OPERATIONS MANUAL

M-810

Please take the time to read these
instructions before starting
to use the scales

Contents

Power Supply

- The INDICATOR uses a rechargeable battery pack, or an AC adaptor.

- When the indicator displays ⌐ Lo (low battery indication), please plug in the AC adaptor for operation and battery recharging (where rechargeable batteries are installed).

Product Specifications

| Model	M-810
Accuracy Class	CLASS III
Capacity	150Kg/300Kg
Increment	50g/100g
Battery Type	7.2V 2000mah
Mains Adaptor	12V 2A
Unit Weight	28kg

Maintenance and General Care

- Repairs and Servicing should only be carried out by authorised service agents.

- There are no user serviceable parts in the weighing scale itself.

- The mains power adaptor fuses that are not accessible.

- When the adaptor is plugged into the mains supply a Green LED should illuminate to indicate that the adaptor is functioning correctly. If the LED does not illuminate then the scale should be checked by competent personnel.

- The weight indicator contains an internal rechargeable battery pack; this should only be replaced by authorised service agents. Under normal operating conditions the batteries should last for several years.

- We would recommend using alcohol based wipes or similar when cleaning the scales.

- Please do not use large amounts of water when cleaning the scales as this will cause damage to the scales electronics, you should also refrain from using corrosive liquids or high pressure washers.

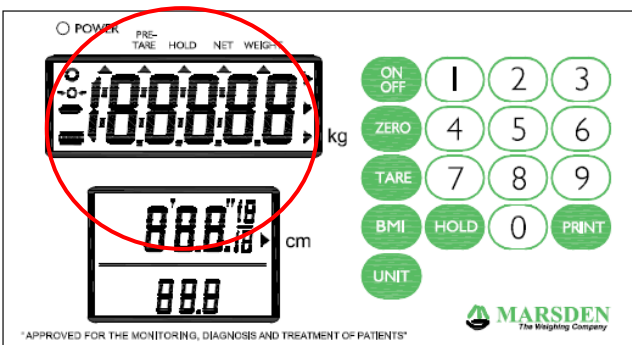- Always disconnect the scales from the mains power supply before cleaning.

Operator Instructions

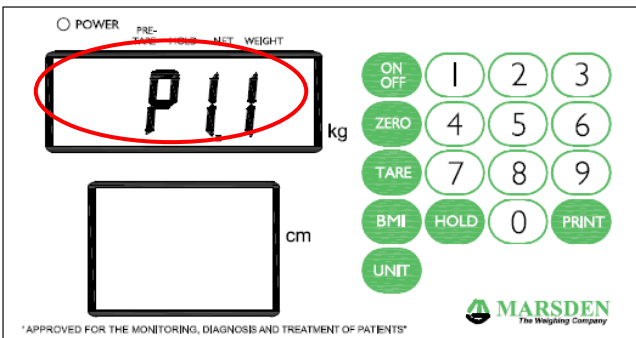## Section 1 – Basic Functions
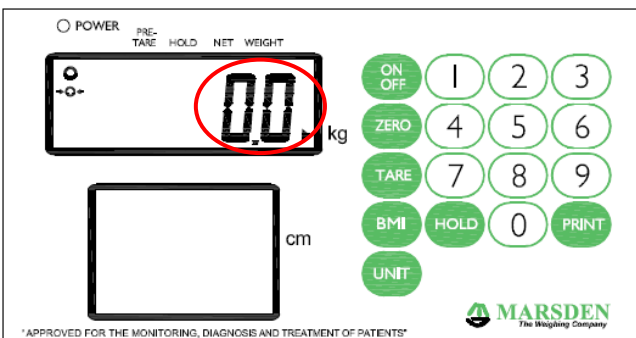## 1.1 Switching on the scale
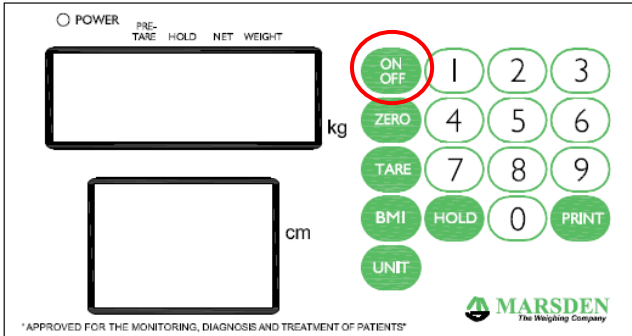
Press the ON button firmly.

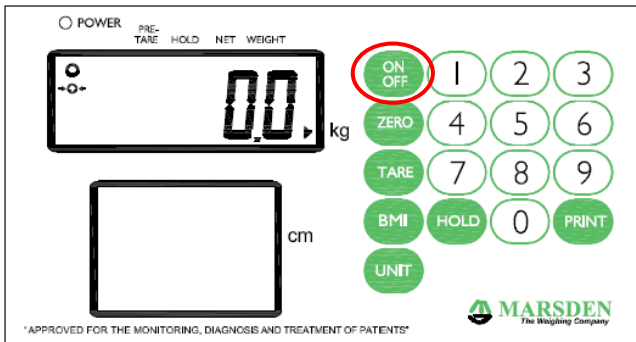The scale will first test all of the display segments.

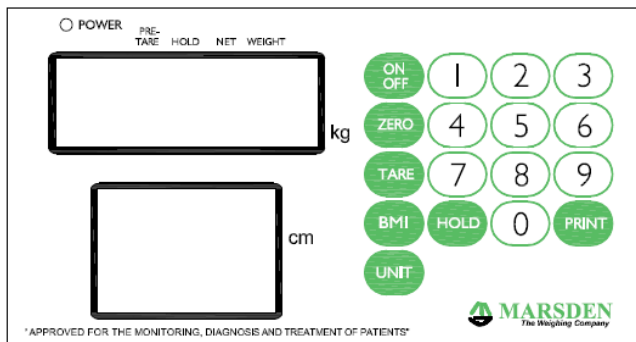The scale will now show its current software version number.

The scale will now go into weighing mode and should show 0.0kg on the display.
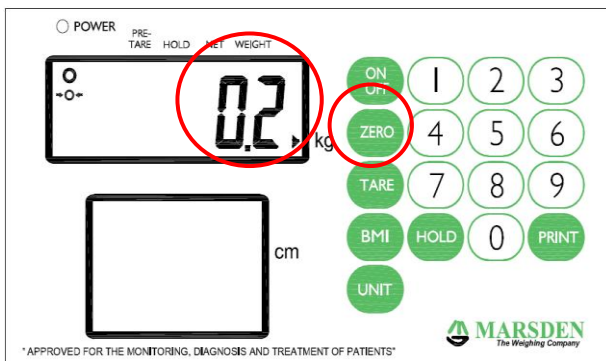
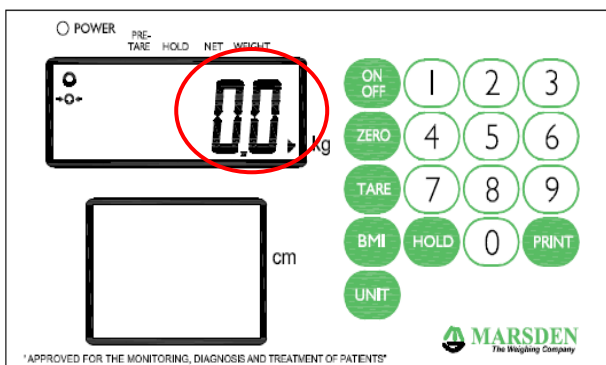## 1.2 Switching off the scale

Press the OFF button.

The scale will power down.

1.3 Setting the scale to zero

If for some reason the scale shows a reading other than 0.0kg then it can be reset to zero (2% of capacity).
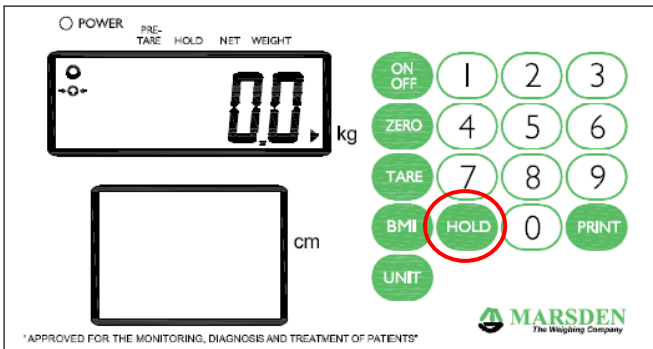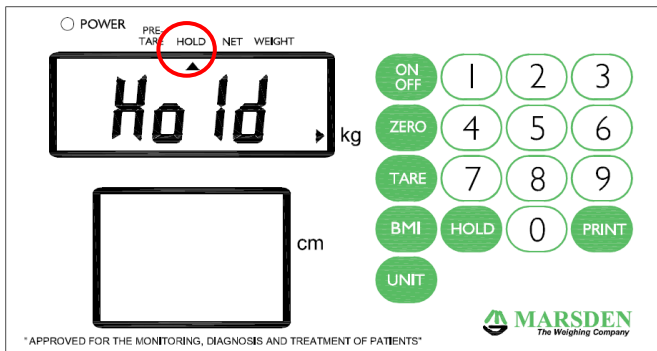
Press the zero key once.

The scale will return to 0.0kg.
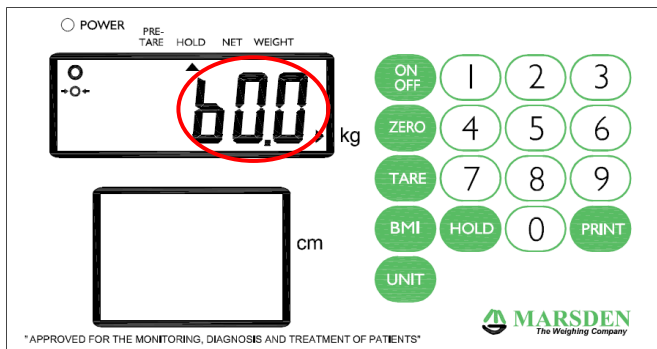
Section 2 – Advanced Functions
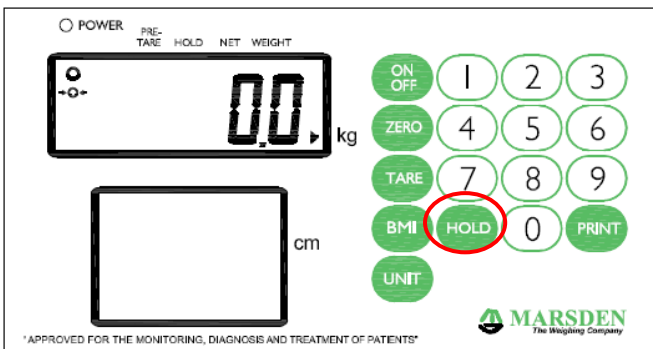
2.1   Hold Function

Press the HOLD button once.
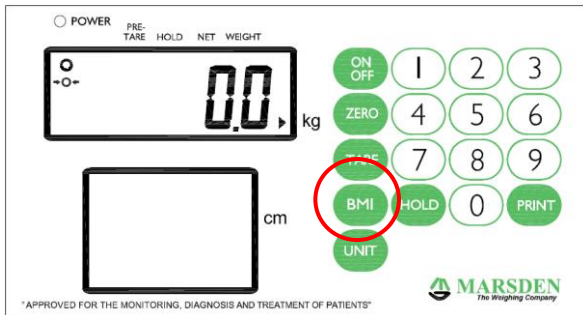

The person should now get on to the scales.

After a few seconds the scale will lock on the person's weight, the person can now stand off the scale and the weight will remain.
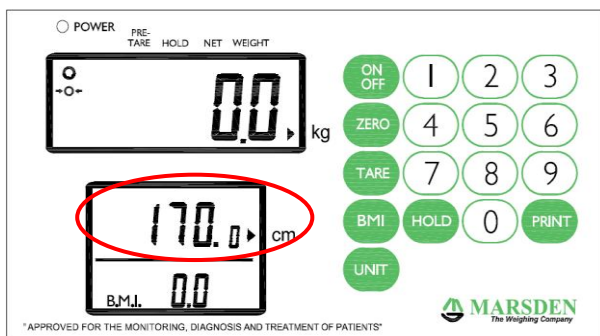

Press HOLD again to unlock the weight and return to 0.0kg

2.2 BMI (Body Mass Index) Function

For this example we will assume we have a person weighing 60kg who is 170.0cm tall.

In normal mode, press BMI key to enter into BMI mode.

The display will show the last height entered and the extreme left digit will flash. Enter the height by using the numeric key pad (e.g. 170.0cm). There will always be an active flashing digit in the height display (unless the HOLD key is pressed).
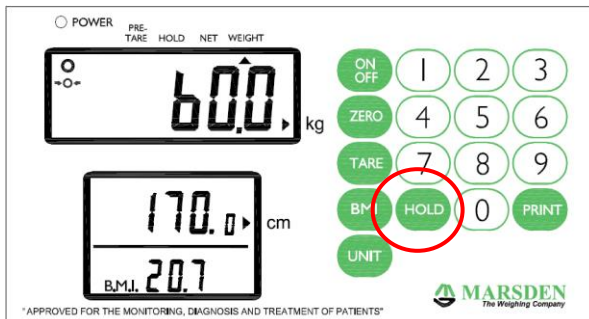
Proceed to weigh as normal. The instrument will show the weight, height, and BMI value.

At this time, the weight and height can be freely changed, and the BMI value will be automatically calculated according to the changed weight and height.

Stand on the scale for 5 seconds. Press the HOLD key to lock the weight, height, and BMI value. Press the HOLD key again to disable the display locking function.
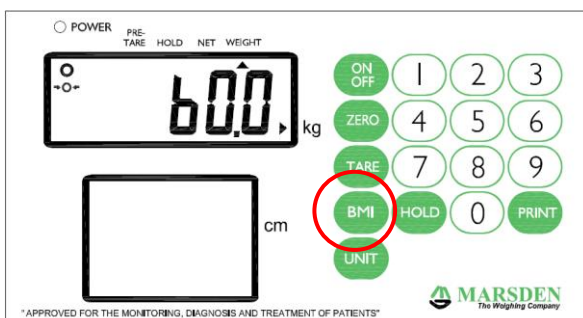
Press the BMI button to return normal mode and the person can now be taken off the scale.

2.3   Setting the date and time

Press the HOLD key for 3 seconds to access the time setting mode. The time period digit that is flashing can be changed by entering the appropriate number from the numeric key pad.   The time period to be edited is selected by pressing the HOLD key.

  E.g. To input 25 December 2008, 8:00 a.m.:

2008	Enter the year. Press HOLD to confirm and access the date editing field.
12.25	Enter the date. E.g. "12.25" for December 25th. Press HOLD to confirm and access the time clock editing field.
08:00	Enter the time (24 hour clock only).
2008 ⇨ **12.25** ⇨ **08:00**	Press Hold and the display shows: YYYY→MM.DD→HH:SS

2.4 Printing Function

An optional Marsden external printer (Model TP-2100) is available for all models. When the printer is fitted the patient's weight, height, and BMI result can be printed on to a paper roll.

Once the person has been weighed and their BMI calculated, simply press the print key to produce the following ticket:

GROSS WEIGHT	**60.00kg**
TARE WEIGHT	**30.00kg**
NET WEIGHT	**30.00kg**
PATIENT HEIGHT	**100.0cm**
PATIENT B.M.I	**37. 5**
29/12/2008 17:00	

2.5 Scale Assembling

■ Connecting the cables of base and column.
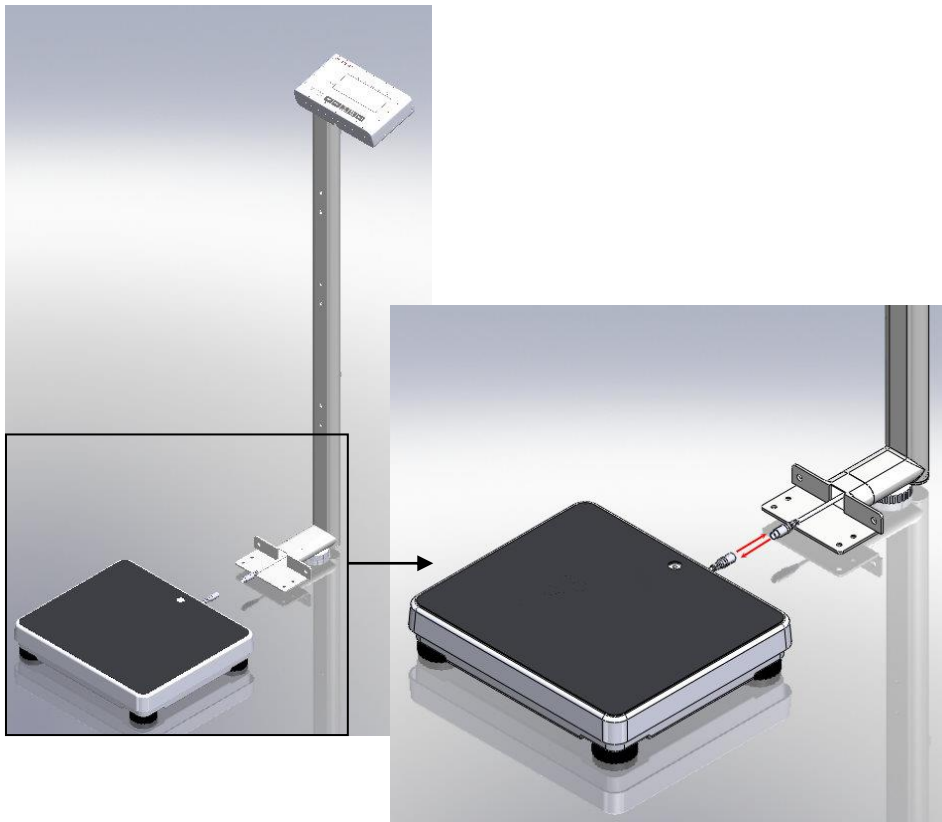
■ Assembling the bracket of column on the base by four screws then screwing the foot stand into the column base. Assembling is complete.
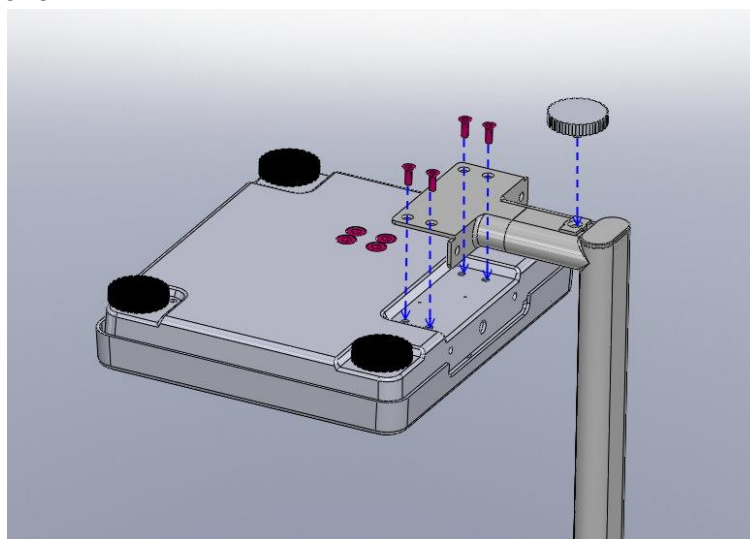
The height measure is attached to the scale column as follows:

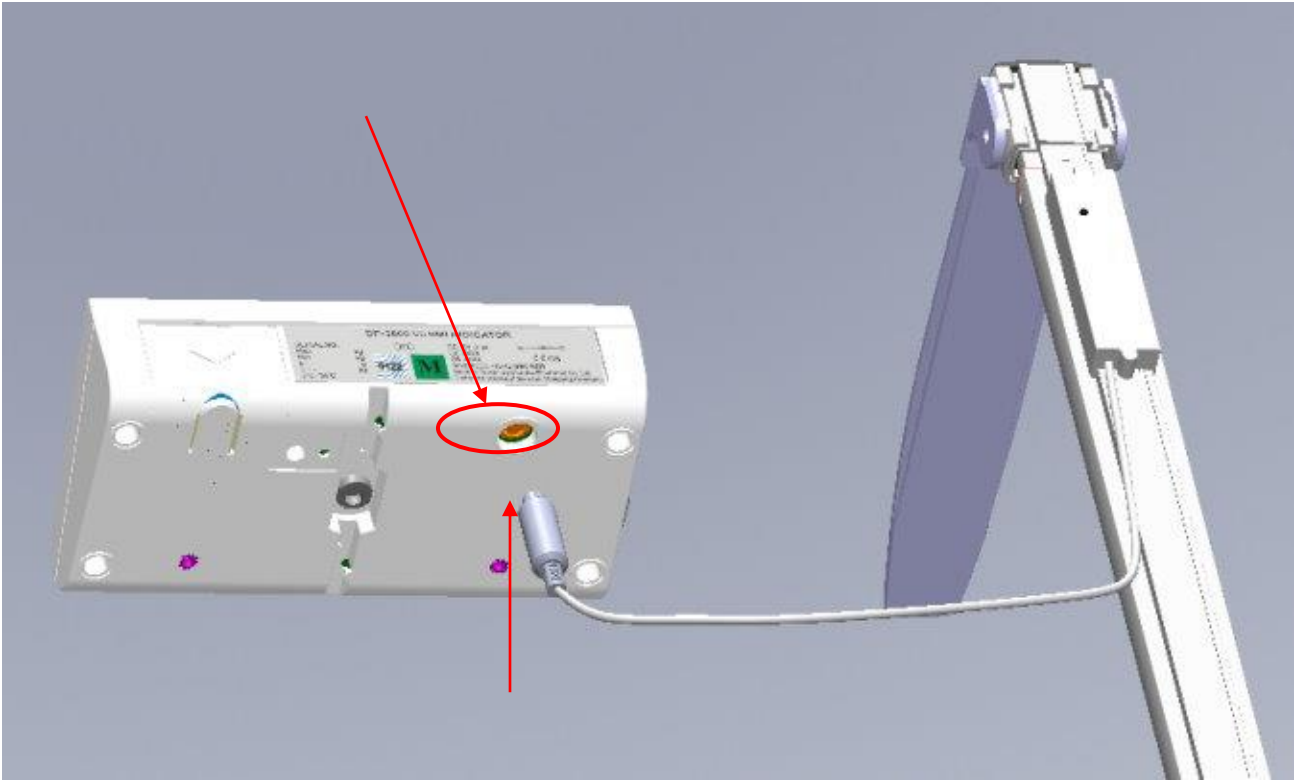| 1. Fix the blocks on the column and tighten the screws.	2. Fix the HM200D or HM201D on the blocks and tighten the screws.
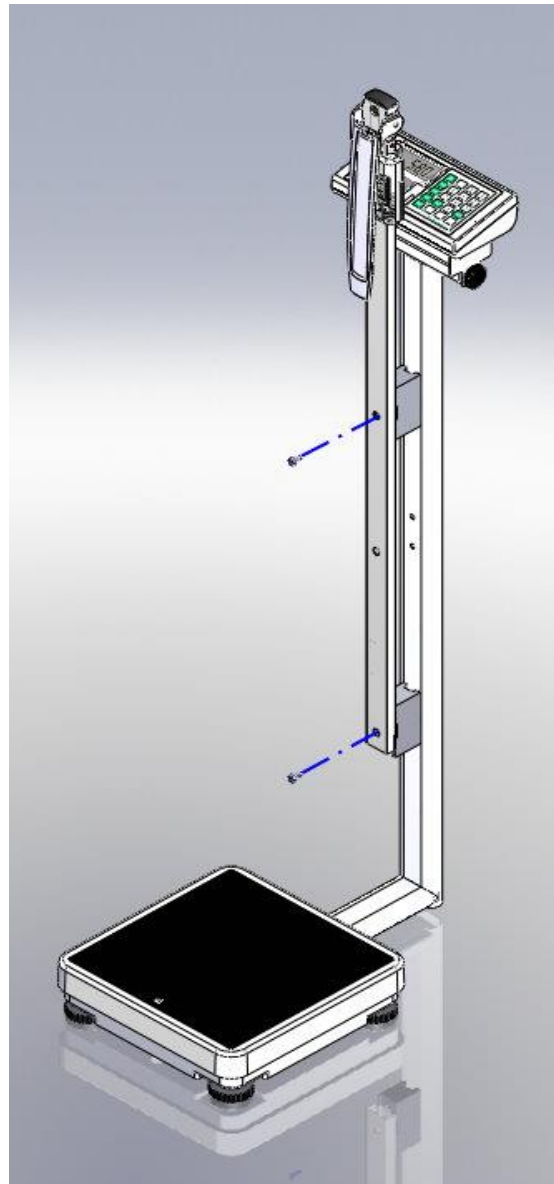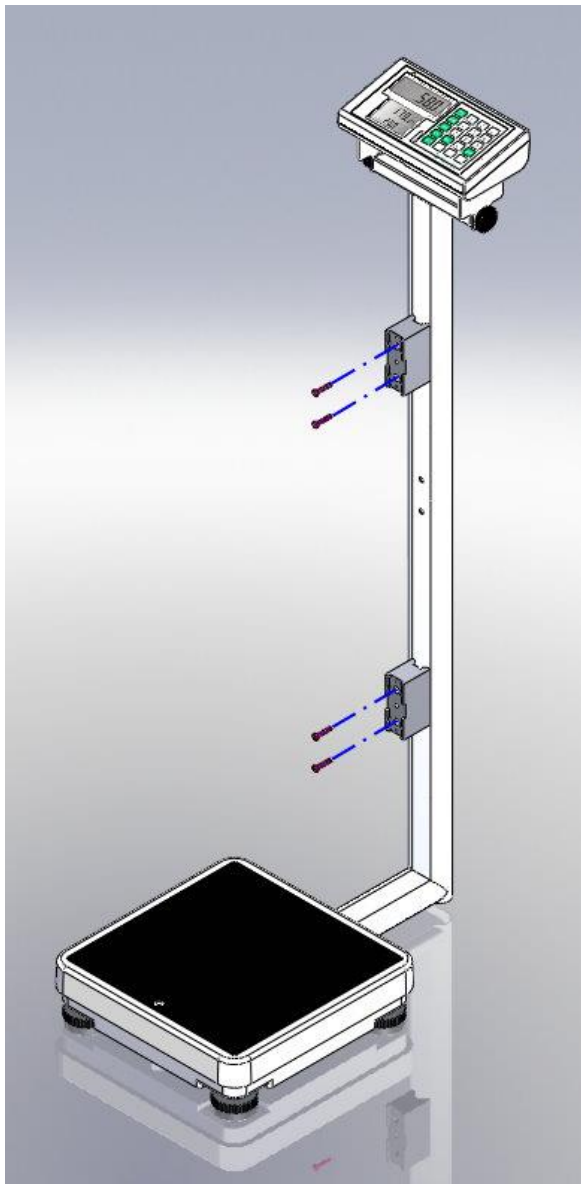
After assembling HM 200D or 201D with MPPS250, connect the height rod wire with scale indicator. The connection point between the DP3800 indicator and HM-201D is illustrated below:

Digital Height Measure data cable socket on DP3800 Indicator:

Insert the HM201D data cable into the socket of DP3800 Indicator before use and simply pull up the height rod and adjust the head piece according to the person's height, HM200D & HM201D will automatically transfer the height measurement to the scale.
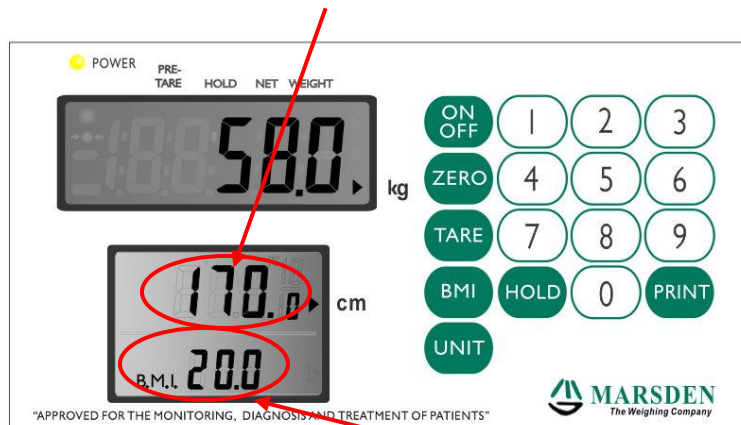
The automatic height measurement also enables the automatic calculation and display of the Body Mass Index (BMI) of the measured person.

2.7   USING & ASSEMBLING: HM200M MANUAL HEIGHT ROD

After assembling the HM 200M height rod, simply pull up the height rod and adjust the head piece according to the person's height and key in the height on the indicator to calculate the persons B.M.I.

1. Fix the block on the column and tighten the screws.	2. Fix the HM200M on the block and tighten the screw.
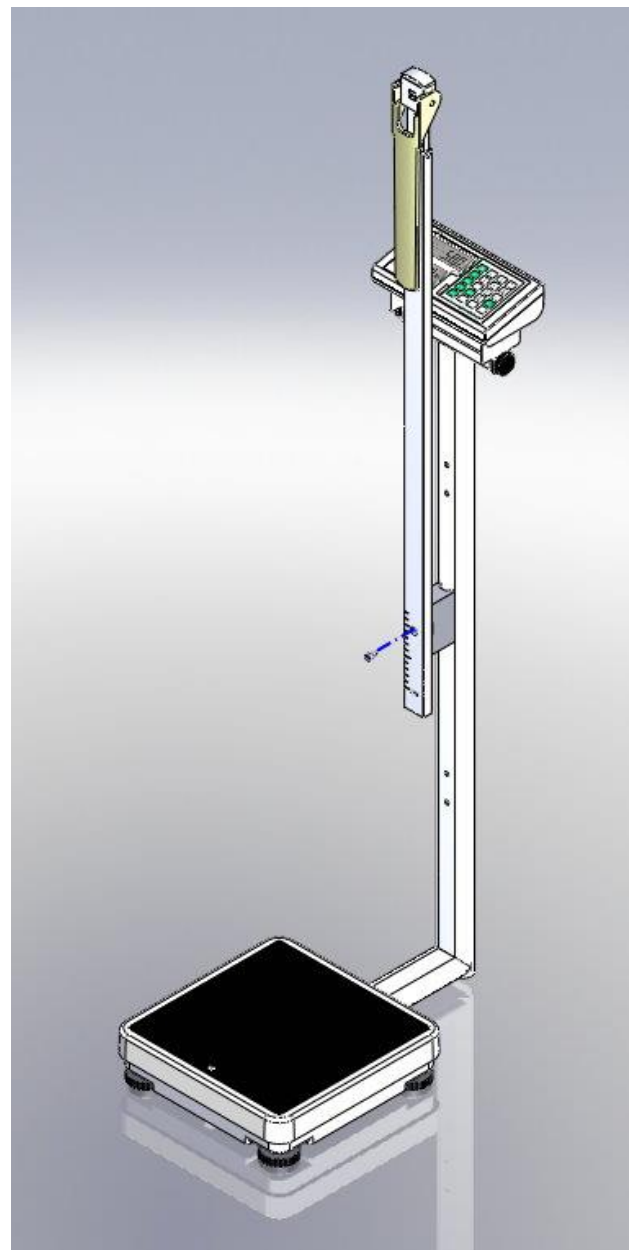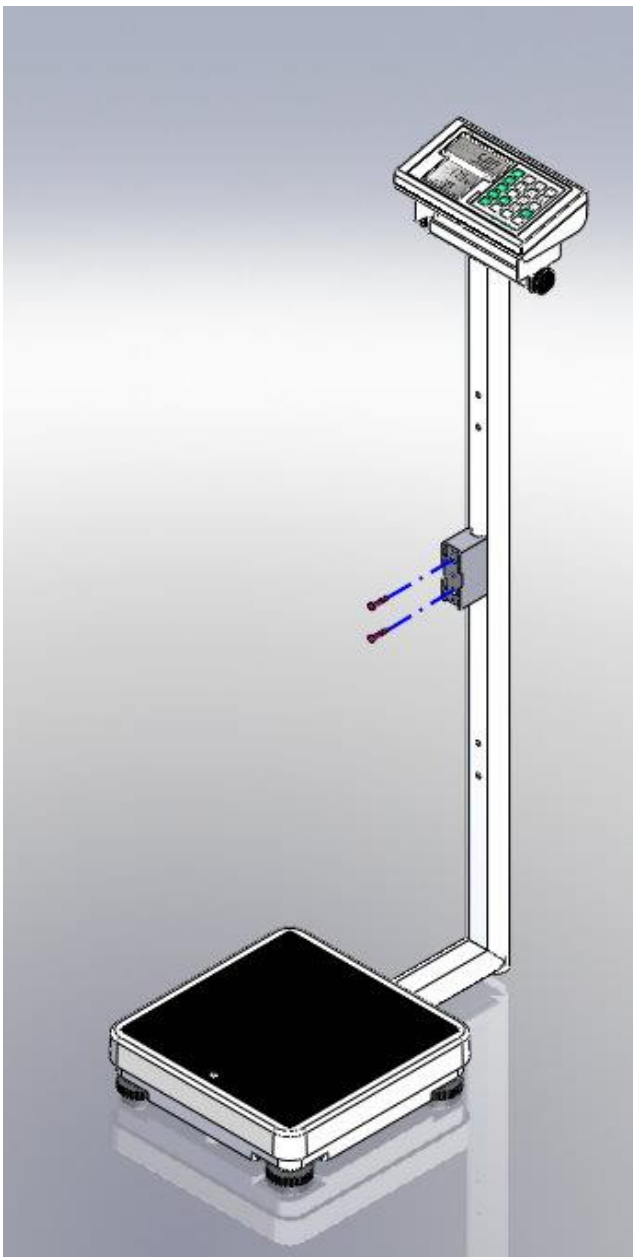
RoHS Compliance

EU Directive 2002/95/EC restrict the use of the 6 substances below in the manufacture of specified types of electrical equipment.

- The product does not contain any of the restricted substances in concentrations and applications banned by the directive;
- and for components, the product is capable of being worked on at higher temperatures required by lead-free soldering.

The restricted substances and maximum allowed concentrations in the homogenous material are, by weight:

Substance	Concentration
Lead	0.1%
Mercury	0.1%
PBB (Polybrominated Biphenyls)	0.1%
PBDE (Polybrominated Diphenyl Ethers)	0.1%
Hexavalant Chromium	0.1%
Cadmium	0.01%

PRODUCT CONFORMITY
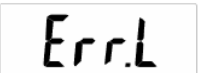
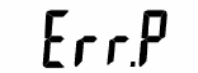Harmonised Standards to Which Conformity is Declared –

EN60601-1-2 / EN60601-1

93/42/EEC – Medical Devices Directive

2009/23/EC – Non Automatic Weighing Instrument Directive

CE0120

Error Messages

ERROR MESSAGE	REASON	ACTION
Lo	Low battery: This warning shows that the voltage of batteries is too low to use.	Please replace with new batteries or plug the AC adaptor for operation.
Err	Overload: The total load exceeds the maximum capacity of the scale.	Please reduce the loading and try again.
Err.H	Counting error (too high): Indicates that the signal from the load cells is too high.	This error is normally caused by a serious fault on the scales i.e. a faulty load cell or wiring. Please contact the local Service Representative.
Err.L	Counting error (too low): Indicates that the signal from the load cells is too low.	This error is normally caused by a serious fault on the scales such as a faulty load cell or wiring. Please contact the local Service Representative.
00000	Zero count over calibration: Zero range +10% while powered on.	Please re-calibrate the instrument. ***1**
00000	Zero count under calibration: Zero range -10% while powered on.	Please re-calibrate the instrument. ***1**
Err.P	EEPROM error: Indicates that there is a fault with the scales software.	This error is normally caused by a serious fault on the scales such as a faulty load cell or wiring. Please contact the local Service Representative.

*1 – These errors are usually less serious and can be rectified by re- calibration; however they can indicate an underlying problem with the scales. Zero Range is set to 10% of Scale Capacity E.g. Capacity 200.0kg = Zero Range +/-20.0kg

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