

# Water Deaeration

## Vacuum Unit

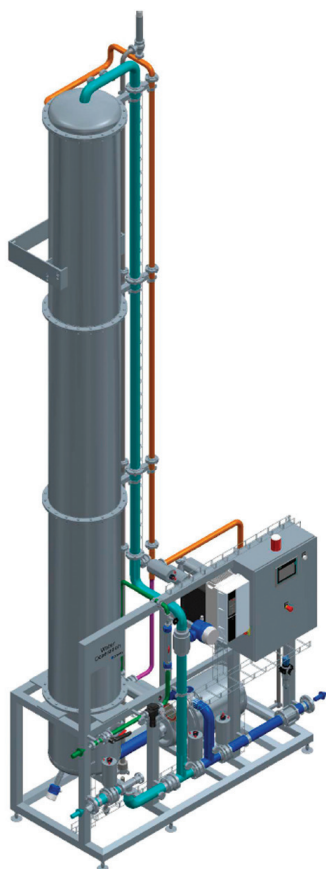
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Vacuum enhanced  
stripping technology  
for deaerated water  
production

- Final oxygen below 10 ppb
- Very low CO<sub>2</sub> or N<sub>2</sub> consumption
- Efficient and hygienic design



### Principle

The deaeration column is filled with high efficient structured packing. Its large internal surface ensures a maximal contact area between gas and liquid. Water is homogeneously distributed on the top and CO<sub>2</sub> or N<sub>2</sub> is injected at the bottom of the column. While the water flows downwards through the packing, the CO<sub>2</sub> or N<sub>2</sub> rises in counter current removing the oxygen to concentrations as low as 10 ppb. The deaeration column operates under vacuum, decreasing gas solubility in water. Therefore stripping gas consumption is significantly lower compared to the unit working under atmospheric pressure.

A drive controlled pump maintains the level in the column and forwards the deaerated water into a buffer tank or point of use.

The unit has an uncompromising sanitary design and is fully CIP cleanable.

### Technical data

Final Oxygen:	less than 10 ppb (0,01 ppm)
Pressure:	operating 2 to 4 barg, 30 to 60 psig
Temperature:	operating 8 to 30 °C, 40 to 90 °F
CIP:	2 to 4 barg, 30 to 60 psig; max. 90 °C, 200 °F
CO <sub>2</sub> /N <sub>2</sub> purity:	99,995%
Stripping gas flow:	app. 0,2 g/l (final O <sub>2</sub> , water temperature and column height dependent)
Carbonation:	app. 0,2 g/l (water temperature dependent)
Connection:	Tri-clamp; other connections upon request
Dimensions:	from Height 5,5m, 16,4'; Width 1,0m, 3,3'; Depth 0,5m, 1,6'
Weight:	from 200kg, 440 lb
Material:	Stainless Steel 304, EPDM, PSU, PP

DWD010V	DN 25	1"	4 to 10 hl/h	2 to 4 gpm	4 to 8 bbls/h
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DWD015V	DN 25	1"	6 to 15 hl/h	3 to 6 gpm	6 to 12 bbls/h
DWD025V	DN 25	1"	10 to 25 hl/h	5 to 11 gpm	9 to 21 bbls/h
DWD050V	DN 40	1½"	20 to 50 hl/h	9 to 22 gpm	18 to 42 bbls/h
DWD075V	DN 40	1½"	30 to 75 hl/h	14 to 33 gpm	26 to 63 bbls/h
DWD100V	DN 50	2"	40 to 100 hl/h	18 to 44 gpm	35 to 85 bbls/h
DWD150V	DN 50	2"	60 to 150 hl/h	27 to 66 gpm	52 to 127 bbls/h
DWD200V	DN 65	2½"	80 to 200 hl/h	36 to 88 gpm	69 to 170 bbls/h
DWD250V	DN 65	2½"	100 to 250 hl/h	44 to 110 gpm	86 to 213 bbls/h
DWD400V	DN 80	3"	160 to 400 hl/h	70 to 176 gpm	136 to 340 bbls/h
DWD600V	DN 100	4"	240 to 600 hl/h	105 to 264 gpm	204 to 511 bbls/h
DWDA00V	DN 125	5"	400 to 1000 hl/h	176 to 440 gpm	340 to 852 bbls/h

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