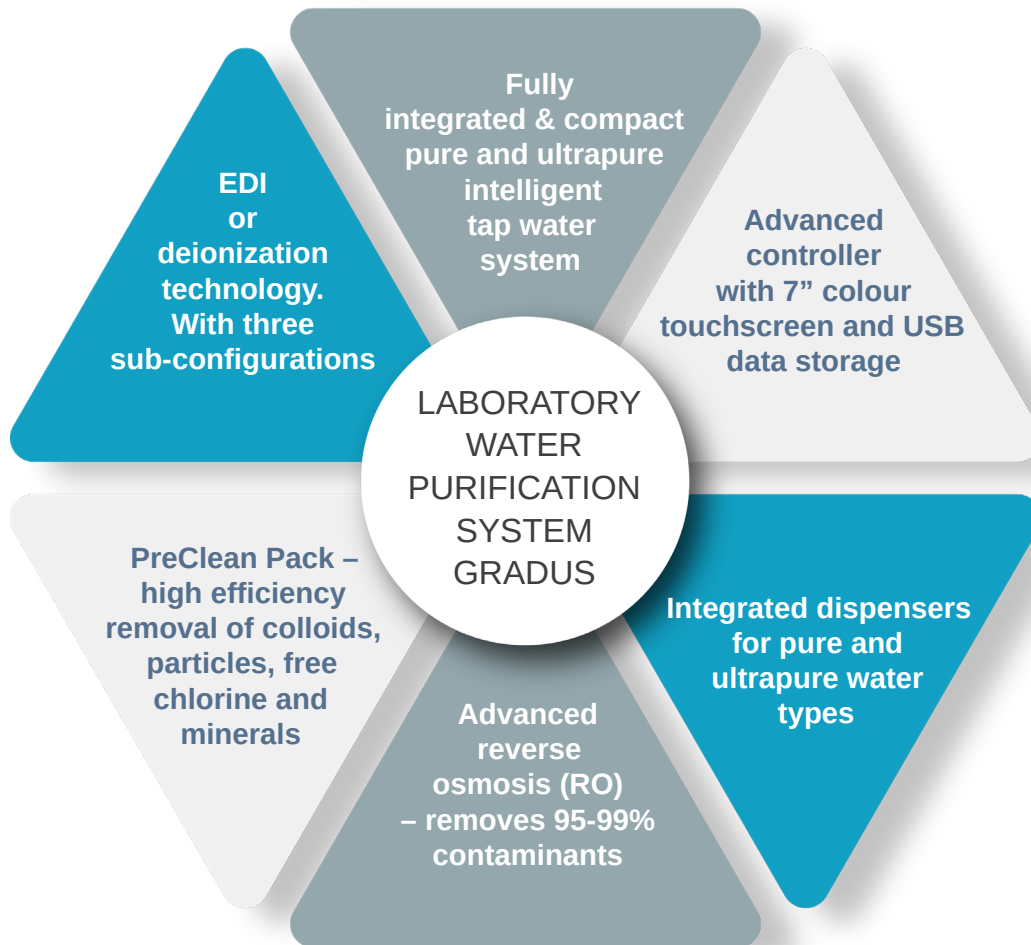




GRADUS

INTELLIGENT WATER SYSTEM

SMART LAB WATER SOLUTION





UNIQUE BUILT-IN DISPENSERS

- G1 ultrapure Type 1 (Grade I) water dispenser - delivers consistently ion free and low TOC ultrapure water.
- G2 pure water dispenser - delivers guaranteed quality Type 2 (Grade II) pure water.

ADJUSTABLE DISPENSE FLOW REGULATION

- Water delivered up to 2 liters per minute keeps interruptions to minimum.
- Volumetric dispense allows fast reissue of set volumes.
- Volumetric control is available from 20 ml to 20 liters.
- Drop-by-drop function.



REMOTE DISPENSER *FLOW POINT 4*

- System can be equipped with up to 4 remote dispensers.
- User-selectable water type for each remote dispenser.
- Range of operation is up to 5 m (optimally 3 m).

PRECISE DISPENSE

EASE OF USE

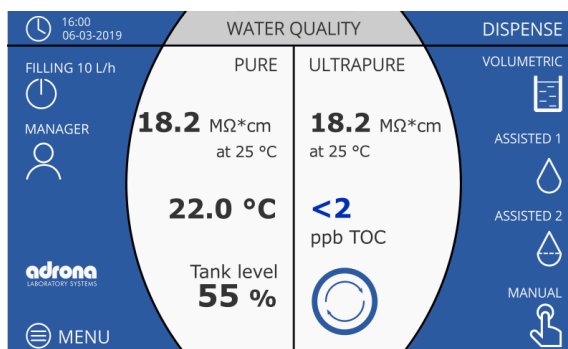


LARGE AND INTUITIVE TOUCHSCREEN DISPLAY

- New electronics and software.
- 7" colour touchscreen.
- USB and Ethernet interface.
- Data storage on USB-C stick.
- Touchscreen is suitable for use with gloves.

DETAILED PROCEDURES

- Simplified and detailed information in multiple languages - English, German, Latvian, Russian.
- Alerts and alarms are displayed on the main screen with a complete description of actions required.
- Monitoring the operation of the system.
- Dispense report preparation.





CONVENIENT

- Installation process gives quick access to laboratory water.
- Simple and trouble-free replacement of consumables.
- Built-in calibration of conductivity sensors.

COST-EFFECTIVE

- All consumables included.
- Large volume deionization (DI) cartridge.
- Space-saving design for a more efficient laboratory setup and daily operation.



COMPACT

- Integrated dispensers for pure and ultrapure water.
- Dimensions: 50 cm wide (base 33 cm), 45 cm deep, 63 cm high.
- Integral to your bench space.

CONVENIENT
& EFFECTIVE WORKFLOW

WATER STORAGE TANK

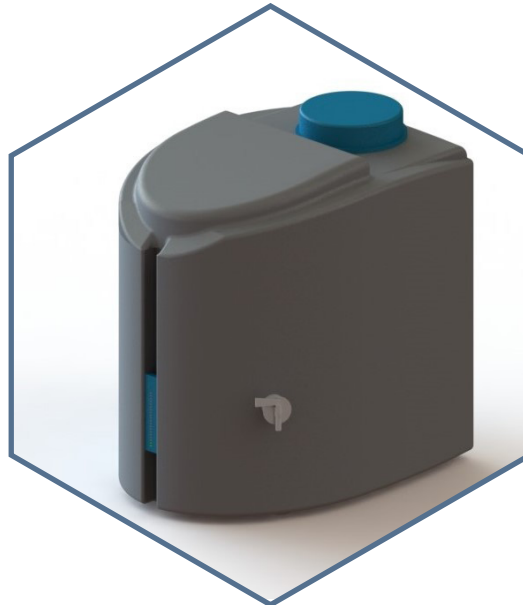


WATER STORAGE TANK PRO

- Capacity: 30 L
- Dimensions: 39*44*60 cm
- A pump for pressurized water delivery can be fitted in the base as an option

COMPACT WATER STORAGE TANK

- Capacity: 40 L
- Built-in water level indicator
- Product coming soon



OTHER WATER TANK VOLUMES AVAILABLE:

- Capacity: 60 L
- Capacity: 100 L

Within the tank, pure water quality is preserved by two built in features:

- **Vent filter** – provides protection against airborne contaminants
- **Automatic Sanitization Module** – with an integrated UVC regularly irradiates stored water and tank walls, preventing bacterial growth and biofilm formation.

Automatic recirculation of stored water through bactericidal UV lamp preserves water quality in the tank and ensures that high quality Type 2 (Grade II) water is always on hand and ready to use.

WATER QUALITY & DISPENSE SPECIFICATION

| | TRACE (EDI) | LT (EDI) | BIO (EDI) |
|--|------------------------------|------------------|------------------|
| Type 1 water conductivity at 25 °C | 0.055 µS/cm | 0.055 µS/cm | 0.055 µS/cm |
| Type 2 water conductivity at 25 °C | <0.1...0.2 µS/cm | <0.1...0.2 µS/cm | <0.1...0.2 µS/cm |
| Total Organic Carbon (TOC) level | <30 ppb | <2 ppb* | <2 ppb* |
| RNase | N/A | N/A | <0.01 ng/mL |
| DNase | N/A | N/A | <4 pg/µL |
| Bacteria | <0.01 CFU/mL | <0.01 CFU/mL | <0.01 CFU/mL |
| Endotoxins | <0.15 EU/mL | <0.15 EU/mL | <0.001 EU/mL |
| Particles >0.22 µm | <1/ per mL | <1/ per mL | <0.05/ per mL |
| Nominal flow, pure water (to storage tank) | 10 L/h (3/5/10/15 L/h**) | | |
| Volumetric dispense | 0.01 L to 100 L | | |
| Adjustable dispense rate | from 2 L/min to drop-by-drop | | |

* In appropriate operating conditions, otherwise normally <3 ppb

** EDI configuration

FEED WATER REQUIREMENTS

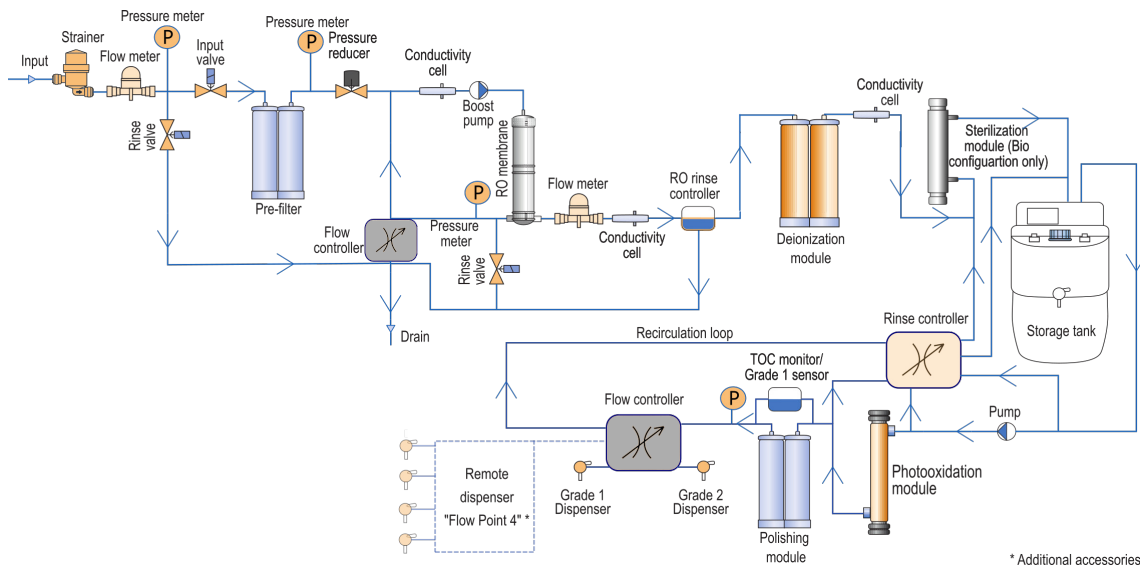
| Feed water | Potable tap water |
|----------------------------------|-------------------|
| Pressure | 0.4–6.0 bar |
| Conductivity | <2000 µS/cm |
| Dissolved CO ₂ | <30 ppm* |
| Temperature | 5–35 °C |
| pH | 4–10 |
| Fouling Index | <10 |
| Free chlorine | < 1 ppm |
| Langelier Saturation Index | <+0.2 |
| Total Organic Carbon (TOC) | <2000 ppb |
| Hardness (as CaCO ₃) | <160 ppm* |
| Silica | <30 ppm* |

* EDI configuration

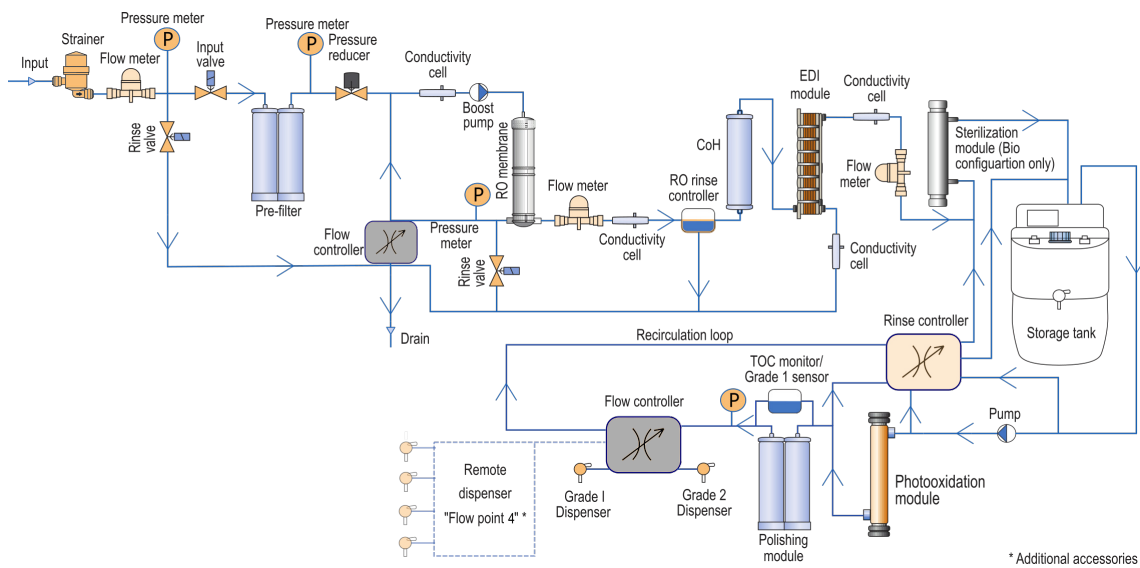
WATER SPECIFICATION

SYSTEM FLOWCHART

SYSTEM FLOWCHART FOR GRADUS SYSTEMS



SYSTEM FLOWCHART FOR GRADUS SYSTEMS WITH ELECTRODEIONIZATION



TUBING AND PORT REQUIREMENTS

| | |
|---|-------------------|
| Feed water piping connection | 1/2" Male NPTF |
| Distance from feed water port | Max 5 m |
| Distance from purification unit to Flow Point 4 dispenser | Max 5 m |
| Distance from purification unit to tank | Max 5 m |
| Power entry | Connection IEC 13 |
| Data interface | Ethernet, USB-C |

ELECTRICAL CONNECTIONS & OTHER REQUIREMENTS

| | |
|----------------------|---------------------------------|
| Power source voltage | 100–240 VAC |
| Power frequency | 50–60 Hz |
| Power used | Max 350 VA |
| Power required | 24 VDC |
| Power cord length | 1.8 m plug |
| Temperature | 15–30 °C (59–86 °F) |
| Humidity | 20–80% relative |
| Altitude | Up to 2000 m (6562 ft) |
| Tank material | Linear low density polyethylene |

DIMENSIONS AND WEIGHT

| | Trace | LT | Bio | EDI Trace | EDI LT | EDI Bio |
|--------------------|-----------------|-------|-------|-----------|--------|---------|
| Dimensions (W*D*H) | 50(33)*45*63 cm | | | | | |
| System weight | 28 kg | 29 kg | 30 kg | 28 kg | 29 kg | 30 kg |
| Operating weight | 32 kg | 33 kg | 34 kg | 32 kg | 33 kg | 34 kg |



TECHNICAL SPECIFICATION

ORDERING INFORMATION

GRADUS SYSTEMS

| | |
|--------------|---------|
| Gradus Trace | GR-1001 |
| Gradus LT | GR-1003 |
| Gradus Bio | GR-1005 |

GRADUS SYSTEMS WITH ELECTRODEIONIZATION

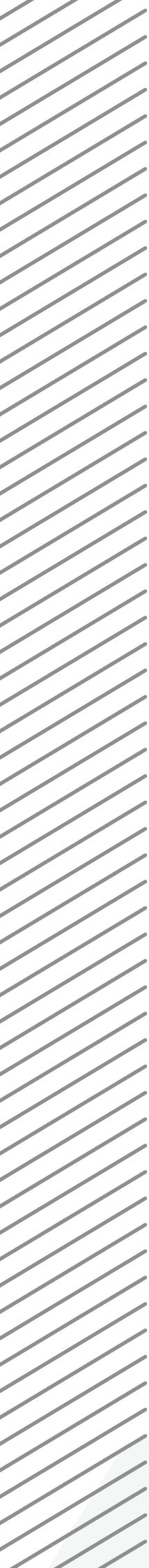
| | |
|---------------------|---------|
| Gradus 3 EDI Trace | GR-2011 |
| Gradus 5 EDI Trace | GR-2021 |
| Gradus 10 EDI Trace | GR-2031 |
| Gradus 15 EDI Trace | GR-2041 |
| Gradus 3 EDI LT | GR-2013 |
| Gradus 5 EDI LT | GR-2023 |
| Gradus 10 EDI LT | GR-2033 |
| Gradus 15 EDI LT | GR-2043 |
| Gradus 3 EDI Bio | GR-2015 |
| Gradus 5 EDI Bio | GR-2025 |
| Gradus 10 EDI Bio | GR-2035 |
| Gradus 15 EDI Bio | GR-2045 |

CONSUMABLES

| | |
|--|--------|
| Pre-filter Q w/ quick connectors | 10411 |
| Deionization Q w/ quick connectors | 10311 |
| Polishing Q w/ quick connectors | 10033 |
| Replacement sterilization UV bulb (Bio configuration) | 10017 |
| Replacement photooxidation UV bulb (LT and Bio configuration) | 10018 |
| Replacement 0.22 µm dispense filter (Trace and LT configuration) | 10012 |
| Replacement 0.22 µm dispense filter, sterile (Trace and LT configuration) | 10013 |
| Replacement ultrafilter (Bio configuration) | 10120 |
| Tank sanitization UV bulb (Bio configuration) | 410175 |

ACCESSORIES

| | |
|---|-------|
| Water storage tank "Pro", 30 L w/ multipoint sensor | 11015 |
| Water storage tank "Comfort", 60 L w/ base | 10007 |
| Water storage tank "Comfort", 100 L w/ base | 10027 |
| Water dispensing unit "Flow Point 4" | 10426 |



FOR
NOTES



ABOUT THE COMPANY

With over 20 years of experience in manufacturing water purification systems, ADRONA has established itself as a trustful and reliable partner to customers and dedicated distributors worldwide. Our portfolio includes a complete range of systems for reverse osmosis, pure and ultrapure water according to the international quality standards (ISO 3696 and corresponding ASTM and CLSI standard). Scientific applications in universities and research institutions, clinical laboratories and industry – we provide the right solution for every customer.

More than 4,000 Adrona systems have been installed and their quality has been recognised by customers in 45 countries around the world.

ADRONA management system and manufacturing site operates in accordance with ISO 9001:2015. We are certified for manufacture, sale, and service of laboratory equipment.

ISO 9001

BUREAU VERITAS
Certification



ADRONA SIA
Kalnciema st. 209
Riga, LV-1046, LATVIA
Phone: +371 67551894
Fax: +371 67551976
info@adrona.lv
www.adrona.lv