Crosby Self Indicating Dynamometer Owner's Manual

Contents

Crosby Self Indicating Dynamometer

Specifications

- Product Name: SID – Self Indicating Dynamometer
- Version: v1.00
- Issue: SQS692 Issue 1, June 2024
- Registered Office: Suite 1, 7th Floor 50 Broadway, London, UK, SW1H 0BL

General Description and Warnings
The SID is a Self Indicating Dynamometer designed for measuring loads accurately. It comes with various features and functions to ensure safe and efficient operation. Please read the following instructions carefully before use.

Fitting Batteries
To fit the battery, follow these steps:

1. Fit the battery and refit the cover ensuring all seals are intact.
2. When the battery level reaches 22% remaining, “LOBAT” will appear on the display.
3. Replace the battery with an alkaline 9-volt PP3, MN1604, 6F22, or equivalent when “LOBAT” is displayed.

SID Shackle Usage
The SID dynamometer is equipped with a shackle for load measurement. Follow these guidelines:

- The dynamometer should be used with a suitable shackle rated for the load capacity.
- The load should be applied gradually and within the working load limit (WLL) specified.

- Ensure proper attachment of the dynamometer to the shackle to prevent accidents.

FAQ

- **Q: What should I do if the display shows “LOBAT”?**
  A: When “LOBAT” appears on the display, it indicates low battery. Replace the battery with an alkaline 9-volt PP3, MN1604, 6F22, or equivalent battery.
- **Q: Can I use any type of battery to replace the old one?**
  A: It is recommended to replace the battery with an alkaline 9-volt PP3, MN1604, 6F22, or an equivalent battery to ensure proper functioning of the SID.
- **Q: How do I know if the load applied is within the specified limit?**
  A: The SID dynamometer displays the load measurement on the screen. Ensure that the load does not exceed the working load limit (WLL) specified for the device.

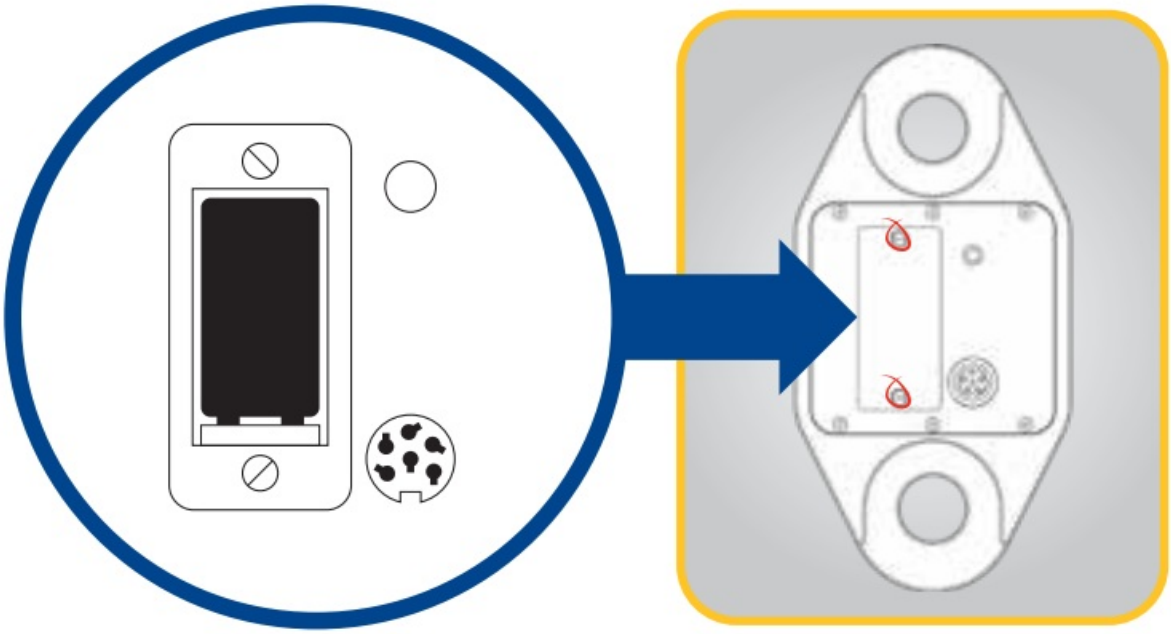
General description and warnings

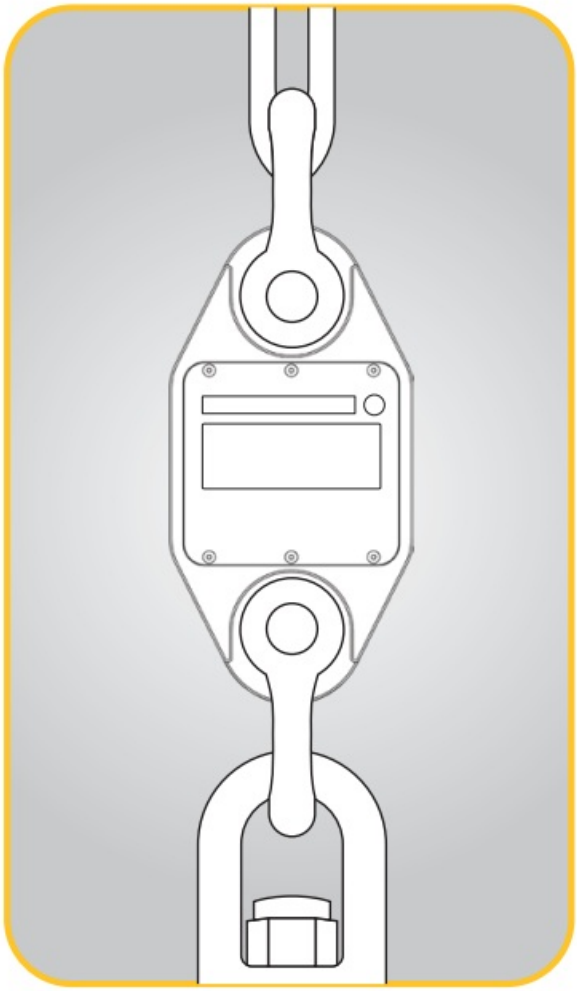
- All products manufactured and sold by Straightpoint Ltd, are sold with the express understanding that the purchaser and user are thoroughly familiar with the safe use, proper care and application of the product.
- Responsibility for the safe use, proper care and application of the product rests with the user.
- Failure of the product can occur due to misapplication, abuse, overloading, or improper care and maintenance.
- There are numerous government and industry standards that cover products manufactured and sold by Straightpoint Ltd. This document makes no attempt to reference all of them. We do reference standards that are most current like ASME B30.26-2010 “detachable load indicating devices.”
- Ratings shown in Straightpoint Ltd literature are only applicable to new or “as new condition” products.
- Rated capacities define the greatest force or load a product can carry under usual or normal environmental conditions. Shock loading and extraordinary conditions must be taken into account when selecting products and product capacity.
- Some of the products in the Straightpoint Ltd catalogues are designed for use with rigging hardware and components which could be supplied from several different manufacturers. It is crucial that you read and understand the literature from these manufacturers, as well as governmental standards and industry technical manuals.
- The rated capacity, design factor and efficiency rating of each Straightpoint Ltd product may be affected by wear, misuse, overloading, corrosion, deformation, intentional alteration, age and other use conditions.
- The recommended proof load on all items manufactured and sold by Straightpoint Ltd is twice the working load limit (WLL), unless otherwise shown. Proof testing is included on all Straightpoint Ltd load indicating products.

SID fitting batteries

Before using the Self Indicating Dynamometer take some time to read this manual and familiarize yourself with it.
The Self Indicating Dynamometer is supplied with a single 9v PP3 battery – this needs to be fitted before use.
Fit the battery supplied by removing the two cross head screws which retain the battery cover.

Fit battery and refit cover making sure all seals are intact.
When the battery is getting low (22% remaining), “LOBAT” will appear in the top left of the display, when this happens, it should be replaced with an alkaline 9 volt PP3, MN1604, 6F22 or equivalent.

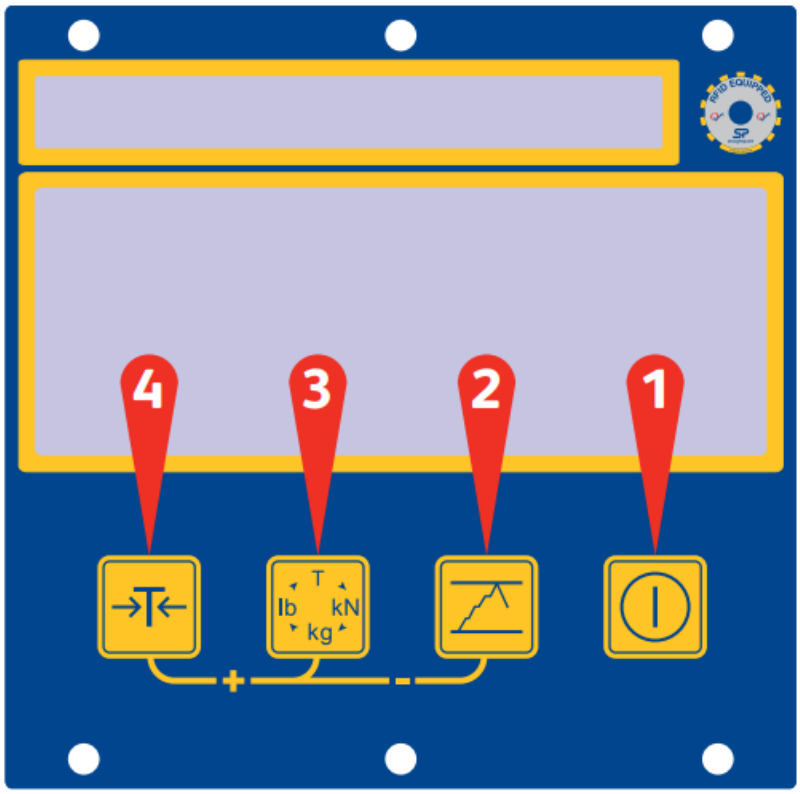




SID shackle usage

- Once the batteries are fitted the Dynamometer should be fitted with the correct shackle for the capacity of the
- Dynamometer. The WLL is marked on the front of every Dynamometer e.g. Max: 5 tonne x 0.001te
- Before using the Dynamometer make sure the capacity of the loadcell is suitable for the task being undertaken.
- Straightpoint recommend Crosby shackles.
- When using the Dynamometer please ensure the operator is positioned at a safe distance.
- This user guide assumes good rigging practice and does not advise on actual in the field use.

SID keypad and annunciators



1.  Press this button for three seconds to turn the device on and off.
   The device will switch itself off if the load does not change for 20 minutes.

2.  Press this button to initialize the peak hold facility.
   Once pressed, the display with show ‘PH’.
   This will make the display ‘freeze’ at the highest load recorded.
   Press the key again to switch off this function.

3. 

   Press this button to toggle through the various units of measurement.
   Select from T- tonnes, kN – kiloNewtons, kg – kilograms or lb – pounds.
   The selected unit is shown on the display.

4.  Pressing this button will tare the display.
   When in net mode, the unit’s annunciator will flash.
   Please see page 14 for details on setting a preset tare.

5. 

Displays when the internal PP3 battery has 22% capacity remaining.

   Displays when the device is reading in tonnes.

   Displays when the device is in peak hold mode.

   Displays when the device is reading kilograms.

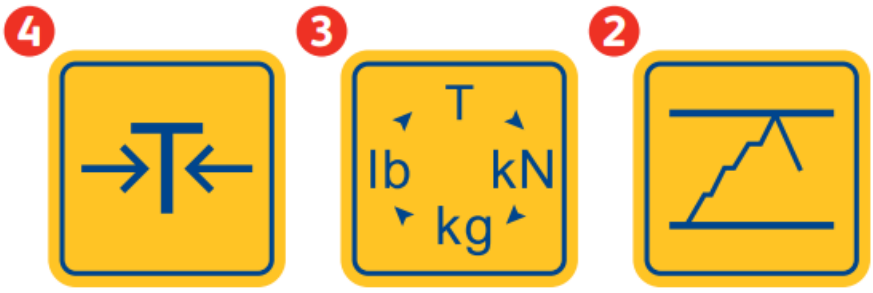
   Displays when the device is reading in kilonewtons.

   Displays when the device is reading in pounds.

SID measuring a load
Ensure that the device is switched on 10 minutes before loading, this will allow the temperature stability circuitry to acclimatize. Apply the load SLOWLY and watch the display on the device to ensure that the load applied is not greater than you had estimated. Avoid shock loads. Do not apply large twisting forces to these devices as it may damage them beyond repair. After use, switch off and, if removing the device from the test site, clean and store, ideally in a Straightpoint carry case. If the device is to be stored for long periods of time, please remove the battery.

SID preset tare
You may require to preset the tare on this device if, for instance, the tare button is not accessible because of a load suspended underneath.

- First, press the 4 button to put the device into net mode.
- By pressing the 4 and 3 buttons, the tare will increase.
- By pressing the 4 and 2 buttons, the tare will decrease.



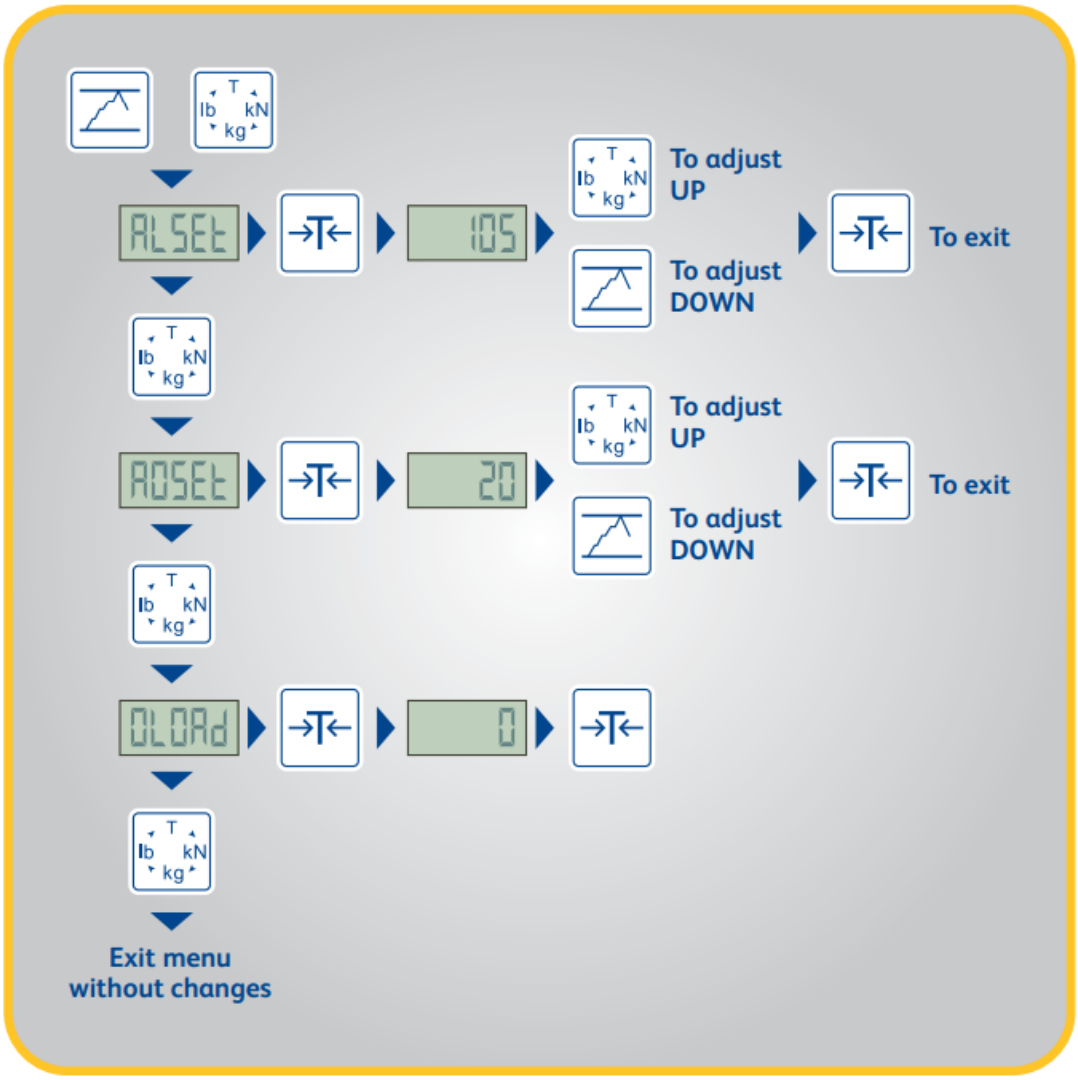
SID user configurable settings

This device is programmed with three user configurable settings:

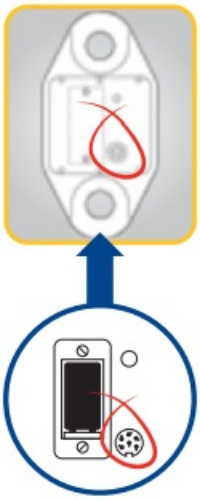
- **ALSET** – The percentage of full load that the audible alarm will sound.
- **AOSET** – The amount of minutes without a button being pressed before the device will automatically switch off. This feature is disabled if set to zero.
- **OLOAD** – The amount of times the device has been overloaded since last calibrated (read only). To change these settings, please follow the flowchart overleaf.

ALSEt
AOSEt
OLOAd

SID optional slave display



If using the Handheld plus as optional cabled handheld display,
plug it into the output port on the rear of the Dynamometer shown to the left.
Please refer to user manual SU3343 for correct use of the Handheld plus.



Product aftercare

- While these devices are sealed to IP65/NEMA4X standards, they should not be immersed in water.
- The effects of solvent on the device can not be guaranteed, and should therefore be avoided.
- Avoid use within 20-30 minutes of rapid changes in temperature, for example moving the device from a cold vehicle into a warm room. The change in temperature can affect the accuracy of the device. The operating temperature is -10 to +50° C or 14 to 122° F.
- Should the display show “OLOAd” remove the load immediately as this indicates an overload situation.
- Check that the load applied is within the working load limit of the device. If it continues to display overload, contact your supplier.

Service and calibration

- These products are supplied with a certificate of calibration which is valid for one year.
- After this date, it is recommended the device is recalibrated by Straightpoint or an approved calibration laboratory.
- Contact the Straightpoint service department or your supplier for more information.
- In the unlikely event of this device failing, fit new batteries and re-test. Only when this has been done should you contact your supplier to report the fault. When reporting the fault it is important to give a full description of the problem and the type of application the device is being used for.

Warranty

Straightpoint (UK) Ltd warranty this product against malfunction for a period of two years from manufacture.
Conditions of warranty:

1. The equipment is used as described exactly in the operators manual supplied.
2. Whilst we make every effort to ensure each device is calibrated before dispatch, Straightpoint (UK) Ltd do not accept responsibility for inaccurate readings indicated by this equipment.
3. In the event of malfunction, the device is returned to the manufacturer:
   Straightpoint (UK) Ltd, Unit 123, Proxima Park, Houghton Avenue, Waterloo Ville, Hants, PO7 3DU
4. If we consider any malfunction to be caused by misuse, this warranty is void and any repair will be charged for accordingly.

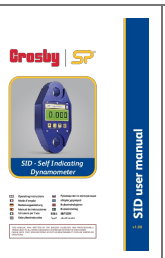
Shackles to fit

Before Rigging Your New Load Cell
To ensure that your loadcell performs with the same accuracy as when it was calibrated in the factory it is imperative that you rig it using the recommended shackle or if using a different shackle manufacturer one with the pin diameter noted below:

WLL	Recommended Shackle	Shackle Part#	Shackle Pin Ø
1te	Crosby G2130 3.25t	1262013	19mm / ¾"
2.5te	Crosby G2130 3.25t	1262013	19mm / ¾"
6.5te	Crosby G2130 6.5t	1262031	25mm / 1"
12te	Crosby G2130 12t	1262068	35mm / 1-3/8"
25te	Crosby G2130 25t	1262095	51mm / 2"
35te	Crosby G2130 35t	1019677	57mm / 2-1/4"
55te	Crosby G2140 55t	1021156	57mm / 2-1/4"
75te	Crosby G2140 85t	1021174	70mm / 2-3/4"
100te	Crosby G2140 120t	1021192	83mm / 3-1/4"
150te	Crosby G2140 150t	1021218	95mm / 3-3/4"
200te	Crosby G2140 200t	1021475	121mm / 4-3/4"
250te	Crosby G2140 250t	1021484	127mm / 5"
300te	Crosby G2140 300t	1021493	152mm / 6"
500te	Crosby G2160 500t	1021343	180mm / 7-1/8"

Crosby Straightpoint
123 Proxima Park, Houghton Avenue, Waterlooville, Hants, PO7 3DU UK · Tel: +44 (0)2392 484491 2801 Dawson Road, Tulsa, OK 74110 · USA · Tel: +1 [918-834-4611](tel:918-834-4611)

Documents / Resources

	Crosby Self Indicating Dynamometer [pdf] Owner's Manual Self Indicating Dynamometer, Self, Indicating Dynamometer, Dynamometer

References

- User Manual