Cat. No. Tk083h



Nitto Kohki's POVJER TOOLS

Pneumatic & Electric





















Pneumatic & Electric Power Tools, Labor-saving plus Improved Work Efficiency! NEEDLE SCALER Various peening works Paint & rust scaling

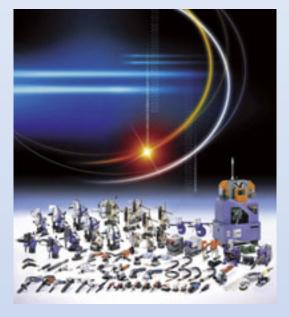
POWER TOOLS











Whether you just glance through this booklet or give it an intensive reading, we are sure you'll agree that NITTO KOHKI's portable hydraulic and electric machines, couplings and pneumatic hand tools are among the finest precision engineered equipment to be found today.

•	Manufacturing	Sheet-Metal Working	
NEEDLE SCALER JET CHISEL	Various peening works	Paint & rust scaling	
AIR HAMMER AUTO CHISEL	Rivet calking, bush inserting & removing	Sheet metal cutting, paint chiseling, rivet punching	
PNEUMATIC SCALER SUPER KELEN	-	-	
PNEUMATIC CHIPPING HAMMER AIR CHIPPER	-	-	
PNEUMATIC GRINDER MYTON	Sanding, grinding, chamfering, finishing	Chamfering, rough grinding, mold grinding	
PNEUMATIC DIE GRINDER AIR SONIC	Metal working, surface smoothing	Various grinding works	
PNEUMATIC HAND DRILL AIR DRILL	Various drilling works	Various drilling works	
PNEUMATIC BELT SANDER BELTON	Trimming, chamfering corner rounding	Spot smoothing, surface regulation, finish sanding	
PNEUMATIC DUST-FREE SANDER ORBITAL SANDER	Smoothing, intermediate finish sanding	Surface smoothing of steel products, finishing of pressed products	
PNEUMATIC COMPACT SANDER PALM ORBITAL SANDER	Smoothing, intermediate finish sanding	Surface smoothing of steel products, finishing of pressed products	
HANDY PNEUMATIC SANDER FREE SANDER	Surface sanding, rust & stain removal	Spot smoothing, corner rounding, surface smoothing	
PNEUMATIC RECIPROCATING SANDER LINE SANDER	Plane sanding, groove sanding	Spot smoothing, surface regulation	
PORTABLE PRECISION FINISHING FILE SUPER HAND	Precision filing of flash, chamfering, sanding, groove finishing	Trimming, filing in narrow space, surface regulation	
PORTABLE FINE FINISHING FILE MICRO AIR HAND	Precision filing of flash, chamfering, groove finishing	-	
PNEUMATIC HACKSAW SUPER SAW	Cuts with small radii	To cut mild steel plates, aluminum, plastics and other materials	
PORTABLE CHAMFERING TOOLS BEVELER	Chamfering of large workplaces	-	
PNEUMATIC RADIAL CHAMFERING TOOL CIRCUIT BEVELER	Chamfering of dies and machine	Chamfering of steel plate	

HI CUPLA Series

Machine Tools

"delvo" Electric Screwdrivers, Spring Balancer, Linear Motor Driven Free Piston System

NOTES ON USING TOOLS - Important Safety Instructions

CONTENTS

Welding	Painting	Metal Casting & Forging	Automotive & Ship Building	Chemical Engineering	Wood Working & Art	Construction	Page
Spatter, chips & sludge scaling	-	Sand blasting & chiseling	Rust scaling, welded-part finish	-	-	Surface coarsening of stone and concrete products	3-4
Flux chiseling, plaster chiseling	Paint chiseling	Trimming, sand chiseling	Various automotive repair works	-	-	Concrete breaking, chiseling of stick	5-6
Spatter, sludge and rust chiseling, scaling	Paint chiseling	Black surface scaling, scaling of ingot remnant in ladle	Removal of weeds, shells, concrete chipping	-	-	Concrete chiseling from framework, removal of linoleum from floor base	7
-	Paint chipping	Sand chipping	Removal of weeds, shells, etc., concrete chipping	-	-	Chipping of stone products	8
Bead grinding, cross section grinding	Grinding of pre- painted surface, buffing	Trimming, chamfering	Additional grinding, rust removal, surface smoothing	-	Sanding	Chamfering of stone products, honing	9-10
Bead grinding	Pre-painted surface regulation	Mold correction, trimming	Precision grinding of parts	Grinding of pipe cross section and inner surface	Correction grinding of molded products, rough grinding	Additional grinding of construction materials & parts	11-12
Initial boring for gas cutting by welder	Paint scrambling (w/attachment)	-	Drilling, removal of spot-welded parts	-	Drilling	Sash works	12
Bead grinding, rust removal, chamfering, section finishing	Rough grinding, rust & paint removal, spot smoothing	Trimming, chamfering, spatter grinding, die-cast finishing	Welding chip grinding, finish grinding, fitting	Grinding of pipe & equipment surface face section	Finish sanding of furniture, profile correction of plastic products	Grinding of parts & elements, repair services of tools	13-14
Surface sanding of pre-welded part	Ground work sanding	Trimming, surface finishing of die-casting	Correction of grinding (finish works)	Precision finishing	Precision sanding	Surface sanding of constructed materials	15
Surface sanding of pre-welded part	Ground work sanding	Trimming, surface finishing of die-casting	Correction of grinding (finish works)	Precision finishing	Precision sanding	Surface sanding of constructed materials	15
-	Sanding of pre- painted, plastered surface, water sanding	Mold correction	Paint sanding of automotive body	Sanding of plastered surface, and test piece surface	Finish sanding, curved surface sanding, sanding of router groove	Sanding of stone products and floor materials	16
-	Sanding of plastered surface, intermediate finish sanding	Mold correction	Paint sanding of automotive body	Synthetic resin sanding		Inner surface sanding of channeled parts	17
Finish filing	Precision filing of pre-painted surface, sanding	Trimming	Trimming, precision sanding of parts	Filing, superfine filing for profile correction	Filing, superfine filing for profile correction	Correction sanding of metal parts	18
-	-	Trimming	Trimming, precision sanding of parts	Filing, superfine filing for profile correction	-	-	19
-	-	-	To cut the body plate of automotive vehicles or shaped steel	To cut fiber plates. To cut fiber-reinforced plastic plates	-	-	19
Surface chamfering of pre-welded shaped steel parts	Chamfering of steel plate	Chamfering of cast molds	Chamfering of steel plate	-	-	Chamfering of columns (HB-15B)	20-22
_	-	-	-	-	-	Chamfering of steel plate	22





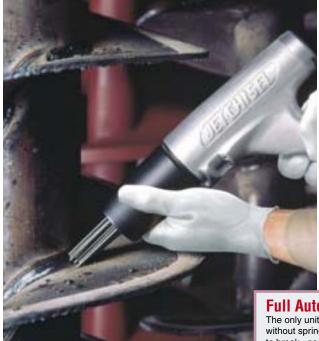




NEEDLE SCALER JET CHISEL

JET CHISEL

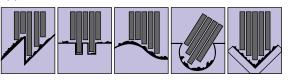
Powerful scaling with multi-needles



Never skip a blow, cleans and descales all jobs fast. Gets into extremely restricted areas...

An asset in any industry...de-slagging, de-sputtering welds, cleaning, castings, brick, stonework, and other materials. Jet Chisel is a prime pneumatic perfomer in each of these and other tough job areas. Maximum performance in a light-weight,minimumsize air tool, Jet Chisel delivers years of trouble-free, efficient operation. And it's a tool that gets all the way down to the surface of matters.

Quick, Jet Chisel needles adjust to any surface contour automatically. They get deep into corners, all the way into uneven surfaces, all types of curvatures making it a tool no shop should be without. It's an equally efficient time-saver in ship-board applications, too.



CE

Full Automatic System

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.









Specifications

•				
Model		AJC-16	JT-20	JEX-20
Rated Air Pressure MPa	{kgf/cm ² }	0.6 {6}	0.6 {6}	0.6 {6}
Air Consumption (No load) m³/min	0.07	0.2	0.2
Stroke Speed	min ⁻¹	6,000	4,000	4,000
Needles to be used	mm	OD 2 x 150 (7 pcs.) or OD 3 x 180 (3 pcs.)	OD 2 x 180 (29 pcs.) or OD 3 x 180 (12 pcs.)	OD 2 x 180 (29 pcs.) or OD 3 x 180 (12 pcs.)
Hose Size	inch	3/8	3/8	3/8
Mass (Weight)	kg	0.98	2.4	2.75
Standard Accessorie	es	 Needle OD 3 mm x 180 mm : 3 pcs. (Needle OD 3 mm x 180 mm : 3 pcs. on the body) Bushing R 3/8 x NPT 3/8 : 1 pc. Hose Nipple R 3/8 x 3/8 : 1 pc. 	 Needle OD 3 mm x 180 mm : 12 pcs. (Needle OD 3 mm x 180 mm : 12 pcs. on the body) Bushing R 3/8 x NPT 3/8 : 1 pc. Hose Nipple R 3/8 x 3/8 : 1 pc. 	 Needle OD 3 mm x 180 mm : 12 pcs. (Needle OD 3 mm x 180 mm : 12 pcs. on the body) Bushing R 3/8 x NPT 3/8 : 1 pc. Hose Nipple R 3/8 x 3/8 : 1 pc.

SCALING

NEEDLE SCALER JET CHISEL



Specifications

opoonnoutiono				
Model	JC-16	JEX-24	JEX-28	JEX-2800A
Rated Air Pressure MPa {kgf/cm ² }	0.6 {6}	0.6 {6}	0.6 {6}	0.6 {6}
Air Consumption (No load) m ³ /min	0.15	0.27	0.35	0.43
Stroke Speed min ⁻¹	4,000	4,000	4,500	3,700
Needles to be used mm	OD 2 x 150 (29 pcs.)	OD 2 x 180 (53 pcs.) or OD 3 x 180 (23 pcs.)	OD 2 x 180 (66 pcs.) or OD 3 x 180) (28 pcs.) or OD 4 x 180 (14 pcs.)
Hose Size inch	3/8	3/8	3/8	3/8
Mass (Weight) kg	1.4	2.7	3.5	3.1
Standerd Accessories	• Needle OD 2 mm x 150 mm : 29 pcs. (Needle OD 2 mm x 150 mm : 29 pcs. on the body) • Bushing R 3/8 x NPT 3/8 : 1 pc. • Hose Nipple R 3/8 x 3/8 : 1 pc.		Needle OD 4 mm x 180 mm : 14 pcs. (Needle OD 3 mm x 180 mm : 28 pcs. on the body) Needle Supporter OD 4 mm : 1 pc. 6 mm Hex. Socket Screw Key : 1 pc. Bushing R 3/8 x NPT 3/8 : 1 pc.	Needle OD 4 mm x 180 mm : 14 pcs. (Needle OD 3 mm x 180 mm : 28 pcs. on the body Needle Supporter OD 4 mm : 1 pc. Bushing R 3/8 x NPT 3/8 : 1 pc. Hose Nipple R 3/8 x 3/8 : 1 pc.

Flectri

225 mm

• Needle OD 3 mm x 180 mm : 30 pcs. (15 pcs.) • 6 mm Hex. Socket Screw Key : 1 pc.

Electric Needle Scaler

520 mm

The same excellent performance as our air tool!

•Hose Nipple R 3/8 x 3/8 : 1 pc.

Operated with standard electric supply to households. Special long and slim barrel design suitable for narrow corners. Double-insulated motor does not need grounding. Free subhandle position best fit to your working situation.

Specifications

Model		EJC-32A		
Power Supply		115 V AC 50/60 Hz	230 V AC 50/60 Hz	
Rated Power Consumption	W	300	300	
Rated Current	А	2.8	1.4	
Rated Duty	min	30		
Stroke Speed	min ⁻¹	3,000		
Needles to be used	mm	OD 2 x 180 (32 pcs.) or OD 3 x 180 (15 pcs		
Power Cord	m	5		
Mass (Weight)	kg	4.5		

Optional Needles

Standard Accessories

CE 230 V AC only



	Qty	Description	PN
TI	100 pcs.	Needle OD 2 mm x 150 mm	TA98780
Т	100 pcs.	Needle OD 2 mm x 180 mm	TA98781
T	50 pcs.	Needle OD 2 mm x 300 mm	TA9A213
T	50 pcs.	Needle OD 2 mm x 500 mm	TA9A214
Т	100 pcs.	Needle OD 3 mm x 180 mm	TA98782
Т	50 pcs.	Needle OD 3 mm x 300 mm	TA9A216
Т	50 pcs.	Needle OD 3 mm x 500 mm	TA9A217
T	50 pcs.	Needle OD 3 mm x 800 mm	TA9A218
Т	50 pcs.	Needle OD 4 mm x 180 mm	TA98783
Т	50 pcs.	Needle OD 4 mm x 300 mm	TA9A220
Т	50 pcs.	Needle OD 4 mm x 500 mm	TA9A221
T		•	

PN	Description	Qty	Model
FP00338	Needle Supporter OD 2 mm	1 pc.	JT-20,
FP00337	Needle Supporter OD 3 mm	1 pc.	JEX-20
Q05210	Needle Supporter OD 2 mm	1 pc.	A IC 1C
Q04554	Needle Supporter OD 3 mm	1 pc.	AJC-16
FP00290	Needle Supporter OD 2 mm	1 pc.	JC-16
FP02244	Needle Supporter OD 2 mm	1 pc.	JEX-24
FP02245	Needle Supporter OD 3 mm	1 pc.	JEX-24
FP01499	Needle Supporter OD 2 mm	1 pc.	
FP01461	Needle Supporter OD 3 mm	1 pc.	JEX-28, JEX-2800A
FP01462	Needle Supporter OD 4 mm	1 pc.	02/ 2000/
FP16475	Needle Supporter OD 2 mm	1 pc.	E IC 204
FP16301	Needle Supporter OD 3 mm	1 pc.	EJC-32A

AIR HAMMER AUTO CHISEL

AUTO CHISEL

A special spool valve inside grip assures excellent durability



A-300 CC

Model

The A-300 Auto Chisel is designed for speeding up the repair and sheet metal works of automobiles, etc. Being light and powerful, labor can be reduced remarkably.

This tool enables the work to be done in narrow space where ordinary hammering work is impossible. Thus the skill usually needed in hammering work is eliminated. The respective parts employ high material and are subjected to high precision process.

Specifications	;
----------------	---

epeemeanene	
Model	A-300
Rated Air Pressure MPa {kgf/cm ² }	0.6 {6}
Air Consumption (No load) m³/min	0.3
Stroke Speed min ⁻¹	2,600
Hose Size inch	1/4
Mass (Weight) kg	1.7

Optional Attachments

Standard Accessories

PN	Description	Qty	PN	Description	Qty
TP00572	No.1001 Blank Chisel	1 pc.	TP00584	No.1013 Fork Chisel 24	1 pc.
TP00573	No.1002 Flat Chisel	1 pc.	TA90051	No.1014 Panel Crimper	1 pc.
TP04606	No.1003 Sheet Metal Chisel A	1 pc.	TP00586	No.1016 Fork Chisel 35	1 pc.
TP00575	No.1004 Sheet Metal Chisel B	1 pc.	TP00585	No.1017 Fork Chisel 15	1 pc.
TP00576	No.1005 Silencer Cutting Chisel	1 pc.	TP00589	No.1018 38 mm Scraper	1 pc.
TP00577	No.1006 Rubber Bushing Remover	1 pc.	TP00590	No.1019 60 mm Scraper	1 pc.
TP00578	No.1007 Spot Weld Booster	1 pc.	TP00591	No.1020 60 mm Concave Scraper	1 pc.
TP00579	No.1008 Bushing Tool	1 pc.	TP04995	No.1023 Sheet Metal Chisel C	1 pc.
TP00580	No.1009 Punch	1 pc.	TP05244	No.1024 Moilpoint Chisel	1 pc.
TP00581	No.1010 Bushing Removing Tool	1 pc.	TP05775	No.1025 Rivet Removing Punch	1 pc.
TP00582	No.1011 Sheet Metal Punch	1 pc.	TP05801	No.1026 Rivet Caulking Chisel	1 pc.
TP00583	No.1012 20 mm Bending Chisel	1 pc.	-	-	-

• Bushing R 1/4 x NPT 1/4 : 1 pc.

• Hose Nipple R 1/4 x 1/4 : 1 pc.

SCALING

Applications and wide variety of optional attachments



PNEUMATIC SCALER SUPER KELEN

SCALING

SUPER KELEN Industrial and shipboard descaling and cleaning



The unique scaler preforms scores of industrial and shipboard descaling and cleaning jobs quickly, efficiently and economically.

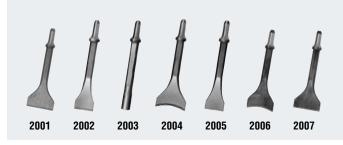
Removes old paint and rust, dislodges solid matter or scale tar. Removes concrete adhering to panels, conveyors, mixers. Strips off bark from lumber, and scores of other applications.



Specifications

opcontoutions				
Model		S-250	S-500	S-1000
Rated Air Pressure MPa {kgf	/cm²}	0.6 {6}	0.6 {6}	0.6 {6}
Air Consumption (No load) mi	³/min	0.27	0.27	0.27
Stroke Speed	min ⁻¹	2,500	2,500	2,500
Size of Chisel Shank	mm	12.7	12.7	12.7
Hose Size	inch	3/8	3/8	3/8
Dimension	mm	630 x 49	890 x 49	1,470 x 49
Mass (Weight)	kg	4.1	4.7	6.1
Standard Accessories		 38 mm Bend Scraper (No.2005) : 1 pc. on the body Hose Lock Nut M16 : 1 pc. Hose Nipple 3/8 : 1 pc. 	 38 mm Bend Scraper (No.2005) : 1 pc. on the body Hose Lock Nut M16 : 1 pc. Hose Nipple 3/8 : 1 pc. 	 38 mm Bend Scraper (No.2005) : 1 pc. on the body Hose Lock Nut M16 : 1 pc. Hose Nipple 3/8 : 1 pc.

Optional Chisels



PN	Description	Qty
TP03645	No.2001 60 mm Scraper	1 pc.
TP03646	No.2002 38 mm Scraper	1 pc.
TP03647	No.2003 Blank Chisel	1 pc.
TP04010	No.2004 60 mm Concave Scraper	1 pc.
TP04552	No.2005 38 mm Bend Scraper	1 pc.
TP04553	No.2006 60 mm Concave Bend Scraper	1 pc.
TP04554	No.2007 60 mm Bend Scraper	1 pc.

SCALING

AIR CHIPPER Now chipping after welding is easy!



The AIR CHIPPER are compact, lightweight and economical tools to have on hand for all kinds of chipping work. Easy chisel replacement is made to excellent operation. The straight design is suitable for operation at narrow and deep places.

In addition, the ACH-16 has many feature on the followings.....

- Idle running proof structure adopted. No blowing without touching the work piece by the chisel.
- Vibration on operation is reduced by low vibration structure. Especially effective on continuous operation.
- Easy to handle, compact lightweight type and weight only one kilogram.





Specifications

Specifications				
Model	ACH-16	CH-24		
Rated Air Pressure MPa {kgf/cm ² }	0.6 {6}	0.6 {6}		
Air Consumption (No load) m³/min	0.15	0.2		
Stroke Speed min ⁻¹	6,000	4,000		
Size of Chisel Shank mm	OD 10.5	12.7 sq.		
Hose Size inch	3/8	3/8		
Mass (Weight) kg	0.9	1.7		
Standard Accessories	 Flat Chisel 20 x 120 : 1 pc. on the body Bushing R 3/8 x NPT 3/8 : 1 pc. Hose Nipple R 3/8 x 3/8 : 1 pc. 	 Curved Flat Chisel 25 x 155 : 1 pc. on the body Bushing R 3/8 x NPT 3/8 : 1 pc. Hose Nipple R 3/8 x 3/8 : 1 pc. 		

Optional Chisels



Chisel for Air Chipper ACH-16

PN	Description	Qty
TQ03431	Flat Chisel 20 x 120	1 pc.
TQ03453	Curved Flat Chisel 20 x 120	1 pc.
TQ03549	Flat Chisel 11 x 120	1 pc.
TQ03452	Flat Chisel 20 x 180	1 pc.

Chisel for Air Chipper CH-24

PN	Description	Qty
TP15234	Straight Flat Chisel 12.7 x165	1 pc.
TP15233	Flat Chisel 25 x 155	1 pc.
TP15166	Curved Flat Chisel 25 x 155	1 pc.

TP15234 TP15233 TP15166

PNEUMATIC GRINDER **MYTON**

GRINDING & SANDING



Specifications

Model		MAG-25B	MAGW-40	MAG-50
Rated Air Pressure	MPa {kgf/cm ² }	0.6 {6}	0.6 {6}	0.6 {6}
Air Consumption	m³/min	0.4 (No load)	0.68 (No load) 0.82 (Load)	0.87
Free Speed	min ⁻¹ (rpm)	22,000	13,000	12,000
Depressed Center Grin	ding Wheel mm	58	100	125
Hose Size	inch	1/4	3/8	1/4
Mass (Weight)	kg	0.55	1.55	2.2
Standard Accessories		 Abrasive Wheel AC #80 : 1 pc. 5 mm Hex. Socket Screw Key : 1 pc. 14 mm Single Ended Spanner : 1 pc. Bushing R 1/4 x NPT 1/4 : 1 pc. 	 6 mm Hex. Socket Screw Key : 1 pc. 17 mm Single Ended Spanner : 1 pc. Bushing R 3/8 x NPT 3/8 : 1 pc. 	 Air Hose Sub Ass'y : 1 set Exhaust Hose Ass'y : 1 set Side Handle Ass'y : 1 set 4 mm Hex. Socket Screw Key : 1 pc. Pin Face Wrench : 1 pc. Bushing R 3/8 x NPT 3/8 : 1 pc.



Specifications

Model	MLG-70 Lever Type	MLG-70 Ring Type	MAG-70
Rated Air Pressure MPa {kgf/cm²}	0.6	{6}	0.6 {6}
Air Consumption (No load) m³/min	0.75 (No load) 1.1 (Load)	0.69 (No load) 1.15 (Load)
Free Speed min ⁻¹ (rpm)	7,6	600	7,100
Depressed Center Grinding Wheel mm	18	30	180
Hose Size inch	3,	/8	1/2
Mass (Weight) kg	2.45 2.25		3.4
Standard Accessories	• 6 mm Hex. Socket • 10 mm Hex. Socket • Bushing R 3/8 x N • Handle Ass'y : 1 so • Wheel Guard Ass'y	et Screw Key : 1 pc. PT 3/8 : 1 pc. et.	 6 mm Hex. Socket Screw Key : 1 pc. 10 mm Hex. Socket Screw Key : 1 pc. 41 mm Single Ended Spanner : 1 pc. Bushing R 1/2 x NPT 1/2 : 1 pc. Side Handle B : 1 pc. Grip Guard B : 1 pc.

GRINDING & SANDING

PNEUMATIC SANDER **MYTON**







Specifications

Model	MAS-20B	MAS-40	MAS-70
Rated Air Pressure MPa {kgf/cm ² }	0.6 {6}	0.6 {6}	0.6 {6}
Air Consumption (No load) m³/min	0.4	0.45	0.98
Free Speed min ⁻¹ (rpm)	22,000	13,700	7,500
Abrasive Disc	1" , 1-1/2" and 2"	100 mm	180 mm
Hose Size inch	1/4	3/8	3/8
Mass (Weight) kg	0.5	0.9	1.9
Standard Accessories	 14 mm Single Ended Spanner : 1 pc. Cupla 20SH : 1 pc. Bushing R 1/4 x NPT 1/4 : 1 pc. Back-up Pad 1[*]: 1 pc. Back-up Pad 1⁻: 1 pc. Back-up Pad 2[*]: 1 pc. Abrasive Paper 1[*] x #60, #80, #100, #120 : 2 pcs. each Abrasive Paper 1⁻/2[*] x #60, #80, #100, #120 : 2 pcs. each 		 10 mm Hex. Socket Screw Key : 1 pc. 41 mm Single Ended Spanner : 1 pc. Hose Nipple NPT 3/8 x 3/8 : 1 pc. Bushing M16 x NPT 3/8 : 1 pc.

Optional Parts

Grinding Disc for MYTON MAG-25B

	PN	Description	Qty
	TB00119	AC 46 x 58 mm	5 pcs.
0	TB00120	AC 60 x 58 mm	5 pcs.
	TB00121	AC 100 x 58 mm	5 pcs.
	TB00155	AC 80 x 58 mm	10 pcs.

Disc Pad for MYTON MAS-20B

	[ſ	
			TP1
			TP1
6			TP1

PN	Description	Qty
TP18576	PAD (1") No.1	1 pc.
TP18575	PAD (1-1/2") No.2	1 pc.
TP18574	PAD (2") No.3	1 pc.

1" Paper for MYTON MAS-20B



1-1/2" Paper for MYTON MAS-20B

1000 million (1990)	do ma
COURS S	-12
	(Dunx"
0	

2" Paper for MYTON MAS-20B



PN	Description	Qty
TA9B101	Paper 1" x #40	25 pcs.
TA9B102	Paper 1" x #60	25 pcs.
TA9B103	Paper 1" x #80	25 pcs.
TA9B104	Paper 1" x #100	25 pcs.

PN	Description	Qty
TA9B109	Paper 1-1/2" x #40	25 pcs.
TA9B110	Paper 1-1/2" x #60	25 pcs.
TA9B111	Paper 1-1/2" x #80	25 pcs.
TA9B112	Paper 1-1/2" x #100	25 pcs.

PN	Description	Qty
TA9B117	Paper 2" x #40	25 pcs.
TA9B118	Paper 2" x #60	25 pcs.
TA9B119	Paper 2" x #80	25 pcs.
TA9B120	Paper 2" x #100	25 pcs.

PN	Description	Qty
TA9B105	Paper 1" x #120	25 pcs.
TA9B106	Paper 1" x #180	25 pcs.
TA9B107	Paper 1" x #240	25 pcs.
TA9B108	Paper 1" x #320	25 pcs.

PN	Description	Qty
TA9B113	Paper 1-1/2" x #120	25 pcs.
TA9B114	Paper 1-1/2" x #180	25 pcs.
TA9B115	Paper 1-1/2" x #240	25 pcs.
TA9B116	Paper 1-1/2" x #320	25 pcs.

PN	Description	Qty
TA9B121	Paper 2" x #120	25 pcs.
TA9B122	Paper 2" x #180	25 pcs.
TA9B123	Paper 2" x #240	25 pcs.
TA9B124	Paper 2" x #320	25 pcs.

PNEUMATIC DIE GRINDER AIR SONIC

AIR SONIC



The perfect tool for all tasks!

The high-speed mighty mite with super-efficient silencer and rear exhaust system.

Wonder works on all metals, wood, and plastics, even extremely hard and exotic materials. And now that efficiency is upgraded with the addition of an air silencer and new rear exhaust system for grinding dust-it's all the more the perfect tool for toolrooms and model shops. The super efficiency of the silencer makes it possible for all craftsmen to work longer with less irritation due to noise. For precision grinding, deburring machines parts, grinding small castings, removing welding slags, shaping and finishing wood, glass and plastics. This is the compact, easy handing air tool for all tasks.

Model L-25B For all grinding, deburring and finishing jobs





Specifications

Model		L-25B	L-35C
Rated Air Pressure	MPa {kgf/cm ² }	0.6 {6}	0.6 {6}
Air Consumption (No Io	ad) m³/min	0.4	0.35
Free Speed	min ⁻¹ (rpm)	27,000	37,500
Size of Collet Chuck	mm	6	6
Hose Size	inch	1/4	1/4
Mass (Weight)	kg	0.6 (without hose)	0.45 (without hose)
Standard Accesso	ries	 14 mm Single Ended Spanner : 1 pc. Mounted Wheel No.2 : 1 pc. Chunk Pin : 1 pc. Mounted Wheel No.3 : 1 pc. Bushing R 1/4 x NPT 1/4 : 1 pc. 	 14 mm Single Ended Spanner : 1 pc. Mounted Wheel 13 x 13 x 6 x 38 : 1 pc. Bushing R 1/4 x NPT 1/4 : 1 pc.

Model

Grinding Stone for AIR SONIC L-25B (Optional)

Rotary bar for AIR SONIC L-35C (Optional) No.1:16 x 32 No.2:17 x 32 No.3 : 19 x 20 No.2 : CB2C-105 No.3 : CB3C-103 No.4 : 25 x 25 No.1 : CB1C-106 No.4 : CB4C-103 PN : TA9A280 PN: TP10594 PN : TP10595 PN: TP10596 PN: TP10597 PN: TA9A277 PN: TA9A278 PN: TA9A279 No.5 : 19 x 28 No.6 : 25 x 13 No.7:32 x 10 No.8 : 16 ball No.5 : CB5C-104 No.6 : CB6C-102 No.7 : CB7C-103 No.8 : CB8C-105 PN : TA9A281 PN : TA9A282 PN : TA9A283 PN : TA9A284 PN: TP10598 PN : TP10599 PN: TP10600 PN: TP10601

GRINDING PNEUMATIC DRILLING DIE GRINDER AIR SONIC PNEUMATIC HAND DRILL AIR DRILL

AL-55 High Speed Rotation 56,500 rpm CE



- Smooth high speed rotation and low vibration enables precision grinding.
 Stepless speed change from 0 to 56,500 rpm meets a wide range of grinding applications.
- Compact & 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	
Rated Air Pressure MPa {kgf/cm ² }	0.6 {6}	
Air Consumption (No load) m³/min	0.17	
Free Speed min ⁻¹ (rpm)	56,500	
Size of Collet Chuck mm	3	
Hose Size inch	1/4	
Mass (Weight) kg	0.25	
Standard Accessories • Mounted Wheel 5 x 13 x 3 : 1 pc. • Spanner 7 x 9 : 1 pc. • Bushing R 1/4 x NPT 1/4 : 1 pc.		

The power and performance you need to drill deeper and faster





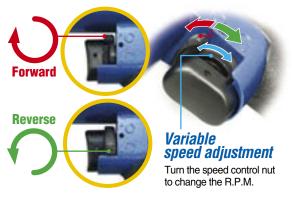
AIR DRIL



- Built-in silencer
- Reversible
- Variable speed adjustment
- Rubber grip reduces chilled hand

Reversible

Change rotation direction by turning the valve as indicated.



Specifications

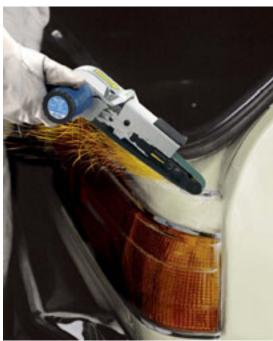
Model	ADR-65	ADR-100
Rated Air Pressure MPa {kgf/cm ² }	0.6 {6}	0.6 {6}
Air Consumption (No load) m³/min	0.55	0.67
Free Speed min ⁻¹ (rpm)	2,900	2,000
Max. Drilling Capacity mm	6.5	10.0
Mass (Weight) kg	0.8	1.1
Standard Accessories	Prill Chuck : 1 pc. on the body Chuck Handle : 1 pc. Bushing R 1/4 x NPT 1/4 : 1 pc. 30SH : 1 pc.	
Optional Accessory	Hanger : 1 pc. *A hanger to be mounted on the bottom of the grip is available as option.	

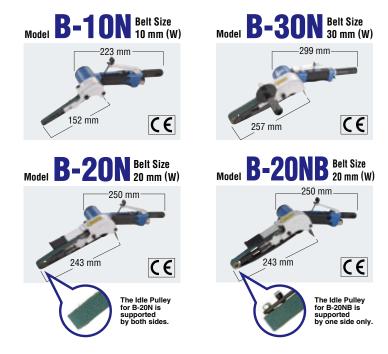
PNEUMATIC BELT SANDER **BELTON**

SANDING

BELTON Rear exhaust system

Suitable for sanding jobs in narrow spaces, recessed corners or on curved surfaces





Specifications

Model	B-10N	B-20N	B-20NB	B-30N
Rated Air Pressure MPa {kgf/cm ² }	0.6 {6}	0.6 {6}	0.6 {6}	0.6 {6}
Air Consumption (No load) m ³ /min	0.4	0.52	0.52	0.68
Motor Free Speed min ⁻¹ (rpm)	17,000	17,000	17,000	14,000
Belt Speed m/min	1,120	2,620	2,620	2,160
Belt Size mm	10 x 330	20 x 520	20 x 520	30 x 540
Hose Size inch	1/4	1/4	1/4	1/4
Mass (Weight) kg	0.7	1.2	1.2	2.4
Standard Accessories	 Abrasive Belt Z#60 x 10 mm :2 pcs. (1 pc. on the body) Abrasive Belt Z#100 x 10 mm :1 pc. Abrasive Belt Z#120 x 10 mm :1 pc. Abrasive Belt Z#120 x 10 mm :1 pc. amm Hex. Wrench Key :1 pc. 4 mm Hex. Wrench Key :1 pc. Bushing R 1/4 x NPT 1/4 :1 pc. Silencer :1 pc. 	 Abrasive Belt Z#60 x 20 mm :2 pcs. (1 pc. on the body) Abrasive Belt Z#0 x 20 mm :1 pc. Abrasive Belt Z#10 x 20 mm :1 pc. Abrasive Belt Z#120 x 20 mm :1 pc. 2.5 mm Hex. Wrench Key :1 pc. Bushing R 1/4 x NPT 1/4 :1 pc. Convex Shoe :1 pc. Finger Pad Ass'y :1 pc. Pan Head Screw & x 10 :1 pc. 	 Abrasive Belt Z#60 x 20 mm :2 pcs. (1 pc. on the body) Abrasive Belt Z#00 x 20 mm :1 pc. Abrasive Belt Z#10 x 20 mm :1 pc. Abrasive Belt Z#120 x 20 mm :1 pc. 5 mm Hex. Wrench Key :1 pc. 4 mm Hex. Wrench Key :1 pc. Bushing R 1/4 x NPT 1/4 :1 pc. Convex Shoe :1 pc. Finger Pad Ass'y :1 pc. Pan Head Screw 5 x 10 :1 pc. 	Abrasive Belt Z#60 x 30 mm :2 pcs. (1 pc. on the body) Abrasive Belt Z#80 x 30 mm :1 pc. Abrasive Belt Z#100 x 30 mm :1 pc. 4 mm Hex. Wrench Key :1 pc. 5 mm Hex. Wrench Key :1 pc. Bushing R 1/4 x NPT 1/4 :1 pc. Sub Handle Ass y :1 set Grip Guard :1 pc. Silencer :1 pc.

Optional Parts

Optional Parts for B-10N

PN	Description	Qty
TQ10942	Shoe 6 (for 6 mm belt)	1 pc.
TB07283	Bracket 6 Ass'y (for 6 mm belt)	1 set
TB05539	Offset Bracket 10 Ass'y	1 set

Abrasive	Belt fo	r B-10N

PN	Description	Qty
TB00241	Abrasive Belt Z#60 x 6 mm	50 pcs.
TB00242	Abrasive Belt Z#80 x 6 mm	50 pcs.
TB00243	Abrasive Belt Z#100 x 6 mm	50 pcs.
TB00244	Abrasive Belt Z#120 x 6 mm	50 pcs.
TB00245	Abrasive Belt Z#180 x 6 mm	50 pcs.
TB00246	Abrasive Belt Z#240 x 6 mm	50 pcs.
TA9A237	Abrasive Belt AA#400 x 6 mm	50 pcs.
TA9A064	Abrasive Belt Z#60 x 10 mm	50 pcs.
TB00076	Abrasive Belt Z#80 x 10 mm	50 pcs.
TB00077	Abrasive Belt Z#100 x 10 mm	50 pcs.
TB00247	Abrasive Belt Z#120 x 10 mm	50 pcs.
TB00248	Abrasive Belt Z#180 x 10 mm	50 pcs.
TB00249	Abrasive Belt Z#240 x 10 mm	50 pcs.
TA9A244	Abrasive Belt AA#400 x 10 mm	50 pcs.

Optional Parts for B-20N/B-20NB

PN	Description	Qty	PN
TB07109	Offset Bracket 20 Ass'y	1 set	TB0815

Abrasive Belt for B-20N/B-20NB

ADRASIVE BEIT FOR B-ZUN/B-ZUNB					
Description	Qty				
Abrasive Belt Z#40 x 20 mm	20 pcs.				
Abrasive Belt Z#60 x 20 mm	20 pcs.				
Abrasive Belt Z#80 x 20 mm	20 pcs.				
Abrasive Belt Z#100 x 20 mm	20 pcs.				
Abrasive Belt Z#120 x 20 mm	20 pcs.				
Abrasive Belt Z#180 x 20 mm	20 pcs.				
Abrasive Belt Z#240 x 20 mm	20 pcs.				
Abrasive Belt AA#280 x 20 mm	20 pcs.				
Abrasive Belt AA#320 x 20 mm	20 pcs.				
Abrasive Belt AA#400 x 20 mm	20 pcs.				
	DescriptionAbrasive Belt Z#40 x 20 mmAbrasive Belt Z#60 x 20 mmAbrasive Belt Z#80 x 20 mmAbrasive Belt Z#100 x 20 mmAbrasive Belt Z#120 x 20 mmAbrasive Belt Z#120 x 20 mmAbrasive Belt Z#180 x 20 mmAbrasive Belt Z#240 x 20 mmAbrasive Belt A#280 x 20 mmAbrasive Belt A#280 x 20 mm				

Optional Parts for B-30N

	PN	Description	Qty
	TB08150	Offset Bracket 30 Ass'y	1 set

Abrasive Belt for B-30N

ADIASIVE D		
PN	Description	Qty
TB00252	Abrasive Belt Z#40 x 30 mm	20 pcs.
TB00253	Abrasive Belt Z#60 x 30 mm	20 pcs.
TB00254	Abrasive Belt Z#80 x 30 mm	20 pcs.
TB00255	Abrasive Belt Z#100 x 30 mm	20 pcs.
TB00256	Abrasive Belt Z#120 x 30 mm	20 pcs.
TB00257	Abrasive Belt Z#180 x 30 mm	20 pcs.
TB00258	Abrasive Belt Z#240 x 30 mm	20 pcs.
TA9A262	Abrasive Belt AA#280 x 30 mm	20 pcs.
TA9A263	Abrasive Belt AA#320 x 30 mm	20 pcs.
TA9A264	Abrasive Belt AA#400 x 30 mm	20 pcs.

SANDING

PNEUMATIC BELT SANDER BELTON

BABY BELTON



Belt rotation direction can be changed.



Forward



Reverse

Model BB-10A Belt Size 10 mm (W)



Specifications

Model	BB-10A	BB-20
Rated Air Pressure MPa {kgf/cm ² }	0.6 {6}	0.6 {6}
Air Consumption (No load) m ³ /min	0.25	0.43
Motor Free Speed min ⁻¹ (rpm)	16,000	16,000
Belt Speed m/min	1,000	1,100
Belt Size mm	10 x 330	20 x 330
Hose Size inch	1/4	1/4
Mass (Weight) kg	0.6	0.8
Standard Accessories	•Abrasive Belt Z#100 x 10 mm:1 pc. (on the body) •Abrasive Belt Z#120 x 10 mm:1 pc. •Abrasive Belt Z#180 x 10 mm:1 pc. •Abrasive Belt Z#240 x 10 mm:1 pc. •1.5 mm Hex. Wrench Key :1 pc. •Cupla HA-65SN:1 pc.	Abrasive Belt Z#60 x 20 mm: 1 pc. (on the body) Abrasive Belt Z#120 x 20 mm: 1 pc. Abrasive Belt Z#240 x 20 mm: 1 pc. 2.5 mm Hex. Wrench Key : 1 pc. Gmm Hex. Wrench Key : 1 pc. Cupla HA-65SN: 1 pc. Shoe: 1 pc. Oust Cover: 1 pc.

Lever position can be changed for right or left hand operator convenience.



Optional Parts For BABY BELTON

Abrasive B		
PN	Description	Qty
TA9A064	Abrasive Belt Z#60 x 10 mm	50 pcs.
TB00076	Abrasive Belt Z#80 x 10 mm	50 pcs.
TB00077	Abrasive Belt Z#100 x 10 mm	50 pcs.
TB00247	Abrasive Belt Z#120 x 10 mm	50 pcs.
TB00248	Abrasive Belt Z#180 x 10 mm	50 pcs.
TB00249	Abrasive Belt Z#240 x 10 mm	50 pcs.

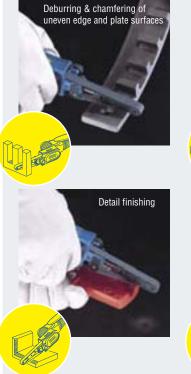
Abrasive Belt for BB-20

TA9A244 Abrasive Belt AA#400 x 10 mm

PN	Description	Qty
TB07114	Abrasive Belt Z#60	20 pcs.
TB07115	Abrasive Belt Z#80	20 pcs.
TB07116	Abrasive Belt Z#100	20 pcs.
TB07117	Abrasive Belt Z#120	20 pcs.
TB07118	Abrasive Belt Z#180	20 pcs.
TB07119	Abrasive Belt Z#240	20 pcs.
TB07120	Abrasive Belt Z#400 (*)	20 pcs.
TB07125	Abrasive Belt CE#60	20 pcs.
TB07126	Abrasive Belt CE#80	20 pcs.
TB07127	Abrasive Belt CE#100	20 pcs.
TB07128	Abrasive Belt CE#120	20 pcs.
TB07121	Finish Belt A-M (Equivalent to #180)	5 pcs.
TB07122	Finish Belt A-VF (Equivalent to #320)	5 pcs.
TB07123	Finish Belt S-SF (Equivalent to #400)	5 pcs.

* #400 is Aluminium Belt









50 pcs

PNEUMATIC COMPACT SANDER PALM ORBITAL SANDER SANDING

ORBITAL SANDER Compact yet extremely powerful. Built-in adjustable speed regulator Model OSV-60A CE



Random orbital action creates a professional finish

The special construction includes the mounting of counter shaft below the rotor. This works in combination with the spindle and circular motions for an extra-fine finish. Speed adjustments

allow selection for the best speed for the best job. Random orbital action eliminates swirl patterns and is suitable for polishing, too.





Sand and polish metal, wood, plastic to a super fine swirl-free finish.

Light weight, compact, powerful, whisper quiet, and adjustable speed regulator.

Productivity and efficiency increase with the orbital sander. The lightweight unit delivers the performance of heavy duty unit with less vibration and reduced operator fatigue.

Specifications

Model	OSV-60A
Rated Air Pressure MPa {kgf/cm ² }	0.6 {6}
Air Consumption (No load) m³/min	0.68
Motor Free Speed min ⁻¹ (rpm)	8,500
Orbit Diameter mm	10
Paper Size mm	150
Mass (Weight) kg	2.0
Pad	for self stick papers

Standard Accessories

- Bushing R 1/4 x NPT 1/4 : 1 pc.
- Spanner 17 : 1 pc.
 Brush : 1 pc.
 Dust Bag : 1 pc.
- Hose : 1 pc.
 Hose Band : 1 pc.

Optional Accessories

PN	Description	Qty	PN	Description	Qty
TA99582	Abrasive Paper #40	100 pcs.	TA99587	Abrasive Paper #180	100 pcs.
TA99583	Abrasive Paper #60	100 pcs.	TA99588	Abrasive Paper #240	100 pcs.
TA99584	Abrasive Paper #80	100 pcs.	TA99589	Abrasive Paper #280	100 pcs.
TA99585	Abrasive Paper #100	100 pcs.	TA99590	Abrasive Paper #320	100 pcs.
TA99586	Abrasive Paper #120	100 pcs.	TA99591	Abrasive Paper #400	100 pcs.

PALM ORBITAL SANDER Ergonomically designed plastic housing conforms to the operator's hand for greater control and comfort



parts. Self Vacuum 145 mm

For Self Vacuum & Central Vacuum Available from stock are Non Vacuum Models.

You can modify Non Vacuum to Self Vacuum or Central Vacuum by adding a few extra

Central Vacuum





Non Vacuum

Random orbital action produces			
a high-quality swirl-free finish			

- Extremely light. APS-125 weights just 690 g.
- Simple structure for easy maintenance.
- Extermely low vibration.
- Adjustable speed.

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
Rated Air Pressure MPa {kgf/cm ² }	0.6 {6}	0.6 {6}
Air Consumption (No load) m ³ /min	0.45	0.45
Motor Free Speed min ⁻¹ (rpm)	10,000	10,000
Orbit Diameter mm	5	5
Paper Size mm	125	150
Mass (Weight) kg	0.69	0.72
Pad Mass (Weight) kg	0.10	0.12
Standerd Accessories	• Spanner 17 : 1 pc • Bushing R 1/4 x N	

SANDING

HANDY PNEUMATIC SANDER FREE SANDER

FREE SANDER

Superlight, Quiet New low-vibration sander



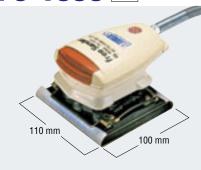
Small and Lightweight for Comfort and Convenience

Free Sander fits the hand like a glove. It's human-engineered to less tiring over longer periods of operation for big jobs, and compact enough to permit working easily in corners and other spots.

Minimized Hand Vibration

The turbine motor of FS-100C and the single-ball air motor of FS-50A are mounted directly onto the sanding pad to minimize the discomfort of hand vibration and lessen operator fatigue caused by vibration. This along with excellent control results in a finer finish on all surface materials.

FS-100C CE







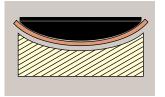
Powerful turbine motor

This newly developed motor features a turbine disc and is capable of high speed orbits for super-fine finishing of all materials.

Specifications

Model	FS-100C	FS-50A
Rated Air Pressure MPa {kgf/cm ² }	0.6 {6}	0.6 {6}
Air Consumption (No load) m³/min	0.2	0.14
Motor Free Speed min ⁻¹	20,000	15,000
Orbit Diameter mm	1.5	1.2
Pad Size mm	100 x 110	75 x 82
Paper Size mm	114 x 140	70 x 114
Mass (Weight) kg	0.5	0.5
Standard Accessories	 Air Hose H Ass'y : 1 set Bushing R 1/4 x NPT 1/4 : 1 pc. Abrasive paper #180 : 5 pcs. Abrasive paper #240 : 5 pcs. 	 Air Hose H Ass'y : 1 set Bushing R 1/4 x NPT 1/4 : 1 pc. Abrasive paper #180 : 5 pcs. Abrasive paper #240 : 5 pcs.

Optional Accessories



Round-Pad for FS-100C The pad is made of sponge rubber and conform easily to the shape being worked. Double-side tape is used with round pad.

For Free Sander FS-100C				
PN	Description	Qty		
TA9A367	Rubber Pad Ass'y	1 pc.		
TA91474	Round Pad Ass'y	1 pc.		
TA9A265	Abrasive paper #100	200 pcs.		
TA9A266	Abrasive paper #120	200 pcs.		
TA9A267	Abrasive paper #150	200 pcs.		
TA9A268	Abrasive paper #180	200 pcs.		
TA9A269	Abrasive paper #240	200 pcs.		
TA9A270	Abrasive paper #280	200 pcs.		
TA9A271	Abrasive paper #320	200 pcs.		
TB02235	Dust Collector Ass'y	1 pc.		

For Free Sander FS-50A

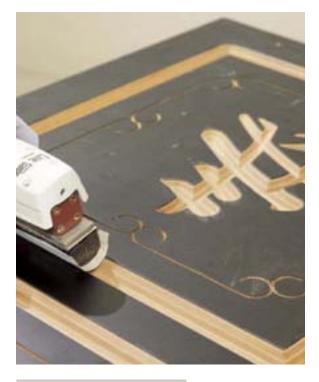
FOR FREE SAUGER FS-DUA		
PN	Description Qty	
TA99828	Rubber Pad Ass'y 1 pc	
TB02240 Dust Collector Ass'y 1 pc.		1 pc.

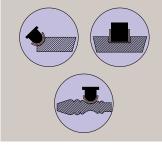
PNEUMATIC RECIPROCATING SANDER LINE SANDER

SANDING

LINE SANDER

Sands to a clean finish and more in less time. Compact and light.





Special Sanding Pad

An accessory Block Rubber Pad Ass'y can be easily trimmed to conform the shape being worked.

Standard Accessories	 Hose E Ass'y : 1 set Bushing R 1/4 x NPT 1/4 : 1 pc. Block Rubber Pad Ass'y : 1 set Abrasive Paper #240 : 5 pcs. Abrasive Paper #320 : 5 pcs. Base Plate A Ass'y : 1 set
----------------------	---

Optional Accessories

PN	Description	Qty
TB02244	Dust Collector Ass'y	1 pc.



Light sanding with piston movement

A compact, lightweight and economical unit having amazingly low air consumption. Built rugged for long continuous hours of operation. Incorporates no gears and other complicated

mechanisms.



Double Piston Alignment

Special double-action minimizes both noise and vibration so the operator works in more comfort.

Specifications

Model	LS-10	
Rated Air Pressure MPa {kgf/cm ² }	0.6 {6}	
Air Consumption (No load) m ³ /min	0.11	
Free Speed min ⁻¹	4,000	
Stroke mm	4	
Pad Size mm	55 x 103	
Abrasive Paper Size mm	57 x 140	
Mass (Weight) kg	0.75	

PORTABLE PRECISION FINISHING FILE SUPER HAND

SUPER HAND Super efficient way of easy filing, polishing and finishing



SUPER HAND replaces work.

SUPER HAND is ultra-small, ultra-lightweight; yet performs with the power and efficiency of a much larger tool to meet user requirements of filling, chamfering and other jobs.

It comes with the quick-change tool points for different jobs. You can work on steel, glass, brass, aluminium, wood and other materials silently. It also handles scores of big jobs with speed and ease.

Model SH-100A CE



Rat Tail File SF-10

Half Round File

Triangular Taper File SF-11

(Rat Tail/Double Cut) SF-12

Model ASH-800 CE





Weight reduced by half for comfortable operation over long period of time

Specifications

Specifications				
Model	SH-100A	ASH-800	ASH-900	
Rated Air Pressure MPa {kgf/cm ² }	0.6 {6}	0.6 {6}	0.6 {6}	
Air Consumption (No load) m³/min	0.24	0.23	0.2	
Stroke Speed min ⁻¹	3,700	6,500	6,300	
Stroke mm	9	8	9	
Max. Shank dia. of Points mm	6.3	5.0	5.0	
Mass (Weight) kg	1.1	0.52	0.5	
Standard Accessories	Flat Bastard File SF-13 : 1 pc. Rat Tail File SF-10 : 1 pc. Triangular Taper File SF-11 : 1 pc. Half Rounded File (Rat Tail/Double Cut) SF-12 : 1 pc. 3 mm Hex. Socket Screw Key : 1 pc. Bushing R 1/4 x NPT 1/4 : 1 pc.	Flat Bastard File SF-13 : 1 pc. Rat Tail File SF-10 : 1 pc. Triangular Taper File SF-11 : 1 pc. Half Rounded File (Rat Tail/Double Cut) SF-12 : 1 pc. 2.5 mm Hex. Socket Screw Key : 1 pc. Hi Cupla (HA-65SNG) : 1 pc.	Flat Bastard File SF-13 : 1 pc. Rat Tail File SF-10 : 1 pc. Triangular Taper File SF-11 : 1 pc. Half Rounded File (Rat Tail/Double Cut) SF-12 : 1 pc. 2.5 mm Hex. Socket Screw Key : 1 pc. Bushing R 1/4 × NPT 1/4 : 1 pc.	

Optional Accessories

Rubber Pad Ass'y for SH-100A

Flat Bastard File SF-13

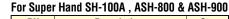


Supporter Ass'y for SH-100A



Sanding Pad Ass'y for ASH-800/ASH-900





PN	Description	Qty
TA9A222	Rat Tail SF-10	5 pcs.
TA9A223	Triangular Taper File SF-11	5 pcs.
TA9A224	Half Rounded File (Rat Tail/Double Cut) SF-12	5 pcs.
TA9A225	Flat Bastard File SF-13	5 pcs.
TA91752	Rubber Pad Ass'y for SH-100A	1 set
TA94625	Supporter Ass'y for SH-100A	1 set
TB04319	Sanding Pad Ass'y for ASH-800/ASH-900	1 set

PORTABLE FINE FINISHING FILE **MICRO AIR HAND**

PNEUMATIC SUPER SAW FILING CUTTING

MICRO AIR HAND

Fine reciprocating motion best for precision parts filing



5

R1 C

0.5

Half-round end file (PN TB07505)

ğ

MAH-05/MAH-16 CE

Specifications

Model		MAH-05	MAH-16
Rated Air Pressure MPa	{kgf/cm²}	0.6 {6}	0.6 {6}
Air Consumption (No load)	m³/min	0.07	0.07
Stroke Speed	min ⁻¹	22,000	13,000
Stroke	mm	0.5	1.6
Shank diameter of file mm		3	3
Mass (Weight)	kg	0.37	0.37
Standard Accessories + Each 1 pc. of diamond flat and round file + Hex. Wrench key 2 : 1 pc. • Cupla Model HA-65SN : 1 pc.			
Vice Holder (PN TB07506) Grinding stone plates such as ceramic grinding stones in the market can be also mounted. (Max size: Thickness 3.2 mm x Width 20 mm) Mounting examples			

SUPER SAW

ő

ы.

2

24

Triangular end file (PN TB07504)



Special double-piston system achieved low vibration while cutting speed improved!!

SSW-110 has many feature on the followings.....

- Low vibration is achieved by the special design of double piston mechanism.
- New adoption of piston rings minimized power loss and improved cutting efficiency.
- Longer piston stroke improved cutting speed so much.
- Rear exhaust system for chip-scattering-free operation.
- New double-lock throttle lever prevents unintended.
- Cutting Capacity : Max. plate thickness 3 mm (for Mild Steel)

Specifications

Model	SSW-110	
Rated Air Pressure MPa {kgf/cm	n²} 0.6 {6}	
Air Consumption (No load) m³/m	ⁿⁱⁿ 0.29	
Stroke Speed min	n ⁻¹ 7,000	
Stroke m	m 11	
Mass (Weight)	kg 0.62	
Standard Accessories	 32 mm Saw Blade : 2 pcs. 3 mm Hex. Socket Screw Key : 1 pc. Bushing R 1/4 x NPT 1/4 : 1 pc. 	





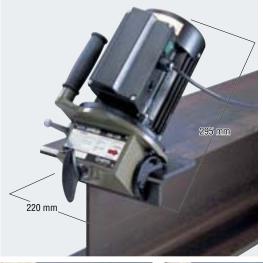
PN	Description	Qty
TA9A005	32 mm Saw Blade	10 pcs.
TA9A011	24 mm Saw Blade	10 pcs.
TB00193	18 mm Saw Blade	10 pcs.
TB00192	14 mm Saw Blade	10 pcs.

CHAMFERING PORTABLE CHAMFERING TOOLS HAND BEVELER

HAND BEVELER HB-15B Chamfering up to 15C

15C







Handy Electric Chamfering Tool

R



Chamfering steel plates

Chamfering I-beams

- Ideal for chamfering before welding
- Use easy-to-replace cutting blades
- Each cutting blade has four working edges for good economy
- Finish a surface so fine that post-sanding is unnecessary
- Column R-section can be chamfered with optional attachment
- No damage of workpieces is expected as heat-hardening or oxidization will seldom happen

Specifications

Model	HB-15B	
Power Source (Single phase)	115 V AC, 50/60 Hz	230 V AC, 50/60 Hz
Rated Power Consumption W	910	910
Rated Current A	10.5	4
No-load Speed min ⁻¹ (rpm)	3,340	2,750
Chamfering Capacity	0 C -	15 C
Chamfer Angle	15° - 45°	
Mass (Weight) kg	1	4

Standard accessories

Hex. Socket Screw Key 4,5,6	mm : each 1 pc. • 3 mm T Wrench Key : 1 pc.
• Spanner 24 x 27 : 1 pc.	 TA9A093 Cutting Blade 12.7 sq.
 Hook spanner 25 ~ 28 : 1 p 	DC. 1 set(12 pcs./ set)

Optional accessories

• TA9A728 Pipe Plate Ass'y for 5" to 32" (125 mm to 800 mm)



F١

MB-03A
230 V or 115 V AC, 50/60 Hz
430
2 / 4.5
0 C - 3 C
2R, 3R
45°
7,100
2.5

Standard accessories

• 3 & 4 mm Hex. Socket Screw Key : each 1 pc.

• Spanner T-9F : 1 pc.

Optional accessories

- TA9A386 Cutting Blade 9.525, 10 pcs./set
- TA9A592 Cutting Blade 9.525 2R, 10 pcs./set • TA9A638 Cutting Blade 9.525 3R, 10 pcs./set
- TA9A594 Inner Head Ass'y

Double insulation



	Specifications
	Model
	Power Supply (Sir
	Rated Power Cons

Model

MB-03A

2R, 3R

3C

Compact and light for speed chamfering

.150 mm

- 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).

PORTABLE CHAMFERING TOOLS MINI BEVELER/CIRCUIT BEVELER CHAMFERING

Handy Electric Chamfering Tool CE EVELER EMB-0307B Model R



Chamfer angle and width

A

7

3.8

1.5

Mild Steel (mm)

В

7

6.6

5.6

С

9.9

7.6

5.8

Α

3

2.2

1

Chamfer angle

α

45

30

15°

• Chamfering up to 3C stainless steel chamfering, and up to 7C mild steel chamfering.

Double insulation

Double insulation

- Cutting blade each with cutting edges on 4 sides.
- Chamfering angle can be adjusted to any desired position at 15° - 45°
- Pipe outer edge can be also chamfered with standard accessories that come with the rool.
- Dust box collects swarf and chips effectively.

Specifications

Model		EMB-0307B
Power Supp	ıly	220 V - 240 V AC, 50/60 Hz
Rated Powe	er Consumption W	1010
Rated Current A		4.6
Rated Duty		Continuous
Chamfering	Mild Steel	0C - 7C, 2R, 3R, 4R
Capacity	Stainless Steel	0C - 3C, 2R, 3R, 4R
Chamfer An	gle	15° - 45°
Power Cord m		4.0
Mass (Weig	l ht) kg	3.9

Standard accessories

- Carbon Brush Ass'y: 1 set.
 4 mm Hex. Wrench Key: 1 pc.
 Cutting Biade with Hole 12.7: 1 pc.
 Cutting Biade Set Screw 4 x 7: 1 pc.
 Pan Head Screw 5 x 10: 3 pcs.

CE

Electric Radial Chamfering Tool Model ECB-0203

Stainless Steel (mm)

В

3

3.8

3.8

С

4.2

4.4

3.9

4R

A

۵

Chamfering curved edges

Chamfer angle a

Smoothly chamfering straight and curved edges



- Applicable up to 3C (3R) mild steel chamfering, and up to 1.5C (2R) stainless steel chamfering.
- Minimum chamfering plate thickness is 2 mm (Max.0.5C)
- Cutting blade with 4-side blades per piece practices good economy.
- An optional straight plate allows chamfering a straight edge shoulder.

Specifications

Model		ECB-0203		
Power Supply		220 V - 240 V AC, 50/60 Hz		
Rated Powe	r Consumption W	450		
Rated Duty min		30		
Motor No-load Speed min ⁻¹ (rpm)		11,000		
Chamfering	Mild Steel	0C - 3C, *2R, 3R		
Capacity	Stainless Steel	0C - 1.5C, *2R		
Chamfer An	gle	45°		
Power Cord m		2.5		
Mass (Weig	ht) kg	2.5		

* In case of chamfering 3R, an optional cutting blade for 3R is necessary, and chamfering 2R, an optional guide sleeve 24 mm dia, and cutting blade for 2R are necessary.

Standard accessories

 Cutting Blade with Hole 12.7 : 1 pc.
 Cutting Blade Set Screw : 1 pc.
 5 mm Hex. Socket Screw Key : 1 pc.
 Spanner 8 x 10 : 1 pc.
 Spanner T-15D : 1 pc. Sub Handle : 1 pc.
Grip Guard : 1 pc.
Ball Bearing 687zz : 1 pc.
Gauge C3 : 1 pc.

21

Chamfering straight edges

PORTABLE CHAMFERING TOOLS MINI BEVELER/CIRCUIT BEVELER **CHAMFERING**

Pneumatic Chamfering Tool Lever Type ELER AMBL-0307



Stainless Steel

AMB-0307

Ring Type

Mild Steel

CE

3C

7C

4R

NOW A SMALL AIR BEVELER DOES THE BIG JOBS. TOO

Specifications

- Applicable to stainless steel and mild steel chamfering.
- Cutting blade with 4-side blades per piece practices good economy
- Simple to adjust chamfering depth and replace cutting blade.
- Pipe outer edge can be also processed with standard accessories.
- Chamfering angle can be adjusted to any desired position at $15^{\circ} \sim 45^{\circ}$.

Chamfer angle and width

The tool has the limit of chamfering width which depends on a chamfer angle.

Chamfer angle	Milo	l Steel (r	nm)	Stainle	ess Stee	I (mm)	Chamfer angle α
α	Α	В	С	Α	В	С	
45°	7	7	9.9	3	3	4.2	
30°	4	7	8.1	2.2	3.8	4.4	^m /c
15°	2.2	8	8.3	1	3.8	3.9	- <u>k</u>

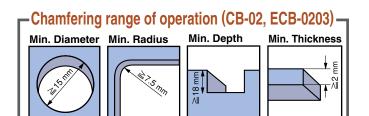
Model		AMBL-0307, AMB-0307		
Air Pressure	MPa {kgf/cm ² }	0.6 {6}		
Air Consumption	n (No load) m³/min	0.9		
Free Speed min ⁻¹ (rpm)		14,000		
Chamfering	Mild Steel	0 C - 7 C or 2 R, 3 R, 4 R		
Capacity	Stainless Steel	0 C - 3 C or 2 R, 3 R, 4 R		
Chamfer Angle		15° - 45°		
Mass (Weight) kg		2.9		

Standard accessories

3 & 4 mm Hex. Socket Screw key : 1 pc. each
8 x 25 Hex. Socket Set Screw : 2 pcs.
9 Cutting Blade Set Screw 4 x 7 : 1 pc.
9 Cutting Blade : 1 pc. Bushing R 3/8 x NPT 3/8

Pneumatic Radial Chamfering Tool CE Model B FI **CB-02** Lets you chamfer easily and smoothly no matter what the curve line is





- Versatility chamfer either inner or outer edges.
- Precisely adjust chamfer dimensions with accessory gauge.

Specifications

Model	CB-02
Air Pressure MPa {kgf/cm ² }	0.6 {6}
Air Consumption (No load) m³/min	0.4
Free Speed min ⁻¹ (rpm)	13,000
Chamfering Capacity	0C ~ 2C, 2R
Chamfer Angle	45°
Mass (Weight) kg	1.8

Standard accessories

Cutting Blade : 1 pc. Adjustment gauge : 1 pc.	 Protective cap : 1 pc. Hook Spanner 58-62 : 1 pc.
 Adjustment gauge : 1 pc. Spanner T-9F : 1 pc. 	• Bushing R 1/4 x NPT 1/4

Optional accessories

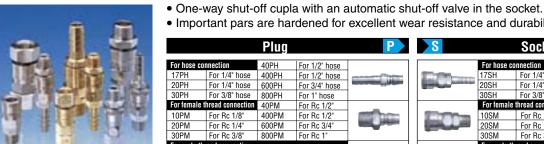
• TA9A386 : Cutting Blade 9.525 sq. Ass'y (10 pcs.) • TA9A592 : Cutting Blade 9.525 sq. R2 Ass'y (10 pcs.)

Optional Accessories for HAND BEVELER / MINI BEVELER / CIRCUIT BEVELER

	PN	Description	Sales Unit	Application model	Remarks
FRANKS	TA9A093	Cutting Blade 12.7 Ass'y	12 pcs./set	HB-15B	
	TA9A896	Cutting Blade 12.7 with hole Ass'y	10 pcs./set	AMB-07	
E Carlos	TB01159	Cutting Blade 12.7 with hole Ass'y	10 pcs./set	EMB-0307B, AMB-0307, AMBL-0307, ECB-0203	
	TB01791	Cutting Blade 12.7 Ass'y R2	10 pcs./set	EMB-0307B, AMB-0307, AMBL-0307, ECB-0203	
Mar Conta	TB01651	Cutting Blade 12.7 Ass'y R3	10 pcs./set	EMB-0307B, AMB-0307, AMBL-0307, ECB-0203	
and the second s	TB01790	Cutting Blade 12.7 Ass'y R4	10 pcs./set	EMB-0307B, AMB-0307, AMBL-0307	
	TA9A386	Cutting Blade 9.525 with hole Ass'y	10 pcs./set	MB-03A, CB-02	
ala a a Ita	TA9A592	Cutting Blade 9.525 Ass'y R2	10 pcs./set	MB-03A, CB-02	
an Lan	TA9A638	Cutting Blade 9.525 Ass'y R3	10 pcs./set	MB-03A	
9-5	TA9A728	Plate Ass'y for pipe	1 set	HB-15B	For pipe 125 - 800 mm dia.
	TB02539	Attachment for small dia. pipe	1 set	EMB-0307B, AMB-0307, AMBL-0307	For pipe 80 - 200 mm dia.
	TA9A594	Inner head Ass'y	1 set	MB-03A	For min. 100 mm dia.
	TB02857	Guide sleeve 24 mm dia. Ass'y	1 set	ECB-0203	For chamfering R2
	TB03097	Plate Ass'y for straight line use	1 set	ECB-0203	
	TB02862	Dust Box Ass'y	1 set	ECB-0203	Used with Plate Ass'y for straight line use
	TB03424	Spanner T-9D	1 pc.	MB-03A, CB-02	
	TQ01683	Spanner T-15D	1 pc.	EMB-0307B, AMB-0307, AMBL-0307, ECB-0203	

QUICK CONNECTIVE COUPLINGS FOR PNEUMATIC TOOLS HI CUPLA series

HI CUPLA / HI CUPLA 200 (One-touch connection & Big flow rate type)





• Important pars are hardened for excellent wear resistance and durability.

		Plug		P	S		Socket		
For hos <u>e</u> o	connection	40PH	For 1/2" hos	se		For hose co	nnection	40SH	For 1/2" hose
17PH	For 1/4" hos	se 400PH	For 1/2" hos	se	The second second	17SH	For 1/4" hose	400SH	For 1/2" hose
20PH	For 1/4" hos	se 600PH	For 3/4" hos	se and a second s	State of Sta	20SH	For 1/4" hose	600SH	For 3/4" hose
30PH	For 3/8" hos	se 800PH	For 1" hose		_	30SH	For 3/8" hose	800SH	For 1 [®] hose
For female	e thread connect	tion 40PM	For Rc 1/2"	_		For female	thread connection	40SM	For Rc 1/2"
10PM	For Rc 1/8	400PM	For Rc 1/2"	COLUMN TWO IS NOT	Contraction of the local division of the loc	10SM	For Rc 1/8"	400SM	For Rc 1/2"
20PM	For Rc 1/4"	600PM	For Rc 3/4"	State of Street, Stree	Construction of the local division of the lo	20SM	For Rc 1/4"	600SM	For Rc 3/4"
30PM	For Rc 3/8"	800PM	For Rc 1"		-	30SM	For Rc 3/8"	800SM	For Rc 1"
For male t	thread connecti	on				For male th	read connection		
20PF	For R 1/4"	400PF	For R 1/2"	and the second s		20SF	For R 1/4"	400SF	For R 1/2"
30PF	For R 3/8"	600PF	For R 3/4"	and the second second	Contraction of the local division of the loc	30SF	For R 3/8"	600SF	For R 3/4"
40PF	For R 1/2"	800PF	For R 1"		_	40SF	For R 1/2"	800SF	For R 1"
For male i	thread connecti	on (parallel thiea	d)						
20PFF	For G 1/4"			and the second second		For hose co			
				and the second second	In the second second	200-17SH	For 1/4" hose	200-40SH	For 1/2" hose
				_		200-20SH	For 1/4" hose		
						200-30SH	For 3/8" hose		
pecifica	ations					For female	thread connection		
Туре		Hi Cup	ola	Hi Cupla 200	C. CONTRACTOR OF	200-20SM	For Rc 1/4"		
Body mat	erial	Steel (chrom	e-plated)	Steel (chrome-plated)	Contraction in the local division of the loc	200-30SM	For Rc 3/8"		
Size		1/8", 1/4", 3/8",	1/2", 3/4", 1"	1/8", 1/4", 3/8", 1/2"		200-40SM	For Rc 1/2"		
Working p	oressure	1.5 M	Pa	1.0 MPa		For male the	read connection		
Pressure	resistance	2.0 M	Pa	1.5 MPa	STREET, LODIE	200-20SF	For R 1/4"		
Packing n		NBR	1	NBR	and the second	200-30SF	For R 3/8"		
Morking t	temp.range	-20°C -	30°C	-5°C - 60°C		200-40SF	For R 1/2"		

HI CUPLA ACE



Specifications						
Body material	Engineering plastics					
Size	1/4", 3/8", others					
Working pressure	1.5 MPa					
Pressure resistance	2.0 MPa					
Packing material	NBR					
Working temp.range	-5°C - 60°C					

- Plastic Cuplas with a bult-in locking mechanism!
- Pressure ratings comparable to steel Cuplas.

Plastic Pl	ug P	S Hi	Cupla Ac	e Socket
For hose connection (PH) 20PH-PLA For 1/4" hose 30PH-PLA For 3/8" hose			For hose con HA-20SH HA-30SH	hection (SH) For 1/4" hose For 3/8" hose
For female thread connection (PM) 20PM-PLA For Rc 1/4" 30PM-PLA For Rc 3/8"			For female the HA-20SM HA-30SM	read connection (SM) For Rc 1/4" For Rc 3/8"
For urelliane hose with spring nut connection (Pl 50PNG-PLA For 5 ID x 8 0D hose 65PNG-PLA For 6.5 ID x 10 0D hose 85PNG-PLA For 8.5 ID x 12.5 0D hose			For urethane ho HA-50SNG HA-65SNG HA-85SNG	se with spring nut connection (SNG) For 5 ID x 8 OD hose For 6.5 ID x 10 OD hose For 8.5 ID x 12.5 OD hose
For male thread connection (PF) 20PFF-PLA For G 1/4*				T type (for 2 branches) 20P-PLA / HA-65S x 2

MACHINE TOOLS

MACHINE TOOLS Electric & Hydarulic Machine Tools, Labor-saving plus improved work efficiency

A wide range of unique tools for boring and punching



"delvo" Electric Screwdrivers / Spring BalancerOTHER PRODUCT LINESLinear-motor-driven Free Piston System



Spring Balancer

TIGON Spring Balancer Improves Work Safety & Efficiency

TIGON Spring Balancer Models

TW-00/TW-0/TW-3/TW-5/TW-9/TW-15/TW-22/ TW-30/TW-40/TW-50/TW-60/TW-70

Capacities ranging from 0.5 \sim 70 kg.



Linear Motor Driven Free Piston System

MEDO pumps are unique products featuring a Linear-motor-driven Free Piston System. NITTO KOHKI has made available a complete series of air compressors and suction pumps that incorporate this revolutionary mechanism.

These are quite appropriate as air sources or suction power units for various pneumatically operated equipment and apparatus in advanced industries.



SAFETY GUIDE

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.

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.

- 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 Air Tools

• Air pressure at the inlet of the tool must not exceed 0.6 MPa (6 kgf/cm²).

Technologies that Respond to the Needs of the Times



Overseas Affiliates/Offices

NITTO KOHKI U.S.A. INC. TEL:+1-630-924-9393 FAX:+1-630-924-0303

NITTO KOHKI EUROPE CO., LTD.(UK) TEL:+44-1923-239-668 FAX:+44-1923-248-815

NITTO KOHKI DEUTSCHLAND GMBH FAX:+49-7157-22437 TEL:+49-7157-22436

NITTO KOHKI AUSTRALIA PTY. LTD. TEL:+61-7-3340-4600 FAX:+61-73340-4640

NITTO KOHKI CO., LTD. SINGAPORE BRANCH TEL:+65-6227-5360 FAX:+65-6227-0192 NITTO KOHKI CO., LTD. BANGKOK **REPRESENTATIVE OFFICE** FAX:+66-2-632-0308 TEL:+66-2-632-0307

NITTO KOHKI CO., LTD. SHANGHAI **REPRESENTATIVE OFFICE** TEL:+86-21-6415-3935 FAX:+86-21-6472-6957

NITTO KOHKI CO., LTD. SHENZHEN **REPRESENTATIVE OFFICE** TEL:+86-755-8375-2185 FAX:+86-755-8375-2187

NITTO KOHKI CO., LTD. SEOUL **REPRESENTATIVE OFFICE**

DISTRIBUTED BY

 \star Specifications and designs are subject to change at any time without notice.



Head Office
 NITTO КОНКІ СО.,LTD.
 9-4, Nakaikegami 2-chome, Ohta-ku, Tokyo 146-8555 Japan

 Phone : +81-3-3755-1111 Fax : +81-3-3753-8791

- E-mail: overseas@nitto-kohki.co.jp
- URL: www.nitto-kohki.co.jp/e