Australian Government
Department of Industry, Science, Energy and Resources

National Measurement Institute

36 Bradfield Road, West Lindfield NSW 2070

Certificate of Approval

NMI LM 6/9C/322

Issued by the Chief Metrologist under Regulation 60
of the
National Measurement Regulations 1999

This is to certify that an approval for use as legal measuring instruments has been granted in respect of the instruments herein described.

Dini Argeo Model WWSD10TRF Weighing Instrument

submitted by Dini Argeo S.r.l.
Via della Fisica 20
41042 Spezzano di Fiorano
Modena
Italy

This Certificate does NOT grant approval for use for trade.

NOTE: This Certificate relates to the suitability of the pattern of the instrument for use as a legal measuring instrument 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 October 2015.

This approval is subject to review at the decision of the Chief Metrologist in accordance with the conditions specified in the document NMI P 106.

DOCUMENT HISTORY

Rev	Reason/Details	Date
0	Pattern and variant 1 approved – certificate issued	03/03/21

CONDITIONS OF APPROVAL

General

Instruments purporting to comply with this approval shall be marked with approval number 'NMI LM 6/9C/322' 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 S1/0B.

Special

This Certificate relates to the suitability of the instrument as a class (III) non-automatic weighing instrument. Instruments complying with this approval and verified as complying with the requirements for a class (III) non-automatic weighing instrument may be used for determining the wheel loads of a vehicle for enforcement of legal limits for roads.

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

Multiple instruments may be used with their indications being summed to provide the mass of an individual axle or an axle group (Note: the use of multiple instruments for summing their indications to provide a mass of a total vehicle is not approved). When multiple instruments are used, caution should be exercised as the uncertainty of the values obtained by the summation of readings could exceed the maximum permissible errors for class (III) weighing instruments. Use of a single instrument is not permitted for any of these mass determinations.

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

Darryl Hines
Manager
Policy and Regulatory Services

TECHNICAL SCHEDULE No LM 6/9C/322

1. Description of Pattern approved on 03/03/21

A Dini Argeo model WWSD10TRF (#) class (III) self-indicating non-automatic platform weighing instrument (Figures 1a & 1b and Table 1) of 10 000 kg maximum capacity with a verification scale interval of 10 kg. The minimum capacity is 200 kg.

(#) A suffix (e.g. -6) may be added, but this represents features which are not metrologically significant.

1.1 Weighing Platform

The instrument is constructed of aluminium alloy and the platform has the weighing area supported by six shear beam load cells between the weighing plate and base frames.

The model WWSD10TRF has an active area of 950 mm × 500 mm.

The weighing platform is especially designed for the vehicles with pneumatic tyres. Use of the instruments for weighing the vehicles with solid rubber wheels or solid objects is not approved.

Note: The Dini Argeo model WWS series instruments have a feature by which multiple platforms may be connected via a summing indicator by cables, to enable totalising of the mass displayed on all instruments. **Use of the instruments in this mode is not approved.**

1.2 Load cell

Six Dini Argeo model SBK2500-1KL C3 shear beam load cells of 2500 kg maximum capacity are used.

1.3 Indicator

A Dini Argeo model DFWL digital indicator is used. The indicator is described in the documentation of approval No NMI S788.

1.4 Zero

A zero-tracking device may be fitted.

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.

1.5 Tare

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

1.6 Display Check

A display check is initiated whenever power is applied.

1.7 Power Supply

The instrument may be powered by the internal rechargeable battery.

1.8 Levelling

The instrument is provided with a level indicator.

The instrument is to be used in a level condition as indicated by the level indicator.

1.9 Interfaces

Instruments may be fitted with interfaces for the connection of auxiliary and/or peripheral devices. Any interfaces shall comply with clause 5.3.6 of document NMI R76 (the basic intent of which is that it shall not be possible to alter weighing results via the interfaces).

Any measurement data output from the instrument or its interfaces shall only be used for trade in compliance with Supplementary Certificate No S1/0B (in particular in regard to the data and its format).

Instruments may be fitted with RS-232/485 and RF (radio frequency) interfaces.

1.10 Certification Provision

Provision is made for the application of a certification mark.

1.11 Descriptive Markings and Notices

Instruments carry the following markings:

Manufacturer's mark, or name written in full	Dini Argeo S.r.l.	
Indication of accuracy class	(III)	
Pattern approval mark for the instrument	NMI LM 6/9C/322	
Model number	……..	
Maximum capacity	*Max* ..... kg	#
Minimum capacity	*Min* ..... kg	#
Verification scale interval	*e* = ... 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.

1.12 Sealing Provision

Provision is made for the calibration to be sealed by setting a link on the main board within the instrument to 'OPEN' position, and then preventing access within the instrument housing (Figure 2).

It is possible to determine that the link status is in the 'OPEN' position by pressing the '↑' key to enter setup menu when the power is first applied to the indicator.

- If the link is in the 'OPEN' position, the instrument will not allow to change instrument metrological configurations. In this case the instrument may be verified.
- Otherwise the instrument will allow to change instrument metrological configurations in which case the instrument should not be verified until the link has been correctly set to the 'OPEN' position.

Sealing to prevent access within the instrument housing may be achieved by using a destructible adhesive label placed over a join in the instrument housing as shown in Figure 2.

1.13 Software

The legally relevant software is identified by a number 02.01.

The instrument type number and software version number can be seen by pressing the '↓' key during the switch-on display sequence (when the power is first applied to the instrument).

2. Description of Variant 1 approved on 03/03/21

Certain other capacities of the Dini Argeo model WWS series instruments as listed in Table 1 (the pattern is shown in bold).

The instrument is approved for a maximum of 1000 verification scale intervals.

TABLE 1

Model	Maximum Capacity (*Max*)	Minimum Capacity (*Min*)	Verification Scale Interval (*e*)	Weighing Area	Number of Dini Argeo Model SBK-1KL C3 series Load Cell
WWSC1.5TRF (#)	1500 kg	40 kg	2 kg	565 x 400 mm	4 x SBK1000-1KL
WWSC3TRF (#)	3000 kg	100 kg	5 kg	565 x 400 mm	4 x SBK2000-1KL
WWSC6TRF (#)	6000 kg	200 kg	10 kg	565 x 400 mm	4 x SBK2500-1KL
WWSC10TRF (#)	10 000 kg	200 kg	10 kg	565 x 400 mm	6 x SBK2500-1KL
WWSC15TRF (#)	12 500 kg	400 kg	20 kg	565 x 400 mm	6 x SBK2500-1KL
WWSD6TRF (#)	6000 kg	200 kg	10 kg	950 x 500 mm	6 x SBK2500-1KL
WWSD10TRF (#)	**10 000 kg**	**200 kg**	**10 kg**	**950 x 500 mm**	**6 x SBK2500-1KL**
WWSD15TRF (#)	15 000 kg	400 kg	20 kg	950 x 500 mm	8 x SBK2500-1KL
WWSD20TRF (#)	20 000 kg	400 kg	20 kg	950 x 500 mm	10 x SBK2500-1KL
WWSE6TRF (#)	6000 kg	200 kg	10 kg	750 x 450 mm	6 x SBK2500-1KL
WWSE10TRF (#)	10 000 kg	200 kg	10 kg	750 x 450 mm	6 x SBK2500-1KL
WWSE15TRF (#)	12 500 kg	400 kg	20 kg	750 x 450 mm	6 x SBK2500-1KL

(#) A suffix (e.g. -6) may be added, but this represents features which are not metrologically significant.

TEST PROCEDURE No LM 6/9C/322

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*.

Notes:

Levelling Arrangements and Stability of Ground

The site chosen for weighing should be firm and with inclinations of up to the limit value (e.g. a ring) of the level indicator on the instruments. The stability of the ground surface should also be considered as subsidence or compaction may affect accuracy.

Tests

(a) Apply a test load of not less than half the capacity of the instrument to the load receptor at least three times to exercise the instrument.

(b) Zero the instrument.

(c) Apply an appropriate zero test using test loads of 0.25 *e* and 0.75 *e*.

(d) Apply an appropriate discrimination test.

(e) Apply a repeatability test.

(f) Where practical, apply an eccentricity test.

(g) With the zero indication correct, apply test loads to the centre of the load receptor in not less than five approximately-equal steps increasing to the maximum capacity.

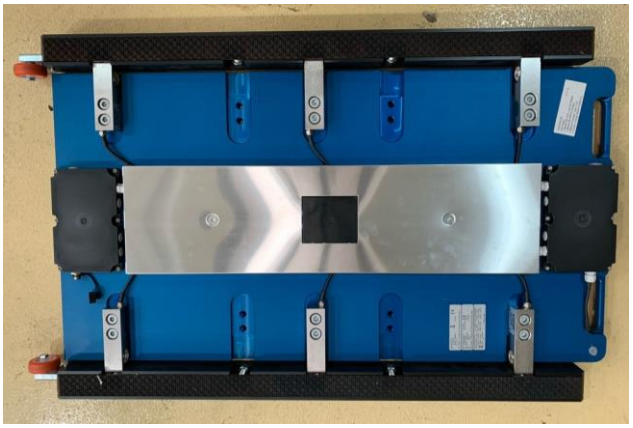
Ensure that the indications are within the maximum permissible error for the load applied.

Each test load is to be applied at least twice and, where test masses are used and the test load consists of more than one test mass, the test load is to be applied as one mass.

Ensure that after the load test, the zero indication is within ±0.25 *e*.

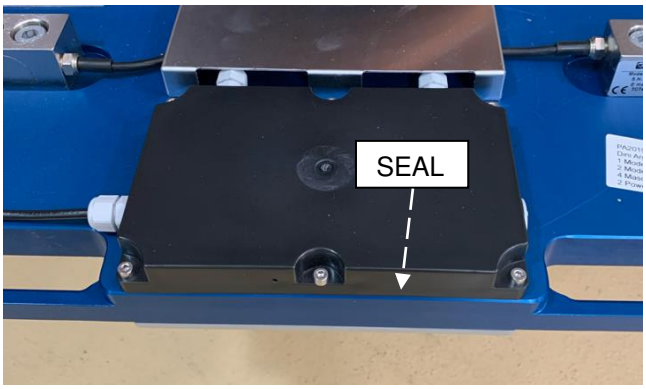
FIGURE LM 6/9C/322 – 1

(a) Dini Argeo Model WWS Weighing Instrument



(b) Bottom View of Model WWS Weighing Instrument

FIGURE LM 6/9C/322 – 2



Showing Typical Sealing

~ End of Document ~