

Instruction Manual

Straight Grinder

MSG-3BSN / 850-0901 MSG-32BSN / 850-0900
MSG-24BSN / 850-0902

Angle Grinder

MAG-121N / 850-0905 MAG-123N / 850-0895
MAG-122N / 850-0875 MAG-093N / 850-0890

Thank you for purchasing UHT's air micro grinder. This is an air tool for grinding and polishing metal.
Wrong use of the product may cause severe injury or fatal accidents. Be sure to read this manual carefully before using the product.
This manual contains instructions on how to use UHT's air micro grinders. Keep this manual near the product for future reference.

8914220 / 1020

Symbols for Safe Use

The symbols below alert you to risk in using the product and give precautions. Be sure to observe all the precautions for safe use.

	WARNING Failure to observe the precautions may result in serious risk to your health, and may lead to death in some cases.
Specifications and package contents subject to change without notice for modification. Please note, therefore, that description in this manual may be different from the actual product.	

	CAUTION Failure to observe the precautions may result in risk to your health, and may lead to accidents, injury or blindness. It may result in damage to the product.
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1. Safety Precautions

WARNING

- Using the tool involves danger; give the highest priority to safety.
- Do not touch the rotating tip of the tool.
- Use leather protective gloves, not cotton work gloves.
- Do not attempt to alter the tool and accessories.
- Turn off the valve of the tool before stopping the work. Do not leave the tool rotating.
- Do not exceed the maximum numbers of rotations of accessories.
- Do not use damaged, cracked, warped or fallen tools and accessories.
- Confirm that the valve is off before connecting the joint.
- Never use the tool near inflammable gases, liquids or substances.

CAUTION

- Be sure to use the FRL unit (air filter, air regulator and lubricator) to remove dust and moisture from the supply air, and to keep supplying oil. (Recommended oil supply: 3 - 5 drops/min)
- This tool involves vibration; do not use it continuously to prevent tendovaginitis and vibration white finger.
- Wear protective glasses, hat, mask, ear muffs and gloves when using the tool.
- Do not use the tool exceeding the specified air pressure.
- Be sure to make a trial run before operation.
- Check the collet chuck for wear and damage before use.
- Stop using the tool if you notice abnormal noise, heat or vibration.
- Be sure to cut off the primary air supply and remove residual air before disconnecting the quick joint from the air pressure source.
- Use the UHT's genuine or recommended accessories with the correct sizes, and follow the appropriate instructions and regulations for use.

2. Unpacking

The package contents vary by the model. Contact the dealer or UHT for missing or defective components.

The contents subject to change without notice for specification change, etc.

① MSG-3BSN (MSG-24BSN MSG-32NSN)	③ MAG-091N ④ MAG-122N ⑤ MAG-123N	⑦ Pin	⑨ 1.5 m air hose
② MAG-121N	⑥ MAG-093N	⑧ Wrench (Excluding MAG-122, 123, 093N)	⑩ Overhose
			⑪ Hose band (2 pcs)
			⑫ Quick joint
			⑬ Manual (this leaflet)

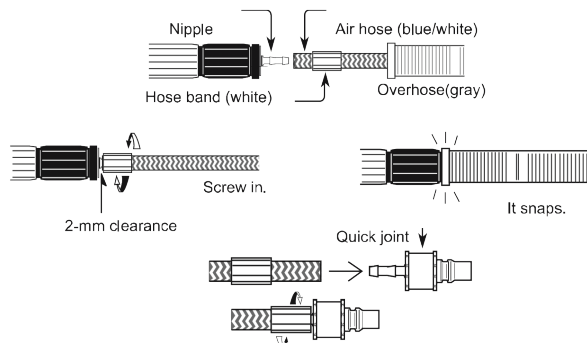
3. Connection

Connecting the Air Hose

Connect the air hose (blue/white) to the nipple on the tool body.
Screw in the hose band that is threaded inside to clamp the hose.
After clamping, connect the overhose to the tool.
On the opposite side of the air hose, attach the quick joint in the same manner.

POINT!

Pass the air hose through the hose bands beforehand.
Pass the air hose through the overhose beforehand in the same manner.



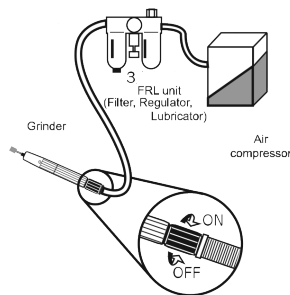
4. Operation Procedure

ON/OFF

In connecting air, be sure to use the FRL unit (sold separately) to remove dust and moisture from the supply air, and to keep lubricating. Industrial multipurpose oil with viscosity of ISO VG32 is recommended. Using the tool without the FRL unit may result in extremely shortened service life, performance degradation and heat. **The warranty does NOT cover defect resulting from neglecting this instruction.**

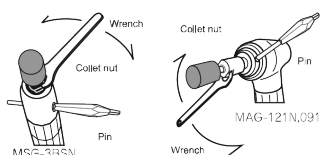
To use the tool, connect it to the air supply with the specified air pressure and flow volume. Turn the control valve counterclockwise. The valve opens fully by 2 turns. Adjust the flow volume by this valve to control the rotation speed of the tool. Use the air regulator in the FRL unit to adjust the air pressure.

To stop using the tool, turn the control valve clockwise fully and confirm that rotation stops. Be sure to disconnect the tool from the air supply after use. Prevent dust or chip from getting in from the quick joint for storage.



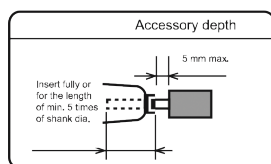
5. Replacing the Accessories

Ensure the tool stops rotating before work.
MSG-3BSN, MAG-121N, 091N



Insert the pin into the pin hole to fix the tool shaft. Loosen the collet nut by the attached wrench. Remove the accessory and replace with a new one. Secure the replaced accessory in reverse order to removal. Check that the accessory is secured, and remove the pin.

Do not tighten the nut without the accessory inside on MSG-3BSN, MAG-121N and MAG-091N. Be sure to attach the accessory of the correct size before tightening the collet nut. The collet may bend and the accessory cannot be inserted. **(The warranty does NOT cover such defects.)**



CAUTION

If it is unavoidable to use accessories not made by UHT, note the following:
Do not exceed the maximum rotation speed of the accessory.
Do not use the carbide bur with a blade diameter larger than the shank diameter.

MAG-122N, MAG-123N, MAG-093N



Insert the pin into the pin hole to fix the tool shaft. Turn the grinding wheel or rubber disc holder by hand to remove it. Secure the replaced accessory in reverse order to removal. Check that the accessory is secured, and remove the pin.

6. Troubleshooting

Symptom	Cause	Countermeasure
Shaft runout	Dust in the collet	Detach the collet nut and remove dust.
	Accessory runout	Replace the accessory.
	Damaged or worn-out bearings	Send for repair.
Insufficient rotation speed/torque No rotation	Low air pressure/low volume	Check the air piping and add an air compressor.
	Insufficient lubricant	Increase the supply oil amount (3 drops/min recommended).
	Damaged or worn-out blades	Send for repair.
	Air compressor failure	Check or repair the air compressor.
	Broken air hose	Replace the air hose.
	Poor connection of air hose	Disconnect the air hose from nipple and reconnect it.
Abnormal noise	Clogged air filter	Replace the quick joint.
	Rotation speed is too high	Decrease air supply pressure by the regulator.
Body becomes hot	Gear noise of pinion	The noise will be weaker by running-in.
	Insufficient lubricant	Increase the supply oil amount (3 drops/min recommended).
	Too high air pressure	Decrease air supply pressure by the regulator.

If the problem persists, contact the dealer or UHT.

7. Specifications

	MSG-3BSN	MSG-24BSN	MSG-32BSN
Air pressure	0.4MPa~0.6MPa		
Air consumption ℓ/min(ANR)	120ℓ~	120ℓ+	
MAX rotating speed(rpm)	65,000		
Vibration level m/s ²	2.5以下		
Noise level dB	78		
Accessory	3mm 3-mm shank	2,34mm 3/32inch shank	3,175mm 1/8inch shank
Weight (Excluding accessories)	130g		

	MAG-121N	MAG-091N	MAG-122N	MAG-123N	MAG-093N
Air pressure	0.4MPa~0.6MPa				
Air consumption ℓ/min(ANR)	120ℓ~		120ℓ+		
MAX rotating speed(rpm)	48,000	48,000	35,000	23,500	
Vibration level m/s ²	2.5	2.5	2.5	2.5	
Noise level dB	78	78	78	78	
Accessory	3mm 3-mm shank only		φ20 M6 P=0.75	φ30 M7 P=0.75	
Weight (Excluding accessories)	140g	140g	140g	175g	160g

Specifications subject to change without notice.

EC DECLARATION OF CONFORMITY
for
Grinders: Micro Hand Tool Series

MSG-3BSN, MSG-3BSPlus, MSG-3BSPLUS T, MSG-3CS, MSG-24BSN, MSG-32BSN
MAG-121N, MAG-121PLUS, MAG-122N, MAG-122PLUS, MAG-123N,
MAG-123PLUS, MAG-093N, MAG-093PLUS, MAG-091N, MAG-121N1/8

Standards used as guidance
Machinery Directive : EN12100:2010

Means of Conformity
The Product is in conformity with Machinery Directive 2006/42/EC