

EXTRACTION TECHNOLOGY

AL-KO
QUALITY FOR LIFE



CENTRAL FILTER SYSTEMS

AL-KO PROFI JET

Modular system concept for
individual extraction solutions.




MADE IN GERMANY

alko-extractionstechnology.com



AL-KO EXTRACTION TECHNOLOGY: GUARANTEED QUALITY

AL-KO Extraction Technology is part of AL-KO Airtech and has been developing, manufacturing, and delivering extraction devices and systems for dust and fume extraction for over 35 years.

Our devices and systems are used both for direct extraction at the source and for hall ventilation. In combination with the heat recovery systems from

AL-KO Air Technology, we are the only manufacturer capable of providing customers with complete solutions for air purification and conditioning from a single source. Our strong customer orientation, maximum manufacturing quality, and our dedicated and highly qualified staff distinguish us in the market.

MADE IN GERMANY

Innovation and patent protection as a success factor:

As a technologically leading company, AL-KO holds numerous patents and utility models.

AL-KO: A financially strong and renowned German manufacturer:

With over 50 years of experience and a worldwide sales network, AL-KO stands for stability and quality.

A reliable partner for long-term business relationships:

AL-KO focuses on trust and consistency. The clear focus is on placing customer needs at the center of actions.

Commitment to quality and sustainability:

Through active participation in associations and committees, comprehensive certifications, and sustainable production processes, AL-KO guarantees the highest quality standards for its products and services.

Competence through continuous training:

Thanks to targeted in-company training programs and specialized know-how at the AL-KO Campus, the company ensures that its personnel always stay up to date.

OUR VISION

AL-KO Extraction Technology offers extraction technology for air purification at the highest level.

For our customers, we are more than just a supplier of high-quality extraction technology. With our expertise, we provide solutions for clean air in the workplace, ensuring the lowest energy consumption while protecting people and the environment.

OUR MISSION

"More than clean air" – with our extraction technology, we protect people, machines, and the environment.

We continuously work to create a better working environment for our customers with our devices and systems, improve their product quality, and increase productivity. As a result, AL-KO extraction systems are always a worthwhile investment.

OUR GOAL

We want to support our customers in creating a clean and healthy working environment through high product quality, optimal service, and innovative technology.



Innovation

Through continuous development of our devices and systems, they are always up to date with the latest technology.



Customer Benefit

Increasing our customers satisfaction is our daily motivation. To achieve this, we take every customer suggestion into account, continuously improving our devices and services to the benefit of our customers.



Environmental Awareness

The use of our systems protects people and the environment. We continuously optimize energy consumption, reduce CO₂ emissions, as well as dust and fume emissions.





OUR STRENGTHS ARE YOUR SAVINGS POTENTIAL

Discover the key advantages that make the difference.

- + Expert advice
- + Maintenance & Service (short delivery times)
- + Tested & certified
- + Long-term & fast spare parts delivery capability
- + Investment security
- + Modularly expandable and convertible

FUNDED AND TESTED

- **Eligible for funding:**
Benefit from government support for energy-efficient investments through BAFA funding.
- **Supported by the Federal Office:**
For Economic Affairs and Export Control: Financial and regulatory security for your company.
- **Tested by the BGHM:**
The products awarded with the DGUV Test have been tested by the Testing and Certification Body of the German Social Accident Insurance according to the relevant testing principles for health protection.
- **Certified:**
Meets all relevant safety requirements of the industry.
- **Patented ultrasonic container monitoring:**
Precise control for maximum operational safety.
- **ATEX certified for explosive environments:**
Safe operation even in demanding environments.



ENERGY AND PERFORMANCE OPTIMIZED AL-KO EXTRACTION SYSTEMS



System design and sizing

AL-KO offers customized extraction systems that grow with your needs. The planning of the ductwork by professional partners ensures short, straight routes and optimal functionality



Filter cleaning

AL-KO OPTI JET® cleaning: Jet impulses with minimal compressed air consumption for best efficiency and lowest energy requirements



Energy-saving fans

Motors with energy efficiency class IE3 or higher



Energy efficiency

Warm, filtered air remains in the room through air recirculation – savings of up to € 3,500 annually with an extraction volume of 10.000 m³/h and a room temperature of 20° C



Aerodynamics

Flow-optimized fan housings for best air flow, compact design

THE AL-KO FREQUENCY CONVERTERS



Energy savings up to 60%

System operation with frequency converter in combination with machine detection ensures enormous energy savings.

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PRODUCT FEATURES

AL-KO PROFI JET

The AL-KO modular system PROFI JET guarantees a high degree of flexibility.
The entire construction is soundproof and thermally insulated.

YOUR ADVANTAGES



High level of factory prefabrication
for shortest assembly times



Energy-saving and quiet design
through insulated panels



Extremely quiet
through highly effective sound insulation



Regular filter cleaning
through AL-KO OPTI JET process



Expandable at any time
even after several years of operation



Tested and certified
ATEX compliant and eligible for BAFA funding



Various control options
AL-KO HIGH PERFORMANCE,
frequency converter



Delivery times
extremely short after technical planning certainty



Installation variants
possible both indoors and outdoors

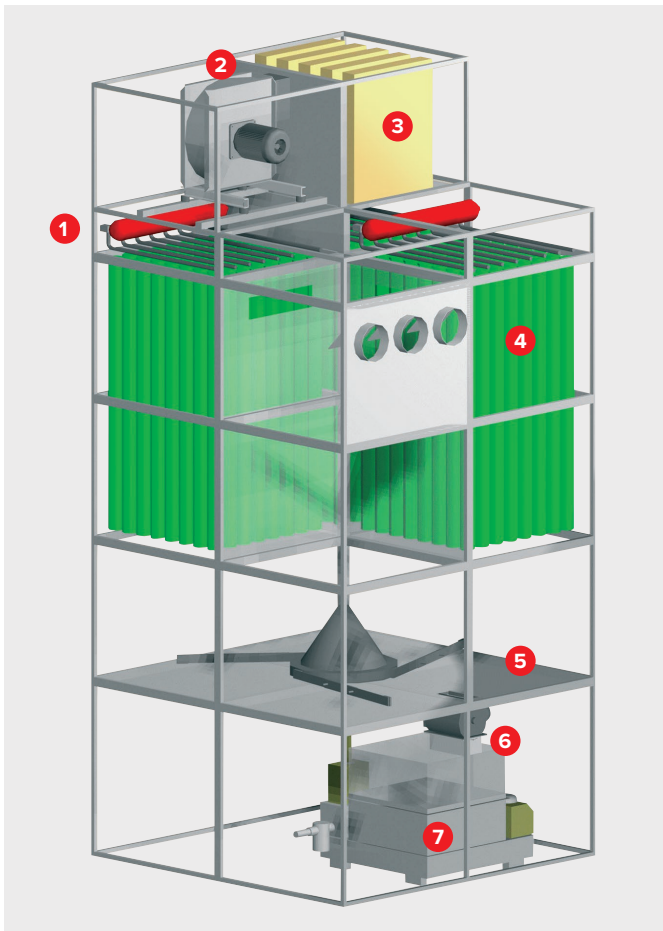


Professional appearance/design
achievable through powder-coated panels
in different RAL colors



Learn more about the
AL-KO PROFI JET system filter unit
in the video.

CONSTRUCTION AND FUNCTIONALITY OF THE FILTER SYSTEMS



- 1 Large-volume compressed air tank with fast-switching diaphragm valves for optimal JET filter cleaning and minimal compressed air consumption
- 2 Process air fans according to ErP Directive 2009/125/EC
- 3 Soundproofed return air chamber (optionally available with soundproofing baffles)
- 4 Hose filter made of antistatic polyester needle felt material (BIA-tested for dust class M) standard with snap ring closure for easy handling
- 5 Round discharge in self-supporting galvanized sheet steel design or welded and powder-coated
- 6 Type-tested AL-KO rotary valve according to ATEX Directive 2014/34/EU
- 7 AL-KO briquetting press tailored to the specific application

APPLICATION AREAS

- Extraction at multiple processing machines, workstations, or entire production areas
- Spatial ventilation and extraction at enclosures and work cabins
- For practically all types of dust and chips
- Also for dust and applications with ATEX classification
- Extraction for industries such as wood, plastic, metal, welding, cutting, recycling, and many other materials



HIGH-PERFORMANCE FILTER SYSTEM AL-KO OPTI JET



1. Filtration Phase

Contamination level monitored

- The contamination level of the filter is continuously monitored via differential pressure measurement.

Automatic cleaning

- When a certain threshold value is reached, the cleaning process starts automatically.



2. Cleaning Phase

Pulsed compressed air blasts

- Compressed air is directed through the filter in short, strong pulses.

Detachment of dust particles

- The sudden air blast detaches clogged particles from the surface.



3. Cleaned Filter

Dust falls into the collection container.

- The loosened particles are directed into a dust collection container or a discharge device.

Maintaining filter performance

- Regular cleaning ensures that the suction power remains constant and the filter does not become clogged.

ADVANTAGES OF PANEL CONSTRUCTION



- + **Thermal protection:** minimal cooling of the return air; more heat recovery into the workspace
- + **Fire protection:** fire-retardant intermediate layer (certified EW 90)
- + **Noise protection:** sound-absorbing mineral fiber; wall thickness 48 mm
- + **Explosion protection** (pressure shock resistance 200 mbar)

AL-KO HIGH PERFORMANCE

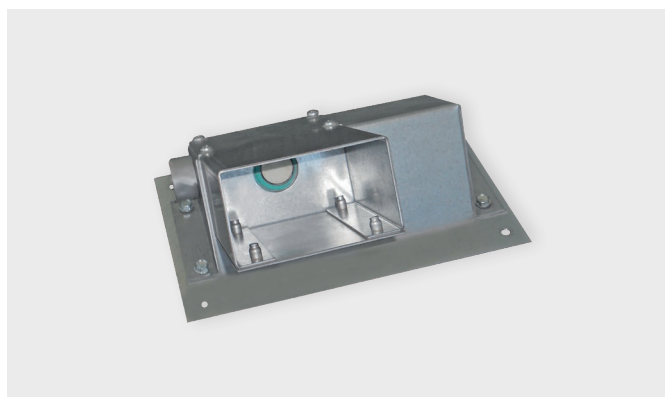
Our control solution for stationary AL-KO extraction systems

- Simple monitoring
- Predictive maintenance
- Remote maintenance enables optimizations and software adjustments
- Real-time monitoring
- Additional features possible



AL-KO LEVEL CONTROL ALC 21

- Contactless ultrasonic fill level sensor
- Continuous ultrasonic measurement for dust and chips
- Optionally pre-assembled or retrofittable
- ATEX certification for raw air area (Zone 21)
- Unique & patented across Europe



RESIDUAL DUST SENSOR PFM 02 HB

- System for continuous, triboelectric in-situ filter monitoring
- Monitoring of dust content using an electronic sensor
- If the limit value (0.3 mg/m^3) is exceeded, a self-sustaining alarm is triggered and the system switches to exhaust air mode or shuts down completely





AL-KO DISPOSAL OPTIONS

BRIQUETTING PRESSES

Energy recovery

- Separated wood chips are processed into fuel briquettes for heating systems

Cost reduction

- Reduced disposal and storage costs through briquetting

Resale

- Briquettes can be resold as an environmentally friendly fuel

Sustainability

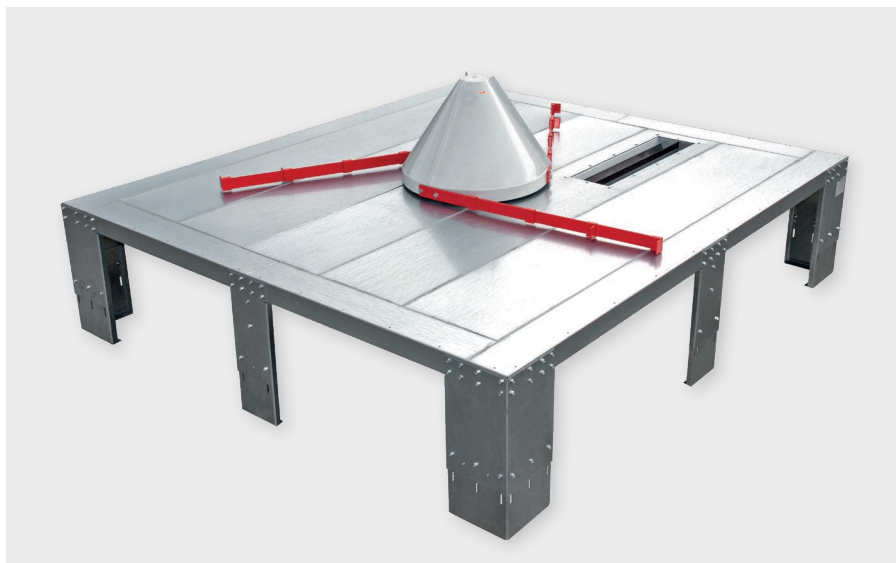
- CO₂-neutral heating through recycled materials



Technical data	APC 30/50	APC 50/70	APV 60	APV 80	APV 100	APV 120
Briquette diameter	50 mm	70 mm	50 mm	60 mm	70 mm	80 mm
Performance depending on material	up to 50 kg/h	up to 70 kg/h	up to 90 kg/h	up to 100 kg/h	up to 150 kg/h	up to 180 kg/h
Motor power	5.5 kW	7.5 kW	7.5 kW	7.5 kW	11 kW	11 kW
Weight	650 kg	750 kg	820 kg	870 kg	1,000 kg	1,050 kg

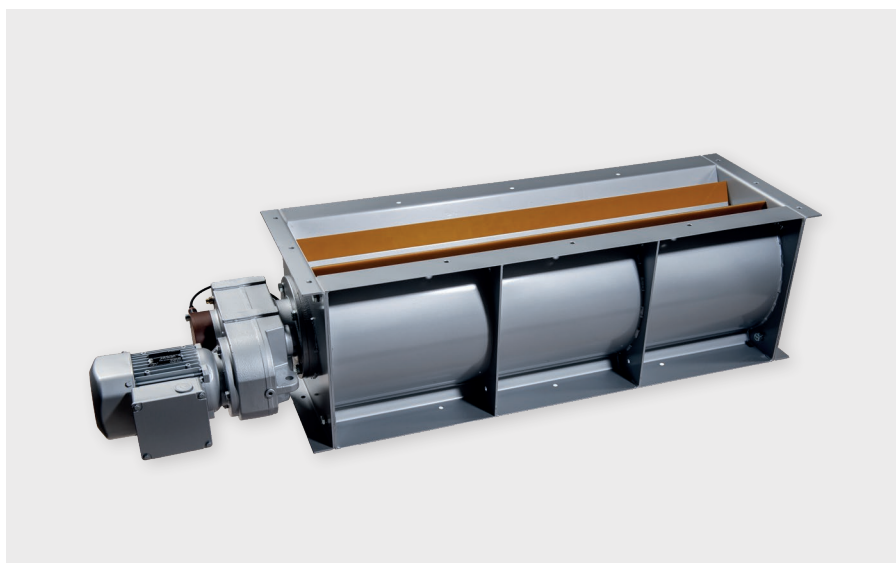
ROUND DISCHARGES

- Compactly built round discharge
- Alternative to the debris chute
- Discharge via attachable rotary valve
- Possibility to buffer materials



ROTARY VALVES

- Separated material is discharged without pressure into a container, big bag, or similar receptacle
- Usable for goods with temperatures up to 50 °C
- Tested according to ATEX Directive 2014/34/EU



Technical data	ZRS 440	ZRS 960
Inlet	250 × 440 mm	250 × 960 mm
Outlet	208 × 440 mm	208 × 960 mm
Overall height	330 mm	330 mm
Total weight	70 kg	100 kg
Max. conveying capacity at 4 U / min rotary valve speed	7,250 L/h	15,816 L/h
Max. conveying capacity at 12 U / min rotary valve speed	21,750 L/h	47,450 L/h
Temperature range	up to 130° C	up to 130° C

AL-KO AIRTECH

AL-KO Airtech is the specialist in the manufacturing and distribution of extraction and ventilation systems. Airtech includes **AL-KO Extraction Technology** and **AL-KO Air Technology**. These business units develop and produce customized air handling systems as well as a wide range of industrial extraction systems for various applications. What began in 1931 as a small village forge is now a global brand. Then and now, the brand promise "QUALITY FOR LIFE" stands for unique product and service quality.

AL-KO EXTRACTION TECHNOLOGY

- ✔ **Over 35 years of experience** – Competence & innovation in Extraction Technology
- ✔ **Tested & certified** – highest safety and quality
- ✔ **5,000+ systems per year** – proven AL-KO quality in use
- ✔ **Diverse solutions** – Standard devices & customized systems
- ✔ **Everything from a single source** – Planning, digital tools, control & service

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