6/4C/225
10 December 2010

Australian Government

National Measurement Institute

Bradfield Road, West Lindfield NSW 2070

Cancellation

Certificate of Approval No 6/4C/225

Issued by the Chief Metrologist under Regulation 60
of the
National Measurement Regulations 1999

This is to certify that the approval for use for trade granted in respect of the

Ohaus Model CD-11 Weighing Instrument

submitted by Ohaus Corporation
19A Chapin Road
Pine Brook NJ 07058
USA

has been cancelled in respect of new instruments as from 1 February 2011.

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

6/4C/225
19 November 2004

Australian Government

National Measurement Institute

12 Lyonpark Road, North Ryde NSW 2113

Certificate of Approval

No 6/4C/225

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

Ohaus Model CD-11 Weighing Instrument

submitted by Ohaus Corporation
19A Chapin Road
Pine Brook NJ 07058
USA.

NOTE: This Certificate relates to the suit ability of the p attern 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.

CONDITIONS OF APPROVAL

This approval becomes subject to review on 1 March 2009, and then every 5 years thereafter.

Instruments purporting to comply with this approval shall be marked with approval number 'NSC 6/4C/225' and only by persons authorised by the submittor.

..../2

It is the submittor 's responsibility to ensure that all instrument s 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 MeasurementAct and may result in cancellation or withdrawal of the approval, in accordance with document NMI P 106.

The National Measurement Institute reserves the right to examine any instrument or component of an instrument purporting to comply with this approval.

Auxiliary devices used with this instrument shall comply with the requirement s of General Supplementary Certificate No S1/0/A.

The values of the performance criteria (maximum number of scale intervals etc.) applicable to the instrument shall be within the limit s specified herein and in any approval documentation for the components where they are approved sep arately.

This approval shall NOT be used in conjunction with General Certificate No 6B/0.

DESCRIPTIVE ADVICE

Pattern: approved 20 February 2004

- An Ohaus model CD-1 1 single-interval self-indicating weighing instrument of 15 kg maximum capacity. May also be known as the Champ-II series.

Variants: approved 20 February 2004

1. Certain other CD-11 series instruments as listed in Tables 1 & 2.
2. Certain CW-11 series instruments as listed in Tables 3 & 4. May also be known as the Champ CQW series.
3. Certain baseworks of this approval used with a comp atible approved indicator.

Technical Schedule No 6/4C/225 describes the p attern and variants 1 to 3.

Variants: approved 18 November 2004

4. Any approved CH series basework used with a model CW -11 indicator.
5. Any approved CQ series basework used with a model CD-1 1 indicator.
6. Any approved CQ series basework having a stainless steel frame.

Technical Schedule No 6/4C/225 Variation No 1 describes the pattern and variants 4 to 6.

FILING ADVICE

Certificate of Approval No 6/4C/225 dated 23 July 2004 is superseded by this Certificate, and may be destroyed. The documentation for this approval now comprises:

Certificate of Approval No 6/4C/225 dated 19 November 2004
Technical Schedule No 6/4C/225 dated 23 July 2004 (incl. Tables 1 to 4, and Test Procedure)
Technical Schedule No 6/4C/225 Variation No 1 dated 19 November 2004
Figures 1 to 5 dated 23 July 2004

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

6/4C/225
23 July 2004

TECHNICAL SCHEDULE No 6/4C/225

Pattern: Ohaus Model CD-11 Weighing Instrument

Submittor: Ohaus Corporation
19A Chapin Road
Pine Brook NJ 07058 USA

1. Description of Pattern

An Ohaus model CD-11 single-interval self-indicating weighing instrument (Table 1 and Figure 1) with a maximum capacity of 15 kg and a verification scale interval of 0.005 kg. These instruments are also known as the Champ-II series.

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

1.1 Basework

The Ohaus model CH15R basework has the load receptor directly supported by a single load cell. The load receptor has maximum nominal dimensions of 305 x 355 mm.

1.2 Load Cell

A Mettler Toledo model MT1241-30 load cell of 30 kg maximum capacity is used.

1.3 Indicator

An Ohaus model CD-11 digital indicator is used (Figure 2). The indicator may be attached directly to the base or mounted on a column; it may also be located remotely

The model CD-11 is also described in the documentation of approval NSC S431.

The indicator also has an additional 'counting' function which can be assigned to a function key of the indicator. The additional function (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) is not approved for trade use.

Power supply may be either:

- 9 V DC supplied by an AC/DC mains adaptor or other DC power source; or
- batteries.

Note: The AC/DC mains adaptor supplied was an Ohaus model S090050D31 power supply (output 9 V DC, 500 mA) – the submittor should be consulted regarding the acceptability of alternative power supply units or other power source.

1.3.1 Zero

Zero is automatically corrected to within ±0.25e whenever the instrument comes to rest within 0.5e of zero.

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The instrument has a semi-automatic zero-setting device (to set the instrument to within ±0.25e of zero) with a nominal range of not more than 4% of the maximum capacity of the instrument.

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

1.3.2 Tare

A semi-automatic subtractive t aring device of up to the maximum cap acity of the instrument may be fitted. When the taring device is in use, the gross value and tare value may be displayed temporarily by the use of the G/N/T button.

1.3.3 Display Check

A display check is initiated whenever power is applied.

1.4 Levelling

The instrument is provided with adjustable feet and adjacent to the level indicator is a notice advising that the instrument must be level when in use.

1.5 Sealing Provision

Provision is made for the calibration adjustment s in the Ohaus model CD-1 1 digital indicator to be sealed by removal of a 'CAL jumper' within the instrument and then sealing to prevent access within the instrument (Figure 3).

To check whether the 'CAL jumper' has been removed:

- with the instrument switched on and in weighing mode, press and hold the G/N/T button for approximately 4 seconds - MENU will appear.
- release the G/N/T button. If 'set up' apears then the 'CAL jumper' has been removed; if 'Cal' appears then the 'CAL jumper' has NOT been removed.
- Removing power from the indicator is a simple means of exiting from menus at this stage.

Once it has been ensured that the 'CAL jumper' has been removed, the instrument may be sealed by means of a screw and lead & wire seal or a destructible label preventing access to the sealing screw (Figure 3), or by means of destructible labels over the join in the indicator casing, at each side of the indicator .

1.6 Verification/Certification Provision

Provision is made for a verification/certification mark to be applied.

1.7 Markings

Instruments carry the following markings:

Manufacturer's mark, or name written in full	Ohaus Corporation
Name or mark of manufacturer's agent	.....
Indication of accuracy class	(III)
Pattern approval mark for the instrument	NSC 6/4C/225
Maximum capacity	*Max* ..... kg *
Minimum capacity	*Min* ..... kg *
Verification scale interval	*e* = ... kg *
Serial number of the instrument	.....

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

In addition, instruments not greater than 100 kg capacity shall carry a notice stating NOT TO BE USED FOR TRADING DIRECT WITH THE PUBLIC, or similar wording.

2. Description of Variants

2.1 Variant 1

Certain Ohaus CD-11 series instruments of specifications as listed in Tables 1 & 2.

2.2 Variant 2

Certain Ohaus CW-11 series instruments which are similar to the pattern and variant 1, but which use the model CW-11 indicator (Figure 4). These instruments are also known as the Champ CQW series.

The model CW-11 indicator is similar to the model CD-11 but in a stainless steel housing and is also described in the documentation of approval NSC S431.

Specifications of these instruments are as listed in Tables 3 & 4.

Sealing Provision

Use the procedure described for the pattern to ensure that the 'CAL jumper' has been removed; the instrument may then be sealed by means of destructible labels as follows:

(a) by placing a label over the joins in the housing on each side of the instrument for instruments operated by mains power supply; or

(b) by placing a label over at least one of the screws which hold the battery holder within the instrument housing (Figure 5). Alternatively, a screw and lead & wire seal may be used.

2.3 Variant 3

Certain baseworks of this approval used with a compatible approved (by Supplementary Certificate) indicator provided the conditions set out below are met. In this case instruments may be known according to the basework model number (model CH15R, etc.).

In addition to the markings specified in clause **1.7 Markings**, instruments are marked with the approval number for the indicator used, together in the same location.

The approved baseworks and their limiting characteristics are given in Tables 1 & 2.

The conditions to be met are:

- The excitation voltage used is within the range approved for the baseworks.
- The maximum load applied to the basework (live load plus any dead load) does not exceed the load cell maximum capacity.
- The verification scale interval is not less than the minimum value specified.
- The number of verification scale intervals is less than or equal to the n_{max} value specified.
- The signal voltage per verification scale interval is not less than the minimum sensitivity value per verification scale interval for the indicator (as specified in the approval documentation for the indicator), i.e.

$$\text{Indicator Sensitivity} \leq 1000 \times Ex \times LC\_Sens \times e / E_{max}$$

where Ex = Excitation from indicator (V)

LC_Sens = Load cell sensitivity (mV/V)

E_{max} = Load cell maximum capacity (kg)

e = verification scale interval of the instrument (kg)

Indicator Sensitivity = Minimum sensitivity value per verification scale interval for the indicator (μV)

TEST PROCEDURE

Instruments should be tested in accordance with any relevant tests specified in the Uniform Test Procedures.

Maximum Permissible Errors at Verification/Certification

The maximum permissible errors for increasing and decreasing loads on initial verification/certification for loads, *m*, expressed in verification scale intervals, *e*, are:

±0.5 *e* for loads $0 \leq m \leq 500$;
±1.0 *e* for loads $500 < m \leq 2\,000$; and
±1.5 *e* for loads $2\,000 < m \leq 10\,000$.

TABLE 1

Instrument/ Indicator Model (#1)	Instrument Model (#2)	Basework Model (#3)	Maximum Capacity	Maximum Platform Size mm x mm	Table 2 Details
CD-11	CH15R11A	CH15R	15 kg	305 x 355	A
CD-11	CH30R11A	CH30R	30 kg	305 x 355	B
CD-11	CH60R11A	CH60R	60 kg	305 x 355	C
CD-11	CH60L11A	CH60L	60 kg	400 x 500	C
CD-11	CH100R11A	CH100R	100 kg	400 x 500	D
CD-11	CH150R11A	CH150R	150 kg	420 x 550	E
CD-11	CH300R11A	CH300R	300 kg	420 x 550	F

(#1) The indicator model number by which the instrument may also be known.

(#2) The instrument model (item) number by which the instrument is typically known when used with the corresponding model indicator.

(#3) Instruments may also be known according to basework model number , typically when used with alternative approved indicators. See variant 3.

TABLE 2

Table 2 details (see Table 1)		A	B	C	D	E	F
Maximum capacity	kg	15	30	60	100	150	300
Typical verification scale interval	kg	0.005	0.01	0.02	0.05	0.05	0.1
Maximum number of verification scale intervals	n_{max}	3000	3000	3000	3000	3000	3000
Load cell model (suffix)							
Mettler Toledo MT1241 series		-30	-50	-100	-150		
Mettler Toledo MT1260 series						-300	-500
Load cell maximum capacity (*Emax*)	kg	30	50	100	150	300	500
Number of load cells		1	1	1	1	1	1
Minimum value of verification scale interval for basework (v_{min} *of load cell*)	kg	0.005	0.0083	0.0167	0.025	0.05	0.083
Load cell sensitivity at *Emax*	mV/V	2	2	2	2	2	2
Input impedance	ohm	410	410	410	410	410	410
Excitation voltage (maximum)	V	20	20	20	20	20	20
Cable length (±0.1m) (#3)	m	2	2	2	2	2	2
Number of leads (plus shield)		4	4	4	4	4	4

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

TABLE 3

Instrument/ Indicator Model (#1)	Instrument Model (#2)	Basework Model (#3)	Maximum Capacity	Maximum Platform Size	Table 2 Details
CW-11	CQ10R11WA	CQ10R	15 kg	300 x 300	G
CW-11	CQ25R11WA	CQ25R	30 kg	300 x 300	H
CW-11	CQ50L11WA	CQ50L	60 kg	450 x 450	I
CW-11	CQ100L11WA	CQ100L	150 kg	450 x 450	J
CW-11	CQ250XL11WA	CQ250XL	250 kg	600 x 600	K

(#1) The indicator model number by which the instrument may also be known.

(#2) The instrument model (item) number by which the instrument is typically known when used with the corresponding model indicator.

(#3) Instruments may also be known according to basework model number, typically when used with alternative approved indicators. See variant 3.

TABLE 4

Table 4 details (see Table 3)		G	H	I	J	K
Maximum capacity	kg	15	30	60	150	250
Typical verification scale interval	kg	0.005	0.01	0.02	0.05	0.05
Maximum number of verification scale intervals	n_{max}	3000	3000	3000	3000	2500
Load cell model (suffix)						
Mettler Toledo SSP1241 series		-30	-50	-100	-200	
Mettler Toledo SSP1260 series						-300
Load cell maximum capacity (*Emax*)	kg	30	50	100	200	300
Number of load cells		1	1	1	1	1
Minimum value of verification scale interval for basework (v_{min} *of load cell*)	kg	0.005	0.0083	0.0167	0.033	0.05
Load cell sensitivity at *Emax*	mV/V	2	2	2	2	2
Input impedance	ohm	387	387	387	387	387
Excitation voltage (maximum)	V	20	20	20	20	20
Cable length (±0.1m) (#3)	m	2	2	2	2	2
Number of leads (plus shield)		4	4	4	4	4

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

6/4C/225
19 November 2004

TECHNICAL SCHEDULE No 6/4C/225

VARIATION No 1

Pattern: Ohaus Model CD-11 Weighing Instrument

Submittor: Ohaus Corporation
19A Chapin Road
Pine Brook NJ 07058 USA

1. Description of Variants

1.1 Variant 4

Any approved model of the CH series baseworks used with a model CW-11 indicator, in which case the **instrument** model number has a W as the second last digit, e.g. the model CH15R1 1A as listed in Table 1 (included in Technical Schedule No 6/4C/225 dated 23 July 2004) becomes model CH15R1 1WA.

1.2 Variant 5

Any approved model of the CQ series baseworks used with a model CD-11 indicator, in which case the **instrument** model number has the second last digit (W) removed, e.g. the model CQ10R1 1WA as listed in Table 3 (included in Technical Schedule No 6/4C/225 dated 23 July 2004) becomes model CQ10R1 1A.

1.3 Variant 6

Any approved model of the CQ series baseworks but having a stainless steel frame (rather than painted steel) in which case the **basework** model number has a W added as the last digit, e.g. the model CQ10R as listed in Table 3 becomes model CQ10RW.

NOTIFICATION OF CHANGE

In Table 3 included in Technical Schedule No 6/4C/225 dated 23 July 2004, the first line in the heading should be amended by changing ‘Table 2’ to read ‘Table 4’.

FIGURE 6/4C/225 – 1

Ohaus Model CD-11 Weighing Instrument

FIGURE 6/4C/225 – 2

Ohaus Model CD-11 Digital Indicator

FIGURE 6/4C/225 – 3

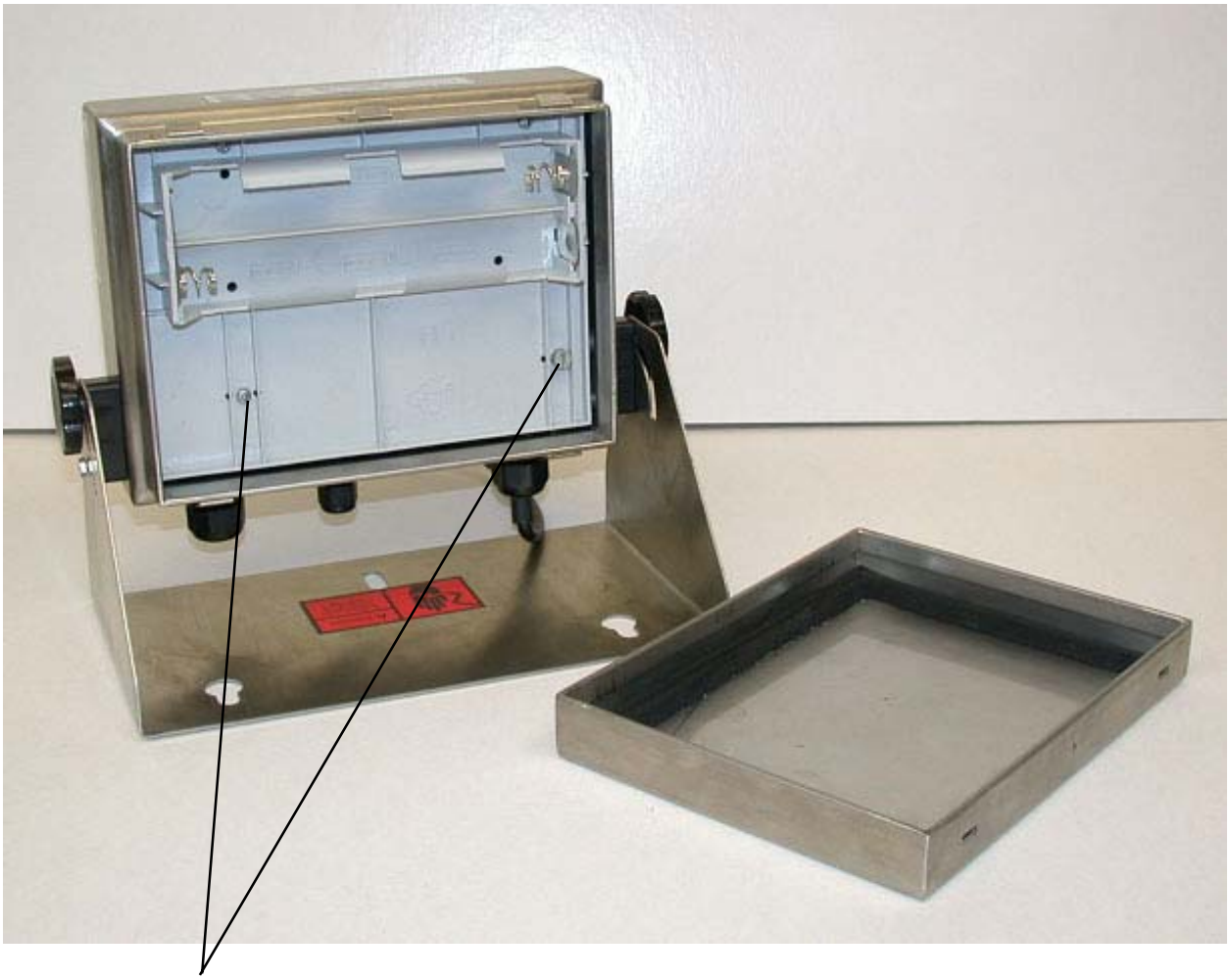
Sealing screw and fixing
for wire and lead seal

Sealing of Model CD-11 Indicator

FIGURE 6/4C/225 – 4

Model CW-11 Indicator

FIGURE 6/4C/225 – 5



At least one sealing
screw to be sealed

Sealing of Model CW-11 Indicator