

Australian Government

National Measurement Institute

Bradfield Road, West Lindfield NSW 2070

Cancellation

Certificate of Approval No 6/9C/295

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

Excell Model FSSPW-150 Weighing Instrument

submitted by

South East Qld Scales 7/10 Enterprise Street Ashmore QLD 4214

has been cancelled in respect of new instruments as from 1 December 2013.

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



Australian Government

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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

Excell Model FSSPW-150 Weighing Instrument

submitted by South East Qld Scales 7/10 Enterprise Street Ashmore QLD 4214.

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.

CONDITIONS OF APPROVAL

This approval becomes subject to review on 1 June 2013, and then every 5 years thereafter.

Instruments purporting to comply with this approval shall be marked with approval number 'NMI 6/9C/295' and only by persons authorised by the submittor.

Certificate of Approval No 6/9C/295

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.

The National Measurement Institute reserves the right to examine any instrument or component 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.

The values of the performance criteria (maximum number of scale intervals etc.) applicable to the instrument shall be within the limits specified herein and in any approval documentation for the components where they are approved separately.

This approval shall NOT be used in conjunction with General Certificate No 6B/0.

DESCRIPTIVE ADVICE

Pattern: approved 29 May 2008

• An Excell model FSSPW-150 class ID self-indicating non-automatic weighing instrument of 150 kg maximum capacity.

Variants: approved 29 May 2008

- 1. Certain other models and capacities of the FSSPW series as listed in Table 1.
- 2. Any basework of this approval with a compatible approved indicator.

Technical Schedule No 6/9C/264A describes the pattern and variants 1 & 2.

FILING ADVICE

The documentation for this approval comprises:

Certificate of Approval No 6/9C/295 dated 4 June 2008 Technical Schedule No 6/9C/295 dated 4 June 2008 (incl. Table 1 and Test Procedure) Figures 1 and 2 dated 4 June 2008

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

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TECHNICAL SCHEDULE No 6/9C/295

Pattern: Excell Model FSSPW-150 Weighing Instrument

Submittor: South East Qld Scales 7/10 Enterprise Street Ashmore QLD 4214

1. Description of Pattern

An Excell model FSSPW-150 class ID self-indicating non-automatic weighing instrument (Figure 1) of 150 kg maximum capacity with a verification scale interval of 0.05 kg.

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

Power may be supplied either:

- by mains AC power;
- by the internal rechargeable 6 V DC sealed lead-acid battery; or
- via a 9 V DC AC/DC mains adaptor which also serves to recharge the internal battery.

Note: The AC/DC mains adaptor supplied was a model MKD-091000SA power supply (9 V DC, 1000 mA), identified by the C-tick number N136; the submittor should be consulted regarding the acceptability of alternative power supply units.

Instruments are not for trading direct with the public, and are so marked.

1.1 Basework

The Excell model FSSPW-150 basework has the load receptor directly supported by a single Tedea Huntleigh model 1042 class C3 load cell of 200 kg maximum capacity.

The load receptor has maximum nominal dimensions of 420 × 520 mm.

Note: The basework is intended to be water resistant and includes a cover over the load cell, with a flexible membrane.

1.2 Indicator

An Excell model PW digital indicator (Figure 2) is used. The indicator is mounted on a column attached to the basework.

The indicator may be fitted with a target weighing function ('HI OK LO') and a counting ('Pcs') function. These functions are not approved for trade use.

The instrument has a 'UNITS' button, which may operate in conjunction with management functions (e.g. to select counting mode). This function shall not permit selection of alternative weighing units (i.e. it shall not be possible to change the units to other than kg, such as lb or oz).

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1.2.1 Zero

Zero is automatically corrected to within $\pm 0.25e$ 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 semi-automatic zero-setting device has a nominal range of not more than 4% of the maximum capacity of the instrument.

1.2.2 Tare

The instrument is fitted with a semi-automatic subtractive taring device of up to the maximum capacity of the instrument. A Net/Gross button is provided that allows switching of indication between net and gross values.

1.2.3 Display Check

A display check is initiated whenever power is applied.

1.3 Leveling

Instruments are provided with adjustable feet and a level indicator, adjacent to which is a level notice stating 'Instrument must be level when in use', or similar wording.

1.4 Sealing Provision

Provision is made for access to the calibration adjustments to be prevented by use of a removable jumper within the indicator casing. To ensure that the instrument will be properly secured:

- Turn the instrument off and then on.
- If the instrument displays '0.00 kg' after the initial display check, then the instrument is in normal weighing mode. If the instrument displays '01 CSP', then the instrument is in a calibration mode sealing in this mode may not properly secure the instrument.
- In normal weighing mode, press the NET/GROSS and ON/ZERO buttons at the same time the display should show '01 FnC'.
- Press the UNIT button three times the display should show '02 EC'.
- Press the TARE button the instrument should 'beep' twice. 'If this does not occur (e.g. a flashing value is displayed), the instrument may have entered its calibration mode, indicating that it has not been correctly secured.

Once the above checks have been carried out, the indicator can be sealed by restricting access within the indicator housing; either by use of lead and wire type seals through sealing screws at the back of the indicator, or by use of destructible adhesive labels covering the join in the indicator housing on each side of the indicator (Figure 2).

1.5 Verification/Certification Provision

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

1.6 Descriptive Markings and Notices

Instruments carry the following markings:

Manufacturer's mark, or name written in full	Excell Pre	cision	Co, Taiwan
Name or mark of manufacturer's agent	South Eas	t QLE) Scales
Indication of accuracy class	\blacksquare		
Maximum capacity	Max	kg	*
Minimum capacity	Min	kg	*
Verification scale interval	e =	kg	*
Tare capacity (if less then Max)	<i>T</i> =	kg	#
Serial number of the instrument			
Pattern approval mark for the instrument	6/9C/295		

- * These markings shall also be shown near the display of the result if they are not already located there.
- # Required only if the maximum subtractive tare capacity of the instrument is not equal to the maximum capacity of the instrument.

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.

2. Description of Variants

2.1 Variant 1

Certain other models and capacities of the FSSPW series as listed in Table 1.

2.2 Variant 2

With the baseworks as listed in Table 1, which are approved for single-interval operation only, used with a compatible NMI-approved (by Supplementary Certificate) indicator provided the conditions set out below are met.

The conditions to be met are:

- The excitation voltage used is within the range approved for the baseworks.
- The maximum load applied to the basework (live load plus any dead load) does not exceed the load cell maximum capacity.
- The verification scale interval is not less than the minimum value specified.
- The number of verification scale intervals in each range is less than or equal to the n_{max} value specified.

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• The signal voltage per verification scale interval is no less than the minimum sensitivity value per verification scale interval for the indicator (as specified in the approval documentation for the indicator), i.e.

Indicator Sensitivity \leq 1000 × Ex × LC_Sens × *e* / *E*_{max}

where Ex = Excitation from indicator (V)

LC_Sens = Load cell sensitivity (mV/V)

 E_{max} = Load cell maximum capacity (nominal) (kg)

e = verification scale interval of the instrument (kg)

Indicator Sensitivity = Minimum sensitivity value per verification scale interval for the indicator (μ V)

TEST PROCEDURE

Instruments should be tested in accordance with any relevant tests specified in the Uniform Test Procedures.

Maximum Permissible Errors at Verification/Certification

The maximum permissible errors are specified in Schedule 12 of the *National Measurement Regulations 1999.*

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	FSSPW-6	FSSPW-15	FSSPW-30	FSSPW-60	FSSPW-150
Maximum capacity	6 kg	15 kg	30 kg	60 kg	150 kg
Maximum platform size in mm	250 x 300	250 x 300	300 x 400	300 x 400	420 x 520
Verification scale interval, <i>e</i>	0.002 kg	0.005 kg	0.01 kg	0.02 kg	0.05 kg
Maximum number of verification scale interval, <i>n_{max}</i>	3000	3000	3000	3000	3000
Load cell model (Tedea Huntleigh)	1042	1042	1042	1042	1042
Load cell classification	C3	C3	C3	C3	C3
Load cell maximum capacities (<i>Emax</i>)	10 kg	20 kg	50 kg	75 kg	200 kg
Minimum values of verification scale interval for basework (<i>V_{min}</i> of load cell)	0.002 kg	0.005 kg	0.01 kg	0.02 kg	0.05 kg
Load cell sensitivity at <i>Emax</i>	2 mV/V				
Input impedance (ohms)	415	415	415	415	415
Excitation voltage (Maximum)	15 V				
Cable length (±0.1 m)	2 m(#)	2 m(#)	2 m(#)	2 m(#)	2 m (#)
Number of leads (plus shield)	4	4	4	4	4

TABLE 1

(#) The load cell cable length supplied with the basework shall not be shortened.

Approved Models of the FSSPW Series

FIGURE 6/9C/295 - 1



Excell Model FSSPW-150 Weighing Instrument

FIGURE 6/9C/295 - 2





Excell Model PW Digital Indicator (including typical sealing)