NATIONAL STANDARDS COMMISSION

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CERTIFICATE OF APPROVAL No 6/4D/41

VARIATION No 1

This is to certify that the following modification of the patterns of the

Berkel Weighing Instrument Models ED 25 and Others

approved in Certificate No 6/4D/41 dated 25 August 1977

submitted by Euroscale Pty Ltd,
19 Evans Street,
Burwood, Victoria, 3125,

has been approved under the Weights and Measures (Patterns of Instruments) Regulations as being suitable for use for trade.

Date of Approval: 7 March 1978

The approved modification, described in Technical Schedule No 6/4D/41 - Variation No 1 and in drawings and specifications lodged with the Commission, provides for a knob-operated taring device.

The approval is subject to review on or after 1 June 1979.

All instruments conforming to this approval shall be marked with the approval number "NSC No 6/4D/41".

Signed

J. Henderson

Acting Executive Officer

5/5/78

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CERTIFICATE OF APPROVAL No 6/4D/41

This Certificate replaces Certificate No 6/4D/41 dated 30 May 1974 and Certificate No 6/4D/41 - Variation Nos 1, 2 and 3 dated 10 June 1974, 13 February 1975 and 11 November 1975 respectively, which are hereby cancelled.

This is to certify that the patterns of the

Berkel Weighing Instrument Models ED 25 and Others

s mitted by Euroscale Pty Ltd,
19 Evans Street,
Burwood, Victoria, 3125,

have been approved under the Weights and Measures (Patterns of Instruments) Regulations as being suitable for use for trade.

Date of Approval: 2 August 1977

The patterns are described in Technical Schedule No 6/4D/41 and in drawings and specifications lodged with the Commission.

The approval is subject to review on or after 1 June 1979.

All instruments conforming to this approval shall be marked with the approval number "NSC No 6/4D/41".

Signed

Executive Officer

25/8/77

NATIONAL STANDARDS COMMISSION

TECHNICAL SCHEDULE No 6/4D/41

Pattern: Berkel Weigning Instrument Models ED 25 and Otners

Submittor: Euroscale Pty Ltd,
19 Evans Street,
Burwood, Victoria, 3125.

Date of Approval: 2 August 1977

Tnis Tecnnical Scnedule replaces* Tecnnical Scnedule No 6/4D/41 dated 11 June 1974 and Tecnnical Scnedule No 6/4D/41 - Variation Nos 1, 2 and 3 dated 29 August 1974, 27 February 1975 and 11 November 1975 respectively.

All instruments conforming to tnis approval snall be marked "NSC No 6/4D/41".

Description:

Tne pattern (see Figures 1 and 2) is a self-indicating price-computing ticket-printing weigning instrument of capacity 2509 g by 1-g or 2508 g by 2-g** graduations witn price computing in 1-c increments to $99,99/kg, and total price to $99,99. Weignt, unit price and total price are digitally indicated by mecnanical indicators on botn tne vendor's and purcnaser's sides. Tne instrument comprises a weigning unit and a weignt-and-price indicating unit connected by a cable and plug.

Tne weigning unit comprises a load receptor supported by a vibrating-string load cell resistant mecnanism in wnicn tne frequency of oscillation is proportional to tne weignt applied.

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* Figures 6/4D/41 - 1 to 7 snould be retained as tney form part of tnis Tecnnical Scnedule.

** Tne 2-g graduation instrument indicates 0, 1, 2, tnen in 2-g increments up to 2508 g.

Zero adjustment is provided by a poise, witnin tne weigning unit, wnicn nas its position adjusted by a screw and ratcnet mecnanism or by a tool and slide mecnanism.

Tne weight-and-price indicating unit converts tne signal from tne load cell to weignt information. Tne unit price is sequentially entered into tne computing console by means of a keyboard and is displayed togetner witn weignt and total price on tne vendor's and purcnaser's sides of tne weignt-and-price indicating unit. A ticket duplicating tne displayed information may be printed by operation of tne pressure plate on tne top of tne computing console; a sample ticket is illustrated in Figure 3.

Below 40 g tne tnird and fourtn zeros on tne weignt indicator are replaced by asterisks and a ticket cannot be printed. Below zero load and above capacity load tne weignt indicator will display dots; in eacn case tne unit-price and total-price indicators will be blank. Any combination of weignt and unit price for wnicn tne total price is more tnan $99,99 will cause tne total-price indicators to snow asterisks.

At equilibrium a circuit witnin tne computer electronically adjusts tne discrimination of tne instrument from less tnan 0,5 g to 3 g. Tnis stabilises tne weignt indication, minimising tne effect of vibration or wind loading, and prevents alternate indications of adjacent values if tne load causes tne instrument to be at a cnangeover point between graduations. A 3-g cnange in tne load, or selection of a different unit price, will override tne discrimination and cause tne instrument to reassess tne condition of equilibrium.

Tne serial number of tne weigning unit and tne weignt-and-price indicating unit are sealed on to tne weigning unit by a stamping plug.

Tne approval includes tne following:

1. Tne weigning unit witn two ungraduated tare bars of capacity up to 1250 g. Tne major tare bar is incremental. Tne minor bar may be incremental or analogue; if it is incremental tne weignt value of eacn increment of tne minor bar is less tnan 0,5 graduation. A "T" adjacent to tne weignt reading face illuminates when any tare greater tnan 0,25 graduation is selected.

   Tne instrument is marked "not to be used in tne presence of tne purcnaser".

2. An ED 25 Mini-Pac prepacking weighing instrument comprising an ED 25 of capacity 2508 g or 2509 g with tare bars as described above fitted on the weighing unit, and with the integral ticket printer replaced by an integral self-adhesive label printer (see Figure 4). A sample label is illustrated in Figure 5. A "T" adjacent to each weight reading face illuminates when any tare greater than 0,25 graduation is selected.

   The weight, unit price and total price indicators may be removed from one side of the weight-and-price indicating unit. The instrument is marked "not to be used in the presence of the purchaser".

3. An ED 25 PRS comprising an ED 25 Mini-Pac of capacity 2508 g or 2509 g without tare bars and with the weight-and-price indicators on the vendor's and purchaser's sides of the instrument. The printed label is similar to the ED 25 Mini-Pac label illustrated in Figure 5 except that it is marked "weight kg" instead of "net kg" as taring is not provided. The instrument is a retail counter instrument.

4. An ED Pac prepackaging weighing instrument comprising the ED 25 weighing unit of capacity 2508 g or 2509 g fitted with two tare bars as described above, with the unit-price keyboard and price-computing circuits in a modified housing and with a separate heat-sensitive label printer (see Figure 7). A sample ticket is illustrated in Figure 6.

   Weight and total price are displayed on a nixie-tube indicator on the operator's side of the console; unit price is read directly off the keyboard. A minus sign (-) illuminates when any tare greater than 0,25 graduation is selected.

   The nixie-tube indication of weight may be replaced by the indication of unit price; the ticket printer is then the only weight indicator.

5. The instrument of capacity 9,995 kg by 0,005-kg graduations with an automatic zero device which resets zero to within 0,25e whenever the instrument is in equilibrium within 1 graduation of zero. The discrimination of the 9,995-kg instrument is automatically adjusted from less than 0,005 kg to 0,010 kg when the instrument is in equilibrium. A 0,010-kg change in the load or the selection of a different unit price will override the discrimination and cause the instrument to reassess the conditions of equilibrium.

The 9,995-kg capacity ED 25, ED 25 PRS, ED 25 Mini-Pac and tne ED Pac are known as tne ED 100, tne ED100 PRS, tne ED 100 Mini-Pac and tne ED Pac 100 respectively.

The instrument is marked adjacent to eacn weignt reading face, for example:

(III)

Max	=	9,995 kg
Min	=	0,100 kg
d_d	=	0,005 kg
T	=	+ 0,205 kg (ED 100 Mini-Pac and ED Pac 100 only)

The ED 100 Mini-Pac and tne ED Pac 100 are also marked "not to be used in tne presence of tne purcnaser".

Special Tests:

1. Zero Test — 9,995-kg capacity instrument — The automatic device resets zero when tne weigning mecnanism is in equilibrium within 1 graduation of zero; zero snould be cnecked with, say, a load of 10 graduations on tne load receptor. Two readings snould be taken at eacn applied load witn tne instrument equilibrium being disturbed before eacn reading.

   Witn a load of, say, 10,25 d_d, readings of 11 d_d and 11 d_d indicate tnat tne alignment of tne instrument is not correct; readings of 10 d_d and 11 d_d or 10 d_d and 10 d_d are acceptable.

   Witn a load of, say, 10,75 d_d, readings of 10 d_d and 10 d_d indicate tnat tne alignment of tne instrument is not correct; readings of 10 d_d and 11 d_d or 11 d_d and 11 d_d are acceptable.

2. Discrimination — At equilibrium tne discrimination is electronically adjusted to be not less tnan 0,010 kg (3 g)* (3 g)**. Tnis setting may be cnecked in tne following

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* Figures in brackets refer to tne instrument witn 1-g graduation.

** Figures in brackets refer to tne instrument with 2-g graduations.

manner:

With tne load on tne instrument adjusted so tnat tne weight indicated is at a cnangeover point and with tne nigner of tne two readings indicated, gently placing a load of 0,012 kg (3,4 g)* (3,4 g)** on tne load receptor snould cause tne weight indicated to increase by not less tnan 0,010 kg (3 g)* (3 g)**.

Note:

Determination of Cnangeover Point: Selection of a new unit price overrides tne discrimination and causes tne instrument to reassess tne condition of equilibrium. Tne cnangeover point may tnerefore be found by cnanging tne unit price as tne load is varied. Tnis will cause tne input from tne weign cell to be recnecked at eacn unit-price cnange. A cnangeover point will be indicated wnen at two different unit prices tne same load indicates adjacent values, say, 1,090 kg and 1,095 kg (309 g and 310 g)* (308 g and 310 g)**.

An alternative to cnanging tne unit price is to remove and replace, say, a 1-kg (100 g)* weight eacn time tne load is varied. Again, cnangeover points will be indicated wnen tne same load indicates adjacent values, say, 1,090 kg and 1,095 kg (109 g and 110 g)* (108 g and 110 g)**.

3. Level Sensitivity —

(a) 2500-g capacity instrument — wnen tne instrument is tilted to a slope of 1 in 20 tne zero indication snould not cnange more tnan 2 graduations, and wnen tne zero is reset in tne tilted position tne instrument snould satisfy tne weigning-accuracy specification, tnat is, ± 0,5 graduations for tne first 500 graduations, ± 1 graduation over 500 and up to 2000 graduations, and ± 1,5 graduations over 2000 graduations.

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* Figures in brackets refer to tne instrument witn 1-g graduations.

** Figures in brackets refer to tne instrument witn 2-g graduations.

(b) 9,995-kg capacity instrument — as the automatic zero device prevents the zero from changing when the instrument is tilted at zero load, the effect of tilt should be initially checked with a small load on the instrument, say, 10 d_i.

When the instrument is tilted to a slope of 1 in 20, the indication (10 d_i) should not change by more than 2 graduations, and when the 10 d_i load is removed and zero reset or allowed to reset in the tilted position, the instrument should satisfy the weighing-accuracy specification, that is, ± ½ graduation for the first 500 graduations and ± 1 graduation over 500 and up to 2000 graduations.

4. Price-computing Accuracy — The indications of weight, unit price and total price as listed in Tables 1, 2 or 3 as appropriate will indicate that the price-computing and weight circuits are functioning correctly. The exact figures should be indicated as rounding is effected within the computer.

5. Taring — At any load within the capacity of the tare mechanism, the tare bars should be able to reset the weight indicator to zero within ± ½ d_i. This may be checked as described for "Zero Test".

TABLE 1

Indicated weignt g	Price per kg $	Total price $
0	00,00	00,00
41	99,99	4,10
52	98,99	5,15
63	97,99	6,17
74	96,99	7,18
85	95,99	8,16
96	94,99	9,12
107	13,00	1,39
218	47,10	10,27
329	91,99	30,26
430	99,82	42,92
500	67,76	33,88
600	49,65	29,79
700	59,51	41,66
800	69,43	55,54
900	79,34	71,41
1000	89,23	89,23
1500	25,16	37,74
2000	32,07	64,14
2500	39,98	99,95
2509	39,85	99,98

Test Specification — 2509-g by 1-g Instrument

TABLE 2

Indicated weignt g	Price per kg $	Total price $
0	00,00	00,00
40	99,99	4,00
52	08,99	5,15
64	97,99	6,27
76	96,99	7,37
88	95,99	8,45
90	94,99	8,55
100	13,90	1,39
210	92,99	19,53
320	91,99	29,44
430	99,82	42,92
500	67,76	33,88
600	49,65	29,79
700	59,51	41,66
800	69,43	55,54
900	79,34	71,41
1000	89,23	89,23
1500	25,16	37,74
2000	30,07	60,14
2500	39,98	99,95
2508	39,87	99,99

TABLE 3

Indicated weignt kg	Price per kg $	Total price $
0,000	00,00	00,00
0,100	99,99	10,00
0,105	98,99	10,39
0,110	97,99	10,78
0,220	96,99	21,34
0,330	95,99	31,68
0,440	94,99	41,80
0,550	93,91	51,65
0,660	82,92	54,73
0,770	71,63	55,16
0,880	69,96	61,56
0,990	59,85	59,25
1,000	43,47	43,47
2,000	39,87	79,74
3,000	29,78	89,34
4,000	19,69	78,76
5,000	09,57	47,85
6,000	09,49	56,94
7,000	09,34	65,38
8,000	09,29	74,32
9,000	09,19	82,71
9,990	10,00	99,90

NATIONAL STANDARDS COMMISSION

TECHNICAL SCHEDULE No 6/4D/41

VARIATION No 1

Pattern: Berkel Weighing Instrument Models ED 25 and Others

Submittor: Euroscale Pty Ltd,
19 Evans Street,
Burwood, Victoria, 3125.

Date of Approval of Variation: 7 March 1978

The modification described in this Schedule applies to the patterns described in Technical Schedule No 6/4D/41 dated 25 August 1977.

All instruments conforming to this approval shall be marked "NSC No 6/4D/41".

Description:

The approved modification provides for the Berkel ED 25, ED Mini-Pac, ED Pac, ED 100, ED 100 Mini-Pac and the ED Pac 100 with a knob-operated taring device on the weighing unit; Figures 8 and 9 illustrate two methods of attaching the tare knob to the weighing unit. A tare spring resistant is connected to the load receptor.

A tare light "T" adjacent to the weight indicator illuminates when any tare greater than 0,25e is selected. The instrument is marked "not to be used in the presence of the purchaser".

Special Tests:

The special tests described in Technical Schedule No 6/4D/41 dated 25 August 1977 are applicable to this variation.

NATIONAL STANDARDS COMMISSION

NOTIFICATION OF CHANGE

CERTIFICATE OF APPROVAL No 6/4D/41

CHANGE No 1

The description of the

Berkel Weighing Instrument Models ED 25 and Others

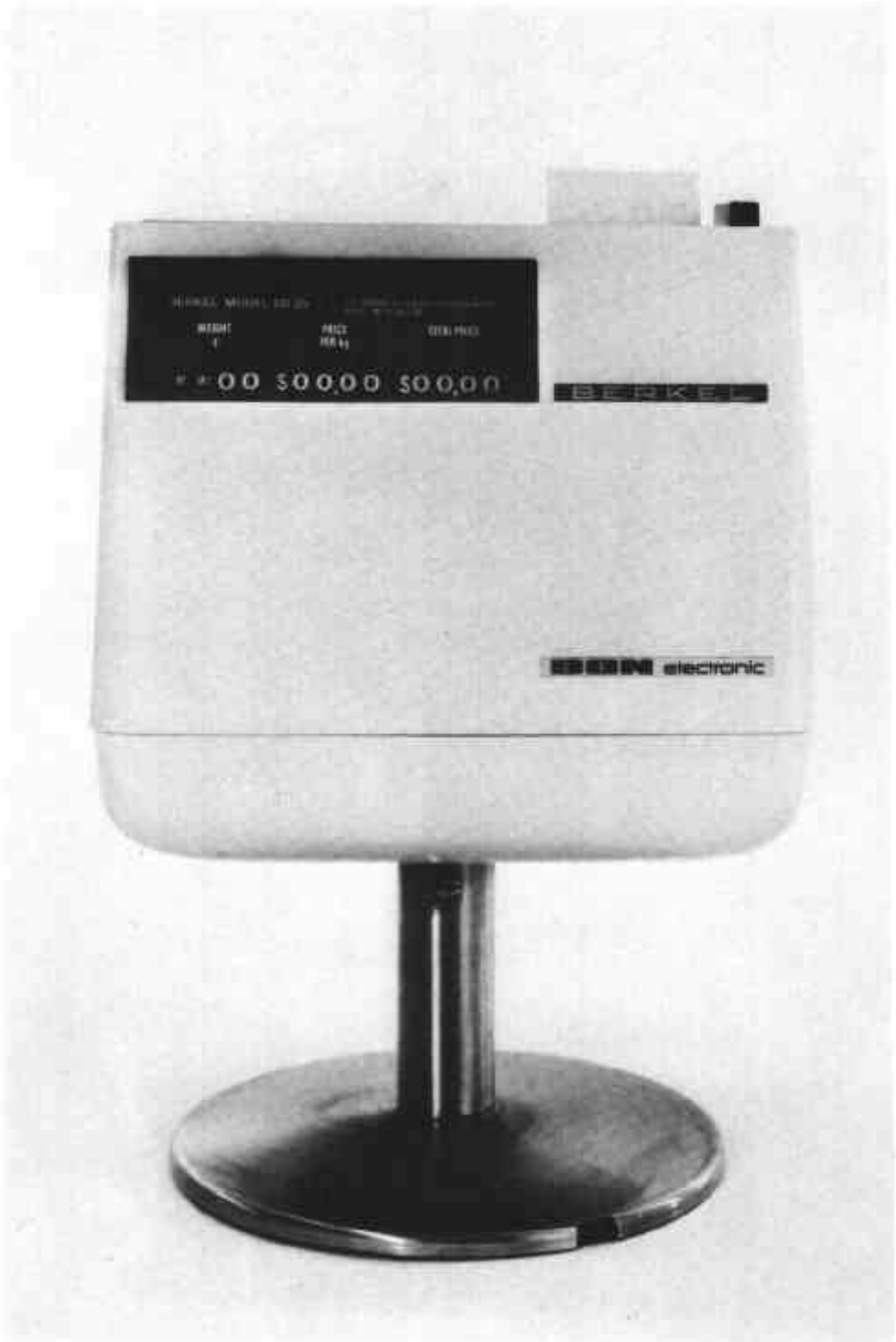
given in Technical Schedule No 6/4D/41 dated 25 August 1977 is altered by, on Table 2 under the heading "Price per kg", changing $08,99 to read $98,99.

4/12/78

FIGURE 6/4D/41 - 1

Berkel ED 25 — Weighing Unit and Computing Console

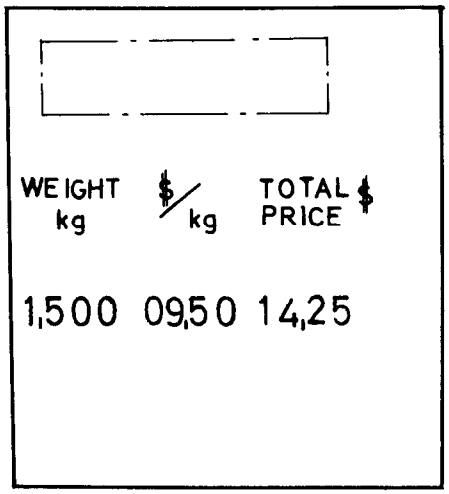
FIGURE 6/4D/41 - 2



Berkel ED 25 — Computing Console

11/6/74

FIGURE 6/4D/41 - 3



Sample Ticket

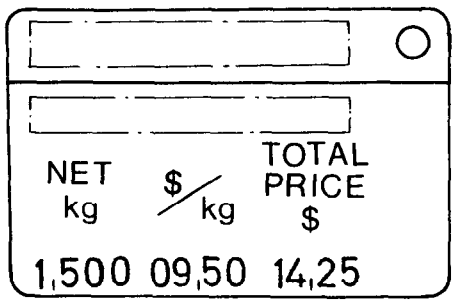
11/6/74

FIGURE 6/4D/41 - 4

29/8/74

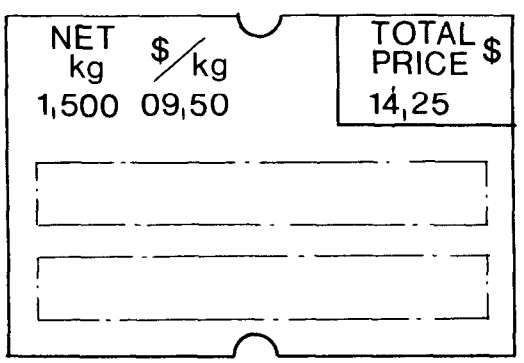
Berkel ED 25 Mini-Pac

FIGURE 6/4D/41 - 5



Berkel ED 25 Mini-Pac — Sample Ticket

FIGURE 6/4D/41 - 6



Berkel ED pac — Sample Ticket

FIGURE 6/4D/41 - 7

Berkel ED pac

FIGURE 6/4D/41 - 8

Weighing Unit with Knob-operated Taring Device

FIGURE 6/4D/41 - 9

Weigning Unit with Knob-operated Taring Device

5/5/78