

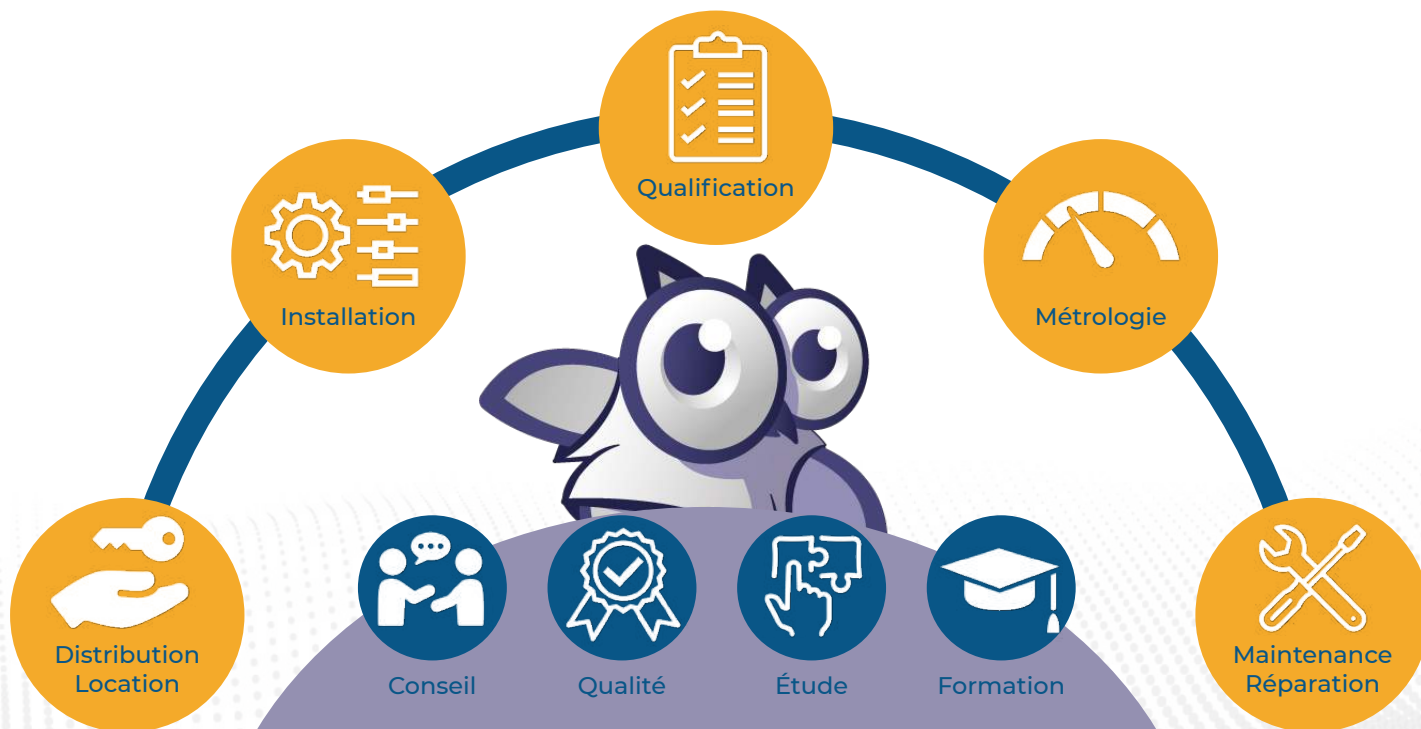
SOLUTIONS TECHNIQUES pour

laboratoires
& industries



LABO AND CO

Nos compétences et services associés



Une équipe de spécialistes

Water quality standards

For various fields of use and requirements.

International Organization for Standardization (ISO)

ISO 3696:1987 distinguishes between three degrees of purity for water for analytical purposes in laboratories.

Parameter	Grade 1	Grade 2	Grade 3
pH value at 25 °C	–	–	5.0–7.0
Conductivity (µS/cm at 25 °C)	0.1	1.0	5.0
Oxidizable matter, oxygen content (mg/l, max.)	–	0.08	0.4
Absorption at 254 nm and a length of 1 cm (absorption units, max.)	0.001	0.01	–
Residue after evaporation by heating to 110 °C (mg/kg, max.)	–	1	2
Silicon content (mg/l, max.)	0.01	0.02	–

Clinical Laboratory Standards Institute (CLSI)

This institute defined the quality requirements of water for clinical laboratories. The regulations that were valid up to 2006 (NCCL types 1, 2 and 3) but were then invalidated by the requirement that water must be suitable for the intended usage. Only the degree of purity of so-called “Clinical laboratory reagent water” (CLRW) is described.

Parameter	CLRW
Resistance	10 MΩ x cm
TOC	< 500 ppb
Bacteria	< 10 CFU/ml
Particle content	Inline 0.2 µm-filter

American Society for Testing and Materials (ASTM)

The ASTM D1193-06 (2011) deals with the requirements for chemical analyses and physical tests.

Type	Grade	Conductivity (µS/cm), max.	Resistance (MΩ x cm), min.	pH	TOC (µg/l), max.	Sodium (µg/l), max.	Chloride (µg/l), max.	Silicon (µg/l), max.	Bacteria (CFU/ml), max.	Endotoxins (EU/ml), max.
Ultrapure Water	I*	0.056	18.0	–	50	1	1	3	–	–
	A	0.056	18.0	–	50	1	1	3	10/1000	0.03
	B	0.056	18.0	–	50	1	1	3	10/100	0.25
	C	0.056	18.0	–	50	1	1	3	100/10	–
Pure water	II	1.0	1.0	–	50	5	5	3	–	–
	A	1.0	1.0	–	50	5	5	3	10/1000	0.03
	B	1.0	1.0	–	50	5	5	3	10/100	0.25
	C	1.0	1.0	–	50	5	5	3	100/10	–
Pure water	III	0.25	4.0	–	200	10	10	500	–	–
	A	0.25	4.0	–	200	10	10	500	10/1000	0.03
	B	0.25	4.0	–	200	10	10	500	10/100	0.25
	C	0.25	4.0	–	200	10	10	500	100/10	–
Pure water	IV	5.0	0.2	5.0–8.0	–	50	50	–	–	–
	A	5.0	0.2	5.0–8.0	–	50	50	–	10/1000	0.03
	B	5.0	0.2	5.0–8.0	–	50	50	–	10/100	0.25
	C	5.0	0.2	5.0–8.0	–	50	50	–	100/10	–

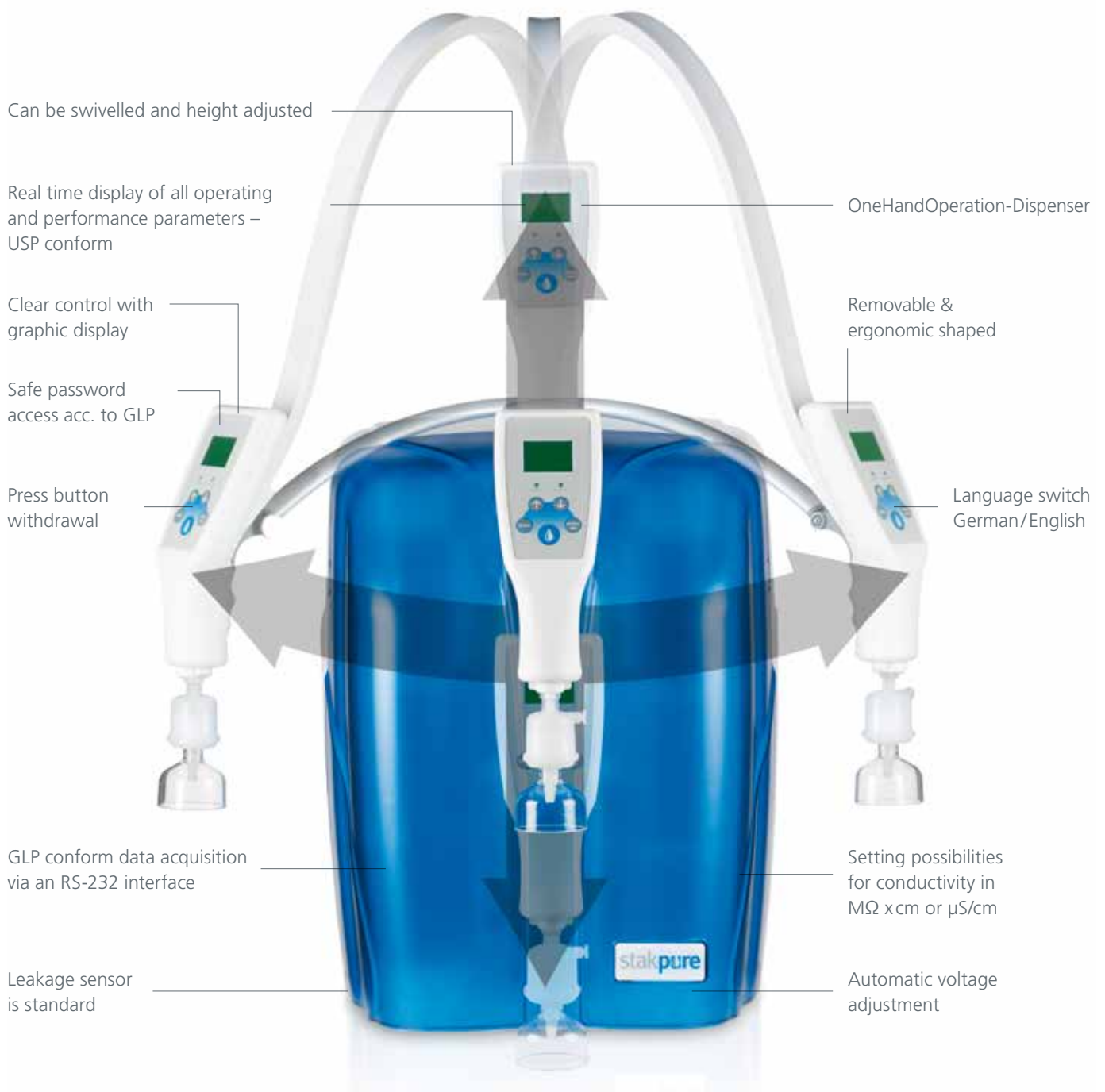
* Using an appropriate 0,2 µm membrane filter.

Omnia

Pure and ultrapure water systems

Convenient. Compact. Adaptable.

OptiFill Dispenser is standard



The Omnia series is extremely convenient to use. All devices are fitted with the Optifill one-hand dispenser with integrated control- and monitoring unit. One-handed operation, removable, can be swivelled and height-adjusted, and with a flexible connection for easy water dispensing into any type of container.



The ergonomic shaped dispenser is easily operable.



The easily accessible control and service cover ensures that consumables can be replaced in seconds.



Separate from the production unit. The external dispenser can be space sparingly wall-fitted or flexibly placed on the lab bench.

Place the production unit under the bench to save valuable space in your lab. Match the positioning to your lab environment with the external OptiFill stand/wall dispenser and monitoring unit. Either practical on a bench or space-saving on a wall.



OmniaPure

The specialist.

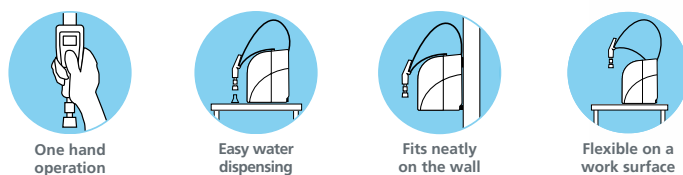
For H₂O pure type I.

When your need is for highest quality pure water that fulfils the demands of analytical and life science laboratory requirements, then one of these OmniaPure systems type will be right for you. You can configure it. The incorporated pre-treatment constantly ensures the reliability of your experimental results and reduces running costs.

Features

- OptiFill dispenser is standard
- Spent filters are simply and quickly changed
- Leakage sensor is standard
- Integrated pressure reducer is standard
- Precise volume control
- Ready-to-use, including filter cartridges

+ Real time TOC monitoring



Specifications	OmniaPure	OmniaPure UV	UV-TOC	OmniaPure UV/UF	UV-TOC/UF
Type I					
Conductivity $\mu\text{S/cm}$	0.055	0.055	0.055	0.055	0.055
Resistance $\text{M}\Omega \times \text{cm}$	18.2	18.2	18.2	18.2	18.2
TOC-value* ppb	5 – 10	1 – 5	1 – 5	1 – 5	1 – 5
TOC monitor	-	- / yes	- / yes	- / yes	- / yes
Dispensing performance l/min.	up to 2	up to 2	up to 2	up to 1.6	up to 1.6
Endotoxins* EU/ml	-	-	-	< 0.001	< 0.001
RNase* ng/ml	-	-	-	< 0.01	< 0.01
DNase* pg/ μl	-	-	-	< 4	< 4
Particles**/ml	< 1	< 1	< 1	< 1	< 1
Bacteria** CFU/ml	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1

Feedwater requirements

Water prepared by ion exchange, reverse osmosis, electroionisation or distillation

Feedwater temperature $^{\circ}\text{C}$	+ 2 up to 35	+ 2 up to 35	+ 2 up to 35
Input conductivity $\mu\text{S/cm}$	< 30	< 30	< 30
TOC-value ppb	< 50	< 50	< 50

Technical data

Operating pressure bar	0.5 – 6	0.5 – 6	0.5 – 6
Supply voltage Volt/Hz	90 – 240/50 – 60	90 – 240/50 – 60	90 – 240/50 – 60
Connected load kW	0.1	0.1	0.1
Connector size	3/4"	3/4"	3/4"
Ambient temperature $^{\circ}\text{C}$	+ 2 up to + 35	+ 2 up to + 35	+ 2 up to + 35
Dimensions*** W x H x D mm	390 x 720 x 525	390 x 720 x 525	390 x 720 x 525
Dimensions production unit B x H x T mm	390 x 480 x 380	390 x 480 x 380	390 x 480 x 380
Dimensions OptiFill Wall dispenser	100 x 520 x 460	100 x 520 x 460	100 x 520 x 460
Dimensions OptiFill Bench dispenser	140 x 580 x 520	140 x 580 x 520	140 x 580 x 520
Weight kg	19	20	20

* in dependence on the feedwater quality

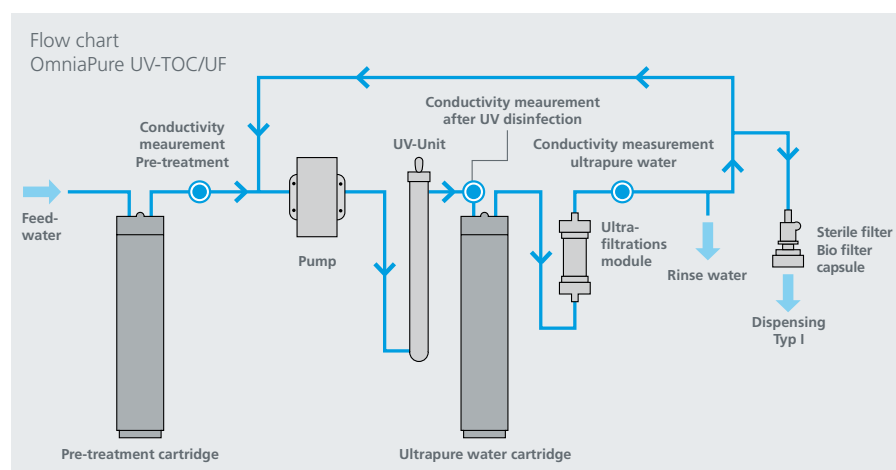
** with sterilizing filter 0.2 μm

*** with OptiFill Dispenser

Article no.	System type* Standard	Article no.	System type Production unit + Wall dispenser**/**	Article no.	System type Production unit + Bench dispenser**/**	Typical applications
18200001	OmniaPure	18200011	OmniaPure-W	18200021	OmniaPure-T	AAS, IC, ICP, buffers and media preparation
18200002	OmniaPure UV	18200012	OmniaPure-W UV	18200022	OmniaPure-T UV	Ultra-trace analysis, ICP-MS, HPLC, TOC-analysis
18200003	OmniaPure UV/UF	18200013	OmniaPure-W UV/UF	18200023	OmniaPure-T UV/UF	Life science and microbiology, cell culture media
18200004	OmniaPure UV-TOC	18200014	OmniaPure-W UV-TOC	18200024	OmniaPure-T UV-TOC	Ultra-trace analysis, ICP-MS, HPLC, TOC-analysis
18200005	OmniaPure UV-TOC/UF	18200015	OmniaPure-W UV-TOC/UF	18200025	OmniaPure-T UV-TOC/UF	Life science and microbiology, cell culture media

* filter cartridges and sterile filter capsule 0.2 μm included

** The Omnia production unit can either be installed on a bench, on a wall or under the bench.



Accessories

19200300	Wall mount Omnia
19200056	Disinfection kit Omnia
19200057	Disinfectant Omnia – 3 Pc./Pkg.

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