

OIML Member State United Kingdom of Great Britain and Northern Ireland	OIML Certificate No. R51/2006-B-GB1-19.01
OIML CERTIFICATE ISSUED UNDER SCHEME B	
OIML Issuing Authority	NMO Stanton Avenue Teddington TW11 0JZ United Kingdom
Person responsible:	Mannie Panesar – Head of Technical Services
Applicant	Strainstall UK Limited 9-10 Mariners Way Cowes, Isle of Wight United Kingdom
Manufacturer	The applicant
Identification of the certified type	CWS™ Loadpin and CWS™ Diaphragm <i>(the detailed characteristics are defined in the Descriptive Annex)</i>
<p>This OIML Certificate attests the conformity of the above identified type (represented by the sample(s) identified in the OIML type evaluation report) with the requirements of the following Recommendation of the International Organization of Legal Metrology (OIML):</p> <p>OIML R51, Edition: 2006</p> <p>For accuracy class: Y(b)</p>	
<p>The OIML Issuing Authority</p> <p>Issue date: 17 January 2019</p>  <p>G Stones Technical Manager</p> <p><i>For and on behalf of the Head of Technical Services</i></p>	

This OIML Certificate relates only to metrological and technical characteristics of the type of measuring instrument covered by the relevant OIML Recommendation identified above.

This OIML Certificate does not bestow any form of legal international approval.

The conformity was established by the results of tests and examinations provided in the associated OIML type evaluation report:

No. P02491 dated 17 January 2019 that includes 14 pages.

The technical documentation relating to the identified type is contained in documentation file:

No. P02491-D dated 17 January 2019.

OIML Certificate History

Revision No.	Date	Description of the modification
0	17 January 2019	OIML Certificate first issued.
-	-	No revision has been issued.

No revisions have been issued.

Important note:

Apart from the mention of the Certificate's reference number and the name of the OIML Member State in which the Certificate is issued, partial quotation of the Certificate and of the associated OIML type evaluation report(s) is not permitted, although either may be reproduced in full.

DESCRIPTIVE ANNEX

Introduction

The CWS™ Loadpin load cell based and diaphragm load cell based instruments are automatic catchweighers designed to weigh containers statically with no operator intervention. The instruments comprise digital load cells, an interface unit and a control and display unit. The instruments capture the container weight automatically once the container has been lifted and reached a stable position.

Construction

The system is designed for permanent installation on the various types of container handlers. The load cells and electronics are permanently installed on the spreader. The system uses either Loadpin digital load cells or Diaphragm digital load cells which are fitted to the lifting equipment. The load values from the load cells are transmitted to a display unit (typically installed in the operators cab) via an interface unit. The final data is transmitted to the container loading system (Terminal Operating System, TOS) which oversees the operation of the weighing instrument.

The interface and display units have aluminium enclosures for all types of the systems. The display unit comprises a communications and display controller fitted with an LCD display and 8 keys: 6 functional control keys and 2 navigation keys. The units are powered by the container handlers with a nominal 24V DC external source. The interface unit provides the supply voltage for the strain gauge bridges in the load cells.

The instrument can be installed in the following configurations:

- | Loadpin digital load cells | Diaphragm digital load cells |
|--|--|
| – 4 load cells (E _{max} = 15 t) | – 4 load cells (E _{max} = 15 t) |
| – 2 load cells (E _{max} = 50 t) | |

Devices

- Semi-automatic zero-setting ($\leq 4\%$ Max) via user interface or TOS
- Long term storage device
- Display and storage of individual and total weights

Operation

The interface unit receives the output from the digital load cells and converts these to a single output. The output is transmitted to the display unit either via a cable or a wireless link. The interface and display units are paired up via software means at installation.

The individual and total weights are captured when the weight indication is stable (displayed as “holding”). The values are stored in the communications interfaces card.

The display unit combines/processes the signals to provide the following functionality:

- Displays the individual loads (4.5mm LCD display)
- Indicates a calculated load eccentricity
- Calculates and displays the total weight (18mm LCD Display)
- Computes outputs for the TOS via Ethernet/RS485 etc
- Stores the individual/container weight data, time/date stamped
- Stores event log – error messages, communications errors etc.

Technical data

Max capacity (Max)	≤ 45 t
Scale interval (e =)	≥ 0.2 t
Minimum capacity (Min)	≥ 2.4 t
Minimum number of verification scale intervals (n)	≥ 100
Accuracy class	Y(b)
Power supply	24 VDC
Temperature range	-10 °C to +40 °C

Software:

The software modules are protected by a version number and checksum, held on the eMMC memory. The software is identified by a version number and a checksum, which shall be as follows:

	Control unit	Spreader unit	Load cell
Software version number	V2.20	V2.20	V2.00
Checksum	FFAE	23E9	8E69

Access to the legally relevant parameters is password-protected; a non-editable counter designated Config Version counter increments every time a legally relevant parameter is changed.

The software identification and value of the Config Version counter can be displayed on the display unit by pressing the “OK|MENU” button on the display.

Interfaces

The instrument may have the following interface types:

- Link between interface and display unit
- RS 232 / RS 422 / RS 485
- CANBUS
- Ethernet
- Wifi

Sealings

Access to the electronics (interface and display unit) is prevented by securing the enclosure with a seal bearing a securing mark.

The load cell serial numbers are indelibly written on the data plate.

The value of the Config Version counter must be written on a tamper-evident label on or near the rating plate.

Alternatives

Having modified software, identified by a version number and a checksum, which shall be as follows:

	Control unit	Spreader unit	Load cell
Software version number	V2.21	V2.22	V2.00
Checksum	C929	286B	8E69

Having modified software, identified by a version number and a checksum, which shall be as follows:

	Control unit	Spreader unit	Load cell
Software version number	V2.23	V2.24	V2.00
Checksum	DACD	A574	8E69