Australian Government
Department of Industry, Science and Resources

National Measurement Institute

36 Bradfield Road, West Lindfield NSW 2070

Certificate of Approval

NMI 6/4D/377

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.

Teraoka DIGI Model DPS-5600 M 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 & variants 1 to 6 approved – interim certificate issued	21/10/14
1	Pattern & variants 1 to 6 approved – certificate issued	20/03/15
2	Variants 7 to 8 approved – certificate issued	22/05/19
3	Certificate updated (review date & NMI R76 edition) & pattern amended & variant 9 approved – certificate issued	07/09/22

CONDITIONS OF APPROVAL

General

Instruments purporting to comply with this approval shall be marked with pattern approval number 'NMI 6/4D/377' 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

Certain aspects of this instrument (in particular label formats) are able to be configured by the user. Whilst NMI believes that acceptable label 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 event that such modifications (if any are required by NMI) are not made to the satisfaction of NMI, this approval may be withdrawn.

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/377

1. Description of Pattern

approved on 21/10/14
amended on 07/09/22

A Teraoka model DPS-5600 M class (III) self-indicating multi-interval price computing labelling weighing instrument (Figure 1) with a verification scale interval of 0.002 kg up to 6 kg and with a verification scale interval of 0.005 kg from 6 kg up to 15 kg.

The instrument is fitted with a keyboard and touch screen display. The instrument is in a 'modular' form where the display/controller module and printer are mounted separately on a frame above the scale base work. This then can be mounted on the optional mounting frame or other suitable support. Modules are connected to the controller module by cables. The pattern may also be known as a Teraoka model DIGI DPS-5600 M.

Instruments are fitted with a colour liquid crystal display (LCD) panel, and with either one or two printers (in which case it may be known as DPS-5600 M type 'Single' (Figure 1) or 'Twin' accordingly).

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

The instrument has the ability to calculate price totals and then print labels for weighed loads, non-weigh items or manually entered weight values. In manual weight mode the weighing operation is inoperative.

Instruments use a Teraoka S-YC series base work, with a nominal platform size of 342 × 285 mm, and are fitted with a Teraoka K series load cell. The A/D module is fitted within the basework.

The instrument operates from mains AC power (220-240 V AC, 50-60 Hz).

1.1 Zero

A zero-tracking device may be fitted.

The initial zero-setting device 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 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.

1.3 Display Check

The instrument has a dot-matrix colour liquid crystal display. The display check is not required.

1.4 Levelling

The instrument is provided with adjustable feet and adjacent to the level indicator is a notice advising that 'Instrument must be level when in use' (or similar wording).

1.5 Descriptive Markings

Instruments carry the following markings:

Manufacturer's mark, or name written in full	Teraoka Seiko Co., Ltd.
Name or mark of manufacturer's agent	W W WEDDERBURN Pty. Limited
Indication of accuracy class	(III)
Pattern approval mark for the instrument	NMI 6/4D/377
Maximum capacity	*Max* ...../..... g or kg #
Minimum capacity	*Min* ..... g or kg #
Verification scale interval	*e* = .../..... g or kg #
Maximum subtractive tare	*T* = - ……. g or kg#
Serial number of the instrument	……..

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

NOTE: Where instruments are in a modular form and where exchanging instrument components can affect the metrological characteristics (such as with the pattern basework, due to the fitted A/D module) then an identification mark is required on such component(s) which is repeated with the descriptive marking of the instrument for linking purposes.

Instruments are marked 'NOT FOR TRADING DIRECT WITH THE PUBLIC' (or similar wording).

1.6 Verification Provision

Provision is made for the application of a verification mark.

1.7 Sealing Provision

A calibration switch is located on the underside of the basework with the A/D board mounted within the basework. Provision is made for the calibration adjustments to be sealed by placing a folded metal cover over the switch and fixing it with two sealing screws. A wire threaded through the sealing screw heads and lead seal may be used for sealing. Alternatively a destructible label may be placed on the underside of the basework over the calibration switch (Figure 2).

The calibration protection can be verified by pressing the 'Operation Mode' button in the 'Main Menu'. If the 'Scale Confirmation – Turn off span switch' message screen pops up, then the instrument is in calibration mode. Otherwise the instrument's calibration switch is off and the instrument calibration is protected (Figure 3).

2. Description of Variant 1 approved on 21/10/14

The pattern now using an alternative Teraoka S-SKS series basework fitted with a Teraoka M type load cell with a nominal platform size of 420 mm × 318 mm. This basework is sealed as shown in Figure 4.

3. Description of Variant 2 approved on 21/10/14

The pattern or variants 1 to 4 as multi-interval instruments fitted with an S-YC basework (fitted with a K type load cell) or an S-SKS basework (fitted with an M type load cell) of certain other capacities listed in Table 1 below (the pattern is shown in **bold**).

TABLE 1 – Multi-Interval Instrument Capacities

Maximum Capacity (*Max*$_1$/*Max*$_2$)	Verification Scale Interval (*e*$_1$/*e*$_2$)	Basework	Resolution	Maximum Tare Capacity (T = - …)
3/6kg	1/2 g	S-YC	3000/3000	2.999 kg
6/15 kg	**2/5 g**	**S-YC**	**3000/3000**	**5.998 kg**
15/30 kg	5/10 g	S-YC or S-SKS	3000/3000	14.995 kg
30/60 kg	10/20 g	S-SKS	3000/3000	29.99 kg
60/150 kg	20/50 g	S-SKS	3000/3000	59.98 kg

4. Description of Variant 3 approved on 21/10/14

The pattern or variants 1 to 4 as single interval instruments fitted with an S-YC base (fitted with a K type load cell) or a S-SKS base (fitted with a M type load cell) of certain capacities as listed in Table 2 below.

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

TABLE 2 – Single Interval Instrument Capacities

Maximum Capacity (*Max*)	Verification Scale Interval *(e)*	Load cell type	Resolution	Maximum Tare Capacity (T = - …)
3 kg	1 g	S-YC	3000	Max
6 kg	2 g	S-YC	3000	Max
15 kg	5 g	S-YC	3000	Max
30 kg	10 g	S-YC or S-SKS	3000	Max
60 kg	20 g	S-SKS	3000	Max
150 kg	50 g	S-SKS	3000	Max

5. Description of Variant 4 approved on 21/10/14

The pattern or variants 1 to 4 without the A/D boards fitted to the basework but instead fitted inside the console unit housing. In this configuration the console unit must be sealed instead of the basework (Figure 5).

6. Description of Variant 5 approved on 21/10/14

Two versions of the model DPS 5600 which are similar to the pattern, except that the display is mounted on a unit containing the instrument electronics and either 1 or 2 integral printers (Figure 6). The basework is located in front of this unit.

This instrument is sealed as shown in Figure 7.

7. Description of Variant 6 approved on 21/10/14

A model AW-5600 series automated weigh/wrap/labelling instruments, using the same 5600 electronics and the same 5600 software as the pattern, and which may include single or multiple printers. This variant has a maximum capacity of not less than 6 kg and not greater than 15 kg in multi-interval or single interval weighing.

Instruments are known as the AW-5600 series but sub models have alternative shapes, indicator mountings, number of printers and arrangements, wrapping technique, and discharge ability. Examples of such configurations are listed below. The alpha suffix after the model number indicates the sub model configuration. These instruments all use an N type load cell.

AW-5600 series instruments are approved for static weighing only, with various maximum wrapping rates.

(i) Model AW-5600 Type AT [Auto Type].

With the indicator centrally mounted in a configuration as shown in Figures 8 & 9.

A calibration switch is located on the A/D board which is located inside the housing within the instrument (beneath a cover at the front of the instrument as shown in Figure 7). Sealing is achieved by use of means such as destructible adhesive labels (or lead and wire type seals) to seal access beneath this cover. May also be known as the AW-5600AT.

(ii) Model AW-5600 Type CP.

With the indicator off-centre mounted and printers mounted centrally in a configuration as shown in Figure 10.

A calibration switch is located on the A/D board which is located inside a housing within the instrument (beneath a cover at the front of the instrument - there may also be a cover which provides access from below (Figure 11). Sealing is achieved by use of means such as destructible adhesive labels (or lead and wire type seals) to seal access to the calibration switch, e.g. by sealing the covers mentioned above. May also be known as the AW-5600CP.

(iii) Model AW-5600 Type CPR.

With the same features and capabilities as the model AW-5600 Type CP except that packages are discharged through the rear of the instrument instead of the front. May also be known as the AW-5600CPR. Sealing is the same as for the model AW-5600 Type CP (Figure 11).

(iv) Model AW-5600 Type FX.

With the indicator centrally mounted in a configuration as shown in Figure 12.

A calibration switch is located on the A/D board which is located inside a housing within the instrument (beneath a cover at left of the instrument (Figure 13). Sealing is achieved by use of means such as destructible adhesive labels (or lead and wire type seals) to seal access beneath this cover. Also known as the AW-5600FX.

(v) Other such sub models of the AW-5600 weigh/wrap/labelling series that use the same electronics, software and load cell as the AW-5600 series models but in arrangements that allow other alternate configurations, such as AW-5600 type SWS (Figures 14 & 15) which is smaller in physical size and weight than the above sub model frameworks allowing for elevated mounting.

8. Description of Variant 7 approved on 22/05/19

The model DPS-5600 M II instruments which are similar to the pattern or variants 1 to 5 but fitted with a new mainboard and larger colour touch screen display (Figure 16).

8.1 Software

The measurement software is designated 04.xx and the A/D board software version is designated 03.xx, where 'xx' refers to the identification of non-legally relevant software.

The A/D board software version and number can be seen in the switch-on display sequence (when the power is first applied to the instrument).

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

- Press the  button on the screen and the MAIN MENU screen is displayed.
- Press the  button and then the 'SETUP' button.
- Press the 'SOFTWARE VERSION' button. The software version numbers are displayed.

9. Description of Variant 8 approved on 22/05/19

The model AW-5600 II series automated weigh/wrap/labelling instruments which are similar to variant 6 but fitted with a new main board and larger colour touch screen display.

10. Description of Variant 9 approved on 07/09/22

The model RGW-560II Strap Banding weighing instrument (Figure 17) has the same display and software of variant 7. The metrological relevant software versions shown in Figure 18. The instrument has a Teraoka S-YC base work with K type load cell and has A/D module fitted in the basework (Figure 19), same as the pattern.

The model RGW-560II strap banding weighing instrument is a multi-interval instrument of certain capacities as listed in Table 3.

Table 3 - Multi-interval Instruments

Maximum Capacity *(Max_1/ Max_2)*	Minimum Capacity *(Min)*	Verification Scale Interval *(e_1/e_2)*	Maximum Load Cell Capacity *(E_{max})*	Maximum Tare Capacity (T = - …)
3/6 kg	0.02 kg	1/2 g	9 kg	2.999 kg
6/15 kg	0.04 kg	2/5 g	23 kg	5.998 kg

TEST PROCEDURE No 6/4D/377

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

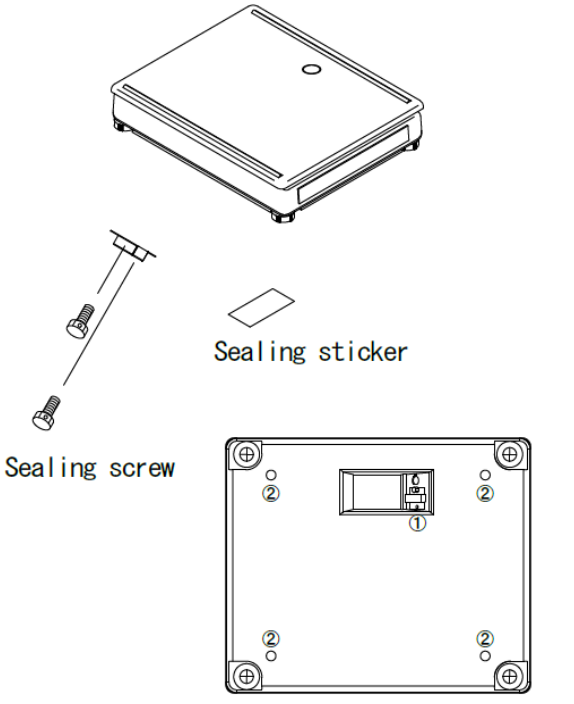
The maximum permissible errors are specified in Schedule 1 of the *National Trade Measurement Regulations 2009*.

For multi-interval 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/377 – 1

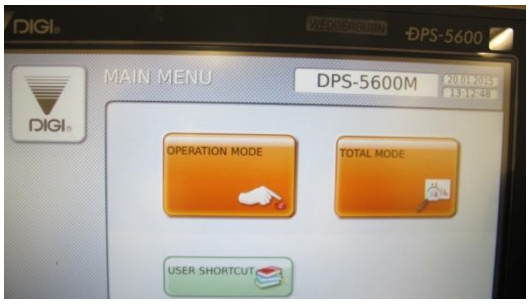
Teraoka Model DPS-5600 M Weighing Instrument (Pattern)

FIGURE 6/4D/377 – 2

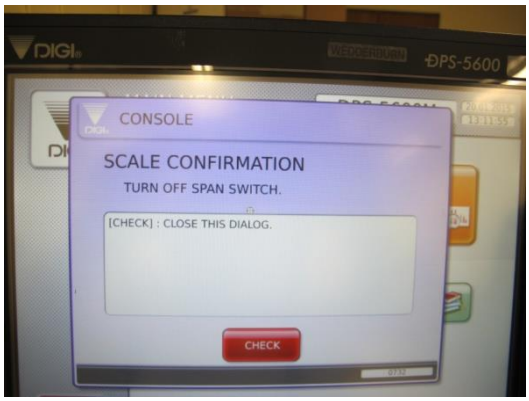


Typical Mechanical Sealing (Pattern)

FIGURE 6/4D/377 – 3



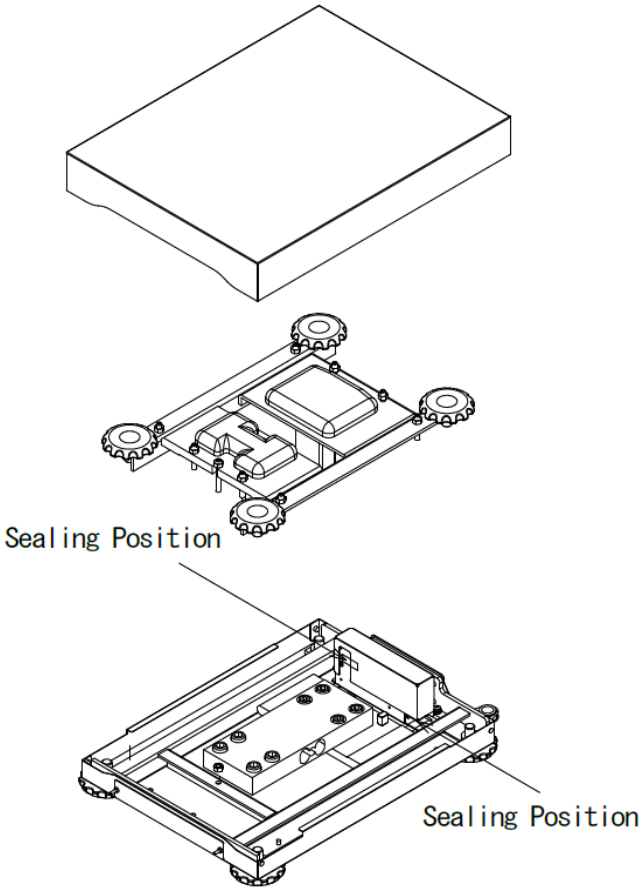
In the Main Menu, press "Operation Mode"



If the TURN OFF SPAN SWITCH message is displayed, then the instrument calibration is not protected.

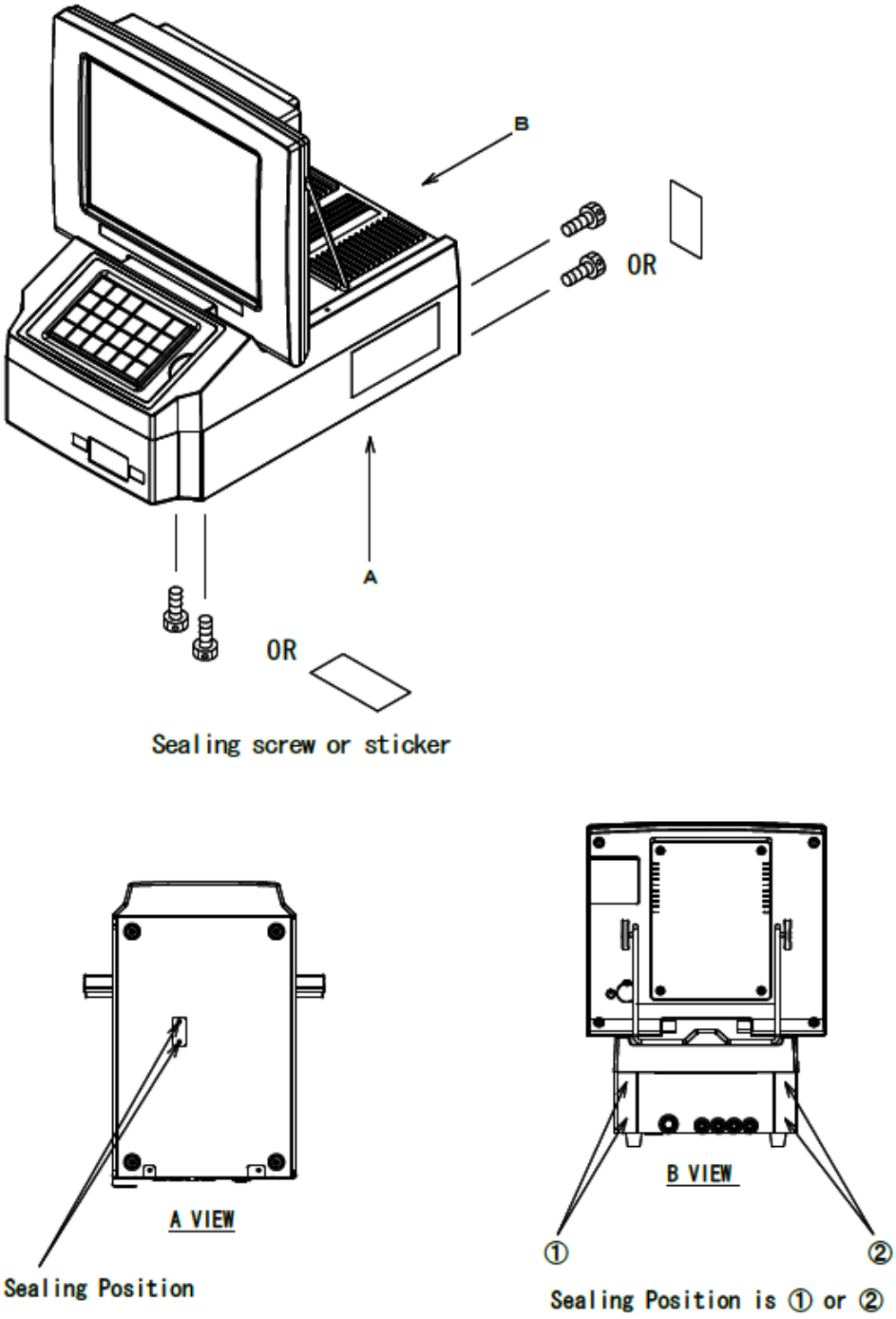
Display Indication For SPAN Switch Setting (Pattern)

FIGURE 6/4D/377 – 4



Typical Mechanical Sealing (Variant 1)

FIGURE 6/4D/377 – 5



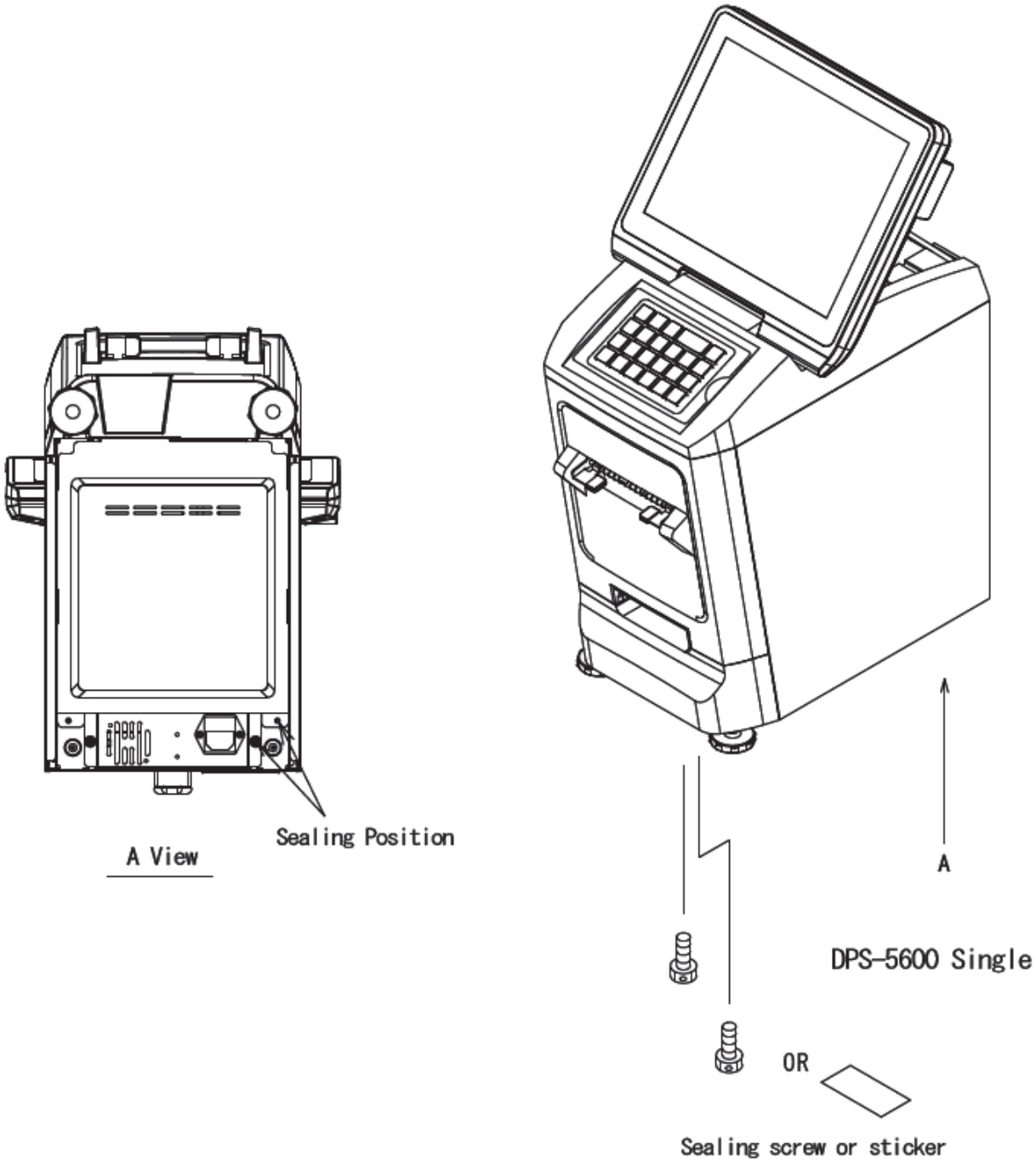
Typical Mechanical Sealing (Variant 4)

FIGURE 6/4D/377 – 6

Teraoka Model DPS-5600 – Single Printer (Variant 5)

Teraoka Model DPS-5600 – Twin Printers (Variant 5)

FIGURE 6/4D/377 – 7

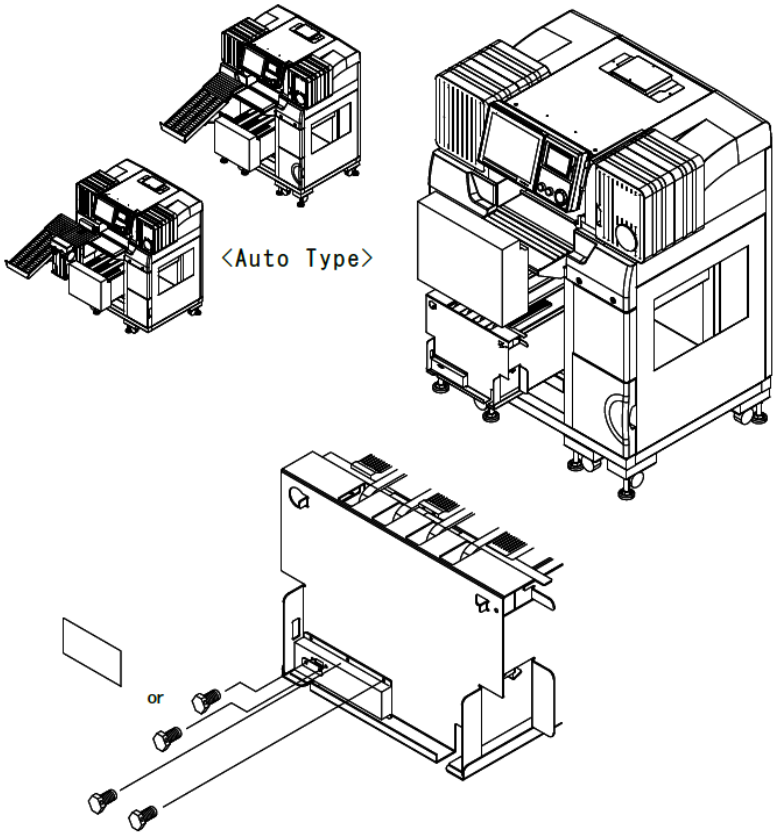


Typical Mechanical Sealing Model DPS-5600 (Variant 5)

FIGURE 6/4D/377 – 8

Teraoka Model AW-5600 AT (Variant 6)

FIGURE 6/4D/377 – 9

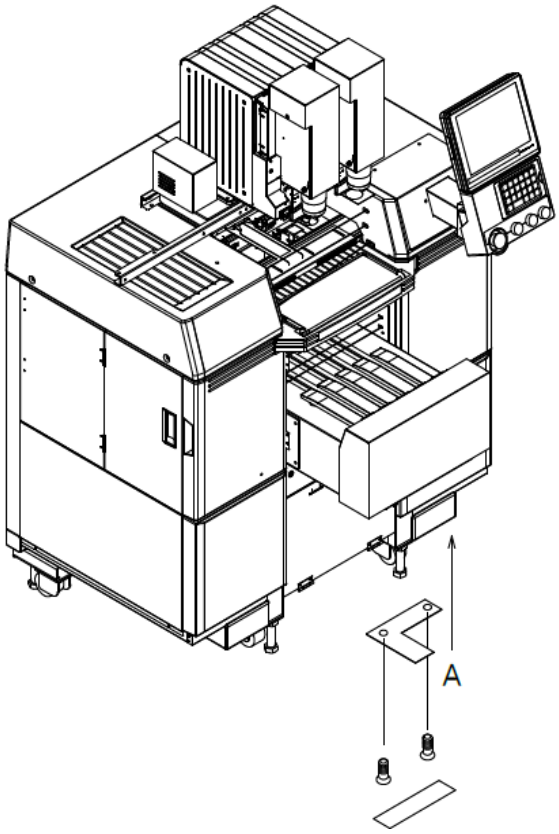


Typical Mechanical Sealing Model AW-5600 AT (Variant 6)

FIGURE 6/4D/377 – 10

Teraoka Model AW-5600 CP (Variant 6)

FIGURE 6/4D/377 – 11

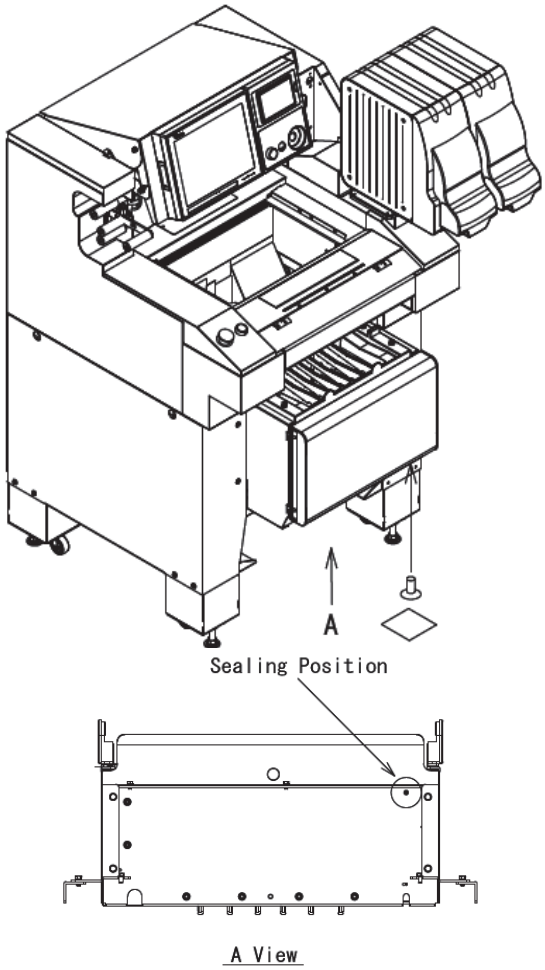


Typical Mechanical Sealing Model AW-5600 CP & CPR (Variant 6)

FIGURE 6/4D/377 – 12

Teraoka Model AW-5600 FX (Variant 6)

FIGURE 6/4D/377 – 13

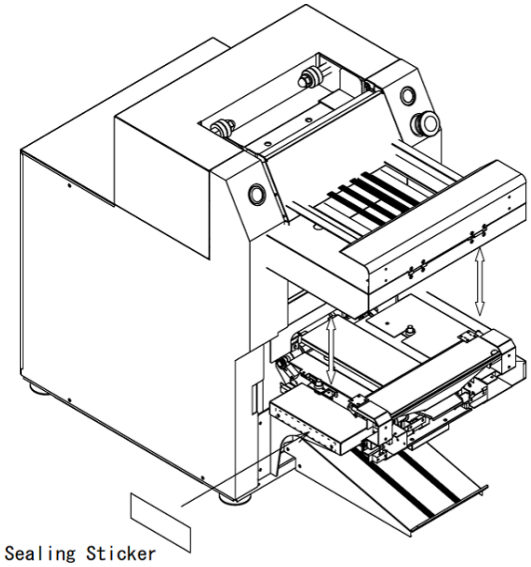


Typical Mechanical Sealing Model AW-5600 FX (Variant 6)

FIGURE 6/4D/377 – 14

Teraoka Model AW-5600 SWS (Variant 6)

FIGURE 6/4D/377 – 15



Typical Mechanical Sealing Model AW-5600 SWS (Variant 6)

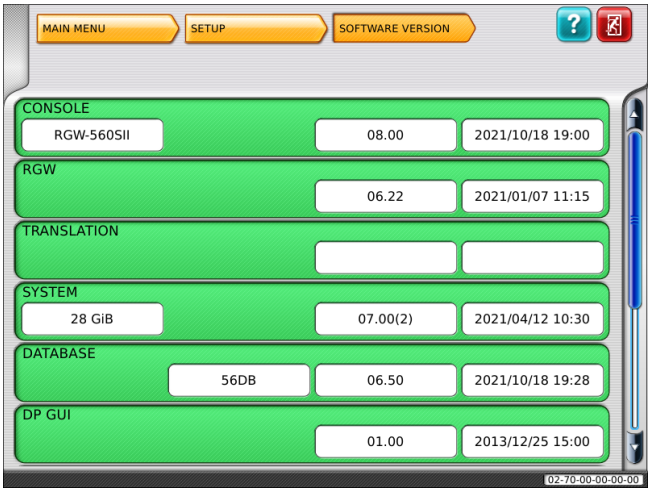
FIGURE 6/4D/377 – 16

Teraoka Model DPS-5600 M II Weighing Instrument (Variant 7)

FIGURE 6/4D/377 – 17

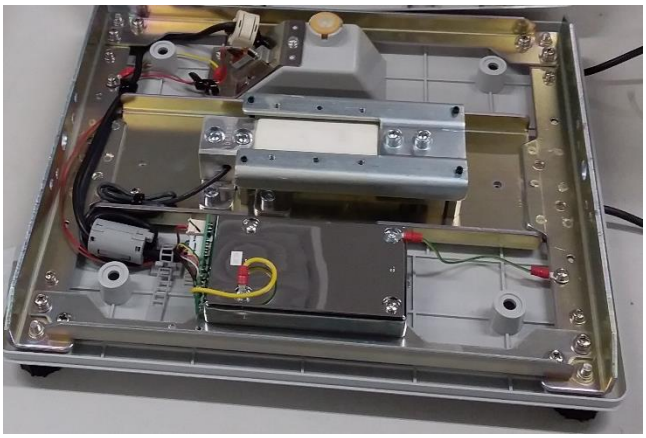
Teraoka Model RGW-560II Strap Banding Weighing Instrument (Variant 9)

FIGURE 6/4D/377 – 18



Software Version (Variant 9)

FIGURE 6/4D/377 – 19



Teraoka S-YC Basework With K Type Load Cell and A/D Module

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