

# POWER TOOLS & MACHINE TOOLS

**GENERAL CATALOG** 















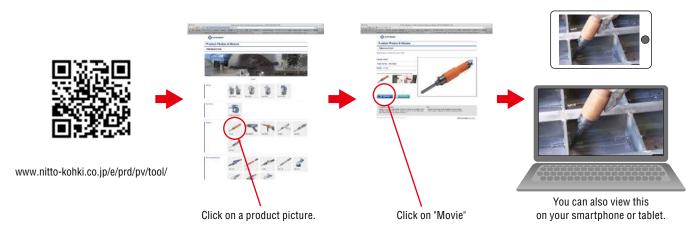
#### **Product Line**

Boring	Atra Ace 5	Grinding & Sanding	Free Sander 44 Line Sander 44
Punching	Selfer 19 Pump 19 Handy Selfer 21		Orbital Sander 45 Palm Orbital Sander 45 Air Sonic 46
Chamfering	Beveler 27	Filing	Super Hand47 Micro Air Hand48
Scaling	Air Chipper 32 Auto Chisel 33	Deburring	Burr Cutter 48
	Super Kelen 34 Jet Chisel 35	Cutting	Super Saw 49
Grinding & Sanding	Myton 37 Belton 39	Drilling	Air Drill 49
	Compact Multi Sander 43	Suspending	Spring Balancer50
Consumables			
Annular Cutters	Broach Cutters & Broach Holders 17	Needles	Needles for Jet Chisel 36
Punches & Dies	Punches & Dies for Selfer 22	Grinding & Sanding Discs	Grinding & Sanding Discs for Myton 38
Indexable Inserts	Indexable Inserts for Beveler 31	Abrasive Belts	Abrasive Belts for Belton 40,42



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.



1

# **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-5575	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	•	•	•	•	•	•	•	•	•

- 1. Automatic control & feed are activated by simply pushing the feed handle to engage the clutch.
- 2. The feed speed is reduced for the first few seconds after boring begins to ensure a smooth cut through the mill scale.
- 3. 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.
- **4.** The feed speed is continuously monitored and updated proportionally to the load on the cutter.
- 5. QA-4000/QA-6500: The sensing system responds to driling 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.

- **6.** The drill will not start until the magnetic field is active.
- 7. QA-4000/QA-6500/WA-3500/WA-5000/WOJ-3200/AO-5575/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.

- 8. 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-5575/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-5575/LO-3550/CLA-2720/ARA-100A: When an excessive load is applied to the cutter, the drill motor will stop automatically.

10. 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.

- 11. While the drill motor is running, if no load is applied within 10 seconds, the drill will stop automatically to save the battery.
- 12. 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

	Sp	ecifications	100		<u> </u>						<u> </u>	-	
	Mo	odel		CLA-	2720	LO-3550	WA-	3500		WA-	5000		
	)rill	Power Source (Single Phase	\		tery V DC)	220 - 240 V AC, 50/60 Hz	110 - 120 V AC, 50/60 Hz	220 - 240 V AC, 50/60 Hz		20 V AC, 60 Hz	220 - 24 50/6	10 V AC, 0 Hz	
	tric [	Rated Power	Consumption W	3	24	800	11	00		11:	50		
	Rated Power Consumption W Rated Current A No-load Speed min <sup>-1</sup> (rpm)		nt A	,	4	3.3	10.2	5.1	1(	0.8	5	.4	
			430		950	95	50		350 / 650				
	Ma	ignet Power	Consumption W	1	8	35	34			75			
		Max. Hole D	iameter	2	27	35	3	5		5	0		
	Max. Plate Thickness		Thickness	2	20	50	3	35		75			
7	One-touch Type	Hole Diameter mm	12 to 17	17.5 to 27	12 to 35	17.5	to 35	12 to 17	17.5 to 50	12 to 17	17.5 to 50		
	Side-lock Type JETBROACH Plate Thickness mm Hole Diameter mm Plate Thickness mm Plate Thickness			6 to 12	6 to 20	6 to 50	9 to	50	9 to 50	9 to 75	9 to 50	9 to 75	
				_	_				_	-			
į		JETBROACH	Plate Thickness mm		_	_	-		_				
		One-touch Type	Hole Diameter mm	12 to 15	16 to 27	_	14 to	35		14 to	50		
		HI-BROACH	Plate Thickness mm	6 to 12	6 to 20	_	9 to	25		9 to	50		
		Twist Drill	Hole Diameter mm		-	-	-			_			
	Ma	ax. Stroke	mm	6	60	80	8	3		10	)7		
	Ma	ngnet Holding	<b>Power</b> N(kgf)	5500	(561)	5500 (561)	7056	(720)		9800 (	1000)		
	Ma	ignet Dimens	sions mm	65 x	126	65 x 145	92 x	213		101 x	201		
	Power Cord Length m			-	3	3	3		3	}			
	Ma	ass (Weight)	kg		7	8.7	2	0		2	3		
	Fe	eding		Ma	nual	Manual	Autor	matic		Autor	matic		
	Pa	ge			7	9	1	1		1	1		

# Atra Ace Specifications











WOJ-3200

AO-5575

QA-4000

QA-6500

ARA-100A

MO1-	3200		AO-5	575		QA-4000		QA-6500	ARA-100A		
110 - 120 V AC, 50/60 Hz	220 - 240 V AC, 50/60 Hz	110 - 12 50/6	20 V AC, 0 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
95	50		11	50			68	30		1010	1800
8.6	4.3	10	).8	5	.4	6	.1	3	.0	4.5	8.2
87	70		350/	650			7:	50		400/750	110 - 210 /330 - 660
38	30		5	0			5	0		75	80
3	2		5	5			4	0		65	100
5	0		7	5			3	5		50	75
12 to	o 32	12 to 17	17.5 to 55	12 to 17	17.5 to 55		17.5	to 40		17.5 to 65	17.5 to 100
9 to	50	9 to 50	9 to 75	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	14 to 15	16 to 18	18 to 35	17.5 to 35
-	-		9 to	50		9 to 12	9 to 25	9 to 12	9 to 25	9 to 25	13 to 50
Max	13		-	-				-		_	Max. 32
13	30		10	)5			7	5		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
3	3	3		4	1		5	5	5		
1	3	18		18.5				26	30		
Mar	nual		Mar	nual		Automatic			Automatic	Manual	
1	3		1	3			1	5		15	5

**Portable Magnetic Base Drilling Machine** 

# ATRA ACE manual feed

# Model ARA-100A C€

• 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



Specifi	catio	ns			
Model			ARA-	100A	
Power So	urce (	Single Phase)	220 - 240 V AC, 50/60 Hz		
Electric	Rated	Power Consumption W	18	00	
Drill	Rated	Current A	8.2		
	No-lo	ad Speed min-1(rpm)	110 - 210	330 - 660	
	Morse	e Taper No.	M	Г3	
	Rated	l <b>Duty</b> min	3	0	
Magnet P	ower (	Consumption W	8	0	
Hole	Cutte	r	Hole Diameter	Plate Thickness	
Capacity	One-t	ouch Type JETBROACH 35L	17.5 to 40	13 to 35	
mm	One-t	ouch Type JETBROACH 50L	17.5 to 65	13 to 50	
	One-t	ouch Type JETBROACH 75L	17.5 to 55	13 to 75	
	JETBI	ROACH 75L	50 to 100	13 to 75	
	One-t	ouch Type HI-BROACH 25L	17.5 to 35	13 to 25	
	One-t	ouch Type HI-BROACH 50L	18 to 35	13 to 50	
	Twist	Drill	Max. 32	mm dia.	
Magnet H	lolding	Power N(kgf)	17000	(1733)	
Magnet D	imens	ions mm	110 >	( 220	
Cutter Position   Straight Front to Back mm		20			
Adjustme	nt	Swivel angle	30°		
Power Co	rd Len	<b>gth</b> m	5		
Mass (Wo	eight)	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
- Drill Drift7 x 8 mm Spanner
- Safety Chain • Guard
- **Optional Accessories** Ref. No. PN Description **Sales Unit** TB01507 Cutting Oil 2L 2 TB04374 Supporting Magnet Ass'y 1 piece 3 TB09727 Holder MT03075 One-touch TB09792 Holder MT03075 Side-lock

#### Slow Starting Function

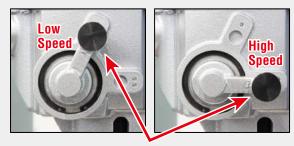
Slow speed at the beginning of boring will securely set a hole cutting position.





#### 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** 



#### 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 drill motor is overloaded. The LFD blinks in red.

#### **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.

hole, the drill motor stop instantly and the LED blink red. To resume operation, Blinking red turn the magnet switch off and on.



#### **Automatic Restart Function**

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





#### Fail-safe Restart

**Built-in Motion Sensor** 

If any lateral movement or excess vibration is detected during drilling a

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



MT3 Morse taper Use Morse taper sleeve MT3 for other shank drill bit can be directly installed. sizes than MT3



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

Portable Magnetic Base Drilling Machine

# ATRA ACE manual feed

**Model CLA-2720 C€** 

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



Specifi	catio	ns					
Model				CLA-2720			
Voltage					18 V DC		
Battery P	ack (Li	thium-ion Battery)		NBL180	06 (18V <sup>4</sup>	.0 Ah)	
No-load Speed min <sup>-1</sup> (rpm)				430			
Hole	Cutter			Hole Diameter	Pla	ate Thickness	
Capacity One-touc		ouch Type JETBROAC	H 25L	12 to 17		6 to 12	
mm	One-touch Type JETBROACH 35L		17.5 to 27		6 to 20		
	One-t	ouch Type HI-BROAC	H 25L	12 to 15		6 to 12	
				16 to 27		6 to 20	
Magnet H	lolding	Power	N(kgf)	55	500 (561)		
Magnet D	imens	ions	mm	(	65 x 126		
Cutter Position   Pivot Side to Side   mm		mm	10				
Ajustmen	t	Straight Front to Bac	ck mm	10			
Mass (We	eight)		kg	7*			

\*Including Battery Pack and Feed Handle

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

<sup>\*</sup>In case of a full charge from an empty battery. However, it can be charged up to 95%

#### 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

- 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

#### 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

#### Optional Accessories

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

#### 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

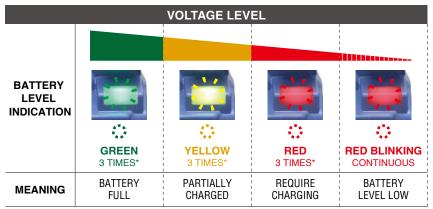
Feed handles can be positioned on the right or left side for ease of drilling and mounting in confined spaces.





#### CLA-2720 LED Indication Light Safety Features

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





\*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** Efficient Load Caution **MOTOR** LOAD INDICATION **GREEN YELLOW RED RED BLINKING** (WHITE)BLINKING MOTOR STOPPED **MEANING** LIGHT LOAD MEDIUM LOAD **OVERLOAD** BY OVERLOAD

'Caution" If an excessive is maintained load 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.



#### "NO LOAD" **DETECTION**



**GREEN** 

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.

ENERGY-SA After the Magnet switch is turned on, if

the Motor switch is not turned on within 10 seconds, the green light will flash.



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



#### **MOTOR NOT ACTIVATED IN TIME**



#### 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.



**Portable Magnetic Base Drilling Machine** 

# ATRA ACE manual feed

Model **LO-3550 C€** 

• Max. 35 mm dia. x 50 mm deep

Chip Breaker

# 276.2 mm 339 mm

## 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

Model				LO-3550		
Power So	urce (S	Single Phase)		220 - 240 V	AC, 50/60 Hz	
Electric	Rated	<b>Power Consumption</b>	Power Consumption W		00	
Drill	Rated Current A			3.	3	
	No-lo	No-load Speed min <sup>-1</sup> (rpm)		95	50	
Hole	Cutter	r		Hole Diameter	Plate Thickness	
Capacity	One-t	ouch Type JETBROAC	H 25L	12 to 17	6 to 25	
mm	One-touch Type JETBROACH 35L			17.5 to 35	6 to 35	
	One-t	ouch Type JETBROAC	H 50L	12 to 35	6 to 50	
Magnet H	olding	Power	N(kgf)	5500	(561)	
Magnet D	imens	ions	mm	65 x	145	
<b>Cutter Po</b>	sition	Pivot Side to Side	mm	1	0	
Ajustment Straight Front to Back		k mm	10			
Power Co	rd Len	gth	m	3		
Mass (Weight) k			kg	8.7*		

\*Without an electric cord and a sub handle

35L, 50L

Sales Unit

1 piece

- Carry Case
   Cutting Oil 0.5L
   Feed Handle
   Sub Handle

- Pilot Pin 08035
- Spanner 17
- 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

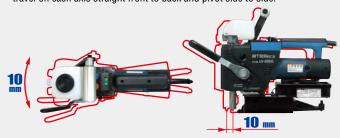
	5.000		outer, outup
S MTD	Optional <i>i</i>	Accessorie	s
	Ref. No.	PN	Description
	1	TB01507	Cutting Oil 2L
	2	TQ10581	Jet Oiler
	3	TB01098	Tube 4 x 7 x 3000 Ass'y
	4	TB07306	Lubrication Adapter Ass'y
This chip breaker prevents the cutter	5	TB04374	Supporting Magnet Ass'y
from becoming jammed with metal shavings.	6	TB07696	Pipe Attachment Ass'y
	*501 for s	tacked plates	One-touch Type JETBROACH 25L 3





#### 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.



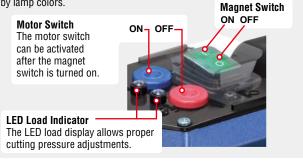
#### Light Handle Operation

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



#### 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 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.



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

#### Portable Magnetic Base Drilling Machine

# ATRA ACE auto

# **Model WA-3500 C€**

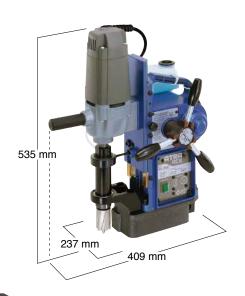
• Max. 35 mm dia. x 50 mm deep

# High-performance feed system & high-tech components

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

# **Model WA-5000 C€**

• Max. 50 mm dia. x 75 mm deep





Specifi	cations					
Model		WA-	3500	WA-	5000	
Power So	urce (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	Rated Power Consumption	W 11	100	11	50	
Drill	Rated Current	A 10.2	5.1	10.8	5.4	
	No-load Speed min <sup>-1</sup> (rp	n) 9	50	350	650	
Magnet P	ower Consumption	W 3	34	7	5	
Hole	Cutter	Hole Diameter	Plate Thickness	Hole Diameter	Plate Thickness	
Capacity	One-touch Type JETBROACH 25	L -	-	12 to 17	9 to 25	
mm	One-touch Type JETBROACH 35	L 17.5 to 35	9 to 35	17.5 to 40	9 to 35	
	One-touch Type JETBROACH 50	L 17.5 to 35	9 to 50	12 to 50	9 to 50	
	One-touch Type JETBROACH 75	L -	-	17 to 50	9 to 75	
	One-touch Type HI-BROACH 25	_ 14 to 35	9 to 25	14 to 50	9 to 25	
	One-touch Type HI-BROACH 50	-	-	14 to 50	9 to 50	
Max. Stro	<b>ke</b> m	m 8	33	107		
Magnet H	olding Power N(k	of) 7056	(720)	9800 (	(1000)	
Magnet D	<b>imensions</b> m	m 92 >	¢ 213	101 >	¢ 201	
Power Co	rd Length	m	3	3	3	
Mass (We	eight)	kg 2	20	2	3	
Accessories Included			Hex. Socket Screw Key mm Spanner	Carry Case     Cutting Oil 0.5L     Pilot Pin 08050     Side Handle     3 mm Hex. Socket Screw Key     Chain     Chip Breaker		

Optional A	ccessories				
Def No	DN	Description	0-1 11	Applicab	le Model
Ref. No.	PN	Description	Sales Unit	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		•



#### One-touch Cutter Replacement

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





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 feed handle to engage the clutch.

# Auto-feed on Feed handle

#### **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.









**Portable Magnetic Base Drilling Machine** 

# ATRA ACE manual feed

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

Advanced safety system

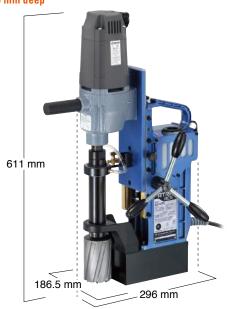
## **Model WOJ-3200 C€**

• Max. 32 mm dia. x 50 mm deep



#### Model **A0-5575 C€**

• Max. 55 mm dia. x 75 mm deep



	cations									
Model			WOJ-3200					AO-	5575	
Power So	urce (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 H	
Electric	Rated Power Consur	nption W	950			1150				
Drill	Rated Current	Α	8.6		4	.3	1(	0.8	5	.4
	No-load Speed	min <sup>-1</sup> (rpm)		87	70			350	650	
Magnet P	ower Consumption	W	3	8	3	30		5	0	
Hole	Cutter		Hole Diameter	Plate Thickness	Hole Diameter	Plate Thickness	Hole Diameter	Plate Thickness	Hole Diameter	Plate Thickness
Capacity	One-touch Type JETE	BROACH 25L	12 to 17	9 to 25	12 to 17	9 to 25	12 to 17	9 to 25	12 to 17	9 to 25
mm	One-touch Type JETE	BROACH 35L	17.5 to 32	9 to 35	17.5 to 32	9 to 35	17.5 to 40	9 to 35	17.5 to 40	9 to 35
	One-touch Type JETE	BROACH 50L	12 to 32	9 to 50	12 to 32	9 to 50	12 to 55	9 to 50	12 to 55	9 to 50
	One-touch Type JETE	BROACH 75L	-	-	-	-	17.5 to 55	9 to 75	17.5 to 55	9 to 75
	One-touch Type HI-B	ROACH 25L	-	-	-	-	12 to 50	9 to 25	12 to 50	9 to 25
	One-touch Type HI-B	ROACH 50L	-	-	-	-	12 to 50	9 to 50	12 to 50	9 to 50
	Twist Drill			Max. 13	mm dia.				-	
Max. Stro	oke	mm		13	30		105			
Magnet H	lolding Power	N(kgf)		9000	(918)			10000	(1020)	
Magnet D	imensions	mm		99 x	177			86 x	170	
Power Co	rd Length	m		(	3			(	3	
Mass (We	eight)	kg		1	3			1	8	
Accessor	ies Included		• Carry Case • Oil Tank Ass'y • Pilot Pin 08035 • Sub Handle • 2 pieces of Hex Head Bolt 5 x 1	k. Socket	• 4 mm Hex. So	ocket Screw Key ocket Screw Key ocket Screw Key oanner	• Carry Case • Cutting Oil 0.5 • Pilot Pin 08050 • Side Handle • 3 mm Hex. Soo	)	• 5 mm Hex. So • 8 x 10 mm Sp • Guard • Chain	ocket Screw Key anner

Dof No	DN	Description	Calaa Hait	Applicabl	le Model
Ref. No.	PN	Description	Sales Unit	WOJ-3200	AO-5575
1	TB07691	Chip Breaker Ass'y	1 piece	•	
<b>2</b> TB07474		Chip Breaker Ass'y	1 piece		•
<b>3</b> 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	•	•
<b>6</b> 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		•
*50L for s	tacked plates	One-touch Type HI-BROACH 50L	1 piece		•



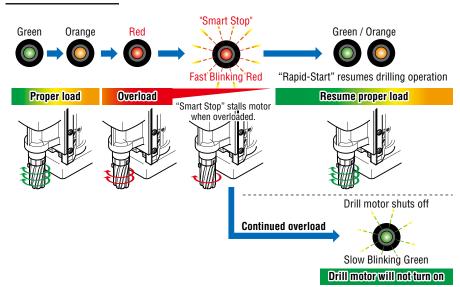
#### Load Detector with "Smart-Stop/Rapid-Restart" Technology

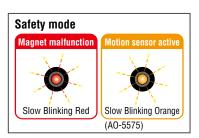
#### The world's first manual feed with "Smart-Stop / Rapid-Restart" technology for WOJ-3200 / AO-5575

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





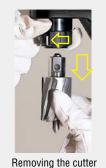


**LED load indicator** 

#### 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



#### Chip Breaker (Optional)

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





#### Two Speed Selection (AO-5575)

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



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



#### 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. Portable Magnetic Base Drilling Machine

# ATRA ACE quick auto

Model QA-4000 Non-CE

• Max. 40 mm dia. x 35 mm deep

# 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-6500 Non-CE

• Max. 65 mm dia. x 50 mm deep





Specifi	cations						
Model			QA-	4000	QA-	6500	
Power So	urce (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 Consum	nption W	V 680		10	010	
Drill	Rated Current	А	6.1	3.0	4	l.5	
	No-load Speed	min <sup>-1</sup> (rpm)	7	50	400	/ 750	
Magnet P	ower Consumption	W		50		75	
Hole	Cutter		Hole Diameter	Plate Thickness	Hole Diameter	Plate Thickness	
Capacity	One-touch Type JETE	BROACH 35L	17.5 to 40	9 to 35	17.5 to 40	9 to 35	
mm	One-touch Type JETE	BROACH 50L	-	-	17.5 to 65	9 to 50	
	One-touch Type HI-B	ROACH 25L	14 to 15	9 to 12	18 to 35	9 to 25	
			16 to 18	9 to 25	10 10 33	9 10 25	
Max. Stro	oke	mm	7	75	8	38	
Magnet H	lolding Power	N(kgf)	6664	(680)	9800	(1000)	
Magnet D	imensions	mm	82 >	x 172	100	x 200	
Power Co	rd Length	m		4		5	
Mass (W	eight)	kg	18	8.5		26	
Accessor	ies Included		• Cutting Oil 0.5L • Pilot Pin 08035	• 4 mm Hex. Socket Screw Key • 8 x 10 mm Spanner • Chain • Tool Box	Oil Tank Ass'y Cutting Oil 0.5L Pilot Pin 08050 Side Handle 3 mm Hex. Socket Screw Key	• 4 mm Hex. Socket Screw Key • 8 x 10 mm Spanner • Chip Stopper • Chain • Tool Box	

Optional <i>A</i>	Accessories					
Ref. No.	PN	Description	Coloo Unit	Applicable Model		
Kei. No.	PN	Description	Sales Unit	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 25I	1 niece	•		



#### **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.

#### 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.



#### **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.

#### 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.



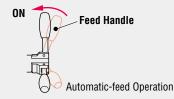
Engage the clutch by pushing the handles in towards the drill and the motor will begin feeding automatically.



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

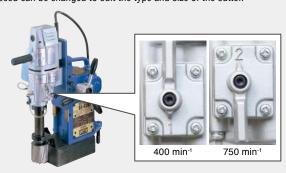


After the hole is completed, the QA Series machines will quickly return and stop at the top of the stroke, ready for the next hole.



#### 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

**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.



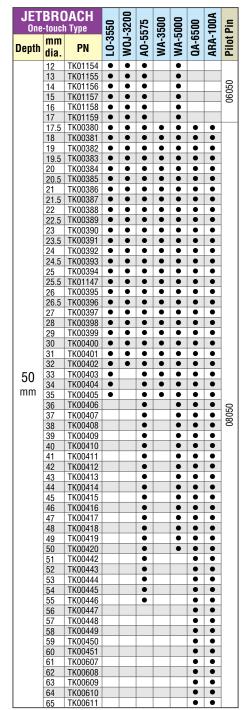
Specifi	cations			90 mm(17.5 - 65 × 50	OL) FOI Stacked plates.		
		HI-BROACH One-touch Type/25L	HI-BROACH One-touch Type/50L	JETBROACH One-touch Type/25,35,50L	JETBROACH One-touch Type/50L(W)	JETBROACH One-touch Type/75L	<b>JETBROACH</b> Side lock Type/75L
		25L : 12 - 52 dia.	-	25L : 12 - 17 dia.	-	-	-
	Hala Diameter	-	-	35L : 17.5 - 40 dia.	-	-	-
	Hole Diameter	-	50L : 12 - 52 dia.	50L : 12 - 65 dia.	50L(W):18,22,24 - 26.5,	-	-
Hole		-	-	-	28,32, and 35 dia.	75L : 17.5 - 55 dia.	75L : 50 - 100 dia.
Capacity		25L : 25 dia.	-	25L : 25 dia.	-	-	-
mm	Plate Thickness	-	-	35L : 35 dia.	-	-	-
	Plate Hillckiless	-	50L : 50 dia.	50L : 50 dia.	50L(W) : 50 dia.	-	-
		-	-	-	-	75L : 75 dia.	75L : 75 dia.
Feed Spe	ed mm/rev			0.02	- 0.1		
Circumfe	rential Speed m/min	15 - 35 (n	nild steel)		35 - 50 (m	nild steel)	

III DDOACH

		)ACH								(11111
		h Type	72	8		8	8	120	8	Ë
	mm		A0-5575	VA-3500	VA-5000	QA-4000	JA-6500	CLA-2720	<b>ARA-100A</b>	Pilot F
Depth	dia.	PN	8	Ž	⋛	8	8	궁	H.	Ξ
	12	TK00698	•					•		
	13	TK00699	•					•		
	14	TK00700	•	•	•	•		•		36025
	15	TK00701	•	•	•	•		•		9
	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	•	•	•		•	•	•	
25	28	TK00352	•	•	•		•	•	•	
	29	TK00353	•	•	•		•		•	
mm	30	TK00354	•	•	•		•		•	
	31	TK00355	•	•	•		•		•	5
	32	TK00356	•	•	•		•		•	08025
	33	TK00357	•	•	•		•		•	õ
	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	•		•					1
	47	TK00715	•		•					1
	48	TK00716	•		•					1
	49	TK00717	•		•					1
	50	TK00718	•		•					
	51	TK00719								
	52	TK00720								1

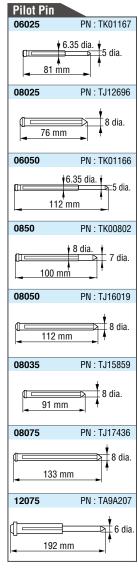
		ACH 1 Type	972	8	100A	Pin
Depth	mm dia.	PN	A0-5575	WA-5000	ARA-100A	<b>Pilot Pin</b>
	12	TK00721	•			
	13	TK00722	•			
	14	TK00723	•	•		0
	15	TK00724	•	•		99
	16	TK00725	•	•		0
	17	TK00726	•	•		
	18	TK00727	•	•	•	
	19	TK00728	•	•	•	
	20	TK00729	•	•	•	
	21	TK00730	•	•	•	
	22	TK00731	•	•	•	
	23	TK00732	•	•	•	
	24	TK00733	•	•	•	
	25	TK00734	•	•	•	
	26	TK00735	•	•	•	
	27	TK00736	•	•	•	
	28	TK00737	•	•	•	
	29	TK00738	•	•	•	
	30	TK00739	•	•	•	
50	31	TK00740	•	•	•	
	32	TK00741	•	•	•	
mm	33	TK00742	•	•	•	
	34	TK00743	•	•	•	22
	35	TK00744	•	•	•	3850 / 0805
	36	TK00745	•	•		2
	37	TK00746	•	•		82
	38	TK00747	•	•		0
	39	TK00748	•	•		
	40	TK00749	•	•		
	41	TK00750	•	•		
	42	TK00751	•	•		
	43	TK00752	•	•		
	44	TK00753	•	•		
	45	TK00754	•	•		
	46	TK00755	•	•		
	47	TK00756	•	•		
	48	TK00757	•	•		
	49	TK00757	•	•		
	50	TK00759	•	•		
	51	TK00760		Ť		
	52	TK00761				
	02	11100701				

_		30 -	JU (IIIIIU 3	leei)									
			DACH 1 Type	550	W0J-3200	575	3500	2000	000	200	CLA-2720	<b>ARA-100A</b>	Pin
	Depth	mm dia.	PN	L0-3550	WOJ	A0-5575	WA-3500	WA-5000	QA-4000	QA-6500	CLA-	ARA-	Pilot Pin
		12	TK01148	•	•	•		•			•		
		13	TK01149	•	•	•		•			•		
	25	14	TK01150	•	•	•		•			•		06025
	mm	15	TK01151	•	•	•		•			•		90
		16	TK01152	•	•	•		•			•		
		17	TK01153	•	•	•		•			•		
		17.5	TK00301	•	•	•	•	•	•	•	•	•	
		18	TK00302	•	•	•	•	•	•	•	•	•	
		18.5	TK00303	•	•	•	•	•	•	•	•	•	
		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	•	•	•	•	•	•	•	•	•	
	35	25	TK00316	•	•	•	•	•	•	•	•	•	ന്
	l .	25.5	TK01169	•	•	•	•	•	•	•	•	•	08035
	mm	26	TK00317	•	•	•	•	•	•	•	•	•	õ
		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			•		•	•	•		•	



		DACH		0		4	
		1 Type	2	20	13	8	ڃ
SUL(VV)		cked plates	32	3	22	Ξ	트
Depth	mm dia.	PN	LO-3550	WO	A0-5575	ARA-100A	Pilot Pir
	18	TK01068	•	•	•	•	
	22	TK00622	•	•	•	•	
	24	TK00623	•	•	•	•	
	24.5	TK00631	•	•	•	•	
50	25	TK00624	•	•	•	•	8050
mm	26	TK00625	•	•	•	•	8
	26.5 28	TK00632 TK00626	•	•	•	•	
	32	TK00627					
	35	TK00628	•	•	•	•	
JET	BRO	DACH			≰		
		1 Туре	A0-5575	WA-5000	<b>ARA-100A</b>	Pilot Pin	
D 41-	mm	DN	5	Ą	≴	₫	
Depth	dia.	PN	¥	≥	¥	ᇤ	
	17.5	TK01036	•	•	•		
	18	TK01003	•	•	•		
	19	TK01004	•	•	•		
	20	TK01005	•	•	•		
	22	TK01006 TK01007	•	•	•		
	23	TK01007	•	•	•		
	24	TK01009	•	•	•		
	24.5	TK01183	•	•	•		
	25	TK01010	•	•	•		
	26	TK01011	•	•	•		
	26.5	TK01182	•	•	•		
	27 28	TK01012 TK01013	•	•	•		
	29	TK01013	•	•	•		
	30	TK01015	•	•	•		
	31	TK01016	•	•	•		
	32	TK01017	•	•	•		
75	33	TK01018	•	•	•	22	
mm	34	TK01019	•	•	•	08075	
	35 36	TK01020 TK01021	•	•	•		
	37	TK01021	•	•	•		
	38	TK01023	•	•	•		
	39	TK01024	•	•	•		
	40	TK01025	•	•	•		
	41	TK01026	•	•	•		
	42	TK01027	•	•	•		
	43	TK01028 TK01029	•	•	•		
	44	TK01029	•	•	•		
	46	TK01030	•	•	•		
	47	TK01032	•	•	•		
	48	TK01033	•	•	•		
	49	TK01034	•	•	•		
	50	TK01035	•	•	•		
	51	TK01112	•		•		
	52	TK01113	•		•		
	53 54	TK01114 TK01115	•		•		
	55	TK01116	•		•		
	00	11101110	_		_		1

JET Si	BR(	DACH ck Type	00A	ڃ
Depth	mm dia.	PN	ARA-1	Pilot Pin
	50	TJ17709	•	
	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 71	TJ16670 TJ16671	•	
	72	TJ16671	•	
	73	TJ16673	•	
	74	TJ16674	•	
75	75	TJ16675	•	2075
mm	76	TJ16676	•	12
	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 96	TJ16695	•	
	96	TJ16696 TJ16697	•	
	98	TJ16698	•	-
	99	TJ16699	•	
	33	1010033		I



Sales Unit: 1 Piece

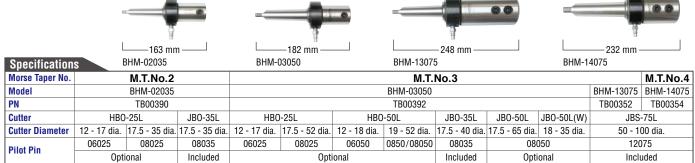
# **BROACH HOLDERS**

#### 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

100 TJ16700 •

- 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



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

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



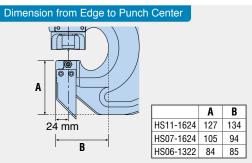




Model				HS11	-1624	HS	07-1624	HS06-1322		
Max. Throa	at Depth			1.	10		70	60		
Punching	Material			Mild Steel	Stainless Steel	Mild Steel	Stainless Steel	Mild Steel	Stainless Steel	
Capacity Max. Punching Thickness* mr		* mm	16	6	16	6	13	6		
	Max. Pun	ching Diameter	mm	24	24	24	24	22	22	
Hole Making time   Punching Time   sec			sec.		11	7.9				
		<b>Returning Time</b>	sec.		5.		3.4			
Allowable	Max. Pres	sure MPa (kg	f/cm <sup>2</sup> )		68.65	68.6	5 (700)			
Max. Outpi	ut		kN (tf)		464	36	7 (37)			
Ram Strok	е		mm		2	21				
Mass (Wei	ght)		kg	3	0		30	2	20.5	
Accessorie	Mass (Weight) kg Accessories Included		<ul> <li>D Punch 22 (Installer</li> <li>D Die 22 (Installed)</li> <li>Sub Handle</li> <li>Ultra-high Pressure I</li> </ul>	• Chip Guard A • Spanner	Ass'y • 5 mm He • Tool Box	x. Socket Screw Key x. Socket Screw Key				

 $<sup>^*</sup>$ Mild steel : Maximum punching thickness must be calculated by the equation 0.8 x punching diameter.

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





# HYDRAULIC PUMP for SELFER ACE

Double-acting



Specifications						
Model		HPD-05				
Power Source (Single Pha	ase)	115 V	230 V AC			
Max. Output Pressure	MPa (kgf/cm²)	68.6	5 (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		R	c 3/8			
Electro-Magnetic Valve		4 way 3 position valve				
Mass (Weight)	kg	32.5				

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

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

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





- 545.0	1111111	

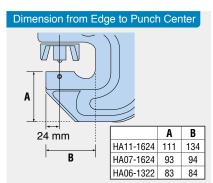
545.6 mm

otiono

Model		HA11-1624	HA07-1624	HA06-1322	
Max. Throa	at Depth	110	70	60	
Punching	Material		Mild Steel		
Capacity	Max. Punching Thickness* mr	n	16	13	
	Max. Punching Diameter mi	n	24		
Hole Makir	ng Time se	i.	16.5	10.5	
Allowable	ax. Pressure MPa (kgf/cm²) 68		65 (700)	68.65 (700)	
Max. Output kN (tf)		43	1 (44)	304 (31)	
Ram Strok	<b>e</b> mi	n	25		
Mass (Wei	i <b>ght)</b> k	35.5	28.5	21.5	
Accessorie	es Included	• D Punch 22 (Installed) • D Die 22 (Installed) • Sub Handle • 4 mm Hex. S	• Tool Box ocket Screw Key		

<sup>\*</sup>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 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 Switch Cord Ass'y 10 m TA95307 1 piece 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





# HYDRAULIC PUMP for SELFER HA Type

Model SC-05 Non-CE

• Single-acting



Specifications					
Model		SC-05			
Power Source (Single Ph	ase)	115 V / 230 V AC			
Max. Output Pressure	MPa (kgf/cm²)	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	L 4.0			
Discharge Port		Rc 3/8			
Mass (Weight)	kg	2	27.5		

**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: 6mm
- ullet Max. punching diameter : 15 mm
- Max. throat depth: 25 mm



Model **E55-0619** Non-CE

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

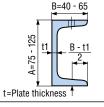


Model			E25-	0615	E55-	-0619	
Power Soi	urce (Single Phase)		220 - 240 V	AC, 50/60 Hz	110 - 120 V AC, 50/60 Hz 220-240 V AC, 50/60Hz		
Max. Thro	at Depth		2	5		55	
Motor	Rated Power Consumption	W	30	05	6	70	
	Rated Current	Α	1	.4	6.0	3.0	
Punching	Material			Mild	Steel		
Capacity Max. Punching Diameter mm		1	5	19			
	Max. Punching Thickness	mm	6	6		6	
Punching time sec (single pass)		oass)	4		2		
Power Cord Length m		m	2.4		2.4		
Mass (Weight) kg		7.0		14			
Accessori	es Included		E Punch 15 (Installed)     E Die 15A     E Die 15B (Installed)     Sub Handle     2.5 mm Hex. Socket Screw Key	4 mm Hex. Socket Screw Key     10 x 12 mm Spanner     Auxiliary Oil 40 cc     Tool Box     Spanner 8	EL Punch 18 (Installed)     EL Die 18A     EL Die 18B (Installed)     Sub Handle     3 mm Hex. Socket Screw Key     4 mm Hex. Socket Screw Key	• 5 mm Hex. Socket Screw Key • 10 x 12 mm Spanner • Stand • Auxiliary Oil 40 cc • Tool Box	

Optional Accessory (E25-0615)						
PN	Description	Sales Unit				
TB00800	Stand Ass'y	1 piece				

Die Selection			
C Die and El Die	Punching Th	Madal	
E Die and EL Die	Mild Steel	Stainless Steel	Model
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	E23-0013
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	0	0	0	0	0	0	0			
100 x 50 t7.5	0	0	0	0	0	0	-			
125 x 65 t8	0	0	0	0	0	-	-			

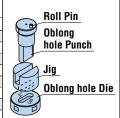




Oblong Hole S	ize						
	( ) <del>(</del> ( ) ( ) ( ) ( ) ( ) ( )	€6.5¥		(%) (%) (%) (%) (%) (%) (%) (%) (%) (%)	( ) *8.5		unit : mm
E25-0615	<u> ←10→ </u>	<del>←</del> 10→	<del>←12→ </del>	<del>←</del> 13→	<del>←</del> 13→		
	(10→)  ←10→	(13→)  ←13→	  ←13→	↑	↑ 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
E55-0619	  ←18→	<b>-</b>	18————————————————————————————————————		20-	<u>↓</u>	21 T

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



FOR E25-0615

al Accessories	
Description	Sales Unit
Hex. Set Screw 8 x 14 for Securing Oblong Hole Dies	1 piece
Lock Nut Ass'y for D Punch 25	1 set
	Description  Hex. Set Screw 8 x 14 for Securing Oblong Hole Dies

	*TA99037 Lock Nut Ass'	v is required for Oblona I	hole D Punch 25 x 9 / 12 / 14 / 18
--	------------------------	----------------------------	------------------------------------

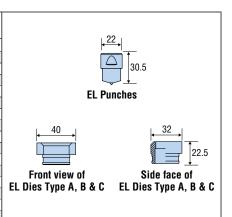
FOR HSO	6-1322/HS07-162	24/HS11-16	24/HA06-1322/H	IA07-1624/HA11-1624
Round	hole D Punch	Round	d hole D Die	
PN	Size	PN	Size	-
TJ10778	D Punch 8	TJ10779	D Die 8	1
TJ11088	D Punch 9	TJ11089	D Die 9	30
TJ06700	D Punch 10	TJ06701	D Die 10	1 <del>  00</del>
TJ06698	D Punch 11	TJ06699	D Die 11	1 📅
TJ06696	D Punch 12	TJ06697	D Die 12	60
TJ06694	D Punch 13	TJ06695	D Die 13	
TJ06692	D Punch 14	TJ06693	D Die 14	1   1
TJ06611	D Punch 14.5	TJ06612	D Die 14.5	] ~ ÷
TJ06690	D Punch 15	TJ06691	D Die 15	D Punches
TJ06688	D Punch 16	TJ06689	D Die 16	1
TJ06686	D Punch 17	TJ06687	D Die 17	1
TJ06609	D Punch 17.5	TJ06610	D Die 17.5	1
TJ06684	D Punch 18	TJ06685	D Die 18	42
TJ06682	D Punch 19	TJ06683	D Die 19	] <del>[</del>
TJ06680	D Punch 20	TJ06681	D Die 20	16.5
TJ06607	D Punch 20.5	TJ06608	D Die 20.5	D Dies
TJ06678	D Punch 21	TJ06679	D Die 21	]
TJ07979	D Punch 21.5	TJ07980	D Die 21.5	1
TJ06676	D Punch 22	TJ06677	D Die 22	1
TJ06674	D Punch 23	TJ06675	D Die 23	]
TJ06566	D Punch 23.5	TJ06569	D Die 23.5	• TA99037 Lock Nut Ass'y i
TJ07748	D Punch 24	TJ07749	D Die 24	required for D Punch 25
TJ10061	D Punch 25	TJ10062	D Die 25	Tequired for D Fullon 25

Round hole E Die Round						
Kouna	noie E Punch	(Type A for thin sheets)		(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 Oblong hole E Die						
Ublong	noie E Punch	(Type A f	or thin sheets)	(Type B f	or 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	
35 21 : over or equal 8 dia. (19 : under 8 dia.)						
E Punches Front view of Side face of E Dies Type A E Dies Type A						
	ED	ies Type F	C DIES IN	he w		
35   27						
21 : over or equal 8 dia.						
	Front view	of	Side face of			
	E Dies Type	B	E Dies Type B			
			,,,,,,			

I UN LJ	TON 255-0019								
Oblong	hole EL Punch		g hole EL Die 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 Fl. Punch	Roun	d hole EL Die	Roun	d hole EL Die				

FOR F55-0619

TK00253	EL Punch 21 x 14	TKUU265	EL DIE 21 X 14A	TKU0277   EL Die 21 x 14B			
Round	hole EL Punch		d hole EL Die for thin sheets)				d hole EL Die or 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	-	-



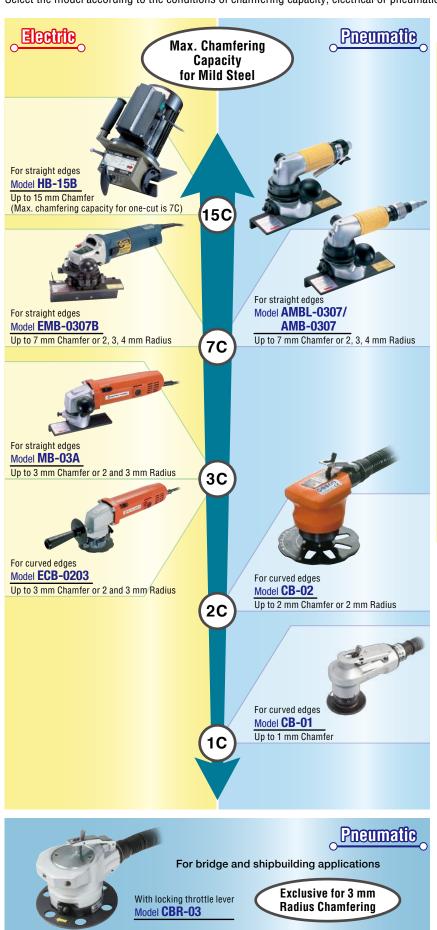
# NITTO KOHKI Tools for Professional Use

	Chamfering	Scaling & Chipping	Grinding & Sanding	Flat Sanding
Machining & Molding	0	•	•	•
Sheet-metal Working	•	•	•	•
Welding	•	0	•	
Painting	•		•	
Steel Fabricating & Can Manufacturing	•	•	•	•
Molding & Die-casting	•	•	•	•
Bridges & Ship Building	•	•	•	•
Plant Construction & Piping		•	•	•
Wood Working & Art				•
Automotive & Painting	•	•	•	©
Construction		0		
©: Best Suited	Hand Beveler	Air Chipper	Myton	Compact Multi Sander
€ : Suited	P27	P32	Wyton	P43
	Mini Beveler P27 - 29	Auto Chisel	P37 - 38	Free Sander
	Circuit Beveler	Super Kelen	Belton	Line Sander
		P34		P44
		Jet Chisel		Orbital Sander
	P28 - 30	*	P39 - 42	P45
				Palm Orbital Sander
		P35 - 36		P45



# **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.





For curved edges

CBR-03

HAND BEVELER Model HB-15B • Mild steel:15C MINI BEVELER Model EMB-0307B

Model MB-03A • Mild steel:3C, 3R • Mild steel:7C, 4R • Stainless steel:3C, 4R

MINI BEVELER

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			ELEC	TRIC		
Model		HB-15B	EMB-0307B	MB-03A	ECB-0203	
Power Source (Single	Phase)	220 - 240 V AC 50 Hz 110 - 120 V AC 60 Hz	220 - 240 V AC, 50/60 Hz	220 - 240 V AC, 50/60 Hz 120 - 240 V AC, 50/60 Hz 100 - 110 V AC 50/60 Hz		
Rated Power Consum	ption W	910	1100	430	450	
Duty Cycle	min	Conti	nuous	3	30	
No-load Speed	min <sup>-1</sup> (rpm)	2750 (220 - 240 V) 3340 (110 - 120 V)	110	000	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	· ·	m Chamfer nm 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)	kg	14	3.9	2.5		
Optional Accessories		TA9A728 Pipe Plate Ass'y for Pipe Outer Edge Beveling (Pipe O.D. 125 to 800 mm)	TB02539 Attachment for Pipe Outer Edge Beveling (Pipe 0.D. 80 to 200 mm)     *Pipe 0.D. more than 200 mm can be chamfered with the standard accessory.	TA9A594 Inner Head Ass'y for Pipe Inner Edge Beveling (Minimum Inner Pipe Diameter : 100 mm)	TB03097 Plate Ass'y for Straight Edge Beveling     TB02862 Dust Box Ass'y Used	
					• TB02857 Guide Sleeve 24 mm Dia. Ass'y	

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
- Stainless steel: 0.5C

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			PNEU	MATIC	
Model		AMBL-0307/AMB-0307	CB-01 CB-02		CBR-03
Air Pressure	MPa (kgf/cm²)		0.6	(6)	
Air Consumption (No	Load) m³/min	0.9	0.15	0.4	0.65
Free Speed	min-1(rpm)	14000	28000	15000	12000
Chamfering Capacity	Mild Steel	Up to 7 mm Chamfer 2, 3, 4 mm Radius	Up to 1 mm Chamfer	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	-	-
Chamfer Angle		15° - 45°	4	=	
Mass (Weight)	kg	2.9	0.5		2
Optional Accessories		TB02539 Attachment for Pipe Outer Edge Beveling (Pipe O.D. 80 to 200 mm)	TB09143 Plate Ass'y for Straight Edge Beveling  TB09140 Guide Plate 78 Ass'y for More Stable Operation	TB02437 Thin Plate Attachment Ass'y	-

<sup>\*</sup>For further information of optional Beveler accessories, see P31.

Portable Chamfering Tools

# **HAND BEVELER**

Model HB-15B C€

# 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



5 <b>C</b>
ild Steel





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

#### **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 Ang	le and	Width		
0	Mild Ste	eel(mm)		
Chamfer Angle $\alpha$	Х	Υ	Chamfer	X
45°	15	15	1,	$\alpha$
30°	9	15.5	Į ¥	Straight
15°	1	15./		

**Handy Electric Chamfering Tool** 

# **MINI BEVELER**

Model EMB-0307B CE

□ Double insulation

# 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



4R Mild Steel Stainless Steel Specifications EMB-0307B Model 220 - 240 V AC, 50/60 Hz\* Power Source (Single Phase) **Rated Power Consumption** W 1100 **Rated Current** 5 Α **Duty Cycle** min Continuous No-load Speed 11000 min-1(rpm) **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 2.5 Mass (Weight) kg 3.9

\*115 V available on request.

- 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 • Dust Box Ass'y
- · Carbon Brush Ass'\
- 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							
01 ( 1 1 -	Mild	Steel(ı	mm)	Stainle	ess Stee	l(mm)	
Chamfer Angle $lpha$	Χ	Υ	Z	Х	Υ	Z	Chamfer X
45°	7	7	9.9	3	3	4.2	Ι, α
30°	3.8	6.6	7.6	2.2	3.8	4.4	//z
15°	1.5	5.6	5.8	1	3.8	3.9	Straight

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

**Handy Electric Chamfering Tool** 

# **MINI BEVELER**

Model MB-03A Non-CE

□ Double insulation

## 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 Ph	ase)	110 V AC, 50/60 Hz	230 V AC, 50/60 Hz	
Rated Power Consumptio	n W	43	30	
Rated Current	А	4.5	2	
Duty Cycle	min	30		
No-load Speed	min <sup>-1</sup> (rpm)	11000		
Chamfering Capacity (Mi	ld 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

Mild Steel

- 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

Cham	Chamfer Angle, Width and Radius							
Mild Ste	eel(mm)					Mild Steel(mm)		
Х	Υ	Chamfer	X		Radius	2, 3	Radius	
3	3		-45°∕					
			Stra	aight			Round	

**Electric Radial Chamfering Tool** 

# **CIRCUIT BEVELER**

Model ECB-0203 CE

# □ Double insulation 400 mm



Chamfering straight edges Chamfering curved edges

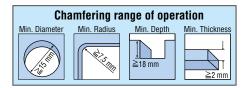
# Smoothly chamfering straight and curved edges

- 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	Α	2.1
Duty Cycle	min	30
No-load Speed	min <sup>-1</sup> (rpm)	11000
<b>Chamfering Capacity</b>	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 sees of 2 mm Dadiu	o an antional inde	wahla Inpart for 2D is passagen, and 2 mm Dadius

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.

- 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



Chamf	er Angle	, Width	and Ra	dius						
Mild Ste	eel(mm)	Stainless	Steel(mm)					Mild Steel	Stainless Steel	
Χ	Υ	Х	Y	Chamfer	X			(mm)	(mm)	Radius
3	3	1.5	1.5	1	_45°		Radius	2, 3	2	
				, J.	Strai	ight				Round

# CHAMFERING

**Pneumatic Chamfering Tool** 

# **MINI BEVELER**

# Model AMBL-0307 CE Model AMB-0307 Non-CE

• Lever type







# 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) m³/min	0.9		
Free Speed	min <sup>-1</sup> (rpm)	14000		
<b>Chamfering Capacity</b>	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
- 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

Chamter Angle, Width and Radius									
01 ( 1 1	Mild Steel(mm)			Stainle	ess Stee	l(mm)			
Chamfer Angle $lpha$	Χ	Υ	Z	Х	Υ	Z	Chamfer	X	
45°	7	7	9.9	3	3	4.2	1,	$\alpha$	$\times$
30°	4	7	8.1	2.2	3.8	4.4	Y	<b>//z</b>	
15°	2.2	8	8.3	1	3.8	3.9		✓ Stra	aight

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

**Pneumatic Radial Chamfering Tool** 

# CIRCUIT BEVELER

Model CB-01 C€

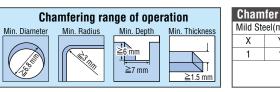
# Ideally suited for chamfering machine and mold component parts

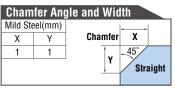
- Only requires a 6.8 mm diameter hole for chamfering
- Two 3-sided indexable inserts provide a cost effective way to get a smooth, chatter free finish



Model		CB-01
Air Pressure	MPa (kgf/cm²)	0.6 (6)
Air Consumption (No-	load) m³/min	0.15
Free Speed	min <sup>-1</sup> (rpm)	28000
<b>Chamfering Capacity</b>	Mild Steel	Up to 1 mm Chamfer
	Stainless Steel	Up to 0.5 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

- 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





**Pneumatic Radial Chamfering Tool** 

# **CIRCUIT BEVELER**

Model CB-02 C€

# 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



Model		CB-02
Air Pressure MPa (kgf.	/cm²)	0.6 (6)
Air Consumption (No-load) m	³/min	0.4
Free Speed min-1	rpm)	15000
Chamfering Capacity		Up to 2 mm Chamfer or 2 mm Radius
Chamfer Angle		45°
Inlet Size		Rc 1/4
Mass (Weight)	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

Chamferin	ig range of	operation
Min. Diameter	Min. Radius	Min. Depth
	Age this	<u></u> ≧20 mm

Chamfer Angle, Width and Radius							
Ste	el(mm)					Mild Steel(mm)	
	Υ	Chamfer	Х		Radius	2	Radius
!	2	Y	45° Stra	aight			Round
	d Ste	d Steel(mm)	d Steel(mm) C Y Chamfer	Chamfer X	Chamfer X	d Steel(mm) C Y Chamfer X Radius	d Steel(mm) Chamfer X Radius 2

**Pneumatic Radial Chamfering Tool** 

# **CIRCUIT BEVELER**

Model CBR-03 CE

# 81 mm

# Chamfering range of operation Min. Diameter Min. Radius Min. Depth ≥9 mm

# For bridge and shipbuilding applications

#### **Bridge**

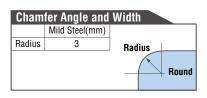
• Radius chamfering on the scallop parts or holes of bridge members

#### **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.

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

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



# **Optional Beveler Accessories**

Ref. No.	PN	Description	Sales Unit	HB-15B	EMB-0307B AMBL-0307 AMB-0307	MB-03A	ECB-0203	CB-01	CB-02	CBR-03
-	TB09097	Indexable Insert 8.4 for Mild Steel	10 pcs./set					•		
-	TB09338	Indexable Insert 8.4 for Stainless Steel	10 pcs./set					•		
-	TA9A093	Indexable Insert 12.7	12 pcs./set	•						
-	TB01159	Indexable Insert 12.7 with Hole	10 pcs./set		•		•			
-	TB01791	Indexable Insert 12.7 R2	10 pcs./set		•		•			
-	TB01651	Indexable Insert 12.7 R3	10 pcs./set		•		•			
-	TB01790	Indexable Insert 12.7 R4	10 pcs./set		•					
-	TB09018	Indexable Insert 12.7 R3	10 pcs./set							•
_	TA9A386	Indexable Insert 9.525	10 pcs./set			•			•	
_	TA9A592	Indexable Insert 9.525 R2	10 pcs./set			•			•	
_	TA9A638	Indexable Insert 9.525 R3	10 pcs./set			•				
1	TB09140	Guide Plate 78 Ass'y for More Stable Operation	1 set					•		
2	TB09143	Plate Ass'y for Straight Edge Use	1 set					•		
3	TA9A728	Pipe and tube Beveling Attachment	1 set	•						
4	TB02539	Attachment for Small Dia. Pipe	1 set		•					
5	TA9A594	Inner Head Ass'y	1 set			•				
6	TB02857	Guide sleeve 24 mm dia. Ass'y	1 set				•			
7	TB03097	Plate Ass'y for Straight Line Use	1 set				•			
8	TB02862	Dust Box Ass'y	1 set				•			
9	TB02437	Thin Plate Attachment Ass'y	1 set						•	
-	TB03424	Spanner T-9D	1 piece			•			•	
-	TQ01683	Spanner T-15D	1 piece							

Ref. No.2: Requires use of TB09140 Guide Plate 78 Ass'y

Ref. No.3 : Capacity 125 to 800 mm O.D. Ref. No.4 : Capacity 80 to 200 mm O.D. Ref. No.5 : Capacity Minimum 100 mm I.D.

Ref. No.6: For chamfering R2

Ref. No.7: Used with Plate Ass'y for Straight Line Use Ref. No.8: Used with Plate Ass'y for Straight Line Use

























TB09140 Guide Plate 78 Ass'y for More Stable Operation



TB09143 Plate Ass'y for Straight Edge Use

#### **Pneumatic Chipping Hammer**

# **AIR CHIPPER**

# Removes weld splatter quickly and easily

- Ideal tool for quickly and efficiently removing weld splatter, rust and other debris from most surfaces
  Compact, heavy-duty construction for tough industrial applications
- Easy one-touch chisel installation and removal NO tools required
- Idle protection system, helps prevent accidental start-up "ACH-16" only

#### Model ACH-16 €



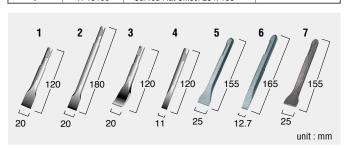




Specifications			
Model		ACH-16	CH-24
Air Pressure	MPa (kgf/cm²)	0.6	(6)
Air Consumption (No-load)	) m³/min	0.15	0.2
Stroke Speed	min <sup>-1</sup>	6000	4000
Shank Size	mm	10.5 Round	12.7 Square
Inlet Size		Rc	3/8
Mass (Weight)	kg	0.9	1.7
Accessories Included		<ul> <li>TQ03431 Flat Chisel (Installed)</li> <li>Bushing R 3/8 x NPT 3/8</li> <li>Hose Nipple R 3/8 x 3/8</li> </ul>	<ul> <li>TP15166 Curved Flat Chisel (Installed)</li> <li>Bushing R 3/8 x NPT 3/8</li> <li>Hose Nipple R 3/8 x 3/8</li> </ul>

Optional Chisels for Air Chipper ACH-16					
Ref. No.	PN	Description	Sales Unit		
1	TQ03431	Flat Chisel 20 x 120			
2	TQ03452	Flat Chisel 20 x 180	1 piece		
3	TQ03453	Curved Flat Chisel 20 x 120	i piece		
4	TQ03549	Flat Chisel 11 x 120			

Optional C	Optional Chisels for Air Chipper CH-24					
Ref. No.	PN	Description	Sales Unit			
5	TP15233	Flat Chisel 25 x 155				
6	TP15234	Straight Flat Chisel 12.7 x 165	1 piece			
7	TP15166	Curved Flat Chisel 25 x 155				





#### **Air Hammer**

# **AUTO CHISEL**

# Model **A-300 C€**



# A special spool valve inside grip assures excellent durability

- Designed for speeding up the repair and sheet metal work of automobiles, etc.
- Enables hammering work in narrow spaces
- Durable and powerful action
- Fast and easy chisel change to reduce downtime
- A wide variety of chisels available

Specifications		
Model		A-300
Air Pressure MP	a (kgf/cm²)	0.6 (6)
Air Consumption (No-load)	m³/min	0.3
Stroke Speed	min-1	2600
Shank Size	mm	10
Inlet Size		Rc 1/4
Mass (Weight)	kg	1.7
Accessories Included		Bushing R 1/4 x NPT 1/4     Hose Nipple R 1/4 x 1/4

<sup>\*</sup>Chisels are not included as standard.

Optional Chisels PN: TP00572	PN: TP00573	PN: TP04606	PN: TP00575
Blank Chisel No. 1001	Flat Chisel No. 1002	Sheet Metal Chisel A No. 1003	Sheet Metal Chisel B No. 1004
For a variety of sheet metal work, bending, and rivet closing jobs	Puts increased efficiency into scraping, peeling spot welds, and cutting off bolts and pins	Cuts shapes in sheet metal fast	Just the chisel for cutting off sheet metal body panel
<b>PN</b> : TP00576	PN: TP00577	PN: TP00578	PN: TP00579
Silencer Cutting Chisel No. 1005	Rubber Bushing Remover No. 1006	Spot Weld Booster No. 1007	Bushing Tool No. 1008
The state of the s		- Contraction of the Contraction	
A quick cut-off chisel for muffler piping	Helps you remove idle arm sleeves and bushings in record time	Ideal for peeling off spot welded points and cutting off pins	Puts speed and ease into the job of bushing insertion
PN: TP00580	PN: TP00581	PN: TP00582	PN: TP00583
<b>Punch</b> No. 1009	Bushing Removing Tool No. 1010	Sheet Metal Punch No. 1011	20 mm Bending Chisel No. 1012
For driving out pins and rivets, and fitting and removing bearings and races	A faster servicing aid in removing bushings	Opens holes for bolts and rivets	Helps you in peening and removing slag around welds
PN: TP00584	PN: TA90051	PN: TP00586	PN: TP00585
Fork Chisel 24 No. 1013	Panel Crimper No. 1014	Fork Chisel 35 No. 1016	Fork Chisel 15 No. 1017
Disconnecting tie rod ends and ball joints	Bending sheet metal: external body plates, doors, fenders, etc.	Disconnecting tie rod end ball joints	Disconnecting tie rod end ball joints
PN: TP00589	PN: TP00590	PN: TP00591	PN: TP04995
38 mm Scraper No. 1018	60 mm Scraper No. 1019	60 mm Concave Scraper No. 1020	Sheet Metal Chisel C No. 1023
		Total State of Texas (1997)	
Peeling paint & removing rust from iron plate	Peeling paint & removing rust from iron plate	Removing incrustation from pipe	Cuts shapes in sheet metal fast
PN: TP05244	PN : TP05775	PN: TP05801	*An order is available from one piece.
<b>Moilpoint Chisel</b> No. 1024	Rivet Removing Punch No. 1025	Rivet Caulking Chisel No. 1026	
	* The section of the		
Breaking-up concrete, removing sand from castings	Removing rivets from brake lining of heavy duty cars	Caulking brake lining of heavy duty cars	

**Pneumatic Scaler** 

# **SUPER KELEN**

# Industrial and shipboard pneumatic scalers

- Quickly and efficiently removes rust, scale, paint, tar and concrete from most surfaces
- Ideal for industrial, maritime and shipboard cleaning and descaling operations
- Idle protection system, tool will not activate unless contacting work surface
- S-1000 over 1.3 m in length for extended reach applications and operator convenience
- Tool-less chisel installation and removal

Model S-250 Non-CE







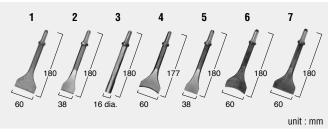
Model **S-1000** Non-CE



Model	S-250	S-500	S-1000	
Air Pressure MPa (kgf/cm²)		0.6 (6)		
Air Consumption (No-load) m³/min		0.27		
Stroke Speed min-1		2500		
Shank Size mm		12.7		
Inlet Size		Rc 1/4		
Mass (Weight) kg	4.1	4.7	6.1	
Accessories Included		No.2005 38 mm Bend Scraper (Installed)     Hose Lock Nut M16     Hose Ninnle 3/8		



Optional Chisels					
Ref. No.	PN	Description	Sales Unit		
1	TP03645	No.2001 60 mm Scraper			
2	TP03646	No.2002 38 mm Scraper			
3	TP03647	No.2003 Blank Chisel			
4	TP04010	No.2004 60 mm Concave Scraper	1 piece		
5	TP04552	No.2005 38 mm Bend Scraper			
6	TP04553	No.2006 60 mm Concave Bend Scraper			
7	TP04554	No.2007 60 mm Bend Scraper			



#### **Needle Scaler**

# **JET CHISEL**

# Powerful scaling with multi-needles

- Quickly and efficiently removes weld slag, rust, paint and scale from most surfaces
- Ideal for cleaning and descaling steel, bridgework, castings, brick, stone and many other materials
- Heavy-duty construction for industrial and maritime applications
- Proven superior design features with no internal spring components ensure trouble-free performance (JEX-2800A and JEX-20 have balancing springs)

Model JC-16 C€

Model **JEX-24** C€

Model **JEX-28 C€** 

Model JEX-2800A C€

• Lightweight model

• Universal model

• Heavy-duty model

Reduced vibration model



Model		JC-16	JEX-24	JEX-28	JEX-2800A
Air Pressure MPa	a (kgf/cm²)		C	0.6 (6)	
Air Consumption (No-load)	m³/min	0.15	0.27	0.35	0.43
Stroke Speed	min <sup>-1</sup>	4000	4000	4500	3700
Inlet Size			F	Rc 3/8	
Mass (Weight)	kg	1.4	2.7	3.5	3.3
Accessories Included		<ul> <li>29 pieces of 2 mm x 150 mm Needles (Installed)</li> <li>29 pieces of 2 mm x 150 mm Needles</li> <li>Bushing R 3/8 x NPT 3/8</li> <li>Hose Nipple R 3/8 x 3/8</li> </ul>	23 pieces of 3 mm x 180 mm Needles (Installed)     6 mm Hex. Socket ScrewKey     Bushing R 3/8 x NPT 3/8     Hose Nipple R 3/8 x 3/8	28 pieces of 3 mm x 180 mm Needles (Installed)     14 pieces of 4 mm x 180 mm Needles     Needle supporter 4 mm     6 mm Hex. Socket Screw Key     Bushing R 3/8 x NPT 3/8     Hose Nipple R 3/8 x 3/8	28 pieces of 3 mm x 180 mm Needles (Installed)     14 pieces of 4 mm x 180 mm Needles     Needle supporter 4 mm     Bushing R 3/8 x NPT 3/8     Hose Nipple R 3/8 x 3/8



• Slim model

Model JT-20 C€

• Medium duty model

Model **JEX-20 C€** 

• Reduced vibration model







Model		AJC-16	JT-20	JEX-20	
Air Pressure MPa (kgf/cm²)			0.6 (6)		
Air Consumption (No-lo	ad) m³/min	0.07	0.2	0.2	
Stroke Speed	min <sup>-1</sup>	6000	4000	4000	
Inlet Size			Rc 3/8		
Mass (Weight)	kg	0.98	2.4	2.75	
Accessories Included		• 3 pieces of 3 mm x 180 mm Needles	<ul> <li>12 pieces of 3 mm x 180 mm Needles (Installed)</li> <li>12 pieces of 3 mm x 180 mm Needles</li> <li>Bushing R 3/8 x NPT 3/8</li> <li>Hose Nipple R 3/8 x 3/8</li> </ul>	<ul> <li>12 pieces of 3 mm x 180 mm Needles (Installed)</li> <li>12 pieces of 3 mm x 180 mm Needles</li> <li>Bushing R 3/8 x NPT 3/8</li> <li>Hose Nipple R 3/8 x 3/8</li> </ul>	

**Electric Needle Scaler** 

## **JET CHISEL**

## Model **EJC-32A C€**



#### Powerful 300 watt double insulated motor

- Extended length, slim barrel design
- Adjustable front handle for operator comfort and convenience

Specifications							
Model		EJC	-32A				
Power Source (Single	Phase)	110 - 120 V AC, 50/60 Hz	220 - 240 V AC, 50/60 Hz				
Rated Power Consump	tion W	300					
Rated Current	А	2.8	1.4				
Duty Cycle	min	30					
Stroke Speed	min <sup>-1</sup>	3000					
Power Cord Length	m	5					
Mass (Weight)	kg	4.5					



#### **Shot Peening Effect**

Reinforcement of a welded part with the shot peening effect increases strength by imparting residual stress to the surface of the workpiece through the high speed impact of the needles. Highly suitable for effective reinforcement of deteriorated welded parts.



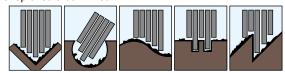
#### Full Automatic System - Excludes EJC-32A

The only unit of it's kind on the market without springs. This means no springs to break...no irregular power... and the advantage of low air consumption.



#### **Self-Adjusting Needles**

Jet Chisel needles automatically adjust to any surface contour. They get deep into corners, reach into uneven surfaces, and conform to all types of shapes, making it a tool no shop should be without.



Combination of Needle and Needle Supporter		Model							
		JC-16	JEX-24	JEX-28	JEX-2800A	AJC-16	JT-20	JEX-20	EJC-32A
2 mm	Number of Needles Required	29 pcs.	53 pcs.	66 pcs.	66 pcs.	7 pcs.	29 pcs.	29 pcs.	32 pcs.
2 111111	Needle Supporter PN	TP00290	TP02244	TP01499	TP01499	TQ05210	TP00338	TP00338	TP16475
3 mm	Number of Needles Required	-	23 pcs.	28 pcs.	28 pcs.	3 pcs.	12 pcs.	12 pcs.	15 pcs.
3 111111	Needle Supporter PN	-	TP02245	TP01461	TP01461	TQ04554	TP00337	TP00337	TP16301
4 mm	Number of Needles Required	-	-	14 pcs.	14 pcs.	-	-	-	-
4 mm	Needle Supporter PN	-	-	TP01462	TP01462	-	-	-	-

Nee	dle	PN	Sales Unit	Model							
Diameter	Length	PN	Sales Ullit	JC-16	JEX-24	JEX-28	JEX-2800A	AJC-16	JT-20	JEX-20	EJC-32A
	150 mm	TA98780	100 pcs./set	•	•	•	•	•	•	•	•
2 mm	180 mm	TA98781	100 pcs./set	•	•	•	•	•	•	•	•
2 111111	300 mm	TA9A213	50 pcs./set	•	•	•	•	•	•	•	•
	500 mm	TA9A214	50 pcs./set	•	•	•	•	•	•	•	•
	180 mm	TA98782	100 pcs./set		•	•	•	•	•	•	•
3 mm	300 mm	TA9A216	50 pcs./set		•	•	•	•	•	•	•
3 111111	500 mm	TA9A217	50 pcs./set		•	•	•	•	•	•	•
	800 mm	TA9A218	50 pcs./set		•	•	•	•	•	•	•
	180 mm	TA98783	50 pcs./set			•	•				
4 mm	300 mm	TA9A220	50 pcs./set			•	•				
	500 mm	TA9A221	50 pcs./set			•	•				



#### **Optional Needles**

Premium Nitto Kohki needles out-perform competitors' needles ensuring optimal performance and trouble-free operation.

## **GRINDING & SANDING**

#### **Pneumatic Grinder**

## **MYTON**

## Heavy-duty grinders for tough applications

- Side exhaust with noise reduction system
- Great power/weight ratio

#### Model MLG-25 C€

• Depressed center wheel 58 mm

#### Model MLG-40 C€

• Depressed center wheel 100 mm

## Model MAGW-40 C€

- Lever type
- Depressed center wheel 100 mm

## Model MAGW-40 Non-CE

- Ring type
- Depressed center wheel 100 mm









Specifications						
Model		MLG-25	MLG-40	MAGW-40 Lever Type	MAGW-40 Ring Type	
Air Pressure	MPa (kgf/cm²)		0.6	5 (6)		
Air Consumption	m³/min	0.42 (No-load)	0.45 (No-load) 0.91 (Load)	0.68 (No-load	) 0.82 (Load)	
Free Speed	min <sup>-1</sup> (rpm)	19000	13000			
<b>Depressed Center Grin</b>	ding Wheel mm	58	100			
Inlet Size		Rc 1/4	Rc 3/8			
Mass (Weight)	kg	0.6		1.5		
Accessories Included		Green DiscGS #80     5 mm Hex. Socket Screw Key     19 mm Single Ended Spanner     Bushing R 1/4 x NPT 1/4	• 6 mm Hex. Socket Screw Key     • Bushing R 3/8 x NPT 3/8      • 6 mm Hex. Socket Screw Key     • 17 mm Single Ended Spanner     • Bushing R 3/8 x NPT 3/8			

## Model MAG-50 €€

• Depressed center wheel 125 mm

### Model MLG-50 C€

- Depressed center wheel 125 mm
- Model MLG-70 C€
- Lever type
- Depressed center wheel 180 mm

## Model MLG-70 Non-CE

- Ring type
- Depressed center wheel 180 mm







Specifications						
Model		MAG-50	MLG-50	MLG-70 Lever Type	MLG-70 Ring Type	
Air Pressure	MPa (kgf/cm²)		0.6	6 (6)		
Air Consumption	m³/min	0.77 (No-load) 0.83 (Load)	0.7 (No-load) 0.81 (Load)	0.7 (No-load) 0.81 (Load) 0.75 (No-load) 1.1 (Load)		
Free Speed	min <sup>-1</sup> (rpm)	12000	11000	7600		
Depressed Center Grindi	ing Wheel mm	125	125	180		
Inlet Size			Ro	3/8		
Mass (Weight)	kg	2.2	2.5	2.5	2.3	
Accessories Included		Air Hose Sub Ass'y Exhaust Hose Ass'y Side Handle 4 mm Hex Socket Screw Key Pin Face Wrench Bushing R 3/8 x NPT 3/8	Handle     Wheel Guard Ass'y     4 mm Hex. Socket Screw Key     6 mm Hex. Socket Screw Key     Pin Face Wrench     Bushing R 3/8 x NPT 3/8	6 mm Hex. Socket Screw Key     10 mm Hex. Socket Screw Key     8 Bushing R 3/8 x NPT 3/8     Handle     Wheel Guard Ass'y		

## **GRINDING & SANDING**

**Pneumatic Sander** 

## **MYTON**

## Ideal for sanding and/or polishing metal, aluminum, wood, plastic and many other materials

- Compact and lightweight design for working in confined spaces
   Side exhaust with noise reduction system

## Model MLS-20 C€

• Abrasive disc 1", 1 - 1/2" & 2"



## Model MAS-40 Non-CE

Abrasive disc 100 mm





Specifications				
Model		MLS-20	MAS-40	MAS-70
Air Pressure MPa (kgf	/cm²)		0.6 (6)	
Air Consumption (No-load) m	³/min	0.42	0.45	0.98
Free Speed min <sup>-1</sup> (	(rpm)	19000	13000	7500
Abrasive Disc		1", 1 - 1/2" and 2"	100 mm	180 mm
Chuck Size	mm	6	N	/A
Inlet Size		Rc	1/4 Rc 3/8	
Mass (Weight)	kg	0.55	0.9	1.9
Accessories Included		• 1" Disc Sanding Pad • 1 - 1/2" Disc Sanding Pad • 2" Disc Sanding Pad • 2 pieces of 14 mm Single Ended Spanner • Bushing R 1/4 x NPT 1/4 • Assortment of Sample Abrasive Disks Contains: 2 each of #60, #80, #100, and #120 2" abrasive disc 2 each of #60, #80, #100, and #120 1-1/2" abrasive disc 2 each of #60, #80, #100, and #120 1" abrasive disc	6 mm Hex. Socket Screw Key     Bushing R 1/4 x NPT 1/4     17 mm Single Ended Spanner	6 mm Hex. Socket Screw Key     17 mm Single Ended Spanner     Bushing R 3/8 x NPT 3/8

Grinding	Grinding Discs for Myton MLG-25								
PN	Description	Sales Unit	Disc						
TB08872	GS#46 x 58 mm	5 pcs./set							
TB08873	GS#60 x 58 mm	5 pcs./set							
TB08874	GS#80 x 58 mm	10 pcs./set							
TB08875	GS#100 x 58 mm	E non /out							
TB08876	GS#120 x 58 mm	5 pcs./set							
TB09074	Myton Disc Z Z#40 x 58		24.500						
TB09075	Myton Disc Z Z#60 x 58								
TB09076	Myton Disc Z Z#80 x 58	5 pcs./set							
TB09077	Myton Disc Z Z#100 x 58								
TB09078	Myton Disc Z Z#120 x 58								
TB09079	Myton Disc SA A#40 x 58		18.500						
TB09080	Myton Disc SA A#60 x 58		BASSA STATE						
TB09081	Myton Disc SA A#80 x 58	5 pcs./set							
TB09082	Myton Disc SA A#100 x 58		• •						
TB09083	Myton Disc SA A#120 x 58		Designed for						
			curve sanding.						



Sanding	Discs and Disc Pads f	or Mvton N	ILS-20		
PN	Description	Sales Unit	Sanding Disc	Disc Pad	Sales Unit
TB09736	Sanding Disc 1" x #40			TQ14384	
TB09737	Sanding Disc 1" x #60			1" Disc	
TB09738	Sanding Disc 1" x #80			Sanding Pad	
TB09739	Sanding Disc 1" x #100	OF non last	ONTO		1 niono
TB09740	Sanding Disc 1" x #120	25 pcs./set	SAL TIG PAPE		1 piece
TB09741	Sanding Disc 1" x #180				
TB09742	Sanding Disc 1" x #240				
TB09743	Sanding Disc 1" x #320				
TB09744	Sanding Disc 1 - 1/2" x #40			TQ14383	
TB09745	Sanding Disc 1 - 1/2" x #60		On TO	1 - 1/2" Disc	
TB09746	Sanding Disc 1 - 1/2" x #80			Sanding Pad	
TB09747	Sanding Disc 1 - 1/2" x #100	25 pcs./set			1 piece
TB09748	Sanding Disc 1 - 1/2" x #120	25 pcs./set	STOR 20		i piece
TB09749	Sanding Disc 1 - 1/2" x #180				
TB09750	Sanding Disc 1 - 1/2" x #240				
TB09751	Sanding Disc 1 - 1/2" x #320				
TB09752	Sanding Disc 2" x #40			TQ14382	
TB09753	Sanding Disc 2" x #60			2" Disc	
TB09754	Sanding Disc 2" x #80			Sanding Pad	
TB09755	Sanding Disc 2" x #100	25 pcs./set	O GHITO		1 piece
TB09756	Sanding Disc 2" x #120	20 pcs./set	SA MYTON 2E		i piece
TB09757	Sanding Disc 2" x #180				
TB09758	Sanding Disc 2" x #240				
TB09759	Sanding Disc 2" x #320				

**Pneumatic Belt Sander** 

## **BELTON**

# Ideal for sanding and grinding in narrow spaces, recessed areas and on curved surfaces

- Quick belt change
- Rear exhaust system



• Belt size 10 mm (W)



Model B-30CL C€

• Belt size 30 mm (W)

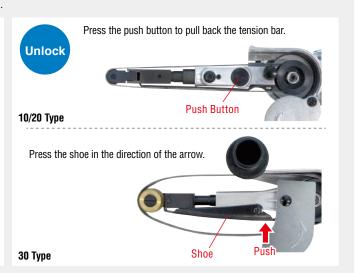


Model		B-10CL	B-20CL	B-30CL
Air Pressure	MPa (kgf/cm²)		0.6 (6)	, , , , , , , , , , , , , , , , , , , ,
Air Consumption (No-load)	m³/min	0.4	0.48	0.82
Free Speed	min <sup>-1</sup> (rpm)	17000	18000	15000
Belt Speed	m/min	1120	2770	2310
Belt Size	mm	10 x 330	20 x 520	30 x 540
Inlet Size			Rc 1/4	
Mass (Weight)	kg	0.9	1.6	2.4
Accessories Included		2 pieces of Abrasive Belt Z#60 x 10 mm (1 piece installed)     Abrasive Belt Z#80 x 10 mm     Abrasive Belt Z#100 x 10 mm     Abrasive Belt Z#120 x 10 mm     1.5 mm Hex. Socket Screw Key     4 mm Hex. Socket Screw Key     Bushing R 1/4 x NPT 1/4	2 pieces of Abrasive Belt Z#60 x 20 mm (1 piece installed) Abrasive Belt Z#80 x 20 mm Abrasive Belt Z#100 x 20 mm Abrasive Belt Z#120 x 20 mm S.5 mm Hex. Socket Screw Key Mm Hex. Socket Screw Key Bushing R 1/4 x NPT 1/4 Convex Shoe	2 pieces of Abrasive Belt     Z#60 x 30 mm (1 piece installed)     Abrasive Belt Z#80 x 30 mm     Abrasive Belt Z#100 x 30 mm     5 mm Hex. Socket Screw Key     Handle Assy     Bushing R 1/4 x NPT 1/4



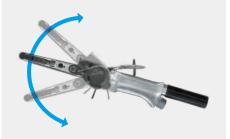
Abrasive belt can be changed easily. \*Rotate and open the cover when changing.





#### Adjustable angle for efficient operation

Guard angle can be changed freely in accordance with the working position and shape of the workpiece.



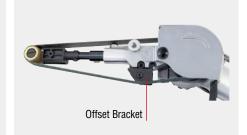
#### Belt Speed Adjustment

Belt speed can be easily adjusted by turning the adjust valve with a screwdriver.



#### Curved surface grinding

Curved surface grinding is possible by using the Offset Bracket (Optional).



#### Abrasive Belt for B-10CL

Albitacité Bett 161 B. 1662									
	Belt Size : <mark>6</mark> mm x <mark>330</mark> mm (W x L)								
O-:1	PN								
Grit	Zirconia (Z)	Alumina (AA)							
#40	-	-							
#60	TB00241	-							
#80	TB00242	-							
#100	TB00243	-							
#120	TB00244	-							
#180	TB00245	-							
#240	TB00246	-							
#400	-	TA9A237							
		50 pcs./set							
Sales Unit	anton		elt, optional bracket 10942 shoe 6 are						

#### Abrasive Belt for B-10CL

	Belt Size : 10 mm x 330 mm (W x L)							
Grit	PN							
diit	Zirconia (Z)	Alumina (AA)	Ceramic (CE)					
#40	-	-	TB08368					
#60	TA9A064	-	TB08369					
#80	TB00076	-	TB08370					
#100	TB00077	-	TB08371					
#120	TB00247	-	TB08372					
#180	TB00248	-	-					
#240	TB00249	-	-					
#400	-	TA9A244	-					
	50 pc	s./set	50 pcs./set					
Sales Unit			an ton					

#### Abrasive Belt for B-20CL

	Belt Size : <mark>20</mark> mm x <mark>520</mark> mm (W x L)							
Grit	PN							
Grit	Zirconia (Z)	Alumina (AA)	Ceramic (CE)					
#40	TA99605	-	TB08373					
#60	TA99606	-	TB08374					
#80	TA99607	-	TB08375					
#100	TA99608	-	TB08376					
#120	TA99609	-	TB08377					
#180	TB00250	-	-					
#240	TB00251	-	-					
#280	-	TA9A252	-					
#320	-	TA9A253	-					
#400	-	TA9A254	-					
	20 pc	20 pcs./set						
Sales Unit								

#### Abrasive Belt for B-30CL

Belt Size : 30 mm x 540 mm (W x L)					
Grit	PN				
Grit	Zirconia (Z)	Alumina (AA)	Ceramic (CE)		
#40	TB00252	-	TB08378		
#60	TB00253	-	TB08379		
#80	TB00254	-	TB08380		
#100	TB00255	-	TB08381		
#120	TB00256	-	TB08382		
#180	TB00257	-	-		
#240	TB00258	-	-		
#280	-	TA9A262	-		
#320	-	TA9A263	-		
#400	-	TA9A264	-		
	20 pcs./set		20 pcs./set		
Sales Unit					

#### Optional Parts

		Description	Sales Unit	Applicable Model		
Ref. No.	PN			B-10CL	B-20CL	B-30CL
1	TB09997	Offset Bracket 10 Ass'y	1 set	•		
2	TB10192	Offset Bracket 20 Ass'y	1 set		•	
3	TB08150	Offset Bracket 30 Ass'y	1 set			•
4	TB09938	Finger Pad Ass'y	1 set		•	
5	TB09996	Bracket 6 Ass'y	1 set	•		
6	TP14770	Shoe 6	1 piece	•		
7	TB10160	Idle Pulley Bracket A Ass'y	1 set		•	
8	TR10191	Convex Shoe	1 piece			





#### **Pneumatic Belt Sander**

## **BABY BELTON**

# Ideal for deburring, chamfering, bead grinding, and polishing applications

- · Compact and lightweight, yet powerful
- Alternative rotation direction
- Ergonomically designed for left or right hand operator convenience

## Model BB-10A C€

- Lever type
- Belt size 10 mm (W)



### Model BB-10A Non-CE

- Ring type
- Belt size 10 mm (W)



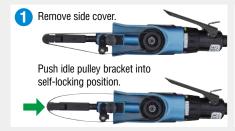
## Model BB-20 C€

• Belt size 20 mm (W)



Specifications				
Model		BB-10A Lever Type	BB-10A Ring Type	BB-20
Air Pressure	MPa (kgf/cm²)	•	0.6 (6)	
Air Consumption (No-load	i) m³/min	0	.25	0.43
Free Speed	min <sup>-1</sup> (rpm)		16000	
Belt Speed	m/min	10	000	1100
Belt Size	mm	10:	x 330	20 x 330
Inlet Size			Rc 1/4	
Mass (Weight)	kg	0.6	0.5	0.8
Accessories Included		Abrasive Belt Z#100 x 10 mm (Installed) Abrasive Belt Z#120 x 10 mm Abrasive Belt Z#180 x 10 mm Abrasive Belt Z#240 x 10 mm Abrasive Belt Z#240 x 10 mm  1.5 mm Hex. Socket Screw Key Bushing R 1/4 x NPT 1/4	Abrasive Belt Z#100 x 10 mm (Installed) Abrasive Belt Z#120 x 10 mm Abrasive Belt Z#180 x 10 mm Abrasive Belt Z#240 x 10 mm 1.5 mm Hex. Socket Screw Key Bushing R 1/4 x NPT 1/4	Abrasive Belt Z#60 x 20 mm (Installed)     Abrasive Belt Z#120 x 20 mm     Abrasive Belt Z#240 x 20 mm     2.5 mm Hex. Socket Screw Key     3 mm Hex. Socket Screw Key     Shoe     Dust Cover     Bushing R 1/4 x NPT 1/4

#### Quick and easy belt installation and removal "NO Tools Required"







#### The throttle lever can be turned by 180 degrees.

Ergonomically designed for right or left hand operator convenience



#### Belt rotation direction can be changed.

Belt rotation direction can be changed to control the direction of chip splash.



#### Sanding for curved surfaces

Curved surface sanding is possible by using the offset bracket.



#### The offset bracket can be positioned up or down.

Push-in offset bracket pulley allows the following use.





#### Belt Speed Adjustment (BB-10)

Speed can be adjusted by turning the adjust valve with a screwdriver.





Low speed

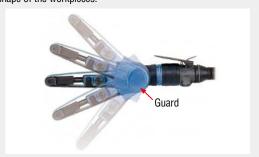






#### Guard position is adjustable (BB-20)

Guard angle can be changed freely in accordance with the working position and shape of the workpieces.



#### Belt Speed Adjustment (BB-20)

Belt speed can be easily adjusted by turning the adjust valve without a tool.

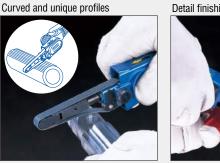


#### Ideal for deburring, chamfering, bead grinding, and polishing applications

Deburring & chamfering of uneven edge and plate surfaces











0	ptional	<b>Parts</b>
-		I GILO

Ref. No.	PN	Description	Sales Unit	Model		
1	TB05539	Offset Bracket 10 Ass'y	1 set	BB-10A		
2	TB07109	Offset Bracket 20 Ass'y	1 set			
3	TB07224	Tension Bar 520 Ass'y*	1 set	BB-20		
4	TQ10701	Shoe 520*	1 piece	DD-20		
5	TB07227	Finger Pad Ass'y 520	1 set			













#### Abrasive Belt for BB-10A

Belt Size : 10 mm x 330 mm (W x L)					
C=i+	PN				
Grit	Zirconia (Z)	Alumina (AA)	Ceramic (CE)		
#40	-	-	TB08368		
#60	TA9A064	-	TB08369		
#80	TB00076	-	TB08370		
#100	TB00077	-	TB08371		
#120	TB00247	-	TB08372		
#180	TB00248	-	-		
#240	TB00249	-	-		
#400	-	- TA9A244			
	50 pcs./set		50 pcs./set		
Sales Unit			DATION		

#### Abrasive Belt for BB-20

ADIASIVE DEIL IOI DD-20					
Belt Size : <mark>20</mark> mm x <mark>330</mark> mm (W x L)					
Grit			PN		
Grit	Zirconia (Z)	Alumina (AA)	Ceramic (CE)	Non-woven	
#40	-	-	-	-	
#60	TB07114	-	TB07125	-	
#80	TB07115	-	TB07126	-	
#100	TB07116	-	TB07127	-	
#120	TB07117	-	TB07128	-	
#180	TB07118	-	-	TB07122 A-M Equivalent to #180	
#240	TB07119	-	-	-	
#320	-	-	-	TB07121 A-VF Equivalent to #320	
#400	-	TB07120	-	TB07123 S-SF Equivalent to #400	
	20 pc	s./set	20 pcs./set	5 pcs./set	
Sales Unit	BEL	on	BELYON	BELLON	

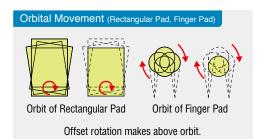
**Pneumatic Sander** 

## **COMPACT MULTI SANDER**

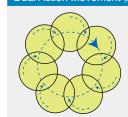
## Excellent for sanding on narrow, confined, and hard-to-reach areas with three types of pads

- By replacement of the pad, both random orbital action and multiple movement are available with one set
- Finish sanding on a small part is possible with a small pad
- Sanding in a confined space is possible due to compact and lightweight body





#### Dual Action Movement (2" Round Pad)



Offset rotation and self rotation makes orbit as shown on the left.

#### Speed Adjustment



Turn the adjust valve to limit the tools speed. Adjust the speed according to the workpiece material, grit of sand paper, and the desired surface finish.

#### Pad Replacement



Pad replacement can easily be made with the included spanner 10 and 4 mm hex. socket screw key.

In case of 2" round pad, only the spanner 10 is used. Use a suitable pad in accordance with the work area or area to be sanded.

#### Specifications

Model		CMX-20
Air Pressure	MPa	0.6
Air Consumption (No load)	m³/min	0.15
Orbit Diameter	mm	2
Mass (Weight)	kg	0.53 (without pad)

The rectangular pad comes mounted to the tool.

#### Accessories Included

**Accessory Sanding** 

Type of Pad

- 2 pieces of 2" Velcro Abrasive Disc #80
  2 pieces of 2" Velcro Abrasive Disc #120
  2 pieces of 2" Velcro Abrasive Disc #180
- 2 pieces of 26 x 50 mm Velcro Abrasive Sheet #80
- 2 pieces of 26 x 50 mm Velcro Abrasive Sheet #120
- 2 pieces of 26 x 50 mm Velcro Abrasive Sheet #180
- 5 pieces of 16 mm Self Adhesive Abrasive Disc #80 5 pieces of 16 mm Self Adhesive Abrasive Disc #120 5 pieces of 16 mm Self Adhesive Abrasive Disc #180

Rectangular Pad

- 2" Round Pad
- 16 mm Finger Pad 4 mm Hex. Socket Screw Key

13000

16 dia

- Bushing R 1/4 x NPT 1/4
- Ultra-thin Wrench SNT1012
- Tool Box

2" Round Pad

14500

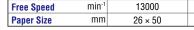
50 dia.

Uptiona	I Access	ories	
Ref. No.	PN	Description	Sales Unit
	TB09977	26 x 50 mm Velcro Abrasive Sheet #80	
1	TB09978	26 x 50 mm Velcro Abrasive Sheet #120	100 pcs. /set
	TB09979	26 x 50 mm Velcro Abrasive Sheet #180	
2	TB09986	26 x 50 mm Velcro Non-woven Abrasive Sheet #320	50 pcs. /set
	TB09980	2" Velcro Abrasive Disc #80	
3	TB09981	2" Velcro Abrasive Disc #120	
	TB09982	2" Velcro Abrasive Disc #180	100 pcs. /set
	TB09983	16 mm Self Adhesive Abrasive Disc #80	100 pcs. /3ct
4	TB09984	16 mm Self Adhesive Abrasive Disc #120	
	TB09985	16 mm Self Adhesive Abrasive Disc #180	





For 2" Round Pad For 16 mm Finger Pad









Rectangular Pad

16 mm Finger Pad

**Handy Pneumatic Sander** 

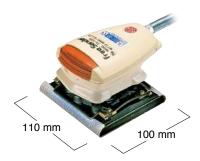
## **FREE SANDER**

## Super lightweight, low-vibration design

- Ideal for sanding and surface finishing wood, metal, plastic and other materials
- · Lightweight design with minimal vibration
- High output and low air consumption motors produce high speed orbits for swirl-free finishes
- Oil free design
- · Suitable for industrial and production applications

#### Model FS-50A C€



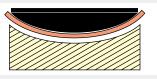


**Model FS-100C C€** 

Specifications		
Model	FS-50A	FS-100C
Air Pressure MPa (kgf/cm²)	0.6	(6)
Air Consumption (No-load) m³/min	0.14	0.2
Free Speed min <sup>-1</sup> (rpm)	15000	20000
Orbit Diameter mm	1.2	1.5
Pad Size mm	75 x 82	110 x 100
Paper Size mm	70 x 114	114 x 140
Inlet Size	Rc	1/8
Mass (Weight) kg	0	.5
Accessories Included	Air Hose H Ass'y	Air Hose H Ass'y
	• 5 pieces of Abrasive Paper #180	• 5 pieces of Abrasive Paper #180
	• 5 pieces of Abrasive Paper #240 • Bushing R 1/4 x NPT 1/4	• 5 pieces of Abrasive Paper #240 • Bushing R 1/4 x NPT 1/4

#### Round-Pad for FS-100C

The pad is made of sponge rubber and conforms easily to the shape being worked. Double-stick tape is used with round pad.



Optiona	l Accesso	ries		
Ref. No.	PN	Description	Sales Unit	Model
1	TA99828	Rubber Pad	1 2000	FS-50A
2	TB02240	Dust Collector 1 piece		F5-50A
3	TA9A367	Rubber Pad		
4	TA91474	Round Pad	1 piece	
5	TB02235	Dust Collector		
6	TA9A265	Abrasive Paper #100		
	TA9A266	Abrasive Paper #120		FS-100C
	TA9A267	Abrasive Paper #150		F3-100C
	TA9A268	Abrasive Paper #180	200 pcs./set	
	TA9A269	Abrasive Paper #240		
	TA9A270	Abrasive Paper #280		
	TA9A271	Abrasive Paper #320		



#### **Pneumatic Reciprocating Sander**

## **LINE SANDER**

## Ideal for inline and grain sanding applications

- Ideal for most inline and profile sanding applications
- Compact and lightweight 0.75 kg design
- · Low vibration and minimal noise output
- Suitable for sanding steel, aluminum, wood, plastic and other materials

## Model LS-10 C€



• Bushing R 1/4 x NPT 1/4

Specifications		
Model		LS-10
Air Pressure MPa (I	kgf/cm²)	0.6 (6)
Air Consumption (No-load)	m³/min	0.11
Free Speed	min-1	4000
Stroke Length	mm	4
Pad Size	mm	55 x 103
Paper Size	mm	57 x 140
Inlet Size		Rc 1/8
Mass (Weight)	kg	0.75
Accessories Included		Air Hose E Ass'y
		Block Rubber Pad
		Base Plate A Ass'y
		• 5 pieces of Abrasive Paper #240
I		o process or restaured aper #240



#### Special Sanding Pad

The Block Rubber Pad Assembly can be easily trimmed to conform to the shape being worked and is available as an accessory.



#### Abrasive Paper

Cut standard size paper (9" x 11") into 8 pieces, as shown below. For dry sanding, use an open coat abrasive paper with silicon carbide or aluminum oxide abrasive grains to prevent clogging, improve grinding efficiency, and prolong the life of the paper.

	<u> 1</u>	1"——
Т	1/8	
9"		
$\perp$		

0	A
	Accessories
Optional	AUUUUUUU

Ref. No.	PN	Description	Sales Unit
1	TB02244	Dust Collector	
2	TA96665	Rubber Pad	1 piece
3	TA96739	Block Bubber Pad	







**Pneumatic Compact Sander** 

## **ORBITAL SANDER**

Model OSV-60A CE

## Heavy-duty and powerful with adjustable speed regulator

- · Powerful dual action for tough applications
- Standard with dust extraction system
- · Rugged construction for years of reliable performance



Specifications Model		OSV-60A
Air Pressure	MPa (kgf/cm²)	0 0 1 0 0 1 1
Air Consumption (No-	oad) m³/min	0.68
Free Speed	min-1(rpm)	8500
Orbit Diameter	mm	10
Paper Size	mm	150 (6")
Pad Type		PSA with 6 holes
Inlet Size		Rc 1/4
Mass (Weight)	kg	2
Accessories Included		Dust Collection Ass'y with Dust Bag     Single Ended Spanner 17     Bushing R 1/4 x NPT 1/4     Brush



#### Random orbital action creates a professional finish

By offsetting the sanding pad shaft, fast aggressive sanding is achieved while dramatically reducing swirl patterns. Speed adjustments allow for the best speed for the best job.



**Pneumatic Compact Sander** 

## **PALM ORBITAL SANDER**

Model **APS-125/150 C€** 



## Ergonomic lightweight design

- Extremely light. APS-125 weighs just 690 g
- Ergonomically designed for operator convenience and comfort
- Powerful high speed 10000 RPM motor
- Ultra small orbital action for high quality swirl-free finishes
- Available with 125 mm or 150 mm pads
- Variable speed control

#### **Applications**

- Feather edging, metal preparation, and finishing work on body filler
- · Curved surface sanding and corner rounding in wood work

Specifications \( \)				
Model		APS-125	APS-150	
Air Pressure	MPa (kgf/cm²)	0.6	(6)	
Air Consumption (No-	load) m³/min	0.4	45	
Free Speed	min <sup>-1</sup> (rpm)	100	000	
Orbit Diameter mm		5		
Paper Size	mm	125 (5")	150 (6")	
Pad Type		PSA or Velcro with 5 holes	Velcro with 6 holes	
Inlet Size		Rc 1/4		
Mass (Weight)	kg	0.69	0.72	
Accessories Included		• 17 mm Single Ended Sp • Bushing R 1/4 x NPT 1/		

#### Random orbital action creates a professional finish

By offsetting the sanding pad shaft, fast aggressive sanding is achieved while dramatically reducing swirl patterns. Speed adjustments allow for the best speed for the best job.



#### For Self Vacuum & Central Vacuum

The non-vacuum model is available from stock and can easily be modified to self-vacuum or central vacuum.









#### **Pneumatic Die Grinder**

## **AIR SONIC**

## Ideal for most deburring, finishing and grinding applications

- · Precision machined with heavy-duty spindle and support bearings
- Rear exhaust with noise reduction system
- Suitable for industrial and production applications
- · Locking throttle lever helps prevent accidental start-up
- · Accepts most stone-type and rotary carbide burrs with 6 mm shanks







Specifications			
Model		L-25B	L-35C
Air Pressure MP	a (kgf/cm²)	0.6	(6)
Air Consumption (No-load)	m³/min	0.4	0.35
Free Speed	min <sup>-1</sup> (rpm)	27000	37500
Chuck Size	mm		6 1.5
Inlet Size		Rc 1/4	
Mass (Weight)	kg	0.6 (without hose)	0.45 (without hose)
Accessories Included		14 mm Single Ended Spanner     Mounted Wheel No.2     Mounted Wheel No.3     Chuck Pin     Bushing R 1/4 x NPT 1/4	2 pieces of 14 mm Single Ended Spanner     Mounted Wheel 13 x 13 x 6 x 38     Bushing R 1/4 x NPT 1/4



Optiona	I Accessory	
PN	Description	Sales Unit
TP02806	Chuck Sleeve 6 x 3 mm	1 piece
	d wheel or rotary burr with stalled on L-25B and L-350 eve 6 x 3	





#### **Pneumatic Die Grinder**

## **AIR SONIC**



## High speed rotation 56500 rpm

- Smooth high speed rotation and low vibration enables precision grinding
- Stepless speed change from 0 to 56500 rpm meets a wide range of grinding applications
- Compact and light weight for comfortable operation over long periods of time.
- Triangular grip fits operator's hand. Special plastic grip prevents cold hands and absorbs vibration.
- · Rear exhaust system

Specifications		
Model		AL-55
Air Pressure MPa	a (kgf/cm²)	0.6 (6)
Air Consumption (No-load)	m³/min	0.17
Free Speed	min <sup>-1</sup> (rpm)	56500
Chuck Size	mm	3
Inlet Size		G 1/4
Mass (Weight)	kg	0.25
Accessories Included		• 2 pieces of 7 x 9 mm Spanner • Mounted Wheel 5 x 13 x 3 • Bushing R 1/4 x NPT 1/4

Optional I	Optional Accessory		
PN	Description	Sales Unit	
TB00137	Mounted wheel 5 x 13 x 3	10 pcs./set	

## GRINDING/FILING

#### **Portable Precision Finishing File**

## **SUPER HAND**

## Fast, efficient filing, sanding and deburring tools

- Eliminates time consuming manual hand-filing operations
- Ideal for industrial production filing applications on steel, aluminum, brass, wood and other materials
- Unique and compact design delivers reduced vibration performance while reducing operator fatigue.
- Interchangeable files
- · Rear exhaust system
- Weight reduced by half for comfortable operation over long period of time (ASH-900)







Specifications Model		SH-100A	ASH-900
Air Pressure	MPa (kgf/cm²)	0.6 (6)	
Air Consumption (No-load	d) m³/min	0.24	0.13
Stroke Speed	min <sup>-1</sup>	3700	6300
Stroke Length	mm		9
File shank Size	mm	6.3	5.0
Inlet Size		F	Rc 1/4
Mass (Weight)	kg	1.1	0.5
Accessories Included		Rat Tail File SF-10 Triangular Taper File SF-11 Half Round File SF-12 Flat File SF-13 3 mm Hex. Socket Screw Key Bushing R 1/4 x NPT 1/4 Air Hose E Ass'y	Rat Tail File SF-10 Triangular Taper File SF-11 Half Round File SF-12 Flat File SF-13 2.5 mm Hex. Socket Screw Key Bushing R 1/4 x NPT 1/4

Optional <i>I</i>	Accessorie		
Ref. No.	PN	Description	Sales Unit
1	TA9A222	Rat Tail File SF-10	
2	TA9A223	Triangular Taper File SF-11	5 pcs./set
3	TA9A224	Half Round File SF-12	5 pcs./set
4	TA9A225	Flat File SF-13	
5	TA91752	Rubber Pad Ass'y for SH-100A	
6	TA94625	Supporter Ass'y for SH-100A (use with TA91752)	1 set
7	TB04319	Sanding Pad Ass'y for ASH-900	



**Portable Precision Finishing File** 

## **SUPER HAND LIGHT**



# Best suited for deburring of die-cast aluminum products and machined parts

- Small size, light-weight, and low-vibration model
- · Reduced operator fatigue for greater productivity

Model		SHL-40
Air Pressure N	IPa (kgf/cm²)	0.6 (6)
Air Consumption (No-load)	m³/min	0.07
Stroke Speed	min <sup>-1</sup>	9000
Stroke Length	mm	4
File shank Size	mm	3.0
Inlet Size		Rc 1/4
Mass (Weight)	kg	0.4
Accessories Included		• Flat File LF-13 • 2 mm Hex. Socket Screw Key • Bushing R 1/4 x NPT 1/4

	Optional Accessories	
	Sales Unit : 3 pcs./set	
	Rat Tail File LF-10	
	PN : TB09652	3 00
4	Triangular Taper File LF-11	
	PN : TB09654	3 00
+	Half Round File LF-12	
1	PN: TB09653 80	300
┪	Flat File LF-13	
	PN : TB09651 80	4.5

Portable Fine Finishing File

## **MICRO AIR HAND**

# Light weight, ultra-low vibration filer for polishing and lapping operations

· Fine reciprocating motion best for precision parts filing

## Model MAH-05 C€

#### Model MAH-16 C€



Specifications				
Model		MAH-05	MAH-16	
Air Pressure MPa	(kgf/cm²)	0.6	(6)	
Air Consumption (No-load)	m³/min	0.0	07	
Stroke Speed min-1		22000	11000	
Stroke Length	mm	0.5	2.2	
File Shank Size	mm	3		
Inlet Size		Rc 1/4		
Mass (Weight)	kg	0.37		
Accessories Included		Flat End Diamond File     Round End Diamond File     2 mm Hex. Socket Screw Key     Bushing R 1/4 x NPT 1/4		

Optional <i>I</i>	Accessories	
PN	Description	Sales Unit
TB07502	Flat End Diamond File	5 pcs./set
TB07503	Round End Diamond File	5 pcs./set
TB07504	Triangular End Diamond File	5 pcs./set
TB07505	Half-round End Diamond File	5 pcs./set
TB07506	Vice Holder*	1 set

#### Mounting Examples

\*This holder can be used for polishing and lapping applications by mounting ceramic stones, etc. (Max size: Thickness 3.2 mm x Width 20 mm)



#### **Pneumatic Deburring Tool**

## **BURR CUTTER**

Model BC-005 C€





## For deburring machined holes

- While gripping the lever, push the countersink into the machined holes to remove burrs
- Optimum speed can be obtained by the adjust valve, resulting in clear deburred surfaces
- Push-to-engage type prevents the countersink from coming off the hole and damaging the workpiece
- Replacement of the countersink is easy and quick with a set of three quick change chucks provided

Model		BC-005
Air Pressure MPa	(kgf/cm²)	0.6 (6)
Air Consumption (No-load)	m³/min	0.22
Free Speed m	in-1(rpm)	420
Deburring Hole diameter	mm	3 to 34
Countersink Shank Size	mm	6, 8, 10, 12*
Inlet Size		Rc 1/8
Mass (Weight)	kg	0.75
Accessories Included		Chuck 6 mm Chuck 8 mm Chuck 10 mm (Installed) Suspension Bail S.5 mm Hex. Socket Screw Key Bushing R 1/8 x NPT 1/4

\*Chuck 12 mm is optional.

Countersinks are not provided with the tool. Please purchase them locally.

Compatibility table between chuck and countersink shank diameter								
Chuck	Appearance*	Countersink Shank Diameter (mm)	Overall Length of Chuck (mm)					
Chuck 6		6	49.5					
Chuck 8		8	49.5					
Chuck 10		10	49.5					
Chuck 12		12	60					

<sup>\*</sup>indicates outer appearances of the chucks around the hex. socket head set screw.

## **CUTTING/DRILLING**

**Pneumatic Hacksaw** 

## **SUPER SAW**

## Model SSW-110 C€



# Special double-piston system provides low vibration while improving cutting speed!

- Ideal for sawing and trimming operations on sheet metal, aluminum, plastic and other materials
- Suitable for automotive, fabrication, HVAC, electrical and woodworking applications
- Ultra lightweight construction with low vibration performance
- Optimized blade stroke for maximum cutting performance
- Powerful dual piston construction
- Locking throttle lever helps prevent accidental start-up



Model		SSW-110
Air Pressure MPa	(kgf/cm²)	0.6 (6)
Air Consumption (No-load)	m³/min	0.29
Stroke Speed	min <sup>-1</sup>	7000
Stroke Length	mm	11
Capacity (Max. plate thickne	ess) mm	3
Inlet Size	kg	Rc 1/4
Mass (Weight)		0.62
Accessories Included		<ul><li>2 pieces of 32 mm Saw Blade</li><li>3 mm Hex. Socket Screw Key</li><li>Bushing R 1/4 x NPT 1/4</li></ul>

Uptional <i>A</i>	Accessories					
Ref. No.	PN	Description	Sales Unit			
1	TB00759	TB00759 9 TPI Saw Blade for Gypsum-board				
2	TB00760	12 TPI Saw Blade for Plywood Panel	10 pcs./set			
3	TB00192	14 TPI Saw Blade for Plastic				
4	TB00193	18 TPI Saw Blade for Plastic	10 μιδ./δει			
5	TA9A011	24 TPI Saw Blade for Mild Steel				
6	6 TA9A005 32 TPI Saw Blade for Mild Steel					
1	2	3 4 5	6			

#### **Pneumatic Hand Drill**

## **AIR DRILL**

## The power and performance you need to drill deeper and faster

- Ultra high power to weight ratio
- Ergonomically designed to reduce operator fatigue
- Variable speed control
- Reversible
- Designed for industrial and production applications

#### Model ADR-65 C€





# Change rotation direction by turning the valve as indicated. Forward Reverse Variable speed adjustment Turn the speed control nut to change the R.P.M.

Model		ADR-65	ADR-100	
Air Pressure MPa	(kgf/cm²)	0	.6 (6)	
Air Consumption (No-load)	m³/min	0.55	0.67	
Free Speed m	iin <sup>-1</sup> (rpm)	2900	2000	
Max. drilling Capacity		6.5	10.0	
Inlet Size		Rc 1/4		
Mass (Weight)	kg	0.8	1.1	
Accessories Included		Drill chuck (Installed) Chuck Handle Bushing R 1/4 x NPT Cupla 30SH		

Uptional Accessory								
PN	Description	Sales Unit						
TQ10969	Hanger	1 piece						

## **SPRING BALANCER** series



# TIGON spring balancer improves work safety and efficiency

The "TIGON" range of spring balancers offer a simple cost effective solution to take the strain out of handling tools thus improving work safety and efficiency. The balancer range covers 0.5 to 70 kg tool capacity with a maximum cable length of 2 meters.

Specifica	tions				
Model		TW-00	TW-0	TW-3	TW-5
Capacity	kg	0.5 - 1.5	0.5 - 1.5	1.0 - 3.0	2.5 - 5.0
Stroke	m	0.5	1.0	1.3	1.3
Weight	kg	0.2	0.5	1.4	1.5
Model		TW-9	TW-15	TW-22	TW-30
Capacity	kg	4.5 - 9.0	9.0 - 15.0	15.0 - 22.0	22.0 - 30.0
Stroke	m	1.3	1.3	1.5	1.5
Weight	kg	3.4	3.8	7.2	7.6
Model		TW-40	TW-50	TW-60	TW-70
Capacity	kg	30.0 - 40.0	40.0 - 50.0	50.0 - 60.0	60.0 - 70.0
Stroke	m	1.5	1.5	1.5	1.5
Weight	kg	9.8	10.4	11.6	11.8

## **HOSE REEL BALANCER series**

#### Functions both as balancer and hose reel



Specifications									
Model			HW-0	HW-3	HW-5				
Capacity		kg	0.5 - 1.5	1.5 - 3.0	3.5 - 5.0				
Stroke		m	1.3	1.3	1.3				
Weight		kg	1.6	1.7	1.8				
Hose Diameter	I.D.	mm	6.5	6.5	6.5				
	0.D.	mm	10	10	10				

## **RETRACTOR** series



## Handy knob for easy tension adjustment

Specifications									
Model		RW-0	RW-3	RW-5	TW-06R	TW-1R			
Capacity	kg	0.5 - 1.5	1.0 - 3.0	2.5 - 5.0	0.2 - 0.6	0.5 - 1.5			
Stroke	m	2.0	2.0	2.0	1.5	1.5			
Weight	kg	0.5	0.7	0.9	0.3	0.3			

## **Vibration Level, Sound Pressure Level, and Sound Power Level**

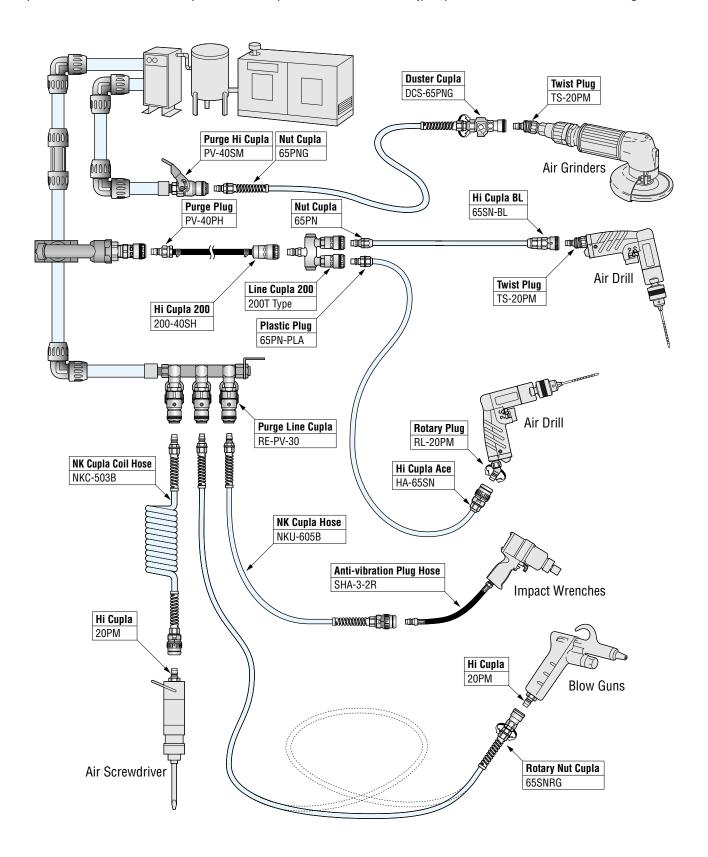
Figures may vary depending on applications

Series	Model	Vibration Level m/s <sup>2</sup>	Measurement Point	Vibration Standard	Sound Pressure Level dB(A)	Sound Powe Level dB(A)
	AMBL-0307	4.1 6.3	Grip Knob		87	98
	AMD 0207	4.1	Grip		07	0.0
Beveler (Pneumatic)	AMB-0307	6.3	Knob	EN ISO 20643	87	98
beveler (Filedillatic)	CB-01	≦2.5	Grip	LIV 100 20040	88	99
	CB-02	4.1	Grip Grip		74	85
	CBR-03	≦2.5 3.4	Handle		81	92
	UD 45D	≦2.5	Grip		0.4	75
	HB-15B	4.6	Handle		64	75
	EMB-0307B	10.0	Grip		84	95
Beveler (Electric)		4.9	Knob	EN 60745-1		
	MB-03A	5.9 6.6	Grip Knob		80	91
	FOD 0000	7.0	Grip		00	0.4
	ECB-0203	7.0	Knob		83	84
	AJC-16	4.8	Grip		84	95
	JT-20 JEX-20	15.5	Grip		91	102
		9.0 8.3	Grip Grip		92	103
	JC-16	11.5	Needle Guide		81	92
et Chisel (Pneumatic)	IEV 04	10.5	Grip	EN ISO 28927-9	00	104
, ,	JEX-24	28	Needle Guide		93	104
	JEX-28	15.0	Grip		96	107
		17.5	Needle Guide			
	JEX-2800A	11.5 14.5	Grip Needle Guide		94	105
		16.0	Grip			
et Chisel (Electric)	EJC-32A	15.0	Handle	EN 60745-2-6	85	96
auto Chisel (Pneumatic)	A-300	≥ 30	-		97	108
Air chipper (Pneumatic)	ACH-16	66	Grip		86	97
cppc. (caac)	CH-24	100	Grip		87	98
	S-250	50 29	Grip Grip	EN 28927-9	101	112
Super Kelen (Pneumatic)	S-500	17.0	Supporting Section		100	111
cape: recien (r neamane)	0.4000	58	Grip		00	440
	S-1000	81	Supporting Section		99	110
	MLG-25	≦2.5	Grip	EN 20643	84	95
	MLG-40	≦2.5	Grip		88	99
	MAGW-40 Lever MAGW-40 Ring	6.3 6.3	Grip Grip	86 84 84 EN 28927-1		97 95
		4.6	Grip		-	
Inter Original (Drawnskie)	MAG-50	6.5	Handle		84	95
lyton Grinder (Pneumatic)	MLG-50	3.6	Grip		89	100
	WILG-50	4.1	Handle		09	100
	MLG-70 Lever	3.8	Grip		89	100
		6.2	Handle			
	MLG-70 Ring	3.5 7.0	Grip Handle		89	100
	MLS-20	2.5 ≤ 2.5	Grip		85	96
lyton Sander (Pneumatic)	MAS-40	≦2.5	Grip	EN 28927-3	79	90
lyton Sander (Pheumatic)	MAS-70	≦2.5	Grip		85	96
		≦2.5	Handle			
	B-10CL B-20CL	≦2.5	Grip		78	89 92
	B-30CL	≦ 2.5 ≦ 2.5	Grip Sub Handle	ISO 20643	81 86	97
		<u>≡ 2.5</u> ≦ 2.5	Grip L			
Selton (Pneumatic)	BB-10A Lever Type	≦ 2.5	Grip R		78	89
	BB-10A Ring Type	≦2.5	Grip L		78	89
	DB TOXTTING Type	≦ 2.5	Grip R	+	70	
	BB-20	≦2.5	Grip L		85	96
compact Multi Sander (Pneumatic)	CMX-20	≦2.5 ≦2.5	Grip R Grip		76	87
	FS-50A	2.7	Grip	EN 28927-3	77	88
ree Sander (Pneumatic)	FS-100C	≦ 2.5	Grip		85	96
ine Sander (Pneumatic)	LS-10	6.0	Grip	EN 20643	78	89
Orbital Sander (Pneumatic)	OSV-60A	4.6	Grip		89	100
, ,	APS-125	7.2 5.5	Supporting Section	ISO 28927-3	78	89
alm Orbital Sander (Pneumatic)	APS-125 APS-150	7.4	Grip Grip		81	92
	L-25B	7.2	Grip		76	87
ir Sonic (Pneumatic)	L-35C	3.1	Grip	28927-12 76	87	
, ,	AL-55	≦2.5	Grip		71	82
Super Saw (Pneumatic)	SSW-110	9.3	Grip		71	82
tupor Hand (Proumatic)	SH-100A	6.8	Grip		76	87
Super Hand (Pneumatic)	ASH-900 4.8 Grip SHL-40 ≦2.5 Grip	Grip Grip	EN 28927-8	62 71	73 81	
	MAH-05	≥ 2.5 ≤ 2.5	Grip		64	75
licro Air Hand (Pneumatic)			<u> </u>		64	75
inoro i in riuma (i rioamiano)	MAH-16 BC-005	≦2.5	Grip		04	73

## **QUICK CONNECT COUPLINGS FOR PNEUMATIC TOOLS**

## **CUPLA**

Nitto Kohki supplies various types of air Cuplas to meet all needs of air piping from main supply, relays in factories, pipe end connections to pneumatic tools, and those of air piping within equipment. The following sketch gives you some examples of air piping using Hi Cupla Series and may serve as a good reference in selecting appropriate Cuplas. For more information, please visit http://www.nitto-kohki.co.jp/e/prd/d\_cat/ and see our eCatalog here.



## **QUICK CONNECT COUPLINGS FOR PNEUMATIC TOOLS**

## HI CUPLA



- One-way shut-off cupla with an automatic shut-off valve in the socket
- Important parts are hardened for excellent wear resistance and durability

Specifications			
Body material	Steel (Chrome-plated)	Brass	Stainless steel
Working pressure	1.5 MPa (15 kgf/cm <sup>2</sup> )	1.0 MPa (10 kgf/cm <sup>2</sup> )	1.5 MPa (15 kgf/cm <sup>2</sup> )
Seal material	Nit	rile rubber / Fluoro rub	ber

## HI CUPLA 200



#### Simple and secure push-to-connect type

· New valve design for low pressure loss to achieve flow rate increase

Specifications	
Body material	Steel (Chrome-plated)
Working pressure	1.5 MPa (15 kgf/cm <sup>2</sup> )
Seal material	Nitrile rubber

## **NUT CUPLA**







- Nut types are available in Hi Cupla Series and Hi Cupla 200 Series
- To mount on hose, simply slide it over the nipple and tighten the nut

Specifications	
Body material	Steel (Chrome-plated), Stainless steel
Working pressure	1.5 MPa (15 kgf/cm <sup>2</sup> )
Seal material	Nitrile rubber
<u> </u>	

## **HI CUPLA ACE**



- · Lightweight plastic coupling with automatic safety lock
- Pressure ratings comparable to steel Cuplas
- Just push plug into socket for simple connection

Specifications	
Body material	Engineering plastics (PBT, POM)
Working pressure	1.5 MPa (15 kgf/cm <sup>2</sup> )
	1.0 MPa (10 kgf/cm²) for Model HA-T
Seal material	Nitrile rubber

## **ROTARY PLUG**



- Newly developed rotary function allows 360° swivelling
- · Rotary neck plug for hose connection to pneumatic tools and pneumatic devices
- Fits at 45° angle to the tool eliminating annoying offset load caused by connected hose

Specifications	
Body material	Steel (Nickel-plated), Stainless steel
Working pressure	1.5 MPa (15 kgf/cm <sup>2</sup> )
Seal material	Nitrile rubber

## **FULL-BLOW CUPLA**



- Unique full-open gate type valve mechanism realizes low pressure loss and high flow rate, which reduces required source air volume
- The flow rate is increased by up to 40% more than that of conventional Cuplas
- During connection and disconnection, the valve is closed, enabling connection/disconnection under zero line pressure

Specifications	
Body material	Aluminum alloy
Working pressure	1.5 MPa (15 kgf/cm <sup>2</sup> )
Seal material	Nitrile rubber

## **QUICK CONNECT COUPLINGS FOR PNEUMATIC TOOLS**

## **LINE CUPLA**



- Enables several air lines to be taken simultaneuosly from one supply line
- Just push in the plug into socket for simple and secure connection
- Choose from the 2-outlet type (Model 200T), the 5-outlet straight type (Model 200L) and the 5-outlet star type (Model 200S) to suit your application

Specifications	
Body material	Aluminum
Cupla	Steel (Chrome-plated)
Working pressure	1.5 MPa (15 kgf/cm <sup>2</sup> )
Seal material	Nitrile rubber

## HI CUPLA BL





- Sleeve-lock mechanism prevents accidental disconnection
- Critical structural parts made of steel are heat-treated for increased strength giving greater durability and resistance to wear
- SN-BL type for connection to urethane hose requires no hose clamp

Specifications	
Body material	Steel (Chrome-plated), Stainless steel
Working pressure	1.5 MPa (15 kgf/cm <sup>2</sup> )
Seal material	Nitrile rubber

## **PURGE PLUG**



- Eliminates an unleasant popping noise and accidental hose whip on disconnection
- Unique design of air purge system enables the residual pressure release quickly and quietly.
- The function is assured even under a high supply pressure or with a long hose

Specifications	
Body material	Steel (Chrome-plated)
Working pressure	1.0 MPa (10 kgf/cm <sup>2</sup> )
Seal material	Nitrile rubber

## **ANTI-VIBRATION PLUG HOSE**



- Protects the Cupla from shocks generated by vibrating tools and impact tools
- Prevents hard-to-notice flow reduction caused by "Cupla" wear under continuous vibration
- Flexible rubber hose allows free and wide range of tool motion.

Specifications	
Size (Thread)	R 1/4", R 3/8"
Inlet (Plug)	Hi Cupla (30PH)
Overall length	320 mm

## **PURGE HI CUPLA**



- Just push in the plug for connection regardless of internal pressure in socket
- Eliminates an unleasant popping noise and accidental hose whip on disconnection
- Even after connection, lever operation gives perfect control over valve opening/closing

Specifications	
Body material	Brass (Chrome-plated)
Working pressure	1.0 MPa (10 kgf/cm <sup>2</sup> )
Seal material	Nitrile rubber

## **ROTARY LINE CUPLA**



- Multiple outlets are available from single air supply source.
- Sideway air outlets are rotatable to any angle. Possible hose twists can be eliminated by the component Cupla's swivel mechanism
- Choose either RT type (2 outlets) or RE type (3 outlets) to suit you application

Specifications	
Body material	Body: Brass (Chrome-plated), Cupla: Steel (Chrome-plated)
Working pressure	1.5 MPa (15 kgf/cm <sup>2</sup> )
Seal material	Nitrile rubber

## **Nitto Kohki's Labor Saving Products**

Nitto Kohki is capturing the needs of users by introducing to the world not only "machine tools and power, "Cuplas" quick connect couplings, and linear-motor-driven piston "compressors/vacuum pumps".

## **Professional Tools for Assembling High-Technology Goods**

Nitto Kohki's "delvo" electric screwdrivers are high-quality tools for professional use, with special emphasis on precise torque control and long-term reliability. "delvo" give you the ability to get it right, every time.

## **DLV5700** series





• Torque range : 0.02 - 0.4 Nm • Speed : 450 - 1800 min<sup>-1</sup> • Machine screw size : 1.0 - 3.0 mm

Low-shock for tightening

• Electro-static discharge (ESD) control

**DLV7104/8104/8204** series



- Torque range : 0.25 4.5 Nm • Speed : 400 - 2000 min<sup>-1</sup>
- Machine screw size : 2.6 6.0 mm
- The clear plastic cover is mounted over the torque adjustment ring to prevent unintentional changes of the preset torque amount
- Heavy-duty cam installed for maximum cycle life

## **DLV02/12/16** series



- Torque range : 0.03 1.6 Nm • Speed : 700 - 1000 min<sup>-1</sup>
- Machine screw size: 1.0 4.2 mm
- Brushless motors are incorporated for maximum tool life
- Grounded bit system standard
- Universal input voltage from 100 to 240 V AC for easy installation (DCL16S)

## **DLV30/45/70** series



- Torque range : 0.4 7.0 Nm • Speed : 650 - 2000 min<sup>-1</sup>
- Machine screw size: 2.6 8.0 mm
- Brushless motor and newly designed clutch provide a more consistent torque output over the life of the tool
- More accurate torque control and considerably quieter operation when compared to pneumatic screwdrivers

<sup>\*</sup>For more information, please visit http://www.nitto-kohki.co.jp/e/ and see our eCatalog here.

## **Nitto Kohki's Labor Saving Products**

tools", but also next-generation laborsaving devices, including high precision "delvo" electric screw drivers,

# Nitto Kohki's Compressors and Vacuum Pumps will enhance your system flexibility

Nitto Kohki offers a lineup of various types of compressors and pumps. These include linear-driven, electro-magnetic diaphragm, DC, and "bimorph" piezoelectric products. Our compressors and pumps are renowned for being compact and lightweight as well as for their low noise level, clean operation and durability for longer life. In further applying these technologies, we are also expanding applications to various fields that include medical, well-being, health devices and environment related equipment.

AC Linear Free Piston Compressor
AC Linear Free Piston Vacuum Pump
DC Linear Free Piston Compressor
DC Linear Free Piston Vacuum Pump
AC Linear Diaphragm Pump
DC Diaphragm Pump
DC Piston Pump

• Compact, lightweight, low vibration, low noise level, clean operation and longer durability



#### Piezoelectric Pump

- · Compact, lightweight, durable and quiet
- Low power consumption and electromagnetic noise
- Simple flow rate adjustment



## DC Diaphragm Liquid Pump

- Built-in pulse absorption chamber
- Many build material options for different liquids
- Self-priming type with air suction acceptable



#### **AC Linear Free Piston Blower**

- · Linear blowers for aeration
- · Low noise and easy maintenance







Be sure to read and understand all safety precautions mentioned below and to follow the instructions given to operate each Nitto Kohki brand tool as stated in the operator's manual. Keep operators manual close by when operating machines or tools for reference of safe operation and precautions.

## **Safety Precautions**

Failure to observe the following warnings may cause a potentially hazardous situation, which if not corrected could result in serious injury or death. To prevent the risk of fire, electric shock, and/or personal injury, proper safety guidelines should be followed at all times.

#### **Warning for ALL Machines and Tools**

- Always keep the work area free from clutter and potentially dangerous conditions such as hanging power cords, working debris, air hoses, and garbage to prevent accidents from occurring.
- Consider proper working environments for each tool carefully. Do not expose tools to extreme amounts of moisture or direct contact with water or rain. Keep area well lit at all times to prevent hidden dangers and never operate the equipment near flammable liquids or in gaseous or explosive atmospheres.
- Keep all tools and tool accessories away from children and all unauthorized personnel. Serious injury or possible death may result from machines being handled by children.
- Properly store machines and accessories while not in use. They should be kept in a dry, locked-up location out of reach of children or unauthorized personnel.
- Improper or negligent use of tools will cause increased maintenance costs, and the amount of time in which to complete the job. Always let the tool do the work at the rate of which it was designed. Best performance is always achieved by reading and understanding the proper operation of each machine or tool.
- Always wear safety glasses and protective hand and foot wear during or around operating tools. Wear a protective hair covering to contain long hair. Do not wear loose clothing and/or accessories as they may be caught in moving parts and inflict serious injury or possible death.
- Wear respiratory protection when working in an environment where dust particles are generated during operation.
- Do not over-reach or allow yourself to become unstable during tool operation and always maintain a correct posture.
- Use clamps or a vise to secure the work piece tightly and eliminate vibration. Never hold the work piece with your hands, keep both hands on the tool for increased productivity.
- Use the right tool or machine that can complete the job within its specifications. Do not attempt to adapt smaller machines or tools to complete a job designed for heavy-duty equipment. Do not use the tools for other than what they were designed for. There is a right tool for each job, be aware of tool limitations and never overload.
- Make sure to inspect all external screws, nuts, bolts and attached accessories
  are fastened tightly and secure prior to each use. All moving parts should be
  free from obstruction and allowed to operate smoothly. Any damaged or
  missing parts should be repaired or replaced by the sales agent or distributor
  from which the tool was originally purchased. Do not use machines or tools
  which cannot be activated or stopped with a power switch or lever.

- Do not use any machine with a damaged, frayed, cut, or deteriorated power cords or air hoses. Always replace at the first sign of damage.
- Always remove all tools required to adjust, add, or remove parts from tools prior to use to prevent tool damage or user injury.
- Always avoid an unexpected start by having all power buttons or levers in the off position prior to attaching to a power or air supply. Never carry tools with your finger on the on/off switch or lever when the power or air supply is attached.
- Do not use the power or air supply lines to move, carry or support the tool during usage or transportation. Do not place the power or air line near a heat source, oil, water, or items with sharp edges.
- Never leave a machine or tool running unattended. Keep a firm grip on the designated areas of the machine or tool until it comes to a complete stop. Always turn the power switch or lever to the off position and disconnect from the power source when not in use.
- Do not disassemble or modify a tool to complete a job other than what it
  was designed for. This will void any warranty on the equipment and may
  cause serious personal injury or possible death.
- Maintenance is necessary for all machines and tools. Always maintain blades and cutters properly and replace when edges become damaged or are not sharp enough for safe operation. Follow the instruction manual for lubrication needs and adjustment points if applicable. Check the power and air supply lines periodically and change accordingly to safety regulations. If an extension line is adopted, always make sure that it meets or exceeds tool requirements for amperage or air supply before using and is rated for outdoor usage. Change supply lines whenever they are found to be defective or damaged. Keep the grip and handles dry and clean of grease or oil so that it will not disturb proper operation.
- Switch off and disconnect from power source before servicing equipment or changing accessories.
- Be alert and pay close attention to the work being performed at all times.
   Do not operate machines or tools when heavily fatigued. Users should be aware of all circumstances surrounding their application.
- Use only recommended parts and accessories as per individual machine or tool operator manuals. Use of improper accessories or attachments may result in serious injury or possible death.
- All repairs and services must be performed by authorized Nitto Kohki dealers or technicians.
- Do not deface or remove any label, warning indicator, or nameplate associated with each machine or tool.

#### **Notice for Electric Tools**

- The power source must be limited to the individual tools specifications as stated on the nameplate or instruction manual.
- Make sure that all machine and power tools are properly grounded at all times (excludes double-insulated tools). Always use a GFCI (Ground-Fault-Circuit-Interrupt) to protect the user and surrounding persons from electric shock.
- Be aware of low voltage situations. Improperly gauged extension cords or power cords used or shared with other electrical devices will cause all tools on the line to not run at optimal performance. This condition may result in damage to the machine and/or operator.

#### **Notice for Air Tools**

• Air pressure at the inlet of the tool must not exceed 0.6 MPa (6 kgf/cm<sup>2</sup>).

	Мо	del	Prod. No.	Description	Page
Α	A-300		090600001	Auto Chisel	33
	ACH-16		091800001	Air Chipper	32
	ADR-100		160700020	Air Drill	49
	ADR-65		160700020	Air Drill	49
					-
	AJC-16		061100001	Jet Chisel	35
	AL-55		184300001	Air Sonic	46
	AMB-0307		135400001	Mini Beveler	29
	AMBL-0307		135600001	Mini Beveler	29
	AO-5575	110 - 120 V	016400110	Atra Ace	13
	AO-5575	220 - 240 V	016400401	Atra Ace	13
	APS-125	NVL5H	074903001	Palm Orbital Sander	45
	APS-125	NVV5H	074900001	Palm Orbital Sander	45
	APS-150	NVV6H	075000001	Palm Orbital Sander	45
	ARA-100A	220 - 240 V	016810401	Atra Ace	5
	ASH-900		111400001	Super Hand	47
B	B-10CL		101850001	Belton	39
	B-20CL		101860001	Belton	39
	B-30CL	Law	101870001	Belton	39
	BB-10A	Lever	101601012	Baby Belton	41
	BB-10A	Ring	101601010	Baby Belton	41
	BB-20		101700012	Baby Belton	41
	BC-005		136505101	Burr Cutter	48
	BHM-02035		TB00390	Broach Holder	18
	BHM-03050		TB00392	Broach Holder	18
	BHM-13075		TB00352	Broach Holder	18
	BHM-14075		TB00354	Broach Holder	18
С	CB-01		136503001	Circuit Beveler	29
	CB-02		135200001	Circuit Beveler	30
	CBR-03		136502000	Circuit Beveler	30
	CH-24	000 04014	091500001	Air Chipper	32
	CLA-2720	220 - 240 V	016811401	Atra Ace	7
	CMX-20		075608001	Compact Multi Sander	43
Ε.	E25-0615	220 - 240 V	155500401	Handy Selfer	21
	E55-0619	110 - 120 V	155300101	Handy Selfer	21
	E55-0619	220 - 240 V	155300501	Handy Selfer	21
	ECB-0203	220 - 240 V	135800300	Circuit Beveler	28
	EJC-32A	110 - 120 V	065200101	Jet Chisel	36
	EJC-32A	220 - 240 V	065200301	Jet Chisel	36
	EMB-0307B	220 - 240 V	136010201	Mini Beveler	27
E	FS-100C	. = . • •	080900001	Free Sander	44
	FS-50A		080600001	Free Sander	44
7	HA06-1322		155700001	Selfer	20
-					
	HA07-1624		155800001	Selfer	20
	HA11-1624	440 10 5	155900001	Selfer	20
	HB-15B	110 - 120 V	131000102	Hand Beveler	27
	HB-15B	220 - 240 V	131000201	Hand Beveler	27
	HPD-05	115 V	152500601	Pump	19
	HPD-05	230 V	152500401	Pump	19
	HPD-05 CE	115 V	152500602	Pump	19
	HPD-05 CE	230 V	152500402	Pump	19
	HS06-1322		152100001	Selfer	19
	HS06-1322 C	E	152100003	Selfer	19
	HS07-1624		152200001	Selfer	19
			152200001	Selfer	19
	HS07-1624 CE HS11-1624 HS11-1624 CE HW-0 HW-3				
			152300001	Selfer	19
			152300003	Selfer	19
			169000171	Hose Reel Balancer	50
			169000181	Hose Reel Balancer	50
			100000101	III D. I D. I.	EO
	HW-5		169000191	Hose Reel Balancer	50

-	Mo	dol	Prod. No.	Docarintian	Dogo
J		uei		Description	Page
J	JEX-20		060900001	Jet Chisel	35
	JEX-24		060300001	Jet Chisel	35
	JEX-28		060500001	Jet Chisel	35
	JEX-2800A		060500100	Jet Chisel	35
	JT-20		061000001	Jet Chisel	35
L	L-25B		180800001	Air Sonic	46
	L-35C		184100001	Air Sonic	46
	L0-3550	220 - 240 V	018000401	Atra Ace	9
	LS-10		170300001	Line Sander	44
М	MAG-50		074700001	Myton	37
	MAGW-40	Lever	078700003	Myton	37
	MAGW-40	Ring	078700005	Myton	37
	MAH-05		111000001	Micro Air Hand	48
	MAH-16		111100001	Micro Air Hand	48
	MAS-40		072900001	Myton	38
	MAS-70	Japanese	072600000	Myton	38
	MB-03A	110 V	130500100	Mini Beveler	28
	MB-03A	230 V	130500201	Mini Beveler	28
	MLG-25		075605001	Myton	37
	MLG-40		075604001	Myton	37
	MLG-50		075606008	Myton	37
	MLG-70	Lever	075602002	Myton	37
	MLG-70	Ring	075602001	Myton	37
	MLS-20		075607001	Myton	37
0	OSV-60A		074400001	Orbital Sander	45
Q	QA-4000	110 - 120 V	015700101	Atra Ace	15
	QA-4000	220 - 240 V	015700401	Atra Ace	15
	QA-6500	220 - 240 V	015800401	Atra Ace	15
R	RW-0		169000141	Retractor	50
	RW-3		169000151	Retractor	50
	RW-5		169000161	Retractor	50
S	S-1000		090300000	Super Kelen	34
	S-250		090100000	Super Kelen	34
	S-500		090200000	Super Kelen	34
	SC-05	115 V	151000601	Pump	20
	SC-05	230 V	151000401	Pump	20
	SH-100A	200 V	110500001	Super Hand	47
	SHL-40		111500001	Super Hand Light	47
	SSW-110		110800101	Super Saw	49
Т	TW-0		169000021	Spring Balancer	50
•	TW-00		169000021	Spring Balancer	50
	TW-06R		169002101	Rectractor	50
	TW-1R		169002101	Rectractor	50
	TW-IN		169000031		50
	TW-5		169000031	Spring Balancer Spring Balancer	50
	TW-9		169000041	Spring Balancer	50
	TW-15		169000051		
				Spring Balancer	50
	TW-22		169000071	Spring Balancer	50
	TW-30		169000081	Spring Balancer	50
	TW-40		169000091	Spring Balancer	50
	TW-50		169000101	Spring Balancer	50
	TW-60		169000111	Spring Balancer	50
14/	TW-70	110 1001/	169000121	Spring Balancer	50
W	WA-3500	110 - 120 V	017400111	Atra Ace	11
	WA-3500	220 - 240 V	017400301	Atra Ace	11
	WA-5000	110 - 120 V	018100102	Atra Ace	11
	WA-5000	220 - 240 V	018100301	Atra Ace	11
	W0J-3200	110 - 120 V	016600101	Atra Ace	13
	W0J-3200	220 - 240 V	016600300	Atra Ace	13
l					

# POWER TOOLS & MACHINE TOOLS

## NITTO KOHKI CO., LTD.

#### **Head Office**

9-4, Nakaikegami 2-chome, Ohta-ku, Tokyo 146-8555, Japan

Tel: +81-3-3755-1111 Fax: +81-3-3753-8791 E-mail: overseas@nitto-kohki.co.jp

Web www.nitto-kohki.co.jp/e

#### Overseas Affiliates / Offices

#### NITTO KOHKI U.S.A., INC.

46 Chancellor Drive, Roselle, Illinois 60172, U.S.A. For Machine Tools
Tel: +1-630-924-9393 Fax: +1-630-924-0303

Tel: +1-630-924-9393 For Cuplas

Tel: +1-630-924-5959 Fax: +1-630-924-1174

www.nittokohki.com

#### NITTO KOHKI EUROPE GMBH

Gottlieb-Daimler-Str. 10, 71144 Steinenbronn, Germany Tel: +49-7157-989555-0 Fax: +49-7157-989555-40 www.nitto-kohki.eu/

#### NITTO KOHKI EUROPE GMBH UK Branch

Unit A5, Langham Park Industrial Estate, Maple Road, Castle Donington, Derbyshire DE74 2UT, United Kingdom Tel: +44-1332-653800 Fax: +44-1332-987273 www.nitto-kohki.eu/

#### NITTO KOHKI AUSTRALIA PTY LTD

77 Brandl Street, Eight Mile Plains, Queensland 4113, Australia Tel: +61-7-3340-4600 Fax: +61-73340-4640 www.nitto-australia.com.au

#### NITTO KOHKI (SHANGHAI) CO., LTD.

Room1506, Suite C, Orient International Plaza, No.85 Loushanguan Road, Shanghai 200336, China Tel:+86-21-6415-3935 Fax:+86-21-6472-6957 www.nitto-kohki.cn

#### NITTO KOHKI (SHANGHAI) CO., LTD. Shenzhen Branch

2005C Shenzhen ICC Tower, Fuhuasanlu 168, Futian District, Shenzhen, Guangdong 518048, China Tel:+86-755-8375-2185 Fax:+86-755-8375-2187 www.nitto-kohki.cn

#### NITTO KOHKI CO., LTD. Singapore Branch

10 Ubi Crescent #01-62, Ubi Techpark Lobby D, Singapore 408564 Tel: +65-6227-5360 Fax: +65-6227-0192 www.nitto-kohki.co.jp/e/nksb/index.html

#### NITTO KOHKI CO., LTD. Bangkok Representative Office

M&A Business Center, Q-House Convent Bldg., 38 Convent Rd., Silom, Bangrak, Bangkok 10500, Thailand Tel: +66-2632-0307 Fax: +66-2632-0308 www.nittobkk.com

#### NITTO KOHKI CO., LTD. India Liaison Office

3rd Floor, Building No.9-A DLF Cyber City, Phase-III, Gurgaon, Haryana 122002, India Tel: +91-124-454-5031 Fax: +65-6227-0192

#### NITTO KOHKI CO., LTD. Mexico Representative Office

OF1109 Torre Corporativo 1 Piso 11 Central Park Armando Birlain Shaffler #2001 Col Centro Sur, Queretaro, Qro, C.P. 76090, Mexico Tel: +52-442-290-1234



#### DISTRIBUTED BY