

Isolated Roller Guides Shoes

WRG80, WRG100, WRG125, WRG200

Operating instruction



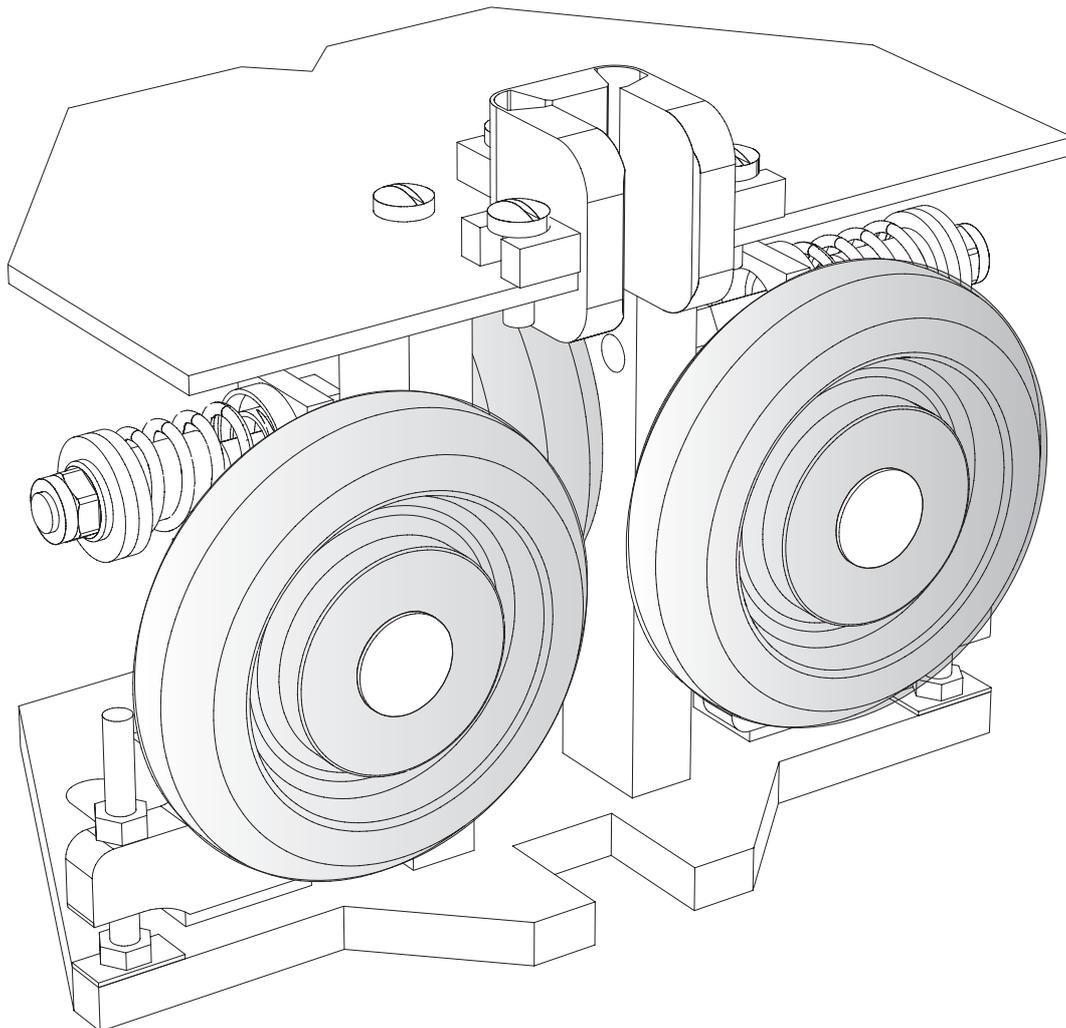
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We reserve the right to make alterations with respect to the specifications and figures in this manual.



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1 General information prior to installation

1.1 Description and functions

The types WRG80, WRG100, WRG125 and WRG200(CWT) are used for guiding counterweight frames.

Generally:

- The isolated roller guide works as a spring element, so that the vibrations are limited to the minimum
- It guides the car between the guide rails within the allowance determined by the safety gear device and the door coupler (in reality approx. $\pm 2\text{mm}$)

When such roller guides are used, the elevator must be both statically and dynamically balanced. The maximum calculated roller guide force should not exceed 70N (car side) or 100N (counterweight side) when the car is empty.

Isolated roller guide shoes are distinguished by its spring system which offers enormous advantages over non-springloaded guides. The rollers always contact the rail closely regardless of the type and direction of load.

The rollers are assured and unusually long service life by the spring system and their being in constant contact with the rail.

All roller guides are sealed and preadjusted at the factory, therefore it is not allowed to adjust the springs and movement limiters (removable clamps and sliders are used during installation and balancing).

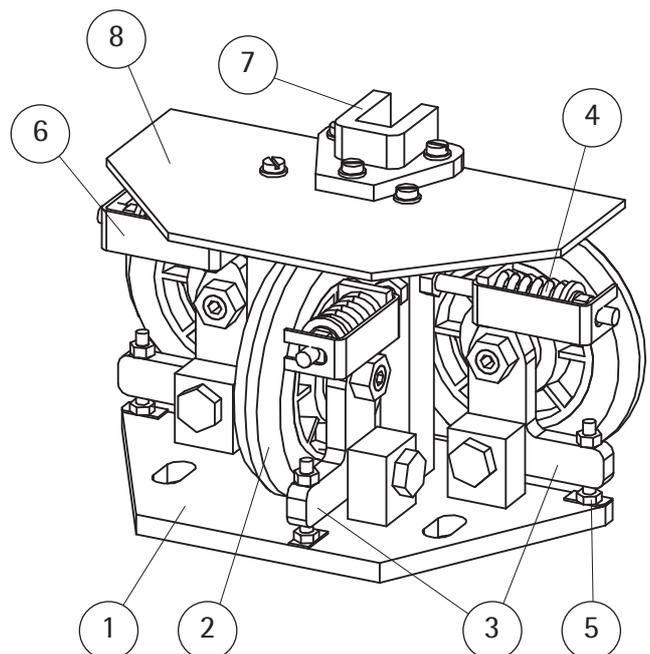
- | | |
|---------------------|--------------------|
| 1. Base | 2. Roller |
| 3. Arm | 4. Spring |
| 5. Movement limiter | 6. Removable clamp |
| 7. Removable slider | 8. Cover |

The operating range is defined as follows:

WRG80	Max. nominal speed	2,5m/s
	Weight (4 pcs.)	13,2kg
	Max. counterweight mass	3200kg
WRG100	Max. nominal speed	3,5m/s
	Weight (4 pcs.)	25kg
	Max. counterweight mass	5000kg
WRG125	Max. nominal speed	7,0m/s
	Weight (4 pcs.)	25,6kg
	Max. counterweight mass	5000kg
WRG200 (CWT)	Max. nominal speed	10,0m/s
	Weight (4 pcs.)	68,4kg
	Max. counterweight mass	7000kg



Never use roller guide shoes with the roll formed HT type guide rails. Roller guide shoes effects noise on low quality HT rails.



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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 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:

- use other means of fixation than prescribed
- install the sliding guide shoes in another way than described in this operating manual
- Carrying out modifications, of any kind
- 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

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. 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.

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.

Note the safety regulations for working on elevators.

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1.5 Content of delivery

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

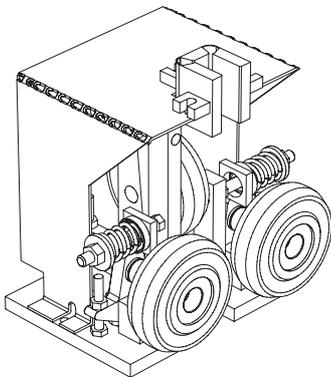
Especially compare article number, quantity and type specification with the ordering data.

- Operating instructions manual

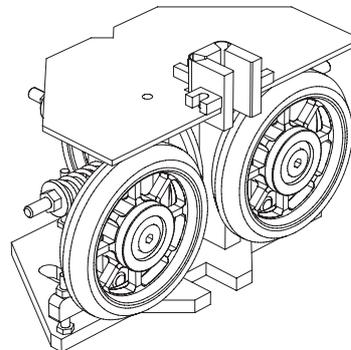


- One pair of roller guide shoe pre-adjusted and sealed at the factory

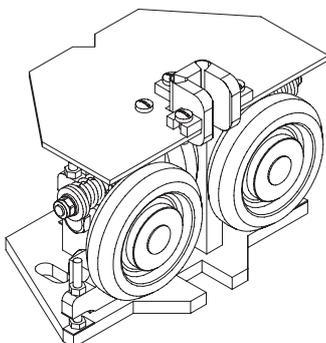
Type WRG80



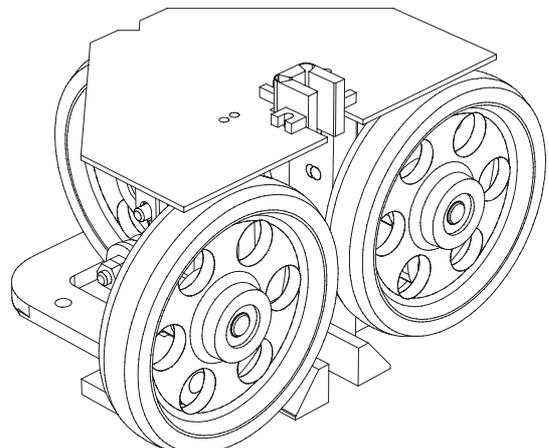
Type WRG125



Type WRG100



Type WRG200 (CWT)



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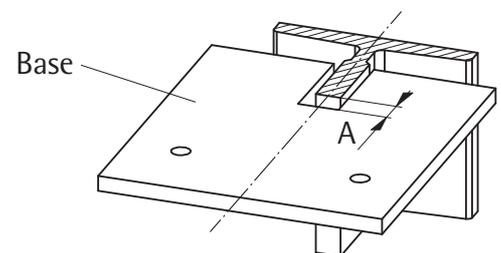
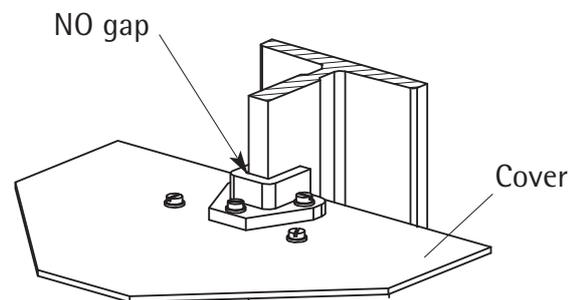
2 Installation

2.1 Adjustment of the position of the roller guides

The installation could be done during counterweight frame assembling or also afterwards if the elevator is to be modernised.

Check from the layout drawing whether counterweight shift has been used. If used, check that the counterweight frame is correctly assembled.

- **Check the position of the slider**
 Make sure that the plastic slider firmly touches the guide rail when the counterweight is in the correct position.
- **Check the position of the guide rail**
 The slot hole of the base should be central to the guide rail, and should have the required gap A (see table) between the rail and the bottom of the slot.



 If these requirements are not achieved the roller guides are most probably not straight and must be aligned as described in chapter 2.2

Roller guide type	A
WRG80	4.5 mm
WRG100	4.5 mm
WRG125	4.5 mm
WRG200(CWT)	5.0 mm

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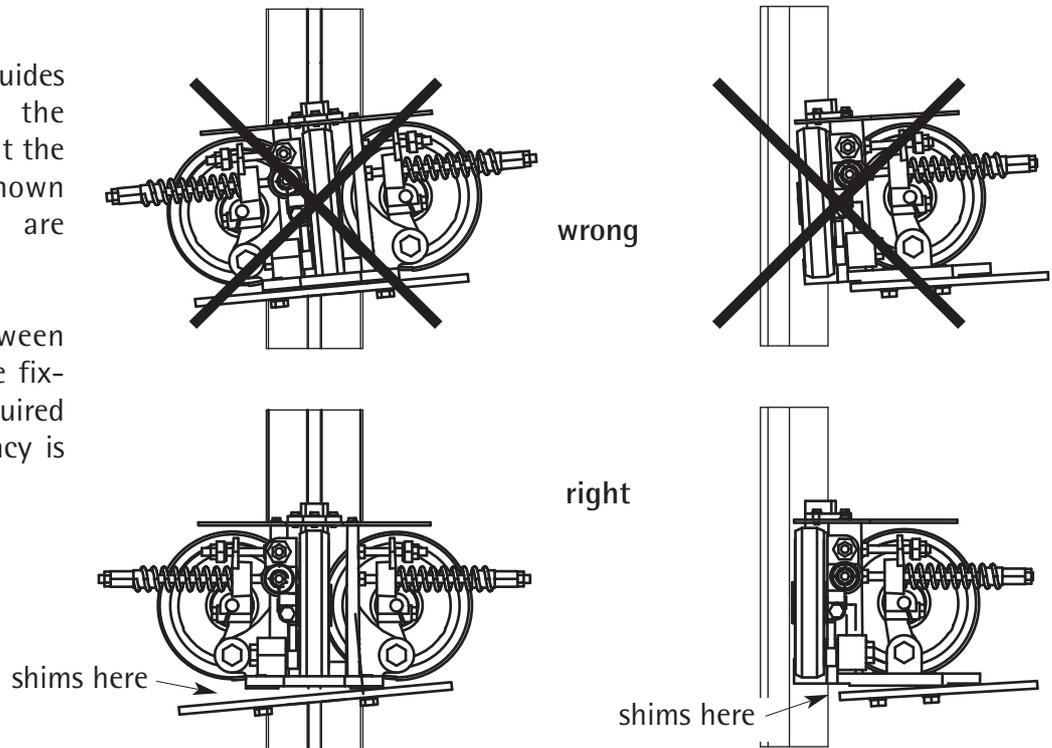
WRG80, WRG100, WRG125, WRG200

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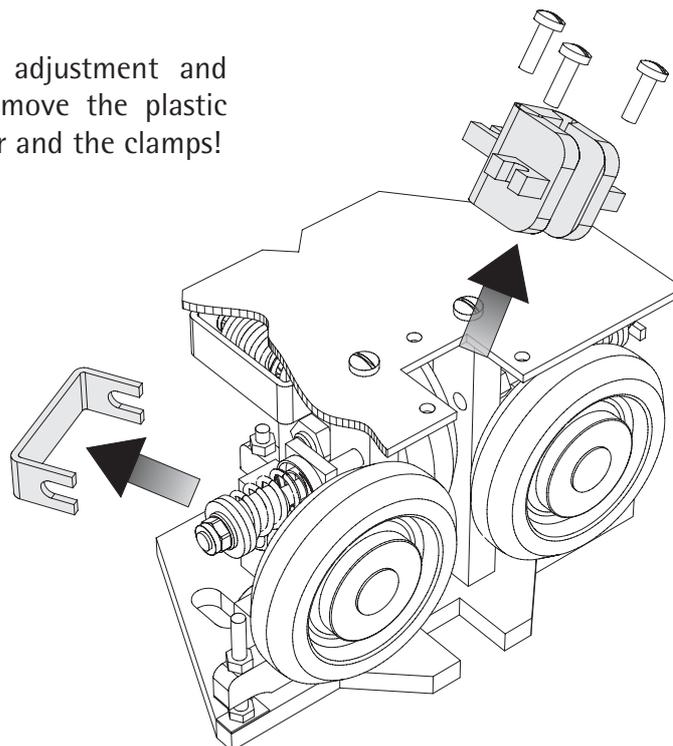
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2.2 Alignment of the roller guide

- Align the roller guides in relation to the guide rails so that the requirements shown in chapter 2.1 are achieved.
- Use shims between the base and the fixing plate (the required shimming accuracy is 0.5mm)



After guide shoe final adjustment and before first test run, remove the plastic slider on top of the cover and the clamps!



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3 Factory settings of the movement limiter and the spring tension

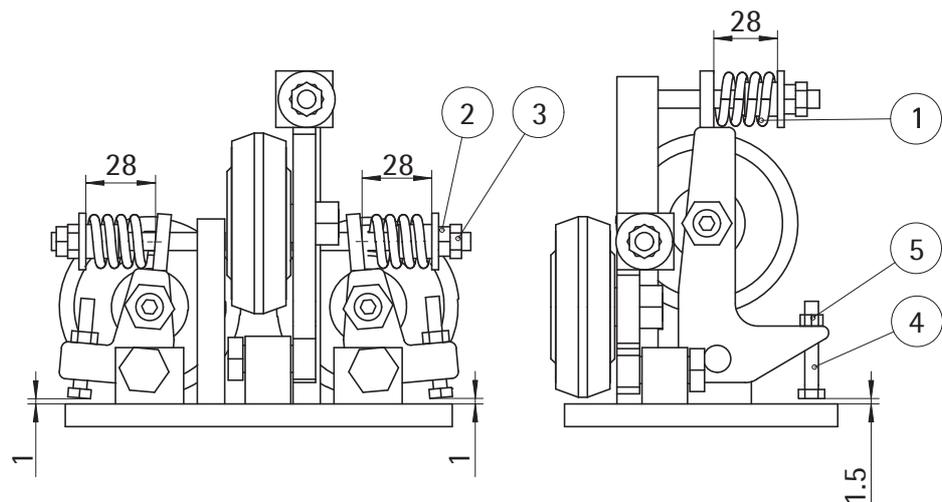
 The spring tension and the movement limiter gap are adjusted at the factory - it is not allowed to adjust it!

3.1 WRG80

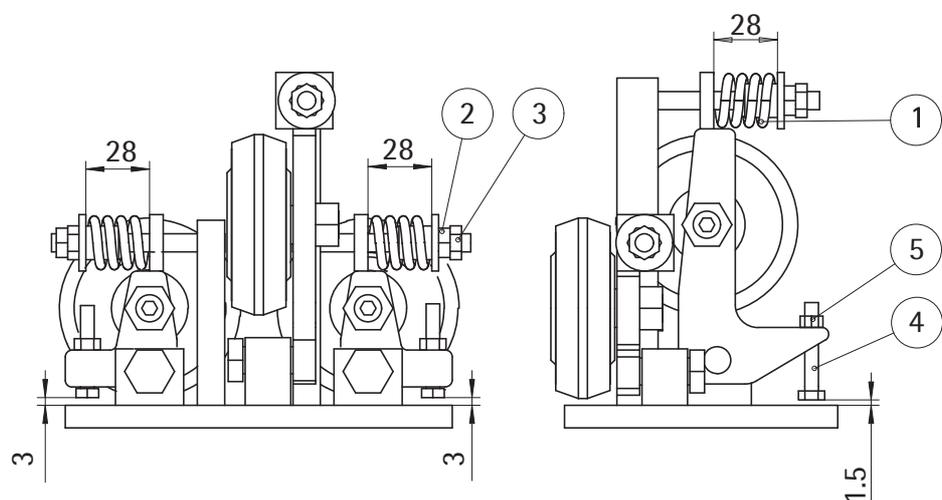
- The right spring tension equals 28mm spring length
- The movement limiter gap depends on the guide rail type

- 1. Spring
- 2. Adjusting nut
- 3. Lock nut
- 4. Limiter screw
- 5. Lock nut

9 mm guide rail
(e.g. T70-1/A)



16 mm guide rail
(e.g. T89/A)



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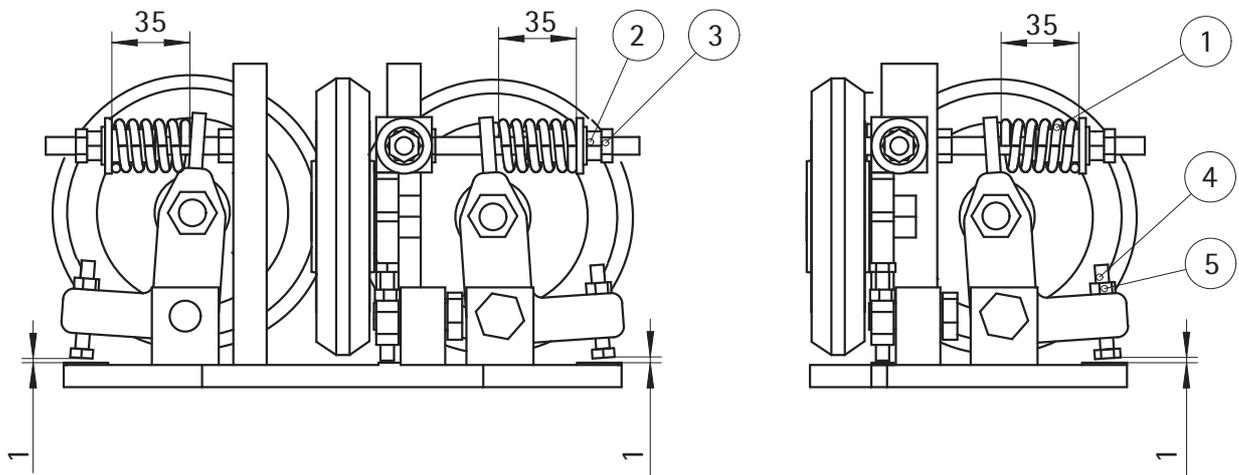
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3.2 WRG100 & WRG125

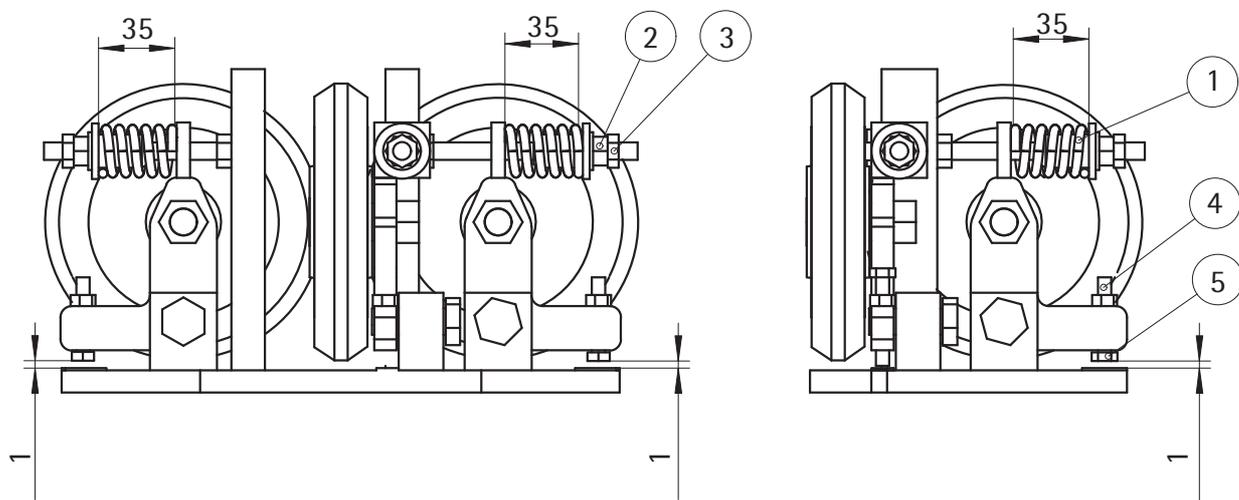
- The right spring tension equals 35mm spring length
- The movement limiter gap depends on the guide rail type

- | | |
|-------------|------------------|
| 1. Spring | 2. Adjusting nut |
| 3. Lock nut | 4. Limiter screw |
| 5. Lock nut | |

9 mm guide rail
 (e.g. T70-1/A)



16 mm guide rail
 (e.g. T89/A)



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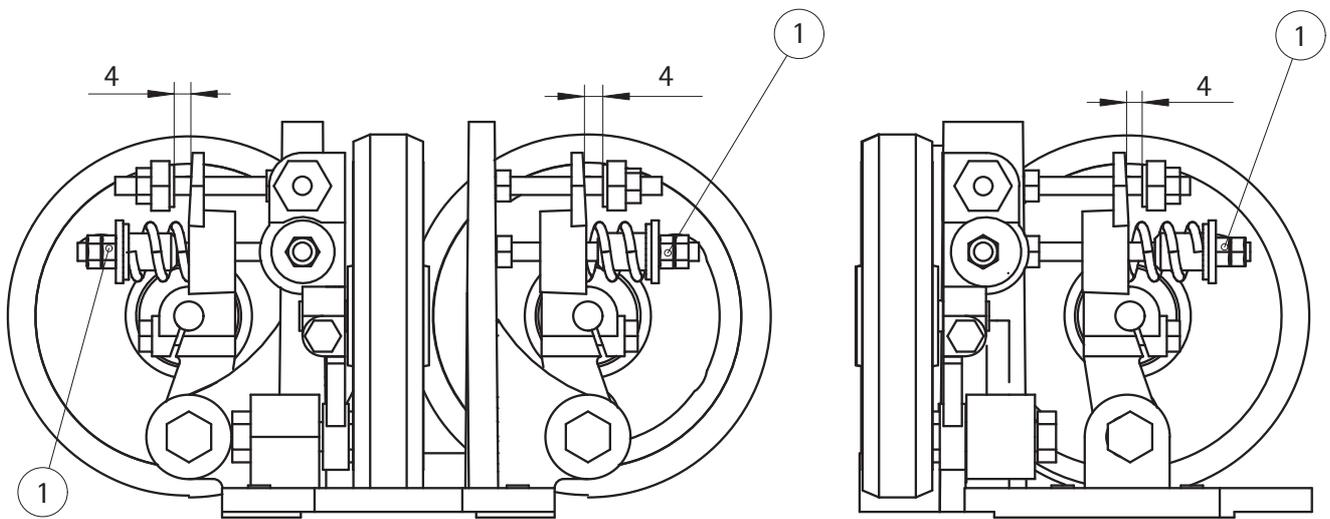
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3.3 WRG200 (CWT)

- The right spring tension equals 3 turns of the adjusting nut (1)
- The movement limiter gap is 4 mm



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4 Function testing

Provided that the system has been properly installed in accordance with all guidelines, it can be assumed the proper functioning of the roller guide shoes is guaranteed.

The individual components are strictly checked for quality and function and are tested before leaving our factory.

The guide shoes must not stick and should

 Check that the guide shoes are tightly screwed to the car frame or counterweight before starting the function test.

Test run after installation:

 Prior to 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.



The guide shoes must not stick and should easily move.



All roller guide shoes have to be used dry (not lubricated)!

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5 Maintenance, inspection and repair

5.1 Maintenance and inspection

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 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.

Maintenance and inspection plan

General:

- Visual control of general condition for irregularity (e.g. contamination, corrosion, deformation, splitting)
- Clean the roller guide shoes with a clean towel if dirty
- Check of screw connections of guide shoes
- Check spring condition and tension



The adjustment is right, if the roller can be turned easily by hand.

- Check the locking of the lock nuts
- Check the roller; change it if it has worn out remarkably
- Check that the roller surface is smooth
- Measure the movement limiter dimensions

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5.2 Carrying out repairs



Damaged parts of the guide shoe cannot be repaired. The damaged parts must be replaced. Only use WITTUR spare parts.



Follow all the local safety instructions during the maintenance work.



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

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

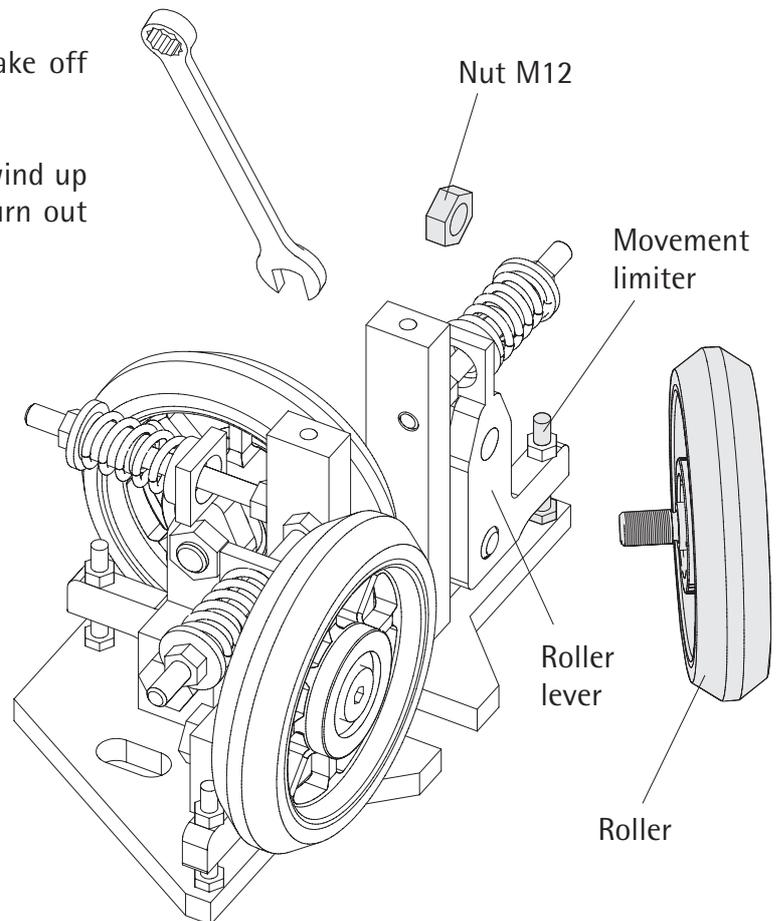
5.2.1 Changing of rollers (example WRG125)

Remove the roller fixing (nut M12) and take off the whole roller (incl axle)



To ease the replacement, you can wind up the movement limiter screw and turn out the roller lever.

Note: For readjustment of the spring tension and limiter gap refer to chapter 3.



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5.3 Spare parts list

Pos.	Component	Spare part	... used	Number...	Art. No.
1	Roller guide assy (1 pcs)	WRG80	Guide rail 9mm	1	86800G09
			Guide rail 16mm	1	86800G16
		WRG100	Guide rail 9mm	1	604124G09
			Guide rail 16mm	1	604124G16
		WRG125	Guide rail 9mm	1	375861G09
			Guide rail 16mm	1	375861G16
		WRG200 (CWT)	Guide rail 16mm (T89)	1	394539G16S
			Guide rail 16mm (T125, T127)	1	394539G16L
			Guide rail 19mm	1	394539G19
2	Roller incl. bearing and axle (1 pcs)	WRG80	bearing type 6203-2Z	1	86789G02
			bearing type 6003-2RS1	1	604112G03
		WRG100	bearing type 6003-2RS1	1	652535G03
		WRG200 (CWT)	bearing type 6003-2RS1	1	168962G01 *)
					1

*) 3 pcs roller 168962G01 are used in WRG200 types 394539G16L and 394539G19

***) 2 pcs roller 86344G01 and 1 pcs roller 168962G01 are used in WRG200 type 394539G16S

