

# EU Type Examination Certificate

**No. 0200-NAWI-06085**

**WWS**

**NON-AUTOMATIC WEIGHING INSTRUMENT**

**Issued by**      **FORCE Certification**  
EU - Notified Body No. 0200

In accordance with the requirements in Directive 2014/31/EU of the European Parliament and Council.

**Issued to**      **Dini Argeo S.r.l.**  
Via della Fisica 20  
41042 Spezzano di Fiorano  
Modena  
Italy

**In respect of** Non-automatic weighing instrument designated WWS having the following characteristics:  
Accuracy class: III or IIII  
Single-interval, multi-interval or multi-range.  
Maximum number of verification scale intervals:  $n \leq 10\,000$   
(however, dependent on environment and the composition of the modules).  
Variants of modules and conditions for the composition of the modules are set out in the annex.

The conformity with the essential requirements in annex 1 of the Directive is met by the application of the European Standard EN 45501:2015 and OIML R76:2006.

The principal characteristics and conditions for certification are set out in the descriptive annex to this certificate.

The annex comprises 9 pages.

**Issued on**      **2019-05-14**  
**Valid until**    **2029-05-14**

FORCE Certification references:

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**Signatory: J. Hovgård Jensen**

## Descriptive annex

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## 1. Name and type of instrument and modules

The weighing instrument is designated the WWS Portable Vehicle Weighing System. The system has a weighing range of between 400 to 60 000 kg with a minimum scale interval (e) of > 0,5 kg depending upon configuration. This instrument is a Class III or IIII, self-indicating weighing instrument with single-interval, multi-interval or multi-ranges, with an internal rechargeable battery.

The name of the instruments may be followed by alphanumeric characters for technical, legally or commercial characterisation of the instrument.

The digital indicators 3590EKR, 3590Exx, DFWKR, DFWxx, DGTxx consist of analogue to digital conversion circuitry, microprocessor control circuitry, power supply, keyboard, non-volatile memory for storage of calibration and setup data, and a weight display contained within a single enclosure. The above digital indicators are fully described in Evaluation Certificate 0200-WL-05741.

The instrument shall not be used for direct sales to the public.

## 2. Description of the construction and function

### 2.1 Construction and devices

#### 2.1.1 Weigh zone

The WWS Portable Vehicle Weighing System can be configured as a cable or RF version. The individual weigh-pads are laid side by side on a suitably prepared and level paved road surface. Surface ramps and levelling mats can be used, or a shallow slot can be cut into the road surface allowing both wheel & axle weights to be calculated.

#### 2.1.2 WWS RF Wireless system

The WWS wireless weigh pads the following characteristics,

- Built-in weighing indicator, which in multi pad mode can serve as a weight transmitter
- Integrated level indication
- Operating range up to 100 m
- Maximum individual wheel load  $\leq 25\ 000$  kg

#### 2.1.3 WWS Analog system

The WWS analog weigh pads the following characteristics,

- Integrated level indication
- Cable length according to Evaluation Certificate 0200-WL-05741
- Maximum individual wheel load  $\leq 25\ 000$  kg

## **2.1.4 Combined multi-platform weighing system**

### **2.1.4.1 Configuration 1**

The weighing system can be configured to use up to 16 pairs of weigh pads which are all connected to the indicator. The indicator receives the weight data from each weigh pad or pair of weigh pads, allowing both wheel and axle weights and total weight value displayed on the primary indicator, but only the total weight is a legal weight. If any of the other platforms within this weighing instrument has its own weight display then these must be disabled, when used in this configuration.

### **2.1.4.2 Configuration 2**

The weighing system can be configured to use up to 16 pairs of digital weigh pads which are connected together via a RF transmission or wire. The display receives the weight data from each weigh pad or pair of weigh pads, allowing both wheel and axle weights and total weight value displayed on the primary display of the platform, but only the total weight is a legal weight. If any of the other platforms within this weighing instrument has its own weight display, then these must be disabled when used in this configuration.

When configuring/calibrating/verifying/using the instrument in this configuration the digital platforms are to be treated as a single load receptor with the load applied simultaneously to all platforms/load cells.

## **2.2 Operation**

Each weighing channel is connected to up a total of 16 pairs of weigh pads, the weight indication for each channel and the summation of these weights are displayed.

The print key generates a printout with the weight indications for each weigh pad, axle loads and/or the summation of these weight indications.

The total print key generates a printout with the list of successive summations of both weigh pads and axle loads, as well as the total weight.

A preset tare function can be implemented to calculate the net weight.

Note: The use of some weighing results for some Article 1 2. a) – f) applications under EU Directive 2014/31/EU may be prohibited in some Member states.

### **3. Technical data**

#### **3.1 Indicator**

The technical data for the indicators is provided in Evaluation Certificate 0200-WL-05741.

#### **3.2 Load cell**

##### **3.2.1 General acceptance of analogue load cells**

Any analogue load cell(s) may be used for instruments under this certificate of type examination provided the following conditions are met:

- 1) There is a respective Part / Evaluation / Test Certificate (EN 45501) or an OIML Certificate of Conformity (R60:2000 or R60:2017) issued for the load cell by a Notified Body responsible for type examination under Directive 2014/31/EU
- 2) The certificate contains the load cell types and the necessary load cell data required for the manufacturer's declaration of compatibility of modules (WELMEC 2:2015), and any particular installation requirements). A load cell marked NH is allowed only if humidity testing to EN 45501 has been conducted on this load cell.
- 3) The compatibility of load cells and indicator is established by the manufacturer by means of the compatibility of modules form, contained in the above WELMEC 2 document, or the like, at the time of EC verification or declaration of EC conformity of type.
- 4) The load transmission must conform to one of the examples shown in the WELMEC 2.4 Guide for load cells.

#### **3.3 Documents**

The documents filed at FORCE Technology (reference No.119-24845) are valid for the weighing instruments described here.

### **4. Interfaces and peripheral equipment**

#### **4.1 Interfaces**

The interfaces for the digital indicators are provided in Evaluation Certificate 0200-WL-05741.

#### **4.2 Printer**

Any simple recipient printer may be used if:

- it bears the CE marking for conformity to the EMC Directive;
- it is not capable of transmitting any data or instruction into the weighing indicator other than to release a printout, checking for correct data transmission or validation;
- it prints weighing results and other data as received from the weighing instrument without any modification or further processing;
- it complies with the applicable requirements of EN45501, i.e. 4.2, 4.4, 4.6 and 4.7.

## **5. Conditions for certification**

### **5.1 Measurement functions other than non-automatic functions**

Measurement functions that will enable the use of the instrument as an automatic weighing instrument are not covered by this type examination.

### **5.2 Compatibility of modules**

Composition of modules, EN 45501:2015, Annex F shall be satisfied.

## **6. Special conditions for verification**

None.

### **6.1 Composition of modules**

The environmental conditions should be taken into consideration by the composition of modules for a complete weighing instrument, for example instruments with load receptors placed outdoors and having no special protection against the weather.

## **7. Securing and location of seals and verification marks**

### **7.1 Securing and sealing**

Seals shall bear the verification mark of a notified body or alternative mark of the manufacturer according to ANNEX II, section 2 or 4 of the Directive 2014/31/EU.

The indicator based non-automatic weighing instrument shall be secured, if securing is used, and sealed according to the instructions in Evaluation Certificate 0200-WL-05741.

The inscription plate shall be sealed, unless it is of a form that is destroyed when removed.

The peripheral interfaces are “protective”; it neither allows manipulation with weighing data or legal setup, nor change of the performance of the weighing instrument in any way that would alter the legality of the weighing.

## **8. Location of CE mark of conformity and inscriptions**

### **8.1 Indicator**

#### **8.1.1 CE mark**

CE mark and supplementary metrological marking shall be applied to the indicator according to article 16 of Directive 2014/31/EU

#### **8.1.2 Inscriptions**

The instrument shall bear the following inscriptions on or near the display:

- $Max_i, Min_i, e_i =$

On the inscription plate:

- Manufacturer's name and/or logo
- Postal address of manufacturer
- Model no.
- Serial no.,
- Maximum subtractive tare (if applicable)
- Type examination certificate no.
- Accuracy class
- Supply voltage.

The markings and inscriptions shall fulfil the requirements of Paragraph 1 of Annex III the Directive 2014/31/EU.

## 9. Pictures



Cable version

Wireless version

**Figure 1** WWS Portable Vehicle Weighing System.



**Figure 2** WWS wireless pad with built in indicator

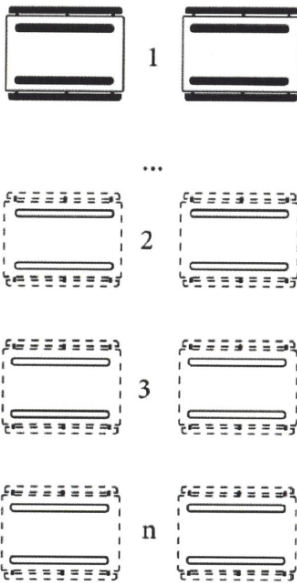




**Figure 3** WWS analog pad.

**Alternative 1**

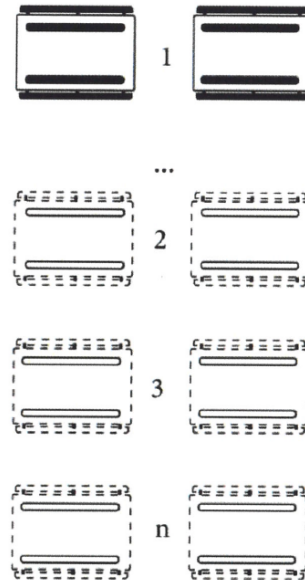
*With external primary indicator  
Type of connections A, B, C.*



*Primary indicator*

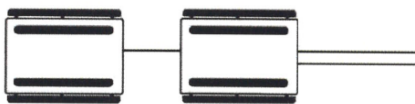
**Alternative 2**

*Without external primary indicator  
Type of connections B, C.*



**Types of connection:**

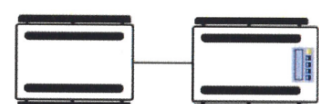
A) WIRED



B) WIRELESS



C) MIXED



**Figure 4** Configuration examples.