Australian Government
Department of Industry and Science

National Measurement Institute

Certificate of Approval

NMI 6/4D/320

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.

ESPERA-WERKE Model ES 3000 Weighing Instrument

submitted by ESPERA-WERKE GmbH
Moltkestrasse 17-33
D-47004 DUISBURG
GERMANY

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 R 76, *Non-automatic weighing instruments, Parts 1 and 2*, dated July 2004.

This approval becomes subject to review on **1/02/20**, and then every 5 years thereafter.

DOCUMENT HISTORY

Rev	Reason/Details	Date
0	Pattern approved – interim certificate issued	27/01/05
1	Pattern approved – certificate issued	21/03/05
2	Variants 1 to 3 approved – interim certificate issued	19/05/09
3	Variants 1 to 3 approved – certificate issued	17/09/09
4	Pattern & variants 1 to 3 reviewed – notification of change issued	13/01/11
5	Pattern & variants 1 to 3 amended, reviewed & updated – variant 4 approved – certificate issued	24/07/15

CONDITIONS OF APPROVAL

General

Instruments purporting to comply with this approval shall be marked with pattern approval number 'NMI 6/4D/320' 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.

Special

Certain aspects of this instrument (in particular transaction record printing formats) are able to be configured by the user. Whilst NMI believes that acceptable formats can be achieved for typical basic sales modes, it is also possible for the instrument to be configured to produce unacceptable formats, and use of some formats may be inappropriate for different sales modes. It is the responsibility of the user to ensure that acceptable and appropriate formats are used in any particular situation.

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

Mario Zamora

TECHNICAL SCHEDULE No 6/4D/320

1. Description of Pattern approved on 21/01/05

An ESPERA-WERKE model ES 3000 multi-interval class (III) self-indicating price-computing weighing instrument (Figure 1) with a verification scale interval (e_1) of 0.001 kg up to 3 kg, with a verification scale interval (e_2) of 0.002 kg from 3 kg up to 6 kg, and with a verification scale interval (e_3) of 0.005 kg from 6 kg up to the maximum capacity of 15 kg.

Instruments have unit price to $999.99/kg, price to $99999.99, a product look up (PLU) facility, and may be fitted with output sockets (output interfacing capability) for the connection of auxiliary and/or peripheral devices.

Instruments are comprised of a model ESC 904 terminal/indicator fitted with a single-sided touch screen LCD display and keyboard, a model ESW 2104 basework fitted with a model AD104-R5 A/D module and a single model 15 load cell of 20 kg capacity, and a printer. The instrument examined utilised a model ESD 104 label printer – alternative printing units may be used, i.e. ESD **4. (Refer to the Special Condition of Approval.)

Instruments are marked ‘NOT FOR TRADING DIRECT WITH THE PUBLIC’ (or similar wording).

1.1 Zero

Zero is automatically corrected to within ±0.25e_1 whenever power is applied and whenever the instrument comes to rest within 0.5e of zero.

The initial zero-setting device of the pattern has a nominal range of not more than 20% of the maximum capacity of the instrument.

The instrument has a semi-automatic zero-setting device with a nominal range of not more than 4% of the maximum capacity of the instrument.

1.2 Tare

A semi-automatic subtractive tare device and/or a keyboard-entered pre-set subtractive tare device, each of up to Max_1 capacity, may be fitted.

A display for tare values is provided.

Pre-set tare values may be associated with product look up (PLU) items.

1.3 Power Supply

The instrument operates from mains AC power (240 V AC nominal).

1.4 Levelling

The instrument is provided with adjustable feet and adjacent to the level indicator is a notice advising that the instrument must be level when in use.

1.5 Sealing Provision

Provision is made for the calibration adjustments in the basework to be sealed by sealing at least one of the load receptor securing screws on the underside of the basework and by sealing the small hole on the front of the basework that provides access to the calibration switch (Figure 2).

1.6 Verification Provision

Provision is made for the application of a verification mark.

1.7 Descriptive Markings and Notices

Instruments carry the following markings:

Manufacturer's mark, or name written in full	ESPERA-WERKE GmbH
Indication of accuracy class	(III)
Pattern approval number for the instrument	NMI 6/4D/320
Maximum capacity	*Max* ..../..../.... kg *
Minimum capacity	*Min* ..... kg *
Verification scale interval	*e* = .../...../..... kg *
Maximum subtractive tare	*T* = - ..... kg
Serial number of the instrument	.....

* These markings shall also be shown near the display of the result if they are not already located there.

Instruments are marked 'NOT FOR TRADING DIRECT WITH THE PUBLIC' (or similar wording).

2. Description of Variant 1 approved on 19/05/09

A model ES 3060 which is similar to the pattern, however this model uses a model ESW 2204 basework of 60 kg maximum capacity. The model ES 3060 is approved as a multi-interval instrument having either two or three intervals (partial weighing ranges) as listed in Table 1 below.

The model ESW2204 basework uses an Espera model 100 load cell.

3. Description of Variant 2 approved on 19/05/09

A model ES2060 (part of the ESPERA-WERKE ES 2000 series) which is similar to the ES 3000 series (the pattern and variant 1), however the instrument uses a model ESC 944 terminal/indicator and a model ESW basework which provides an RS232 interface (to connect to the ESC 944) rather than the 'CAN' interface used for the pattern.

The model ES 2060 is approved as a multi-interval instrument having either two or three intervals (partial weighing ranges) as listed in Table 1 below.

The model ESW2204 basework uses an Espera model 100 load cell.

TABLE 1

Instrument Model	Basework Model	Verification Scale Intervals e_1 / e_2 / …	Maximum Capacity Max_1 / … / Max
ES 3060	ESW 2204	5 / 10 / 20 g	15 / 30 / 60 kg
ES 3060	ESW 2204	10 / 20 g	30 / 60 kg
ES 2060	ESW 2214	5 / 10 / 20 g	15 / 30 / 60 kg
ES 2060	ESW 2214	10 / 20 g	30 / 60 kg

4. Description of Variant 3 approved on 19/05/09

The model ES 2012 (part of the ESPERA-WERKE ES 2000 series) which is similar to the model ES 2060 described in Variant 2.

The model ES 2012 is approved as a multiple range instrument having two intervals (partial weighing ranges) as listed in Table 2 below.

The model ESW2144 basework uses an HBM model SP4C3 load cell.

TABLE 2

Instrument Model	Basework Model	Verification Scale Intervals e_1 / e_2	Maximum Capacity $Range_1$ / $Range_2$
ES 2012	ESW 2144	2 / 5 g	6 / 12 kg

5. Description of Variant 4 approved on 24/07/15

The pattern and variants using a model ESC964 IP terminal/indicator (Figure 3).

TEST PROCEDURE

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

The instrument shall not be adjusted 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 the *National Trade Measurement Regulations 2009*.

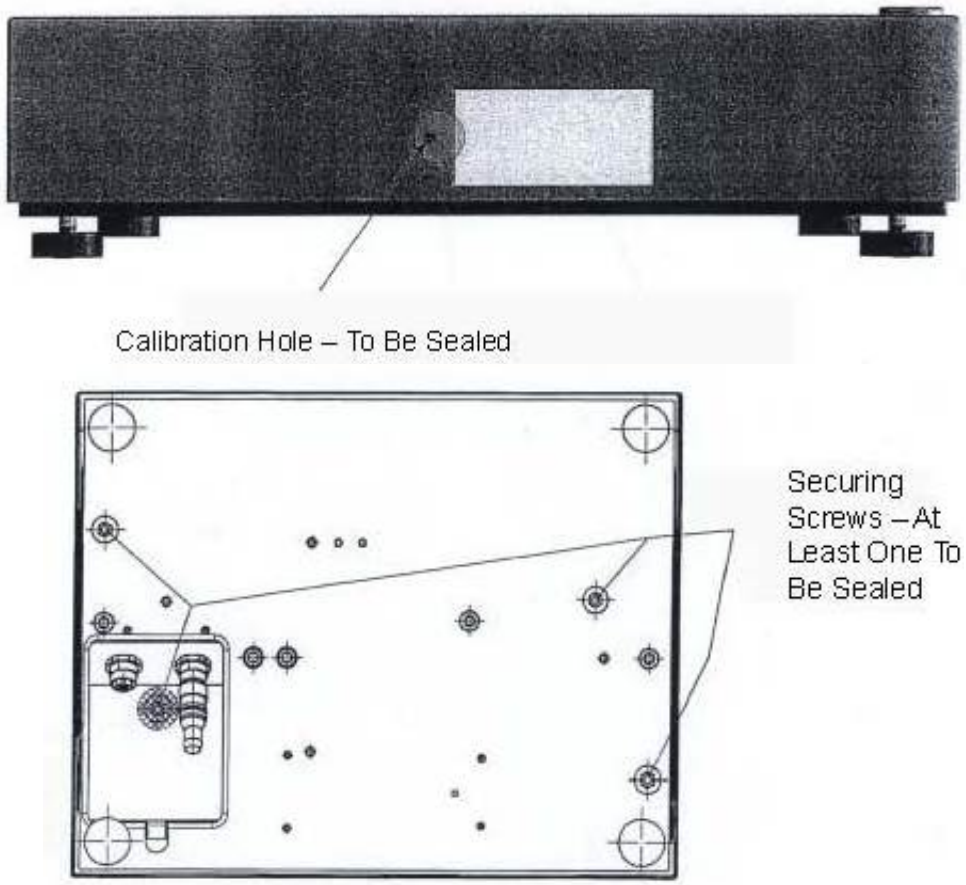
Tests

For multi-interval and multiple range instruments with verification scale intervals of e_1, e_2 …, apply e_1 for zero adjustment, and maximum permissible errors apply e_1, e_2 …, as applicable for the load.

FIGURE 6/4D/320 – 1

ESPERA-WERKE Model ES 3000 Weighing Instrument (Pattern)

FIGURE 6/4D/320 – 2



Typical Sealing Provision

FIGURE 6/4D/320 – 3

ESPERA-WERKE Model ESC964 IP Terminal/Indicator (Variant 4)

~ End of Document ~