

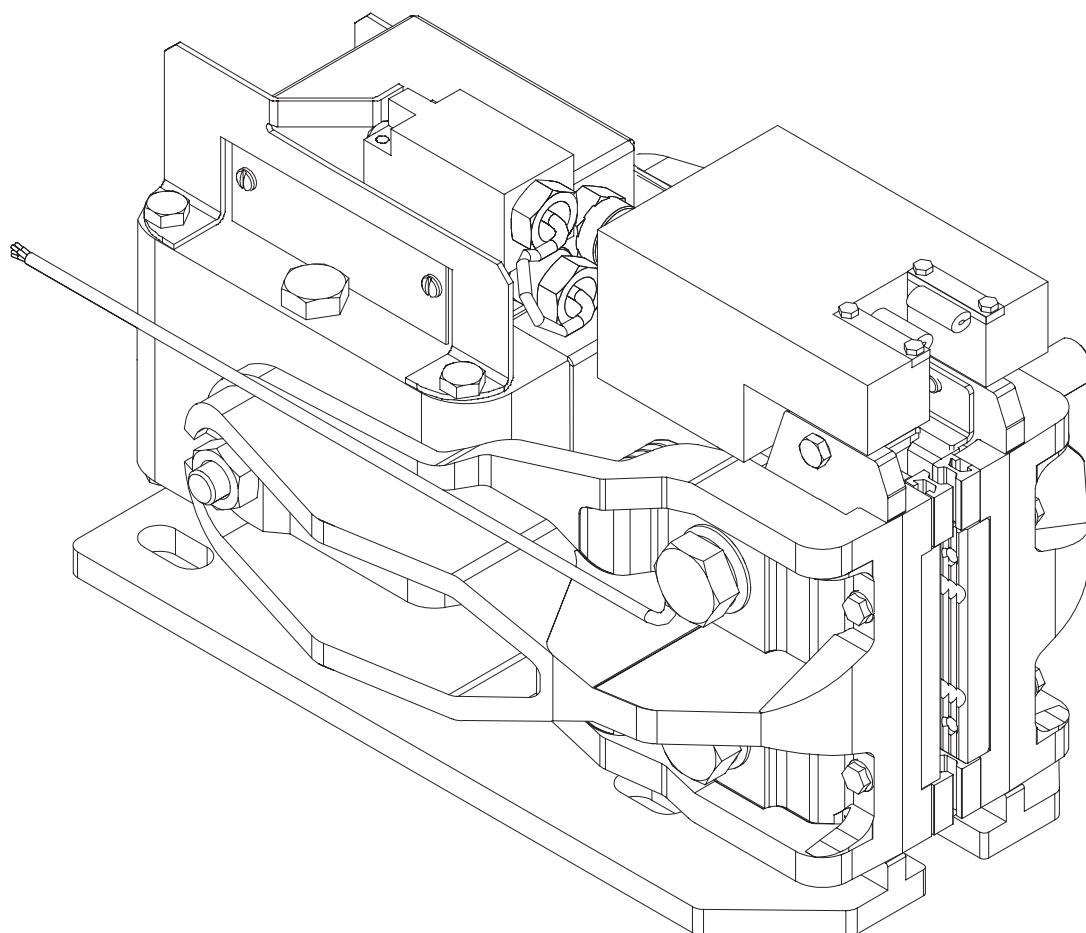
Braking System EBRA20

Operating instruction



Blatt/sheet D7AJMGB.000
Datum/date 23.05.2002
Stand/version K-07.04.2016
Geprüft/approved WAT/MZE

Braking System EBRA20



D7AJMGB C-04.2016

Original Instruction

www.wittur.com

Product manufacturer reference can be found on the product type label.
For any support or further questions please contact your trading office.



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Änderungen vorbehalten!

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1 General information prior to installation

1.1 Description and functions

The EBRA20 guide rail brake is used as an ascending car over speed protection safety device.

EBRA20 is used when the motor-brake does not effect direct to the traction sheave or to the axle of the traction sheave near of it. It acts onto the car guide rail an reduces the car speed according to the regulations (EN81-1: 9.10.4). The brake operates with two spring loaded brake shoes and is opened by an electro magnetic coil.

The brake is installed on the upper or lower beam of the sling and it replaces the sliding guide shoe of the car (the guide shoe of the car is integrated to the brake body - to be used with sliding guide shoes only)*.

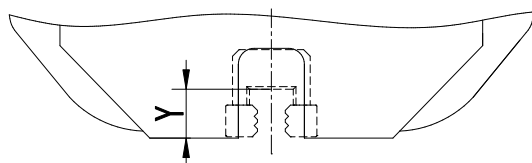
EBRA20 is a stand alone braking system which only needs the tripping information (over speed governor switch) from the elevator.

The EBRA20 may be used for electrical operated passenger an goods lifts according EN81-1. The system does not substitute the safety gear for down direction.

The settings are carried out in the factory (according to the elevator data) an sealed.

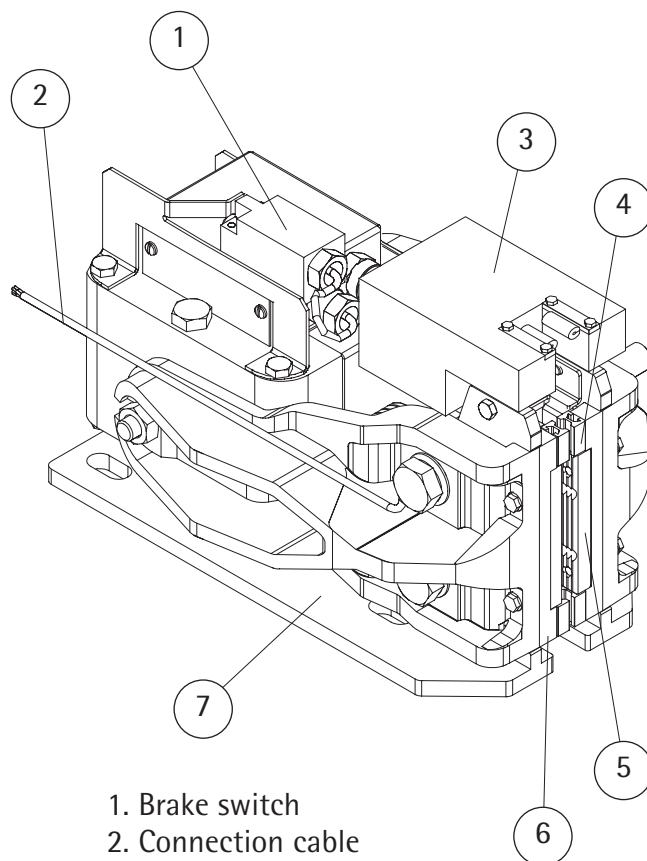


*) The EBRA20 with reduced width of guide rail running surface ($Y=18.5\text{mm}$) does not serve as sliding guide shoe, a separate guide shoe has to be added.



The operating range is defined as follows:

- Max. nominal speed 2.0m/s
- Nominal load Q 240 - 2000kg
- Min. brake force [N] $8 \times Q$ [kg]
- Max. brake force [N] $22 \times Q$ [kg]
- Width of guide rail head 7 - 19mm
- Max. guide forces during normal running $F = 2000\text{N}$
- Weight of one EBRA20 30kg
- Power supply 230VAC $\pm 15\%$
- Power usage 25W per coil



1. Brake switch
2. Connection cable
3. Lubricator cup
4. Sliding element
5. Brake shoe
6. Sliding guide shoe
7. Base plate

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1.2 Liability and guarantee

This instruction handbook is written for people who are familiar with lift servicing and installation. Sufficient knowledge of lifts is essential.

WITTUR accepts no responsibility for damage caused by improper handling, or for damage caused as a result of actions other than those stated in these operating instructions.

The WITTUR guarantee may be voided if parts other than those described in these instructions are installed.

Unless stated otherwise, the following are not permissible due to technical safety reasons:

- The use of components other than those installed
- Carrying out modifications, of any kind on the brake system
- Installing two different brake heads with different index numbers together
- Destruction of the lead seal
- Combining different component types
- Installing braking systems intended for other employment than that stipulated
- Carrying out faulty or improper maintenance or inspection checks
- Using unsuitable accessories, spare parts or operating material which has neither been released by the WITTUR Company nor consists of original WITTUR spare parts

1.3 Safety precautions

Installers and servicing personnel are fundamentally responsible for their safety while working. The monitoring and following of all valid safety rules and legal conditions is required in order to prevent personal injury and damage to materials during installation, maintenance and repair work. This refers especially to the corresponding accident prevention rules.

Important safety advice and danger warnings are emphasized with the following symbols:



General danger warning



High danger risk warning (i.e. crushing edge, cutting edge etc.).



Risk of damage to machinery parts (i.e. due to incorrect installation).



Important information sign

These operating instructions belong with the whole installation and must be kept in a safe place at all times (i.e. machine room).

The proper assembly and installation of WITTUR brake systems requires correspondingly well trained fitting engineers. The responsibility of training lies with the company appointed to carry out the work.

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Before starting installation work:



Only properly trained personnel may carry out work, or be allowed access to the installation site.

- Attach safety devices to guard against falling (platform or harnesses)
- Cover any floor openings
- Secure installation tools or objects against accidental falling
- Lift shaft openings should be cordoned off and suitable warning signs should be erected when working in shaft openings
- Work involving electrical equipment should only be carried out by an electrical engineer or qualified personnel.

1.4 Preparation

Before beginning installation work it is in your own interest to ascertain the constructional and spatial conditions. Where (workshop or on site) and when which installation operations can or must be carried out. It is recommended therefore, taking into account all the given circumstances, to plan the various operational sequences in advance, rather than carrying them out prematurely and in an unconsidered manner.

On receipt of the delivery, the goods or components should be checked for correctness and completeness with the order sheet.

The following should be checked also:

- that the factory and order number correspond
- that the details on the name plate correspond to those on the order
- the elevator speed
- the width and type of guide rail used
- the nominal load (Q)

1.5 Advice for when working on safety components

The Brake system EBRA20 is classified as safety components. It is most important that the standards and guidelines described in this section are complied as well as those given in the rest of this operating manual.



These instructions, and especially the section on safety precautions, should be read and fully understood before work begins.

Safety devices require special attention. It is compulsory that they function perfectly to ensure danger free installation operation.

Safety devices that can only be adjusted after installation should be done immediately after installation.

Operation of safety devices installed ex-works must be tested immediately.

If it is necessary to disassemble a safety device during servicing or repair, it should be reassembled and checked with the required tests, as soon as the work has been carried out.

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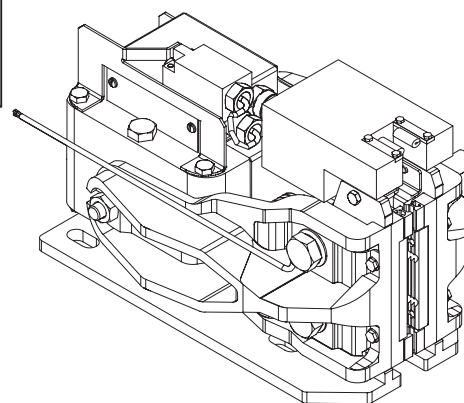
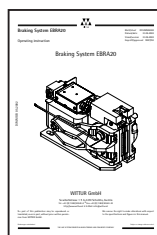
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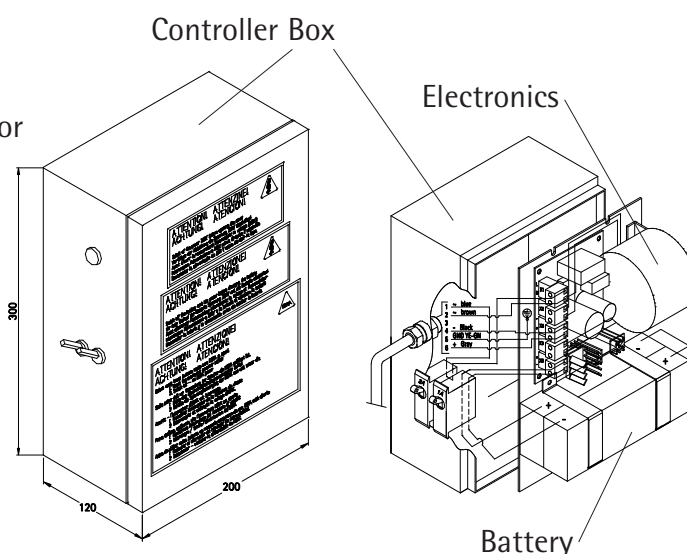
1.6 Content of supply

After delivery, check the brake system for damage and for full delivery of parts. The content of supply covers:

- Operating instructions manual
- One pcs. EBRA20 ($Q \leq 1000\text{kg}$) or two pcs. EBRA20 ($1000 < Q \leq 2000\text{kg}$) pre-adjusted and sealed at the factory

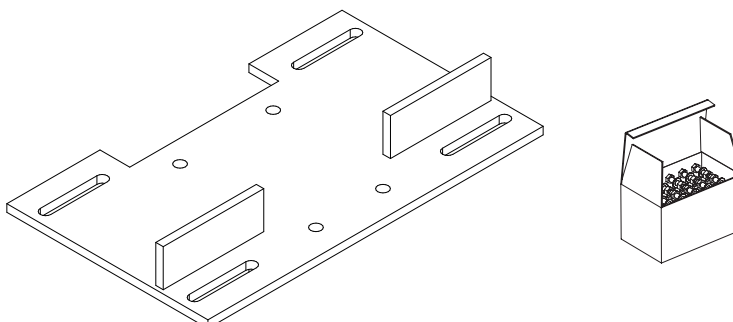


- Electrical interface:
 - Controller box (incl. electronics) or electronic without box
 - Battery (optional)
-  In case of using the electronic without battery a UPS has to be used.



- Mechanical interface (optional):

- Adapter plate to car frame
- Fixing screw-packages



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2 Name plate, designation, identification


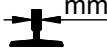
The EBRA20 identification indicator is located on the top of the brake connection box.

It gives following data:

- Type term
- Serial number
- Elevator number
- Tripping speed
- Nominal load
Number of brakes (1... $Q \leq 1000\text{kg}$)
(2... $1000 < Q \leq 2000\text{kg}$)
- Rail head width
- Spring adjustment dim. (B)
- Position of installation

The EBRA20 is preset in the factory and should not be adjusted on site conditions.

Spring length (B) is measured when EBRA20 is on the rail and braking and should be $\pm 1\text{ mm}$ from the value given.

Order number - Elevator number (refer to delivery or order sheet)		Typ term	
Serial number	EBRA20 727116GXX		Traceability 
Date of manufacture	Serial - No.: Serial number	Elevator-No.: Custom number	
Nominal load $Q = (\text{kg})$	Prod. Date: YYYY-MM-DD		
CE ID No. Q ##### kg with # brake(s)		Tripping speed $v_{\text{max}} = (\text{m/s})$	
COMPONENT TYPE B ### mm V_{MAX} ### m/s			
CERTIFICATE NUMBER k  mm ### mm			
WITTUR AUSTRIA GmbH Sowitschstr. 1 3270 Scheibbs, Austria		pos. of installation <input checked="" type="checkbox"/> standard <input type="checkbox"/> head first	
Type test designation and CE-label		Rail head width	
		Position of installation	

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3 Installation

3.1 Installation of EBRA20 to the car frame's upper or lower beam

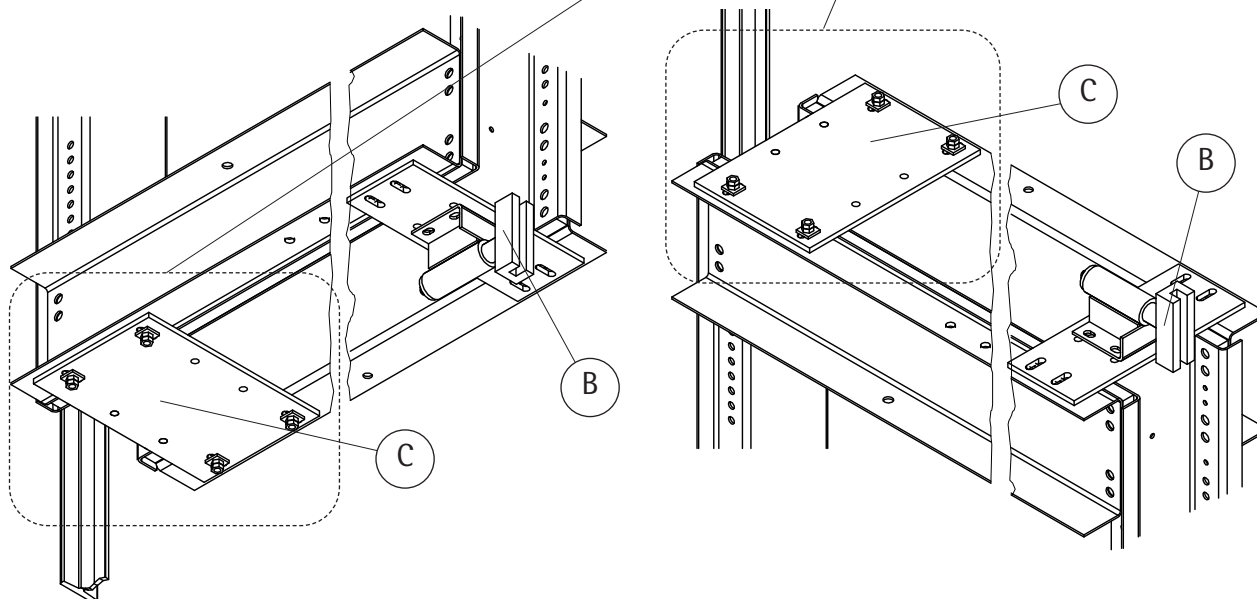
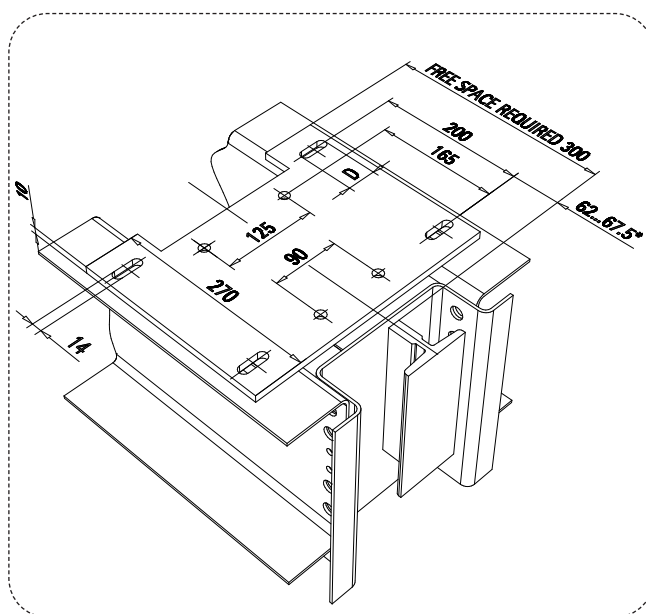
The installation can be done during car frame assembling or also afterwards if the elevator is to be modernized.

- (1) Fix car sling in position to guide (if modernization).
- (2) Remove the old sliding shoe of the car (B) and possible other fixings on the upper or lower beam of the car (in case of EBRA20 with reduced width of guide rail running surface the EBRA20 does not serve as sliding guide shoe, a separate guide shoe has to be added).
- (3) Fix the adapter plate(s) (C) to the upper or lower beam - drill fixing holes $\varnothing 14\text{mm}$ to the beams if required.

! ⚙ Take care of tightening torque
Screw M12: 80Nm.

(1-3)

Screw package
601775G04



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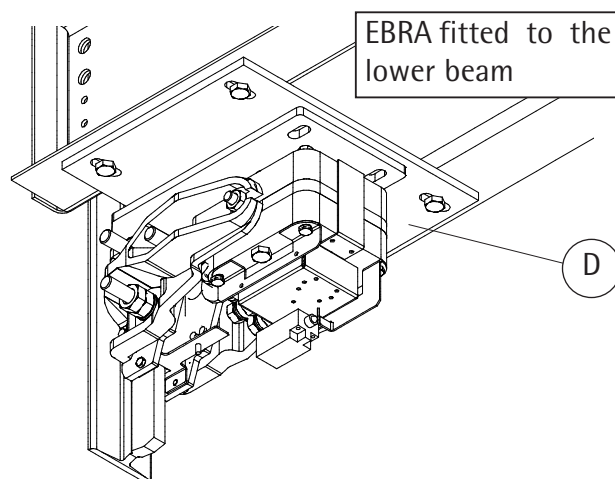
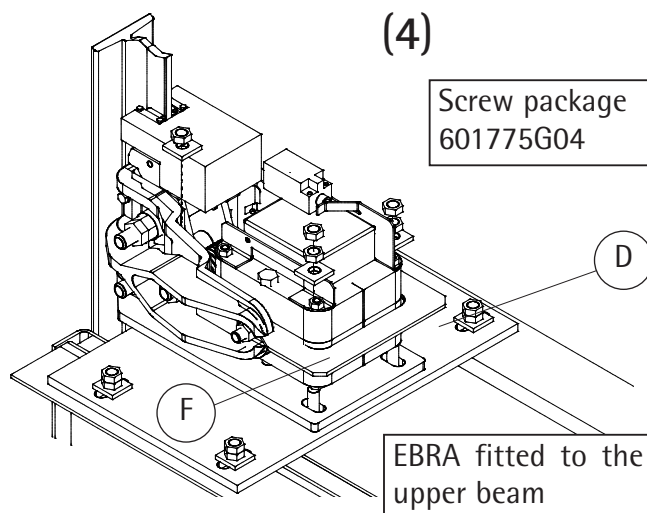
(4) Fix the EBRA(s)20 (D) on the adapter plate.

 There are two EBRA20 units when nominal load of the lift is above 1000kg arranged in pairs on either the upper or lower beam of the car frame.


 A proper mounting is necessary for correct function. Tilt max $\pm 1^\circ$ relating to the guide rail in all directions.

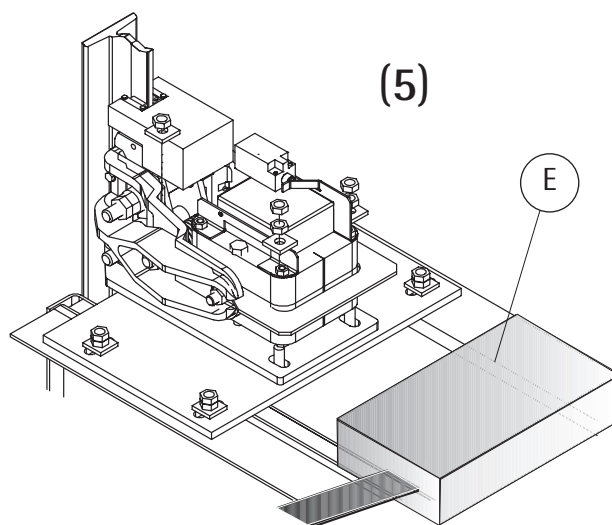
 Mind the tightening torque
Screw M12: 80Nm.

 Only remove the transport clamp (F) after wiring is finished. Retain the transport clamp (F) unconditionally for later application.



(5) Connect the connection cables from each brake unit to the car roof terminal box (E).

 Refer to chapter 3.3 Electrical installation of the braking system



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3.2 Preparations and installations in the machine room

The following conditions / interfaces are required to operate the EBRA20:

- Overspeed governor contact switch with two NC-contacts
- 230VAC power supply including 6A fuse
- two strands in travelling cable
- Brake switch of EBRA20 to be connected in safety circuit

(1) Change the whole overspeed governor and the cable (A) if it is not equipped with a switch with two NC-contacts (F).

(2) Install the controller box (B) to the machine-room wall and connect the cables (C) from the box to the controller cabinet.

In case of machineromless lifts the controller box or even the electronic has to be integrated to the controller cabinet to prevent unattended switching.



Refer also to chapter 3.3 Electrical installation of the braking system.

(3) Check if two free strands in traveling cable (D) available - otherwise assemble a new traveling cable.

3.3 Electrical installation of the braking system



Work involving electrical equipment should only be carried out by an electrical fitter or qualified personnel.



Before carrying out work, switch off all voltage to installation equipment.



Take note of the following when laying the connection cable:

- the single polarity cables have double insulation
- the use and laying of cables is governed



by the EMC

The braking switch contact opens the lift installation's remotely controlled safety circuit.



Take note that you have to adhere the polarity of the EBRA20 strictly, otherwise the brake will not get open!



Refer to chapter 3.3.2 and 3.3.3 Wiring principal for electronics.

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- (1) Connect the cables (A) in the controller cabinet (E) to the over speed governor.



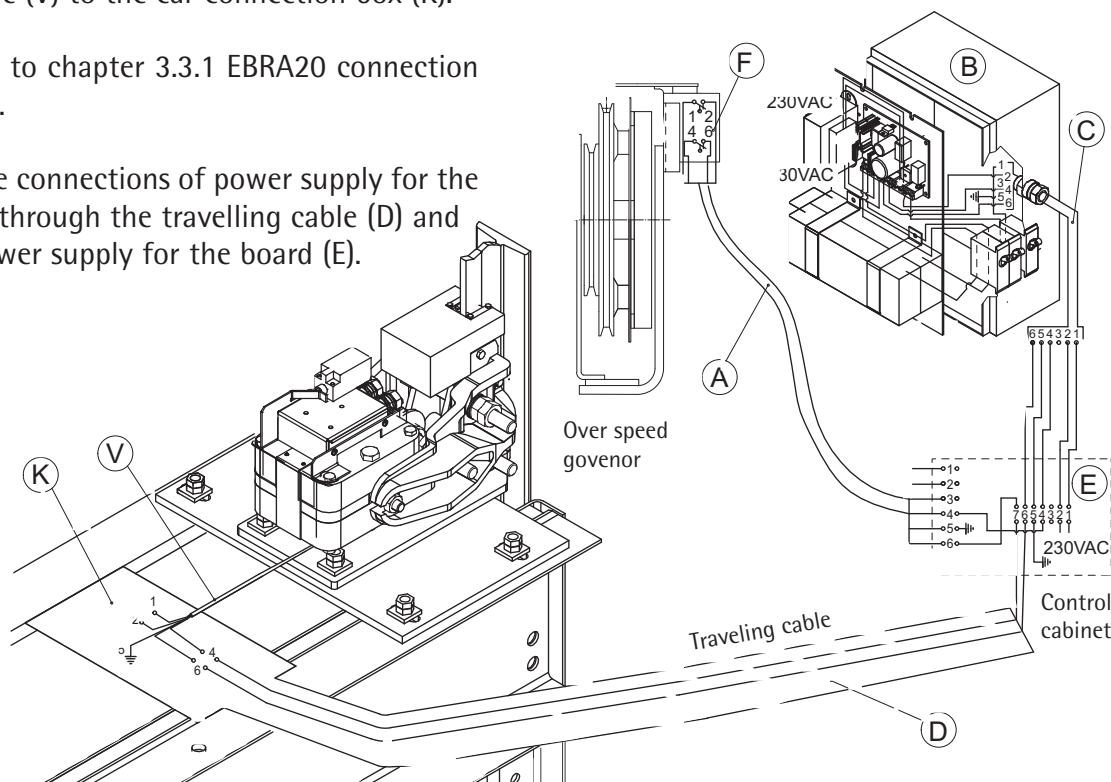
If the car light supply is used the wires should be marked to have electricity when the main supply of the lift is switched OFF.

- (2) Make the connections of the EBRA20 connection cable (V) to the car connection box (K).



Refer to chapter 3.3.1 EBRA20 connection cable.

- (3) Make the connections of power supply for the EBRA20 through the travelling cable (D) and 230V power supply for the board (E).

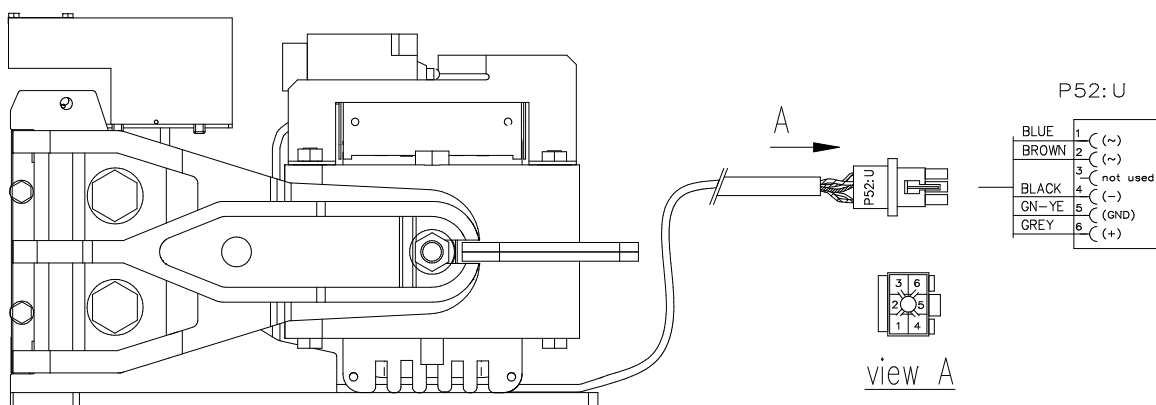


3.3.1 EBRA20 connection cable

The EBRA20 is delivered from factory with pre-wired connection cable equipped with a Molex-plug. This Molex-plug can be removed if it is required, instead of the plug, a terminal can be used. The connection have to be according the connection diagramm.

Plug - configuration P52:U

- Molex receptacle 3191-6R1
- with female connectors 4550-T

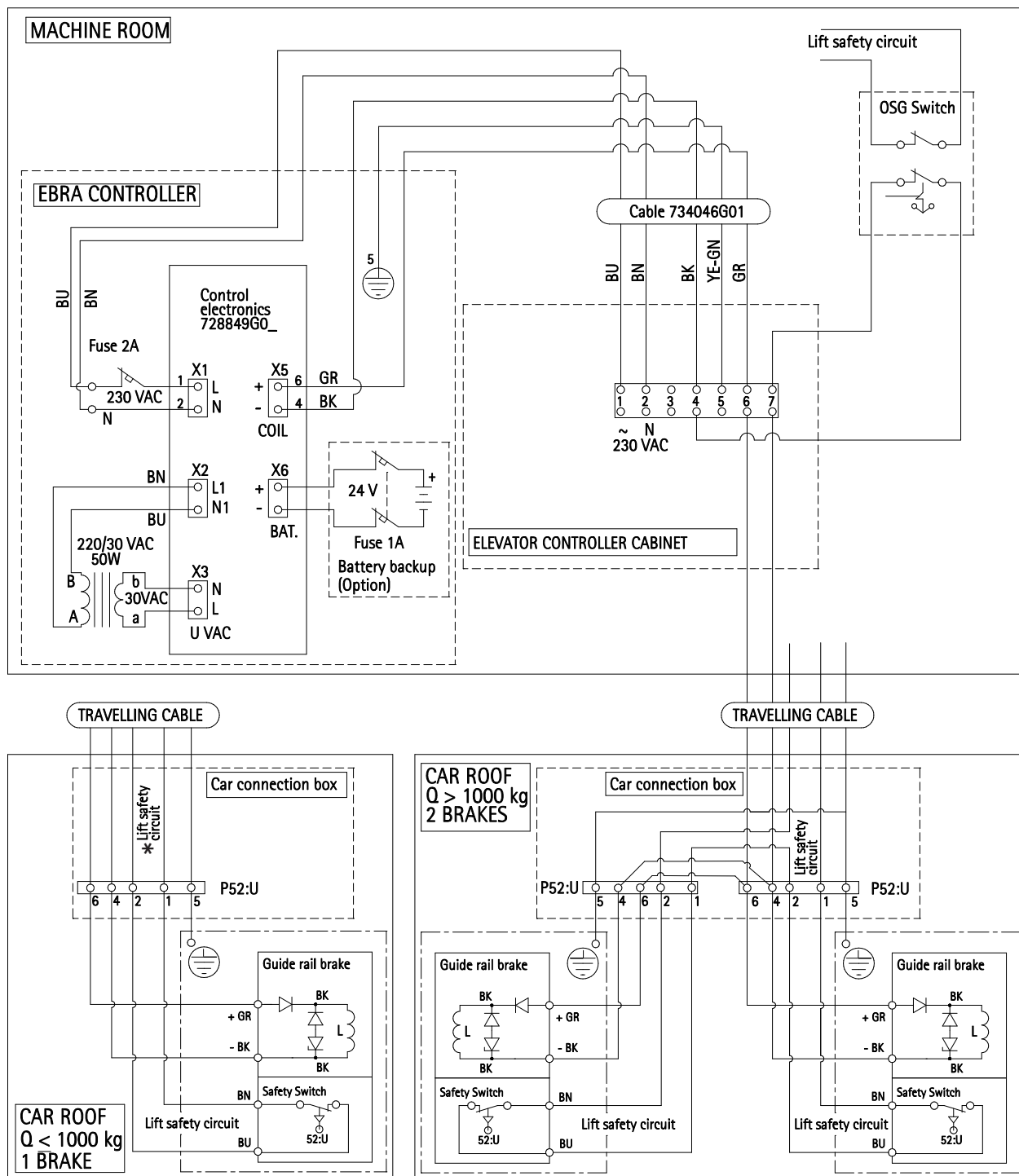


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3.3.2 Wiring principal for electronics (incl. box)



* According EN81-1 number 14.2.1.4c switch 52:U has to be bridged with the emergency control switch.

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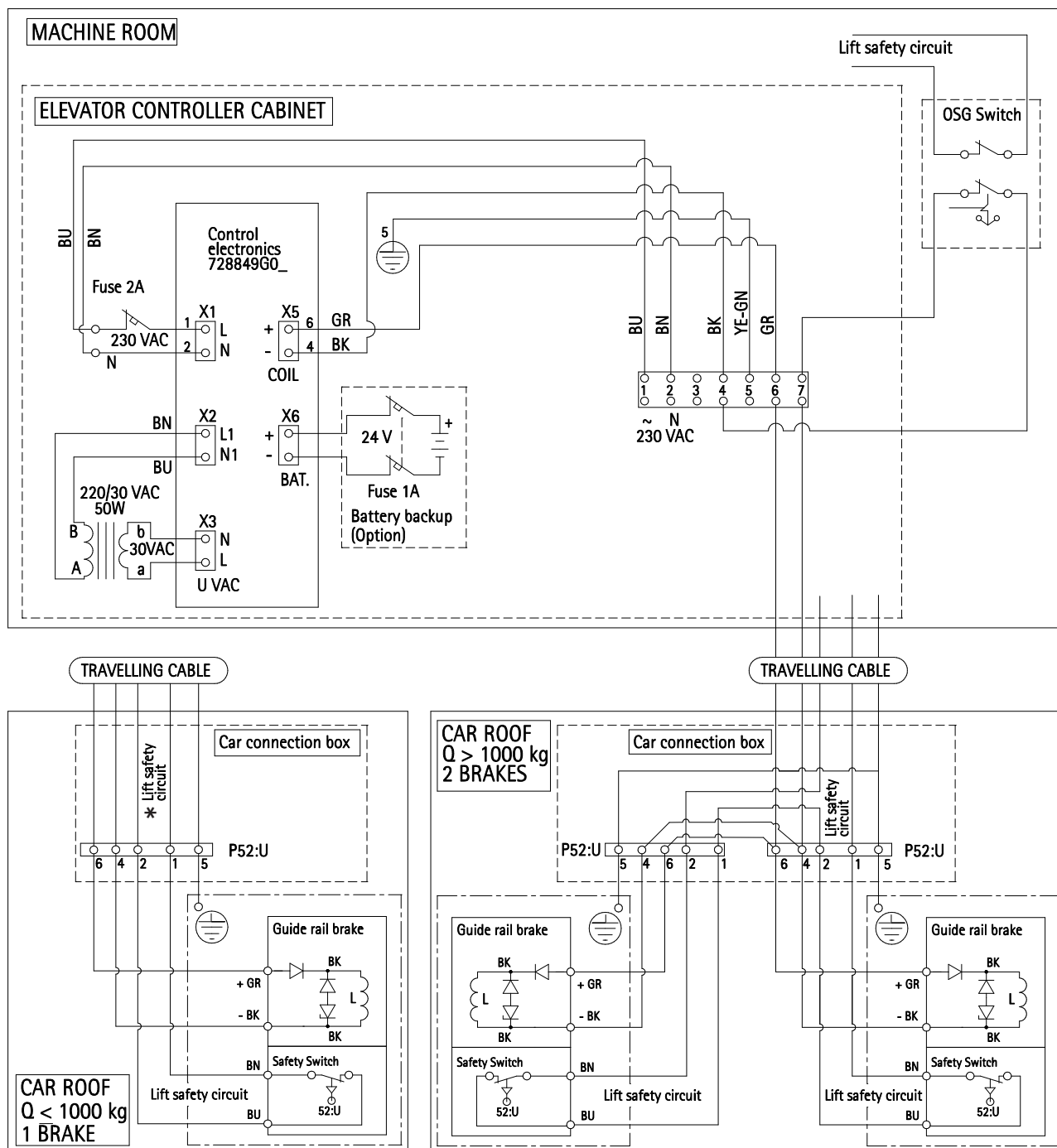
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3.3.3 Wiring principal for electronics (fitted in the elevator controller cabinet)



* According EN81-1 number 14.2.1.4c switch 52:U has to be bridged with the emergency control switch.

4 Adjustment tasks

- (1) Close the overspeed governor contact switch (F) and put the power ON for EBRA20 230VAC (G). The magnet closes and the brake opens.
- (2) Remove the transport clamp (yellow) (H) from the back side of the magnet and retain it for later application.
- (3) Check that EBRA20 magnet releases when overspeed governor contact switch (F) is opened and closes if after closing the Overspeed governor contact switch the power supply 230VAC (G) is switched OFF and ON.



Switching the power off, resets the time circuit on the board.



Do not open the overspeed governor contact switch (F) shortly after recycling the EBRA20 (G) because there is 200VDC over the overspeed governor contact switch contacts and they may be burned if opened. The voltage drops in 2 seconds to about 30VDC.

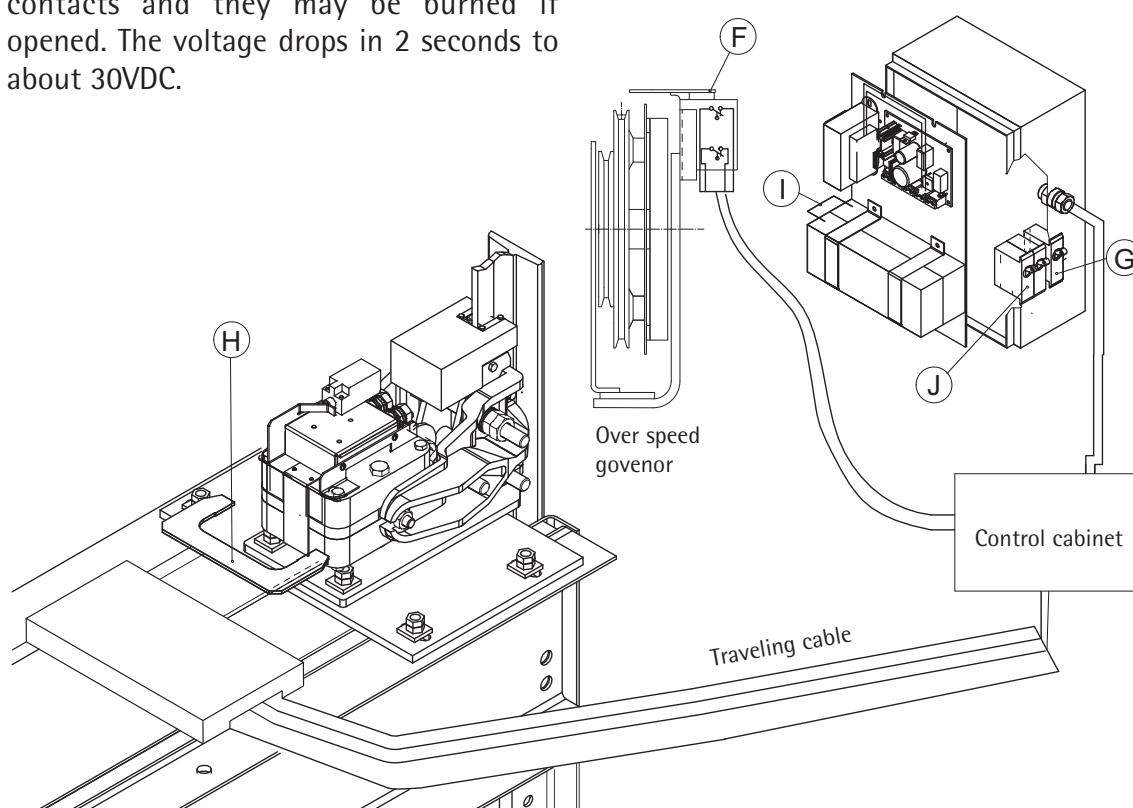
If there is battery backup:

- (4) FIRST Switch battery OFF (J) then connect the plugs (I) if loose and switch (J) ON. Then check that the battery voltage is about 24VDC when the 230VAC power supply (G) is OFF. Otherwise switch on the 230VAC (G) ON and wait until batteries are charged.
- (5) When battery voltage is about 24VDC, check that the EBRA20 remains open even if the power is cut from the 230VAC supply (G).



Otherwise, please contact us at WITTUR for technical support.

- (6) Leave the battery (J) ON after testing.



5 Function testing

Operational reliability of the installation is assured. The quality and function of individual components are subject to thorough inspection and is checked before dispatch from our works. The brake system should undergo an operational test before commissioning or before possible inspection from a technical institute.

First test run after installation



Before the first test run:

**The protective coating of grease is to be carefully removed from the guide rails!
Clean the guide rails!**



The cleaning of the guide rail must be done with a disc brake cleaner or a similar fluid. It is not allowed to do mechanical cleaning like grinding. If the surface cannot be cleaned properly contact the manufacturer.



Clear all people and objects from the lift shaft before commencing the test run!
Risk of crushing injuries!

The entire lift travel path should be slowly travelled (in inspection mode) before the function tests. Attention should be paid to the clearance of all fastened parts, especially with regards to the guide brackets/safety gear devices. Find and remove any protruding bolts or other dangerous restrictions well in advance.

Preparations before tests:



The EBRA20 can only be used with sliding guides shoes. Therefore a thin coating of the guide rail oil is to be applied to the guide rails.



**Permissible guide rail oil viscosity class
ISO VG 68 - 320.**

5.1 Static functions test

The function of brake is to be checked with empty car before the real brake system test is performed.

The first test should be done as follows:

- Move the car (the car must be empty) to ground floor
- Switch off the EBRA20 so it brakes the elevator
- Switch off the power of the elevator
- Release the brake of the drive manually
- The car might move up to 500mm upwards
- The car must stop



In case of not stopping within 1000mm reactivate the motor brake to stop the car. In that case the brake is not properly aligned or has to be changed. Please contact Wittur in that case.



If the retardation is not correct the EBRA20 must be replaced (please contact WITTUR).



The real test can be performed when the above mentioned tests are ok.

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5.2 Dynamic functions test



Nobody is allowed to be in the lift car or on the car roof when carrying out test runs or functions tests!

Test procedure according to EN81-1: 1998 appendix (D) point (n) page 73:

The test can be made while the empty car is ascending at not less than rated speed, using exclusively the EBRA20 for braking.

The car can be driven upwards using the motor and when the nominal speed is reached the EBRA20 is activated by the OSG switch (F) and the motor brake is kept open manually during the braking.

The EBRA20 can be actuated as well by switching OFF the battery (J) and then the power supply (G).



Do not open the overspeed governor contact switch (F) shortly after recycling the EBRA20 (G) because there is 200VDC over the overspeed governor contact switch contacts and they may be burned if opened. The voltage drops to about 30VDC in 2 seconds.

5.2.1 Visual checks after a braking test

After each test or activation of the EBRA20 check that there are no defects that can impair the normal run of the elevator.

Check following items:

- existence of sliding inlays
- existence of brake lining
- visual defects of brake system parts
- friction marks
- defects on the EBRA20 body



If there is any defect the safety gear must be replaced!



Change sliding inserts or brake lining if necessary.

6 Maintenance, inspection and repair

6.1 Maintenance and inspection

6.1.1 General

The braking system EBRA20 is basically maintenance free. The whole installation is designed so that no large maintenance operations have to be carried out during damage free operation of the installation.

Inspection checks must be carried out at regular intervals (minimum twice a year with each service) to guarantee safe operation. Alterations, damage or other irregularities should be reported, and repaired if possible. Frequent servicing and control checks not only make operation of the installation safer, but also ensure long and reliable service life.

It is recommended that control checks and servicing are carried out before legally prescribed functional tests (e.g. before TÜV tests).



The EBRA20 can only be used with sliding guides shoes. Therefore a thin coating of the guide rail oil is to be applied to the guide rails.



Permissible guide rail oil viscosity class ISO VG 68 - 320.



The lift installation must be immediately taken out of use should any damage or irregularities arise which could possibly impair operational safety.



Please contact us at WITTUR if you have any problems or queries.



Maintenance work should be expertly carried out with utmost care in order to guarantee safe installation operation.

6.1.2 Cleaning of guide rails

Any dust or dirt on the guide rails can have influence to the friction between the guide rail and the braking system. This means that the guide rails must be cleaned carefully whenever the dirt becomes visible on the guide rails or in minimum once per year.



As cleaning fluid a disc brake cleaner or a similar fluid should be used.



Mechanical cleaning like filing, grinding is not permitted.

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6.1.3 Periodical tests of EBRA20

Periodical examinations and tests shall not be more stringent than those required before the elevator was first put to service. Thus if the tests are made they shall be carried out using reduced speed to avoid causing excessive wear or impose stresses likely to reduce the safety of the elevator.

The operation of the EBRA20 brake can be tested following the instructions in chapter 5 Function testing.

The static force produced by the EBRA20 can be tested just by opening the motor brake when EBRA20 is braking and by checking that the car does not ascend more than 200mm.



The resetting of the braking system must be done by an expert person.

Each test has to be documented and a copy of the test report must remain in the elevator book.

6.1.4 Periodical tests of the safety gear

The EBRA20 has to be disabled for the periodical safety gear test. This can be done by bypassing the trigger signal of the overspeed governor in the control cabinet, or by mechanical blocking of the brake forks with the transport clamp that came with the initial delivery of the EBRA20.



The EBRA20 has to be enabled after the periodical tests of the safety gear. Check if the eventual bypass in the control cabinet and the transport clamp are removed. Make sure that the transport clamp is retained for later application.

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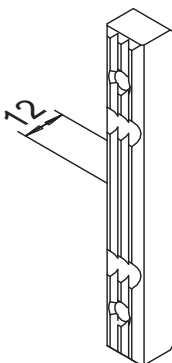
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Datum/date 23.05.2002
Stand/version J-01.10.2014
Geprüft/approved WAT/MZE

Operating instruction

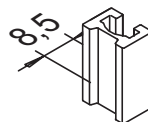
6.2 Maintenance and inspection check list

To indicate when wearing parts of EBRA20 should be changed use following list:

- **Brake shoes** should be clean and without iron fillings. If dirt or fillings are present the brake shoes have to be cleaned with the help of e.g. a screwdriver. For checking the wear of the brake shoes let the EBRA20 drop and remove the magnet by pulling it slightly apart and pull it out to the back. Measure the distance between the forks on the points shown below. The distance X has to be lower than $144,5\text{mm} + k$ (guide rail thickness acc. type label). If this condition is not fulfilled the brake shoes has to be changed. Reassemble the magnet in it original position after the check.

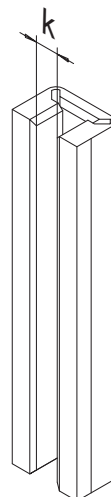


- **Sliding elements** are nominally 8.5mm thick and can wear to 7.5mm. If the thickness is less than 7,5 mm the brake shoe touches the rail and makes noise (refer to chapter 6.2.2).

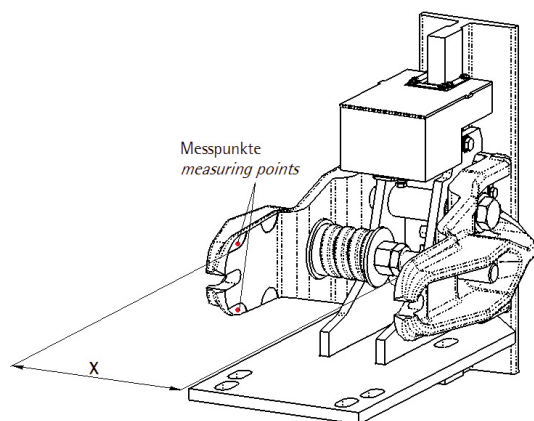


The burrs on the guide rails caused by the braking might cause noise and therefore have to be removed after every braking.

- **Car sliding shoes** should be changed like normal guide shoes after the clearance between the rail and shoe is over 2mm (refer to chapter 6.2.3).



See also chapter 6.2.1



- **Battery** (optional) is changed every 2.5 years or if the voltage of the battery (U) is less than 10V (refer to chapter 6.2.4).
- Check state of EBRA20 and neighboring components for damage, deformation or heavy oxidation (rust)
- Check brake switch for function
- Clean the system if dirt has built


Braking System EBRA20

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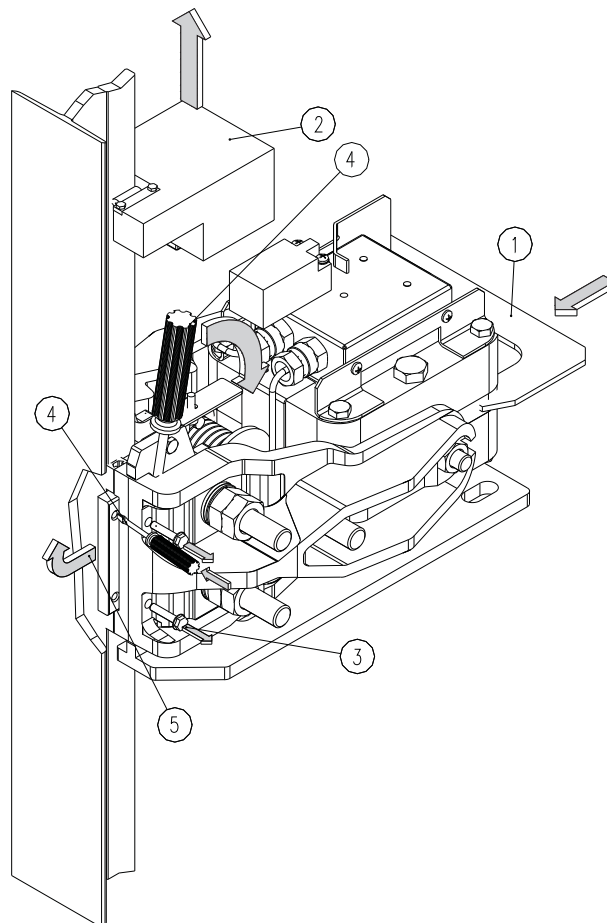
Operating instruction

6.2.1 Checking and changing of the brake shoe

- (1) Put a clamp to the brake magnet to ensure that the brake magnet will not release during the brake shoe changing process
- (2) Remove the Lubricator cup (if present)
- (3) Open the M5 screws which are used to fix the brake shoes
- (4) Turn the brake shoes carefully out so that a M5 hole comes visible and put some assisting pin to the hole

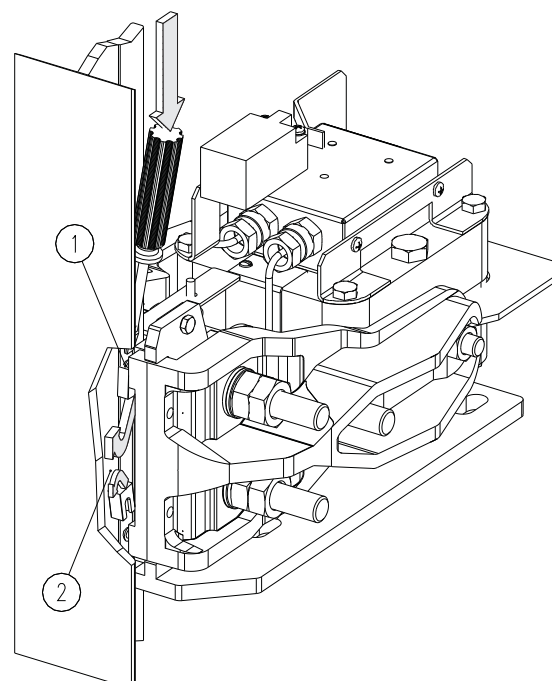
!  DO NOT DROP the brake shoes as they are made out of fragile hardened steel and might be broken if dropped.

- (5) Take the brake shoe out from the cut-out and check its condition. Change if needed



6.2.2 Checking and changing the brake fork sliding elements

- (1) Push the upper sliding element downwards along the guide rail and the lower one upwards.
- (2) Take the parts out for examination by fingers
- (3) Change if needed



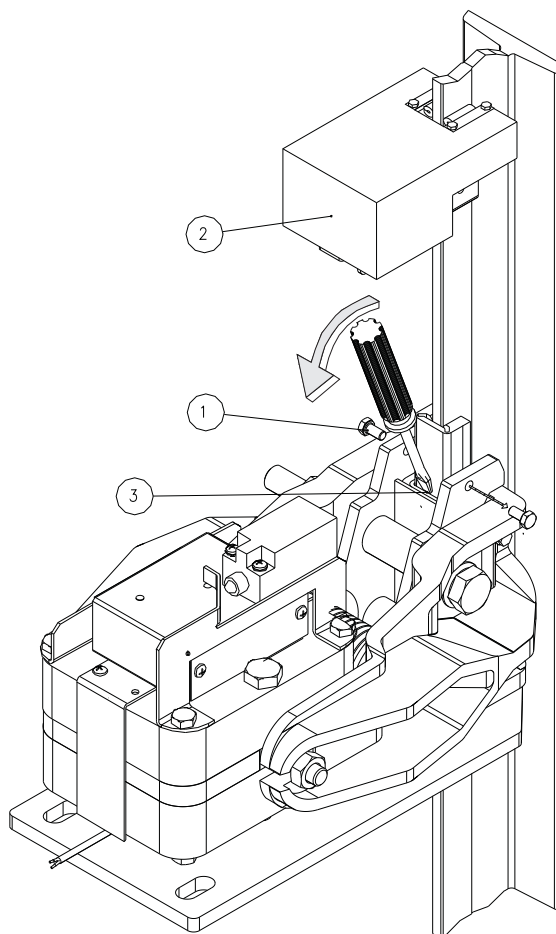
Braking System EBRA20

Operating instruction

Blatt/sheet D7AJMGB.020
Datum/date 23.05.2002
Stand/version D-02.02.2010
Geprüft/approved WAT/MZE

6.2.3 Checking and changing the car sliding shoe

- (1) Remove the M6 screws holding the slide shoe and the oil cup fixing
- (2) Remove the lubricator cup with the fixing part (if existing)
- (3) Lift the guide shoe up for examination
- (4) Change if needed



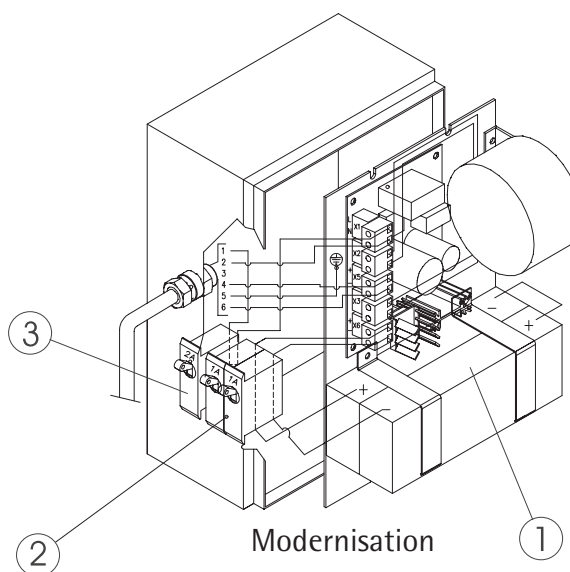
6.2.4 Changing the battery

- (1) SWITCH OFF the battery (2) and the power of EBRA20 (3) before changing the battery



NOTE! There might still be 230V on the wires.

- (2) Remove the fixing and change the battery (1)



Braking System EBRA20

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Datum/date 23.05.2002
Stand/version G-04.04.2013

Operating instruction

Geprüft/approved WAT/MZE

6.3 Carrying out repairs



As a rule, the safety gear should neither be taken apart or altered in any other way than described here (sealants, sealing wax). This also applies to repairs. An exception to this is the electrification (e.g. due to reconstruction work etc). Condition for this, is that the process is carried out properly and functioning is in no way compromised.



It is forbidden to replace faulty or worn parts of the EBRA20 brake yourself.

The reasons are:

- conditions of liability and technical safety
- only original replacement parts may be installed (these are available from manufacturer only).



Operation of the system without the safety gear, even for short periods of time, is forbidden.

6.4 Fault finding

Elevator does not move, even if EBRA20 is open

- Check that the contact (1) is closed when the EBRA20 is open

EBRA20 does not open, even if the power is ON



When EBRA20 was activated by the over-speed governor switch switch OFF and ON the EBRA20 after resetting governor switch.

- Measure the rail head width and compare it to the identification plate of the EBRA 20.
- Get sure that the electrical installation was done correctly.

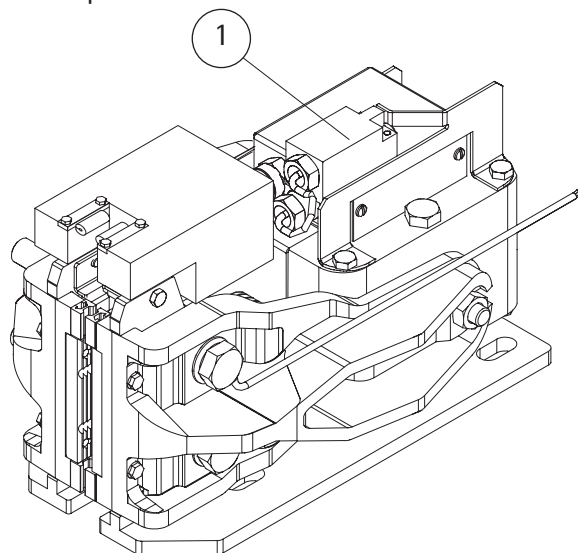
Permitted repair work:

Repairs to the braking system which do not directly affect the brake (e.g. electrification, sliding elements) can be carried out locally. In other words, all procedures involved in initial installation are also included in the repairs and maintenance schedule.

Such repair work in the safety system must of course be carried out correctly and with utmost care, in order to guarantee long-term safe operation of the system.



Please contact WITTUR if for any reason something is unclear, or you encounter damage that cannot be repaired with the help of these instructions.



Take note that you have to adhere the polarity of the EBRA20 strictly, otherwise the brake will not get open!



Refer to chapter 3.3.2 and 3.3.3 Wiring principal for electronics.

Braking System EBRA20

Blatt/sheet D7AJMGB.022
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Geprüft/approved WAT/MZE

Operating instruction

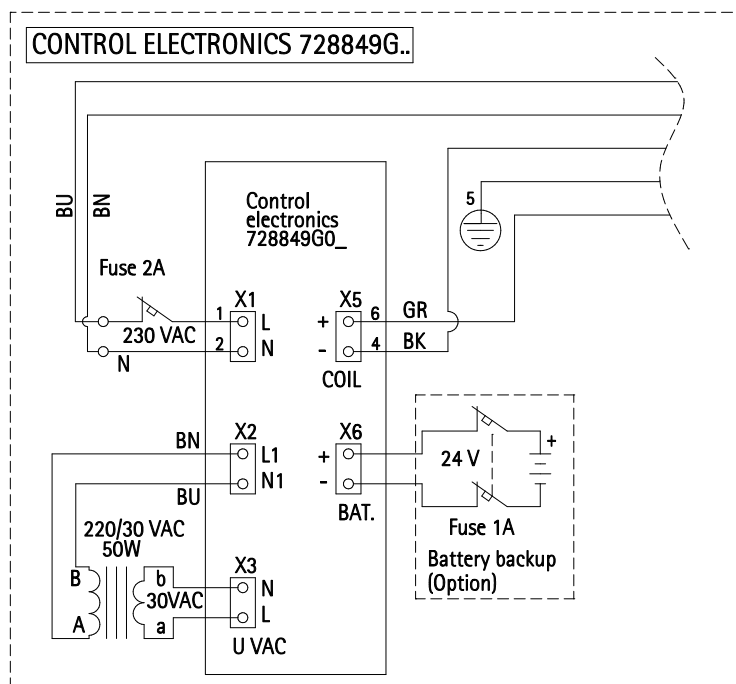
- Check the outputs from EBRA control:

Switching the power ON for X1

Outputs: X2: 230VAC; X3: 30VAC;
X5: 200VDC (which drops to about 40VDC 2 seconds after switching power ON); X6 : ~27VDC.

Switching the power OFF for X1

Outputs: X2: 0V; X3: 0V;
X5: ~24VDC (0V with no battery);
X6: ~24VDC (0V with no battery)



6.5 Rescuing trapped passengers



The rescuing of trapped passengers must be performed by trained professionals only.

Rescuing trapped passengers in exceptional situations is somewhat different in elevators where EBRA20 is used, than it is in traditional traction elevators without any ascending car overspeed protection.

The main difference is, that the EBRA20 is an independent brake which is released in overspeed situations and reset separately by the OSG switch and its own reset button.

Rescuing trapped passengers might become necessary under the following conditions where EBRA20 is actuated and braking and the elevator car cannot be moved following the standard procedures given for elevators without this additional brake.



ALWAYS, check first if the OSG switch has been activated i.e. the car has run overspeed.



Check the condition of the machine for signs of wear or damage. Ensure that the machine brake is functional.



Determine the position of the car in the shaft and if it has to be moved to rescue trapped passengers.

There are three cases in which rescuing can become necessary:

- (1) Power ON and the OSG switch has been switched OFF. The car has run overspeed (refer to chapter 6.5.1)
- (2) Power OFF, but the OSG switch has not been switched OFF (refer to chapter 6.5.2)
- (3) Car cannot be moved following 1 and 2 (Power OFF) and the OSG switch has been switched OFF. Two or more independent failures occurred at the same time (refer to chapter 6.5.3)

Braking System EBRA20

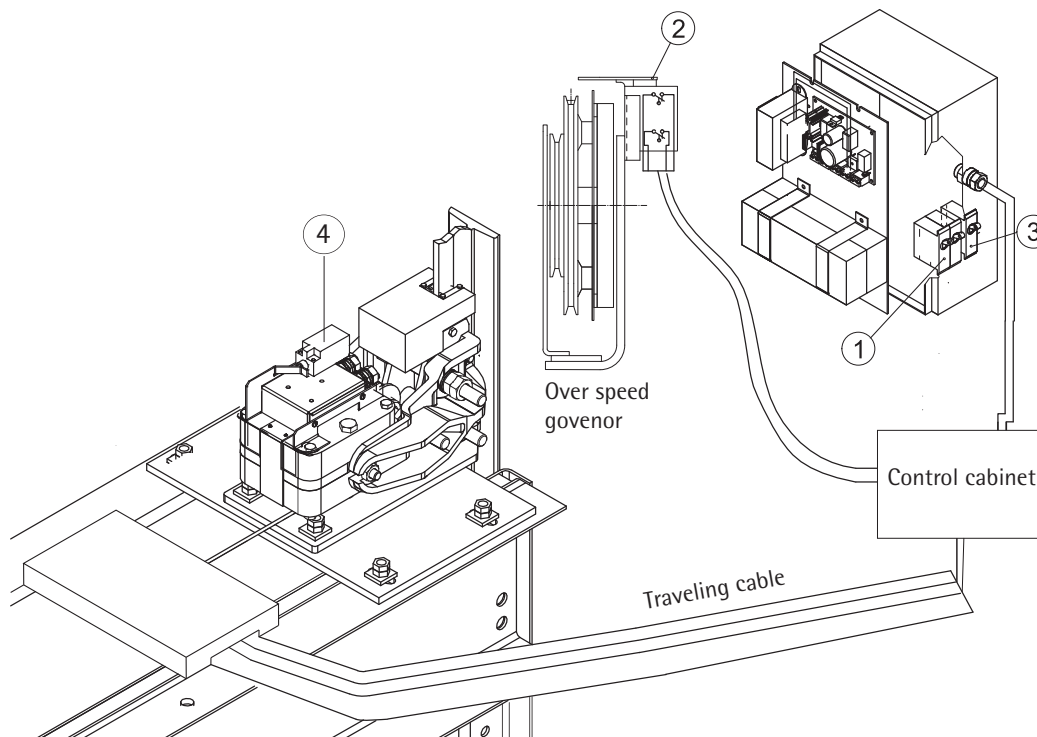
Operating instruction

Blatt/sheet D7AJMGB.023

Datum/date 23.05.2002

Stand/version E-28.07.2011

Geprüft/approved WAT/MZE



6.5.1 Power ON and the OSG switch has been switched OFF. The car has run overspeed

- Inform the passengers that you are about to let them out and they must not try to do anything by themselves.
- Switch OFF the eventual battery backup (1) from the EBRA20 control.
- Reset the OSG switch (2) if OSG is accessible (e.g. in the machine room).



If the OSG is not accessible (e.g. is placed in the shaft head room), bridge in the controller cabinet ONLY the normally closed contact of the OSG switch (2) which is put in series with the EBRA20 magnet via the travelling cable (attention: do NOT bridge the normally closed contact from the safety circuit).

If the emergency control is activated the contact of OSG switch (2) and EBRA-switch (4) has to be bridged according EN81-1 number 14.2.1.4c

- Switch the power supply (3) off and on again in order to get EBRA20 to open.



KEEP FINGERS ON THE SWITCH so that the brake can be actuated by switching the power off if the elevator car rushes up or down.

- Switch ON the possible battery backup (1) from the EBRA20 control.
- If the car does not move even if the EBRA20 brake is open follow the rescue plan given for that specific elevator type to get the car to the door zone.



Normally: open the motor brake and turn the hand wheel.

Resp. if the elevator is equipped with recall-drive: drive as far as to enable passenger rescuing through car doors.

- Open the door and let the passengers exit.


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Blatt/sheet D7AJMGB.024
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Stand/version D-02.02.2010
Geprüft/approved WAT/MZE

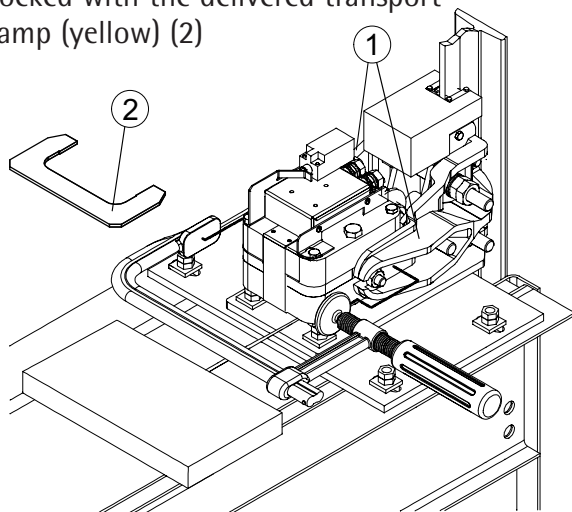
Operating instruction

6.5.2 Power OFF, but the OSG switch has not been switched OFF

- Inform the passengers that you are about to let them out and they must not try to do anything by themselves
- If there is battery backup for EBRA20 (keeps the brake system open for approx. 3 hours and then drops) the brake is not actuated and the car can be moved following the rescue plan given for that specific elevator type

 *Normally:* open the motor brake and turn the hand wheel.

- *If there is no battery,* and a hand wheel is available, try to move the car into the next door zone (even if EBRA20 is closed); resp. try to rescue the people without moving the car. If that is not possible, continue in the next step
- Go to the car roof if the EBRA20 is mounted on the upper cross beam and open the EBRA20 by pressing the brake forks (1) - e.g. by means of a C-clamp. After that the magnet can be blocked with the delivered transport clamp (yellow) (2)



Make sure that the car frame cannot move uncontrolledly upwards before you access the car roof, - e.g. by fixing the counterweight.



STOP pressing the brake forks (1) if the car starts to move



Release the car from its fixation against uncontrolled movement after the EBRA20 has been manually opened and you have left the car roof

- If the car does not move even if the EBRA20 brake is open, follow the rescue plan given for that specific elevator type to get the car to the door zone.
- If the EBRA20 is mounted on the lower cross beam and a handwheel is available, try to move the car into the next door zone (even if EBRA20 is closed); resp. try to rescue the people without moving the car. If that is not possible, refer to chapter 6.5.3.
- If it was possible to move the car into the next door zone, open the door and let the passengers exit.



Make sure that the transport clamp (2), if attached, is removed and retained for later application.

Braking System EBRA20

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Geprüft/approved WAT/MZE

Operating instruction

6.5.3 Car cannot be moved following 1 and 2 - Power OFF and the OSG switch has been switched OFF

- Inform the passengers that you are about to let them out and they must not try to do anything by themselves
- Find out what was the reason for overspeed. Are the motor brakes or gear BROKEN? IF NOT continue like described in chapter 6.5.2. Otherwise wait for the power to come ON.
- If it takes too long to restore the power or if the EBRA20 cannot be opened although power is on:



Rescue the passengers through the car roof if there is no other possibility. If rescuing through the car roof is not possible, consult the maintenance professionals for help.

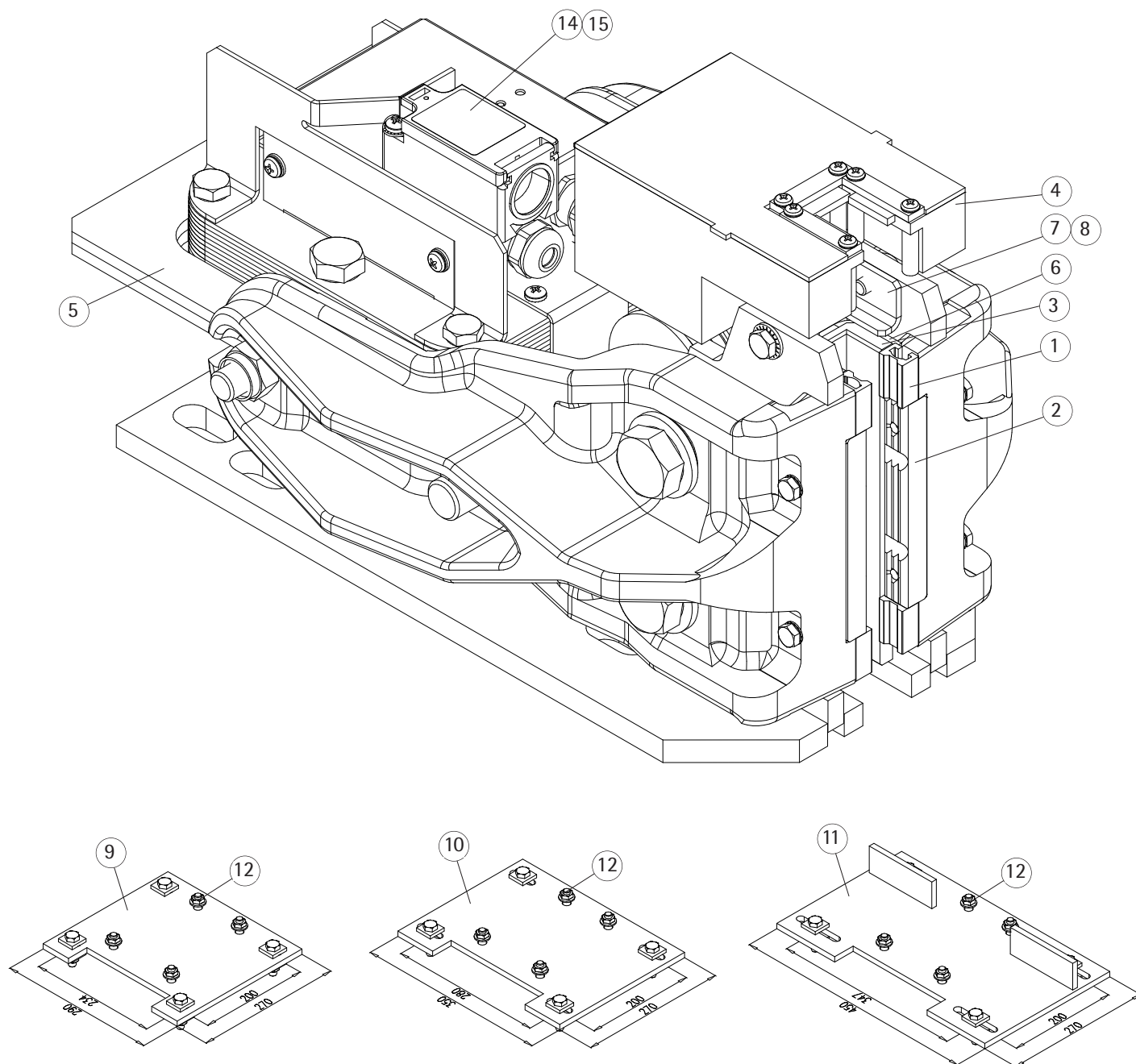
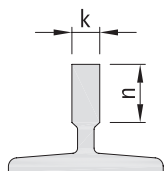
Braking System EBRA20

Operating instruction

Blatt/sheet D7AJMGB.026
Datum/date 23.05.2002
Stand/version F-07.05.2012
Geprüft/approved WAT/MZE

6.6 Spare parts list

Pos.	Component	Spare part ... used	Number...	Art. No.
1	Sliding element	19x12x8,5 mm	4	726762H01
2	Brake Shoe		2	724488H01
3	Sliding insert	Guide rail width K=7mm n=20mm n≥29mm	1 1	720498H24 720498H07
		k=8mm n=20mm n≥29mm	1 1	720498H25 720498H08
		k=9mm n=20mm n=25,4-28,9mm	1 1	720498H26 720498H20
		k=10mm n=20mm n=25,4-28,9mm	1 1	720498H27 720498H21
		k=11mm n=20mm n≥30mm	1 1	720498H28 720498H11
		k=12mm n=20mm n≥30mm	1 1	720498H29 720498H12
		k=13mm n=20mm n≥30mm	1 1	720498H30 720498H13
		k=14mm n=20mm n≥31mm	1 1	720498H31 720498H14
		k=15mm n=20mm n≥31mm	1 1	720498H32 720498H15
		k=16mm n=20mm n≥31mm	1 1	720498H33 720498H16
		k=19mm n=20mm n≥32mm	1 1	720498H34 720498H19
4	Lubricator cup	Guide rail width k=7-9mm	1	86375G09
		k=10-16mm	1	86375G16
		k=19mm	1	86375G19
5	Transportation bow		1	600682H01
6	Slide shoe adapter		1	720499G01
7	Oil cup fixing		1	720501H01
8	Oil cup fixing	only if no lubricator cup (for head first fixing)	1	720501H02
9	Adapter plate	screw package 601775G04 included WCF06, WCS10	1	601775G01
10	Adapter plate	screw package 601775G04 included WCF10, WCS25/10	1	601775G02
11	Adapter plate	screw package 601775G04 included WCF10/16/25	1	601775G03
12	Screw package	WRG Adapter	1	601775G04



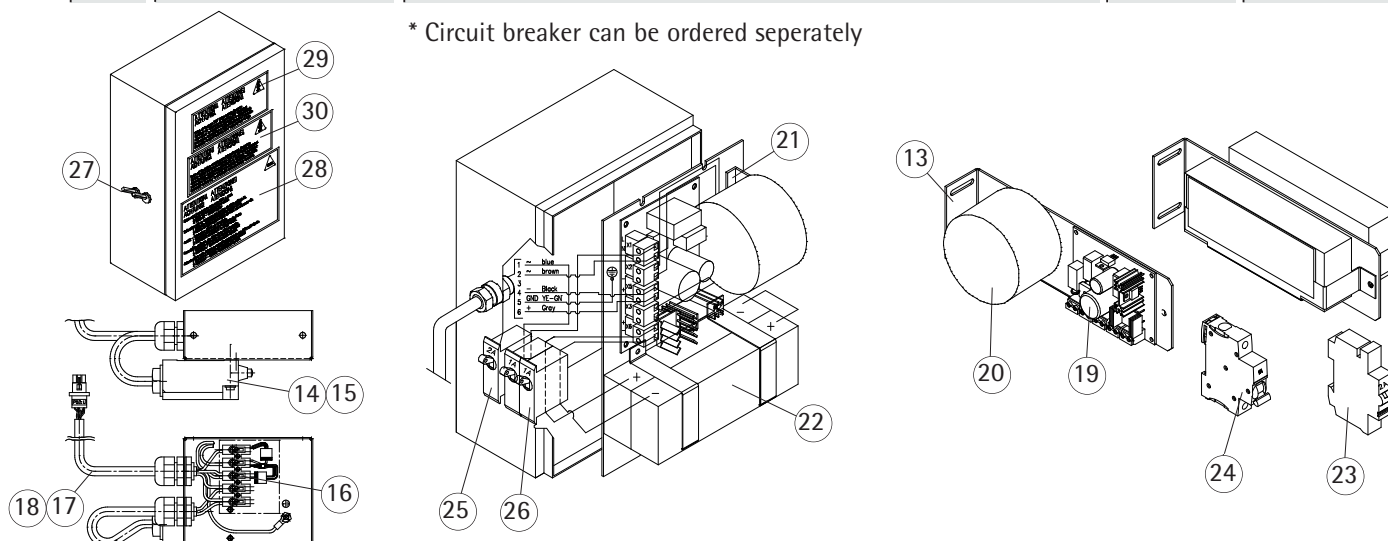
Braking System EBRA20

Operating instruction

Blatt/sheet D7AJMGB.028
Datum/date 23.05.2002
Stand/version F-07.05.2012
Geprüft/approved WAT/MZE

Pos.	Component	Spare part ... used	Number...	Art. No.
13	Fixing plate		1	602011H01
14	Switch	Bernstein l88-A2Z w	1	265244
15	Switch with cable	Bernstein l88-A2Z w + 240mm cable	1	720512G03
16	Connection block	with diodes	1	720512G05
17	Brake coil cable	4000mm	1	729789G01
18	Brake coil cable	7000mm	1	729789G02
19	Electronic board		1	720504G01
20	Transformer	230/30VAC 50VA	1	604200G01
21	Transformer fixing		1	604213H01
22	Battery	12V 2.1 AH	2	253300
23	Circuit breaker	Siemens 5SX2102-7 - 2A-230V	1	273268
24	Circuit breaker	Siemens 5SX2101-7 - 1A-230V	2 *	273267
25	Circuit breaker	JA1S-A8-AK-04-H-L-2A-10	1	273324
26	Circuit breaker	JA2S-B3-BK-04-H-A-1,2-2	1	273321
27	ELECTRONIC BOX	when separate Box and NO battery is included	1	728849G01
		when controller cabinet and NO battery is included	1	728849G02
		when separate Box and battery is included	1	728849G03
		when controller cabinet and battery is included	1	728849G04
28	Warning sticker	117x180mm; EN, DE, FR, IT, SP, FI, SV, NO, DA, NL, RU, PL, CS, EL	1	734580G01
29	Warning sticker	117x180mm; EN, DE, FR, IT, SP, FI, SV, NO, DA, NL, RU, PL, CS, EL	1	734580G02
30	Warning sticker	117x180mm; EN, DE, FR, IT, SP, FI, SV, NO, DA, NL, RU, PL, CS, EL	1	734580G03

* Circuit breaker can be ordered separately



Änderungen vorbehalten!

Subject to change without notice!



WITTUR manufacturing locations

Product manufacturer reference can be found on the product type label.

ARGENTINIA

WITTUR S.A.
Av. Belgrano 2445
Sarandi - Pcia. de Buenos Aires, Argentina

ITALY

WITTUR S.P.A.
Via Macedonio Melloni no 12
43052 Colorno, Italy

AUSTRIA

WITTUR Austria GmbH
Sowitschstrasse 1
3270 Scheibbs, Austria

INDIA

WITTUR Elevator Components India Pvt. Ltd.
Survey nos 45/1B , 3 & 4 , Pondur Village
Sriperumbudur - 602 105
Tamil Nadu, India

BRAZIL

WITTUR LTDA
Rodovia Celso garcia Cid
1406 Cambé Parana, Brazil

SLOVAKIA

WITTUR S.R.O.
Priemyselná ulica 2747/7
963 01 Krupina, Slovakia

CHINA

WITTUR Elevator Components (Suzhou) Co. Ltd.
18 Shexing Road, FOHO Economic Development Zone,
Wujiang City, Jiangsu Province,
P.R. China 215214

SPAIN

WITTUR ELEVATOR COMPONENTS S.A.U.
Polig. Ind. Malpica, Calle E - Parcela 8
50016 Zaragoza, Spain

GERMANY

WITTUR ELECTRIC DRIVES GMBH
Offenburger Str. 3
01189 Dresden, Germany

TURKEY

WITTUR Asansör San. ve Tic. A.S.
Y Dudullu Organize - Sanayi Bolgesi n° 13
34776 Istanbul, Turkey