

## CONTENTS

### Product Line

<b>Boring</b>	ATRA ACE ----- 5	<b>Grinding &amp; Sanding</b>	FREE SANDER ----- 44
			LINE SANDER ----- 44
<b>Punching</b>	SELFER ----- 19		ORBITAL SANDER ----- 45
	PUMP ----- 19		PALM ORBITAL SANDER ----- 45
	HANDY SELFER ----- 21		AIR SONIC ----- 46
<b>Chamfering</b>	BEVELER ----- 27	<b>Filing</b>	SUPER HAND ----- 47
			MICRO AIR HAND ----- 48
<b>Scaling</b>	AIR CHIPPER ----- 32	<b>Deburring</b>	BURR CUTTER ----- 48
	AUTO CHISEL ----- 33		
	SUPER KELEN ----- 34	<b>Cutting</b>	SUPER SAW ----- 49
	JET CHISEL ----- 35		
<b>Grinding &amp; Sanding</b>	MYTON ----- 37	<b>Drilling</b>	AIR DRILL ----- 49
	BELTON ----- 39		
	COMPACT MULTI SANDER ---43	<b>Suspending</b>	SPRING BALANCER ----- 50

### Consumables

<b>Annular Cutters</b>	BROACH CUTTERS & BROACH HOLDERS ----- 17	<b>Needles</b>	NEEDLES FOR JET CHISEL ---- 36
<b>Punches &amp; Dies</b>	PUNCHES & DIES FOR SELFER ----- 22	<b>Grinding &amp; Sanding Discs</b>	GRINDING & SANDING DISCS FOR MYTON ----- 38
<b>Indexable Inserts</b>	INDEXABLE INSERTS FOR BEVELER ----- 31	<b>Abrasive Belts</b>	ABRASIVE BELTS FOR BELTON ----- 40,42

## Green Procurement

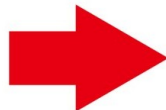
Nitto Kohki has made every effort in developing "Environmental Improvement Plans" through the implementation of ISO14001, to execute environmentally conscious business activities on a company-wide basis. As a part of our ongoing commitment to the environment, we are also committed to reduce and/or exclude restricted chemical substances from our products as designated by RoHS directives, laws and regulations of chemical substances.

### Check out our video gallery to see our products at work.



YouTube

[www.youtube.com/c/NittoKohkiGLOBAL](http://www.youtube.com/c/NittoKohkiGLOBAL)



# YouTube



You can also view this  
on your smartphone or tablet.

# High-End Features of ATRA ACE Drilling Machines

## High-End Features of ATRA ACE Drilling Machines Enhance Your Productivity and Safety

Ref. No.	Features	QA-4000	QA-6500	WA-3500	WA-5000	WOJ-3200	AO-5575A	LO-3550	CLA-2720	ARA-100A
1	Auto-feed	●	●	●	●	—	—	—	—	—
2	Slow Start Mechanism	●	●	●	●	—	—	—	—	—
3	Step Feed	●	●	—	—	—	—	—	—	—
4	Variable Automatic Feed	●	●	●	●	—	—	—	—	—
5	Load Sensor	●	●	●	●	—	—	—	—	—
6	Magnet Open-circuit Sensor	●	●	●	●	●	●	●	●	●
7	Fail-safe Restart	●	●	●	●	●	●	●	●	●
8	Built-in Motion Sensor	●	●	●	●	—	●	—	●	●
9	Overload Stop	●	●	●	●	●	●	●	●	●
10	Cycle Stop	●	●	●	●	—	—	—	—	—
11	Unique Battery Conservation	—	—	—	—	—	—	—	●	—
12	One-touch Cutter Replacement	●	●	●	●	●	●	●	●	●

- Automatic control & feed are activated by simply pushing the feed handle to engage the clutch.
- The feed speed is reduced for the first few seconds after boring begins to ensure a smooth cut through the mill scale.
- When the cutter has become dull or it cuts through difficult materials, the load sensor will automatically activate the Step Feed Program to help penetrate material. When working on deep holes or large diameter holes, the Step Program will also help to reduce swarf build up around the cutter as the waste material will break off with each Step cycle.
- The feed speed is continuously monitored and updated proportionally to the load on the cutter.
- QA-4000/QA-6500:** The sensing system responds to drilling forces on the cutter for the optimum cutting condition.  
**WA-3500/WA-5000:** The dual sensing system responds to both drilling and feeding forces on the cutter for the optimum cutting condition.
- The drill will not start until the magnetic field is active.
- QA-4000/QA-6500/WA-3500/WA-5000/WOJ-3200/AO-5575A/LO-3550/ARA-100A:** The drill will not re-start even if power is re-supplied after accidental shutdown. Drilling can only be continued after turning on the drill switch.  
**CLA-2720:** If the battery pack is replaced/removed whilst both the magnet and the drill motor switch are in the on position, the drill will not operate until both switches are reset.
- QA-4000/QA-6500/WA-3500/WA-5000:** If any lateral movement or excess vibration is detected, both the drill and the feed motor stop.  
**AO-5575A/CLA-2720/ARA-100A:** If any lateral movement or excess vibration is detected, the drill motor stops.
- QA-4000/QA-6500/WA-3500/WA-5000:** When an excessive load is applied to the cutter, both the drill and the feed motor will stop automatically.  
**WOJ-3200/AO-5575A/LO-3550/CLA-2720/ARA-100A:** When an excessive load is applied to the cutter, the drill motor will stop automatically.
- QA-4000/QA-6500:** After the cut has finished, a detector responds to the reduction in load, the drill retracts quickly and then both the drill and feed motor automatically stop.  
**WA-3500/WA-5000:** After the cut has finished, a detector responds to the reduction in load and both the drill and the feed motor automatically stop.
- While the drill motor is running, if no load is applied within 10 seconds, the drill will stop automatically to save the battery.
- Replacement is quick and easy with our unique push fit self-centering cutter system.  
**ARA-100A:** Optional one-touch type Holder required.



# ATRA ACE Specifications



CLA-2720



LO-3550



WA-3500



WA-5000

## Specifications

Model		CLA-2720		LO-3550	WA-3500		WA-5000				
Electric Drill	Power Source (Single Phase)	Battery (18 V DC)		220 - 240 V AC, 50/60 Hz	110 - 120 V AC, 50/60 Hz	220 - 240 V AC, 50/60 Hz	110 - 120 V AC, 50/60 Hz		220 - 240 V AC, 50/60 Hz		
	Rated Power Consumption	-		800	1100		1150				
	Rated Current	-		3.3	10.2	5.1	10.8		5.4		
	No-load Speed	430		950	950		350 / 650				
Magnet Power Consumption		18		35	34		75				
Max. Hole Diameter		27		35	35		50				
Max. Plate Thickness		20		50	50		75				
Hole Capacity	One-touch Type JETBROACH	Hole Diameter	12 to 17	17.5 to 27	12 to 35	17.5 to 35		12 to 17	17.5 to 40	12 to 50	17.5 to 50
		Plate Thickness	6 to 12	6 to 20	6 to 50	9 to 50		9 to 25	9 to 35	9 to 50	9 to 75
	Side-lock Type JETBROACH	Hole Diameter	-		-	-		-			
		Plate Thickness	-		-	-		-			
	One-touch Type HI-BROACH	Hole Diameter	12 to 15	16 to 27	-	14 to 35		14 to 50			
		Plate Thickness	6 to 12	6 to 20	-	9 to 25		9 to 50			
Twist Drill	Hole Diameter	-		-	-		-				
Max. Stroke		60		80	83		107				
Magnet Holding Power		5500 (561)		5500 (561)	7056 (720)		9800 (1000)				
Magnet Dimensions		65 x 126		65 x 145	92 x 213		101 x 201				
Overall dimensions * (length) x (width) x (height)		199 x 151 x 290		339 x 112 x 316	409 x 237 x 530		425 x 237 x 604				
Power Cord Length		-		3	3		3				
Mass (Weight)		7		8.7	20		23				
Feeding		Manual		Manual	Automatic		Automatic				
Page		7		9	11		11				

\*The height is the dimension from the surface of the workpiece to the highest part of the machine when the tip of the Pilot Pin is touching the workpiece with the cutter of the machine's maximum capacity attached.

# ATRA ACE Specifications

**WOJ-3200****AO-5575A****QA-4000****QA-6500****ARA-100A**

<b>WOJ-3200</b>		<b>AO-5575A</b>		<b>QA-4000</b>		<b>QA-6500</b>	<b>ARA-100A</b>
110 - 120 V AC, 50/60 Hz	220 - 240 V AC, 50/60 Hz	220 - 240 V AC, 50/60 Hz		110 - 120 V AC, 50/60 Hz	220 - 240 V AC, 50/60 Hz	220 - 240 V AC, 50/60 Hz	220 - 240 V AC, 50/60 Hz
950		950		680		1010	1800
8.6	4.3	4.3		6.1	3.0	4.5	8.2
870		520		750		400/750	110 - 210 /330 - 660
38	30	50		50		75	80
32		55		40		65	100
50		75		35		50	75
12 to 32		12 to 17	17.5 to 55	17.5 to 40		17.5 to 65	17.5 to 50
9 to 50		9 to 50	9 to 75	9 to 35		9 to 50	13 to 75
-		-		-		-	50 to 100
-		-		-		-	13 to 75
-		12 to 50		14 to 15	16 to 18	18 to 35	17.5 to 35
-		9 to 50		9 to 12	9 to 25	9 to 25	13 to 50
Max. 13		-		-		-	Max. 32
130		105		75		88	296
9000 (918)		10000 (1020)		6664 (680)		9800 (1000)	17000 (1733)
99 x 177		86 x 170		82 x 172		100 x 200	110 x 220
318 x 196 x 420		432 x 197 x 493		407 x 215 x 424		455 x 215 x 534	570 x 274 x 623
3		3		4	5	5	5
13		17.5		18.5		26	30
Manual		Manual		Automatic		Automatic	Manual
13		13		15		15	5



# BORING

Portable Magnetic Base Drilling Machine

## ATRA ACE manual feed

Model **ARA-100A** 

• Max. 100 mm dia. x 75 mm deep



*The versatile drilling machine with top-class power*

- Accepts various cutters for diverse drilling
- Advanced electronic control for efficient drilling and operator safety

### Specifications

Model		ARA-100A	
Power Source (Single Phase)		220 - 240 V AC, 50/60 Hz	
Electric Drill	Rated Power Consumption	1800 W	
	Rated Current	8.2 A	
	No-load Speed	110 - 210 / 330 - 660 min <sup>-1</sup> (rpm)	
	Morse Taper No.	MT3	
	Rated Duty	30 min	
Magnet Power Consumption		80 W	
Hole Capacity	Cutter	Hole Diameter	Plate Thickness
	One-touch Type JETBROACH 35L	17.5 to 40	13 to 35
	One-touch Type JETBROACH 50L	17.5 to 50	13 to 50
	One-touch Type JETBROACH 75L	17.5 to 50	13 to 75
	JETBROACH 75L	50 to 100	13 to 75
	One-touch Type HI-BROACH 25L	17.5 to 35	13 to 25
	One-touch Type HI-BROACH 50L	18 to 35	13 to 50
Twist Drill		Max. 32 mm dia.	
Magnet Holding Power		N(kgf) 17000 (1733)	
Magnet Dimensions		mm 110 x 220	
Cutter Position	Straight Front to Back	mm 20	
Adjustment	Swivel angle	30°	
Power Cord Length		m 5	
Mass (Weight)		kg 30	

### Accessories Included

- Pilot Pin 12075
- Side Handle
- 2.5 mm Hex. Socket Screw Key
- 5 mm Hex. Socket Screw Key
- 6 mm Hex. Socket Screw Key
- 8 mm Hex. Socket Screw Key
- Drill Drift
- 7 x 8 mm Spanner
- Safety Chain
- Guard
- Oil Tank
- Oil Tank Bracket
- 3 pieces of Rod Handle

### Optional Accessories

Ref. No.	PN	Description	Sales Unit
1	TB01507	Cutting Oil 2L	1 piece
2	TB04374	Supporting Magnet Ass'y	
3	TB09727	Holder MT03075 One-touch	

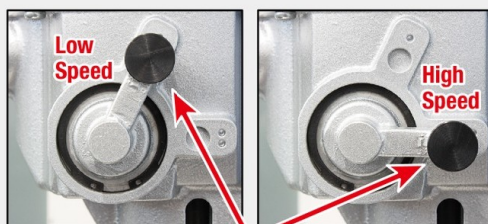
### Slow Starting Function

Slow speed at the beginning of boring will securely set a hole cutting position.

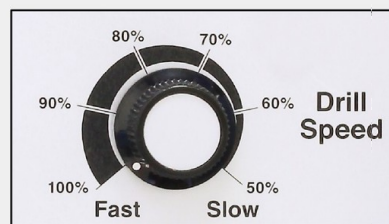


### Two speed electric drill with speed adjustment

Optimum drill speed adjustment can be made to bore a hole on difficult-to-cut materials or to securely set a hole cutting position at initial cutting stage.



Shift Lever



# BORING

## Load Indication and LED Condition

### Load Indication

The load indicator (LED) indicates the condition of the load with different color of LED light.

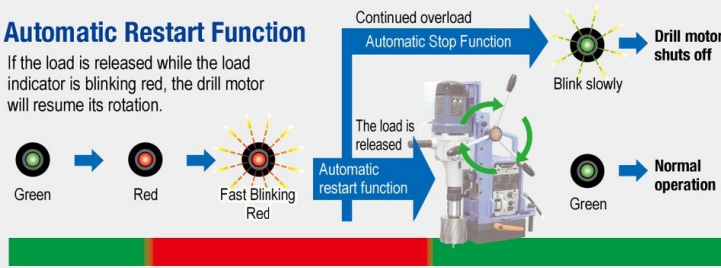
The LED lights up in green. ➔ The load on the drill motor is normal.  
 The LED lights up in red. ➔ The load on the drill motor is close to overload.  
 The LED blinks in red. ➔ The drill motor is overloaded.

### Automatic Stop Function

As the drilling load increases, the load indicator will change in color from green to red. In addition, if excessive feeding force is applied, the load indicator will rapidly blink red and the rotation of the drill motor will slow down and stop. After the drill motor has come to a complete stop, the load indicator will slowly blink in green. To resume the rotation of the drill motor release the load and turn off the switch of the drill motor, and then turn it on.

### Automatic Restart Function

If the load is released while the load indicator is blinking red, the drill motor will resume its rotation.



### Built-in Motion Sensor

If any lateral movement or excess vibration is detected during drilling a hole, the drill motor stop instantly and the LED blink red. To resume operation, turn the magnet switch off and on.



### Fail-safe Restart

The magnetic field will become active, but the drill will not re-start even if power is re-supplied after accidental shutdown. The LED will blink green at this stage. Drilling can only be continued after turning on the drill switch.

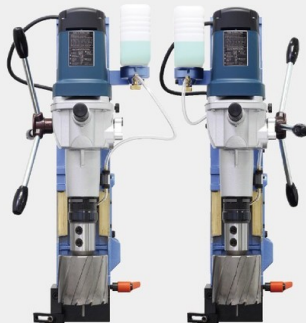
### Magnet Open-circuit Sensor

The drill will not start until the magnetic field is active. If malfunction occurs on the magnet, the LED will blink red slowly and the drill motor will not revolve.



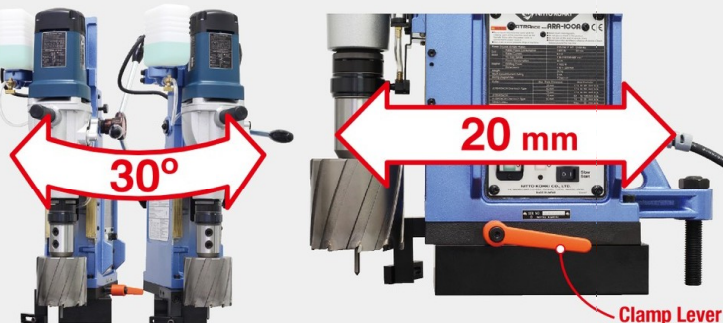
## Features

### Reversible Feed Handles



Feed handles can be positioned on the right or left hand side for ease of drilling. When changing the feed handle position, oil tank is required to be positioned opposite to the feed handles.

### Drilling Position Adjustment



When the clamp lever is loosened, the drill position can be adjusted back and forth by 20 mm and pivoted 15 degrees to the left or right. The clamp lever can be positioned for left hand or right hand operation.

## One-Touch Cutter Replacement (Holder MT03075 One-Touch)



**Mounting the cutter**  
Align the depression in the cutter shank with the white line on the sleeve, and then insert the cutter.



**Removing the cutter**  
Turn the sleeve counterclockwise. The cutter will come off.



## Available in the market

### Twist Drill Bit



MT3 Morse taper shank drill bit can be directly installed.

Use Morse taper sleeve MT3 for other sizes than MT3

A drill chuck is required to install a straight drill bit.



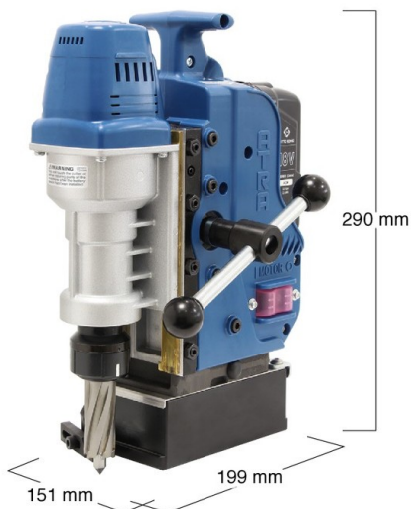
# BORING

Portable Magnetic Base Drilling Machine

## ATRA ACE manual feed

Model **CLA-2720** 

• Max. 27 mm dia. x 20 mm deep



**Compact and cordless operation, powered by a rechargeable lithium-ion battery.**

- Weighs only 7 kg with battery installed
- Compact size allows drilling in tight spots

### Specifications

		CLA-2720	
<b>Model</b>		18 V DC	
<b>Voltage</b>		18 V DC	
<b>Battery Pack (Lithium-ion Battery)</b>		NBL18006 (18V 4.0 Ah)	
<b>No-load Speed</b>		430	
		min <sup>1</sup> /(rpm)	
<b>Hole Capacity</b>	<b>Cutter</b>	Hole Diameter	Plate Thickness
	One-touch Type JETBROACH 25L	12 to 17	6 to 12
	One-touch Type JETBROACH 35L	17.5 to 27	6 to 20
	One-touch Type HI-BROACH 25L	12 to 15	6 to 12
		16 to 27	6 to 20
<b>Magnet Holding Power</b>		N(kgf)	5500 (561)
<b>Magnet Dimensions</b>		mm	65 x 126
<b>Cutter Position</b>	Pivot Side to Side	mm	10
<b>Adjustment</b>	Straight Front to Back	mm	10
<b>Mass (Weight)</b>		kg	7*

\*Including Battery Pack and Feed Handle

<b>Battery Charger</b>	<b>NC14435</b>
<b>Power Source</b>	220 - 240 V AC
<b>Charging Time</b>	90 min*
<b>Chargeable Battery Pack</b>	NBL18006 (18 V 4.0 Ah)

\*In case of a full charge from an empty battery. However, it can be charged up to 95% in 45 min.

### Accessories Included

- Carry Case
- Cutting Oil 0.5L
- Jet Oiler No.3013
- Tube 4 x 7 mm, 1 m Long
- Handle
- Battery Charger
- 2 pieces of Battery Pack 18V NBL18006
- Blade
- 3 mm Hex. Socket Screw Key
- 4 mm Hex. Socket Screw Key
- Hex. Socket Head Cap Screw 5 x 12
- Hex. Socket Head Set Screw 8 x 28
- Spanner 8 x 10
- Guard
- Safety Strap

### Optional Accessories

Ref. No.	PN	Description	Sales Unit
1	TB01507	Cutting Oil 2L	1 piece
2	TB09657	Oil Tank Ass'y	
3	TB04374	Supporting Magnet Ass'y	
4	TB07696	Pipe Attachment Ass'y	
		One-touch Type JETBROACH 25L, 35L	
		One-touch Type HI-BROACH 25L	

### TOP-LEVEL SAFETY

#### Highly Sensitive Sensor Equipped

Side slip and inclination detected by a built-in sensor

#### Self-check Function

The machine checks for faults itself

### Highly Advanced Energy-Saving

#### Magnetic Force Control Function

The magnet force is automatically reduced when the drill is not running.

#### Soft Start Function

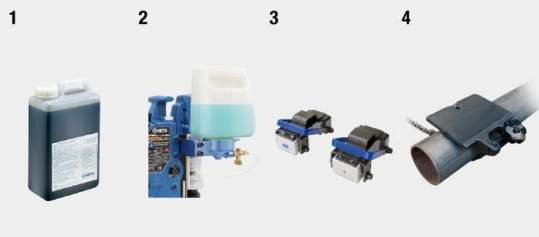
The large electric current on start-up is prevented by starting the electric drill gently.

#### Automatic Drill Stop and Warning Function

Unnecessary operations are eliminated.



Lithium-ion batteries are required to be recycled; never discard a lithium-ion battery in the waste. Please contact your local sales office or community recycling program for information on properly disposing of lithium-ion batteries.



### Reversible Feed Handle

Feed handles can be positioned on the right or left side for ease of drilling and mounting in confined spaces.





# BORING

## CLA-2720 LED Indication Light Safety Features

LED INDICATION – Battery level and Motor load can be monitored while drilling

VOLTAGE LEVEL	
BATTERY LEVEL INDICATION	
MEANING	BATTERY FULL
	PARTIALLY CHARGED
	REQUIRE CHARGING
	BATTERY LEVEL LOW

LED Indication Light



\*After turning on the magnet switch the light flashes 3 times with the color according to the battery level, then the light will turn green and the tool is ready for use. If the light flashes red 3 times or continuously, replace the low battery pack with a charged battery pack.

ELECTRIC CURRENT OF THE ELECTRIC DRILL					
MOTOR LOAD INDICATION					
	GREEN	YELLOW	RED	RED BLINKING	(WHITE)BLINKING
	LIGHT LOAD	MEDIUM LOAD	OVERLOAD		MOTOR STOPPED BY OVERLOAD

**Caution** If an excessive load is maintained during the cut, the motor will shut-off to prevent damage or injury to the operator.

SLIDE SLIP DETECTION		When a slide slip is detected, the blue light will flash and the Motor will stop automatically.	<b>SAFETY</b>
"NO LOAD" DETECTION		While the electric drill is running, if no load is applied for 7 seconds, the green light will flash. After another 3 seconds without load, the electric drill will be stopped automatically.	<b>ENERGY-SAVING</b>
MOTOR NOT ACTIVATED IN TIME		After the Magnet switch is turned on, if the Motor switch is not turned on within 10 seconds, the green light will flash.	

### Chip Breaker

This chip breaker prevents the cutter from becoming jammed with metal shavings.



### Powered by Lithium-ion Battery

Using the Lithium-ion battery it takes about 90 minutes for a full charge. Sufficient charge (95%) can be achieved in just 45 minutes.



### Drilling Position Adjustment

After engaging the magnet, the drill position can be adjusted up to 10 mm travel on each axis straight front to back and pivot side to side.



# BORING

Portable Magnetic Base Drilling Machine

## ATRA ACE manual feed

Model **LO-3550** 

• Max. 35 mm dia. x 50 mm deep

**Compact, light weight, low profile design gives you greater hole making mobility**

- Drilling on 100 mm or more width web and flange of wide flange beam
- Designed to improve drilling on walls, confined and elevated locations
- Drill position can be adjusted up to 10 mm travel on each axis straight front to back and pivot side to side



### Specifications

Model		LO-3550		
Power Source (Single Phase)		220 - 240 V AC, 50/60 Hz		
Electric	Rated Power Consumption	W	800	
	Rated Current	A	3.3	
	No-load Speed	min <sup>-1</sup> (rpm)	950	
Hole Capacity	Cutter	Hole Diameter	Plate Thickness	
		One-touch Type JETBROACH 25L	12 to 17	6 to 25
		One-touch Type JETBROACH 35L	17.5 to 35	6 to 35
	One-touch Type JETBROACH 50L	12 to 35	6 to 50	
Magnet Holding Power		N(kgf)	5500 (561)	
Magnet Dimensions		mm	65 x 145	
Cutter Position	Pivot Side to Side	mm	10	
Adjustment	Straight Front to Back	mm	10	
Power Cord Length		m	3	
Mass (Weight)		kg	8.7*	

\*Without an electric cord and a sub handle

### Accessories Included

- Carry Case
- Cutting Oil 0.5L
- Feed Handle
- Sub Handle
- Pilot Pin 08035
- Spanner 17
- Blade
- Hex. Socket Bolt 5 x 12
- Hex. Socket Head Set Screw 8 x 28
- 4 mm Hex. Socket Screw Key
- 5 mm Hex. Socket Screw Key
- Spanner 7 x 8
- Guard
- Safety Strap

### Chip Breaker



This chip breaker prevents the cutter from becoming jammed with metal shavings.

### Optional Accessories

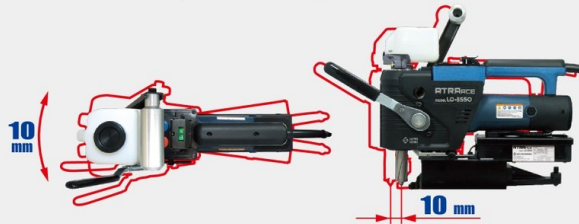
Ref. No.	PN	Description	Sales Unit
1	TB01507	Cutting Oil 2L	1 piece
2	TQ10581	Jet Oiler	
3	TB01098	Tube 4 x 7 x 3000 Ass'y	
4	TB07306	Lubrication Adapter Ass'y	
5	TB04374	Supporting Magnet Ass'y	
6	TB07696	Pipe Attachment Ass'y	
*50L for stacked plates		One-touch Type JETBROACH 25L, 35L, 50L	



# BORING

### Easy Drilling Position Adjustment

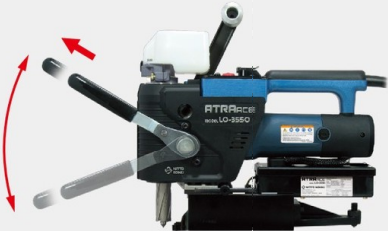
After engaging the magnet, the drill position can be adjusted up to 10 mm travel on each axis straight front to back and pivot side to side.



### Adjustable Feed Handle

The feed handle can be locked at varying angles to enhance productivity.

Pull the feed handle to adjust the angle.



### Light Handle Operation

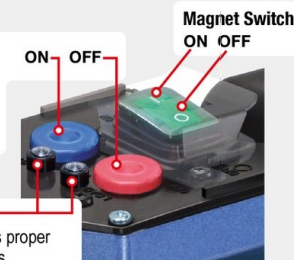
Fast revolution of Jetbroach cutter makes less cutting resistance and smooth handling.



### Easy-to-use Switch Panel

On / off buttons of the magnet and the drill motor are on the front panel and can be operated by one hand. Drilling conditions can be checked by lamp colors.

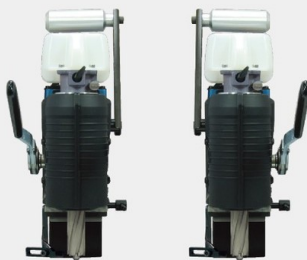
**Motor Switch**  
The motor switch can be activated after the magnet switch is turned on.



**LED Load Indicator**  
The LED load display allows proper cutting pressure adjustments.

### Reversible Feed Handle

The feed handle can be positioned on the right or left hand side for ease of drilling and mounting in confined spaces.



### A Carrying Case Is Provided

The carrying case is a rugged accessory that provides a convenient way to transport and store the LO-3550.



## Optional Accessories for ATRA ACE

### Pipe Attachment Ass'y

The Pipe Attachment Ass'y is an optional base to securely fasten an Atra Ace on pipe for drilling. The chain can easily and securely fit around pipes having an outside diameter of 48.6 to 318.5 mm.

#### Example of installation on a pipe



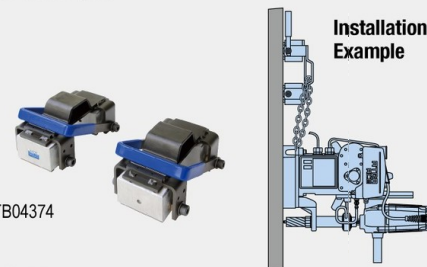
Applicable Pipe Size:  
48.6 to 318.5 mm

PN : TB07696

Applicable Models when a 35 mm or 50 mm length one touch type Jetbroach cutter is used:  
**CLA-2720, WOJ-3200, LO-3550, WA-3500, and QA-4000**

### Supporting Magnet Ass'y

If the accessory safety strap or chain is unable to be properly secured to prevent the Atra Ace from falling off the workpiece, the supporting magnet ass'y is recommended. It employs a permanent magnet and can secure the Atra Ace even if power is interrupted.



PN : TB04374

Applicable Models:  
**CLA-2720, LO-3550, WA-3500, WOJ-3200, AO-5575A, QA-4000, and QA-6500**



# BORING

Portable Magnetic Base Drilling Machine

## ATRA ACE auto

**High-performance feed system & high-tech components**

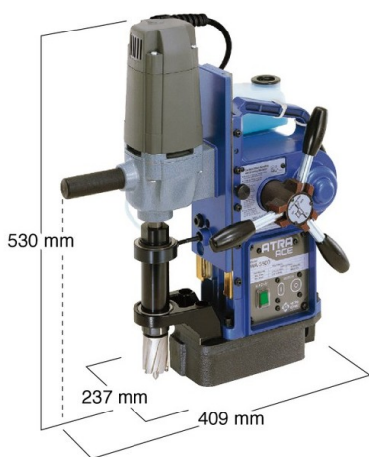
• Drilling time and cutting performance are enhanced by the automatic feed function.

### Model WA-3500

• Max. 35 mm dia. x 50 mm deep

### Model WA-5000

• Max. 50 mm dia. x 75 mm deep



#### Specifications

Model		WA-3500		WA-5000	
Power Source (Single Phase)		110 - 120 V AC, 50/60 HZ	220 - 240 V AC, 50/60 HZ	110 - 120 V AC, 50/60 HZ	220 - 240 V AC, 50/60 HZ
Electric Drill	Rated Power Consumption	W	1100	1150	
	Rated Current	A	10.2	5.1	
	No-load Speed	min <sup>-1</sup> (rpm)	950	350 / 650	
Magnet Power Consumption		W	34	75	
Hole Capacity mm	Cutter	Hole Diameter	Plate Thickness	Hole Diameter	Plate Thickness
	One-touch Type JETBROACH 25L	-	-	12 to 17	9 to 25
	One-touch Type JETBROACH 35L	17.5 to 35	9 to 35	17.5 to 40	9 to 35
	One-touch Type JETBROACH 50L	17.5 to 35	9 to 50	12 to 50	9 to 50
	One-touch Type JETBROACH 75L	-	-	17.5 to 50	9 to 75
	One-touch Type HI-BROACH 25L	14 to 35	9 to 25	14 to 50	9 to 25
One-touch Type HI-BROACH 50L	-	-	14 to 50	9 to 50	
Max. Stroke	mm	83		107	
Magnet Holding Power	N(kgf)	7056 (720)		9800 (1000)	
Magnet Dimensions	mm	92 x 213		101 x 201	
Power Cord Length	m	3		3	
Mass (Weight)	kg	20		23	
Accessories Included		<ul style="list-style-type: none"> <li>• Carry Case</li> <li>• Cutting Oil 0.5L</li> <li>• Pilot Pin 08035</li> <li>• Side Handle</li> </ul>		<ul style="list-style-type: none"> <li>• 3 mm Hex. Socket Screw Key</li> <li>• 8 x 10 mm Spanner</li> <li>• Guard</li> <li>• Chain</li> </ul>	
		<ul style="list-style-type: none"> <li>• 3 mm Hex. Socket Screw Key</li> </ul>		<ul style="list-style-type: none"> <li>• 4 mm Hex. Socket Screw Key</li> <li>• 8 x 10 mm Spanner</li> <li>• Guard</li> <li>• Chain</li> <li>• Chip Breaker</li> </ul>	

#### Optional Accessories

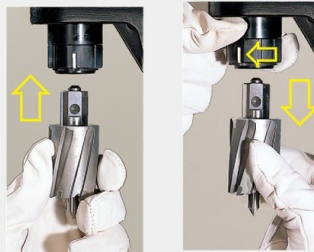
Ref. No.	PN	Description	Sales Unit	Applicable Model	
				WA-3500	WA-5000
1	TB05186	Chip Breaker Ass'y	1 piece	●	●
2	TB01507	Cutting Oil 2L	1 piece	●	●
3	TB04374	Supporting Magnet Ass'y	1 piece	●	●
4	TB02536	Sleeve 6.5 for Triangle Shank Drill Bit	1 piece	●	●
5	TB07696	Pipe Attachment Ass'y	1 piece	●	●
		One-touch Type JETBROACH 25L	1 piece	●	●
		One-touch Type JETBROACH 35L	1 piece	●	●
		One-touch Type JETBROACH 50L	1 piece	●	●
		One-touch Type JETBROACH 75L	1 piece	●	●
		One-touch Type HI-BROACH 25L	1 piece	●	●
		One-touch Type HI-BROACH 50L	1 piece	●	●



# BORING

## One-touch Cutter Replacement

Replacement is quick and easy with our unique push fit self-centering cutter system.



Mounting the cutter

Removing the cutter

## Coolant into the Heart of the Cut

Coolant is fed directly to the inside of the cut. The coolant system also features an auto shut-off.



## Improved Bearing Bracket

Our precision bearing bracket aligns cutters precisely, which increases cutter life.



## Fail-Safe Protection

### Built-in Motion Sensor

If any lateral movement or excess vibration is detected, both the drill and the feed motor stop. Nitto Kohki is the first company to incorporate this feature into magnetic base drills.

### Fail-safe Restart

The drill will not re-start even if power is re-supplied after accidental shutdown. Drilling can only be continued after turning on the drill switch.

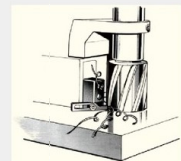
### Magnet Open-circuit Sensor

The drill will not start until the magnetic field is active.

## Chip Breaker

This chip breaker prevents the cutter from becoming jammed with metal shavings.

- Standard accessory for the WA-5000
- Optional accessory for the WA-3500



## Two Speed Selection (WA-5000)

Speed can be changed to suit the type and size of the cutter.



## New drill control prevents cutters from breaking

### Slow Start Mechanism

The feed speed is reduced for the first few seconds after boring begins to ensure a smooth cut through the mill scale.

### Auto-feed

Automatic control & feed are activated by simply pushing the Rod handle to engage the clutch.

### Load Sensor

The dual sensing system responds to both drilling and feeding forces on the cutter for the optimum cutting condition.

### Variable Automatic Feed

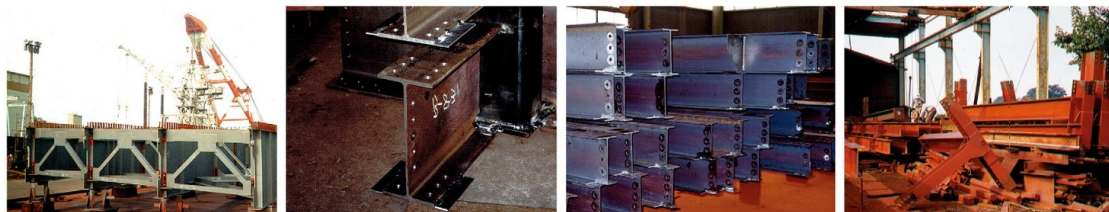
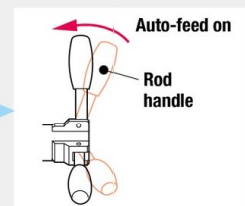
The feed speed is continuously monitored and updated proportionally to the load on the cutter.

### Cycle Stop

After the cut has finished, a detector responds to the reduction in load and both the drill and the feed motor automatically stop.

### Overload Stop

When an excessive load is applied to the cutter, both the drill and the feed motor will stop automatically.



# BORING

Portable Magnetic Base Drilling Machine

## ATRA ACE manual feed

*New generation magnetic base drilling machines help meet productivity and safety goals.*

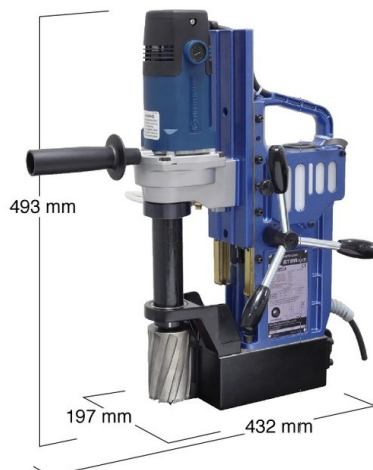
- Advanced safety system

### Model **WOJ-3200**

• Max. 32 mm dia. x 50 mm deep

### Model **AO-5575A**

• Max. 55 mm dia. x 75 mm deep



#### Specifications

Model		WOJ-3200		AO-5575A	
Power Source (Single Phase)		110 - 120 V AC, 50/60 Hz	220 - 240 V AC, 50/60 Hz	220 - 240 V AC, 50/60 Hz	
Electric	Rated Power Consumption	W	950	950	
	Rated Current	A	8.6	4.3	
	No-load Speed	min <sup>1</sup> (rpm)	870	520	
Magnet Power Consumption		W	38	30	
Hole Capacity	Cutter	Hole Diameter	Plate Thickness	Hole Diameter	Plate Thickness
		mm			
mm	One-touch Type JETBROACH 25L	12 to 17	9 to 25	12 to 17	9 to 25
	One-touch Type JETBROACH 35L	17.5 to 32	9 to 35	17.5 to 40	9 to 35
	One-touch Type JETBROACH 50L	12 to 32	9 to 50	12 to 55	9 to 50
	One-touch Type JETBROACH 75L	-	-	17.5 to 55	9 to 75
	One-touch Type HI-BROACH 25L	-	-	12 to 50	9 to 25
	One-touch Type HI-BROACH 50L	-	-	12 to 50	9 to 50
Twist Drill		Max. 13 mm dia.		-	
Max. Stroke		mm	130	105	
Magnet Holding Power		N(kgf)	9000 (918)	10000 (1020)	
Magnet Dimensions		mm	99 x 177	86 x 170	
Power Cord Length		m	3	3	
Mass (Weight)		kg	13	17.5	
Accessories Included		<ul style="list-style-type: none"> <li>• Carry Case</li> <li>• Oil Tank</li> <li>• Pilot Pin 08035</li> <li>• Sub Handle</li> <li>• 2 pieces of Hex. Socket Head Bolt 5 x 10 mm</li> <li>• 3 pieces of Rod Handle</li> </ul>		<ul style="list-style-type: none"> <li>• 3 mm Hex. Socket Screw Key</li> <li>• 4 mm Hex. Socket Screw Key</li> <li>• 6 mm Hex. Socket Screw Key</li> <li>• 8 x 10 mm Spanner</li> <li>• Guard</li> <li>• Safety Strap</li> </ul>	
		<ul style="list-style-type: none"> <li>• 3 mm Hex. Socket Screw Key</li> <li>• 5 mm Hex. Socket Screw Key</li> <li>• 8 x 10 mm Spanner</li> <li>• Guard</li> <li>• Chain</li> </ul>		<ul style="list-style-type: none"> <li>• Carry Case</li> <li>• Cutting Oil 0.5L</li> <li>• Pilot Pin 08050</li> <li>• Side Handle</li> <li>• 3 mm Hex. Socket Screw Key</li> </ul>	

#### Optional Accessories

Ref. No.	PN	Description	Sales Unit	Applicable Model	
				WOJ-3200	AO-5575A
1	TB07691	Chip Breaker Ass'y	1 piece	●	●
2	TB07474	Chip Breaker Ass'y	1 piece	●	●
3	TQ10581	Jet Oiler No.3013	1 piece	●	●
4	TB01098	Tube 4 x 7 x 3000 Ass'y	1 piece	●	●
5	TB01507	Cutting Oil 2L	1 piece	●	●
6	TB07696	Pipe Attachment Ass'y	1 piece	●	●
7	TB04374	Supporting Magnet Ass'y	1 piece	●	●
8	TB07690	One-touch Drill Adapter	1 piece	●	●
9	TB02536	Sleeve 6.5 for Triangle Shank Drill Bit	1 piece	●	●
		One-touch Type JETBROACH 25L	1 piece	●	●
		One-touch Type JETBROACH 35L	1 piece	●	●
		One-touch Type JETBROACH 50L	1 piece	●	●
		One-touch Type JETBROACH 75L	1 piece	●	●
		One-touch Type HI-BROACH 25L	1 piece	●	●
		One-touch Type HI-BROACH 50L	1 piece	●	●





# BORING

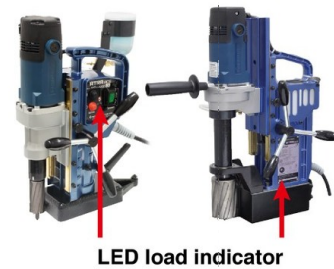
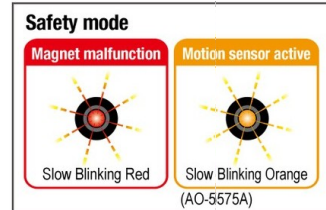
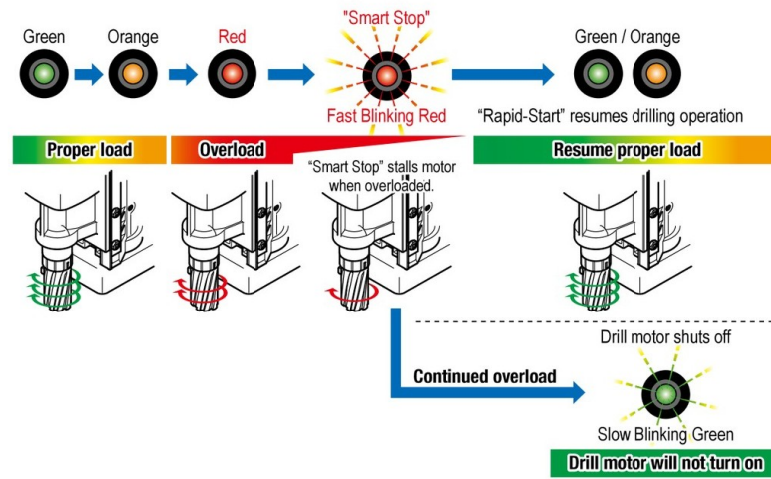
## Load Detector with "Smart-Stop/Rapid-Restart" Technology

### The world's first manual feed with "Smart-Stop / Rapid-Restart" technology for WOJ-3200 / AO-5575A

This new feature is a breakthrough in the Manual drill industry. Formerly only found on high end Nitto Kohki Automatic drills, this technology displays the current drill status via the LED Load Indicator. Customers will experience a cutting edge drill management system designed solely around saving time and money in replacement parts and cutters in addition to reducing user fatigue and down time.

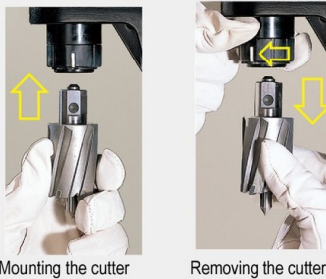
As the drilling load increases, the load indicator will change in color from green to orange to red. In addition, if excessive feeding force is applied, the load indicator will rapidly blink red and the rotation of the drill motor will slow down and temporarily stop. If the load is released while the load indicator is blinking red, the drill motor will resume its rotation.

#### LED load indicator



#### One-Touch Cutter Replacement

Replacement is quick and easy with our unique push fit self-centering cutter system.



#### Reversible Feed Handle

Feed handles can be positioned on the right or left side for ease of drilling and mounting in confined spaces.



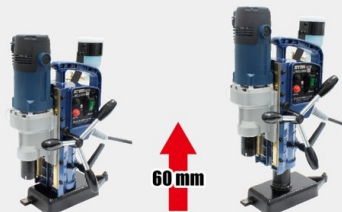
#### Chip Breaker (Optional)

This chip breaker prevents the cutter from becoming jammed with metal shavings.



#### Body Height Adjustment (WOJ-3200)

The use of Jetbroach cutters require the frame to be at the lowest position, while twist bit drilling requires the appropriate amount of elevation to be adjusted for safe operation.



#### One-Touch Drill Adapter (WOJ-3200)

Optional one-touch drill adapter allows the use of up to 13 mm twist drills to be used in the original arbor.



\*Twist drills are not provided with the one-touch drill adapter.

#### Built-in coolant tank to protect against damage (AO-5575A)



# BORING

Portable Magnetic Base Drilling Machine

## ATRA ACE quick auto

**Fully automatic drilling for increased productivity and reduced cost**

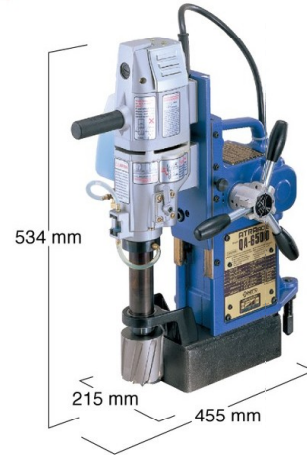
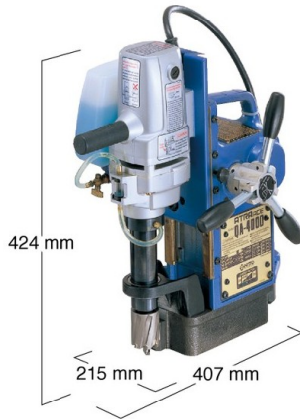
- Proven Automatic Technology (self feeding, automatic return, load detection for speed and feed regulation)

### Model QA-4000 Non-CE

- Max. 40 mm dia. x 35 mm deep

### Model QA-6500 Non-CE

- Max. 65 mm dia. x 50 mm deep



#### Specifications

Model		QA-4000		QA-6500			
Power Source (Single Phase)		110 - 120 V AC, 50/60 HZ		220 - 240 V AC, 50/60 Hz			
Electric Drill	Rated Power Consumption	W	680	1010			
	Rated Current	A	6.1	3.0			
	No-load Speed	min <sup>-1</sup> (rpm)	750	400 / 750			
Magnet Power Consumption		W	50	75			
Hole Capacity	Cutter	mm	Hole Diameter	Plate Thickness	Hole Diameter	Plate Thickness	
			One-touch Type JETBROACH 35L	17.5 to 40	9 to 35	17.5 to 40	9 to 35
			One-touch Type JETBROACH 50L	-	-	17.5 to 65	9 to 50
			One-touch Type HI-BROACH 25L	14 to 15	9 to 12	18 to 35	9 to 25
	16 to 18	9 to 25					
Max. Stroke		mm	75	88			
Magnet Holding Power		N(kgf)	6664 (680)	9800 (1000)			
Magnet Dimensions		mm	82 x 172	100 x 200			
Power Cord Length		m	4	5	5		
Mass (Weight)		kg	18.5	26			
Accessories Included			<ul style="list-style-type: none"> <li>• Oil Tank</li> <li>• Cutting Oil 0.5L</li> <li>• Pilot Pin 08035</li> <li>• Side Handle</li> <li>• 3 mm Hex. Socket Screw Key</li> </ul>	<ul style="list-style-type: none"> <li>• 4 mm Hex. Socket Screw Key</li> <li>• 8 x 10 mm Spanner</li> <li>• Chain</li> <li>• Tool Box</li> </ul>	<ul style="list-style-type: none"> <li>• Oil Tank</li> <li>• Cutting Oil 0.5L</li> <li>• Pilot Pin 08050</li> <li>• Side Handle</li> <li>• 3 mm Hex. Socket Screw Key</li> </ul>	<ul style="list-style-type: none"> <li>• 4 mm Hex. Socket Screw Key</li> <li>• 8 x 10 mm Spanner</li> <li>• Chip Stopper</li> <li>• Chain</li> <li>• Tool Box</li> </ul>	

#### Optional Accessories

Ref. No.	PN	Description	Sales Unit	Applicable Model	
				QA-4000	QA-6500
1	TB01507	Cutting Oil 2L	1 piece	●	●
2	TB04374	Supporting Magnet Ass'y	1 piece	●	●
3	TB07696	Pipe Attachment Ass'y	1 piece	●	●
		One-touch Type JETBROACH 35L	1 piece	●	●
		One-touch Type JETBROACH 50L	1 piece	●	●
		One-touch Type HI-BROACH 12L	1 piece	●	●
		One-touch Type HI-BROACH 25L	1 piece	●	●





# BORING

### Automatic Return

Once drilling is completed and the slug is ejected from the hole, the cutting bit is quickly retracted. This quick drill motor retraction allows the user to move onto the next hole more quickly.

### Built-in Motion Sensor

If any lateral movement or excess vibration is detected, both the drill and the feed motor stop. Nitto Kohki is the first company to incorporate this feature into magnetic base drills.

### Self Feeding & Load Detection

The feeding is controlled by an onboard microcomputer. The feed rate begins slowly and then increases to the appropriate speed for the cutter size and load condition. The load detector clearly shows the amount of resistance on the cutter at anytime.



### Step Feed

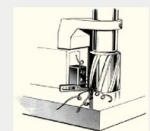
When cutting through difficult materials, the load sensor will automatically activate the Step Feed Program to help penetrate material.

### Limit Switch

The ATRA ACE Automatic Drills utilize a limit switch that resets the machine when it retracts to the starting position after hole completion, also shuts down the motors in the event of an over-travel at the bottom of the stroke.

### Chip Breaker

This chip breaker prevents the cutter from becoming jammed with metal shavings.



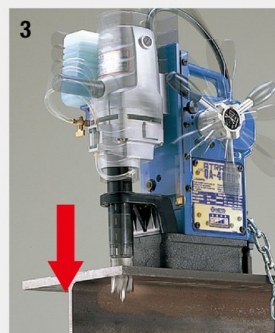
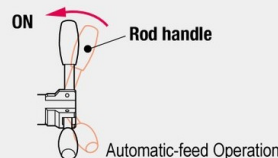
### Automatic-feed Hole-cutting Procedure



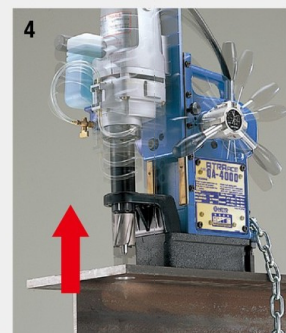
Align the pilot pin with the center punch mark of the hole to be drilled. Attach the machine to the beam with the proper safety chain and engage the magnet. Lower the drill down from the top limit switch location to the point of the pilot pin making contact with the material and engage the motor.



Engage the clutch by pushing the handles in towards the drill and the motor will begin feeding automatically.



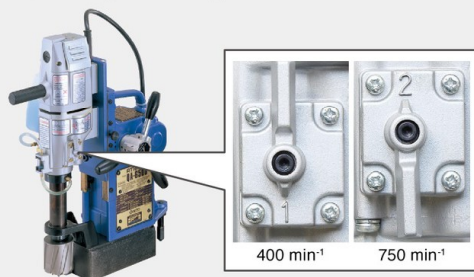
Slow start mechanism cuts smoothly through the mill scale. Then, speed and feed rate is controlled by the sensors to achieve efficient drilling.



After the hole is completed, the QA Series machines will quickly return and stop at the top of the stroke, ready for the next hole.

### Two Speed Selection (QA-6500)

Speed can be changed to suit the type and size of the cutter.



### One-touch Cutter Replacement

Replacement is quick and easy with our unique push fit self-centering cutter system.



Mounting the cutter



Removing the cutter



# BORING

## Annular Cutters

# JETBROACH CUTTERS & HI-BROACH CUTTERS

### BROACH CUTTERS are far better than twist drills

- No dead point
- Peripheral cutting
- Dramatically reduce cutting resistance
- Available diameter size: 12 - 100 mm

Test Drilling is very often the only way to determine the machinability of difficult materials. Use a small size cutter wherever possible in order to minimize trial costs.



#### Specifications

		HI-BROACH One-touch Type/25L	HI-BROACH One-touch Type/50L	JETBROACH One-touch Type/25,35,50L	JETBROACH One-touch Type/50L(W)	JETBROACH One-touch Type/75L	JETBROACH Side lock Type/75L
Hole	Hole Diameter	25L: 12 - 52 dia.	-	25L: 12 - 17 dia. 35L: 17.5 - 40 dia.	-	-	-
	Capacity mm	-	50L: 12 - 52 dia.	50L: 12 - 65 dia.	50L(W): 18, 22, 24 - 26.5, 28, 32, and 35 dia.	75L: 17.5 - 55 dia.	75L: 50 - 100 dia.
		Plate Thickness	25L: 25	-	25L: 25 35L: 35 50L: 50	-	-
Feed Speed	mm/rev	0.02 - 0.1			-		
Circumferential Speed	m/min	15 - 35 (mild steel)			35 - 50 (mild steel)		

HI-BROACH One-touch Type		AO-5575A	WA-3500	WA-5000	OA-4000	OA-6500	CLA-2720	ARA-100A	Pilot Pin
Depth	mm dia.								
	PN								
25 mm	12	TK00698	•						08025
	13	TK00699	•						
	14	TK00700	•						
	15	TK00701	•	•	•	•	•	•	
	16	TK00702	•	•	•	•	•	•	
	17	TK00703	•	•	•	•	•	•	
	17.5	TK00335	•	•	•	•	•	•	
	18	TK00336	•	•	•	•	•	•	
	19	TK00337	•	•	•	•	•	•	
	19.5	TK00338	•	•	•	•	•	•	
	20	TK00339	•	•	•	•	•	•	
	21	TK00340	•	•	•	•	•	•	
	21.5	TK00341	•	•	•	•	•	•	
	22	TK00342	•	•	•	•	•	•	
	22.5	TK00343	•	•	•	•	•	•	
	23	TK00344	•	•	•	•	•	•	
	23.5	TK00345	•	•	•	•	•	•	
	24	TK00346	•	•	•	•	•	•	
	24.5	TK00347	•	•	•	•	•	•	
	25	TK00348	•	•	•	•	•	•	
	26	TK00349	•	•	•	•	•	•	
	27	TK00351	•	•	•	•	•	•	
	28	TK00352	•	•	•	•	•	•	
	29	TK00353	•	•	•	•	•	•	
	30	TK00354	•	•	•	•	•	•	
	31	TK00355	•	•	•	•	•	•	
	32	TK00356	•	•	•	•	•	•	
	33	TK00357	•	•	•	•	•	•	
	34	TK00359	•	•	•	•	•	•	
	35	TK00361	•	•	•	•	•	•	
	36	TK00704	•	•	•	•	•	•	
	37	TK00705	•	•	•	•	•	•	
38	TK00706	•	•	•	•	•	•		
39	TK00707	•	•	•	•	•	•		
40	TK00708	•	•	•	•	•	•		
41	TK00709	•	•	•	•	•	•		
42	TK00710	•	•	•	•	•	•		
43	TK00711	•	•	•	•	•	•		
44	TK00712	•	•	•	•	•	•		
45	TK00713	•	•	•	•	•	•		
46	TK00714	•	•	•	•	•	•		
47	TK00715	•	•	•	•	•	•		
48	TK00716	•	•	•	•	•	•		
49	TK00717	•	•	•	•	•	•		
50	TK00718	•	•	•	•	•	•		
51	TK00719	•	•	•	•	•	•		
52	TK00720	•	•	•	•	•	•		

HI-BROACH One-touch Type		AO-5575A	WA-5000	ARA-100A	Pilot Pin
Depth	mm dia.				
	PN				
50 mm	12	TK00721	•		08050
	13	TK00722	•		
	14	TK00723	•		
	15	TK00724	•	•	
	16	TK00725	•	•	
	17	TK00726	•	•	
	18	TK00727	•	•	
	19	TK00728	•	•	
	20	TK00729	•	•	
	21	TK00730	•	•	
	22	TK00731	•	•	
	23	TK00732	•	•	
	24	TK00733	•	•	
	25	TK00734	•	•	
	26	TK00735	•	•	
	27	TK00736	•	•	
	28	TK00737	•	•	
	29	TK00738	•	•	
	30	TK00739	•	•	
	31	TK00740	•	•	
	32	TK00741	•	•	
	33	TK00742	•	•	
	34	TK00743	•	•	
	35	TK00744	•	•	
	36	TK00745	•	•	
	37	TK00746	•	•	
	38	TK00747	•	•	
	39	TK00748	•	•	
	40	TK00749	•	•	
	41	TK00750	•	•	
	42	TK00751	•	•	
	43	TK00752	•	•	
44	TK00753	•	•		
45	TK00754	•	•		
46	TK00755	•	•		
47	TK00756	•	•		
48	TK00757	•	•		
49	TK00758	•	•		
50	TK00759	•	•		
51	TK00760	•	•		
52	TK00761	•	•		

JETBROACH One-touch Type		LO-3550	WOJ-3200	AO-5575A	WA-3500	WA-5000	OA-4000	OA-6500	CLA-2720	ARA-100A	Pilot Pin
Depth	mm dia.										
	PN										
25 mm	12	TK01148	•	•	•	•	•	•	•	•	08025
	13	TK01149	•	•	•	•	•	•	•	•	
	14	TK01150	•	•	•	•	•	•	•	•	
	15	TK01151	•	•	•	•	•	•	•	•	
	16	TK01152	•	•	•	•	•	•	•	•	
	17	TK01153	•	•	•	•	•	•	•	•	
	17.5	TK00301	•	•	•	•	•	•	•	•	
	18	TK00302	•	•	•	•	•	•	•	•	
35 mm	18.5	TK00303	•	•	•	•	•	•	•	•	08035
	19	TK00304	•	•	•	•	•	•	•	•	
	19.5	TK00305	•	•	•	•	•	•	•	•	
	20	TK00306	•	•	•	•	•	•	•	•	
	20.5	TK00307	•	•	•	•	•	•	•	•	
	21	TK00308	•	•	•	•	•	•	•	•	
	21.5	TK00309	•	•	•	•	•	•	•	•	
	22	TK00310	•	•	•	•	•	•	•	•	
	22.5	TK00311	•	•	•	•	•	•	•	•	
	23	TK00312	•	•	•	•	•	•	•	•	
	23.5	TK00313	•	•	•	•	•	•	•	•	
	24	TK00314	•	•	•	•	•	•	•	•	
	24.5	TK00315	•	•	•	•	•	•	•	•	
	25	TK00316	•	•	•	•	•	•	•	•	
	25.5	TK01169	•	•	•	•	•	•	•	•	
	26	TK00317	•	•	•	•	•	•	•	•	
	26.5	TK00318	•	•	•	•	•	•	•	•	
	27	TK00319	•	•	•	•	•	•	•	•	
	28	TK00320	•	•	•	•	•	•	•	•	
	29	TK00321	•	•	•	•	•	•	•	•	
	30	TK00322	•	•	•	•	•	•	•	•	
	31	TK00323	•	•	•	•	•	•	•	•	
32	TK00324	•	•	•	•	•	•	•	•		
33	TK00325	•	•	•	•	•	•	•	•		
34	TK00326	•	•	•	•	•	•	•	•		
35	TK00328	•	•	•	•	•	•	•	•		
36	TK00602	•	•	•	•	•	•	•	•		
37	TK00603	•	•	•	•	•	•	•	•		
38	TK00604	•	•	•	•	•	•	•	•		
39	TK00605	•	•	•	•	•	•	•	•		
40	TK00606	•	•	•	•	•	•	•	•		

Sales Unit: 1 Piece

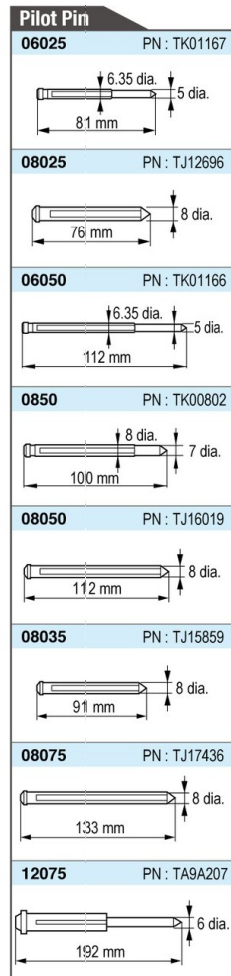
# BORING

JETBROACH One-touch Type			LO-3550	WOJ-3200	AO-5575A	WA-3500	WA-5000	QA-6500	ARA-100A	Pilot Pin
Depth	mm dia.	PN								
12		TK01154	•	•	•	•	•	•	•	06050
13		TK01155	•	•	•	•	•	•	•	
14		TK01156	•	•	•	•	•	•	•	
15		TK01157	•	•	•	•	•	•	•	
16		TK01158	•	•	•	•	•	•	•	
17		TK01159	•	•	•	•	•	•	•	
17.5		TK00380	•	•	•	•	•	•	•	
18		TK00381	•	•	•	•	•	•	•	
19		TK00382	•	•	•	•	•	•	•	
19.5		TK00383	•	•	•	•	•	•	•	
20		TK00384	•	•	•	•	•	•	•	
20.5		TK00385	•	•	•	•	•	•	•	
21		TK00386	•	•	•	•	•	•	•	
21.5		TK00387	•	•	•	•	•	•	•	
22		TK00388	•	•	•	•	•	•	•	
22.5		TK00389	•	•	•	•	•	•	•	
23		TK00390	•	•	•	•	•	•	•	
23.5		TK00391	•	•	•	•	•	•	•	
24		TK00392	•	•	•	•	•	•	•	
24.5		TK00393	•	•	•	•	•	•	•	
25		TK00394	•	•	•	•	•	•	•	
25.5		TK01147	•	•	•	•	•	•	•	
26		TK00395	•	•	•	•	•	•	•	
26.5		TK00396	•	•	•	•	•	•	•	
27		TK00397	•	•	•	•	•	•	•	
28		TK00398	•	•	•	•	•	•	•	
29		TK00399	•	•	•	•	•	•	•	
30		TK00400	•	•	•	•	•	•	•	
31		TK00401	•	•	•	•	•	•	•	
32		TK00402	•	•	•	•	•	•	•	
33		TK00403	•	•	•	•	•	•	•	
34		TK00404	•	•	•	•	•	•	•	
35		TK00405	•	•	•	•	•	•	•	
36		TK00406	•	•	•	•	•	•	•	
37		TK00407	•	•	•	•	•	•	•	
38		TK00408	•	•	•	•	•	•	•	
39		TK00409	•	•	•	•	•	•	•	
40		TK00410	•	•	•	•	•	•	•	
41		TK00411	•	•	•	•	•	•	•	
42		TK00412	•	•	•	•	•	•	•	
43		TK00413	•	•	•	•	•	•	•	
44		TK00414	•	•	•	•	•	•	•	
45		TK00415	•	•	•	•	•	•	•	
46		TK00416	•	•	•	•	•	•	•	
47		TK00417	•	•	•	•	•	•	•	
48		TK00418	•	•	•	•	•	•	•	
49		TK00419	•	•	•	•	•	•	•	
50		TK00420	•	•	•	•	•	•	•	
51		TK00442	•	•	•	•	•	•	•	
52		TK00443	•	•	•	•	•	•	•	
53		TK00444	•	•	•	•	•	•	•	
54		TK00445	•	•	•	•	•	•	•	
55		TK00446	•	•	•	•	•	•	•	
56		TK00447	•	•	•	•	•	•	•	
57		TK00448	•	•	•	•	•	•	•	
58		TK00449	•	•	•	•	•	•	•	
59		TK00450	•	•	•	•	•	•	•	
60		TK00451	•	•	•	•	•	•	•	
61		TK00607	•	•	•	•	•	•	•	
62		TK00608	•	•	•	•	•	•	•	
63		TK00609	•	•	•	•	•	•	•	
64		TK00610	•	•	•	•	•	•	•	
65		TK00611	•	•	•	•	•	•	•	

JETBROACH One-touch Type 50L(W) for stacked plates			LO-3550	WOJ-3200	AO-5575A	ARA-100A	Pilot Pin
Depth	mm dia.	PN					
18		TK01068	•	•	•	•	08050
22		TK00622	•	•	•	•	
24		TK00623	•	•	•	•	
24.5		TK00631	•	•	•	•	
25		TK00624	•	•	•	•	
26		TK00625	•	•	•	•	
26.5		TK00632	•	•	•	•	
28		TK00626	•	•	•	•	
32		TK00627	•	•	•	•	
35		TK00628	•	•	•	•	

JETBROACH One-touch Type			AO-5575A	WA-5000	ARA-100A	Pilot Pin
Depth	mm dia.	PN				
17.5		TK01036	•	•	•	08075
18		TK01003	•	•	•	
19		TK01004	•	•	•	
20		TK01005	•	•	•	
21		TK01006	•	•	•	
22		TK01007	•	•	•	
23		TK01008	•	•	•	
23.5		TK01207	•	•	•	
24		TK01009	•	•	•	
24.5		TK01183	•	•	•	
25		TK01010	•	•	•	
26		TK01011	•	•	•	
26.5		TK01182	•	•	•	
27		TK01012	•	•	•	
28		TK01013	•	•	•	
29		TK01014	•	•	•	
30		TK01015	•	•	•	
31		TK01016	•	•	•	
32		TK01017	•	•	•	
33		TK01018	•	•	•	
34		TK01019	•	•	•	
35		TK01020	•	•	•	
36		TK01021	•	•	•	
37		TK01022	•	•	•	
38		TK01023	•	•	•	
39		TK01024	•	•	•	
40		TK01025	•	•	•	
41		TK01026	•	•	•	
42		TK01027	•	•	•	
43		TK01028	•	•	•	
44		TK01029	•	•	•	
45		TK01030	•	•	•	
46		TK01031	•	•	•	
47		TK01032	•	•	•	
48		TK01033	•	•	•	
49		TK01034	•	•	•	
50		TK01035	•	•	•	
51		TK01112	•	•	•	
52		TK01113	•	•	•	
53		TK01114	•	•	•	
54		TK01115	•	•	•	
55		TK01116	•	•	•	

JETBROACH Side-lock Type			ARA-100A	Pilot Pin
Depth	mm dia.	PN		
50		TJ17709	•	12075
51		TJ16651	•	
52		TJ16652	•	
53		TJ16653	•	
54		TJ16654	•	
55		TJ16655	•	
56		TJ16656	•	
57		TJ16657	•	
58		TJ16658	•	
59		TJ16659	•	
60		TJ16660	•	
61		TJ16661	•	
62		TJ16662	•	
63		TJ16663	•	
64		TJ16664	•	
65		TJ16665	•	
66		TJ16666	•	
67		TJ16667	•	
68		TJ16668	•	
69		TJ16669	•	
70		TJ16670	•	
71		TJ16671	•	
72		TJ16672	•	
73		TJ16673	•	
74		TJ16674	•	
75		TJ16675	•	
76		TJ16676	•	
77		TJ16677	•	
78		TJ16678	•	
79		TJ16679	•	
80		TJ16680	•	
81		TJ16681	•	
82		TJ16682	•	
83		TJ16683	•	
84		TJ16684	•	
85		TJ16685	•	
86		TJ16686	•	
87		TJ16687	•	
88		TJ16688	•	
89		TJ16689	•	
90		TJ16690	•	
91		TJ16691	•	
92		TJ16692	•	
93		TJ16693	•	
94		TJ16694	•	
95		TJ16695	•	
96		TJ16696	•	
97		TJ16697	•	
98		TJ16698	•	
99		TJ16699	•	
100		TJ16700	•	



Sales Unit: 1 Piece

## BROACH HOLDERS

### Industrial cutters for faster and better finished holes

- The Spring-loaded pilot pin picks up the hole location quickly, and ejects the slug automatically at the end of cut
- Available with No. 2 to 4 Morse taper shanks
- Oil cup complete Ass'y (PN TB00350) is available as an optional attachment which provides continuous and adjustable cutting oil flow to the cutting area



Specifications		M.T.No.2							M.T.No.3			M.T.No.4							
Morse Taper No.		BHM-02035							BHM-03050			BHM-13075		BHM-14075					
Model		TB00390							TB00392			TB00352		TB00354					
PN		HBO-25L							HBO-50L			JBO-35L		JBO-50L	JBO-50L(W)	JBS-75L			
Cutter		12 - 17 dia.		17.5 - 35 dia.		17.5 - 40 dia.		12 - 17 dia.		17.5 - 52 dia.		12 - 18 dia.		17.5 - 40 dia.		17.5 - 65 dia.		18 - 35 dia.	50 - 100 dia.
Cutter Diameter		06025		08025		08035		06025		08025		06050		0850/08050		08035		08050	
Pilot Pin		Optional		Included		Optional		Optional			Included		Optional		Optional		Included		

HBO: HI-BROACH One-touch Type    JBO: JETBROACH One-touch Type    JBS: JETBROACH Side-lock Type



# PUNCHING

Portable Double-Acting Hydraulic Puncher

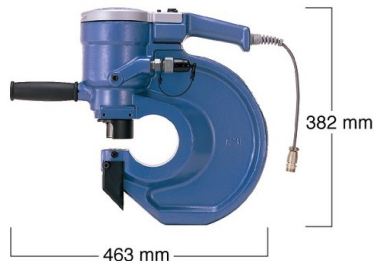
## SELFER ACE

**Double acting hydraulic system allows automatic and inching (manual mode) operation.** \*CE model is available without auto-return function.

• Applicable for both mild steel and stainless steel punching

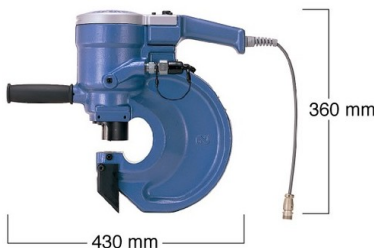
### Model **HS11-1624** Non-CE/CE\*

- Max. punching thickness: 16 mm
- Max. punching diameter: 24 mm
- Max. throat depth: 110 mm



### Model **HS07-1624** Non-CE/CE\*

- Max. punching thickness: 16 mm
- Max. punching diameter: 24 mm
- Max. throat depth: 70 mm



### Model **HS06-1322** Non-CE/CE\*

- Max. punching thickness: 13 mm
- Max. punching diameter: 22 mm
- Max. throat depth: 60 mm



Specifications		HS11-1624		HS07-1624		HS06-1322	
Model							
Max. Throat Depth	mm	110		70		60	
Punching Capacity	Material	Mild Steel	Stainless Steel	Mild Steel	Stainless Steel	Mild Steel	Stainless Steel
	Max. Punching Thickness*	16	6	16	6	13	6
	Max. Punching Diameter	24		24		22	
Hole Making time	Punching Time	11.8		7.9		3.4	
	Returning Time	5.7		3.4		3.4	
Allowable Max. Pressure	MPa (kgf/cm <sup>2</sup> )	68.65 (700)		68.65 (700)		68.65 (700)	
Max. Output	kN (tf)	464 (47)		464 (47)		367 (37)	
Ram Stroke	mm	25		25		21	
Mass (Weight)	kg	30		25.5		20.5	
Accessories Included		<ul style="list-style-type: none"> <li>• D Punch 22 (Installed)</li> <li>• D Die 22 (Installed)</li> <li>• Sub Handle</li> <li>• Ultra-high Pressure Hose</li> </ul>		<ul style="list-style-type: none"> <li>• Hose Cord Ass'y</li> <li>• Chip Guard Ass'y</li> <li>• Spanner</li> <li>• 12 mm Spanner</li> </ul>		<ul style="list-style-type: none"> <li>• 4 mm Hex. Socket Screw Key</li> <li>• 5 mm Hex. Socket Screw Key</li> <li>• Tool Box</li> </ul>	

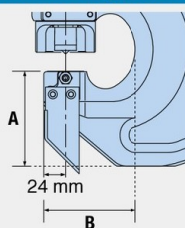
\*Mild steel: Maximum punching thickness must be calculated by the equation 0.8 x punching diameter.

\*Stainless steel: Maximum punching thickness must be calculated by the equation 0.5 x punching diameter. For the details see the instruction manual.

### Optional Accessories

PN	Description	Sales Unit
TB02506	Hose Kit Ass'y	1 piece
TP05184	Ultra-high Pressure Hose 5 m	
TB02390	Switch Cord Ass'y 5 m	
TP05777	Ultra-high Pressure Hose 10 m	
TB02545	Switch Cord Ass'y 10 m	
TB02141	Foot Switch Ass'y	
TA92729	4L Oil Can	
TB02142	Hook Clamp Ass'y	
TA99037	Lock Nut Ass'y for 25 mm Punch	
TQ01279	Hex. Socket Head Screw 8 x 14 for Securing Oblong Hole D Dies	

### Dimension from Edge to Punch Center



	A	B
HS11-1624	127	134
HS07-1624	105	94
HS06-1322	84	85



## HYDRAULIC PUMP for SELFER ACE

### Model **HPD-05** Non-CE/CE\*

- Double-acting



Specifications		HPD-05	
Model		HPD-05	
Power Source (Single Phase)		115 V / 230 V AC	
Max. Output Pressure	MPa (kgf/cm <sup>2</sup> )	68.65 (700)	
Output		50 Hz	60 Hz
At No-load	L/min	1.20	1.44
At 68.65 MPa	L/min	0.55	0.66
Motor		0.4 kW 4P	
Reservoir Capacity	L	4.0	
Discharge Port		Rc 3/8	
Electro-Magnetic Valve		4 way 3 position valve	
Mass (Weight)	kg	32.5	

\*CE model is available without auto-return function.



# PUNCHING

Portable Single-Acting Hydraulic Puncher

## SELFER HA Type

**Punch, return, and reset operations are fully automatic.**  
**An emergency switch returns the punch at any time.**

• Will punch both round and oblong holes

### Model HA11-1624 Non-CE

- Max. punching thickness: 16 mm
- Max. punching diameter: 24 mm
- Max. throat depth: 110 mm



### Model HA07-1624 Non-CE

- Max. punching thickness: 16 mm
- Max. punching diameter: 24 mm
- Max. throat depth: 70 mm



### Model HA06-1322 Non-CE

- Max. punching thickness: 13 mm
- Max. punching diameter: 22 mm
- Max. throat depth: 60 mm



#### Specifications

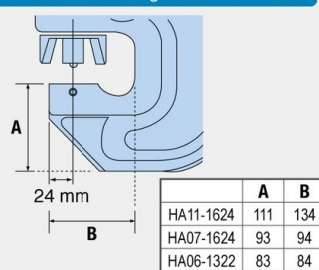
Model	HA11-1624	HA07-1624	HA06-1322
Max. Throat Depth	mm 110	70	60
Punching Material	Mild Steel		
Capacity	Max. Punching Thickness* mm	16	13
	Max. Punching Diameter mm	24	22
Hole Making Time	sec.	16.5	10.5
Allowable Max. Pressure	MPa (kgf/cm <sup>2</sup> )	68.65 (700)	
Max. Output	kN (tf)	431 (44)	304 (31)
Ram Stroke	mm	25	21
Mass (Weight)	kg	35.5	21.5
Accessories Included	<ul style="list-style-type: none"> <li>• D Punch 22 (Installed)</li> <li>• D Die 22 (Installed)</li> <li>• Sub Handle</li> <li>• Hose Cord Ass'y</li> <li>• Spanner</li> <li>• 4 mm Hex. Socket Screw Key</li> <li>• Tool Box</li> </ul>		

\*Mild steel: Maximum punching thickness must be calculated by the equation 0.8 x punching diameter. For the details see the instruction manual.

#### Optional Accessories

PN	Description	Sales Unit
TA96534	Hose Kit Ass'y 5 m	1 piece
TP05184	Ultra-high Pressure Hose 5 m	
TA93778	Switch Cord Ass'y 5 m	
TA9B044	Hose Kit Ass'y 10 m	
TP05777	Ultra-high Pressure Hose 10 m	
TA95307	Switch Cord Ass'y 10 m	
TA94386	Foot Switch Ass'y	
TA92729	4L Oil Can	
TA96342	Hook Clamp Ass'y for HA07-1624 and HA11-1624	
TA99037	Lock Nut Ass'y for 25 mm Punch	
TQ01279	Hex. Socket Head Screw 8 x 14 for Securing Oblong Hole D Dies	

#### Dimension from Edge to Punch Center



## HYDRAULIC PUMP for SELFER HA Type

### Model SC-05 Non-CE

- Single-acting



#### Specifications

Model	SC-05	
Power Source (Single Phase)	115 V / 230 V AC	
Max. Output Pressure	MPa (kgf/cm <sup>2</sup> ) 68.65 (700)	
Output	50 Hz	60 Hz
At No-load	L/min 1.20	1.44
At 68.65 MPa	L/min 0.55	0.66
Motor	0.4 kW 4P	
Reservoir Capacity	L 4.0	
Discharge Port	Rc 3/8	
Mass (Weight)	kg 27.5	

# PUNCHING

Electrically Operated Hydraulic Puncher

## HANDY SELFER

*Self-contained hydraulic punch shows its power in making round or elongated holes in flat bar, angle bar or channel iron.*

### Model E25-0615 Non-CE

- Double insulation
- E punch and E die
- Max. punching thickness: 6 mm
- Max. punching diameter: 15 mm
- Max. throat depth: 25 mm



### Model E55-0619 Non-CE

- EL punch and EL die
- Max. punching thickness: 6 mm
- Max. punching diameter: 19 mm
- Max. throat depth: 55 mm



#### Specifications

Model		E25-0615	E55-0619		
Power Source (Single Phase)		220 - 240 V AC, 50/60 Hz	110 - 120 V AC, 50/60 Hz	220-240 V AC, 50/60Hz	
Max. Throat Depth		25 mm	55		
Motor	Rated Power Consumption	305 W	670		
	Rated Current	1.4 A	6.0	3.0	
Punching Material		Mild Steel			
Capacity	Max. Punching Diameter	15 mm	19		
	Max. Punching Thickness	6 mm	6		
Punching time		4 sec (single pass)	2		
Power Cord Length		2.4 m			
Mass (Weight)		7.0 kg	14		
Accessories Included		<ul style="list-style-type: none"> <li>• E Punch 15 (Installed)</li> <li>• E Die 15A</li> <li>• E Die 15B (Installed)</li> <li>• Sub Handle</li> <li>• 2.5 mm Hex. Socket Screw Key</li> </ul>	<ul style="list-style-type: none"> <li>• 4 mm Hex. Socket Screw Key</li> <li>• 10 x 12 mm Spanner</li> <li>• Auxiliary Oil 40 cc</li> <li>• Tool Box</li> <li>• Spanner 8</li> </ul>	<ul style="list-style-type: none"> <li>• EL Punch 18 (Installed)</li> <li>• EL Die 18A</li> <li>• EL Die 18B (Installed)</li> <li>• Sub Handle</li> <li>• 3 mm Hex. Socket Screw Key</li> <li>• 4 mm Hex. Socket Screw Key</li> </ul>	<ul style="list-style-type: none"> <li>• 5 mm Hex. Socket Screw Key</li> <li>• 10 x 12 mm Spanner</li> <li>• Stand Ass'y</li> <li>• Auxiliary Oil 40 cc</li> <li>• Tool Box</li> </ul>

#### Optional Accessory (E25-0615)

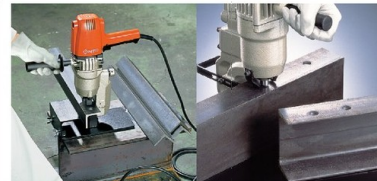
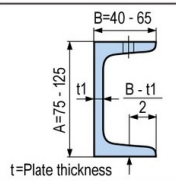
PN	Description	Sales Unit
TB00800	Stand Ass'y	1 piece

#### Die Selection

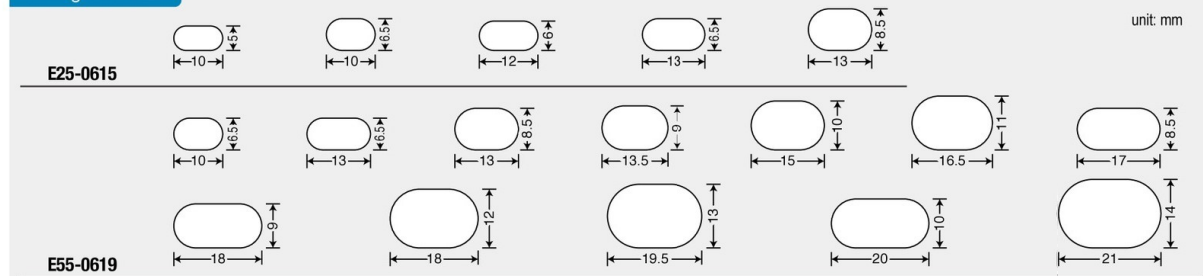
E Die and EL Die	Punching Thickness (mm)		Model
	Mild Steel	Stainless Steel	
Round Hole E Die A (for Thin Sheets)	2 to 3.2	Max. 3	E25-0615
Round Hole E Die B (for Thick Sheets)	4 to 6	Max. 4	
Round Hole EL Die A (for Thin Sheets)	2 to 3.2	Max. 3	
Round Hole EL Die B (for Thick Sheets)	4 to 6	Max. 4	E55-0619
Round Hole EL Die C (for Channel Iron)	7 to 8	-	

#### Punching Capacity in Channel Iron (E55-0619)

Punching Dia. Size	10 OD	11 OD	12 OD	13 OD	14 OD	15 OD	16 OD
75 x 40 t7	○	○	○	○	○	○	○
100 x 50 t7.5	○	○	○	○	○	○	-
125 x 65 t8	○	○	○	○	○	-	-



#### Oblong Hole Size



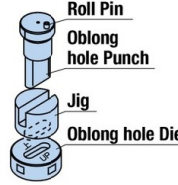


# PUNCHES & DIES

## Punches & Dies for SELFER Puncher

### FOR HS06-1322/HS07-1624/HS11-1624/HA06-1322/HA07-1624/HA11-1624

Oblong hole D Punch		Oblong hole D Die		Oblong hole Jig	
PN	Size	PN	Size	PN	Size
TJ13229	D Punch 16 x 8	TJ13238	D Die 16 x 8	TK00455	Jig 16 x 8
TJ13230	D Punch 18 x 9	TJ13239	D Die 18 x 9	TK00456	Jig 18 x 9
TJ13231	D Punch 20 x 10	TJ13240	D Die 20 x 10	TK00457	Jig 20 x 10
TJ13232	D Punch 22 x 11	TJ13241	D Die 22 x 11	TK00458	Jig 22 x 11
TJ13233	D Punch 24 x 12	TJ13242	D Die 24 x 12	TK00459	Jig 24 x 12
TJ13234	D Punch 25 x 9*	TJ13243	D Die 25 x 9	TK00460	Jig 25 x 9
TJ13235	D Punch 25 x 12*	TJ13244	D Die 25 x 12	TK00461	Jig 25 x 12
TJ13236	D Punch 25 x 14*	TJ13245	D Die 25 x 14	TK00462	Jig 25 x 14
TJ13237	D Punch 25 x 18*	TJ13246	D Die 25 x 18	TK00463	Jig 25 x 18



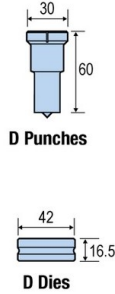
### Optional Accessories

PN	Description	Sales Unit
TQ01279	Hex. Set Screw 8 x 14 for Securing Oblong Hole Dies	1 piece
TA99037	Lock Nut Assy for D Punch 25	1 set

\*TA99037 Lock Nut Assy is required for Oblong hole D Punch 25 x 9 / 12 / 14 / 18

### FOR HS06-1322/HS07-1624/HS11-1624/HA06-1322/HA07-1624/HA11-1624

Round hole D Punch		Round hole D Die	
PN	Size	PN	Size
TJ10778	D Punch 8	TJ10779	D Die 8
TJ11088	D Punch 9	TJ11089	D Die 9
TJ06700	D Punch 10	TJ06701	D Die 10
TJ06698	D Punch 11	TJ06699	D Die 11
TJ06696	D Punch 12	TJ06697	D Die 12
TJ06694	D Punch 13	TJ06695	D Die 13
TJ06692	D Punch 14	TJ06693	D Die 14
TJ06611	D Punch 14.5	TJ06612	D Die 14.5
TJ06690	D Punch 15	TJ06691	D Die 15
TJ06688	D Punch 16	TJ06689	D Die 16
TJ06686	D Punch 17	TJ06687	D Die 17
TJ06609	D Punch 17.5	TJ06610	D Die 17.5
TJ06684	D Punch 18	TJ06685	D Die 18
TJ06682	D Punch 19	TJ06683	D Die 19
TJ06680	D Punch 20	TJ06681	D Die 20
TJ06607	D Punch 20.5	TJ06608	D Die 20.5
TJ06678	D Punch 21	TJ06679	D Die 21
TJ07979	D Punch 21.5	TJ07980	D Die 21.5
TJ06676	D Punch 22	TJ06677	D Die 22
TJ06674	D Punch 23	TJ06675	D Die 23
TJ06566	D Punch 23.5	TJ06569	D Die 23.5
TJ07748	D Punch 24	TJ07749	D Die 24
TJ10061	D Punch 25	TJ10062	D Die 25



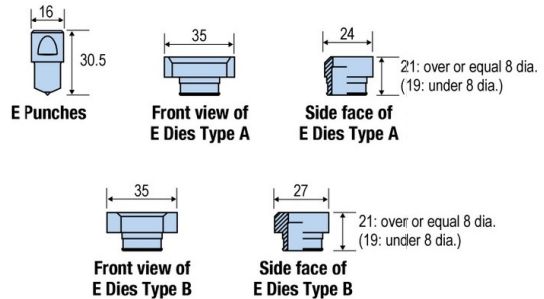
\* TA99037 Lock Nut Assy is required for D Punch 25

### FOR E25-0615

Round hole E Punch		Round hole E Die (Type A for thin sheets)		Round hole E Die (Type B for thick sheets)	
PN	Size	PN	Size	PN	Size
TK00100	E Punch 4	TK00101	E Die 4A	-	-
TK00102	E Punch 5	TK00103	E Die 5A	TK00104	E Die 5B
TK00143	E Punch 5.5	TK00144	E Die 5.5A	TK00145	E Die 5.5B
TK00105	E Punch 6	TK00106	E Die 6A	TK00107	E Die 6B
TK00146	E Punch 6.5	TK00147	E Die 6.5A	TK00148	E Die 6.5B
TK00111	E Punch 8	TK00112	E Die 8A	TK00113	E Die 8B
TK00149	E Punch 8.5	TK00150	E Die 8.5A	TK00151	E Die 8.5B
TK00117	E Punch 10	TK00118	E Die 10A	TK00119	E Die 10B
TK00120	E Punch 11	TK00121	E Die 11A	TK00122	E Die 11B
TK00123	E Punch 12	TK00124	E Die 12A	TK00125	E Die 12B
TK00097	E Punch 13	TK00098	E Die 13A	TK00099	E Die 13B
TK00167	E Punch 14	TK00168	E Die 14A	TK00169	E Die 14B
TK00428	E Punch 15	TK00288	E Die 15A	TK00429	E Die 15B

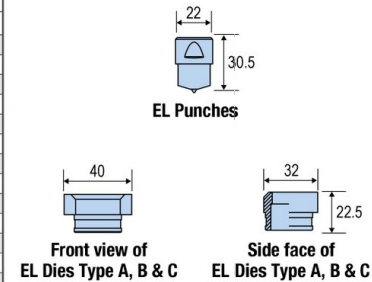
Oblong hole E Punch		Oblong hole E Die (Type A for thin sheets)		Oblong hole E Die (Type B for thick sheets)	
PN	Size	PN	Size	PN	Size
TK00126	E Punch 10 x 5	TK00127	E Die 10 x 5A	TK00128	E Die 10 x 5B
TK00158	E Punch 10 x 6.5	TK00159	E Die 10 x 6.5A	TK00160	E Die 10 x 6.5B
TK00129	E Punch 12 x 6	TK00130	E Die 12 x 6A	TK00131	E Die 12 x 6B
TK00152	E Punch 13 x 6.5	TK00153	E Die 13 x 6.5A	TK00154	E Die 13 x 6.5B
TK00155	E Punch 13 x 8.5	TK00156	E Die 13 x 8.5A	TK00157	E Die 13 x 8.5B



### FOR E55-0619

Oblong hole EL Punch		Oblong hole EL Die (Type A for thin sheets)		Oblong hole EL Die (Type B for thick sheets)	
PN	Size	PN	Size	PN	Size
TK00242	EL Punch 10 x 6.5	TK00254	EL Die 10 x 6.5A	TK00266	EL Die 10 x 6.5B
TK00243	EL Punch 13 x 6.5	TK00255	EL Die 13 x 6.5A	TK00267	EL Die 13 x 6.5B
TK00244	EL Punch 13 x 8.5	TK00256	EL Die 13 x 8.5A	TK00268	EL Die 13 x 8.5B
TK00245	EL Punch 13.5 x 9	TK00257	EL Die 13.5 x 9A	TK00269	EL Die 13.5 x 9B
TK00246	EL Punch 15 x 10	TK00258	EL Die 15 x 10A	TK00270	EL Die 15 x 10B
TK00247	EL Punch 16.5 x 11	TK00259	EL Die 16.5 x 11A	TK00271	EL Die 16.5 x 11B
TK00248	EL Punch 17 x 8.5	TK00260	EL Die 17 x 8.5A	TK00272	EL Die 17 x 8.5B
TK00249	EL Punch 18 x 9	TK00261	EL Die 18 x 9A	TK00273	EL Die 18 x 9B
TK00250	EL Punch 18 x 12	TK00262	EL Die 18 x 12A	TK00274	EL Die 18 x 12B
TK00251	EL Punch 19.5 x 13	TK00263	EL Die 19.5 x 13A	TK00275	EL Die 19.5 x 13B
TK00252	EL Punch 20 x 10	TK00264	EL Die 20 x 10A	TK00276	EL Die 20 x 10B
TK00253	EL Punch 21 x 14	TK00265	EL Die 21 x 14A	TK00277	EL Die 21 x 14B

Round hole EL Punch		Round hole EL Die (Type A for thin sheets)		Round hole EL Die (Type B for thick sheets)		Round hole EL Die (Type C for channel iron)	
PN	Size	PN	Size	PN	Size	PN	Size
TK00193	EL Punch 6	TK00208	EL Die 6A	TK00222	EL Die 6B	-	-
TK00194	EL Punch 6.5	TK00209	EL Die 6.5A	TK00223	EL Die 6.5B	-	-
TK00195	EL Punch 8	TK00210	EL Die 8A	TK00224	EL Die 8B	-	-
TK00196	EL Punch 8.5	TK00211	EL Die 8.5A	TK00225	EL Die 8.5B	-	-
TK00197	EL Punch 10	TK00212	EL Die 10A	TK00226	EL Die 10B	TK00235	EL Die 10C
TK00198	EL Punch 11	TK00213	EL Die 11A	TK00227	EL Die 11B	TK00236	EL Die 11C
TK00199	EL Punch 12	TK00214	EL Die 12A	TK00228	EL Die 12B	TK00237	EL Die 12C
TK00200	EL Punch 13	TK00215	EL Die 13A	TK00229	EL Die 13B	TK00238	EL Die 13C
TK00201	EL Punch 14	TK00216	EL Die 14A	TK00230	EL Die 14B	TK00239	EL Die 14C
TK00202	EL Punch 15	TK00217	EL Die 15A	TK00231	EL Die 15B	TK00240	EL Die 15C
TK00203	EL Punch 16	TK00218	EL Die 16A	TK00232	EL Die 16B	TK00241	EL Die 16C
TK00204	EL Punch 17	TK00219	EL Die 17A	TK00233	EL Die 17B	-	-
TK00205	EL Punch 18	TK00220	EL Die 18A	TK00234	EL Die 18B	-	-
TK00278	EL Punch 18.5	TK00279	EL Die 18.5A	TK00280	EL Die 18.5B	-	-
TK00180	EL Punch 19	TK00181	EL Die 19A	TK00182	EL Die 19B	-	-



Sales Unit: 1 Piece



# NITTO KOHKI Tools for Professional Use

	Chamfering	Scaling & Chipping	Grinding & Sanding	Flat Sanding
Machining & Molding	◎	●	●	●
Sheet-metal Working	●	●	●	●
Welding	●	◎	●	
Painting	●		●	
Steel Fabricating & Can Manufacturing	●	●	●	●
Molding & Die-casting	●	●	●	●
Bridges & Ship Building	●	●	●	●
Plant Construction & Piping		●	●	●
Wood Working & Art			●	●
Automotive & Painting	●	●	●	◎
Construction		◎	●	

◎ : Best Suited  
● : Suited

**HAND BEVELER**



P27

**AIR CHIPPER**



P32

**MYTON**



**COMPACT MULTI SANDER**



P43

**MINI BEVELER**



P27 - 29

**AUTO CHISEL**



P33

**MYTON**



P37 - 38

**FREE SANDER**




P44

**CIRCUIT BEVELER**



P28 - 30

**SUPER KELEN**




P34

**BELTON**



P39 - 42

**LINE SANDER**



P44

**JET CHISEL**




P35 - 36

**BELTON**




P39 - 42

**ORBITAL SANDER**



P45

**PALM ORBITAL SANDER**



P45



Precision Grinding	Filing	Deburring	Cutting	Drilling



# CHAMFERING

## Guide for Selecting Portable Chamfering Tools

Select the model according to the conditions of chamfering capacity, electrical or pneumatic tool required, and materials to be chamfered.

**Electric**

**Max. Chamfering Capacity for Mild Steel**

For straight edges  
Model **HB-15B**  
Up to 15 mm Chamfer  
(Max. chamfering capacity for one-cut is 7C)

For straight edges  
Model **EMB-0307C**  
Up to 7 mm Chamfer or 2, 3, 4 mm Radius

For straight edges  
Model **MB-03A**  
Up to 3 mm Chamfer or 2 and 3 mm Radius

For straight edges  
Model **ECB-0203**  
Up to 3 mm Chamfer or 2 and 3 mm Radius

For curved edges  
Model **CB-02**  
Up to 2 mm Chamfer or 2 mm Radius

For curved edges  
Model **CB-01**  
Up to 1 mm Chamfer or 1 mm Radius

For bridge and shipbuilding applications  
With locking throttle lever  
Model **CBR-03**

**Exclusive for 3 mm Radius Chamfering**

**Pneumatic**

**Max. Chamfering Capacity for Stainless Steel**

For straight edges  
Model **AMB-0307/AMB-0307**  
Up to 3 mm Chamfer or 2, 3, 4 mm Radius

For straight edges  
Model **AMB-0307/AMB-0307**  
Up to 7 mm Chamfer or 2, 3, 4 mm Radius

For curved edges  
Model **CB-01**  
Up to 0.5 mm Chamfer  
(with optional indexable insert)

For curved edges  
Model **CB-01**  
Up to 1 mm Chamfer  
(with optional indexable insert)

**Pneumatic**

**Max. Chamfering Capacity for Aluminum**

For curved edges  
Model **CB-01**  
Up to 1 mm Chamfer  
(with optional indexable insert)

Applicable to stainless steel chamfering

Applicable to aluminum chamfering



# CHAMFERING

**HAND BEVELER**  
Model **HB-15B**  
• Mild steel: 15C

**MINI BEVELER**  
Model **EMB-0307C**  
• Mild steel: 7C, 4R  
• Stainless steel: 3C, 4R







**MINI BEVELER**  
Model **MB-03A**  
• Mild steel: 3C, 3R

**CIRCUIT BEVELER**  
Model **ECB-0203**  
• Mild steel: 3C, 3R  
• Stainless steel: 1.5C, 2R

For further information, see the following pages.

P27 for Model HB-15B  
P27 for Model EMB-0307B  
P28 for Model MB-03A  
P28 for Model ECB-0203



Specifications		ELECTRIC			
Model		HB-15B	EMB-0307C	MB-03A	ECB-0203
Power Source (Single Phase)		220 - 240 V AC 50/60 Hz 110 - 120 V AC 50/60 Hz	220 - 240 V AC 50/60 Hz 110 - 120 V AC 50/60 Hz	220 - 240 V AC 50/60 Hz 100 - 110 V AC 50/60 Hz	220 - 240 V AC 50/60 Hz
Rated Power Consumption		910	900	430	450
Duty Cycle		Continuous			30
No-load Speed		2750 (220 - 240 V) 3340 (110 - 120 V)	12700 (220 - 240 V) 13300 (110 - 120 V)	11000	10000
Chamfering Capacity	Mild Steel	Up to 15 mm Chamfer (Initial chamfer is 7 mm.)	Up to 7 mm Chamfer 2, 3, 4 mm Radius	Up to 3 mm Chamfer 2 and 3 mm Radius	
	Stainless Steel	-	Up to 3 mm Chamfer 2, 3, 4 mm Radius	-	Up to 1.5 mm Chamfer 2 mm Radius
Chamfer Angle		15° - 45°			45°
Mass (Weight)		14	3.9	2.5	
Optional Accessories		<ul style="list-style-type: none"> <li>TA9A728 Pipe Plate Ass'y for Pipe Outer Edge Beveling (Pipe O.D. 125 to 800 mm)</li> </ul> 	<ul style="list-style-type: none"> <li>TB02539 Attachment for Pipe Outer Edge Beveling (Pipe O.D. 80 to 200 mm) *Pipe O.D. more than 200 mm can be chamfered with the standard accessory.</li> </ul> 	<ul style="list-style-type: none"> <li>TA9A594 Inner Head Ass'y for Pipe Inner Edge Beveling (Minimum Inner Pipe Diameter : 100 mm)</li> </ul> 	<ul style="list-style-type: none"> <li>TB03097 Plate Ass'y for Straight Edge Beveling</li> <li>TB02862 Dust Box Ass'y Used with TB03097 Plate Ass'y</li> <li>TB02857 Guide Sleeve 24 mm Dia. Ass'y</li> </ul>   

**MINI BEVELER**  
Model **AMBL-0307 (Lever)**  
Model **AMB-0307 (Ring)**  
• Mild steel: 7C, 4R  
• Stainless steel: 3C, 4R

**CIRCUIT BEVELER**  
Model **CB-01**  
• Mild steel: 1C, 1R  
• Stainless steel: 0.5C\*  
• Aluminum: 1C\*





**CIRCUIT BEVELER**  
Model **CB-02**  
• Mild steel: 2C, 2R

**CIRCUIT BEVELER**  
Model **CBR-03**  
• Mild steel: 3R

For further information, see the following pages.

P29 for Model AMBL/AMB-0307  
P29 for Model CB-01  
P30 for Model CB-02  
P30 for Model CBR-03



Specifications		PNEUMATIC			
Model		AMBL-0307/AMB-0307	CB-01	CB-02	CBR-03
Air Pressure		0.6 (6)			
Air Consumption (No Load)		0.9	0.15	0.4	0.65
Free Speed		14000	28000	15000	12000
Chamfering Capacity	Mild Steel	Up to 7 mm Chamfer 2, 3, 4 mm Radius	Up to 1 mm Chamfer 1 mm Radius	Up to 2 mm Chamfer 2 mm Radius	3 mm Radius
	Stainless Steel	Up to 3 mm Chamfer 2, 3, 4 mm Radius	Up to 0.5 mm Chamfer *	-	-
	Aluminum	-	Up to 1 mm Chamfer *	-	-
Chamfer Angle		15° - 45°	45°		-
Mass (Weight)		2.9	0.5	1.8	2
Optional Accessories		<ul style="list-style-type: none"> <li>TB02539 Attachment for Pipe Outer Edge Beveling (Pipe O.D. 80 to 200 mm)</li> </ul> 	<ul style="list-style-type: none"> <li>TB09143 Plate Ass'y for Straight Edge Beveling</li> <li>TB09140 Guide Plate 78 Ass'y for More Stable Operation</li> </ul>  	<ul style="list-style-type: none"> <li>TB02437 Thin Plate Attachment Ass'y</li> </ul> 	-

For further information of optional Beveler accessories, see P31.

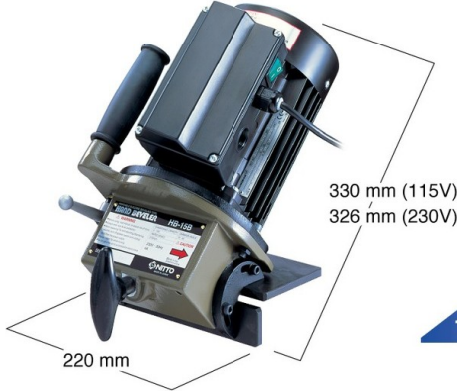
\*With optional indexable insert

# CHAMFERING

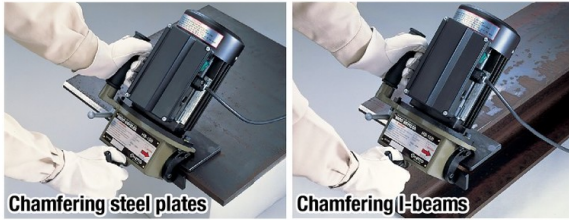
Portable Chamfering Tools

## HAND BEVELER

Model **HB-15B**



**15C**  
Mild Steel



### Chamfering up to 15C

- Ideal for plate, pipe, and tube chamfering for welding preparation
- Chamfer width up to 15 mm at 45° angle using multiple passes
- Indexable inserts have four working edges for good economy
- Finishes a surface so fine that post-sanding is unnecessary
- Column R-section can be chamfered with optional attachment
- High speed cutting action minimizes material hardening

#### Specifications

Model	HB-15B	
Power Source (Single Phase)	110 - 120 V AC, 50/60 Hz	220 - 240 V AC, 50/60 Hz
Rated Power Consumption	W	910
Rated Current	A	10.5      4
Duty Cycle	min	Continuous
No-load Speed	min <sup>-1</sup> (rpm)	3350      2750
Chamfering Capacity (Mild Steel)	Up to 15 mm Chamfer *	
Chamfer Angle	15° - 45°	
Power Cord Length	m	5
Mass (Weight)	kg	15

\*Max. Chamfering Capacity for one - cut is 7C

#### Accessories Included

- 12 pieces of Indexable Insert 12.7 (Installed)
- 12 pieces of Indexable Insert 12.7
- 4 mm Hex. Socket Screw Key
- 5 mm Hex. Socket Screw Key
- 6 mm Hex. Socket Screw Key
- 24 x 27 mm Spanner
- Hook Spanner 25 - 28
- 3 mm T Wrench
- Roller Bracket Ass'y
- Spacer A
- Spacer B
- Plate B

#### Chamfer Angle and Width

Chamfer Angle $\alpha$	Mild Steel(mm)		Chamfer
	X	Y	
45°	15	15	
30°	9	15.5	
15°	4	15.4	

Handy Electric Chamfering Tool

## MINI BEVELER

Model **EMB-0307C**

Double insulation



**7C**      **3C**  
**4R**      **4R**  
Mild Steel      Stainless Steel

### Designed to chamfer stainless and mild steel

- Ideal for edge chamfering pipe, tube, and plate
- Adjustable to chamfer angles from 15° to 45°
- Chamfer width up to 7 mm on mild steel.
- Uses indexable carbide inserts
- Swarf and chip collection box included

#### Specifications

Model	EMB-0307C	
Power Source (Single Phase)	110 - 120 V AC, 50/60 Hz	220 - 240 V AC, 50/60 Hz
Rated Power Consumption	W	900
Rated Current	A	7.8      3.9
Duty Cycle	min	Continuous
No-load Speed	min <sup>-1</sup> (rpm)	13300      12700
Chamfering Capacity	Mild Steel	Up to 7 mm Chamfer or 2, 3, 4 mm Radius
	Stainless Steel	Up to 3 mm Chamfer or 2, 3, 4 mm Radius
Chamfer Angle	15° - 45°	
Power Cord Length	m	4.0
Mass (Weight)	kg	3.9

\*115 V available on request.

#### Accessories Included

- Indexable Insert with Hole 12.7 (Installed)
- Indexable Insert Set Screw 4 x 7 (Installed)
- Indexable Insert with Hole 12.7
- Indexable Insert Set Screw 4 x 7
- Dus: Box Ass'y
- Carbon Brush Ass'y
- 2 pieces of Hex. Nut M8
- 2 pieces of Hex. Socket Set Screw 8 x 25
- 3 pieces of Pan Head Screw 5 x 10
- 4 mm Hex. Socket Screw Key
- Spanner T-15D

#### Chamfer Angle, Width and Radius

Chamfer Angle $\alpha$	Mild Steel(mm)			Stainless Steel(mm)			Chamfer
	X	Y	Z	X	Y	Z	
45°	7	7	9.9	3	3	4.2	
30°	3.8	6.6	7.6	2.2	3.8	4.4	
15°	1.5	5.6	5.8	1	3.8	3.9	

Radius	Mild Steel(mm)		Stainless Steel(mm)		Radius
	2, 3, 4		2, 3, 4		



# CHAMFERING

Handy Electric Chamfering Tool

## MINI BEVELER

Model **MB-03A** Non-CE

Double insulation



**3C**  
**3R**  
Mild Steel

### Compact and light for speed chamfering

- An outer R-part attachment allows chamfering of outer diameters with a radius greater than 170 mm
- An optional inner head ass'y allows chamfering a pipe of inner diameter larger than 100 mm (50R)

#### Specifications

Model	MB-03A	
Power Source (Single Phase)	110 V AC, 50/60 Hz	230 V AC, 50/60 Hz
Rated Power Consumption	W	430
Rated Current	A	4.5
Duty Cycle	min	30
No-load Speed	min <sup>-1</sup> (rpm)	11000
Chamfering Capacity (Mild Steel)	Up to 3 mm Chamfer or 2 mm and 3 mm Radius	
Chamfer Angle	45°	
Power Cord Length	m	2.5
Mass (Weight)	kg	2.5

#### Accessories Included

- Indexable Insert 9.525 R2 (Installed)
- Indexable Insert 9.525
- 3 mm Hex. Socket Screw Key
- 4 mm Hex. Socket Screw Key
- Spanner T-9F
- Hex. Nut
- 2 pieces of Hex. Socket Set Screw 8 x 25

#### Chamfer Angle, Width and Radius

Mild Steel(mm)		Chamfer	X	Y	45°	Straight	Mild Steel(mm)		Radius	Round
X	Y						Radius	2, 3		
3	3									

Electric Radial Chamfering Tool

## CIRCUIT BEVELER

Model **ECB-0203**

Double insulation



**3C** **1.5C**  
**3R** **2R**  
Mild Steel Stainless Steel

### Smoothly chamfering straight and curved edges

- Designed to chamfer stainless and mild steel
- Minimum chamfering plate thickness is 2 mm (Max. 0.5 mm Chamfer)
- Indexable inserts have four working edges for good economy
- An optional straight plate allows chamfering a straight edge shoulder

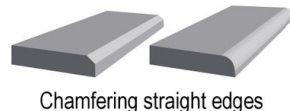
#### Specifications

Model	ECB-0203	
Power Source (Single Phase)	220 - 240 V AC, 50/60 Hz	
Rated Power Consumption	W	450
Rated Current	A	2.1
Duty Cycle	min	30
No-load Speed	min <sup>-1</sup> (rpm)	11000
Chamfering Capacity	Mild Steel	Up to 3 mm Chamfer or 2* and 3 mm Radius
	Stainless Steel	Up to 1.5 mm Chamfer or 2* mm Radius
Chamfer Angle	45°	
Power Cord Length	m	2.5
Mass (Weight)	kg	2.5

\*In case of 3 mm Radius, an optional indexable Insert for 3R is necessary, and 2 mm Radius, an optional guide sleeve 24 mm dia. and indexable insert for 2R are necessary.

#### Accessories Included

- Indexable Insert with Hole 12.7 (Installed)
- Indexable Insert Set Screw 4 x 7 (Installed)
- Indexable Insert with Hole 12.7
- Indexable Insert Set Screw 4 x 7
- Sub Handle
- Grip Guard
- Ball Bearing 687zz
- 5 mm Hex. Socket Screw Key
- 8 x 10 mm Spanner
- Spanner T-150
- Gauge C3



Chamfering straight edges



Chamfering curved edges

Chamfering range of operation			
Min. Diameter	Min. Radius	Min. Depth	Min. Thickness

#### Chamfer Angle, Width and Radius

Mild Steel(mm)		Stainless Steel(mm)		Chamfer	X	Y	45°	Straight	Mild Steel	Stainless Steel	Radius	Round
X	Y	X	Y						(mm)	(mm)		
3	3	1.5	1.5						2, 3	2		

# CHAMFERING

Pneumatic Chamfering Tool

## MINI BEVELER

Model **AMBL-0307**

• Lever switch type

Model **AMB-0307** Non-CE

• Ring switch type



**7C**  
**4R**  
Mild Steel

**3C**  
**4R**  
Stainless Steel

*Ideal for chamfering plate, pipe, tube and other profiles*

- Lightweight design for portable edge chamfering applications
- Designed to chamfer stainless and carbon steels
- Adjustable to chamfer angles from 15° to 45°
- 300 mm minimum radius bend
- Chamfer width up to 7 mm at 45°
- Uses indexable carbide inserts

### Specifications

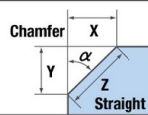
Model		AMBL-0307 / AMB-0307
Air Pressure	MPa (kgf/cm <sup>2</sup> )	0.6 (6)
Air Consumption (No-load)	m <sup>3</sup> /min	0.9
Free Speed	min <sup>-1</sup> (rpm)	14000
Chamfering Capacity	Mild Steel	Up to 7 mm Chamfer or 2, 3, 4 mm Radius
	Stainless Steel	Up to 3 mm Chamfer or 2, 3, 4 mm Radius
Chamfer Angle		15° - 45°
Inlet Size		Rc 3/8
Mass (Weight)	kg	2.9

### Accessories Included

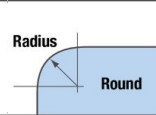
- Indexable Insert with Hole 12.7 (Installed)
- Indexable Insert Set Screw 4 x 7 (Installed)
- Indexable Insert with Hole 12.7
- Indexable Insert Set Screw 4 x 7
- Knob
- 2 pieces of Hex. Socket Set Screw 8 x 25
- 2 pieces of Hex. Nut M8
- 3 mm Hex. Socket Screw Key
- 4 mm Hex. Socket Screw Key
- Spanner T-15F
- Bushing R 3/8 x NPT 3/8

### Chamfer Angle, Width and Radius

Chamfer Angle $\alpha$	Mild Steel(mm)			Stainless Steel(mm)		
	X	Y	Z	X	Y	Z
45°	7	7	9.9	3	3	4.2
30°	4	7	8.1	2.2	3.8	4.4
15°	2.2	8	8.3	1	3.8	3.9



	Mild Steel(mm)	Stainless Steel(mm)
Radius	2, 3, 4	2, 3, 4



Pneumatic Radial Chamfering Tool

## CIRCUIT BEVELER

Model **CB-01**

*Ideally suited for chamfering machine and mold component parts*

- Only requires a 6.8 mm diameter hole for chamfering
- Two 3-sided indexable inserts provide a cost effective way to get a smooth, chatter free finish
- Aluminum and stainless steel can also be processed with optional indexable insert



**1C**  
Aluminum\*

**1C**  
**1R**  
Mild Steel

**0.5C**  
Stainless Steel\*

### Specifications

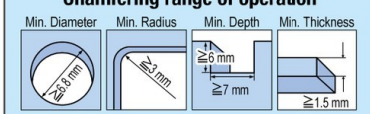
Model		CB-01
Air Pressure	MPa (kgf/cm <sup>2</sup> )	0.6 (6)
Air Consumption (No-load)	m <sup>3</sup> /min	0.15
Free Speed	min <sup>-1</sup> (rpm)	28000
Chamfering Capacity	Mild Steel	Up to 1 mm Chamfer or 1 mm Radius
	Stainless Steel*	Up to 0.5 mm Chamfer
	Aluminum*	Up to 1 mm Chamfer
Chamfer Angle		45°
Minimum Workpiece Thickness	mm	1.5 (0.5 mm Chamfer)
Inlet Size		Rc 1/4
Mass (Weight)	kg	0.5

\*Optional indexable insert is required.

### Accessories Included

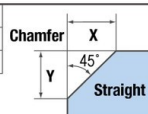
- 2 pieces of Indexable Insert 8.4 (Installed)
- 2 pieces of Indexable Insert Set Screw (Installed)
- 2 pieces of Indexable Insert Set Screw
- 2 mm Hex. Socket Screw Key for Chamfering Adjustments
- Spanner T-6F for Replacement of Indexable Insert
- Bushing R 1/4 x NPT 1/4

### Chamfering range of operation

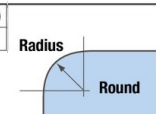


### Chamfer Angle and Width

Mild Steel(mm)		Stainless Steel(mm)		Aluminum(mm)	
X	Y	X	Y	X	Y
1	1	0.5	0.5	1	1



	Mild Steel(mm)
Radius	1





# CHAMFERING

Pneumatic Radial Chamfering Tool

## CIRCUIT BEVELER

Model **CB-02**

*Uniquely designed to chamfer circular, elliptical and straight line profiles*

- Chamfers exterior and/or interior edges
- Depth gauge provided to accurately set chamfer widths
- Optional attachment PN TB02437 available for chamfering thin materials



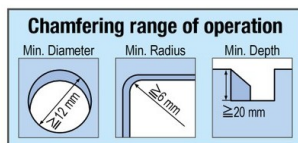
**2C**  
**2R**  
Mild Steel

### Specifications

<b>Model</b>	<b>CB-02</b>	
<b>Air Pressure</b>	MPa (kgf/cm <sup>2</sup> )	0.6 (6)
<b>Air Consumption (No-load)</b>	m <sup>3</sup> /min	0.4
<b>Free Speed</b>	min <sup>-1</sup> (rpm)	15000
<b>Chamfering Capacity</b>	Up to 2 mm Chamfer or 2 mm Radius	
<b>Chamfer Angle</b>	45°	
<b>Inlet Size</b>	Rc 1/4	
<b>Mass (Weight)</b>	kg	1.8

### Accessories Included

- Indexable Insert 9.525 (Installed)
- Indexable Insert 9.525
- Adjustment Gauge
- Spanner T-9F
- Protective Cap
- Hook Spanner 58-65
- Bushing R 1/4 x NPT 1/4



### Chamfer Angle, Width and Radius

Mild Steel(mm)		Chamfer	X	Y	45°	Straight	Mild Steel(mm)	
X	Y						Radius	2
2	2							

Pneumatic Radial Chamfering Tool

## CIRCUIT BEVELER

Model **CBR-03**

*For bridge and shipbuilding applications*

### Bridge

- Radius chamfering on the scallop parts or holes of bridge members

### Shipbuilding

- Meets or exceeds PSPC\* requirements on surface preparation of steel materials prior to coating
- Radius chamfering on steel materials used in seawater ballast tanks and double-side skin bulk carrier production
- Dual cutting head with 4 radius surfaces per tip and a quick-change base

\*PSPC stands for Performance Standard for Protective Coatings regulated by International Marine Organization.



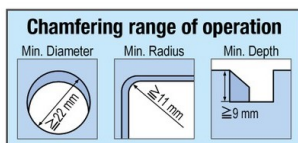
**3R**  
Steel

### Specifications

<b>Model</b>	<b>CBR-03</b>	
<b>Air Pressure</b>	MPa (kgf/cm <sup>2</sup> )	0.6 (6)
<b>Air Consumption (No-load)</b>	m <sup>3</sup> /min	0.65
<b>Free Speed</b>	min <sup>-1</sup> (rpm)	12000
<b>Chamfering Capacity</b>	3 mm Radius	
<b>Minimum Workpiece Thickness</b>	mm	6
<b>Inlet Size</b>	Rc 1/4	
<b>Mass (Weight)</b>	kg	2

### Accessories Included

- 2 pieces of Indexable Insert 12.7 R3 (Installed)
- 2 pieces of Indexable Insert Set Screw (Installed)
- Indexable Insert Set Screw
- Spanner T-15D
- Handle



### Chamfer Angle and Width

Mild Steel(mm)		Radius	Round
Radius	3		