

## UniRo 400-1600S. Reverse Osmosis Unit



### UniRo for Large-Scale Industry

Guldager's UniRo reverse osmosis units are aimed at those customers, who have special demands to water quality and consumption. In a softening unit, lime and magnesium salts are removed from the water. This is not always enough, there are still some mineral salts left, which might cause problems in technical installations. The membranes in Guldager UniRo units retain 95-98% of all salts.

Guldager's UniRo S units are designed to meet needs of high capacity. Guldager has experienced a significant success with the demanding car washing plants. The RO units are also well suited for other industrial purposes, where demands are high e.g. humidification in printing houses, district heating systems, boiler water and steam production, humidification and tunnel dishwashers in large-scale kitchens.

The UniRo S series consist of systems with capacities up to 20,000 l/h or more on request. Only the best components are used for the plants e.g. Grundfos pumps, Danfoss pressure switches etc. The required electricity, and heating, water and sanitation installations are simple. The water consumption is low. The plant will stop automatically if the water pressure gets too low.

The UniRo units are VA approved.

### Function

Reverse osmosis is a membrane separation process, where water molecules are pressed through a membrane, at high pressure. The dissolved salts are removed at almost 100% and even micro organisms, bacteria and pyrogenes are retained. The permeate is pumped from the reservoir to the place of consumption.

### Application

The plant can, advantageously, be used in technical water installations, where environment, high efficiency and reduction of the content of lime and salt are of great importance.

- Car washing plants
- District heating systems
- Boiler water and steam production
- Humidification
- Dishwashing machines
- Other processes where lime and mineral salts cause problems

### Guldager's Service System

Guldager's Service System has been developed through 60 years. It contains all available softening, decarbonisation and reverse osmosis plants.

UniRo type	400S	800S	1200S	1600S
Output, l/h	400	800	1200	1600
Water utilization*, %	75-80	75-80	75-80	75-80
Salt retention, %	98	98	98	98
Water quality, µS	< 20	< 20	< 20	< 20
Electricity connection, V/Hz	3 x 380/50	3 x 380/50	3 x 380/50	3 x 380/50
Power, kW	2,2	2,2	4	5
Power consumption, kW/h	1,4	1,8	2,5	3
Pipe inlet, SS316	3/4"	3/4"	1"	1"
Pipe outlet, SS316	3/4"	3/4"	3/4"	3/4"
Pump, SS304/316, Grundfos	CRI/CRN	CRI/CRN	CRI/CRN	CRI/CRN
Frame height, SS316, mm	1100	1100	1100	1100
Frame width, mm	460	460	460	460
Frame depth, mm	500	500	500	500

\* Only with softening from the UniSoft 9000 series as pretreatment, See our special datasheet.

### Accessories:

Reservoir, l	200	500	1150
Height, mm	1480	1480	1040
Diameter, mm	670	800	1560

### Optional equipment:

- Automatic stop at hard feed water (lime alarm)
- Flow meter for permeate
- Conductivity meter with alarm