SDF-FS UNIT SLECTION:

1) Design refrigeration Load? ·······························TR
2) Chilled Water flow ? ·······························GPM
3) Leaving / Entering Chilled Water Temp? ···············/ ···············°F
4) Max Eva Pd ? ···················· ft.w
5) Cooling Water flow ? ···························· GPM
6) Entering / Leaving cooling water Temp? ···············/ ···············°F
7) Max Absorber and condenser Pd? ···················· ft.w
8) Heating load? ···················· Kcal/hr
9) Domestic Hot water? ···················· Kcal/hr
10) Type of fuel? ····································

● Step1) Machine size selection
Model ····················
● Step2) Check design load:
LCWT ················°F & ECWT ················°F , refer to unit rating table(*)
Available cooling capacity will be ···················· Ton and available heating
capacity will be ···················· Kcal/hr
···················· TR⩾ ···············TR Then ····················
···················· Kcal/hr⩾···············Kcal/hr Then ····················

● Step3) Cooling
Heat input to Gen ···················· Ton×14475 = ················ Btu/hr
Heat input to Eva ···················· Ton×12000= ················ Btu/hr
Total Heat REJ: Eva Heat ···············+Gen Heat ········ = ················ Btu/hr

$$\text{Cooling water Range} = \frac{\text{T.H. REJ} \ \text{················}}{500 \times \text{················Cooling GPM}} = \text{················}°F$$

Leaving cooling water temp = ECWT ···············°F+CWR ···············°F= ···············then ···············

$$\text{Chilled water range} = \frac{\text{Eva Heat················}}{500 \times \text{················Chilled GPM}}$$

$$\text{Gas consumption for cooling} = \frac{\text{Gen Heat········Btu/hr+D.H.W Heat················}}{4 \times 9000 \times 0.85} = \text{················m}^3/\text{hr}$$
& Domestic Hot Water

● Step4) Heating
Heating capacity = ···············Btu/hr

$$\text{Heating water GPM} = \frac{\text{H.I················}}{500 \times \text{Heating range ···············}} = \text{················GPM}$$

$$\text{Gas consumption for heating} = \frac{\text{Heating load···········Btu/hr+D.H.W Heat ···············}}{4 \times 9000 \times 0.85} = \text{···············m}^3/\text{hr}$$
& Domestic Hot Water