SUPERBEE

Indexable Carbide Form Cutters

2026

SUPERBEE

Recommended Cutting Conditions

Material	ISO	Hardness	Grade	Cutting Speed Feet/ Min	Feed In/Tooth
Non-Alloy Steel	P	< 25 HRC	T5700 / 520	500-800	.003-.006
Low Alloy Steel	P	~30 HRC	T5700 / 520	400-650	.003-.005
Die & Mold Steel	P	< 33 HRC	T5700 / 520	400-500	.003-.005
Stainless Steel (PH)	M	< 33 HRC	T5700 / 520	400-500	.003-.004
Stainless Steel (AS)	M	< 35 HRC	T5700 / 520	350-450	.003-.004
Cast Iron	K	~30 HRC	T5700 / 520	400-500	.003-.005
Aluminum - Low Si	N	B60	NT33	900-2500	.003-.007
Aluminum - High Si	N	B80	NT33	900-2500	.003-.006
Titanium Alloy	S	< 38 HRC	T5700 / 520	300-400	.003-.004
High Temp Alloy	S	< 44 HRC	T5700 / 520	80-120	.003-.004
Hardened Steel	H	> 50 HRC	T5700 / 520	150-250	.003-.004

E T5700

The T5700 proprietary **MDC** coating on NT56 is the ultimate in heat and wear resistance and lubricity. The T5700 out performs all other coatings in steel, stainless steel and exotics. Upgrading to T5700 from AlTiN will increase SFPM by at least 15%, feeds & speeds increased up to 30%, and tool life increased up to 200%.

E T520

The T520 **AlTiN** coating on NT56 is a high performance coating which excels in machining abrasive and hard to machine materials such as cast iron, aluminum alloys, tool steels and nickel alloys. Its superior oxidation resistance provides unparalleled performance in high temp machining. This coating is best for applications that generate the high heat at the tools cutting edge.

E NT5T

The NT5T **TiCN-TiN** coating on NT56 is designed for added wear resistance when milling steel, stainless steel and cast iron.

F NT33

The NT33 **Uncoated** grade for general purpose milling of aluminum, brass, cast iron and all non-ferrous materials. It has excellent strength and wear resistance.

E NT56

The NT56 **Uncoated** carbide with extreme edge strength is designed for general purpose milling of steel and cast iron. It is ideal for stainless steel and difficult machining conditions such as interrupted cutting.

E =Honed ***F*** =Sharp

Tips for BC large concave corner rounders:

- **For best insert life use a 45 degree chamfer mill for the first pass leaving around .025 of material from the center of the finish radius, then do a final pass with the BC large concave corner rounder.**
- **It is important when setting feed rate to remember that the BC series are single flute effective, with each insert cutting a segment of the finish radius.**

 Version 2.4 January 2026

SwiftCARB

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INDEXABLE CARBIDE FORM CUTTERS

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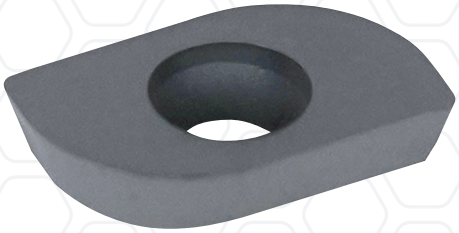
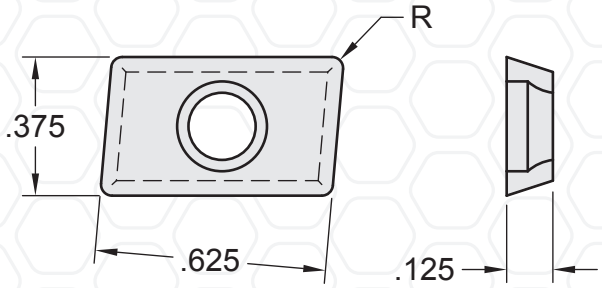
EM15 CONVEX FILLET RADIUS SERIES

Convex fillet radii range from .007" to .375", available in both fractional and metric sizes. Choose from either integral shank or shell mill cutter bodies, each designed for optimal performance. Both feature postive geometry for enhanced cutting speeds and a proprietary pocket design that ensures unmatched repeatability.

- Superbee inserts are precision ground on all surfaces ensuring the tightest tolerances possible. This provides a stronger edge with better wear characteristics than a pressed insert.
- The T5700 grade provides superior lubricity and heat resistance, delivering up to 30% higher SFM and up to 70% longer tool life in steel, stainless and exotic materials.





To build your insert, choose a Part Number in Red from each column. Example: EM15007ET5700

Range	Part Number	Radius	Fraction/ Metric
R1	EM15007	0.007	
	EM15015	0.015	1/64
	EM15020	0.020	
	EM15030	0.030	1/32
	EM15040	0.040	1MM
	EM15050	0.050	
	EM15060	0.060	1/16
R2	EM15070	0.070	
	EM15080	0.080	
	EM15090	0.090	
	EM15100	0.100	
	EM15110	0.110	7/64
	EM15120	0.120	3MM
	EM15125	0.125	1/8
	EM15130	0.130	
R3	EM15140	0.140	9/64
	EM15150	0.150	
	EM15156	0.156	5/32, 4MM
	EM15160	0.160	
	EM15170	0.170	
	EM15187	0.187	3/16
	EM15190	0.190	
R4	EM15200	0.200	
	EM15210	0.210	
	EM15220	0.220	
	EM15250	0.250	1/4
✳ R5	EM15312	0.312	5/16
R6	EM15375	0.375	3/8

Double Corner

Single Corner

Edge Prep + Coating + Substrate					
Honed	Honed	Honed	Honed	Honed	Sharp
MDC	AlTiN	TiCN-TiN	None	None	None
C5	C5	C5	C5	C2	C2
ET5700	ET520	ENT5T	ENT56	ENT33	FNT33

RECOMMENDED INSERTS BY MATERIAL TYPE

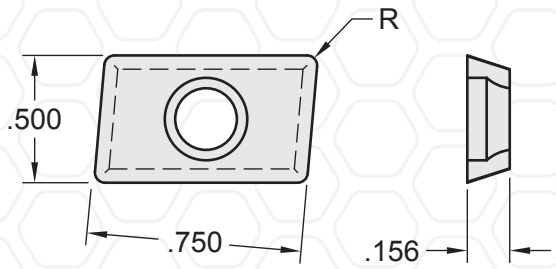
P	Non-Alloy Steel, Non Alloy Cast Steel	P	Low Alloy Steel, Low Alloy Cast Steel
P	High Alloy Steel, High Alloy Cast Steel	M	Austenitic Stainless Steel
M	Super Austenitic, Duplex Stainless Steel	K	Cast Iron
K	Wrought Alloy, Cast Alloyed Aluminum	N	Copper Alloys, Non Metallic Materials
S	High Temp Alloys Fe, Ni, or Co Based	S	Titanium and Ti Alloys
H	Hardened Steel, Chilled/ Hardened Cast Iron		

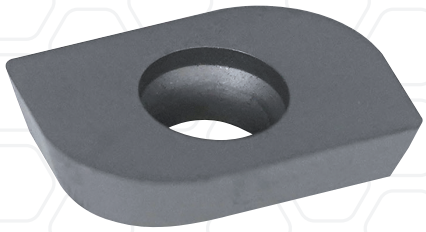
Special shapes, forms and sizes are available upon request.

EM19 CONVEX FILLET RADIUS SERIES

Convex fillet radii range from .007" to .500", available in both fractional and metric sizes. Choose from either integral shank or shell mill cutter bodies, each designed for optimal performance. Both feature postive geometry for enhanced cutting speeds and a proprietary pocket design that ensures unmatched repeatability.

- Superbee inserts are precision ground on all surfaces ensuring the tightest tolerances possible.
- The T5700 grade provides superior lubricity and heat resistance, delivering up to 30% higher SFM and up to 70% better tool life in steel, stainless and exotic materials.





To build your insert, choose a Part Number in Red from each column. Example: EM19007ET5700

Range	Part Number	Radius	Fraction/ Metric
R1	EM19007	0.007	
	EM19015	0.015	1/64
	EM19020	0.020	
	EM19030	0.030	1/32
	EM19040	0.040	1MM
	EM19050	0.050	
	EM19060	0.060	1/16
R2	EM19070	0.070	
	EM19080	0.080	
	EM19090	0.090	
	EM19100	0.100	
	EM19110	0.110	7/64
	EM19120	0.120	3MM
	EM19125	0.125	1/8
	EM19130	0.130	
R3	EM19140	0.140	9/64
	EM19150	0.150	
	EM19156	0.156	5/32,
	EM19160	0.160	4MM
	EM19170	0.170	
	EM19187	0.187	
	EM19190	0.190	3/16
R4	EM19200	0.200	
	EM19210	0.210	
	EM19220	0.220	
	EM19250	0.250	
R5	EM19312	0.312	1/4
R6	EM19375	0.375	5/16
R7	EM19437	0.437	3/8
✳ R8	EM19500	0.500	7/16

Double Corner

Single Corner

Edge Prep + Coating + Substrate					
Honed	Honed	Honed	Honed	Honed	Sharp
MDC	AlTiN	TiCN-TiN	None	None	None
C5	C5	C5	C5	C2	C2
ET5700	ET520	ENT5T	ENT56	ENT33	FNT33

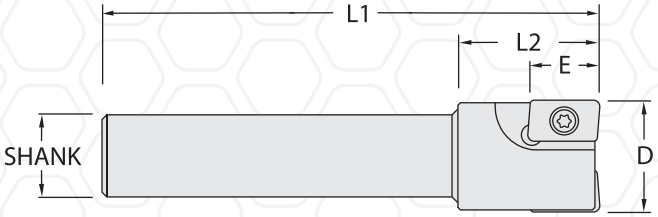
RECOMMENDED INSERTS BY MATERIAL TYPE

P			Non-Alloy Steel, Non Alloy Cast Steel
P			Low Alloy Steel, Low Alloy Cast Steel
P			High Alloy Steel, High Alloy Cast Steel
M			Austenitic Stainless Steel
M			Super Austenitic, Duplex Stainless Steel
K			Cast Iron
K			Wrought Alloy, Cast Alloyed Aluminum
N			Copper Alloys, Non Metallic Materials
S			High Temp Alloys Fe, Ni, or Co Based
S			Titanium and Ti Alloys
H			Hardened Steel, Chilled/ Hardened Cast Iron

Special shapes, forms and sizes are available upon request.

BE CONVEX FILLET RADIUS CUTTER

End mill style integral shank indexable cutter body with positive geometry for more aggressive cutting action, proprietary pocket design provides unmatched repeatability and better finishes.



EM15 Convex Radius .007-.375

Refer to page 1 for the full range of EM15 convex radius inserts

Begin by choosing a cutter body

Part Number	D	Shank	L1	L2	FL	E	Insert Type
BE4011540	0.625	0.625	3.375	1.000	1	0.625	EM15
BE4411548	0.687	0.750	4.000	1.250	1		
BE4811548	0.750	0.750	4.000	1.250	1		
BE6421548	1.000	0.750	4.500	1.250	2		
BE6421564	1.000	1.000	4.500	1.250	2		
BE8031580	1.250	1.250	5.000	1.750	3		
BE9631580	1.500	1.250	5.000	1.750	3		

Then choose a radius Example: BE4011540R1

.007-.060	.070-.130	.140-.190	.200-.250	.312	.375
R1	R2	R3	R4	R5	R6

Double Corner

EM19 Convex Radius .007-.500

Refer to page 2 for the full range of EM19 convex radius inserts

Begin by choosing a cutter body

Part Number	D	Shank	L1	L2	FL	E	Insert Type
BE5611948	0.875	0.750	4.500	1.250	1	0.750	EM19
BE5611964	0.875	1.000	4.500	1.250	1		
BE6411948	1.000	0.750	4.500	1.250	1		
BE6411964	1.000	1.000	4.500	1.250	1		
BE8021980	1.250	1.250	5.000	1.750	2		
BE9621980	1.500	1.250	5.000	1.750	2		

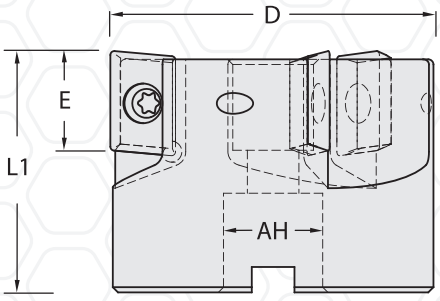
Then choose a radius Example: BE5611948R1

.007-.060	.070-.130	.140-.190	.200-.250	.312	.375	.437	.500
R1	R2	R3	R4	R5	R6	R7	R8

Double Corner | **Single Corner**

SUPERBEE

BE SHELL MILL CONVEX FILLET RADIUS CUTTER



Shell mill-style cutter bodies feature positive geometry for more aggressive cutting action. The proprietary pocket design ensures unmatched repeatability, minimizing runout and delivering superior surface finishes.

EM15 Convex Radius .007-.375

Refer to page 1 for the full range of EM15 convex radius inserts

Begin by choosing a shell mill

Part Number	D	AH	L1	FL	E	Insert Type
BE12851548	2.000	0.750	1.825	5	0.625	EM15
BE14451548	2.250	0.750		5		
BE16051548	2.500	0.750		5		
BE19261564	3.000	1.000		6		
BE22461580	3.500	1.250		6		

Then choose a radius Example: BE12851548R1

.007-.060	.070-.130	.140-.190	.200-.250	.312	.375
R1	R2	R3	R4	R5	R6

Double Corner

EM19 Convex Radius .007-.500

Refer to page 2 for the full range of EM15 convex radius inserts

Begin by choosing a shell mill

Part Number	D	AH	L1	FL	E	Insert Type
BE12831948	2.000	0.750	1.825	3	0.750	EM19
BE16031948	2.500					

Then choose a radius Example: BE12831948R1

.007-.060	.070-.130	.140-.190	.200-.250	.312	.375	.437	.500
R1	R2	R3	R4	R5	R6	R7	R8

Double Corner | **Single Corner**

Spare Parts:

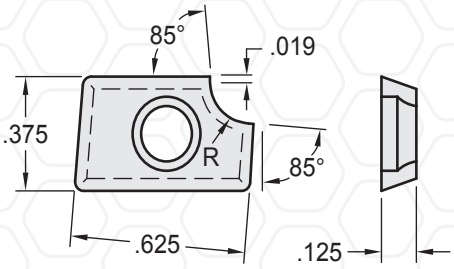
EM15 Screw: BS15
EM19 Screw: BS19
EM15 Wrench: BW15
EM19 Wrench: BW19

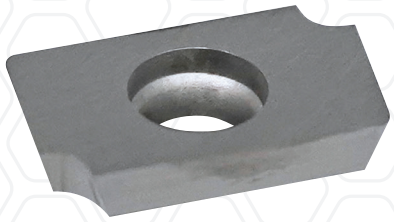
Special shapes, forms and sizes are available upon request.

EM15 CONCAVE CORNER ROUNDING RADIUS SERIES

Concave corner rounding radii stocked between .010"- .125" including fractional and metric sizes. Choose from either integral shank or shell mill cutter bodies, each designed for optimal performance. Featuring positive geometry for enhanced cutting speeds and a proprietary pocket design that ensures unmatched repeatability.

- **SUPERBEE inserts are precision ground on all surfaces ensuring the tightest tolerances possible. This provides a stronger edge with better wear characteristics than a pressed insert.**
- **The T5700 grade provides superior lubricity and heat resistance, delivering up to 30% higher SFM and up to 70% longer tool life in steel, stainless and exotic materials.**





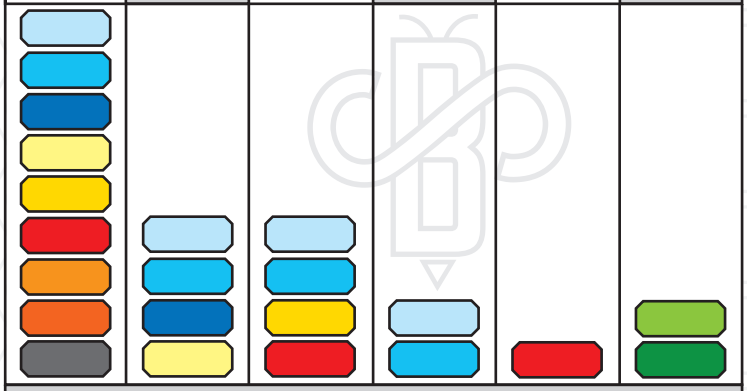
To build your insert, choose a Part Number in Red from each column. Example: EM15C010ET5700

Double Corner

Range	Part Number	Radius	Fraction/ Metric
C1	EM15C010	0.010	
	EM15C015	0.015	1/64
	EM15C020	0.020	
	EM15C030	0.030	1/32
	EM15C0393	0.039	1MM
	EM15C040	0.040	1MM
	EM15C050	0.050	
	EM15C060	0.060	1/16
C2	EM15C070	0.070	
	EM15C0787	0.079	5/64, 2MM
	EM15C080	0.080	
	EM15C090	0.090	
	EM15C100	0.100	
	EM15C110	0.110	7/64
	EM15C118	0.118	3MM
	EM15C120	0.120	3MM
	EM15C125	0.125	1/8

Edge Prep + Coating + Substrate

Honed	Honed	Honed	Honed	Honed	Sharp
MDC	AlTiN	TiCN-TiN	None	None	None
C5	C5	C5	C5	C2	C2
ET5700	ET520	ENT5T	ENT56	ENT33	FNT33



RECOMMENDED INSERTS BY MATERIAL TYPE

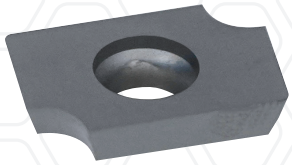
	P		Non-Alloy Steel, Non Alloy Cast Steel
	P		Low Alloy Steel, Low Alloy Cast Steel
	P		High Alloy Steel, High Alloy Cast Steel
	M		Austenitic Stainless Steel
	M		Super Austenitic, Duplex Stainless Steel
	K		Cast Iron
	N		Wrought Alloy, Cast Alloyed Aluminum
	N		Copper Alloys, Non Metallic Materials
	S		High Temp Alloys Fe, Ni, or Co Based
	S		Titanium and Ti Alloys
	H		Hardened Steel, Chilled/ Hardened Cast Iron

Special shapes, forms and sizes are available upon request.

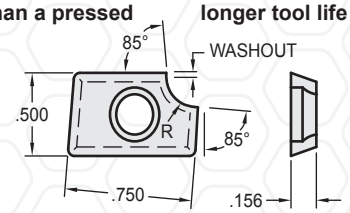
EM19 CONCAVE CORNER ROUNDING RADIUS SERIES

Concave corner rounding radii stocked between .010"- .250", including fractional and metric sizes. Choose from either integral shank or shell mill cutter bodies, each designed for optimal performance.

- **SUPERBEE inserts are precision ground on all surfaces ensuring the tightest tolerances possible. This provides a stronger edge with better wear characteristics than a pressed insert.**



- **The T5700 grade provides superior lubricity and heat resistance, delivering up to 30% higher SFM and up to 70% longer tool life in steel, stainless and exotic materials.**



WASHOUT
0.010-0.220 radius washout: 0.019
0.236 radius washout: 0.010
0.250 radius washout: 0.005

To build your insert, choose a Part Number in Red from each column. Example: EM19C010ET5700

	Range	Part Number	Radius	Fraction/ Metric
Double Corner	C1	EM19C010	0.010	
		EM19C015	0.015	1/64
		EM19C020	0.020	
		EM19C030	0.030	1/32
		EM19C0393	0.039	1MM
		EM19C040	0.040	1MM
		EM19C050	0.050	
		EM19C060	0.060	1/16
	C2	EM19C070	0.070	
		EM19C0787	0.079	5/64, 2MM
		EM19C080	0.080	
		EM19C090	0.090	
		EM19C100	0.100	
		EM19C110	0.110	7/64
		EM19C118	0.118	3MM
		EM19C120	0.120	3MM
		EM19C125	0.125	1/8
	C3	EM19C130	0.130	
		EM19C140	0.140	9/64
		EM19C150	0.150	
		EM19C156	0.156	5/32, 4MM
		EM19C157	0.157	5/32, 4MM
		EM19C160	0.160	
Single Corner	C4	EM19C170	0.170	
		EM19C180	0.180	
		EM19C187	0.187	3/16
		EM19C190	0.190	
	C5	EM19C197	0.197	5MM
		EM19C200	0.200	
		EM19C210	0.210	
		EM19C220	0.220	
	C6	EM19C236	0.236	15/64,6MM
		EM19C250	0.250	1/4

Edge Prep + Coating + Substrate					
Honed	Honed	Honed	Honed	Honed	Sharp
MDC	AlTiN	TiCN-TiN	None	None	None
C5	C5	C5	C5	C2	C2
ET5700	ET520	ENT5T	ENT56	ENT33	FNT33

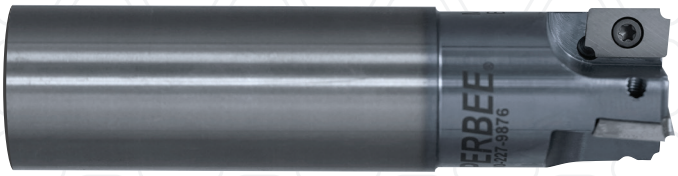
RECOMMENDED INSERTS BY MATERIAL TYPE

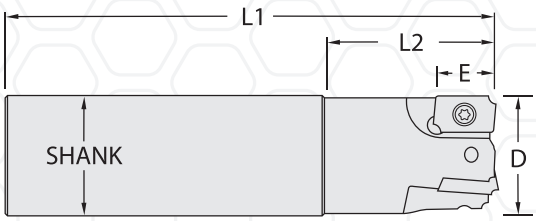
P			Non-Alloy Steel, Non Alloy Cast Steel
P			Low Alloy Steel, Low Alloy Cast Steel
P			High Alloy Steel, High Alloy Cast Steel
M			Austenitic Stainless Steel
M			Super Austenitic, Duplex Stainless Steel
K			Cast Iron
N			Wrought Alloy, Cast Alloyed Aluminum
N			Copper Alloys, Non Metallic Materials
S			High Temp Alloys Fe, Ni, or Co Based
S			Titanium and Ti Alloys
H			Hardened Steel, Chilled/ Hardened Cast Iron

Special shapes, forms and sizes are available upon request.

BE CONCAVE CORNER ROUNDING CUTTER

End mill style integral shank indexable cutter bodies relieved for EM15 or EM19 concave corner rounding inserts. Designed with positive geometry for more aggressive cutting action and a proprietary pocket design providing unmatched repeatability and quality finishes.





EM15 Concave Radius .010-.125

Refer to page 4 for the full range of EM15 convex radii inserts

Begin by choosing a cutter body

Part Number	D	Shank	L1	L2	FL	E	Insert Type
BE4011540	0.625	0.625	3.375	1.000	1	0.625	EM15
BE4411548	0.687	0.750	4.000	1.250	1		
BE4811548	0.750	0.750	4.000	1.250	1		
BE6421548	1.000	0.750	4.500	1.250	2		
BE6421564	1.000	1.000	4.500	1.250	2		
BE8031580	1.250	1.250	5.000	1.750	3		
BE9631580	1.500	1.250	5.000	1.750	3		

Then choose a radius Example: BE4011540C1

.010-.060	.070-.125
C1	C2

Double Corner

EM19 Concave Radius .010-.250

Refer to page 5 for the full range of EM19 concave radii inserts

Begin by choosing a cutter body

Part Number	D	Shank	L1	L2	FL	E	Insert Type
BE5611948	0.875	0.750	4.500	1.250	1	0.750	EM19
BE5611964	0.875	1.000	4.500	1.250	1		
BE6411948	1.000	0.750	4.500	1.250	1		
BE6411964	1.000	1.000	4.500	1.250	1		
BE8021980	1.250	1.250	5.000	1.750	2		
BE9621980	1.500	1.250	5.000	1.750	2		

Then choose a radius Example: BE5611948C1

.010-.060	.070-.125	.130-.160	.170-.190	.197-.220	.236-.250
C1	C2	C3	C4	C5	C6

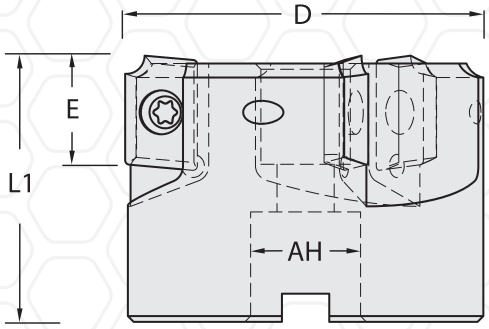
Double Corner **Single Corner**

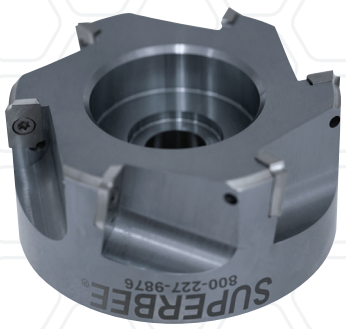
Spare Parts:
EM15 Screw: BS15
EM19 Screw: BS19
EM15 Wrench: BW15
EM19 Wrench: BW19

SUPERBEE

BE SHELL MILL CONCAVE CORNER ROUNDING CUTTER

Shell mill-style indexable cutter bodies precision-relieved for EM15 or EM19 concave corner rounding inserts. Designed with positive geometry for more aggressive cutting action, they feature a proprietary pocket design that ensures unmatched repeatability and superior surface finishes.





EM15 Concave Radius .010-.125

Refer to page 4 for the full range of EM15 concave radii inserts

Begin by choosing a shell mill

Part Number	D	AH	L1	FL	E	Insert Type
BE12851548	2.000	0.750	1.825	5	0.625	EM15
BE14451548	2.250	0.750		5		
BE16051548	2.500	0.750		5		
BE19261564	3.000	1.000		6		
BE22461580	3.500	1.250		6		

Then choose a radius Example: BE12851548R3

.010-.060	.070-.125
C1	C2

Double Corner

EM19 Concave Radius .010-.250

Refer to page 5 for the full range of EM15 concave radii inserts

Begin by choosing a shell mill

Part Number	D	AH	L1	FL	E	Insert Type
BE12831948	2.000	0.750	1.825	3	0.750	EM19
BE16031948	2.500					

Then choose a radius Example: BE12831948C1

.010-.060	.070-.125	.130-.160	.170-.190	.197-.220	.236-.250
C1	C2	C3	C4	C5	C6

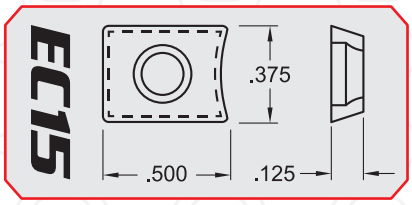
Double Corner **Single Corner**

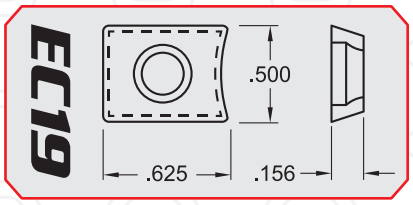
Special shapes, forms and sizes are available upon request.

EC CORNER ROUNDING SERIES

Large Corner Rounding Concave Inserts

The fastest way to cut large radii, our design segments the cut, reducing tool pressure and minimizing chatter for higher feed rates. Available in both fractional and metric sizes from .250" - 1.00".



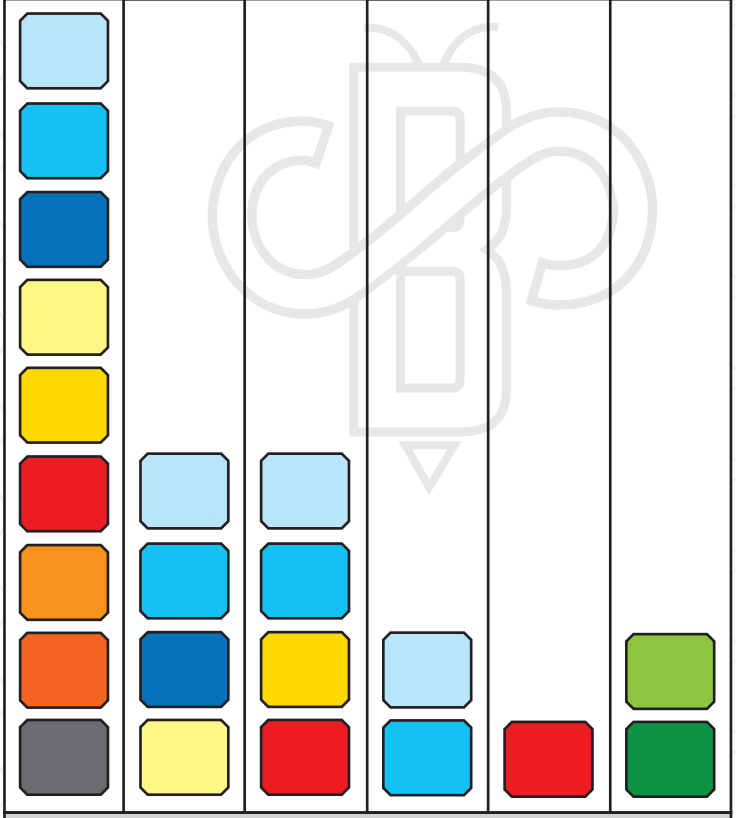


To build your insert, choose a Part Number in Red from each column. Example: EC15C250ET5700

Range	Part Number	Radius	Fraction/ Metric
EC15	EC15C250	0.250	1/4
	EC15C275	0.275	7MM
	EC15C281	0.281	9/32
	EC15C312	0.312	5/16
	EC15C315	0.315	8MM
	EC15C343	0.343	11/32
	EC15C354	0.354	9MM
	EC15C375	0.375	3/8
	EC15C393	0.393	10MM
EC19	EC19C406	0.406	13/32
	EC19C433	0.433	11MM
	EC19C437	0.437	7/16
	EC19C468	0.468	15/32
	EC19C472	0.472	12MM
	EC19C500	0.500	1/2
	EC19C512	0.512	13MM
EC15	EC15C531	0.531	17/32
	EC15C551	0.551	14MM
	EC15C562	0.562	9/16
	EC15C590	0.590	15MM
	EC15C625	0.625	5/8
	EC15C629	0.629	16MM
EC19	EC19C656	0.656	21/32
	EC19C669	0.669	17MM
	EC19C687	0.687	11/16
	EC19C708	0.708	18MM
	EC19C718	0.718	23/32
	EC19C748	0.748	19MM
	EC19C750	0.750	3/4
	EC19C781	0.781	25/32
	EC19C787	0.787	20MM
	EC19C812	0.812	13/16
	EC19C875	0.875	7/8
	EC19C906	0.906	29/32,23MM
	EC19C968	0.968	31/32
	EC19C984	0.984	63/64, 25MM
	EC19C100	1.000	1

Edge Prep + Coating + Substrate

Honed	Honed	Honed	Honed	Honed	Sharp
MDC	AlTiN	TiCN-TiN	None	None	None
C5	C5	C5	C5	C2	C2
ET5700	ET520	ENT5T	ENT56	ENT33	FNT33



RECOMMENDED INSERTS BY MATERIAL TYPE

	P		Non-Alloy Steel, Non Alloy Cast Steel
	P		Low Alloy Steel, Low Alloy Cast Steel
	P		High Alloy Steel, High Alloy Cast Steel
	M		Austenitic Stainless Steel
	M		Super Austenitic, Duplex Stainless Steel
	K		Cast Iron
	N		Wrought Alloy, Cast Alloyed Aluminum
	N		Copper Alloys, Non Metallic Materials
	S		High Temp Alloys Fe, Ni, or Co Based
	S		Titanium and Ti Alloys
	H		Hardened Steel, Chilled/ Hardened Cast Iron

Special shapes, forms and sizes are available upon request.

BC LARGE CONCAVE CORNER ROUNDING RADIUS CUTTER

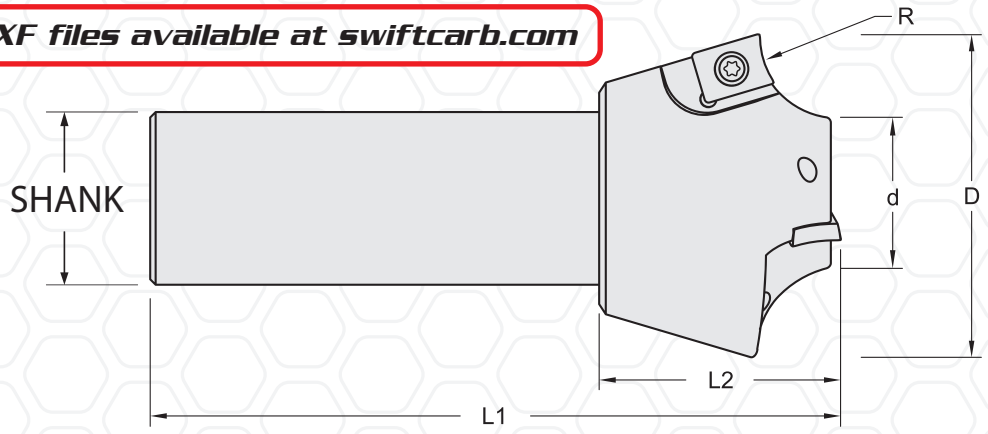
Integral shank large concave cutter bodies offer the fastest way to cut large radii. Our design segments the cut, reducing tool pressure and minimizing chatter, allowing for higher feed rates and improved performance.

Spare Parts:
EC15 Screw: BS15
EC19 Screw: BS19
EC15 Wrench: BW15
EC19 Wrench: BW19

.250-1.000 Radius Cutter Body

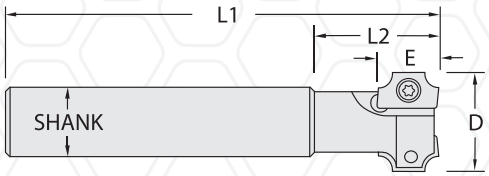
Part Number	Radius Range	D	d	Shank	L1	L2	FL	
BC4821564C250	.250 -.280	1.409	0.748	1.000	4.500	0.850	2	EC15
BC4821564C281	.281 -.311	1.454	0.745			0.910		
BC4821564C312	.312 -.342	1.480	0.745			1.000		
BC4821564C343	.343 -.374	1.522	0.748			1.000		
BC4821564C375	.375 -.405	1.550	0.748			1.100		
BC5621980C406	.406 -.436	1.846	0.883	1.250	5.000	1.250	2	EC19
BC5621980C437	.437 -.467	1.883	0.872			1.346		
BC5621980C468	.468 -.499	1.812	0.776			1.750		
BC5621980C500	.500 -.530	1.957	0.876			1.465		
BC8031580C531	.531 -.561	2.399	1.249	1.250	5.000	1.800	3	EC15
BC8031580C562	.562 -.592	2.375	1.200			1.750		
BC8031580C625	.625 -.655	2.538	1.245			1.814		
BC9631980C656	.656 -.686	2.943	1.496	1.250	5.000	1.800	3	EC19
BC9631980C687	.687 -.717	2.877	1.386			1.750		
BC9631980C718	.718 -.749	3.023	1.494			1.805		
BC9631980C750	.750 -.780	3.059	1.500			1.800		
BC9631980C781	.781 -.811	3.130	1.491			1.800		
BC9631980C812	.812 -.842	3.164	1.498			1.790		
BC11241980C875	.875 -905	3.601	1.750	1.250	5.250	2.066	4	
BC11241980C906	.906 -936	3.687	1.751			2.051		
BC11241980C968	.968 -.999	3.756	1.697			2.026		
BC11241980C1.000	1.000	3.800	1.800			2.000		

DXF files available at swiftcarb.com



BE TOP & BOTTOM 90° CORNER ROUNDING CUTTER

End mill style indexable cutter body for 90° top and bottom corner rounding, cuts a radius on the top, bottom, or both corners of your part. Positive geometry for more aggressive cutting action, and proprietary pocket design provides unmatched repeatability, reducing runout and producing far better finishes.



Spare Parts:
EM15 Screw: BS15
EM19 Screw: BS19
EM15 Wrench: BW15
EM19 Wrench: BW19

EM15 .030-.125 Radius Cutter Body

Begin by choosing a Top & Bottom cutter body

Part Number	D	Shank	L1	L2	FL	E	Insert Type
BE6421548TB	1.000	0.750	4.500	1.250	2	0.625	EM15
BE6421564TB	1.000	1.000	4.500	1.250	2		
BE8031580TB	1.250	1.250	5.000	1.750	3		

Then choose a radius range — Example: BE6421548TBC1

.030-.060	.079-.125
C1	C2

EM19 .156-.250 Radius Cutter Body

Begin by choosing a Top & Bottom cutter body

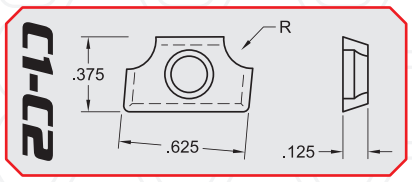
Part Number	D	Shank	L1	L2	FL	E	Insert Type
BE8021980TB	1.250	1.250	5.000	1.750	2	0.750	EM19

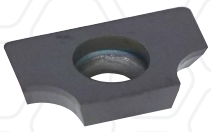
Then choose a radius range — Example: BE8021980TBC3

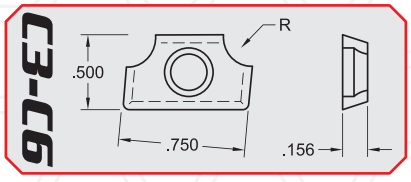
.156-.157	.187	.197	.236-.250
C3	C4	C5	C6

EM TOP & BOTTOM 90° CORNER ROUNDING

The EM top and bottom corner rounding inserts effortlessly cut a 90° radius on the top, bottom, or both corners of your part. Available from .030" - .250".







WASHOUT
0.030-0.197 radius washout: 0.019, 0.236 radius washout: 0.010, 0.250 radius washout: 0.005

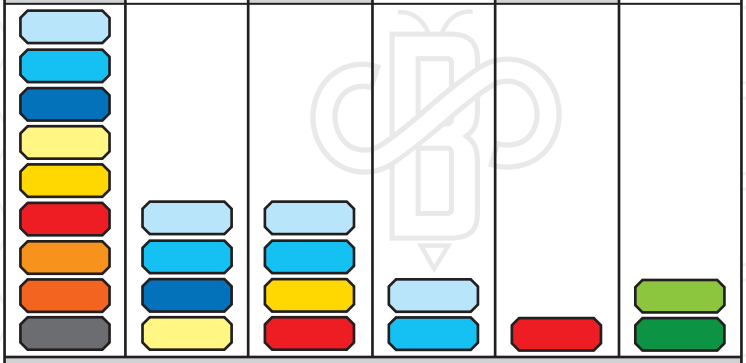
P	Non-Alloy Steel	
P	Low Alloy Steel	
P	High Alloy Steel	
M	Stainless Steel (PH)	
M	Stainless Steel (AS)	
K	Cast Irons	
N	Aluminum - Low Si	
N	Copper Alloy, Plastic	
S	High Temp Alloys	
S	Titanium Alloys	
H	Hardened Steels	

To build your insert, choose a Part Number in Red from each column. Example: EM15C030TBET5700

Range	Part Number	Radius	Fraction/ Metric
C1	EM15C030TB	0.030	1/32
	EM15C0393TB	0.039	1MM
	EM15C060TB	0.060	1/16
C2	EM15C0787TB	0.079	5/64, 2MM
	EM15C090TB	0.090	
	EM15C118TB	0.118	3MM
	EM15C120TB	0.120	3MM
	EM15C125TB	0.125	1/8
C3	EM19C156TB	0.156	5/32, 4MM
	EM19C157TB	0.157	5/32, 4MM
C4	EM19C187TB	0.187	3/16
C5	EM19C197TB	0.197	5MM
C6	EM19C236TB	0.236	15/64, 6MM
	EM19C250TB	0.250	1/4

Edge Prep + Coating + Substrate

Honed	Honed	Honed	Honed	Honed	Sharp
MDC	AlTiN	TiCN-TiN	None	None	None
C5	C5	C5	C5	C2	C2
ET5700	ET520	ENT5T	ENT56	ENT33	FNT33

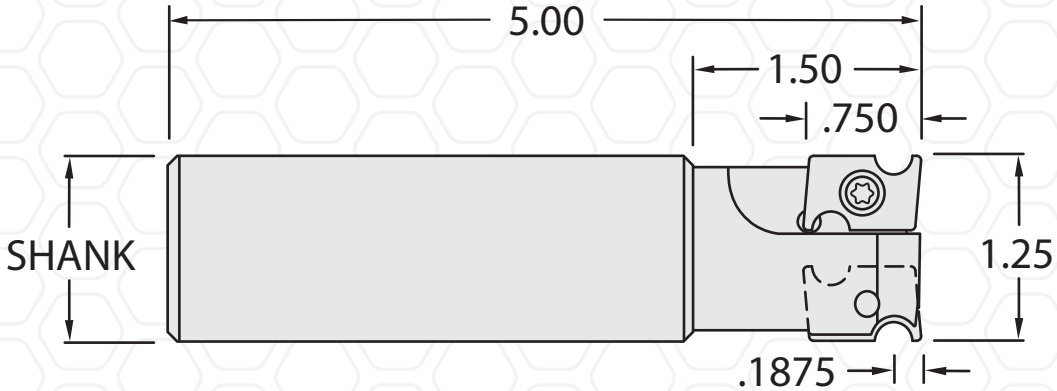


RECOMMENDED INSERTS BY MATERIAL TYPE

Special shapes, forms and sizes are available upon request.

180° CORNER ROUNDING CUTTER

The 180° corner rounding series. All surfaces are precision ground for excellent repeatability from insert to insert. Incredible time savings for all applications requiring a 180 degree radius. Sizes not listed in the table between .031-.125 radius can be quoted upon request.

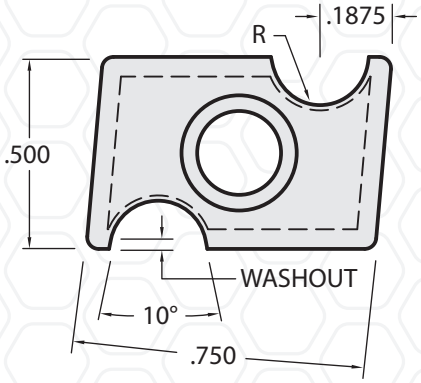


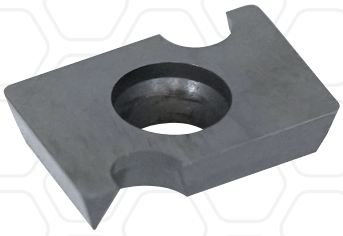
Cutter Body Part Number	Radius Range	DIA	Shank DIA	OAL	Flutes
BE8021980180DEGC1	.031-.062	1.250	1.250	5.000	2
BE8021980180DEGC2	.079-.125				

Spare Parts:
EM19 Screw: BS19
EM19 Wrench: BW19

SUPERBEE

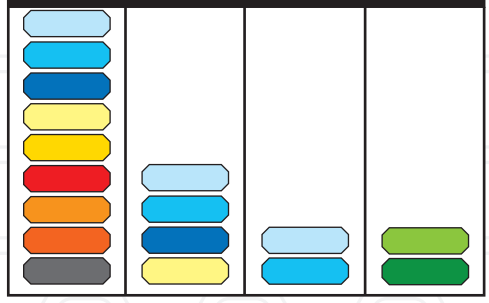
180° CORNER ROUNDING INSERTS





Insert Part Number	R	Washout
EM19180DEGC031	0.031	0.015
EM19180DEGC039	0.039	0.015
EM19180DEGC047	0.047	0.015
EM19180DEGC062	0.062	0.015
EM19180DEGC079	0.079	0.015
EM19180DEGC093	0.093	0.015
EM19180DEGC099	0.099	0.015
EM19180DEGC118	0.118	0.015
EM19180DEGC125	0.125	0.005

Edge Prep + Coating + Substrate			
Honed	Honed	Honed	Sharp
MDC	AlTiN	None	None
C5	C5	C5	C2
ET5700	ET520	ENT56	FNT33

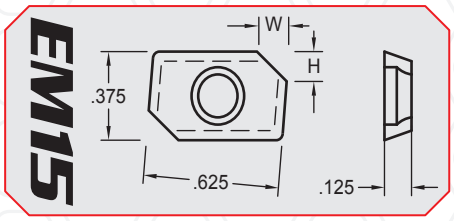


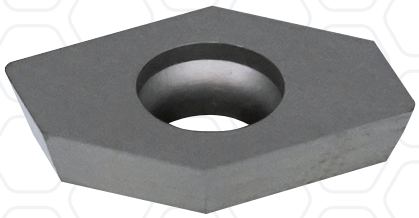
	P		Non-Alloy Steel, Non Alloy Cast Steel
	P		Low Alloy Steel, Low Alloy Cast Steel
	P		High Alloy Steel, High Alloy Cast Steel
	M		Austenitic Stainless Steel
	M		Super Austenitic, Duplex Stainless Steel
	K		Cast Iron
	N		Wrought Alloy, Cast Alloyed Aluminum
	N		Copper Alloys, Non Metallic Materials
	S		High Temp Alloys Fe, Ni, or Co Based
	S		Titanium and Ti Alloys
	H		Hardened Steel, Chilled/ Hardened Cast Iron

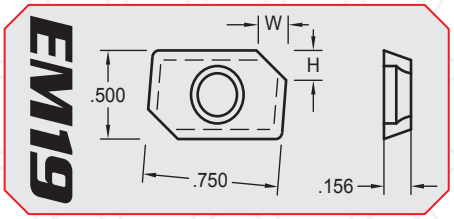
EM CHAMFER SERIES

Available in 9 different chamfer angles. Choose from either integral shank or shell mill cutter bodies, each designed for optimal performance. Positive geometry for more aggressive cutting action.

- **SUPERBEE inserts are precision ground on all surfaces ensuring the tightest tolerances possible. This provides a stronger edge with better wear characteristics than a pressed insert.**
- **T5700 grade provides superior lubricity and heat resistance, delivering up to 30% higher SFM and up to 70% longer tool life in steel, stainless and exotic materials.**







To build your insert, choose a Part Number in Red from each column. Example: **EM1510250ET5700**

EM15 CHAMFER WIDTH UP TO .200

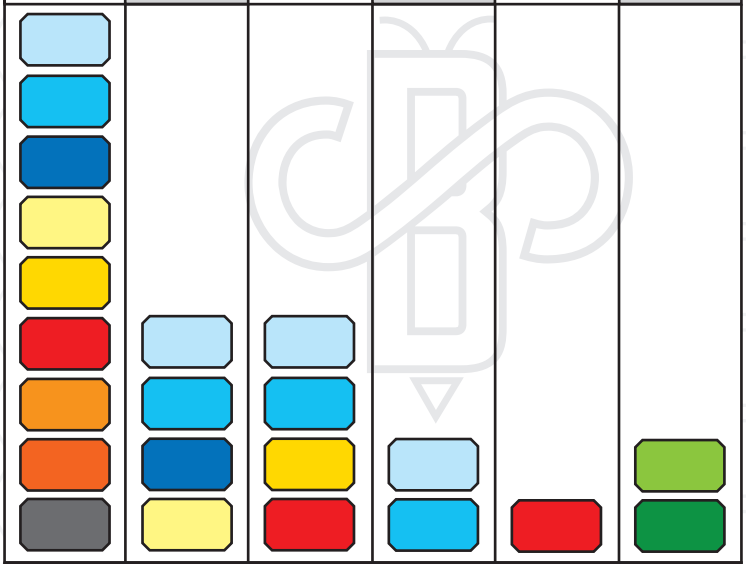
Part Number	Angle	H	W
EM1510250	10°	0.044	0.250
EM1515250	15°	0.067	0.250
EM1520250	20°	0.091	0.250
EM1525250	25°	0.117	0.250
EM1530200	30°	0.115	0.200
EM1541200	41°	0.174	0.200
EM1545200	45°	0.200	0.200
EM1550200	50°	0.200	0.168
EM1560200	60°	0.200	0.115

EM19 CHAMFER WIDTH UP TO .250

Part Number	Angle	H	W
EM1910300	10°	0.052	0.300
EM1915300	15°	0.080	0.300
EM1920300	20°	0.109	0.300
EM1925300	25°	0.140	0.300
EM1930250	30°	0.144	0.250
EM1941250	41°	0.217	0.250
EM1945250	45°	0.250	0.250
EM1950250	50°	0.250	0.210
EM1960250	60	0.250	0.144

Edge Prep + Coating + Substrate

Honed	Honed	Honed	Honed	Honed	Sharp
MDC	AlTiN	TiCN-TiN	None	None	None
C5	C5	C5	C5	C2	C2
ET5700	ET520	ENT5T	ENT56	ENT33	FNT33



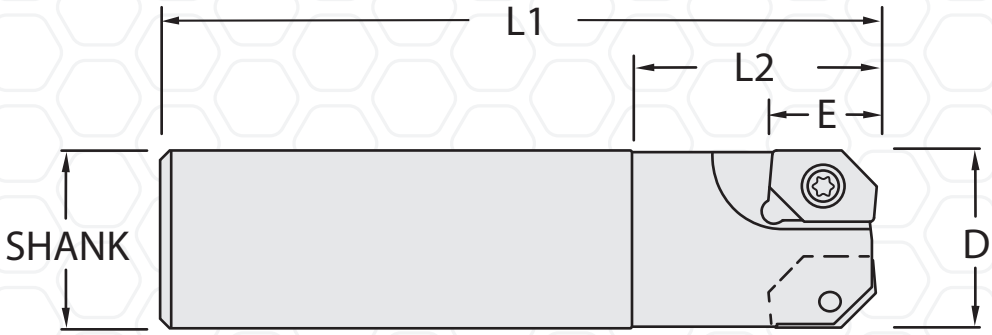
RECOMMENDED INSERTS BY MATERIAL TYPE

	P		Non-Alloy Steel, Non Alloy Cast Steel
	P		Low Alloy Steel, Low Alloy Cast Steel
	P		High Alloy Steel, High Alloy Cast Steel
	M		Austenitic Stainless Steel
	M		Super Austenitic, Duplex Stainless Steel
	K		Cast Iron
	N		Wrought Alloy, Cast Alloyed Aluminum
	N		Copper Alloys, Non Metallic Materials
	S		High Temp Alloys Fe, Ni, or Co Based
	S		Titanium and Ti Alloys
	H		Hardened Steel, Chilled/ Hardened Cast Iron

Special shapes, forms and sizes are available upon request.

BE CHAMFER CUTTER

The end mill-style integral shank indexable cutter body features positive geometry for more aggressive cutting action. Its proprietary pocket design ensures unmatched repeatability, delivering superior finishes on chamfered corners.



EM15 CHAMFER WIDTH UP TO .200

Refer to page 10 for the full range of chamfer widths

Begin by choosing a cutter body

Part Number	D	Shank	L1	L2	FL	E	Insert Type
BE4011540	0.625	0.625	3.375	1.000	1	0.625	EM15
BE4411548	0.687	0.750	4.000	1.250	1		
BE4811548	0.750	0.750	4.000	1.250	1		
BE6421548	1.000	0.750	4.500	1.250	2		
BE6421564	1.000	1.000	4.500	1.250	2		
BE8031580	1.250	1.250	5.000	1.750	3		
BE9631580	1.500	1.250	5.000	1.750	3		

Then choose an angle Example: BE4011540A10

10°	15°	20°	25°	30°	41°	45°	50°	60°
A10	A15	A20	A25	A30	A41	A45	A50	A60

EM19 CHAMFER WIDTH UP TO .250

Refer to page 10 for the full range of chamfer widths

Begin by choosing a cutter body

Part Number	D	Shank	L1	L2	FL	E	Insert Type
BE5611948	0.875	0.750	4.500	1.250	1	0.750	EM19
BE5611964	0.875	1.000	4.500	1.250	1		
BE6411948	1.000	0.750	4.500	1.250	1		
BE6411964	1.000	1.000	4.500	1.250	1		
BE8021980	1.250	1.250	5.000	1.750	2		
BE9621980	1.500	1.250	5.000	1.750	2		

Then choose an angle Example: BE5611948A10

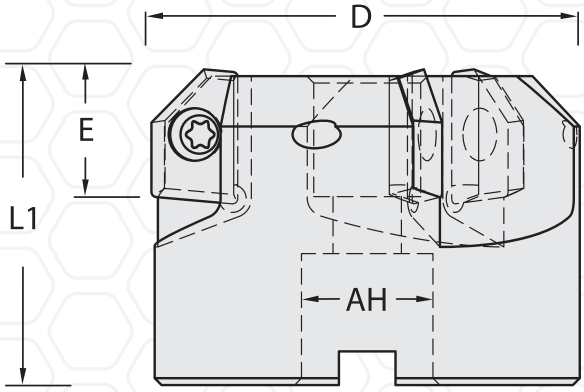
10°	15°	20°	25°	30°	41°	45°	50°	60°
A10	A15	A20	A25	A30	A41	A45	A50	A60

Spare Parts:
EM15 Screw: BS15
EM19 Screw: BS19
EM15 Wrench: BW15
EM19 Wrench: BW19

Special shapes, forms and sizes are available upon request.

BE SHELL MILL CHAMFER CUTTER

Shell mill-style indexable cutter body features positive geometry for more aggressive cutting action. Its proprietary pocket design ensures unmatched repeatability, delivering superior finishes on chamfered corners.



EM15 CHAMFER WIDTH UP TO .200

Refer to page 10 for the full range of chamfer widths

Begin by choosing a shell mill

Part Number	D	AH	L1	FL	E	Insert Type
BE12851548	2.000	0.750		5		
BE14451548	2.250	0.750		5		
BE16051548	2.500	0.750	1.825	5	0.625	EM15
BE19261564	3.000	1.000		6		
BE22461580	3.500	1.250		6		

Then choose an angle Example: BE12851548A10

10°	15°	20°	25°	30°	41°	45°	50°	60°
A10	A15	A20	A25	A30	A41	A45	A50	A60

EM19 CHAMFER WIDTH UP TO .250

Refer to page 10 for the full range of chamfer widths

Begin by choosing a shell mill

Part Number	D	AH	L1	FL	E	Insert Type
BE12831948	2.000	0.750	1.825	3	0.750	EM19
BE16031948	2.500	0.750				

Then choose an angle Example: BE12831948A10

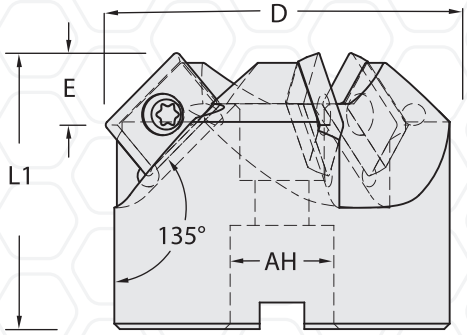
10°	15°	20°	25°	30°	41°	45°	50°	60°
A10	A15	A20	A25	A30	A41	A45	A50	A60

Spare Parts:
EM15 Screw: BS15
EM19 Screw: BS19
EM15 Wrench: BW15
EM19 Wrench: BW19

SUPERBEE

BE 45° SHELL MILL CHAMFER CUTTER

The ideal choice for larger 45° chamfers.This cutter body holds a standard EM15 or EM19 insert at a 45° angle, delivering a longer length of cut than the BE Chamfer series. (Inserts on page 1 and 2)



EM15 CHAMFER .400 WIDTH

Part Number	Angle	D	d	L1	AH	FL	E	Insert
CM963154845	45°	2.352	1.500	1.825	0.750	3	0.400	EM15

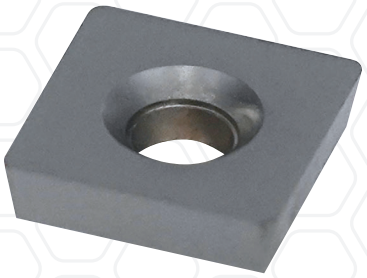
EM19 CHAMFER .490 WIDTH

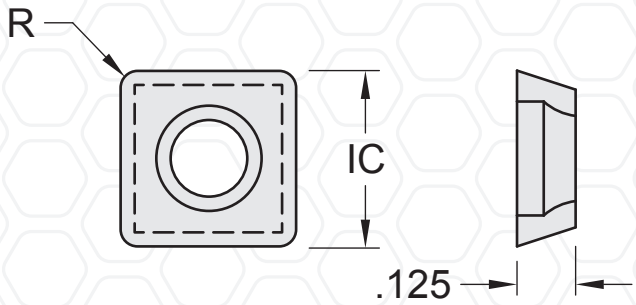
Part Number	Angle	D	d	L1	AH	FL	E	Insert
CM963194845	45°	2.530	1.500	1.825	0.750	3	0.490	EM19

SP SQUARE INSERT SERIES

Square four cornered inserts available with corner radii between .010" - .090".

- SUPERBEE inserts are precision ground on all surfaces ensuring the tightest tolerances possible. This provides a stronger edge with better wear characteristics than a pressed insert.
- T5700 grade provides superior lubricity and heat resistance, delivering up to 30% higher SFM and up to 70% longer tool life in steel, stainless and exotic materials.





To build your insert, choose a Part Number in Red from each column. Example: SP32010ET5700

SP32 Inserts

Part Number	Radius	IC	Thickness
SP32010	0.010	0.375	0.125
SP32015	0.015	0.375	0.125
SP32030	0.030	0.375	0.125
SP32060	0.060	0.375	0.125
SP32090	0.090	0.375	0.125

SP42 Inserts

Part Number	Radius	IC	Thickness
SP42010	0.010	0.500	0.125
SP42015	0.015	0.500	0.125
SP42030	0.030	0.500	0.125
SP42060	0.060	0.500	0.125
SP42090	0.090	0.500	0.125

Edge Prep + Coating + Substrate

Honed	Honed	Honed	Honed	Honed	Sharp
MDC	AlTiN	TiCN-TiN	None	None	None
C5	C5	C5	C5	C2	C2
ET5700	ET520	ENT5T	ENT56	ENT33	FNT33

RECOMMENDED INSERTS BY MATERIAL TYPE

P			Non-Alloy Steel, Non Alloy Cast Steel
P			Low Alloy Steel, Low Alloy Cast Steel
P			High Alloy Steel, High Alloy Cast Steel
M			Austenitic Stainless Steel
M			Super Austenitic, Duplex Stainless Steel
K			Cast Iron
N			Wrought Alloy, Cast Alloyed Aluminum
N			Copper Alloys, Non Metallic Materials
S			High Temp Alloys Fe, Ni, or Co Based
S			Titanium and Ti Alloys
H			Hardened Steel, Chilled/ Hardened Cast Iron

Special shapes, forms and sizes are available upon request.

Spare Parts:

SP3 Screw: CS5

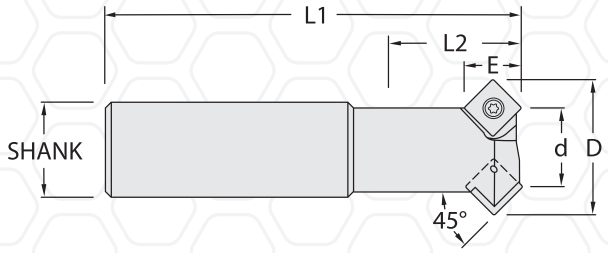
SP4 Screw: CS6

SP3 Wrench: NT9

SP4 Wrench: NT15

CMS 45° TOP & BOTTOM CHAMFER CUTTER

Ideal for cutting a 45° on the top or bottom of a part, utilizing a square 4 cornered insert, and stocked with 5 different radii. The positive geometry allows for more aggressive cutting action, while the proprietary pocket design provides unmatched repeatability and reduced runout.



CMS Chamfer .375-.400 WIDTH

Refer to page 13 for the full range of insert sizes

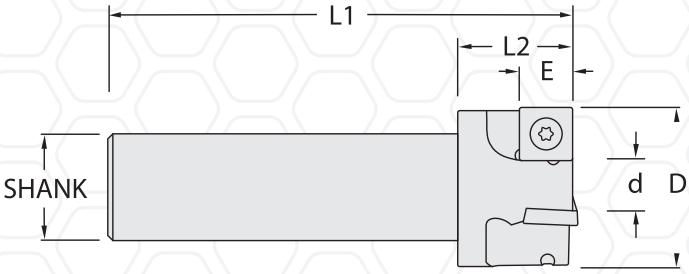
Part Number	D	d	Shank	L1	L2	FL	E	Insert
CMS4014264A45	0.989	0.312	1.000	5.000	1.750	1	0.500	SP42
CMS4814264A45	1.304	0.625	1.000	5.250	2.000	1	0.500	SP42
CMS6433280A45	1.504	1.000	1.250	5.500	2.250	3	0.375	SP32
CMS6424280A45	1.680	1.000	1.250	5.500	2.250	2	0.500	SP42
CMS8034280A45	1.931	1.250	1.250	5.500	2.250	3	0.500	SP42
CMS9634280A45	2.056	1.375	1.250	5.500	2.250	3	0.500	SP42

SUPERBEE

CB COUNTERBORE CUTTER BODY

Designed for efficient counterboring, this cutter delivers a precise flat-bottom cut utilizing the SP Series square, four-cornered insert, available in five different radii.

Spare Parts:
- SP3 Screw: CS5
- SP4 Screw: CS6
- SP3 Wrench: NT9
- SP4 Wrench: NT15



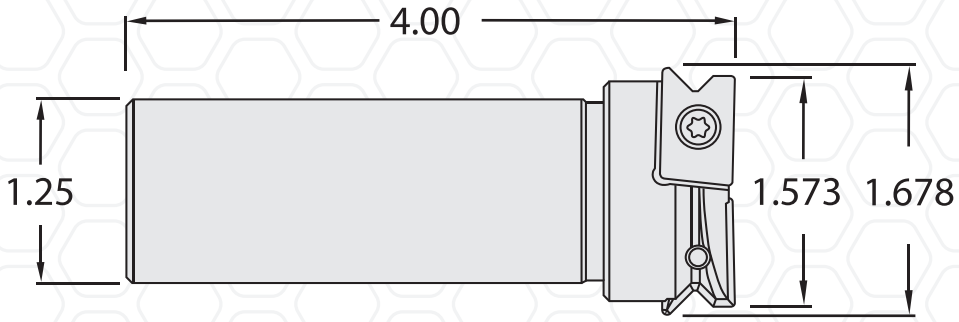
Counterbore .594-1.50 Diameter

Refer to page 13 for the full range of insert sizes

Part Number	D	d	Shank	L1	L2	FL	E	Insert
CB3813240	0.594	0.125	0.625	3.250	1.000	1	0.370	SP32
CB4013240	0.625	0.125	0.625	3.250		1	0.370	SP32
CB4413248	0.687	0.125	0.750	3.250		1	0.370	SP32
CB5013248	0.781	0.125	0.750	3.250		1	0.370	SP32
CB6423248	1.000	0.290	0.750	3.250		2	0.370	SP32
CB6823248	1.062	0.352	0.750	3.250		2	0.370	SP32
CB7633264	1.187	0.477	1.000	4.250		3	0.370	SP32
CB8033264	1.250	0.540	1.000	4.250		3	0.370	SP32
CB8834264	1.375	0.415	1.000	4.250		3	0.495	SP42
CB9634264	1.500	0.540	1.000	4.250		3	0.495	SP42

PICATINNY / NATO RAIL CUTTER

Introducing the new Picatinny / NATO accessory rail indexable milling cutter. It is designed in accordance with the STANAG 4694 standardization agreement. Each surface is precision ground to ensure exceptional repeatability from insert to insert, delivering incredible time and cost savings for any application requiring a Picatinny / NATO accessory rail.

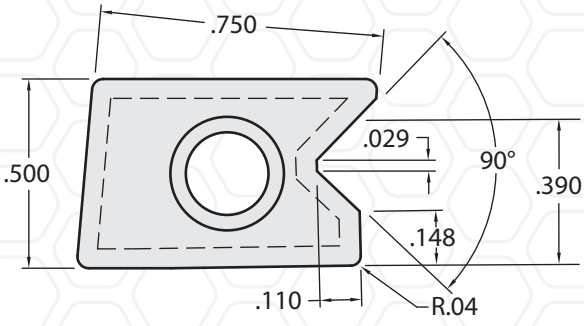


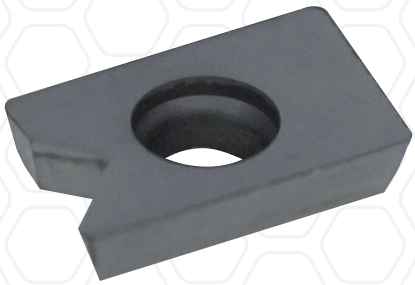
Cutter Body Part Number	DIA	Shank DIA	OAL	Flutes
BESTANAG4694	1.573	1.250	4.000	2

SUPERBEE

PICATINNY / NATO RAIL CUTTING INSERTS

Spare Parts:
EM19 Screw: BS19
EM19 Wrench: BW19



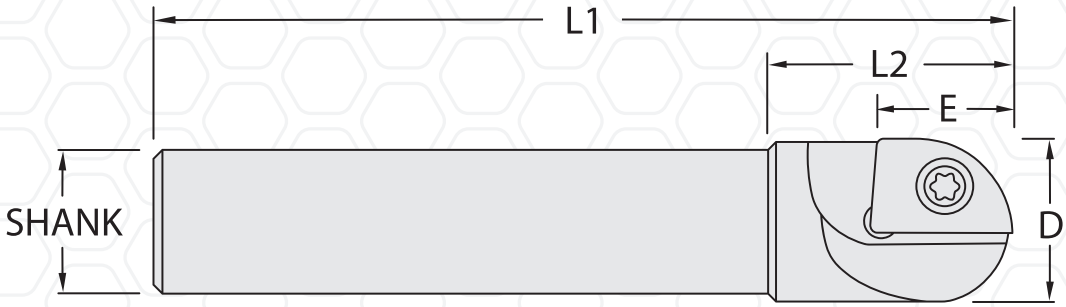


Insert Part Number	
EM19STANAG4694	
Edge Prep, Coating, Substrate	
Honed	Sharp
MDC	None
C5	C2
ET5700	FNT33

	P		Non-Alloy Steel, Non Alloy Cast Steel
	P		Low Alloy Steel, Low Alloy Cast Steel
	P		High Alloy Steel, High Alloy Cast Steel
	M		Austenitic Stainless Steel
	M		Super Austenitic, Duplex Stainless Steel
	K		Cast Iron
	N		Wrought Alloy, Cast Alloyed Aluminum
	N		Copper Alloys, Non Metallic Materials
	S		High Temp Alloys Fe, Ni, or Co Based
	S		Titanium and Ti Alloys
	H		Hardened Steel, Chilled/ Hardened Cast Iron

BB BALL END CUTTER BODY

Positive geometry for more aggressive cutting action. The proprietary pocket design provides unmatched repeatability reducing runout and producing far better finishes.



Ball End .375-.500 Radius

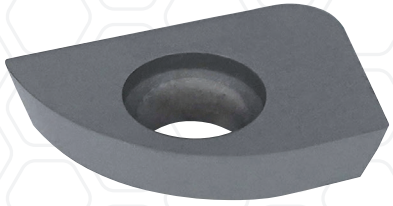
Part Number	Ball Size	D	Shank	L1	L2	FL	E	Insert
BB4011440	5/8	0.625	0.625	3.375	1.000	1	0.625	EB14
BB4811548	3/4	0.750	0.750	4.000	1.250		0.625	EB15
BB5611948	7/8	0.875	0.750	4.500	1.250		0.750	EB19
BB5611964	7/8	0.875	1.000	4.500	1.250		0.750	EB19
BB6411948	1	1.000	0.750	4.500	1.250		0.750	EB19
BB6411964	1	1.000	1.000	4.500	1.250		0.750	EB19

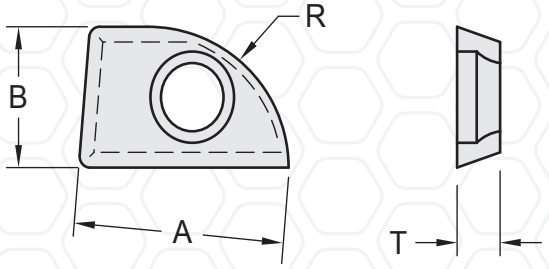
SUPERBEE

EM BALL END SERIES

Positive geometry for more aggressive cutting action, while the proprietary pocket design provides unmatched repeatability reducing runout and producing far better finishes.

P		Non-Alloy Steel
P		Low Alloy Steel
P		High Alloy Steel
M		Stainless Steel (PH)
M		Stainless Steel (AS)
K		Cast Irons
N		Aluminum - Low Si
N		Copper Alloy, Plastic
S		High Temp Alloys
S		Titanium Alloys
H		Hardened Steels



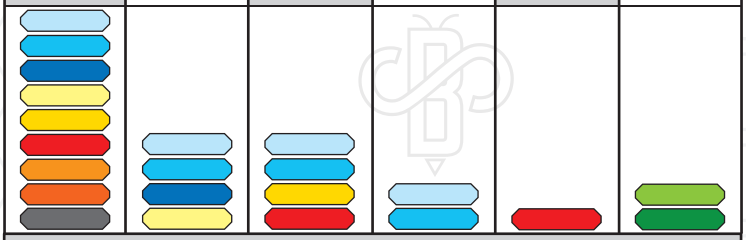


To build your insert, choose a Part Number in Red from each column. Example: EB1458ET5700

Part Number	R	Ball	A	B	T
EB1458	0.312	5/8	0.625	0.375	0.125
EB1534	0.375	3/4	0.625	0.375	0.125
EB1978	0.437	7/8	0.750	0.500	0.156
EB191	0.500	1	0.750	0.500	0.156

Edge Prep + Coating + Substrate

Honed	Honed	Honed	Honed	Honed	Sharp
MDC	AlTiN	TiCN-TiN	None	None	None
C5	C5	C5	C5	C2	C2
ET5700	ET520	ENT5T	ENT56	ENT33	FNT33



RECOMMENDED INSERTS BY MATERIAL TYPE

Spare Parts:

EB14 Screw: BS15	EB14 Wrench: BW15
EB15 Screw: BS15	EM15 Wrench: BW15
EB19 Screw: BS19	EB19 Wrench: BW19

Special shapes, forms and sizes are available upon request.

DE SERIES 3/4 X 3/4 TURNING HOLDER

Indexable .750 X .750 square turning holder for fillet, corner round & angle.
Fits all EM 19 inserts. Can be used with chamfers, convex and concave radii.

EM19 Concave Insert Holder

Part Number	R Range	Shank
DEMCLNR1219C1	C1	0.750
DEMCLNR1219C2	C2	
DEMCLNR1219C3	C3	
DEMCLNR1219C4	C4	
DEMCLNR1219C5	C5	
DEMCLNR1219C6	C6	

EM19 Convex Insert Holder

Part Number	R Range	Shank
DEMCLNR1219R1	R1	0.750
DEMCLNR1219R2	R2	
DEMCLNR1219R3	R3	
DEMCLNR1219R4	R4	
DEMCLNR1219R5	R5	
DEMCLNR1219R6	R6	
DEMCLNR1219R7	R7	
DEMCLNR1219R8	R8	

EM19 Chamfer Insert Holder

Part Number	R Range	Shank
DEMCLNR1219A10	A10	0.750
DEMCLNR1219A15	A15	
DEMCLNR1219A20	A20	
DEMCLNR1219A25	A25	
DEMCLNR1219A30	A30	
DEMCLNR1219A41	A41	
DEMCLNR1219A45	A45	
DEMCLNR1219A50	A50	
DEMCLNR1219A60	A60	

SUPERBEE
TOOLS & SCREWS

Cutter Body Screwdriver:

BW15 (T15)
BW19 (T19)

Cutter Body Flag Wrench:

NT8 (T8)
NT9 (T9)
NT15 (T15)
NT19 (T19)

Screws:

BS15 | CS5
BS19 | CS6