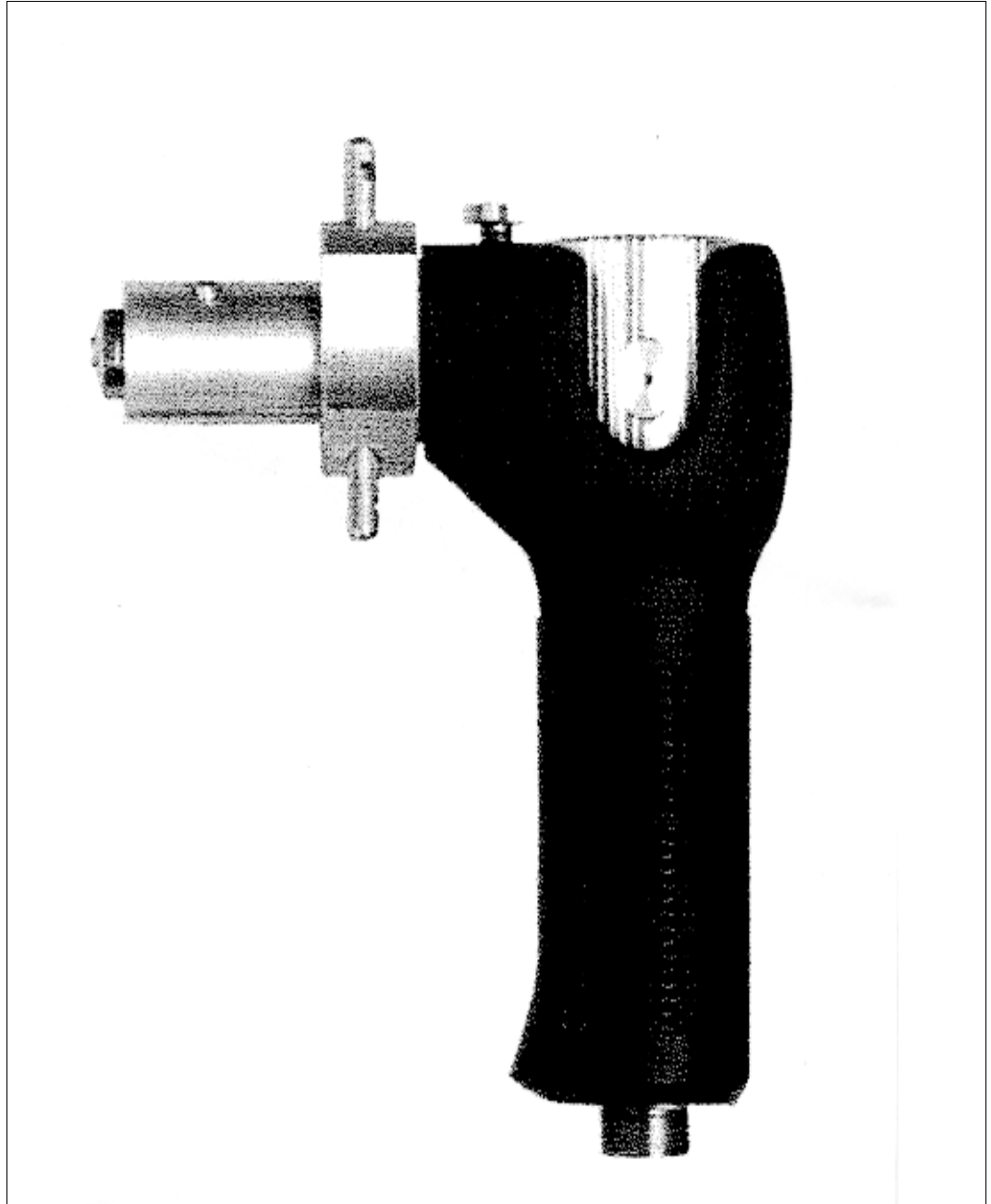




and-filing Machine Type FMM/3



Instruction Manual

for the
Hand-filing machine
FMM / 3
Order no. 0 005 400

Made and sold by:
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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.*



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.

3 Safety instructions



3 Safety instructions



- (7) Do not carry out any modifications, additions or conversions to the device! This also applies to the installation and adjustment of safety equipment.
- (8) Spare parts must meet the technical requirements specified by the manufacturer. This can only be guaranteed with original JOKE spare parts.
- (9) 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!
- (10) Wear safety goggles when working with the handpiece for rotating movements.
- (11) 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!
- (12) Restrain from any type of work that could jeopardise your safety.
- (13) The device may only be used if all protective and safety equipment is in place and in proper working order.
- (14) Do not leave the device unattended when switched on!
- (15) Stop and secure the device immediately in the event of malfunctions! Faults must be remedied at once.

4 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.

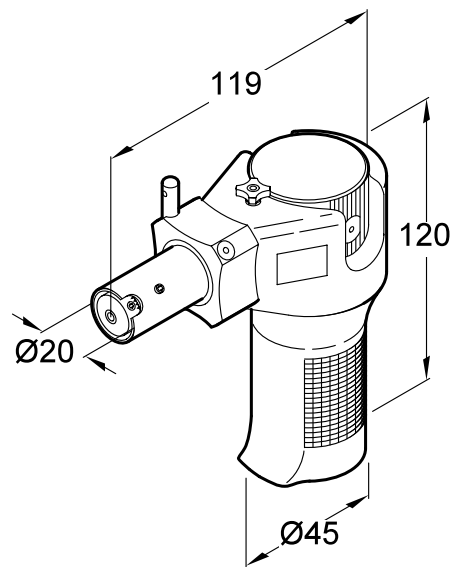


The device may only be used by appropriately trained personnel. If it is not, all warranty claims will be forfeited according to the terms of delivery.

Device identification

The manufacturer's code, type code, CE-symbol and serial number can be found on the rear of the control unit or on the handle of the handpieces.

5 Operation/Use

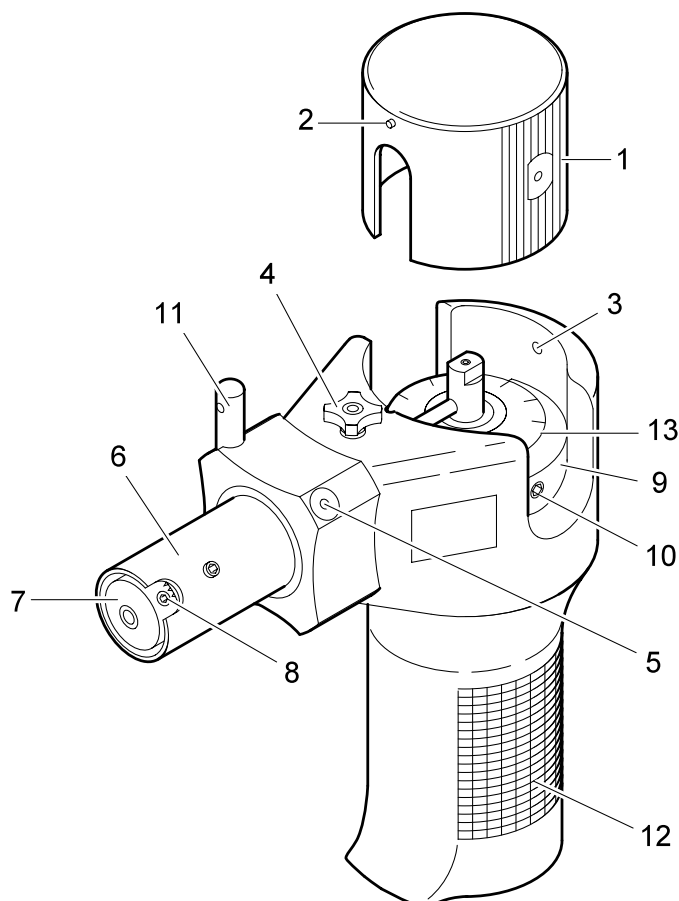


5 Operation/Use

joke hand-filing machine type FMM/3

Order no. 0 005 400

Functional and operating elements of the joke FMM/3 hand-filing machine



- 1 - Protective cover
- 2 - Guide pin
- 3 - Screw for protective cover
- 4 - Screw for guide bush
- 5 - Lubrication point
- 6 - Guide bush
- 7 - Tool reception
- 8 - Screw
- 9 - Stroke adjustment ring
- 10 - Screw for stroke determination
- 11 - Guide pins
- 12 - Rubber handle
- 13 - Shaft

5 Operation/Use

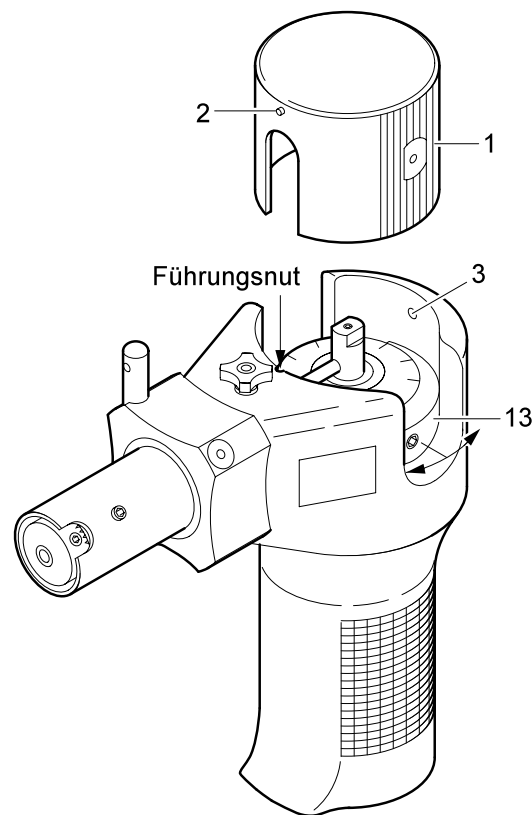
joke hand-filing machine type FMM/3

Order no. 0 005 400

Using the joke FMM/3 hand-filing machine for the first time



When connecting the hand-filing machine, the protective cover (1) must be removed. This is necessary in order to be able to rotate the shaft manually if the difficulties arise during engagement in the motor connection.



- (1) Loosen screw (3).
- (2) Remove protective cover (1).
- (3) Rotate the shaft (13) manually to and fro until the carrier of the filing machine engages in the micromotor coupling.
- (4) Apply protective cover (1), while paying attention to the position of the guide pin (2) and groove.



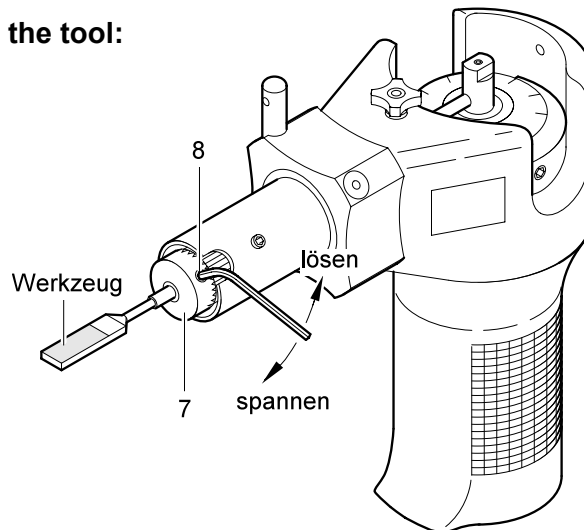
Never operate the filing machine without the protective cover.

5 Operation/Use

joke hand-filing machine type FMM/3

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Changing the tool:

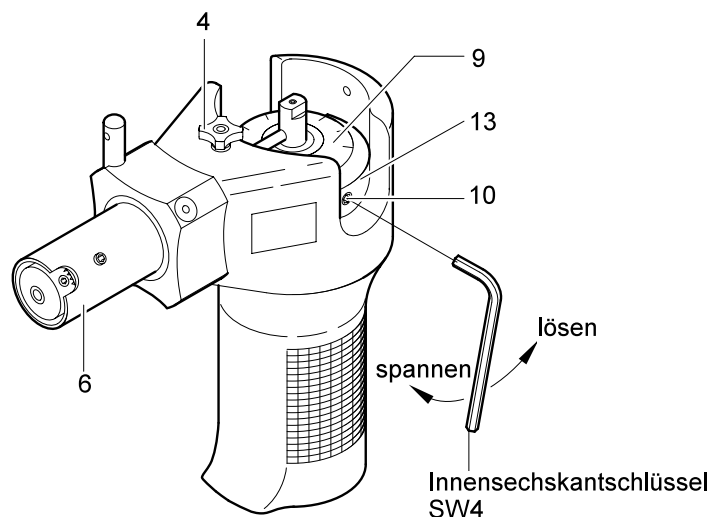


- (1) Loosen screw (8) and tighten again after inserting the tool into the tool reception (7).

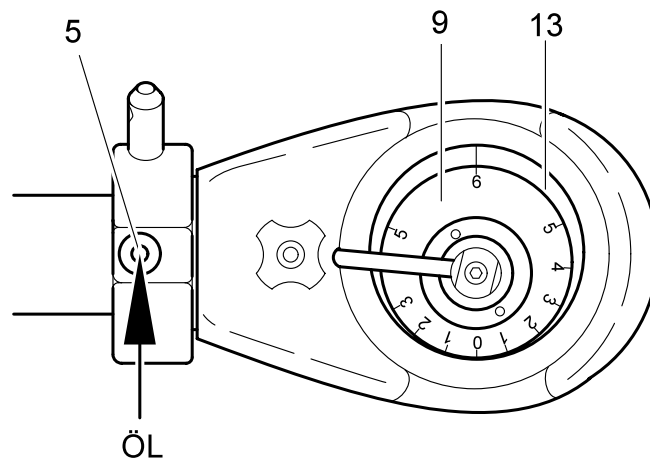
CAUTION! *Use only authorised tools from the JOKE® main catalogue for this purpose!*

- (2) For adjustment of the working stroke, release and remove the protective cover (3) and set the desired working stroke by rotating the adjustment ring (9).
- (3) Tighten the screw again (10) and install the protective cover as described above.

Recommended stroke length: 0.5 - 3 mm for filing
3 - 6 mm for polishing.



5 Operation/Use



6

Spare parts

joke hand-filing machine type FMM/3

Order No. 0 005 400

Spare parts for joke hand-filing machine for Eneska 3

| Pos. No. | Art. No. | Description | Qty |
|----------|-----------|----------------------|-----|
| 19 | 0 009 663 | Carrier | 1 |
| 20 | 0 009 664 | Sleeve | 1 |
| 21 | 0 005 328 | Cover disk | 1 |
| 22 | 0 005 329 | O-ring | 4 |
| 23 | 0 005 330 | Ball-bearing housing | 1 |
| 24 | 0 005 331 | Ball bearing | 2 |
| 25 | 0 005 332 | Spring cover | 1 |
| 26 | 0 005 333 | Spring | 1 |
| 27 | 0 005 334 | Spacer bush | 1 |
| 28 | 0 005 335 | Ball-bearing housing | 1 |
| 29 | 0 005 336 | Cover disk | 1 |
| 30 | 0 005 337 | Tool holder | 1 |
| 31 | 0 005 338 | Tool holder screw | 1 |
| 32 | 0 005 339 | Spring | 1 |
| 33 | 0 005 340 | Spring pad | 1 |
| 34 | 0 005 341 | Piston rod | 1 |
| 35 | 0 005 342 | Piston | 1 |
| 36 | 0 005 343 | Retaining ring | 1 |

6 Spare parts

joke hand-filing machine type FMM/3

Order No. 0 005 400

Spare parts for joke hand-filing machine for Eneska 3

| Pos. No. | Art. No. | Description | Qty |
|----------|-----------|---|-----|
| 1 | 0 005 310 | Protective cap | 1 |
| 2 | 0 005 312 | Eccentric, complete | 1 |
| 3 | 0 005 313 | Lock nut | 1 |
| 4 | 0 005 314 | Hexagon socket screw M 5 x 10 | 1 |
| 5 | 0 005 315 | Eccentric axle | 1 |
| 6 | 0 005 316 | Ball bearing | 1 |
| 7 | 0 005 317 | Spacer ring, small | 1 |
| 8 | 0 005 318 | Spacer ring, large | 1 |
| 9 | 0 005 319 | Bearing housing | 1 |
| 10 | 0 005 320 | Holding screw | 1 |
| 11 | 0 005 321 | Bearing housing Holding screw M3 x 5 (hexagon socket screw) | 1 |
| 12 | 0 005 322 | Exzenterring | 1 |
| 13 | 0 005 323 | O-ring | 1 |
| 14 | 0 005 324 | Drive shaft | 1 |
| 15 | 0 005 325 | Coupling shaft (carrier) | 1 |
| 16 | 0 005 326 | Hexagon socket screw M4 x 6 | 4 |
| 17 | 0 005 327 | Pin | 1 |
| 18 | 0 009 366 | Spring | 1 |

6

Spare parts

joke hand-filing machine type FMM/3

Order No. 0 005 400

Spare parts for joke hand-filing machine for Eneska 3

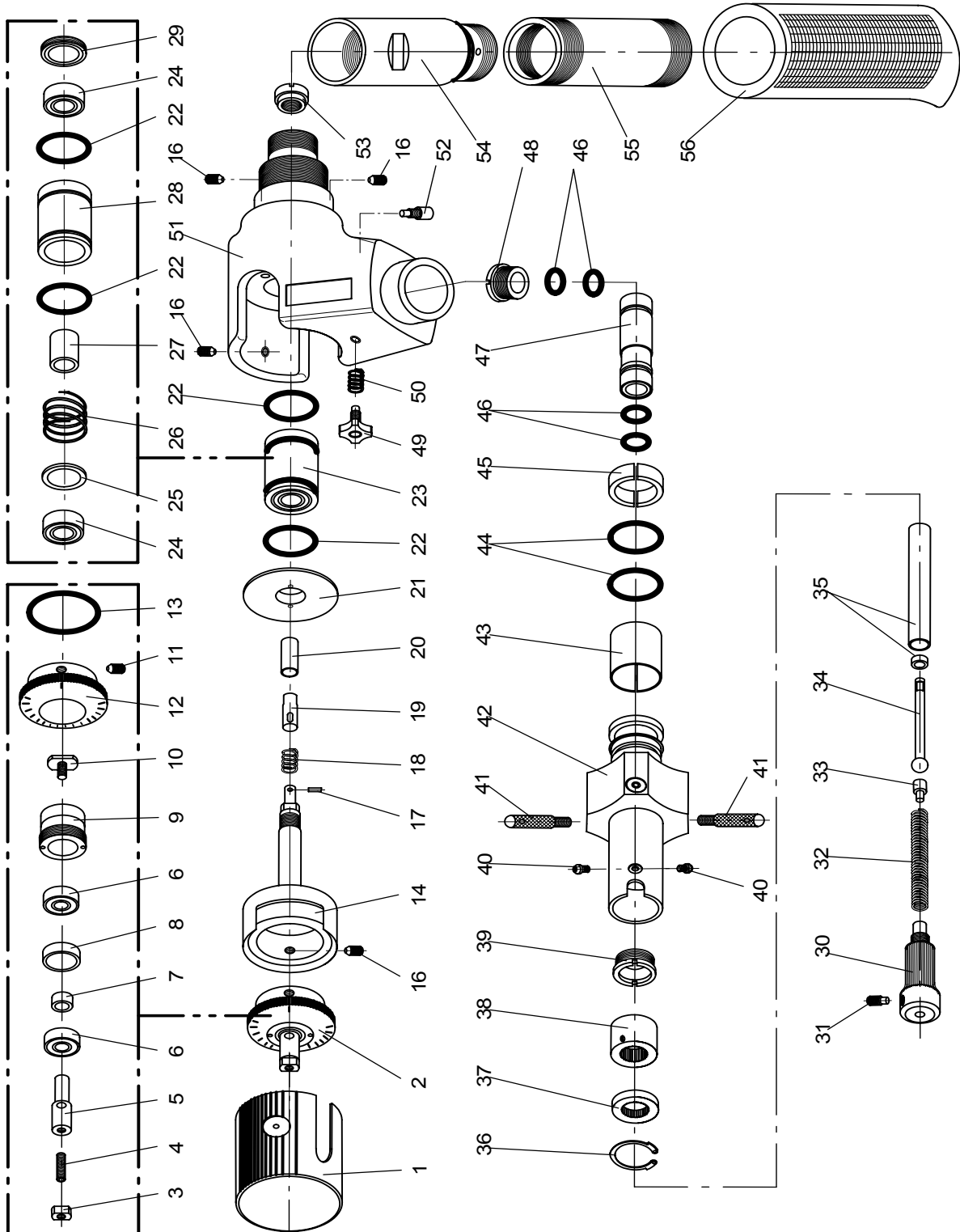
| Pos. No. | Art. No. | Description | Qty |
|-----------------|-----------------|-----------------------|------------|
| 37 | 0 005 344 | Dust filter | 1 |
| 38 | 0 005 345 | Plastic guide bush | 1 |
| 39 | 0 005 346 | Threaded ring (brass) | 1 |
| 40 | 0 005 347 | Screw | 2 |
| 41 | 0 005 348 | Locking screw | 2 |
| 42 | 0 005 349 | Tool holder housing | 1 |
| 43 | 0 005 350 | Guide bush | 1 |
| 44 | 0 005 351 | O-ring | 2 |
| 45 | 0 005 352 | Friction bearing | 1 |
| 46 | 0 005 353 | O-ring | 4 |
| 47 | 0 005 354 | Guide (piston) | 1 |
| 48 | 0 005 355 | Threaded ring | 1 |
| 49 | 0 005 356 | Locking screw | 1 |
| 50 | 0 005 357 | Spring | 1 |
| 51 | 0 005 358 | Housing | 1 |
| 52 | 0 005 359 | Locking screw | 1 |
| 53 | 0 005 360 | Ball bearing setscrew | 1 |
| 54 | 0 005 461 | Step-down gear 4:1 | 1 |
| 55 | 0 005 362 | Gear housing | 1 |
| 56 | 0 005 363 | Handle | 1 |

Special tooling is required for assembly/disassembly of items 42 to 48! This can be obtained from joke. Alternatively, we recommend that maintenance be carried out by joke service.

6

Spare parts

joke hand-filing machine type FMM/3
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7 Enclosure

Device overview

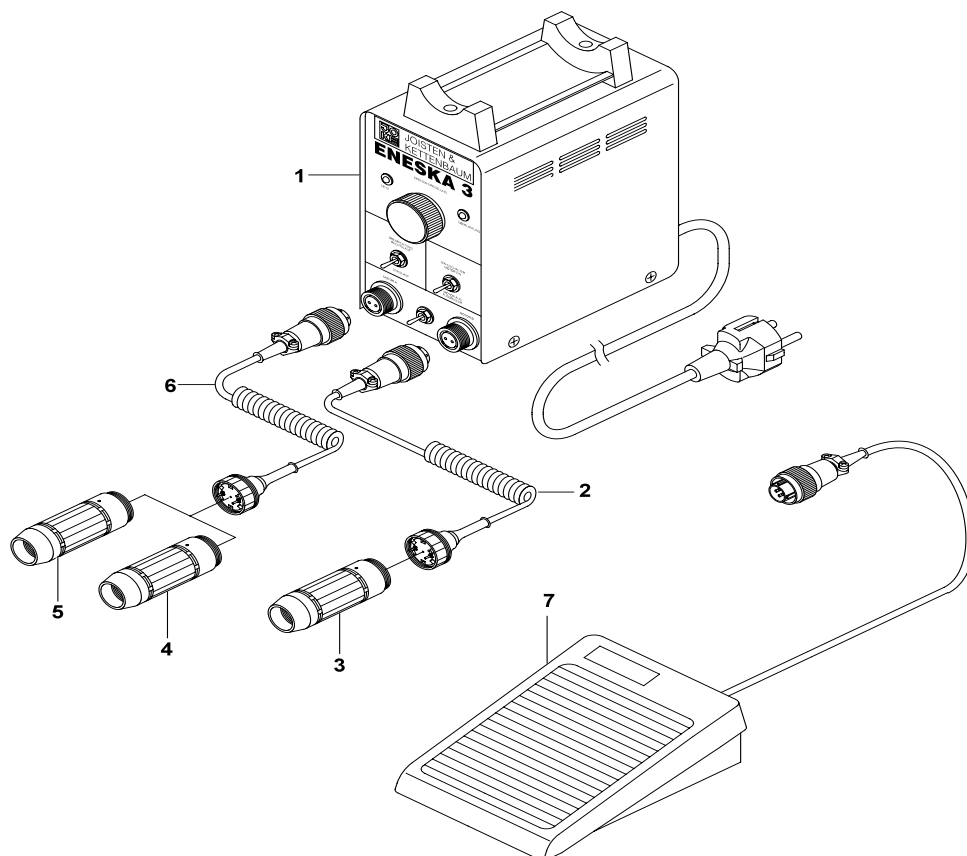


Figure 5.1 Overview ENESKA 3 grinding, milling and polishing system

| | | Order no. |
|------------------|--------------|------------------|
| 1 - Control unit | NCL 35 SV-JK | 0 009 020 |
| 2 - Motor cable | NCL 35 KS-CD | 0 009 101-0 |
| 3 - Micromotor | JNK 804 | 0 009 100 |
| 4 - Micromotor | JNK 260 N | 0 009 400 |
| 5 - Micromotor | JNK 150 | 0 009 602 |
| 6 - Motor cable | NCI-26-CD | 0 009 401-0 |
| 7 - Foot control | FC 35 | 0 009 301 |

7 Enclosure

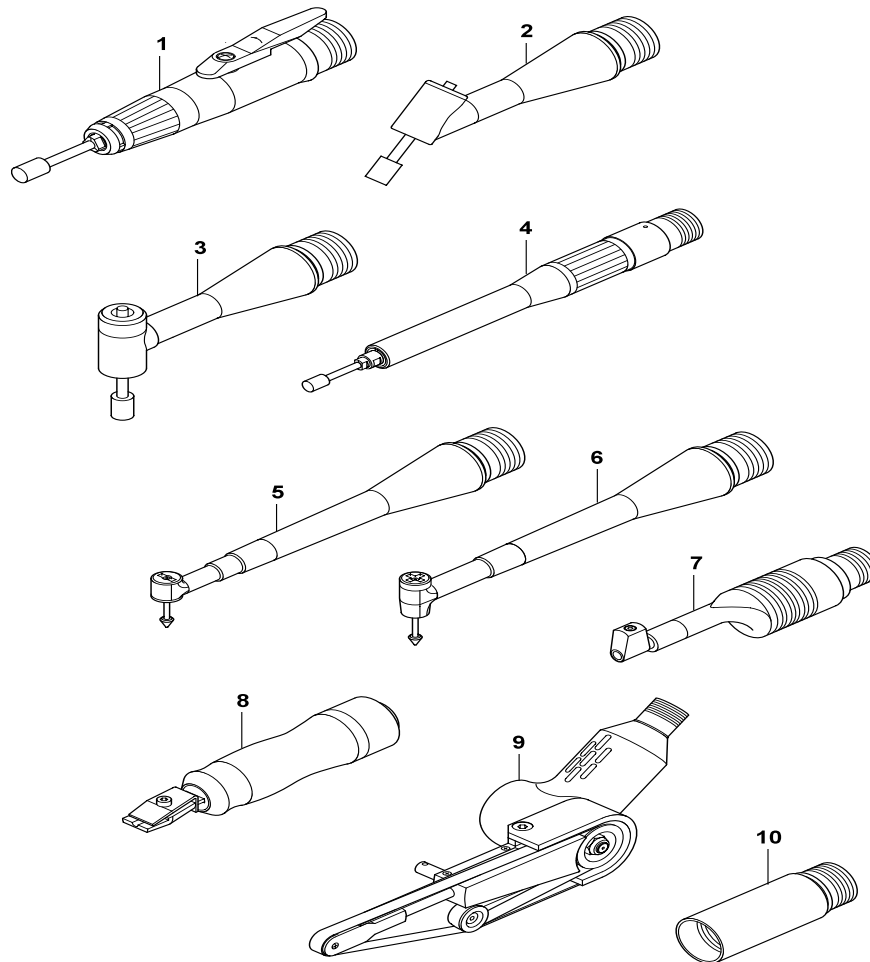
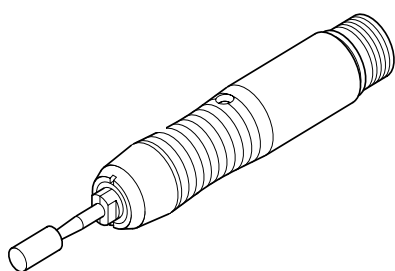


Figure 5.2 Handpieces and filing machines for micromotor JNK 804 and JNK 260 N

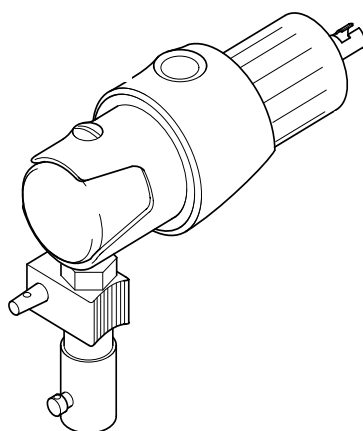
- 1 - Rapid-chuck handpiece JIH 300
- 2 - Angle handpiece JKC 345
- 3 - Angle handpiece JIC 390
- 4 - Handpiece JBMH 300 N
- 5 - Miniature angle handpiece JMFC-300 M
- 6 - Miniature angle handpiece JMFC-300 S
- 7 - DIPROFIL mini hand-filing machine FMR/N18 and FMR/N5
- 8 - j o k e transverse handpiece QH3
- 9 - Belt grinder J-BS 100
- 10 - Step-down gear RG-01

7 Enclosure

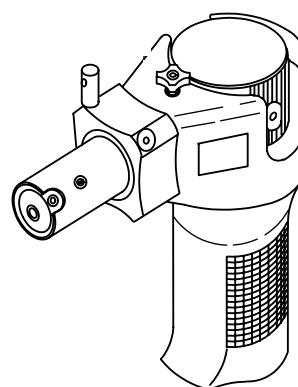
Overview 5.3



5.3.1



5.3.2



5.3.3

Figure 5.3 Handpieces for micromotor JNK 150

- 5.3.1 - Handpiece JHG 200
Hand-filing machine with integrated motor for connection to control unit NCL 35 SV-JK.
- 5.3.2 - DIPROFIL hand-filing machine FPM/R
- 5.3.3 - Hand-filing machine Type FMM/3