



NATIONAL STANDARDS COMMISSION

NATIONAL MEASUREMENT (PATTERNS OF INSTRUMENTS) REGULATIONS

REGULATION 9

CERTIFICATE OF APPROVAL No 6/4D/210

This is to certify that an approval has been granted that the pattern and variants of the

Berkel Model 567 Weighing Instrument

submitted by Berkel Australia Pty Ltd
19 Evans Street
Burwood, Victoria, 3125

are suitable for use for trade.

This approval is subject to review on or after 1/7/87.

Instruments purporting to comply with this approval shall be marked NSC No 6/4D/210.

This approval may be withdrawn if instruments are constructed and used other than in accordance with the drawings and specifications lodged with the Commission.

Signed

Executive Director

Descriptive Advice

Pattern: approved 11/6/82

- Berkel model 567 self-indicating weighing instrument of 10 kg capacity with 0,005 kg scale intervals.

Variants: approved 11/6/82

1. With the customer indicator mounted on a pillar attached to the weighing instrument.
2. With the customer indicator separate to the weighing instrument.
3. With the keyboard separate to the weighing instrument.
4. With semi-automatic tare.
5. With a printer output socket.

Technical Schedule No 6/4D/210 describes the pattern and variants 1 to 5.

Variants: approved 20/4/83

6. With a 24-key or 48-key price-look-up (PLU) keyboard.
7. Model 567 of capacity 15 kg with 0,005 kg scale intervals.
8. Variant 4 with tare function modified to blank below zero.

Technical Schedule No 6/4D/210 Variation No 1 describes variants 6 to 8.

Variant: approved 6/2/84

9. With the weighing unit, vendor indicator, customer indicator and keyboard all in separate housings.

Technical Schedule No 6/4D/210 Variation No 2 describes variant 9.

Variant: approved 28/3/85

10. In an alternative housing and known as a model 682.

Technical Schedule No 6/4D/210 Variation No 3 describes variant 10.

Filing Advice

Certificate of Approval No 6/4D/210 dated 27/2/84 is superseded by this Certificate and may be destroyed. The documentation for this approval now comprises:

Certificate of Approval No 6/4D/210 dated 21/6/85
Technical Schedule No 6/4D/210 dated 5/7/82
Technical Schedule No 6/4D/210 Variation No 1 dated 16/5/83
Technical Schedule No 6/4D/210 Variation No 2 dated 27/2/84
Technical Schedule No 6/4D/210 Variation No 3 dated 21/6/85
Test Procedure No 6/4D/210 dated 5/7/82
Figures 1 to 7 dated 5/7/82
Figure 8 dated 16/5/83



NATIONAL STANDARDS COMMISSION

TECHNICAL SCHEDULE No 6/4D/210

Pattern: Berkel Model 567 Weighing Instrument

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

1. Description of Pattern

The pattern is a self-indicating price-computing weighing instrument of capacity 10 kg by 0.005 kg scale intervals with price computing in 1c increments to \$999.99/kg and price to \$9999.90 (Figures 1 and 2). Unit price is entered via the keyboard and cancelled by pressing a button marked C. Pressing the button marked F retains unit price.

1.1 Zero

An automatic zero-setting device resets zero within 0.25s whenever the instrument comes to rest within 0.5e of zero.

Additionally, this device will reset zero when the instrument is switched on, provided the instrument is within $\pm 20e$ of the factory-set reference point.

A self-indicating zero-check test program occurs every 0.4s when the instrument is not loaded; if an error in zero setting is encountered an error signal is given and the instrument becomes inoperative until the fault is cleared.

1.2 Display Check

When power is applied to the instrument, all the indicators display from 0 to 9, then all the indicators blank before the instrument zeroes.

1.3 Levelling

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

1.4 Marking

The instrument is marked with the following data, together in one location:

Manufacturer's name or mark	
Serial number of instrument	
NSC approval number	NSC No 6/4D/210
Accuracy class	III
Maximum capacity	Max*
Minimum capacity	Min*
Verification scale interval	e = d =*

*These markings are to appear adjacent to each reading face.

1.5 Sealing

- (a) The instrument is sealed by two separate sealing plugs mounted on two cover retaining screws under the load receptor (Figure 3).
- (b) The stamping plug is located on the vendor's side of the instrument.

2. Description of Variants

2.1 Variant 1

With the customer indicator mounted on a pillar attached to the weighing instrument (Figure 4).

2.2 Variant 2

With the customer indicator separate to the weighing instrument and the inter-connecting cable permanently connected within the weighing instrument (Figure 5).

2.3 Variant 3

With the keyboard separate to the weighing instrument and the interconnecting cable permanently connected within the weighing instrument (Figure 6).

2.4 Variant 4

With semi-automatic tare of 9.995 kg capacity. The tare is entered by pressing the key marked 'T' on the keyboard, a light marked 'T' illuminates when the tare mass has been entered. On removal of the tare mass, the mass indicator will show the value of tare as a minus quantity (Figure 7).

2.4.1 Markings

As for the pattern, but with the additional marking:

Maximum subtractive tare

T = - 9.995 kg

The instrument also has a notice NOT FOR RETAIL COUNTER USE.

2.5 Variant 5

With an output socket for a printer.

TABLE 1

<u>Indicated Mass</u>	<u>Unit Price</u>	<u>Price</u>
kg	\$/kg	\$
0.000	0	0
0.100	999.99	100.00
0.105	498.99	52.39
0.110	997.99	109.78
0.120	696.99	83.64
0.130	595.99	77.48
0.140	764.50	107.03
0.150	993.99	149.10
0.160	882.31	141.17
0.170	991.99	168.64
0.180	990.96	178.37
0.190	389.88	74.08
0.200	179.77	35.95
0.300	269.66	80.90
0.400	959.55	383.82
0.500	949.44	474.72
0.600	939.33	563.60
0.700	929.22	650.45
0.800	919.11	735.29
0.900	9.14	8.23
1.000	910.57	910.57
2.000	870.03	1740.06
3.000	784.67	2354.01
4.000	950.52	3802.08
5.000	884.96	4424.80
6.000	906.99	5441.94
7.000	899.64	6297.48
8.000	949.53	7596.24
9.000	988.72	8898.48
10.000	999.99	9999.90

10 kg Instrument With Unit Price To \$999.99/kg And Price To \$9999.90

All loads should be applied in accordance with the method recommended in the Commission's Test Procedure for the Elimination of Rounding Error for Weighing Instruments with Digital Indication (Document 104).

Accuracy Requirements

The maximum permissible errors are:

- ± 0.5e for loads between 0 and 500e inclusive;
- ± 1e for loads between 501 and 2000e; and
- ± 1.5e for loads above 2000e.

1. Zero Test

As the automatic device resets zero when the weighing mechanism is in equilibrium within 0.5e of zero, zero should be checked as described in Document 104, with a load equal to, say, 10e on the load receptor. The indications with 0.25e and 0.75e additional mass on the load receptor will then be 10e and 11e respectively.

2. Zero Range

The maximum range of operation of the 'power switch' zero adjustment should not exceed 4% of the maximum capacity of the instrument (± 2% approximately). Satisfactory setting may be checked by the following method:

- (a) With zero balance indicated apply a load of, say, 2.5% of maximum capacity to the instrument and turn the power off and on via the power button; the instrument should not re-zero.
- (b) Reduce the load to, say, 1.5% of maximum capacity and again turn the power off and on via the power button; the instrument should indicate 0 to 9 then zero balance.

3. Level Sensitivity

As the automatic zero device may prevent 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, 10e.

When the instrument is tilted so that the bubble in the level indicator moves 2 mm, the indication of 10e should not change by more than 2e, and when, in the tilted position, the 10e load is removed and zero is allowed to automatically reset, or it is manually reset, the instrument should satisfy the accuracy requirements given above.

4. Price-computing Accuracy

The indications of mass, unit price and price listed in Table 1 will indicate that the price-computing and mass circuits are functioning correctly. The figures should be indicated exactly as in the table, as rounding is effected within the computer.

Note: This test does not establish correct mass indication; a separate load test in accordance with Document 104 is necessary. This may be carried out in conjunction with the above test.

5. Range of Indication

- (a) The maximum mass indicated should not exceed the marked maximum capacity (Max) by more than 10e; above this the mass indication should indicate the symbol '∞'.
- (b) The minimum mass indicated should be zero; below this mass indication should indicate the symbol '0'.

6. Tare (Variant 4)

At any load within the tare capacity, a tare should be able to be balanced within 0.25e. This may be checked as described for Zero Test.

Attempt to tare a mass above the tare capacity. This should not be possible and on removal of the mass from the load receptor the mass indicator should indicate zero.



NATIONAL STANDARDS COMMISSION

TECHNICAL SCHEDULE No 6/40/210

VARIATION No 1

Pattern: Berkel Model 567 Weighing Instrument

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

1. Description of Variants

1.1 Variant 6

Model 567 with a 24-key or 48-key price-look-up (PLU) keyboard either within the housing or on a pillar. Figure 8 shows the 48-key version mounted on a pillar.

1.2 Variant 7

Model 567 of capacity 15 kg by 0.005 kg scale intervals with unit price to \$999.99/kg and price to \$9999.99 in 1c increments.

1.2.1 Markings

As per the pattern, except for the following:

Maximum capacity	Max 15 kg*
Minimum capacity	Min 0.1 kg*
Maximum subtractive tare	T = -15 kg

1.3 Variant 8

With semi-automatic subtractive tare of 9.995 kg capacity, as in variant 4 but modified to blank below zero.

This instrument is suitable for retail counter use.

* These markings are repeated in the vicinity of each reading face.



NATIONAL STANDARDS COMMISSION

TECHNICAL SCHEDULE No 6/40/210

VARIATION No 2

Pattern: Berkel Model 567 Weighing Instrument

Submitter: Berkel Australia Pty Ltd
19 Evans Street
Burwood, Victoria, 3125.

1. Description of Variant 9

With the weighing unit, vendor indicator, customer indicator and keyboard all in separate housings, connected by cables.



NATIONAL STANDARDS COMMISSION

TECHNICAL SCHEDULE No 6/4D/210

VARIATION No 3

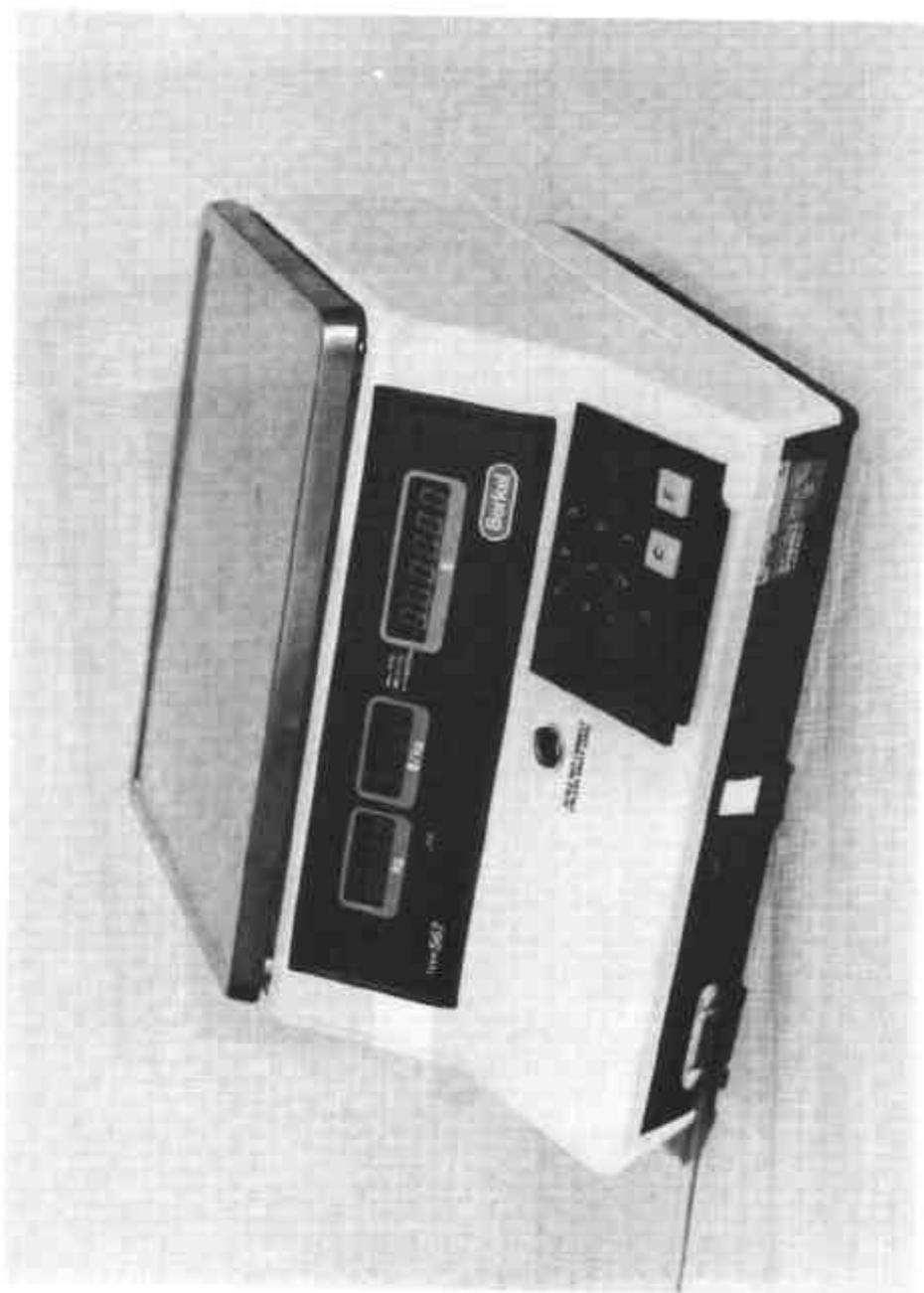
Pattern: Berkel Model 567 Weighing Instrument

Submittor: Berkel Australia Pty Ltd
19 Evans Street
Burwood, Victoria, 3125

1. Description of Variant 10

In an alternative housing and known as a model 682.

FIGURE 6/40/210 - 1



Berkelex Model 567 - Vendor's Side

5/7/82

FIGURE 6/40/210 - 2



Model 567 - Customer's Side

5/7/82

FIGURE 6/40/210 - 3



Sealing Of Model 567

5/7/82

FIGURE 6/4D/210 - 4



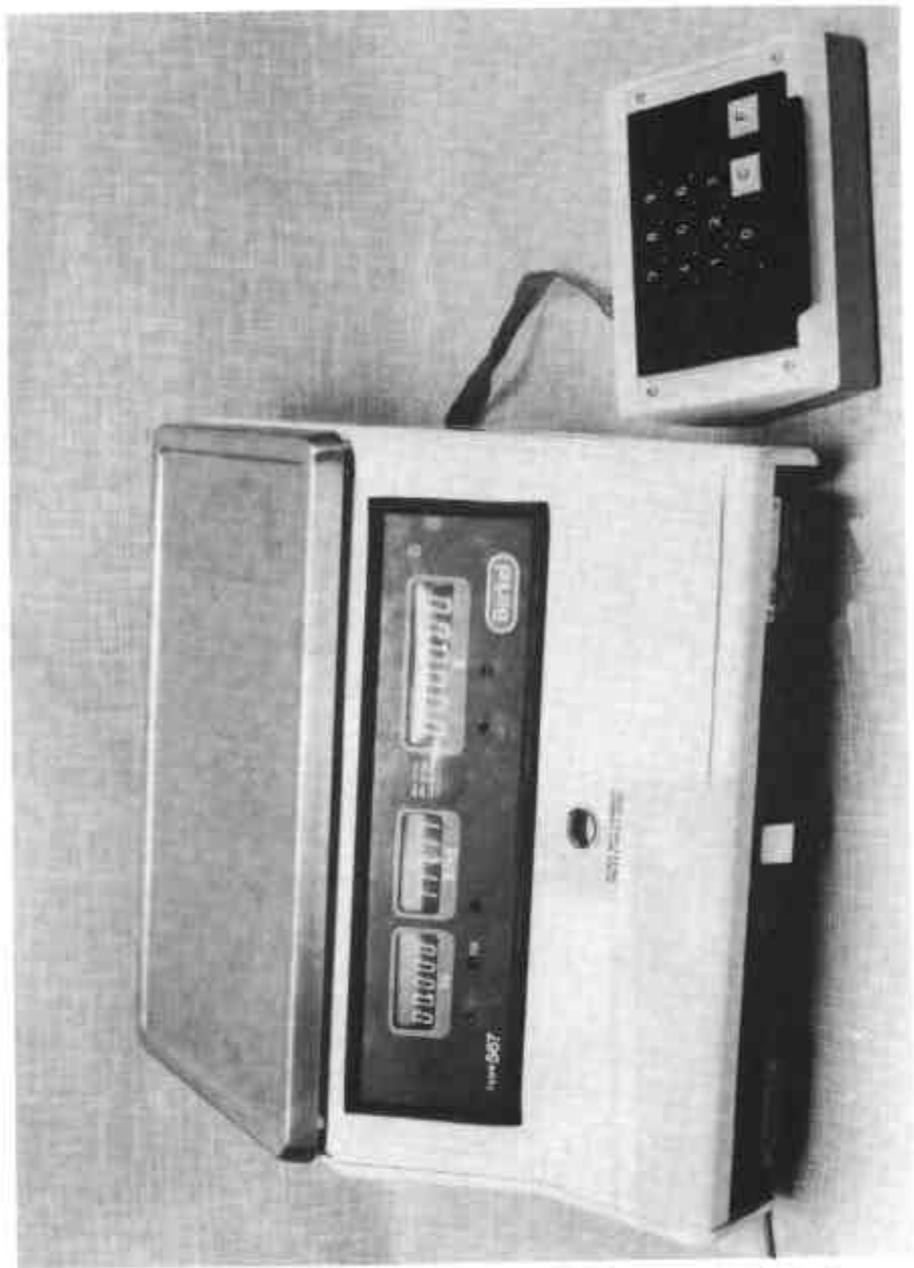
Variant 1 - Indicator On A Pillar (

FIGURE 6/40/210 - 5



Variant 2 - Separate Indicator

FIGURE 6/4D/210 - 6



Variant 3 - Separate Keyboard

FIGURE 6/40/210 - 7



Variant 4 - Non-retail Instrument

5/7/82

FIGURE 6/40/210 - B



Model 567 With PLU Keyboard On A Pillar

16/5/83