



Refrigeration Load Estimate Form (for rooms below 32°F) Bulletin Below32-05

Estimate for: _____

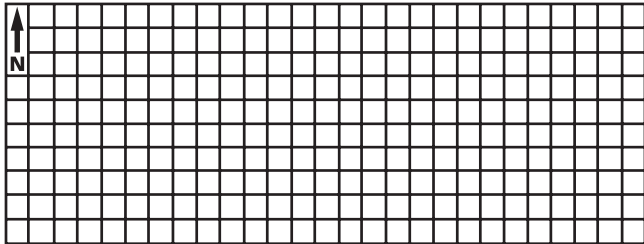
Estimate by: _____

Date: _____

Basis for Estimate

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.

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



	Insulation	
	Inches	Type
Ceiling		
Walls		
Floor		

Product Load

(a) _____ lbs./day of _____ to be reduced from entering temp. of _____ °F. to freezing point of _____ °F. (Table 7) = _____ °F. Initial temp. drop and then reduced from freezing point to storage Temp. of _____ °F. = (Table 7) _____ °F. Final temp. drop.
 (b) _____ gallons of ice cream @ _____ overrun

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 5) 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 31200 BTU/Door/24 hr. = _____

4. Product Load: (Table 7) (Product Load Figured @ 24 hr. Pulldown*)

(a) _____ lbs./day x _____ Spec. Heat above freezing x _____ °F. Intial Temp. Drop = _____
 _____ lbs./day x _____ Latent Heat Fusion = _____
 _____ lbs./day x _____ Spec. Heat below freezing x _____ °F. Intial Temp. Drop = _____
 (b) _____ gallons of ice cream/day x _____ BTU/gal (Table 19) = _____

*For product pulldown time other than 24 hrs. figure 24 hr. load x (24/Pulldown Time)

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. (18) to obtain BTUH Cooling Requirement _____

Equipment Selection

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