



LE GOUVERNEMENT  
DU GRAND-DUCHÉ DE LUXEMBOURG  
Ministère de la Mobilité  
et des Travaux publics

Département de la mobilité  
et des transports

SOCIÉTÉ NATIONALE DE  
CERTIFICATION ET D'HOMOLOGATION  
S.A.

Registre de Commerce: B 27180

L-8070 Bertrange



**Référence:** SNCH\*R13:A11\*0012\*00

**Annexes:** - Rapport technique  
- Fiche de renseignements du constructeur

Bertrange, le 31 août 2023



**Communication concernant <sup>(1)</sup>:**

Communication concerning <sup>(1)</sup>:

- **Délivrance d'une confirmation**  
Confirmation granted
- ~~Extension d'une confirmation~~  
~~Confirmation extended~~

**d'un rapport technique concernant l'Annexe 11, Appendice 2, paragraphe 3.9. du Règlement CEE N° 13  
pour un essieu de référence/frein de référence**

of a test report regarding Annex 11 Appendix 2 item 3.9. of ECE Regulation N° 13 for a reference axle/brake

**Numéro de confirmation:**

Confirmation number:

SNCH\*R13:A11\*0012\*00

**1. Marque de fabrique ou de commerce du dispositif  
ou du composant:**

Trade name or mark of the device or component:

TRAX / VAVAX

(Logos: See information document)

**2. Type du dispositif ou du composant:**

Type of the device or component:

**TRAX PND 3020**

**3. Nom et adresse du constructeur:**

Manufacturer's name and address:

ÖZKOÇ İLAVE DİNGİL SAN. TİC. LTD. ŞTİ.

Büyük kayacık Mahallesi Konya

Organize Sanayi Bölgesi 13. Sokak No:5

Selçuklu / Konya / Turkey

**4. Le cas échéant, nom et adresse du représentant  
du constructeur:**

If applicable, name and address of the manufacturer's representative:

Not applicable

**5. Présenté aux essais le:**

Submitted for tests on:

03.06.2023

6. **Modifications faisant l'objet de la présente extension:**  
Reasons for extension: Not applicable
7. **Service technique chargé des essais:**  
Technical service responsible for conducting tests: Luxcontrol SA  
B.P. 349  
L-4004 Esch-sur-Alzette
8. **Date du procès-verbal délivré par ce service:**  
Date of test report issued by that service: 07.07.2023
9. **Numéro du procès-verbal délivré par ce service:**  
Number of test report issued by that service: LC 1454 001 23
10. **Lieu:**  
Place: Bertrange
11. **Date:**  
Date: 31 août 2023
12. **Signature:**  
Signature:

Pour le Ministre de la Mobilité  
et des Travaux publics

Pol PHILIPPE  
Attaché

Pour la SNCH



Laurent LINDEN  
Directeur opérationnel



13. **Pièces jointes:**  
Attachments: See INDEX

<sup>(1)</sup> **Biffer les mentions inutiles.**  
Strike out what does not apply.



**Référence:** SNCH\*R13:A11\*0012\*00

**Annexes:** - Rapport technique  
- Fiche de renseignements du constructeur

Bertrange, le 31 août 2023

## INDEX INDEX

**Numéro de confirmation:**

Confirmation number:

SNCH\*R13:A11\*0012\*00

**Marque de fabrique ou de commerce:**

Trade name or mark:

TRAX / VAVAX

(Logos: See information document)

**Type:**

Type:

TRAX PND 3020

**1. Procès-verbal d'essai:**

Test report:

N° LC 1454 001 23

- Technical report:
- Index:
- General information:
- Test results:

Page(s) 1 to 3;  
Index - Page(s) 1;  
Annex A - Page(s) 1;  
Annex B - Page(s) 1 to 6.

**2. Dossier du constructeur:**

Report of the manufacturer:

N° TRAX PND 3020-R13

- Manufacturer's information folder:

Page(s) 1 to 6.

**3. Autres documents annexés:**

Other documents annexed:

Not applicable

**4. Date de délivrance de la confirmation:**

Date of issue of the confirmation:

31.08.2023

**5. Date de la dernière délivrance d'une confirmation révisée:**

Date of last extension of the confirmation:

Not applicable





1. **General**

Manufacturer Name and Address: **ÖZKOÇ İLAVE DİNGİL SAN. TİC.  
LTD. STİ.  
Büyük kayacık Mahallesi Konya Organize  
Sanayi Bölgesi 13. Sokak No:5  
Selçuklu / Konya / Türkiye**

Vehicle Type **TRAX PND 3020**  
Or component or ESA or STU:

2. **Test details**

	Inspector	Location of test:	Date of receipt of test item:	Date of test:
Main report	Erdal ÇINARCI (Type Approval Engineer)	Ferizli Organize Sanayi Bölgesi 2. Cad. No: 34/1 Ferizli, Sakarya - Türkiye	02.06.2023	03.06.2023

2.1. **Remarks**

2.1.1. Main report:

**Not applicable**



**3. Statement of compliance**

The inspections items and measurements carried out have shown the compliance of the type described in this technical report and the attached Annexes with the requirements of the standard as stated on page 1.

Istanbul/Turkey, July 07, 2023

Luxcontrol s.a.  
Service Homologation-automobile

Erdal ÇINARCI  
Ingénieur-Inspecteur

Mehmet Rauf GÜMÜŞ  
Ingénieur-Inspecteur

Annexes



Details to the information package, including a summary in chronological order, concerning extensions and/or amendments

Previously granted: **Not applicable**

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### **Main Report**

Technical Report No.:	LC 1454 001 23	3 Pages
	Index	1 Page

List of Annexes:

A: General Information	1 Page
B: Test results	6 Pages
C: Information folder	6 Pages

### **Content of the information folder:**

- Manufacturer's information document no. TRAX PND 3020-R13 dated 07.07.23 acc. to ECE R13.11 (pages 1 to 5)
  - Drawing (Page 6)
-



## **GENERAL INFORMATION**

### **Concerning a confirmation**

of a Test Report regarding Annex 11 Appendix 2 item 3.9. of ECE Regulation No. 13 for a reference axle/brake

- |      |   |  |
|------|---|--|
| [1.] | Trade name or mark of the device or component:                        |  and  |
| [2.] | Manufacturer's name for the type of device or component:              | <b>TRAX PND 3020</b>   |
| [3.] | Manufacturer's name and address:                                      | <b>ÖZKOÇ İLAVE DİNGİL SAN.<br/>TİC. LTD. STİ.<br/>Büyük kayacık Mahallesi Konya<br/>Organize Sanayi Bölgesi 13. Sokak<br/>No:5<br/>Selçuklu / Konya / Türkiye</b>          |
| [4.] | If applicable, name and address of the manufacturer's representative: | <b>not applicable</b>  |
| [5.] | Submitted on:   | <b>02.06.2023</b>  |
| [6.] | Reason(s) for extension:  | <b>not applicable</b>  |



**Technical report No**  
**Base Part: ID4-LC 1454 001 23**  
**Suffix:00**

Note: Test report as prescribed in section 3.9 of Appendix 2 to Annex 11.

**1.General**

- 1.1. Axle manufacturer name and address:  
ÖZKOÇ İLAVE DİNGİL SAN. TİC. LTD. STİ.  
Büyük kayacık Mahallesi Konya Organize Sanayi Bölgesi 13. Sokak  
No:5  
Selçuklu / Konya / Türkiye
- 1.1.1. Make of axle manufacturer: TRAX
- 1.2. Brake manufacturer name and address:  
See item 1.1.
- 1.2.1. Brake identifier ID2-: 300x200
- 1.2.2. Automatic brake adjustment device:  
- ~~Integrated\*~~  
- ~~Non-integrated\*~~  
*\*Strikethrough, as appropriate.*
- 1.3. Manufacturer's information document: TRAX PND 3020-R13

**2. Test Record**

The following data is recorded for each test:

- 2.1. Test code: LC 1454 001 23
- 2.2. Test specimen: Axle with drum brake  
Test variant: S-cam brake
- 2.2.1. Axle code: See below
- 2.2.1.1. Axle identifier: ID1-TRAX PND 3020
- 2.2.1.2. Identification of tested axle: TRAX PND 3020
- 2.2.1.3. Test axle load (Fe identifier) [daN]: ID3-14803



2.2.2.	Brake:	See below
2.2.2.1.	Brake identifier:	ID2-300x200
2.2.2.2.	Identification of tested brake:	300x200
2.2.2.3.	Maximum stroke capability of the brake: <i>Note: Applies to disc brakes only.</i>	NA mm
2.2.2.4.	Effective length of the cam shaft: <i>Note: Applies to drum brakes only.</i>	230 mm
2.2.2.5.	Material variation: <i>Note: As per paragraph 3.8 (m) of Appendix 2 to this annex.</i>	NA
2.2.2.6.	Brake: - Drum* - <del>Disc</del> * <i>*Strikethrough, as appropriate.</i>	
2.2.2.6.1.	Actual test mass of drum/ <del>disc</del> : <i>*Strikethrough, as appropriate.</i>	33 kg
2.2.2.6.2.	Nominal external diameter of disc: <i>Note: Applies to disc brakes only.</i>	NA mm
2.2.2.6.3.	Type of cooling of the disc: - <del>Ventilated</del> * - <del>Non-ventilated</del> * <i>*Strikethrough, as appropriate.</i>	
2.2.2.6.4.	Integrated hub: - <del>With</del> * - <del>Without</del> * <i>*Strikethrough, as appropriate.</i>	
2.2.2.6.5.	Disc with integrated drum: - <del>With parking brake function</del> * - <del>Without parking brake function</del> * <i>*Strikethrough, as appropriate.</i> <i>Note: Applies to disc brakes only.</i>	
2.2.2.6.6.	Geometric relationship between disc friction surfaces and disc mounting: NA <i>Examples: One piece, casted, connection on action side.</i>	



2.2.2.6.7.	Base material:	Grey Cast Iron	
2.2.2.7.	Brake:	<ul style="list-style-type: none"> <li>- Lining*</li> <li>- Pad*</li> </ul> <p><i>*Strikethrough, as appropriate.</i></p>	
2.2.2.7.1.	Manufacturer:	EREN BALATACILIK SANAYİ VE TİCARET A.Ş.	
2.2.2.7.2.	Make:	EREN	
2.2.2.7.3.	Type:	M76	
2.2.2.7.4.	Method of attachment:	Riveted	
		<ul style="list-style-type: none"> <li>- Lining*</li> <li>- Pad on the brake shoe*</li> <li>- Back plate*</li> </ul> <p><i>*Strikethrough, as appropriate.</i></p>	
2.2.2.7.5.	Thickness of back plate:	5	mm*
	Weight of shoes:	4,25	kg*
		<i>*Strikethrough, as appropriate.</i>	
2.2.2.7.6.	Base material:	S235	
		<ul style="list-style-type: none"> <li>- Back plate*</li> <li>- Brake shoe*</li> </ul> <p><i>*Strikethrough, as appropriate.</i></p>	
2.2.3.	Automatic brake adjustment device:	See below	
		<i>*Not applicable in the case of integrated automatic brake adjustment device.</i>	
2.2.3.1.	Manufacturer name and address:	Geçgel Metal Döküm Mak. Oto. San.Tic. Ltd. Şti Konya Organize San.Bölgesi Büyük Kayacık Mah. Yaylacık Cad. Güneştepe Sok. No:5 Selçuklu / Konya / Türkiye	
2.2.3.2.	Make:	GOS	
2.2.3.3.	Type:	S-ABA	
2.2.3.4.	Version:	12	
2.2.4.	Wheel(s):	285/70 R19,5	
		<i>Note: For dimensions, see Figures 1A and 1B in Appendix 5 to this annex.</i>	



2.2.4.1. Reference tyre rolling radius ( $R_e$ ) at test axle load ( $F_e$ ):  mm

2.2.4.2. Data of the fitted wheel during testing:

Tyre Size	Rim Size	$X_e$ (mm)	$D_e$ (mm)	$E_e$ (mm)	$G_e$ (mm)
285/70 R19,5	19,5x7,5	260	248	60	30

2.2.5. Lever length  $l_e$ :  mm

2.2.6. Brake Actuator:

2.2.6.1. Manufacturer:

2.2.6.2. Make:

2.2.6.3. Type:

2.2.6.4. (Test) identification number:

2.3. Test results:

*Note: Corrected to take account of rolling resistance of  $0.01 \cdot F_e$ .*



2.3.2. In the case of vehicles of categories O<sub>3</sub> and O<sub>4</sub> where the O<sub>3</sub> trailer has been subject to the Type III test:

Test Type	0	III	
Annex 11, Appendix 2, paragraph:	3.5.1.2.	3.5.3.1.	3.5.3.2.
Initial test speed (km/h)	60	60	60
Final test speed (km/h)	0	30	0
Brake actuator pressure p <sub>e</sub> (kPa)	560	N/A	650
Number of brake applications	-	20	-
Duration of brake cycle(s)	-	60	-
Braking force developed T <sub>e</sub> (daN)	7867,8	4527	6047
Brake efficiency T <sub>e</sub> /F <sub>e</sub>	0,53	0,31	0,41
Actuator stroke s <sub>e</sub> (mm)	--	--	--
Brake input torque C <sub>e</sub> (Nm)	2049,3	--	2049,3
Brake input threshold torque C <sub>0,e</sub> (Nm)	41,48	--	41,48

2.3.3. *This item is to be completed only when the brake has been subject to the test procedure defined in paragraph 4 of Annex 19 to this regulation, to verify the cold performance characteristics of the brake by means of the brake factor (BF).*

2.3.3.1. Brake factor B<sub>F</sub>:

2.3.3.2. Declared threshold torque C<sub>0,dec</sub>:  Nm

2.3.4. Performance of the automatic brake adjustment device, (if applicable).

2.3.4.1. Free running according to paragraph 3.6.3 of Annex 11, Appendix 2:

- Yes\*

- ~~No\*~~

\*Strikethrough, as appropriate.

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### **3. Application Range**

Application range specifies the axle/brake variants that are covered in this test report, by showing which variables are covered by the individual test codes.

NA

This test has been carried out and the results reported, in accordance with Appendix 2 to Annex 11 and, where appropriate, paragraph 4 of Annex 19 – Part 1 to Regulation No. 13, as last amended by the 11 series of amendments.

Yes

At the end of the test defined in paragraph 3.6 of Annex 11, Appendix 2, the requirements of paragraph 5.2.2.8.1 of Regulation No. 13 are deemed to be fulfilled.

Yes

*Note: Only to be completed when an automatic brake wear adjustment device is installed.*

### **4. Remarks**

The inspection results are only applicable to items which have been tested.

### **5. Test facilities**

Calibration of measuring and test equipment used to carry out the inspections is in accordance with the standard stated on page 1 of this report and with ISO 17025:2017.

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	<b>TRAILER AXLE &amp; BRAKE INFORMATION DOCUMENT</b>	Date	07.07.2023	
		Document Nr.	TRAX PND 3020 - R13	
	According to ECE R13.11, Annex 11, Appendix 5 ANNEX C		Revision Nr.	00
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## 1. GENERAL

Name and address of axle or vehicle manufacturer  
 ÖZKOÇ İLAVE DİNGİL SAN. TİC. LTD. STİ.  
 Büyük kayacak Mahallesi Konya Organize Sanayi Bölgesi  
 13. Sokak No:5  
 Selçuklu / Konya / Türkiye

1.1. Commercial Description

TR5472

1.2. Category

O4

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## 2. AXLE DATA

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2.1. Manufacturer (name and address)

ÖZKOÇ İLAVE DİNGİL SAN. TİC. LTD. STİ.  
 Büyük kayacak Mahallesi Konya Organize Sanayi Bölgesi  
 13. Sokak No:5  
 Selçuklu / Konya / Türkiye

2.1.1 Make of manufacturer



and



2.2. Type / variant

TRAX PND 3020

2.3. Axle identifier

ID1- TRAX PND 3020

2.4. Test axle load ( $F_e$ )

**14803 daN**

2.5. Wheel and brake data according to the following  
 Figures 1A and 1B

Figure 1A

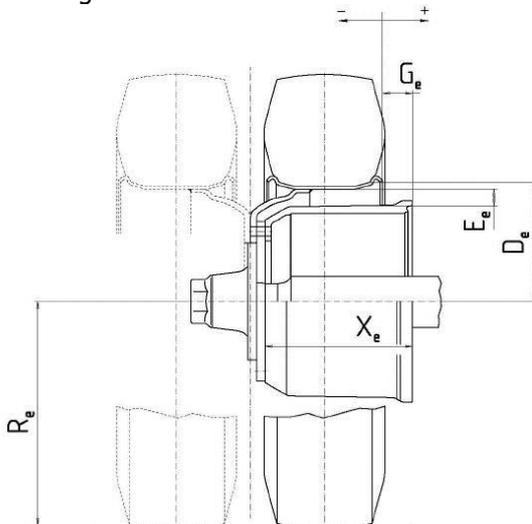
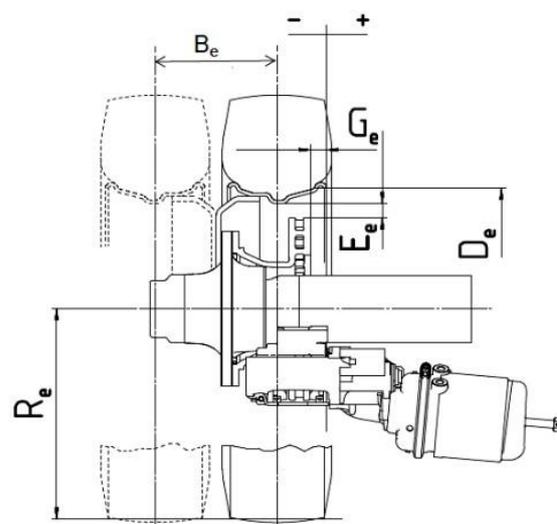


Figure 1B



Tyre	Rim	$D_e$ (mm)	$E_e$ (mm)	$G_e$ (mm)	$R_e$ (mm)	$B_e$ (mm)	$X_e$ (mm)
285/70 R17,5	7,5 x 17,5	248	60	+30	434	--	260



## TRAILER AXLE & BRAKE INFORMATION DOCUMENT

According to  
ECE R13.11, Annex 11, Appendix 5  
ANNEX C

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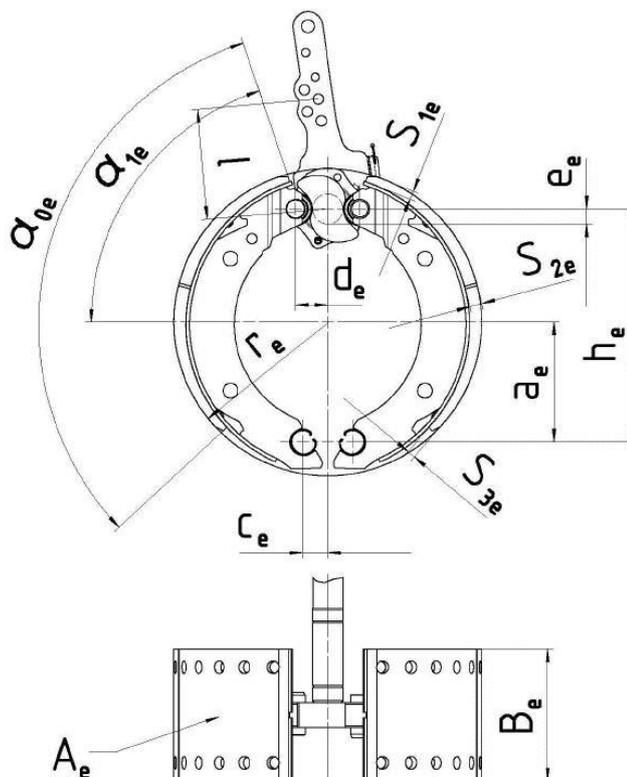
Société Nationale de Certification et d'Homologation

### 3. BRAKE

#### 3.1. General Information

3.1.1.	Name	TRAX
3.1.2.	Manufacturer (Name and address)	See Item 1.
3.1.3.	Type of brake	Drum Brake
3.1.3.1.	Variant	S-Cam Brake
3.1.4.	Brake identifier	ID2-300x200
3.1.5.	Brake data according to the following Figures 2A and 2B	
3.1.6.	Brake Factor ( $B_r$ )	8,5

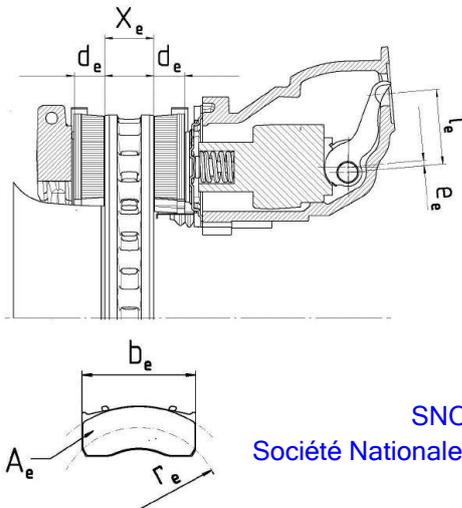
Figure 2A



$a_e$ (mm)	$h_e$ (mm)	$c_e$ (mm)	$d_e$ (mm)	$e_e$ (mm)	$\alpha_{0e}$ (°)	$\alpha_{1e}$ (°)	$B_e$ (mm)	$r_e$ (mm)	$A_e$ (cm <sup>2</sup> )	$S_{1e}$ (mm)	$S_{2e}$ (mm)	$S_{3e}$ (mm)
110	223	30	28	13	114,5	67,25	200	150	1118	13	18	13

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Figure 2B



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$X_e$ (mm)	$d_e$ (mm)	$e_e$ (mm)	$l_e$ (mm)	$b_e$ (mm)	$A_e$ (cm <sup>2</sup> )	$r_e$ (mm)
--	--	--	--	--	--	--

### 3.2. Drum brake data

#### 3.2.1. Brake adjustment device (external/internal)

**External**

##### 3.2.1.1. Manufacturer (Name and address)

GEÇGEL METAL DÖKÜM MAK. SAN. TİC. LTD.  
ŞTİ.  
Konya Org. San. Bölgesi Büyük Kayacık Mah.  
Yaylacık Cad. Güneştepe Sok. No: 5 Selçuklu /  
Konya / Turkey  
GOS

##### 3.2.1.2. Make

GOS

##### 3.2.1.3. Type

S-ABA

##### 3.2.1.4. Version

12

##### 3.2.2. Declared maximum brake input torque ( $C_{max}$ )

2800 Nm

##### 3.2.3. Mechanical efficiency ( $\eta$ )

0,9

##### 3.2.4. Declared brake input threshold torque ( $C_{0,dec}$ )

41,48 Nm

##### 3.2.5. Efficiency length of the cam shaft

230 mm

### 3.3. Brake drum

#### 3.3.1. Max. diameter of friction surface (wear limit)

300 mm

#### 3.3.2. Base material

Grey Cast iron

#### 3.3.3. Declared mass

33 kg

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3.3.4.	Nominal mass	33,5 kg
3.3.5.	Permitted range of the brake drum mass	33-35 kg
3.4.	<i>Brake Lining</i>	
3.4.1.	Manufacturer (Name and address)	EREN BALATACILIK SAN. VE TİC. A.Ş. 13 SOKAK NO:6 KEMALPAŞA ORGANİZE SANAYİ BÖLGESİ Kemalpaşa/ İzmir / Turkey
3.4.2.	Make	EREN
3.4.3.	Type	M76
3.4.4.	Identification (type identification on lining)	M76-GG
3.4.5.	Minimum thickness (wear limit)	5 mm
3.4.6.	Method of attaching friction material to brake shoe	Riveted
3.4.6.1.	Worst case of attachment (in the case of more than one)	N/A
3.4.6.2.	Base material of the brake shoe	S235
3.4.6.3.	Range of the weight of the brake shoes (without brake lining)	4,25 kg
3.5.	<i>Disk brake data</i>	<a href="#">SNCH*R13:A11*0012*00</a> <a href="#">Société Nationale de Certification et d'Homologation</a>
3.5.1.	Connection type to the axle (axial, radial, integrated etc.)	N/A
3.5.2.	Brake adjustment device (external / integrated)	N/A
3.5.3.	Max. actuation stroke	N/A
3.5.4.	Declared maximum input force ( $Th_{Amax}$ )	N/A
3.5.4.1.	Declared maximum brake input torque ( $C_{max}$ ) $C_{max} = Th_{Amax} * l_e$	N/A
3.5.5.	Friction radius ( $r_e$ )	N/A
3.5.7.	Input/output ratio (i) ( $l_e/e_e$ )	N/A
3.5.8.	Mechanical efficiency ( $\eta$ )	N/A
3.5.9.	Declared brake input threshold force ( $Th_{A0,dec}$ )	N/A

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3.5.9.1.	$C_{0,dec} = Th_{A0,dec} * I_e$	N/A
3.5.10.	Minimum rotor thickness (wear limit)	N/A
3.6.	<i>Brake disc data</i>	
3.6.1.	Disc type description	N/A
3.6.2.	Connection/mounting to the hub	N/A
3.6.3.	Ventilation (yes/no)	N/A
3.6.4.	Declared mass	N/A
3.6.5.	Nominal mass	N/A
3.6.6.	Declared external diameter	N/A
3.6.7.	Minimum external diameter	N/A
3.6.8.	Inner diameter of friction ring	N/A
3.6.9.	Width of ventilation channel (if appl.)	N/A
3.6.10.	Base material	N/A
3.7.	<i>Brake pad data</i>	
3.7.1.	Manufacturer and address	N/A
3.7.2.	Make	N/A
3.7.3.	Type	N/A
3.7.4.	Identification (type identification on pad back plate)	N/A
3.7.5.	Minimum thickness (wear limit)	N/A
3.7.6.	Method of attaching friction material to pad back plate	N/A
3.7.6.1.	Worst case of attachment (in case of more than one)	N/A

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**LIST OF ANNEXES**

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