NMO	OIML Certification System
OIML Member State United Kingdom of Great Britain and Northern Ireland	**OIML Certificate No.** **R76/2006-A-GB1-20.08**

OIML CERTIFICATE ISSUED UNDER SCHEME A

OIML Issuing Authority	**NMO** **Stanton Avenue** **Teddington** **TW11 0JZ** **United Kingdom**
Person responsible:	**Mannie Panesar – Head of Technical Services**
Applicant	**Avery Weigh-Tronix** **Foundry Lane** **Smethwick** **West Midlands B66 2LP** **United Kingdom**
Manufacturer	**The applicant**
Identification of the certified type	**ZQ375 Checkweigher** *(the detailed characteristics are defined in the Descriptive Annex)*

This OIML Certificate attests the conformity of the above identified type (represented by the sample(s) identified in the OIML type evaluation report) with the requirements of the following Recommendation of the International Organization of Legal Metrology (OIML):

OIML R 76, Edition: 2006

For accuracy class: III

Issue date: 29 June 2020

The OIML Issuing Authority

G Stones
Technical Manager
For and on behalf of the Head of Technical Services

This OIML Certificate relates only to metrological and technical characteristics of the type of measuring instrument covered by the relevant OIML Recommendation identified above.

This OIML Certificate does not bestow any form of legal international approval.

The conformity was established by the results of tests and examinations provided in the associated OIML type evaluation report:

No. P02739 dated 29 June 2020 that includes 20 pages

The technical documentation relating to the identified type is contained in documentation file:

No. P02739-D dated 29 June 2020

OIML Certificate History

Revision No.	Date	Description of the modification
0	29 June 2020	OIML Certificate first issued.
-	-	-

No revisions have been issued.

Important note:
Apart from the mention of the Certificate's reference number and the name of the OIML Member State in which the Certificate is issued, partial quotation of the Certificate and of the associated OIML type evaluation report(s) is not permitted, although either may be reproduced in full.

DESCRIPTIVE ANNEX

Characteristics:

This family of instruments is designated the ZQ375 Checkweigher and comprises the Torsion base and Diamond base models. The instruments are Class III, mains or battery-powered, self-indicating, non-automatic weighing instruments, and are not designed for direct sales to the public.

Main features:

- ZQ375 Indicating Device (fully described in R76/2006-A-GB1-20.07)
- BSF / BSG Torsion or BS Diamond base stainless steel load receptor
- Stainless Steel Column
- Optional ZQ-BAT battery box
- Optional ZQ-OPTO interface box (with or without beacon assembly)

Devices:

- Semi-automatic zero setting (≤ 4% Max)
- Zero tracking (≤ 4% Max)
- Semi-automatic subtractive tare weighing
- Pre-set tare
- Recall of Gross indication when tare is active
- Determination of stability of equilibrium
- Indication of stability of equilibrium
- Checking of display
- Printing
- PLUs
- Alibi storage device
- Gravity compensation
- Real time clock
- Command via external device (PC)
- Simple checkweighing (Sim375)
- Mid-level checkweighing (Mid375)
- Advanced checkweighing (Adv375)
- Percentage checkweighing (Per375)
- Grading checkweighing (Grad375)
- Gross, Net, Tare, Preset tare, Print, Zero, Motion, Accumulation, Over/Under weight and Network indicators

Load cell:

Torsion Base (BSF Series):

The load cell is an HBM Stainless Steel Single Point Load cell, model PW15AHC3MR, capacities as per following table.

Torsion Base (BSG Series):

The load cell is a Vishay Stainless Steel Single Point Load cell, model 1130, capacities as per following table.

Diamond Base (BS Series):

The load cell is an Avery Weigh-Tronix Stainless Steel Single Point load cell, model FLS, capacities as per following table.

Any compatible load cell(s) may be used providing the following conditions are met:

- There is a respective OIML Certificate of Conformity (R60) issued for the load cell.
- The certificate contains the load cell types and the necessary load cell data required for the manufacturer's declaration of compatibility of modules, and any particular installation requirements. A load cell marked NH is allowed only if humidity testing to R76 has been conducted on this load cell.
- The compatibility of the load cells and indicator is established by the manufacturer by means of the compatibility of modules calculation at the time of verification.
- The load cell transmission conforms to a standard type.

Metrological characteristics

BSF-99 Torsion base (with HBM PW15AHC3MR load cell)

Base Model	BSF-99-3	BSF-99-6	BSF-99-6
Load Cell Model	PW15AHC 3MR/10 kg	PW15AHC 3MR/10 kg	PW15AHC 3MR/20 kg
Max (kg)	3	6	6
Min (g)	20	40	40
e = (g)	1	2	2
T ≤ (kg)	3	6	6
E_{max} (kg)	10	10	20

BSF-1214 Torsion base (with HBM PW15AHC3MR load cell)

Base Model	BSF-1214-15	BSF-1214-15	BSF-1214-30	BSF-1214-45	BSF-1214-60
Load Cell Model	PW15AHC 3MR/20 kg	PW15AHC 3MR/20 kg	PW15AHC 3MR/50 kg	PW15AHC3 MR/100 kg	PW15AHC3 MR/100 kg
Max (kg)	6	15	30	45	60
Min (g)	40	100	200	400	400
e = (g)	2	5	10	20	20
T ≤ (kg)	6	15	30	45	60
E_{max} (kg)	20	20	50	100	100

BSG-99 Torsion base (with Vishay 1130 load cell)

Base Model	BSG-99-6	BSG-99-6
Load Cell Model	1 130-10 kg	1 130-10 kg
Max (kg)	3	6
Min (g)	20	40
e = (g)	1	2
T ≤ (kg)	3	6
E_{max} (kg)	10	10

BSG-1214 Torsion base (with Vishay 1130 load cell)

Base Model	BSG-1214-15	BSG-1214-15	BSG-1214-30
Load Cell Model	1130-20 kg	1130-20 kg	1 130-50 kg
Max (kg)	6	15	30
Min (g)	40	100	200
e = (g)	2	5	10
T ≤ (kg)	6	15	30
E_{max} (kg)	20	20	50

1824 Diamond base (with Avery Weigh-Tronix FLS R60 load cell)

Base Model	BS-1824-45	BS-1824-45
Load Cell Model	FLS R60 59.5 kg	FLS R60 59.5 kg
Max (kg)	30	45
Min (g)	200	200
e = (g)	10	10
T ≤ (kg)	30	45
E_{max} (kg)	59.5	59.5

2020 Diamond base (with Avery Weigh-Tronix FLS or FLS R60 load cell)

Base Model	BS-2020-50	BS-2020-45	BS-2020-50		BS-2020-100		
Load Cell Model	FLS R60 59.5 kg	FLS 125 lb	FLS R60 59.5 kg	FLS R60 59.5 kg	FLS R60 119 kg	FLS R60 119 kg	FLS R60 119 kg
Max (kg)	30	45	45	50	60	90	100
Min (g)	200	200	200	200	400	400	400
e = (g)	10	10	10	10	20	20	20
T ≤ (kg)	30	45	45	50	60	90	100
E_{max} (kg)	59.5	59.7	59.5	59.5	119	119	119

2424 Diamond base (with Avery Weigh-Tronix FLS or FLS R60 load cell)

Base Model	BS-2424-90	BS-2424-150	BS-2424-200	BS-2424-200	BS-2424-250
Load Cell Model	FLS 250 lb	FLS R60 299 kg	FLS R60 299 kg	FLS 1 000 lb	FLS R60 299 kg
Max (kg)	90	150	200	200	250
Min (g)	400	1 000	1 000	1 000	1 000
e = (g)	20	50	50	50	50
T ≤ (kg)	90	150	200	200	250
E_{max} (kg)	113	299	299	440	299

Technical characteristics:

Power supply	110-240V AC (50/60Hz)
Maximum number of scale intervals	6,000
Maximum Tare	-100% Max
Maximum Preset Tare	-100% Max
Load cell excitation voltage	5 V DC
Minimum load cell impedance	58.33 Ω
Maximum load cell impedance	1 100 Ω
Minimum input voltage per scale interval	0.8 µV
Measuring range minimum voltage	0 mV
Measuring range maximum voltage	15 mV
Fraction of maximum permissible error	P_{ind} = 0.5
Operating temperature range	-10 °C to +40 °C
Load cell connection	4 or 6-core with braided outer screen, flexible PVC overall Jacket. 0.5 mm^2 per core Maximum length (6-wire) = 30 m (60 m/mm^2)

Interfaces:

- Load cell 4-wire or 6-wire shielded connection
- Logic level inputs
- Open collector outputs
- Current Loop
- RS232/422/485
- 10/100 Ethernet
- USB Host
- Wireless LAN 802.11b/g
- ZQ-BAT Battery Pack
- ZQ-OPTO Interface box
- USB Device

Software:

The software is designated AWT30-500161 version 1.x.x.x or 2.x.x.x (where x.x.x refers to the identification of non-legally relevant software, which may be modified by the manufacturer). The calibration and legally relevant parameters are protected via physical (jumper located on main board) or software means (password and incrementing counters).