Fresenius Medical Care
SERVICE BULLETIN

Equipment: 2008E/H/K Hemodialysis Machines

Bulletin: 04-FRS-001 Rev A

Subject: Deaeration Pressure Calibration vs. Altitude (Update)

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1.0 PURPOSE

To inform all Field Service and Technical Support personnel of the significance of altitude on the deaeration pressure calibration.

2.0 DESCRIPTION

The deaeration system is designed to remove dissolved air from the water to the point that it is no longer supersaturated at 37°C. This is done by reducing the pressure of the water to a subatmospheric level so that the air "degasses" from the water. In the Fresenius 2008 Hemodialysis machine, this is done by reducing the pressure to -24inHg (-610mmHg) vacuum at sea level. This corresponds to an absolute pressure of about 150mmHg (760 – 610mmHg) which is about 20% of the atmospheric pressure. When the machine is at a different elevation above sea level, it may be difficult or impossible to achieve -24inHg when the reference point is atmospheric pressure. For removal of the supersaturated air, the water pressure should be reduced to the same 20% of atmospheric pressure. The following table will help in determining the appropriate calibration point at different elevations:

Elevation	**Approx. atmospheric pressure**	**Minimum target deaeration pressure relative to atmospheric pressure**
feet	**mmHg**	**inches of Hg**
0	760	-24.0
1000	728	-23.0
2000	697	-22.0
3000	667	-21.0
4000	639	-20.0
5000	612	-19.0
6000	585	-18.5
7000	561	-17.5
8000	537	-16.9
9000	514	-16.2
10000	492	-15.5

If there are any questions regarding this bulletin, contact Fresenius Technical Support at 800-227-2572.