

SOLVENT DISTILLERS TEMPERATURE ADJUSTMENT



TEMPERATURE CONVERTER BASED ON ALTITUDE

The standard atmosphere (atm) on Earth at sea level is 1013.25 mbar (101.325 kPa), equivalent to 760 mmHg (torr), 29.92 inches Hg, or 14.696 psi. As altitude increases, atmospheric pressure decreases, so air pressure is lower at high altitudes than at sea level. Lowering the atmospheric pressure decreases the boiling point of the solvent so that it can be heated below its normal boiling point to cause its evaporation.

However, it is important to note that the whole distillation process takes longer in altitude than at sea level. Indeed, since the solvent evaporates at lower temperature, the evaporation cycle is slower.

The following chart reflects the temperature adjustment required to compensate for higher altitudes. Look for the value in the "Differential" column corresponding to the altitude level where your unit operates, and reduce this value from the normal boiling point of your solvent.

For example, if your solvent has a normal boiling point of 120 °C and your unit operates at 2,000 feet above sea level, you must set your cycle temperature at 112 °C (120 °C - 8 °C) instead of 120 °C.

Temperature Adjustment to Compensate for Altitude					
Altitude (Ft)	Altitude (M)	Temperature (°C)	(°C) Differential from 182 °C	Temperature (°F)	(°F)Differential from 360 °F
0	0	182	0	360	0
500	152	181	1	357	3
1000	305	179	3	354	6
1500	457	177	5	350	10
2000	610	174	8	346	14
2500	762	172	10	342	18
3000	914	170	12	338	22
3500	1067	167	15	334	26
4000	1219	164	18	327	33
4500	1372	161	21	322	38
5000	1524	157	25	315	45
6000	1829	154	28	310	50
7000	2134	147	35	298	62
8000	2438	141	41	286	74
9000	2743	136	46	274	86
10000	3048	128	54	262	98



All systems are designed to build and they are manufactured with the highest quality standards in our manufacturing shop in Quebec, Canada.

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