

National Standards Commission



Certificate of Approval

No 6/4C/48A

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

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

Mettler Model PM4800 Weighing Instrument

submitted by FSE Pty Limited
Unit 3, 149 Arthur Street
Homebush NSW 2140.

This Certificate is issued upon completion of a review of NSC approval No 6/4C/48.

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

A handwritten signature in black ink, appearing to read 'J. Birch', written in a cursive style.

CONDITIONS OF APPROVAL

This approval is subject to review on or after 1/4/96.

This approval expires in respect of new instruments on 1/4/97.

Instruments purporting to comply with this approval shall be marked NSC No 6/4C/48A 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 drawings and specifications 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.

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

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

DESCRIPTIVE ADVICE

Pattern: approved 14/3/91

A Mettler model PM4800 class II self-indicating weighing instrument of 4 100 g maximum capacity.

Variant: approved 14/3/91

1. Certain other models and capacities as listed in Tables 1 to 3.

Technical Schedule No 6/4C/48A describes the pattern and variant 1.

FILING ADVICE

The documentation for this approval comprises:

Certificate of Approval No 6/4C/48A dated 28/8/91

Technical Schedule No 6/4C/48A dated 28/8/91 (incl. Tables 1 to 3, and Test Procedure)

Figures 1 and 2 dated 28/8/91



National Standards Commission

TECHNICAL SCHEDULE No 6/4C/48A

Pattern: Mettler Model PM4800 Weighing Instrument

Submittor: FSE Pty Limited
Unit 3, 149 Arthur Street
Homebush NSW 2140.

1. Description of Pattern

A Mettler model PM4800 class II self-indicating weighing instrument (Figure 1) of 4 100 g maximum capacity with a verification scale interval (e) of 0.1 g and a scale interval (d) of 0.01 g. The scale interval (d) is only displayed for the first 800 g of the weighing range.

The instrument may be fitted with output sockets for the connection of peripheral and/or auxiliary devices. The instrument is approved for use over a temperature range of 10°C to 30°C, and must be so marked.

1.1 Zero and Tare

Zero setting and taring are accomplished by means of a common switch bar that sets zero to within $\pm 0.25e$, as indicated by the right-hand digit (d) which is differentiated.

Tare capacity is up to the maximum capacity of the instrument.

1.2 Additional Graphic Display

A clockface type display provides a graphic representation of the mass on the platter.

1.3 Adaptable Filtering

Filtering to reduce vibration effects etc. which may be changed by holding the control bar down.

1.4 Display Check

A display check is initiated whenever power is applied via the control bar.

1.5 Levelling

The instrument is provided with three feet, two of which are adjustable. Clearly visible to the user is a notice advising that the instrument must be level when in use.

1.6 Optional Mass Unit (or Display)

A facility to configure the instrument with another mass unit (or display), as follows:

- (a) CM, kg or oz tr (precious metals only).
- (b) GN, dwt, oz, ozt, lb, ct, or k - if the other mass unit is any of these the instrument shall be marked "GN ... k (as applicable) not for trade use" or "GN ... k (as applicable) for export use only". The scale interval, verification scale interval, maximum capacity and minimum capacity when used with these units (and CM, kg or oz tr) shall be marked in the vicinity of the reading face. The markings of the primary units shall be given in grams.
- (c) PCS: Piece counting - the mass of 10 pieces is set by placing the mass on the platter and holding the control bar down.
- (d) %: Percentage - the mass corresponding to 100% is set by placing the mass on the platter and holding the control bar down.

Note: The approval of functions b, c or d relates to the metrological performance only; inspectors are advised that the use of these functions must comply with the requirements of other statutory authorities.

1.7 Markings

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

Manufacturer's name or mark	
Serial number	
Accuracy class	Ⓜ and/or ⓂⓂ
NSC approval number	NSC No 6/4C/48A
Maximum capacity	Max g and/or CM *
Minimum capacity	Min g and/or CM *
Verification scale interval	e = g and/or CM *
Scale interval	d = g and/or CM #
Maximum subtractive tare	T = - g and/or CM
Special temperature limits	10°C - 30°C

* Repeated in the vicinity of each reading face.

Refer cl. 1.4 **Optional Mass Unit or (Display)**.

In addition, instruments are marked NOT FOR RETAIL COUNTER USE, NOT FOR TRADING DIRECT WITH THE PUBLIC, or similar wording.

1.8 Verification Provision

Provision is made for a verification mark to be applied.

2. Description of Variant 1

Certain other models and capacities as listed in Tables 1, 2 and 3.

Table 1 lists instruments which are similar to the pattern, including having the scale interval (d) only displayed for part of the weighing range.

The PJ series instruments (Tables 1 and 2) are not fitted with the additional graphic display nor the optional mass unit (or display).

Tables 2 and 3 list instruments which are similar to the pattern, but where the scale interval (d) is displayed for the full weighing range. Instruments listed in Table 3 are of the style shown in Figure 2.

Table 3 includes models which display (and are marked) in both g and CM units (models CM200 and PM400C); that Table also includes the model CJ150 which only uses the unit CM. The model CM200 does not have piece counting nor percentage facilities.

TEST PROCEDURE

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

Maximum Permissible Errors at Verification/Certification

The maximum permissible errors for increasing and decreasing loads, expressed in terms of verification scale interval (e), with the instrument adjusted to zero within $\pm 0.25e$ at no load, are:

- $\pm 0.5e$ for loads from 0 to 5 000e;
- $\pm 1.0e$ for loads over 5 000e up to 20 000e; and
- $\pm 1.5e$ for loads over 20 000e.

TABLE 1

Model	PM3000	PM4800	PM6	PM15	PM30	PM34	PJ600	PJ3600	PJ4000	PJ6
Maximum capacity	3100 g	4100 g	6100 g	16000 g	30000 g	30000 g	610 g	3100 g	4100 g	6000
Verif. scale interval (e)	0.1	0.1	1	1	1	1	0.1	0.1	0.1	1
Scale interval (d)	0.01	0.01	0.1	0.1	0.1	0.1	0.01	0.01	0.01	0.1
for first g	1	800	10	10	10	4000	1	600	1	10

Approved models and capacities, where the scale interval (d) is only displayed for part of the weighing range.

TABLE 2

Model	PM60	PM2000	PM4000	PM6000	PM11	PM16	PJ3000	PJ6000
Maximum capacity	610 g	2100 g	4100 g	6100 g	11000 g	16000 g	3100 g	6000 g
Verif. scale interval (e)	0.1	0.1	0.1	1	1	1	0.1	1
Scale interval (d)	0.0	0.01	0.01	0.1	0.1	0.1	0.01	0.1

Other approved models and capacities.

TABLE 3

Model	CM200	CJ150	PM400C	PM11-N	PM15-N	PM16-N	PM30-N
Maximum capacity	110 g	200 CM	400 g	2000 CM	11000 g	16000 g	30000 g
Verif. scale interval (e)	0.01	0.01	0.1	0.1	1	1	1
Scale interval (d)	(=e)	0.001	0.01	0.01	0.1	(=e)	(=e)

Other approved models and capacities, including some where the instrument is marked in g and CM, or CM only.

National Standards Commission



NOTIFICATION OF CHANGE

CERTIFICATE OF APPROVAL No 6/4C/48A

CHANGE No 1

The following changes are made to the approval documentation for the

Mettler Model PM4800 Weighing Instrument

submitted by FSE
Unit 3, 149 Arthur Street
Homebush NSW 2140.

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.

A handwritten signature in black ink, appearing to read 'J. Birch'.

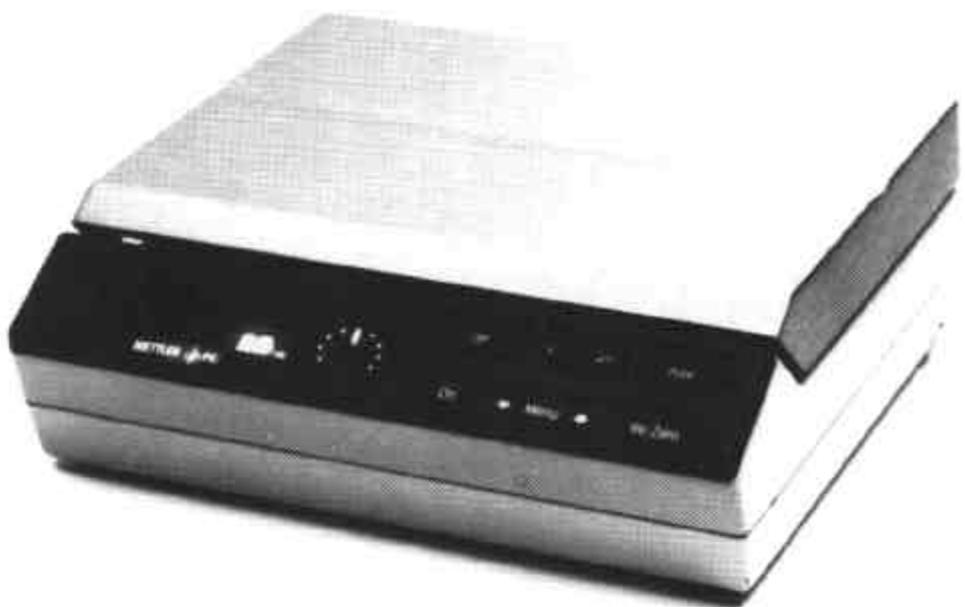
In Technical Schedule No 6/4C/48A dated 28/8/91, clause 1.1 **Zero and Tare** should be amended by changing the reference to zero setting to now read, in part, "... sets zero to within $\pm 0.5d$...", (rather than " $\pm 0.25e$ ").

FIGURE 6/4C/48A - 1



Mettler Model PM4800 Weighing Instrument

FIGURE 6/4C/48A - 2



Mettler Model PM11