



Industrie Service

EC type-examination certificate

Certificate no.:	ABV 834
Notified body:	TÜV SÜD Industrie Service GmbH Westendstr. 199 80686 München - Germany
Applicant/ Certificate holder:	Chr. Mayr GmbH & Co. KG Eichenstraße 1 87665 Mauerstetten - Germany
Date of application:	2009-11-20
Manufacturer of the test sample:	Chr. Mayr GmbH & Co. KG Eichenstraße 1 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
Type:	RSO 1800/896.03-.-
Test laboratory:	TÜV SÜD Industrie Service GmbH Prüflaboratorium für Produkte der Fördertechnik Prüfbereich Aufzüge und Sicherheitsbauteile Westendstr. 199 80686 München - Germany
Date and number of test report:	2010-01-21 ABV 834
EC-directive:	95 / 16 / EC
Result:	The safety component conforms to the essential safety requirements of the Directive for the respective scope of application stated on page 1 - 3 of the annex to this EC type -examination certificate
Date of issue:	2010-02-04

Certification body for lifts and safety components
Identification number: 0036

S. Melzer

Siegfried Melzer





**Annex to the EC type-examination certificate
No. ABV 834 dated 2010-02-04**

1. Scope of Application

1.1 Permissible brake moment when the brake device acts on the shaft of the traction sheave while the car is moving upward 2800 Nm

1.2 Maximum tripping speed of the overspeed governor and maximum rated speed

The maximum tripping speed and the maximum rated speed must be calculated on the basis of the traction sheaves maximum tripping rotary speed and maximum rated rotary speed as outlined in sections 1.2.1 and 1.2.2 taking into account traction-sheave diameter and car suspension.

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

v = speed (m/s)
D = Diameter of the traction sheave from rope's center to rope's center (m)
 π = 3,14
n = Rotary speed (min⁻¹)
i = Ratio of the car suspension

1.2.1 Maximum tripping speed of the traction-sheave 460 min⁻¹

1.2.2 Maximum rated speed of the traction-sheave 400 min⁻¹

2. Conditions

2.1 Since the brake device represents only a part of the protection device against overspeed for the car moving in upwards direction an overspeed governor as per EN 81-1, paragraph 9.9 must be used to monitor the upward speed and the brake device must be triggered (engaged) via the overspeed governor's electric safety device.

Alternatively, the speed may also be monitored and the brake device engaged by a device other than an overspeed governor as per paragraph 9.9 if the device shows the same safety characteristics and has been type tested.

2.2 In order to recognise the loss of redundancy the movement of each brake circuit (each anchor) is to be monitored separately and directly (e.g. by micro switches). If a brake circuit fails to engage (close) while the lift machine is at standstill, next movement of the lift must be prevented.

2.3 In cases where the lift machine moves despite the brake being engaged (closed), the lift machine must be stopped at the next operating sequence at the latest and the next movement of the lift must be prevented. (The car may, for example, be prevented from traveling by querying the position of the micro switch which is used to monitor the mechanical movement of the brake circuits, should both brake circuits fail to open).

2.4 According to EN 81-1, paragraph 9.10.4 d a braking device must act directly on the traction sheave or on the same shaft on which the traction sheave is situated in the immediate vicinity thereof.

If the braking device does not act in the immediate vicinity of the traction sheave on the same shaft on which the traction sheave is situated, the standard is not complied with. In cases involving shaft failure in the extended area between the traction sheave and the braking device, safety would no longer be ensured by the latter if the lift car made an uncontrolled upward movement.



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Shaft failure in the extended area must therefore be ruled out by appropriate design and sufficient dimensioning. In order to eliminate or reduce influencing factors which may lead to failure wherever possible, the following requirements must be satisfied:

- Minimization of bending length between traction sheave and braking device or traction sheave and the next bearing (the next bearing must form part of the drive unit)
- Static defined bearing (e. g. 2-fold borne shaft) otherwise measures are required to obtain a defined loading
- As far as possible, prevention of a reduction in load-bearing capacity in the area of reversed bending stress (reduction in load-bearing capacity caused, for example, by stress concentration and cross-sectional reductions)
- Between traction sheave and braking device the shaft must be continuous (made from one piece)
- Cross-sectional influences on the shaft are only permitted if they act on the following connections: traction sheave – shaft, braking device – shaft, torque of the transmitting component – shaft (situated between traction sheave and braking device).

2.5 The manufacturer of the drive unit must provide calculation evidence that the connection braking device – shaft, traction sheave - shaft and the shaft itself is sufficiently safe.

If necessary, evidence must be provided for the intended measures, too (see static undefined bearing).

The calculation evidence must be enclosed with the technical documentation of the lift.

3. Remarks

3.1 Precondition for the validity of this certificate is that the requirements outlined in Directive 95/16/EC, Article 8 Section 1 point a) (monitoring the production) for placing safety components on the market are met.

3.2 Possible modules for monitoring the production of safety components are:

- a) random checking of the production (Directive 95/16/EC, Annex XI, module C),
or
- b) a full quality assurance system for monitoring the production (Directive 95/16/EC, Annex VIII, module E)

3.3 All changes of or deviations from the inspected safety component which are not included in section 1: „Scope of application“ must be advised immediately and in writing. The notified body decides whether and to what extent complementary examinations of the changed test object will be necessary.

3.4 The assigned certificate number may not be used for other products that do not comply with the tested product.

3.5 The permissible brake forces must be applied to the lift system in such a manner, that the empty car moving in upwards direction is not decelerated by more than $1g_n$.

3.6 A code number will be inserted in the blank in the type designation RSO 1800/896.03-.- according to the design (3 with hand release, 2 without hand release).

3.7 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.

This type examination only refers to the requirements pertaining to brake devices as per EN 81-1, paragraph 9.10.

Checking whether the requirements as per paragraph 12.4 have been complied with is not part of this type examination.



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- 3.8 For the purposes of identification and information concerning the fundamental method of construction, the approval drawing no. E079 14 015 000 1 10 (with hand release) of 2007-06-11 with last alteration of 2010-01-20 with certification stamp dated 2010-02-04 or drawing no. E079 14 015 000 1 11 (without hand release) of 2010-02-03 with certification stamp dated 2010-02-04 have to be attached to the EC type-examination certificate ABV 834 and its annex.
- 3.9 A sign with particulars for identification of the safety component, containing the name of the manufacturer, the sign of the EC type-examination and the type specification must be attached at the product.
- 3.10 The environment and connection conditions of the safety gear are described and depicted in additional documents (e. g. the assembly instructions).
- 3.11 This certificate is state-of-the-art, as documented by harmonized standards valid at present. In case of changes or supplements to this standard, or in case of a development of the state of the art, a revision of this certificate may become necessary.
- 3.12 The EC type-examination certificate may only be used in connection with the pertinent annex.
- 3.13 In addition to the conditions stated above, all other provisions of the general terms and the agreement on the test carried out are applicable to the TÜV SÜD certificate.
- 3.14 If the certificate will become invalid or will be declared invalid, it must be returned to the certification body.
- 3.15 The English text is a translation of the German original. In case of any discrepancy, the German version is valid only.

EU – Konformitätserklärung
EU – Declaration of conformity
Déclaration de conformité UE
Dichiarazione di conformità UE
Declaración de conformidad de la UE
Declaração de conformidade da UE

Im Sinne der Richtlinie Aufzüge 2014/33/EU erklären wir
In terms of the Directive 2014/33/EU relating to lifts, we
Conformément à la directive 2014/33/UE sur les ascenseurs, nous déclarons par la présente,
Secondo la Direttiva per ascensori 2014/33/UE, la presente
En el sentido de la Directiva 2014/33/UE sobre ascensores
Nos termos da diretiva 2014/33/UE declaramos

Chr. Mayr GmbH + Co. KG
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dass die angeführten Produkte den Anforderungen der oben genannten EU-Richtlinie entsprechen.
declare that the listed products meet the requirements of the above mentioned EU Directive.
que les produits décrits satisfont aux exigences de la directive UE susmentionnée.
dichiara che i prodotti sotto elencati soddisfano i requisiti della suddetta Direttiva UE.
declaramos que los productos indicados arriba cumplen los requisitos de la Directiva UE.
que os produtos abaixo mencionados correspondem às exigências da diretiva UE supramencionada.

Elektromagnetische Federdruckbremse / Electromagnetic spring applied brakes / Freins électromagnétiques à ressort de pression / Freni elettromagnetici a molle compresse / Frenos de muelles electromagnéticos / Freio eletromagnético de molas

Produkt / Product / Produit / Prodotto / Producto / Produto	Größen / Sizes / Tailles / Grandezze / Dimensión / Dimensão	Typen / Types / Types / Serie / Tipos / Tipos	ANVP
ROBA-stop®-silenzio®	1800	896.03 _._ _	1, **, ***

Jahr der Herstellung: <i>Year of manufacture:</i> Année de production: <i>Anno di produzione:</i> Año de fabricación: <i>Ano de fabricação:</i>	Siehe Typenschild am Produkt <i>see product label</i> Voir l'étiquette sur le produit <i>vedi l'etichetta sul prodotto</i> ver placa de identificación del producto <i>Ver placa do produto</i>
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Mauerstetten, gültig ab dem 20.4.2016

Ort und Datum / place and date / Lieu et date /
luogo – data / fecha y lugar / Lugar e data


 Dipl. Ing. (FH) / graduate engineer / Engenheiro graduado
 Geschäftsführer / Managing Director / Directeur Général / Gerente / Gerente
 Günther Klingler

Angewendete Normen, Vorschriften und Prüfungen (ANVP) / Applied standards, regulations and inspections (ANVP) / Normes, prescriptions et contrôles appliqués (ANVP) / In conformità alle direttive UE di norme, specifiche e controlli (ANVP) / Normas, regulaciones e inspecciones aplicadas (ANVP) / Normas, regulamentações e inspeções aplicadas (ANVP)

1	EN 81-20:2014 / EN 81-50:2014 / EN 81-1:1998 + A3:2009	Sicherheitsregeln – Konstruktion u. Einbau von Aufzügen <i>Safety rules – Construction and installation of lifts</i> Règles de sécurité – construction et installation d'ascenseurs <i>Regole di sicurezza per la costruzione e il montaggio di ascensori</i> Reglas de seguridad – Construcción y montaje de ascensores <i>Regras de segurança – Construção e instalação de elevadores</i>	2014/33/EU 2014/33/EU 2014/33/EU 2014/33/EU 2014/33/EU
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Zertifizierungsstelle für Aufzüge und Sicherheitsbauteile, Überwachung gemäß Aufzugsrichtlinie:

Certification body for lifts and safety components, monitoring of production acc. lifts directive:

Organisme de certification pour ascenseurs et composants de sécurité, contrôle de production selon la directive sur les ascenseurs:

Organismo di certificazione per ascensori e componenti di sicurezza, controllo di produzione secondo la Direttiva per ascensori :

Centro de certificación para ascensores y componentes de seguridad, supervisión según la directiva de ascensores:

Centro de certificação para elevadores e componentes de segurança, monitoramento conforme a diretiva para elevadores:

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Kennnummer 0036 / Identification number 0036 / Numéro d'identification 0036 / Numero d'identificazione 0036 / Número de identificación 0036 / Número de identificação 0036 /

Sicherheitsfunktion / Safety function / Fonction de sécurité / Funzione di sicurezza / Función de seguridad / Função de segurança

Bremseinrichtung, als Teil der Schutzvorrichtung für den aufwärtsfahrenden Fahrkorb gegen Übergeschwindigkeit und Bremsselement gegen unbeabsichtigte Bewegung des Fahrkorbs.

Braking device as part of the protection device against over speed for the car moving in upwards direction and braking element against unintended car movement.

Dispositif de freinage faisant partie d'un système de protection contre la survitesse en montée de la cabine d'ascenseur et élément de freinage contre le déplacement involontaire de la cabine d'ascenseur.

Dispositivo di frenatura come parte del dispositivo di protezione contro la fuga verso l'alto della cabina e elemento di frenatura contro i movimenti incontrollati della cabina.

Dispositivo de frenado como parte de un dispositivo de seguridad contra la sobrevelocidad de la cabina en movimiento ascendente y como elemento de frenado contra movimientos incontrolados de la cabina.

Dispositivo de freio para ser usado como parte da unidade de proteção para prevenir excesso de velocidade da cabine elevadora em movimento ascendente e elemento de freio contra movimentos inadvertidos da cabine elevadora.

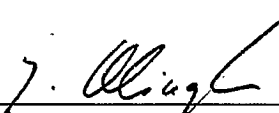
EU-Baumusterprüfbescheinigung / EU type examination certificate / Certificate d'examen de type UE / Certificato di omologazione UE / Certificado de examen UE / Certificado de exame UE

EU-BD 834

	* EG-Maschinenrichtlinie 2006/42/EG * Directive 2006/42/CE sur les machines * Directiva de Máquinas 2006/42/CE	* EC-Machinery directive 2006/42/EC * Direttiva macchine 2006/42/CE * Diretiva para maquinaria 2006/42/CE
X	** Richtlinie Niederspannung 2014/35/EU ** Directive 2014/35/UE sur les basses tensions ** Directivas de Baja Tensión 2014/35/UE	** EC-Low voltage directive 2014/35/EU ** Direttiva per il basso voltaggio 2014/35/UE ** Diretiva de baixa voltagem 2014/35/UE
X	*** Elektromagnetische Verträglichkeit 2014/30/EU *** Directive 2014/30/UE sur la compatibilité électromagnétique *** Compatibilidad Electromagnética 2014/30/UE	*** Electromagnetic compatibility directive 2014/30/EU *** Direttiva per la compatibilità elettromagnetica 2014/30/UE *** Diretiva de compatibilidade eletromagnética 2014/30/UE

Mauerstetten, gültig ab dem 20.4.2016

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