ZERTIFIKAT ◆ CERTIFICATE ◆ 認証証書 ◆ СЕРТИФИКАТ ◆ CERTIFICADO ◆ CERTIFICAT

Industrie Service

EU-TYPE EXAMINATION CERTIFICATE

According to Annex IV, Part A of Directive 2014/33/EU

Certificate No.:	EU-SG 491
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: (Manufacturer of Serial Production - see Enclosure)	Schindler Drive Systems Poligono "Empresarium" Albardin, 58 50720 La Cartuja Baja - Zaragoza – Spain
Product:	Progressive safety gear and braking device as part of the protection device against overspeed for car moving in upwards direction
Type:	SA GED 20 ID-No.: 59344600
Directive:	2014/33/EU
Reference Standards:	EN 81-20:2014 EN 81-50:2014
Test report:	No. EU-SG 491 of 2017-12-20
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 EU-type examination certificate are kept.
Date of Issue:	2017-12-20

TÜV SÜD Industrie Service GmbH 00 36 Notified Body

Achim Janocha /
Certification Body "lifts and cranes"

TÜV®

Annex to the EU-Type Examination Certificate
No. EU-SG 491 dated 2017-12-20

Industrie Service

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	9 – 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.
drawn	dry	1.73 – 1.88	2.16	1542 – 2405
	dry	2.10 – 2.29	2.63	1542
	oiled*	1.73 – 1.88	2.16	1288 – 2686
	oiled*	2.10 – 2.29	2.63	1288
machined	dry	1.73 – 1.88	2.16	1492 – 3008
	dry	2.10 – 2.29	2.63	1492
	oiled*	1.73 – 1.88	2.16	1446 – 3196
	oiled*	2.10 – 2.29	2.63	1446
	oiled*	1.94 – 2.11	2.43	1866 – 3516
	dry	2.72 – 3.04	3.50	1310 – 3410
	oiled*	2.72 – 3.04	3.50	1205 – 3627

*HLP – oils according DIN 51524, part 2

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.
drawn	dry	2.21	8139 – 11857
	oiled*	2.21	8115 – 8370
machined	dry	2.21	6024 – 15526
	oiled*	2.21	6024 – 14923
	oiled*	2.43	8765 – 13945

*HLP – oils according DIN 51524, part 2

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 _ _ 253850 with certification stamp dated 2009-03-31 has to be enclosed to the EU-type examination certificate and its annex.

2.5 The EU-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.

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 EU-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 EU-type examination certificate necessary.

Enclosure of EU-Type Examination Certificate
No. EU-SG 491 dated 2017-12-20

TÜV SÜD
Industrie Service

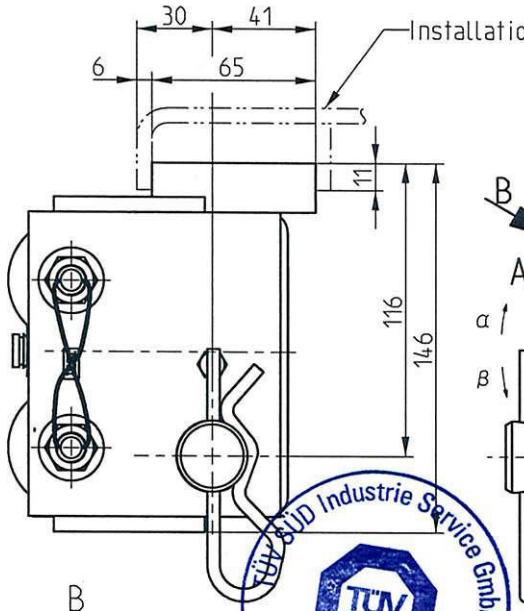
Authorised Manufacturer of Serial Production – Production Sites (Stated: 2017-12-20):

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	Schindler (China) Elevator Co. Ltd.
Address	No. 555 Xing Shun Road, Jiading District, 201800 Shanghai – P.R. China
Company	Elevadores Atlas Schindler S. A.
Address	R. Angelina Ricci Vezozzo, 3400 86087 Londrina – Brasil
Company	Hebei Dongfang Fuda Machinery Factory
Address	No. 112, Guangming East Avenue, Langfang City Heibei Province 065000 – P.R.China

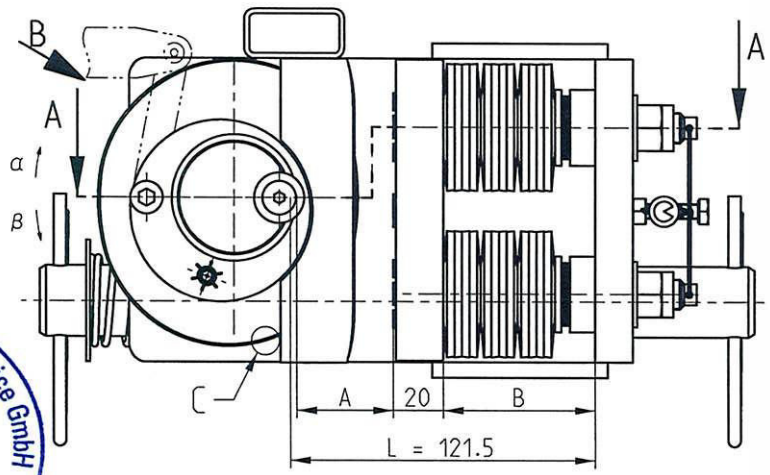
- ENDE DOKUMENT -

Based on: Application from Co. Schindler Aufzüge AG dated 2017-12-12

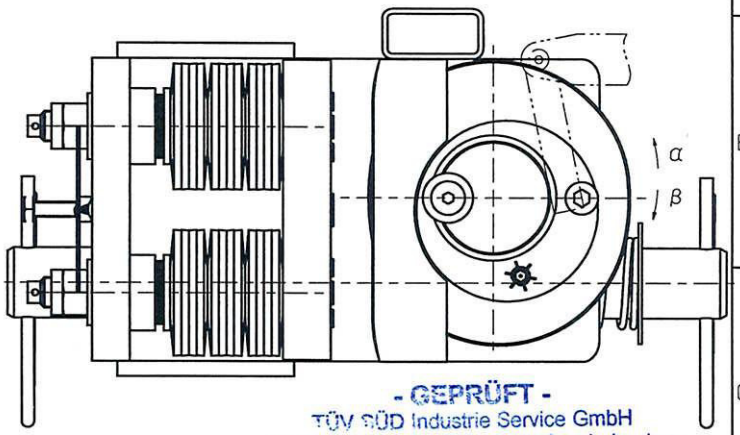
Pro/E.

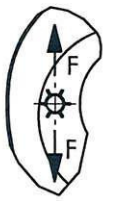


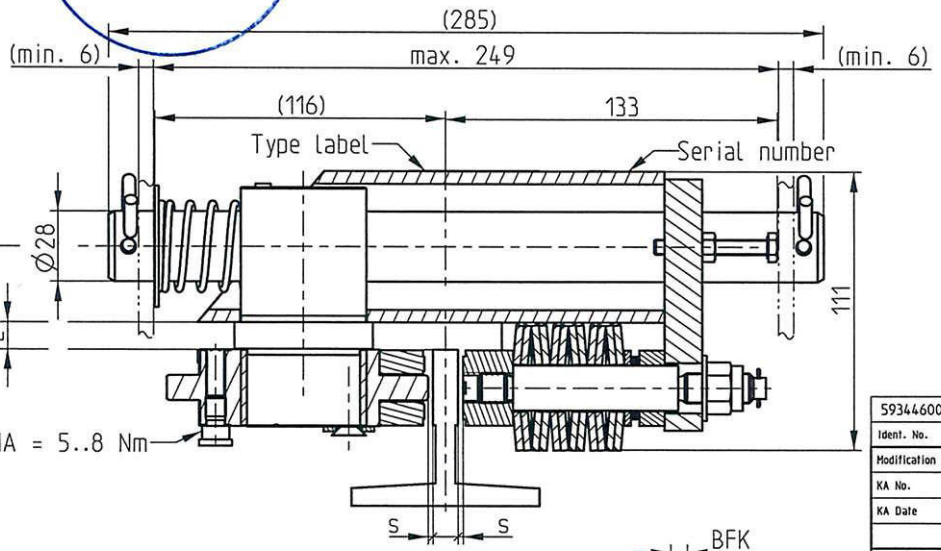
Safety Gear SA GED 20 left

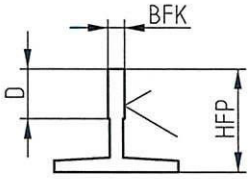


Safety Gear SA GED 20 right









Example:

T127	16	88.9	47.0	54.5	40.75	50.8	10.75	2
T89	16	62.0	47.0	54.5	40.75	33.4	10.75	2
T75-3	10	62.0	41.0	60.5	40.75	30.0	10.75	2
Type	**BFK**	**HFP**	**A**	**B**	**C**	**D**	**E**	**s**

Notes: **31. März 2009**

- The safety gear SA GED 20 works in up direction and down direction.
- Actuating force F = 60 N for 1 pair SA GED 20 (without retaining spring) according to detail B
  - α rotating angle for up direction
  - α ~35° contact of the braking elements with the guide rail
  - α ~150° brake position (maximum rotation angle)
  - β rotating angle for down direction
  - β ~35° contact of the braking elements with the guide rail
  - β ~95° brake position (maximum rotation angle)
- Drawn version SA GED 20/AS with BFK10
- ISO7465 for surface, manufacturing, and material quality

59344600													20.451
Ident. No.	Semi finished product / raw material					Semi fin. Ident. No.	Item	Code surface		Heat treatment		Drwg / BOM / Model	Weight Kg.
Modification							Ae6		Draw Ver.	Related BOM			
KA No.							158150		6	Related BOM			
KA Date							2008-09-12		Model Ver.	Related BOM			
									4	Release Level		Released	

Group: SAFETY	Remark			Date / Name
Dimensioned Drawing SA GED 20	Scale 1:1	Replaces /Ae:	Prepared	2008-04-17 schoopch
			Reviewed	2008-04-17 imfeldma
SA GED 20	Page 1/1		Norms checked	2008-04-17 imfeldma
			Released	2008-04-23 gensicka

INVENTIO AG CH-6052 Hergiswil	Classification 11540 Format A3	Lead Office EB3	M__253850	Lang. EN