Australian Government
Department of Industry, Innovation and Science

National Measurement Institute

Certificate of Approval

NMI 6/4D/385

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.

Dibal Model S-545 Weighing Instrument

submitted by Rollex Australia Pty Ltd
Unit 1, 51 Overload Place
Acacia Ridge QLD 4110

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 Oct 2015.

This approval becomes subject to review on 1/08/21, and then every 5 years thereafter.

DOCUMENT HISTORY

Rev	Reason/Details	Date
0	Pattern & variants 1 to 11 approved – certificate issued	20/07/16

CONDITIONS OF APPROVAL

General

Instruments purporting to comply with this approval shall be marked with pattern approval number 'NMI 6/4D/385' and only by persons authorised by the submittor.

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 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 Certificate No S1/0B.

Special Conditions of Approval:

Certain aspects of this instrument (in particular label and ticket formats) are able to be configured by the user. Whilst NMI believes that acceptable label and ticket formats can be achieved for typical basic sales modes, it is also possible for the instrument to be configured to produce unacceptable formats, and use of some formats may be inappropriate for different sales modes. It is the responsibility of the user to ensure that acceptable and appropriate formats are used in any particular situation.

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 6/4D/385

1. Description of Pattern approved on 20/07/16

A Dibal model S-545 class (III) non-automatic self-indicating price-computing multiple range weighing instrument (Figure 1a and Table 1) with a verification scale interval (e_1) of 0.002 kg for the low range which has a maximum capacity of 6 kg and with a verification scale interval (e_2) of 0.005 kg for the high range which has a maximum capacity of 15 kg.

Instruments are configured so that the weighing range changes automatically with increasing load and when the indication remains at rest at zero. The range symbol changes from e=2g to e=5g whenever the instrument is in the high range (Figure 1b).

Instruments are fitted with integral dot matrix type LCD screen displays for the operator and customer. For each side, the screen display consists of displays for the presentation of tare, weight, unit price and price information, zero, net indications and functions relating to product look up (PLU) items.

Instruments may be fitted with 7 segment LCD displays (Figure 1c) for the operator and customer.

Instruments are fitted with an integral printer, for printing of tickets or labels.

Instruments display unit price to $999.99/kg, total price to $9999.99, and have a product look up (PLU) facility.

The instrument operates from mains AC power (240 V AC, 50 Hz).

Instruments may be fitted with output sockets (output interfacing capability) for the connection of auxiliary and/or peripheral devices (see clause **1.6** below).

1.1 Zero

A zero-tracking device may be fitted.

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

The instrument has a semi-automatic zero-setting device with a nominal range of not more than 4% of the maximum capacity of the instrument.

1.2 Tare

A semi-automatic and/or non-automatic keyboard-entered pre-set subtractive tare device, each of up to 14.995 kg, may be fitted.

Pre-set tare values may be associated with product look up (PLU) items.

A separate display of tare values is provided.

1.3 Display Check

A display check is initiated whenever power is applied.

1.4 Networking

A number of instruments may be connected in a network to share common PLU data, for totalisation across instruments, and to accumulate and retrieve management information.

In addition, the instrument may be interfaced with a computer for the collection of management data, the downloading of PLU data.

Note: The weighing and price computing functions of each weighing instrument in the network are independent, and the removal, repair or replacement of a particular weighing instrument does not necessitate re-verification of any other weighing instrument in the network.

1.5 Levelling

The instrument is provided with adjustable feet and a level indicator.

1.6 Interfaces

Instruments may be fitted with interfaces for the connection of auxiliary and/or peripheral devices. Any interfaces shall comply with clause 5.3.6 of document NMI R76 (the basic intent of which is that it shall not be possible to alter weighing results via the interfaces).

Any measurement data output from the instrument or its interfaces shall only be used for trade in compliance with Supplementary Certificate No S1/0/B (in particular in regard to the data and its format).

Instruments may be fitted with Ethernet, USB, Scanner and cash drawer interfaces.

1.7 Sealing Provision

Provision is made for the calibration adjustments to be sealed by means of destructible adhesive labels placed over the securing screws on the cover plate underneath the instrument as shown in Figure 2a.

1.8 Descriptive Markings and Notices

Instruments carry the following markings:

Manufacturer's mark, or name written in full	Dibal
Mark or name of manufacturer's agent	Rollex Australia Pty Ltd
Indication of accuracy class	(III)
Pattern approval mark for the instrument	NMI 6/4D/385
Maximum capacity	*Max* ..... g or kg #1
Minimum capacity	*Min* ..... g or kg #1
Verification scale interval	*e* = ... g or kg #1
Maximum subtractive tare	*T* = - ..... kg #2
Serial number of the instrument	…….

#1 These markings are shown near the display of the result.

#2 This marking is required if *T* is not equal to *Max*.

Note:

For multiple range instruments, the maximum capacity, minimum capacity and verification scale interval for each range shall be marked, with an indication of the range to which they apply, e.g.

Range (*)	1		2
Max_1	…. kg	Max_2	…. kg
Min_1	…. kg	Min_2	…. kg
e_1 =	…. kg	e_2 =	…. kg

1.9 Verification Provision

Provision is made for the application of a verification mark.

1.10 Software

The legally relevant software is designated W200.

The legally relevant software version can be seen in the switch-on display sequence (when the power is first applied to the instrument).

2. Description of Variant 1 approved on 20/07/16

A Dibal model M-525 instruments which is similar to the pattern but having a smaller PLU facility.

3. Description of Variant 2 approved on 20/07/16

Certain other capacities of the Dibal model S-545/M-525 multiple range instruments as listed in Table 1 below (the pattern is shown in **bold**).

TABLE 1

Maximum Capacity (*Max1/Max2*)	Verification Scale Interval (*e1/e2*)	Maximum Subtractive Tare Capacity (*T* = - …)	Load Cells used
6/15 kg	**0.002/0.005 kg**	**14.995 kg**	**HBM PW6KC3MR, HBM PW6CC3MR 20 kg**
15/30 kg	0.005/0.010 kg	29.99 kg	HBM PW6KC3MR, HBM PW6CC3MR 40 kg

4. Description of Variant 3 approved on 20/07/16

The Dibal model S-545/M-525 of single interval instruments in certain capacities as listed in Table 2 below.

TABLE 2

Maximum Capacity (*Max*)	Verification Scale Interval (*e*)	Maximum Subtractive Tare Capacity (*T* = - …)	Load Cells used
15 kg	0.005 kg	14.995 kg	HBM PW6KC3MR, HBM PW6CC3MR 20 kg
30 kg	0.010 kg	29.990 kg	HBM PW6KC3MR, HBM PW6CC3MR 40 kg

5. Description of Variant 4 approved on 20/07/16

A Dibal model S-545/M-525 pole type (Figure 3a), which is similar to the pattern and variants 2 & 3, but has the operator and customer displays mounted on a column, the operator keyboard integrated to the instrument.

The model S-545 may be fitted with 7” TFT LCD screen displays for the operator and customer (Figure 3b).

6. Description of Variant 5 approved on 20/07/16

A Dibal model S-545/M-545 double body type (Figure 4a), which is similar to the pattern and variants 2 & 3 but having the keyboard, the operator and customer display all mounted on a column above the instrument housing.

The model S-545 may be fitted with 7” TFT LCD screen displays for the operator and customer (Figure 4b).

7. Description of Variant 6 approved on 20/07/16

A Dibal model S-545/M525 (Figure 5a) single interval instrument which is a ‘hanging’ style version of the instrument, having a suspended load receptor in certain capacities as listed in Table 2.

The model S-545 may be fitted with 7” TFT LCD screen displays for the operator and customer (Figure 5b).

The instrument is firmly mounted to a mounting rod and in a fixed position.

Provision is made for the calibration adjustments to be sealed by means of a destructible adhesive label placed over the securing screw on the cover plate underneath the instrument as shown in Figure 2b.

8. Description of Variant 7 approved on 20/07/16

A Dibal model D-955 bench type (Figure 6a) which is similar to the pattern and variant 2 & 3, but having a large operator LCD touchscreen integrated within the instrument housing, the LCD display for the customer attached to the instrument.

Instruments are configured so that the weighing range changes automatically with increasing load and when the indication remains at rest at zero. The range symbol changes from e1 to e2 whenever the instrument is in the high range (Figure 6b).

9. Description of Variant 8 approved on 20/07/16

A Dibal model D-955 pole type (Figure 7) which is similar to variant 7 but having the customer display mounted on a column rather than attached to the instrument housing.

10. Description of Variant 9 approved on 20/07/16

A Dibal model D-955 double body type (Figure 8) which is similar to variant 7 but having a large operator touchscreen and a large/small customer display mounted on a column.

11. Description of Variant 10 approved on 20/07/16

A Dibal model D-955 hanging type (Figure 9) which is similar to variant 6 but having a large LCD touchscreen for the operator and a large/small LCD display for the customer.

12. Description of Variant 11 approved on 20/07/16

The pattern and variants may be connected in a network with compatible approved Dibal instruments, to share common PLU data, for totalisation across instruments ('floating system'), and to accumulate and retrieve management information.

In addition, the network may be interfaced with a computer for the collection of management data, or the downloading of PLU data.

Note 1: The weighing and price-computing functions of each weighing instrument in the network are independent, and the removal, repair or replacement of a particular weighing instrument does not necessitate reverification of any other weighing instrument in the network.

Note 2: The use of a totalisation across instruments ('floating system') arrangement in this variant is not approved for use in self-service arrangement.

TEST PROCEDURE No 6/4D/385

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

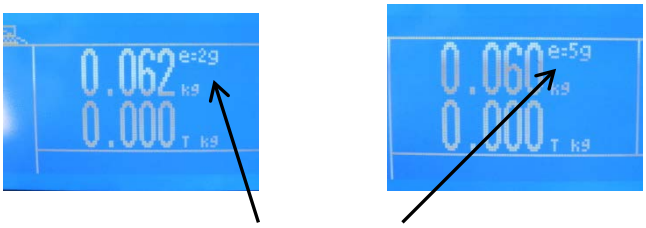
The maximum permissible errors are specified in Schedule 1 of the *National Trade Measurement Regulations 2009*.

Tests

For multiple range instruments with verification scale intervals of e_1, e_2 …, apply e_1 for zero adjustment, and maximum permissible errors apply e_1, e_2 …, as applicable for the load.

FIGURE 6/4D/385 – 1

(a) Dibal Model S-545/M-525 Bench Type Weighing Instrument (Pattern)

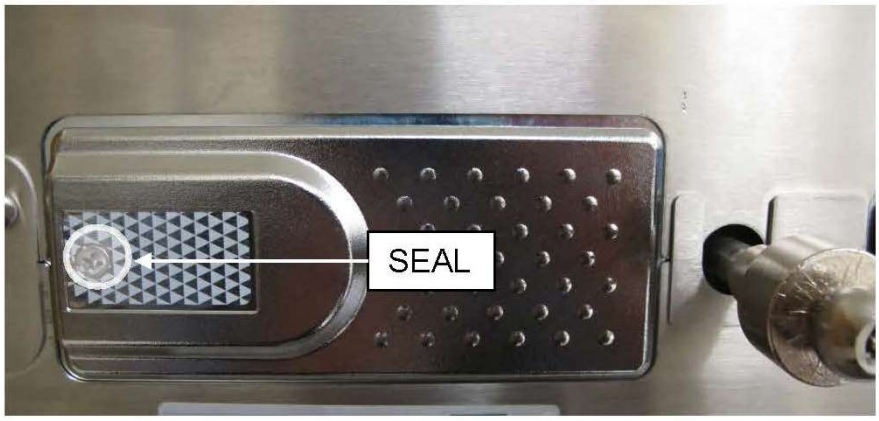


(b) Dibal Model S-545/M-525 Range Indication

(c) Dibal Model S-545/M-525 Bench Type With 7 Segment LCD Displays

FIGURE 6/4D/385 – 2

(a) Typical Sealing Arrangement – Bench Style Instruments



(b) Typical Sealing Arrangement – Hanging Style Instruments

FIGURE 6/4D/385 – 3

(a) Dibal Model S-545/M-525 Pole Type (variant 4)

(b) Dibal Model S-545 Pole Type With LCD Displays (variant 4)

FIGURE 6/4D/385 – 4

(a) Dibal Model S-545/M-525 Double Body Type (variant 5)

(b) Dibal Model S-545 Double Body Type with LCD Displays (variant 5)

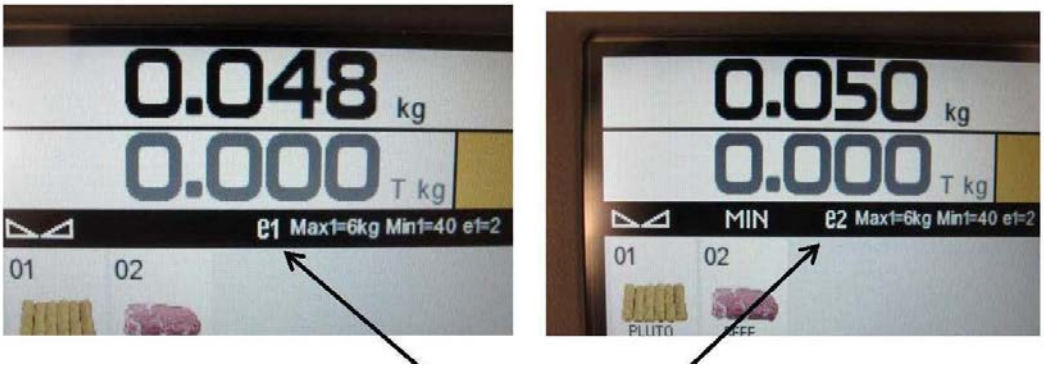
FIGURE 6/4D/385 – 5

(a) Dibal Model S-545/M-525 Hanging Type Weighing Instrument (variant 6)

(b) Dibal Model S-545/M-525 Hanging Type With LCD Displays (variant 5)

FIGURE 6/4D/385 – 6

(a) Dibal Model D-955 Bench Type Weighing Instrument (variant 7)



(c) Dibal Model D-955 Range Indication (variant 7)

FIGURE 6/4D/385 – 7

Dibal Model D-955 Pole Type Weighing Instrument (variant 8)

FIGURE 6/4D/385 – 8

Dibal Model D-955 Double Body Type (variant 9)

FIGURE 6/4D/385 – 9

Dibal Model D-955 Hanging Type Weighing Instrument (variant 10)

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