



Industrie Service

EU TYPE-EXAMINATION CERTIFICATE

According to Annex IV, Part A of 2014/33/EU Directive

Certificate No.: EU-OG 229

Certification Body of the Notified Body: TÜV SÜD Industrie Service GmbH
Westendstr. 199
80686 Munich – Germany
Identification No. 0036

Certificate Holder: SLC - SCHLOSSER LUEZAR & CVR S.L.
Pol. Malpica, C/ F, Grupo Quejido, nave 7
50016 Zaragoza – Spain

Manufacturer of the Test Sample: LUEZAR-ECO, S.L.
(Manufacturer of Serial Production – see Enclosure)
Pol. Malpica C/ F, Grupo Quejido, nave 69
50016 Zaragoza – Spain

Product: Overspeed governor, detecting and tripping element fixed at the overspeed governor, as a part of the protection device against overspeed for the car moving in upwards direction and tripping element against unintended car movement

Type: SLC LM 18 __

Directive: 2014/33/EU


Reference Standards: EN 81-20:2014
EN 81-50:2014
EN 81-1:1998+A3:2009
EN 81-2:1998+A3:2009

Test Report: EU-OG 229 of 2016-03-01

Outcome: The safety component conforms to the essential health and safety requirements of the mentioned Directive as long as the requirements of the annex of this certificate are kept.

Date of Issue: 2016-03-01

Date of Validity: from 2016-04-20


Werner Rau
Certification Body "lifts and cranes"



Annex to the EC Type-Examination Certificate

No. EU-OG 229 of 2016-03-01



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1 Scope of application

1.1 Generally

- 1.1.1 Drive Endwise toothed belt
acting on a tooth wheel
- 1.1.2 Toothed belt
- | | |
|----------------------------|---------------|
| Type | RPU 8 M10 |
| Dimension | |
| Width x height | 10.0 x 5.4 mm |
| Tooth height | 3.2 mm |
| Tooth distance | 8.0 mm |
| Tensile strength | 5415 N |
| Maximum permissible length | 89.1 m |
- 1.1.3 Tooth wheel
- | | |
|----------|-----------------|
| Material | Polyamide (PA6) |
| Diameter | 180 mm |
- 1.1.4 Maximum tensioning force of toothed belt
- (Pre-stressing of toothed belt at the fix points in the headroom
and pit realize by pressure springs) 100 N
- The tensioning force bases on the normal operation only and refers not to the insert force
- 1.1.5 Tensile force in the toothed belt respectively tangential force at the tooth wheel 450 – 500 N
after activating the overspeed governor
(look for this remarks 3.6)
- 1.1.6 Arrangement Lower or upper side of car
- 1.1.7 Permissible application
- The overspeed governor can be used with instantaneous safety gears, progressive safety gears or progressive safety gear including a braking device against overspeed in upwards direction.
- Retraction of the safety gear in both direction of rotation is permissible.
- The safety component can fulfil three security features (1.2, 1.3 and 1.4)

1.2 Using as an overspeed governor – permissible speeds

- | | |
|----------------------------|-----------------|
| Permissible tripping speed | 0.43 – 3.27 m/s |
| Permissible rated speed | ≤ 2.84 m/s |

1.3 Using as a part of the protection device against overspeed for the car moving in upwards direction

The overspeed governor can be used as a part of the protection device against overspeed for the car moving in upwards direction. Monitoring of upward speed will be done by overspeed governor itself and a braking device can be triggered (engaged) via the overspeed governor's electric safety device or mechanically

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1.4 Using as a part of the protection device against unintended car movement by an installed anti-creep protection

Using **without** detection system (activation at each landing)

1.4.1 Tripping speed and response distance

➤ Design type AD 10:

Maximum possible response distance* 127.0 mm

Theoretical tripping speed by gravitational acceleration 1.58 m/s

*Response distance: Defined as the max. distance that can be covered by the lift moving away from the landing position **after the blocking device has engaged** and as caused by delay and/or other distance losses at the overspeed governor until the tensile force has built up

1.4.2 Assigned execution features

➤ Type AD 10:

Solenoid

Working voltage 24 – 190 V DC or 230 V AC

Duty cycle 75 - 100 %

2 Terms and Conditions

- 2.1 Above mentioned safety component represents only a part at the protection device against over-speed for the car moving in upwards direction and unintended car movement. Only in combination with a braking respectively detecting component in accordance with the standard, which must be subjected to an own type-examination, can the system created fulfil the requirements for a protection device.
- 2.2 The adjusted tripping speed and the safety switch must be sealed against unauthorized adjustment (safety switch e.g. by colour sealing of the fastening bolts).
- 2.3 The releasing of the overspeed governor must be carried out by a remote control from outside of the shaft.
- 2.4 It must be possible to test the engaging force at the operating place of the lift.
- 2.5 If the overspeed governor is mounted on the lower side of car, for inspection and maintenance the overspeed governor must be available without any risk from the pit (means reachability the lower side of car by a car position, where you can enter or leave the pit riskless).
- 2.6 The triggering of the safety device according 1.4 takes place by interruption of the energy supply to the magnetic coil of anti creep protection. This is not caused positive mechanically but electrically resp. electromagnetically by interruption of the energy supply to the magnetic coil of anti creep protection. However, the mechanically engagement of the device has to be absolutely guaranteed after the electrical safety device has responded. In light of the above, the device must be made to engage at each regular landing, so that the anchor plates can be checked for correct closing (e.g. micro switches resp. proximity switch). If the anchor do not perform correctly (anchors fail to close) the lift must be kept at standstill.
- 2.7 Activation of anti-creep according 1.4 will take place by every operational stop of the lift in the way such as activation is initiated before car stands still.
- 2.8 The installer of the complete lift must create an examination instruction to fulfil the overall concept of the protection device, add it to the lift documentation and provide any necessary tools or measuring devices, which allow a safe examination (e. g. with closed landing doors).

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- 2.9 Fast and safe rescuing of lift passengers must be possible by suitable technical measures under all circumstances. It must be documented in the operation manual of the lift.
- 2.10 The identification drawing „PG.LM18CD.00E“ including stamp dated 2016-03-01 shall be included to the EU type-examination for the identification and information of the general construction and operation and distinctness of the approved type.
- 2.11 The EU type-examination certificate may only be used in combination with the corresponding annex and enclosure (List of authorized manufacturer of the serial production). The enclosure will be updated immediately after any change by the certification holder.

3 Remarks

- 3.1 Considering the whole protection systems, it is necessary to include time need and impact of build-up the tensile force as well as spread and change over time, perhaps possible distances and/or time delay caused by mechanical deflections.
- 3.2 Possible design variants (also in combination):
- Version acting downwards only also possible. The direction of rotation for retracting the safety gear is to be marked at the overspeed governor.
 - Optional the overspeed governor can be arranged with protection against lowering.
- 3.3 The tensioning force of 100 N is fixed, if the switch compensator at the compensator guide is pending (no gap). The distance of switch actuation is about 2 mm.
- 3.4 The tooth wheel, insert wheel (= part of the overspeed governor) and the shaft of the safety gear have a common centre or centre of rotation and the shaft of the safety gear are positive connected with insert wheel. Therefore the force of toothed belt is to regard as the engaging force acting on the lever of the shaft of the safety gear.
- 3.5 Based on the shaft of the safety gear is positive connected with the insert wheel of overspeed governor and both have a common centre of rotation, there is a common electrical safety switch needed only.
- The meaning is, based on this common electrical safety switch, the drive will power off if
- Engaging of safety gear parts not by an overspeed governor or
 - Blocking the overspeed governor (e.g. in up direction) not affect the engaging of the safety gear.
- 3.6 The force produced by the friction clutch will adjust by the manufacturer and is not adjustable at the operating place of the lift.
- 3.7 The overspeed governor can also be used to a counterweight in compliance with the permissible tripping speed.
- 3.8 This EU type-examination certificate was issued according to the following standards:
- EN 81-1:1998 + A3:2009 (D), Annex F.4, F.7 and F.8
 - EN 81-2:1998 + A3:2009 (D), Annex F.4 und F.8
 - EN 81-20:2014 (D), part 5.6.2.1.1.2, part 5.6.6.11 and part 5.6.7.13
 - EN 81-50:2014 (D), part 5.4, 5.7 and 5.8

A revision of this EU type-examination certificate is inevitable in case of changes or additions of the above mentioned standards or of changes of state of the art.

**Enclosure to the EU Type-Examination Certificate
No. EU-OG 229 of 2016-03-01**



Industrie Service

Authorised Manufacturer of Serial Production – Production Sites (valid from: 2016-03-01):

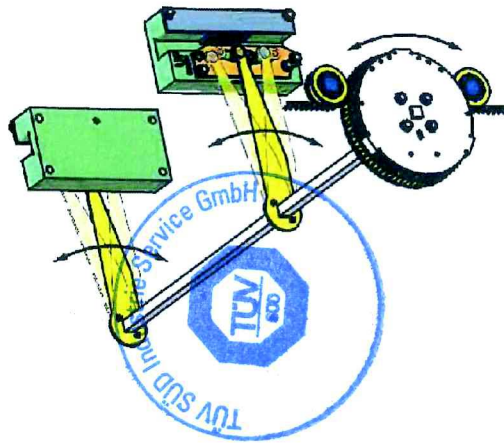
Company	LUEZAR – ECO, S.L.
Address	Pol. Malpica C/ F, Grupo Quejido, nave 69 50016 Zaragoza – Spain

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1.- SLC LM 18 CD OVERSPEED GOVERNOR

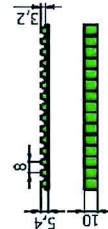
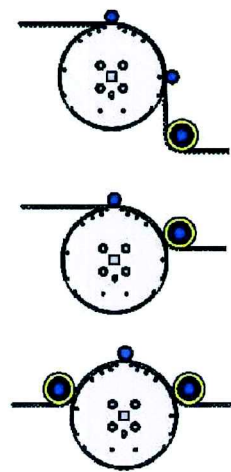
- The SLC LM 18 CD overspeed governor has been certified under the lift directive 2014/33/UE.
- It's fixed on the car sling.
 - It can perform in both directions or only in one direction.
 - It is a centrifugal overspeed governor actuated by a toothed belt, which activates mechanically the safety gears.
 - The effort transmitted to the steering linkage is limited by the governor's clutch, which allows the governor rotation after the safety gear interlocking.
 - The toothed belt is fixed to the top and to the bottom of the lift shaft by two tensioners.
 - The tensile force in the belt should be about 100N
 - The overspeed governor can be provided with a recovery system which turns the governor to its standby position.

General description SLC LM 18 CD
General assembly instructions SLC LM 18 CD
Periodic control SLC LM 18 CD



2.- BELT ARRANGEMENT

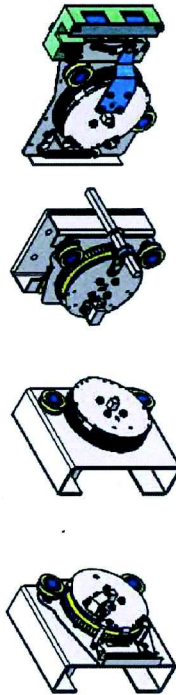
- A minimum of 12 belt teeth should engage with the governor toothed disc.
- The belt can be diverted and guided using rollers with a minimum diameter of 50mm.
- Rope retainers should be used for preventing the belt from leaving the disc.



TOOTHED BELT
Type RPU 8 M10
Tensile strength ≥ 6415 N

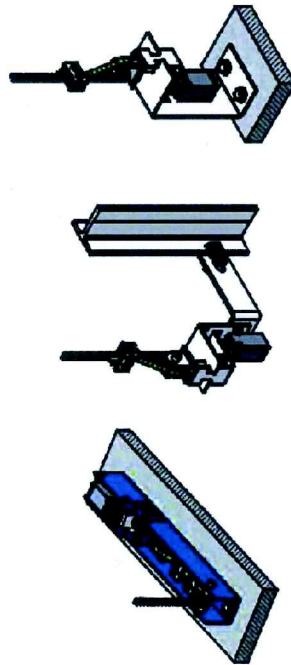
3.- OVERSPEED GOVERNOR ASSEMBLY

- Depending on the car frame type and the shaft configuration, it can be placed:
- On a support specially designed for the governor, including guide rollers and belt retainers, to be fixed to the sling.
 - Fixing every part (overspeed governor, rollers, retainers, etc) direct on the sling.
 - Attaching the overspeed governor to the safety gear.



4.- BELT TENSIONERS

- The tensioners keep the tension in the belt and control the stretch / breakage of the belt by a safety switch.
- The tensioners are placed at the top and at the bottom of the lift shaft or fixed to the guide.



5.- REMOTE ACTIVATION

The overspeed governor SLC LM 18 CD include an activating system according to 5.6.2.2.1.5 EN81-20, which causes the opening of the centrifugal masses and the interlocking of the overspeed governor.

- The system can be:
- Internal.
 - External.

INTERNAL



EXTERNAL



6.- ELECTRICAL CONTROL

In conformity with point 5.6.2.2.1.6 of EN81-20, the overspeed governor, or another device, shall initiate the stopping of the machine before the car reaches the tripping speed of the governor by means of an electric safety device.

For $V_{n1} > 1\text{m/s}$, the device must operate before the tripping speed. This device is called "overspeed switch" which consists of:

- A mechanical system.
- An electrical safety switch according to the standard 5.11.2 EN81-20.

For $V_{n1} \leq 1\text{m/s}$, the device must operate as latest as the moment when the tripping speed of the governor is reached. This function is often carried out by the electrical switch of the steering linkage of the safety gear. But an overspeed switch could be also used.

Modification report
Description
Instruction
General drawing

IM.CSLIM.00E
DG.CSLIM.00E
MM.CSLIM.00E
PG.CSLIM.00E

OVERSPEED SWITCH



1. MRZ. 2016

GEPRÜFT / APPROVED
TUV SÜD Industrie Service GmbH
Prüflaboratorium für Produkte der Fördertechnik
Westendstraße 199
80686 München

Sachverständige(r) / Expert

7.- ANTI-SLIDING PROTECTION (AD)

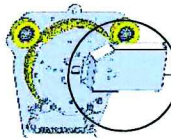
Optionally, the overspeed governor can include an anti-sliding protection system as a protection against uncontrolled car movements. This is an electro-mechanical device that locks the overspeed governor when the lift car is stopped. The system performs in both directions (upwards and downwards).

On this overspeed governor only the AD10 system can be used.

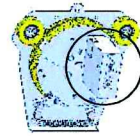
AD10 system
Performance report
Description
Instructions
General drawing


IF.AD10.00E
DG.AD10.00E
MM.AD10.00E
PG.AD10.00E

AD10H



AD10V



		Technische Zeichnung		Revision: 1		Adressat: Feld of application: Verwendungsbereich:	
Formelkennzeichnung: ISO 2768-m		Oberflächen: Surface: Oberfläche:		Gezeichnet: Entwurf: Material: Werkstoff:		Zeichnungsnummer: Drawing number: Zählung nr°:	
Skala: Hauptst.: Hauptst.: Hauptst.:		Formel: Hauptst.: Hauptst.: Hauptst.:		Datum / Date / Datum: 11/06/2015		Zeichnungsnummer: Drawing number: Zählung nr°:	
SE A3		SE A3		I+D		PG.LM18CD.00E	
SE A3		SE A3		Produktion		PG.LM18CD.00E	
SE A3		SE A3		Comercial		PG.LM18CD.00E	