



## INFRASTRUCTURE PROTECTION

## ROAD OVERLOAD CONTROL & ENFORCEMENT

In a context where protection of road infrastructures is a major concern for States, the overload control per axle and total weight of trucks plays a crucial role. Captels is recognized as an expert in this field through an innovative approach to protect and preserve road infrastructures, fair competition among carriers, and road safety. Captels offers reliable, durable, and easy-to-use axle weighing solutions. Captels offers to make your weighing process more efficient thanks to our versatile LSWIM software. LPX software embeds your national traffic road regulation to automatically control and calculate fines. LPX software manages many devices such as LPR cameras, 3D LIDARS & all innovative peripherals. Our solution will help you to implement and follow-up the right application of your national overload policy.



More informations

[captels.com](http://captels.com)



## Mobile CET - LSWIM



The CET LSWIM weighing system is a mobile solution designed to weigh trucks along the roads. All components are OIML certified. We have a proven expertise in integrating our solution into HSWIM pre-selection stations, tolling systems, IT systems... Captels offers peripheral accessories for data retrieval, increasing efficiency and productivity.

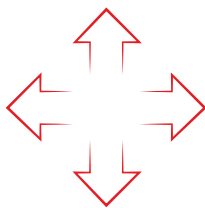


### Key points

Precision



Ergonomics



Durability



Mobility



THE OTHER DIMENSION OF WEIGHING

0743 233223/ 0726 144224

[www.scales-technology.co.ke](http://www.scales-technology.co.ke)

[sales@scales-technology.co.ke](mailto:sales@scales-technology.co.ke)

**MOBILE AXLE WEIGHING SYSTEM LSWIM  
CET 10-68 / UCC 3 LS WIM**

**Recommended speed up to 10 km / h**

**DEDICATED TO TRUCKS OVERLOAD ENFORCEMENT  
OUT OF LEGAL METROLOGY**

**TECHNICAL OFFER**

**This document introduce Captels mobile axle weighing system *CET 10/68 LS WIM* functioning in Low Speed Weighing In Motion and in Static**



---

**0743 233223/ 0726 144224**

**CET 10/68 Platforms**  
**Quantity: 2**

**Technical Characteristics**



- ✓ **Calibration:**  
Up to 30 t / 20 kg per axle
- ✓ **Material:** aluminium high resistance alloy
- ✓ **Protection:** anti- skating polyurethane painting
- ✓ **Platform weight:** 34 kg
- ✓ **Overall dimensions:**

Width: 800 mm

Length: 500 mm

Height: 40 mm

**Accuracy on the total weight**

- ✓ **Static weighing:**  
+/- 0.5 % of full scale
- ✓ **LS WIM weighing:** +2 % full scale  
+/- 2 %

**0743 233223/ 0726 144224**



### Measurement cables

The three enclosed measurement cables (including one as spare part), are equipped with fast DIN 6 points connectors, and are used to connect platforms to the electronics.

These measurement cables have been especially developed for hard using conditions, and are renowned robust and waterproof.

### Metrology

4 stainless steel strain gauges load cells IP 68 - hermetically sealed - per platform scale connected to a junction box, transmission by cable connected with a quick release connector.

Load cells **CPA** are approved according to the Recommendation of the International Organization of Legal Metrology (OIML).

Please refer to OIML certificate n° R60/2000-NL1-09.10.



## Test certificate

Number **TC2946** revision 2  
Project number 9200260  
Page 1 of 4

Issued by NMI Certin B.V.  
Hugo de Grootplein 1  
3314 LG Dordrecht  
The Netherlands

In accordance with Paragraph 8.1 of the European Standard on Metrological aspects of non-automatic weighing instruments EN 45501:1992/AC:1993 and by application of the OIML International Recommendation R 60 (Edition 2000). The applied error fraction  $p_1$  meant in the paragraph 3.5.4. of the standard is 0.7.

Applicant Captels S.A.  
1 Chamin du Mazet  
ZAE des Avants  
34270 Saint Matthieu de Trévier  
France

In respect of A **compression load cell**, with strain gauges, tested as a part of a weighing instrument.  
Manufacturer : Captels S.A.  
Type : CFA and CPA SL

Characteristics  $E_{max}$  : 3000 kg up to and including 15000 kg  
Accuracy class : C

In the description number TC2946 revision 2 further characteristics are described.

Description and documentation The load cell is described in the description number TC2946 revision 2 and documented in the documentation folder TC2946-3, appertaining to this test certificate.

Remarks Summary of the test involved: see Appendix number TC2946 revision 2.  
This revision test certificate replaces the earlier version, including its documentation folder.

The Notified Body no. 0122  
NMI Certin 15 July 2009

C. Oosterman  
Head Certification Board

**NMI Certin B.V.**  
Hugo de Grootplein 1, 3314 LG Dordrecht  
PO Box 294, 3300 AJ Dordrecht, NL  
T +31 78 6332332  
F +31 78 6332309  
certin@nmi.nl  
www.nmi.nl

Parties concerned can lodge objection against this decision, within six weeks after the date of submission, to the general manager of NMI B.V. Use "Regulation objection and appeal against decisions of NMI B.V."

This document is issued under the provision that no liability is assumed and that the applicant shall indemnify in its party liability.  
Reproduction of the complete document is permitted.

**0743 233223/ 0726 144224**

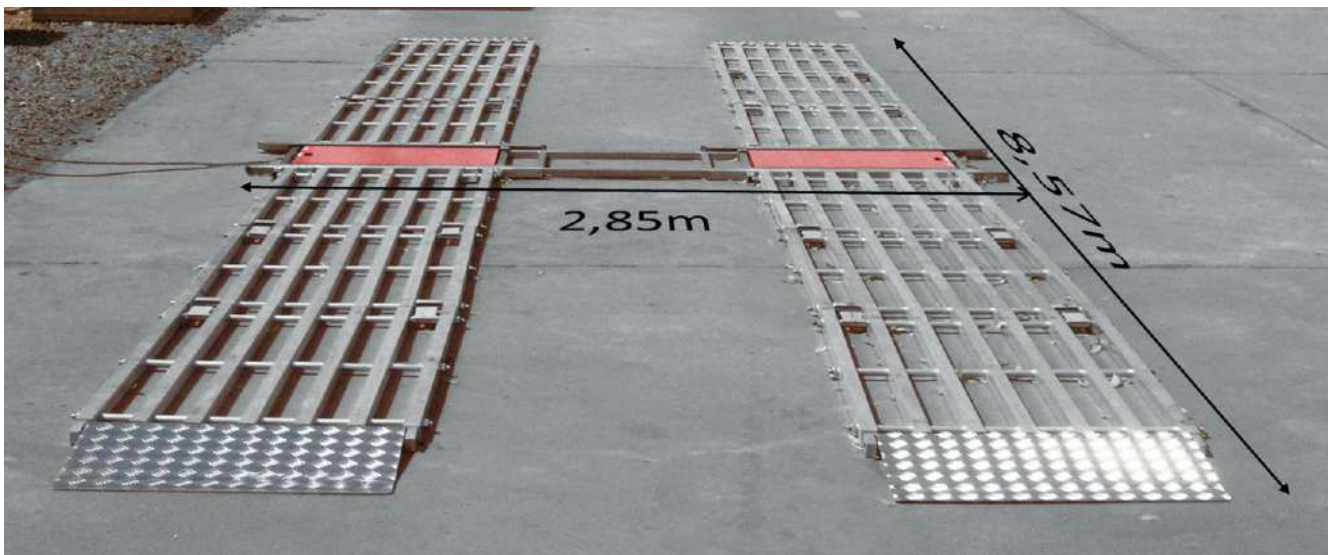
**Levelling tracks**  
**Quantity: 4**

Any mobile weighing system used onto the ground requires a specific disposal in order to level the system, and then avoid important load transfers. When weighing an axle, which is part of a group of axle, it has to be at the same level.

The levelling track developed by **Captels**<sup>®</sup> matches perfectly this objective, as it does not need any manipulation of the platforms and offers a flat and secured area for a successful weighing.

Furthermore, the levelling tracks are equipped with 4 access ramps and 2 cradles in order to position perfectly the platforms.

Thanks to its size and its metallic structure, it offers all the needed mechanical resistance to ensure a good functioning of the **Captels**<sup>®</sup> **CET 10/68** weighing system.



- ✓ **Protection:**  
Aluminium and steel structure
  
- ✓ **Weight:** 225 kg
  
- ✓ **Dimensions once installed:**  
Length: 8570 mm  
Width: 2850 mm

## UCC3 : LSWIM digital Unit Controller

Quantity: 1

**Captels® UCC3** weighing electronics is dedicated to static and low speed weighing in motion.

It has to be connected to a computer, equipped with **Captels® LPX** software, for weighing results data acquisition.

### Main Features:

- ✓ Compatible with OIML R-76 requirements for III and IIII classes
- ✓ High frequency numeric weighing processor 1 kHz
- ✓ Internal LCD display (for maintenance purpose)
- ✓ Built-in battery and charger
- ✓ High grade Industrial metal box
- ✓ TCP/IP (Ethernet) computer connection
- ✓ **Captels®** Weigh In Motion algorithm (**DIN-scale**)



### Main technical characteristics:

- ✓ 1 channel weighing with 1 to 2 inputs scales
- ✓ Gravity correction (latitude input)
- ✓ 1 kHz measurement sampling rate
- ✓ Static weighing and / or LSWIM
- ✓ Built in calibration test card
- ✓ Communication TCP/IP with fix IP address
- ✓ Input level 0,4mv/v up to 3 mv/v
- ✓ Standard Operating Temperature: -10°C up to +40 ° C
- ✓ Storage Temperature: -20°C up to 60 ° C

### Power supply requirements:

- ✓ Main Voltage 230V AC / 50-60Hz (on request 115V AC/ 50-60Hz)
- ✓ External Input 12V DC for emergency power supply
- ✓ Power consumption: max 25W on 230V AC
- ✓ Built-in floating battery 12V/1,2Ah and charger

### Mechanical specifications:

- ✓ Protection index: IP54 (in accordance with standards DIN40050, CEI 529, BS 5490)
- ✓ Dimensions: l = 400 mm, h = 230 mm, d = 110 mm
- ✓ Weight: 6.5 kg

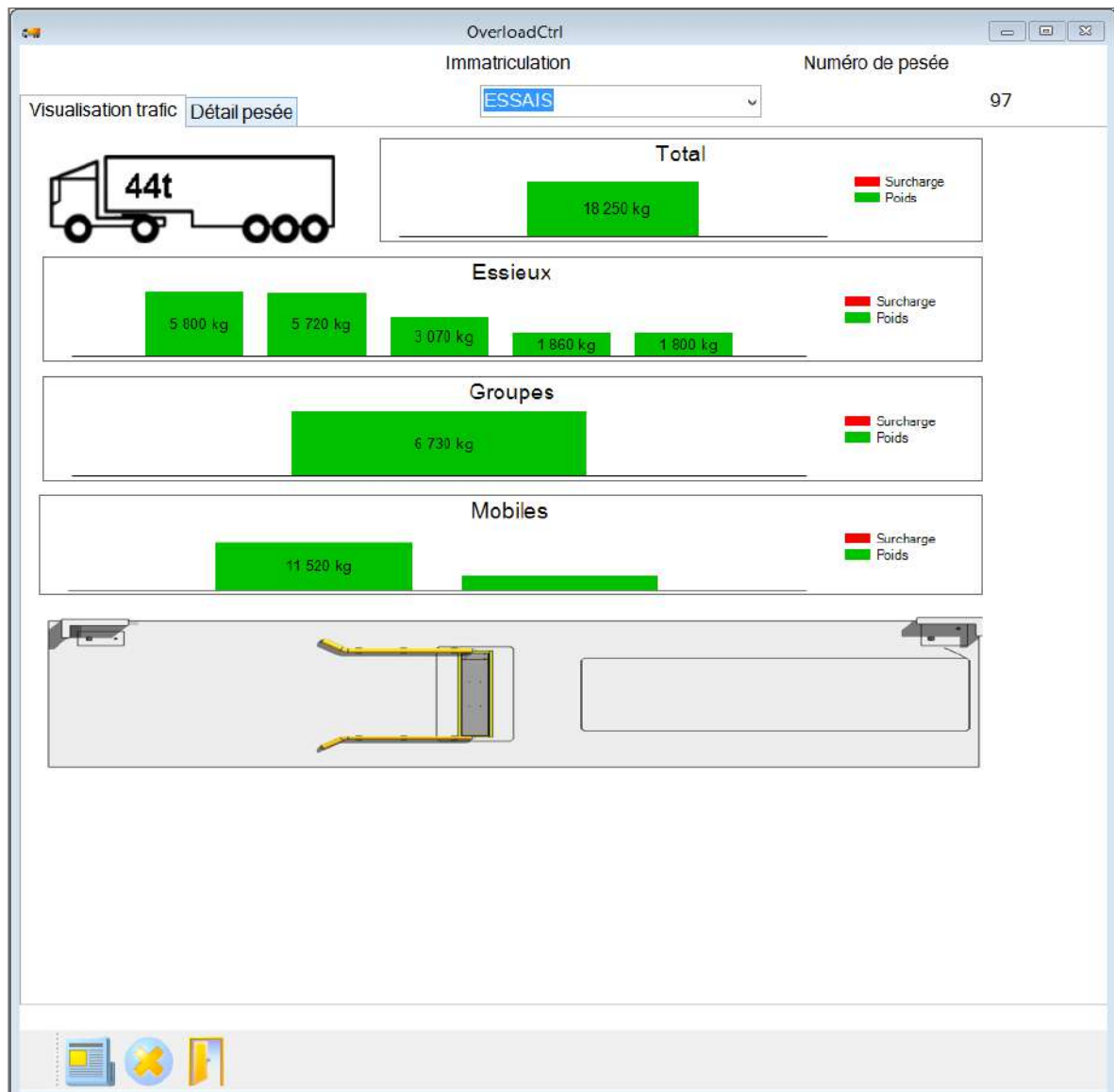
**0743 233223/ 0726 144224**

## Data acquisition software LPX Quantity: 1

**LPX** software is designed for data processing, data acquisition & weighing files management.

The **LPX** software will enable operators to:

- ✓ Perform an overload control,
- ✓ Print a verbalization form,
- ✓ Store information of overload and verbalizations.



**Main features:**

- ✓ Specifically dedicated to overload enforcement and control,
- ✓ Fully customizable to be in accordance with all local laws,
- ✓ Automatic Vehicle classification,
- ✓ Automatic calculation of overload and fines,
- ✓ Friendly user,
- ✓ Vehicle axle load overview,
- ✓ Easy export of datas and weighing reports in .xml format.

**Other features of the application:**

- ✓ Weighing station identification,
- ✓ Weighing date and time,
- ✓ individual axles and axle groups weight,
- ✓ Gross weight of the vehicle,
- ✓ Computes fines based on local regulations (absolute value, percentage, tolerance...),
- ✓ Vehicle licence plate number,
- ✓ Origin of vehicle,
- ✓ Destination of vehicle,
- ✓ Product type carried,
- ✓ Driver/Vehicle operator,
- ✓ Definable fields for more information,
- ✓ Datas can be printed on specific fine,
- ✓ Management of several systems through a local network...

**LPX** automatically manages many peripheral equipments, such as:

- ✓ Traffic lights
- ✓ Large size displays
- ✓ Barriers
- ✓ ALPR...




Captels - LPX-CS V1.10.2013.0903 - [FrmDataBases]

Fichier Affichage Outils Fenêtres Aide

Quitter

Contrôle surcharge Entrées-Sorties Pesée

**Vehicles datas**

Nom	Image	Immat 1	Poids	Poids Max	Surcharge	Pesée N°	Longueur MAX	Longueur	Longueur MIN
T11S3		IMMAT1	49020	40000	9020	1	0	70641	
T11S3		IMMAT2	49000	40000	9000	2	0	13990	
T11S3-44		IMMAT3	49000	44000			0	13750	

**Mobiles datas**

Position	Nom	Poids	Poids Max	Surcharge	Code V.	Pesée N°	Distance MIN	Distance	Distance Max
1	T11	19000	19000	0	0	3	99999	960	
2	S3	30000	38000	0				3980	

**Groupe of axles datas**

Position	Nom	Poids	Poids Max	Surcharge	Code V.	Pesée N°	Distance MIN	Distance	Distance Max
1	Tridem roue simple	30000	31500	0	0	1	850	0	
1	Tridem roue simple	30000	31500	0	0	2	850	0	
1	Tridem roue simple	30000	27000	3000	1	3	850	0	

**Axles datas**

Position	Nom	Poids	Poids Max	Surcharge	Code V.	Pesée N°	Distance MIN	Distance	Distance Max
1	Simple	6500	13000	0	0	1	0	1	
2	Simple	12520	13000	0	4	1	2500	2980	
3	Simple	10000	10500	0	4	1	2500	4180	

Prêt

**Option: Captels®** can fully customize **LPX** or develop specific applications

**Computer minimum requirements:**

- ✓ Windows® XP pack 3, Vista pro, 7 pro, 8 pro, 8.1 pro,
- ✓ RAM 2 Gb, HDD 250 Gb
- ✓ Communication port : Ethernet 100 mb/s, at least 3 USB 2 port
- ✓ **No Windows® pack office required**

**0743 233223/ 0726 144224**

Répression de surcharge - [Pesée]

**LPX** Fichier Paramètres Editions Fenêtres ?

**CAPTELS**  
S.A.

Date/Heure: 17/11/2010 11:35

Fiche de verbalisation n°: 201103110001

Pesée n°: [ ]

Opérateur: [ ]

Transporteur: [ ]

Immatriculation: 111111 **Effacer**

Nationalité: [ ]  Transport international

Provenance: [ ] Destination: [ ]

Type véhicule: P11  Citerne

Marchandise: 111111  Dangereux **Impression infractions**

Type d'infraction	Montant (FCFA)
Poids total	19 180
<b>Total infraction(s) retenue(s)</b>	<b>19 180</b>

Date de l'infraction	Numéro de verbalisation
07/03/2011 17:24	201103070001
09/03/2011 10:41	201103090001

Classe	Poids (Kg)	Tolérance (Kg)	Poids retenu (Kg)	Poids max (Kg)	Surcharge (%)	Surcharge (Kg)	Montant (FCFA)
P11	18 960	1	18 959	18 000	5	959	19 180

Essieux et Groupe	Poids (Kg)	Tolérance (Kg)	Poids retenu (Kg)	Poids max (Kg)	Surcharge (%)	Surcharge (Kg)	Montant (FCFA)
Essieu simple...	6 480	1	6 479	13 000	0	0	0
Essieu simple...	12 480	1	12 479	13 000	0	0	0

**Données gabarit**

Type	Mesure (cm)	Maximum (cm)	Technique	Chargement	Montant (FCFA)



## Calibration

**Captels**<sup>®</sup> equipments are calibrated at the factory at three levels:

### 1 – Load cells

Individually manufactured, tested and calibrated in **Captels**<sup>®</sup> factory.

All load cells can be replaced by a new one, no factory's return needed - no recalibration necessary (cells are standardized).

### 2 – Platform scales

They are individually tested and calibrated in **Captels**<sup>®</sup> factory.

### 3 – Weighing systems

Electronics and platform scales are calibrated with approved dead weights.

Local gravity corrections are factory implemented.

**Once the equipment is installed on the weighing site, no re-calibration is needed.**

---

**0743 233223/ 0726 144224**

French company **Captels**<sup>®</sup> has designed and manufactured since 1985 a full range of equipments dedicated to vehicles weighing. **CET 10/68** axle weighing system has been specifically developed for mobile and accurate overload enforcement.

**Key features:**

**Highly accurate:** systems are individually calibrated with approved dead weights with local gravity correction implemented according to end user location.

**Indisputable:** insensitive to wheel position on the entire platform scale, allowing easy measurement repeatability.

**Speedy:** digital electronics centralize and display in real time axle unit weight, group of axles weight and total vehicle's weight.

**Adaptable:** digital electronics can be provided with external or built-in ticket printer, built-in battery with charger and linked to a computer equipped with **LPX** software.

**User-friendly:** software which are, according to version, dedicated to overload screening applications or industrial flow management, include end user database as road and highway code with vehicle's classification and attached legal weights or tare weights database for net weights calculation.

**Quality:** top quality components, IP68 waterproof stainless steel load cells, high resistance steel structure, digital electronics housing in metallic box or military quality case.

**Robust:** designed for an extend life span, 12 to 20 years, even in harsh environments.

**Low profile:** only 100 mm deep is necessary to install the **CET 10/68** platform within its frame.

**Easy to maintain:** designed for an easy in situ maintenance.