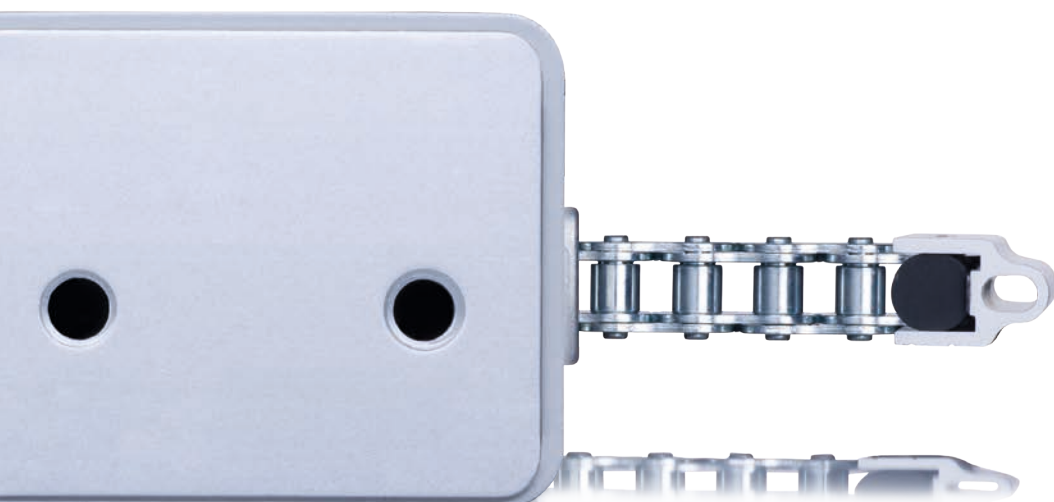


+ *VERSATILE
APPROVED*



KA SERIES

True all-rounder

- » Individual solutions due to a high level of flexibility for application
- » Fits all common window types
- » Quick and easy installation due to optimum coordination of the bracket sets
- » Can be used universally for SHEV and controlled natural ventilation

All-round talent

- » Customized stroke length and construction dimension changes optionally available
- » Unique bracket solutions for safe and time-saving installation on window profiles
- » High-speed function (HS) for very quick opening of the window in the case of a fire (SHEV)
- » Microprocessor-controlled PLP motor electronics, alternatively BSY+ synchronised electronics for synchronisation of up to 8 drives
- » Fire resistance B300 (30 min / 300 °C) and 20000 double strokes at nominal load
- » Available as 24 V DC and 230 V AC versions
- » Additional passive and active anti-trap protection system for the main closing edge
- » Housing made of high-quality aluminium
- » Highly efficient, extremely low-noise gearbox
- » High-performance chain made of hardened and galvanised steel with lifetime lubrication
- » Extreme flexibility thanks to the easy parameter configuration for functions on a PC using D+H software SCS
- » Inspected and approved in accordance with globally approved standards, approval in accordance with VdS 2580 and UL 325

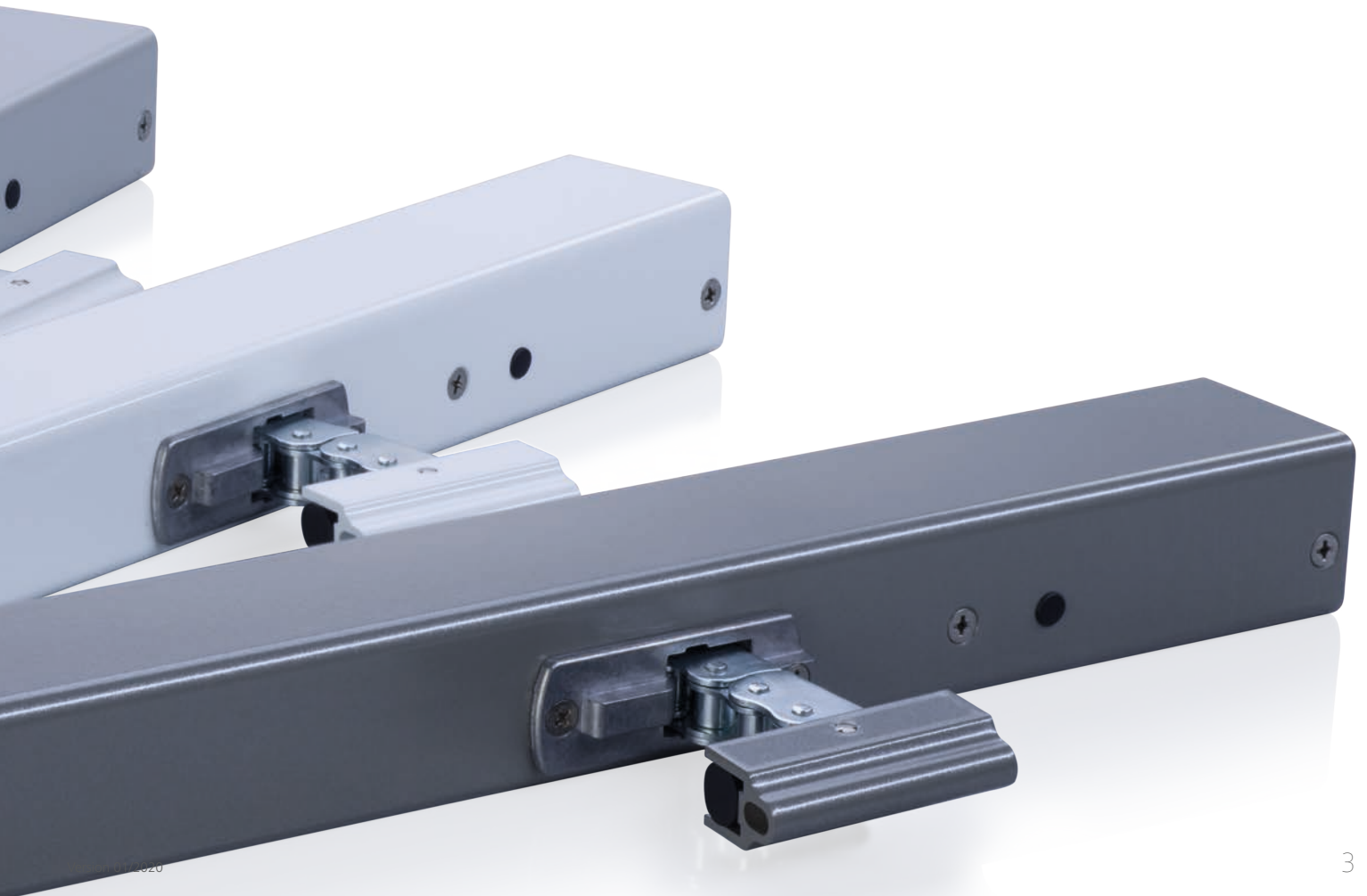


+ FLEXIBILITY EASE

The versatile all-rounder

A multitude of designs make it possible to use the KA Series chain drive for all common window types. As a true all-rounder, it provides a custom fit to meet your requirements and features a variable length dimension as well as the option to adjust force and stroke individually. The BSY+ synchronised electronics can be used to control multiple drives at the same time upon request. So much variety in only one drive - nothing is likely equal that. A force of pressure and tensile force up to 600 N and a stroke length up to 1300 mm allows this window drive to control the movement of almost any façade window, roof window or skylight with ease. Whether for advanced SHEV applications in accordance with EN 12101-2 or convenient ventilation func-

tions, the KA Series is equipped with integrated high-speed function (HS) by default to open windows in just 60 seconds in case of fire. For safety purposes, all drives of this series are equipped with an additional passive and active anti-trap protection system. And all of this in tried-and-tested D+H quality: The consistent use of high-quality materials and the sturdy high-performance chain ensure a long service life and reliable operation. Individually adjustable, reliable and cost-effective at the same time: The versatile KA Series drives have been proven in thousands of applications around the world.





The KA-TW

One drive, twice the force

Specifically developed for particularly wide and heavy façade and roof windows, skylights and ventilation flaps: The KA-TW, which places two drive chains in one housing, provides twice

the force of pressure and tensile force for uniform load distribution on the window sash.



Variety with system

Aluprof®	Reynaers®
Colt®	Sapa®
Gutmann®	Schüco®
Heroal®	Skandinavista®
Jet Brakel®	Technal®
Raico®	Wicona®

If a suitable manufacturer is not listed for you, please contact our service regarding a solution.

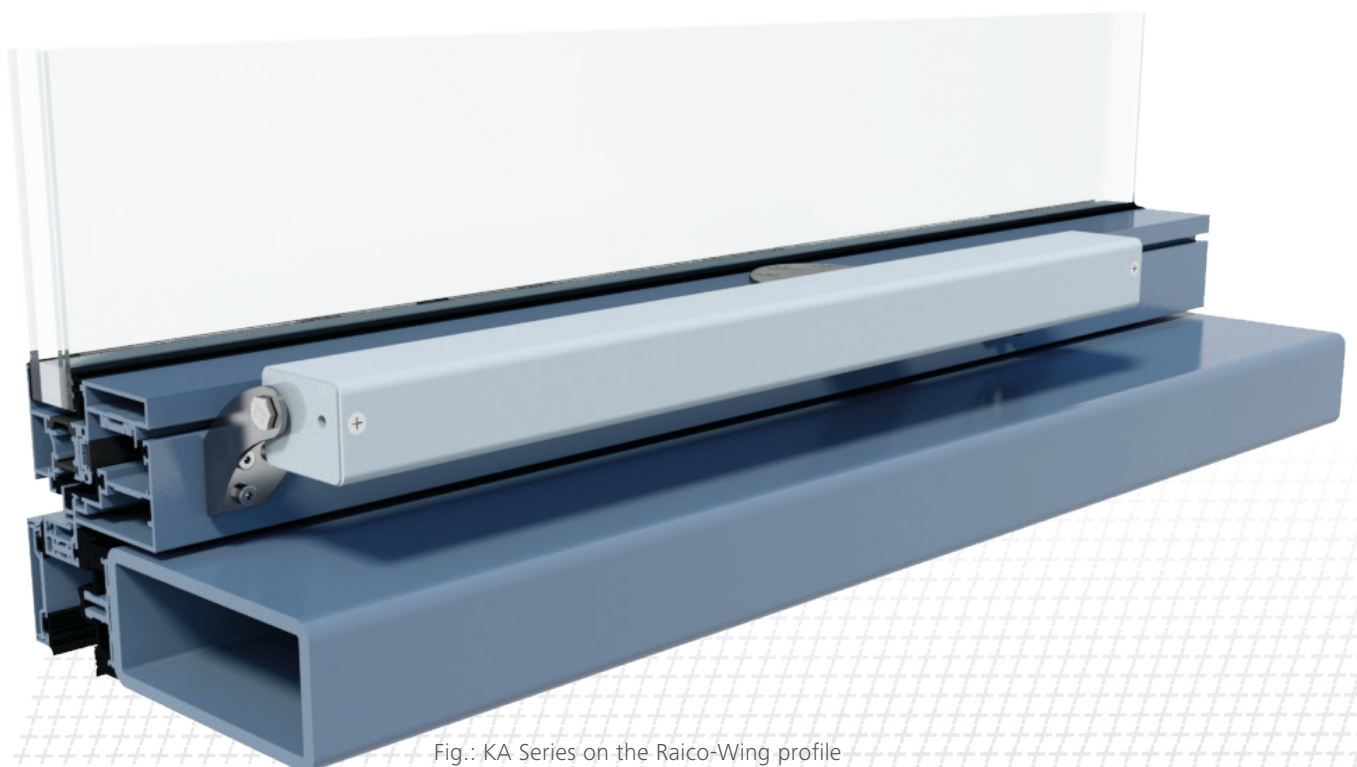


Fig.: KA Series on the Raico-Wing profile

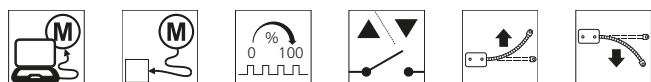
KA-PLP



Performance features

- » Can be used for openings for smoke exhaust; D+H Euro SHEV in accordance with EN 12101-2; and for daily ventilation
- » With motor electronics controlled via microprocessor
- » High-speed function (HS) for especially fast opening windows in case of fire (SHEV)
- » Special chain stabilisation
- » Pressure applications up to 700 mm (KA 34) / 600 mm (KA 54), application tension stroke lengths >1000 mm possible
- » Relief of pressure on window gasket after closing process
- » Programmable drive functions and different drive parameters
- » Running speed in CLOSED direction decreases to 5 mm/s (passive closing edge protection)
- » Time-controlled reversing when an obstacle is detected in the CLOSED direction (active closing edge protection)

Potential drive options



You can find the explanations for the icons in the legend.

Approvals / Certificates

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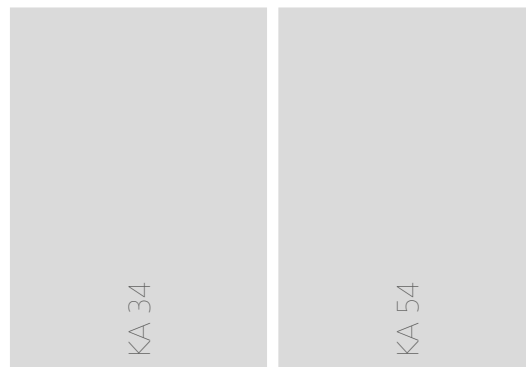


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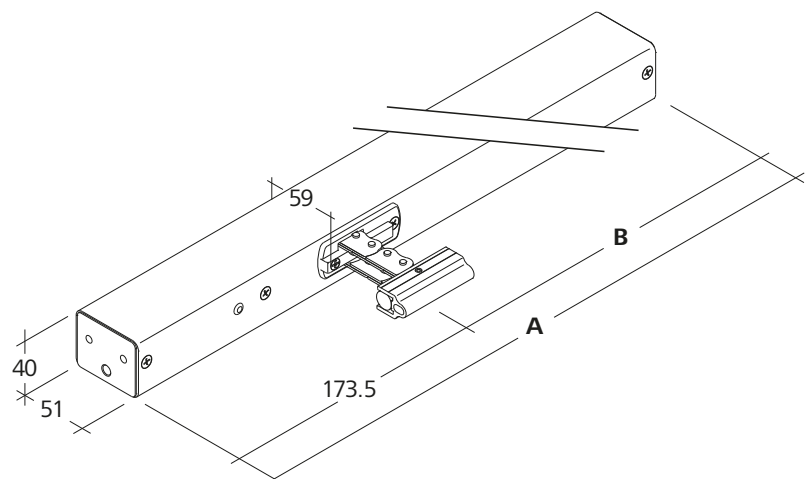
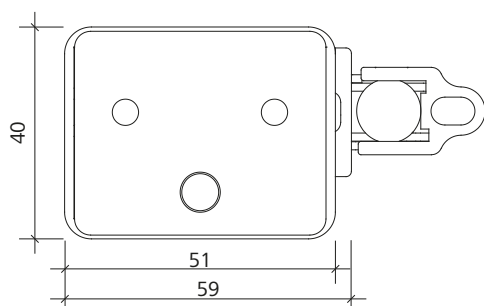
Supply	24 V DC / $\pm 15\%$	
Rated input current	1 A	1.4 A
Force of pressure	300 N	500 N
Tensile force	300 N	500 N
Service life	20000 double strokes *	
Stroke	350 - 1300 mm	
Type of protection	IP 32	
Emission sound pressure level	LpA ≤ 70 dB(A)	
Temperature range	-5 °C ... +75 °C	
Housing	Aluminium	
Colour	White aluminium (~ RAL 9006)	
H x D	40 x 59 mm	
Dimension A	421 - 902 mm	
Dimension B	247.5 - 728.5	



* For vertical use, please consult with D+H Sales!

Dimensions

All specifications in mm



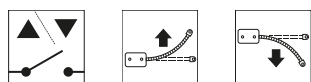
KA-K



Performance features

- » Can be used for openings for smoke exhaust; D+H Euro SHEV in accordance with EN 12101-2; and for daily ventilation
- » With motor electronics controlled via microprocessor
- » Direct control via 230 V AC
- » Special chain stabilisation
- » Relief of pressure on window gasket after closing process
- » Pressure applications up to 700 mm (KA 34) / 600 mm (KA 54), application tension stroke lengths >1000 mm possible
- » Easy window control via 230 V AC ventilation button
- » Adjustable electronic closing force optimisation
- » Running speed in CLOSED direction decreases to 5 mm/s (passive closing edge protection)
- » Time-controlled reversing when an obstacle is detected in the CLOSED direction (active closing edge protection)

Potential drive options



You can find the explanations for the icons in the legend.

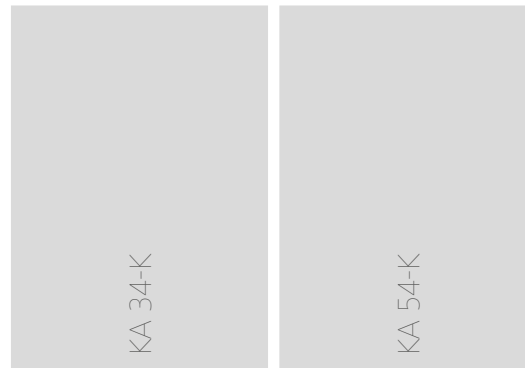
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Technical data

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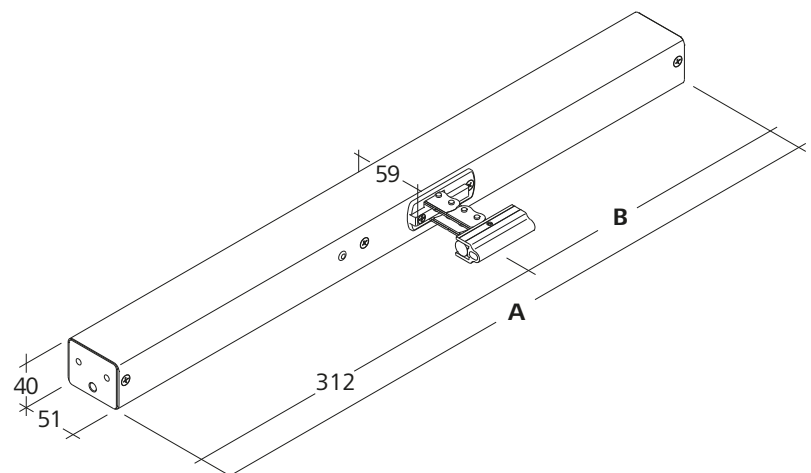
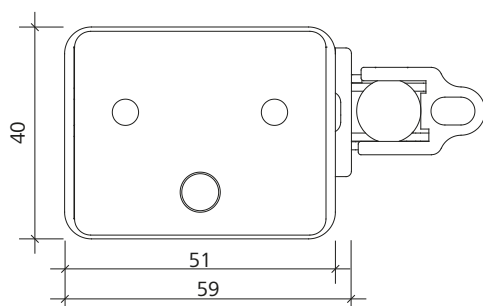
Supply	230 V AC / +10 % ... -15 %	
Input frequency	50 Hz	
Performance	24 W / 40 VA	32 W / 52 VA
Force of pressure	300 N	500 N
Tensile force	300 N	500 N
Service life	20000 double strokes *	
Stroke	350 - 1300 mm	
Type of protection	IP 32	
Emission sound pressure level	LpA ≤ 70 dB(A)	
Temperature range	-5 °C ... +75 °C	
Housing	Aluminium	
Colour	White aluminium (~ RAL 9006)	
H x D	40 x 59 mm	
Dimension A	560 - 1041 mm	
Dimension B	248 - 729 mm	



* For vertical use, please consult with D+H Sales!

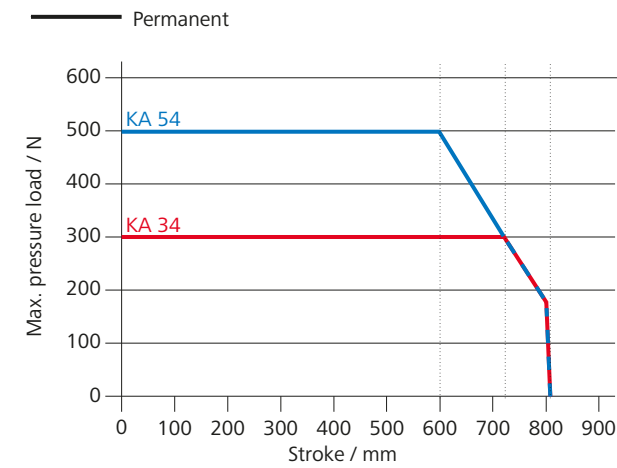
Dimensions

All specifications in mm

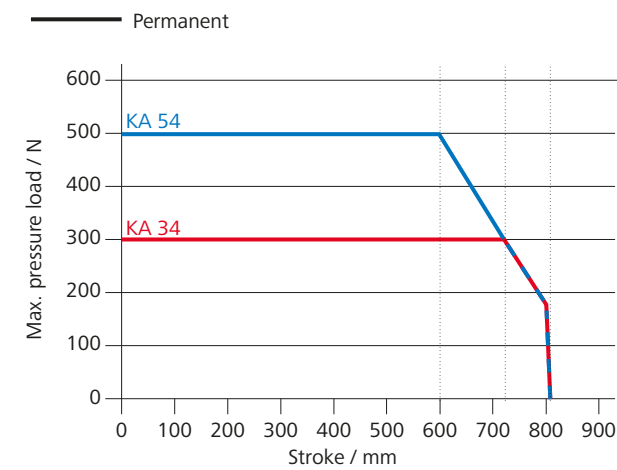


Pressure load diagram

KA-PLP



KA-K



Possible applications

Illustration provided as an example



- » Mounted installation
- » Sash mounting
- » Frame mounting
- » Application force
- » Application tension

Installation example

KA 34/500 right / window locking drive FRA 11



Brackets are not included and have to be ordered separately.

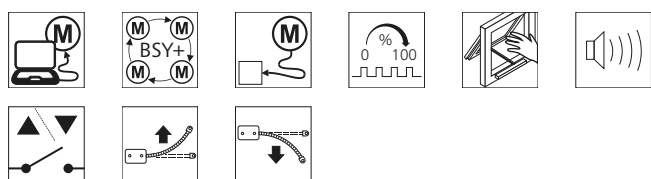
KA-BSY+



Performance features

- » Can be used for openings for smoke exhaust; D+H Euro SHEV in accordance with EN 12101-2; and for daily ventilation
- » With BSY+ motor and synchronised electronics controlled via microprocessor
- » High-speed function (HS) for especially fast opening windows in case of fire (SHEV)
- » Option of up to 8 drives in one synchronous group
- » Supply and signals at KA 34-BSY+ for up to 3 drives (KA 54-BSY+ up to 2 drives) can be looped in series
- » Special chain stabilisation
- » Relief of pressure on window gasket after closing process
- » Programmable drive functions and different drive parameters
- » Running speed in CLOSED direction decreases to 5 mm/s (passive closing edge protection)
- » Time-controlled reversing when an obstacle is detected in the CLOSED direction (active closing edge protection)

Potential drive options



You can find the explanations for the icons in the legend.

Approvals / Certificates

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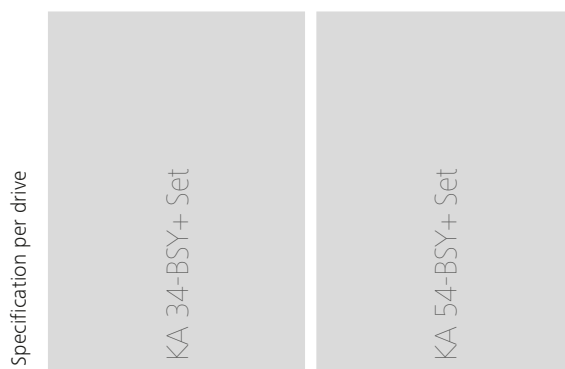


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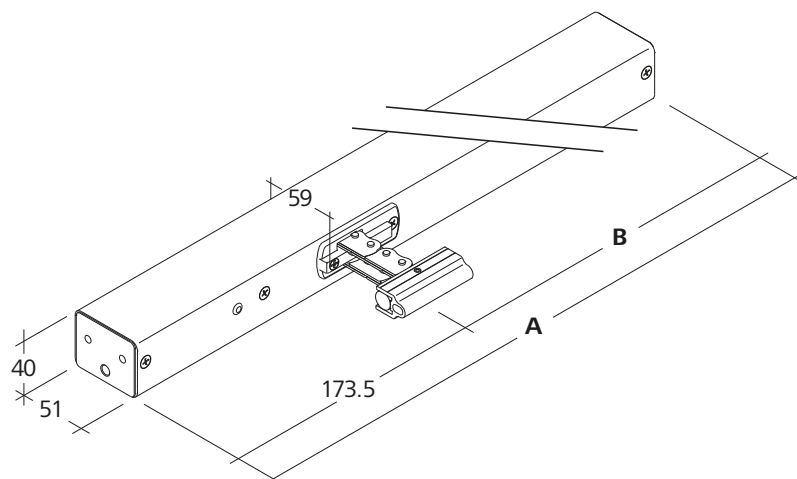
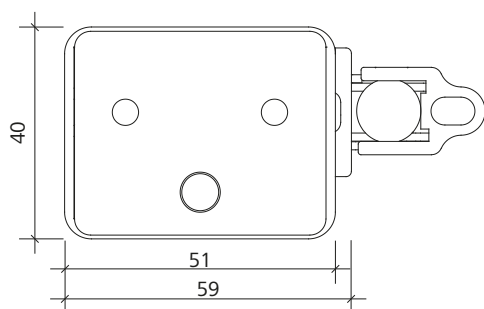
Supply	24 V DC / $\pm 15\%$	
Rated input current	1 A	1.4 A
Force of pressure	300 N	500 N
Tensile force	300 N	500 N
Service life	20000 double strokes *	
Stroke	350 - 1300 mm	
Type of protection	IP 32	
Emission sound pressure level	LpA ≤ 70 dB(A)	
Temperature range	-5 °C ... +75 °C	
Housing	Aluminium	
Colour	White aluminium (~ RAL 9006)	
H x D	40 x 59 mm	
Dimension A	421 - 902 mm	
Dimension B	247.5 - 728.5	



* For vertical use, please consult with D+H Sales!

Dimensions

All specifications in mm



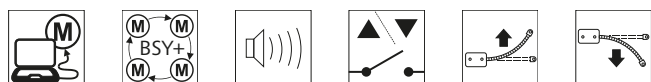
KA-K-BSY+



Performance features

- » Can be used for openings for smoke exhaust; D+H Euro SHEV in accordance with EN 12101-2; and for daily ventilation
- » With BSY+ motor and synchronised electronics controlled via microprocessor
- » Direct control via 230 V AC
- » 2 drives in one synchronous group possible
- » Special chain stabilisation
- » Relief of pressure on window gasket after closing process
- » Programmable drive functions and different drive parameters
- » Running speed in CLOSED direction decreases to 5 mm/s (passive closing edge protection)
- » Time-controlled reversing when an obstacle is detected in the CLOSED direction (active closing edge protection)

Potential drive options



You can find the explanations for the icons in the legend.

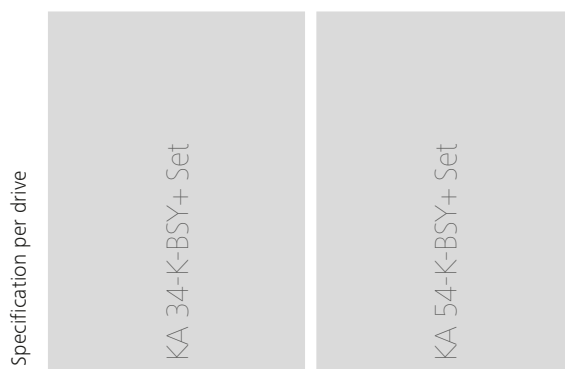
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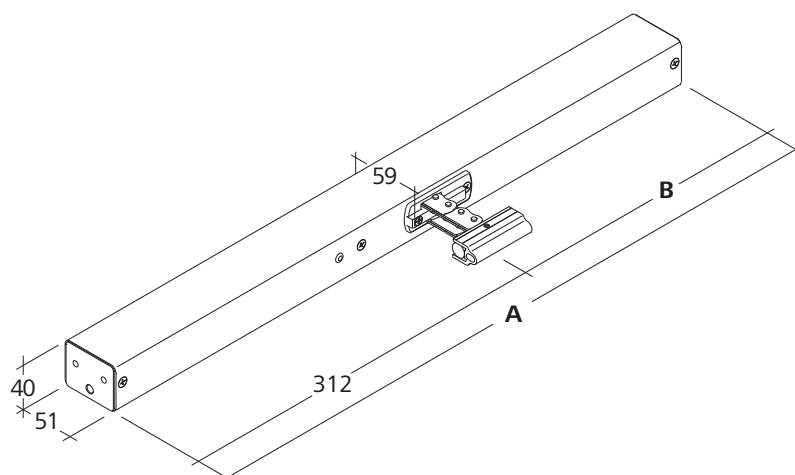
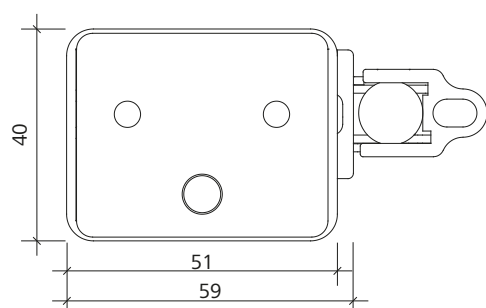
Supply	230 V AC / +10 % ... -15 %	
Input frequency	50 Hz	
Performance	45 W / 75 VA	75 W / 115 VA
Force of pressure	300 N	500 N
Tensile force	300 N	500 N
Service life	20000 double strokes *	
Stroke	350 - 1300 mm	
Type of protection	IP 32	
Emission sound pressure level	LpA ≤ 70 dB(A)	
Temperature range	-5 °C ... +75 °C	
Housing	Aluminium	
Colour	White aluminium (~ RAL 9006)	
H x D	40 x 59 mm	
Dimension A	560 - 1041 mm	
Dimension B	248 - 729 mm	



* For vertical use, please consult with D+H Sales!

Dimensions

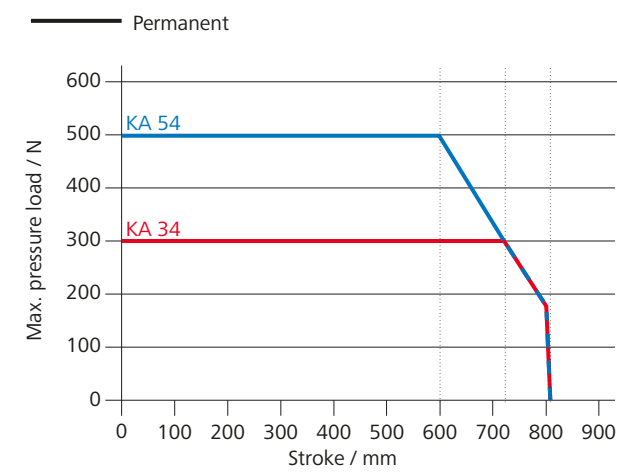
All specifications in mm



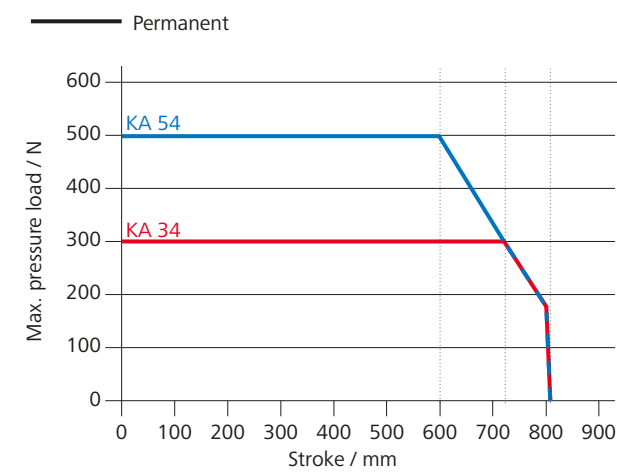
Pressure load diagram

Specification per drive

KA-BSY+

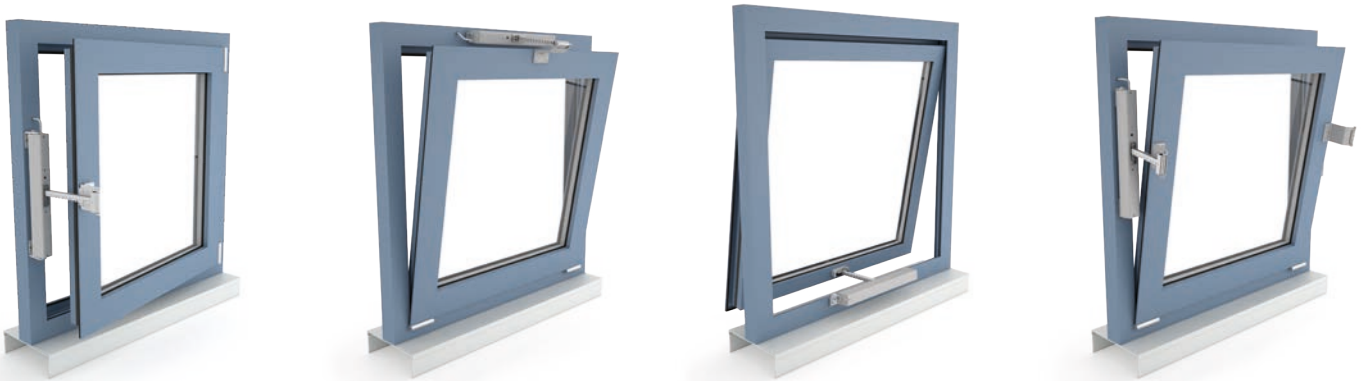


KA-K-BSY+



Possible applications

Illustration provided as an example



- » Mounted installation
- » Sash mounting
- » Frame mounting
- » Application force
- » Application tension
- » Drawbridge application

Installation example

KA 34/500 BSY+ left + right / window locking drive FRA 11



Brackets are not included and have to be ordered separately:

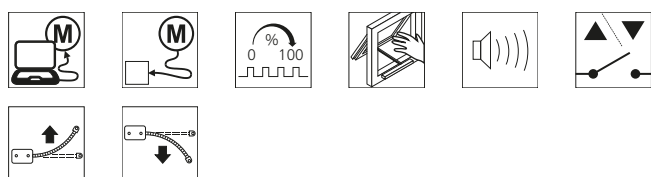
KA-TW-BSY+



Performance features

- » Can be used for openings for smoke exhaust; D+H Euro SHEV in accordance with EN 12101-2; and for daily ventilation
- » With BSY+ motor and synchronised electronics controlled via microprocessor
- » High-speed function (HS) for especially fast opening windows in case of fire (SHEV)
- » 2 drive chains for optimal power application to the sash
- » Special chain stabilisation
- » Relief of pressure on window gasket after closing process
- » Electronic force and position control
- » Programmable drive functions and different drive parameters
- » Running speed in CLOSED direction decreases to 5 mm/s (passive closing edge protection)
- » Time-controlled reversing when an obstacle is detected in the CLOSED direction (active closing edge protection)

Potential drive options



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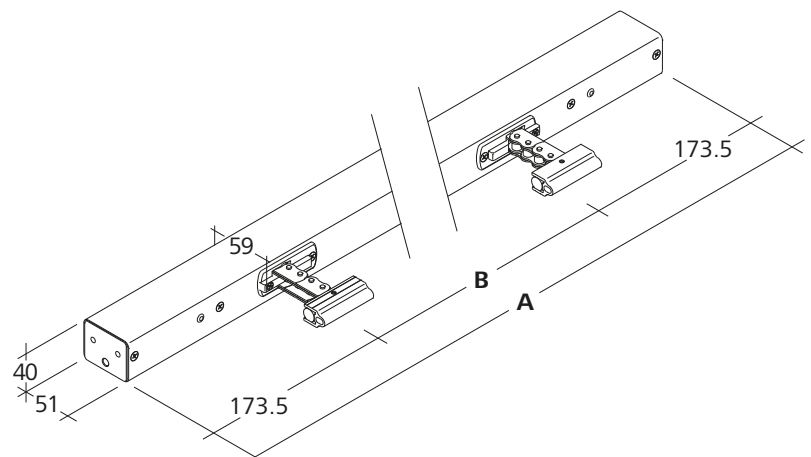
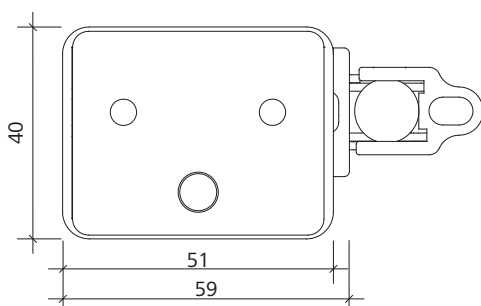
Supply	24 V DC / $\pm 15\%$
Rated input current	2 A
Force of pressure	600 N
Tensile force	600 N
Service life	20000 double strokes *
Stroke	350 - 800 mm
Type of protection	IP 32
Emission sound pressure level	$L_p \leq 70$ dB(A)
Temperature range	-5 °C ... +75 °C
Housing	Aluminium
Colour	White aluminium (~RAL 9006)
H x D	40 x 59 mm
Dimension A	997 / 1347 mm
Dimension B	650 / 1000 mm



* For vertical use, please consult with D+H Sales!

Dimensions

All specifications in mm



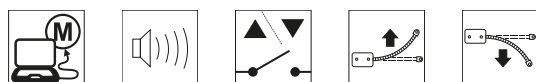
KA-TW-K-BSY+



Performance features

- » Can be used for openings for smoke exhaust; D+H Euro SHEV in accordance with EN 12101-2; and for daily ventilation
- » With BSY+ motor and synchronised electronics controlled via microprocessor
- » Direct control via 230 V AC
- » 2 drive chains for optimal power application to the sash
- » Special chain stabilisation
- » Relief of pressure on window gasket after closing process
- » Electronic force and position control
- » Programmable drive functions and different drive parameters
- » Running speed in CLOSED direction decreases to 5 mm/s (passive closing edge protection)
- » Time-controlled reversing when an obstacle is detected in the CLOSED direction (active closing edge protection)

Potential drive options



You can find the explanations for the icons in the legend.

Approvals / Certificates

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Technical data

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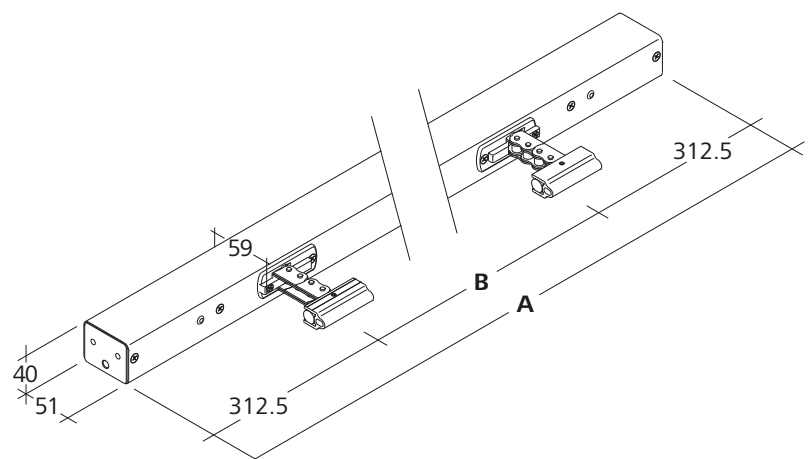
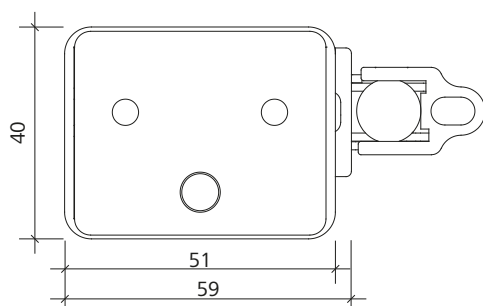
Supply	230 V AC / +10 % ... -15 %
Input frequency	50 Hz
Performance	45 W / 75 VA
Force of pressure	600 N
Tensile force	600 N
Service life	20000 double strokes *
Stroke	350 - 800 mm
Type of protection	IP 32
Emission sound pressure level	$L_{pA} \leq 70 \text{ dB(A)}$
Temperature range	-5 °C ... +75 °C
Housing	Aluminium
Colour	White aluminium (~RAL 9006)
H x D	40 x 59 mm
Dimension A	1275 / 1625 mm
Dimension B	650 / 1000 mm



* For vertical use, please consult with D+H Sales!

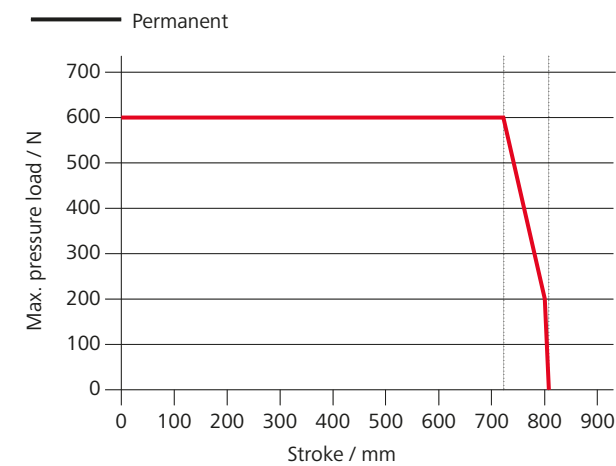
Dimensions

All specifications in mm

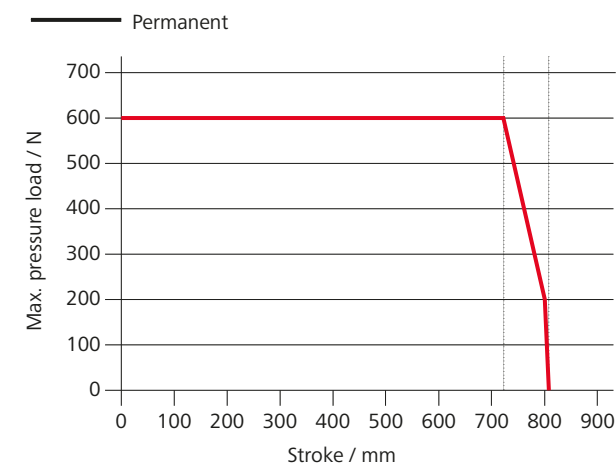


Pressure load diagram

KA-TW-BSY+

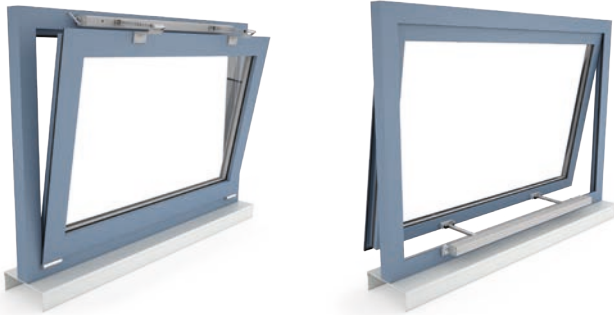


KA-TW-K-BSY+



Possible applications

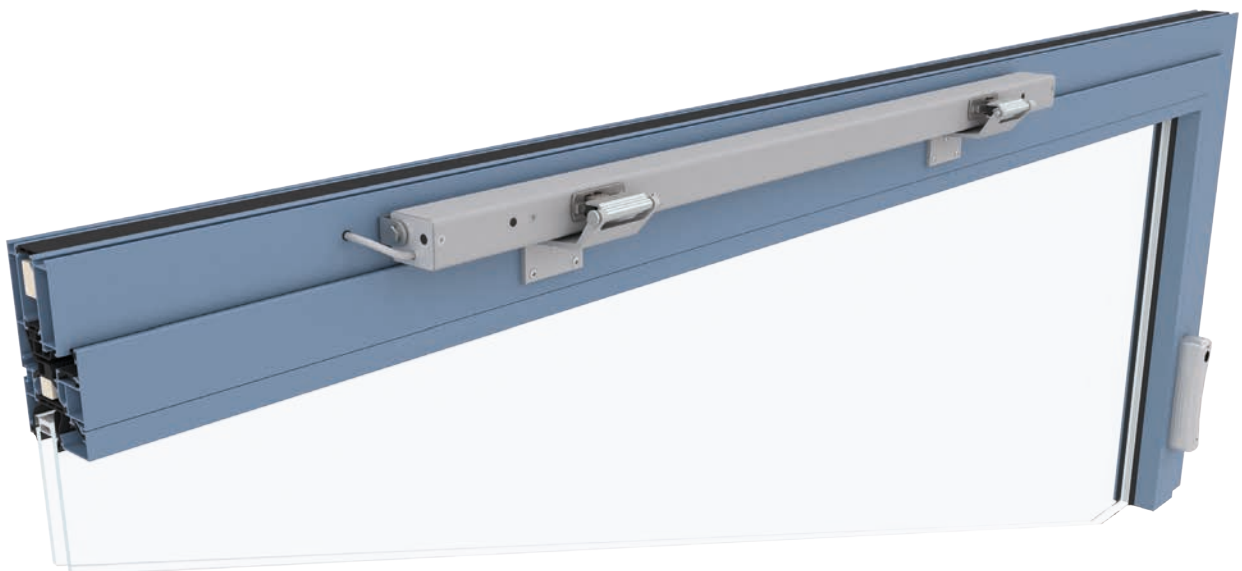
Illustration provided as an example



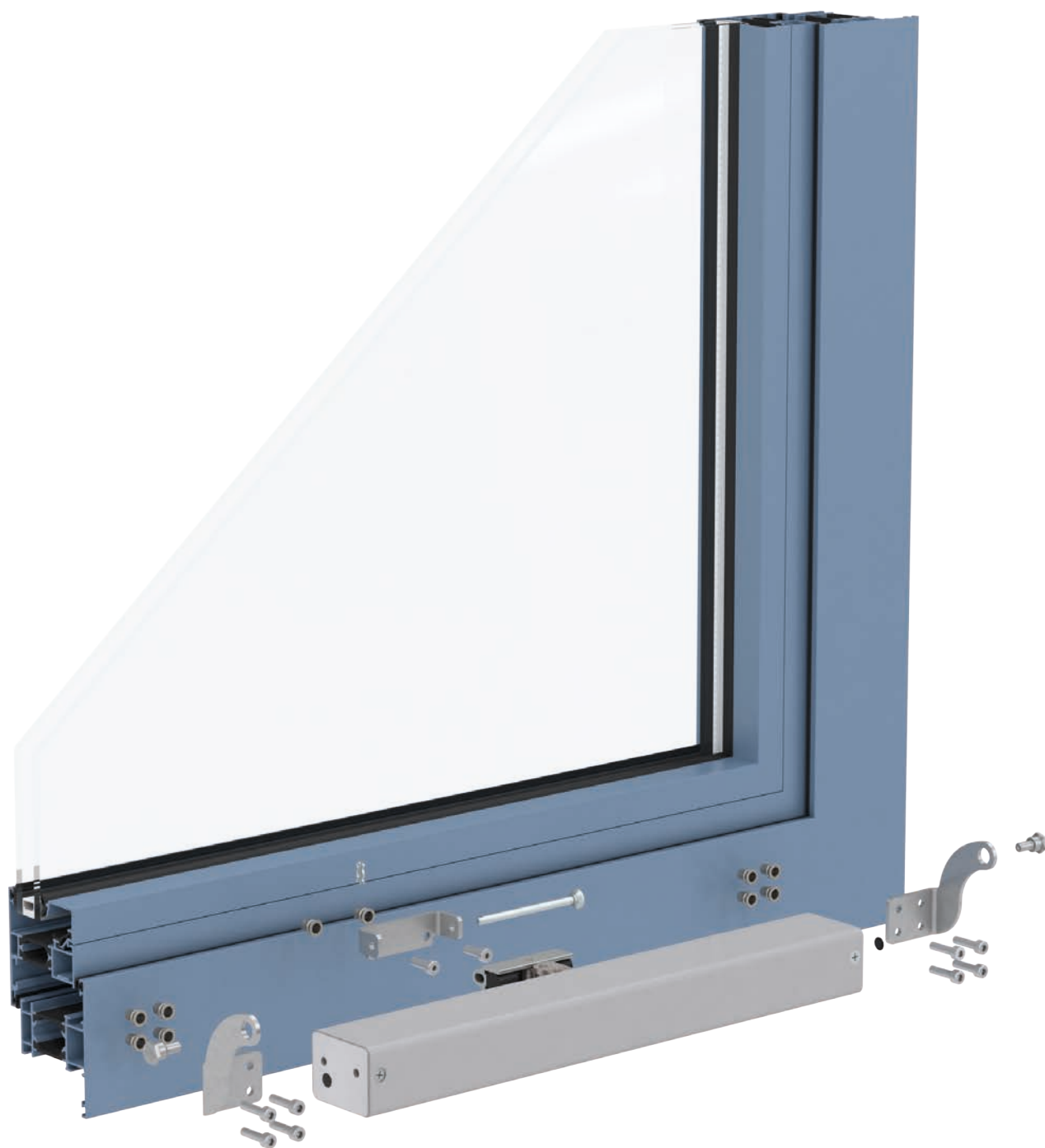
- » Mounted installation
- » Sash mounting
- » Frame mounting
- » Application force
- » Application tension

Installation example

KA 66/500-TW1 / window locking drive FRA 11



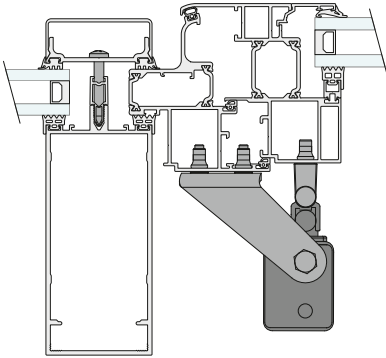
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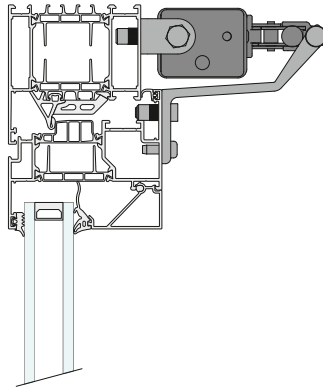
Bracket applications

Illustration provided as an example

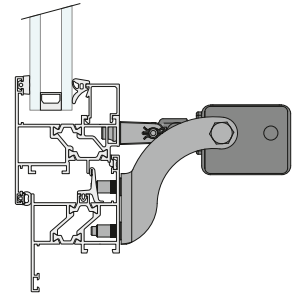
Roof window,
outward opening



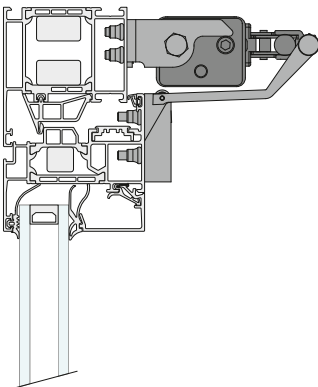
Bottom-hung and side-hung window,
inward opening



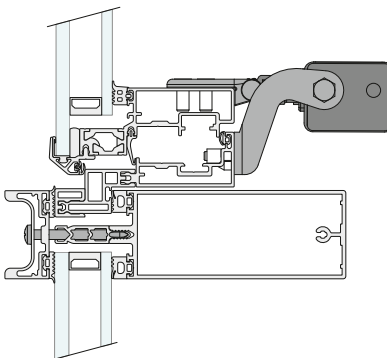
Top-hung window,
outward opening



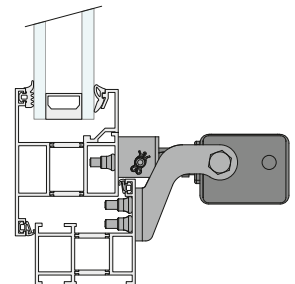
Side-hung vent window,
inward opening



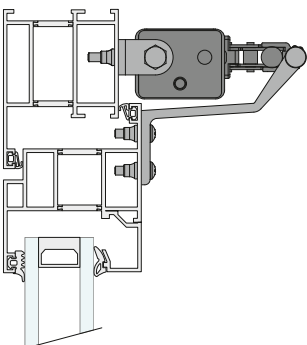
Projected top-hung, parallel opening
window, outward opening



Universal bracket sets,
outward opening

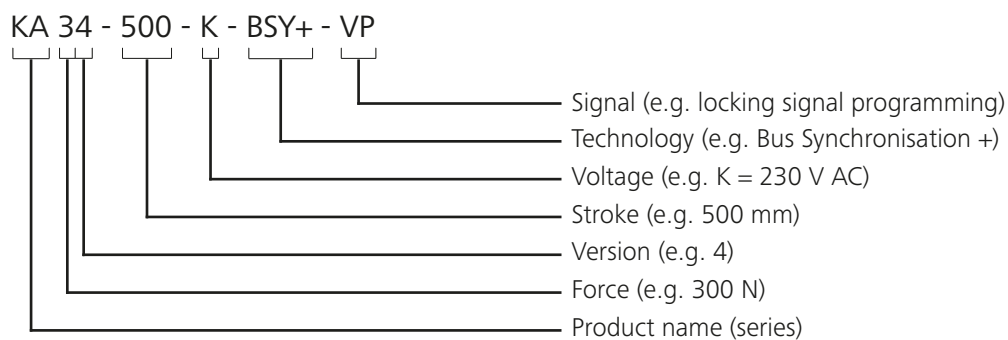


Universal bracket sets,
inward opening



Legend

Product name



"TW" stands for "Twin" in the product name

Notice / design



SHEV (Smoke and heat exhaust ventilation)



CNV (Controlled natural ventilation)












230 V AC



24 V DC

Options icons

-  Function programming
Option for customised configuring of drive parameters (e.g. stroke) via software and associated service tools for drives equipped with PLP, BSY or BSY+ electronics.
-  BRV signal
Acknowledgement from the drive, via a control cable, to confirm that it has been completely extended or retracted. When used with the AT 41 and ERM 44 modules, this signal is sent to the central building control system, the modules themselves, or to the locking drive. The BRV signal is not isolated.
-  BSY+ (synchronisation of drives)
In addition to providing the same synchronisation function as BSY, BSY+ enables different components in the window to communicate with each other. For example, the chain drives, during synchronous operation, or the window and locking drives (e.g. FRA 11 BSY+ or VLD-BSY+).
-  SGI signal (position reporting)
In combination with the D+H servo plug-in unit SE 622 or the BSY-gateway BSY-GW-024-010-U, the drives can be controlled with perfect positioning.
-  SKS (closing edge protection)
Drive option, which enables an anti-trap strip or presence detector to be connected directly to the drive (terminal resistor 5.6 kΩ).
-  Audible signal (corresponding to protection class)
AS2 corresponding to "Protection class 2" in accordance with ZVEI risk assessment through an audible warning signal in the "CLOSED" running direction. AS3 corresponding to "Protection class 3" in accordance with ZVEI risk assessment, in addition to AS2, stops the drive for 11 s with a remaining stroke of 28 mm.
-  End position message (OPEN / CLOSED)
Drive feedback via an integrated isolated switching contact. This happens if the chain / rack and pinion has moved completely out or in.
-  SBD side bow chain
Drive chain with rigid backing, bends in the direction of the hinge. Drive is fixed in place (not rotatable).
-  SBU side bow chain
Drive chain with rigid backing, bends in the direction of the hinge. Drive is fixed in place (not rotatable).

Overview of standards

DIN EN

DIN EN 60335-2-103

Requirements and test methods for drives for windows

DIN EN 12101-2

Requirements and test methods for natural smoke and heat exhaust ventilators (NSHEV)

VdS

VdS directive VdS 2580

Requirements and test methods for electro-mechanical drives, for natural smoke extraction systems (NSE)

UL

UL 325

This test standard defines, among other aspects, the requirements and test methods for electro-mechanical drives, which shall be used for ventilation purposes. The result of this test is a UR certificate.

Test centres / test symbols

Dekra

Approvals for the electric safety/security of products (drives and control panels) - particularly regarding Low Voltage Directive approvals for drives in accordance with the EN 60335-2-103 standard.

VdS Schadenverhütung

Well-established as a test laboratory for fire protection technology in Europe.

Inspection of SHEV control panels in accordance with the standards listed below or VdS directives.

Named as a notified body by DIBt; inspections in accordance with EN 12101-2 European standards for natural smoke and heat exhaust ventilators and subsequent certification.

Inspection of electro-mechanical drives in accordance with the VdS directive VdS 2580.

EN 12101-2

Drive tested in conjunction with NSHEV in accordance with EN 12101-2.

Underwriters Laboratory UL

Underwriters Laboratories (abbreviated UL) is an independent organisation which inspects and certifies products in terms of their safety. UL inspects products, components, materials and systems to see whether they conform to US and Canadian market requirements.

CNBOP

The CNBOP is a Polish test institution which conducts specific function checks for individual components or systems for SHEV systems in accordance with Polish standards and laws and which issues certificates based on these tests.

CCCF

The CCCF is a Chinese test institution which issues country-specific certificates on the basis of tests conducted at accredited Chinese test institutions for components or systems for SHEV systems in accordance with Chinese standards and laws.





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