

VENTILATION AND AIR-CONDITIONING TECHNOLOGY
FOR INDUSTRY AND AUTOMOTIVE

A large, red, teardrop-shaped graphic with a white border, containing the text "PRECISION AND EFFICIENCY." in white, bold, uppercase letters. The graphic is positioned in the lower-left foreground, partially overlapping the background image of a car lift.

PRECISION
AND
EFFICIENCY.



SOLUTIONS FOR LARGE VOLUMES



For decades AL-KO has been supplying production plants from different industries with ventilation and air-conditioning units in perfect alignment with the individual requirements. Worldwide, reliable and at a consistently high quality. The scope ranges from test facilities and paint shops to production lines of various dimensions.

YOUR ADVANTAGES

- | Variable and optimised adaptation for all system-specific applications
- | High product quality through state-of-the-art production technology
- | Agreed delivery dates and highest reliability
- | Realisation worldwide according to EN and VDI standards





EVERYTHING IS FEASIBLE

AL-KO **ATFLEX**[®] adapts to your requirements and circumstances. No matter what the premises and the supply on-site are like, with **ATFLEX**[®] we can configure the air-conditioning and ventilation unit that matches the requirements exactly.

The range of solutions is complemented by a wide selection of the best components available on the market. If there isn't a solution for the specific requirements yet, AL-KO engineers will construct and realise an individual system from lot size one.

PARTNER TO THE AUTOMOTIVE INDUSTRY

AL-KO **ATFLEX**[®] solutions cool and ventilate production halls for the automotive industry worldwide. From engine production, paint shops and tyre production to various areas of research and development. The assured AL-KO reliability, the practically endless variability of **ATFLEX**[®] as well as the comprehensive advice offered by AL-KO engineers are the reasons why leading brands are counting on AL-KO when it comes to air-conditioning and ventilation.



THE RIGHT SOLUTION FOR EVERY NEED

AL-KO ATFLEX® based on AT4-F and AT4

Flow rate m ³ /h	Equipment size	External dimensions		Internal dimensions	
		Width in mm	Height in mm	Width in mm	Height in mm
1,348 – 3,370	8 x 8	689	1,608	612	612
2,024 – 5,060	12 x 8	995	1,608	918	612
2,696 – 6,740	16 x 8	1,301	1,608	1,224	612
3,032 – 7,580	12 x 12	995	2,220	918	918
4,040 – 10,100	16 x 12	1,301	2,220	1,224	918
5.40 – 12,600	20 x 12	1,607	2,220	1,530	918
5,392 – 13,480	16 x 16	1,301	2,832	1,224	1,224
6,740 – 16,850	20 x 16	1,607	2,832	1,530	1,224
8,092 – 20,230	24 x 16	1,913	2,832	1,836	1,224
10,788 – 26,970	32 x 16	2,525	2,832	2,448	1,224
8,428 – 21,070	20 x 20	1,607	3,444	1,530	1,530
10,112 – 25,280	24 x 20	1,913	3,444	1,836	1,530
12,136 – 30,340	24 x 24	1,913	4,012	1,836	1,836
14.156 – 35,390	28 x 24	2,219	4,056	2,142	1,836
16,180 – 40,450	32 x 24	2,528	4,056	2,448	1,836
16,516 – 41,290	28 x 28	4,458	2,329	2,142	2,142
18,876 – 47,190	32 x 28	2,525	2,329	2,448	2,142
24,184 – 60,460	41 x 28	6,446	2,329	3,136.5	2,142
21,572 – 53,930	32 x 32	5,070	2,635	2,448	2,448
27,636 – 69,090	41 x 32	6,446	2,635	3,136.5	2,448
33,032 – 82,580	49 x 32	7,670	2,635	3,748.5	2,448

AL-KO ATFLEX® based on AT6

Flow rate m ³ /h	Equipment size	External dimensions		Internal dimensions	
		Width in mm	Height in mm (incl. installation frame)	Width in mm	Height in mm (incl. installation frame)
12,700 - 29,600	15 x 15	1,632	1,632 (1,782)	1,530	1,530
15,200 - 35,500	18 x 15	1,938	1,632 (1,782)	1,836	1,530
20,300 - 47,300	24 x 15	2,550	1,632 (1,782)	2,448	1,530
26,200 - 61,100	31 x 15	3,264	1,632 (1,782)	3,162	1,530
18,200 - 42,600	18 x 18	1,938	1,938 (2,088)	1,836	1,836
21,300 - 49,700	21 x 18	2,244	1,938 (2,088)	2,142	1,836
24,300 - 56,700	24 x 18	2,550	1,938 (2,088)	2,448	1,836
31,400 - 73,300	31 x 18	3,264	1,938 (2,088)	3,162	1,836
37,500 - 87,400	37 x 18	3,876	1,938 (2,088)	3,774	1,836
24,800 - 57,900	21 x 21	2,244	2,244 (2,394)	2,142	2,142
28,400 - 66,200	24 x 21	2,550	2,244 (2,394)	2,448	2,142
31,900 - 74,500	27 x 21	2,856	2,244 (2,394)	2,754	2,142
36,600 - 85,500	31 x 21	3,264	2,244 (2,394)	3,162	2,142
40,200 - 93,700	34 x 21	3,570	2,244 (2,394)	3,468	2,142
43,700 - 102,000	37 x 21	3,876	2,244 (2,394)	3,774	2,142
47,300 - 110,300	40 x 21	4,182	2,244 (2,444)	4,080	2,142
50,800 - 118,500	43 x 21	4,488	2,244 (2,444)	4,386	2,142
32,400 - 75,600	24 x 24	2,550	2,550 (2,700)	2,448	2,448
36,500 - 85,100	27 x 24	2,856	2,550 (2,700)	2,754	2,448
41,900 - 97,700	31 x 24	3,264	2,550 (2,700)	3,162	2,448
45,900 - 107,100	34 x 24	3,570	2,550 (2,700)	3,468	2,448
50,000 - 116,600	37 x 24	3,876	2,550 (2,700)	3,774	2,448
54,000 - 126,000	40 x 24	4,182	2,550 (2,750)	4,080	2,448
58,100 - 135,500	43 x 24	4,488	2,550 (2,750)	4,386	2,448
62,100 - 144,900	46 x 24	4,794	2,550 (2,850)	4,692	2,448
66,200 - 154,400	49 x 24	5,100	2,550 (2,850)	4,998	2,448
41,000 - 95,700	27 x 27	2,856	2,856 (3,006)	2,754	2,754
47,100 - 109,900	31 x 27	3,264	2,856 (3,006)	3,162	2,754
51,600 - 120,500	34 x 27	3,570	2,856 (3,006)	3,468	2,754
56,200 - 131,100	37 x 27	3,876	2,856 (3,006)	3,774	2,754
60,700 - 141,700	40 x 27	4,182	2,856 (3,056)	4,080	2,754
65,300 - 152,400	43 x 27	4,488	2,856 (3,056)	4,386	2,754
69,900 - 163,000	46 x 27	4,794	2,856 (3,156)	4,692	2,754
74,400 - 173,600	49 x 27	5,100	2,856 (3,156)	4,998	2,754
79,000 - 184,300	52 x 27	5,406	2,856 (3,156)	5,304	2,754
83,500 - 194,900	55 x 27	5,712	2,856 (3,156)	5,610	2,754

INDUSTRIAL SOLUTIONS

AL-KO **ATFLEX**® for manufacturing:

- | Highest corrosion protection due to galvanised and additionally powder-coated housing panels
- | Excellent sound and heat insulation due to 47 or 58 mm thick panels, insulating material made of mineral wool, incombustible according to EN 13501/1
- | Complete thermal decoupling between inner and outer shell
- | Units can be dissembled for optimised installation and transport
- | Perfectly adaptable to the structural circumstances on site due to variable modular dimensions of 102 mm
- | Smooth interior surfaces without corners and edges



- | No galvanised panel surfaces prone to corrosion with unprotected cut edges
- | Door and panel seals with elaborate sealing geometry overlapping in the corners – thermally highly sealed and non-ageing
- | Fan models adapted to the operating point
- | Use of all established heat recovery solutions, aligned to the respective design range

FILTER

- | Mechanically stable even in humidity
- | Optical and electric monitoring of filter differential pressure as standard
- | All components with test certificate
- | Maintenance on raw air side with space and time-saving filter tension spring
- | New in 2015: also with plasma filter for reliable elimination of viruses, bacteria and VOCs as well as minimisation of odours

FANS

- | Free-wheeling fans combined with highly efficient driving motors for top overall efficiency
- | EC and free-wheeling fans combined with permanent magnet motors for optimum efficiency
- | Housing fans with low-abrasion flat belt on request

HUMIDIFIER

- | Built-in automatic shutoff which allows the entire humidifier chamber to be run dry
- | Easy-to-clean, extendable and demountable eliminator with stainless steel frame
- | All humidifier units are tested for type examination and VDI 6022 certified
- | New in 2015: Dry humidifier unit

INDUSTRIAL SOLUTIONS



SILENCER

- | Fibre glass coating with particularly high mechanical strength for sound-absorbing panels
- | Tool-less removal of the panels
- | Individually replaceable panels
- | Easily accessible through control panels at the front of the unit



HEAT EXCHANGER

- | All sections of the unit can be accessed – either extricable or accessible on foot
- | Particular corrosion protection of the cooler frame parts
- | Spacing of plates > 2 mm, can verifiably be steam-cleaned down to the core
- | Continuous and complete emptying of the cooler through stainless steel condensate outlet at the lowest point
- | Extendable and demountable eliminator, integrated after the cooler as standard
- | Prevention of water condensation due to continuous insulation of pipe openings through the panel
- | Highest quality through aluminium cooler frame and copper collection pipes



INDEPENDENT HYGIENE CERTIFICATION

- | Can be cleaned down to the core
- | Independently verified, confirmed and audited

EXACTLY AS ORDERED



In an industrial setting, the success of a project or the quality of the production is often dependant on the right quality of air. The performance data of AL-KO units for your industry is reliably tested at our TÜV-monitored, in-house test facilities, where you are also able to inspect your system before delivery and check the setup, parts and components. Naturally a documented check of aerodynamic data can be performed at the suction-side chamber test rig. The air nozzles used for this purpose achieve an accuracy of $\pm 1.5\%$. Guaranteed performance data through Eurovent certification ensures an energy-efficient operation.

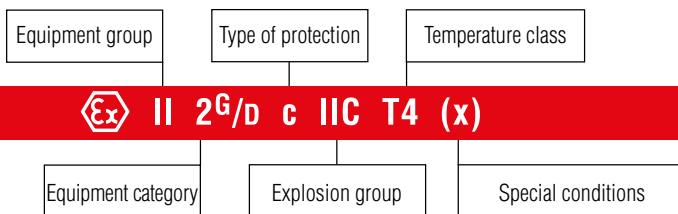


COMPLETELY SAFE



ATEX-compliant components

- | ATEX-design direct drive fans for zone 1 to T4 and 21 to T 120°C respectively, in combination with an explosion-proof motor
- | Belt-driven ATEX-fans for zone 2 and temperature class T3
- | Motor explosion-proof with frequency converter operation – efficiency class up to IE3
- | Fan driving belt electroconductive
- | Bellow expansion sleeves made of conductive material
- | Non-static air filter – for explosion groups (IIA – IIC)
- | Inspection glasses made of glass
- | Eliminators made of conductive material
- | All electric components are ATEX-certified, all mechanical components are tested for type examination with manufacturers declaration
- | Fully earthed construction
- | Earthing of multi-leaf dampers
- | Heat recovery through circuit compound system or plate heat exchanger
- | Earthed and non-static sound-absorbing panels



YOUR PARTNER WORLDWIDE

Your industry thinks and works on a global level. So does AL-KO. This means that AL-KO is able to support you and your trusted partners anywhere in the world. From planning and configuration to on-site installation. AL-KO is also happy to help when it comes to servicing your systems. Worldwide, competently and with consistent quality.



AS SMOOTHLY-RUNNING AS AIR **ATFLEX**[®] AND **ATEASY**[®]

PROJECT MANAGEMENT AND IMPLEMENTATION

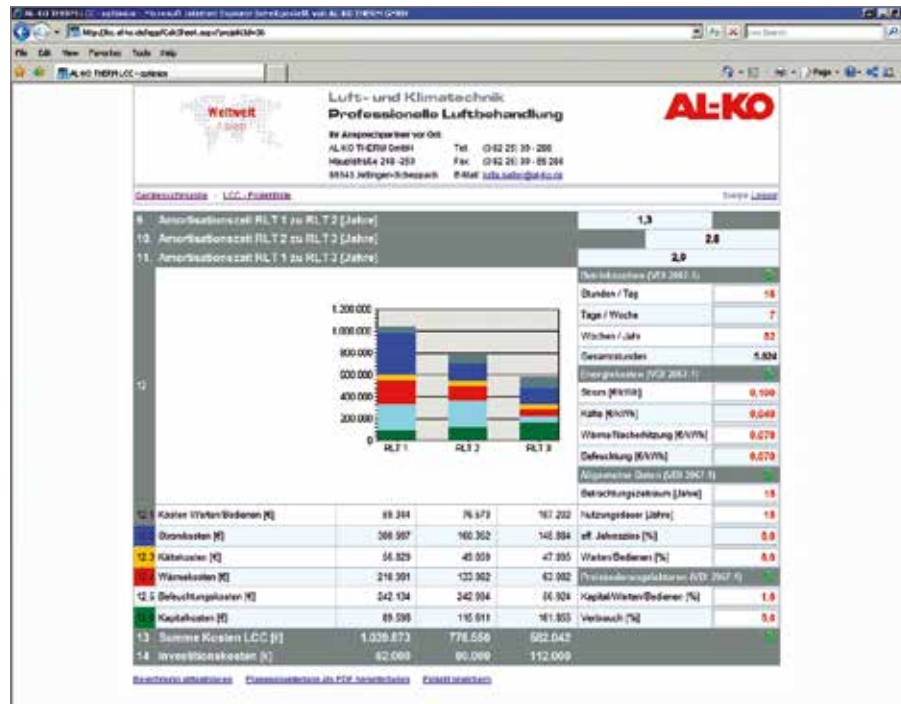
Admittedly, on new-builds or renovation projects, ventilation and air-conditioning technology is one of the more inconspicuous trades for clients and architects. At AL-KO we would like it to stay that way until completion of the construction project and for many years to come.

- | AL-KO stands for long-standing cooperation with technical designers and manufacturers.
- | AL-KO has decades of experience in the international project business. This expertise is available to you.
- | On site, the modular AL-KO **ATFLEX**[®] systems, which can be dissembled, can easily be taken to premises that are difficult to access.
- | AL-KO offers a comprehensive construction kit for ideal climate and air conditions. At the same time, AL-KO makes every effort to continue to reduce delivery times for even the most unusual requirements, so that the project succeeds on time.



IT IS EASIEST TO CALCULATE WHEN THE SUM IS KNOWN

ENERGETIC EVALUATIONS



Life cycle costs are known from day 1

Investors, owners and users of buildings are at an advantage with AL-KO: Even before signing the contract you know exactly which costs to expect during the service life of your AL-KO ventilation system.

Not only does the AL-KO life cycle cost (LCC) calculation ensure you are receiving a ventilation and air-conditioning system perfectly meeting your requirements. As part of the LCC calculation, AL-KO engineers combine the components best suited for your project in terms of function, energy-efficiency and life cycle costs.

The bottom line is a precise calculation including purchase price, maintenance costs and operating costs. Plain, transparent and definite. Do the test: <http://lcc.al-ko.de> is the gateway to the world of life cycle cost calculation by AL-KO.

AL-KO supports you with the energetic evaluation of various concepts for ventilation units – for all climatic zones worldwide. Reliable technical data based on Eurovent certification ensures an energy-efficient choice of components.



AL-KO

QUALITY FOR LIFE

AL-KO THERM GMBH
Ventilation and Air-Conditioning
Technology

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Figures show configuration examples which are not available in every market.
Please ask your AL-KO advisor.

Provided by your AL-KO partner:

Subject to modifications in response to technical developments.
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