IES 3
The smoke evacuation system for clean air at your workplace
HAZARD DETECTED. RISK AVERTED. INFORMATION AT: SMOKE.ERBE-MED.COM

IES 3 smoke evacuation
Our solution for a safe working environment

Eliminate surgical smoke with all its potentially dangerous substances from operating rooms, outpatient facilities and medical practices.

Smoke evacuation with IES 3 reduces the smoke concentration in the operating room – and thus also your smoke exposure.1,2 A face mask allows too many particles to pass through.2,3

Direct evacuation with an electrosurgical pencil just a few millimeters above the source is more efficient than conventional ventilation systems.4 This always gives you a good view of the surgical field and the surgical site itself.3

Protection through ULPA-15 filter
One core component of the 5-stage main filter cartridge is the ULPA-15 filter which removes 99.9995% of all 0.1 μm particles.5 It offers the best possible safety.6,7 The active carbon barrier in the main filter reduces odors. The display indicates the remaining filter capacity at all times.6 Changing the filter is simple and convenient.7
The optional prefilter protects the main filter cartridge against penetration of liquids and impurities via coarser tissue particles.

Good response, quiet operation
The innovative bi-turbo technology ensures a clean and safe working environment within a very short time through effective and fast evacuation. Due to the enhanced noise insulation, the IES 3 is noticeably quieter and more pleasant than comparable devices.7,8

Stage 1: ULPA-15 filter
Prefilter
Stage 2: Foam filter
Stage 3: First active carbon filter
Stage 4: Second active carbon filter
Stage 5: Dust protecting fleece

Design of filter cartridge and filter stages.
ULPA Filter = Ultra Low Penetration Air Filter
Extended range of applications

The different operating modes of the IES 3 allow versatile use:
☑️ Open surgical mode (OPEN Mode)
☑️ Laparoscopic mode (LAP Mode) with special accessories such as the LAP tubing set with trumpet valve (3 m and 5 m)
☑️ Presettings and configurations allow immediate use for different clinical requirements

Flexible activation

You have the following options for activating the IES 3 individually — regardless of working with one or two instruments simultaneously:
☑️ Automatically via the VIO® activation
☑️ Via the automatic activation device for all electrosurgical units
☑️ Via the foot switch for laser and ultrasonic applications

91% of respondents regard the IES 3 as quiet and pleasant.?
Our complete package
Smoke evacuation made by Erbe

Benefit from our almost 100 years of experience in electrosurgery, our worldwide presence and international support. The IES 3 is our contribution to a safe working environment.¹,³

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Easy and intuitive to use
☐ Compatible with all models of the VIO® range
☐ Fast and user-friendly operation:⁷
  → Proven user interface, similar to the VIO® 3 touchscreen
  → Display shows all parameters at a glance (settings, filter runtime, notes for the user)

High flexibility, compact design
☐ Smoke evacuation for every surgical discipline
☐ In the operating room as well as in outpatient facilities and medical practices
☐ For electrosurgery, laser, ultrasound
☐ Can be integrated into the VIO® workstation
☐ Can be used as stand-alone device
☐ Can be positioned horizontally or vertically

90% of all respondents regard the IES 3 user interface as intuitively easy.⁷
A system with variable configurations – all from one source

Water trap and prefilter protect the high-efficiency filter.

The connection to the central evacuation system removes particles and odors from the operating field.

The automatic activation device enables starting the IES 3 with all electrosurgical devices.

Good view of the target area in LAP mode with the LAP tubing set.

The T-piece offers optimal simultaneous evacuation even with 2 instruments.

The one-pedal footswitch activates the IES 3 in combination with laser and ultrasonic devices.

The single-use smoke evacuation pencils extract surgical smoke directly at its source.

<table>
<thead>
<tr>
<th>Instruments</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>20321-028</td>
<td>Electrosurgical pencil for IES, telescoping with spatula electrode</td>
</tr>
<tr>
<td>20321-040</td>
<td>Smoke evacuation pencil, single-use, short with spatula electrode, connecting cable 3 m</td>
</tr>
<tr>
<td>20321-041</td>
<td>Smoke evacuation pencil, single-use, short with coated spatula electrode, connecting cable 3 m</td>
</tr>
<tr>
<td>20321-042</td>
<td>Smoke evacuation pencil, single-use, short with spatula electrode, connecting cable 5 m</td>
</tr>
<tr>
<td>20321-043</td>
<td>Smoke evacuation pencil, single-use, short with coated spatula electrode, connecting cable 5 m</td>
</tr>
<tr>
<td>20321-007</td>
<td>Clip-on handle for Slim-Line electrosurgical pencils, tip short 12 mm with evacuation tubing 3 m and connection ø 22 mm, without electrosurgical pencil</td>
</tr>
<tr>
<td>20321-020</td>
<td>Clip-on handle for Slim-Line electrosurgical pencils, tip long 100 mm with evacuation tubing 3 m and connection ø 22 mm, without electrosurgical pencil</td>
</tr>
<tr>
<td>20321-044</td>
<td>Clip-On handle for smoke evacuation</td>
</tr>
<tr>
<td></td>
<td>To be used in combination with Erbe Slim-Line electrosurgical pencils (20190-065, 20190-066, 20190-067, 20190-074, 20190-075)</td>
</tr>
<tr>
<td>20321-045</td>
<td>Extension tip for Clip-On handle</td>
</tr>
<tr>
<td></td>
<td>To be used in combination with 20321-044</td>
</tr>
</tbody>
</table>
## Technical data

### Power connection

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated supply voltage</td>
<td>100–240 V AC (± 10 %)</td>
</tr>
<tr>
<td>Rated supply frequency</td>
<td>50/60 Hz</td>
</tr>
<tr>
<td>Line current</td>
<td>max. 3 A</td>
</tr>
<tr>
<td>Power consumption</td>
<td>max. 300 watts</td>
</tr>
<tr>
<td>Stand-by</td>
<td>12 watts at 230V, 12 watts at 115V</td>
</tr>
<tr>
<td>Potential equalization connection</td>
<td>Yes</td>
</tr>
<tr>
<td>Power fuse</td>
<td>T 4 A H / 250 V</td>
</tr>
</tbody>
</table>

### Type of operation

- Continuous operation

### Unit data

- Filter specifications: ULPA-15 in accordance with EN 1822-3:2011 and EN 1822-5:2011, corresponds to the requirements of ISO 16571 smoke evacuation devices

- Noise development:
  - At 60% evacuation power ≤ 49 dB(A) according to DIN EN ISO 3744
  - At max. evacuation power ≤ 59 dB(A) according to DIN EN ISO 3744

- Extraction performance:
  - ≤ 730 l/min (maximum turbine power, th)
  - ≤ 300 l/min (with main filter cartridge, automatic shut-off)

### Dimensions and weight

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Width x height x depth</td>
<td>205 x 280 x 404 mm</td>
</tr>
<tr>
<td>Weight</td>
<td>9.7 kg including main filter cartridge</td>
</tr>
<tr>
<td>Display size</td>
<td>5.7 inches</td>
</tr>
</tbody>
</table>

### Ambient conditions for operating the unit

- Temperature: +10 °C to +40 °C
- Relative humidity: 15 % – 85 %, non-condensing
- Air pressure: 54 kPa – 106 kPa
- Max. operating height: 5000 m over SL

### Acclimatization

If the unit has been stored or transported at temperatures below +10 °C or above +40 °C, the unit will take approximately 3 hours to acclimatize to room temperature.

### Standards

- Classification in accordance with MDD 93/42 EEC: I
- Protection class in accordance with EN 60 601-1: I
- Type in accordance with EN 60 601-1: CF
Smoke evacuation system and accessories

**Smoke evacuation system consisting of:**

- 10323-000: IES3 smoke evacuation unit
- 20323-000: Main filter cartridge IES3

**Accessories for protecting the main filter cartridge**

- 20321-022: Prefilter for smoke evacuation
- 20323-004: Self-sealing water trap; right angled, medium volume

**Accessories for laparoscopic application and simultaneous application**

- 20323-003: LAP tubing set IES3 with trumpet valve 3 m
- 20323-006: LAP tubing set IES3 with trumpet valve 5 m
- 20323-005: T-piece 22 mm outer diameter, 22 mm inner diameter, 22 mm outer diameter

**Accessories for open surgical application**

- 20321-004: Evacuation tube with optimized streaming
- 20321-009: Evacuation tubing, ø 22 mm
- 20321-010: Evacuation funnel connection, ø 22 mm
- 20321-012: Evacuation tubing, ø 22 mm, length 2.1 m (reusable)

**Accessories for connection to central evacuation system**

- 20323-001: Evacuation element IES3 for central evacuation
- 20323-009: Smoke evacuation tubing, ø 32 mm, length 1.8 m, type VT 10106

**Attachment sets**

- 20180-132: Attachment set IES2/IES3 to VIO® CART 20180-000
- 20323-008: Attachment set VIO® C to IES3
- 20323-007: Attachment set IES3 to VIO® 3

**Accessories for activation options**

- 20323-002: Automatic activation device for IES3 for VIO® C, electrosurgical external devices or stand-alone operation
- 20322-101: One-pedal footswitch IES2/IES3 AP & IP X8 equipment

**References**

5. Internal data: VB_Filter qualification ULPA15 IES 3; D158650
6. Internal data: filter service life IES 3; D138347
7. Internal data: results of summary evaluation II; D158302
8. Internal data: VB_sound measurements IES 3; D162979
Important information

We have prepared this medium with care. Nonetheless, we cannot completely rule out errors in this medium.

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