

# Die and Mold

## Cutting Data Calculations



Ballnose endmills



45 degree Facemilling

Square Shoulder Milling





# Die and Mold

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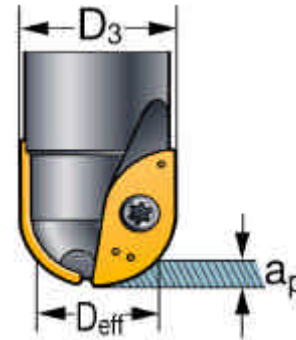


## Cutting Data Calculations - Ballnose Endmills

Enter values in the yellow shaded boxes to calculate cutting data  
Switch between inch / metric units or use CLEAR button to clear the form

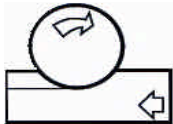


Nominal diameter of endmill	$D_3$	<input type="text"/>
number of inserts	$z$	<input type="text"/>
Axial depth of cut	$a_p$	<input type="text"/>
Feed per insert	$f_z$	<input type="text"/>
Cutting speed	$V_c$	<input type="text"/>
Max chip thickness	$h_{ex}$	<input type="text"/>
Effective diameter	$D_{eff}$	<input type="text"/>



Spindle speed, RPM

Table feed,



### Radial chip thinning / Milling with the periphery of the cutter

If the width of cut ( $a_e$ ) is less than half the effective diameter of the cutter,  $D_{eff}$ ,

and the periphery of the cutter is engaged, the table feed should be increased.

For applications meeting these conditions, enter the width of cut

$a_e$

Table feed,



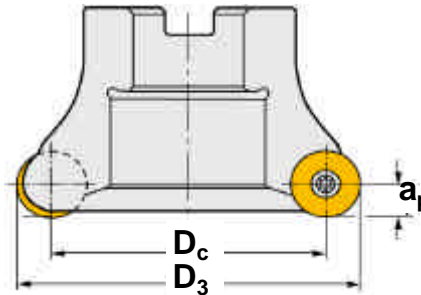
## Cutting Data Calculations - Round Insert Cutters

Enter values in the yellow shaded boxes to calculate cutting data

Switch between inch / metric units or use CLEAR button to clear the form

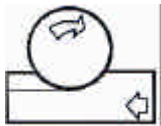


insert size	<b>iC</b>	
Nominal cutter diameter	<b>D<sub>3</sub></b>	
number of inserts	<b>z</b>	
Axial depth of cut	<b>a<sub>p</sub></b>	
Feed per insert	<b>f<sub>z</sub></b>	
Cutting speed	<b>V<sub>c</sub></b>	
Max chip thickness	<b>h<sub>ex</sub></b>	(may be adjusted)
Effective diameter	<b>D<sub>eff</sub></b>	



**Spindle speed, RPM**

**Table feed,**



### Radial chip thinning / Milling with the periphery of the cutter

If the width of cut ( $a_e$ ) is less than half the effective diameter of the cutter,  $D_{eff}$ ,

and the periphery of the cutter is engaged, the table feed should be increased.

For applications meeting these conditions, enter the width of cut **a<sub>e</sub>**

**Table feed,**

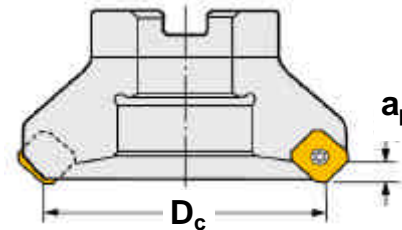


## Cutting Data Calculations - 45° Cutters

Enter values in the yellow shaded boxes to calculate cutting data  
Switch between inch / metric units or use CLEAR button to clear the form

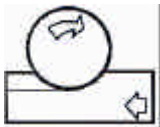


Cutter diameter	$D_c$	<input type="text"/>
number of inserts	$z$	<input type="text"/>
Feed per insert	$f_z$	<input type="text"/>
Cutting speed	$V_c$	<input type="text"/>



Spindle speed, RPM

Table feed,



Chip thickness  $h_{ex}$   (may be adjusted)

### Radial chip thinning / Milling with the periphery of the cutter

If the width of cut ( $a_e$ ) is less than half the diameter of the cutter, and the periphery of the cutter is engaged, the table feed should be increased.  
For applications meeting these conditions, enter the width of cut

Table feed,

$a_e$



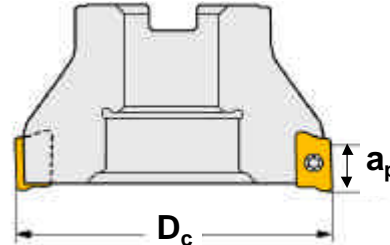
## Cutting Data Calculations - Square Shoulder (90°)

Enter values in the yellow shaded boxes to calculate cutting data

Switch between inch / metric units or use CLEAR button to clear the form

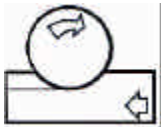


Cutter diameter	$D_c$	<input type="text"/>
number of inserts	$z$	<input type="text"/>
Feed per insert = Chip thickness, $f_z = h_{ex}$		<input type="text"/>
Cutting speed	$V_c$	<input type="text"/>



Spindle speed, RPM

Table feed,



### Radial chip thinning / Milling with the periphery of the cutter

If the width of cut ( $a_e$ ) is less than half the diameter of the cutter, and the periphery of the cutter is engaged, the table feed should be increased.

For applications meeting these conditions, enter the width of cut

$a_e$

Table feed,