Australian Government
National Measurement Institute

Bradfield Road, West Lindfield NSW 2070

Cancellation

Supplementary Certificate of Approval

No S404

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

Mettler Toledo Model Hawk Digital Indicator

submitted by Mettler Toledo Limited
220 Turner Street
Port Melbourne VIC 3207

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

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

National Standards Commission

12 Lyonpark Road, North Ryde NSW

Supplementary Certificate of Approval

No S404

Issued 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

Mettler Toledo Model Hawk Digital Indicator

submitted by Mettler Toledo Limited
220 Turner Street
Port Melbourne VIC 3207.

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.

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CONDITIONS OF APPROVAL

This approval becomes subject to review on 1 July 2007, and then every 5 years thereafter.

Instruments purporting to comply with this approval shall be marked NSC No S404 and only by persons authorised by the submittor.

Instruments incorporating a digital indicator purporting to comply with this approval shall be marked NSC No S404 in addition to the approval number of the instrument.

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 NSC P 106.

The values of the performance criteria (maximum number of scale intervals etc.) applicable to an instrument incorporating the pattern approved herein shall be within the limits specified herein and in any approval documentation for the other components.

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

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

DESCRIPTIVE ADVICE

Pattern: approved 11 June 2002

- A Mettler Toledo model Hawk single interval digital indicator. May also be known as a model WILDCAT.

Variant: approved 11 June 2002

1. A Mettler Toledo model Hawk Harsh single interval digital indicator. May also be known as a model WILDCAT.

Technical Schedule No S404 describes the pattern and variant 1.

FILING ADVICE

The documentation for this approval comprises:

Supplementary Certificate of Approval No S404 dated 16 August 2002
Technical Schedule No S404 dated 16 August 2002 (incl. Table 1 and Test Procedure)
Figures 1 to 5 dated 16 August 2002

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.

TECHNICAL SCHEDULE No S404

Pattern: Mettler Toledo Model Hawk Digital Indicator.

Submittor: Mettler Toledo Limited
220 Turner Street
Port Melbourne VIC 3207

1. Description of Pattern

A Mettler Toledo model Hawk single interval digital indicator (Figure 1 and Table 1) which is approved for use with up to 10 000 verification scale intervals. May also be known as a model WILDCAT.

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

Instruments may be operated by mains power supply, or by battery (4 x 1.5V).

TABLE 1 - Specifications

Maximum number of verification scale intervals	10 000
Minimum sensitivity	1.0 μV/scale interval
Excitation voltage	5 V DC
Maximum excitation current	57 mA

1.1 Zero

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

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.

1.2 Tare

A semi-automatic subtractive and/or a pre-set taring device, each having a capacity of up to the maximum capacity of the instrument, may be fitted.

Note: An indicator with the legend ‘B/G’ indicates when the gross (‘G’) load is being displayed (‘B’ in the legend is an equivalent abbreviation in some other languages).

1.3 Display Check

A display check is initiated whenever power is applied.

1.4 Verification/Certification Provision

Provision is made for the application of a verification/certification mark.

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1.5 Markings

Instruments carry the following markings:

Manufacturer's mark, or name written in full	Mettler-Toledo Changzhou
Indication of accuracy class	(III)
Maximum capacity	*Max* ..... kg *
Minimum capacity	*Min* ..... kg *
Verification scale interval	*e* = ... kg *
Serial number of the instrument	…….....
Pattern approval mark for the indicator	NSC No S404
Pattern approval mark for other components	.....

* These markings are also 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.

1.6 Sealing Provision

Calibration is protected by use of destructible adhesive labels to prevent access within the instrument housing (i.e. a label over the joins in the housing on each side of the instrument). This prevents access to the calibration protection jumper which enables or disables the calibration protection (Figures 2 and 3).

It is possible to check that the jumper is in the 'calibration protected' position by pressing the zero and print keys simultaneously and then releasing them simultaneously. If the instrument enters a mode displaying "F1" then the calibration is NOT protected; if otherwise then the instrument is calibration protected.

2. Description of Variant 1

The Mettler Toledo model Hawk Harsh single interval digital indicator (Figure 4) which is similar to the pattern but supplied in a stainless steel enclosure. May also be known as a model WILDCAT.

2.1 Sealing Provision

Calibration is protected by use of destructible adhesive labels to prevent access as follows:

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

(b) to the instrument circuit board by a label over at least one of the screws which hold the battery holder within the instrument housing (Figure 5).

TEST PROCEDURE

Instruments should be tested in conjunction with any tests specified in the approval documentation for the instrument to which the pattern is connected, as appropriate, and in accordance with any relevant tests specified in the Uniform Test Procedures.

Maximum Permissible Errors at Verification/Certification

For the weighing range in use, 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 $2\,000 < m \leq 10\,000$.

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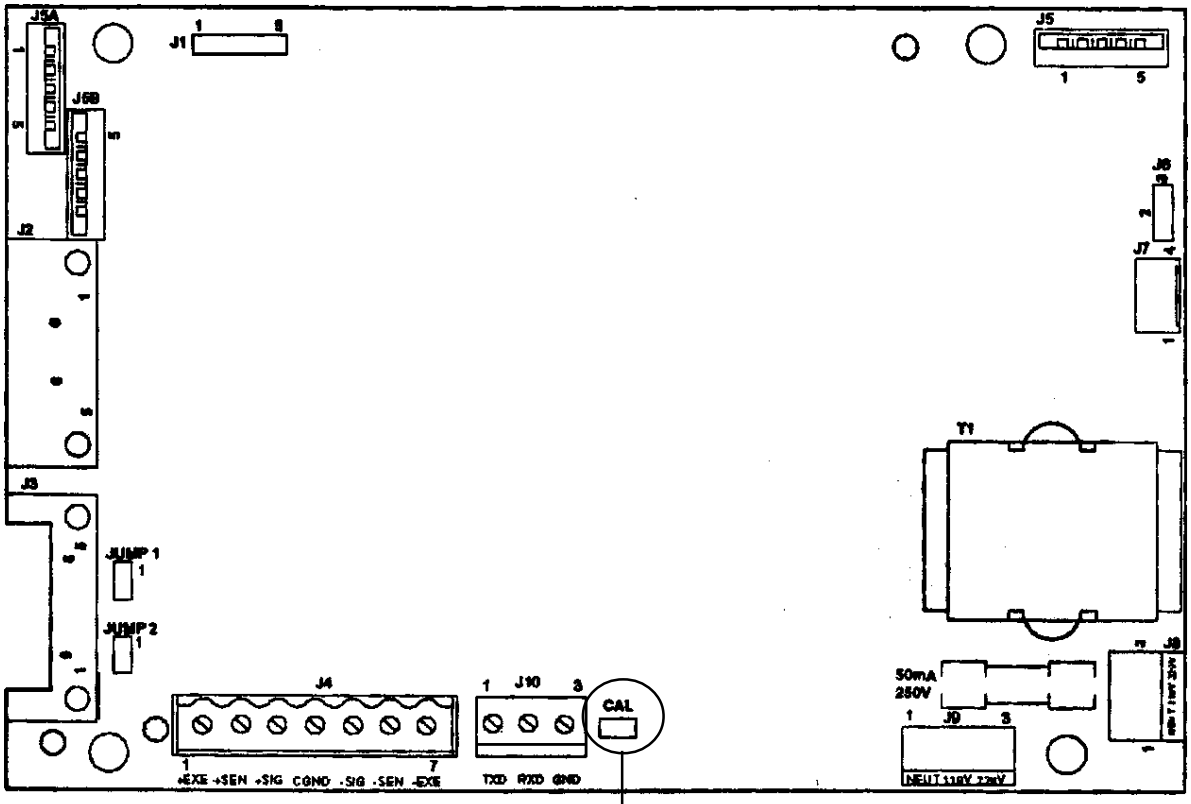
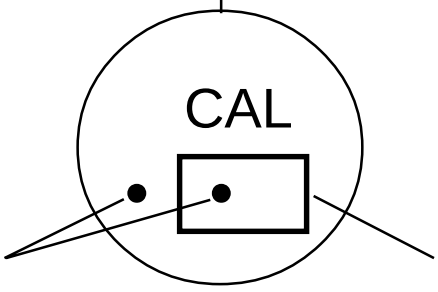
FIGURE S404 - 1

Mettler Toledo Model Hawk Digital Indicator

FIGURE S404 - 2

Main Circuit Board





Calibration (‘CAL’) Pins

Calibration (‘CAL’) Jumper

Showing Correct Location of Calibration (‘CAL’) Jumper
On Only One of The Calibration (‘CAL’) Pins

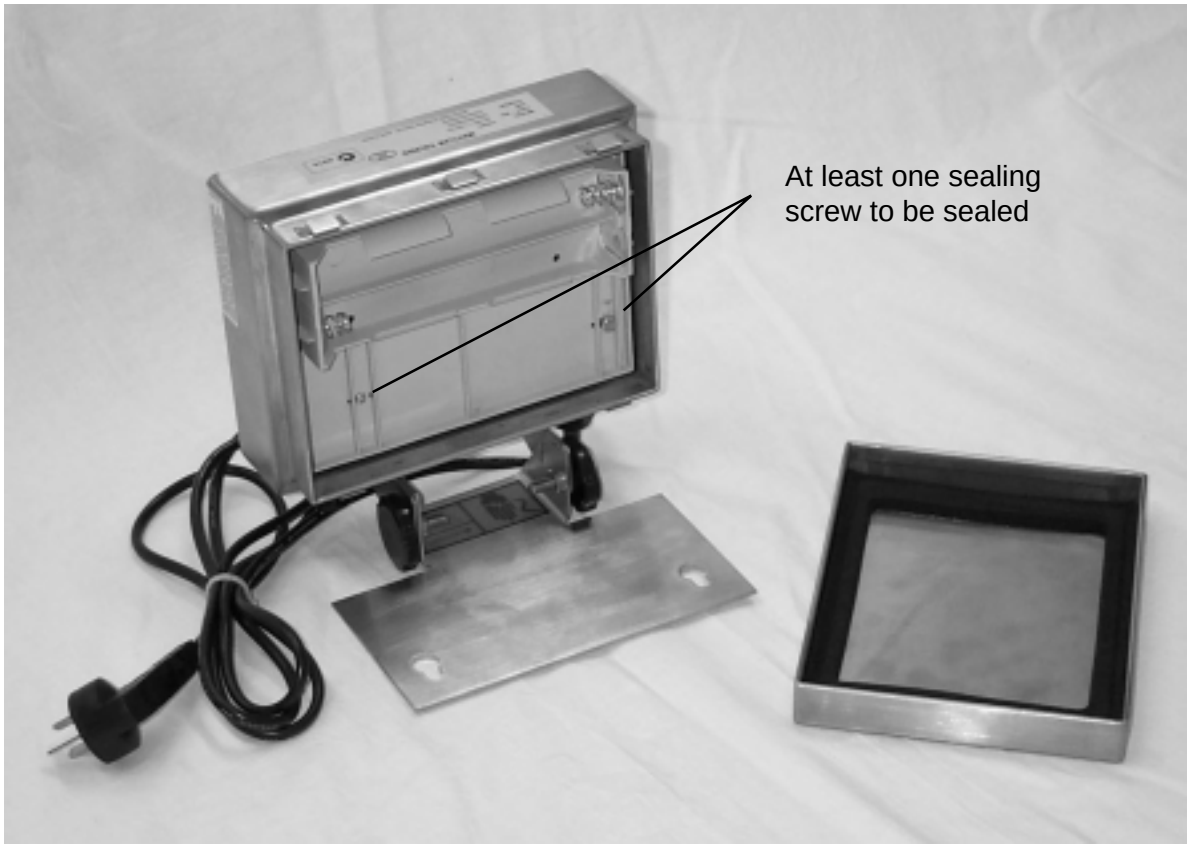
FIGURE S404 - 3

Showing Sealing of Mains-powered Hawke Instruments
(at least two labels are required)

FIGURE S404 - 4

Mettler Toledo Model Hawk Harsh Digital Indicator

FIGURE S404 - 5



Showing Sealing of Battery-powered Hawke Harsh Instruments