

The index numbers stated in () reappear within the breakdown drawings and the spare part lists.

5.1 Dismantling the Housing

5.1.1 Front panel (102)

- Pull out the mains plug and place the instrument to the rear for the wide of the front panel
- Unscrew both screws (type Ejot 101) at the lower rim of front panel (use a small Phillips screw driver)
- Pull the panel's lower rim a little to front (but no more than 15° to avoid the braking off of the plastic hooks at the upper rim)
- Push the front panel in this position to the top to unlock it's casing connection and depose the panel in front of the unit
- Reassemble the front panel analogously in reverse order and press the lower rim tight to the casing when refitting the Ejot screws (but don't tighten the Ejot screws too much to avoid an overscrewing of the casing's plastic thread)

5.1.2 Lid (210)

- Open the lid and pull out the mains plug
- Unscrew both threaded hinge bolts (214), remove them together with bushings (212), spring washers (213) and rubber O-rings (215) and take off the lid
- Reassemble the lid analogously in reverse order (don't tighten the bolts too much, to avoid a squeezing off of the O-rings)

5.1.3 Dismantling the Casing (205)

- Open the lid and pull out the mains plug
- Unscrew the rotor and remove it from the motor shaft
- Dismantle front panel and lid - see 5.1.1 and 5.1.2
- Remove both Phillips screws (204) from bottom plate in front and lateral from armored chamber
- Disconnect the mains cable from terminal **XA** on main board and pull of the grounding plug
- Pick up the front panel, turn it to 90° and place it in front of armored chamber
- Press the casing upwards and remove it from the bottom plate passing the front panel in vertical position
- Reassemble the instrument analogously in reverse order

5.2 Replacement of Electrical Components

5.2.1 Fuses on Main Board (113) replacement

- Dismantle the front panel (see 5.1.1)
- Check the micro fuses and if necessary replace them by equivalent and undamaged parts
- Perform a test run and search for blowing cause
- Reassemble the device analogously in reverse order

5.2.2 NV-RAM on Main Board (112)

- Dismantle the front panel (see 5.1.1)
- ATTENTION - CMOS components! Discharge your body before handling! Notice correct position of NV-RAM (8 pins) and pull carefully out of socket
- Reinsert the new NV-RAM correctly
- Reassemble the device analogously in reverse order reconnect it to power and perform a test run

5.2.3 Main Board Replacement (110)

ATTENTION! The key and indication board is part of the main board and cannot be ordered separately!

- Dismantle the front panel (see 5.1.1)
- Disconnect plug connections for lid switches **XB**, protecting earth conductor **PE**, and unscrew the lines for lid solenoid **XD**, motor **XC** and mains supply **XA**
- Remove all screwing of the main and indication board (Ejot type 111 and 122) with fiber washers (121) and take out both boards
- Touch a grounded receptacle to discharge your body before touching the sensitive CMOS components! Take a new NV-RAM (112) out of box (or re-use the old but trouble-free component) and insert it into the socket of the new main board (if necessary, remove a placed but non programmed NV-RAM before)
- Place the parts of the new board correctly and mount it with all screws and fibre washers
- Before assembling the front panel check the trigger function of all keys and correct the board mounting if necessary)
- Do not mix up disconnected cables during re-connection!
- Reassemble the device in reverse order and perform a test run, making sure the drive turns in the right direction (see imprinted arrow on rim of rotor chamber)!

5.3 Replacement of Drive Components

5.3.1 Disassembly of Drive Motor (310)

- Remove the casing (see 5.1.3)
- Disconnect the motor leads from terminal **XC** and pull off the plug connectors from the capacitor (327)
- Take the leads out of the cable holder (308)
- Unscrew the 3 nuts (313) and remove them together with the lock washers (314)
- Lift the motor out of the rubber mounts and remove the motor from the bottom plate
- Reassemble the motor analogously in reverse order and tighten the 3 nuts with use of torque key (5Nm) and secure them with locking lac
- Reassemble the device in reverse order
- Perform a test run and check the sense of rotation (see imprinted arrow direction on casing)

5.3.2 Motor supports (316)

All 3 rubber supports (316) have to be replaced at the same time and at least every three years!
By the way the 6 double-sided sandpaper discs (315) must be exchanged, too.

- Unscrew the drive motor (see 5.3.1), hold it with one hand and lay the armored chamber together with motor onto the side
- Pull the motor from the supports and lay it carefully onto the side
- Remove the 3 screws (224) from the bottom plate and take out the rubber supports together with sand paper discs (315)
- Install the new rubber mounts together with new sandpaper disks, put the lock washers in place, tighten the screws evenly and secure them with screw locking lac
- Put the unit again onto it's feet, mount sandpaper disc, motor and lock washer and tighten the 3 nuts evenly by use of a torque key (5 Nm) and secure them with screw locking lac
- Reassemble the device in reverse order
- At last perform a test run

5.4 Replacement of Mechanical Components

5.4.1 Lid Lock Assemblies (300)

ATTENTION!

Both lid lock assemblies inclusive micro switches are combined to one spare part and cannot be ordered separately!

- Dismantle the casing (see 5.1.3)
- Disconnect the leads of the lid solenoids from terminal **XD** and pull out the plug **XB** for the micro switches
- Unscrew both upper screws (305) of the lid lock assemblies' attachment from the inside of the armored chamber and the lower Ejot screws (304) from the outer side
- Push down the levers of micro switches, guide the micro switches through the openings of the armored chamber and remove both lid lock assemblies completely with rubber base plates
- Reinstall the new lid lock assemblies analogously in reverse order and secure the thread of all upper fixing screws (305) with Loctite 221!
- Reassemble the device in reverse order
- Check the lid's correct closing and self-acting opening functions after the correct installation and replace the rubber profile (206)

5.5 Service Kit for Clinifuge

This service kit includes all parts which have to be replaced after termination of 10000 cycles. The kit includes different NV-Rams which are destined for the use of the referring control program (signification of micro controller No.) on the specific main board.

ATTENTION! When changing the NV-RAM it is absolutely necessary to insert the right one into the main board with the right micro controller No.! Misuse can lead to main board destruction!

The specific variants can be identified as follows:

Cat. No. of unit	Mains connection	NV-RAM signification	Controller signification	Additional identifying information and further notes
3538	120V/50Hz	1066 V02	0474	main board 14 #150076 or main board 178 #150178

5.6 Dismantling and assembling the rotor

After removing the rotor nut, the rotor can be pulled vertically from the motor shaft. The rotor has to be disassembled in order to clean or insert the adaptor #3761 and #3762 or the rubber pads #3762.

To do this, remove the three fastening screws using a Phillips screwdriver. With your two index fingers reach into the opposite container bores and applying slight pressure with your thumbs on the rotor hub let the two rotor shells come apart from each other.

When putting the two rotor parts together, care is to be taken that the journals of the upper shell grip exactly into the grooves of the lower shell. By pressing slightly, both shells audibly click together. Following this the halves are to be screwed together again.

After the rotor fastening nut has been tightened for the first time the rotor screws are to be tightened again.