



Industrie Service

EC TYPE-EXAMINATION CERTIFICATE

According to Annex V, Part A of 95/16/EC Directive

Certificate No.: ABFV 569/4

Certification Body of the Notified Body: TÜV SÜD Industrie Service GmbH
Westendstr. 199
80686 Munich – Germany
Identification No. 0036

Certificate Holder: INVENTIO AG
Seestrasse 55
6052 Hergiswil – Switzerland

Manufacturer of the Test Sample: Schindler Drive Systems
Poligono “Empresarium”
Albardin, 58
50720 La Cartuja Baja - Zaragoza – Spain
(Manufacturer of Serial Production - see Enclosure)

Product: Progressive safety gear and braking device as part of the protection device against overspeed for car moving in upwards direction

Type: SA GED 15
ID-Nr.: 59344550

Directive: 95/16/EC

Reference Standards: EN 81-20:2014
EN 81-50:2014
EN 81-1:1998+A3:2009
EN 81-2:1998+A3:2009

Test report: ABFV 569/4 of 2015-08-10

Outcome: The safety component conforms to the essential health and safety requirements of the mentioned Directive as long as the requirements of the annex of this certificate are kept.

Date of Issue: 2015-08-12

Werner Rau

Werner Rau

Certification Body “lifts and cranes”



**Annex to the EC type-examination certificate
no. ABFV 569/4 dated 2015-08-12**



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1 Scope of application

1.1 General

All following application possibilities refer to a brand-new pair of safety gear, depending on manufacturing method, condition running surface of guide rail and tripping speeds. The safety device can fulfil two security features according 1.2 and 1.3.

Guide rails to be used

Minimum running surface width 25 mm

Blade width 8 – 16 mm

1.2 Using as a progressive safety gear (working in down direction) - Permissible total mass of car plus rated load and rated speed

Guide rail manufactured by	Condition of the running surface	Max. rated speed [m/s]	Max. tripping speed [m/s]	Total mass [kg] min. – max.
machined	dry	2.23 – 2.52	2.90	557 – 1749
	oiled*	2.23 – 2.52	2.90	525 – 1860

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

1.3 Using as a brake device – Part of protection device against overspeed for car moving in upwards direction (working in up direction) - Permissible brake forces

Guide rail manufactured by	Condition of the running surface	Max. tripping speed [m/s]	Brake force [N] min. – max.
machined	dry	2.90	3660 – 7535
	oiled*	2.90	2462 – 11497

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

2 Conditions

- 2.1 The above mentioned safety component represents only part of a protection device against overspeed for car moving in upwards direction. Only in combination with a detecting and triggering component (two separate components also possible), which must be subjected to an own type examination, can the system created fulfil the requirements of the protection device.
- 2.2 The forces acting on the guide rails must be safely absorbed.
- 2.3 The dimension configuration of the lift system must be designed as regards the total mass and brake forces in such a way, that the permissible value of deceleration according norm EN 81-20 does not exceed (e.g. empty lift car travelling in upwards direction is not decelerated by more than 1 g_n).
- 2.4 For identification and information about the principal construction and operation and for demarcation of the examined and approved sample the identification drawing M __ 43200031 with certification stamp dated 2015-08-12 has to be enclosed to the EC type-examination certificate and its annex.
- 2.5 The EC type-examination certificate may only be used in connection with the pertinent annex and the enclosure (list of the manufacturers serial production). 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.

**Annex to the EC type-examination certificate
no. ABFV 569/4 dated 2015-08-12**



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3 Remarks

- 3.1 Due to the characteristics, the braking force for the progressive safety gear acting downwards and the braking force for the brake device acting upwards are permanently related to each other. They cannot be adjusted separately in principle. The permissible total mass stated in scope of application thus also is permanently related to the permissible braking force.
- 3.2 Pursuant to the standard EN 81-50:2014, paragraph 5.3.4, the total mass of the progressive safety gear determined for adjustment purposes may be 7.5 % higher or lower.
- 3.3 The progressive safety gear based on permissible total mass according table point 1.2 of this type examination certificate can also be used till maximum permissible tripping speed by the counterweight.
- 3.4 This EC type-examination certificate is based modelled after and /or harmonized standards as following:
 - EN 81-1:1998 + A3:2009 (D), Anhang F.3 and F.7
 - EN 81-2:1998 + A3:2009 (D), Anhang F.3
 - EN 81-20:2014 (D), Punkt 5.6.2.1.1.2 and 5.6.6.11
 - EN 81-50:2014 (D), Punkt 5.3 and 5.7
- 3.5 Changes resp. extensions of the upper mentioned standards or a further development of the state of the art may make a revision of this EC type-examination certificate necessary

**Enclosure of EC type-examination certificate
no. ABFV 569/4 dated 2015-08-12**



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Manufacturer serial production – production sites (Stated: 2015-08-12):

Company **Schindler Drive Systems**
Address Poligono “Empresarium”
 Albardin 58
 50720 La Cartuja Baja - Zaragoza – Spain

Company **Schindler (China) Elevator Co. Ltd.**
Address No. 818 Jin Men Road
 215004 Suzhou – P.R. China

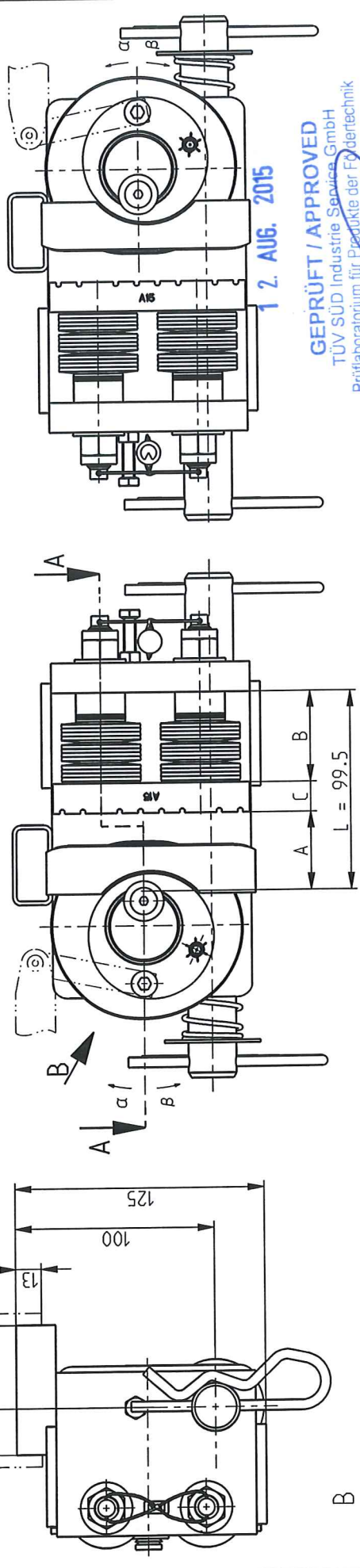
Company **Elevadores Atlas Schindler S. A.**
Address R. Angelina Ricci Vezozzo, 3400
 86087 Londrina – Brasil

- ENDE DOKUMENT -

Base: Letter of SCHINDLER Aufzüge AG dated 07.08.2015

Safety Gear SA GED 15 left

Safety Gear SA GED 15 right

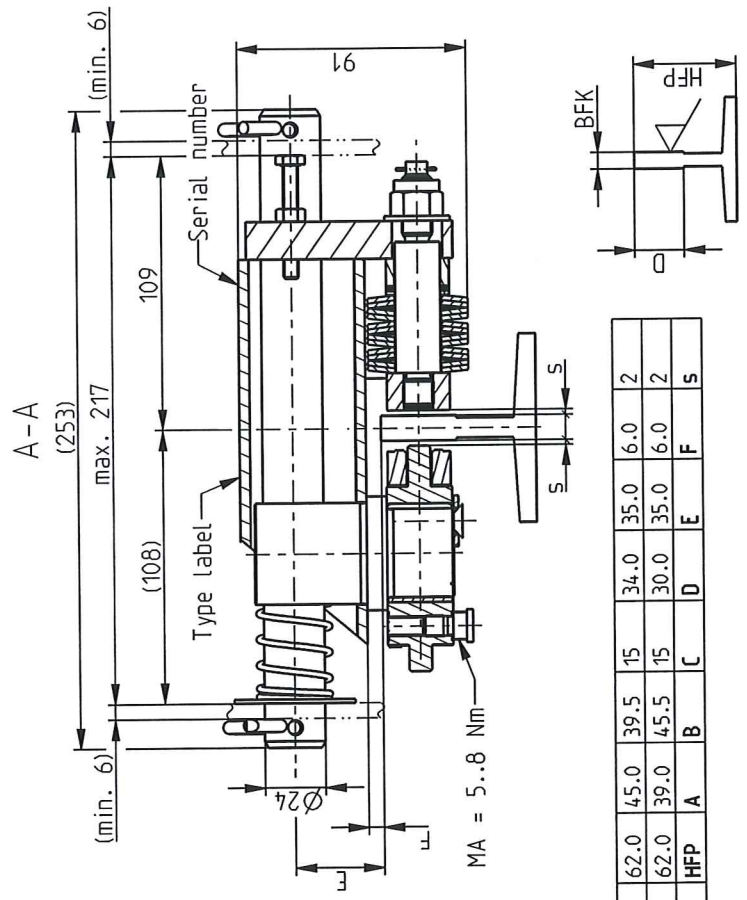


12. AUG. 2015

GEPRÜFT / APPROVED
 TÜV SÜD Industrie Service GmbH
 Prüflaboratorium für Produkte der Folientechnik
 Westendstraße 199
 80686 München
 Sachverständigen / Expert

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
- Guide rail information according to IS07465:2007 (E)



Example:

T89/B	16	62.0	45.0	39.5	15	34.0	35.0	6.0	2
T75/B	10	62.0	39.0	45.5	15	30.0	35.0	6.0	2
Type	BFK	HFP	A	B	C	D	E	F	S

Ident. No.	59344550	Semi finished product / raw material	Item	Loop surface	Heat treatment	Drawn / BKH / Model	Weight
Modification			Ae5	Draw Ver.	Released BKH		11.958
MA No.			159006	6	Released BKH		
MA Date			2009-12-23	Model Ver.	Released Level		
Group: SAFETY		Remark:		Date		Name	
Dimensioned Drawing SA GED 15		Scale		Replaces / Ae		draeger	
SA GED 15		1:1		2009-11-04		osmanbira	
Classification		Lead Office		Page		osmanbira	
11540		EB3		1/1		fischlma	
Formal A3						Lang.	
INVENTIO AG CH-6052 Hengwil				M_--43200031		EN	