Ministry of Business, Innovation & Employment

Wellington, New Zealand

CERTIFICATE OF APPROVAL

Weights and Measures Regulations 1999
Part 1 Regulations 5 and 6

Current Date of Issue: 24 August 2015
Original Date of Issue: 26 April 2012

Certificate 2070

Overseas Certificate No: DK 0199.266

This certifies that the Taiwan Scale or T Scale NHB (also known as MPB), Weighing Instrument described overleaf has been approved as suitable for trade use subject to any conditions stated in the schedule:

Figure 1 - T Scale Model NHB 150 weighing instrument

S R Bobbala **J P Crane**

Under delegated authority from the Chief Executive of The Ministry of Economic Development

Note: This is not an approval to any person but only with respect to the type and pattern of weight, measure, or weighing or measuring instrument.

SCHEDULE

Pattern:	Weighing Instrument
Make:	Taiwan Scale / T Scale / Millennium Mechatronics
Model:	NHB (also known as MPB)
Manufacturer:	Taiwan Scale Mfg. Co., Ltd. Taipai, Taiwan
Submitter:	Millennium Mechatronics Ltd, Auckland
Maximum Capacity (Max):	150 g ≤ Max ≤ 6000 g (see Table 1)
Minimum Capacity:	See Table 1 Amended by Notification of Change, dated 24 August 2015.
Verification Scale Interval:	Various (see Table 1)
Class:	II
Load Receptors:	1) 80 mm Ø (Max Cap = 150 g) 2) 120 mm Ø (300 g ≤ Max Cap ≤ 600 g) 3) 140 x 150 mm (1500 g ≤ Max Cap ≤ 6000 g)
Tare:	- Max, (semi-automatic subtractive tare)
Conditions of Approval:	1. Instruments are marked 'NOT FOR TRADING DIRECT WITH THE PUBLIC'. 2. Adjacent to level indicator a level notice stating "incorrect if not truly level" or a similar wording must be shown. 3. This Certificate only covers compliance with respects to the relevant sections of the Weights and Measures Act and Regulations and should not be construed as guarantee of compliance with any safety requirements. 4. It is the submittor's responsibility to ensure that all instruments marked with this approval number are constructed as described in the documentation lodged with MAPSS and with the relevant Certificate of Approval and Technical Schedule. 5. MAPSS reserves the right to examine any instrument or component of an instrument purporting to comply with this approval.

Description:

A Taiwan Scale Model NHB (*) Series is a Class II, self indicating, non-automatic weighing instrument. The instruments are configured with certain capacities as listed in Table 1.

(*) Note: Instruments may also be known as T Scale model NHB Series or Millennium Mechatronics model MPB series.
The model number may have a suffix of up to four numeric characters reflecting the maximum capacity of the instrument; the various models are detailed in Table 1.
E.g. Model NHB1150 instrument has a 150 g maximum capacity with a verification scale interval of 0.02 g.

CONSTRUCTION:

Base work:
The pattern is built in a plastic enclosure and has either a circular or rectangular type stainless steel load receptor depending on its maximum capacity (figure 1, 2 & 3). Instrument having a maximum capacity of up to 600 g are provided with a wind shield.

Display:
The instruments are provided with an integrated (within the instrument housing) LCD type display (16 mm height). Pressing the "MODE" key will toggle the display view between normal display mode in grams, extended view in grams with e = 10d, and extended display view in carat (ct).

Load Cell:
The instruments uses a single HBM type SPL & PW6K load cell with an Emax capacity as detailed in Table 1.

Power Supply:
Operates on a 230V AC via a compatible mains adaptor to supply 9~12 VDC to the instrument.
The instrument may also operate on an internal 6V rechargeable battery.

Display Check:
A display check to ensure that all segments are active is initiated whenever power is switched on.

Interfaces:
The instruments may be fitted with one or more of the following interfaces for connection of auxiliary and/or peripheral devices:
- RS-232
- USB interface
- Blue tooth

Note: The Auxiliary devices shall meet the following conditions:
(i) have no function that would cause a variation in the display of the measured or computed quantities
(ii) is not capable of transmitting any data or instruction into the weighing instrument, other than to release a printout, checking for correct data transmission or validation
Or
As indicated at any time by the Measurement and Product Safety Service (Type Approvals).

Additional Functions (NOT APPROVED for trade use).
The instruments may be equipped with additional management functions including percentage (%) and counting ('pcs'). All these functions are not approved for trade use.

ZERO SETTING DEVICES:
Initial Zero Setting Device: ± 10% of the maximum capacity of the instrument.
Semi-Automatic Zero Setting: ± 2% of the maximum capacity of the instrument.
Zero-tracking: A Zero-tracking device may be fitted and operates over a range of ± 2% of the maximum capacity of the instrument.

METROLOGICAL MARKINGS:
Instruments carry the following markings:
Manufacturer's mark, or name:
Accuracy class: II
Pattern approval number: **MCA 2070**
Maximum capacity Max .....g or kg #
Minimum capacity Min ..... g or kg #
Verification scale interval e = ...g or kg #
Serial number of the instrument ……..
Special temperature limits: 5˚ C to 40˚ C
These markings are also shown near the display of the result.
Additionally, instruments must carry a notice stating "NOT FOR TRADING DIRECT WITH THE PUBLIC" or similar wording.

Sealing:	A calibration switch is located at the bottom of the instrument housing. An approved type adhesive destructible label shall secure the metrological functions from unauthorised entry (see figure 4).
Mark of Verification:	An adhesive destructible label used to inhibit access to calibration switch of the instrument shall carry a Mark of Verification. Removal of seal deems the instrument not verified.
Levelling:	The Instrument is equipped with adjustable feet and a level bubble. Adjacent to the level bubble is a notice "Instrument incorrect unless level" or similar wording.
Temperature:	Limited temperature range: +5˚ C to 40˚ C (this range must be marked on the instrument)

TABLE - 1 Amended by Notification of Change, dated 24 August 2015.

Model	Max	Min Cap	e	D	n	No of load cells	HBM Load cell Type	Load cell Emax
NHB-150	150 g	0.04 g	0.02 g	0.002 g	7500	1	SPL	200 g
NHB-300	300 g	0.1 g	0.05 g	0.005 g	6000			300 g
NHB-600	600 g	0.5 g	0.1 g	0.01 g	6000			600 g
NHB-1500	1500 g	1 g	0.2 g	0.02 g	7500			1500 g
NHB-3000	3000 g	2.5 g	0.5 g	0.05 g	6000			3000 g
NHB-6000	6000 g	5 g	1 g	0.1 g	6000		PW6K	10 kg

Figure 2 - T Scale Model NHB 1500 weighing instrument

Figure 3 - T Scale Model NHB 6000 weighing instrument

Figure 4 - Typical Sealing Method