



The air purifiers

WAREHOUSE

CATALOG 2023



www.teka-warehouse.com



WAREHOUSE



Our Hotline
+49 25 41 84 84 10



Welcome to the **TEKA WAREHOUSE**

Dear customers and partners of TEKA,

consultancy costs time and money. In the TEKA Warehouse you can **choose** your appropriate unit or create **your own system**. The following pages will assist you in selecting the right system.

We save on a time-intensive consulting and pass this advantage directly on to you.

In addition, you will receive your TEKA system even **more quickly**, because we keep **many products** of TEKA warehouses **stocked**. The system will usually arrive **in a few days** delivered by a shipping agency (depending on your location).

TEKA GmbH is a family business.

Founded in 1995 by the current directors Jürgen Kemper and Erwin Telöken. Simon Telöken moved up to the CEO-level in 2015.

The company is located in Velen in Westphalia. In the nearby Borcken-Weseke TEKA operates a training center for special seminars, product training and demonstration.

The air purifiers



Erwin Telöken



Pablo Gallardo

www.teka-warehouse.com

Table of Contents *The air purifiers*

Good to know

Dust..... 6
 Laws 7
 Decision diagram..... 11
 Filter types..... 12
 Particle Sizes 14
 Dust settling times 16
 Hazard classes 17

AirFan

AirFan 18

DusToo

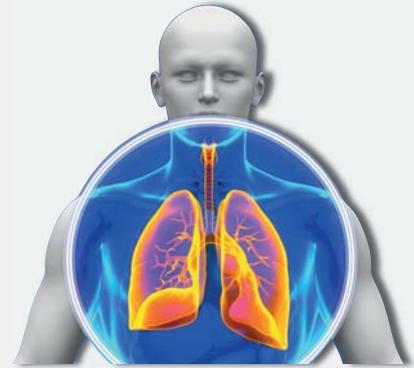
Process/application areas 20
 Basic version 22
 Hose and round nozzle 24
 Hose and funnel nozzle 25

filtoo

Process/application areas 26
 Basic version 28
 Extraction arm..... 30
 Mobile workbench 31
 Dust Pre-Separator STAVO 32

STRONGMASTER

Process/application areas 34
 STRONGMASTER with extraction arm 36



The future is NOW



Industry 4.0

Overview..... 38

TEKA-Connect WLAN

Airtracker Basic/Pro 40

CleanAir-Cube

CleanAir-Cube 42

EcoCube

Process/application areas 44

Basic version 50

ECO 5,5 Sets 52-57

ECO 7,5 Sets..... 58-63

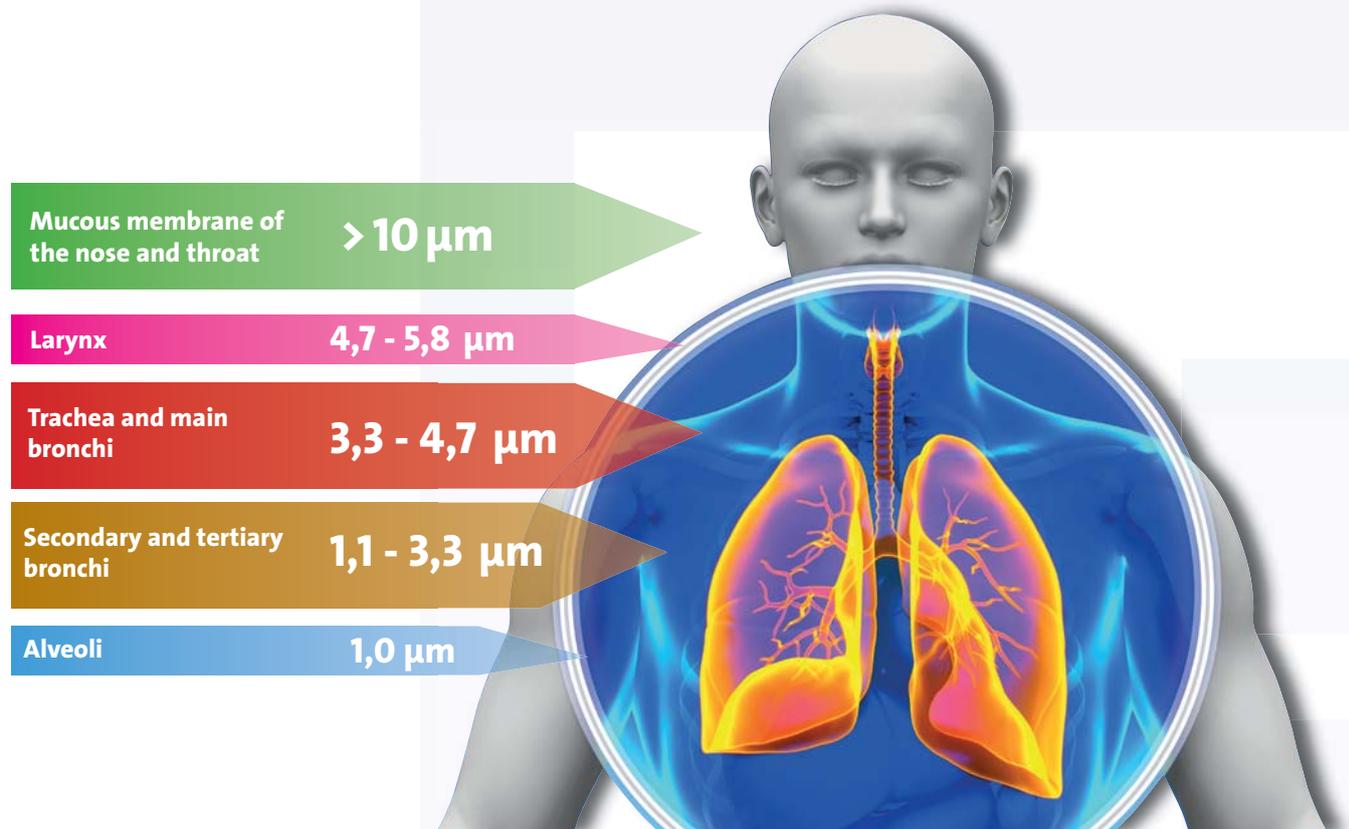
ECO 11 Sets..... 64-69



Good to know

What is dust/fume?

The definition of dust/fume applied in this context describes the amount of dispersed, firm particles in the air, which are produced inter alia during thermal processes such as welding.



Medical illustration:
Internalisation of particles of different sizes into the human body

When does dust/fume occur?

In welding technology dust/ fume and thus hazardous substances are produced

due to the use of

- ▶ base materials
- ▶ filler materials
- ▶ impurities
- ▶ ambient air

during processes such as

- ▶ evaporation
- ▶ condensation
- ▶ oxidation
- ▶ decomposition
- ▶ pyrolysis
- ▶ combustion



Good to know

Why is dust/fume dangerous?

In general, every kind of dust/fume can lead to respiratory diseases (bronchitis, obstructive bronchitis) resulting from the inhaling of dust in a high concentration and for a longer period. Dust/fume is particularly dangerous if it contains hazardous substances.

Particles contained in welding fume are inhalable and respirable and in case of chromium-nickel steel, they are carcinogenic. The Ordinance on Hazardous Substances requires a local extraction: "Dusts shall be collected and disposed of safely at the place of its origin. The extracted air shall be conducted in such a way that as little dust as possible passes into the workers' breathing air. The extracted air may only be returned to the working area if it has been adequately cleaned. Equipment to separate, collect and precipitate dusts must be state of the art. When these devices are first put into operation, it must be checked if they are sufficiently effective. At least once a year the devices must be inspected with respect to their proper functioning, serviced and, if relevant, repaired. The results of the inspections according to the sentences 1 and 2 shall be preserved." (Annex I No. 2, § 2.3(5,7))

German framework regulation Ordinance on Hazardous Substances (GefStoffV)

When it came into effect on January 1st, 2005, the Ordinance on Hazardous Substances restructured the occupational safety for activities involving hazardous substances as implementation of several EC directives. Welding fume is considered a hazardous substance, thus the Ordinance on Hazardous Substances applies.



Good to know

Occupational exposure limits

Occupational exposure limits serve to protect the employees and their health against the dangers of inhalation of substances (TRGS 900). They came into effect in 2005 and replaced the maximum workplace concentration values that applied until then.

TRGS 400 clearly states that the employer needs to carry out an assessment of the risks and that the necessary protective measures must be taken before starting the work with hazardous substances (§ 3.1(2)). The employer always has the overall responsibility (§ 3.1(6)).

TRGS 402 informs about the measures which can be taken by an employer in order to comply with the occupational exposure limits. The decision tree on the right can be used as a first clue.

| Hazardous substance | Chemical symbol | Occupat. exposure limit (in mg/m ³) | Health risk |
|--------------------------|--------------------------------|--|--|
| Aluminium oxide | Al ₂ O ₃ | 1.25** | Fibrosis, neuropsychic symptoms |
| Barium compounds | Ba | 0.5 | Acute toxicity |
| Lead compounds | Pb | 0.15 | Damage to brain, kidneys, nervous system |
| Chromium (III) compounds | Cr | 2 | Skin damage |
| Chromium (VI) compounds | Cr (VI) | - | Carcinogenic |
| Cobalt(compounds) | Co | 0.1 | Carcinogenic |
| Ferric oxide | Fe ₂ O ₃ | 1.25** | Siderosis |
| Formaldehyde | CH ₂ O | 0.37 | Potentially carcinogenic |
| Carbon dioxide | CO ₂ | 9100 | Damage to nervous and circulatory system |
| Carbon monoxide | CO | 35 | Damage to cardiovascular system |
| Manganese | Mn | 0.02 | Damage to central nervous system/resp. tract |
| Nickel | Ni | 0.006 | Potentially carcinogenic/skin damage |
| Nickel compounds | NiO u.a. | 0.05 | Carcinogenic |
| Phosgene | COCl ₂ | 0.41 | Damage to lung |
| Nitrogen dioxide | NO ₂ | 0.95 | Lung-function abnormalities |
| Nitrogen monoxide | NO | 2.5 | Impact on vascular and nervous system |
| Zinc oxide | ZnO | 0.1 | Metal fume fever/ skin damage |
| Tin compounds | Sn | 2 | Toxicity |

* The information is taken from GESTIS substances database of the Institute for occupational safety and health (Institut für Arbeitsschutz – IFA) of the German Social Accident Insurance. We do not assume any liability for the accuracy of the data and for possible typing and transmission errors. In case of doubt, please consult the GESTIS database and/or a member of the IFA.

**General dust limit



Good to know

The Technical Rules for Hazardous Substances

The Technical Rules for Hazardous Substances (Technischen Regeln for Gefahrstoffe -TRGS) reflect the state of the art, occupational medicine and work hygiene as well as other established results of occupational research regarding work with hazardous substances including their classification and labelling. They are determined and adjusted by the Committee on Hazardous Substances (Ausschuss for Gefahrstoffe - AGS) and announced by the German Federal Ministry of Labour and Social Affairs in the Joint Ministerial Gazette (Gemeinsames Ministerialblatt) according to the Ordinance on Hazardous Substances.

Ordinance on Hazardous Substances
<http://www.w.teka.eu/gefstoffv>

TRGS 528 (Welding work)
<http://www.w.teka.eu/trgs528>

TRGS 560 (Air recirculation)
<http://www.w.teka.eu/trgs560>

Air circulation when dealing with carcinogenic substances

If activities are carried out in a working area involving hazardous substances of category 1 or 2 which are carcinogenic, mutagenic or have a negative impact on fertility, the extracted air there must not be returned into the working area. This does not apply if the air has been adequately decontaminated of such substances using processes or devices recognised by the authorities or the statutory accident insurance institutions. The air must then be conducted or cleaned in such a way that hazardous substances that are carcinogenic, mutagenic and toxic to reproduction do not pass into the breathing air of other workers." (§ 10(5) GefStoffV)



Good to know

If the welding fumes contain carcinogenic parts – such as nickel compounds or chromates – the exhaust air has to be led to the outside. In exceptional cases, the cleaned air can be returned if the requirements of the TRGS 560 „Technical Rules for Hazardous Substances - Air return when handling carcinogenic, mutagenic substances and substances toxic to reproduction“ are met. According to this, the concentration of hazardous substances in the air which is returned into the working area (returned cleaned air) must not exceed a tenth of the former TRK (technical guideline concentration) value.

Extract from TRGS 528

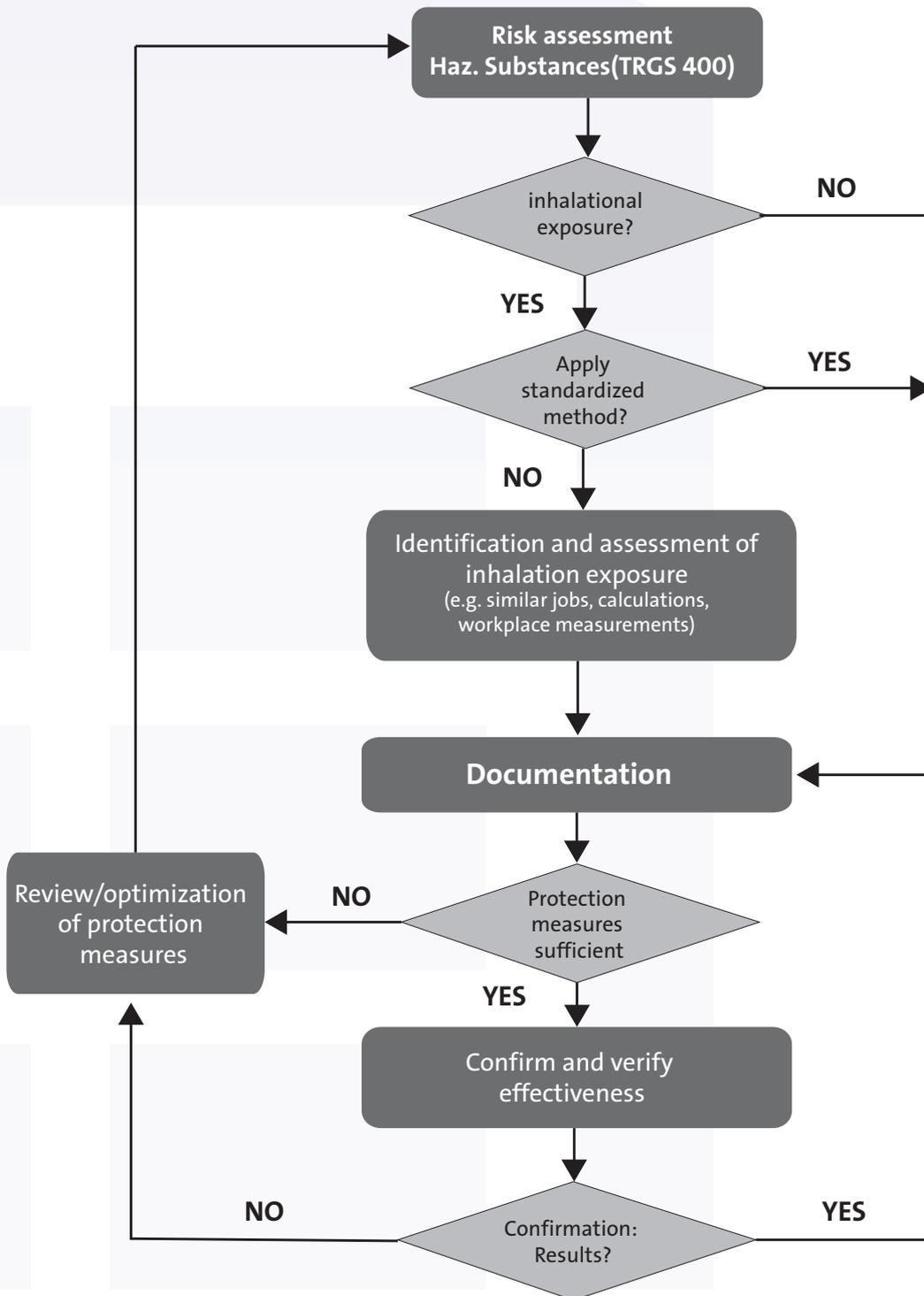
4.5 Air return: (1) Extracted air may only be returned to the working area if it has been adequately purified. Ventilation systems with air return may be used if they are type-approved or if individual measurements are conducted to check the required effectiveness. Instructions on the fresh air fraction in room ventilation systems are given in BGR 121 „Workplace ventilation – ventilation measures“. (2) At workplaces where welding work or allied processes involving the emission of carcinogenic or mutagenic substances or substances toxic to reproduction of category 1 or 2 are performed (especially with the use of chromium- and nickel-bearing materials) extracted air must not be recirculated.

This does not apply if type-approved welding fume extraction devices of the welding fume separation classes W2 or W3 are used. For instructions concerning the welding fume separation classes see DIN EN ISO15012- 1 „Health and safety in welding and allied processes – Requirements, testing and marking of equipment for air filtration – Part 1: Determining the separation efficiency for welding fume“ (Issue: February 2009).



Good to know

Decision diagram for employers





Good to know

Types of filters

Prefilters and particulate filters are classified into 17 different filter classes according to their separation efficiency ranging from the coarsest filter to the finest filter U17:

- G1, G2, G3, G4: COARSE DUST FILTERS
- ePM10, ePM2.5, ePM 1: FINE DUST FILTERS
- E10, E11, E12, H13, H14, U15, U16, U17: PARTICULATE FILTERS

(ISO 16890 and EN 1822-1:1998)

Depending on the norm the initial separation efficiency or the fractional separation efficiency are used as a performance criterion under standard load.

Initial separation efficiency: Ratio between the passing and the filtered material with a new filter.

Fractional separation efficiency: Separation efficiency of a filter concerning the particles of one specific size group (fraction).

The table to the right shows a detailed overview.



| EN 779:2012 | ePM 1 | ePM 2,5 | ePM 10 |
|-------------|-----------|-----------|------------|
| M5 | 5% - 35% | 10% - 45% | 40% - 70% |
| M6 | 10% - 40% | 20% - 50% | 60% - 80% |
| F7 | 40% - 65% | 65% - 75% | 80% - 90% |
| F8 | 65% - 90% | 75% - 95% | 90% -> 95% |
| F9 | 80% - 90% | 85% - 95% | 90% -> 95% |

The previous standard EN 779 has been replaced by the new standard ISO 16890. The table above shows how the old filter classes carry over into the new standard.



Good to know

| Directly relevant norms | | | | | | | | | | | |
|-------------------------|----------------|---|--|------------------------------------|-----------------------------------|--|--|---|--|---|--|
| Directly relevant norms | ISO 16890 | Coarse dust filter | G1 A > 50% | | | | | | | | |
| | ISO 16890 | Fine dust filter | ISO ePM10 ePM10 >= 50% | ISO ePM2,5 ePM2,5,min >= 50% | ISO ePM1 ePM1,min >= 50% | | | | | | |
| | EN 1822-1:1998 | EPA, HEPA, ULPA Initial separation efficiency A DEHS, MPPS approx. 0,1-0,3 µm | E10 A (integral) > 85% | E11 A (integral) > 95% | E12 A (integral) > 99,5% | H13 A (integral) > 99,95% A (local) > 99,75% | H14 A (integral) > 99,995% A (local) > 99,975% | U15 A (integral) > 99,9995% A (local) > 99,9975% | U16 A (integral) > 99,99995% A (local) > 99,99975% | U17 A (integral) > 99,999995% A (local) > 99,99999% | |
| Related norms | ZH 1/487 | Dust eliminating Medium transmittance level D Quartz dust 90% 0,2 µm | The specified limits may vary considerably depending on the materials. | | | U D < 5% | S D < 1% | G D < 0,5% | C D < 0,1% | K1, K2 D < 0,05%, Paraffin Oil 90% < 1 EM | |
| | US MIL-STD | Particulate filter Initial separation efficiency A DOP 0,3 µm | 95% | 99,97% | 99,99% | 99,999% | | | | | |
| | DS 3928 | Particulate filter Initial separation efficiency A NaCl DOP 0,3 µm | EU10 A > 95% | EU11 A > 99,9% | EU12 A > 99,97% | EU13 A > 99,99% | EU14 A > 99,999% | | | | |
| | DIN EN 60335 | Particulate filter Transmittance level D Paraffin oil 61% < 1 µm | L D < 1% | M D < 0,1% | H D < 0,005% | | | | | | |



Good to know

Particle sizes

Particles having a size between 1 mm and 0.1 mm can often be seen with the naked eye. Particles smaller than 100 μm (= 0.1 mm) are only visible by means of an optical microscope. These particle sizes correspond to the filter classes G3 and G4.



Coarse (>10 μm)

Particles which are smaller than 1 μm (= 0.001 mm) do not sink, but keep on floating permanently. Dust and oil mist produced during metal processing belong to this category. Filters of the filter classes M5 thru F9 are intended to be used for particles between 0.1 μm and 1 μm .

Smaller particles can only be seen with the help of a scanning electron microscope. To filter these particles the finest filters of the classes E10-U17 must be used. Furthermore, activated carbon filters must be used for particles of 0.01 μm (= 0.00001 mm) and smaller.

Smaller



Fine (< 10 μm)

As the right choice of filters depends on many other factors such

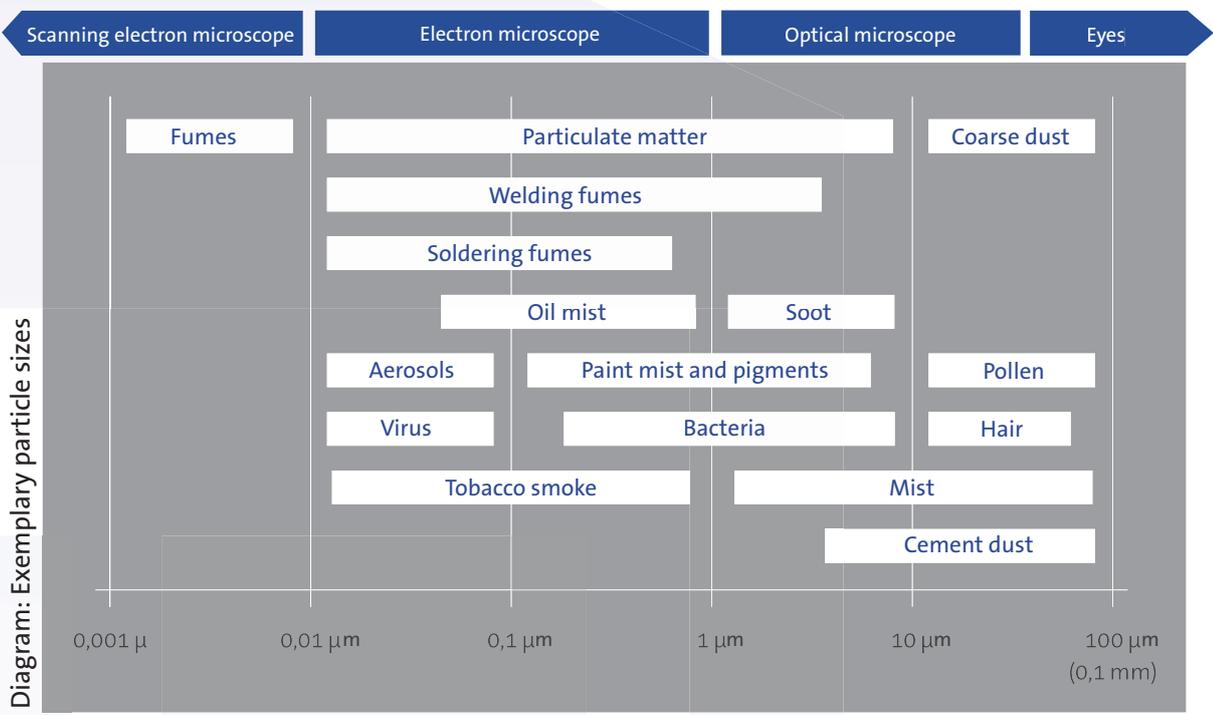
as the quantity and composition of pollutants and the operating conditions, a professional consultation and perhaps an assessment of the situation on site should take place. For this matter feel free to contact our team by using info@teka.eu.



Ultra fine (0,1 μm)



Good to know



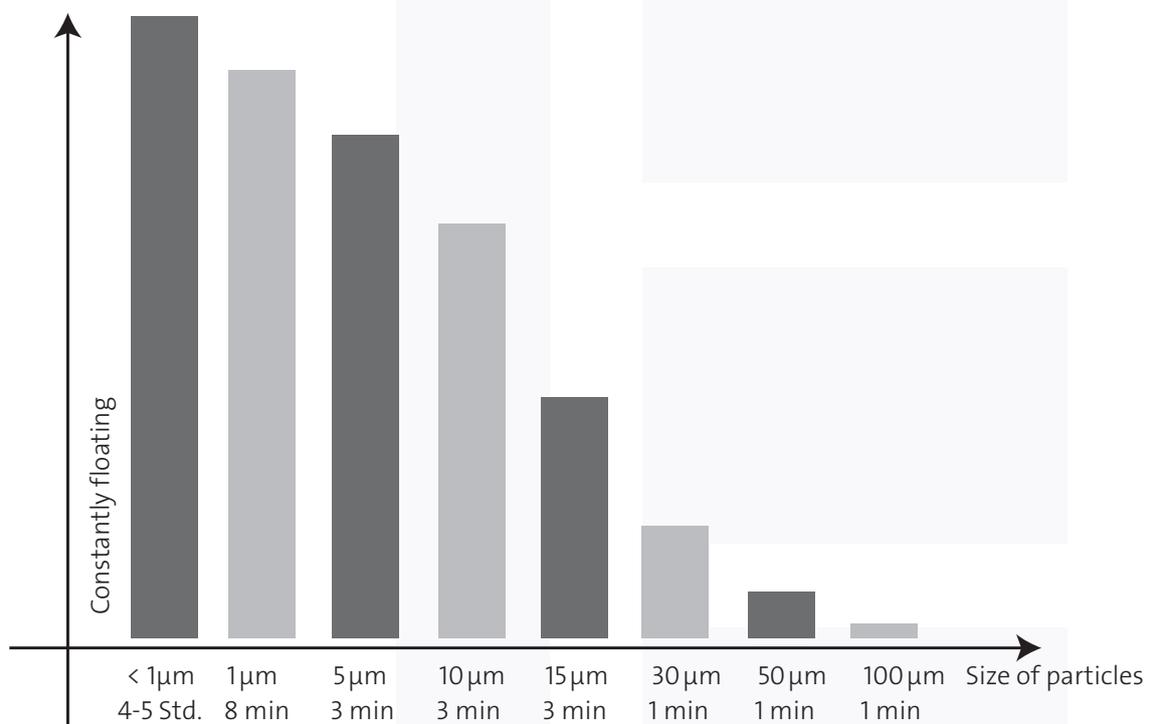


Good to know

Settling times

Decisive for the settling time of particles are in particular their size and weight. Small, light particles are held in the air by air vortices. Very small particles are in a permanent state of floating and may be inhaled if they are not extracted.

Inhalation may result in significant damage to the health or even cancer. The chart shows the approximate settling times of particles.



Bar chart: Settling times of particles



Good to know

Hazard classes of welding processes

The employer must determine the hazard class according to the applied processes and materials with the help of the table. The highest hazard standard class determined for the three listed groups of substances is decisive for the respective process. (Source: TRGS 528, § 3.2.5., Paragraph 1, Issue February 2009)

| Processes | Emission rate ³ (mg/s) | Hazard classes of the processes | | |
|--|-----------------------------------|--|------------------------------------|-------------------------|
| | | Substances impacting the respiratory tract and the lungs | Toxic or toxic irritant substances | Carcinogenic substances |
| Submerged arc welding | < 1 | low | low | low |
| Gas welding (autogenous process) | < 1 | low | low | - |
| TIG | < 1 | low | medium | medium |
| Laser beam welding without filler material | 1 to 2 | medium | high | high |
| MIG/MAG (low-energy gas-shielded welding) | 1 to 4 | low | medium | medium - high |
| Manual arc welding, MIG (in general) | 2 to 8 | high | high | high |
| MAG (flux-cored wire); flux-cored welding with protective gas, Laser beam welding with filler material | 6 to 25 | high | high | high |
| MAG (cored); cored wire welding without protective gas | > 25 | very high | very high | very high |
| Soldering | < 1 to 4 | low | medium | medium |
| Autogenous flame cutting | > 25 | very high | very high | very high |
| Arc spraying | > 25 | very high | very high | very high |

Source: Technical Rules for Hazardous Substances/Welding work/ TRGS 528, Issue February 2009

AirFan Basic version

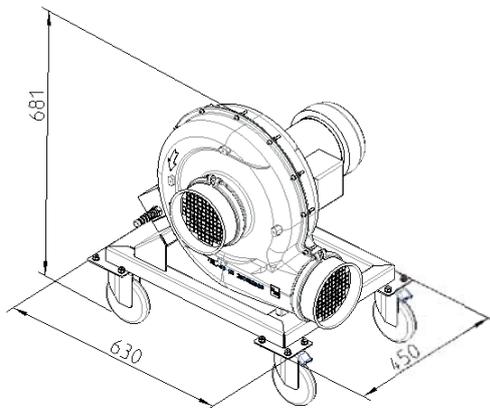
✓ Simple exhaust system

✓ Robust construction

✓ Silumin housing

✓ Ventilation system

✓ Construction site fan



AirFan Basic version

| | |
|---------------------------------|-------------------------|
| Max. volumetric flow of the fan | 2.000 m ³ /h |
| Max. pressure | 1.500 Pa |
| Motor power | 0,75 kW / 230 V |
| Noise level | approx. 72 dB(A) |
| Suction/exhaust nozzle | 2 × Ø150 mm |
| Weight | 28 kg |

AirFan Basic version

Art.No. 20170010

1239,- €

AirFan Basic version incl.
Suction hose + Exhaust hose, 3 m each

✓ *Temperature resistance*
0°C to +85°C

✓ *Incl. magnetic base*



Art.No. 20170011

1611,- €

AirFan Basic version incl.
Suction hose + Exhaust hose, 6 m each

✓ *Temperature resistance*
0°C to +85°C

✓ *Incl. magnetic base*



Art.No. 20170012

1805,- €

DusToo Processes/application areas



Torch extraction

- unalloyed materials
- low alloy materials
- Aluminium
- Nonferrous materials
- Tools and labor protection means at the same time
- Suction nozzles behind the gas nozzle, so that only the fume is extracted and not the inert gases at the same time



Manual arc welding

- unalloyed materials
- low alloy materials
- Aluminium
- Nonferrous materials
- one of the oldest, electric welding processes
- Main scope of the Manual arc weldings is the steel and pipeline construction
- particularly suitable for outdoor use



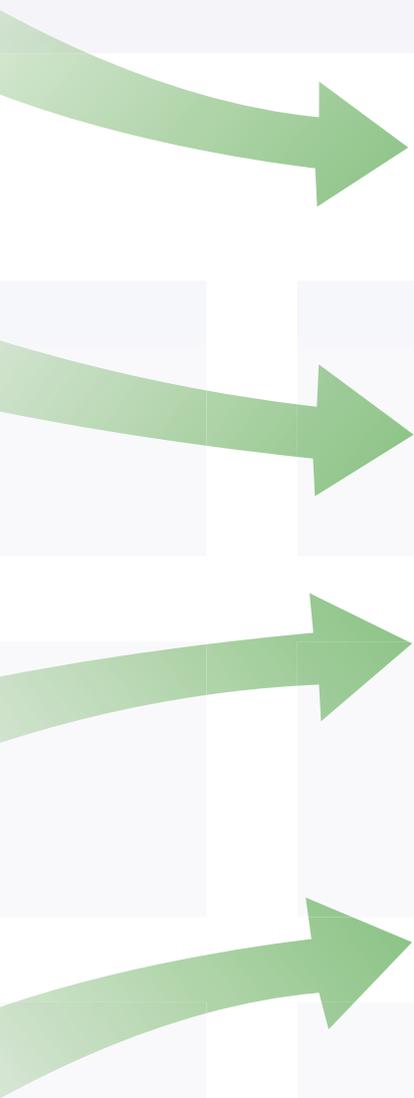
MIG-MAG welding

- unalloyed materials
- low alloy materials
- Aluminium
- Nonferrous materials
- Metal welding with shielding gases
- More productive than manual arc welding
- MAG process is used primarily for steels while MIG method is preferred for nonferrous metals



TIG-Welding

- unalloyed materials
- low alloy materials
- Aluminium
- Nonferrous materials
- Relatively low-emission welding processes
- TIG welding can be used both with and without filler
- TIG welding is mostly used on aluminium and high-alloy steels, since seam qualities are required which are hardly accessible by other welding processes



DusToo Basic version



✓ *Perfect for torch extraction*

✓ *Incl. speed control*

✓ *Construction site unit*

✓ *Automatic dedusting*

✓ *Incl. high pressure turbines*



Technical data



| DusToo Basic version | |
|---------------------------------|-------------------------------|
| Max. volumetric flow of the fan | 0-340 m ³ /h |
| Max. pressure | 20.000 Pa |
| Motor power | 1,6 (2x 0,8) kW |
| Separation efficiency | ≥ 99% |
| Noise level | approx. 74 dB(A) |
| Extraction connection | 2 × Ø 50 mm |
| Filter equipment | Filter cartridge |
| Engine type | Carbon brush |
| Dimensions | W: 300 mm D: 300 mm H: 810 mm |
| Weight | 25 kg |

Description

Mobile high vacuum cartridge filter in portable and stationary versions.

The system is particularly suitable for use with welding guns with integrated extraction. The housing is made of sturdy steel and powder coated in- and outside.

This unit has an integrated spark protection. The dust is collected in a dust collection tray and can be easily disposed of. The filter cartridge based on the principle of surface filtration, which means that the particles are deposited on the filter cartridge, and will not enter into the filter material.

The unit has a variable speed control via potentiometer to adjust the suction power. The suction unit is equipped with two powerful high-pressure turbines.

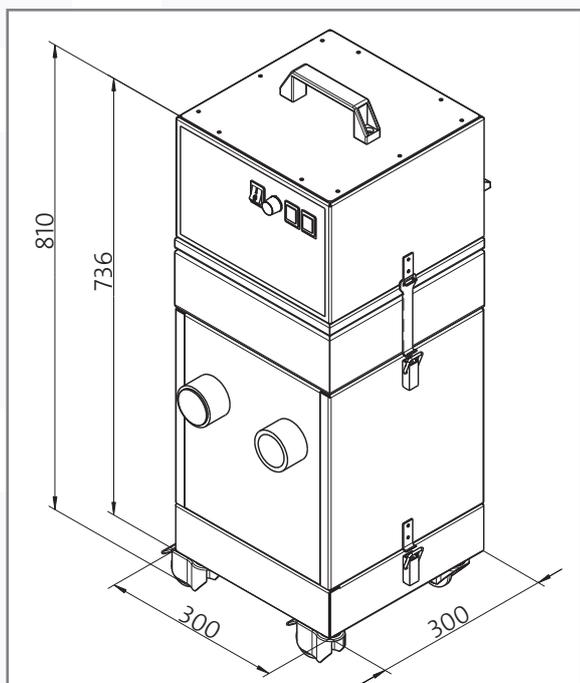
The unit is equipped with an automatic filter cleaning system. If the system is connected to compressed air,

the dedusting is controlled by a timer which is preset to certain intervals.

Upon reaching a certain pressure value a built-in filter monitor notifies of a required change of the filter cartridge. The unit is supplied ready to plug including the power cord. To use the system you need a extraction element (see following pages).

Standard equipment

- ▶ Speed control
- ▶ 2 suction connections \varnothing 50 mm
- ▶ 1 temporary cover for the 2nd connection
- ▶ Optical filter control
- ▶ Automatic dedusting
- ▶ 5 m mains cable



The DusToo is particularly suitable for the extraction of welding fumes directly at the welding gun.

DusToo Basic version incl. Hose, 2,5 m + round nozzle

✓ *Incl. magnetic base*

✓ *Temperature resistance
0°C to +85°C*



Art.No. 20170021

1302,- €

DusToo Basic version incl. Hose, 5 m + round nozzle

✓ *Incl. magnetic base*

✓ *Temperature resistance
0°C to +85°C*



Art.No. 20170023

1368,- €

DusToo Basic version incl.
Hose, 2,5 m + funnel nozzle

 *Incl. magnetic base*

 *Temperature resistance
0°C to +85°C*



Art.No. 20170022

1302,- €

DusToo Basic version incl.
Hose, 5 m + funnel nozzle

 *Incl. magnetic base*

 *Temperature resistance
0°C to +85°C*



Art.No. 20170024

1368,- €

filtoo Processes/application areas



Manual arc welding

- unalloyed materials
- low alloy materials
- Nonferrous materials
- one of the oldest, electric welding processes
- Main scope of the Manual arc weldings is the steel and pipeline construction particularly suitable for outdoor use



MIG-MAG Welding

- unalloyed materials
- low alloy materials
- Nonferrous materials
- Metal welding with shielding gases
- More productive than manual arc welding
- MAG process is used primarily for steels while MIG method is preferred for nonferrous metals



TIG Welding

- unalloyed materials
- low alloy materials
- Nonferrous materials
- Relatively low-emission welding processes
- TIG welding can be used both with and without filler
- TIG welding is mostly used on aluminium and high-alloy steels, since seam qualities are required which are hardly accessible by other welding processes



Manual plasma welding (sporadic use)

- unalloyed materials
- low alloy materials
- Nonferrous materials
- Plasma is a conductive gas highly heated electrically by an electric arc
- In the plasma torch the flowing plasma gas (argon) is ionized by high-frequency pulses and a secondary arc (pilot arc) is ignited
- The method is also used in the micro-welding technology (sheets of 0.1 mm)
- Only in combination with TEKA STAVO



Grinding (sporadic use)

- unalloyed materials
- low alloy materials
- Nonferrous materials
- chipping manufacturing processes for fine and finish machining of workpieces
- excess material is removed in the form of chips
- by-products or waste products when grinding chips are referred to as grinding dust
- Only in combination with TEKA STAVO

filtoo



filtoo

IN STOCK

- ✓ *Four-stage filter set*
- ✓ *Universally applicable*
- ✓ *Good suction performance*
- ✓ *Intelligently designed maintenance door*
- ✓ *Tightening mechanism for filter*



Technical data

| filtoo Basic version | |
|---------------------------------|--------------------|
| Max. volumetric flow of the fan | 1600 m³/h |
| Max. pressure | 1800 Pa |
| Voltage | 230 V |
| Motor power | 1,1kW |
| Separation efficiency | ≥ 99% |
| Noise level | approx. 68 dB(A) |
| Dimensions (WxDxH) | 580 × 580 × 900 mm |
| Weight | approx. 80 kg |

Description

The device can be used in numerous applications. The mobile suction and filter unit filters smoke and dust and neutralizes odors. The arm (alternatively with hose) extracts contaminated air precisely. The device filters particles or gases in a four-stage filter process using coarse filter, pre-filter, activated carbon filter and main filter.

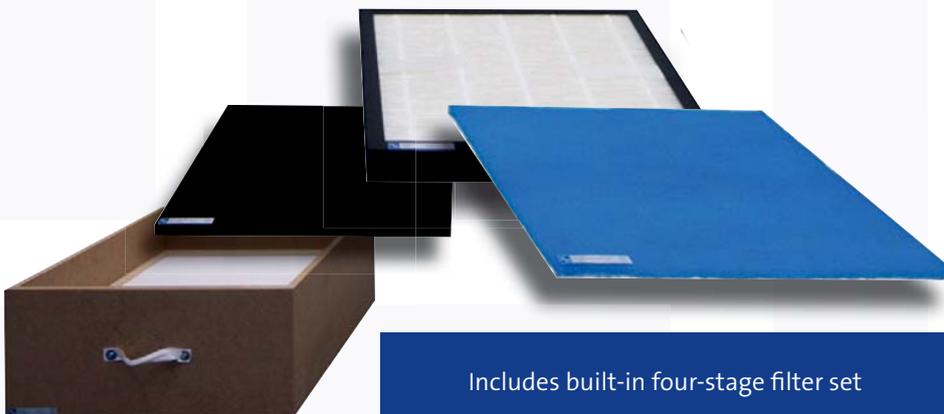
The filtoo is characterized by smart design with an upwardly opening service door, good suction and a tightening mechanism for the filter element.

To use the system you need an extraction element (see following pages).

Standard equipment

- ▶ Large-scale coarse filter
- ▶ Prefilter
- ▶ Activated carbon filter
- ▶ Main filter
- ▶ Electronic filter monitoring
- ▶ Operating hours counter
- ▶ 5 m power cable

Matching accessories on the following pages



Includes built-in four-stage filter set



filtoo controls

filtoo Basic version incl. extraction arm

✓ *Easily adjustable*

✓ *Up to 100 °C
temperature resistant*

✓ *High flexibility*



**Set incl. STAVO
1637,- €**



Technical data

| Extraction arm for AirToo Basic version | |
|---|-------------------------------------|
| Length | 3 m |
| Diameter | 150 mm |
| Material | PVC coated polyester fabric |
| Material thickness | 0,4 mm |
| Temperature resistance | -30° to +80°C (shortly up to 100°C) |

AirToo Basic version incl.
extraction arm **Art.No. 978100**

1389,- €

The mobile workbench

filtoo Basic version incl. worktop

- ✓ Large working surface
- ✓ Perfect for grinding
- ✓ Perfect for manual plasma
- ✓ For small welding processes
- ✓ Robust construction
- ✓ Incl. STAVO



Technical data

| Worktop for AirToo Basic version | |
|----------------------------------|-------------------------|
| Dimension | 1.100 x 700 mm x 400 mm |
| Working height | 950 mm |
| Weight | Approx. 40 kg |
| Material | Steel sheet |

AirToo Basic version incl.
Mobile workbench

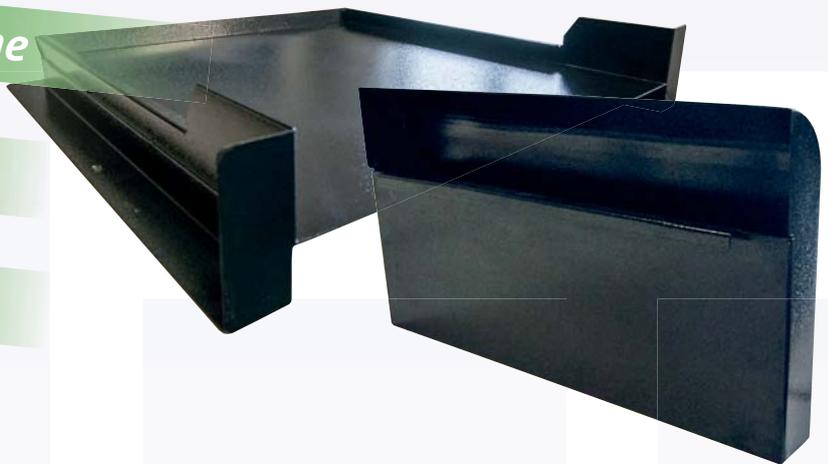
Art.No. 978300

2605,- €

Dust Pre-Separator STAVO

for AirToo Basic version as an add-on-system

- ✓ *Increased filter lifetime*
- ✓ *Ideal spark protection*
- ✓ *Easy installation*



1
Just open the maintenance door on the front and remove the dust collecting tray



2
Without the STAVO this dust would have hit the filter directly and greatly reduced its lifetime.



3
The particles can easily be disposed of (according to their risk classification).

Dust Pre-Separator STAVO
for AirToo Basic version

Art.No. 978013

248,- €

Examples of application



STRONGMASTER Processes/application areas



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- The method is also used in the micro-welding technology (sheets of 0.1 mm)



Grinding

- unalloyed materials
- low alloy materials
- Nonferrous materials
- chipping manufacturing processes for fine and finish machining of workpieces
- excess material is removed in the form of chips
- by-products or waste products when grinding chips are referred to as grinding dust

STRONGMASTER



STRONGMASTER-IFA

✓ *Dedustable filter cartridge*

✓ *Filter monitoring*

✓ *Easy accessibility*

✓ *Incl. pre-separator*

✓ *Tightening mechanism*



Technical data

STRONGMASTER Basic version

| | |
|---------------------------------|-------------------------|
| Max. volumetric flow of the fan | 3 000 m ³ /h |
| Max. pressure | 2 900 Pa |
| Voltage | 400 V / 50 Hz |
| Motor power | 1,1 kW |
| Separation efficiency | ≥ 99 % |
| Noise level | approx. 75 dB(A) |
| Dimensions (WxDxH) | 665 × 820 × 1365 mm |

Description

The STRONGMASTER is the professional for heavy industry.

Since the filter cartridge is dedustable, follow-up costs for this device are minimal. The filter cartridge remains in the system during cleaning, so that no dust can reach the working area.

The purified particles are collected in a dust collecting drawer and can be disposed afterwards.

The air is let out upwards on the rear side through an outlet grill. Thus, at a distance of 1 m no disturbing air flow is noticeable.

The device is equipped with a powerful fan with high negative pressure that guarantees a high volumetric flow even if the filter is saturated.

The cartridge is precoated already with a special filter medium (coated). The lifetime compared with conventional filter cartridges is increased significantly.

To use the system you need an extraction element.

Standard equipment

- ▶ Baffle plate as pre-separator
- ▶ Durable, cleanable filter cartridge
- ▶ Optical filter monitoring
- ▶ Tightening mechanism
- ▶ Operating hours counter
- ▶ 5 m power cord



example filter cartridges



High quality

Technical data

Extraction arm for STRONGMASTER Basic version

| | |
|------------------------|-------------------------------------|
| Length | 3 m |
| Diameter | 150 mm |
| Material | PVC coated polyester fabric |
| Material thickness | 0,4 mm |
| Temperature resistance | -30° to +80°C (shortly up to 100°C) |

STRONGMASTER-IFA
incl. extraction arm

Art.No. 97030101

3485,- €

Industry 4.0 describes the linking of industrial production with the latest information and communication technology.

This development is the increasing digitalization of business and society, smartphone, tablet, internet, smart home. It permanently changes the way how Germany produces and works in the future.

Smart Factories is the future, says Erwin Telöken, CEO of TEKA GmbH. The technical basis for this are intelligent, digitally networked systems, which aid in creating a largely self-organized production. People, machines, equipment and products communicate with each other.

Production and logistics processes between companies in the same process are intelligently linked together to make production more efficient, more flexible and healthier.

If all informations are available in real time, a company can be proactive about the availability of certain spare parts, missing parts, misconduct, etc.

Through the use of sensors TEKA SmartFilter - Airtracker - DifCon series and the actuators of EcoCube and FilterCube series, production processes for networking can be controlled, for example in MicroStep cutting laser systems across companies, so that resources and energy can be saved, explains Telöken.

Intelligent sensors/actuators help manage the errors that occur in all companies and can not be completely avoided. Overall, the efficiency of the production can be improved by the intelligent networking, competitiveness strengthened and flexibility of the production can be increased

TEKA – Industry 4.0 – The future is NOW.



Smart
-Ser



MicroStep
Cutting-/ Laser Technology
-Actuators-



DifCon
-Sensors-



TEKA ex
-Ac

INDUSTRY 4.0



SmartFilter
-Sensors-



SmartFactory



Airtracker
-Sensors-



SmartWarehouse



Smart Traction unit
-actuators-



AirController
-Sensors-

The future is NOW

4.0





Airtracker Basic/Pro

Room monitoring system

More than a dust monitoring system!



The Airtracker is normally mounted on the ceiling at a central location



- ▶ Measurement of particulate matter concentration
- ▶ Certified Measurement Sensors
- ▶ Measures the air temperature
- ▶ Measures the air humidity
- ▶ Measures the noise level
- ▶ Highly visible LED display for the dust concentration
- ▶ Individual configuration of the thresholds for dust concentration
- ▶ Own TEKA-Connect
- ▶ WIFI-Airtracker
- ▶ Control of TEKA fans or filter systems
- ▶ Display and analysis of measured data
- ▶ Switching on and off via suitable smart-phone / tablet / PC
- ▶ Trend display for review / data logger
- ▶ Checking data via web interface
- ▶ Set up on wall, ceiling or floor. One device - many options!
- ▶ Latest generation PC (MX6 with 2 cores)
- ▶ WIFI control
- ▶ MQTT- and OPC-UA-interfaces (Airtracker Pro)

Description

The innovative, smart room monitoring system of the future.

The European division of the World Health Organization (WHO) has called on the EU to install stricter air quality standards..

This is where the innovative, intelligent solution of TEKA comes into play: **Airtracker room monitoring system**.

The newly developed sensor **TEKA Airtracker** series captures particles smaller than 100 nanometers and convinces in the evaluation from 0 to 30 mg/m³ with an accuracy of ± 0.1 mg/m³, documented and certified. Building up trust.

High-tech sensors guarantee reliable measured value and safety. Customizable thresholds set the course for a secure future.



Once the threshold value is reached, the sensor indicates the current status of the particulate concentration by two widely visible, large-size LED strips with traffic light function. By the optionally available AirController optional, TEKA fans or filter systems can be controlled, depending on particulate pollution.

Ready-to-Go: Industry 4.0 – TEKA Airtracker.

Companies can document, manually or by the data logger (optional), its compliance with the trade association rules, even in advance before auditing. Precaution and employee health always in view – **building up confidence**.

Technical data

| Airtracker Basic/Pro - room monitoring system | |
|---|--|
| Wireless standard | 2.4 GHz IEEE 802.15 conform wireless standard |
| Processor | CPU i.MX6 with 2 cores up to 1GHz |
| Security | 128-bit AES Encryption |
| Interfaces | LAN-/WIFI-Module MQTT- and OPC-UA (only Airtracker Pro) |
| Memory | 4 GB Flash/RAM 1GB/SD-Card slot |
| Voltage | 230/110 V/AC |
| Casing | Metal |
| Weight | approx. 12 kg |
| Dimensions (W x D x H) | 600 mm x 250 mm x 220 mm |
| Temperature | -10°C to + 60°C |
| Humidity | 10% to 95% |
| Fine dust | 0 mg/m ³ to 30 mg/m ³ (precision ± 0,1 mg/m ³) |
| Noise level | 40 db to 140 db |

Airtracker Basic

Art.Nr. 20170140

Price upon request

Airtracker Pro

Art.Nr. 2017014020

Price upon request

CleanAir-Cube

Supplementary room ventilation system

El CleanAir-Cube es un equipo de aspiración y filtración de aire ambiental con filtros desechables. Los campos de aplicación son predominantemente empresas de la industria, talleres de soldadura por polvos, humos posteriores y adicionalmente como ampliación a los sistemas de una aspiración puntual.

El CleanAir-Cube sirve como medida de prevención, la cual evita un riesgo causado por polvos peligrosos. Alternativamente se puede utilizar el CleanAir-Cube como sistema de aspiración y filtración de aire ambiental.



| CleanAir-Cube | |
|---------------------------------|------------------------|
| Max. volumetric flow of the fan | 8000 m ³ /h |
| Motor performance | 550 W |
| Voltage | 230 V / 50 Hz |
| Separation efficiency | > 99% |
| Current consumption | 4 A |
| Noise level | 72 dB(A) |
| Dimensions (B x T x H) | 865 x 682 x 2778 mm |



Application example CleanAir-Cubes with AirControllers and Airtrackers

CleanAir-Cube Standalone / Art. No. 20170201

9120,- €



EcoCube Processes/application areas



Gas cutting

- low alloy materials
- Aluminium
- Nonferrous materials
- Plasma / Oxy / Laser
- all cutting processes in which the material is burned
- torch cutting most common method
- acetylene is usually used as fuel gas



Manual arc welding

- unalloyed materials
- low alloy materials
- Aluminium
- Nonferrous materials
- one of the oldest, electric welding processes
- Main scope of the Manual arc weldings is the steel and pipeline construction
- particularly suitable for outdoor use



MIG-MAG welding

- unalloyed materials
- low alloy materials
- Aluminium
- Nonferrous materials
- Metal welding with shielding gases
- More productive than manual arc welding
- MAG process is used primarily for steels while MIG method is preferred for nonferrous metals



TIG welding

- unalloyed materials
- low alloy materials
- Aluminium
- Nonferrous materials
- Relatively low-emission welding processes
- TIG welding can be done with or without additional material
- TIG welding is mostly used on aluminium and high-alloy steels, since seam qualities are required which are hardly accessible by other welding processes

EcoCube Basic version





EcoCube

More than a filter unit

- ✓ Logistical concept
- ✓ Aircraft + Container-optimized
- ✓ Worldwide use
- ✓ Easy installation (25 min)
- ✓ Shorter delivery time
- ✓ Powerful fans
- ✓ US-compliant
- ✓ Optional disposal in a barrel
- ✓ Fire protection concept
- ✓ Optimized for shop systems
- ✓ Spare parts concept





Ready to go

in 25 minutes

1



Delivery on two pallets



2

Unboxing



3



Lift the filter housing onto stand



4

Lift fan onto housing



5



Connect current - **done!**





EcoCube Basic version

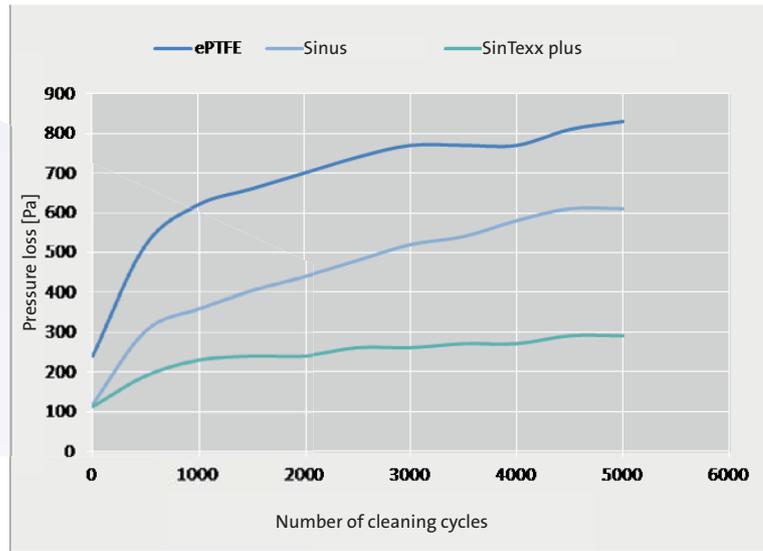


- ▶ 4 filter cartridges of the latest generation
- ▶ Siemens SPS control
- ▶ Integrated spark trap
- ▶ Maintenance flaps
- ▶ Intelligent Eco-Management
- ▶ Quick-Setup System
- ▶ Powerful – up to 10,000 m³/h
- ▶ Warehouse Concept
- ▶ Spare Parts Management
- ▶ Ready-To-Go 4.0
- ▶ Interface for Sensors
- ▶ Combineable with all sensors of the TEKA series



The future is NOW.





Nanofiber inside

Many talk about it, but we included it with every EcoCube!

The new sinTexx Plus filter cartridges with fluted polyester media and nanofiber edition protect man, machine and reduce energy costs. They achieve best values in fine and dust and smoke that is difficult to handle and exceed the performance of previously used filter media. This way it provides for unprecedented efficiency.

These cartridges with nano-fibers have been specifically developed for the welding and cutting technology. Compared to conventional ePTFE membranes these innovative cartridge with nanofiber pads have core advantages:

-  Special protection, great separation performance
-  Longer lifetime compared to conventional systems
-  Improved energy efficiency, less kW at better performance
-  Low follow-up costs, no precoating required

Just the best for your health.

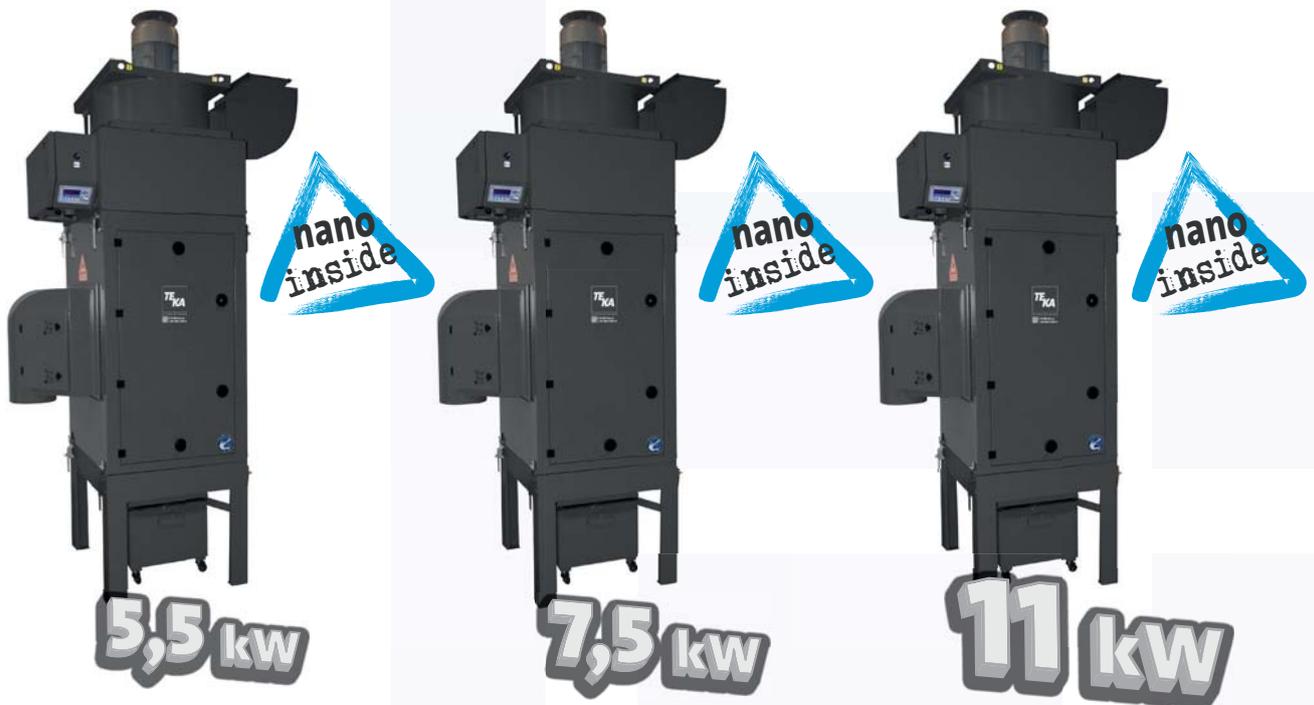
The future is NOW.



EcoCube Basic version



One size –
different performance



Technical data

| EcoCube Central filter unit | | | |
|---------------------------------|-------------------------|-------------------------|--------------------------|
| Motor power | 5,5 kW | 7,5 kW | 11 kW |
| Max. volumetric flow of the fan | 4.500 m ³ /h | 7.000 m ³ /h | 10.000 m ³ /h |
| Max. pressure | 3.000 Pa | | |
| Separation efficiency | ≥ 99 % | | |
| Nozzle | 250 mm | 400 mm | 400 mm |
| Noise level | approx. 75 dB(A) | | |
| Dimensions (WxDxH) | 1.790 × 850 × 3.140 mm | 1.930 × 850 × 3.150 mm | 1.930 × 850 × 3.200 mm |
| Weight | approx. 470 kg | approx. 475 kg | approx. 480 kg |

Description

TEKA EcoCubes can be used for almost any application in the field of filtration of smokes and dusts.

Via a pipeline system (not included), the polluted air is extracted by the fan and guided to the filters. Here, the particulate contaminants are filtered on the surface of the filter cartridge.

The filter cartridges are automatically cleaned by compressed air at the required intervals. The adhesive



particles on the cartridges dissolve by the blast of compressed air and get into a dust collector. The cleaned air is led back into the working area without any heat loss. The EcoCube can be used as a central extraction system at multiple manual welding

stations, as suction for welding robots/cabins and a suction system for exhaust hoods.

You get a fully operational system incl. the control for the fan. Only the current supply must be applied. The main components of the EcoCube are a fan with pneumatic and integrated controls, filter section incl. cartridges and dust collection section.

The housing is made of a stable steel construction and powder coated inside and outside. The individual sections are equipped with service doors, in order to perform an optimal and quick maintenance.

The control unit is supplied completely adjusted.

This control unit is developed specifically for the monitoring and control of the filter system. The EcoCube is fitted with filter cartridges for dust class M according to DIN EN: 60335-2-69 of 2008.

Standard equipment

- ▶ Fully automatic dedusting via POWER-SPRAY-System
- ▶ 4 large-sized cartridge filters with nano-fibers, 1.200 mm each
- ▶ Rollable dust container with snap closures
- ▶ SIEMENS S7 Control
- ▶ Maintenance doors for all control areas
- ▶ Spark trap dia. 250 mm or 400 mm

EcoCube Basic version

5,5 kW

Art.No. 20170050

15 342,- €

EcoCube Basic version

7,5 kW

Art.No. 20170070

15 909,- €

EcoCube Basic version

11 kW

Art.No. 20170090

18 238,- €



EcoCube Sets

5,5 kW



Technical data

| EcoCube Central filter unit | |
|---------------------------------|-------------------------|
| Motor power | 5,5 kW |
| Max. volumetric flow of the fan | 4.500 m ³ /h |
| Max. pressure | 3.000 Pa |
| Separation efficiency | ≥ 99 % |
| Nozzle | 250 mm |
| Noise level | approx. 75 dB(A) |
| Dimensions (WxDxH) | 1.790 × 850 × 3.140 mm |
| Weight | approx. 470 kg |

Set 1

EcoCube 5,5 kW

Basic version + 4 Extraction arms, 3 m length

- ✓ *Three joints per arm*
- ✓ *Spring support*
- ✓ *Heat resistant up to 100 °C*
- ✓ *Integrated throttle valve*



Art.No. 20170051

18 273,- €

Set 2

EcoCube 5,5 kW

Basic version + 3 Extraction arms, 4 m length

- ✓ *Three joints per arm*
- ✓ *Spring support*
- ✓ *Heat resistant up to 100 °C*
- ✓ *Integrated throttle valve*



Art.No. 20170052

17 724,- €



EcoCube Sets

5,5 kW



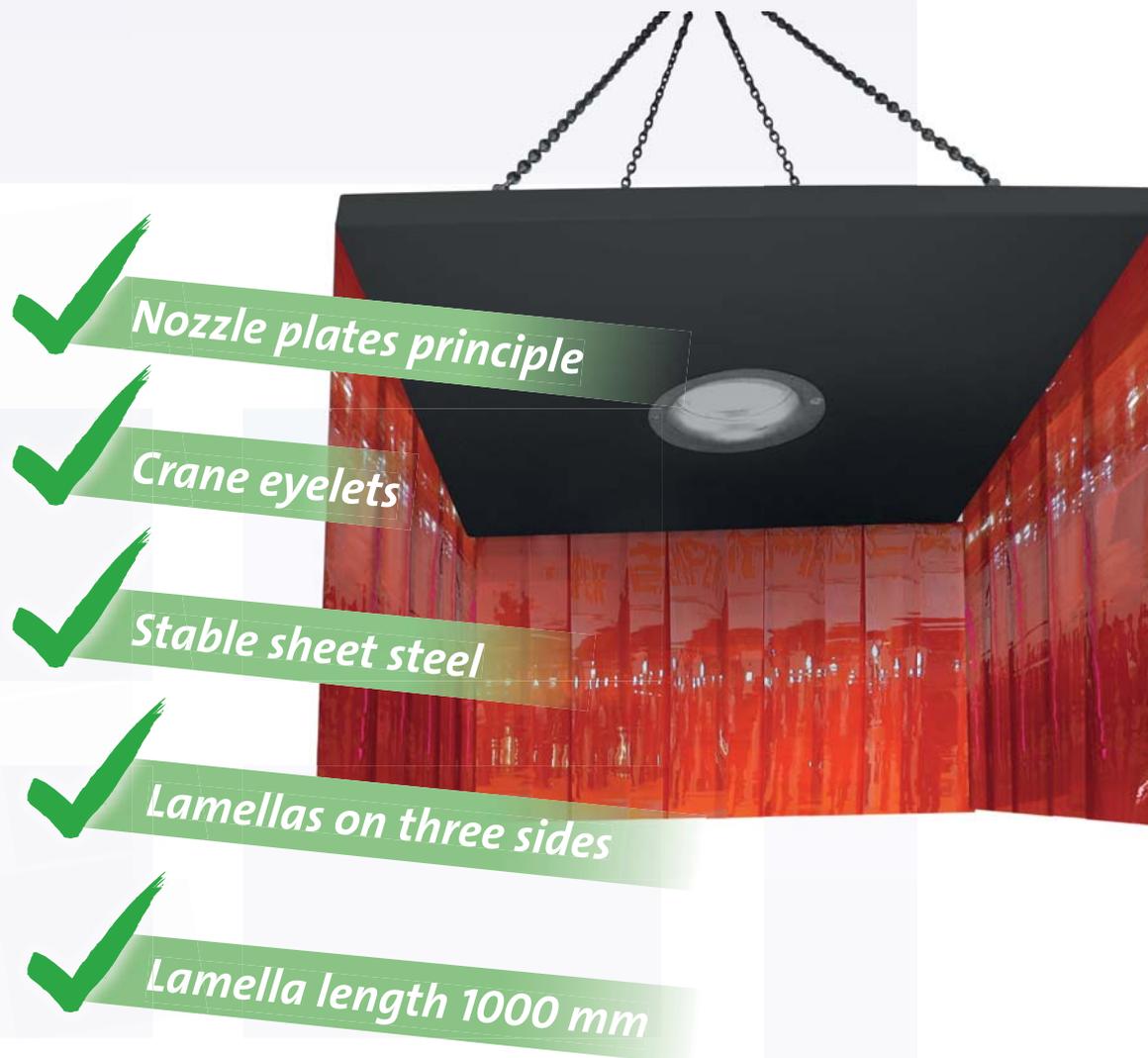
Technical data

| EcoCube Central filter unit | |
|---------------------------------|-------------------------|
| Motor power | 5,5 kW |
| Max. volumetric flow of the fan | 4.500 m ³ /h |
| Max. pressure | 3.000 Pa |
| Separation efficiency | ≥ 99 % |
| Nozzle | 250 mm |
| Noise level | approx. 75 dB(A) |
| Dimensions (WxDxH) | 1.790 × 850 × 3.140 mm |
| Weight | approx. 470 kg |

Set 3

EcoCube 5,5 kW

Basic version + 1 suction hood, 1.500 x 1.500mm



Art.No. 20170060

17 244,- €



EcoCube Sets

5,5 kW



Technical data

| EcoCube Central filter unit | |
|---------------------------------|-------------------------|
| Motor power | 5,5 kW |
| Max. volumetric flow of the fan | 4.500 m ³ /h |
| Max. pressure | 3.000 Pa |
| Separation efficiency | ≥ 99 % |
| Nozzle | 250 mm |
| Noise level | approx. 75 dB(A) |
| Dimensions (WxDxH) | 1.790 × 850 × 3.140 mm |
| Weight | approx. 470 kg |

Set 4

Room ventilation solution

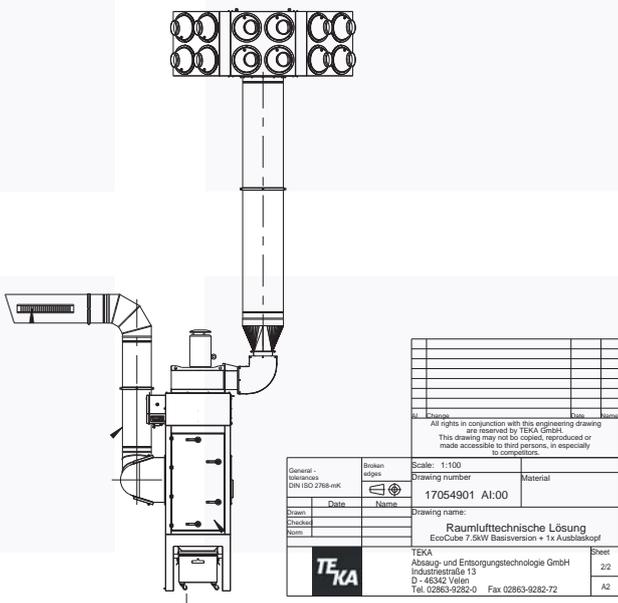
EcoCube Basic version incl. 1 x blow-out

(delivery without piping and intake grille)

- ▶ Jet nozzles
- ▶ Manifold air changes per hour
- ▶ Heating cost savings by recirculation mode
- ▶ Heating cost savings by warm air mixing



blow-out



Example of application

delivery without piping and intake grille

Sample calculation



Designed for a hall size of approx. 900 m³
e.g. 18 m x 10 m x 5 m

Art.No. 20170061

17 942,- €



EcoCube Sets

7,5 kW



Technical data

| EcoCube Central filter unit | |
|---------------------------------|-------------------------|
| Motor power | 7,5 kW |
| Max. volumetric flow of the fan | 7.000 m ³ /h |
| Max. pressure | 3.000 Pa |
| Separation efficiency | ≥ 99 % |
| Nozzle | 400 mm |
| Noise level | approx. 75 dB(A) |
| Dimensions (WxDxH) | 1.930 × 850 × 3.150 mm |
| Weight | approx. 475 kg |

Set 5

EcoCube 7,5 kW

Basic version + 6 Extraction arms, length 3 m



✓ *Three joints per arm*

✓ *Spring support*

✓ *Heat resistant up to 100 °C*

✓ *Integrated throttle valve*

Art.No. 20170071

20 313,- €

Set 6

EcoCube 7,5 kW

Basic version + 5 Extraction arms, length 4 m



✓ *Three joints per arm*

✓ *Spring support*

✓ *Heat resistant up to 100 °C*

✓ *Integrated throttle valve*

Art.No. 20170072

19 892,- €

EcoCube Sets

7,5 kW



Technical data

| EcoCube Central filter unit | |
|---------------------------------|-------------------------|
| Motor power | 7,5 kW |
| Max. volumetric flow of the fan | 7.000 m ³ /h |
| Max. pressure | 3.000 Pa |
| Separation efficiency | ≥ 99 % |
| Nozzle | 400 mm |
| Noise level | approx. 75 dB(A) |
| Dimensions (WxDxH) | 1.930 × 850 × 3.150 mm |
| Weight | approx. 475 kg |

Set 7

EcoCube 7,5 kW

Basic version + 1 suction hood, 2.000 x 2.000 mm



Art.No. 20170080

18 791,- €



EcoCube Sets

7,5 kW



Technical data

| EcoCube Central filter unit | |
|---------------------------------|-------------------------|
| Motor power | 7,5 kW |
| Max. volumetric flow of the fan | 7.000 m ³ /h |
| Max. pressure | 3.000 Pa |
| Separation efficiency | ≥ 99 % |
| Nozzle | 400 mm |
| Noise level | approx. 75 dB(A) |
| Dimensions (WxDxH) | 1.930 × 850 × 3.150 mm |
| Weight | approx. 475 kg |

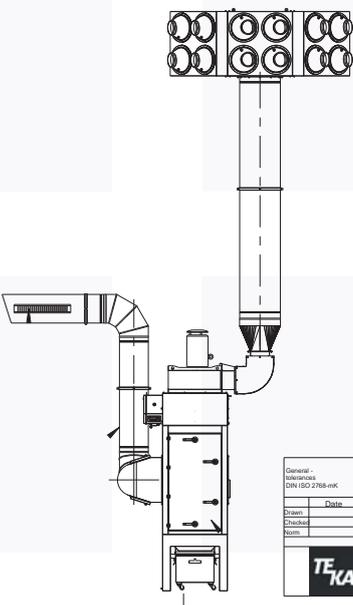
Set 8

Room ventilation solution

EcoCube Basic version incl. 1 x blow-out

(delivery without piping and intake grille)

- ▶ Jet nozzles
- ▶ Manifold air changes per hour.
- ▶ Heating cost savings by recirculation mode
- ▶ Heating cost savings by warm air mixing



| | | |
|---|---|--------------------|
| General information DW ISO 2785-mk | Broken edge | Scale: 1:100 |
| Date | Name | Drawing number |
| Drawn | Checked | 17054901 AI:00 |
| Material | Drawing name: | |
| Raumluftechnische Lösung | | |
| EcoCube 7.5kW Basisversion + 1x Ausblaskopf | | |
|  | TEKA Absaug- und Entsorgungstechnologie GmbH Industriestraße 13 D-46342 Velen Tel. 02863-9282-0 Fax 02863-9282-72 | Sheet 2/2 A2 |

blow-out



Example of application

delivery without piping and intake grille



Sample calculation

Designed for a hall size of approx. 1.400 m³
e.g. 19 m x 15 m x 4,9 m

Art.No. 20170081

18 504,- €

EcoCube Sets

11 kW



Technical data

| EcoCube Central filter unit | |
|---------------------------------|--------------------------|
| Motor power | 11 kW |
| Max. volumetric flow of the fan | 10.000 m ³ /h |
| Max. pressure | 3.000 Pa |
| Separation efficiency | ≥ 99 % |
| Nozzle | 400 mm |
| Noise level | approx. 75 dB(A) |
| Dimensions (WxDxH) | 1.930 × 850 × 3.200 mm |
| Weight | approx. 480 kg |

Set 9

EcoCube 11 kW

Basic version + 8 Extraction arms, length 3 m

- ✓ *Three joints per arm*
- ✓ *Spring support*
- ✓ *Heat resistant up to 100 °C*
- ✓ *Integrated throttle valve*



Art.No. 20170091

24 109,- €

Set 10

EcoCube 11 kW

Basic version + 7 Extraction arms, length 4 m

- ✓ *Three joints per arm*
- ✓ *Spring support*
- ✓ *Heat resistant up to 100 °C*
- ✓ *Integrated throttle valve*



Art.No. 20170092

23 814,- €



EcoCube Sets

11 kW



Technical data

| EcoCube Central filter unit | |
|---------------------------------|--------------------------|
| Motor power | 11 kW |
| Max. volumetric flow of the fan | 10.000 m ³ /h |
| Max. pressure | 3.000 Pa |
| Separation efficiency | ≥ 99 % |
| Nozzle | 400 mm |
| Noise level | approx. 75 dB(A) |
| Dimensions (WxDxH) | 1.930 × 850 × 3.200 mm |
| Weight | approx. 480 kg |

Set 11

EcoCube 11 kW

Basic version + 1 suction hood, 2.500 x 2.500 mm

- ✓ *Lamellas on three sides*
- ✓ *Nozzle plates principle*
- ✓ *Crane eyelets*
- ✓ *Sturdy sheet steel*
- ✓ *Lamella length 1000 mm*



Art.No. 20170099

20 660,- €

Set 12

EcoCube 11 kW

Basic version + 2 suction hoods, 1.500 x 1.500 mm

- ✓ *Lamellas on three sides*
- ✓ *Nozzle plates principle*
- ✓ *Crane eyelets*
- ✓ *Sturdy sheet steel*
- ✓ *Lamella length 1000 mm*



Art.No. 20170100

22 044,- €



EcoCube Sets

11 kW



Technical data

| EcoCube Central filter unit | |
|---------------------------------|--------------------------|
| Motor power | 11 kW |
| Max. volumetric flow of the fan | 10.000 m ³ /h |
| Max. pressure | 3.000 Pa |
| Separation efficiency | ≥ 99 % |
| Nozzle | 400 mm |
| Noise level | approx. 75 dB(A) |
| Dimensions (WxDxH) | 1.930 × 850 × 3.200 mm |
| Weight | approx. 480 kg |

Set 13

Room ventilation solution

EcoCube Basic version incl. 1 x blow-out

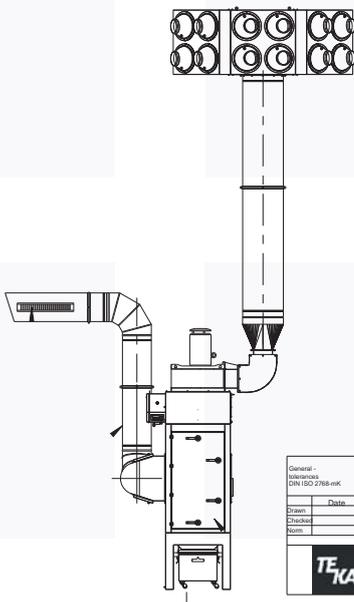
(delivery without piping and intake grille)

- ▶ Jet nozzles
- ▶ Manifold air changes per hour.
- ▶ Heating cost savings by recirculation mode
- ▶ Heating cost savings by warm air mixing

for up to **2.000 m³** sized halls



blow-out



delivery without piping and intake grille

| | | |
|---|--|---|
| General - References DIN ISO 2768-mK | Broken links | Scale: 1:100 |
| Date | Name | Drawing number 17054901 A1:00 |
| Drawn | Name | Drawing name: Raumlufttechnische Lösung EcoCube 7.5kW Basisversion + 1x Ausblaskopf |
| Checked | | Material |
| Num | | |
|  | TEKA Abzug- und Entsaugungstechnologie GmbH Industriestraße 13 D - 46342 Velen Tel. 02863-9282-0 Fax 02863-9282-72 | Sheet 2/2 A2 |



Example of application

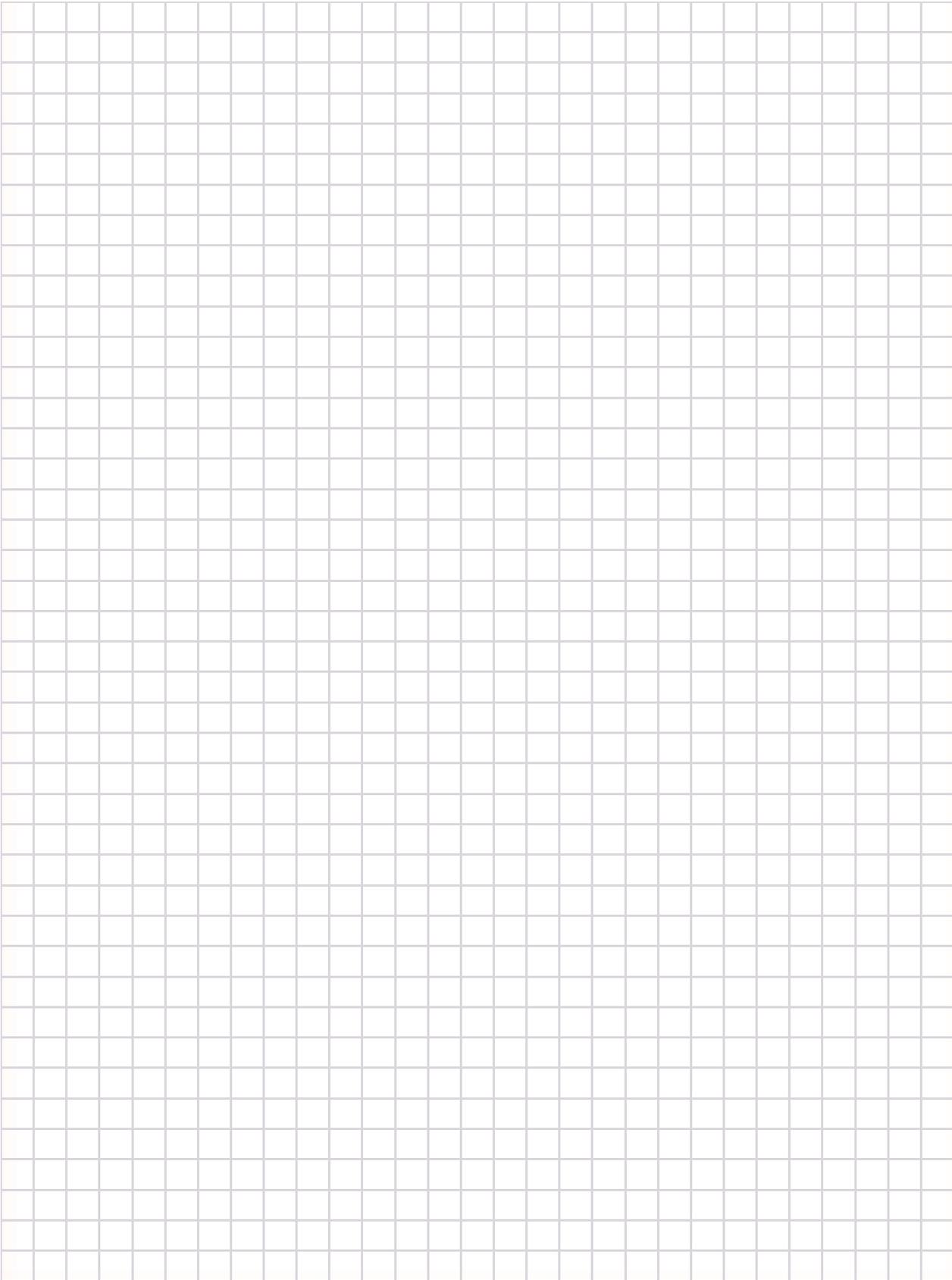


Sample calculation

Designed for a hall size of approx. 2.000 m³
z.B. 27 m x 15 m x 5 m

Art.No. 20170101

20 832,- €





The air purifiers

Your TEKA-Partner:

TEKA

Tecnologia de Limpio Aereo, S.L.

C/Riera Principal, 8
08328 Alella/Barcelona
Spain

Tel.: (+34) 931.600.020
Fax: (+34) 931.815.297

Web: www.teka.eu