Australian Government
Department of Industry, Science and Resources

National Measurement Institute

36 Bradfield Road, West Lindfield NSW 2070

Certificate of Approval

NMI 6/4D/403

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.

Digi Singapore Model SM-5300 LG Weighing Instrument

submitted by W.W. Wedderburn Pty. Limited
101 Williamson Road
Ingleburn NSW 2565

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 October 2015.

This approval is subject to review at the decision of the Chief Metrologist in accordance with the conditions specified in the document NMI P 106.

DOCUMENT HISTORY

Rev	Reason/Details	Date
0	Pattern and Variants 1 to 11 approved – certificate issued	24/02/25

CONDITIONS OF APPROVAL

General

Instruments purporting to comply with this approval shall be marked with pattern approval number 'NMI 6/4D/403' 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 of Approval No S1/0B.

Special Conditions of Approval

Certain aspects of this instrument (in particular transaction record printing formats) are able to be configured by the user. Whilst NMI believes that acceptable 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*.

Darryl Hines
Manager
Policy and Regulatory Services

TECHNICAL SCHEDULE No 6/4D/403

1. Description of Pattern approved on 24/02/25

A Digi Singapore model SM-5300B LG class (III) non-automatic self-indicating price-computing multi-interval weighing instrument (Figure 1) with a verification scale interval (e_1) of 0.002 kg up to 6 kg and a verification scale interval (e_2) of 0.005 kg from 6 kg up to the maximum capacity of 15 kg. The minimum capacity is 0.04 kg.

Instruments are fitted with a colour touchscreen operator display/keyboard, numeric keypad and a colour customer display all incorporated within the main instrument housing (Figure 1). The operator touchscreen consists of displays for presentation of tare, weight, unit price and price information, zero, and 'net' indicators.

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

Instruments have unit price to $9999.99/kg, price to $99999.99, a product look up (PLU) facility.

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

The instrument operates from mains AC power (220 - 240 V AC, 50 Hz).

(#) Refer to the Special Conditions of Approval in the certificate.

1.1 Zero

A zero-tracking device may be fitted.

The initial zero-setting device of the pattern has a nominal range of approximately 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 subtractive tare device and/or non-automatic keyboard-entered pre-set subtractive tare device, each of up to 5.998 kg maximum tare capacity, 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 Levelling

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

The instrument is to be used in a level condition as indicated by the level indicator.

The pattern may be provided with adjustable feet and an automatic tilt sensor/compensation device that automatically compensates for out of level conditions up to ±3° in longitudinal or transverse directions. If the instrument exceeds this value, then the weight indications are replaced by a series of diagonal bars and the price-to-pay indications are inhibited.

Note: When the automatic tilt sensor is installed and activated, the level bubble shall be covered for viewing and the instrument should have the notice label(s) stating 'Instrument must be level when in use' and 'Electronic tilt sensor in use' or similar wording.

1.5 Additional Features

Instruments may be fitted with a manual weight entry function. This function is intended for use where (for example) the instrument is being used to calculate price and the weight value had been previously determined using a separate weighing instrument.

When this function is operated, the weighing functions (and associated zero and tare functions) of the instrument (pattern and the variants) are disabled. This is indicated by the weight display of the instrument indicating '-----'. The manually entered value is displayed separately, in the area otherwise intended for the tare value, and is designated 'Manual Wt kg'.

The manually entered weight value shall be marked 'M' on the receipt and/or label to distinguish this from a value determined by weighing on the instrument.

1.6 Interfaces

The indicator 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 R 76 (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 NMI General Supplementary Certificate No S1/0B (in particular in regard to the data and its format).

Indications other than the indications of measured mass (i.e. gross, tare, net, totals) displayed either on the indicator or on an auxiliary or peripheral device, are not for trade use.

Instruments may be fitted with USB and Ethernet interfaces.

1.7 Verification Provision

Provision is made for the application of a verification mark.

1.8 Descriptive Markings and Notices

Instruments carry the following markings:

Manufacturer's mark, or name written in full	Digi Singapore PTE. LTD.
Name or mark of manufacturer's agent	WEDDERBURN
Indication of accuracy class	(III)
Pattern approval number for the instrument	NMI 6/4D/403
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* = - ……. g or 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 multi-interval instruments the markings shall be as above, with the exception that the 'Maximum capacity' and 'Verification scale interval' shall be marked for both interval ranges, e.g. as follows:

Maximum capacity	*Max* ...../….. kg
Verification scale interval	*e* = .../…… kg

1.9 Sealing Provision

Provision is made for the calibration and configuration to be sealed by setting the SPAN switch within the instrument to the DISABLE position, and then preventing access within the instrument housing.

To determine if the SPAN switch status is in the 'DISABLE' position:

- Press the 'MENU' key on main weight screen, then press the 'MAINTENANCE' key. The 'MAINTENANCE MODE' screen will be displayed.
- Press the 'MAINTENANCE' key in the 'MAINTENANCE MODE' screen and 'SCALE' key will be displayed.
- Press the 'SCALE' key, then the 'CALIBRATION' will be displayed.
- Press 'CALIBRATION' key.
- If the SPAN switch is in the 'DISABLE' position, the instrument will display 'PLEASE TURN ON SPAN SWITCH'. The metrologically relevant configuration and calibration are sealed.
- Otherwise 'CAPACITY, INCREMENT, RESOLUTION …' and the 'NEXT>' button will be displayed in which case the instrument should not be verified until the switch has been correctly located in the 'DISABLE' position.

Provision is made for access to the SPAN switch to be sealed by means of lead and wire type seals with drilled screws, or a destructible adhesive label placed over the securing screw of the sealing cover plate underneath the load receptor as shown in Figure 2.

1.10 Software

The legally relevant software is identified by a scale driver version number protected by a checksum number:

- Software version: 31.67.65-1-rc1.
- AD driver software version: 9.1.1.40 and checksum number 1146450F.

Any modification in the scale driver will result in a change in the checksum value and an error being detected.

The software version of the instrument is indicated on top right corner of the Menu screen in the form of A.BB.CC-D-E (where A to E represent numbers). The number 'A" for this variant is 31 (indication the SM-5300… LG hardware). 'BB' (indicating major firmware release) shall be 67 or greater, CC' (indicating a minor firmware release) shall be 65 or greater, eg version shall be 31.67.65-*-* or greater.

The instructions for accessing the legally relevant software version are as follows (starting from the normal weighing mode):

- Press the 'MENU' key, then the 'MAINTENANCE' key on the MENU screen. The 'MAINTENANCE MODE' will be displayed.

- Press the ‘SYSTEM INFO’ key on the ‘MAINTENANCE MODE’ screen. The software version numbers will be displayed.

2. Description of Variant 1 approved on 24/02/25

Certain other capacities of multi-interval instruments are listed in Table 1 (the pattern is shown in **bold**).

Table 1

Maximum Capacity (Max_1 / Max_2)	Minimum Capacity (*Min*)	Verification Scale Interval (e_1 / e_2)	Maximum Subtractive Tare Capacity (*T* = - …)
3 / 6 kg	0.02 kg	0.001 / 0.002 kg	2.999 kg
6 / 15 kg	**0.04 kg**	**0.002 / 0.005 kg**	**5.998 kg**
15 / 30 kg	0.100 kg	0.005 / 0.010 kg	14.995 kg

3. Description of Variant 2 approved on 24/02/25

Certain capacities of single interval instruments as listed in Table 2.

A semi-automatic subtractive tare device and/or a keyboard-entered pre-set subtractive tare device, each of up to 50% maximum tare capacity minus 1 e as shown in the table 2, may be fitted.

Table 2

Maximum Capacity (*Max*)	Minimum Capacity (*Min*)	Verification Scale Interval (*e*)	Maximum Subtractive Tare Capacity (*T* = - …)
6 kg	0.02 kg	0.001 kg	2.999 kg
6 kg	0.04 kg	0.002 kg	2.998 kg
15 kg	0.04 kg	0.002 kg	7.498 kg
15 kg	0.1 kg	0.005 kg	7.495 kg
30 kg	0.1 kg	0.005 kg	14.995 kg
30 kg	0.2 kg	0.01 kg	14.99 kg

4. Description of Variant 3 approved on 24/02/25

The Digi Singapore model SM-5300P LG (Figure 3) instruments which are similar to the pattern and variants 1 to 2, except that the operator touch-screen console is replaced with an operator keyboard that is attached to the instrument housing on the operator side, together with a column mounted operator display.

5. Description of Variant 4 approved on 24/02/25

The Digi Singapore model SM-5300EV LG (Figure 4) instruments which are similar to the pattern and variants 1 to 2 but as an ‘elevated’ style instruments with the main instrument housing mounted on a column above the load receptor.

6. Description of Variant 5 approved on 24/02/25

The pattern or variants 1 to 4 without a customer display in which case instruments are either:

(a) NOT FOR TRADING DIRECT WITH THE PUBLIC in which case instruments carry a notice to this effect; or

(b) Used in a self-service arrangement (e.g. model SM-5300SSP XG, Figure 6d) which provides a product look up (PLU) touch screen display, as well as providing mass, unit price, price displays.

Note 1: It is not required that access to the zero setting facility be available to customers in a self-service arrangement. However, access to the zero setting facility shall be available to staff of the particular store, and it is expected that measures will be in place to ensure that the zero condition of the instrument is checked regularly.

Note 2: When used in a self-service arrangement, all keys on the touch screen keyboard, other than the REZERO key, may be disabled or removed. The TARE key is not functional with this arrangement. The use of totalisation across instruments (floating system') arrangement is not approved for use in self-service arrangement.

7. Description of Variant 6 approved on 24/02/25

The pattern and variants 1 to 5 may be connected in a network with compatible approved DIGI 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.

8. Description of Variant 7 approved on 24/02/25

The pattern and variants may be fitted with certain additional devices as follows:

(i) An external colour monitor, or a large colour monitor, or an ‘electro luminescent' display as the customer display, either attached to the instrument or separately mounted as a remote display.

(ii) An additional display (i.e. a third display) which may be used for advertisement or other non-metrological functions.

(iii) A second printer either attached to the main instrument or separately mounted as a remote printer.

(iv) A large colour touch screen, operator display.

(v) Integrated peripheral and/or auxiliary devices such as a scanner, card reader, and proximity reader.

(vi) Remote `Hi-Touch' devices for selection of PLUs.

9. Description of Variant 8 approved on 24/02/25

The pattern and variants may be fitted with an external basework (Figure 5) when the integral basework is either disabled or removed. The approved external baseworks are shown in the tables below.

Table 3 — Certain Single Interval Baseworks

Make	Teraoka						
Basework model	S-YA			S-YB			
Platform size, mm	380 x 380			480 x 480			
Max, kg	30	60	150	30	60	150	300
e, kg	0.01	0.02	0.05	0.01	0.02	0.05	0.1
T, kg	14.99	29.98	74.95	14.99	29.98	74.95	149.9
Load cell make	Teraoka						
Load cell model	P			PM			
Load cell Emax, kg	45	90	225	45	90	225	450
No of load cells	1						
Load cell sensitivity at Emax	1.5 mV/V						
Input impedance	1100 Ω						
Excitation voltage (maximum)	20 V						
Cable length (±0.1m) (#)	3 m						
No of leads (plus shield)	4						

Table 4 — Other Single Interval Baseworks

Make	Teraoka											
Basework model	SX-C or S-YC											
Platform size, mm	352 x 292 (for SX-C) or 341 x 284 (for S-YC)											
Max, kg	6		15		30		6		15		30	
e, kg	0.001	0.002	0.002	0.005	0.005	0.01	0.001	0.002	0.002	0.005	0.005	0.01
T, kg	2.999	2.998	7.498	7.495	14.995	14.99	2.999	2.998	7.498	7.495	14.995	14.99
Load cell make	Teraoka											
Load cell model	K type											
Load cell Emax, kg	9		22.5		45		9		22.5		45	
No of load cell	1						1					
Load cell sensitivity at Emax	1.5 mV/V											
Input impedance	350 Ω											
Excitation voltage (maximum)	20 V DC (Max)											
Cable length (±0.1m) (#)	3 m											
No of leads (plus shield)	4											

Max = maximum capacity of the instrument

e = verification scale interval

T = maximum tare capacity

(#) The load cell cable length supplied with the basework shall not be shortened.

Table 5 — Multi-interval Baseworks

Make	Teraoka		
Basework model	SX-C or S-YC		
Platform size, mm	352 x 292 (for SX-C) or 341 x 284 (for S-YC)		
Max, kg	3/6	6/15	15/30
e, kg	0.001/0.002	0.002/0.005	0.005/0.010
T, kg	2.999	5.998	14.995
Load cell make	Teraoka		
Load cell model	K type		
Load cell Emax, kg	9	22.5	45
Number of load cells	1		
Load cell sensitivity at Emax	1.5 mV/V		
Input impedance	350 Ω		
Excitation voltage (maximum)	20 V DC (Max)		
Cable length (±0.1m) (#)	3 m		
No of leads (plus shield)	4		

Max = maximum capacity of the instrument

e = verification scale interval

T = maximum tare capacity

(#) The load cell cable length supplied with the basework shall not be shortened.

10 Description of Variant 9 approved on 24/02/25

The SM-5300 XG series of instruments Models SM-5300B XG (Figure 6a), SM-5300P XG (Figure 6b), SM-5300EV XG (Figure 6c), and SM-5300SSP XG self-service with a 12.1” touch screen display or a 19” touch screen display (Figure 6d) are similar to the pattern and variants 1 to 8, but with the capacitive operator touch screen and upgraded circuitry, and as multi-interval instruments in certain capacities as listed in Table 1 and as single interval instruments in certain capacities as listed in Table 2.

The legally relevant software is identified by a scale driver version number protected by a checksum number:

- Software version: 37.67.65-2-rc1.
- AD driver software version: 8.1.1.40 and checksum number 18425002.

The software version of the instrument is indicated on top right corner of the Menu screen in the form of A.BB.CC-D-E (where A to E represent numbers). The number ‘A’ for this variant is 37 (indicating the SM-5300... XG hardware). ‘BB’ (indicating major firmware release) shall be 67 or greater, ‘CC' (indicating a minor firmware release) shall be 65 or greater, e.g. version shall be 37.67.65-*-* or greater.

Instruments with `PLUS' added to the model number (e.g., SM-5300P PLUS XG) indicates that these instruments are fitted with a larger customer display.

The sealing provision is the same as the pattern (Figure 2).

This series of instrument may also be known as Wedderburn model SM-5500... XG (where ... indicates the style, B, P, EV etc).

10.1 Levelling

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

The instrument is to be used in a level condition as indicated by the level indicator.

The instrument may be provided with adjustable feet and an automatic tilt sensor/compensation device that automatically compensates for out of level conditions up to ±3° in longitudinal or transverse directions. If the instrument exceeds this value, then the weight indications are replaced by a series of diagonal bars and the price-to-pay indications are inhibited.

The instrument may be fitted with an electronic tilt level bubble.

The electronic tilt level bubble can be checked using following method.

- Press the 'MENU' key on main weight screen, then press the 'MAINTENANCE' key. The 'MAINTENANCE MODE' screen will be displayed.
- Press the 'MAINTENANCE' key in the 'MAINTENANCE MODE' screen and 'SCALE' key will be displayed.
- Press the 'SCALE' key, then the 'SCALE LEVEL' key will be displayed.
- Press the 'SCALE LEVEL' key, then the electronic level bubble will show the levelling position of the instrument.

Note: When the automatic tilt sensor is installed and activated, the level bubble shall be covered for viewing and the instrument should have the notice label(s) stating 'Instrument must be level when in use' and 'Electronic tilt sensor in use' or similar wording.

11 Description of Variant 10 approved on 24/02/25

The SM-5300H XG (Figure 7) which is similar to variant 9 but as a 'Hanging' instrument.

This instrument may also be known as Wedderburn model SM-5500H XG. The sealing provision is the same as shown in Figure 8.

12 Description of Variant 11 approved on 24/02/25

The pattern and variants may be fitted with an alternative platter in which it has a safety bar on the platter as shown in Figure 9.

TEST PROCEDURE No 6/4D/403

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

Maximum Permissible Errors

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

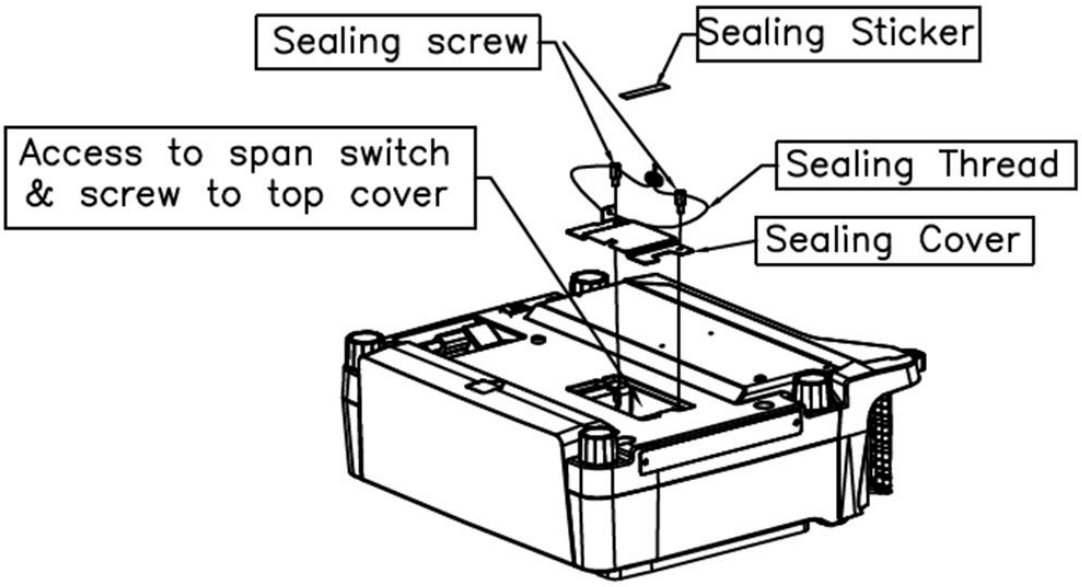
Tests

For multi-interval and 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/403 – 1

Digi Singapore Model SM-5300B LG Weighing Instrument (Pattern)

FIGURE 6/4D/403 – 2



Digi Singapore Model SM-5300 LG Series - Typical Sealing

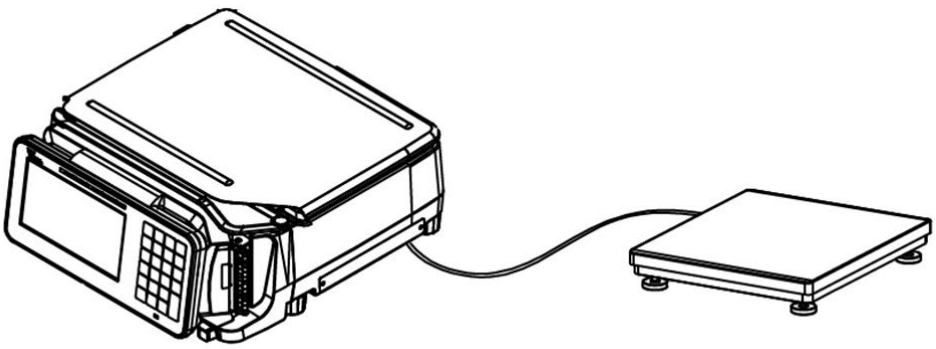
FIGURE 6/4D/403 – 3

Digi Singapore Model SM-5300P LG Weighing Instrument (Variant 3)

FIGURE 6/4D/403 – 4

Digi Singapore Model SM-5300EV LG Weighing Instrument (Variant 4)

FIGURE 6/4D/403 – 5



Digi Singapore Model SM-5300 Series With External Platform

FIGURE 6/4D/403 – 6

(a) Digi Singapore Model SM-5300B XG Weighing Instrument (Variant 10)

(b) Digi Singapore Model SM-5300P XG Weighing Instrument (Variant 10)

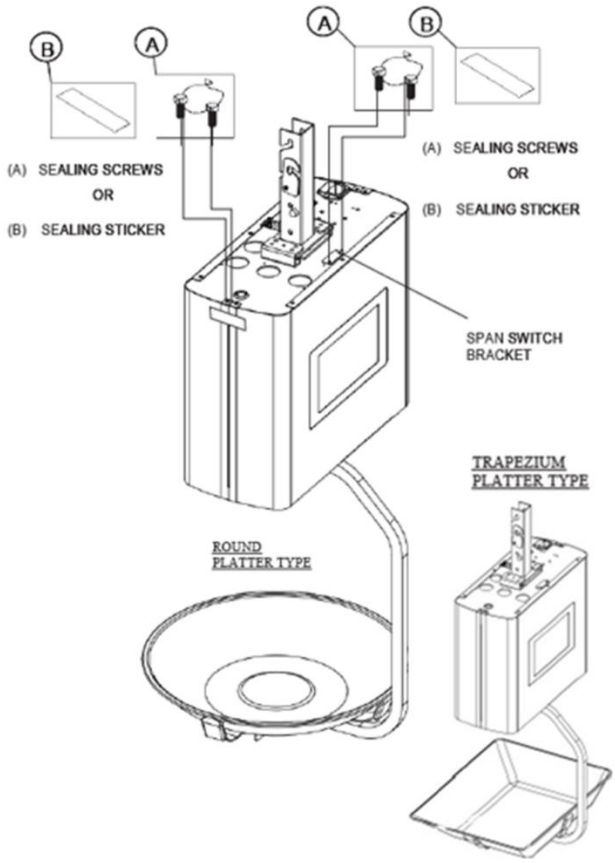
(c) Digi Singapore Model SM-5300EV XG Weighing Instrument (Variant 10)

(d) Digi Singapore Model SM-5300SSP XG Self-Service Weighing Instrument (Variant 10)
(With A 12.1” Touch Screen Display Or A 19” Touch Screen Display)

FIGURE 6/4D/403 – 7

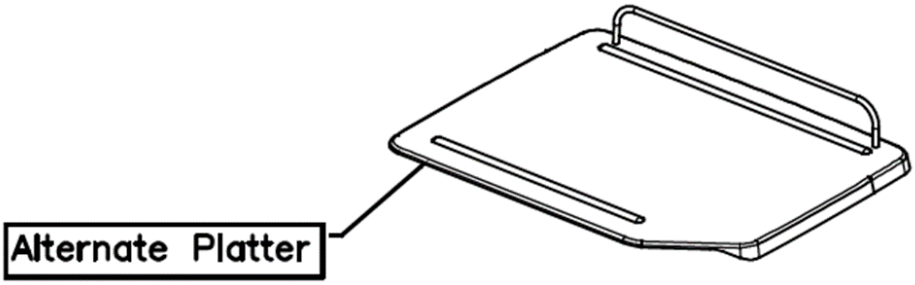
Digi Singapore Model SM-5300H XG Weighing Instrument (Variant 10)

FIGURE 6/4D/403 – 8



Digi Singapore Model SM-5300H XG - Typical Sealing

FIGURE 6/4D/403 – 9



Alternate Platter for DIGI SM-5300 Series Instrument (Variant 11)

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