

Reverse Osmosis System Dulcosmose® TW

Potable water desalination for industrial applications - compact and cost-effective



Permeate output 0.1 – 50 m³/h

As the system runs with low operating pressures, the entire Dulcosmose® TW can be fitted with inexpensive PVC pipework. This system is also available with an integral, semi-automated cleaning system and permeate and/or raw water flushing option. Equipped with the latest generation of "ultra low-pressure" membranes, this system achieves

maximum permeate output with low operating pressures, thereby lowering investment and operating costs.

The system is very adaptable to specific customer requirements. Pipework material, other types of membrane for enhanced salt retention, integration of measuring and control technology and metering technology to visualisation of the entire process with peripheral components via a PLC.

Your benefits

- Efficient operation with low-pressure diaphragms with outputs of up to 90% and high salt retention rates of up to more than 99% (depending on the type of diaphragm used)
- Reduced maintenance and service costs as well as long diaphragm service lives, thanks to integrated cleaning concepts and flushing options, such as permeate flushing
- Service-friendly construction of systems on a corrosion-resistant powder-coated steel, stainless steel frame or PP frame
- Simple and safe to operate: Control with direct connection option for peripheral system components and integrated conductivity measurement with plain text display in the graphic display
- One-stop shop: no interface problems, smooth running with short times between definition of the task to joint commissioning and on-site system supervision with our global subsidiaries.

Field of application

- Power plants: Provision of boiler feed water
- Electroplating / metal processing industry: Provision of rinsing water
- Beverage industry: Provision of rinsing water, product water and process and return dilution water
- Food industry: Provision of rinsing water and process water
- Chemical industry: Provision of rinsing water and process water
- Provision of rinsing water and process water for laboratory purposes and industrial rinsing machines
- Pure water for laboratory applications, hospital uses (autoclaves, high-speed steam generators)
- Feed water for cooling and air conditioning plants (air humidification and air scrubbers)
- Process water in printing plants, the pharmaceutical or cosmetics industry

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Technical Data

The product range Dulcosmose® TW was designed for the following values in feed water:

Max. salt content PRO 0010TW – 0055TW	650 mg/l
Max. salt content PRO 0060TW – 5000TW	1,000 mg/l
pH range	3.0 ... 10.0
Silt density index max.	3
Free chlorine max.	0.1 mg/l
Total Fe, Mn max.	0.2 mg/l
Total hardness max.	0.1 °dH
Bacteria count max.	100 KBE/ml
Turbidity max.	0.5 NTU
COD max.	5 mg/l**

* Differing salinities affect the performance data accordingly

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Systems with 2.5 or 4" membranes, system salt retention 90-97%

Plant	Permeate capacity at 15 °C	Number of 2.5" and 4" membranes	Connected load	Dimensions H x W x D	Order no.
	water temperature				
	l/h	No.	kW	mm	
PRO 0010TW	100	1	0.37	1,400 x 500 x 320	1104535
PRO 0020TW	200	2	0.55	1,400 x 500 x 320	1104536
PRO 0030TW	300	1	1.10	1,500 x 600 x 400	1104537
PRO 0055TW	550	2	1.10	1,500 x 600 x 400	1104539
PRO 0060TW	600	2	1.50	1,650 x 700 x 720	1104540
PRO 0090TW	900	3	1.50	1,650 x 700 x 720	1104541
PRO 0120TW	1,200	4	1.50	1,650 x 700 x 720	1104542
PRO 0150TW	1,500	5	2.20	1,650 x 700 x 720	1104543
PRO 0180TW	1,800	6	2.20	1,750 x 2,600 x 750	1106338
PRO 0240TW	2,400	8	3.00	1,750 x 2,600 x 750	1106340
PRO 0270TW	2,700	9	3.00	1,750 x 3,500 x 750	1106342

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Systems with 8" membranes, system salt retention 90-97%

Plant	Permeate capacity at 15 °C water temperature	Number of 8" membranes	Connected load	Dimensions H x W x D	Order no.
	l/h	No.	kW	mm	
PRO 0300TW	3,000	3	3.0	1,800 x 4,000 x 1,000	on request
PRO 0400TW	4,000	4	3.0	1,800 x 3,000 x 1,000	on request
PRO 0500TW	5,000	5	4.0	1,800 x 4,000 x 1,000	on request
PRO 0600TW	6,000	6	4.0	1,800 x 4,000 x 1,000	on request
PRO 0700TW	7,000	6	5.5	1,800 x 4,000 x 1,000	on request
PRO 0800TW	8,000	7	5.5	1,800 x 4,000 x 1,000	on request
PRO 0900TW	9,000	7	7.5	1,800 x 4,000 x 1,000	on request
PRO 1000TW	10,000	8	11.0	1,800 x 3,000 x 1,000	on request
PRO 1100TW	11,000	9	11.0	1,800 x 4,000 x 1,000	on request
PRO 1200TW	12,000	10	11.0	1,800 x 4,000 x 1,000	on request
PRO 1300TW	13,000	11	11.0	1,800 x 4,000 x 1,000	on request
PRO 1400TW	14,000	12	11.0	1,800 x 4,000 x 1,000	on request
PRO 1500TW	15,000	12	11.0	1,800 x 4,000 x 1,000	on request
PRO 2000TW	20,000	18	11.0	1,800 x 7,000 x 1,200	on request
PRO 2500TW	25,000	24	15.0	1,800 x 7,000 x 1,200*	on request
PRO 3000TW	30,000	28	18.5	1,800 x 7,000 x 1,200*	on request
PRO 4000TW	40,000	34	22.0	1,800 x 7,000 x 1,200*	on request
PRO 5000TW	50,000	48	22.0	1,800 x 7,000 x 1,200*	on request

* Separate cleaning tank

On request, these plants can also be supplied with different membrane types for further salt rejection, and with measuring and control equipment (conductivity, ORP, pH measurement) and metering equipment (in pre-treatment and post-treatment).