Australian Government
Department of Industry, Science, Energy and Resources

National Measurement Institute

36 Bradfield Road, West Lindfield NSW 2070

Certificate of Approval

NMI 6/14G/27

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.

OCS/Wipotec Model HC-FL Automatic Catchweighing Instrument

submitted by Wipotec-OCS GmbH
(formerly OCS Checkweighers GmbH)
Adam-Hoffmann-Strasse 26
67657 Kaiserslautern Germany

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 51, *Automatic Catchweighing Instruments 2* dated July 2004.

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 & variants 1 to 4 approved – interim certificate issued	1/04/14
1	Pattern amended (validity) – interim certificate issued	19/06/14
2	Pattern amended (validity) – interim certificate issued	30/09/14
3	Pattern amended (validity) – interim certificate issued	16/12/14
4	Pattern amended (validity) – interim certificate issued	19/06/15
5	Pattern amended (validity) – interim certificate issued	18/12/15
6	Pattern amended (validity) – interim certificate issued	21/06/16
7	Pattern & variants 1 to 14 approved – certificate issued	29/09/16

Document History (cont…)

Rev	Reason/Details	Date
8	Submittor name and figure amended – certificate issued	31/08/18
9	Review date removed – certificate issued	28/01/21

CONDITIONS OF APPROVAL

General

Instruments purporting to comply with this approval shall be marked with pattern approval number 'NMI 6/14G/27' 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 Certificate No S1/0B.

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*.

Darryl Hines
Manager
Policy and Regulatory Services

TECHNICAL SCHEDULE No 6/14G/27

1. Description of Pattern approved on 1/04/14

An OCS/Wipotec model HC-FL (*) automatic catchweighing instrument which is approved for use to weigh certain objects while in motion, for trade use. Instruments and components may be known as either OCS or Wipotec units.

Note: Wipotec-OCS GmbH is an affiliated company of Wipotec GmbH (formerly Wipotec Wiege- und Positioniersysteme GmbH).

Instruments are approved for use over a temperature range of 0°C to +40°C, and must be so marked.

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

Instruments are intended to be installed in a fixed location.

(*) Abbreviated model number – the full model number may include additional alphanumeric characters as a suffix, e.g. a model HC-FL-2-SI-c (pattern), model HC-SL-2-SI-c (variant 2), etc.

1.1 Details

The OCS/Wipotec model HC-FL is approved for use as a class Y(a) single interval automatic catchweighing instrument with a maximum capacity of 60 kg, with a verification scale interval (*e*) of 0.02 kg, and with a minimum capacity of 0.1 kg.

In automatic mode, the instrument operates dynamically (i.e. with the objects being weighed whilst the belt of the weighing conveyor is moving), and may also operate statically (with the object stopped on the weighing conveyor).

The speed of the weighing conveyor is up to 3 m/s.

The instrument has facilities to detect errors and provide error messages for situations outside the speed and package size limits.

The HC-FL comprises:

a) Two adjacent OCS/Wipotec weighing units which each incorporate a motor-driven belt-conveyor type load receptor (Figure 1). Weigher 1 is 900 mm in length while weigher 2 is 1200 mm in length. The belt width is 1100 mm.

   The weighing units operate on the electromagnetic force compensation principle and incorporate a Wipotec Weighcell model IW-B150K-FS digital load cell of 120 kg maximum capacity.

(b) An OCS/Wipotec HC operator/indication unit (Figure 2) may be mounted separately or in an enclosure. The unit has an LCD touchscreen and displays a weight value from the weighing units (either individually or in combination).

(c) An IPC SWAx control unit (Figure 3) receives data from the weighcells and provides the measurement data results on an indicator. In addition, measurement data may be made available by means of an interface (e.g. RS232) to other systems for indication and/or printing.

(d) Infeed and/or outfeed conveyors may be provided at each end of the weigh conveyor to convey objects onto and/or away from the weighing unit.

(e) An optical sensor at the infeed end of the weigh conveyor.

Note: The instrument is only approved in situations where the weight value determined for each item is actually to be used as the basis of a transaction. This may for example be by the value being printed and affixed to the item, or by association of the weight value with identification from the particular item (e.g. by a barcode which individually identifies the item) for later billing – the latter may be appropriate for use in freight/postal situations.

1.2 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 semi-automatic and automatic zero-setting devices with a nominal range of not more than 4% of the maximum capacity of the instrument, capable of setting zero to within ±0.25*e*.

The instrument has a zero-tracking device with a nominal range of not more than 4% of the maximum capacity of the instrument.

1.3 Tare

A pre-set subtractive tare device of up to maximum capacity (100% Max) may be fitted.

1.4 Operation

The system is designed to operate in dynamic or static weighing mode and depending on the length of the parcel. The instrument selects the weight output from either weigher 1 (S1) or weigher 2 (S2) or the combined weight of both weighers (S3) and displays it on the operator/indication unit.

An optical sensor provides information regarding the position of the package on the conveyor to initiate weighing operations once the package arrives on the weighing unit/s.

An object to be measured is transported on the infeed conveyor. At the end of this infeed conveyor, or at the start of the weighing conveyor, is a sensor (light barrier) that is used to measure the length of the parcel. Once the length is determined a weight from the appropriate weigher/s is sent to the HC operator/indication unit by the IPC SWAx control unit.

If the length of the parcel is less than or equal to 800 mm then the weight value from weigher 1 is selected and displayed. If the length of the parcel is from 801to 1100 mm then the weight value from weigher 2 is selected and displayed.

If the length of the parcel is from 1101 mm to the maximum of 2000 mm then the weight value from both weighers are summed and displayed.

After weighing, the object continues on to an outfeed conveyor while the weight is displayed on the HC operator/indication unit. If a weight is found to be in error (for example exceeding the maximum capacity) (- - - -) or (++++) or (????) or (<<<<) or (>>>>) or similar are displayed, and a weight value is not recorded or printed.

Any peripheral and/or auxiliary devices shall only use approved weight data for trade purposes.

1.5 Software

The system software of the HC-FL is designated V5. xx-xx (where xx refers to the identification of non-legally relevant software).

The software version and number can be seen in the switch-on display sequence (when the power is first applied to the instrument) or in a sub-menu.

1.6 Verification Provision

Provision is made for the application of a verification mark.

1.7 Sealing Provision

Provision is made for access to the sealing switch of the model IPC SWAx control unit to be sealed by using a destructible adhesive label as shown in Figure 3.

1.8 Descriptive Markings and Notices

Instruments carry the following markings:

Manufacturer's mark, or name written in full	Wipotec-OCS GmbH (***)	
Model designation	…..	
Serial number	…..	
Accuracy class	Y(a)	
Pattern approval mark	NMI 6/14G/27	
Maximum capacity	*Max* …. g or kg	(*)
Minimum capacity	*Min* ….. g or kg	(*)
Verification scale interval	*e* =…… g or kg	(*)
Maximum conveyor speed	…….. m/s	
Special temperature limits	0°C to 40°C (**)	

(*) These markings are also shown near or in the display of the result if they are not already located there.

In situation where the instrument is intended to be used for weighing items for export the instrument may be provided with alternative units (e.g. lb, oz). In this case instrument shall be marked 'Units other than g or kg only to be used for export purposes'.

(**) Temperature ranges not less than 30 °C may be marked.

(***) 'Wipotec-OCS GmbH' may also be shown as 'OCS Checkweighers GmbH'.

Note:

For multi-interval instruments the markings shall be as above, with the exception that the 'Maximum capacity' and 'Verification scale interval' shall be marked for both interval ranges, e.g. as follows:

Maximum capacity	*Max* ...../..... g or kg
Verification scale interval	*e* = .../..... g or kg

Note for variants:

The model numbers listed (*) are abbreviated model numbers – the full model numbers may include additional alphanumeric characters as a suffix, e.g. a model HC-FL-2-SI-c (variant 1), model HC-SL-2-SI-c (variant 2), EC-M-ML-2-SI-c. (variant 9), etc.

2. Description of Variant 1 approved on 29/09/16

Certain other models of the HC-FL (*) series having the weighing units as described in certain other capacities using a Wipotec Weighcell model IW-B150K-FS or IWB400K-FS digital load cell), with conveyor lengths from 800 mm to 2500 mm, conveyor widths up to 1600 mm, and having maximum weighing capacities from 5 kg to 300 kg.

Instruments may have a maximum of 3500 verification scale intervals and a speed of up to 3 m/s (with the verification scale interval being in the series … 0.01, 0.02, 0.05, 0.1, 0.2, 0.5, 1 …kg).

(*) Abbreviated model number of the instrument.

3. Description of Variant 2 approved on 29/09/16

Certain OCS/Wipotec models of the HC-SL series (*) (Figure 1) of single-conveyor instruments using a weighing unit which incorporates a Wipotec Weighcell model IW-B150K-FS or IW-B400K-FS digital load cell), with conveyor lengths from 800 mm to 2500 mm, conveyor widths up to 1600 mm, and having maximum weighing capacities from 5 kg to 300 kg.

Instruments may have a maximum of 4500 verification scale intervals and a speed of up to 3 m/s (with the verification scale interval being in the series … 0.01, 0.02, 0.05, 0.1, 0.2, 0.5, 1 …kg).

(*) Abbreviated model number of the instrument.

4. Description of Variant 3 approved on 29/09/16

Certain OCS/Wipotec models of the HC-SL series (*) as multi-interval instruments using a weighing unit which incorporates a Wipotec Weighcell model IW- B150K-FS or IW-B400K-FS digital load cell with conveyor lengths from 800 mm to 2500 mm, conveyor widths up to 1600 mm, and having maximum weighing capacities from 5 kg to 300 kg.

Instruments may have up to two partial weighing ranges (each with its own verification scale interval) in which case it is approved for use with up to 6000 verification scale intervals per partial weighing range and a speed of up to 2 m/s (with the verification scale interval being in the series … 0.005, 0.01, 0.02, 0.05, 0.1 …kg).

(*) Abbreviated model number of the instrument.

5. Description of Variant 4 approved on 29/09/16

Certain OCS/Wipotec models of the HC-SL series (*) as multi-interval instruments using a weighing unit which incorporates a Wipotec Weighcell model IW-B30K-FS, IW-B60K-FS digital load cell with conveyor lengths from 400 mm to 1000 mm, conveyor widths up to 800 mm, and having maximum weighing capacities from 0.1 kg to 60 kg.

Instruments may have up to three partial weighing ranges (each with its own verification scale interval) in which case it is approved for use with up to 6000 verification scale intervals per partial weighing range and a speed of up to 2 m/s (with the verification scale interval being in the series … 0.001, 0.002, 0.005, 0.01, 0.02, 0.05, 0.1 …kg).

(*) Abbreviated model number of the instrument.

6. Description of Variant 5 approved on 29/09/16

Certain OCS/Wipotec models of the HC-SL series (*) as single interval instruments using a weighing unit which incorporates a Wipotec Weighcell model IW-B30K-FS, IW-B60K-FS digital load cell with conveyor lengths from 400 mm to 1000 mm, conveyor widths up to 800 mm, and having maximum weighing capacities from 0.1 kg to 60 kg.

Instruments may have a maximum of 6000 verification scale intervals and a speed of up to 3 m/s (with the verification scale interval being in the series … 0.001, 0.002, 0.005, 0.01, 0.02, 0.05, 0.1 …kg).

(*) Abbreviated model number of the instrument.

7. Description of Variant 6 approved on 29/09/16

Certain models of the HC-M-ML (*) series which are similar to variant 3 & 4 (Figure 4) but having designated software version and number V6. xx-xx (where xx refers to the identification of non-legally relevant software). (*) Abbreviated model number of the instrument.

8. Description of Variant 7 approved on 29/09/16

Certain single interval models of the HC-VLS (*) instruments (Figure 5) using a weighing unit which incorporates a Wipotec Weighcell model EC3000 or EC4000 digital load cell with conveyor lengths from 150 mm to 800 mm, conveyor widths up to 150 mm, and having maximum weighing capacities of 600 g.

Instruments may have a maximum of 240 verification scale intervals and a speed of up to 4 m/s (with the verification scale interval being in the series … 0.5, 1.0, 2.0, 5.0…g).

The instrument operates for weighing letters vertically.

(*) Abbreviated model number of the instrument.

9. Description of Variant 8 approved on 29/09/16

Certain models of the EC-VLS (*) series which are similar to variant 7 but using an OCS/Wipotec model BD-CAN control unit (Figure 6), and an RC-TERM operator/ indication unit (Figure 7).

(*) Abbreviated model number of the instrument.

9.1 Sealing Provision

Provision is made for the sealing switch of the model BD-CAN control unit to be sealed by using a destructible adhesive label as shown in Figure 6.

10. Description of Variant 9 approved on 29/09/16

Certain models of the EC-M-ML (*) series which are similar to variant 3 & 4 but using an OCS/Wipotec model BD-CAN control unit (Figure 6), and an RC-TERM operator/indication unit (Figure 7).

(*) Abbreviated model number of the instrument.

11. Description of Variant 10 approved on 29/09/16

Certain models of the EC-M-SL (*) series which are similar to variant 3 & 4 (Figure 8) but using an OCS/Wipotec model BD-CAN control unit (Figure 6), and an RCTERM operator/indication unit (Figure 7).

(*) Abbreviated model number of the instrument.

12. Description of Variant 11 approved on 29/09/16

Certain single interval models of the EC-M-SL (*) series which are similar to variant 2 & 5 but using an OCS/Wipotec model BD-CAN control unit (Figure 6), and an RC-TERM operator/indication unit (Figure 7).

(*) Abbreviated model number of the instrument.

13. Description of Variant 12 approved on 29/09/16

Certain single interval EC-M (*) instruments using a weighing unit (Figure 9) which incorporates a Wipotec weighcell model EC2000 or EC3000 or EC4000 digital load cell.

With conveyor lengths from 150 mm to 650 mm, conveyor widths up to 450 mm, and having maximum weighing capacities from 750 g to 15 000 g.

Instruments may have up to two partial weighing ranges (each with its own verification scale interval) in which case it is approved for use with up to 7500 verification scale intervals per partial weighing range or up to three partial weighing ranges (each with its own verification scale interval) in which case it is approved for use with up to 3000 verification scale intervals per partial weighing range, and a speed of up to 2 m/s (with the verification scale interval being in the series … 0.1, 0.2, 0.5, 1.0, 2.0, 5.0, 10 ..g).

An OCS/Wipotec model BD-CAN control unit (Figure 6) and an RC-TERM operator/indication unit (Figure 7) are used.

(*) Abbreviated model number of the instrument.

14. Description of Variant 13 approved on 29/09/16

Certain models of the HC (*) series which are similar to variant 10 but using an OCS/Wipotec HC operator/indication unit and an IPC SWAx control unit.

(*) Abbreviated model number of the instrument.

15. Description of Variant 14 approved on 29/09/16

The pattern and variants are approved for use as Y(b) instruments.

Single range Instruments may have a maximum of 1000 verification scale intervals.

Multi-interval weighing instrument may have up to three partial weighing ranges (each with its own verification scale interval) in which case it is approved for use with up to 1000 verification scale intervals per partial weighing range.

TEST PROCEDURE No 6/14G/27

Instruments shall be tested in accordance with any relevant tests specified in the National Instrument Test Procedures.

In addition three tests shall be carried out with a test object of a length close to the maximum for which the instrument is intended to be used in normal operation

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*.

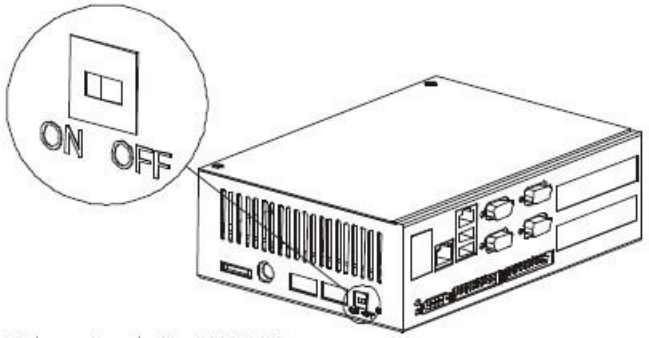
FIGURE 6/14G/27 – 1

OCS/Wipotec Model HC-FL with IW-B Weighing Platform (Pattern)

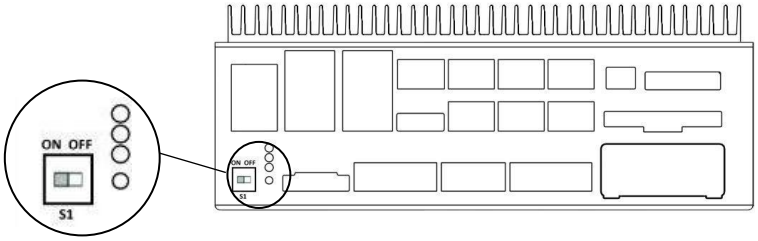
FIGURE 6/14G/27 – 2

OCS/Wipotec Model HC Indication Unit (Pattern)

FIGURE 6/14G/27 – 3



Picture of controller IPC SWAxx

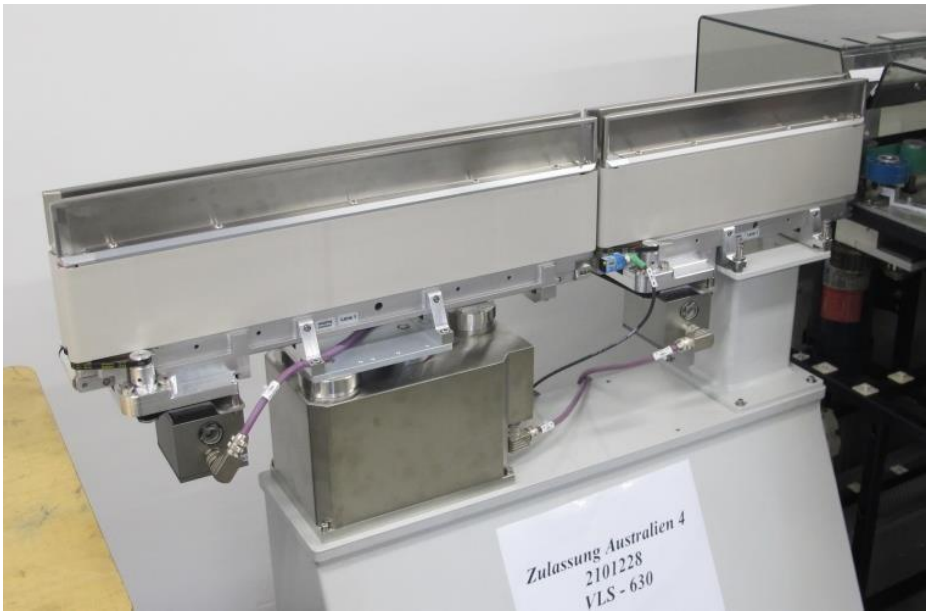


IPC SWAx Controller incl. Typical Sealing

FIGURE 6/14G/27 – 4

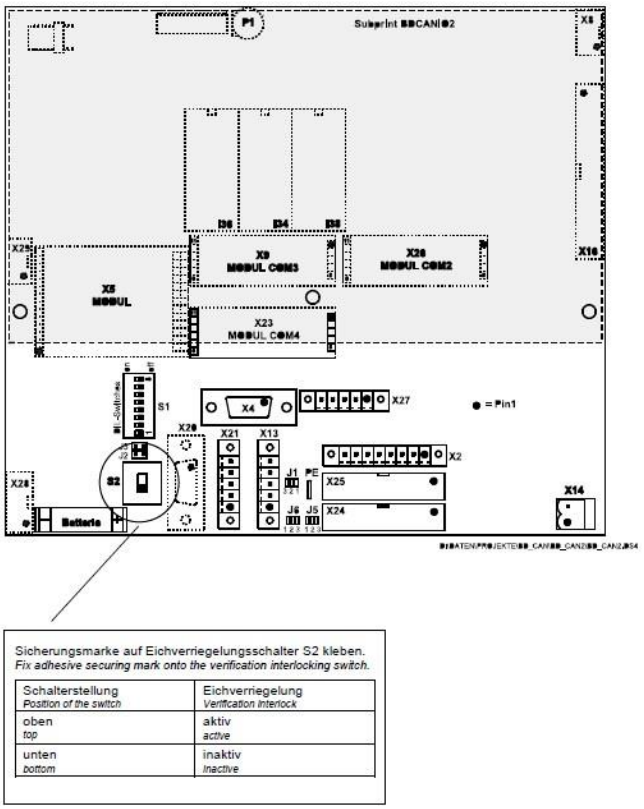
OCS/Wipotec Model HC-M-ML / EC-M-ML using IW-B Weighing Platform (Variants 6 & 9)

FIGURE 6/14G/27 – 5



OCS/Wipotec Model HC-VLS / EC-VLS Instrument (Variants 7 & 8)

FIGURE 6/14G/27 – 6



OCS/Wipotec Model BD-CAN Control Unit with Typical Sealing Details (Variants 8 to 12)

FIGURE 6/14G/27 – 7

OCS/Wipotec Model RC-TERM Indication Unit (Variants 8 to 12), integrated into a switch cabinet (refer to Figure 9)

FIGURE 6/14G/27 – 8

OCS/Wipotec Model EC-M-SL (*) using IW-B series Weighing Platform (Variants 10 & 11) and Model RC-TERM Indicator (Variants 8 to 12) in a separate housing

FIGURE 6/14G/27 – 9

OCS/Wipotec Model EC-M (*) using ECxxxx series Weighcell (Variant 12)

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