

CERTIFICAT

CERTIFICADO

EPFITRAT

認証証書

CERTIFICATE

ZERTIFIKAT

EC type-examination certificate

TÜV

SÜDDEUTSCHLAND

Certificate no.: ABV 549/1

Notified body: TÜV Süddeutschland Bau und Betrieb GmbH
Zertifizierungsstelle
für Aufzüge und Sicherheitsbauteile
Westendstraße 199, D-80686 München

**Applicant/
Certificate holder:** Schindler Aufzüge AG
Corporate Research & Development
CH-6030 Ebikon

Date of submission: 2001-10-16

Manufacturer: Schindler Drive Systems
San Joaquin 15
E-50013 Zaragoza

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 PMA 350

Test Laboratory: TÜV Süddeutschland Bau und Betrieb GmbH
Abteilung Aufzüge und Sicherheitsbauteile
Westendstraße 199, D-80686 München

**Date and
Number of test report:** 2001-11-27
549/1

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: 2001-11-27

Zertifizierungsstelle für Aufzüge und Sicherheitsbauteile
Identificaton number: 0036



Peter Tkalec

**Annex to the EC type-examination certificate No. ABV 549/1
dated 2001-11-27**

1. Scope of Application

- | | | |
|-------|--|---------------|
| 1.1 | Permissible brake moment when the brake device acts on the traction sheave while the car is moving upward | 600 - 1400 Nm |
| 1.2 | Maximum tripping speed of the overspeed governor and maximum rated speed for a traction sheave diameter of 260 mm (in relation to the rope's center) and car suspension of 2:1 | |
| 1.2.1 | Maximum tripping speed | 2,00 m/s |
| 1.2.2 | Maximum rated speed | 1,60 m/s |

According to the tripping speed and the rated speed, a tripping rotary speed of 294 min^{-1} and a rated rotary speed of 235 min^{-1} of the traction sheave is calculated on the basis of the traction sheave's diameter of 260 mm and the car suspension of 2:1.

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.

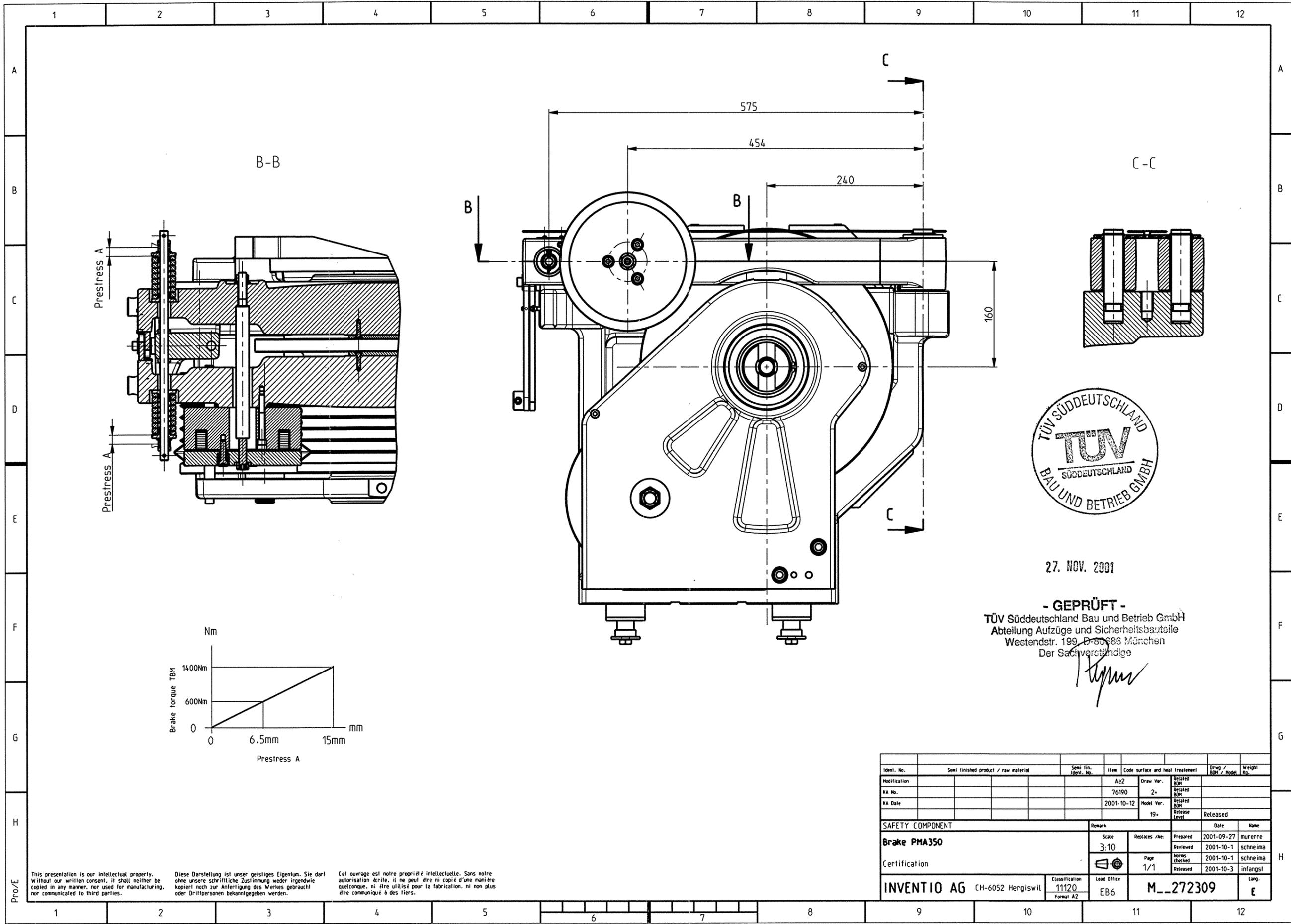
2. Conditions

- 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.
- 2.2 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.
- 2.3 The movement of each brake circuit (each brake lever) 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.
- 2.4 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).

3. Remarks

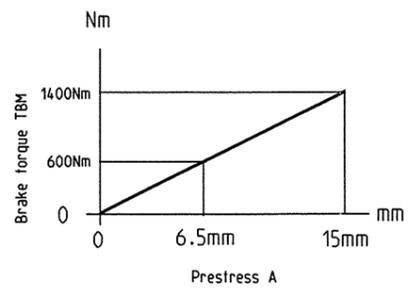
- 3.1 The permissible braking moments must be applied to the lift system in such a manner that they do not decelerate more than $1 g_n$, if the empty car is moving upwards.
- 3.2 In the scope of this type-examination it was found out, that the brake device also functions as a brake for normal operation, 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 the environmental conditions and connection requirements, drawing No M_ _ 272 309 dated 27 September 2001/Ae2 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.



27. NOV. 2001

- GEPRÜFT -
 TÜV Süddeutschland Bau und Betrieb GmbH
 Abteilung Aufzüge und Sicherheitsbauteile
 Westendstr. 199, D-80686 München
 Der Sachverständige



Ident. No.	Semi finished product / raw material	Semi fin. Ident. No.	Item	Code surface and heat treatment	Draw / BOM / Model	Weight kg.			
Modification			Ae2	Draw Ver.	Revised BOM				
KA No.			76190	2-	Revised BOM				
KA Date			2001-10-12	Model Ver.	Revised BOM				
				19-	Release Level	Released			
SAFETY COMPONENT					Remark	Date	Name		
Brake PMA350					Scale	2001-09-27	murerre		
					3:10	Replaces /As	Prepared	2001-10-1	schneima
					Page	2001-10-1	schneima		
Certification					1/1	2001-10-3	infangst		
INVENTIO AG CH-6052 Hergiswil					Classification	Lead Office	Lang.		
					11120	EB6	M_-272309		
					Format A2		E		

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