



Australian Government  
Department of Industry,  
Innovation and Science

## National Measurement Institute

# Supplementary Certificate of Approval NMI S535

Issued by the Chief Metrologist under Regulation 60  
of the  
National Measurement Regulations 1999

This is to certify that an approval for use for trade has been granted in respect of the instruments herein described.

Avery Weigh-Tronix Model T302x Load Cell

submitted by Avery Weigh-Tronix  
Foundry Lane, Smethwick  
West Midlands B66 2LP  
United Kingdom

**NOTE:** This Certificate relates to the suitability of the pattern of the instrument for use for trade only in respect of its metrological characteristics. This Certificate does not constitute or imply any guarantee of compliance by the manufacturer or any other person with any requirements regarding safety.

This approval has been granted with reference to document NMI R 60, *Metrological Regulation for Load Cells*, dated July 2004.

This approval becomes subject to review on **1/6/22**, and then every 5 years thereafter.

### DOCUMENT HISTORY

Rev	Reason/Details	Date
0	Pattern & variant 1 approved – certificate issued	17/05/10
1	Pattern & variant 1 amended (company name), <b>reviewed &amp; updated</b> – certificate issued	7/12/16

## CONDITIONS OF APPROVAL

### General

Instruments purporting to comply with this approval shall be marked with pattern approval number 'NMI S535' and only by persons authorised by the submitter.

Instruments incorporating a component purporting to comply with this approval shall be marked 'NMI S535' in addition to the approval number of the instrument, and only by persons authorised by the submitter.

It is the submitter's responsibility to ensure that all instruments marked with this approval number are constructed as described in the documentation lodged with the National Measurement Institute (NMI) and with the relevant Certificate of Approval and Technical Schedule. Failure to comply with this Condition may attract penalties under Section 19B of the National Measurement Act and may result in cancellation or withdrawal of the approval, in accordance with document NMI P 106.

The values of the performance criteria (maximum number of scale intervals etc.) applicable to an instrument incorporating the pattern approved herein shall be within the limits specified herein and in any approval documentation for the other components.

### Special:

Under certain conditions model T302x load cells may be used to replace some or all approved model T302 (approval NMI S386) or T302i (approval NMI S492) load cells of equivalent capacity in existing instruments.

Also, under certain conditions model T302x load cells of 45 000 kg capacity may be used to replace some or all approved model 8701 (approvals NMI S204 and NMI S204A) load cells of 45 400 kg capacity in existing instruments. This does NOT apply to 8701 load cells other than those of 45 400 kg capacity.

Note that in some cases the abovementioned approvals are no longer valid for NEW instruments – this condition relates only to replacement of load cells in existing instruments.

The above applies to load cells branded "Avery Berkel" as well as load cells branded "Avery Weigh-Tronix".

Refer to clause **2. Description of Variant 1** in Technical Schedule No S535 dated 17 May 2010 for the applicable conditions.

Signed by a person authorised by the Chief Metrologist to exercise their powers under Regulation 60 of the *National Measurement Regulations 1999*.



**Mario Zamora**

TECHNICAL SCHEDULE No S535

**1. Description of Pattern**

**approved on 14/5/10**

An Avery Weigh-Tronix model T302x (or T302X) load cell of 22 500 kg maximum capacity (Figure 1 and Table 1) of 'C5' classification, approved for use with up to 5000 verification intervals.

**1.1 Method of Mounting**

Mounting is to be in accordance with the manufacturer's instructions and as shown in Figure 2.

**1.2 Markings**

Each load cell is marked with the following:

Manufacturer's mark, or name written in full	Avery Weigh-Tronix
Model number	.....
Maximum capacity	..... kg (or t)
Classification	C5
Serial number	.....
Pattern approval mark	NMI S535

**1.3 Table of Specifications**

Type: Avery Weigh-Tronix model T302x (T302X) load cells

<i>E<sub>max</sub></i> (kg)	22 500	45 000
Classification	C5	C5
nLC	5000	5000
<i>V<sub>min</sub></i> (kg)	1.7	3.4
DR (kg)	2.25	4.5
mV/V	1.74	
Input imp. (ohms)	540	
Supply voltage (V)	10 – 12	
Cable length (±0.1 m)	25 and 40	
Number of leads	4 (plus shield)	

Where:

<i>E<sub>max</sub></i>	=	Maximum capacity
nLC	=	Maximum number of verification intervals
<i>V<sub>min</sub></i>	=	Minimum value of verification interval
DR	=	Minimum dead load output return value
mV/V	=	Output rating (nominal)
Input imp.	=	Input impedance (nominal)
Voltage	=	Supply voltage (AC or DC)

## 2. Description of Variant 1

approved on 14/5/10

Model T302x (or T302X) load cell of 45 000 kg maximum capacity and with other characteristics as listed in Table 1.

As indicated in the Special Condition of Approval, under certain conditions model T302x load cells may be used to replace some or all approved model T302 (approval NMI S386) or T302i (approval NMI S492) load cells of equivalent capacity in existing instruments.

All the following conditions apply:

- (a) The use of combinations of load cells from differing approvals is acceptable only for the replacement of load cells in existing instruments. The construction of NEW instruments using such combinations is not acceptable.
- (b) Replacement of the load cells as described may require use of an extension block to match the height of the load cell assembly which is being replaced.
- (c) Calculations in accordance with NMI General Certificate 6B/0 shall be satisfied to demonstrate compatibility of the load cells and indicator. Where the parameters shown in the approvals of the load cells differ, the 'worst case' value shown below shall be used when carrying out these calculations:

Maximum capacity ( $E_{max}$ ) - lowest value

Maximum number of verification intervals ( $n_{LC}$ ) – lowest value

Minimum value of verification interval ( $v_{min}$ ) – highest value

Minimum dead load output return value (DR) – highest value

Output rating (mV/V) – lowest value

Input impedance (ohm) – lowest value

Load cell supply voltage – highest value

Also, under certain conditions model T302x load cells of 45 000 kg capacity may be used to replace some or all approved model 8701 (approvals NMI S204 and NMI S204A) load cells of 45400 kg capacity in existing instruments. This does NOT apply to 8701 load cells other than those of 45 400 kg capacity.

In addition to the conditions (a), (b) and (c) mentioned above, the requirement of NMI S204 and NMI S204A requiring use of "an indicator incorporating at least 3-point linearisation and which is approved for use with load cells requiring linearization" shall be met wherever the model 8701 load cell is used.

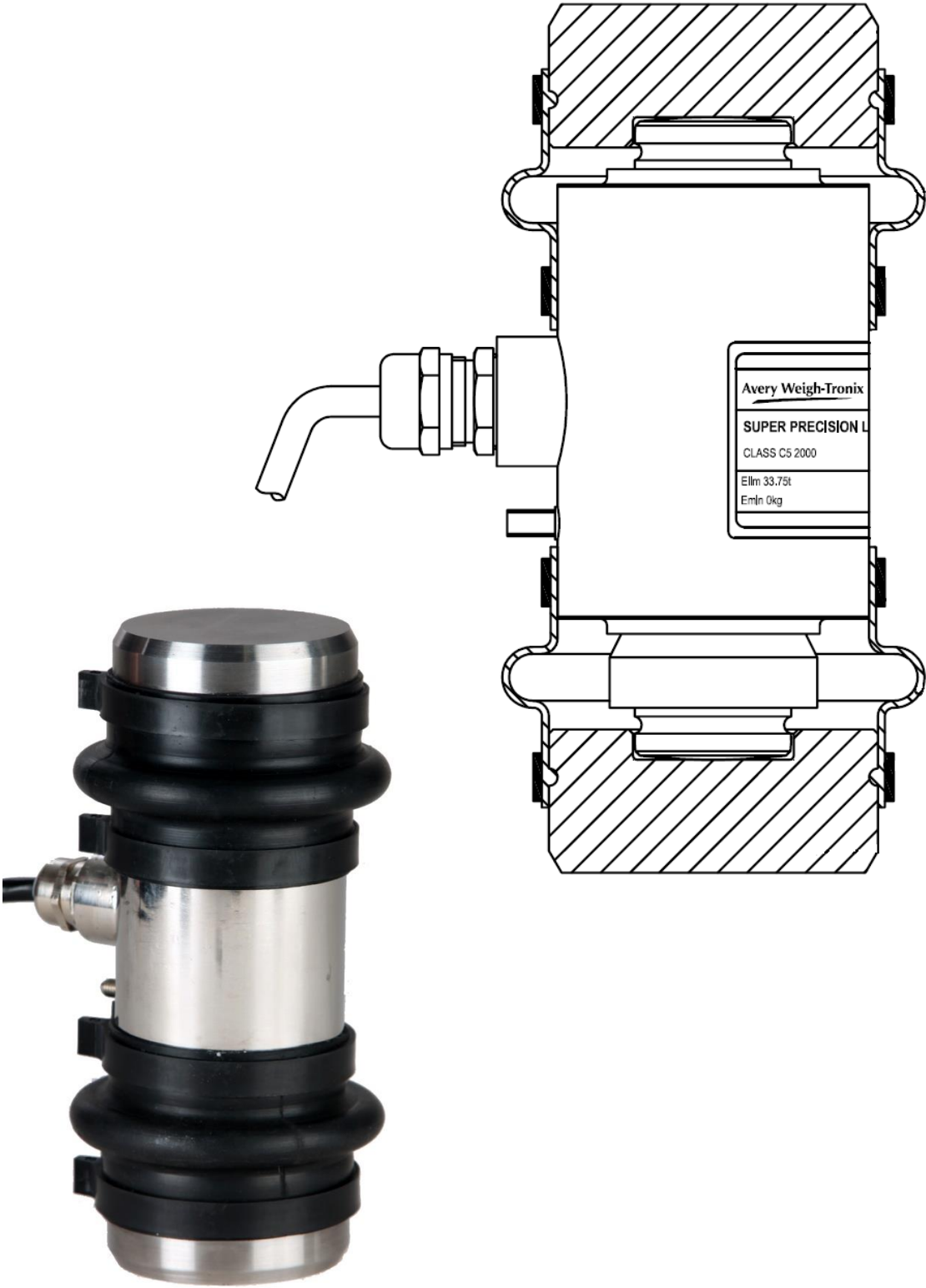
Note that in some cases the abovementioned approvals are no longer valid for NEW instruments – this condition relates only to replacement of load cells in existing instruments.

FIGURE S535 – 1



Avery Weigh-Tronix Model T302x 22 500 kg Load Cell

FIGURE S535 – 2



Avery Weigh-Tronix Model T302x 22 500 kg Load Cell  
(shown with mounting fixtures)

~ End of Document ~