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

TÜV SÜD
Industrie Service

EU TYPE-EXAMINATION CERTIFICATE

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

Certificate No.:	EU-BD 591/2
Certification Body of the Notified Body:	TÜV SÜD Industrie Service GmbH Westendstr. 199 80686 Munich - Germany Identification No. 0036
Certificate Holder:	WARNER Electric Europe 7, rue de Champfleur BP 20095 49124 Saint Barthélemy d'Anjou - France
Manufacturer of the Test Sample: (Manufacturer of Serial Production – see Enclosure)	WARNER Electric Europe 7, rue de Champfleur BP 20095 49124 Saint Barthélemy d'Anjou - France
Product:	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 and braking element against unintended car movement
Type:	ERS VAR09 Size: SZ200/_ _ _, SZ300/_ _ _, SZ600/_ _ _, SZ600/_ _ _ FZ, SZ800/_ _ _, SZ1000/_ _ _ _, SZ1700/_ _ _ _, SZ1700/1200 CH
Directive:	2014/33/EU
Reference Standards:	EN 81-20:2014 EN 81-50:2014 EN 81-1:1998+A3:2009
Test Report:	EU-BD 591/2 of 2016-04-15
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:	2016-04-15
Date of Validity:	from 2016-04-20

Achim Janocha
Certification Body "lifts and cranes"

TÜV SÜD Industrie Service GmbH 00 36 Notified Body

TÜV®

Annex to the EU Type-Examination Certificate
No. EU-BD 591/2 of 2016-04-15

Industrie Service

1 Scope of application

1.1 Use as braking device – part of the the protection device against overspeed for the car moving in upwards direction – permissible brake torques and tripping rotary speeds

1.1.1 Permissible brake torques and maximum tripping rotary speeds of the traction sheave when the brake device acts on the shaft of the traction sheave while the car is moving upward

Size	Permissible brake torque [Nm]	Max. tripping rotary speed of the traction sheave [rpm]
SZ200/_ _ _	239 - 569	300
SZ200/_ _ _	247 - 487	500
SZ300/_ _ _	441 - 849	450
SZ600/_ _ _	736 - 1383	450
SZ600/_ _ _ FZ	845 - 1469	450
SZ800/_ _ _	948 - 1736	250
SZ1000/_ _ _ _	1126 - 2168	400
SZ1700/_ _ _	2893 - 3854	250
SZ1700/_ _ _	1684 - 2807	400
SZ1700/1200 CH	1924 - 2781	400

1.1.2 Maximum tripping speed of the overspeed governor and maximum rated speed of the lift

The maximum tripping speed of the overspeed governor and the maximum rated speed of the lift must be calculated on the basis of the traction sheave's maximum tripping rotary speed as outlined above taking into account traction sheave diameter and car suspension.

$$v = \frac{D_{TS} \times \pi \times n}{60 \times i}$$

v = Tripping (rated) speed (m/s)
D_{TS} = Diameter of the traction sheave from rope's centre to rope's centre (m)
π = 3,14
n = Rotary speed (rpm)
i = Ratio of the car suspension

1.2 Use as braking element – part of the protection device against unintended car movement (acting in up and down direction) – permissible brake torques, tripping rotary speeds and characteristics

1.2.1 Nominal brake torques and response times with relation to a brand-new brake element

Size	Min. nominal brake torque* [Nm]	Intermediate nominal brake torque * [Nm]	Max. nominal brake torque * [Nm]	Max. tripping rotary speed [rpm]	Maximum response times** [ms] with / without overexcitation		
					t_{10}	t_{50}	t_{90}
SZ200/_ _ _	2 x 160 = 320			400	180	220	260
SZ200/_ _ _			2 x 200 = 400	400	130	168	205
SZ300/_ _ _			2 x 330 = 660	450	55	83	110
SZ600/_ _ _	2 x 500 = 1000			450	75	108	140
SZ600/_ _ _			2 x 600 = 1200	450	75	138	200
SZ600/_ _ _ FZ	2 x 500 = 1000			450	150	210	270
SZ600/_ _ _ FZ			2 x 600 = 1200	450	140	200	260
SZ800/_ _ _		2 x 800 = 1600		250	110	175	240
SZ1000/_ _ _	2 x 800 = 1600			400	140	170	200

SZ1000/_ _ _			2 x 900 = 1800	400	140	185	230
SZ1700/_ _ _	2 x 1350 = 2700			250	80	155	230
SZ1700/_ _ _			2 x 1700 = 3400	250	50	105	160
SZ1700/_ _ _		2 x 1200 = 2400		400	65	110	155
SZ1700/1200 CH		2 x 1200 = 2400		278	110	185	260

Interim values can be interpolated

Explanations:

* **Nominal brake torque:** Brake torque assured for installation operation by the safety component manufacturer.

** **Response times:** t_X time difference between the drop of the braking power until establishing X% of the nominal brake torque, t_{50} optionally calculated $t_{50}= (t_{10}+ t_{90})/2$ or value taken from the examination recording

1.2.2 Assigned execution features

Size	Type of powering / deactivation	Brake control	Nominal air gap [mm]	Damping elements / adhesive foil integrated	Overexcitation
SZ200/_ _ _	Continuous current / continuous current end	serial	0.6	no	no
SZ300/_ _ _	Continuous current / continuous current end	serial	0.4	yes / no	no
SZ600/_ _ _	Continuous current / continuous current end	serial	0.6	yes / no	no
SZ600/_ _ _ FZ	Continuous current / continuous current end	serial	0.6	yes / no	no
SZ800/_ _ _	Continuous current / continuous current end	parallel	0.6	yes / yes	at double non-release voltage
SZ1000/_ _ _	Continuous current / continuous current end	serial	0.6	yes / no	at double non-release voltage
SZ1700/_ _ _	Continuous current / continuous current end	serial	0.6	yes / yes	at double non-release voltage
SZ1700/1200 CH	Continuous current / continuous current end	serial	0.6	no / yes	at double non-release voltage

2 Conditions

2.1 Above mentioned safety component represents only a part at the protection device against overspeed for the car moving in upwards direction and unintended car movement. Only in combination with a detecting and triggering component in accordance with the standard (two separate components also possible), which must be subjected to an own type-examination, can the system created fulfil the requirements for a protection device.

2.2 The installer of a lift must create an examination instruction to fulfil the overall concept, add it to the lift documentation and provide any necessary tools or measuring devices, which allow a safe examination (e. g. with closed shaft doors).

2.3 The manufacturer of the drive unit must provide calculation evidence that the connection traction sheave – shaft – brake disc and the shaft itself is sufficiently safe, if the brake disc is not a direct component of the traction sheave (e. g. casted on). The shaft itself has to be statically supported in two points.

An evidence must be enclosed with the technical documentation of the lift.

2.4 The setting of the brake torque has to be secured against unauthorized adjustment (e. g. sealing lacquer).

2.5 The respective identification drawing according to the following table shall be included to the EU type-examination certificate for the identification and information of the general construction and operation and distinctness of the approved type:

Size	No. of the identification drawing	Date of stamp
SZ200/_ _ _	1 12 107190	2009-05-04
SZ300/_ _ _	1 12 107223	2009-08-20
SZ600/_ _ _	1 12 107132	2009-02-10
SZ600/_ _ _ FZ	1 12 108238	2016-03-18
SZ800/_ _ _	1 12 106774	2008-01-15
SZ1000/_ _ _ _	I-1 12 107136	2009-02-10
SZ1700/_ _ _	1 12 106581	2007-11-19
SZ1700/1200 CH	1 12 108245	2016-03-18

2.6 The EU type-examination certificate may only be used in combination with the corresponding annex and enclosure (List of authorized manufacturer of the serial production). The enclosure will be updated immediately after any change by the certification holder.

3 Remarks

3.1 The brake moments effectively adjusted of one brake circuit will be marked at the blank after the type designation ERS VAR09 SZXXXX/_ _ _ _ XX.

3.2 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 and as braking element as part of the protection device against unintended car movement.

3.3 Checking whether the requirements as per section 5.9.2.2 of EN 81-20:2014 (D) have been complied with is not part of this type examination.

3.4 Other requirements of the standard, such as reduction of brake moment respectively brake force due to wear or operational caused changes of traction are not part of this type examination.

3.5 This EU type-examination certificate was issued according to the following standards:

- EN 81-1:1998 + A3:2009 (D), Annex F.7 and F.8
- EN 81-20:2014 (D), part 5.6.6.11, 5.6.7.13
- EN 81-50:2014 (D), part 5.7 and 5.8

3.6 A revision of this EU type-examination certificate is inevitable in case of changes or additions of the above mentioned standards or of changes of state of the art.

Enclosure to the EU Type-Examination Certificate
No. EU-BD 591/2 of 2016-04-15

Industrie Service

Authorised Manufacturer of Serial Production – Production Sites (valid from: 2016-01-22):

Company WARNER Electric Europe
Address 7, rue de Champfleur
BP 20095
49124 Saint Barthélemy d'Anjou - France

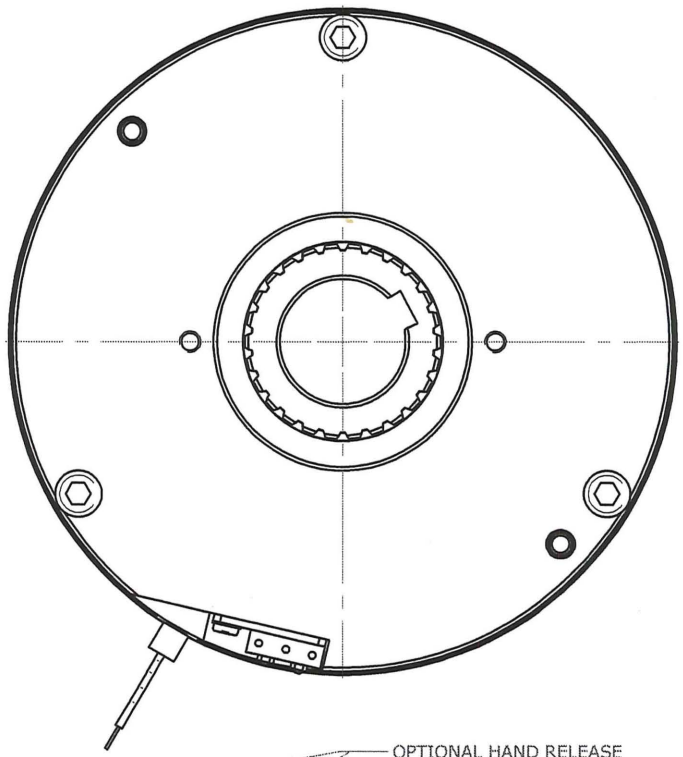
Company Altra Industrial Motion Shenzhen Co. Ltd.
Address Dabo Industry Zone
18 Huanzhen Road
Bogang County, Shajing Town
Baoan District, Shenzhen City
518104 Guangdong province - China (PRC)

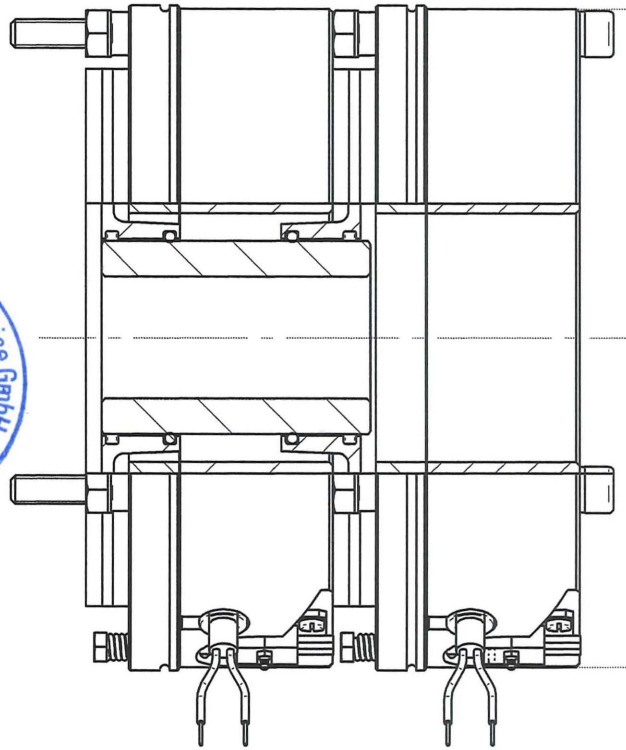
- END OF DOCUMENT -

Based on: e-mail from Warner Electric Europe of 2016-01-15

Les cotes sans indication de tolérances sont des cotes nominales.
Untoleranced dimensions are nominal dimensions.

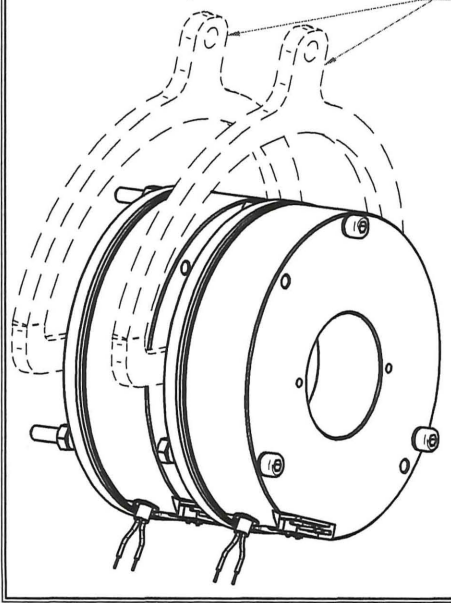
NOTES

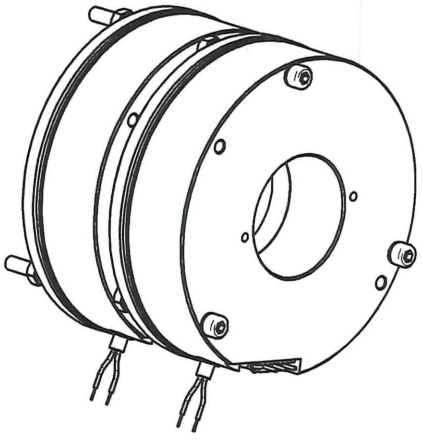


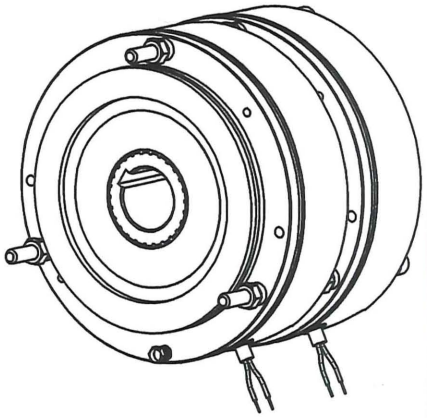


TÜV SÜD Industrie Service GmbH

OPTIONAL HAND RELEASE







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

– 4. Mai 2009

Client/customer: Standard							
Ms (Nm) :	Customer ref :						
Md (Nm) :							
n Md (min-1) :	Dimensions in mm						
n max (min-1) :							
U (Vdc) :	Manual/Notice : SM						
P20°C (W) :	Mass : 19,8 kg	Scale: 1:1					
Insulation class (°C):			FM	LT	REVISION	DATE	By	Ch.
			Drawn : F Madiot			Date: 15-01-09		
			Checked: CHE			Date: 11 05 09		
			Design.: Frein électromagnétique / Electromagnetic brake					
			Type: ERS VAR09 SZ200/----					
			N° 1 12 107190					

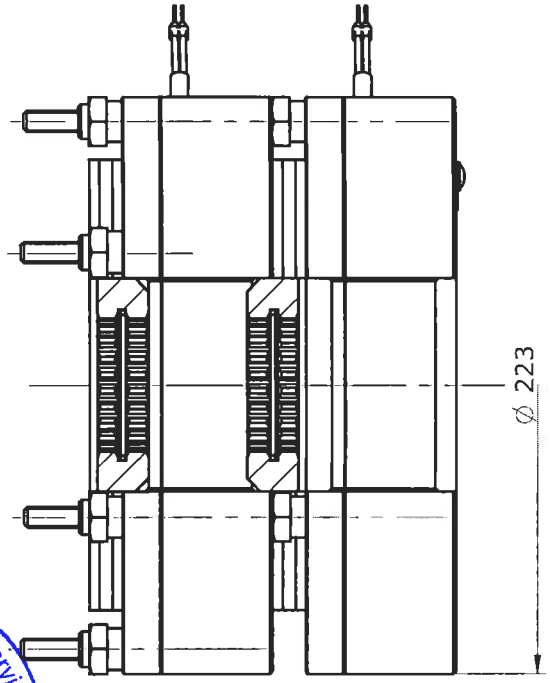
Warner Electric Europe

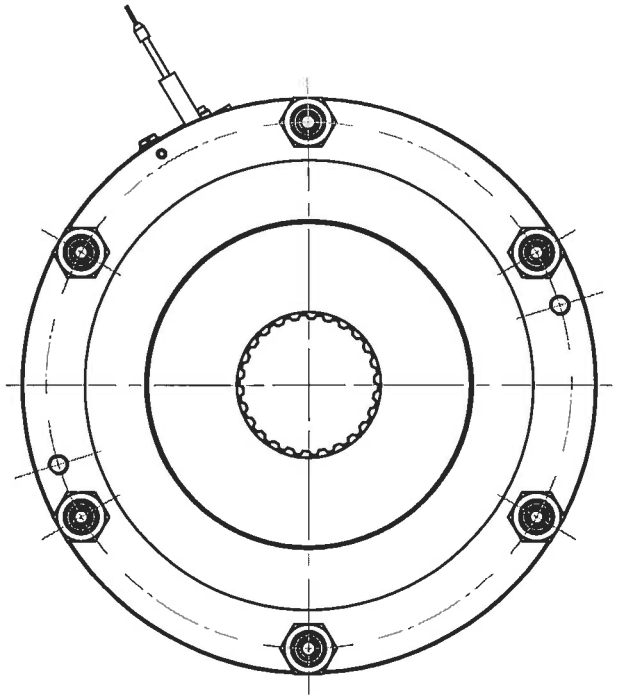
CAD SE

A2

Les cotes sans indication de tolérances sont
des cotes nominales.
Untoleranced dimensions are nominal dimensions.

NOTES



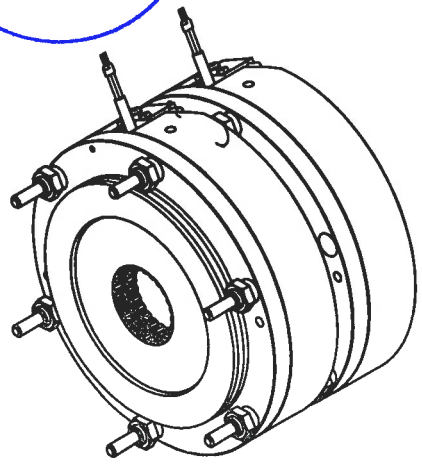


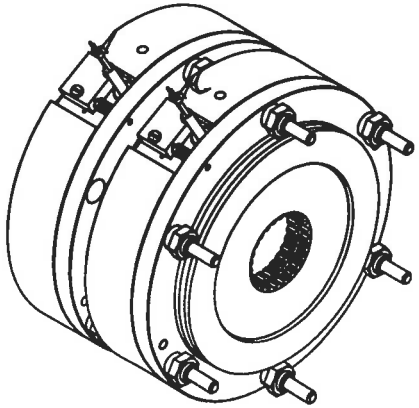
20. Aug. 2009

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

TÜV SÜD Industrie Service GmbH

20 JUIL. 2009





TUV DIFFUSION

Client/customer:	
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Md (Nm) :	
n Md (min-1) :	Dimensions in mm
n max (min-1) :	
U (Vdc) :	Manual/Notice : SM
P20°C (W) :	Mass : / Scale: /
Insulation class (°C):	

FM	LT	REVISION	DATE	By	Ch.

Drawn : G. Ferrand Date: 17-07-09
Checked: MP. Date: 17-07-09

Design.: Frein électromagnètique
Electromagnetic brake

Type: ERS VAR09 SZ300/---

N° 1 12 107223

A3

CAD SE

Warner Electric Europe

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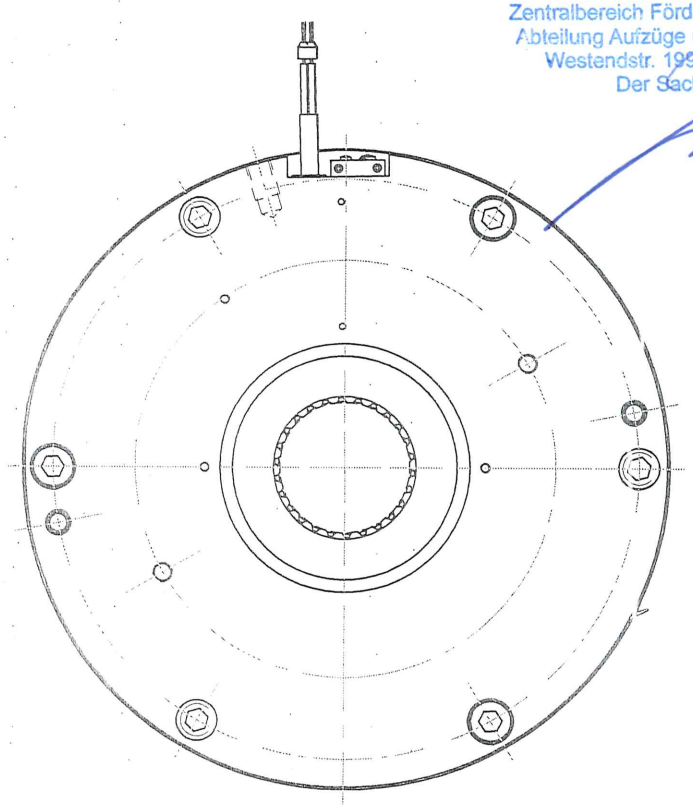
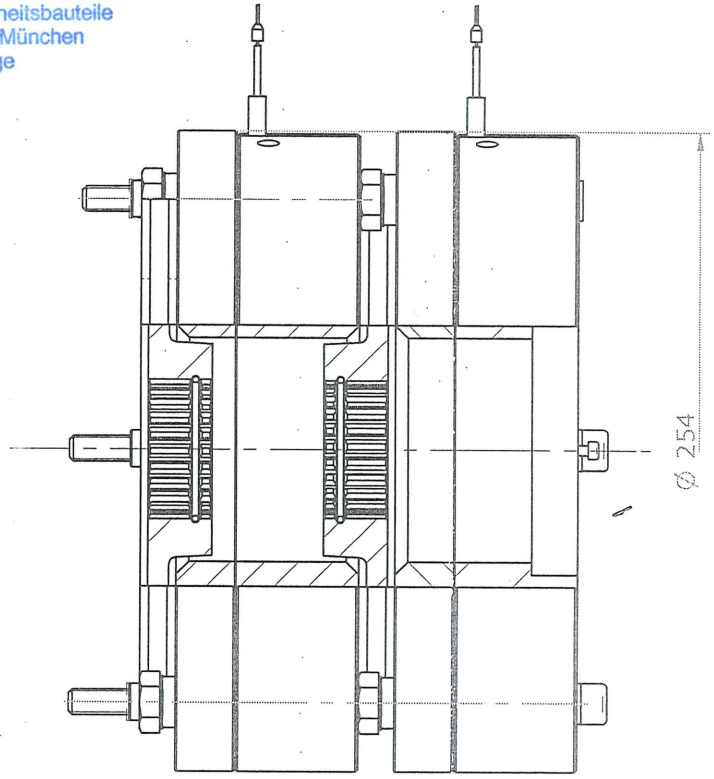
Untoleranced dimensions are nominal dimensions.

NOTES

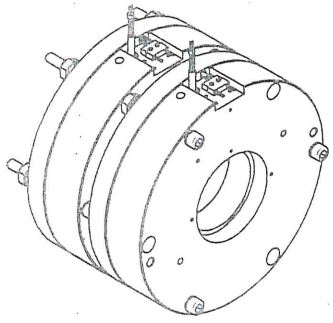
- GEPRÜFT - 10. Feb. 2009
TÜV SÜD Industrie Service GmbH
Zentralbereich Fördertechnik-Sonderbauten
Abteilung Aufzüge und Sicherheitsbauteile
Westendstr. 199, D-80686 München
Der Sachverständige

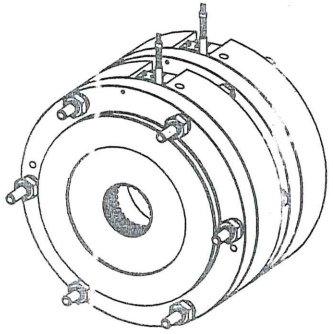
TÜV SÜD Industrie Service GmbH





19 NOV. 2008





FM	LT	REVISION			DATE	By	Ch.

Client/customer:

Ms (Nm) :
Md (Nm) :
n Md (min-1) :
n max (min-1) :
U (Vdc) :
P20°C (W) :
Insulation class (°C):

Customer ref :

Dimensions in mm

Manual/Notice :

Mass :

Scale: 1:1

Drawn : G. Ferrand Date: 07.11.08
Checked: MP. Date: 18.11.08

Design.: Frein électromagnètique
Electromagnetic brake

Type: ERS VAR09 SZ600/---

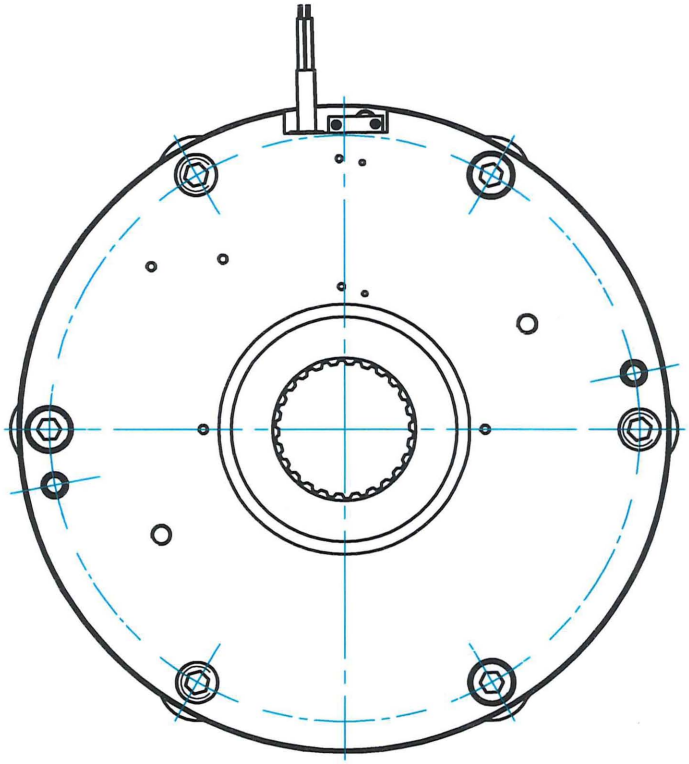
N° 1 12 107132

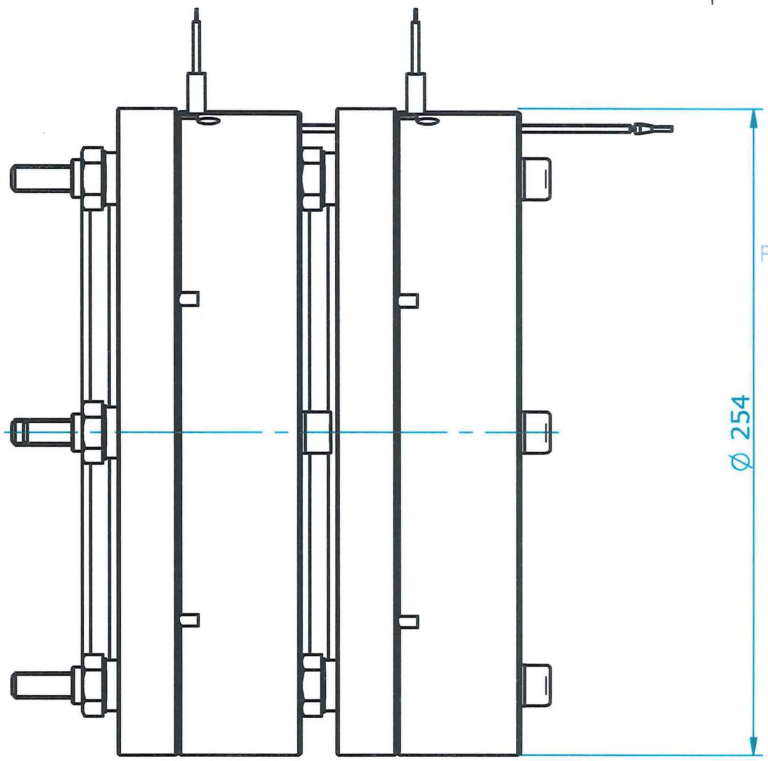
Warner Electric Europe

A3 CAD SE

Les cotes sans indication de tolérances sont des cotes nominales.
Untoleranced dimensions are nominal dimensions.

NOTES

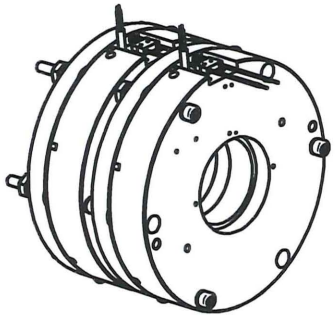


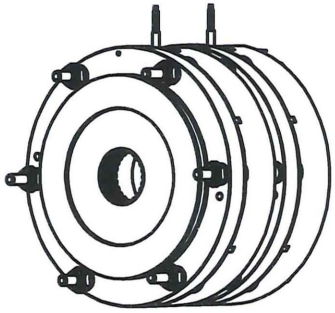


18. MRZ. 2016

GEPRÜFT / APPROVED
TÜV SÜD Industrie Service GmbH
Prüflaboratorium für Produkte der Fördertechnik
Westendstraße 199
80686 München
Sachverständige(r) / Expert

TÜV SÜD Industrie Service GmbH





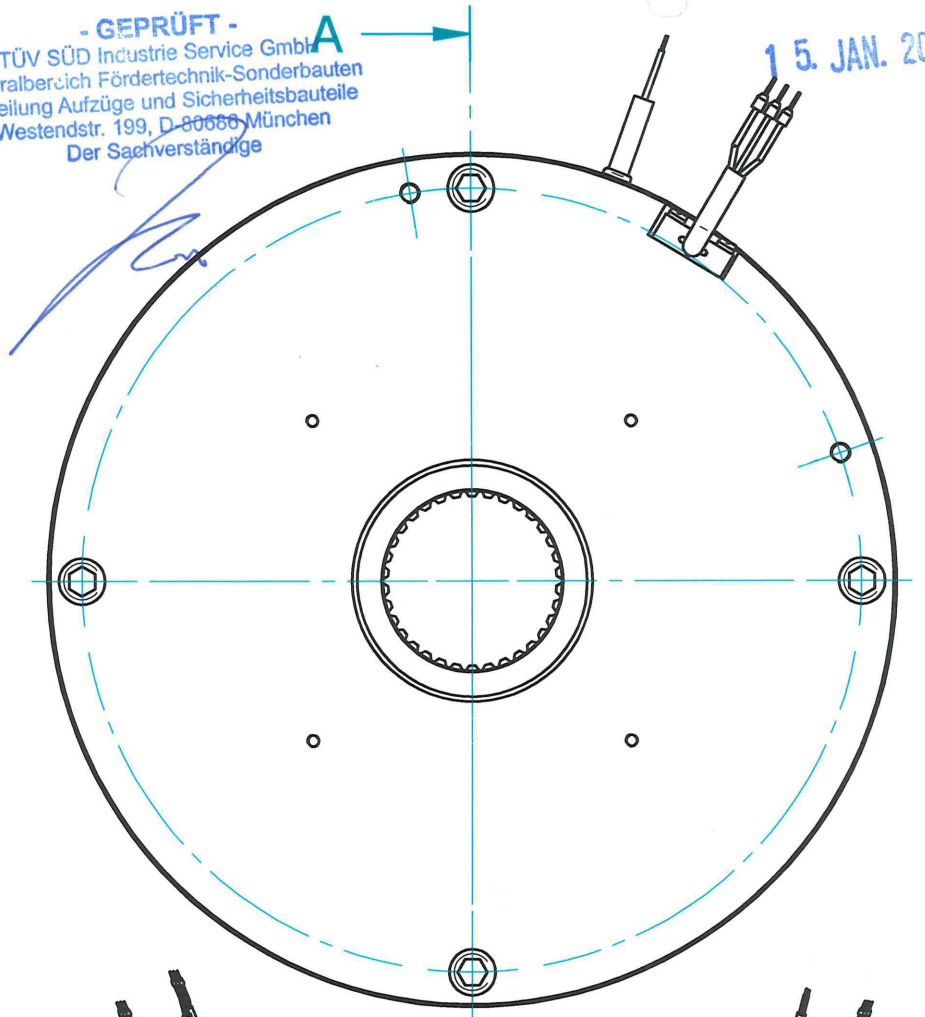
TUV Diffusion

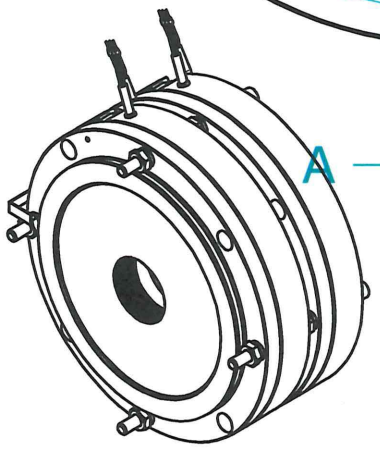
Last modifications in Blue *Dernières modifications en Bleu*						
Client / Customer:						
Ms (Nm) :	Customer ref:					
Md (Nm) :						
n Md (min-1) :	Dimensions in mm	A	Drawing creation	18/02/16	JE	XG
n max (min-1) :		FM / LT	REVISION	DATE	By	Ch.
U (Vdc) :	Manual / Notice:	Drawn: J.Emery		Date: 18/02/16		
P 20°C :	Mass: / Scale:	Checked: XG		Date: 19/02/16		
Insulation class (°C) :		Design.:	Frein électromagnètique / Electromagnetic brake			
		Type:	ERS VAR09 SZ600/--- FZ			
		SAP N°:				
		Dwg N°:	1 12 108238		Rev.	A

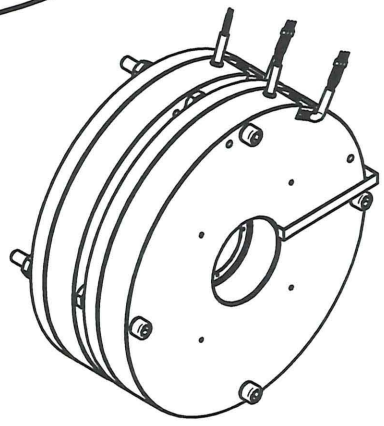
Altra Electric Clutch Brake Group
Warner Electric • Matrix International
Inertia Dynamics • Warner Linear
www.altramotion.com

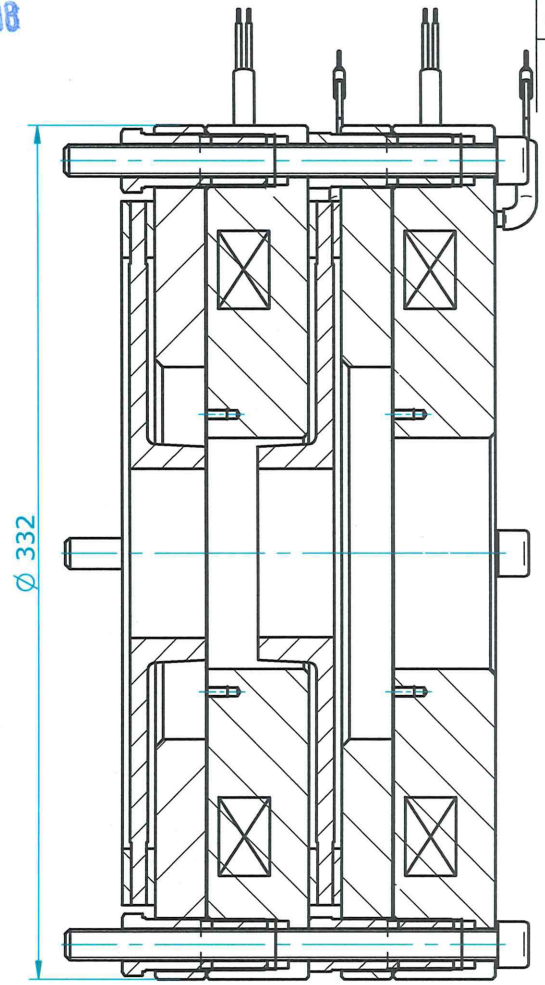
CAD SE

A3ens-1









Les cotes sans indication de tolérances sont des cotes nominales.
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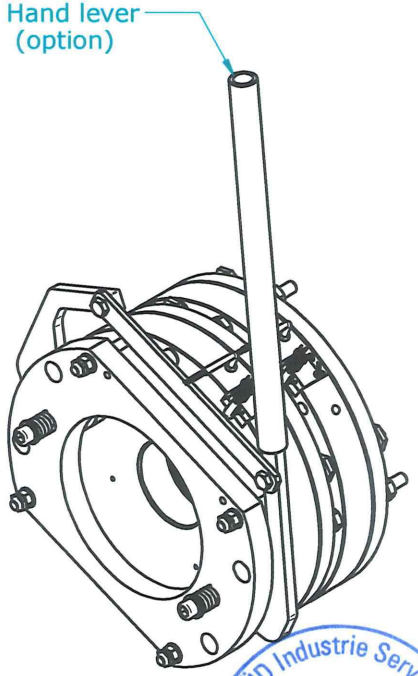
NOTES



TUV DIFFUSION

	A	Up to date	30.11.07	GFE		
FM	LT	REVISION	DATE	By	Ch.	

Client/customer:

Ms (Nm) :
Md (Nm) :
n Md (min-1) :
n max (min-1) :
U (Vdc) :
P20°C (W) :
Insulation class (°C):

Customer ref :

Dimensions in mm

Manual/Notice :

Mass : Scale:

Drawn : G. Ferrand Date: 07.01.04
Checked: Bruno Pitto Date: 07.01.04

Design.: **Frein électromagnetique**

Type: **ERS VAR09 SZ800/---**

N° **1 12 106774** **A**

Warner Electric Europe

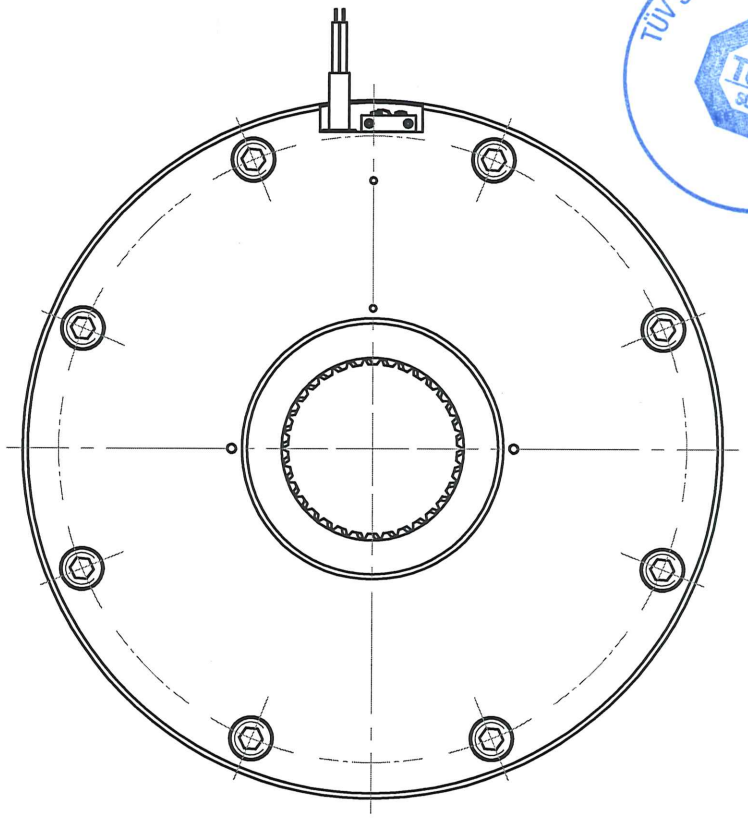
CAD SE

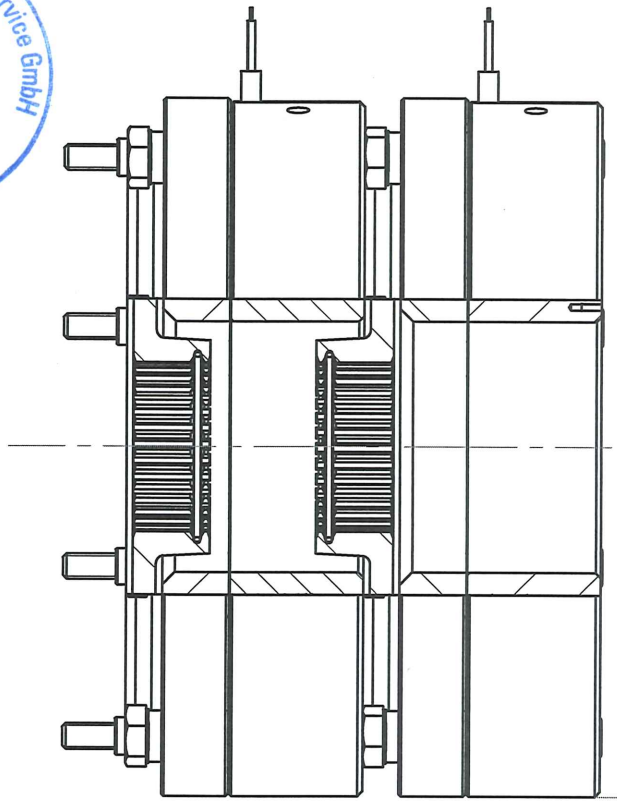
A3

Les cotes sans indication de tolérances sont des cotes nominales.
Untoleranced dimensions are nominal dimensions.

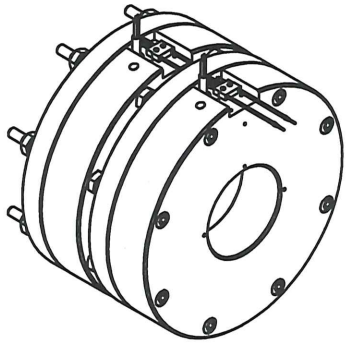
NOTES

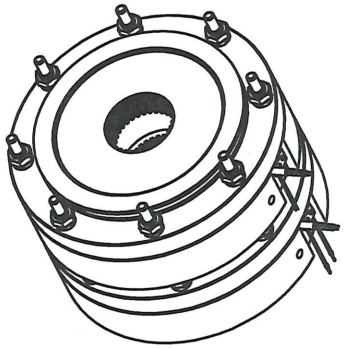
TÜV SÜD Industrie Service GmbH





10. Feb. 2009
- GEPRÜFT -
TÜV SÜD Industrie Service GmbH
Zentralbereich Fördertechnik-Sonderbauten
Abteilung Aufzüge und Sicherheitsbauteile
Westendstr. 199, D-80686 München
Der Sachverständige





FM	LT	REVISION	DATE	By	Ch.	

Client/customer:

Ms (Nm) :
Md (Nm) :
n Md (min-1) :
n max (min-1) :
U (Vdc) :
P20°C (W) :
Insulation class (°C):

Customer ref :

Dimensions in mm

Manual/Notice : SM

Mass : Scale: 1:2

Drawn : G. Ferrand Date: 12.01.2009
Checked: Date: 13.01.2009

Warner Electric Europe

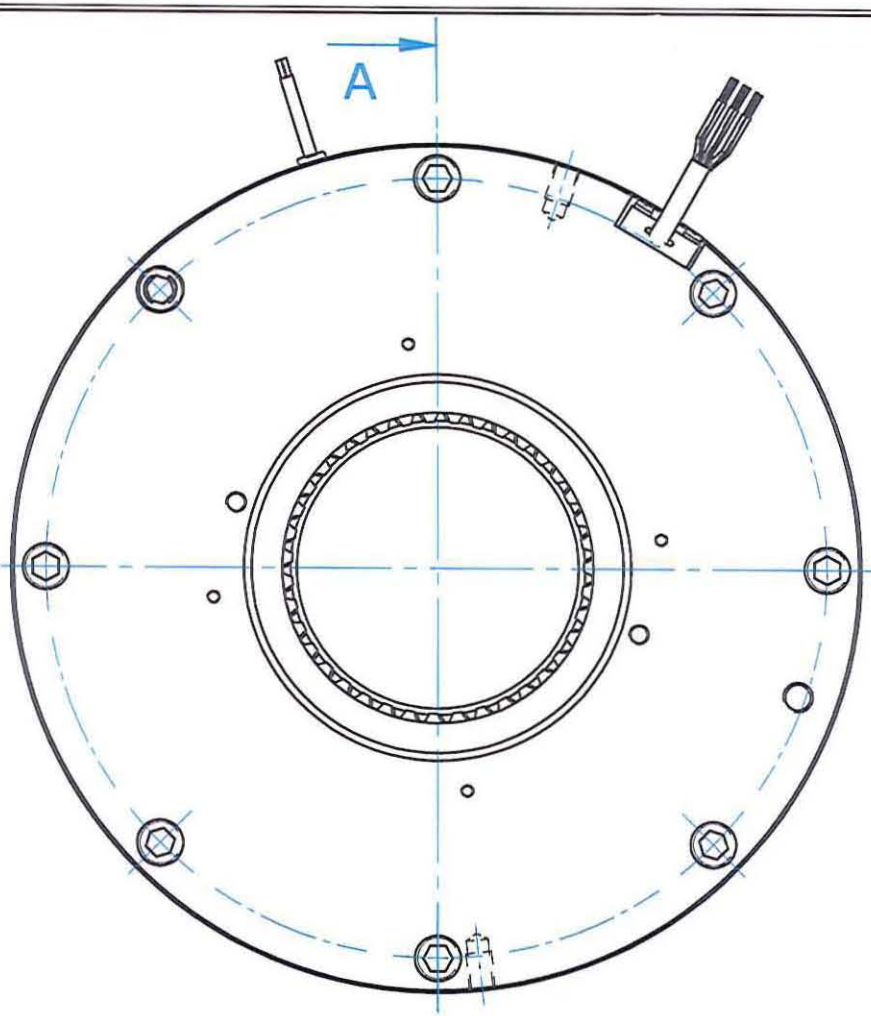
Design.: Frein électromagnétique
Electromagnetic brake

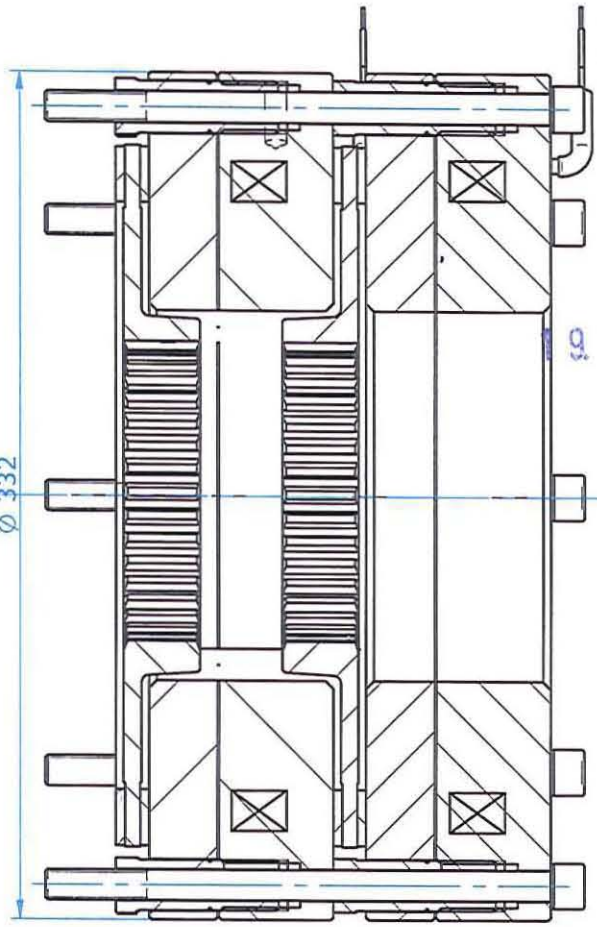
Type: ERS VAR09 SZ1000/800

N° I-1 12 107136

CAD SE

A3





A-A

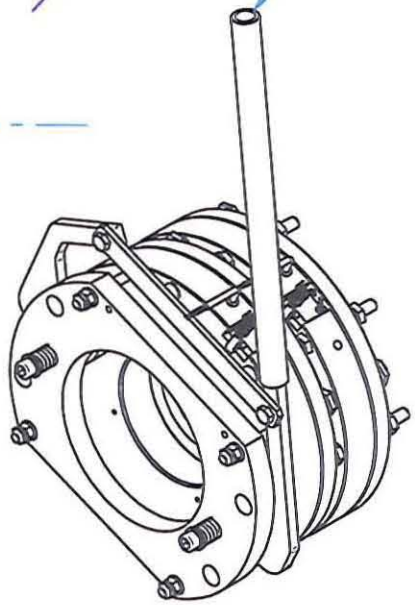
Les cotes sans indication de tolérances sont des cotes nominales.
Untoleranced dimensions are nominal dimensions.

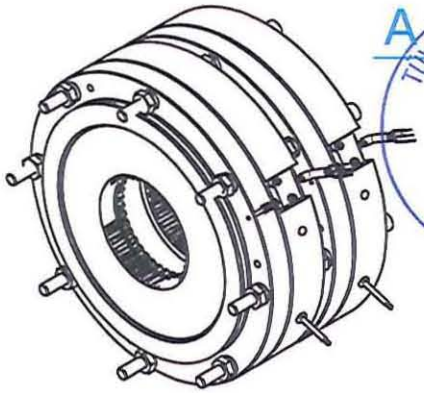
NOTES

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

Hand lever (option)

19. NOV. 2007





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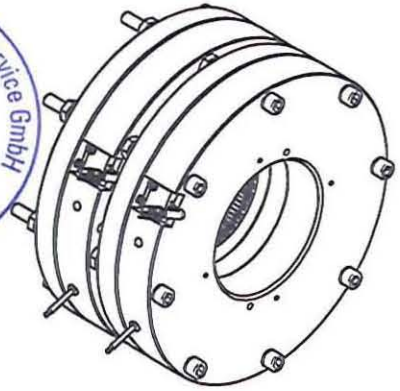


TÜV SÜD Industrie Service GmbH

TUV DIFFUSION

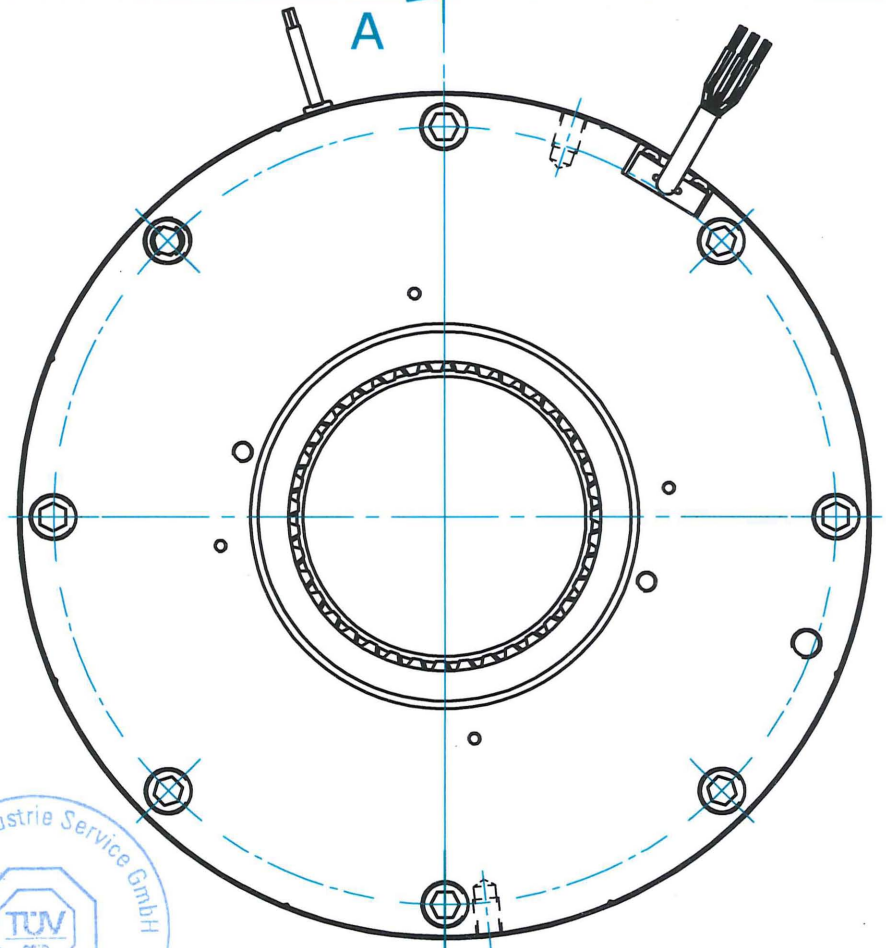
Client/customer: Standard					
Ms (Nm) :	Customer ref :				
Md (Nm) :					
n Md (min-1) :	Dimensions in mm	A	Up to date	14.11.07	GFE
n max (min-1) :		FM	LT	REVISION	DATE	By	Ch.
U (Vdc) :	Manual/Notice :	Drawn : M. Poiraud	Date: 12.07.01		
P20°C (W) :	Mass : / Scale:	Checked: B. Pitto	Date: 12.07.01		
Insulation class (°C):		Design.: Frein électromagnétique / Electromagnetic brake			
		Type: ERS VAR09 SZ1700/----			
		N° 1 12 106581		A	

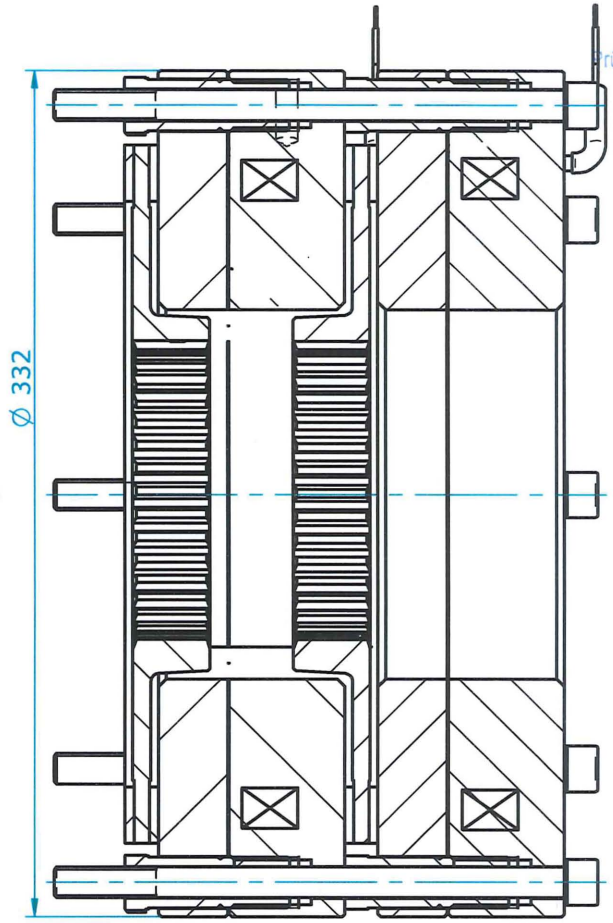
Warner Electric Europe

CAD SE A3

18. MRZ. 2016

GEPRÜFT / APPROVED
TÜV SÜD Industrie Service GmbH
Prüflaboratorium für Produkte der Fördertechnik
Westendstraße 199
80686 München
Sachverständige(r) / Expert





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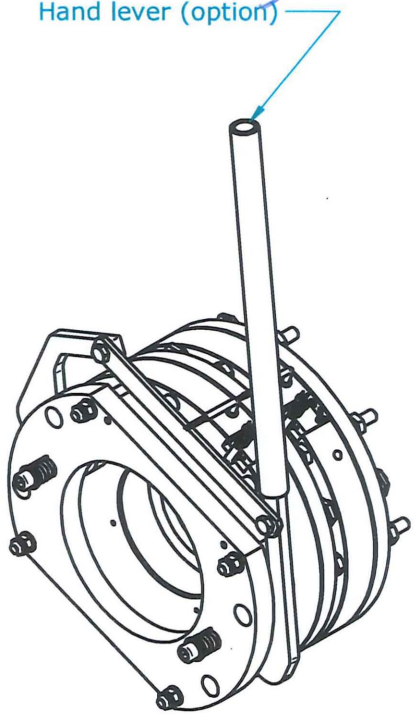
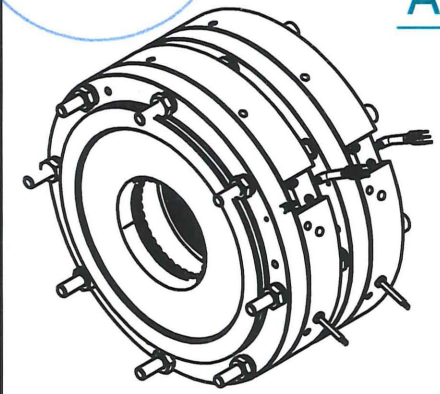
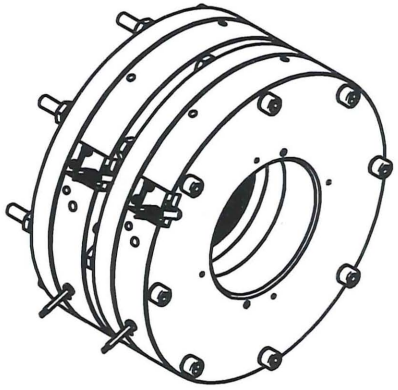


TÜV SÜD Industrie Service GmbH





TUV DIFFUSION

Last modifications in Blue *Dernières modifications en Bleu*						
Client / Customer:						
Ms (Nm) :	Customer ref:					
Md (Nm) :						
n Md (min-1) :	Dimensions in mm	A	Drawing creation	25/02/16	JE	RG
n max (min-1) :	Manual / Notice:	FM LT	REVISION	DATE	By	Ch.
U (Vdc) :			Drawn: J.Emery	Date: 25/02/16		
P 20°C :	Mass: Scale:		Checked: RG	Date: 25/02/16		
Insulation class (°C) :		Design.:	**Frein électromagnétique** Electromagnetic brake			
		Type:	**ERS VAR09 SZ1700/---- CH**			
		Dwg N°:	**1 12 108245**		Rev.	**A**
		SAP N°:				

Altra Electric Clutch Brake Group
Warner Electric • Matrix International
Inertia Dynamics • Warner Linear

CAD SE
A3ens