CATALOG M-100

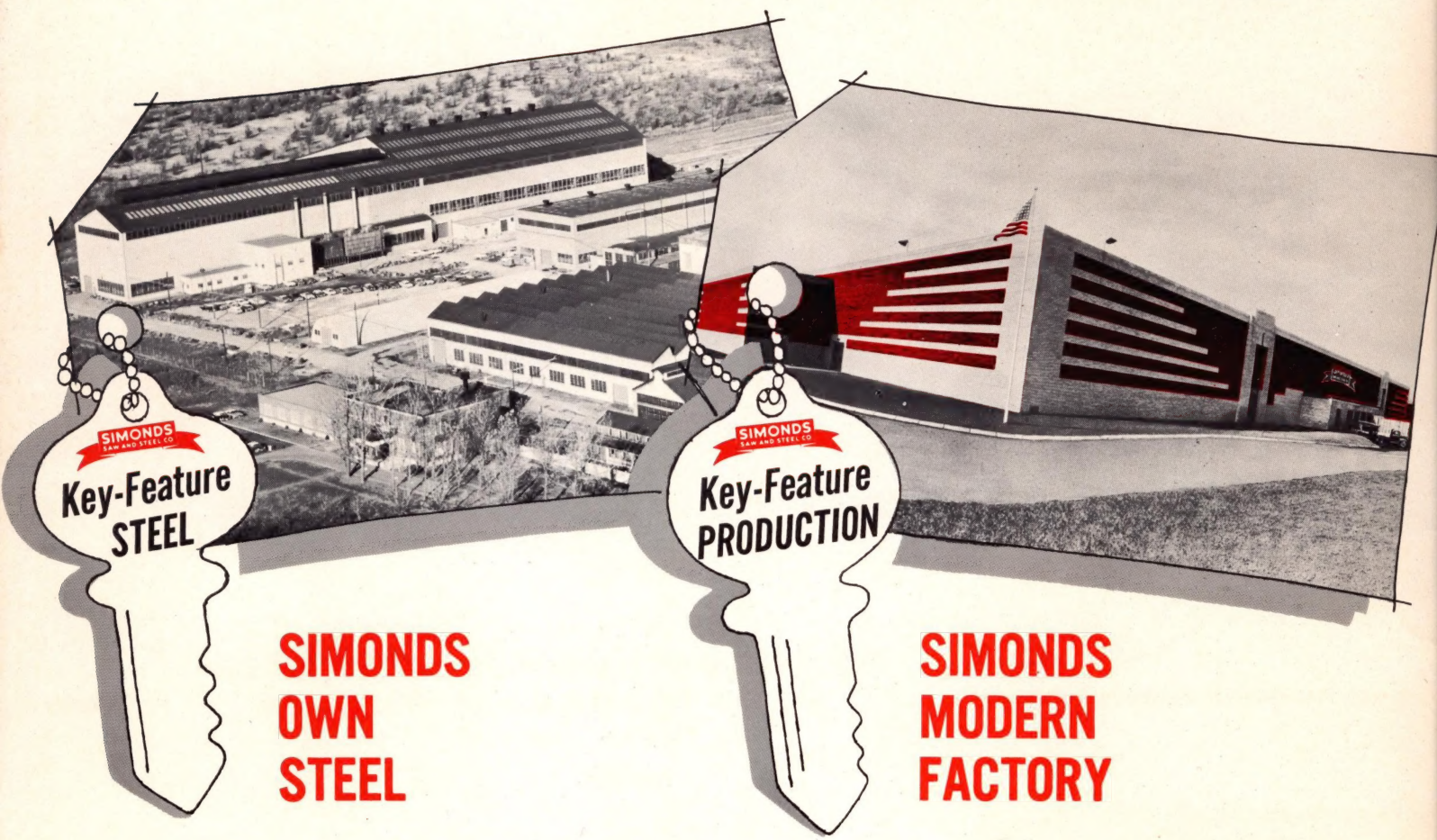
SIMONDS

Metal Cutting Tools

Boyer Campbell in Detroit
Besford & Sons in S. State.

Simonds Key-Feature Products

Unlock the Real Savings Only Quality Can Bring



SIMONDS OWN STEEL

Simonds Quality starts with Simonds Steel . . . tough, electric furnace steel that is poured, rolled and forged in Simonds own mill under the close supervision of trained metallurgists . . . steel that must be exactly right in content, grain structure and wear-resistant qualities for the intended use.

At Simonds world-famous "controlled conditions" plant, skilled workmen using special methods and equipment for machining, heat-treating, grinding, and finishing transform this quality-proven steel into precision cutting tools that have a reputation for outstanding quality, performance and dependability.

SIMONDS MODERN FACTORY

Our men, backed by Simonds factory-trained local Representatives, are "on call" whenever needed to help with your particular job . . . offer you the benefit of their wide experience in the metalworking field.

SIMONDS SAW AND STEEL CO

SIMONDS SAW AND STEEL COMPANY

FITCHBURG, MASSACHUSETTS

FACTORY BRANCHES IN UNION, N. J., CHICAGO, SHREVEPORT, LA., LOS ANGELES, SAN FRANCISCO AND PORTLAND, ORE.

SIMONDS NEW RED END® "EASY-KUT" Hand Hacksaw Blades

NEW DESIGN EASY-STARTING TEETH

Patent No. 2,682,098

New blade cuts so easily that pipe, tubing, thin sheet, electrical conduit, etc., can be handheld and thumb-guided to a line or mark.

STARTS EASIER . . . CUTS SMOOTHER . . . WITH LESS EFFORT

This newly developed blade takes most of the work out of hacksawing . . . cuts with greater accuracy and far less effort. The secret is in the patented design starting teeth. These special teeth take a lighter chip, lead quickly and easily into the regular tooth section without bucking or bouncing. As a result, a wide range of work items can be hand-held and cut, easily and accurately, without straddling or stripping the teeth, even on sharp corners. Available AT NO EXTRA COST in all 3 Simonds Hard Edge blade types — see details below and on next page.

SIMONDS COMPLETE LINE OF HAND HACKSAW BLADES

BLADE TYPES

HIGH SPEED MOLYBDENUM

HIGH SPEED TUNGSTEN

STANDARD STEEL

To provide a blade best suited for the job to be done, Simonds offers a choice of 3 types: HIGH SPEED MOLYBDENUM STEEL; HIGH SPEED TUNGSTEN STEEL and STANDARD STEEL. All Hard Edge blades are furnished with patented Easy-Starting teeth. All-Hard blades have regular teeth. Heat treated only on the tooth edge, Hard Edge blades are tough, flexible and best suited for general use. All-Hard blades are heat treated so that they are hard throughout and have added stiffness which is preferred by skilled mechanics.

HIGH SPEED MOLYBDENUM blades are long wearing and give best results for general use.

HIGH SPEED TUNGSTEN blades are more heat resistant and best suited for cutting tough alloy steels.

STANDARD STEEL blades are lowest cost and suited for general use.

Tooth size or spacing is important and the following general recommendations will provide best results:

14 TEETH PER INCH (Regular Set) - For cutting soft solid steel, iron, brass, copper and aluminum.

18 TEETH PER INCH (Regular Set) - For general shop use cutting tool steels, iron pipe, light angle iron, etc.

24 TEETH PER INCH (Wavy Set) - Best suited for cutting hard materials as well as drill rod, tubing, medium sheet metal.

32 TEETH PER INCH (Wavy Set) - For cutting thin sheet metal, tubing and stock less than .085" thick.

To prevent straddle and possible stripping of the teeth, a good rule is to have at least 3 teeth in the work at once. All 3 types of blades are made to highest quality standards of Simonds cross-rolled electric furnace steel.

SEE NEXT PAGE FOR BLADE SPECIFICATIONS - HAND AND POWER

RED END® HAND BLADE SPECIFICATIONS

ORDER BY PART NUMBER			STANDARD Steel		HIGH SPEED Molybdenum		HIGH SPEED Tungsten	
			"Easy-Kut"	Regular	"Easy-Kut"	Regular	"Easy-Kut"	Regular
Length and Width	*Thick-ness*	*No. Teeth per Inch*	HARD EDGE *Part No.*	ALL HARD *Part No.*	HARD EDGE *Part No.*	ALL HARD *Part No.*	HARD EDGE *Part No.*	ALL HARD *Part No.*
10" x ½"	.025	18	30-01018	30-11018	31-01018	31-11018	32-01018	32-11018
		24	30-01024	30-11024	31-01024	31-11024	32-01024	32-11024
		32	30-01032	30-11032	31-01032	31-11032	32-01032	32-11032
12" x ½"	.025	14	30-01214	30-11214	31-01214	31-11214	32-01214	32-11214
		18	30-01218	30-11218	31-01218	31-11218	32-01218	32-11218
		24	30-01224	30-11224	31-01224	31-11224	32-01224	32-11224
		32	30-01232	30-11232	31-01232	31-11232	32-01232	32-11232
PACKED 100 BLADES IN A BOX			10" BLADES → Weight per 100: 3¼ lbs. 12" BLADES → Weight per 100: 4 lbs.		Weight per 100: 3½ lbs. Weight per 100: 4½ lbs.		Weight per 100: 4¼ lbs. Weight per 100: 4¾ lbs.	

RED END® POWER BLADE SPECIFICATIONS

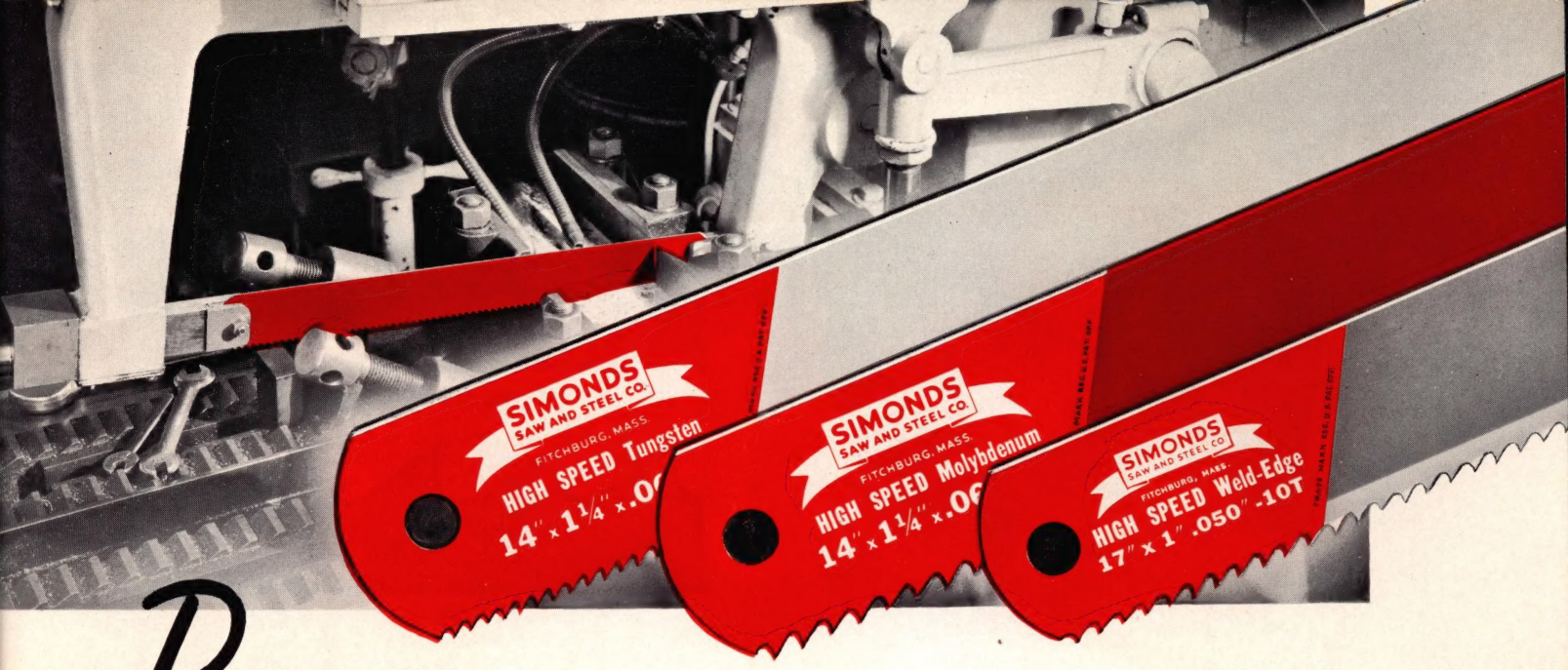
➤ ORDER BY PART NUMBER

Length and Width	*Thick-ness*	HIGH SPEED Molybdenum *No. Teeth per Inch and Part No.*	*Lbs. per 100*	HIGH SPEED Tungsten *No. Teeth per Inch and Part No.*	*Lbs. per 100*	"WELD-EDGE"® High Speed *No. Teeth per Inch and Part No.*	*Lbs. per 100*
12" x 5/8"	.032	14 33-1214-3 | 18 33-1218-3	7.5	14 34-1214-3 | 18 34-1218-3	8	14 35-1214-3 | 18 35-1218-3	8
12" x 1	.050	10 33-1210-5 | 14 33-1214-5	19	10 34-1210-5 | 14 34-1214-5	20	10 35-1210-5 | 14 35-1214-5	20
14" x 1	.050	10 33-1410-5 | 14 33-1414-5	21	10 34-1410-5 | 14 34-1414-5	23	10 35-1410-5 | 14 35-1414-5	23
14" x 1¼	.062	6 33-1406-6 | 10 33-1410-6	32	6 34-1406-6 | 10 34-1410-6	35	6 35-1406-6 | 10 35-1410-6	35
14" x 1½	.075	3 33-1403-7 | 4 33-1404-7 | 6 33-1406-7	46	3* 34-1403-7 | 4 34-1404-7 | 6 34-1406-7	50	— | 4 35-1404-7 | 6 35-1406-7	51
17" x 1	.050	10 33-1710-5 | 14 33-1714-5	25	10 34-1710-5 | 14 34-1714-5	27	10 35-1710-5 | 14 35-1714-5	28
17" x 1¼	.062	3 33-1703-6 | 4 33-1704-6 6 33-1706-6 | 10 33-1710-6	39	4 34-1704-6 | 6 34-1706-6 10 34-1710-6	42	4 35-1704-6 | 6 35-1706-6 10 35-1710-6	43
18" x 1¼	.062	6 33-1806-6 | 10 33-1810-6	40	6 34-1806-6 | 10 34-1810-6	44	6 35-1806-6 | 10 35-1810-6	45
18" x 1½	.075	— | 4 33-1804-7 | 6 33-1806-7	59	3 34-1803-7 | 4 34-1804-7 | 6 34-1806-7	64	3 35-1803-7 | 4 35-1804-7 | 6 35-1806-7	64
18" x 1¾	.088	3 33-1803-8 | 4 33-1804-8 | 6 33-1806-8	84	3* 34-1803-8 | 4 34-1804-8 | 6 34-1806-8	90	3 35-1803-8 | 4 35-1804-8 | 6 35-1806-8	88
21" x 1¾	.088	3 33-2103-8 | 4 33-2104-8 | 6 33-2106-8	95	3† 34-2103-8 | 4 34-2104-8 | 6 34-2106-8	103	4 35-2104-8 | 6 35-2106-8	104
24" x 1¾	.088	— | 4 33-2404-8 | 6 33-2406-8	111	3† 34-2403-8 | 4 34-2404-8 | 6 34-2406-8	119	3 35-2403-8 | 4 35-2404-8 | 6 35-2406-8	125
24" x 2	.100	3 33-2403-0 | 4 33-2404-0 | —	142	3* 34-2403-0 | 4 34-2404-0 | —	152	3 35-2403-0 | 4 35-2404-0 | —	149
30" x 2½	.100	4 33-3004-0	229	4 34-3004-0	244	4 35-3004-0	231
36" x 4½	.125	—	—	2½ 34-3625-2	654	2½ 35-3625-2	648

This list comprises all types, sizes, and tooth spacings that will be regularly carried in stock. Anything differing from these Hack Saws will be considered as special and will not be manufactured except in cases of urgent necessity.

*Also furnished Every Tooth Set designed for cutting High Chrome Nickel Alloy Steel. Be sure to specify when ordering.

†Furnished Every Tooth Set only for cutting High Chrome Nickel Alloy Steel.



Power HACK SAW BLADES

General Information

Three types of Power Blades are furnished from three types of Simonds Steel to provide exactly the right blade for specific cutting needs:

High Speed—Molybdenum
"Weld-Edge"®—Shatterproof High Speed
High Speed—Tungsten

Each of these job-designed blades is available in all standard lengths, widths, thicknesses and tooth spacings as shown on Page 4 (opposite). For best results always use the heaviest blade available in the desired size. To insure proper blade tension for straighter cuts and longest blade life use a "Simometer."

Simonds design tooth shape, maintained by accurate milling, provides perfectly formed teeth of uniform height. Machines of advanced design set the teeth to exacting tolerances. Straighter cuts and longer cutting life are direct results.

BLADE TYPES

HIGH SPEED Molybdenum
(THE RED BLADE)

For general purpose cutting, this is the recommended blade that is widely used and accepted by industry. Designed to give exceptionally long cutting life on a variety of steels, this blade is extremely tough and on many applications is more economical to use than any other type on the market. It will cut fast and straight at lowest cost.

"WELD-EDGE"® High Speed
(THE SHATTER-PROOF BLADE)

Designed to meet all plant safety and performance requirements, this blade is extra tough—will not snap in operation regardless of abuse, neglect, worn machine condition or improper adjustment. With its electrically welded High Speed Steel cutting edge, this shatter-proof blade resists wear, reduces blade changing and is adaptable for all types of cutting under all conditions.

HIGH SPEED Tungsten
(THE GRAY BLADE)

Where maximum cutting performance is required, this is the most satisfactory blade. Its capacity to resist heat makes it especially suited for cutting the many exceptionally tough High Alloy Steels which have been developed during the past few years. On applications of this nature, this blade is the most economical type to use in the long run.

Operating Hints

Slow speed and moderately heavy feed give best results. Be sure the machine lifts the blade slightly on the return stroke. Exact speed and feed for each job can be determined only by actual tests. The table at right gives general recommendations. . . . . .

Except when cutting cast iron, plenty of cutting compound should be used. This acts as a coolant and also reduces friction.

Type of Machine	*With or Without Solution*	Unannealed Tool Steel & Hard Metals *Strokes Per Minute*	Annealed Tool Steel *Strokes Per Minute*	Machinery Steel and Soft Metal *Strokes Per Minute*
Light	Without	40	50-60	50-60
Medium	Without	40	50-60	50-60
Medium	With	60	65-90	100-110
Heavy	With	60	90	110-120
Ex. Heavy	With	60	90	110-120

SIMONDS METAL CUTTING BAND SAW BLADES

REGULAR and "SI-MET"® HARD EDGE • SPRING TEMPER
HIGH SPEED and "SUPER" HIGH SPEED STEEL

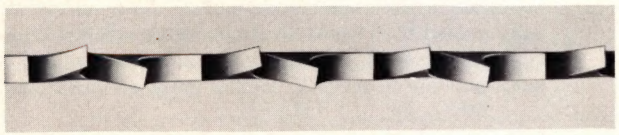
New, rugged 100′ coil package makes it easy to pull out any desired length and recoil excess blade . . . eliminates binding, saves time and trouble.

General Information

Designed for use on either vertical or horizontal type machines of all makes, these tough, long-lasting blades cut practically all kinds of materials. Simonds complete line includes Hard Edge, High Speed Steel and Spring Temper types in various tooth shapes, number of teeth and set to handle all cutting requirements. In contour sawing the radius of the curve to be cut governs the width of the saw to be used—See Radius Chart on Page 8. Saws are furnished in 100-, 250- and 500-foot coils or welded to length for specific machines—see list of saw sizes for various makes of machines on Page 8.

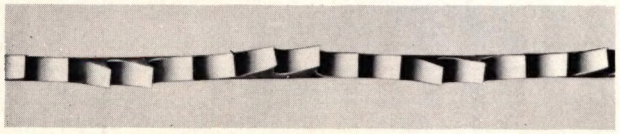
Kinds of Set

REGULAR



Regular Set is generally furnished on saws which have 2 to 24 teeth per inch. Saws with Regular Set have one tooth set to the left, one to the right and one tooth unset, called a raker. This type of set is used where the material to be cut is of uniform size and for contour cutting.

WAVY



Wavy Set is furnished on saws which have 8 to 32 teeth per inch. This type of set has groups of teeth set alternately to the left and right which greatly reduces the strain on individual teeth. Saws with Wavy Set are therefore used where tooth breakage is a problem, such as in cutting thin stock or where a variety of work is cut without changing blades. By distributing strain to groups of teeth, a wide variety of shapes and sizes of material can be cut with the same Wavy Set Saw without stripping the teeth.

REGULAR HARD EDGE

Tooth Shapes

Standard Tooth Saws, with their well-rounded gullets (see illustration above), are best suited for cutting most all ferrous materials as well as nonferrous materials such as hard brasses and bronzes. This style tooth is also used for friction sawing.

STOCK SAW SPECIFICATIONS

REGULAR SET

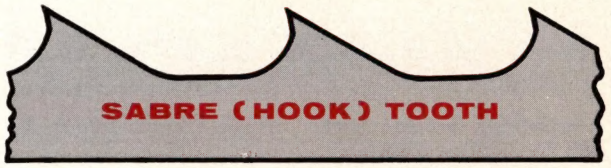
Width	*Thickness*	*No. Teeth per Inch*							
*1/8″	.025	—	—	—	—	14	18	24	—
3/16	.025	—	—	10	—	14	18	24	—
1/4	.025	—	—	10	12	14	18	24	—
3/8	.025	—	8	10	—	14	18	24	—
1/2	.025	6	—	10	—	14	18	24	—
5/8	.032	—	8	10	—	14	18	—	—
3/4	.032	6	8	10	12	14	18	—	—
1	.035	6	8	10	—	14	—	—	—

WAVY SET

Width	*Thickness*	*No. Teeth per Inch*						
1/4	.025	—	—	—	—	—	—	32
1/2	.025	—	10	—	14	18	24	—
5/8	.032	—	10	—	14	—	—	—
3/4	.032	8	10	12	14	18	—	—
1	.035	—	10	—	—	—	—	—

Furnished in 100′ and 250′ coils or cut to specified length and welded ready for use.

**Not available in 250′ coils.*



This design is similar to, but offers two distinct advantages over, the Skip Tooth Saw: (1) the face or cutting edge of the tooth has a 10° hook which makes the saw feed easier; (2) its chip breaker design prevents soft, gummy materials from sticking in the gullet. Used on essentially the same applications as Skip Tooth, the Sabre Tooth Saw will do more work at lower cost.

STOCK SAW SPECIFICATIONS

Width	*Thickness*	No. Teeth per Inch *Regular Set*			
1/4″	.025	—	—	4	6
3/8	.025	—	3	4	6
1/2	.025	2	3	4	6
3/4	.032	2	3	—	6
1	.035	2	3	—	6

Furnished in 100′ and 250′ coils or cut to specified length and welded ready for use.

SIMONDS METAL CUTTING BAND SAW BLADES

Regular Hard Edge - Tooth Shapes (Con't)

The need for more gullet capacity without weakening the body of the saw led to the development of the Skip Tooth design. This style tooth is especially desirable in cutting soft materials such as aluminum, copper, magnesium and soft brasses, where large chips are formed. Wood, plywood, plastics and masonite can also be cut fast, smooth and economically with Skip Tooth Saws.

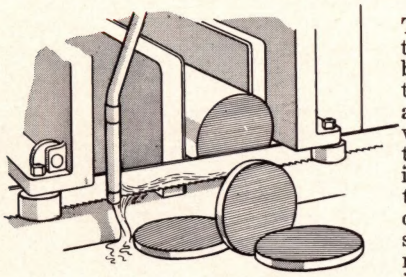
STOCK SAW SPECIFICATIONS

Width	*Thickness*	No. Teeth per Inch *Regular Set*			
3/16"	.025	—	—	4	—
1/4	.025	—	—	4	6
3/8	.025	—	3	4	—
1/2	.025	—	3	4	—
3/4	.032	—	3	—	—
1	.035	2	3	—	—

Furnished in 100′ and 250′ coils or cut to specified length and welded ready for use.

"SI-MET"® HARD EDGE

(Spring Temper Back)

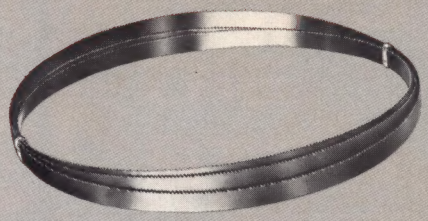


This carbon alloy type steel blade has been specially heat treated so that it has a spring temper back with a full hard cutting edge. As a result, it has nearly twice the tensile strength of ordinary carbon steel blades. This means you can place it under greater tension which will make the blade more rigid and permit heavier feeding pressure. Faster and more accurate cutting are immediate advantages. "Si-Met" Blades operate on standard band saw machines, will outcut and outlast regular carbon steel blades and consequently provide substantial savings in down time for blade changing as well as blade replacement costs. Made to Simonds rigid high quality standards, "Si-Met" Blades cost only pennies more than regular hard edge blades, are available in sizes, tooth. styles, tooth spacing and set for most common applications.

STOCK SAW SPECIFICATIONS

Width	*Thick.*	*Tooth Style*	No. Teeth per Inch *Regular Set*	*Wavy Set*
1/4"	.025	Standard	10–12–14–18	—
		Skip	4	—
3/8"	.025	Standard	10–14–18	—
		Sabre	4	—
		Skip	4	—
1/2"	.025	Standard	6–10–14–18	14
		Sabre	4	—
		Skip	4	—
5/8"	.032	Standard	8–10–14	—
3/4"	.032	Standard	6–8–10–12–14–18	8–10–12–14
		Sabre	3–6	—
		Skip	3	—
1"	.035	Standard	6–8–10–14	10
		Sabre	2–3	—
		Skip	2–3	—

Furnished in 100′ and 250′ coils or cut to specified length and welded ready for use.



SUPER High Speed Steel

Simonds SUPER High Speed Steel Blade is an entirely new concept in band saws . . . new steel*, new manufacturing methods, new heat treatment, new welding techniques, new final inspection. It will cut all types of ferrous metals and *give up to 3 times better performance* than any other High Speed Steel blade. Designed and made especially for production cut-off work, it combines the very latest in metallurgical technology and saw manufacturing know-how yet costs only slightly more than a regular blade. Furnished welded-to-length and individually packaged in all of the standard specifications listed below.

STANDARD High Speed Steel

Simonds STANDARD High Speed Steel Blade is designed for production cutting . . . offers many advantages over Hard Edge type blades. Made like a fine cutting tool, it can be operated at faster feeds and speeds, has greater resistance to wear and breakage, gives more in savings, service and satisfaction both from stepped-up production and less down-time for blade changing. Used under proper conditions it will cut all types of ferrous metals and give outstanding results. Furnished welded-to-length and individually packaged in all of the standard specifications listed below.

SAW SPECIFICATIONS

Width	*Thickness*	*Standard Tooth*	*Skip Tooth*	*Sabre Tooth*
1/2"	.025	— — — 10	— 4	— — — —
3/4	.032	— 6 8 10	3 —	— 3 — —
1	.035	4 6 8 10	3 —	2 3 4 6
1 1/4	.042	— 6 — —	3 —	— 3 — —

Furnished welded-to-length ready to use.

*Developed and made in Simonds own Steel Mill

Patent No. 3,231,433

SPRING TEMPER
Band Saw Blades

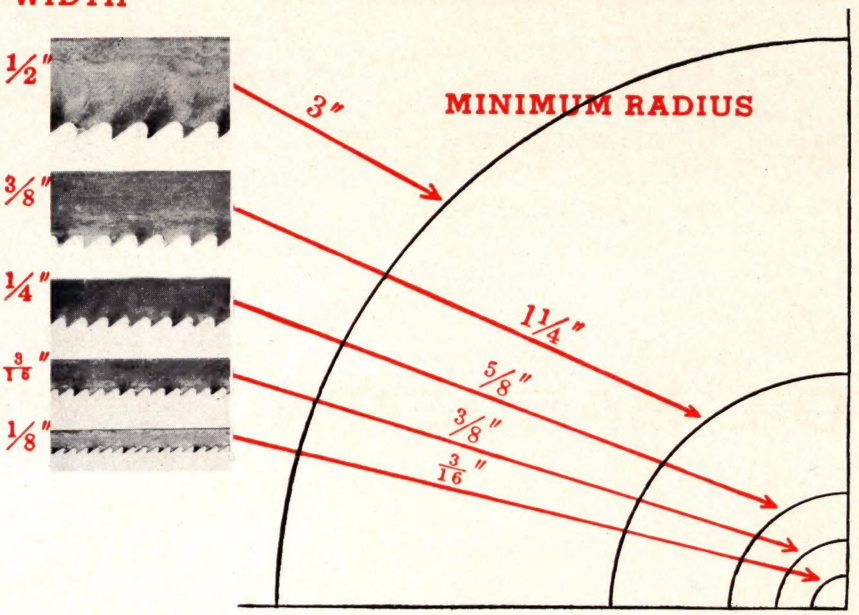
Made of cold-rolled, ground and polished Simonds Steel, with every tooth set, this type saw is principally used for cutting thin sheet steel, aluminum and magnesium and for general cutting of light structural shapes, plastics, fibre, etc. When dull, teeth can be reset and filed, and the saw reused good as new. Furnished in standard sizes as listed. Special sizes made on order.

STANDARD SAW SPECIFICATIONS

Width	*Thickness*	*Teeth Per Inch*				
1/4	23 ga. (.025)	—	—	—	8	10
3/8	23 ga. (.025)	—	—	—	8	10
3/8	21 ga. (.032)	—	—	—	8	10
1/2	23 ga. (.025)	—	—	6	8	10
1/2	21 ga. (.032)	—	—	6	8	10
5/8	23 ga. (.025)	—	4	6	8	10
5/8	21 ga. (.032)	—	4	6	8	10
5/8	20 ga. (.035)	—	4	6	8	10
3/4	20 ga. (.035)	—	4	6	8	—
1	20 ga. (.035)	—	4	6	8	—
1 1/4	19 ga. (.042)	3	4	—	—	—
1 1/4	18 ga. (.049)	3	4	—	—	—

Furnished in 250′ coils or cut to specified length and welded ready for use.

Radius Chart



In contour sawing the radius of the curve to be cut governs the width of the saw to be used. The smaller the radius, the narrower the blade. For desired radius use width of saw as indicated by above chart.

SPECIFIC BAND SAW SIZES

Lengths and widths of blades required for various makes and models of band saw machines

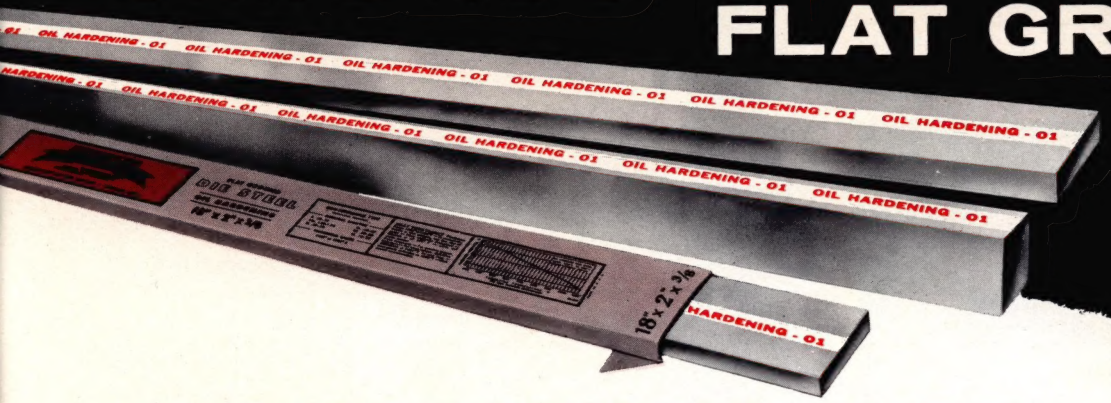
Machine	*Length*	*Width*
Atkins No. 3	15′ 8″	5/8″, 3/4″ or 1″
Atkins No. 4	14′ 1″	5/8″, 3/4″ or 1″
Avey Milband	14′ 9″	1″
Bett-Marr 14SM	8′ 1″	1/4″, 3/8″, 1/2″
Bett-Marr 24S	9′10″	1/4″, 3/8″, 1/2″
Boice Crane	8′ 2″	3/16″, 3/4″
Clark Compound	15′ 6″	1″
Clark Special and Junior	10′10″	1/2″ or 5/8″
Delta 14″	7′ 9″	1/8″–3/4″
Delta (with Height Attachment)	8′ 9″	1/8″–3/4″
Delta 20″	11′ 9″	3/16″–1″
Do-All No. C 41	12′	3/4″–1″
Do-All No. J	7′	1/8″–1/2″
Do-All No. J D	8′ 7″	1/8″–1/2″
Do-All No. M	9′	1/8″–1/2″
Do-All No. M L and V 16	10′	1/8″–1/2″
Do-All No. MP 20	13′ 5″	1/8″–1″
Do-All No. V 26	14′ 9″	1/8″–1″
Do-All No. V 36	13′ 6″	1/8″–1/2″
Famco No. 612 (All models)	8′10″	5/8″
Grob N S-18-10	12′	1/8″–1″
Grob N S-24-10	14′ 4″	1/8″–1″
Grob N S-36-10	15′10″	1/8″–1″
Grob N S-60-10	20′	1/8″–1″
Grob OSN-20 and OSN-14 (open end)	140′	1/8″–1/4″
Grob C O-18 Cut-Off Saw	13′ 6″	3/4″
Grob HS-24 Hi-speed	14′ 4″	1/2″–1″
Houghton	12′ 6″	5/8″ or 3/4″
Johnson (Model B)	7′ 5″	1/2″
Johnson (Model J)	11′ 5″	3/4″
Kalamazoo (Models 8 C and 8CW)	10′10 1/2″	3/4″
Kalamazoo (Models 816C and 816S)	10′ 5″	3/4″
Kalamazoo (Models 824C–D–S and W)	12′ 1″	3/4″
Kalamazoo (Models 610 and 610-D and W)	7′ 5″	1/2″
Kalamazoo Models 1220 and 1220-D and W)	13′11″	1″
Klemm No. 1	11′ 2″	5/8″ or 3/4″
Klemm No. 2	15′ 8″	5/8″ or 3/4″
Laidlaw CM and CMT	15′ 8″	1″
Laidlaw JM-30 and SM-30	16′	3/4″–1″
Laidlaw JM-30 Fdry	16′	1″ or 1 1/4″
Laidlaw JM-30 Fdry	17′ 6″	1 1/4″
Laidlaw JM-20, SM-20 and SMT-20	11′	3/16″–5/8″
Laidlaw SMT-30	16′	3/16″–5/8″
Marvel No. 8	14′ 8″	3/4″
Marvel No. 8 High Column	15′ 8″	3/4″
Milclark	10′10″	1/2″ or 5/8″
Napier	12′ 3″	1″
Napier JR	8′ 4″	3/4″
Racine	7′ 8″	1/8″–5/8″
Roll-in	9′ 2″	1/4″–3/4″
Stockbridge 6″	12′ 5 1/2″	5/8″
Stockbridge 9″	13′	5/8″
Stockbridge 12″	15′ 5 1/2″	3/4″
Tannewitz E-24″	13′ 7″	1/8″–1″
Tannewitz P-30-30″ PH-30″	17′	1/8″–1 1/2″
Tannewitz G-3-36″	19′ 6″	1/8″–1 3/4″
Tannewitz GH-36″ GHE-36″	19′ 9″	1/8″–1 3/4″
Tannewitz DI-SAW 24M, 36M, 48M	13′ 7″	1/8″–1/2″
Tannewitz RH-42, RHE-42	22′	1/8″–1 3/4″
Thompson	15′ 8″	5/8″ or 3/4″
Thompson Milband	12′11″	3/4″
Walker-Turner, 16″	9′ 3 1/2″	1/4″–3/4″
Wells No. 5	8′ 2 1/2″	1/2″
Wells No. 7a, No. 7b, and No. 8	11′ 6″	3/4″
Wells No. 9	9′ 5″	1/2″
Wells No. 12	13′ 6″	1″
Wells 49A	5′	1/2″
W. F. Wells Model A	94″	1/2″
W. F. Wells Model D and F	14′ 5″	1″
W. F. Wells Model J24	16′ 9″	1 1/4″
W. F. Wells Model L and W	11′ 6″	3/4″
W. F. Wells Model M	11′ 5″	3/4″
Williamson	20′ 9″	5/8″
Wright	15′ 8″	5/8″ or 3/4″

MACHINES EXPRESSLY DESIGNED FOR THE USE OF HIGH SPEED STEEL BLADES

Armstrong-Blum, No. 81	14′ 6″	1″ or 1 1/4″
Do-All, No. C-47 and No. C-70	12′	1″
Do-All, No. C-12	11′	1″
Johnson, H. S.	11′ 6″	1″
Kalamazoo H-12-B	13′ 11″	1″
Kalamazoo 14-A	15′ 6″	1″, 1 1/4″, 1 1/2″
Thompson Milband	15′	1″
Peerless No. 2216 and No. 1214	12′	1″

SIMONDS RED STREAK FLAT GROUND DIE STEEL

"1001 SIZES FOR 1001 USES"



OIL HARDENING TYPE

A.I.S.I. or S.A.E Type No. 01 Analysis

Simonds OIL HARDENING Flat Ground Die Steel is made of high grade Chromium-Tungsten type alloy tool steel produced in our own Steel Mill by the latest type electric arc furnaces. It is spheroidize annealed for good machinability and for consistently uniform hardenability with a minimum of shrinkage or warping.

Precision Ground—Ready to Use

Precision ground with an extra smooth surface finish for accurate layout purposes, standard stock sizes are available from 1/64 to 4 inches thick and 1/2 to 14 inches wide — see list on Pages 10-11.

Standard 18- and 36-inch Lengths

All stock sizes of this high grade alloy steel are supplied in convenient 18-inch and 36-inch length bars, ready for scribing, shaping, hardening and tempering. Both flat and square sizes are available.

Wide Hardening Range

Due to its wide hardening range (1450° to 1500°F.) uniform results with all thicknesses are assured with even the simplest heat-treating equipment.

Saves Time—Cuts Cost

Widely used for an ever-growing variety of purposes, this non-deforming type steel is particularly suited for making dies, punches, jigs, gauges, fixtures, templates, stamps, shims, machine parts, small tools, and 1001 other items. By eliminating difficult and costly machining operations required to grind ordinary bar stock to size, "Red Streak" Flat Ground Die Steel enables toolmakers, diemakers, machinists and others using tool and die steels to save valuable time and obtain excellent results on every job.

Individually Packaged

All sizes are individually packaged, fully protected from rusting and scratching, with dimensions and proper heat-treating instructions clearly indicated. Standard stock sizes are ready for immediate delivery. Special sizes promptly made to order.

SPECIFICATIONS

CHEMICAL ANALYSIS:

Carbon	.85– .95	Chrome	.40 – .60
Manganese	1.00–1.25	Tungsten	.40 – .60
Silicon	.20– .40	Vanadium	.10 – .20

SIZE TOLERANCES:

Thickness: ± .001"
Width: + .005–.000" (18" Lengths)
+ .015–.000" (36" Lengths)
Length: 18" + 1/32"–0" (Ends milled)
36" + 5/8"

HARDENING RANGE:

1450°F. to 1500°F.—Quench in oil 125°F. Full heat-treating instructions, including tempering chart, on each package.

SURFACE FINISH:

35 micro inches or better with all decarburization and surface defects removed.

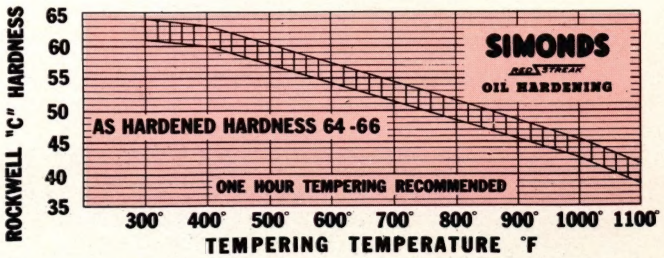
HEAT-TREATMENT

HARDENING—All thicknesses are satisfactorily quenched in oil from a hardening temperature of 1450° to 1500° Fahrenheit. *Quenching in water, regardless of water temperature, should not be attempted since this material is Oil Hardening.* It is necessary, before quenching, that the stock be thoroughly and uniformly heated. Temperature of the oil quench should be approximately 125°F.

If commercial quenching oils are not available, motor engine oil SAE 20 or SAE 30 may be substituted. Caution should be exercised to prevent the quenching oil from becoming too hot and catching fire. The flash point of motor engine oil SAE 20 is approximately 340°F.

TEMPERING:

For filing temper—Heat to a very dark blue.
For grinding temper—Heat to a light straw color.
For specific Rockwell hardness—Follow chart.

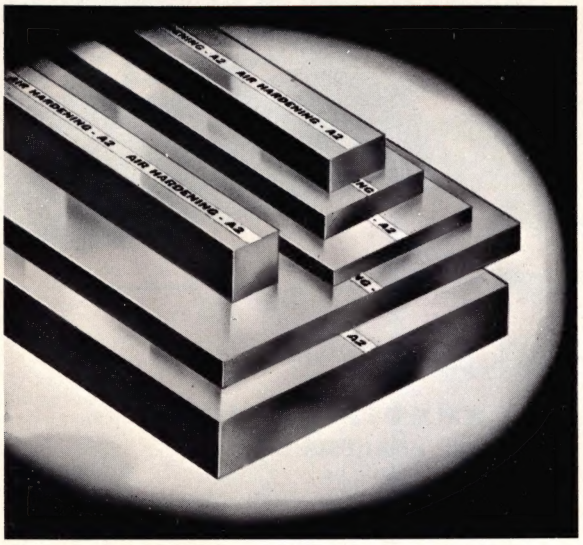


SEE LIST OF STANDARD STOCK SIZES ON PAGE 11

SIMONDS RED STREAK FLAT GROUND DIE STEEL

AIR HARDENING TYPE (5% CHROME)

A.I.S.I. or S.A.E. Type No. A2 Analysis



Simonds offers an Air Hardening type of Die Steel for longer lasting punches and dies where greater production runs are desired between sharpenings. This 5% chrome type steel will produce up to 50% more pieces per sharpening than the Oil Hardening type of Die Steel. Due to the Air Hardening features less skill is required in heat-treating.

The 5% chrome content makes this type of steel more wear resistant than Oil Hardening types and therefore is ideal for punches and dies for punching silicon or stainless steels, Monel metal, or other types of abrasive metal. It also may be used for gauges, tools, etc., where a more wear resistant steel is desired.

Made in Simonds Own Steel Mill, this Air Hardening, non-deforming type Die Steel is spheroidize annealed for good machinability and consistently uniform hardenability. It has a wide hardening range (1700° to 1800°F.) making it practically foolproof in heat-treating.

Furnished in a wide range of stock sizes in 36″ lengths (18″ lengths also available on request), all sizes are accurately ground with an extra smooth surface finish. All scale, decarburization and surface defects are completely removed so that each piece is ready for scribing, shaping and heat-treating. Both flats and squares are available.

All sizes are individually packaged, fully protected from rusting or scratching, with dimensions and heat-treating instructions on each wrapper. Special sizes promptly made to order.

Specifications:

SIZE TOLERANCES:

Thickness: ±.001″ Length: 36″ +5/8″
Width: +.015″–.000″

HARDENING RANGE:

1700° to 1800°F.—Harden at 1750°F.—Heat uniformly throughout, then soak for 15–20 minutes. Cool in still air.
Full heat-treating instructions, including tempering chart, on each package.

SURFACE FINISH:

35 micro inches or better with all decarburization and surface defects removed.

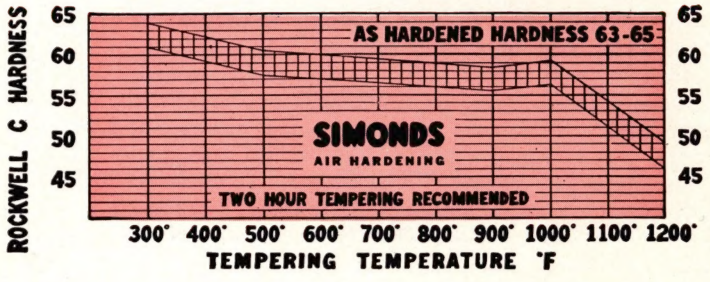
CHEMICAL ANALYSIS

Carbon . .	.95–1.05	Chrome . .	5.00–5.50
Manganese	.50– .70	Molybdenum	.90–1.10
Silicon . .	.30– .50	Vanadium . .	.20– .30

HEAT-TREATMENT

HARDENING: 1750°F. recommended. (Hardening range 1700°–1800°F. For heavier sections use high side of range.) • Heat uniformly throughout, then soak for 15–20 minutes. • Cool in still air. • If pack or atmosphere control furnace methods are used, no preheat required. • If open furnace method is used, a preheat of 1450°F. is recommended.

TEMPERING: See tempering chart opposite for desired hardness. Two-hour temper recommended. For maximum toughness double temper 1½ hours each temper recommended. • For light blanking: Temper 400° to 425°F. • For heavy blanking: Temper 700°F.



ANNEALING: 1525°F. to 1575°F. Furnace cool at not more than 50° per hour to 800° for maximum softness.

SQUARE STOCK SIZES

OIL HARDENING 18″ LENGTHS

1/8 9/64 5/32 3/16 7/32 1/4 9/32 5/16 3/8
7/16 1/2 9/16 5/8 3/4 13/16 7/8 1 1 1/4
1 1/2 1 5/8 2 2 1/2 2 3/4 3 4

OIL HARDENING 36″ LENGTHS

1/2 9/16 5/8 3/4 7/8 1 1 1/4 1 1/2 1 5/8 2 2 1/2 2 3/4 3 4

AIR HARDENING 36″ LENGTHS

11/16 3/4 13/16 7/8 1 1 1/4 1 1/2 2 2 1/2 3

SIMONDS SAW AND STEEL CO.

Flat Ground Die Steel

STANDARD STOCK SIZES

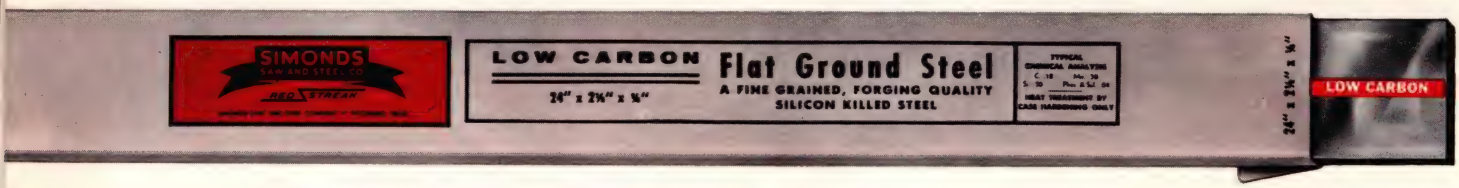
SPECIAL SIZES PROMPTLY MADE TO ORDER

AIR HARDENING — Widths

Thickness	Length	10	8	7	6	5½	5	4½	4	3½	3	2½	2	1½	1¼	1
1/8	36				●	●	●	●	●	●	●	●	●	●	●	●
5/32	36				●	●	●	●	●	●	●	●	●	●	●	●
3/16	36				●	●	●	●	●	●	●	●	●	●	●	●
1/4	36				●	●	●	●	●	●	●	●	●	●	●	●
5/16	36				●	●	●	●	●	●	●	●	●	●	●	●
3/8	36				●	●	●	●	●	●	●	●	●	●	●	●
7/16	36				●	●	●	●	●	●	●	●	●	●	●	●
1/2	36	●	●	●	●	●	●	●	●	●	●	●	●			
9/16	36	●	●	●	●	●	●	●	●	●	●	●	●			
5/8	36	●	●	●	●	●	●	●	●	●	●	●	●			
11/16	36	●	●	●	●	●	●	●	●	●	●	●	●			
3/4	36	●	●	●	●	●	●	●	●	●	●	●	●			
13/16	36	●	●	●	●	●	●	●	●	●	●	●	●			
7/8	36	●	●	●	●	●	●	●	●	●	●	●	●			
1	36	●	●	●	●	●	●	●	●	●	●	●	●			●
1 1/8	36	●	●	●	●	●	●	●	●	●	●	●	●			
1 1/4	36	●	●	●	●	●	●	●	●	●	●	●	●		●	
1 3/8	36	●	●	●	●	●	●	●	●	●	●	●	●			
1 1/2	36	●	●	●	●	●	●	●	●	●	●	●	●	●		
1 5/8	36	●	●	●	●	●	●	●	●	●	●	●	●			
2	36	●	●	●	●	●	●	●	●	●	●	●	●			

OIL HARDENING — Widths

Thickness	Length	½	5/8	¾	1	1¼	1½	1¾	2	2½	3	3½	4	4½	5	5½	6	7	8	10	12	14
1/64	18	●		●	●	●	●	●	●	●	●		●									
1/32	18	●		●	●	●	●	●	●	●	●		●				●					
3/64	18	●		●	●	●	●	●	●	●	●	●	●				●					
1/16	18	●		●	●	●	●	●	●	●	●	●	●		●		●		●	●		
1/16	36	●		●	●	●	●	●	●	●	●	●	●		●		●					
5/64	18	●		●	●				●	●	●		●				●					
3/32	18	●		●	●	●	●	●	●	●	●				●		●		●			
3/32	36	●		●	●	●	●		●	●	●		●	●	●		●					
7/64	18	●		●	●	●	●		●		●		●									
1/8	18	●	●	●	●	●	●	●	●	●	●	●	●	●	●		●	●	●	●	●	●
1/8	36	●		●	●	●	●	●	●	●	●	●	●	●	●		●	●	●			
9/64	18	●		●	●		●		●		●		●									
5/32	18	●		●	●	●	●	●	●	●	●	●	●		●		●		●			
5/32	36	●		●	●	●	●	●	●	●	●	●	●		●		●		●			
11/64	18																					
3/16	18	●		●	●	●	●	●	●	●	●	●	●		●		●	●	●	●		
3/16	36	●		●	●	●	●	●	●	●	●	●	●		●		●		●			
13/64	18																					
7/32	18	●		●	●	●	●		●		●		●				●					
7/32	36	●		●	●	●	●		●		●		●				●					
15/64	18																					
1/4	18	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
1/4	36	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			
9/32	18	●		●	●	●	●		●	●	●		●				●					
5/16	18	●		●	●	●	●		●	●	●	●	●	●	●		●		●			
5/16	36	●		●	●	●	●		●	●	●	●	●	●	●		●		●			
11/32	18																					
3/8	18	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
3/8	36	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
13/32	18																					
7/16	18	●		●	●	●	●		●	●	●		●				●					
7/16	36	●		●	●	●	●		●	●	●		●				●					
15/32	18																					
1/2	18	●	●	●	●	●	●		●	●	●	●	●	●	●		●	●	●	●	●	●
1/2	36	●	●	●	●	●	●		●	●	●	●	●	●	●		●	●	●	●		
9/16	18			●	●	●	●		●													
9/16	36				●	●	●		●													
5/8	18			●	●	●	●		●	●	●	●	●		●		●	●	●	●		
5/8	36				●	●	●		●	●	●	●	●		●		●	●	●	●		
11/16	18																					
11/16	36								●	●	●	●	●	●	●	●	●	●	●	●		
3/4	18			●	●	●	●		●	●	●	●	●	●	●		●		●	●	●	
3/4	36			●			●		●	●	●	●	●	●	●		●		●	●		
13/16	18																					
13/16	36								●	●	●	●	●	●	●	●	●	●	●	●		
7/8	18				●	●	●		●	●	●		●				●					
7/8	36						●		●	●	●		●				●					
1	18				●	●	●	●	●	●	●	●	●	●	●		●		●	●	●	●
1	36				●		●	●	●	●	●	●	●	●	●		●		●	●		
1 1/8	18						●		●		●		●				●	●	●			
1 1/8	36								●		●		●				●					
1 1/4	18					●	●		●	●			●		●		●		●	●		
1 1/4	36					●			●	●		●	●		●		●		●	●		
1 3/8	18																					
1 3/8	36								●	●	●	●	●	●	●	●	●	●	●	●		
1 1/2	18						●		●	●	●	●	●		●		●		●	●		
1 1/2	36						●		●	●	●	●	●		●		●		●	●		
1 5/8	18																					
1 5/8	36																					
2	18										●		●				●					
2	36										●		●				●					



SIMONDS RED STREAK

LOW CARBON

FLAT GROUND STEEL

Simonds now offers a Low Carbon Steel which gives substantial savings in applications where a heat-treated steel is not required, such as templates, stripper plates, etc. This is a fine grained, forging quality, silicon killed steel which can be case hardened only.

Due to its fine grain structure, this steel is more ductile, tougher, more uniformly machinable and has excellent welding qualities. Close control of various mill practices . . . chemical composition, pouring, forging, rolling, cooling, etc. plus the addition of silicon to the liquid metal which deoxidizes or "kills" the steel . . . produces a much sounder structure with excellent forging qualities.

Precision ground with an extra smooth surface finish for accurate layout purposes, standard stock sizes are available from $\frac{1}{16}$" to $1\frac{1}{2}$" thick, $\frac{1}{2}$" to 16" wide and in $\frac{3}{8}$" to $2\frac{7}{8}$" squares.

Stock sizes are now available in 24" lengths. All sizes are individually packaged, fully protected from rusting and scratching and "Type-Taped" for instant identification. Dimensions are clearly indicated. Standard stock sizes are ready for immediate delivery.

TYPICAL CHEMICAL ANALYSIS

Carbon .18 Manganese .50 Silicon .20
Sulphur .04 Phosphorus .04

SPECIFICATIONS

SIZE TOLERANCES:

Thickness: ±.001"

Width: +.005—.000" (Edges ground on pieces ¾" thick or less—Edges milled on pieces over ¾" thick.)

Length: 24"+¼"—0"

HARDENING: Can be case hardened only.

SURFACE FINISH: 35 micro inches or better.

STANDARD STOCK SIZES

LENGTH 24"	
Thickness	Width
1/16	½, ¾, 1, 1¼, 1½, 2, 2½, 3, 3½, 4, 5, 6, 8, 10, 12
3/32	
1/8	
5/32	
3/16	
1/4	

LENGTH 24"	
Thickness	Width
5/16	½, ¾, 1, 1¼, 1½, 2, 2½, 3, 3½, 4, 5, 6, 7, 8, 9, 10, 12
3/8	
1/2	
5/8 NOT FURN. IN ½"	
3/4 NOT FURN. IN ½"	

LENGTH 24"	
Thickness	Width
7/8 NOT FURN. IN 14" & 16"	1, 1¼, 1½, 2, 2½, 3, 3½, 4, 5, 6, 7, 8, 9, 10, 12, 14, 16
1 NOT FURN. IN 14" & 16"	
1¼ NOT FURN. IN 1"	
1½ NOT FURN. IN 1" & 1¼"	

STOCK SQUARE SIZES

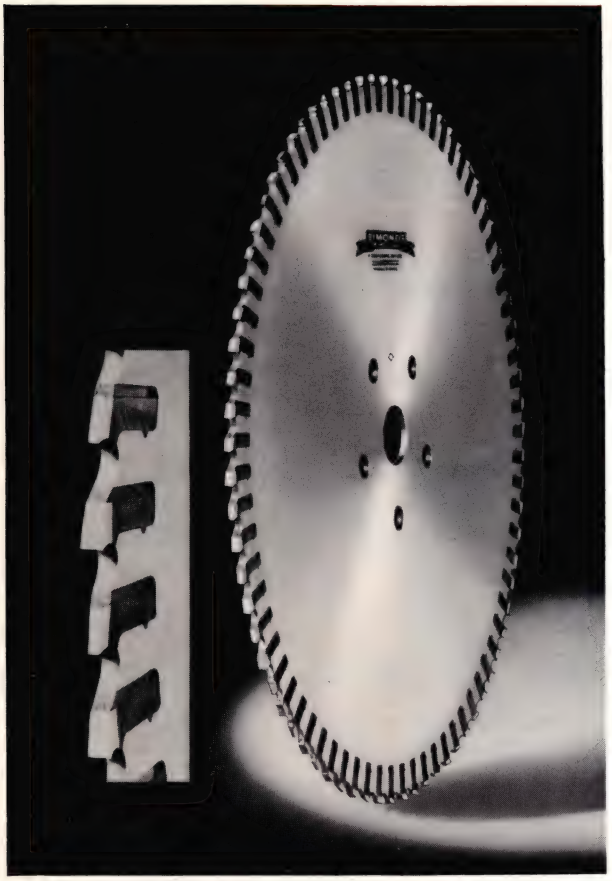
3/8, 7/16, 1/2, 9/16, 5/8, 11/16, 3/4, 13/16, 7/8

15/16, 1, 1 1/16, 1 1/8, 1 3/16, 1 1/4, 1 5/16, 1 3/8, 1 7/16

1 1/2, 1 9/16, 1 7/8, 2, 2 1/4, 2 3/8, 2 1/2, 2 7/8

SIMONDS CIRCULAR SAWS

Inserted Tooth—Ferrous and Nonferrous Cutting



Primarily designed for efficient production cutting of solid ferrous and nonferrous billets, cakes, rod, heavy and medium wall tubes, structural shapes and extrusions, Simonds Inserted Tooth Saws have long been recognized as the strongest and freest cutting in the field.

This type saw consists basically of a hardened, tempered and smoothly ground plate of a special, tough saw steel. In precision milled pockets around the edge, alternating beveled and square, wear-resisting High Speed Steel cutting teeth are securely locked in place. . . a wedge for every tooth. These high-low teeth "Tri-Vide" the chips for fast, cool cutting with less strain on the blade or machine. Ample clearance, back and down from the cutting points makes for long cutting life between sharpenings.

Standard tooth sizes and applications are described above right.

Maintenance is easily accomplished by anyone of average mechanical ability. Damaged or broken teeth, and even an entire set of worn-out teeth, are quickly and satisfactorily replaced right in your plant, eliminating the expense and delay occasioned by a trip back to the saw manufacturer's plant or repair depot. Shoulders broken by accident or abuse can be replaced by welding and the repaired saw will perform in its original outstanding manner.

TOOTH SIZES

No. 000 Jr. fills the need for a thin saw in the smaller sizes. It has proven to be best suited for maximum production from the smaller, lighter machines when cutting thin wall material such as angles, small I-Beams, etc. $\frac{3}{16}$" Kerf—10" to 18" diameter.

No. 000 cuts a slightly wider kerf than No. 000 Jr. but the teeth are more closely spaced. This greater number of teeth minimizes chatter when cutting thin walls in I-Beams, Channels, and other material of similar construction. It is also furnished in diameters up to 50". $\frac{1}{4}$" to $\frac{3}{8}$" Kerf—10" to 50" diameter.

No. 00 cuts the same narrow kerf as the No. 000 Jr. but has a coarser tooth spacing with more gullet room for chips, making it better suited for cutting thicker sections. $\frac{3}{16}$" Kerf—10" to 18" diameter.

No. 0 cuts the same kerf as No. 000 but it has coarser tooth spacing with more gullet room for chips. It is therefore better suited for cutting heavier sections, where the amount of kerf cut is not as important as the ability to stand rough usage and at the same time work well on the lighter powered machines. $\frac{1}{4}$" to $\frac{7}{16}$" Kerf—14" to 42" diameter.

No. 1 is for heavy-duty cutting on large machines where extra gullet capacity is required. $\frac{3}{8}$" or $\frac{7}{16}$" Kerf—18" to 50" diameter.

No. 2 is for cutting large dimension stock requiring ample gullet capacity. It will stand up to the heaviest feeds of the larger machines. $\frac{11}{32}$" or $\frac{1}{2}$" Kerf —26" to 64" diameter.

No. 3 is for cutting the largest billets and forgings on heavy-duty machines. This is the largest and most rugged tooth size for use in the largest diameter inserted tooth saws made. $\frac{5}{8}$" to $1\frac{3}{16}$" Kerf—50" to 100" diameter.

STANDARD SIZES

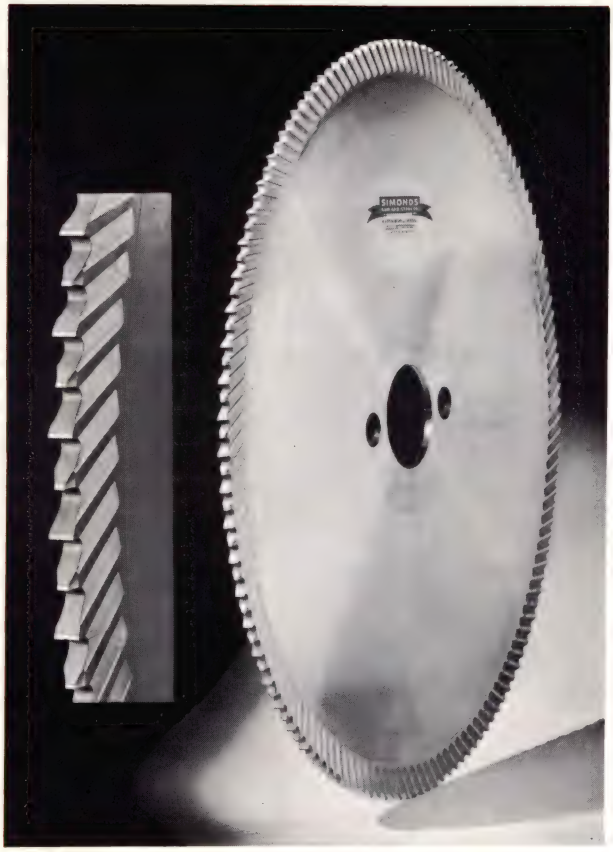
Dia.	*Plate Thickness*	*Kerf*	*No. Teeth*	*Tooth Size*
10	$\frac{9}{64}$	$\frac{3}{16}$	32	000 Jr.
12	$\frac{9}{64}$	$\frac{3}{16}$	44	000 Jr.
12	$\frac{9}{64}$	$\frac{1}{4}$	44	000 Jr.
12	$\frac{3}{16}$	$\frac{1}{4}$	44	000
12	$\frac{3}{16}$	$\frac{5}{16}$	44	000
14	$\frac{9}{64}$	$\frac{3}{16}$	52	000 Jr.
16	$\frac{9}{64}$	$\frac{3}{16}$	60	000 Jr.
16	$\frac{3}{16}$	$\frac{1}{4}$	60	000
18	$\frac{9}{64}$	$\frac{3}{16}$	68	000 Jr.
18	$\frac{9}{64}$	$\frac{3}{16}$	50	00
18	$\frac{3}{16}$	$\frac{1}{4}$	68	000
20†	$\frac{3}{16}$	$\frac{1}{4}$	36	0
20	$\frac{3}{16}$	$\frac{1}{4}$	62	000
20	$\frac{1}{4}$	$\frac{5}{16}$	62	000
22	$\frac{3}{16}$	$\frac{1}{4}$	50	0
22	$\frac{3}{16}$	$\frac{1}{4}$	70	000
24	$\frac{3}{16}$	$\frac{1}{4}$	76	000
26	$\frac{3}{16}$	$\frac{1}{4}$	82	000
28	$\frac{1}{4}$	$\frac{5}{16}$	64	0
29	$\frac{3}{16}$	$\frac{1}{4}$	64	0
30	$\frac{1}{4}$	$\frac{5}{16}$	66	0
32	$\frac{1}{4}$	$\frac{5}{16}$	70	0
34	$\frac{1}{4}$	$\frac{5}{16}$	74	0
36	$\frac{1}{4}$	$\frac{5}{16}$	78	0
36	$\frac{5}{16}$	$\frac{3}{8}$	60	1
38	$\frac{1}{4}$	$\frac{5}{16}$	84	0
44	$\frac{5}{16}$	.432	70	1 L.F.*

*L.F.—Long Face. †For Nonferrous Cutting only.

In addition to the above listed Stock Sizes, a complete range of saws can be furnished from 10"to 100" of Standard Specifications for use on all makes of cold-sawing machines.

SIMONDS CIRCULAR SAWS

Segmental Type—Ferrous and Nonferrous Cutting



Designed for efficient cutting of a wide range of ferrous and nonferrous structural shapes and extrusions, Simonds Segmental Type Saws are particularly adapted for production sawing of forging slugs or semifinished machine parts . . . operations calling for smooth cuts to minimize end finishing costs.

Design-wise, this type saw consists of a tough alloy steel saw plate with close-fitting, clearance ground High Speed Steel toothed segments securely riveted around its periphery. Two styles of segments are offered: Tongued Segment and Slotted Segment.

Both style segments are tongue and groove construction. The Tongued Style Segment has the tongue on the segment which fits into a carefully centered, precision milled slot around the periphery of the saw plate. The Slotted Style Segment has the slot in the segment which fits on a tongue precision milled around the periphery of the saw plate. Both styles give smooth, fast cuts and have long life—are furnished with or without coolant channels.

Alternating high-low beveled and square teeth "Tri-Vide" chips (split them into 3 separate pieces) reducing the load on the saw and the machine. Available in a wide range of tooth spacings from fine to coarse, both Slotted and Tongued style saws can be furnished with exactly the right number of teeth to cut thin wall sections without tooth straddle or vibration, or to cut heavy solids without danger of gullet loading.

Simonds Segmental Saws can be sharpened on any automatic saw grinder.

STOCK and STANDARD SIZES

Tongued Segment Saws

Inches	Kerf	Number of Teeth	Number of Teeth
		STOCK SAWS	STANDARD SAWS
12⅛	1/64	80	32–48–64–96–112–128
14	3/64	96–112	32–48–64–80–128
16¾	1/64	54–72–90–144	108–126
18 5/16	3/64	72–90–108–144	72*–90*–126–144*–198
20 7/16	5/64	72–90–108	72*–108*–126–144*
22⅜	5/64	36*–54–72–90–108–126–144	54*–72*–180
24 5/16	5/64	60–80–100–120–160	140
26⅛	5/64	80–100–120–140–200	40–160
28 3/16	5/64	48–72–96–120–144–192	168–216
30⅛	9/64	48–72–96–120–144	192
32 1/16	9/64	48–72–96	120–144
34 1/16	9/64	48–72–144	90–120–150–180
36 1/16	9/64	60–90–120	—
38 1/16	9/64	60–120	90–180
40	9/64	—	120–180
42¼	9/64	60–90	72–120–180
45⅛	11/32	120	90–150–180
48⅛	⅜	—	108–144–216
50⅛	⅜	—	72–108–216
55⅝	⅜	—	72–108–144
60⅛	7/16	—	72–108–144

*Also furnished for Higley Machine.

STOCK and STANDARD SIZES

Slotted Segment Saws

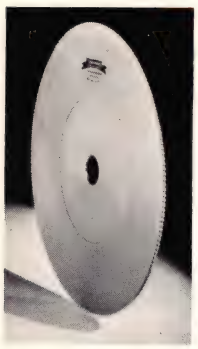
Inches	Kerf	Number of Teeth	Number of Teeth
		STOCK SAWS	STANDARD SAWS
16 17/32	.189	72–144	54–90–108–126
18½	.189	72*–90*–108	126–144*–198
20 15/32	.224	72*–90–108*–144*	126
22 7/16	.224	36–54*–72*–90–108–144	126–180
24 1/16	.236	80–100–120	60–140–160
25 63/64	.236	80–100–200	40–120–140–160
27 61/64	.248	72–96–120–144	48–168–192–216
29 33/64	.248	72–96–120	48–144–192
31 57/64	.256	48–72–96–120–144	—
33 55/64	.256	72	48–90–120–144–150–180
34½	.256	—	48
35 53/64	.275	60–120	90
37 51/64	.275	120	60–90–180
42	.315	60–72	90–108–144–180–216–288

*Also furnished for Higley Machine.

SIMONDS CIRCULAR SAWS

Solid Tooth—Nonferrous Cutting

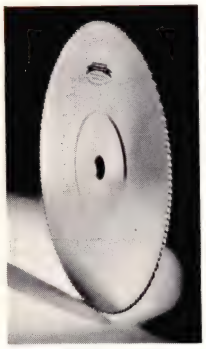
SI-MALOY® STEEL SAWS



Si-Maloy Steel Saws, practically without exception, provide the ultimate in nonferrous sawing economy. They are made of a high carbon-high chrome type saw steel especially developed for sawing nonferrous metals. Costing more than Semi-High Speed Steel Saws, their increased cost is reflected in longer cutting life between sharpenings. Costing the same as High Speed Steel Saws, they have a higher degree of toughness and resistance to breakage than the latter and in all but the most unusually abrasive alloys will hold their cutting edges equally well.

Scientific heat-treating, accurate toothing and precision grinding insure greater uniformity, perfect balance and longer life from every saw. Si-Maloy Saws are normally manufactured clearance ground and of a hard filing temper for nonferrous sawing on table, radial arm, cut-off and "chop" machines. Si-Maloy Saws are not recommended for sawing ferrous metal.

SEMI-HIGH SPEED STEEL SAWS



Semi-High Speed Steel Saws are normally applied where production requirements are limited and do not warrant the extra expense of Si-Maloy or High Speed Steel Saws. Costing less than the latter two saws, they provide somewhat less cutting between sharpenings. They are, however, tougher and more resistant to cracking or breaking and consequently more economical to use on jobs where saws are subject to abuse.

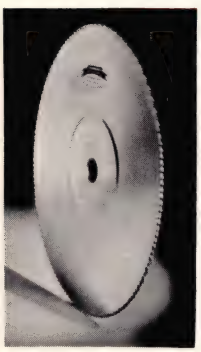
Modern heat-treating, toothing and grinding methods provide uniform clearance, perfect balance and maximum cutting life.

For nonferrous sawing on table, radial arm and "chop" machines, they are normally manufactured clearance ground and of a hard filing temper.

For sawing heavy sections of "sticky" alloys of nonferrous metals on the same equipment, they are sometimes furnished flat ground, with teeth set and filed.

Semi-High Speed Steel Saws are also furnished in a low temper and with relatively fine teeth for friction sawing of light to medium ferrous metal sections at high rim speeds. Simonds does not manufacture High R.P.M. saws over 24 inches in diameter.

HIGH SPEED STEEL SAWS



High Speed Steel Saws provide the ultimate in cutting life between sharpenings. Costing more than Semi-High Speed Steel Saws, they deliver more in the way of performance. Costing the same as Si-Maloy Steel Saws, they possess the quality of slightly better edge-holding properties in the more abrasive nonferrous alloys, but they will not take the abuse that the latter steel will stand. High Speed Steel Saws give equally good results in cutting either ferrous or nonferrous alloys.

Edge-holding qualities, uniformity and perfect balance are assured by Simonds modern heat-treating, toothing and grinding methods. Adequate clearance and an extra smooth surface finish are additional reasons why these saws give long, trouble-free service.

For nonferrous sawing on table, radial arm, cut-off and "chop" machines, saws are usually made clearance ground and of a hard filing temper.

SIMONDS manufactures High Speed Steel Saws through 16-inch diameter only

SIMONDS NEW HARD RIM SAW
See Page 17 for details

STOCK SIZES

(Saws of other specifications furnished on order)

SI-MALOY® STEEL SAWS

Concave Ground for Clearance

Dia.	*Thick.*	*Hole*	*No. Teeth*	*Collar*
4"	3/64"	1/2"	100	None
6	3/64	1/2	110	2 1/2"
6	3/64	5/8	150-200	2 1/2
6	1/16	5/8	80-110-150-200	2 1/2
7	1/16	5/8	150	3
8	3/64	5/8	150	3 1/2
8	1/16	5/8	80-100-150-200-250	3 1/2
8	1/16	1	150	3 1/2
8	3/32	5/8	100-150-200	3 1/2
10	1/16	5/8	100-130-150-190-250-300	4
*10	1/16	5/8	100-130-190	5
10	1/16	1	100-130-150-190-300	4
10	3/32	5/8	80-100-130-150-190	4
*10	3/32	5/8	80-100	5
10	3/32	1	80-100-130-190	4
10	1/8	5/8	130	4
12	1/16	1	150-200	5
12	3/32	5/8	100	2
12	3/32	1	100-150-200	5
12	3/32	1	150 (5 exp. slots)	5
12	3/32	1 1/8	150	5
12	1/8	1	100-150	5
12	1/8	1	150 (5 exp. slots)	5
14	3/32	1	150	5 1/2
14	3/32	1	150 (5 exp. slots)	5 1/2
14	1/8	1	100-150	5 1/2
14	1/8	1	150 (5 exp. slots) 200	5 1/2
16	1/8	1	150 (5 exp. slots)	6

*For use on Delta Chop Machines only.

SEMI-HIGH SPEED STEEL SAWS

Concave Ground for Clearance

4"	3/64"	1/2"	100	None
6	3/64	1/2	110-200	2 1/2"
6	1/16	1/2	110	2 1/2
6	1/16	5/8	110-150	2 1/2
6	3/32	5/8	110	2 1/2
7	1/16	5/8	150	3
8	1/16	5/8	80-100-150-200	3 1/2
8	1/16	1	150-200	3 1/2
8	3/32	5/8	100-150	3 1/2
8	3/32	1	100	3 1/2
10	1/16	5/8	100-130-150-190-250	4
10	1/16	3/4	150	4
10	1/16	1	190	4
10	3/32	5/8	80-100-130-150-190	4
10	3/32	1	130	4
12	1/16	1	150	5
12	3/32	1	100-150-200	5
12	1/8	1	150	5
14	1/8	1	150	5 1/2
16	1/8	1	150 (5 exp. slots)	6

HIGH SPEED STEEL SAWS

Concave Ground for Clearance

6"	3/64"	5/8"	200	2 1/2"
8	1/16	5/8	150-200-250	3 1/2
10	1/16	5/8	130-150-250	4
*10	1/16	5/8	190	5
10	3/32	5/8	130	4
*10	3/32	5/8	80-100	5
12	1/16	1	200	5

*For use on Delta Chop Machines only.

SIMONDS CIRCULAR SAWS

For Cutting Plastics, Fibre and Composition Materials

CARBIDE TIPPED SAWS

STANDARD

This type saw is recommended for clean, chip-free cutting of thermosetting and thermo plastics over ⅜″ thick, hardboard, Masonite, insulating board, gypsum board, Micarta, Textolite, Formica, laminates, impregnated woods, composition materials, etc.

A choice of tooth spacing is offered in the various diameters to provide a saw that will give best results on specific applications as follows:

GENERAL PURPOSE SAWS — For cutting a variety of material types, shapes, and thicknesses.

COARSER TOOTH SAWS — For cutting heavier cross-sections and in general cutting where quality of finish is not important.

FINER TOOTH SAWS — For cutting lighter cross-sections and where quality of finish is important.

THIN RIM

This type saw was developed for minimum kerf loss and for cleaner, more chip-free cutting of thermosetting and thermo plastic sheet, tube and shapes, laminates, hardboards, chipboards, rare woods, composition materials, etc.

GENERAL PURPOSE SAWS — For use where average quality of cut is satisfactory.

COARSER TOOTH SAWS — For use where quality of cut is not important.

FINER TOOTH SAWS — For use where chip-free cutting and smooth edges are desired and material is less than ⅛″ thick.

SEMI-HIGH SPEED STEEL SAWS

Simonds Semi-High Speed Steel Saws are manufactured of a carefully heat-treated, special analysis Electric Furnace Saw Steel that combines exceptional edge-holding qualities with maximum plate toughness. Accurate toothing and fitting with ample clearance provided either by grinding the saw body or setting the teeth (for cutting heavy sections) insure smooth, fast cutting and dependable on-the-job results.

While Semi-High Speed Steel Saws cost somewhat less than High Speed Steel Saws and therefore have somewhat less cutting life between sharpenings, they do have a greater ability to withstand abuse than High Speed Steel Saws. By minimizing cracking or breaking on any operation where such problems exist, Semi-High Speed Steel Saws may prove to be more economical to use and will give completely satisfactory results.

HIGH SPEED STEEL SAWS

Simonds High Speed Steel Saws are made of a special analysis high alloy saw steel developed in Simonds own Electric Furnace Steel Mill... steel that possesses the best edge-holding properties for circular type saws.

Carefully heat-treated and precision ground with adequate clearance for free cutting, yet retaining sufficient body strength for straight cuts, these saws are accurately toothed and furnished with long-lasting keen cutting edges. Costing more than Semi-High Speed Steel Saws, they provide superior performance and find widespread application in cutting all but the most abrasive materials where only a Carbide Tipped Saw will out-perform them.

While High Speed Steel Saws will retain their cutting edges longer between sharpenings than Semi-High Speed Steel Saws, they will not stand the abuse. On applications where cracking or breaking is a factor, it is sometimes more economical to use the lower priced Semi-High Speed Steel Saws.

STOCK SIZES

CARBIDE TIPPED SAWS

STANDARD

Dia.	*Gauge*	*Kerf*	COARSE *No. Teeth*	GEN. PURP. *No. Teeth*	FINE *No. Teeth*
8″	13	.125	36	48	66
10	12	.139	36	60	72
12	11	.150	—	60	72
14	10	.164	—	60	72
16	10	.164	—	60	72

THIN RIM

Dia.	*Gauge*	*Kerf*	*Collar*	COARSE *No. Teeth*	GEN. PURP. *No. Teeth*	FINE *No. Teeth*
8″	13	.085	4″	36	48	66
10	12	.085	6	36	60	72
12	11	.085	8	60	72	90

SEMI-HIGH SPEED STEEL SAWS

CLEARANCE GROUND

Dia.	*Thick.*	*Centerhole*	*No. Teeth*	*Collar*
8″	1/16″	5/8″	150	3½″
8	1/16	5/8	200	3½
12	1/16	1	150	5
12	3/32	1	150	5

FLAT GROUND with TEETH SET for CLEARANCE

Dia.	*Thick.*	*Centerhole*	*No. Teeth*	*Collar*
6″	3/64″	½″	110	—
8	3/64	5/8	150	—

HIGH SPEED STEEL SAWS

CLEARANCE GROUND

Dia.	*Thick.*	*Centerhole*	*No. Teeth*	*Collar*
6″	1/16″	½″	110	2½″
8	1/16	5/8	150	3½
8	1/16	5/8	200	3½
8	3/32	5/8	150	3½
10	1/16	5/8	190	4
10	3/32	5/8	130	4
12	3/32	1	150	5

Saws for special applications promptly made to order. Submit blueprint or complete saw specifications. We recommend that samples of material to be cut be submitted for test-cutting by our engineers to determine proper saw specifications.

SIMONDS CIRCULAR SAWS

HARD RIM HIGH SPEED STEEL SAWS

For Cutting Nonferrous Metals, Plastics and Composition Materials

This new design saw provides three of the most wanted features for today's cutting needs: maximum safety, long cutting life and less kerf. Made of High Speed Steel, it is specially heat-treated so that the rim is of maximum hardness for greatest resistance to abrasion and wear while the saw body is kept at a mild temper for maximum toughness and resistance to cracks and breakage. Saws will not shatter, can be safely run at higher speeds, take out less kerf and can repeatedly be resharpened on standard saw grinding equipment. Available through 18″ in diameter only, all saws have expansion slots.*

STOCK SIZES

Metal — Style 4-MS Teeth

Dia.	*Thick.*	*Hole*	*No. Teeth*	*Collar*
8″	1/16″	5/8″	80-100-150-200	3½″
10	1/16	5/8	100-130-150-190-250	4
10	3/32	5/8	80-100	4
10	3/32	5/8	130-190	4
12	1/16	1	200	5
12	3/32	1	100-150	5
12	1/8	1	100	5
12″	1/8″	1″	150	5″
14	3/32	1	96-150	5½
14	1/8	1	96	5½
14	1/8	1	150	5½
16	1/8	1	96-150	6
18	5/32	1	96-180	6½

Plastics — Style 7-MS Teeth

Dia.	*Thick.*	*Hole*	*No. Teeth*	*Collar*
8″	1/16″	5/8″	150-200	3½″
10	1/16	5/8	190	4
10	3/32	5/8	130-190	4
12″	1/16″	1″	200	5″
12	1/8	1	100	5
14	1/8	1	150	5½

Hard Rim Saws of any Desired Specification Promptly Made to Order
Not Furnished Over 18″ in Diameter

*All Saws less than 14″ have 5 Expansion Slots. All Saws 14″ and over have 6 Expansion Slots and Number of Teeth must be divisible by 6.

CARBIDE TIPPED SAWS

For Cutting Nonferrous Metals

Made with chip breaker style teeth, with a slight negative hook or rake, this saw is recommended for cutting Aluminum, Magnesium, Copper, Brasses, Leads and similar nonferrous metals . . . will give excellent results on table, radial arm or "chop" type machines.

A choice of tooth spacing is offered in the various diameters to provide a saw that will give best results on specific applications as outlined below.

GENERAL PURPOSE SAWS — Made with medium size tooth spacing for cutting a variety of shapes and thicknesses.

FINER TOOTH SAWS — Recommended for cutting light wall tubes, extrusions and shapes, thin sheet and plate.

COARSER TOOTH SAWS — Recommended for cutting heavy wall tubes, extrusions and shapes, thicker sections of cast as well as rolled plate and solids.

STOCK SIZES

Dia.	*Gauge*	*Kerf*	COARSE *No. Teeth*	GEN. PURP. *No. Teeth*	FINE *No. Teeth*
8″	13	.125	36	48	60
10	12	.139	48	60	72
12	11	.150	60	72	90
14	10	.164	60	72	90
16	10	.164	60	72	90
20	9	.195	—	72	—

SOLID TOOTH—FERROUS CUTTING

Cold cutting Solid Tooth Saws for general shop cut-off requirements, for use on smaller automatic cut-off machines and for cutting operations where kerf is an important factor, are furnished clearance ground with a choice of High Speed or Semi-High Speed Steel. High Speed Steel Saws are furnished up to 16″ in diameter only. Scientific heat-treatment insures correct temper, edge-holding qualities and long, dependable, trouble-free service. Semi-High Speed Steel High R.P.M. Saws are also furnished up to 24″ for cutting light wall tube, sheet and structural shapes.

STANDARD SIZES—COLD CUTTING SAWS

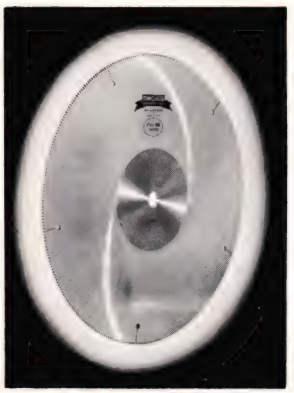
High Speed

Dia.	*Thickness*	*No. of Teeth*
8″	.086″	64-84-100
10	3/32	84-100-126
12	1/8	64-84-100-126-150
14	1/8	64-76-100-126-150
15	5/32	64-76-100-126-150
16	5/32	64-84-100-150

Semi-High Speed

Dia.	*Thickness*	*No. of Teeth*
8″	.086″	64-84-100
10	3/32	84-100-126
12	1/8	64-84-100-126-150
14	1/8	64-76-100-126-150
15	5/32	64-76-100-126-150
16	5/32	64-84-100-150
18	3/16	64-84-100-126-150
20	3/16	64-84-100
22	3/16	76-100-112
24	1/32	76-100-126
26	1/32	64-84-100-150

FRICTION CUTTING SAWS



For cutting light gauge ferrous metals such as thin cross-section tubes, structural shapes, etc. Operating at speeds between 15,000 and 20,000 surface feet per minute, rim friction generates sufficient heat to actually melt the metal and the teeth carry globules of metal, rather than chips, out of the cut. Where finish is not critical and abrasive cut-off wheel breakdown is excessive, friction saw use can often be more economical.

Saws 12 inches and over in diameter have rim expansion slots to control or minimize rim cracks. Saws cannot be guaranteed against cracking, but the frequency has been greatly reduced by the unique combination of special steel and a style 9 MR tooth design.

For cutting maximum wall thickness up to 3/16 inch, saws up to and including 16 inches in diameter are recommended. Saws from 18 to 26 inches in diameter are recommended for cutting up to 3/8-inch wall only. Saws are not furnished over 26 inches in diameter.

STOCK SIZES

Dia.	*Thickness*	*Hole*	*No. Teeth*	*Collar Dia.*	**Max. Teeth*	*Dia.*	*Thickness*	*Hole*	*No. Teeth*	*Collar Dia.*	**Max. Teeth*
12″	1/8″	1″	200	5″	200	20″	1/8″	1.5748	300	9½″	330
14	1/8	1	220	5½	230	20	5/32	1	300	8	330
16	3/32	1	250	6	270	22	3/16	1	300	8	370
16	1/8	1	250	6	270	22	3/16	1.5748	300	9½	370
16	5/32	1	250	6	270	24	3/16	1	300	8	400
18	5/32	1	280	6½	300	26	3/16	1	300	8	400

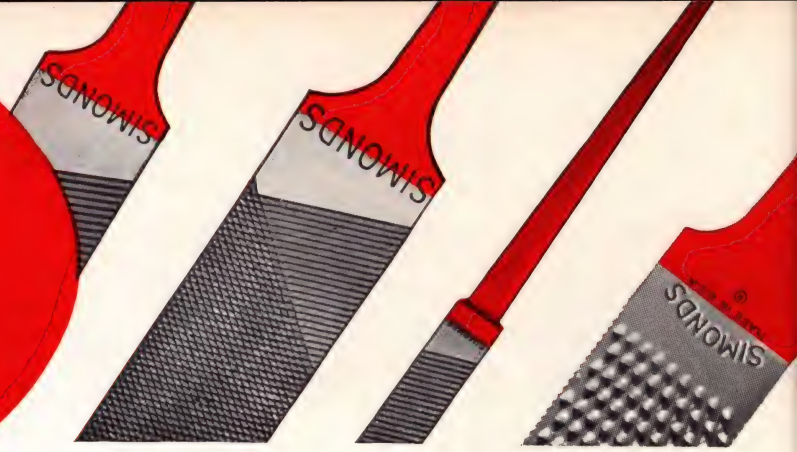
**Maximum number of teeth per diameter.*

Saws with other than stock number of teeth promptly furnished on order. Saws 10 inches and less with modified tooth design also available on order.

"TUNGSWELD" SQUARING SHEARS

Designed for shearing thin sheet steel . . . unannealed up to 16-gauge . . . annealed up to 3/16″ thick . . . Simonds "TUNGSWELD" SQUARING SHEARS cut clean, stay sharp longer, reduce shearing costs. Accurately made with a single High Speed Steel cutting edge inlaid by Simonds exclusive "Tungsweld" process for long, trouble-free service.

SIMONDS "RED TANG"®
AMERICAN PATTERN
FILES and RASPS



Precision cut for uniform tooth height and sharpness; scientifically heat-treated and "prover-tested" for hardness, straightness, uniformity and edge-holding ability, "Red Tang" Files remove more metal with less effort, wear better and stay sharp longer.

SAW SHARPENING and MACHINISTS FILES

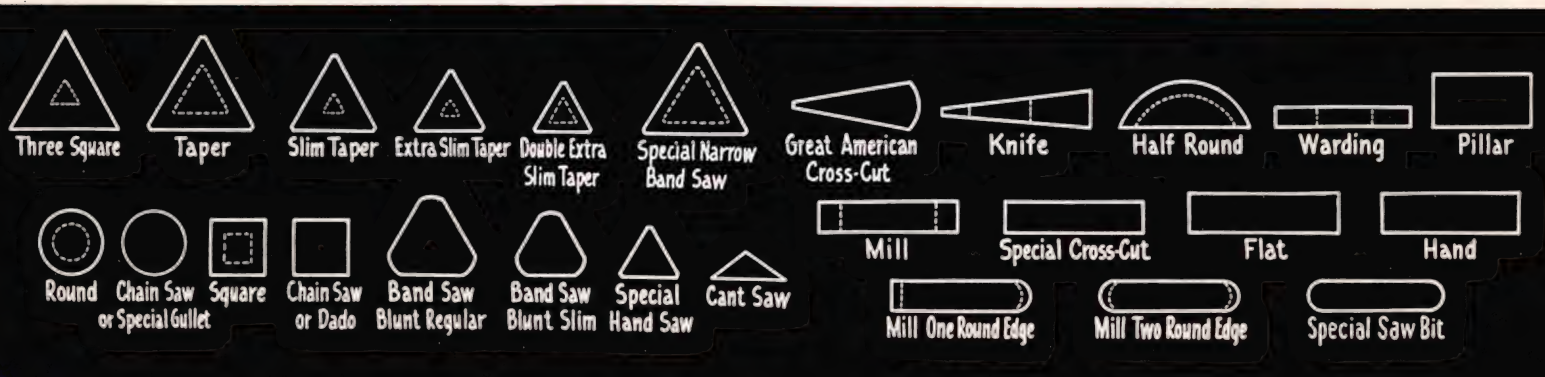
Type — Shape and Cut	Length
Aluminum: Flat, Half Round	6″ 8″ 10″ 12″
Auger Bit	7″
Bandsaw Blunt: Regular Single Cut, Regular Double Cut, Slim Single Cut, Slim Double Cut	6″ 8″
Brass: Half Round	8″ 10″ 12″
Cant Saw: Single Cut, Double Cut	6″ 7″ 8″ 10″
Chain Saw, Round: 3/16″, 7/32″, 1/4″, 9/32″, 5/16″, 3/8″	8″
Chain Saw, Square	6″
Chain Saw, Narrow Mill: 5/8″, No. 3084	8″
Chain Saw, Beveled Edge: No. 4680	7″
Cross Cut, Great American: Single Cut, Double Cut	6″ 8″ 10″
Cross Cut, Special: Single Cut, Double Cut	6″ 7″ 8″ 10″
Dado	10″
Doctor Blade: Second Cut, No. 381	14″
Double Ender: Single Cut	6″ 7″ 8″ 9″ 10″
Flat: Bastard	4″ 6″ 8″ 10″ 12″ 14″ 16″ 18″
Flat: Second Cut, Smooth	4″ 6″ 8″ 10″ 12″ 14″ 16″
Foundry: Flat, Half Round	8″ 10″ 12″ 14″
Gullet, Special	8″ 10″
Half Round: Bastard	4″ 6″ 8″ 10″ 12″ 14″ 16″
Half Round: Second Cut	4″ 6″ 8″ 10″ 12″ 14″
Half Round: Smooth	4″ 6″ 8″ 10″ 12″ 14″ 16″
Hand: Bastard, Second Cut, Smooth	6″ 8″ 10″ 12″ 14″
Hand Saw, Special	5½″ 6″ 7″
Knife: Bastard, Second Cut, Smooth	4″ 6″ 8″ 10″
Lead Float: Flat, Half Round	8″ 10″ 12″
Long Angle Lathe	10″ 12″ 14″
Mill: Bastard Single Cut, Double Cut	4″ 6″ 7″ 8″ 10″ 12″ 14″ 16″
Mill: Second Cut Single Cut, Double Cut, Smooth Single Cut, Double Cut	4″ 6″ 8″ 10″ 12″ 14″
Mill: Bastard, 1 Round Edge Single Cut, 1 Round Edge Double Cut	6″ 8″ 10″ 12″
Mill: Bastard, 2 Round Edges Single Cut, 2 Round Edges Double Cut	6″ 8″ 10″

Type — Shape and Cut	Length
Multi-Kut: Flat, Half Round, Square	8″ 10″ 12″ 14″
Narrow Band Special: No. 2	8″
Narrow Band Special: No. 3, No. 456	6″ 7″
Pillar: Bastard	6″ 8″ 10″ 12″ 14″
Pillar: Second Cut, Smooth	6″ 8″ 10″
Round: Bastard	4″ 6″ 7″ 8″ 10″ 12″ 14″ 16″
Round: Second Cut, Smooth	4″ 6″ 8″ 10″ 12″ 14″
Saw Bit, Special	8″
Square: Bastard	4″ 6″ 8″ 10″ 12″ 14″ 16″
Square: Second Cut, Smooth	4″ 6″ 8″ 10″ 12″ 14″
Taper: Regular Single Cut, Double Cut	6″ 7″ 8″
Taper, Slim: Single Cut, Double Cut	6″ 7″ 8″
Taper, Extra Slim: Single Cut, Double Cut	6″ 7″ 8″
Taper, Double Extra Slim: Single Cut, Double Cut	6″ 7″ 8″
Three Square: Bastard	6″ 8″ 10″ 12″
Three Square: Second Cut, Smooth	6″ 8″ 10″
Warding: Bastard	4″ 6″ 8″ 10″ 12″
Warding: Second Cut, Smooth	4″ 6″ 8″ 10″

WOOD FILES and RASPS

Type — Shape and Cut	Length
Cabinet Rasp: Second Cut	6″ 8″ 10″ 12″ 14″
Cabinet Rasp: Smooth	8″ 10″ 12″
Cabinet File: Half Round	8″ 10″ 12″
Horse Rasp Plain, Half File: Regular	12″ 14″ 16″
Horse Rasp Plain, Half File: Slim	18″
Horse Rasp, Tanged: Regular	14″ 16″
Race Trak Rasp, Tanged	14″
Race Trak Rasp, Slim	18″
Shoe Rasp: Half Round	8″ 9″ 10″
Wood File: Flat, Half Round	8″ 10″ 12″ 14″
Wood Rasp, Flat: Bastard	8″ 10″ 12″ 14″
Wood Rasp, Half Round: Bastard	6″ 8″ 10″ 12″ 14″ 16″
Wood Rasp, Half Round: Smooth	8″ 10″ 12″

CROSS SECTIONAL VIEWS OF COMMONLY USED FILES



SIMONDS SAW AND STEEL CO.

American-Swiss®

For finish filing of dies or delicate instruments or parts, these precision cutting tools are indispensable to tool and die makers, jewelers, model and pattern makers, etc. Made in a wide variety of shapes, sizes and cuts, Simonds *American-Swiss*, SWISS PATTERN line provides a "right" file you can count on for quality, service and dependability . . . for every task!

SWISS PATTERN FILES

Kinds	Size Inches	Cuts	Length
Barrette		00-0	3″ 4″ 6″ 8″
		1	4″ 6″
		2-4	3″ 4″ 6″ 8″
Bench Filing Machine			
1/8″ shank		00-2	3¼″
¼″ shank		00-2	3¼″
Crochet		00-0	4″ 6″ 8″ 10″
		2	4″ 6″ 8″ 10″
		4	4″ 6″
Crossing		00	4″ 6″ 8″
		0	4″ 6″ 8″
		2	4″ 6″ 8″
		3	6″
		4	4″ 6″ 8″
		6	6″
Die Sinkers Files		0-2	5¼″
Die Sinkers Rifflers		0-2-4	6½″
Die Sinkers Rifflers Set of 12		0-2-4	Set (12 Asst.) 6½″
Equalling*		00-0-2-4	4″ 6″ 8″
Half Round		00-0	3″ 4″ 5″ 6″ 8″ 10″
		1	6″ 8″
		2	3″ 4″ 5″ 6″ 8″ 10″
		3-4	4″ 5″ 6″ 8″
		6	6″
Hand		00	6″ 8″ 10″ 12″
		0	4″ 6″ 8″ 10″ 12″
		1	6″ 8″ 10″
		2	4″ 6″ 8″ 10″ 12″
		3	6″ 8″
		4	4″ 6″ 8″ 10″ 12″
		6	6″ 8″
Joint Files—Round Edges*		2	4″
Joint Files—Square Edge*		2	4″
Knife		00-0	4″ 6″ 8″
		1	4″ 6″ 8″
		2	4″ 6″ 8″
		4	4″ 6″
Needle Files—			
Round Handle		0-2-4-6	4″ 5½″ 6¼″
Square Handle		0-2-4-6	5½″
Parallel Machine Files—			
5″ (Standard Tang)		00-2	5″
Cant	11/32	00-2	8″
Crochet	3/16 × 3/32	00-2	8″
	1/4 × 1/8	00-2	8″
	3/8 × 3/16	00-2	8″
	1/2 × 3/16	00-2	8″
Equalling	3/8	00-2	8″
Half Round	3/16 × 3/32	00-2	8″
	1/4 × 1/2	00-2	8″
	3/8 × 3/16	00-2	8″
	1/2 × 1/4	00-2	8″
Knife	15/32 × 1/8	00-2	8″
Lozenge	11/32 × 7/32	00-2	8″
Oval	11/32 × 3/16	00-2	8″
Pillar	3/16 × 3/32	00-2	8″
	1/4 × 1/8	00-2	8″
	3/8 × 3/16	00-2	8″
	1/2 × 1/4	00-2	8″

Kinds	Size Inches	Cuts	Length
Parallel Machine Files - cont.			
Pippin	19/64 × 5/32	00-2	8″
Round	1/8	00-2	8″
	3/16	00-2	8″
	1/4	00-2	8″
	5/16	00-2	8″
	3/8	00-2	8″
	1/2	00-2	8″
	5/8	00-2	8″
Square	3/16	00-2	8″
	1/4	00-2	8″
	3/8	00-2	8″
	1/2	00-2	8″
Three Square	3/16	00-2	8″
	1/4	00-2	8″
	3/8	00-2	8″
	1/2	00-2	8″
Assortments	Large	00-2	8″
	Small	00-2	8″
Pillar		00-0	4″ 6″ 8″ 10″ 12″
		1	4″ 6″ 8″
		2	3″ 4″ 6″ 8″ 10″ 12″
		3	6″ 8″
		4	3″ 4″ 6″ 8″ 10″
		6	4″
Pillar Narrow		00	4″ 6″ 8″ 10″ 12″
		0	4″ 6″ 8″ 10″ 12″
		1	4″ 6″ 8″ 10″
		2	4″ 6″ 8″ 10″ 12″
		4	4″ 6″ 8″ 10″
		6	4″ 6″
Pillar Extra Narrow*		00-0	3″ 4″ 6″ 8″ 10″
		1	4″ 6″ 8″
		2	3″ 4″ 6″ 8″ 10″
		4	3″ 4″ 6″ 8″
		6	4″ 6″
Pippin		00-0-2	4″ 6″ 8″
Round		00-0	3″ 4″ 5″ 6″ 8″ 10″
		1	3″ 4″ 6″ 8″ 10″
		2	3″ 4″ 5″ 6″ 8″ 10″
		3	3″ 4″ 5″ 6″ 8″
		4	3″ 4″ 5″ 6″ 8″
		6	3″ 6″
Round Straight*		00-0-2-4	4″ 6″ 8″
Screw Head—			
Plain or Tanged		6	3″
Silversmiths Rifflers		0-2	7½″
Slitting		0-2	4″ 6″
Square		00	4″ 6″ 8″ 10″
		0	3″ 4″ 6″ 8″ 10″
		1	4″ 6″ 8″
		2	3″ 4″ 6″ 8″ 10″
		4	3″ 4″ 6″ 8″
Three Square		00	4″ 6″ 8″
		0	3″ 4″ 6″ 8″
		1	4″ 6″ 8″
		2	3″ 4″ 6″ 8″
		4	3″ 4″ 6″ 8″
Warding*		00-0-2	3″ 4″ 6″ 8″
		4	4″ 6″

*Available in other dimensions (see catalog) at regular prices plus 10%.

SIMONDS VIXEN®

milled curved-tooth FILES

Universally recognized as the most useful, efficient files ever designed for automobile body manufacture and repair, Simonds VIXEN Files come in rigid and flexible types and in a variety of shapes, cuts and sizes — can be resharpened and re-used.

VIXEN FILES AND HOLDERS

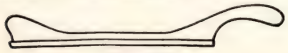
Kinds . . . Sizes . . . Cuts

TYPE OF FILE	CUT:	8"	10"	12"	14"
*Flexible "Vixen" (without tang)	Babbitt	—	—	—	*x
	Standard	x	x	x	†x
	Fine	x	x	x	x
	Smooth	—	—	x	x
Flexible Narrow (without tang)	Standard	—	—	—	x
Flat Rigid (with tang)	Standard	x	x	x	x
	Fine	x	x	x	x
	Smooth	x	x	x	x
Flat Rigid Utility (with tang)		x	x	x	x
Flat Rigid Babbitt (with tang)		x	x	x	x
Half Round Rigid (with tang)	Standard	x	x	x	x
	Fine	x	x	x	x
Half Round Shell (without tang)	Standard	x	x	x	x
	Fine	—	—	—	x
Half Oval Shell (without tang)	Standard	—	—	—	x
Molding (without tang)	Standard	x	x	x	x
Pillar Rigid (with tang)	Standard	x	x	x	—
Square Rigid (with tang)	Standard	x	x	x	—
Half Circle (without tang)	Standard	—	—	—	x
Special Curved (without tang)	Standard	—	—	—	x
Whizcut	Standard	x	x	x	x
	Fine	x	x	x	x
	Smooth	x	x	x	x

*The 14" Flexible Babbitt has 7 teeth per inch.

†Available in 6 teeth, 7 teeth, 8 teeth and 9 teeth per inch, 8 teeth per inch is regularly furnished unless otherwise specified.

NOTE: Steel Backs, Bolts and Nuts available for Flexible "Vixen."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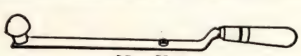
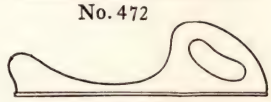

No. V-2

VIXEN HOLDERS

Holder	*For Use With*
416	12" or 14" Flexible Vixen
472	12" or 14" Flexible Vixen
V-1	14" Flexible Vixen
V-2	14" Half Round or Half Oval Shell
V-3	14" Molding
V-4	14" Half Circle Vixen
471	14" Special Curved Vixen

No. 472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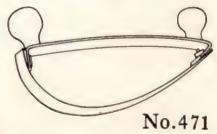

No. 471

REVEAL TOOLS AND FILES

Number	*Description*	*Size*
152	Reveal Tool (Holder only)	7" long
153	Reveal Half Round Shell "Vixen"	2¾" long
154	Reveal Flat Square Cornered "Vixen" one edge bent	2¾" long
155	Reveal Round Cornered "Vixen"	2¾" long
156	Reveal Half Round Bent Shell "Vixen"	2¾" long
157	Reveal Half Round Molding "Vixen"	2¾" long
158	No 152 Holder and No 155 "Vixen"	—
159	No 152 Holder and five assorted "Vixen"	—

SPECIAL REVEAL FILES AND WOOD HOLDERS

HOLDER *Number*	HOLDER *Weight Each*	FILE
V-6	4 oz.	6" Radius Reveal (Standard Cut) "Vixen" No. 2544
V-7	3 oz.	7" Special Window Reveal Flat (Standard Cut) "Vixen" No. 332—⅝" wide
V-8	3 oz.	7" Special Window Reveal Molding (Standard Cut) "Vixen" No. 1389—⅝" wide
V-9	3 oz.	7" Special Window Reveal Shell (Standard Cut) "Vixen" No. 1386—⅝" wide
V-10	6 oz.	12" Special Curved Shell (Standard Cut) "Vixen" No. 996

SIMONDS Rotary FILES and BURS

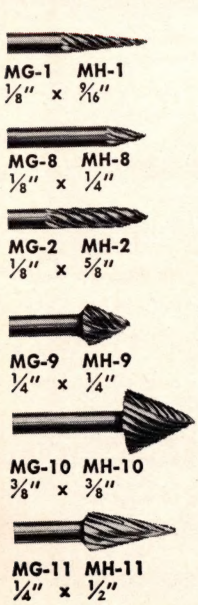
Designed for use in drill presses, lathes and power hand tools or flexible shaft equipment, Simonds ROTARY Files and Burs save time and cost in elongating holes and slots, in removing fins and burrs and filing intricate parts or hard-to-get-at surfaces. Simonds ROTARY Files come in a wide variety of sizes and shapes in Hand Cut or Ground-from-Solid High Speed Steel or Ground from-Solid Carbide—can be resharpened and re-used.

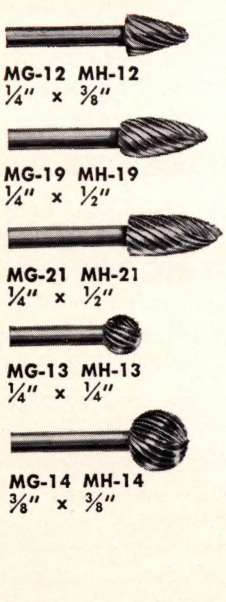
Complete Catalog of Rotary Files and Burs Available on request

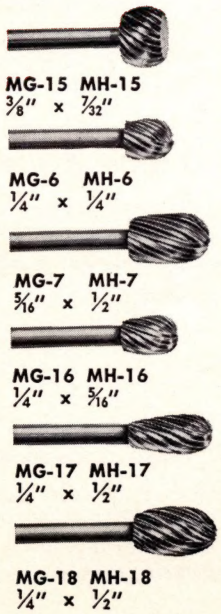
SIMONDS SOLID CARBIDE BURS

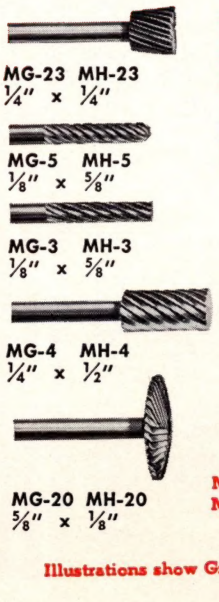
SET NO. 1 ⅛" DIA. HEADS ⅛" DIA. SHANKS 1½" OVERALL LENGTH		SET NO. 2 ¼" DIA. HEADS ⅛" DIA. SHANKS 1" SHANK LENGTH		SET NO. 3 ¼" DIA. HEADS 3/16" DIA. SHANKS 1¼" SHANK LENGTH		SET NO. 4 3/16" & ¼" DIA. HEADS ¼" DIA. SHANKS 2" LENGTH OVERALL		SET NO. 5 5/32" & 3/16" DIA. HEADS ⅛" DIA. SHANKS 1½" OVERALL LENGTH		SET NO. 6 3/16" DIA. HEADS 3/16" DIA. SHANKS 2" OVERALL LENGTH	
Simonds Tool No.	Length of Head	Simonds Tool No.	Length of Head	Simonds Tool No.	Length of Head	Simonds Tool No.	Length of Head	Simonds Tool No.	Length of Head	Simonds Tool No.	Length of Head
A-1	9/16"	A-51	½"	A-53	½"	A-23	⅝"	A-14	½"	A-22	⅝"
A-2	7/16"	B-51	3/16"	B-55	3/16"	A-105	⅝"	A-21	½"	C-24	⅝"
C-1	9/16"	C-51	½"	C-52	½"	C-23	⅝"	C-12	½"	D-23	3/16"
D-1	⅛"	D-51	¼"	D-52	¼"	C-105	⅝"	C-21	½"	E-23	9/32"
E-1	7/32"	E-51	⅜"	E-52	⅜"	D-24	3/16"	D-21	3/16"	H-23	½"
H-1	½"	H-51	½"	H-53	½"	D-105	¼"	E-22	9/32"	K-21	½"
H-2	¼"	K-51	½"	K-52	½"	E-105	⅜"	H-22	½"	L-21	⅝"
K-1	¼"	L-51	½"	L-52	½"	H-105	⅝"	K-22	½"	M-21	3/16"
L-3	⅝"	S-51	¼"	S-55	¼"	K-105	⅝"	L-22	½"	P-22	⅜"
P-1	¼"					L-104	¾"	P-21	⅜"	R-21	3/16"
S-1	3/16"					L-105	½"	S-22	¼"	S-25	¼"
U-4	⅜"					S-105	5/16"	U-21	½"	U-22	½"

SIMONDS MINIATURE ROTARY FILES

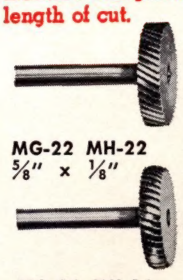






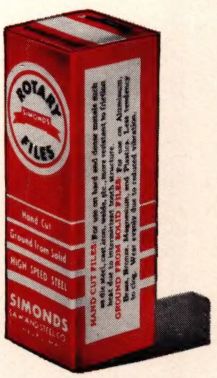


All miniature files are furnished with ⅛" shanks. First dimension designates diameter, second dimension designates length of cut.



MG—Ground-from-Solid
MH—Hand-Cut

Illustrations show Ground-From-Solid Type



Simonds Rotary Files come in these distinctive red boxes that are your assurance of product quality and dependability.

SIMONDS
SAW AND STEEL CO.

"WELD-EDGE"®
SUPER DUTY
BRAND

HOLE SAWS

ALL THE MOST WANTED SIZES

Simonds "Weld-Edge" Shatterproof Hole Saws are rugged cutting tools designed to cut accurate holes cleanly and efficiently in machineable materials up to 1⅛" thick. Ranging in size from 9/16" to 6" diameter, they can be used in portable electric or air tools, drill presses, lathes, boring mills, milling machines or any other machine tool which has a rotating spindle that can be operated at the correct speed for the size of hole saw to be used and type of material to be cut.

They are made with a wear-resistant, fast cutting high speed steel cutting edge, permanently bonded to an extra tough alloy steel body by an electric welding process. The blade is rolled to the correct diameter and strongly joined along the seam for maximum strength and concentricity. It is then welded to the outside diameter of a tough, resilient steel cap making the diameter of the cut slightly larger than the diameter of the cap, which allows the saw to follow completely through its own hole. The depth of cut of this "follow through" design is limited only by the ability of the operator to remove the cores when drilling a deep hole through stacked or layers of material. The knock-out slots permit easy removal of cores. Furnished in standard stock sizes as shown in table on opposite page.

FOR ALL MACHINABLE MATERIALS

Mechanics, maintenance men, electricians, plumbers, construction workers and installation men use hole saws for numerous applications such as:

— Cutting holes for pipe or electrical conduits.
— Installing pipes and valves in fabricated tanks.
— Installing vents for clothes dryers.
— Cutting holes for the installation of running lights on tank trucks.
— Installing air-conditioning units in automobiles.

Simonds Hole Saws can be used for cutting steel pipe, cast iron pipe, steel plates, aluminum, copper, brass, stainless steel, wood or plastics.

RECOMMENDED CUTTING SPEED - R.P.M.'s

Size Inches	Mild Steel	Tool and Stainless Steels	Cast Iron	Brass	Aluminum
9/16	580	300	400	790	900
5/8	550	275	365	730	825
11/16	500	250	330	665	750
3/4	460	230	300	600	690
13/16	425	210	280	560	635
7/8	390	195	260	520	585
15/16	370	185	245	495	555
1	350	175	235	470	525
1 1/16	325	160	215	435	480
1 1/8	300	150	200	400	450
1 3/16	285	145	190	380	425
1 1/4	275	140	180	360	410
1 5/16	260	135	175	345	390
1 3/8	250	125	165	330	375
1 7/16	240	120	160	315	360
1 1/2	230	115	150	300	345
1 5/8	220	110	145	290	330
1 5/8	210	105	140	280	315
1 11/16	205	100	135	270	305
1 3/4	195	95	130	260	295
1 13/16	190	95	125	250	285
1 7/8	180	90	120	240	270
2	170	85	115	230	255
2 1/16	165	80	110	220	245
2 1/8	160	80	105	210	240
2 1/4	150	75	100	200	225
2 5/16	145	75	100	195	225
2 3/8	140	70	95	190	220
2 1/2	135	65	90	180	205
2 5/16	130	65	85	175	200
2 5/8	130	65	85	170	195
2 3/4	125	60	80	160	185
2 7/8	120	60	80	160	180
3	115	55	75	150	170
3 1/8	110	55	70	140	165
3 1/4	105	50	70	140	155
3 3/8	100	50	65	130	150
3 1/2	95	45	65	130	145
3 5/8	95	45	60	120	140
3 3/4	90	45	60	120	135
3 7/8	90	45	60	120	135
4	85	40	55	110	130
4 1/8	80	40	55	110	120
4 1/4	80	40	55	110	120
4 3/8	80	40	50	100	120
4 1/2	75	35	50	100	105
4 3/4	70	35	45	95	95
5	65	30	45	90	90
5 1/4	60	25	45	85	85
5 1/2	60	25	40	85	85
5 3/4	55	25	35	80	80
6	55	25	35	75	75

STANDARD STOCK HOLE SAW SIZES

(Without Arbors)

Catalog Number	Saw Diameter (Inches)	Threaded Hole in Saw Cap	For Use With Arbor Numbers	Use for Pipe Tap, Pipe Size	Use for Pipe Entrance, Pipe Size	Approx. Legal Shpg. Weight - Lbs./100
36-00090	9/16	1/2"–20	36-01001 - 36-01005 - 36-01010	3/8	1/4	12.5
36-00100	5/8	1/2"–20		—	—	12.5
36-00110	11/16	1/2"–20		—	—	12.5
36-00120	3/4	1/2"–20		1/2	3/8	12.5
36-00130	13/16	1/2"–20		—	—	12.5
36-00140	7/8	1/2"–20		—	1/2	12.5
36-00150	15/16	1/2"–20		3/4	—	12.5
36-00160	1	1/2"–20		—	—	12.5
36-00170	1 1/16	1/2"–20		—	—	18.8
36-00180	1 1/8	1/2"–20		—	3/4	18.8
36-00190	1 3/16	1/2"–20		1	—	18.8
36-00200	1 1/4	5/8"–18	36-01015 - 36-01020 - 36-01030	—	—	18.8
*36-00201	1 1/4	1/2"–20		—	—	18.8
36-00210	1 5/16	5/8"–18		—	—	18.8
36-00220	1 3/8	5/8"–18		—	1	25.0
*36-00221	1 3/8	1/2"–20		—	—	25.0
36-00230	1 7/16	5/8"–18		—	—	25.0
36-00240	1 1/2	5/8"–18		1 1/4	—	25.0
*36-00241	1 1/2	1/2"–20		—	—	25.0
36-00250	1 9/16	5/8"–18	36-01020 - 36-01030	—	—	25.0
36-00260	1 5/8	5/8"–18		—	—	25.0
36-00270	1 11/16	5/8"–18		—	—	31.3
36-00280	1 3/4	5/8"–18		1 1/2	1 1/4	31.3
36-00290	1 13/16	5/8"–18		—	—	31.3
36-00300	1 7/8	5/8"–18		—	—	31.3
36-00320	2	5/8"–18		—	1 1/2	31.3
36-00330	2 1/16	5/8"–18		—	—	31.3

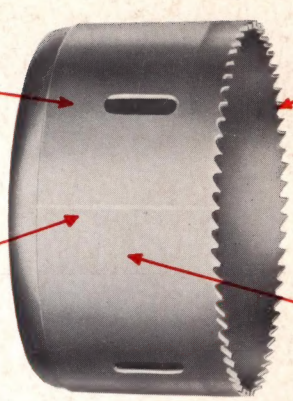
* For use with Arbor Numbers 36-01001, 36-01005 and 36-01010 only.

Catalog Number	Saw Diameter (Inches)	Threaded Hole in Saw Cap	For Use With Arbor Numbers	Use for Pipe Tap, Pipe Size	Use for Pipe Entrance, Pipe Size	Approx. Legal Shpg. Weight - Lbs./100
36-00340	2 1/8	5/8"–18	36-01020 - 36-01030	—	—	37.5
36-00360	2 1/4	5/8"–18		2	—	37.5
36-00370	2 5/16	5/8"–18		—	—	37.5
36-00380	2 3/8	5/8"–18		—	—	37.5
36-00400	2 1/2	5/8"–18		—	2	43.8
36-00410	2 9/16	5/8"–18		—	—	43.8
36-00420	2 5/8	5/8"–18		2 1/2	—	43.8
36-00440	2 3/4	5/8"–18		—	—	50.0
36-00460	2 7/8	5/8"–18		—	—	50.0
36-00480	3	5/8"–18	36-01020 - 36-01030 - 36-01040	—	2 1/2	50.0
36-00500	3 1/8	5/8"–18		—	—	60
36-00520	3 1/4	5/8"–18		3	—	63
36-00540	3 3/8	5/8"–18		—	—	66.5
36-00560	3 1/2	5/8"–18		—	—	70.5
36-00580	3 5/8	5/8"–18		—	3	73.5
36-00600	3 3/4	5/8"–18		3 1/2	—	76
36-00620	3 7/8	5/8"–18		—	—	79.5
36-00640	4	5/8"–18		—	—	82.5
36-00660	4 1/8	5/8"–18	36-01030 - 36-01040	—	3 1/2	85
36-00680	4 1/4	5/8"–18		4	—	88.5
36-00700	4 3/8	5/8"–18		—	—	92.5
36-00720	4 1/2	5/8"–18		—	4	97
36-00760	4 3/4	5/8"–18		4 1/2	—	120
36-00800	5	5/8"–18		—	—	147
36-00840	5 1/4	5/8"–18		5	—	160
36-00880	5 1/2	5/8"–18		—	—	172
36-00920	5 3/4	5/8"–18		—	5	186
36-00960	6	5/8"–18		—	—	200

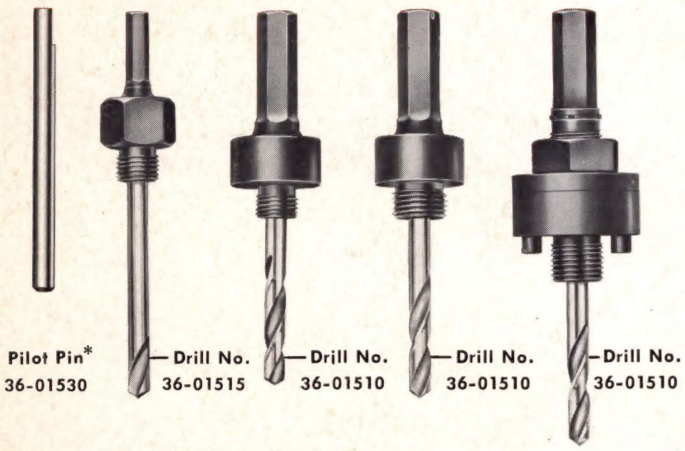
SIMONDS

SUPER DUTY BRAND

HOLE SAWS



ARBORS - ADAPTORS - EXTENSIONS

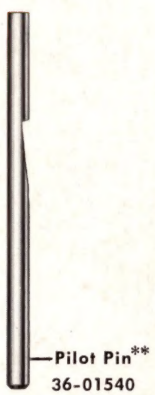


36-01001
36-01005

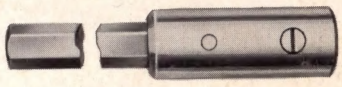
36-01010

36-01015

36-01020
36-01030



36-01040



36-01050

Simonds' pin-drive arbor design provides a positive floating drive arrangement to the saw which assures uniform cutting and eliminates the possibility of stripping threads in heavy cutting. This pin-drive also makes it easier to remove the saw after heavy cutting since the saw can not tighten up on the arbor threads. Heat treated for extra strength and longer life, these arbors have straight hexagonal shape shanks for a positive non-slip drive when used in jaw chucks. The High Speed Steel pilot drills have a flat spot on the shank for equally positive driving. Furnished in standard stock sizes as shown in tables below.

* For use with Arbors 36-01001 and 36-01005

** For use with Arbors 36-01010, 36-01015, 36-01020 and 36-01030

ARBORS - COMPLETE WITH 1/4" HIGH SPEED STEEL PILOT DRILLS

Catalog Number	Chuck or Adaptor Diameter	Shank Size	Fits Saws (See List)	Weight Per 100
36-01001	1/4"	1/4" Hex	1/2" - 20 Thread	17.5 lbs.
36-01005	3/8"	11/32" Hex	1/2" - 20 Thread	19.4 lbs.
36-01010	1/2"	7/16" Hex	1/2" - 20 Thread	19.0 lbs.
36-01015	1/2"	7/16" Hex	5/8" - 18 Thread	19.0 lbs.
36-01020	1/2"	7/16" Hex	5/8" - 18 Thread	53.0 lbs.
36-01030	3/4"	5/8" Hex	5/8" - 18 Thread	55.0 lbs.
36-01040	# 3 Morse Taper	# 3 Morse Taper	3" to 6" Diam.	400 lbs.

Catalog Number	Chuck or Adaptor Diameter		Weight Per 100
36-01050	1/2"	12" Extension Fits All 7/16" Shanks	88 lbs.
36-01510	1/4" High Speed Steel Pilot Drill (Packed 10 to a box)		5 lbs.
36-01515	1/4" High Speed Steel Short Flute Pilot Drill (Packed 10 to a box)		4.0 lbs.
36-01520	3/8" Pilot Pin		7 lbs.
36-01530	1/4" High Speed Steel Pilot Pin – 3" Long (Packed 10 to a box)		4.6 lbs.
36-01540	1/4" High Speed Steel Pilot Pin – 4" Long (Packed 10 to a box)		5.9 lbs.

MORSE TAPER ADAPTORS

Catalog Number	Morse Taper	For Arbor	Weight Per 100
36-01060	2	7/16" Hex	20 lbs.
36-01070	3	7/16" Hex	70 lbs.
36-01080	3	5/8" Hex	60 lbs.

SIMONDS SAW AND STEEL CO., FITCHBURG, MASS.

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