EFFECT OF SATURATED AIR SERVICE ON THE CAPACITY OF LIQUID RING VACUUM PUMPS

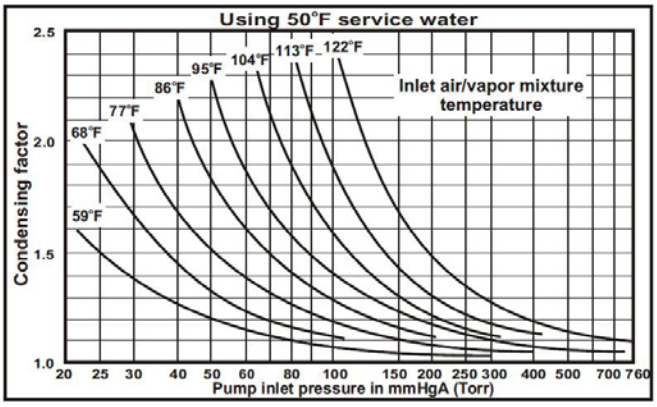
The seven graphs below show the average condensing factors for vacuum pumps in saturated air service.

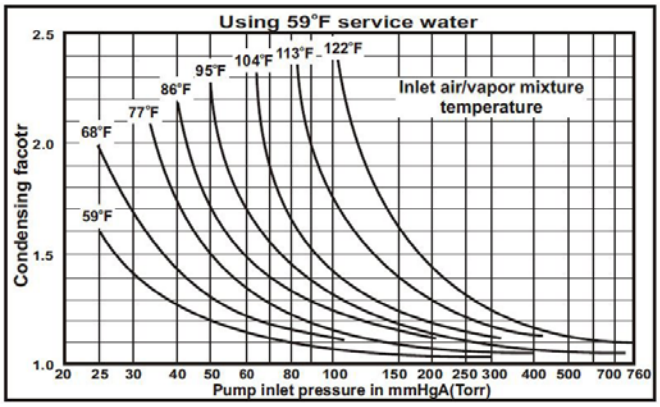
DEKKER's published vacuum pump performance curves are based on handling dry air at 68°F. When handling air/ water vapor mixtures, the pump capacity will increase, depending on the saturated air temperature as well as the sealing liquid temperature entering the pump.

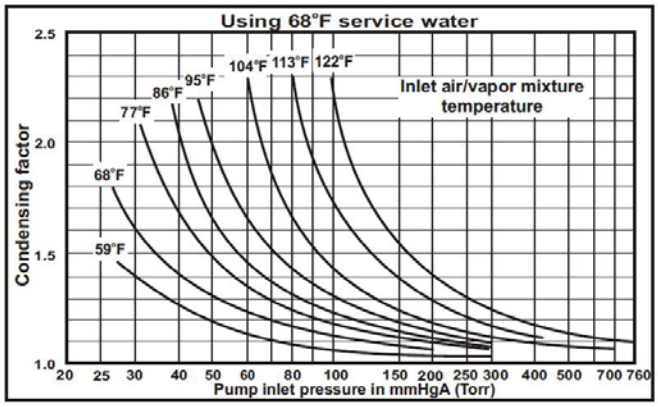
Example:
Consider a liquid ring vacuum pump operating at 27" HgV (75 Torr) with a dry-air capacity of 200 ACFM of dry air when using 59°C seal-water. If the same pump handles saturated air at 86°F and seal-water of 59°F, the actual pump capacity would be:

CFM (dry air) x condensing factor = Actual CFM
200 x 1.37 = 274 ACFM

If the seal-water temperature is higher, apply seal-water temperature factor.







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EFFECT OF SATURATED AIR SERVICE ON THE CAPACITY OF LIQUID RING VACUUM PUMPS

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