

CCT

CARBIDE CUTTING TOOLS

Shouldering

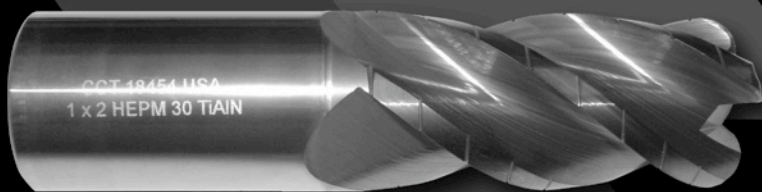
Ramping

Helical Ramping

Slotting

Pocketing

Taking Metalworking To A New Level



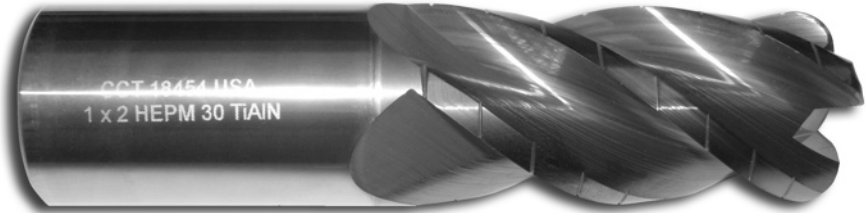
HEPM[®]

High Efficiency Productive Machining

FALL 2014 CATALOG

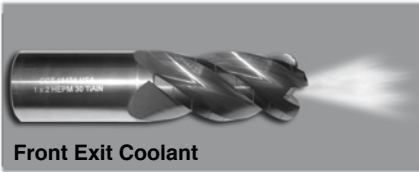
HEPM STYLE Taking Metalworking to a New Level

The **HEPM** is designed for **H**igh **E**fficiency **P**roductive **M**achining. Capabilities include shouldering, ramping, helical ramping, slotting and pocketing. The advantage lies in the high cutter load per tooth (CLPT) capabilities of this geometry.



"HEPM" STYLE Regular Length	Flutes	Diameter	LOC	OAL	Radius	Coated SKU#
1/4 x 3/4 HEPM-304 AlCrN	4	1/4	3/4	2-1/2	.030	18623
5/16 x 7/8 HEPM-304 AlCrN	4	5/16	7/8	2-1/2	.040	18624
3/8 x 1 HEPM-304 AlCrN	4	3/8	1	2 1/2	.050	18436
3/8 x 1 HEPM-305 AlCrN	5	3/8	1	2-1/2	.050	18618
1/2 x 1-1/4 HEPM-304 AlCrN	4	1/2	1-1/4	3	.086	18422
1/2 x 1-1/4 HEPM-305 AlCrN	5	1/2	1-1/4	3	.086	18619
5/8 x 1-1/2 HEPM-304 AlCrN	4	5/8	1-1/2	3-1/2	.120	18437
5/8 x 1-1/2 HEPM-305 AlCrN	5	5/8	1-1/2	3-1/2	.120	18620
3/4 x 1-1/2 HEPM-304 AlCrN	4	3/4	1-1/2	4	.150	18491
3/4 x 1-1/2 HEPM-305 AlCrN	5	3/4	1-1/2	4	.150	18621
1 x 1-1/2 HEPM-304 AlCrN	4	1	1-1/2	4	.200	18445
1 x 1-1/2 HEPM-305 AlCrN	5	1	1-1/2	4	.200	18622
1 x 2 HEPM-304 AlCrN	4	1	2	4	.200	18455

“HEPM” STYLE Long Length	Flutes	Diameter	LOC	OAL	Radius	Coated SKU#
1/4 x 1-1/4 HEPM-304EL AICrN	4	1/4	1-1/4	3	.030	18626
5/16 x 1-1/4 HEPM-304EL AICrN	4	5/16	1-1/4	3	.040	18625
3/8 x 1-1/2 HEPM-304EL AICrN	4	3/8	1-1/2	3	.050	18627
3/8 x 1-1/2 HEPM-305EL AICrN	5	3/8	1-1/2	3	.050	18628
1/2 x 2 HEPM-304EL AICrN	4	1/2	2	4	.086	18449
1/2 x 2 HEPM-305EL AICrN	5	1/2	2	4	.086	18629
5/8 x 2-1/4 HEPM-304EL AICrN	4	5/8	2-1/4	5	.120	18630
3/4 x 2-1/4 HEPM-304EL AICrN	4	3/4	2-1/4	5	.150	18631
3/4 x 2-1/4 HEPM-305EL AICrN	5	3/4	2-1/4	5	.150	18632
1 x 2-1/4 HEPM-304EL AICrN	4	1	2-1/4	5	.200	18633



Front Exit Coolant



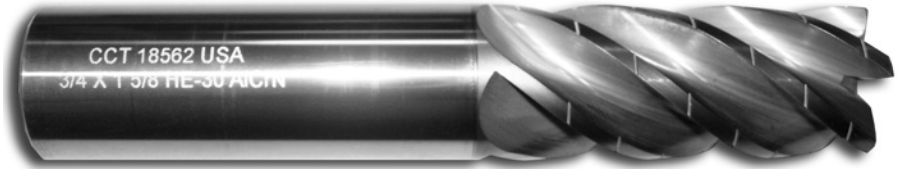
Radial Exit Coolant

“HEPM” STYLE Front Exit Coolant	Flutes	Diameter	LOC	OAL	Radius	Coated SKU#
3/8 x 1 HEPM-304 4Y AICrN	4	3/8	1	3	.050	18611
1/2 x 1 HEPM-304 4Y AICrN	4	1/2	1-1/4	3	.086	18507
3/4 x 1-1/2 HEPM-304 4Y AICrN	4	3/4	1-1/2	4	.150	18634

“HEPM” STYLE Radial Exit Coolant	Flutes	Diameter	LOC	OAL	Radius	Coated SKU#
5/16 x 7/8 HEPM-304 SC AICrN	4	5/16	7/8	3	.040	18637
3/8 x 1 HEPM-304 SC AICrN	4	3/8	1	3	.050	18636
1/2 x 1-1/4 HEPM-305 SC AICrN	5	1/2	1-1/4	3	.086	18635
1/2 x 1-1/2 HEPM-304EL SC AICrN	4	1/2	1-1/2	3-1/2	.086	18433
3/4 x 1-1/2 HEPM-305 SC AICrN	5	3/4	1-1/2	4	.150	18638

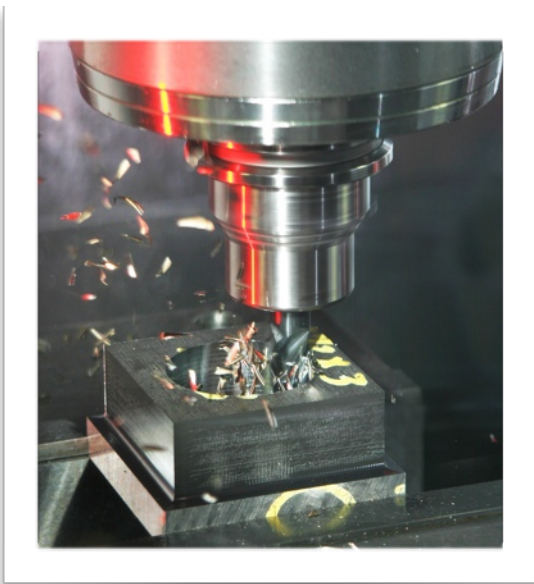
HE STYLE

The **HE** geometry incorporates all the features of the **HEPM** except the end geometry. In applications where side milling is required the tools are supplied with standard radii or can be supplied with a specified radius. Minimal ramping is still possible.



"HE" STYLE Regular Length	Flutes	Diameter	LOC	OAL	Radius	Coated SKU#
1/4 x 3/4 HE-305 AICrN	5	1/4	3/4	2-1/2	.015	18579
5/16 x 7/8 HE-305 AICrN	5	5/16	7/8	2-1/2	.015	18566
3/8 x 7/8 HE-305 AICrN	5	3/8	7/8	2 1/2	.015	18560
1/2 x 1-1/4 HE-305 AICrN	5	1/2	1-1/4	3	.030	18578
5/8 x 1-1/2 HE-305 AICrN	5	5/8	1-1/2	3-1/2	.030	18572
3/4 x 1-5/8 HE-305 AICrN	5	3/4	1-5/8	4	.030	18562
1 x 1-1/2 HE-305 AICrN	5	1	1-1/2	4	.030	18575

"HE" STYLE Long Length	Flutes	Diameter	LOC	OAL	Radius	Coated SKU#
1/4 x 1-1/4 HE-305EL AICrN	5	1/4	1-1/4	3	.015	18580
5/16 x 1-1/4 HE-305EL AICrN	5	5/16	1-1/4	3	.015	18567
3/8 x 1-1/2 HE-305EL AICrN	5	3/8	1-1/2	3	.015	18569
1/2 x 2 HE-305EL AICrN	5	1/2	2	4	.030	18559
5/8 x 2-1/4 HE-305EL AICrN	5	5/8	2-1/4	5	.030	18573
3/4 x 2-1/4 HE-305EL AICrN	5	3/4	2-1/4	5	.030	18563
1 x 2-1/4 HE-305EL AICrN	5	1	2-1/4	5	.030	18576



"HE" STYLE Extra Long Length	Flutes	Diameter	LOC	OAL	Radius	Coated SKU#
1/4 x 1-3/4 HE-305XL AlCrN	5	1/4	1-3/4	4	.015	18581
3/8 x 2-1/2 HE-305XL AlCrN	5	3/8	2-1/2	4	.015	18570
1/2 x 3 HE-305XL AlCrN	5	1/2	3	5	.030	18561
5/8 x 3 HE-305XL AlCrN	5	5/8	3	6	.030	18574
3/4 x 3 HE-305XL AlCrN	5	3/4	3	6	.030	18564
1 x 3 HE-305XL AlCrN	5	1	3	6	.030	18577

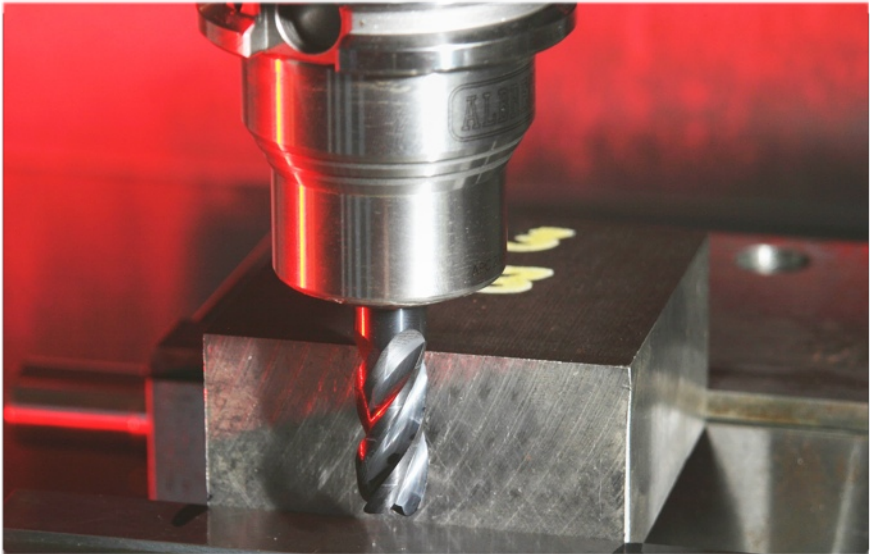
"HE" STYLE Radial Coolant	Flutes	Diameter	LOC	OAL	Radius	Coated SKU#
1/4 x 1-1/4 HE-303 SC AlCrN	3	1/4	1-1/4	3	.015	18582
5/16 x 1-1/4 HE-304 SC AlCrN	4	5/16	1-1/4	3	.015	18568
3/8 x 1-1/4 HE-304 SC AlCrN	4	3/8	1-1/4	3	.015	18571
1/2 x 1-1/2 HE-304 SC AlCrN	4	1/2	1-1/2	3-1/2	.030	18544
3/4 x 1-5/8 HE-305 SC AlCrN	5	3/4	1-5/8	4	.030	18565

HEP STYLE

The **HEP** geometry designed for high feed low depth of cut applications where extra length is required.



"HEP" STYLE Regular Length	Flutes	Diameter	L1	OAL	Radius	Coated SKU#
1/4 x 1 HEP-304 AlCrN	4	1/4	1	2-1/2	.030	18663
5/16 x 1-1/4 HEP-304AlCrN	4	5/16	1-1/4	3	.040	18664
3/8 x 1-1/4 HEP-304 AlCrN	4	3/8	1-1/4	3	.050	18614
1/2 x 1-3/8 HEP-304 AlCrN	4	1/2	1-3/8	3-1/2	.086	18665
5/8 x 1-3/4 HEP-304 AlCrN	4	5/8	1-3/4	4	.120	18666
3/4 x 2 HEP-304 AlCrN	4	3/4	2	5	.150	18667



Recommended Speeds

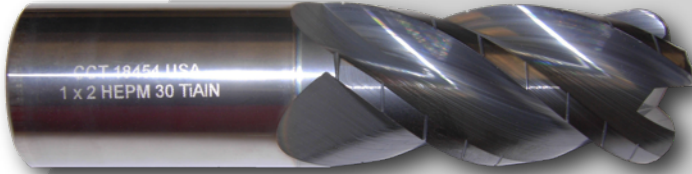
ISO	Material	Hardness HB	Speed SFM
	Carbon Steel	100-250	720-1425
	Alloy Steel	150-250	660-1275
P	Alloy Steel Hardened/Tempered	250-350	590-1185
	Alloy Steel Hardened/Tempered	350-470	460-885
P(H)	Steel Hardened (49-55 HRC)	470-550	165-215
M	Stainless Steel Austenitic	130-250	260-560
	Stainless Steel Martensitic	130-320	460-800
M(S)	Titanium, Alloyed <900	200-270	230-295
	Titanium, Alloyed >900-1400	270-410	130-180
	Nickel, Alloyed	240-470	65-100
	Malleable Cast Iron	150-200	395-490
	Malleable Cast Iron	200-300	330-425
	Graphite	/	656-850

Recommended Feeds

Tool Diameter (inch)	fz (CLPT) 5% - ae	fz (CLPT) 10% - ae	fz (CLPT) 15% - ae	fz (CLPT) 20% - ae	fz (CLPT) 30% - ae	fz (CLPT) 40% - ae	fz (CLPT) 50% - ae
	HEPM	HEPM	HEPM	HEPM			
0.188	.004-.006	.003-.005	.003-.004	.002-.003	.0015-.002	.001-.0015	.0007-.0012
0.25	.005-.008	.004-.006	.003-.004	.0025-.004	.0015-.003	.001-.002	.0007-.0015
0.313	.007-.010	.005-.009	.004-.006	.003-.005	.002-.004	.0015-.0025	.0012-.0023
0.375	.009-.012	.006-.010	.005-.007	.004-.006	.003-.005	.002-.004	.0015-.0031
0.5	.010-.014	.008-.012	.008-.009	.005-.007	.004-.006	.003-.005	.0019-.0039
0.625	.012-.016	.010-.014	.009-.011	.007-.009	.005-.007	.0035-.0055	.0023-.0047
0.75	.014-.018	.012-.016	.010-.012	.008-.010	.006-.008	.004-.007	.0031-.0063
1	.016-.020	.014-.018	.010-.012	.009-.011	.007-.009	.0045-.008	.0031-.0070

HEPM[®] High Efficiency Productive Machining

Taking Metalworking To A New Level



“Profit By Performance”

The **HEPM[®]** design incorporates many features that will allow speeds and feeds never before reachable with solid carbide end mills.

View a video of our HEPM tool in action:

<http://www.youtube.com/watch?v=ToRLgJX1WqA>

HEPM[®] is a registered trademark of Carbide Cutting Tools SC, Inc.
Patent Pending.

TO ORDER

call: **1.864.244.1485**

fax: **1.864.244.2736**

email: **Sales@CarbideCuttingTools.com**

Carbide Cutting Tools SC, Inc.

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38 Jordan Drive, Taylors, SC 29687

www.carbidecuttingtools.com