Salcon II Salt Concentration Meter Kit

The **SALCON II Salt Concentration Meter** is designed to measure the water soluble Chloride ion content during Marine Aggregate processing and prior to onward supply for concrete manufacturing.

Chlorides may be present in concrete from other constituent materials e.g. cement and admixtures. Field evidence shows that, provided that the Chloride levels in the hardened concrete do not exceed the limits specified in **BS8500**, and that the normal criteria for concrete quality and depth of cover are applied, there is no significant additional risk of reinforcement corrosion from the use of marine dredged aggregate in concrete.

British and European Standards:

The guidance given for water soluble Chloride ion content can be summarised in the following European and British Standards **BS EN 12620** and **BS EN 206-1**.

The Standard **BS EN 206-1** defines the chloride class depending on the type of reinforcing to be used. The class specifies the maximum Chloride Content in concrete by mass of cement from the total contribution of all the constituents.

The EDT **SALCON II Meter** is designed to assist in the monitoring and management of the Chloride marine aggregate producers' factory control procedures as required by **BS EN 12620**

The maximum chloride content in concrete ranges from 1.0% in un-reinforced structures to 0.1% in pre-stressed steel reinforcement.

The SALCON II Kit includes the **Meter**, **RB400** Rubber Boot, **E5019** Rugged Conductivity Cell, 4 x AA Batteries, 2 x 100ml Bottle, 500ml **Salcon II Standard** Solution.

The Instrument

The **SALCON II** model is a robust direct reading instrument designed for use in the field or workshop/laboratory to provide a direct % Chloride content in wash solutions.

The meter has a built in correction allowing for the use of tap water as the wash
solution by correcting automatically for its inherent conductivity.

Features include:

- Direct Concentration Readout down to 0.001% Chloride
- Automatic Correction for Tap Water (Blank Correction)
- Auto Endpoint
- Results Storage in the Internal Memory
- Backlit Display with Brightness and Contrast Control.
- Automatic Temperature Correction (ATC)
- Automatic Calibration using actual NaCl conductivity data.*
- Portable with a 200 hour continuous battery life**

The Sensor Electrode

EDT directION manufacture and develop electrodes for specific applications. The robust epoxy conductivity cell with Carbon plates is tough and is easily cleaned. It contains no glass or activated platinum which ensure good continuity with expectation of a long working life. This probe (Model **E5019**) is ideal for Chloride in Aggregate applications.

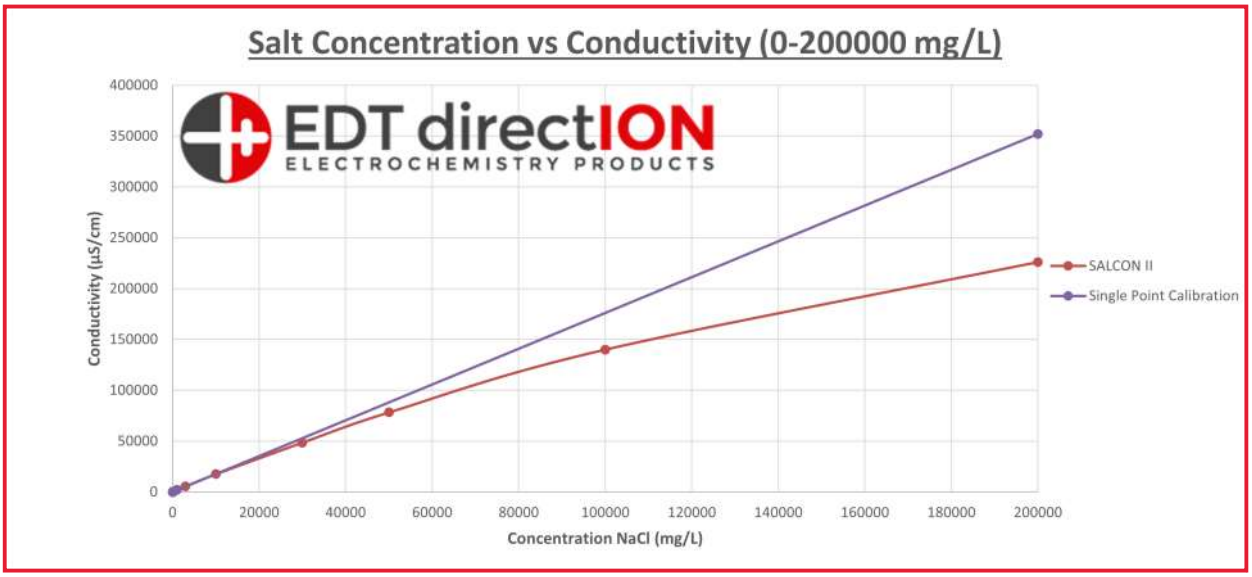
*When calculating Salt or Chloride Concentration the conductivity is read and then multiplied by a single factor. Normally around 0.5. Unfortunately Conductivity vs Salt concentration is non-linear (See Calibration Graph below). The SALCON II has the complete Salt vs Conductivity table in its software providing far greater accuracy.

** 4x AA Batteries with energy saving features. Expect 1 years lifetime in normal use.

Calibration & Data Storage

Calibration

Whether you are calibrating for Chloride in Aggregates or Salt Concentration in general applications it is simple to run a Calibration using a single standard which then sets both parameters and Conductivity. The **SALCON II** instrument is unique in that it has the actual **NaCl vs Conductivity** table inbuilt into the software. This means that it does not assume a straight line calibration but calibrates against true conductivity data which eliminates significant errors.

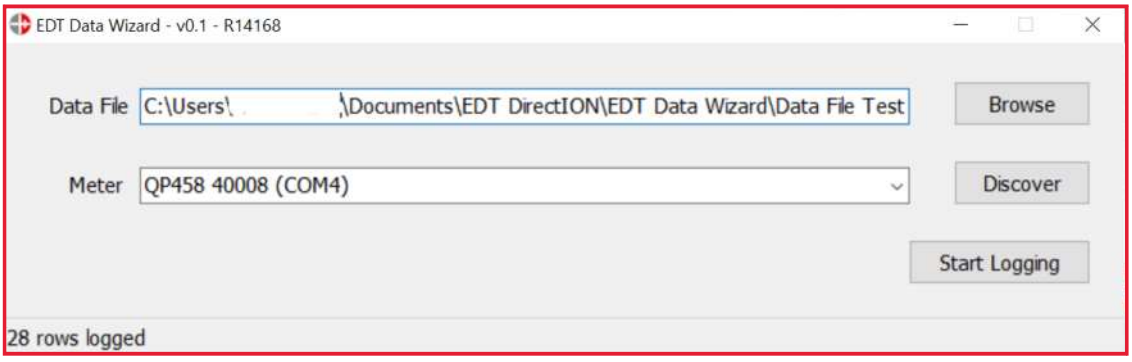


A standard of 0.1% NaCl and 0.061% Chloride is provided and is set as the default. Once calibrated the % **Chloride**, % **Salt** and the Conductivity ranges are ready to use. Each can be selected by pressing the mode key. The dynamic display will indicate "**Calibrated**" or "**Uncalibrated**" and will remain until calibration is deleted.

Data Storage

The **SALCON II** meter can store up to 64 files and over 10,000 datapoints in its internal memory. Each result or file can be given a Tag and a User ID to ensure easy identification. Data can be recalled at any time.

For permanent record keeping the data can be exported directly into Excel using the EDT Data Wizard which is provided as a direct download.



Specification

Accuracy (Conductivity)	±0.2% of Reading
ATC/Temperature	ATC across the entire range
Auto-ranging (Conductivity)	Selects the correct unit range automatically.
Battery Life	200 hours continuous use - auto switch off and power saving options
Chloride Concentration	Direct Reading as % Chloride - Resolution 0.001% - Range 0-30% (Saturation)
Conductivity Range	0-999.9 mS/cm Autoranging - Auto Unit Selection
Conductivity Resolution	0.01uS/cm in the low range. Otherwise 4 Significant Figures
Connection	Mini DIN
Data Output	Mini USB - outputs CSV - 38,400 Baud
Data Storage	Storage of up to 64 files - Logging max 10,000 data points
Data Logging	64,000 data points - Log 10 seconds to 99 hrs, 59mins ,59 secs - Log interval minimum 1 second.
Dimensions	175x88x48mm
Reference Temperature	Set at 25 degrees C
Temperature Coefficient	2% Per Degree Over The Whole Range
Temperature Range	-30 to +130 Degrees Centigrade
Weight	350g - Meter only

Related Products

Salcon II Standard (500ml)

1413µS/cm Conductivity Standard

K=1 Glass Conductivity Cell

www.edt.co.uk/product/salcon-ii-salt-concentration-meter-kit