

Operating instructions

Machine designation: Single workplace extraction unit

Machine type: D-LE 255 S

Machine no.:

Hausanschrift:

**Harnisch+Rieth
GmbH & Co. KG**
Küferstr. 14 - 16
D-73650 Winterbach

Telefon

+49 7181 / 96 78-0

Telefax

+49 7181 / 7 31 39
+49 7181 / 96 78-17

E-mail:

info@hr-dental.de
<http://www.hr-dental.de>

Keep for future reference!

Dear customer,

Thank you for the confidence you have placed in us by purchasing this extraction unit.

For this unit to be of service to you for many years to come, please take the time to read these operating instructions carefully, especially before using the unit for the first time.

Contents

1 Safety	2
1.1 Intended use	2
1.2 Possible dangers.....	2
1.3 Approved operators.....	2
1.4 Safety measures at the site of operation.....	3
1.5 Marking of safety references contained in these instructions	3
2 Initial/setting into operation	3
2.1 Unpacking the single workplace extraction unit	3
2.2 Brief description of the unit and identification of the unit components	4
2.3 Initial/setting into operation	5
3 Operation	6
3.1 Checking the filter unit.....	6
3.2 Air flow regulation.....	6
3.3 Automatic deactivation device and filter control lamp	6
4 Cleaning/maintenance	7
4.1 Changing the filter bag	7
4.2 Cleaning (changing) the ultra-fine filter	7
5 Electrical fuse protection	8
6 Technical data	8
7 Warranty conditions	9
8 EC declaration of conformity	10

1 Safety

1.1 Intended use

The single workplace extraction unit D-LE 255 S is intended for use in dental laboratories for extracting dusts, which are created by dust generating units. Never use it for suctioning liquids.

The suction apparatus is equipped with a filter of dust class M according to DIN EN 60335 (maximum leakage < 0.1 %).

Unauthorized modifications and additions are not permitted for safety reasons!

The conditions for operating, maintaining and cleaning the unit, as described in these operating instructions, must be strictly adhered to.

Caution

The unit is not designed as a medical appliance! Use on human beings is prohibited!
--

1.2 Possible dangers

The incorporated extraction unit should not be used for suctioning potential ignition sources or inflammable gases.

Before maintenance work, cleaning and/or repair work you should switch the unit off at the main switch and disconnected from the mains supply (i. e. the mains plug should be pulled).

As the dusts to be extracted are more or less hazardous to health, special care should be taken that the filter bag and ultra-fine filter are properly inserted and that they are not damaged!

Before accessing any of the incorporated electric components, the unit should be disconnected from the mains supply!

1.3 Approved operators

The operator of the machine should make sure that the operating instructions are accessible to the operating personnel. The operator should make sure that they have been read and fully understood by the operating personnel. Only then should they be allowed to operate the machine.

1.4 Safety measures at the site of operation

(See fig. 1, page 4)

The air flowing through the air outlet (45) should be allowed to flow freely.

The distance between the air outlet and the next obstacle (e. g. wall or piece of furniture) should be at least 10 cm.

The unit may only be installed and operated in cabinets or rooms with low volumetric capacity if adequate aeration is provided for and if the ambient temperature only increases by max. 10 °C when the extraction unit is running.

Foreign bodies should not be inserted through the ventilation openings of the unit.

Danger	The unit is not suitable for use in rooms where special conditions prevail (e.g. corrosive or explosive atmospheres).
---------------	---

1.5 Marking of safety references contained in these instructions

Note	Refers to tips and other particularly helpful pieces of information.
-------------	--

Caution	Refers to particular ways of operation or handling, the non-adherence of which can lead to malfunctioning, damages or other kinds of trouble.
----------------	---

Danger	Refers to dangerous situations, in which injuries can occur.
---------------	--

2 Initial/setting into operation

2.1 Unpacking the single workplace extraction unit

1. Put the carton onto a flat surface.
2. Remove the upper packaging material.
3. Press the packaging material away from the device and grasp the lower edge of the device.
4. The unit should be lifted by two people out of the carton (approx. 25 kg).

2.2 Brief description of the unit and identification of the unit components

The D-LE 255 S single workplace extraction unit comprises a powerful, noise absorbing high-pressure blower and is equipped with a potentiometer for regulating the air flow, an automatic deactivation device and a change filter display.

The D-LE 255 S single workplace extraction unit is intended for use with spot blasting units, saws and similar dust generating units.

When accordingly equipped with an extraction hose installation or an extraction pipe installation in combination with our S-1 electronic control unit as well as our W-2 extraction switch it is possible to connect and individually to operate several dust generating units to a single D-LE 255 S extraction unit. The S-1 unit switches the D-LE 255 S extraction unit on automatically as soon as one of the dust generating unit is activated. For further details please contact our office at H + R.

The dust is collected in a double-ply disposable filter bag. Depending upon the types of work materials being processed it can collect up to 10 kg of dust.

The large-area fine-particle filter that is downline to the disposable paper filter bag has a maximum leakage of < 0.1 %.

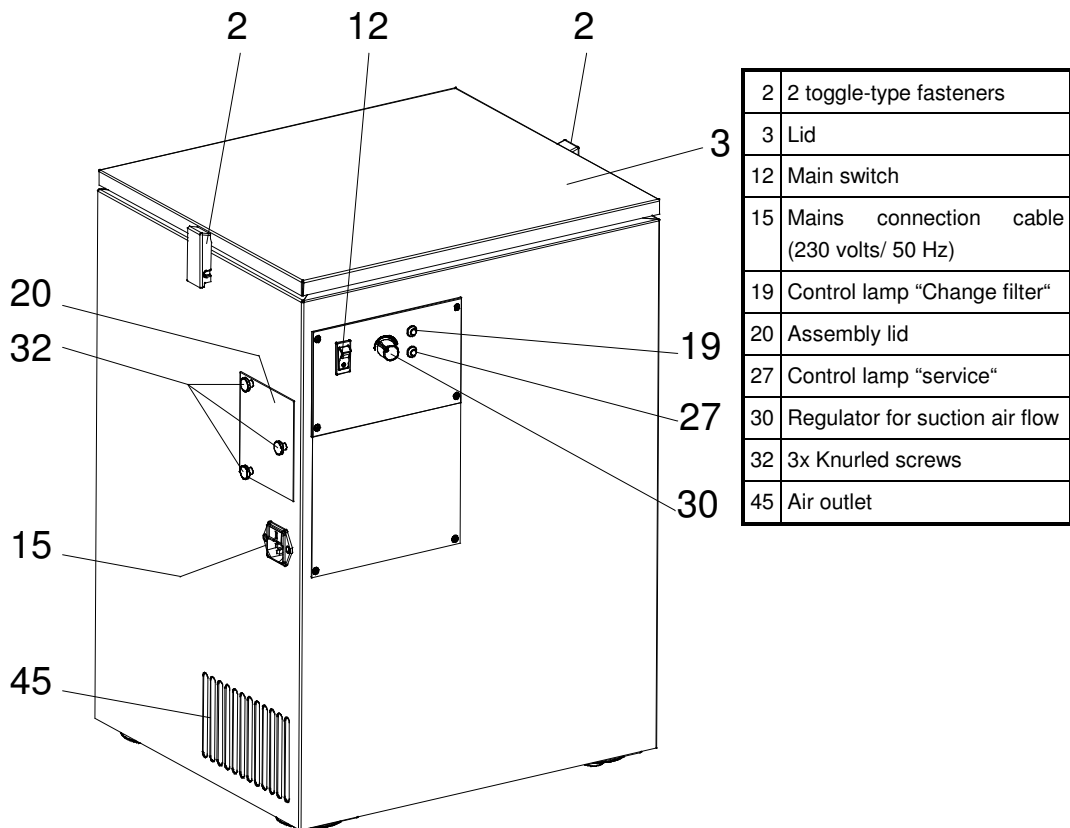


Fig. 1: Front left view

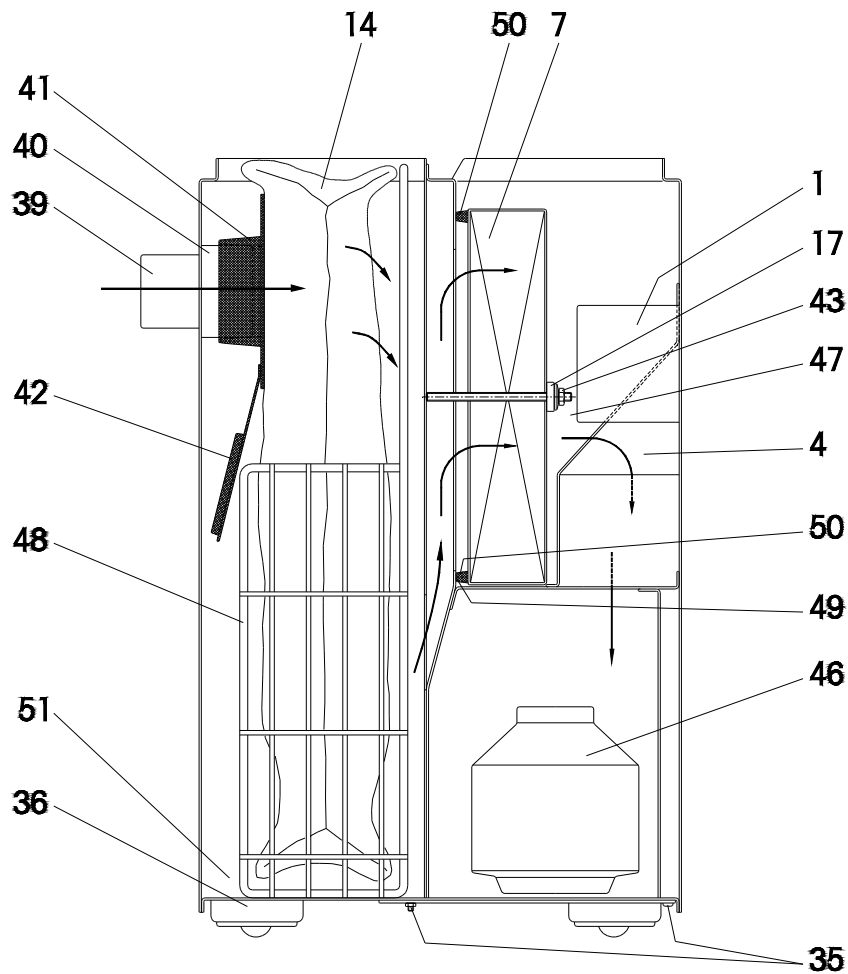


Fig. 2: Middle section of unit - left view

1	Electrical equipment box	41	Plastic connection of the filter bag
4	Suction duct opening	42	Screw cap for filter bag
7	Ultra-fine filter	43	2x M6 nuts
14	Filter bag	46	Suction motor
17	Strip with long holes	47	Suction compartment
35	9x screws for floor compartment	48	Wire basket
36	Castor rollers	49	Sealing surface, bordering
39	Nozzle Ø 50 mm	50	Gasket, bordering
40	Nozzle Ø 63 mm	51	Filter compartment

2.3 Initial/setting into operation

(See fig. 1, page 4)

1. Check filter unit , see section "3.1".
2. Establish hose connection (diameter 40 mm) to the dust generating units (hose length should be as short as possible, maximum length approx. 2 m).
3. Establish connection to mains supply (230 volts/50 Hz).
4. Actuate main switch (12).
 - permanent suction mode.

3 Operation

3.1 Checking the filter unit

(See figures 1 and 2 on pages 4 and 5)

Caution	The D-LE 255 S single workplace extraction unit may only be operated with a properly installed and intact ultra-fine filter (7) and filter bag (14).
----------------	--

1. Open 2 toggle-type fasteners (2) and take off lid (3).
2. Make sure that the ultra-fine filter (7) is not damaged and that strip (17) presses it properly (i. e. tightly) against the sealing surface (49).
3. The two M6 nuts (43) should be tightened firmly and evenly.
4. Assembly lid (20) should be fastened tightly with the two knurled screws (32).
5. Make sure that the filter bag (14) is not damaged when inserted into the wire basket (48).
6. Plastic connection (41) of the filter bag should be tightly connected to connection nozzle (40).
7. Put lid (3) back on and close the two toggle-type fasteners (2).

3.2 Air flow regulation

(See figures 1 and 2 on pages 4 and 5)

Note	As the filter bag (14) fills up, the suction air flow decreases.
-------------	--

- Regulator (potentiometer) (30) determines the desired suction air flow.

3.3 Automatic deactivation device and filter control lamp

(See figures 1 and 2 on pages 4 and 5)

Note	The max. admissible filter bag (14) quantity being reached actuates the deactivation device via a vacuum switch and the control lamp "Change filter" (19) lights up. The suction device is switched off.
-------------	--

- Filter bag (14) must then be replaced. See section "4.1".

Note	If the unit is switched off by the automatic deactivation device then you can still work with it for a short while without having to change the filter bag by first switching the unit off and on again and by tapping the filter bag (14).
-------------	---

- To tap the filter bag (14) open the toggle-type fasteners (2) and take off lid (3) (see figures 1 and 2).

Note	If the filter bag (14) is only slightly filled when the deactivation device is actuated (Change filter display lights up) then you should check the ultra-fine filter (7) (see section "4.2").
-------------	--

4 Cleaning/maintenance

4.1 Changing the filter bag

(See figures 1 and 2 on pages 4 and 5)

1. Open the 2 toggle-type fasteners (2) and take off lid (3).
2. Press the plastic connection (41), using both hands, from the nozzle (40).
3. Seal filter bag (14) with attached plastic lid (42).
4. Take filter bag (14) in the wire basket (48) to the waste disposal.

Caution

In no case are you allowed to empty the disposable paper filter bag for re-use, as this - as well as being hazardous to health - can cause damages to the unit.

Caution

Do not use compressed air to remove any remaining dust particles out of the filter compartment (51).
--

Foreign bodies should be kept from entering the suction duct opening (4), as this could cause damages to the motor!

5. Insert the new filter bag tightly and check the filter unit (see section "3.1").

4.2 Cleaning (changing) the ultra-fine filter

(See figures 1 and 2 on pages 4 and 5)

Note

After changing the filter bag (14) approx. ten times you should also take out the ultra-fine filter (7) and clean it (dry). If necessary, it should be exchanged completely!
--

We can also clean the ultra-fine filter (7) for you in exchange for a new one. We would be only too pleased to exchange your fine-particle filters in order to clean them, whereby only type-checked filters compliant with dust class M (DIN 60335) are employed.
--

1. Open the two toggle-type fasteners (2) and take off lid (3).
2. Take out knurled screws (32) and remove assembly lid (20).
3. Loosen the nuts (43) and lift out strip (17) (with long holes).
4. Take out ultra-fine filter (7).

Caution

The sealing surfaces (49) and the suction compartment (47) should be dust-free, as dust could possibly damage the suction motor (46).

The suction compartment (47) and the sealing surfaces (49) should be vacuumed clean. Do not use compressed air!

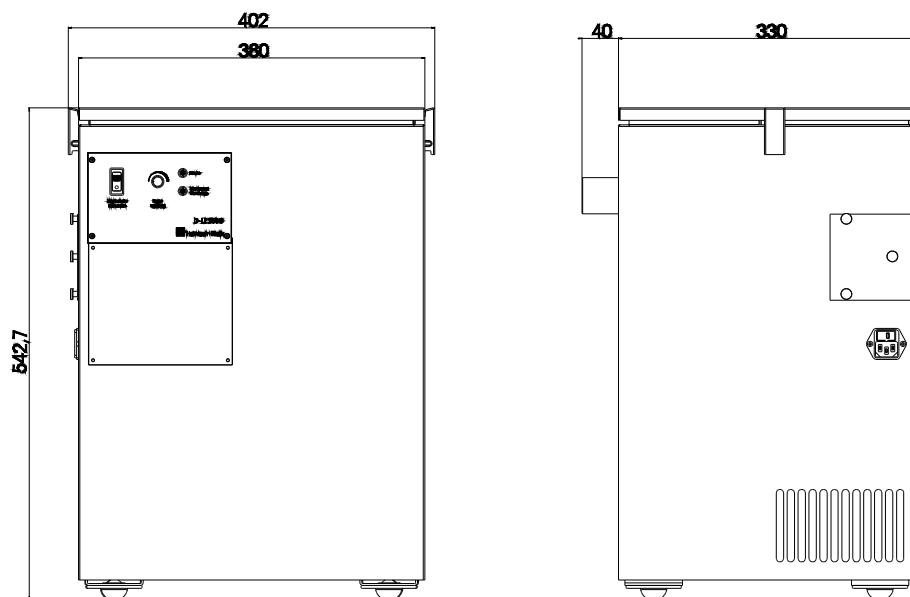
5. Insert cleaned/new ultra-fine filter (7).
6. Replace strip (17) from above onto the threaded pins.
7. Tighten the two M6 nuts (43) well and evenly..
8. Fasten the assembly lid (20) tightly with the knurled screws (32).
9. Check the filter unit (see section "3.1").

5 Electrical fuse protection

(See fig. 2, page 5)

- The entire unit is fuse protected with two fuses for feeble currents (main fuse) 6.3 A/T (27).

6 Technical data



Machine designation	: single workplace extraction unit
Machine type	: D-LE 255 S
Overall dimensions	: Width 420 mm, (with tension relief for mains supply cable) Depth 390 mm (with suction nozzle), Height 540 mm.
Electrical connection	: 230 volts/50 Hz
Overvoltage category	: II
Power consumption	: max. 600 watts
Air capacity	: max. 40 l / sec.
Sound pressure level	: 52 dB(A) min. air capacity 64 dB(A) max. air capacity
Fine-particle filter quality:	: dust class M, DIN EN 60335
Suction hose connection	: 40 mm in diameter
Dust capacity	: up to approx. 10 kg (depends on type of dust)
Electrical fuse protection	: 2x 8 A/T (mains supply connection)
Weight	: approx. 25 kg

7 Warranty conditions

This device conforms with current safety regulations and was subjected to extensive testing before leaving the works.

We grant a 12 months guarantee in which we are obliged to carry out all repairs necessary as a result of material or production faults free of charge.

Warranty limitations:

1. The guarantee is considered void if repairs are not carried out by specialized dealers or by us.
2. Spare parts deliveries made for reasons covered by the guarantee do not lead to an extension of the original guaranty period.
3. Incorrect installation (e.g. failure to heed VDE* regulations or written installation instructions).
4. Incorrect operation or stress.
5. External influences (e.g. transportation damage, damage caused by impacting or blows, damage caused by the effects of weather or other natural phenomenae).
6. Repairs and alterations not carried out by authorized third parties.
7. Unit breakdown resulting from adjustment, alteration or any other attempt to adapt the unit is not considered a material or production fault. **This guarantee neither encompasses the costs of such adjustment, alteration or any other attempt to adapt the unit, nor remedying of the resulting damage.**
8. Normal wear and tear (e.g. spray nozzles, hoses, and including hand-held pieces, union nuts, glass panes, carbon brushes, illumination agents) or damage resulting from incorrect operation is not covered by the terms of guarantee.

In order to provide you with a comprehensive service we would like you to fill out the guarantee return form (enclosed at the beginning of these instructions) and send it to us by fax or letter (window envelope).

* Verband Deutscher Elektrotechniker (German Electrical Technician Association)

Fax-Nr.: 0 71 81/ 73 13 9

☒-----☒-----☒-----☒-----☒-----Fold here for window envelope ----
Fax no.: 07181/73139

Copy
Guarantee return form

**Maschinenbau
Harnisch+Rieth GmbH & Co.
Postfach 1260
D-73644 Winterbach**

Machine designation:	Single workplace extraction unit
Machine type:	D-LE 255 S
Machine no.:	
Date of purchase:	
Dealer/store:	
From:	
Date/signature:	

8 EC declaration of conformity

In the meaning of the EC Machine Directive 2006/42/EG

We herewith declare that due to its design the machine specified below is in conformity with the basic safety and health requirements of the EC directives.

In the event of modifications of the machine not approved by us this certificate loses its validity.

Name of the manufacturer	:	Harnisch+Rieth
Address of the manufacturer	:	Küferstraße 14-16, 73650 Winterbach
Machine designation	:	Single workplace extraction unit
Machine type	:	D-LE 255 S

The following pertinent EC directives were applied:

EC machine directive (89/392/EEC), corresponding to 9. GSG regulation of 12.05.93

EC low voltage directive (73/23/EEC), corresponding to 1. GSG regulation of 11.06.79

EC EMC directive (89/336/EEC), corresponding to EMC law of 09.11.92

Following harmonizing standards were applied:

DIN EN ISO 12100	Safety of Machinery—Part 1, General Principles of Design (04.2004)
DIN EN ISO 14121-1	Safety of Machinery – Principles of Risk Assessment (12.2007)
DIN EN 61010-1	Safety regulations for measuring, control, regulating, and laboratory devices
DIN EN 60204-1	Safety of machinery - Electrical equipment of machines (06.2007)
DIN EN 61000-6-3	Radio-Suppression of Electrical Equipment – Radio Interference Voltage Interference Power (09.2007)
DIN EN 55 014	Electromagnetic compatibility, noise resistance requirements (category I).
DIN EN 55 104	Regulation concerning steam boilers formulation 12.96

The following national technical specifications were applied:

DIN EN 60335	Facility for separating health endangering dusts with re-circulation of the clean air into the work rooms.
--------------	--

A technical documentation is available.

The operation instructions belonging to the machine are also available.

Director of the Quality Control Department

Winterbach, 02.01.2010