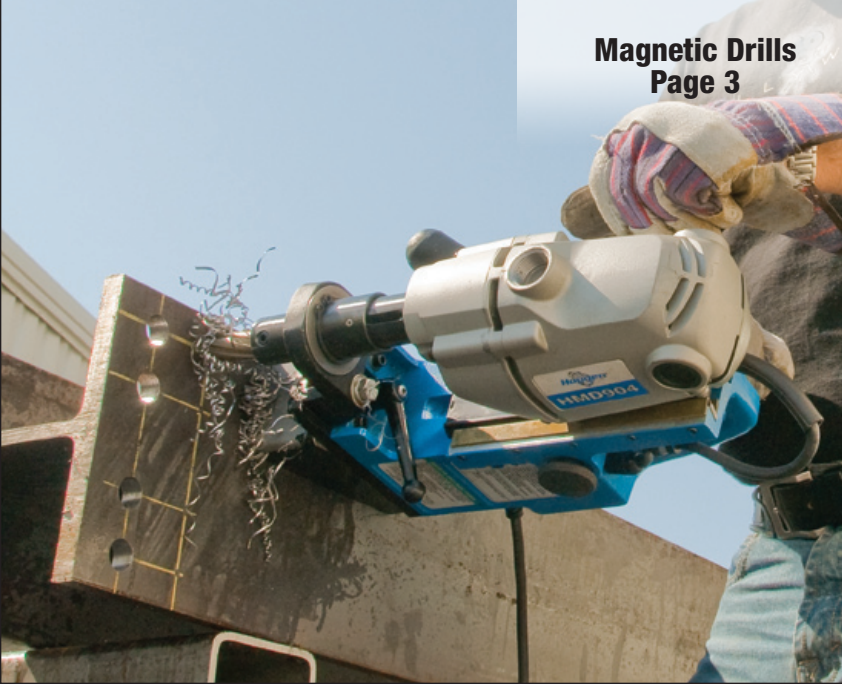


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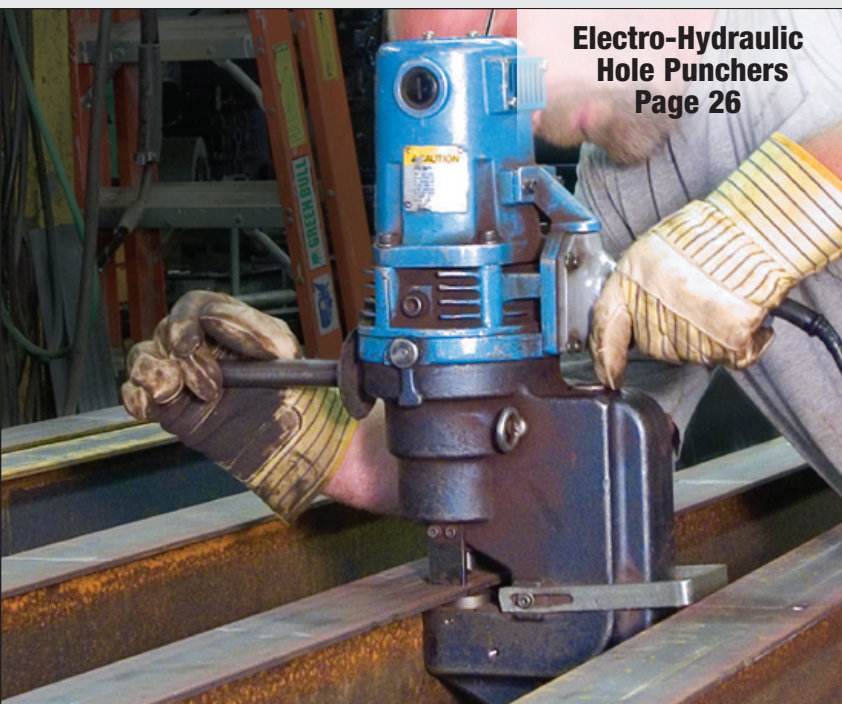


**PORTABLE  
MAGNETIC  
DRILLS,  
HOLE PUNCHERS,  
ACCESSORIES,  
AND  
FABRICATION  
TOOLS**

Rotabroach® Cutters  
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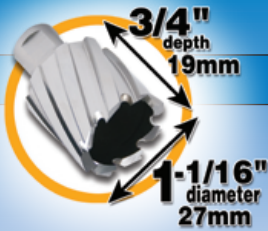


# PORTABLE MAGNETIC DRILLS

		HMD115	HMD150	HMD904	HMD925	HMD914	HMD505 / HMD508	HMD915
		Low Profile		Fabricating			Heavy Duty Drilling	
<b>Annular Cutters</b>	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"							✓
<b>Model Specifications</b>	Diameter Min./Max.	1/2" to 1-1/16" (12 - 27mm)	1/2" 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			✓	✓	✓	✓	✓
<b>Available Accessories</b>	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



Patented

### 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



Made in U.S.A.

### 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.

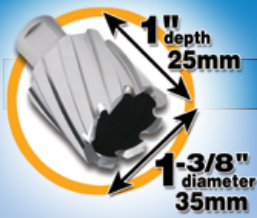
Part No.	Description	Voltage	CSA	Special Plug
0115101	HMD115	115V	X	
0115201	HMD115	230V		
0115301	HMD115	230V		Type I
0115401	HMD115	230V		No Plug

- 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 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	1/2" - 1-3/8" (12mm - 35mm)		
Depth	1" (25mm)		
Cutter/Mount	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



**HMD904  
SWIVEL / COOLANT**



Patented



**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.

HMD904 SPECIFICATIONS			
<b>Electrical System</b>		115V, 50/60 Hz - 9A, 1035W 230V, 50/60 Hz - 4.5A, 1035W	
<b>Motor</b>		8A (115V), 4A (230V) 450 RPM	
<b>Diameter</b>		7/16" - 1-1/2" (12mm - 38mm)	
<b>Depth</b>		2" (50mm)	
<b>Cutter/Mount</b>		Rotabroach® or Copperhead™ 3/4" shank	
<b>Dimensions</b>		16-3/8" H x 7-3/16" W x 8-1/4" L (416mm H x 183mm W x 210mm L)	
<b>Swivel Area</b>		1-1/8" W x 1-3/8" L (28.5mm W x 34.9mm L)	
<b>Magnet</b>	<b>Base</b>	3-1/8" W x 6-9/16" L (79mm W x 167mm L)	
	<b>1" Plate (25mm)</b>	Dead Lift 1750 lb. (794 kg)	Drillpoint Breakaway 995 lb. (433 kg)
	<b>3/8" Plate (9.5mm)</b>	1310 lb. (594 kg)	710 lb. (322 kg)
<b>Swivel Magnet</b>	<b>1" Plate (25mm)</b>	Dead Lift 1340 lb. (608 kg)	Drillpoint Breakaway Forward - 695 lb. (315 kg) Back - 835 lb. (379 kg)
	<b>3/8" Plate (9.5mm)</b>	1015 lb. (460 kg)	Forward - 503 lb. (228 kg) Back - 605 lb. (274 kg)
<b>Net Weight</b>		27.5 lb. (12.5 kg)	
<b>Net Weight (904S)</b>		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® or Copperhead™ 3/4" 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

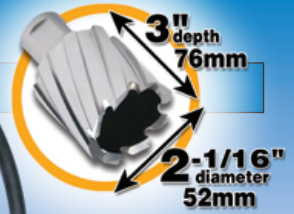


**Increase your versatility with the swivel base!**

### 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.



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

Patented

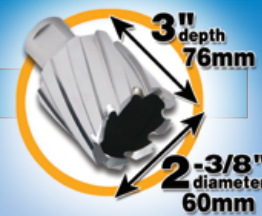


HMD914 SPECIFICATIONS			
<b>Electrical System</b>		115V, 50/60 Hz - 12.2A, 1403W 230V, 50/60 Hz - 6.1A, 1403W	
<b>Motor</b>		11.2A (115V), 5.6A (230V) 350 RPM	
<b>Diameter</b>		7/16" - 2-1/16" (12mm - 52mm)	
<b>Depth</b>		3" (76mm)	
<b>Cutter/Mount</b>		Rotabroach® or Copperhead™ 3/4" shank	
<b>Dimensions</b>		23" H x 7-1/2" W x 12-1/4" L (584mm H x 191mm W x 311mm L)	
<b>Swivel Area</b>		1-1/8" W x 1-3/8" L (28.5mm W x 34.9mm L)	
<b>Magnet</b>	<b>Base</b>	3-1/2" W x 7-3/4" L (89mm W x 197mm L)	
	<b>1" Plate (25mm)</b>	Dead Lift 2230 lb. (1012 kg)	Drillpoint Breakaway 1180 lb. (535 kg)
	<b>3/8" Plate (9.5mm)</b>	1245 lb. (565 kg)	795 lb. (361 kg)
<b>Swivel Magnet</b>	<b>1" Plate (25mm)</b>	Dead Lift 2330 lb. (1057 kg)	Drillpoint Breakaway For. - 980 lb. (445 kg) Back - 1145 lb. (519 kg)
	<b>3/8" Plate (9.5mm)</b>	1360 lb. (617 kg)	For. - 680 lb. (308 kg) Back - 815 lb. (370 kg)
<b>Net Weight</b>		41 lb (18.6 kg)	
<b>Net Weight (914S)</b>		45 lb. (20.4 kg)	



# HOUGEN® PORTABLE MAGNETIC DRILLS

## HMD505 & HMD508



Patented



**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

**Quill Feed Arbor for smooth cuts**



**Two speed gear box for increased tool life**



### 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.

### HMD505 & HMD508 SPECIFICATIONS

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

Optional pressurized coolant system increases productivity and provides coolant even in upside down and horizontal positions. Part No. 24140



# HOUGEN® PORTABLE MAGNETIC DRILLS

## HMD915

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

- Interchangeable gears for up to seven speeds
- Uses Rotabroach "42/43,000-Series" Cutters
- Can use "12,000-Series" Cutters with adapter (Included) - (Part No. 40040)
- 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

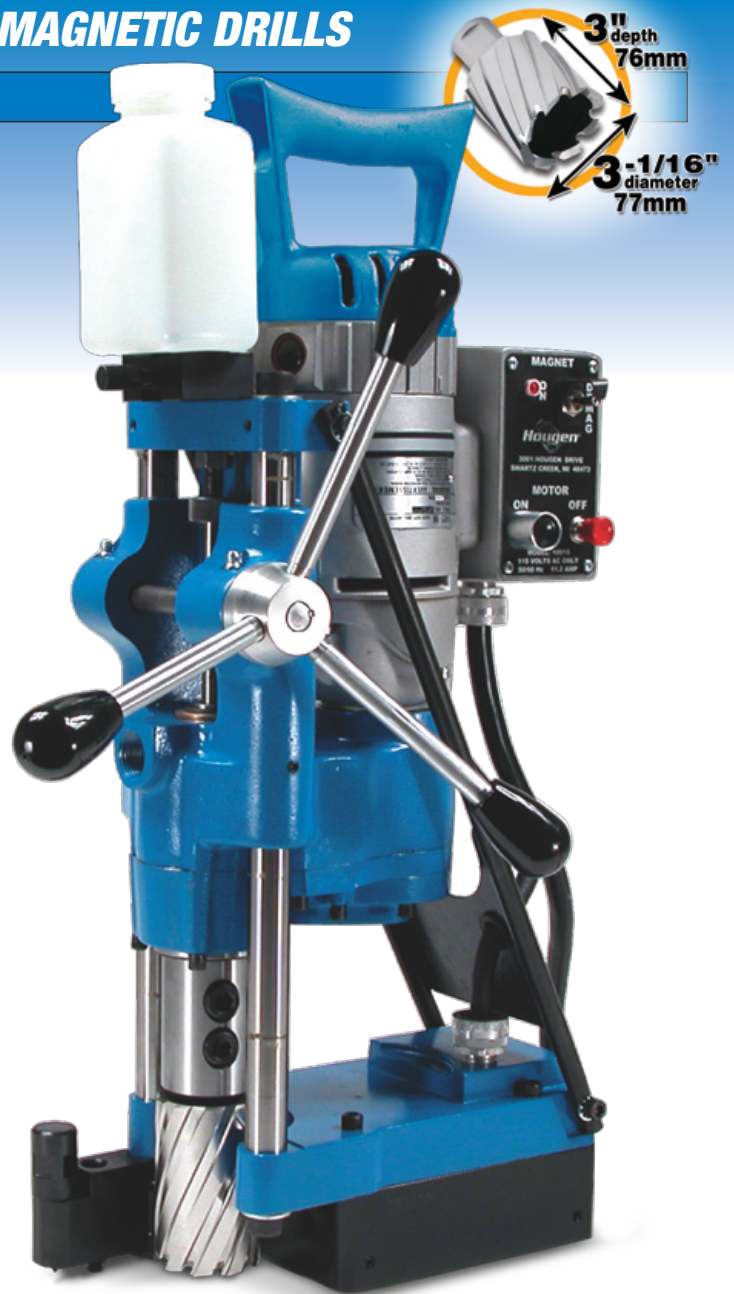
### OPTIONAL GEARING AVAILABLE FOR THE FOLLOWING CUTTER RPM

Cutter RPM	Part No. (Number Teeth Per Gear)	
	Shaft A	Shaft B
100	40011 (16)	40017 (32)
120	40012 (18)	40016 (30)
142	40013 (20)	40015 (28)
200	40014 (24)	40014 (24)
279	40015 (28)	40013 (20)
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

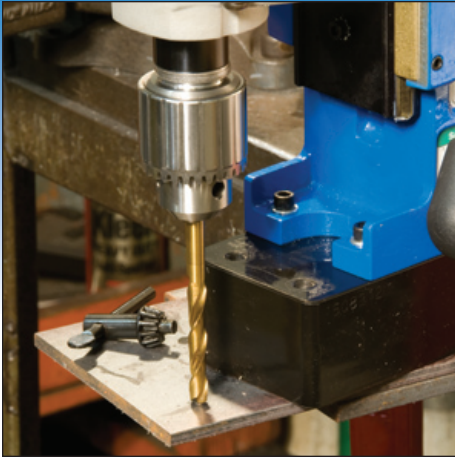
- All drills include: pint of coolant, hex wrenches, adapter for "12,000-Series" cutters, handle & safety chain.



### 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)

1/2" Chuck requires 05536 Spindle Adapter for Model HMD904 and HMD925. 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 4015 Wear Resistant (10 pieces)

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



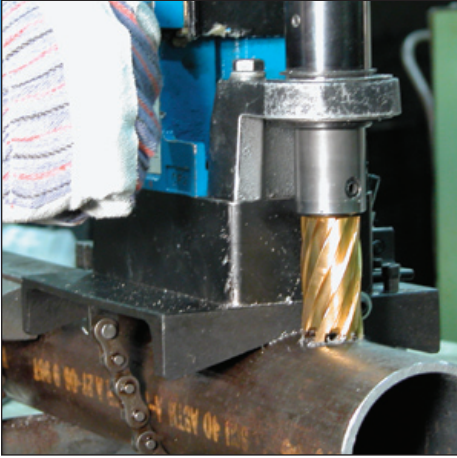
TAPPING ATTACHMENT KITS	
Part No.	Description
02463	For use with HMD904. Order Collets separately (Threaded Drive - adapter required)
05457	For use with HMD904. Order Collets separately (Hex Drive - adapter required)
Collets:	02495 for #6 thru 1/4" tap 02496 for 1/4" thru 1/2" tap
10937	For use with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

**\*\* Spindle adapter 40226 required**

# 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.

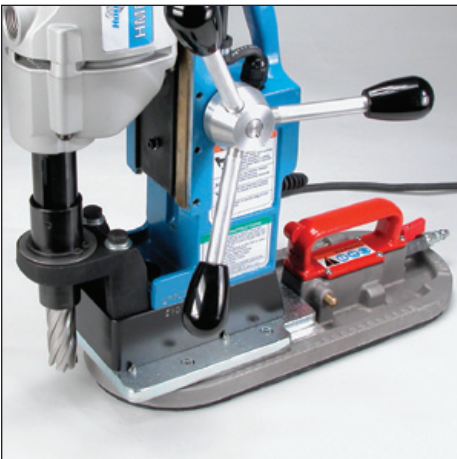
\*Minimum 3" dia. schedule 160, maximum 12" dia. schedule 160.



## SPINDLE ADAPTERS

Part No.	Description
01829	HMD904 Chuck Adapter (Old Style Threaded) (not shown)
02386	HMD915 3/4" Shank Adapter
05397	HMD904 & HMD925 Tapping Adapter (Hex Drive) (not shown)
05536	HMD904 & HMD925 Chuck Adapter (Hex Drive)
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 ass'y & kit for use with HMD904 (Threaded Drive)
05548	16 oz. gravity feed bottle ass'y & kit for use with HMD904 (Hex Drive)
24140	2 gal. pressurized bottle ass'y 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, Hougen 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 Hougen's Customer Service Department for more information about how the Arbor Extenders may help in your application.

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 Hougen magnetic drill.

DRILL HANDLE	
Part No.	Description
07021	Handle to fit Hougen Motors

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

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 Hougen® Portable Magnetic Drills or any other drill that also accepts Rotabroach® "12,000-Series" Cutters.

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)*

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.

## SLICK-STIK™ LUBRICANT & ROTAMAGIC™ CUTTING FLUID



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.

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)

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

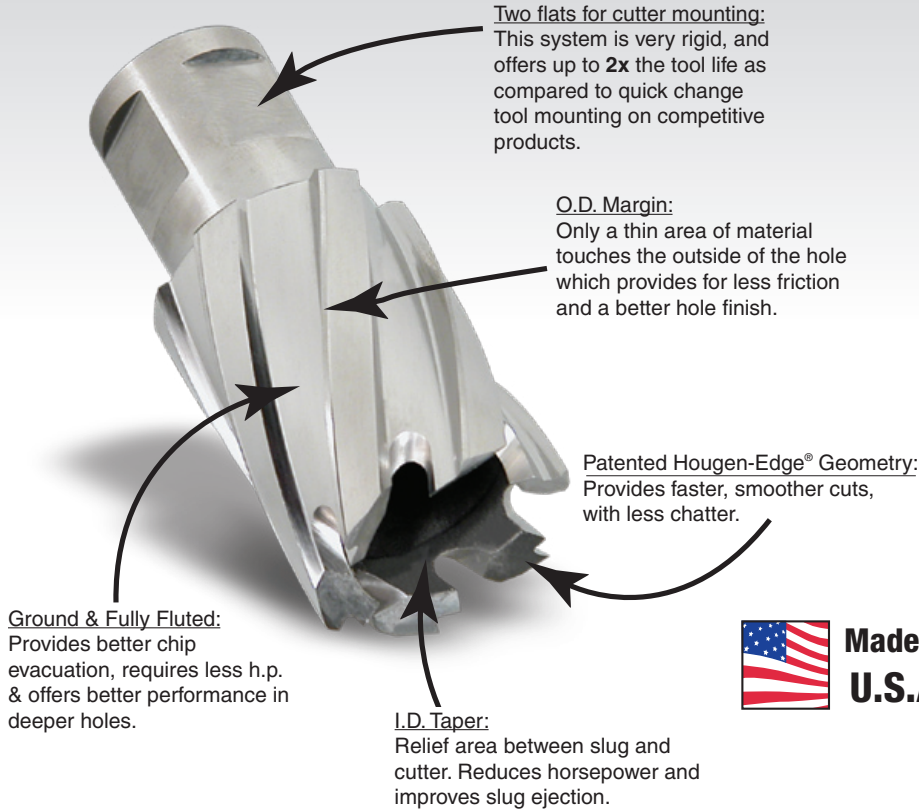


Hougen lubricants are environmentally friendly and do not contain harmful ingredients as do many lubricants.

## 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" 1/4" (6.4mm)	1 1/16" to 3" 1/8" (3.2mm)	1 1/16" to 3" 1/8" (3.2mm)	1/2" to 1-1/16" (12mm - 27mm)	1/2" to 1-3/8" (12mm - 35mm)	7/16" to 2-3/8" (12mm - 52mm)	9/16" to 2" (14mm - 40mm)	3/4" to 3-1/16" (50mm - 76mm)	
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" or 3" (50mm or 76mm)	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



**Two flats for cutter mounting:**  
This system is very rigid, and offers up to **2x** the tool life as compared to quick change tool mounting on competitive products.

**O.D. Margin:**  
Only a thin area of material touches the outside of the hole which provides for less friction and a better hole finish.

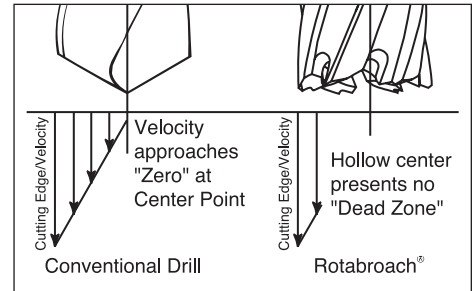
**Patented Hougen-Edge® Geometry:**  
Provides faster, smoother cuts, with less chatter.

**Ground & Fully Fluted:**  
Provides better chip evacuation, requires less h.p. & offers better performance in deeper holes.

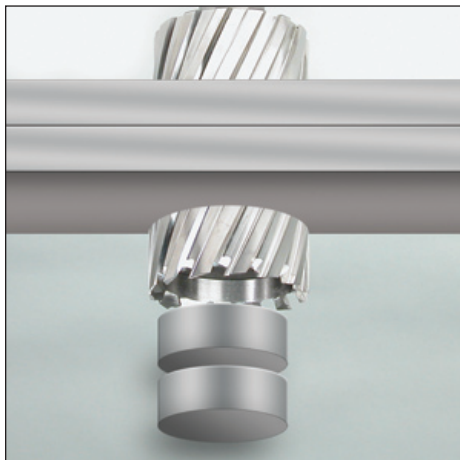
**I.D. Taper:**  
Relief area between slug and cutter. Reduces horsepower and improves slug ejection.



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 375 BHN (28.5 HRC). They are made of hardened high speed tool steel and are precisely ground for excellent performance throughout the cut and long tool life. They require less horsepower and thrust to drill and last much longer than traditional double-flute 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 available for drilling in stacked plate applications. For extended tool life and lower cost per hole Rotabroach® cutters are available in a resharpenable design.



**Rotabroach®**  Made in U.S.A.

Cutter Dia. (Inches)	Decimal Equivalent	Part No.		
		1" D.O.C.	2" D.O.C.	3" D.O.C.
<b>Use with Pilot</b>				
7/16	.4375	12114*	12214*	----
<b>Use with Pilot</b>				
1/2	.5000	12116*	12216*	----
9/16	.5625	12118*	12218*	----
5/8	.6250	12120*	12220*	----
11/16	.6875	12122*	12222*	----
<b>Use with Pilot</b>				
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.
<b>Use with Pilot</b>				
12mm	.4724	12312	12412	----
<b>Use with Pilot</b>				
13mm	.5118	12313	12413	----
14mm	.5512	12314	12414	----
15mm	.5906	12315	12415	----
16mm	.6299	12316	12416	----
17mm	.6693	12317	12417	----
18mm	.7087	12318	12418	----
<b>Use with Pilot</b>				
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

\* 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
Use with Pilot			10533	10534
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
21/32	.6563	3/4-10	12121	12221
11/16	.6875	3/4-16	12122	12222
23/32	.7188	1/2-14 NPT	----	12223
Use with Pilot			10527	10528
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 in stack-cut geometry.



Cutter Dia. (Inches)	Decimal Equivalent	Part No.	
		4" (102mm) D.O.C.	6" (152mm) D.O.C.
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 (3/4" - 2-3/8" & 19mm - 52mm)
10528	2" D.O.C. Pilot (3/4" - 2-3/8" & 19mm - 52mm)
10531	1" D.O.C. Pilot (7/16" & 12mm)
10532	2" D.O.C. Pilot (7/16" & 12mm)
10533	1" D.O.C. Pilot (1/2" - 11/16" & 13mm - 18mm)
10534	2" D.O.C. Pilot (1/2" - 11/16" & 13mm - 18mm)
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"

## HOLE ENLARGING PILOTS - "12,000-SERIES"



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

Replaceable "Nose" screws on to end of pilot.

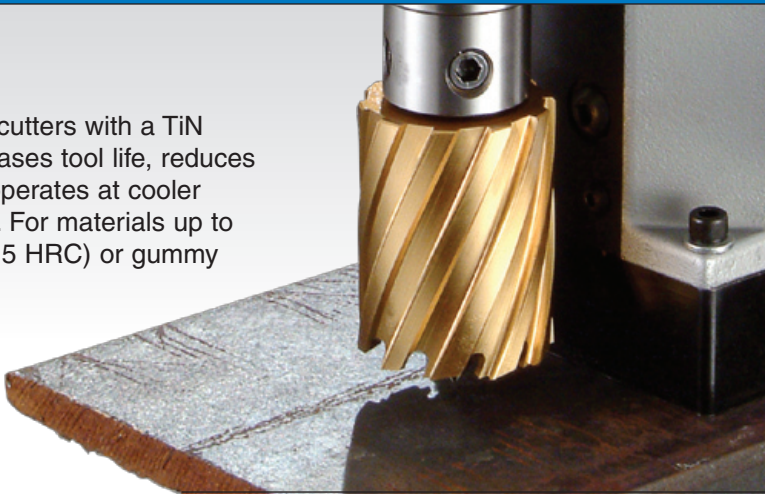


\* Use with 2" Cutters. Sold separately.

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
Use with Pilot		10533	10534
1/2	.5000	12616	12716
9/16	.5625	12618	12718
5/8	.6250	12620	12720
11/16	.6875	12622	12722
Use with Pilot		10527	10528
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

Find your nearest Hougen dealer at [www.hougen.com](http://www.hougen.com)

## 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.

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

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

## 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.

- 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
<b>Optional Accessories</b>	
04147	Tool Holder - RotaLoc™ Cutters
04118	Work Stand

## COPPERHEAD™ CARBIDE TIP CUTTERS

Featuring the  
**Fusion**  
Style Shank



**Additional  
Sizes**

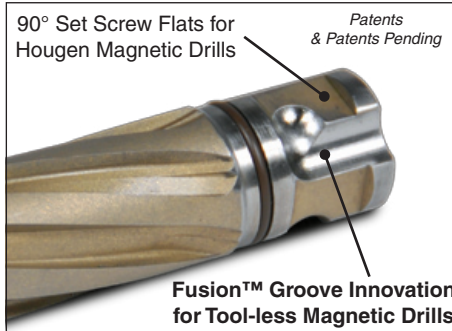
Copperhead™ Carbide Tip Cutters offer extended tool life on abrasive, tough-to-cut materials and in high-speed mag drills such as the HMD508. The unique Hougén design includes a special tooth geometry that helps maintain a better chip flow than other brands. Using the set screw arbor system can result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

Cutter Dia. (Inches)	Fusion Shank	Standard Two Flat Shank	Standard Two Flat Shank
Use with Pilot	10530	10530	10535
D.O.C.	2" (50mm)	2" (50mm)	3" (76mm)
9/16	18618	18218	----
5/8	18620	18220	----
11/16	18622	18222	3-18222
3/4	18624	18224	----
13/16	18626	18226	3-18226
7/8	18628	18228	3-18228
15/16	18630	18230	3-18230
1	18632	18232	3-18232
1-1/16	18634	18234	3-18234
1-1/8	18636	18236	3-18236
1-3/16	18638	18238	3-18238
1-1/4	18640	18240	3-18240
1-5/16	18642	18242	3-18242
1-3/8	18644	18244	3-18244
1-1/2	18648	18248	3-18248
1-5/8	----	18252	----
1-3/4	----	18256	----
1-7/8	----	18260	----
2	----	18264	----

The kits below contain the standard shank with two flats.

Kit No.	Description (2" / 50mm DOC)
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

**Hougén 24/7**  
[www.hougen.com](http://www.hougen.com)



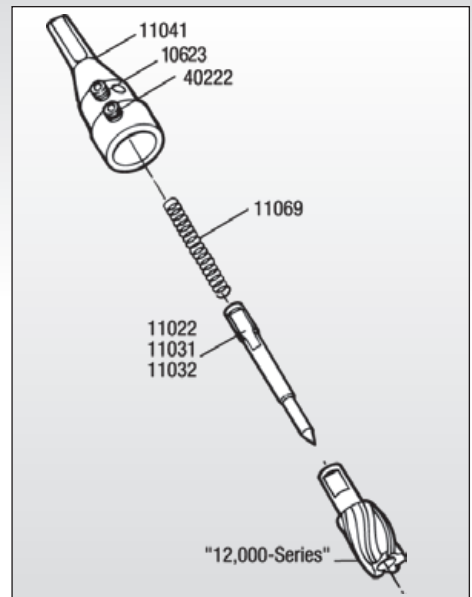
90° Set Screw Flats for Hougén Magnetic Drills

Patents & Patents Pending

Fusion™ Groove Innovation for Tool-less Magnetic Drills

Cutter Dia. (Metric)	Decimal Equiv.	Standard Two Flat Shank
Use with Pilot 10530 - 2" (50mm) D.O.C.		
14mm	.5512	18414
15mm	.5906	18415
16mm	.6299	18416
18mm	.7087	18418
20mm	.7874	18420
22mm	.8661	18422
24mm	.9449	18424
25mm	.9843	18425
26mm	1.0236	18426
28mm	1.1024	18428
30mm	1.1811	18430
31mm	1.2205	18431
32mm	1.2598	18432
34mm	1.3386	18434
36mm	1.4173	18436
38mm	1.4961	18438
40mm	1.5743	18440

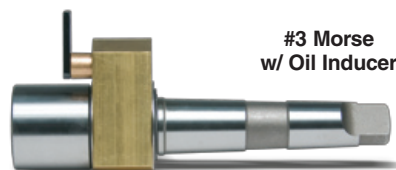
## ARBORS FOR STATIONARY TOOLS



You can also use Rotabroach® Cutters with stationary tools and drill presses. Triple flatted shank fits 1/2" drill chucks. Uses 1" (25mm) depth of cut "12,000-Series" Cutters for materials up to 1/2" (12.7mm) thick maximum.

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)
<b>Optional &amp; Replacement Arbor Parts</b>	
11041	Arbor Body
10623	1/4-28 Set Screw
11069	Ejector Spring
40222	7/16-14 Soc. Hd. Cap Screw
<b>Pilots</b>	
11022	Starter Pilot for 7/16" & 12mm Dia. Cutters
11031	Starter Pilot for 3/4"- 2-1/16" & 19mm-52mm Dia. Cutters
11032	Starter Pilot for 1/2"-11/16" & 13mm-18mm Dia. Cutters

## ARBORS FOR MACHINE TOOLS



#3 Morse  
w/ Oil Inducer

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.

Part No.	Shank Size	Hole Capacity	
		Diameter	Depth
<b>Arbor Assembly with Oil Inducer</b>			
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"
<b>Arbor Assembly without Oil Inducer</b>			
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"

# ROTALOC™ & ROTALOC PLUS™ ANNULAR CUTTERS AND KITS

## RotaLoc™ Plus



Made in U.S.A.

Patented

RotaLoc™ Annular Cutters are designed for use with the Hougen® 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 Hougen® 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 Hougen® 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 - 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		
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
Cutter Dia. (Metric)	Decimal Equiv.	Part No.
Use with Pilot 17470 - 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
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

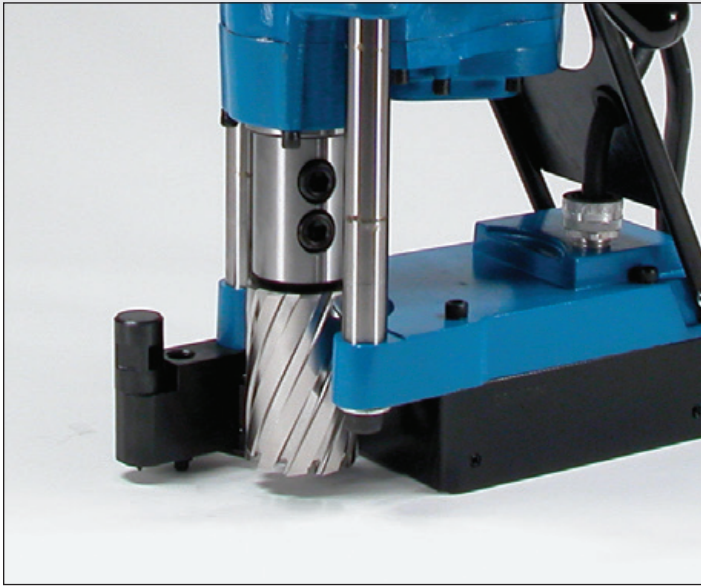


### ROTALOC™ & ROTALOC PLUS™ CUTTER KITS

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.

# Rotabroach®

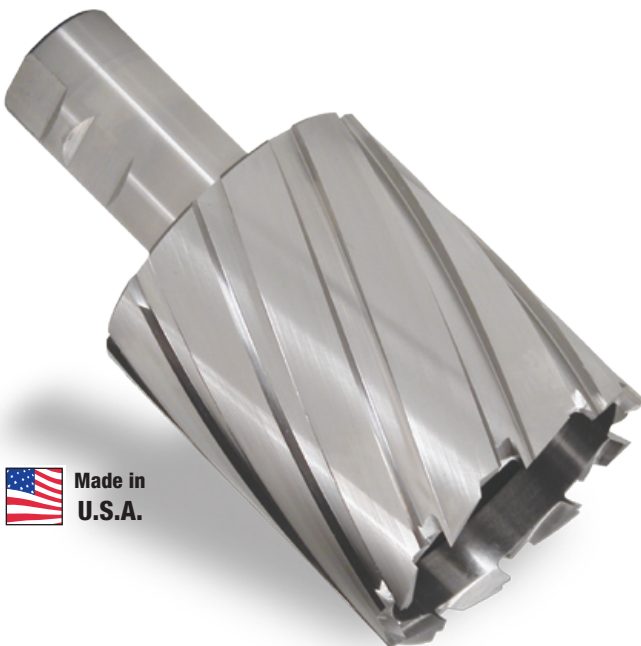


You can produce holes up to 3-1/16" diameter thru 3" material with the Hougen® HMD915 portable magnetic drill using Rotabroach® "42/43,000-Series" Annular Cutters. The heavy duty "42/43,000-Series" Annular Cutters handle the most demanding hole production jobs requiring portability for drilling large, deep holes. "42,000-Series" Cutters feature a 3/4" or 1-1/4" Weldon Shank mounting (depending on cutter diameter) which also provides for convenient use in stationary machine tools.

For added wear resistance, Hougen® also offers the TiN coated "22/23,000-Series" Annular Cutters, with the same features as the "42/43,000-Series" Cutters but for use on materials up to 325 BHN (34.5 HRC). Modified end tooth geometry for drilling stacked plate is available upon request. Intermediate sizes can be made available as "grind downs" from the next larger size. Maximum grind down varies from 0.010" to 0.020" off the initial diameter. Consult Hougen Technical Service for details.

Cutter Dia. (Inches)	Decimal Equiv.	Part No.	
		M2	M2 TiN Coated
3/4" Weldon Shank - 2" D.O.C. (50mm)			
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

Cutter Dia. (Inches)	Decimal Equiv.	Part No.	
		M2	M2 TiN Coated
1-1/4" Weldon Shank - 2" D.O.C. (50mm)			
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
1-15/16	1.9375	42062	22062
2	2.0000	42064	22064
1-1/4" Weldon Shank - 3" D.O.C. (76mm)			
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



 Made in U.S.A.

**Hougen® can help with all your special  
cutter needs and applications.  
800-426-7818**

# ROTACUT™ SHEET METAL HOLE CUTTERS



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
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	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	Contains (12) 11075 Kits in a pop up display box
11077	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	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)

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

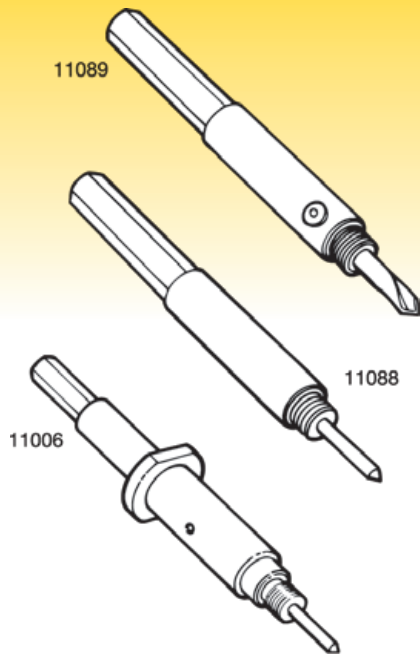
# ROTACUT™ SPOTWELD CUTTER

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.

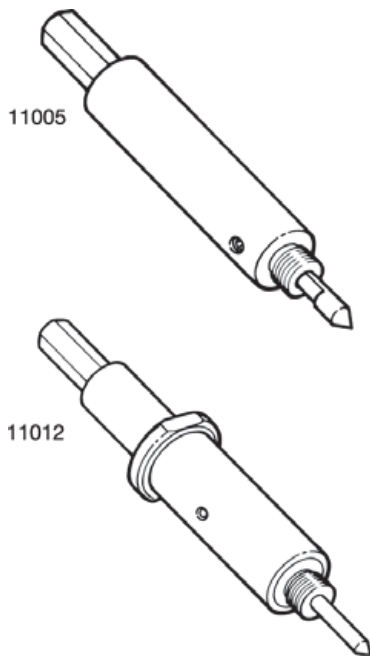
Part No.	Description
11200C	Package includes 3/8" RotaCut p/n 11108, Arbor p/n 11088, and instructions.



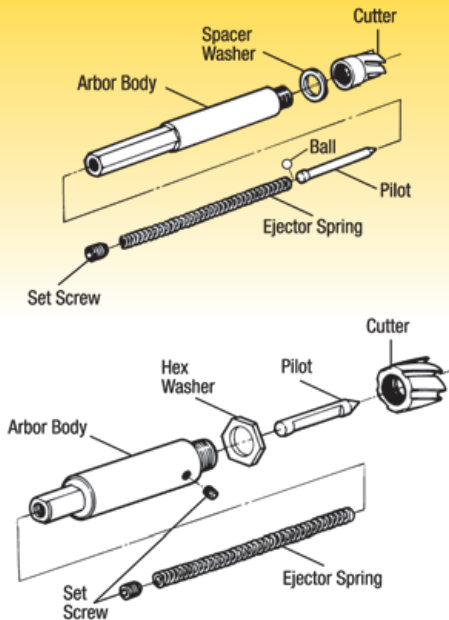
# ROTACUT™ SHEET METAL ARBORS AND PARTS



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 13/16" thru 1-1/2" dia.)



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



Locate your nearest Hougen dealer at [www.hougen.com](http://www.hougen.com)

## 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

Made in U.S.A.



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)

## 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



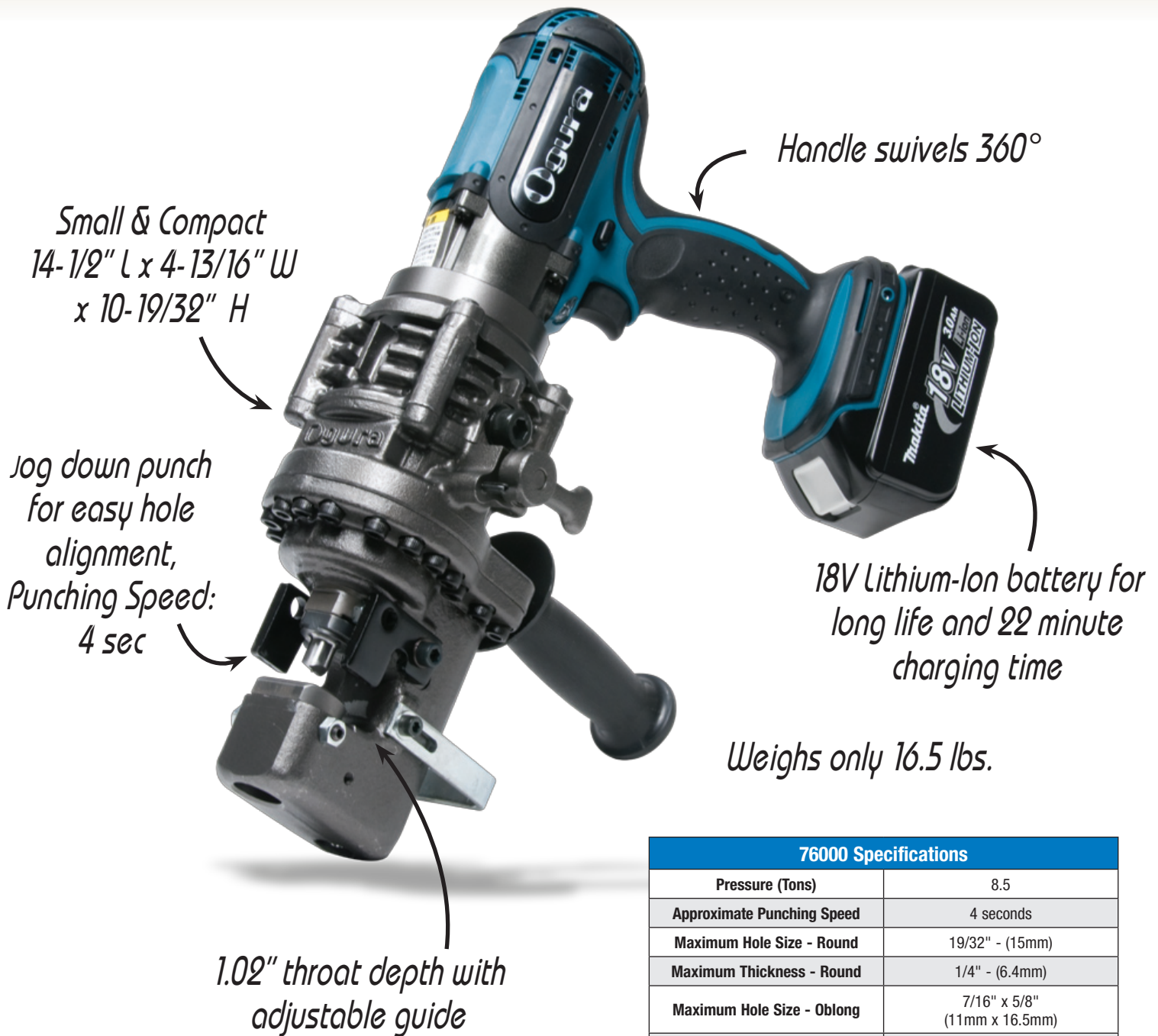
Model:		76000	75002.5A	75003A	75004R	75005	75006
<b>SPECIFICATIONS</b>	Pressure (Tons)	8.5	13.2	14.85	22	27.5	34.1
	Approximate Punching Speed	4 seconds	1.2 seconds	1.5 seconds	2 seconds	3 seconds	4 seconds
	Maximum Punch Throat Depth	1.02" (26mm)	2-3/8" (60.3mm)	2-5/32" (54.8mm)	1-9/16" (39.7mm)	3-15/16" (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)
<b>ROUND</b>	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)
<b>OBLONG</b>	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)
<b>SQUARE</b>	Maximum Hole Size		7/16" (11mm)				
	Maximum Thickness		1/4" (6.4mm)				
<b>STEEL STYLES</b>	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

**NEW!**



### 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

# 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.

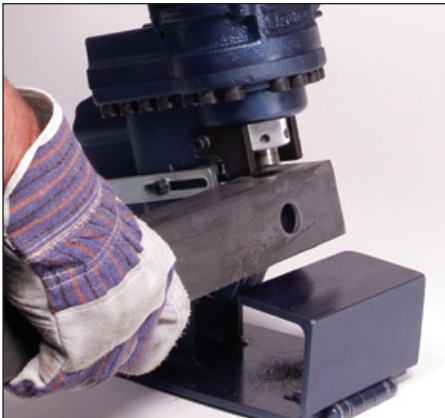
A Punch-Pro™ dramatically reduces your hole-making costs over conventional drilling methods.

**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.

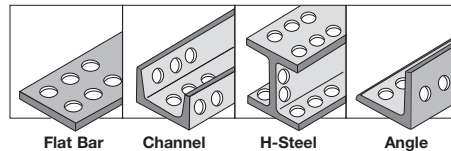
**Ease Of Handling** — Single body lightweight construction starting at 16.5 lbs make these units easy to handle and move with only a single 120V power cord and no separate hydraulics. And operator fatigue is reduced since the Punch-Pro™ does all the work.

**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

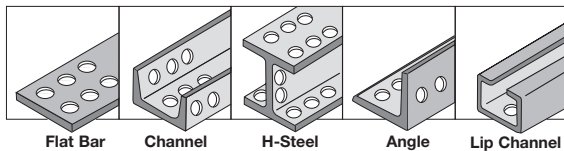


Designed for applications typically done with hand held twist drills. At just 26 lbs, the 75002.5A is easily handled in all types of punching applications, onsite or in the shop. Punch round, oblong and square holes in materials from 5/64" up to 1/4" thick. Its 2-3/8" throat depth provides excellent 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.

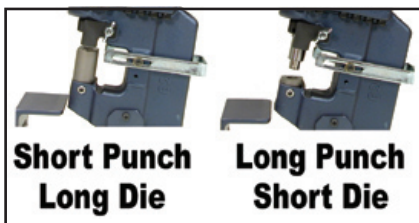
### 75002.5A Specifications

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

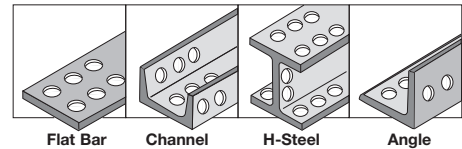


Provides extra versatility with a unique throat design and the ability to adapt to two punch and die styles. The standard punch/long die combination allows flanged sections to be "swallowed" while the long punch/standard die combination allows the tooling to reach through narrow lip channel to punch 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.



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

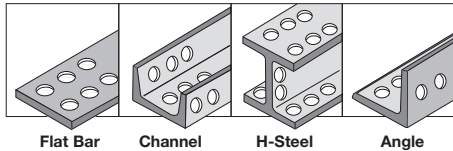


Portable electro-hydraulic punch with 22 tons of punching pressure can quickly punch through 3/8" materials in 2 seconds. Easily confirm the hole position with the jog down feature. Punch automatically returns to the starting position after the punching cycle is complete. If punch ever resists returning 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 & die, 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)

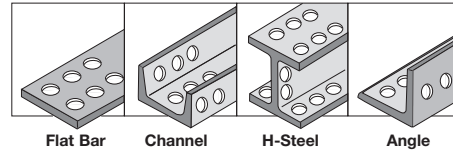
## 75005



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)

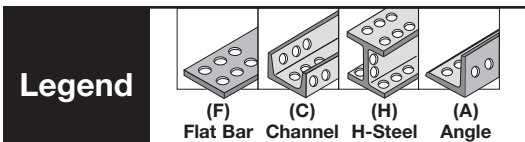
# PUNCH-PRO™ — MODEL 76000

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 15/64 (.236) 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 15/64 (.236) 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 15/64 (.236) 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 15/64 (.236) 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 15/64 (.236) 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 15/64 (.236) 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 15/64 (.236) 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 15/64 (.236) 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 15/64 (.236) 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 15/64 (.236) 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 15/64 (.236) 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 15/64 (.236) 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 15/64 (.236) 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 15/64 (.236) 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 15/64 (.236) 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

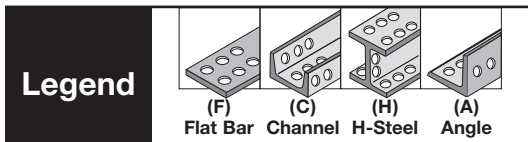
ROUND PUNCH				MATERIAL		DIE	
Nominal	Size		Part No.	Thickness	Style	Size	Part No.
	Actual	Metric					
1/4"	.256	6.5mm	75421	5/64 (.078) to 1/8 (.125) 14 to 11 GA.	F, A, H	Die 1/4 A	75432
				>1/8 (.125) to 1/4 (.250) 10 to 3 GA.	F, A, H	Die 1/4 B	75433
5/16"	.315	8mm	75422	5/64 (.078) to 1/8 (.125) 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

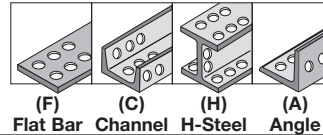
# PUNCH-PRO™ — MODEL 75004R

ROUND PUNCH			Part No.	MATERIAL		DIE	
Nominal	Actual	Metric		Thickness	Style	Size	Part No.
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			Part No.	MATERIAL		DIE	
Nominal	Actual	Metric		Thickness	Style	Size	Part No.
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)  
Flat Bar



(C)  
Channel



(H)  
H-Steel



(A)  
Angle

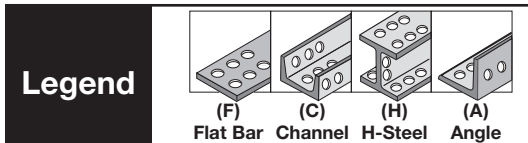
# PUNCH-PRO™ — MODEL 75006

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

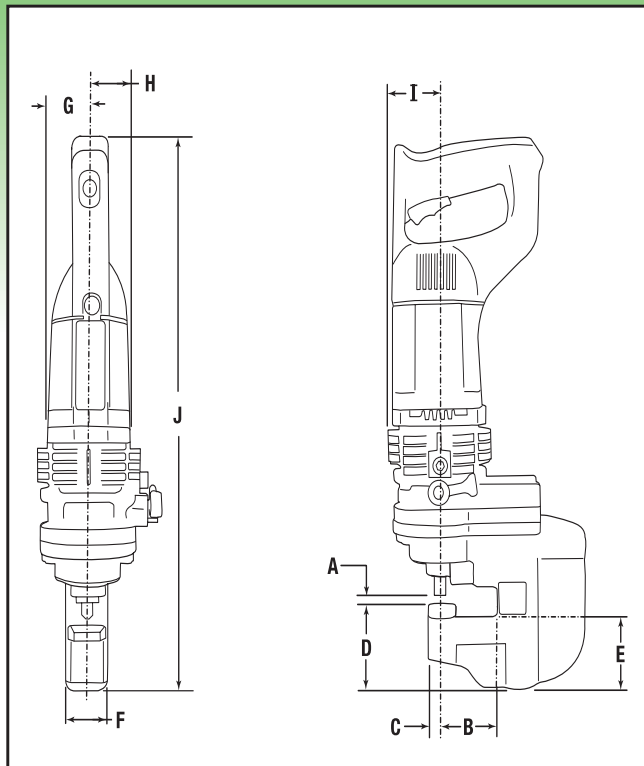
ROUND PUNCH			Part No.	MATERIAL		DIE	
Size				Thickness	Style	Size	Part No.
Nominal	Actual	Metric					
13/16"	.812	20.6mm	75575	5/64 (.078) to 1/8 (.125) 14 to 11 GA.	F, A, H	Die 13/16 A	75604
				>1/8 (.125) to 1/4 (.250) 10 to 3 GA.	F, A, H	Die 13/16 B	75605
				>1/4 (.250) to 3/8 (.375)	F, A, H	Die 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	11mm	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	
	.650	16.5mm		>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	13mm	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	
	.768	19.5mm		>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	14mm	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	
	.827	21mm		>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	18mm	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	
	.827			21mm	>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  
 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

A&A Industrial Supplies Inc.  
 251 Meacham Ave  
 Elmont, NY 11003  
 516-437-0114

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

Jensen Equipment Repair  
 N27 W23015 Roundy Dr  
 Pewaukee, WI 53072  
 262-547-5548

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

Allied Sales & Service  
 1508 River Oaks Rd West  
 Jefferson, LA 70123  
 504-734-9566

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

Fastenal Services Co.  
 1432 Macarthur Drive  
 Carrollton, TX 75007  
 972-446-4389

----- CANADA -----

Kenbil Service Center  
 2900 Adams St #B-14  
 Riverside, CA 92504  
 951-689-6633

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

Hanes Supply Repair Cntr.  
 10 Cairn Street  
 Rochester, NY 14611  
 716-826-2636

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

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

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

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

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

Power Tool Service  
 3718 Polk St.  
 Houston, TX 77003  
 713-228-0100

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

Aviation Industrial Supply  
 3900 Ulster Street  
 Denver, CO 80207  
 303-355-2391

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

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

ATS Repair Center  
 2780 West Directors Row  
 Salt Lake City, UT 84104  
 801-972-3182

Anchor Products  
 1810 Dublin Avenue  
 Winnipeg, Manitoba  
 Canada R3H 0H3  
 204-633-0064

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

Oxygen Service Repair  
 1111 Pierce Butler Rte.  
 St. Paul, MN 55104  
 651-644-7273

Cincinnati Electrical Repair  
 2023 Elm Street  
 Cincinnati, OH 45210  
 513-621-2183

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

Brunswick Ind. Supply  
 136 Savoie Dr  
 Moncton, New Brunswick  
 Canada E1C 8H5  
 506-859-1303

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

Fastenal Services Co.  
 4730 N. Service Drive  
 Winona, MN 55987  
 507-453-8280

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

Pro Tool Repair  
 2238 James  
 Bellingham, WA 95225  
 360-733-7343

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

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

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

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

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

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

Quimby Corp Repair  
 7926 NE Killingsworth St  
 Portland, OR 97218  
 503-221-1100

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

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

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

Universal Repair  
 1611 Boylston  
 Seattle, WA 98122  
 206-322-2726

## OTHER HELPFUL INFORMATION

### Material Cutting Speed: Surface Feet per Minute (SFM)

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

### Carbide Cutting Speed: Surface Feet per Minute (SFM)

Mild Steel	Stainless	Cast Iron
164	115	131

### 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

### Material Machinability Factor (Kc)

Material Type	BHN Hardness	Tensile Strength (Kc)
Free Machining & Low Carbon Steel	----	239,200
Carbon Steel	----	254,000
	125-160	283,000
Alloy Steel (soft)	----	297,000
	170-210	312,300
Alloy Steel (med. hard)	----	326,000
	220-250	341,000
Tool Steel (hot & cold worked)	210-250	355,000
Alloy Steel (hard)	260-300	370,000
Stainless Steel	----	370,000
Cast Iron	180 max.	167,000
	180-250	196,000
	250-300	255,000
Aluminum	----	106,000

### Grind Down Limits

Dia. Range	Minimum (Inches)	Maximum (Inches)
<b>RotaCut™</b>		
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
<b>"12,000-Series"</b>		
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
<b>"42,000-Series"</b>		
3/4" - 13/16"	.0020	.0150
7/8" - 2"	.0020	.0200
<b>"43,000-Series"</b>		
2-1/16" - 3-1/16"	.0020	.0200

Visit [www.hougen.com](http://www.hougen.com) for an interactive  
Speed & Feed Calculator

## 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](http://WWW.HOUGEN.COM)  
OR CALL HOUGEN TECHNICAL SERVICE 800-426-7818**

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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.

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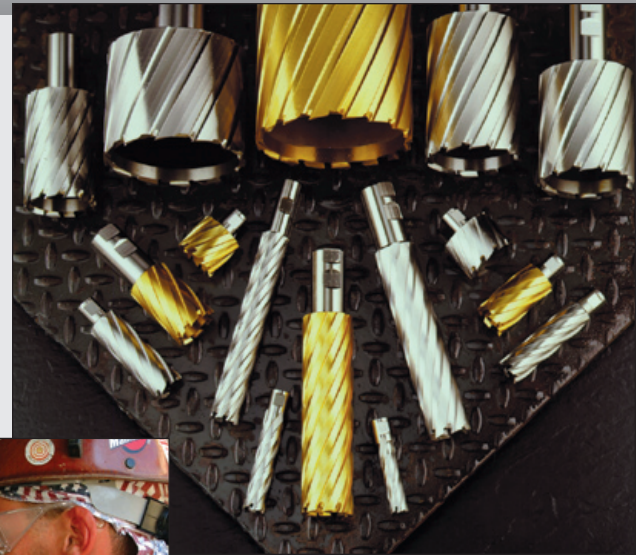
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## Rotabroach® Industrial Annular Cutters

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.



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