

HIGH-TECH COMPONENTS FOR CARAVANS





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AL-KO

QUALITY FOR LIFE



FROM THE VILLAGE FORGE TO A GLOBAL CORPORATION

Our roots were planted in a small village smithy. The fact that a global corporation has emerged from these humble roots is also because we are constantly aware of what our identity represents and what values the company has always embodied: Quality, innovation in product and process as well as reliability and sustainability in our internal and external customer relations. That is the basis of our pursuit of sustainable growth and quality leadership in our business fields.

Since 2016 we have been making our contribution to the DexKo Group, the world's leading manufacturer of axles and chassis components in the lightweight segment. We are proud to continue in successfully shaping this development together with DexKo and to convey our brand promise of quality, safety and comfort for our products and services to the world.

Member of **DEXKO**
G L O B A L



VEHICLE TECHNOLOGY

Our vehicle technology products for motorhomes, caravans, commercial vehicles and commercial trailers guarantee the greatest safety and comfort. In any situation. With our premium solutions for vehicles in commercial use, we are meeting the most exacting customer requirements in terms

of ergonomics. For leisure vehicles we pave the way for a positive start to your holidays and a relaxed return home. We are always your reliable companion – for more joy on the road.



HIGH-TECH COMPONENTS

YOUR RELIABLE COMPANION IN EVERY SITUATION

SAFE

Page 21

JACK

Page 36

EURO DELTA AXLE Page 40

SHOCK ABSORBER / AAA PREMIUM BRAKE Page 16/17

ATC - AL-KO TRAILER CONTROL

Page 14

MANOEUVRING SYSTEMS

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2LINK

Page 12

JOCKEY WHEELS

Page 34



COMFORT

Enjoy your holiday. All AL-KO components are perfectly optimised for your chassis.

SAFETY

On the road and at the camping site, AL-KO's high-tech components always give you 100% reliable safety.



SPARE WHEEL HOLDER

Page 37

CORNER STEADY SYSTEMS

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WEATHER PROTECTION

Page 35

MANOEUVRING HANDLE

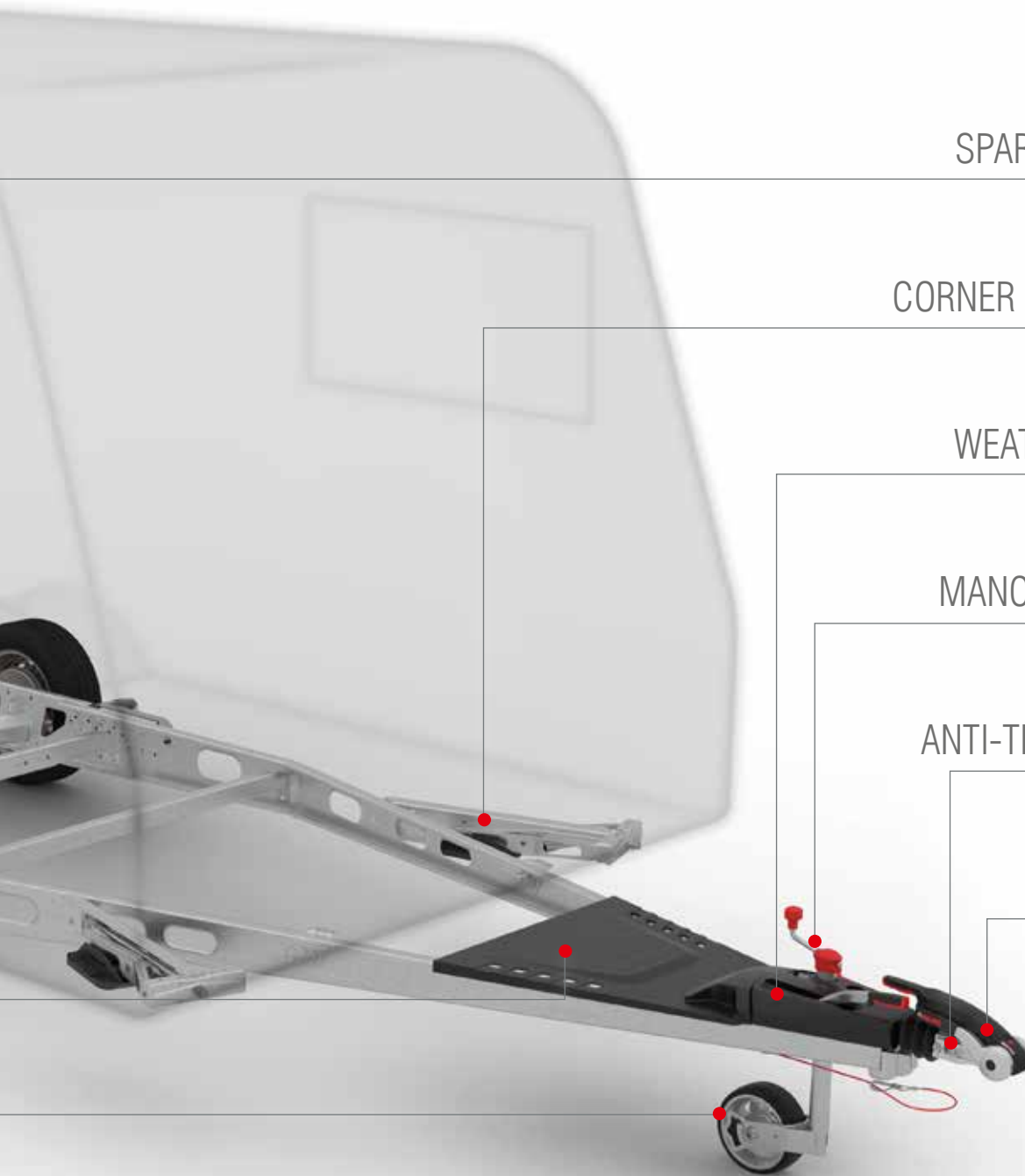
Page 34

ANTI-THEFT PROTECTION

Page 20

COUPLINGS

Page 15





EXPERIENCE

For over 85 years, AL-KO has been developing and producing products that meet the needs of all customers with sophisticated and proven technology.

AL-KO PRODUCTION HIGHEST STANDARDS AND QUALITY

COOPERATION

The ongoing collaboration of the AL-KO Development department with leading caravan manufacturers lays the foundation for improved safety and maximum driving comfort.

This know-how has made us a valued partner of the caravan industry across the globe.

From component to product – precision and care define the manufacturing process



DRIVING SAFETY





DRIVING SAFETY



MORE SAFETY AND COMFORT WHEN TRAVELLING – THE AL-KO 2LINK CONNECTIVITY SYSTEM

AL-KO 2LINK offers you the possibility of monitoring important safety functions on your smartphone while driving. The core element is the 2LINK box. Installed on the drawbar, it processes the data from the sensors in the chassis and transmits these to the 2LINK app that you can download free of charge in the app store or the Google Play store.



THE 2LINK APP AT A GLANCE

- I ATC status display
- I TPMS status display
- I Levelling function
- I Service locator
- I Various operating manuals



ATC

The ATC status display warns the driver directly of system interventions and thus helps to detect dangerous driving situations and external influences earlier.



Spirit level

The integrated electronic spirit level makes it easy to manually level the caravan. The 2LINK box detects the current alignment of the caravan and shows the position directly on the smartphone display.



Tyre pressure

The TPMS status display allows the driver to check the tyre pressure at any time while driving and is immediately warned of any pressure drop.





AL-KO TPMS – THE TYRE PRESSURE ALWAYS IN YOUR SIGHTS

The optimum tyre pressure on your caravan has a significant influence on the cost-effectiveness, but more importantly also on the safety, of your holiday trip. The new AL-KO tyre pressure monitoring sensor system in combination with the AL-KO 2LINK box enables you to check the tyre pressure on your smartphone at any time while driving and therefore to detect pressure loss in good time.



OPTIMUM TYRE PRESSURE FOR OPTIMUM DRIVING

Driving with the right tyre pressure at all times offers crucial advantages:

- | Short braking distance
- | Better driving and cornering properties
- | Lower fuel consumption
- | Reduced tyre wear

THE SIMPLE SOLUTION

The sensor of the AL-KO TPMS is installed directly on the wheel rim instead of a standard valve quickly and easily after removing the tyre. If a battery is required, installation can be carried out by AL-KO Service or an authorised caravan dealer.



For more information about 2LINK and the app, go to www.alko-tech.com/2link



DRIVING SAFETY

ATC – AL-KO TRAILER CONTROL THE INNOVATIVE ANTI-SNAKING SYSTEM

SIMPLY CLEVER

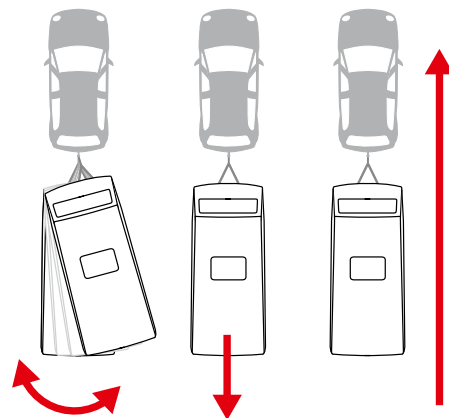
Avoidance manoeuvres or side wind can cause caravans to start swinging. AL-KO Trailer Control actively counteracts these forces. It detects the swinging motion directly at the axle and automatically brakes the caravan gently. It is available ex works for new purchases and as a retrofit for nearly all caravans, as well as hobby caravans.



THE INNOVATIVE ANTI-SNAKING SYSTEM

The emergency system reacts automatically when the vehicle combination swaying exceeds limit values.

- I Sensors react even to slight lateral accelerations.
- I The caravan immediately brakes automatically. The driver barely notices this correction.
- I Braking automatically puts the caravan back on track, i.e. there is little risk of a rear-end collision due to sudden, sharp braking, and an overtaking manoeuvre is not affected.



The driving behaviour of the caravan is permanently monitored by the ATC. Sensors detect dangerous lateral movements directly on the caravan axle, even before an ESP system for trailers installed in the car is able to sense the pendulum movement. The caravan will immediately – without any action on the part of the driver – brake gently and return to a stable driving condition.



A clearly visible green **LED** indicates that the emergency system is fully functional.



AKS™ 3004

FOUR FRICTION LININGS FOR BETTER LANE HANDLING

THE NUMBER 1 IN EUROPE!

Snaking or pitching movements of the caravan are effectively suppressed before they become serious. As the only anti-snaking coupling on the market, the AKS™ 3004 has four friction linings. That's why it is used by most caravan manufacturers ex works.

The coupling and stabilisation handles are separate from one another. Therefore, the stabilisation function can be easily deactivated with a simple manual action. The caravan, however, still remains safely coupled.



IMPROVED ERGONOMICS

Closing the stabilisation handle presses the four friction linings against the car's towball from all sides. This four-fold increased friction suppresses snaking and pitching movements. The vehicle combination comes to rest significantly quicker even in an emergency situation.



VISIBLE CONTROL

- 1 Wear indicator for friction pads
- 2 When the green cylinder is visible the AKS™ 3004 is correctly placed
- 3 Wear indicator for coupling



WS 3000

Specially developed friction elements are pressed axially under high spring pressure against the towball of the car, resulting in the enormous stability of the vehicle combination. As a result, the critical speed at which a vehicle combination becomes unstable and starts to yaw is permanently increased by up to 30%. Your safety advantage!



DRIVING SAFETY

ORIGINAL ACCESSORIES



OCTAGON SHOCK ABSORBER

Optimal damping thanks to precise tuning. AL-KO octagon shock absorbers have overload protection and are characterised by high-quality seals and a special oil. They are precisely optimised for a clearly defined weight range and significantly improve the driving characteristics of the caravan. Trailer "bounce" is reduced significantly.



SOFT-BALL

The soft rubber blend protects vehicles against scratches, shins against injuries and clothing from dirt. Available in a variety of colours.



IMPROVE EFFICIENCY

With the original AL-KO Longlife Bowden cables, the brakes respond with more sensitivity and less friction and the Bowden cables last longer. Just like the original AL-KO brake pads that are perfectly customised to the brakes. In short: additional longer service life and more protection even for long holiday trips!

AL-KO ORIGINAL COMPONENTS

Greater safety both for driving and braking. During servicing always insist on original AL-KO components. As a manufacturer of chassis, shock absorbers and Bowden cables, we know what really matters.

AAA PREMIUM BRAKE – THE HIGH-PERFORMANCE BRAKE

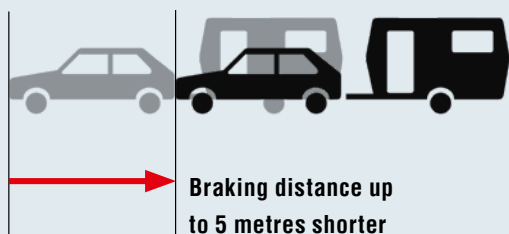


PREMIUM BRAKE WITH AUTOMATIC ADJUSTMENT

- | The proven wheel brake with its far above-average braking values is supplemented by the automatic adjustment function
- | When driving in reverse, the adjustment is deactivated to prevent the brake from blocking
- | Suitable for wheel brake types 2051 and 2361, and therefore for most caravans with AL-KO axles
- | Quick and easy conversion by pre-mounted AL-KO screw system in AL-KO axles

YOUR ADVANTAGE

- | **Greater driving safety** thanks to an up to 5 m shorter braking distance
- | **Greater driving comfort** thanks to smooth braking without a jolting motion
- | **Lower maintenance costs** thanks to extended service intervals + dispensing with the first workshop visit after 1,000 km
- | **Tip:** Change over to the AAA Premium Brake the next time you change your brake linings, if not before



SHORTER BRAKING DISTANCE, MORE SAFETY

Every metre of shorter braking distance is a “bonus” in safety. The AAA Premium Brake automatically readjusts the brake as soon as there is too much play. Optimally set brakes ensure the best possible performance and the braking distance is thus shortened.

ANTI-THEFT PROTECTION





ANTI-THEFT PROTECTION

SAFETY LOCKS – THE EFFECTIVE DETERRENT AGAINST THEFT



SAFETY PREMIUM – THE NEW ANTI-THEFT PROTECTION GENERATION

Safety Premium also meets the highest international safety standards such as the criteria for the "Sold Secure Gold standard" (UK), "SBSC tested" (Sweden) and "SCM tested" (the Netherlands).

The sturdy steel construction with powder-coated housing and a solid galvanised bolt (free of chromium(VI)) is supplied with two keys.



SAFETY COMPACT

The tried-and-tested solution offers protection both on the road and when parked. So the caravan remains secure even when taking a break.



SAFETY PLUS

With additional drill protection! Thanks to especially high-strength steel, additional reinforcements and the lock with drill protection, the Plus version offers even greater anti-theft protection even in unsafe areas. The red colour also means: This caravan is perfectly secured.

WINTERHOFF ANTI-THEFT DEVICES



ROBSTOP WS 3000 PLUS

Reinforced, hardened design with special lock cylinders and certificates.



ROBSTOP WS 3000

Standard version without certificates.



FOR MORE SAFETY – ANY TIME, ANYWHERE



COMFORTING PROTECTION FOR YOUR VALUABLES

Your property is secure against outside access behind solid steel walls. Only the double-bit safety key will open the stable round bolts of the safe door. Independent of power or batteries, the safe is positioned inside the caravan and can be secured under the vehicle floor using a mounting plate.



SAFETY COMPACT FOR PREMIUM CORNER STEADIES FROM 2006 PRODUCTION DATE

Easy to use, 2-part, mechanical immobiliser for caravans.

The Safety Compact for Premium corner steadies prevents the steady legs from being cranked up. This secures the caravan into position. Simply turn the legs down, insert safety lock and push in lock. Now you can spend a nice, relaxing day at the beach or in the city. Ensures additional security during longer periods when the caravan is not being moved, e.g. over the winter months.



SAFETY-BALL

The Safety Ball supplements the AL-KO anti-theft devices on the towbar in stationary use. The hard plastic safety catch drops into the coupling heads when uncoupled and prevents the spherical head engaging, thus also preventing unauthorised coupling.

MANOEUVRING





MANOEUVRING

MAMMUT / MAMMUT TANDEM GREAT PRECISION WITH MAXIMUM GROUND CLEARANCE



FINGERTIP MANOEUVRING

Only the AL-KO MAMMUT offers a caravan manoeuvring system with a joystick control. Contrary to button operation, you can use one hand to easily steer, accelerate and brake.



Control panel with battery (caravan / remote control) and overload display

Adjustable speed and direction control via joystick

Remove MAMMUT drive from the wheel

Engage MAMMUT drive at the wheel

PLAYING IT SAFE

The system must be paired to prevent inadvertent operation. The remote control is simply held against the sensor on the drawbar to activate the system.



Safety authorisation

On/Off



360° turns



Soft start
Soft stop



Obstacles
up to 4 cm



Inclines
up to 28%
(single axle)



Infinitely
variable control



More ground clearance with an AL-KO CHASSIS with the embossed "M" (single axle from model year 2010, tandem from model year 2015).



The sturdy aluminium housing of the MAMMUT is splash-proof (IP65) and guarantees reliable function at all times even under adverse conditions.



Powerful, robust, compact: Powerful electric motors in each drive move the caravan wheels.



OPTIMAL GRIP

Two motors are integrated into every drive unit: one for the positioning drive and one for the wheel drive. One push of the button on the remote control and the sturdy sandblasted drive rollers mounted in double bearings press against the wheels. The permanent electronic control of the contact pressure ensures optimal grip under all conditions. The second motor in the drive housing is responsible for the wheel drive.

MANOEUVRING

RANGER / RANGER TANDEM



AL-KO QUALITY AND DESIGN AT AN AFFORDABLE PRICE

The powerful entry-level model for single-axle caravans up to 1.8 t and tandem caravans up to 2.5 t.

Manoeuvring without external assistance. Even on uneven terrain.

- I AL-KO quality and design
- I Climbing power up to 18% (long inclines) / over 18% (short inclines, e.g. drive-on ramps)
- I Perfect and tested AL-KO CHASSIS connection from Europe's chassis market leader
- I Soft start and soft stop
- I Ergonomic remote control with lanyard
- I Suitable for almost any caravan up to 1.8 t (single-axle) or 2.5 t (tandem)
- I Protected mechanical system
- I Worldwide service network
- I 5-year warranty (as per AL-KO warranty conditions)



360°
turns



Soft start
Soft stop



Obstacles
up to 2 cm



Inclines
up to 18 %



Direction control via buttons

Green status LED light

On/Off

Battery (caravan / remote control) and overload display

MY SUITABLE MANOEUVRING SYSTEM

MAMMUT	RANGER
Electric control	Manual control
Joystick remote control	Button remote control
M-connection / underneath connection	Underneath connection
Aluminium housing (IP65)	Plastic housing
Electronics in drive	Electronics in caravan (storage space)
Aluminium rollers on both sides	Aluminium rollers on both sides
5-year warranty	5-year warranty
Gross weight of caravan*: 2.25 t / 3.0 t	Gross weight of caravan*: 1.8 t / 2.5 t
Maximum gradeability up to 28%	Maximum gradeability up to 18%

* Single-axle / Tandem

Our tip:

RANGER and UP4 are unbeatable in a package, because both systems can be operated with just one remote control!

See page 30 / 31



PARKING





PARKING

UP4 ELECTRONIC SUPPORT SYSTEM

DEVELOPED FOR CAMPING TODAY

With UP4 from AL-KO, you raise the legs of your caravan and adjust them precisely by remote control. It was never so quick, easy and safe. UP4 is more than just a further technical accessory. It upgrades your holiday

because you spare your back and nerves and can start to relax as soon as you arrive at the camp site. Your neighbours will envy you!

I One step faster

No matter how fast you can crank: The UP4 electronic support system does it faster. And more conveniently.

I One step more convenient

Lower and adjust the legs simply by remote control. Spares your back.

I One step more stable

With UP4 you compensate unevenness electrically and the BIG FOOT is already included. For secure standing and greater stability whatever the ground.

I One step more intelligent

Combine the UP4 with the RANGER: Elegant parking and manoeuvring in future with just one remote control.



AN EVOLUTIONARY STEP AHEAD

UP4, the new electronic support system for caravans up to 2.5 t is carefully designed right down to the last detail.

And the best of all: UP4 can be retrofitted on your AL-KO CHASSIS at any time.

COMBINATION REMOTE CONTROL FOR UP4 AND RANGER



Manual control of the height via buttons

On/Off

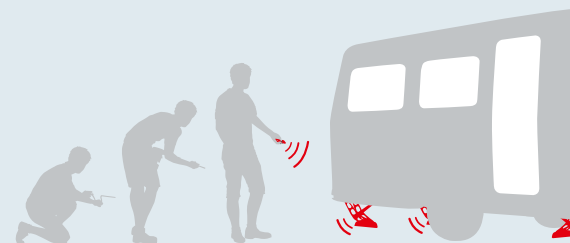
Automatic lowering of the support legs

TECHNICAL DATA UP4

Power supply	12 Volt DC
Average current consumption	6 amps
Maximum current consumption	24 amps
Remote control transmitter frequency	868MHz
Additional weight	approx. 17.5 kg System weight approx. 40 kg (without battery)
Min. permitted gross weight of the caravan	800 kg
Max. permitted gross weight of the caravan	2,500 kg
Support power source (battery)	12V, 20Ah (min.)
Remote control power source (battery)	PP3 9V

One step safer!

Extended at just the push of a button and thus ideally protected against theft. A special adapter prevents unauthorised manual resetting.



PARKING

CORNER STEADIES FOR GREATER STABILITY ON ANY SURFACE

CORNER STEADIES

Pressed sections, side bracings, strong, rolled trapezoidal threaded spindles and a thick hot-dip galvanisation make corner steadies from AL-KO nearly indestructible.



Premium 1,250 kg long

Stabilform 1,000 kg short



BIG FOOT SUPPORT FOOT

With the large footprint of 200 x 180 mm, the big foot prevents the steadies from sliding away or sinking in. Practical: When driving, the steady foot folds down snugly thereby saving space. Can be retrofitted on caravans with an AL-KO chassis and Stabilform or Premium supports.

ADAPTER FOR BIG FOOT

When you frequently need the maximum steady height, we recommend the optional adapters for the big foot. The adapters extend the big foot by 45 mm. Please note decreased ground clearance when the adapters are fitted.



WEATHER PROTECTION PREMIUM FOR OVERRUN HITCHES AND COUPLINGS



WEATHER PROTECTION LARGE

Weather Protection ensures optimum protection of components thanks to its high-quality material made of spun-dyed acrylic fabric plus dirt- and water-repellent Cleangard coating.



WEATHER PROTECTION SMALL

Weather Protection offers optimal protection for the AKS 1300 and AKS 3004. It is made from an impressive breathable, dirt-repellent fabric. The integrated eyelets ensure easy securing.

PARKING



PREMIUM JOCKEY WHEEL THE STABLE MANOEUVRING TOOL

THE MANOEUVRING WHEEL

Particularly recommended for manoeuvring systems

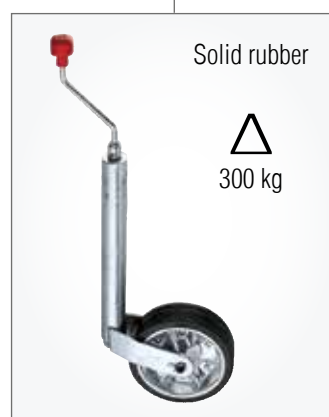
The wide profile wheel with solid rubber tyre allows easier manoeuvring on any surface.

Extremely stable design:

- I Load capacity up to 300 kg
- I Runs over uneven ground
- I Integrated wheel load indicator
- I Easy to manoeuvre
- I Easy-running, removable crank

Product line Plus with thrust bearing and hot-dip galvanisation

The products from the PLUS category impress with high-quality workmanship, reliability, high-quality materials and long service life. Their high level of stability and smart technical details fulfil the high requirements in the day-to-day use of trailers. All products have a higher degree of functions and are very user-friendly and appealing in their design.



MANOEUVRING HANDLE

The smart complement to the jockey wheel. Uncoupled caravans have never been easier to move. The manoeuvring handle also prevents loss of the jockey wheel when towing in case a locking bar has not been tightened enough. Can be easily retrofitted to all jockey wheels with an outer tube diameter of 48 mm.

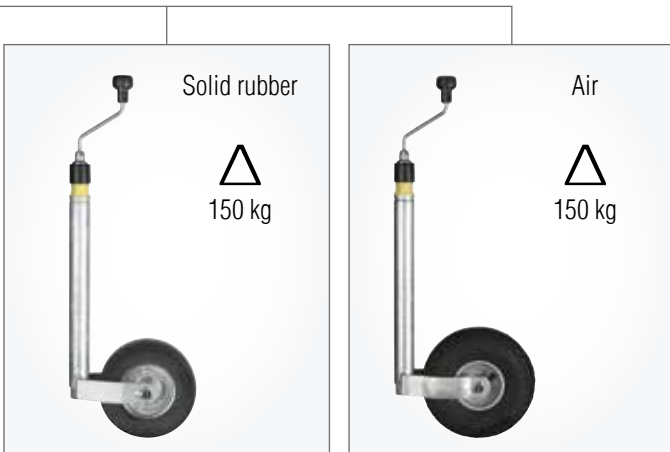


THE RIGHT WHEEL FOR ALL APPLICATIONS

Stable, hot-dip galvanised jockey wheels with a crank thrust bearing are optimal solutions for any application due to different types of tyres.



WINTERHOFF
QUALITY TRAILER SYSTEMS



Integrated load indicator



SECURING SYSTEM

The Winterhoff BS-KLE 48 securing system secures your jockey wheel while driving.

BREAKDOWN ASSISTANCE

CAR JACK AND SPARE WHEEL HOLDER



MECHANICAL JACK

A special plug-in system prevents the jack from slipping while changing a tyre. Special insertion pockets are additionally supported against the floor of the caravan, thus protecting the chassis + structure. Load capacity up to 1,000 kg. Suitable for caravans up to 2,000 kg gross weight. Can be retrofitted to caravans with an AL-KO CHASSIS from 1980 production date onwards.



HYDRAULIC JACK

Heavy caravans now get the right support. AL-KO is the only manufacturer to market a certified vehicle lifting system for tandem caravans up to 3,000 kg gross weight. Suitable for and can be retrofitted to tandem caravans with an AL-KO CHASSIS from 1980 production date onwards.



SPARE WHEEL CARRIER

The weight optimised spare wheel carrier puts the spare wheel under the caravan. This creates more storage space in the front locker. The installation under the base directly behind the axle lowers the centre of gravity, thus improving driving behaviour. Can be retrofitted to caravans with AL-KO CHASSIS from 1985 production date onwards. No TÜV certification or approval required.



WHEEL CHOCKS

Wheel chocks are essential for any trailer – in many cases they are required by law. AL-KO offers a range of wheel chock variants for securing parked trailers – from the metal variant through to plastic wheel chocks.

CHASSIS TECHNOLOGY





CHASSIS TECHNOLOGY

AXLE TECHNOLOGY DELIVERING DRIVING SAFETY

SAFETY FIRST

Maximum safety when cornering, during roll movements, when overtaking, with side and tail wind. Maintenance-free. Proven standard for high-quality caravans for more than 15 years.



DELTA AXLES

The Delta axle acts against centrifugal force: The individual wheels mounted on arms move about the axle located at an angle in space during suspension compression and rebound. The force acting on the wheel on the outside of the corner is transmitted via the swing arm onto the axle stub of the wheel with the effect that it increases its toe-in and negative camber. The wheel braces itself against the centrifugal force, thus supporting the vehicle on the inside.



HEXAGONAL RUBBER SUSPENSION AXLES

As standard for caravans with AL-KO CHASSIS. The straight rubber suspension axles ensures optimum driving behaviour of the caravan. Increased driving comfort is experienced due to the long suspension travel. The axles are robust, durable and easy to maintain and benefit from good shock absorption. The suspension is designed to settle quickly and provides increased driving safety.



TECHNICAL DATA

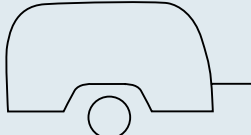
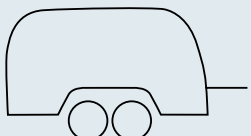
AL-KO 2LINK SYSTEM

Designation	Part no.
AL-KO 2LINK SYSTEM (incl. spirit level function)	1 731 216
AL-KO 2LINK TPMS EA	1 732 453
AL-KO 2LINK TPMS Upgrade TA / TPMS ET	1 732 454

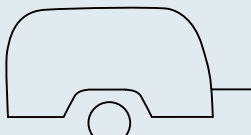
Suitable for all ATCs (including ATC-Hobby) from 2017. For older ATCs, a software update is possible at AL-KO customer centres (price for software update on request). The levelling function is available via an in-app purchase in the store.

ATC TRAILER CONTROL

ATC installation in AL-KO chassis

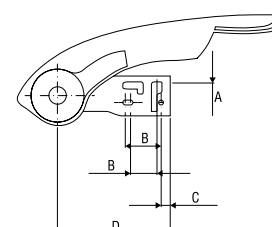
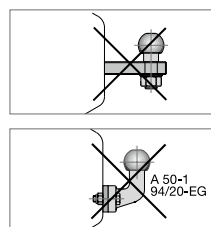
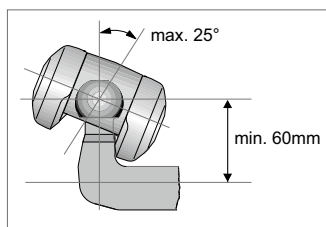
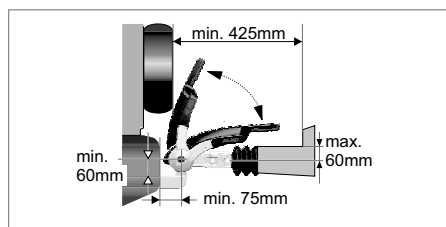
AL-KO chassis	Gross weight min. – max. kg	Unladen weight min. kg	Part no.
	750 – 1,000	500	1 223 022
	1,001 – 1,300	800	1 223 022
	1,301 – 1,500	1,000	1 223 023
	1,501 – 1,800	1,100	1 223 287
	1,801 – 2,000	1,300	1 225 186
	1,300 – 1,600	1,000	1 223 161
	1,601 – 2,000	1,200	1 223 162
	2,001 – 2,500	1,600	1 223 288
	2,501 – 2,800	1,800	1 730 034

ATC installation for hobby caravans (from model year 1997) with Knott axle

Hobby caravan	Gross weight min. – max. kg	Unladen weight min. kg	Part no.
	750 – 1,000	500	1 225 429
	1,001 – 1,300	800	1 225 429
	1,301 – 1,600	1,000	1 225 430
	1,601 – 1,900	1,100	1 225 431

AKS™ 3004 STABILISER

Type Perm. gross weight	Holes	Connection A Ø mm	W mm	C mm	D mm	Weight kg	Part no.
AKS™ 3004 up to 3,000 kg nose load 150 kg	horizontal* cross**	35 + 50 45 + 50	50 + 54 40	11 18	168	4.2	1 225 158
Safety three-pack***	horizontal* cross**	35 + 50 45 + 50	50 + 54 40	11 18	168	5.4	not available



OCTAGON AXLE SHOCK ABSORBER

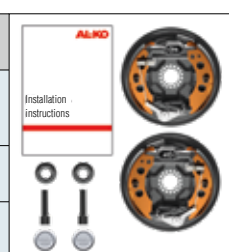
Single axle	Tandem axle	Colour	Weight kg	Part no.
up to 900 kg	up to 1,600 kg	green	1.3	601204
up to 1,350 kg	up to 2,700 kg	blue	1.3	601205
up to 2,000 kg	up to 3,500 kg	red	1.3	601206
up to 4,000 kg	up to 7,500 kg	black	1.5	244 087

SOFT-BALL

For trailer hitch	Colour	Weight kg	Part no.
with 50 mm ball	red	0.055	605 307
with 50 mm ball	black	0.055	1 310 913
with 50 mm ball	blue	0.055	1 337 726
with 50 mm ball	aluminium	0.055	1 651 589

AAA PREMIUM BRAKE

Designation	Part no.
Scope of delivery: Complete set for wheel brakes with bolted standard brake shield from 1999	
Wheel brake 2051 (SA up to 1,500 kg / TA up to 2,800 kg)	1 730 255
RB 2361 (SA up to 2,000 kg / TA up to 3,500 kg)	1 730 299



SAFETY ACCESSORIES

Designation	Weight kg	for AKS™ 1300	for AKS™ 2000	for AKS™ 2004/3004	for AK 160, Ø 35 mm	for AK 160/300/ 350, Ø 50 mm
		Part no.	Part no.	Part no.	Part no.	Part no.
Shackle lock**	0.2				247 589	247 589
Barrel lock**	0.1	245 737	1 224 478			
Universal shackle lock**	1.0				1 224 081	1 224 081
Safety Compact silver	1.4	1 310 944		1 310 892	1 310 943	not available
Safety Plus red	1.5	1 225 258	247 632	1 225 260	1 225 261	not available
Safety Premium***	4.9	1 730 540		1 730 541 (AKS 3004)	1 730 538	1 730 539 (AK 160)
	4.9					1 730 540 (AK 300)

* Cannot be used with AK 350 ** not illustrated *** Version UK ("Sold Secure"); Sweden (SBSC) + Netherlands (SCM) versions on demand

WINTERHOFF ANTI-THEFT DEVICES

Designation	suitable for	Certificates*	Weight kg	Part no.
ROBSTOP WS 3000	WS 3000 from production date 08-2002	–	1.48	1860170 (<i>W1551</i>)
ROBSTOP WS 3000 PLUS	WS 3000 from production date 08-2002	Sold Secure Gold (UK), SCM (NL)	1.92	1860171 (<i>W1553</i>)

* Sweden version (SBSC) on demand



ROBSTOP WS 3000



ROBSTOP WS 3000 PLUS

SAFE

External dimensions Length x width x height mm	Volume Litres	Weight kg	Part no.
300 x 240 x 200	14	12.5	245 091

SAFETY-BALL

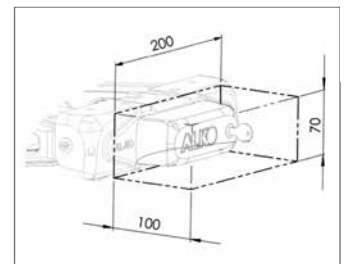
Type	Colour	Weight kg	Part no.
Safety-Ball	red	0.1	605 305

ANTI-THIEF DEVICE SAFETY COMPACT FOR CORNER STEADIES

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Single axle	Tandem axle	Colour	Weight kg	Part no.
Corner steadies Premium 1,250 kg, from production date 2006	2 units	electrogalvanised	0.8	1 222 515

Required operating space



This is how you determine the mass ratio (factor "X")

The permitted total mass of the caravan may not exceed the empty mass of the towing vehicle:	Current regulation from 22.10.2005 with AKS	Previous regulation from 15.10.1998 without AKS
For unbraked trailers up to 750 kg	X = 0.3	X = 0.3
For caravans	X = 1.0	X = 0.8
For other braked trailers	X = 1.2	X = 1.1

Therefore: Permissible gross weight of trailer = **tare weight** of towing vehicle · X (factor)

Example: With AKS: Permitted total mass of caravan = empty mass of towing vehicle 1,600 kg x 1 = 1,600 kg

Without AKS: Permitted total mass of caravan = empty mass of towing vehicle 1,600 kg x 0.8 = 1,280 kg

In short: + 20% / 320 kg thanks to AKS!

Requirements for braked caravan

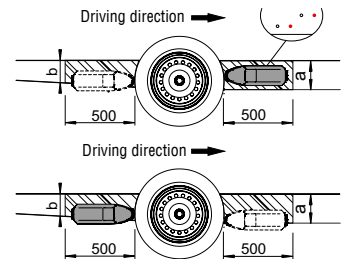
- I ISO-approved stabilisation device or other approved technical equipment
- I Hydraulic axle shock absorbers
- I The maximum possible nose load of the combination (vehicle) must be exploited
- I Tyres for min. 120 km/h (speed category L)
- I Tyres less than 6 years old (manufacturer date)

Requirements for the towing vehicle

- I ABS (ALB) equipment
- I Approved up to a max. gross weight of 3.5 t

"MAMMUT" MANOEUVRING SYSTEM

Type	Weight kg	Part no.
M20	32	1 730 367
S21	42	1 730 368
S22	42	1 730 369



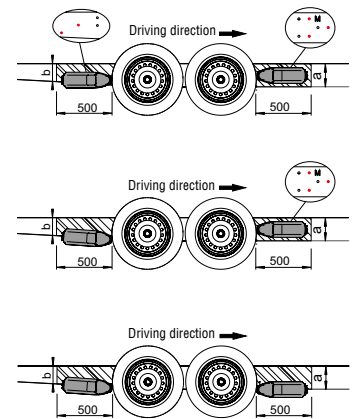
Max. permissible gross weight of caravan 2.25 t, max. climbing ability (gross weight): 15% (2.0 t) / 17% (1.8 t) / 28% (1.2 t)

	Installation in front of axle		Installation behind axle		
	Yes	No	Yes	No	
	"M" in front of axle from model year 2010		"M" behind axle		
Height a > 184 mm	M20	S21		S21	Height b > 184 mm
Height a = 125-184 mm	S22	S22		S22	Height b = 125-184 mm
Height a < 125 mm	S23	S23		S23	Height b < 125 mm

Height a / b: Bottom edge of the frame until interference contour (steps, water pipe, etc.)

Versions in italics = note ground clearance, consultation and installation by AL-KO + dealer

Type	Weight kg	Part no.
TM400	67 kg	1 730 287
TM410	77 kg	1 730 288
TM420	77 kg	1 730 289
TM401	74 kg	1 730 238
TM402	74 kg	1 730 054
TS411	84 kg	1 730 237
TS412 / TS421	84 kg	1 730 233
TS422	84 kg	1 730 049

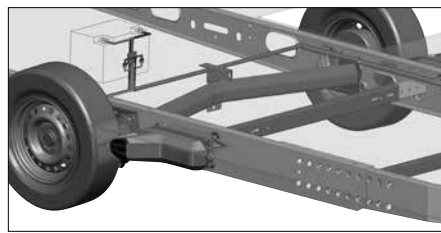
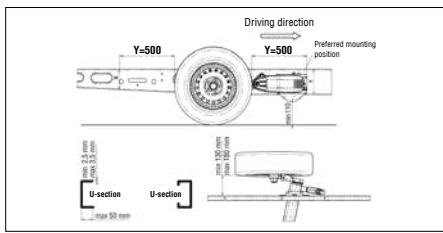


Max. permissible gross weight of caravan 3.0 t, max. climbing ability (gross weight): 15% (3.0t)

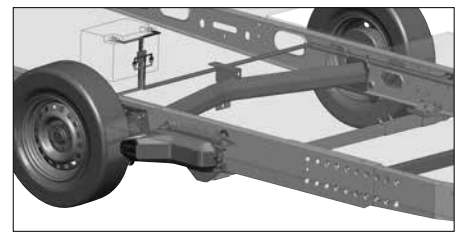
Installation in front of + behind axle					
	"M" in front of axle from model year 2010		2 holes behind the axle as per fig. (from model year 2015)		
	Yes	No	Yes	No	
Height a > 184 mm	TM400 TM401 TM402 TM403		X	X X X	Height b > 125 mm Height b > 184 mm Height b = 125-184 mm Height b < 125 mm
Height a > 184 mm	TM410	TS411 TS412 TS413	X	X X X	Height b > 125 mm Height b > 184 mm Height b = 125-184 mm Height b < 125 mm
Height a = 125-184 mm	TM420 TS421 TS422 TS423	TS421 TS422 TS423	X	X X X	Height b > 125 mm Height b > 184 mm Height b = 125-184 mm Height b < 125 mm
Height a < 125 mm	TM430 TS431 TS432 TS433	TS431 TS432 TS433	X	X X X	Height b > 125 mm Height b > 184 mm Height b = 125-184 mm Height b < 125 mm

Height a / b: Bottom edge of the frame until interference contour (steps, water pipe, etc.)

Versions in italics = note ground clearance, consultation and installation by AL-KO + dealer



M20 (fig. MAMMUT)



S21 (fig. MAMMUT)

The S and TS variants can be used for AL-KO and third-party chassis under the following conditions:
The frame profile must be a U or C profile and have a material thickness of 2.5 to 3.5 mm. The distance between the outside edge of the frame and the inside of the tyre must be at least 130 mm for the Mammut and at least 85 mm for the Ranger. The remaining ground clearance must be at least 110 mm.

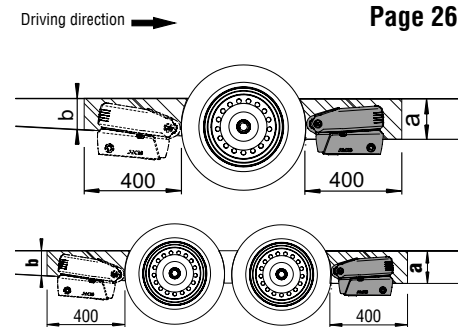
"RANGER" MANOEUVRING SYSTEM

Type	Axles	Weight kg	Part no.
S21 (single axle)	1	37	1 731 051
TS411 (tandem)	2	74	1 731 211

Max. perm. gross caravan weight: 1.8 t (S21) / 2.5 t (TS411); max. gradeability 18% at 1.5 t (S21) or 1.8 t (TS411)

Clearance (a/b) min. 193 mm from the bottom edge of the frame until interfering contour (steps, water pipe etc.).

For clearance less than 193 mm, use distance plates item no. 1731063 (see installation accessories).



OPTIONAL INSTALLATION ACCESSORIES MAMMUT / RANGER

Add-on kit for variant S/TS*	Contents	Recommended for MAMMUT	Recommended for RANGER	Part no.
Add-on kit AL-KO Vario III AV / IV AV (installation behind the axle, reinforcement of frame profile 2 mm)**	2 reinforcement plates with fixing bolts	X	X	1224882
Add-on kit AL-KO Vario III AV / IV AV (installation in front of the axle, overlapping adapter)***	2 adapter plates with fixing bolts	–	X	1731042
Add-on kit AL-KO Vario II (installation in front of the axle, overlapping adapter)***	2 adapter plates with fixing bolts	–	X	1731044
Add-on kit for frame height (X) less than 185 mm and more than 150 mm	3 x 2 spacer plates each 10 mm with fixing bolts	X	–	1224883
Add-on kit for frame height (X) less than 193 mm and more than 147 mm****	2 spacer plates each 15 mm with fixing bolts	–	X	1731063

* the area of application of the variant S / TS can be expanded with add-on kits.

** if required, with spacer plates 1224883 or 1731063

*** if required, with spacer plates 1731063

**** can be combined with a max. of 3

BATTERY

AL-KO recommends AL-KO maintenance-free, lead rechargeable batteries with gel or fleece technology (AGM)* for Mammut and Ranger manoeuvring drives. If the battery is only used for the AL-KO manoeuvring system (Mammut or Ranger), it should have a charge capacity of at least 80 Ah (single-axle) or 100 Ah (tandem). Fully charged, it can manoeuvre for two hours on even terrain or half an hour at max. load. As an alternative, an AGM battery with spiral cell technology (e.g. Optima)* can also be used. For this, we recommend a capacity of at least 66 Ah.



*with tuned charging technology

UP4

Designation	Additional weight kg	Part no.
UP4	approx. 17.5 System weight approx. 40 kg (without battery)	1731376



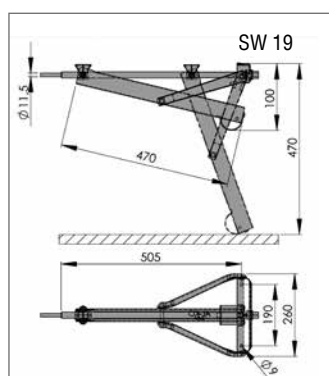
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CORNER STEADIES

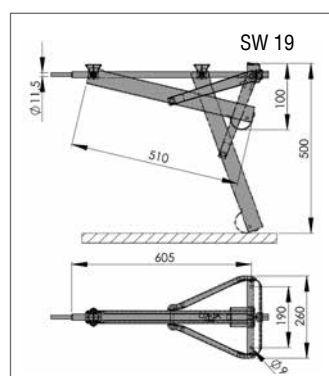
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Designation	Static load capacity in kg	PTW of the trailer kg	Surface treatment	Weight kg	Part no.
Compact 800 kg short	max. 800	max. 1,600	hot-dip galvanised	3.4	205 808
Compact 800 kg long	max. 800	max. 1,600	hot-dip galvanised	3.6	205 817
Stabilform 1,000 kg short	max. 1,000	max. 2,000	hot-dip galvanised	4.2	267 265
Premium 1,250 kg long	max. 1,250	max. 2,500	hot-dip galvanised	4.95	1 221 694
Extending crank WAF 19 mm, length 665 mm	–	–	hot-dip galvanised	1	205 520
Mounting rail*			hot-dip galvanised	0.5	294 370
Retaining tab*			hot-dip galvanised	0.05	365 100

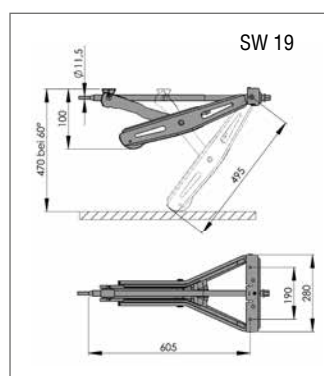
* for fitting to other chassis



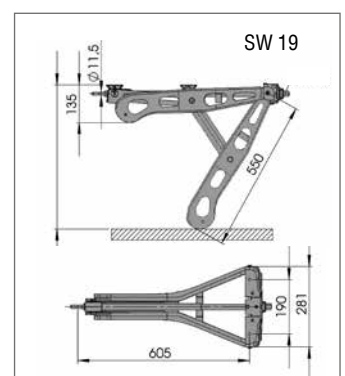
Part no. 205 808



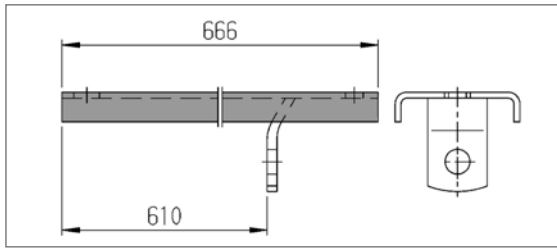
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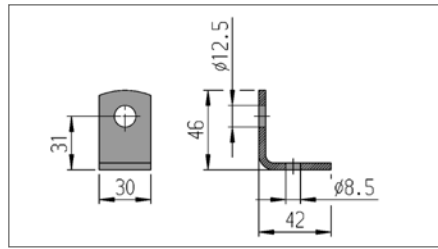
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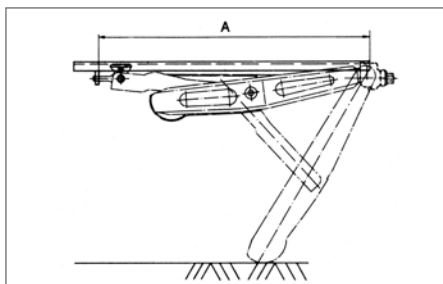
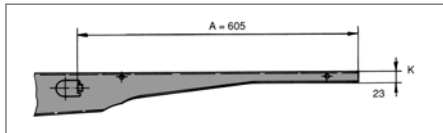
Part no. 1 221 694



Part No. 294 370

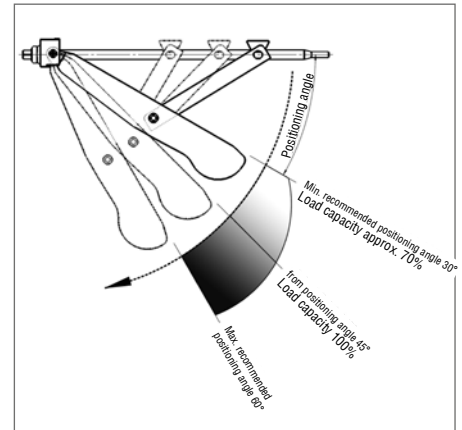


Part no. 365 100



AL-KO Stabilform or Premium corner steadies can be retrofitted on all caravans with AL-KO chassis as of production date 1989.

Check dimension "A" and "K":
 Dimension A = 605 mm = possible
 Dimension A = 505 mm = not possible
 Dimension K = 23 mm = possible
 Dimension K = 30 mm = not possible



AL-KO corner steadies achieve their maximum load capacity from a positioning angle of 45° onwards. If the corner steady is positioned at a very flat angle (e.g. 30°), the load capacity will be reduced (see diagram).

COMFORT KIT

Usable for	Weight kg	Part no.
All extendible corner steadies with hexagon WAF 19	2.3	1 210 506



BIG FOOT

Designation	Weight kg	Part no.
big foot support foot*	2.5	1 212 458
Adapter 45 mm for big foot*	2.5	1 213 899



* suitable for Stabilform and Premium corner steadies

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WEATHER PROTECTION

Designation	Suitable for	Weight kg	Part no.
PREMIUM weather protection	Overrun hitch V and square AL-KO and competitors	0.3	1 730 474
Weather protection	AL-KO coupling heads and ball couplings from the competition	0.09	1 730 820
Weather protection	AKS 1300 / 2004 / 3004 / 3504	0.19	1 730 821

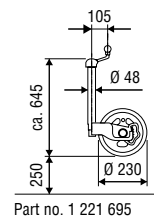
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PREMIUM PRODUCT LINE JOCKEY WHEELS*

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Static load capacity kg	Dynam. load capacity kg	Wheel mm	Rim	Weight kg	Part no.
300	180	230 x 80 solid rubber	Steel	9.8	1 552 197

*Corrosion protection: hot-dip galvanised; wheel bearings: Slide bearings; swing arm suspension; removable crank and wheel

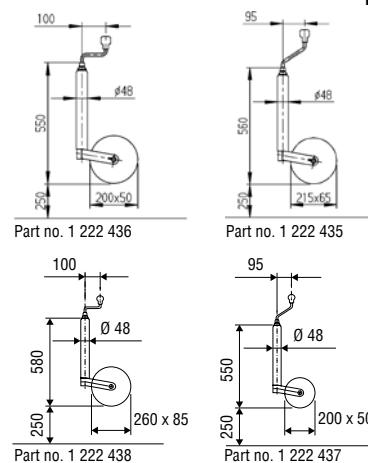


PLUS PRODUCT LINE JOCKEY WHEELS* – AL-KO

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Load capacity static kg	Load capacity dynamic	Wheel mm	Rim	Weight kg	Part no.
150	90	200 x 50 solid rubber	Steel	5	1 222 436
150	90	215 x 65 soft rubber	Plastic	5	1 222 435
200	120	260 x 85 air	Steel	5	1 222 438
300	180	200 x 50 solid rubber	Steel	7	1 222 437

*Corrosion protection: hot-dip galvanised; crank with thrust block; wheel bearings: slide bearing



ACCESSORIES

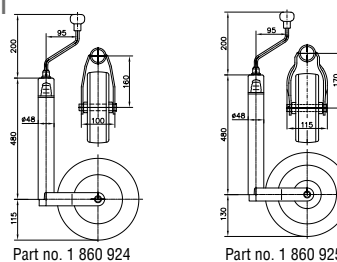
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Designation	Weight kg	Part no.
Manoeuvring handle with Ø 48 mm outer tube	0.2	1 210 182
Securing system BS-KLE 48	0.13	1 860 693 (W 1950)

PLUS PRODUCT LINE JOCKEY WHEELS* – WINTERHOFF

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Load capacity static kg	Load capacity dynamic kg	Wheel mm	Rim	Weight kg	Part no.
150	90	225 x 70 solid rubber	Steel	6.62	1 860 924 (W 6095)
150	90	260 x 85 air	Steel	5.57	1 860 925 (W 6097)



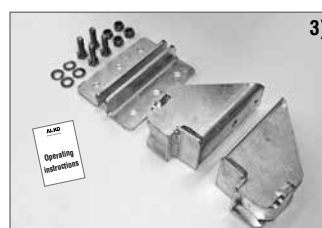
JACK

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Static load capacity in kg	Initial height mm	Lifting height mm	Final height mm	Weight kg	Part no.
800	85	290	375	4.5	246 059 (with box)
1,000	85	290	375	5.5	1 222 530 (with attachments)
1,500	200	190	390	4.5	1 730 240 (bracket)*
2,000	170	213	383	3.7	1 730 395 (hydr. jack)**

*Only for use on caravans with a tandem chassis and in combination with a hydraulic jack (at least 2,000 kg load capacity, ram Ø 28 - 40 mm, flat head or groove, see table for lifting heights).

**not illustrated



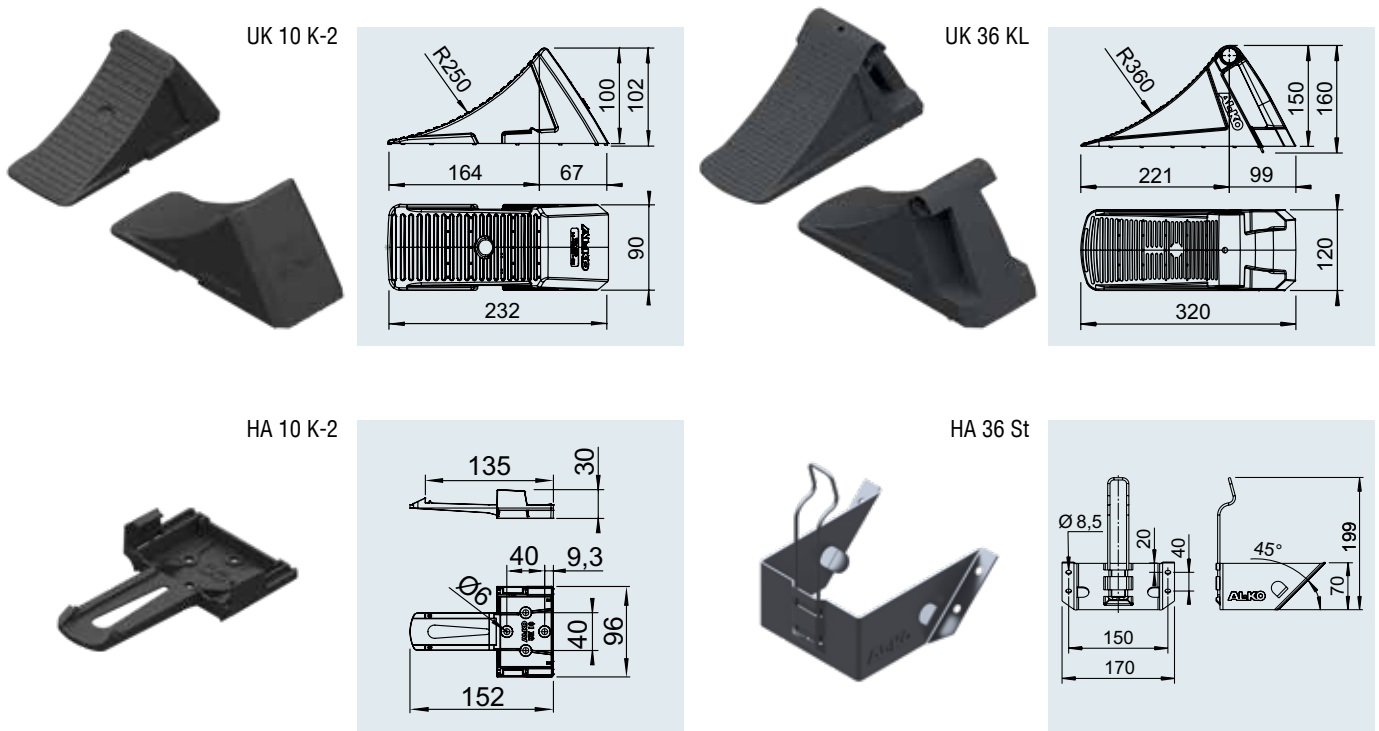
- 1) 800 kg kit scope of delivery
Part no. 246 059
- 2) 1,000 kg kit scope of delivery
Part no. 1 222 530
- 3) 1,500 kg attachment kit scope of delivery
Part no. 1 730 240

Dimension X mm	75	85	95	105	115	125	Frame gap mm	Implementation	Weight kg	Part no.	
EH1	Tyre width* mm	155	165	175	185	195	205	1,050 – 1,250	A	6.4	1 555 934
								1,250 – 1,550	B	6.8	1 555 943
								1,450 – 1,850	C	7.7	1 555 955
EH1 BR	175	185	195	205	215	215	1,265 – 1,515	D	6.8	1 556 005	
							1,465 – 1,815	E	7.7	1 556 010	
Retrofit accessory kit EH2									1.85	294 284	

* Tyre widths are only reference values due to permissible tolerances in the production of tyres.
 With a tyre width of 215 mm, it is possible for jamming between the tyre and frame when the spare wheel holder is pulled out. Therefore, the ability to use the spare wheel holder must be checked before installation!
 Dimension X for determining the maximum possible tyre.

WHEEL CHOCKS AND HOLDERS

Type	Material / colour	Wheel load per chock = half axle load kg	Static wheel radius max.	Weight kg	Part no.
Wheel chock UK 10 K-2	Plastic, black	800	up to 310 mm	0.18 kg	1 237 250
Holder HA 10 K-2 for UK 10 K-2	Plastic, black	–	–	0.03 kg	1 237 251
Wheel chock UK 36 KL	Plastic, black	1,600 kg	up to 360 mm	0.60 kg	1 235 990
Holder HA 36 St for UK 36 steel and plastic	Metal, Sendzimir-galvanised	–	–	0.50 kg	244 376



AL-KO

QUALITY FOR LIFE



Member of **DEXKO**
GLOBAL

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