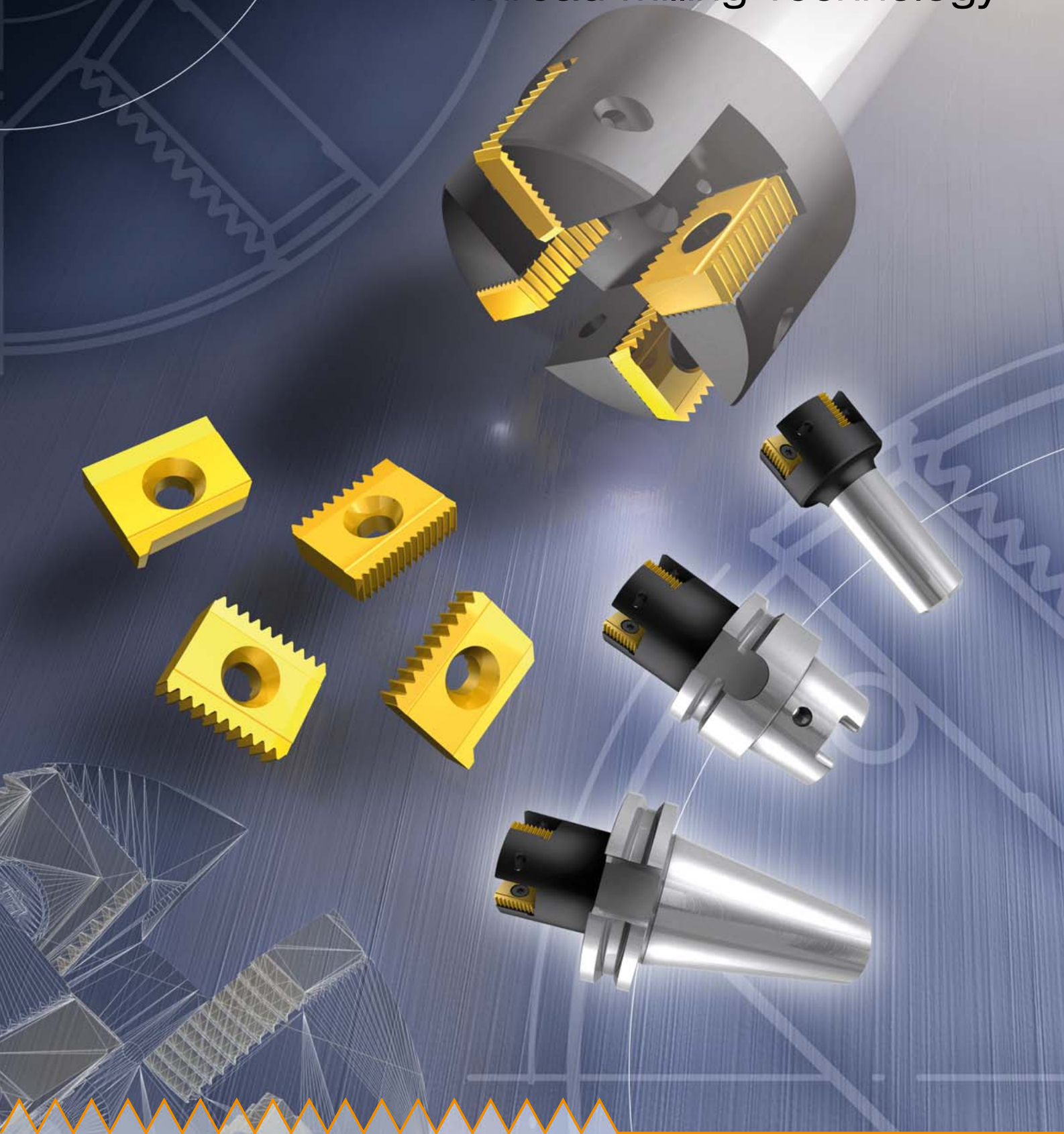


EMUGE

Thread Milling Technology



Bell-type thread milling cutter
with serrated inserts

Our new bell-type thread milling cutters are mainly used in the production of external threads, external contours, large internal threads and large internal contours. Due to a specially designed insert seat, the radial stop which is normally needed becomes superfluous, so the insert can be provided with a second cutting edge. This second milling edge can be provided with another profile and/or another thread pitch, for example. In this way, you can for instance produce different threads with just one bell-type milling cutter and a set of milling inserts.

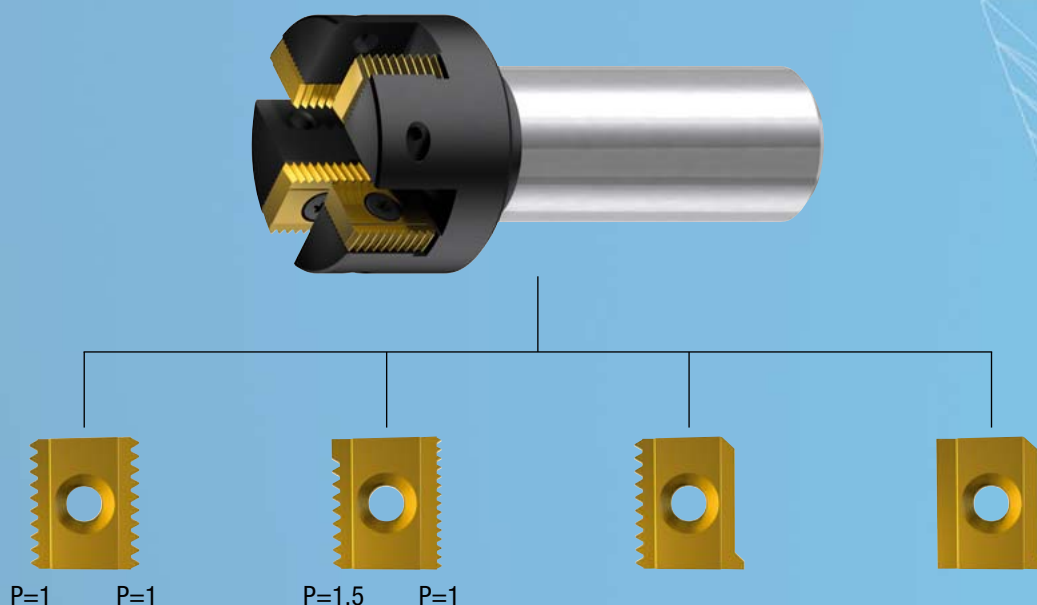
Application range:

Aluminium, aluminium alloys, cast materials, low- and high-alloyed steels up to 1400 N/mm², stainless steels, titanium, and a number of synthetic materials.

Advantages:

- Thread production almost independent of thread size and tolerance
- One tool only for right- and left-hand threads
- High reliability thanks to short chips
- Long tool life
- Repeated regrinding is possible
- Thread production down to the bottom of the hole / over the full bolt length
- Cost-efficient solution for small-series production
- Appropriate coatings for every application
- One holder only for both bolt and thread hole machining and for thread milling
- Variable diameters and lengths, adjusted perfectly to each individual application
- Internal coolant-lubricant supply
- High stability

Types of milling inserts:



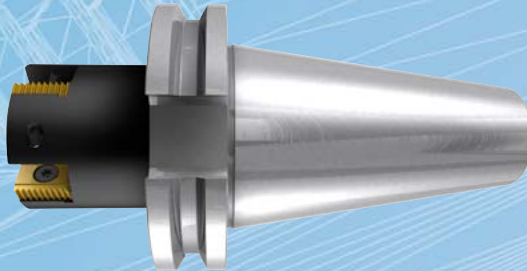
Shank types (examples):

Straight shanks



DIN 1835
ASME B94.19

ISO taper shanks



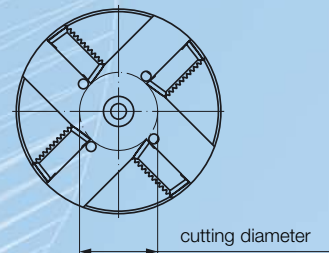
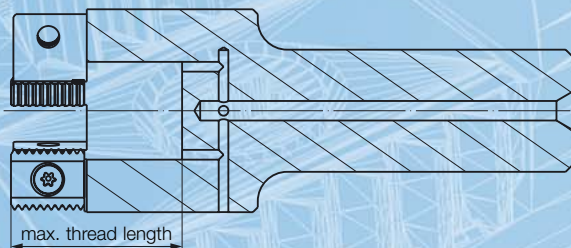
DIN 69871
ASME B5.50
JIS B 6339 (MAS 403 BT)

Hollow taper shanks

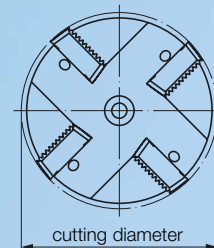
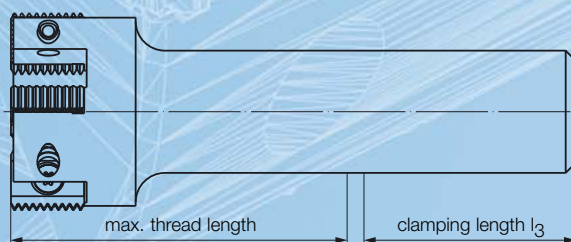


DIN 69893

Design for external threads



Design for internal threads



your individual
alternatively.



The diagram illustrates the six steps of the thread milling process:

- Positioning:** The tool is positioned above the workpiece.
- Lowering to thread depth:** The tool is lowered to the required depth.
- Run-in to thread milling process:** The tool begins to rotate and feed into the workpiece.
- Thread milling:** The tool rotates and feeds, creating the thread.
- Run-out from thread milling process:** The tool rotates and feeds, creating the thread.
- Retract to positioning level:** The tool is retracted to its original position.

The timeline at the bottom shows the sequence of movements and the pitch (P) of the thread. The movements are indicated by red arrows: a downward arrow for lowering, a downward arrow for run-in, a double-headed arrow for thread milling (labeled 1 P), a double-headed arrow for run-out (labeled 1/2 P), and an upward arrow for retracting.

Company:
.....
Contact:
Phone:
Fax:
E-mail:

Size:
Design:
Article no.:
Project:

Workpiece description:
Workpiece material:

Ident no.:
Tensile strength/hardness:

Work conditions:

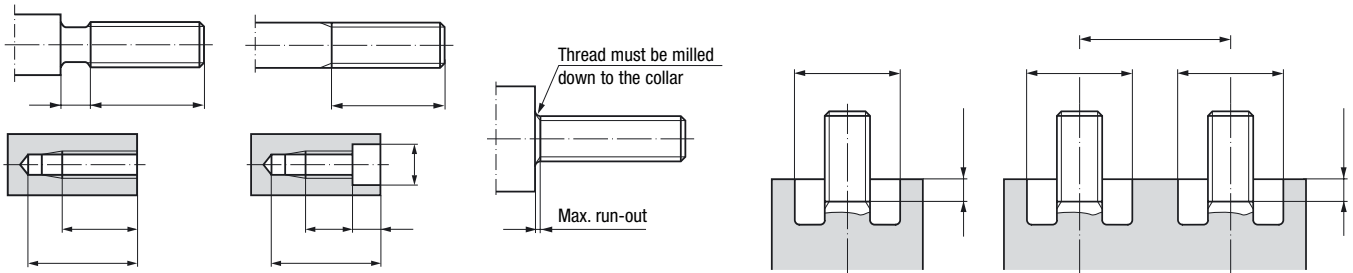
Machine type:
Control:
Machining level:
Tool holder:

Spindle adaptation:
Hole type / bolt type:
Coolant-lubricant:
Pressure: bar ☐ Internal coolant-lubricant supply

Cutting speed v_c : m/min
Speed n : min^{-1}
Tool life: (no. of threads)

Feed values: f_z : mm
 f_s : mm
 f_b : mm

Application case – please fill in dimensional specifications



Result / special information:

Sketch:





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