SANDVIK Coromant

Die and Mold

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Acrobat Reader 4 is required for calculator to work

Cutting Data Calculations

Ballnose endmills

Round insert cutters

45 degree Facemilling

Square Shoulder Milling

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For customer service:

In the US call 1-800-SANDVIK (1-800-726-3845)
In Canada call 1-800-268-0703

or e-mail to: tech-us.coromant@sandvik.com

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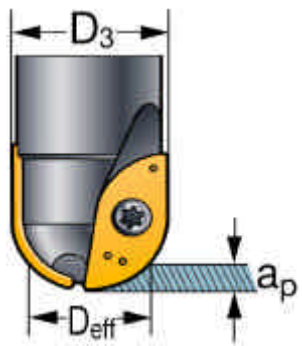
Cutting Data Calculations - Ballnose Endmills

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

Inch | CLEAR | Metric

inch

Nominal diameter of endmill	D_3	
number of inserts	z	
Axial depth of cut	a_p	
Feed per insert	f_z	
Cutting speed (ft/min)	V_c	
Max chip thickness	h_{ex}	(may be adjusted)
Effective diameter	D_{eff}	



Spindle speed, RPM

Table feed, inches/min

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, inches/min

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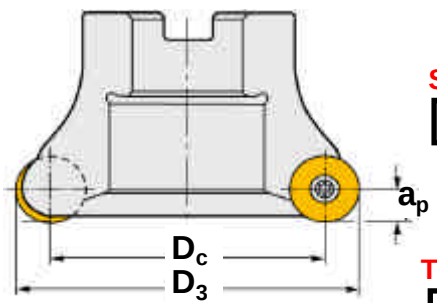
Cutting Data Calculations - Round Insert Cutters

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

Inch | CLEAR | Metric

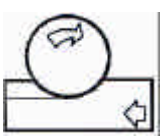
inch

insert size	iC	
Nominal cutter diameter	D_3	
number of inserts	z	
Axial depth of cut	a_p	
Feed per insert	f_z	
Cutting speed (ft/min)	V_c	
Max chip thickness	h_{ex}	(may be adjusted)
Effective diameter	D_{eff}	



Spindle speed, RPM

Table feed, inches/min



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, inches/min

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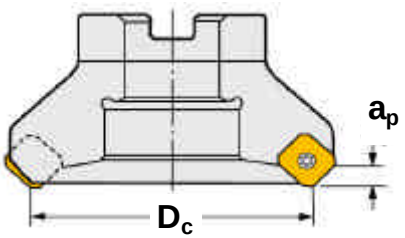
Cutting Data Calculations - 45° Cutters

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

Inch | CLEAR | Metric

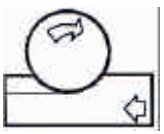
inch

Cutter diameter	D_c	
number of inserts	z	
Feed per insert	f_z	
Cutting speed (ft/min)	V_c	



Spindle speed, RPM

Table feed, inches/min



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 a_e

Table feed, inches/min

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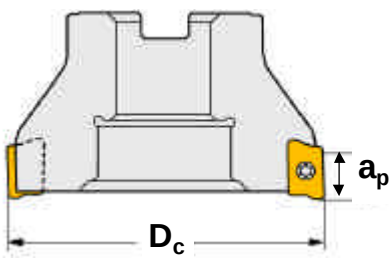
Cutting Data Calculations - Square Shoulder (90°)

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

Inch CLEAR *Metric*

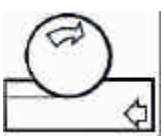
inch

Cutter diameter	D_c	
number of inserts	z	
Feed per insert = Chip thickness,	f_z = h_{ex}	
Cutting speed (ft/min)	V_c	



Spindle speed, RPM

Table feed, inches/min



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, inches/min