

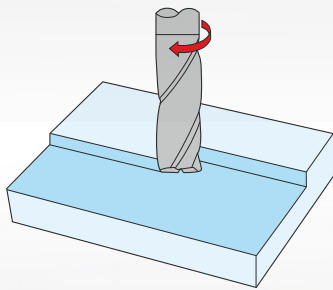
Basic operations:

- Face milling
- Slot milling
- Side milling
- Copy milling

Definitions, basic operations:

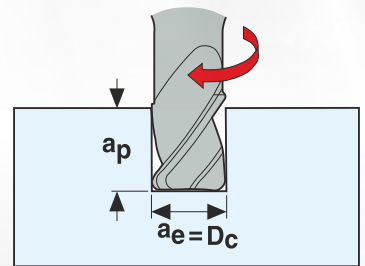
Face milling

Operation where the tool is in engagement with less than 180° arc of contact. Tool engagement: Small a_p and large a_e .



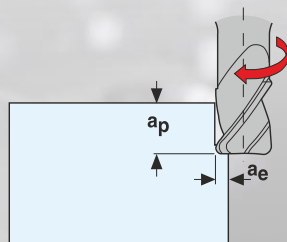
Slot milling:

Operation where the full diameter is in engagement, a_e is equal to D_c and a_p up to $1\frac{1}{2}$ times D_c depending on the machining strategy in use.



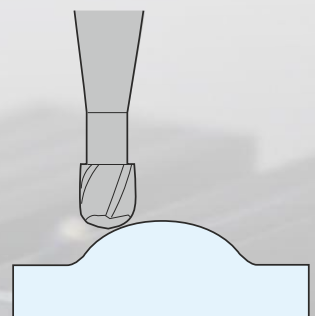
Side milling:

Operation where the side of the tool is in engagement, a_p is large and a_e is small.



Copy milling:

Operation where the radius is in engagement. a_p and a_e are both small.



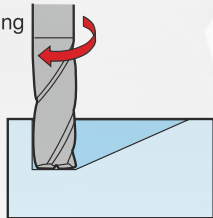
Advanced Machining Methods

- Ramping
- Advanced roughing / Optirough
- Helical interpolation
- Trochoidal milling
- Push-pull
- Plunge milling
- Z-leveling
- Drilling

Definitions, basic operations:

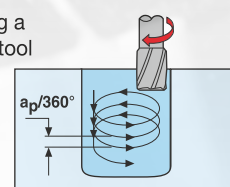
Rampin

Opening up a pocket by making a Z axis at an angle.



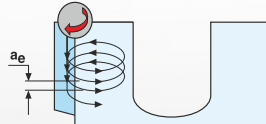
Helical interpolation

Opening a pocket by making a circular movement with the tool while ramping in Z axis.



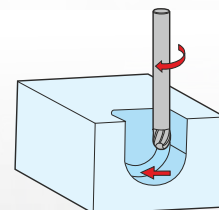
Trochoidal

Opening a slot by using side milling, making a partial circular movement in X- or Y-axis. (changing slot milling into side milling).



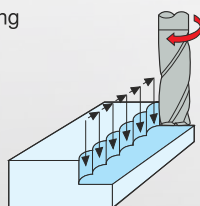
Push-p

Machining a 3D form by making a down and up copying movement following the profile of the form.



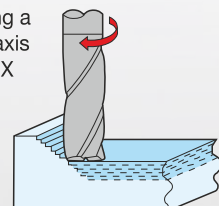
Plunge milling:

Opening up a deep slot by using drilling (Z) axis.



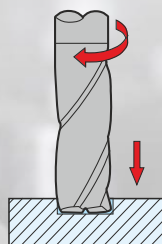
Z-leve

Machining a surface by making a small drilling or ramping in Z axis then opening the pocket with X and Y movements.



Drilling:

Making a hole with movement in Z axis.



Advanced roughing/Optirough

Well defined tool paths with constant arc of contact for reliable roughing of simple & complex shapes.

The large axial depths (a_p) & small radial depths (a_e) of cut combined with high feeds per tooth (f_z) and cutting speeds (V_c) results in high productivity.

