



**4-Flute, Ball End, Extended Reach**

Cutter ø	Flute Length	OAL	Reach Length	Shank ø	Uncoated Part #	AlTiN Coated Part #	DLC Coated Part #
.0100	.030	1-1/2	.080	1/8	<a href="#">RET9000</a>	<a href="#">RET9001</a>	<a href="#">RET9002</a>
.0100	.030	1-1/2	.100	1/8	<a href="#">RET9003</a>	<a href="#">RET9004</a>	<a href="#">RET9005</a>
.0150	.045	1-1/2	.128	1/8	<a href="#">RET9006</a>	<a href="#">RET9007</a>	<a href="#">RET9008</a>
.0150	.045	1-1/2	.150	1/8	<a href="#">RET9009</a>	<a href="#">RET9010</a>	<a href="#">RET9011</a>
.0156	.047	1-1/2	.120	1/8	<a href="#">RET9012</a>	<a href="#">RET9013</a>	<a href="#">RET9014</a>
.0200	.060	1-1/2	.170	1/8	<a href="#">RET9015</a>	<a href="#">RET9016</a>	<a href="#">RET9017</a>
.0200	.060	1-1/2	.200	1/8	<a href="#">RET9018</a>	<a href="#">RET9019</a>	<a href="#">RET9020</a>
.0250	.075	1-1/2	.213	1/8	<a href="#">RET9021</a>	<a href="#">RET9022</a>	<a href="#">RET9023</a>
.0250	.075	1-1/2	.250	1/8	<a href="#">RET9024</a>	<a href="#">RET9025</a>	<a href="#">RET9026</a>
.0300	.090	1-1/2	.270	1/8	<a href="#">RET9027</a>	<a href="#">RET9028</a>	<a href="#">RET9029</a>
.0300	.090	1-1/2	.300	1/8	<a href="#">RET9030</a>	<a href="#">RET9031</a>	<a href="#">RET9032</a>
.0312	.094	1-1/2	.315	1/8	<a href="#">RET9033</a>	<a href="#">RET9034</a>	<a href="#">RET9035</a>
.0350	.105	1-1/2	.315	1/8	<a href="#">RET9036</a>	<a href="#">RET9037</a>	<a href="#">RET9038</a>
.0350	.105	1-1/2	.350	1/8	<a href="#">RET9039</a>	<a href="#">RET9040</a>	<a href="#">RET9041</a>
.0400	.120	1-1/2	.360	1/8	<a href="#">RET9042</a>	<a href="#">RET9043</a>	<a href="#">RET9044</a>
.0400	.120	1-1/2	.400	1/8	<a href="#">RET9045</a>	<a href="#">RET9046</a>	<a href="#">RET9047</a>
.0450	.135	1-1/2	.405	1/8	<a href="#">RET9048</a>	<a href="#">RET9049</a>	<a href="#">RET9050</a>
.0450	.135	1-1/2	.450	1/8	<a href="#">RET9051</a>	<a href="#">RET9052</a>	<a href="#">RET9053</a>
.0469	.141	1-1/2	.390	1/8	<a href="#">RET9054</a>	<a href="#">RET9055</a>	<a href="#">RET9056</a>
.0469	.141	1-1/2	.423	1/8	<a href="#">RET9057</a>	<a href="#">RET9058</a>	<a href="#">RET9059</a>
.0500	.150	1-1/2	.500	1/8	<a href="#">RET9060</a>	<a href="#">RET9061</a>	<a href="#">RET9062</a>
.0550	.165	1-1/2	.500	1/8	<a href="#">RET9063</a>	<a href="#">RET9064</a>	<a href="#">RET9065</a>
.0600	.180	1-1/2	.500	1/8	<a href="#">RET9066</a>	<a href="#">RET9067</a>	<a href="#">RET9068</a>
.0600	.180	2	.600	1/8	<a href="#">RET9069</a>	<a href="#">RET9070</a>	<a href="#">RET9071</a>
.0625	.186	1-1/2	.590	1/8	<a href="#">RET9072</a>	<a href="#">RET9073</a>	<a href="#">RET9074</a>
.0625	.188	2	.590	1/8	<a href="#">RET9075</a>	<a href="#">RET9076</a>	<a href="#">RET9077</a>
.0650	.195	1-1/2	.500	1/8	<a href="#">RET9078</a>	<a href="#">RET9079</a>	<a href="#">RET9080</a>
.0650	.195	2	.600	1/8	<a href="#">RET9081</a>	<a href="#">RET9082</a>	<a href="#">RET9083</a>
.0700	.210	1-1/2	.500	1/8	<a href="#">RET9084</a>	<a href="#">RET9085</a>	<a href="#">RET9086</a>
.0700	.210	2	.700	1/8	<a href="#">RET9087</a>	<a href="#">RET9088</a>	<a href="#">RET9089</a>
.0750	.225	1-1/2	.500	1/8	<a href="#">RET9090</a>	<a href="#">RET9091</a>	<a href="#">RET9092</a>
.0750	.225	2	.700	1/8	<a href="#">RET9093</a>	<a href="#">RET9094</a>	<a href="#">RET9095</a>
.0781	.234	1-1/2	.590	1/8	<a href="#">RET9096</a>	<a href="#">RET9097</a>	<a href="#">RET9098</a>
.0781	.234	2	.590	1/8	<a href="#">RET9099</a>	<a href="#">RET9100</a>	<a href="#">RET9101</a>
.0800	.240	1-1/2	.500	1/8	<a href="#">RET9102</a>	<a href="#">RET9103</a>	<a href="#">RET9104</a>
.0800	.240	2	.750	1/8	<a href="#">RET9105</a>	<a href="#">RET9106</a>	<a href="#">RET9107</a>
.0850	.255	1-1/2	.500	1/8	<a href="#">RET9108</a>	<a href="#">RET9109</a>	<a href="#">RET9110</a>
.0850	.255	2	.750	1/8	<a href="#">RET9111</a>	<a href="#">RET9112</a>	<a href="#">RET9113</a>



Tolerances	Diameter	Shank	Radius
All Sizes	+0.0005, -0.0005	+0.0003, -0.0003	+0.0005, -0.0005



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