

TOC: < 1 ppb

Typical applications

**Ultra Clear / Integra:**  
AAS, routine analysis, standard buffer, GC

**Ultra Clear / Integra UV and UV TM:**  
HPLC, IC, GC, GC/MS, TOC analysis, ICP and ICP/MS

**Ultra Clear / Integra plus:**  
Cell and tissue culture, monoclonal antibody production, IVF, pyrogen sensitive applications

**Ultra Clear /Integra UV plus and UV plus TM:**  
DNA sequencing, RNase- and DNase-free, DNA-free, PCR, IVF, 2-D-electrophoresis, critical cell and tissue culture, pyrogen sensitive applications

# Pure purity

TOC monitoring units with UV-radiation intensity measurement. Programmable volume control dispensing included.

**O**utstanding performance: The Ultra Clear bench top system and the Ultra Clear Integra for space saving under-bench installation.

Each Ultra Clear series is equipped with economical state-of-the-art purification technology.

System include: A deionization module, conductivity meter to measure pretreated water, a polishing module and a 0.1 µm sterile filter in the recirculation loop.

Water quality with a resistivity of 18.2 MΩ-cm and a TOC-level < 1ppb far exceed all reagent water quality standards including: ASTM Type 1, CLSI Type 1 and ISO 3696 Type 1.

All systems that include UV-oxidation, TOC monitoring and ultrafil-

tration to produce the highest possible water quality and guarantees the perfect water quality control. These units deliver RNase-, DNase- and DNA-free water. Systems are also capable of producing



## The Integra – a space-saving alternative

For under-bench mounting of the system. A remotable dispense/display station can be mounted to the wall.

Type* Ultra Clear ...		-	UV	plus	UV plus	UV TM	UV plus TM
<b>Ultrapure water specifications</b>							
Output** up to	<i>l/min</i>	2	2	2	2	2	2
Conductivity at 25° C	<i>µS/cm</i>	0.055	0.055	0.055	0.055	0.055	0.055
Resistivity at 25° C	<i>MΩ-cm</i>	18.2	18.2	18.2	18.2	18.2	18.2
TOC	<i>ppb</i>	5 – 10	< 1	5 – 10	< 1	< 1	< 1
DNase, RNase, DNA		-	-	-	free	-	free
Bacteria	<i>cfu/ml</i>	< 1	< 1	< 1	< 1	< 1	< 1
Endotoxins	<i>EU/ml</i>	-	-	< 0.001	< 0.001	-	< 0.001
Particles > 0.1 µm	<i>per ml</i>	< 1	< 1	< 1	< 1	< 1	< 1
<b>Feed water specification</b>							
Feed water pressure	<i>bar</i>	0.1 – 5	0.1 – 5	0.1 – 5	0.1 – 5	0.1 – 5	0.1 – 5
Feed conductivity	<i>µS/cm</i>	< 20	< 20	< 20	< 20	< 20	< 20
TOC	<i>ppb</i>	< 50	< 50	< 50	< 50	< 50	< 50
Shipping weight <i>Clear/Integra</i>	<i>kg</i>	24 / 26	25 / 27	25 / 27	26 / 28	26 / 28	26 / 28
Power supply	<i>V/Hz</i>	for all types 100 – 240 / 50 – 60					
Dimensions: H/W/D	<i>mm</i>	for all types 530 / 340 / 320					
<b>Catalogue Number Ultra Clear</b>		2001	2002	2003	2004	2002-TM	2004-TM
<b>Catalogue Number Integra</b>		2005	2006	2007	2008	2006-TM	2008-TM

\* The technical specifications are the same for all Integra systems (only the Integra housing dimensions are slightly smaller).  
\*\* Gravity feed: 1.5 l/min

purified water with bacterial endotoxin levels of < 0.001 EU/ml.

The dispense flow rate is up to 2 LPM of ultrapure water. The high resolution display indicates the water conductivity in  $\mu\text{S}/\text{cm}$  or resistivity in  $\text{M}\Omega\text{-cm}$  with the corresponding water temperature. Mount the system wherever space is a premium. If there is a need for a space saving under bench installation the Ultra Clear Integra is the right choice.

Cartridge changes are very simple and fast due to quick and easy access to the replacement parts.

SG utilizes a single UV-lamp for the oxidization of organic compounds and TOC-measurement. The energy emitted from the lamp is continuously monitored to account for declining radiation output during the lamp service life. The use of a single UV lamp results in much lower annual running cost compared to the competition. The brilliant design with compact dimensions makes it possible to use or mount the system where space is a premium.

A flexible remote dispenser enables the user to dispense water where it is needed. A built-in automatic self-cleaning mechanism extends the life of the ultrafilter module.

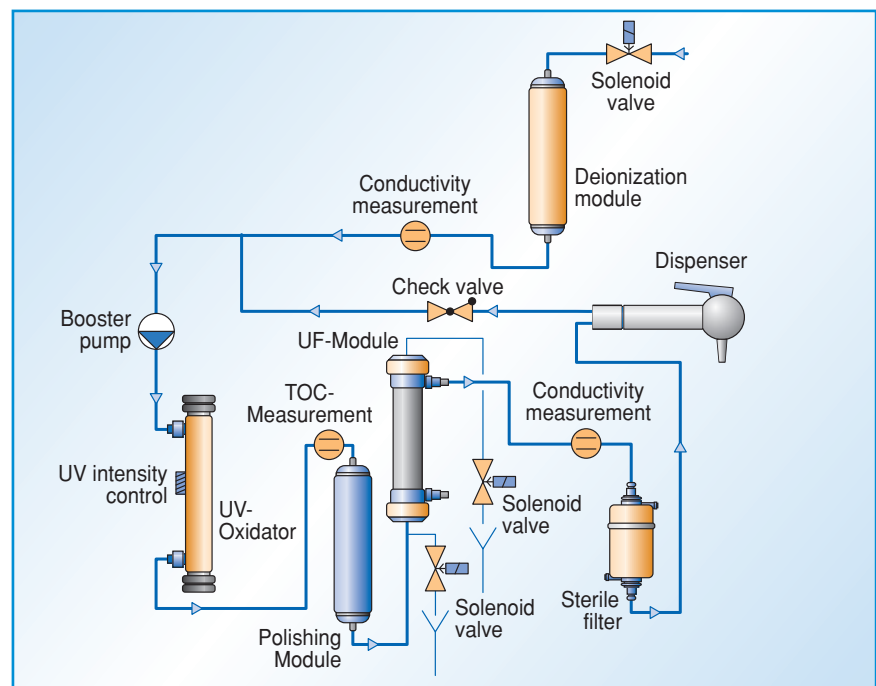
Pure water dispensing is made easy by simply activating the valve lever. A continuous flow of pure water is achieved by simply placing the draw-off lever in an upright position.

Our new systems are available with special features such as: volume control dispensing, a „24-hour-circulation“ mode with extreme low sound level < 40dba and integrated RS 232 interface for data recording. Flexible remote dispenser hoses are available at various lengths.

### Options

Item	Cat. No.
Dispenser hose extension on request (please specify the needed length)	<b>02194-2</b>

### Flowsheet Ultra Clear UV plus TM



### Consumables

Item	Change frequency	Cat. No.
Deionization Module VMD for applications in the inorganic range	6 – 12 monthly	<b>2050</b>
Pretreatment Module DTO for applications that need low TOC	6 – 12 monthly	<b>2094</b>
Polishing Module MF III D for applications in the low TOC range	6 – 12 monthly	<b>2051</b>
Polishing Module ILT for inorganic applications	6 – 12 monthly	<b>2092</b>
Sterile filter 0.1 $\mu\text{m}$ , 1000 $\text{cm}^2$	6 monthly	<b>2052</b>
Disinfection kit (pack of 3)	–	<b>2055</b>
UV- Replacement bulb, only for systems without TM	6 monthly	<b>2068</b>
UV- Replacement bulb, only for systems with TM	6 monthly	<b>2069</b>
UF Membrane Preventor 5000	18 – 36 monthly	<b>2058</b>

All change frequency information are to be understood as average and can vary.



The dispensing of ultrapure water can be so easy!

In all versions the polishing module MFIIID is included. All UV versions are delivered with pretreatment module DTO and all other versions with the deionization module VMD.