

# National Standards Commission



## Certificate of Approval

**No 6/4C/93**

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

Serac Model FCS Weighing Instrument

submitted by Simon Engineering (Australia) Pty Ltd  
33 Paul Street  
North Ryde NSW 2113.

**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.

### CONDITIONS OF APPROVAL

This approval is subject to review on or after 1 January 2001.  
This approval expires in respect of new instruments on 1 January 2002.

Instruments purporting to comply with this approval shall be marked NSC No 6/4C/93 and only by persons authorised by the submittor.

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

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.

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

#### DESCRIPTIVE ADVICE

**Pattern:** approved 20 December 1995

. A Serac model FCS weighing instrument.

Technical Schedule No 6/4C/93 describes the pattern.

#### FILING ADVICE

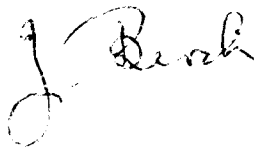
The documentation for this approval comprises:

Certificate of Approval No 6/4C/93 dated 11 March 1996

Technical Schedule No 6/4C/93 dated 11 March 1996 (incl. Test Procedure)

Figures 1 to 3 dated 11 March 1996

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.





## National Standards Commission

### TECHNICAL SCHEDULE No 6/4C/93

**Pattern:** Serac Model FCS Weighing Instrument.

**Submitter:** Simon Engineering (Australia) Pty Ltd  
33 Paul Street  
North Ryde NSW 2113.

#### 1. Description of Pattern

A Serac model FCS weighing instrument (Figure 1).

##### 1.1 Basework

The instrument is fitted with twelve load receptors mounted on a rotary table (Figure 2). Each receptor is of 1000 g maximum capacity and has a verification scale interval of 1 g.

Containers of 1000 mL capacity are conveyed onto the load receptors, tared, and then filled with liquid to a preset mass value.

##### 1.2 Load Cell

A Serac model E-4 load cell of 7.5 kg capacity is fitted to each load receptor.

##### 1.3 Indicator

A Serac model FCS digital indicator (Figure 3) has facilities for the setting of various filling sequences, alarms, and parameters, and can provide various management control and reporting functions.

The net mass is calculated after filling, taking into account the tared mass of the containers.

**NOTE:** This net mass is later converted into a volume; this conversion is subject to the requirements of the relevant packaging legislation of the state or territory in which the instrument is located.

The indicator will display the mass on each receptor (on command when in Calibration Mode) for verification/certification purposes.

##### 1.3.1 Tare

Each receptor is tared automatically before each filling. Zero indication and an external zero setting device are only provided in Calibration Mode.

#### 1.4 Markings

Instruments are marked with the following data, together in one location on each basework and on the indicator:

Manufacturer's name or mark	
Serial number	
NSC approval number	NSC No 6/4C/93
Accuracy class	III
Maximum capacity	Max ..... kg *
Minimum capacity	Min ..... kg *
Verification scale interval	e = ..... kg *

\* These are repeated adjacent to each reading face.

#### 1.5 Verification/Certification Provision

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

#### 1.6 Sealing Provision

Provision is made for the calibration adjustments to be sealed by means of destructible labels on the load cell access doors and on indicator panel door.

### TEST PROCEDURE

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

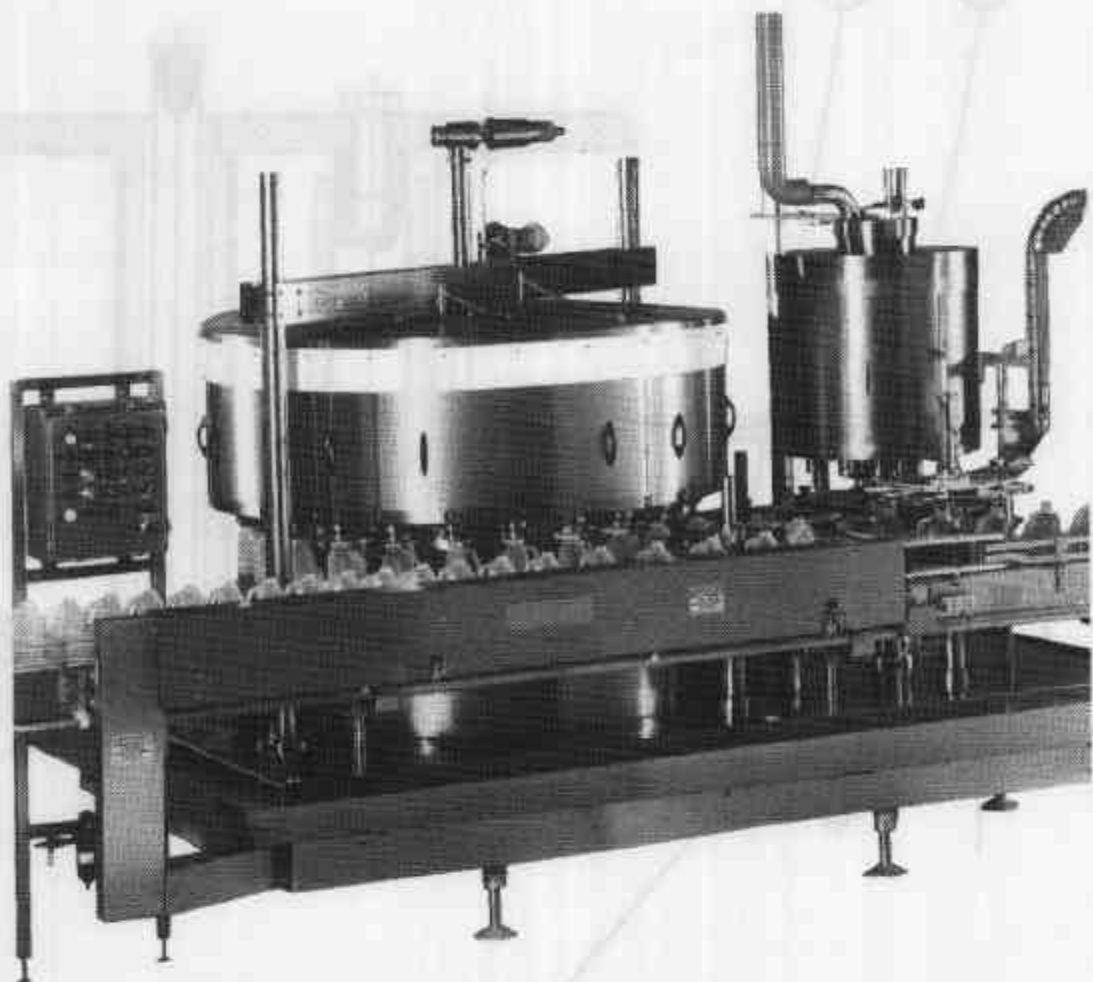
**NOTE:** Test indications displaying mass are only available when in Calibration Mode, for the purposes of verification/certification.

#### 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:

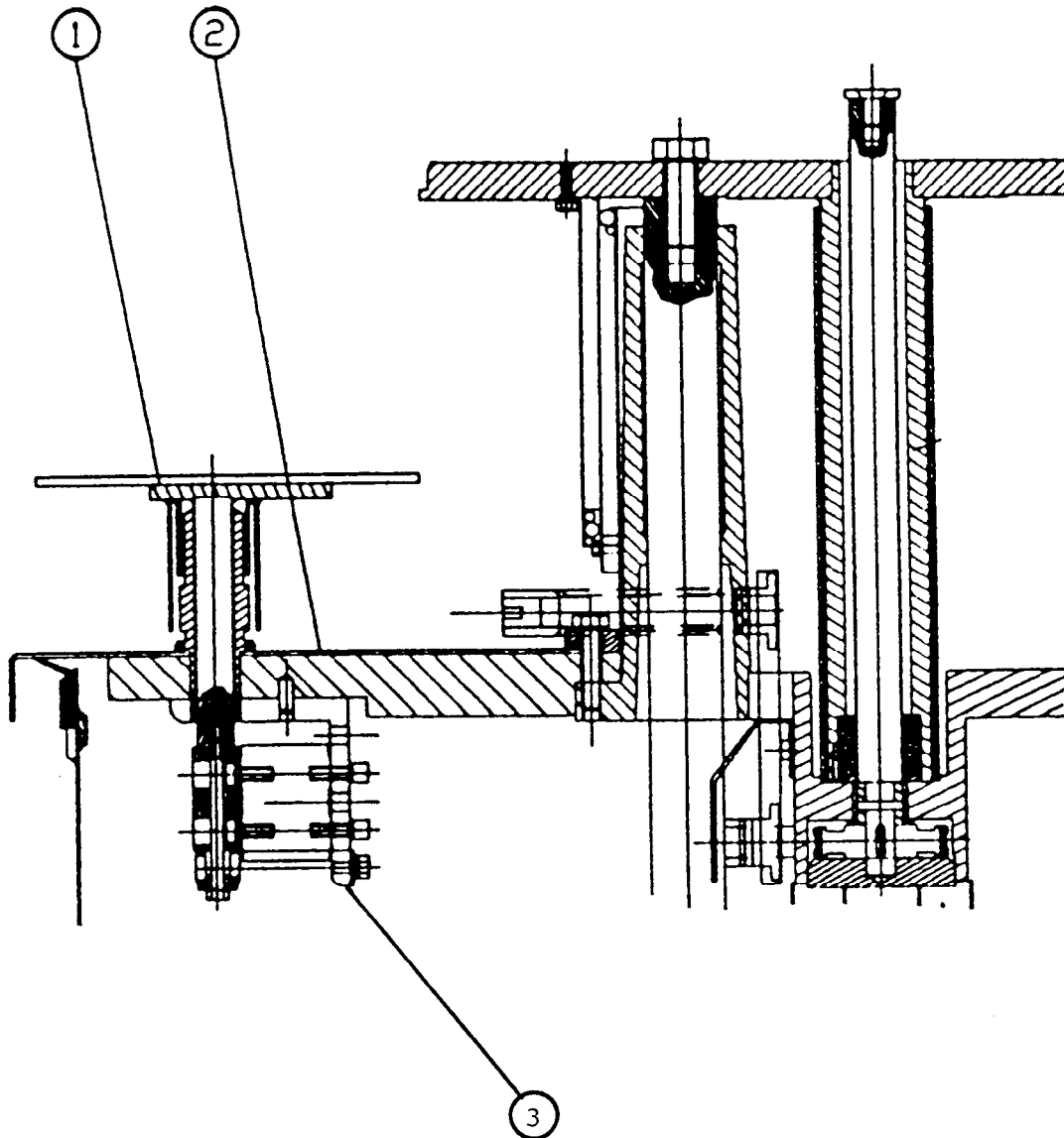
- $\pm 0.5e$  for loads from 0 to  $500e$ ; and
- $\pm 1.0e$  for loads over  $500e$ .

FIGURE 6/4C/93 - 1



Serac Model FCS Weighing Instrument

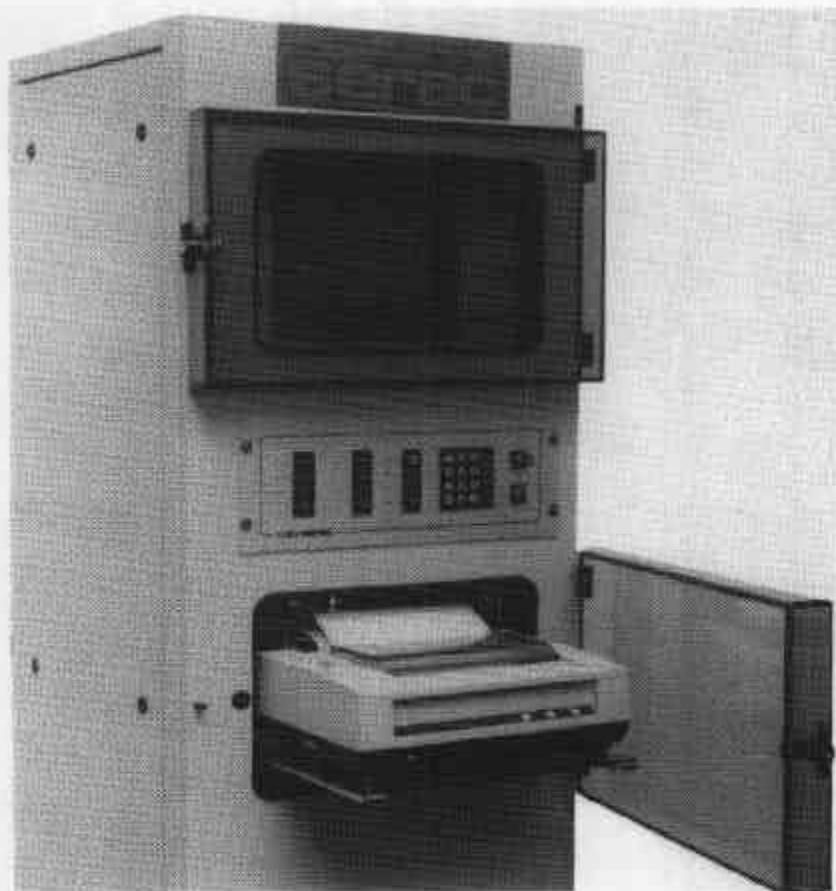
FIGURE 6/4C/93 - 2



- 1. Load Receptor
- 2. Rotary Frame
- 3. Load Cell and Mounting

A Load Receptor Including Load Cell Mounting

FIGURE 6/4C/93 - 3



Serac Model FCS Indicator