

MasterCAM Settings

Contour

Pocket

Drill

Contour



Toolpath Type

Tool Holder

Cut Parameters

- Depth Cuts
- Lead In/Out
- Break Through
- Multi Passes
- ✕ Tabs

Linking Parameters

- Home / Ref. Points

Arc Filter / Tolerance

Planes (WCS)

Coolant

Canned Text

Misc Values

Axis Control

Quick View Settings

Tool	1/2" Straight
Tool Diameter	0.5
Corner Radius	0
Feed Rate	100
Spindle Speed	18000
Coolant	Off
Tool Length	2.75
Length Offset	1
Diameter Offset	1
Cplane / Tplane	Top
Axis Combinati...	Default

✓ = edited

✕ = disabled

Contour

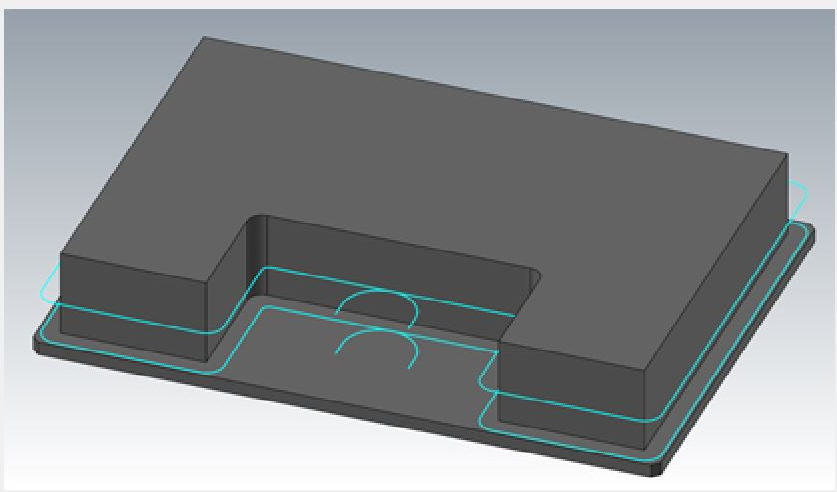
Pocket

Facing

Slot Mill

Chain geometry

(23)





- Toolpath Type
- Tool
- Holder
- Cut Parameters
- Depth Cuts
- Lead In/Out
- Break Through
- Multi Passes
- Tabs
- Linking Parameters
- Home / Ref. Points
- Arc Filter / Tolerance
- Planes (WCS)
- Coolant
- Canned Text
- Misc Values
- Axis Control

Quick View Settings

Tool	15/32 Flat Endmill
Tool Diameter	0.46875
Corner Radius	0
Feed Rate	100
Spindle Speed	18000
Coolant	Off
Tool Length	1.5
Length Offset	8
Diameter Offset	8
Cplane / Tplane	Top
Axis Combinati...	Default

#	Asse...	Tool ...	Holde...	Dia.	C...	Le...	# ...	Ty...
1	--	1/2" ...	--	0.5	0.0	2.0	2	St...
8	--	15/32...	--	0.47	0.0	1.0	2	St...

Right-click for options

Select library tool...

☐ Filter Active

Filter...

☐ To batch

Tool diameter: 0.46875

Corner radius: 0.0

Tool name: 15/32 Flat Endmill

Tool #: 8

Length offset: 8

Head #: 0

Diameter offset: 8

Spindle direction: CW

Feed rate: 100.0

Spindle speed: 16000

FPT: 0.0028

SFM 2356.0209

Plunge rate: 50.0

Retract rate: 50.0

☐ Force tool change

☐ Rapid Retract

Comment



- Toolpath Type
- Tool
- Holder
- ✓ Cut Parameters
- Depth Cuts
- ◊ Lead In/Out
- ◊ Break Through
- ◊ Multi Passes
- + Tabs
- Linking Parameters
- Home / Ref. Points
- Arc Filter / Tolerance
- Planes (WCS)
- Coolant
- Canned Text
- Misc Values
- Axis Control

Quick View Settings

Tool	15/32 Flat Endmill
Tool Diameter	0.46875
Corner Radius	0
Feed Rate	100
Spindle Speed	18000
Coolant	Off
Tool Length	1.5
Length Offset	8
Diameter Offset	8
Cplane / Tplane	Top
Axis Combinati...	Default

✓ = edited
◊ = disabled

Compensation type

Computer

Compensation direction

Left

Tip comp

Tip

☒ Optimize cutter comp in control

Roll cutter around corners

Sharp

☒ Infinite look ahead

Internal corner rounding radius

0.0

External corner break radius

0.0

Max. depth variance

0.005

Stock to leave on walls

0.0

Stock to leave on floors

0.0

Contour type

2D

2D

3D

set to "off" to cut on center
use computer to cut on one side

2D

3D

2D

3D



- Toolpath Type
- Tool
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- ✓ Cut Parameters
 - Depth Cuts
 - ✗ Lead In/Out
 - ✗ Break Through
 - ✗ Multi Passes
 - + ✗ Tabs
- Linking Parameters
 - Home / Ref. Points
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- Misc Values
- Axis Control

Quick View Settings

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Tool Diameter	0.46875
Corner Radius	0
Feed Rate	100
Spindle Speed	18000
Coolant	Off
Tool Length	1.5
Length Offset	8
Diameter Offset	8
Cplane / Tplane	Top
Axis Combinati...	Default

✓ = edited

✗ = disabled

☒ Depth cuts

Max rough step:

0.25

Finish cuts:

0

Finish step:

0.05

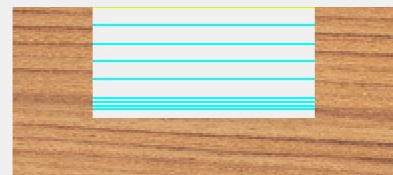
☐ Keep tool down☐ Subprogram☒ Absolute☐ Incremental

Depth cut order

☒ By contour☐ By depth☐ Tapered walls

Taper angle:

0.0





- Toolpath Type
- Tool
- Holder
- ✓ Cut Parameters
- Depth Cuts
- ✗ Lead In/Out
- ✗ Break Through
- ✗ Multi Passes
- + ✓ Tabs
- Linking Parameters
- Home / Ref. Points
- Arc Filter / Tolerance
- Planes (WCS)
- Coolant
- Canned Text
- Misc Values
- Axis Control

Quick View Settings

Tool	15/32 Flat Endmill
Tool Diameter	0.46875
Corner Radius	0
Feed Rate	100
Spindle Speed	18000
Coolant	Off
Tool Length	1.5
Length Offset	8
Diameter Offset	8
Cplane / Tplane	Top
Axis Combinati...	Default

✓ = edited

✗ = disabled

☒ Tabs

Tab Position

☐ Automatic

☒ Number of tabs

☐ Max. distance between tabs

☐ Create tabs on shapes less than:

x

☒ Tab all

☒ Manual

☐ Use square point for tab position

☐ Start ☒ Midpoint ☐ End

Tab Motion

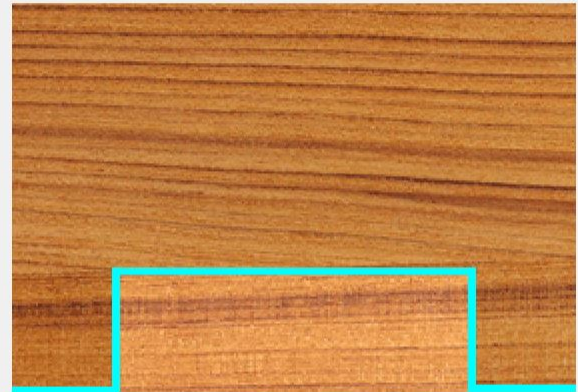
☐ Full ☒ Partial

☒ Vertical moves

☐ Ramp moves

Width

Tab thickness



- ☐ Use feed plane for full height tabs
- ☐ Overwrite edited tabs



- Toolpath Type
- Tool
- Holder
- ✓ Cut Parameters
- Depth Cuts
- ◊ Lead In/Out
- ◊ Break Through
- ◊ Multi Passes
- + ✓ Tabs
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Quick View Settings

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Feed Rate	100
Spindle Speed	18000
Coolant	Off
Tool Length	1.5
Length Offset	8
Diameter Offset	8
Cplane / Tplane	Top
Axis Combinati...	Default

✓ = edited

◊ = disabled

☒ Clearance... 2.0

☒ Absolute ☐ Incremental

☐ Use clearance only at the start and end of operation

☒ Retract... 0.25

☒ Absolute ☐ Incremental

Feed plane... 0.1

☒ Absolute ☐ Incremental

Top of stock... 0.0

☒ Absolute ☐ Incremental

Depth... -0.5

☐ Absolute ☒ Incremental

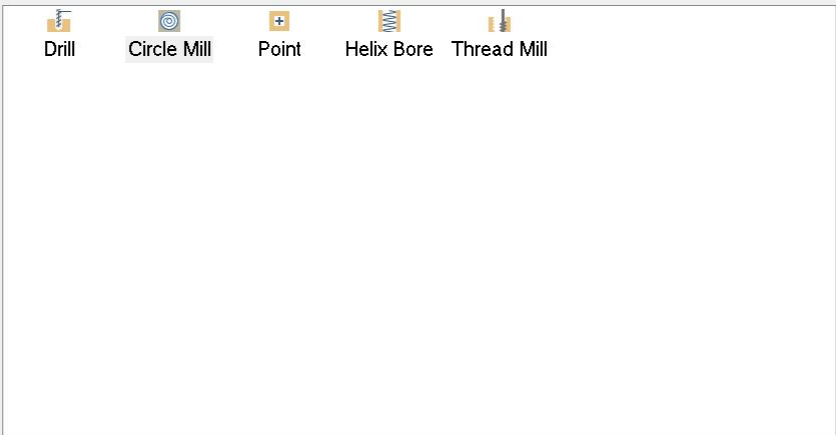
Drill (circle mill)



- ✓ Toolpath Type
- Tool Holder
- [-] Cut Parameters
 - ◇ Roughing
 - [-] Finishing
 - Transitions
 - ◇ Depth Cuts
 - ◇ Break Through
- [-] Linking Parameters
 - Home / Ref. Points
- Planes (WCS)
- Coolant
- Canned Text
- Misc Values
- [-] Axis Control
 - Axis Combination

Quick View Settings

Tool	15/32 Flat Endmill
Tool Diameter	0.46875
Corner Radius	0
Feed Rate	15
Spindle Speed	6000
Coolant	Off
Tool Length	1.5
Length Offset	8
Diameter Offset	8
Cplane / Tplane	Top
Axis Combinati...	Default
Tip comp	Off

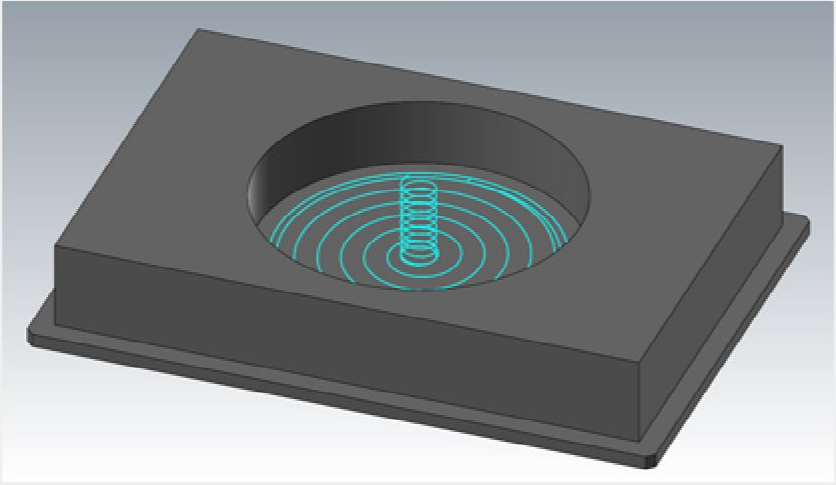


Point geometry

(4)

Arc geometry

(4)



✓ = edited
✗ = disabled



- Toolpath Type
- Tool
- Holder
- Cut Parameters
- Roughing
- Finishing
- Transitions
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- Break Through
- Linking Parameters
- Home / Ref. Points
- Planes (WCS)
- Coolant
- Canned Text
- Misc Values
- Axis Control
- Axis Combination

Quick View Settings

Tool	15/32 Flat Endmill
Tool Diameter	0.46875
Corner Radius	0
Feed Rate	15
Spindle Speed	6000
Coolant	Off
Tool Length	1.5
Length Offset	8
Diameter Offset	8
Cplane / Tplane	Top
Axis Combinati...	Default
Tip comp	Off

✓ = edited
✗ = disabled

#	Asse...	Tool ...	Holde...	Dia.	C...	Le...	# ...	Ty...
1	--	1/2" ...	--	0.5	0.0	2.0	2	St...
8	--	15/32...	--	0.47	0.0	1.0	2	St...

Right-click for options

Select library tool...

☐ Filter Active

Filter...

☐ To batch

Tool diameter: 0.46875

Corner radius: 0.0

Tool name: 15/32 Flat Endmill

Tool #: 8

Length offset: 8

Head #: 0

Diameter offset: 8

☐ RCTF

Spindle direction: CW

Feed rate: 15.0

Spindle speed: 6000

FPT: 0.0013

SFM 736.2565

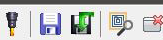
Plunge rate: 50.0

Retract rate: 50.0

☐ Force tool change

☒ Rapid Retract

Comment



- ✓ Toolpath Type
- Tool
- Holder
- Cut Parameters
- ✕ Roughing
- ✕ Finishing
- Transitions
- ✕ Depth Cuts
- ✕ Break Through
- Linking Parameters
- Home / Ref. Points
- Planes (WCS)
- Coolant
- Canned Text
- Misc Values
- Axis Control
- Axis Combination

Quick View Settings

Tool	15/32 Flat Endmill
Tool Diameter	0.46875
Corner Radius	0
Feed Rate	15
Spindle Speed	6000
Coolant	Off
Tool Length	1.5
Length Offset	8
Diameter Offset	8
Cplane / Tplane	Top
Axis Combinati...	Default
Tip comp	Off

✓ = edited
✕ = disabled

Compensation type

Computer

Compensation direction

Left

Tip comp:

Tip

Circle diameter

.5001

Start angle

90.0

set this value to .0001 more than the diameter of the tool being used.

Stock to leave on walls

0.0

Stock to leave on floors

0.0



- ✓ Toolpath Type
- Tool
- Holder
- [-] Cut Parameters
- ✗ Roughing
- + Finishing
- ✓ Depth Cuts
- ✗ Break Through
- [-] Linking Parameters
- Home / Ref. Points
- Planes (WCS)
- Coolant
- Canned Text
- Misc Values
- [-] Axis Control
- Axis Combination
- Rotary Axis Control

Quick View Settings

Tool	15/32 Flat Endmill
Tool Diameter	0.46875
Corner Radius	0
Feed Rate	15
Spindle Speed	6000
Coolant	Off
Tool Length	1.5
Length Offset	8
Diameter Offset	8
Cplane / Tplane	Top
Axis Combinati...	Default
Tip comp	Off

✓ = edited

✗ = disabled

☒ Depth cuts

Max rough step:

0.125

Finish cuts:

0

Finish step:

0.05

☐ Keep tool down

☐ Subprogram

☐ Absolute

☒ Incremental



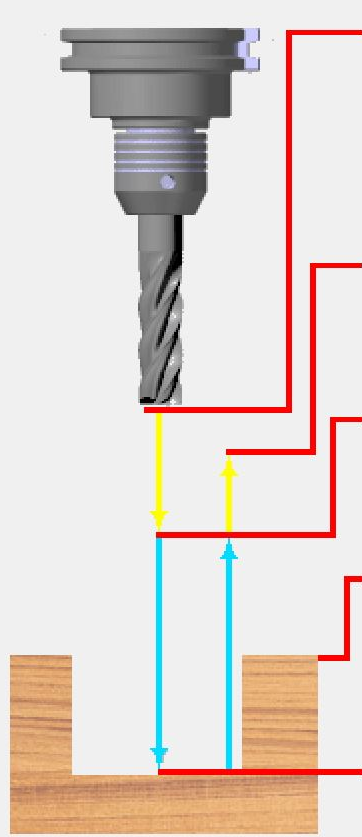
- ✓ Toolpath Type
 - Tool
 - Holder
- [-] Cut Parameters
 - ✗ Roughing
 - + Finishing
 - ✓ Depth Cuts
 - ✗ Break Through
- [-] ✓ **Linking Parameters**
 - Home / Ref. Points
- Planes (WCS)
- Coolant
- Canned Text
- Misc Values
- [-] Axis Control
 - Axis Combination
 - Rotary Axis Control

Quick View Settings

Tool	15/32 Flat Endmill
Tool Diameter	0.46875
Corner Radius	0
Feed Rate	15
Spindle Speed	6000
Coolant	Off
Tool Length	1.5
Length Offset	8
Diameter Offset	8
Cplane / Tplane	Top
Axis Combinati...	Default
Tip comp	Off

✓ = edited

✗ = disabled



☒ Clearance... 2.0
☒ Absolute ☐ Incremental
☐ Use clearance only at the start and end of operation

☒ Retract... 0.25
☒ Absolute ☐ Incremental

Feed plane... 0.1
☒ Absolute ☐ Incremental

Top of stock... 0.0
☒ Absolute ☐ Incremental

Depth... -0.5
☒ Absolute ☐ Incremental

Pocket



Toolpath Type

- Tool Holder
- Cut Parameters
 - Roughing
 - Entry Motion
 - Finishing
 - Depth Cuts
 - Break Through
- Linking Parameters
 - Home / Ref. Points
- Arc Filter / Tolerance
- Planes (WCS)
- Coolant
- Canned Text
- Misc Values
- Axis Control

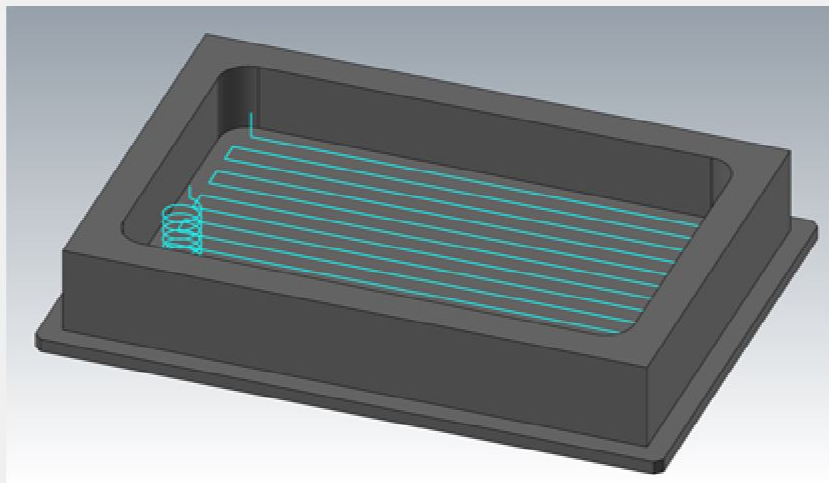
Quick View Settings

Tool	1/2" Straight
Tool Diameter	0.5
Corner Radius	0
Feed Rate	100
Spindle Speed	18000
Coolant	Off
Tool Length	2.75
Length Offset	1
Diameter Offset	1
Cplane / Tplane	Top
Axis Combinati...	Default

- Contour
- Pocket
- Facing
- Slot Mill

Chain geometry

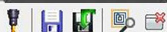
(2)



✓ = edited

✗ = disabled





- Toolpath Type
- ☒ Tool
 - Holder
 - Cut Parameters
 - Roughing
 - Entry Motion
 - Finishing
 - Depth Cuts
 - Break Through
 - Linking Parameters
 - Home / Ref. Points
 - Arc Filter / Tolerance
 - Planes (WCS)
 - Coolant
 - Canned Text
 - Misc Values
 - Axis Control

Quick View Settings

Tool 1/2" Straight
Tool Diameter 0.5
Corner Radius 0
Feed Rate 150
Spindle Speed 18000
Coolant Off
Tool Length 2.75
Length Offset 1
Diameter Offset 1
Cplane / Tplane Top
Axis Combinati... Default

✓ = edited
✗ = disabled

#	Asse...	Tool ...	Holde...	Dia.	C...	Le...	# ...	Ty...
1	--	1/2" ...	--	0.5	0.0	2.0	2	St...
8	--	15/32...	--	0.47	0.0	1.0	2	St...

Select library tool...

☐ Filter Active

Filter...

☐ To batch

Right-click for options

Tool diameter: 0.5

Corner radius: 0.0

Tool name: 1/2" Straight

Tool #: 1

Length offset: 1

Head #: -1

Diameter offset: 1

☐ RCTF

Spindle direction: CW

Feed rate: 150.0

Spindle speed: 16000

FPT: 0.0042

SFM 2356.0209

Plunge rate: 50.00

Retract rate: 50.0

Force tool change

☐ Rapid Retract

Comment





- Toolpath Type
- ✓

 Tool
- Holder
- Cut Parameters
- +

 Roughing
 - Entry Motion
- +

 Finishing
 - Depth Cuts
 - ⊗

 Break Through
- Linking Parameters
 - Home / Ref. Points
- Arc Filter / Tolerance
- Planes (WCS)
- Coolant
- Canned Text
- Misc Values
- Axis Control

Quick View Settings

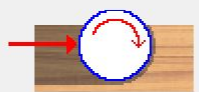
Tool	1/2" Straight
Tool Diameter	0.5
Corner Radius	0
Feed Rate	150
Spindle Speed	18000
Coolant	Off
Tool Length	2.75
Length Offset	1
Diameter Offset	1
Cplane / Tplane	Top
Axis Combinati...	Default

✓ = edited

⊗ = disabled

Machining direction

☒ Climb ☐ Conventional



Pocket type

Standard

Tip comp

Tip



Roll cutter around corners

Sharp

Linearization tolerance

0.001

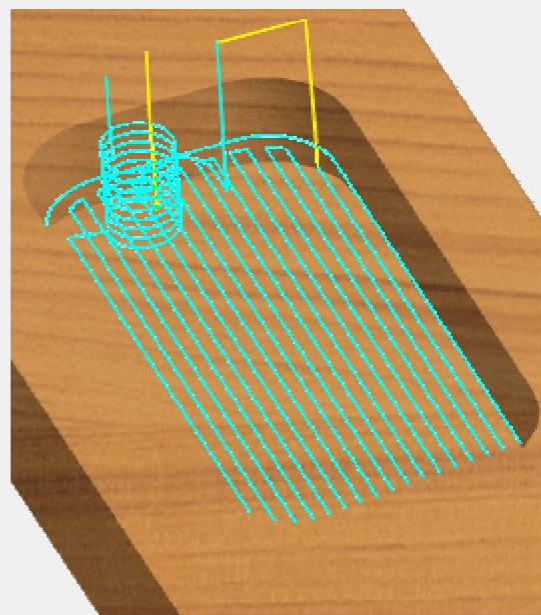
☐ Create additional finish operation

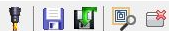
Stock to leave on walls

0.0

Stock to leave on floors

0.0





- Toolpath Type
 - ✓ Tool
 - Holder
- Cut Parameters
 - Roughing**
 - Entry Motion
 - Finishing
 - Depth Cuts
 - Break Through
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- Arc Filter / Tolerance
- Planes (WCS)
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- Canned Text
- Misc Values
- Axis Control

Quick View Settings

Tool	1/2" Straight
Tool Diameter	0.5
Corner Radius	0
Feed Rate	150
Spindle Speed	18000
Coolant	Off
Tool Length	2.75
Length Offset	1
Diameter Offset	1
Cplane / Tplane	Top
Axis Combinati...	Default

✓ = edited

⊘ = disabled

☒ Rough

Cutting method: Zigzag



Zigzag



Constant
Overla...



Parallel Spiral



Parallel
Spiral, Cle...



Morph Spiral



High Speed



One Way



True Spiral

Stepover percentage

55.0

☒ Minimize tool burial

Tolerance for remachining and constant overlap spiral

Stepover distance

0.275

☒ Spiral inside to outside

5.0

%

0.025

Roughing angle

0.0

☒ Display stock for constant overlap spiral

Trochoidal cuts:

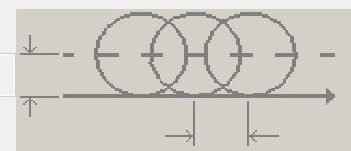
☐ Off

☒ Full material only

☐ Entire pocket

Loop radius

0.1



Loop spacing

0.1

Corner smoothing radius

0.1





- Toolpath Type
 - ✓ Tool
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- Misc Values
- Axis Control

☒ Off ☐ Ramp ☐ Helix

Quick View Settings

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Corner Radius	0
Feed Rate	150
Spindle Speed	18000
Coolant	Off
Tool Length	2.75
Length Offset	1
Diameter Offset	1
Cplane / Tplane	Top
Axis Combinati...	Default

✓ = edited

⊘ = disabled





- Toolpath Type
 - ✓ Tool
 - Holder
- Cut Parameters
 - Roughing
 - Entry Motion
 - ✓ **Finishing**
 - Depth Cuts
 - Break Through
- Linking Parameters
 - Home / Ref. Points
- Arc Filter / Tolerance
- Planes (WCS)
- Coolant
- Canned Text
- Misc Values
- Axis Control

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Corner Radius	0
Feed Rate	150
Spindle Speed	18000
Coolant	Off
Tool Length	2.75
Length Offset	1
Diameter Offset	1
Cplane / Tplane	Top
Axis Combinati...	Default

✓ = edited

⊘ = disabled

☒ Finish

Passes

1

Spacing

0.125

Spring passes

0

Cutter compensation

computer

Override Feed Speed

☐ Feed rate

150.0

☐ Spindle speed

18000

☒ Finish outer boundary

☐ Start finish pass at closest entity

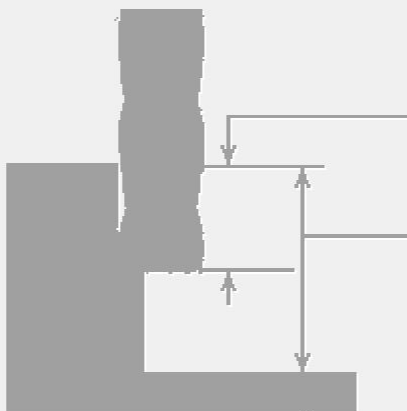
☐ Keep tool down

☒ Optimize cutter comp in control

☐ Machine finish passes only at final depth

☐ Machine finish passes after roughing all pockets

☐ Thin wall



2

Z finish passes per
rough depth cut

0.125

Max calculated
finish step

0.25

Max rough stepdown
from Depth Cuts

Finish direction

☐ Climb

☒ Conventional





- Toolpath Type
- ✓

 Tool
- Holder
- Cut Parameters
- +

 Roughing
- Entry Motion
- +

 Finishing
- Depth Cuts
- ⊗

 Break Through
- Linking Parameters
- Home / Ref. Points
- Arc Filter / Tolerance
- Planes (WCS)
- Coolant
- Canned Text
- Misc Values
- Axis Control

Quick View Settings

Tool	1/2" Straight
Tool Diameter	0.5
Corner Radius	0
Feed Rate	150
Spindle Speed	18000
Coolant	Off
Tool Length	2.75
Length Offset	1
Diameter Offset	1
Cplane / Tplane	Top
Axis Combinati...	Default

☒ Depth cuts

Max rough step:

0.25

Finish cuts:

0

Finish step:

0.05

☐ Keep tool down

☐ Use island depths

☐ Subprogram

☐ Absolute

☒ Incremental

Depth cut order

☒ By pocket

☐ By depth

☐ Tapered walls

Taper angle

3.0

Island taper angle

3.0



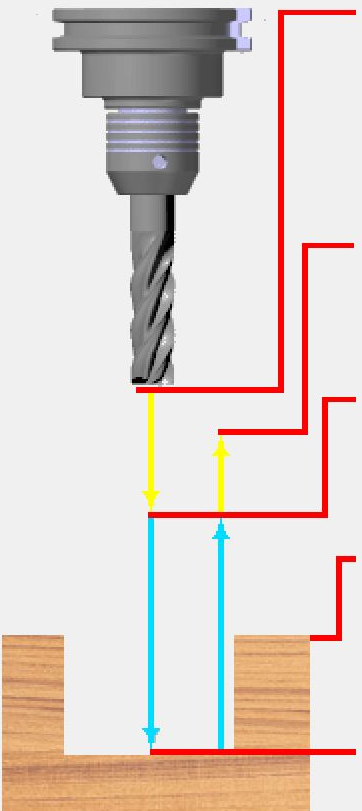
✓ = edited
⊗ = disabled



- Toolpath Type
 - ✓ Tool
 - Holder
- Cut Parameters
 - Roughing
 - Entry Motion
 - + Finishing
 - Depth Cuts
 - Break Through
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Quick View Settings

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Corner Radius	0
Feed Rate	150
Spindle Speed	18000
Coolant	Off
Tool Length	2.75
Length Offset	1
Diameter Offset	1
Cplane / Tplane	Top
Axis Combinati...	Default



☒ Clearance... 2.0

☒ Absolute
 ☐ Incremental

☐ Use clearance only at the start and end of operation

☒ Retract... 0.25

☒ Absolute
 ☐ Incremental

Feed plane...

0.1

☒ Absolute
 ☐ Incremental

Top of stock...

0.0

☒ Absolute
 ☐ Incremental

Depth...

-0.25

☒ Absolute
 ☐ Incremental

✓ = edited
 ✗ = disabled

