DIAMOND D By MARTINDALE

Diamond D Commstones

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 workman 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 sandpaper can be used.

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DIRECTIONS FOR USING COMMSTONES

If grease or oil is present, wipe or sandpaper 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.

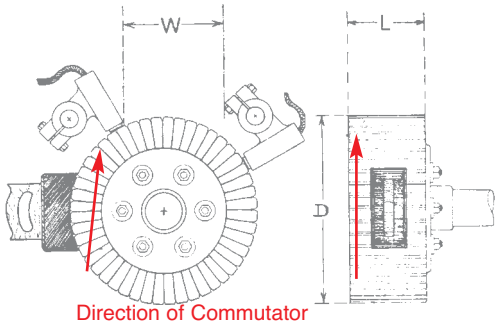
DON'T USE TOO SMALL OF A STONE

COMMSTONES can be made in ANY SIZE.

A Commutator stone 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 the 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.



Direction of Commutator Rotation, as shown by arrow.

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

Sandpaper 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.

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