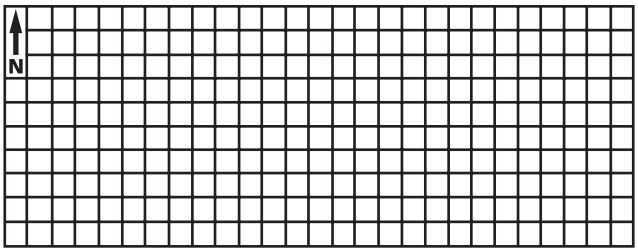
Refrigeration Load Estimate Form (for rooms above 32°F) Bulletin Above32-05

Estimate for: **Estimate by:** **Date:**

Basis for Estimate

Note: Tables can be found in Engineering Manual, H-ENG-2

Room Dimensions: Width _____ ft. Length _____ ft. Height _____ ft.
Volume: (L) _____ x (W) _____ x (H) _____ = _____ cu. ft.
Ambient Temp _____ °F. (Corrected for sun load) — Room Temp _____ °F. = _____ °F. T.D.



Insulation	Inches	Type
Ceiling		
Walls		
Floor		

Product Load

(a) _____ lbs./day of _____ to be reduced from entering temp. of _____ °F. to _____ °F. Temp. Drop _____ °F.
(b) _____ lbs./day of _____ to be reduced from entering temp. of _____ °F. to _____ °F. Temp. Drop _____ °F.

Miscellaneous

Motors (including all blower motors) _____ HP Ground Temp. _____ (Table 21)
Lights (assume 1 watt/sq.ft.) _____ Watts
No. of people _____

1. Transmission Loads

Ceiling: (L) _____ x (W) _____ x Heat Load _____ (Table 1) = _____
North Wall: (L) _____ x (H) _____ x Heat Load _____ (Table 1) = _____
South Wall: (L) _____ x (H) _____ x Heat Load _____ (Table 1) = _____
East Wall: (W) _____ x (H) _____ x Heat Load _____ (Table 1) = _____
West Wall: (W) _____ x (H) _____ x Heat Load _____ (Table 1) = _____
Floor: (L) _____ x (W) _____ x Heat Load _____ (Table 1) = _____

2. Air Change Load

Volume: _____ cu. ft. x _____ Factor (Table 4) x _____ Factor (Table 6) = _____

3. Additional Loads

Electrical Motors: _____ HP x 75000 BTU/HP/24 hr. = _____
Electrical Lights: _____ Watts x 82 = _____
People Load: _____ People x _____ BTU/24 hrs. (Table 12) = _____
Glass Door Load: _____ Doors x 19200 BTU/Door/24 hr. = _____

4. Product Load: Sensible (Product Load Figured @ 24 hr. Pulldown*)

(a) _____ lbs./day x _____ Spec. Heat (Table 7) x _____ °F. Temp Drop = _____
(b) _____ lbs./day x _____ Spec. Heat (Table 7) x _____ °F. Temp Drop = _____
*For product pulldown time other than 24 hrs. figure 24 hr. load x (24/Pulldown Time)

5. Product Load: Respiration*

(a) _____ lbs. stored x _____ BTU/lbs./24 hrs. (Table 8) = _____
(b) _____ lbs. stored x _____ BTU/lbs./24 hrs. (Table 8) = _____
*For consideration of previously loaded product, a multiplier of (5) is normally applied to the daily product load (Line #4)

Total Refrigeration Load (1+2+3+4+5) BTU/24 hrs. _____
Add 10% Safety Factor _____
Total with Safety/Factor BTU/24 hrs. _____

Divide by No. of Operating Hrs. (16) to obtain BTUH Cooling Requirement _____

Equipment Selection

Condensing Unit Qty.	Condensing Unit Model No.	Unit Cooler Qty.	Unit Cooler Model No.	System Capacity BTU/hr.