



joke

Oberflächentechnik
Surface Technology

Instruction Manual
jokeFlex Premium Plus
Motor System

Order no.: 0 016 850 and 0 016 850R

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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 high lighted.

The symbols used in the manual have the following meanings:



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



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



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

Safety instructions

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

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 should only be used with tools for grinding, milling, and polishing listed and approved in the joke catalogue. 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.

2. Keep the instruction manual handy at the device's place of use.
3. 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!
4. 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.
5. 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.
6. Do not carry out any modifications, additions or conversions to the device! This also applies to the installation and adjustment of safety equipment.
7. Spare parts must meet the technical requirements specified by the manufacturer. This can only be guaranteed with original joke spare parts.
8. 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!
9. Wear safety goggles when working with the handpiece.
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 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.

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Warranty / Identification

joke warrant the correct manufacture of every joke Technology GmbH 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.



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.

Device identification

The manufacturer's code and type code for motor and foot control can be found on the respective type plate.

Disposal

This product shall not be treated as household waste. Instead it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment.



Device overview



Figure 5.1 Complete overview Motor system jokeFlex Premium Plus (illustrated here: Rapid-Change Version)

- 1 – Mains lead
- 2 – jokeFlex Premium Plus motor system
- 3 – External potentiometer
- 4 – Foot control
- 5 – Flexible shaft
- 6 – Motor connecting lead
- 7 – Plastic cap
- 8 – Premium Plus handpiece (not included in the scope of delivery)

Mode of operation

The jokeFlex Premium Plus motor system is electrically powered. The rotary movement is transferred to the joke handpieces or hand-filing machines via the highly flexible shaft with ball bearings connected to the motor system.

The flexible shaft is connected to the handpiece/hand filing machine by a quick-release spring clip or the Rapid-Change-System.

The tools in the handpieces/hand filing machines are held by collets or clamped in a reception.

The unit is switched on and off using the foot control, simultaneously allowing continuous adjustment of speed.

The maximum speed can be limited by the potentiometer. The potentiometer adjustment range is 8,000 – 22,000 rpm.

The marking on the external potentiometer serves as a guide.



Figure 5.3 Section of foot control



Figure 5.2 Foot control



Setting for hang-filing machines, speed up to 8,000 rpm



Setting for angle handpieces, speed up to 15,000 rpm



Setting for straight handpieces, speed up to 22,000 rpm

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Technical data

Power supply	
Supply voltage	230 V , 50/60 Hz
Connected load	1000 W
Fuse	16 A
Cyclic duration factor	100 %
Degree of protection	totally insulated housing IP 20

Performance data for jokeFlex Premium Plus motor	
Speed range	max. 22,000 rpm
Dimensions (H x W x D)	240 x 105 x 95 mm
Weight	2,1 kg
Cable length	2,2 m

The motor is characterised by a robust construction with regard to the shaft connection and the suspension. It can be used as a suspended and horizontal motor. It generates a low level of noise. It is compatible with the Premium foot control.

Premium foot control performance data	
Speed range	3.000 up to 22.000 rpm
Speed limit	max. speed via potentiometer from 10,000 to 22,000 rpm
Connected load	230 Volt, 50/60 Hz
Weight	2,0 kg
Cable length	2,8 m

1. The foot control serves to control the motor speed by foot and is compatible with the Premium and Premium Plus motors.



Suspension device for bench top mounting: Order no.: 0 020 100

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Operation / Use

Installing and connecting the device

1. Suspend motor system in a suitable suspension device:



We recommend the height-adjustable suspension devices for bench top mounting.

The motor system can also be operated horizontally for individual applications.



Figure 7.1 Rapid-Change-System

2. Connecting the Quick-Change-System to the motor system:
 - Unscrew the plastic cap
 - Insert the shaft in the motor connection
 - then push on the plastic cap and screw it back onto
2. the motor hand tight.



Figure 7.2 Connection of motor and shaft (here: Quick-Change-System)

3. Place foot control (7.3/3) beneath the working area on the floor and connect motor connecting lead with compact plug (7.3/2) to the foot control.
4. Plug mains lead (7.3/1) into socket with earthing contact - the jokeFlex Premium Plus motor system is now ready for use.

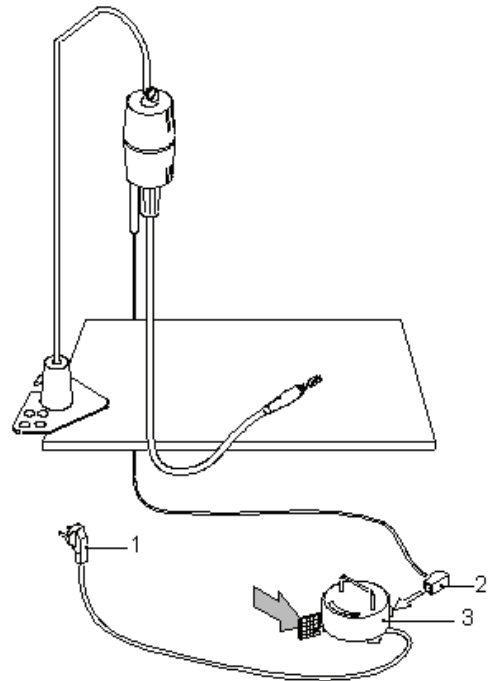


Figure 7.3 Assembly (Symbolic drawing)

Trial run

The first time the motor system is started

1. Let the flexible shaft hang down.
2. Press the foot control and leave the unit to run for approx. 10 min at the medium speed.

The resulting high rise in temperature of the flexible shaft is normal!

Before restarting the jokeFlex units after repairs, please pay attention to the following instructions:

1. Hang the motor in a sufficiently stable holder.

We recommend our suspension devices Article No. 0 020 100, see also our catalogue „Surface Finishing“.

2. Then screw the cap over the shaft - motor connection hand tight.
3. The flexible shaft should be run for at least 10 minutes with a slight bend at medium speed with no load while the motor is suspended.

This is important so that the grease on the inner shaft is distributed evenly over the entire surface. The flexible shaft may warm up slightly when running in the jokeFlex motor system. This does not affect the functionality.

The jokeFlex Premium Plus motor system is fully ready for use after running in.

If you have any questions or encounter problems with our tools please feel free to call our service department at any time under:

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

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



Connecting a handpiece/hand-filing machine

Connection to the flexible shaft is the same for all handpieces and handfiling machines!



Handpieces/hand-filing machines may not be fitted/removed whilst the shaft is rotating! Risk of breaking the carrier!

1. Spring clip system: Push spring clip together, slide chosen handpiece/hand-filing machine onto end of shaft and open spring clip.



Figure 7.4 Spring clip system



The legs of the spring clip should snap into the corresponding grooves on the handpiece/hand-filing machine!

2. Rapid-Change System: draw back the bush on the coupling on the shaft side. Subsequently push the handpiece into the coupling and allow the bush to snap back.



Figure 7.5 Rapid-Change System



The same applies to both systems: the catch must be corrected if necessary by rotating the collet until it engages.

The following flexible shafts are available for the Quick Change motor system:

Motor jokeFlex Premium Plus	Length	Order no.:
Flexible shaft Premium Plus with spring clip	1.1 m	0 016 800
Flexible shaft Premium Plus with slip joint	1.1 m	0 016 800-3
Flexible shaft Premium Plus with rapid-change coupling	1.1 m	0 016 900

Speed setting for different applications

In order to avoid damage as a result of possibly excessively high speed settings, the maximum rpm can be limited by the potentiometer on the foot control. The scale has three graduations (refer to Figure 7.5):

- Working with hand-filing machines (speed up to 8,000 rpm)
- Working with angle handpieces (speed up to 15,000 rpm)
- Working with straight handpieces (speed up to 22,000 rpm)

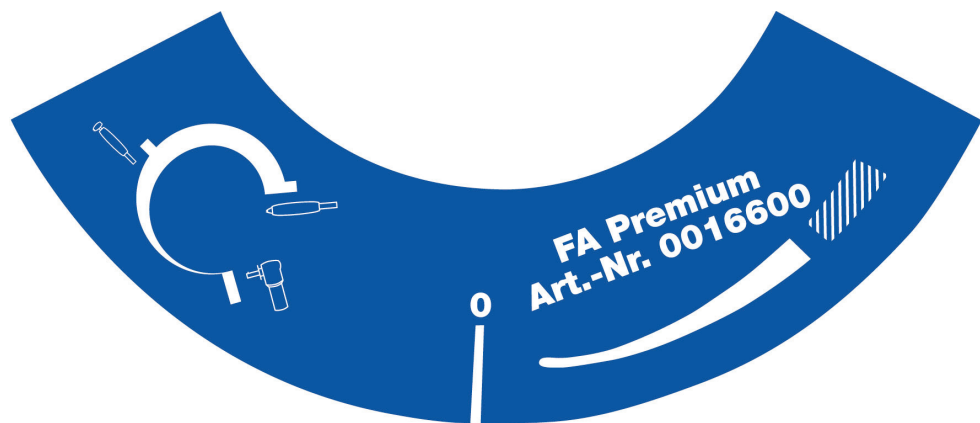


Figure 7.6 Potentiometer

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Troubleshooting

Tool does not turn

Possible cause	Remedy
Foot control not pressed.	Press foot control
Electric leads loose.	Fix leads
Flexible shaft defective.	Replace
Foot control defective.	Replace
Handpiece/hand-filing machine incorrectly connected	Check spring clip connection.
Tool reception defective.	Repair/replace
Bearing defective.	Repair
Carrier on shaft or handpiece defective.	Repair

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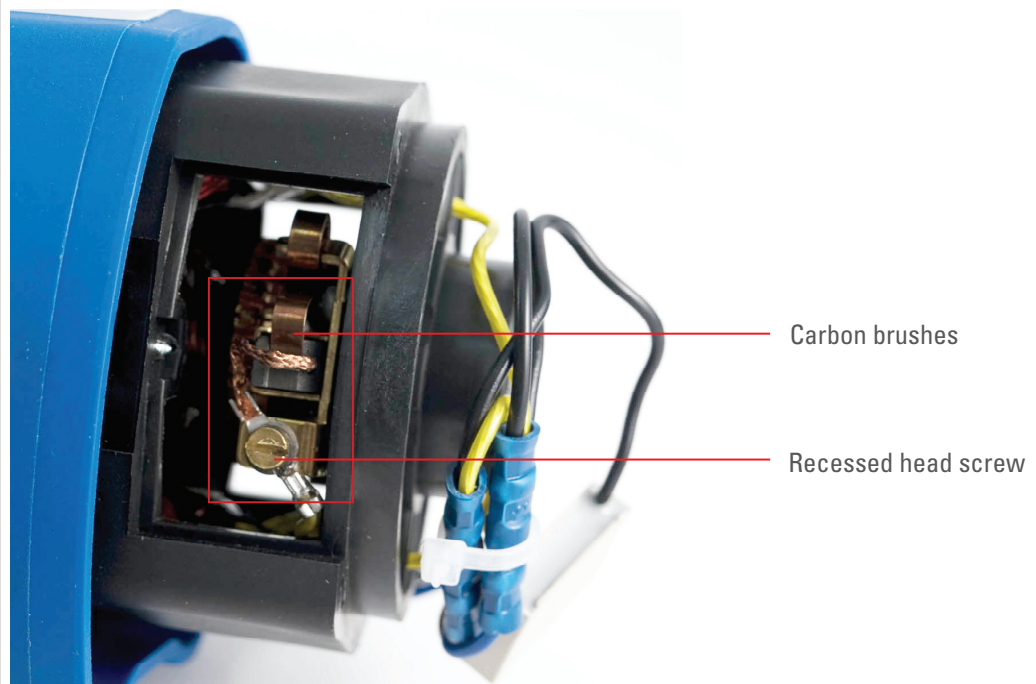
Servicing the motor system

The motor bearings require no maintenance. The deep groove ball bearings are sealed and have a lifetime lubrication.

Check the carbon brushes for wear every 4 weeks to avoid damage to the armature. If the carbon brushes have worn down to around 5 mm they should be replaced. No exact guidance of the carbon brushes in the holders can be guaranteed at a length of < 5 mm.

Proceed as follows to check or replace the carbon brushes:

1. Unplug connecting lead to foot control.
2. Dismantle flexible shaft.
3. Remove the four recessed head screws at the black motor cover.
4. Pull off the lateral motor covers.
5. Remove recess head screw of carbon brush strip.
6. Replace carbon brushes.



Allow the motor to run in for approx. 1 hour after changing the carbon brushes and installing the cover.



Regularly remove the excess grease on the shaft connection on the motor side.

To

joke Technology GmbH
 Service Department
 Fax: 0 22 04 / 8 39 - 60

**Sender:**

Company _____

Name/Department _____

Customer-No. _____

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

Motor system jokeFlex Premium Plus, Advantage package	Order No. 0 016 850	<input type="checkbox"/>
Motor system jokeFlex Premium Plus, Advantage package, Rapid Change	Order No. 0 016 850R	<input type="checkbox"/>
Motor Premium Plus	Order No.. 0 016 550	<input type="checkbox"/>
Foot control Premium	Order No. 0 016 600	<input type="checkbox"/>
Flexible shaft Premium Plus with expanding ring, 1,1 m	Order No. 0 016 800	<input type="checkbox"/>
DIPROFIL® Hand-filing machine FPB/R, FPK/RL	Order No. 0 001 151	<input type="checkbox"/>
DIPROFIL® Hand-filing machine FPK/R, FPK/RL	Order No. 0 005 151, 0 005 152	<input type="checkbox"/>
DIPROFIL® Mini hand-filing machine FMR/S 5/ S 10/ S 15	Order No. 0 001 205/ 213/ 219	<input type="checkbox"/>
DIPROFIL® Transverse handpiece FMV/S	Order No. 0 001 211	<input type="checkbox"/>
Technical handpiece joke Premium Plus	Order No. 0 030 200	<input type="checkbox"/>
Technical handpiece THSZ/N	Order No. 0 030 004	<input type="checkbox"/>
Angle handpiece VTN-S/N	Order No. 0 031 540	<input type="checkbox"/>
Angle handpiece VTN-N 90°	Order No. 0 031 341	<input type="checkbox"/>
Angle handpiece VTN-N 135°	Order No. 0 031 342	<input type="checkbox"/>
Rotating hollow handpiece NHK-L, NHG-L	Order No. 0 031 600, 0 031 400	<input type="checkbox"/>
Telescope angle handpiece 90°, Ergo-Line	Order No. 0 030 820	<input type="checkbox"/>
Telescope angle handpiece 135°, Ergo-Line	Order No. 0 030 830	<input type="checkbox"/>
Angle handpiece 90°-R, Ergo-Line	Order No. 0 030 900	<input type="checkbox"/>

Date _____

Signature _____



Brilliant solutions for perfect surfaces

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