



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

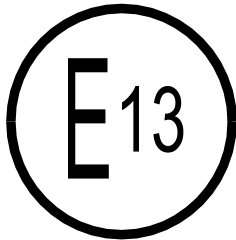
L-8070 Bertrange



Référence: SNCH*R13:A11*0015*00

Annexes: - Rapport technique
- Fiche de renseignements du constructeur

Bertrange, le 07 mars 2024



Communication concernant ⁽¹⁾:

Communication concerning ⁽¹⁾:

- **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:

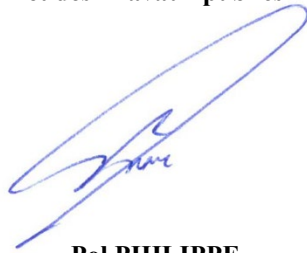
Confirmation number:

SNCH*R13:A11*0015*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 PLT 4218
- 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: 19. - 20.12.2023


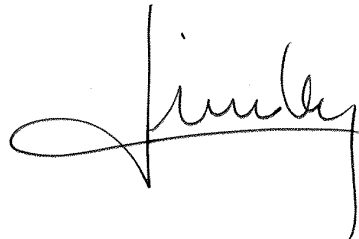
6. **Modifications faisant l'objet de la présente extension:**
Reasons for extension: Not applicable
7. **Service technique chargé des essais:**
Technical service responsible for conducting tests: Luxcontrol SA
B.P. 349
L-4004 Esch-sur-Alzette
8. **Date du procès-verbal délivré par ce service:**
Date of test report issued by that service: 24.01.2024
9. **Numéro du procès-verbal délivré par ce service:**
Number of test report issued by that service: LC 1454 003 24
10. **Lieu:**
Place: Bertrange
11. **Date:**
Date: 07 mars 2024
12. **Signature:**
Signature:

Pour la Ministre de la Mobilité
et des Travaux publics



Pol PHILIPPE
Attaché

Pour la SNCH



Laurent LINDEN
Directeur opérationnel



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

⁽¹⁾ **Biffer les mentions inutiles.**
Strike out what does not apply.



Référence: SNCH*R13:A11*0015*00

Annexes: - Rapport technique
- Fiche de renseignements du constructeur

Bertrange, le 07 mars 2024

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Numéro de confirmation:

Confirmation number:

SNCH*R13:A11*0015*00

Marque de fabrique ou de commerce:

Trade name or mark:

TRAX / VAVAX

(Logos: See information document)

Type:

Type:

TRAX PLT 4218

1. Procès-verbal d'essai:

Test report:

N° LC 1454 003 24

- 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 7.

2. Dossier du constructeur:

Report of the manufacturer:

N° TRAX PLT 4218

- Manufacturer's information folder:

Page(s) 1 to 5.

3. Autres documents annexés:

Other documents annexed:

Not applicable

4. Date de délivrance de la confirmation:

Date of issue of the confirmation:

07.03.2024

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

Date of last extension of the confirmation:

Not applicable

TECHNICAL REPORT

Base Part: ID4-LC 1454 003 24

Suffix:00

Inspection concerning

Reference axle

performed according to

Annex 11, Appendix 2

**of ECE-Regulation No. 13
series of amendments: 12
Including supplement: 02**

Type: TRAX PLT 4218

Manufacturer name and address:

**ÖZKOÇ İLAVE DİNGİL SANAYİ VE TİCARET LTD. ŞTİ.
BÜYÜK KAYACIK MAHALLESİ KONYA ORGANİZE SANAYİ
BÖLGESİ 13. SOKAK NO:5
SELÇUKLU/KONYA/TÜRKİYE**

Contents:

1. General
2. Test details
Index

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■ **Luxcontrol SA**

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BIL
IBAN: LU48 0026 1824 1543 2600
BIC: BILLLLULL



1. General

Manufacturer Name and Address: ÖZKOÇ İLAVE DİNGİL SANAYİ VE
TİCARET LTD. ŞTİ.
BÜYÜK KAYACIK MAHALLESİ
KONYA ORGANİZE SANAYİ BÖLGESİ
13. SOKAK NO:5
SELÇUKLU/KONYA/TÜRKİYE

~~Vehicle Type~~ **TRAX PLT 4218**
~~Or component or ESA or STU:~~

2. Test details

	Inspector	Location of test:	Date of receipt of test item:	Date of test:
Main report	Fatih UZUN (Type Approval Engineer)	Selçuklu/Konya/ Türkiye	19.12.2023	19.12.2023 20.12.2023

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, 24 January 2024

Luxcontrol s.a.
Service Homologation-automobile

Fatih UZUN
Ingénieur-Inspecteur

Mehmet YÜKSEL
Ingénieur-Inspecteur

Annexes



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

Previously granted: **Not applicable**

Main Report

Technical Report No.:	LC 1454 003 24	3 Pages
	Index	1 Page

List of Annexes:



A: General Information	1 Page
B: Test results	7 Pages
C: Information folder	5 Pages

Content of the information folder:

- Manufacturer's information document no. TRAX PLT 4218 dated 24/01/2024 acc. to ECE R13.12 (page 1 to 5)
-

**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: | TRAX PLT 4218 |
| [3.] | Manufacturer's name and address: | ÖZKOÇ İLAVE DİNGİL
SANAYİ VE TİCARET LTD. ŞTİ.
BÜYÜK KAYACIK
MAHALLESİ KONYA
ORGANİZE SANAYİ BÖLGESİ
13. SOKAK NO:5
SELÇUKLU/KONYA/TÜRKİYE |
| [4.] | If applicable, name and address of the manufacturer's representative: | not applicable |
| [5.] | Submitted on: | 19.12.2023 |
| [6.] | Reason(s) for extension: | not applicable |



Technical report No
Base Part: ID4-LC 1454 003 24
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 SANAYİ VE TİCARET LTD. ŞTİ.
BÜYÜK KAYACIK MAHALLESİ KONYA ORGANİZE SANAYİ
BÖLGESİ 13. SOKAK NO:5 SELÇUKLU/KONYA/TÜRKİYE

1.1.1. Make of axle manufacturer:



1.2. Brake manufacturer name and address:

See item 1.1.

1.2.1. Brake identifier ID2-:

420x180

1.2.2. Automatic brake adjustment device:

- ~~Integrated*~~
- ~~Non-integrated*~~

*Strikethrough, as appropriate.

1.3. Manufacturer's information document:

TRAX PLT 4218

2. Test Record

The following data is recorded for each test:

2.1. Test code:

LC 1454 003 24

2.2. Test specimen:
Test variant:

Axle with drum brake

S-cam brake

2.2.1. Axle code:

See below

2.2.1.1. Axle identifier:

ID1- TRAX PLT 4218

2.2.1.2. Identification of tested axle:

TRAX PLT 4218



2.2.1.3.	Test axle load (Fe identifier) [daN]:	10844
2.2.2.	Brake:	See below
2.2.2.1.	Brake identifier:	ID2- 420x180
2.2.2.2.	Identification of tested brake:	420x180
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>	640 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* - Disc * <i>*Strikethrough, as appropriate.</i>	
2.2.2.6.1.	Actual test mass of drum/ disc : <i>*Strikethrough, as appropriate.</i>	44.5 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: - Ventilated * - Non-ventilated * <i>*Strikethrough, as appropriate.</i>	
2.2.2.6.4.	Integrated hub: - With * - Without * <i>*Strikethrough, as appropriate.</i>	
2.2.2.6.5.	Disc with integrated drum: - With parking brake function * - Without parking brake function * <i>*Strikethrough, as appropriate. Note: Applies to disc brakes only.</i>	



2.2.2.6.6. Geometric relationship between disc friction surfaces and disc mounting:

NA

Examples: One piece, casted, connection on action side.

2.2.2.6.7. Base material:

Grey Cast Iron

2.2.2.7. Brake:

- Lining*
- Pad*

**Strikethrough, as appropriate.*

2.2.2.7.1. Manufacturer:

Eren Balataçılık Sanayi ve
Ticaret A.Ş.

2.2.2.7.2. Make:

EREN

2.2.2.7.3. Type:

M76GG

2.2.2.7.4. Method of attachment:

Riveted

- Lining*
- Pad on the brake shoe*
- Back plate*

**Strikethrough, as appropriate.*

2.2.2.7.5. Thickness of back plate:

--

mm*

Weight of shoes:

6,40

kg*

**Strikethrough, as appropriate.*

2.2.2.7.6. Base material:

Steel

- Back plate*
- Brake shoe*

**Strikethrough, as appropriate.*

2.2.3. Automatic brake adjustment device:

See below

**Not applicable in the case of integrated automatic brake adjustment device.*

2.2.3.1. Manufacturer name and address:

HALDEX BRAKE PRODUCTS AB.
INSTRUMENTGATAN 15 BOX 501 261 14 LANDSKRONA,
SWEDEN

2.2.3.2. Make:

HALDEX

2.2.3.3. Type:

S-ABA 80022



2.2.3.4. Version:

2.2.4. Wheel(s):

Note: For dimensions, see Figures 1A and 1B in Appendix 5 to this annex.

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)
445/65 R 22.5	14.00x22.5	228	235	56	+20

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 $0.01 \cdot F_e$.



2.3.1.

In the case of vehicles of categories O₂ and O₃ where the O₄ trailer has been subject to the Type I test:

Test Type	0	I	
Annex 11, Appendix 2, paragraph:	3.5.1.4	3.5.2.2/3	3.5.2.4
Test speed (km/h)	40	40	40
Brake actuator pressure p _e (kPa)	650	N/A	650
Braking time (min)	N/A	2.55	N/A
Braking force developed T _e (daN)	6691.6	759.5	5252.4
Brake efficiency T _e /F _e	0.62	0.07	0.48
Actuator stroke s _e (mm)	76.745	N/A	76.745
Brake input torque C _e (Nm)	1925.1	N/A	1925.1
Brake input threshold torque C _{0,e} (Nm)	14.29	N/A	14.29

2.3.2.

In the case of vehicles of categories O₃ and O₄ where the O₃ 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 _e (kPa)	650	N/A	650
Number of brake applications	N/A	20	N/A
Duration of brake cycle(s)	N/A	60	N/A
Braking force developed T _e (daN)	5972.0	3318.0	5046.8
Brake efficiency T _e /F _e	0.55	0.31	0.47
Actuator stroke s _e (mm)	76.75	N/A	76.75
Brake input torque C _e (Nm)	1925.1	N/A	1925.1
Brake input threshold torque C _{0,e} (Nm)	14.29	N/A	14.29

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_F:

8.67

2.3.3.2.

Declared threshold torque C_{0,dec}:

14.29

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.*



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 12 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.

	TRAILER AXLE & BRAKE INFORMATION DOCUMENT	Date	24.01.2024	
		Document Nr.	TRAX PLT 4218	
	According to ECE R13.12, Annex 11, Appendix 5 ANNEX I		Revision Nr.	00
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1. GENERAL

Name and address of axle or vehicle manufacturer
 ÖZKOÇ İLAVE DİNGİL SANAYİ VE TİCARET LTD. ŞTİ.
 BÜYÜK KAYACIK MAHALLESİ KONYA ORGANİZE SANAYİ
 BÖLGESİ 13. SOKAK NO:5
 SELÇUKLU/KONYA/TÜRKİYE

1.1. Commercial Description
 TRAX 3020

1.2. Category
 O3&O4

2. AXLE DATA

2.1. Manufacturer (name and address)
 ÖZKOÇ İLAVE DİNGİL SANAYİ VE TİCARET LTD. ŞTİ.
 BÜYÜK KAYACIK MAHALLESİ KONYA ORGANİZE SANAYİ
 BÖLGESİ 13. SOKAK NO:5
 SELÇUKLU/KONYA/TÜRKİYE

2.1.1. Make of axle manufacturer

SNCH*R13:A11*0015*00

Société Nationale de Certification et d'Homologation



and



2.2. Type / variant

TRAX PLT 4218

2.3. Axle identifier

ID1-TRAX PLT 4218

2.4. Test axle load (F_e)

10844 daN

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

Figure 1A

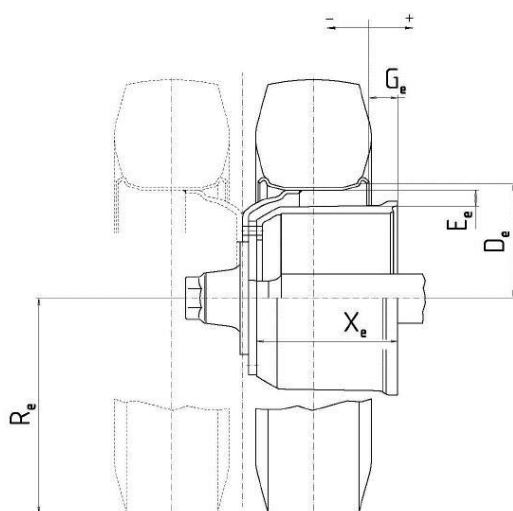
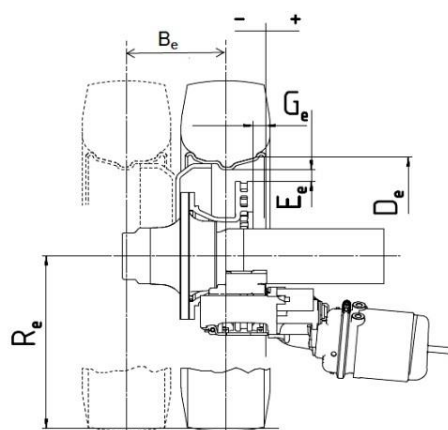


Figure 1B



Tyre	Rim	D_e (mm)	E_e (mm)	G_e (mm)	R_e (mm)	B_e (mm)	X_e (mm)
445/65 R 22.5	14.00x22.5	235	56	+20	555	--	228
315/80 R 22.5	9.00x22.5	235	56	-65	522	351	228



TRAILER AXLE & BRAKE INFORMATION DOCUMENT

According to
ECE R13.12, Annex 11, Appendix 5
ANNEX I

Date	24.01.2024
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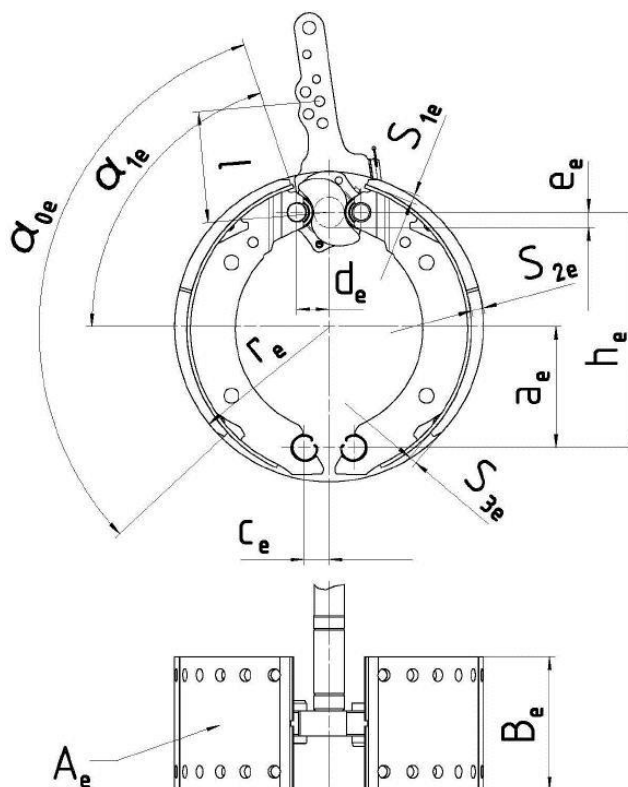
Société Nationale de Certification et d'Homologation

3. BRAKE


3.1. General Information

- 3.1.1. Name **TRAX**
- 3.1.2. Manufacturer (Name and address)
- 3.1.3. Type of brake Drum Brake
- 3.1.3.1. Variant S-Cam brake
- 3.1.4. Brake identifier ID2- 420x180
- 3.1.5. Brake data according to the following Figures 2A and 2B
- 3.1.6. Brake Factor (B_f) 8.67

Figure 2A



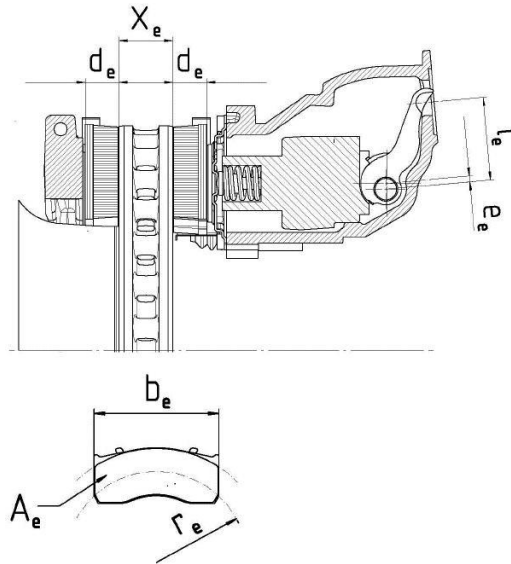
a_e (mm)	h_e (mm)	c_e (mm)	d_e (mm)	e_e (mm)	α_{0e} (°)	α_{1e} (°)	B_e (mm)	r_e (mm)	A_e (cm ²)	S_{1e} (mm)	S_{2e} (mm)	S_{3e} (mm)
163.7	317.7	33	43.5	21	114.5	70.5	180	210	1389	13	18	13

	TRAILER AXLE & BRAKE INFORMATION DOCUMENT	Date	24.01.2024	
		Document Nr.	TRAX PLT 4218	
	According to ECE R13.12, Annex 11, Appendix 5 ANNEX I		Revision Nr.	00
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Société Nationale de Certification et d'Homologation


Figure 2B



X_e (mm)	d_e (mm)	e_e (mm)	l_e (mm)	b_e (mm)	A_e (cm ²)	r_e (mm)
--	--	--	--	--	--	--

3.2. *Drum brake data*

3.2.1.	Brake adjustment device (external/internal)	N/A
3.2.1.1.	Manufacturer (Name and address)	HALDEX BRAKE PRODUCTS AB. INSTRUMENTGATAN 15 BOX 501 261 14 LANDSKRONA, SWEDEN
3.2.1.2.	Make	HALDEX
3.2.1.3.	Type	S-ABA 80022
3.2.1.4.	Version	0
3.2.2.	Declared maximum brake input torque (C_{max})	2800 Nm
3.2.3.	Mechanical efficiency (η)	0.86
3.2.4.	Declared brake input threshold torque ($C_{0,dec}$)	14.29 Nm
3.2.5.	Efficiency length of the cam shaft	640 mm

	TRAILER AXLE & BRAKE INFORMATION DOCUMENT	Date	24.01.2024	
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	According to ECE R13.12, Annex 11, Appendix 5 ANNEX I		Revision Nr.	00
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3.3. Brake drum

3.3.1.	Max. diameter of friction surface (wear limit)	420 mm
3.3.2.	Base material	Grey Cast Iron
3.3.3.	Declared mass	44.4 kg
3.3.4.	Nominal mass	44.5 kg
3.3.5.	Permitted range of the brake drum mass	43-46 kg


3.4. Brake Lining

3.4.1.	Manufacturer (Name and address)	EREN BALATACILIK SANAYİ VE TİCARET A.Ş. 13. Sokak No:6 KOSBİ Kemalpaşa / İzmir / Turkey
3.4.2.	Make	EREN
3.4.3.	Type	M76 GG
3.4.4.	Identification (type identification on lining)	EREN 4689 WVA 19032
3.4.5.	Minimum thickness (wear limit)	5mm
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	Steel (S355)
3.4.6.3.	Range of the weight of the brake shoes (without brake lining)	6.084 KG

SNCH*R13:A11*0015*00

3.5. Disk brake data [Société Nationale de Certification et d'Homologation](#)

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

	TRAILER AXLE & BRAKE INFORMATION DOCUMENT	Date	24.01.2024	
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3.5.5.	Friction radius (r_e)	N/A
3.5.6.	Lever length (l_e)	N/A
3.5.7.	Input/output ratio (i) (l_e/e_e)	N/A
3.5.8.	Mechanical efficiency (η)	N/A
3.5.9.	Declared brake input threshold force ($Th_{A0,dec}$)	N/A
3.5.9.1.	$C_{0,dec} = Th_{A0,dec} * l_e$	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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