



# PRODUCT CATALOG EXTRACTION TECHNOLOGY

MOBILE AND STATIONARY EXTRACTION SYSTEMS







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The Directors of AL-KO KOBER SE (from left to right): Dr. Christian Stehle (COO) and Peter Kaltenstadler (CEO)

### LIFE IN PURSUIT OF QUALITY — FROM THE VILLAGE FORGE TO A GLOBAL CORPORATION

AL-KO KOBER SE was founded in 1931 by Alois Kober as a small metalworking shop in the Bavarian-Swabian town of Großkötz, near Günzburg.

The third generation to run this family business, it is still managed as per the founder's wishes: constantly striving for quality, innovation and carefully designed functionality.



AL-KO extraction systems are developed in the Bavarian Jettingen-Scheppach, tested under various operating conditions and manufactured at the Jettingen-Scheppach and Lutherstadt Wittenberg plants with loving attention to quality. This guarantees you are investing in a quality product which you will enjoy on a daily basis for years to come.





# AL-KO EXTRACTION TECHNOLOGY ENGINEERED AND MADE IN GERMANY

# AL-KO EXTRACTION TECHNOLOGY — ENGINEERED

### WHO IS AL-KO EXTRACTION TECHNOLOGY?

AL-KO Extraction Technology develops, produces and sells extraction units and extraction systems for diverse and constantly increasing areas of application in trade and industry.

The AL-KO Extraction Technology has developed a special filter technology for its extraction units and extraction systems, which offers decisive operating and maintenance cost savings compared to the conventional principle. A customer-oriented and individually

adapted solution can be found for every extraction task together with the proven AL-KO modular system for extraction units.

AL-KO Extraction Technology sells its products in Germany and abroad exclusively through specialist dealers and professional partners. This has the advantage for the end customer that the direct enquiry is immediately forwarded to the responsible partner, who will then assist the customer on site by providing advice and

practical help. AL-KO sales partners are regularly informed about products, techniques and regulations in order to be competent partners for their end consumer.

AL-KO Extraction Technology works closely with ministries, associations, trade bodies and trade supervisory/occupational safety offices on developing new technologies in order to comply with current regulations.

### WHY EXTRACTION TECH-NOLOGY FROM AL-KO?

- I Surface-coated high-performance filters
- I Filter cleaning with compressed air (JET cleaning)
- I Long filter service life and washability of the filters
- I Compact design (and therefore manoeuvrability and flexibility of the mobile extraction units)
- I Low operating costs (energy efficiency)
- I Strong team in technology and service
- I Pure air dust extractors tested and certified by trade association
- I Drivers of innovation through variety of patented solutions
- I Wide product range from vacuum cleaner up to filter systems for many industries
- I Standardized systems and assemblies neverthless freely configurable

### WHY EXTRACTION TECH- THE EXPERT PARTNER FOR EXTRACTION SYSTEMS

### I Efficiency and occupational safety

These are topics that are of great importance in almost every company. The products from AL-KO Extraction Technology contribute to optimising precisely these points.

### I Clean air for breathing and effective work

These are the principles according to which AL-KO filter systems are developed and built. With the help of a specific filtration system, the AL-KO OPTI JET® process, AL-KO Extraction Technology has succeeded in generating clean air economically.

### I Technical expertise

for high-quality filtration technologies which is input both into the mobile dust extractors and the stationary extraction units, helps to ensure that all dust and chips produced are collected quickly and correctly, disposed of. Individual solutions to problems are developed by our own design office, extraction units and systems are produced in series production and according to industrial standards.

### I For our clients

AL-KO Extraction Technology's customers include the processing trade and industrial companies which produce dust and chips and would like to have them disposed of quickly and without problems. Many areas of application are covered. It goes without saying that AL-KO extraction units and extraction systems remove all the surplus materials that are created — welding fumes are also no problem.

### I Customer proximity

is a top priority at AL-KO Extraction
Technology. Our products are sold in over
25 countries exclusively through specialist
dealers (mobile extraction units) and plant
manufacturer (stationary extraction units). Customers thus have an AL-KO contact person on
site who is always at their side with advice and
practical help, backed up by AL-KO as a strong
manufacturer.

# AND MADE IN GERMANY

### MOBILE AND STATIONARY PRODUCT RANGE

### I Mobile raw air equipment

- MOBIL 100 / 125 / 140 / 160 / 200 / AAS 1013 - 6013
- BAG

### I Mobile pure air equipment

- POWER UNIT 100
- POWER UNIT 120
- POWER UNIT 140
- POWER UNIT 160
- POWER UNIT 200
- POWER UNIT 250
- POWER UNIT 300
- POWER UNIT 350
- POWER UNIT 350+

### I Industrial vacuum cleaner

- JFT STRFAM

### | Sanding Tables

- AST 1.5 BASIC
- AST 1.0 PREMIUM
- AST 2.0 PREMIUM
- AST 3.0 PREMIUM

### | Mobile paint mist extraction

- COLOUR JET 1
- COLOUR JET 2
- COLOUR JET 3
- COLOUR JET 4

### | Stationary extraction units

- ECO JET, various types, air flow rates 3,500 - 22,000 m<sup>3</sup>/h
- PROFI JET, in the modular system, air flow rate 2,000 - .....m3/h

### Manual workplace extraction

- TURBO JET 4
- TURBO JET 6
- TURBO JET 8

### Discharge variants

- Waste container
- Rotary lock valves
- Briquette presses
- Push floor discharge
- Round discharge

### Welding fume-/ dedusting system

- AL-KO FLEX UNIT
- AL-KO FLEX UNIT ECO
- AL-KO FLEX UNIT 15 50

### FILTER APPLICATION POSSIBILITIES OF AL-KO FILTER TECHNOLOGY

### for the following applications:

- Wood
- Wood composites
- Plastics
- Paper
- Welding fumes
- I Lead and zinc smelter dedusting
- Aerated concrete demolition
- Coking plant dedusting
- Sandblasting plants
- I Cement clinker plants and grinding plants

1. The AL-KO filter material is suitable 2. In general, dust in dust explosion class 1, i.e. up to a maximum K<sub>st</sub>- value 200 bar m/s, can be extracted and filtered.

> The following products can therefore also be separated if the filter surface air load is appropriate:

- Wood products, fibrous materials, composites (peat, pulp, cardboard, etc.)
- I Food, luxury foodstuffs, animal feed (brewer's yeast, powdered egg, meat meal, etc.)
- Coal, coal powder
- I Natural products (leather, herbs, fertilizers, sugar, etc.)
- I Plastics, resins, rubber (epoxy resin powder)
- I Pharmaceuticals, cosmetics (dandelion, lemon balm powder, etc.)

- I Intermediates, auxiliaries (cellulose, citric acid, desulphurization agents, etc.)
- I Technical products (dyes, fillers, metal powder except aluminium dust, magnesium dust, etc.)
- I Inorganic products (graphite, soot, coke, sinter dust, etc.)
- I Metal chips (aluminium chips, steel chips, etc.)

In this case, special materials (e.g. slate powder, quartz, trass powder, etc.) must applied to the AL-KO filter material before it is exposed to dust. In addition, depending on the medium, the filter surface load must be reduced.

# AL-KO EXTRACTION TECHNOLOGY — ENGINEERED

### AL-KO FILTER TECHNOLOGY

### THE AL-KO high-performance filter system Al-KO OPTI JET®

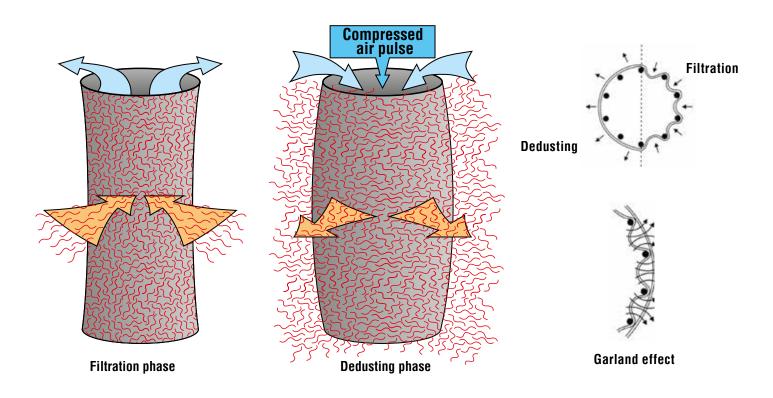
The high-quality AL-KO filtration technology consists of two components that have been precisely matched to each other. The combination of surface filtration and proven AL-KO OPTI JET® cleaning delivers an advantage compared to the competition, which still largely works with vibratory cleaning and three-dimensional depth filters.

The principle of surface filtration is based on the fact that the dust particles are already separated at the surface and therefore cannot penetrate into the depth of the filter material. The polyester needle felt of which the filter tubes are made is surrounded by a water and oil-repellent layer, which makes it possible to regenerate each tube up to three times by washing.

During the extraction process, a filter cake forms on the outside of the filter tubes. With conventional filter material, this cake acts as an auxiliary filter layer and is necessary to maintain the residual dust content. For this reason, a completely cleaned depth filter allows additional dust pollution until it has again once been accumulated a certain layer of dust. In comparison, no auxiliary layer is required

for the AL-KO filter material, which means that the cleaning intervals can be selected as required and the filter is immediately fully operational again after each cleaning process. Further benefits of this filter material are the high mechanical load capacity, which results from the high basis weight of 400 g/m² and the excellent air permeability with a minimum dust transmission rate.

With the proven AL-KO OPTI JET® cleaning system, the filters are cleaned by means of a pressure surge that flows through the filter material from the inside to the outside. In connection with this type of cleaning, the so-called "Girlanden-Effekt" or "garland effect" comes into play. The garland occurs during the extraction process when the filter tubes are placed around the longitudinal bars of the support cages.



# AND MADE IN GERMANY

The sudden inflation of the tubes causes the filter tube to undergo a change in shape, which leads to the filter cake being blown off. The garland is lifted off the support cage and opens out to form a round, inflated hose. This change in shape not only breaks apart the filter cake, but also casts it off. The fast centrifugal movement and the subsequent abrupt stopping process push the fine dust out of the filter material due to the inertia force. In addition to this garland effect, the so-called counter-flushing also contributes to optimum filter cleaning. Here, compressed air flows through the filter bags from the inside to the outside against the direction of application, so that the fine dust is removed from the surface by the air flow.

This point is the decisive difference from the mechanical shaking of the filters. Although the mechanical movements of the filter bags break open and shake off the filter cake, the fine dust is also shaken into the material, causing the pores to become blocked. A second disadvantage of vibration cleaning is the mechanical stress on the filter housing.



# WASHING INSTRUCTIONS FOR AL-KO STANDARD FILTER MEDIA

Textile filter media are sensitive to abrasion. Improper mechanical treatment, including washing, leads to surface damage and roughening. A drum washing machine should only be used if the filter media are sufficiently protected against friction on the drum walls. This can be done, for example, by wrapping in oversized bags of open fabric.

In principle, the following washing steps should be observed:

### 1. Water-soluble, easily removable soiling

- I Placing the filter media in a cold water bath
- I Washing and rinsing of filter media
- I Increasing the water temperature to max. 50 °C and prolonged soaking assist the cleaning effect
- A commercially available mild detergent can be used to speed up the washing process

### 2. Acid or alkaline soiling

- Removal of acid soiling by alkaline bath or alkaline soiling by acid bath
- Alkaline bath with ammonia added to the washing liquid at the rate of 1-2 ml/l
- Acid bath with acetic acid added to the washing liquid at the rate of 1–2 ml/l
- Washing temperature max. 50°C

The washed filter media can be dried in air or in industrial dryers. The drying temperature must be significantly below the temperature resistance of the respective filter medium.

### 3. Structural change

Depending on previous exposure, the washing process can lead to a structural change in the surface finish. This may lead to the criteria according to BIA test category M no longer being met.

### 4. Local regulations

I Check that local regulations for waste water are not violated.

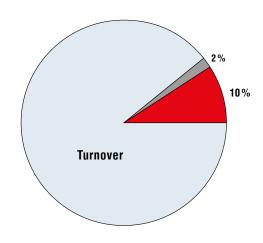
# OPEN UP YOUR SAVINGS POTENTIAL

### YOUR AL-KO CONSULTANT WILL HELPS YOU TO DO THIS



**Electricity and heat** usually cost a company between 2 and 10% of sales. This range already indicates the savings potential and the opportunities to improve margins through energy-efficient production. Especially in wood processing: **40% of the electricity consumption** in joinery or carpentry shops **is attributable to the extraction technology.** Your AL-KO expert advisor **will help you** uncover the energy wasters.

The extraction system is responsible for approx. 40% of your electricity consumption. You decide whether you spend 2 or 10% of your turnover on electricity and heat.





### THE ELECTRICITY WASTERS

- I Obsolete facilities: New motors are significantly more efficient than even relatively recent models. The flow behaviour is also significantly better today than it was a few years ago.
- Raw air dust extractor: The maximum efficiency of a raw air dust extractor is 50%, compared to more than 80% for clean air dust extractors with vacuum system.
- I Filters: Worn, damaged or insufficiently cleaned filters falsify the result of the differential pressure measurement. The extraction unit is triggered more frequently than necessary.
- Controllers: Old controllers are less optimised, and what is more if they are also set incorrectly then the system does not run at the optimum operating point and wastes energy.



### ...AND MONEY WASTERS

- I Piping: The extraction system has gone through all the changes in the company: Long distances, many branches, various pipe diameters, valves that are not practical to operate: Pressure and speed losses consume energy unnecessarily and therefore waste money.
- Seals: Porous and defective seals lead to air and pressure losses, controller errors, polluted air and wasted energy.

# THE SOLUTION

# AL-KO EXTRACTION UNITS WHICH ARE OPTIMISED IN TERMS OF ENERGY AND PERFORMANCE

Of course, there are cases in which only the complete replacement of the extraction unit and piping makes economic sense. In most cases, however, there are individual interventions that have a positive effect on your company's (energy) balance sheet:

### OPTIMUM SIZE AND PIPING BY YOUR AL-KO PARTNER

- I AL-KO offers you the suitable extraction unit for every application size. AL-KO PROFI JET systems can grow with you thanks to their modular design. This secures your investment.
- I Optimum planning of the pipe network by the AL-KO specialist partner guarantees the shortest possible routes and perfect functioning of the AL-KO extraction unit. The pipe sections should be arranged so they are as short and straight as possible.



# THE MOBILE AND STATIONARY EXTRACTION UNITS FROM AL-KO

- I AL-KO OPTI JET® cleaning: With the AL-KO OPTI JET® cleaning, the filter is inflated for approx. one second. The compressor only supplies 1/7 of the required compressed air, the rest is carried along. A smaller compressor and less energy are required for optimum cleaning results.
- Reduction in heating costs: With all stationary AL-KO extraction units and mobile pure air dust extractors, the warm, filtered air remains in the room or is recirculated.
- With an extraction volume of 10,000 m<sup>3</sup>/h and a room temperature of 20 °C, savings of up to 3500 € per year are possible.
- I Aerodynamics: In order to guarantee an optimum air flow, AL-KO fan housings are optimised in terms of aerodynamics. The size of the units is particularly compact.
- I Energy-saving fans: AL-KO uses particularly energy-saving IE3 fans in all units from 7.5 kW upwards.

### AL-KO FREQUENCY CONVERTERS

- I Whenever individual processing machines are not in operation, the speed of the extraction fan is reduced to such an extent that the extraction of the other machines is still guaranteed. Each machine is assigned a minimum speed and the lower limit for ensuring pneumatic transport is defined. But even at full load, a frequency converter
- saves approx. 10% energy because it ensures that the motor runs at the optimum operating point.
- I The machine recognition function knows where work is being done and only extracts air there. In conjunction with a frequency converter, this means energy savings of up to 60% and clean air, as the extraction starts
- automatically. Together with pneumatic valves, this results in high energy savings and reduced working time.

### **USE YOUR ENERGY**

With the briquetting presses from AL-KO, you use the energy you have in your company. Thanks to its calorific value, the wood briquette is a perfect fuel. By reducing the volume of product residues by up to 90%, there is an enormous saving effect for logistics.



# Perfect fuel: the calorific value of wood briquettes in comparison

19.5 kJ lignite briquettes

18,0 kj Holzbriketts

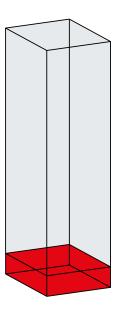
6.5 kJ air-dried hardwood

5.8 kJ air-dried softwood

4.2 kJ freshly felled wood

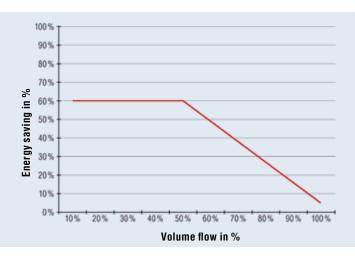
# Saving effect for logistics: up to 90% volume reduction

Before 100 % material



After 10 % material

### Energy saving when using an AL-KO frequency converter



We would be pleased to calculate, especially for your applications, the savings potential and the payback period!

# THE AL-KO PRINCIPLE QUALITY FOR LIFE

We take the promise "Quality for Life" very seriously. How seriously becomes evident when looking at the age AL-KO extraction systems reach on average. This is why, along with an AL-KO extraction system, you are purchasing the certainty of investing in your company's future, the stability of your operations and your team's motivation.



### **POWER UNIT**

A real asset at work for people and machines

### ECO JET AND PROFI JET

ECO JET and PROFI JET filter systems offer the right solution for any application, providing people and machines with clean air in the workplace.

ECO JET – The cleanest form of security of investment

PROFI JET – The extraction system that grows with your company





# PURE AIR DUST EXTRACTOR POWER UNIT

- I Efficient and economical: Large air surge tank with fast diaphragm valves for effective OPTI JET® filter cleaning and lowest use of compressed air.
- I So simple and yet so effective: OPTI JET® dedusting and filter bag with snap ring lock.
- I Highly economical: energy-efficient motors according to IE3.
- I Safety in case of emergencies: Low-maintenance automatic fire extinguishing system (standard from POWER UNIT 250).
- I Completely calm: sound-insulated air recirculation by AL-KO.

- I All options are available: PLC control system for manual and automated operation (from POWER UNIT 140). Countless options from machine recognition to slide valve control and frequency-controlled operation to name but three.
- No mess: container with window for visual checks.
- I Practical down to the last detail: container lock with ergonomic tension lever.
- I Retroactively extendable: Conversion to discharge via briquette press or rotary lock valve possible (from POWER UNIT 140).

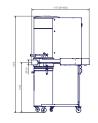
### The benefits for you:

- I High extraction performance
- I Compact design
- I 100% air recirculation without loss of temperature (residual dust < 0.1 mg/m³)
- Integrated pre-separator and extendable control system
- I Optimum filter dedusting
- I Minimal noise level
- I Patented filling level control
- I Certified automatic extinguishing device, easy to maintain
- I Dust compartment for dust-free container change (optional: safety lock of the containers)
- Freely configurable assemblies, exchangeable and expandable





# PURE AIR DUST EXTRACTORS **POWER UNIT (APU)**





### AL-KO POWER UNIT 100/120

Туре	100	100**	120**	120 M
Art.no.	192 488	192 489	192 490	192 498
Extraction nozzle	100 mm	100 mm	120 mm	120 mm
Nominal motor rating	1.1 kW/1 Ph	1.5 kW/3 Ph	1.5 kW/3 Ph	1.5 kW/3 Ph
Voltage	230 V/50 Hz	400 V/50 Hz	400 V/50 Hz	400 V/50 Hz
Max. flow rate	790 m³/h	790 m³/h	1,140 m³/h	1,140 m³/h
Nominal flow rate*	565 m³/h	565 m³/h	814 m³/h	814 m³/h
Vacuum at nominal flow rate	2,118 Pa	2,124 Pa	2,180 Pa	2,180 Pa
Filter area	4.1 m <sup>2</sup>	4.1 m <sup>2</sup>	5.1 m <sup>2</sup>	5.1 m <sup>2</sup>
Filter dedusting	Manual	Manual	Manual	Pressurised air
Pre-separator	Integrated	Integrated	Integrated	Integrated
Swarf collection capacity	approx. 135 L	approx. 135 L	approx. 135 L	approx. 135 L
Sound pressure level***	69 dB(A)	69 dB(A)	71 dB(A)	71 dB(A)
Dimensions (L/W/H) in mm	1,178 x 650 x 1,973			
Weight net	approx. 114 kg	approx. 116 kg	approx. 117 kg	approx. 121 kg

\*GS-H0-07

\*\*On stock

\*\*\* Free sound field measurement according to DIN EN 11201

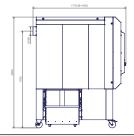
 $\ensuremath{\mathsf{M}}-\ensuremath{\mathsf{Version}}$  with automatic filter dedusting and machine detection

- I Controller upgrade page 33
- I Accesories:
  - I Swarf bags page 36
  - I Valves page 38-39
  - I Floor cleaning set page 38
  - I PUR-spiral hose page 36





# **POWER UNIT (APU)**





### **AL-KO POWER UNIT 160**

Туре	160 H**	160 HM	160 P**	160 K****
Art.no.	199 001	199 363 01	192 199 01	199 018 02
Extraction nozzle	160 mm	160 mm	160 mm	160 mm
Nominal motor rating	2.2 kW/3 Ph	2.2 kW/3 Ph	2.2 kW/3 Ph	2.2 kW/3 Ph
Voltage	400 V/50 Hz	400 V/50 Hz	400 V/50 Hz	400 V/50 Hz
Max. flow rate	2,000 m <sup>3</sup> /h	2,000 m³/h	2,000 m³/h	2,000 m³/h
Nominal flow rate*	1.448 m³/h	1.448 m³/h	1.448 m³/h	1.448 m³/h
Vacuum at nominal flow rate	2,503 Pa	2,503 Pa	2,503 Pa	2,503 Pa
Filter area	9.1 m²	9.1 m²	9.1 m <sup>2</sup>	9.1 m²
Filter dedusting	Manual	Manual	Pressurised air	Pressurised air
Pre-separator	Integriert	Integrated	Integrated	Integrated
Swarf collection capacity (net/gross)	165 L / 241 L	165 L / 241 L	165 L / 241 L	165 L / 241 L
Sound pressure level***	70 dB(A)	70 dB(A)	70 dB(A)	70 dB(A)
Dimensions (L / W / H) in mm	1.800 x 830 x 2.050	1,718 x 830 x 2,050	1,718 x 830 x 2,050	1,718 x 830 x 2,050
Weight net	330 kg	330 kg	340 kg	350 kg

\*GS-H0-07

\*\*On stock

\*\*\* Free sound field measurement according to DIN EN 11201

\*\*\*\* K - integrated compressor





- I Filter surface increase up to 29.4 m² (on request)
- I Control options page 32-33
- I Accesories:
  - I Swarf bags page 36
- I Valves page 38-39
- I External switch cabinet
- I Increase of expansion chamber (on request)
- I PUR-spiral hose page 36
- I Sound damper
- I Exhaust air hood

# **POWER UNIT (APU)**

### **AL-KO POWER UNIT 200**





Туре	200 P**	200 K <sup>1)</sup>
Art.no.	192 491 01	199 609 01
Extraction nozzle	200 mm	200 mm
Nominal motor rating	3.0 kW/3 Ph	3.0 kW/3 Ph
Voltage	400V/50Hz	400V/50Hz
Max. flow rate	3,010 m³/h	3,010 m³/h
Nominal flow rate*	2,262 m³/h	2,262 m³/h
Vacuum at nominal flow rate	2,563 Pa	2,563 Pa
Filter area	13.8 m²	13.8 m²
Filter dedusting	Pressurised air	Pressurised air
Pre-separator	Integrated	Integrated
Swarf collection capacity (net / gross)	2 x 165 L / 2 x 241 L	2 x 165 L / 2 x 241 L
Sound pressure level***	72 dB(A)	72 dB(A)
Dimensions (L / W / H) in mm	2,296 x 830 x 2,050	2,296 x 830 x 2,050
Briquette / rotary lock valve performance	_	-
Briquette diameter	-	
Weight net	460 kg	470 kg

\*GS-H0-07

\*\*On stock

\*\*\* Free sound field measurement according to DIN EN 11201

1) Compressor integrated

- I Filter surface increase up to 44.8 m² (on request)
- I Control options page 32-33
- I Accesories:
- I Swarf bags page 36
- I Valves page 38-39
- I External switch cabinet
- I Increase of expansion chamber (on request)
- I PUR-spiral hose page 36
- I Sound damper
- I Exhaust air hood





# **POWER UNIT (APU)**



### **AL-KO POWER UNIT 200**

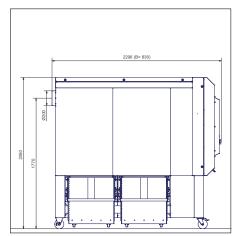
Туре	200 P-ZRS	200 P-BP 30-40
Art.no.	199 044 01	199 019 02
Extraction nozzle	200 mm	200 mm
Nominal motor rating	3.0 kW/3 Ph	3.0 kW/3 Ph
Voltage	400V/50Hz	400V/50Hz
Max. flow rate	3,010 m³/h	3,010 m³/h
Nominal flow rate*	2,262 m³/h	2,262 m³/h
Vacuum at nominal flow rate	2,563 Pa	2,563 Pa
Filter area	13.8 m²	13.8 m²
Filter dedusting	Pressurised air	Pressurised air
Pre-separator	Integrated	Integrated
Swarf collection capacity (net / gross)	Rotary lock valve	Briquette press
Sound pressure level***	72 dB(A)	72 dB(A)
Dimensions (L / W / H) in mm	2,297 x 836 x 2,607	2,631 x 1,307 x 2,111
Briquette / rotary lock valve performance	15,744 L/h <sup>2)</sup>	up to 40 kg/h <sup>2)</sup>
Briquette diameter	-	40 mm
Weight net	550 kg	950 kg

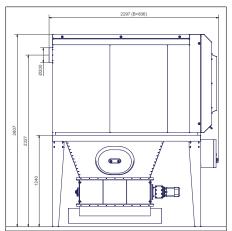
\*GS-H0-07

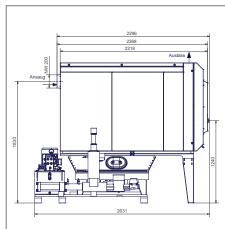
\*\*On stock

\*\*\* Free sound field measurement according to DIN EN 11201

2) Depending on the material







# **POWER UNIT (APU)**







### **AL-KO POWER UNIT 250**

Туре	250 P**	250 P-ZRS
Art.no.	195 676 03	195 875 03
Extraction nozzle	250 mm	250 mm
Nominal motor rating	7.5 kW/3 Ph	7.5 kW/3 Ph
Voltage	400 V/50 Hz	400 V/50 Hz
Max. flow rate	4,900 m³/h	4,900 m³/h
Nominal flow rate*	3,534 m³/h	3,534 m³/h
Vacuum at nominal flow rate	2,451 Pa	2,451 Pa
Filter area	22.4 m <sup>2</sup>	22.4 m²
Pre-separator	Integrated	Integrated
Extinguishing device	Integrated	Integrated
Swarf collection capacity (net / gross)	2 x 165 L / 2 x 250 L	Rotary lock valve
Sound pressure level***	71 dB(A)	71 dB(A)
Dimensions (L / W / H) in mm	2,351 x 1,058 x 2,361	2,387 x 1,058 x 2,807
Briquette / Rotary lock valve performance	_	15,744 L/h <sup>2)</sup>
Briquette diameter	-	-
Weight net	758 kg	728 kg

<sup>\*</sup> GS-H0-07

- I Filter surface increase up to 63 m² (on request)
- I Control options page 32-33
- I Accesories:
- I Swarf bags page 36
- I Valves page 38-39
- I External switch cabinet
- I Increase of expansion chamber (on request)
- I PUR-spiral hose page 36
- I Sound damper
- I Exhaust air hood





<sup>\*\*</sup>On stock

<sup>\*\*\*</sup> Free sound field measurement according to DIN EN 11201

<sup>2)</sup> Depending on the material

# **POWER UNIT (APU)**





### **AL-KO POWER UNIT 250**

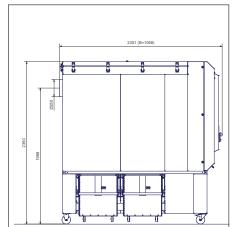
Туре	250 P-BP 30-40	250 P-BP 30-50
Art.no.	199 537 01	195 872 05
Extraction nozzle	250 mm	250 mm
Nominal motor rating	7.5 kW/3 Ph	7.5 kW/3 Ph
Voltage	400 V/50 Hz	400 V/50 Hz
Max. flow rate	4,900 m³/h	4,900 m³/h
Nominal flow rate*	3,534 m³/h	3,534 m³/h
Vacuum at nominal flow rate	2,451 Pa	2,451 Pa
Filter area	22.4 m²	22.4 m²
Pre-separator	Integrated	Integrated
Extinguishing device	Integrated	Integrated
Swarf collection capacity (net / gross)	Briquette press	Briquette press
Sound pressure level***	71 dB(A)	71 dB(A)
Dimensions (L / W / H) in mm	2,351 x 1,332 x 2,619	2,351 x 1,361 x 2,620
Briquette / Rotary lock valve performance	up to 40 kg/h <sup>2)</sup>	up to 50 kg/h²)
Briquette diameter	40 mm	50 mm
Weight net	1,381 kg	1,381 kg

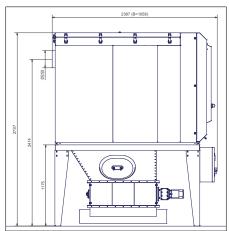
\* GS-H0-07

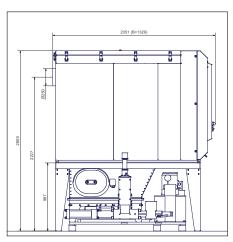
\*\*On stock

\*\*\* Free sound field measurement according to DIN EN 11201

2) Depending on the material







# **POWER UNIT (APU)**





### **AL-KO POWER UNIT 300**

Туре	300 P**	300 P-ZRS
Art.no.	195 677 03	195 876 03
Extraction nozzle	300 mm	300 mm
Nominal motor rating	7.5 kW/3 Ph	7.5 kW/3 Ph
Voltage	400 V/50 Hz	400 V/50 Hz
Max. flow rate	6,000 m³/h	6,000 m³/h
Nominal flow rate*	5,089 m³/h	5,089 m³/h
Vacuum at nominal flow rate	2,587 Pa	2,587 Pa
Filter area	30 m²	30 m²
Pre-separator	Integrated	Integrated
Extinguishing device	Integrated	Integrated
Swarf collection capacity (net / gross)	3 x 165 L / 3 x 250 L	Rotary lock valve
Sound pressure level***	71 dB(A)	71 dB(A)
Dimensions (L / W / H) in mm	3,000 x 1,058 x 2,361	3,000 x 1,058 x 3,027
Briquette / Rotary lock valve performance	-	15,744 L/h²)
Briquette diameter	-	-
Weight net	838 kg	832 kg

<sup>\*</sup> GS-H0-07

- I Filter surface increase up to 90 m² (on request)
- I Control options page 32-33
- I Accesories:
- I Swarf bags page 36
- I Valves page 38-39
- I External switch cabinet
- I Increase of expansion chamber (on request)
- I PUR-spiral hose page 36
- I Sound damper
- I Exhaust air hood





<sup>\*\*</sup>On stock

<sup>\*\*\*</sup> Free sound field measurement according to DIN EN 11201

<sup>2)</sup> Depending on the material

**POWER UNIT (APU)** 





### **AL-KO POWER UNIT 300**

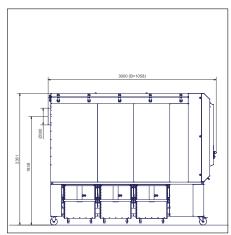
Туре	300 P-BP 30-40	300 P-BP 30-50	300 P-BP 50-70
Art.no.	199 538 01	192 006 05	195 874 05
Extraction nozzle	300 mm	300 mm	300 mm
Nominal motor rating	7.5 kW/3 Ph	7.5 kW/3 Ph	7.5 kW/3 Ph
Voltage	400 V/50 Hz	400 V/50 Hz	400 V/50 Hz
Max. flow rate	6,000 m³/h	6,000 m <sup>3</sup> /h	6,000 m³/h
Nominal flow rate*	5,089 m³/h	5,089 m <sup>3</sup> /h	5,089 m³/h
Vacuum at nominal flow rate	2,587 Pa	2,587 Pa	2,587 Pa
Filter area	30 m²	30 m²	30 m²
Pre-separator	Integrated	Integrated	Integrated
Extinguishing device	Integrated	Integrated	Integrated
Swarf collection capacity (net / gross)	Briquette press	Briquette press	Briquette press
Sound pressure level***	71 dB(A)	71 dB(A)	71 dB(A)
Dimensions (L / W / H) in mm	3,000 x 1,332 x 2,817	3,000 x 1,361 x 2,817	3,000 x 1,351 x 2,817
Briquette / Rotary lock valve performance	up to 40 kg/h <sup>2)</sup>	up to 50 kg/h <sup>2)</sup>	up to 70 kg/h²)
Briquette diameter	40 mm	50 mm	70 mm
Weight net	1,570 kg	1,570 kg	1,570 kg

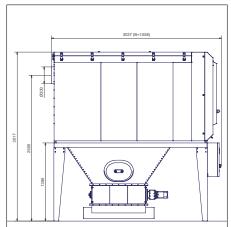
\* GS-H0-07

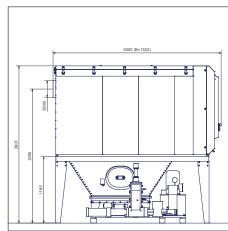
\*\*On stock

\*\*\* Free sound field measurement according to DIN EN 11201

2) Depending on the material







# AL-KO POWER UNIT 350 AND POWER UNIT 350<sup>+</sup> THE NEW PERFORMANCE CLASS













AL-KO POWER UNIT 350 and POWER UNIT 350<sup>+</sup> is the new performance class among pure air dust extractors. The powerful 11 or 15 kW **IE3 motors** extracts dust and swarf with a gigantic **flow rate** from more tham 8.000 m³/h to 10.000 m³/h, while being very economical in terms

of consumption. Thanks to 57 filters, the AL-KO POWER UNIT 350 and POWER UNIT 350 $^{+}$  offers a **gigantic filter surface** of 73 m<sup>2</sup> – enough to lower the residual dust content of the **air which is 100% recycled** to < 0.1 mg/m<sup>3</sup> (H3).

Naturally, the AL-KO POWER UNIT 350 and 350<sup>+</sup> uses tried and tested, and further improved, AL-KO OPTI JET® technology and the **integrated pre-separator** comes as standard.

While performing on a gigantic level, AL-KO POWER UNIT 350 and POWER UNIT 350<sup>+</sup> is never noisy. The maximum sound level at a distance of one meter measures according to DIN EN ISO 11201 – **absolutely quiet 71 dB (A)** – probably the lowest figure in this class. This is not surprising as the AL-KO POWER UNIT 350 and POWER UNIT 350<sup>+</sup> is equipped with real sound-absorbing panels – as standard.

Thanks to the unique design and the further optimised internal layout, AL-KO POWER UNIT 350 is extremely space-saving: with its dimensions of  $3,129 \times 1,058 \times 2,361$  mm (LxWxH) the AL-KO POWER UNIT 350 is significantly smaller than many other devices of the 300 class.

### The benefits for you:

- I Highest extraction performance
- I Lowest energy consumption A+
- I Optimum safety
- I Compact construction

# THE NEW LEVEL OF PERFECTION

- I New technology
- I Unique design
- I Made in Germany
- I Patended air routing

# **POWER UNIT (APU)**

### **AL-KO POWER UNIT 350**



Туре	350 P	350 P-FU <sup>1)</sup>	350 P-RA
Art.no.	199 560	199 710	199 690 01
Extraction nozzle	350 mm	350 mm	350 mm
Nominal motor rating	11.0 kW/3 Ph	11.0 kW/3 Ph	11.0 kW/3 Ph
Voltage	400 V/50 Hz	400 V/50 Hz	400 V/50 Hz
Max. flow rate	8,500 m³/h	8,500 m³/h	8,500 m³/h
Nominal flow rate*	6,927 m³/h	6,927 m³/h	6,927 m³/h
Vacuum at nominal flow rate	2,543 Pa	2,543 Pa	2,543 Pa
Filter area	73 m²	73 m²	73 m <sup>2</sup>
Pre-separator	Integrated	Integrated	Integrated
Extinguishing device	Integrated	Integrated	Integrated
Swarf collection capacity (net / gross)	3 x 165 L / 3 x 250 L	3 x 165 L / 3 x 250 L	Rotary lock valve
Sound pressure level***	71 dB(A)	71 dB(A)	71 dB(A)
Dimensions (L / W / H) in mm	3,129 x 1,058 x 2,361	3,337 x 1,058 x 2,361	3,164 x 1,202 x 2,956
Briquette / Rotary lock valve performance	=	=	7,232 L/h <sup>2)</sup>
Briquette diameter	_	_	_
Weight net	977 kg	999 kg	1,368 kg

<sup>\*</sup> According GS-H0-07 dusted \*\*\* Free sound field measurement according to DIN EN 11201

- I Filter surface increase up to 146 m² (on request)
- I Control options page 32-33
- I Accesories:
- I Swarf bags page 36
- I Valves page 38-39
- I External switch cabinet
- I Increase of expansion chamber (on request)
- I PUR-spiral hose page 36
- I Sound damper
- I Exhaust air hood





<sup>2)</sup> Depending on the material

<sup>&</sup>lt;sup>1)</sup> FU - with frequency converter incl. control panel and plain-text display, integrated control loop with pressure transmitter for demand-driven control of the dust extractor

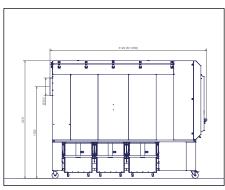
# **POWER UNIT (APU)**

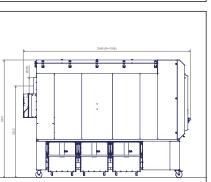


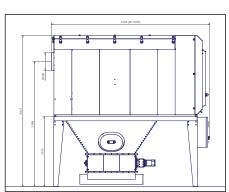
### **AL-KO POWER UNIT 350**

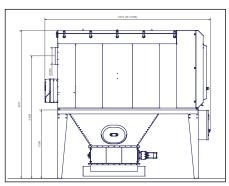
Туре	350 P-RA FU <sup>1)</sup>	350 P-ZRS	350 P-ZRS FU <sup>1)</sup>
Art.no.	199 715 01	199 563	199 713
Extraction nozzle	350 mm	350 mm	350 mm
Nominal motor rating	11.0 kW/3 Ph	11.0 kW/3 Ph	11.0 kW/3 Ph
Voltage	400 V/50 Hz	400 V/50 Hz	400 V/50 Hz
Max. flow rate	ca. 8,500 m³/h	ca. 8,500 m³/h	ca. 8,500 m³/h
Nominal flow rate*	6,927 m³/h	6,927 m³/h	6,927 m³/h
Vacuum at nominal flow rate	2,543 Pa	2,543 Pa	2,543 Pa
Filter area	73 m²	73 m²	73 m²
Pre-separator	Integrated	Integrated	Integrated
Extinguishing device	Integrated	Integrated	Integrated
Swarf collection capacity (net / gross)	Rotary lock valve	Rotary lock valve	Rotary lock valve
Sound pressure level***	71 dB(A)	71 dB(A)	71 dB(A)
Dimensions (L / W / H) in mm	3,374 x 1,202 x 2,956	3,164 x 1,058 x 3,027	3,371 x 1,058 x 3,027
Briquette / Rotary lock valve performance	7,232 L/h <sup>2)</sup>	15,744 L/h²)	15,744 L/h <sup>2)</sup>
Briquette diameter	_	-	_
Weight net	1,390 kg	1,010 kg	1,030 kg

<sup>\*</sup> According GS-HO-07 dusted









<sup>\*\*\*</sup> Free sound field measurement according to DIN EN 11201

<sup>2)</sup> Depending on the material

<sup>&</sup>lt;sup>1)</sup>FU - with frequency converter incl. control panel and plain-text display, integrated control loop with pressure transmitter for demand-driven control of the dust extractor

**POWER UNIT (APU)** 

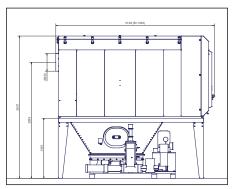


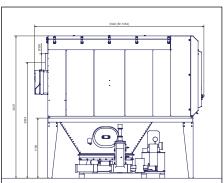


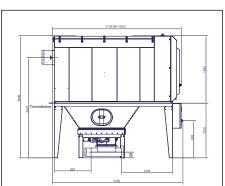


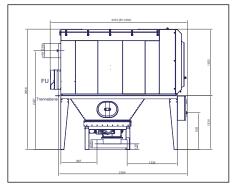
# **AL-KO POWER UNIT 350**

Туре	350 P-BP 30-50	350 P-BP 30-50 FU <sup>1)</sup>	350 P-BP 50-70	350 P-BP 50-70 FU <sup>1)</sup>
Art.no.	199 561	199 711	199 562	199 712
Extraction nozzle	350 mm	350 mm	350 mm	350 mm
Nominal motor rating	11.0 kW/3 Ph	11.0 kW/3 Ph	11.0 kW/3 Ph	11.0 kW/3 Ph
Voltage	400 V/50 Hz	400 V/50 Hz	400 V/50 Hz	400 V/50 Hz
Max. flow rate	ca. 8,500 m³/h	ca. 8,500 m³/h	ca. 8,500 m³/h	ca. 8,500 m³/h
Nominal flow rate*	6,927 m³/h	6,927 m³/h	6,927 m³/h	6,927 m³/h
Vacuum at nominal flow rate	2,543 Pa	2,543 Pa	2,543 Pa	2,543 Pa
Filter area	73 m²	73 m²	73 m²	73 m²
Pre-separator	Integrated	Integrated	Integrated	Integrated
Extinguishing device	Integrated	Integrated	Integrated	Integrated
Swarf collection capacity (net / gross)	Briquette press	Briquette press	Briquette press	Briquette press
Sound pressure level***	71 dB(A)	71 dB(A)	71 dB(A)	71 dB(A)
Dimensions (L / W / H) in mm	3,129x1,361x2,817	3,340x1,361x2,817	3,129x1,361x2,817	3,340x1,361x2,817
Briquette / Rotary lock valve performance	up to 50 kg/h²)	up to 50 kg/h <sup>2)</sup>	up to 70 kg/h <sup>2)</sup>	up to 70 kg/h <sup>2)</sup>
Briquette diameter	50 mm	50 mm	70 mm	70 mm
Weight net	1,740 kg	1,762 kg	1,740 kg	1,762 kg









<sup>2)</sup> Depending on the material

<sup>&</sup>lt;sup>1)</sup> FU - with frequency converter incl. control panel and plain-text display, integrated control loop with pressure transmitter for demand-driven control of the dust extractor

# **POWER UNIT (APU)**



### AL-KO POWER UNIT 350+

Туре	350⁺ P	350⁺ P FU¹)	350⁺ P-RA
••			
Art.no.	199 843	199 849	199 847 01
Extraction nozzle	355 mm	355 mm	355 mm
Nominal motor rating	15.0 kW/3 Ph	15.0 kW/3 Ph	15.0 kW/3 Ph
Voltage	400 V/50 Hz	400 V/50 Hz	400 V/50 Hz
Max. flow rate	ca. 10,000 m³/h	ca. 10,000 m³/h	ca. 10,000 m³/h
Nominal flow rate*	7,127 m³/h	7,127 m³/h	7,130 m³/h
Vacuum at nominal flow rate	3,347 Pa	3,347 Pa	3,347 Pa
Filter area	73 m²	73 m <sup>2</sup>	73 m²
Pre-separator	Integrated	Integrated	Integrated
Extinguishing device	Integrated	Integrated	Integrated
Swarf collection capacity (net / gross)	3 x 165 L / 3 x 250 L	3 x 165 L / 3 x 250 L	Rotary lock valve
Sound pressure level***	73 dB(A)	73 dB(A)	73 dB(A)
Dimensions (L / W / H) in mm	3,130 x 1,058 x 2,361	3,320 x 1,058 x 2,361	3,164 x 1,202 x 2,956
Briquette / Rotary lock valve performance	=	_	7,232 L/h**
Briquette diameter			_
Weight net	1,040 kg	1,064 kg	1,386 kg

<sup>\*</sup> According GS-HO-07 dusted

- I Filter surface increase up to 146 m² (on request)
- I Control options page 32-33
- I Accesories:
- I Swarf bags page 36
- I Valves page 38-39
- I External switch cabinet
- I Increase of expansion chamber (on request)
- I PUR-spiral hose page 36
- I Sound damper
- I Exhaust air hood





<sup>\*\*\*</sup> Free sound field measurement according to DIN EN 11201

<sup>2)</sup> Depending on the material

<sup>&</sup>lt;sup>1)</sup> FU - with frequency converter incl. control panel and plain-text display, integrated control loop with pressure transmitter for demand-driven control of the dust extractor

# **POWER UNIT (APU)**

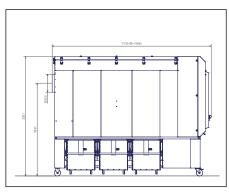


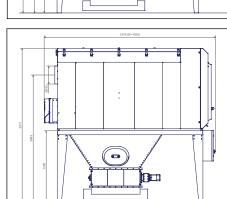


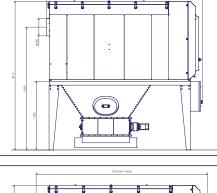
### AL-KO POWER UNIT 350+

Туре	350* P-RA-FU1)	350* P-ZRS	350* P-ZRS-FU <sup>1)</sup>
Art.no.	199 874 01	199 846	199 852
Extraction nozzle	355 mm	355 mm	355 mm
Nominal motor rating	15.0 kW/3 Ph	15.0 kW/3 Ph	15.0 kW/3 Ph
Voltage	400 V/50 Hz	400 V/50 Hz	400 V/50 Hz
Max. flow rate	ca. 10,000 m³/h	ca. 10,000 m³/h	ca. 10,000 m³/h
Nominal flow rate*	7,130 m³/h	7,130 m³/h	7,130 m³/h
Vacuum at nominal flow rate	3,347 Pa	3,347 Pa	3,347 Pa
Filter area	73 m <sup>2</sup>	73 m²	73 m²
Pre-separator	Integrated	Integrated	Integrated
Extinguishing device	Integrated	Integrated	Integrated
Swarf collection capacity (net / gross)	Rotary lock valve	Rotary lock valve	Rotary lock valve
Sound pressure level***	73 dB(A)	73 dB(A)	73 dB(A)
Dimensions (L / W / H) in mm	3,374 x 1,202 x 2,956	3,164 x 1,058 x 3,027	3,374 x 1,058 x 3,027
Briquette / Rotary lock valve performance	7,232 L/h <sup>2)</sup>	15,744 L/h <sup>2)</sup>	15,744 L/h <sup>2)</sup>
Briquette diameter		_	_
Weight net	1,410 kg	1,027 kg	1,051 kg

<sup>\*</sup> According GS-H0-07 dusted \*\*\* Free sound field measurement according to DIN EN 11201







<sup>2)</sup> Depending on the material

 $<sup>^{\</sup>eta}$ FU - with frequency converter incl. control panel and plain-text display, integrated control loop with pressure transmitter for demand-driven control of the dust extractor

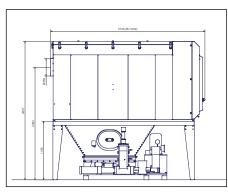
**POWER UNIT (APU)** 

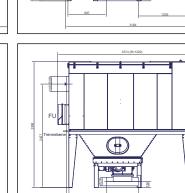
# AL-KO POWER UNIT 350+

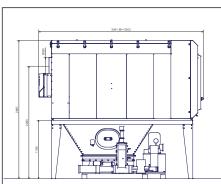


Туре	350* P-BP 30-50	350* P-BP 30-50 FU <sup>1)</sup>	350* P-BP 50-70	350° P-BP 50-70 FU <sup>1)</sup>
Art.no.	199 844	199 850	199 845	199 851
Extraction nozzle	355 mm	355 mm	355 mm	355 mm
Nominal motor rating	15,0 kW/3 Ph	15,0 kW/3 Ph	15,0 kW/3 Ph	15,0 kW/3 Ph
Voltage	400 V/50 Hz	400 V/50 Hz	400 V/50 Hz	400 V/50 Hz
Max. flow rate	ca. 10,000 m³/h	ca. 10,000 m³/h	ca. 10,000 m³/h	ca. 10,000 m³/h
Nominal flow rate*	7,127 m³/h	7,127 m³/h	7,127 m³/h	7,127 m³/h
Vacuum at nominal flow rate	3,347 Pa	3,347 Pa	3,347 Pa	3,347 Pa
Filter area	73 m²	73 m²	73 m²	73 m²
Pre-separator	Integrated	Integrated	Integrated	Integrated
Extinguishing device	Integrated	Integrated	Integrated	Integrated
Swarf collection capacity (net / gross)	Briquette press	Briquette press	Briquette press	Briquette press
Sound pressure level***	73 dB(A)	73 dB(A)	73 dB(A)	73 dB(A)
Dimensions (L / W / H) in mm	3,130 x 1,361 x 2,817	3,341 x 1,361 x 2,817	3,130 x 1,361 x 2,817	3,341 x 1,361 x 2,817
Briquette / Rotary lock valve performance	up to 50 kg/h²)	up to 50 kg/h <sup>2)</sup>	up to 70 kg/h <sup>2)</sup>	up to 70 kg/h²)
Briquette diameter	50 mm	50 mm	70 mm	70 mm
Weight net	1,802 kg	1,826 kg	1,802 kg	1,826 kg

<sup>\*</sup> According GS-HO-07 dusted \*\*On stock







stock \*

<sup>\*\*\*</sup> Free sound field measurement according to DIN EN 11201

<sup>2)</sup> Depending on the material

<sup>&</sup>lt;sup>1)</sup> FU - with frequency converter incl. control panel and plain-text display, integrated control loop with pressure transmitter for demand-driven control of the dust extractor

### **POWER UNIT CONTROL TECHNOLOGY**

Product	Designation	Art. no.
Machine detection incl. slide valve control	APU 140-350* 4ME&4S EXTERNAL  I Machine detection for up to 4 processing machines  I by transducer coils or potential-free contact  I incl. automatic slide valve control  I for up to 4 electropneumatic or electric motor-driven shutter valves in 24 V  I external connection box for independent wall mounting	199 105
	APU 140-350* 8ME&8S EXTERNAL  I Machine detection for up to 8 processing machines  I by transducer coils or potential-free contact  I incl. automatic slide valve control  I for up to 8 electropneumatic or electric motor-driven shutter valves in 24 V  I external connection box for independent wall mounting	199 106
	APU 140-350* 12ME&12S EXTERNAL  I Machine detection for up to 12 processing machines I by transducer coils or potential-free contact I incl. automatic slide valve control I for up to 12 electropneumatic or electric motor-driven shutter valves in 24 V I external connection box for independent wall mounting	199 107
	APU 140-350* 16ME&16S EXTERNAL  I Machine detection for up to 16 processing machines I by transducer coils or potential-free contact I incl. automatic slide valve control I for up to 16 electropneumatic or electric motor-driven shutter valves in 24 V I external connection box for independent wall mounting	199 108
Machine detection	APU/MPJ 140-350* 8ME 230V  I Machine detection for automatic start-up of up to 8 processing machines I by transducer coil I external connection box for independent wall mounting I electrical power supply 230 V to be provided on site I on-site fusing	195 601
Machine detection incl. slide valve control	APU/MPJ 140-350* 8ME&8S 230V  I Machine detection for up to 8 processing machines I by transducer coil or potential-free contact I incl. automatic slide valve control I for up to 8 electropneumatic or electric motor-driven shutter valves in 230 V I external connection box for independent wall mounting I electrical power supply 230 V to be provided on site I on-site fusing	195 602 02
	APU 140-160 P & K control FC  I with frequency converter 2.2 kW incl. control panel and plain-text display  I integrated control loop with pressure transmitter for demand-driven control of the dust extractor	199 094 01
	APU 200 P control FC I with frequency converter 3.0 kW incl. control panel and plain-text display I integrated control loop with pressure transmitter for demand-driven control of the dust extractor	199 095 01
	APU 250-300 P control FC  I with frequency converter 7.5 kW incl. control panel and plain-text display I integrated control loop with pressure transmitter for demand-driven control of the dust extractor	199 096

# **DUST EXTRACTORS**

### **POWER UNIT CONTROL TECHNOLOGY**

Product	Designation	Art. no.
Control options for POWER UNIT 100 – 350*	Flash lamp 24V/DC/RED Flash lamp for visual detection of a fault indication on an AL-KO control unit; flash lamp supplied loose for on-site connection	199 433
	Signal horn with flash lamp Signal horn incl. flash lamp for acoustic and visual detection of a fault indication on an AL-KO control unit; signal horn and flash lamp supplied loose for on-site connection	199 434
	<b>Transducer coil</b> for detection of a processing machine	938 361
	Automatic switch on for 230 V and 400 V up to 16 A, automatic start-up of an extraction device (raw air dust extractor)	938 415
	Automatic switch on for 230 V and 16 A, automatic start-up of an extraction device (raw air dust extractor)	199 569

External controllers for wall mounting, other options and configuration for other voltages on request.

### **POWER UNIT ACCESSORIES**

Product	Designation	Art. no.
Accessories/options	APU 160 splitter silencer For POWER UNIT 160 Add-on silencer for mounting on the unit Height 536 mm Reduce the dB value by 6 dB(A)	199 913
	APU 200 splitter silencer For POWER UNIT 200 Add-on silencer for mounting on the unit Height 536 mm Reduce the dB value by 6 dB(A)	199 911
	APU 250 - 350* splitter silencer  For POWER UNIT 250 - 350*  Add-on silencer for mounting on the unit  Height 610 mm  Reduce the dB value by 6 dB(A)	199 687
	AL-KO LEVEL CONTROL 21 Contactless level filling sensor suitable for ATEX-Zone 21 Ultrasonic sensor For dry dust and chips Preinstalled at AL-KO extraction units or to retrofit	199 100 01
	Bulk shaft compressed air dedusting 1 pc Control on request	197 203

### MACHINE FIRE PROTECTION SYSTEM FOR POWER UNIT 250 - 350<sup>+</sup>

Product	Designation	Art. No.
IGNITION PROTECTION SYSTEM FOR DUST COLLECTOR	APU 250-350* ignition protection system  Ignition protection system for mobil extractors during suction wood and wood materials in indoor areas according to EN 16770  Consisting of: I spark detector FM 1/8 Ex incl. screw-in holder and connection cable I extinguishing device IPS with pressure switch incl. extinguishing nozzle, nozzle holder, flow monitor, terminal box I alarm module incl. optical and acoustic indication	199 903
	Pressure booster pump GDA-70 Only necessary if the domestic water connection is permanently less than 3 bar	197 288
	Installation tool for ignition protection system (reusable)	199 899
	Spare part - spark detector FM 1/8	199 900
	Spare part - extinguishing nozzle K45 for extinguishing device	199 901
	Spare part - alarm module	199 902

# AL-KO DUST COMPARTMENT

### PRACTICAL - SIMPLE - CLEAN

The AL-KO DUST COMPARTMENT, the simple and inexpensive solution for greater cleanliness and health protection in the workplace.

### The benefits for you:

- I Easy to operate
- I Dust-free wind-up during container changes
- I Bag removal with lifting machine
- I Optimised health protection



Release the chippings container



Push in the dust compartment



Replace the chippings container



Reinsert the chippings container and remove the dust compartment



Clamp the chippings container into place

### **CLEAN DUST COMPARTMENT**

Designation	Art. no.
APU 140-160 Dust compartment cpl. <sup>1)</sup>	199 752
APU 200 Dust compartment cpl. <sup>1)</sup>	199 834
APU 250 Dust compartment cpl. <sup>1)</sup>	199 836
APU 300-350* Dust compartment cpl. <sup>1)</sup>	199 837
APU 140-200 Dust compartment	868 283
APU 250-350* Dust compartment	868 340

<sup>&</sup>lt;sup>1)</sup>Content: 1 pc. Dust compartment plus the required guide rail

# **DUST EXTRACTOR**

# **ACCESSORIES**

Product	Designation	Art. no.
PUR spiral hose	PUR spiral hose NW 80 / per metre (flame retardant)	846 093
Individual lengths 5 m / 10 m	PUR spiral hose NW 100 / per metre (flame retardant)	933 873
	PUR spiral hose NW 120 / per metre (flame retardant)	845 631
	PUR spiral hose NW 125 / per metre (flame retardant)	933 874
	PUR spiral hose NW 140 / per metre (flame retardant)	933 875
	PUR spiral hose NW 160 / per metre (flame retardant)	933 876
	PUR spiral hose NW 180 / per metre (flame retardant)	934 233
	PUR spiral hose NW 200 / per metre (flame retardant)	934 136
	PUR spiral hose NW 250 / per metre (flame retardant)	845 316
	PUR spiral hose NW 300 / per metre (flame retardant)	934 698
	PUR spiral hose NW 350 / per metre (flame retardant)	868 506
	PUR spiral hose NW 355 / per metre (flame retardant)	870 482

Worm drive hose clip	Worm drive hose clip NW 50	847 903
	Worm drive hose clip NW 80	847 270
	Worm drive hose clip NW 100	847 041
	Worm drive hose clip NW 120	847 264
7 )	Worm drive hose clip NW 125	847 264
	Worm drive hose clip NW 140	847 074
	Worm drive hose clip NW 160	847 265
	Worm drive hose clip NW 180	847 266
	Worm drive hose clip NW 200	847 267
	Worm drive hose clip NW 250	847 268
	Worm drive hose clip NW 300	847 269
	Worm drive hose clip NW 350	870 483
	Worm drive hose clip NW 355	870 483

# **DUST EXTRACTOR**

# **ACCESSORIES**

Product	Designation	Art. no.
Filter Filter category M	For POWER UNIT 100/MOBIL JET 100 <b>SP-Filter bag</b> 1 pc necessary	195 181
electro conductive	For POWER UNIT 120 H SP-Filter bag 1 pc necessary	195 671
	For POWER UNIT 120 M <b>SP-Filter bag</b> 1 pc necessary	195 673
	For POWER UNIT 140 P filter 1m 16 pcs necessary	851 003 01
	For POWER UNIT 140 H filter 1m 16 pcs necessary	851 011 01
	For POWER UNIT 160 H filter 1m 23 pcs necessary	851 011 01
	For POWER UNIT 160 P filter 1m 23 pcs necessary	851 003 01
	For POWER UNIT 160 K filter 1m 23 pcs necessary	851 003 01
	For POWER UNIT 200 P filter 1m 35 pcs necessary	851 003 01
	For POWER UNIT 250 P filter 1,15m 63 pcs necessary	851 012 01
	For POWER UNIT 300 P filter 1,15m 90 pcs necessary	851 012 01
	For POWER UNIT 350 P filter 1m 57 pcs necessary	867 416
	für POWER UNIT 350° P <b>filter 1m</b> 57 pcs necessary	867 416

Swarf bags for pure air equipment	<b>Swarf bags</b> for APU 100 / 120, D = 520 mm, 1,300 mm long, 20 pcs.	868 154
	<b>Swarf bags</b> for APU 140 / 160 / 200 (705 x 640 x 1,200), 20 pcs.	868 157
	<b>Swarf bags</b> for APU 250 / 300 / 350 / 350+ / ECO JET (890 x 570 x 1,200), 20 pcs.	934 605
	<b>Swarf bags</b> for MOBIL JET 125 / 140 (640 x 600 x 1,000), 20 pcs., up to build year 2005	868 159
	<b>Swarf bags</b> for MOBIL JET 140 / 160 (938 x 620 x 1,200), 20 pcs.	868 160
	<b>Swarf bags</b> for MOBIL JET 200 (780 x 520 x 1,200), 20 pcs.	868 161
	<b>Swarf bags</b> for MOBIL JET 250 / 300 (920 x 780 x 1,150), 20 pcs.	868 162
Swarf bags for raw air equipment	<b>Swarf bags</b> for MOBIL 100, D = 400 mm, 900 mm long, 5 pcs.	868 156
	<b>Swarf bags</b> for MOBIL 125 – 200 / AAS, D = 520 mm, 1,300 mm long, 20 pcs.	868 154
	<b>Swarf bags</b> for MOBIL 125 – 200 / AAS, D = 520 mm, 1,600 mm long, 20 pcs.	868 155

# **DUST EXTRACTOR**

# **ACCESSORIES**

Product	Designation		Art. no.
Floor cleaning sets and accessories for workshop and machine cleaning	Floor cleaning set Metal, consisting of floor of metal elbow extension pipe 2.5 m highly flexible PU ho		938 579
	Floor cleaning set	like 938 579, + adapter for 120	938 579 10
13	Floor cleaning set	like 938 579, but without hose	938 580
	Floor cleaning set	like 938 580, + adapter for 120	938 580 10
	Crevice nozzle	for floor and machine cleaning	520 305

Product	Designation		Art. no.
Valve, electropneumatic 24 V DC / 230 V	EPS 80/1	NW 80 / 1 with rim 24 V / 230 V	192 132
1 = 1 cylinder / 2 = 2 cylinders	EPS 100/1	NW 100 / 1 with rim 24 V / 230 V	192 133
	EPS 120/1	NW 120 / 1 with rim 24 V / 230 V	192 135
	EPS 125/1	NW 125 / 1 with rim 24 V / 230 V	192 136
7	EPS 140/1	NW 140 / 1 with rim 24 V / 230 V	192 138
	EPS 150/1	NW 150 / 1 with rim 24 V / 230 V	192 139
	EPS 160/1	NW 160 / 1 with rim 24 V / 230 V	192 140
	EPS 180/1	NW 180 / 1 with rim 24 V / 230 V	192 141
	EPS 200/1	NW 200 / 1 with rim 24 V / 230 V	192 143
	EPS 220/2	NW 220 / 2 with rim 24 V / 230 V	192 145
	EPS 225/2	NW 225 / 2 with rim 24 V / 230 V	192 146
	EPS 250/2	NW 250 / 2 with rim 24 V / 230 V	192 147
	EPS 280/2	NW 280 / 2 with rim 24 V / 230 V	192 148
	EPS 300/2	NW 300 / 2 with rim 24 V / 230 V	192 149
	EPS 315/2	NW 315 / 2 with rim 24 V / 230 V	192 150
	EPS 350/2	NW 350 / 2 with rim 24 V / 230 V	192 151
	EPS 355/2	NW 355 / 2 with rim 24 V / 230 V	192 152
	EPS 400/2	NW 400 / 2 with rim 24 V / 230 V	192 153
	EPS 450/2	NW 450 / 2 with rim 24 V / 230 V	192 154
	EPS 500/2	NW 500 / 2 with rim 24 V / 230 V	192 155

# **DUST EXTRACTOR**

## **ACCESSORIES**

Product	Designation	Art. no.
Valve, electric motor 24 V DC	MAS 80 / 15 Nm	938 426
40 -	MAS 100 / 15 Nm	938 427
	MAS 120 / 15 Nm	192 001
	MAS 140 / 15 Nm	938 429
A P	MAS 150 / 15 Nm	938 430
	MAS 160 / 15 Nm	938 431
	MAS 180 / 15 Nm	938 432
	MAS 200 / 15 Nm	938 433
	MAS 225 / 15 Nm	938 434
	MAS 250 / 15 Nm	938 435
	MAS 280 / 15 Nm	938 436
	MAS 300 / 15 Nm	938 437

Product	Designation	Art. no.
Residual dust sensor	Residual dust monitoring for AL-KO extraction systems  The residual dust monitoring uses an electrokinetic sensor to detect the residual dust in the return air duct. If the defined limit value of 0.3 mg/m³ is exceeded, the evaluation unit generates a self-holding alarm. If there is a recirculating air valve, it is moved to the outgoing air position.	
4	Residual dust sensor (Residual dust evaluation unit in IP65 housing wired and programmed)	194 648 01

# CLASSIFICATION OF DUST CLASSES

Suitable for dry, dangerous to health, non flammable dust since 01.01.2005	Valid dust class accord. to DIN EN 60335-2-69, annex AA			
non naminable dust since 01.01.2005	Dust class	Maximum passage level		
with AGW* > 1 mg/m <sup>3</sup>	at least L (M, H)	< 1 %		
with AGW* $\geq 0.1 \text{ mg/m}^3$	at least M (H)	< 0.1 %		
with AGW* < 0.1 mg/m <sup>3</sup>	Н	< 0.005 %		
Carcinogenic dangerous substances accord. GefStoffV § 11 TRGS 905 or TRGS 906	Н	< 0.005 %		

<sup>\*</sup>AGW = workplace limit value

# RAW AIR DUST COLLECTORS MOBIL AND AAS

### THE ROBUST SOLUTION FOR CLEANER AIR

Whether you need to extract dust, swarf or plastic, polystyrene, paper, metal or glass waste, at different locations or stationary, AL-KO raw air dust collectors MOBIL and AAS are characterised by optimum extraction performance, robust construction and convenient handling. Both ranges of models ensure a significant reduction of dust levels. Short installation periods and quick-release brackets for fastening the standardised swarf bags simplify work. The AAS series also offers the possibility of switching to swarf collection bins, either as part of the original equipment or at a later stage. Filter cartridges can be refitted at any stage as well.

#### The benefits for you:

- I Exceptional value for money
- I Robust design
- I Easy to operate
- I Outstanding extraction performance
- I Wide range of possibilities for retrofitting



# MOBIL RAW AIR DUST COLLECTORS MOBIL | AAS



### **MOBIL 100 - 200**

Туре	1001)**	125W**	125D**	140W**	140D**	160**	200**
Art. no.	195 174	195 125	195 126	195 142 50	195 127 50	195 129 50	195 131 50
Extraction nozzle	100 mm	125 mm	125 mm	140 mm	140 mm	160 mm	200 mm
Nominal motor rating	0.75 kW/1 Ph	0.75 kW/1 Ph	0.75 kW/3 Ph	0,75 kW/1 Ph	0.75 kW/3 Ph	1.5 kW/3 Ph	2.2 kW/3 Ph
Voltage	230 V/50 Hz	230 V/50 Hz	400 V/50 Hz	230 V/50 Hz	400 V/50 Hz	400 V/50 Hz	400 V/50 Hz
Flow rate	865 m³/h	1,350 m³/h	1,350 m³/h	1,650 m³/h	1,650 m³/h	2,200 m³/h	2,500 m³/h
Vacuum at nominal flow rate	1,780 Pa	1,600 Pa	1,600 Pa	1,750 Pa	1,750 Pa	2,500 Pa	2,700 Pa
Filter area	1.1 m <sup>2</sup>	2.2 m <sup>2</sup>					
Swarf collection capacity	90 L	175 L	175 L	175 L	175 L	175 L	175 L
Dimensions (L/W/H) in mm	883x479x1,622	1,093x577x2,300	1,093x577x2,300	1,093x577x2,300	1,061x577x2,300	1,061x577x2,300	1,094x577x2,300
Weight net	26 kg	51 kg	53 kg	52 kg	53 kg	53 kg	60 kg

<sup>1) 2</sup> m hose included in the delivery

Use in the wood industry is not permitted according DIN EN 16770



### **AAS 1013-AFB - 6013-AFB**

Туре	1013-AFB	2013-AFB	3013-AFB	4013-AFB	5013-AFB	6013-AFB
Art. no.	199 451	199 452	199 457	199 458	199 459	199 460
Extraction nozzle	160 mm	160 mm	200 mm	250 mm	250 mm	300 mm
Nominal motor rating	2.2 kW/3Ph	2.2 kW/3Ph	3 kW/3Ph	4 kW/3Ph	5.5 kW/3Ph	7.5 kW/3Ph
Voltage	400 V /50 Hz	400 V /50 Hz	400 V /50 Hz	400 V /50 Hz	400 V /50 Hz	400 V /50 Hz
Nominal flow rate*	1,300 m³/h	1,300 m³/h	2,500 m <sup>3</sup> /h	3,500 m <sup>3</sup> /h	4,500 m³/h	5,500 m <sup>3</sup> /h
Max. flow rate	1,800 m³/h	2,300 m³/h	3,300 m³/h	4,300 m <sup>3</sup> /h	5,300 m³/h	7,300 m³/h
Max. vacuum	2,100 Pa	2,200 Pa	2,700 Pa	2,500 Pa	2,900 Pa	2,900 Pa
Filter area	2.2 m <sup>2</sup>	2 x 2.2 m <sup>2</sup>	3 x 2.2 m <sup>2</sup>	4 x 3.5 m <sup>2</sup>	5 x 3.5 m <sup>2</sup>	6 x 3.5 m <sup>2</sup>
Swarf collection capacity	175 L	2 x 175 L	3 x 175 L	4 x 175 L	5 x 175 L	6 x 175 L
Dimensions (L/W/H) in mm	1,149 x 578 x 2,115	1,817 x 578 x 2,115	2,193 x 578 x 2,115	3,416 x 787 x 2,754	4,101 x 787 x 2,754	4,786 x 787 x 2,754
Weight net	74 kg*	103 kg*	139 kg*	238 kg*	277 kg*	319 kg*

<sup>\*</sup> incl. bin

<sup>\*\*</sup>On stock

# MOBIL RAW AIR DUST COLLECTORS AAS



#### AAS 1013 - 6013

Туре	1013KS	1013	2013 KS	2013
Art. no.	195 773 01	199 375 01	195 774 01	199 376 01
Extraction nozzle	160 mm	160 mm	160 mm	160 mm
Nominal motor rating	2.2 kW/3Ph	2.2 kW/3Ph	2.2 kW/3Ph	2.2 kW/3Ph
Voltage	400 V /50 Hz	400 V /50 Hz	400 V /50 Hz	400 V /50 Hz
Nominal flow rate	1,300 m³/h	1,300 m³/h	1,300 m³/h	1,300 m³/h
Max. flow rate	1,800 m³/h	1,800 m³/h	2,300 m³/h	2,300 m³/h
Max. vacuum	2,100 Pa	2,100 Pa	2,200 Pa	2,200 Pa
Filter area	2.2 m <sup>2</sup>	2.2 m <sup>2</sup>	2 x 2.2 m <sup>2</sup>	2 x 2.2 m <sup>2</sup>
Swarf collection capacity	175 L	175 L	2 x 175 L	2 x 175 L
Dimensions (L/W/H) in mm	1,149 x 578 x 2,115	1,149 x 578 x 2,115	1,817 x 578 x 2,115	1,817 x 578 x 2,115
Weight net	61 kg	61 kg	76 kg	76 kg

Туре	3013	4013	5013	6013
Art. no.	192 452 01	195 776 02	195 777 02	195 778 02
Extraction nozzle	200 mm	250 mm	250 mm	300 mm
Nominal motor rating	3 kW/3Ph	4 kW/3Ph	5.5 kW/3Ph	7.5 kW/3Ph
Voltage	400 V /50 Hz			
Nominal flow rate	2,500 m³/h	3,500 m³/h	4,500 m³/h	5,500 m³/h
Max. flow rate	3,300 m³/h	4,300 m³/h	5,300 m³/h	7,300 m³/h
Max. vacuum	2,700 Pa	2,500 Pa	2,900 Pa	2,900 Pa
Filter area	3 x 2.2 m <sup>2</sup>	4 x 3.5 m <sup>2</sup>	5 x 3.5 m <sup>2</sup>	6 x 3.5 m <sup>2</sup>
Swarf collection capacity	3 x 175 L	4 x 175 L	5 x 175 L	6 x 175 L
Dimensions (L/W/H) in mm	2,486 x 578 x 2,115	3,416 x 787 x 2,754	4,101 x 787 x 2,754	4,786 x 787 x 2,754
Weight net	98 kg	182 kg	207 kg	236 kg

Use in the wood industry is not permitted according DIN EN 16770

The **AAS 1013 – 6013** raw air units are equipped with steel castors as standard. AAS 1013 and 2013 are additionally available as variants with plastic castors (KS, only in version with swarf bags).

- I Extraction nozzle on top in standard version, conversion to nozzle underneath is generally possible on site without extra cost
- I Selection between two standard discharge variants (swarf bag, swarf collection bin)
- I Container painted in RAL 7035 structured finish, body with feet in galvanised steel plate design
- I Units can be retrofitted for swarf collection barrels (AFB) on site; for this, there is a retrofit set for AAS 1013 3013 and a retrofit set for AAS 4013 6013. These sets comprise a container as well as the holding and fastening materials.
- Uniform swarf bags for all unit variants (art. no. 868 154, D=520, 1,300 mm long)
- I Filter length with AAS 1013 3013 = 1,000 mm filter length with AAS 4013 6013 = 1,600 mm
- I Filter cartridges art. no. 195 194 can be retrofitted at any time

# MOBIL RAW AIR DUST COLLECTORS

# MOBIL | AAS | BAG

Product	Type			Art. no.
Connection cable for raw air equipment	Connection cable 230 V, 5 m with plug-in	n connection		520 195
	Connection cable 400 V, 5 m with plug-in	n connection		520 196
Accessories/options	Retrofit set AFB	AAS 1013-3013	Comprising: 1 Pc. bin as well as	199 461
	Retrofit set AFB	AAS 4013-6013	the holding and fastening materials	199 462
	Transport device	AAS 1013	- Comprising: 1 Pc. base plate and castors for mobile handling of the AAS	199 504
	Transport device	AAS 2013		199 505
	Transport device	AAS 3013		199 506
Filter	for MOBIL 100 Filter	320 / 400 700		934 988
	for AAS 1000-3000 / /	for AAS 1000-3000 / AAS 1013-3013 / MOBIL 125-200 filter 525 / 625 1000		
	for AAS 4000-6000 / A	for AAS 4000-6000 / AAS 4013-6013 <b>filter 525 / 625 1600</b>		
	for BAG 140-200 filte	for BAG 140-200 <b>filter Kat. L 1600</b>		
Filter cartridges	· · ·	Filter cartridges for raw air equipment diameter 330 mm for MOBIL 100 (Height of the filter cartridges with Ø 330 mm = 890 mm); 6 m <sup>2</sup>		
	Filter cartridges for raw air equipment of (height of the filter car			195 194

# MOBILE VENTILATION EXTRACTION FAN

#### The benefits for you:

I Fresh air supply for working with construction chemicals
I Fresh air supply for working with loose materials
I Fresh air supply for working in rooms with uncomfortable air conditions





### **BAG 140 - 200**

Туре	140	200
Art. no.	199 679	199 677
Intake nozzle	120 mm and 140 mm	120 mm and 200 mm
Nominal motor rating	1.1 kW/1 Ph	2.2 kW/3 Ph
Voltage	230 V/50 Hz	400 V/50 Hz
Flow rate	1,650 m³/h	2,500 m³/h
Vacuum at nominal flow rate	1,750 Pa	2,700 Pa
Filter surface	3 m <sup>2</sup>	3 m²
Swarf collection capacity	175 L	175 L
Dimensions (L /W / H) in mm	590* x 632 x 835	590* x 632 x 835
Weight net	ca. 29 kg	ca. 34 kg

# MOBILE PAINT MIST EXTRACTION

## **FLEXIBLE AND EFFICIENTLY**

#### Your benefits:

- I mobile design
- I high degree of separation, high suction performance
- l easy to handle
- I long filter life, therefore less downtime
- I flexible due to suction technology with front panel system
- I certified for ATEX-zone 2

### **COLOUR JET**

Туре	Туре 1	Type 2	Туре 3	Type 4
Art. no.	195 627 01	195 628 01	195 629 01	195 752 01
Motor rating	1.5 kW	0.75/2.1 kW	0.75/2.1 kW	2.2 kW
Motor speed	1,410 min <sup>-1</sup>	960/1,430 min <sup>-1</sup>	960/1,430 min <sup>-1</sup>	1,430 min <sup>-1</sup>
Air volume	4,600 m³/h	3,000 / 6,800 m³/h	3,000 / 6,800 m <sup>3</sup> /h	6,800 m³/h
Usable pressure	500 Pa	400 / 500 Pa	400 / 500 Pa	500 Pa
Dimensions (L/W/H) in mm	1,012 x 1,405 x 912	1,012 x 1,405 x 943	1,912 x 1,405 x 943	1,912 x 1,405 x 943
Dimensions (L/W/H) in mm*	1,897 x 1,405 x 1,144	1,897 x 1,405 x 1,177	2,971 x 1,405 x 1,131	2,971 x 1,405 x 1,215
Filter area	1 m <sup>2</sup>	1 m <sup>2</sup>	2 m <sup>2</sup>	2 m²
Weight net	175 kg	176 kg	248 kg	248 kg

<sup>\*</sup> with opened side parts

Product	Туре		Art. no.
Accessories/options	· ·	ET 2, COLOUR JET 3, COLOUR JET 4, diameter 300 mm r with flange ring, 1 cover flap for outside wall)	195 376 01
	Energy-saving stand Hook-on fixture for spray gun wi throttle valve (integrated in COLO	195 753	
	Volume paper filter for COLOUR JET 1, COLOUR JE prefilter for hooking onto COLOU	T 2: Holding frame with additional volume paper, JR JET	195 630 01
	Volume paper filter for COLOUR JET 3, COLOUR JE prefilter for hooking onto COLOU	T 4: Holding frame with additional volume paper, JR JET	195 631 01
	1 replacement volume paper filter	for COLOUR JET 1, COLOUR JET 2	195 640
	1 replacement volume paper filter	for COLOUR JET 3, COLOUR JET 4	195 650
	1 replacement prefilter	for COLOUR JET 1, COLOUR JET 2	195 651
	1 replacement prefilter	for COLOUR JET 3, COLOUR JET 4	195 652
	1 replacement fine filter	for COLOUR JET 1, COLOUR JET 2	195 653
	1 replacement fine filter	for COLOUR JET 3, COLOUR JET 4	195 654
	Teflon spray	Content: 400 ml	195 389

# PROGRAM AL-KO VENTILATING AND AIR-CONDITIONING SYSTEMS

#### Air handling unit type AT4-F

The AT4-F kit is the basis for your air conditioning and ventilation system. In the development of the housing has AL-KO particularly strict standards created. So are indoor and outdoor space not only completely decoupled from each other, the AT4-F modules also correspond in each configuration according to T2 / TB2 energy standard. With the sensibly graduated device cross-sections air capacities of 1,000 m³/h up to 120,000 m³/h can be realized. The housing construction is completely dismantled. The housing panel consists of a sandwich construction of two hot galvanized sheet steel shells with an internal, non-combustible insulation. The panels are 47 mm thick, cold bridge free and powder coated.



A supply air device typically consists of an outside air filter, a hot water heat exchanger and a fan. If required, this device can also be extended with regulation and additional ventilation components such as e.g. a cooling register.

An ideal complement to our paint mist extractors. For instance with an air volume of 3,000 m³ / h up to 7,000 m³ / h.

# The ideal air heating or air cooling for your working space

AL-KO offers a comprehensive program on decentralized air heating and cooling units. Your working space can be heated electric or with hot or cold water in an energy-efficient way (6 - 73 kW heat output) or cooled (5 - 66 kW cooling capacity). Devices for the ATEX area complete this assortment off.



#### **Applications:**

- I commercial, industrial and automotive
- I spraying and painting equipment
- I medicine / pharma
- I human climate





# HIGH-PERFORMANCE INDUSTRIAL VACUUM AL-KO

### SOLUTIONS THAT IMPROVE EFFICIENCY

AL-KO industrial vacuum cleaners are not simple vacuum cleaners but true industrial tools capable of increasing the efficiency of each industrial process, ensuring security and cleaning standards even in the most demanding environments.

From the wood-working handicraft to the foundry, from the small bakery to the largest automotive industry, our vacuum cleaners have solved and continue to satisfy the cleaning requirements of industry worldwide.

The AL-KO sales team is available to our customers at any time with its professionalism and competence. We always find the best result for every application, wether in terms of cleaning or material recovery. Instead of selling products, AL-KO offers real solutions to meet your expectations or even exceed them.

# JET-STREAM ALTERNATING CURRENT INDUSTRIAL VACUUM CLEANERS







Model	JS M	JS 202 DS M*	JS DM 3 EL M*
Art.no.	192 451	197 000	197 023 01
Motor performance	1.2 kW/ 230 V/ 50 Hz	2.3 kW/ 230 V/ 50 Hz	3,45 kW/ 230 V/ 50 Hz
Max. vacuum	22,000 Pa	25,000 Pa	25.000 Pa
Max. volume flow	150 m³/h	360 m³/h	540 m³/h
Filter area / diameter	6,000 cm <sup>2</sup>	30,000 cm²/ 360 mm	30.000 cm²/ 500 mm
Filtertype main filter	flat-fold filter	cartridge, polyester	star, polyester
Dust class Cat. BIA	M (<0.1 mg/m³)	M (<0.1 mg/m³)	M (<0,1 mg/m³)
Filter area load	250 m³/(m²xh)	120 m³/(m²xh)	180 m³/(m²xh)
Filter cleaning system	automatic	Dustop	manual
Suction nozzle	Ø 35 mm	Ø 50 mm	Ø 80 mm
Storage capacity	43 I	20	60 I
Noise level (EN ISO 3744)	67 dB(A)	76 dB(A)	76 dB(A)
Dimension (L x W x H)	520 x 380 x 695 mm	590 x 480 x 1,100 mm	670 x 660 x 1.340 mm
Weight	approx. 13,7 kg	approx. 35 kg	approx. 77 kg

\*not suitable to extract wood dust

# JET STREAM

#### RELIABILITY

Discover every day the reliability of each AL-KO vavuum cleaner. Not only because each vacuum cleaner is the perfect combination of quality, safety and technology, but also because you have at your disposal a unique service, attentive to your requirements and your needs

The choice of an AL-KO industrial vacuum cleaner guarantees that you will be able to work with the certainty of being able to count an safe and efficient device in all situations.

#### SAFETY

SAFETY is not just an abstract concept at AL-KO, but a real philosophy. From the engineering to certification, our goal is to provide to our customers state of the art, safe and user-friendly AL-KO extraction solutions.

Whether ATEX industrial vacuum cleaners or systems in dust class M or H, AL-KO always offers the right solution and the corresponding device.

## **JET-STREAM**

ALTERNATING CURRENT
INDUSTRIAL VACUUM CLEANERS





#### optional:

Machines also available in the ATEX version and with additional filter of dust class H









Dust class M (medium hazard) according EN 60335-2-69, for separating dust with exposure limit value more than 0.1 mg/m³.



Dust class H (high hazard) according EN 60335-2-69, for separating dust with exposure for any dust with all exposure limits, including carcinogenic and pathogenic dusts.

#### iiiiis, iiiciuuiiig carciiio(

**Your Benefits** 

- I mobile collection container
- I comfortable lever clamping closure
- I optionally with tear-resistant plastic bags and appropriate sack holder
- I robust steel frame with powder painting
- I trackless rotatable wheels and parking brake
- I All-steel design, durable and indestructible

Model JS 4535 M\* JS DG 70 EXP M\* 197 023 197 037 Art.no. Motor performance 3,.5 kW/ 230 V/ 50 Hz 5.5 kW/ 400 V/ 50 Hz Max. vacuum 25,000 Pa 36,000 Pa Max. volume flow 540 m<sup>3</sup>/h 530 m<sup>3</sup>/h Filter area / diameter 30,000 cm<sup>2</sup>/ 500 mm 30,000 cm<sup>2</sup>/ 500 mm Filtertype main filter star, polyester star, polyester **Dust class Cat. BIA**  $M (< 0.1 \text{ mg/m}^3)$  $M (< 0.1 \text{ mg/m}^3)$ Filter area load 180 m<sup>3</sup>/(m<sup>2</sup>xh) 176 m<sup>3</sup>/(m<sup>2</sup>xh) Filter cleaning system manual manual Suction nozzle Ø 80 mm Ø 80 mm Storage capacity 100 I 100 I Noise level (EN ISO 3744) 76 dB(A) 72 dB(A) Dimension (L x W x H) 770 x 660 x 1,500 mm 660 x 1,180 x 1,450 mm Weight approx. 85 kg approx. 150 kg

\*not suitable to extract wood dust

# HIGH-PERFORMANCE INDUSTRIAL VACUUM AL-KO

## **APPLICATIONS**

The JETSTREAM high-performance industrial vacuum cleaners are used in a wide variety of industries. You will find us in the wood industry, metal industry, plastics industry, pharmaceutical industry, food industry, building materials industry and many more.

Whether dusts, liquids or solids, we suit every area and offer a fitting vacuum cleaner for a diversity of applications.









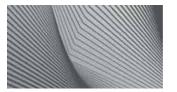
Wood

Metal

**Plastic** 

Paper





**JET STREAM** Vacuum cleansers for cleaning in diverse

scope of applications

Stone Other

#### JET STREAM 202

for cleaning of woddworking machines and working area Easy handling, professional cleaning





# JET STREAM



Industrial vacuum cleaners can be used in many industries and areas. Let us advise you on the one specific to your application, get tailored solution.



**JET STREAM 4533** for cleaning of areas, equipped with floor suction nozzle



# HIGH-PERFORMANCE INDUSTRIAL VACUUM AL-KO

## **OPTIONAL ACCESSORIES**

Using original AL-KO accessories increases the performance of your industrial vacuum cleaner. For the different applications we offer you the right Equipment. For more information, please refer to our accessories catalog or contact our service center.

Accessories / s	suitable for		JS M	JS 202 DS M	JS 4535 M	JS DM 3 EL M	JS DG 70 ECEXP M
		Art.no.					
	<b>Trade and industry kit</b> extension tube 2-pc DN35, elbow, upholstery nozzle, joint nozzle DN35, floor nozzle DN35 widet, floor nozzle DN35 small, all-purpose nozzle	195 587					
0	Device connector D50 for suction hose	197 105		Х			
9	Device connector D80/50 for suction hose	197 050			Х	Х	Х
	Antistatic PE suction hose D40 length 3m incl. sockets	197 058		Х			
	Antistatic PE suction hose D40 length 5m incl. sockets	197 106		Х			
	Antistatic PE suction hose D50 length 3m incl. sockets	197 060			Х	Х	Х
	Antistatic PE suction hose D50 length 5m incl. sockets	197 107			Х	Х	Х
~	Hand tube in aluminium D40	197 004		Х			
~	Hand tube in aluminium D50	197 113			Х	Х	Х
W,	Floor nozzle with rolls and brushes D40/width 430mm	197 005		Х			
W.	Floor nozzle with rolls and brushes D50/width 430mm	197 108			Х	Х	Х
	Joint nozzle flat out of aluminium D40/length 500mm	197 109		Х			
	Joint nozzle flat out of aluminium D50/length 500mm	197 110			Х	Х	Х

# JET STREAM

Accessories / s	suitable for		US M	JS 202 DS M	JS 4535 M	JS DM 3 EL M	JS DG 70 ECEXP M
		Art.no.					
	Bristle brush out of aluminium/nylon D40	197 111		Х			
	Bristle brush out of aluminium/nylon D50	197 112			Х	Х	Х
	M- filter antistatic	197 002		Х			
	M- filter antistatic	197 020			Х		
	M- filter antistatic	197 025				X	
	M- filter antistatic	197 039					Х
	H- absolute filter dust class H14	197 001		Х			
	H- absolute filter dust class H14	197 019			Х		
	H- absolute filter dust class H14	197 024				Х	
	H- absolute filter dust class H14	197 032					Х
	Paper filter bags, 5 pc	195 588	Х				
	Replacement filter	195 589	Х				
	Suction hose 4m with socket	195 590	Х				
	Connecting adapter	195 591					
	Disposable bag, antistatic D360/400 mm, 80 micron, 1 pc	197 085		Х			
	Disposable bag, antistatic D400/450 mm, 80 micron, 1 pc	197 086				X	Х
	Support ring for plastic bags D300	197 102		Х	Х		
	Support ring for plastic bags D400	197 103				Х	Х

Filter prices are only valid for original equipment ex works, additional accessories and spare parts on request







Calculation of the stationary systems is made by a max. Filter load of 150  $m^3/m^2$ \*h.

More than this value is not allowed by AL-KO and is only made on responsibility of the commissioning engineer.

While developing the ECO JET compact filter systems, AL-KO focussed on three goals: ECO JET offers you maximum security of investment, exceedingly low operating costs and maximum convenience. This is why every ECO JET system is of course fitted with the unique AL-KO OPTI JET® filter system: For you and your valuable machinery this means cleaner air, constant extraction performance, lower energy consumption, less noise and vibration, longer filter service life and thus less downtime as well as predictable maintenance intervals. In addition, the programmable controller enables you to make changes at any time with little effort. That's security of investment you can enjoy on a daily basis.

#### The benefits for you:

- I Permanently clean air for humans and machines
- I Low energy consumption
- Less downtime and predictable maintenance intervals
- I Low sound and vibration emission
- I Easy to extend











# STATIONARY COMPACT FILTER SYSTEMS **ECO JET**

#### | Default disposal:

I Waste container

I Rotary feeder

I Briquetting press

I Round discharge

#### | Special disposal:

Sliding floor, chain floor, screw conveyor and other variations on request

#### Options:

Spacer rings for longer filters = more filter area = lower filter load = reduction of the differential pressure = reduction of energy- and operating costs

alternative

As expansion increase = calming of the air speed = filter protection = higher liftetime



#### **Excerpt of possible variations. Other versions on request.**

Туре	Type 2	Туре 3	Type 4	Type 5
Vacuum at nominal flow rate	2,500 Pa	3,700 – 4,200 Pa	2,500 – 4,200 Pa	2,100 – 3,700 Pa
Motor rating	3.0 kW	5.5 – 11 kW	7.5 – 15 kW	7.5 – 15 kW
Flow rate	2,300 m³/h	2,500 - 4,200 m <sup>3</sup> /h	6,045 - 10,000 m <sup>3</sup> /h	6,045 - 10,000 m <sup>3</sup> /h
Filter area	17.3 m <sup>2</sup>	$23 - 38.8 \text{ m}^2$	28.8 – 58.2 m <sup>2</sup>	40.3 – 77.6 m <sup>2</sup>
Depth	1,122 – 1,315 mm	1,122 — 1,315 mm	1,122 – 1,315 mm	1,122 – 1,315 mm
Length	2,225 mm	2,440 mm	3,188 mm	3,950 mm
Height	2,959 mm	2,959 – 4,816 mm	2,959 - 5,269 mm	2,959 – 5,562 mm

Туре	Type 6	Type DUO 6	Type DUO 8	Type DUO 10
Vacuum at nominal flow rate	2,250 – 3,000 Pa	2,100 – 4,700 Pa	2,100 – 4,700 Pa	2,100 – 4,700 Pa
Motor rating	11 – 18.5 kW	15 – 18.5 kW	2 x 11 – 2 x 15 kW	2 x 11 – 2 x 18.5 kW
Flow rate	7,770 – 10,000 m³/h	5,700 - 13,000 m <sup>3</sup> /h	8,000 - 17,000 m <sup>3</sup> /h	8,000 – 22,000 m³/h
Filter area	51.8 – 97 m <sup>2</sup>	57.6 – 97 m <sup>2</sup>	69.2 – 116.4 m <sup>2</sup>	92 – 155.2 m²
Depth	1,122 – 1,315 mm	2,121 – 2,000 mm	2,121 – 2,000 mm	2,121 – 2,000 mm
Length	4,563 mm	2,530 mm	3,188 mm	3,919 mm
Height	2,959 – 4,057 mm	3,610 - 5,245 mm	3,610 - 5,245 mm	3,996 – 5,572 mm

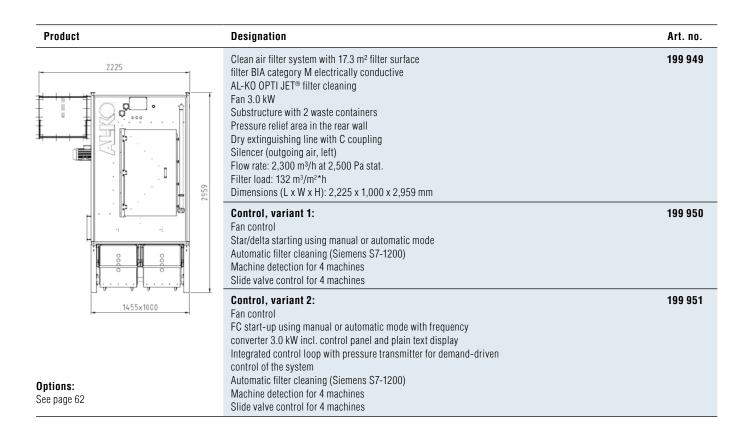
# STATIONARY COMPACT FILTER SYSTEMS **ECO JET**

For calculation of other System-variations, please send following information to us:

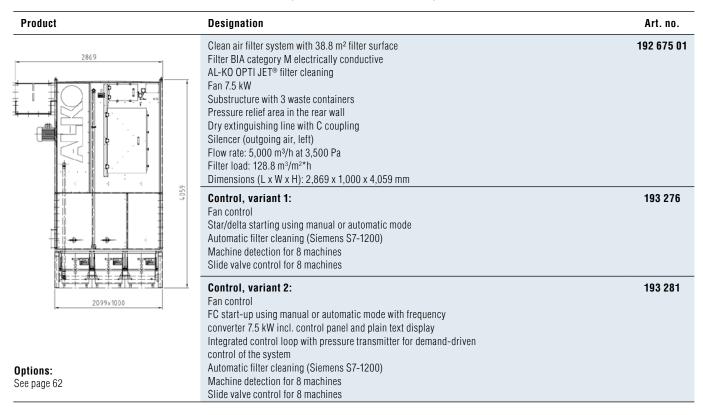
Checklist ECO JET				
Partner:				
Customer:				
Project:				
Flow rate (m³/h):				
Vacuum fan total (Pa):				
Pressure fan total (Pa):				
Filter area (m²):				
Filter load: Please observe the rules (such as wood max. 150 m³/m²*h)				
Voltage solenoid valves 24 V / 230 V:				
Special voltage (such as V/Hz):				
Machines to extract:				
Material to extract:				
Material per hour (kg):				
Installation situation (on roof, walls, near buildings, place of installation):				
ATEX Zone:	Yes	(Cat:	)	No
ECO JET top:				
Number of fans:				
ECO JET spacer rings:	Yes	(Height:	)	No
ECO JET bottom / disposal:				
Inlet (mm):				
Pipes:				
Sound damper (guidelines sound):	Yes	(dB(A):	)	No
Control requirements:				

# STATIONARY COMPACT FILTER SYSTEMS (Excerpt)

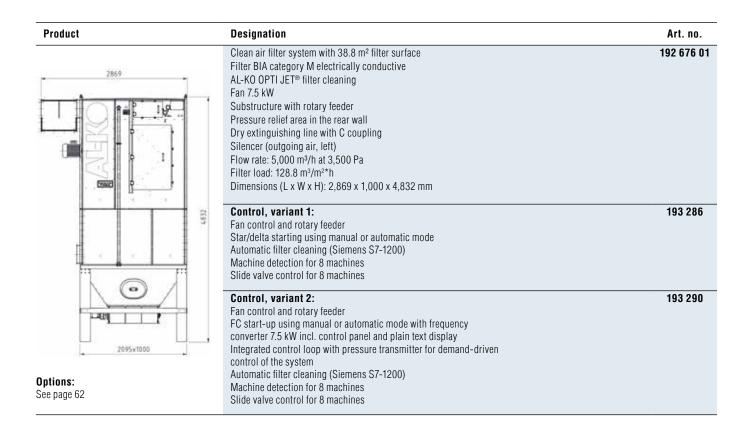
## ECO JET 2 AFB 3.0 KW (waste container)



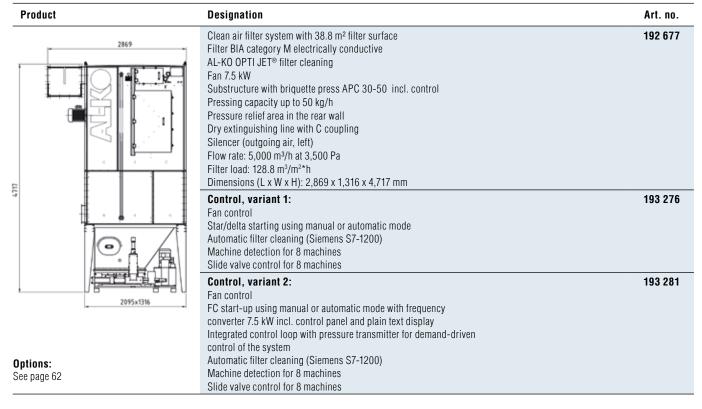
## ECO JET 3 XL AFB 7,5 KW (waste container)



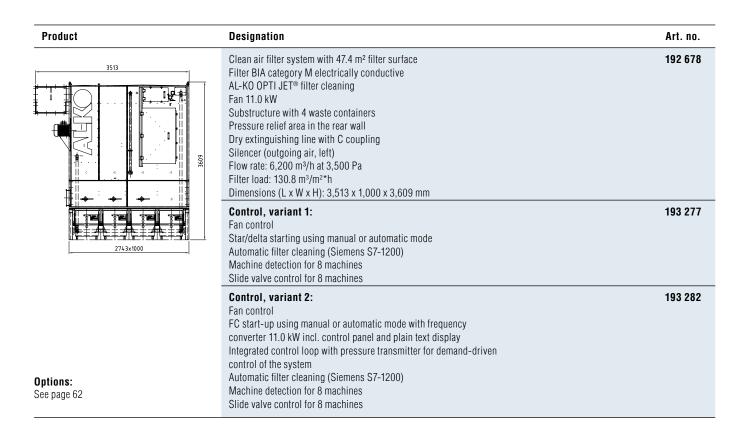
## ECO JET 3 XL ZRS 7.5 KW (rotary feeder)



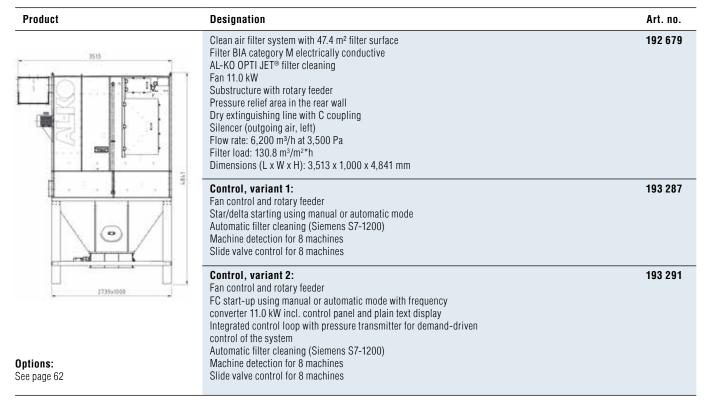
## ECO JET 3 XL BP 7.5 KW (briquetting press)



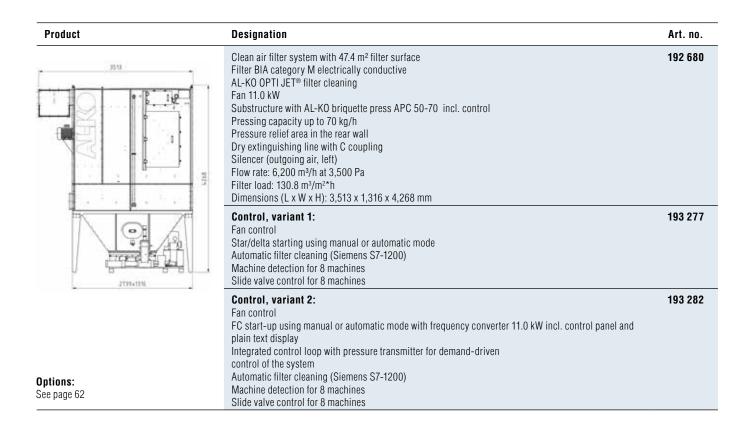
## ECO JET 4 L AFB 11 KW (waste container)



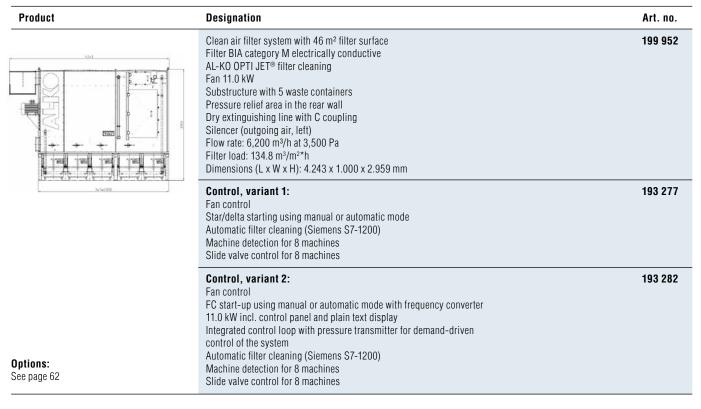
# ECO JET 4 L ZRS 11 KW (rotary feeder)



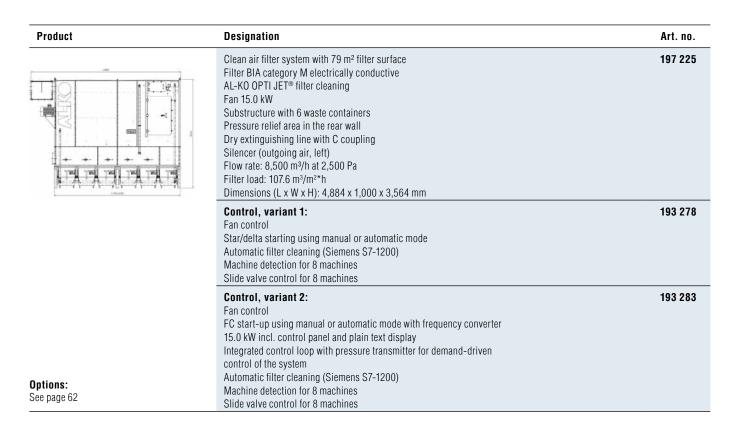
## ECO JET 4 L BP 11 KW (briquetting press)



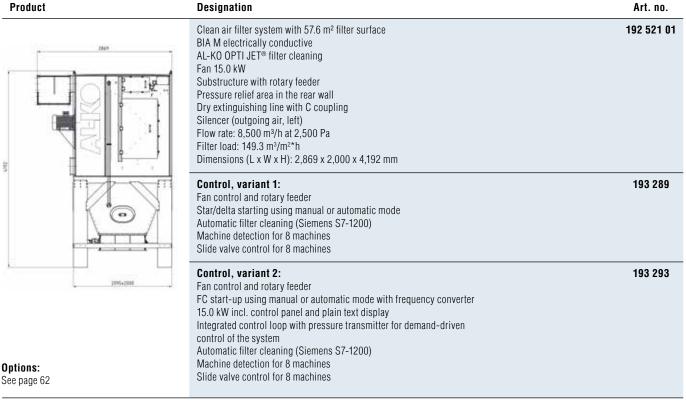
## ECO JET 5 AFB 11 KW (waste container)



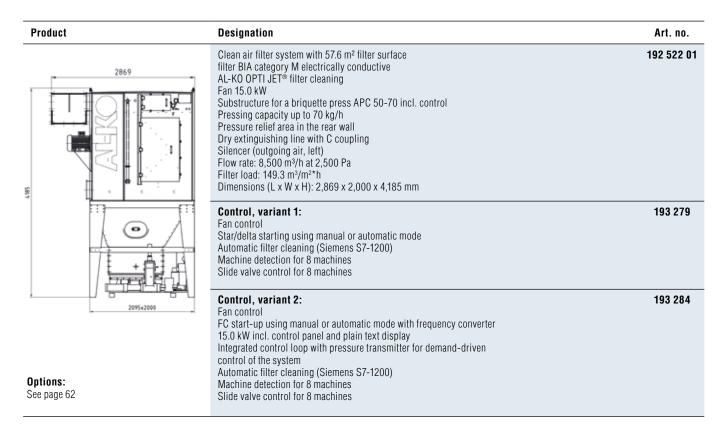
## ECO JET 6 L AFB 15 KW (waste container)



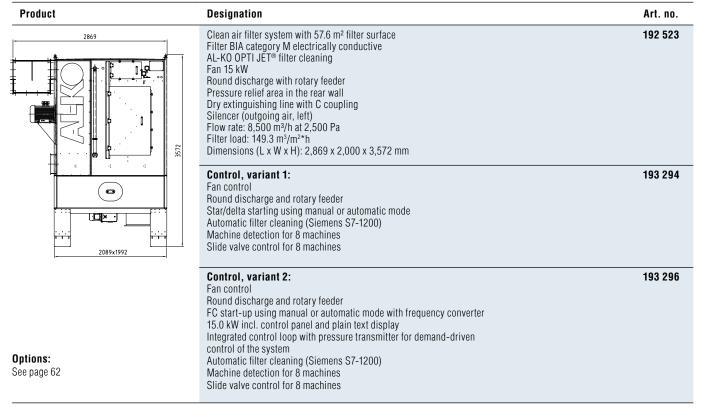
## ECO JET DUO 6 ZRS 15 KW (rotary feeder)



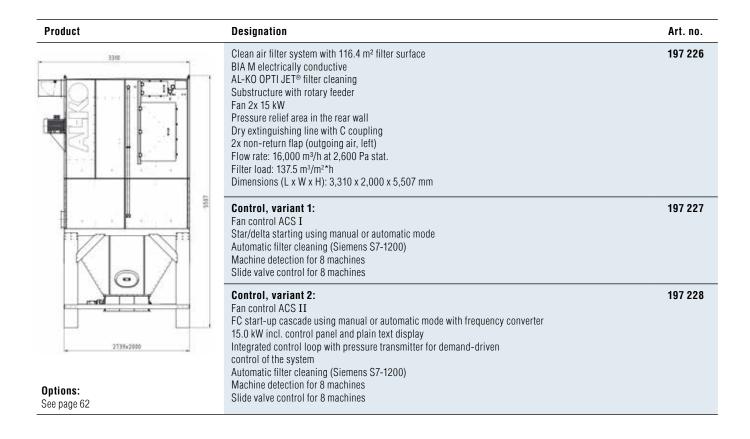
## ECO JET DUO 6 BP 15 KW (briquetting press)



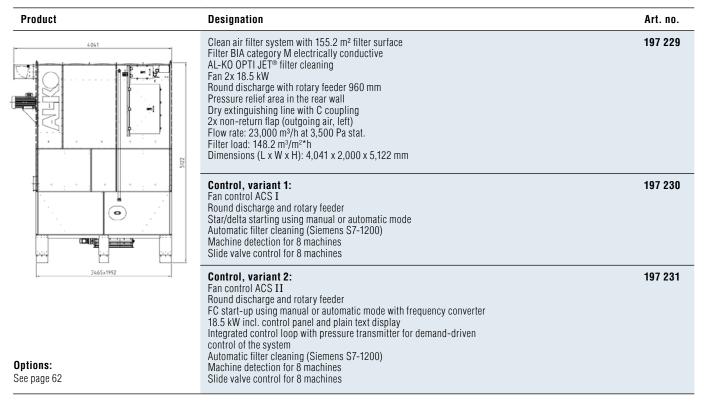
### ECO JET DUO 6 RA 15 KW (round discharge)



## ECO JET DUO 8 XL ZRS 2x15 KW (rotary feeder)



## ECO JET DUO 10 XL RA 2x18.5 KW (round discharge)



### **ACCESSORIES ECO JET**

#### IMPORTANT: In all stationary systems of the ECO JET series, it is necessary to order the intake sockets as well!

Product	Designation	Art. no.
Intake socket	Intake sockets 200 mm with check valve in rectangular duct	199 610
	Intake sockets 250 mm with check valve in rectangular duct	199 611
	Intake sockets 300 mm with check valve in rectangular duct	199 612
	Intake sockets 2 x 250 mm with check valve in rectangular duct	199 613
	Intake sockets 2 x 300 mm with check valve in rectangular duct	199 614
	Intake sockets 315 mm with check valve in rectangular duct	199 323
	Intake sockets 350 mm with check valve in rectangular duct	199 479
	Intake sockets 355 mm with check valve in rectangular duct	199 324
	Intake sockets 400 mm with check valve in rectangular duct	199 325
Swarf bags	Swarf bags for ECO JET/ PROFI JET 20 pcs	934 605
Silencer/ Exhaust- return air hood	ECO JET exhaust air silencer V1	938 022 01
	ECO JET exhaust air silencer V2	199 480
	ECO JET return air channel EA/RA	199 953 01
	ECO JET DUO return air channel EA/RA	199 954 01
	ECO JET non-return flap 910x346x250 mm	199 975 01
Cleaning bulk shaft	Bulk shaft compressed air dedusting	199 751
Control	Slide valve control quad group	193 742
	Horn & flash lamp fault indication	193 763
	EA/RA control 24V	193 773
	ACS AL-KO LEVEL CONTROL 21 ATEX	193 759 01
	Paddle switch 24V- 230V	199 842
	Control dedusting bulk shaft 1 pc	193 803
		193 803 867 231

# STATIONARY SYSTEM FILTER EQUIPMENT PROFIJET

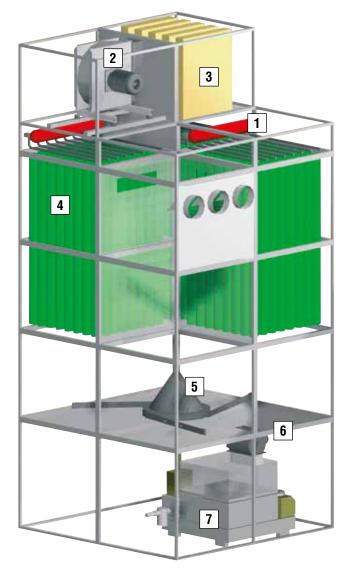
On the following pages you will find a few variations. More systems on request.

Calculation of the stationary systems is made by a max. Filter load of 150  $\text{m}^3/\text{m}^2*\text{h}$ . More than this value is not allowed by AL-KO and is only made on responsibility of the commissioning engineer.

- **1** Efficient and economical: Large air surge tank with fast diaphragm valves for effective OPTI JET® filter cleaning and lowest use of compressed air.
- **2** Safely regulated: Process fans according to ErP Directive 2009/125/EC.
- **3** Safeguarding good neighbourhood relations: sound-insulated return air chamber, optionally with sound-absorbing panels providing the lowest sound emission values on the market.
- **4** Optimum efficiency: OPTI JET® filter bag (BGIA-tested for dust class M).
- **5** According to your preference: Discharge made from galvanised steel plates or welded and powder-coated.
- **6** AL-KO rotary feeder pressure-tested according to ATEX Directive 2014/34/EU.
- **7** They soon pay themselves off: AL-KO briquette presses.

#### The benefits for you:

- I Individual solution with cost-effective standard components
- I AL-KO OPTI JET® technology for cleaner air, less downtime and lower energy consumption
- I Security of investment as the system can grown and change along with the business
- I Integrated insulation for minimal temperature loss
- I Integrated fire and explosion protection









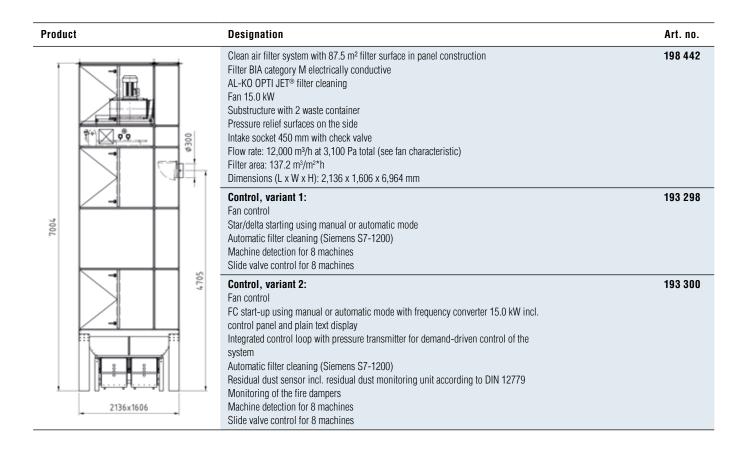






# STATIONARY SYSTEM FILTER EQUIPMENT

# PROFI JET 1 AFB / 15 KW (waste container)

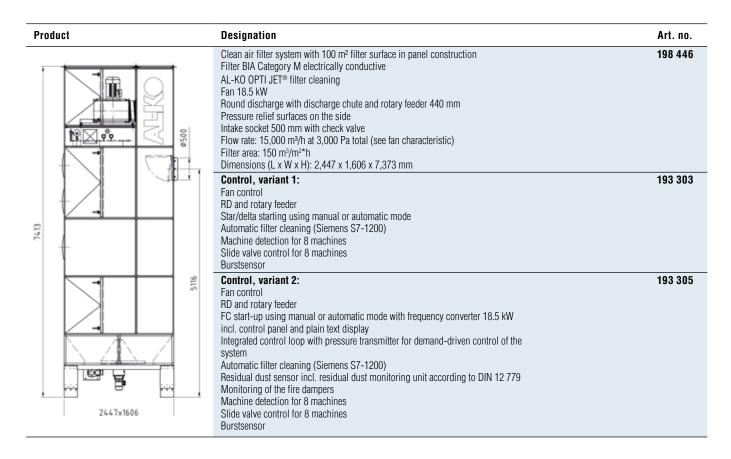


### PROFI JET 2 BP / 15 KW (briquetting press)

Produ	ct	Designation	Art. no.
		Clean air filter system with 75 m² filter surface in panel construction Filter BIA category M electrically conductive AL-KO OPTI JET® filter cleaning Fan 15.0 kW Briquette press with a pressing capacity of up to 50 kg/h incl. control Pressure relief surfaces on the side Intake socket 450 mm with check valve Flow rate: 12,000 m³/h at 3,160 Pa total (see fan characteristic) Filter area: 137.2 m³/m²*h Dimensions (L x W x H): 2,601 x 1,606 x 7,571 mm	198 444
7611		Control, variant 1: Fan control Star/delta starting using manual or automatic mode Automatic filter cleaning (Siemens S7-1200) Machine detection for 8 machines Slide valve control for 8 machines	193 298
	2606x1606	Control, variant 2: Fan control FC start-up using manual or automatic mode with frequency converter 15.0 kW incl. control panel and plain text display Integrated control loop with pressure transmitter for demand-driven control of the system Automatic filter cleaning (Siemens S7-1200) Residual dust sensor incl. residual dust monitoring unit according to DIN 12 779 Monitoring of the fire dampers Machine detection for 8 machines Slide valve control for 8 machines	193 300

# STATIONARY SYSTEM FILTER EQUIPMENT

## PROFI JET 3 RA / 18.5 KW (round discharge with rotary feeder)

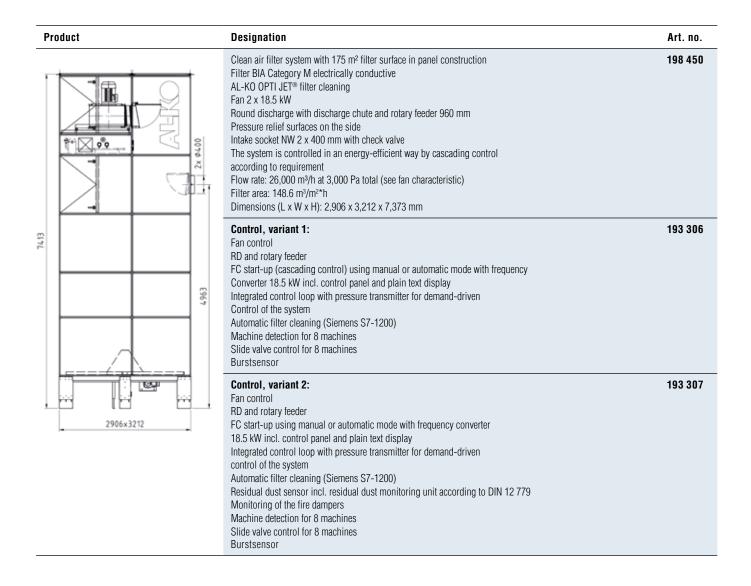


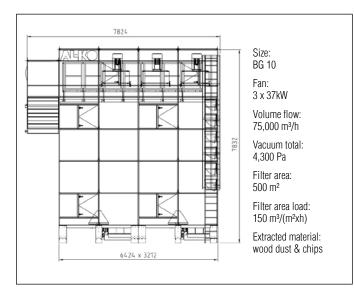
### PROFI JET 4 BP / 18.5 KW (briquetting press)

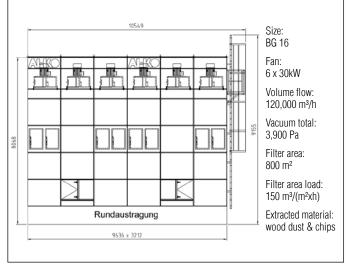
Product	Designation	Art. no.
	Clean air filter system with 100 m² filter surface in panel construction Filter BIA Category M electrically conductive AL-KO OPTI JET® filter cleaning Fan 18.5 kW Briquette press with a pressing capacity of up to 50 kg/h incl. control Pressure relief surfaces on the side Intake socket 500 mm with check valve Flow rate: 15,000 m³/h at 3,100 Pa total (see fan characteristic) Filter area: 150 m³/m²*h Dimensions (L x W x H): 2,601 x 1,606 x 8,183 mm	198 448
8223	Control, variant 1: Fan control Star/delta starting using manual or automatic mode Automatic filter cleaning (Siemens S7-1200) Machine detection for 8 machines Slide valve control for 8 machines	193 299
2606×1606	Control, variant 2: Fan control FC start-up using manual or automatic mode with frequency converter 18.5 kW incl. control panel and plain text display Integrated control loop with pressure transmitter for demand-driven control of the system Automatic filter cleaning (Siemens S7-1200) Residual dust sensor incl. residual dust monitoring unit according to DIN 12 779 Monitoring of the fire dampers Machine detection for 8 machines Slide valve control for 8 machines	193 301

# STATIONARY SYSTEM FILTER EQUIPMENT

## PROFI JET 5 RA / 2 X 18.5 KW (round discharge with rotary feeder)







# WELDING FUME / DEDUSTING UNITS

### **AFU ECO**

#### **Features**

- I 2 in1 extraction with integrated heat recovery (up to 67 %)
- I Efficient and economical thanks to large-volume compressed air tanks with silenced diaphragm valves for the effective
  - OPTI JET® filter cleaning and lowest pressure consumption
- I Filter elements with bayonet lock for easy handling
- I 100% fresh air supply prevents long-term odour nuisance
- I Energy savings through heat recovery and frequency converter operation
- I Low space requirement
- I Easy maintenance access
- I Low noise emission values
- I Control with freely positionable control cabinet
- I Individually expandable



Fig. AFU ECO type 1 with options







400 V / 3 Ph / 50 Hz

Heat recovery unit

Technical data:

Supply air section	AFU ECO TYPE 1	AFU ECO TYPE 2	AFU ECO TYPE 3	AFU ECO TYPE 4
Art. no.	199 854 01	199 855 01	199 856 01	199 857 01
Nominal power (EC-fan)	4.5 kW/3 Ph	4.5 kW/3 Ph	2 x 4.5 kW/3 Ph	2 x 4.5 kW/3 Ph
Voltage	400 V/50 Hz	400 V/50 Hz	400 V/50 Hz	400 V/50 Hz
max. Volume flow	5,200 m³/h	9,000 m³/h	10,400 m³/h	18,000 m³/h
Exhaust air section				
Nominal power fan	7.5 kW/3 Ph	11.0 kW/3 Ph	2 x 7.5 kW/3 Ph	2 x 11.0 kW/3 Ph
Voltage	400 V/50 Hz	400 V/50 Hz	400 V/50 Hz	400 V/50 Hz
Number of filter	6	9	12	18
Filter area*	78-126 m²	117-189 m²	156-252 m²	234-378 m²
Filter area load*	41-67 m³/m²*h	48-77 m³/m²*h	41-67 m³/m²*h	48-77 m³/m²*h
max. Volume flow	5.200 m³/h	9,000 m³/h	10,400 m³/h	18,000 m³/h
max. Negative pressure **	2.800 Pa	2,800 Pa	2,800 Pa	2,800 Pa
Sound pressure level	65 dB(A)	67 dB(A)	65 dB(A)	66 dB(A)
Heat recovery				
Efficiency	60 - 67 %	61 - 66 %	60 - 67 %	61 - 66 %
Dimension (L/W/H)	4.088 x 1.414 x 3.103	4,850 x 1,414 x 3,103	4,088 x 2,714 x 3,103	4,850 x 2,714 x 3,10

400 V / 3 Ph / 50 Hz

400 V / 3 Ph / 50 Hz

**Operating voltage AFU ECO** 

400 V / 3 Ph / 50 Hz

<sup>\*)</sup> Depending on filter design, different filter area and filter area load, filter selection on page 77.
\*\*) max. negative pressure with clean filters!

# WELDING FUME — AND DUST FILTER SYSTEMS AFU ECO

#### Options:

Options.				
	AFU ECO TYPE 1	AFU ECO TYPE 2	AFU ECO TYPE 3	AFU ECO TYPE 4
Article number	Art. no.	Art. no.	Art. no.	Art. no.
Supply air filter ISO Coarse ePM 10 ≥ 50% (M5)	197 630	197 630	2 x 197 630	2 x 197 630
Supply air filter ISO ePM 1 ≥ 50% (F7)	197 631	197 631	2 x 197 631	2 197 631
Heating register supply air	197 632	197 633	197 634	197 635
Cooling register supply air	197 636	197 637	197 638	197 639
Control option frost protection Heat Recovery	197 640	197 640	197 640	197 640
Control option cooling recovery	197 641	197 641	197 641	197 641

#### Accessories:

	AFU ECO TYPE 1	AFU ECO TYPE 2	AFU ECO TYPE 3	AFU ECO TYPE 4
Article number	Art. no.	Art. no.	Art. no.	Art. no.
Silencer supply/ exhaust air	on request	on request	on request	on request
Suction panel up to max. D=350 mm *	on request	on request	on request	on request
Finn hood outside air intake	197 627	197 627	2 x 197 627	2 x 197 627
Exhaust air hood	197 629	197 629	2 x 197 629	2 x 197 629
Pressure regulator compressed air	197 642	197 642	197 642	197 642
Frost protection thermostat heating coil	304 269 6	304 269 6	304 269 6	304 269 6

<sup>\*)</sup> with non-return valve

#### AL-KO AFU-ECO

The AL-KO AFU-ECO is a welding fume extraction system with integrated heat recovery which serves as a compact supply/exhaust air unit for simultaneous welding fume extraction at several workplaces.

As there is no contact between the extracted and freshly supplied air, the system guarantees a 100% fresh air supply. This means that no attention has to be paid to the welding material when removing the filtered air and supplying fresh air. In addition, this reduces the odour pollution in the working area and prevents a concentration of gaseous air pollutants, as is the case with conventional extraction systems in recirculation mode.





# WELDING FUME — AND DUST FILTER SYSTEMS **AFU ECO**

An example of an economic efficiency calculation of an AFU ECO extraction system, compared to a system without heat recovery

### Calculation of economic efficiency

according DIN V 18599-3 and VDI 2067-1

1.	General data (DIN V 185	99-3)			
1.1	Air volume supply air [m³/h]	18,000			
1.2	Supply air temp, winter	22°C			
1.3	Supply air temp, summer	18°C			
1.4	Cooling function	with cooling function	1		
2.	Extraction concepts	with cooming function	·	ex heat recovery	AFU ECO
3.	Costs device concepts			62,000 €	73,595 €
4.	<u> </u>	s of the device concepts (DIN	V 10500 2\	02,000 €	70,090 €
4.1	Efficiency of the heat recover		v 10399-3)	0.0%	65.0%
	<u> </u>				ł
4.2	Electrical connected load su	• • • • • • • • • • • • • • • • • • • •		4.80 kW	5.60 kW
4.3	Electrical connected load ext			30.10 kW	31.77 kW
5.	Energy quantities at 1,80	JU N (DIN V 18599-3)"		440.000.13111.4	07.040.1144.4
5.1	Heat expenditure per year			118,660 kWh/a	27,943 kWh/a
5.2	Cold expenditure per year			13,623 kWh/a	13,147 kWh/a
5.3	Cost of electricity per year			62,820 kWh/a	67,266 kWh/a
6.	Costs = expenses (energ	y quantity) x energy costs			
6.1	Heat costs in the first year			7,120 €	1,677 €
6.2	Cold cost in the first year			681 €	657 €
6.3	Cost of electricity labour price	ce in the first year		9,423 €	10,090 €
6.4	Total costs in the first year	•		17,224€	12,424€
7.	Annuity calculation (VDI	2067-1)		, i	
7.1	Capital payments in € / year	2007 1)		4,183 €	4,965 €
7.2	Energy costs heat payments	in £ / year		9,494 €	2,236 €
7.3	Energy costs cold payments	<u>·</u>		908 €	877 €
7.4	Energy costs clid payments  Energy costs electricity payr	<b>.</b>		12,565 €	13,454 €
		<u>.</u>	in C / was		<u> </u>
7.5	1 0 11	cleaning, maintaining, inspecting)	III € / year	1,330 €	1,579 €
7.6	Total annuity in € / year			28,480€	23,111 €
8.		of consideration (VDI 2067-1)	(annuity x period of consideration	- <del>'</del>	
8.1	Capital costs			62,747 €	74,481 €
8.2	Heating costs			142,405 €	33,535 €
8.3				13,625 €	13,148 €
8.4	·			188,476 €	201,816 €
8.5	Costs maintaining / operating			19,955 €	23,686 €
8.6	Total costs (total annuity x	period of consideration)		427,207€	346,666€
9.	Pay back time AFU ECO 1	or system without heat recov	ery	2.42	years
	•	•		Operating hours (VDI 206)	*
	450,000 € 7			hours / day	8.0 hours
	400,000 €			Days / week	5 days
	350,000 €			Weeks / year	45 weeks
	300,000 €			Total hours	1,800 hours
				Energy costs (VDI 2067-1)	<del></del>
	250,000 € -				0.060 €/kWh
	200,000 € -			Heat	
	150,000 € -			Cold	0.050 €/kWh
	100,000 € -			Electricity price	0.150 €/kWh
	50,000 € -				
	- € -	ex heat recovery	AFU ECO	General data (VDI 2067-1)	
	□ Costs maintaining /	•		Period if consideration	15 years
	operating	19,955 €	23,686 €	Service life	15 years
	■Energy costs	188,476 €	201,816 €	eff. Annual interest rate	0.15%
	□ Cooling costs	13,625 €	13,148 €	Maintain / operate	2.00%
	Heating costs			Price cange factors (VDI 2	
		142,405 €	33,535 €	Capital	1.0%
	■ Capital costs	62,747 €	74,481 €	Consumption	4.0%
10.	Total costs LCC	427,207€	346,666 €	Operation	1.0%
11.	Investment costs	62,000 €	73,595 €	Maintainance	1.0%
				i mainiannance	1 1 117/0

# WELDING FUME- / DEDUSTING SYSTEMS

#### **AL-KO AFU 15-50**

AL-KO filter units serie AFU 15-50 are universally applicable to extract chips, dust as well as welding fume in metal and plastic industry and many other sectors. They combine high reliability with a compact and space-saving design. They create ideal production conditions with healthy air in the workplace, are unusually quiet and help to achieve significant cost savings.

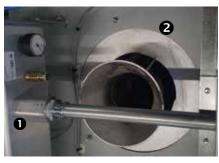
All sizes are designed to offer the optimum combination of maximum extraction power

and the lowest possible energy consumption. Furthermore, the tried-and- tested AL-KO OPTI JET® process guarantees filter cleaning, and consequently increased filter service life. They are delivered ready for connection, all you need is to insert the swarf bag.



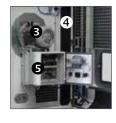
#### YOUR BENEFITS

- I High extraction performance
- I Compact design
- I Integrated pre-separator and extendable control system
- I Optimum filter dedusting
- I Minimum noise level
- I Container move left/right possible
- I Equipment with different filter media
- I Special voltage on request
- I Additional variants for pre-separation
- I Simple exhaust air duct connection
- I Castors in the standard for positioning on the workplace
- I Integrated lifting point for fork lift (optionally)
- I Extensive control options also with frequency converter
- I Various discharge systems available (Rotary feeder, etc)
- I Dust-free container removal by AL-KO DUST COMPARTMENT (optionally) see page 35
- I Made for single and muliti-user extraction
- I VENTURI-nozzle in the standard for optimum filter cleaning
- I Optionally with spark pre-separator



- Large air surge tank with fast diaphragm valves for optimum JET filter cleaning and lowest use of compressed air
- Filter cartridge made of antistatic polyester needle felt material (BGIAtested for dust class M) as standard with bajonet catch for easy handling
- 3 Energy-efficient motors according to IE3 as standard

- Sound-insulated air recirculation for optimum noise emission values
- PLC control; manual and automated operation possible; can be extended with many options (e.g. machine recognition; slide valve control; frequency controlled operation and many more functions besides)
- **6** Viewing window for easy fill level check
- Ergonomically shaped clamping lever for simple container locking





#### CLEAN DUST COMPARTMENT



The AL-KO DUST COMPARTMENT, the simple and inexpensive solution for greater cleanliness and health protection in the workplace.

#### The benefits for you:

- I Easy to operate
- I Dust-free wind-up during container changes
- I Bag removal with lifting machine
- I Optimised health protection

# WELDING FUME- / DEDUSTING SYSTEMS

### **AL-KO AFU 15-50**

Model	AFU 15*	AFU 25*	AFU 35*	AFU 50*
Article number	199 133 01	199 132 01	199 129 01	199 131 01
Diameter suction nozzle	160 mm	200 mm	250 mm	300 mm
Motor rated power	2.2 kW	3.0 kW	7.5 kW	7.5 kW
Supply voltage	400 V/50 Hz	400 V/50 Hz	400 V/50 Hz	400 V/50 Hz
max. Volume flow	2,200 m³/h	3,200 m³/h	5,000 m³/h	6,000 m³/h
max. Negative pressure **	2,800 Pa	3,200 Pa	3,800 Pa	4,000 Pa
Number of filter	2	2	4	4
Filter area*	26-50 m²	26-50 m²	52-100 m <sup>2</sup>	52-100 m²
Filter area load*	44-85 m³/m²*h	64-123 m³/m²*h	50-96 m³/m²*h	60-115 m³/m²*h
Swarf collection volume	150 L	150 L	150 L	150 L
Sound pressure level	70 dB(A)	72 dB(A)	72 dB(A)	72 dB(A)
Dimension (L/W/H)	1,660 x 1,106 x 2,075	1,650 x 1,106 x 2,075	1,910 x 1,106 x 2,075	1,915 x 1,106 x 2,075
Weight	450 kg	466 kg	612 kg	621 kg

<sup>\*</sup>ATTENTION: Depending on the intended use (material sample), appropriate filters must be selected! Appropriate accessories must also be considered! Talk to your responsible sales consultant!

\*) Depending on the filter design, different filter surface and filter surface load, filter selection on page 77. \*\*) Max. negative pressure with clean filters

#### Accessories AFU 15-50

Product	Туре	Art. no.
	AFU 15-25 Splitter silencer	197 221
	AFU 35-50 Splitter silencer	199 145
	AFU 15-50 Dust compartment cpl.	199 144
Post-filter stage	Post-filter stage H13 AFU 15-25	197 236
	Post-filter stage H13 AFU 35-50	197 237
10 30	Post-filter stage H14 AFU 15-25	197 259
	Post-filter stage H14 AFU 35-50	197 260



#### **APPLICATION**

Thanks to the proven AL-KO extraction program, we can offer you a customized suction solution for almost every application and every special requirements. AL-KO extraction systems are designed for the following application areas.





Welding fume





Stone materials

Plastic materials

# WELDING FUME- / DEDUSTING SYSTEMS

## **ACCESSORIES AFU-ECO, AFU 15-50**

#### Optimum extraction arm for industrial applications



Extraction arm with supporting parts in anodised aluminium and anthracite-grey coated steel, blue PVC hose.

The bonnet in anthracite PP and bonnet sheet in aluminium.

The extraction arm owes its numerous new and significant benefits to innovative technology combined with new materials and a stronger focus on design::

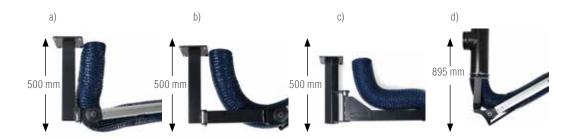
- I Uniquely easy manoeuvrable
- I Particularly stable position
- I Optimally designed bonnet for welding fumes and other warm contaminants
- Maximum suction efficiency and highest possible collection capacity
- I Externally positioned support arms
- I A natural and pure air flow ensures a low pressure drop
- I Low risk of clogging
- I Wall console made of steel with powder coating

Supplied partially assembled for easy installation.

Product	Туре	Art. no.
Extraction arm incl. wall console	AIW 2 DN 160 mm, extendable to 2 m	197 301
	AIW 3 DN 160 mm, extendable to 3 m	197 302
-	AIW 4 DN 160 mm, extendable to 4 m	197 303
	AIW 7 DN 160 mm, extendable to 7 m	197 304
<b>6</b>	AIW 9 DN 160 mm, extendable to 9 m	197 305

The extraction arm is supplied with a wall bracket as standard. The following brackets are available for ceiling and floor mounting

Bracket variants	a) Ceiling and floor bracket for extraction arms AIW 2, AIW 3 and AIW 4, swivelling by 180°	197 306
	b) Ceiling and floor bracket for extraction arms AIW 2, AIW 3 and AIW 4, swivelling by 360°	197 307
	c) Ceiling and floor bracket for extraction arm AIW 7 swivelling by 180°	197 308
	d) Ceiling bracket for extraction arm AIW 2 and AIW 3 swivelling by 360°, with connection nozzle NW 160 mm	197 309



## **ACCESSORIES AFU-ECO, AFU 15-50**

Product	Туре	Art. no.
Work lightning / Unit On/Off a)	a) LED light incl. wiring, transformer and push-button for the extraction arms AIW 2, AIW 3 and AIW 4	197 310
	LED light incl. wiring, transformer and push-button for the extraction arms AIW 7 and AIW 9	197 311
b)	b) Push-button ON/OFF extraction unit for the extraction arms AIW 2, AIW 3 and AIW 4	197 312
	Push-button ON/OFF extraction unit for the extraction arms AIW 7 and AIW 9	197 313
c)	c) Combination LED light / push-button ON/OFF extraction unit for the extraction arms AIW 2, AIW 3 and AIW 4	197 314
(See	Combination LED light / push-button ON/OFF extraction unit for the extraction arms AIW 7 and AIW 9	197 315

#### Optimum extraction arm for industrial areas when handling explosive gases and dust-air mixtures



However, it has a grounded construction and complies with the requirements of the ATEX 2014/34/EU directive for gases and dust:

- I Zone 1 and 21
- I Marked with EX II 2 GD

The suction arm is characterised by the following:

- I EXC with black, chemical-resistant PE hose.
- I Bonnet made of conductive PP with bonnet plate made of stainless steel
- I Externally positioned support arms
- I A natural and pure air flow ensures a low pressure drop
- I Low risk of clogging
- I Wall console made of steel with conductive powder coating
- I Joints made of conductive PP

Supplied partially assembled for easy installation.

Product	Туре		Art. no.
ATEX- extraction arm incl. wall	AIW 2 ATEX	DN 160 mm, extandable to 2 m	197 316
bracket	AIW 3 ATEX	DN 160 mm, extandable tos 3 m	197 317
	AIW 4 ATEX	DN 160 mm, extandable to 4 m	197 318
	AIW 7 ATEX	DN 160 mm, extandable to 7 m	197 319

Further versions of extraction arms on request

## **ACCESSORIES AFU-ECO, AFU 15-50**

#### Optimum extraction arm for laboratory areas



This extraction arm ensures a particularly low pressure drop with its unique design of joints and stable mountings. This leads to numerous other benefits:

- I Energy-saving
- I Quieter
- I Reduced risk of annoying ventilation noise
- I Low pressure drop without having to select larger dimensions
- I Easy to combine with other extractors in the same ventilation system
- I In ATEX version EX II 2 GD according to ATEX directive 2014/34/EU

The standard version is suitable for most air contaminants, e.g. in:

- **I** Laboratories
- I Schools and universities
- I Pharmaceutical industry
- I Hairdressing salons
- I Electronic industry

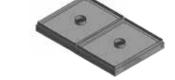
Product	Туре		Art. no.
Laboratory- extraction arm	AL 1.3	DN 75 mm, extandable to 1,3 m	197 320
@P	AL 1.5	DN 75 mm, extandable to 1,5 m	197 321
41	AL 1.3 ATEX	DN 75 mm, extandable to 1,3 m	197 322
	AL 1.5 ATEX	DN 75 mm, extandable to 1,5 m	197 323
Wall bracket	Wall bracket for labo	oratory extraction arm DN 75 x 98 mm	197 324
	Wall bracket ATEX for	or laboratory extraction arm DN 75 x 98 mm	197 325
Hood	Flat hood 300 x 200	mm, DN 75 mm	197 326
-	Flat hood ATEX 300	x 200 mm, DN 75 mm	197 327

## **ACCESSORIES AFU-ECO, AFU 15-50**

#### **Extraction hood**

AL-KO's modular extraction hoods, with an integrated baffle plate on the intake manifold, can be adapted to the individual needs and requirements of the customer. The robust extraction hoods, which are available in two sizes, can be combined in any modular way. Optionally, a strip curtain can be attached to the all-round edging of the extraction hoods. This prevents the escape of flue gases and not only protects against welding spatter, but also serves as a visual screen. The extraction hood can be suspended from the ceiling of the room via 4 suspension points using steel cables or threaded rods. Alternatively, the extraction hood can also be mounted on feet.





Several modules can be assembled



ASH 1

 Product
 Type
 Art. no.

 Extraction hood
 ASH 1
 1 x nozzle DN 160 mm, length x width: 1,000 x 800 mm
 197 328

 ASH 1,5
 2 x nozzle DN 160 mm, length x width: 1,500 x 800 mm
 197 329

#### **Option: Strip curtain**



Strip curtain made of red, transparent and fixed slats. Strip element made of PVC 3 mm thick including support strip for fixing to the extraction hood. The strip curtain consists of elements, with a width of 300 mm, which are lined up overlapping in a 250 mm grid. The metal parts are made of galvanized sheet steel or powder-coated. Including fastening material for mounting to the extraction hood.

Strip curtain per meter	SV 300 for ASH 1 / 1.5 length x width: 2,700 x 300 mm	197 330
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#### Suction wall modular for connection to an extraction system

AL-KO modular extraction walls are suitable for extracting process air from grinding/milling, powder mix or welding fumes. The contaminated air is sucked in through a perforated sheet opening. The walls can be combined with each other as required and thus guarantee maximum flexibility. The wall modules can be easily cleaned with an industrial hoover via a removable front flap. Each stand module is equipped with 4 height-adjustable feet.







Several modules can be assembled

Product	Туре	Art. no.
Suction wall modular	ASW 1 Width x Height x Depth: 1,000 x 1,500 x 300 mm, DN 250, 1,800-3,000 m³/h*)	197 331
	ASW 1 L Width x Height x Depth: 1,000 x 2,500 x 300 mm, DN 250, 2,500-3,500 m³/h*)	197 332
	ASW 2 Width x Height x Depth: 2,000 x 1,500 x 300 mm, 2x DN 250, 4,000-5,000 m³/h*)	197 333
	ASW 2 L Width x Height x Depth: 2,000 x 2,500 x 300 mm, 2x DN 250, 5,000-7,000 m³/h*)	197 334

<sup>\*)</sup> Depending on the medium to be extracted

## **ACCESSORIES AFU-ECO, AFU 15-50**

#### Extraction tables for connection to an extraction system

The AL-KO extraction tables are characterised by a very stable construction, together with a robust material support, this ensures that working conditions are always pleasant and safe.

AL-KO extraction tables are available in two versions. The basic model as a simple table and the premium table with rear wall extraction and swivelling side wings.

The extraction tables have integrated baffle plates which ensure the separation of coarse particles. The extraction tables can be connected to the pipe system either on the left or right via a connection piece and have dirt collection drawers, each with a capacity of approx. 40 litres. The extraction table can be easily moved if necessary via 4 swivel castors with total locking device. The height adjustability ensures an ergonomically adapted workplace.

Optionally, a wood covering can be selected.





ET-G 800

ET-G 2.000 RA

Product	Туре		Art. no.
Extraction table	ET-G 800	Width x Depth x Height: 800 x 750 x 800 mm, DN 160 required volume flow: 1,000-1,500 m³/h*)	197 335
	ET-G 2.000	Width x Depth x Height: $1,800 \times 750 \times 800 \text{ mm}$ , DN 200 required volume flow: $1,200-1,800 \text{ m}^3/\text{h}^*$ )	197 336
	ET-G 800 RA	Width x Depth x Height: $800 \times 750 \times 1.603 $ mm, DN 160 with rear wall extraction. required volume flow: 1,100-1,600 m³/h*)	197 337
	ET-G 2.000 RA	Width x Depth x Height: $1,800 \times 750 \times 1,603$ mm, DN 200 with rear wall extraction required volume flow: $1,200-2,000$ m <sup>3</sup> /h*)	197 338
Wood covering	Wood covering	Width x Depth: 800 x 750 mm	197 343
	Wood covering	Width x Depth: 1.800 x 750 mm	197 344

 $<sup>^{\</sup>star}$ ) Depending on the medium to be extracted

## **ACCESSORIES AFU-ECO, AFU 15-50**

#### Mobile welding protection wall

The AL-KO protection wall consists of a stable, three-part round tube construction which is very easy to install. The lamella curtain, which has been tested according to EN ISO 25980 for protection during arc welding, has a thickness of 2 mm. The two outer sides (800 mm) can be swung in without any problems. The welding protection wall is equipped with 4 swivel castors, two of which have brakes, and can thus be easily adapted to changing welding situations. Ideally, several walls can also be set up as a combination.



Product	Туре		Art. No.
Mobile welding protection wall	SSW 1	Width x Heigth: 3,750 x 2,000 mm	197 345

#### **Further accessories**

Product	Туре	Art. No.
Spark trap	Nominal diameter 160 mm with rim cpl.	197 244
	Nominal diameter 200 mm with rim cpl.	197 245
No. of the last of	Nominal diameter 250 mm with rim cpl.	197 246
	Nominal diameter 300 mm with rim cpl.	197 247
Filter AFU 15-50 / AFU ECO	Filter cartridge welding fume 1.0 m/filter area 21 m².	869 729
	Filter cartridge welding fume 1.2 m/filter area 25 m².	868 952
	Filter cartridge for aluminum dust 1.0 m/filter area 14 m².	868 954
	Filter cartridge for aluminum dust 1.2 m/filter area 17.2 m².	868 785
	Filter cartridge for material 1.0 m/filter area 13 m <sup>2</sup> .	869 281 01
	Filter cartridge for material 1.2 m/Filterfläche 15.6 m².	869 282 01
Swarf bags for AFU 15-50/ AFU ECO	for AFU 15-50 / AFU ECO (890x570x1200) 20 pcs	934 605

## **BRIQUETTE PRESSES**

**Product** Designation Art. no. **BRIQUETTE PRESSES** AL-KO briquette press APC 30-40 197 210 Feed opening 1,044 x 1,044 mm Drive output 4 kW / 400 V / 50 Hz Throughput rate up to 40 kg/h depending on material Cpl. incl. hydraulics Switch cabinet with PLC control Connection piece for transport hose Automatic final position of all cylinders Galvanised tongs Automatic ON/OFF Base plate Manual control for cylinders (incl. sliding frame) Screw pre-compactor Oil quantity 100 L Briquette diameter 40 mm AL-KO briquette press APC 30-50 192 286 Feed opening 1,044 x 1,044 mm Drive output 5.5 kW / 400 V / 50 Hz Throughput rate up to 50 kg/h depending on material Cpl. incl. hydraulics Switch cabinet with PLC control Connection piece for transport hose Automatic final position of all cylinders Galvanised tongs Automatic ON/OFF Base plate Manual control for cylinders (incl. sliding frame) Screw pre-compactor Oil quantity 160 L Briquette diameter 50 mm 192 288 AL-KO briquette press APC 50-70 Feed opening 1,044 x 1,044 mm Drive output 5.5 kW / 400 V / 50 Hz Throughput rate up to 70 kg/h depending on material Cpl. incl. hydraulics Switch cabinet with PLC control Connection piece for transport hose Automatic final position of all cylinders Galvanised tongs Automatic ON/OFF Base plate Manual control for cylinders (incl. sliding frame) Screw pre-compactor Oil quantity 160 L Briquette diameter 70 mm

## **BRIQUETTE PRESSES**

Product Designation Art. no. **BRIQUETTE PRESSES** 192 290 AL-KO briquette press APV 60 Feed opening 1,400 x 1,400 mm Drive output 7.5 kW / 400 V / 50 Hz Throughput rate up to 90 kg/h depending on material Cpl. incl. hydraulics Switch cabinet with PLC control Connection piece for transport hose Automatic final position of all cylinders Galvanised tongs Pole-changing screw motor Hardened insert sleeve in pressing chamber Manual control for cylinders (incl. sliding frame) Oil quantity 160 L Briquette diameter 50 mm AL-KO briquette press APV 80 938 701 Feed opening 1,400 x 1,400 mm Drive output 7.5 kW / 400 V / 50 Hz Throughput rate up to 100 kg/h depending on material Cpl. incl. hydraulics Switch cabinet with PLC control Connection piece for transport hose Automatic final position of all cylinders Galvanised tongs Pole-changing screw motor Hardened insert sleeve in pressing chamber Base plate Manual control for cylinders (incl. sliding frame) Oil quantity 160 L Briquette diameter 60 mm AL-KO briquette press APV 100 938 702 Feed opening 1,400 x 1,400 mm Drive output 11 kW / 400 V / 50 Hz Throughput rate up to 150 kg/h depending on material Cpl. incl. hydraulics Switch cabinet with PLC control Connection piece for transport hose Automatic final position of all cylinders Galvanised tongs Pole-changing screw motor Hardened insert sleeve in pressing chamber

Manual control for cylinders (incl. sliding frame)

Oil quantity 250 L Briquette diameter 70 mm

## **BRIQUETTE PRESSES**

Product	Designation	Art. no.
BRIQUETTE PRESSES		
	AL-KO briquette press APV 120 Feed opening 1,400 x 1,400 mm Drive output 11 kW 400 V/50 Hz throughput rate up to 180 kg/h depending on material Cpl. incl. hydraulics Switch cabinet with PLC control Connection piece for transport hose Automatic final position of all cylinders Galvanised tongs Pole-changing screw motor Hardened insert sleeve in pressing chamber Base plate Manual control for cylinders (incl. sliding frame) Oil quantity 250 L Briquette diameter 80 mm	938 743
Options	Briquette press oil pre-heater APC & APV 60-80 obtained the viscosity at colder temperatures	938 710
	Briquette press oil pre-heater APV 100-120 obtained the viscosity at colder temperatures	870 370
	Briquette press oil cooler obtained the viscosity at warmer temperatures	938 711
	Briquette press low oil switch to display of low oil	938 712
	Special version pressing direction presses of the type APC	
Accessories	BP transport pipe for briquette diameter up to 50 mm straight, per metre, Ø 70 mm	938 707
	BP transport pipe for briquette diameter up to 50 mm 90° elbow, r = 120 cm, Ø 70 mm	938 708
	BP transport pipe for briquette diameter up to 70 mm straight, per metre, Ø 90 mm	938 793
	BP transport pipe for briquette diameter up to 70 mm 90° elbow, r = 120 cm, Ø 90 mm	938 794

## **SHREDDER**

Designation	Art. no.
AL-KO shredder AZR 600, 18.5 kW  Feed opening approx. 600 x 800 mm 0.6 m³ funnel volume Rotor diameter 252 mm  Slow-running unit Cutting system 14 diamond knives 40 x 40 mm Electrical control via PLC Main motor 18.5 kW Screen perforation 20/25 mm Automatic star/delta start-up + 5 m cable Automatic OFF on idling Operating hours counter Extraction nozzle Diameter 160 mm Vibration-damping machine feet Air speed 28 m/s Weight 1,300 kg Other options and machines on request	199 399
	Feed opening approx. 600 x 800 mm  0.6 m³ funnel volume  Rotor diameter 252 mm  Slow-running unit  Cutting system 14 diamond knives 40 x 40 mm  Electrical control via PLC  Main motor 18.5 kW  Screen perforation 20/25 mm  Automatic star/delta start-up  + 5 m cable  Automatic OFF on idling  Operating hours counter  Extraction nozzle Diameter 160 mm  Vibration-damping machine feet  Air speed 28 m/s  Weight 1,300 kg

## **ROTARY FEEDER**

Product	Designation	Art. no.
ROTARY FEEDER		
	ZRS 440/1FG 0.18 kW 4 rpm II1D/- Rotary feeder 440/1 0.18 kW 4 rpm CE 0588 EX II 1D/- (device interior/exterior area) EX D (protection system) FSA 11 ATEX 1614X	867 972
	ZRS 440/FG 0.37 kW 11 rpm II1D/- Rotary feeder 440 0.37 kW 11 rpm CE 0588 EX II 1D/- (device interior/exterior area) EX D (protection system) FSA 11 ATEX 1614X	867 973
	ZRS 960/1FG 0.18 kW 4 rpm EX II 1D/- Rotary feeder 960/1 0.18 kW 4 rpm CE 0588 EX II 1D/- (device interior/exterior area) EX D (protection system) FSA 11 ATEX 1614X	867 974
	ZRS 960/FG 0.55 kW 11 rpm EX II 1D/- Rotary feeder 960 0.55 kW 11 rpm CE 0588 EX II 1D/- (device interior/exterior area) EX D (protection system) FSA 11 ATEX 1614X	867 975

## **AL-KO SANDING TABLES**

## FOR A CLEAN WORKPLACE DURING MANUAL WORK

Sanding tables, when combined with dust extractors or a decentralised filter system, ensure additional removal of dust during manual sanding work with manual sanders, as well as when working with hand-guided sanding equipment, that goes beyond the device's own dust removal function. The sanding table significantly reduces the amount of dust produced,

the air in the room is noticeably improved and the health of the employee is not put at risk by dusty exhaust air.

In the domain of manual / sanding stations, AL-KO offers the ideal solution for every requirement: with its "BASIC" series, AL-KO provides a low-cost entry-level model that impresses primarily with its practice-proven features and value for money.

The "PREMIUM" series is aimed at customers with more exacting demands, since the high-quality, carefully thought-out details leave no wish un-granted.





Designation	Length [mm]	Width [mm]	Working height [mm]	Recommended extraction performance [m³]	Weight [kg]	Art.no.
AST 1.0 PREMIUM	1000	1000	757 - 1157	1400	90	199 645
AST 2.0 PREMIUM	2000	1000	757 - 1157	1800	147	199 646
AST 3.0 PREMIUM	3000	1000	757 - 1157	2200	220	199 647
AST 1.5 BASIC	1585	1000	735 - 1015	1500	73	199 922

#### Optional Accessories: Electrical connector strip

- I supply cable H07-RN-F 5G 2.5<sup>2</sup>, 5 m long, with mains switch
- I Electrical master switch, lockable
- I 3 x protective contact sockets with line protection C16, 16 A, 230 V, for power tools
- I upstream 4-pole residual circuit breaker, 40/0.03 amps

#### Hydraulic height adjustment with hand crank

Adjustable work height from 757 mm - 1,157 mm

#### Vacuum clamping system

- I Powerful multi-chamber ejector, suitable for continuous operation
- 1 2 pcs. clamp, squeegee with separate stopcock for horizontal and vertical clamping
- I Release of the workpiece via foot valve

#### Support fixture for vertical clamping

I Load holding with vertical clamping by folding out support fixture

#### Mobility set

- I Simple movement of the sanding table on 4 pivoting castors
- I Sturdy pivoting castors with rubber tyres and Stopp-Fix brake
- Work height with castors: adjustable from 859 mm 1,259 mm

#### Suction set 1 (DN160), 2( DN160) or 3 (DN 200) meter

- I Connection side optionally on the left or right face
- I incl. end cover, machine connection and sound insulation connection (enclosed loose)
- I incl. manual slide on hopper/ 2 hoppers/ 3 hoppers (already mounted)

Options for PREMIUM:	Art.no.
Electrical connector strip	199 648
Vacuum clamping system	199 649
Hydraulic height adjustment	199 650
Support fixture	199 651
Mobility set (4 pivoting castors)	199 652
Suction set sanding table 1 m DN 160	197 346
Suction set sanding table 2 m DN 160	197 347
Suction set sanding table 3 m DN 200	197 348









# COMPRESSED AIR SUPPLY / AIR CONSUMPTION JET-FILTER

Guide values for compressed air supply and compressed air consumption when using surface-coated (max 8.5 bar) or surface-treated (max 6.0 bar) filter material.

	Cleaning-off	Air consumption	Min. compressed air supply / compressor at factory setting			
Device type	pressure max. (bar)	(standard litres) each Cleaning cycle	ca. suction cabability (I/min)	ca. filling performance (I/min)	ca. driving power (kW)	
MJ 140 / 160	6.0	108	165	130	1.5	
MPJ 160	6.0	108	165	130	1.5	
APU 140 / 160	6.0	108	165	130	1.5	
MJ 200	6.0	108	165	130	1.5	
MPJ 200	6.0	108	165	130	1.5	
APU 200	6.0	108	165	130	1.5	
MJ 250	6.0	234	350	270	2.2	
MPJ 250 / 300	6.0	234	350	270	2.2	
APU 250 / 300	6.0	234	350	270	2.2	
APU 350 / 350+	6.0	234	350	270	2.2	
	4.0	142	210	170	1.5	
MJ 300	6.0	342	520	400	3.0	
ECO JET 3	6.0	234	350	270	2.2	
ECO JET 4	6.0	234	350	270	2.2	
ECO JET 5	6.0	234	350	270	2.2	
ECO JET 6	6.0	234	340	240	2.2	
PROFI JET BG1/BG2	6.0	396	600	450	4.0	

#### Information:

In principle, compressed air consumption and compressor output depend on the network conditions (pressure, connection cross-section, line length, etc.). The values given are only approximate values. The number of cycles per hour depends on the operating parameters (material quantities, material type, etc.)

Guiding value: Dust extraction Chip extraction

~ 3 cycles per hour ~ 1 cycle per hour

Machine type	air flow into (m/s)*	pressure loss into (Pa)*
Sliding table saw above	23	1500
Sliding table saw below	23	1000
Edge bender per aggregate	23	1700
Edge grinding machine per aggregate	23	1200
Folding and profiling machine for windows	28	1200
Four-side planer	28-32	1200
Horizontal panel saw	23	1300
Long belt sander with slide table	23	1000
Long slot drilling machine	28	850
Machining center CNC	28-35	2000- 3000
Milling machine at the table	28	1000
Milling machine at the fence	28	500
Pendulum saw	23	1000
Surface planer	28	700
Table band saw	23	850
Tenoning and slot machine	28	800
Thickness planer	28	700
Vertical panel saw	28	1500
Waste wood shredder	28	1000
Wide belt sander per aggregate	23	1000

<sup>\*</sup>Please note manufacturers advice!!

## CALCULATION SUCTION CAPACITY

Pipe dia cross se	meter/ - ection	Air quantity (m³/h) depending on air velocity (m/s) and pressure loss (Pa) per m suction pipe					
DN in mm	A in cm <sup>2</sup>	m³/h at 20 m/s	Loss in Pa	m³/h at 23 m/s	Loss in Pa	m³/h at 28 m/s	Loss in Pa
80	50	271	45	416	61	507	95
100	79	565	37	650	51	792	84
120	113	814	30	936	53	1140	68
125	123	884	29	1016	41	1237	65
140	154	1108	26	1275	35	1552	56
160	201	1448	23	1665	30	2027	47
180	254	1832	20	2107	27	2565	41
200	314	2262	18	2601	24	3167	37
225	394	2863	16	3292	21	4008	32
250	491	3534	14	4064	19	4948	28
300	707	5089	12	5853	16	7125	24
315	779	5611	11	6453	15	7855	22
350	990	6927	10	7966	14	9698	20
400	1257	9048	9	10405	12	12667	18
450	1590	11451	8	13168	11	16031	16

Valid for steel tube, folded alongside, inside smooth. Loss from branches, bends and pipe distributers are about 50 Pa.

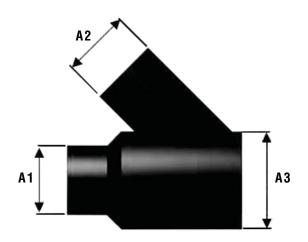
Also note, pressure loss from suction hose is about 5-6 times higher than steel tube.

rounded values

#### Calculation cross section on several connection and distributing points

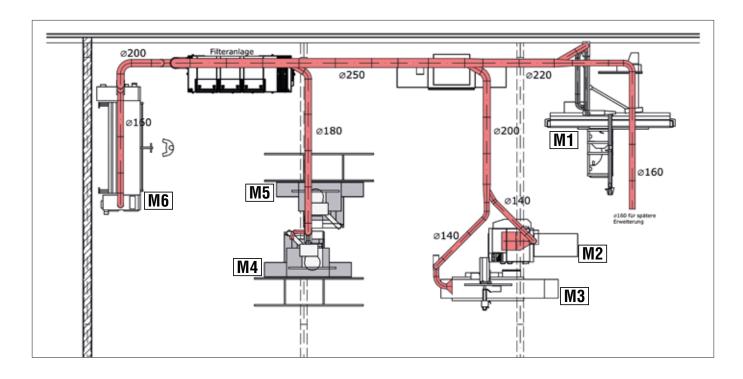
#### Example circular saw:

Connection A1 = 
$$\emptyset$$
 120 mm<sup>2</sup> A 113 cm<sup>2</sup>  
Connection A2 =  $\emptyset$  100 mm<sup>2</sup> A 79 cm<sup>2</sup> = connection A3 = A 192 cm<sup>2</sup>  $\triangleq$   $\emptyset$  160 mm



In this example, the suction line requires a pipe diameter DN 160 mm. To integrate this machine in the suction pipe network, the same calculation method is used for the determination of the main pipe.

Example: A1=  $\emptyset$  pipe from additional machine + A2 =  $\emptyset$  160 mm = A3  $\emptyset$  main pipe in direction dust extractor.



#### Calculation dust extractor with desired simultaneity of 2 machines

The amount of the necessary air volume results from the machines with the greatest demand. When calculating with smaller values, the required air volume would be too low, so the system would be too small.

If all machines should be extracted at the same time, even if this happens only for a short time, an extraction capacity of 10,838 m³ / h would be required. For simultaneity 2 machines 4,560 m³ / h.

In this example, more than two machines or machines in other combinations can be extracted simultaneously. However, the required extraction capacity must not exceed the maximum volume flow of the selected dust extractor.

Machine	Ø Suction nozzle	Required velocity.	Volume flow	Pressure loss at nozzle	Simulta neity	Air requirement
M1 Circular saw	120 + 100 mm	23 m/s	1,587 m³/h	1,500 Pa		
M2 Thickness planer	140 mm	28 m/s	1,552 m³/h	700 Pa		
M3 Surface planer	140 mm	28 m/s	1,552 m³/h	700 Pa		
M4 Milling machine	120 + 120 mm	28 m/s	2,280 m³/h	1,000 Pa	Х	2,280 m³/h
M5 Milling machine	120 + 120 mm	28 m/s	2,280 m³/h	1,000 Pa	Х	2,280 m³/h
M6 Grinding machine	120 + 100 mm	23 m/s	1,587 m³/h	1,000 Pa		

Air requirement total 10,838 m³/h at simult. 4,560 m³/h

### Calculation required vacuum of the dust extractor

At first, all pipelines to the machines to be extracted must be calculated. Often, the pipe with the largest pipe length has the greatest pressure loss. Only then the right extraction system can be selected.

#### **Calculation formula:**

Pressure loss on extraction nozzle + pressure loss in pipe line incl. suction hose

= required vacuum of dust extractor

The pressure loss inside the dust extractor is already considered at AL-KO extractors.

#### Example:

Machine with the largest loss Circular saw	1,500 Pa
8 linear meter pipe Ø 250 mm each 19 Pa =	152 Pa
2 linear meter pipe Ø 220 mm each 21 Pa =	42 Pa
2 linear meter pipe Ø 160 mm each 30 Pa =	60 Pa
2 bows, 2 branches each 50 Pa =	200 Pa

#### Total pressure loss 1,954 Pa

At the required suction performance of 4,560 m³/h as well as a pressure loss 1,954 Pa an AL-KO POWER UNIT 250 is necessary.

The operator is free to use an extraction unit with a higher performance, eg. an APU 300 ( as a reserve capacity).



### Note when designing the piping:

- I Use the next largest dimension according the table for selection of the pipe cross section
- I The total cross-section of the machines to be extracted at the same time may not exceed the connection cross-section of the dust extractor
- I The suction nozzle on a single machine may not be larger than the connection crosssection of the dust extractor
- I For longer suction lines, the main pipe should be larger than the machine connection
- I Plan the suction lines as directly as possible, as little as possible branches and bends
- I Reductions and transitions to the suction hose should be directly before the machine to be extracted
- I Gate valves on all machines

I Observe the requirements of the machine manufacturer with regard to the required suction power and vacuum at the machine nozzle

## ATEX ZONING AND EQUIPMENT CATEGORY

	Zone	Duration of occurence of an explosive atmosphere	Equipment category
Gases, Vapours, Mists	0	Continously, for a long period, frequently	1G
	1	Occasionally	2G
	2	Rarely or for a short period	3G
Dusts	20	Continously, for a long period, frequently	1D
	21	Occasionally	2D
	22	Rarely or for a short period	3D



# AL-KO EXTRACTION TECHNOLOGY – YOUR STRONG PARTNER

In Europe and across the world, thousands of customers every year choose quality products from AL-KO Extraction Technology. The enthusiasm for these products and customers' confidence in us demonstrates that even today, products bearing the "MADE IN GERMANY" label have a future — if they are consistently based on innovation and superior quality.

Look to the future with us, and as our customer and partner profit from the performance, the quality and the security offered by the AL-KO brand.

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