ZERTIFIKAT ◆ CERTIFICATE ◆ 認証書 ◆ СЕРТИФИКАТ ◆ CERTIFICADO ◆ CERTIFICAT

Industrie Service

# EU TYPE-EXAMINATION CERTIFICATE

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

| | |
|---|---|
| **Certificate No.:** | EU-OG 280 |
| **Certification Body of the Notified Body:** | TÜV SÜD Industrie Service GmbH<br>Westendstr. 199<br>80686 Munich – Germany<br>Identification No. 0036 |
| **Certificate Holder:** | P.F.B. s.r.l.<br>Via Raimondo Dalla Costa, 690<br>41122 Modena – Italy |
| **Manufacturer of the Test Sample:**<br>(Manufacturer of Serial Production – see Enclosure) | P.F.B. s.r.l.<br>Via Raimondo Dalla Costa, 690<br>41122 Modena – Italy |
| **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:** | LK 120 |
| **Directive:** | 2014/33/EU |
| **Reference Standards:** | EN 81-20:2014<br>EN 81-50:2014<br>EN 81-1:1998+A3:2009<br>EN 81-2:1998+A3:2009 |
| **Test Report:** | EU-OG 280 of 2017-03-10 |
| **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:** | 2017-04-06 |

TÜV SÜD Industrie Service GmbH 00 36 Notified Body

Achim Janocha
Certification Body "lifts and cranes"

TÜV

# Annex to the EU Type-Examination Certificate No. EU-OG 280 of 2017-04-06

Industrie Service

## 1 Scope of application

1.1 Generally

1.1.1 Driving rope design V-groove 35°

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|---|---|
| Types | rope made of steel wire Drako 250T / PAWO 819W / PAWO F7S |
| Diameter | 6 – 6.5 mm |

1.1.2 Driving rope design V-groove 40°

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| Category | Round strand rope made of steel wire |
| Diameter | 4.0 mm |

1.1.3 Tension forces (force produced by the tensioning weight, acting on the axis of rope deviating pulley)

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|---|---|
| Tensioning force determined in the test acting downwards | 196 N |
| Tensioning force determined in the test acting up and downwards (New rope and groove) | 589 N |
| Tensile forces at given tensioning force | ≥ 300 N |

Retraction of the safety gear in both directions of rotation 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

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| Permissible tripping speed | 0.28 – 2.04 m/s |
| Permissible rated speed | ≤ 1.77 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.

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)

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|---|---|
| Max. possible response distance** | 96 mm |
| Theoretical tripping speed at acceleration of 2.5 m/s² | 0.69 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

## 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 rope according1.1.1 must be discarded in case of:
- 26 broken wires within a length of 30 x d or
- 13 broken wires within a length of 6 x d or
- a diameter reduction of more than 6 % related to nominal diameter

2.3 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).

2.4 Positioning of the overspeed governor vertical with rocker above pulley. Rope deflection optional (but at least 180° angle of wrap).

2.5 The triggering of the safety device according 1.4 takes place by interruption of the energy supply to the magnetic coin of anti-creep protection. This is not caused positive mechanically but electrically resp. electromagnetically by interruption of the energy supply to the magnetic coin 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.

2.6 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.

2.7 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).

2.8 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.

2.9 The identification drawing LK_120_DE including stamp dated 2017-03-10 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.

2.10 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):

- Design with or without testing groove
- Preliminary switch off
- Remote release
- Anti-creeping protection
- Safety switch with electrical resetting
- Attachment pulse encoder
- Protection device against rope leaving the pulley
- Protection cover
- Hardened rope groove
- Magnetic sensor

3.3 The overspeed governor can also be used to a counterweight in compliance with the permissible tripping speed.

3.4 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 5.6.2.2.1.7, 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 280 of 2017-04-06

Industrie Service

**Authorised Manufacturer of Serial Production – Production Sites (valid from: 2017-04-06):**

| | |
|---|---|
| **Company** | P.F.B. s.r.l. |
| **Address** | Via Raimondo Dalla Costa, 690<br>41122 Modena – Italy |

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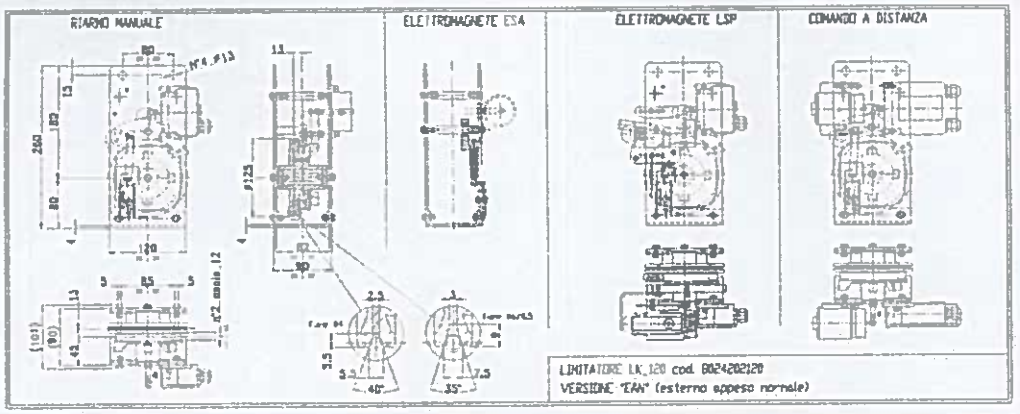


LIMITATORE LK_120 cod. 8024202120
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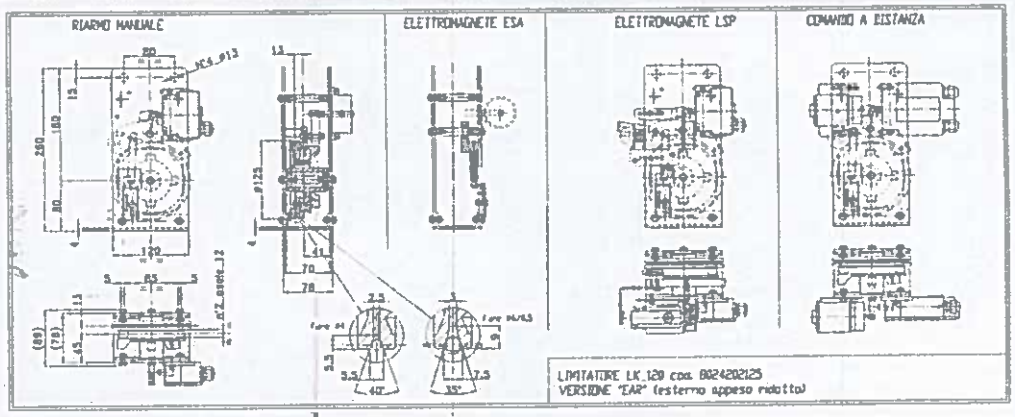


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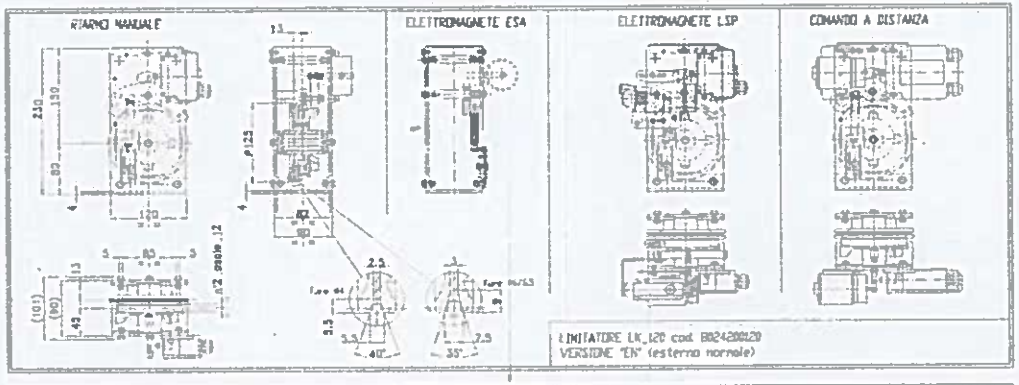


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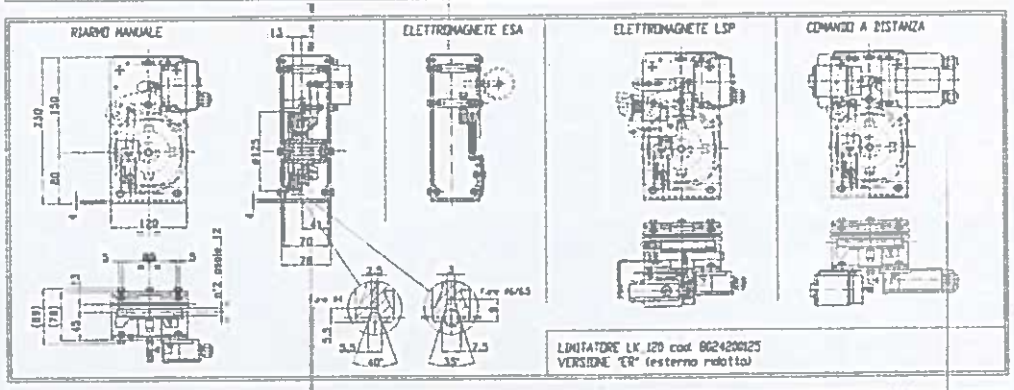


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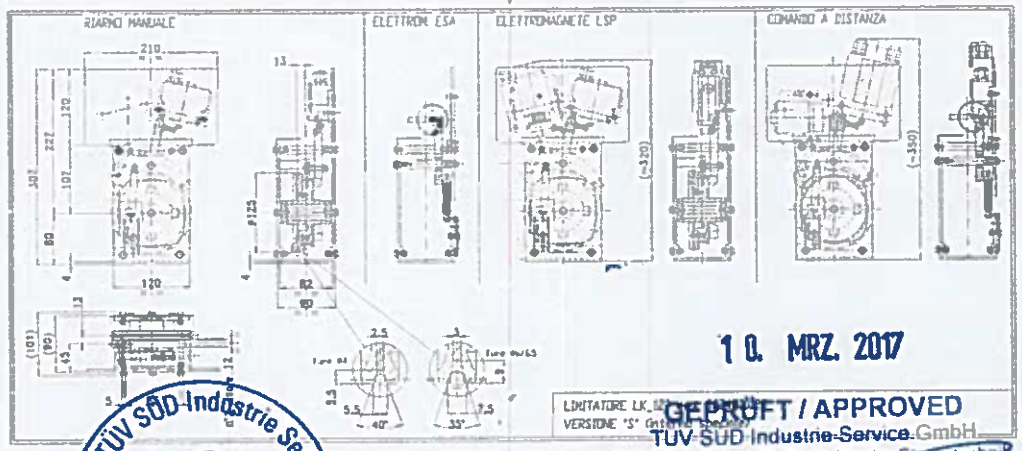


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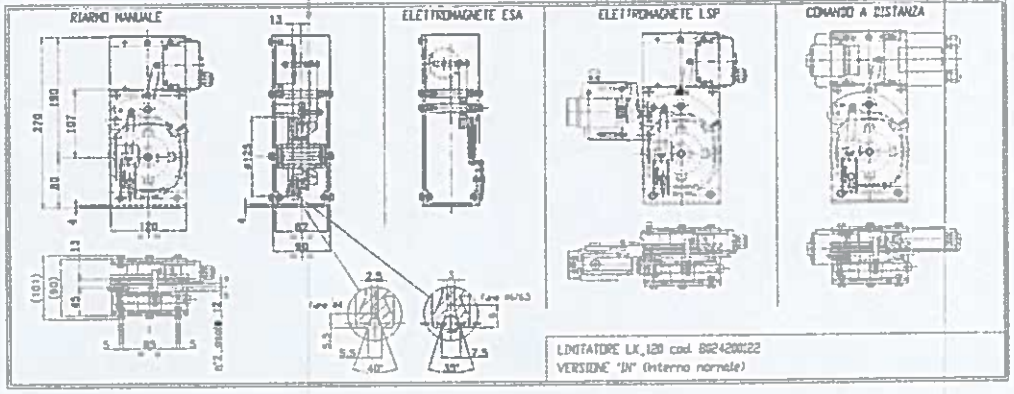


LIMITATORE LK_120 cod. 8024200122
VERSIONE "IN" (interno normale)

10. MRZ. 2017

GEPRÜFT / APPROVED
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| ed. | data | MODIFICHE - MODIFIKATIONEN |

COMPLESSIVI LIMITATORI LK_120
versioni "EN"/"ER"/"EAN"/"ER"/"EAR"

INTERNATIONAL PATENT N°

COMPONENTI MECCANICI PER ASCENSORI

8024200120 GENERICO

LK_120_DE