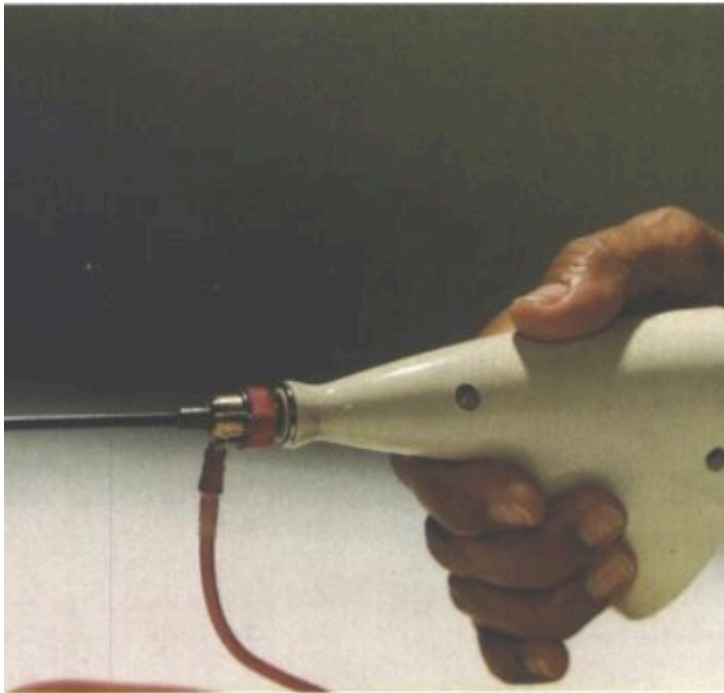


CARBITRON MODEL 300

Tungsten-Carbide Applicator System.

A heavy-duty, low-cost system for depositing Tungsten-Carbide onto tools and wear parts — extending operational life by 5× to 10× over standard tooling.



Extend tool life up to 1000%.

The Carbitron 300 is a complete deposition system consisting of an adjustable power supply and a vibrating hand-tool. Tungsten-Carbide ions are dislodged from an electrode and bonded directly to the work surface, forming a true metallic layer with a hardness of 78–80 Rockwell C.

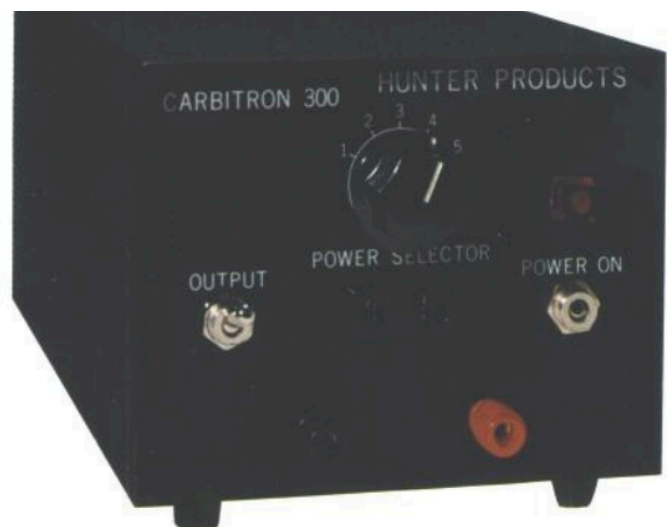
The unit incorporates the features of systems selling for 5× to 10× its price. Through savings in down-time, tool changing, sharpening, and replacement, the Carbitron 300 pays for itself in an amazingly short period.

Deposition thickness is operator-controlled, ranging from 0.0002" to 0.001" in 0.0002" increments, with a typical 1/8" × 2½" electrode coating approximately 50 sq. in. of surface.

A heavy-duty unit at a low-cost price.

The discharge intensity selector on the power supply allows precise control of deposition layer thickness. The hand-held vibrator tool is engineered for continuous operation with a 50% duty cycle and ten-minute maximum continuous on-time.

Standard equipment includes the discharge power supply, vibrator hand tool, two Tungsten-Carbide electrodes (1/8" and 1/16"), power and ground cables, and full instruction manual.



HOW IT WORKS

The Tungsten-Carbide deposition process.

A true metallic bond at 78–80 Rockwell C.

PROCESS

Minute particles of Tungsten-Carbide are diffused into and deposited onto metallic surfaces, improving wear characteristics and correcting defects or mistakes. A Tungsten-Carbide electrode mounted in a hand-gun vibrator is coupled to a specially designed power supply. As the electrode repeatedly contacts and withdraws from the work surface, small disruptive arcs dislodge Tungsten-Carbide ions from the electrode and deposit them into and onto the work.

RESULT

The deposition layer forms a true metallic bond with the work surface — not a coating, but a fused layer with a hardness of 78–80 Rockwell C. Layer thickness is operator-controlled via the discharge intensity selector, varying from 0.0002" to 0.001" in 0.0002" increments. A 1/8" × 2½" electrode typically covers 50 sq. in. of surface at 0.0005" average thickness.

"The Carbitron 300 will pay for itself in an amazingly short period — through savings in down-time, tool changing, sharpening, and replacement."

SPECIFICATIONS

Carbitron 300 — Catalog No. TS3037

PARAMETER	VALUE
DIMENSIONS	11" L × 6" W × 5" H
WEIGHT	15 lb.
VOLTAGE	110V, 60Hz, 4 amp · also available 230V / 50Hz
NOMINAL POWER	0.4 KW
DUTY CYCLE	50% (Max. continuous on-time 10 min.)
DEPOSITION LAYER	0.0002" – 0.001" in 0.0002" increments
HARDNESS	78–80 Rockwell C

STANDARD EQUIPMENT

- › Discharge Power Supply
- › Vibrator Hand Tool
- › Power Cable
- › Ground Cable
- › 1/8" × 2½" Tungsten-Carbide Electrode
- › 1/16" × 2½" Tungsten-Carbide Electrode
- › Instruction Manual

REPLACEMENT ELECTRODES & ACCESSORIES

CATALOG NO.	ITEM	SIZE	NOTES
TS3038	Tungsten-Carbide Electrode	1/8" × 2½"	Standard size, supplied with system
TS3039	Tungsten-Carbide Electrode	1/16" × 2½"	Fine work, supplied with system
TS3040	Tungsten-Carbide Electrode	1/32" × 2½"	Precision applications

TYPICAL APPLICATIONS

Where the Carbitron 300 extends tool life.

Recommended deposition thickness by tool type.

WHY USE IT

- Extend tool life
- Resize and salvage worn tools
- Obtain self-sharpening cutting edges
- Protect wear surfaces
- Repair worn parts
- Create non-brittle Tungsten-Carbide surfaces
- Increase friction and wear-life of grippers
- Improve thermal-shock and impact resistance
- Improve surface textures

MATERIAL CATEGORIES

CUTTING TOOLS

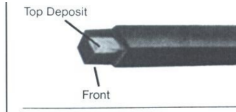
Lathe bits, milling cutters, taps, saws, drills, hobs, reamers, knives, scissors.

FORMING, STAMPING & FORGING

Punches, dies, forming tools, contact surfaces — life extended 5× to 10×.

COLLETS, CHUCKS & MACHINE PARTS

Apply to gripping surfaces to increase action and reduce wear.



LATHE BITS & SINGLE-POINT TOOLS

Deposit .0004" – .004" along top side of cutting edge. Then re-sharpen by grinding front.



END MILLS

Deposit .0002" – .0006" along cutting edges inside flute, at bottom and sides. Deposit along entire length of tool, then re-sharpen.



HORIZONTAL MILLING CUTTERS

Deposit .0002" – .004" on front face of each tooth along cutting edge. Then re-sharpen by grinding land.



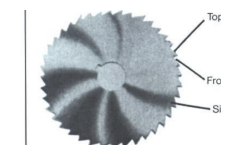
HOBBS

Deposit .0002" – .004" on front face of each tooth along cutting edge, then re-sharpen.



SHELL MILLS

Deposit .0002" – .0006" on front face of cutting surface along cutting edge, then re-sharpen.



SAWS

Deposit .0002" – .001" on front edges of each tooth, then re-sharpen. On fine saws with extremely small teeth, deposit on sides of teeth instead.



DRILLS

APPLICATION GUIDE · CONTINUED

Specialty tooling & non-cutting surfaces.



REAMERS

Deposit .0002" – .0008" inside flute along cutting edge, then re-sharpen.



COUNTER-SINKS

Deposit .0002" – .0006" along cutting edge inside flute. Deposit along entire length of cutting edge, then re-sharpen.



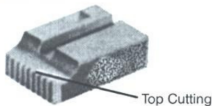
COUNTER-BORES

Follow same basic procedure as for end mills with deposit of .0002" – .0006". Re-sharpen after deposit.



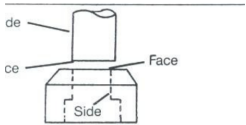
TAPS

For sharp tools, apply .0002" – .001" inside flute along cutting edge for 2–3 full threads. Take care not to nick the cutting edge. Dull tools should be re-sharpened first.



THREAD CHASERS

Apply .0002" – .001" along top cutting edge. If tool is dull, re-sharpen first, then follow same procedure.



PUNCHES & DIES

Apply to sides, face, or both depending on area that is wearing. Most commonly the deposit is applied to sides; the face is then ground. Deposit .0002" – .001" depending on thickness of build-up that can be tolerated.

NON-CUTTING APPLICATIONS

For casting molds, dies, chucks, grippers, collets, and general machine parts, apply deposit over the entire wear or gripping surface with a deposition thickness of .0002" – .004" depending on tolerable thickness. For maximum smoothness, move electrode briskly side-to-side and apply a light finish coat of .0002" after a heavier coat is deposited.

FINISHING NOTE

In all applications — cutting or non-cutting — a light stoning of the deposited surface with a cubic boron nitride or diamond stone is generally beneficial for removal of burrs and optimum sharpness of cutting edge and surface smoothness.

CONTACT & ORDERING

Hunter Products Inc. · 36 Madison Avenue, Flemington, NJ 08822

Phone 908-526-8440 Toll Free 1-800-524-0692 Fax 908-526-8348 Email hunter@hunterproducts.com

Web www.hunterproducts.com

TERMS · Net 30 days, F.O.B. Flemington, NJ for accredited companies. Prices subject to change without notice.