

DRINKING WATER PLANT AZUD WATERTech DW DUSW

POTABLE WATER FROM SEAWATER

Production

- > 0.8 to 30.0 m³/h

Raw water

- > Sea water; TDS: 35000 - 45000 mg/l

APPLICATIONS

- > Villages
- > Industry
- > Hotels / Hospitals

ADVANTAGES

- > PREASSEMBLED and FACTORY-TESTED plant. PLUG&PLAY solution.
- > QUICK and EASY installation. IMMEDIATE commissioning with no setbacks.
- > MECHANICAL FILTRATION technologies, without unnecessary chemicals and consumables.
- > EXCLUSIVE PRE-TREATMENT thanks to the disc filtration system AZUD HELIX AUTOMATIC AA.
- > ULTRAFILTRATION MEMBRANE system designed for high loads of TSS.
- > HIGH EFFICIENCY backwash system for filters and membranes, thanks to the mix water/air.
- > EXTENDED LIFESPAN of RO membranes, thanks to an improved physical-chemical pre-treatment.
- > CONTROL and MONITORING system to guarantee the quality of potable water.
- > EASY operation and maintenance.



TECHNOLOGIES



Disc filtration
(130 µm)



Ultrafiltration membranes
(0.08 µm)



Reverse osmosis membranes
desalination

FRAMEWORK



Open skid



Shipping container

AUTOMATION



Automatic control of:

- > Start / Stop
 - > Equipment cleaning
- Optional remote control

POWER SUPPLY



Electrical grid



Generator



Solar energy (on request)



Skid



Container

MODELS

Model	Code	Framework	Production (maximum *)		Power kW	Dimensions L x W x H (m)
			m³/h	gpm		
D1USW0.8	71DFA8A0	Open skid	0.8	3.5	7.3	4.5 x 1.5 x 2.2
D1USW0.8 L20	71DFA8D0	20' Container	0.8	3.5	7.3	6.1 x 2.5 x 2.6
D2USW1.5	71DFB5A0	Open skid	1.5	6.6	8.8	5.8 x 1.5 x 2.2
D2USW1.5 L20	71DFB5D0	20' Container	1.5	6.6	8.8	6.1 x 2.5 x 2.6
D3USW3	71DF03A0	Open skid	3.0	13.2	23.7	5.8 x 1.5 x 2.2
D3USW3 L20	71DF03D0	20' Container	3.0	13.2	23.7	6.1 x 2.5 x 2.6
D4USW4	71DF04A0	Open skid	4.0	17.6	37.0	5.5 x 2.0 x 2.2
D4USW4 L20	71DF04D0	20' Container	4.0	17.6	37.0	6.1 x 2.5 x 2.6
D6USW7	71DF07A0	Open skid	7.0	30.8	33.2	8.0 x 2.2 x 2.2
D6USW7 L40	71DF07E0	40' Container	7.0	30.8	33.2	12.2 x 2.5 x 2.6
D8USW10	71DF10A0	Open skid	10.0	44.0	46.7	10.0 x 2.2 x 2.2
D8USW10 L40	71DF10E0	40' Container	10.0	44.0	46.7	12.2 x 2.5 x 2.6
D16USW17	71DF17A0	Open skid	17.0	74.9	61.7	11.5 x 2.2 x 2.2
D16USW17 L40	71DF17E0	40' Container	17.0	74.9	61.7	12.2 x 2.5 x 2.6
D24USW30	71DF30A0	Open skid	30.0	132.1	98.0	11.9 x 2.2 x 2.2
D24USW30 L40	71DF30E0	40' Container	30.0	132.1	98.0	12.2 x 2.5 x 2.6

* Design criteria: Turbidity = 50 NTU; TSS = 100 mg/l; TDS = 40000 mg/l; T = 18 °C. | Dimensions without auxiliary equipment. L=Length; W=Width; H=Height.

MAIN COMPONENTS

- > AZUD HELIX AUTOMATIC disc filter (130 µm) with air assisted backflushing.
- > PVDF ULTRAFILTRATION membranes (0.08 µm), housed inside PVC vessel.
- > Ultrafiltration BACKWASH SYSTEM; included pump, blower, tank and dosing pump.
- > ANTISCALANT dosing pump.
- > Polypropylene MICROFILTRATION cartridge (1 µm), housed inside PVC or polyamide vessel.
- > SUPER DUPLEX stainless steel HIGH PRESSURE PUMP with variable frequency drive and energy recovery system (except D3USW3 / D4USW4 models).
- > Polyamide REVERSE OSMOSIS membranes, housed inside fiberglass reinforced polyester pressure vessels.
- > PLC with operator touch screen to monitor operation parameters.
- > Electric cabinet including transformer, circuit breakers and motor starters.
- > FRAMEWORK: Carbon steel skid with protection paint or 20' / 40' shipping container.

ADDITIONAL EQUIPMENT

FLUSHING SKID and/or CIP skid for reverse osmosis membranes maintenance.

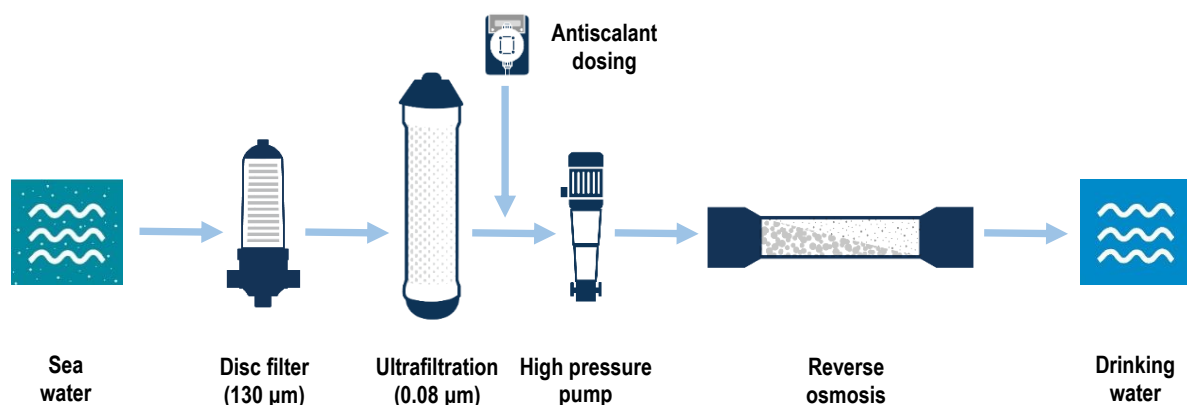
WATER QUALITY

RAW WATER	SEA WATER; usually closed intake from beach boreholes. > Medium level of suspended solids > High concentration of dissolved mineral salts (mainly chlorides) > Low level of pathogens and organic matter
TREATED WATER	Compliance with the requirements of the GUIDELINES FOR DRINKING WATER QUALITY published by the World Health Organization's (WHO): > Free from microbiological contaminants > TDS < 1000 mg/l > TSS < 10 mg/l > Turbidity < 1 NTU

SYSTEM LIMITATIONS

Turbidity	< 200 NTU
TSS	< 150 mg/l
TDS	< 45000 mg/l
Oil and grease	< 0.1 mg/l
Iron + Manganese	< 0.3 mg/l
Aluminum	< 0.05 mg/l
Boron	< 5 mg/l
COD	< 10 mg/l
TOC	< 3 mg/l
Chlorine	< 0.1 mg/l
pH	6.5 - 8.5

TREATMENT LINE



INSTALLATION REQUIREMENTS

POWER SUPPLY	Three-phase // 380 - 400 V AC // 50 Hz.
FOOTPRINT	According to plant dimensions. One meter free space around the plant for operation and maintenance to be considered.
OPERATION PARAMETERS	> Feed pressure: 2 - 4 bar. > Ambient temperature: 0 - 40 °C. > Water temperature: 5 - 30 °C.

NOTE: In order to assure the treated water quality and nominal production for each model, a COMPLETE and UPDATED CHEMICAL-PHYSICAL ANALYSIS of the raw water is RECOMMENDED. This analysis will be requested before manufacturing the plant.

AZUD

ACROSS THE WORLD

