Get Acrobat Reader

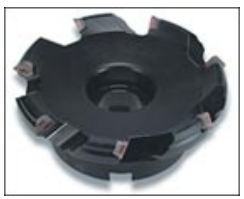
Acrobat Reader 4 is required for calculator to work

Die & Mold

Cutting Data Calculations

Ballnose endmills

Round insert cutters



45 degree Facemilling

Square Shoulder Milling

Die & Mold

Index

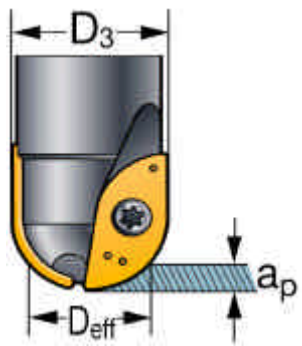
Cutting Data Calculations - Ballnose Endmills

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

metric

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



Spindle speed, RPM

Table feed, mm/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, mm/min

Die & Mold

Index

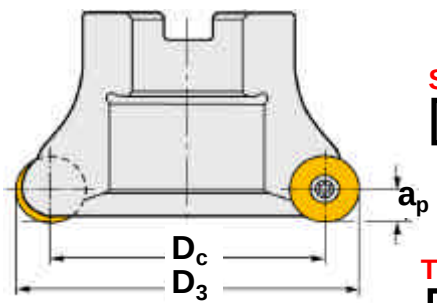
Cutting Data Calculations - Round Insert Cutters

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

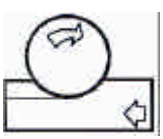
inch

insert size	iC	.375
Nominal cutter diameter	D_3	1.250
number of inserts	z	2
Axial depth of cut	a_p	0.060
Feed per insert	f_z	0.03
Cutting speed (ft/min)	V_c	2512



Spindle speed, RPM
8343.923921

Table feed, inches/min
500.6354352



Max chip thickness	h_{ex}	0.02199636	(may be adjusted)
Effective diameter	D_{eff}	1.14995454	

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 .6250

Table feed, inches/min
500.6354352

Die & Mold

Index

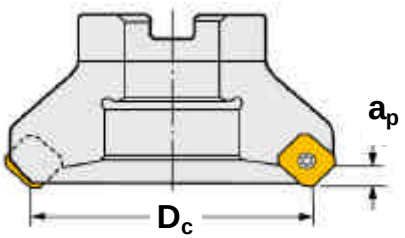
Cutting Data Calculations - 45° Cutters

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

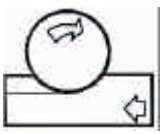
metric

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



Spindle speed, RPM

Table feed, mm/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, mm/min

Die & Mold

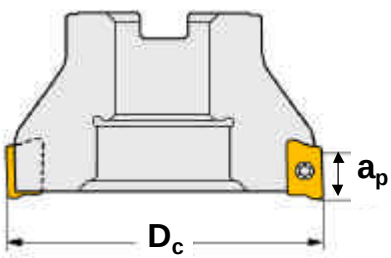
Index

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

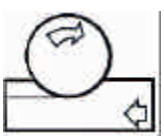
Inch | CLEAR | Metric

		inch
Cutter diameter	D_c	2
number of inserts	z	5
Feed per insert = Chip thickness,	$f_z = h_{ex}$	.007
Cutting speed (ft/min)	V_c	300



Spindle speed, RPM
572.9577951

Table feed, inches/min
20.05352282



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 .5

Table feed, inches/min
23.15581360