



— EXPERTISE IN MACHINING

M4000 – High performance made universal.

Product expertise

Milling

New!
EXTENDED
RANGE



Walter **Green**

COMPREHENSIVE EXPERTISE IN ONE UNIVERSAL SYSTEM.

M4002 high-feed milling cutter

Dia. 20–125 mm

$\kappa = 15^\circ$

$a_{pmax} = 1.0/1.5/2.0$ mm

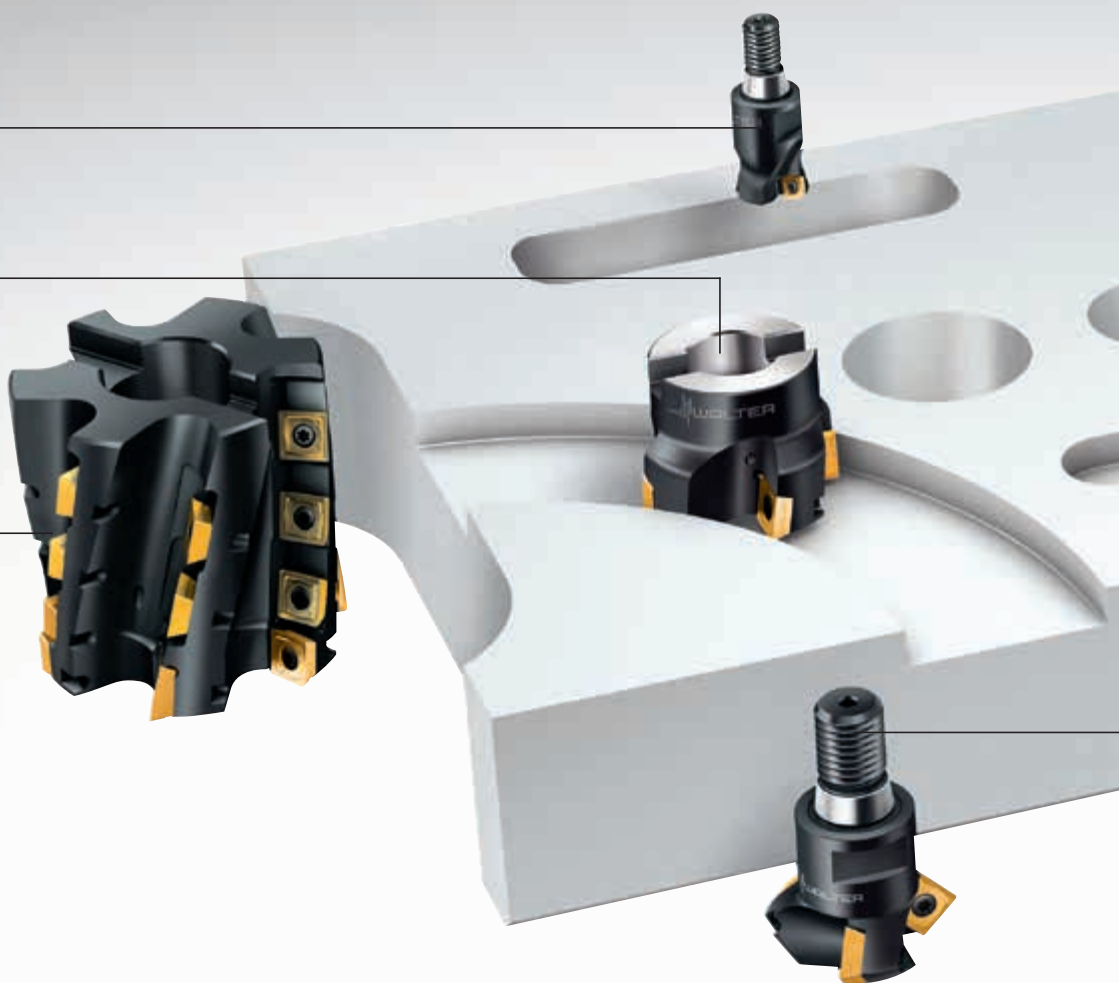
M4132 shoulder milling cutter

M4256 / M4257 / M4258 porcupine milling cutters

Dia. 20–100 mm

$\kappa = 90^\circ$

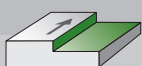
$a_{pmax} = 27\text{--}77$ mm



Shoulder milling

Roughing

M4132 shoulder milling cutter
M4256, M4257 and M4258 porcupine milling cutters



Shoulder milling

Finishing

M4132 shoulder milling cutter



Face milling

Roughing

M4002 high-feed milling cutter
M4003 face milling cutter
M4132 shoulder milling cutter



Face milling

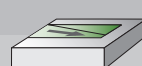
Finishing

M4003 face milling cutter
M4132 shoulder milling cutter



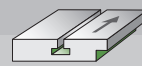
Ramping

M4002 high-feed milling cutter
M4792 routing cutter
M4003 face milling cutter
M4256, M4257 and M4258 porcupine milling cutters



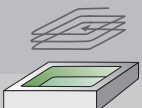
T-slot milling

M4575 T-slot milling cutter



Pocket milling

M4002 high-feed milling cutter
M4792 routing cutter
M4256, M4257 and M4258 porcupine milling cutters



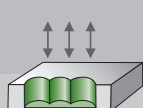
Circular interpolation milling

M4002 high-feed milling cutter
M4792 routing cutter
M4256, M4257 and M4258 porcupine milling cutters



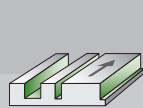
Plunging

M4002 high-feed milling cutter
M4792 routing cutter



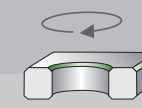
Slot milling

M4132 shoulder milling cutter
M4792 routing cutter
M4256, M4257 and M4258 porcupine milling cutters



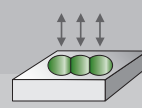
Chamfering and back chamfering

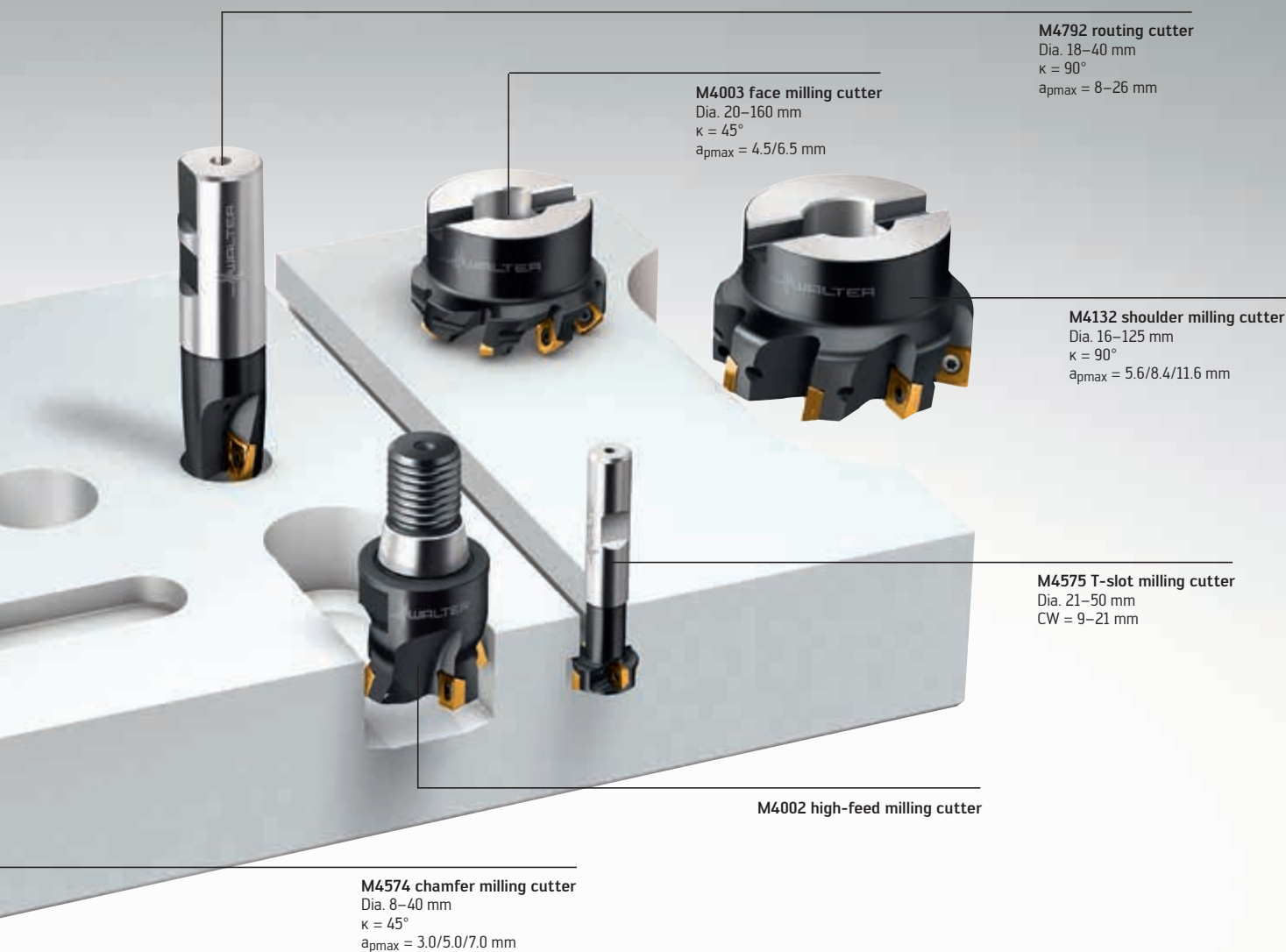
M4574 chamfer milling cutter



Routing

M4792 routing cutter





LOOK TO FIND SUCCESS IN PERFORMANCE AND COST EFFICIENCY

M4000 is the universal system for all users who want to have as many options as possible when milling. The M4000 range can master all machining tasks with one type of indexable insert. Whether used in shoulder milling cutters, high-feed milling cutters, face milling cutters, chamfer milling cutters, T-slot milling cutters, porcupine milling cutters or routing cutters, the square system inserts can be used across the entire M4000 range. For routing cutters and porcupine milling cutters, the range also has an additional rhombic indexable insert.

The low storage and procurement costs clearly indicate that this system places particular emphasis on cost efficiency. Efficiency is also maximized thanks to extremely easy handling and impressive performance data across the M4000 tool family.

And the same universality provides benefits in terms of easy handling and the impressive performance data that M4000 tools can produce. That's because they ensure a maximum level of efficiency.

THE CONCEPT SOON FINDS FAVOUR, WHILE THE PERFORMANCE GENERATES INSPIRATION.

System insert SD ...

- Square, positive basic shape
- Range of grades and geometries



Powered by
Tiger-tec®Silver

Now also in:
Tiger-tec®Gold

Can now also be equipped with the new WKP35G Tiger-tec® Gold grade for even longer tool life on steel and cast iron.



Shoulder milling cutter
M4132



High-feed milling cutter
M4002

ONE SYSTEM INSERT FOR SEVEN CUTTER TYPES

Walter's tool bodies and indexable inserts are used wherever process reliability really counts. The M4000 range makes no compromises in this regard either. The distinct advantage of the system's universal usability begins with the cutting tool materials. Almost every machining process can be carried out efficiently using the entire force of the system indexable inserts. The complete M4000 range can be fitted with the universally usable system inserts in three different sizes.

But the M4000 system can do much more. It is a universal system that can also accommodate special indexable inserts for special applications.

This can be seen in the inclusion in the range of a circumference-sintered insert with facet for optimised surface quality when using the M4002 high-feed milling cutter. A further variant with a large corner radius guarantees maximum cutting edge stability. For the M4132 shoulder milling cutter, an indexable insert with a fully ground circumference is available, which comes with an additional facet. The result of such a configuration is maximum precision. There are also user-specific indexable inserts for the M4003 face milling cutter. These have a facet which enables excellent surface finish quality to be achieved. Wiper inserts are also available for the M4003 face milling cutter.

Leading insert LD ...

- Rhombic, positive basic shape
- Range of grades and geometries



Face milling cutter
M4003



Chamfer milling
cutter
M4574



T-slot milling cutter
M4575



Routing cutter
M4792

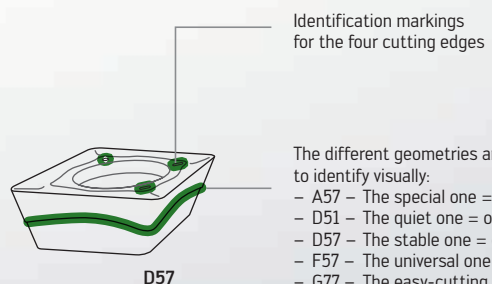


Porcupine milling
cutters
M4256/M4257/M4258

An additional performance advantage for the M4000 routing cutters and porcupine milling cutters: For this tool, circumference-sintered, leading inserts are available in a rhombic shape, each with two cutting edges.

Easily distinguishable through visible features:

The M4000 system inserts can be identified at a glance because of their unique wave profile on the flank face. In addition, they also carry indicators on the rake face. These can be used as a guide when changing cutting edges.



Identification markings
for the four cutting edges

- The different geometries are easy to identify visually:
- A57 – The special one = no wave
 - D51 – The quiet one = one wave
 - D57 – The stable one = one wave
 - F57 – The universal one = two waves
 - G77 – The easy-cutting one = three waves
 - G88 – The sharp one = three waves

Walter Xpress

THREE STEPS TO CREATE THE RIGHT TOOL FOR YOU

1. Select the lead angle for the tool:



2. Select the indexable insert size:



3. Select the tool diameter:



The name itself says it all. Walter Xpress stands out thanks to extremely short delivery times. For you, this means: Three weeks after placing your order – usually much sooner – you will receive custom-designed M4000 tools from the Walter Xpress tool range.

Due to the individual design of the tool and the variable parameters (tool lead angle, indexable insert size and tool diameter), you are guaranteed the highest possible level of freedom when designing your tool, in addition to the universal M4000 system. This means that you can use standard system inserts from the M4000 range.

That allows you to keep your own tool storage at a low level, and reduce your capital commitment. With Walter Xpress, an additional benefit for you is an extremely high degree of certainty when planning – right from the very start. That's because the simulation is available as soon as the quote is provided.



Example: M4003 face milling cutter
 $\kappa = 45^\circ$
IC = 9.52
Dia. 250 mm

Look to find success in efficiency, insist on cost efficiency and demonstrate your sense of responsibility.



Borneo

SUSTAINABLY IMPRESSIVE

Costs and environmental issues often go hand in hand; it is worth taking a closer look, particularly in terms of power requirements. Today, constantly rising energy costs call for tools in a totally new efficiency class that are just as powerful as earlier tools, but more cost-efficient and environmentally friendly than ever before. The M4000 fully measures up to such ambitious objectives by producing some impressive performance data.

Extensive tests have shown:

The cutting material costs per component can be reduced by up to 50%. Examples of tool life that are up to 130% higher than those of commonly manufactured competitor products spell this out quite clearly.

In comparison to other tools, it was also possible to significantly reduce the power requirement when using the M4000 range. Easy-cutting geometries, an increased clearance angle and an optimised installation position are important design features which, with the M4000 series, allow energy to be consumed sparingly in the production environment. The savings potential that has been proven in field testing is over 14%. As a result, the system makes a valuable contribution to creating production operations that save more resources and, at the same time, are more cost efficient.

THINKING AHEAD MEANS: COMPENSATING FOR CO₂ IN YOUR ACTIONS

At Walter, high environmental standards have been firmly anchored in the company culture for many years. Using the M4000, Walter and its renowned partner FirstClimate* have now shown that powerful tooling systems can be manufactured with 100 % CO₂ compensation.

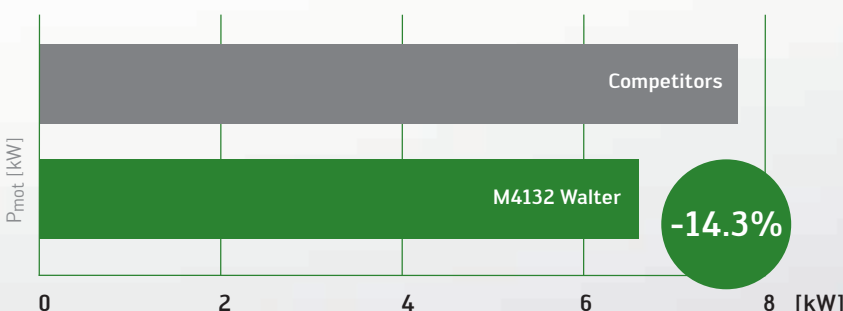
Together with FirstClimate, Walter has balanced and documented all its CO₂ requirements according to ISO 14064. Along the entire production and supply chain: From raw material procurement to development and manufacture through to packing and warehousing. The CO₂ balance determined in this way is used as the binding basis for the Walter Green Compensation project on Borneo's southern coast: The aim of the project is to maintain the Tanjung Puting National Park.

The acquisition of the land use rights along the park boundaries helps to prevent deforestation in favour of palm oil plantations. Walter Green supports continuous afforestation and is able to make an important contribution to protecting the habitat of the endangered orangutans.

* You can find information at:
www.firstclimate.com

Walter Green

Drive power comparison:

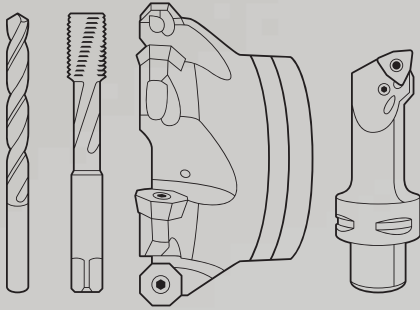


Competitors Dia. 63 Z = 7		
M4132 shoulder milling cutter Dia. 63 Z = 7		
Material		42CrMo4
Cutting diameter	D _C [mm]	63
Cutting speed	v _C [m/min]	188
Feed per tooth	f _Z [mm]	0.2
Depth of cut	a _p [mm]	3
Width of cut	a _e [mm]	31.5
Coolant		Dry

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Watch the
application video:

