

Car Frame Series WCF

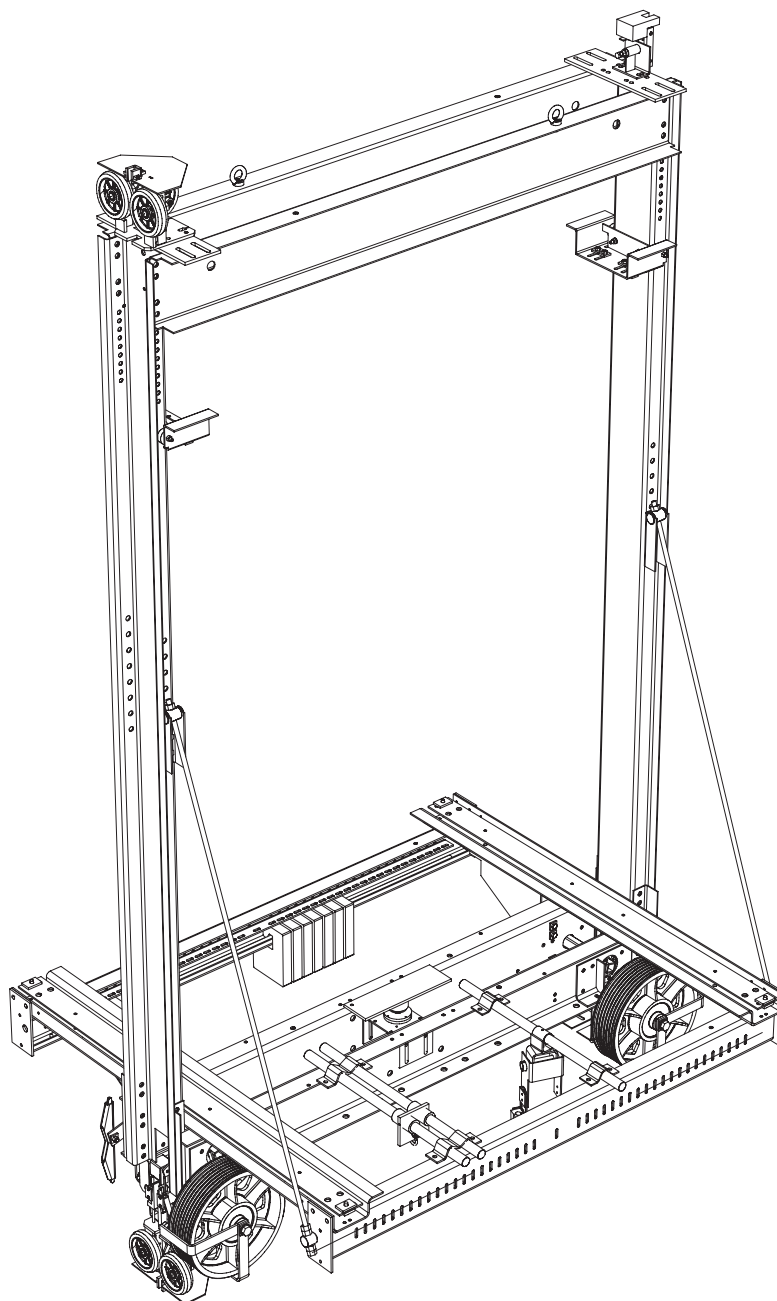
Underslung 2:1 Suspension

Operating instructions

Blatt/sheet D384MGB.000
Datum/date 16.01.2002
Stand/version C-22.07.2015
Geprüft/approved WAT/MZE



Car Frame Series WCF Underslung 2:1 Suspension



D384MGB 07.2015

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1 General information prior to installation

1.1 Description and functions

The car frame series WCF is a car frame used for passenger-, passenger-goods and freight elevators.

Because of its modularity structure and its variety of different (optional) equipment (safety gears, rope suspensions, ...) covers the WCF car frame a wide range of use.

The WCF Series can be also equipped with a braking system, which safeguards against uncontrolled lift car movement in up direction. A non-directional speed governor with corresponding tensioning weight must be fitted if this braking system is used.

The car frame operating range is defined as follows:

WCF10:

- All up load $\leq 3000 \text{ kg}$ ($Q \leq 1000 \text{ kg}$)
- Car depth $\leq 2100 \text{ mm}$
- Car width $\leq 2250 \text{ mm}$

WCF16:

- All up load $\leq 5000 \text{ kg}$ ($Q \leq 1600 \text{ kg}$)
- Car depth $\leq 2750 \text{ mm}$
- Car width $\leq 2650 \text{ mm}$

General:

- Safety gear devices: Roller type SG
Progressive type SG
Bi-directional SG
- Guide: Sliding guide shoe
Roller guide shoe
- Suspension: 2:1 with 2 pulleys below car

Further options:

- Load weighing system
- Ring-, Balancing beams
- Compensation chain hanger
- Travelling cable hanger

The built-in safety devices are set, synchronized and lead sealed ex-works, according to the order. For reasons of safety, it is forbidden to readjust these settings once they have been made.

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 accept 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 safety gear devices or brake components other than those installed
- Carrying out modifications, of any kind, on brake components
- Destroying of seals
- Frame modification
- Modification of the actuating mechanism
- Readjustment of settings have been made ex-works
- Carrying out faulty or improper maintenance, 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

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1.3 Safety precautions

WITTUR machine installation or repair engineers are chiefly responsible for the safe operation of machinery.

It is essential to comply with and keep abreast of all safety rules and legal obligations in order to avoid personal / product damage during installation, maintenance and repair work.

Important safety advice and danger warnings are emphasised 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, or such like).



Important information sign

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

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

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 details on the name plates should be compared with the order sheet and also check:

- that the factory and order number correspond
- the rail head width and model
- the total load (G)
- the tripping speed
- for 2:1 suspension: the rope pulley diameter, the number of rope grooves and rope groove diameter are suited to the ropes

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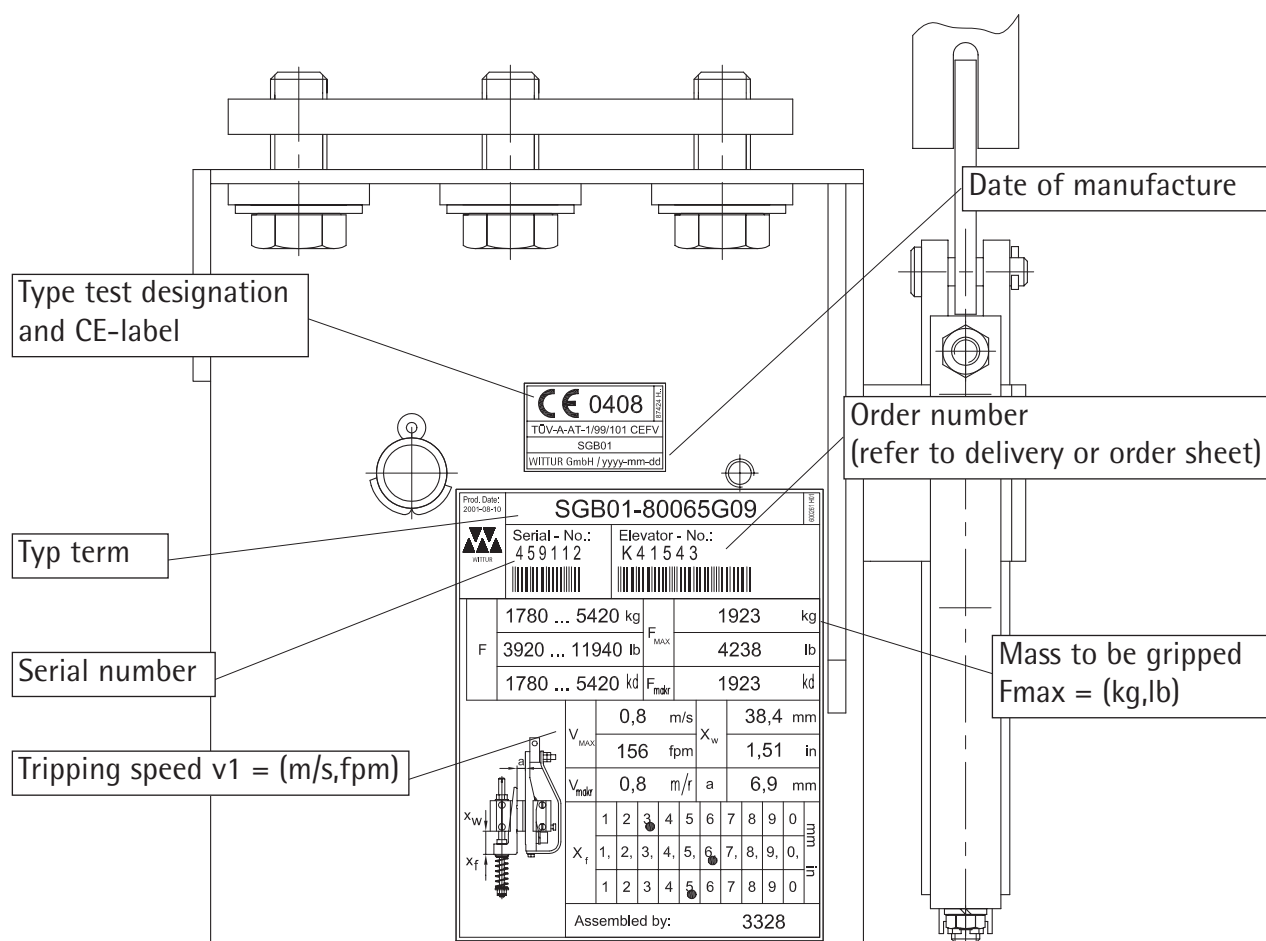
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1.5 Safety gear name plate

The safety gear device identification indicators are located on the side of the safety block. These consist of a name plate and a identification sticker.



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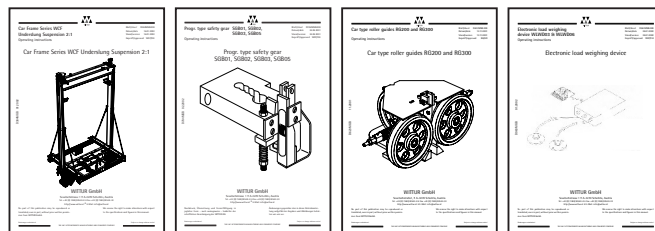
Operating instructions

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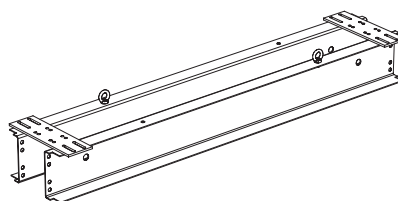
1.6 Content of supply

After delivery, check the lift car frame for damage and for full delivery of parts. The content of supply covers:

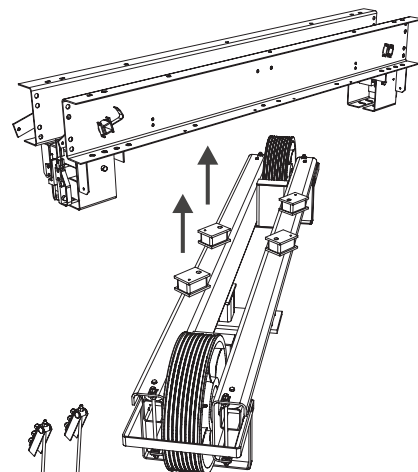
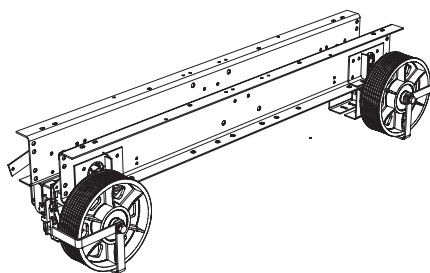
- Car frame operating instructions manual
- Safety gear operating instructions manual
- Guide shoe operating instructions manual
- Load weighing device operating instr. man.



- Crosshead beam (pre-assembled)

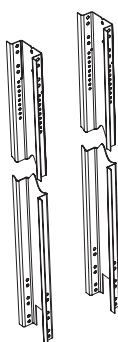


- Bottom Cross beam incl. safety gear housing and synchronization (pre-assembled)

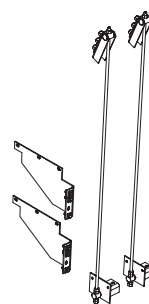
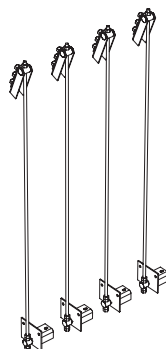


- Skewed pulley beam with suspension 2:1 underslung skewed (US)

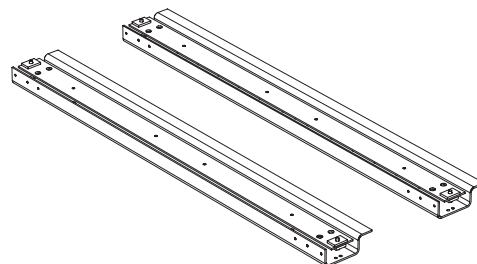
- Uprights



- 4 Diagonals or 2 Diagonals and 2 platform support



- Platform support (incl. lower car fixing material)



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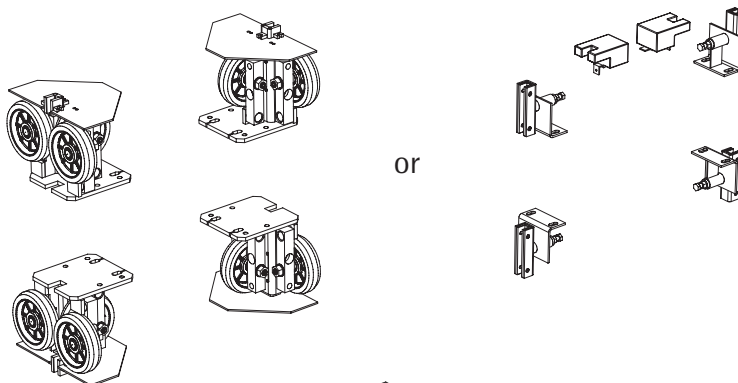
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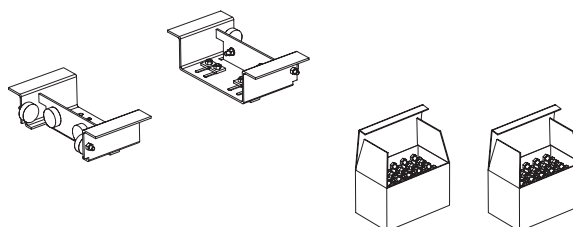
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Accessories:

- Guide shoes

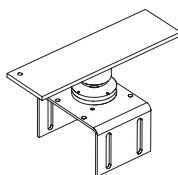


- Upper car fixing (incl. isolation buffer)
- Screw packages

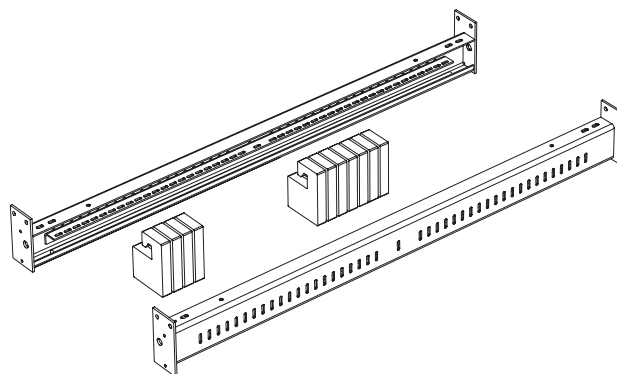


Optional parts:

- Load weighing device

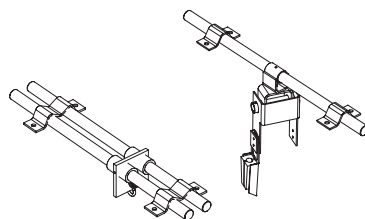


- Ring/balancing beams (incl. balancing weights)

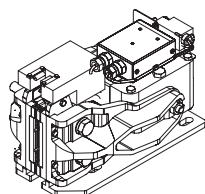


- Compensation chain fixing

- Travelling cable hanger



- EBRA



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2 Installation



Car frame installation can either be carried out at the bottom of the lift shaft or on a stable installation platform in the lift shaft. Also guide clamps could be used which can take the total load of frame and car!



The guide rails should have been already properly set. The distance between the guide rails should be checked before installing the car frame.

2.1 Placing the bottom cross beam between the rails

The bottom cross beam is delivered pre-assembled. It contains the safety gear, the synchronization and the buffer plate. The safety gear device is bolted and synchronized.



Note the correct position of the cross beam and of the skewed pulley beam in relationship to the governor rope position (check layout drawing).

Procedure:

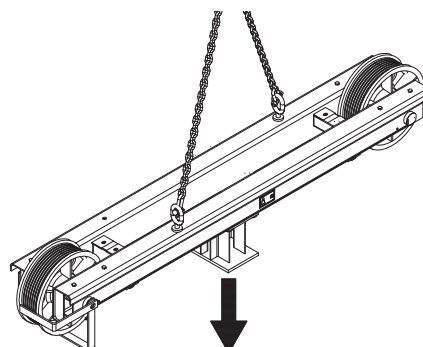
- (1) Place skewed pulley beam on bottom of the shaft (only needed with suspension 2:1 underslung skewed car frame)
- (2) Set cross beam at an angle (see Fig.)
- (3) Clip one safety gear head onto the rail
- (4) Turn Cross beam back into the horizontal position, pushing the second safety gear device onto the rail
- (5) Adjust the cross beam in the middle of the guide rails (safety gear gripping wedge must overlap guide rail blade)
- (6) Fix the guide shoe to the safety gear housing. Adjust RGF125 (0,3 to 1mm clearance). For setting of the rest refer to operating instructions

tion of guide shoes.

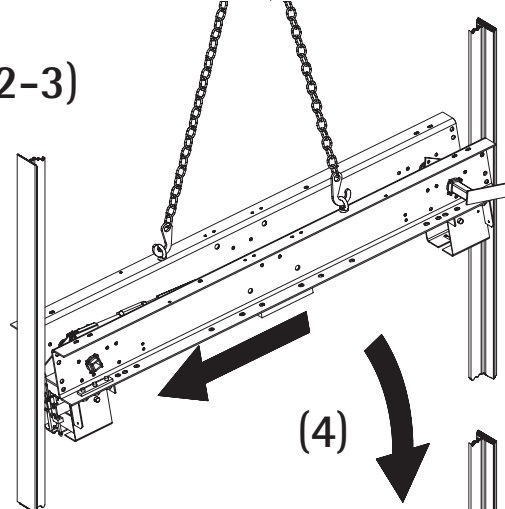


During installation the frame must be supported so that it does not rest on the guides.

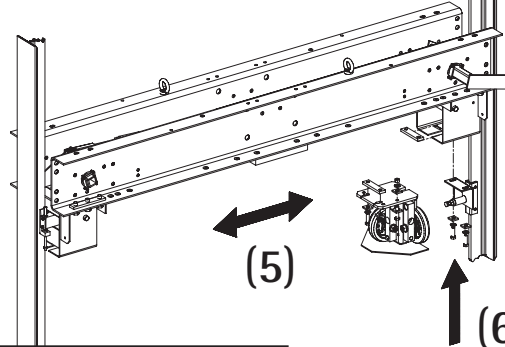
(1)



(2-3)



(4)



(5)

(6)

WRG150 Screw pack. 600213G..
WRG200, WRG300 Screw pack.
600214G..
RGF125 Screw pack 900635G..

SLG1 Screw package
600210G..
SLG2/3/4 Screw package
600211G..

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- (7) Lift OSG-lever by hand and
- (8) ... secure it with a rope or wire around nearest guide fixing


2.2 Securing the uprights to lower cross beam

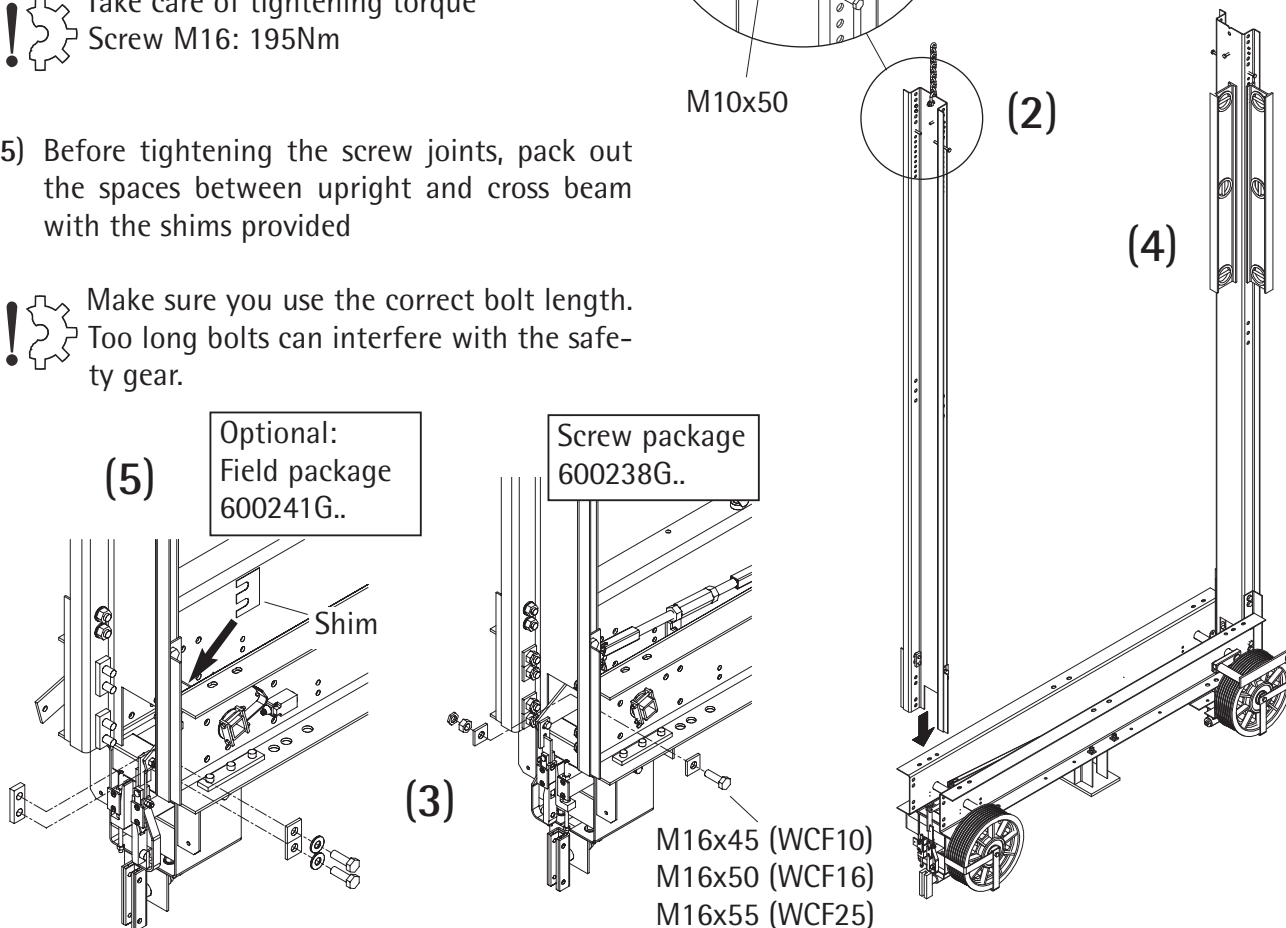
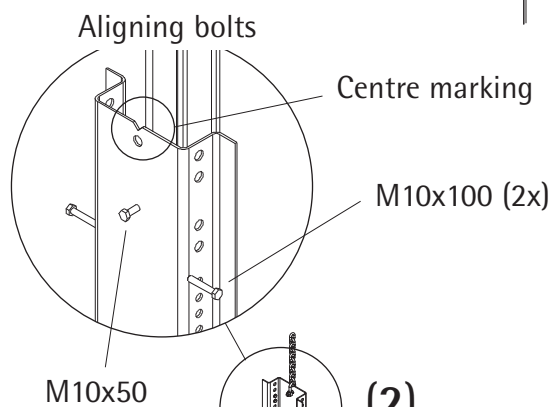
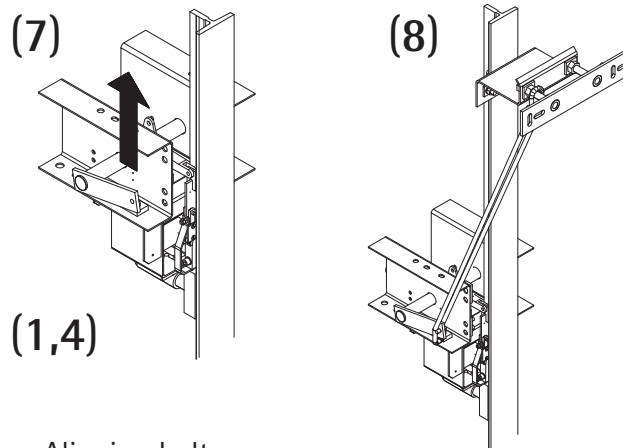
- (1) Fit the aligning bolts in the threaded holes at top of the uprights
- (2) Lift the uprights using the hole at the top and a shackle
- (3) Loosely bolt the uprights to the lower beam
- (4) Adjust the uprights in plumb and in centre to the guide rails using the aligning bolts

 Ensure aligning bolts are wound out to allow easy installation.

 Take care of tightening torque
Screw M16: 195Nm

- (5) Before tightening the screw joints, pack out the spaces between upright and cross beam with the shims provided

 Make sure you use the correct bolt length.
Too long bolts can interfere with the safety gear.



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2.3 Installing Crosshead beam

The crosshead beam is delivered pre-assembled. It contains the beams and adapter plates for the guide shoes.

- (1) Lift in the crosshead beam into the uprights
- (2) Fit the beam to the upright. If necessary add shims between beam and upright.



Take care of tightening torque
Screw M16: 195Nm

Remove lock-pin!

Restraining plate:

Rivet when installing (holes in adapter plate and beam had to be drilled at building site)

SLG1 Screw package
600210G..
SLG2, SLG3, SLG4 Screw package
600211G..



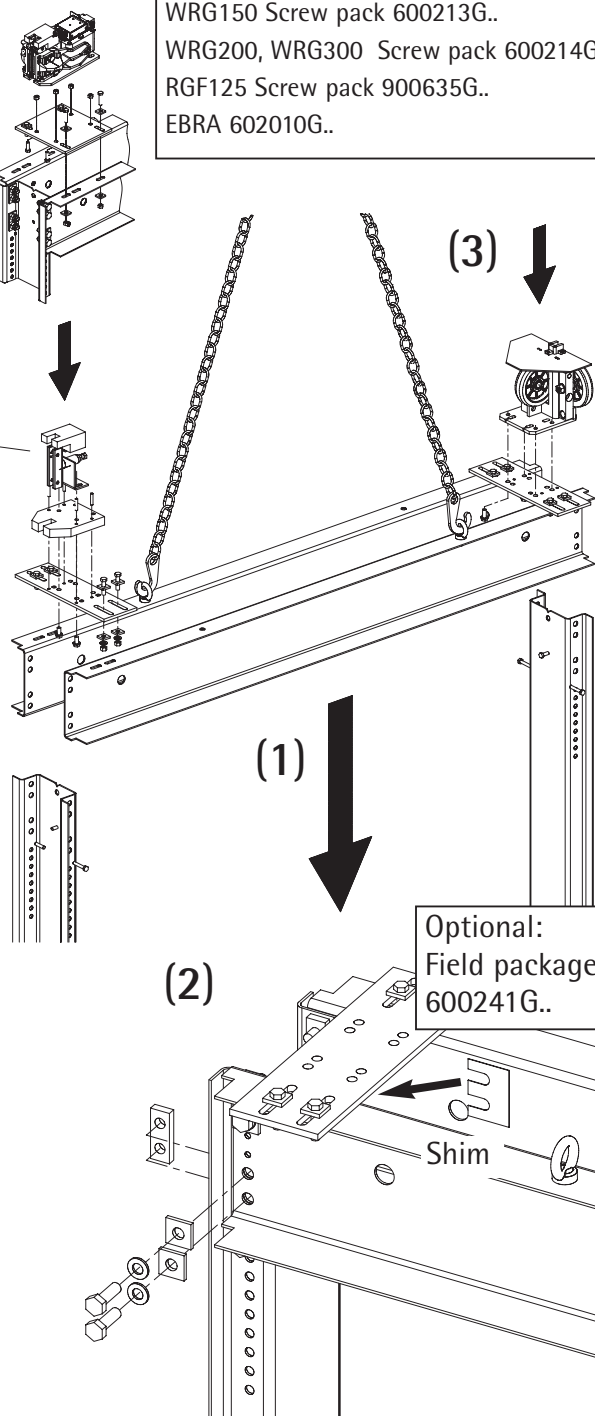
In case of car frame is used in seismic risk zones, additional restraining plates (30mm thick plate) will be placed between guide shoe and adapter plate.

- (2) Screw package
600238G..

M16x45 (WCF10)
M16x50 (WCF16)
M16x55 (WCF25)

- (3) Fit the guide shoe (optional EBRA) to the adapter plate (for setting refer to operating instruction manuals of guide shoes)

WRG150 Screw pack 600213G..
WRG200, WRG300 Screw pack 600214G..
RGF125 Screw pack 900635G..
EBRA 602010G..



Optional:
Field package
600241G..

Shim

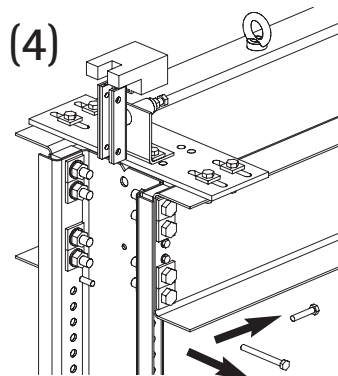
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(4) Remove the aligning bolts



2.4 Installing Platform support

The platform support is delivered pre-assembled. It contains a beam including isolation springs and car fixing plates.

- (1) Fit the platform support to the lower cross beam (if ring beams are delivered, do not tighten the screw joint)
- (2) Check that the profiles are horizontal. If necessary, add shims between profile and beam.

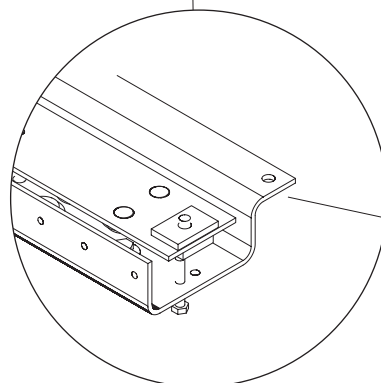
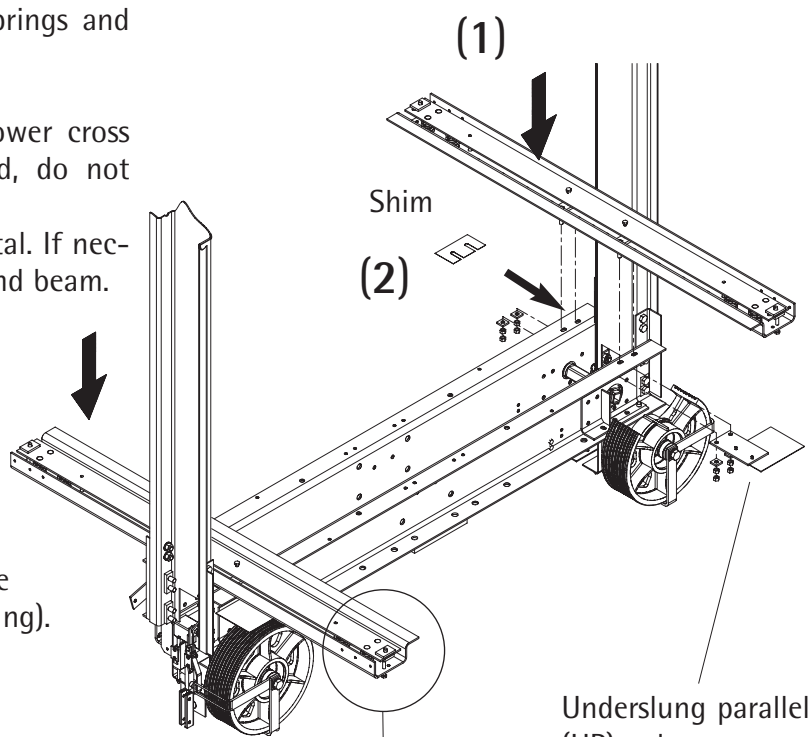
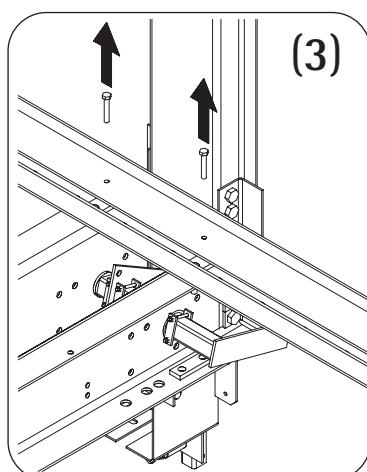


Take care of tightening torque
 Screw M12: 80Nm



If asymetral platform is used,
 the marking hole must be on the
 main door side (see layout drawing).

(3) Remove the lock screws



Marking hole


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2.5 Ring-, Balancing beams (optional)

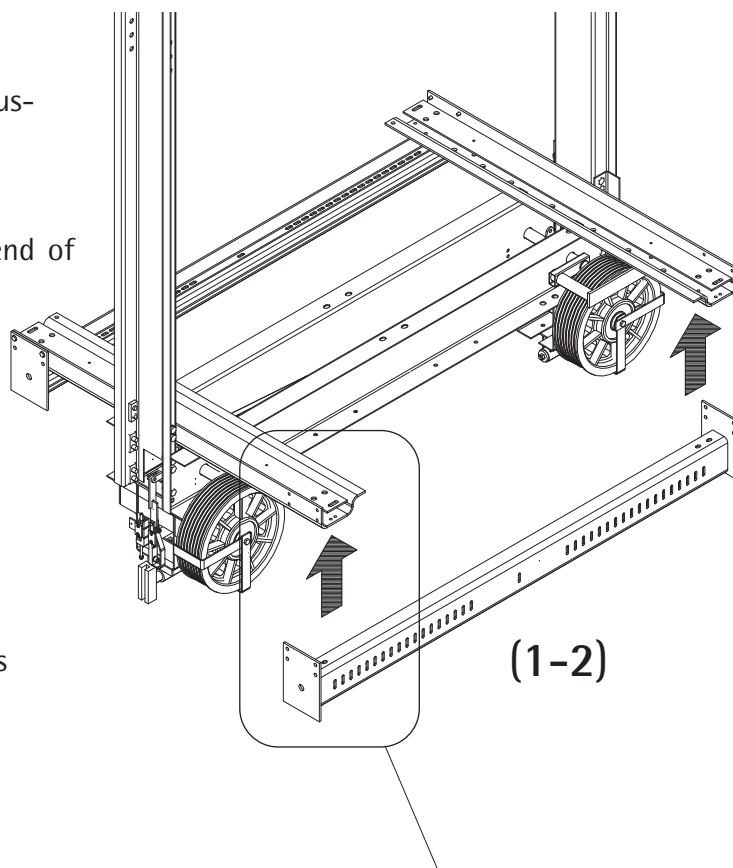
 Car frame with underslung skewed suspension (US) has no ring beam.

- (1) Remove the nuts and washers at the end of the platform support beams
- (2) Install the ring beams (tighten the screw joint slightly)

 Note position of balancing beam (see layout drawing)

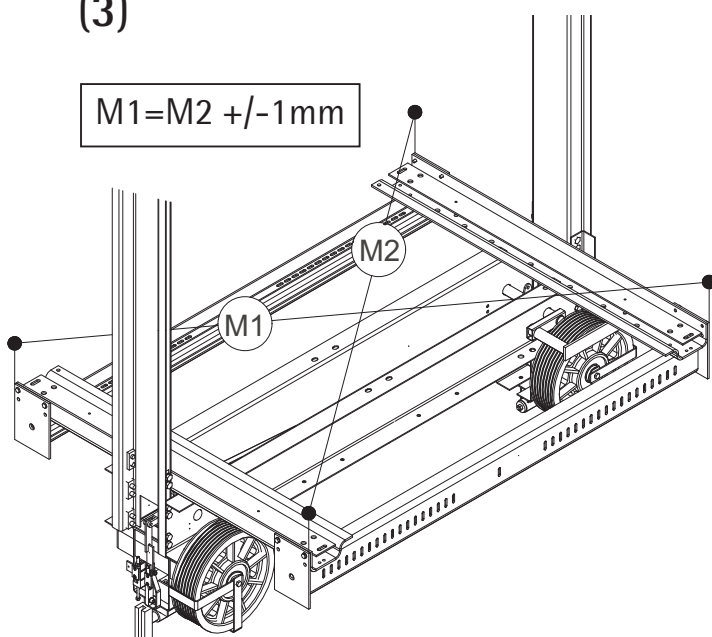
- (3) Check the square by cross measurement and adjust as necessary
- (4) Tighten all platform support screw joints

 Take care of tightening torque
 Screw M10: 46Nm
 Screw M12: 80Nm



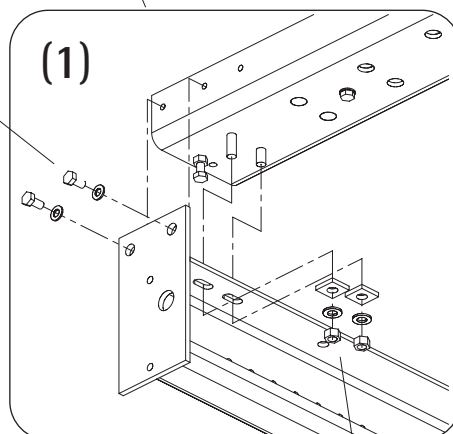
(3)

$$M1 = M2 \pm 1\text{mm}$$



(1)

M10x20



M12

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2.6 Installing the diagonal rods (1-3) or Platform support (4)


(1) Bolt the fixing brackets to the uprights

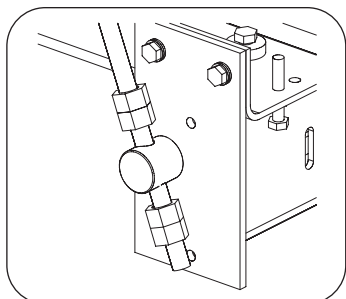
 Choice of fixing holes is depending on the isolation profile length.

(2) Bolt the adapters at both ends of the platform support beams, if no ring beams are fitted

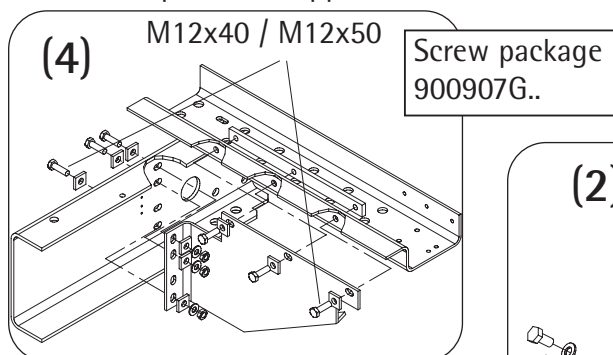
 Car frame with underslung skewed suspension (US) has no ring beam.


(3) Install the adjustable diagonal rods

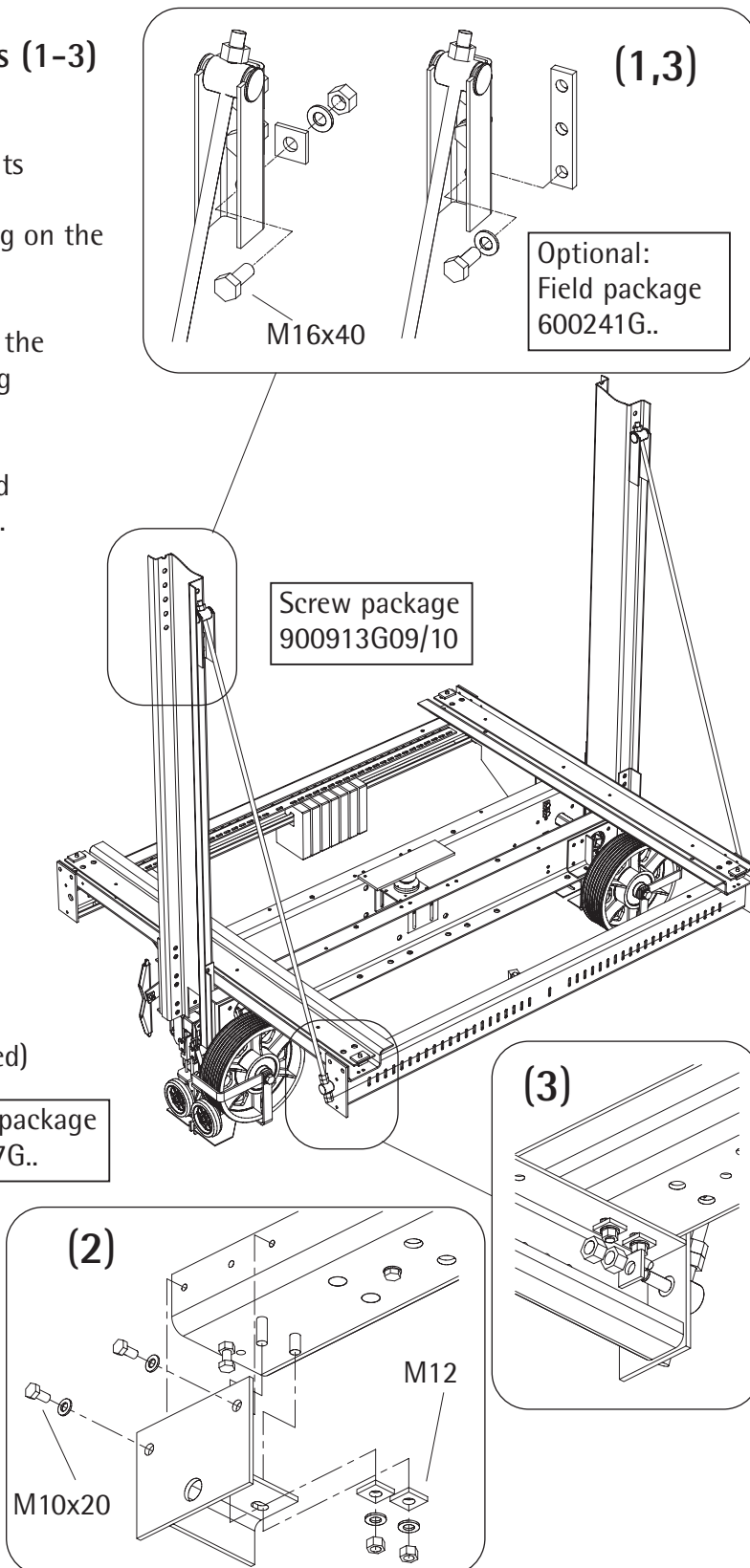
 Do not tighten the 4 nuts at the lower ends of the support.



(4) Install the platform support (if ordered)



 Take care of tightening torque
Screw M10: 46Nm
Screw M12: 80Nm
Screw M16: 195Nm



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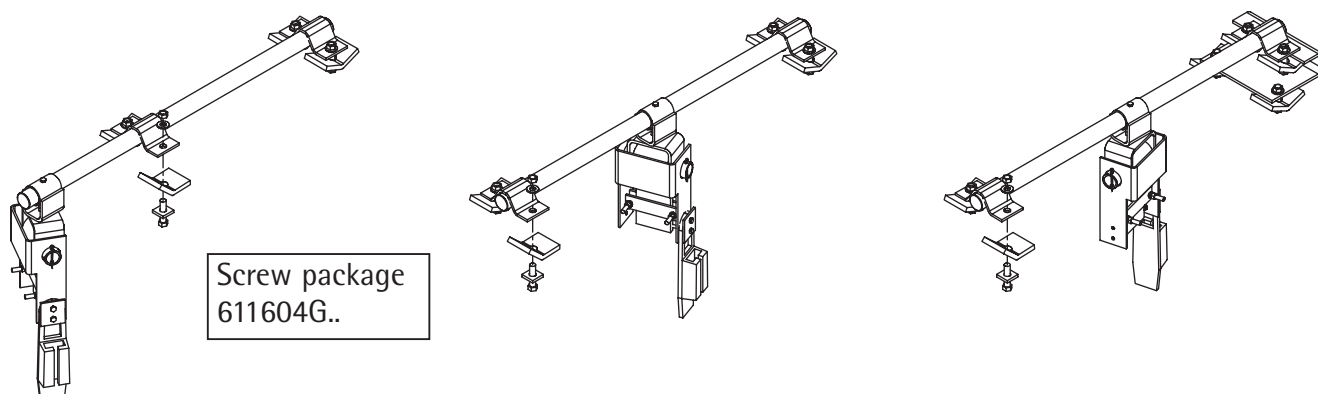
Blatt/sheet D384MGB.013
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2.7 Travelling cable hanger and compensation chain fixings

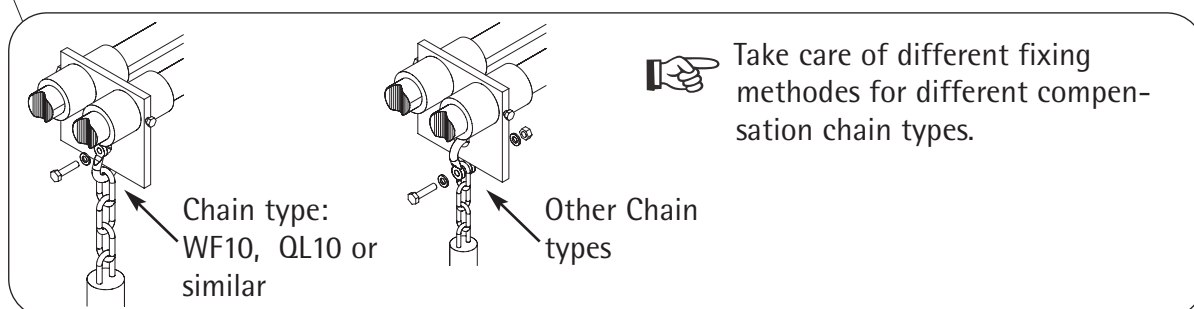
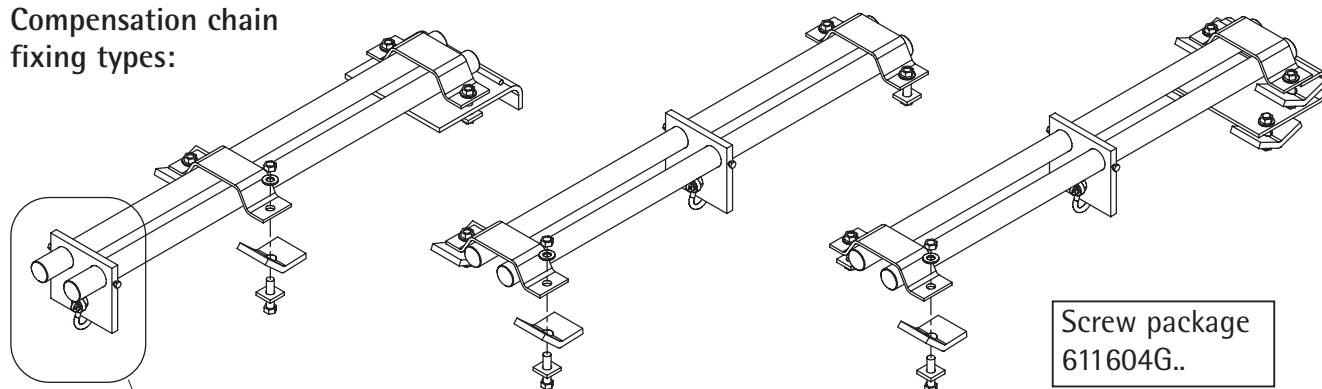
Before installing the car fix the cable hanger and chain fixings to lower cross beam (for position refer to layout drawing).

! Take care of tightening torque
Screw M12: 80Nm

Travelling cable hanger types:



Compensation chain fixing types:



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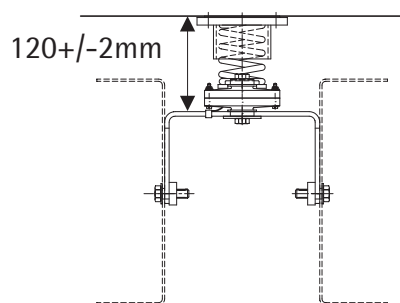
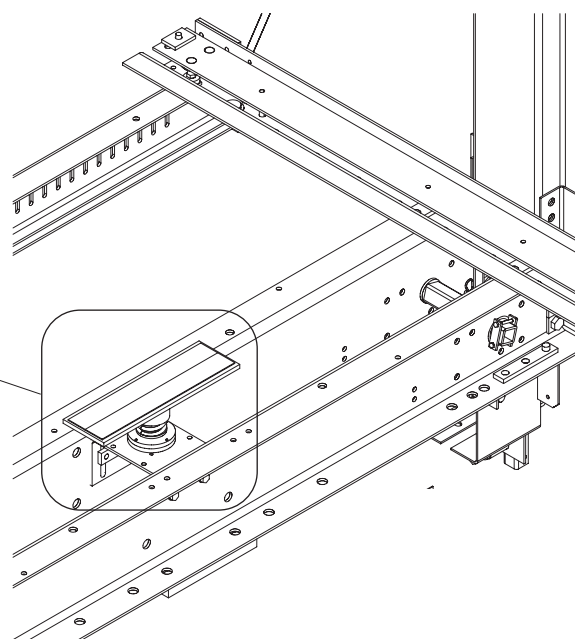
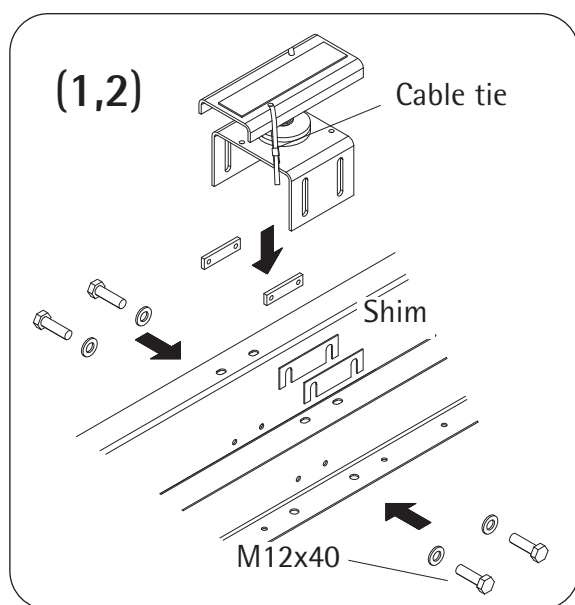
Blatt/sheet D384MGB.014
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2.8 Load weighing device

For setup of the load weighing device WLWD refer to the operating instruction manual.

- (1) Fit the load weighing device as low as possible in the lower cross beams
- (2) If necessary add shims between beams and fixing channel.

! Do not undo the cable ties at this stage.



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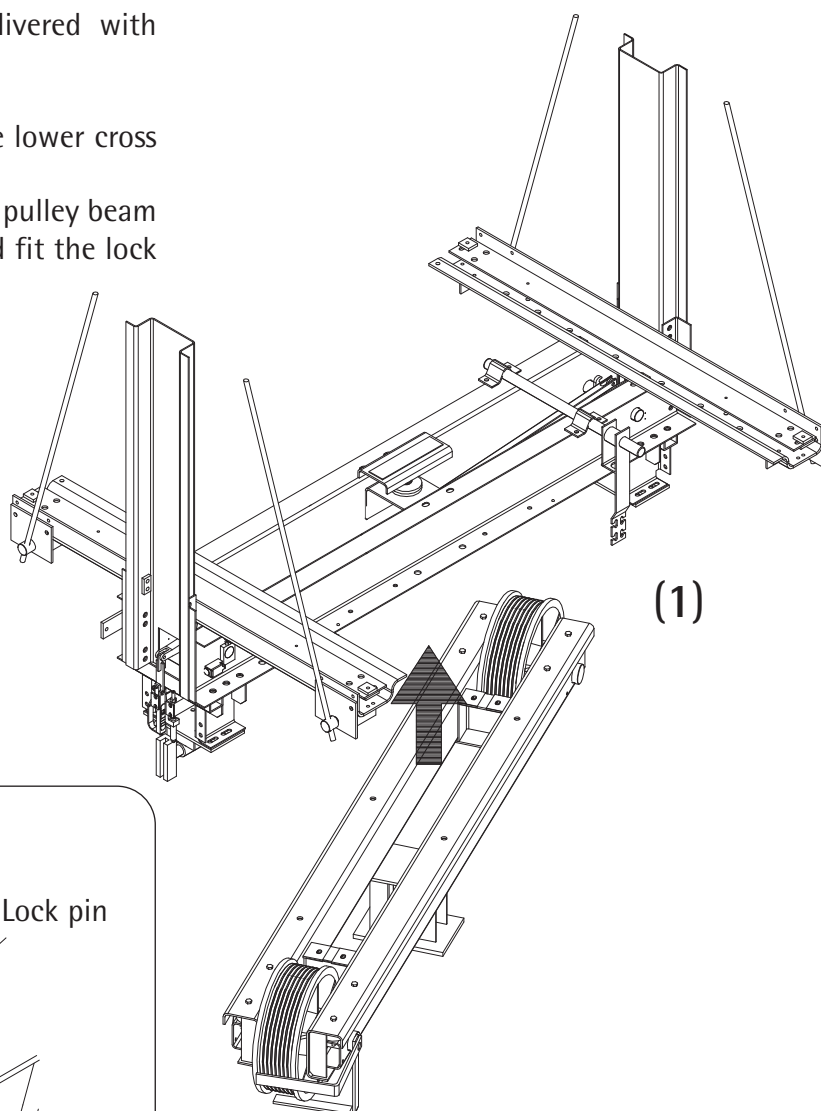
2.9 Securing the pulley beam below lower cross beam

A separate pulley beam is only delivered with underslung skewed suspension.

- (1) Lift the pulley beam up under the lower cross beam
- (2) Position the 4 bases on top of the pulley beam
- (3) Bolt the both beams together and fit the lock pins



Take care of tightening torque
Screw M16: 195Nm

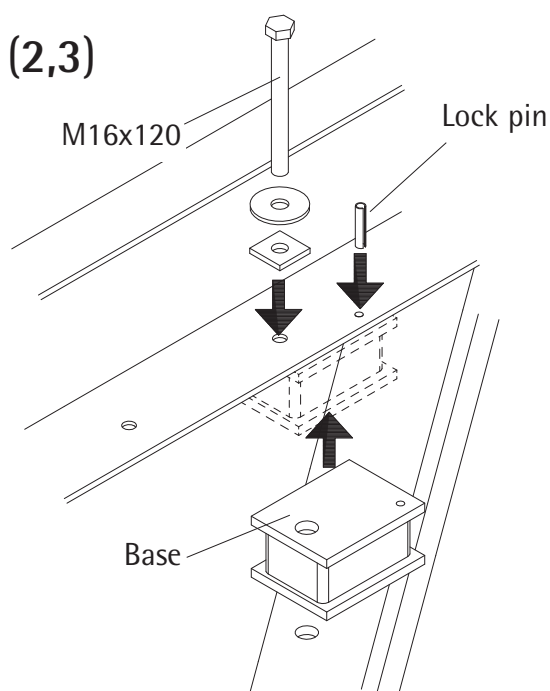


(2,3)

M16x120

Lock pin

Base



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Underslung 2:1 Suspension

Operating instructions

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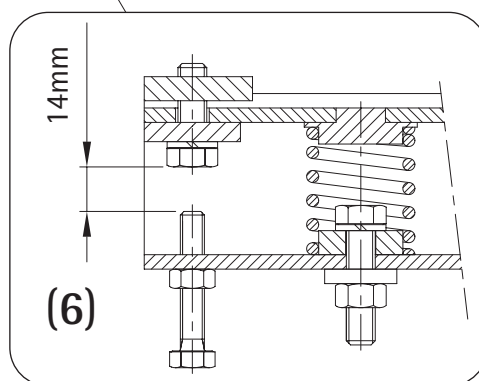
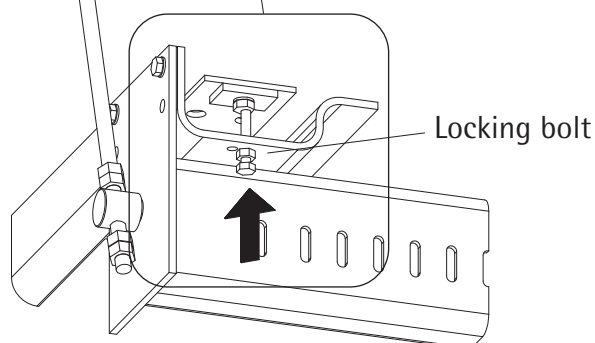
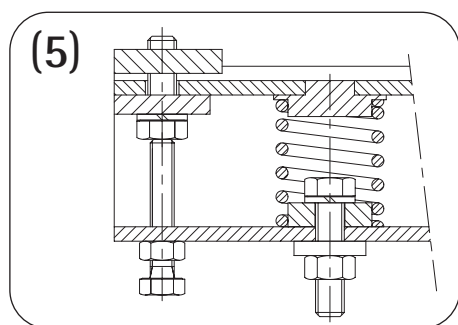
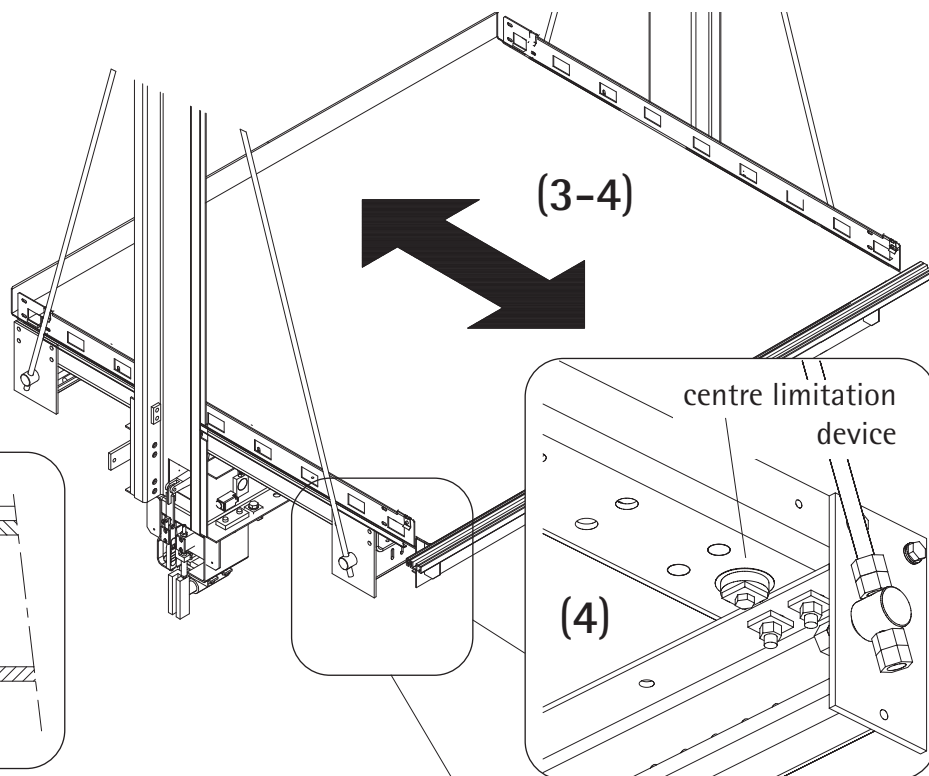
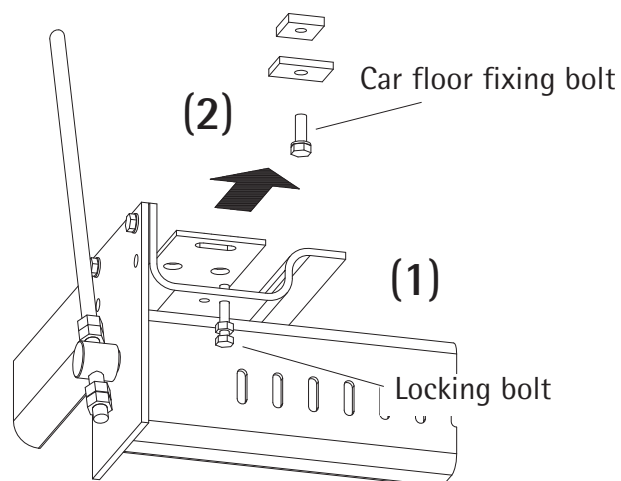
2.10 Car installation

- (1) Wind down the locking bolt
- (2) Remove the car floor fixing bolts at the end of the platform support beams
- (3) Fit the car floor to the car frame (refer to the operating instruction manual of car)
- (4) Adjust the car floor by using the centre limitation device on the bottom of the platform support beam
- (5) Lock the floor by winding up the locking bolt slightly against the fixing bolts (lock with fixing nut)



Do not overtighten

- (6) After car installation adjust the locking bolt




Car Frame Series WCF

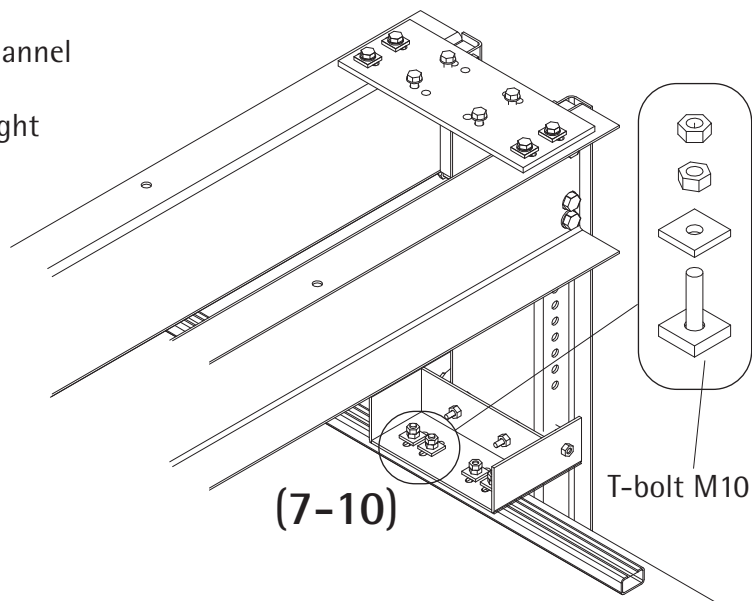
Underslung 2:1 Suspension

Operating instructions

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- (7) Fix the upper isolation to the car roof channel (handtighten T-bolts)
- (8) Push the isolation tight against the upright
- (9) Tighten the T-bolts


 Take care of tightening torque
 Screw M10: 46Nm

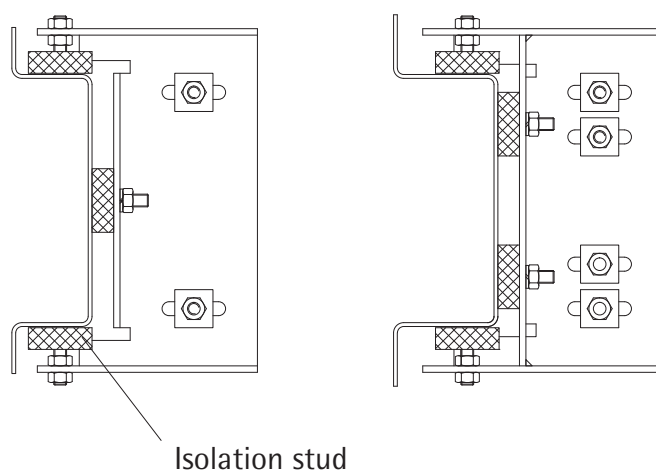


WCF10


WCF16, WCF25

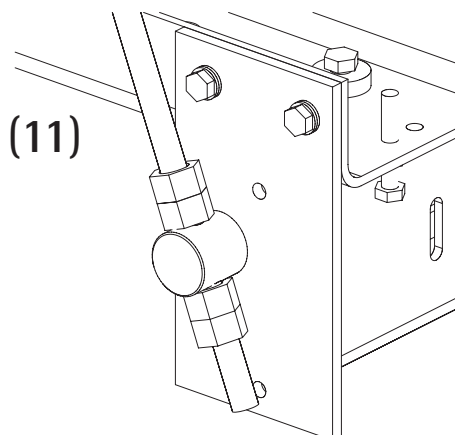
- (10) Tighten the isolation studs slightly

 Tighten the isolation studs so, that the bracket can slide on the upright.



- (11) Tighten the diagonal rod nuts

 Hand tighten the upper nuts and then lock the lower nuts.



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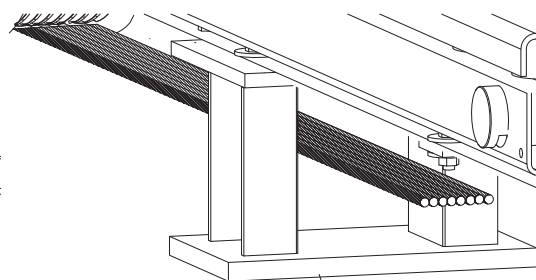
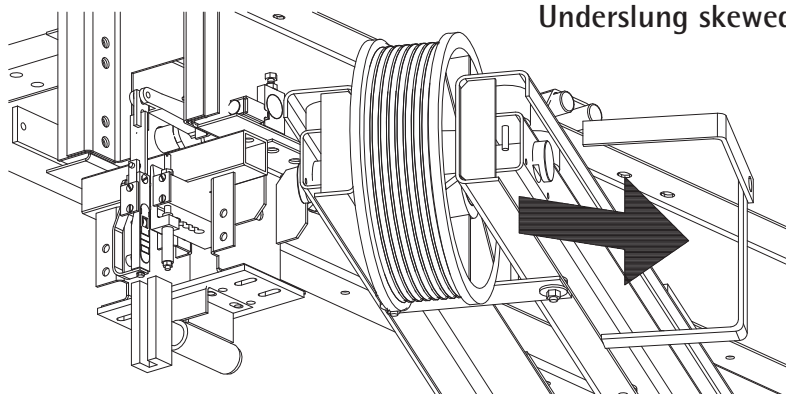
2.11 Roping of the car frame

(1) Remove the rope guards

(1)

Underslung skewed suspension

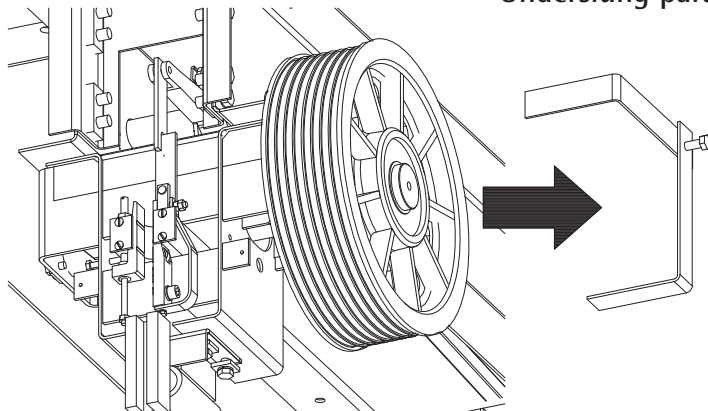
(2)



(1)

Underslung parallel suspension

Buffer stroke plate



(2) Pass the rope round the diverter pulleys under the car



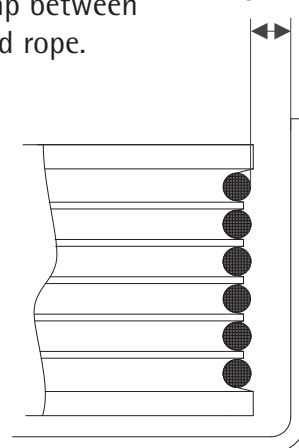
Ensure 3mm gap between rope guard and rope.



When used number of ropes is less than the number of grooves on the rope pulley, the ropes should be put into the grooves counting from inside (car frame) to outwards.

3mm

(3)



(3) Re-fit the rope guards

Car Frame Series WCF

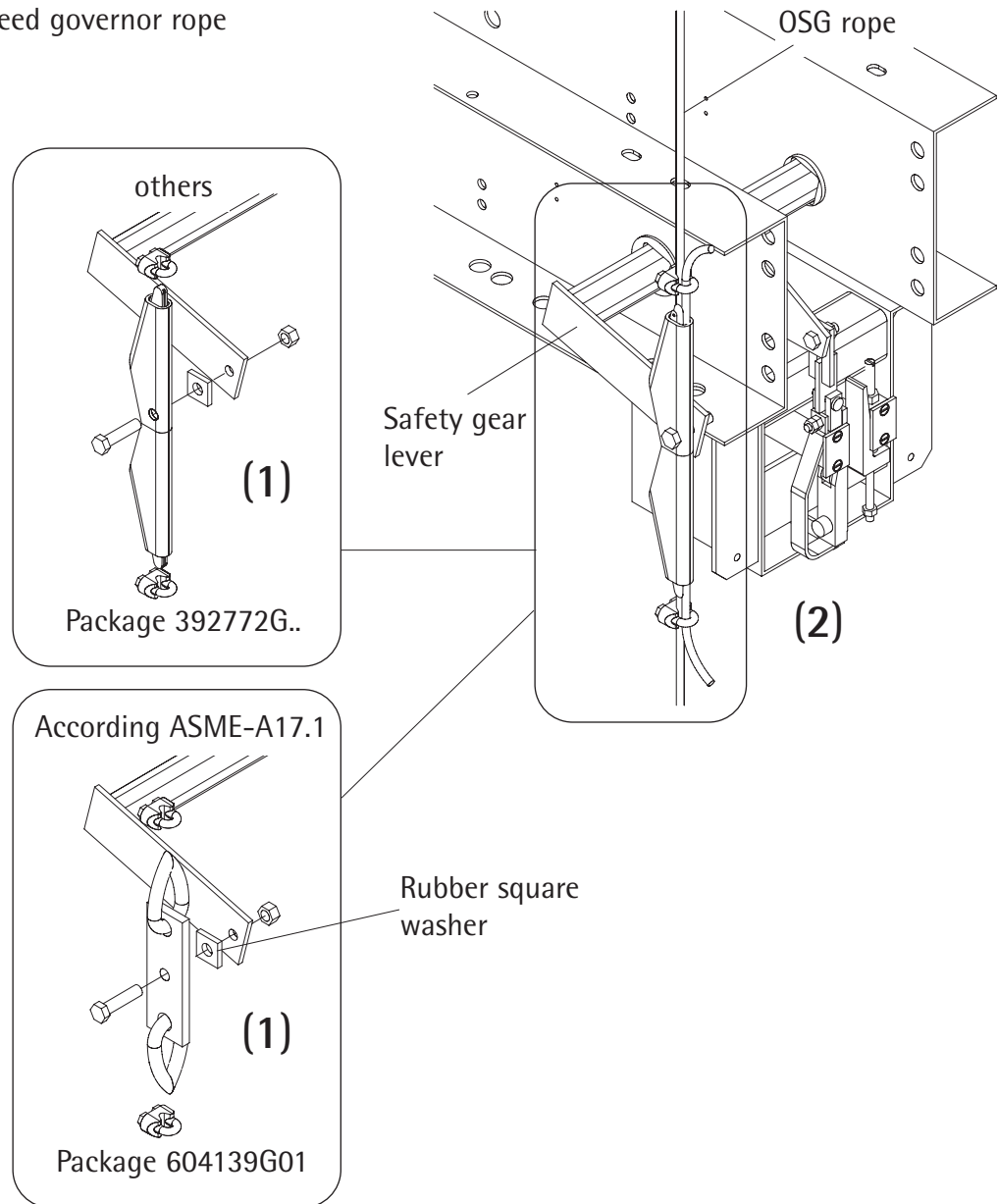
Underslung 2:1 Suspension

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2.12 Overspeed governor rope fixing

- (1) Fix the rope fastener to the safety gear lever
- (2) Install the overspeed governor rope



Car Frame Series WCF

Underslung 2:1 Suspension

Operating instructions

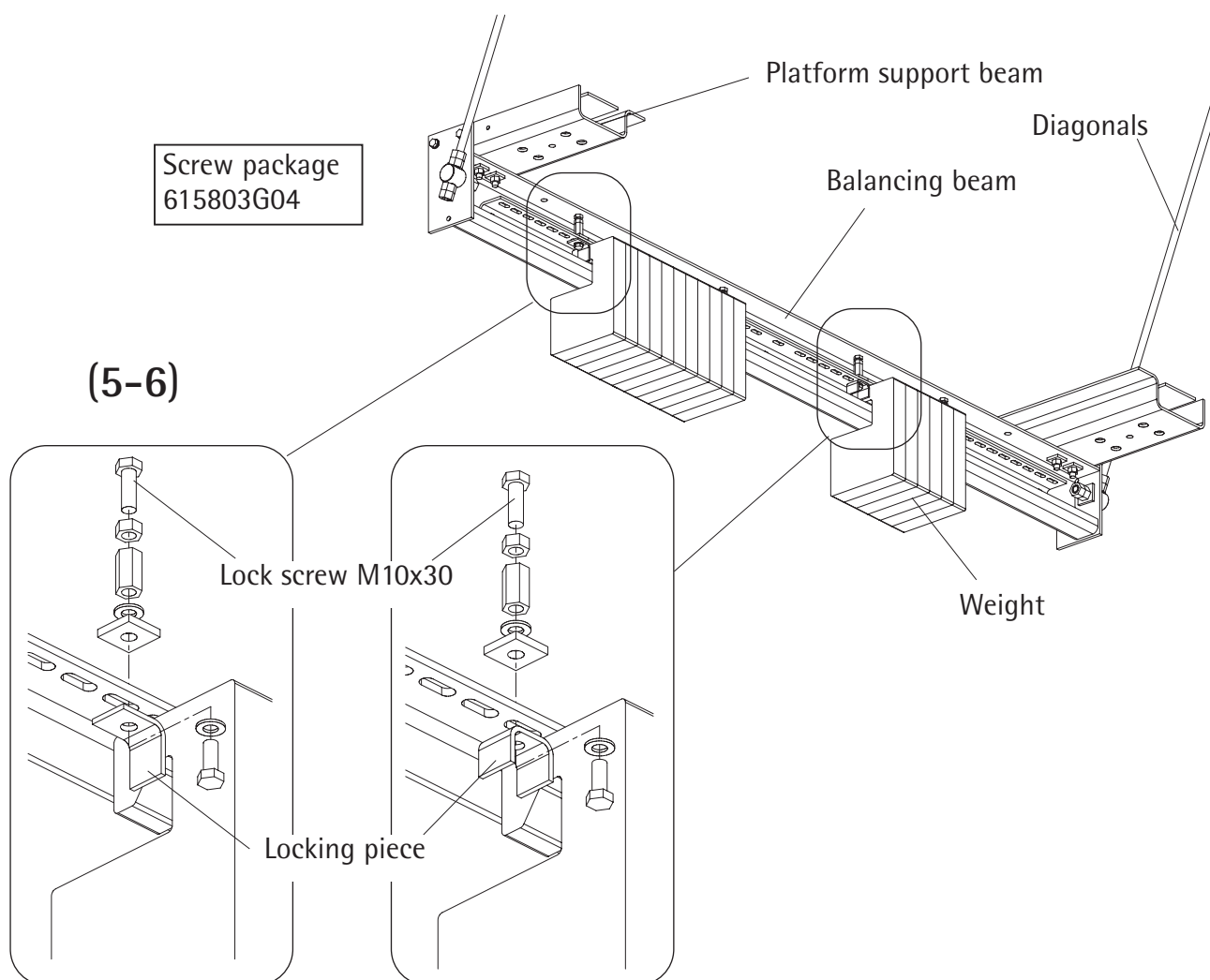
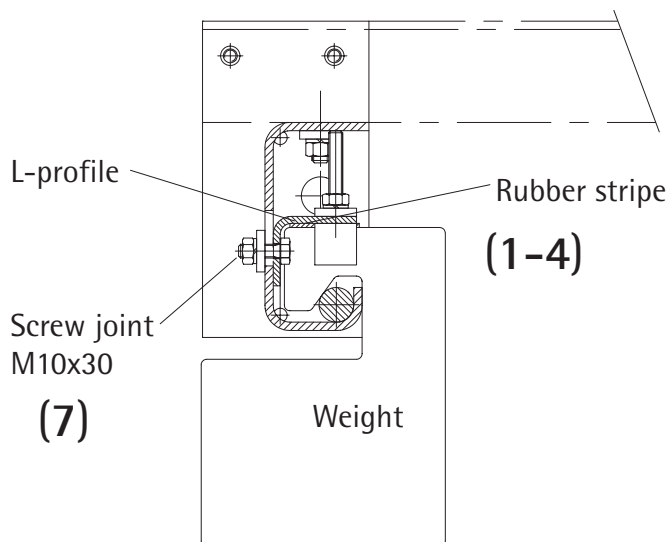
Blatt/sheet D384MGB.020
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Stand/version 16.01.2002
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2.13 Balancing of the car

- (1) Set the L-profile in upper position with slightly tightened screw joints
- (2) Load the balancing beam with the weights
- (3) Place rubber stripes on top of the weight
- (4) Lower the L-profile
- (5) Fix the locking pieces
- (6) Lock down the L-profile using lock screws
- (7) Tighten the screw joints



Take care of tightening torque
Screw M10: 46Nm



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2.14 Adjustment of safety gear

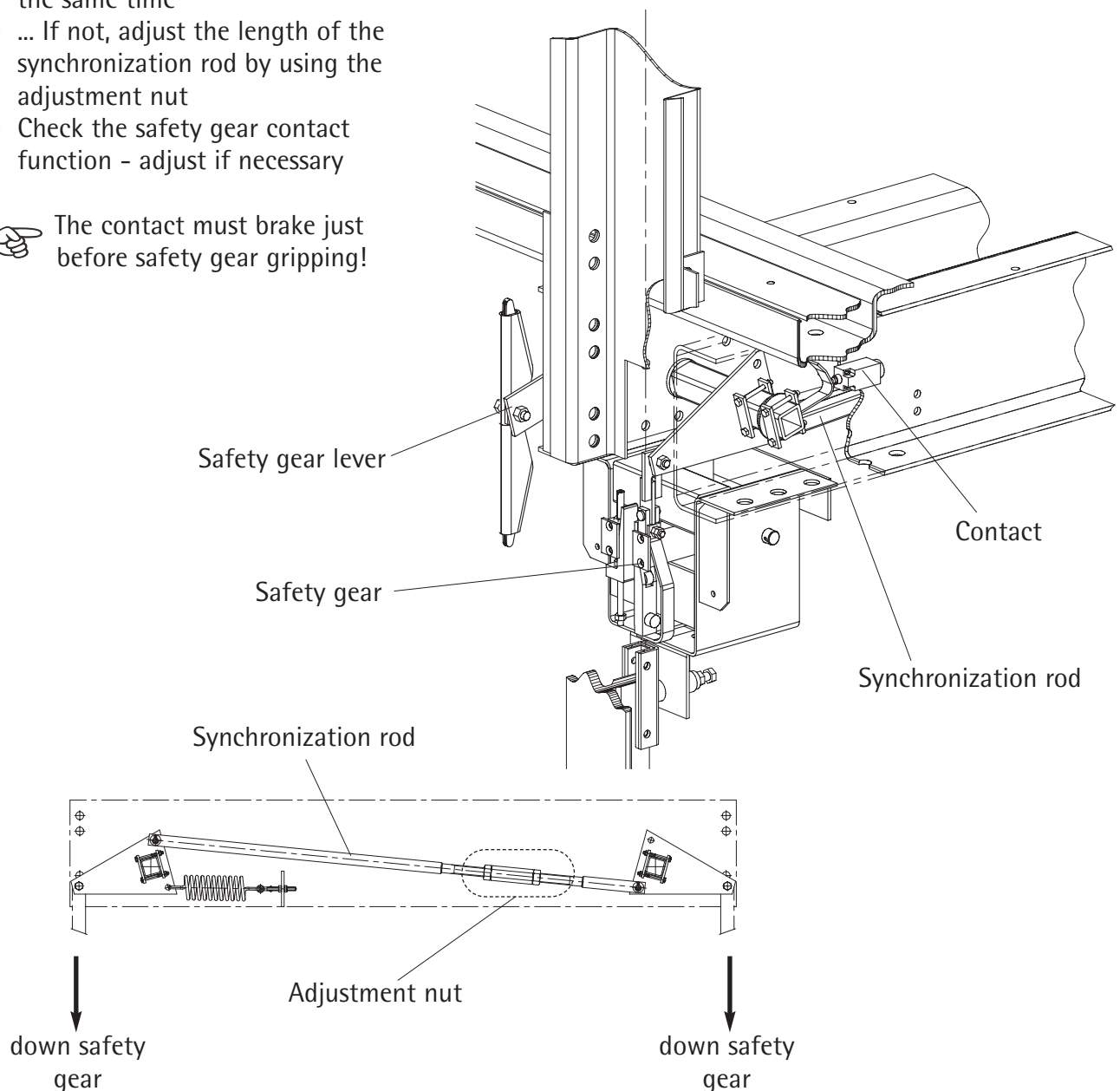
The safety gear device (safety gear, synchronization, safety gear contact) is delivered pre-adjusted. Therefore no additional assembling of the safety gear device is needed.

- (1) Operate the safety gear lever by hand and check that both safety gears begin gripping at the same time
- (2) ... If not, adjust the length of the synchronization rod by using the adjustment nut
- (3) Check the safety gear contact function - adjust if necessary

 The contact must brake just before safety gear gripping!

- (4) Adjust the safety gear in accordance with the operating instruction manual of the corresponding safety gear

 Take care of required safety gear running clearance (referring also to the type of guide shoe used)



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Underslung 2:1 Suspension

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2.14.1 Electrical installation of the safety gear switch



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:

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



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

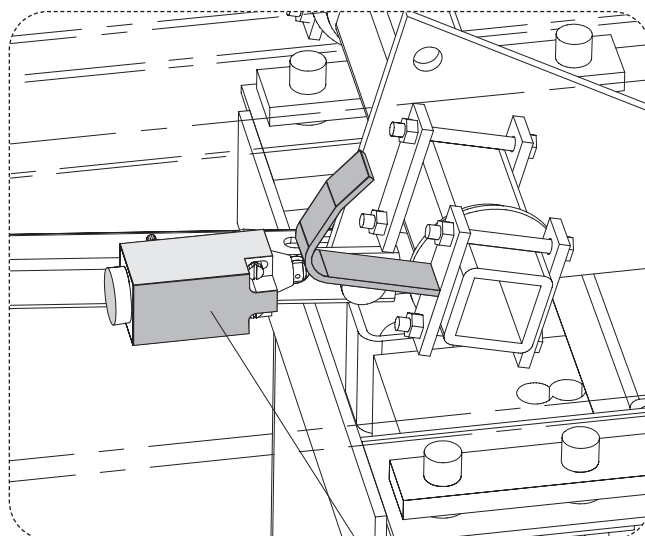
- (1) Connect the safety gear contact
- (2) Test the safety gear switch function
- (3) Adjust the switch horizontally on its fixing bracket



Adjusting dimension: 3-5 mm from the guard peak

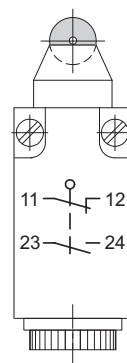


The contact must brake just before safety gear gripping!



Safety gear switch (self reset type)

- use category: AC 15, A300
 U_e/I_e 240V (3A)
- thermal current: $I_{the} = 10A$
- insulation voltage: $U_i = 250V$ AC
- protection type: IP 43
- approved in accordance: VDE 0470
IEC/EN 60947-5-1



(1-3)

Safety gear switch

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3 Function testing

Operational reliability of the installation is assured, assuming that all guide lines were adhered to during proper installation. The quality and function of individual components are subject to thorough inspection and is checked before dispatch from our works. Once installation fitting is complete, the lift car frame 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:
Clean the guide rails!



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 functions 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.

Safety clearance inspections at the bottom of the shaft and shaft head (observe the applicable regulations/guidelines):

- Check the following distances between the shaft floor, after descending the shaft passage:
 - Distance between guide - floor
 - Distance between cross beam - floor
- Check the following distances to the shaft ceiling, on completion of ascension of the lift shaft:
 - Distance between guide - ceiling
 - Distance between rope pulleys - ceiling
 - Distance between cross beam - ceiling

Static & dynamic function testing

The procedures differ according to the safety gear device. Refer to the operating instructions of the relevant safety device.



Examine the lift car frame for changes after carrying out the safety gear test:

- deformation of components
- that the screws are firmly in place
- signs of damage or wear on the rope pulleys, guides and suspension points



Nobody should be in the lift car when carrying out test runs or functions tests!

Car Frame Series WCF

Underslung 2:1 Suspension

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4 Maintenance, inspection and repair

4.1 Maintenance and inspection

The WITTUR lift car frame requires little servicing.

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 be carried out before legally prescribed functional tests (e.g. before TÜV tests).



The lift installation must be immediately taken out of use should any damage or irregularities to the lift car frame 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.

WITTUR car frame maintenance and inspection check list

General:

- Visual inspection for general irregularities (i.e. dirt build up, corrosion, deformation, fracturing etc.)
- Check the screw connections

Lubricators:

- Replenish
- Check the felt inserts for damage, replace if necessary

Guides:

- Check inserts or rollers at every service call. Replace the sliding inlays by new one if the running clearance is more than 2mm (refer to the Chapter "Carrying out repairs")

Safety gear devices:

- Check the operation of the safety gear device at every service call. Refer to the operating instructions of the installed safety device.
- The surface of the wedge area has to be clean. Wedge and roller must not be cracked.
- Check the overspeed governor rope fixing

Rope pulley:

- Signs of wear on the rope pulley; replace if necessary
- Check the condition of the rope pulley bearings by listening to the running noise (refer to the Chapter "Carrying out repairs")

Platform support (isolation beams):

- Check visually that the platform support is not twisted (release diagonal rods to untwist)

Car Frame Series WCF

Underslung 2:1 Suspension

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4.2 Carrying out repairs



As a rule, damage or deformation of a car frame (i.e. as result of bending or heating) cannot be repaired or straightened. The damaged parts should be replaced. Only use WITTUR spare parts.



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



Follow all the local safety instructions during the maintenance work.

The following repairs should be carried out on site by qualified fitters/service personnel:

- The sanding down of rust (i.e. caused as result of damage to the undercoat) and application of a suitable paint sealant.
- Changing the guides / guide shoe inserts
- Changing the rope pulleys



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

4.2.1 Changing the guides/inserts

The components for the guides which are subject-to-wear (sliding guides: inserts; roller guides: rollers) can be delivered individually as spare parts: (see Chapter "Spare parts").



The distance (play) to the rails (distance between guides) must be readjusted after replacement of the inserts and remounting.

4.2.2 Changing the rope pulley

The rope pulleys can be delivered individually as spare parts (refer to "Spare parts" chapter).

Procedures for changing a rope pulley:

- Lower the lift car onto its contact buffer
- Safeguard the counterweight against falling
- Release the ropes
- Unscrew the complete rope pulley / axle / axle bracket unit
- Dismantle rope pulley / axle / axle bracket unit
- Replace the rope pulley, and remount the parts following the instructions above in reverse order

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Underslung 2:1 Suspension

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4.3 Spare parts list

Tab.1: Spare parts WCF Underslung 2:1 suspension

Component	Type	Spare part			Number...	Art. No.	
Sliding guide shoe	SLG1	Guide shoe	rail width	9 mm	1	92410G09	
				10 mm	1	92410G10	
				16 mm	1	92410G16	
	SLG1A	Guide shoe	rail width	9 mm	1	92410G09A	
				10 mm	1	92410G10A	
				16 mm	1	92410G16A	
	SLG2	Guide shoe	rail width	10 mm	1	92510G10	
				16 mm	1	92510G16	
				19 mm	1	92510G19	
	SLG2A	Guide shoe	rail width	10 mm	1	92510G10A	
				16 mm	1	92510G16A	
				19 mm	1	92510G19A	
	SLG3	Guide shoe	rail width	16 mm	1	430365G16	
				19 mm	1	430365G19	
	SLG3A	Guide shoe	rail width	16 mm	1	430365G16A	
				19 mm	1	430365G19A	
	SLG9	Guide shoe	rail width	9 mm	1	580220G09	
				10 mm	1	580220G10	
				16 mm	1	580220G16	
				19 mm	1	580220G19	
	Guide rail lubricator		rail width	9 mm	1	86375G09	
				10 mm	1	86375G10	
				16 mm	1	86375G16	
				19 mm	1	86375G19	
	Sliding inlay (SLG1, SLG2, SLG3*)			9 mm	1	86854H09	
				10 mm	1	86854H10	
	Note: Fixing material to be ordered separat			16 mm	1	86854H16	
				19 mm	1	86854H19	
	Sliding inlay (SLG1A, SLG2A, SLG9, SLG3A*)			9 mm	1	85119H09	
				10 mm	1	85119H10	
	Note: Fixing material to be ordered separat			16 mm	1	85119H16	
				19 mm	1	85119H19	

*) For SLG3 and SLG3A double number of sliding inlays is required.



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Tab. 2: Spare parts WCF Underslung 2:1 suspension

Component	Type	Spare part		Number...	Art. No.
Roller guide shoe	WRG150	rail width	16 mm (Type "S")	1	581271G16S
			16 mm (Type "L")	1	581271G16L
			19 mm	1	581271G19
	WRG150HD	rail width	16 mm (Type "S")	1	600653G16S
			16 mm (Type "L")	1	600653G16L
			19 mm	1	600653G19
	WRG200	rail width	16 mm (Type "S")	1	169850G16S
			16 mm (Type "L")	1	169850G16L
			19 mm	1	169850G19
	Roller for WRG150 (incl. axle)	D150mm / 38mm wide D150mm / 27mm wide *		1	581274G03
				1	581275G03
	Roller for WRG150HD (incl. axle)	D150mm / 38mm wide D150mm / 27mm wide *		1	600655G03
				1	600656G03
	Roller for WRG200 (incl. axle)	D200mm / 38mm wide D200mm / 27mm wide *		1	168962G01
			1	86344G01	
RGF125	rail width	5-16mm	1	C1068	
Rope pulley (incl. bearings)	DR=330mm	Rope	DL=8mm	1	560224G03
	DR=410mm	Rope	DL=8mm	1	505699G05
		Rope	DL=10mm	1	560226G03
	DR=530mm	Rope	DL=10mm	1	560228G03
		Rope	DL=13mm	1	560229G03
	DR=656mm	Rope	DL=13mm	1	560231G03
		Rope	DL=16mm	1	560232G03

- *) For e.g. WRG150 type "S" (rail width 16mm only) ...
2 pcs. roller with 27mm width and 1 pcs. roller with
38mm width are required!
For all other types ("L" and 19mm rail width) 3 pcs.
roller with 38mm width are required!

