



EC type-examination certificate

Certificate no.: ABFV 569/2
Notified body: TÜV SÜD Industrie Service GmbH
 Zertifizierungsstelle für Aufzüge und Sicherheitsbauteile
 Westendstrasse 199
 D-80686 München
**Applicant/
 Certificate holder:** Inventio AG
 Seestrasse 55
 CH-6052 Hergiswil
Date of submission: 2008-06-03
**Accredited manufacturer
 of the holding:** Schindler Drive Systems
 Poligono „Empresarium“
 Albardin, 58
 ES-50720 La Cartuja Baja – Zaragoza
 Suzhou Schindler Elevator Co. Ltd.
 818 Jin Men Road
 CN-Suzhou 215004
 Elevadores Atlas Schindler S. A.
 R. Angelina Ricci Vezozzo, 3400
 BR-86087 – Londrina – PR
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
 Abteilung Aufzüge und Sicherheitsbauteile
 Westendstrasse 199
 D-80686 München
**Date and number
 of test report:** 2009-03-30
 569/2
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: 2009-03-31

Zertifizierungsstelle für Aufzüge und Sicherheitsbauteile
 EC-Identification number: 0036

S. Melzer

Siegfried Melzer





Annex to the EC type-examination certificate no. ABFV 569/2 dated 2009-03-31

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, 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).

3. Remarks

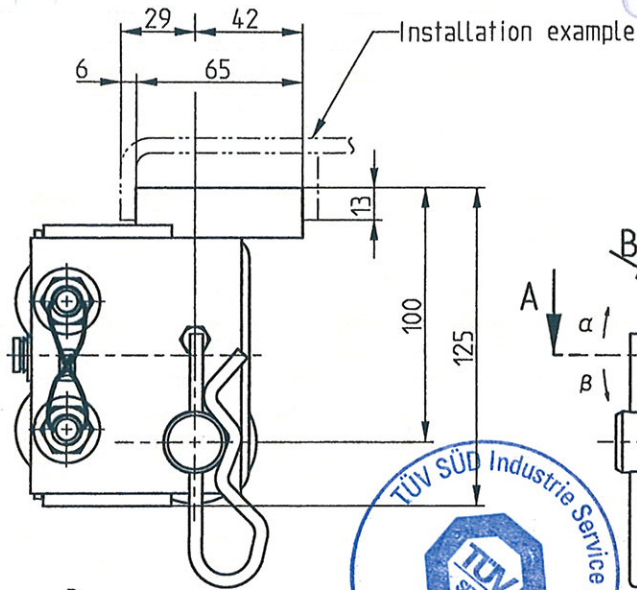
- 3.1 Due to the characteristics, the brake force for the safety gear acting downwards and the brake force for the braking device acting upwards are permanently related to each other. They cannot be adjusted separately in principle. The permissible total mass stated in 1.1 thus also is permanently related 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, annex F, paragraph 3, section 3.4. a) 2) the total mass determined for adjustment purposes may be 7.5 % higher or lower.
- 3.4 In order to provide identification and information about the basic design and its functioning and to show the environmental conditions and connection requirements pertaining to the tested and approved type, and to define which parts have been tested, drawing No. M 43200031 with revision state Ae4 is to be enclosed with the EC type-examination certificate and the annex thereto.
- 3.5 The EC type-examination certificate may only be used in connection with the pertinent annex.

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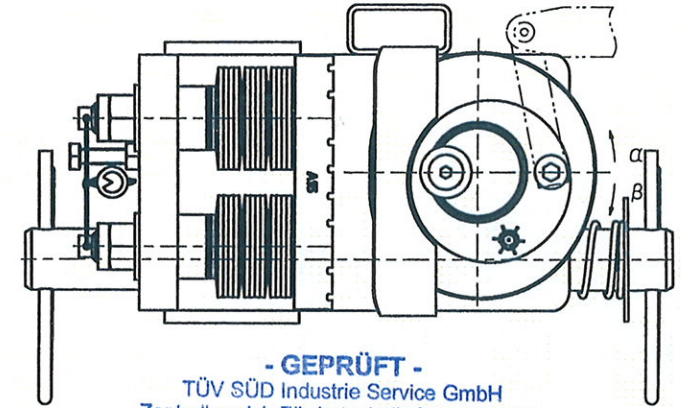
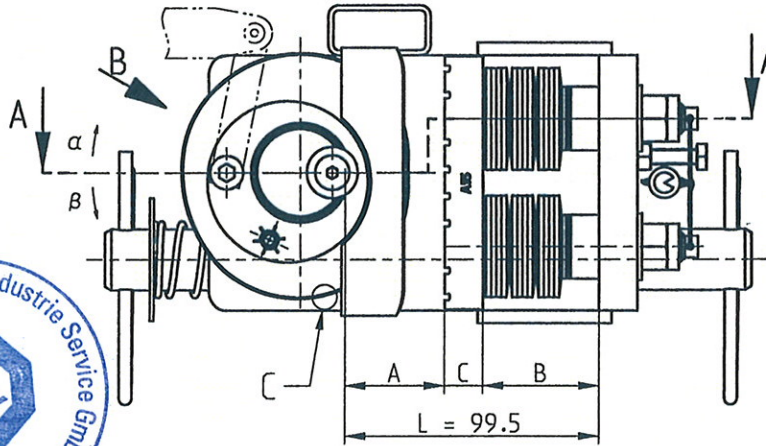
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Pro/E.



Safety Gear SA GED 15 left

Safety Gear SA GED 15 right



- GEPRÜFT -
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 Zentralbereich Fördertechnik-Sonderbauten
 Abteilung Aufzüge und Sicherheitsbauteile
 Westendstr. 199, D-80686 München
 Der Sachverständige

3 1. März 2009

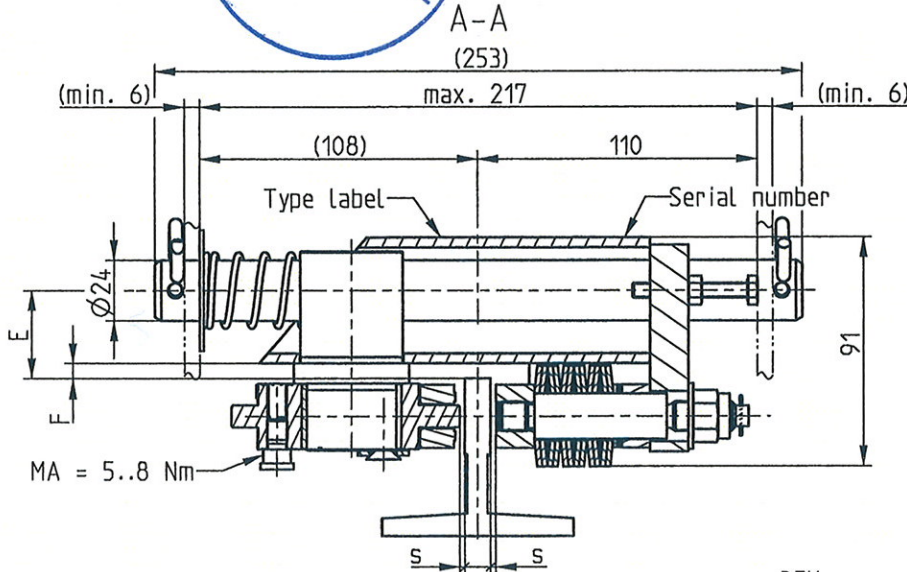
Notes:

- 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

B

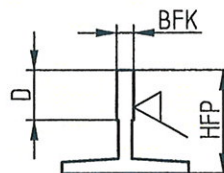


2:1 Knurl



Example:

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
Type	BFK	HFP	A	B	C	D	E	F	s



59344550									11.960
Ident. No.	Semi finished product / raw material	Semi fin. Ident. No.	Item	Code surface	Heat treatment	Drawg / Model	Weight	Kg.	
Modification			Ae4	Draw Ver.	Related BDH				
KA No.			15B149	8	Related BDH				
KA Date			2008-05-16	Model Ver.	Related BDH				
				8	Release Level	Released			
Group: SAFETY					Remark		Date	Name	
Dimensioned Drawing SA GED 15					Scale	Replaces /Ae	Prepared	2008-04-17	schoopch
					1:1		Reviewed	2008-04-17	Imfeldma
SA GED 15					Page	Norms checked	2008-04-17	Imfeldma	
					1/1	Released	2008-04-17	gensicka	
INVENTIO AG CH-6052 Hergiswil				Classification	Lead Office	M...43200031		Lang.	
				11540	EB3			EN	
				Format A3					