

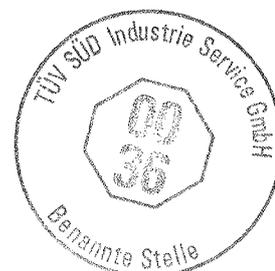


EC type-examination certificate

Certificate no.:	ABV 749/1
Notified body:	TÜV SÜD Industrie Service GmbH Zertifizierungsstelle für Aufzüge und Sicherheitsbauteile Westendstraße 199, 80686 München - Germany
Applicant/ Certificate holder: (Responsible manufacturer)	Inventio AG Seestr. 55 6052 Hergiswil - Switzerland
Date of submission:	2006-10-10
Manufacturer:	Schindler Aufzüge AG EBI Works 6030 Ebikon- Switzerland
Product, type:	Braking device, acting on the traction sheave, as part of the protection device against overspeed for the car moving in upwards direction, type FM 710
Test Laboratory:	TÜV SÜD Industrie Service GmbH Prüfbereich Aufzüge und Sicherheitsbauteile Westendstraße 199, 80686 München - Germany
Date and Number of test report:	2006-10-27 749/1
EC-directive:	95 / 16 / EC
Statement:	The safety component conforms to the directive's essential safety requirements for the respective scope of application stated on page 1 of the annex to this EC type-examination certificate.
Certificate date:	2006-10-27

Zertifizierungsstelle für Aufzüge und Sicherheitsbauteile
Identification number: 0036


 Dieter Roas



**Annex to the EC type-examination certificate
No. ABV 749/1 dated 2006-10-27**

1. Scope of Application

- | | | |
|-------|--|------------------|
| 1.1 | Permissible brake moment when the brake device acts on the traction sheave while the car is moving upward | 16146 - 38336 Nm |
| 1.2 | Maximum tripping speed of the overspeed governor and maximum rated speed for a traction sheave diameter of 900 mm (in relation to the rope's center) and car suspension of 1:1 | |
| 1.2.1 | Maximum tripping speed | 12,50 m/s |
| 1.2.2 | Maximum rated speed | 10,00 m/s |

According to the tripping speed and the rated speed, a tripping rotary speed of 265 min^{-1} and a rated rotary speed of 212 min^{-1} of the traction sheave is calculated on the basis of the traction sheaves diameter of 900 mm and the car suspension of 1:1.

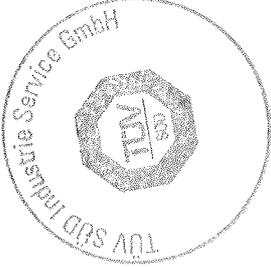
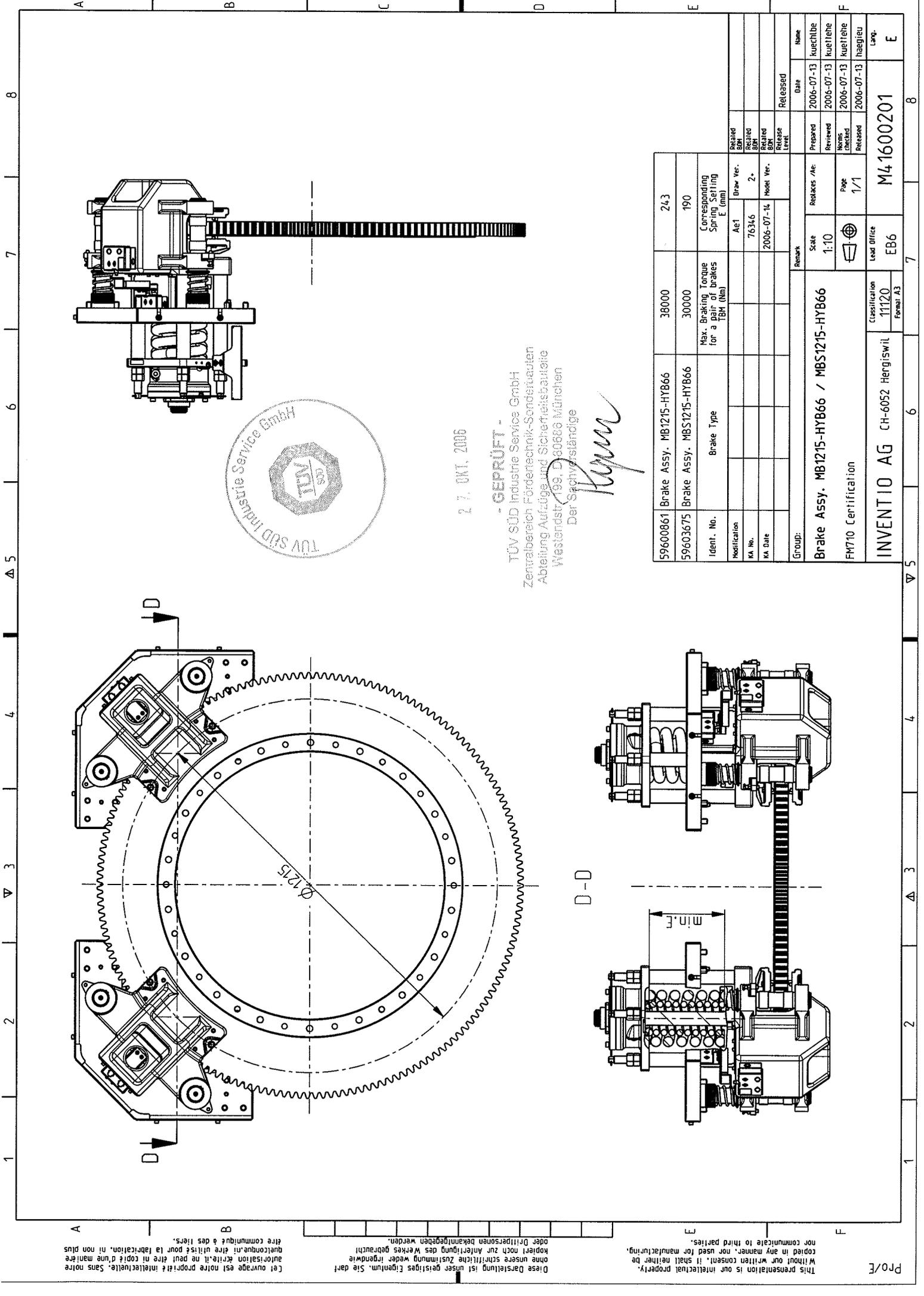
If deviating traction sheave diameters, car speeds or car suspensions are used, care must be taken that these rotary speeds are not exceeded during operation and tripping of the overspeed governor.

2. Conditions

- 2.1 Since the brake device represents only a part off 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 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 form 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).

3. Remarks

- 3.1 The permissible braking moments must be applied to the lift system in such a manner that they do not decelerate more than $1 g_n$, if the empty car is moving upwards.
- 3.2 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.
- 3.3 In order to provide identification, information about the design and its functioning and to show which parts have been tested of the approved type, drawing No M4 1600201 dated 13 July 2006/Ae1 is to be enclosed with the EC type-examination certificate and the Annex thereto.
- 3.4 The EC type-examination certificate may only be used in connection with the pertinent Annex.



2. 7. OKT. 2006

„GEPRÜFT“

TÜV SÜD Industrie Service GmbH
 Zentralbereich Fördertechnik-Sonderbauten
 Abteilung Aufzüge und Sicherheitsbauteile
 Westendstr. 199, D-80686 München
 Der Sachverständige

Kaplan

59600861	Brake Assy. MB1215-HYB66	38000	243
59603675	Brake Assy. MBS1215-HYB66	30000	190
Ident. No.	Brake Type	Max. Braking Torque for a pair of brakes TBM (Nm)	Corresponding Spring Setting E (mm)
Modification			Ae1
MA No.			7634.6
MA Date			2006-07-14
Group:	Remark	Scale	Replaces /Ae
	Brake Assy. MB1215-HYB66 / MBS1215-HYB66	1:10	
	FMT10 Certification	Classification	Page
		11120	1/1
		Format A3	
	Lead Office	Released	Name
	EB6	2006-07-13	Kuechlin
		2006-07-13	Kuechlin
		2006-07-13	Kuechlin
		2006-07-13	haegle
			Lang.
			E

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