

National Standards Commission



Supplementary Certificate of Approval

No S281

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

Ishida Model MTC-20 Digital Mass Indicator

submitted by Ishida Scales Mfg Co Ltd (Japan)
c/o PCC Systems
17/38-46 South Street
RYDALMERE NSW 2116

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.

CONDITIONS OF APPROVAL

This approval is subject to review on or after 1/10/96.

This approval expires in respect of new instruments on 1/10/97.

Instruments purporting to comply with this approval shall be marked NSC No S281 and only by persons authorised by the submitter.

Instruments incorporating a component purporting to comply with this approval shall be marked NSC No S281 in addition to the approval number of the instrument.

It is the submitter'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.

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

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.

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

DESCRIPTIVE ADVICE

Pattern: approved 30/9/91

. An Ishida model MTC-20 digital mass indicator.

Variant: approved 30/9/91

1. In an alternative housing and known as a model MTC-10.

Technical Schedule No S281 describes the pattern and variant 1.

FILING ADVICE

The documentation for this approval comprises:

Supplementary Certificate of Approval No S281 dated 20/4/92
Technical Schedule No S281 dated 20/4/92 (incl. Tables 1 & 2, and
Test Procedure)
Figure 1 dated 20/4/92



National Standards Commission

TECHNICAL SCHEDULE No S281

Pattern: An Ishida Model MTC-20 Digital Mass Indicator.

Submittor: Ishida Scales Mfg Co Ltd (Japan)
c/o PCC Systems
17/38-46 South Street
RYDALMERE NSW 2116

1. Description of Pattern

An Ishida model MTC-20 digital mass indicator (Figure 1) which may be fitted with output sockets for the connection of auxiliary and/or peripheral devices.

The pattern is approved for use with 3000 verification scale intervals (refer Table 1) but shall only be connected to instruments of the capacities listed in Table 2.

1.1 Zero

Zero is automatically set to within $\pm 0.25e$ whenever the instrument comes to rest within $\pm 0.5e$. If the instrument comes to rest outside that range but within the zero setting range, zero may be set by pressing the zero button.

1.2 Display Check

A display check is initiated whenever power is applied.

1.3 Tare

Instruments may be fitted with a semi-automatic subtractive taring device of up to the tare capacity listed in Table 2.

1.4 Verification/Certification Provision

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

1.5 Markings

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

Manufacturer's name or mark	
Serial number	
Accuracy class	III
Maximum capacity	Max..... *
Minimum capacity	Min *
Maximum subtractive tare	T = -
NSC approval numbers - indicator	NSC No S281
- other components #

* Repeated in the vicinity of each reading face.

May be located separately from the other markings.

2. Description of Variant 1

In alternative housings, including one of plastic in which case the pattern is known as a model MTC-10.

TABLE 1

Type: Ishida	MTC-20 (also MTC-10)
Maximum number of verification scale intervals	3000
Minimum sensitivity	1.5×10^{-3} mV/scale interval
Excitation voltage	12 V DC
Minimum load impedance	133 ohms
Maximum excitation current	90 mA

TABLE 2

Maximum Capacity	Verification Scale Interval	Tare Capacity
300 kg	0.1 kg	299.9 kg
600 kg	0.2 kg	599.8 kg
1500 kg	0.5 kg	1499.5 kg
3000 kg	1.0 kg	2999.0 kg
6000 kg	2.0 kg	5998.0 kg

TEST PROCEDURE

Instruments shall 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 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 $500e$;
- $\pm 1.0e$ for loads over $500e$ up to $2000e$; and
- $\pm 1.5e$ for loads over $2000e$.

National Standards Commission



NOTIFICATION OF CHANGE

VARIOUS CERTIFICATES OF APPROVAL

The following change is made to the approval documentation for various approvals

submitted by Ishida Scales Mfg Co. Ltd
44 Sanno-cho, Shogoin
Sakyo-ku Kyoto JAPAN.

In the Certificates and Technical Schedules for the approvals listed below, the name of the submitter should be changed to read;

"Ishida Co. Ltd" (the address remains unchanged)

NOTE: Only 'current' approvals are listed; not those that have expired or have been cancelled.

APPROVAL NUMBER	PATTERN
6/4C/62	MT-30W Weighing Instrument
6/4C/73	WL-600SS Weighing Instrument
6/4C/78	VEGA Weighing Instrument
6/4C/79	MG-3000 Weighing Instrument
6/4D/228	MS-5060SP Weighing Instrument
6/4D/250	Nova 150 Weighing Instrument
6/4D/262	Libra-150 Weighing Instrument
6/4D/263	Libra II Weighing Instrument
6/4D/264	AC-2000 Weighing Instrument
6/4D/265	IP-21EX Weighing Instrument
6/9C/227	MT-150W Weighing Instrument
S281	MTC-20 Digital Indicator

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.

FIGURE S281 - 1



Ishida Model MTC-20 Digital Indicator