

Instructions for Infiltration device



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Introduction

The operating manual contains important instructions, descriptions and tips for operation and safety. It is the basis for safe, economic, and problem-free work.

Safety First!

Whoever works with or on the machine, transports or sets up the machine, commissions or decommissions the machine, maintains or cleans the machine, is obligated to read and observe these safety instructions, guidelines and precautions. This will prevent injuries and damage to the machine, material and environment. Furthermore, any claim in accordance with EU machine guideline 98/37/EU is nullified if the machine is used improperly.

This operating manual is a component part of the delivered device.

Made in Germany



EG Conformity Declaration

EU Conformity Declaration (98/37/EU Appendix II, 89/336/EEC and 73/23/EEC Appendix III Machines EMC and low voltage

We herewith declare that the machine designated below in its concept and design as well as in the construction we have placed in circulation corresponds to the fundamental safety and health requirements of the EU machine guideline, and that it satisfies all relevant norms. This declaration loses its validity if the machine is modified without our consent.

Name:

Infiltration device

Machine number:

.....

Year of manufacture:

.....

Applied harmonized norms, in particular:

EN 12100

Manufacturer's address:

 GMBH
Driescheider Weg 57
D-57610 Altenkirchen / WW

Date, signature (position of the signer):

A handwritten signature in blue ink, appearing to read 'H. G. G.', followed by a horizontal line.

02.06.2005

(CEO)

Guarantee

The manufacturer assumes neither liability nor guarantee if:

- the instructions contained in the transport, installation and operating manual are not observed.
- the machine, including additional fixtures, is operated improperly and is not properly maintained and repaired.
- any technical or functional modifications have been made that are not authorised by the manufacturer.

Intended Use

The **Infiltration device** is a manually operated mechanical device, expressly designed for imbedding bubble-free cold-compressed samples and filling porous prepared samples.

If the **Infiltration device** is not used for the intent listed here then no safe operation of the machine can be ensured. This applies as improper use.

The owner/operator of the machine, not the manufacturer, is liable for all personal injuries and property damages that occur from improper use.

Intended use also includes the reading of this operating manual, as well as compliance with all instructions contained therein – particularly the safety instructions.

Explanation of the safety symbols and “notice” signs used in the manual

The following safety symbols are used in this manual. Primarily these symbols serve to alert the reader to the safety instructions accompanying the symbol.



This symbol indicates that hazards to life and health exist.



This symbol indicates that hazards exist for machine, material, or environment.



This symbol identifies explanations that contribute to better understanding of the machine processes and is “notice” sign for important information.



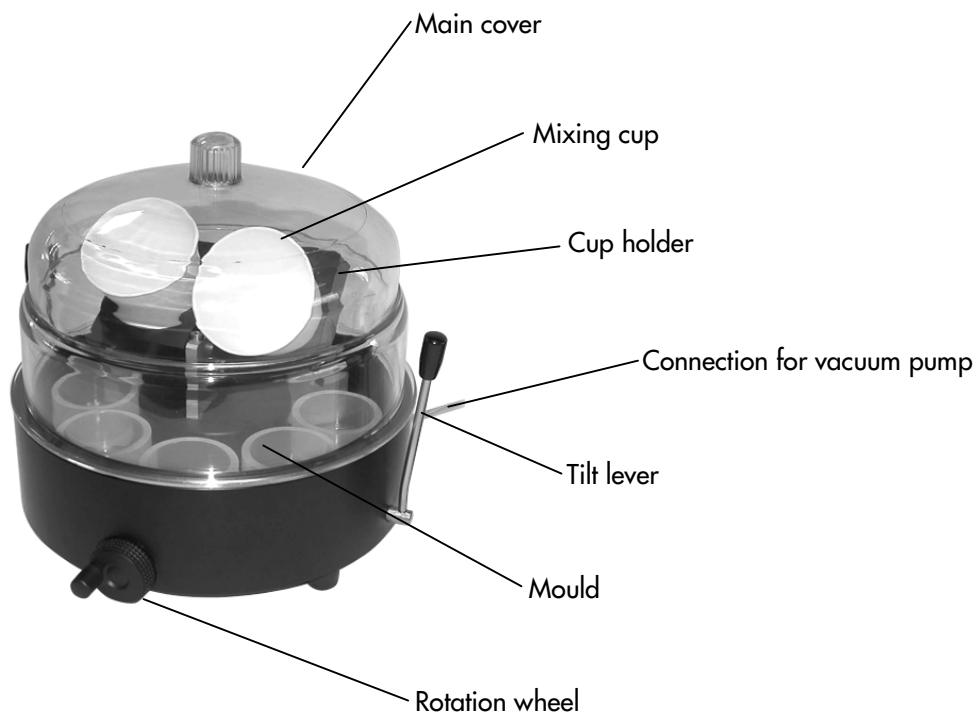
This symbol identifies situations that require notification of the authorized service organization.

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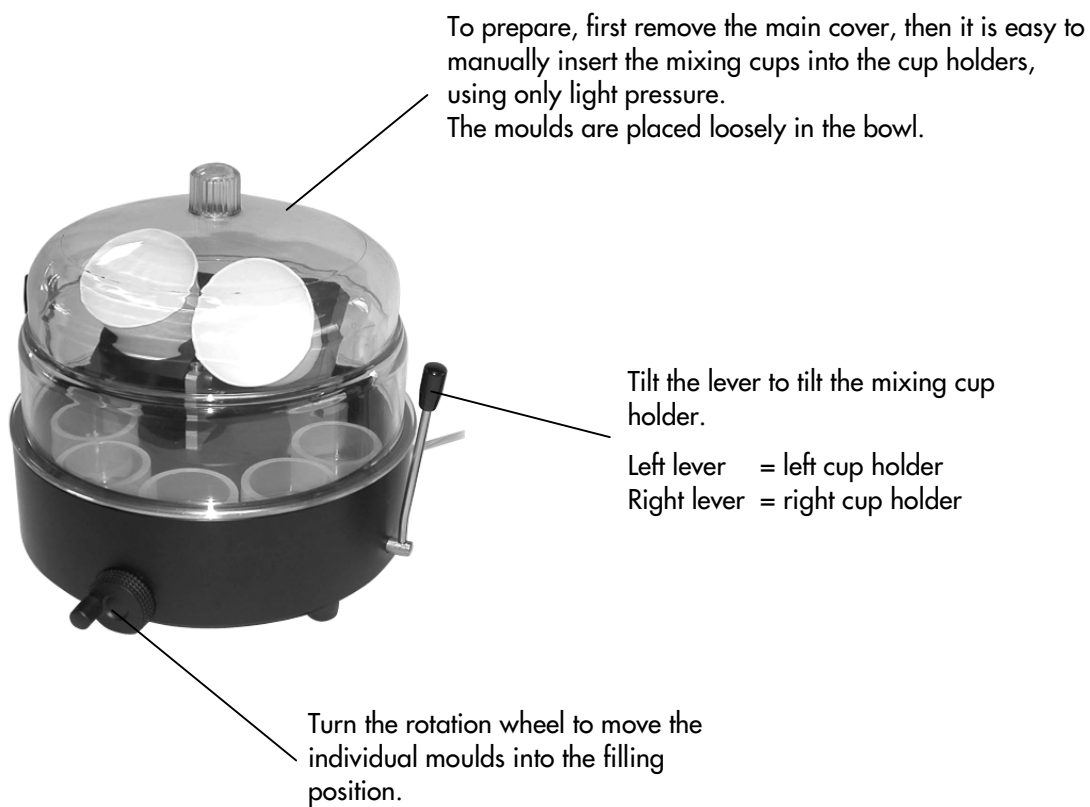
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1 Product Description

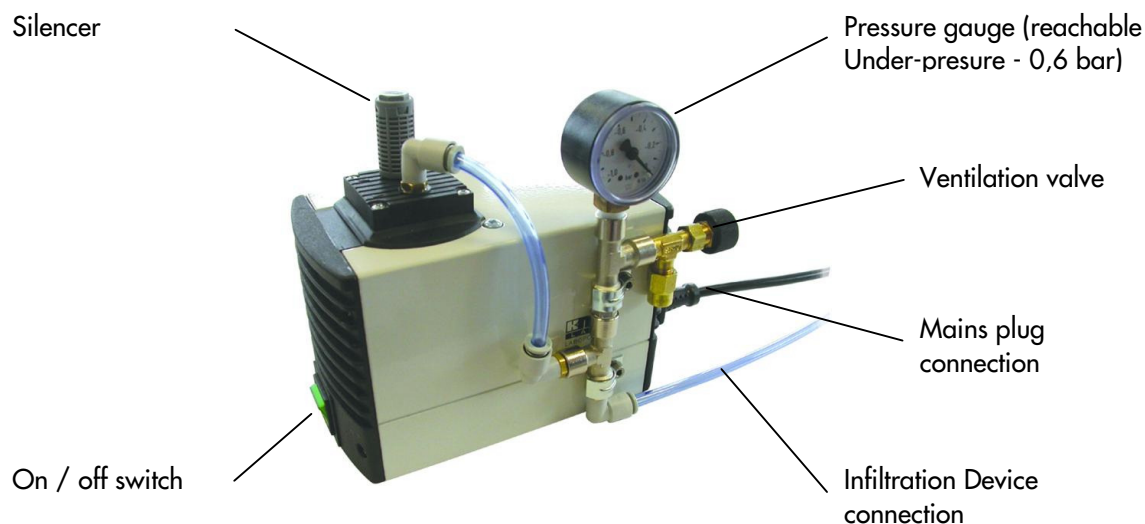
1.1 Device



1.2 Operation



1.3 Membrane vacuum pump



Technical features:

- 100% Oil-free
- maintenance-free
- environmentally friendly

Technical Data:

| | |
|---|------------|
| Continuous load | 100% |
| Power output (l/min) ¹⁾ | 6 |
| End vacuum (mbar abs.) | 100 |
| Permitted gas and surrounding temperature | +5...+40°C |
| Mains voltage | 230V/50Hz |
| Motor protection class | IP 20 |
| Motor-rated power P ₁ | 60W |
| Power consumption | 0,63A |
| Weight | ca. 1,9kg |
| Dimensions LxHxW (mm) | 164/141/90 |

With Thermoswitch and mains fuse

¹⁾ Performance at atmospheric pressure



2 Maintenance and Care

Before starting with maintenance and cleaning work, the General Safety Instructions in chapter 4 must be known!

2.1 Maintenance

For the most part the Infiltration device is maintenance-free if the machine is thoroughly cleaned at least once a week.

Spillages of preparation material are to be removed from the bowl after each pouring process.

2.2 Care


The service life of the device increases with proper care!

- Under no circumstances you should clean the device with compressed air or with high-pressure cleaners (steam jet). Impurities can get into guides, spindle bearings and seals, and can damage these components.
- Wipe off the exterior of the casing and the work surface using a wet, lint-free, cloth and an off-the-shelf, non-alkaline, cleaner.




3 Malfunctions and Measures

Before starting of maintenance the General Safety Instructions in chapter 4 must be known!

Resolve a malfunction only if you have the specified qualifications.

ATM service must be contacted for measures with this symbol . (Tel.: see chapter 6.1)
Please have the machine number ready when you call.

3.1 Errors, causes, and their elimination

| Malfunction | Cause | Measure |
|-----------------------------|--|---|
| No vacuum in the device | Vacuum pump not switched on | Switch on vacuum pump |
| | Hose leads between device and pump are not tight / not connected | Check hose leads |
| | Main cover is not seated correctly | Make sure main cover sits correctly |
| | Seal between main cover and basic housing is damaged | Replace seal |
| | Machine damage |  |
| Bowl cannot be rotated | Machine damage |  |
| Cup holder cannot be tilted | Tilt range restricted | Remove restriction |
| | Machine damage |  |



4 General Safety Instructions

ATM machines and devices are built in accordance with EG Machine guideline 98/37/EU in accordance with the latest state of the technology and they ensure the highest degree of safety.

This safety can however only be attained in operational practice if all measures required for safety are in place. It is the proper obligation of the owner/operator of the machine to plan these measures and monitor their execution.

In addition the following must be complied with:

- the work protection law with its legal ordinances
- the EU direction for usage of means for work (AMBR)
- the Accident Prevention guidelines VBG or
- the national operating and testing guidelines.

4.1 Basic safety measures

4.1.1 Ensure that information is available

This operating manual should always be kept complete and in legible condition at the device. It must be ensured that all persons who must be active on the machine can consult the operating manual at any time. Supplemental corporate instructions in the sense of the German Occupational Safety Law and the German Work Material Use Ordinance should be provided along with this operating manual.

All safety warning signs and operating signs on the machine must be maintained in a legible condition. Damaged or illegible signs must be replaced immediately.

4.1.2 Before starting

Familiarize yourself sufficiently with

- the control elements of the device
- the device equipment
- the manner in which the device works
- the immediate vicinity of the device
- emergency measures

Check the machine for visible damage before starting the machine.

Deficiencies that are noted must be resolved immediately or supervisory personnel must be notified of these deficiencies. The machine may only be operated in a problem-free, functional, condition.

4.2 Environmental protection



Pay attention to waste avoidance and proper recycling or disposal in all work on and with the machine.



All substances used – oils, lubricants, cleaning agents etc. may not contaminate the soil or reach waterways. They must be handled professionally and disposed of in an environmentally responsible manner.

Comply with the instructions on the respective storage containers and safety data sheets.

4.3 Changes to the machine

ATM GmbH, Altenkirchen, must approve planned changes in writing.

4.4 Operating personnel requirements

Only personnel that have been trained to operate the machine and who are authorized to do so should operate the machine. These individuals must be familiar with the operating manual and act accordingly.

4.5 Safety when transporting, setting up, commissioning and decommissioning

The general Accident Prevention Guidelines (VBG 1 or the respective national guidelines) must be complied with when transporting the machine.

Comply with the transport instructions on the packaging

The machine may only be lifted on the machine base and / or specially indicated areas

Ensure that the machine is not jolted as this can damage delicate components.

All machine components – cable, hoses, and pipelines – must be routed in such a manner that they do not become stumbling hazards!

5 Transport and Set-up

Before starting with the transport and setup of the machine, the General Safety instructions in chapter 4 must be known!

5.1 Transport

For the most part the device is secured against transport damages. However as delicate components can be damaged through transport, the instructions attached to the crating must be strictly observed.



UP – do not tip



Caution - fragile



keep dry

The machine may only be lifted together with the pallet.

Storage conditions: Store in a dry location at an ambient temperature between 10-40°C.

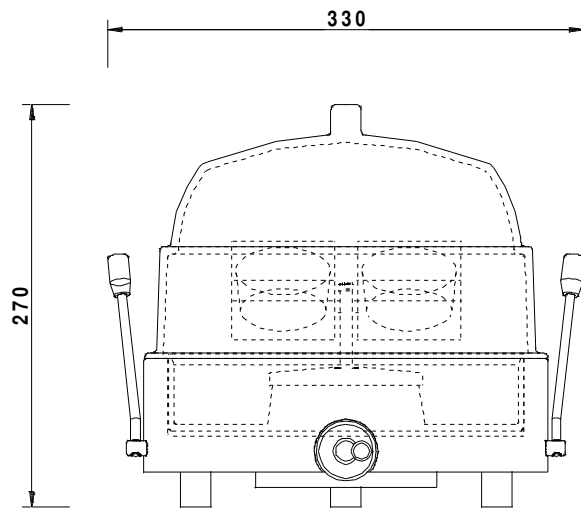
5.2 Delivery Condition



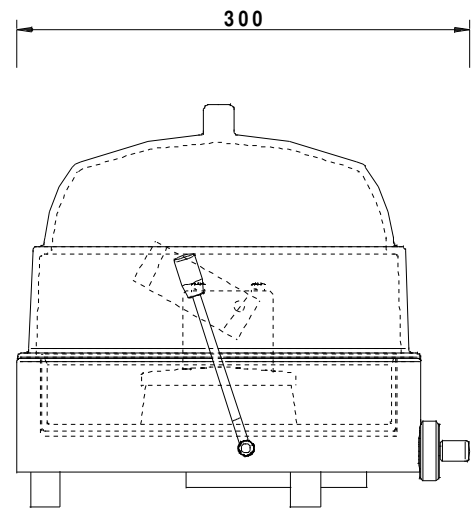
Inspect the packaging material for external damages before opening the transport packaging. The freight forwarder making the delivery or our service hotline must be notified immediately of any damages.

Use the delivery note to verify that all accessories are present.

5.3 Dimensional Measurements



front view



side view



6 Additional Information

6.1 ATM contacts and customer service

Do you have further questions or desires? We would be pleased to help you.

ATM head offices Driescheider Weg 57
57610 Altenkirchen
phone: +49 (0) 2681.9539.0
fax: +49 (0) 2681.9539.20
E-mail: Info@atm-m.com

Service department phone: +49 (0) 2681.9539.11

Sales department phone: +49 (0) 2681.9539.16
phone: +49 (0) 2681.9539.12

Central laboratory Driescheider Weg 57
57610 Altenkirchen
phone: +49 (0) 2681.9539.21
fax: +49 (0) 2681.9539.20

6.2 Internet

Visit us on the Internet at:

<http://www.atm-m.com>

Here you will find current information about our entire product line.

6.3 Accessories and consumables

We would like to offer a few suggestions as to how you can obtain more benefit from your Infiltration device with the following information.

6.3.1 Cold moulds

| | Name / Dimensions | Order No.: |
|--|------------------------------------|------------|
| <ul style="list-style-type: none"> • re-usable • not suitable for UV-hardening | Silicon rubber round | |
| | Ø 25mm / H 23mm | 92002511 |
| | Ø 30mm / H 25mm | 92002504 |
| | Ø 32mm / H 25mm | 92002505 |
| | Ø 38mm / H 25mm | 92002506 |
| | Ø 40mm / H 30mm | 92005567 |
| | Ø 50mm / H 30mm | 92005568 |
| | Silicon rubber rectangular- | |
| | 55 x 30mm / H 22mm | 92002509 |
| | 70 x 40mm / H 22mm | 92002510 |

Prices and large amounts upon request.

6.3.2 Cold preparation material Epoxy resin

| | Name | V.E. | Order No.: |
|--|---------------|-------|------------|
| <ul style="list-style-type: none"> • 2-component system • resin + hardener (2:1 [Gew.-%]) • clear, transparent • suitable for vacuum infiltration e.g. porous material • Hardening time: ca. 4 - 6h | KEM 90 | | |
| | resin | 500ml | 92002484 |
| | Hardener | 250ml | 92002485 |
| | | | |

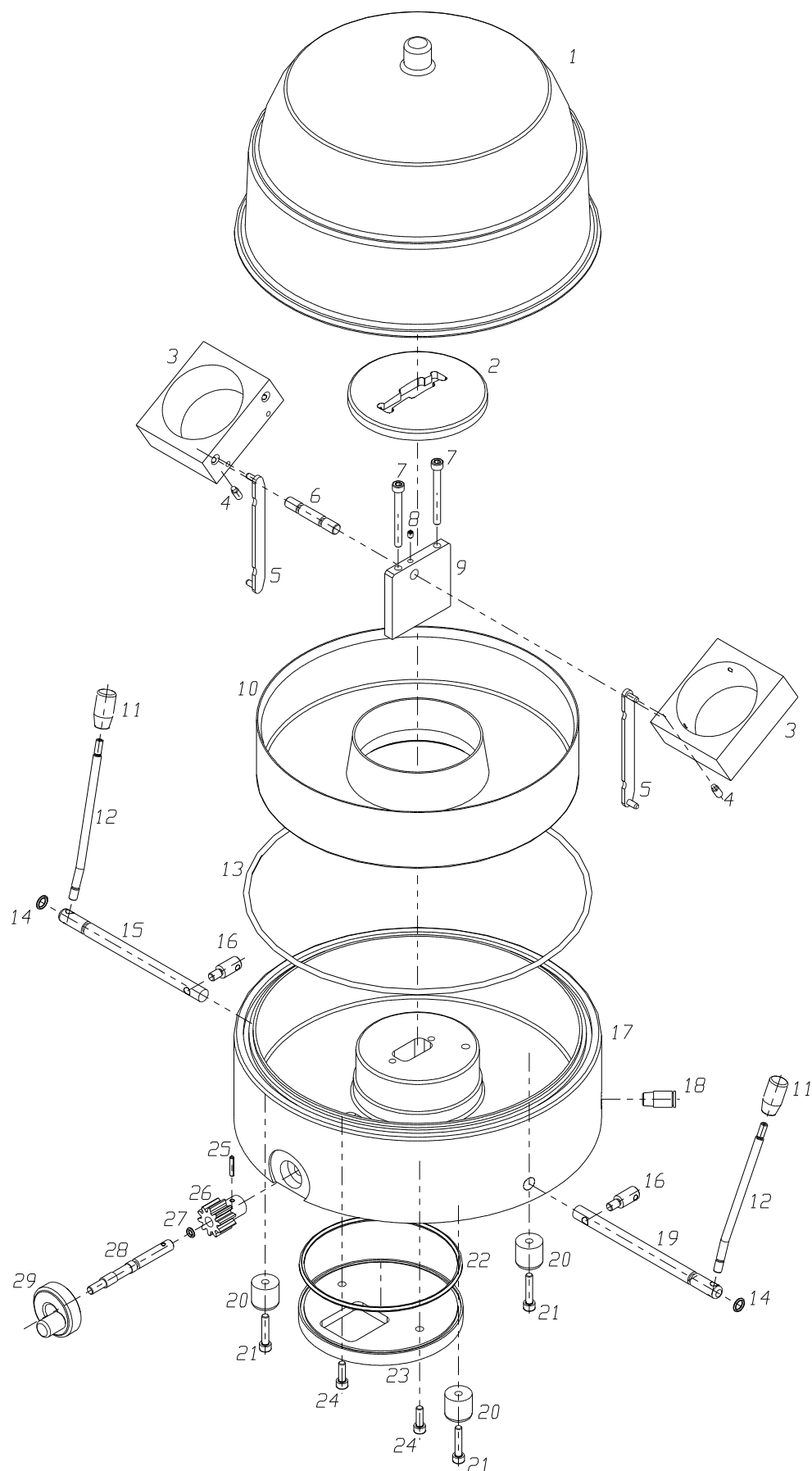
Prices and large amounts upon request.

6.3.3 Accessories for cold preparation

| Name | V.E. | Order No.: |
|---|----------|------------|
| Mixing cup, one-way 0,2Ltr. | 10 Pcs. | 92001715 |
| Wooden mixer | 100 Pcs. | 92001717 |
| Preparation aids in plastic Ø 30mm | | |
| Imbedding aid 1mm | 100 Pcs. | 92002623 |
| Imbedding aid 2mm | 100 Pcs. | 92002625 |
| Imbedding aid 3mm | 100 Pcs. | 92002624 |
| Angled inlay | 100 Pcs. | 92002657 |
| Steel clip | 100 Pcs. | 92002662 |
| Plastic clip | 100 Pcs. | 92002663 |

Prices and large amounts upon request.

6.4 Replacement parts and parts subject to wear



Spare parts list:

| Pos. | Name | Pcs. | Order No.: |
|------|---|-----------|------------|
| 1 | Main cover | 1 | 92008681 |
| 2 | Protective cover | 1 | 06500014 |
| 3 | Cup holder | 2 | 06500004 |
| 4 | Grub screw DIN 915, M4x12mm | 2 | 91000074 |
| 5 | Link bar | 2 | 06500005 |
| 6 | Link pin | 1 | 06500007 |
| 7 | Cheesehead screw galv. DIN 912, M5x65mm | 2 | 90003043 |
| 8 | Grub screw DIN 914, M4x6mm | 1 | 93001137 |
| 9 | Holder | 1 | 06500003 |
| 10 | Bowl | 1 | 06500013 |
| 11 | Lever knob | 2 | 92001419 |
| 12 | Tilt lever | 2 | 06500008 |
| 13 | Rubber seal | 725mm lg. | 92004171 |
| 14 | O-Ring 7mm x 2mm | 2 | 92000370 |
| 15 | Tilt-pin, left | 1 | 06500006 |
| 16 | Connector pin | 2 | 06500009 |
| 17 | Basic housing | 1 | 06500001 |
| 18 | Plug connector, straight | 1 | 92009160 |
| 19 | Tilt-pin, right | 1 | 06500015 |
| 20 | Round buffer | 3 | 92005662 |
| 21 | Cheesehead screw A2 DIN 912, M5x25mm | 3 | 90003058 |
| 22 | O-Ring 112mm x 2mm | 1 | 92006633 |
| 23 | Base cover | 1 | 06500011 |
| 24 | Cheesehead screw A2 DIN 912, M5x16mm | 2 | 90003290 |
| 25 | Fixing pin DIN 7346, Ø 3mm x 16mm | 1 | 90003314 |
| 26 | Toothed wheel | 1 | 92006631 |
| 27 | O-Ring 4mm x 2mm | 1 | 91070005 |
| 28 | Shaft | 1 | 06500010 |
| 29 | Rotation wheel | 1 | 92006351 |

Option (excl. diagram)

| Pos. | Name | Pcs. | Order No.: |
|------|--------------------------|------|------------|
| 1 | Vacuum pump 230 V, 50 Hz | 1 | B6500001 |
| 2 | Vacuum pump 110 V, 60 Hz | 1 | B6500002 |

Prices upon request.

In case of questions, please contact our **Service Department** (see under 6.1).