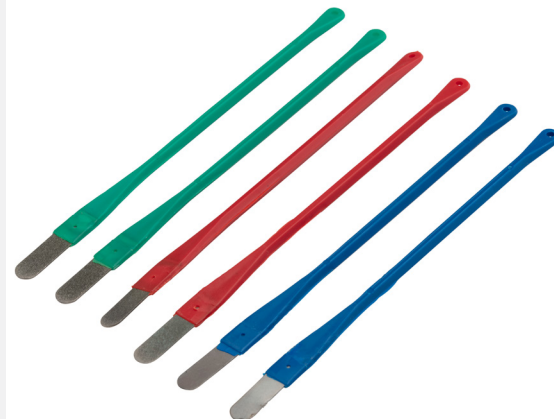




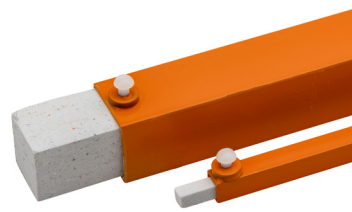
FOR TOTAL COMMUTATOR MAINTENANCE

Resurfacing | Brush Contouring | Burnishing | Polishing | Finishing | Dressing | Cleaning





OVER 100 YEARS OF SERVICE.



Martindale Electric Co. started in the electric motor maintenance tool manufacturing business in 1913. From the start, we put emphasis on quality materials and workmanship — and on dedicated customer service.

Our approach worked. We prospered and grew. Gradually, we added new products to our line, including commutator treating supplies and specialty abrasives now produced under our roof.

Diamond D by Martindale products are readily available to promptly meet your electric motor repair tool needs. Each and every employee adheres to the standards of product quality and customer service that has kept us the one stop shop for electric motor repair tools for more than 100 years!



**Reliable Solutions
Today!**

ABRASIVE INDEX

Brush Seater Holders	13
Brush Seaters with Handles	13
Brush Seating and Cleaning Stones	12
Burnishing Tools, Contact	17
Commstone Overview	4
Commstones (Commutator Stones)	6
Commutator Dressing and Finishing Stones	6
Commutator Paper, Garnet	16
Contact Burnishing Tools	17
Cut-Off Wheels and Arbor	21
Diamond Spatulas	19
Dressing Sticks, Aluminum Oxide	22
Flap Wheels	20
Flexible Abrasives, Rubrite	14
Flexible Files, Plastone	18
Garnet Commutator Paper	16
Plastone Flexible Files	18
Rubrite Flexible Abrasives	14
Sanding Bands	21
Sanding Drums	21
Spatulas, Diamond	19
Stripping Wheels	20

COMMSTONE OVERVIEW

QUICKLY REMOVE FLAT SPOTS, HIGH BARS, GROOVES, RIDGES, HIGH MICA, AND OTHER COMMUTATOR AND SLIP RING DEFECTS

Regular maintenance of commutators and slip rings with Martindale Commstones is so easy it enables you to eliminate the above defects in their early stages.

With Commstones, it is not necessary to take a machine out of service to resurface its commutator, thus production time is saved and time-consuming major overhauls can be prevented.

ADVANTAGES OF GRINDING OVER TURNING

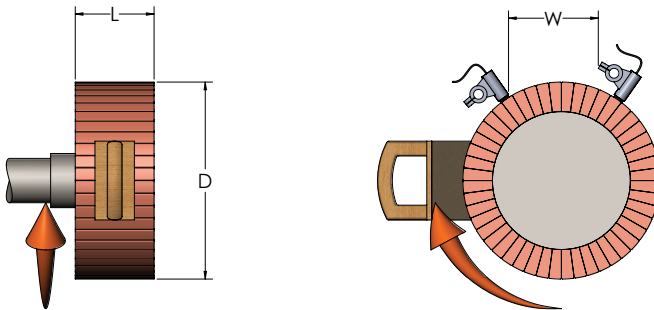
- ▶ Turning a commutator is an expensive operation and, furthermore, necessitates taking the machine out of service. For these reasons it is customary to postpone the turning until the machine gives serious trouble.
- ▶ On the other hand, if Martindale Commstones are applied as soon as the defect appears, it will be eliminated before it has a chance to become serious.
- ▶ A flat spot 1/16" deep will not be cleaned up until 1/16" of copper has been ground away from all other parts of the commutator. When the commutator is clean and bright all the way around, the grinding is finished and no more copper has been removed than was absolutely necessary.
- ▶ The use of hand stones on any commutator even with large flats (if the stone is twice as long as the width of the flat spot) will not leave the commutator eccentric unless it is already so.

WHAT DIAMOND D COMMSTONES WILL DO

1. Cut copper faster than a turning tool.
2. Cut copper, brass or steel without clogging.
3. Cut the edges of every bar clean - no dragging of copper.
4. May be used on either flush mica or undercut commutators.
5. Remove ridges, flats, high bars, high mica, quicker and more effectively than any other method.
6. Save from 75% to 95% of the cost of turning a commutator.
7. Save from 80% to 99% of the time required to remove an armature and turn the commutator in a lathe.
8. Grind under full speed operating conditions where every bar is held in its true operating position by centrifugal force and leave every bar perfectly rounded even when some of the bars are loose.
9. Remove less copper than the most careful operator would with a turning tool.
10. Commstones are perfect insulators and may be used while the motor or generator is operating under normal voltage and even under full load. They can be used with perfect safety on any commutator on which garnet paper can be used.

DIRECTIONS FOR USING COMMSTONES

- ▶ If grease or oil is present, wipe or garnet paper the commutator thoroughly before applying the stone.
- ▶ Run the machine at full speed.
- ▶ Do not rock the stone; hold it firmly in order to get a true arc as quickly as possible.
- ▶ Apply with sufficient pressure to get rapid cutting. If the stone wears faster on one side than on the other, it is because the pressure is not applied perpendicularly. This may be corrected by turning the stone three or four times until the full face has been obtained.
- ▶ During grinding, move the stone slowly from side to side. This will prevent ridges in the commutator from wearing grooves in the stone. Large stones which are difficult to move while grinding may be held in one place for a few seconds, then lifted, moved about 1/4 inch, applied again for a few seconds, moved again, and so on until the commutator is true.



Direction of Commutator Rotation, as shown by arrow.

DON'T USE TOO SMALL OF A STONE

- ▶ COMMSTONES can be made in ANY SIZE.
- ▶ A Commstone should be as long as will work freely between adjacent brush sets, and should also be twice as long as the width of the largest flat spot. This latter requirement may occasionally make it necessary to remove one brush-holder stud during grinding to prevent commutator ridges from wearing grooves in the stones.
- ▶ A Commstone that meets these size requirements will give much better results than too small a stone and will prove more economical.
- ▶ If in doubt about the size to order, give us dimensions "W", "L" and "D" of your commutator and we will supply the proper size.

Position the Commstone so that the top surface of the commutator moves away from stone, as shown at left.

Garnet paper only cleans a flat spot
— Commstones remove it!

NINE GRADES FOR COMMUTATORS AND SLIP RINGS

For Commutators and Brass or Copper Slip Rings

GRADE EC	(Extra Coarse – 36 Grit) for use where a great deal of copper is to be removed and a very fast cutting stone is desired for pitted and grooved conditions.
GRADE C	(Coarse – 46 Grit) recommended for general fast cutting.
GRADE M	(Medium – 90 Grit) for use where only high mica or a small amount of copper is to be removed.
GRADE F	(Fine – 120 Grit) recommended for general finishing, for periodic preventative maintenance or removing small ridges.
GRADE P	(Extra Fine or Polishing – 220 Grit) for finishing or polishing / burnishing where a high mirror-like polish is desired.
GRADE EP	(Extra Polish – 320 Grit) for finishing of small commutators.

For Cast Iron and Steel Slip Rings

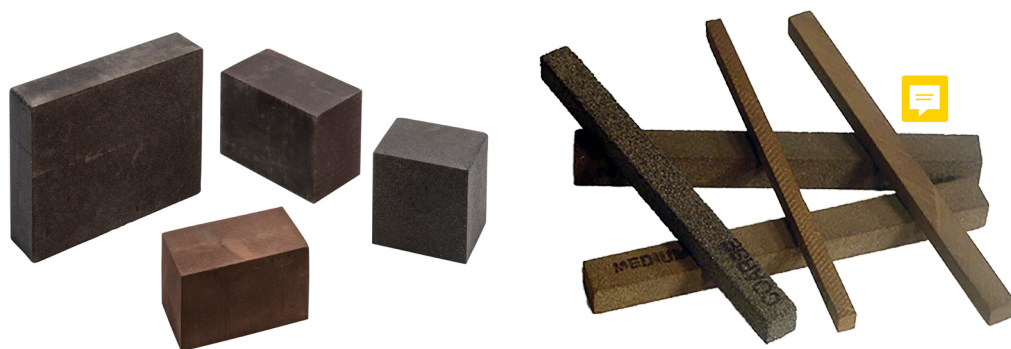
When using on cast iron or steel slip rings, run at 1800 or more surface feet per minute.

GRADE SRC	(Coarse – 36S Grit) for removing large quantities of metal.
GRADE SRM	(Medium – 60S Grit) for general use and removing pits.
GRADE SRF	(Finish – 90S Grit) for finishing.

DIAMOND D COMMSTONES

COMMUTATOR DRESSING AND FINISHING STONES

UNMOUNTED STONES



- ▶ Available in a complete range of sizes to a maximum of 14" x 14" x 3".

Specify size and grade when ordering. See Pg. 5 for Grades.

PENCIL TYPE / PLAIN-LATHE TYPE

- ▶ Unmounted stones (no handles)
- ▶ Smaller sizes used for small motors and generators
- ▶ Larger sizes used clamped in a lathe or portable grinder



Description	Pcs. Per Box	Catalog Number (Priced per Pc.)
3/4" x 3/4" x 3"	2	COMMMLS804__
1/4" x 1/2" x 4"	6	COMMMLS802__
1/4" x 3/8" x 6"	6	COMMMLS800__
1/4" x 1/2" x 6"	6	COMMMLS805__
1/8" x 3/8" x 6"	6	COMMMLS801__
3/8" x 3/8" x 6"	6	COMMMLS810__
3/8" x 1/2" x 6"	4	COMMMLS815__
1/2" x 1/2" x 6"	4	COMMMLS820__
3/8" x 5/8" x 6"	4	COMMMLS825__
1/2" x 5/8" x 6"	4	COMMMLS830__
5/8" x 5/8" x 6"	2	COMMMLS835__
3/4" x 3/4" x 6"	1	COMMMLS840__
1" x 1" x 6"	1	COMMMLS845__
1" x 1" x 6-1/2"	1	COMMMLS846__
1" x 1-1/2" x 6-1/2"	1	COMMMLS847__
1/4" x 5/16" x 8"	6	COMMMLS803__
5/16" x 3/4" x 8"	6	COMMMLS809__
1" x 2" x 8"	1	COMMMLS850__
2" x 2" x 8"	1	COMMMLS855__
1" x 1-1/2" x 11"	1	COMMMLS860__

Specify catalog number and grade when ordering, e.g. COMMMLS804__ in grade EC becomes COMMMLS804EC. See p. 5 for available grades.

POCKET COMBINATION STONES

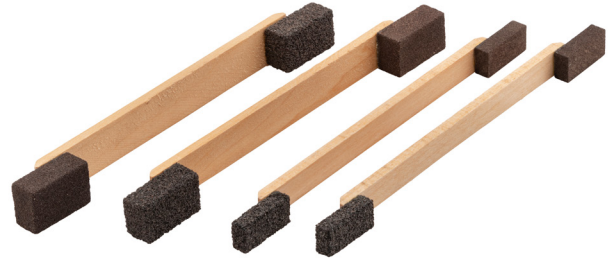


- Versatile two-grade stone for use on small motors and generators.

Description	Catalog Number
1" x 1" x 4"	COMM905__
1" x 2" x 6"	COMM910__
1" x 2" x 8"	COMM940__

Specify catalog number and both grades when ordering, e.g. COMM905__ in grades EC and M becomes COMM905ECM. See p. 5 for available grades.

SMALL MOTOR COMBINATION STONES

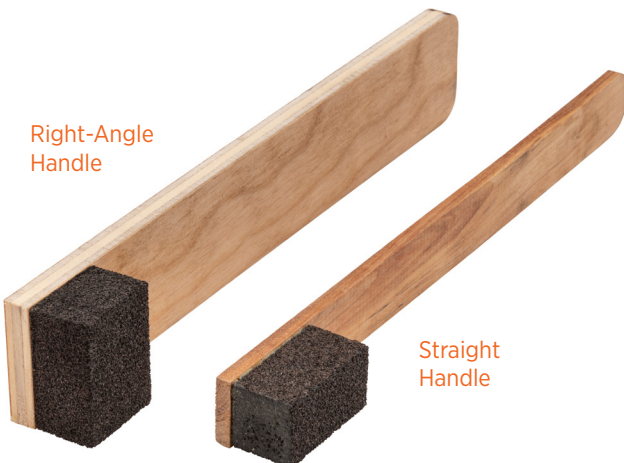


- Handy two-grade stone is excellent for use on fractional horsepower motors.

Description	OAL	Catalog Number
3/4" x 1/2" x 3/8"	6-3/4"	COMM950__
1-1/8" x 1/2" x 5/16"	7-1/8"	COMM952__
1-1/4" x 3/4" x 1/2"	7-1/4"	COMM955__

Specify catalog number and both grades when ordering, e.g. COMM950__ in grades EC and M becomes COMM950ECM. See p. 5 for available grades.

WITH STRAIGHT OR RIGHT-ANGLE HANDLES



Right-Angle Handle

Straight Handle

- Long handle allows use with difficult-to-reach commutators.

Description L x W x T	Catalog Number	
	Straight Handle	Right-Angle Handle
1" x 1" x 1"	—	COMM700R__
1" x 1" x 2"	—	COMM705R__
1-1/2" x 1" x 2"	COMM706S__	COMM706R__
1-1/2" x 1-1/2" x 1-1/2"	—	COMM725R__
2" x 1" x 1"	COMM710S__	COMM710R__
2" x 1" x 1-1/2"	COMM712S__	COMM712R__
2" x 1" x 2"	COMM715S__	COMM715R__
2" x 1-1/2" x 1"	COMM716S__	COMM716R__
3" x 1" x 2"	COMM720S__	COMM720R__
3" x 1-1/2" x 2"	COMM722S__	COMM722R__
3" x 2" x 1-1/2"	COMM707S__	COMM707R__
3" x 2" x 3"	COMM711S__	COMM711R__

- Handle length is 12" for both Straight & Right-Angle Handle, which includes the length of the stone.
- Specify catalog number and grade when ordering, e.g. COMM700R__ in grade EC becomes COMM700REC. See p. 5 for available grades.

DIAMOND D COMMSTONES

COMMUTATOR DRESSING AND FINISHING STONES

WITH STRAIGHT OR RIGHT-ANGLE TRAMWAY HANDLES

Straight
Tramway
Handle



Right-Angle
Tramway
Handle



- ▶ This handle is mounted at a 45° angle which insures a good, positive grip in awkward positions.

Description L x W x T	Catalog Number	
	Straight Handle	Right-Angle Handle
2" x 1-1/2" x 2"	COMMX300S__	COMMX300R__
2" x 2" x 2"	—	COMMX305R__
3" x 1-1/2" x 2"	COMMX306S__	COMMX306R__
3" x 2" x 1-1/2"	COMMX307S__	COMMX307R__
3" x 2" x 2"	COMMX310S__	COMMX310R__
3" x 2" x 3"	COMMX311S__	COMMX311R__
3" x 3" x 2"	—	COMMX315R__
4" x 3" x 2"	COMMX320S__	COMMX320R__

- Handle length is 12" for both Straight & Right-Angle Handle.
- Specify catalog number and grade when ordering, e.g. COMMX300S__ in grade EC becomes COMMX300SEC. See p. 5 for available grades.

WITH ADJUSTABLE HANDLES



- ▶ This stone has a permanently mounted short knob with a removeable handle. The handle can be inserted in three different positions.

Description L x W x T	Catalog Number
2" x 1-1/2" x 2"	COMMX500__
2" x 2" x 2"	COMMX505__
3" x 1-1/2" x 2"	COMMX506__
3" x 2" x 1-1/2"	COMMX507__
3" x 2" x 2"	COMMX510__
3" x 2" x 3"	COMMX511__
3" x 3" x 2"	COMMX515__
4" x 3" x 2"	COMMX520__

- Handle length is 8-1/2".
- Specify catalog number and grade when ordering, e.g. COMMX500__ in grade EC becomes COMMX500EC. See p. 5 for available grades.

WITH RAILWAY HANDLES

Long Railway Handle
(Approximately
9" - 12" Long)



Short Railway Handle
(Approximately 6" Long)



- ▶ The long handle is excellent for use with commutators that are difficult to reach.

Description L x W x T	Catalog Number	
	Short Handle	Long Handle
2" x 1-1/2" x 2"	COMMX400S__	COMMX400L__
2" x 2" x 2"	COMMX405S__	COMMX405L__
3" x 1-1/2" x 2"	—	COMMX406L__
3" x 2" x 1-1/2"	—	COMMX407L__
3" x 2" x 2"	—	COMMX410L__
3" x 2" x 3"	—	COMMX411L__
3" x 3" x 2"	—	COMMX415L__
4" x 3" x 2"	—	COMMX420L__

- Short Handle is 7". Long Handle is 12" for the COMMX400 & 405, remaining sizes have 8" handles.
- Specify catalog number and grade when ordering, e.g. COMMX400S__ in grade EC becomes COMMX400SEC. See p. 5 for available grades.

WITH SAW HANDLES

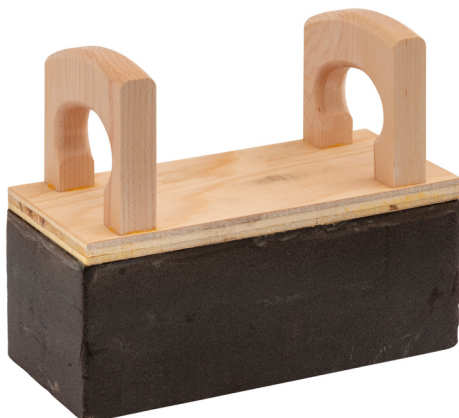


- ▶ Large handle gives excellent control, this stone is used on large motors and generators.

Description L x W x T	Catalog Number
4" x 1" x 3"	COMMX200__
4" x 1-1/2" x 3"	COMMX205__
4" x 2" x 2"	COMMX206__
4" x 2" x 3"	COMMX207__
4" x 2" x 4"	COMMX208__
4" x 3" x 2"	COMMX210__
4" x 4" x 2-1/2"	COMMX211__
4" x 4" x 3"	COMMX215__
5" x 2" x 2"	COMMX220__
5" x 2" x 3"	COMMX225__
5" x 3" x 2"	COMMX230__
5" x 3" x 3"	COMMX235__
6" x 2" x 3"	COMMX240__
6" x 3" x 4"	COMMX242__
6" x 4" x 3"	COMMX245__
8" x 3" x 4"	COMMX247__
8" x 4" x 3"	COMMX250__

Specify catalog number and grade when ordering, e.g. COMMX200__ in grade EC becomes COMMX200EC. See p. 5 for available grades.

WITH DOUBLE SAW HANDLES



- ▶ This stone is used on very large rotating equipment. The dual handle design gives excellent leverage and control.

Description L x W x T	Catalog Number
5" x 7" x 3"	COMMX105__
5" x 9" x 3"	COMMX110__
6" x 10" x 3"	COMMX115__
7" x 5" x 3"	COMMX116__
8" x 3" x 4"	COMMX101__*
8" x 4" x 3"	COMMX100__
9" x 5" x 3"	COMMX117__
10" x 6" x 3"	COMMX118__

Specify catalog number and grade when ordering, e.g. COMMX105__ in grade EC becomes COMMX105EC. See p. 5 for available grades.

* COMMX101 commstones have handles rotated 90° from picture and offset from each other. Please specify left- or right-handed operator when ordering.

DIAMOND D COMMSTONES

COMMUTATOR DRESSING AND FINISHING STONES

LATHE TYPE WITH HANDLE

- This is supplied with a wooden block handle, which allows the entire stone to be used when clamped in a lathe or portable grinder.

Stone Dimensions	Wood Block	Overall Length	Catalog Number
1" x 1-1/2" x 5"	1-1/2"	6-1/2"	COMMX602__
1" x 2" x 5"	3"	8"	COMMX604__
1-1/2" x 2-1/2" x 5"	3"	8"	COMMX614__
2" x 2" x 5"	3"	8"	COMMX616__
1" x 1-1/2" x 8"	1-1/2"	9-1/2"	COMMX634__
1-1/2" x 2-1/2" x 8"	3"	11"	COMMX648__
2" x 2" x 8"	3"	11"	COMMX650__

Specify catalog number and grade when ordering, e.g. COMMX602__ in grade EC becomes COMMX602EC. See p. 5 for available grades.



COMMUTATOR BRUSH SAVER

Uniquely shaped plastic handle with resurfacing stones at each end. Designed for smoothing commutators on small motors and generators.

This non-conductive tool allows user access to resurface commutator to a smooth finish, which extends brush life and improves commutation.



Cutting Faces	Overall Length	Handle Width	Catalog Number
5/16 x 7/8"	8-5/8"	5/8"	COMMX007

- Provided standard with one polish and one finish stone
- Other grades available on request
- Handle length is 8-3/4". OAL = 9-5/8"

DIAMOND D COMMUTATOR TREATING KIT



You'll never find a more versatile tool than this one — the shape can be quickly changed to fit any job. Simply dip holder (less stones) in hot water for one minute, then bend to suit your particular application.

The holder and inserts are both non-conductive, so the tool is extremely safe to use. The exclusive hex nut and screw locking assembly permits replacement and locking of inserts, eliminating the chance of the stone working its way loose.

With this versatile treating kit you'll find it easy to keep small commutators operating at peak efficiency.

- ▶ Our kit includes holder, four grades of commstone inserts, as well as grade FH brush seater inserts.
- ▶ Inserts are color coded for easy identification.
- ▶ Holders (9-1/4" L.) and replacement inserts (1" x 3/4" x 5/16") are available separately.

Description	Grade	No. in Pkg.	Color Code	Catalog Number
Complete Kit (for commutators and brass or copper slip rings)	Holder	1		DIAMX2000
	Coarse Stone (C)	2	Red	
	Medium Stone (M)	2	Yellow	
	Finish Stone (F)	2	Green	
	Extra Fine or Polish Stone (P)	2	Black	
	Brush Seater (FH)	4	White	
Holder Only, with Two Stones	Please specify stone grades when ordering, e.g. one holder with one each Coarse and Finish stone becomes <i>DIAMX2001CP</i>			DIAMX2001_ _
Replacement Stones (for commutators and brass or copper slip rings)	Coarse Stone (C)	6	Red	DIAMX2002
	Medium Stone (M)	6	Yellow	DIAMX2003
	Finish Stone (F)	6	Green	DIAMX2004
	Extra Fine or Polish Stone (P)	6	Black	DIAMX2005
	Extra Polish Stone (EP)	6	Pink	DIAMX2011
Replacement Stones (for cast iron and steel slip rings)	Brush Seater (FH)	6	White	DIAMX2006
	Coarse Stone (SRC)	6	Blue	DIAMX2008
	Medium Stone (SRM)	6	Orange	DIAMX2009
	Finish or Stone (SRF)	6	Gray	DIAMX2010
Replacement Holder	Holder only, without stones			DIAMX2007

BRUSH SEATING AND CLEANING STONES



Commutators and slip ring brushes of any material can be easily and accurately seated with Diamond D Brush Seaters.

Just hold the Brush Seater on the commutator close to the brush so the Brush Seater material will be carried under the brush.

At the same time, press on the brush to increase pressure. Many commutators and slip ring troubles are caused by poor contact with the brushes. This is particularly true when new brushes are installed along with old ones because if the new brushes do not make good contact, the current is forced through the other brushes. This overloads the other brushes causing pitting of the brush faces, loosening of brush shunts, burning of brush holders, and many other evils that result from sparking and heating.

SIZE SELECTION

For brush seating, choose a stone with a width equal to, or slightly greater than, the width of the brush. For cleaning commutators, pick a stone about 3/4 the length of the commutator bar and as thick as will neatly fit between the brush riggings. For slip rings, select a stone about 1/2" wider than the ring.

WE CAN MANUFACTURE SPECIAL SIZES NOT SHOWN, UP TO MAX LENGTH 8". PLEASE ADVISE SIZE AND GRADE FOR QUOTATION.

See Brush Seater Holders p. 13

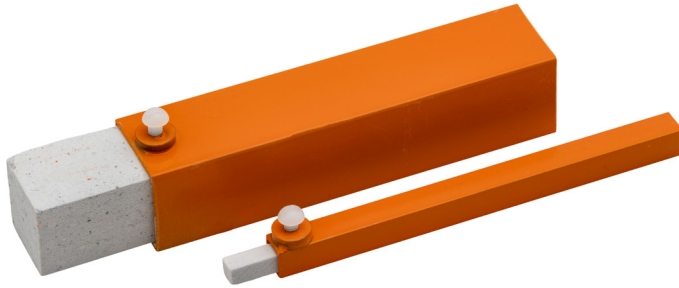
GRADE SELECTION

Grade ES (Extra Soft)	Used for cleaning and seating brushes on all types of slip rings. Not recommended for use on commutators because of the softness.
Grade FH (Fine Hard)	Recommended for small motor applications such as vacuum cleaners, fans, and automotive generators.
Grade MS (Medium Soft)	Our most popular grade. Normally supplied for general use.
Grade FS (Fine Soft)	Similar to Grade MS, except utilizing a finer grit abrasive.
Grade MH (Medium Hard)	Similar to grade MS except harder. It was specifically developed for use on undercut commutators where softer grades might wear too quickly.

Description	Pcs. Per Box	Catalog Number (Priced per Pc.)
4" x 1-1/2" x 2"	2	BRSRX03__
4-3/4" x 2" x 1-1/4"	2	BRSRX01__
4-3/4" x 1-1/2" x 1-1/4"	2	BRSRX02__
4-3/4" x 1-1/4" x 3/4"	4	BRSRX04__
4-3/4" x 1-1/8" x 5/8"	4	BRSRX05__
4-3/4" x 1" x 1/2"	4	BRSRX06__
4-3/4" x 3/4" x 5/8"	4	BRSRX07__
4-3/4" x 3/4" x 1/2"	4	BRSRX08__
4-3/4" x 1/2" x 1/2"	2	BRSRX09__
4-3/4" x 1/2" x 3/8"	2	BRSRX10__
4-3/4" x 5/8" x 1/2"	4	BRSRX28__
4-3/4" x 3/4" x 1/4"	2	BRSRX11__
4-3/4" x 1/2" x 1/4"	4	BRSRX12__
4-3/4" x 1/4" x 1/4"	6	BRSRX13__
4-3/4" x 1/4" x 1/8"	12	BRSRX14__
4-3/4" x 3/8" x 3/8"	4	BRSRX15__
4-3/4" x 1" x 1"	4	BRSRX16__
4-3/4" x 2" x 1"	2	BRSRX17__
4-3/4" x 3/8" x 1/4"	4	BRSRX18__
2" x 1" x 1"	1	BRSRX19__
2" x 2" x 2"	1	BRSRX23__
3" x 2" x 2"	1	BRSRX24__
3" x 2" x 4"	1	BRSRX25__
6" x 3" x 2"	1	BRSRX21__
5" x 2" x 2"	1	BRSRX22__
8" x 1-1/2" x 1-1/2"	1	BRSRX27__
8" x 3" x 2"	1	BRSRX20__

Specify catalog number and grade when ordering, e.g. BRSRX03__ in grade ES becomes BRSRX03ES. See chart above for available grades.

BRUSH SEATER HOLDERS



Brush Seater Holders add an element of safety when seating brushes while the motor is running. Holder helps keep fingers away from rotating equipment, and risk of possible shock is reduced because it is non-conductive. Holder also provides additional support to relatively fragile Brush Seater material.

See *Brush Seaters* p. 12

NON-CONDUCTIVE

(BRUSH SEATERS SOLD SEPARATELY)

I.D. Dimension	Length	Catalog Number
1/4" x 1/4"	Standard length is 5" 10" & 15" lengths available <i>(To order longer lengths, add "10" or "15" to catalog number, e.g. 10" long BRHDX13 becomes BRHDX1310.)</i>	BRHDX13
1/2" x 1/4"		BRHDX12
3/8" x 3/8"		BRHDX15
1/2" x 1/2"		BRHDX09
5/8" x 1/2"		BRHDX28
3/4" x 1/2"		BRHDX08
3/4" x 5/8"		BRHDX07
1" x 1/2"		BRHDX06
1" x 1"		BRHDX16

BRUSH SEATERS WITH HANDLES



4x3x2" with
Straight Tramway
Handle

4x3x2" with Saw
Handle

2x2x2" with
Right-Angle
Tramway Handle

Used to seat larger brushes or clean commutators where a sturdy handle is required for safety and durability. Five grades are offered, see p. 12 for available grades.

Description	Catalog Number
2" x 2" x 2" with Right-angle Tramway Handle	BRSRX23__RT
4" x 3" x 2" with Saw Handle	BRSRX25__SW
4" x 3" x 2" with Straight Tramway Handle	BRSRX25__ST

- Handle length is 12" for both Straight & Right-Angle Handle.
- Specify catalog number and grade when ordering, e.g. BRSRX23__RT in grade ES becomes BRSRX23ESRT. See p. 12 for available grades.

RUBRITE FLEXIBLE ABRASIVES

Rubrite flexible abrasive cleaning stones are excellent for removing surface imperfections from any metal. Mildly abrasive, they do only enough cutting to produce a high polish and fine finish. They are slow-wearing, non-loading, and will not gum or dust.

Recommended in commutator maintenance for periodic cleanup of surface, or for polishing the commutator after grinding with Diamond D commstones. They can also be recommended to provide a smooth, clean finish on machined parts, etc.

SIZE AND GRADE SELECTION

We make Rubrite in only one grade. When using on commutators and slip rings, we suggest you use as large a Rubrite as will easily fit between your brush riggings.

If you don't see the exact size you want, you can always special order up to a maximum size of 12" x 6" x 2". Please specify size and quantity for us to quote price and delivery.

UNMOUNTED

This type can be used for hundreds of jobs, including metal cleaning, commutator burnishing, and rust removal.

Specify catalog number when ordering.



Description	Catalog Number
3/8" x 3/8" x 5"	RUBBX6250
3/8" x 1/2" x 5"	RUBBX6251
3/8" x 5/8" x 5"	RUBBX6252
3/8" x 3/4" x 5"	RUBBX6253
1/2" x 1/2" x 5"	RUBBX6254
1/2" x 3/4" x 5"	RUBBX6255
1/2" x 1" x 5"	RUBBX6256
5/8" x 1" x 5"	RUBBX6259
3/4" x 3/4" x 5"	RUBBX6260
3/4" x 1" x 5"	RUBBX6261
1" x 1" x 5"	RUBBX6262
1" x 1-1/2" x 5"	RUBBX6263
1" x 2" x 5"	RUBBX6264
1" x 3" x 5"	RUBBX6266
1" x 4" x 5"	RUBBX6268
1" x 5" x 6"	RUBBX6269
2" x 5" x 6"	RUBBX6270
1/8" x 1" x 5"	RUBBX6271

WITH SAW HANDLE



This type is used to clean and polish larger diameter commutators.

Specify catalog number when ordering.

Description L x W x T	Catalog Number
5" x 1" x 2"	RUBBX6290

WITH FRACTIONAL MOTOR HANDLE



This type is used to clean and polish fractional horsepower motor commutators.

Specify catalog number when ordering.

Description L x W x T	Catalog Number
3/4" x 3/8" x 1"	RUBBX6249

Handle length is 6"

WITH RAILWAY HANDLE



This handle is mounted vertically, which gives excellent leverage.

Specify catalog number when ordering.

Description L x W x T	Handle Length	Catalog Number
2" x 1-1/2" x 2"	12"	RUBBX6225
2" x 2" x 2"	12"	RUBBX6226
3" x 2" x 2"	8"	RUBBX6227
3" x 3" x 2"	8"	RUBBX6228
4" x 3" x 2"	8"	RUBBX6229

WITH TRAMWAY HANDLE



This handle is mounted at a 45° angle, which gives good access to awkwardly positioned commutators.

Specify catalog number when ordering.

Description L x W x T	Catalog Number
2" x 1-1/2" x 2"	RUBBX6235
2" x 2" x 2"	RUBBX6236
3" x 2" x 2"	RUBBX6237
3" x 3" x 2"	RUBBX6238
4" x 3" x 2"	RUBBX6239

Handle length is 10"

WITH POCKET HANDLE



This Rubrite is excellent for burnishing small motor and generator commutators.

Specify catalog number when ordering.

Description L x W x T	Catalog Number
1-3/4" x 3/4" x 1"	RUBBX6245
2" x 3/4" x 1"	RUBBX6246
1-3/4" x 1" x 1"	RUBBX6247
2" x 1" x 1"	RUBBX6248

GARNET COMMUTATOR PAPER



Garnet Commutator Paper is non-conductive and is used for pre-shaping new copper and carbon brushes and for cleaning and burnishing commutator surfaces.

To pre-shape brushes, commutator paper of sufficient width to contact all brushes is secured, abrasive side out, to the full commutator circumference with masking tape. With the new brushes in place, the commutator is rotated by hand until the brushes have taken on the radius of the commutator. Use 80 grit paper for primary shaping, followed by 220 grit for a fine finish.

Surface burnishing of the commutator should be done with 150 grit followed by 220 grit paper.

NON-CONDUCTIVE

AVAILABLE IN:

- 3 GRITS
- 7 WIDTHS
- 25 YD. ROLLS

**CUSTOM WIDTHS AVAILABLE
UPON REQUEST**

Width	Length	Catalog Number		
		80 grit	150 grit	220 grit
1"	25 yds.	COMP01X080	COMP01X150	COMP01X220
2"	25 yds.	COMP02X080	COMP02X150	COMP02X220
3"	25 yds.	COMP03X080	COMP03X150	COMP03X220
4"	25 yds.	COMP04X080	COMP04X150	COMP04X220
6"	25 yds.	COMP06X080	COMP06X150	COMP06X220
8"	25 yds.	COMP08X080	COMP08X150	COMP08X220
12"	25 yds.	COMP12X080	COMP12X150	COMP12X220

DIAMOND D CONTACT BURNISHING TOOLS



Burnisher with Plastic Handle

Pocket Pen Holder with Blade

These exceptional tools are designed to burnish and polish all types of contacts — without removing virtually any precious metal. They leave no grit, no filings, no dust and no film that would start new carbon build-up.

Diamond D Contact Burnishers perform superbly on all types of metal, including silver, gold, platinum, molybdenum and tungsten. We have designed them with just enough stiffness to apply the proper pressure to the contact face.

Our contact burnishers are available with plastic handles, or with our handy Pocket Pen Holder. Proven by years of faithful field service, these tools have greatly extended the lives of millions of contacts.

Description	Width	Thickness	Length	Qty. per Pkg.	Catalog Number
With Plastic Handle	3/16"	.007"	4"	12	BURNX1
	1/4"	.007"	4"		BURNX2
	3/8"	.007"	4"		BURNX3
	1/4"	.011"	5"		BURNX4
	1/4"	.020"	5"		BURNX5
	1/4"	.011"	3-1/2"		BURNX6
With Pocket Pen Holder <i>(one Holder included with each package of 12 Blades)</i>	3/16"	.007"	1-1/2"	12	BURNXD21
	1/4"	.007"			BURNXD22
	1/4"	.011"			BURNXD23
Replacement Blades only	3/16"	.007"	1-1/2"	25	BURNXRB21
	1/4"	.007"			BURNXRB22
	1/4"	.011"			BURNXRB23

DIAMOND D PLASTONE® FLEXIBLE FILES



This unique product offers all of the traditional features of ordinary files — plus the flexibility you often need.

Plastone flexible files are made of hard abrasive materials pressed into a flexible core. This enables you to bend or twist these tools any way you like to reach curved surfaces and otherwise hard-to-reach areas.

Because they are non-conductive, these special files are popular for dressing automotive, electrical, and electronic contacts.

Many other uses can be found for these inexpensive files, wherever fine finishing of metals is required. They are impervious to oil and water; accumulations of grease can be washed from them with soap and water.



ORDERING INFORMATION

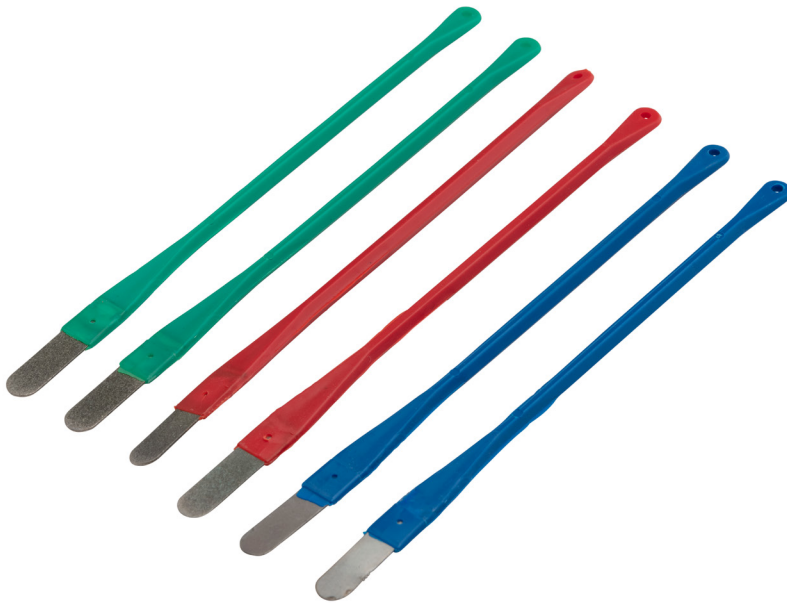
Plastones are **packed a dozen to a box**. If you require a special size, give us complete specifications and we will furnish a quote.

Width	Length	Thickness	Grit	Catalog Number (priced per dozen)
1/2"	4-3/4"	.025"	180-Fine	FLXFX1045
1/2"	4-3/4"	.030"	240-Extra Fine	FLXFX3046
1/2"	4-3/4"	.030"	320-Polish	FLXFX3048
1/2"	4-3/4"	.040"	80-Coarse	FLXFX3043
1/2"	4-3/4"	.040"	120-Medium	FLXFX3044
1/2"	4-3/4"	.040"	180-Fine	FLXFX3045
1/2"	4-3/4"	.080"	80-Coarse	FLXFX6043
1/2"	4-3/4"	.080"	120-Medium	FLXFX6044
1/2"	4-3/4"	.080"	180-Fine	FLXFX6045
1/2"	4-3/4"	.080"	240-Extra Fine	FLXFX6046
1/2"	4-3/4"	.080"	320-Polish	FLXFX6047
1/4"	4-3/4"	.015"	320-Polish	FLXFX1006
1/4"	4-3/4"	.020"	240-Extra Fine	FLXFX1002
1/4"	4-3/4"	.025"	240-Extra Fine	FLXFX1502
1/4"	4-3/4"	.025"	320-Polish	FLXFX1506
1/4"	4-3/4"	.040"	180-Fine	FLXFX3002
3/8"	4-3/4"	.015"	320-Polish	FLXFX1008
3/8"	4-3/4"	.020"	240-Extra Fine	FLXFX1004
3/8"	4-3/4"	.025"	120-Medium	FLXFX1044
3/8"	4-3/4"	.025"	240-Extra Fine	FLXFX1504
3/8"	4-3/4"	.025"	320-Polish	FLXFX1508
3/8"	4-3/4"	.040"	80-Coarse	FLXFX3033
3/8"	4-3/4"	.040"	180-Fine	FLXFX3004
3/8"	4-3/4"	.040"	240-Extra Fine	FLXFX3008
3/8"	4-3/4"	.040"	320-Polish	FLXFX3012
3/8"	4-3/4"	.080"	120-Medium	FLXFX6048
3/8"	4-3/4"	.080"	240-Extra Fine	FLXFX6050
7/8"	4-3/4"	.030"	80-Coarse	FLXFX3073
7/8"	4-3/4"	.030"	120-Medium	FLXFX3074
7/8"	4-3/4"	.030"	180-Fine	FLXFX3075
7/8"	4-3/4"	.030"	240-Extra Fine	FLXFX3076
7/8"	4-3/4"	.030"	320-Polish	FLXFX3077
7/8"	4-3/4"	.080"	80-Coarse	FLXFX6073
7/8"	4-3/4"	.080"	120-Medium	FLXFX6074
7/8"	4-3/4"	.080"	180-Fine	FLXFX6075

TOLERANCES

Length: $\pm 1/16"$ | Width: $\pm 1/32"$ | Thickness: $\pm .008"$

DIAMOND D DIAMOND SPATULAS



No product outperforms these Diamond Spatulas when it comes to cleaning, polishing and burnishing contacts. Our spatulas consist of uniform diamond particles bonded to a proprietary metal, then attached to a color-coded nylon shaft.

The diamond particles we use are such an effective abrasive that only minimum pressure is required on the contact, so very little metal is removed. The naturally irregular shapes of the particles also prevents clogging. The abrasive surface remains clean, ensuring maximum efficiency.

Our nylon shaft gives you good flexibility for normally inaccessible areas, as well as permitting use of the spatula under power.

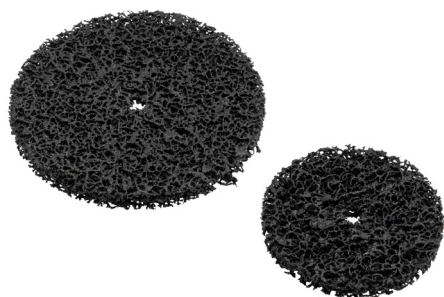
Diamond Spatulas are approximately 5-5/8" long with a 1/4" wide by 7/8" diamond face.

Description		Catalog Number
Complete Kit (Set of 3)	1 - Coarse Grit (Green)	SPATX4003
	1 - Medium Grit (Red)	
	1 - Fine Grit (Blue)	
Coarse Grit only (Green) For rapid cleaning. This spatula has two diamond faces.		SPATX4000
Medium Grit only (Red) For use on intermediate size contacts. This spatula has two diamond faces.		SPATX4001
Fine Grit only (Blue) For use on small, sensitive contacts. Made with only one diamond face, selective cleaning of closely set contacts is possible.		SPATX4002

ABRASIVE WHEELS

STRIPPING WHEELS

Extra coarse, non-woven abrasive fiber



Great for removing excess baked-on varnish from stators, or paint from motor housings, and other metal surfaces.

The rugged construction of this material, along with the knife-like cutting characteristics of silicon carbide grain, produces the most aggressive working non-woven material without a reinforced backing.

WHEELS

O.D.	Thick.	I.D.	Catalog Number
4"	1/2"	1/4"	SDBDCSW414
6"	1/2"	1/2"	SDBDCSW612

MANDRELS WITH 1/4" SHANK

Arbor	Catalog Number
1/4"	SDBDCSWM23
1/2"	SDBDCSWMW24SP

FLAP WHEELS



Particularly effective in cleaning stator surfaces. Also adaptable to smoothing, finishing and polishing of any metal form having convex or concave surfaces, cylinders, cavities, etc., where finish is important.

- ▶ Aluminum Oxide resin bond cloth with 1/4" shanks
- ▶ Abrasive cloth segments are permanently bonded to the shank in a core of epoxy; no removable parts.
- ▶ Grits available: 60, 80, 120

Dia.	Width	Max. R.P.M.	Catalog Number
1-1/2"	1/2"	25,000	FLWH01_ _ _
1-1/2"	1"	25,000	FLWH02_ _ _
2"	1"	22,000	FLWH03_ _ _
2-1/2"	1-1/2"	15,000	FLWH04_ _ _
3"	1"	18,000	FLWH05_ _ _
3"	2"	9,000	FLWH06_ _ _

Specify catalog number and grit when ordering, e.g. FLWH01_ _ _ in 60 grit becomes FLWH01060.

SANDING BANDS AND CUT-OFF WHEELS

SANDING BANDS



Dia.	Width	Catalog Number				
		24 Grit	36 Grit	60 Grit	80 Grit	120 Grit
1"	1"	SDBD11024	SDBD11036	SDBD11060	SDBD11080	SDBD11120
1"	2"	SDBD12024	SDBD12036	SDBD12060	SDBD12080	SDBD12120
2"	1"	SDBD21024	SDBD21036	SDBD21060	SDBD21080	SDBD21120
2"	2"	SDBD22024	SDBD22036	SDBD22060	SDBD22080	SDBD22120
3"	3"	SDBD33024	SDBD33036	SDBD33060	SDBD33080	SDBD33120

- 100 pcs. per package
- Handling Fee (Catalog Number SBD07) applied to order quantities other than packaged quantity
- Special sizes available on request

SANDING DRUMS



Number	Dia.	Width	Max. R.P.M.	Catalog Number
SH-1A	1"	1"	18,000	SDDR1A
SH-1B	1"	2"	8,000	SDDR1B
SH-2A	2"	1"	11,000	SDDR2A
SH-2B	2"	2"	6,000	SDDR2B
SH-3B	3"	3"	3,000	SDDR3B

The core-expanding nut on the drum is on the shank side, and there are no protrusions on the opposite end.

All have 1/4" shanks except SH-3B which is 3/8"

CUT-OFF WHEELS AND ARBOR



The M-12 is shown in use with a 3" cut-off wheel, cutting off coil ends in a stator.

This cut-off wheel will cut most anything, and is perfect for stripping the ends of coils in small-diameter stators. The wheels fit on a 1/4" arbor, and can be used in any tool up to 25,000 RPM. We have even cut chain link with this wheel and arbor in an electric hand drill at 700 RPM!

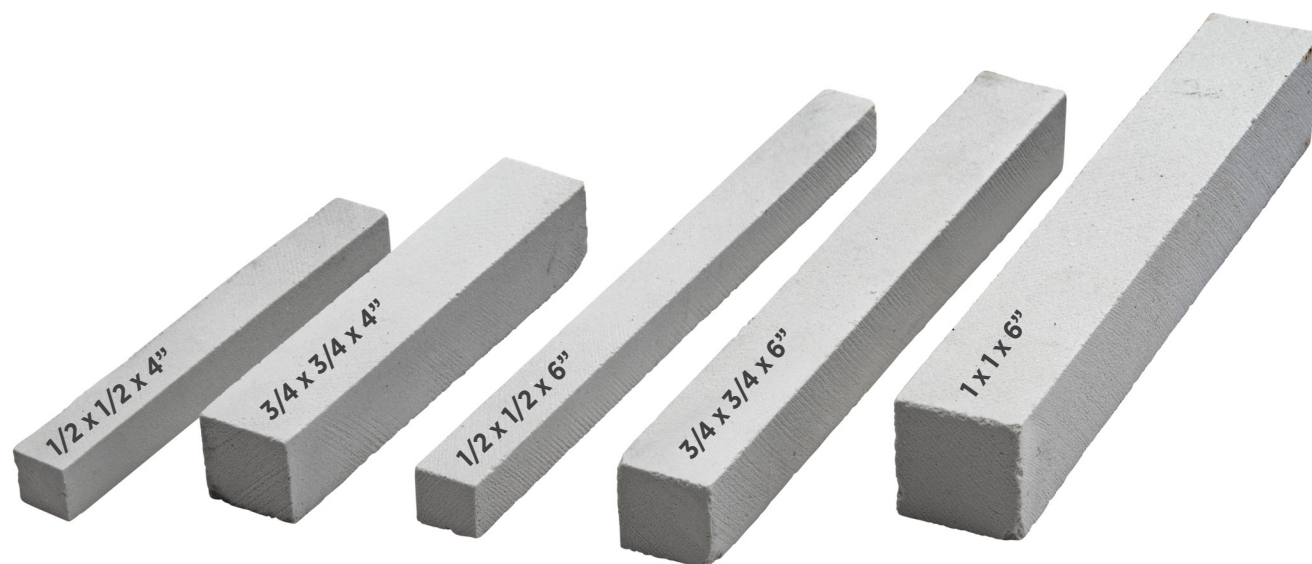
Available also is a 4" diameter wheel, with 1/4" hole, but with a top speed limitation of 19,000 r.p.m.



Shown above is the arbor and 3" cut-off wheel in the Martindale M-12 Production Air Grinder

Description	Arbor Diameter	Max RPM	Catalog Number
3" Cut-Off Wheel	1/4"	25,000	CTWH3
4" Cut-Off Wheel	1/4"	19,000	CTWH4
1/4" diameter Arbor	1/4"	--	MFLX54
M-12 Air Grinder, 1/4" collet, and wrenches	--	22,000	AGRD1814

ALUMINUM OXIDE DRESSING STICKS



For Dressing & Cleaning Diamond Wheels

Regular use of dressing sticks will help achieve maximum performance for your diamond wheels. Typical applications include cleaning and dressing diamond, CBN and conventional abrasive wheels.

How to Choose A Grit

- Choose a stick 1 or 2 grits finer than the existing abrasive of your grinding wheel.
- The smaller the grit number, the more aggressive the dressing, which will abrade the surface faster.

Dimensions	Pkg. Qty.	Catalog Number (Price per Pc.)		
		150 Grit	240 Grit	320 Grit
1/2" x 1/2" x 4"	2	DRST12124150	DRST12124240	DRST12124320
1/2" x 1/2" x 6"	4	DRST12126150	DRST12126240	DRST12126320
3/4" x 3/4" x 4"	4	DRST34344150	DRST34344240	DRST34344320
3/4" x 3/4" x 6"	2	DRST34346150	DRST34346240	DRST34346320
1" x 1" x 6"	4	DRST116150	DRST116240	DRST116320





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