MF812260.S4
Model	GAT 812-260 BX/S4
Ø	116 mm, 125 mm
Field of application	aluminum
Drive	Turbine
Power	2,6 kW
Speed	12.000 rpm
Air pressure	6,3 bar
Air flow rate	2.000 l/min.
Air inlet thread	1/2"
Tool holder	Universal
Weight (plus disc)	2,8 kg
Hose diameter (inner)	9 mm

Powerful
High performance and high speed - equipped with turbine drive.

Oil-free
Our turbine millers are designed for oil-free operation.

Ergonomic
Low-vibration, quiet and an ergonomic handle for non-tiring work.

Safe
Reinforced construction and guard for even more safety when working with the Maija milling discs.

Flexible
Suitable for left- and right-handers. Guard and handle can be adjusted accordingly.

Approved system
EC Declaration of Conformity for use with MAIJA milling discs.

CE

Suitable accessories

Guard	p. 83
Ball joint connection 1/2"	p. 88
Gear oil	p. 86
Tool holder	p. 71

COMPRESSED AIR - HAND ANGLE MILLER · 116 mm - 125 mm

GAT "FerrumMaster"

Article No.	MF212260.S2	MF112260.S2
Model	GAT 212-260 BX/S2	GAT 112-260 BX/S2
Ø	116 mm, 125 mm	
Field of application	steel copper wood	steel stainless steel copper CFRP / GRP
Drive	Turbine	
Power	2,6 kW	
Speed	2.800 rpm	1.800 rpm
Air pressure	6,3 bar	
Air flow rate	2.000 l/min.	
Air inlet thread	1/2"	
Weight (plus disc)	3,1 kg	
Hose diameter (inner)	9 mm	

Powerful
High performance at low speed - equipped with turbine drive.

Oil-free
Our turbine millers are designed for oil-free operation.

Ergonomic
Low-vibration, quiet and an ergonomic handle for non-tiring work.

Safe
Reinforced construction and guard for even more safety when working with the Maija milling discs.

Flexible
Suitable for left- and right-handers. Guard and handle can be adjusted accordingly.

Approved system
EC Declaration of Conformity for use with MAIJA milling discs.

CE

Suitable accessories

Guard	p. 83
Ball joint connection 1/2"	p. 88
Gear oil	p. 86
Tool holder	p. 71

COMPRESSED AIR - HAND ANGLE MILLER · 116 mm - 125 mm

FerrumMaster DY125

Handy
Compact design with high performance.

Optimized
Low speed, suitable speed for use with the Maija milling discs.

Ergonomic
Low-vibration, quiet and an ergonomic handle for non-tiring work.

Safe
Reinforced guard for even more safety when working with the Maija milling discs.

Flexible
Suitable for left- and right-handers. Guard and handle can be adjusted accordingly.

Approved system
EC Declaration of Conformity for use with MAIJA milling discs.

Article No.	MF810068	MF810066
Ø	116 mm, 125 mm	
Field of application	steel stainless steel copper CFRP / GRP	steel stainless steel titanium magnesium
Drive	Vane motor	
Power	746 W	
Speed	1.800 rpm	1.250 rpm
Air pressure	6,3 bar	
Air flow rate	1.189 l/min.	
Air inlet thread	3/8"	
Tool holder	M14	
Weight (plus disc)	2,2 kg	
Hose diameter (inner)	9 mm	

Suitable accessories

Guard p. 84
Ball joint connection 3/8" p. 88
Tool holder p. 68+69
Gear oil + gear grease p. 85

Compressed air - Hand angle miller · 150 mm

GAT 123-451 BX/S1 "FerrumMaster BIG Steel"

Article No.	MF123451.S1
Ø	150 mm
Field of application	steel stainless steel copper CFRP / GRP
Drive	Turbine
Power	4,5 kW
Speed	800 rpm
Air pressure	6,3 bar
Air flow rate	3.300 l/min.
Air inlet thread	1/2"
Tool holder	Universal
Weight (plus disc)	8,7 kg
Hose diameter (inner)	11 mm

Powerful
Very high performance at low speed - equipped with turbine drive.

Optimized
Speed adapted for use with the Maija milling discs. Bow handle and handle extension ensure better handling of the machine.

Ergonomic
Low-vibration, quiet and an ergonomic handle for non-tiring work.

Safe
Reinforced guard for even more safety when working with the Maija milling discs.

Flexible
Suitable for left- and right-handers. Guard and bow handle can be adjusted accordingly.

Approved system
EC Declaration of Conformity for use with MAIJA milling discs.

CE

Suitable accessories

Ball joint connection 1/2" p. 88
Gear oil p. 86

Electric - hand angle miller · 116 mm - 125 mm

WPO 14-25 E

Article No.	FE72214900230
Ø	116 mm, 125 mm
Field of application	steel stainless steel magnesium copper CFRP / GRP
Power consumption	1.200 W
Power output	750 W
Idle speed	900 - 2.500 rpm
Tool holder	M14
Weight (plus disc)	2,5 kg
Cable length	4 m

Handy
Compact design with high performance.

Optimized
Very low speed, suitable speed for use with the Maija milling discs.

Ergonomic
Low-vibration, quiet and an ergonomic handle for non-tiring work.

Safe
Reinforced guard for even more safety when working with the Maija milling discs.

Flexible
Suitable for left- and right-handers. Guard and handle can be adjusted accordingly.

Compatible
Various customers use this type of machine in combination with the Maija milling discs.

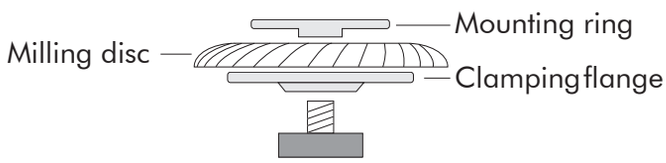
Suitable accessories

Guard p. 84
Tool holder p. 68+69

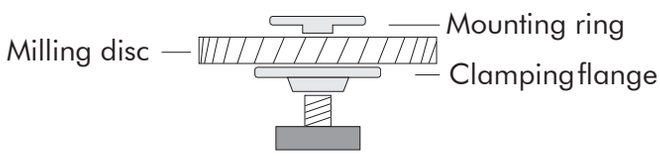
Tool holder · 70 mm - 100 mm

Single sided milling disc, milling disc "RocketCutter"

For kind of disc	Single sided milling disc	
	Milling disc "RocketCutter"	
Ø	70 mm - 100 mm	
Spindel size	**3/8"**	
Set	010070890	
Consisting of	Mounting ring	010070291
	Clamping flange	010070284

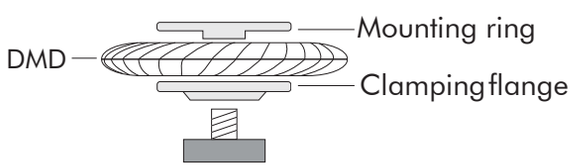


For kind of disc	Single sided milling disc	
	Milling disc "RocketCutter"	
Ø	70 mm - 100 mm	
Spindel size	**M14**	
Set	010070888	
Consisting of	Mounting ring	010070287
	Clamping flange	010070283

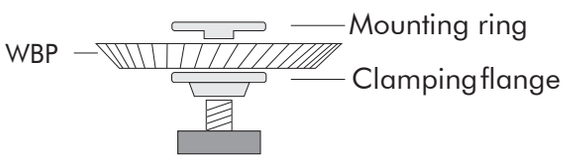


Double sided milling disc (DMD), Weld bevel preparator "trapezoidal shape" (WBP)

For kind of disc	DMD, DMD "DoubleWorker"	
	WBP "trapezoidal shape"	
Ø	70 mm - 100 mm	
Spindel size	**3/8"**	
Set	010070889	
Consisting of	Mounting ring	010070291
	Clamping flange	010070285



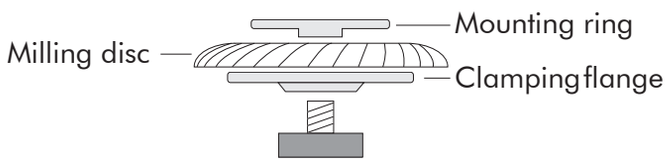
For kind of disc	DMD, DMD "DoubleWorker"	
	WBP "trapezoidal shape"	
Ø	70 mm - 100 mm	
Spindel size	**M14**	
Set	010070887	
Consisting of	Mounting ring	010070287
	Clamping flange	010070286



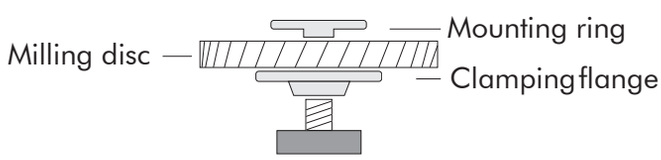
TOOL HOLDER · 116 mm - 125 mm

Single sided milling disc, milling disc "RocketCutter"

For kind of disc	Single sided milling disc	
	Milling disc "RocketCutter"	
Ø	116 mm - 125 mm	
Spindel size	**Universal (22,3mm)**	
Set	010116821	
Consisting of	Mounting ring	010116287
	Clamping flange	010116285
	Countersunk screw M8*35	

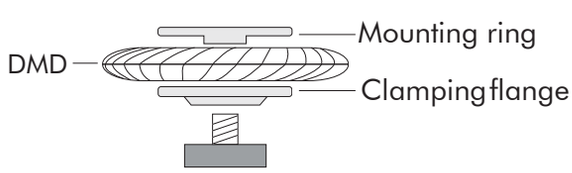


For kind of disc	Single sided milling disc	
	Milling disc "RocketCutter"	
Ø	116 mm - 125 mm	
Spindel size	**M14**	
Set	010116888	
Consisting of	Mounting ring	010116287
	Clamping flange	010116286

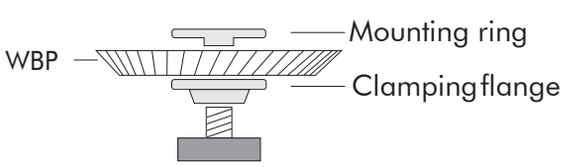


Double sided milling disc (DMD), Weld bevel preparator "trapezoidal shape" (WBP)

For kind of disc	DMD, DMD "DoubleWorker"	
	WBP "trapezoidal shape"	
Ø	116 mm - 125 mm	
Spindel size	**Universal (22,3mm)**	
Set	010116284	
Consisting of	Mounting ring	010116287
	Clamping flange	010116283
	Countersunk screw M8*35	



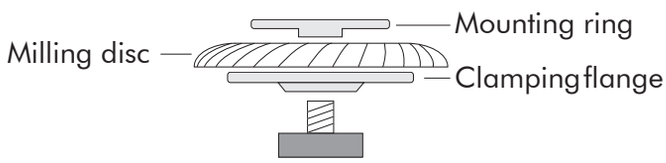
For kind of disc	DMD, DMD "DoubleWorker"	
	WBP "trapezoidal shape"	
Ø	116 mm - 125 mm	
Spindel size	**M14**	
Set	010116288	
Consisting of	Mounting ring	010116287
	Clamping flange	010116284

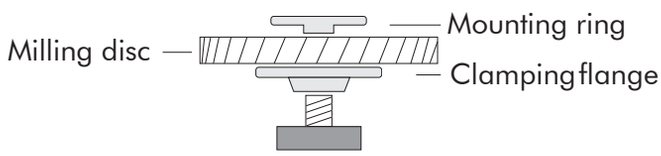


Tool holder · 150 mm

Single sided milling disc, milling disc "RocketCutter"

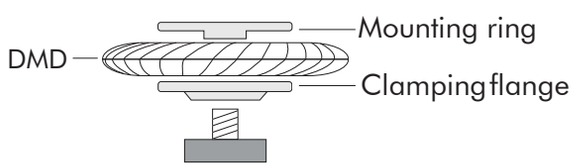
For kind of disc	Single sided milling disc	
	Milling disc "RocketCutter"	
Ø	150 mm	
Spindel size	**Universal (22,3mm)**	
Set	010150502	
Consisting of	Mounting ring	010150501
	Clamping flange	010150502

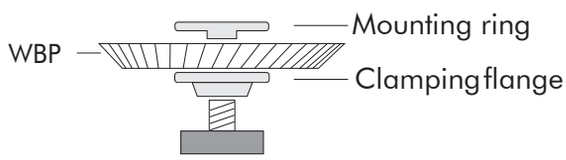




Double sided milling disc (DMD), Weld bevel preparator "trapezoidal shape" (WBP)

For kind of disc	DMD, DMD "DoubleWorker"	
	WBP "trapezoidal shape"	
Ø	150 mm	
Spindel size	**Universal (22,3mm)**	
Set	010150503	
Consisting of	Mounting ring	010150501
	Clamping flange	010116285

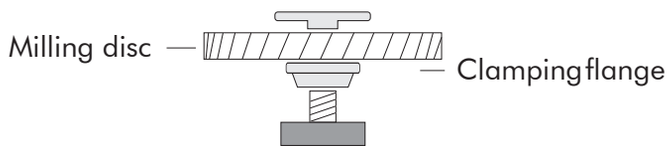


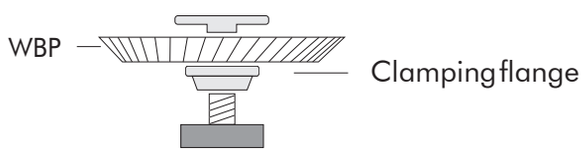


Tool holder • GAT

100 mm

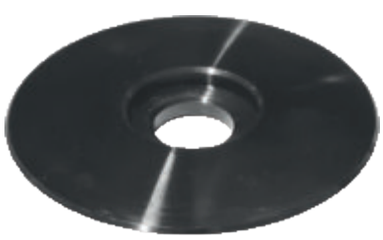
For machine	GAT 112-260 BX/S2
	GAT 212-260 BX/S2
	GAT 812-260 BX/S4
Ø	100 mm
Clamping flange	010100292

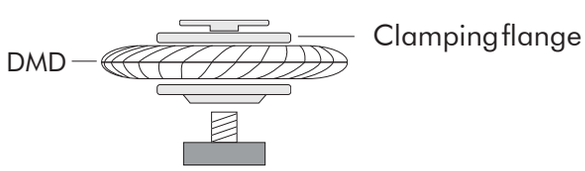


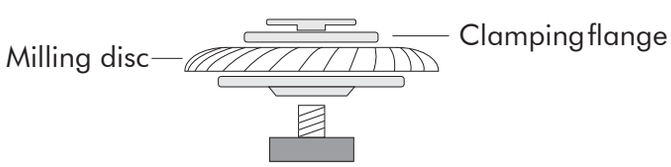


150 mm

For machine	GAT 112-260 BX/S2
	GAT 212-260 BX/S2
	GAT 812-260 BX/S4
Ø	150 mm
Clamping flange	010150605







Milling disc at work - mounted on a robot

Maija-Frästechnik GmbH
www.maija-fraestechnik.de

Tel.: +49 2333 869 77 05
info@maija-fraestechnik.de

Cooling lubricant for milling 73 - 75

Cooling lubricant for milling

General information

What are the Maija fluids?
The Maija Fluids "Maija Baux-Fluid" and "Maija Ferrum-Fluid" are cooling lubricants that were developed for use in milling.

What are the Maija fluids used for?
The Maija fluids are used to optimize chip evucation at high chip removal. In addition, they can be used to loosen adhesions in the chip spaces and built-up edges on the teeth during and after work..

When can the Maija fluids be used?
- before using a milling discss or double-sided milling disc
- to free the chip space from adhesions during work
- for removing build-up edges during work
- for maintaining the discs after work
- for an improved surface

How are the Maija fluids used?
- drizzle the disc with the Maija fluid
- spread the Maija fluid with a cloth or a similar non-metallic object

Safety data sheets for the lubricants are available on our website or on request.

Cooling lubricant for milling

Maija Baux-Fluid

Cooling lubricant for milling

Area of application	aluminum magnesium copper

Description	Content	Article No.
Spray bottle	500 ml	MF031480.S
Spray bottle	1 l	MF031490.S
Canister	10 l	MF031590.K

Area of application
Processing aluminum and copper.

Minimum quantity lubricant
A few drops on the milling tool are sufficient.

Residue-free
When used in small amounts ("drizzle"), the baux fluid leaves no residue that could cause inclusions during welding.

Usage
Drizzle the disc with "Maija Baux-Fluid" and spread the fluid with a cloth or similar non-metallic object.

Maija Ferrum-Fluid

Cooling lubricant for milling

Area of application	steel stainless steel titanium

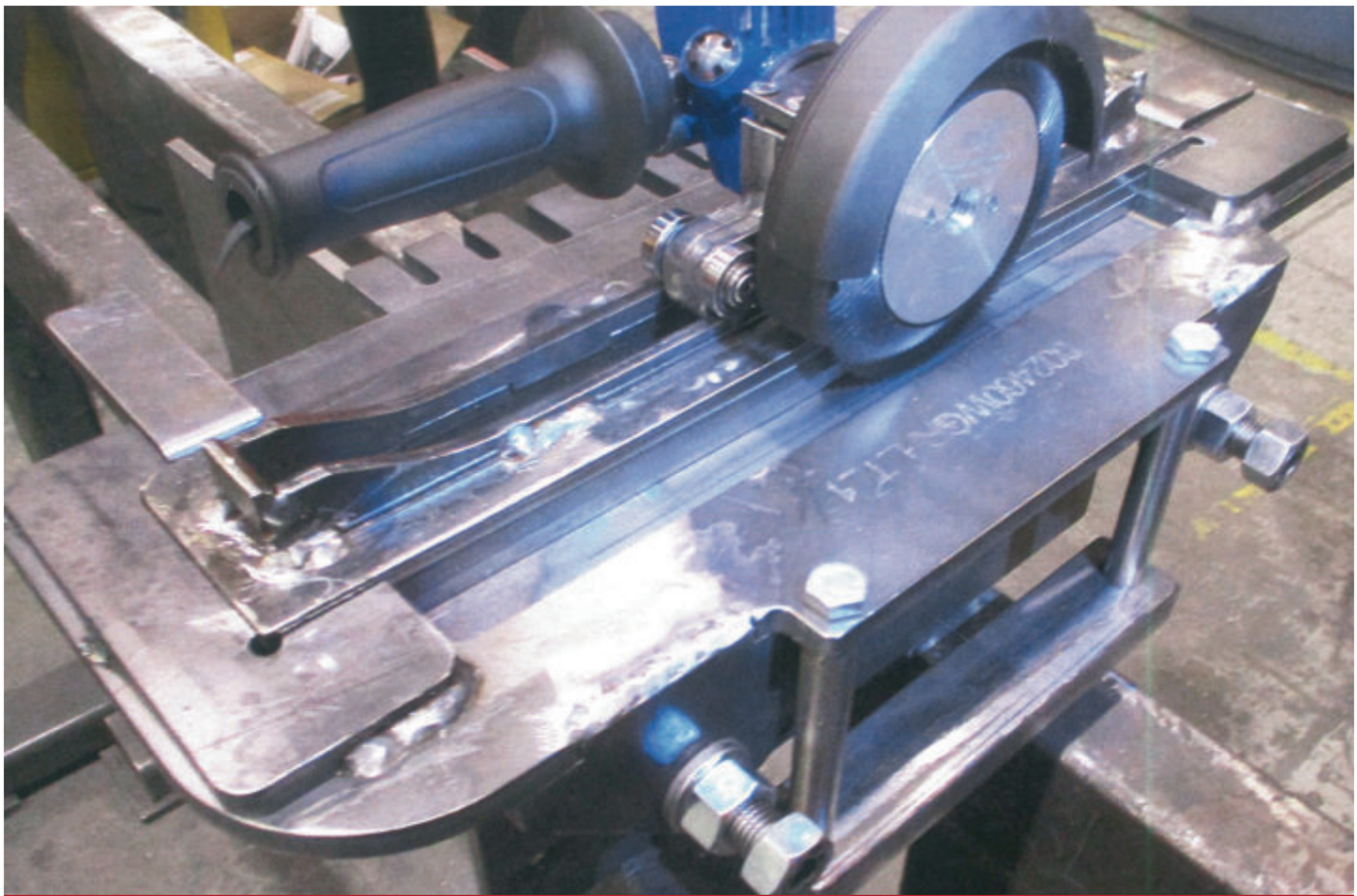
Description	Content	Article No.
Spray bottle	500 ml	MF031482.S
Spray bottle	1 l	MF031492.S
Canister	10 l	MF031592.K

Area of application
Processing steel, stainless steel and titanium.

Minimum quantity lubricant
A few drops on the milling tool are sufficient.

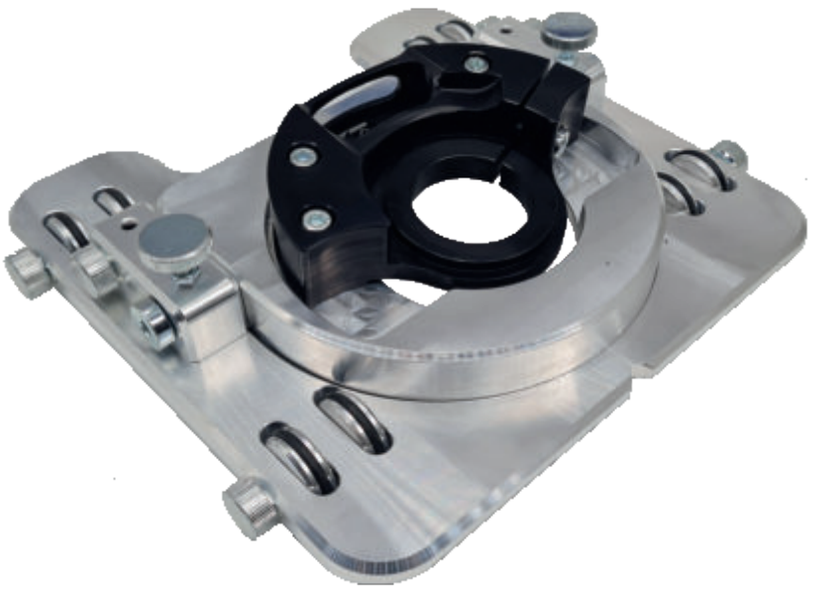
Residue-free
When used in small amounts ("drizzle"), the baux fluid leaves no residue that could cause inclusions during welding.

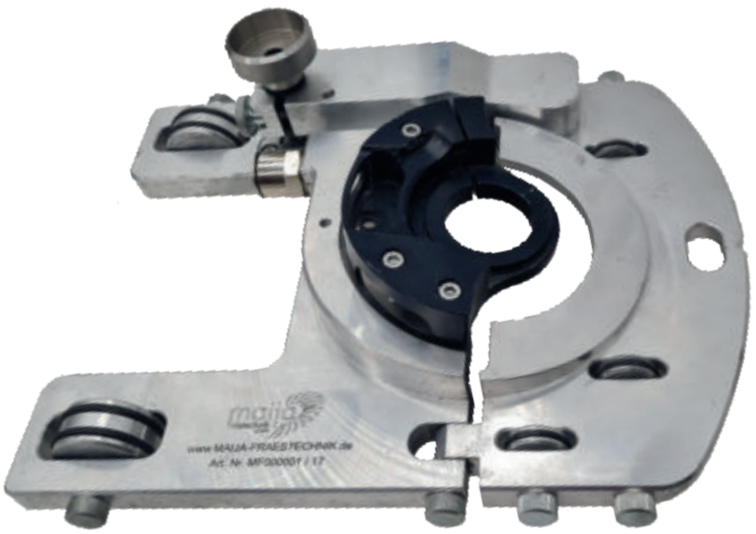
Usage
Drizzle the disc with "Maija Ferrum-Fluid" and spread the fluid with a cloth or similar non-metallic object.



Milling aids

can also be used in (partially) automated processes





Milling carrier — 100mm

The roller milling carrier type MAIJA is a milling aid to facilitate constant milling to a certain height.

- The height to be reached can be adjusted and fixed
- Adapter for various angle millers available
- Air return extension kit available

Roller milling carrier 100mm — type MAIJA

Article No.	MF000070

An adapter is currently available for the following machines:

GAT 112 — FerrumMaster Page 63
GAT 212 — FerrumMaster Page 63
GAT 812 — BauxMaster Page 62

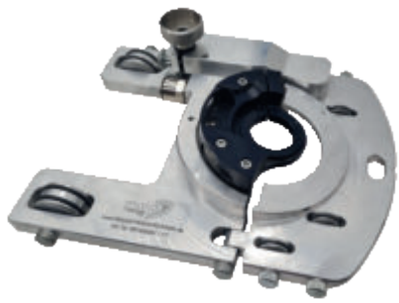
Replacement rollers for roller milling carrier 100mm — type MAIJA

Article No.	Set consisting of
MF000071	8x roller Ø 24mm, 1 O-ring

Milling carrier — 116 - 125mm

The roller milling carrier type MAIJA is a milling aid to facilitate constant milling to a certain height.

- The height to be reached can be adjusted and fixed
- Adapter for various angle millers available
- Air return extension kit available



Roller milling carrier 116+125mm — type MAIJA

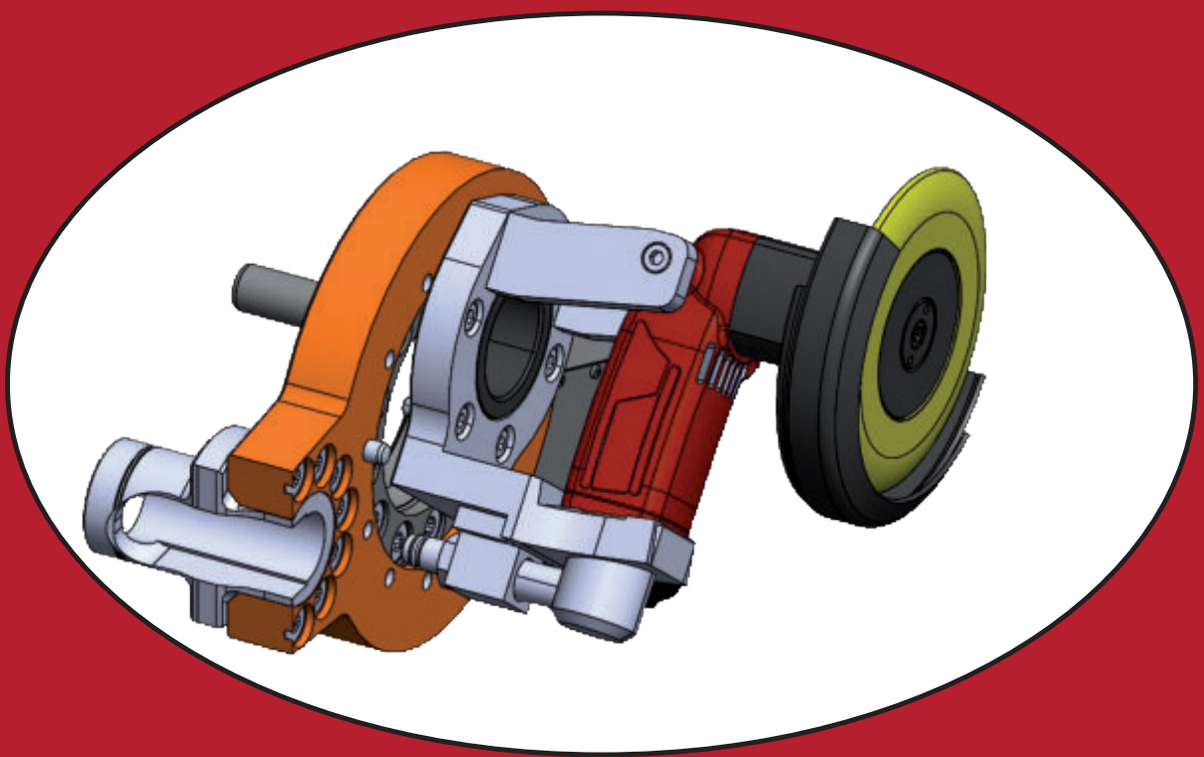
Article No.	MF000018

An adapter is currently available for the following machines:

GAT 112 — FerrumMaster	Page 63
GAT 212 — FerrumMaster	Page 63
GAT 812 — BauxMaster	Page 62

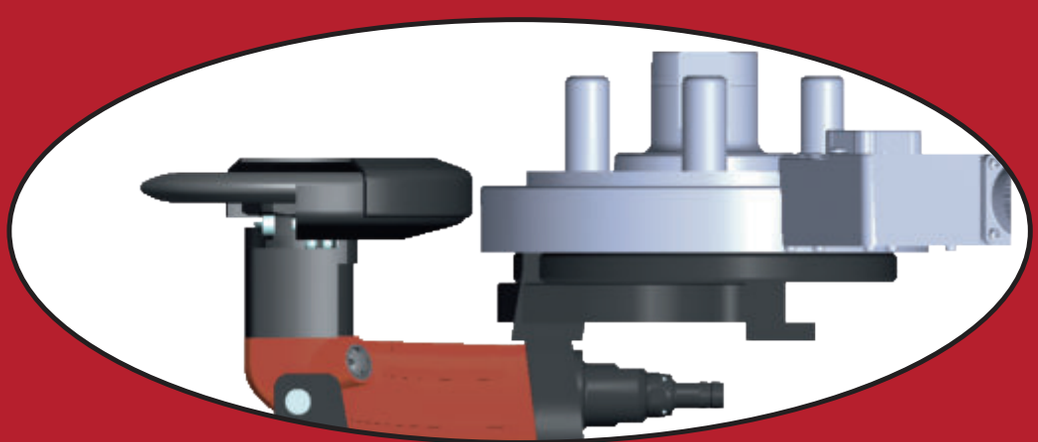
Replacement rollers for roller milling carrier 116+125mm — type MAIJA

Article No.	Set consisting of
MF000056	2x roller Ø 39mm, 2 O-rings
MF000057	3x roller Ø 24mm, 1 O-ring
MF000055	2x roller Ø 39mm, 2 O-rings 3x roller Ø 24mm, 1 O-ring



Adapter for robots - Production on request

Modification in consultation, according to the robots used



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GUARD

Increased security

Extra strong guards for maximum protection when working with our milling discs.

❶ Thickness of at least 2,8 mm
❷ Partially closed - increased protection without completely covering the disc

70 mm

Article No.	MF212001
For milling disc with Ø	70 mm
Only compatible with the machines listed below!	

Suitable for machines:

GAT 112 — FerrumMaster **Page 63**
GAT 212 — FerrumMaster **Page 63**
GAT 812 — BauxMaster **Page 62**

100 mm

Article No.	MF212002.F
For milling disc with Ø	100 mm
Only compatible with the machines listed below!	

Suitable for machines:

GAT 112 — FerrumMaster **Page 63**
GAT 212 — FerrumMaster **Page 63**
GAT 812 — BauxMaster **Page 62**

GUARD

Increased security

Extra strong guards for maximum protection when working with our milling discs.

1. Thickness of at least 2,8 mm
2. Partially closed - increased protection without completely covering the disc

125 mm

Article No.	MF212010
For milling disc with Ø	116 mm - 125 mm
Only compatible with the machines listed below!	

Suitable for machines:

GAT 112 — FerrumMaster **Page 63**
GAT 212 — FerrumMaster **Page 63**
GAT 812 — BauxMaster **Page 62**

150 mm

Article No.	MF212005
For milling disc with Ø	150 mm
Only compatible with the machines listed below!	

Suitable for machines:

GAT 112 — FerrumMaster **Page 63**
GAT 212 — FerrumMaster **Page 63**

GUARD

Increased security

Extra strong guards for maximum protection when working with our milling discs.

1. Thickness of at least 2,8 mm
2. Partially closed - increased protection without completely covering the disc

70 mm - DY

Article No.	MF212004
For milling disc with Ø	70 mm
Inner Ø	34 mm

Suitable for machines:

FerrumMaster Teen DY70 **Page 61**

125 mm - DY

Article No.	MF212003
For milling disc with Ø	116 mm - 125 mm
Inner Ø	47 mm

Suitable for machines:

FerrumMaster DY125 **Page 64**
WPO 14-25 E **Page 66**

MACHINE MAINTENANCE

Auxiliary materials for machine maintenance

Dynabrade® gear oil 2.5 oz (74 ml) tube

Article No.	MF034013
Dynabrade® Article No.	95848

Suitable for machines:

FerrumMaster Teen DY70	Page 61
FerrumMaster DY125	Page 64

Dynabrade® gear grease 2.5 oz (74 ml) tube

Article No.	MF034014
Dynabrade® Article No.	95544

Suitable for machines:

FerrumMaster DY125	Page 64

Dynabrade® grease gun

Article No.	MF034015
Dynabrade® Article No.	95541

Suitable for articles:

MF034014 - Dynabrade® gear grease

MACHINE MAINTENANCE

Auxiliary materials for machine maintenance

Gear oil (25 ml)

Article No.	MF034016
DEPRAG Article No.	6078679

Suitable for machines:

GA 607 — BauxTeen Page 60

Oil-Set (10ml syringe + 250ml oil)

Article No.	MF034011
DEPRAG Article No.	790083A

Suitable for machines:

GAT 112 — FerrumMaster Page 63
GAT 212 — FerrumMaster Page 63
GAT 812 — BauxMaster Page 62
GAT 123 — FerrumMaster BIG Page 65

Tools

Tool for (dis)mounting the milling discs

Spanner wrench

Article No.	MF1952259

- adjustable
- suitable for all MAIJA mounting rings

Special spanner for locking

Article No.	D60189881

For locking the gearbox when (dis)assembling the milling disc

Suitable for machines:

GA 607 — BauxTeen **Page 60**

AIRgoflex

Aluminum ball joint connections for compressed air machines

Comfort through flexibility

360° rotatable and 90° bendable - prevents the compressed air hose from kinking or twisting.

1/4"

Article No.	MF000004

Suitable for machines:

GA 607 — BauxTeen Page 60
FerrumMaster Teen DY70 Page 61

3/8"

Article No.	MF000003

Suitable for machines:

FerrumMaster DY125 Page 64

1/2"

Article No.	MF000002

Suitable for machines:

GAT 112 — FerrumMaster Page 63
GAT 212 — FerrumMaster Page 63
GAT 812 — BauxMaster Page 62
GAT 123 — FerrumMaster BIG Page 65

Notizen

Notizen

Changes to the product range

Machines

BauxTeen DY

Instead use:
GA 607-050 BXS/S3

GAT 818-450 BX "BauxMaster BIG

Instead use:
GAT 212
+Guard 150mm
+Tool holder 150mm

Tool holder

GAT – 100 mm and 150mm

New, unified Tool holder

The new tool holders works for:
- GAT 112, GAT 212 starting version /S2
- GAT 812 starting version /S4

For older versions some remaining items in stock, while stock lasts.

Tools / Extras

Pull-off device for the Balancer

No longer required after model change

Manufactured on request for machines
Typ GAT 812-221 and GAT 812-260 up to version /S3

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