



Australian Government
Department of Industry,
Science and Resources

**National
Measurement
Institute**

36 Bradfield Road, West Lindfield NSW 2070

Certificate of Approval

NMI 6/4C/326

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.

Ohaus Model Defender i-D61PW30K1R6 Weighing Instrument

submitted by Ohaus Australia Pty Ltd
Unit 3, 220 Turner Street
Port Melbourne VIC 3207

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 5 approved – certificate issued	15/11/22

CONDITIONS OF APPROVAL

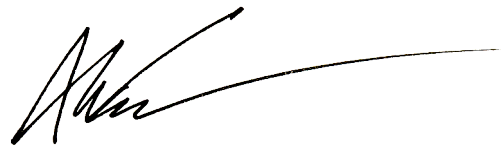
General

Instruments purporting to comply with this approval shall be marked with pattern approval number 'NMI 6/4C/326' 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 Certificate of Approval No S1/0B.

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



Alex Winchester

A/g Manager
Policy and Regulatory Services

TECHNICAL SCHEDULE No 6/4C/326

1. Description of Pattern **approved on 15/11/22**

An Ohaus model Defender i-D61PW30K1R6 class III single interval self-indicating non-automatic weighing instrument (Figure 1) of 30 kg maximum capacity with a verification scale interval of 0.01 kg, and with a minimum capacity of 0.2 kg.

Instruments are marked 'NOT FOR TRADING DIRECT WITH THE PUBLIC' (or similar wording) unless the maximum capacity of the instrument is greater than 100 kg (i.e. as may be the case for variant 3).

1.1 Basework

The Ohaus model i-D30K1R basework (Figure 5a) has the load receptor directly supported by a single load cell. The load receptor has a nominal dimension of 305 mm × 305 mm, and typically uses a stainless steel type construction.

1.2 Load cell

An HBM model PW15AHC3 50kg load cell of 50 kg maximum capacity is used.

1.3 Indicator

An Ohaus model Defender i-DT61PW digital indicator (Figure 3a) is used.

The indicator has an ABS enclosure with an LCD display for display of the weight value.

The indicator may be mounted on a column attached to the base (Figures 1a).

1.4 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.

1.5 Tare

An automatic subtractive tare device and/or semi-automatic subtractive tare device and/or pre-set tare device, each of up to maximum capacity of the instrument, may be fitted.

1.6 Display Check

A display check is initiated whenever power is applied.

1.7 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.

1.8 Power Supply

The instrument operates from 6 x D size 1.5 V dry batteries.

1.9 Additional Features

Instruments may be fitted with certain additional functions including counting, percent weighing, target/check weighing, 'Lo/OK/Hi' display, dynamic weighing, accumulation with statistical information. The additional functions (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 approved for trade use.

Instruments may also be fitted with an 'animal weighing' or 'dynamic weighing' function. This function shall not be used for trade use.

1.10 Verification Provision

Provision is made for the application of a verification mark.

1.11 Descriptive Markings and Notices

Instruments carry the following markings:

Manufacturer's mark, or name written in full	Ohaus Corporation
Indication of accuracy class	Ⓜ
Pattern approval number for the instrument	NMI 6/4C/326
Maximum capacity	Max/..... g or kg #1
Minimum capacity	Min g or kg #1
Verification scale interval	e =/..... g or kg #1
Serial number of the instrument

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

In addition, instruments shall carry a notice stating NOT TO BE USED FOR TRADING DIRECT WITH THE PUBLIC, or similar wording (see 1. *Description of Pattern* above).

1.12 Sealing Provision

Provision is made for the calibration to be sealed by setting a switch on the main board within the instrument to 'ON' position, and then preventing access within the protective cover (Figure 6).

The switch status (Figure 8a) can be seen in the switch-on display sequence when the power is first applied to the instrument.

- If the switch is in the 'ON' position, the instrument will display 'LFt ON'. In this case the instrument may be verified.
- Otherwise the instrument will not display 'LFt ON' in the switch-on display sequence in which case the instrument should not be verified until the switch has been correctly set to the 'ON' position.

Sealing to prevent access within the protective cover may be achieved by the application of lead and wire type seals or similar with drilled screws or using a destructive label placed over the securing screw in the protective cover as shown in Figure 6.

1.13 Software

The legally relevant software is designated Sr 1.xx, where 'xx' refers to the identification of non-legally relevant software.

The software version and number 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 15/11/22

The Ohaus model Defender i-D61PW series single interval instruments in certain other capacities as listed in Table 1 and as shown in Figures 1, 5a and 5b (the pattern is shown in **bold**).

TABLE 1

Model	Maximum Capacity (<i>Max</i>) (kg)	Minimum Capacity (<i>Min</i>) (kg)	Verification Scale Interval (<i>e</i>) (kg)	Platform Size (mm x mm)	HBM PW15AHC3 Load Cell
i-D61PW3K1S6AU	3	0.02	0.001	254 x 254	PW15AHC3 10kg
i-D61PW6K1S6AU	6	0.04	0.002	254 x 254	PW15AHC3 10kg
i-D61PW15K1R6AU	15	0.1	0.005	305 x 305	PW15AHC3 20kg
i-D61PW30K1R6AU	30	0.2	0.01	305 x 305	PW15AHC3 50kg
i-D61PW60K1L7AU	60	0.4	0.02	400 x 500	PW15AHC3 100kg

3. Description of Variant 2

approved on 15/11/22

The Ohaus model Defender i-D61PW series instruments which are similar to the pattern but with an i-DT61PW digital indicator attached to the basework in certain single interval capacity as listed in Table 2 and as shown in Figures 2, 5a and 5b.

TABLE 2

Model	Maximum Capacity (<i>Max</i>) (kg)	Minimum Capacity (<i>Min</i>) (kg)	Verification Scale Interval (<i>e</i>) (kg)	Platform Size (mm x mm)	HBM PW15AHC3 Load Cell
i-D61PW3K1S5AU	3	0.02	0.001	254 x 254	PW15AHC3 10kg
i-D61PW6K1S5AU	6	0.04	0.002	254 x 254	PW15AHC3 10kg
i-D61PW15K1R5AU	15	0.1	0.005	305 x 305	PW15AHC3 20kg
i-D61PW30K1R5AU	30	0.2	0.01	305 x 305	PW15AHC3 50kg
i-D61PW60K1L5AU	60	0.4	0.02	400 x 500	PW15AHC3 100kg

4. Description of Variant 3

approved on 15/11/22

The Ohaus model Defender i-D61PW series instruments which are similar to the pattern but using a Mettler Toledo model SSH C3 load cell in certain single interval capacity as listed in Table 3 and as shown in Figures 1 and 5c.

TABLE 3

Model	Maximum Capacity (<i>Max</i>) (kg)	Minimum Capacity (<i>Min</i>) (kg)	Verification Scale Interval (<i>e</i>) (kg)	Platform Size (mm x mm)	Mettler Toledo SSH C3 Load Cell
i-D61PW150K1L7AU	150	1	0.05	400 x 500	SSH 300kg

5. Description of Variant 4 **approved on 15/11/22**

The Ohaus model Defender i-D61PW series instruments which are similar to the pattern but using a Mettler Toledo model SSH C3 load cell and with an i-DT61PW digital indicator attached to the basework in certain single interval capacity as listed in Table 4 and as shown in Figures 2 and 5c.

TABLE 4

Model	Maximum Capacity (<i>Max</i>) (kg)	Minimum Capacity (<i>Min</i>) (kg)	Verification Scale Interval (<i>e</i>) (kg)	Platform Size (mm x mm)	Mettler Toledo SSH C3 Load Cell
i-D61PW150K1L5AU	150	1	0.05	400 x 500	SSH 300kg

6. Description of Variant 5 **approved on 15/11/22**

The Ohaus model Defender i-D61XWE series instruments which are similar to the pattern and variants 1 and 3 but using an Ohaus model Defender i-DT61XWE digital indicator (Figure 3b) and typically having a stainless steel platform in certain single interval capacities as listed in Tables 5 to 6 and as shown in Figures 4, 5a, 5b and 5c.

The indicator has a stainless steel enclosure with an LED display for display of the weight value.

6.1 Tare

An automatic subtractive tare device and/or semi-automatic subtractive tare device and/or pre-set tare device, each of up to maximum capacity of the instrument, may be fitted.

6.2 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 of Approval 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 RS232, RS485, USB, Ethernet and digital inputs/outputs.

6.3 Power Supply

The instrument operates from mains AC power (100–240 V AC, 50/60 Hz).

6.4 Additional Features

Instruments may be fitted with certain additional functions including counting, percent weighing, target/check weighing, dot matrix colour LED display, dynamic weighing, accumulation with statistical information, filling/setpoints and a 'library' function to allow storing/recall of 'under/accept/over' values, average piece weight for counting, reference weight for percentage weighing, setpoint values for filling, tare values and material name against part numbers. The additional functions (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 approved for trade use.

Instruments may also be fitted with an 'animal weighing' or 'dynamic' function. This function shall not be used for trade use.

6.5 Sealing Provision

Provision is made for the calibration to be sealed by setting a switch on the main board within the instrument to 'ON' position, and then preventing access within the protective cover (Figures 7).

The switch status (Figure 8b) can be seen in the switch-on display sequence when the power is first applied to the instrument.

- If the switch is in the 'ON' position, the instrument will display 'LFt ON'. In this case the instrument may be verified.
- Otherwise the instrument will not display 'LFt ON' in the switch-on display sequence in which case the instrument should not be verified until the switch has been correctly set to the 'ON' position.

Sealing to prevent access within the protective cover may be achieved by the application of lead and wire type seals or similar with wire holes or using a destructive label placed over the securing screw in the protective cover as shown in Figure 7.

TABLE 5

Model	Maximum Capacity (<i>Max</i>) (kg)	Minimum Capacity (<i>Min</i>) (kg)	Verification Scale Interval (<i>e</i>) (kg)	Platform Size (mm x mm)	HBM PW15AHC3 Load Cell
i-D61XWE3K1S6AU	3	0.02	0.001	254 x 254	PW15AHC3 10kg
i-D61XWE6K1S6AU	6	0.04	0.002	254 x 254	PW15AHC3 10kg
i-D61XWE15K1R6AU	15	0.1	0.005	305 x 305	PW15AHC3 20kg
i-D61XWE30K1R6AU	30	0.2	0.01	305 x 305	PW15AHC3 50kg
i-D61XWE60K1L7AU	60	0.4	0.02	400 x 500	PW15AHC3 100kg

TABLE 6

Model	Maximum Capacity (Max) (kg)	Minimum Capacity (Min) (kg)	Verification Scale Interval (e) (kg)	Platform Size (mm x mm)	Mettler Toledo SSH C3 Load Cell
i-D61XWE150K1L7AU	150	1	0.05	400 x 500	SSH 300kg

TEST PROCEDURE No 6/4C/326

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 6/4C/326 – 1



Ohaus Model Defender i-DT61PW Series Weighing Instrument

FIGURE 6/4C/326 – 2



Ohaus Model Defender i-DT61PW Series Weighing Instrument (Bench Style)

FIGURE 6/4C/326 – 3



(a) Ohaus Model Defender i-DT61PW Digital Indicator



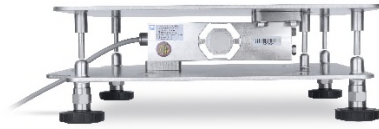
(b) Ohaus Model Defender i-DT61XWE Digital Indicator

FIGURE 6/4C/326 – 4



Ohaus Model Defender i-DT61XWE Series Weighing Instrument

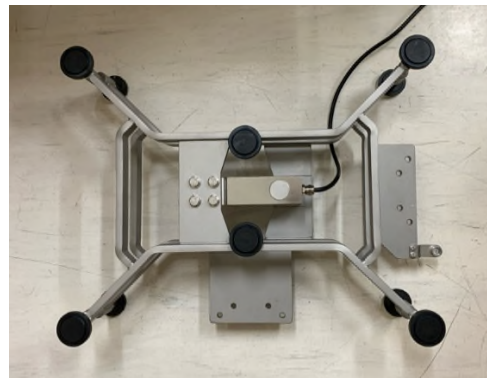
FIGURE 6/4C/326 – 5



(a) Ohaus Model Defender i-D61PW / i-D61XWE Series Basework Fitted with an HBM PW15AH Load Cell



(b) Ohaus Model Defender i-D61PW / i-D61XWE Series Basework Fitted with an HBM PW15AH Load Cell



(c) Ohaus Model Defender i-D61PW / i-D61XWE Series Basework Fitted with a Mettler Toledo SSH Load Cell

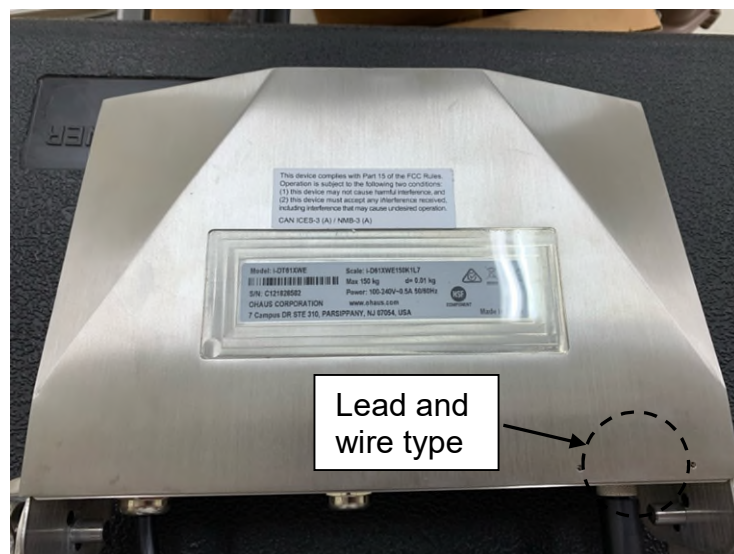
FIGURE 6/4C/326 – 6



Sealing of i-DT61PW Digital Indicator

Typical Sealing Methods

FIGURE 6/4C/326 – 7



Sealing of i-DT61XWE Digital Indicator

Typical Sealing Methods

FIGURE 6/4C/326 – 8



(a) Model i-DT61PW Digital Indicator Calibration Switch Status



(b) Model i-DT61XWE Digital Indicator Calibration Switch Status

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