

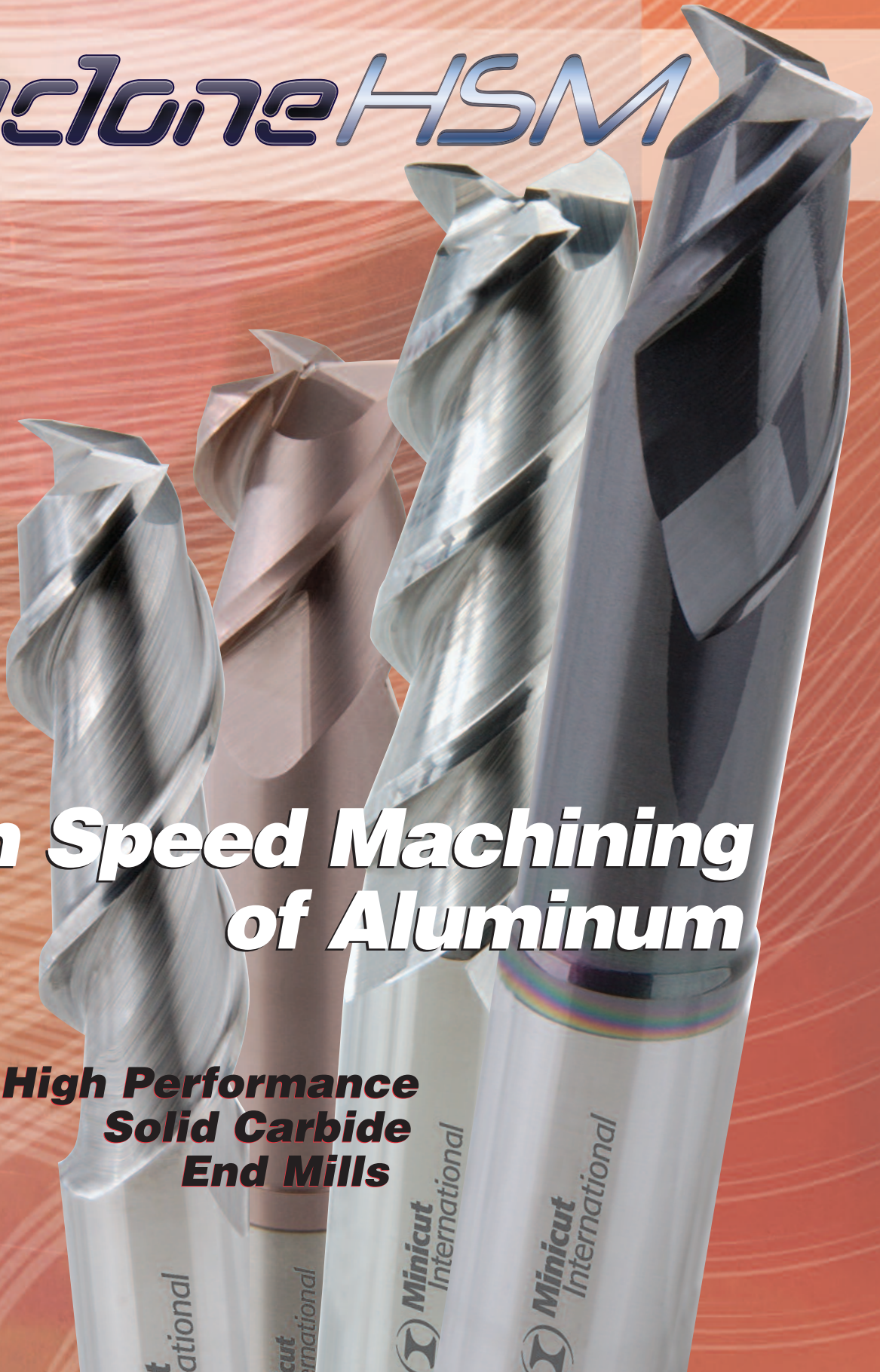


**Minicut**  
*International*  
Leader in Cutting Tool Technology

# *Cyclone HSM*

## **High Speed Machining of Aluminum**

**Ultra High Performance  
Solid Carbide  
End Mills**



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International

## 2 & 3 FLUTE EXTENDED NECK SOLID CARBIDE END MILLS FOR HIGH SPEED MACHINING OF ALUMINUM

For Deep Pocket High Speed Machining of Aluminum  
Mirror finish on all cutting surfaces

Pour l'Usage de l'Aluminium à grande vitesse de cavités profondes  
Fini miroir sur les surfaces de coupe

Para Fresar el Aluminio a Alta Velocidad de Canales profundo  
Acabado espejo en superficies de corte

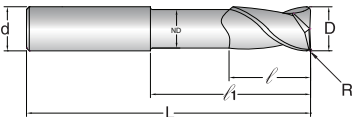
Feinstkorn Voll-HM Fräser  
Hochgeschwindigkeits  
Tiefetaschen in Aluminium  
Spiegelglatte Schneidoberflächen

### LIST 2030



### INCH SERIES

D	d	ℓ	ℓ <sub>1</sub>	ND	L	EDP NUMBER				
						0 RAD	0.030 RAD	0.060 RAD	0.090 RAD	.120 RAD
1/4	1/4	3/8	1 1/8	0.230	2 1/2	41000	41100	-	-	-
1/4	1/4	3/8	1 5/8	0.230	3	41005	41105	-	-	-
1/4	1/4	3/8	2 1/4	0.230	4	27350	41110	-	-	-
3/8	3/8	1/2	1 1/8	0.355	2 1/2	41015	41115	41215	-	-
3/8	3/8	1/2	1 3/4	0.355	3	41020	41120	41220	-	-
3/8	3/8	1/2	2 1/2	0.355	4	41025	41125	41225	-	-
1/2	1/2	5/8	1 5/8	0.470	3	41030	41130	41230	41330	41415
1/2	1/2	5/8	2 1/2	0.470	4	41035	41135	41235	41335	41420
1/2	1/2	5/8	3 1/4	0.470	5	41040	41140	41240	41340	41425
1/2	1/2	5/8	4	0.470	6	41045	27370	41245	41345	41430
5/8	5/8	3/4	1 1/2	0.595	3 1/2	41050	41150	41250	41350	41435
5/8	5/8	3/4	2 1/2	0.595	5	41055	41155	41255	41355	41440
5/8	5/8	3/4	3 1/4	0.595	6	41060	27380	41260	41360	41445
3/4	3/4	1	2 1/8	0.720	4	41065	41165	41265	41365	41450
3/4	3/4	1	2 1/2	0.720	5	41070	41170	41270	41370	41455
3/4	3/4	1	3 1/2	0.720	6	41075	41175	41275	41375	41460
1	1	1	2	0.960	4	41080	41180	41280	41380	41465
1	1	1	3	0.960	5	41085	41185	41285	41385	41470
1	1	1	4	0.960	6	41090	41190	41290	41390	41475
1	1	1	4	0.960	7	41095	41195	41295	41395	41480



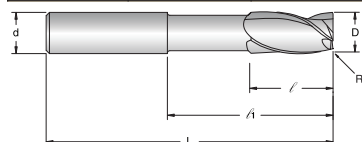
Note: Larger corner radius available on request.



### LIST 3030



D	d	ℓ	ℓ <sub>1</sub>	ND	L	EDP NUMBER				
						0 RAD	0.030 RAD	0.060 RAD	0.090 RAD	.120 RAD
1/4	1/4	3/8	1 1/8	0.230	2 1/2	42000	42095	-	-	-
1/4	1/4	3/8	1 5/8	0.230	3	42005	42100	-	-	-
1/4	1/4	3/8	2 1/4	0.230	4	27570	42105	-	-	-
3/8	3/8	1/2	1 1/8	0.355	2 1/2	42010	42110	42210	-	-
3/8	3/8	1/2	1 3/4	0.355	3	42015	42115	42215	-	-
3/8	3/8	1/2	2 1/2	0.355	4	42020	42120	42220	-	-
1/2	1/2	5/8	1 5/8	0.470	3	42025	42125	42225	42325	42425
1/2	1/2	5/8	2 1/2	0.470	4	42030	42130	42230	42330	42430
1/2	1/2	5/8	3 1/4	0.470	5	42035	42135	42235	42335	42435
1/2	1/2	5/8	4	0.470	6	42040	42140	42240	42340	42440
5/8	5/8	3/4	1 1/2	0.595	3 1/2	42045	42145	42245	42345	42445
5/8	5/8	3/4	2 1/2	0.595	5	42050	42150	42250	42350	42450
5/8	5/8	3/4	3 1/4	0.595	6	42055	42155	42255	42355	42455
3/4	3/4	1	2 1/8	0.720	4	42060	42160	42260	42360	42460
3/4	3/4	1	2 1/2	0.720	5	42065	42165	42265	42365	42465
3/4	3/4	1	3 1/2	0.720	6	42070	42170	42270	42370	42470
1	1	1	2	0.960	4	42075	42175	42275	42375	42475
1	1	1	3	0.960	5	42080	42180	42280	42380	42480
1	1	1	4	0.960	6	42085	42185	42285	42385	42485
1	1	1	4	0.960	7	42090	42190	42290	42390	42490



Note: Larger corner radius available on request.



## 2 & 3 FLUTE SOLID CARBIDE END MILLS FOR HIGH SPEED MACHINING OF ALUMINUM

For High Speed Machining of Aluminum  
Mirror finish on all cutting surfaces

Pour L'Usinage de l'Aluminium à Grande Vitesse  
Fini miroir sur les surfaces de coupe

Para Fresar el Aluminio a Alta Velocidad  
Acabado espejo en superficies de corte

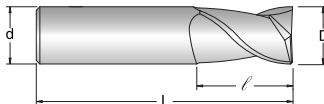
Feinstkorn Voll-HM Fräser in Aluminium  
Spiegelglatte Schneidoberflächen

### LIST 2045



### INCH SERIES

D	d	ℓ	L	EDP NUMBER				
				0 RAD	0.030 RAD	0.060 RAD	0.090 RAD	.120 RAD
1/8	1/8	3/8	1-1/2	20000	20255	-	-	-
3/16	3/16	9/16	2	20005	20227	-	-	-
1/4	1/4	3/4	2-1/2	20010	20229	-	-	-
1/4	1/4	1-1/4	3	20015	20231	-	-	-
5/16	5/16	13/16	2-1/2	20020	20233	-	-	-
5/16	5/16	1-3/8	3	20025	20235	-	-	-
3/8	3/8	7/8	2-1/2	20030	20237	20273	-	-
3/8	3/8	1-1/2	3	20035	20239	20275	-	-
1/2	1/2	1-1/4	3-1/4	20040	20241	20277	20313	20349
1/2	1/2	2	4	20045	20243	20279	20315	20351
5/8	5/8	1-1/4	3-1/2	20050	20245	20281	20317	20353
5/8	5/8	2-1/2	5	20052	20247	20283	20319	20355
3/4	3/4	1-5/8	4	20055	20249	20285	20321	20357
3/4	3/4	2-1/2	5	20057	20251	20287	20323	20359
3/4	3/4	3	5	20060	20253	20289	20325	20361
1	1	1-1/2	4	20065	20255	20291	20327	20363
1	1	2-5/8	5	20067	20257	20293	20329	20365
1	1	3-1/4	6	20070	20259	20295	20331	20367



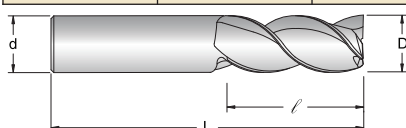
Note: Larger corner radius available on request.



### LIST 3045



D	d	ℓ	L	EDP NUMBER				
				0 RAD	0.030 RAD	0.060 RAD	0.090 RAD	.120 RAD
1/8	1/8	3/8	1-1/2	30000	30460	-	-	-
3/16	3/16	9/16	2	30005	30462	-	-	-
1/4	1/4	3/4	2-1/2	30010	30464	-	-	-
1/4	1/4	1-1/4	3	30015	30466	-	-	-
5/16	5/16	13/16	2-1/2	30020	30468	-	-	-
5/16	5/16	1-3/8	3	30025	30470	-	-	-
3/8	3/8	7/8	2-1/2	30030	30472	30512	-	-
3/8	3/8	1-1/2	3	30035	30474	30514	-	-
1/2	1/2	1-1/4	3-1/4	30040	30476	30516	30556	30596
1/2	1/2	2	4	30045	30478	30518	30558	30598
1/2	1/2	3-1/8	6	30050	30480	30520	30560	30600
5/8	5/8	1-1/4	3-1/2	30055	30482	30522	30562	30602
5/8	5/8	2-1/2	5	30060	30484	30524	30564	30604
3/4	3/4	1-5/8	4	30070	30486	30526	30566	30606
3/4	3/4	2-1/2	5	30075	30488	30528	30568	30608
3/4	3/4	3-1/4	6	30080	30490	30530	30570	30610
3/4	3/4	4	6-1/2	30085	30492	30532	30572	30612
1	1	1-1/2	4	30090	30494	30534	30574	30614
1	1	2-5/8	5	30100	30496	30536	30576	30616
1	1	3-1/4	6	30105	30498	30538	30578	30618



Note: Larger corner radius available on request.



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Acabado espejo en  
superficies de corte

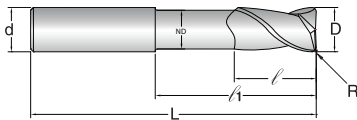
Feinstkorn Voll-HM Fräser  
Hochgeschwindigkeits  
Tiefetaschen in Aluminium  
Spiegelglatte Schneidoberflächen

### LIST 2030M



### METRIC SERIES

D	d	ℓ	ℓ <sub>1</sub>	ND	L	EDP NUMBER				
						0 RAD	0.8 RAD	1.5 RAD	2.5 RAD	3.0 RAD
6	6	8	20	5.4	65	41500	41590	-	-	-
6	6	8	40	5.4	75	41505	41595	-	-	-
6	6	10	57	5.4	100	41510	41600	-	-	-
8	8	10	30	7.2	75	41515	41605	41695	-	-
8	8	10	40	7.2	100	41520	41610	41700	-	-
10	10	12	36	9	80	41525	41615	41705	-	-
10	10	12	50	9	100	41530	41620	41710	-	-
12	12	14	40	11	90	41535	41625	41715	41805	41870
12	12	14	70	11	125	41540	41630	41720	41810	41875
12	12	16	102	11	150	41545	28205	41725	41815	41880
16	16	18	50	14.5	100	41550	41640	41730	41820	41885
16	16	18	80	14.5	150	41555	41645	41735	41825	41890
20	20	24	45	18	100	41560	41650	41740	41830	41895
20	20	25	57	18	125	41565	41655	41745	41835	41900
20	20	25	83	18	150	41570	41660	41750	41840	41905
20	20	25	100	18	175	41575	41665	41755	41845	41910
25	25	30	45	23	110	41580	41670	41760	41850	41915
25	25	30	83	23	150	41585	41675	41765	41855	41920



Note: Larger corner radius available on request.

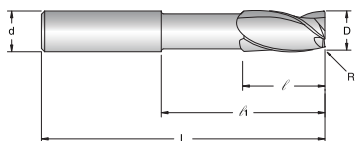


### LIST 3030M



### METRIC SERIES

D	d	ℓ	ℓ <sub>1</sub>	ND	L	EDP NUMBER				
						0 RAD	0.8 RAD	1.5 RAD	2.5 RAD	3.0 RAD
6	6	8	20	5.4	65	42500	42590	-	-	-
6	6	8	40	5.4	75	42505	42595	-	-	-
6	6	10	57	5.4	100	42510	42600	-	-	-
8	8	10	30	7.2	75	42515	42605	42695	-	-
8	8	10	40	7.2	100	42520	42610	42700	-	-
10	10	12	36	9	80	42525	42615	42705	-	-
10	10	12	50	9	100	42530	42620	42710	-	-
12	12	14	40	11	90	42535	42625	42715	42805	42895
12	12	14	70	11	125	42540	42630	42720	42810	42900
12	12	16	102	11	150	42545	28425	42725	42815	42905
16	16	18	50	14.5	100	42550	42640	42730	42820	42910
16	16	18	80	14.5	150	42555	42645	42735	42825	42915
20	20	24	45	18	100	42560	42650	42740	42830	42920
20	20	25	57	18	125	42565	42655	42745	42835	42925
20	20	25	83	18	150	42570	42660	42750	42840	42930
20	20	25	100	18	175	42575	42665	42755	42845	42935
25	25	30	45	23	110	42580	42670	42460	42850	42940
25	25	30	83	23	150	42585	42675	42765	42855	42945



Note: Larger corner radius available on request.



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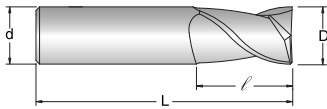
Feinstkorn Voll-HM Fräser  
in Aluminium  
Spiegelglatte  
Schneidoberflächen

### LIST 2045M



### METRIC SERIES

D	d	ℓ	L	EDP NUMBER				
				0 RAD	0.8 RAD	1.5 RAD	2.5 RAD	3.0 RAD
6	6	13	57	31000	31001	-	-	-
8	8	16	63	31005	31006	31007	-	-
10	10	22	72	31010	31011	31012	-	-
12	12	26	83	31015	31016	31017	31018	31019
14	14	26	83	31020	31021	31022	31023	31024
16	16	32	92	31025	31026	31027	31028	31029
18	18	32	92	31030	31031	31032	31033	31034
20	20	38	104	31035	31036	31037	31038	31039



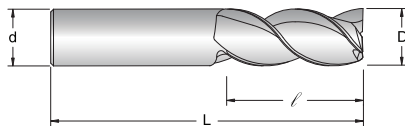
Note: Larger corner radius available on request.



### LIST 3045M



D	d	ℓ	L	EDP NUMBER				
				0 RAD	0.8 RAD	1.5 RAD	2.5 RAD	3.0 RAD
6	6	13	57	32000	32001	-	-	-
8	8	16	63	32005	32006	32007	-	-
10	10	22	72	32010	32011	32012	-	-
12	12	26	83	32015	32016	32017	32018	32019
14	14	26	83	32020	32021	32022	32023	32024
16	16	32	92	32025	32026	32027	32028	32029
18	18	32	92	32030	32031	32032	32033	32034
20	20	38	104	32035	32036	32037	32038	32039



Note: Larger corner radius available on request.



**Recommended Cutting Parameters**  
**Vitesses de coupe suggérées**  
**Velocidades y Avances Recomendados**  
**Empfohlene Schnittparameter**

## INCH SERIES

$\emptyset$	Aluminium Alloys		Aluminium High Silicon	
	List 2030-2045	List 3030-3045	List 2030-2045	List 3030-3045
	<b>MAXIMUM RPM AVAILABLE</b>			
	CHIP LOAD PER TOOTH		CHIP LOAD PER TOOTH	
1/4	0.0020	0.0020	0.0018	0.0018
3/8	0.0035	0.0035	0.0023	0.0027
1/2	0.0042	0.0042	0.0033	0.0033
5/8	0.0055	0.0055	0.0045	0.0045
3/4	0.0070	0.0070	0.0057	0.0057
1	0.0100	0.0100	0.0080	0.0080

## METRIC SERIES

$\emptyset$	Aluminium Alloys		Aluminium High Silicon	
	List 2030M-2045M	List 3030M-3045M	List 2030M-2045M	List 3030M-3045M
	<b>MAXIMUM RPM AVAILABLE</b>			
	CHIP LOAD PER TOOTH		CHIP LOAD PER TOOTH	
6	0.054	0.054	0.045	0.045
8	0.071	0.071	0.057	0.057
10	0.090	0.090	0.070	0.070
12	0.108	0.108	0.085	0.085
16	0.140	0.140	0.115	0.115
20	0.180	0.180	0.145	0.145
25	0.250	0.250	0.200	0.200

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# **Minicut International**

*Leader in Cutting Tool Technology*

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