



**Water  
purification  
systems**



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## Tap water systems

### Description

B30 and Integrity+ series water purification systems produce ultrapure and pure water for laboratory needs. Quality of water meets requirements for Grade 1 water (ultrapure) and Grade 2 water (pure) of ISO 3696 standard and corresponding ASTM and CLSI standards.

B30 and Integrity+ produce ultrapure water right from tap water. Water is purified in two stages: pure water is produced first and stored in the tank. Pure water is later used for production of ultrapure water.

Adrona B30 and Integrity+ water purification systems are available in the following configurations:

- **B30 Trace** (P/N CB-2301) and **Integrity+ Trace** (P/N CB-2101) produce water essentially free of dissolved organic and inorganic contaminants. This type of water is used for analytical chemistry methods including but not limited to atomic absorption spectrometry, plasma optical emission spectrometry and other inorganic trace analysis methods.
- **B30 HPLC** (P/N CB-2303) and **Integrity+ HPLC** (P/N CB-2103) provide purified water quality meeting requirements of liquid chromatography methods. Water is free of dissolved contaminants and inorganic compounds. Total Organic Carbon (TOC) concentration is below 2 ppb. Water produced by Onsite HPLC and Connect HPLC is intended for organic analysis methods such as liquid chromatography, gas chromatography, mass spectrometry as well as some methods of molecular biology.
- **B30 Bio** (P/N CB-2305) and **Integrity+ Bio** (P/N CB-2105) produce water essentially free of enzymes,

such as RNase and DNase, endotoxins, organic and inorganic contaminants. The list of applications includes molecular biology, cell culture and other methods sensitive to RNase and endotoxins.

- **B30 EDI** (P/N CB30-1018) produces purified water for general laboratory applications. Integrated electrodeionization module eliminates need for replacement of deionization module thus driving running costs very low. Storage tanks of various sizes (up to 300 L) are available as an option. All storage tanks include pure water dispense pump for easy and convenient dispensing.

Integrity+ series systems contain a 5L embedded tank to keep the system compact. B30 systems use external tank. Default external tank capacity is 25L, larger capacities up to 60L (up to 300L for B30 EDI) are available as an option.

### Features

- Adrona B30 and Adrona Integrity+ systems produce ultrapure water for most demanding and sensitive biological and chemical analytical methods. The applications include but are not limited to inorganic trace analysis, high-performance and ultra high performance liquid chromatography, cell culture, molecular biology. Ultrapure water has resistivity of 18.2 MOhm\*cm (0.055 uS/cm), thus exceeding requirements of all applicable purified water standards (ISO 3696 Grade 1, ASTM Type 1, CLSI Type 1, EP, USP).
- Embedded recirculation loop ensures stable premium water quality and enables virtual elimination of Total Organic Carbon (TOC).

Integrated TOC monitor allows user to control concentration of organics in water.

- Adrona B30 and Adrona Integrity+ systems are equipped with color graphic LCD display. The 16-bit color display provides clear read-out of water quality, system component status, performance of the polishing module. System component status is reflected on the display in an intuitive color pattern (Green/Yellow/Red).
- Performance of the deionization and polishing modules is constantly monitored. Monitoring algorithm enables cutting running costs, as replacement of the modules is requested only when service life is close to the end.
- Adrona water purification systems control quality of water with conductivity sensor and the TOC monitor.
- B30 and Integrity+ systems enable user to carry out validation of water quality sensors right on the site.
- Adrona water purification systems have a volumetric dispenser, which enables the user to set accurate dispensing volume for each dispense cycle. The dispense volume can be set either from the keyboard or by using "teaching" mode. In "teaching" mode user uses "Dispense On/OFF" button to do the first dispense cycle manually. Afterwards, the system will dispense exactly the same volume each time the user presses the dispense button again. Please, note that volumetric dispense is not available for B30 EDI.
- B30 and Integrity+ systems have all necessary safety functions. The systems are installed by user and all cartridges and filters are user

## Applications

- replaceable. No tools are needed.
- Adrona water purification systems can be installed either on a laboratory bench or on a wall. Wall-mount installation allows saving valuable laboratory space.
- The first set of the consumables is included into the delivery.

| Application                            | B30 or Integrity+ configuration |      |     |     |
|----------------------------------------|---------------------------------|------|-----|-----|
|                                        | Trace                           | HPLC | Bio | EDI |
| Reagent preparation                    | ●                               | ●    | ●   | ●   |
| Ion chromatography                     | ●                               | ●    | ●   | –   |
| Plasma mass-spectrometry (ICP-MS)      | ●                               | ●    | ●   | –   |
| Atomic absorption spectrophotometry    | ●                               | ●    | ●   | ●   |
| Plasma spectrophotometry (ICP-OES)     | ●                               | ●    | ●   | –   |
| High Performance Liquid Chromatography | –                               | ●    | ●   | –   |
| Gas chromatography                     | –                               | ●    | ●   | –   |
| Total Organic Carbon measurements      | –                               | ●    | ●   | –   |
| Flow cytometry                         | –                               | –    | ●   | –   |
| Cell culture                           | –                               | –    | ●   | –   |
| Molecular biology                      | –                               | –    | ●   | –   |

## Ordering Information

| Model                               | Part number |
|-------------------------------------|-------------|
| B30 Trace                           | CB-2301     |
| B30 HPLC                            | CB-2303     |
| B30 Bio                             | CB-2305     |
| Integrity+ Trace                    | CB-2101     |
| Integrity+ HPLC                     | CB-2103     |
| Integrity+ Bio                      | CB-2105     |
| B30 EDI                             | CB30-1018   |
| Storage tank Comfort 60L            | 10007       |
| Storage tank Comfort 100L           | 10027       |
| Storage tank Comfort 200L           | 10026       |
| Storage tank Comfort 300L           | 10025       |
| Water quality sensor validation kit | 10913       |

## Technical parameters

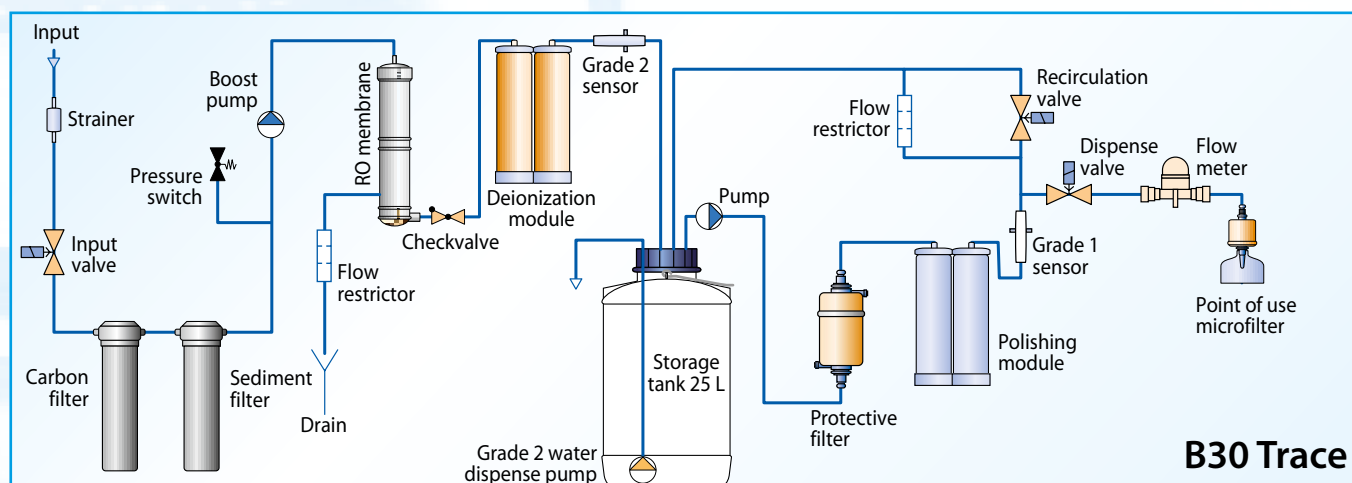
| Purified water parameters        | Onsite/Connect system configuration |                  |                  |             |
|----------------------------------|-------------------------------------|------------------|------------------|-------------|
|                                  | Trace                               | HPLC             | Bio              | EDI         |
| Purified water resistivity       | 18.2 MΩ x cm                        | 18.2 MΩ x cm     | 18.2 MΩ x cm     | 1.0 MΩ x cm |
| Purified water conductivity      | 0.055 μS/cm                         | 0.055 μS/cm      | 0.055 μS/cm      | 1.0 μS/cm   |
| Total Organic Carbon (TOC) level | <10 ppb                             | <2 ppb           | <2 ppb           | <30 ppb     |
| RNase                            | –                                   | –                | <0.01 ng/mL      | –           |
| DNase                            | –                                   | –                | <4 pg/μL         | –           |
| Bacteria                         | < 1 CFU/mL                          | < 1 CFU/mL       | <1 CFU/mL        | –           |
| Endotoxins                       | <0.15 EU/mL                         | <0.15 EU/mL      | <0.001 EU/mL     | –           |
| Particles > 0.22 μm              | <1/ mL                              | <1/ mL           | <1/ mL           | –           |
| Deionization module life*        | 1 m <sup>3</sup>                    | 1 m <sup>3</sup> | 1 m <sup>3</sup> | N/A         |
| Dimensions (WxDxH), cm           | 32x54x60                            | 32x54x60         | 32x54x60         | 32x54x60    |

\*B30 EDI electrodeionization module life is not limited as it is regenerated automatically.

## Consumables

| Part number | Description              | Replacement interval                                                                                    | Comments                    |
|-------------|--------------------------|---------------------------------------------------------------------------------------------------------|-----------------------------|
| 10310       | Deionization module      | When indicated on the display or water conductivity is constantly > 0.1 uS/cm during tank filling stage |                             |
| 10029       | Polishing module         | When indicated on the display or water conductivity is constantly > 0.1 uS/cm during recirculation      |                             |
| 10319       | Pre-filter set           | When pre-filter life counter reaches zero                                                               |                             |
| 10018       | UV photooxidation bulb   | When required (on average every 3 years)                                                                | Only for „Bio” and „HPLC”   |
| 10012       | Point-of-use microfilter | Every 6–12 months                                                                                       | Only for „Trace” and „HPLC” |
| 10120       | Point-of-use ultrafilter | Every 6–12 months                                                                                       | Only for „Bio”              |
| 10011       | UV sterilization bulb    | When required (on average every 3 years)                                                                | Only for „Bio”              |

## Schematics



# Schematics

