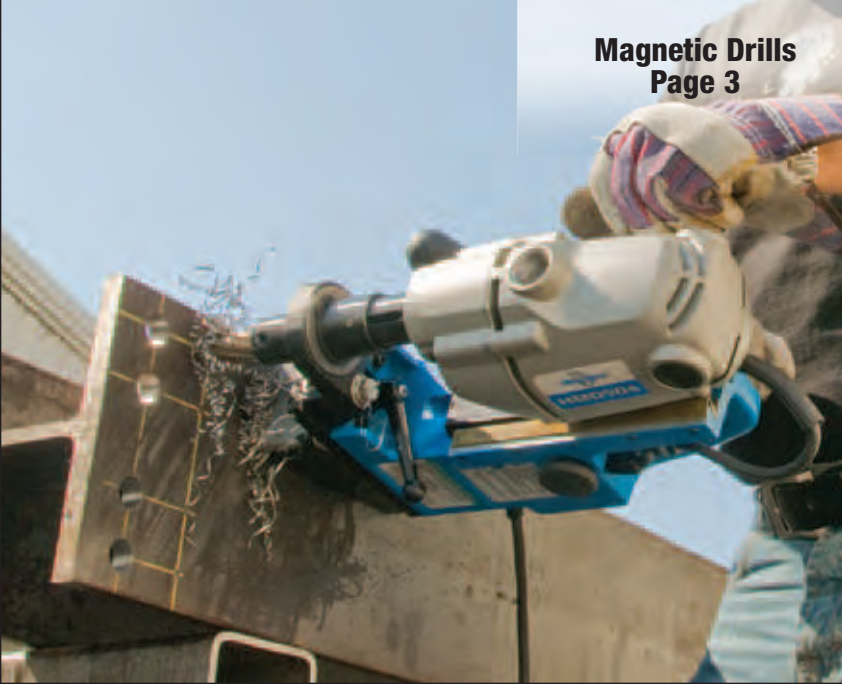


**Magnetic Drills
Page 3**



**Rotabroach® Cutters
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Hole Punchers
Page 26**



**PORTABLE
MAGNETIC
DRILLS,
HOLE PUNCHERS,
ACCESSORIES,
AND
FABRICATION
TOOLS**

Volume 12

WWW.HOUGEN.COM



**ROTAFOAM™
CUTTING FLUID**
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**ROTACUT™
MASTER KITS**
(Page 22)



**UPDATED PILOT SYSTEM
FOR THE "12,000-SERIES"
ROTABROACH® CUTTERS**
(Page 16)



**ADDITIONAL SIZES
OF COPPERHEAD™
CARBIDE CUTTERS**
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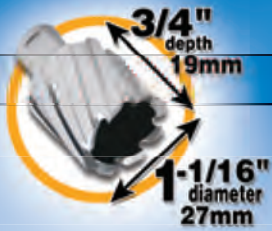


PORTABLE MAGNETIC DRILLS

| | | HMD115 | HMD150 | HMD904 | HMD925 | HMD914 | HMD505 / HMD508 | HMD915 |
|------------------------------|--------------------------------|-----------------------------|-----------------------------|-----------------------------|--|------------------------------|-----------------------------|------------------------------|
| | | Low Profile | | Fabricating | | | Heavy Duty Drilling | |
| Annular Cutters | RotaLoc™ | ✓ | ✓ | With Adapter | With Adapter | With Adapter | With Adapter | |
| | RotaLoc Plus™ | | ✓ | With Adapter | With Adapter | With Adapter | With Adapter | |
| | Rotabroach® "12,000-Series" | | | ✓ | ✓ | ✓ | ✓ | With Adapter (3/4" & Larger) |
| | Copperhead™ Carbide Tipped | | | ✓ | ✓ | ✓ | ✓ | |
| | Rotabroach® "42/43,000-Series" | | | | | | | ✓ |
| Model Specifications | Diameter Min./Max. | 1/2" to 1-1/16" (12 - 27mm) | 7/16" to 1-3/8" (12 - 35mm) | 7/16" to 1-1/2" (12 - 38mm) | 7/16" to 1-1/2" (1-1/4" Pwr. Fd.) (12 - 38mm) (32mm Pwr Fd.) | 7/16" to 2-1/16" (12 - 52mm) | 7/16" to 2-3/8" (12 - 60mm) | 3/4" to 3-1/16" (19 - 77mm) |
| | Depth Max. | 3/4" (19mm) | 1" (25mm) | 2" (50mm) | 2" (50mm) | 3" (76mm) | 3" (76mm) | 3" (76mm) |
| | Cutter Mounting | Bayonet Style | Bayonet Style | 3/4" Double Flat | 3/4" Double Flat | 3/4" Double Flat | 3/4" Double Flat | 3/4" or 1-1/4" Weldon Shank |
| | No-Load R.P.M. | 450 | 450 | 450 | 450 | 350 | 250 / 450 450 / 750 | 120 / 332 (w/ gear swap) |
| | Model Weight | 21.3 lbs (9.7 kg) | 22.7 lbs (10.3 kg) | 27.5 lbs (12.5 kg) | 37 lbs (16.8 kg) | 41 lbs (18.6 kg) | 45 lbs (20.4 kg) | 69 lbs (31.3 kg) |
| | Thru-the-Tool Coolant | | | ✓ | ✓ | ✓ | ✓ | ✓ |
| Available Accessories | Carrying Case Included | ✓ | ✓ | ✓ | Optional | ✓ | ✓ | |
| | Swivel Base | | | Optional | Optional | Optional | | |
| | Pipe Adapter | | | ✓ | Manual Mode | ✓ | ✓ | Bracket Mount |
| | Tap Attachment | | | ✓ | Manual Mode | ✓ | | |
| | Vac-Pad™ | | | ✓ | | | | |
| | Coolant Bottle | | | Optional | Included | Included | Included | Included |
| | Countersink Kit | | | ✓ | Manual Mode | ✓ | ✓ | With Adapter |
| | Twist Drill Adapter | | | ✓ | Manual Mode | ✓ | ✓ | With Adapter |
| | Ratchet Drive | ✓ | ✓ | ✓ | | | ✓ | |
| | Arbor Extender | | | ✓ | Manual Mode | ✓ | ✓ | With Adapter |
| | Drill Chuck | | | ✓ | Manual Mode | ✓ | | |
| | RotaLoc™ Spindle Adapter | | | ✓ | Manual Mode | ✓ | ✓ | |

HOUGEN® PORTABLE MAGNETIC DRILLS

HMD115 ULTRA LOW PROFILE



Ultra Low Profile right angle drill for extreme tight spots.



- Ultra Low Profile - fits in the tightest of spots. Only 6-11/16" (170mm) height
- Lightweight at only 21.3 lbs (9.7 kg)
- Patented quill feed arbor for smooth cuts and minimal maintenance
- Uses RotaLoc™ cutters which requires no tools for installation or removal
- Positive slug ejection
- High torque gearing
- Feed handles lock for easy maneuverability
- Ratchet or wrench can be used in place of handles
- Rear mounted controls
- Carrying case included
- One year warranty
- Optional carrying handle part no. 07021



Patented



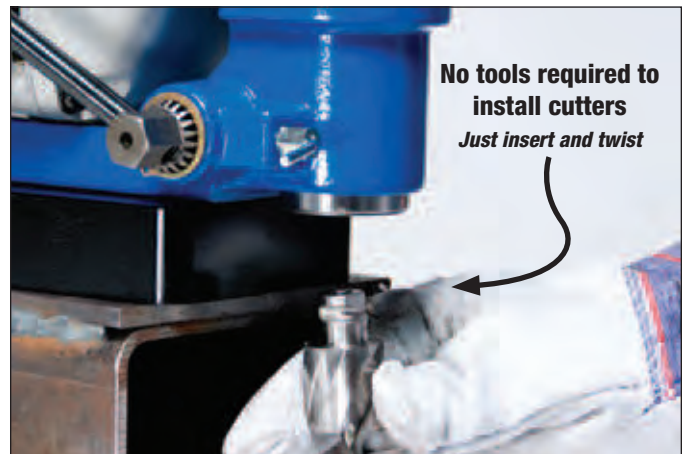
HMD115 SPECIFICATIONS

| | | | |
|-------------------|--|-----------------------------------|--|
| Electrical System | 115V, 50/60 Hz - 8A, 960W 230V, 50/60 Hz - 4A, 960W | | |
| Motor | 7A (115V), 3.5A (230V) 450 RPM | | |
| Diameter | 1/2" - 1-1/16" (12mm - 27mm) | | |
| Depth | 3/4" (19mm) | | |
| Cutter/Mount | RotaLoc™ with push & turn style shank | | |
| Dimensions | 6-11/16" H x 8-1/2" W x 11-5/8" L (170mm H x 216mm W x 295mm L) | | |
| Magnet | Base | 4" W x 7" L (102mm W x 178mm L) | |
| | 1" Plate (25mm) | Dead Lift 2080 lb. (944 kg) | Drillpoint Breakaway 849 lb. (385 kg) |
| | 3/8" Plate (9.5mm) | 1283 lb. (582 kg) | 535 lb. (243 kg) |
| Net Weight | 21.3 lb. (9.7 kg) | | |

MODELS & PART NO.

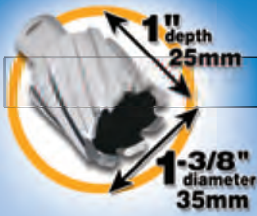
| Part No. | Description | Voltage | CSA | Special Plug |
|----------|-------------|---------|-----|--------------|
| 0115101 | HMD115 | 115V | X | |
| 0115201 | HMD115 | 230V | | |
| 0115301 | HMD115 | 230V | | Type I |
| 0115401 | HMD115 | 230V | | No Plug |

- All drills include: carrying case, Slick-Stik™ lubricant, & safety strap.



HOUGEN® PORTABLE MAGNETIC DRILLS

HMD150 LOW PROFILE



Low Profile lightweight right angle drill with large capacity.



Patented



Made in U.S.A.

- Lightweight at only 22.7 lbs (10.3 kg)
- Patented quill feed arbor for smooth cuts and minimal maintenance
- Uses RotaLoc™ & RotaLoc Plus™ cutters which requires no tools for installation or removal
- Positive slug ejection
- High torque gearing
- Lift detector safety system
- Feed handle switches easily from side to side
- Ratchet or wrench can be used in place of feed handle
- Rear mounted controls
- Ergonomic carrying handle
- Carrying case included
- One year warranty

| HMD150 SPECIFICATIONS | | | |
|-----------------------|--|-----------------------------------|--|
| Electrical System | 120V, 50/60 Hz - 9A, 1035W 230V, 50/60 Hz - 4.5A, 1035W | | |
| Motor | 8A (120V), 4A (230V) 450 RPM | | |
| Diameter | 7/16" - 1-3/8" (12mm - 35mm) | | |
| Depth | 1" (25mm) | | |
| Cutter/Mount | RotaLoc™ and RotaLoc Plus™ with push & turn style shank | | |
| Dimensions | 7-13/16" H x 6-1/2" W x 11-11/16" L (198mm H x 165mm W x 297mm L) | | |
| Magnet | Base | 4" W x 7" L (102mm W x 178mm L) | |
| | 1" Plate (25mm) | Dead Lift 2165 lb. (982 kg) | Drillpoint Breakaway 735 lb. (333 kg) |
| | 3/8" Plate (9.5mm) | 1200 lb. (544 kg) | 500 lb. (227 kg) |
| Net Weight | 22.7 lb. (10.3 kg) | | |

Use a ratchet or wrench in tight areas



Includes carrying handle



MODELS & PART NO.

| Part No. | Description | Voltage | CSA | Special Plug |
|----------|-------------|---------|-----|--------------|
| 0150101 | HMD150 | 120V | X | |
| 0150201 | HMD150 | 230V | | |
| 0150301 | HMD150 | 230V | | Type I |
| 0150401 | HMD150 | 230V | | No Plug |

- All drills include: carrying case, carrying handle, Slick-Stik™ lubricant, & safety strap.



HOUGEN® PORTABLE MAGNETIC DRILLS

HMD904

**The drill of choice for fabrication.
Lightweight, compact, powerful, & versatile.**

- Large 1-1/2" x 2" capacity
- Positive slug ejection
- More durable and powerful magnet
- Many accessories are available for a portable machine shop including: drill chucks, tapping, countersink, and more...
- Feed handles quickly change from side to side
- Lift detector safety system
- Rear mounted controls
- Gravity fed coolant system
- Carrying case included
- One year warranty

Optional
Coolant Bottle



 Made in
U.S.A.

Swivel Base adds even greater versatility:

- Precisely line up your pilot with the holes center location
- One stroke lock and unlock handle
- Great for horizontal, overhead, tight areas, and getting out over another piece of steel

MODELS & PART NO.

| Part No. | Description | Voltage | Coolant Bottle | Swivel | Cutter Kit | CSA | Special Plug |
|----------|-------------------------|---------|----------------|--------|------------|-----|--------------|
| 0904101 | HMD904 | 115V | | | | X | |
| 0904102 | HMD904 | 115V | X | | | X | |
| 0904103 | HMD904 | 115V | | X | | | |
| 0904104 | HMD904 | 115V | X | X | | | |
| 0904105 | HMD904 Fabricator's Kit | 115V | X | | 12002 | | |
| 0904108 | HMD904 Fabricator's Kit | 115V | X | | 12004 | | |
| 0904201 | HMD904 | 230V | | | | | |
| 0904202 | HMD904 | 230V | X | | | | |
| 0904203 | HMD904 | 230V | | X | | | |
| 0904204 | HMD904 | 230V | X | X | | | |
| 0904205 | HMD904 Fabricator's Kit | 230V | X | | 12002 | | |
| 0904208 | HMD904 Fabricator's Kit | 230V | X | | 12004 | | |
| 0904301 | HMD904 | 230V | | | | | Type I |
| 0904302 | HMD904 | 230V | X | | | | Type I |
| 0904303 | HMD904 | 230V | | X | | | Type I |
| 0904304 | HMD904 | 230V | X | X | | | Type I |
| 0904401 | HMD904 | 230V | | | | | No Plug |
| 0904402 | HMD904 | 230V | X | | | | No Plug |
| 0904403 | HMD904 | 230V | | X | | | No Plug |
| 0904404 | HMD904 | 230V | X | X | | | No Plug |
| 0904405 | HMD904 Fabricator's Kit | 230V | X | | 12002 | | No Plug |
| 0904408 | HMD904 Fabricator's Kit | 230V | X | | 12004 | | No Plug |

- All drills include: carrying case, pint of coolant, hex wrenches, and safety chain.

- Fabricator's Kit Includes: drill, 10732 Jacobs Chuck, adapter, & Rotabroach Cutter kit.



Optional
Swivel Base
(Patented)



HMD904 SPECIFICATIONS

| | | | |
|--------------------------|---------------------------|---|---|
| Electrical System | | 115V, 50/60 Hz - 9A, 1035W 230V, 50/60 Hz - 4.5A, 1035W | |
| Motor | | 8A (115V), 4A (230V) 450 RPM | |
| Diameter | | 7/16" - 1-1/2" (12mm - 38mm) | |
| Depth | | 2" (50mm) | |
| Cutter/Mount | | Rotabroach®, Copperhead™ and Fusion™ cutters, 3/4" (19mm) shank | |
| Dimensions | | 16-3/8" H x 7-3/16" W x 8-1/4" L (416mm H x 183mm W x 210mm L) | |
| Swivel Area | | 1-1/8" W x 1-3/8" L (28.5mm W x 34.9mm L) | |
| Magnet | Base | 3-1/8" W x 6-9/16" L (79mm W x 167mm L) | |
| | 1" Plate (25mm) | Dead Lift 1750 lb. (794 kg) | Drillpoint Breakaway 995 lb. (433 kg) |
| | 3/8" Plate (9.5mm) | 1310 lb. (594 kg) | 710 lb. (322 kg) |
| Swivel Magnet | 1" Plate (25mm) | Dead Lift 1340 lb. (608 kg) | Drillpoint Breakaway Forward - 695 lb. (315 kg) Back - 835 lb. (379 kg) |
| | 3/8" Plate (9.5mm) | 1015 lb. (460 kg) | Forward - 503 lb. (228 kg) Back - 605 lb. (274 kg) |
| Net Weight | | 27.5 lb. (12.5 kg) | |
| Net Weight (904S) | | 30.5 lb. (13.8 kg) | |

HOUGEN® PORTABLE MAGNETIC DRILLS

HMD925 POWER FEED

Power Feed - Saves time and money with less effort.

- Compact, lightweight, power feed
- Smart technology optimizes feed rate for increased tool life and excellent hole quality
- More durable and powerful magnet
- Swivel base model available
- Single handle to engage power feed system
- Positive slug ejection
- Lift detector safety system
- Side mounted controls
- Gravity fed coolant bottle included
- Many accessories are available (manual mode only)
- Selectable manual/power feed mode
- One year warranty



Patented

Increase your versatility with the swivel base!



MODELS & PART NO.

| Part No. | Description | Voltage | Coolant Bottle | Swivel | CSA | Special Plug |
|----------|-------------|---------|----------------|--------|-----|--------------|
| 0925102 | HMD925 | 115V | X | | X | |
| 0925104 | HMD925 | 115V | X | X | | |
| 0925202 | HMD925 | 230V | X | | | |
| 0925204 | HMD925 | 230V | X | X | | |
| 0925302 | HMD925 | 230V | X | | | Type I |
| 0925304 | HMD925 | 230V | X | X | | Type I |
| 0925402 | HMD925 | 230V | X | | | No Plug |
| 0925404 | HMD925 | 230V | X | X | | No Plug |

- All drills include: pint of coolant, safety chain, & hex wrenches.



HMD925 SPECIFICATIONS

| | | | |
|-------------------|--------------------|---|---|
| Electrical System | | 115V, 50/60 Hz - 9A, 1035W 230V, 50/60 Hz - 4.5A, 1035W | |
| Motor | | 8A (115V), 4A (230V) 450 RPM | |
| Manual Feed | Dia. | 7/16" - 1-1/2" (12mm - 38mm) | |
| | Depth | 2" (50mm) | |
| Power Feed | Dia. | 7/16" - 1-1/4" (12mm - 32mm) | |
| | Depth | 2" (50mm) | |
| Cutter/Mount | | Rotabroach®, Copperhead™ and Fusion™ cutters, 3/4" (19mm) shank | |
| Dimensions | | 17-1/8" H x 10-13/16" W x 11-3/16" L (435mm H x 275mm W x 284mm L) | |
| Swivel Area | | 1-1/8" W x 1-3/8" L (28.5mm W x 34.9mm L) | |
| Magnet | Base | 3-1/8" W x 6-9/16" L (79mm W x 167mm L) | |
| | 1" Plate (25mm) | Dead Lift 1750 lb. (794 kg) | Drillpoint Breakaway 955 lb. (433 kg) |
| | 3/8" Plate (9.5mm) | 1310 lb. (594 kg) | 710 lb. (322 kg) |
| Swivel Magnet | 1" Plate (25mm) | Dead Lift 1340 lb. (608 kg) | Drillpoint Breakaway Forward - 695 lb. (315 kg) Back - 835 lb. (379 kg) |
| | 3/8" Plate (9.5mm) | 1015 lb. (460 kg) | Forward - 503 lb. (228 kg) Back - 605 lb. (274 kg) |
| Net Weight | | 37 lb. (16.8 kg) | |
| Net Weight (925S) | | 40 lb. (18.1 kg) | |

HOUGEN® PORTABLE MAGNETIC DRILLS

HMD914

Powerful workhorse with a large capacity and built in versatility.

- Powerful high torque motor and gears
- Available with or without the swivel base
- Positive slug ejection
- Many accessories are available to turn your drill into a portable machine shop including: drill chucks, tapping, countersink, and more...
- Feed handles quickly change from side to side
- Lift detector safety system
- Rear mounted controls
- Gravity fed coolant bottle included
- Carrying case included
- One year warranty

Swivel Base adds even greater versatility:

- Precisely line up your pilot with the holes center location
- One stroke lock and unlock handle
- Great for horizontal, overhead, tight areas, and getting out over another piece of steel



Patented

Increase your versatility with the swivel base!

MODELS & PART NO.

| Part No. | Description | Voltage | Coolant Bottle | Swivel | Cutter Kit | CSA | Special Plug |
|----------|-------------------------|---------|----------------|--------|------------|-----|--------------|
| 0914102 | HMD914 | 115V | X | | | X | |
| 0914104 | HMD914 | 115V | X | X | | | |
| 0914105 | HMD914 Fabricator's Kit | 115V | X | | 12002 | | |
| 0914108 | HMD914 Fabricator's Kit | 115V | X | | 12004 | | |
| 0914202 | HMD914 | 230V | X | | | | |
| 0914204 | HMD914 | 230V | X | X | | | |
| 0914205 | HMD914 Fabricator's Kit | 230V | X | | 12002 | | |
| 0914208 | HMD914 Fabricator's Kit | 230V | X | | 12004 | | |
| 0914302 | HMD914 | 230V | X | | | | Type I |
| 0914304 | HMD914 | 230V | X | X | | | Type I |
| 0914402 | HMD914 | 230V | X | | | | No Plug |
| 0914404 | HMD914 | 230V | X | X | | | No Plug |
| 0914405 | HMD914 Fabricator's Kit | 230V | X | | 12002 | | No Plug |
| 0914408 | HMD914 Fabricator's Kit | 230V | X | | 12004 | | No Plug |

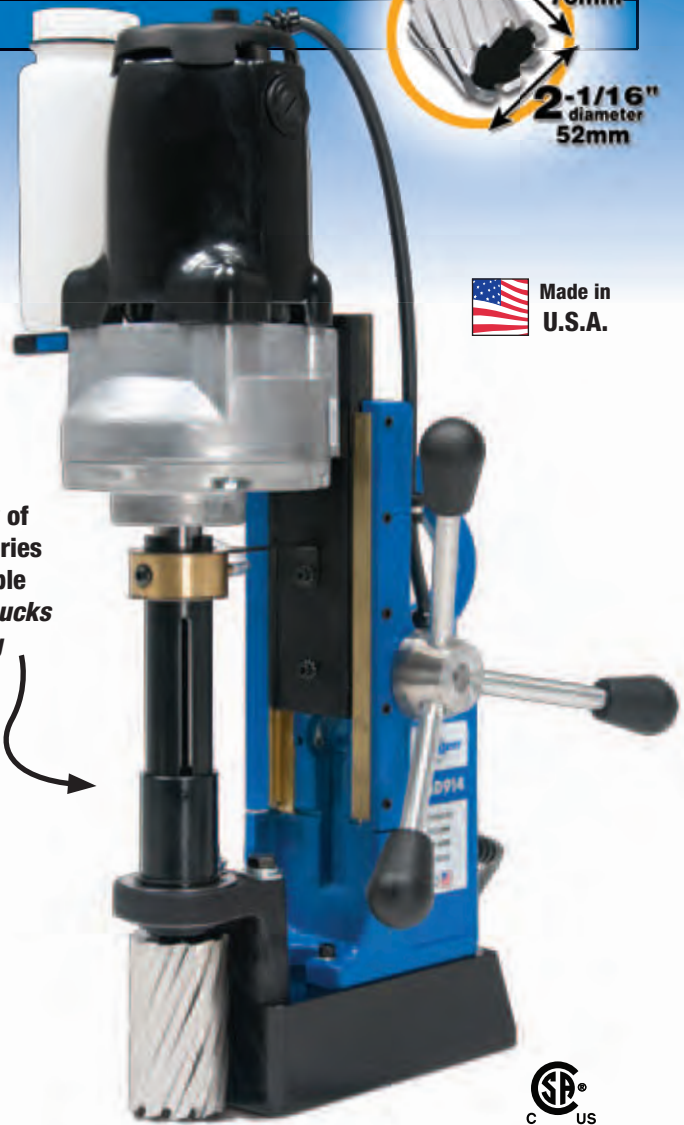
- All drills include: carrying case, pint of coolant, safety chain, & hex wrenches.

- Fabricator's Kit Includes: drill, 10732 Jacobs Chuck, adapter, & Rotabroach Cutter kit.



Made in U.S.A.

Variety of Accessories Available - Drill Chucks - Tapping - & more

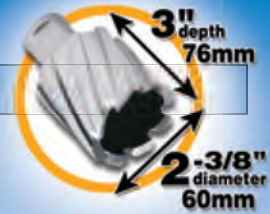


HMD914 SPECIFICATIONS

| | | | |
|-------------------|---|--|---|
| Electrical System | 115V, 50/60 Hz - 12.2A, 1403W 230V, 50/60 Hz - 6.1A, 1403W | | |
| Motor | 11.2A (115V), 5.6A (230V) 350 RPM | | |
| Diameter | 7/16" - 2-1/16" (12mm - 52mm) | | |
| Depth | 3" (76mm) | | |
| Cutter/Mount | Rotabroach®, Copperhead™ and Fusion™ cutters, 3/4" (19mm) shank | | |
| Dimensions | 23" H x 7-1/2" W x 12-1/4" L (584mm H x 191mm W x 311mm L) | | |
| Swivel Area | 1-1/8" W x 1-3/8" L (28.5mm W x 34.9mm L) | | |
| Magnet | Base | 3-1/2" W x 7-3/4" L (89mm W x 197mm L) | |
| | 1" Plate (25mm) | Dead Lift 2230 lb. (1012 kg) | Drillpoint Breakaway 1180 lb. (535 kg) |
| | 3/8" Plate (9.5mm) | 1245 lb. (565 kg) | 795 lb. (361 kg) |
| Swivel Magnet | 1" Plate (25mm) | Dead Lift 2330 lb. (1057 kg) | Drillpoint Breakaway For. - 980 lb. (445 kg) Back - 1145 lb. (519 kg) |
| | 3/8" Plate (9.5mm) | 1360 lb. (617 kg) | For. - 680 lb. (308 kg) Back - 815 lb. (370 kg) |
| Net Weight | 41 lb (18.6 kg) | | |
| Net Weight (914S) | 45 lb. (20.4 kg) | | |

HOUGEN® PORTABLE MAGNETIC DRILLS

HMD505 & HMD508



Patented



Made in U.S.A.

A rugged, high powered drill for fabrication and high production environments.

- Two speed gear box - 250 & 450 RPM (HMD505) or higher speed 450 & 750 RPM (HMD508)
- Positive slug ejection
- Patented quill feed arbor for smooth cuts and minimal maintenance
- Two stage magnet. Engages full power when motor is turned on
- Feed handles quickly change from side to side
- Lift detector safety system
- Rear mounted controls
- Coolant bottle included
- Optional pressurized coolant system available
- With coolant bottle and carrying handle removed, drill becomes only 15" (381mm) high
- Carrying case included
- One year warranty

MODELS & PART NO.

| Part No. | Description | Voltage | RPM | Coolant Bottle | Special Plug |
|----------|-------------|---------|---------|----------------|--------------|
| 0505102 | HMD505 | 115V | 250/450 | X | |
| 0505202 | HMD505 | 230V | 250/450 | X | |
| 0505302 | HMD505 | 230V | 250/450 | X | Type I |
| 0505402 | HMD505 | 230V | 250/450 | X | No Plug |
| 0508102 | HMD508 | 115V | 450/750 | X | |
| 0508202 | HMD508 | 230V | 450/750 | X | |
| 0508302 | HMD508 | 230V | 450/750 | X | Type I |
| 0508402 | HMD508 | 230V | 450/750 | X | No Plug |

- All drills include: carrying case, pint of coolant, hex wrenches, & safety chain.

Quill Feed Arbor for smooth cuts



Two speed gear box for increased tool life



HMD505 & HMD508 SPECIFICATIONS

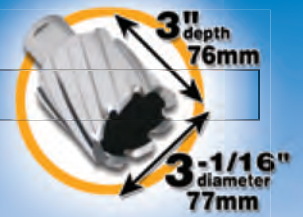
| | | | |
|--------------------------|---------------------------|---|---|
| Electrical System | | 115V, 50/60 Hz - 15A, 1725W 230V, 50/60 Hz - 7.5A, 1725W | |
| Motor | | 14A (115V), 7A (230V) 250/450 RPM or 450/750 RPM | |
| Diameter | | 7/16" - 2-3/8" (12mm - 60mm) | |
| Depth | | 3" (76mm) | |
| Cutter/Mount | | Rotabroach®, Copperhead™ and Fusion™ cutters, 3/4" (19mm) shank | |
| Dimensions | | 20" H x 4-3/4" W x 10-3/4" L (508mm H x 121mm W x 273mm L) | |
| Magnet | Base | 4" W x 8" L (102mm W x 203mm L) | |
| | 1" Plate (25mm) | Dead Lift 2560 lb. (1161 kg) | Drillpoint Breakaway 1080 lb. (490 kg) |
| | 3/8" Plate (9.5mm) | 1550 lb. (703 kg) | 820 lb. (372 kg) |
| Net Weight | | 45 lb. (20.4 kg) | |

Optional pressurized coolant system increases productivity. Part No. 24140



HOUGEN® PORTABLE MAGNETIC DRILLS

HMD915



Power for large deep holes with multi-speed gear box.

- Interchangeable gears for up to five speeds
- Uses Rotabroach "42/43,000-Series" Cutters
- Can use "12,000-Series" Cutters with included adapter 40040 (02386 optional adapter)
- Positive slug ejection
- Feed handles quickly change from side to side
- Coolant bottle included
- More holding power with impactor points
- Lift detector safety system
- Chip breaker
- Minimal maintenance requirements
- One year warranty

OPTIONAL GEARING AVAILABLE FOR THE FOLLOWING CUTTER RPM

| Cutter RPM | Part No. (Number Teeth Per Gear) | |
|------------|----------------------------------|------------|
| | Shaft A | Shaft B |
| 100 | 40011 (16) | 40017 (32) |
| 120 | 40012 (18) | 40016 (30) |
| 200 | 40014 (24) | 40014 (24) |
| 332 | 40016 (30) | 40012 (18) |
| 400 | 40017 (32) | 40011 (16) |

MODELS & PART NO.

| Part No. | Description | Voltage | Special Plug |
|----------|-------------|---------|--------------|
| 0915102 | HMD915 | 120V | |
| 0915202 | HMD915 | 230V | |
| 0915302 | HMD915 | 230V | Type I |
| 0915402 | HMD915 | 230V | No Plug |

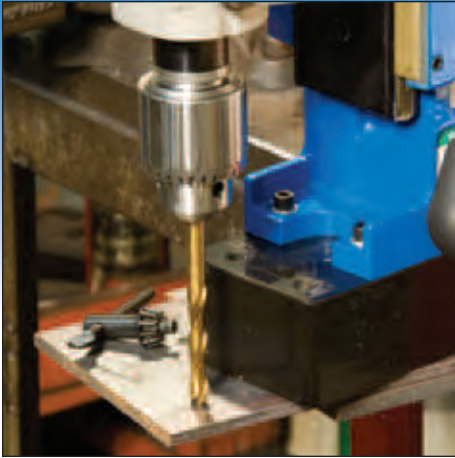
- All drills include: pint of coolant, hex wrenches, adapter for "12,000-Series" cutters, handle & safety chain.



HMD915 SPECIFICATIONS

| | | | |
|-------------------|--|---------------------------------|---|
| Electrical System | 120V, 50/60 Hz - 11A, 1265W 230V, 50/60 Hz - 5.5A, 1265W | | |
| Motor | 10A (120V), 5A (230V) 120/332 RPM (Included) | | |
| Diameter | 3/4" - 3-1/16" (19mm - 77mm) | | |
| Depth | 3" (76mm) | | |
| Cutter/Mount | Rotabroach® "42/43,000-Series" 1-1/4" shank | | |
| Dimensions | 26-1/4" H x 10" W x 17-3/4" L (667mm H x 254mm W x 451mm L) | | |
| Magnet | Base | 5" W x 7" L (127mm W x 178mm L) | |
| | 1" Plate (25mm) | Dead Lift 2565 lb. (1163 kg) | Drillpoint Breakaway 1390 lb. (631 kg) |
| | 3/8" Plate (9.5mm) | 1080 lb. (490 kg) | 470 lb. (213 kg) |
| Net Weight | 69 lb. (31.3 kg) | | |

HOUGEN® MAGNETIC DRILL ACCESSORIES



| DRILL CHUCKS | |
|--------------|--|
| Part No. | Description |
| 10731 | 1/2" Low Buck Chuck with Key (HMD904, HMD914 & HMD925) |
| 10737 | 5/8" Low Buck Chuck with Key (HMD914) |
| 10732 | 1/2" Jacobs® Chuck with Key (HMD904, HMD914 & HMD925) |
| 10738 | 5/8" Jacobs® Chuck with Key (HMD914) |

For models HMD904/HMD925 1/2" Chuck requires 05536 Hex Spindle Adapter (01829 adapter for old style threaded motor spindles). Model HMD914 requires Spindle Adapter 40341 for either chuck size.



| TWIST DRILL ADAPTER KIT | |
|-------------------------|-------------------------|
| Part No. | Description |
| 02608 | Twist Drill Adapter |
| 03835 | 1/2" Twist Drill Bit |
| 03837 | 7/16" Twist Drill Bit |
| 03839 | 3/8" Twist Drill Bit |
| 03841 | 5/16" Twist Drill Bit |
| 03843 | 1/4" Twist Drill Bit |
| 03845 | Twist Drill Adapter Kit |

Adapter accepts a modified 118° twist drill with a 1/4" flatted shank that secures in adapter with a set screw.



| 82° CARBIDE-INSERT COUNTERSINK KIT | |
|------------------------------------|---|
| Part No. | Description |
| 12965 | (1) 82° Countersink (double fluted) with carbide inserts, (4) Pilots - 9/16, 11/16, 13/16, 15/16", plus a Torx Wrench |
| 12960 | 9/16" Pilot |
| 12961 | 11/16" Pilot |
| 12962 | 13/16" Pilot |
| 12963 | 15/16" Pilot |
| 12966 | Countersink Ass'y w/Carbide Inserts |
| 05465 | Replacement Torx Wrench |
| 05467 | Carbide Inserts (10 pieces) |
| 05779 | Carbide Inserts 4215 Wear Resistant (10 pieces) |

Countersink provides 82° chamfers on holes quickly and easily. Two types of carbide inserts are available depending upon material hardness.



| TAPPING ATTACHMENT KITS | |
|-------------------------|--|
| Part No. | Description |
| 02463 | For use with HMD904. Order Collets separately (Threaded Drive) |
| 05457 | For use with HMD904. Order Collets separately (Hex Drive-Includes 07339 adapter) |
| Collets: | 02495 for #6 thru 1/4" tap 02496 for 1/4" thru 1/2" tap |
| 10937 | For use with HMD914. Order Collets separately |
| Collets: | 10807 for #10 thru 1/2" tap 10808 for 1/2" thru 3/4" tap* |

Incorporates a planetary gear reverse with a 1:1 ratio. Reversing speed is equal to spindle speed so in-feed and out-feed of the unit can be employed without reversing motor direction.

*** The tapping unit will tap a 3/4-16 UNF but will not tap a 3/4-10 or larger.**

HOUGEN® MAGNETIC DRILL ACCESSORIES



PIPE ADAPTER KIT

| Part No. | Description |
|----------|---|
| 02564* | Chain Mount for use with HMD904, HMD914, HMD505/508 |
| 10726 | Bracket Mount for use with HMD915 |

These kits let you drill pipe and tubing with a minimum 3" (76mm) diameter and some convex surfaces. Kits quickly attach to your Hougén® Magnetic Drill and positive non-slip positioning assures centered hole location.

*Minimum 3" dia. schedule 160, maximum 12" dia. schedule 160.



SPINDLE ADAPTERS

| Part No. | Description |
|----------|---|
| 01829 | HMD904 Chuck Adapter (Old Style Threaded) (not shown) |
| 02386 | HMD915 3/4" Shank Adapter |
| 05536 | HMD904 & HMD925 Chuck Adapter (Hex Drive) |
| 07339 | HMD904 & HMD925 Tapping Adapter (Hex Drive) (not shown) |
| 10851 | 1/2" Shank Adapter (not shown) |
| 40040 | HMD915 3/4" Weldon Adapter (not shown) |
| 40226 | HMD914 Tap Adapter |
| 40341 | HMD914 Chuck Adapter |

Spindle adapters are required for some Hougén mag drill accessories.



VAC-PAD™

| Part No. | Description |
|----------|------------------------|
| 05000 | Vacuum Base Attachment |

Vac-Pad™ works with the HMD904 on non-ferrous materials, diamond plate and materials with surface imperfections up to 3mm deep. Standard shop air provides 761 lbf surface holding power at 85 kpa. Safety switch shuts off drill motor if air pressure drops.



ALTERNATIVE COOLANT SYSTEMS

| Part No. | Description |
|----------|---|
| 05087 | 16 oz. gravity feed bottle & kit for use with HMD904 (Threaded Drive) |
| 05548 | 16 oz. gravity feed bottle & kit for use with HMD904 (Hex Drive) |
| 24140 | 2 gal. pressurized bottle for use with HMD505 & HMD508 |

These coolant systems offer an optional solution to the base drill unit system. The pressurized coolant system for the HMD505/508 is used for production applications or when gravity feed coolant is not applicable. The gravity feed bottle is an external add-on accessory for the HMD904.

HOUGEN® MAGNETIC DRILL ACCESSORIES

ARBOR EXTENDERS

| Part No. | Description |
|----------|----------------------------|
| 10100 | 1" Arbor Extender Assembly |
| 10200 | 2" Arbor Extender Assembly |

When extended reach is necessary, Hougén offers 1" (25mm) and 2" (50mm) Arbor Extenders with a 1.310" (33.3mm) outside diameter that fit arbors using Rotabroach® "12,000-Series" Cutters. Contact Hougén's Customer Service Department for more information about how the Arbor Extenders may help in your application.

ROTALOC™ SPINDLE ADAPTER

| Part No. | Description |
|----------|--------------------------|
| 17680 | RotaLoc Adapter Assembly |
| 04778 | Replacement Adapter |
| 04780 | Replacement Pilot |

With the RotaLoc™ Spindle Adapter you can take advantage of the fast change out of RotaLoc™ or RotaLoc Plus™ Annular Cutters in virtually all Hougén® Portable Magnetic Drills or any other drill that also accepts Rotabroach® "12,000-Series" Cutters.

CARRYING/STORAGE CASES

| Part No. | Description |
|----------|--|
| 10725 | Optional metal case for Models HMD914/HMD925 |
| 17481 | HMD150 replacement case |
| 04550 | HMD904 replacement case |
| 04679 | HMD505 replacement case |
| 07258 | HMD914 replacement case |
| 07389 | HMD115 replacement case |

Replace your lost or damaged carrying case to store and protect your Hougén magnetic drill.

RATCHET DRIVES

| Part No. | Description |
|----------|--|
| 02449 | For use with Model HMD904 |
| 24154 | For use with Models HMD505 & HMD508 (requires 1" socket) |

With the feed handles removed the Ratchet Drive is easily installed, allowing use of a standard ratchet handle for drilling in confined areas. Ratchet Drive may be operated from either side of drill. *(Ratchet not included)*

DRILL HANDLE

| Part No. | Description |
|----------|-----------------------------|
| 07021 | Handle to fit Hougén Motors |

Convenient handle helps you to carry and/or move your drill around. Fits HMD115, HMD150, HMD904's, & HMD925's.

SWIVEL BASE UPGRADE KIT

| Part No. | Description |
|----------|--|
| 05757 | Swivel Base Upgrade Kit - 10904/HMD904/HMD925 (115V) |
| 05968 | Swivel Base Upgrade Kit for HMD904/HMD925/HMD908/HMD928 - (230V) |
| 07042 | Swivel Base Upgrade Kit for HMD914 (115V) (New style housing only) |
| 07043 | Swivel Base Upgrade Kit for HMD914 (230V) (New style housing only) |

Upgrade your current drill to gain the benefits of the swivel base. Swivel base has 1-3/8" (34.9mm) forward and 1-1/8" (28.5mm) side to side movement. Upgrade limits your depth of cut to 1-1/4" (32mm) for 10904, HMD904 & HMD925 machines. Upgrade limits your depth of cut to 2-1/4" (57mm) for HMD914 machines.

LUBRICANT & CUTTING FLUID



NEW!

RotaFoam™ Cutting Fluid works on all types of metals to extend tool life and improve hole finish. Blue foamy lubricant visually assures thorough coverage.

| Part No. | Description |
|----------|--|
| 11747 | 17 oz. (482g) RotaFoam™ Lubricant Single Can |
| 11747-12 | (12) 17 oz. (482g) RotaFoam™ Lubricant |

Slick-Stik™ is softer than other stick lubricants for easy application, superior adhesion to the tool, assuring thorough coverage. Specially formulated for use with Rotabroach Cutters. (Non-Toxic)



| Part No. | Description |
|----------|--|
| 11746-12 | (12) 1.68 oz. (48g) Slick-Stik™ Lubricant |
| 11746-24 | (24) 1.68 oz. (48g) Slick-Stik™ Lubricant in display box |
| 11745-6 | (6) 16 oz. (454g) Slick-Stik™ Lubricant |



Use with ferrous or non-ferrous materials. RotaMagic™ Concentrated Cutting Fluid is water soluble and yields a 10:1 ratio when mixed with water. (Biodegradable & Non-Toxic)

| Part No. | Description |
|----------|--|
| 11741-12 | (12) 1 Pint (.47L) Bottles - makes 1 pint each, 12 pints total |
| 11742-4 | (4) 1 Gallon (3.8L) Bottles - makes 11 gallons (41.6L) each, 44 gallons (167.6L) total |
| 11743 | (1) 5 Gallon Pail (18.9L) - makes 55 gallons (208L) total |

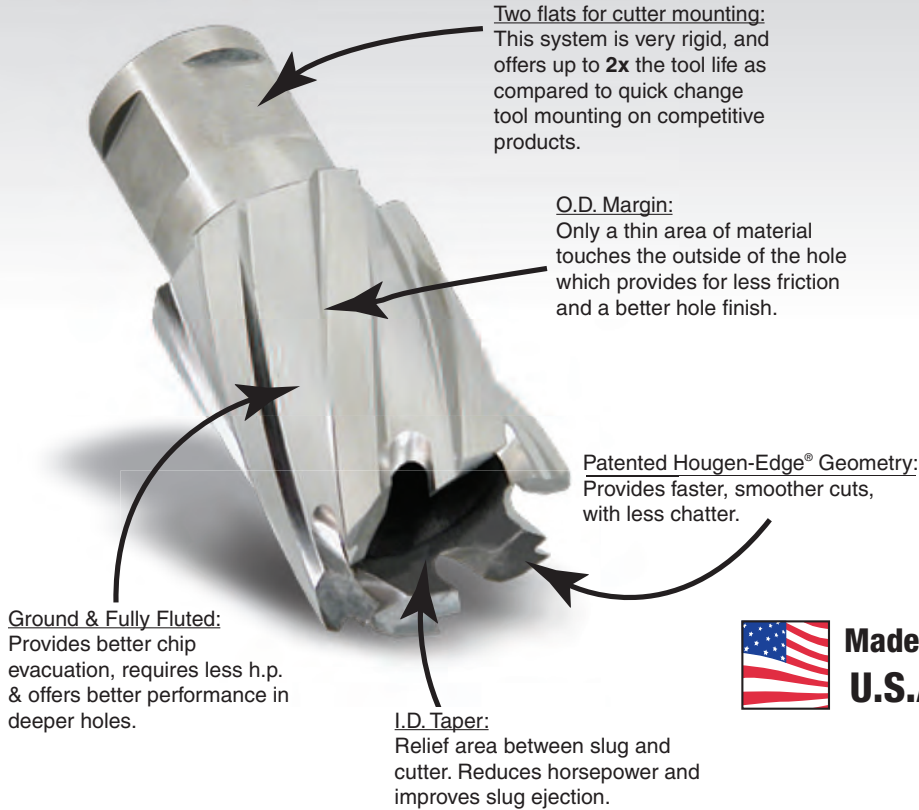


Slick Stik™ and RotaMagic™ are environmentally friendly and do not contain harmful ingredients as do many lubricants.

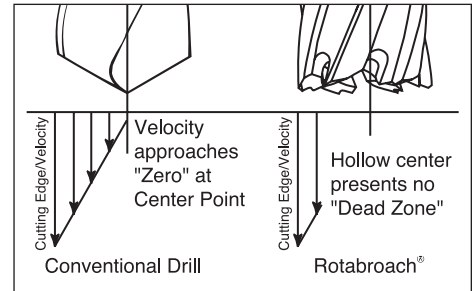
HOUGEN® CUTTER COMPARISON CHART

|  | |  |  |  |  |  |  |  |  |  |
|--|---|---|---|---|--|---|---|---|---|---|
| Tool Series: | Rotacut™ | Extended Reach | Holcutter™ | Carbide Holcutter™ | Rotaloc™ | Rotaloc Plus™ | Rotabroach® | Copperhead™ | "42/43,000" | |
| Diameter Range Min. / Max. | 1/4" to 1-1/2" (6mm - 25mm) | 3/8" to 9/16" (6.4mm) | 1/16" to 3" (3.2mm) | 1/16" to 3" (3.2mm) | 1/2" to 1-1/16" (12mm - 27mm) | 7/16" to 1-3/8" (12mm - 35mm) | 7/16" to 2-3/8" (12mm - 52mm) | 9/16" to 2" (14mm - 50mm) | 3/4" to 3-1/16" | |
| Max. Depth of Cut | 1/4" to 1/2" (6.4mm - 12.7mm) | 1/4" (6.4mm) | 1/8" (3.2mm) | 1/8" (3.2mm) | 3/4" - (19mm) Stack Geometry | 1" - (25mm) | 1", 2", or 3" (25mm to 76mm) | 2", 3" or 4" (50, 76 or 102mm) | 2" or 3" (50mm or 76mm) | |
| Mounting | 3/8" or 1/2" Triple Flat Shank | 3/8" Triple Flat Shank | 3/8" Triple Flat Shank | 3/8" or 1/2" Triple Flat Shank | Bayonet Style | Bayonet Style | 3/4" Double Flat Shank | 3/4" Double Flat or Fusion™ Shank | 3/4" Weldon or 1-1/4" Weldon | |
| Cutter Material(s) Available | M2 HSS | M2 HSS | M2 HSS | Carbide Tip | M42 HSS | M2 HSS | M2 HSS, M2 TIN Coat, or M42 TIN | Carbide Tip | M2 HSS or M2 TIN Coat | |
| Can be Resharpened | ===== Disposable ===== | | | | | | | | | |
| Available Grind Down (Within Limits) |  | | | |  |  |  | |  | |
| Max. Application Hardness Rating | 275 BHN (28.5 HRC) | 275 BHN (28.5 HRC) | 275 BHN (28.5 HRC) | 450 BHN (47.2 HRC) | 350 BHN (37.7 HRC) | 275 BHN (28.5 HRC) | 275 BHN (28.5 HRC) | 450 BHN (47.2 HRC) | 275 BHN (28.5 HRC) | |
| Recommended Lubrication | Slick-Stik™ | Slick-Stik™ | Slick-Stik™ | Slick-Stik™ | Slick-Stik™ | Slick-Stik™ | Rotamagic™ | Rotamagic™ | Rotamagic™ | |
| Aluminum | ===== High RPM & Fast Feed Rates Suggested ===== | | | | | | | | | |
| Mild Steel |  |  |  |  |  |  |  |  |  | |
| Harder Steel | | Good | |  | Better | Good | Standard - Good TIN - Better |  | Standard - Good TIN - Better | |
| Stainless Steel | Good | | Recommend Speed Reducer |  | Good | | TIN Coat or Premium Recommended |  | TIN Coat Recommended | |

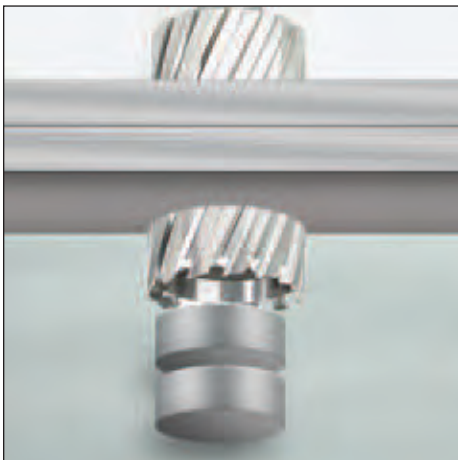
HOUGEN® ROTABROACH® CUTTERS - SIMPLY THE BEST



Rotabroach® cutters were the original annular cutters invented over 35 years ago. With the most features of any annular cutter, Rotabroach cutters provide the best performance in the largest variety of materials. Compared to traditional tooling (twist drills, etc.) Rotabroach cutters can multiply your cutting speed by up to 3 times. And you get longer tool life, a more accurate hole, a better finish, with no burrs. Rotabroach cutters maximize feed rates because up to 10 cutting edges distribute the cutting load evenly. Rotabroach cutters convert a smaller area to chips, requiring less horsepower and thrust. The Hougen-Edge® feature is a patented tooth geometry that provides long tool life, less chatter, and extended resharpenability. The slug also offers a higher scrap value than loose chips.



Why use Stack-Cut Geometry?



Rotabroach® Annular Cutters with a Stack-Cut tooth geometry must be used whenever two or more plates are being drilled simultaneously. When drilling multiple pieces with traditional cutters, after the first piece is drilled, you need to stop and remove the slug before continuing on thru the second piece. Not a problem with stack cutters. Drill straight thru without stopping.

Many sizes of "12,000-Series" cutters are available from stock with stack cut geometry. All sizes are available by special request with stack-cut geometry.

Stack-Cut* and Flat Bottom Grooving Tooth Geometry is available on the following Series of Cutters:

- "12,000-Series"
- "42/43,000-Series"
- "22/23,000-Series"
- RotaLoc Plus™

Hougen's Technical Service Department should be contacted whenever special tooth geometry and applications will be necessary.

**NOTE: Stack-Cut geometry is a standard feature of RotaLoc™ Cutters.*

Carbide Cutters



Copperhead™ Carbide tipped cutters are premium tools with unique Hougen features. Designed for harder, rough, rusted, or more abrasive materials, but offer excellent performance in mild and structural steel applications.

These cutters feature a full length flute to pull chips out when deep in the hole. A thinner cutter wall improves cutting speed, while special Hougen tooth geometry optimizes cutter life and hole finish. Plus they now are available with two different shanks: the standard two flat 3/4" shank and the Fusion style shank that fits Hougen mag drills and competitive tool-less arbors.

Special Holemaking Solutions

Hougen can solve your holemaking problems with creative solutions to help you get the job done, complete it faster and at a lower cost. We have helped thousands of customers with unique holemaking solutions. Give us a call or send us an email with your holemaking challenge.



ROTABROACH® "12,000-SERIES" ANNULAR CUTTERS

For use with Hougen® Portable Magnetic Drills and many competitive models on materials up to 275 BHN (28.5 HRC). They are made of hardened M2 high speed steel and are precision ground for excellent performance throughout the cut and long tool life. They require less horsepower and thrust to cut, and last much longer than traditional holemaking methods. Rotabroach® cutters feature a 3/4" diameter double-flatted shank and are available in 1, 2, and 3" D.O.C. Modified end tooth geometry is also available for drilling in stacked plate applications. For extended tool life and lower cost per hole Rotabroach® Cutters are resharpenable.



- New Pilot System -

Please Note there has been a Change in the Pilot System for the "12,000-Series" Cutters. Sizes 11/16" (18mm) and smaller may use a different pilot now.



| Cutter Dia. (Inches) | Decimal Equivalent | Part No. | | |
|----------------------|--------------------|-----------|-----------|-----------|
| | | 1" D.O.C. | 2" D.O.C. | 3" D.O.C. |
| Use with Pilot | | 10531 | 10532 | |
| 7/16 | .4375 | 12114* | 12214* | ---- |
| 1/2 | .5000 | 12116* | 12216* | ---- |
| 9/16 | .5625 | 12118* | 12218* | ---- |
| Use with Pilot | | 10527 | 10528 | 24131 |
| 5/8 | .6250 | 12120* | 12220* | ---- |
| 11/16 | .6875 | 12122* | 12222* | ---- |
| 3/4 | .7500 | 12124* | 12224* | 3-12224* |
| 13/16 | .8125 | 12126* | 12226* | 3-12226* |
| 7/8 | .8750 | 12128* | 12228* | 3-12228* |
| 15/16 | .9375 | 12130* | 12230* | 3-12230* |
| 1 | 1.0000 | 12132* | 12232* | 3-12232* |
| 1-1/16 | 1.0625 | 12134* | 12234* | 3-12234* |
| 1-1/8 | 1.1250 | 12136* | 12236* | 3-12236* |
| 1-3/16 | 1.1875 | 12138 | 12238* | 3-12238* |
| 1-1/4 | 1.2500 | 12140 | 12240* | 3-12240* |
| 1-5/16 | 1.3125 | 12142 | 12242* | 3-12242 |
| 1-3/8 | 1.3750 | 12144 | 12244* | 3-12244* |
| 1-7/16 | 1.4375 | 12146 | 12246* | 3-12246 |
| 1-1/2 | 1.5000 | 12148* | 12248* | 3-12248 |
| 1-9/16 | 1.5625 | 12150 | 12250* | 3-12250 |
| 1-5/8 | 1.6250 | 12152 | 12252 | 3-12252 |
| 1-11/16 | 1.6875 | 12154 | 12254 | 3-12254 |
| 1-3/4 | 1.7500 | 12156 | 12256 | 3-12256 |
| 1-13/16 | 1.8125 | 12158 | 12258 | 3-12258 |
| 1-7/8 | 1.8750 | 12160 | 12260 | 3-12260 |
| 1-15/16 | 1.9375 | 12162 | 12262 | 3-12262 |
| 2 | 2.0000 | 12164* | 12264* | 3-12264 |
| 2-1/16 | 2.0625 | ---- | 12266* | 3-12266 |
| 2-1/8 | 2.1250 | ---- | 12268 | 3-12268 |
| 2-3/16 | 2.1875 | ---- | 12270 | 3-12270 |
| 2-1/4 | 2.2500 | ---- | 12272 | 3-12272 |
| 2-5/16 | 2.3125 | ---- | 12274 | 3-12274 |
| 2-3/8 | 2.3750 | ---- | 12276 | 3-12276 |

| Cutter Dia. (Metric) | Decimal Equivalent | Part No. | | |
|----------------------|--------------------|-------------|-------------|-------------|
| | | 25mm D.O.C. | 50mm D.O.C. | 76mm D.O.C. |
| Use with Pilot | | 10531 | 10532 | |
| 12mm | .4724 | 12312 | 12412 | ---- |
| 13mm | .5118 | 12313 | 12413 | ---- |
| 14mm | .5512 | 12314 | 12414 | ---- |
| 15mm | .5906 | 12315 | 12415 | ---- |
| Use with Pilot | | 10527 | 10528 | 24131 |
| 16mm | .6299 | 12316 | 12416 | ---- |
| 17mm | .6693 | 12317 | 12417 | ---- |
| 18mm | .7087 | 12318 | 12418 | ---- |
| 19mm | .7480 | 12319 | 12419 | 12519 |
| 20mm | .7874 | 12320 | 12420 | 12520 |
| 21mm | .8268 | 12321 | 12421 | 12521 |
| 22mm | .8661 | 12322 | 12422 | 12522 |
| 23mm | .9055 | 12323 | 12423 | 12523 |
| 24mm | .9449 | 12324 | 12424 | 12524 |
| 25mm | .9843 | 12325 | 12425 | 12525 |
| 26mm | 1.0236 | 12326 | 12426 | 12526 |
| 27mm | 1.0630 | 12327 | 12427 | 12527 |
| 28mm | 1.1024 | 12328 | 12428 | 12528 |
| 29mm | 1.1417 | 12329 | 12429 | 12529 |
| 30mm | 1.1811 | 12330 | 12430 | 12530 |
| 31mm | 1.2205 | 12331 | 12431 | 12531 |
| 32mm | 1.2598 | 12332 | 12432 | 12532 |
| 33mm | 1.2992 | 12333 | 12433 | 12533 |
| 34mm | 1.3386 | 12334 | 12434 | 12534 |
| 35mm | 1.3779 | 12335 | 12435 | 12535 |
| 36mm | 1.4173 | 12336 | 12436 | 12536 |
| 37mm | 1.4567 | 12337 | 12437 | 12537 |
| 38mm | 1.4961 | 12338 | 12438 | 12538 |
| 39mm | 1.5354 | 12339 | 12439 | 12539 |
| 40mm | 1.5743 | 12340 | 12440 | 12540 |
| 41mm | 1.6142 | 12341 | 12441 | 12541 |
| 42mm | 1.6535 | 12342 | 12442 | 12542 |
| 43mm | 1.6929 | 12343 | 12443 | 12543 |
| 44mm | 1.7323 | 12344 | 12444 | 12544 |
| 45mm | 1.7717 | 12345 | 12445 | 12545 |
| 46mm | 1.8110 | 12346 | 12446 | 12546 |
| 47mm | 1.8504 | 12347 | 12447 | 12547 |
| 48mm | 1.8898 | 12348 | 12448 | 12548 |
| 49mm | 1.9291 | 12349 | 12449 | 12549 |
| 50mm | 1.9685 | 12350 | 12450 | 12550 |
| 51mm | 2.0079 | 12351 | 12451 | 12551 |
| 52mm | 2.0472 | 12352 | 12452 | 12552 |

Rotabroach®

* Indicates **stack geometry** is available as a stock item.
To order: add 'S' to end of part no. i.e...12226S. Other sizes available with stack geometry upon request (General lead time is 7-10 days).

ROTABROACH® CUTTER KITS



A group of nine Rotabroach® cutter kits are conveniently packaged with the most popular diameters in protective cases for easy transporting and safe storage. Choose from fractional or metric diameters, in 1" or 2" depth of cut. Each kit includes hex wrenches and 2 pilots.

| Part No. | Mat'l / Coating | D.O.C. | Diameters Included |
|----------|-----------------|--------|------------------------------------|
| 12001 | M2 HSS | 1" | 9/16, 11/16, 13/16, 15/16, 1-1/16" |
| 12002 | M2 HSS | 2" | 9/16, 11/16, 13/16, 15/16, 1-1/16" |
| 12003 | M2 HSS | 25mm | 14mm, 16mm, 18mm, 20mm, 22mm |
| 12004 | M2 HSS | 50mm | 14mm, 16mm, 18mm, 20mm, 22mm |
| 12005 | M2 HSS | 1" | 5/8, 3/4, 7/8, 1, 1-1/8" |
| 12006 | M2 HSS | 2" | 5/8, 3/4, 7/8, 1, 1-1/8" |
| 12007 | M2 HSS | 2" | 7/16, 17/32, 21/32, 25/32, 7/8" |
| 12601 | M2 / TiN | 1" | 9/16, 11/16, 13/16, 15/16, 1-1/16" |
| 12702 | M2 / TiN | 2" | 9/16, 11/16, 13/16, 15/16, 1-1/16" |

"12,000-SERIES" TAP DRILL SIZES

A clean, accurate hole helps to make tapping an easier task. You can achieve that task easily with these tap drill size Rotabroach® Cutters. Kit #12007 contains five popular sizes of tap drills.



| Cutter Dia. (Inches) | Decimal Equivalent | Thread | Part No. | |
|----------------------|--------------------|------------|-----------|-----------|
| | | | 1" D.O.C. | 2" D.O.C. |
| Use with Pilot | | | 10531 | 10532 |
| 7/16 | .4375 | 1/2-13 | 12114 | 12214 |
| 29/64 | .4531 | 1/2-20 | ---- | 12010 |
| 31/64 | .4844 | 9/16-12 | ---- | 12011 |
| 33/64 | .5156 | 9/16-18 | ---- | 12012 |
| 17/32 | .5313 | 5/8-11 | 12117 | 12217 |
| 37/64 | .5781 | 5/8-18 | ---- | 12014 |
| 19/32 | .5938 | 11/16-11 | ---- | 12219 |
| Use with Pilot | | | 10527 | 10528 |
| 21/32 | .6563 | 3/4-10 | 12121 | 12221 |
| 11/16 | .6875 | 3/4-16 | 12122 | 12222 |
| 23/32 | .7188 | 1/2-14 NPT | ---- | 12223 |
| 49/64 | .7656 | 7/8-9 | ---- | 12020 |
| 25/32 | .7812 | 7/8-9 | 12125 | 12225 |
| 13/16 | .8125 | 7/8-14 | 12126 | 12226 |
| 7/8 | .8750 | 1-8 | 12128 | 12228 |
| 59/64 | .9219 | 1-12 | ---- | 12025 |

EXTENDED REACH CUTTERS

Choose this select series of cutters to give you extra reach in deep hole drilling applications. Each cutter features the same cutting geometry and action as the standard depth Rotabroach® cutters, but in the extended 4" and 6" depth of cut. Also available with stack-cut geometry.



| Cutter Dia. (Inches) | Decimal Equivalent | Part No. | |
|----------------------|--------------------|-------------------|-------------------|
| | | 4" (102mm) D.O.C. | 6" (152mm) D.O.C. |
| Use with Pilot | | 4-10528 | 6-10528 |
| 13/16 | .8125 | 4-12226* | 6-12226 |
| 15/16 | .9375 | 4-12230* | 6-12230 |
| 1-1/16 | 1.0625 | 4-12234* | 6-12234 |
| 1-3/16 | 1.1875 | 4-12238 | 6-12238 |

PILOTS - "12,000-SERIES"

The pilot serves three functions when used with Rotabroach® cutters in a portable magnetic drill; 1) Locate the holes center point, 2) Initiate coolant flow to the center of the tool, 3) Eject the slug at the end of the cut. Always use a sharp pilot for best results.

| Part No. | Description |
|--|---|
| 10527 | 1" D.O.C. Pilot (5/8" - 2-3/8" & 16mm - 52mm) |
| 10528 | 2" D.O.C. Pilot (5/8" - 2-3/8" & 16mm - 52mm) |
| 10531 | 1" D.O.C. Pilot (7/16 - 9/16" & 12 - 15mm) |
| 10532 | 2" D.O.C. Pilot (7/16 - 9/16" & 12 - 15mm) |
| 24131 | 3" D.O.C. Pilot (3/4" - 2-3/8" & 19mm - 52mm) |
| 4-10528 | 4" Pilot for Extended Reach "12,000-Series" |
| 6-10528 | 6" Pilot for Extended Reach "12,000-Series" |
| Pilots for Old Style Rotabroach® Cutters | |
| 10533 | 1" D.O.C. Pilot (1/2" - 11/16" & 13mm - 18mm) |
| 10534 | 2" D.O.C. Pilot (1/2" - 11/16" & 13mm - 18mm) |

HOLE ENLARGING PILOTS - "12,000-SERIES"

Take an existing hole and make it larger using Hougens' Hole Enlarging Pilots. Available in three select sizes.



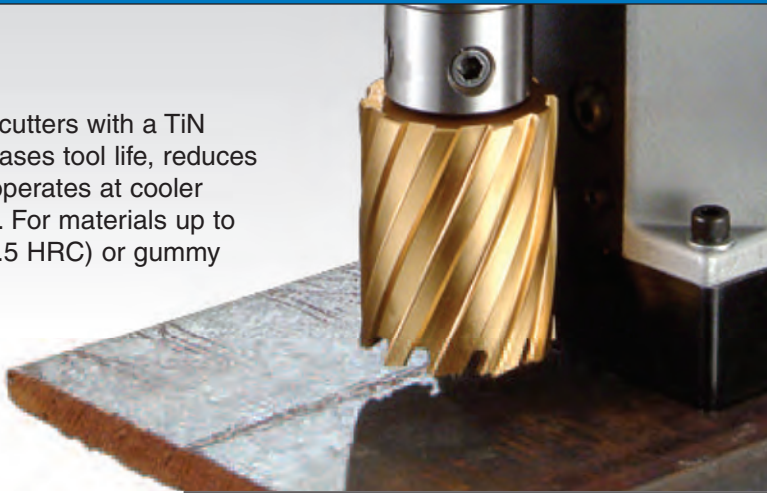
* Use with 2" Cutters. Sold separately.

Replaceable "Nose" screws on to end of pilot.

| Part No. | Description |
|----------|---|
| 07370 | Replacement Pilot |
| 07373 | 11/16" Pilot Assy for enlarging up to 13/16" |
| 07372 | 13/16" Pilot Assy for enlarging up to 15/16" |
| 07371 | 15/16" Pilot Assy for enlarging up to 1-1/16" |
| 07368 | 11/16" Replacement Nose |
| 07367 | 13/16" Replacement Nose |
| 07366 | 15/16" Replacement Nose |

ROTABROACH® M2 CUTTERS TIN COATED

Rotabroach® cutters with a TiN Coating increases tool life, reduces friction, and operates at cooler temperatures. For materials up to 325 BHN (34.5 HRC) or gummy materials.



| Cutter Dia. (Inches) | Decimal Equiv. | Part No. | |
|----------------------|----------------|-----------|-----------|
| | | 1" D.O.C. | 2" D.O.C. |
| Use with Pilot | | 10531 | 10532 |
| 7/16 | .4375 | 12614 | 12714 |
| 1/2 | .5000 | 12616 | 12716 |
| 9/16 | .5625 | 12618 | 12718 |
| Use with Pilot | | 10527 | 10528 |
| 5/8 | .6250 | 12620 | 12720 |
| 11/16 | .6875 | 12622 | 12722 |
| 3/4 | .7500 | 12624 | 12724 |
| 13/16 | .8125 | 12626 | 12726 |
| 7/8 | .8750 | 12628 | 12728 |
| 15/16 | .9375 | 12630 | 12730 |
| 1 | 1.0000 | 12632 | 12732 |

| Cutter Dia. (Inches) | Decimal Equiv. | Part No. | |
|----------------------|----------------|-----------|-----------|
| | | 1" D.O.C. | 2" D.O.C. |
| Use with Pilot | | 10527 | 10528 |
| 1-1/16 | 1.0625 | 12634 | 12734 |
| 1-1/8 | 1.1250 | 12636 | 12736 |
| 1-3/16 | 1.1875 | 12638 | 12738 |
| 1-1/4 | 1.2500 | 12640 | 12740 |
| 1-5/16 | 1.3125 | 12642 | 12742 |
| 1-3/8 | 1.3750 | 12644 | 12744 |
| 1-7/16 | 1.4375 | 12646 | 12746 |
| 1-1/2 | 1.5000 | 12648 | 12748 |
| 1-9/16 | 1.5625 | 12650 | 12750 |
| 1-5/8 | 1.6250 | 12652 | 12752 |
| 1-11/16 | 1.6875 | 12654 | 12754 |
| 1-3/4 | 1.7500 | 12656 | 12756 |
| 1-13/16 | 1.8125 | 12658 | 12758 |
| 1-7/8 | 1.8750 | 12660 | 12760 |
| 1-15/16 | 1.9375 | 12662 | 12762 |
| 2 | 2.0000 | 12664 | 12764 |
| 2-1/16 | 2.0625 | ---- | 12766 |
| 2-1/8 | 2.1250 | ---- | 12768 |
| 2-3/16 | 2.1875 | ---- | 12770 |
| 2-1/4 | 2.2500 | ---- | 12772 |
| 2-5/16 | 2.3125 | ---- | 12774 |
| 2-3/8 | 2.3750 | ---- | 12776 |

Special sizes and different coatings for Rotabroach Cutters are available on request. Contact the Hougen Customer Service Department for more information.
800-426-7818

ROTABROACH® M42 PREMIUM CUTTERS



Rotabroach® Premium Steel Cutters with TiN Coating extends tool life, reduces friction, and operates at cooler temperatures. They're made from M42 high speed steel for cutting materials up to 350 BHN (37.7 HRC) or gummy materials. These tools are specifically designed to stay cool throughout the cut. For materials up to 2" (50mm) thick. Made in USA.

| Cutter Dia. (Inches) | Decimal Equiv. | Part No. |
|----------------------|----------------|----------|
| Use with Pilot 10528 | | |
| 7/8 | .8750 | 01354 |
| 15/16 | .9375 | 01355 |
| 1 | 1.0000 | 01356 |
| 1-1/16 | 1.0625 | 01357 |
| 1-1/8 | 1.1250 | 01358 |
| 1-3/16 | 1.1875 | 01359 |
| 1-1/4 | 1.2500 | 01360 |
| 1-5/16 | 1.3125 | 01361 |
| 1-3/8 | 1.3750 | 01362 |
| 1-7/16 | 1.4375 | 01363 |
| 1-1/2 | 1.5000 | 01364 |

ARBORS FOR STATIONARY TOOLS



You can also use Rotabroach® Cutters with stationary tools and drill presses. Triple flatted shank fits 1/2" drill chucks. Uses 25mm (1") depth of cut "12,000-Series" Cutters for materials up to 12.7mm (1/2") thick maximum. (Not for use with Copperhead Cutters)

| Part No. | Description |
|---|---|
| 11016 | Arbor Assembly (with set screws and spring) for 3/4" Shank Cutters up to 1/2" D.O.C. (Pilot not included) |
| Optional & Replacement Arbor Parts | |
| 11041 | Arbor Body |
| 10623 | 1/4-28 Set Screw |
| 11069 | Ejector Spring |
| 40222 | 7/16-14 Soc. Hd. Cap Screw |
| Pilots | |
| 11022 | Starter Pilot for 7/16" - 9/16" (12mm - 15mm) Dia. Cutters |
| 11031 | Starter Pilot for 5/8" - 2-1/16" & 16mm-52mm Dia. Cutters |
| Pilot for Old Style Cutters | |
| 11032 | Starter Pilot for 1/2"-11/16" & 13mm-18mm Dia. Cutters |

Find your nearest Hougen dealer at www.hougen.com

COPPERHEAD™ CARBIDE TIP CUTTERS

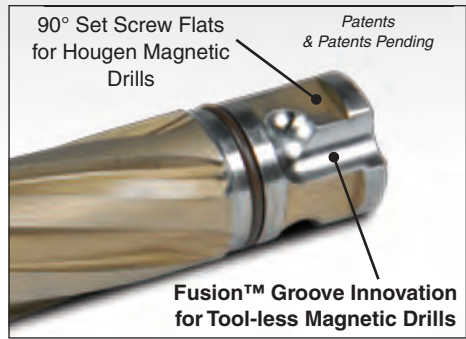
Additional Sizes



Copperhead™ Carbide Tip Cutters offer extended tool life on abrasive, tough-to-cut materials and in high-speed mag drills such as the HMD508. The unique Hougen design includes a special tooth geometry that helps maintain a better chip flow than other brands. Using the set screw arbor system can result in up to **2x** the tool life as tool-less systems.

Copperhead Cutters are available with two different shanks. The standard 3/4" two flat shank and the Fusion shank.

Featuring the Fusion Style Shank



| Cutter Dia. (Inches) | Decimal Equivalent | Part No. | | | |
|----------------------|--------------------|------------------|-------------------------|------------------|-------------------|
| | | Fusion Shank | Standard Two Flat Shank | | |
| D.O.C. | | 2" D.O.C. (50mm) | 2" D.O.C. (50mm) | 3" D.O.C. (76mm) | 4" D.O.C. (102mm) |
| Use with Pilot | | 10530 | 10530 | 10535 | 10540 |
| 9/16 | .5625 | 18618 | 18218 | ---- | ---- |
| 5/8 | .6250 | 18620 | 18220 | ---- | ---- |
| 11/16 | .6875 | 18622 | 18222 | 3-18222 | 4-18222 |
| 3/4 | .7500 | 18624 | 18224 | 3-18224 | 4-18224 |
| 13/16 | .8125 | 18626 | 18226 | 3-18226 | 4-18226 |
| 7/8 | .8750 | 18628 | 18228 | 3-18228 | 4-18228 |
| 15/16 | .9375 | 18630 | 18230 | 3-18230 | 4-18230 |
| 1 | 1.0000 | 18632 | 18232 | 3-18232 | 4-18232 |
| 1-1/16 | 1.0625 | 18634 | 18234 | 3-18234 | 4-18234 |
| 1-1/8 | 1.1250 | 18636 | 18236 | 3-18236 | 4-18236 |
| 1-3/16 | 1.1875 | 18638 | 18238 | 3-18238 | 4-18238 |
| 1-1/4 | 1.2500 | 18640 | 18240 | 3-18240 | 4-18240 |
| 1-5/16 | 1.3125 | 18642 | 18242 | 3-18242 | 4-18242 |
| 1-3/8 | 1.3750 | 18644 | 18244 | 3-18244 | 4-18244 |
| 1-1/2 | 1.5000 | 18648 | 18248 | 3-18248 | 4-18248 |
| 1-5/8 | 1.6250 | 18652 | 18252 | 3-18252 | 4-18252 |
| 1-3/4 | 1.7500 | 18656 | 18256 | 3-18256 | 4-18256 |
| 1-7/8 | 1.8750 | 18660 | 18260 | 3-18260 | 4-18260 |
| 2 | 2.0000 | 18664 | 18264 | 3-18264 | 4-18264 |

| Cutter Dia. (Metric) | Part No. | |
|---|--------------|-------------------------|
| | Fusion Shank | Standard Two Flat Shank |
| Use with Pilot 10530 - 2" (50mm) D.O.C. | | |
| 14mm | 18814 | 18414 |
| 15mm | 18815 | 18415 |
| 16mm | 18816 | 18416 |
| 18mm | 18818 | 18418 |
| 20mm | 18820 | 18420 |
| 22mm | 18822 | 18422 |
| 24mm | 18824 | 18424 |
| 25mm | 18825 | 18425 |
| 26mm | 18826 | 18426 |
| 28mm | 18828 | 18428 |
| 30mm | 18830 | 18430 |
| 31mm | 18831 | 18431 |
| 32mm | 18832 | 18432 |
| 34mm | 18834 | 18434 |
| 36mm | 18836 | 18436 |
| 38mm | 18838 | 18438 |
| 40mm | 18840 | 18440 |
| 42mm | 18842 | 18442 |
| 44mm | 18844 | 18444 |
| 45mm | 18845 | 18445 |
| 46mm | 18846 | 18446 |
| 48mm | 18848 | 18448 |
| 50mm | 18850 | 18450 |

COPPERHEAD™ CUTTER KITS



Copperhead Cutters are available in four kits for convenient storage and portability.

| Kit No. | Description 2" (50mm) DOC |
|----------------------------|--|
| Two Flat Shank Kits | |
| 18002 | Fractional Kit contains (5) cutters, 9/16, 11/16, 13/16, 15/16, 1-1/16", (2) Pilots & Hex Wrenches |
| 18004 | Metric Kit contains (5) cutters, 14, 16, 18, 20, & 22mm, (2) Pilots & Hex Wrenches |

| Kit No. | Description 2" (50mm) DOC |
|---------------------------|--|
| Fusion™ Shank Kits | |
| 18006 | Fractional Kit contains (5) cutters, 9/16, 11/16, 13/16, 15/16, 1-1/16", (2) Pilots & Hex Wrenches |
| 18008 | Metric Kit contains (5) cutters, 14, 16, 18, 20, & 22mm, (2) Pilots & Hex Wrenches |

SHARPENING MACHINE



The Model 10950 Sharpening Machine has been specifically designed for resharpening Rotabroach®, RotaLoc™, and RotaLoc Plus™ Annular Cutters. It provides ease of operation while restoring factory specified tooth geometry. Made in USA.

- Improved holders and fasteners allow easier changes and tool sharpening.
- Holder bushing is more accurate for precise tooth height.

| Part No. | Description |
|----------------------|--|
| 10950 | Sharpening Machine (120V) |
| 10950A | Sharpening Machine - No Motor (Requires Bosch Motor - 230V Model GGS 27L Purchase from local source) |
| 03983 | Borazon® Cup Wheel |
| 04049 | Tool holder - "12,000-Series" |
| 04072 | Borazon® Gullet Wheel |
| 10747 | Dressing Stick |
| 10779 | 7/32" Hex Wrench for #04049 |
| Optional Accessories | |
| 04147 | Tool Holder - RotaLoc™ Cutters |
| 04118 | Work Stand |

ARBORS FOR MACHINE TOOLS

Convert CNC machines such as drill presses or mills into fast hole makers. 3 styles of holders: R-8, Straight, and Morse taper accommodate "12,000-Series" Cutters. Made in USA.

| Part No. | Shank Size | Hole Capacity | |
|---------------------------------|-------------|---------------|--------|
| | | Diameter | Depth |
| Arbor Assembly with Oil Inducer | | | |
| 10804 | #2 Morse | 1" | 1-1/2" |
| 10806 | #3 Morse | 2-3/8" | 1-1/2" |
| 49849 | R8 | 2-3/8" | 2" |
| 49850 | 1" Straight | 2-3/8" | 2" |

| Arbor Assembly without Oil Inducer | | | |
|------------------------------------|-------------|--------|--------|
| 10814 | #2 Morse | 1" | 1-1/2" |
| 10816 | #3 Morse | 2-3/8" | 1-1/2" |
| 49853 | R8 | 2-3/8" | 2" |
| 49851 | 1" Straight | 2-3/8" | 2" |



ROTABROACH® "42/43,000-SERIES" ANNULAR CUTTERS



Made in
U.S.A.

You can produce holes up to 3"-1/16 in diameter thru 3" material with the Hougen® HMD915 portable magnetic drill using Rotabroach® "42/43,000-Series" Annular Cutters. The heavy duty "42/43,000-Series" Annular Cutters handle the most demanding hole production jobs requiring portability for drilling large, deep holes. "42,000-Series" Cutters feature a Weldon Shank mounting (depending on cutter diameter) which also provides for convenient use in stationary machine tools. Also available in stack geometry and grind downs.

| Cutter Dia. (Inches) | Decimal Equiv. | Part No. | |
|--|-------------------|----------|---------------|
| | | M2 | M2 TiN Coated |
| 19mm Weldon Shank - 2" (50mm) D.O.C. | | | |
| 3/4 | .7500 | 42024 | 22024 |
| 13/16 | .8125 | 42026 | 22026 |
| 7/8 | .8750 | 42028 | 22028 |
| 15/16 | .9375 | 42030 | 22030 |
| 1 | 1.0000 | 42032 | 22032 |
| 1-1/16 | 1.0625 | 42034 | 22034 |
| 1-1/8 | 1.1250 | 42036 | 22036 |
| 1-3/16 | 1.1875 | 42038 | 22038 |
| 1-1/4 | 1.2500 | 42040 | 22040 |
| 1-5/16 | 1.3125 | 42042 | 22042 |
| 1-3/8 | 1.3750 | 42044 | 22044 |
| 1-7/16 | 1.4375 | 42046 | 22046 |
| 1-1/4" Weldon Shank - 2" (50mm) D.O.C. | | | |
| 1-1/2 | 1.5000 | 42048 | 22048 |
| 1-9/16 | 1.5625 | 42050 | 22050 |
| 1-5/8 | 1.6250 | 42052 | 22052 |
| 1-11/16 | 1.6875 | 42054 | 22054 |
| 1-3/4 | 1.7500 | 42056 | 22056 |
| 1-13/16 | 1.8125 | 42058 | 22058 |
| 1-7/8 | 1.8750 | 42060 | 22060 |

| Cutter Dia. (Inches) | Decimal Equiv. | Part No. | |
|--|-------------------|----------|---------------|
| | | M2 | M2 TiN Coated |
| 1-1/4" Weldon Shank - 2" (50mm) D.O.C. | | | |
| 1-15/16 | 1.9375 | 42062 | 22062 |
| 2 | 2.0000 | 42064 | 22064 |
| 1-1/4" Weldon Shank - 3" (76mm) D.O.C. | | | |
| 2-1/16 | 2.0625 | 43066 | 23066 |
| 2-1/8 | 2.1250 | 43068 | 23068 |
| 2-3/16 | 2.1875 | 43070 | 23070 |
| 2-1/4 | 2.2500 | 43072 | 23072 |
| 2-5/16 | 2.3125 | 43074 | 23074 |
| 2-3/8 | 2.3750 | 43076 | 23076 |
| 2-7/16 | 2.4375 | 43078 | 23078 |
| 2-1/2 | 2.5000 | 43080 | 23080 |
| 2-9/16 | 2.5625 | 43082 | 23082 |
| 2-5/8 | 2.6250 | 43084 | 23084 |
| 2-11/16 | 2.6875 | 43086 | 23086 |
| 2-3/4 | 2.7500 | 43088 | 23088 |
| 2-13/16 | 2.8125 | 43090 | 23090 |
| 2-7/8 | 2.8750 | 43092 | 23092 |
| 2-15/16 | 2.9375 | 43094 | 23094 |
| 3 | 3.0000 | 43096 | 23096 |
| 3-1/16 | 3.0625 | 43098 | 23098 |

ROTALOC™ & ROTALOC PLUS™ ANNULAR CUTTERS AND KITS



Made in U.S.A.

Patented

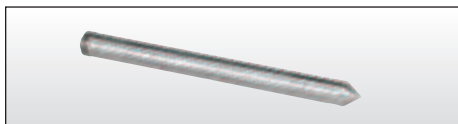
RotaLoc™ Annular Cutters are designed for use with the Hougén® HMD115 Ultra-Low Profile Truck Frame Drill. They're made of M42 high speed steel and feature Stack Cut geometry for penetrating multiple plates in a single pass, up to 3/4" depth of cut.

RotaLoc Plus™ Annular Cutters are designed for the Hougén® HMD150 Low Profile Drill. They're made of M2 high speed steel and are designed for a full 1" D.O.C.

Both series feature a 5/8" bayonet-style shank mounting for fast change out, with no other tools required to install in the drill spindle, and can be as easily removed. For optimum cutter tool life and cutter efficiency use Hougén® Slick-Stik™ Lubricant.

ROTALOC™ ANNULAR CUTTERS M42 HSS - 3/4" D.O.C. - STACK CUT (FOR HMD115 OR HMD150)

| Cutter Dia. (Inches) | Decimal Equiv. | Part No. |
|--|----------------|----------|
| Use with Pilot 17100 | | |
| 1/2 | .5000 | 17116 |
| 9/16 | .5625 | 17118 |
| 5/8 | .6250 | 17120 |
| 11/16 | .6875 | 17122 |
| 3/4 | .7500 | 17124 |
| 13/16 | .8125 | 17126 |
| 7/8 | .8750 | 17128 |
| 15/16 | .9375 | 17130 |
| 1 | 1.0000 | 17132 |
| 1-1/16 | 1.0625 | 17134 |
| Cutter Dia. (Metric) | Decimal Equiv. | Part No. |
| Use with Pilot 17100 - 3/4" (19mm) D.O.C | | |
| 12mm | .4724 | 17300 |
| 13mm | .5118 | 17302 |
| 14mm | .5512 | 17304 |
| 15mm | .5906 | 17306 |
| 16mm | .6299 | 17308 |
| 17mm | .6693 | 17310 |
| 18mm | .7087 | 17312 |
| 19mm | .7480 | 17314 |
| 20mm | .7874 | 17316 |
| 21mm | .8268 | 17318 |
| 22mm | .8661 | 17320 |
| 23mm | .9055 | 17322 |
| 24mm | .9449 | 17324 |
| 24.5mm | .9645 | 17325 |
| 25mm | .9843 | 17326 |
| 26mm | 1.0236 | 17328 |
| 27mm | 1.0630 | 17330 |



ROTALOC™ & ROTALOC PLUS™ PILOTS

| Part No. | Description |
|----------|---------------------------|
| 17100 | Standard Pilot for HMD115 |
| 17101 | Spring Ejection Pilot* |
| 17470 | For use with HMD150 |

* For early model HMD115 w/o spring ejection and all HMD100 drills.

ROTALOC PLUS™ ANNULAR CUTTERS M2 HSS - 1" D.O.C. - (FOR HMD150)

| Cutter Dia. (Inches) | Decimal Equiv. | Part No. |
|---|----------------|----------|
| Use with Pilot 17470 | | |
| 7/16 | .4375 | 17214* |
| 1/2 | .5000 | 17216* |
| 17/32 | .5313 | 17217* |
| 9/16 | .5625 | 17218* |
| 5/8 | .6250 | 17220* |
| 11/16 | .6875 | 17222* |
| 3/4 | .7500 | 17224* |
| 13/16 | .8125 | 17226* |
| 7/8 | .8750 | 17228* |
| 15/16 | .9375 | 17230* |
| 1 | 1.0000 | 17232* |
| 1-1/16 | 1.0625 | 17234* |
| 1-1/8 | 1.1250 | 17236* |
| 1-3/16 | 1.1875 | 17238 |
| 1-1/4 | 1.2500 | 17240 |
| 1-5/16 | 1.3125 | 17242 |
| 1-3/8 | 1.3750 | 17244 |
| Use with Pilot 17470 - 1" (25mm) D.O.C. | | |
| 12mm | .4724 | 17400 |
| 13mm | .5118 | 17402 |
| 14mm | .5512 | 17404 |
| 15mm | .5906 | 17406 |
| 16mm | .6299 | 17408 |
| 17mm | .6693 | 17410 |
| 18mm | .7087 | 17412 |
| 19mm | .7480 | 17414 |
| 20mm | .7874 | 17416 |
| 21mm | .8268 | 17418 |
| 22mm | .8661 | 17420 |
| 23mm | .9055 | 17422 |
| 24mm | .9449 | 17424 |
| 24.5mm | .9645 | 17425 |
| 25mm | .9843 | 17426 |
| 26mm | 1.0236 | 17428 |
| 26.5mm | 1.0433 | 17429 |
| 27mm | 1.0630 | 17430 |
| 28mm | 1.1024 | 17432 |
| 29mm | 1.1417 | 17434 |
| 30mm | 1.1811 | 17436 |
| 31mm | 1.2205 | 17438 |
| 32mm | 1.2598 | 17440 |
| 33mm | 1.2992 | 17442 |
| 34mm | 1.3386 | 17444 |
| 35mm | 1.3779 | 17446 |



ROTALOC™ & ROTALOC PLUS™ CUTTER KITS

| Kit No. | Description |
|---|--|
| RotaLoc Kits for HMD115 and HMD150 | |
| 17001 | Kit contains (10) cutters, 3/4" D.O.C. - 1/2, 9/16, 5/8, 11/16, 3/4, 13/16, 7/8, 15/16, 1 & 1-1/16" dia, plus (2) Pilots in a sturdy plastic case. |
| 17700 | Kit contains (3) cutters, 3/4" D.O.C. - 1/2, 5/8, 3/4" dia, plus (3) Pilots in a sturdy plastic case. |
| 17701 | Kit contains (3) cutters, 3/4" D.O.C. - 9/16, 11/16, 13/16" dia, plus (3) Pilots in a sturdy plastic case. |
| 17704 | Kit contains (3) cutters, 3/4" D.O.C. - 13mm, 15mm, 18mm dia, plus (3) Pilots in a sturdy plastic case. |
| RotaLoc Plus Kits for HMD150 | |
| 17800 | Kit contains (3) cutters, 1" D.O.C. - 1/2, 5/8, 3/4" dia, plus (3) Pilots in a sturdy plastic case. |
| 17801 | Kit contains (3) cutters, 1" D.O.C. - 9/16, 11/16, 13/16" dia, plus (3) Pilots in a sturdy plastic case. |
| 17804 | Kit contains (3) cutters, 1" D.O.C. - 14mm, 16mm, 18mm dia, plus (3) Pilots in a sturdy plastic case. |

* Indicates **stack geometry** is available as a stock item. To order: add 'S' to end of part no. ie... 17216S. Other sizes available with stack geometry upon request (General lead time is 7-10 days). RotaLoc Cutters for the HMD115 come standard with stack geometry.

ROTACUT™ SHEET METAL HOLE CUTTERS



Made in U.S.A.



Holemaking – faster and easier than with conventional twist drills and hole saws – in sheet metal, plate materials, and plastics up to 1/2" thick. RotaCut™ Cutters are precision-ground and produce clean, burr-free, round holes without deforming the surrounding material. For use in hand held drills with either 3/8" or 1/2" chucks, and in air feed drill spindles for production work. Lasts **10x** longer and cuts **3x** faster than twist drills or hole saws.

ROTACUT™ KITS



Hougen® offers kits packaged in sturdy cases for keeping handy the most often used sizes of RotaCut™ Annular Cutters.

| Cutter Dia. (Inches) | Decimal Equiv. | Part No. |
|--|----------------|----------|
| 3/8"-24 Thread Mount & 1/4" D.O.C. | | |
| Use with Arbor 11088 or 11006 | | |
| 1/4 | .2500 | 11100 |
| 9/32 | .2812 | 11102 |
| 5/16 | .3125 | 11104 |
| 11/32 | .3438 | 11106 |
| Use with Arbor 11088, 11089, or 11006 | | |
| 3/8 | .3750 | 11108 |
| 13/32 | .4062 | 11110 |
| 27/64 | .4219 | 11111 |
| 7/16 | .4375 | 11112 |
| 29/64 | .4531 | 11113 |
| 15/32 | .4688 | 11114 |
| 1/2 | .5000 | 11116 |
| 17/32 | .5312 | 11118 |
| 9/16 | .5625 | 11120 |
| 5/8 | .6250 | 11124 |
| 11/16 | .6875 | 11128 |
| 23/32 | .7188 | 11130 |
| 3/4 | .7500 | 11132 |
| 1/2"-20 Thread Mount & 1/2" D.O.C. | | |
| Use with Arbor 11005 or 11012 | | |
| 13/16 | .8125 | 11136 |
| 7/8 | .8750 | 11140 |
| 15/16 | .9375 | 11144 |
| 1 | 1.0000 | 11148 |
| 1-1/16 | 1.0625 | 11152 |
| 1-1/8 | 1.1250 | 11156 |
| 1-3/16 | 1.1875 | 11160 |
| 1-1/4 | 1.2500 | 11164 |
| 1-5/16 | 1.3125 | 11165 |
| 1-3/8 | 1.3750 | 11166 |
| 1-7/16 | 1.4375 | 11167 |
| 1-1/2 | 1.5000 | 11168 |

| Cutter Dia. (Metric) | Decimal Equiv. | Part No. |
|--|----------------|----------|
| 3/8"-24 Thread Mount & 6.4mm D.O.C. | | |
| Use with Arbor 11088 or 11006 | | |
| 6mm | .2362 | 11206 |
| 7mm | .2756 | 11207 |
| 8mm | .3150 | 11208 |
| 8.5mm | .3346 | 11285 |
| 9mm | .3543 | 11209 |
| Use with Arbor 11088, 11089, or 11006 | | |
| 10mm | .3937 | 11210 |
| 11mm | .4331 | 11211 |
| 12mm | .4724 | 11212 |
| 13mm | .5118 | 11213 |
| 14mm | .5512 | 11214 |
| 15mm | .5906 | 11215 |
| 16mm | .6299 | 11216 |
| 17mm | .6693 | 11217 |
| 18mm | .7087 | 11218 |
| 19mm | .7480 | 11219 |
| 20mm | .7874 | 11220 |
| 1/2"-20 Thread Mount & 12.7mm D.O.C. | | |
| Use with Arbor 11005 or 11012 | | |
| 21mm | .8268 | 11221 |
| 22mm | .8661 | 11222 |
| 23mm | .9055 | 11223 |
| 24mm | .9449 | 11224 |
| 25mm | .9843 | 11225 |

| Part No. | Description |
|-----------------------|---|
| 11075C (Fractional) | Kit contains an 11088 Arbor Assembly, Center Punch, extra Pilot, and (7) Cutters: 5/16, 3/8, 7/16, 1/2, 9/16, 5/8, & 3/4" (DOC: 1/4" / 6.4mm) |
| 11075-12 (Fractional) | Contains (12) 11075 Kits in a pop up display box |
| 11077 (Metric) | Kit contains an 11088 Arbor Assembly, Center Punch, extra Pilot, and (7) Metric Cutters: 8, 10, 12, 14, 16, 18, & 20mm (DOC: 1/4" / 6.4mm) |
| 11078 (Fractional) | Kit contains an 11005 Arbor Assembly, Center Punch, extra Pilot, and (6) Cutters: 7/8, 1, 1-1/8, 1-1/4, 1-3/8, & 1-1/2" (DOC: 1/2" / 12.7mm) |
| 11078-12 (Fractional) | Contains (12) 11078 Kits |
| 11085 (Fractional) | Fractional Master Kit 16 Sizes of cutters from 1/4" to 3/4", extra Pilots, Arbor & Center Punch (DOC: 1/4" / 6.4mm) |
| 11085-12 (Fractional) | Contains (12) 11085 Kits |
| 11086 (Metric) | Metric Master Kit 16 Sizes of cutters from 6mm to 20mm, extra Pilots, Arbor & Center Punch (DOC: 1/4" / 6.4mm) |

Special sizes of RotaCut™ Cutters are available on request. Contact the Hougen Customer Service Department for more information.
800-426-7818

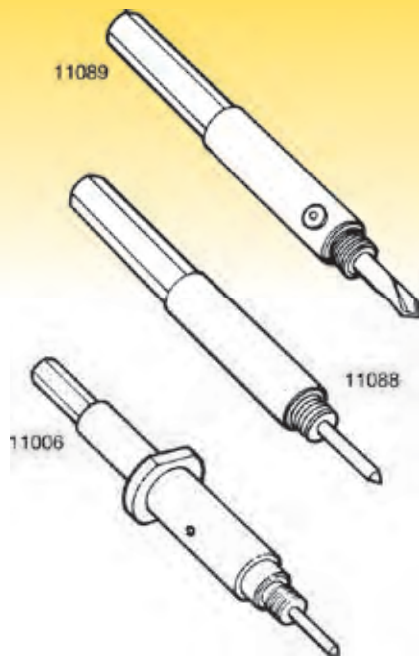
ROTACUT™ SPOTWELD CUTTER

Remove spotwelds in auto body and restoration work quickly with the RotaCut™ Premium Spotweld Cutter. Heavy cutter wall and fast cutting action that can last for hundreds or thousands of spotwelds.

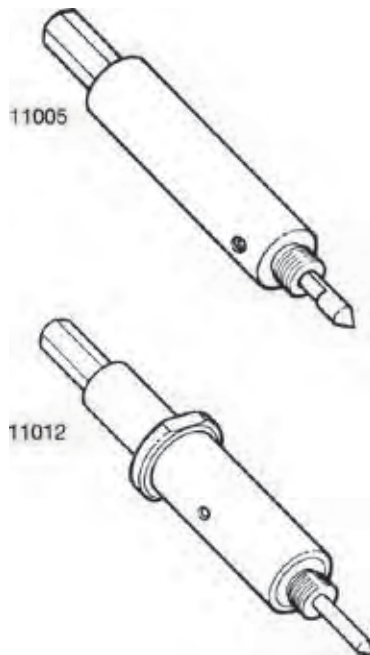
| Part No. | Description |
|----------|---|
| 11200C | Package includes 3/8" RotaCut p/n 11108, Arbor p/n 11088, and instructions. |



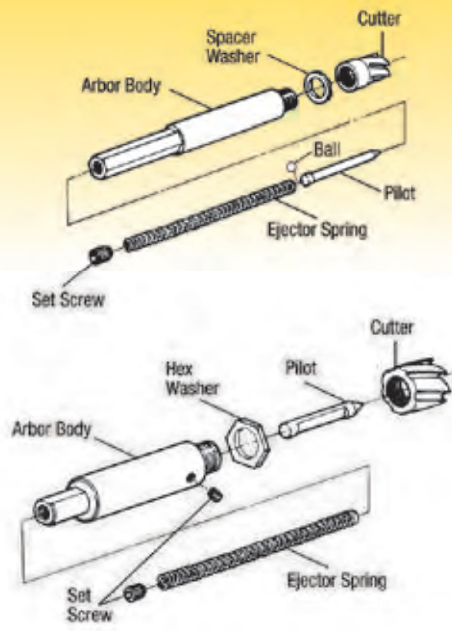
ROTACUT™ SHEET METAL ARBORS AND PARTS



| ARBORS FOR 3/8" CHUCKS | |
|------------------------------|---|
| Part No. | Description |
| With 3/8"-24 Mounting Thread | |
| 11088 | Arbor with Pilot Pin |
| 11089 | Arbor with Pilot Drill (For use with 3/8" thru 3/4" dia.) |
| 11006 | Arbor with Pilot Pin (For use in 5/8" Drill Bushing) |



| ARBORS FOR 1/2" CHUCKS | |
|------------------------------|---|
| Part No. | Description |
| With 1/2"-20 Mounting Thread | |
| 11005 | Arbor with Pilot Pin (For use with 13/16" thru 1-1/2" dia.) |
| 11012 | Arbor with Pilot Pin (For use with 15/16" Drill Bushing) |



Hougen Manufacturing maintains a complete stock of replacement parts for the Sheet Metal Arbors listed below. Our computerized order entry system means your required parts are often processed and shipped the same day that the order is received.

REPLACEMENT ARBOR PARTS

| Part Desc. | Arbor Assembly / Component Part No. | | | | |
|----------------|-------------------------------------|--------|-------------|-------|-------|
| | 11088 | 11089 | 11005 | 11006 | 11012 |
| Arbor Body | 90224 | 90225 | 11074 | 11035 | 11038 |
| Pilot | 11083 | 03913C | 11027 | 11083 | 11084 |
| Ejector Spring | 11034 | 11049 | 11047 | 11045 | 11048 |
| Set Screw | 11050 | 11051 | 11052 | 11050 | 11052 |
| Hex Washer | ---- | ---- | 03996 | ---- | 03996 |
| Spacer Washer | 11056 | 11056 | ---- | 11056 | ---- |
| Stop Washer | 11055 | 11055 | ---- | ---- | ---- |
| Button Screw | ---- | 11053 | ---- | ---- | ---- |
| Stop Rod | ---- | 11064 | ---- | ---- | ---- |
| Ejector Collar | ---- | ---- | ---- | 11059 | 11061 |
| Roll Pin | ---- | ---- | ---- | 11062 | 11063 |
| Plunger | ---- | ---- | ---- | 11058 | ---- |
| Misc. | 11260 Ball | ---- | 11050 Screw | ---- | ---- |

EXTENDED REACH CUTTERS



| Cutter Dia. (Inches) | Decimal Equiv. | Part No. |
|---|----------------|----------|
| Triple Flat Arbor with .80" flute & 1/4" D.O.C. | | |
| 3/8 | .3750 | 16112 |
| 7/16 | .4375 | 16114 |
| 1/2 | .5000 | 16116 |
| 9/16 | .5625 | 16118 |

Hougen® Extended Reach Cutters are designed for applications where additional reach and a shallow depth of cut is required. They're ideally suited for trailer hitch installations, or single pass through holes in square and rectangular pipe and tubing. The cutter and arbor are a single-piece construction and include a spring loaded pilot for "popping out" the slug at the end of the cut. For use in 3/8" or larger drill chucks.



| Part No. | Description |
|----------|---|
| 16005 | Kit contains (4) Cutters: 3/8, 7/16, 1/2, & 9/16", (2) extra Pilots, and a Hex Wrench |



CARBIDE HOLCUTTER™ FOR SHEET METAL AND THIN MATERIALS



day out use. Features a shoulder stop to prevent over penetration of the work piece. Ejector Spring helps with slug ejection. Tungsten carbide provides long tool life and smooth cutting action. Dramatically outlasts bi-metal hole saws and step drills. For materials up to 1/8" (3.2mm) thick. (All cutters include arbor, pilot and spring.)

Contractor's Choice

Carbide Holcutters cut smooth, fast, burr-free holes in all types of materials, from soft aluminum to tough-to-cut stainless and cast iron. Rugged construction for day in and

| Cutter Dia. (Inches) | Decimal Equiv. | Part No. |
|---|----------------|----------|
| Replacement Pilot 14301 & Spring 14303 (3/8" Chuck) | | |
| 11/16 | .6875 | 14322 |
| 3/4 | .7500 | 14324 |
| 13/16 | .8125 | 14326 |
| 7/8 | .8750 | 14328 |
| 15/16 | .9375 | 14330 |
| 1 | 1.0000 | 14332 |
| 1-1/16 | 1.0625 | 14334 |
| 1-1/8 | 1.1250 | 14336 |
| 1-3/16 | 1.1875 | 14338 |
| 1-1/4 | 1.2500 | 14340 |
| 1-5/16 | 1.3125 | 14342 |

| Cutter Dia. (Inches) | Decimal Equiv. | Part No. |
|---|----------------|----------|
| 1-3/8 | 1.3750 | 14344 |
| 1-1/2 | 1.5000 | 14348 |
| 1-5/8 | 1.6250 | 14352 |
| 1-3/4 | 1.7500 | 14356 |
| 2 | 2.0000 | 14362 |
| 2-1/8 | 2.1250 | 14366 |
| 2-1/4 | 2.2500 | 14368 |
| 2-3/8 | 2.3750 | 14372 |
| Replacement Pilot 14302 & Spring 14304 (1/2" Chuck) | | |
| 2-1/2 | 2.5000 | 14374 |
| 2-5/8 | 2.6250 | 14378 |
| 2-3/4 | 2.7500 | 14380 |
| 3 | 3.0000 | 14384 |

| Part No. | Description |
|----------|--|
| 14301 | Pilot for cutters up to 2-3/8" (3 Pk) |
| 14302 | Pilot for cutters 2-1/2" to 3" (3 Pk) |
| 14303 | Spring for cutters up to 2-3/8" (3 Pk) |
| 14304 | Spring for cutters 2-1/2" to 3" (3 Pk) |

HOLCUTTER™ FOR SHEET METAL AND THIN MATERIALS



HSS Holcutters last **10x** longer and cut **3x** faster than bi-metal hole saws or twist drills. All cutters use a single arbor, with a patented Quad-Lead thread mounting system. For materials up to 1/8" (3.2mm) thick.

| Cutter Dia. (Inches) | Decimal Equiv. | Part No. |
|--|----------------|----------|
| Quad-Lead thread mount - Use Arbor 14009 | | |
| 11/16 | .6875 | 14222 |
| 3/4 | .7500 | 14224 |
| 13/16 | .8125 | 14226 |
| 7/8 | .8750 | 14228 |
| 15/16 | .9375 | 14230 |
| 1 | 1.0000 | 14232 |
| 1-1/16 | 1.0625 | 14234 |
| 1-1/8 | 1.1250 | 14236 |

| | | |
|---------|--------|-------|
| 1-3/16 | 1.1875 | 14238 |
| 1-1/4 | 1.2500 | 14240 |
| 1-5/16 | 1.3125 | 14242 |
| 1-3/8 | 1.3750 | 14244 |
| 1-7/16 | 1.4375 | 14246 |
| 1-1/2 | 1.5000 | 14248 |
| 1-9/16 | 1.5625 | 14250 |
| 1-5/8 | 1.6250 | 14252 |
| 1-11/16 | 1.6875 | 14254 |
| 1-3/4 | 1.7500 | 14256 |
| 1-7/8 | 1.8750 | 14260 |
| 2 | 2.0000 | 14262 |
| 2-1/16 | 2.0625 | 14264 |
| 2-1/8 | 2.1250 | 14266 |
| 2-1/4 | 2.2500 | 14268 |
| 2-3/8 | 2.3750 | 14272 |
| 2-1/2 | 2.5000 | 14274 |
| 2-9/16 | 2.5625 | 14276 |
| 2-5/8 | 2.6250 | 14278 |
| 2-3/4 | 2.7500 | 14280 |
| 2-7/8 | 2.8750 | 14282 |
| 3 | 3.0000 | 14284 |



| Part No. | Description |
|------------------------------------|---|
| 13007C | Pilot for 14009 Arbor (3 Pk) |
| 14009 | Arbor (3/8" Chuck) for Quad-Lead Threaded Cutters |
| Arbors for Discontinued Holcutters | |
| 14001 | Arbor for 3/8" Threaded Cutters |
| 14002 | Arbor for older style Double "D" Holcutters |
| 14004 | Arbor for Double "D" Cutters |

HOLCUTTER™ KIT



| Part No. | Description |
|----------|--|
| 14005C | Sturdy plastic case contains Arbor, Pilots, Hex Washer, instructions, and HSS Holcutters: 7/8, 1-1/8, 1-3/8, 1-3/4, 2 & 2-1/2" |
| 14005-12 | Case of (12) 14005 Kits |

HOLCUTTER™ SPEED REDUCER



Featuring a 4:1 gear ratio, the Holcutter™ Speed Reducer mounts directly to your 1/2" drill and maintains torque while reducing RPMs for large hole diameters. Cutters mount to Speed Reducer with no arbor required.

| Part No. | Description |
|----------|--|
| 14008 | Speed Reducer for 1/2" Drills |
| *04938 | Clamp Handle |
| *04939 | 3/16" Pilot |
| 04942 | Thread Adapter for 3/8" Drills |
| 04943 | Triple-flatted Shank Adapter (for use in 1/2" drill chuck) |
| 04812 | Hex Washer (for easy cutter removal) |

* Details marked are required to operate Speed Reducer

TORNADO II™ PAINT SHAKER



The lightweight Hougen® Tornado II™ Portable Paint Shaker can be used on benches or the floor without bolting it down. Blending cycles can be set to numerous time intervals via the convenient up-front control panel. Three-axis orbital action assures complete mixing of gallons, pints, quarts or aerosols. Easy to use four-point clamping securely holds containers while minimal moving parts provide quiet operation. Weight: 24lbs (10.9 kg) 26" H x 15-3/8" W x 11-1/2" D (660mm H x 391mm W x 292mm D) Can/Paint weight limit: 11 lbs (5kg)

**Mixes Pints, Quarts, Gallons,
& Aerosols**

Multi-Motion Blending



Orbital



Side-to-Side



Up & Down

TORNADO II PAINT SHAKER

| Part No. | Description |
|----------|---------------------------------|
| 51200 | Tornado II™ Paint Shaker (115V) |
| 51230 | Tornado II™ Paint Shaker (230V) |



Made in
U.S.A.

POP DISPLAYS



These counter top displays help to make the point-of-purchase sale for you. They're easy to setup and are a good way to get the product in front of your customer.

| Part No. | Description |
|----------|--|
| 11075-12 | Case of (12) RotaCut™ Kits |
| 11745-6 | Case of (6) Large Slick-Stik™ |
| 11746-24 | Case of (24) Mini Slick-Stik™ |
| 12900 | Case of (28) Rotabroach® "12,000-Series" Cutters in 1" and 2" D.O.C. in sizes from 7/16" up to 1-3/8" diameter |



The RotaCut™ Hole Making Center is designed to get the RotaCut™ Cutters and Kits in front of customers. You'll display open kits, replacement cutters, arbors and pilots. Your customers have the option of buying any single component or a mix of their choosing.

ROTACUT™ HOLE MAKING CENTER

| Part No. | Description |
|----------|--|
| 11000C | RotaCut™ Hole Making Center includes Kits and replacement components in clamshell packages for easy display. |



The Holcutter™ display is designed to work along side of the RotaCut™ Hole Making Center, or as a stand alone.

HOLCUTTER™ HOLE MAKING CENTER

| Part No. | Description |
|----------|--|
| 14000C | Holcutter™ Hole Making Center includes Kits and replacement components in clamshell packages for easy display. |








**HOUGEN®-OGURA™ PUNCHES ARE ONLY AVAILABLE IN 120V
AND SOLD IN NORTH AND SOUTH AMERICA**

Hougen-Ogura PUNCH-PRO™

Electro-hydraulic Hole Punches

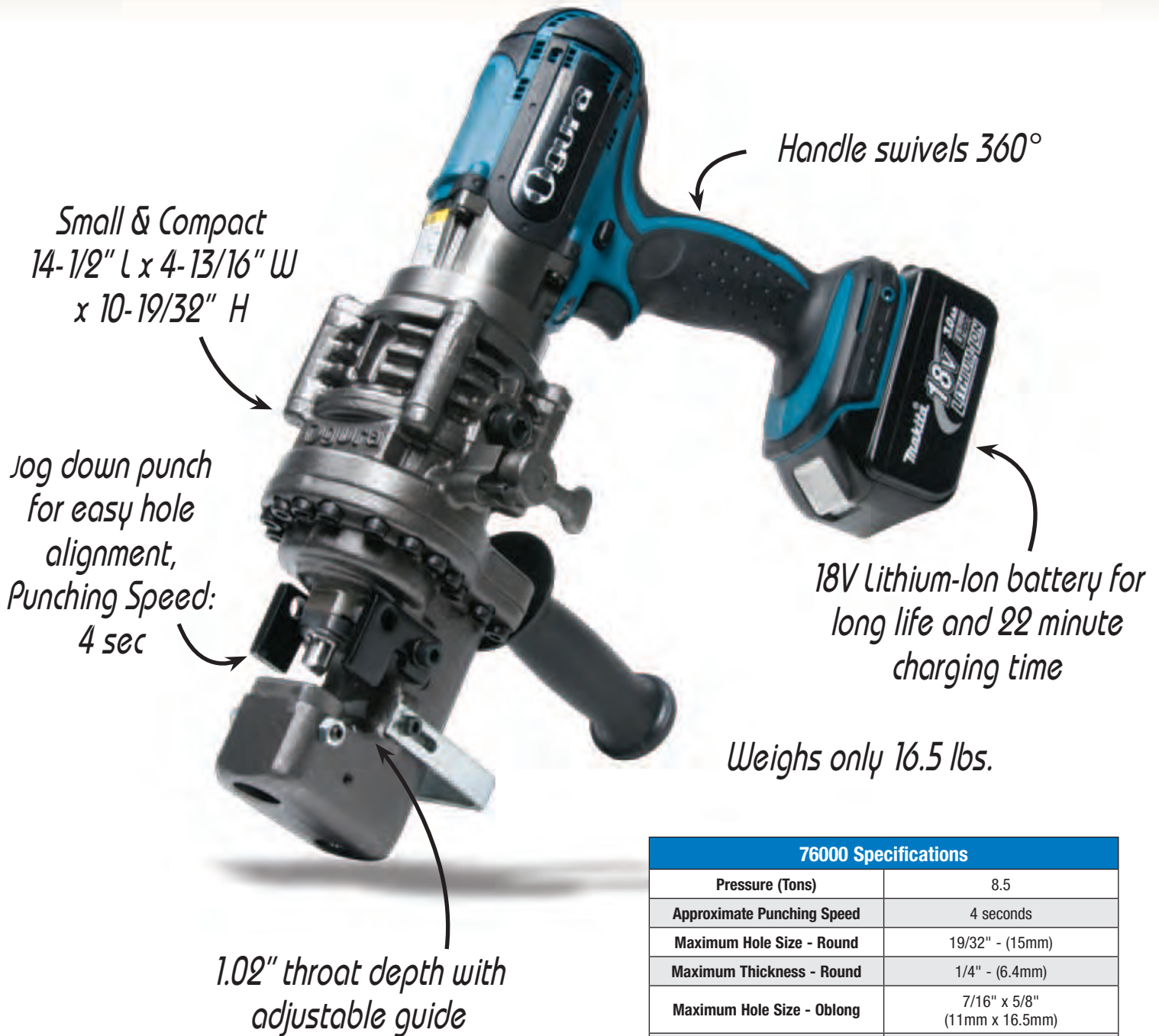


| Model: | | 76000 | 75002.5A | 75003A | 75004R | 75005 | 75006 |
|-----------------------|---|------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|-------------------------------|-------------------------------|
| SPECIFICATIONS | Pressure (Tons) | 8.5 | 13.2 | 14.85 | 22 | 27.5 | 34.1 |
| | Approximate Punching Speed | 4 seconds | 1.2 seconds | 1.5 seconds | 2 seconds | 3 seconds | 4 seconds |
| | Maximum Punch Throat Depth | 1.02" (26mm) | 2-3/8" (60.3mm) | 2-5/32" (54.8mm) | 1-9/16" (39.7mm) | 3-15/16" (100mm) | 1-31/32" (50mm) |
| | Single Phase Motor | 18V Cordless (120V Charger) | 120V/50-60 Hz AC 9.5 Amp / 1050 Watts | 120V/50-60 Hz AC 9.5 Amp / 1050 Watts | 120V/50-60 Hz AC 9.5 Amp / 1050 Watts | 120V/50-60 Hz AC 12.2 Amps | 120V/50-60 Hz AC 12.2 Amps |
| | Weight (Less Work Stand) | 16.5 lbs. (7.5 kg) | 26 lbs. (11.8 kg) | 35.8 lbs. (16.2 kg) | 39.7 lbs. (18 kg) | 79.3 lbs. (36 kg) | 65 lbs. (29.5 kg) |
| | Shipping Weight (Approx.) | 32 lbs. (14.5 kg) | 49.7 lbs. (22.5 kg) | 60.7 lbs. (27.5 kg) | 63.6 lbs. (28.8 kg) | 110 lbs. (49.9 kg) | 88.3 lbs. (40 kg) |
| ROUND | Maximum Hole Size | 19/32" (15mm) | 25/32" (20mm) | 25/32" (20mm) | 13/16" (20.6mm) | 7/8" (22.2mm) | 15/16" (23.8mm) |
| | Maximum Thickness | 1/4" (6.4mm) | 19/64" (7.5mm) | 19/64" (7.5mm) | 3/8" (9.5mm) | 3/8" (9.5mm) | 1/2" (12.7mm) |
| OBLONG | Maximum Hole Size | 7/16" x 5/8" (11mm x 16.5mm) | 9/16" x 13/16" (14mm x 21mm) | 9/16" x 13/16" (14mm x 21mm) | 9/16" x 13/16" (14mm x 21mm) | 11/16" x 13/16" (18mm x 21mm) | 11/16" x 13/16" (18mm x 21mm) |
| | Maximum Thickness | 1/4" (6.4mm) | 1/4" (6.4mm) | 1/4" (6.4mm) | 3/8" (9.5mm) | 3/8" (9.5mm) | 1/2" (12.7mm) |
| SQUARE | Maximum Hole Size | | 7/16" (11mm) | | | | |
| | Maximum Thickness | | 1/4" (6.4mm) | | | | |
| STEEL STYLES | Flat Bar  | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| | Channel  | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| | H-Steel  | | ✓ | ✓ | ✓ | ✓ | ✓ |
| | Angle  | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| | Lip Channel  | | | ✓ | | | |

Hougen-Ogura punches are self contained units, no need for external hydraulic pumping systems.

Hougen®-Ogura™

18V CORDLESS HOLE PUNCHER



76000 Specifications

| | |
|----------------------------|---------------------------------|
| Pressure (Tons) | 8.5 |
| Approximate Punching Speed | 4 seconds |
| Maximum Hole Size - Round | 19/32" - (15mm) |
| Maximum Thickness - Round | 1/4" - (6.4mm) |
| Maximum Hole Size - Oblong | 7/16" x 5/8" (11mm x 16.5mm) |
| Maximum Thickness - Oblong | 1/4" - (6.4mm) |
| Maximum Punch Throat Depth | 1.02" - (26mm) |
| Weight | 16.5 lbs - (7.5 kg) |

Includes: carrying case, 7/16" punch & die, charger (120V).
Optional Stand: Part No. 75166
Replacement Battery: 76094

PUNCH-PRO™

PUNCH MORE HOLES, MORE OFTEN, IN MORE PLACES, IN LESS TIME



You'll punch more holes, more often in more places all in less time using a Hougen®-Ogura™ Punch-Pro™ Electro-hydraulic Hole Puncher because of its lightweight and single body construction. Unlike hole punchers with separate hydraulics that require hydraulic hoses, the Punch-Pro™ series has unique single-body construction meaning there is only a 120V power cord to deal with.

Punch-Pro™ models require less punching tonnage than traditional hole punchers because of an exclusive punch and die design. Six Punch-Pro™ models offer punching diameters from 1/4" up to 15/16" thru material thicknesses from 5/64" up to 1/2". Punching beats drilling.

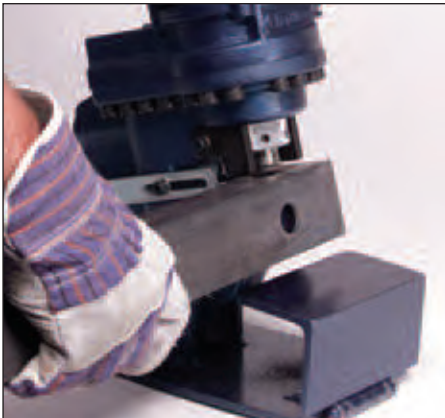
A Punch-Pro™ dramatically reduces your hole-making costs over conventional drilling methods.

Time Savings — Punch-Pro™ users have documented increases in productivity over other holemaking methods. One user stated that he had achieved a 75% time savings over the old method of using twist drills.

Fast Cycle Times — Punch clean and accurate holes in as little as 1.2 seconds. A single trigger actuates the punch while an exclusive auto-return mechanism returns to the punch starting position.

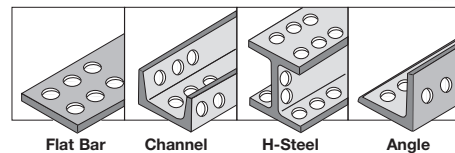
Ease Of Handling — Single body lightweight construction starting at 16.5 lbs make these units easy to handle and move with only a single 120V power cord and no separate hydraulics. And operator fatigue is reduced since the Punch-Pro™ does all the work.

Accuracy — Eliminates the need to pre-drill or pre-punch. To confirm the punch position, simply jog the punch down to the center mark for the hole location. A convenient release valve allows ease of repositioning if required.



Punches are designed to punch mild or structural steel. For other materials contact Hougen Technical Service 800-426-7818.

75002.5A

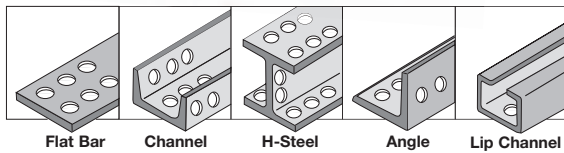


Designed for applications typically done with hand held twist drills. At just 26 lbs, the 75002.5A is easily handled in all types of punching applications, onsite or in the shop. Punch round, oblong and square holes in materials from 5/64" up to 1/4" thick. Its 2-3/8" throat depth provides excellent reach and versatility. Easily confirm the hole position with the jog down feature. Punch automatically returns to the starting position after the punching cycle is complete. Work stand, foot switch, 9/16" punch & (2) dies, tool kit and carrying case are included.

75002.5A Specifications

| | |
|----------------------------|---------------------------------|
| Pressure (Tons) | 13.2 |
| Approximate Punching Speed | 1.2 seconds |
| Maximum Hole Size - Round | 25/32" - (20mm) |
| Maximum Thickness - Round | 19/64" - (7.5mm) |
| Maximum Hole Size - Oblong | 9/16" x 13/16" (14mm x 21mm) |
| Maximum Thickness - Oblong | 1/4" - (6.4mm) |
| Maximum Hole Size - Square | 7/16" - (11mm) |
| Maximum Thickness - Square | 1/4" - (6.4mm) |
| Maximum Punch Throat Depth | 2-3/8" - (60.3mm) |
| 120V/50-60Hz AC | 9.5 Amps / 1050 Watts |
| Weight (less work stand) | 26 lbs - (11.8 kg) |
| Shipping Weight (approx) | 49.7 lbs - (22.5 kg) |

75003A



Flat Bar Channel H-Steel Angle Lip Channel

Provides extra versatility with a unique throat design and the ability to adapt to two punch and die styles. The standard punch/long die combination allows flanged sections to be "swallowed" while the long punch/standard die combination allows the tooling to reach through narrow lip channel to punch the web section. It has the jog down and automatic punch return features like all models. Work stand, foot switch, 9/16" punch & (2) dies, tool kit and carrying case are included.

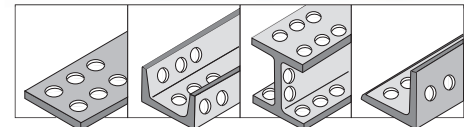


Short Punch Long Die Long Punch Short Die

75003A Specifications

| | |
|----------------------------|---------------------------------|
| Pressure (Tons) | 14.85 |
| Approximate Punching Speed | 1.5 seconds |
| Maximum Hole Size - Round | 25/32" - (20mm) |
| Maximum Thickness - Round | 19/64" - (7.5mm) |
| Maximum Hole Size - Oblong | 9/16" x 13/16" (14mm x 21mm) |
| Maximum Thickness - Oblong | 1/4" - (6.4mm) |
| Maximum Punch Throat Depth | 2-5/32" - (54.8mm) |
| 120V/50-60Hz AC | 9.5 Amps / 1050 Watts |
| Weight (less work stand) | 35.8 lbs - (16.2 kg) |
| Shipping Weight (approx) | 60.7 lbs - (27.5 kg) |

75004R



Flat Bar Channel H-Steel Angle

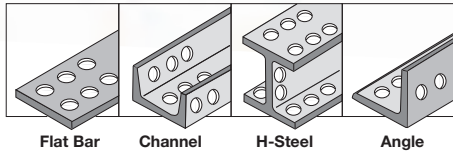
Portable electro-hydraulic punch with 22 tons of punching pressure can quickly punch through 3/8" materials in 2 seconds. Easily confirm the hole position with the jog down feature. Punch automatically returns to the starting position after the punching cycle is complete. If punch ever resists returning to the home position, squeeze the trigger for power feed return. The 75004R is a self contained unit that only requires 120V power. There is no separate hydraulics or power packs required. Includes: work stand, foot switch, 11/16" punch & (2) dies, tool kit and carrying case.

The 75004R replaces the 75004A.

75004R Specifications

| | |
|----------------------------|---------------------------------|
| Pressure (Tons) | 22 |
| Retract Pressure (Tons) | 14 |
| Approximate Punching Speed | 2 seconds |
| Maximum Hole Size - Round | 13/16" - (20.6mm) |
| Maximum Thickness - Round | 3/8" - (9.5mm) |
| Maximum Hole Size - Oblong | 9/16" x 13/16" (14mm x 21mm) |
| Maximum Thickness - Oblong | 3/8" - (9.5mm) |
| Maximum Punch Throat Depth | 1-9/16" - (39.7mm) |
| 120V/50-60Hz AC | 9.5 Amps / 1050 Watts |
| Weight (less work stand) | 39.7 lbs - (18 kg) |
| Shipping Weight (approx) | 63.6 lbs - (28.8 kg) |

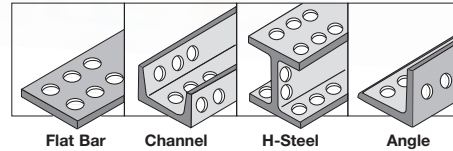
75005



This heavy-duty model is built for punching up to 7/8" diameter holes in materials up to 3/8" thick. The addition of eyebolts on both sides of the unit allows for easy attachment of a lift assist or a counter-balancer for improved ergonomics. Its 3-15/16" throat depth adds to its versatility covering a wide range of work pieces. Easily confirm the hole position with the jog down feature. Punch automatically returns to the starting position after the punching cycle is complete. Work stand, foot switch, 13/16" punch & (2) dies and tool kit are included.

| 75005 Specifications | |
|----------------------------|----------------------------------|
| Pressure (Tons) | 27.5 |
| Approximate Punching Speed | 3 seconds |
| Maximum Hole Size - Round | 7/8" - (22.2mm) |
| Maximum Thickness - Round | 3/8" - (9.5mm) |
| Maximum Hole Size - Oblong | 11/16" x 13/16" (18mm x 21mm) |
| Maximum Thickness - Oblong | 3/8" - (9.5mm) |
| Maximum Punch Throat Depth | 3-15/16" - (100mm) |
| 120V/50-60Hz AC | 12.2 Amps |
| Weight (less work stand) | 79.3 lbs - (36 kg) |
| Shipping Weight (approx) | 110 lbs - (49.9 kg) |

75006



Our heaviest duty model, the 75006, develops 34.1 tons pressure and will produce round holes up to a maximum of 15/16" diameter and punch through a maximum thickness of 1/2" material in approximately 4 seconds. It has eyebolts on both sides for easy attachment of a lift assist or a counter-balancer for improved ergonomics. Like all Punch-Pro models, its single body design makes it easy to use anywhere. Easily confirm the hole position with the jog down feature. Punch automatically returns to the starting position after the punching cycle is complete. Work stand, foot switch, 13/16" punch & (2) dies and tool kit are included.

| 75006 Specifications | |
|----------------------------|----------------------------------|
| Pressure (Tons) | 34.1 |
| Approximate Punching Speed | 4 seconds |
| Maximum Hole Size - Round | 15/16" - (23.8mm) |
| Maximum Thickness - Round | 1/2" - (12.7mm) |
| Maximum Hole Size - Oblong | 11/16" x 13/16" (18mm x 21mm) |
| Maximum Thickness - Oblong | 1/2" - (12.7mm) |
| Maximum Punch Throat Depth | 1-31/32" - (50mm) |
| 120V/50-60Hz AC | 12.2 Amps |
| Weight (less work stand) | 65 lbs - (29.5 kg) |
| Shipping Weight (approx) | 88.3 lbs - (40 kg) |

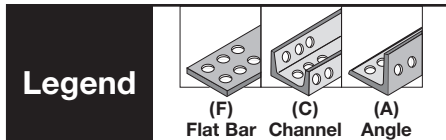
PUNCH-PRO™ — MODEL 76000

| ROUND PUNCH | | | MATERIAL | | | DIE | |
|-------------|--------|--------|----------|---|-------|-------------|----------|
| Size | | | Part No. | Thickness | Style | Size | Part No. |
| Nominal | Actual | Metric | | | | | |
| 5/32" | .157 | 4mm | 76200 | 5/64 (.078) 14 GA. | F, A | Die 5/32 A | 76204 |
| 3/16" | .197 | 5mm | 76201 | 5/64 (.078) to 1/8 14 to 12 GA. | F, A | Die 3/16 A | 76205 |
| 7/32" | .217 | 5.5mm | 76202 | 5/64 (.078) to 1/8 14 to 12 GA. | F, A | Die 7/32 A | 76206 |
| 15/64" | .236 | 6mm | 76203 | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A | Die 15/64 A | 76207 |
| | | | | >1/8 (.125) to 5/32 (.157) 10 to 9 GA. | F, A | Die 15/64 B | 76216 |
| 1/4" | .256 | 6.5mm | 75421 | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A | Die 1/4 A | 76208 |
| | | | | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A | Die 1/4 B | 76217 |
| 5/16" | .315 | 8mm | 75422 | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A | Die 5/16 A | 76209 |
| | | | | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A | Die 5/16 B | 76218 |
| 11/32" | .335 | 8.5mm | 75423 | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A | Die 11/32 A | 76210 |
| | | | | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A | Die 11/32 B | 76219 |
| 3/8" | .394 | 10mm | 75424 | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A | Die 3/8 A | 76211 |
| | | | | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A | Die 3/8 B | 76220 |
| | | | | 19/64 (.276) max. | C | Die 3/8 C | 76245 |
| 7/16" | .433 | 11mm | 75425 | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A | Die 7/16 A | 76212 |
| | | | | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A | Die 7/16 B | 76221 |
| | | | | 19/64 (.276) max. | C | Die 7/16 C | 76246 |
| 1/2" | .512 | 13mm | 75426 | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A | Die 1/2 A | 76213 |
| | | | | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A | Die 1/2 B | 76222 |
| 9/16" | .551 | 14mm | 75427 | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A | Die 9/16 A | 76214 |
| | | | | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A | Die 9/16 B | 76223 |
| 19/32" | .591 | 15mm | 76248 | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A | Die 19/32 A | 76215 |
| | | | | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A | Die 19/32 B | 76224 |

| OBLONG PUNCH | | | MATERIAL | | | DIE | |
|-----------------------|--------|--------|----------|---|-------|---------------------|----------|
| Size | | | Part No. | Thickness | Style | Size | Part No. |
| Nominal | Actual | Metric | | | | | |
| 1/4" x 3/8" | .256 | 6.5mm | 76225 | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A | Die 1/4 x 3/8 A | 76229 |
| | .394 | 10mm | | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A | Die 1/4 x 3/8 B | 76236 |
| 1/4" x 1/2" | .256 | 6.5mm | 75638 | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A | Die 1/4 x 1/2 A | 76230 |
| | .512 | 13mm | | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A | Die 1/4 x 1/2 B | 76237 |
| 11/32" x 1/2" | .335 | 8.5mm | 75639 | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A | Die 11/32 x 1/2 A | 76231 |
| | .512 | 13mm | | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A | Die 11/32 x 1/2 B | 76238 |
| 11/32" x 43/64" | .335 | 8.5mm | 76226 | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A | Die 11/32 x 43/64 A | 76232 |
| | .669 | 17mm | | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A | Die 11/32 x 43/64 B | 76239 |
| 23/64" x 17/32" | .354 | 9mm | 76227 | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A | Die 23/64 x 17/32 A | 76233 |
| | .531 | 13.5mm | | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A | Die 23/64 x 17/32 B | 76240 |
| 3/8" x 19/32" | .394 | 10mm | 76228 | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A | Die 3/8 x 19/32 A | 76234 |
| | .591 | 15mm | | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A | Die 3/8 x 19/32 B | 76241 |
| 7/16" x 5/8" | .433 | 11mm | 75640 | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A | Die 7/16 x 5/8 A | 76235 |
| | .650 | 16.5mm | | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A | Die 7/16 x 5/8 B | 76242 |



Punching capacity data is based on mild steel of 65,000 psi tensile strength.



PUNCH-PRO™ — MODEL 75002.5A

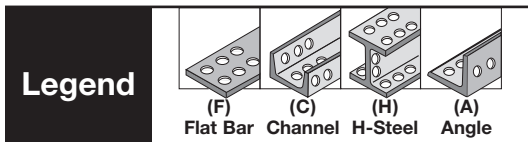
| ROUND PUNCH | | | MATERIAL | | DIE | | |
|-------------|--------|--------|----------|--|---------|-------------|----------|
| Nominal | Size | | Part No. | Thickness | Style | Size | Part No. |
| | Actual | Metric | | | | | |
| 1/4" | .256 | 6.5mm | 75421 | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A, H | Die 1/4 A | 75432 |
| | | | | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H | Die 1/4 B | 75433 |
| 5/16" | .315 | 8mm | 75422 | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A, H | Die 5/16 A | 75434 |
| | | | | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H | Die 5/16 B | 75435 |
| 11/32" | .335 | 8.5mm | 75423 | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A, H | Die 11/32 A | 75436 |
| | | | | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H | Die 11/32 B | 75437 |
| 3/8" | .394 | 10mm | 75424 | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A, H | Die 3/8 A | 75438 |
| | | | | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H | Die 3/8 B | 75439 |
| | | | | 19/64 (.297) max. | C | Die 3/8 C | 75450 |
| 7/16" | .433 | 11mm | 75425 | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A, H | Die 7/16 A | 75440 |
| | | | | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H | Die 7/16 B | 75441 |
| | | | | 19/64 (.297) max. | C | Die 7/16 C | 75451 |
| 1/2" | .512 | 13mm | 75426 | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A, H | Die 1/2 A | 75442 |
| | | | | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H | Die 1/2 B | 75443 |
| | | | | 19/64 (.297) max. | C | Die 1/2 C | 75452 |
| 9/16" | .551 | 14mm | 75427 | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A, H | Die 9/16 A | 75444 |
| | | | | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H | Die 9/16 B | 75445 |
| | | | | 19/64 (.297) max. | C | Die 9/16 C | 75453 |
| 5/8" | .625 | 15.9mm | 75428 | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A, H | Die 5/8 A | 75446 |
| | | | | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H | Die 5/8 B | 75447 |
| 11/16" | .688 | 17.5mm | 75429 | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A, H | Die 11/16 A | 75448 |
| | | | | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H | Die 11/16 B | 75449 |
| 3/4" | .748 | 19mm | 75430 | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A, H | Die 3/4 A | 75729 |
| | | | | >1/8 (.125) to 3/16 (.188) 10 to 7 GA. | F, A, H | Die 3/4 B | 75730 |
| 25/32" | .787 | 20mm | 75431 | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A, H | Die 25/32 A | 75731 |
| | | | | >1/8 (.125) to 3/16 (.188) 10 to 7 GA. | F, A, H | Die 25/32 B | 75732 |

| OBLONG PUNCH | | | MATERIAL | | DIE | | |
|----------------|-------------|---------------|----------|--|---------|--------------------|----------|
| Nominal | Size | | Part No. | Thickness | Style | Size | Part No. |
| | Actual | Metric | | | | | |
| 1/4" x 1/2" | .256 x .512 | 6.5mm x 13mm | 75638 | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A, H | Die 1/4 x 1/2 A | 75643 |
| | | | | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H | Die 1/4 x 1/2 B | 75644 |
| | | | | 19/64 (.297) max. | C | Die 1/4 x 1/2 C | 75653 |
| 11/32" x 1/2" | .335 x .512 | 8.5mm x 13mm | 75639 | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A, H | Die 11/32 x 1/2 A | 75645 |
| | | | | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H | Die 11/32 x 1/2 B | 75646 |
| | | | | 19/64 (.297) max. | C | Die 11/32 x 1/2 C | 75654 |
| 7/16" x 5/8" | .433 x .650 | 11mm x 16.5mm | 75640 | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A, H | Die 7/16 x 5/8 A | 75647 |
| | | | | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H | Die 7/16 x 5/8 B | 75648 |
| | | | | 19/64 (.297) max. | C | Die 7/16 x 5/8 C | 75655 |
| 1/2" x 3/4" | .512 x .768 | 13mm x 19.5mm | 75641 | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A, H | Die 1/2 x 3/4 A | 75649 |
| | | | | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H | Die 1/2 x 3/4 B | 75650 |
| 9/16" x 13/16" | .551 x .827 | 14mm x 21mm | 75642 | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A, H | Die 9/16 x 13/16 A | 75651 |
| | | | | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H | Die 9/16 x 13/16 B | 75652 |

| SQUARE PUNCH | | | MATERIAL | | DIE | | |
|--------------|--------|--------|----------|---------------------------------------|---------|------------|----------|
| Nominal | Size | | Part No. | Thickness | Style | Size | Part No. |
| | Actual | Metric | | | | | |
| 1/4" | .256 | 6.5mm | 75800 | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H | Die 1/4 B | 75804 |
| 5/16" | .315 | 8mm | 75801 | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H | Die 5/16 B | 75805 |
| 3/8" | .394 | 10mm | 75802 | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H | Die 3/8 B | 75806 |
| 7/16" | .433 | 11mm | 75803 | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H | Die 7/16 B | 75807 |



Punching capacity data is based on mild steel of 65,000 psi tensile strength.



PUNCH-PRO™ — MODEL 75003A

| ROUND PUNCH | | | MATERIAL | | DIE | | |
|---------------------------------------|--|---------------|------------|--|------------|----------------|----------|
| Nominal | Size | | Part No. | Thickness | Style | Size | Part No. |
| | Actual | Metric | | | | | |
| 1/4" | .256 | 6.5mm | 75421 | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A, H | Die LD 1/4 A | 75454 |
| | | | | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H | Die LD 1/4 B | 75455 |
| 5/16" | .315 | 8mm | 75422 | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A, H | Die LD 5/16 A | 75456 |
| | | | | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H | Die LD 5/16 B | 75457 |
| 11/32" | .335 | 8.5mm | 75423 | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A, H | Die LD 11/32 A | 75458 |
| | | | | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H | Die LD 11/32 B | 75459 |
| 3/8" | .394 | 10mm | 75424 | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A, H | Die LD 3/8 A | 75460 |
| | | | | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H | Die LD 3/8 B | 75461 |
| | | | 75476 (LP) | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A, H, L | Die 3/8 A | 75438 |
| | | | | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H, L | Die 3/8 B | 75439 |
| | | | | 19/64 (.297) max. | C | Die 3/8 C | 75450 |
| | | | 75425 | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A, H | Die LD 7/16 A | 75462 |
| >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H | Die LD 7/16 B | | 75463 | | | |
| 75477 (LP) | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A, H, L | Die 7/16 A | 75440 | | | |
| | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H, L | Die 7/16 B | 75441 | | | |
| | 19/64 (.297) max. | C | Die 7/16 C | 75451 | | | |
| 1/2" | .512 | 13mm | 75426 | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A, H | Die LD 1/2 A | 75464 |
| | | | | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H | Die LD 1/2 B | 75465 |
| | | | 75478 (LP) | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A, H, L | Die 1/2 A | 75442 |
| | | | | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H, L | Die 1/2 B | 75443 |
| | | | | 19/64 (.297) max. | C | Die 1/2 C | 75452 |
| | | | 75427 | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A, H | Die LD 9/16 A | 75466 |
| >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H | Die LD 9/16 B | | 75467 | | | |
| 75479 (LP) | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A, H, L | Die 9/16 A | 75444 | | | |
| | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H, L | Die 9/16 B | 75445 | | | |
| | 19/64 (.297) max. | C | Die 9/16 C | 75453 | | | |
| 5/8" | .625 | 15.9mm | 75428 | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A, H | Die LD 5/8 A | 75468 |
| | | | | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H | Die LD 5/8 B | 75469 |
| 11/16" | .688 | 17.5mm | 75429 | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A, H | Die LD 11/16 A | 75470 |
| | | | | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H | Die LD 11/16 B | 75471 |
| 3/4" | .748 | 19mm | 75430 | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A, H | Die LD 3/4 A | 75472 |
| | | | | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H | Die LD 3/4 B | 75473 |
| 25/32" | .787 | 20mm | 75431 | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A, H | Die LD 25/32 A | 75474 |
| | | | | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H | Die LD 25/32 B | 75475 |

| OBLONG PUNCH | | | MATERIAL | | DIE | | |
|----------------|-------------------|---------------|-------------------|--|------------|-----------------------|----------|
| Nominal | Size | | Part No. | Thickness | Style | Size | Part No. |
| | Actual | Metric | | | | | |
| 1/4" x 1/2" | .256 x .512 | 6.5mm x 13mm | 75638 | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A, H | Die LD 1/4 x 1/2 A | 75656 |
| | | | | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H | Die LD 1/4 x 1/2 B | 75657 |
| | | | 75666 (LP) | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A, H, L | Die 1/4 x 1/2 A | 75643 |
| | | | | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H, L | Die 1/4 x 1/2 B | 75644 |
| | 19/64 (.297) max. | C | Die 1/4 x 1/2 C | 75653 | | | |
| 11/32" x 1/2" | .335 x .512 | 8.5mm x 13mm | 75639 | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A, H | Die LD 11/32 x 1/2 A | 75658 |
| | | | | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H | Die LD 11/32 x 1/2 B | 75659 |
| | | | 75667 (LP) | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A, H, L | Die 11/32 x 1/2 A | 75645 |
| | | | | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H, L | Die 11/32 x 1/2 B | 75646 |
| | 19/64 (.297) max. | C | Die 11/32 x 1/2 C | 75654 | | | |
| 7/16" x 5/8" | .433 x .650 | 11mm x 16.5mm | 75640 | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A, H | Die LD 7/16 x 5/8 A | 75660 |
| | | | | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H | Die LD 7/16 x 5/8 B | 75661 |
| | | | 75668 (LP) | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A, H, L | Die 7/16 x 5/8 A | 75647 |
| | | | | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H, L | Die 7/16 x 5/8 B | 75648 |
| | 19/64 (.297) max. | C | Die 7/16 x 5/8 C | 75655 | | | |
| 1/2" x 3/4" | .512 x .768 | 13mm x 19.5mm | 75641 | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A, H | Die LD 1/2 x 3/4 A | 75662 |
| | | | | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H | Die LD 1/2 x 3/4 B | 75663 |
| 9/16" x 13/16" | .551 x .827 | 14mm x 21mm | 75642 | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A, H | Die LD 9/16 x 13/16 A | 75664 |
| | | | | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H | Die LD 9/16 x 13/16 B | 75665 |



Punching capacity data is based on mild steel of 65,000 psi tensile strength.

Legend

(F) Flat Bar (C) Channel (H) H-Steel (A) Angle (L) Lip Channel

LP=Long Punch
LD=Long Die

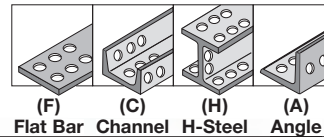
PUNCH-PRO™ — MODEL 75004R

| ROUND PUNCH | | | MATERIAL | | DIE | | |
|-------------|--------|--------|----------|--|---------|-------------|----------|
| Nominal | Size | | Part No. | Thickness | Style | Size | Part No. |
| | Actual | Metric | | | | | |
| 1/4" | .256 | 6.5mm | 75484 | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A, H | Die 1/4 R | 75495 |
| | | | | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H | Die 1/4 S | 75496 |
| 5/16" | .315 | 8mm | 75485 | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A, H | Die 5/16 R | 75497 |
| | | | | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H | Die 5/16 S | 75498 |
| 11/32" | .335 | 8.5mm | 75486 | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A, H | Die 11/32 R | 75499 |
| | | | | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H | Die 11/32 S | 75500 |
| 3/8" | .394 | 10mm | 75487 | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A, H | Die 3/8 R | 75501 |
| | | | | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H | Die 3/8 S | 75502 |
| | | | | 5/16 (.312) max. | C | Die 3/8 C | 75524 |
| 7/16" | .433 | 11mm | 75488 | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A, H | Die 7/16 R | 75503 |
| | | | | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H | Die 7/16 S | 75504 |
| | | | | >1/4 (.250) to 3/8 (.375) | F, A, H | Die 7/16 T | 75505 |
| | | | | 5/16 (.312) max. | C | Die 7/16 C | 75525 |
| 1/2" | .512 | 13mm | 75489 | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A, H | Die 1/2 R | 75506 |
| | | | | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H | Die 1/2 S | 75507 |
| | | | | >1/4 (.250) to 3/8 (.375) | F, A, H | Die 1/2 T | 75508 |
| | | | | 5/16 (.312) max. | C | Die 1/2 C | 75526 |
| 9/16" | .551 | 14mm | 75490 | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A, H | Die 9/16 R | 75509 |
| | | | | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H | Die 9/16 S | 75510 |
| | | | | >1/4 (.250) to 3/8 (.375) | F, A, H | Die 9/16 T | 75511 |
| | | | | 5/16 (.312) max. | C | Die 9/16 C | 75527 |
| 5/8" | .625 | 15.9mm | 75491 | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A, H | Die 5/8 R | 75512 |
| | | | | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H | Die 5/8 S | 75513 |
| | | | | >1/4 (.250) to 3/8 (.375) | F, A, H | Die 5/8 T | 75514 |
| | | | | 5/16 (.312) max. | C | Die 5/8 C | 75528 |
| 11/16" | .688 | 17.5mm | 75492 | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A, H | Die 11/16 R | 75515 |
| | | | | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H | Die 11/16 S | 75516 |
| | | | | >1/4 (.250) to 3/8 (.375) | F, A, H | Die 11/16 T | 75517 |
| | | | | 5/16 (.312) max. | C | Die 11/16 C | 75529 |
| 3/4" | .750 | 19mm | 75493 | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A, H | Die 3/4 R | 75518 |
| | | | | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H | Die 3/4 S | 75519 |
| | | | | >1/4 (.250) to 3/8 (.375) | F, A, H | Die 3/4 T | 75520 |
| | | | | 5/16 (.312) max. | C | Die 3/4 C | 75530 |
| 25/32" | .787 | 20mm | 75494 | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A, H | Die 25/32 R | 75521 |
| | | | | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H | Die 25/32 S | 75522 |
| | | | | >1/4 (.250) to 3/8 (.375) | F, A, H | Die 25/32 T | 75523 |
| | | | | 5/16 (.312) max. | C | Die 25/32 C | 75531 |
| 13/16" | .812 | 20.6mm | 75733 | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A, H | Die 13/16 R | 75734 |
| | | | | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H | Die 13/16 S | 75787 |
| | | | | >1/4 (.250) to 3/8 (.375) | F, A, H | Die 13/16 T | 75785 |
| | | | | 5/16 (.312) max. | C | Die 13/16 C | 75786 |

| OBLONG PUNCH | | | MATERIAL | | DIE | | |
|----------------|-------------|---------------|----------|--|---------|--------------------|----------|
| Nominal | Size | | Part No. | Thickness | Style | Size | Part No. |
| | Actual | Metric | | | | | |
| 1/4" x 1/2" | .256 x .512 | 6.5mm x 13mm | 75669 | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A, H | Die 1/4 x 1/2 R | 75674 |
| | | | | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H | Die 1/4 x 1/2 S | 75675 |
| 11/32" x 1/2" | .335 x .512 | 8.5mm x 13mm | 75670 | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A, H | Die 11/32 x 1/2 R | 75676 |
| | | | | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H | Die 11/32 x 1/2 S | 75677 |
| 7/16" x 5/8" | .433 x .650 | 11mm x 16.5mm | 75671 | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A, H | Die 7/16 x 5/8 R | 75678 |
| | | | | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H | Die 7/16 x 5/8 S | 75679 |
| | | | | >1/4 (.250) to 3/8 (.375) | F, A, H | Die 7/16 x 5/8 T | 75680 |
| | | | | 5/16 (.312) max. | C | Die 7/16 x 5/8 C | 75687 |
| 1/2" x 3/4" | .512 x .768 | 13mm x 19.5mm | 75672 | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A, H | Die 1/2 x 3/4 R | 75681 |
| | | | | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H | Die 1/2 x 3/4 S | 75682 |
| | | | | >1/4 (.250) to 3/8 (.375) | F, A, H | Die 1/2 x 3/4 T | 75683 |
| | | | | 5/16 (.312) max. | C | Die 1/2 x 3/4 C | 75688 |
| 9/16" x 13/16" | .551 x .827 | 14mm x 21mm | 75673 | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A, H | Die 9/16 x 13/16 R | 75684 |
| | | | | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H | Die 9/16 x 13/16 S | 75685 |
| | | | | >1/4 (.250) to 3/8 (.375) | F, A, H | Die 9/16 x 13/16 T | 75686 |
| | | | | 5/16 (.312) max. | C | Die 9/16 x 13/16 C | 75689 |

Punching capacity data is based on mild steel of 65,000 psi tensile strength.

Legend



PUNCH-PRO™ — MODEL 75005





| ROUND PUNCH | | | | MATERIAL | | DIE | |
|-------------|--------|--------|----------|--|---------|-------------|----------|
| Nominal | Size | | Part No. | Thickness | Style | Size | Part No. |
| | Actual | Metric | | | | | |
| 7/16" | .433 | 11mm | 75532 | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H | Die 7/16 A | 75541 |
| | | | | >1/4 (.250) to 3/8 (.375) | F, A, H | Die 7/16 B | 75542 |
| | | | | 5/16 (.312) max. | C | Die 7/16 C | 75559 |
| 1/2" | .512 | 13mm | 75533 | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H | Die 1/2 A | 75543 |
| | | | | >1/4 (.250) to 3/8 (.375) | F, A, H | Die 1/2 B | 75544 |
| | | | | 5/16 (.312) max. | C | Die 1/2 C | 75560 |
| 9/16" | .551 | 14mm | 75534 | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H | Die 9/16 A | 75545 |
| | | | | >1/4 (.250) to 3/8 (.375) | F, A, H | Die 9/16 B | 75546 |
| | | | | 5/16 (.312) max. | C | Die 9/16 C | 75561 |
| 5/8" | .625 | 15.9mm | 75535 | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H | Die 5/8 A | 75547 |
| | | | | >1/4 (.250) to 3/8 (.375) | F, A, H | Die 5/8 B | 75548 |
| | | | | 5/16 (.312) max. | C | Die 5/8 C | 75562 |
| 11/16" | .688 | 17.5mm | 75536 | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H | Die 11/16 A | 75549 |
| | | | | >1/4 (.250) to 3/8 (.375) | F, A, H | Die 11/16 B | 75550 |
| | | | | 5/16 (.312) max. | C | Die 11/16 C | 75563 |
| 3/4" | .750 | 19mm | 75537 | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H | Die 3/4 A | 75551 |
| | | | | >1/4 (.250) to 3/8 (.375) | F, A, H | Die 3/4 B | 75552 |
| | | | | 5/16 (.312) max. | C | Die 3/4 C | 75564 |
| 25/32" | .787 | 20mm | 75538 | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H | Die 25/32 A | 75553 |
| | | | | >1/4 (.250) to 3/8 (.375) | F, A, H | Die 25/32 B | 75554 |
| | | | | 5/16 (.312) max. | C | Die 25/32 C | 75565 |
| 13/16" | .812 | 20.6mm | 75539 | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H | Die 13/16 A | 75555 |
| | | | | >1/4 (.250) to 3/8 (.375) | F, A, H | Die 13/16 B | 75556 |
| | | | | 5/16 (.312) max. | C | Die 13/16 C | 75566 |
| 7/8" | .875 | 22.2mm | 75540 | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H | Die 7/8 A | 75557 |
| | | | | >1/4 (.250) to 3/8 (.375) | F, A, H | Die 7/8 B | 75558 |
| | | | | 5/16 (.312) max. | C | Die 7/8 C | 75567 |

| OBLONG PUNCH | | | | MATERIAL | | DIE | |
|-----------------------|-------------------|---------------------|----------|--|---------|---------------------|----------|
| Nominal | Size | | Part No. | Thickness | Style | Size | Part No. |
| | Actual | Metric | | | | | |
| 7/16" x 5/8" | .433 x .650 | 11mm x 16.5mm | 75690 | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H | Die 7/16 x 5/8 A | 75694 |
| | | | | >1/4 (.250) to 3/8 (.375) | F, A, H | Die 7/16 x 5/8 B | 75695 |
| | | | | 5/16 (.312) max. | C | Die 7/16 x 5/8 C | 75702 |
| 1/2" x 3/4" | .512 x .768 | 13mm x 19.5mm | 75691 | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H | Die 1/2 x 3/4 A | 75696 |
| | | | | >1/4 (.250) to 3/8 (.375) | F, A, H | Die 1/2 x 3/4 B | 75697 |
| | | | | 5/16 (.312) max. | C | Die 1/2 x 3/4 C | 75703 |
| 9/16" x 13/16" | .551 x .827 | 14mm x 21mm | 75692 | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H | Die 9/16 x 13/16 A | 75698 |
| | | | | >1/4 (.250) to 3/8 (.375) | F, A, H | Die 9/16 x 13/16 B | 75699 |
| | | | | 5/16 (.312) max. | C | Die 9/16 x 13/16 C | 75704 |
| 11/16" x 13/16" | .709 x .827 | 18mm x 21mm | 75693 | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H | Die 11/16 x 13/16 A | 75700 |
| | | | | >1/4 (.250) to 3/8 (.375) | F, A, H | Die 11/16 x 13/16 B | 75701 |



Punching capacity data is based on mild steel of 65,000 psi tensile strength.

Legend

| | | | |
|---|---|---|---|
|  |  |  |  |
| (F) | (C) | (H) | (A) |
| Flat Bar | Channel | H-Steel | Angle |

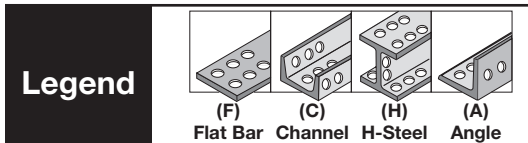
PUNCH-PRO™ — MODEL 75006

| ROUND PUNCH | | | Part No. | MATERIAL | | DIE | |
|----------------------------|--------|--------------|----------|--|---------|--------------|----------|
| Size | | | | Thickness | Style | Size | Part No. |
| Nominal | Actual | Metric | | | | | |
| 7/16" | .433 | 11mm | 75568 | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A, H | Die 7/16 A | 75578 |
| | | | | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H | Die 7/16 B | 75579 |
| | | | | >1/4 (.250) to 3/8 (.375) | F, A, H | Die 7/16 C | 75580 |
| | | | | 5/16 (.312) max. | C | Die 7/16 CC | 75616 |
| 1/2" | .512 | 13MM | 75569 | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A, H | Die 1/2 A | 75581 |
| | | | | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H | Die 1/2 B | 75582 |
| | | | | >1/4 (.250) to 3/8 (.375) | F, A, H | Die 1/2 C | 75583 |
| | | | | 5/16 (.312) max. | C | Die 1/2 CC | 75617 |
| 9/16" | .552 | 14mm | 75570 | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A, H | Die 9/16 A | 75584 |
| | | | | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H | Die 9/16 B | 75585 |
| | | | | >1/4 (.250) to 3/8 (.375) | F, A, H | Die 9/16 C | 75586 |
| | | | | >3/8 (.375) to 1/2 (.500) | F, A, H | Die 9/16 D | 75587 |
| | | | | 5/16 (.312) max. | C | Die 9/16 CC | 75618 |
| | | | | >5/16 (.312) to 1/2 (.500) | C | Die 9/16 CD | 75619 |
| 5/8" | .625 | 15.9mm | 75571 | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A, H | Die 5/8 A | 75588 |
| | | | | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H | Die 5/8 B | 75589 |
| | | | | >1/4 (.250) to 3/8 (.375) | F, A, H | Die 5/8 C | 75590 |
| | | | | >3/8 (.375) to 1/2 (.500) | F, A, H | Die 5/8 D | 75591 |
| | | | | 5/16 (.312) max. | C | Die 5/8 CC | 75620 |
| | | | | >5/16 (.312) to 1/2 (.500) | C | Die 5/8 CD | 75621 |
| 11/16" | .688 | 17.5mm | 75572 | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A, H | Die 11/16 A | 75592 |
| | | | | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H | Die 11/16 B | 75593 |
| | | | | >1/4 (.250) to 3/8 (.375) | F, A, H | Die 11/16 C | 75594 |
| | | | | >3/8 (.375) to 1/2 (.500) | F, A, H | Die 11/16 D | 75595 |
| | | | | 5/16 (.312) max. | C | Die 11/16 CC | 75622 |
| | | | | >5/16 (.312) to 1/2 (.500) | C | Die 11/16 CD | 75623 |
| 3/4" | .750 | 19mm | 75573 | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A, H | Die 3/4 A | 75596 |
| | | | | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H | Die 3/4 B | 75597 |
| | | | | >1/4 (.250) to 3/8 (.375) | F, A, H | Die 3/4 C | 75598 |
| | | | | >3/8 (.375) to 1/2 (.500) | F, A, H | Die 3/4 D | 75599 |
| | | | | 5/16 (.312) max. | C | Die 3/4 CC | 75624 |
| | | | | >5/16 (.312) to 1/2 (.500) | C | Die 3/4 CD | 75625 |
| 25/32" | .787 | 20mm | 75574 | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A, H | Die 25/32 A | 75600 |
| | | | | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H | Die 25/32 B | 75601 |
| | | | | >1/4 (.250) to 3/8 (.375) | F, A, H | Die 25/32 C | 75602 |
| | | | | >3/8 (.375) to 1/2 (.500) | F, A, H | Die 25/32 D | 75603 |
| | | | | 5/16 (.312) max. | C | Die 25/32 CC | 75626 |
| >5/16 (.312) to 1/2 (.500) | C | Die 25/32 CD | 75627 | | | | |

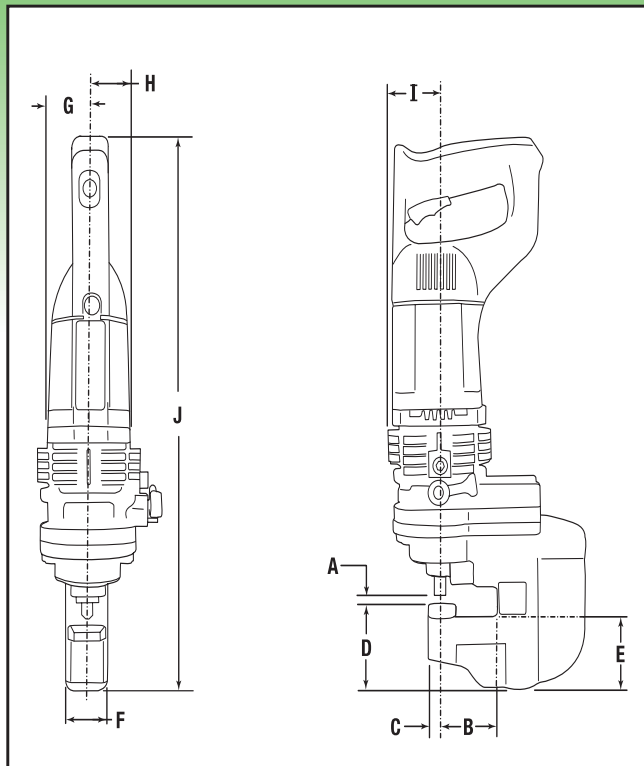
| ROUND PUNCH | | | Part No. | MATERIAL | | DIE | |
|----------------------------|--------|------------|----------|--|---------|--------------|----------|
| Size | | | | Thickness | Style | Size | Part No. |
| Nominal | Actual | Metric | | | | | |
| 13/16" | .812 | 20.6mm | 75575 | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A, H | Die 13/16 A | 75604 |
| | | | | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H | Die 13/16 B | 75605 |
| | | | | >1/4 (.250) to 3/8 (.375) | F, A, H | Die 13/16 C | 75606 |
| | | | | >3/8 (.375) to 1/2 (.500) | F, A, H | Die 13/16 D | 75607 |
| | | | | 5/16 (.312) max. | C | Die 13/16 CC | 75628 |
| | | | | >5/16 (.312) to 1/2 (.500) | C | Die 13/16 CD | 75629 |
| 7/8" | .875 | 22.2mm | 75576 | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A, H | Die 7/8 A | 75608 |
| | | | | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H | Die 7/8 B | 75609 |
| | | | | >1/4 (.250) to 3/8 (.375) | F, A, H | Die 7/8 C | 75610 |
| | | | | >3/8 (.375) to 1/2 (.500) | F, A, H | Die 7/8 D | 75611 |
| | | | | 5/16 (.312) max. | C | Die 7/8 CC | 75630 |
| >5/16 (.312) to 1/2 (.500) | C | Die 7/8 CD | 75631 | | | | |
| 15/16" | .938 | 23.8mm | 75577 | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A, H | Die 15/16 A | 75612 |
| | | | | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H | Die 15/16 B | 75613 |
| | | | | >1/4 (.250) to 3/8 (.375) | F, A, H | Die 15/16 C | 75614 |
| | | | | >3/8 (.375) to 15/32 (.469) | F, A, H | Die 15/16 D | 75615 |

| OBLONG PUNCH | | | Part No. | MATERIAL | | DIE | |
|------------------|-------------|------------------|----------|--|---------|----------------------|----------|
| Size | | | | Thickness | Style | Size | Part No. |
| Nominal | Actual | Metric | | | | | |
| 7/16" x 5/8" | .433 x .650 | 11mm x 16.5mm | 75705 | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A, H | Die 7/16 x 5/8 A | 75709 |
| | | | | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H | Die 7/16 x 5/8 B | 75710 |
| | | | | >1/4 (.250) to 3/8 (.375) | F, A, H | Die 7/16 x 5/8 C | 75711 |
| | | | | 5/16 (.312) max. | C | Die 7/16 x 5/8 CC | 75723 |
| 1/2" x 3/4" | .512 x .768 | 13mm x 19.5mm | 75706 | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A, H | Die 1/2 x 3/4 A | 75712 |
| | | | | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H | Die 1/2 x 3/4 B | 75713 |
| | | | | >1/4 (.250) to 3/8 (.375) | F, A, H | Die 1/2 x 3/4 C | 75714 |
| 5/16 (.312) max. | C | Die 1/2 x 3/4 CC | 75724 | | | | |
| 9/16" x 13/16" | .551 x .827 | 14mm x 21mm | 75707 | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A, H | Die 9/16 x 13/16 A | 75715 |
| | | | | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H | Die 9/16 x 13/16 B | 75716 |
| | | | | >1/4 (.250) to 3/8 (.375) | F, A, H | Die 9/16 x 13/16 C | 75717 |
| | | | | >3/8 (.375) to 1/2 (.500) | F, A, H | Die 9/16 x 13/16 D | 75718 |
| | | | | 5/16 (.312) max. | C | Die 9/16 x 13/16 CC | 75725 |
| | | | | >5/16 (.312) to 1/2 (.500) | C | Die 9/16 x 13/16 CD | 75726 |
| 11/16" x 13/16" | .709 x .827 | 18mm x 21mm | 75708 | 5/64 (.078) to 1/8 (.125) 14 to 11 GA. | F, A, H | Die 11/16 x 13/16 A | 75719 |
| | | | | >1/8 (.125) to 1/4 (.250) 10 to 3 GA. | F, A, H | Die 11/16 x 13/16 B | 75720 |
| | | | | >1/4 (.250) to 3/8 (.375) | F, A, H | Die 11/16 x 13/16 C | 75721 |
| | | | | >3/8 (.375) to 1/2 (.500) | F, A, H | Die 11/16 x 13/16 D | 75722 |
| | | | | 5/16 (.312) max. | C | Die 11/16 x 13/16 CC | 75727 |
| | | | | >5/16 (.312) to 1/2 (.500) | C | Die 11/16 x 13/16 CD | 75728 |

Punching capacity data is based on mild steel of 65,000 psi tensile strength.



Model Dimensions



Special Notice Regarding Punches and Dies

The exclusive Hougen-Ogura punch geometry and die clearances reduces press tonnage requirements and increases portability. Premium heat treated materials help achieve tool life increases of two to two and a half times that of other manufacturers and generic copies. The use of incorrect punches or dies could result in unacceptable performance or damage to the machine and may void the warranty. Hougen Manufacturing Inc. recommends the use of only genuine Hougen-Ogura punches and dies.

Hougen-Ogura Repair Center

Hougen Manufacturing, Inc.

3001 Hougen Drive
Swartz Creek, Michigan 48473 USA
Phone: (810) 635-7111
Fax: (810) 635-8277

| Part No. | A | B | C | D | E | F | G | H | I | J |
|----------|-----|------|-----|------------------------|------|------|------|------|------|-------|
| 76000 | .31 | 1.02 | .51 | 1.81 | — | — | — | — | — | 10.60 |
| 75002.5A | .31 | 2.36 | .59 | 2.99 | — | 2.21 | 2.47 | 3.03 | 2.12 | 20.16 |
| 75003A | .31 | 2.16 | .59 | L.D. STD. 4.29 2.91 | — | 2.59 | 2.47 | 3.06 | 1.94 | 21.42 |
| 75004R | .43 | 1.57 | .67 | 3.03 | — | 3.05 | 2.47 | 3.16 | 2.56 | 21.26 |
| 75005 | .43 | 3.94 | .75 | 2.76 | 4.38 | 2.73 | 2.88 | 3.56 | 3.19 | 21.00 |
| 75006 | .59 | 1.97 | .94 | 3.62 | — | 2.78 | 3.16 | 3.47 | 3.16 | 19.72 |

FACTORY AUTHORIZED WARRANTY SERVICE CENTERS (MAG DRILL & PAINT SHAKER ONLY)

(Service Centers listed alphabetically by State/Province)

ACC Machinery Co., Inc.
747 Grand Avenue
Phoenix AZ 85007
602-258-7330

Fastenal Services Co.
9911 Woodend Road
Edwardsville KS 66111
913-422-8221

Awisco NY Corp
55-16 43rd Ave.
Maspeth NY 11378
718-786-7788

Fastenal Services Co.
3833 Airport Road
Denton TX 76207
972-446-4389

Anchor Products
1810 Dublin Ave.
Winnipeg Manitoba
Canada R3H 0H3
204-633-0064

Fastenal Services Co.
4025 Finch Rd.
Modesto CA 95357
209-548-5000

Allied Sales & Services
1508 River Oaks Rd West
Harahan LA 70123
504-734-9566

Hanes Supply Repair Center
20 Jetview Drive
Rochester NY 14624
585-235-0169

Arcmaster Repair Center
301 Woodrow Ave.
Forth Worth TX 76105
817-531-8101

Hougen Canada
309 Nash Road North
Hamilton Ontario
Canada L8H 7P4
905-573-9088

Kenbil Service Center
2900 Adams St C-18
Riverside CA 92504
951-689-6633

N.H. Bragg & Sons
92 Perry Road
Bangor ME 04401
207-947-8611

Ace Tool Repair
2201 Wantagh Ave.
Wantagh NY 11793
516-783-8899

Arcet Equipment Co.
3416 Odd Fellows Road
Lynchburg VA 24501
434-847-1234

Fastenal Services Co.
860 Trillium Dr.
Kitchener Ontario
Canada N3R 1K4
519-748-6566

Caltool Industrial
470 Hester Street
San Leandro CA 94577
510-729-0600

Hougen Manufacturing
3001 Hougen Drive
Swartz Creek MI 48473
810-635-7111

Awisco NY Corp.
20c Gleam Street
West Babylon NY 11704
631-643-1308

American Equip Services
22418 72nd Ave. South
Kent WA 98032
253-395-9947

Outiltech Orleans, Inc.
4975 Rue Rideau Local 180
Quebec City Quebec
Canada G2E 5H5
418-877-7776

AIS Industrial
3900 Ulster Street
Denver CO 80207
303-355-2391

Westbrook Engineering
23501 Mound Road
Warren MI 48091
586-759-3100

Cincinnati Electrical Repair
2023 Elm Street
Cincinnati OH 45202
513-621-2183

Edge Construction Supply
1503 E. Riverside Ave.
Spokane WA 99202
509-535-9841

Brunswick Ind. Supply
551 Ferdinand Blvd., Unit 4
Dieppe New Brunswick
Canada E1A 7G1
506-859-1303

Jossam Tool Repair
411 Burnham Street
East Hartford CT 06108
860-290-9044

Fastenal Services Co.
15 Prairie Island Road
Winona MN 55987
507-453-8280

Pennsylvania Tool Sales
625 Bev Road
Youngstown OH 44512
330-758-0845

Fastenal Services Co.
9725 47th. Ave SW
Lakewood WA 98489
253-983-0015

Colony Hardware Supply
15 Stiles Street
New Haven CT 06512
203-466-5252

Ceekay Repair Center
5835 Manchester Ave
St. Louis MO 63110
314-644-3500

Wilbanks Repair Center
5532 S. 94th East Ave.
Tulsa OK 74145
918-627-8445

CANADA
Industrial Power Tool
8, 4115 64 Ave S.E.
Calgary, Alberta
Canada T2C 2C8
403-261-0780

Fastenal Services Co.
6445 Fulton
Atlanta GA 30336
404-346-4520

Mid-South Welding Supply
505 51st. Ave
Meridian MS 39307
601-483-9331

Matheson
7926 NE Killingsworth St
Portland OR 97218
503-221-1100

Celtic Ind. Tools & Repair
5736-103 A Street
Edmonton Alberta
Canada T6H 3J5
780-431-0970

Idaho Tool & Equip
452 Caldwell
Nampa ID 83651
208-465-7533

Fastenal Services Co.
4110 Premier Dr. #102
High Point NC 27265
336-841-6555

Fastenal Services Co.
1225 Mid Valley Drive
Jessup PA 18434
570-307-6555

Power Tool Clinic
#105 19835-56 Ave.
Langley British Columbia
Canada V3A 3Y1
604-530-3550

Fastenal Services Co.
5851 Guion Road
Indianapolis IN 46254
317-280-2502

A&A Industrial Supplies
245 Meacham Ave
Elmont NY 11003
516-437-0114

Boyer Machinery
2280 Wyandotte Road
Willow Grove PA 19090
215-657-2242

OTHER HELPFUL INFORMATION

Material Cutting Speed: Surface Feet per Minute (SFM)

| Type of Material | Brinell Hardness | Cutting Speed (sfm) | Tool Material |
|--|------------------|---------------------|--------------------|
| Aluminum <ul style="list-style-type: none"> Wrought & Cast Die cast 360.0, 380.0 383.0, 413.0 390.0, 392.0 | * 30-150 | 500-1000 | M2 |
| | * 40-125 | 450-600 | M2 |
| | * 40-125 | 450-600 | M2 |
| | * 40-125 | 75-100 | M2 |
| Brass & Bronze | ---- | 300-600 | M2 |
| Cast Iron <ul style="list-style-type: none"> Soft Medium Chilled | 120-150 | 75-125 | M2 |
| | 160-220 | 50-100 | M2/M42 |
| | 230-300 | 30-50 | M42 |
| Malleable Iron <ul style="list-style-type: none"> Ferritic Pearlitic Tempered Matensite | 110-160 | 100-130 | M2 |
| | 160-220 | 75-100 | M2 |
| | 200-320 | 30-60 | M42 |
| Magnesium | * 50-90 | 400-800 | M2 |
| Nickel Alloys <ul style="list-style-type: none"> 200-230 Monel 400-404 Monel K500, 502 | 80-170 | 60-80 | M2 |
| | 115-240 | 35-50 | M2 |
| | 150-330 | 20-40 | M42 |
| Steel Free Machining <ul style="list-style-type: none"> Resulphurized/Leaded | ---- | 105-130 | M2 |
| Carbon Steel | 125-160 | 90-110 | M2 |
| Steel Alloys Soft | 170-210 | 65-90 | M2 |
| Steel Alloys Medium | 220-250 | 55-75 | M2 |
| Steel Alloys Hard | 260-300 | 35-50 | M2/M42 |
| | 325-400 | 30-40 | M42/ M42 Coated |
| Tool Steel <ul style="list-style-type: none"> T15, M42, D2 M2, A2 S6, H13 | 210-250 | 35-60 | M2/M42 |
| Forgings | ---- | 40-50 | M2 |
| Armor Plate | 200-250 | 40-55 | M2/M42 |
| | 250-300 | 30-45 | M42/ M42 Coated |
| Stainless Steel Ferritic <ul style="list-style-type: none"> 430/405 430F | 135-185 | 90-125 | M2 |
| Stainless Steel Austenitic <ul style="list-style-type: none"> Lower BHN Higher BHN <ul style="list-style-type: none"> 309/316 301/304 303/203EZ | 135-185 | 55-75 | M2 |
| | 225-275 | 40-70 | M2 |
| Stainless Steel Nitronic (Low Alloy) | 275-325 | 25-35 | M42 |
| Stainless Steel Martensitic <ul style="list-style-type: none"> By Hardness Range 501 416/440F | 135-185 | 70-125 | M2 |
| | 185-240 | 45-110 | M2 |
| | 275-325 | 35-55 | M42 |
| | 375-425 | 30-55 | M42 Coated |
| Stainless Steel Precipitation Hardening <ul style="list-style-type: none"> By Hardness Range 17-4 PH | 150-200 | 45-55 | M2 |
| | 275-325 | 40-50 | M42 |
| | 325-375 | 35-45 | M42 Coated |

Hardness Conversion Chart

| Rockwell Hardness "C" Scale | Brinell Hardness |
|-----------------------------|------------------|
| 20 | 226 |
| 25 | 253 |
| 28 | 271 |
| 30 | 286 |
| 32 | 301 |
| 34 | 319 |
| 36 | 336 |
| 38 | 353 |
| 40 | 371 |
| 43 | 400 |

Grind Down Limits

| Dia. Range | Minimum (Inches) | Maximum (Inches) |
|----------------------------|------------------|------------------|
| RotaCut™ | | |
| 1/4", 9/32", 6mm, 7mm | No Grind Down | |
| 5/16" - 17/32" | .0015 | .0070 |
| 8mm - 14mm | .0015 | .0070 |
| 9/16" - 1-1/2" | .0020 | .0100 |
| 15mm - 25mm | .0020 | .0100 |
| "12,000-Series" | | |
| 7/16", 1/2", 12mm, 13mm | .0020 | .0100 |
| 9/16" - 1-5/16" | .0020 | .0150 |
| 14mm - 34mm | .0020 | .0150 |
| 1-3/8" - 2-3/8" | .0020 | .0200 |
| 35mm - 51mm | .0020 | .0200 |
| "42,000-Series" | | |
| 3/4" - 13/16" | .0020 | .0150 |
| 7/8" - 2" | .0020 | .0200 |
| "43,000-Series" | | |
| 2-1/16" - 3-1/16" | .0020 | .0200 |

**Visit www.hougen.com
for an interactive Speed
& Feed Calculator**

Carbide Cutting Speed: Surface Feet per Minute (SFM)

| Mild Steel | Stainless | Cast Iron |
|------------|-----------|-----------|
| 164 | 115 | 131 |

OTHER HELPFUL INFORMATION

Conversion Chart: SFM to RPM

| Cutter Dia. (Inches) | Surface Feet per Minute | | | | | | | | | |
|------------------------------|-------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 |
| Revolutions per Minute (RPM) | | | | | | | | | | |
| .7500 | 51 | 102 | 153 | 204 | 255 | 306 | 357 | 407 | 458 | 509 |
| .8750 | 44 | 87 | 131 | 175 | 218 | 262 | 306 | 349 | 393 | 437 |
| 1.0000 | 38 | 76 | 115 | 153 | 191 | 229 | 267 | 306 | 344 | 382 |
| 1.1250 | 34 | 68 | 102 | 136 | 170 | 204 | 238 | 272 | 306 | 340 |
| 1.2500 | 31 | 61 | 92 | 122 | 153 | 183 | 214 | 244 | 275 | 306 |
| 1.3750 | 28 | 56 | 83 | 111 | 139 | 167 | 194 | 222 | 250 | 278 |
| 1.5000 | 25 | 51 | 76 | 102 | 127 | 153 | 178 | 204 | 229 | 255 |
| 1.6250 | 24 | 47 | 71 | 94 | 118 | 141 | 165 | 188 | 212 | 235 |
| 1.7500 | 22 | 44 | 65 | 87 | 109 | 131 | 153 | 175 | 196 | 218 |
| 1.8750 | 20 | 41 | 61 | 81 | 102 | 122 | 143 | 163 | 183 | 204 |
| 2.0000 | 19 | 38 | 57 | 76 | 95 | 115 | 134 | 153 | 172 | 191 |
| 2.1250 | 18 | 36 | 54 | 72 | 90 | 108 | 126 | 144 | 162 | 180 |
| 2.2500 | 17 | 34 | 51 | 68 | 85 | 102 | 119 | 136 | 153 | 170 |
| 2.3750 | 16 | 32 | 48 | 64 | 80 | 96 | 113 | 129 | 145 | 161 |
| 2.5000 | 15 | 31 | 46 | 61 | 76 | 92 | 107 | 122 | 138 | 153 |
| 2.6250 | 15 | 29 | 44 | 58 | 73 | 87 | 102 | 116 | 131 | 146 |
| 2.7500 | 14 | 28 | 42 | 56 | 69 | 83 | 97 | 111 | 125 | 139 |
| 2.8750 | 13 | 27 | 40 | 53 | 66 | 80 | 93 | 106 | 120 | 133 |
| 3.0000 | 13 | 25 | 38 | 51 | 64 | 76 | 89 | 102 | 115 | 127 |
| 3.1250 | 12 | 24 | 37 | 49 | 61 | 73 | 86 | 98 | 110 | 122 |
| 3.2500 | 12 | 24 | 35 | 47 | 59 | 71 | 82 | 94 | 106 | 118 |
| 3.3750 | 11 | 23 | 34 | 45 | 57 | 68 | 79 | 91 | 102 | 113 |
| 3.5000 | 11 | 22 | 33 | 44 | 55 | 64 | 76 | 87 | 98 | 109 |
| 3.6250 | 11 | 21 | 32 | 42 | 53 | 63 | 74 | 84 | 95 | 105 |
| 3.7500 | 10 | 20 | 31 | 41 | 51 | 61 | 71 | 81 | 92 | 102 |
| 3.8750 | 10 | 20 | 30 | 39 | 49 | 59 | 69 | 79 | 89 | 99 |
| 4.0000 | 10 | 19 | 29 | 38 | 48 | 57 | 67 | 76 | 86 | 95 |

To compute RPM's for cutting speeds other than those shown, either select two speeds from the table that add up to the speed desired and then add their RPM's, or select a factor which, when multiplied by one of the speeds in the table, gives the desired speed and multiply its RPM by the same factor.

Examples: To find the RPM for a 1" diameter cutter run at 150 SFM --
 1) Add RPM's for 100 SFM (382) and 50 SFM (191) = 573 rpm
 2) Or multiply the RPM for 50 SFM (191) by a factor of 3 = 573 rpm

TECHNICAL TIPS

- **#1 cause of broken or prematurely dull cutters is too slow of feed rate. Slower feed rates will not add life to your cutter but actually reduce the cutter's life. Use firm steady feed pressure throughout cut.**
- **Always make sure to clear all chips from your cutter before starting the next hole.**
- **Make sure support system for drill arbor is in place and not worn out. If using on a drill press, a support system must be used.**
- **For harder material use Hougens's Premium Cutters or Copperhead™ Carbide Tip Cutters.**
- **Make sure mag drill is on a clean work piece and securely attached. Uneven or large build up of debris can cause drill slippage. Material must be at least 3/8" thick. Painted material can also be troublesome if paint buildup does not allow magnet to hold securely.**
- **When slug ejection becomes unreliable or tool resists cutting, sharpen or replace your cutter.**
- **Always use coolant when drilling. For best results use Hougens's Slick-Stik™ or RotaMagic™ cutting lubricant.**
- **For best performance always maintain your drill as instructed in your operator's manual.**
- **Always observe standard and specific safety instructions.**

**FOR MORE INFORMATION VISIT WWW.HOUGEN.COM
OR CALL HOUGEN TECHNICAL SERVICE 800-426-7818**

OUR COMMITMENT TO PROVIDE YOU WITH HOLEMAKING INNOVATIONS

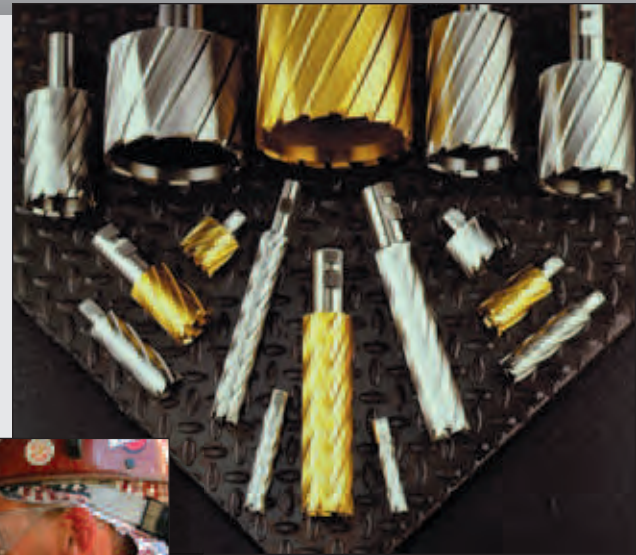
At Hougen®, we want you to make more holes, more often, in more places all in less time... profitably. To that end, Hougen engineers are constantly striving to bring you the right tools.

Hougen® Portable Magnetic Drills are just one of a family of Hole making products that can be found on the production floor or the job-site.

Ask your distributor about how Hougen's fine products can improve your Hole making productivity.

Rotabroach® Industrial Annular Cutters

Produce holes faster than spade, twist, or indexable drills with less power. Improve hole accuracy, finish, and tool life. Hougen® heavy duty annular cutters with patented tooth geometry for use on lathes, mills, drills, and other high production and CNC machine tools.



COMMERCIAL/INDUSTRIAL LIMITED WARRANTY

Hougen Manufacturing, Inc. warrants its Portable Magnetic Drills, Electro-hydraulic Hole Punchers, Trak-Star Rail Drills, and Tornado II Paint Shakers for one (1) year, and it's Husqvarna Saw and other products for ninety (90) days from date of purchase against defects due to faulty material or workmanship and will repair or replace (at its option) without charge any items returned. This warranty is void if the item has been damaged by accident or unreasonable use, neglect, improper service, or other causes not arising out of defects in material or workmanship. No other expressed warranty is given or authorized. Hougen Manufacturing, Inc. disclaims any implied warranty of Merchantability or fitness for any period beyond the expressed warranty and shall not be liable for incidental or consequential damages. Some states do not allow exclusion of incidental or consequential damages or limitation on how long an implied warranty lasts and, if the law of such a state governs your purchase, the above exclusion and limitation may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

To obtain warranty service, return the item(s), transportation prepaid to your nearest Factory Authorized Warranty Service Center, or to Hougen Manufacturing, Inc., 3001 Hougen Drive, Swartz Creek, MI 48473.

This warranty is in lieu of any other warranty, expressed or implied, including any warranty of merchantability or fitness for a particular purpose.



Hougen® Quality

No matter the tool, we stand behind our product 100%. If ever you are not satisfied with one of our products, let us know and we'll work to make you happy. That's why we offer the industries best...

**Service • Integrity
Reliability**

Hougen Patent Notice

The products covered in this catalog may be covered by one or more of the following U.S. patents, foreign patents, and pending patents.

| | | | |
|---------|---------|---------|---------|
| 5145296 | 5624213 | 5607266 | 5902076 |
| 6280123 | D445808 | D447494 | D577750 |

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