Australian Government

National Standards Commission

12 Lyonpark Road, North Ryde NSW 2113 Australia

Cancellation

Certificate of Approval No 2/1/3B

This is to certify that the approval for use for trade granted in Certificate No 2/1/3B issued 31 December 1993 in respect of the

Ellwood Model AM 3 Area Measuring Instrument

submitted by Fraho & Son Pty Ltd
PO Box 118
Galston NSW 2159

has been cancelled in respect of new instruments as from 1 July 2004.

Signed by a person authorised under Regulation 60 of the National Measurement Regulations 1999 to exercise the powers and functions of the Commission under this Regulation.

National Standards Commission

Notification of Change

Certificate of Approval No 2/1/3B

Change No 1

The following changes are made to the approval documentation for the

Ellwood Model AM 3 Area Measuring Instrument

submitted by Fraho & Son Pty Ltd
PO Box 118
Galston NSW 2159.

In Certificate of Approval No 2/1/3B dated 31 December 1993;

1. The Condition of Approval referring to the review of the approval should be amended to read:

   "This approval becomes subject to review on 1 December 2003, and then every 5 years thereafter."

2. The Condition of Approval referring to the expiry of the approval should be deleted.

Signed and sealed by a person authorised under Regulation 63 of the National Measurement Regulations 1999 to exercise the powers and functions of the Commission under this Regulation.

National Standards Commission

Certificate of Approval

No 2/1/3B

Issued under Regulation 9
of the
National Measurement (Patterns of Measuring Instruments) Regulations

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

Ellwood Model AM 3 Area Measuring Instrument

submitted by Fraho & Son Pty Ltd
PO Box 118
Galston NSW 2159.

This Certificate is issued upon completion of a review of NSC approval No 2/1/3A.

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.

CONDITIONS OF APPROVAL

This approval is subject to review on or after 1/12/98.
This approval expires in respect of new instruments on 1/12/99.

Instruments purporting to comply with this approval shall be marked NSC No 2/1/3B and only by persons authorised by the submittor.

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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 Commission 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 the Commission's Document 106.

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

DESCRIPTIVE ADVICE

Pattern: approved 30/11/93

- An Ellwood model AM 3 area measuring instrument for measuring the area of opaque sheets of leather of up to 211 dm^2.

Variant: approved 30/11/93

1. With a motor-driven measuring head.

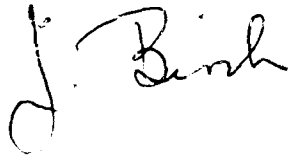
Technical Schedule No 2/1/3B describes the pattern and variant 1.

FILING ADVICE

The documentation for this approval comprises:

Certificate of Approval No 2/1/3B dated 31/12/93
Technical Schedule No 2/1/3B dated 31/12/93 (incl. Test Procedure)
Figure 1 dated 31/12/93

Signed and sealed by a person authorised under Regulation 9 of the National Measurement (Patterns of Measuring Instruments) Regulations to exercise the powers and functions of the Commission under this Regulation.



National Standards Commission

TECHNICAL SCHEDULE No 2/1/3B

Pattern: Ellwood Model AM 3 Area Measuring Instrument

Submittor: Fraho & Son Pty Ltd
PO Box 118
Galston NSW 2159.

1. Description of Pattern

The Ellwood model AM 3 (Figure 1) is an instrument for measuring the area of opaque sheets of leather. It has a clear glass table on which the leather is spread; this is traversed by a measuring head.

1.1 Measuring System

The manually-operated measuring head has two arms, one travelling above the table and the other below. The upper arm carries a regular array of infra-red light emitting diodes (LED's); the lower arm carries a matching array of photodetectors. The sensing head is activated at regular intervals.

At each scan, the number of detectors occluded by the leather is counted and the total number counted in the complete traverse of the head is summed, and divided by a scaling factor to produce an indication in dm^2 on the seven segment display.

A green LED provides indication of adequate speed; it must show a steady illumination during the traverse.

1.2 Indicator

The indicator displays the area of the hide up to a maximum of 211 dm^2 with a scale interval of 0.2 dm^2.

1.3 Units

The instrument may be switched to measure in either SI units (dm^2) or imperial units (ft^2) and remains set until the alternate units are selected. The selection of the units in use is indicated by the appropriate LED being illuminated.

The use of imperial units is only for export use, and a notice to this effect is located adjacent to the display.

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1.4 Test Facilities

The test switch fitted to the measuring head should be used at least once per day to check operation.

1.5 Marking

Instruments are marked with the following data, together in one location:

Manufacturer's name or mark	
Serial number	
NSC approval number	NSC No 2/1/3B
Maximum area	..... dm^2
Minimum area	..... dm^2
Scale interval	..... dm^2

In addition, adjacent to the LED indicating that the instrument is set to measure in 'ft^2' units, a notice is provided stating 'FOR EXPORT USE ONLY', or similar wording.

A notice clearly visible to the operator is marked 'DO NOT PLACE STRAIGHT EDGES PARALLEL TO MACHINE SIDES' or similar wording.

1.6 Verification/Certification Provision

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

1.7 Sealing

No sealing is required.

2. Description of Variant 1

With a motor-driven measuring head replacing the manually-operated head of the pattern.

These instruments are not fitted with an LED traversing speed indicator.

TEST PROCEDURE

Instruments should be tested in accordance with any relevant tests specified in the Inspector's Handbook.

Instruments shall be tested for single-measurement error and mean error.

Maximum Permissible Errors at Verification/Certification

The maximum permissible errors applied during a verification/certification test are:

(a) Single-measurement error;

±1 dm^2 for templets not exceeding 25 dm^2; and

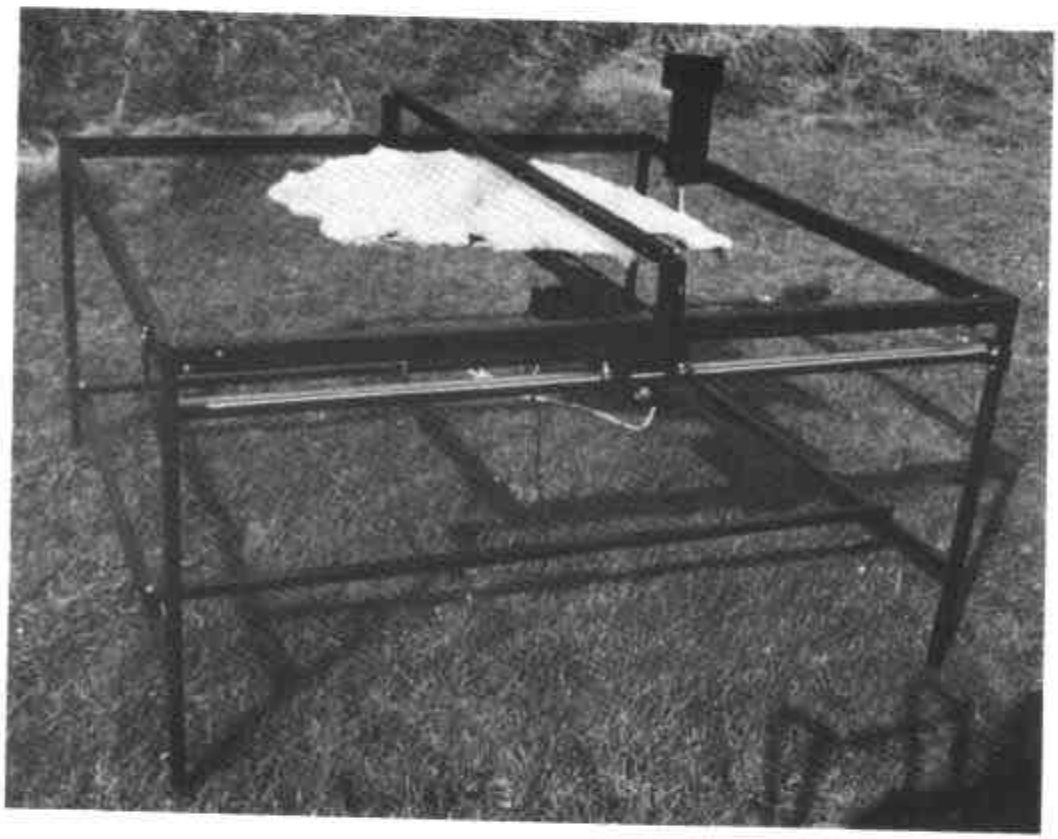
±(1 dm^2 + 1 dm^2 for each additional 50 dm^2 or part thereof) for templets exceeding 25 dm^2.

(b) Mean error;

The mean of 20 measurements shall not differ from the denominated value of the templet by more than one-half the maximum permissible error specified in (a) above.

NOTE: The test templets shall have values which are an integral number of square decimetres (dm^2).

FIGURE 2/1/3B - 1



Ellwood Model AM 3 Area Measuring Instrument