

Thanks for choosing NOHDA products

Before using machine please make sure read the manual completely

NODHA



Portable Plate Beveling Machine

Operator's Manual

Nodha Industrial Co., LTD

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Part 1 Intended use

The weld-edge milling machine is a hand-held, electrically powered device that can be used:

For machining workpieces made of steel, chromium steel, fine-grained steel, aluminium, aluminium alloys, brass and plastics,

For commercial use in industrial settings and in the skilled-trades,

For preparing K, V, X and Y-shaped welding grooves, and

For creating visible edges in plant and mechanical engineering work.



Warning

Risk of injury or damage to health!

The machine may only be used for work and materials described in the section 'Intended use'.

Do not use the machine to work on materials containing asbestos.

Part 2 Technical data

Technical data		ISE-15
Your machine		
Bevel width	[mm]	1–18
Radius	[mm]	2–4
Bevel angle	[deg]	20 30 37.5 45
Power	[W]	2450
Milling spindle speed	[1/min]	2400–7500
Weight	[kg]	8.5
Line voltage/frequency	[V/Hz]	220-240/50
No of cutting tools per head		4 / 5
Stock removal rate (per minute)		
Stock removal rate (range)	cm ³ /min	10–50
Plastics	cm ³ /min	50
Al Cu Mg Pb	cm ³ /min	50
S235	cm ³ /min	30
S355	cm ³ /min	20
S690	cm ³ /min	20
S960	cm ³ /min	15
X 5 CrNi 18 10	cm ³ /min	20
X 6 CrNiMoTi 17 12 2	cm ³ /min	10
Stock removal rate (per head)		
Stock removal rate (range)	cm ³ /hd	600–6000
Plastics	cm ³ /hd	6000
Al Cu Mg Pb	cm ³ /hd	6000
S235	cm ³ /hd	2000
S355	cm ³ /hd	1500
S690	cm ³ /hd	1500
S960	cm ³ /hd	900
X 5 CrNi 18 10	cm ³ /hd	1500
X 6 CrNiMoTi 17 12 2	cm ³ /hd	900

The manufacturer reserves the right to make technical changes.

The stock removal rates per minute and the stock removal rates per milling head specified in the tables above are based on data gathered by Nodha Industrial. This information, while accurate to the best of our knowledge, is provided without obligation or guarantee.

Part 3 Safety information

Before using the machine, the operating manual and safety instructions must have been read and understood in their entirety. The instructions contained therein must be strictly followed.

Safety regulations such as DIN, VDE, CEE, AFNOR and others that may be applicable in the country of use must be observed.

Electrocution hazard!



Hazard

- Always disconnect the machine from the power supply before servicing.
- Before each use, always check the plug, cable and machine for signs of damage.
- The machine must be kept dry. Do not use in damp locations or humid environments.
- If used out of doors, the machine must be protected by a residual-current circuit-breaker with a maximum tripping current of 30 mA.

Improper use can cause serious injury!



Warning

- Always wear safety goggles, ear protectors, gloves and safety shoes when working with the machine.
- Insert plug only when machine is switched off. Disconnect the machine from the power supply after use.

Improper use can cause damage to equipment and property!



Caution

- Never lift or carry the machine by its power cable.
- Make sure the cable is directed behind and away from the machine. Do not lay cable over sharp edges.
- Testing and servicing must only be carried out by an appropriately qualified technician.
- Always use genuine Nodha Industrial spare parts and accessories.

Part 4 General instructions on use

4.1. Check mains voltage



Warning

- Check the mains (line) voltage. The mains voltage must coincide with the details on the machine's rating plate.

4.2. Check cutting tools



Caution

Blunt tools can cause damage and can overload the machine!

- Inspect the cutting tools regularly for signs of wear.
- Make sure the cutting edges of the inserts are sharp as this improves performance and protects the machine from damage.
- Rotate or replace the indexable inserts before they become blunt.

4.3. Adjusting height of bevel

- 1) Rotate the locking ring (2) until the vernier (4) and the main scale (3) show the desired value for the height of the bevel.
- 2) Keep the locking ring in this position.
- 3) Manually tighten the guide-plate unit (1) against the locking ring using the hook spanner provided. Do not over tighten.



- 1 Guide-plate unit
- 2 Locking ring
- 3 Main scale
- 4 Vernier

Please note:

As the milling heads are not all of the same length, the numbers on the main scale do not reflect absolute bevel height settings. They are used to adjust the relative height of the bevel in millimetres!!!

Fig. 7.1: ISE-15

4.4. Working with the weld-edge milling machine



Caution

- Make sure you always have a firm footing when working with the machine.
- Never touch the milling head when the machine is running.
- When using the machine, always guide it away from you.
- Never use the machine above head height.

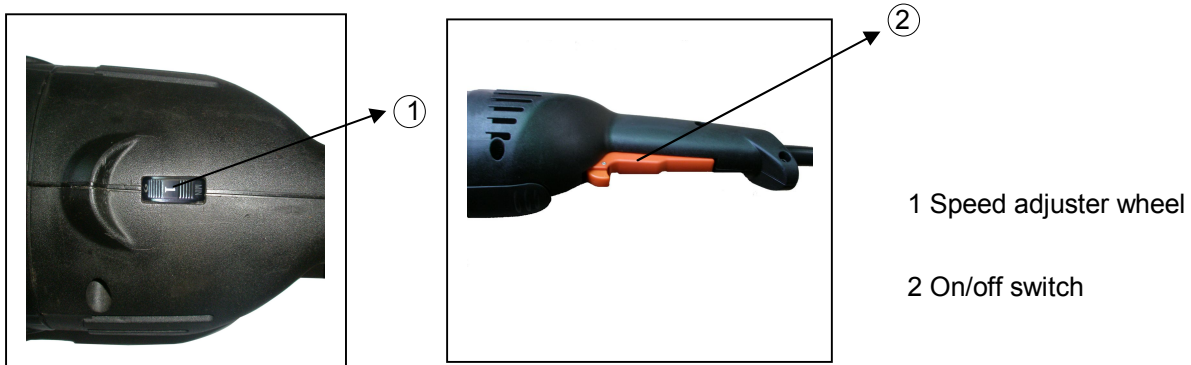


Fig. 8.1: *ISE-15*

1. Press and hold down the on/off switch (2) on the handle.
Motor starts.
2. Set speed adjuster wheel (1) to '4'.

Two-handed operation Always use two hands to hold and control the machine.



Please note:

When work with the machine, make sue that both hands are kept away from the machining point.

Electromagnetic interference (220V)

The machine may switch off if subjected to electromagnetic interference over an extended period. Once the interference has died down, the machine can be used again.

Motor overload protection (220V)

The motor switches off automatically if the motor temperature is too high.
In this case, leave the machine to cool until the motor can be switched on again.
Once cooled, the machine can be used normally again.



Caution

To become acquainted with the machine, we recommend that you begin by machining a small bevel no more than 2mm in height and advance the machine slowly at first.

Step-by-step guide to milling with the ISE

1. Move the machine into contact with the workpiece only after the selected tool speed has been reached.
2. Guide the machine along the workpiece only after the spacer guide-bearing has made contact with the workpiece.
3. When initially cutting the bevel, the machine must always be moved from left to right. Make sure you know which way the milling head is rotating. The machine should only be used for conventional (upcut) milling.
4. When machining bore holes, always work in a clockwise direction.

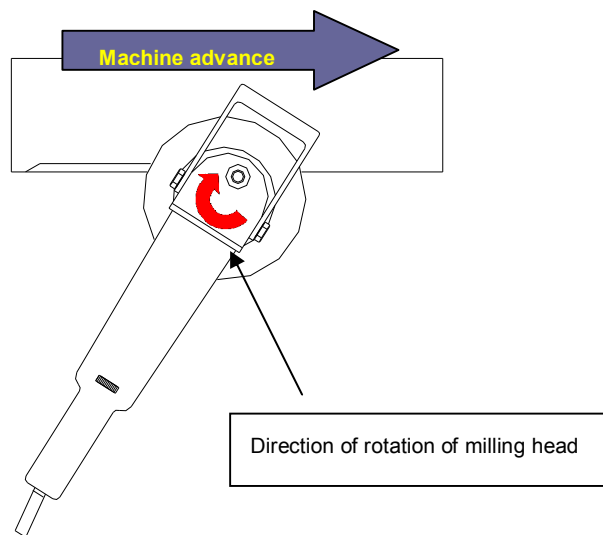


Fig. 10.1: **ISE-15** – Direction of advance

Switching off the ISE

1. Remove the milling machine from the workpiece and switch off.
2. The motor will switch off.

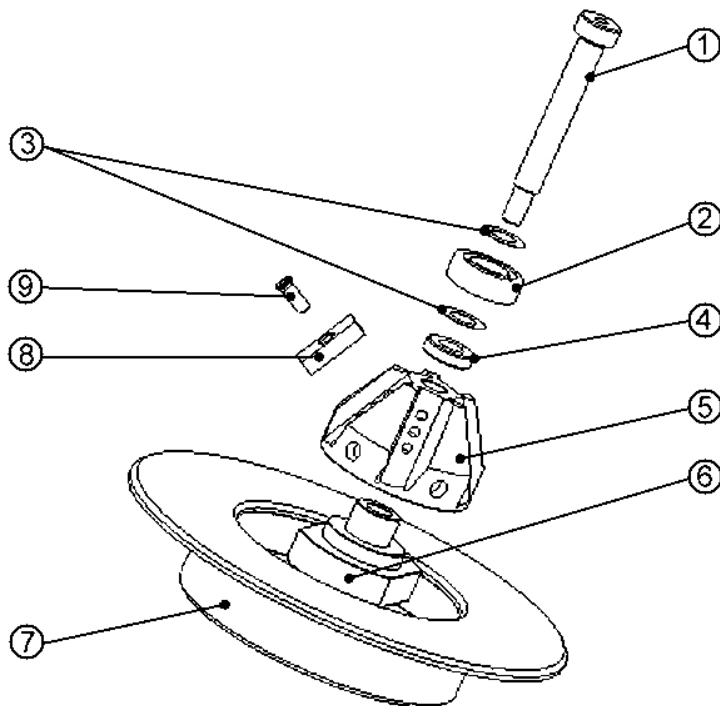
Part 5 Milling unit – structural description

ISE15



- 1 Mounting flange
- 2 Locking ring
- 3 Guide-plate mount
- 4 Guide plate
- 5 Indexable cutting insert
- 6 Milling head
- 7 Spacer guide-bushing

Fig. 11.1: ISE-15



- 1 Central fitting bolt
- 2 Spacer guide-bearing
- 3 Shims
- 4 Spacer ring
- 5 Milling head
- 6 Drive shaft with flats
- 7 Guide plate
- 8 Indexable cutting insert
- 9 Locking screw

Fig. 11.2: Components of the ISE-15

Part 6 Changing the milling head

General precautions

- Switch off the machine by releasing the on/off switch.
- Pull out the power cable plug from the mains socket.
- Make sure that the machine cannot be switched on again accidentally or by unauthorized persons.

Removing the ISE-15 milling heads

(Figs. 11.1 and 11.2)

Rotate the guide-plate unit (guide plate + mount) back as far as possible.

Position a 32mm spanner on the flats of the drive shaft.

Loosen the central socket-head fitting bolt using the hex key (Allen key) supplied.

Loosen the milling head from the shaft, using the hook spanner provided. Remove it together with the spacer guide-bearing (comprising fitting bolt, guide bearing and guide bushing, shims and spacer ring).

Always store the milling head and the spacer guide-bearing together.



Fig. 12.1: *ISE-15*

Fitting the ISE-15 milling heads

- Rotate the guide-plate unit (2) (guide plate + mount) back as far as possible
- Assemble the fitting bolt, shims, guide bearing, spacer ring and milling head as shown in fig.11.2.
- Position the spindle locking bar (3015R / 3018R) or a 32mm spanner (3020R) on the flats of the drive shaft and then, using the hook spanner provided, tighten the milling head onto the shaft.
- Using hex key provided, screw the space guide-bearing securely into the drive shaft, as shown in fig.11.2.
- If the spacer guide-bushing is not optimally positioned relative to the cutting inserts, adjust its position by varying the number of shim rings behind or in front of the guide-bushing.

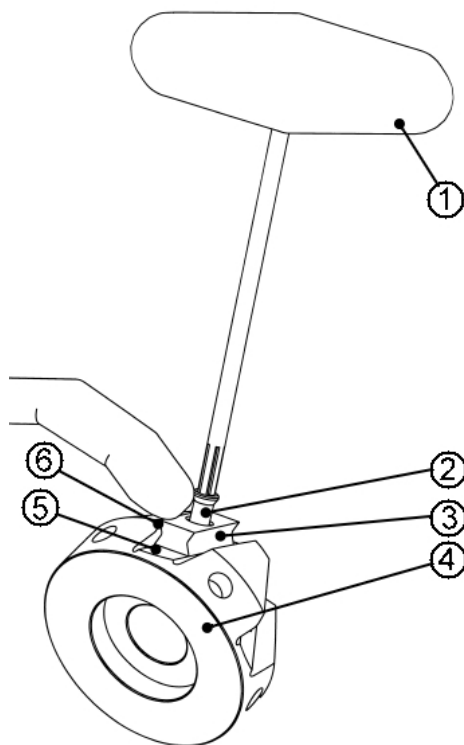


Caution

Caution!

To avoid damaging the thread, the cap screws must be screwed in until hand tight. Do not overtighten!

Part 7 Fitting new indexable cutting inserts



- 1 Torx screw driver
- 2 Locking screw
- 3 Indexable cutting insert
- 4 Milling head
- 5 Mounting face for cutting insert
- 6 Shoulder of mounting face

Procedure

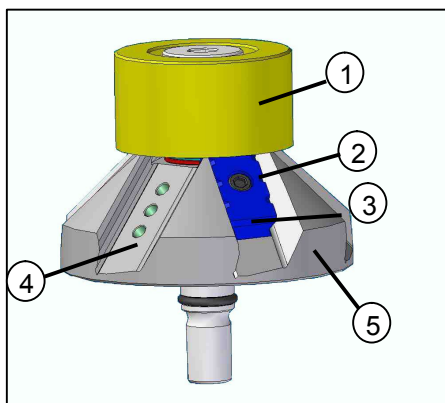
- Switch off the machine by releasing the on/off switch.
- Pull out the power cable plug from the mains socket.
- Press and hold down the safety button on the top of the gearing housing.
- Loosen the locking screw and remove the cutting insert.
- Clean the area where the insert sits (mounting face and shoulder) and check for damage.
- Always rotate or exchange **all** the inserts on the milling head at the same time.
- Make sure that the new inserts are all of **identical** type.
- Press each insert into position so that it lies perfectly flat on the lower part of the mounting face (5).
- With the insert still properly positioned, tighten the screw with the Torx screwdriver (1) handtight so that the insert lies up against the shoulder of the mounting face.
- Once all inserts are in position, retighten each of the screws.

-
- Check to make sure that all the indexable inserts on the milling head are of the same type, that each insert is properly located on the mounting surface and butted up against the shoulder, and that all screws are tight.
 - Start with a small bevel and guide the machine slowly onto the material to be milled. If the machine kicks back, switch off the machine immediately and check again that the indexable inserts are all of the same type and that they have been fitted exactly as described above. If the machine kicks back again, you will need to replace the entire set of inserts.



Caution

Failing to change the cutting inserts in time can result in damage to the machine



- 1 Guiding bearing
- 2 Clamping screw
- 3 Carbon inserts
- 4 Contact surface / thread
- 5 Milling head

The mounted inserts has to be close to the guiding bearing, which means small inserts has to be fixed in top thread under the guiding bearing. Long and radius inserts has to be fixed in the middle positioned thread.

Part 8 Speed adjustment

Material	ISE-8		ISE-15	
	Speed setting	Power-on time	Speed setting	Power-on Time
Your machine:				
Aluminium, copper, plastic	Speed 4–6 approx. 5 500–7 500 rpm	60 %	Speed 4–6 approx. 5 500–7 300 rpm	100 %
Materials with a tensile strength $\leq 400 \text{ N/mm}^2$	Speed 3–5 approx. 4 500–6 500 rpm	40 %	Speed 3–5 approx. 4 500–6 500 rpm	80 %
Materials with a tensile strength $> 400 \text{ N/mm}^2$	Speed 2–3 approx. 2 500–4 500 rpm	30 %	Speed 2–3 approx. 2 400–5 500 rp	60 %
Chromium steels, stainless steels, fine-grained steels	Speed 2–3 approx. 2 500–4 500 rpm	20 %	Speed 2–3 approx. 2 400–5 500 rpm	40 %



Information on adjusting the machine

speed:

- Start by adjusting a medium speed setting ('4').
- Commence cutting using a small bevel height.
- If excessive sparks are generated during cutting, reduce the machine speed.
- If no spark showers are evident, machine speed can be increased.
- The higher the tool speed, the faster the machine can be advanced along the workpiece.
- The more sparks produced, the greater the wear on the cutting inserts.
- Specially coated indexable inserts can withstand higher operating temperatures and can therefore be used at higher machine speeds and can cope with higher levels of spark generation.

Part 9 Maintenance and repairs

Part to be serviced	Maintenance procedure	Materials required	Interval
Height adjuster threads	Clean and lubricate	Teflon spray	Weekly
Ventilation slots	Clean		As necessary

All other servicing must only be carried out by the manufacturer or an authorised dealer



Caution

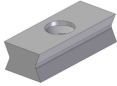
Part to be serviced	Type of maintenance	Maintenance interval
Gears	Change gear lubricant	1000 operating hours
Carbon brushes	Replace worn brushes (machine switches off when carbon brushes are too worn)	As necessary

Part 10 Accessories, spare parts and consumables

Accessories

Item	Description	Remark
1	Hook Spanner 40–52mm	
2	Hook Spanner 90-95mm	
3	Inner Hexagon Spanner	
4	Hexagon Spanner	
5	Open Spanner	
6	Fastening Screw KS 30-11	

Consumables

Item	Appearance	Description
1		Bevel : 1-18mm

ORDERING OR MORE INFORMATION

To place an order or get more detailed information:

Tel: 86 - 510 8580 8562

Fax: 86 - 510 8580 8563

Email: info@nodha.com

Web: www.nodha.com

ORDERING REPLACEMENT PARTS

Please refer to parts lists provided in manual. Advise us part number and description of replacement parts to help expedite order and ensure proper parts are being ordered.

Or take photo for replacement parts, send email to us.

REPAIR INFORMATION

Please call Nodha Industrial Company prior to returning any equipment for repair. We will advise you of shipping and handling. Please enclose with machine to be repaired your name, address, phone number and a brief description of problem or work to be done or estimated.

All repair work done at our plant will be estimated and the customer advised of cost and time required to complete repair.

POSTAL ADDRESS

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