

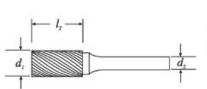
#### TYPE OF CUT

TYPE OF CUT	PICTURE	RECOMMENDED USE
Standard Cut		STANDARD CUT is a general purpose tool designed for cast iron, copper, brass and other ferrous materials. It will give good material removal and good work piece finishes.
Fine Cut		FINE CUT improves finishes on hardened steel, stainless steel and cast iron. Operator control is improved.
Coarse Cut		COARSE CUT is recommended for use on soft material such as copper, brass, aluminum, plastics, and rubber, where chip loading is a problem.
Chip Breaker		CHIP BREAKER CUT will reduce sliver size and improve operator control at a slightly reduced surface finish.
Standard Double-Cut	The state of	STANDARD DOUBLE-CUT allows for rapid stock removal and better operator control. Chip size is reduced and tool speed can be slower than normal speeds.
Coarse Double-Cut	1.61.15	COARSE DOUBLE-CUT is for fast stock removal in soft materials. Allows good operator control and produces small chips.
Fine Double-Cut		FINE DOUBLE-CUT is very effective on heat treated and tough alloy steels. Chip size is reduced and it offers good operator control.
Aluminum Cut		ALUMINUM CUT is for use on non-ferrous and non- metallic materials. It is designed for rapid stock removal with minimum chip loading.
Diamond Cut		DIAMOND CUT is very effective on heat treated and tough alloy steels. It produces very small chips and good operator control. Surface finish and tool life is reduced.
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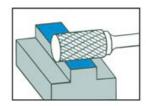


#### Cylindrical Shape SA











TOOL	HEAD DIA.	FLUTE LENGTH	SHANK	
<b>NO.</b> SA-11	1/8"	1/2"	1/4"	
SA-11				
	1/8"	5/8"	1/4"	
SA-13	5/32"	5/8"	1/4"	
SA-14	3/16"	5/8"	1/4"	
SA-1	1/4"	> 5/8"	1/4	
SA-1L	1/4"	1"	1/4"	
SA-2	5/16"	3/4"	1/4"	
SA-3	3/8"	3/4"	1/4"	
SA-3L	3/8"	1"	1/4"	
SA-3X	3/8"	1-1/2"	1/4"	
SA-4	7/16"	1"	1/4"	
SA-5	1/2"	1"	1/4"	
SA-6	5/8"	1"	1/4"	
SA-7	3/4"	1"	1/4"	
SA-15	3/4"	1/2"	1/4"	
SA-16	3/4"	3/4"	1/4"	
SA-8	7/8"	1"	1/4"	
SA-9	1"	1"	1/4"	
1/4" chanks are supplied standard				

1/4" shanks are supplied standard unless ordered otherwise. 3/8" shanks are recommended on all Burs larger than 1/2" diameter.

TOOL	HEAD	FLUTE	SHANK
NO.	DIA.	LENGTH	DIA
SA-11M	3 mm	12 mm	6 mm
SA-12M	3 mm	15.8 mm	6 mm
SA-13M	4 mm	15.8 mm	6 mm
SA-14M	5 mm	15.8 mm	6 mm
SA-1M	6 mm	15.8 mm	6 mm
SA-1LM	6 mm	25 mm	6 mm
SA-2M	8 mm	19 mm	6 mm
SA-3M	9.5 mm	19 mm	6 mm
SA-3LM	9.5 mm	25 mm	6 mm
SA-3XM	9.5 mm	37 mm	6 mm
SA-4M	11 mm	25 mm	6 mm
SA-5M	12.7 mm	25 mm	6 mm
SA-6M	16 mm	25 mm	6 mm
SA-7M	19 mm	25 mm	6 mm
SA-15M	19 mm	12 mm	6 mm
SA-16M	19 mm	19 mm	6 mm
SA-8M	22.3 mm	25 mm	6 mm
SA-9M	25 mm	25 mm	6 mm

6 mm shanks are supplied standard unless ordered otherwise. 8mm shanks are recommended on all Burs larger than 12mm diameter.



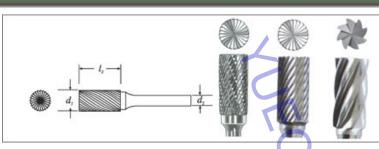
TOOL NO.	HEAD DIA.	FLUTE LENGTH	SHANK DIA
SA-1AL	1/4"	3/4"	1/4"
SA-3AL	3/8"	3/4"	1/4"
SA-5AL	1/2"	1"	1/4"
SA-6AL	5/8"	1"	1/4"
SA-7AL	3/4"	1"	1/4"

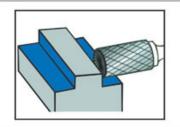
1/4" shanks are supplied standard unless ordered otherwise. 3/8" shanks are recommended on all Burs larger than 1/2" diameter. Metric shanks available on request.

TOOL NO.	HEAD DIA.	FLUTE LENGTH	SHANK DIA
SA-1ALM	6 mm	19 mm	6 mm
SA-3ALM	9.5 mm	19 mm	6 mm
SA-5ALM	12 mm	25 mm	6 mm
SA-6ALM	15.8 mm	25 mm	6 mm
SA-7ALM	19 mm	25 mm	6 mm



#### Cylindrical Shape SB(W / End Cut)









TOOL	HEAD	FLUTE	SHANK
NO.	DIA.	LENGTH	DIA
SB-11	1/8"	1/2"	1/4"
SB-12	1/8"	5/8"	1/4"
SB-13	5/32"	5/8"	1/4"
SB-14	3/16"	5/8"	1/4"
SB-1	1/4"	> 5/8"	1/4"
SB-1L	1/4"	1"	1/4"
SB-2	5/16"	3/4"	1/4"
SB-3	3/8"	3/4"	1/4"
SB-3L	3/8"	1"	1/4"
SB-3X	3/8"	1-1/2"	1/4"
SB-4	7/16"	1"	1/4"
SB-5	1/2"	1"	1/4"
SB-6	5/8"	1"	1/4"
SB-7	3/4"	1"	1/4"
SB-15	3/4"	1/2"	1/4"
SB-16	3/4"	3/4"	1/4"
SB-8	7/8"	1"	1/4"
SB-9	1"	1"	1/4"

1/4" shanks are supplied standard unless ordered otherwise. 3/8" shanks are recommended on all Burs larger than 1/2" diameter.

TOOL NO.	HEAD DIA.	FLUTE LENGTH	SHANK DIA
SB-11M	3 mm	12 mm	6 mm
SB-12M	3 mm	15.8 mm	6 mm
SB-13M	4 mm	15.8 mm	6 mm
SB-14M	5 mm	15.8 mm	6 mm
SB-1M	6 mm	15.8 mm	6 mm
SB-1LM	6 mm	25 mm	6 mm
SB-2M	8 mm	19 mm	6 mm
SB-3M	9.5 mm	19 mm	6 mm
SB-3LM	9.5 mm	25 mm	6 mm
SB-3XM	9.5 mm	37 mm	6 mm
SB-4M	11 mm	25 mm	6 mm
SB-5M	12.7 mm	25 mm	6 mm
SB-6M	16 mm	25 mm	6 mm
SB-7M	19 mm	25 mm	6 mm
SB-15M	19 mm	12 mm	6 mm
SB-16M	19 mm	19 mm	6 mm
SB-8M	22.3 mm	25 mm	6 mm
SB-9M	25 mm	25 mm	6 mm

6 mm shanks are supplied standard unless ordered otherwise. 8 mm shanks are recommended on all Burs larger than 12 mm diameter.





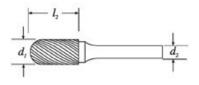


TOOL NO.	HEAD DIA.	FLUTE LENGTH	SHANK DIA
SB-1ALM	6 mm	19 mm	6 mm
SB-3ALM	9.5 mm	19 mm	6 mm
SB-5ALM	12 mm	25 mm	6 mm
SB-6ALM	15.8 mm	25 mm	6 mm
SB-7ALM	19 mm	25 mm	6 mm



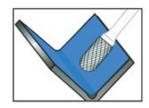


#### Cylindrical Shape SC(With Radius)











TOOL	HEAD	FLUTE	SHANK	
NO.	DIA.	LENGTH	DIA	
SC-11	1/8"	1/2"	1/4"	
SC-12	1/8"	5/8"	1/4"	
SC-13	5/32"	5/8"	1/4"	
SC-14	3/16"	5/8"	1/4"	
SC-1	1/4"	> 5/8"	1/4"	
SC-1L	1/4"	1"	1/4"	
SC-2	5/16"	3/4"	1/4"	
SC-3	3/8"	3/4"	1/4"	
SC-3L	3/8"	1"	1/4"	
SC-3X	3/8"	1-1/2"	1/4"	
SC-4	7/16"	1"	1/4"	
SC-5	1/2"	1"	1/4"	
SC-6	5/8"	1"	1/4"	
SC-7	3/4"	1"	1/4"	
SC-15	3/4"	1/2"	1/4"	
SC-16	3/4"	3/4"	1/4"	
SC-8	7/8"	1"	1/4"	
SC-9	1"	1"	1/4"	

1/4" shanks are supplied standard unless ordered otherwise. 3/8" shanks are recommended on all Burs larger than 1/2" diameter.

TOOL NO.	HEAD DIA.	FLUTE LENGTH	SHANK DIA
SC-11M	3 mm	12 mm	6 mm
SC-12M	3 mm	15.8 mm	6 mm
SC-13M	4 mm	15.8 mm	6 mm
SC-14M	5 mm	15.8 mm	6 mm
SC-1M	6 mm	15.8 mm	6 mm
SC-1LM	6 mm	25 mm	6 mm
SC-2M	8 mm	19 mm	6 mm
SC-3M	9.5 mm	19 mm	6 mm
SC-3LM	9.5 mm	25 mm	6 mm
SC-3XM	9.5 mm	37 mm	6 mm
SC-4M	11 mm	25 mm	6 mm
SC-5M	12.7 mm	25 mm	6 mm
SC-6M	16 mm	25 mm	6 mm
SC-7M	19 mm	25 mm	6 mm
SC-15M	19 mm	12 mm	6 mm
SC-16M	19 mm	19 mm	6 mm
SC-8M	22.3 mm	25 mm	6 mm
SC-9M	25 mm	25 mm	6 mm

6 mm shanks are supplied standard unless ordered otherwise. 8 mm shanks are recommended on all Burs larger than 12 mm diameter.



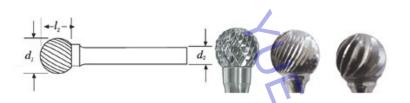
TOOL NO.	HEAD DIA.	FLUTE	SHANK
SC-1AL	1/4"	3/4"	1/4"
SC-3AL	3/8"	3/4"	1/4"
SC-5AL	1/2"	1"	1/4"
SC-6AL	5/8"	1"	1/4"
SC-7AL	3/4"	1"	1/4"

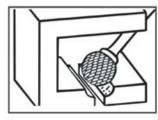
1/4" shanks are supplied standard unless ordered otherwise. 3/8" shanks are recommended on all Burs larger than 1/2" diameter. Metric shanks available on request.

TOOL NO.	HEAD DIA.	FLUTE LENGTH	SHANK DIA
SC-1ALM	6 mm	19 mm	6 mm
SC-3ALM	9.5 mm	19 mm	6 mm
SC-5ALM	12 mm	25 mm	6 mm
SC-6ALM	15.8 mm	25 mm	6 mm
SC-7ALM	19 mm	25 mm	6 mm



### Ball Shape SD







TOOL	HEAD	SHANK
NO.	DIA.	DIA
SD-11	1/8"	1/4"
SD-14	3/16"	1/4"
SD-1	1/4"	1/4"
SD-2	5/16"	1/4"
SD-3	3/8"	1/4"
SD-4	7/16"	1/4"
SD-5	1/2"	1/4"
SD-6	5/8"	1/4"
SD-7	3/4"	1/4"
SD-9	1"	1/4"

1/4" shanks are supplied standard unless ordered otherwise. 3/8" shanks are recommended on all Burs larger than 1/2" diameter.

TOOL	HEAD	SHANK
NO.	DIA.	DIA
SD-11M	3 mm	6 mm
SD-14M	5 mm	6 mm
SD-1M	6 mm	6 mm
SD-2M	8 mm	6 mm
SD-3M	9.5 mm	6 mm
SD-4M	11 mm	6 mm
SD-5M	12.7 mm	6 mm
SD-6M	16 mm	6 mm
SD-7M	19 mm	6 mm
SD-9M	25 mm	6 mm

6 mm shanks are supplied standard unless ordered otherwise. 8 mm shanks are recommended on all Burs larger than 12 mm diameter.



TOOL NO.	HEAD DIA.	FLUTE LENGTH	SHANK DIA
SD-1AL	1/4"	1/4"	1/4"
SD-3AL	3/8"	3/8"	1/4"
SD-5AL	1/2"	1/2"	1/4"
SD-6AL	5/8"	5/8"	1/4"
SD-7AL	3/4"	3/4"	1/4"

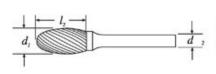
1/4" shanks are supplied standard unless ordered otherwise. 3/8" shanks are recommended on all Burs larger than 1/2" diameter. Metric shanks available on request.

TOOL NO.		FLUTE LENGTH	SHANK DIA
SD-1ALM	6 mm	6 mm	6 mm
SD-3ALM	9.5 mm	9.5 mm	6 mm
SD-5ALM	12 mm	12 mm	6 mm
SD-6ALM	15.8 mm	15.8 mm	6 mm
SD-7ALM	19 mm	19 mm	6 mm



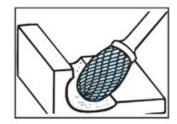


### Oval Shape SE











TOOL NO.	HEAD DIA.	FLUTE LENGTH	SHANK DIA
SE-11	3/16"	5/16"	1/4"
SE-1	1/4"	3/8"	1/4"
SE-3	3/8"	5/8"	1/4"
SE-5	1/2"	7/8"	1/4"
SE-6	5/8"	1"	1/4"
SE-7	3/4"	_1"	1/4"

1/4" shanks are supplied standard unless ordered otherwise. 3/8" shanks are recommended on all Burs larger than 1/2" diameter.

TOOL NO.	HEAD DIA.	FLUTE LENGTH	SHANK DIA
SE-11M	4.7 mm	7.9 mm	6 mm
SE-1M	6 mm	9.5 mm	6 mm
SE-3M	9.5 mm	16 mm	6 mm
SE-5M	12.7 mm	22 mm	6 mm
SE-6M	16 mm	25 mm	6 mm
SE-7M	19 mm	25 mm	6 mm

6 mm shanks are supplied standard unless ordered otherwise. 8 mm shanks are recommended on all Burs larger than 12 mm diameter.



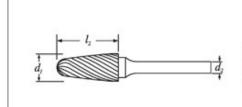
TOOL NO.	HEAD DIA.	FLUTE LENGTH	SHANK DIA
1101	DIAI	LEIGHT	DIA
SE-3AL	3/8"	5/8"	1/4"
SE-5AL	1/2"	7/8"	1/4"
SE-6AL	5/8"	1"	1/4"
SE-7AL	3/4"	1"	1/4"

1/4" shanks are supplied standard unless ordered otherwise. 3/8" shanks are recommended on all Burs larger than 1/2" diameter. Metric shanks available on request.

TOOL	HEAD	FLUTE	SHANK
NO.	DIA.	LENGTH	DIA
SE-3ALM	9.5 mm	15.8 mm	6 mm
SE-5ALM	12 mm	22.3 mm	6 mm
SE-6ALM	15.8 mm	25 mm	6 mm
SE-7ALM	19 mm	25 mm	6 mm

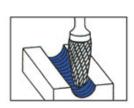


#### Round Nose Tree Shape SF











TOOL NO.	HEAD DIA.	FLUTE LENGTH	SHANK DIA
SF-11	1/8"	1/2"	1/4"
SF-1	1/4"	5/8"	1/4"
SF-3	3/8"	3/4"	1/4"
SF-4	7/16"	1"	1/4"
SF-5	1/2"	1"	1/4"
SF-13	1/2"	3/4"	1/4"
SF-6	5/8"	1"	1/4"
SF-7	3/4"	1"	1/4"
SF-14	3/4"	1-1/4"	1/4"
SF-15	3/4"	1-1/2"	1/4"

1/4" shanks are supplied standard unless ordered otherwise. 3/8" shanks are recommended on all Burs larger than 1/2" diameter.

TOOL NO.	HEAD DIA.	FLUTE LENGTH	SHANK DIA
SF-11M	3 mm	12.7 mm	6 mm
SF-1M	6 mm	16 mm	6 mm
SF-3M	9.5 mm	19 mm	6 mm
SF-4M	11 mm	25 mm	6 mm
SF-5M	12.7 mm	25 mm	6 mm
SF-13M	12.7 mm	19 mm	6 mm
SF-6M	16 mm	25 mm	6 mm
SF-7M	19 mm	25 mm	6 mm
SF-14M	19 mm	32 mm	6 mm
SF-15M	19 mm	38 mm	6 mm

6 mm shanks are supplied standard unless ordered otherwise. 8 mm shanks are recommended on all Burs larger than 12 mm diameter.



TOOL NO.	HEAD DIA.	FLUTE LENGTH	SHANK DIA
SF-1AL	1/4"	3/4"	1/4"
SF-3AL	3/8"	3/4"	1/4"
SF-5AL	1/2"	1"	1/4"
SF-6AL	5/8"	1"	1/4"
SF-14AL	3/4"	1-1/4"	1/4"

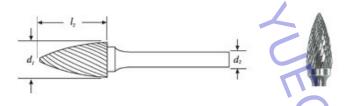
1/4" shanks are supplied standard unless ordered otherwise. 3/8" shanks are recommended on all Burs larger than 1/2" diameter. Metric shanks available on request.

TOOL NO.	HEAD DIA.	FLUTE LENGTH	SHANK DIA	
SF-1ALM	6 mm	19 mm	6 mm	
SF-3ALM	9.5 mm	19 mm	6 mm	
SF-5ALM	12 mm	25 mm	6 mm	
SF-6ALM	15.8 mm	25 mm	6 mm	
SF- 14ALM	19 mm	32 mm	6 mm	

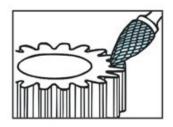




#### Pointed Tree Shape SG









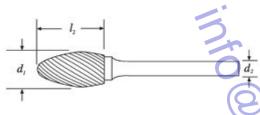
TOOL NO.	HEAD DIA.	FLUTE LENGTH	SHANK DIA	
SG-1	1/4"	5/8"	1/4"	
SG-2	5/16"	3/4"	1/4"	
SG-3	3/8"	3/4"	1/4"	
SG-5	1/2"	1"	1/4"	
SG-13	1/2"	3/4"	1/4"	
SG-6	5/8"	1"	1/4" 🖣	
SG-7	3/4"	1"	1/4"	
SG-14	3/4 "	1-1/4"	1/4 "	
SG-15	3/4"	1-1/2"	1/4"	
1/4" chanks are supplied standard				

1/4" shanks are supplied standard unless ordered otherwise. 3/8" shanks are recommended on all Burs larger than 1/2" diameter.

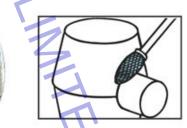
TOOL NO.	HEAD DIA.	FLUTE LENGTH	SHANK DIA
SG-1M	6 mm	16 mm	6 mm
SG-2M	8 mm	19 mm	6 mm
SG-3M	9.5 mm	19 mm	6 mm
SG-5M	12.7 mm	25 mm	6 mm
SG-13M	12.7 mm	19 mm	6 mm
SG-6M	16 mm	25 mm	6 mm
SG-7M	19 mm	25 mm	6 mm
SG-14			
SG-15M	19 mm	38 mm	6 mm

6 mm shanks are supplied standard unless ordered otherwise. 8 mm shanks are recommended on all Burs larger than 12 mm diameter.

# Flame Shape SH









TOOL NO.	HEAD DIA.	FLUTE LENGTH	SHANK DIA
SH-1	1/4"	5/8"	1/4"
SH-2	5/16"	3/4"	1/4"
SH-5	1/2"	1-1/4"	1/4"
SH-6	5/8"	1-7/16"	1/4"
SH-7	3/4"	1-5/8"	1/4"

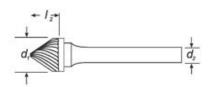
1/4" shanks are supplied standard unless ordered otherwise. 3/8" shanks are recommended on all Burs larger than 1/2" diameter.

TOOL NO.	HEAD DIA.	FLUTE LENGTH	SHANK DIA
SH-1M	6 mm	16 mm	6 mm
SH-2M	8 mm	19 mm	6 mm
SH-5M	12.7 mm	32 mm	6 mm
SH-6M	16 mm	36 mm	6 mm
SH-7M	19 mm	41 mm	6 mm

6 mm shanks are supplied standard unless ordered otherwise. 8 mm shanks are recommended on all Burs larger than 12 mm diameter.

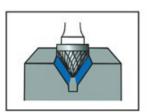


#### Cone ShapeSJ (60°











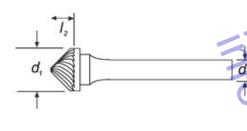
TOOL NO.	HEAD DIA.	FLUTE LENGTH	SHANK DIA
SJ-1	1/4"	3/16"	1/4"
SJ-3	3/8"	5/16"	1/4"
SJ-5	1/2"	7/16"	1/4"
SJ-6	5/8"	9/16"	1/4"
SJ-7	3/4"	11/16"	1/4"
SJ-9	1"	15/16"	1/4"

1/4" shanks are supplied standard unless ordered otherwise. 3/8" shanks are recommended on all Burs larger than 1/2" diameter.

TOOL NO.	HEAD DIA.	FLUTE LENGTH	SHANK DIA
SJ-1M	6 mm	4 mm	6 mm
SJ-3M	9.5 mm	8 mm	6 mm
SJ-5M	12.7 mm	11 mm	6 mm
SJ-6M	16 mm	14.5 mm	6 mm
SJ-7M	19 mm	17.5 mm	6 mm
SJ-9M	25 mm	24.5 mm	6 mm

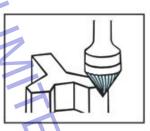
6 mm shanks are supplied standard unless ordered otherwise. 8 mm shanks are recommended on all Burs larger than 12 mm diameter.

# Cone Shape SK(90











TOOL NO.	HEAD DIA.	FLUTE LENGTH	SHANK DIA
SK-1	1/4"	1/8"	1/4"
SK-3	3/8"	3/16"	1/4"
SK-5	1/2"	1/4"	1/4"
SK-6	5/8"	5/16"	1/4"
SK-7	3/4"	3/8"	1/4"
SK-9	1"	1/2"	1/4"

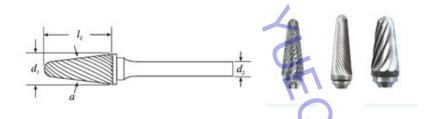
1/4" shanks are supplied standard unless ordered otherwise. 3/8" shanks are recommended on all Burs larger than 1/2" diameter.

TOOL NO.	HEAD DIA.	FLUTE LENGTH	SHANK DIA
SK-1M	6 mm	3 mm	6 mm
SK-3M	9.5 mm	4.7 mm	6 mm
SK-5M	12.7 mm	6.3 mm	6 mm
SK-6M	16 mm	8 mm	6 mm
SK-7M	19 mm	9.5 mm	6 mm
SK-9M	25 mm	12.7 mm	6 mm

6 mm shanks are supplied standard unless ordered otherwise. 8 mm shanks are recommended on all Burs larger than 12 mm diameter.



## Taper Shape(Cone W / Radius End) SL







TOOL NO.	HEAD DIA.	FLUTE LENGTH	SHANK
SL-1	1/4"	3/16"	1/4"
SL-2	5/16"	7/8"	1/4"
SL-3	3/8"	1-1/16"	1/4"
SL-4	1/2"	1-1/8"	1/4"
SL-5	5/8"	1-3/16"	1/4"
SL-6	5/8"	1-5/16"	1/4"
SL-7	3/4"	1-1/2"	1/4"

1/4" shanks are supplied standard unless ordered otherwise. 3/8" shanks are recommended on all Burs larger than 1/2" diameter.

TOOL NO.	HEAD DIA.	FLUTE LENGTH	SHANK DIA
SL-1M	6 mm	16 mm	6 mm
SL-2M	8 mm	22 mm	6 mm
SL-3M	9.5 mm	27 mm	6 mm
SL-4M	12.7 mm	28 mm	6 mm
SL-5M	16 mm	30 mm	6 mm
SL-6M	15.9 mm	33 mm	6 mm
SL-7M	19 mm	38 mm	6 mm

6 mm shanks are supplied standard unless ordered otherwise. 8 mm shanks are recommended on all Burs larger than 12 mm diameter.



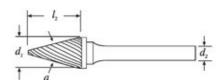
TOOL NO.	HEAD DIA.	FLUTE LENGTH	SHANK DIA
SL-3AL	3/8"	1-1/16"	1/4"
SL-4AL	1/2"	1-1/8"	1/4"
SL-5AL	5/8"	1-3/16"	1/4"
SL-6AL	5/8"	1-5/16"	1/4"
SL-7AL	3/4"	1-1/2"	1/4"

1/4" shanks are supplied standard unless ordered otherwise. 3/8" shanks are recommended on all Burs larger than 1/2" diameter. Metric shanks available on request.

TOOL NO.		FLUTE LENGTH		
SL-3ALM	9.5 mm	27 mm	6 mm	
SL-4ALM	12 mm	29 mm	6 mm	
SL-5ALM	15.8 mm	30 mm	6 mm	
SL-6ALM	15.8 mm	34 mm	6 mm	
SL-7ALM	19 mm	38 mm	6 mm	

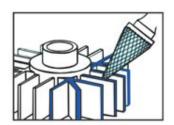


#### Cone Shape SM











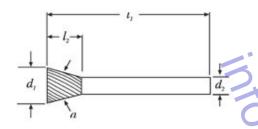
		V Comments	
TOOL	HEAD	FLUTE	SHANK
NO.	DIA.	LENGTH	DIA.
SM-1	1/4"	1/2"	1/4"
SM-2	1/4"	3/4"	1/4"
SM-3	1/4"	1"	1/4"
SM-4	3/8"	5/8"	1/4"
SM-5	1/2"	7/8"	1/4"
SM-6	5/8"	1"	1/4"

1/4" shanks are supplied standard unless ordered otherwise. 3/8" shanks are recommended on all Burs larger than 1/2" diameter.

TOOL NO.	HEAD DIA.	FLUTE LENGTH	INCLUDED ABGLE
SM-1M	6 mm	12.7 mm	22°
SM-2M	6 mm	19 mm	14°
SM-3M	6 mm	25 mm	10°
SM-4M	9.5 mm	16 mm	28°
SM-5M	12.7 mm	22 mm	28°
SM-6M	16 mm	25 mm	31°

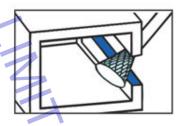
6 mm shanks are supplied standard unless ordered otherwise. 8 mm shanks are recommended on all Burs larger than 12 mm diameter.

# Cone Shape SN











TOOL NO.	HEAD DIA.	FLUTE LENGTH	SHANK DIA.
SN-1	1/4"	5/16"	1/4"
SN-2	3/8"	3/8"	1/4"
SN-4	1/2"	1/2"	1/4"
SN-6	5/8"	3/4"	1/4"
SN-7	3/4"	5/8"	1/4"

1/4" shanks are supplied standard unless ordered otherwise. 3/8" shanks are recommended on all Burs larger than 1/2" diameter.

TOOL NO.	HEAD DIA.	FLUTE LENGTH	INCLUDED ABGLE
SN-1M	6 mm	8 mm	10°
SN-2M	9.5 mm	9.5 mm	13°
SN-4M	12.7 mm	12.7 mm	28°
SN-6M	16 mm	19 mm	18°
SN-7M	19 mm	16 mm	30°

6 mm shanks are supplied standard unless ordered otherwise. 8 mm shanks are recommended on all Burs larger than 12 mm diameter.



Burs listed are with 6" long steel shanks. Special shank length are available upon request.



TOOL NO.	HEAD DIA. Cylinde	FLUTE LENGTH r Shnae	SHANK DIA
SA-1L6	1/4	1/2	1/4
SA-3L6	3/8	3/4	1/4
SA-5L6	1/2	1	1/4









Ball Shape			
SD-1L6	1/4	7/32	1/4
SD-3L6	3/8	5/16	1/4
SD-5L6	1/2	7/16	1/4



Over Shape					
SE-1L6	1/4	3/8	1/4		
SE-3L6	3/8	5/8	1/4		
SE-5L6	1/2	7/8	1/4		





# **Round Nose Tree**

SF-1L6	1/4	1/2	1/4
SF-3L6	3/8	3/4	1/4
SF-5L6	1/2	1	1/4







SG-1L6	1/4	1/2	1/4
SG-3L6	3/8	3/4	1/4
SG-5L6	1/2	1	1/4









SH-2L6	5/16	3/4	1/4
SH-5L6	1/2	1-1/4"	1/4







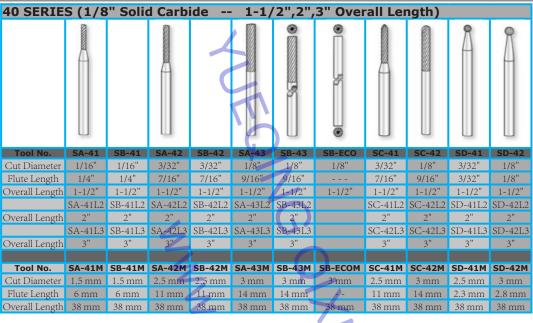
SL-1L6	1/4	3/8	1/4
SL-3L6	3/8	1-1/16"	1/4
SL-4L6	1/2	1-1/8"	1/4

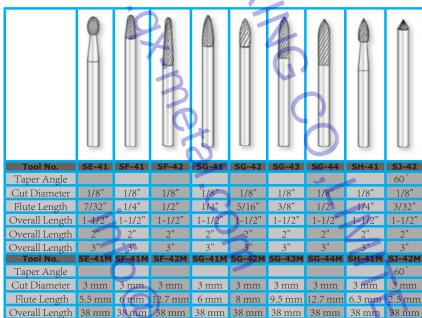






#### 41-43 Series-Mold, Tool&Die Making







Tool No.	SK-42M	SL-41M	SL-42M	SM-41M	SM-42M	SM-43M	SN-41M	SN-42M
Taper Angle	90°	8°	8°	12°	14°	7°	10°	10°
Cut Diameter	3 mm	3 mm	3 mm	3 mm	3 mm	3 mm	2.5 mm	3 mm
Flute Length	1.5 mm	9.5 mm	12.7 mm	8.9 mm	11 mm	16 mm	3 mm	4 mm
Overall Length	38 mm	38 mm	38 mm	38 mm	38 mm	38 mm	38 mm	38 mm



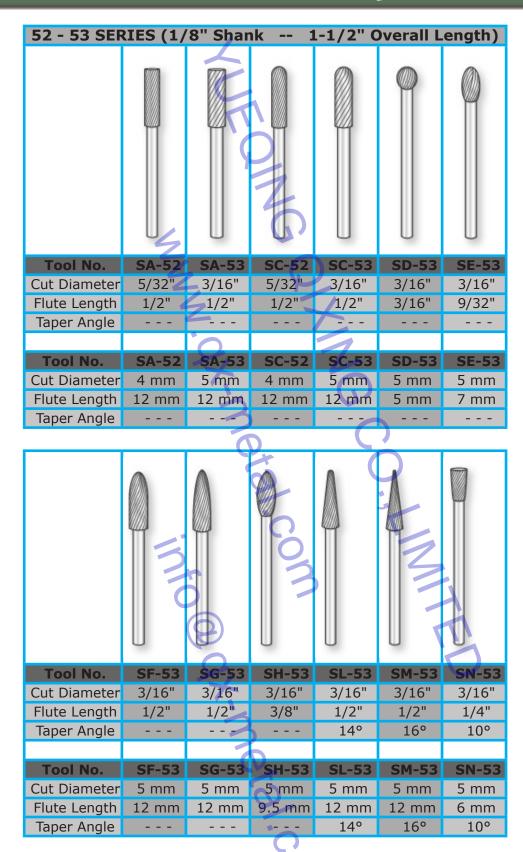
#### 51 Series-Mold, Tool&Die Making



Tool No.	SA-51M	SB-51M	SC-51M	SD-51M	SE-51M	SF-51M	SG-51M	SM-51M	SN-51M
Cut Diameter	6 mm	6 mm	6 mm	6 mm	6 mm	6 mm	6 mm	6 mm	6 mm
Flute Length	12.7 mm	5 mm	12.7 mm	6 mm	9.5 mm	12.7 mm	12.7 mm	12.7 mm	6 mm
Taper Angle			3			4		22°	10°
			100 C	ox-metal.	7 507		THE STATE OF THE S		



### 52-53 Series-Mold, Tool&Die Making





#### 61-63 & 81 Series-Mold,Tool&Die Making

61 - 63 SERIES (3/32" Solid Carbide 1-1/4" Overall Length)									
				EQING.					
Tool No.	SA-61	SA-63	SC-61	SD-61	SE-61	SF-61	SG-61	SM-61	SN-61
Cut Diameter	1/16"	3/32"	3/32"	3/32"	3/32"	3/32"	3/32"	3/32"	3/32"
Flute Length	1/4"	3/8"	3/8"	3/32"	1/8"	1/4"	1/4"	1/4"	1/8"
			*						
Tool No.	SA-61	SA-63	SC-61	SD-61	SE-61	SF-61	SG-61	SM-61	SN-61
Cut Diameter	1.5 mm	2.5 mm							
Flute Length	6 mm	9.5 mm	9.5 mm	2.5 mm	3 mm	6 mm	6 mm	6 mm	3 mm

81 SERIES (3/16" Solid Carbide - 2" Overall Length)									
OI SERIES (	3/10 3	oliu Cai	Dide (-	2 000	si all Lei	igtii)			
				Secon					
Tool No.	SA-81	SC-81	SD-81	SE-81	SF-81	SG-81	SL-81	SN-81	
Cut Diameter	3/16"	3/16"	3/16"	3/16"	3/16"	3/16"	3/16"	3/16"	
Flute Length	1/2"	1/2"	3/16"	9/32"	1/2"	1/2"	7/16"	1/4"	
Tool No.	SA-81	SC-81	SD-81	SE-81	SF-81	SG-81	SL-81	SN-81	
Cut Diameter	5 mm	5 mm	5 mm	5 mm	5 mm	5 mm	5 mm	5 mm	
Flute Length	12 mm	12 mm	5 mm	7 mm	12 mm	12 mm	11 mm	6 mm	
This sery need moulding developing unpon demand, negotiable.									

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