RhinoCam Horizontal Roughing : Recommended Feeds & Speeds

Instructions: Begin by selecting your material from the far left. Determine which bit you will use for your operation. Enter feeds and speeds into RhinoCam.

Material	Bit Diameter	Spindle RPM	Plunge	Approach	Engage	Cut	Retract	Departure	Step Down (Dist.)	Stepover (%)
Foam	.25"	16000	100	200	300	400	1000	1000	.22"-.3"	46%
	.375"	16000	100	230	360	500	1000	1000	.25"-.375"	48%
	.5" and up	16000	100	260	420	600	1000	1000	.27"-.375"	50%
	Foam Settings are based on Extruded Polystyrene (XPS) and Expanded Polystyrene (EPS). Both of which are sold and stocked in dFab. Consult a Monitor or Manager for any/all other foam materials.									

Material	Bit Diameter	Spindle RPM	Plunge	Approach	Engage	Cut	Retract	Departure	Step Down (Dist.)	Stepover (%)
M. D. F.	.25"	16000	50	75	125	175	800	800	.25"	40%
	.375"	16000	60	120	180	225	800	800	.25"-.29"	47%
	.5" and up	16000	65	135	205	275	800	800	.32"	48%
	MDF Settings are based on UltralIght Fiberboard, and other various Light Density Fiberboard products readily available in the lab. Consult a Monitor or Manager for any/all other MDF materials.									

Material	Bit Diameter	Spindle RPM	Plunge	Approach	Engage	Cut	Retract	Departure	Step Down (Dist.)	Stepover (%)
Plywood	.25"	16000	50	85	135	175	800	800	.2"	40%
	.375"	16000	60	125	185	250	800	800	.25"-.28"	42%
	.5" and up	16000	65	150	220	300	800	800	.28"-.3"	45%
	Plywood Settings are based on Baltic Birch & MDO Stock available through the lab and wood shop. Consult a Monitor or Manager for any/all other wood products.									

If you would like to see more material settings listed here, please inform the Manager- and they will be considered and posted as soon as possible.

Material	Bit Diameter	Spindle RPM	Plunge	Approach	Engage	Cut	Retract	Departure	Step Down Max	Stepover

Material	Bit Diameter	Spindle RPM	Plunge	Approach	Engage	Cut	Retract	Departure	Step Down Max	Stepover

Material	Bit Diameter	Spindle RPM	Plunge	Approach	Engage	Cut	Retract	Departure	Step Down Max	Stepover

RhinoCam Parallel Finishing : Recommended Feeds & Speeds

Instructions: Begin by selecting your material from the far left. Determine which bit you will use for your operation.
Enter feeds and speeds into RhinoCam.

*Stepover Value Suggestions are optional. Use smaller percentages (20%-) for detailed resolution. Larger percentages (25%+) for less detail. Smaller percentages create longer completion times; whereas Larger percentages create shorter completion times.

Material	Bit Diameter	Spindle RPM	Plunge	Approach	Engage	Cut	Retract	Departure	Stepover (%)
Foam	.25"	16000	100	300	400	500	1000	1000	20-27%
	.375"	16000	100	330	460	600	1000	1000	18-25%
	.5" and up	16000	100	360	520	700	1000	1000	18-25%
	Foam Settings are based on Extruded Polystyrene (XPS) and Expanded Polystyrene (EPS). Both of which are sold and stocked in dFab. Consult a Monitor or Manager for any/all other foam materials.								

Material	Bit Diameter	Spindle RPM	Plunge	Approach	Engage	Cut	Retract	Departure	Stepover (% Tool Diameter)
M. D. F.	0.25"	16000	50	100	150	225	800	800	20-27%
	.375"	16000	60	145	205	275	800	800	18-25%
	.5" and up	16000	65	160	230	325	800	800	18-25%
	MDF Settings are based on Ultralight Fiberboard, and other various Light Density Fiberboard products readily available in the lab. Consult a Monitor or Manager for any/all other MDF materials.								

Material	Bit Diameter	Spindle RPM	Plunge	Approach	Engage	Cut	Retract	Departure	Stepover (% Tool Diameter)
Plywood	.25"	16000	50	95	145	200	800	800	20-27%
	.375"	16000	60	135	195	275	800	800	18-25%
	.5" and up	16000	65	160	230	325	800	800	18-25%
	Plywood Settings are based on Baltic Birch & MDO Stock available through the lab and wood shop. Consult a Monitor or Manager for any/all other wood products.								

If you would like to see more material settings listed here, please inform the Manager-
and they will be considered and posted as soon as possible.

Material	Bit Diameter	Spindle RPM	Plunge	Approach	Engage	Cut	Retract	Departure	Stepover (% Tool Diameter)

Material	Bit Diameter	Spindle RPM	Plunge	Approach	Engage	Cut	Retract	Departure	Stepover (% Tool Diameter)

Material	Bit Diameter	Spindle RPM	Plunge	Approach	Engage	Cut	Retract	Departure	Stepover (% Tool Diameter)

RhinoCam 2.5 Axis Operations : Recommended Feeds & Speeds

Instructions: Begin by selecting your material from the far left. Determine which bit you will use for your operation.
Enter feeds and speeds into RhinoCam.
*Step/Cut Values indicate the Maximum a bit can travel in one pass, you may use less, but no more.

Material	Bit Diameter	Spindle RPM	Plunge	Approach	Engage	Cut	Retract	Departure	Step/Cut Max
Foam	.25"	16000	100	200	310	350	1000	1000	.3"
	.375"	16000	100	235	375	450	1000	1000	.375"
	.5" and up	16000	100	275	430	550	1000	1000	.5"
	Foam Settings are based on Extruded Polystyrene (XPS) and Expanded Polystyrene (EPS). Both of which are sold and stocked in dFab. Consult a Monitor or Manager for any/all other foam materials.								

Material	Bit Diameter	Spindle RPM	Plunge	Approach	Engage	Cut	Retract	Departure	Step/Cut Max
M.D.F.	.25"	16000	50	75	125	175	800	800	.25"
	.375"	16000	60	120	180	225	800	800	.3"
	.5" and up	16000	65	135	205	275	800	800	.375"
	MDF Settings are based on UltraIight Fiberboard, and other various Light Density Fiberboard products readily available in the lab. Consult a Monitor or Manager for any/all other MDF materials.								

Material	Bit Diameter	Spindle RPM	Plunge	Approach	Engage	Cut	Retract	Departure	Step/Cut Max
Plywood	.25"	16000	50	85	135	175	800	800	.2"
	.375"	16000	60	125	185	250	800	800	.26"
	.5" and up	16000	65	150	220	300	800	800	.28"
	Plywood Settings are based on Baltic Birch & MDO Stock available through the lab and wood shop. Consult a Monitor or Manager for any/all other wood products.								

If you would like to see more material settings listed here, please inform the Manager-
and they will be considered and posted as soon as possible.

Material	Bit Diameter	Spindle RPM	Plunge	Approach	Engage	Cut	Retract	Departure	Step/Cut Max

Material	Bit Diameter	Spindle RPM	Plunge	Approach	Engage	Cut	Retract	Departure	Step/Cut Max

Material	Bit Diameter	Spindle RPM	Plunge	Approach	Engage	Cut	Retract	Departure	Step/Cut Max

RhinoCam Drilling Operations : Recommended Feeds & Speeds

Instructions: Begin by selecting your material from the far left. Determine which bit you will use for your operation.
Enter feeds and speeds into RhinoCam.

*Drilling Operations REQUIRE A DRILLING BIT AND the SPINDLE RPM VALUE is most important!

Material	Bit Diameter	Spindle RPM	Plunge	Approach	Engage	Cut	Retract	Departure
Foam	ANY DRILLING BIT	4000	60	70	70	70	1000	1000
	Foam Settings are based on Extruded Polystyrene (XPS) and Expanded Polystyrene (EPS). *Both of which are sold and stocked in dFab. Consult a Monitor or Manager for any/all other foam materials.*							

Material	Bit Diameter	Spindle RPM	Plunge	Approach	Engage	Cut	Retract	Departure
M. D. F.	ANY DRILLING BIT	4200	50	60	60	60	1000	1000
	MDF Settings are based on UltraIight Fiberboard, and other various Light Density Fiberboard products *readily available in the lab. Consult a Monitor or Manager for any/all other MDF materials.*							

Material	Bit Diameter	Spindle RPM	Plunge	Approach	Engage	Cut	Retract	Departure
Plywood	ANY DRILLING BIT	5000	45	50	50	50	1000	1000
	Plywood Settings are based on Baltic Birch & MDO Stock available through the lab and wood shop. *Consult a Monitor or Manager for any/all other wood products.*							

If you would like to see more material settings listed here, please inform the Manager-
and they will be considered and posted as soon as possible.

Material	Bit Diameter	Spindle RPM	Plunge	Approach	Engage	Cut	Retract	Departure

Material	Bit Diameter	Spindle RPM	Plunge	Approach	Engage	Cut	Retract	Departure

Material	Bit Diameter	Spindle RPM	Plunge	Approach	Engage	Cut	Retract	Departure

MasterCam Surface Roughing : Recommended Feeds & Speeds

Instructions: Begin by selecting your material from the far left. Determine which bit you will use for your operation.
Enter feeds and speeds into MasterCam.

Material	Bit Diameter	Spindle Speed	Plunge Rate	Feed Rate	Retract Rate	Max StepDown	Max StepOver
Foam	.25"	16000	100	400	RAPID	.22"-.3"	.115"
	.375"	16000	100	500	RAPID	.25"-.375"	.18"
	.5" and up	16000	100	600	RAPID	.27"-.375"	.25"
	Foam Settings are based on Extruded Polystyrene (XPS) and Expanded Polystyrene (EPS). *Both of which are sold and stocked in dFab. Consult a Monitor or Manager for any/all other foam materials.*						

Material	Bit Diameter	Spindle Speed	Plunge Rate	Feed Rate	Retract Rate	Max StepDown	Max StepOver
M. D. F.	.25"	16000	50	175	RAPID	.25"	.1"
	.375"	16000	60	225	RAPID	.25"-.29"	.18"
	.5" and up	16000	65	275	RAPID	.32"	.24"
	MDF Settings are based on UltraIlght Fiberboard, and other various Light Density Fiberboard products *readily available in the lab. Consult a Monitor or Manager for any/all other MDF materials.*						

Material	Bit Diameter	Spindle Speed	Plunge Rate	Feed Rate	Retract Rate	Max StepDown	Max StepOver
Plywood	.25"	16000	50	175	RAPID	.2"	.1"
	.375"	16000	60	250	RAPID	.25"-.28"	.158"
	.5" and up	16000	65	300	RAPID	.28"-.3"	.225"
	Plywood Settings are based on Baltic Birch & MDO Stock available through the lab and wood shop. *Consult a Monitor or Manager for any/all other wood products.*						

If you would like to see more material settings listed here, please inform the Manager-
and they will be considered and posted as soon as possible.

Material	Bit Diameter	Spindle Speed	Plunge Rate	Feed Rate	Retract Rate	Max StepDown	Max StepOver

Material	Bit Diameter	Spindle Speed	Plunge Rate	Feed Rate	Retract Rate	Max StepDown	Max StepOver

Material	Bit Diameter	Spindle Speed	Plunge Rate	Feed Rate	Retract Rate	Max StepDown	Max StepOver

MasterCam Parallel Surface Finishing : Recommended Feeds & Speeds

Instructions: Begin by selecting your material from the far left. Determine which bit you will use for your operation.
Enter feeds and speeds into MasterCam.

*Stepover Value Suggestions are optional. Use smaller percentages (20%-) for detailed resolution. Larger percentages (25%+) for less detail. Smaller percentages create longer completion times; whereas Larger percentages create shorter completion times.

Material	Bit Diameter	Spindle Speed	Plunge Rate	Feed Rate	Retract Rate	StepOver Control (Dist.)
Foam	.25"	16000	100	500	RAPID	.05" (MIN) - .0675" (MAX)
	.375"	16000	100	600	RAPID	.0675" (MIN) -.094" (MAX)
	.5" and up	16000	100	700	RAPID	.09" (MIN) -.125" (MAX)
	Foam Settings are based on Extruded Polystyrene (XPS) and Expanded Polystyrene (EPS). Both of which are sold and stocked in dFab. Consult a Monitor or Manager for any/all other foam materials.					

Material	Bit Diameter	Spindle Speed	Plunge Rate	Feed Rate	Retract Rate	StepOver Control (Dist.)
M. D. F.	0.25"	16000	50	225	RAPID	.05" (MIN) - .0675" (MAX)
	.375"	16000	60	275	RAPID	.0675" (MIN) -.094" (MAX)
	.5" and up	16000	65	325	RAPID	.09" (MIN) -.125" (MAX)
	MDF Settings are based on UltraIight Fiberboard, and other various Light Density Fiberboard products readily available in the lab. Consult a Monitor or Manager for any/all other MDF materials.					

Material	Bit Diameter	Spindle Speed	Plunge Rate	Feed Rate	Retract Rate	StepOver Control (Dist.)
Plywood	.25"	16000	50	200	RAPID	.05" (MIN) - .0675" (MAX)
	.375"	16000	60	275	RAPID	.0675" (MIN) -.094" (MAX)
	.5" and up	16000	65	325	RAPID	.09" (MIN) -.125" (MAX)
	Plywood Settings are based on Baltic Birch & MDO Stock available through the lab and wood shop. Consult a Monitor or Manager for any/all other wood products.					

If you would like to see more material settings listed here, please inform the Manager-
and they will be considered and posted as soon as possible.

Material	Bit Diameter	Spindle Speed	Plunge Rate	Feed Rate	Retract Rate	StepOver Control (Dist.)

Material	Bit Diameter	Spindle Speed	Plunge Rate	Feed Rate	Retract Rate	StepOver Control (Dist.)

Material	Bit Diameter	Spindle Speed	Plunge Rate	Feed Rate	Retract Rate	StepOver Control (Dist.)

MasterCam Contour Operations : Recommended Feeds & Speeds

Instructions: Begin by selecting your material from the far left. Determine which bit you will use for your operation.
Enter feeds and speeds into MasterCam.

*Depth Cuts : Max Rough Step Values indicate the Maximum a bit can travel in one pass, you may use less, but no more.

Material	Bit Diameter	Spindle Speed	Plunge Rate	Feed Rate	Retract Rate	Depth Cuts : Max Rough Step
Foam	.25"	16000	100	350	RAPID	.3"
	.375"	16000	100	450	RAPID	.375"
	.5" and up	16000	100	550	RAPID	.5"
	Foam Settings are based on Extruded Polystyrene (XPS) and Expanded Polystyrene (EPS). Both of which are sold and stocked in dFab. Consult a Monitor or Manager for any/all other foam materials.					

Material	Bit Diameter	Spindle Speed	Plunge Rate	Feed Rate	Retract Rate	Depth Cuts : Max Rough Step
M. D. F.	0.25"	16000	50	175	RAPID	.25"
	.375"	16000	60	225	RAPID	.3"
	.5" and up	16000	65	275	RAPID	.375"
	MDF Settings are based on UltraIIght Fiberboard, and other various Light Density Fiberboard products readily available in the lab. Consult a Monitor or Manager for any/all other MDF materials.					

Material	Bit Diameter	Spindle Speed	Plunge Rate	Feed Rate	Retract Rate	Depth Cuts : Max Rough Step
Plywood	.25"	16000	50	175	RAPID	.2"
	.375"	16000	60	250	RAPID	.26"
	.5" and up	16000	65	300	RAPID	.28"
	Plywood Settings are based on Baltic Birch & MDO Stock available through the lab and wood shop. Consult a Monitor or Manager for any/all other wood products.					

If you would like to see more material settings listed here, please inform the Manager-
and they will be considered and posted as soon as possible.

Material	Bit Diameter	Spindle Speed	Plunge Rate	Feed Rate	Retract Rate	Depth Cuts : Max Rough Step

Material	Bit Diameter	Spindle Speed	Plunge Rate	Feed Rate	Retract Rate	Depth Cuts : Max Rough Step

Material	Bit Diameter	Spindle Speed	Plunge Rate	Feed Rate	Retract Rate	Depth Cuts : Max Rough Step

MasterCam Drilling Operations : Recommended Feeds & Speeds

Instructions: Begin by selecting your material from the far left. Determine which bit you will use for your operation.
Enter feeds and speeds into MasterCam.
*Drilling Operations REQUIRE A DRILLING BIT AND the SPINDLE SPEED VALUE is most important!

Material	Bit Diameter	Spindle Speed	Plunge Rate*	Feed Rate	Retract Rate*	Spindle Direction
Foam	ANY DRILLING BIT	4000	60 *This Value is locked by default	70	RAPID *This Value is locked by default	CW
	Foam Settings are based on Extruded Polystyrene (XPS) and Expanded Polystyrene (EPS). Both of which are sold and stocked in dFab. Consult a Monitor or Manager for any/all other foam materials.					

Material	Bit Diameter	Spindle Speed	Plunge Rate*	Feed Rate	Retract Rate*	Spindle Direction
M. D. F.	ANY DRILLING BIT	4200	50 *This Value is locked by default	60	RAPID *This Value is locked by default	CW
	MDF Settings are based on UltraIIght Fiberboard, and other various Light Density Fiberboard products readily available in the lab. Consult a Monitor or Manager for any/all other MDF materials.					

Material	Bit Diameter	Spindle Speed	Plunge Rate*	Feed Rate	Retract Rate*	Spindle Direction
Plywood	ANY DRILLING BIT	5000	45 *This Value is locked by default	50	RAPID *This Value is locked by default	CW
	Plywood Settings are based on Baltic Birch & MDO Stock available through the lab and wood shop. Consult a Monitor or Manager for any/all other wood products.					

If you would like to see more material settings listed here, please inform the Manager-
and they will be considered and posted as soon as possible.

Material	Bit Diameter	Spindle Speed	Plunge Rate*	Feed Rate	Retract Rate*	Spindle Direction
			*This Value is locked by default		RAPID *This Value is locked by default	CW

Material	Bit Diameter	Spindle Speed	Plunge Rate*	Feed Rate	Retract Rate*	Spindle Direction
			*This Value is locked by default		RAPID *This Value is locked by default	CW

Material	Bit Diameter	Spindle Speed	Plunge Rate*	Feed Rate	Retract Rate*	Spindle Direction
			*This Value is locked by default		RAPID *This Value is locked by default	CW