

RUBBER BOND

PRECISION

CUT-OFF

WHEELS



A NEW GENERATION OF RUBBER BOND CUT-OFF WHEELS

As one of the world's foremost leaders in abrasives, Radiac has incorporated over 100 years of abrasive manufacturing experience into the new line of Rubber Bond Cut-Off wheels. Radiac Abrasives' new generation of rubber bond cut-off wheels provide superior performance, closer tolerances, finer finishes and greater strength. More importantly, you'll achieve lower production costs due to our improved product manufacturing in a state-of-the-art facility.

Radiac Abrasives is committed to maintaining customer satisfaction and provides a capable and highly experienced team of Abrasive Specialists to assist you in the correct selection of rubber cut-off wheels for your grinding application.



ENGINEERED SOLUTIONS TO YOUR GRINDING NEEDS

Radiac/National manufactures a complete line of abrasive products and rubber wheels for the grinding wheels market. Headquartered in Salem, Illinois, Radiac Abrasives operates five state-of-the-art manufacturing facilities - three in the United States and two in Mexico. The Salem plant has over 300,000 square feet dedicated to the manufacturing and marketing of a full range of quality bonded abrasives.

PRECISE, EFFICIENT CUTTING PART AFTER PART

Radiac Rubber Bond wheels are manufactured to close tolerances, enabling the ultimate in precision. Cut-off wheels are formulated to slot and cut a wide range of materials and are ideally suited for applications where fast, accurate, consistent cutting is required with minimum heat build-up.

Wet cutting with Radiac Rubber Bond wheels is the most efficient method to cut and provide a clean, burr free surface without altering the characteristics of the material. Whatever your application, Radiac is the top performer.

FULL RANGE OF SIZES, CUSTOM FORMULATED SPECIFICATIONS, AGGRESSIVE PRICE STRUCTURE, WORLD CLASS LEAD TIMES

Radiac Abrasives provides a full range of rubber bonded cut-off wheels, from .004" (0.1mm) in thickness to .185" (4.7mm) and from 2" (50mm) to 20" (510mm) in diameter. All of our wheels are manufactured to the highest quality standards and are custom formulated for your application.

STANDARD DIMENSIONAL AVAILABILITY/TOLERANCES

| Diameter | Thickness | Thickness Tolerance* |
|----------|------------|----------------------|
| 2"-3" | .004-.030" | ± .001" |
| 4" | .005-.030" | ± .001" |
| 5" | .008-.030" | ± .001" |
| 6" | .010-.030" | ± .001" |
| 7" | .014-.030" | ± .001" |
| 8"-12" | .020-.032" | ± .003" |
| >12"-20" | .032-.185" | ± .005" |


**Closer tolerances available upon request*

RUBBER CUT-OFF APPLICATION GUIDE

| Application | Material | Starting Specification |
|-----------------------------|------------------------------|--------------------------|
| Automotive Industry | | |
| Tungsten Contacts | Tungsten | A120-M-R60 |
| Sprag Clutches | Mild Steel | A120-M-R60 |
| Control Cables | Hardened Steel | A150-M-R45 |
| Pump Valves | Hardened Steel | A120-M-R60 |
| Diesel Glow Plugs | Alnico | A90-F-R35 |
| Forgings and Castings | Various | A90-F-R35 |
| Piston Ring Slotting | Hardened Steel | A120-M-R50 |
| Aerospace Industry | | |
| Metallurgical Sampling | High Nickel Alloy, Titanium | A90-F-R35 |
| Medical Industry | | |
| Hypodermic Needles | Stainless Steel | A400-F-R55 |
| Dental Slotting | False Teeth | A150-M-R55 |
| Electrical Industry | | |
| Transformer Cores | Epoxy Laminated Steel | A120-M-R50 |
| Contacts | Tungsten, Silver Molybdenum | A120-M-R60 |
| Wires/Slugs | Tungsten, Silver Molybdenum | A120-F-R35 |
| Magnets | Alnico | C120-F-R35 |
| Light Components | Tungsten, Molybdenum, Nickel | A90-M-R45 |
| Thermocouples | — | C320-M-R60 |
| General Industries | | |
| Pen Nibs | Stainless Steel | A400-U-R60 |
| Computer Printing Heads | Tungsten, Steel | A120-F-R35 |
| Collet Slotting | Mild Steel | A60-M-R40 |
| Drills, Taps, End Mills | HSS | A120-M-R30 A120-M-R60 |
| Carding Wire, Side Grinding | Stainless Steel | A120-M-R60 |
| Tube Cutting | Brass, Copper | C320-M-R60 |
| | Aluminum | A240-M-R55 |
| | Stainless Steel | A400-F-R55 |
| Fork Pronging | Mild Steel | A120-M-R45 |
| Saw Blade Sharpening | Hardened Steel | A100-R-R45 |
| Shower Hose | — | A120-M-R45 |
| Ejector Pins | Hardened Steel | A120-F-R35 |

Order Format: D x T x H

MAKE AVAILABILITY

| | Bond | Abrasive | Grit | Grade |
|---|------|----------|------------------------------|------------|
| Free Cut | R30 | A | 120 | F, M, R |
|  | R35 | A,C | 80, 90, 100, 120 | F, M, R |
| | R40 | A | 60, 80, 90, 100, 120 | F, M, R |
| | R45 | A | 90, 100, 120, 150, 180, 240 | F, M, R |
| | R50 | A | 80, 90, 100, 120, 150 | F, M, R |
| | R55 | A | 150, 180, 240, 320, 400 | F, M, R |
| | R60 | A, C | 120, 150, 180, 240, 320, 400 | F, M, R, U |
| Long Life | | | | |

F= Free Cut
 M= General Purpose
 R= Long Life
 U= Ultra Durable

RADIAC

CUT-OFF WHEEL

TROUBLE SHOOTING

GUIDE

The finest abrasive cutting wheels give unsatisfactory performance if abused, improperly applied, or used on poorly maintained machines. These trouble-shooting suggestions will help you obtain optimum performance from your abrasive cut-off wheels.

1. Symptom

Wheels break as soon as the machine is started, or immediately upon beginning the first cut.

Suggested Action

- A. Flex wheels, look and listen for the cracks. If cracked, check the shipping containers for damage.
- B. Use the proper methods of storing and handling wheels.
- C. Reduce the spindle speed. Never operate a cut-off wheel at a speed in excess of the maximum operating speed.

2. Symptom

Wheels stall or break in the widest part of cut.

Suggested Action

- A. Re-adjust, repair or replace the work holder.
- B. Use a softer grade wheel.
- C. Reface or replace the flanges.

3. Symptom

Wheel cuts crooked and/or breaks.

Suggested action

- A. Check for and remove broken wheel pieces and other materials that may be deflecting the water flow. Adjust the water flow to be equal on both sides of the wheel.
- B. Check spindle runout and replace bearing if required.
- C. If wheel appears to be dished or warped, notify the local distributor or factory representative.

4. Symptom

Wheels bind or break just before a cut is completed.

Suggested Action

- A. Align the feed table with the work holder.
- B. Repair or replace worn work holder surfaces.

5. Symptom

CUT surface is burned.

Suggested Action

- A. Use a Softer grade wheel.
- B. Cut faster.
- C. Re-align the feed table with the work holder.
- D. Repair or replace worn work holder surfaces.
- E. Reduce the spindle speed. Never operate a cut-off wheel at a speed in the excess of the maximum operating speed marked on the wheel.
- F. Improve water application as follows:
 - 1. Clean the nozzle, water lines and tank.
 - 2. Remove sludge and chips from the coolant tank.
 - 3. Check pump for proper flow.
 - 4. Adjust the nozzle so the water is directed to the area where wheel and material are in contact.

6. Symptom

Wheel stalls in the cut and motor stalls.

Suggested Action

- A. Use a softer grade wheel.
- B. Cut at a slower rate.
- C. Align and/or repair the feed table and work holder.



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