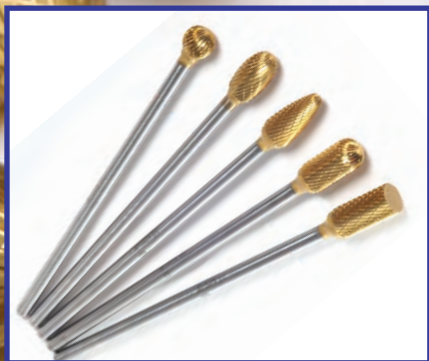


CHAMPION

Carbide Burs



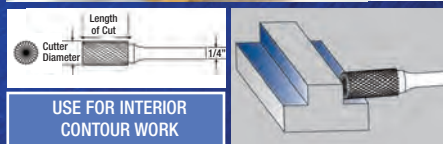
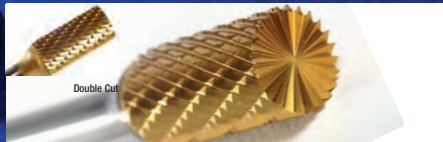
SA Cylinder Shape



USE FOR DEBURRING

CUTTER DETAILS		LIST / EDP No.		
Cutter Diameter	Length of Cut	Double Cut	Non Ferrous	Long Series
1/8"	1/2"	SA11	-	-
1/8"	5/8"	SA12	-	-
5/32"	5/8"	SA13	-	-
3/16"	5/8"	SA14	-	-
1/4"	5/8"	SA1***	-	-
1/4"	1"	SA1L	-	-
1/4"	3/4"	-	SA1NF	-
1/4"	1/2"	-	-	SA1-L6*
5/16"	3/4"	SA2	-	-
3/8"	3/4"	SA3***	SA3NF	SA3-L6*
3/8"	1"	SA3L	-	-
3/8"	1-1/2"	SA3X	-	-
7/16"	1"	SA4	-	-
1/2"	1"	SA5***	SA5NF	SA5-L6*
5/8"	1"	SA6	SA6NF	-
3/4"	1/2"	SA15	-	-
3/4"	3/4"	SA16	-	-
3/4"	1"	SA7	SA7NF	-
3/4"	1"	-	SA7NF-3/8**	-
7/8"	1"	SA8	-	-
1"	1"	SA9	-	-

SB Cylinder End Cut



USE FOR INTERIOR CONTOUR WORK

CUTTER DETAILS		LIST / EDP No.		
Cutter Diameter	Length of Cut	Double Cut	Non Ferrous	Long Series
1/8"	1/2"	SB11	-	-
1/8"	5/8"	SB12	-	-
5/32"	5/8"	SB13	-	-
3/16"	5/8"	SB14	-	-
1/4"	5/8"	SB1***	-	-
1/4"	1"	SB1L	-	-
5/16"	3/4"	SB2	-	-
3/8"	3/4"	SB3***	-	-
3/8"	1"	SB3L	-	-
3/8"	1-1/2"	SB3X	-	-
7/16"	1"	SB4	-	-
1/2"	1"	SB5***	-	-
5/8"	1"	SB6***	-	-
3/4"	1/2"	SB15	-	-
3/4"	3/4"	SB16	-	-
3/4"	1"	SB7***	-	-
7/8"	1"	SB8	-	-
1"	1"	SB9	-	-

* 6" long shank ** 3/8" shank
*** Available without Titanium Nitride Coating.
Specify US (uncoated) when ordering.

SC Cylinder Radius End



USE FOR SURFACE MILLING & CONTOURING

CUTTER DETAILS		LIST / EDP No.		
Cutter Diameter	Length of Cut	Double Cut	Non Ferrous	Long Series
1/8"	1/2"	SC11***	-	-
1/8"	5/8"	SC12	-	-
5/32"	5/8"	SC13	-	-
3/16"	5/8"	SC14	-	-
1/4"	5/8"	SC1***	-	-
1/4"	1/2"	-	-	SC1-L6*
1/4"	3/4"	-	SC1NF	-
5/16"	3/4"	SC2	-	-
3/8"	3/4"	SC3***	SC3NF	SC3-L6*
3/8"	1"	SC3L	-	-
3/8"	1-1/2"	SC3X	-	-
7/16"	1"	SC4	-	-
1/2"	1"	SC5***	SC5NF	SC5-L6*
5/8"	1"	SC6	SC6NF	-
3/4"	1/2"	SC15	-	-
3/4"	3/4"	SC16	-	-
3/4"	1"	SC7***	SC7NF	-
3/4"	1"	-	SC7NF-3/8**	-
1"	1"	SC9	-	-

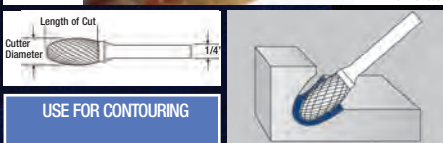
SD Ball Shape



USE FOR CONTOURING, HOLE DEBURRING & MILLING

CUTTER DETAILS		LIST / EDP No.		
Cutter Diameter	Length of Cut	Double Cut	Non Ferrous	Long Series
1/8"	3/32"	SD11	-	-
3/16"	1/8"	SD14***	-	-
1/4"	7/32"	SD1***	SD1NF	SD1-L6*
5/16"	1/4"	SD2***	-	-
3/8"	5/16"	SD3***	SD3NF	SD3-L6*
7/16"	3/8"	SD4	-	-
1/2"	7/16"	SD5***	SD5NF	SD5-L6*
5/8"	9/16"	SD6	SD6NF	-
3/4"	11/16"	SD7***	SD7NF	-
3/4"	11/16"	-	SD7NF-3/8**	-
1"	15/16"	SD9	-	-

SE Oval Shape



USE FOR CONTOURING

CUTTER DETAILS		LIST / EDP No.		
Cutter Diameter	Length of Cut	Double Cut	Non Ferrous	Long Series
3/16"	5/16"	SE11	-	-
1/4"	3/8"	SE1***	-	SE1-L6*
3/8"	5/8"	SE3***	SE3NF	SE3-L6*
1/2"	7/8"	SE5***	SE5NF	SE5-L6*
5/8"	1"	SE6***	SE6NF	-
3/4"	1"	SE7	SE7NF	-
3/4"	1"	-	SE7NF-3/8**	-

SF Tree Shape Radius End



USE FOR WORK ON NARROW CONTOURS

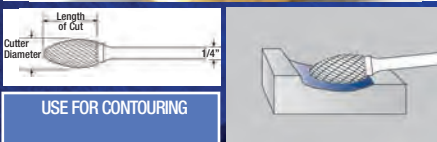
CUTTER DETAILS		LIST / EDP No.		
Cutter Diameter	Length of Cut	Double Cut	Non Ferrous	Long Series
1/8"	1/2"	SF11	-	-
1/4"	3/4"	SF1***	SF1NF	-
1/4"	1/2"	-	-	SF1-L6*
3/8"	3/4"	SF3***	SF3-NF	SF3-L6*
7/16"	1"	SF4	-	-
1/2"	3/4"	SF13	-	-
1/2"	1"	SF5***	SF5-NF	SF5-L6*
5/8"	1"	SF6	SF6-NF	-
3/4"	1"	SF7	-	-
3/4"	1-1/4"	SF14	SF14-NF	-
3/4"	1-1/4"	-	SF14-NF-3/8**	-
3/4"	1-1/2"	SF15	-	-

SG Tree Shape



CUTTER DETAILS		LIST / EDP No.		
Cutter Diameter	Length of Cut	Double Cut	Non Ferrous	Long Series
1/4"	5/8"	SG1***	-	-
1/4"	1/2"	-	-	SG1-L6*
5/16"	3/4"	SG2	-	-
3/8"	3/4"	SG3***	-	SG3-L6*
1/2"	3/4"	SG13***	-	-
1/2"	1"	SG5***	-	SG5-L6*
5/8"	1"	SG6	-	-
3/4"	1"	SG7	-	-
3/4"	1-1/2"	SG15	-	-

SH Flame Shape



CUTTER DETAILS		LIST / EDP No.		
Cutter Diameter	Length of Cut	Double Cut	Non Ferrous	Long Series
1/4"	5/8"	SH1***	-	-
5/16"	3/4"	SH2	-	SH2-L6*
1/2"	1-1/4"	SH5***	-	SH5-L6*
5/8"	1-7/16"	SH6	-	-
3/4"	1-5/8"	SH7***	-	-

SL 14° Taper Radius End



CUTTER DETAILS		LIST / EDP No.		
Cutter Diameter	Length of Cut	Double Cut	Non Ferrous	Long Series
1/4"	5/8"	SL1***	-	SL1-L6*
5/16"	7/8"	SL2	-	-
3/8"	1-1/16"	SL3***	SL3NF	SL3-L6*
1/2"	1-1/8"	SL4***	SL4NF	SL4-L6*
5/8"	1-3/16"	SL5	SL5NF	-
5/8"	1-5/16"	SL6	SF6NF	-
3/4"	1-1/2"	SL7	SF7NF	-
3/4"	1-1/2"	-	SL7NF-3/8**	-

SM Cone Shape



CUTTER DETAILS			LIST / EDP No.		USE FOR NARROW CONTOURS / SURFACE MACHINING
Cutter Diameter	Length of Cut	Included Angle	Double Cut	Non Ferrous	
1/4"	1/2"	22°	SM1	-	
1/4"	3/4"	14°	SM2***	-	
1/4"	1"	10°	SM3***	-	
3/8"	5/8"	28°	SM4***	-	
1/2"	7/8"	28°	SM5***	-	
5/8"	1"	31°	SM6	-	

SN Inverted Cone Shape



CUTTER DETAILS			LIST / EDP No.		EDGE MACHINING FROM THE REAR IN HARD TO REACH AREAS
Cutter Diameter	Length of Cut	Included Angle	Double Cut	Non Ferrous	
1/4"	5/16"	10°	SN1***	-	
3/8"	3/8"	13°	SN2	-	
1/2"	1/2"	28°	SN4***	-	
5/8"	3/4"	18°	SN6	-	
3/4"	5/8"	30°	SN7	-	

SK 90° Cone Shape



CUTTER DETAILS			LIST / EDP No.		MACHINING OF ACUTE ANGLE AREAS / COUNTERSINKING
Cutter Diameter	Length of Cut	Included Angle	Double Cut	Non Ferrous	
1/4"	1/8"	90°	SK1	-	
3/8"	3/16"	90°	SK3	-	
1/2"	1/4"	90°	SK5	-	
5/8"	5/16"	90°	SK6	-	
3/4"	3/8"	90°	SK7	-	
1"	1/2"	90°	SK9	-	

SJ 60° Cone Shape



CUTTER DETAILS			LIST / EDP No.		MACHINING OF ACUTE ANGLE AREAS / COUNTERSINKING
Cutter Diameter	Length of Cut	Included Angle	Double Cut	Non Ferrous	
1/4"	3/16"	60°	SJ1	-	
3/8"	5/16"	60°	SJ3	-	
1/2"	7/16"	60°	SJ5	-	
5/8"	9/16"	60°	SJ6	-	
3/4"	11/16"	60°	SJ7	-	
1"	15/16"	60°	SJ9	-	

Miniature Burs



MINIATURE BURS											
1/8" SHANKS - 1-1/2" OVERALL LENGTH											
CUTTER DETAILS			LIST	CUTTER DETAILS			LIST	CUTTER DETAILS			LIST
Cut Style	Cutter Diameter	Length of Cut	Double Cut	Cut Style	Cutter Diameter	Length of Cut	Double Cut	Cut Style	Cutter Diameter	Length of Cut	Double Cut
SA	1/16"	1/4"	SA41	SF	1/16"	1/4"	SF41	SM	1/8"	11/32"	SM41
	3/32"	7/16"	SA42		3/32"	7/16"	SF42		1/8"	7/16"	SM42
	1/8"	9/16"	SA43		1/8"	9/16"	SF51		1/8"	5/8"	SM43
	1/4"	1/2"	SA51		1/8"	1/4"	SG41		1/4"	1/2"	SM51
SB	1/8"	1/4"	SB43	SG	1/8"	5/16"	SG42	SN	1/4"	1/4"	SN43
	3/32"	7/16"	SB-ECO		1/8"	3/8"	SG43				
	1/8"	9/16"	SB51		1/8"	1/2"	SG44				
SC	3/32"	7/16"	SC41		1/4"	1/2"	SG51				
	1/8"	9/16"	SC42	SH	3/32"	7/16"	SH41				
	1/4"	1/2"	SC51								
SD	3/32"	3/32"	SD41	SJ	1/8"	3/32"	SJ41				
	1/8"	1/8"	SD42								
	1/4"	7/32"	SD51	SL	1/8"	7/32"	SE41				
SE	1/8"	7/32"	SE41		1/4"	3/8"	SE51				
	1/4"	3/8"	SE51								



Application & Speed Recommendations

SOLID CARBIDE BUR APPLICATION INFORMATION			SOLID CARBIDE BUR SPEED RECOMMENDATIONS		
MATERIAL Check List	SUITABILITY		BUR DIAMETER	Recommended Cutting Speed	Maximum Cutting Speed
	Double Cut	Non-Ferrous		(RPM)	(RPM)
Aluminum	—	✓	1/16	60,000 - 90,000	100,000
Brass	✓	✓	1/8	40,000 - 70,000	90,000
Bronze	✓	—	3/16	35,000 - 60,000	80,000
Cast Iron	✓	—	1/4	30,000 - 50,000	70,000
Copper	—	✓	5/16	20,000 - 40,000	68,000
Carbon Fiber	—	✓	3/8	20,000 - 40,000	66,000
Fiberglass	✓	—	7/16	15,000 - 40,000	58,000
Inconel	✓	—	1/2	15,000 - 40,000	50,000
Magnesium	—	✓	5/8	12,000 - 25,000	40,000
Plastics	✓	—	3/4	10,000 - 20,000	33,000
Hard Rubber	✓	—	1	7,500 - 20,000	25,000
Steel - 45-55Rc	✓	—	1-1/8	7,000 - 13,000	20,000
Steel - 55-60Rc	✓	—	1-1/2	5,000 - 10,000	17,000
Steel - Carbon	✓	—	1-3/4	4,500 - 9,000	14,000
Steel - Nickel Chrome	✓	—	2	4,000 - 8,000	12,500
Steel - Stainless	✓	—			
Steel - Weldments	✓	—			
Titanium	✓	—			
Zinc	—	✓			

Usage Guidelines

Do not use carbide burs in portable drill motors. Portable drills run much too slowly for burs.

Operating Speed Recommendations:

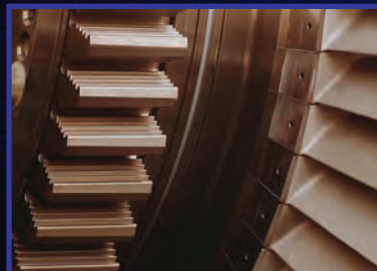
- Slower speeds for harder materials
- Higher speeds when using small burs
- Slower speeds when using long series burs

Running burs below recommended speeds may cause chipping.

Do not use worn-out tools and collets. They will cause chipping.

Running burs too fast will cause teeth to wear prematurely.

Apply constant pressure and steady action.



Double Cut Bur Kits BK8P

The most popular bur sizes.

SA5,	SC3,	SC5,	SD5,
SF3,	SF5,	SG3,	SL4

BK8P-RE

The most popular automotive bur sizes.

SD3,	SD1,	SC1,	SC3,
SA3,	SA5,	SF3,	SF5



Non-Ferrous Bur Kit BK5PT-NF

SA5NF,	SC3NF,
SC5NF,	SD5NF,
SF3NF	



DIS-BUR-4



DIS-BURM

Standard Double Cut Bur Displays

List	Contents
DIS-BUR-3	3 Each: SA1, SA3, SA5, SC1, SC3, SC5, SD1, SD3, SD5, SE1, SE3, SE5, SF1, SF3, SF5, SG1, SG3, SG5, SL1, SL3, SL4, SM3, SM4 and SM5
DIS-BUR-4	4 Each: SA1, SA3, SA5, SC1, SC3, SC5, SD1, SD3, SD5, SE1, SE3, SE5, SF1, SF3, SF5, SG1, SG3, SG5, SL1, SL3, SL4, SM3, SM4 and SM5
DIS-BURM	2 Each: SA1M, SA3M, SA5M, SC1M, SC3M, SC5M, SD1M, SD3M, SD5M, SF1M, SF3M, SF5M, SG1M, SG3M, SG5M, SL1M, SL3M, SL4M, SM3M, SM4M, and SM5M

Non-Ferrous Bur Displays

List	Contents
DIS-BUR-NF	3 Each: SA1NF, SA3NF, SA5NF, SC1NF, SC3NF, SC5NF, SD1NF, SD3NF, SD5NF, SE3NF, SE5NF, SF1NF, SF3NF, SF5NF, SL3NF, and SL4NF
DIS-NF-BURM	2 Each: SA1NFM, SA3NFM, SA5NFM, SC1NFM, SC3NFM, SC5NFM, SD1NFM, SD3NFM, SD5NFM, SE3NFM, SE5NFM, SF1NFM, SF3NFM, SF5NFM, SL3NFM, and SL4NFM

Long Shank Bur Displays

List	Contents
DIS-BUR-L6	3 Each: SA1-L6, SA3-L6, SA5-L6, SC1-L6, SC3-L6, SC5-L6, SE1-L6, SE3-L6, SE5-L6, SF1-L6, SF3-L6, and SF5-L6
DIS-L6-BURM	2 Each: SA1-L6M, SA3-L6M, SA5-L6M, SC1-L6M, SC3-L6M, SC5-L6M, SD1-L6M, SD3-L6M, SD5-L6M, SE1-L6M, SE3-L6M, SE5-L6M, SF1-L6M, SF3-L6M, SF5-L6M, SL1-L6M, SL3-L6M, and SL4-L6M

Miniature Bur Display

List	Contents
DIS-MINI-BURM	SA41M, SA42M, SA43M, SB43M, SB-ECOM, SC41M, SC42M, SD41M, SD42M, SE41M, SF41M, SF42M, SG41M, SG42M, SG43M, SG44M, SL41M, SL42M, SM41M, SM42M, and SM43M

Carbide Burs

USAGE

Carbide burs are one of the most versatile metal working tools. Used in virtually every industry, burs are used in mold and pattern making, die sinking, tool making and maintenance. They are used widely in the automotive, aerospace, foundry, power station and engineering industries.

THE BUR STYLES YOU NEED

Double Cut Burs - Non-Ferrous Burs - Miniature Burs - Long Series Burs - Bur Kits - Bur Displays

THE QUALITY TO MEET THE MOST DEMANDING JOBS

Manufactured in the U.S.A. from C2 tungsten carbide, Champion carbide burs are precision machine ground using diamond wheels and automated CNC machinery. Producing consistent geometry, sharp cutting edges and vibration free performance.

All Champion carbide burs are Titanium Nitride coated for superior surface finish and long life - at no extra cost.

SELECTING THE RIGHT BUR

Use the reference charts to select the best bur for your job.

Double Cut

Machine ground chisel type cutting edges, with left and right hand spirals.

Double cut burs provide :
Excellent stock removal
Fine surface finish
Excellent operator control

Applications include :
Cast iron and steels
Titanium
Brass
Copper
Bronze

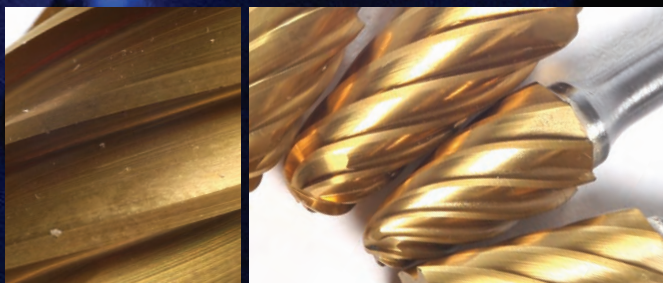


Non Ferrous

Champion non-ferrous burs have open, aggressive cutting edges for softer materials that avoid loading.

NF burs provide :
Easy chip flow
Minimal clogging.

Applications Include :
Aluminum & Magnesium
Copper & Soft Steel
Brass & Zinc
Alloys & Hard Rubber
Most Plastic and non-ferrous metals



Miniature

Miniature burs are ideal for engraving and use in Dremel like power tools (often called pencil grinders). They have 1/8" shank diameter and 1-1/2" overall length.



Long Series

Long series burs are ideal for hard to reach applications, like engine block work. They have 6" length shanks.



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www.championcuttingtool.com