



**Member State of OIML  
United Kingdom of Great Britain  
and Northern Ireland**

**OIML Certificate No  
R76/1992-GB1-09.04  
Revision 1**

## **OIML CERTIFICATE OF CONFORMITY**

Issuing authority

Name: **National Weights and Measures Laboratory  
(Part of National Measurement Office)**  
Address: **Stanton Avenue  
Teddington  
Middlesex  
TW11 0JZ  
United Kingdom**

Person responsible: **Paul Dixon - Product Certification Manager**

Applicant

Name: **Avery Weigh-Tronix Ltd**  
Address: **Foundry Lane  
Smethwick  
West Midlands B66 2LP  
United Kingdom**

Manufacturer of the certified pattern is the Applicant.

Identification of the certified pattern:

**Non-automatic weighing instruments comprising the GSE 60-  
Series electronic weight indicators connected to a compatible  
R60 load cell and the 675 Bench Scale  
Further characteristics see page 2**

This certificate attests the conformity of the above-mentioned pattern (represented by the samples identified in the associated test report) with the requirements of the following Recommendation of the International Organization of Legal Metrology (OIML):

<b>OIML:</b>	<b>R76</b>
<b>Edition:</b>	<b>1992 (E)</b>
<b>Accuracy class:</b>	<b>III or IIII</b>

This revision replaces earlier versions of this certificate.

**OIML Certificate No**  
**R76/1992-GB1-09.04**  
**Revision 1**

This certificate relates only to the metrological and technical characteristics of the pattern of the instrument concerned, as covered by the relevant OIML International Recommendation.

This certificate does not bestow any form of legal international approval.

The conformity was established by tests described in the associated:

Test reports:	TR 538 (562 Standard Model)	having 29 pages
	SN 1074 (665 Standard Model)	having 13 pages
	SN 1075 (665 Panel Mount Model)	having 11 pages
	SN 1076 (675 Bench Scale)	having 10 pages
Pattern evaluation checklist:	P00003 (562 and 675 Models)	having 12 pages

The issuing authority

The CIML member



Mr P R Dixon  
*for* NWML

Mr P Mason

Date: 10 November 2009  
Ref: T1138/0017

**Characteristics:**

This family of instruments utilises the digital indicating devices designated the GSE 60-Series indicators connected to a weighing platform to form single or multi-range, Class III or IIII, self-indicating, non-automatic weighing instruments.

**Construction:**

The GSE 60-Series controller housing is fabricated from stainless steel plate, and comprises the 460, 465, 560, 562, 660, 661, 662, 663, and 665 models. The controller can be provided in a universal, wall, panel or desk-top mount configuration. The front panel has a VFD or LCD display and a keypad. The front panel displays the weight and user information.

**Devices:**

The instruments have the following devices:

- Semi-automatic zero setting
- Zero tracking
- Semi-automatic subtractive tare weighing/balancing
- Preset tare
- Indication of stability of equilibrium
- Zero indicator
- Price calculation
- Price labelling
- Totalisation
- Printing key
- Multi-range option, with a maximum of 3 weighing ranges

**OIML Certificate No**  
**R76/1992-GB1-09.04**  
**Revision 1**

- Multi-scale option (additional internal A/D module card), with a maximum of 7 additional modules
- Compound scale functionality to provide the sum of two or more scales
- Data Storage Device, with a maximum of 999,999 data sets
- Counting mode

**Load cell:**

The following load cells may be used, in single-range applications only:

Model	Load cell $E_{max}$	Max capacity	$e \geq$	Max n
HBM PW2 C3	7.2 kg	5 kg	0.001 kg	3000
	12 kg	10 kg	0.002 kg	3000
	18 kg	16 kg	0.005 kg	3000
	36 kg	34 kg	0.01 kg	3000
	72 kg	70 kg	0.02 kg	3000
Vishay / Tede 1040 C3	5 kg	3 kg	0.001 kg	3000
	7 kg	5 kg	0.001 kg	3000
	10 kg	8 kg	0.001 kg	3000
	15 kg	13 kg	0.002 kg	3000
	20 kg	18 kg	0.002 kg	3000
	30 kg	28 kg	0.005 kg	3000
	50 kg	48 kg	0.005 kg	3000
	75 kg	73 kg	0.01 kg	3000
Vishay / Tede 1042 C4	5 kg	3 kg	0.0005 kg	4000
	7 kg	5 kg	0.001 kg	4000
	10 kg	8 kg	0.001 kg	4000
	15 kg	13 kg	0.002 kg	4000
Vishay / Tede 1042SYM C6	20 kg	18 kg	0.002 kg	6000
	30 kg	28 kg	0.005 kg	6000
	50 kg	48 kg	0.005 kg	6000
	75 kg	73 kg	0.01 kg	6000

Any compatible load cell(s) may be used providing the following conditions are met:

- There is a respective OIML Certificate of Conformity (R60) issued for the load cell.
- The certificate contains the load cell types and the necessary load cell data required for the manufacturer's declaration of compatibility of modules and any particular installation requirements. A load cell marked NH is allowed only if humidity testing to R76 has been conducted on this load cell.
- The compatibility of the load cells and indicator is established by the manufacturer by means of the compatibility of modules calculation.

**Technical data:**

Power supply	10-32 VDC or 90-250 VAC
Maximum tare (gross weigher only)	-100% Max
Maximum number of scale intervals	6000
Load cell excitation voltage	± 5 VDC (10 VDC)
Minimum load cell impedance	43 Ω
Maximum load cell impedance	1100 Ω
Minimum input voltage per scale interval	0.83 μV
Measuring range minimum voltage	0 mV
Measuring range maximum voltage	200 mV
Fraction of maximum permissible error	$P_{ind} = 0.5$
Operating temperature range	-10°C to +40°C
Load cell connection	4-wire or 6-wire shielded

**Interfaces:**

The instrument may be fitted with the following protected interfaces:

- RS232/RS485
- Profibus, DeviceNet and Ethernet (as modules connected to above port)
- Digital inputs and outputs for interfacing with external equipment and initiating macro commands; as follows:
  - 2 control inputs (all models)
  - 8 TTL inputs/outputs (66x models only)
  - Additional 4-channel I/O modules (46x up to 8 channels, 56x up to 32 channels, 66x/675 up to 128 channels)
- Analogue outputs (0/4-20mA or 0-10V), with a maximum of 8 outputs

**Alternatives:**

Having the GSE 675 Bench Scale, comprising the same electronics and software as the GSE 60-Series, with a different construction. The indicator has an integrated load cell platform and a different enclosure.

**CERTIFICATE HISTORY**

ISSUE NO.	DATE	DESCRIPTION
R76/1992-GB1-09.04	19 March 2009	Test Certificate first issued.
R76/1992-GB1-09.04 rev 1	10 November 2009	660 Model indicator added to the certificate

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