



Industrie Service

## EC type-examination certificate

**Certificate no.:** ABV 798/1  
**Notified body:** TÜV SÜD Industrie Service GmbH  
 Westendstr. 199  
 80686 München - Germany  
**Applicant/  
 Certificate holder:** Inventio AG  
 Seestr. 55  
 6052 Hergiswil - Switzerland  
**Date of application:** 2011-03-27  
**Manufacturer of the test sample:** Schindler Aufzüge AG  
 Zugerstr. 13  
 6030 Ebikon - Switzerland  
**Product:** Braking device acting on the traction sheave, as part of  
 the protection device against overspeed for the car  
 moving in upwards direction  
**Type:** FMR 560 / PMR 560  
**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 the test report:** 2011-04-08  
 ABV 798/1  
**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 of the annex to this EC  
 type-examination certificate.  
**Date of issue:** 2011-04-11

Certification body for lifts and safety components  
 Identification number: 0036

*C. Rührmeyer*  
 Christian Rührmeyer





**Annex to the EC type-examination certificate  
no. AGB 798/1 dated 2011-04-11**

**1 Scope of Application**

- 1.1 Permissible brake moment when the brake device acts on the traction sheave while the car is moving upward 5500 - 12500 Nm
- 1.2 Maximum tripping speed of the overspeed governor and maximum rated speed for a traction sheave diameter of 760 mm (in relation to the rope's center) and car suspension of 1:1
- 1.2.1 Maximum tripping speed 12.0 m/s
- 1.2.2 Maximum rated speed 10.0 m/s

According to the tripping speed and the rated speed, a tripping rotary speed of  $301 \text{ min}^{-1}$  and a rated rotary speed of  $251 \text{ min}^{-1}$  of the traction sheave is calculated on the basis of the traction sheaves diameter of 760 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 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.
- 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 and information about the basic design and its functioning and to show which parts have been tested of the approved type drawing no. M \_\_ 41603040, revision state Ae1 with certification stamp dated 2011-04-11 is to be enclosed with the EC type-examination certificate and the annex thereto. The environmental conditions and connection requirements are presented or described in separate documents (e. g. installation instructions).
- 3.4 The EC type-examination certificate may only be used in connection with the pertinent annex and the list of the authorized manufacturers (according to enclosure). This enclosure shall be updated and re-edited following information of the certificate holder.

**Note:** The English text is a translation of the German original. In case of any discrepancy, the German version is valid only.



Industrie Service

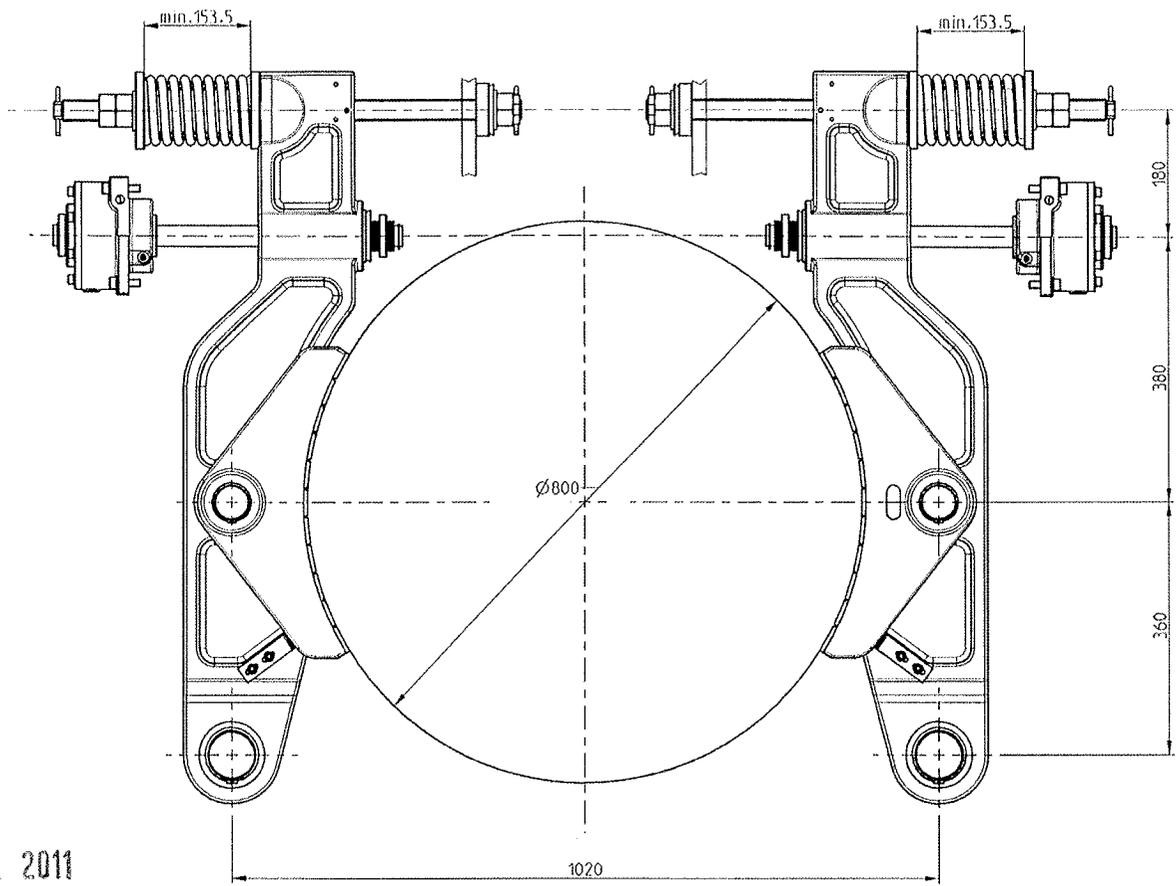
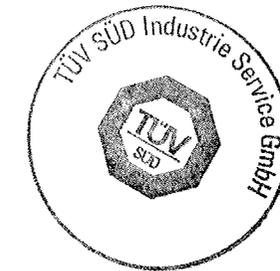
**Enclosure of EC type - examination certificate  
No. ABV 798/1 dated 2011-04-11**

**Authorised manufacturer – Production sites (Stated: 2011-04-11):**

**Schindler Aufzüge AG**  
EBI Works  
Zugerstrasse 13  
6030 Ebikon – Switzerland

- END OF DOCUMENT -

Base: Letter of Schindler Elevator Ltd. dated 2011-03-27



11. April 2011

**- GEPRÜFT -**  
 TÜV SÜD Industrie Service GmbH  
 Zentralbereich Fördertechnik-Sonderbauten  
 Abteilung Aufzüge und Sicherheitsbauteile  
 Westendstr. 198, D-80686 München  
 Der Sachverständige

min.E=153.5mm=TBM max.12'500Nm

S9604020													
Item No.	Spec. finished product / raw material	Spec. fin. Contr. No.	Item	Code surface	Z	Heat treatment	Sting / Spec. / Mod.	Weight					
Modification			Act	Draw Ver.		Revised Spec.							
KA No.			76357	8		Spec.							
KA Date			2003-05-15	Project Ver.		Revised Spec.							
				8		Project Lead	Released						
Group: 01	Remark		Scale	Parties /#:	Prepared	Date	Name						
Brake Assembly MBR800-HYB54			1:5		2008-05-07	2008-05-08	Kuschlitz						
FHR560 Certification				Page	2008-05-08	2008-05-08	Kueltzke						
				1/1	2008-05-08	2008-05-08	arzenow						
INVENTIO AG	CH-6052 Hergiswil	Classification	11120	Local Office	EB6	M...41603040	Lang						
		Format	A2				EN						

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