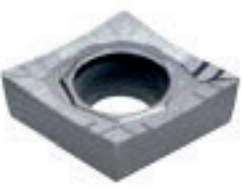

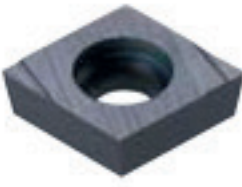















Chip breaker for turning

Geometry	Cutting edge	Application range											Features										
		feed rate f_n (mm/rev)																					
		0.04	0.063	0.10	0.16	0.25	0.4	0.63	1.0	1.6	2.5	4.0		6.3									
depth of cut a_p (mm)																							
											0.1	0.16	0.25	0.4	0.63	1.0	1.6	2.5	4.0	6.3	10.0	11.6	13
AL series	AR			<div style="display: flex; justify-content: space-around;"> <div style="background-color: #ADD8E6; padding: 2px;">0.05~0.50</div> <div style="background-color: #90EE90; padding: 2px;">0.5~4.0</div> </div>											<p>For Aluminum cutting</p> <ul style="list-style-type: none"> High stability of cutting edge secures great performance in high speed and interrupted machining High speed of medium and interrupted operation 								
	Auto tool series	KF			<div style="display: flex; justify-content: space-around;"> <div style="background-color: #ADD8E6; padding: 2px;">0.01~0.12</div> <div style="background-color: #90EE90; padding: 2px;">0.01~1.0</div> </div>											<p>For Finishing</p> <ul style="list-style-type: none"> Shallow depth of cut with sharp edge Longer tool life at high speed cutting due to low cutting force Good surface finish 							
KM				<div style="display: flex; justify-content: space-around;"> <div style="background-color: #ADD8E6; padding: 2px;">0.04~0.15</div> <div style="background-color: #90EE90; padding: 2px;">0.05~1.5</div> </div>											<p>For Medium to finish cutting</p> <ul style="list-style-type: none"> Improved chip control makes tool life long and better machining 								
Wiper tool series	LW			<div style="display: flex; justify-content: space-around;"> <div style="background-color: #ADD8E6; padding: 2px;">0.15~0.60</div> <div style="background-color: #90EE90; padding: 2px;">1.0~5.0</div> </div>											<p>For Medium cutting (Wiper)</p> <ul style="list-style-type: none"> Guarantees excellent surface roughness and good chip controls at high feed machining 								
	VW			<div style="display: flex; justify-content: space-around;"> <div style="background-color: #ADD8E6; padding: 2px;">0.15~0.50</div> <div style="background-color: #90EE90; padding: 2px;">0.5~3.5</div> </div>											<p>For Finishing (Wiper)</p> <ul style="list-style-type: none"> Improved surface roughness at shallow depth of cut and high feed due to strong cutting edge 								

Chip breaker for milling





















Geometry	Cutting edge	Application range											Features										
		feed rate f_n (mm/rev)																					
		0.04	0.063	0.10	0.16	0.25	0.4	0.63	1.0	1.6	2.5	4.0		6.3									
depth of cut a_p (mm)																							
											0.1	0.16	0.25	0.4	0.63	1.0	1.6	2.5	4.0	6.3	10.0	11.6	13
MX series	MX			<div style="display: flex; justify-content: space-around;"> <div style="background-color: #ADD8E6; padding: 2px;">0.10~0.30</div> <div style="background-color: #90EE90; padding: 2px;">1.0~5.0</div> </div>											<p>For Roughing</p> <ul style="list-style-type: none"> Possible to increase productivity through increase feed and depth Excellent heat resistance due to the special chip breaker design of top face of insert 								
Rich Mill series-RM3	MA			<div style="display: flex; justify-content: space-around;"> <div style="background-color: #ADD8E6; padding: 2px;">0.05~0.40</div> <div style="background-color: #90EE90; padding: 2px;">1.0~8.0</div> </div>											<p>For Aluminum milling</p> <ul style="list-style-type: none"> Sharp cutting edge for low cutting load, which is ideal for machining steel, hard-to-cut materials and aluminum 								
	ML			<div style="display: flex; justify-content: space-around;"> <div style="background-color: #ADD8E6; padding: 2px;">0.05~0.30</div> <div style="background-color: #90EE90; padding: 2px;">1.0~8.0</div> </div>											<p>For machining hard-to-cut materials</p> <ul style="list-style-type: none"> Low cutting resistance for light cutting and machining hard-to-cut materials with excellent tool life and surface roughness 								

Notice: Application ranges are based on main cutting material



A Chip Breakers





















Chip breaker for milling

Geometry	Cutting edge	Application range											Features		
		feed rate f_n (mm/rev)													
		0.04	0.063	0.10	0.16	0.25	0.4	0.63	1.0	1.6	2.5	4.0		6.3	
depth of cut a_p (mm)															
0.1	0.16	0.25	0.4	0.63	1.0	1.6	2.5	4.0	6.3	10.0	11.6	13			
Rich Mill series-RM3	MM			<div style="display: flex; justify-content: space-between;"> <div style="width: 20%; background-color: #ADD8E6; text-align: center;">0.05~0.35</div> <div style="width: 20%;"></div> <div style="width: 20%; background-color: #90EE90; text-align: center;">1.0~8.0</div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> </div>											<p>For Medium to roughing</p> <ul style="list-style-type: none"> Available for most of applications with universal design for general milling
	MA			<div style="display: flex; justify-content: space-between;"> <div style="width: 20%; background-color: #ADD8E6; text-align: center;">0.05~0.25</div> <div style="width: 20%;"></div> <div style="width: 20%; background-color: #90EE90; text-align: center;">0.3~14.0</div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> </div>											<p>For Aluminum milling</p> <ul style="list-style-type: none"> Sharp cutting edge design ensures low cutting resistance and excellent machining in difficult-to-cut materials, aluminum and light machining
Rich Mill series-RM4	MF			<div style="display: flex; justify-content: space-between;"> <div style="width: 20%; background-color: #ADD8E6; text-align: center;">0.05~0.30</div> <div style="width: 20%;"></div> <div style="width: 20%; background-color: #90EE90; text-align: center;">0.5~14.0</div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> </div>											<p>For Finishing of milling</p> <ul style="list-style-type: none"> Low cutting force chip breaker design ensures longer tool life and excellent machining in difficult-to-cut material and light machining
	MM			<div style="display: flex; justify-content: space-between;"> <div style="width: 20%; background-color: #ADD8E6; text-align: center;">0.05~0.30</div> <div style="width: 20%;"></div> <div style="width: 20%; background-color: #90EE90; text-align: center;">1.0~14.0</div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> </div>											<p>For Medium to roughing of milling</p> <ul style="list-style-type: none"> Suitable geometry design for general milling has wider ranges of machining
Rich Mill series-RM8	MA			<div style="display: flex; justify-content: space-between;"> <div style="width: 20%; background-color: #ADD8E6; text-align: center;">0.05~0.35</div> <div style="width: 20%;"></div> <div style="width: 20%; background-color: #90EE90; text-align: center;">0.3~6.0</div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> </div>											<p>For Aluminum</p> <ul style="list-style-type: none"> Sharp cutting edge and lubricated top face show excellent chip flow and welding resistance in aluminum machining
	MF			<div style="display: flex; justify-content: space-between;"> <div style="width: 20%; background-color: #ADD8E6; text-align: center;">0.05~0.35</div> <div style="width: 20%;"></div> <div style="width: 20%; background-color: #90EE90; text-align: center;">0.3~6.0</div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> </div>											<p>For Finishing of milling</p> <ul style="list-style-type: none"> Low cutting force chip breaker design ensures longer tool life and excellent machining in difficult-to-cut material and light machining
	ML			<div style="display: flex; justify-content: space-between;"> <div style="width: 20%; background-color: #ADD8E6; text-align: center;">0.05~0.30</div> <div style="width: 20%;"></div> <div style="width: 20%; background-color: #90EE90; text-align: center;">0.3~6.0</div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> </div>											<p>For Machining hard-to-cut materials</p> <ul style="list-style-type: none"> Low cutting resistance for excellent tool life and surface roughness in machining hard-to-cut materials
	MM			<div style="display: flex; justify-content: space-between;"> <div style="width: 20%; background-color: #ADD8E6; text-align: center;">0.10~0.40</div> <div style="width: 20%;"></div> <div style="width: 20%; background-color: #90EE90; text-align: center;">0.5~6.0</div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> </div>											<p>For Medium to roughing of milling</p> <ul style="list-style-type: none"> Suitable geometry design for general milling has wider ranges of machining
Rich Mill series-RMT	MF			<div style="display: flex; justify-content: space-between;"> <div style="width: 20%; background-color: #ADD8E6; text-align: center;">0.05~0.20</div> <div style="width: 20%;"></div> <div style="width: 20%; background-color: #90EE90; text-align: center;">0.5~5.0</div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> </div>											<p>For Finishing of milling</p> <ul style="list-style-type: none"> Low cutting force chip breaker design ensures longer tool life and excellent machining in difficult-to-cut material and light machining
	MM			<div style="display: flex; justify-content: space-between;"> <div style="width: 20%; background-color: #ADD8E6; text-align: center;">0.05~0.30</div> <div style="width: 20%;"></div> <div style="width: 20%; background-color: #90EE90; text-align: center;">0.5~8.0</div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> <div style="width: 20%;"></div> </div>											<p>For Medium to roughing of milling</p> <ul style="list-style-type: none"> Suitable geometry design for general milling has wider ranges of machining

Notice: Application ranges are based on main cutting material



Chip breaker for milling

















Geometry	Cutting edge	Application range											Features											
		feed rate f_n (mm/rev)																						
		0.04	0.063	0.10	0.16	0.25	0.4	0.63	1.0	1.6	2.5	4.0		6.3										
depth of cut a_p (mm)																								
											0.1	0.16	0.25	0.4	0.63	1.0	1.6	2.5	4.0	6.3	10.0	11.6	13	
RichMill series-RM16	MA																							<p>For Aluminum</p> <ul style="list-style-type: none"> Sharp cutting edge design ensures low cutting resistance and excellent machining in difficult-to-cut materials, aluminum and light machining
	MF																							<p>For Finishing of milling</p> <ul style="list-style-type: none"> Low cutting force chip breaker design ensures longer tool life and excellent machining in difficult-to-cut material and light machining
	ML																							<p>For Machining hard-to-cut materials</p> <ul style="list-style-type: none"> Low cutting resistance for excellent tool life and surface roughness in machining hard-to-cut materials
	MM																							<p>For Medium to roughing of milling</p> <ul style="list-style-type: none"> Suitable geometry design for general milling has wider ranges of machining
	W																							<p>For Finishing of milling (Wiper)</p> <ul style="list-style-type: none"> Wiper insert provides improved surface roughness due to special cutting edge
Alpha Mill series	MA																						<p>For Aluminum</p> <ul style="list-style-type: none"> Sharp cutting edge and lubricated top face show excellent chip flow and welding resistance in aluminum machining 	
	MF																						<p>For Finishing of milling</p> <ul style="list-style-type: none"> Low cutting force chip breaker design ensures longer tool life and excellent machining in difficult-to-cut material and light machining 	
	MM																						<p>For Medium to roughing of milling</p> <ul style="list-style-type: none"> Suitable geometry design for general milling has wider ranges of machining 	
	ML																						<p>For Hard-to-cut material machining</p> <ul style="list-style-type: none"> The chip breaker with low cutting resistance ensures superior machinability in hard-to-cut materials 	
Future Mill series	MF																						<p>For Finishing of milling</p> <ul style="list-style-type: none"> Special design for light cutting of gummy materials like stainless steel and hard to machine material provide fine surface finish and longer tool life 	

Notice: Application ranges are based on main cutting material



A Chip Breakers

Chip breaker for milling

Geometry	Cutting edge	Application range											Features										
		feed rate f_n (mm/rev)																					
		0.04	0.063	0.10	0.16	0.25	0.4	0.63	1.0	1.6	2.5	4.0		6.3									
depth of cut a_p (mm)																							
0.1											0.16	0.25	0.4	0.63	1.0	1.6	2.5	4.0	6.3	10.0	11.6	13	
Future Mill series	MM							0.05~0.30															For Medium cutting of milling <ul style="list-style-type: none"> Chip breaker design to cover general cutting condition provides wide available application range Ground type and as sintered type is available
	MR							0.05~0.35															For Roughing of milling <ul style="list-style-type: none"> Strongest cutting edge strength provide stable tool life even in case of severe cutting with heavy intermittent and heavy roughing
	MA								0.10~0.35														
Future Mill series P-posi	MA									0.30~0.60													For Aluminum milling <ul style="list-style-type: none"> Excellent surface roughness due to buffed surface in machining aluminum
	ML										0.30~0.50												For Machining titanium and inconel <ul style="list-style-type: none"> Low cutting resistance and high hardness cutting edges for excellent surface roughness in machining titanium and Inconel
	MF											0.12~0.50											For Finishing of milling <ul style="list-style-type: none"> Low cutting resistance for light cutting
	MM													0.20~0.70									For Medium to rough milling <ul style="list-style-type: none"> Universal purpose for most of milling applications
	None C/B																						

Notice: Application ranges are based on main cutting material

