

Magnetic Drilling Machines & Annular Cutters

L

What is an Annular Cutter

- A cutting tool used to make a large diameter hole in metal, usually in about 10% of the time of twist drills
- Typically used in conjunction with a magnetic drill machine. Increasingly used in CNC operations.
- Removes only the periphery of the hole, ejecting a slug at the end of the cut
- Sometimes referred to as broach cutters





User Advantages vs. Twist Drills

- Less energy
- Faster penetration
- Less thrust
- Less horsepower
- Better surface finish

- More accurate hole
- No secondary operation needed (i.e. reaming)
- Longer tool life
 - Easily re-sharpened



Drillco Annular Cutters Program

- High Speed Steel
 - 1" DOC 9100SE*
 - 2" DOC 9200SE*
 - ▶ 3" DOC 9300SE
 - ▶ 4" DOC 9400SE
 - Sizes ranging from 7/16" –
 4"
- Carbide Tipped
 - 1.3/8" DOC 9100CT
 - 2" DOC 9200CT
- Sets
 - > 7pc Sets in HSS or Cobalt
 - 32pc Fractional Sizes Display

- Nitro Cobalt
 - 1" DOC 9100N
 - 2" DOC 9200N
 - 3" DOC 9300N
 - Sizes ranging from 7/16" 2.1/4"
- Accessories
 - 1/2" and 3/4" Shank Adapters
 - Morse Taper Shank Adapters
 - Ejector Pins

Recognized Brand Competitive Test



- Drillco HSS cutter lasted longer than nationally recognized competitor HSS Cutter
- > Drillco Cobalt (Nitro) cutter lasted nearly 2x as long as nationally recognized competitor HSS cutter

Carbide Tipped Annular Cutters

Makes a hole in less time when compared to regular HSS cutters



- Delivers reamed quality, burr free holes
- Universal shank fits most magnetic drilling machines including those with tool less arbors and set-screw arbors
- Available in 1.3/8" and 2" depths of cut, with diameters up to 2.3/8"



What is a Magnetic Drilling Machine?

- Portable machines used to drill holes on remote job sites
- Typically used in conjunction with an annular cutter or twist drill
- Used in a wide variety of industries including construction and manufacturing
- Can either be electric, pneumatic, or hydraulic powered
 - Feature a magnetic base that holds to the workpiece





Where are they used?

- Job sites were portability is important
- By machinists, fabricators, contractors and more
- In hard-to-reach or confined spaces
- To cut holes in pipes/tubes in the oil & gas industry where twist drills often fail
- To cut holes in structural plates



DC35

- One of the most powerful mag base machines for its size
- Overload protection
- Extremely compact and lightweight, which makes it easy to maneuver and ideal for the work site
- Mag drill arbor is easily replaced with 1/2'' chuck for twist drills
- Adjustable reach for twist drills and for drilling deeper holes

LED light in the base of the machine lights the pilot point. Beneficial when drilling in low light areas!



<u>DC50</u>

- Variable speed control with 2 gear ranges
- Powerful new light weight motor unit
- Integral arbor for precise cuts
- Stroke is the longest in it's class
- Quick conversion to twist drills
- Overload protection
- Integrated automatic lubrication system





DC100

- Variable speed control with 2 gear ranges, and 5 speeds
- Stroke is longer than competitors
- Integral arbor for precise cuts
- Torque overload protection sensor
- Automatic integrated lubrication system
- Up to 4" Cutter capacity, and 1.1/2" Twist Drill Capacity



Re-sharpening Program

- Get the most out of your investment by re-sharpening your cutter at a fraction of the original cost
- Annular cutters can be resharpened up to 3 times
- No set-up or minimum quantity charges
- Tools are resharpened at our own state of the art facility, ensuring consistent quality and enabling an extremely quick turnaround time upon receipt
- Re-sharpening available on our entire offering
- Competitively priced, with quality guaranteed
- Call today to take advantage of this exceptional service from Drillco!

Product Videos

- Drillco YouTube channel > You Tube
- Demonstrates key features, benefits, and uses of our core products
- Annular Cutters & Magnetic Drill Machines
- Check out our new Annular Cutters and Magnetic Drills Product Brochure!





Drillco Cutting Tools

✓ Subscribed ۞ 17

Drillco offers a complete selection of domestic and imported metal cutting tools including: drills, taps, dies, reamers, burs, annular cu... Show more

Uploads

Threadformers

273 views · 1 month ago





239 views • 1 month ago



Construction Reamers

100 views • 1 month ago



146 views · 2 months ago



Drillco Annular Cutters & Mag Drill Machines 195 views + 2 months ago



Tips for Successful Cutting

- Always make sure that the slug ejects at the end of the cut before starting a new hole
- Clear away any chips left behind before starting a new hole
- Ensure that the set screws used to hold the cutter are tight. This will improve hole quality and ensure better tool life.
- Use a pilot pin. This will help you eject the slug at the end of the cut, and will aid in getting the coolant to flow to the cutting teeth.
- Ensure that the on-board integrated lubrication system has plenty of **fluid**. This will help to dissipate the heat generated when cutting the hole.
- For angled holes, make sure the centerline is no more than 20° from perpendicular. Reduce feed rates until the cutter is fully engaged. Use a brass or other soft metal bushing.
- Select the right cutter for the job. For harder materials, make sure to use a Cobalt or Carbide Tipped cutter. Also make sure that you have enough reach with the cutter and machine to drill through your workpiece.
- When cutting stainless steel, the magnet will not stick. You must clamp a ferrous metal to the surface for the magnet to rest on.
- Use aggressive feed rates on stainless steel and other hard to drill materials
- > Always wear safety glasses and use the provided safety shield while operating

For more tips on using magnetic drilling machines and annular cutters, please see our "Guide to Good Drilling" manual included with each machine from Drillco!