



EU TYPE-EXAMINATION CERTIFICATE

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

Certificate No.: EU-BD 761

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

Certificate Holder: Chr. Mayr GmbH & Co. KG
Eichenstr. 1
87665 Mauerstetten - Germany

Manufacturer of the Test Sample: Chr. Mayr GmbH & Co. KG
Eichenstr. 1
87665 Mauerstetten - Germany
(Manufacturer of Serial Production – see Enclosure)

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: 896.1 __ . __, Size 200, 300, 500, 800, 1300, 1800

Directive: 2014/33/EU

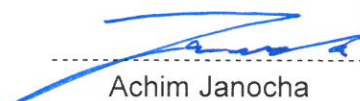
Reference Standards: EN 81-20:2014
EN 81-50:2014
EN 81-1:1998+A3:2009


Test Report: EU-BD 761 of 2015-09-30

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: 2015-09-30

Date of Validity: from 2016-04-20


Achim Janocha
Certification Body "lifts and cranes"



**Annex to the EC Type-Examination Certificate
No. EU-BD 761 of 2015-09-30**



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1 Scope of application

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

1.1.1 Permissible brake torques and maximum tripping rotary speeds of the traction sheave when the brake device acts on the shaft of the traction sheave while the car is moving upward

Size	Permissible brake torque [Nm]	Max. tripping rotary speed of the traction sheave [rpm]
200	150 - 300	1000
300	225 - 500	800
500	380 - 800	730
800	600 - 1200	730
1300	980 - 1800	580
1800	1350 - 2300	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 center to rope's center (m)
 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 torques, tripping rotary speeds and characteristics

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

Size	Min. 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}
200	150		1000	80 / 80	120 / 130	170 / 190
200		300	1000	35 / 40	60 / 75	100 / 120
300	225		800	90 / 90	170 / 180	200 / 220
300		500	800	35 / 40	100 / 120	165 / 200
500	380		730	100 / 100	160 / 170	230 / 240
500		800	730	45 / 55	75 / 90	150 / 180
800	600		730	95 / 95	175 / 180	220 / 240
800		1200	730	35 / 40	75 / 90	140 / 170
1300	980		580	115 / 120	180 / 195	250 / 265
1300		1800	580	45 / 55	100 / 130	130 / 200
1800	1350		500	145 / 145	225 / 240	320 / 340
1800		2300	500	65 / 80	150 / 175	200 / 260

Interim values can be interpolated

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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

1.2.2 Assigned execution features

Type of powering / deactivation	continuous current / continuous current end
Nominal air gap	0.45 – 0.55 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 triggering of the braking device is not caused positive mechanically but electrically resp. electromagnetically by interruption of the energy supply to the magnetic coil of the braking device. However, the mechanical engagement of the braking device has to be absolutely guaranteed after the electrical safety device has responded.
In light of the above, the braking device must be made to engage at regular intervals e. g. once daily, so that the anchor plates can be checked for correct closing (e.g. micro switches resp. proximity switch). If the anchor plates do not perform correctly (anchors fail to close) the lift must be kept at standstill.
- 2.4 Appropriate measures must ensure that it is evident in the machine room whether the braking device has responded in line with its intended use as a safety component (following failure of an item of operating equipment such as breakage of a gearing element or shaft) or whether the response was caused by other reasons (e. g. loss of power supply). It must also have to be provided a instruction sheet how to proceed in emergency operation (moving the car through manual operation or return motion control) after the braking device has responded. Once the braking device has responded in the intended way as a safety component, it should never be possible to move the lift machine via the return motion control.
- 2.5 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.
- 2.6 The setting of the brake torque has to be secured against unauthorized adjustment (e. g. sealing lacquer).
- 2.7 The identification drawing no. E07909000000261 including stamp dated 2015-09-30 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.

**Annex to the EC Type-Examination Certificate
No. EU-BD 761 of 2015-09-30**



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2.8 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 A code number for the brake moment effectively adjusted will be marked at the first blank in the type designation 896.1 __ . __ within the permissible scope of application. A code number for design characteristics which are not directly part of the type-examination will be marked at the second, third and fourth blank (e. g. in the second blank: with flange plate, hand release; in the third blank: characteristics for electrical connection; in the fourth blank: with or without cover).
- 3.2 Checking whether the requirements as per section 5.9.2.2 of EN 81-20:2014 (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
- 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.

**Enclosure to the EU Type-Examination Certificate
No. EU-BD 761 of 2015-09-30**



Industrie Service

Authorised Manufacturer of Serial Production – Production Sites (valid from: 2015-09-30):

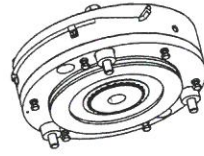
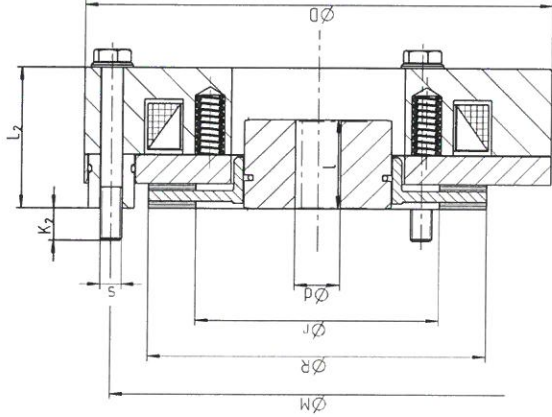
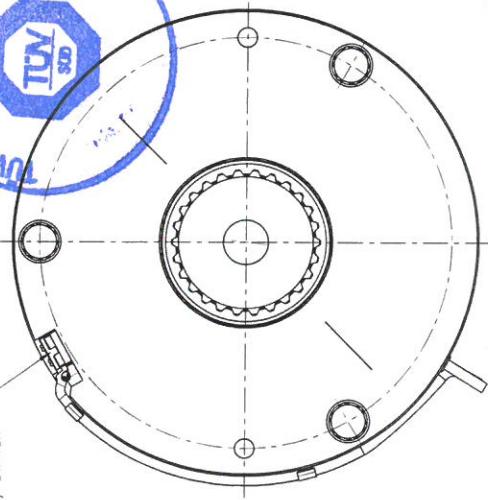
Company Chr. Mayr GmbH & Co. KG
Address Eichenstr. 1
87665 Mauerstetten - Germany

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

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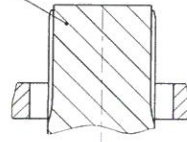


© Mikroschalter/ micro switch
Initiator/ proximity switch



1:5

© Sonderausführungen
alternativ mit
direktverzahler
Motorwelle /
special designs
alternative with
splined motor shaft



30. SEP. 2015

GEPRÜFT / APPROVED

TÜV SÜD Industrie Service GmbH
Prüflaboratorium für Produkte der Fördertechnik
Westendstraße 199
80686 München

Sachverständiger / Expert

1) Maße variabel:
Zulässige Bohrungsdurchmesser, Nabenlängen und Einschraubtiefen sind vom Drehmoment der Bremse
abhängig und können an vorgegebene Wellenenden bzw. Motorflansche angepasst sein. /
Dimensions variable:
Permitted bore diameters, hub lengths and screw in depth are dependent on
braking torque and could be adapted to specified motor shafts and motor flanges.

Größe	Bohrung/ bore	Ø ± 5	Ø R-4	Ø r	Ø M	L 2	11) Ø L	11) Ø K 2	11) Ø S
200	30-46	223	170	172	196	76	35	14,2	3xM10
300	24-59	261	188	135	230	79,4	50	18,1	3xM12
500	40-69	285	213	150	250	86	50	21,5	3xM12
800	45-79	329	246	180	290	94,5	60	22,5	3xM16
1300	56-95	370	283,5	208	325/330	84-99,5	70	25-28	3xM16 4xM16
1800	66-104	415	320	230	370	102,5	80	24,5	4xM16

Geprüft auf: Zeichnungs-Nr.		Arbeits-Nr.		* Abweich. v. approved	
Zeichner	Blatt	Druckgröße	Druck	Werkzeug-Nr.	Datum
11108.00.01	1/1	DIN EN ISO 10303	1:1	11108.00.01	11.09.2015
Werkstoff	Werkstoff-Nr.	Material	Material	11108.00.01	11.09.2015
Alu	11108.00.01	Alu	Alu	11108.00.01	11.09.2015
Zeichnungs-Nr. RSO 200-1800 / 896.1					
Fertigungs-Nr. E079090000000261					
Preiscode 1:2					
Zeichnungs-Nr. 06633994					