

Compressed-air filing machine FRV-110

Order no. 0 751 600



Operating Manual

1



List of contents

1	List of contents.....	Page 02
2	Tips on using the manual	Page 03
3	Safety instructions	Page 04
4	Warranty / identification	Page 07
5	Device overview	Page 08
6	Technical data.....	Page 09
7	Operation / use.....	Page 10
8	Troubleshooting.....	Page 15
9	Care and maintenance.....	Page 16
10	Fax form.....	Page 17

2

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 - 60

Internet www.joke.de

3

Safety instructions



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 device is designed exclusively for grinding, filing and polishing with the tools listed and approved in the joke catalogue for 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.**

- (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.

IMPORTANT!

- (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 safety goggles and hearing protection when working with the handpiece.**

3

Safety instructions



CAUTION!

- (9) 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!
- (10) Restrain from any type of work that could jeopardise your safety.
- (11) The device may only be used if all protective and safety equipment is in place and in proper working order.
- (12) Before clamping in a new tool and adjustment, the filing handpiece must be switched off.
- (13) Do not leave the device unattended when switched on!
- (14) Stop and secure the device immediately in the event of malfunctions! Faults must be remedied at once.
- (15) **The filing handpiece is designed for an air pressure of 6.5 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.**
- (16) Use a pressure control valve that can be adjusted to 6.5 bars.
- (17) 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.
- (18) The compressed-air filing machine is generally not earthed. Take care during contact with other sources of current.
- (19) The compressed-air filing machine should not be used in the vicinity of explosive substances/gases.
- (20) Dammed up compressed-air may result in damage to the filing machine.
- (21) Long hair or loose clothing may get caught in or drawn into the filing machine.
- (22) Watch out with the pulsating pressure line.

4

Warranty / identification



joke Technology GmbH warrants 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 filing handpiece 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 filing handpiece.

Device identification

The series number can be found on the handle sleeve.

5

Device overview

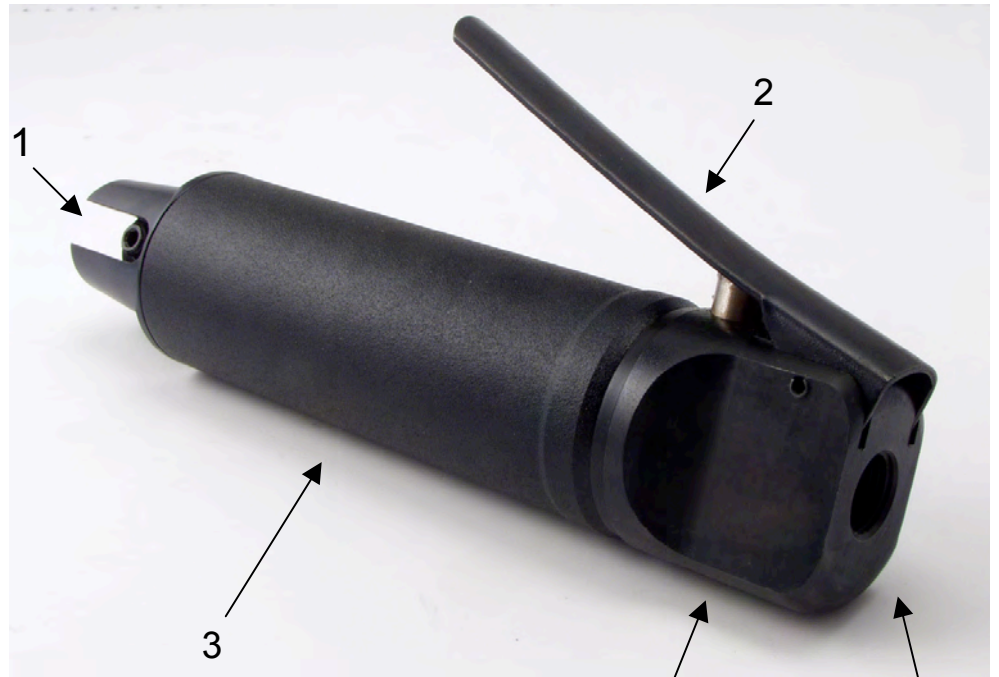


Figure 5.1 Side view

- 1 Tool fastening screw
- 2 Operating lever
- 3 Handle
- 4 Valve block
- 5 1/4" internal thread

6

Technical data



Pneumatic filing handpiece	
Number of strokes:	9,000 strokes/min
Stroke length:	8 mm
Air consumption:	78 l / min (dry)
Air pressure:	6.5 bars
Air connection:	1/4"
Tool receptacle:	max. 6 mm
Noise level:	< 77 dB (A)
Vibration:	2 m/ s ²
Dimensions:	Ø 40 x 182 mm
Weight:	1,005 g

7

Operation / use



Notes on operation

- The recommended air pressure for operating the filing handpiece is 6,5 bars. A higher air pressure may result in damage to the filing handpiece.
- 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.
- Only apply light pressure when grinding and polishing with the filing handpiece.
- 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 securely tighten #using the Allen key.
- Setting into operation by pressing the lever valve.

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 and hearing protection!

Filing:

The filing handpiece is excellent in combination with a wide selection of tools for precision and deburring work on all steels and non-ferrous alloys. The filing handpiece offers the optimum prerequisites for use in mould building during deburring, grinding and polishing tasks. Tools with a shank diameter of 6.0 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. Do not use any deformed or cracked files.

7

Operation / use



Connecting the filing handpiece

1. Connect the air supply line of the pneumatic filing handpiece to the maintenance unit.

INFORMATION!

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

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 6.5 bars on the maintenance unit.
The filing handpiece is now ready for operation.
3. Insert the tool into the tool receptacle and tighten with the Allen key provided.
4. The device is switched on and off by operating the operating lever.

Ensure that the compressed air used is oil-free.

IMPORTANT!

Tool receptacles

- The filing handpiece is only intended for manual use.
- The tool receptacle is designed such that tools with a shaft \varnothing up to 6.0 mm can be received by the collets.
- The handpiece can be rotated to the valve block. This allows adaptation to all conditions.

Tool change

Fold the hand lever fully upwards and grasp the handle when changing the tool. Use the Allen key to loosen the locking screw. Do not use any tools with greater shaft diameters (max. \varnothing 6.0 mm) and insert the tools according to their dimensions. Place the tools in the desired position, tighten the fastening screw and check that the tool is correctly locked.

INFORMATION!

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

7

Operation / use



IMPORTANT!

Maintenance unit and air connection

The compressed air required in order to drive the filing handpiece must be supplied through a maintenance unit. The compressed air must be dry, i.e. without oil.

The maintenance unit must consist of the following functional units:

- water and dirt separator
- Pressure gauge

INFORMATION!

Optimum function of the filing handpiece is guaranteed by using the joke Dryjet (order no. 0 004 060).



Figure 7.1 Maintenance unit joke Dryjet (order no. 0 004 060)

The maintenance unit JOKE® Dryjet consists of:

- Manual water separator
- Filter 25 µm
- Pressure reducer
- Pressure manometer and wall attachment

Technical data of maintenance unit joke Dryjet

7

Operation / use



Max. volumetric flow:	1,200 l/min
Max. input pressure:	16 bars
Control range	0 – 12 bars
Air connection:	1/4"

INFORMATION!

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

IMPORTANT!

Add 1 to 2 drops of joke high-performance lubricant X 73012 manually through the supply hose every 10 working hours!

Setting up and connecting the maintenance unit

1. On the maintenance unit check whether
 - the condensation bleed screw is closed;
turn clockwise to close.
 - the pressure regulator screw is open;
open by turning anticlockwise.
2. Connect the hose of the external air supply to the maintenance unit.

IMPORTANT!

Ensure that the air flows through the housing in the direction indicated by the arrow.

8

Troubleshooting



<u>Malfunction</u>	<u>Possible cause</u>	<u>Remedy</u>
<ul style="list-style-type: none">• Tool does not work.	<ul style="list-style-type: none">➤ Lever valve of the filing hand-piece not pressed.➤ Hose line kinked.➤ Air-pressure controller on the maintenance unit not opened.➤ Maintenance unit faulty.	<ul style="list-style-type: none">✓ Press lever valve.✓ Eliminate the kink.✓ Set air-pressure controller to 6.5 bars.✓ Change the maintenance unit

9

Care / Maintenance



Care

Clean the compressed-air filing machine as necessary with a soft brush or dry cloth.

Maintenance

The compressed-air filing machine is maintenance-free.

Emptying condensate from the air filter of the maintenance unit

1. Render the maintenance unit free of pressure using a 1/4" ball cock.
2. The condensate must be drained using the bleed valve prior to reaching the maximum filing level. The bleed screw is to be turned clockwise (~90°) and pushed upwards.
3. Screw out the air filter and change or clean.
4. Screw in the condensate container again and perform a functional test. After emptying and changing the filter, loosen the bleed screw and rotate anticlockwise (~90°).

CAUTION!

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

5. Supply the maintenance unit with pressure.

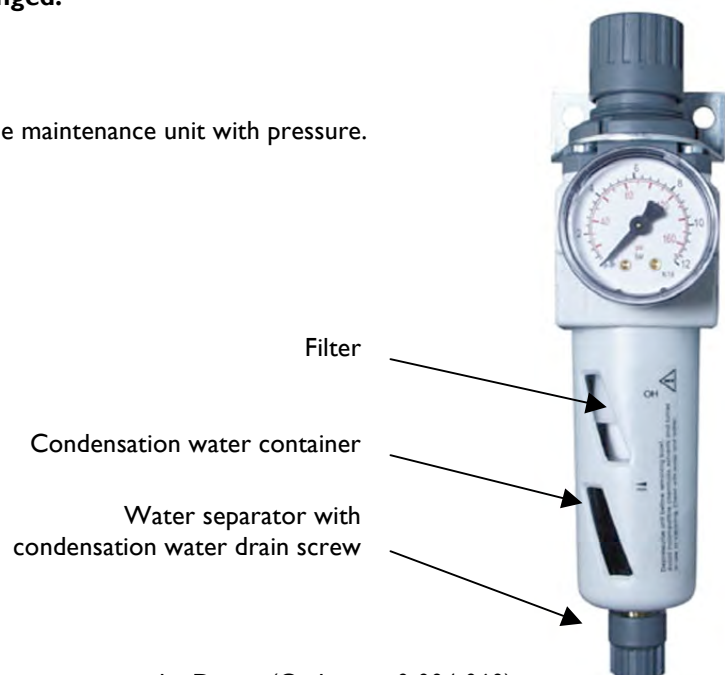


Figure 9.1 Maintenance unit joke Dryjet (Order no. 0 004 060)

10

Fax-form



To
joke
-Service Department
+49 (0) 22 04 / 8 39 - 60

Sender:

Company

Name

Street

Postcode town/city

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

as a printout (see address overleaf),

by fax, _____

as a pdf file to my e-mail address

Compressed-air filing machines FRV-I 10	Order no. 0 751 600	<input type="checkbox"/>
Maintenance unit joke Dryjet	Order no. 0 004 060	<input type="checkbox"/>
High-performance lubricant X 73012, 1,0 l 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"/>

Date

Signature

joke Technology GmbH

Asselborner Weg 14 - 16

D-51429 Bergisch Gladbach

Telephone +49 (0) 22 04 / 8 39 – 0

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

Internet: www.joke.de

Email: info@joke.de



All rights reserved for
modifications in the interest
of technical progress

joke 01/11