

## 3051 CALCIUM HARDNESS ANALYZER

The Waltron 3051 Calcium Hardness Analyzer stands alone as able to deliver the most accurate and repeatable results for online analysis of low level hardness in ultrapure water applications.

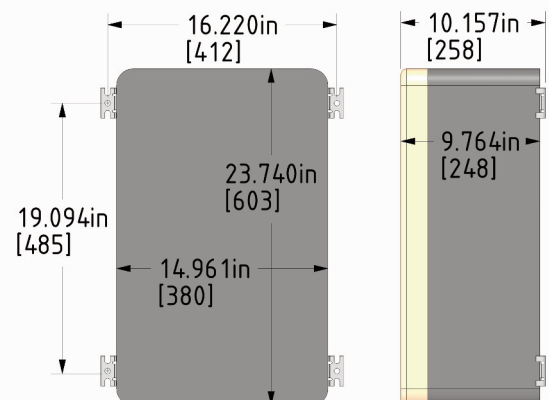
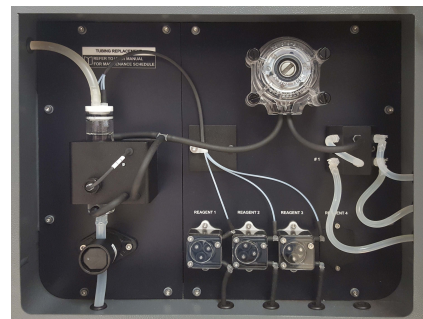
The 3051 uses unique colorimetric chemistry to achieve the most accurate results (+/- 5ppb) for analysis of calcium hardness in ultrapure water. Protect your boiler water systems from harmful calcium deposits by continuous automatic monitoring. Upgrade your manual grab sample process with accurate and reliable online analysis.



### FEATURES

- Accurate analysis
- Multi-stream available
- Fast loop reservoir
- Adjustable cycle and calibration frequency
- Automatic calibration and validation (QA/QC)
- Compact design
- Color touchscreen display
- Grab sample capability
- Internal datalogger
- Low reagent level alarm
- Automatic start/stop based on sample flow detection
- Minimal analyzer maintenance

### Wet Section



See reverse side for specifications.

## 3051 CALCIUM HARDNESS ANALYZER | GENERAL SPECIFICATIONS

### PERFORMANCE

|   |  |
|---|--|
| <b>Range</b>                                | 0-250ppb, 0-1ppm   |
| <b>Accuracy</b>                             | +/- 5 ppb or +/-3% of full scale, whichever is greater             |
| <b>Reproducibility</b>                      | +/- 5 ppb or +/- 5% of reading, whichever is greater               |
| <b>Analysis Time</b>                        | 10 min, batch process  |
| <b>Sampling Frequency (Cycle Time)</b>      | One reading every 20 mins, adjustable                              |
| <b>Required Maintenance</b>                 | Once a month replenish reagents, Quarterly replace tubing          |
| <b>Reagent Consumption (approximate)</b>    | 3 reagents, 2L each per month                                      |
| <b>Sensor Classification</b>                | Colorimetric with glass flowcell and LED source                    |
| <b>Application</b>                          | Boiler water and cooling water                                     |
| <b>Ambient Temperature Range</b>            | 10-45°C analyzer (50-113°F)  |
| <b>Atmospheric Pressure Range</b>           | No Limits  |
| <b>Humidity</b>                             | Up to 90% not condensable  |
| <b>Unit Dimensions</b>                      | Height=23.6"(60 cm), Width=15"(38 cm), Depth=8.3"(21 cm)           |
| <b>Positioning and Installation Details</b> | Wall mounting, bench supported, or panel mounting (optional)       |
| <b>Weight</b>                               | 17 kg (37.5 lbs.)  |
| <b>Degree of Protection</b>                 | IP55 (NEMA 4): Wet section, IP65 (NEMA 4x): Electronics            |
| <b>Alarms</b>                               | 2 or 4 configurable alarm relays (Result, loss of sample, fault)   |
| <b>Power Supply</b>                         | 110-220Vac, 50-60 Hz 80 VA   |
| <b>Certification (on request)</b>           | Meets low voltage and low electromagnetic compatibility directives |

### SAMPLE DELIVERY OPERATING CONDITIONS

|   |   |
|---|---|
| <b>Temperature Range</b>                | 5-55°C (41-131°F)   |
| <b>Inlet Sample</b>                     | 100-500 ml/min, atmospheric, flexible tubing O.D. 1/4"(6 mm)                                |
| <b>Outlet Sample</b>                    | Atmospheric, waste tubing O.D. 3/8"(9 mm)   |
| <b>PH</b>                               | 3-12  |
| <b>Sample Conditioning Requirements</b> | Filtering between 10 and 60 micron, depending on the matrix, needed only to avoid clogging. |
| <b>Materials in Contact with Sample</b> | Glass, Silicone, Plexiglass, Stainless Steel AISI 316                                       |

### SIGNAL OUTPUTS

|                           |   |
|---------------------------|---|
| <b>Analogue Outputs</b>   | 4-20mA (galvanic isolator module available as option) or 0-5V |
| <b>Serial I/O Options</b> | RS232; RS485; MODBUS; PROFIBUS                                |

### OPERATIONAL CALIBRATION

|                           |                                 |
|---------------------------|---------------------------------|
| <b>Single/Multi Point</b> | Multi-Point: zero and mid range |
| <b>Matrix Corrections</b> | Yes, sample blank correction    |
| <b>Manual/Automatic</b>   | Both                            |

102-019-D.1



#### WALTRON GROUP HEADQUARTERS

25 Minneakoning Road, Suite 101

Flemington, NJ 08822 USA

Phone: +1 908 534 5100

Fax: +1 908 534 5546

[www.waltron.net](http://www.waltron.net)