

"Far North" Butane Power Cycle

	Enthalpy BTU/Lb	Pressure psia	T Deg. K
A-B: Feed Pump			
Point A (Inlet to Pump)	120	14.7	273
Point B: Pump Discharge	120	147	273
B-C: Boiler			
Point B: Boiler Inlet	120	147	273
Point C Boiler Discharge	345	147	365
C-D Turbine			
Point C: Turbine Inlet	345	147	365
Point D: Turbine Outlet	300	14.7	285
D-A: Condenser			
Point D: Condenser Inlet	300	14.7	285
Point A: Condenser Outlet	120	14.7	273

Total Work Out: BTU/Lb	Cell B21-B22	45
Total Heat in: BTU/Lb	Cell B18-B17	225
Waste Condenser Heat	Cell B25-B26	180

Maximum Efficiency Cell C29/C30 20.00%

Power Output
If Butane flow is 1 Lb/Min 1.06 HP

- ASSUMPTIONS:
- 1: Ignore feedpump power
 - 2: Assume no friction
 - 3: Assume no heat loss
 - 4: Assume 100% turbine Efficiency (Isentropic Expansion)
 - 5: Assumes "Far North Operation" where Condenser is at 273 K = 0 Degrees C

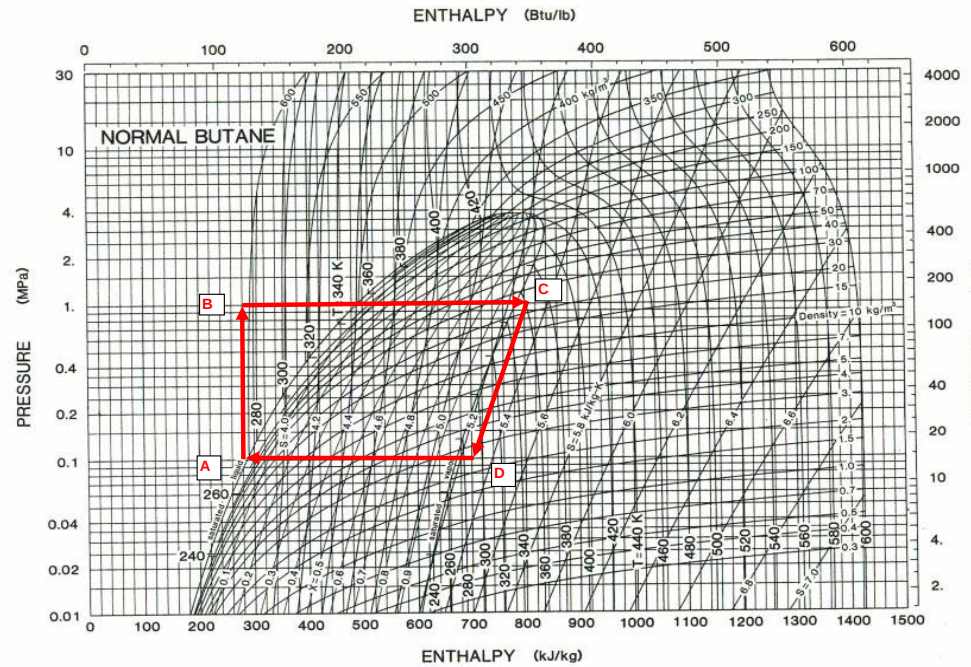


Fig. 20 Pressure-Enthalpy Diagram for Refrigerant 600