Australian Government
National Measurement Institute
Bradfield Road, West Lindfield NSW 2070

Certificate of Approval

NMI 1/2A/7

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.

Intertex Model MCM-Q Length Measuring Instrument

submitted by Masters Pty Ltd
3 City View Road
Pennant Hills NSW 2120

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 M 1 *Pattern Approval Specifications for Length Measuring Instruments*, July 2004.

This approval becomes subject to review on 1/05/18, and then every 5 years thereafter.

DOCUMENT HISTORY

Rev	Reason/Details	Date
0	Pattern approved – certificate issued	10/04/13

CONDITIONS OF APPROVAL

General

Instruments purporting to comply with this approval shall be marked with approval number ‘NMI 1/2A/7’ and only by persons authorised by the submittor.

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 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 Certificates No S1/0/A or 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*.

Dr A Rawlinson

TECHNICAL SCHEDULE No 1/2A/7

1. Description of Pattern approved on 10/04/13

An Intertex model MCM-Q length measuring instrument (Figure 1) which is approved for use to measure lengths of carpet or similar material.

1.1 Details

The pattern, which is also known as a paternoster, is approved for use for the determination of the lengths of carpet, vinyl or other similar material having a maximum thickness of 20 mm. The instrument is approved for a minimum length of measurement of 2 m.

The instrument comprises up to two vertical loading systems, each of which stores up to 16 rolls of material to be measured. Material is stored on mandrels mounted on a revolving mechanism which is used to select and position the material for measurement on the measurement/cutting table (Figure 2).

The measurement/cutting table includes a Baumer model ME280.060G02C meter which has a scale interval of 1 cm, a keypad terminal to control the in-feed rollers and an electric cutting knife which is aligned along the edge of the table. The table has a maximum speed of 10 m/min and a minimum speed of 4 m/min.

1.2 Field of Operation

The field of operation of the measuring system is determined by the following characteristics:

- Power supply:

Number of phases	3
Reference frequency	50 Hz
Rated voltage	240 V AC

- Reference ambient temperature ranges:

Specified temperature range	0 °C to 40 °C

1.3 Indicating Device (Figure 2)

The Baumer meter is fitted to the measurement/cutting table and is connected by a shaft to a measurement wheel mounted on the table.

The meter includes a 5 digit measurement indication. A lever is used to reset the indication to zero and reveal the pre-setting (*) counter window.

Five buttons below the pre-setting window are aligned with the digits of the pre-setting indicator and each press will increment the corresponding digit by one.

When the measurement operation begins the meter will stop the draw-in pressure roller when the pre-set value has been reached.

(*) The pre-setting indicator is not approved for trade use, and must be so marked.

1.4 Measurement/Cutting Table (Figure 3)

The measurement/cutting table includes a flat surface, the edge of which is used as the reference for beginning and ending of the measurement. The electric cutting knife is aligned along this edge and is used to cut the length of material to the length indicated on the meter when the measurement is complete.

A measurement wheel is mounted underneath the table (Figure 3a) and exposed through the flat surface to contact the underneath side of the material to be measured. The wheel is connected to the indicating device with a shaft and is of a diameter such that 2 revolutions equates to 1 metre of material measured. The material is kept in contact with the measurement wheel by another weighted wheel (Figure 3b) mounted on a hinged arm to allow this wheel to be lowered on top of the material to keep it in contact with the measurement wheel.

Draw-in rollers can be raised or lowered to apply the required pressure based on the thickness of the material being measured. The draw-in rollers feed the material across the measuring wheel and are stopped by the indicating device when the pre-set value has been reached.

An electronic keypad is used to control the functions of the table including raising and lowering of the draw-in rollers or starting or stopping the measurement. The direction of the draw-in rollers can also be reversed.

1.5 Method of Operation

- Material selected for measurement is moved into position in front of the measurement/cutting table (Figure 4a) and manually fed through the draw-in pressure rollers.
- The rollers are lowered to ensure sufficient pressure is applied to the material so that it is fed smoothly across the table.
- The selected material is aligned with the measurement/cutting edge of the cutting table.
- The weighted wheel is lowered on top of the material to keep it in contact with the measurement wheel.
- The indicating device is reset by holding the lever and pressing the buttons to increment the presetting device to select the desired length do be measured.
- The draw-in feed direction button is pressed to begin measurement.
- The indicator will stop the draw-in feed measurement once the pre-set value has been reached on the indicator. The reverse direction button may be used if more material has been measured than required.
- The electric cutting knife is used to cut the material along the edge of the table (Figure 4b).

1.6 Over-measure Protection

Draw-in pressure rollers are used to ensure that the inertia of the material will not affect movement across the measuring wheel.

1.7 Verification Provision

Provision is made for the application of a verification mark.

1.8 Sealing Provision

Provision is made for the measurement indicator to be sealed by the application of one or more mechanical seals (Figure 5).

1.9 Descriptive Markings and Notices

Instruments are marked with the following data, together in one location, in the form shown at right:

Manufacturer's mark, or name written in full	…….
Name or mark of manufacturer's agent	…….
Pattern approval mark for the instrument	NMI 1/2A/7
Minimum length	……. m
Maximum speed	……. m/min
Minimum speed	……. m/min
Scale interval	……. cm
Serial number of the instrument	…….

The instrument carries the following notice, applied near the edge of the cutting table, stating BEGINNING – END OF MEASURING, or similar wording

Instruments shall carry notices stating MINIMUM LENGTH 2 METRES (#), and PRESETTING INDICATION NOT IN USE FOR TRADE, or similar wording.

(#) This notice is not required if minimum length is including in the markings and if they are located near to the indicator reading face.

TEST PROCEDURE No 1/2A/7

Instruments shall be tested in accordance with any relevant tests specified in the National Instrument Test Procedures.

The instrument shall not be set 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 1/2A/7 – 1

(a) OverallView

(b) Close-up of Measuring/Cutting Table

Intertex Model MCM-Q Length Measuring Instrument

FIGURE 1/2A/7 – 2

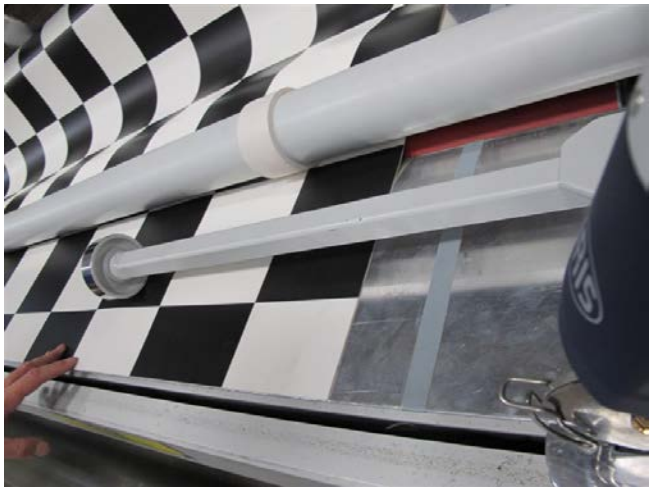
Baumer Model ME280.060G02C Meter and Indicator

FIGURE 1/2A/7 – 3

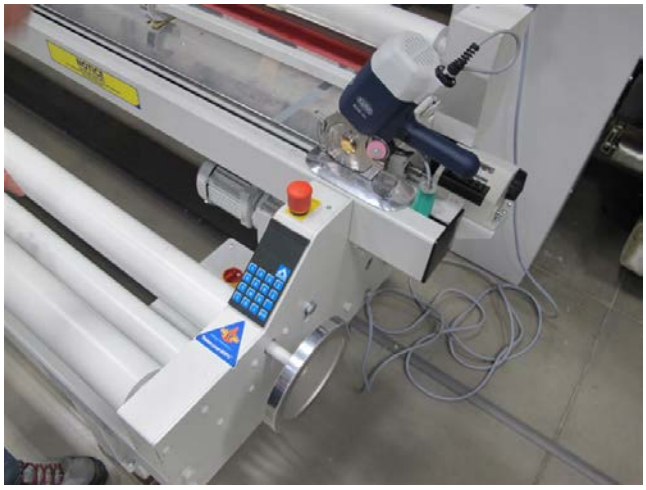
(a) Measurement Wheel Mounted Underneath the Measuring/Cutting Table

(b) Weighted Wheel Mounted Above the Measuring/Cutting Table

FIGURE 1/2A/7 – 4



(a) Aligning Material to Edge of Measuring/Cutting Table



(b) Cutting Knife and Keypad

FIGURE 1/2A/7 – 5

(c) Typical Mechanical Sealing

~ End of Document ~