



# **VEIT AIRCLEANER AC 10 / AC 20**

Combatting viruses and bacteria chemically-free

# AGENDA



1. **INTRODUCTION GENERAL / UV-C-RADIATION**
2. **YOUR BENEFITS AC 10 / AC 20**
3. **TECHNICAL DETAILS GENERAL / AC 10 / AC 20**
4. **APPLICATION AREAS AC 10 / AC 20**
5. **YOUR HEALTH IS IMPORTANT TO US**
6. **QUALITY OUR PROMISE**
7. **VEIT GMBH**



**TAKE A DEEP BREATH  
WITH THE NEW VEIT AC SERIES  
ENJOY THE ADVANTAGES OF A GERM  
AND VIRUS-FREE INDOOR CLIMATE.**



# INTRODUCTION UV-C-RADIATION

Many people run the risk of becoming infected with viruses and bacteria and are also spreading them. The micro-organisms present in the air - such as viruses, bacteria, yeasts and mould - occur particularly in heavily frequented areas such as airports, doctors' surgeries, hospitals and in industry. They endanger the health of people, contaminate raw materials or spoil food.

To limit the risk of infection, UV-C radiation can be used to disinfect the air and destroy viruses and bacteria.



## UV-C-RADIATION:

- ✓ UV-C is ultraviolet radiation below 280 nm wavelength, which is not visible to the human eye
- ✓ Germs, viruses and spores are reliably reduced and hygiene and storage conditions are improved
- ✓ UV-C light has been used for over 40 years to disinfect air, surfaces and water
- ✓ UV-C has the biggest effect at a wavelength of 254 nm. This is the range of the UV-C lamps we use (low-pressure lamps, service life approx. 9,000 hours)

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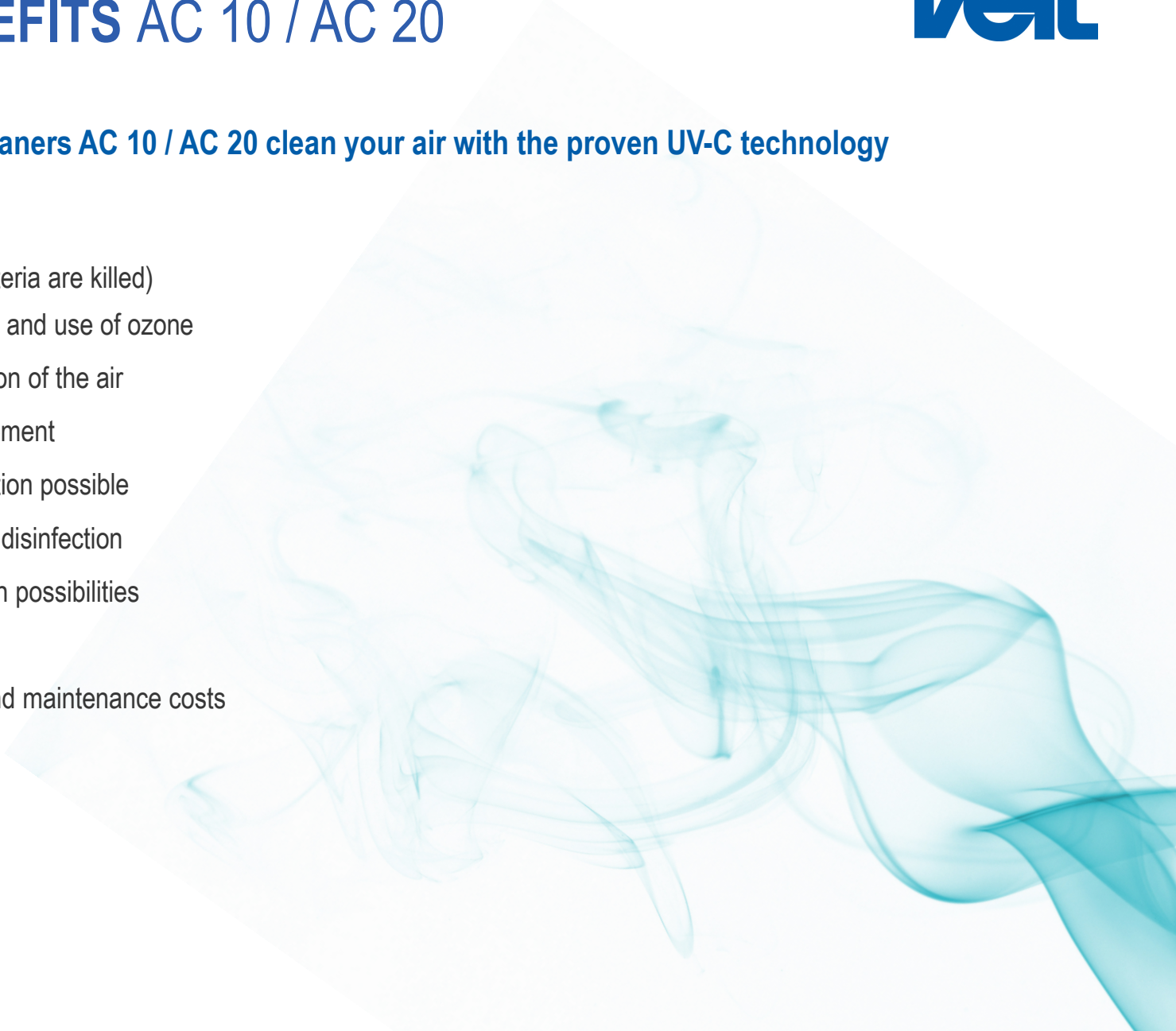


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# YOUR BENEFITS AC 10 / AC 20

**The new VEIT air cleaners AC 10 / AC 20 clean your air with the proven UV-C technology**

- ✓ High efficiency  
(up to 99% of bacteria are killed)
  - ✓ Without chemicals and use of ozone
  - ✓ Odour neutralisation of the air
  - ✓ Low space requirement
  - ✓ Continuous operation possible
  - ✓ Fast and effective disinfection
  - ✓ Flexible application possibilities
  - ✓ Easy handling
  - ✓ Low acquisition and maintenance costs
  - ✓ Made in Germany
- 
- A large, abstract graphic of blue smoke or mist rising from the bottom right corner, filling the right side of the slide. The smoke is composed of many thin, overlapping, wavy lines that create a sense of movement and depth. It is a light blue color, matching the overall theme of the slide.

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# TECHNICAL DETAILS GENERAL

- ✓ **CASE:** stainless steel (rustproof) with powder coating and a front cover with air grille for air inlet and outlet on both sides
- ✓ **FAN:** a powerful fan guides the airflow through a dust filter (filter flow) into the system and disinfects along the UV-C lamps to clean it of germs and viruses
- ✓ **CASE INTERIOR:** Contains germicidal UV-C lamps
- ✓ **UV-C-LAMPS:** The air is sterilized by the UV-C lamps. The clean air is returned (without contamination) to the environment
- ✓ **HUMAN HEALTH:** Due to the design of the device, UV-C rays are harmless to health and cannot cause skin or eye irritation



# TECHNICAL DETAILS AC 10



- ✓ Dimension: 855x320x325mm (HxWxD)
- ✓ Supply voltage: 230V (50Hz)
- ✓ Emitter power: 1 x 95W
- ✓ Protection class IP 20
- ✓ Suitable for rooms up to 30m<sup>2</sup> (depending on the room height)

## Output:

- 9.000 operating hours per UV-C lamp
- Continuous operation possible

## Design:

- Compact VEIT-Design
- UV-C radiation does not leak out of the case

## Flexible placement options:

- Easy positioning due to mobile base frame
- Optionally available with wall bracket



## Fan:

- High air flow (80m<sup>3</sup>/h)
- Low noise operation <40dB

## Maintenance:

- Easy filter and lamp change possible

# TECHNICAL DETAILS AC 20



- ✓ Dimensions: 400x1200x400mm (HxWxD)
- ✓ Supply voltage: 230V (50Hz)
- ✓ Installation site: in the middle of the room
- ✓ Emitter power : 2 x 95W
- ✓ Protection class IP 21
- ✓ Suitable for rooms up to 120m<sup>2</sup> (depending on the room height)

## Fan:

- High air flow (300m<sup>3</sup>/h)

## Maintenance:

- Easy filter and lamp change possible

## Design:

- Compact VEIT-Design

## Bracket:

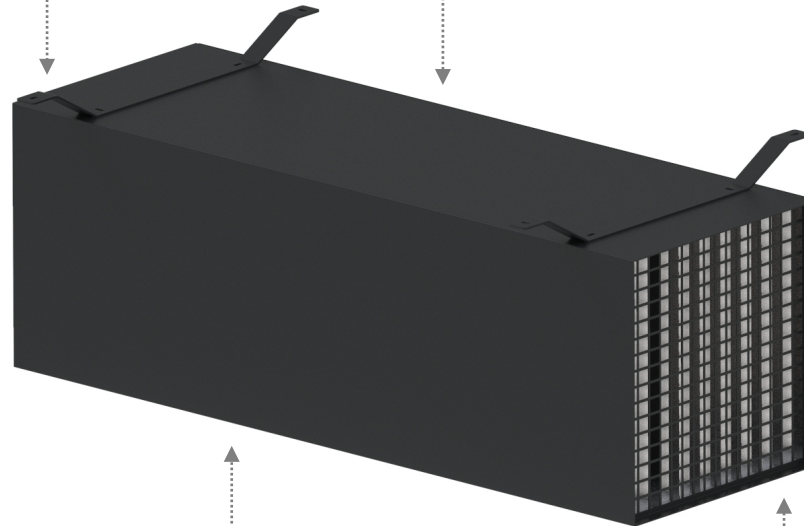
- Possibility for ceiling mounting

## Output:

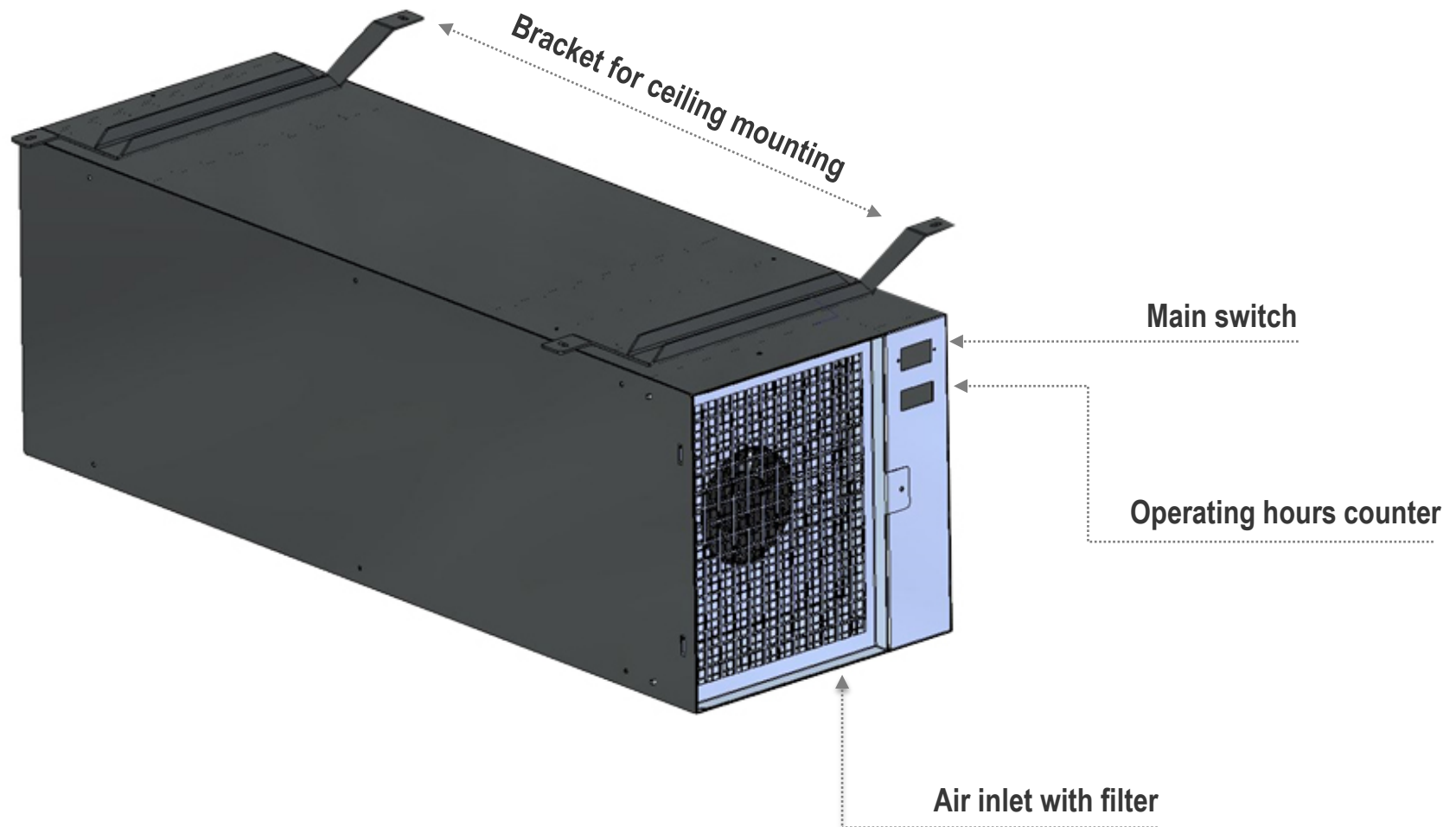
- 9.000 operating hours per UV-C lamp
- Continuous operation possible

## Option:

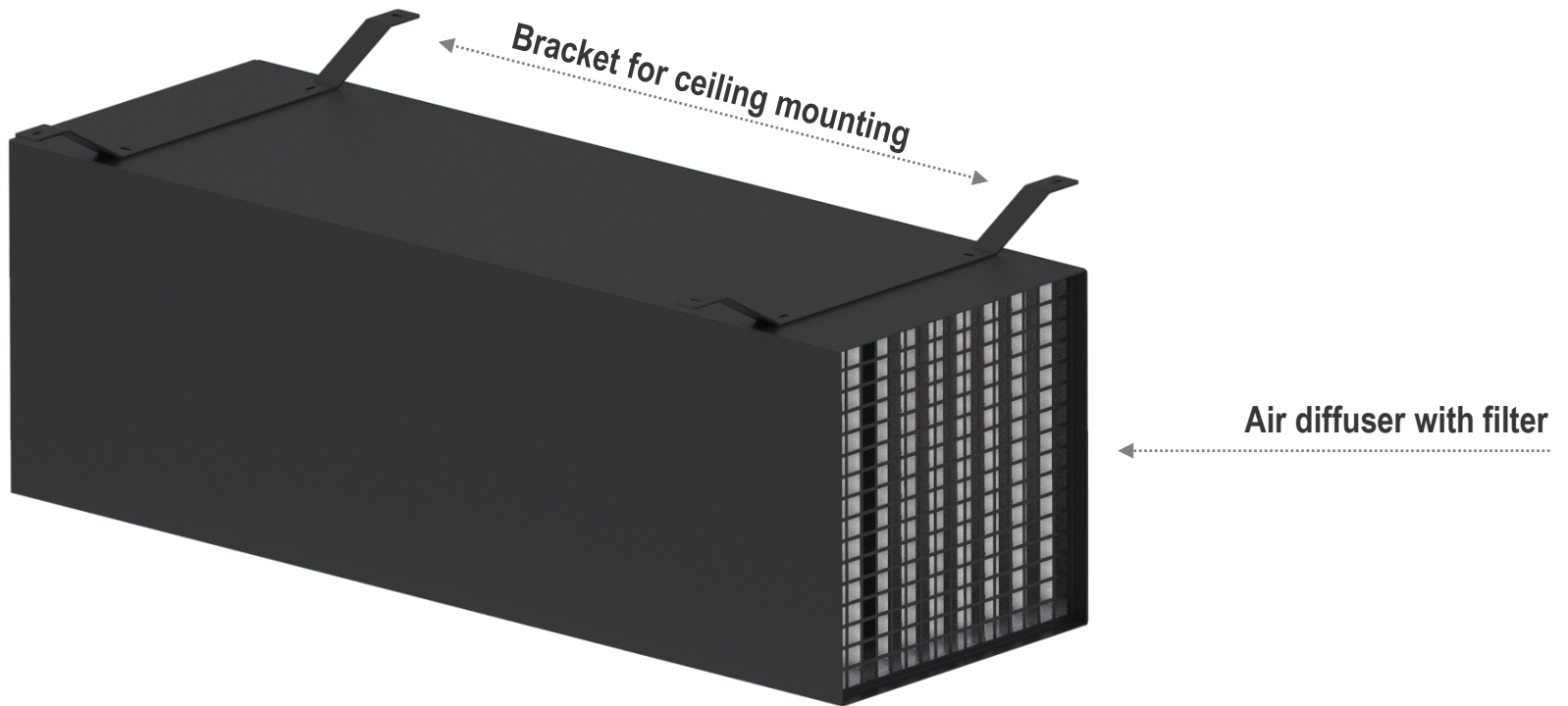
- Simple operation by radio remote control



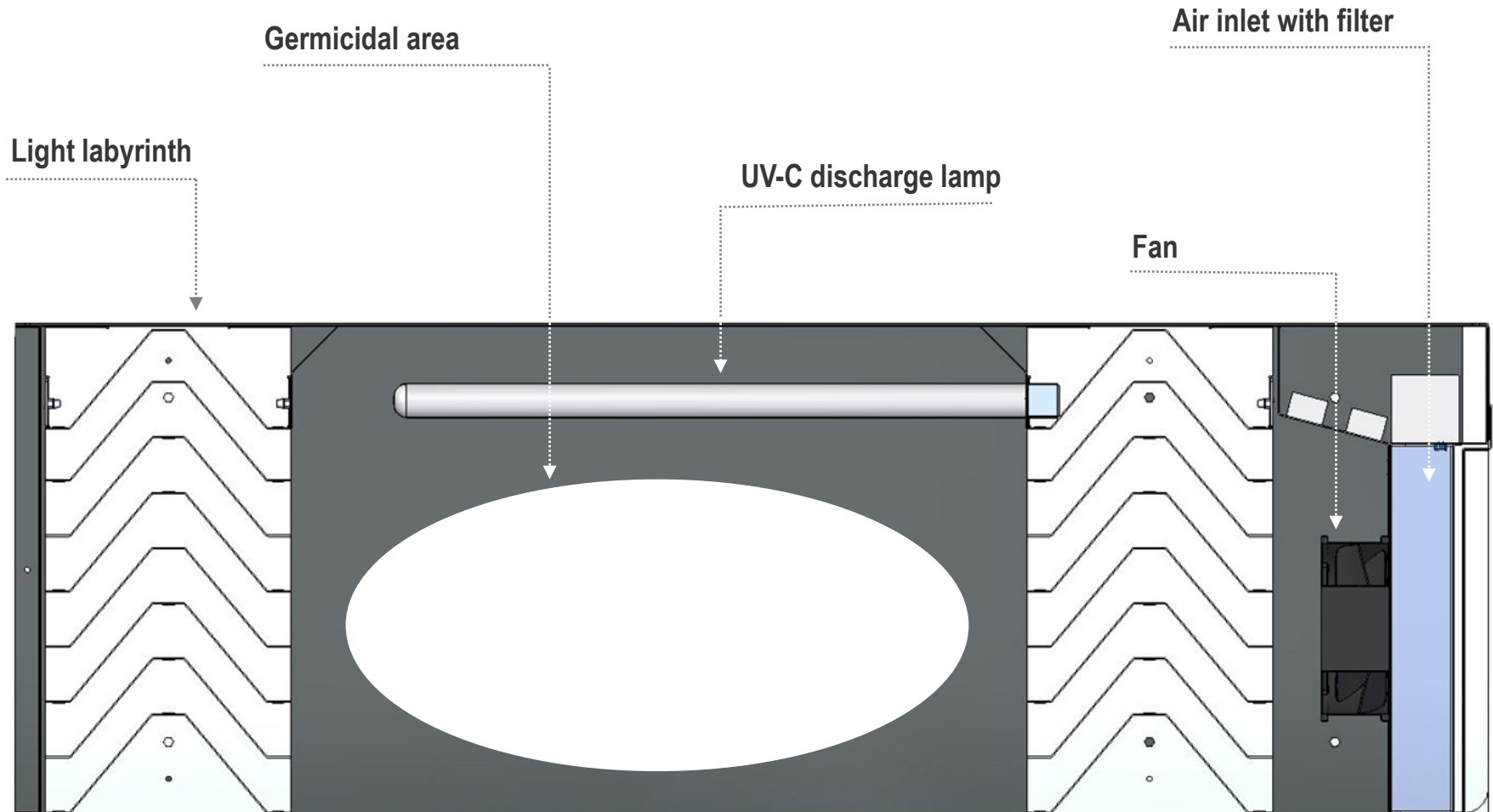
# TECHNICAL DETAILS AC 20 BACK SIDE VIEW



# TECHNICAL DETAILS AC 20 FRONT SIDE VIEW



# TECHNICAL DETAILS AC 20 CROSS SECTION VIEW



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# APPLICATION AREAS AC 10



- ✓ City and municipality offices
- ✓ Banks, service institutions
- ✓ Medical practices, dental laboratories, massage studios
- ✓ Shopping centers, grocery stores
- ✓ Furniture stores, building centers
- ✓ Gastronomy, kitchens, hotel industry
- ✓ Butchers, production facilities
- ✓ Fitness studios, cinemas, swimming pools
- ✓ Airports, buses, train, large-capacity taxis
- ✓ and much more

# APPLICATION AREAS AC 20



- ✓ Hospitals
- ✓ Retirement homes
- ✓ Office buildings
- ✓ Manufacturing industry
- ✓ Public institutions
- ✓ and much more

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# YOUR HEALTH IS IMPORTANT TO US



With the AC - series you can clean the air 24 hours 7 days a week, because the UV-C radiation does not escape from the housing. We can ensure this by means of our intensive tests and measurements in our R&D development laboratory.

## TEST REPORT

### Measurement of UV radiation



TITLE	PRODUCT	PROJECT NUMBER	VB-NUMBER
Measurement of UV radiation	AC 20		2020_009
<b>ELECTRICAL SAFETY TEST SETUP</b>			
Protective conductor resistance (<0.3 Ohm)	<input checked="" type="checkbox"/>	SK0 <input type="checkbox"/> SKII <input type="checkbox"/> SKIII <input type="checkbox"/>	<input type="checkbox"/>
Insulation resistance (>0.25 MOhm / >1 MOhm / >2 MOhm)	<input checked="" type="checkbox"/>	Function correct (<0.5 mA)	<input checked="" type="checkbox"/>
Differential current (<3.5 mA)	<input type="checkbox"/>		



Date of creation: 14 May 2020

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## TEST REPORT

### Measurement of UV radiation



#### TARGET AND PURPOSE

Detection of the maximum UV-C radiation outside the AC 20.

#### TESTING / TEST SETUP / MEASUREMENT METHOD

Which test setup and which method was used for the test execution?

The AC 20 prototype is running an endurance test. During this test a dose measurement of UV-C light is done. The dose measurement was done by a „Gigahertz-Optik X1 Optometer“.

#### BOUNDARY CONDITIONS

Which measurement devices, tools, device options, drawing no. etc was used?

- AC 20 (164298-initial batch)
- Light labyrinth (164287\_003\_0)
- Dust filter type 15/150, Cl. G3 / ISO coarse 30% for air intake and air exhaust
- Philips UV-C lamp 2x 95Watt (254nm Hg-lamp)
- Measurement device: Gigahertz-Optik X1 Optometer
- Measured points: Determination of the "Radiation-Hot-Spots"
- Hot-Spot: Air exhaust

#### MEASUREMENT

Which physical dimensions are measured?

UV-C radiation [ $\mu\text{J}/\text{cm}^2$ ]

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## TEST REPORT

### Measurement of UV radiation



#### RESULT / ASSESSMENT / OBSERVATION

Has the objective and purpose of the test been fulfilled?

**Findings:** The dose of radiation is behaving approximately linear, due to this a measurement period of 2h was chosen.



#### Measurement with Filter Test:

**Result:** Maximum dose of radiation directly at the exhaust (Measurement with filter) = 17,831  $\mu\text{J}/\text{cm}^2$

**Interpretation:** According to the study „Occupant UV Exposure Measurements for Upper-Room Ultraviolet Germicidal Irradiation“ (<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4854786/>) oder VEG2020-009: a maximum daily dose of 6.0 mJ/cm<sup>2</sup> for a duration of 8 hours is classified as harmless.

As the dose of radiation is behaving approximately linear, the measured value can be extrapolated. The result is a dose of 0.7 mJ/cm<sup>2</sup> which is far below the permitted dose.



#### Measurement without Filter Test:

**Result:** Maximum dose of radiation directly at the exhaust (Measurement without filter) = 549,24  $\mu\text{J}/\text{cm}^2$

**Interpretation:** According to the study „Occupant UV Exposure Measurements for Upper-Room Ultraviolet Germicidal Irradiation“ (<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4854786/>) oder VEG2020-009: a maximum daily dose of 6.0 mJ/cm<sup>2</sup> for a duration of 8 hours is classified as harmless. As the dose of radiation is behaving approximately linear, the measured value can be extrapolated. The result is a dose of 2.2 mJ/cm<sup>2</sup> which is far below the permitted dose.

#### SUMMARY

The maximum dose of UV radiation which passes out of the AC 20 is classified as harmless. Even there is close contact to the device.

Signature

*J. V. [Signature]*



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Date

14. 05. 2020

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# QUALITY OUR PROMISE



VEIT stands for outstanding quality. Through a continuous improvement process, quality is maintained at the highest level guaranteed.

You can rely on us:

- We run comprehensive initial tests
- We monitor our quality constantly and
- We continuously improve our products

The entire company has been certified according to DIN EN ISO 9001.





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The VEIT Group with its head office in Landsberg, Germany, is worldwide the leading manufacturer of ironing equipment, fusing machines, pressing machines as well as refinishing equipment for garments.

For more than 60 years the products of the VEIT Group have been models of outstanding quality and maximum efficiency, which is also reflected in the new products in the area of cleaning, germ and virus protection.

**ARRANGE YOUR PHONE INDIVIDUAL APPOINTMENT WITH YOUR EXPERT!**





# **VEIT AIRCLENADER AC 10 / AC 20**

Our response to viruses and bacteria