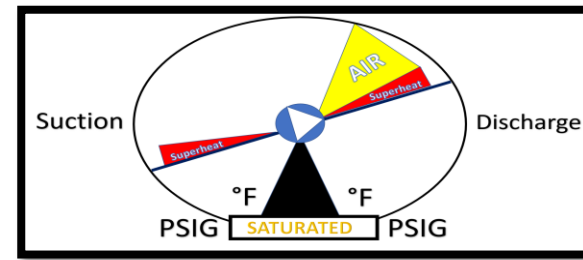


°F	PSIG
-50	14.3 "Hg
-45	11.7 "Hg
-40	8.7 "Hg
-35	5.4 "Hg
-30	1.6 "Hg
-25	1.23
-20	3.5
-15	6.1
-10	9.0
-5	12.1
0	15.6
5	19.5
10	23.7
15	28.3
20	33.4
25	38.9
30	44.9
35	51.4
40	58.4
45	67.0
50	74.3
55	83.1
60	92.6
65	102.8
70	113.8
75	125.5
80	138.0
85	151.3
90	165.5
95	180.7
100	196.7
105	213.7
110	231.8
115	250.9



KEEP IT IN THE PIPES

- 1% = 10,000 PPM
- $PSIA = \{14.7 - (\text{"Hg} / 2.035)\}$
- $PSIA = (14.7 + PSIG)$
- $PSIG = (PSIA - 14.7)$
- $^{\circ}C = (^{\circ}F - 32) \times .556$        $^{\circ}F = (^{\circ}C \times 1.8) + 32$
- Superheated = Gas, Subcooled = liquid, Saturated is liquid/gas
- 1 HP = 2,545 BTU's of Energy
- Three-Phase kW =  $\{(Amps \times Volts \times Power \text{ Factor} \times 1.73) / 1,000\}$
- kW = 3,412 BTU's of Energy per Hour = 28.6% of a Ton
- 1 HP = 0.746 kilowatts = 746 watts
- BHP Three-Phase =  $\{(Volts \times Amps \times \% \text{ Efficient} \times Power \text{ Factor} \times 1.73) / 746\}$
- 200 BTU's / Min = 1 Ton of Refrigeration
- Compression Ratio = (Discharge Pressure in PSIA / Suction Pressure in PSIA)
- $S_H \text{ BTUs} = (Mass \times C_p \times \text{Temperature Difference})$
- $L_H \text{ BTUs} = (Mass \times L_{HF})$
- Flash / Tax Gas % for NH3 =  $\{(TD \times 1.12) / 561\}$



## Settings for Hansen Control Valves

- All Hansen Valves – Out for Auto
- HA4AD – De-energized set @ high pressure

## Setting for Danfoss Control Valves

- ICF: Size 25-40 – In for Auto
- ICLX – In for Auto
- EVRA – Out for Auto
- EVRAT – Out for Auto
- ICS – Out for Auto
- ICF: Size 20 – Out for Auto

## Settings for (RS) – Parker Control Valves

- S5A – Out for Auto
- S7A – Out for Auto
- S4A – In for Auto
- S6N – Out for Auto
- S8F – Out for Auto
- S9A – In for Auto
- S4W – Out for Auto
- S9W – Out for Auto
- A4A – In for Auto
- CK2 – Out for Auto
- A4AD – In for Auto – De-energized set @ high pressure

Label	Name
BD	Booster Discharge
BS	Booster Suction
CD	Condensate Drain / Condenser Drain
CD	Compressor Discharge
CGD	Cool Gas Defrost
CPL	Control/Constant Pressure Liquid
DC	Defrost Condensate
EQ	Equalizer
ES	Economizer Suction
FG	Foul Gas
FR	Flooded Return
FS	Flooded Supply
SCS	Secondary Coolant Supply
SCR	Secondary Coolant Return
HG	Hot Gas
HGD	Hot Gas Defrost
HPL	High Pressure Liquid
HSD	High Stage Discharge
HSS	High Stage Suction
HTL	High Temperature Liquid
HTRL	High Temperature Recirculated Liquid
HTRS	High Temperature Recirculated Suction
HTS	High Temperature Suction
IPL	Intermediate Pressure Liquid
LIC	Liquid Injection Cooling
LPL	Low Pressure Liquid
LSD	Low Stage Discharge
LSS	Low Stage Suction
LT	Liquid Transfer
LTL	Low Temperature Liquid
LTRL	Low Temperature Recirculated Liquid
LTRS	Low Temperature Recirculated Suction
LTS	Low Temperature Suction
MPL	Medium Pressure Liquid
MTL	Medium Temperature Liquid
MTRL	Medium Temperature Recirculated Liquid
MTRS	Medium Temperature Recirculated Suction
MTS	Medium Temperature Suction
OC	Oil Charge Line
OPS	Oil Pot Supply
OPR	Oil Pot Return
OD	Oil Drain
PO	Pump Out
PRG	Purge
RC	Receiver Charge Line
RV	Relief Vent
SCL	Sub-Cooled Liquid
SOC	Screw Oil Cooling
TSR	Thermosyphon Return
TSS	Thermosyphon Supply

