



A Brand AE-MS-H & AE-CR-MS-H

Advanced Performance Carbide End Mills with DUREY Coating

List 8440, 8540, 8470, 8570: Multi-Flute, Regular Length, Square & Corner Rad.

Side Milling

Hardness		Up to 45 HRC		45-55 HRC		55-62 HRC		62-66 HRC		66-70 HRC	
Work Material		Tool Steels Hardened Steels Alloy Steels		Hardened Steels							
Cutting Speed (SFM)		360 - 425		260 - 330		195 - 260		165 - 230		130 - 200	
Depth of Cut		D _a a _a a _r		a _a a _r		a _a a _r				a _a a _r	
		D ≤ 0.15	1.5D	0.02D	1.5D	0.05D	1.5D			0.03D	1D
		Ø1.5 < D ≤ 2.5		Ø2.5 < D						a _r Max=1mm	
Mill Dia.		Speed RPM	Feed in/min	Speed RPM	Feed in/min	Speed RPM	Feed in/min	Speed RPM	Feed in/min	Speed RPM	Feed in/min
Inch	mm										
-	1	38,220	60.2	28,660	45.3	22,290	24.4	19,110	18.1	15,920	13.0
1/16	-	24,061	60.2	18,076	45.3	14,046	24.4	12,031	18.1	10,015	13.0
-	1.5	25,480	60.2	19,110	45.3	14,860	24.4	12,740	18.1	10,620	13.0
5/64	-	19,249	60.2	14,461	45.3	11,237	24.4	9,624	18.1	8,012	13.0
-	2	19,110	60.2	14,330	45.3	11,150	24.4	9,550	18.1	7,960	13.0
3/32	-	16,041	60.2	12,051	45.3	9,364	24.4	8,020	18.1	6,677	13.0
-	2.5	15,290	60.2	11,460	45.3	8,920	24.4	7,640	18.1	6,370	13.0
7/64	-	13,749	60.2	10,329	45.3	8,026	24.4	6,875	18.1	5,723	13.0
-	3	12,740	60.2	9,550	45.3	7,430	24.4	6,370	18.1	5,310	13.0
1/8	-	12,031	60.2	9,038	45.3	7,023	24.4	6,015	18.1	5,008	13.0
5/32	-	9,624	60.2	7,231	45.3	5,618	24.4	4,812	18.1	4,006	13.0
-	4	9,550	60.2	7,170	45.3	5,570	24.4	4,730	18.1	3,980	13.0
3/16	-	8,020	60.2	6,025	45.3	4,682	24.4	4,010	18.1	3,338	13.0
-	5	7,640	60.2	5,730	45.3	4,460	24.4	3,820	18.1	3,180	13.0
7/32	-	6,875	60.2	5,165	45.3	4,013	24.4	3,437	18.1	2,862	13.0
-	6	6,370	90.2	4,780	67.7	3,720	37.0	3,180	27.2	2,650	20.1
1/4	-	6,015	90.2	4,519	67.7	3,511	37.0	3,008	27.2	2,504	20.1
9/32	-	5,347	90.2	4,017	67.7	3,121	37.0	2,673	27.2	2,226	20.1
5/16	-	4,812	90.2	3,615	67.7	2,809	37.0	2,406	27.2	2,003	20.1
-	8	4,780	90.2	3,580	67.7	2,790	37.0	2,390	27.2	1,990	20.1
3/8	-	4,010	90.2	3,013	67.7	2,341	37.0	2,005	27.2	1,669	20.1
-	10	3,820	90.2	2,870	67.7	2,230	37.0	1,910	27.2	1,590	20.1
7/16	-	3,437	90.2	2,582	67.7	2,007	37.0	1,719	27.2	1,431	20.1
-	12	3,180	90.2	2,390	67.7	1,860	37.0	1,590	27.2	1,330	20.1
1/2	-	3,008	90.2	2,260	67.7	1,756	37.0	1,504	27.2	1,252	20.1
5/8	-	2,406	90.2	1,808	67.7	1,405	37.0	1,203	27.2	1,002	20.1
-	16	2,390	90.2	1,790	67.7	1,390	37.0	1,190	27.2	1,000	20.1
3/4	-	2,005	90.2	1,506	67.7	1,170	37.0	1,003	27.2	835	20.1
-	20	1,910	90.2	1,430	67.7	1,110	37.0	960	27.2	800	20.1
1	-	1,504	90.2	1,130	67.7	878	37.0	752	27.2	626	20.1

1. Use a rigid and precise machine and holder.
2. When chattering occurs, reduce the speed and feed simultaneously.
3. Use an air blow or a suitable cutting fluid with high smoke retardant properties.

ABOUT OSG

DRILLING

THREADING

MILLING

HOLDERS


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List 8440, 8540, 8470, 8570: Multi-Flute, Regular Length, Square & Corner Rad. (Cont.)

High Speed Milling

Hardness	Up to 45 HRC		45-55 HRC		55-62 HRC		62-66 HRC		66-70 HRC																	
Work Material	Tool Steels Hardened Steels Alloy Steels		Hardened Steels																							
Cutting Speed (SFM)	950 - 1,020		785 - 850		490 - 560		425 - 490		295 - 360																	
Depth of Cut	 <table border="1"> <tr><th>aa</th><th>ar</th></tr> <tr><td>1D</td><td>0.05D</td></tr> </table> ar Max=0.5mm		aa	ar	1D	0.05D	<table border="1"> <tr><th>aa</th><th>ar</th></tr> <tr><td>1D</td><td>0.03D</td></tr> </table> ar Max=0.5mm		aa	ar	1D	0.03D	<table border="1"> <tr><th>aa</th><th>ar</th></tr> <tr><td>1D</td><td>0.02D</td></tr> </table> ar Max=0.2mm		aa	ar	1D	0.02D	<table border="1"> <tr><th>aa</th><th>ar</th></tr> <tr><td>1D</td><td>0.01D</td></tr> </table> ar Max=0.2mm				aa	ar	1D	0.01D
	aa	ar																								
1D	0.05D																									
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1D	0.03D																									
aa	ar																									
1D	0.02D																									
aa	ar																									
1D	0.01D																									
Mill Dia.	Speed RPM	Feed in/min	Speed RPM	Feed in/min	Speed RPM	Feed in/min	Speed RPM	Feed in/min	Speed RPM	Feed in/min																
Inch	mm																									
-	1	50,000	78.7	50,000	78.7	50,000	63.0	44,590	49.2	31,850	27.6															
1/16	-	50,000	125.0	50,000	125.0	32,122	64.2	28,092	49.2	20,031	31.0															
-	1.5	50,000	118.1	50,000	118.1	33,970	64.2	29,720	49.2	21,230	29.9															
5/64	-	48,171	150.5	40,110	125.3	25,698	64.2	22,473	49.2	16,024	31.0															
-	2	47,770	150.4	39,810	125.2	25,480	64.2	22,290	49.2	15,920	31.5															
3/32	-	40,142	150.5	33,425	125.3	21,415	64.2	18,728	49.2	13,354	31.0															
-	2.5	38,220	150.4	31,850	125.6	20,380	64.2	17,830	49.2	12,740	31.9															
7/64	-	34,408	150.5	28,650	125.3	18,356	64.2	16,052	49.2	11,446	31.0															
-	3	31,850	150.4	26,540	125.2	16,990	64.2	14,860	49.2	10,620	31.9															
1/8	-	30,107	150.5	25,069	125.3	16,061	64.2	14,046	49.2	10,015	31.0															
5/32	-	24,085	150.5	20,055	125.3	12,849	64.2	11,237	49.2	8,012	31.0															
-	4	23,890	150.4	19,900	125.2	12,740	64.2	11,150	49.2	7,960	31.9															
3/16	-	20,071	150.5	16,712	125.3	10,707	64.2	9,364	49.2	6,677	31.0															
-	5	19,110	150.4	15,920	125.2	10,190	64.2	8,920	49.2	6,370	31.9															
7/32	-	17,204	150.5	14,325	125.3	9,178	64.2	8,026	49.2	5,723	31.0															
-	6	15,920	225.6	13,270	188.2	8,490	96.5	7,430	73.6	5,310	47.6															
1/4	-	15,053	225.8	12,534	188.0	8,031	96.4	7,023	73.7	5,008	46.6															
9/32	-	13,381	225.8	11,142	188.0	7,138	96.4	6,243	73.7	4,451	46.6															
5/16	-	12,043	225.8	10,027	188.0	6,424	96.4	5,618	73.7	4,006	46.6															
-	8	11,940	225.6	9,950	188.2	6,370	96.5	5,570	73.6	3,980	47.6															
3/8	-	10,036	225.8	8,356	188.0	5,354	96.4	4,682	73.7	3,338	46.6															
-	10	9,550	225.6	7,960	188.2	5,100	96.5	4,460	73.6	3,180	47.6															
7/16	-	8,602	225.8	7,162	188.0	4,589	96.4	4,013	73.7	2,862	46.6															
-	12	7,960	225.6	6,630	188.2	4,250	96.5	3,720	73.6	2,650	47.6															
1/2	-	7,527	225.8	6,267	188.0	4,015	96.4	3,511	73.7	2,504	46.6															
5/8	-	6,021	225.8	5,014	188.0	3,212	96.4	2,809	73.7	2,003	46.6															
-	16	5,970	225.8	4,980	188.0	3,180	96.4	2,790	73.7	1,990	46.6															
3/4	-	5,018	225.8	4,178	188.0	2,677	96.4	2,340	73.7	1,669	46.6															
-	20	4,780	225.8	3,980	188.0	2,550	96.4	2,230	73.7	1,590	46.6															
1	-	3,763	225.8	3,134	188.0	2,008	96.4	1,756	73.7	1,252	46.6															

1. Tools can cause sparks. Do not use flammable fluids.
2. Use an air blow or a suitable cutting fluid with high smoke retardant properties.

ABOUT OSG

DRILLING

THREADING

MILLING

HOLDERS

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