



# **Compressed-air grinder AirMAX 20, 35 und 90/20**



**Instrucion manual**

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## Tips on using the manual



This manual has been written for the device user to ensure a problem-free operation, care and maintenance.

Important instructions and information concerning safety and operational reliability have been highlighted.

The symbols used in the manual have the following meanings:

### CAUTION!

***Working and operating processes which must be observed to the letter to exclude any risk to persons.***

### IMPORTANT!

***Working and operating processes which must be observed to the letter to avoid any damage to the device.***

### INFORMATION!

*Technical information to which the device operator must give special attention.*

The illustrations and diagrams are numbered in sequence within each chapter. Some of these illustrations have keys. References to illustrations within the text e. g. (5.1/2) have the following meaning:

5.1 = Figure 5.1

2 = Position 2 in the key to the figure.

**Please feel free to call our customer service department at any time should you encounter technical problems which are not dealt with in this manual:**

**Telephone +49 (0) 22 04 / 8 39 - 0**

**Telefax +49 (0) 22 04 / 8 39 - 86**

***www.joke.de***

### INFORMATION!

*Spare parts lists and instruction manuals for our products are to be found at [www.joke.de](http://www.joke.de).*

This device has been built according to the latest technical standards and generally accepted safety regulations. Nevertheless, it can constitute danger to life and limb for operator or third parties and a hazard to the device itself or other equipment during use.

**IMPORTANT**

- (1) **Only use the device if in perfect working order and for its intended purpose. You must always pay attention to the instruction manual and safety instructions therein and be aware of the risks! Repair any faults which could affect the device's safety immediately by yourself or have these repaired.**

The unit is designed exclusively for grinding, milling and brushing work with the tools listed and approved in the JOKE® catalogue „Surface Finishing“. Any other use will be deemed to be contrary to its intended purpose. The manufacturer cannot be held liable for any resulting damages. The risk is borne solely by the user.

Correct use also includes compliance with the instruction manual and an observation of the care and maintenance conditions.

Keep the instruction manual handy at the device's place of use.

**CAUTION!**

- (2) Pay attention to and observe generally applicable statutory and otherwise binding regulations relating to accident prevention and environmental protection in addition to the information provided in the instruction manual!
- (3) **All personnel commissioned to work on or with the device must have read this instruction manual, and particularly the safety instructions chapter, before starting work. This applies especially for personnel who only work with the device occasionally.**

**IMPORTANT!**

- (4) Stop the device immediately should you notice changes to the device or its operating behaviour that are relevant to its safety. Have these remedied before restarting work.
- (5) **Do not carry out any modifications, additions or conversions to the device! This also applies to the installation and adjustment of safety equipment.**
- (6) Spare parts must meet the technical requirements specified by the manufacturer. This can only be guaranteed with original JOKE spare parts.
- (7) Any work on/with the device may only be carried out by qualified, appropriately trained and authorised personnel. Pay attention to minimum statutory age limits!

**CAUTION**

- (8) **Wear protective goggles, protective gloves and hearing protection when working with the handpiece.**
- (9) If noise generation (sound pressure level) at the workplace exceeds 85dB (A), sound protection and hearing protection measures for the user are required.
- (10) Personnel undergoing training or in a general apprenticeship should only be allowed to work with the machine under the constant supervision of an experienced operator!
- (11) Restrain from any type of work that could jeopardise your safety.
- (12) The device may only be used if all protective and safety equipment is in place and in proper working order.
- (13) Do not under any circumstances exceed the maximum permissible speed of the tool and clamping device.
- (14) Before clamping in a new tool and adjustment, the compressed-air grinder must be switched off. Take care that the tools are fixed according to instructions. Allow the machine to run at idling speed for a few seconds. Change vibrating tools immediately; protect grinding points against impact, jarring and grease.
- (15) Secure or firmly clamp the workpiece to be processed against slipping.
- (16) Do not leave the device unattended when switched on!
- (17) Stop and secure the device immediately in the event of malfunctions! Faults must be remedied at once.
- (18) **The compressed-air grinder is designed for an air pressure of 6 bars. If the device is driven with greater air pressure, undesirable vibrations may occur that do not necessarily damage the device, but place stress on the user. The air pressure should not exceed 8 bars, since damage can no longer be ruled out in this case.**
- (19) Use a pressure control valve that can be adjusted to 6 bars.
- (20) Before beginning work, check all lines for condensation water and soiling. The compressed-air should be dry and clean. It is advisable to place a filter upstream.
- (21) The compressed-air grinder is generally not earthed. Take care during contact with other sources of current.

**CAUTION!**

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## Safety instructions



- (22) The compressed-air grinder should not be used in the vicinity of explosive substances/gases.
- (23) Dammed up compressed-air may result in damage to the filing machine.
- (24) Long hair or loose clothing may get caught in or drawn into the filing machine.
- (25) Always keep the compressed-air grinder such that grinding sparks cannot cause any damage.
- (26) Watch out with the pulsating pressure line.
- (27) Allow the machine to run at idle rpm for a few seconds. Change vibrating tools immediately. Protect grinding points against knocks, impacts and grease.
- (28) Materials containing asbestos must not be ground, milled or brushed.

Joisten & Kettenbaum warrant the correct manufacture of every JOKE®-product which is delivered in accordance with the terms of contract and delivery.

This warranty does not cover damages caused by normal wear and tear, incorrect handling, negligent use, the fitting of non-original spare parts, inadequate care and/or a failure to comply with this technical manual.

**IMPORTANT!**

**The device may only be used by appropriately trained personnel. If it is not, all warranty claims will be forfeited according to the terms of delivery.**

The compressed-air grinder is a pioneering tool owing to its active vibration damping. The slightest natural oscillations offer excellent properties for precision work, which rule out fatigue even during lengthy working processes. If the following simple instructions for use of the device are observed, we guarantee a long service life under the best working conditions.

**IMPORTANT!**

***Claims under the warranty are rendered void by opening the compressed-air grinder. Complaints can only be recognised if the machine is returned without being dismantled.***

## Device identification

The series number can be found on the handle sleeve.

**Scope of supply for AirMAX 20 and 35:**

- ✓ Collet Ø 3 mm
- ✓ Chuck key
- ✓ Air line, 1.5 m
- ✓ 1/4" connection bush incl. filter
- ✓ Rotary lever valve

**Scope of supply for AirMAX 90/20:**

- ✓ Collet Ø 6 mm
- ✓ Tool set
- ✓ Rotary lever valve
- ✓ Chuck key

**Accessories for AirMAX 20, 35 and 90/20:**

- |   |                             |
|---|-----------------------------|
| ✓ Air line, air supply                      | Order no.: <b>0 750 813</b> |
| ✓ Collet Ø 3 mm                             | Order no.: <b>0 750 831</b> |
| ✓ Collet Ø 6 mm                             | Order no.: <b>0 750 832</b> |
| ✓ Collet Ø 8 mm                             | Order no.: <b>0 750 833</b> |
| ✓ Adapter for belt grinder (only for 90/20) | Order no.: <b>0 750 841</b> |



Compressed-air grinder AirMAX 20	
Speed:	20,000 l/min
Output:	270 W
Air pressure:	6 bar
Air consumption:	590 l/min, exhaust air forwards
Noise level:	< 81 dB (A)
Dimensions:	Ø 32 x 160 mm
Weight:	420 g
Lubrication:	Continuous by oil mist

Compressed-air grinder AirMAX 35	
Speed:	35,000 l/min
Output:	220 W
Air pressure:	6 bar
Air consumption:	520 l/min, exhaust air forwards
Noise level:	< 78 dB (A)
Dimensions:	Ø 31 x 143 mm
Weight:	290 g
Lubrication:	Continuous by oil mist

Compressed-air grinder AirMAX 90/20	
Speed:	20,000 l/min
Output:	220 W
Air pressure:	6 bar
Air consumption:	520 l/min, exhaust air forwards
Noise level:	< 79 dB (A)
Dimensions:	Ø 31 x 70 x 137 mm
Weight:	370 g
Lubrication:	Continuous by oil mist

**Notes on operation**

- The recommended air pressure for operating the compressed-air grinder is 6 bars. An air pressure greater than 8 bars may result in damage to the compressed-air grinder.
- The spindle must be treated particularly carefully when immobile. Under no circumstances must the spindle be knocked, since the high precision bearings which are important for function will be damaged. Impact stress with the spindle in the resting state will result in lasting deformation of the bearing races.
- Pay attention to the permissible cutting speeds and the tool manufacturer's guidelines before using the tools.
- Check that the tool is firmly seated and safely tighten.

**INFORMATION!**

*Check the maintenance unit regularly. If condensation water and dirt are present, drain the condensation water and clean the filter (refer to section on Care/Maintenance).*

**CAUTION!**

**Wear protective goggles, protective gloves and hearing protection!**

The compressed air grinder provides optimum conditions for use during deburring, grinding and polishing work in mould making. Tools with a shaft diameter of 8 mm and smaller can be easily clamped.

**IMPORTANT!**

***Pay attention to proper handling of the device. Do not exert any pressure on the tools. The tools should only be guided over the surfaces. Correct clamping of the tools is indispensable.***

**Connecting the compressed-air grinder**

**INFORMATION!**

1. Connect the air supply line of the pneumatic compressed-air grinder to the maintenance unit.

*In order to ensure optimum lubrication and the lowest loss of pressure, it is preferable not to use any line extensions.*

**INFORMATION!**

*With a line length exceeding 2 m, continuous lubrication of the hand grinder is not guaranteed, since the oil already deposits itself inside the line.*

2. Set a pressure of 6 bars on the maintenance unit.  
The compressed-air grinder is now ready for operation. The oiler should be set to the smallest possible dispensing quantity, 1-2 drops/min.
3. Insert the tool in the collet and tighten with the chuck keys supplied.
4. Valve operation: the machine is equipped with a combined rotary safety lever valve. Thus it can be switched on and off by two ways:
  - Pivot the ratchet lever in the direction of the arrow and press down the valve lever.
  - Open the valve by turning anticlockwise, close by turning clockwise until the stop position (observe the direction of the arrow). The ratchet lever must be previously removed in this case.

**IMPORTANT!**

***Before connection to the compressed-air network, one must check in each case that the rotary valve is closed.***

**Tool receptacles**

- The compressed-air grinder is only intended for manual use.
- The tool receptacle is designed such that tools with a shaft Ø up to 8 mm can be received by the collets.

**Tool change**

Use the chuck keys to loosen the collet. Do not use any tools with greater shaft diameters (max. Ø 8 mm) and insert the tools according to their dimensions. Place the tools in the desired position, tighten the collect and checkfor tight seat.

**INFORMATION!**

*See the current JOKE® catalogue for usable, permissible tools.*

## Maintenance unit and air connection

**IMPORTANT!**

***The compressed-air required in order to drive the compressed-air grinder must be supplied through a maintenance unit.***

The maintenance unit must consist of the following functional units:

- water and dirt separator
- pressure gauge
- oil mister (micromister)

**INFORMATION!**

*Optimum function of the compressed-air grinder is guaranteed by using the JOKE® Oiljet maintenance unit (order no. 0 004 050).*

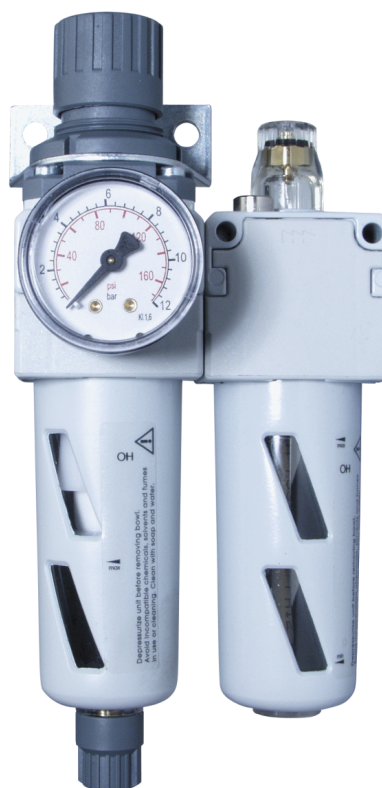


Fig. 7.1 JOKE® Oiljet maintenance unit (order no. 0 004 050)

The JOKE® Oiljet maintenance unit consists of:

- an automatic water separator, filter, a pressure reducer, an oil mister, pressure gauge and wall fixing.

### Technical data, JOKE® Oiljet maintenance unit:

max. volumetric flow:	1,200 l/min
max. input pressure:	16 bars
adjustment range:	0 – 12 bars

#### INFORMATION!

See the current JOKE® catalogue for further accessories and the installation package.

### Mechanism of action of the oil mister

The micro oil mister guarantees an even, rapid and precisely dispensable lubrication of the hand grinder.

The oil mister is adjusted to approx. 1-2 drops per minute. Only a fraction of the falling drops are misted and partly flow back into the reservoir.

Owing to the special air supply, it is possible to reduce the size of the oil particles. The latter can be transported over long distances as micromist in the air flow. They are hardly deposited. All surfaces with which they come into contact are intensively and very uniformly wetted. An even, stable oil film forms immediately at the bearing sites, the thickness of which can be rapidly and precisely adjusted.

### Setting up and connecting the maintenance unit

1. Check on the maintenance unit whether
  - the condensation-water bleed screw is closed; closing is performed by turning clockwise.
  - the pressure controller screw is open; opening is performed by turning anticlockwise.
2. Fill the oil container up to the mark with JOKE® high performance lubricant X 73012.

#### IMPORTANT!

***The oil level must not rise higher than the baffle plate of the micro oiler.***

#### INFORMATION!

*See the current JOKE® catalogue for the order no. for the lubricant in various container sizes.*

#### IMPORTANT!

3. Connect the line of the external air supply to the maintenance unit.
4. ***Take care that the air flows through the housing in the direction indicated by the arrow.***

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## Troubleshooting



<u>Fault</u>	<u>Possible cause</u>	<u>Remedy</u>
• Tool does not work	<ul style="list-style-type: none"> <li>➤ Compressed-air grinder not switched on at the lever rotary switch.</li> <li>➤ Hose line kinked.</li> <li>➤ Air pressure controller on the maintenance unit not opened.</li> <li>➤ Maintenance unit faulty.</li> </ul>	<ul style="list-style-type: none"> <li>✓ Press and twist the rotary lever valve.</li> <li>✓ Eliminate the kink.</li> <li>Set air pressure controller to 6 bars.</li> <li>✓ Change the maintenance unit.</li> </ul>

## Care

Clean the compressed-air grinder if necessary with a soft brush/paintbrush or a dry cloth.  
Store the machine in a clean, dry place.

## Maintenance

Periodically check the idle rpm. Even if the machine still operates perfectly, the motor should be removed, cleaned and the four slides checked for wear by a specialist after approx. 300 to 400 operating hours; the lubricant in the gear head (Isoflex NBU 15) should be replaced (do not wash out).

### Emptying condensate from the air filter of the maintenance unit:

1. Render the maintenance unit free of pressure
2. Unscrew the condensate container
3. Screw out the air filter and change or clean.

### CAUTION!

**Take care that the filter frame and the loose seal are reinstalled with their position unchanged.**

4. Screw in the condensate container again and perform a functional test
5. Supply the maintenance unit with pressure.



To the  
**JOKE® service department**

+49 (0) 22 04 / 8 39 - 86

Sender:

Company

Name

Street

Postcode/town or city

Please send us the spares drawing and parts  
list for the following equipment:

☐ as a printout (see above for address)

☐ by fax, \_\_\_\_\_

☐ as a pdf file to my email address \_\_\_\_\_

Compressed-air grinder AirMAX 20	Order no. 0 750 830	<input type="checkbox"/>
Compressed-air grinder AirMAX 35	Order no. 0 750 840	<input type="checkbox"/>
Compressed-air grinder AirMAX 90/20	Order no. 0 750 860	<input type="checkbox"/>
Adapter for belt grinder	Order no. 0 750 841	<input type="checkbox"/>
Maintenance unit JOKE® Oiljet	Order no. 0 004 050	<input type="checkbox"/>
Air line, supply air	Order no. 0 750 813	<input type="checkbox"/>
Adapter for belt grinder	Order no. 0 750 841	<input type="checkbox"/>
Collet, Ø 3 mm	Order no. 0 750 831	<input type="checkbox"/>
Collet, Ø 6 mm	Order no. 0 750 832	<input type="checkbox"/>
Collet, Ø 8 mm	Order no. 0 750 833	<input type="checkbox"/>
High performance lubricant X 73012, 0.1L bottle	Order no. 0 580 601	<input type="checkbox"/>
High performance lubricant X 73012, 1.0 L bottle	Order no. 0 580 602	<input type="checkbox"/>
High performance lubricant X 73012, 5.0 L bottle	Order no. 0 580 603	<input type="checkbox"/>
High performance lubricant X 73012, 10.0 L bottle	Order no. 0 580 604	<input type="checkbox"/>

Date

Signature



**joke**

Asselborner Weg 14 - 16

D-51429 Bergisch Gladbach

Telephone: +49 (0) 22 04 / 8 39-0

Telefax: +49 (0) 22 04 / 8 39-60

Internet: [www.joke.de](http://www.joke.de)

Email: [info@joke.de](mailto:info@joke.de)

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