



Australian Government

National Measurement
Institute

Bradfield Road, West Lindfield NSW 2070

Certificate of Approval

No 6/10B/57A

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.

Doyle Model 10TSSV Weighing Instrument

submitted by Rice Lake Weighing Systems
230 West Coleman Street
Rice Lake WI 54868
USA

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 76, *Non-automatic weighing instruments, Parts 1 and 2*, dated July 2004.

This approval becomes subject to review on **1/04/17**, and then every 5 years thereafter.

DOCUMENT HISTORY

Rev	Reason/Details	Date
0	Pattern approved – certificate issued	15/03/02
1	Variant 1 approved – certificate issued	17/08/06
2	Pattern & variant 1 reviewed – notification of change issued	5/06/08
3	Pattern & variant 1 reviewed & updated – certificate issued	18/01/13

CONDITIONS OF APPROVAL

General

Instruments purporting to comply with this approval shall be marked with pattern approval number 'NMI (or NSC) 6/10B/57A' 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.

Auxiliary devices used with this instrument shall comply with the requirements of General Supplementary Certificates No S1/0/A or No S1/0B.

The pattern as approved herein or with substitute NMI approved load cells and/or approved indicators, and in other capacities or configurations, shall comply with General Certificate of Approval No 6B/0.


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



Dr A Rawlinson

TECHNICAL SCHEDULE No 6/10B/57A

1. Description of Pattern **approved on 12/03/02**

A Doyle model 10TSSV class  non-automatic self-indicating weighing instrument of 10 000 kg maximum capacity and approved for use with up to 2000 verification scale intervals (Figure 1).

Instruments may also be known as Kraus model 10TSSV.

1.1 Basework

The hopper is supported by a Rice Lake model PLS-25-Y lever system and has a single load cell connected to the transfer lever (Figure 2).

1.2 Load Cell

A single Rice Lake model RL20000A-3K load cell of 1360 kg maximum capacity is used and is mounted as shown in Figure 3.

1.3 Indicator

A Rice Lake model 320HE-1B digital indicator (Figure 4) is used.

Zero is automatically corrected to within $\pm 0.25e$ whenever power is applied and whenever the instrument comes to rest within $0.5e$ of zero.

The initial zero-setting device has a nominal range of not more than 20% of the maximum capacity of the instrument.

Instruments may be fitted with output sockets (output interfacing capability) for the connection of auxiliary and/or peripheral devices.


A display check is initiated whenever power is applied or when the test button is pressed.

1.4 Tare

A semi-automatic subtractive taring device of up to the maximum capacity of the instrument may be fitted.

1.5 Descriptive Markings

Instruments carry the following markings:

Manufacturer's mark, or name written in full
Indication of accuracy class	
Pattern approval mark for the instrument	NMI (or NSC) No 6/10B/57A
Maximum capacity	<i>Max</i> kg #1
Minimum capacity	<i>Min</i> kg #1
Verification scale interval	<i>e</i> = kg #1
Serial number of the instrument
Serial number of the indicator #2
Serial number of the load cell #2

#1 These markings shall also be shown near the display of the result if they are not already located there.

#2 Alternatively, these may be marked adjacent to the verification mark.

1.6 Sealing Provision

Provision is made for the calibration adjustments in the indicator to be sealed by means of one of the screws connecting the casing halves.

1.7 Verification Provision

Provision is made for the application of a verification mark.

2. Description of Variant 1

approved on 17/08/06

With certain models of the Rice Lake 420HE series of digital indicators which have the same features as the model 320HE-1B described for the pattern except that they have an LED type display rather than an LCD type display.

The approved models are:

- i. Model 420HE-1A (Figure 5) which uses a 230 V AC (nominal) power supply; or
- ii. Model 420HE-1D which uses a 9–36 V DC 1.5 A (maximum) power supply. The submitter should be contacted regarding the suitability of alternative power supplies.

TEST PROCEDURE No 6/10B/57A

Instruments shall be tested in accordance with any relevant tests specified in the National Instrument Test Procedures.

The instrument shall not be adjusted to anything other than as close as practical to zero error, even when these values are within the maximum permissible errors.

Maximum Permissible Errors

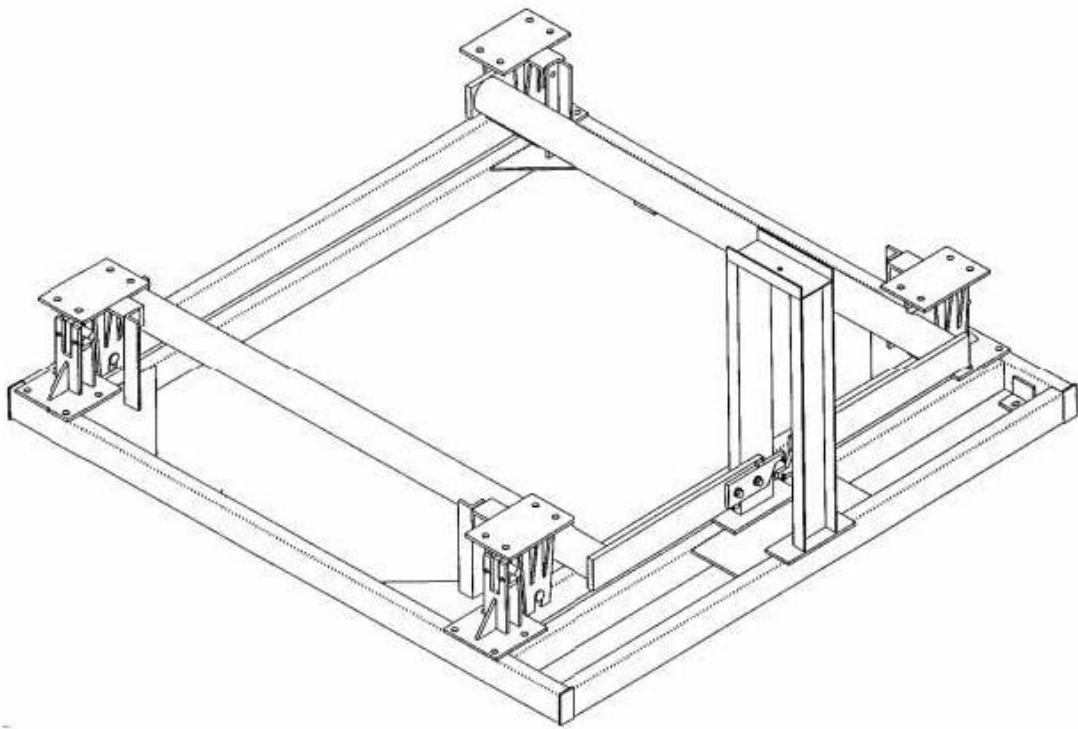
The maximum permissible errors are specified in Schedule 1 of the *National Trade Measurement Regulations 2009*.

FIGURE 6/10B/57A – 1



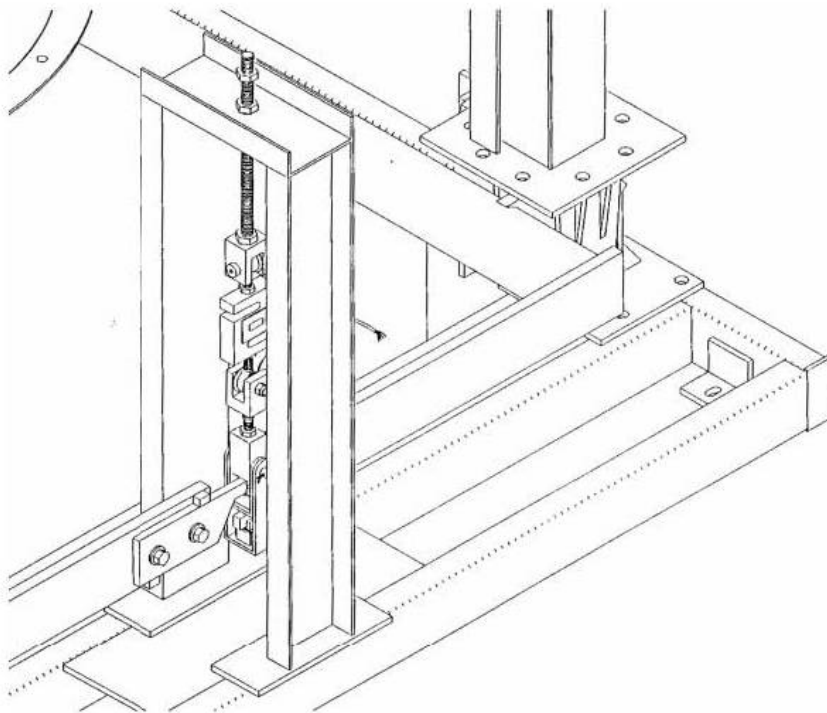
Doyle/Kraus Model 10TSSV Weighing Instrument

FIGURE 6/10B/57A – 2



Lever System

FIGURE 6/10B/57A – 3



Load Cell Mounting

FIGURE 6/10B/57A – 4



Rice Lake Model 320HE-1B Digital Indicator

FIGURE 6/10B/57A – 5



Rice Lake Model 420HE-1A Digital Indicator