

Instruction Manual Turntable type 1035



Version A: September 2008

Subject to modification without notice.

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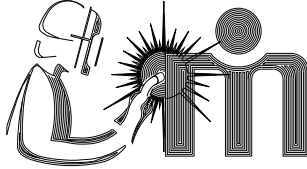
IMPORTANT SAFETY INSTRUCTION

Please ensure that the welding machine’s chassis cable is connected correctly. If this is not the case, both the control unit and the electrical installation may be damaged since the welding current will then be able to flow through the earth wire in the electrical installation.

During installation and operation of the machine, the safety regulations stated in the section **PERSONAL SAFETY** in this instruction manual must be read and adhered to.

This instruction manual must always be readily accessible to the personnel who shall install, operate and service the machine.

Reading of the instruction manual assumes knowledge of welding, and of the dangers associated with it, at a level which corresponds to that of a professionally trained welder.

EC declaration of conformity**EC declaration of conformity**

Manufacturer	
Company name :	Migatronik Automation A/S
Address :	Knøsgaardvej 112
	DK-9440 Aabybro
Telephone :	(+45) 98 – 24 42 33

hereby declares that

Machine/control unit.	
Product :	Turntable
Type :	1035
Part no. :	79111035-1

is manufactured in compliance with the provisions in the COUNCIL'S DIRECTIVE of 14 June 1989 on the mutual harmonisation of the member states' legislation regarding machines (89/392/EØF and amended by 91/368/EØF and 93/44/EØF) with particular reference to the directive's appendix I on important health and safety requirements in connection with the design and manufacture of machines, (cf. the Danish Labour Inspectorate's regulation No. 561 of 24 June 1994)

A handwritten signature in black ink, appearing to read 'Søren C. Jensen', written over a horizontal line.

Søren C. Jensen

22-2-1999

Personal safety



Light and heat radiation

The arc emits radiation which is harmful to the human eye.

Even brief exposure to this radiation can result in permanent damage.

The eyes must be protected against strong radiation of infrared, visible and ultraviolet light with suitable radiation protection glass in the welding helmet.

The skin can also be damaged by these rays. The radiation can cause serious burns. The skin should be protected by a helmet, full-length working clothes and gloves.

Warn other people in the vicinity of the welding area of the danger from radiation and sparks. If possible, the working area should be shielded from the surroundings.

In addition to the sparks, heat radiated from the arc and the weld pool is a fire hazard. Therefore do not carry out welding in the vicinity of flammable materials.

Working clothes must not contain flammable materials or have folds or open pockets which can trap sparks. It may be advisable to use a fireproof apron.



Welding fumes

The smoke and fumes which are generated by welding are harmful to health.

The fume extraction units must therefore be arranged so that any vapours which are produced when welding are removed effectively.

When the vapours from degreasing agents are exposed to the electric arc's ultraviolet rays, the highly toxic phosgene gas can result. Therefore all solvents, degreasing agents and other potential sources of such vapours must be removed from the welding area.

Take care not to inhale welding fumes and gases.

Use tables with extraction units or other extraction systems for the removal of welding fumes and gases. If it is not possible to set up effective extraction systems, oxygen masks must be used.



Electricity

Avoid contact with live parts.

The voltages which are used when welding are not high enough to be hazardous in themselves. However, when wearing damp working clothes or similar, there is a risk of getting an electric shock which can startle the operator and thus indirectly be hazardous. In particular HF high voltage ignition for TIG and PLASMA welding can give powerful shocks and cause small burns under the skin.

Contact with welding current-carrying parts must be avoided if possible.

Always ensure that insulation on cables, welding torches and the machine's plug connections are intact.

Always use dry leather gloves, dry working clothes and shoes. In addition, keep cables, welding torches and the welding machine itself dry.

It is important that the machine's connections are in accordance with regulations (mains cables, fuses and safety cables/earth cables).

Do not open the machine to access live parts. Maintenance and service which requires access to parts of the machine which carry mains current must be carried out by qualified personnel.

Never leave a dismantled machine which is connected to the mains supply.

Connection

The turntable must be connected to 230V AC using the accompanying mains cable.

Please ensure that there is EARTH in the mains connection plug.

The turntable must be connected to earth. If this is not done, the control unit may be damaged when welding is carried out.

Connect the welding machine's chassis cable to the Dinse connection socket on the turntable.

Check that the connection is OK before commencing welding.

NOTE: It is extremely important that the welding machine's chassis cable is correctly connected to the turntable's Dinse connection socket in order to ensure that the welding current does not flow through the gear's bearings or, even worse, flows via the earth cable through the welding machine, electrical installation and back to the turntable. This can result in expensive repairs to the equipment and electrical installation.

Applications

The turntable must be secured to a stable base.

TIG welding hoses (live parts) and torches must not be placed on the electronic control box.

The maximum dimensions of the workpiece stated in the operating manual must not be exceeded.

The machine/equipment must only be used by an operator who has been trained in the use of the machine and has studied the operating manual.

Removal of safety devices:

Safety devices must not be removed or disabled during operation.

Correct positioning of the workpiece:

Before commencing welding, the operator must ensure that the workpiece is correctly positioned and correctly secured.

Please note that depending on the shape of the workpiece, there may be a risk of becoming trapped when the workpiece rotates. In this case, the operator must carry out suitable precautions in order to eliminate this risk.

Maintenance

Regular maintenance is important.

Regular maintenance ensures:

- * Long service life for the turntable.
- * Safety.
- * Reliability.

Many of the maintenance tasks are simple to perform yourself if you have a little mechanical skill and a few tools. These tasks are described below. However, please note that some maintenance tasks require special tools and special knowledge. These tasks should be left to qualified Migatronik personnel. Even though you may be an experienced do-it-yourself mechanic, we recommend that you let us deal with repairs and maintenance.

Basic precautions



Warning

All mains connections must be disconnected before work with electrical installations or components is commenced. Make sure that the working area is tidy. When the equipment is not being used or is left unattended, the air and electricity supply to the equipment must be switched off.

DAILY INSPECTION BEFORE START

Inspect the control unit:

- A. Check that the plug is put correctly into the control unit.
- B. Run through a cycle without welding.

Inspect mains cables, earth cables, air and gas hoses:

- A. Check for external damage.
- B. Check for leaks.

Welding check:

Weld an item – compare this with an item from the same time the previous day. If everything is OK, save the most recent item for start-up the following day.

WEEKLY INSPECTION

Clean all important surfaces with compressed air and lightly lubricate with machine oil.
Sign the maintenance schedule.

MONTHLY INSPECTION

In addition to the weekly inspection, check all nuts and Allen screws, in particular around ball bearings and the torch support.

Loosen the carbon in the carbon holders (if fitted), clean with compressed air and check the carbon length.

Inspect the gear motors for leakage in the gear seals and check the cables.

Check to see if there is any play in the main bearings.

Clean the power sources internally (**Remember to disconnect the mains cable**).

Sign the maintenance schedule.

Operation

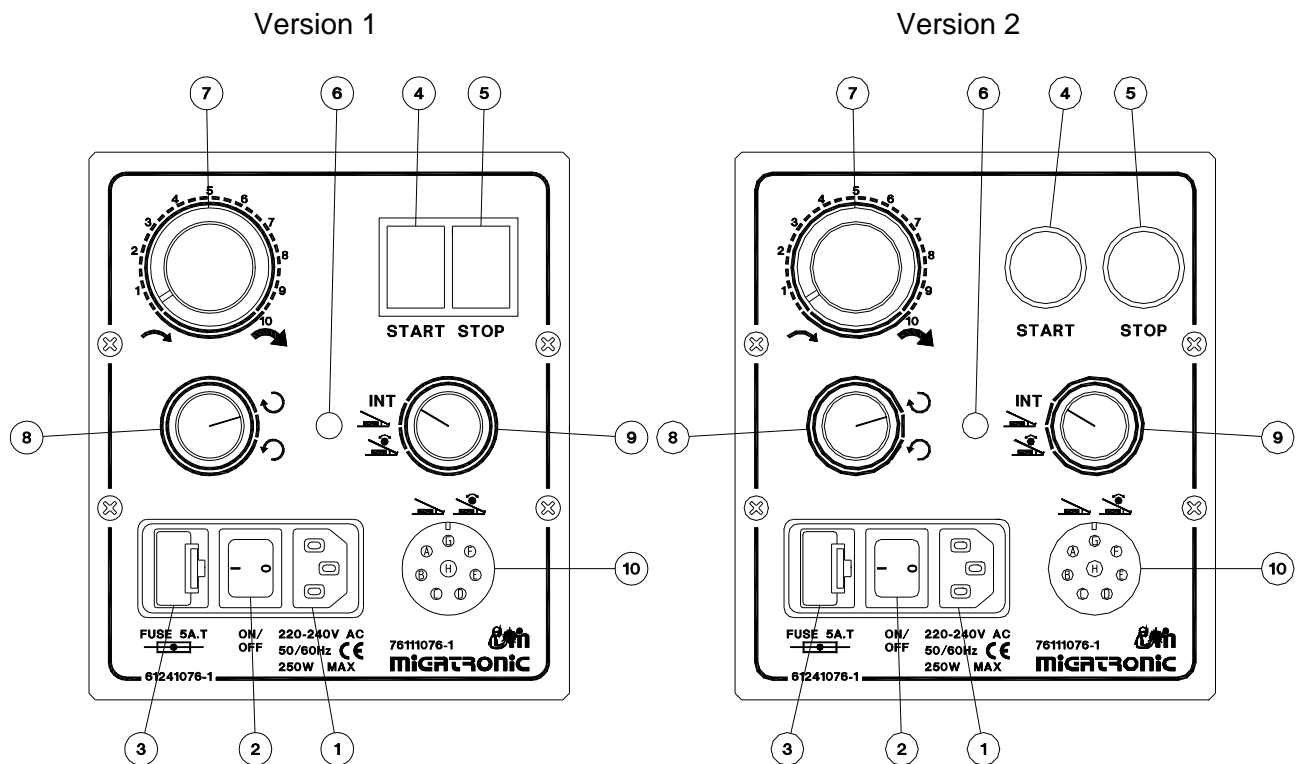
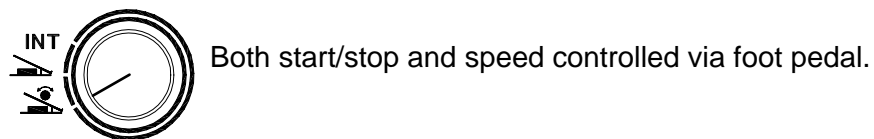
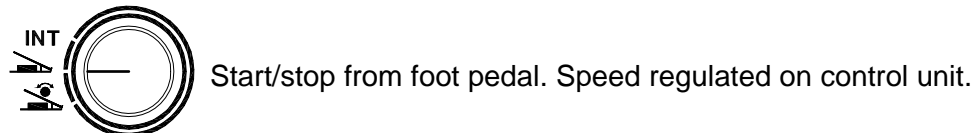
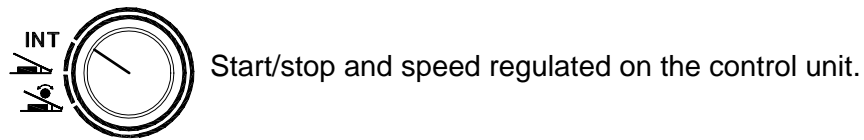


Figure 1

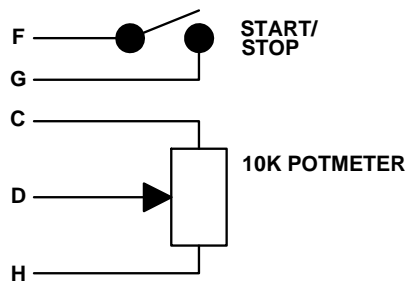
The following refers to figure 1:

- Pos. 1: Connection of mains cable. Connector plug with earth.
- Pos. 2: 0/1 switch. Switches the control unit on/off.
- Pos. 3: Fuse 5A. slow-acting 5*20mm.
- Pos. 4: Start turntable. (Only if the switch pos. 9 is in the INT position).
- Pos. 5: Stop turntable. (Only if the switch pos. 9 is in the INT position).
- Pos. 6: Lamp which indicates status. Red = control unit stopped, green = control unit started.
- Pos. 7: Regulation of speed of rotation. (Dependent on the switch pos. 9).
- Pos. 8: Direction of rotation of the turntable.

Pos. 9: Function switch with the following functions:



Pos. 10: Connection of foot pedal with start/stop and speed regulation.



Connections in the 8-pole remote control plug.

If pins F&G are connected, the turntable starts. The turntable stops when the circuit is broken.

A standard circuit switch with min. 100mA closed/open circuit capacity can be used.

The speed is increased when the arm on the potentiometer D moves up towards C, and the speed is reduced when the arm on the potentiometer D moves down towards H.

A standard 0.5W potentiometer can be used.

Accessories

Part No.	Description
92260150-0	5 metre mains cable, connector plug and with Danish earth plug
76111102-1	Foot pedal with start/stop and speed regulation <i>NOTE: intermediate cable necessary No. 74340003-0</i>
74340003-0	5 metre 8-pole intermediate cable. Foot pedal / turntable
76111101-1	Foot pedal with start/stop <i>NOTE: adapter cable necessary no. 74320016-1</i>
74320016-1	Adapter cable from 4-pole pin 1&2 to 8-pole F&G Adapter between standard foot pedal to 8-pole plug.
17210024-0	8-pole cannon plug. For use with remote control
18110103-0	Dinse connection socket female 50-70mm ² (Welding current connection)
18110104-0	Dinse connection socket female 70-95mm ² (Welding current connection)
81100204-1	Centre chuck Ø160mm
81100205-1	Centre chuck Ø200mm

Trouble shooting

Symptom:

Reaction:

No light in the turntable's indicator lamp.

Check that the control unit is switched on.
Check the mains connection.
Check the fuse. (Disconnect the mains cable before checking the fuse).

The start button does not start control unit.

If the indicator lamp on the turntable switches to the green when the start button is pressed, and the turntable does not rotate, check that the speed button is not turned to minimum. Increase the speed.
Turn off the control unit for 2 minutes and try again.
If the fault has still not been remedied, contact service.

If the indicator lamp on the turntable does not switch to green, when the start button is pressed, check the function switch and turn it to the INT (Internal) position.

The turntable tries to run, but stops suddenly and cannot be restarted.

The control unit is in an error state. Switch off the control unit for about 1 minute and try again.
Check whether the turntable is overloaded.

Technical specifications

Mains voltage:	220-240V AC / 10A
Frequency:	50/60Hz
Input power max.	250Watt
Speed of rotation *)	0.5 – 10 revs/min.
Bore	G1/8" at both ends
Max. welding current via current junction	200 Ampere 100%
Weight	18 kg
Dimensions H * B * D	300 * 300 * 350mm
Mounting holes in bottom plate	4 * Ø12mm, mutual spacing 110mm

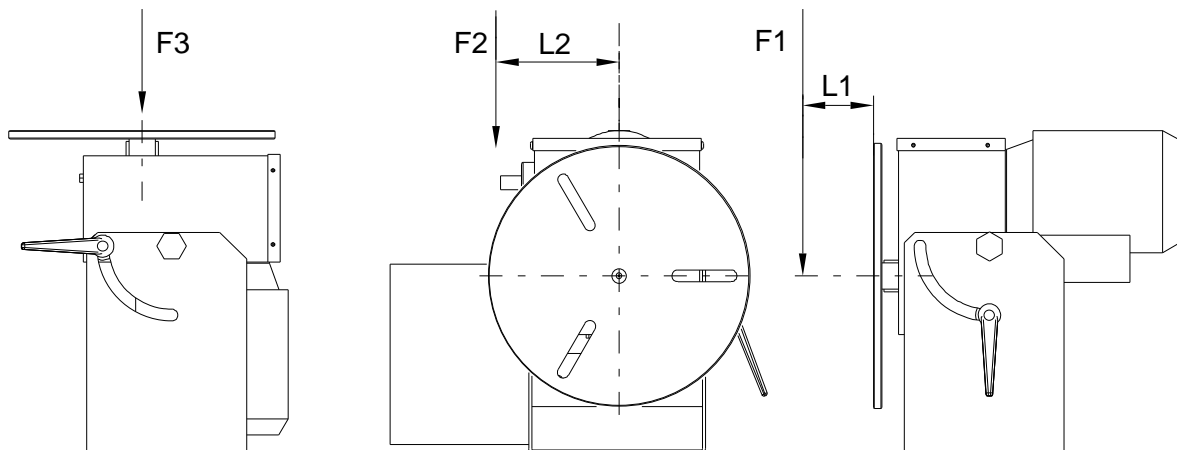
* Max 50% duty cycle

Max. load

L1 / mm	0	50	100	200	300
F1 / kg	35	25	15	10	6

L2 / mm	20	40	60	80	100
F2 / kg	50	25	16.5	12.5	10

F3 = 25 kg



Spare parts list

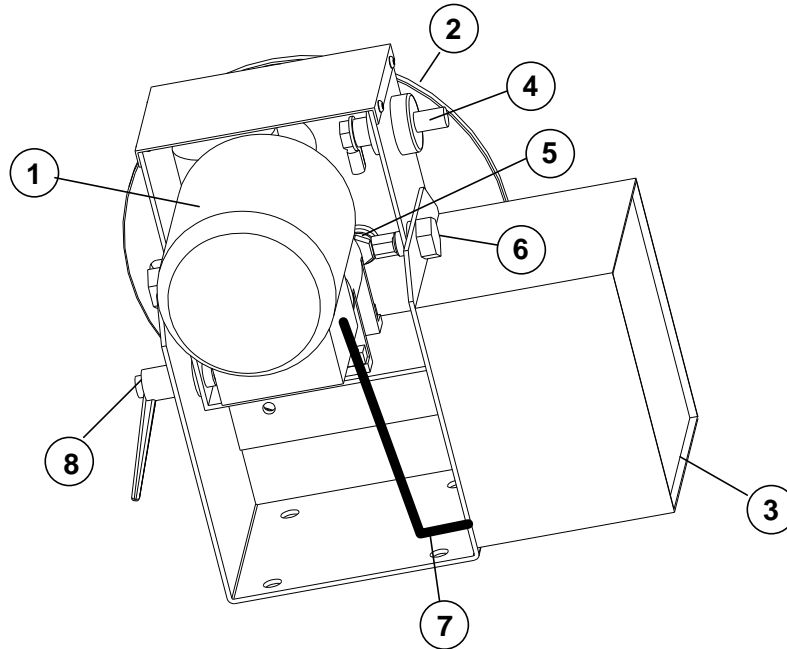


Figure 2

The following refers to figure 2:

Pos. No.	Part No.	Description
1	17290055-1	Gear motor 1400 RPM
2	70701035-1	Plane flange Ø250mm
3	76111076-1	Control unit complete
4	18120060-0	Dinse connection plug 35-50mm ² MALE
5	Current junction consisting of the following components:	
	25563001-1	Etronax bush
	25143001-1	Copper pressure shoe
	42111035-1	Compression spring 1478
	40061012-1	M10 steel bolt
6	29403006-1	Fulcrum pin NV24*M10
7	92292004-1	Special cable control unit/turntable
8	45030034-1	Handle GN-300-78-M10-20-SW

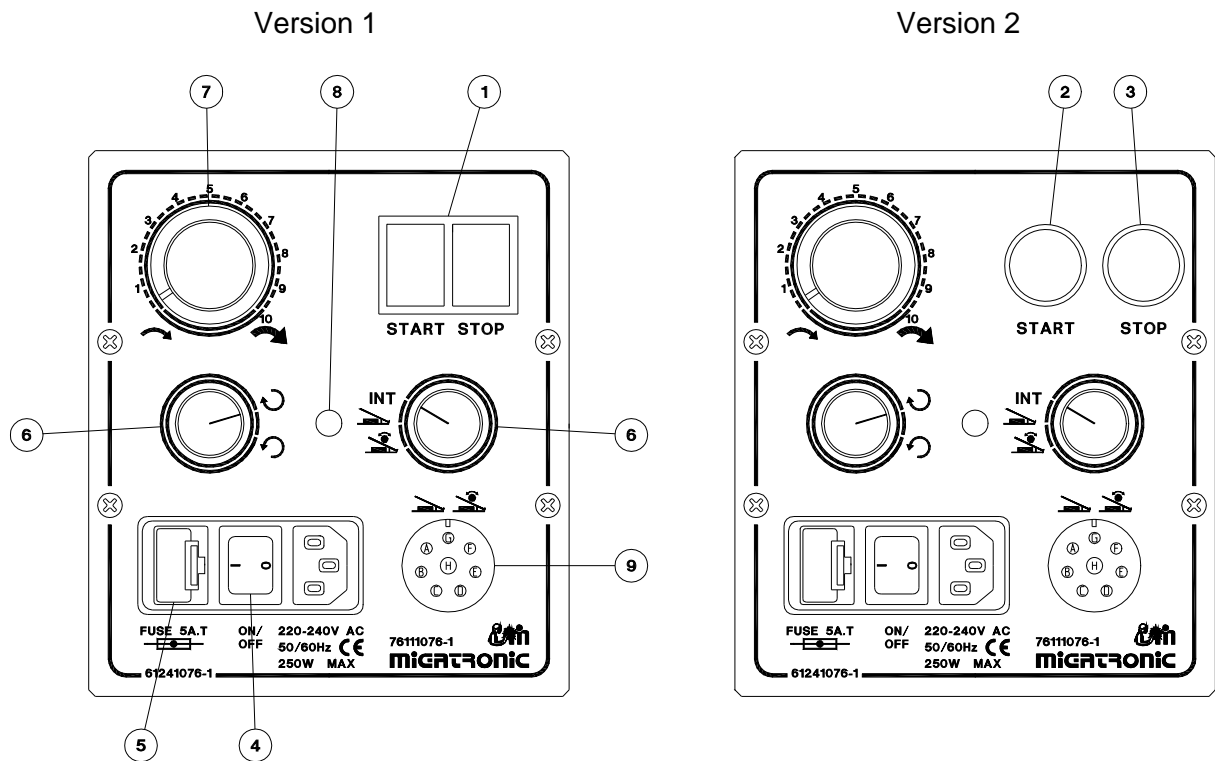


Figure 3

The following refers to figure 3:

Pos. No.	Part No.	Description
1	17110258-1	Combined start/stop button
2	17110189-1	Push-button green. Schurter
3	17110190-1	Push-button red. Schurter
4	18180009-1	Connector plug incl. switch and fuse
5	17172050-1	Fuse 5 * 20mm. 5 Ampere. Slow-acting
6	18508009-0	Button. Heva position B
7	Speed regulation button consisting of the following components:	
	18519001-0	Arrow disc. Disc behind the button
	18503605-0	Knob Ø28mm, without line
	18521205-0	Cover for button. Without line
	18490001-0	Friction drive 1:6, brass
	14504101-0	Potentiometer for speed 10K

Pos. No.	Part No.	Description
8	12240501-1	Lamp/LED 8mm
9	17200023-0	8-pole multiplug for remote control

Other spare parts not illustrated:

71611076-1A	Assembled complete printed circuit board. Control unit version 1
71611076-1B	Assembled complete printed circuit board. Control unit version 2
76130033-1	Motor control/frequency converter
76110035-1	EMC Noise filter for motor control

Cabinet parts:

61241076-1	Front panel - serigraph. Black with white print
70131076-1	Cabinet. Rear panel incl. side pieces
24411001-1	Lid and bottom of cabinet.

Note: When ordering cabinet parts, please state version of control unit.

Disposal

The old turntable contains components which can be recycled. Therefore do not deliver your turntable to the nearest waste disposal site, but contact your local authority or a car or scrap dealer with regard to the recycling of these components.

All external connections (electricity, air, etc.) must be disconnected prior to dismantling.

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