



INSTRUCTION MANUAL

PCR Mini

ID: 807216



Important user information

Please read this entire manual to fully understand the safe and effective use of this product.

In case you have any comments about this manual we will appreciate receiving them at the address below.

Warranty and Liability

Jouan Nordic A/S guarantees that the product delivered has been thoroughly tested to ensure that it meets its published specifications. The warranty included in the conditions of delivery is valid only if the product has been installed and used in accordance with the instructions supplied by Jouan Nordic A/S.

Jouan Nordic A/S shall in no event be liable for incidental or consequential damages, including without limitation, lost profits, loss of income, loss of business opportunities, loss of use, and other related exposures, caused by e.g. incorrect use of the product.

Symbols used in this manual

	WARNING Used in case of danger of a serious accident or when documentation needs to be consulted.
	NOTE Used to direct attention to a special item.

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Enclosure: Declaration of conformity



1. Introduction

The PCR MINI is designed to protect the work process and the handled product against particle or microbiological contamination.

The PCR MINI complies with I.E.S. Recommended Practice; IES-RP-002-86; January 1986; Laminar Flow Clean Air Devices and the Nordiska R³-föreningens Norm för öppna LAF-enheter.

In order to avoid unintended wrong attendance, please read this instruction manual carefully.

2. Description

Principle of operation:

A confined workspace in which stable vertical unidirectional flow (laminar flow) provides protection for the product handled against particulate contamination from the surroundings and the operator.

All operations take place through the front opening. Pressure in the work chamber keeps the clean air flowing from the work chamber to the surroundings, avoiding introduction of particulate contamination to the work chamber.

3. Installation

Placement:

- The place of installation should be a place without draught and a place where the passing by of persons is avoided.
- Place the unit on the stand, connect the electrical special coded plug on the back to the socket and turn the rim to fasten it.
- On existing tabletop: Before placing the cabinet, make sure that the existing tabletop is able to carry the load of the unit.

Prior to electric connection it must be checked that the mains supply corresponds to what is stated on the type plate.

4. Operation

- A: Pushbutton for start/stop of fan.
- B: Pushbutton for switching the light ON/OFF.
- C: Pushbutton for switching the UV-light ON/OFF.

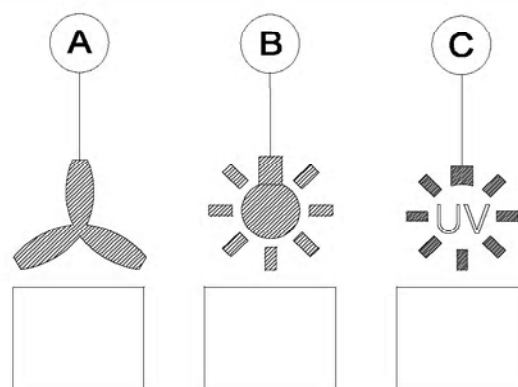


Figure 1. Control panel on PRC Mini.



5. Working rules

5.1. Working rules before work is started

- About 15 minutes before work is started, the fan of the cabinet is switched on for operation at normal speed.
- The work chamber is to be carefully cleaned and/or disinfected. Use 70 % ethanol or the like.
- It is recommended to use special lint-free wipes.

**WARNING**

Use preferably aqueous detergents on the window - **never** use detergents containing chloride. Use mainly a soft cloth in order not to scratch the windows.

5.2. Working rules during work

- Objects and remedies must be carefully cleaned and/or disinfected before being brought into the work chamber.
- Necessary remedies for use during work must be placed within reach.
- Put on necessary personal clothing for reducing particle emission from the operator (e.g. gloves, masks and general clean room clothing). Special attention should be focused on hands and lower parts of arms, as these are the parts of the person most likely to emit particles near the product.

5.3. Important in order to work under clean conditions

- Work with tranquil movements.
- Never overload the work chamber.
- Reduce the number of transports into the work chamber.
- Avoid remedies with strong emission of heat.
- Do not place the cabinet on places with direct draught towards the work opening.
- Avoid placing the cabinet where many persons pass by.

**NOTE**

For reliable operation it is important that the airflow conditions are as undisturbed as possible. Therefore, never overload the work chamber - only remedies necessary for the actual work should be placed in the work chamber.



6. Maintenance

Daily:

The work area is cleaned. Be especially careful when cleaning the work surface.

Weekly:

Wipe the exterior of the cabinet with a mild detergent of household type. Antistatic spray can be used for cleaning the window.

Regularly:

A reliable operation of the cabinet is based on the following conditions:

1. Correct air velocities.
2. Efficiency of installed HEPA-filter.

A qualified technician should test these parameters after approximately 5000 hours of operation or at least once a year. On the right gable of the lamp cover there is a label stating the time for the next service check-up.

- Testing of air velocities involves measurement of the air velocity in the vertical unidirectional flow.
- Testing of the efficiency of the installed HEPA-filters. By means of special measuring device, a particle counter or a photometer, the effectiveness of the filter is tested (see also the enclosed test report).

**NOTE**

Contact your local supplier for further information on test procedures.

6.1. Changing of wearing parts

Change of prefilter

Change of prefilter should be made whenever the surface of the prefilter turns grey.

- Loosen the cover in the right side of the upper part of the unit.
- Remove the prefilter and replace with new prefilter.

**NOTE**

Never try to clean the prefilter as it is of a disposable type!

Change of transformer

- The transformer is placed on a separate electrical plate underneath the prefilter cover.



Change of main filter

- Remove the lid in the right side of the cabinet.
- Loosen the special filter fasteners.
- Remove the filter from the cabinet.
- Carefully, install the new filter please be particularly careful with the filter gaskets.
- Fasten the filter using the special filter fasteners.
- Fasten the filter so there is about 3 mm between the aluminium frame of the filter and the filter-mounting frame of the cabinet.
- Refit the front lid.

Test

- Correct air velocities.
- Efficiency of installed HEPA-filter.



7. Technical description

Airflow in he work chamber

Through the perforated opening in the top of the cabinet air from the surrounding room is drawn into the cabinet. The air is prefiltered through a filter with medium efficiency.

Prefilter

The prefilter efficiency is 83 % Ashrae 52/76 (grav.) corresponding to EUROVENT 4/5 classification EU 3. The air is then led to the fan.

Fan

The air is led to the fan in the top of the cabinet where the air is pressurised. The fan is of a self-compensating type and has only an insignificant drop in supplied air volume by an increase in back pressure. By means of a built-in transformer the fan can be made to operate with increased power.

From the pressure plenum the air passes the main filter.

Main filter

The filter efficiency of the main filter is 99.95 % of particles = 0.3 μm (D.O.P. test).

The air flows from the main filter through the work chamber in a vertical unidirectional flow of clean air.

Immediately before reaching the tabletop the air separates and partly flows out through the perforated back wall, partly flows out through the perforated work surface.

The air returns to the suction opening of the cabinet passing through the surrounding space.

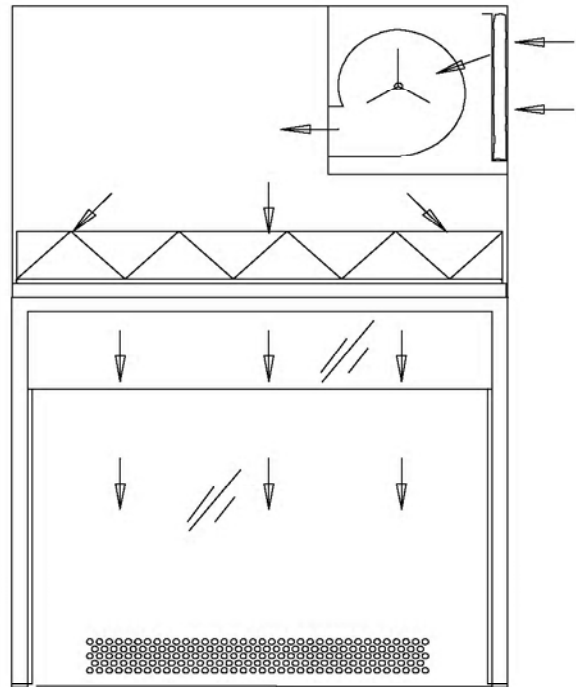


Figure 2. PRC Mini.

8. Technical data

PCR Mini	
Filter efficiency	99.95 % particles = 0.3 µm
External dimensions D x W x H	338 x 626 x 975 mm
Working chamber dimensions D x W x H	313 x 574 x 530 mm
Air volume	300 m ³ /h
Air velocity	0.45 m/s
Power	220/50/3 V/Hz/A
Power consumption	200 W
Noise level (ISO 6081)	55 dB(A)
Placed on a stable tabletop	
Weight	40.5 kg

9. Functional parts

1. Main filter
2. Filter cover
3. Electrical parts
4. On/Off buttons
5. Fan
6. Pre-filter
7. Socket for special coded plug (at the rear).

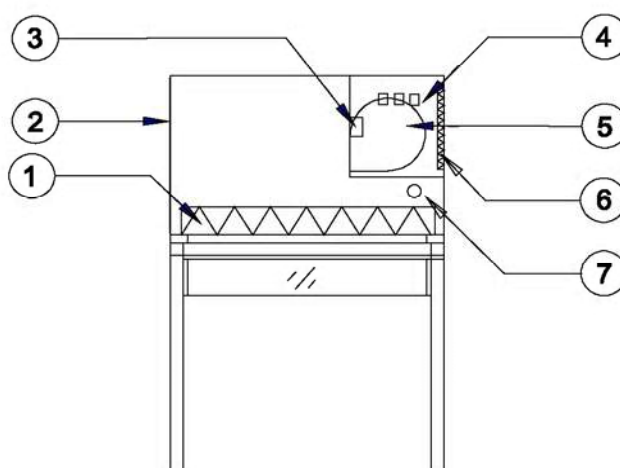


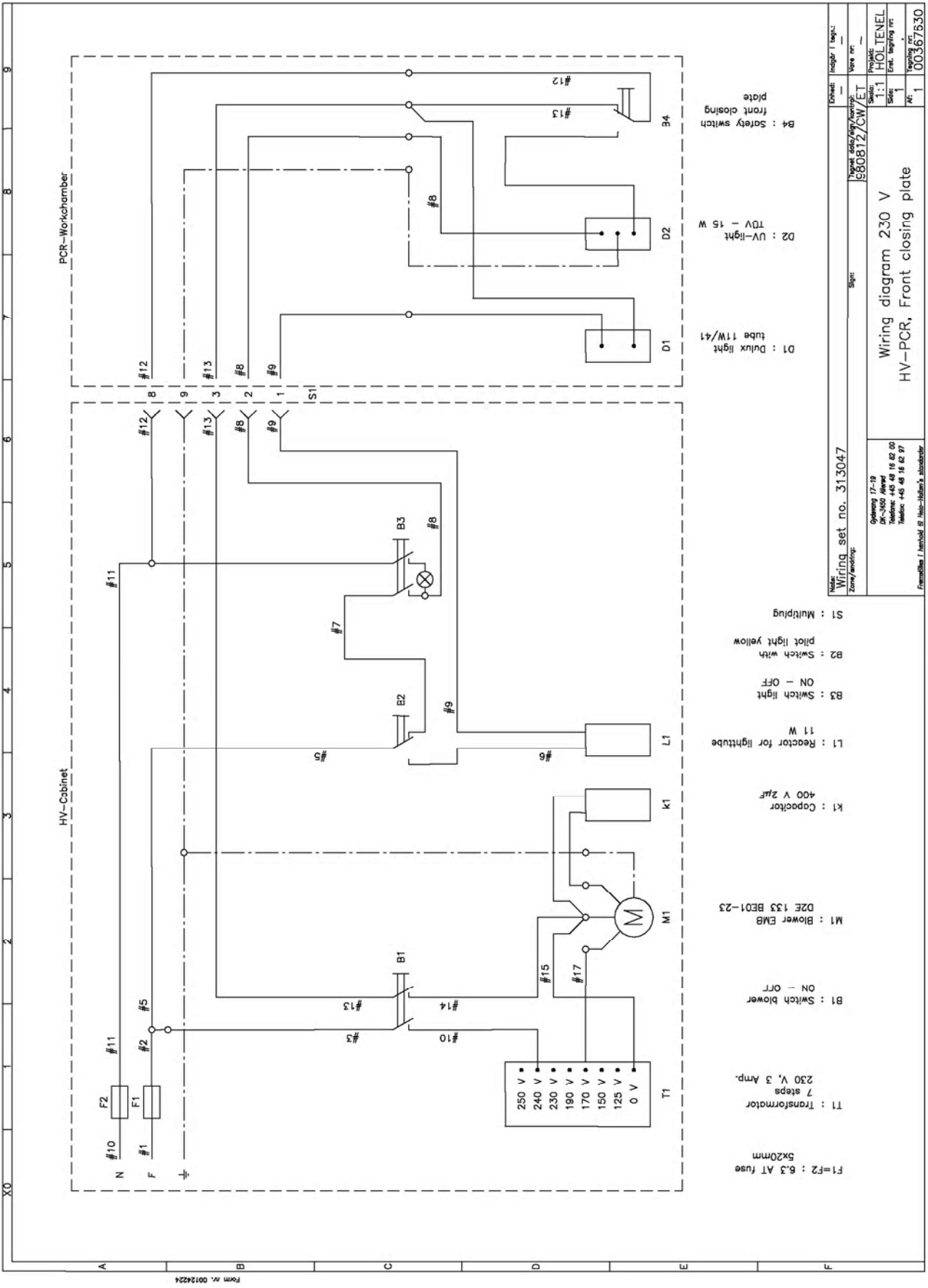
Figure 3. Functional parts of PCR Mini.

- The fan is built into the upper part of the cabinet and is accessible from the side cover in the right hand side.
- The control panel is built into the side of the cabinet. Mains connections, fuses and transformers are placed underneath the cover at the right side of the unit.

10. Recommended spare parts

Description	Amount	Make	Specifications	Jouan no.
Prefilter	1 pcs	Filtrair	VNF 290	82400103
Main filter	1 pcs	Luftfilterbau	HEPA MDA	82200501

11. Wiring diagram



We:

Jouan Nordic A/S
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Denmark

declare under our sole responsibility that the product

Model: Holten PCR Mini

to which this declaration relates is in conformity with the following standard(s) or other normative document(s):

EN 292-1:1991 - Safety of machinery.
Basic concepts - General principles for design.
(Basic terminology, methodology)

EN 292-2:1991 - Safety of machinery
Basic concepts - General principles for design
(Technical principles and specifications)

EN 60204-1:1999 - Safety of machinery - Electrical equipment of machines.
(General requirements)

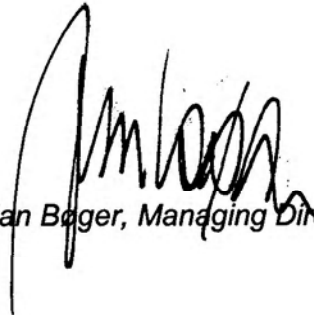
following the provisions of:

Directive **98/37/EEC** Machinery

Directive **73/23/EEC** Low voltage

Directive **89/336/EEC** Electromagnetic compatibility

Allerød, 2003.03.28


Jan Bøger, Managing Director

