

# Reverse osmosis and electro-deionisation.

The efficient way to produce and supply pure water on a centralised purified water supply.

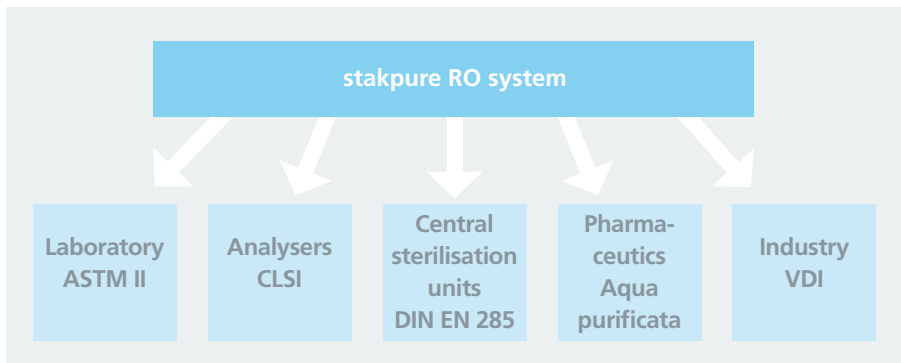


# stakpure reverse osmosis systems. Constant and reliable.



RO systems provide an efficient and cost-effective way of producing a centralised supply of pure water as required in laboratories, health care, pharmaceutical companies and industry.

stakpure reverse osmosis systems are configured to meet specific needs within a capacity range of 20 l/h to 6,000 l/h. This makes it possible to supply individual laboratory and medical systems, floors or even entire buildings. Reliably and always in constantly high quality.



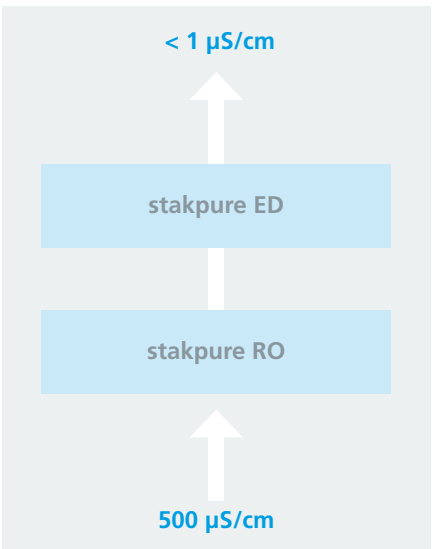
**Typ. rejection rate of a stakpure reverse osmosis system**

Minerals	99 %
Bacteria	99 %
Particles	99 %
Pyrogens	99 %

**Need purified water of an even higher quality?**

In meeting maximum demands on purifying water, an electro-deionisation facility is installed downstream of the RO system to remove any residual minerals. This achieves pure water qualities within a range of 0.067 to 1 µS/cm. Permanent regeneration of the mixed-bed resins in the ED system also produces an extremely high level of water purity without adding chemicals. This rules out the temporary occurrence of impurities and prevents the system from overloading.

- Benefits at a glance:**
- One central system – space-saving
  - No regeneration costs
  - No use of chemicals
  - Free from particles and bacteria
  - High pure water yield
  - Modular capacity upgrade



# stakpure reverse osmosis systems.

## Compact units for decentralised supply.

### stakpure RO cabinet

Ready-to-connect, compact RO system in a cabinet for wall-mounting. Digital micro-processor controller with LCD display for controlling and monitoring all operating and performance parameters as well as for displaying permeate conductivity. Fully automatic rinsing cycles. Module-based capability of increasing capacity at a later stage.



stakpure RO cabinet	20	40	60	120
Permeate performance at 10 °C	20 l/h	40 l/h	60 l/h	120 l/h
Power consumption	0.30 kW			
Electrical requirements	230/50 V/Hz			
Max. operating pressure	14 bar			
Dimensions mm (WxDxH)	600x400x800			
Weight	45 kg	50 kg	55 kg	60 kg
Order no.	15300020	15300040	15300060	15300120

### stakpure RO ready

"All in one" unit in a cabinet with lockable door and observation window. All components (pretreatment, water softening, reverse osmosis, storage tank with level control and pressure booster) are integrated and premounted ready to connect. Multilingual micro-processor controller with LCD display for controlling and monitoring RO systems. Display of permeate conductivity, fully automatic rinsing cycles, potential-free fault reporting relay. Module-based capability of increasing capacity at a later stage.



stakpure RO ready	60	120
Permeate performance at 10 °C	60 l/h	120 l/h
Power consumption	1.0 kW	
Mains voltage	230/50 V/Hz	
Max. operating pressure	14 bar	
Dimensions mm (WxDxH)	800x600x1800	
Weight	200 kg	210 kg
Order no.	15200060	15200120

# stakpure reverse osmosis systems. For centralised supply.

## stakpure RO easy

Ready-to-connect RO system on stainless-steel frame. Multilingual microprocessor controller with LCD display for controlling and monitoring RO systems. Display of permeate conductivity, fully automatic rinsing cycles, potential-free fault reporting relay. Module-based capability of increasing capacity at a later stage.

stakpure RO easy	100	150	200	300
Permeate performance at 10 °C	100 l/h	150 l/h	200 l/h	300 l/h
Power consumption	0.60 kW			
Mains voltage	230/50 V/Hz			
Max. operating pressure	12 bar			
Dimensions mm (WxDxH)	600x600x1600			
Weight	80 kg	85 kg	100 kg	110 kg
Order no.	15400100	15400150	15400200	15400300



## stakpure RO central

RO-Cabinet version with lockable door and observation window. Multilingual microprocessor control with LCD display for controlling and monitoring RO systems. Display of raw and pure water conductivity with limiting value setting capability and temperature compensation. Fully automatic rinsing cycles, potential-free fault reporting relay. Module-based capability of increasing capacity at a later stage.

stakpure RO central	300	600	900	1200
Permeate performance at 10 °C	300 l/h	600 l/h	900 l/h	1200 l/h
Power consumption	1.6 kW	1.6 kW	1.6 kW	1.6 kW
Mains voltage	380/50 V/Hz	380/50 V/Hz	380/50 V/Hz	380/50 V/Hz
Max. operating pressure	14 bar	14 bar	14 bar	14 bar
Dimensions mm (WxDxH)	800x600x1800	800x600x1800	800x600x1800	1000x600x1800
Weight	220 kg	260 kg	280 kg	300 kg
Order no.	15300300	15300600	15300900	15301200

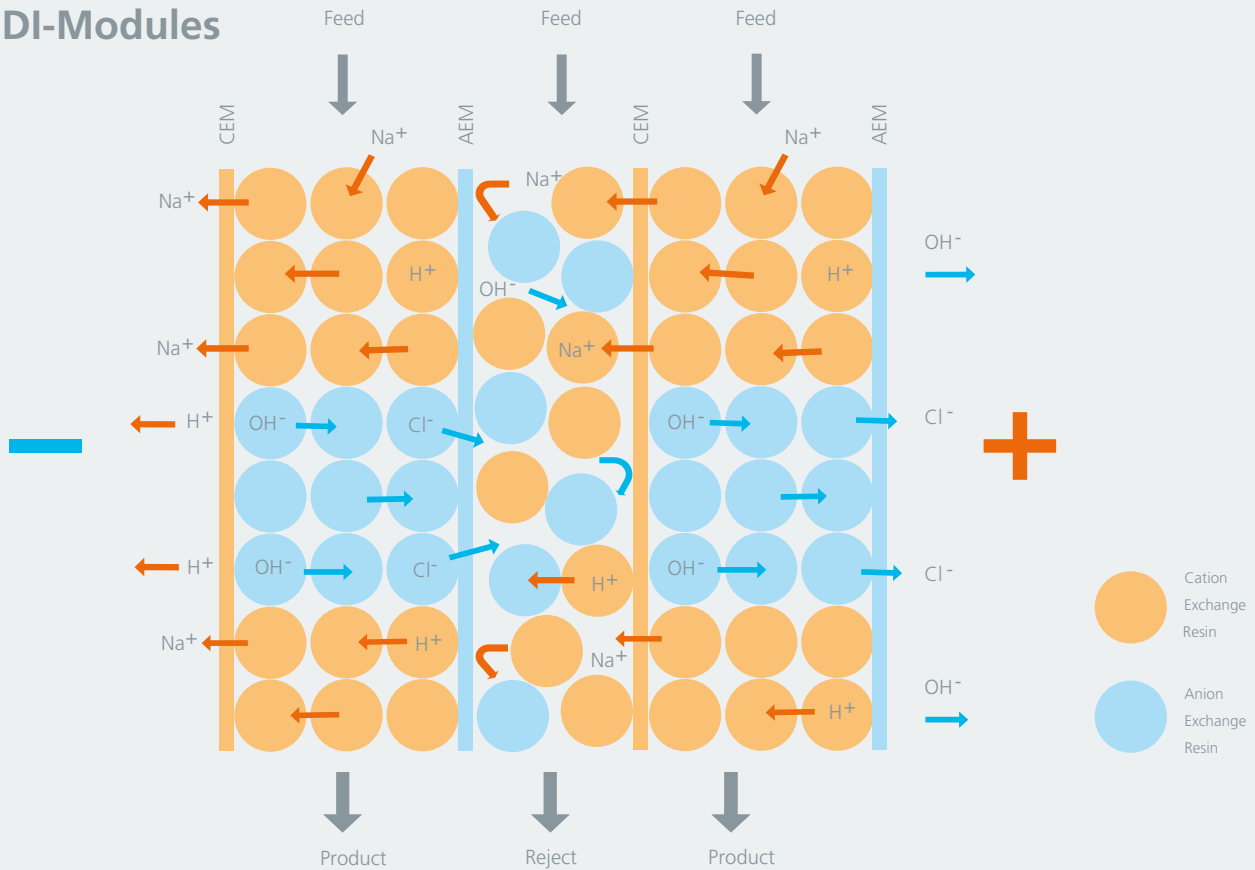


# stakpure electro-deionisation ED. For the highest of demands.

Electro-deionisation combines two processes for producing ultrapure water: the electrodialysis and ion exchanger processes (IEP).

Whereas the conventional ion-exchanger process involves chemically regenerating the resins on a regular basis after longer time use, electro-deionisation continuously regenerates the resins using electric current.

## CEDI-Modules



### Principle and mode of operation:

With electro-deionisation, water is split into H<sup>+</sup> and OH<sup>-</sup> ions by applying an electric voltage within the cells. This creates a process that continuously regenerates the mixed-bed resins without adding chemicals. Ions are held back on the mixed-bed resins and flushed out through selective membranes that only let anions or cations through. This process rules out any occurrence of impurities and the risk of "impure mixed-bed resins" contaminating the pure water that is produced. Electro-deionisation systems produce a constantly high water quality, making them ideal for supplying pure water to entire building wings in the laboratory (ASTM II), central sterilisation units in clinics (DIN EN 285) as well as for many pharmaceutical and industrial applications.

# stakpure reverse osmosis systems.

## With integrated electro-deionisation modules.

### stakpure RO ED cabinet

RO system with integrated electro-deionisation. Cabinet version with lockable door and observation window. Multilingual microprocessor control with LCD display for controlling and monitoring electro-deionisation systems. Display of permeate and pure water conductivity with limiting value setting capability and temperature compensation. Fully automatic rinsing cycles, potential-free fault reporting relay. Module-based capability of increasing capacity at a later stage.

Also optionally available with control unit with touch panel. Programmable control unit for controlling and monitoring entire systems all automatically. Display of all operating and performance parameters with process visualisation. Capability for connecting and controlling external units and relaying measurement readings and fault messages to the building and central services management system.



stakpure RO ED cabinet	80	130	170	270
Ultrapure water output at 10 °C	80 l/h	130 l/h	170 l/h	270 l/h
Ultrapure water quality	0.1 – 1.0 µs/cm*			
Max. operating pressure	14 bar			
Power consumption	0.9 kW			
Mains voltage	230/50 V/Hz			
Dimensions mm (WxDxH)	615x600x1600			
Weight	135 kg	140 kg	145 kg	150 kg
Order no.	17400080	17400130	17400170	17400270

\* depending on feed water quality



### stakpure RO ED ultra

RO system with integrated electro-deionisation and recirculation module (polisher). With digital microprocessor control, see RO ED cabinet. Also optionally available with control unit.

stakpure RO ED ultra	80	130	170	270
Ultrapure water output at 10 °C	80 l/h	130 l/h	170 l/h	270 l/h
Ultrapure water quality	0.067 – 0.1 µs/cm*			
Max. operating pressure	14 bar			
Power consumption	0.9 kW			
Mains voltage	230/50 V/Hz			
Dimensions mm (WxDxH)	615x600x1600			
Weight	155 kg	159 kg	164 kg	169 kg
Order no.	17500080	17500130	17500170	17500270

\* depending on feed water quality



### stakpure RO ED central

RO system with integrated electro-deionisation on stainless-steel frame. With digital microprocessor controller, see RO ED cabinet. Also optionally available with control unit.

stakpure RO ED central	500	800	1100
Ultrapure water output at 10 °C	500 l/h	800 l/h	1100 l/h
Ultrapure water quality	0.1 – 1.0 µs/cm*		
Max. operating pressure	14 bar		
Power consumption	2.3 kW	2.3 kW	3.5 kW
Mains voltage	230/50 V/Hz		
Dimensions mm (WxDxH)	1400x600x1800		
Weight	360 kg	370 kg	400 kg
Order no.	17300500	17300800	17301100

\* depending on feed water quality



# stakpure accessories.

## For reverse osmosis systems.

### Filter housings and filter cartridges

Pressure-resistant filter casings made of plastic with wall mount as well as appropriately sized filter cartridges for pre-filtration, particle and sterile filtration. Also as activated carbon filter combined with pre-filter.



stakpure filter housings	10"	10"	10"	20"	20"	20"
Pressure gauge	without	1	2	without	1	2
Casing material		PP			PP	
Seal		Buna			Buna	
Max. operating pressure		8.5 bar			8.5 bar	
Max. temperature		52 °C			52 °C	
Connection, both sides		R 3/4"			R 3/4"	
Dimensions mm (Øxlength)		130x311			130x568	
Weight	1.2 kg	1.3 kg	1.4 kg	1.9 kg	2.0 kg	2.1 kg
Order no.	16531000	16531100	16531200	16532000	16532100	16532200

stakpure pre-filter cartridges	10"	10"	10"	10"	20"	20"	20"	20"	
Pore size	1 µm	3 µm	5 µm	Activated carbon + 5 µm PF	1 µm	3 µm	5 µm	Activated carbon + 5 µm PF	
Design		10"				20"			
Flow rate at 0.15 bar Δp	750 l/h	1000 l/h	1500 l/h	750 l/h	1500 l/h	2000 l/h	3000 l/h	1500 l/h	
Order no.	16510100	16510700	16510500	16520100	16510600	16510800	16511000	16520200	

stakpure particle and sterile filtration	10"	20"
Pore size	0.20 µm	0.20 µm
approx. flow rate at 0.15 bar Δp	800 l/h	1600 l/h
Order no.	16555500	16555800

## System separator

Safety device that is compliant with EN 1717 and DIN 1988 – DVGW (German drinking water specifications). It prevents non-potable water from flowing into the public water supply should back-pressure, reverse flow or suction occur in the system.



stakpure ST FK4	ST 20	ST 25	ST 32	ST 40	ST 50
Flow rate at 0.7 bar Δp	2.0 m <sup>3</sup> /h	3.0 m <sup>3</sup> /h	4.0 m <sup>3</sup> /h	6.0 m <sup>3</sup> /h	10.0 m <sup>3</sup> /h
Connections	R ¾"	R 1"	R 1 ¼"	R 1 ½"	R 2"
Width mm	208	247	272	315	345
Depth mm	140	168	180	220	230
Height mm	218	263	263	446	446
Weight	1.55 kg	1.65 kg	4.6 kg	4.7 kg	4.8 kg
Order no.	25014000	25014100	25014200	25014300	25014400

## Backflushable fine filter + household water station

Filter combinations with backflushable fine filter and pressure reducer in one unit – DVGW-tested (German Association for Gas and Water). The fine filter prevents foreign particles from being washed in, such as rust particles, hemp remnants and grains of sand. The pressure reducer prevents pressure damage and lowers water consumption.



stakpure type RF + HS	RF 20	RF 25	RF 32	RF 40 HS	RF 50 HS
Connections	R ¾"	R 1"	R 1 ¼"	R 1 ½"	R 2"
Flow rate at 0.2–0.6 bar Δp	2.0 m <sup>3</sup> /h	3.0 m <sup>3</sup> /h	4.0 m <sup>3</sup> /h	6.0 m <sup>3</sup> /h	10.0 m <sup>3</sup> /h
Width mm	150	150	150	370	408
Depth mm	178	178	182	150	150
Height mm	415	415	415	590	590
Filtration down to	100 μm				
Weight	2.3 kg	2.6 kg	3.9 kg	8.1 kg	10.0 kg
Order no.	16552900	16553000	16553100	16554000	16554100

# stakpure accessories.

## For reverse osmosis systems.

### Storage tanks 100 – 500 l

Storage tanks in grey PP for storing purified water from reverse osmosis systems. Closed and opaque design, round, including manhole for cleaning. The tank comes completely piped and is available with optional accessories. On request, also available with sloping tank bottom for completely discharging and effective disinfection.



stakpure storage tank	Type RT 100 PP	Type RT 200 PP	Type RT 300 PP	Type RT 400 PP	Type RT 500 PP
Material			PP		
Volume	100 l	200 l	300 l	400 l	500 l
Colour			grey		
Overflow connection			R ¾"		
Outlet connection			R 1 ¼"		
Inlet connection			R ¾"		
Dimensions mm (Øxheight)	470x680	560x840	690x830	760x1050	780x1100
Dimensions mm (Øxheight) with sloping tank bottom	460x800	650x800	790x800	670x1390	750x1390
Weight	12 kg/empty	14 kg/empty	16 kg/empty	18 kg/empty	20 kg/empty
Order no.	16500100	16500200	16500300	16500400	16500500
Order no. with sloping tank bottom	16500101	16500201	16500301	16500401	16500501

## Storage tanks 1100 – 3000 l

Storage tanks in black PP for storing pure water from reverse osmosis systems. Closed rectangular design, including 400 mm manhole with lid and tension ring as well as galvanised steel bandages.



stakpure storage tank	Type RT 1100 PE	Type RT 1500 PE	Type RT 2000 PE	Type RT 3000 PE
Material			PE	
Volume	1100 l	1500 l	2000 l	3000 l
Colour			black	
Overflow connection			R ¾"	
Outlet connection			R 1 ¼"	
Inlet connection			R ¾"	
Dimensions mm (LxWxH)	1400x720 x1400	1560x720x1640	2070x720x1690	2230x995x1650
Weight	55 kg/empty	70 kg/empty	110 kg/empty	165 kg/empty
Order no.	16501100	16501500	16502000	16503000

# stakpure water softening systems.

## For softening water the reliable way.

### stakpure standalone softeners

The System is either volume or time-controlled, for softening iron and manganese-free drinking water, in compliance with the German Drinking Water Ordinance, fully automatic with 5-stage central control valve and microprocessor with integrated blending valve and water meter. Pressurised tank made of non-corroding GFP, including top-quality cation exchanger, built into cabinet container with float valve.



stakpure WEA compact	32	60	100
Capacity at 10°dH	4 m <sup>3</sup>	6 m <sup>3</sup>	10 m <sup>3</sup>
Nominal flow rate	0.32 m <sup>3</sup>	0.6 m <sup>3</sup>	1.0 m <sup>3</sup>
Salt charge	25 kg	75 kg	75 kg
Dimensions mm (WxDxH)	310x430x660	320x560x1135	320x560x1135
Order no.	16127200	16127400	16127800

Sensor-controlled water softening systems are also available on request.

### stakpure twin water softening system

A twin system, volume-controlled, for softening iron and manganese-free drinking water, in compliance with the German Drinking Water Ordinance, fully automatic with 5-stage central control valve with intelligent control electronics, made of red brass. 2 pressurised tanks made of non-corroding GFP, including top quality cation exchanger. 1 salt water tank with sieve bottom and float valve.



fig.: Double softener with brine container

stakpure WEA Duo	60	100	200	440	600	800
Capacity at 10 °dH	2x6 m <sup>3</sup>	2 x 10 m <sup>3</sup>	2x20 m <sup>3</sup>	2 x44 m <sup>3</sup>	2 x60 m <sup>3</sup>	2x80 m <sup>3</sup>
Nominal flow rate	0.6 m <sup>3</sup> /h	1.0 m <sup>3</sup> /h	2.0 m <sup>3</sup> /h	4.4 m <sup>3</sup> /h	6.0 m <sup>3</sup> /h	8.0 m <sup>3</sup> /h
Salt charge	75 kg	75 kg	150 kg	200 kg	200 kg	300 kg
Connection	R 1"	R 1"	R 1"	R 1 ½"	R 1 ½"	R 2"
Height mm	1200	1200	1650	2000	2000	2200
Width mm	1110	1200	1300	1800	1900	2700
Depth mm	500	500	600	800	800	950
Order no.	16128200	16128400	16128600	16120200	16120400	16130600

Sensor-controlled water softening systems are also available on request.

### stakpure accessories for water softeners.

The use of genuine products from the stakpure range of accessories for water softeners is recommended where higher standards are required on constant water quality.

stakpure accessories	Order no.
Total hardness measurement facility with titration solution	16100000
Disinfection system for water softeners	16200100
Salt tablets for water softeners (1 sack = 25 kg)	16200000
Flexible 1" connection hose, sheathed in stainless steel, length 1 metre	16115900
1" mounting block with blending valve and test tap	16116000
Blending valve for 1" water softening systems	25011000
Blending valve for 1 ½" water softening systems	25011100

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Retailer panel