

FULLERTON



BURR ROTARY FILE GUIDE

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Burr Cut Types

SINGLE CUT #1



Single cut is a general purpose tool designed for cast iron, steel, some copper and brass, and other ferrous materials. It will give good material removal and good workpiece finish.

CHIP BREAKER CUT #2



The addition of a chip breaker will reduce sliver size and improve operator control at a slightly reduced surface finish. Available on Quote Only.

DOUBLE CUT #3



The double cut allows for rapid stock removal in harder materials. The addition of the left hand flutes reduces the pulling action, which allows for better operator control. It reduces the size of the chips, and it can be used at slower than normal speeds.

DIAMOND CUT #4



The diamond cut is very effective in heat treated and tough alloy steels, producing extremely small chips. It offers very good operator control with good stock removal at the sacrifice of finish. The diamond grind will reduce tool life. Available on all Burrs - Add 20% to List Price of #1 Cut

FAST MILL CUT #5



For use on non-ferrous and non-metallic materials. It is designed for rapid stock removal with minimum chip loading.

WHEN ORDERING, SPECIFY TOOL # OR EDP # AND SPECIFIC CUT REQUIRED

NOTE: CHIP BREAKER, COARSE, AND FINE CUTS ARE ONLY AVAILABLE ON QUOTE



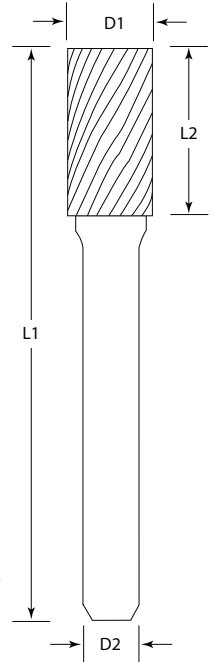
Burrs with a head diameter of 5/16" or larger, with the exception of extended shanks, are available with a 6mm diameter shank. They will retain standard fractional cutting diameters and cutting length. Add \$2.50 to the list price.

1/4" Shank Diameter Cylindrical

SA



D1	L2	L1	TOOL NUMBER	EDP NUMBER		
				#1 Cut	#3 Cut	#5 Cut
1/8	5/8	2	SA-12	41007	41009	
3/16	5/8	2	SA-14	41014	41016	
1/4	5/8	2	SA-1	41000	41002	41004
	1	2	SA-1A	41035	41037	
5/16	3/4	2 1/2	SA-2	41049	41051	
	3/4	2 1/2	SA-3	41063	41065	41067
3/8	1	2 3/4	SA-3A	41070	41072	
	1 1/2	3 1/4	SA-3B	41077	41079	
	1	2 3/4	SA-4	41091	41093	
1/2	1	2 3/4	SA-5	41098	41100	41102
5/8	1	2 3/4	SA-6	41112	41114	41116
	1/2	2 1/2	SA-15	41021	41023	
3/4	3/4	2 1/2	SA-16	41028	41030	
	1	2 3/4	SA-7	41119	41121	41123
1	1	2 3/4	SA-9	41126	41128	
EXTENDED SHANK						
1/4	1/2	6 1/2	SA-1X6	41042	41044	
3/8	3/4	6 3/4	SA-3X6	41084	41086	
1/2	1	7	SA-5X6	41105	41107	



Recommendations:

For maximum control and to prevent whipping and chatter, insert the shank into the chuck as far as possible.

Avoid excessive pressure, which slows the spindle speed and damages the cutting edge. Avoid operating the burr beyond normal resharpener, otherwise resultant heat and pressure will cause excessive chipping and possible braze failure.

Burrs featured on these pages are available with #4 Diamond Cut. Add 20% to list price of #1 Cut. All Burrs 5/16" diameter and larger furnished with 1/4" x 1 3/4" steel shanks.

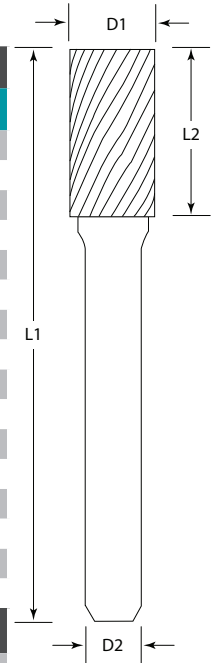
Burrs - 1/4" Shank Diameter



Cylindrical End Cut



D1	L2	L1	TOOL NUMBER	EDP NUMBER		
				#1 Cut	#3 Cut	#5 Cut
1/8	5/8	2	SB-12	40100	40102	
3/16	5/8	2	SB-14	40107	40109	
1/4	5/8	2	SB-1	40142	40144	40104
	1	2	SB-1A	40135	40137	
5/16	3/4	2 1/2	SB-2	40149	40151	
	1	2 3/4	SB-2A	40156	40158	
3/8	3/4	2 1/2	SB-3	40163	40165	40167
	1	2 3/4	SB-3A	40170	40172	
	1 1/2	3 1/4	SB-3B	40177	40179	
7/16	1	2 3/4	SB-4	40191	40193	
1/2	1	2 3/4	SB-5	40198	40200	40202
5/8	1	2 3/4	SB-6	40212	40214	40216
	1/2	2 1/2	SB-15	40121	40123	
3/4	3/4	2 1/2	SB-16	40128	40130	
	1	2 3/4	SB-7	40219	40221	40223
1	1	2 3/4	SB-9	40226	40228	
EXTENDED SHANK						
1/4	1/2	6 1/2	SB-1X6	40114	40116	
3/8	3/4	6 3/4	SB-3X6	40184	40186	
1/2	1	7	SB-5X6	40205	40207	



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Add 20% to list price of #1 Cut.

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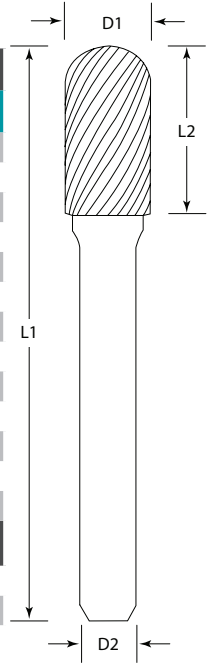
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SC

Cylindrical Ball Nose



D1	L2	L1	TOOL NUMBER	EDP NUMBER		
				#1 Cut	#3 Cut	#5 Cut
1/8	5/8	2	SC-12	42132	42134	
3/16	5/8	2	SC-14	42139	42141	
1/4	5/8	2	SC-1	42125	42127	42129
	1	2	SC-1A	42146	42148	
5/16	3/4	2 1/2	SC-2	42160	42162	
	1	2 3/4	SC-2A	42189	42191	
3/8	3/4	2 1/2	SC-3	42197	42199	42201
	1	2 3/4	SC-3A	42204	42206	
	1 1/2	3 1/4	SC-3B	42211	42213	
7/16	1	2 3/4	SC-4	42225	42227	
1/2	1	2 3/4	SC-5	42232	42234	42236
5/8	1	2 3/4	SC-6	42171	42173	42175
3/4	1	2 3/4	SC-7	42178	42180	42182
EXTENDED SHANK						
1/4	1/2	6 1/2	SC-1X6	42153	42155	
3/8	3/4	6 3/4	SC-3X6	42218	42220	
1/2	1	7	SC-5X6	42164	42166	

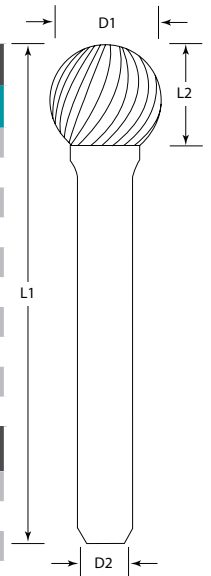


SD

Ball Shape



D1	L2	L1	TOOL NUMBER	EDP NUMBER		
				#1 Cut	#3 Cut	#5 Cut
1/8	1/8	2	SD-12	43132	43134	
3/16	3/16	2	SD-14	43139	43141	
1/4	1/4	2	SD-1	43125	43127	43129
5/16	5/16	2 1/4	SD-2	43153	43155	
3/8	3/8	2 1/8	SD-3	43160	43162	43164
7/16	7/16	2 1/8	SD-4	43174	43176	
1/2	1/2	2 1/4	SD-5	43181	43183	43185
5/8	5/8	2 1/4	SD-6	43195	43197	43199
3/4	3/4	2 1/2	SD-7	43202	43204	
1	1	2 3/4	SD-9	43100	43102	
EXTENDED SHANK						
1/4	1/4	6 1/4	SD-1X6	43146	43148	
3/8	3/8	6 3/8	SD-3X6	43167	43169	
1/2	1/2	6 1/2	SD-5X6	43188	43190	



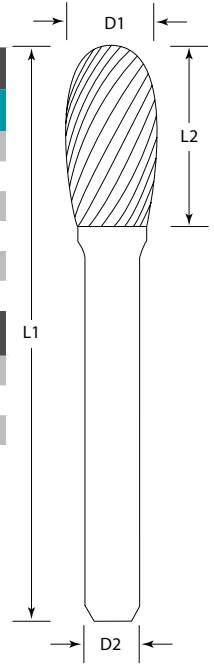
Burrs - 1/4" Shank Diameter

SE



Egg Shape

D1	L2	L1	TOOL NUMBER	EDP NUMBER		
				#1 Cut	#3 Cut	#5 Cut
3/16	5/16	2	SE-11	44194	44196	
1/4	3/8	2	SE-1	44187	44189	44191
3/8	5/8	2 3/8	SE-3	44208	44210	44212
1/2	7/8	2 5/8	SE-5	44222	44224	44226
5/8	1	2 3/4	SE-6	44236	44238	
3/4	1	2 3/4	SE-7	44243	44245	
EXTENDED SHANK						
1/4	3/8	6 3/8	SE-1X6	44201	44203	
3/8	5/8	6 5/8	SE-3X6	44215	44217	
1/2	7/8	6 7/8	SE-5X6	44229	44231	

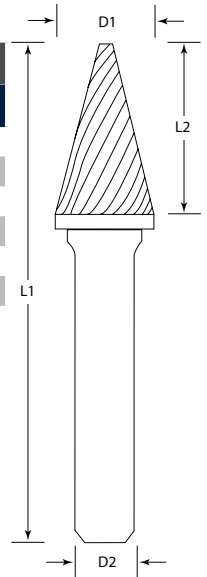


SM



Cone Shape

D1	L2	L1	TOOL NUMBER	EDP Number	
				#1 Cut	#3 Cut
1/4	1/2	2	SM-1	47250	47252
	3/4	2	SM-2	47257	47259
	1	2 1/2	SM-3	47264	47266
	1 1/4	2 1/2	SM-3A	47271	47273
3/8	5/8	2 1/2	SM-4	47278	47280
1/2	7/8	2 3/4	SM-5	47285	47287
5/8	1	3	SM-6	47292	47294



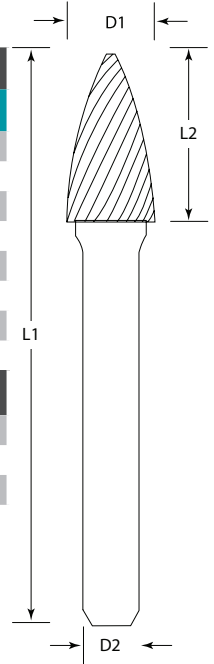
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SG



Pointed Tree Shape

D1	L2	L1	TOOL NUMBER	EDP NUMBER		
				#1 Cut	#3 Cut	#5 Cut
1/4	5/8	2	SG-1	46100	46102	46104
5/16	3/4	2 1/2	SG-2	46128	46130	
3/8	3/4	2 1/2	SG-3	46135	46137	46139
1/2	3/4	2 1/2	SG-13	46107	46109	
	1	2 3/4	SG-5	46149	46151	46153
5/8	1	2 3/4	SG-6	46163	46165	46167
3/4	1	2 3/4	SG-7	46170	46172	
	1 1/2	3 1/4	SG-15	46114	46116	
EXTENDED SHANK						
1/4	1/2	6 1/2	SG-1X6	46121	46123	
3/8	3/4	6 3/4	SG-3X6	46142	46144	
1/2	1	7	SG-5X6	46156	46158	

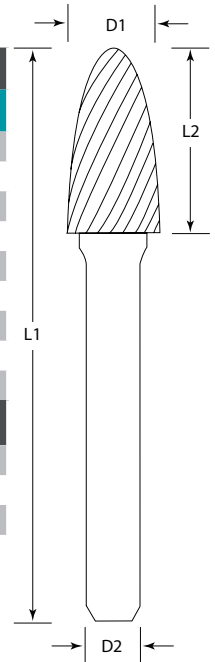


SF



Round Tree Cut

D1	L2	L1	TOOL NUMBER	EDP NUMBER		
				#1 Cut	#3 Cut	#5 Cut
1/4	5/8	2	SF-1	45256	45258	45260
3/8	3/4	2 1/2	SF-3	45291	45339	45294
7/16	1	2 3/4	SF-4	45304	45306	
1/2	3/4	2 1/2	SF-13	45263	45265	
	1	2 3/4	SF-5	45311	45313	45315
5/8	1	2 3/4	SF-6	45325	45327	45329
3/4	1	3	SF-7	45332	45334	
	1 1/4	3	SF-14	45270	45272	
	1 1/2	3 1/4	SF-15	45277	45279	
EXTENDED SHANK						
1/4	1/2	6 1/2	SF-1x6	45284	45286	
3/8	3/4	6 3/4	SF-3x6	45297	45299	
1/2	1	7	SF-5x6	45318	45320	



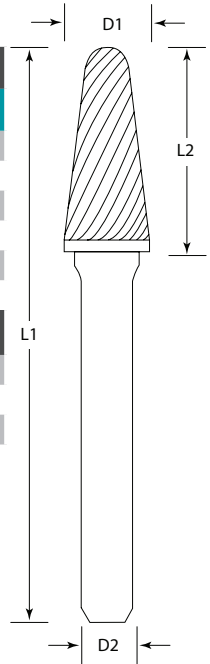
Burrs - 1/4" Shank Diameter

SL



14° Included Angle

D1	L2	L1	TOOL NUMBER	EDP NUMBER		
				#1 Cut	#3 Cut	#5 Cut
1/4	5/8	2	SL-1	48250	48252	
5/16	7/8	2 3/4	SL-2	48257	48259	
3/8	1 1/16	3	SL-3	48271	48273	48275
1/2	1 1/8	3	SL-4	48285	48287	48289
5/8	1 5/16	3 1/4	SL-6	48299	48301	
3/4	1 1/2	3 1/4	SL-7	48306	48308	
EXTENDED SHANK						
5/16	7/8	7	SL-2X6	48264	48266	
3/8	1 1/16	7 1/8	SL-3X6	48278	48280	
1/2	1 1/8	7 1/4	SL-4X6	48292	48294	



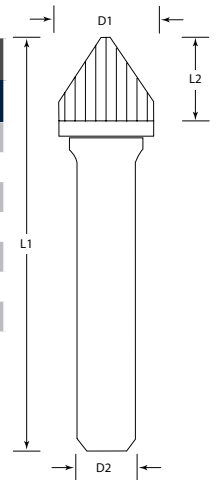
SK



90° Included Angle

D1	L2	L1	TOOL NUMBER	EDP NUMBER	
				#1 Cut	#3 Cut
1/4	1/8	2	SK-1	50250*	50252*
3/8	3/16	2 1/8	SK-3	50264	50266
1/2	1/4	2 1/8	SK-5	50271	50273
5/8	5/16	2 1/4	SK-6	50278	50280
3/4	3/8	2 3/8	SK-7	50285	50287
7/8	7/16	2 1/2	SK-8	50292	50294
1	1/2	2 1/2	SK-9	50299	50301

* Items are Double Ended



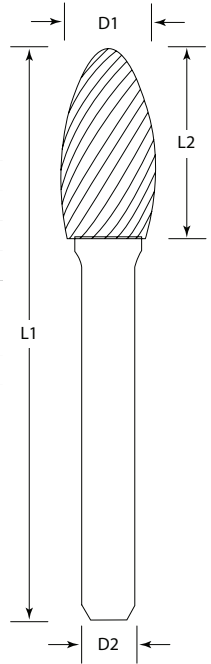
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SH



Flame Shape

D1	L2	L1	TOOL NUMBER	EDP NUMBER		
				#1 Cut	#3 Cut	#5 Cut
1/4	5/8	2	SH-1	49250	49252	
5/16	3/4	2 1/2	SH-2	49257	49259	49261
1/2	1 1/4	3	SH-5	49271	49273	
5/8	1 7/16	3 1/4	SH-6	49285	49287	
3/4	1 5/8	3 1/2	SH-7	49292	49294	
EXTENDED SHANK						
5/16	3/4	6 3/4	SH-2X6	49264	49266	
1/2	1 1/4	7 1/4	SH-5X6	49278	49280	

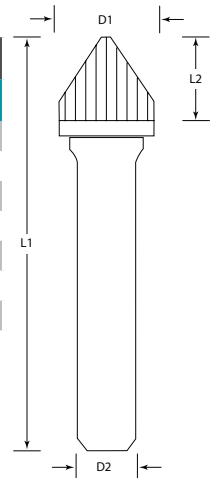


SJ



60° Included Angle

D1	L2	L1	TOOL NUMBER	EDP NUMBER		
				#1 Cut	#3 Cut	#5 Cut
1/4	3/16	2	SJ-1	51001*	51003*	
5/16	1/4	2 1/4	SJ-2	51008	51010	
3/8	5/16	2 1/4	SJ-3	51015	51017	51019
1/2	7/16	2 3/8	SJ-5	51022	51024	
5/8	1/2	2 1/2	SJ-6	51029	51031	
3/4	5/8	2 5/8	SJ-7	51036	51038	
7/8	3/4	2 3/4	SJ-8	51043	51045	
1	7/8	2 3/4	SJ-9	51050	51052	



* Items are Double Ended

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 Add 20% to list price of #1 Cut.
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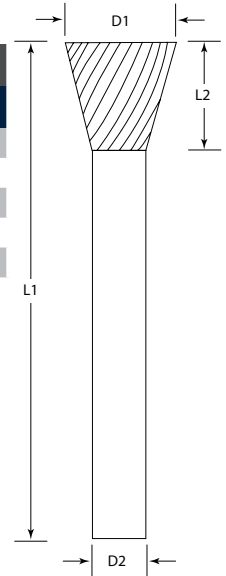
Burrs

SN



1/4" Shank Diameter Inverted Cone

D1	L2	L1	TOOL NUMBER	EDP NUMBER	
				#1 Cut	#3 Cut
1/4	5/16	2	SN-1	52250	52252
3/8	3/8	2 1/8	SN-2	52257	52259
1/2	1/2	2 1/4	SN-3	52264	52266
5/8	3/4	2 1/2	SN-6	52271	52273
3/4	5/8	2 3/8	SN-7	52278	52280



SNE



Inverted Cone - End Cut

D1	L2	L1	TOOL NUMBER	EDP NUMBER	
				#1 Cut	#3 Cut
1/4	5/16	2	SN-1E	53250	53252
3/8	3/8	2 1/8	SN-2E	53257	53259
1/2	1/2	2 1/4	SN-3E	53264	53266
5/8	3/4	2 1/2	SN-6E	53271	53273
3/4	5/8	2 3/8	SN-7E	53278	53280

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 with 1/4" x 1 3/4" steel shanks.

**METRIC
AVAILABLE**

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1/16" - 1/8" Head Diameter, 1/8" Shank Diameter

Cutting Head	1/16" x 1/4"	3/32" x 7/16"	1/8" x 9/16"	1/8" x 1/8"	1/8" x 9/16"	3/32" x 7/16"	1/8" x 9/16"	3/32" x 3/32"	1/8" x 1/8"	1/8" x 1/4"	1/8" x 1/4"	1/8" x 1/4"
Style	SA-41	SA-42	SA-43	SB-41	SB-43	SC-41	SC-42	SD-41	SD-42	SE-41	SH-41	SG-41













1 1/2" Approx. Overall Length												
#1 Cut	59100	59102	59104	59106	40160	59108	59110	59112	59114	59116	59128	59122
#3 Cut	59101	59103	59105	59107		59109	59111	59113	59115	59117	59129	59123
2" Approx. Overall Length												
#1 Cut			59000				59002		59004	59006	59012	
#3 Cut			59026				59028		59030	59032	59038	
3" Approx. Overall Length												
#1 Cut			59001	59050			59003	59055	59005	59007	59013	
#3 Cut			59027				59029		59031	59033	59039	

Cutting Head	1/8" x 3/8"	1/8" x 1/2"	1/8" x 1/4"	1/8" x 1/2"	1/8" x 11/32"	1/8" x 7/16"	1/8" x 5/8"	1/8" x 3/8"	1/8" x 1/2"	1/8" x 7/64"	1/8" x 1/16"	3/32" x 1/8"	1/8" x 3/16"
Style	SG-43	SG-44	SF-41	SF-42	SM-41	SM-42	SM-43	SL-41	SL-42	SJ-42	SK-42	SN-41	SN-42
					12" Incl.	14" Incl.	7" Incl.	8" Incl.	8" Incl.	60° Incl.	90° Incl.	10° Incl.	10° Incl.










1 1/2" Approx. Overall Length													
#1 Cut	59124	59126	59118	59120	59137	59139	59141	59134	59135	59130	59132	59143	59145
#3 Cut	59125	59127	59119	59121	59138	59140	59142	59147	59136	59131	59133	59144	59146
2" Approx. Overall Length													
#1 Cut		59010		59008		59016			59014				
#3 Cut		59036		59034		59042			59040				
3" Approx. Overall Length													
#1 Cut		59011		59009		59017			59015				
#3 Cut		59037		59035		59043			59041				

3412 Series Phantom 2.0 End Mill

5/32" - 3/16" Head Diameter, 1/8" Shank Diameter

Cutting Head	5/32" X 1/2"	3/16" X 1/2"	5/32" X 1/2"	3/16" X 1/2"	3/16" X 3/16"	3/16" X 1/2"	3/16" X 1/2"	3/16" X 3/8"	3/16" X 9/32"	3/16" X 1/4"	3/16" X 1/2"	3/16" X 1/2"
Style	SA-52	SA-53	SC-52	SC-53	SD-53	SG-53	SF-53	SH-53	SE-53	SN-53	SM-53	SL-53
										10" Incl.	10" Incl.	14" Incl.
												
	1 1/2" Approx. Overall Length											
#1 Cut	71101	71103	71105	71108	71110	71115	71113	71116	71112	71120	71119	71117
#3 Cut	71102	71104	71106	71109	71111	71130	71114	71135	71140	71121	71145	71118

1/4" Head Diameter, 1/8" Steel Shank Diameter











Cutting Head	1/2"	3/16"	1/4"	1/2"	1/2"	1/2"	1/2"	3/8"	1/4"
Style	SA-51	SB-51	SD-51	SC-51	SF-51	SG-51	SM-51	SE-51	SN-51
							22" Incl.		10" Incl.
									
	2" Max Overall Length								
#1 Cut	70101	70103	70107	70105	70111	70113	70115	70109	70117
#3 Cut	70102	70104	70108	70106	70112	70114	70116	70110	70118



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3/16" Head Diameter, 3/16" Steel Shank Diameter

Cutting Head	5/8"	5/8"	3/16"	1/2"	1/2"	7/16"	9/32"	1/4"	3/32"	5/32"
Style	SA-81	SC-81	SD-81	SF-81	SG-81	SL-81	SE-81	SN-81	SK-81	SJ-81
										
						14° Incl.		10° Incl.	90° Incl.	60° Incl.
2" Approx. Overall Length										
#1 Cut	72101	72102	72103	72105	72106	72110	72104	72111	72108	72109
#3 Cut	72121	72122	72123	72124	72125	72126	72127	72128	72129	72130

3412 Series Phantom 2.0 End Mill

1.5-3mm Head Diameter, 3mm Shank Diameter

Cutting Head	1.5mm x 6mm	2mm x 13mm	3mm x 15mm	3mm x 3mm	2mm x 11mm	3mm x 15mm	2mm x 2mm	3mm x 3mm	3mm x 6mm	3mm x 7mm	3mm x 7mm	3mm x 10mm
Style	MSA-41	MSA-42	MSA-43	MSB-41	MSC-41	MSC-42	MSD-41	MSD-42	MSE-41	MSH-41	MSG-41	MSG-43
												
	38mm Approx. Overall Length											
#1 Cut	59301	59302	59303	59300	59304	59305	59306	59307	59308	59314	59311	59312
#3 Cut	59505	59508	59511	59502	59514	59517	59520	59523	59526	59831	59535	59825


Cutting Head	3mm x 15mm	3mm x 8mm	3mm x 15mm	3mm x 9mm	3mm x 11mm	3mm x 16mm	3mm x 10mm	3mm x 13mm	3mm x 3mm	3mm x 3mm	2mm x 3mm	3mm x 5mm
Style	MSG-44	MSF-41	MSF-42	MSM-41	MSM-42	MSM-43	MSL-41	MSL-42	MSJ-42	MSK-42	MSN-41	MSN-42
				12° Incl.	14° Incl.	7° Incl.	8° Incl.	8° Incl.	60° Incl.	90° Incl.	10° Incl.	10° Incl.
												
	38mm Approx. Overall Length											
#1 Cut	59313	59309	59310	59319	59320	59321	59317	59318	59315	59316	59324	59323
#3 Cut	59828	59529	59532	59545	59548	59551	59840	59538	59834	59837	59554	59557



Burrs with a head diameter of 5/16" or larger, with the exception of extended shanks, are available with a 6mm diameter shank. They will retain standard fractional cutting diameters and cutting length. Add \$2.50 to the list price.

6.4mm Head Diameter, 3mm Steel Shank Diameter

Cutting Head	13mm	5mm	6mm	13mm	13mm	13mm	13mm	10mm	6mm
Style	MSA-51	MSB-51	MSD-51	MSC-51	MSF-51	MSG-51	MSM-51 22° Incl.	MSE-51	MSN-51 10° Incl.



51mm Max Overall Length									
#1 Cut	70310	70311	70313	70312	70315	70316	70317	70314	70318
#3 Cut	59560	59563	59569	59566	59575	59578	59581	59572	59584

Burrs are available with #4 Diamond Cut, add 20% to list price of #1 Cut.

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ABOUT FULLERTON TOOL COMPANY

Fullerton Tool Company is a third-generation, family owned business that specializes in the design and production of solid carbide cutting tools for a wide variety of industries. Founded in 1942, the company manufactures high quality end mills, drills, reamers, burrs, saws, keyseat cutters and PCD tooling. Fullerton's Advanced Solutions Team (FAST) is the foundation of the company's commitment to continuously improve, innovate and provide vast product diversity. Fullerton is an ISO 9001:2015 certified company.



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