Survey and Load Estimate Form

Use with Refrigeration Load Estimating Manual (RLE - 593)

Part 1 - General Information:

CUSTOMER _____

ADDRESS _____

_____

_____

PHONE _____ CONTACT _____

JOB NAME _____

ADDRESS _____

_____

_____

PHONE _____ CONTACT _____

ENGINEER _____

PHONE _____ CONTACT _____

JOB DESCRIPTION

_____

_____

_____

_____

_____

_____

_____

_____

_____

PREPARED BY _____ DATE _____

Part II - Survey Data:

A. Facility Design Data

Design Data

AMBIENT DESIGN	INSULATED DOORS	
_____ DRY BULB (˚F)	_____ #	_____ THICKNESS (IN)
_____ WET BULB (˚F)	_____ HEIGHT (FT)	_____ TYPE
_____ REL. HUMID. (%)	_____ WIDTH (FT)	_____ TIME OPN. (MIN/HR)

ROOM DESIGN		VENTILATION FANS	TYPE DEFROST (✔)	
_____ DRY BULB (˚F)	_____ LENGTH (FT)	_____ #	_____ AIR	_____ HOT GAS
_____ WET BULB (˚F)	_____ WIDTH (FT)	_____ HP (EA)	_____ WATER	_____ KOOLGAS®
_____ REL. HUMID. (%)	_____ HEIGHT (FT)	_____ CFM (EA)	_____ ELECTRIC	_____ NONE

Physical Data

	TYPE CONSTRUCTION	INSULATION TYPE	INSULATION THICK (IN)	COMPOUND U VALUE	SOLAR LOAD (✔)	ADJACENT AREA TEMP. (˚F)	T.D. DB (˚F)
FLOOR							
CEILING							
N. WALL							
E. WALL							
S. WALL							
W. WALL							

B. Electric Service

POWER CHARACTERISTICS		DISCONNECT	
_____ PHASE	_____ HERTZ	_____ EXISTING	_____ BY REFRIG. CONTROL
_____ VOLTAGE	_____ CONTROL VOLTAGE	_____ BY OTHERS	_____ TYPE REQUIRED

POWER TRANSFORMER	CONTROL TRANSFORMER	SERVICE AVAILABILIY	
___ KVA REQ'D. ___ NO. REQ'D.	___ VA REQ'D. ___ NO. REQ'D.	_____ EXISTING SERVICE (AMPS)	A
_____ / _____ PRIM/SEC VOLTAGE	_____ / _____ PRIM/SEC VOLTAGE	_____ EXISTING CONNECTED LOAD (AMPS)	B
___ BY OTHERS ___ BY REFRIG. CONTR.	___ BY OTHERS ___ BY REFRIG. CONTR.	_____ AVAILABLE SERVICE (AMPS)	A-B

C. Product Data

_____ DESCRIPTION
_____ TYPE PACKAGING
_____ SP. HEIGHT
_____ ENTERING TEMP. (˚F)
_____ FINAL TEMP. (˚F)
_____ [PULLDOWN / FREEZING] TIME (HRS)
_____ [LB / TON / GAL / BBL / BOX / CASE] PER [LOADING / HOUR / DAY / ___HR. SHIFT]

CONTAINERS		PALLETS	
_____ TYPE	_____ CONT. WGHT. (LBS)	_____ SIZE (L x W x H) FT	_____ NUMBER
_____ PROD. WGHT. (LBS)	_____ MATERIAL	_____ WGHT. EA. (LBS)	_____ MATERIAL
_____ SP. HEIGHT	TABLE 44	_____ SP. HEIGHT	TABLE 44

RESPIRATION	ROOM CAPACITY
_____ HOLDING LOAD (LBS)	_____ ROOM VOLUME (CU. FT.) TABLE 14
_____ RATE (BTU/LBS/24 HR)	_____ LOAD DENSITY (LB/CU. FT.)
TABLE 9	_____ EST. PROD. LOAD LB (VOL X L.D. X .40)

D. Miscellaneous Load Data

_____ PEOPLE
_____ FAN MOTOR HP (ESTIMATE)
_____ OTHER MOTORS (HP)
_____ FORKLIFTS HP (EST. @ 4 HP EA.)
_____ LIGHTS (WATTS/SQ. FT.)
_____ APPLIANCES (WATTS)
_____ OTHER HEAT GAINS ( )

RACK PULLDOWN	EST. OPERATING HOURS
_____ MATERIAL	_____ FAN MOTORS
_____ TOTAL WEIGHT (LBS)	_____ FORK LIFTS
_____ SP. HEIGHT TABLE 44	_____ DEFROST HEATERS

FAN MTR. EQUIV. HP = _____ HP x ( ) $\frac{\text{MIN/HR OPER. TIME}}{60}$ = _____

FORKLIFT EQUIV. HP = _____ HP x ( ) $\frac{\text{MIN/HR OPER. TIME}}{60}$ = _____

E. Supplemental Data

Part III - Load Calculations:

A. Heat Transmission Load

	T.D.	SOLAR CORR*	EQUIV. T.D.	AREA / FACTOR (TABLE 1)	BTU/24 HOURS		
FLOOR		X		_____ LENGTH (FT) x _____ WIDTH (FT) x _____ FACTOR			
CEILING				_____ LENGTH (FT) x _____ WIDTH (FT) x _____ FACTOR			
N. WALL		X		_____ LENGTH (FT) x _____ HEIGHT (FT) x _____ FACTOR			
E. WALL				_____ WIDTH (FT) x _____ HEIGHT (FT) x _____ FACTOR			
S. WALL				_____ LENGTH (FT) x _____ HEIGHT (FT) x _____ FACTOR			
W. WALL				_____ WIDTH (FT) x _____ HEIGHT (FT) x _____ FACTOR			

*Table 2

SUBTOTAL A - TRANSMISSION BTU/24 HRS

B. Infiltration Load

One Only Applies

_____ RM VOL $(FT)^3$ x _____ FACTOR (TABLE 4A OR B) x _____ FACTOR (TABLE 5)

_____ # DOORS x _____ VEL. (FPM)* x [( ) DOOR AREA $(FT)^2$ / 2] x _____ MIN. OPEN/24 HRS x _____ FACTOR (TABLE 5)

_____ VENTILATION (CFM) x _____ FACTOR x 1440 (TABLE 5)

*See pg 7 - VEL = 4.88 x $\sqrt{H\ (FT)}$ X $\sqrt{T.D.\ (^{\circ}F)}$

SUBTOTAL B - INFILTRATION BTU/24 HRS

C. Product Load

PRODUCT COOLING } _____ LBS/HR x _____ T.D. (˚F) x _____ SP. HEIGHT (TABLE 9) x _____ LOAD FACTOR* x 24 (TABLE 10)

PRODUCT FREEZING } _____ LBS/HR x _____ BTU/LBS (TABLE 9) x _____ LOAD FACTOR* x 24 (TABLE 10)

PRODUCT SUB-COOLING } _____ LBS/HR x _____ T.D. (˚F) x _____ SP. HEIGHT (TABLE 9) x _____ LOAD FACTOR* x 24 (TABLE 10)

CONTAINER COOLING } _____ LBS/HR x _____ T.D. (˚F) x _____ SP. HEIGHT (TABLE 44) x 24

PALLET COOLING } _____ LBS/HR x _____ T.D. (˚F) x _____ SP. HEIGHT (TABLE 44) x 24

RESPIRATION HEAT } _____ LBS x _____ BTU/LBS/24 HOURS (TABLE 9)

Applies to certain chill rooms and batch loaded blast freezers only.See pgs 9 - 11, and note 5 Table 10.

SUBTOTAL C - PRODUCT BTU/24 HRS

D. Supplemental Load

OCCUPANCY : _____ # OF PERSONS x _____ BTU/PERSON/DAY TABLE 6

LIGHTS : _____ LENGTH (FT) x _____ WIDTH (FT) x _____ WATTS/SQ. FT x 82 BTU/WATT/24 HRS

MOTORS : _____ EQUIV. HP x _____ BTU/HP-HR x 24 TABLE 3

FORKLIFTS : _____ EQUIV. HP x 72000 BTU/HP/24 HRS

DEFROST HEAT : _____ HRS x _____ WATTS x 3.4 BTU/WATT/HR x .25

OTHER : ( ) _____

SUBTOTAL D - SUPPLEMENTAL BTU/24 HRS

Equipment Selection and Design Data

	UNIT COOLERS	CONDENSING UNITS	COMPRESSOR UNITS	CONDENSERS
QUANTITY				
MODEL #				
CAP. (EA) BTU/HR				
CFM (EA)			X	
EVAP. TEMP (˚F)		X	X	X
SUCTION TEMP (˚F)	X			X
COND. TEMP (˚F)	X			

NOTES:

BTU/24 HR TOTAL (A + B + C + D)

CONVERT TO HOURLY LOAD (TABLE 8) ..... ÷

BTU/HR TOTAL WITH TIME CYCLE CORRECTION

APPLY SAFETY FACTOR ..... X 1

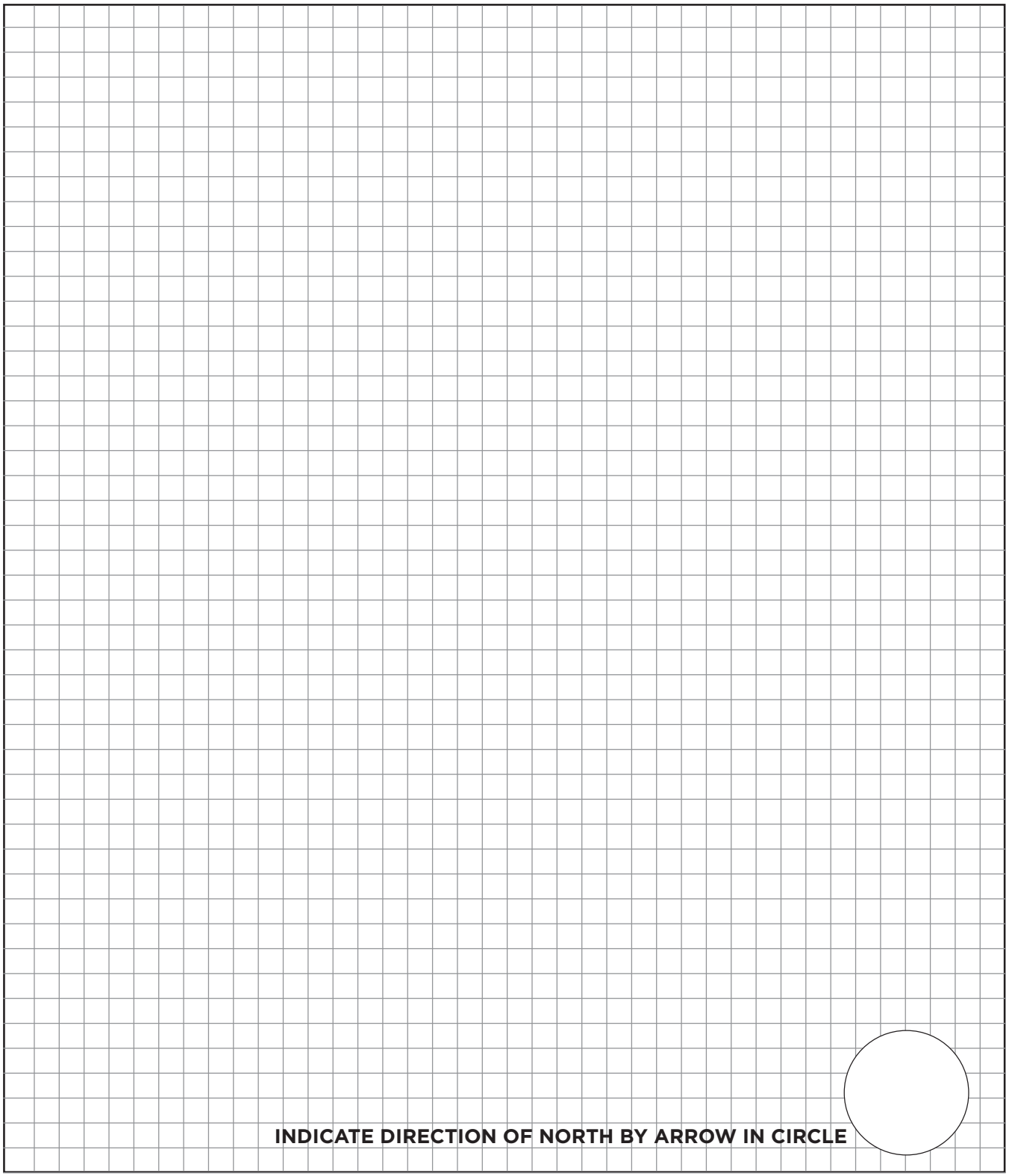
BTU/HR TOTAL WITH S.F. CORRECTION

CONVERT TO TONS OF REFRIGERATION ..... ÷ 12,000

GRAND TOTAL	TONS	
	SQ. FT/TON	

Part V - Facility Layout:

(Note: Detail All Relevant Contruction Features)



Krack, a Hussmann Corporation brand
890 Remington Boulevard
Bolingbrook, Illinois 60440
Ph: 630.629.7500

www.krack.com