

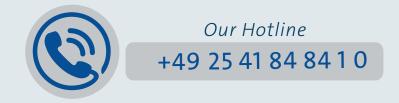
# FILTER SYSTEMS



# FUMES | DUSTS | VAPOURS

# Die Luftreiniger





# Welcome to "Die Luftreiniger"

Dear customers and partners of TEKA,

Welcome to our world – the world of air purifiers! Because clean air is not just a profession for us, it's a vocation.

While the protection against air pollutants at the industrial workplace used to be considered a generous gesture by the boss, the use of innovative extraction technology for modern companies is commonly accepted as a necessity nowadays.

In times of a shortage of skilled labor, the targeted energy turnaround and high requirements of clean production processes, employee satisfaction and the *Clean Factory* become a figurehead. What's more, today they are decisive for the competitiveness and long-term survivability of a company in international markets. Modern air purification, as we understand it, means more than suction and filtration of dusts and smokes.

Rather, it also includes continuous monitoring of indoor air quality as well as automatic, needs-based regulation when particulate matter thresholds are exceeded with the aid of Industrie 4.0-compliant sensor technology.

For around 25 years TEKA has been the cutting edge company of innovation in all areas of air purification at work and the catalyst for innovative technologies. To keep it that way, we continue to grow as a modern family business - true to our motto "The future is now".

We invite you to get an overview of our comprehensive product range of extraction and filter technology for the benefit of your employees and your entire company.

With our best regards



Jürgen Kemper, Director/



Niklas Kemper, Director

Erwin Telöken, Director



Simon Telöken, Director

Simme letin

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### What is dust/fume?

Dust/fume is finely distributed solid particles in the air, which are caused by thermal processes such as welding.

### What causes dust/fume?

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
- pyrolisis
- combustion

### 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 (see table on page 8).

### German framework regulation Ordinance on Hazardous Substances (GefStoffV) **1**

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.

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." Furthermore it says: "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))

Mucous membrane of the nose and throat (> 10  $\mu\text{m})$ 

Larynx (4,7 - 5,8 μm)

Trachea and main bronchi (3,3 - 4,7 μm)

. Secondary and tertiary bronchi (1,1 - 3,3 μm)

Alveoli (< 1,1 μm) (Source: DIN ISO 7708)

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

# 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)

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.

#### **Tips for users**

In order to fulfill the requirements, the operator has mobile dust extractors as well as central stationary devices at his disposal. The dust extractors certified by IFA (formerly BGIA) (in accordance with the international standard DIN EN ISO 15012-1 or DIN EN ISO 21904-1/-2) and the central devices corresponding to TRGS 528 fulfill the legal bases <sup>2</sup>.

### Extract from TRGS 528 2

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.

neker-bearing materials) extracted an mast 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 or DIN EN ISO 21904-1/-2 "Health and safety in welding and allied processes – Requirements, testing and marking of equipment for air filtration".



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.teka.eu/gefstoffv



2 TRGS 528 (Welding work) http://www.teka.eu/trgs528



3 TRGS 560 (Air recirculation)

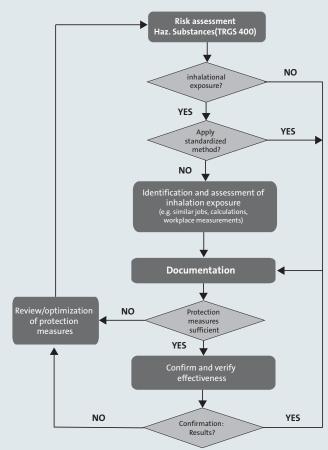
http://www.teka.eu/trgs560

### **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.



(Source: TRGS 402)

Hazardous substance	Chemical symbol	Occupat. exposure limit * (in mg/m <sup>3</sup> )	Health risk*
Aluminium oxide	Al <sub>2</sub> O <sub>3</sub>	1,25 (A) / 10 (E) **	Fibrosis, neuropsychic symptoms
Barium compounds	Ва	0,5 (E)	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)	0,001 (E) ***	Carcinogenic
Cobalt (compounds)	Со	0,005mg/m³ (A) ****	Carcinogenic
Ferric oxide	Fe <sub>2</sub> O <sub>3</sub>	1,25 (A) / 10 (E) **	Siderosis
Formaldehyde	CH <sub>2</sub> O	0,37	Potentially carcinogenic
Carbon dioxide	CO <sub>2</sub>	9100	Damage to nervous and circulatory system
Carbon monoxide	СО	35	Damage to cardiovascular system
Manganese oxide	Mn	0,02 (A) / 0,2 (E)	Damage to central nervous system/resp. tract
Nickel	Ni	0,006	Potentially carcinogenic/skin damage
Nickel compounds	NiO u.a.	0,006 ****	
Phosgene	COCI,	0,41	Damage to lung
Nitrogen dioxide	NO <sub>2</sub>	0,95	Lung-function abnormalities
Nitrogen monoxide	NO	2,5	Impact on vascular and nervous system
Zinc oxide	ZnO	0,1 (A) / 2 (E)	Metal fume fever/ skin damage
Tin compounds	Sn	8 (E) ****	Toxicity

The information is taken from GESTIS substances database of the Institute for occupational safety and health (Institut for 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 occupat. exposure limit

\*\*\* Assessment standard (BM) after TRGS 561

\*\*\*\*\* Tolerance concentration (TK) after TRGS 561 \*\*\*\*\* Recommendation by AGS and EU

### 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:

ISO Coarse: 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).



	Directly relevant n	orms		Related	norms	
DIN EN 779	DIN EN 779	EN 1822-1:1998	ZH 1/487	US MIL-STD	DS 3928	DIN EN 60335
Coarse dust filter	Fine dust filter	EPA, HEPA, ULPA Initial separation efficiency A DEHS, MPPS approx. 0,1-0,3 μm	Dust eliminating Medium transmit- tance level D Quartz dust 90% 0,2 µm	Particulate filter Initial separation efficiency Α DOP 0,3 μm	Particulate filter Initial separation efficiency A NaCl DOP 0,3 μm	Particulate filter Transmittance level D Paraffin oil 61% < 1 μm
<b>ISO Coarse</b> ePM10 <50%	<b>ISO ePM10</b> ePM10 >= 50%	<b>E10</b> A (integral)>85%	The specified limits may vary conside- rably depending on the materials.	95%	<b>EU10</b> A > 95 %	<b>L</b> D < 1%
	<b>ISO ePM2,5</b> ePM2.5,min >= 50%	<b>E11</b> A (integral)>95%	<b>U</b> D< 5%	99,97%	<b>EU11</b> A > 99,9%	<b>M</b> D < 0,1%
	<b>ISO ePM1</b> ePM1,min >= 50%	<b>E12</b> A (integral)>99,5%	<b>s</b> D < 1%	99,99%	<b>EU12</b> A > 99,97%	<b>H</b> D < 0,005%
		<b>H13</b> A (integral)> 99,95% A (local)> 99,75%	<b>G</b> D< 0,5%	99,999%	<b>EU13</b> A > 99,99%	
		<b>H14</b> A (integral)>99,995% A (local)>99,975%	<b>C</b> D < 0,1%		<b>EU14</b> A > 99,999%	
		<b>U15</b> A (integral)>99,9995% A (local)>99,9975%	<b>K1, K2</b> D< 0,05%, Paraffinöl 90% < 1 EM			
		<b>U16</b> A (integral)> 99,99995% A (local)> 99,99975%				
		<b>U17</b> A (integral)>99,999995% A (local)>99,9999%				

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% -> 100%
F9	80% - 90%	85% - 95%	90% -> 100%

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

(Source: Eurovent Recommendation 4/23 (2017))

### **Particle sizes**

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Particles having a size between 1 mm and 0.1 mm can often be seen with the naked eye. Particles smaller than



Coarse (>10 µm)



Fine (< 10 μm)



Ultra fine (0,1μm)

100  $\mu$ m (= 0.1 mm) are only visible by means of an optical microscope. These particle sizes correspond to the filter classes G3 and G4.

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 ePM 10 thru ePM 1 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 electrode 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  $\mu m$  ( = 0.00001 mm) and smaller.

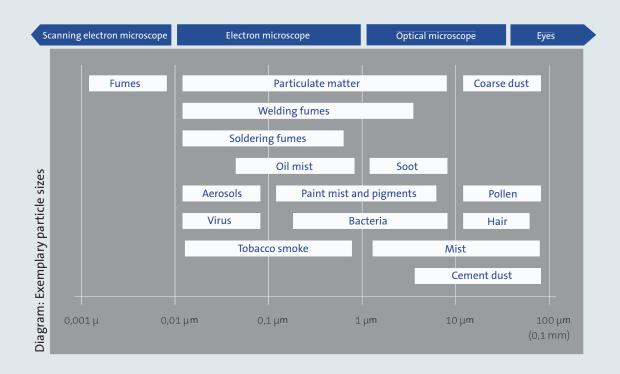
As the right choice of filters depends on many other factors such as the quantity and composition of pollutants and the operating conditions, a professional consultation and perhaps an assessment of the situation on site should take place. For this matter feel free to contact our team by using info@teka.eu.

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### **PLEASE NOTE:**

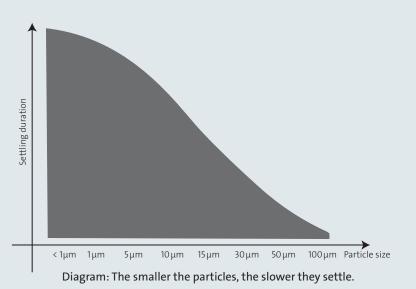
The employer must determine the hazard class according to the applied processes and materials with the help of the table. The highest hazard standard class determined for the three listed groups of substances is decisive for the respective process. (Source: TRGS 528, § 3.2.5., Paragraph 1, Issue February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



### 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 on the right shows the approximate settling times of particles.



### Hazard classes of welding processes

		Hazard classes of the processes		
Processes	Emission rate <sup>3</sup> (mg/s)	Substances impac- ting the respiratory tract and the lungs	Toxic or toxic irritant substances	Carcinogenic subs- tances
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 protec- tive 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

### IFA test certificate

With a IFA certificate, the need for an individual approval of each extraction unit is omitted!



## IFA certified products in this brochure

(all the systems are certified for the welding fume category W3)









CareMaster-IFA Mechanical filter unit with 1 suction elements Suitable for: Fume extraction during welding work with unalloyed steels and precious metals.







StrongMaster-IFA Cartridge filter unit with 1 suction elements Suitable for: Long-lasting fume extraction during welding involving unalloyed steels and precious metals, galvanized material and aluminium involving a strong fume production.



CartMaster-IFA Cartridge filter unit with 1 suction elements Suitable for: Long-lasting fume extraction during welding involving unalloyed steels and precious metals, galvanized material and aluminium involving a strong fume production.



CartMaster-IFA Stationary cartridge filter unit from 1.5 up to 2.0 kW compatible with 1 or 2 suction elements Suitable for: Long-lasting fume extraction during welding involving unalloyed and precious metals, galvanized material and aluminium involving a strong fume production (professio-

nal solution).



FilterCube 4N/4H-IFA Central filter units

Suitable for: Various suction problems at several working places at the same time for work involving unalloyed and precious metals, galvanized material and aluminium.





#### **ZPF 9H-IFA Central suction and filter units**

Suitable for: Various suction problems at several working places at the same time for work involving unalloyed and precious metals, galvanized material and aluminium. Especially suitable for larger amounts of air.





Suitable for: Robust extraction system for welding work in shipyards and large halls for up to twelve extraction stations. The system can be used flexibly stationary or mobile, as it is easy to move via runners and crane eyes.





AirTech P10/P18/P24/P30 Suitable for: Filtration of hall air containing pollutants as a supplementary measure.



TEKA mobile suction and filter units make it possible for you to flexibly adapt to changing conditions. For situations that require dust and smoke extraction, we offer adequate solutions for metal processing (welding/laser), electronic industry (soldering), dental and medical technology and also for the printing industry (plotting).

The TEKA HandyCart, for instance, is a compact, space-saving unit used for welding of small components. In a special version, this filter unit can be used for torch extraction.

On the other hand, the mobile TEKA cartridge filter units StrongMaster and CartMaster are a high-end solution in the field of mobile suction and filter units. These professional systems make it possible to realize longlasting fume extraction during welding work involving non alloyed and precious metals, especially with strong smoke production.

# 1. Mobile and wall-mounted suction and filtering systems





## HandyCart Cartridge filter unit

### Suitable for

Extraction of welding fumes and dusts at frequently changing places (construction sites, shipbuilding, small parts welding stations, motor vehicle workshops)





Description

Mobile portable high-vacuum extraction unit with manual dedusting or fully automatic pneumatic dedusting.

The filter cartridge remains in the unit to prevent dust from reaching the workplace. The filter cartridge guarantees a separation efficiency  $\geq$  99 %.

The extracted dusts are collected in the dust tray. They can be disposed of by means of an inlaid polyethylene bag (optionally available).

#### **Standard equipment**

- Automatic speed control
- High quality GORE-TEX filter cartridge
- 2 suction connections Ø 50 mm
- I temporary cover for suction connection
- Service-friendly maintenance door
- Dust collecting tray
- Operating hours metres
- Optical filter monitoring
- 1,8 m mains cable

#### Available as an option

- Outlet silencer
- Adaptable activated carbon cell (use for gases)
- Large number of accessories

Device with torch extraction includes fully automatic dedusting (Art.-No. 97904666)

#### **Technical Data**

HandyCart Cartridge filter unit			
Max. volumetric flow of the fan	320 m³/h		
Max. pressure	21000 Pa		
Motor performance	1,2 kW		
Separation efficiency	≥ 99%		
Sound level	approx. 62 dB(A)		
Inlet nozzle	2 × Ø 50 mm		
Filter equipment	filter cartridge GORE-TEX		
Drive type	continuous running turbine		
Dimensions	W: 300 mm D: 300 mm H: 679 mm		
Weight	approx. 28 kg		







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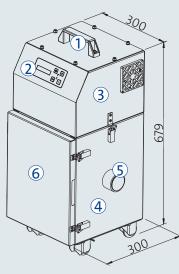
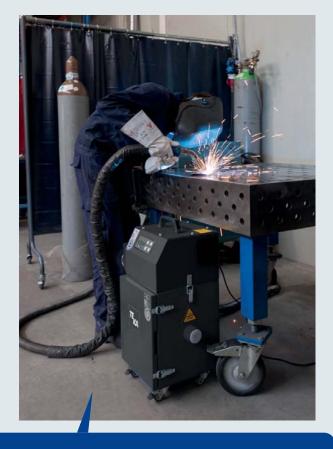


Illustration without automatic dedusting

- Handle 1)
- 2) Display control for HD version
- 3) Motor housing
- 4) Cartridge housing
- 5) Suction nozzle
- *6) Maintenance door*



Example of application: Torch extraction

Δνа	Ilah	le ver	sions
~~~~	nub		510115

HandyCart Cartridge filter unit		
	Type of dedust	ing
	manual Height: 670mm	automatic Height: 797mm
HandyCart HD	97902666	97904666



# HandyCart Accessories

Filter cartridge PTFE 0,8 m²	(Units from September 2003 on)	100281
Activated-carbon filter, Conversion set		97901120
Activated-carbon filter	250 x 250 x 100 mm	97901125
Suction hose Ø45mm with hard connection pieces	Length 2,5 m	9631925
	Length 5 m	9631950
	Length 10 m	96319 10
Funnel nozzle Ø45mm, flexible, with magnetic base		96317
Round nozzle Ø45mm, flexible, with magnetic base		963171
Slot nozzle Ø 45 mm,	Width 300 mm	96318
with magnetic base	Width 600 mm	938186



		Our Hotline +49 25 41 84 84 1 0
	Floor suction nozzle, Ø 45, width 500 mm	12201
	Suction pipe for floor suction nozzle, Ø45, length 1250mm	12202
	Coupling sleeve for hose Ø 45 mm	12203
×	Set: Floor suction nozzle, suction pipe, coupling sleeve	1220010
	Silencer	97801130
	Pack of 10 PE-dust bags	10030252

# **filtoo**<sup>®</sup> Mechanical filter unit with 1 suction element, IFA-certified

### Suitable for

Welding fumes, cutting fumes, cutting dust, laser fumes, plasma fumes, grinding dust, glueing vapors, drilling dust and much more





filtoo with suction arm (Art.-No. 978100)

### Description

The device can be used for numerous fields of application. The mobile suction and filter unit filters fume and dust and neutralizes odors. The suction arm (alternatively with hose) extracts polluted air exactly where it is produced. The device filters particles or gases in a four-level filter process including a gross filter, a prefilter, an activated carbon filter and a main filter.

The unit meets the security requirements of units of the welding fume category W3 (high alloy steels). If you handle the unit correctly, you can use it for circulating air operation because it fulfills the requirements of the exceptional rules according to the German Hazardous Substances Ordinance (GefStoffV).

### Standard equipment

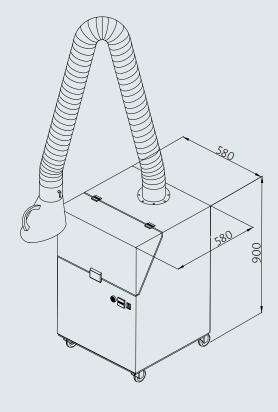
- Gross filter with a large surface
- Prefilter
- Activated carbon filter
- Main filter with separation efficiency of ≥99%
- Electronic filter monitoring
- Operating hours metre
- 5 m mains cable
- Suction arm 3 m in hose version with internal joints

or

Suction hose 3 m with hood and magnetic base

### Available as option

- Dust pre-separator StaVo
- Spark arrester screen for extraction hood



### **Technical Data**

filtoo <sup>®</sup> Mechanical filter unit	
Max. volumetric flow of the fan	1600 m³/h
Max. pressure	1800 Pa
Motor performance	1,1 kW
Separation efficiency	≥99%
Sound level	ca.72 dB(A)
Dimensions (W×D×H)	580×580×900 mm
Weight	ca. 80 kg



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### **Available versions**

filtoo <sup>®</sup> Mechanical filter unit with 1 suction element, IFA-certified		
Suction arm hose, internal joints, 3 metres	978100	
Hose with hood and magnetic base, 3 metres	978200	



### Accessories: StaVo Dust-pre-separator for filtoo

### Suitable for

*Retrofitting of filtoo to increase filter life; serves as a spark arrester; easy installation* 





### Description

This kit is used for preliminary dust separation in the filtoo. The inserted baffle directs the airflow toward the dust collecting drawer. Possibly suctioned sparks are also captured effectively.

In the collecting drawer most of the dust is already pre-separated. The following 4 filter units will be relieved and their lifetime will be increased. The collection charge can regularly be emptied in a simple manner.

- Longer filter life and thus very economical
- Easy removal of dust particles via dust collecting drawer
- Uncomplicated installation
- Can be retrofitted for each filtoo<sup>®</sup>
- Patented



The risk of fire is minimized by the StaVo when occasionally sparks are extracted.

#### **Available versions**

Accessories: StaVo Dust-pre-separator for filtoo 978013



Accessorie	s for <b>filtoo</b> ®	Our Hotline +49 25 41 84 84 1 0
	Gross filter, set of 10, 490 x 490 x 20 mm	978003
	Prefilter 484 x 484 x 48 mm	978004
	Activated carbon filter 484 x 484 x 20 mm	978006
	Main filter 520 x 520 x 250 mm	978005
	Dust pre-separator StaVo	978013
	Protection grille for exhaust hood	10372
	Standard exhaust hood incl. throttle $ ot \varnothing$ 150	66200
	Adapter for exhaust hood angular, 300x300mm PVC, black	66210
	Adapter for exhaust hood round, 400mm PVC, black	66220

### filtoo with working surface

### Suitable for

Variable workstations in workshops and in the metalworking industry. For welding, grinding and cutting with little smoke and dust.





filtoo with working surface

#### Description

The mobile workbench is a brilliant variation on our top seller filtoo with suction arm. You get a mobile worktable with underfloor extraction and an integrated particle preseparator.

Due to the five-stage filtration system all dangerous particles are effectively filtered out from the working air. The mobile workbench is high-quality German engineering technology at its best.

#### **Standard equipment**

- StaVo
- Large coarse filter
- Pre-filter
- Activated carbon filter
- ► Main filter
- Electronic filtration control
- Operating hours counter
- 5m power cable





#### **Technical data**

filtoo with working surface	
Max. volumetric flow of the fan	1600 m³/h
Max. pressure	1800 Pa
Motor performance	1,1 kW
Separation efficiency	≥ 99%
Sound level	approx. 68 dB(A)
Dimensions (W×D×H)	1150 x 750 x 1350 mm
Weight	approx. 120 kg



### Our Hotline +49 25 41 84 84 1 0







Ideal for a small workshop

# Accessories for filtoo with working surface

Coarse filter set, Set of 10, 490 x 490 x 20 mm	978003
Pre-filter 484 x 484 x 48 mm	978004
Activated carbon filter 484 x 484 x 20 mm	978006
Main filter 520 x 520 x 250 mm	978005
Extension set for working surface incl. alu mesh filter	978018
Replacement alu mesh filter for extension set	978017
	490 x 490 x 20 mm Pre-filter 484 x 484 x 48 mm Activated carbon filter 484 x 484 x 20 mm Main filter 520 x 520 x 250 mm Extension set for working surface incl. alu mesh filter Replacement alu mesh filter

**Available versions** 

filtoo with working surface



# **CareMaster-IFA** Mechanical filter unit with 1 suction element

### Suitable for

Fume extraction involving unalloyed steels. This unit is IFA certified for welding fume class W3.







CareMaster-IFA (Art.-Nr. 97300101)

### Description

This mobile welding fume filter is IFA certified in combination with all TEKA suction arms ( $\emptyset$  150 mm). The separation efficiency is  $\ge$  99%.

The unit meets the security requirements of units of the welding fume category W3 (highly alloyed steels). If you handle the unit correctly, you can use it for circulating air operation because it fulfills the requirements of the exceptional rules according to the new German Hazardous Substances Ordinance (GefStoffV).

A stable construction made of steel plate with consistent powder coating guarantees a low maintenance operation even under rough conditions.

The gross particles are separated in the prefilter. Afterwards the air is guided through the particle filter where even finest fumes and dusts are separated. The tight lifting device guarantees an absolute impermeability and therefore the separation efficiency of the filter unit.

The air is let out on the backside of the unit through an outlet grill and rises up. Thus, at a distance of 1 m you cannot perceive a disturbing air flow any more. The unit is fitted with a high-capacity fan with high negative pressure which guarantees a high volumetric flow even if the filter is saturated.

### **Standard equipment**

- Extensive pre-filter mat
- Particle filter with separation efficiency ≥ 99%
- Optical and acoustic filter monitoring
- Sealing device
- Operating hours meter
- Operation control lamp
- Suction arm Ø 150 mm or suction hose 12 m Ø 150 mm
- 5 m mains cable

#### Available as an option

- Automatic start/stop system
- Lighting kit
- On/off switch via suction hood
- Aluminium mesh pre-filter
- Spark arrester screen for extraction hood

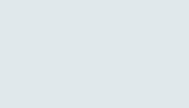
### **Technical Data**

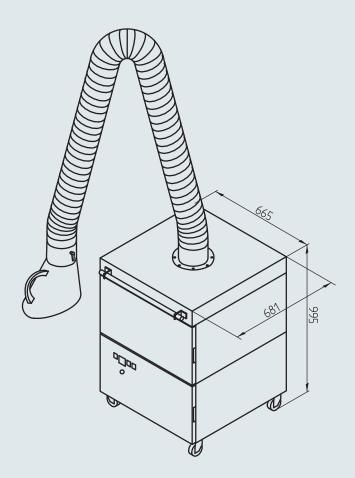
CareMaster-IFA Mechanical filter unit			
Max. volumetric flow of the fan	2 500 m³/h		
Max. pressure	2 500 Pa		
Motor performance	1,1 kW		
Separation efficiency	≥99%		
Sound level	approx. 70 dB(A)		
Dimensions (W×D×H)	665×681×995mm		
Weight	approx. 122 kg		













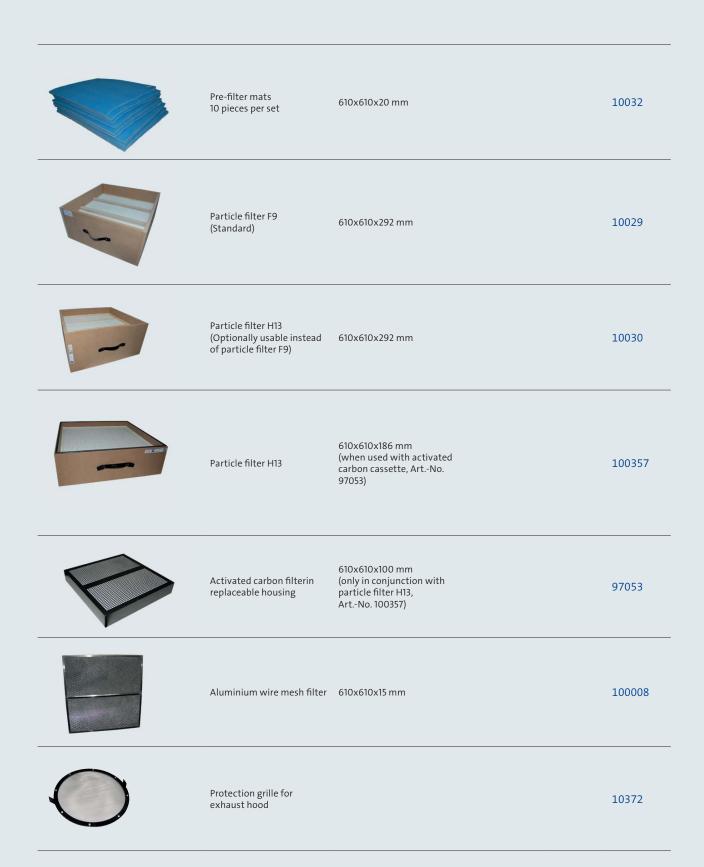
Example of application: CareMaster at a welding bench

### Available versions

CareMaster-IFA Mechanical filte	er unit with 1 suction element			
		Length		
		3 metres	4 metres	12 metres
Arm, hose type	Internal joints	97300101	97300102	
	External joints	97300111	97300112	
Hose				97300140

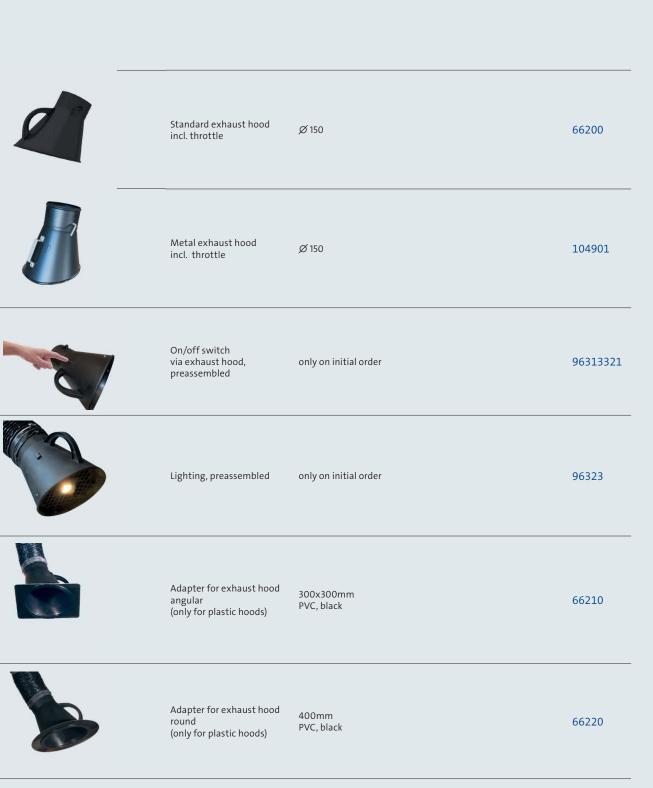


# Accessories for CareMaster mobile





### Our Hotline +49 25 41 84 84 1 0





# **StrongMaster-IFA** Mobile cartridge filter unit, 1 suction element

### Suitable for

Long-lasting fume extraction involving unalloyed steels and precious metals, galvanized material and aluminium involving a strong fume production. This unit is IFA certified for welding fume class W3.





### Description

Mobile cartridge filter unit, IFA certified in combination with all TEKA suction arms for the welding fumes class W3. The separation efficiency is  $\geq$  99%.

As the filter cartridge is dedustable, the unit only generates minimal follow up costs. The filter cartridge remains within the unit during dedusting which makes sure that no dust can reach the working space.

The unit meets the security requirements of the welding fume category W3 (highly alloyed steels). If you handle the unit correctly, you can use it in recirculation mode because it fulfills the requirements of the exceptional rules according to the new German Hazardous Substances Ordinance (GefStoffV).

A stable sheet steel construction with consistent powder coating ensures a low maintenance operation even under rough conditions. A baffle plate serves to pre-separate gross particles. Afterwards, the filter cartridge separates the remaining dusts and fumes. The filter is dedusted via a maintenance door by means of a compressed air pistol on the clean air side. The particles are collected in a dust collecting tray and can be disposed of afterwards.

The air is exhausted on the backside of the unit through an outlet grill and rises up. Thus, at a 1 m distance, no disturbing air flow can be perceived any more.

The unit is fitted with a high-capacity snail fan with high negative pressure that guarantees a high volumetric flow even if the filter is saturated.

The filter cartridge (dust category M) is precoated with a special powder that increases its lifetime compared to regular filter cartridge enourmously.

#### **Technical data**

StrongMaster-IFA Cartrdige filter unit			
Max. volumetric flow of the fan	1860 m³/h		
Max. pressure	2900 Pa		
Motor performance	1,1 kW		
Separation efficiency	≥ 99%		
Sound level	approx.70 dB(A)		
Dimensions (W×D×H)	665×820×1365 mm		
Weight	approx. 130 kg		



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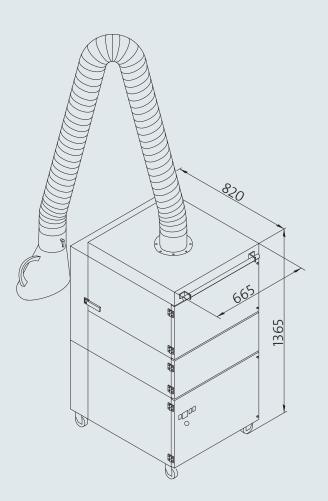


### Standard equipment

- Pre-separator
- Long lasting, dedustable filter cartridge
- Optical and acoustic filter monitoring
- Sealing device
- Operating hours meter
- Suction arm Ø 150 mm or
   12 m suction hose Ø 150 mm
- ▶ 5 m mains cable
- PE bag for the dust collecting tray

### Available as an option (with IFA Certificate)

- Automatic start/stop system
- On/off switch via suction hood
- Lighting kit
- Spark arrester screen for extraction hood

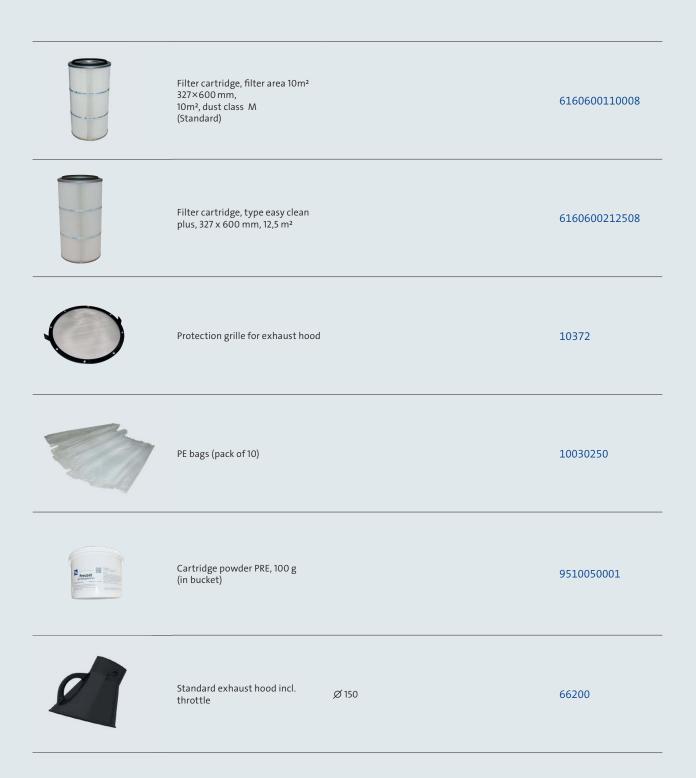


### **Available versions**

it, 1 suction element				
	Length	Length		
	3 metres	4 metres	12 metres	
Internal joints	97030101	97030102		
External joints	97030111	97030112		
			97030140	
	Internal joints	Length 3 metres Internal joints 97030101	Length       3 metres     4 metres       Internal joints     97030101     97030102	



# Accessories for StrongMaster-IFA





Our Hotline +49 25 41 84 84 1 0



Metal exhaust hood incl. throttle	Ø 150	104901
On/off switch via exhaust hood, preassembled	only on initial order	96313321
Lighting, preassembled	only on initial order	96323
Adapter for exhaust hood angular (only for plastic hoods)	300x300mm PVC, black	66210
Adapter for exhaust hood round (only for plastic hoods)	400mm PVC, black	66220



## **CartMaster-IFA** Mobile Cartridge filter unit, 1 suction element and automatic dedusting

### Suitable for

Long-lasting fume extraction involving unalloyed steels and precious metals, galvanized material and aluminium involving a strong fume production. This unit is IFA certified for welding fume class W3.





#### Description

Mobile cartridge filter unit with suction arm or 12 m suction hose.

The specially developed dedusting system guarantees optimal separation efficiency during the whole operation. The advantage of the POWER SPRAY-SYSTEM is not only its low maintenance construction without rotating jets (which wear off easily) but also the low dedusting pressure respectively low consumption of compressed air. The dedusted particles are collected in the dust collecting tray and can be disposed of afterwards.

The control contains a subsequent cleaning when the fan stands still.

A stable steel plate construction with consistent powder coating guarantees a low maintenance operation even under rough conditions. A baffle plate serves as pre-separator for gross particles. The filter cartridge of the filter category BIA M separates the remaining fumes and dusts (separation efficiency ≥ 99%). The cartridge is coated ex works with a special filter medium. Thus, the lifetime increases considerably compared to that of standard filter cartridges.

The enormous advantage of this unit is its user-friendly construction with maintenance doors for all control areas and very low consequential costs because the cartridge is dedustable.

#### **Standard equipment**

- Fully automatic, contamination-related dedusting via POWER SPRAY-SYSTEM
- Pre-separator
- Durable filter cartridge with large filter surface
- Control with display
- Compressed air container
- Optical filter monitoring
- Sealing device
- Operating hours meter

### Technical Data

CartMaster Cartridge filter unit			
Max. volumetric flow of the fan	1860 m³/h		
Max. pressure	2900 Pa		
Motor performance	1,1 kW		
Separation efficiency	≥99%		
Sound level	approx.70dB(A)		
Dimensions (W×D×H)	665×1100×1495 mm		
Weight	approx. 160 kg		





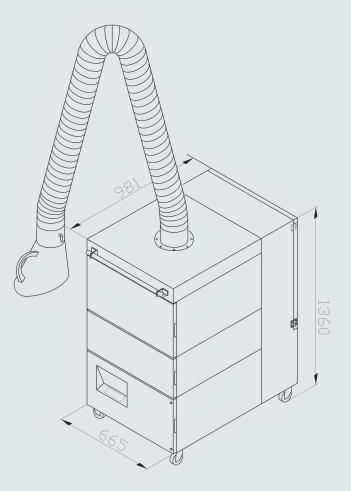




- Suction arm Ø 150 mm or
   12 m suction hose Ø 150 mm
- ► 5 m mains cable
- PE bag for the dust collecting try

### Available as an option

- Lighting kit
- On/off switch via suction hood
- Spark arrester screen for extraction hood

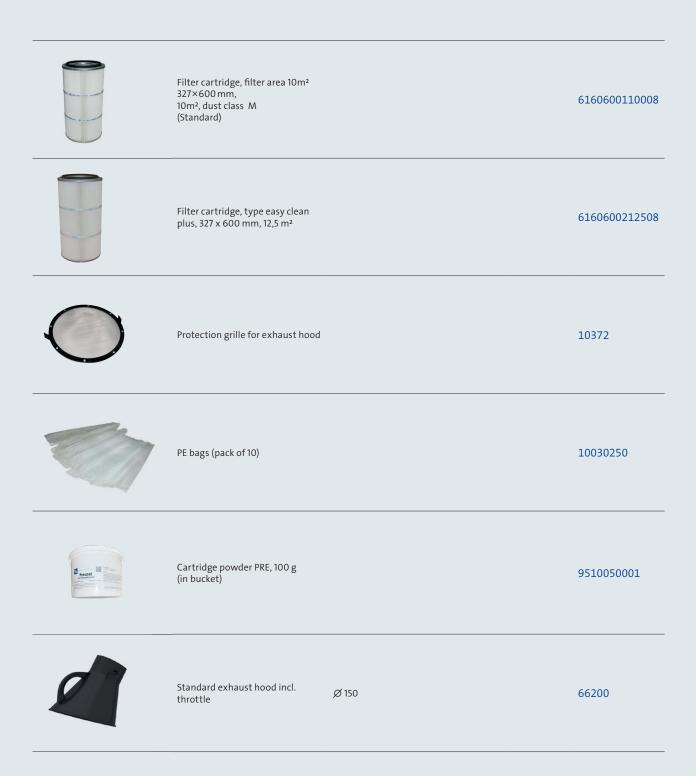


#### **Available versions**

CartMaster Cartridge filter unit with 1	suction element				
		Length	Length		
		3 metres	4 metres	12 metres	
Arm, hose type	Internal joints	97000101	97000102		
	External joints	97000111	97000112		
Hose with exhaust hood and magnetic foot				97000140	



## Accessories for CartMaster-IFA





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Metal exhaust hood incl. throttle	Ø 150	104901
On/off switch via exhaust hood, preassembled	only on initial order	96313321
Lighting, preassembled	only on initial order	96323
Adapter for exhaust hood angular (only for plastic hoods)	300x300mm PVC, black	66210
Adapter for exhaust hood round (only for plastic hoods)	400mm PVC, black	66220

## CareMaster Wall-mounted mechanical filter unit with 1 or 2 suction elements

#### Suitable for

#### Fume extraction involving unalloyed steels





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A stable steel plate construction with consistent powder coating guarantees a low maintenance operation even under rough conditions.

The gross particles are separated in the prefilter. Afterwards the air is guided through the particle filter where even finest fumes and dusts are separated. The sealing device guarantees an absolute impermeability and therefore the separation efficiency of the filter unit.

The unit is fitted with a high-capacity fan with high negative pressure which guarantees a high volumetric flow even if the filter is saturated.

From a length of 5 m on, the suction arm/ crane is equipped with an additional wall bracket.

#### **Standard equipment**

- Extensive pre-filter mat
- Particle filter with separation efficiency ≥ 99%
- Optical filter monitoring
- Sealing device
- Operating hours meter
- External control
- ► Wall mount
- ▶ 1 or 2 suction arm Ø 150 mm with hood (synthetics) incl. throttle valve or

nozzle Ø 160 mm

#### Available as an option

- Aluminium mesh pre-filter
- Activated carbon filter cartridge
- Automatic start/stop system
- Lighting kit
- On/off switch via suction hood
- Exhaust air connection
- Spark arrester screen for suction hood

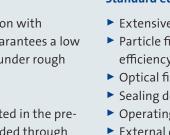
CareMaster (Art.-Nr. 97420101)

CareMaster

(Art.-Nr. 97400101)

#### **Technical Data**

CareMaster Wall-mounted mechanical filter unit				
Max. volumetric flow of the fan	1800–3500 m³/h			
Max. pressure	2500 – 3000 Pa			
Motor performance	1,5–2,2 kW			
Separation efficiency	≥99%			
Sound level	approx. 70 dB(A)			
Dimensions (W×D×H)	665×681×940mm			
Weight	approx. 122 kg			

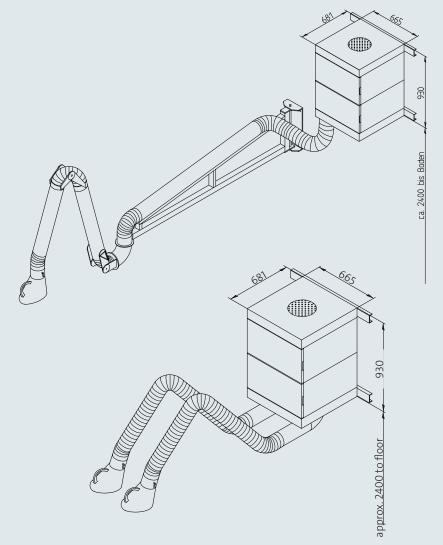


- ▶ 5 m mains cable











Example of application: CareMaster wall mounted with additional nozzle plate attached to the suction hood

#### **Available versions**

CareMaster Wall-mounted mechanical filter unit with 1 suction element							
		Length					
		3 metres	4 metres	5 metres	6 metres	7 metres	8 metres
1 x Arm, hose type	Internal joints	97400101	97400102	97400103	97400104	97400105	97400106
with 3500 m³/h, 1,5 kW	External joints	97400111	97400112	97400113	97400114	97400115	97400116
Nozzle	Ø 160	97430 with 3500 m³/h, 1,5 kW					

#### CareMaster Wall-mounted mechanical filter unit with 2 suction elements

		Length					
		3 metres	4 metres	5 metres	6 metres	7 metres	8 metres
2 x Arm, hose type	Internal joints	97420101	97420102	97420103	97420104	97420105	97420106
with 3 500 m³/h, 2,2 kW	External joints	97420111	97420112	97420113	97420114	97420115	97420116
Nozzle	2 × Ø 160	97440					
	1 × Ø 250	97443					



## Accessories for CareMaster wall-mounted

Pre-filter mats 10 pieces per set	610x610x20 mm	10032
Particle filter F9 (Standard)	610x610x292 mm	10029
Particle filter H13 (Optionally usable instead of particle filter F9)	610x610x292 mm	10030
Particle filter H13	610x610x186 mm (when used with activated carbon cassette, ArtNo. 97053)	100357
Activated carbon filterin replaceable housing	610x610x100 mm (only in conjunction with particle filter H13, ArtNo. 100357)	97053
Aluminium wire mesh filter	610x610x15 mm	100008
Protection grille for exhaust hood		10372
Standard exhaust hood incl. throttle	Ø 150	66200



		Our Hotline +49 25 41 84 84 1 0	
Metal exhaust hood incl. throttle	Ø 150	104901	
On/off switch via exhaust hood, preassembled	only on initial order	96313321	
Lighting, preassembled (only on initial order)	for one arm	96323	
(only on initial order)	for two arms	96324	
Adapter for exhaust hood angular (only for plastic hoods)	300x300mm PVC, black	66210	
Adapter for exhaust hood round (only for plastic hoods)	400mm PVC, black	66220	
Master-Slave-Control 400V / 16A	automatic powering of a filter unit by connected devices	150010016	
Master-Slave-Control 400V / 32A	automatic powering of a filter unit by connected devices	150010032	
Master-Slave-Control 230V / 16A	automatic powering of a filter unit by connected devices	15001001602	
Master slave junction box	for the control of up to 3 master-slave controllers simultaneously	15001001604	



### CartMaster-IFA Wall-mounted cartridge filter unit, for up to 2 suction elements

#### Suitable for

Long-lasting fume extraction for welding involving unalloyed steels and precious metals, galvanized material and aluminium involving a strong fume production. The unit is IFA certified for welding fume class W3.



#### Description

Stationary cartridge filter unit which is IFAcertified in combination with all TEKA suction arms or cranes according to DIN EN 150012-1.

The separation efficiency is  $\geq$  99 %.

The unit corresponds to the security requirements of units of the welding fume category W3 (highly alloyed steels). If you handle the unit correctly, you can use it in a recirculation mode because it fulfills the requirements of the exceptional rules according to the new German Hazardous Substances Ordinance (GefStoffV).

A stable sheet steel construction with consistent powder coating guarantees a low maintenance operation even under rough conditions.

The specially developed dedusting system guarantees optimal separation efficiency during the whole operation. The advantage of the POWER SPRAY-SYSTEM is not only its low maintenance construction without rotating jets which are susceptible to wear, but also the low dedusting pressure and low consumption of compressed air. The cleaned particles are collected in a freely accessible dust bin and can then be disposed of.

A baffle plate serves as protection device for the filter cartridges. The fumes and dusts are separated from the filter cartridges. They are coated ex works with a special filter agent. This increases their lifetime considerably compared to standard filter cartridges.

From a length of 5 m on, the suction arm/ crane is equipped with an additional wall bracket.

#### **Standard equipment**

- Automatic filter monitoring
- Operating hours meter
- Fully automatic cleaning via POWER SPRAY-SYSTEM
- 2 durable filter cartridges (10 m<sup>2</sup> filter surface each)
- Dust collection bin
- Compressed air container
- Wall bracket
- Silencer



CartMaster-IFA (Assembly example)

#### **Technical Data**

CartMaster-IFA Wall-mounted cartridge filter unit				
Max. volumetric flow of the fan	3500 m³/h			
Max. pressure	3000 Pa			
Motor performance	2,2 kW			
Separation efficiency	≥99%			
Sound level	approx. 72 dB(A)			
Dimensions (W×D×H)	665×681×2100 mm			
Weight	ca. 165 kg			



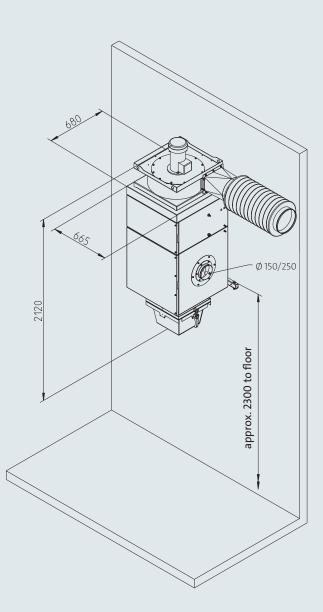




- 2 suction nozzles Ø 150 mm or 1 suction nozzle Ø 250 mm
- PE bag for the dust collecting tray

#### Available as an option (with IFA Certificate)

- Automatic start/stop system
- Lighting kit
- On/off switch via suction hood
- Spark arrester screen for suction hood



suitable suction elements can be found on page 102

#### **Available versions**

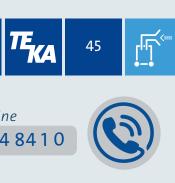
CartMas	CartMaster-IFA Wall-mounted cartridge filter unit, for up to 2 suction elements				
Nozzle	2x Ø 150	97530			
	1x Ø 250	97532			



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## Accessories for CartMaster wall-mounted

$\sim$	1x suction arm, length 4m (additional extraction elements can be found on page 102)	Ø 150mm	97603
	Filter cartridge, filter area 10m² 327×600mm, 10m², dust class M (Standard)		6160600110008
	Filter cartridge, type easy clean plus, 327 x 600 mm, 12,5 m²		6160600212508
	PE bags (pack of 10)		10030251
	Spark-trap with copper fins	Ø 160	95014901609006
		Ø 250	950149025019006
B neat	Cartridge powder PRE, 100 g (in bucket, per m² of filter surface 10g are required)		9510050001
	Standard exhaust hood incl. throttle	Ø 150	66200
	Metal exhaust hood incl. throttle	Ø 150	104901
$\bigcirc$	Protection grille for exhaust hood		10372



			Our Hotline +49 25 41 84 84 1 0
			145 25 41 61 61 10
	On/off switch via exhaust hood, preassembled	only on initial order	96313321
Lighting, preassembled		for one arm	96323
0	(only on initial order)	for two arms	96324
	Adapter for exhaust hood angular (only for plastic hoods)	300x300mm PVC, black	66210
	Adapter for exhaust hood round (only for plastic hoods)	400mm PVC, black	66220
	Master-Slave-Control 400V / 16A	automatic powering of a filter unit by connected devices	150010016
	Master-Slave-Control 400V / 32A	automatic powering of a filter unit by connected devices	150010032
	Master-Slave-Control 230V / 16A	automatic powering of a filter unit by connected devices	15001001602
	Master slave junction box	for the control of up to 3 master-slave controllers simulta- neously	15001001604



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 are the future, says Erwin Telöken, CEO of TEKA GmbH. The technical basis for this are intelligent, digitally networked systems, which help to create 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 information is 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 can help to manage the errors that occur in all companies and can not be completely avoided. All in all, 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.



TEKA ex



DifCon -Sensors-

# **DUSTRY 4.0**

**Smart**Factory





## AirTracker Basic/Pro



### **Smart**Warehouse



AirController -Sensors48

## AirTracker Basic Room monitoring system

#### Suitable for

Monitoring of air quality in the hall or in the workspace and control the connected extraction and filter systems.

#### 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.

The innovative, intelligent solution for that is the TEKA AirTracker room monitoring system.

The newly developed sensor captures particles smaller than 100 nanometers and convinces in the evaluation from 0 to 30 mg/m<sup>3</sup> with an accuracy of  $\pm$  0.1 mg/<sup>3</sup>, documented and certified.

Building up trust.

High-tech sensors guarantee reliable measured value and safety. Individual adjustment of threshold values 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, TEKA fans or filter systems can be controlled, depending on particulate pollution. Ready-to-Go: Industry 4.0 – TEKA AirTracker.

Businesses 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 - boost confidence.

Dust, whether coarse or fine – even up to nanoparticles, dust categories PM2.5 for A-dust or PM10 for E-dust – the TEKA AirTracker with its newly developed sensor supervises the respirable dust in a more than 15 meters wide radius with an accuracy of +/- 0.1 Micrometer, certified – Feeling safety.

Standard features of TEKA AirTracker include additional innovative sensors: Air temperature, humidity and noise levels are also measured.

#### **Technical Data**

AirTrackor Pacic P

AITITACKET BASIC KOOM 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			
Memory	4 GB Flash/RAM 1 GB			
Voltage	230/110 V/AC			
Casing	Metal			
Weight	approx. 12 kg			
Measures (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 mg³/m to 30 mg³/m (Accuracy $\pm$ 0,1 mg³/m )			
Noise level	40 db to 140 db			



AirTracker Basic Room monitoring system

ILK Dresden	
Prüf-Nr. B-33-17-2115-1	



#### Our Hotline +49 25 41 84 84 1 0





Networked sensors/actuators are the future in the "Industry 4.0". TEKA already faces this networked technology nowadays. TEKA sensors/actuators are already an integral part of the industry.

With suitable smartphone, tablet or PC, the TEKA AirTracker app can be downloaded. It depicts the current values of room temperature, humidity, particulate pollution and volume levels.

Various settings in the app complete the user-friendliness and functionality.

There are many "dust sensors". Quality and safety, however, provides only the networking of certified sensors, which document the measured data.

TEKA AirTracker. The future is NOW.



The AirTracker room montoring system is for example mounted on the ceiling at a central location



The associated web app is constantly developed further and improved

AirTracker Pro Room monitoring system

Incl. MQTT- und OPC-UA-Interface

2017014020



In the field of stationary and central systems we offer devices for medium and high amounts of emissions fitted with a fully automatic dedusting system.

Additionally, there are high-capacity units in this field that can be installed to fixed places in production halls and that allow a simultaneous extraction of many different workplaces via ducting and hoses. Our technicians adapt the different components optimally to the needs of every customer.

POWER

PRAY-SYSTEM

# TEKA POWER SPRAY-SYSTEM – Fully automatic dedusting

Precoat

Particle

Filter element

TEKA implements a fully automated dedusting systems for almost all units in the following category: the microprocessor-controlled POWER SPRAY-SYSTEM! Instead of the usual 8 bar with jet-/rotating nozzles this system requires barely

4 bar pressure. There are no follow-up costs for worn out rotating nozzles.

This intelligently developed system dispenses the air within the filter cartridge optimally.

If the filter has to be changed after extensive use at some point, the filter cartridge with the displacer is easily removable (common jet-/rotating nozzles have to be disassembled tediously.

The core piece of the POWER SPRAY-SYSTEM is the displacer within the filter cartridge. This displacer dispenses the incoming air evenly onto the Filter surface.

The cartridge is dedusted gently and effectively.



## 3. Central suction and filter systems



+49 25 41 84 84 1 0



F. l. t. r.: FilterCube 4H with silence module plus soundproof housing, silence module plus silencer and the standard version with just the silencer 52

## FilterCube 4H-IFA Central filter units

#### Suitable for

Various suction problems at several working places at the same time for work involving unalloyed metals and precious metals, galvanized material and aluminium. The units are IFA certified for welding fume class W3.

#### Description

The stationary filter units FilterCube 4H is certified according to DIN EN ISO 15012-1 or DIN EN ISO 21904-1/-2. The separation efficiency is  $\geq$  99 %.

The unit meets the security requirements of units of the welding fume category W3 (highly alloyed steels). If you handle the unit correctly, you can use it for circulating air operation because it fulfills the requirements of the exceptional rules according to the new German Hazardous Substances Ordinance (GefStoffV).

The released fumes and dusts are extracted via appropriate suction elements and guided into the filter unit. A perforated plate with large surface serves as pre-separator and distributes the particles on the whole filter surface.

FilterCube 4H



All filter units are fitted with hanging filter cartridges. Thus, the admission of the cartridges is carried out on the side. Heavy particles fall down directly into the dust container. The filter cartridges are precoated ex works with a special filter medium. This increases their lifetime compared to standard cartridges considerably.

The dedusting is controlled by a microprocessor by means of the display control via the POWER SPRAY-SYSTEM.

#### **Standard equipment**

- Fully automatic dedusting via POWER SPRAY-SYSTEM
- Display control unit
- 2 extensive filter cartridges with 600 mm each (type 2N)

SUCTION PLA

- or with 1 200 mm length (type 2H)
- Dust collecting tray with sealing device
- Fan within a soundproof housing
- Integrated compressed air container
- Control unit for the fan
- Maintenance doors for all operating areas
- Maintenance door in the filter cartridge housing with inspection window made of laminated safety glass
- Suction nozzle according to type Ø 160 – 315 mm
- PE bag for the dust collecting tray

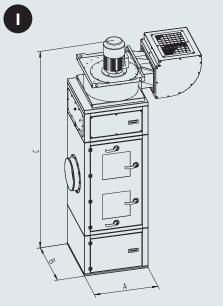
#### Available as an option (with IFA Certificate)

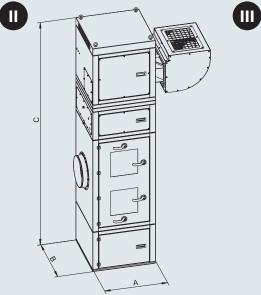
- Continuous precoating device
- Particle sensor
- Spark pre-separator
- Easy-Clean-Plus filter cartridges
- Silence module for ventilator
- Soundproof housing (only in conjunction with silence module)

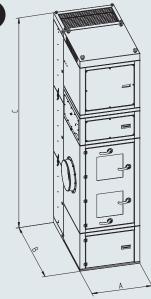
#### **Technical Data**

FilterCube 4H Central filter units		
Max. volumetric flow of the fan	10000 m³/h	
Max. pressure	2700-4600 Pa	
Motor performance	2,2–11,0 kW	
Separation efficiency	≥99%	
Sound level	approx. 72 dB(A)	
Dimensions (W×D×H)	800×800×2320−3067 mm	









		2,2 kW	3,0 kW	4,0 kW	5,5 kW	7,5 kW	11,0 kW
	Α	800	800	800	800	800	800
Version I with silencer	В	800	800	800	800	800	800
	с	2860	2900	2880	3010	3010	3130
Version II with silencer + silence module	А	800	800	800	800	800	800
	В	800	800	800	800	800	800
	c	3050	3050	3050	3180	3180	3180
	Α	800	800	800	800	800	800
Version III with silence module + soundproof housing	В	1310	1310	1310	1310	1310	1310
······································	c	3050	3050	3050	3180	3180	3180

#### Available versions

FilterCube 4	FilterCube 4H Central filter units, IFA-Certified (Version I)					
Filter cartridges	4x 7,8 m²	4x 7,8 m²	4x 10,0 m²	4x 15,6 m²	4x 20 m²	4x 25 m²
max. volumetric flow of the fan	3500 m³/h	4000 m³/h	5000 m³/h	6000 m³/h	7500 m³/h	10000 m³/h
max. pressure	2700 Pa	3300 Pa	3600 Pa	4100 Pa	3950 Pa	4600 Pa
Motor performance	2,2 kW	3,0 kW	4,0 kW	5,5 kW	7,5 kW	11,0 kW
	<b>FilterCube 4H-3500</b> 9501441022031100	<b>FilterCube 4H-4000</b> 9501441030031100	<b>FilterCube 4H-5000</b> 9501441040040100	<b>FilterCube 4H-6000</b> 9501441055062100	<b>FilterCube 4H-7500</b> 9501441075080100	FilterCube 4H-10000 9501441110100100



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## Accessories for FilterCube 4H-IFA

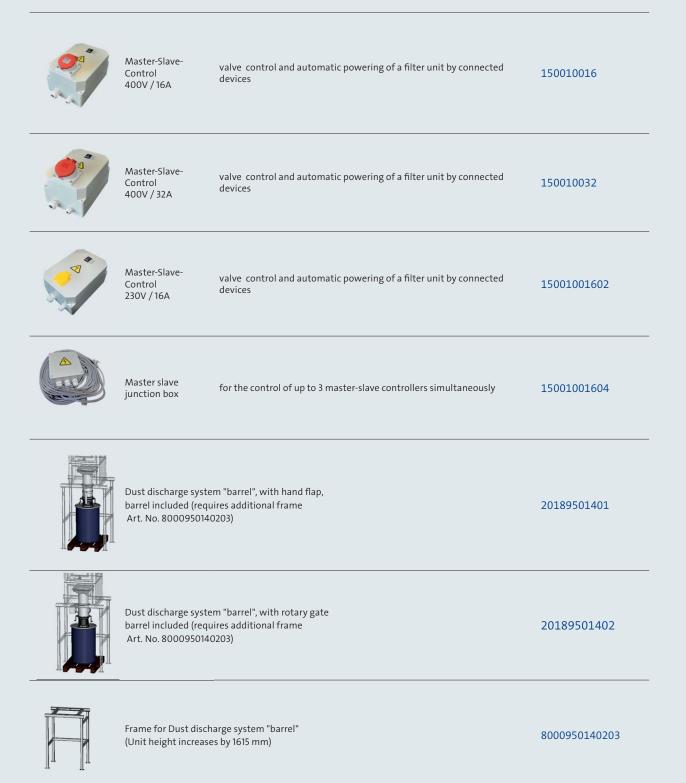
	Filter cartridge 7,8 m <sup>2</sup> Standard, 327 x 600 mm (4 cartridges are the <b>default setup</b> for FilterCube 2,2 kW and 3,0 kW)	6160600107808
	Filter cartridge 10 m² Standard, 327 x 600 mm (4 cartridges are the <b>default setup</b> for FilterCube 4 kW)	6160600110008
Standard	Filter cartridge 15,6 m² Standard, 327 x 1200 mm (4 cartridges are the <b>default setup</b> for FilterCube 5,5 kW)	6161200115608
	Filter cartridge 20 m² Standard, 327 x 1200 mm (4 cartridges are the <b>default setup</b> for FilterCube 7,5 kW)	6161200120008
	Filter cartridge 25,3 m², Easy Clean Plus, 327 x 1200 mm (4 cartridges are the <b>default setup</b> for FilterCube 11 kW)	6161200225308
	Cartridges, length 600 mm for FilterCubes 2,2 kW to 4,0 kW	
	Filter cartridge, Type easy clean plus, Dim.: 327 x 600 mm, Filter surface: 7,7m² (for FilterCube 2,2 kW/3,0 kW/4,0kW)	6160600207706
00 mm	Filter cartridge, Type easy clean plus, Dim.: 327 x 600 mm, Filter surface: 7,7m² (for FilterCube 2,2 kW/3,0 kW/4,0kW)	6160600307706
Length 600 mm	Filter cartridge, Type easy clean plus, Dim.: 327 x 600 mm, Filter surface: 12,5m² (for FilterCube 2,2 kW/3,0 kW/4,0kW)	6160600212508
	Filter cartridge, Type easy clean plus, Dim.: 327 x 600 mm, Filter surface: 12,6m² (for FilterCube 2,2 kW/3,0 kW/4,0kW)	6160600312606
	Cartridges, length 1200 mm for FilterCubes 5,5 kW bis 11,0 kW	
E	Filter cartridge, Type easy clean plus, Dim.: 327 x 1200 mm, Filter surface: 15,6 m² (for FilterCube 5,5 kW/7,5 kW/11,0kW)	6161200215606
Length 1200 mm	Filter cartridge, Type easy clean nano, Dim.: 327 x 1200 mm, Filter surface: 15,6m² (for FilterCube 5,5 kW/7,5 kW/11,0kW)	6161200315606
Le	Filter cartridge, Type easy clean nano, Dim.: 327 x 1200 mm, Filter surface: 25,3m² (for FilterCube 5,5 kW/7,5 kW/11,0kW)	6161200325308

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	Extension set H13 filte (suitable for FilterCubes up to 7,5 kW) Silence module with maintenance door, unit height increases by approx. 500 mm		4000950144002
	Extension set for activated carbon filter, only on initial order, Filter housing with maintenance door, Unit height increases by approx. 602 mm, suitable for all FilterCubes		40009501440
2 Jreast	Cartridge powder PRE, 400g (in bucket, per m² filter surface 10g is required)		951004
	Cartridge powder PRE, 10kg (in bag, per m² filter surface 10g is required)		9510054002
	PE-bags (pack of 10)		10030251
		2,2 kW	962002009022
			962002009030
	3,0 kW       Frequency converter with pressure       4,0 kW	962002009040	
	transmitter incl. intelligent filter control	5,5 kW	962002009055
		7,5 kW	962002009075
		11,0 kW	962002009110
	Option silence module, blowing left, housing color: RAL 7035 (light grey)		950144194712
	Option silence module, blowing right, housing color: RAL 7035 (light grey)		950144194718
	Option silence module with soundproof housing on the back, for FilterCube 4H (2,2 kW - 4,0 kW) , color: RAL 7035 (light grey)		950144194012
	Option silence module with soundproof housing on the back, for FilterCube 4H (5,5 kW - 11,0 kW) , color: RAL 7035 (light grey)		950144194011
	Adapter (soundproof housing) to diam. 500mm, required when venting to atmosphere		9501441940111



## Accessories for FilterCube 4H-IFA





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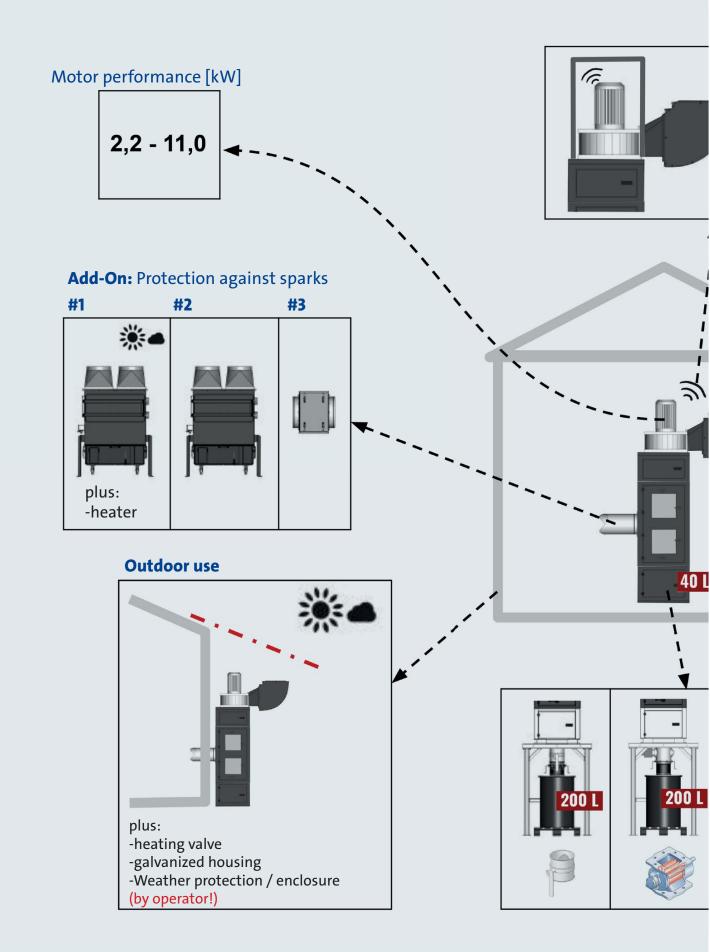
	Dust discharge syste (requires additional	20189501404	
	Frame for dust disch (Unit height increase	8000950140204	
	Disposable BigBag w Dim. 910 x 910 x 850	5030909185	
	Steel sheet barrel 20 RAL 7035, incl. lid	80000583	
	Protection system w (e.g. because of a fire	99920401	
	Galvanized housing	and heat tracing for the solenoid valves for outdoor installation	On request
		300 x 300 to dia. 280 mm (FC 2,2 kW)	7045040001
_		300 x 300 to dia. 315 mm (FC 3,0 kW)	7045050001
N.G.	Transition piece	300 x 300 to dia. 355 mm (FC 4,0 kW)	7045060001
27	for for TEKA elbow silencer	450 x 450 to dia. 400 mm (FC 5,5kW)	7045010001
		450 x 450 to dia. 450 mm (FC 7,5 kW)	7045020001
		450 x 450 to dia. 500 mm (FC 11 kW)	7045030001
	Stand console for ele	96200300	

Subject to change. Images are similar to the actual product.

## Variants of the FilterCube 4H-IFA

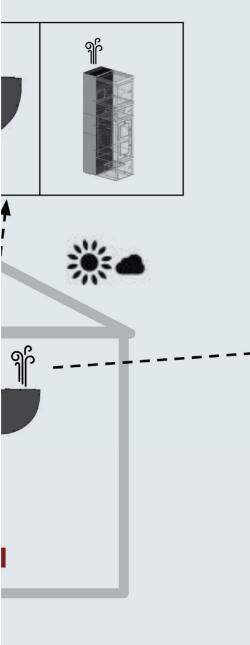
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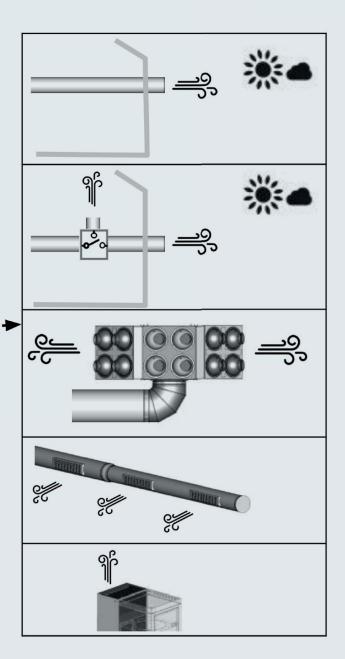
58

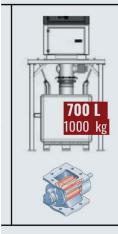












## Advantages of the FilterCube 4H-IFA

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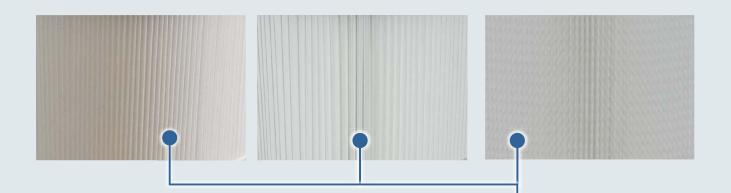


- ► energy efficient engine
- Iow-wear direct drive
- Performance optimized impellers
- Iow noise level
- ► demand-dependent cleaning
- wear-free cleaning
- low compressed air consumption through power spray system
  - variable filter setting
     (can be adapted to application)
  - user-friendly through maintenance doors and easy removal of the filters
  - checks are possible at any time via the standard viewing windows

simple dust dischargefurther discharge systems possible

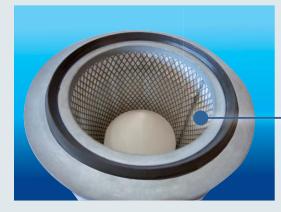


## Advantages of our filter cartridges





- different filter materials for a variety of applications
- high separation efficiency with low pressure loss
- mechanical stability through use of support belts and support cage
- self-extinguishing
- ► washable
- ▶ no cellulose material
- ► long service life





## **ZPF** Central suction and filter unit

#### Suitable for

Various extraction tasks at several working places at the same. Especially suitable for large amounts of air. This unit is IFA certified for welding fume class W3.





ZPF with top fan

#### Description

The central, self-dedusting cartridge filter system cleans the polluted air that is guided by an extraction element suitable for practical application through a specially designed ducting system.

All filter units are equipped with hanging filter cartridges of the dust category M (separation efficiency ≥ 99%). Thus, the cartridges are admitted on the side. Heavy particles immediately fall into the dust collecting container.

The filter cartridges are coated ex works with a special filter medium. This increases their lifetime compared to standard cartridges.

The advantages of this self-dedusting system are the optimal dedusting performance (high lifetime of the cartridges, high extraction performance), the user-friendliness and the low maintenance.

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The dedusting is controlled by a microprocessor by means of the display control via the POWER SPRAY-SYSTEM.

#### **Standard equipment**

- Fully automatic cleaning via POWER SPRAY system
- 6 to 27 large filter cartridges with 25 m<sup>2</sup> filter surface
- Dust bin with snap closures
- Powerful fan with control
- Integrated compressed air tank
- Maintenance doors for all operating areas

Let us configure

- Display control
- Filter aid PRE
- PE bags for the dust collection unit

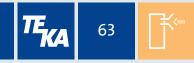
#### Available as an option

- Silence module
- Spark pre-separator
- Particle sensor



Gefantsoffgeprüft Schweißrauchabscheideklasse W3

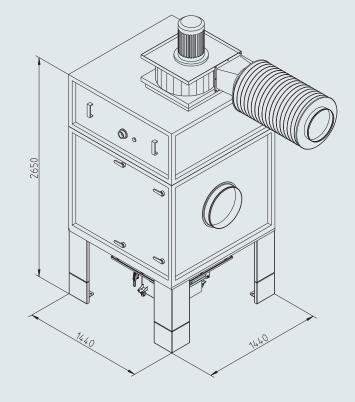
lechnical Data	your ZPF version!
<b>ZPF</b> Central suction and filter unit	
Max. volumetric flow of the fan	5000-42000 m <sup>3</sup> /h
Max. pressure	2500-5600 Pa
Motor performance	5,5-55,0 kW
Separation efficiency	≥99%
Filter surface	150 m² - 675 m²





ZPF with adjacent fan in a soundproof housing





ZPFs set up modularly with increased suction power and filter surface

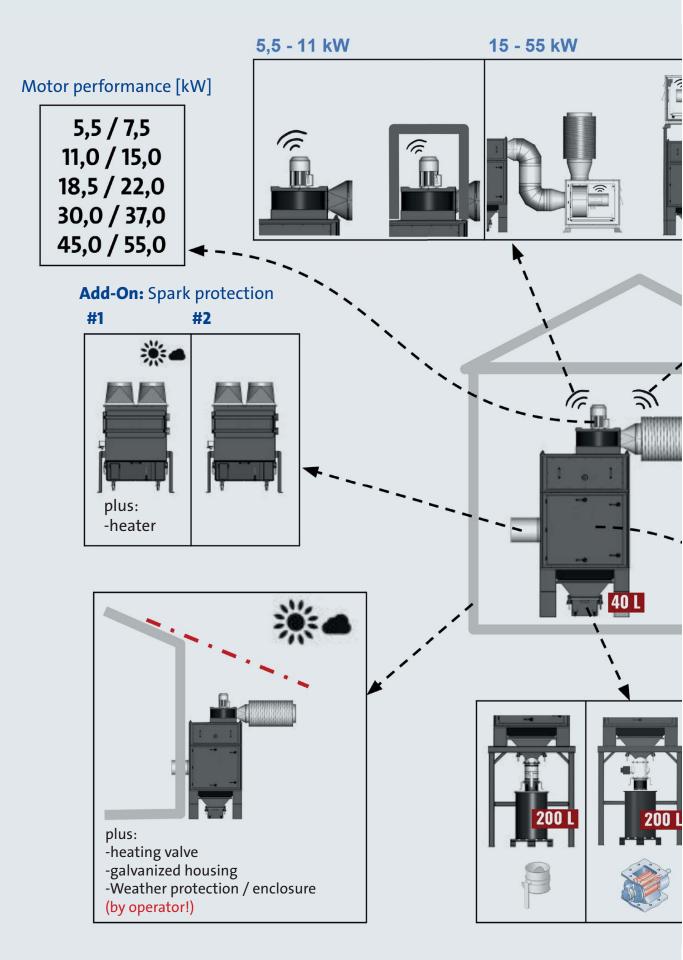
### Accessories for **ZPF**

	Filter cartridges 15,6 m², 327 x 1200 mm 6 to 9 cartridges per module		6161200115608
	Filter cartridges 20 m², 327 x 1200 mm 6 to 9 cartridges per module		6161200120008
	Filter cartridge 25,3 m², Easy Clean Plus, 327 x 1200 mm 6 to 9 cartridges per module		6161200225308
2	Master-Slave- Control 400V / 16A	valve control and automatic powering of a filter unit by connected devices	150010016
	Master-Slave- Control 400V / 32A	valve control and automatic powering of a filter unit by connected devices	150010032
Ì	Master-Slave- Control 230V / 16A	valve control and automatic powering of a filter unit by connected devices	15001001602
	Master-Slave Verbindungseinheit	for the control of up to 3 master- slave controllers simultaneously	15001001604

## Variants of the ZPF

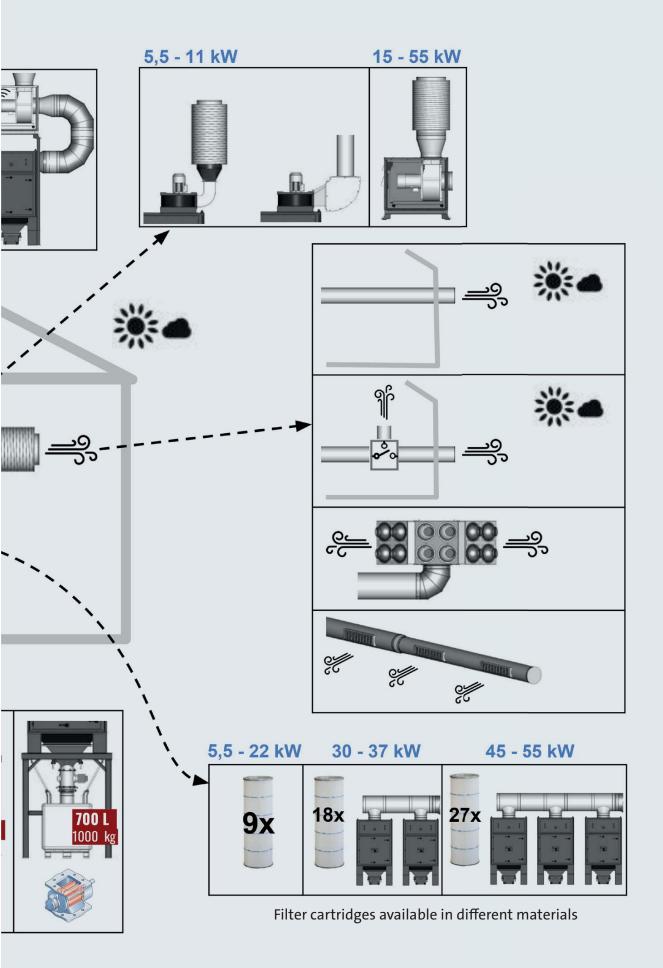
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### VarioCube-IFA

Suitable for

Robust extraction for welding work in shipyards and large halls for up to twelve extraction points. The system can be used flexibly, stationary or mobile, since it is easy to move over skids and crane eyelets. This unit is IFA certified for welding fume class W3.



#### Description

This unit is specially designed for the shipbuilding industry and can be used as a central or mobile unit thanks to its design.

The advantages of this self-dedusting filter system are the optimum dedusting performance (long service life of the cartridges, good extraction capacity), the ease of operation and the minimal need for maintenance.

The housing is made of a massive sheet steel construction and gets an undercoat and a paint coating on the outside - the inner side is prime-coated. The individual unit parts are equipped with user-friendly maintenance doors or masks for optimum and fast maintenance. The switch cabinet doors can be opened with conventional switch cabinet keys.

The filter units are equipped with filter cartridges of the filter category BIA M. These cartridges are precoated with a special filter aid at the factory. This procedure considerably extends the service life compared to standard filter cartridges. The units have a specially developed dedusting system consisting of a combination of a Siemens control (S7) and the power spray system. This combination provides a very good dedusting performance of the filter cartridges which ensures an optimal extraction capacity during the entire operation. The advantage of this system is not only its low-maintenance design without rotating nozzles subject to wear but also the use of low dedusting pressure and low consumption of compressed air. The control is supplied completely preset.

If you want to change the control parameters it can be done with an external control unit with Siemens S7 menu navigation. This control unit will then be connected to a Harting interface. This control unit is not included in the delivery and can be purchased separately. Set parameters can only be displayed and changed with the help of the control unit.

The pressure difference of the filters as well as the negative pressure at the clean-air side are measured in the filter unit. The filters



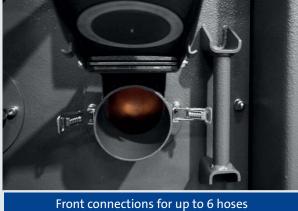
VarioCube

#### Technical Data

VarioCube-IFA	
Max. volumetric flow of the fan	2000 m³/h
Max. pressure	10000 Pa
Motor performance	11,0 kW
Supply voltage	400/50 V/Hz
Motor control	Star-delta circuit
Sound level	approx. 78 dB(A)
Filter control	Siemens S7
Dimensions	800 x 1200 x 2900 mm



are permanently monitored. When a preset pressure difference is reached, pulses are consecutively sent to



the individual magnet valves. The magnet valves open briefly and supply compressed air to the individual filter cartridge at the clean-air side. The dust particles (dust cake) adhering at the raw gas side are detached and get into the dust collector. This dedusting process is repeated until a preset bottom switching value is reached. Furthermore, the dedusting can be started according to a certain time interval or manually. When a fault occurs the red signal lamp lights up. The unit is equipped with an on/off switch as well as with an emergency stop switch and a connector is supplied.

#### Standard equipment

- pressure regulator with a manometer 1/2" for 0.5-10 bar
- pressure controller which gives a signal if the pressure in the compressed air tank is below 2 bar and which then switches off the system

- timer with battery module to automatically start and stop the unit
- dust sensor for the dust collector to mechanically monitor the dust fill level in the container
- signal lamp for compressed air



- signal lamp dedusting alarm / filter condition
- signal lamp engine malfunction
- signal lamp to show full dust collector
- Harting interface to connect the external control unit
- button for the manual dedusting of the cartridges
- on/off switch with an integrated signal lamp
- main switch (supplies the unit with voltage)
- emergency stop switch
- strobe lights to signal malfunctions

#### Available as an option

- Hoses and suction hoods
- Mobile control element





### Wet Cyclone Separator

#### Suitable for

*Extraction of grinding dust – in special version also suitable to extract aluminium dust* 





Wet cyclone separator, Example with connected exhaust pipe

#### Description

The advantages of the unit are its simple and trouble-free operation. Pumps or jets which could create troubles are not used.

The air is cleaned by swirling the dust with water. The particles in the air flow are enclosed by water and bonded.

The extracted dust particles set down in the lower water tank and can be discharged by the ball valve which is installed at the lowest position of the unit and can be removed through a maintenance flap.

The fan is suitable for continuous operation and is placed onto the unit by standard.

The engine of the wet cyclone separator requires very low maintenance

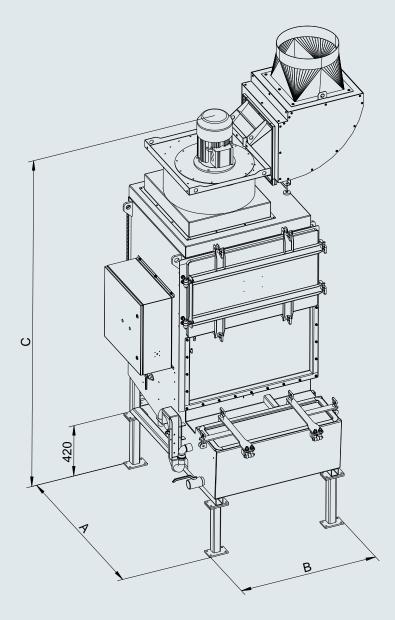
#### **Standard equipment**

- Stable, high performance fan with silencer
- Housing made of galvanized steel
- Ball valve for water outlet
- Water tanks
- Level control
- Shut-off valve
- Adjustable feet, 420 mm (use optional)

#### **Technical Data**

Wet cyclone separator		
Max. volumetric flow of the fan	1500-9000 m³/h	
Max. pressure	1400-2700Pa	
Motor performance	1,5—11,0 kW	





#### Dimensions

	Α	В	с
WNA 1500	1160 mm	850 mm	2660 mm
WNA 2000	1360 mm	1050 mm	2575 mm
WNA 3000	1360 mm	1050 mm	2625 mm
WNA 3500	1360 mm	1050 mm	2635 mm
WNA 5000	1560 mm	1250 mm	3220 mm
WNA 7500	1760 mm	1450 mm	3310 mm
WNA 9000	1760 mm	1550 mm	3320 mm

#### Available versions

Wet cyclone separator							
Max. volumetric flow of the fan	1500 m³/h	2000 m³/h	3000 m³/h	3500 m³/h	5000 m³/h	7500 m³/h	9000 m³/h
Motor performance	1,5 kW	2,2 kW	3,0 kW	4,0 kW	5,5 kW	7,5 kW	11,0 kW
Standard	<b>WNA 1500</b> 200350015	<b>WNA 2000</b> 200350022	<b>WNA 3000</b> 200350030	<b>WNA 3500</b> 200350040	<b>WNA 5000</b> 200350055	<b>WNA 7500</b> 200350075	<b>WNA 9000</b> 20035001502
For aluminium dust	<b>WNA-AL 1500</b> 20035001577	<b>WNA-AL 2000</b> 20035002277	<b>WNA-AL 3000</b> 20035003077	<b>WNA-AL 3500</b> 20035004077	<b>WNA-AL 5000</b> 20035005577	<b>WNA-AL 7500</b> 20035007577	<b>WNA-AL 9000</b> 2003500150277



## Accessories for Wet Cyclone Separator

Recirculating air filter attachment for WNA-1500 / WNA-1500-AL		20035015007
Recirculating air filter attachment for WNA und WNA AL 2000/3000		20035025007
Recirculating air filter attachment for WNA-3500 / WNA-3500-AL		20035035007
Recirculating air filter attachment for WNA und WNA AL 5000/7500		20035045007
Recirculating air filter attachment for WNA-9000 / WNA-9000-AL		20035055007
Replacement filter for post-filter: Hepa filter H13 for Recirculating air filter attachment for WNA	(up to WNA 3500 one cassette is required, as of WNA 5000 two cassettes are required)	10030200350
Wire mesh filter in aluminium 295 x 595 x 50 mm for WNA-1500 / WNA-1500-AL	Two filters per unit	200351500
Wire mesh filter in aluminium 405 x 795 x 50 mm for WNA and WNA AL 2000/3000/3500	Two filters per unit	200353500







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TEKA

At TEKA we use intelligently designed filter systems and high-quality filter materials to reduce the risk of fire.

However, it can never be completely ruled out that a spark will cause the process dust to ignite. We have therefore developed a multi-stage fire protection concept that works preventively but can also minimise damage in the event of a fire.

Additional sensors, such as the TEKA AirTracker, can also be meaningfully integrated into a comprehensive fire protection concept and also offers valuable additional benefits in the area of efficient system control and employee protection.







# Spark latch

Suitable for

*Central suction and filter units and suction ductings. Ideal protection device against fire risk of filter units* 





Angle frontal view

# Description

The spark latch consists of a separate housing with integrated copper plates. The assembly of the copper plates guarantees a multiple air scoop. Due to this, sparks bump into the baffle plates and emit their energy.

The spark latch can be screwed to the filter unit. Of course it can also be integrated into the suction ducting.

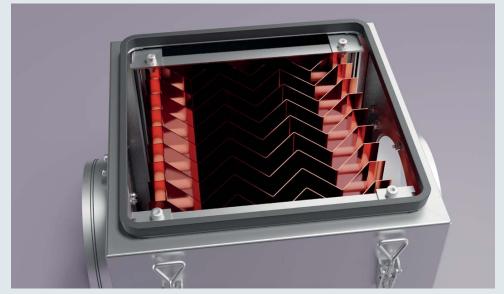
By means of a maintenance hole, the spark latch can be cleaned if necessary.

### **Standard equipment**

- ► Baffle plates
- ► Maintenance hole



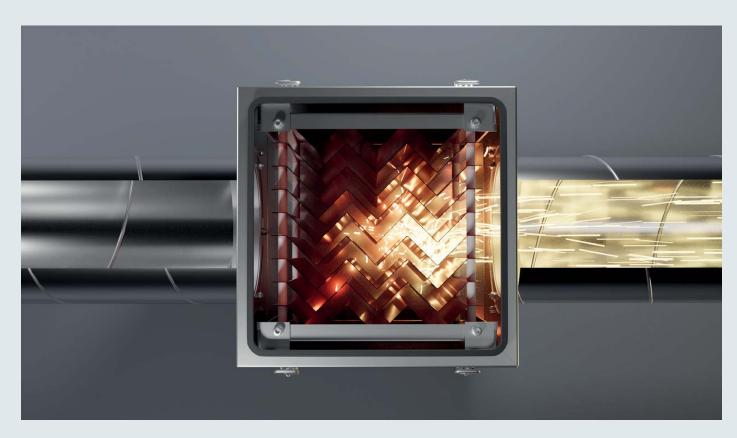
View with opened lid



Detailed view of the copper plates (up to 17 kg of copper content)

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# Functional principle of the spark latch

On the right side the sparks enter the spark latch. They are deflected several times by the copper lamellas. The majority of the sparks are already extinguished in the middle of the spark trap. On the left-hand side, the air flow exits the spark latch and from there is passed on via piping to the extraction and filter system.

The risk of ignition of the filter material has been minimised.

1	A		2

# Dimensions

Ø	Α	В	с
100 - 160 mm	377 mm	284 mm	375 mm
180 - 250 mm	377 mm	377 mm	415 mm
280 - 315 mm	377 mm	437 mm	475mm
355 - 400 mm	377mm	507 mm	545 mm
450 mm	870mm	507 mm	545 mm

Spark latch							
Extraction nozzle	Ø 100 mm	Ø 125 mm	Ø 150 mm	Ø 160 mm	Ø 180 mm	Ø 200 mm	Ø 224 mm
	95014901009006	95014901259006	95014901509006	95014901609006	95014901809006	95014902009006	95014902249006
	Ø 250 mm	Ø 280 mm	Ø 315 mm	Ø 355 mm	Ø400mm	Ø450mm	
	950149025019006	95014902809006	9501490315059006	95014903559006	9501490400109006	950144509006	

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# Spark pre-separator

# Suitable for

*Central suction and filter units. Ideal protection device against fire risk of filter units.* 



# Spark pre-separator

# Description

Metal working produces not only respirable pollutants, but also sparks and glowing parts – such as during grinding or cutting.

The special diversion of the polluted air inside the unit guides heavy and especially glowing parts into the water.

# **Standard equipment**

- ► Level control
- Housing made of galvanized steel
- Inspection glass for monitoring the water level
- Control and maintenance door with snap-fasteners
- ► Collecting container
- ► Water connection
- Transition piece for ducting
- Shut-off valve

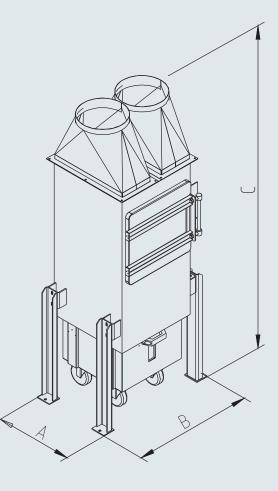
Dimensions	1	I	L
	Α	В	c
FVS 1000 - 3000	560 mm	760 mm	1430 mm
FVS 4000 - 6000	760 mm	960 mm	1445 mm
FVS 7000 - 12000	1060 mm	1260 mm	1433 mm
FVS 12000 - 15000	1230 mm	1500 mm	1980 mm

### Available as an option

Housing made of stainless steel

SAF

 Collecting container made of stainless steel







The sparks drop into the water and extinguish

# Functional principle of the spark pre-separator

The mixture of sparks and grinding, cutting or welding smoke is fed through the pipe to the spark pre-separator. Inside the housing, the air flow is deflected by 180 degrees. Due to their own weight, the sparks fall into the water bath of the spark pre-separator and extinguish.

What remains is an air flow that can usually be safely led to the filter section of the downstream extraction system, where over 99.9% of the smoke particles are filtered out. The processed air can then be returned to the hall.

# **Available versions**

Spark pre-separator							
max. volumetric flow							
up to 3000 m³/h	up to 5000 m³/h	up to 12 000 m³/h	up to 15 000 m³/h				
FVS 1000 - 3000	FVS 4000 - 6000	FVS 7000 - 12000	FVS 12000 - 15000				
201010205	201040205	201080205	201150205				

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# **TEKA** Fire protection concept

Basically, there are different ways to equip a filter system with options that make a system safer overall. It is important to realize that there is no 100% protection to prevent a filter fire.

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The measures that can be taken should always be in proportion to the effort involved.

In most cases, the listed preventive measures already offer very good protection; depending on the main application, it can be useful to supplement the preventive measures with further sensor, detection and extinguishing systems and thus minimise the risk of greater damage.

Note: TEKA extraction and filter systems are designed for smoke detection in thermal and mechanical metalworking. The systems must not be used for other purposes.

# **PREVENTIVE MEASURES**



Spark pre-separator



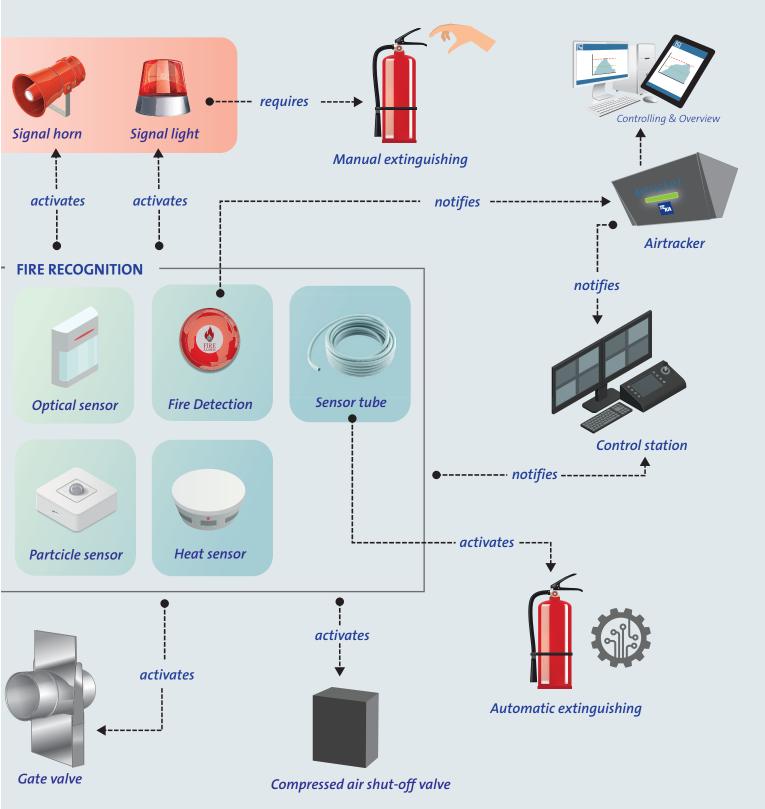
supplemented

by

Spark latch



Sparktoo





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Many of our room ventilation systems do not require any installation of piping, which means that installation can be carried out quickly and cost-effectively.

We offer a large number of different types of systems in order to be able to cope with almost any structural requirement.

The circulating air operation means that hardly any fresh air has to be supplied and reheated, which minimises heating costs in winter.

Room ventilation systems should mainly be used as supportive extraction. A focused extraction of the dust directly at the point of origin should always be the first choice, as it offers the most effective protection for the employee.



# 4. Room ventilation systems







# CleanAirCube

# Suitable for

# Supplementary room ventilation system





CleanAirCube

# Description

The CleanAirCube is a room ventilation extraction and filtration system with disposable filter. It is mainly used in industrial plants, in particular in welding shops. The standalone unit removes dust and smoke, for example, and is suitable as a supplement to the point extraction systems. The CleanAirCube serves as a preventive measure, which takes effect before there is any danger from dangerous dust. As an alternative, the CleanAirCube can also be used to keep the hall air clean.



### **Technical Data**

CleanAirCube	
Max. volumetric flow of the fan	8000 m³/h
Motor performance	550 W
Voltage	230 V / 50 Hz
Separation efficiency	> 99%
Current consumption	4 A
Noise level	65 dB(A)
Dimensions (B x T x H)	865 x 682 x 2778 mm



# Our Hotline +49 25 41 84 84 1 0



Application example CleanAirCube s with AirTrackers

# **Available versions**

CleanAirCube

20170201

# AirTech P10

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# Suitable for

Cleaning of polluted ambient air in a production hall. This unit is IFA certified for welding fume class W3.





Description

The TEKA AirTech series is a stand alone system. Fields of use are mainly industrial and welding companies where a suction solution right at the source can not be installed or where the AirTech unit is used for additional cleaning of the production hall.

The polluted air is sucked into the extraction channels attached on either side of the unit at a height of about 3 m and then led into the filter section. The particles are sticking to the surface of the filter cartridges.

The filter cartridges are automatically air cleaned at preset intervals. The particles are loosened from the surface of the filter and fall into the dust collecting container. The cleaned air is guided back into the room by individually adjustable jet nozzles with high reach. That way the polluted air is also moved into the direction of the suction canals.

The AirTech series is certified according to the DIN EN ISO 15012-1 or DIN EN ISO 21904-1/-2 and approved by the IFA (Institute for Work Safety of the German Legal Accident Insurance, formerly known as BGIA) for the welding fume class W3 as a welding fume suction unit with a fixed position. Many types of dust, welding fume among others, are inflammable.

The welding company is supposed to take appropriate measures to prevent those specific hazards.

Especially it has to make sure that no ignition sources are sucked into the unit. If you are dealing with explosive dusts, please request a separate offer according to the ATEX directive.

Using these kind of units does not release the person in charge from his/her duty to provide appropriate, personal protective equipment for his/her co-workers.

When working with stainless steels it is mandatory to use suction elements.

INCLUDING
POWER SPRAY-SYSTEM further information on page 50

# **Technical Data**

AirTech P10	
Max. volumetric flow of the fan	10 000 m³/h
Motor performance	11,0 kW
Separation efficiency	≥99%
Dimensions	800 x 1200 x 3 990 mm (Width incl. canals 5130 mm, depth incl. jets 1455 mm)



# Our Hotline +49 25 41 84 84 1 0

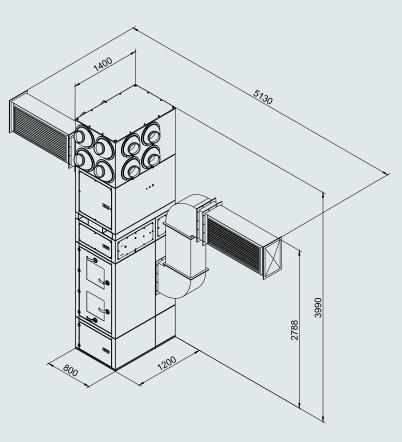


# **Standard equipment**

- Housing made of stable steel plate (powder coating inside and outside)
- Wear- and maintenance-free, fully automatic dedusting via POWER SPRAY-SYSTEM
- Filter housing with air inlet holes on both sides
- Dedusting system with compressed air tank
- Fan with soundproof housing
- ► Filter cartridges, category BIA M
- Suction channel
- Display control unit
- Filter medium (precoat)
- PE bag for the dust collecting tray

# Available as an option

- Device to connect ductings
- Frequency converter
- Particle sensor



# Subject to change. Images are similar to the actual product.

AirTech P10	Spark latches, set of 2
950141610	9501491906

# AirTech Central suction and filter unit

# Suitable for

Cleaning of polluted ambient air in a production hall. This unit is IFA certified for welding fume class W3.





# Description

The filter unit is IFA-certified according to DIN EN ISO 15012-1 or DIN EN ISO 21904-1/-2. A local extraction often is not enough to undercut the occupational exposure limits and thus to exclude any risk for humans. In this case, it is necessary to ventilate the room in addition.

The pollutants are extracted at a height of approx. 3-4 m via extraction grilles and filtered afterwards. At ceiling height, the cleaned air is returned to the room via nozzles.

The advantages of the AirTech room exhausting system are the optimal extraction performance of the filter unit (high lifetime of the cartridges, good extraction performance), the user-friendliness and the low maintenance. Since ducting is not necessary, the location of the unit can be chosen flexibly. If the air is returned into the working area, the heating costs can be reduced considerably. However, the regulations of the new German Hazardous Substances Ordinance (GefStoffV) have to be met.

The filter units are equipped with filter cartridges of the category BIA M (separation efficiency ≥ 99 %) and have an especially developed dedusting system which consists of the combination of a display control unit and the POWER SPRAY-SYSTEM. This combination makes sure of an excellent dedusting performance of the filter cartridges, so that an optimal extraction performance is guaranteed at any time of the operation.



her information on page 50

# **Technical Data**

AirTech Central suction and filter unit					
Max. volumetric flow of the fan	18 000 - 30 000 m³/h				
Motor performance	11,0–22,0 kW				
Separation efficiency	≥99%				



# Our Hotline +49 25 41 84 84 1 0



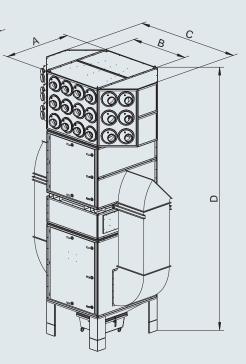
# **Standard equipment**

- Housing made of stable steel plate (powder coating inside and outside)
- Wear- and maintenance-free, fully automatic dedusting via POWER SPRAY-SYSTEM
- Filter housing with air inlet holes on both sides
- Dedusting system with compressed air tank
- Fan with soundproof housing
- Filter cartridges, category BIA M
- Suction channel
- Display control unit
- Filter medium (precoat)
- PE bag for the dust collecting tray

### Available as an option

- Suction ducting
- Device to connect ductings
- Frequency converter
- Particle sensor

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Unit with silencer housing

Unit without silencer housing

ngs	Dimensions		A	В	с	D	Amount of nozzles
		AirTech P18	1440 mm	1440 mm	3200 mm	6570 mm	17
	with silencer housing	AirTech P24	1880 mm	1600 mm	3510mm	6810 mm	20
		AirTech P30	1880 mm	1600 mm	3510 mm	6810 mm	24
		AirTech P18	1440 mm	1440 mm	3200 mm	6000 mm	17
	without silencer housing	AirTech P24	1880 mm	1600 mm	3510mm	6240 mm	20
	liousing	AirTech P30	1880 mm	1600 mm	3510 mm	6240 mm	24

### **Available versions**

AirTech Central suction and filter unit for clean room air							
Max. volumetric flow of the fan         18 000 m³/h         24 000 m³/h         30 000 m³/h							
Motor performance	11,0 kW	15,0 kW	22,0 kW				
Filter surface	324 m² (9 x 36 m²)	324 m² (9×36 m²)	432 m² (12×36 m²)				
	AirTech P18	AirTech P24	AirTech P30				
	940141618	940141624	940141630				

# Replacement cartridges for AirTech (default P18/P24 = 9 cartridges, P30 = 12 cartridges)



# BlowTec Central suction and filter unit

# Suitable for

Cleaning of polluted room air in a modular design for perfect adjustment to the architecture of the room. The unit is IFA certified for welding fume class W3.





Example: BlowTec

# Description

AirTech - BlowTec is one of many new developments from TEKA Absaug- und Entsorgungstechnologie GmbH. This central suction and filter unit is the perfect solution for every kind of work that requires more than extraction right at the source.

The biggest advantage: the efficient use of energy and reduction of cost. During heating times the energy costs are considerably reduced by recirculating the cleaned, warm air back into the working area. Alternatively it can also be led outside.

The modular setup of the AirTech - BlowTec is perfectly adaptable to the architecture of the room. The ducting that extracts the air and guides it to the movable jets can vary in height and length.

# **Standard equipment**

- Housing made of stable steel plate (powder coating inside and outside)
- Fully automatic dedusting via POWER SPRAY-SYSTEM
- ► Fan with soundproof housing
- Filter cartridges, category BIA M
- Filter unit
- Ventilatorteil
- Control (filter/motor)
- Nozzle head
- Silencer
- Connection between filter unit fan unit and nozzle head
- Filter medium (precoat)
- PE bag for the dust collecting tray

# Available as an option

- Extraction ducting
- Frenquency converter
- Particle sensor

# NOTE:

The ducting installation is designed to project requirements!

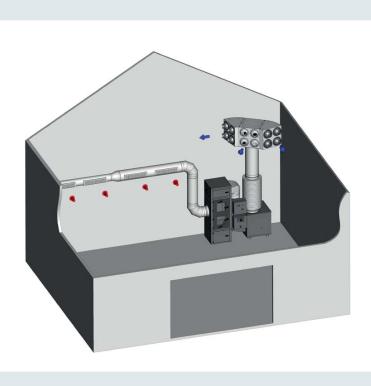
### **Technical Data**

BlowTec Central suction and filter unit					
Max. volumetric flow of the fan	7500—10000 m³/h				
Motor performance	7,5–11,0 kW				
Separation efficiency	≥99%				

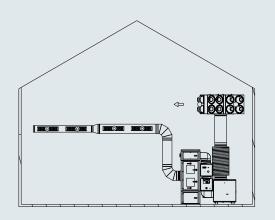


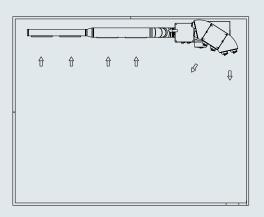












BlowTec Central suction and filter unit						
Max. volumetric flow of the fan	7500 m³/h	10000 m³/h				
Motor performance	7,5 kW	11,0 kW				
Filter surface	100 m² (4 x 25 m²)	100 m² (4×25 m²)				
	BlowTec P7,5	BlowTec P10				
	9501441075100358	9501441110100358				

# PushPull Central suction and filter unit

# Suitable for

# Cleaning of polluted ambient air in a production hall





FilterCube 4H from System PushPull

# Description

A suction at the source often is not enough to undercut the occupational exposure limits for working places and thus to exclude any risk for humans. Therefore it is necessary to additionally ventilate the room.

The pollutants on one side of the hall are extracted by sufficiently dimensioned ventilation grilles and filtered afterwards. On the other side of the hall, the cleaned air is returned into the room – either via ventilation grilles or via nozzles.

Die FilterCube is certified from the Institute of Work Safety (IFA, formerly BGIA) and approved for the welding fume class W3 as a stationary welding fume suction device. A big advantage: the automated filter control allows for a filter cleaning on demand.

### **Standard equipment**

- Fully automatic dedusting via POWER SPRAY-SYSTEM
- Display control unit
- Maintenance doors for all operational areas
- Maintenance door for the filter cartridges housing with inspection window made of laminated safety glass
- Filter medium (precoat)
- PE bag for the dust collecting tray

# NOTE:

The ducting installation is designed to project requirements!

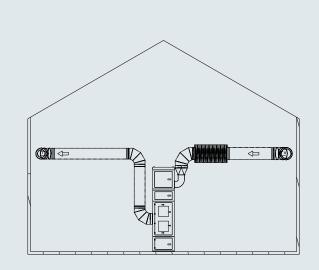


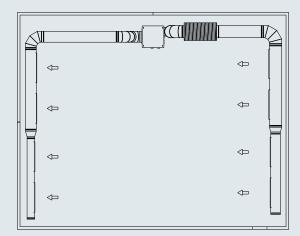
### **Technical Data**

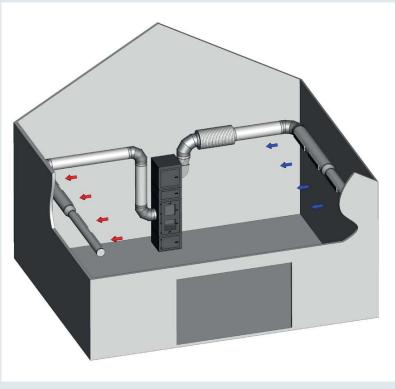
PushPull Central suction and filter unit					
Max. volumetric flow of the fan	7500–10000 m³/h				
Motor performance	7,5–11,0 kW				
Separation efficiency	≥99%				











Example of set up: PushPull system in a production hall

PushPull Central suction and filter unit						
Max. volumetric flow of the fan	7500 m³/h	10000 m³/h				
Motor performance	7,5 kW	11,0 kW				
Filter surface	100 m² (4 x 25 m²)	100 m² (4×25 m²)				
	PushPull System P7,5	PushPull System P10				













# MasterCut Compact: The inexpensive introduction to high-quality bevel cutting!

- With optional plasma rotator now high-quality bevel cuts up to 47° possible
- V- and X-seams as well as complex Y- or K-seams possible
- Fully automatic correction of inaccuracies and deviations by the ACTG<sup>®</sup> calibration unit

# **Cutting tables**







ompact 4001.20Prk

<sup>act 4001.20Prk</sup>

P Ma

The cutting tables offered by TEKA have a modular design and are available in standard sizes from 2 to 12 m<sup>2</sup>.

-Y -

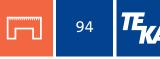
Depending on the requirements, we also realize multifunctional tables up to 200 m<sup>2</sup> and more with our partner MicroStep. In combination with our extraction and filter systems, these systems offer optimum protection against health hazards during thermal cutting.

More information about our flame cutting tables - especially about the MasterCut Compact series, which is offered in cooperation with MicroStep



- can be found on our website

www.teka.eu



We offer different welding benches, among others a special welding bench for education purposes that is often applied in companies with a training programme and can be used flexibly. . .

REFERENCE

Our grinding benches are characterized by rear wall extraction and extraction from below and are optionally fitted with lamellas. Since there are no metal side walls, it is also possible to handle long and bulky objects in an ergonomic way.

# 5. Welding and grinding benches





# Suction table

# Suitable for

Extraction from below of fumes and dusts – e.g. for manual plasma arc cutting





# Description

Stable construction for extraction from below. A baffle plate distributes the pollutants inside the bench and calms the air flow.

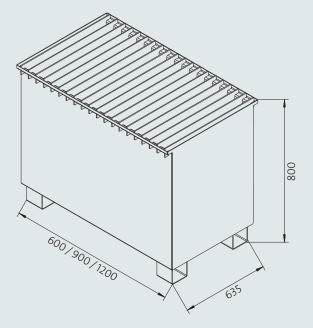
We would be glad to advise you regarding the choice of the appropriate filter units or fans.

# **Standard equipment**

- Support made of flat iron
- Baffle plate

# Available as an option

- Support made of refractory bricks
- Special dimensions on request
- Suction arm

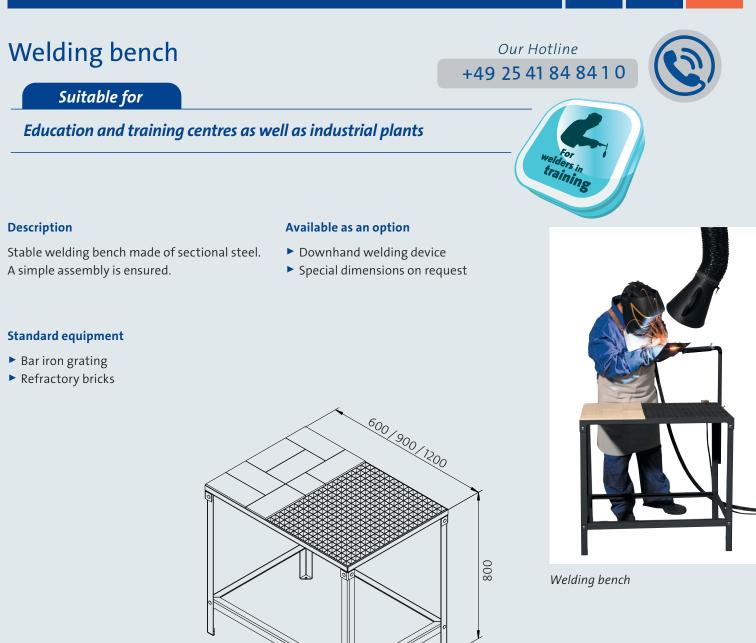


# **Technical Data / Available versions**

Suction table

Suction table							
Depth: 635mm · Height: 800mm							
Width     Required volumetric flow       of the fan     Suction nozzle							
600 mm	1500 m³/h	Ø 160 mm	56200				
900mm	2000 m³/h	Ø 200 mm	56210				
1200 mm	2500 m³/h	Ø 250 mm	56220				





### Technical Data / Available versions

Welding bench	Welding bench					
Depth: 635mm · H	leight: 800 mm					
Width						
600 mm	56100					
900 mm	56110					
1200 mm	56120					

635

# **Grinding bench**

# Suitable for

Rear wall extraction and extraction from below for grinding tasks.





Grinding bench (Art.-Nr. 56410)

# Description

Here you find a selection of standard grinding benches.

The dusts are extracted on the back and below. 90 % of the extracted particles are already extracted by the rear wall and can safely and easily be disposed of by means of the dust collec ting tray.

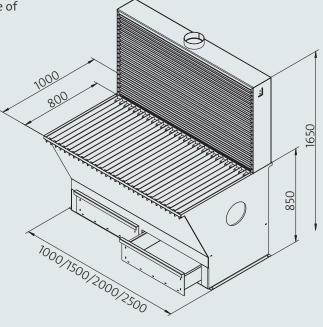
We gladly advise you regarding the choice of filter units or fans.

# **Standard equipment**

- Rear wall extraction
- Flat iron support or wooden support
- Pre-separator
- Dust collecting tray
- 2 temporary covers for nozzles

# Available as an option

- Side panels
- Lamella curtains folding type
- Partial roof with lighting
- Special dimensions on request



# Technical Data / Available versions

Grinding bench									
Depth: 100	0 mm · Height: 850 mm								
Width									
	required volumetric flow of the fan	Suction nozzle (for rear extraction)	Suction nozzle (for extraction from below)	Standard	with wood support				
1000 mm	1800 m³/h	Ø 150 mm	Ø 200 mm	56400	5640088				
1500 mm	2600 m³/h	Ø 150 mm	Ø 200 mm	56410	5641088				
2000 mm	3400 m³/h	Ø 2× 150 mm	Ø 200 mm	56420	5642088				
2500 mm	4200 m³/h	Ø 2× 150 mm	Ø 200 mm	56430	5643088				



Accessories	Our Hotline +49 25 41 84 84			
		Wellding bench	Grinding bench	
Description	ArtNo.	Welldir	Grindir	
Downhand welding device	56130	-		
Pivotable side panels (2 pieces)	9992000	040		
Rib suspension, pivotable (2 pieces)	9992000	05		
Roof with lighting 1 m	9992000	16	•	
Roof with lighting 1,5 m	9992000	14	•	
Roof with lighting 2 m	9992000	12		
Roof with lighting 2,5 m	9992000	18		

Grinding table with lamella panels on the left, removable, pivotable side wall on the right and roof with lighting. The support is divided into two parts - left wood - right flat iron.





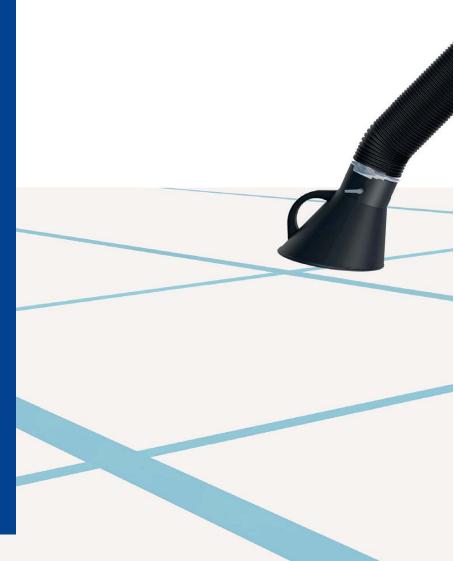
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TEKA offers a wide range of suction andcollecting elements for various solutions. Our suction arms range from small diameters, e.g. 50 mm for laboratories, dentistry or beauty salons up to large diameters for the extraction of high amounts of welding fume.

Additionally, the TEKA product portfolio consists of suction arms, cranes and hoses made of materials which are optimized for different applications such as arms made of aluminium that are chemically resistant or antistatic.

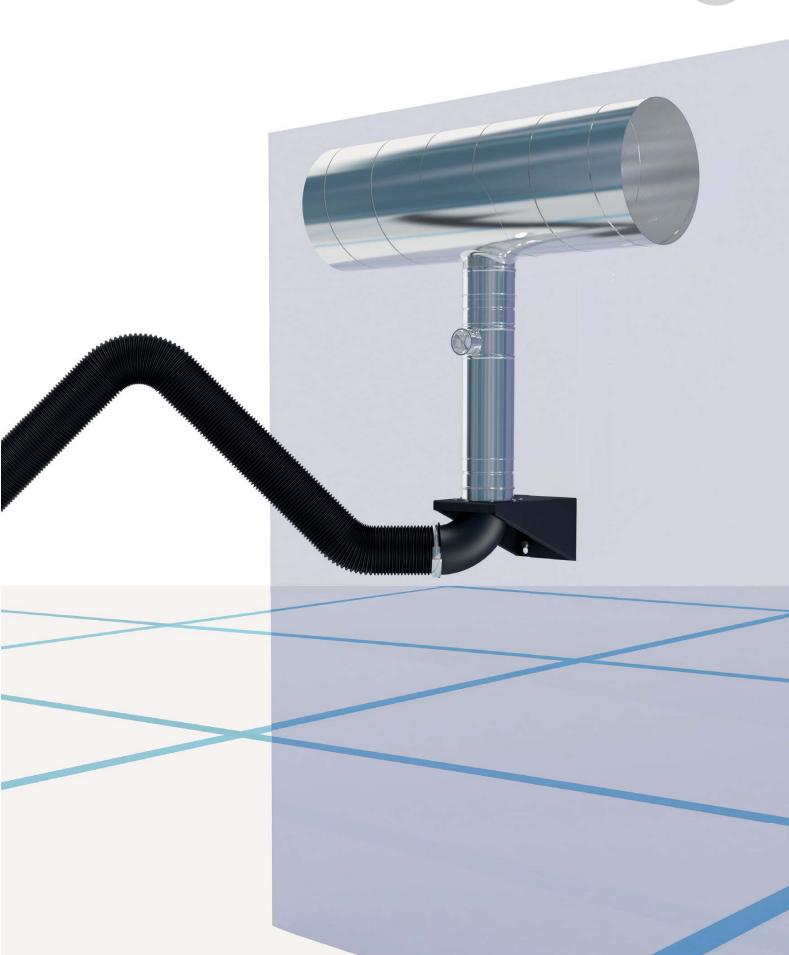
A hood is installed at the tip of every suction element to make sure of an efficient extraction. You can choose between different versions.

Our extraction elements are available for table, wall or ceiling attachment, or they are connected directly to the filter unit and positioned by means of joints or jib cranes. It would be our pleasure to advise you in finding the appropriate solution for you.



# 6. Suction and collecting elements





# Suction arm Ø 150 mm

# Suitable for

Welding fume extraction – The arms can either be connected to individual fans or to central suction and filter systems



# Description

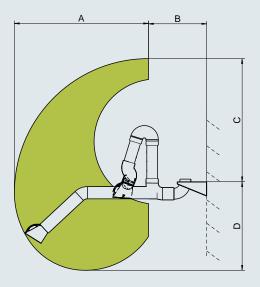
The suction arms  $\phi$  150 mm are available in different versions and lengths.

Due to the spring-support, all arms are easily positioned and self-supporting in the adjusted position.

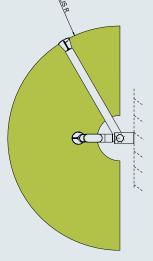
The volumetric flow can be individually regulated via a throttle valve that is integrated in the suction hood.

# **Standard equipment**

- Oval suction hood Ø 270 mm made of synthetics with throttle valve
- From a length of 5 m on, additional wall bracket with C-rail
- Stable wall bracket made of powdercoated steel plate
- ► Connection nozzle Ø160 mm
- Wall bracket with support for ducting connection
- 3 joints with spring control and friction plates
- Flexible suction hose (PVC) with welded steel wire spiral (temperature-resistant up to +120°C)

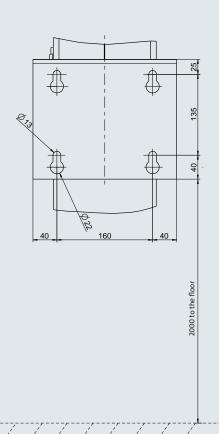


Side view



Top view

Dimensio	ons	Art. No.	А	В	с	D	R
Hose	internal joints	97601	1900 mm	815 mm	1730 mm	1242 mm	2410 mm
	external joints	97620	1800 mm	750 mm	1640 mm	1150 mm	2315 mm



Suction arm (Art.-No. 97621)



# Our Hotline



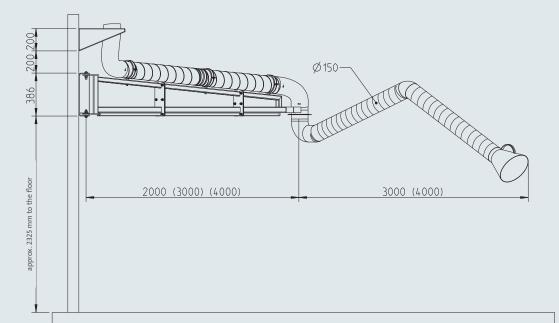
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- Other arm lengths on request
- Suction hood made of metal
- Nozzle plate for an even more effective extraction of fumes and dusts
- Lighting kit for suction hood
- High-temperature hoses
- Spark arrester grill
- Spark arrester grill made of aluminium including metal hood
- Wall bracket with counter nozzles for TEKA fans



Suction arm with wall bracket and guide rail



Suction arm $\varnothing$ 150 mm										
		Length	Length							
		2 metres	3 metres	4 metres	5 metres	6 metres	7 metres	8 metres		
recommended volumetric flow of the fan:			2000 m³/h	2000 <i>m³/h</i>	2000–2500 m³/h	2000–2500 m³/h	2500 m³/h	2500–3000m³/h		
Hose	Internal joints	97601	97602	97603	976022	976032	976024	976034		
	External joints	97 620	97 621	97 622	97 621 2	97 622 2	97 621 4	97 622 4		
for mobile units Hose Internal joints		976010001	976020001	976030001						
	External joints	976200001	976210001	976220001						
	commended volur Hose	commended volumetric flow of the fan: Hose Internal joints External joints Hose Internal joints	Length       2 metres       commended volumetric flow of the fan:       1000-2000m³/h       Hose     Internal joints       Product     97601       Kternal joints     97601001	Length       2 metres     3 metres       2 metres     3 metres       commended volumetric flow of the fan:     1000–2000m³/h       Hose     Internal joints     97601       Ketrenal joints     97620     97 621       Hose     Internal joints     976010001	Length       2 metres     3 metres     4 metres       2 metres     3 metres     4 metres       commended volumetric flow of the fan:     1000–2000m³/h     2000m³/h       Hose     Internal joints     97601     97602       Keternal joints     97 620     97 621     97 622       Hose     Internal joints     976010001     976020001	Length       2 metres     3 metres     4 metres     5 metres       commended volumetric flow of the fan:     1000–2000m³/h     2000m³/h     2000m³/h     2000–2500m³/h       Hose     Internal joints     97601     97602     97603     976022       Hose     Internal joints     97601001     976020001     976030001	Length2 metres3 metres4 metres5 metres6 metrescommended volumetric flow of the fan:1000–2000 m³/h2000 m³/h2000 m³/h2000–2500 m³/h2000–2500 m³/hHoseInternal joints976019760297603976022976032HoseInternal joints97601001976020019760300101	Length       2 metres       3 metres       4 metres       5 metres       6 metres       7 metres         commended volumetric flow of the fan:       1000–2000m?h       2000m?/h       <		

# Suction arm Ø 200 mm

# Suitable for

Larger amounts of air, e.g. for flux-cored arc welding with high tensions or gross welding rod



Suction arm (Art.-No. 97622)

# Description

The suction arms ø 200 mm are available in different versions and lengths.

Due to the spring-support, all arms are easily positioned and self-supporting in the adjusted position.

The volumetric flow can individually be regulated via the throttle valve integrated in the suction hood.

# Standard equipment

- Oval suction hood made of metal (Ø 315 mm) with throttle valve
- From a length of 5 m on with an additional wall bracket
- Stable wall bracket made of powder-coated sheet steel
- Connection nozzle
- Wall bracket with counter nozzle for TEKA fans

- 3 joints with spring support
- Flexible suction hose (PVC) with welded steel wire spiral (temperature-resistant up to +120°C)

# Available as an option

- Other lengths on request
- Lighting kit for suction hood
- Spark arrester grill
- Wall mount with counter-pipe for TEKA fans

# **Available versions**

# Suction arm Ø 200 mm

			Length						
			2 metres	3 metres	4 metres	5 metres	6 metres	7 metres	8 metres
recommended volumetric flow of the fan:		3 000 m³/h	3000 m³/h	3000 m³/h	3 500 m³∕h	3500 m³/h	3500 m³∕h	3500 m³/h	
for wall	Hose	Internal joints	97661	97662	97663	976622	976632	976624	976634
assembly	,								
for mobil	e Hose	Internal joints	976610001	976620001	976630001				
units									



Our Hotline +49 25 41 84 84 1 0

# Suction crane

# Suitable for

# Connection to central units and individual fans

# Description

Suction cranes are available indifferent versions and lengths.

Regarding suction cranes Ø 160 mm up to a reach of 6 meters, it is possible to attach tools due to the two part supporting construction. At the first outrigger, you can attach charges up to a weight of 50 kg (e.g. a mechanical wire travel). The second outrigger can be charged with up to 10 kg (e.g. tube package).

The internal construction of the telescopic arm allows a smooth adjustment at every height.

# Available as an option

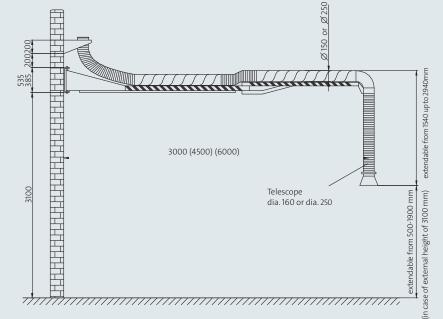
- Lighting kit for suction hood
- High-temperature hoses
- Spark arrester grill



Suction crane (Art.-No. 97641)

# **Standard equipment**

- Pivoted, powder-coated supported construction made of sectional steel
- Adjustable brakes for the joints
- Connection of the suction pipes to flexible hoses at the joints
- Smoothly telescopable extension with suction hood situated at the front outrigger
- Wall bracket incl. pipe elbow and drive flange



Suction crane					
	Length				
	3 metres	4,5 metres	6 metres		
Ø 160	97640	97641	97642		
Ø 250	97649	97650	97651		

# **Telescopic suction arm**

# Suitable for

*Connection to central units and individual fans. Ideal to extract pollutants produced by fixed welding benches, e.g. in welding booths.* 

# SPACE SAVER



# Description

The telescopic suction arms are available in different versions. Due to the little space required, they are optimally appropriate to be applied in training and education centres.

The version fitted with external joints guarantees a fume extraction with considerably lower fan performance. This reduces the noise level.

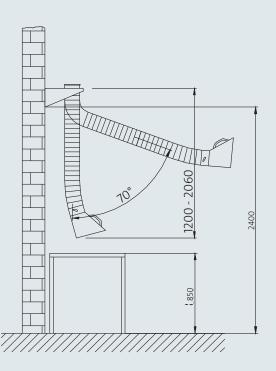
# Standard equipment

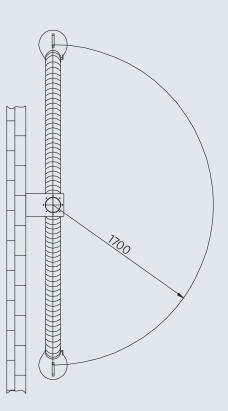
- Smoothly vertically adjustable
- Pivoted to the front
- Rotating by 180°
- Extendable from a length of 1.20 to 2.06 m
- Low wear telescopic function (without counterweight)

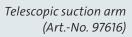
- Suction hood Ø 150 mm made of synthetics with integrated throttle valve
- Suction hoods ø 100 mm and ø 200 mm made of metal with integrated throttle valve
- Wall bracket with support for ducting connection
- Connection nozzle Ø 160 mm
- Suction hood

# Available as an option

- Lighting kit for suction hood
- High temperature hoses
- Spark arrester grill
- Wall mount with counter-pipe for TEKA fans

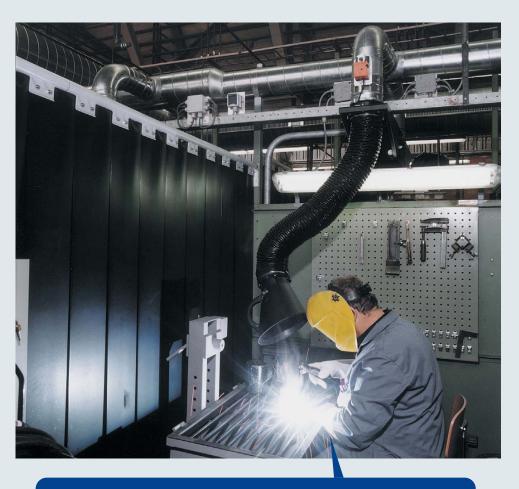












Example of application: Telescopic suction arm in a welding booth

Telescopic suction arm						
Length: 1,2-2,06 m						
		ø	ø			
		100	150			
Hose	Internal joints	97616100	97616			
	External joints	97626100	97626			

# Special suction hood

# Suitable for

# Application above booths and welding robots

# Description

The suction hoods operate according to the principle of the nozzle plate. Due to this, the necessary air amount is applied much more effectively.

Special versions can be realized at every time. Made of ga Our employees would be glad to advise you in your request, also regarding required curtains and lamellas. Intake openings

# Available as an option

- Different dimensions on request
- Curtains
- Lamellas
- Different versions (e.g. lip suction) on request
- Made of galvanised steel plate

Special suction hood with lamellas at a robotic suction system

### **Standard equipment**

- Stable steel plate
- Suction nozzles
- Eye hooks

Crane lugs for connection from the ceiling

Fastening screws for lamella

Suction hood					
Suction nozzle					
	Required volumetric flow of the fan	Dimensions (B×T)			
Ø 200 mm	1700 m³/h	1000 × 1000 mm	56610		
Ø 250 mm	2600 m³/h	1500 × 1500 mm	56611		
Ø 2×200 mm	3400 m³/h	2500 × 1500 mm	56612		



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### Accessories

incl. snap fastener

for suction arms, cranes and telescopic arms

Description		ArtNo.	Suction arm Ø 150 mm	Suction arm Ø 200mm	Suction crane	Telescopic suction arm
Nozzle plate, angular 300 × 360 mm, PVC, black		66210				
Nozzle plate, round Ø 400 mm, PVC, black		66220	•			
Connection material Ø 160 mm (nozzle, flange and hose clamp)		96301	•			
Outlet air hose, multilayer aluminium foil, length for delivery 1,25 m, extendable up to 5,0 m	Ø 160 mm	96303	•			
	Ø 250 mm	96304		•		
Lighting kit incl. transformer unit		96312	•		-	-
Support column for arm 2 - 4 m long, with base pla	ate, height 2 500 mm	90000005				
Spare hose for arm, pipe type, incl. rubber bands		100043				
Spare hose for arm, hose type (Dia 150)	Length 2,0 m	101925	•			
	Length 3,0 m	101926	•			
	Length 4,0 m	101927	•			
Spare hose for arm, hose type (Dia 200)	Length 2,0 m	101925200		•		-
	Length 3,0 m	10192620030				
	Length 4,0 m	10192620040				
Suction hood PVC, incl. throttle valve		66200	•			
Protective grille (fine-meshed) for integration in suction hood		10372	•			
Suction hood PVC incl. throttle valve and integrated spark protection grille		662000003	•			
Suction hood (metal), incl. throttle valve		104901				
Fan 3 000 m³/h, 1,5 kW incl. fixing plate and snap fastener		9610341		•		
Fan 3 500 m³/h, 2,2 kW incl. wall bracket and flexible aluminium du	ucting	9610441		•		
Fixing plate for connection		96301200				



TEKA fans are efficiently applicable for aeration and ventilation of working places and halls. Polluted air can be extracted by means of a hose or a pipe fitted with an extraction element at the suction nozzle and can afterwards be guided outside by means of the outlet nozzle and the connected ducting. Optionally, the air can be guided from outside to inside in order to provide working places or spaces with fresh air.

Our high-quality fans that are made of steel plate or silumin casting are stable and thus suitable for continuous operation. Additionally, a very calm operation is made sure by the static and dynamic balance.

The fans are also integrated in our economical, universally applicable exhaust fans. They are the central part of our filter devices, in this case in combination with disposable filters or filter cartridges.

The air is guided via the ducting from the working places to the unit with almost no loss. If required, the ducting can easily and professionally be installed by our technicians.

# 7. Fans and ducting





### Fan

112

### Suitable for

*Connection to suction arms, in order to evacuate pollutants from the extraction point* 





Silumin fan

### Description

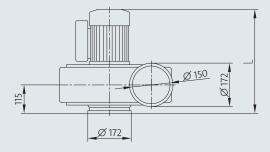
The fans are available in different versions and performances. Due to the stable construction, they are suitable for continuous operation.

### **Standard equipment**

- Up to 3 000 m<sup>3</sup>/h made of silumin casting (with snap fastener)
- From 3 500 m<sup>3</sup>/h on made of silumin casting (with vibration absorber)
- Static and dynamic balanced impellers (guarantees a calm operation)
- Low maintenance engine



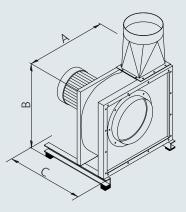
- Wall bracket
- Protective grating
- Silencer box
- Connection material

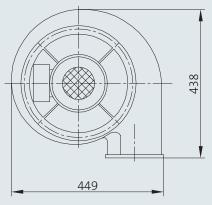


### Fan made of steel sheet

#### Dimensions

	Α	В	с
Fan 3500 m³/h	615 mm	650 mm	550 mm
Fan 4000 m³/h	615 mm	650 mm	550 mm
Fan 5000 m³/h	615 mm	650 mm	570 mm
Fan 6000 m³/h	740 mm	770 mm	720 mm
Fan 7500 m³/h	740 mm	770 mm	720 mm
Fan 10 000 m³/h	740 mm	770 mm	720 mm





### **Available versions**

Fan	an														
		Volumetric flow of the fan													
		2000 m³/h	2500 m³/h	3000 m³/h	3500 m³/h	4000 m³/h	5000 m³/h	6000 m³/h	7500 m³/h	10000 m³/h					
	Motor performance	0,75 kW	1,1 kW	1,5 kW	2,2 kW	3,0 kW	4,0 kW	5,5 kW	7,5 kW	11,0 kW					
	Dimensions in mm	449×438×410	449×438×410	449×438×438	615×650×550	615×650×550	615×650×570	740×770×720	740×770×720	740×770×720					
	Connection nozzle	Ø 160 mm	Ø 160 mm	Ø 160 mm	Ø 250 mm	Ø 250 mm	Ø 315mm	Ø 355mm	Ø 400 mm	Ø 450 mm					
	Weight	approx. 27kg	approx. 27kg	approx. 27kg	approx. 45 kg	approx. 60 kg	approx. 50 kg	approx. 100 kg	approx. 107 kg	approx. 160 kg					
Voltage	230 V / 50 Hz	9610123	9610223	9610323											
	400 V / 50 Hz	961014	961024	961034	961044	961054	961064	961074	961084	961094					



### Mobile exhaust fan

### Suitable for

Evacuation of pollutants from the extraction point, e.g. fresh air supply for containers, pipes and boxes. Also suitable for the extraction of emissions

#### Description

The mobile exhaust fan can be used very flexibly due to its low design and the low weight.

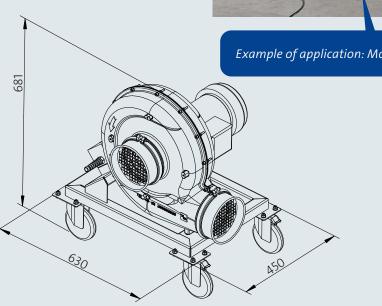
Connected to a suction hose, the exhaust fan is suitable for the application to workplaces which are difficult to access (e.g. shipbuilding).

#### **Standard equipment**

- Housing and impeller made of resistant aluminium casting (up to 1,5 kW) or steel plate (from 1,5 kW on)
- Powder-coated housing and chassis
- Ready to plug in
- Protective grating on the suction and pressure side
- Motor circuit breaker
- ▶ 5 m mains cable

#### Available as an option

- Suction hose with suction hood and magnetic base
- Other voltages on request
- Exhaustion hose



#### **Available versions**

Mobile exhaust fan

		Volumetric flow of	the fan			
		2000 m³/h	2500 m³/h	3000 m³/h	3500 m³/h	4000 m³/h
	Motor performance	0,75 kW	1,1kW	1,5 kW	2,2 kW	3,0 kW
	Suction nozzle	Ø 160 mm	Ø 160 mm	Ø 160 mm	Ø 250 mm	Ø 250 mm
Voltage	230 V / 50 Hz		97102230	97103230		
	400 V / 50 Hz	97101	97102	97103	97104	97105

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FLEXIBLE





Example of application: Mobile exhaust fan

### Accessories

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Description		ArtNo.	Fan 2 000 m³/h, 0,75 kW	Fan 2500m³/h, 1,1kW	Fan 3000 m³/h, 1,5 kW	Fan 3500 m³/h, 2,2kW	Fan 4 000 m³/h, 3,0 kW	Fan 5 000 m³/h, 4,0 kW	Fan 6 000 m³/h, 5,5 kW	Fan 7500 m³/h, 7,5 kW	Fan 10 000 m³/h, 11,0 kW	Mobile exhaust fan
Wall bracket	RGB	96010 96015										
		96012										
		96020										
Protective grille		41501	•	•	•							
	RGB	41502										
		41503							-			
		41504										
Silencer box for upright version		960101		•								
	RGB	960151										
		960201										
		960251								•		
		960301										
Automatic start/stop system with field sensor Maxi-Control	RGB	963131220123	230 V	230 V	230 V	230 V						
	KUD	963131220140	400 V	400 V	400 V	400 V						
		963131220141					400 V	400 V				
Automatic start/stop system with magnetic field sensor for electropneumatic slide valve or motor shut-off valve		963131220224	•									
Motor circuit breaker	RGB	9620100	500 V									
		9620101	400 V	500 V								
		9620102		400 V	400 V 500 V	500 V						
		9620103	230 V			400 V	500 V					
		9620104		230 V	230 V		400 V	400 V 500 V	500 V			



# **Ⅲ** ⊛=

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Description		ArtNo.	Fan 2000m³/h, 0,75 kW	Fan 2500m³/h, 1,1kW	Fan 3000 m³/h, 1,5kW	Fan 3500 m³/h, 2,2 kW	Fan 4000 m³/h, 3,0 kW	Fan 5000 m³/h, 4,0 kW	Fan 6 000m³/h, 5,5 kW	Fan 7500 m³/h, 7,5 kW	Fan 10 000 m³/h, 11,0 kW	Mobile exhaust fan
Automatic star-delta connection 50 Hz	400 V RG B	9620007										
		9620010										
		9620020										
Connection material Ø 160 mm (nozzle, flange and hose clamp)	RG B	96301	•		•							
Suction hose, glass fibre fabric hose	Ø 100 mm	96314										•
with steel wire spiral, length 6 m, incl. suction nozzle with magnetic base as well as connection	Ø 150 mm	96316										•
material and reduction	Ø 250 mm	96343										•
Exhaust air hose, glass fibre fabric hose with steel wire spiral, length 6 m, incl.	Ø 160 mm	963104										•
connection material	Ø 250 mm	96344										

### Hoses and accessories

Hoses and accessories												
<b>Field of application</b> Type Temperature resistance	<b>High vacuum</b> Superflex 0° to +85°C		<b>Mid vacuum</b> Klimaflex -30° to +80°C		<b>High temperature</b> Klimaflex HT -85° to +310°C	<b>Mid vacuum</b> Aluflex -50° to +200°C	Hose clip					
						C)	$\bigcirc$					
Length	10 metres	15 metres	6 metres	12 metres	4 metres	5 metres	1 piece					
Ø 35 mm	51100	511001	51120	511201	51140		51180					
Ø 45 mm	51101	511011	51121	511211	51141		51181					
Ø 50 mm	51102	511021	51122	511221	51142	51162	51182					
Ø 75 mm	51103	511031	51123	511231	51143	51163	51183					
Ø 100 mm	51104	511041	51124	511241	51144	51164	51184					
Ø 125 mm	51105	511051	51125	511251	51145	51165	51185					
Ø 150 mm	51106	511061	51126	511261	51146	51166	51186					
Ø 160 mm			51127	511271	51147	51167	51187					
Ø 180 mm			51128	511281	51148	51168	51188					
Ø 200 mm			51129	511291	51149	51169	51189					
Ø 250 mm			51130	511301	51150	51170	51190					
Ø 300 mm			51131	511311	51151	51171	51191					
Ø 355 mm			51132	511321		51172						
Ø 400 mm			51133	511331		51173						
Ø 450 mm			51134	511341		51174						
Ø 500 mm			51135	511351		51175						



# Pipes, moulded parts and acc.

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	Roof cowl	Deflection cowl	Outlet nozzle with protective grille	Shut off valve airtight	Regulating valve	Flange collar	Flange ring
				Č	Č		$\bigcirc$
Ø 63 mm					40360	40390	
Ø 80 mm			40301		40361	40391	
Ø 100 mm	40242	40272	40302	40332	40362	40392	40422
Ø 125 mm	40243	40273	40303	40333	40363	40393	40423
Ø 150 mm	40244	40274	40304	40334	40364	40394	40424
Ø 160 mm	40245	40275	40305	40335	40365	40395	40425
Ø 180 mm	40246	40276	40306	40336	40366	40396	40426
Ø 200 mm	40247	40277	40307	40337	40367	40397	40427
Ø 224 mm	40248	40278	40308	40338		40398	40428
Ø 250 mm	40249	40279	40309	40339	40369	40399	40429
Ø 315mm	40250	40280	40310	40340	40370	40400	40430
Ø 355 mm	40251	40281	40311	40341	40371	40401	40431
Ø 400 mm	40252	40282	40312	40342	40372	40402	40432
Ø 450 mm	40253	40283	40313	40343		40403	40433
Ø 500 mm	40254	40284	40314	40344		40404	40434

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# Pipes, moulded parts and accessories

	Bow 15°	Bow 30°	Bow 45°	Bow 60°	Bow 90°	Nipple for pipes	Sleeve for moulded parts	End cap for pipes	Endcap for moulded parts
	0	0	0	2					
Ø 63 mm	40000	40015	40030	40060	40090	40120	40150	40180	40210
Ø 80 mm	40001	40016	40031	40061	40091	40121	40151	40181	40211
Ø 100 mm	40002	40017	40032	40062	40092	40122	40152	40182	40212
Ø 125 mm	40003	40018	40033	40063	40093	40123	40153	40183	40213
Ø 150 mm	40004	40019	40034	40064	40094	40124	40154	40184	40214
Ø 160 mm	40005	40020	40035	40065	40095	40125	40155	40185	40215
Ø 180 mm	40006	40021	40036	40066	40096	40126	40156	40186	40216
Ø 200 mm	40007	40022	40037	40067	40097	40127	40157	40187	40217
Ø 224 mm	40008	40023	40038	40068	40098	40128	40158	40188	40218
Ø 250 mm	40009	40024	40039	40069	40099	40129	40159	40189	40219
Ø 315 mm	40010	40025	40040	40070	40100	40130	40160	40190	40220
Ø 355 mm	40011	40026	40041	40071	40101	40131	40161	40191	40221
Ø 400 mm	40012	40027	40042	40072	40102	40132	40162	40192	40222
Ø 450 mm	40013	40028	40043	40073	40103	40133	40163	40193	40223
Ø 500 mm	40014	40029	40044	40074	40104	40134	40164	40194	40224



# Pipes, silencers and accessories

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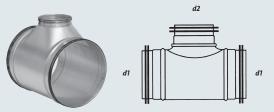


Pipes, sile	ncers and acces	ssories					
Туре	Pipe		Silencer				Pipe clip
Length	3 metres	6 metres	300 mm	600 mm	900 mm	1200mm	
Ø 63mm	41300	41301					
Ø 80mm	41302	41303	41351				41411
Ø 100 mm	41304	41305	41352				41412
Ø 125mm	41306	41307	41353				41413
Ø 150 mm	41308	41309	41354				41414
Ø 160 mm	41310	41311	41355				41415
Ø 180 mm	41312	41313		41356			41416
Ø 200 mm	41314	41315		41357			41417
Ø 224 mm	41316	41317		41358			41418
Ø 250 mm	41318	41319		41359			41419
Ø 315mm	41320	41321			41360		41420
Ø 355 mm	41322	41323			41361		41421
Ø 400 mm	41324	41325				41362	41422
Ø 450 mm	41326	41327				41363	41423
Ø 500 mm	41328	41329				41364	41424

### **T**-pieces

120

**(3)**=

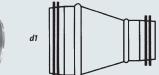


T-pieces	-pieces													
d1	d2	Ø 63 mm	Ø 80mm	Ø 100 mm	Ø 125mm	Ø 150 mm	Ø 160 mm	Ø 180mm	Ø 200 mm	Ø 224 mm	Ø 250 mm	Ø 315mm	Ø 355 mm	
Ø 63 mm		40870	40900	40930										
Ø 80 mm		40871	40901	40931	40961									
Ø 100 mm		40872	40902	40932	40962	40992	41022	41052	41082	41112	41142			
Ø 125 mm		40873	40903	40933	40963	40993	41023	41053	41083	41113	41143			
Ø 150 mm		40874	40904	40934	40964	40994	41024	41054	41084	41114	41144			
Ø 160 mm		40875	40905	40935	40965	40995	41025	41055	41085	41115	41145			
Ø 180 mm		40876	40906	40936	40966	40996	41026	41056	41086	41116	41146			
Ø 200 mm		40877	40907	40937	40967	40997	41027	41057	41087	41117	41147	41207		
Ø 224 mm			40908	40938	40968	40998	41028	41058	41088	41118	41148	41208	41238	
Ø 250 mm			40909	40939	40969	40999	41029	41059	41089	41119	41149	41209	41239	
Ø 315 mm			40910	40940	40970	41000	41030	41060	41090	41120	41150	41210	41240	
Ø 355 mm				40941	40971	41001	41031	41061	41091	41121	41151	41211	41241	
Ø 400 mm				40942	40972	41002	41032	41062	41092	41122	41152	41212	41242	
Ø 450 mm					40973	41003	41033	41063	41093	41123	41153	41213	41243	
Ø 500 mm							41034	41064	41094	41124	41154	41214	41244	



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### Reductions



d2

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Reductions	Reductions													
d2 d	Ø 63 mm	Ø 80mm	Ø 100 mm	Ø 125mm	Ø 150 mm	Ø 160 mm	Ø 180 mm	Ø 200 mm	Ø 224 mm	Ø 250 mm	Ø 315mm	Ø 355 mm		
Ø 80 mm	40481													
Ø 100 mm	40482	40512												
Ø 125 mm	40483	40513	40543											
Ø 150 mm	40484	40514	40544	40574										
Ø 160 mm	40485	40515	40545	40575	40605									
Ø 180 mm		40516	40546	40576	40606	40636								
Ø 200 mm		40517	40547	40577	40607	40637	40667							
Ø 224 mm			40548	40578	40608	40638	40668	40698						
Ø 250 mm		40519	40549	40579	40609	40639	40669	40699	40729					
Ø 315 mm			40550	40580	40610	40640	40670	40700	40730	40760				
Ø 355 mm					40611	40641	40671	40701	40731	40761	40821			
Ø 400mm						40642	40672	40702	40732	40762	40822	40852		
Ø 450 mm								40703	40733	40763	40823	40853		
Ø 500mm										40764	40824	40854		



#### Planning



In order to realize customized projects, our highly qualified employees are at your disposal. We have our own employees in all sales areas and we are swiftly available for you everywhere.

#### Production



products that you do not find in this catalogue, please contact us. We are glad to submit you an individual quo-

If you need larger quantities or if you look for

tation.

#### Delivery



The company's own vehicles, logistics companies and courier services enable worldwide delivery of TEKA products.

#### Assembly



Our qualified employees take care of the assembly and the turnkey handover of suction and filter units on request.

#### Warranty



As standard, we offer you a warranty period of 12 months on all products listed in this catalogue.

Service



Our in-house service department is at your disposal. By completion of a maintenance contract, the warranty period can be extended to 36 months.

#### **After Sales**

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A STATE



Even after your purchase, we do not leave you alone. Our team is glad to answer your questions. You can contact us at our international hotline:

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Exhibition



TEKAFFEE



Seminar rooms

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