

**TKA – Pacific UP 6**  
**High-purity water systems for every laboratory**

The TKA–Pacific PW modularly designed laboratory reverse osmosis system is specifically intended for the functional and economical production of high-purity water. The combination of different purification technologies, such as reverse osmosis, deionization and adsorption, ensures a practically maintenance-free supply of ASTM Type II, CLSI, CAP and ISO 3696 quality water. Microprocessor control of the automatic operation, with continual monitoring of all important parameters, together with the cost-favourable production of high-purity water without waste of energy or water resources, make the TKA-Pacific UP system an efficient high-purity water provider for every lab, ideal for supplying autoclaves, clinical analysers and ultrapure water systems, as well as for laboratory glassware washing. It can be simply stood on a bench or be space-savingsly wall-mounted.



**Our technologies that you benefit from:**

- **Practically maintenance-free and easy to service**  
The complete pretreatment unit (09.4001) consists of a hardness stabiliser that protects the reverse osmosis module from scale-forming substances and an activated carbon / 5 µm combination cartridge that safeguards the long service life of the purification stages.
- **Guaranteed high-purity water quality and economy**  
The combination of various High-Tech purification technologies such as reverse osmosis, deionization with highest-quality resins and organic adsorbers ensures that the most stringent standards, i.e. ASTM Type II, CLSI, CAP and ISO 3696, are not only met but even exceeded.
- **Reliable operation!**  
The microprocessor control of the automatic operation with continual monitoring of all important parameters additionally provides extreme operator comfort. The water volume in the tank is shown in the Pacific display in % and the required filling level can be variably set.
- **The monitoring and documentation that laboratories need!**  
The high-precision, temperature-compensated conductivity monitoring with exact temperature display complies with USP 645. The potential-free contact and RS 232 interface allow connection to an external data printer (09.2207). Supporting validation and qualification documents are optionally available.

### System construction and filtration stages:

- Plastic housing for all system components and modular filtration stages
- Pressure pump for the generation of the operating pressure required for feedwater to diffuse through the RO-membrane
- Spiral wound membrane, plus pressure tube and all necessary fittings, for the removal of organic and inorganic contaminants, microorganisms, particles and colloids
- High-purity pretreatment set for the removal of organic substances, volatile organic compounds and inorganic ions
- Solenoid valves for feedwater inflow and quality rinses
- Adjusting valves for setting the operating pressure and the WCF (water conversion factor)
- High-precision measuring cells for the monitoring and display of the electrical conductivity in  $\mu\text{S}/\text{cm}$  as well as the temperature in  $^{\circ}\text{C}$
- All parts that contact water are made of high-quality natural (pigment-free) materials
- Microprocessor control for fully automatic control and supervision of the high-purity water system

### Characteristics and functions of the digital control:

The digital microprocessor control is equipped with an illuminated, adjustable, four-line alphanumeric LCD display with 16 characters for the display of all operating functions and performance parameters in clear text:

- It is integrated in a plastic housing, protection class IP 55, with a membrane keypad that allows simple start and operating procedure input
- High-precision conductivity measurement with temperature compensation that can be switched off and individually settable limiting values for high-purity and ultrapure water
- High-precision, coaxially constructed conductivity measuring cells with measured out cell constants of 0.01 and built-in reference resistance for fully automatic balancing of conductivity measurements prior to each measurement
- Switch-over of the conductivity measurement unit between  $\mu\text{S}/\text{cm}$  and  $\text{M}\Omega \times \text{cm}$  and of language between English, German and French
- Exact temperature measurement in  $^{\circ}\text{C}$  with temperature compensation that can be switched off, a measurement accuracy of  $\pm 0.1^{\circ}\text{C}$  and an integrated platinum-chip sensor
- Fault storage for all faults that have occurred during the last 4 weeks and display of the fault messages in clear text
- Real-time clock and code-protected operating system for the prevention of unauthorized changes to the system and to default settings
- RS232 Interface with adjustable sender interval for data transmission of all measured values and faults to a PC or data printer with dates and times

### Demands on the feedwater:

Water pretreatment:	Tap water acc. to DIN 2000
Manganese and iron contents in mg/L:	< 0.05
Free chlorine concentration in mg/L:	< 0.1
Salt content in mg/L:	max. 1500
Colloid index:	max. 3
Feedwater temperature in $^{\circ}\text{C}$ :	$2^{\circ}\text{C} - 35^{\circ}$
Feedwater pressure in bar:	2 – 6

pH-Range: 4 - 11

**High-purity water specifications:**

Conductivity in $\mu\text{S}/\text{cm}$ :	0.067 – 0.1
Resistance in $\text{M}\Omega \times \text{cm}$ :	15 - 10
Flow rate in L/h at 15°C:	6
TOC-Value in ppb:	< 30
Retention quota, bacteria in %:	> 99
Retention quota, particles in %:	> 99
Silicate retention in %:	> 99.9

\*  $\leq 30$  ppm  $\text{CO}_2$  in the feedwater

**Technical specifications:**

Supply voltage in V/Hz:	230 / 50-60
Power consumption in kW:	0.1 kW
Feedwater connector:	R $\frac{3}{4}$ " male thread
Concentrate connector:	R $\frac{3}{4}$ " male thread
Permeate connector:	R $\frac{3}{4}$ " male thread
Ambient temperature in °C:	+ 2°C - + 35°C
Dimensions in mm, W x D x H:	372 x 330 x 603
Weight in kg:	24

**Article no.:** 08.4106

**Accessories – optional:**

Pretreatment, complete	09.4001
Ultrapure water tank, 30 L with filling level display	06.5033
Ultrapure water tank, 30 L with pressure/recirculation pump	06.5032
Ultrapure water tank, 60 L with filling level display	06.5063
Ultrapure water tank, 60 L with pressure/recirculation pump	06.5062
Sterile overflow for tank	06.5001
$\text{CO}_2$ -Adsorber + sterile vent filter, 0.2 $\mu\text{m}$	06.5002
Sterile vent filter, 0.2 $\mu\text{m}$	06.5003
UV-Immersion tube system, 30/60 L	06.5006
Wall mount for tank, 30 L	06.5015
Wall mount for tank, 60 L	06.5016
Electronic water watcher	16.0129