### 9.6 EU Type Examination Certificate

TÜV SÜD
Industrie Service

# EU-TYPE EXAMINATION CERTIFICATE

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

| | |
|---|---|
| **Certificate No.:** | EU-BD 1112 |
| **Notified Body:** | TÜV SÜD Industrie Service GmbH<br>Westendstr. 199<br>80686 Munich - Germany<br>Identification No. 0036 |
| **Certificate Holder:** | Chr. Mayr GmbH & Co. KG<br>Eichenstr. 1<br>87665 Mauerstetten - Germany |
| **Manufacturer of the Test Sample:**<br>(Manufacturer of Serial Production – see Enclosure) | Chr. Mayr GmbH & Co. KG<br>Eichenstr. 1<br>87665 Mauerstetten - Germany |
| **Product:** | Braking device acting on the shaft of the traction sheave, as part of the protection device against overspeed for the car moving in upwards direction and braking element against unintended car movement |
| **Type:** | RTW 800 / 8012._ _ _ _ _ |
| **Directive:** | 2014/33/EU |
| **Reference Standards:** | EN 81-20:2020<br>EN 81-50:2020 |
| **Test Report:** | EU-BD 1112 of 2020-11-19 |
| **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:** | 2020-11-19 |

Achim Janocha
Notified Body LCC

TÜV SÜD Industrie Service GmbH
00
36
Notified Body

TÜV®

## Annex to the EU Type-Examination Certificate
## No. EU-BD 1112 of 2020-11-19

**1**      **Scope of application**

**1.1**      **Use as braking device – part of the protection device against overspeed for the car moving in upwards direction – permissible brake torques and tripping rotary speeds**

1.1.1      Permissible brake torque when the braking device acts on the shaft of the traction sheave while the car is moving upward

| Permissible brake torque [Nm] | Max. tripping rotary speed of the traction sheave [rpm] |
|---|---|
| 1200 - 1840 | 500 |

1.1.2      Maximum tripping speed of the overspeed governor and maximum rated speed of the lift

The maximum tripping speed of the overspeed governor and the maximum rated speed of the lift must be calculated on the basis of the traction sheave's maximum tripping rotary speed as outlined above taking into account traction sheave diameter and car suspension.

$$v = \frac{D_{TS} \times \pi \times n}{60 \times i}$$

$v$ = Tripping (rated) speed (m/s)
$D_{TS}$ = Diameter of the traction sheave from rope's centre to rope's centre (m)
$\pi$ = 3,14
$n$ = Rotary speed (rpm)
$i$ = Ratio of the car suspension

**1.2**      **Use as braking element – part of the protection device against unintended car movement (acting in up and down direction) – permissible brake torques, tripping rotary speeds and characteristics**

1.2.1      Nominal brake torques and response times with relation to a brand-new brake element

Type 8012._4_ _ oder 8012._5_ _

| Min. nominal brake torque* [Nm] | Mid. nominal brake torque* [Nm] | Max. nominal brake torque * [Nm] | Max. tripping rotary speed [rpm] | Maximum response times** [ms] without / with overexcitation | | |
|---|---|---|---|---|---|---|
| | | | | $t_0$ | $t_{50}$ | $t_{90}$ |
| 2 x 600 = 1200 | | | | 50 / -- | 85 / -- | 160 / --- |
| | 2 x 800 = 1600 | | 500 | 30 / --- | 60 / -- | 100 / --- |
| | | 2 x 920 = 1840 | | -- / 45 | -- / 70 | --- / 120 |

Type 8012._0_ _ oder 8012._1_ _

| Min. nominal brake torque* [Nm] | Mid. nominal brake torque* [Nm] | Max. nominal brake torque * [Nm] | Max. tripping rotary speed [rpm] | Maximum response times** [ms] without / with overexcitation | | |
|---|---|---|---|---|---|---|
| | | | | $t_0$ | $t_{50}$ | $t_{90}$ |
| 2 x 600 = 1200 | | | | 120 / --- | 175 / --- | 265 / --- |
| | 2 x 800 = 1600 | | 500 | 75 / -- | 110 / --- | 215 / --- |
| | | 2 x 920 = 1840 | | -- / 85 | --- / 110 | --- / 200 |

Interim values can be interpolated

Explanations:

  *    **Nominal brake torque:**      Brake torque assured for installation operation by the safety component manufacturer.

  **    **Response times:**      $t_X$ time difference between the drop of the braking power until establishing X% of the nominal brake torque , $t_{50}$ optionally calculated $t_{50}= (t_{10}+ t_{90})/2$ or value taken from the examination recording

**Note:** The English text is a translation of the German original. In case of any discrepancy, the German version is valid only.      Page 1 of 2

**ZIEHL-ABEGG**

<div align="center">

**Annex to the EU Type-Examination Certificate
No. EU-BD 1112 of 2020-11-19**

</div>

TÜV SÜD

Industrie Service

### 1.2.2 Assigned execution features

| | |
|---|---|
| Type of powering / deactivation | continuous current / continuous current end |
| Brake control | parallel |
| Nominal air gap | 0.45 mm |
| Damping elements | YES |
| Overexcitation | at double non-release voltage |

## 2 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 detecting and triggering component in accordance with the standard (two separate components also possible), which must be subjected to an own type-examination, can the system created fulfil the requirements for a protection device.

2.2 The installer of a lift must create an examination instruction to fulfil the overall concept, add it to the lift documentation and provide any necessary tools or measuring devices, which allow a safe examination (e. g. with closed shaft doors).

2.3 The manufacturer of the drive unit must provide calculation evidence that the connection traction sheave – shaft – brake disc and the shaft itself is sufficiently safe, if the brake disc is not a direct component of the traction sheave (e. g. casted on). The shaft itself has to be statically supported in two points.
The calculation evidence must be enclosed with the technical documentation of the lift.

2.4 The setting of the brake torque must be secured against unauthorized adjustment (e. g. sealing lacquer).

2.5 The identification drawing no. E02810410000260 including stamp dated 2020-11-19 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.

2.6 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 In the scope of this type-examination it was found out, that the brake device also functions as a brake for normal operation, is designed as a redundant system and therefore meets the requirements to be used also as a part of the protection device against overspeed for the car moving in upwards direction and as braking element as part of the protection device against unintended car movement.

3.2 Checking whether the requirements as per section 5.9.2.2 of EN 81-20:2020 (D) have been complied with is not part of this type examination.

3.3 Other requirements of the standard, such as reduction of brake moment respectively brake force due to wear or operational caused changes of traction are not part of this type examination.

3.4 This EU type-examination certificate was issued according to the following standards:

    – EN 81-1:1998 + A3:2009 (D), Annex F.7 and F.8
    – EN 81-20:2014 (D), part 5.6.6.11, 5.6.7.13    - EN 81-50:2014 (D), part 5.7 and 5.8
    – EN 81-20:2020 (D), part 5.6.6.11, 5.6.7.13    - EN 81-50:2020 (D), part 5.7 and 5.8

3.5 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.

**Note:** The English text is a translation of the German original. In case of any discrepancy, the German version is valid only.

Page 2 of 2

**ZIEHL-ABEGG**

## Enclosure to the EU-Type Examination Certificate
## No. EU-BD 1112 of 2020-11-19

**Authorised Manufacturer of Serial Production – Production Sites (valid from: 2020-07-23):**

| | |
|---|---|
| **Company** | Chr. Mayr GmbH & Co. KG |
| **Address** | Eichenstr. 1 |
| | 87665 Mauerstetten - Germany |

| | |
|---|---|
| **Company** | Mayr Polska Sp. z. o. o. |
| **Address** | Rojów, ul. Hetmanska 1 |
| | 63-500 Ostrzesów - Poland |

- END OF DOCUMENT -

Based on: Application letter from Chr. Mayr GmbH & Co. KG of 2020-07-23

Page 1 of 1

**ZIEHL-ABEGG**