



United Kingdom of Great Britain and Northern Ireland

Certificate of EC type-approval of a measuring instrument

Number: UK 2747

issued by the Secretary of State for Trade and Industry
Notified Body Number 0126

In accordance with the requirements of the Non-automatic Weighing Instruments Regulations 2000 (SI 2000/3236) which implement, in the United Kingdom, Council Directive 90/384/EEC, this certificate of EC type-approval has been issued to:

**Ian Fellows Limited
37 Lower Keyford
Frome
Somerset
BA11 4AR
United Kingdom**

in respect of a non-automatic weighing instrument, with single interval, utilising the Ian Fellows Limited Lucid and X-types indicating device (Test certificate TC2489) connected to a platform.

$n \leq 10\,000$ for class III instruments or
 $n \leq 1\,000$ for class IIII instruments

The necessary data (principal characteristics, alterations, securing, functioning etc) for identification purposes and conditions (when applicable) are set out in the descriptive annex to this certificate.

A handwritten signature in black ink, appearing to read 'P R Dixon'.

Signatory: P R Dixon
for Chief Executive
National Weights & Measures Laboratory
Department of Trade and Industry
Stanton Avenue
Teddington
TW11 0JZ
United Kingdom

Date: 26 November 2004
Valid Until: 25 November 2014
Reference No: STD 11384

Descriptive Annex

1 INTRODUCTION

This instrument utilises the digital indicating device designated the Ian Fellows Limited Lucid and X-types indicator connected to a weighing platform to form a Class III or IIII, mains powered self-indicating non-automatic weighing instrument.

2 FUNCTIONAL DESCRIPTION

2.1 Devices

The Ian Fellows Limited Lucid and X-types indicating device is fully described in Test Certificate TC2489 and has the following devices.

- self test sequence and display check during power-up;
- determination stability of equilibrium;
- calibration / set-up access control via push-button on main board;
- initial zero-setting, overall effect $\leq 20\%$;
- semi-automatic zero-setting;
- automatic zero-setting;
- zero-tracking;
- zero indicator;
- indication of stable equilibrium via motion indicator;
- semi-automatic tare balancing;
- automatic tare balancing;
- preset tare;
- gross indicator;
- net indicator;
- weighing of unstable samples;
- extended indicating, resolution $1/10 e$ during pressing a key or activated via an interface (ET1), the maximum duration after software activation will be 5 seconds;
- indication of $0.1 e$ function active (X-type indicators);
- memory storage device.

2.2 Load cells

2.2.1 Load cells as described in Table below

No	Manufacturer	Test or OIML Certificate Number	Type
1	Weigh-tronix Inc.	Danak 190993	WPB-1.25K
2	Tedea Huntleigh	T(C)2152	1040-C3
3	Tedea Huntleigh	T(C)2153	HSB

4	Tedea Huntleigh	TC2272	3510-C3
5	Tedea Huntleigh	TC2274	1320
6	Tedea Huntleigh	TC2353	3410
7	Tedea Huntleigh	PTB 1.13-93.278	1250-C3
8	Tedea Huntleigh	TC2462	1241
9	Tedea Huntleigh	PTB 1.13-92-523	355-C3/C4
10	Thameside	T(C)2205	T66
11	Thameside	TC2315	T95
12	Veccer Ltd	DK0199.R60.2	VC4200
13	Revere Transducers	T(C)2161	5102
14	Revere Transducers	T(C)2216	C92
15	Revere Transducers	T(C)2224	CHP
16	Revere Transducers	TC2308	953
17	Revere Transducers	TC2331	9102
18	Revere Transducers	C9301 (France)	SSB
19	Revere Transducers	C9302 (France)	CSP-M
20	Revere Transducers	PTB 1.13-92.578	SHBxM
21	Revere Transducers	Danak 190695	SHBxM
22	Revere Transducers	TC2508	SHBxR
23	Revere Transducers	TC2354	933
24	Revere Transducers	TC2453	HCB
25	Revere Transducers	1.13-94.184	RLC
26	Revere Transducers	TC2555	BSP
27	Revere Transducers	TC2513	HPS
28	Revere Transducers	TC2510	652
29	Revere Transducers	R60/1991-GB-95.07	5222/5223

30	HBM	T2163	BLC/HLC
31	HBM	T2207	Z6.D./...& Z6.C./...
32	HBM	PTB 1.13-94.373	C16
33	Tedea-Huntleigh	TC2559	1260
34	Tedea-Huntleigh	TC2584	220/230
35	Shering Weighing Ltd	R60/1991-GB-95.15	SSL30A
36	Shering Weighing Ltd	R60/1991-GB-95.20	SSL30SA
37	Shering Weighing Ltd	R60/1991-GB-95.18	SBL30A
38	Shering Weighing Ltd	R60/1991-GB-95.22	SBL30SA
39	Shering Weighing Ltd	R60/1991-GB-95.17	SBL110SA
40	Shering Weighing Ltd	R60/1991-GB-95.16	SBL100A
41	Shering Weighing Ltd	R60/1991-GB-95.21	SBL90A
42	Shering Weighing Ltd	R60/1991-GB-95.23	SCL20SA
43	Shering Weighing Ltd	R60/1991-GB- 94.05R60/1991-GB-95.05	SCL20SA
44	Sensortronics		65023C
45	Flintab	T(C)2097	RC1

2.2.2 The indicator can be connected to a weigh platform to form a complete weighing system. Any compatible loadcell(s) may be used providing the following conditions are met:

- There is a respective OIML Certificate of Conformity (R60) or a test certificate (EN45501) issued for the loadcell by a Notified Body responsible for type examination under Directive 90/384/EEC.
- The certificate contains the loadcell types and the necessary loadcell data required for the manufacturer's declaration of compatibility of modules (WELMEC 2, Issue 4, 2004, No 11), and any particular installation requirements. A loadcell marked NH is allowed only if humidity testing to EN45501 has been conducted on this loadcell.
- The compatibility of the loadcells and indicator is established by the manufacturer by means of the compatibility of modules calculation, contained

in the above WELMEC 2 document, at the time of verification or declaration of EC conformity of type.

- The loadcell transmission must conform to one of the examples shown in the WELMEC Guide 2.4, “Guide for Loadcells”, or as shown in the drawing ‘Module load cell’, Annex 3.

2.3

Load Receptors

Type	Load Receptor	Nr. Of Load cells	Load Cell Type See No. of Table 2
Weighbridge	All-concrete platform with or without rails (fully electronic)	4, 6 or 8	1, 11, 14, 15, 19, 29, 32, 34, 41, 42, 43, 45
	All-steel platform with or without rails (fully electronic)	4, 6 or 8	
	Steel + concrete platform with or without rails (fully electronic)	4, 6 or 8	
	All-concrete platform with or without rails with lever system	1	1, 3, 4, 6, 9, 10, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 29, 30, 31, 32, 34, 36, 37, 38, 39, 40, 41, 42, 43, 44
	Steel + concrete platform with or without rails with lever system	1	1, 3, 4, 6, 9, 10, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 29, 30, 31, 32, 34, 36, 37, 38, 39, 40, 41, 42, 43, 44
Platform scale	Platform scale with corner load cells (fully electronic)	4	1, 2, 3, 4, 5, 6, 7, 8, 9, 12, 13, 17, 18, 23, 24, 25, 30, 33, 38, 39, 40, 44
	"U" shaped platform scale for pallet weighing (fully electronic)	4	
	"Bar" pair for pallet weighing (fully electronic)	4, 2 per bar	
	Platform scale with lever system	1	1, 3, 4, 6, 9, 10, 13, 16, 17, 18, 20, 21, 22, 23, 24, 26, 30, 31, 36, 37, 38, 39, 40, 44
	"U" construction for pallet weighing with lever system	4	

	"Bar" pair for pallet weighing with two lever systems	4, 2 per bar	
	"Single point" type	1	2, 5, 7, 8, 33
Overhead Track scale	Fully electronic with two load cells	2	1, 3, 4, 6, 9, 10, 13, 16, 17, 18, 19, 20, 21, 23, 30, 32, 36, 37, 38, 39, 40, 43, 44
	Fully electronic with single point load cell(s)	1 or 2	2, 7, 8, 27, 28, 33
Hopper	Fully electronic with one or two single point load cell(s)	1 or 2	2, 7, 27, 28, 33
	Fully electronic	3	1, 3, 4, 6, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 30, 32, 36, 37, 38, 39, 40, 43, 44
	Lever system + one load cell	1	1, 9, 10, 13, 16, 17, 18, 20, 21, 22, 23, 24, 27, 30, 31, 36, 37, 38, 39, 40, 43

2.4 Zener barriers

Type	Manufacturer	Cable designation	Remarks
766ac	MTL	excitation lines sense lines	
764ac	MTL	Signal lines	

If zener barriers are applied:

- The formula used for the maximum cable length (l) between indicator and cable junction box in m is:

$$l = ((281/n) - 0.0139) * 13680 * A \text{ where:}$$

n = number of divisions of the weighing instrument;

A = total conductor cross section area of one sense input in mm².

- The above calculated cable length can be divided in two parts:

- from the indicator to the zener barriers;
- from the zener barriers to the load cell junction box.
- The formula from the test certificate of the indicator involved is no longer valid.
- Zener barriers must be placed in excitation lines, sense lines, and signal lines, according to drawing "Scheme 1", drawing number IF-ZB-1.

3 TECHNICAL DATA

3.1 Technical data for the indicator is provided in Test Certificate No. TC2489.

4 PERIPHERAL DEVICES AND INTERFACES

4.1 The weighing system may be connected to any non-intelligent recipient peripheral which is technically compatible, has a test certificate issued by a notified body for EC Type Examination to the directive 90/384/EEC in any Member State and bears the CE marking of conformity to the relevant directives.

4.2 The following peripherals can also be connected

Ian Fellows Ltd printers types E-240, LX-300, Prodigy+, L2042, D510 and D520.

4.3 Having a computer or other logical device(s) connected to the indicator for controlling the zero setting devices and optional devices used to control the position of vehicles on a weighbridge for the purpose of providing driver operated weighbridge facilities.

In which case:

- (i) A ticket is issued to the driver.
- (ii) A weight indicating device is available to the driver.

Adequate instructions are clearly visible to the driver together with a contact point in the event of problems. Where the weight is below the minimum load or above the maximum capacity of the instrument, a ticket indicating "Invalid Weight", or equivalent wording, is issued or printed is inhibited with alternative instructions available to the driver.

Interlocks may be provided so that when a vehicle is not correctly positioned on the weighbridge no ticket is issued.

5 APPROVAL CONDITIONS

The certificate is issued subject to the following conditions:

5.1 Legends and inscriptions

5.1.1 The instrument shall bear the following legends near the display of the weighing result:

Max
Min
e =

5.1.2 The instrument shall bear the following legends

CE mark
Verification mark
Green M
Class
Serial number
Manufacturers mark or name
Certificate number

6 LOCATION OF SEALS AND VERIFICATION MARKS

6.1 The data plate will be mounted in such a manner that it is easily accessible and clearly visible in its regular operating position. The CE mark shall be impossible to remove without damaging it. The data plate shall be impossible to remove without it being destroyed.

The markings and inscriptions shall fulfil the requirements of Paragraph 1 of Annex IV of the Directive 90/384/EEC.

6.2 Components that may not be dismantled or adjusted by the user (e.g. load cell connections) will be secured by either a wire and lead seal or tamper evident label and securing mark. The securing mark may be either:

- a mark of the manufacturer and/or manufacturer's representative, or
- An official mark of a verification officer.

6.3 Sealing of the instrument is as described in Test Certificate TC2489. Load Cell Junction Box Seal Placement detail is shown in Figure 1.

7 ALTERNATIVES

7.1 There are no alternatives

8 ILLUSTRATIONS

Figure 1 Load Cell Junction Box Seal Placement detail

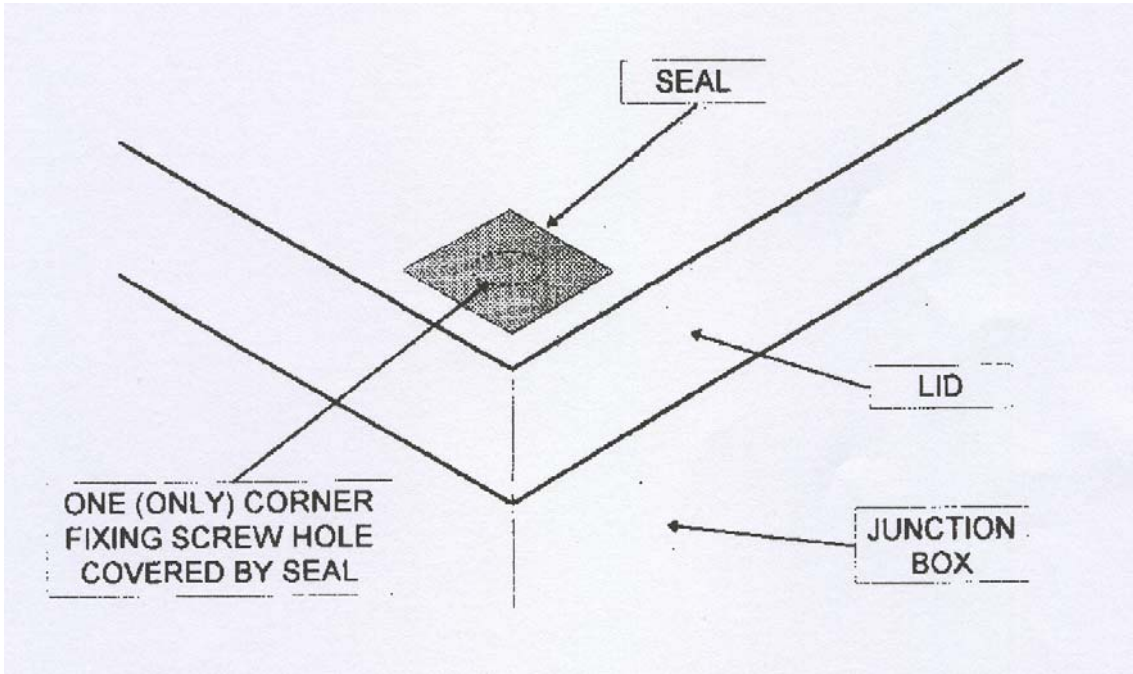


Figure 1 Load Cell Junction Box Seal Placement detail

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