User manual

Weighing computer BDI 30000 for platform weighing

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INDEX

1. INTRODUCTION

Please read the operating instructions carefully before erecting and commissioning, even if you already have experience with Big Dutchman scales.

The BWI is a general purpose indicator for displaying weight.

All the displays are large easy to read liquid crystal type displays (LCD). The LCD's are supplied with a LED backlight.

All units include automatic zero tracking, audible alarm for pre-set weights, and an accumulation facility that allows the individual weights to be stored and recalled as an accumulated total.
The Indicator could have (optional) a Bi-directional RS-232 Interface for communication with printer or PC.

2. TECHNICAL SPECIFICATIONS

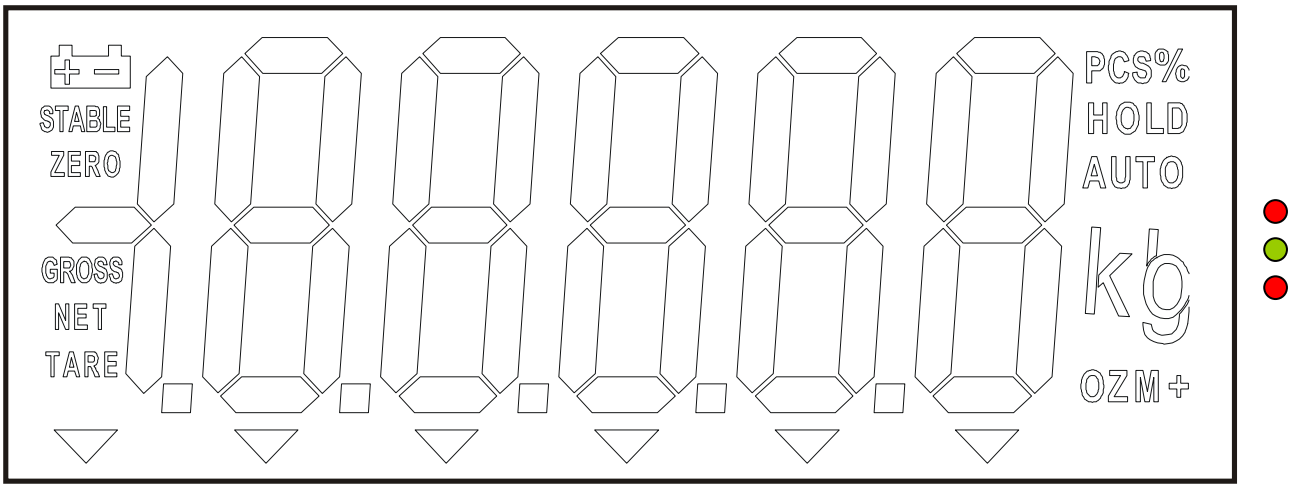
Stabilisation Time	2 Seconds
Operating Temperature	0℃ - 40℃
Operating Relative Humidity:	< 80% Non-condensing
Power supply (external)	internal rechargeable battery or main power 9 VDC, 800 mA, Akku 6V/4Ah
Battery operating time	90 hours / charging 12 hours
Calibration	Lockable keyboard calibration and configuration
Max. Resolution	External 1/15.000; Internal 1/100.000
Display	50 mm LCD Display with Backlight
Keyboard	7 Tact-Switch
Housing	ABS housing IP54
Interface (Optional)	RS232 or Serial printer output
Funktion	Weighing, Manual and automatic memory accumulation facility, Manual and automatic print, Automatic power off
Load cell sensitivity	1mV/V~3mV/V
Load cells	Up to 8 350ohms cells
AD Converter	Sigma delta, Max 60/sek.
Zero input range	0mv~5mV
Signal input range	0~15mV
Weight kg	3.8 kg

Standard accessories:

- Indicator with built in rechargeable battery
- Mains device (for operating the scale as well as for charging the built in rechargeable battery)
- Operating instructions

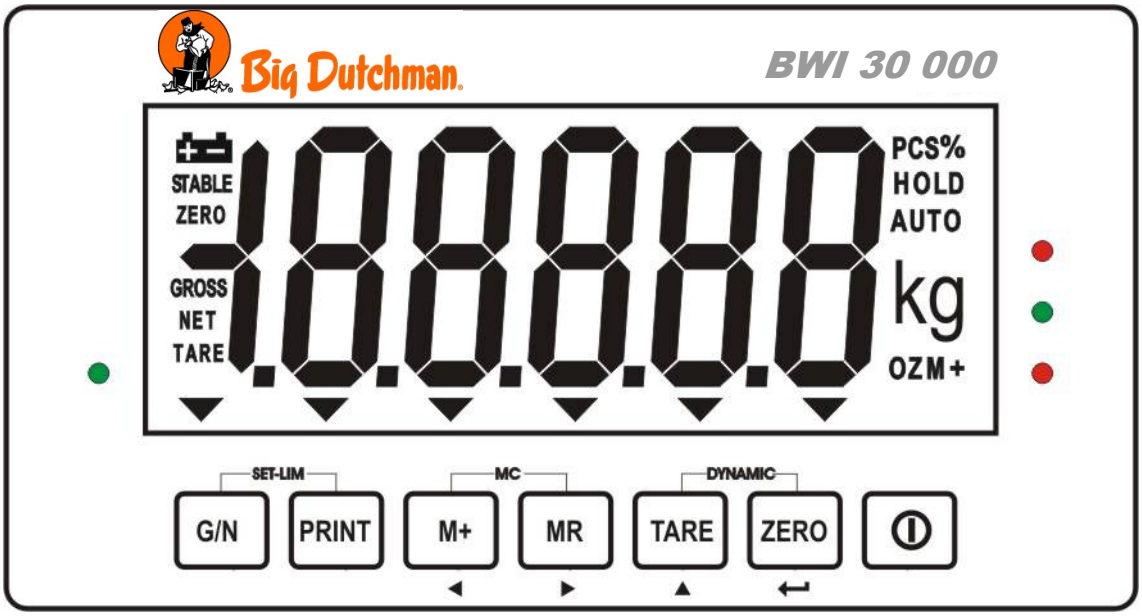
3. DISPLAY

The LCD display will show a value and a unit to the right of the digits.
In addition there are labels for TARE, GROSS weight, ZERO, Stable and for Low battery .



	Battery needs charging
STABLE	The weight is stable - when the weight value is being displayed without fluctuation
ZERO	The scale is at zero
GROSS	Brutto
NET	Net
TARE	A weight has been tared, the display is showing the net weight.
PSC %	Parts counting mode is active. PSC - Indicates that the number of sampled pieces is being displayed
AUTO	The automatic accumulation function is active
●	When weight is above the High setpoint
●	When weight is between the setpoints
●	When weight is below the High setpoint
kg lb	Shows actual unit of weight
M+	Accumulation function
Charge	Indicate the status of battery charging. Green the battery is fully charged. Red, the battery is nearly discharged. Yellow indicates the battery should be charged longer, preferably overnight.

4. KEYBOARD



	Normal mode		Setting mode
G/N **Gross/Net**	Gross weight/net weight shift key	**Esc**	A secondary function, is to return to normal operation when the scale is in a parameter setting mode.
PRINT **Print**	To print the results to a PC or printer using the optional RS-232 interface. Press Print during self checking will enter setting mode.	**C**	**Delete.** In setting mode, this key used as delete key.
M+ **M+**	**Accumulation -** add current weight in memory. Up to 99 values or full capacity of the weight display can be added.	◀	In setting mode, this key used to move active digits left.
MR **MR**	Memory recall key, show total accumulate weight in memory.	▶	In setting mode, this key used to move active digits right.
TARE **Tare**	Tares the scale. Stores the current weight in memory as a tare value, subtracts the tare value from the weight and shows the results.	▲	A secondary function incrementing the active digit when setting a value for parameters or other functions.
ZERO **Zero**	Set the zero point for all subsequent weighing. The display shows zero.	↵ **Enter**	A secondary function of "Enter" key when setting parameters or other functions.
⏻	Turn on or off the power.		

Setting check Weighing limit: Press G/N and PRINT together.

MC (memory clear): Press M+ and MR together

Animal scale function: Press TARE and ZERO together in normal weighing mode will turn on/off.(when enter/escape animal scale mode, you will hear beeper on twice)

5. Fundamental information

5.1 INTENDED USE

The scale you have acquired serves to determine the weighing value of the material to be weighed. It is intended to be used as a “non-automatic“ scale. i.e. the material to be weighed is manually and carefully placed in the centre of the weighing plate. The weighing value can be read off after a stable weighing value has been obtained.

5.2 INAPPROPRIATE USE

Do not use the scale for dynamic weighing. In the event that small quantities are removed or added to the material to be weighed, incorrect weighing results can be displayed due to the “stability compensation“ in the scale. (Example: Slow draining off of liquid from a container suspended from the balance).
Do not leave a permanent load on the weighing plate. This can damage the measuring equipment. Be sure to avoid impact shock and overloading the balance in excess of the prescribed maximum load rating (max.), minus any possible tare weight that is already present. This could cause damage to the scale.
Never operate the balance in hazardous locations.
The series design is not explosion proof.
Structural alterations may not be made to the balance. This can lead to incorrect weighing results, faults concerning safety regulations as well as to destruction of the scale.
The scale may only be used in compliance with the described guidelines.
Varying areas of application/planned use must be approved by Big Dutchman in writing.
Do not use the crane balance to transport loads.

5.3 GUARANTEE

Big Dutchman offers Limited Warranty (Parts and Labour) for the components failed due to defects in materials or workmanship. Warranty starts from the date of delivery.
Big Dutchman shall have the right to either repair the fault or supply a replacement unit.
Repairs carried out under the warranty does not extend the warranty period.
The guarantee is not valid following:

- non-observation of our guidelines in the operating instructions
- use outside the described applications
- alteration to or opening of the device
- mechanical damage and damage caused by media, liquids
- natural wear and tear
- inappropriate erection or electric installation

5.4 MONITORING THE TEST SUBSTANCES

The metrology features of the balance and any possible available adjusting weight must be checked at regular intervals within the scope of quality assurance. For this purpose, the answerable user must define a suitable interval as well as the nature and scope of this check.

5.5 ACCEPTANCE CHECK

Please check the packaging immediately upon delivery and the device during unpacking for any visible signs of external damage.

5.6 PACKAGING

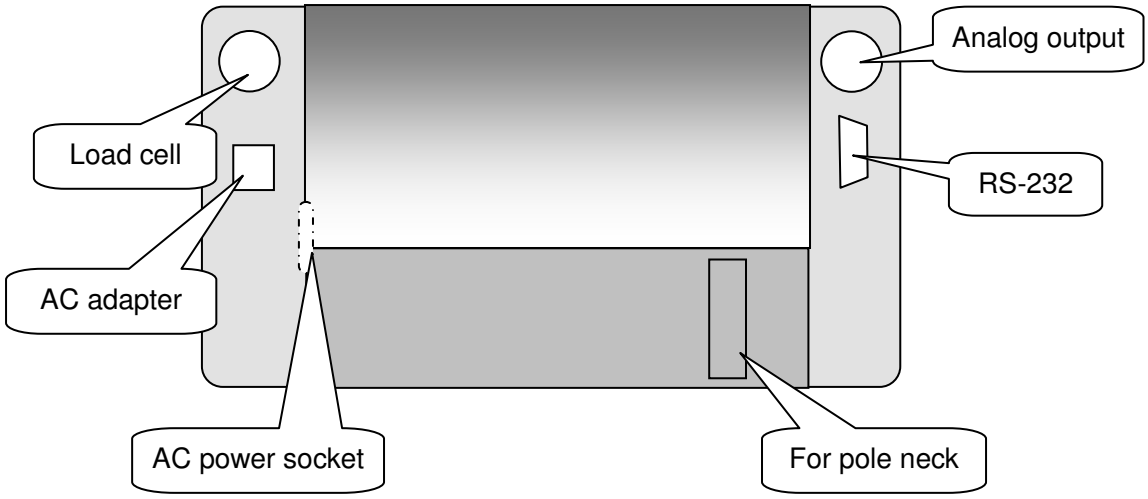
Please retain all parts of the original packaging in case it should be necessary to return items at any time. Only the original packaging should be used for return consignments.
Before despatch, disconnect all attached cables and loose/movable parts.
Apply any intended transport security devices. Secure all parts to prevent slipping and damage.

6. INSTALLATION

6.1 INSTALLATION OF BWI SERIES

6.1.1 Pillar

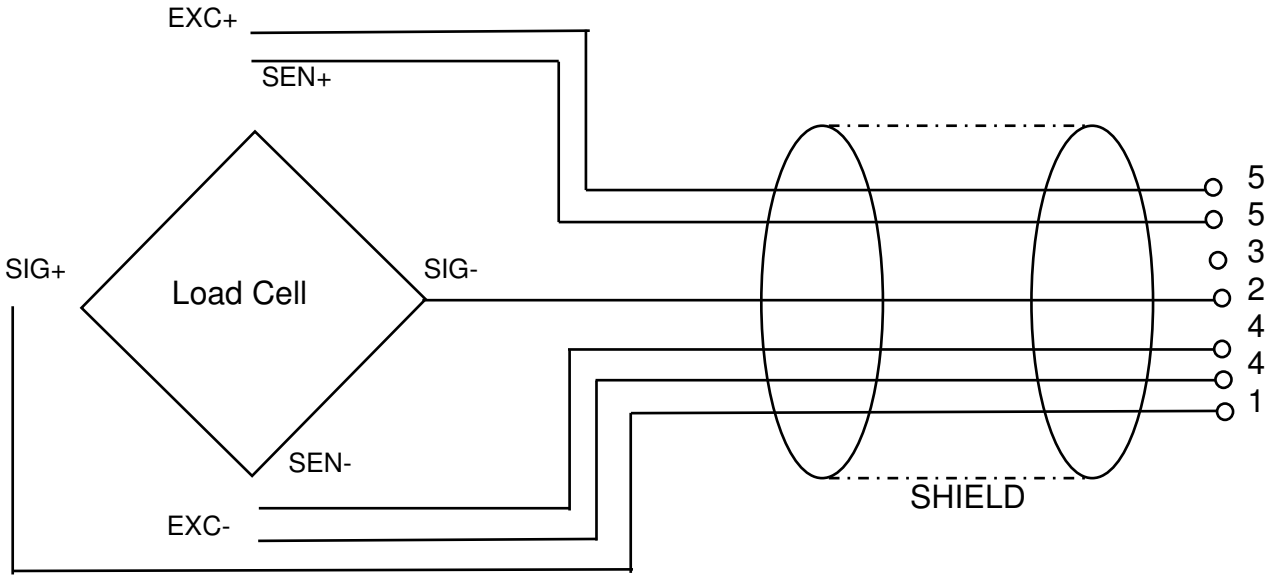
The pillar is attached to the base using a bracket that must first be attached to the base frame using the 4 bolts supplied. The Pillar is secured to the bracket using 2 set screws. The cable from the base to the indicator module is run through the tube, out through the plastic support at the top. Excess cable can be stored within the tube.
Attach the indicator module to the pillar by sliding it over the bracket with the flanges engaged in the groves on the base. Attach the cable from the base to the connector on the rear of the indicator. Attach the AC power adapter to the connector on the back of the indicator.



6.1.2 Load Cells

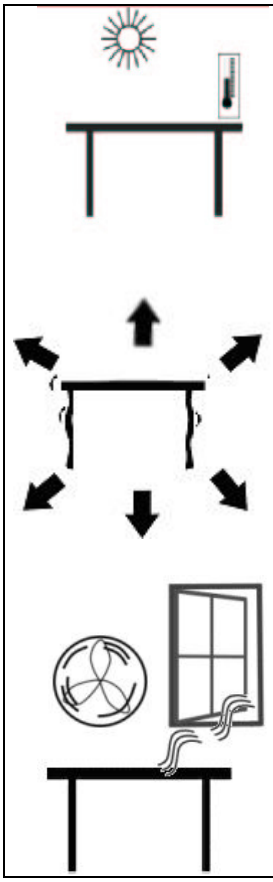
The TWI Indicator is a general purpose weighing indicator for use with strain gauge load cells. Up to 8 load cells (4 or 6-wired) of 350 ohm in parallel connection can be used.
When the indicator is first connected to a load cell it is necessary to set up the indicator to display the correct information. To do this, first set up the capacity, resolution, decimal point location and then calibrate the scale.

Load cell connect as below (5pin air connector)



6.2 GENERAL INSTALLATION

The scales should be sited in a location that will not degrade the accuracy.



- The scales should not be placed in a location that will reduce the accuracy.
- Avoid extremes of temperature. Do not place in direct sunlight or near air conditioning vents.
- Avoid unsuitable tables. The table or floor must be rigid and not vibrate.
- Avoid unstable power sources. Do not use near large users of electricity such as welding equipment or large motors.
- Do not place near vibrating machinery.
- Avoid high humidity that might cause condensation. Avoid direct contact with water. Do not spray or immerse the scales in water.
- Avoid air movement such as from fans or opening doors. Do not place near open windows or air-conditioning vents.
- If the scale is long time not in use, please charge every 3 month the battery.
- Keep the scales clean.
- Do not stack material on the scales when they are not in use.

Attention:

⇒ A warm-up time of 15 minutes stabilises the measured values after switching on.
⇒ Do not stack material on the scales when they are not in use.
⇒ Place the products in the middle of the scale.
⇒ Don't overload the scale.

6.3 SET BACKLIGHT

Press [ZERO] for 3 seconds, display will show "**setbl** ", press [ZERO] key to enter backlight setting, press [TARE] key to change backlight mode:

Bl au ⇒ "Auto Backlight" mode. backlight will on when press any key or add load on scale. After 5 seconds turn the backlight off.

bl on ⇒ Backlight always on.

bloFF ⇒ Backlight always off.

Press [ZERO] key to sure, press [G/N] key to escape.

6.4 KEYBOARD LOCK

You can use keyboard lock when this function enable. After keyboard haven't use for 10 minutes, keyboard will be lock, after enter lock status, if you press any key, display will show "**K-LCK**". If you want to escape lock mode and return work mode, hold [PRINT] , [MR] , [ZERO] key 2 seconds, display will show "**ULCK**", return normal mode.

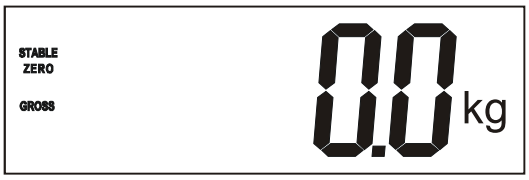
7. WEIGHING

Switch the indicator on by pressing the ⏻ key. Next a self-test is followed. At the end of the self-test, it will display “0”. The display shows STABLE-, GROSS-, ZERO symbol.
A warm-up time of 15 minutes stabilises the measured values after switching on.
Once the weight display appears, the scale is ready for use. Place the products on the scale. The indicator will show the weight.

7.1 RESETTING THE SCALE TO ZERO

Environmental influences can cause the scale not to display exactly “0.00”, even though the scale is empty.
The scale has an automatic re-zeroing function to account for minor drifting or accumulation of material on the platform. However you may need to press ZERO to re-zero the scale if small amounts of weight are still shown when the platform is empty, and thereby be certain that all weighing operations begin at zero.

Switch the scale on.



If the scale not to display exactly “0.00”, press ZERO

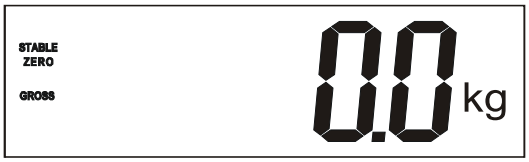
Resetting to zero even when there is a weight on the scale is only possible within a certain weight range (-4 % ... +4 % of max. weight range).
If the scale cannot be reset to zero with a weight on it, this range was exceeded. By using TARE the scale can be reset to 0.00“.

7.2 SET AUTO POWER OFF

Hold ZERO key 3 seconds, display will show ”**setbl** “. Press TARE key, display show “**setof**”. Press ZERO key to enter auto power off setting. Press TARE key to change auto power off time (**of ON**: always on, **of 5**: auto power off after standby 5 minutes, **of 15**: auto power off after standby 15 minutes). Press ZERO key to sure, press G/N key to escape.

7.3 SIMPLE WEIGHING

Place the products on the scale.



A value for its weight will be displayed.

Please do not add item that is over the maximum capacity. When reading “—OL—“ and hear beeping sound, remove the item on the platter to avoid damage to the load cell.

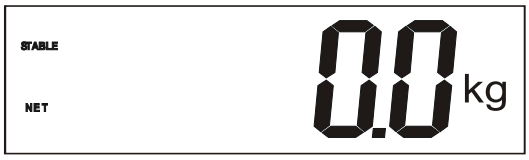
7.4 TARE WEIGHING

The weight of any weighing container can be subtracted from the gross weight with the press of a key, so that subsequent weight measurements always display the item's net weight. Place the empty container on the platform. The total weight of the container and **GROSS** will be displayed. Press the TARE key to tare the scale. The weight that was displayed is stored as the tare value and that value is subtracted from the display, leaving zero on the display. The "NET" indicator will be on. As product is added only the weight of the product will be shown.

Place the empty container on the platform.

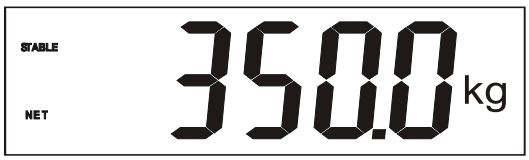
The total weight of the container and **GROSS** will be displayed.

Press the TARE key to tare the scale.



The weight that was displayed is stored as the tare value and that value is subtracted from the display, leaving zero on the display. The "**NET**" indicator will be on the "**GROSS**" will disappear.

Place the products in the container.



As product is added, only the weight of the product will be shown.

The scale could be tared a second time if another type of product was to be added to the first one. Again only the weight that is added after taring will be displayed.
When the container is removed a negative value will be shown. If the scale was tared just before removing the container this value is the gross weight of the container plus all product that was removed.

Deleting Tara - To delete the stored tare weight, remove any weights from the balance and press the TARE key.

7.4 ACCUMULATED TOTAL

The scale can be set to accumulate manually by pressing the M+ key. See the PARAMETERS Section for details of selecting the method using function "**P2 com**".

7.4.1 Accumulate operate

The weight displayed will be stored in memory when the M+ key is pressed and the weight is stable. If the optional RS-232 interface is installed the weight will be output to a printer or PC. The display will show "**ACC 1**" and then the total in memory for 2 seconds before returning to normal. (after do accumulate operate, "M+" indicator will turn on).
Remove the weight, allowing the scale to return to zero and put a second weight on. Press the M+ key, the display will show "**ACC 2**" and then the new total.
Continue until all weights have been added.

Press M+ key.

Es ertönt ein "beep". Zuerst wird die Anzahl der Einzelwägungen angezeigt und danach das Summengewicht. **ACC 1** erscheint für 2 Sekunden in Display.

Wägegut entnehmen und Stillstand abwarten. Nächstes Wägegut auflegen. Erneut M+ Taste betätigen.

ACC 2 erscheint für 2 Sekunden in Display, usw. Es können bis 99 Einzelgewichte summiert werden.

More products can be added and M+ be pressed again. This can continue for up to 99 entries, or until the capacity of the display is exceeded. The indicator shows the total number of all individual parts "ACC XX" and the total weight, before it goes back to zero.
The sum total is printed by the interface (RS 232).

7.4.2 Memory recall

To view the totals in memory press MR key.

7.4.3 Memory clear

To clear the memory, just press M+ and MR together.

7.4.4 Automatically accumulate

Press PRINT key during selfchecking, then M+ G/N TARE to enter setting mode.
Press TARE key until display show **P2cOn** press ZERO key to enter, press TARE key to select "**mode**".
Press ZERO key to sure, display will show current RS-232 mode, press TARE key to select **auto**.
After you set, AUTO indicator on.
Press weight on platform, after stable, you will hear beep on twice, you can add or remote weight now, scale will beep on again after stable, at last, remove all weight on platform, the last weight value will store in memory.

Attention:

Please note before every accumulate operate, scale need return to zero, and only press M+ key when stable.
When weight less than 20d, accumulate operate will be invalid.

7.5 CHECK-WEIGHING

Check-weighing is a procedure to cause an alarm to sound when the weight on the scale meets or exceeds values stored in memory. The memory holds values for a high limit and a low limit.

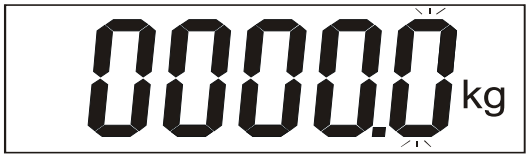
7.5.1 Set limits

After you enter the value, press [ZERO] key to sure, press [G/N] key to escape.

Press [G/N] **a**nd [PRINT] together

You are in the menu for set the high limit. Press [ZERO] key to enter.

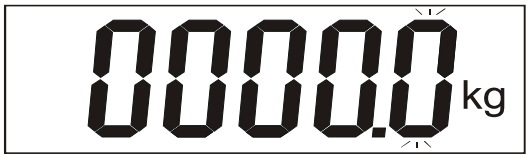
Use [M+] and [MR] key to move active digit, use [TARE] key to change value, use [PRINT] key to clear value. Press [TARE].



After you enter the value, press [ZERO] key to sure.

You are in the menu for set the low limit. Press [ZERO] key to enter.

Use [M+] and [MR] key to move active digit, use [TARE] key to change value, use [PRINT] key to clear value.



After you enter the value, press [ZERO] key to sure, press [G/N] key to escape.

Attention:

Checkweighing function only available when weight more than 20d (min).

To disable the Check-Weighing function enter zero into both limits by pressing the [PRINT] key when the current limits are shown then pressing [ZERO] to store the zero values.

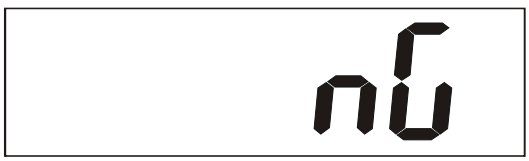
After setting the limit is the checkweighing is active.
If a weight is put on the scale, you can read off from the LED display, whether the weight is lower or higher than the limit value.

7.5.2 Set beep in check weighing mode

Press [G/N] and [PRINT] together.

You are in the menu for set the high limit.

Press [TARE] till **bEEP** will be displayed to set the beep. Press [ZERO] key to enter.



Press [TARE] key to select between 3 options (**OK,NG, NO**), press [ZERO] key to sure, press [G/N] key to escape.

Check mode OK OK: When check range, the display will show OK and the beeper will sound when the weight is between the limits.
Check mode NG NG: When check range, the display will show OK and the beeper will sound when the weight is out of the limits.
Check mode NO NO: No beeper.

7.6 DYNAMIC WEIGHING – ANIMAL WEIGHING

If "itself moving loads" like living animals should be weighed, the scale can be switched to the dynamic cradle mode.
In this case the scale weighs 20 times per second, and a calculated average value is indicated and held.
Without this function the movement of the load would be passed directly to the indicator, and it would be difficult to read off.

The scale can be set for animal weighing in the set up section. The scale should use a high level of filtering and the HOLD function will be enabled automatically when it has determined a stable weight for the animal.
You can press TARE and ZERO together to enter/escape animal weighing mode.

Attention: *!*

After the weighing is indicated as stable by the dynamic cradle function, a signal appears and the weight will be stored.

8. BATTERY OPERATION

The scales can be operated from the battery, if desired. The battery life is approximately 70 hours.
When the battery needs charging the arrow above the low battery symbol will turn on.
The battery should be charged as soon as the symbol is on. The scale will still operate for about 10 hours after which it will automatically switch off to protect the battery.
To charge the battery, simply plug the power supply module into the scale and switch the main power ON. The scale does not need to be turned on.
The battery should be charged for 12 hours for full capacity.
Under the display is an LED to indicate the status of battery charging. When the scale is plugged into the main power, the internal battery will be charged. If the LED is green the battery is fully charged. If it is red, the battery is nearly discharged and yellow indicates the battery should be charged longer, preferably overnight.

9. PARAMETER

The scale has 5 parameters that can be set by the user plus a method of entering the calibration section.
The first indicated value, is the standard increment of the balance. In order to select another increment, press TARE. Press ZERO in order to store the new value.

- Switch the scale on. To set parameters press the PRINT key during self checking.
- Display will show **pn** (ask password). Press M+ G/N TARE to enter the setting mode.
- The display will show the first function "F0cxi".
- Pressing the TARE key will cycle through the other functions.
- Pressing ZERO will allow you to set the function.
- It may be necessary to either use TARE or set a value using the M+ or MR key to move active digit and then using the TARE key to increment a digit, followed by the ZERO key to enter the value.
- Use the G/N key to leave a parameter unchanged.

Example:
For example when the display shows "**p0 chk**" press the ZERO key to begin.
The display will show "**Set Lo**", press the ZERO key to set the low limit, or press the TARE to skip to the next parameter, "**Set Hi**" for setting the high limit.
After pressing the ZERO key to set a limit, use the M+ MR keys to change the flashing digit, then use the TARE key to increment the flashing digit. Continue to the next digit and set it as needed.

When all digits have been set press the ZERO key to store the value. The display will go back to the parameter just set, i.e. "**Set Lo**". Advance to another parameter if needed or press the G/N key to return to weighing.

9.1 PARAMETER SETTING TABLE

Function	Sub Function	Describe
F0Cki	**SEt L**	Set high limit, press M+ MR key to move active digit, press TARE to change value, press PRINT key to clear data, press ZERO key to sure.
	SEt k	Set high limit, press M+ MR key to move active digit, press TARE to change value, press PRINT key to clear data, press ZERO key to sure.
	bEEP	Set beep mode **Check mode OK OK**: beep when weight between hi and low (OK) **Check mode NG NG:** beep when weight out of hi-low range (NG) **Check mode NO NO:** no beep for checkWeighing
F1 ref	**AZn 0**	This option is used to select the auto zero tracking range Options : 0d, 0.5d, 1d, 2d, 4d
	0Auto	This option is used to select the auto zero range when turn the indicator. Options : 0%, 2%, 5%, 10%, 20%, 50%, 100%
	0rAGe	This option is used to select the manual zero range when press the ZERO key. Options: 0%, 2%, 4%, 10%, 20%, 50%, 100%
	0-TARE	This option is used to set whether weighing indicator will do auto zero tracking in net mode (after do tare operate, net weight is zero) Options: ON/OFF
	SPEED	Set the ADC speed 7.5/15/30/60 times/second
	ZERO	Set new zero point, after set this value, when in zero point, the reading will be –xxx.xxx
F2con		This option is used to set RS-232 communication mode Options: **CONT** (continuously send) **ST1**: send one frame data after stable **STC**: send data continuously when stable **PR1**: when press print key, send one frame data (printer mode) **PR2**: when press M+ key, do print data and M+ at the same time **AUTO**: auto accumulate (auto print) mode, when weight stable and then return to zero, indicator will do accumulate and print operate automatically **ASK**: ask mode, bi-direction, Command R: read data Command T: tare Command Z: zero
	BAUD	This option is used to set baud rate Options: 600/1200/2400/4800/9600
	pr	This option is used to set parity verify Optional: 7E1/7O1/8N1
F3cal		This option is used to select the decimal Options : 0, 0.0, 0.00, 0.000
	INC	This option is used to select the division Options : 1, 2, 5, 10, 20, 50
	CAP	This display will show xxxxxx for setting the capacity.
	CAL	Calibrate
	COUNT	This display will show xxxxxx for indicating the internal counts.
F4oth	**loCK**	Enable /disable key lock
	anm	ON (animal scale) OFF(normal mode)

10. CALIBRATION

As the acceleration value due to gravity is not the same at every location on earth, each scale must be coordinated – in compliance with the underlying physical weighing principle - to the existing acceleration due to gravity at its place of location (only if the balance has not already been adjusted to the location in the factory). This adjustment process must be carried out during the initial start-up, after change in location and variation of surrounding temperature. It is also recommendable to adjust the balance periodically during weighing operation in order to obtain exact measured values.

Calibration:
Please make sure, that there are stable conditions at the calibration location. A warm up period of 10 minutes for stabilization is necessary. Make sure that there are no objects on the plate of the scale.

Switch the scale on. To set parameters press the PRINT key during self checking.

Display whill show **pn** (ask password). Press M+ G/N TARE to enter the setting mode. The first parameter **F0cxi** is displayed.

Press TARE till **F3cal** is displayed. Pressing ZERO will allow you to set the function.

Press TARE till **cal** is displayed. Pressing ZERO will allow you to set the function.

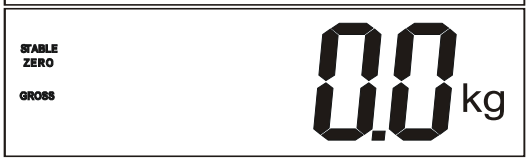
Remove any weight from the platform. After stable indicator on, press the ZERO key.

Then the display will show the last calibration weight used. If this is correct you can continue by pressing the ZERO key. If it is not correct use the M+, MR, TARE keys to change the calibration weight value. When it is correct press the ZERO key.

Then display will show:

Place the calibration weight on the scale. After stable, press the ZERO key.

The calibration weight should be removed during this test
The scale shows **PASS**..



Now the scale makes a self check and than it is ready to use.

If the calibration is acceptable the display will return to normal. If an error message is shown try calibration again as a disturbance may have prevented a successful calibration.
If the problem persist then contact your dealer.
After calibration the scale should be checked to verify the calibration and linearity is correct.
If necessary repeat calibration, especially be certain the scale is stable before accepting any weight.

Attention:

The P3 CAL Subparameter contains the basic functions fort he scale: setting capacity, place of the decimal point, stepp- size as well as for calibration procedures. Please don't change one of these attitudes, because the scale doesn't work any more to its technical data, and a wrong capacity, etc will be stored.

12. RS 232 Interface

The RS-232 Interface is for output of weighing results.
The RS-232 is normally configured to print a weight when the value is stored into memory, either automatically or when the M+ key is pressed.

The announcements of the TWI series can be equipped when desired with R-S 232 interface. If the balance is attached over this interface to a computer or a printer, it prints the balancing result as well as the selected balancing unit.

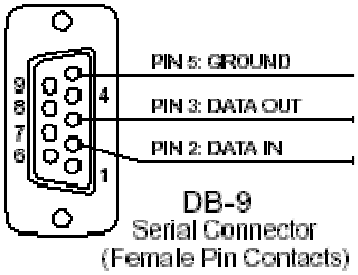
The indicators of the TWI series can be equipped with a RS 232-interface. If the scale is connected to a computer or a printer by this interface, the weighing result and the selected weighing unit are printed.

12.1 SPECIFICATION RS 232

- ASCII Code
- 7/8 Data bits
- Parity setable
- Baud rate from 600 to 9600 Baud

12.2 CONNECTOR

The RS-232 connector is a 9 pin d-subminiature plug mounted on the rear panel.



Pin 2: RXD – Input - Receive data
Pin 3: TXD – Output - Transmit data
Pin 5: GND - Signal ground

12.3 FORMAT OF THE INPUT- INSTRUCTIONS

The scale can be steered by the following instructions.
The instructions for the functions must be entered in capital letters, like “T” and not “t”
Press Enter to confirm your input.
.

T<cr><lf>
With this key, you can tare the scale in order to indicate the net weight, like pressing TARE.

Z<cr><lf>
Sets the zero point for all following weighing procedures. The display shows Zero.

T12.5<cr><if>
Like the input of a tare value of 12.5 by the keyboard.

P<cr><lf>
By using this key, results can be sent to a printer or a PC by the (optional) RS-232 interface. If the distribution memory is not adjusted on mechanism, the scale adds the value to the distribution memory.

12.4 PRINT OUTPUT

Data Format for normal weighing operations, parts counting or recalling of totals from memory will all be different.

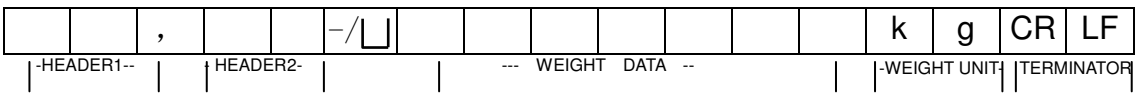
12.4.1 Normal print out:

S/N	The number increments every time a new value is stored in memory
GW	GW for gross weight NT for net weight and a unit of weight
<lf>	
<lf>	Includes 2 line feeds

12.4.2 When recalling the Total weight stored in the accumulation memory the output format is:

**********	A line of stars is shown
<lf>	Includes 1 line feed
Total No. 5	Times of the accumulation memory
Total wt.: 21.456kg	Weight of the accumulation memory
**********	

12.4.3 Continuously output protocol:



HEADER1: ST=STABLE， US=UNSTABLE
HEADER2: NT=NET， GS=GROSS

13. MAINTENANCE, DISPOSAL

13.1 CLEANING

Only use a cloth dampened with mild suds and not aggressive cleaning agents (solvents or similar). Please ensure that fluids are not able to get into the device and rub off using a clean, soft cloth. Loose sample residue/powder can be removed carefully using a brush.

13.2 MAINTENANCE, UPKEEP

The device may only be opened by trained service engineers authorised by Big Dutchman. Disconnect from the mains supply before opening.
The battery is not water-proof, so the contact with water is forbidden. If the battery should become wet or it is visible damaged, don't use the battery.

13.3 DISPOSAL

The operating company shall dispose of the packaging and the device in compliance with the valid national or regional law of the operating location.

A defective battery is to be disposed separately in accordance with the national and local regulations for environmental protection and recovery of raw materials.

This product is not to be treated as normal waste. You have to bring it to an accepted place for the recycling of electrical and electronic devices. You receive further information at your municipality, your local disposal enterprises or the company, from which you bought the product.

14. Spare parts & Accesories

If you need spare parts or accessories, please contact your dealer or Big Dutchman
Here some spare parts for example:

- battery
- RS 232 Interface
- power cord

15. ERROR CODES

During operation or calibration, certain conditions may appear to be incorrect as determined by the scale. In such cases, an error code will be displayed.

Errors	*Possible*	*Causes*
------	Over range	Remove weight from the scale. If the problem persist contact your dealer or Big Dutchman for assistance.
--oL--		Please do not add item that is over the maximum capacity. When reading "—OL—" and hear beeping sound, remove the item on the platter to avoid damage to the load cell.
Err4	Zero Setting Error	The scale was outside the normal zero setting range either when it was turned on or when the ZERO key was pressed. Remove weight from the scale and try again. Use the TARE key to set the display to zero value. If the problem persist contact your dealer or Taiwan scale for assistance.
Err6	A/D out of range	The values from the A/D converter are outside the normal range. Remove weight from the scale if overloaded, make sure the pan is attached. Indicates the load cell or the electronics may be faulty. If the problem persist contact your dealer

If there are other disturbances or error messages, please turn the scale off and restart it after one minute. It is then necessary to repeat the weighing process from the beginning. If error messages arise again, please contact the manufacturer.

16. TROUBLE-SHOOTING GUIDE

Display is blank	On/Off switch on rear panel is off Scale not turned on Battery not charged
No turn on test	Battery not charged Power supply not plugged in Power supply faulty Display turned off
Display blank after turn on test or Error message displayed	Load cell not connected correctly Load cell damaged
Display is unstable	Drafts or air currents Load cell connections not secure Obstruction under weighing platform Sample is moving (animal weighing) Vibrations through table or floor Temperature changed dramatically Power supply faulty
Weight value incorrect	Calibration error, Recalibrate Unit calibrated with inaccurate weight Obstruction around platform
Cannot use Full Capacity	Overload stops hitting platform support or hitting bottom of load cell Shipping screw not removed if applicable Electronic problem on A/D Parameters set incorrectly Load cell Damaged
Not Linear	Overload stops hitting too soon Load cell damaged A/D damaged
Off Center Loading error	Overload stops not set correctly Load cell damaged
Battery will not charge	Charging circuit failure Battery failure Main voltage not present or too low

17. SERVICE INFORMATION

This manual covers the details of operation. If you have a problem with the scale that is not directly addressed by this manual then contact your supplier for assistance. In order to provide further assistance, the supplier will need the following information which should be kept ready:

Details of your company

Name of your company:

Contact person's name:

Contact telephone, e-mail,

fax or any other methods:

Details of the unit purchased

This part of information should always be available for any future correspondence. We suggest you to fill in this form as soon as the unit is received and keep a print-out in your record for ready reference.

Model name of the scale:	
Serial number of the unit:	
Software revision number (Displayed when power is first turned on):	
Date of Purchase:	
Name of the supplier and place:	

Brief description of the problem

Include any recent history of the unit. For example:

- Has it been working since it's delivered
- Has it been in contact with water
- Damaged from a fire
- Electrical Storms in the area
- Dropped on the floor, etc.

Contact:

Big Dutchman Pig Equipment GmbH
Auf der Lage 2
49377 Vechta
Tel. +49 4447 801-0
Fax +49 4447 801 237
Mail info@bigdutchman.de

KONFORMITÄTSERKLÄRUNG DES HERSTELLERS

CE

Konformitätserklärung für Geräte mit CE-Zeichen

Die nicht selbsttätige elektronische Auswertelektronik		
Typ:	BWI	Bosche Anzeige
Dieses Produkt ist in Konformität mit den harmonisierten europäischen Standards hergestellt worden, entsprechend den Kriterien der nachstehenden Richtlinien:		
EG - Richtlinie 89/336/EEC EMC EG Niederspannungsrichtlinie 73/23/EEC		Harmonisierte Normen EN 50081-1 EN 50082-1 EN 60950
Bei einer nicht mit **BOSCHE** abgestimmten Änderung der oben beschriebenen Geräte verliert diese Erklärung ihre Gültigkeit.		
Datum: 15. Mai 2006	Unterschrift:	
	Geschäftsführung	Jarmila Bosche

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