

CERTIFICAT

CERTIFICADO

‘EPHITTAH

認証証書

CERTIFICATE

ZERTIFIKAT

EC type-examination certificate



Certificate no.: ABV 729

Notified body: TÜV Süddeutschland Bau und Betrieb GmbH
Zertifizierungsstelle
für Aufzüge und Sicherheitsbauteile
Westendstraße 199, 80686 München - Deutschland

**Applicant/
Certificate holder:** WARNER ELECTRIC EUROPE
7, rue Champfleür
B.P. 11095
49182 St. Barthélemy d'Anjou - Frankreich

Date of submission: 2004-02-02

Manufacturer: WARNER ELECTRIC EUROPE
7, rue Champfleür
B.P. 11095
49182 St. Barthélemy d'Anjou - Frankreich

Product, type: Braking device acting on the shaft of the traction sheave, as part of the protection device against overspeed for the car moving in upwards direction, type ERS VAR 09 SZ 800/ _ _ _

Test Laboratory: TÜV Süddeutschland Bau und Betrieb GmbH
Abteilung Aufzüge und Sicherheitsbauteile
Westendstraße 199, 80686 München - Deutschland

**Date and
Number of test report:** 2004-02-10
729

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 - 2 of the annex to this EC type-examination certificate.

Certificate date: 2004-02-10

Zertifizierungsstelle für Aufzüge und Sicherheitsbauteile
Identification number: 0036

Peter Tkalec



Annex to the EC type-examination certificate No. ABV 729 dated 2004-02-10

1. Scope of Application

1.1 Permissible brake moment when the braking device acts on the shaft of the traction sheave while the car is moving upward 1005 - 1646 Nm

1.2 Maximum tripping speed of the overspeed governor and maximum rated speed

The maximum tripping speed and the maximum rated speed must be calculated on the basis of the traction sheave's maximum tripping rotary speed and maximum rated rotary speed as outlined in sections 1.2.1 and 1.2.2 taking into account traction sheave diameter and car suspension.

$$v = \frac{D \times \Pi \times n}{60 \times i}$$

v = speed (m/s)
D = Diameter of the traction sheave from rope's center to rope's center (m)
 $\Pi = 3,14$
n = Rotary speed (min⁻¹)
i = Ratio of the car suspension

1.2.1 Maximum tripping rotary speed of the traction sheave 250 min⁻¹

1.2.2 Maximum rated rotary speed of the traction sheave 217 min⁻¹

2. Conditions

2.1 Since the braking 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 braking device must be triggered (engaged) via the overspeed governor's electric safety device.

Alternatively, the speed may also be monitored and the braking 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.

2.2 The movement of each brake circuit (each anchor) 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.

2.3 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).

- 2.4 According to EN 81-1, paragraph 9.10.4 d a braking device must act directly on the traction sheave or on the same shaft on which the traction sheave is situated in the immediate vicinity thereof.

If the braking device does not act in the immediate vicinity of the traction sheave on the same shaft on which the traction sheave is situated, the standard is not complied with. In cases involving shaft failure between the traction sheave and the braking device, safety would no longer be ensured by the latter if the lift car made an uncontrolled upward movement.

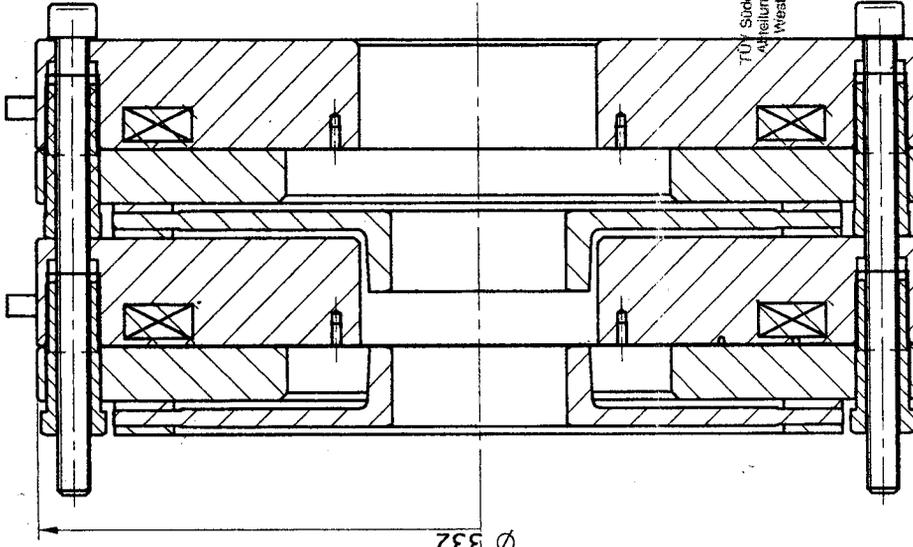
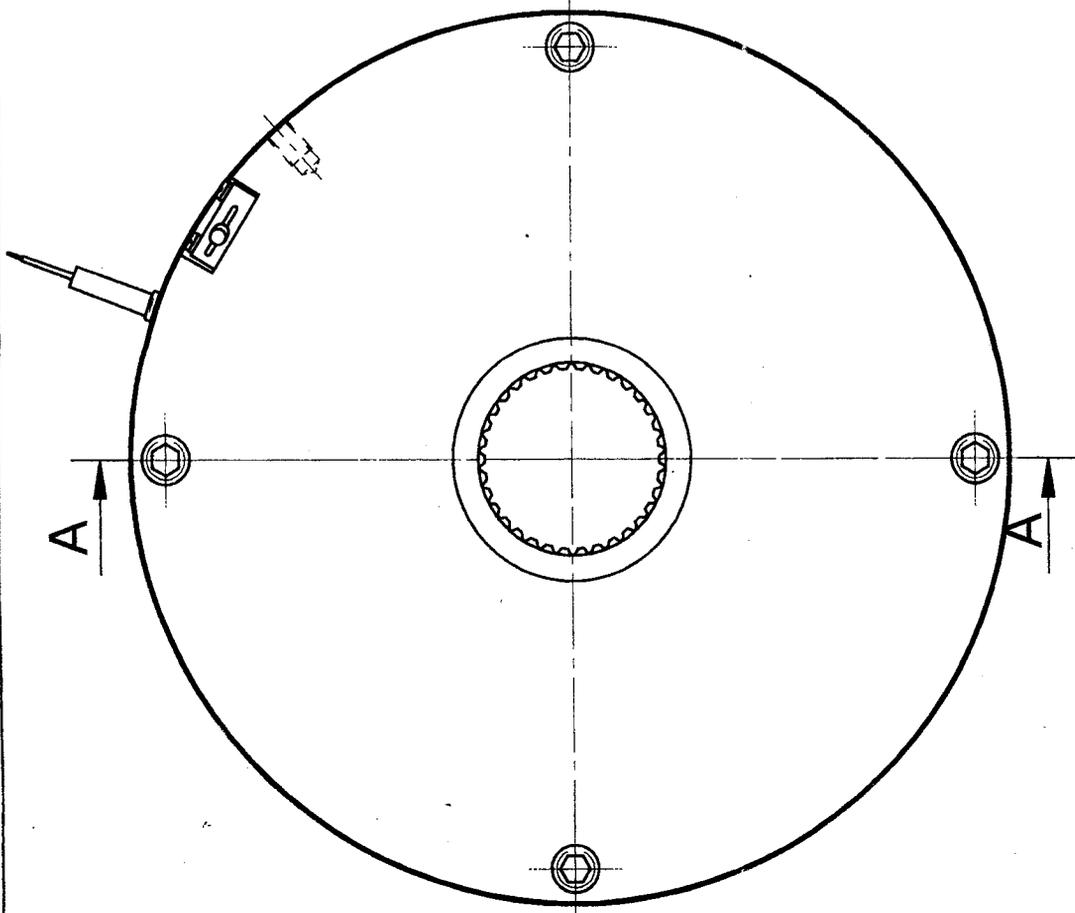
Shaft failure in this area must therefore be ruled out by appropriate design and sufficient dimensioning. In order to eliminate or reduce influencing factors which may lead to failure wherever possible, the following requirements must be satisfied:

- Minimization of bending length between traction sheave and braking device or traction sheave and the next bearing (the next bearing must form part of the drive unit)
- As far as possible, prevention of a reduction in load-bearing capacity in the area of reversed bending stress (reduction in load-bearing capacity caused, for example, by stress concentration and cross-sectional reductions)
- Between traction sheave and braking device the shaft must be continuous (made from one piece)
- Cross-sectional influences on the shaft are only permitted if they act on the following connections: traction sheave – shaft, braking device – shaft, torque of the transmitting component – shaft (situated between traction sheave and braking device).

- 2.5 The manufacturer of the drive unit must provide calculation evidence that the connection braking device – shaft, traction sheave - shaft and the shaft itself is sufficiently safe. The calculation evidence must be enclosed with the technical documentation of the lift.

3. Remarks

- 3.1 The brake moment effectively adjusted of one brake circuit will be marked at the blank after the type designation ÈRS VAR 09 SZ 800/___ .
- 3.2 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.
- 3.3 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.
- 3.4 In order to provide identification and information about the design and its functioning drawing No. 1 12 106774, dated 07 January 2004 is to be enclosed with the EC type-examination certificate and the Annex thereto. The installation conditions and connection requirements are presented or described in separate documents (e. g. operating instructions).
- 3.5 The EC type-examination certificate may only be used in connection with the pertinent Annex.



Ø 332



10.10.2004

- GEPRÜFT -

TUV SÜDdeutsches Bau und Betrieb GmbH
Abteilung Antriebe und Sicherheitsausrüstung
Westendstr. 159, D-80696 München
Der Sachverständige

[Signature]

0 2 FEB 2004

TUV DIFFUSION

Client/customer:

Ms (Nm) :

Md (Nm) :

n Md (min-1) :

n max (min-1) :

U (Vdc) :

P20°C (W) :

Insulation class (°C):

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Customer ref :

Dimensions in mm

Manual/Notice :

SM

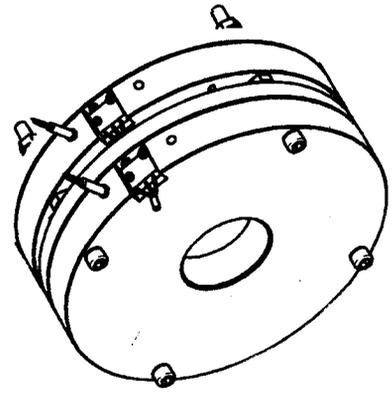
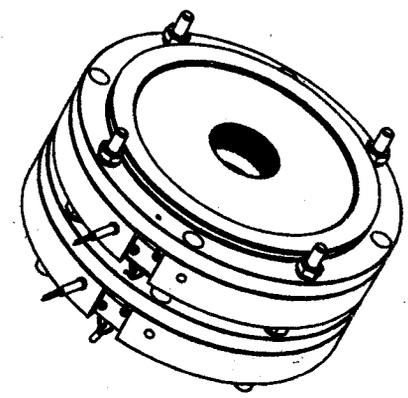
Mass :

Scale :

Customer ref :	Customer ref :
Dimensions in mm	Dimensions in mm
Manual/Notice :	Manual/Notice :
SM	SM
Mass :	Mass :
Scale :	Scale :



FM	LT	REVISION	DATE	By	Ch.
Drawn : G. Ferrand			Date: 07.01.04		
Checked: <i>[Signature]</i>			Date: 7.1.04		
Design: Frein électromagnétique					
Type: ERS VAR09 SZ800 / ---					
N° 1 12 106774					



declare that the mentioned products have been developed, constructed and manufactured in sole responsibility and in conformity with the below mentioned EC directive.

Contraction sample Inspected

Product/type	ASRI			
ERS VAR07 SZ250/---	1	50		
ERS VAR07 SZ300/---	1	55	56	
ERS VAR07 SZ400/---	1	51		
ERS VAR07 SZ420	1	62		
ERS VAR07 SZ600	1	63		
ERS VAR07 SZ800/---	1	59		
ERS VAR08 SZ1000/....	1	32		
ERS VAR08 SZ1050/---	1	54		
ERS VAR08 SZ1700/....	1	8	9	
ERS VAR08 SZ550/...	1	18		
ERS VAR08 SZ800/...	1	16		
ERS VAR08 SZ900/...	1	21		
ERS VAR09 SZ1000/---	1	48	49	
ERS VAR09 SZ1700/....	1	10	11	12

Product/type	ASRI			
ERS VAR09 SZ200/---	1	52	53	
ERS VAR09 SZ300/---	1	57	58	
ERS VAR09 SZ550/...	1	19		
ERS VAR09 SZ600/---	1	45	46	47
ERS VAR09 SZ800/....	1	24	25	
ERS VAR09 SZ900/...	1	22		
ERS VAR10 SZ1000/....	1	20		
ERS VAR10 SZ1010/---	1	61		
ERS VAR10 SZ1600/....	1	23		
ERS VAR10 SZ2500/....	1	13	14	
ERS VAR10 SZ5000/....	1	17		
ERS VAR11-01	1	6	7	
ERS VAR11-01 Ft=3600N	1	27	28	29
ERS VAR11-01 Ft=4100N	1	33	34	

Product/type	ASRI				
ERS VAR11-02	1	15			
ERS VAR12-01	1	2	3	4	5
ERS VAR12-03 Ft=2580N	1	43	44		
ERS VAR12-04 Ft=2580N	1	30	31		
ERS VAR14-01	1	26			
ERS VAR15-01 Ft=2950N	1	35	36	37	
ERS VAR15-02 Ft=2110N	1	38	39	40	
ERS VAR15-02 FT2110/---	1	41	42		
ERS VAR15-06 FT=700/---	1	65			
ERS VAR15-11 FT=3000N	1	60			
ERS VAR15-11 A Ft=2500/---	1	64			

Applied standards, regulations and Inspections (ASRI)

1	DIN EN81-01/2	05/2005	Safety rules for the construction and installations of lift
2	ABV 588	16/08/2001	TÜV Association for technical inspection EC-Certification number 0036
3	ABV 588/1	25/10/2005	TÜV Association for technical inspection EC-Certification number 0036
4	ABV 588/2	11/01/2008	TÜV Association for technical inspection EC-Certification number 0036
5	ABV 588/3	03/05/2010	TÜV Association for technical inspection EC-Certification number 0036
6	ABV 589/1	18/08/2004	TÜV Association for technical inspection EC-Certification number 0036
7	ABV 589/3	03/05/2010	TÜV Association for technical inspection EC-Certification number 0036
8	ABV 590/1	12/02/2003	TÜV Association for technical inspection EC-Certification number 0036
9	ABV 590/2	29/11/2010	TÜV Association for technical inspection EC-Certification number 0036
10	ABV 591	08/08/2001	TÜV Association for technical inspection EC-Certification number 0036
11	ABV 591/1	19/11/2007	TÜV Association for technical inspection EC-Certification number 0036
12	ABV 591/2	29/11/2010	TÜV Association for technical inspection EC-Certification number 0036
13	ABV 592/1	12/02/2003	TÜV Association for technical inspection EC-Certification number 0036
14	ABV 592/2	29/11/2010	TÜV Association for technical inspection EC-Certification number 0036
15	ABV 594/1	18/11/2004	TÜV Association for technical inspection EC-Certification number 0036
16	ABV 603/1	12/02/2003	TÜV Association for technical inspection EC-Certification number 0036
17	ABV 604/1	12/02/2003	TÜV Association for technical inspection EC-Certification number 0036
18	ABV 723	08/08/2003	TÜV Association for technical inspection EC-Certification number 0036
19	ABV 724	08/08/2003	TÜV Association for technical inspection EC-Certification number 0036
20	ABV 725	16/04/2003	TÜV Association for technical inspection EC-Certification number 0036
21	ABV 726	08/08/2003	TÜV Association for technical inspection EC-Certification number 0036
22	ABV 727	08/08/2003	TÜV Association for technical inspection EC-Certification number 0036
23	ABV 728	16/04/2003	TÜV Association for technical inspection EC-Certification number 0036
24	ABV 729	10/02/2004	TÜV Association for technical inspection EC-Certification number 0036
25	ABV 729/1	15/01/2008	TÜV Association for technical inspection EC-Certification number 0036
26	ABV 758	16/02/2005	TÜV Association for technical inspection EC-Certification number 0036
27	ABV 769	14/10/2005	TÜV Association for technical inspection EC-Certification number 0036
28	ABV 769/1	11/01/2008	TÜV Association for technical inspection EC-Certification number 0036
29	ABV 769/2	05/05/2010	TÜV Association for technical inspection EC-Certification number 0036
30	ABV 770	23/01/2006	TÜV Association for technical inspection EC-Certification number 0036
31	ABV 770/1	03/05/2010	TÜV Association for technical inspection EC-Certification number 0036
32	ABV 771	24/01/2006	TÜV Association for technical inspection EC-Certification number 0036
33	ABV 775	26/04/2006	TÜV Association for technical inspection EC-Certification number 0036
34	ABV 775/1	03/05/2010	TÜV Association for technical inspection EC-Certification number 0036
35	ABV 776	03/08/2006	TÜV Association for technical inspection EC-Certification number 0036
36	ABV 776/1	11/01/2008	TÜV Association for technical inspection EC-Certification number 0036
37	ABV 776/2	03/05/2010	TÜV Association for technical inspection EC-Certification number 0036
38	ABV 777	01/06/2006	TÜV Association for technical inspection EC-Certification number 0036
39	ABV 777/1	10/01/2008	TÜV Association for technical inspection EC-Certification number 0036
40	ABV 777/2	03/05/2010	TÜV Association for technical inspection EC-Certification number 0036
41	ABV 777/3	01/10/2010	TÜV Association for technical inspection EC-Certification number 0036
42	ABV 777/4	06/12/2010	TÜV Association for technical inspection EC-Certification number 0036
43	ABV 780	18/07/2006	TÜV Association for technical inspection EC-Certification number 0036
44	ABV 780/1	03/05/2010	TÜV Association for technical inspection EC-Certification number 0036
45	ABV 809	10/02/2009	TÜV Association for technical inspection EC-Certification number 0036
46	ABV 809/1	03/05/2010	TÜV Association for technical inspection EC-Certification number 0036
47	ABV 809/2	25/10/2010	TÜV Association for technical inspection EC-Certification number 0036
48	ABV 811	10/02/2009	TÜV Association for technical inspection EC-Certification number 0036
49	ABV 811/1	03/05/2010	TÜV Association for technical inspection EC-Certification number 0036
50	ABV 815	26/03/2009	TÜV Association for technical inspection EC-Certification number 0036
51	ABV 816	26/03/2009	TÜV Association for technical inspection EC-Certification number 0036
52	ABV 817	04/05/2009	TÜV Association for technical inspection EC-Certification number 0036
53	ABV 817/1	03/05/2010	TÜV Association for technical inspection EC-Certification number 0036
54	ABV 818	25/05/2009	TÜV Association for technical inspection EC-Certification number 0036
55	ABV 819	01/07/2009	TÜV Association for technical inspection EC-Certification number 0036
56	ABV 819/1	03/05/2010	TÜV Association for technical inspection EC-Certification number 0036
57	ABV 825	20/08/2009	TÜV Association for technical inspection EC-Certification number 0036
58	ABV 825/1	25/10/2010	TÜV Association for technical inspection EC-Certification number 0036
59	ABV 826	21/09/2009	TÜV Association for technical inspection EC-Certification number 0036
60	ABV 828	30/10/2009	TÜV Association for technical inspection EC-Certification number 0036
61	ABV 829	05/11/2009	TÜV Association for technical inspection EC-Certification number 0036
62	ABV 843	12/03/2010	TÜV Association for technical inspection EC-Certification number 0036
63	ABV 844	30/04/2010	TÜV Association for technical inspection EC-Certification number 0036
64	ABV 857	06/12/2010	TÜV Association for technical inspection EC-Certification number 0036
65	ABV 858	06/12/2010	TÜV Association for technical inspection EC-Certification number 0036

EC-directive 95/16 CE
EC-Low voltage directive 73/23/EEC
Electromagnetic compatibility directive 89/336/EEC



Angees Tho Blaizot
Place / date

graduate engineer, Pierre Lonjon
(Quality Manager)