



Chain drive

# ELTRAL KS 30/40 RADIO CONTROL

EN

Installation and Operating instructions









# ELTRAL KS30/40 RADIO CONTROL

Chain drive

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## Symbols used in this manual

Symbol	Signal word	Meaning	Symbol	Signal word	Meaning
	<b>Danger!</b>	Risk of physical injury and damage to property		<b>Info</b>	Special functions or tips for users
	<b>Attention!</b>	Risk of property damage		<b>Note</b>	User prompt
	<b>Caution!</b>	Crushing risk		<b>Danger!</b>	Electrical hazard symbol sign

## General advice

These instructions are designed to be used exclusively by specialists trained by Gretschi-Unitas GmbH Baubeschlge who are also responsible for instructing the user.

The Technical Office of Gretschi-Unitas GmbH Baubeschlge in Ditzingen is responsible for all manuals.

The supplied product is as a whole to be regarded as an incomplete machine. The instructions accompanying it do not contain a risk assessment. In fact, it is the installer of the complete technical equipment who is in charge of carrying out a risk analysis.

## 1 Essential information

These instructions are an important delivery component and are intended for the persons who will install, operate or service the product. These instructions provide information about the product and using it safely.

- Please read the instructions thoroughly and pay particular attention to the advisory notes concerning safety.
- Keep the instructions for later reference.
- Reliable functioning and the prevention of risk and damage can only be achieved by accurate assembly and adjustment according to the instructions.
- Gretschi-Unitas GmbH Baubeschlge accepts no liability for damage arising from inappropriate assembly and installation.
- After removing all packaging, check that all parts of the appliance are present and complete.



**Plastic bags as well as small parts, such as staples, etc. must not be left within the reach of children. They represent potential danger sources.**

## 2 General safety advice

**It is absolutely essential to observe the following safety instructions.**

Additional instructions in other sections of the manual are clearly identified by the symbols listed above.

- Ensure that assembly, installation, and initial commissioning of the equipment are carried out by trained and qualified persons only.
- Observe all regulations and directives applicable at the place of installation; these might include:
  - Directives for safety at work
  - Accident prevention regulations
  - Regulations concerning electrical and electronic engineering (eg, VDE directives), DIN/EN standards,
  - Technical guidelines for workplaces "ASR A1.6 and ASR A1.7 (former guideline for "Guidelines for Power-operated Windows, Doors and Gates" BGR 232) - Where required, please request from Gretschi Unitas GmbH Baubeschlge,
  - Code of practise KB.01 issued by the German association of window and facade manufacturers (VFF); ask Gretschi-Unitas GmbH Baubeschlge for a copy if necessary.
- The product may only be used if it is in full technical working order and for the purpose intended; it must be handled in a safety-conscious way with due regard to dangers, and in accordance with the installation and operating instructions.
- Attach safety devices such as safety catches or safety stays correctly and ensure that they are in perfect working order. Check that the opening width of the catching device is sufficient to match the travel of the chain drive.
- Use only original spare parts, original accessories and original fixing materials supplied by Gretschi-Unitas GmbH Baubeschlge.
- Fixing material must be compatible with the structure and supplemented if necessary.
- You must always check that your installation complies with applicable regulations. Special attention must be paid to window opening width, permitted installation dimensions, opening speed, push force, connecting cable cross-section in relation to cable length and current consumption.
- The product is designed for use in dry rooms only. The product must be protected against dirt and humidity at all times.

# ELTRAL KS30/40 RADIO CONTROL

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### 3 Intended use

The ELTRAL KS 30/40 RADIO CONTROL chain drive is designed exclusively for opening and closing Tilt-Only windows, Top-Hung windows, Turn-Only windows, skylights, Horizontal-Pivot and Vertical-Pivot windows.

Other use is considered inappropriate.

Gretsch-Unitas GmbH Baubeschläge accepts no liability for damage arising from inappropriate use.

In the case of inappropriate use, the guarantee is null and void.

**Our General Terms and Conditions apply.**

### 4 Product description

The ELTRAL KS 30/40 RADIO CONTROL chain drive is designed for use in dry rooms at a maximum permissible ambient temperature of -5° C to +65° C.

It can be installed either horizontally or vertically.

An ELTRAL KS 30/40 RADIO CONTROL set consists of:

- Chain drive with connecting cable, length 2 m
- Standard pivot bracket with spacer
- Pivot bracket for Top-Hung sash with drive mounted to the frame
- Chain holding bracket for installation on frame
- Chain holder for installation on sash
- Package with locking piece and connecting pin
- Drilling template
- Installation and Operating instructions

#### NOTE

#### Spacer



The purpose of the spacer is to ensure correct positioning.  
It can be removed afterwards.

The following installation variants are possible:

- attached to the frame,
- attached to the sash.

#### NOTE

#### Type label



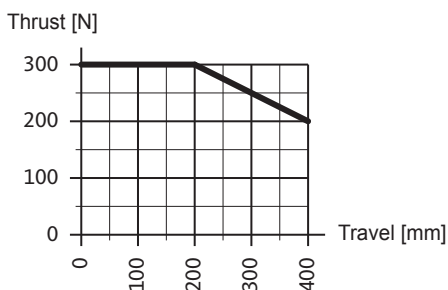
The type label is attached to the motor. With the motor installed, the type label is not visible.

## 5 Technical data (1 motor)

Model	110 V / 230 V
Push* / pull force	* (See force-displacement curve) / max. 300 N
Travel (adjustable)	100, 200, 300, 400 mm
Nominal voltage	110 V / 230 V~ 50/60 Hz
Current consumption at nominal load	0.16 A
Power consumption at nominal load	~28 W
Running speed (full load / 2/3 load)	10 mm/s
Double electrical insulation	Yes
Duty ratio (power-on time)	30% (10 min)
Ambient temperature	-5°C to +65° C
Protection type	IP30
Connection of several drives in parallel	Yes
Limit stop switch at opening	Electronic
Limit stop switch at closing	Electronic with power input
Overload protection at opening and closing	Electronic with power input
Connecting cable	2x 75 mm <sup>2</sup> , approx. 2 m long
Dimensions Height x Depth x Width	37 mm x 59 mm x 386.5 mm
Weight	approx. 1.0 kg

The specifications in this table are not binding and may be changed without prior notice.

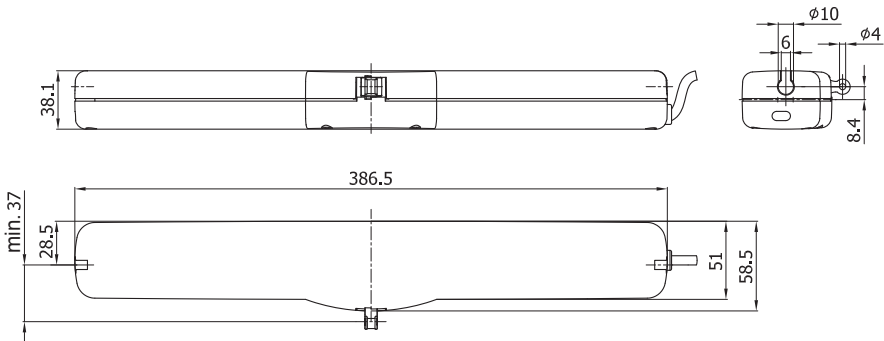
### \* Force-displacement curve



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## Dimensioned drawing




For the suitable sash heights of the various installation options, refer to the following table or the diagrams in chapter Page 18.

### Min. sash height


Installation method	Travel 100 mm	Travel 200 mm	Travel 300 mm	Travel 400 mm
Tilt-Only sashes (inwards), installation on frame	250 mm	600 mm	1100 mm	1500 mm
Tilt-Only sashes (inward), installation on sash	200 mm	400 mm	650 mm	900 mm
Top-Hung sashes (outward), installation on frame	150 mm	250 mm	350 mm	450 mm

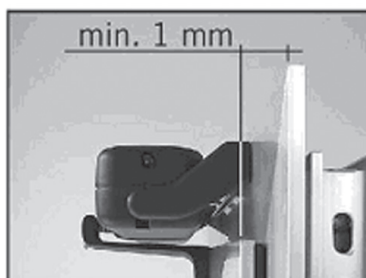
NOTE	Smaller sash heights
➡	Please contact us if smaller sash heights are required.

## 6 Preparing to install

<b>DANGER</b> 	<b>Incorrect use may cause injury to people and damage to property</b> Using the type label on the motor and the data listed in chapter "5 Technical data (1 motor)" on page 5, make sure that you have the right motor for your installation situation.
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- ⇒ Examine the delivered equipment immediately upon receipt and check it for possible transport damage. Do not install the motor if it is damaged.

<b>NOTE</b> 	With Tilt-Only sashes, the distance between the inner faces of the frame and sash must be at least 1 mm to provide for safe closing (see depiction below).  With flush windows, or if the inner face of the sash is set back from the face of the frame, shims of the corresponding size must be inserted between bracket of the Tilt-Only sash and sash profile.
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## 7 Calculating the opening and closing force

### NOTE



With the formulae indicated below it is possible to determine the approximate force required to open or close a window.

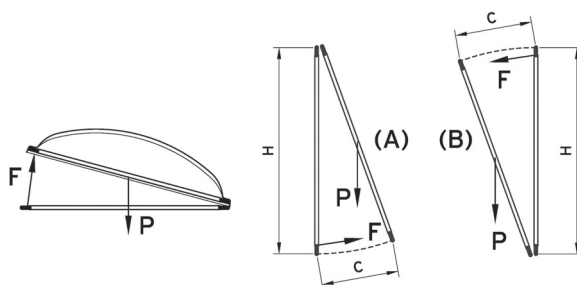
The windows are assumed to be smooth-running.  
Possible snow loads are also to be considered.

### NOTE



The application formula can only be used for Tilt-Only windows, Top-Hung windows, and skylights.

The permitted drive force according to the technical specifications can be found in chapter "5 Technical data (1 motor)" on page 5.  
If the values you calculated exceed the max. allowed force, please contact Gretschi-Unitas GmbH Baubeschlge.



$F, F_g, F_K$  = opening and closing force (N)

$P$  = sash weight (kg)

$A$  = window area ( $m^2$ )

$H$  = sash height (mm)

$C$  = opening width of sash (mm)

$F_w$  = wind load

### Wind loads depending on the building height

Height	$F_w$
0–8 m	500 N/ $m^2$
8–20 m	800 N/ $m^2$
20–100 m	1100 N/ $m^2$
> 100 m	1300 N/ $m^2$

### For rooflights and small domes

Calculating the drive force depending on the sash weight  $P$

$$F_g = 5,4 \times P$$

### For vertically installed Tilt-Only or Top-Hung windows

Calculating the drive force depending on the sash weight  $P$

$$F_K = 5,4 \times P \times C / H$$

Calculating the drive force depending on the wind load  $F_w$




$$F_K = F_w \times A / 2$$

Calculating the drive force depending on sash weight and wind load

$$F = F_g + F_K$$



## 8 Mounting the device



<b>ATTENTION</b>  	<b>Risk of inappropriate assembly</b> <p>The device must be assembled by trained and qualified persons only.</p> <ul style="list-style-type: none"> <li>➔ After mounting the hardware, make sure it is working correctly.</li> <li>➔ Carefully follow the enclosed installation drawings.</li> </ul>
<b>DANGER</b>  	<b>Risk of crushing</b> <p>During the automatic opening and closing of the window, push and pull forces of up to 300 N occur. These forces are capable of crushing limbs should you reach into the area between the sash and the frame. In particular because in the event of a jam the motor will attempt repeatedly to complete travel.</p> <ul style="list-style-type: none"> <li>➔ Keep children, disabled persons, and animals away from the window.</li> <li>➔ Do not reach between sash and frame when the motor is running.</li> <li>➔ In the case of a window sash installed below 2.50 m, secure all crushing and shearing points to ensure that persons do not accidentally reach into them. Observe VFF code of practise KB.01: Power-Operated Windows.</li> </ul>
<b>DANGER</b>  	<b>Risk of injury</b> <p>Motor-driven Tilt-Only windows must always be equipped with a safety catch to prevent injury caused by falling sashes.</p> <p>Furthermore, there is a risk of injury when assembling the motor on a window that has already been installed if the sash opens suddenly.</p> <ul style="list-style-type: none"> <li>➔ Always use appropriate safety devices such as security stays to catch the window.</li> <li>➔ The safety stay must be adapted to the opening width of the drive. To avoid jamming, the opening width of the safety stay must exceed that of the drive.</li> </ul>

- ➔ Install the motor in a way that it is always accessible.
- ➔ Follow the installation drawing. This is enclosed in the fixing set or can be obtained from your nearest subsidiary and contains the dimensions for the various installation methods and profile systems.
- ➔ All dimensions of the particular installation are the responsibility of the installer; adjustments may be necessary.
- ➔ Before working on the profiles, take note of the following:
  - Minimum sash width
  - Minimum sash height
  - Maximum sash weight
  - Possible wind and snow loads
  - Space required on the profile according to the assembly method.
- ➔ Check the required minimum distances.
- ➔ Perform a function check. For this purpose, use the proper GU testing and setting apparatus (see section "11 Components and accessories" on page 14).

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## 9 Electrical installation

<b>DANGER</b> 	<b>Risk of electric shock</b> <p>Only approved electricians are permitted to carry out electrical installation work on site.</p> <ul style="list-style-type: none"> <li>➔ For electrical installation on site, observe the VDE regulations (German Electrical Engineers Association) and the requirements of the local electricity supplier.</li> <li>➔ Disconnect all components from the mains before carrying out any work on the installation or the control unit.</li> </ul>
<b>DANGER</b> 	<b>Risk of damaging the motor beyond repair</b> <p>The motor requires a 110/230 V AC connection. Other voltages will destroy the motor.</p> <ul style="list-style-type: none"> <li>➔ Connect the motor accordingly.</li> <li>➔ Do not lay the motor connection cable together with a mains cable.</li> <li>➔ Never connect 24 V DC drives to a 230 V mains power supply. Danger to life!</li> <li>➔ Low-voltage lines and power lines must be laid separately.</li> </ul>

A two-core (230 V) connecting cable is required to connect the motor (see "Technical data").

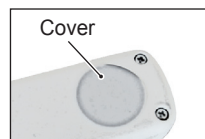
- ➔ Follow the electrical connection diagram in section "16 Connection diagram" on page 16.
- ➔ For cable lengths, cable types and cable cross-sections observe the details given in the connection diagram and under "Technical data".
- ➔ Ensure that the cables are protected against shearing, kinking or twisting. If necessary use cable ducts.
- ➔ Observe the connection assignment, the permitted drive voltage (see type label), the minimum and maximum power specifications (see technical data) and the mounting and installation instructions, and strictly comply with these.

## 10 Operation

### Meaning of LED flashing signals

The LED display can be seen when the cover is removed. This shows the different operating statuses of the drive.

For the meaning of the LED flashing signals, refer to the following table.



Flashing signal	Flashing frequency	Meaning
Off		Drive in inactive state, no alarm triggered
Light up continuously		Function not available
Flashing for 10 seconds	1x per second	Device is ready to receive a valid radio control code
Light up for 2 seconds	Light up continuously	Device has stored the remote control correctly
Flashing for 2 seconds	2x per second	Device has not saved the remote control
Continuous flashing	2x per second	Rain sensor active
Flashing for 5 seconds	2x per second	Deleting the remote control memory

**To reverse the running direction, the drive must be de-energized for at least 1 s.**

## Switching off in the closed position

The drive switches off via the integrated load cut-off in the closed position. The limit switches therefore do not need to be adjusted. When the end position is reached, the drive reverses approx. 1 mm. This relieves the load on the gaskets as well as the fastening brackets.

## Setting the travel

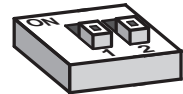
The travel of the chain drive is set at the factory to 400 mm.

The travel can be changed at any time via the DIP switches. These are under the cover. Only the settings of DIP switches 1 and 2 have to be changed as indicated in the table below. To apply the change, the chain must be extended slightly then retracted.

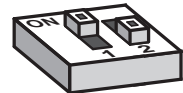
After this a test run should be completed.

Travel [mm]	DIP switch	
	1	2
100	OFF	OFF
200	ON	OFF
300	OFF	ON
400	ON	ON

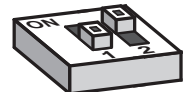
Travel 100 mm



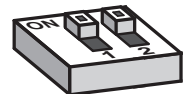
Travel 200 mm



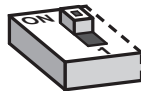
Travel 300 mm



Travel 400 mm



Switch shown  
in "ON" position



## Handheld radio transmitter

The ELTRAL KS 30/40 RADIO CONTROL chain drive is operated exclusively using the KS 30/40 handheld radio transmitter (Order No. K-19046-00-0-0). It cannot be operated using handheld transmitters by other manufacturers.

For more details on the characteristics and functional principle, please refer to the operating instructions enclosed with the handheld radio transmitter. Read the operating instructions for the handheld radio transmitter first, and observe the directions given. The transmitter is not programmed at the factory.

The radio transmission frequency is 433.92 MHz and has a variable code ("Rollcode") with 16 billion possible combinations. The code changes with every transmission operation according to an algorithm that conceals the code used thus ensuring an optimum degree of security.

Several drives can be controlled via the handheld radio transmitter, in which case every channel must be assigned to an ELTRAL KS30/40 RADIO CONTROL drive and therefore a window. The handheld radio transmitter has 30 channels which means that up to 30 windows can be controlled individually. A maximum of 15 handheld radio transmitters can be stored on every drive.

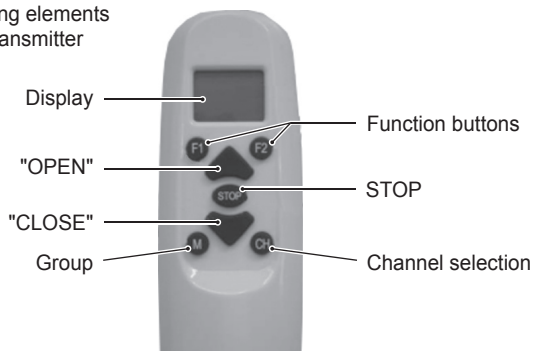
Several channels can be combined into a group so that several drives can be activated simultaneously at the push of a button. A maximum of 2 groups each containing 10 channels can be programmed.

Special applications, such as an automatic ventilation function, can be programmed at the factory via function buttons. These function buttons cannot be programmed individually by the user.

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Display and operating elements  
of handheld radio transmitter

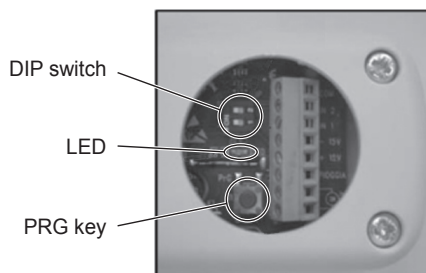


- F1** Special function 1 (see description)
- F2** Special function 2 (see description)
- M** Drive group 1 or 2
- CH** Channel selection or group selection, depending on which function is set
- ▲** Sash OPEN, drive extends or channel is adjusted upwards, depending on which function is set
- STOP** Stop, drive stops, channel is added to the group depending on which function is set
- ▼** Sash CLOSE, drive retracts or channel is adjusted downwards, depending on which function is set

The programming of the handheld radio transmitter is described in the instructions for the handheld radio transmitter.

### Saving a handheld radio transmitter

Display and operating elements of  
ELTRAL KS 30/40 RADIO CONTROL  
(under the cover)



#### NOTE



**The same button on a handheld radio transmitter cannot be assigned to several drives.**

- ⇒ Make sure that the handheld radio transmitter is working and that the batteries are charged and in a serviceable condition.
- ⇒ Select the required channel at the handheld radio transmitter (in doing so refer to the operating instructions of the handheld radio transmitter).
- ⇒ Press the "PRG" button on the ELTRAL KS30/40 RADIO CONTROL chain drive for approx. 1 second. The LED flashes slowly. The ELTRAL KS30/40 RADIO CONTROL chain drive expects a valid radio code.

- ➔ Press the ▲ arrow, STOP or ▼ arrow twice within 10 seconds (the first time to switch on the display of the handheld radio transmitter and the second time to send the radio code).
- ➔ The LED lights up for longer (1 second) to confirm that the handheld radio transmitter has been saved correctly. The LED then goes out and remains in the inactive state.
- ➔ If the handheld radio transmitter has not been saved correctly, the LED emits fast flashing signals for 1 second. The LED then goes out and remains in the inactive state. Reasons for incorrect saving could be that the memory is full, for example, or that the handheld radio transmitter is incompatible.

### Deleting the stored handheld radio transmitter

To delete the stored handheld radio transmitter completely, proceed as follows:


- ➔ Press the "PRG" button on the ELTRAL KS30/40 RADIO CONTROL chain drive (for approx. 20 seconds) until the LED flashes quickly. Release the "PRG" button. The LED continues flashing until all handheld radio transmitters that have been saved are deleted.

### Saving a handheld radio transmitter in remote mode

A new handheld radio transmitter can only be saved in remote mode, i.e. without pressing the "PRG" button, if at least one handheld radio transmitter has been saved beforehand and this handheld radio transmitter is to hand.

To save a handheld radio transmitter in the ELTRAL KS30/40 RADIO CONTROL chain drive, proceed as follows:

- ➔ Select the required channel at the handheld radio transmitter to be saved (in doing so refer to the operating instructions of the handheld radio transmitter).
- ➔ Press the F1, F2 and STOP buttons one after the other at the handheld radio transmitter that has already been saved in the ELTRAL KS30/40 RADIO CONTROL. This key combination is the same as pressing the "PRG" button at the ELTRAL KS30/40 RADIO CONTROL.
- ➔ Press the ▲ arrow, STOP or ▼ arrow twice within 10 seconds on the handheld radio transmitter to be saved (the first time to switch on the display of the handheld radio transmitter and the second time to send the radio code).
- ➔ The LED lights up for longer (1 second) to confirm that the handheld radio transmitter has been saved correctly. The LED then goes out and remains in the inactive state.
- ➔ If the handheld radio transmitter has not been saved correctly, the LED emits fast flashing signals for 1 second. The LED then goes out and remains in the inactive state. Reasons for incorrect saving could be that the memory is full, for example, or that the handheld radio transmitter is incompatible.

<b>NOTE</b> 	<b>When the ELTRAL KS30/40 RADIO CONTROL chain drive is installed, the LED may not be visible.</b>
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### Ventilation function

The handheld radio transmitter can be used to execute a function referred to as "ventilation". When this key combination is pressed, the window is opened for 5 minutes.

To activate the ventilation function, proceed as follows:

- ➔ Press the F1, F2 and arrow ▲ buttons one after the other.

The window opens. It closes once again after 5 minutes.

If the ELTRAL KS 30/40 RADIO CONTROL receives a further remote control command, the ventilation function is aborted.

To resume ventilation, press the key combination described above once again.

# ELTRAL KS30/40 RADIO CONTROL

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## 11 Components and accessories

### ELTRAL KS 30/40 RADIO CONTROL chain drive

ELTRAL KS 30/40 RADIO CONTROL

K-19042-00-0\*

\* = colour: 1 = grey (RAL 7047), 6 = black (RAL 9005), 7 = white (RAL 9016)

### Accessories for ELTRAL KS 30/40 RADIO CONTROL chain drive

(see section "17 Application examples" on page 17)

Handheld radio transmitter	K-19046-00-0-0
Chain holder for top hung sash	9-44272-00-0*
Narrow chain holding fixture set	K-17441-00-0*
Pivot bracket set	K-17440-00-0*
Bracket set for sash mounting	K-17720-00-0-8
Testing and setting apparatus	K-17736-00-0-0

\* = colour: 1 = grey (RAL 7047), 6 = black (RAL 9005), 7 = white (RAL 9016)

### Security stay Euro-Solid

Catch-stay for aluminium or timber windows without lateral locking point	K-17915-00-0-8
Catch-stay for aluminium or timber windows without lateral locking point	K-17915-01-0-8
Catch-stay for timber windows with lateral locking point	K-18046-00-0-8

- ⇒ For installation see application diagram
- ⇒ Profile-related packing shims may be required when installing the safety stays see order catalogue.
- ⇒ Fastening kits vary depending on installation method, profile system, and profile material.

## 12 Maintenance and care

To ensure problem-free operation, you must perform the following work every 1000 opening cycles, and at least once a year:

- ⇒ Check all screws for tight fit and retighten where necessary.
- ⇒ Check the window sash fits correctly in the frame. Readjust the fixing set if necessary.
- ⇒ Check all parts for damage and wear. Replace them where necessary.
- ⇒ Never use alkaline or acidic cleaning detergents. Do not immerse the device in water.
- ⇒ Do not try to repair a defective drive by yourself. Never remove the housing or other components. In case of signs of damage to the device contact the manufacturer. Only use spare parts supplied by the manufacturer to carry out repairs.

## 13 Trouble-shooting

Installers or end users are not capable of repairing motors professionally and therefore must not do so themselves. Professional repairs can only be carried out by the manufacturer. If you open the motor or manipulate it in any way, this will invalidate the warranty.

- ⇒ If a motor is faulty, you should therefore have it replaced and repaired
- ⇒ If the motor stops running, check whether the limit position switch has been activated.


In case any problems arise while installing or operating the drive, please consult the following trouble-shooting table:

Problem	Possible cause	Solution
Drive not functioning.	<ul style="list-style-type: none"> <li>• Electric energy is not being supplied to the power supply unit.</li> <li>• Connecting cable unplugged or wire(s) loose.</li> <li>• Power supply unit in the drive is faulty and not providing low voltage.</li> </ul>	<ul style="list-style-type: none"> <li>⇒ Check the residual-current circuit-breaker or safety switch.</li> <li>⇒ Check all electrical connections of the drive.</li> <li>⇒ Replace the drive.</li> </ul>
The LED lights up but the drive is not working	<ul style="list-style-type: none"> <li>• The drive has been damaged by overvoltage or has developed another fault.</li> </ul>	<ul style="list-style-type: none"> <li>⇒ Replace the drive</li> </ul>
Despite being set correctly, the drive is not locating the limit switch.	<ul style="list-style-type: none"> <li>• Programming has not been carried out correctly.</li> <li>• Failure or interruption of the electric DIP switch contact.</li> </ul>	<ul style="list-style-type: none"> <li>⇒ Reprogram the DIP switch.</li> <li>⇒ Replace the drive.</li> </ul>
The drive does not start	<ul style="list-style-type: none"> <li>• The handheld radio transmitter has not been accepted by the receiver.</li> </ul>	<ul style="list-style-type: none"> <li>⇒ Repeat the storage of the handheld radio transmitter</li> </ul>

If the motor does not respond when the remote control is operated, have the power supply checked by a qualified electrician.


## 14 Disassembly and disposal

### Disassembly

<b>DANGER</b> 	<b>Follow the safety instructions in the sections "8 Mounting the device" and "9 Electrical installation" from Page 9!</b>
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To disassemble the system follow the mounting instructions in reverse order. The adjustments can be omitted.

### Disposal

<b>NOTE</b> 	<b>Motor components</b> <ul style="list-style-type: none"> <li>• Aluminium</li> <li>• Zinc</li> <li>• Copper</li> <li>• Plastic</li> <li>• Iron</li> </ul>
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- ⇒ Dispose of the components in accordance with the local disposal regulations.

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### 15 Guarantee and aftersales service

In principle, all deliveries are made on the basis of our "General Terms and Conditions".

The guarantee complies with the legal regulations and is valid in the country where the motor was purchased.

The guarantee covers material and manufacturing defects occurring under normal stress.

Guarantee and liability claims for personal injury and damage to property are excluded if they are due to one or more of the following:

- Inappropriate use of the product.
- Improper installation, commissioning, operation, maintenance, and repair of the product.
- Operation of the product with faulty, incorrectly fitted or non-functional safety and protection devices.
- Non-observance of the installation and operating instructions.
- Unauthorised structural modification of the product.
- Catastrophic events as a result of foreign-object damage and force majeure.
- Wear.

For any guarantee claims or the delivery of spare parts or accessories, please contact your nearest subsidiary.

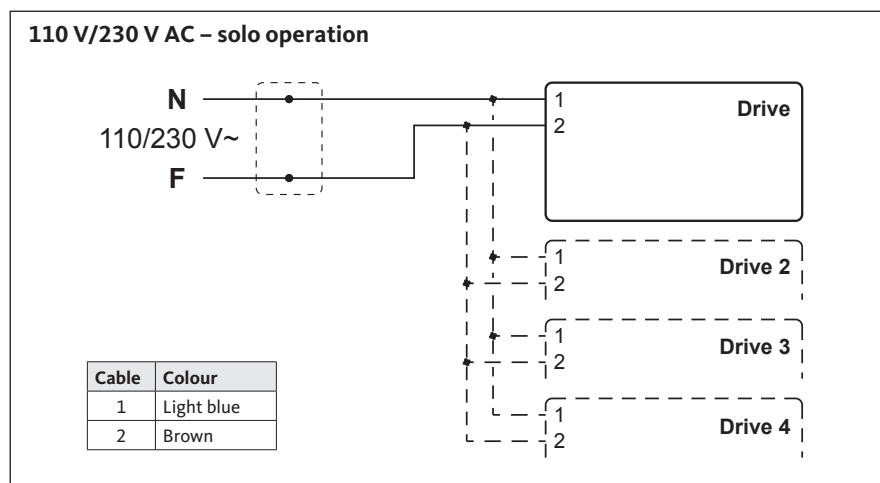
### 16 Connection diagram

#### Connection of KS30/40 RADIO CONTROL

The ELTRAL KS 30/40 RADIO CONTROL chain drive comes with a connection cable which is approx. 2m long. It must be connected to a mains voltage of 110V or 230V~ 50Hz.

The opening and closing control commands are issued by the KS 30/40 handheld radio transmitter (Item No. K-19046-00-0-0). The drive cannot be controlled via a hard-wired switch or button.

The connection must be made according to the following wiring diagram:



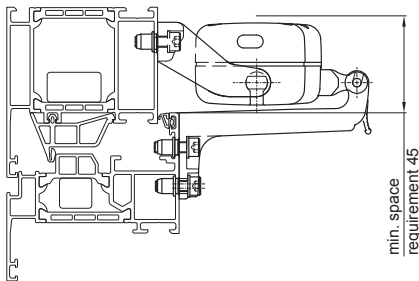


## 17 Application examples

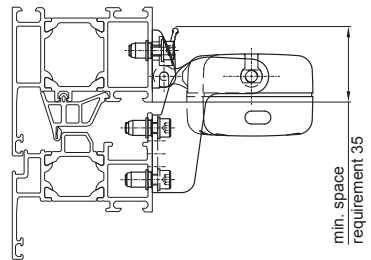
The application range of the product is recommended by Gretschi-Unitas GmbH Baubeschlge and may vary, depending on which profile system is used.

The product guidelines of the profile manufacturer, in particular information about construction and assembly, tightness, max. sash weights and material qualities (e.g. linear profile expansion) must be followed.

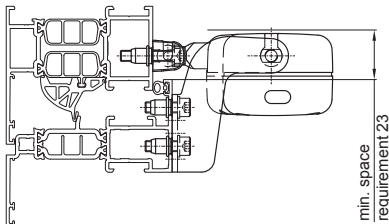
**Tilt-Only sash, installation on frame**



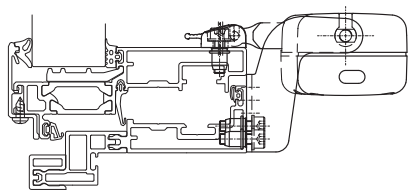
**Tilt-Only sash, installation on sash**



**Tilt-Only sash, installation on sash**



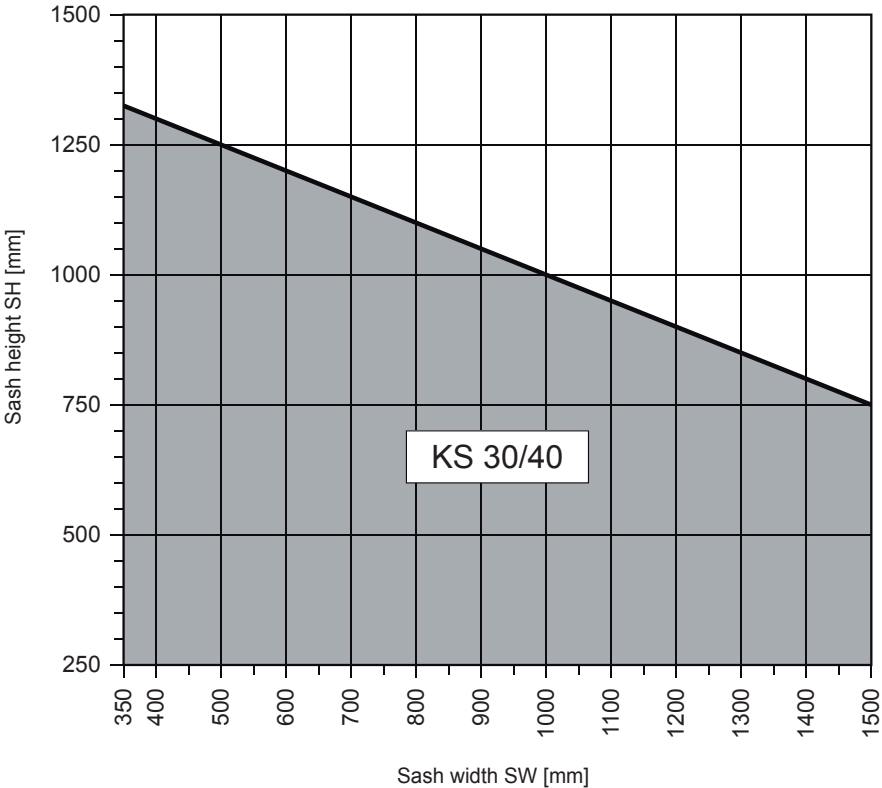
**Top-Hung sash, installation on frame**



# ELTRAL KS30/40 RADIO CONTROL

Chain drive

## 18 Application diagram



## 19 Declaration of incorporation

### Einbauerklärung (für eine unvollständige Maschine)

### Declaration of incorporation (for a partly completed machinery)

Hiermit erklären wir, dass folgendes Produkt  
We hereby declare that the following product

<b>Hersteller:</b> Manufacturer:	<b>Gretsch-Unitas GmbH Baubeschläge</b> Johann-Maus-Str. 3 D-71254 Ditzingen
<b>Produktbezeichnung:</b> Product Designation:	<b>Fenster-Kettenantrieb 230V AC</b> Window chain drive 230V AC
<b>Typ/ Type:</b>	<b>ELTRAL KS30/40</b> <b>ELTRAL KS30/40 Synchro</b> <b>ELTRAL KS30/40 Remote</b>

**Baujahr:** ab 2011  
Year of manufacture: from 2011

die Anforderungen der Maschinenrichtlinie 2006/42/EG, Anhang I, Teil 1 erfüllt. Die technischen Unterlagen sind nach Maschinenrichtlinie 2006/42/EG Anhang VII, Teil B erstellt worden.  
complies with the requirements of the Machinery Directive 2006/42/EC, Appendix I, Part 1  
The technical documents are issued according to the Machinery Directive 2006/42/EC, Appendix VII, Part B.

Der Bevollmächtigte für die Zusammenstellung technischer Unterlagen ist  
Authorised to compile the relevant technical documentation is

**Dipl.-Ing (BA) Daniel Gründler, Gretsch-Unitas GmbH Baubeschläge**

Auf begründeten Antrag hin sind wir verpflichtet, die spezifischen Dokumente für die oben genannten Produkte innerhalb einer angemessenen Frist bereitzustellen. Die Dokumente werden per E-Mail zur Verfügung gestellt.  
Upon justified request, we shall be obligated to provide the specific documents regarding the product listed above within an adequate period. The documents will be provided via e-mail.

Die unvollständige Maschine entspricht weiterhin allen Bestimmungen der  
Furthermore the partly completed machinery complies with all regulations of

<b>Richtlinie 2004/108/EG</b> Elektromagnetische Verträglichkeit	<b>Directive 2004/108/EC</b>	EMC Compatibility
<b>Richtlinie 2006/95/EG</b> Niederspannungsrichtlinie	<b>Directive 2006/95/EC</b>	Low Voltage Directive.

und folgenden harmonisierten Normen / and the following harmonised standards:

**DIN EN 60335-2 – 103, EN 55011, EN 55014-1, EN 55014-02, EN 55022**

Die vollständige Maschine, inklusive der von uns gelieferten o.a. Antriebe darf erst dann in Betrieb genommen werden, wenn festgestellt wurde, dass die Anlage entsprechend den Vorgaben der Montageanleitung und der Betriebs- und Installationshinweise montiert wurde und die Abnahme durch einen Sachkundigen mit Nachweis mittels Abnahmeprotokoll durchgeführt wurde. Dadurch wird den Bestimmungen der Maschinenrichtlinie 2006/42/EG entsprochen.

Commissioning of the complete machinery including the above mentioned drives delivered by us is not allowed until it is ascertained that the installation of the complete machinery was performed in accordance with the specifications and the operating and installation advice given in our "Mounting Instructions", and that the acceptance procedure was duly carried out and documented in an acceptance protocol by a specialist.  
This stipulation is made in accordance with the regulations of the Machinery Directive 2006/42/EC.

Diese Erklärung wird verantwortlich für den Hersteller / This is declared by the manufacturer

**Gretsch-Unitas GmbH Baubeschläge, Johann-Maus-Str. 3, D-71254 Ditzingen**

abgegeben durch / represented by

Julius von Resch – Geschäftsführer / Managing Director

(Titel, Vorname, Name, Stellung im Betrieb des Herstellers / title, first name, name, responsibility in the company)

Ditzingen, 13. Januar 2011

  
rechtsgültige Unterschrift / valid signature

Einbauerklärung-Nr. / Manufacturer's Declaration no. G.U. K-1033



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The documents accompanying the product were issued when the product was manufactured. Due to the fact that our products undergo continuous development, you should verify at [www.g-u.com](http://www.g-u.com), if the technical documents you have at hand are up to date. Be sure to use the latest edition of our technical documents