(2638) *V(3)e*

Department for Business Innovation & Skills

Certificate

Pursuant to section 12 of the Weights and Measures Act 1985

Certification No 2638 Revision 3

Valid Until 08 May 2012

In accordance with the provisions of section 12 of the Weights and Measures Act 1985, the Secretary for Business, Innovation & Skills hereby certifies as suitable for use for trade a pattern of an automatic catchweight price computing weighing machine as described in the descriptive annex to this Certificate, and having the following characteristics:-

Maximum capacity	*Max*	=	*2 kg*
Minimum capacity	*Min*	=	*0.100 kg*
Scale interval	*e*	=	*0.001 kg*
Tare	*T*	=	*- Max*

Under the provisions of section 12(5) of the said Act, the certificate is subject to the conditions as given in the descriptive annex.

Note: This certificate relates to the suitability of the equipment for use for trade only in respect of its metrological characteristics. It does not constitute or imply any guarantee as to the safety of the equipment in use for trade or otherwise.

This revision replaces previous versions of the certificate.

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Signatory: *P R Dixon*
for Chief Executive
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Date: 28 September 2010
Reference No: TS1202/0011

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CERTIFICATION NO 2638 REVISION 3

Descriptive Annex

1 INTRODUCTION

This pattern of a 230 V AC 50 Hz mains-operated automatic catch weigher, designated Gemini, comprises a self-indicating and price computing weighing machine and control system, a weigh platform incorporating a weigh conveyor with a 12 kg load cell type K-PW2AC6/12K-C-HG manufactured by HBM, two additional conveyors, and a thermal label printer and applicator module.

The Gemini has a maximum capacity of 2 kg, a minimum load of 0.100 kg, with a scale interval of 0.001 kg. The instrument provides indications of:

i) price per unit weight from £0.00 to £450.00 per 100 g or per kg by £0.01 intervals
ii) price-to-pay from £0.00 to £999.99 by £0.01 intervals.

The instrument is designed to weigh packs dynamically, with a maximum throughput of 150 packs per minute, depending upon the pack size, weight and label size. The conveyors can run at a maximum speed of 71 m/min, which is set in the PLU for the pack and can also be adjusted by the operator (adjustment range of 10 - 71 m/min).

The Gemini can store up to 9999 PLUs in memory, depending upon the amount of data associated with the PLU. The PLU contains the price per unit weight data for each product/pack type, which is used in conjunction with the pack weight to calculate the price to pay. The required transaction and commodity data is sent to the printer where the labels are printed and automatically applied to the packs.

2 CONSTRUCTION

Figure 1 shows a photograph of the Gemini.

2.1 Mechanical

2.1.1 The main H-frame supports three modular conveyor assemblies, with the console mounted at the rear of the H-frame. The label printer, applicator and labelling conveyor are mounted on a separate stand-alone module. A sliding perspex cover is provided over the weighing conveyor, which must be closed for weighing operations.

2.1.2 Photosensors are mounted on the H-frame, with the associated reflectors mounted below the conveyor belts along the central strip. The photosensors detect the position of the packs and are used to provide the control signals for the weighing and labelling operations.

2.1.3 Conveyors

The system may consist of three conveyors:

(i) Infeed (optional)
(ii) Separator
(iii) Weighing

2.1.3.1 Infeed conveyor

2.1.3.1.1 The infeed conveyor module is provided with twin belts which are driven by a DC motor. The conveyor speed is adjustable, with the infeed conveyor speed set to run at a speed 20% slower than the rest of the conveyors. The conveyor runs on a stop/start basis under the control of the microprocessor.

2.1.3.2 Separator conveyor

2.1.3.2.1 The separator conveyor module follows the infeed conveyor and is provided with twin belts which are driven by a DC motor. The speed of the conveyor is adjustable, up to a maximum of 71 m/min. The separator conveyor runs at a higher speed to the infeed conveyor to provide separation of packs arriving close together. The conveyor runs on a stop/start basis under the control of the microprocessor.

2.1.3.3 Weighing conveyor

2.1.3.3.1 The scale comprises a 12 kg load cell type K-PW2AC6/12K-C-HG manufactured by HBM, mounted onto the H-frame, onto which a self-contained conveyor assembly is mounted. The weighing conveyor comprises twin belts which are driven by a DC motor. The conveyor speed is adjustable, up to a maximum of 71 m/min. The conveyor runs continuously in order that the packs are weighed dynamically. A spirit level indicator is mounted within the scale conveyor assembly to ensure that the machine is set level during operation.

2.1.3.3.2 The system can operate at a maximum throughput of 150 packs/min up to and including pack weights of 500 g. Above 500 g the throughput is reduced to a maximum of 120 packs/min. The system automatically checks if the throughput is correct for the pack weight.

2.1.3.3.3 The system has an operating temperature range of -10 to +40 °C when operating in catch-weight mode, and an operating temperature range of 5 to +40 °C when operating as a checkweigher (see Average Weight Modes in Section 4).

2.2 Console

2.2.1 Mounted at the rear of the H-frame is the main electronics console. The console houses the main system electronics, A/D converter, motor control and power supplies.

2.2.2 Electronics

2.2.2.1 Located within the console is the system electronics which provides the weighing and control functions for the Gemini machine. The electronics system comprises of a PC card, up to two network cards, an I/O card, a colour LCD driver card, a hard disk, a floppy disk for engineer access, a SEP Server board, a power supply for the PC card, an A/D converter, motor speed controllers and an Ethernet hub. The system utilises three-way communications between the PC card, the SEP Server and the printer, to ensure the correct operation of the system. Communications between the PC card and the SEP Server is via a serial RS422 link, while Ethernet is used to link the PC card to the printer. A serial RS422 link provides the communications between the SEP Server and the printer.

2.2.2.2 The activities of the system are controlled by the microprocessor on the PC card and the microprocessor on the SEP Server board. The PC compatible card contains a microprocessor and runs Microsoft Windows™ application software to provide the operator interface and management of the system and PLU structure. The PC receives weight data from the SEP Server and uses this data to perform the weight and transaction data calculations.

2.2.2.3 The SEP Server board incorporates a real-time processor which provides the control of the weighing and labelling operations via monitoring of the photosensors. It follows the progress of the pack at all times and provides the control signals for the conveyor start and stop, adjusting the belt speed and signals to printer to label the packs. The SEP Server also obtains the weight data from the A/D converter and passes it to the PC card.

2.2.2.4 The system incorporates a power supply which provides the power for the PC card and the floppy disk and hard disk drives. A separate power supply provides a 24 V AC. supply for driving the LCD panel. The SEP Server board incorporates a power supply which is used to provide the control signals for the system.

2.2.2.5 The system is provided with two Ethernet cards, one of which provides an external Ethernet connection. The second card provides the connection between the PC card and an Ethernet hub which provides up to four Ethernet links, one for each of the connectable printers (see Authorised Alternatives).

2.2.3 Weighing circuit

2.2.3.1 The weighing circuit consists of the load cell, a separate power supply, and a conformal coated analogue to digital converter under control of the SEP Server microprocessor. While the pack is transported across the weighing platform the A/D takes several weight readings and when the microprocessor determines that the weight is stable the count is used for weight and transaction data calculations.

2.2.4 Touch sensitive display panel

2.2.4.1 The touch sensitive liquid crystal display provides the operator interface. The display is a colour LCD panel backlit by an electro-luminescent panel. The display is touch sensitive and enables the operator to control the operation of the machine by touching the appropriate points on the screen, to perform functions or navigate through the menu structure. During normal operation mode the display indicates the active PLU No., Tare, Weight, Unit Price and the calculated Price to Pay, along with additional function keys and status windows.

2.2.5 Software

2.2.5.1 The operating software for the PC is stored on the hard disk in the executable files. The floppy disk is provided to enable engineer access to non-metrologically critical software. The machine configuration and calibration software is held on the disk in a protected 'DLL' file. Software protection is provided by checksums and a calibration log.

2.2.6 Devices

2.2.6.1 The instrument is provided with the following devices:

- Initial zero-setting device (< 20 %)
- Semi-automatic zero-setting device (range of 4 % of Max)
- Zero-tracking device
- Automatic zero-checking device (600 packs or 5 minutes)
- Semi-automatic subtractive tare balancing device
- Preset tare device
- Zero indication
- Belt speed setting accessible to user
- Device to determine when stability criteria fulfilled
- Internal memory
- Counting device
- Static calibration not accessible to user
- Dynamic setting not accessible to user
- Device that acts upon significant faults
- Price computing
- Optional batch totalising device (see 7.18)

2.2.7 Interfaces

2.2.7.1 The instrument is provided with the following interfaces:

- RS232, RS485 and fibre optic serial communications
- PC standard Ethernet Network (four connections)
- 24 V DC I/O, control for up to 8 devices

2.3 Label printer and applicator module (Figure 2)

2.3.1 The labelling module is a stand-alone module and is provided with a single belt which is driven by a DC motor. The conveyor speed is adjustable, up to a maximum of 71 m/min, with the conveyor set to run continuously.

2.3.2 The label printer and applicator is a custom labeller system and it is positioned over the labelling conveyor. Mounted on the printer central aluminium plate are the thermal print head assembly, label reel support and guide rollers, take-up spool, tension arm, label sensor adjuster, label detector assembly, and pneumatic label applicator assembly.

2.3.3 The printer is controlled by a single-board PC, and a custom I/O board. An Ethernet card is provided for communications with the main processor. The software program is held in Flash memory, which is downloaded by the central processor at power-up.

2.3.4 An electric motor and gear box are fitted to a threaded shaft of a raise/lower mechanism. This allows the height of the printer assembly and thus the print head to be adjusted to an optimum position above the pack being labelled. Limit switches inside the column restrict excessive movement in either direction. The vertical movement of the printer assembly is controlled by the push-buttons on the front of the console.

2.3.5 The printer assembly may be rotated about the vertical axis to enable labels to be applied along or across the packs. Movement is restricted to approximately 350 degrees. The position of the printer assembly at right angles to the direction of the conveyors may also be adjusted.

2.3.6 Labeller data is sent from the main board in the console to the printer controller board in the labeller via the Ethernet link. The SEP Server is connected to the printer CPU by a serial link and provides control signals for the printer. The labeller prints the transaction and commodity data supplied by the console on labels and applies the labels to packs positioned beneath the applicator.

2.4 Electrical

2.4.1 The machine is supplied by a single phase 230 V AC 50 Hz mains input.

2.5 Pneumatic

2.5.1 The machine has a filter/regulator mounted on the H-frame for the air supply to the label applicator. The filter/regulator is supplied by an external air supply. The normal operating pressure is 5 bar. A pressure switch detects air pressures below 2 bar and stops the system in the event of low air pressure.

2.6 Legends

2.6.1 The following legends are durably and legibly marked on a rating plate fixed to the side of the console:

Manufacturers name:	Herbert Industrial Ltd.
Model Type:	Gemini
Serial Number:	#####
Certification No:	2638
Voltage:	230 V a.c.
Frequency:	50 Hz
Temperature:	-10 to +40 °C (catchweigher)
	5 to +40 °C (checkweigher)

2.6.2 The following legends are durably and legibly marked on a label securely fixed on the H-frame next to the pressure regulator:

"Set to 5 Bar"

2.6.3 The following text is located on the console near to the display:

"NOT TO BE USED FOR DIRECT SALES TO THE PUBLIC"

2.6.4 ‘Tamper-evident’ labels are located on the weigh conveyor assembly and on the H-frame adjacent to the stamping plug, and bear the same serial number as the console.

2.6.5 The following legends are shown in the top right-hand corner of the operator display:

Maximum Capacity:	2 kg
Minimum Capacity:	0.1 kg
Verification Scale Interval:	0.001 kg
Accuracy Classification:	III

2.6.6 The following text is located on the cover over the weigh conveyor:

“COVER MUST BE IN PLACE DURING AUTOMATIC OPERATION”

2.7 Stamping

2.7.1 A stamping plug is securely fixed to the H-frame of the instrument by a screw which has its head sealed over by the lead of the stamping plug.

2.8 Sealing and security

2.8.1 A “tamper-evident” label (Figure 3) is applied to the cover of the A/D converter box. A second is applied across the cover clasp of the load cell D-Connector and a third across the two halves of the D-Connector (Figure 7). The D-Connector would have to be disconnected and the cover would have to be removed to change the load cell, hence the seal would be broken to indicate that the cover had been opened.

2.8.2 Control and configuration of the system is effected via the LCD panel on the console. Four levels of operator access are provided which give password protection to different facilities within the operating system.

2.8.3 The metrologically critical software files are Welmec.dll and Calilog.db. These are stored on the hard disk in the executable files. The metrological characteristics are also protected by a checksum, with the calibration mode password protected. A calibration log provides a non-erasable record each time a metrological parameter or calibration change is made and saved. The software operates with the protected software interfaces and is protected by checksum. System configuration files (non-metrologically critical) can be loaded via the internal floppy disk drive. This facility is software protected and any unauthorised use of this facility will result in complete system shut-down.

3 OPERATION

3.1 Switching on

3.1.1 The system ‘boots-up’ with the console display showing the ‘boot-up’ procedure. The Windows™ application software is loaded and when this is complete the Gemini application program is automatically run. The system integrity is tested and the operating software is downloaded to the printer.

3.1.2 During the power-up sequence the system is set to zero. If the system is unable to zero, operation of the system will be inhibited until the platform has been cleared and zero achieved.

3.2 Operator touch sensitive display (Figure 4)

3.2.1 The operator display is an analogue touch sensitive panel. The touch sensitive panel allows the user to operate the machine, navigate through the menu structure and program PLUs and other data. The screen is also used by an authorised engineer to configure the system. The screen layout in Figure 4 is an example of the display when the machine is in Operation Mode.

3.3 Operation mode

3.3.1 The machine operates under the control of the PLUs, of which there may be 9999. The PLUs are programmed with information to allow the machine to calculate the price of the pack and print the required label, containing the transaction and commodity data, and apply it to the pack in the correct location. Information contained within the PLU is used by the system processors, in association with the signals from the pack photosensors, to generate the timing signals for control of the weighing and labelling operations.

3.3.2 When the system has completed its power-up routine and is in Operation Mode, the operator selects a PLU by touching the 'PLU' area on the display. A list of PLUs will then be given. On selecting a valid PLU, the Operation Mode screen will show the Unit Price and the Tare.

3.3.3 With the conveyors clear, and the display indicating ZERO, the conveyors are started by pressing the start push-button on the front of the console. For the conveyors to start the emergency stop switch must be in the released position.

3.3.4 A pack is supplied on to the infeed conveyor which runs at a slower speed than the separator conveyor, to provide separation of packs. The pack is transported across the infeed and separator conveyors to the weighing conveyor. The pack breaks the photosensor located at the trailing edge of the separator conveyor which initiates the dynamic weighing process. The pack passes along the weighing conveyor and is weighed dynamically. If a stable weight value is not achieved the system indicates an error and the pack is not labelled. Provided a stable weight value is achieved, it is used to calculate the Total Price to the nearest 1 p (0.5 rounded up) and the transaction is sent to the printer. The label is then printed and applied to the pack.

3.3.5 The photosensor at the trailing edge of the separator conveyor is used to ensure that there is only one pack on the weighing conveyor while the weighing operation is in progress. If a second pack arrives at the photosensor while the weighing operation is in progress, the infeed and separator conveyors stop. When the weighing operation is complete the conveyors start again and the pack is transported onto the weighing conveyor.

3.3.6 When all weighing and labelling operations have been completed the conveyors can be stopped by pressing the Stop push-button on the front of the console, or by operating the emergency stop switch.

3.3.7 The speed of the conveyors can be changed while in operation mode. The separator, weighing and labelling conveyors all run at the same selected speed, with the infeed conveyor always running at a slower speed.

3.4 Weight limits

3.4.1 It is possible to selectively label packs within preset limits inclusive of the limits or, outside of the limits or, set the facility to off. Weight limits can be defined and enabled/disabled within the PLU. Weight limits can also be enabled/disabled by touching the weight limits area on the Operation Mode display.

3.5 Interlocks

The following interlocks are provided by the system:

3.5.1 When gross zero (or net equivalent to gross zero) has not been detected within a five minute period or 600 packs, whichever occurs the sooner, then the conveyors will stop.

3.5.2 Packs not achieving stability as they pass along the weighing conveyor cause an error to be indicated and the pack is not labelled.

3.5.3 Packs which are too long pass across the system and are not labelled.

3.5.4 If the air pressure is too low for correct operation the conveyors stop.

3.6 Non-weighed items operation

3.6.1 A fixed price mode of operation is provided, and is accessed by selecting a PLU which has been programmed with a fixed price. The symbol associated with the Unit Price field in the Operation Mode display is changed to show the '£' symbol only. The weight and total price fields are hatched as they are not used in this mode of operation. In the weighing mode area of the display the text Fixed Price is displayed. The price which can be set in the PLU is from £0.00 to £450.00 by £0.01 intervals. Packs are labelled with the price but not with the weight in this mode of operation.

4 AVERAGE WEIGHT MODES

The Gemini system has three different operating modes which provide average weight facilities, as follows:

i) Internal average weight mode
ii) Combined internal average weight and catch-weight mode
iii) External average weight mode (PAWS)

The availability of each of the average weight features is protected to management level and is subject to the conditions in section 8.

4.1 Internal average weight

4.1.1 The internal average weight mode is accessed by selecting a PLU that has been configured for average weight operation. On selecting the PLU the operator is asked to confirm entry into the average weight mode. The Unit Price is replaced by a fixed Total Price. The operation is based on a programmed target weight which is governed by tolerance parameters.

These parameters are programmed in to the PLU, and are defined as follows:

(i) Target weight - specifies the nominal weight for the average weight operation. This value is printed on the label.
(ii) T1 and T2 under - these are calculated by the system and cannot be modified.

4.1.2 When in the average weight mode of operation, labelling of the packs is regulated by the following:

(i) The actual weight shall not be less, on average than the nominal (printed) weight.
(ii) No more than 2.5% (1 in 40) of the packages shall be Non-standard, that is to be less than the tolerance limit (T1 under).
(iii) No package to be inadequate, i.e. to contain less than the absolute tolerance limit (T2 under).

4.1.3 An average weight label contains the nominal weight with the associated units of measurement, the ‘e’ symbol, and a fixed price. The units of measurement and the “e” symbol may be provided on special pre-printed labels.

4.2 Combined mode

4.2.1 The combined internal average weight and catch-weight mode is accessed by selecting a PLU that has been configured for combined mode operation. On selecting the PLU the operator is asked to confirm entry into the combined mode. On entry to a combined mode PLU, the message ‘CATCH & AVERAGE WEIGHT’ is displayed in the weighing mode area.

4.2.2 For this mode of operation, an average weight band is specified in the PLU. The nominal weight is defined for the pack along with an upper limit, and a lower limit which varies to ensure that the three average weight requirements, as listed in Section 4.1.2, are complied with. For a pack falling within the average weight band, the text “Average weight” is displayed. Any pack falling within the band is labelled with an average weight label format containing the nominal weight and the associated unit of measurement, the ‘e’ symbol, and a fixed price. For a pack falling outside of the average weight band, the text “Catch-weight” is displayed. Packs falling outside of the average weight band are labelled with a catch-weight label format containing the catch-weight, unit price and calculated total price.

4.3 External average weight (PAWS)

4.3.1 One or more Gemini instruments may be independently connected via an RS232 or a fibre optic link to a central, office based, PC. All data processing and recording is carried out by the PC which transmits the necessary information back to the weighing instrument for generation of the appropriate label. Data is stored by the PC on hard disk, which can be backed up onto tape on a regular basis, plus printed paper records may be generated as required.

4.3.2 The instrument has a fibre optic output board which provides the two way communication between the weighing instrument and the PC. Entry into the PAWS facility is achieved by selecting an appropriate PLU. The operator is asked to confirm entry into the PAWS operating mode.

4.3.3 A batch scheme is set up centrally at the PC, either to "e" weighing or "poultry" weighing requirements with any number of Gemini instruments assigned to a batch at any given time. The batch scheme consists of a series of products with allocated PLUs, specific data derived from the appropriate Regulations and other production control settings.

4.3.4 Once the instrument has been "switched" into PAWS mode and a product weighed, the weight data is transmitted, via the fibre-optic link, to the central PC which processes the data against the active batch scheme and re-transmits the necessary product information and nominal quantity declaration back to the weighing unit.

4.3.5 A label is then generated which includes a specific identifying symbol signifying that the product has been weighed to an average weight procedure. These symbols are different and specific to the type of batch scheme set up on the PC.

4.3.6 For average weighing to the Weights and Measures requirements, the symbol is an "e" and for weighing to the Poultry Meat requirements, the symbol is a "p". These symbols are printed in the weight field of the label and are only initiated with the weighing instrument switched into PAWS mode. The symbols are not available or printed when the instrument is operating in normal catch-weight mode.

5 CERTIFICATION NUMBER

5.1 The system bears the Certification No 2638.

6 RECOMMENDED TESTS

In addition to the tests specified in The Weighing Equipment (Non-automatic Weighing Machines) Regulations 2000, the following additional tests should be carried out:

6.1 Dynamic testing of the instrument is to be performed using the type of items or articles which are intended to be weighed. Test loads shall be applied at maximum, minimum and mid-point speeds of operation, as follows:

(i) Test load values close to Min and Max.

(ii) Test loads at critical points in between Min and Max e.g. at 500 e.

The number of test weighings shall be a minimum of 10 for each load.

The mass of all test loads shall be determined on a control instrument to an accuracy at least five times higher (three times higher if the control instrument is verified immediately prior to the automatic test) than the appropriate error allowance for the load.

7 AUTHORISED ALTERNATIVES

7.1 Having the alternative configurations of the weighing system as shown below, in which case the descriptive markings are amended accordingly:

Maximum capacity:	2 kg ≤ Max ≤ 10 kg
Minimum capacity:	Min ≥ 0.100 kg
Scale interval:	e ≥ 0.001 kg
Number of scale intervals:	n ≤ 2000
Maximum subtractive tare:	T = - Max
Throughput:	Above 2 kg, a proportionate reduction in throughput with increasing pack weight (set by manufacturer).
Load cell:	E_{max} = 12 kg for Max ≤ 4 kg E_{max} = 18 kg for Max > 4 kg

7.2 Having up to three additional label printer and applicator modules.

7.3 Having overhead pack guides mounted above the infeed and/or separator conveyors.

7.4 Having the infeed conveyor removed from the system.

7.5 Having a barcode verifier and label catcher fitted to the printer and applicator module. The barcode verifier scans the barcode that is printed on the label. If the barcode is un-readable, the catcher swings out to catch the label as it ‘blown’ from the applicator. The next pack passing through the system will not be labelled either as it is not possible to return the catcher to it’s home position in sufficient time to enable the pack to be labelled. Any packs which are unlabelled are removed from the active batch totals.

7.6 Having the printing mechanism replaced by thermal transfer. The thermal transfer film is held on its core by the dispensing shaft. The film is fed down, via a guide roller, to join the label paper before they pass together under the thermal print head. The action of the thermal print head causes the ink on the film to be deposited onto the label. An image is built up on the label in the normal way, by turning on and off the thermal dots arranged in a linear bar on the thermal head. Used film exits the thermal head assembly and is wound up on a take-up shaft. The take-up shaft rotates via the action of a "polycord" belt driven from a 24 V DC motor.

7.7 Having the system arranged as a Left to Right conveyor arrangement.

7.8 Having up to eight pack diverters/centraliser assemblies, connected to RS-232 or fibre optic ports on the console.

7.9 Having a different print reel mechanism to facilitate the use of wide print spools.

7.10 Having a mechanical label folder situated after the labelling module.

7.11 Having a sleeving and printing machine connected.

7.12 Having the addition of a feature enhancement to the Gemini weigh-price labelling system. The enhancement, known as "SuperBanding", allows the Gemini to pick the most appropriate PLU for any particular pack in-flight. The PLUs to be used are arranged into a “table” (BTT) that details the individual PLU characteristics, such as priority and packing targets.

7.12.1 The standard PLU selection hotshot is used to enter PLU selection screen. The Gemini will display, depending on a console option, either the PLU list or the BTT list in a generic selector. The programmable button will allow the operator to switch the list to the other type, i.e. if starting with the PLU list, pressing the programmable button will switch the list to BTT. If the operator selects to load a PLU, Gemini will operate as normal. If the operator selects to load a BTT, the PLU manager will load it.

7.13 Having a base labeller connected.

7.14 Having the photosensors replaced by cross-bed photosensors.

7.15 Having a reduced operating temperature range anywhere within the approved range specified in 2.1.3.3.3. The descriptive markings are amended accordingly.

7.16 Having an alternative construction (Figure 5), in which case the instrument is designated the Gemini Solo. The Solo is based on a sub-set of the Gemini components. It is limited to only one printer and also has a reduced operating speed which is software configurable.

7.16.1 The instrument has only one infeed conveyor, instead of two. Instead of being on a separate free-standing module, the out-feed conveyor and printer are mounted integrally on the main frame of the instrument, together with the control cabinet, infeed and weighing system. When fitted with the standard printer the label catcher and “label on shoe” sensor are omitted.

7.17 Having an Ink Jet printer as an alternative printer type on the standard Gemini and Solo instruments. It is integrated within the software in a similar manner to the standard printer, thus allowing a combination of standard and Ink Jet printers to be supported by a single instrument.

7.17.1 The Ink Jet printer control unit is physically separate to the Gemini. The Ink Jet print head is mounted over a Gemini controlled conveyor to ensure correct pack and print placement. The Gemini sends label formatting data and variable pack data to the Ink Jet printer via serial or ethernet communications.

7.18 Having a Genesis printer provided for printing batch totalising information. The batch totalising device is implemented as an option that can be enabled or disabled. The device allows a Batch Target Count, Weight or Value to be programmed in a PLU, or set up via the Operation screen. The software for programming the Genesis printer can reside on the Gemini, but is only accessible when the instrument is stopped.

7.18.1 When the instrument is started with the device active, as packs are processed, the pack Count, Weight and Values are totalised. Once the Batch Target is reached, data is sent to the Genesis printer where a label is printed. The Batch Totals are then reset and the process repeats. The label printed by the Genesis printer typically contains product related data, along with the values totalised by the Gemini. The batch totals values are identified by a special word or symbol on the label, with all totals the algebraic sums of all the values printed.

7.19 Having an alternative Minimum capacity (Min) of 0.050 kg.

7.20 Having a modified support structure which facilitates the use of the space beneath the unit. A typical example is shown in Figure 6.

7.21 Having alternative software, Welmec.dll version V2.00 or V3.00, as described in section 3.3 of Certificate UK/0126/0002.

8 NOTES AND CONDITIONS

Note 1: Approval under this certificate only covers the use of the pattern as an automatic catchweight weighing machine.

Note 2: Features (as described at Section 4), not forming part of the conventional use of an automatic catchweight weighing machine, have been allowed in this pattern under the following condition.

In accordance with section 12(5) of the Weights and Measures Act 1985 these features shall not be used in a manner that compromises the pattern when used as an automatic catchweight weighing machine.

Note 3: Use of these features for weighing and pricing may be covered by requirements in other legislation outside the scope of this approval.

8.1 When more than one labeller is provided on a system, when more than one label is applied to the same pack, the primary indications of weight, unit price and price-to-pay shall be grouped together clearly and unambiguously on the same label.

8.2 The instrument may bear the following alternative manufacturers name: Herbert Industrial Ltd.

9 CERTIFICATE HISTORY

ISSUE NO.	DATE	DESCRIPTION
2638	9 May 2002	Certificate first issued.
2638 Revision 1	30 June 2008	Amendments 1 to 8 consolidated in to certificate. Modifications to permit an upgrade of the Windows Operating System
2638 Revision 2	10 July 2008	Amendment to section 2.8.1 to modify sealing arrangements
2638 Revision 3	28 September 2010	Company name changed from Herbert Industrial Ltd to Herbert Partnering Solutions Ltd.

Figure 1 Photograph of Gemini

Figure 2 Photograph of label printer and applicator module

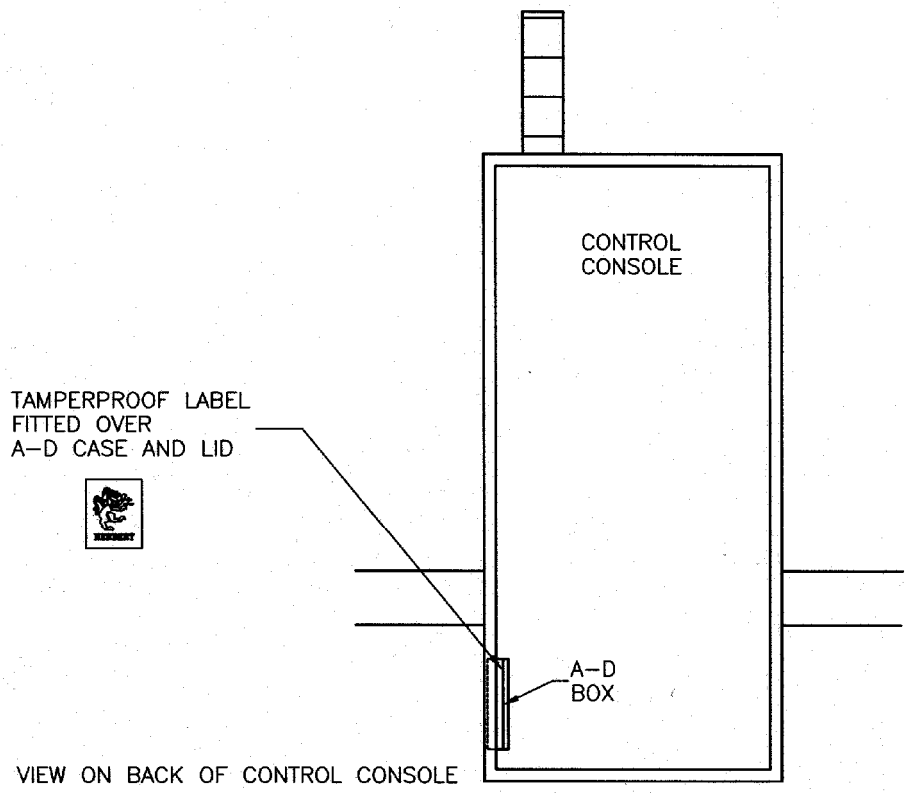

Figure 3 Location of seals on A/D box

Figure 4 Operation mode display

Figure 5 Gemini Solo

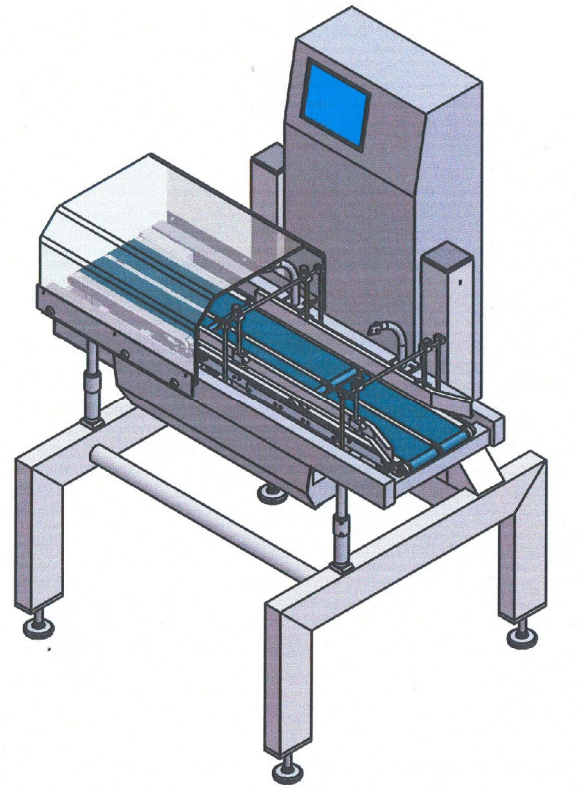

Figure 6 Modified Support Structure

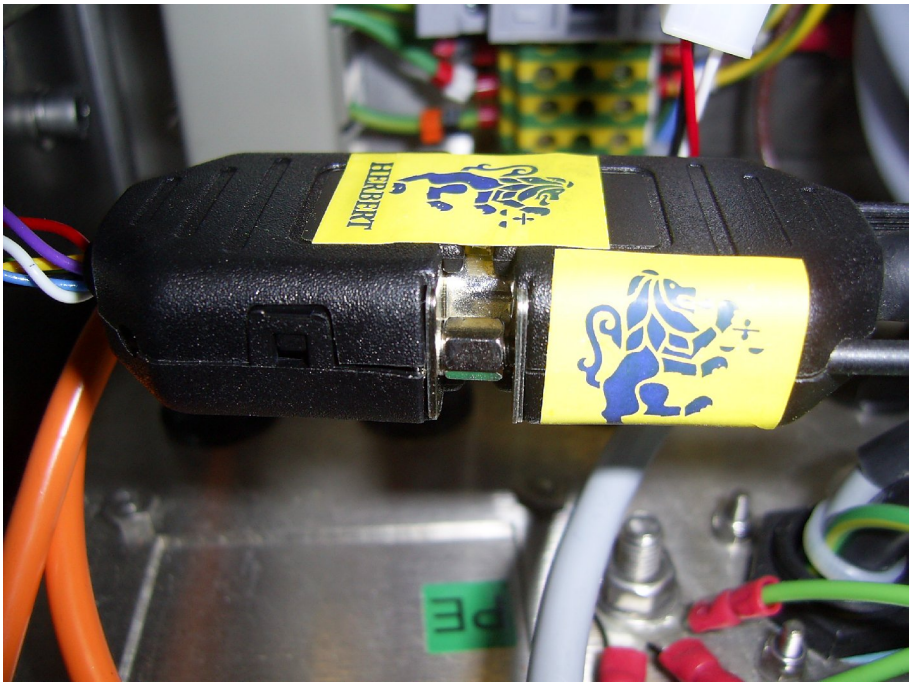

Figure 7 Sealing of D-connector