



Industrie Service

EC type-examination certificate

Certificate no.:	ABFV 569/3
Notified body:	TÜV SÜD Industrie Service GmbH Westendstrasse 199 80686 München - Germany
Applicant/ Certificate holder:	Inventio AG Seestrasse 55 6052 Hergiswil - Switzerland
Date of application:	2013-03-06
Manufacturer of the test sample:	Schindler Drive Systems Poligono "Empresarium" Albardin, 58 50720 La Cartuja Baja - Zaragoza - Spain
Product:	Progressive safety gear with braking device as part of the protection device against overspeed for car moving in up- wards direction
Type:	SA GED 15
Test laboratory:	TÜV SÜD Industrie Service GmbH Prüflaboratorium für Produkte der Fördertechnik Prüfbereich Aufzüge und Sicherheitsbauteile Westendstrasse 199 80686 München - Germany
Date and number of the test report:	2013-03-27 ABFV 569/3
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 1-2 of the annex to this EC type-examination certificate.
Date of issue:	2013-03-28

Certification body for lifts and safety components
Identification number: 0036

C. Rührmeyer
Christian Rührmeyer



**Annex to the EC type-examination certificate
no. ABFV 569/3 dated 2013-03-28**

1. Scope of Application

1.1 Progressive safety gear (acting downwards)

Permissible total mass of car and rated load or counterweight in using one pair of safety gears, depends on manufacture and condition of the guide rail running surface

Condition of the running surface	Total mass (kg)	
	min.	max.
dry	557	1749
oiled*	525	1860

*HLP-oils according to DIN 51524, part 2 or oils with comparable characteristics

1.2 Braking device (acting upwards)

Permissible brake force when using the braking devices in twos, depends on the condition of the guide rail running surface

Condition of the running surface	Brake force (N)	
	min.	max.
dry	3660	7535
oiled*	2462	11497

*HLP-oils according to DIN 51524, part 2 or oils with comparable characteristics

1.3 Maximum tripping speed of overspeed governor and range of the maximum rated speed

1.3.1 Maximum tripping speed 2.90 m/s

1.3.2 Maximum rated speed 2.23 - 2.52 m/s

1.4 Guide rails to be used

1.4.1 Manufactured by machined

1.4.2 Minimum running surface width 25 mm

1.4.3 Blade width 8 - 16 mm

2. Conditions for the braking device

2.1 Since the braking device represents only the decelerating element of the protection device against overspeed for the car moving upwards direction against overspeed, the speed monitoring element for upwards direction must be an overspeed governor which also retracts the brake device as per EN 81-1:1998 + A3:2009 (D), section 9.9.

2.2 The forces acting in upwards direction on the guide rails must be safely absorbed (e. g. without shifting the guide rails in upwards direction).



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3. Remarks

- 3.1 Due to the characteristics, the brake force for the safety gear acting downwards and the brake force for the braking device acting upwards are permanently related to each other. They cannot be adjusted separately in principle. The permissible total mass stated in 1.1 thus also is permanently related to the permissible brake force as defined in 1.2.
- 3.2 The permissible brake forces must be applied to the lift system in such a manner, that the empty car travelling in an upwards direction is not decelerated by more than 1g.
- 3.3 Pursuant to the standard EN 81-1:1998 + A3:2009 (D), annex F, paragraph 3, section 3.4. a) 2) the total mass of the progressive safety gear determined for adjustment purposes may be 7.5 % higher or lower.
- 3.4 For the purposes of identification and information concerning the fundamental method of construction, the approval drawing no. M__43200031 with certification stamp dated 2009-03-31 have to be attached to the EC type-examination certificate ABFV 569/3 and its annex.
- 3.5 The environment and connection conditions of the safety gear are described and depicted in additional documents (e. g. the assembly instructions).
- 3.6 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 in-formation 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.



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**Enclosure of EC type-examination certificate
no. ABFV 569/3 dated 2013-03-28**

Authorized manufacturers – production sites (stated: 2013-03-28):

Schindler Drive Systems

Poligono "Empresarium"
Albardin, 58
50720 La Cartuja Baja - Zaragoza
Spain

Suzhou Schindler Elevator Co. Ltd.

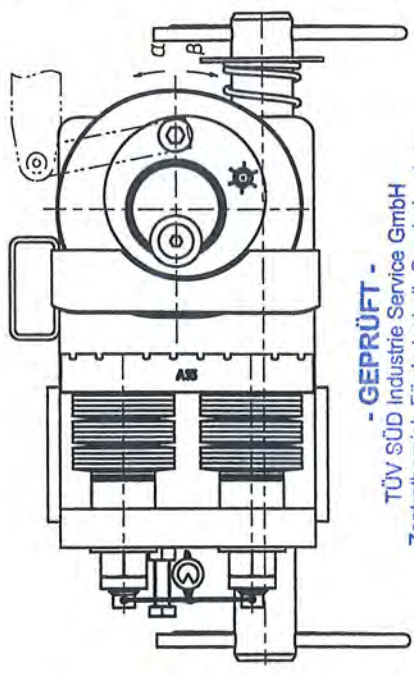
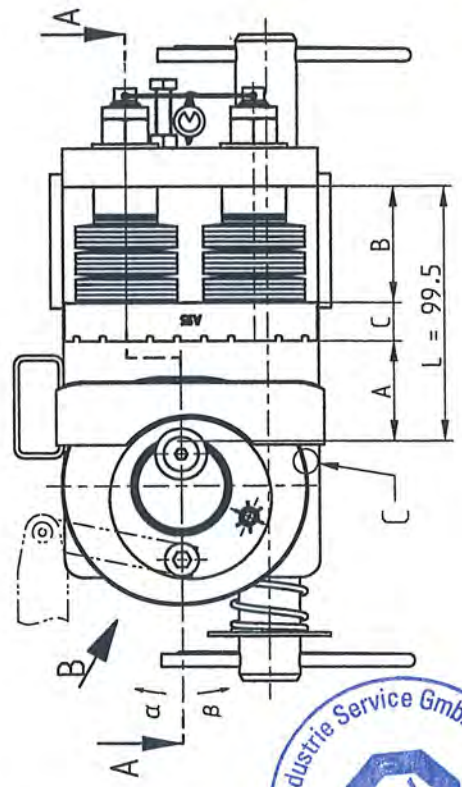
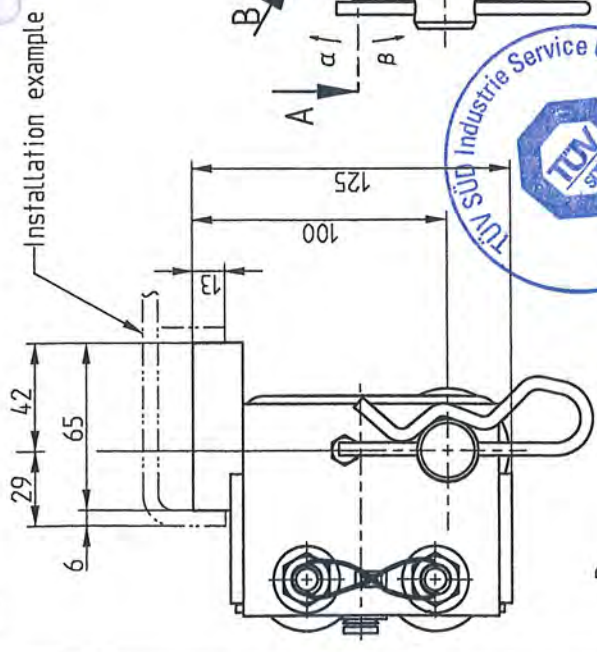
818 Jin Men Road
Suzhou 215004
P.R. China

Elevadores Atlas Schindler S. A.

R. Angelina Ricci Vezozzo, 3400
86087 – Londrina – PR
Brazil

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Safety Gear SA GED 15 left Safety Gear SA GED 15 right

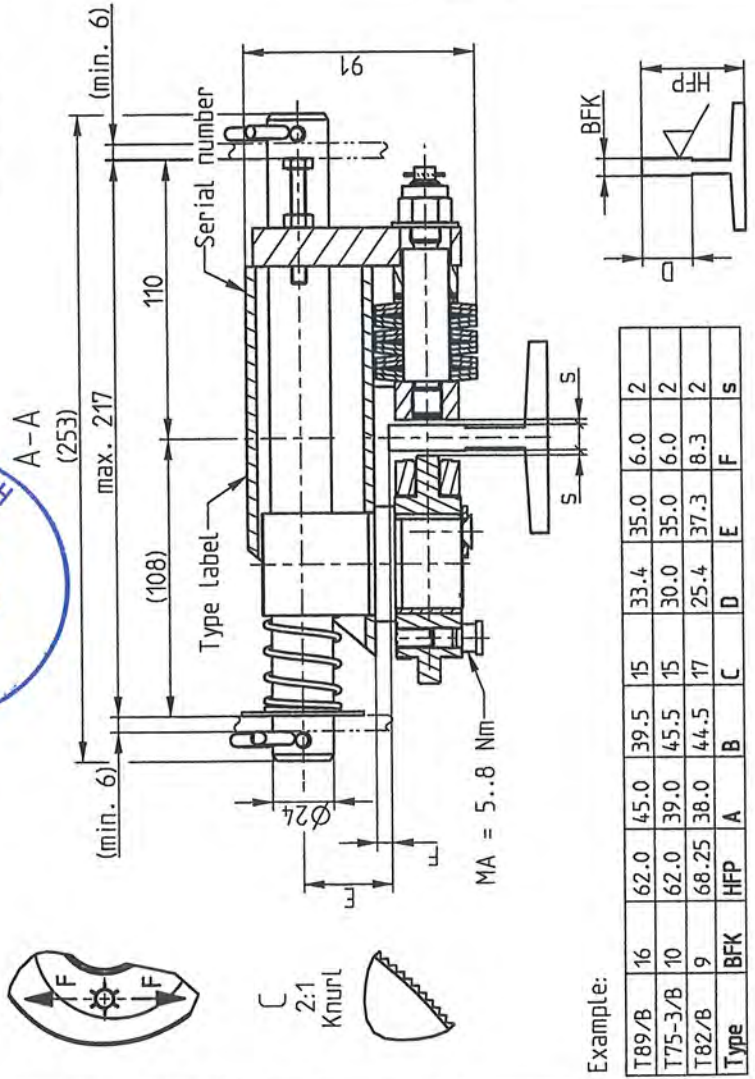


- GEPÜFT -
 TÜV SÜD Industrie Service GmbH
 Zentralbereich Fördertechnik-Sonderbauten
 Abteilung Aufzüge und Sicherheitsbauteile
 Westendstr. 199, D-80686 München
 Der Sachverständige

3.1. März 2009

Notes:

- The safety gear SA GED 15 works in up direction and down direction.
- Actuating force $F = 60\text{ N}$ for 1 pair SA GED 15 (without retaining spring) according to detail B
- α rotating angle for up direction
- $\alpha \sim 45^\circ$ contact of the braking elements with the guide rail
- $\alpha \sim 150^\circ$ brake position (maximum rotation angle)
- β rotating angle for down direction
- $\beta \sim 45^\circ$ contact of the braking elements with the guide rail
- $\beta \sim 105^\circ$ brake position (maximum rotation angle)
- Drawn version SA GED 15/BS with BFK 10
- ISO7465 for surface, manufacturing, and material quality



Example:

Type	BFK	HFP	A	B	C	D	E	F	S
T89/B	16	62.0	45.0	39.5	15	33.4	35.0	6.0	2
T75-3/B	10	62.0	39.0	45.5	15	30.0	35.0	6.0	2
T82/B	9	68.25	38.0	44.5	17	25.4	37.3	8.3	2

59344550	Ident. No.	Seal finished product / raw material	Seal fin. ident. No.	Item	Code surface	Heat treatment	Drawg. / Weight	11.960
	Modification			Ae4	Draw Ver.	Revised	BKH / Model	Kg
	KA No.			15B149	8	Revised		
	KA Date			2008-05-16	Model Ver.	Revised		
					8	Release		
						Release		
Group: SAFETY								
Dimensioned Drawing SA GED 15								
SA GED 15								
Classification T1540 Format A3								
INVENTIO AG CH-6052 Hergiswil								
Lead office EB3								
M__43200031								
Lang- EN								