

A collection of short
pointed topical papers.

Cold

W.A.R.

Whether it's Air Conditioning or Refrigeration



Fits and Tolerances

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Terminology

Lift

The difference between saturated suction TEMPERATURE and saturated condensing TEMPERATURE. This value is expressed in °F.

Example: SST is 35°F., SCT is 105°F therefore the LIFT is 70°F.

Head

The difference between saturated suction PRESSURE and saturated condensing PRESSURE. This value is expressed in PSI.

Example: SSP is 30 psig, SCP is 130 psig therefore the HEAD is 100 psi

Approach

The approach temperature of a chiller is the delta between the saturated suction temperature and the leaving chilled water temperature.

Example: if the SST is 35°F and the leaving water temperature is 43°F, the APPROACH would be 8°F.

Rise

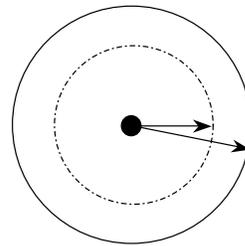
The temperature difference between the water entering the cooler or condenser and the water leaving the cooler or condenser is known as RISE.

Example: Cooler EWT is 54°F, LWT is 44°F therefore the RISE is 10°F.

Types of Measurements

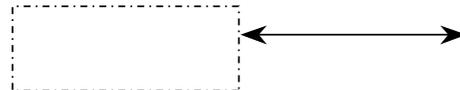
Radial

The difference in RADII between a stationary component and a rotating component.



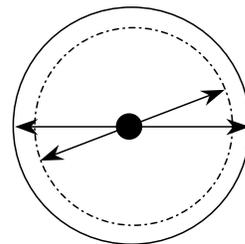
Axial

The linear parallel difference between the THRUST position and the COUNTER THRUST position.



Diametrical

The difference in DIAMETERS between a stationary component and a rotating component.



Typical Tolerances

Shrink fit

-0.0015 / -0.0025 inch

Size / Size fit

+/-0.0000 / +/-0.0000 inch

Running fit

+0.0015 / +0.???? inch

Interference fit

-0.0005 / +0.0005 inch

Slip fit

+0.0005 / +0.0015 inch

TIR

Total Indicated Run out, Round out or Reading