

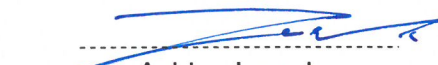


Industrie Service

EU-TYPE EXAMINATION CERTIFICATE

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

Certificate No.:	EU-BD 1118
Notified Body:	TÜV SÜD Industrie Service GmbH Westendstr. 199 80686 Munich – Germany Identification No. 0036
Certificate Holder:	Wittur Holding GmbH Rohrbachstrasse 26-30, 85259 Wiedenzhausen - Germany
Manufacturer of the Test Sample: (Manufacturer of Serial Production - see Enclosure)	Zhejiang Furder Drive Technology Co., Ltd. No. 567, Tunheng Road, Nanxun Town, Nanxun District, Huzhou City, Zhejiang Province, P.R. China
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:	VED40
Directive:	2014/33/EU
Reference Standards:	EN 81-20:2020 EN 81-50:2020
Test report:	No. EU-BD 1118 dated 2021-05-21
Outcome:	The product conforms to the essential health and safety requirements of the mentioned Directive if the requirements of the annex to this EU-type examination certificate are kept.
Date of Issue:	2021-07-15


Achim Janocha
Notified Body LCC



Annex to the EU-Type Examination Certificate No. EU-BD 1118 of 2021-07-15



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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 torque and maximum tripping speed

Permissible brake torque when the braking devices act on the shaft of the traction sheave while the car is moving upward and the maximum tripping rotary speed of the traction sheave

Permissible brake torque when the braking devices act on the shaft of the traction sheave while the car is moving upward [Nm]	Maximum tripping rotary speed of the traction sheave [rpm]
$2 \times 900 = 1800$	314

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

v = Tripping speed(m/s)

D_{TS} = Diameter of the traction sheave from rope's centre to rope's centre (m)

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

π = 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 torque, response time, maximum tripping speed and features

1.2.1 Nominal brake torque and response time with relation to a brand-new brake element

Nominal brake torque * [Nm]	Maximum tripping rotary speed [rpm]	Maximum response time ** [ms]		
		t_{10}	t_{50}	t_{90}
$2 \times 900 = 1800$	314	57	113	172

Interim values can be interpolated.

Explanations:

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

** Response time: 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

1.2.1 Assigned execution features

Type of powering / deactivation	Continuous current / continuous current end
Brake control	In parallel
Nominal air gap	0.20 - 0.35 mm
Damping elements	Yes
With/without Over-excitation	Without
Rated voltage	110 VDC \pm 10%
Coil resistance (total coils) at 20°C	37.2 Ω \pm 5%

2 Conditions

2.1 The approval drawing No. D2200981 with certification stamp dated on 2020-12-21 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.

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- 2.2 The EU-type examination certificate may only be used in combination with the corresponding annex and enclosure (List of authorized manufacturers of the serial production). The enclosure will be updated immediately after any change by the certification holder.
- 2.3 The above mentioned safety component represents only a part of the protection device against overspeed for the car moving in upwards direction and unintended car movement (acting in up and down direction), only in combination with a detecting and triggering component in accordance with the standards (two separate components also possible), which must be subjected to an own EU-type examination, can the system be created for fulfilling the requirements for a protection device.
- 2.4 The installer of a lift must create an examination instruction to fulfil the overall concept, add it to lift documentation and provide any necessary tools or measuring devices, which allow a safe examination (e.g. with closed shaft doors).
- 2.5 The manufacturer of the drive unit must provide calculation evidence that the connection traction sheave – shaft – brake disc (drum, rotor) and the shaft itself is sufficiently safe, if the brake disc (drum, rotor) 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.
- 2.6 The setting of the brake torque/force has to be secured against unauthorized adjustment (e. g. sealing lacquer).

3 Remarks

- 3.1 This EU-type examination certificate was issued according to the following standards:
- EN 81-20:2020, Clause 5.6.6.11 and 5.6.7.13
 - EN 81-50:2020, Clause 5.7 and 5.8
 - EN 81-20:2014, Clause 5.6.6.11 and 5.6.7.13
 - EN 81-50:2014, Clause 5.7 and 5.8
- In case of changes resp. amendments of the above-named standards resp. advancements of the state of the art, a revision of this EU-Type Examination Certificate will be necessary.
- 3.2 In the scope of this EU-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 a part of the protection device against unintended car movement.
- 3.3 Checking whether the requirements as per clause 5.9.2.2 of EN 81-20:2020 have been complied with is not part of this EU-type examination.
- 3.4 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 EU-type examination.

**Enclosure to the EU-Type Examination Certificate
No. EU-BD 1118 of 2021-07-15**



Industrie Service

Authorised Manufacturer of Serial Production – Production Sites (valid from:2021-07-15):

Company **Zhejiang Funder Drive Technology Co., Ltd.**
Address No. 567, Tunheng Road, Nanxun Town, Nanxun District,
 Huzhou City, Zhejiang Province, P.R. China

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