



Bradfield Road, West Lindfield NSW 2070

Certificate of Approval

No 6/9C/279

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.

Nuweigh Model JAC-929 Weighing Instrument

submitted by Newcastle Weighing Services Pty Ltd
 104-110 Hannell Street
 Wickham NSW 2293

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 1/03/20, and then every 5 years thereafter.

DOCUMENT HISTORY

Rev	Reason/Details	Date
0	Pattern & variants 1 & 2 approved – interim certificate issued	23/02/04
1	Pattern & variants 1 & 2 approved – certificate issued	19/03/04
2	Variant 3 approved – certificate issued	14/02/06
3	Pattern (Table 1) amended – notification of change issued	30/06/06
4	Variants 4 to 7 approved – certificate issued	25/09/06
5	Variants 8 & 9 approved – interim certificate issued	30/04/07
6	Variants 8 & 9 approved – certificate issued	10/05/07
7	Pattern (Markings) amended – notification of change issued	15/10/07
8	Pattern & variants 1 to 9 reviewed – variant 10 approved – certificate issued	9/11/09
9	Variants 11 & 12 approved – certificate issued	30/08/10
10	Pattern & variants 1 to 12 updated – variant 13 approved – certificate issued	11/06/13
11	Pattern & variants 1 to 13 reviewed – variant 14 approved – certificate issued	28/05/15

CONDITIONS OF APPROVAL

General

Instruments purporting to comply with this approval shall be marked with pattern approval number 'NMI (or NSC) 6/9C/279' and only by persons authorised by the submitter.

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 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.

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.

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 6/9C/279

1. Description of Pattern **approved on 19/03/04**

A Nuweigh model JAC-929 self-indicating weighing instrument (Table 1 and Figure 1) with a maximum capacity of 150 kg and 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.

1.1 Basework

The Nuweigh model JAC-929 basework (Figure 2) has the load receptor directly supported by a single load cell. The load receptor has maximum nominal dimensions of 420 × 520 mm.

1.2 Load Cell

A Tedea Huntleigh model 1263 class C3 load cell of 200 kg maximum capacity is used.

1.3 Indicator

A Nuweigh model JAC-101 digital indicator is used (Figure 1). The indicator may be attached directly to the base or mounted on a column; it may also be located remotely.

The model JAC-101 is also described in the documentation of NSC approval No S419.

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

1.3.2 Tare

A semi-automatic subtractive taring device of up to the maximum capacity of the instrument may be fitted.

1.3.3 Display Check

A display check is initiated whenever power is applied.

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 Verification Provision

Provision is made for the application of a verification mark.


1.6 Sealing Provision

Provision is made for the calibration adjustments to be sealed as described in the approval documentation for the indicator.

For the Nuweigh model JAC-101 digital indicator, provision is made for the calibration adjustments to be sealed by the use of destructible adhesive labels over the join between the front and back sections of the indicator housing, in two opposing locations.

1.7 Descriptive Markings and Notices

Instruments are marked with the following data, together in one location, in the form shown at right:

Manufacturer's mark, or name written in full	Newcastle Weighing Services Pty Ltd
Indication of accuracy class	
Pattern approval number for the instrument	NMI (or NSC) 6/9C/279
Maximum capacity	<i>Max</i> kg #1
Minimum capacity	<i>Min</i> kg #1
Verification scale interval	<i>e</i> = kg #1
Maximum subtractive tare	<i>T</i> = - kg #2
Serial number of the instrument

#1 These markings are also shown near the display of the result if they are not already located there.

#2 This marking is required if *T* is not equal to *Max*.

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 Variant 1

approved on 19/03/04

Certain other models of the JAC-929 and JAC-939 series as listed in Table 1.

3. Description of Variant 2

approved on 19/03/04

Certain baseworks of this approval used with a compatible approved (by Supplementary Certificate) indicator provided the conditions set out below are met.

In addition to the markings specified in clause **1.7 Descriptive Markings and Notices**, instruments are marked with the NMI approval number for the indicator used, plus relevant markings (*Max*, *Min*, *e*) where appropriate for multi-interval or multiple range instruments together in the same location.

The approved baseworks and their limiting characteristics are given in Table 1.

The conditions to be met are given below, and include calculations using the following terms:

Ex = Excitation from indicator (V)

LC_Sens = Load cell sensitivity (mV/V)

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

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

e = verification scale interval of the instrument (kg). ***In the case of multi-interval or multiple range instruments, any reference to 'e' refers to the smallest verification scale interval (i.e. e_1).***

e_1, e_2, \dots = verification scale interval of each range for multiple range instruments (or partial weighing ranges for multi-interval instruments), e_1 refers to the smallest verification interval.

Max = the maximum capacity of the instrument. This refers to the maximum capacity of the highest range (i.e. Max_r for multiple range instruments).

Max_r = the maximum capacity of the instrument for a multiple range instrument, i.e. the maximum capacity of the highest range.

Max₁ Max₂ ... = the maximum capacity of the instrument for a multiple range instrument, i.e. the maximum capacity of the highest range.

n_{LC} = the maximum number of verification intervals for which the load cell or basework is approved (e.g. 3000 for a 'class C3' load cell).

DR = dead load return value for the load cell. Note: Many load cells do not have a specified DR value.

The conditions 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. ***In the case of multi-interval or multiple range instruments, the verification scale interval refers to the smallest verification scale interval (i.e. e_1).***
- The number of verification scale intervals is less than or equal to the n_{max} value specified. ***In the case of multi-interval or multiple range instruments, the number of verification scale intervals refers to the largest number in any weighing range or partial weighing range (i.e. the largest of $Max_1/e_1, Max_2/e_2$ etc).***
- The signal voltage per verification scale interval is not less than the minimum sensitivity value per verification scale interval for the indicator (as specified in the approval documentation for the indicator), i.e.

$$\text{Indicator Sensitivity} \leq 1000 \times Ex \times LC_Sens \times e / E_{max}$$

Additional requirement for multi-interval operation:

In the case of indicators which are configured to form a multi-interval weighing instrument the instrument shall comply with one of the following conditions:

(i) ***The smallest verification scale interval (e_1) shall satisfy the following:***

$$e_1 \geq Max/n_{LC}$$

(ii) ***Or, the smallest verification scale interval (e_1) shall satisfy the following:***

$$e_1 \geq 2 \cdot DR \cdot Max/E_{max}$$

Of course (ii) cannot apply where a value of 'Deadload return' DR is not given.

Additional requirement for multiple range operation:

In the case of indicators which are configured to form a multiple range weighing instrument the instrument shall comply with one of the following conditions:

- (i) The smallest verification scale interval (e_1) shall satisfy the following:**

$$e_1 \geq 0.4 \text{ Max}_r/n_{LC}$$

- (ii) Or, the smallest verification scale interval (e_1) shall satisfy the following:**

$$e_1 \geq DR. \text{Max}_r/E_{max}$$

Of course (ii) cannot apply where a value of 'Deadload return' DR is not given.

4. Description of Variant 3

approved on 14/02/06

Certain model baseworks of the Nuweigh JAC-949 series. The baseworks have the same specifications as the JAC-929 series listed in Table 1 but are of waterproof construction.

The Tedea Huntleigh model 1263 class C3 load cell is now mounted under an ABS plastic protective cover and the basework frame is made of stainless steel (Figure 3).

5. Description of Variant 4

approved on 25/09/06

The following model JAC-929 instruments, with load receptors of maximum nominal dimensions of 420 mm x 520 mm.

- (i) JAC-929, Max = 150 kg, $e = 0.05$ kg using a Tedea Huntleigh 1263 load cell of 150 kg capacity.**
- (ii) JAC-929, Max = 300 kg, $e = 0.1$ kg using a Tedea Huntleigh 1263 load cell of 300 kg capacity.**

These instruments are NOT approved to be used with alternative indicators.

6. Description of Variant 5

approved on 25/09/06

Certain model baseworks of the JAC-949 series as listed in Table 2.

These baseworks may be used with a compatible approved (by Supplementary Certificate) indicator provided under the same conditions as described in variant 2.

7. Description of Variant 6

approved on 25/09/06

Certain model baseworks of the JAC-949H series as listed in Table 3.

The model JAC-949H series use Tedea Huntleigh model 1130 Class C6 load cells.

These baseworks may be used with a compatible approved (by Supplementary Certificate) indicator provided under the same conditions as described in variant 2.

8. Description of Variant 7 **approved on 25/09/06**

The following model JAC-929 multiple range instruments, with load receptors of maximum nominal dimensions of 420 mm × 520 mm.

- (i) JAC-929, $Max_1 = 60$ kg, $e_1 = 0.02$ kg, $Max_2 = 150$ kg, $e_2 = 0.05$ kg using a Tedea Huntleigh 1263 load cell of 150 kg capacity.
- (ii) JAC-929, $Max_1 = 150$ kg, $e_1 = 0.05$ kg, $Max_2 = 300$ kg, $e_2 = 0.1$ kg using a Tedea Huntleigh 1263 load cell of 300 kg capacity.

The multiple range features of the JAC101 indicator used in these instruments are as described in the documentation of approval NSC S419 and approval NMI S524, respectively.

These instruments are NOT approved to be used with alternative indicators.

9. Description of Variant 8 **approved on 10/05/07**

Certain models of the JAC-959 series as listed in Table 4. The baseworks are similar to the model JAC-949 basework shown in Figure 3 but the Tedea Huntleigh model 1510 load cell is used without an ABS plastic protective cover.

The load receptors have maximum nominal dimensions of 420 mm × 520 mm.

These baseworks may be used with a compatible approved (by Supplementary Certificate) indicator provided under the same conditions as described in variant 2.

10. Description of Variant 9 **approved on 10/05/07**

The following model JAC-959 multiple range instruments, with load receptors of maximum nominal dimensions of 420 mm × 520 mm.

- (i) JAC-959, $Max = 30$ kg, $e_1 = 0.01$ kg, $Max_2 = 60$ kg, $e_2 = 0.02$ kg using a Tedea Huntleigh 1510 load cell of 100 kg capacity; and
- (ii) JAC-959, $Max_1 = 150$ kg, $e_1 = 0.05$ kg, $Max_2 = 300$ kg, $e_2 = 0.05$ kg using a Tedea Huntleigh 1510 load cell of 500 kg capacity.

The multiple range features of the JAC101 indicator used in these instruments are as described in the documentation of approval NSC S419 and approval NMI S524, respectively.

These instruments are NOT approved to be used with alternative indicators.

11. Description of Variant 10 **approved on 9/11/09**

Any basework of this approval now constructed using rounded tubular frame as shown in Figure 4.

12. Description of Variant 11 **approved on 30/08/10**

Certain models of the JAC-959 series as listed in Tables 5 and 6. The baseworks use a Zemic model BM6G load cell (Figure 5).

The load receptors have maximum nominal dimensions of 600 mm × 800 mm.

These baseworks may be used with a compatible approved (by Supplementary Certificate) indicator provided under the same conditions as described in variant 2.

13. Description of Variant 12

approved on 30/08/10

The following model JAC-959 multiple range instruments, with load receptors of maximum nominal dimensions of 600 mm x 800 mm.

- (i) $Max_1 = 30$ kg, $e_1 = 0.01$ kg, $Max_2 = 60$ kg, $e_2 = 0.02$ kg, $Max_3 = 90$ kg, $e_3 = 0.05$ kg using a Zemic model BM6G load cell of 100 kg capacity; and
- (ii) $Max_1 = 60$ kg, $e_1 = 0.02$ kg, $Max_2 = 150$ kg, $e_2 = 0.05$ kg, $Max_3 = 190$ kg, $e_3 = 0.1$ kg using a Zemic model BM6G load cell of 200 kg capacity; and
- (iii) $Max_1 = 150$ kg, $e_1 = 0.05$ kg, $Max_2 = 300$ kg, $e_2 = 0.1$ kg, $Max_3 = 490$ kg, $e_3 = 0.2$ kg using a Zemic model BM6G load cell of 500 kg capacity.

The multiple range features of the JAC-259 indicator used in these instruments are as described in the documentation of approval NMI S524.

These instruments are NOT approved to be used with alternative indicators.

14. Description of Variant 13

approved on 11/06/13

Certain model baseworks of the JAC-949/JAC-949H series as listed in Table 7.

The model JAC-949H / JAC-949H series use Zemic model BM6A Class C3 load cells.

These baseworks may be used with a compatible approved (by Supplementary Certificate) indicator provided under the same conditions as described in variant 2.

15. Description of Variant 14

approved on 28/05/15

Model JAC-929 and JAC-949 instruments, with baseworks using Zemic model L6G Class C3 load cells, as shown in Tables 8 and 9.

Model JAC-949H instruments with baseworks having the same characteristics as the model JAC-949 instruments in Table 9 are also approved.

These baseworks may be used with a compatible approved (by Supplementary Certificate) indicator provided under the same conditions as described in variant 2.

TEST PROCEDURE No 6/9C/279

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 Schedule 1 of the *National Trade Measurement Regulations 2009*.

Tests

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

TABLE 1

Instrument Model:	JAC 929	JAC 929	JAC 929	JAC 929	JAC 929	JAC 939	JAC 939
Maximum capacity (kg)	30	60	150	280	300	300	600
Maximum platform size (mm x mm)	420 × 520	420 × 520	420 × 520	420 × 520	420 × 520	600 × 800	600 × 800
Typical verification scale interval (kg)	0.01	0.02	0.05	0.1	0.1	0.1	0.2
Maximum number of verification scale intervals (nmax)	3000	3000	3000	3000	3000	3000	3000
Load cell model: Tedeo Huntleigh	1263	1263	1263	1263	1263	1263	1263
Load cell classification	C3	C3	C3	C3	C3	C3	C3
Load cell maximum capacity (Emax) (kg)	(a) 50 (b) 100	(a) 100 (b) 150 (c) 200	(a) 200 (b) 300 (c) 330 (d) 500	(a) 300 (b) 500	(a) 330 (b) 500	(a) 330 (b) 500 (c) 635	635
Number of load cells	1	1	1	1	1	1	1
Minimum value of verification scale interval for basework (v_{min} of load cell) (kg)	(a) 0.0033 (b) 0.0067	(a) 0.0067 (b) 0.01 (c) 0.0133	(a) 0.0133 (b) 0.02 (c) 0.022 (d) 0.033	(a) 0.02 (b) 0.033	(a) 0.022 (b) 0.033	(a) 0.022 (b) 0.033 (c) 0.0423	0.0423
DR value (kg)	(a) 0.0081 (b) 0.0161	(a) 0.0161 (b) 0.0242 (c) 0.0323	(a) 0.0323 (b) 0.0283 (c) 0.0311 (d) 0.0472	(a) 0.0283 (b) 0.0472	(a) 0.0311 (b) 0.0472	(a) 0.0311 (b) 0.0472 (c) 0.0599	0.0599
Load cell sensitivity at Emax (mV/V)	2	2	2	2	2	2	2
Input impedance (Ω)	415	415	415	415	415	415	415
Excitation voltage (maximum) (V)	15	15	15	15	15	15	15
Cable length (m \pm 0.1 m) (#1)	2	2	2	2	2	2	2
Number of leads (plus shield)	4	4	4	4	4	4	4

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

TABLE 2

Instrument Model:	JAC 949	JAC 949	JAC 949	JAC 949
Maximum capacity (kg)	3	6	15	30
Maximum platform size (mm x mm)	300 × 300	300 × 300	300 × 300	300 × 300
Typical verification scale interval (kg)	0.001	0.002	0.005	0.01
Maximum number of verification scale intervals (nmax)	3000	3000	3000	3000
Load cell model: Tedea Huntleigh	1130	1130	1130	1130
Load cell classification	C3	C3	C3	C3
Number of load cells	1	1	1	1
Load cell maximum capacity (E _{max}) (kg)	(a) 7 (b) 7.5 (c) 10	(a) 7 (b) 7.5 (c) 10 (d) 15 (e) 20	(a) 20 (b) 30 (c) 35 (d) 50	(a) 35 (b) 50
Minimum value of verification scale interval for basework (V _{min} of load cell) (kg)	(a) 0.00047 (b) 0.0005 (c) 0.00067	(a) 0.00047 (b) 0.0005 (c) 0.00067 (d) 0.001 (e) 0.0013	(a) 0.0013 (b) 0.002 (c) 0.0023 (d) 0.0033	(a) 0.0023 (b) 0.0033
Load cell sensitivity at E _{max} (mV/V)	2	2	2	2
Input impedance (Ω)	385	385	385	385
Excitation voltage (maximum) (V)	15	15	15	15
Cable length (m ±0.1m) (#1)	2	2	2	2
Number of leads (plus shield)	4	4	4	4

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

TABLE 3

Instrument Model:	JAC 949H	JAC 949H	JAC 949H	JAC 949H
Maximum capacity (kg)	3	6	15	30
Maximum platform size (mm x mm)	300 × 300	300 × 300	300 × 300	300 × 300
Typical verification scale interval (kg)	0.001	0.002	0.005	0.01
Maximum number of verification scale intervals (nmax)	3000	3000	3000	3000
Load cell model: Tedea Huntleigh	1130	1130	1130	1130
Load cell classification	C6	C6	C6	C6
Number of load cells	1	1	1	1
Load cell maximum capacity (E _{max})	(a) 7 kg (b) 7.5 kg (c) 10 kg	(a) 7 kg (b) 7.5 kg (c) 10 kg (d) 15 kg (e) 20 kg	(a) 20 kg (b) 30 kg (c) 35 kg (d) 50 kg	(a) 35 kg (b) 50 kg
Minimum value of verification scale interval for basework (V _{min} of load cell) (kg)	(a) 0.00047 (b) 0.0005 (c) 0.00067	(a) 0.00047 (b) 0.0005 (c) 0.00067 (d) 0.001 (e) 0.0013	(a) 0.0013 (b) 0.002 (c) 0.0023 (d) 0.0033	(a) 0.0023 (b) 0.0033
DR value (kg)	(a) 0.00025 (b) 0.000268 (c) 0.000357	(a) 0.00025 (b) 0.000268 (c) 0.000357 (d) 0.000536 (e) 0.000714	(a) 0.000714 (b) 0.00107 (c) 0.00125 (d) 0.00179	(a) 0.00125 (b) 0.00179
Load cell sensitivity at E _{max} (mV/V)	2	2	2	2 mV/V
Input impedance (Ω)	385	385	385	385
Excitation voltage (maximum) (V)	15	15	15	15
Cable length (m ±0.1 m) (#1)	2	2	2	2
Number of leads (plus shield)	4	4	4	4

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

TABLE 4

Instrument Model	JAC 959	JAC 959	JAC 959	JAC 959
Maximum capacity (kg)	30	60	150	300
Maximum platform size (mm x mm)	420 x 520	420 x 520	420 x 520	420 x 520
Typical verification scale interval (kg)	0.01	0.02	0.05	0.1
Maximum number of verification scale interval (n_{\max})	3000	3000	3000	3000
Load cell model: Tedea Huntleigh	1510	1510	1510	1510
Load cell classification	C3 or C4	C3 or C4	C3 or C4	C3 or C4
Load cell maximum capacity (E_{\max}) (kg)	100	100	(a) 250 (b) 500	500
Number of load cells	1	1	1	1
Minimum value of verification scale interval for basework (v_{\min} of load cell) (kg)	0.0083	0.0083	(a) 0.0208 (b) 0.0417	0.0417
DR value (kg)				
Load cell sensitivity at E_{\max} (mV/V)	2	2	2	2
Input impedance (Ω)	380	380	380	380
Excitation voltage (maximum) (V)	15	15	15	15
Cable length (m \pm 0.1 m) (#1)	3	3	3	3
Number of leads (plus shield)	6	6	6	6

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

TABLE 5

Instrument model	JAC 959	JAC 959	JAC 959	JAC 959
Maximum capacity (kg)	30	60	90	150
Maximum platform size (mm × mm)	600 × 800	600 × 800	600 × 800	600 × 800
Typical verification scale interval (kg)	0.01	0.02	0.05	0.05
Maximum number of verification scale interval (n_{\max})	3000	3000	3000	3000
Load cell model: Zemic	BM6G	BM6G	BM6G	BM6G
Load cell classification	C3MR	C3MR	C3MR	C3MR
Load cell maximum capacity (E_{\max}) (kg)	100	(a) 100 (b) 200	(a) 100 (b) 200	(a) 200 (b) 300 (c) 400 (d) 500
Number of load cells	1	1	1	1
Minimum value of verification scale interval for basework (v_{\min} of load cell) (kg)	0.0067	(a) 0.0067 (b) 0.0133	(a) 0.0067 (b) 0.0133	(a) 0.0133 (b) 0.0200 (c) 0.0267 (d) 0.0333
DR value (kg)	0.0042	(a) 0.0042 (b) 0.0083	(a) 0.0042 (b) 0.0083	(a) 0.0083 (b) 0.0125 (c) 0.0167 (d) 0.0208
Load cell sensitivity at E_{\max} (mV/V)	2	2	2	2
Input impedance (Ω)	380	380	380	380
Excitation voltage (maximum) (V)	18	18	18	18
Cable length (m \pm 0.1 m) (#1)	3	3	3	3
Number of leads (plus shield)	4	4	4	4

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

TABLE 6

Instrument model	JAC 959	JAC 959	JAC 959	JAC 959
Maximum capacity (kg)	190	300	390	490
Maximum platform size (mm × mm)	600 × 800	600 × 800	600 × 800	600 × 800
Typical verification scale interval (kg)	0.1	0.1	0.2	0.2
Maximum number of verification scale interval (n_{\max})	3000	3000	3000	3000
Load cell model: Zemic	BM6G	BM6G	BM6G	BM6G
Load cell classification	C3MR	C3MR	C3MR	C3MR
Load cell maximum capacity (E_{\max}) (kg)	(a) 200 (b) 300 (c) 400 (d) 500	(a) 400 (b) 500	(a) 400 (b) 500	500
Number of load cells	1	1	1	1
Minimum value of verification scale interval for basework (v_{\min} of load cell) (kg)	(a) 0.0133 (b) 0.0200 (c) 0.0267 (d) 0.0333	(a) 0.0267 (b) 0.0333	(a) 0.0267 (b) 0.0333	0.0333
DR value (kg)	(a) 0.0083 (b) 0.0125 (c) 0.0167 (d) 0.0208	(a) 0.0167 (b) 0.0208	(a) 0.0167 (b) 0.0208	0.0208
Load cell sensitivity at E_{\max} (mV/V)	2	2	2	2
Input impedance (Ω)	380	380	380	380
Excitation voltage (maximum) (V)	18	18	18	18
Cable length (m \pm 0.1 m) (#1)	3	3	3	3
Number of leads (plus shield)	4	4	4	4

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

TABLE 7

Instrument Model:	JAC 949 / JAC 949H	JAC 949 / JAC 949H	JAC 949 / JAC 949H	JAC 949 / JAC 949H
Maximum Capacity (kg)	3	6	15	30
Maximum Platform size (mm × mm)	300 × 300	300 × 300	300 × 300	300 × 300
Typical Verification Scale Interval (kg)	0.001	0.002	0.005	0.01
Maximum Number of Verification Scale Intervals (nmax)	3000	3000	3000	3000
Load cell model:	Zemic BM6A	Zemic BM6A	Zemic BM6A	Zemic BM6A
Load cell classification	C3	C3	C3	C3
Load cell Maximum Capacity (kg)	(a) 6 (b) 8	(a) 8 (b) 12 (c) 15 (d) 20	(a) 20 (b) 30 (c) 40	(a) 40 (b) 60
Number of load cells	1	1	1	1
Minimum value of verification scale interval for baseworks (Vmin of loadcell) (kg)	(a) 0.0004 (b) 0.00053	(a) 0.00053 (b) 0.0008 (c) 0.001 (d) 0.00133	(a) 0.00133 (b) 0.0015 (c) 0.002	(a) 0.002 (b) 0.003
DR value (kg)	(a) 0.001 (b) 0.00133	(a) 0.00133 (b) 0.002 (c) 0.0025 (d) 0.0033	(a) 0.0033 (b) 0.0025 (c) 0.0033	(a) 0.0033 (b) 0.005
Loadcell sensitivity at Emax (mV/V)	2	2	2	2
Input Impedance (Ω)	400	400	400	400
Excitation Voltage (maximum) (V)	18	18	18	18
Cable Length (m \pm 0.1m) #1	3	3	3	3
Number of leads (plus Shield)	4	4	4	4

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

TABLE 8

Instrument Model	JAC 929	JAC 929	JAC 929	JAC 929
Maximum capacity (kg)	30	60	150	300
Maximum platform size (mm x mm)	420 x 520	420 x 520	420 x 520	420 x 520
Typical verification scale interval (kg)	0.01	0.02	0.05	0.1
Maximum number of verification scale interval (n_{\max})	3000	3000	3000	3000
Load cell model: Tedea Huntleigh	L6G	L6G	L6G	L6G
Load cell classification	C3	C3	C3	C3
Load cell maximum capacity (E_{\max}) (kg)	(a) 50 (b) 100	(a) 100 (b) 200	(a) 200 (b) 300 (c) 500	(a) 500 (b) 600
Number of load cells	1	1	1	1
Minimum value of verification scale interval for basework (v_{\min} of load cell) (kg)	(a) 0.0042 (b) 0.0083	(a) 0.0083 (b) 0.0167	(a) 0.0167 (b) 0.025 (c) 0.0417	(a) 0.0417 (b) 0.05
DR value (kg)				
Load cell sensitivity at E_{\max} (mV/V)	2	2	2	2
Input impedance (Ω)	409	409	409	409
Excitation voltage (maximum) (V)	18	18	18	18
Cable length (m \pm 0.1 m) (#1)	2	2	2	2
Number of leads (plus shield)	4	4	4	4

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

TABLE 9

Instrument Model	JAC 949	JAC 949	JAC 949	JAC 949
Maximum capacity (kg)	30	60	150	300
Maximum platform size (mm × mm)	420 × 520	420 × 520	420 × 520	420 × 520
Typical verification scale interval (kg)	0.01	0.02	0.05	0.1
Maximum number of verification scale interval (n_{\max})	3000	3000	3000	3000
Load cell model: Zemic	L6G	L6G	L6G	L6G
Load cell classification	C3	C3	C3	C3
Load cell maximum capacity (E_{\max}) (kg)	(a) 50 (b) 100	(a) 100 (b) 200	(a) 200 (b) 300 (c) 500	(a) 500 (b) 600
Number of load cells	1	1	1	1
Minimum value of verification scale interval for basework (v_{\min} of load cell) (kg)	(a) 0.0042 (b) 0.0083	(a) 0.0083 (b) 0.0167	(a) 0.0167 (b) 0.025 (c) 0.0417	(a) 0.0417 (b) 0.05
DR value (kg)				
Load cell sensitivity at E_{\max} (mV/V)	2	2	2	2
Input impedance (Ω)	409	409	409	409
Excitation voltage (maximum) (V)	18	18	18	18
Cable length (m \pm 0.1 m) (#1)	2	2	2	2
Number of leads (plus shield)	4	4	4	4

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

FIGURE 6/9C/279 – 1



Nuweigh Model JAC-929 Weighing Instrument (Pattern)

FIGURE 6/9C/279 – 2



Nuweigh Model JAC-929 Basework (Pattern & Variant 1)

FIGURE 6/9C/279 – 3



Nuweigh Model JAC-949 Basework (Variant 3)

FIGURE 6/9C/279 – 4



Typical Tubular Frame Construction Basework of this Approval (Variant 10)

FIGURE 6/9C/279 – 5



Nuweigh JAC-959 Series Basework
With Typical Zemic Model BM6G Load Cell (Variant 11)