TECHNICAL SPECIFICATION
FOR
REFRIGERATED CONTAINER

10’ × 8’ × 8’6”

MODEL NO: **SS1WN1**

—	POLYURETHANE INSULATION	
—	ROOF AND SIDE PANEL	MGSS
—	FRONT AND REAR END FRAME	CORTEN A / EQUIVALENT
—	ALUMINUM FLOOR RAIL	
—	LINING: SIDE & DOOR	STAINLESS STEEL (HGSS)
	ROOF	PRE-PAINTED ALUMINUM SHEET
—	DOOR PANEL	MGSS
—	TOP & BOTTOM RAIL	CORTEN A / EQUIVALENT
—	CORRUGATED BASE	CORTEN A / EQUIVALENT

SPEC NO. : SS1WN1-FB
ISSUED DATE: February 9, 2009
REVISED DATE:

1. GENERAL

1) The container model SS1WN1 Reefer is designed for the carriage of foodstuffs frozen, chilled and general cargo by road, rail and sea (above or below decks) and is suitable for the environmental conditions imposed by these modes of transports.

2) The container is designed for the carriage of deep frozen, frozen and chilled (excluding hung-chilled meat) cargoes in the range -25°C to +25°C with external temperature ranging from -40°C to +50°C and is suitable to be subjected to severe thermal shock.

3) Refrigeration unit CARRIER 69NT40

2. STANDARDS & REGULATIONS

— ISO TC - 104

668 -Classification, dimensions and ratings (1995 edition)

1161- Corner fittings-specification (1990 edition)

1496/2 - Specification and testing (1996 edition)

Part 2: Thermal containers

6346 - Coding, identification and marking (1995 edition)

— CSC requirements

— TIR requirements

— Timber components and certificates (No exposed timber to be used)

— USDA requirement and certificate

— Taint test (Acc. BS 3755 last issue)

— UIC registration

— Type approval by classification society

3. DESIGN DATA

3.1 External Dimensions

Length	2,991	mm	(0, -6)	10’
Width	2,438	mm	(0, -5)	8’
Height	2,591	mm	(0, -5)	8’6”

3.2 Internal Dimensions (Nominal)

Length	2,388	mm	(0, -10)
Width	2,290	mm	(0, -8)
Height	2,276	mm	(0, -10)

3.3 Door openings (Nominal)

Width	2,294	mm	(0, -5)
Height — at sill	2,264	mm	(0, -5)
Cargo access height	2,224	mm	(0,-10)

3.4 Cubic Capacity

12.4 m^3 440cu. ft.

3.5 Weights & Ratings

Tare weight (Including Ref. Unit)	2,030	kg ±2%	(4,480 lb.)
(Excluding Ref. Unit)	1,500	kg ±2%	(3,310 lb.)
Payload	12,970	kg	(28,590 lb.)
Max. Gross Weight	15,000	kg	(33,070 lb.)

3.6 Thickness & Density of Thermal Insulating PUR Foam

	Thickness (mm)	Density (kg/m^3)
Side	63	50 - 55
Door	74	50 - 55
Roof	80	45 - 50
Floor	Min. 76 Max. 135	55 - 60
Corner		45

3.7 Insulation

Polyurethane foam with R-141b (non-CFC) blowing agent:
Air leakage : Qmax = 5 m^3/hr (176.5cu. ft./hr) at 25.4mm WPG inside
Heat transfer rate : Umax = 17 kcal/hr. °C (20 W/K) at 20°C mean temp.

4. CONSTRUCTIONS

4.1 Base Frame

1) Forklift pocket : 4.0mm thick pressed profile with 6.0mm thick closed strip
2) Base panel : 1.6mm thick corrugated panel welded to bottom side rail
3) Bottom side rail : 4.0mm thick upper and lower cold rolled steel

4.2 Floor

1) Floor board : 40mm high and 63.5mm spaced aluminum extruded "T" section
2) Floor bow : Aluminum extruded "I" section floor bow shall be stitch welded to the under side of floor board.

4.3 Front Frame

1) Front top rail : 4.0mm thick pressed profile
2) Front bottom rail : 4.0mm thick pressed profile with load transfer area brackets
3) Corner Post : Welded construction with 6.0mm thick outer and 4.0mm thick inner
4) Double plate : 4.0mm thick rectangular plates

4.4 Rear End Frame

1) Door Header : Welded construction with 4.0mm thick outer and 3.0mm thick inner, and four (4) vertical gusset plates welded behind of cam keepers
2) Door Sill : Welded construction with 6.0mm thick outer and 4.0mm thick inner, and four (4) vertical gusset plates welded behind of cam keepers
3) Corner Posts : Welded construction with 6.0mm thick outer and inner, and with 12mm thick reinforcement plate.
4) Double plate : 4.0mm thick rectangular plate

4.5 Door Panel

Each door is capable of swinging 270 degree when opened, which is designed to prevent left hand door from opening before right hand door in TIR requirements.

1) Door panel (1) outer – 1.6mm thick pre-painted MGSS sheet
(2) inner – Corten pressed section
2) Door gaskets (1) outer gaskets – EPDM "C" section double lips
(2) inner gaskets – EPDM "O" section
3) Locking gears : SAEJIN SJ-77M or eq., with anti-theft handle & secure cam & keeper on right door center, hot-dip galvanized 75μ
4) Door hinge : Eight (8) hot dip galvanized steel hinges with nylon

bushes and stainless steel washers.

5) Hinge pin : Φ12mm stainless steel bar fixed by flaring

6) Door lining : 0.7mm thick stainless sheet, with 12mm deep pressed battens

7) Hinge lug : 6.0mm thick MGSS plate

4.6 Side Wall

1) Outer Cladding : 1.0mm thick M.G.S.S. with vertical corrugations, welded together by TIG method

2) Inner Lining : 0.7mm thick H.G.S.S. with deep inverted battens, welded together by TIG method

3) Top side Rail : 4mm thick cold rolled section with chamfer

4) Side post : Two (2) 4.0mm thick pressed omega section per side, bonded to side panel by bi-adhesive structure tape or glue

5) Side Stringer : Two(2) per side, MGSS pressed omega section, spot welding to side lining

4.7 Roof

1) Outer Cladding : 0.8mm thick M.G.S.S. with deep pressed corrugations, welded together by TIG method

2) Lining : 0.8mm thick one piece pre-painted aluminum sheet, with small bead corrugations

3) Roof bow : Two (2) pieces MGSS pressed omega section

4) Roof Stringer : Two (2) aluminum omega section, bonded to roof lining by bi-adhesive structure tape and fixed with three (3) rivets

4.8 Particular attachment

1) Floor drain

Two (2) drains are provided at each front and rear end. [Total four (4)]

2) Lashing bar

Two (2) pieces lashing bar per side. [Total four (4)]

3) Generator set mounting receptacles

Front corner post and front top rail fitted with receptacles and brackets for mounting clip-on generator set.

4.9 Marking

All containers to be marked in accordance with latest standard regulation and owner's specification.

5. SURFACE PREPARATION AND PROTECTION

5.1. Surface preparation

5.1.1. Prior to assembly

1) All steel components, prior to forming, will be short blasted to Swedish Standard Sa 2.5 to remove rust, mill scale etc, and applied with zinc rich primer approx. 10 micron.
2) All stainless steel components, prior to forming, will be cleaned to all oil and dirt etc.
3) Gear cam keepers will be electro zinc plated. (Thickness : Min. 16 micron)
4) Locking rod assemblies are welded with gear cams, bars, holders and handle hinges are hot dip galvanized. (Thickness: Min. 75 micron)

5.1.2. After assembly

1) All stainless steel parts will be sweep blasted with non-metallic media and cleaned to remove all oil rust, dirt and hot rolled mill scale and etc.
2) Welding seam line will be blasted to remove all welding slags, spatters and other foreign matters.

5.1.3. Polyurethane contact surfaces

Glue or adhesive primer will be applied to the polyurethane contacting surfaces for good adhesion with polyurethane.

5.2. Painting

All steel parts shall be painted as follows:

5.2.1. SPA-H parts

1) Outside surfaces (end frame & side top & bottom rail)
   1st primer: Zinc rich primer - 30 micron(after ass'y)
   2nd primer: Polyamide epoxy - 40 micron(after ass'y)
   3rd Top: Vinyl high build - 40 micron(after ass'y)
   (Color: RAL 9010)

2) Polyurethane foaming contact surfaces (inside surface)
   1st primer: Polyamide epoxy - 20 micron(after ass'y)

5.2.2. MGSS parts (roof and side panel)

1st primer: Polyamide epoxy	- 40micron(after ass'y)
2nd top: Vinyl high build	- 40micron
(Color: RAL 9010)	

5.2.3. Foaming contact area (HGSS, MGSS and T-FLOOR)

Adhesive primer	- 15micron

5.2.4. Door panel

1st primer: Polyamide epoxy	- 40micron
2nd primer : Polyurethane	- 50micron
(Color: RAL 9010)	

5.2.5. Under coating

1st primer: Zinc rich primer	- 30micron
2nd Top : Bitumen/wax	- 200micron

6. MATERIAL SPECIFICATION

1) The main materials used in construction are as follow:

Where used	Material	Yield Point (N/mm^2) (min.)	Tensile Strength (N/mm^2)(min.)	Elongation (%)
Floor Rail	Al. Alloy Extrusion AA6061-T6	225	270	8
Roof Lining	Al. Alloy Sheet AA5052-H16/H46	180	240	6
Side/Roof panel door panel	MGSS	205	410	20
Side/Door Lining Generator Fitting Nut	SUS304	220	510	40
Front/Rear Corner Post Front Header/Sill Top/Bottom Side Rail Door Header/Sill Forklift pocket Corrugated base	CORTEN A / equivalent	345	485	
Carbon Steel Pipe Lock Rod	STK 51	360	520	18
Carbon Steel for forged (Lock Rod Cam Keeper)	JIS S25C	270	450	25
Weldable steel Castings (corner castings)	SCW 480	270	450	21
Insulation Tape (Between steel and aluminum)	Electrolytic Buffer of PE			
Foam Tape	Adhesive of P.V.C.			
Insulation Material	1) Rigid Polyurethane Foam			

2) Blowing Agent: R141b

2) Fasteners application

Material	Shear Resistance (N)	Tensile Resistance (N)
Aluminum blind rivet diam. 4.8mm (3/16”)	4390	4490
Aluminum blind rivet diam. 6.4mm (1/4”)	7540	6500
Stainless steel blind rivet diam. 4.8mm (3/16”)	4500	5500

3) Sealant

Exposed Sealer
a) Interior surface: MS
b) Exterior surface: Silicone
Hidden sealer Butyl

7. TESTING & INSPECTION

1. Type approval and inspection of units is carried out by classification society.
2. Every container is manufactured under effective quality control procedures to meet the specified standards and align industrial practice. After completion all container dimensions will be checked and door operation checked.

Item	**Test load**
● Stacking	1.8R – T Load: 86,400 kg/post
● Top & bottom lifting	2.0 R – T
● Forklift pocket	1.6R – T (if applicable)
● Restraint	R – T Load : 1.0R/rail
● Racking test	
● Transverse	15,240 kg
Longitudinal	7,620kg
● Strength	
— End wall	0.4 P
— Side wall	0.6 P
— Roof	300 kg
— Floor (ISO +33%)	7,260 kg
● Airtightness test	
Internal pressure 25 ± 1 mm Aq.	
● Thermal test In compliance with ATP	
● Performance test of thermal appliances In compliance with ISO 1496/2	
● Taint test in compliance with B.S. 3755-1964 or equivalent	

8. GUARANTEE

8.1 Guarantees

The guarantee period will commence the date after the certification has been issued by the classification society.

8.2 Paint Guarantee

The application of paint will be guaranteed against corrosion and paint failure for a period of five (5) years. The guarantee is for faults affecting more than 10% of the painted surfaces and will assure partial or total re-painting of the container. Corrosion caused by acids, alkalis or other chemicals, damage by abrasion, impact or accident are excluded.

8.3 Decal Guarantee

The decals are warranted for seven (7) years to withstand the environmental conditions as “General” mentioned for color, stability & adhesion.

8.4 Other Guarantee

This will be guaranteed against fault in construction, poor workmanship and material for a period of one (1) year. Any damages caused by mis-handing, mis-securing, mis-loading, impact and any accidents relating from bad practices are excluded.

9. REVISION

9.1 Added USDA requirement and certificate (spec.2.)

9.2 Thermal test (spec 7.2.)

In compliance with ATP.

9.3 Distance between the two fork lifting pockets.

900mm ⟶ 1,540mm, see drawing C20381080

Revised Date: February 9, 2009

CONTAINER REFRIGERATION UNIT TECHNICAL SPECIFICATIONS

ThinLINE Leasing Specification

Model 69NT40-541-300 series

10 June 2008

Carrier
A United Technologies Company

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1. UNIT PERFORMANCE

1.1. Net R-134a Refrigeration Cooling Capacity

At 38°C (100°F) ambient temperature and 60 Hz Power Supply:

Air to Evaporator	Cooling Capacity		Power	Power Factor
-29°C (-20°F)	3,230 Watt	(11,000 Btu/h)	5.0 kW	0.55
-18°C (0°F)	6,010 Watt	(20,500 Btu/h)	6.4 kW	0.66
2°C (35°F)	10,250 Watt	(35,000 Btu/h)	10.8 kW	0.81

1.2. Evaporator Airflow (Downward)

High Speed: 5,437 m^3/h @ 19.0 mm wg* (3,200 ft^3/min @ 0.75 inch wg) @ 60 Hz
Low Speed: 2,379 m^3/h @ 6.4 mm wg* (1,400 ft^3/min @ 0.25 inch wg) @ 60 Hz
*Static pressure measured external to the unit.

1.3. Electric Resistance Heating

5,627 Watt (19,200 Btu/h) @ 460 V, 60 Hz (Including fan motor heat.)

1.4. Fresh Air Renewal - 50 Hz @ Zero Ext. Static Pressure (Standard position)

Flow rate: 0 - 180 cmh (106 cfm), Maximum rate meets the ATO requirement. Rate is also affected by the container design. Adjustable disc is located on upper left access panel

1.5. Condenser Airflow

3,908 m^3/h (2,300 ft^3/min) @ 60 Hz

1.6. Unit Air Leakage

0.142 m^3/h @ 50.8 mm wg (5 ft^3/h @ 2 inch wg)

1.7. Unit Heat Leakage

3.9 W/K (7.4 Btu/h/°F) calculated

1.8. Low Sound

Does not exceed 78 dB(A) 1.5 meter in front and 1.2 meter above lower corner castings @ 380 V, 50 Hz.

1.9. Bulkhead Resistance

13,000 kg (28,660 lbs)

2. UNIT PHYSICAL DATA

2.1. Unit Weight

531 kg (1170 lbs)

2.2. Dimensions and Drawing references (Standard)

Unit Height: ..... 2,235 mm (88.00 inch)
Unit Width: ..... 2,026 mm (79.75 inch)
Unit Depth: ..... 416 mm (16.38 inch)

Applicable Drawings:

98-02325, Rev. - ..... Installation and Dimension
98-02327, Rev. - ..... TIR Plan

2.3. Electrical

Operating Voltage Range ..... 400 to 500 V, 3 ph @ 60 Hz ± 2.5%
360 to 430 V, 3 ph @ 50 Hz ± 2.5%

Power Cable (460V) ..... 18 meter (59.4 ft) yellow 10/4 SO Hypalon; 90°C (194°F) rating.

Power Plug ..... Type CEE17 with earth @ 3h position
Rated 32 A @ 440 VAC.

Circuit Breaker ..... Must hold 25 A. Must trip at 29 A

- Address system of wire marking on all wiring (except controller). Control wires to be white, power wires to be red, ground wires to be green with yellow stripe.
- Wire is tin plated multi-strand copper
- Fan motors are single phase

2.4. Refrigeration Piping (Refer to Refrigeration Piping Diagram)

Refrigerant and Oil..... R-134a and POE oil

Refrigeration Circuits ..... Solid copper tube

Service Ports ..... SAE J639 R-134a connections are used on compressor service valves and liquid line.

Receiver Assembly ..... Consists of receiver, brass service valve and fusible plug.

Receiver Vessel..... Copper with two brass sightglasses, one dry eye. Coated with acrylic electrocoat system.

Control Components..... Stepper modulation valve provides continuous capacity control and increased low temperature capacity, quench TXV for compressor cooling.

Heat Exchanger ..... Copper, suction-side

3. UNIT DESIGN

3.1. Guidelines

ISO 1496/2-1996(E); ATP; ARI; TIR; AMCA

3.2. Operating Conditions

Ocean Environment	Salinity and high relative humidity, severe atmospheric conditions (temperature, wind, rain, spindrift variations).
Rolling	Amplitude of 30° on each side, period of 13 seconds
Pitching	Amplitude of 6°, period of 8 seconds
Permanent List	10° on each side
Shock	Acceleration, longitudinal of 2g; vertical of 5g
Vibration	As encountered by the following types of transport: naval, land (vehicular) and rail.
Ambient Range	-30°C to +50°C (-22°F to +122°F)

4. COMPONENT DESCRIPTION

4.1. Compressor

Model	Carrier 06DR241
Thermal Protection	Internal, automatic reset
Standard Speed	1,750 rpm @ 60 Hz
Gas Displacement @ 1750 rpm	41 cfm
Oil Pump	Reversible, gear
Finish	Shotblast, iron phosphate surface preparation, electrocoat polyester base, electrostatic polyester powder paint topcoat.

4.2. Condenser Fan Motor

Nominal Rating	560 Watt (3/4hp)
Type	Totally enclosed, non-vented
Speed	1,725 rpm @ 60 Hz
Shaft Material	Stainless steel type 303/304/316
Frame Size	56
Finish	Engineered marine finish of electrocoat epoxy paint.
Thermal Protection	Internal, automatic reset

4.3. Evaporator Fan Motors (2)

Nominal Rating (high/low)	627/82 Watt (0.84/0.11hp)
Type	Totally enclosed
Speed (high/low)	3,450/1,725 rpm @ 60 Hz
Shaft Material	Stainless steel type 303/304/316
Frame Size	48
Thermal Protection	Internal, automatic reset

4.4. Condenser Coil

Number of Rows	3
Tube Material	Copper, patented enhanced internal cross-hatched surface.
Fin Material	Copper, patented wave design.
Tube/Fin Coating	Patented Acrylic Electrocoat
Fin Spacing	14 per 25.4 mm (1 inch)
Face Area	0.414 m^2 (4.46 ft^2)
Fin Surface Area	25.5 m^2 (275 $ft^{2)}$
Tubesheets (4)	Copper

4.5. Evaporator Coil

Attitude	30° from horizontal
Tube Material	Copper, patented enhanced internal cross-hatched surface.
Fin Material	Aluminum
Face Area	0.63 m^2 (6.73ft^2)
Fin Surface Area	48.5 m^2 (522 ft^2)
Number of circuits	16
Tube Sheets	Aluminum (mounting hardware is 300-series stainless steel).
Fin Spacing	8 per 25.4 mm (1 inch)
Tube/Fin Treatment	Oakite Cryscoat-747, or Parco Cleaner-PC2323

4.6. Condenser Fan

Type	Axial, 9 blade
Number	1
Drive	Direct via stainless steel motor shaft
Diameter	445 mm (17.5 inch)
Material	15% glass filled nylon

4.7. Evaporator Fans

Type	Vane axial, 11 blade
Number	2
Drive	Direct via stainless steel motor shaft
Diameter	330 mm (13 inch)
Material	15% glass filled nylon

4.8. Heaters (Defrost and Heating)

Main Heater Rods	Six U-shaped tubular with stainless steel sheath. Rated 750 Watt each @ 230 VAC.

4.9. Electrical Controls Circuitry

Control Circuit Transformer

Control Circuit Voltage	24 VAC (1 ph. @ 460 VAC, 60 Hz)
(nominal)	20 VAC (1 ph. @ 380 VAC, 50 Hz)

Rating ..... 205 VA (24 V) plus 105 VA (18 V x2).
Insulation ..... Class H

Indicator Lights
Function/Color:
Cool ..... White
Defrost ..... Orange
Heat ..... Orange
In-range ..... Green
Alarm ..... Red
Supply Air Control ..... Yellow
Return Air Control ..... Yellow

Contactors
Full load amp rating @ 600 VAC:
Condenser Fan ..... 12 A
Evaporator Fan ..... 12 A
Compressor ..... 30 A
Heater ..... 12 A

Main On-Off Switch
Location ..... External face of unit
Type ..... Toggle switch (bayonet)
Protection ..... O-ring sealed shaft
Rating ..... 10 A @ 115 VAC

4.10. Safety Devices

High pressure switch, settings:
Cut-out ..... 2,413 kPa ± 69 kPa (350 psig ±10 psig)
Cut-in ..... 1,724 kPa ± 69 kPa (250 psig ±10 psig)

Fusible Plug pressure relief device
Temperature setting ..... 99°C (210°F)

High temperature safety
Temperature setting ..... 54°C (130°F)

Circuit Breaker (CB1)
Trips at ..... 29 amps

Fuses
Control Circuit
Rating ..... 7.5 A (x2)
Type ..... Auto blade, SAE J1284
Microprocessor
Rating ..... 5 A (x2)
Type ..... Auto blade SAE J1284

5. UNIT CONTROL SYSTEM

5.1. Temperature Controller/DataCorder

Manufacturer	Division of UTC (USA)
Type	ML3 Microprocessor
Controlling and Recording Range	-30°C to +30°C (-22°F to +86°F)
Controller (2) and Recording (2) Probes	Precision 10,000 Ohm Thermistor
Probe locations	Air entering the evaporator coil (return) and air leaving the evaporator coil (discharge).
Recorder memory	Minimum 1-year of trip information.
Interrogation	5-pin connector (Veam or equivalent), unit front.

5.2. Cooling Capacity Control

Chilled Mode, Set Point Above -10°C (14°F)

Type of Capacity Control	Suction modulation
Control logic	PID control algorithm
Control range	±0.25°C (± 0.45°F)
Heating: energize	0.5°C (0.9°F) below set point
de-energize	0.2°C (0.36°F) above set point

Frozen Mode, Set Point Below -10°C (14°F)

Type of Capacity Control	Compressor on/off
Heating	Locked out

5.3. Defrost

Type	Electrical heating
Intervals	Selectable, timed or automatic
Selected intervals	3, 6, 9, 12 or 24 hours
Automatic	If selected, the unit microprocessor will determine the defrost interval based on the previous defrost length and previous defrost interval. Minimum defrost interval will be 3 hours and maximum 24 hours.
Defrost termination	(DTS) coil temperature sensor
Manual initiation	Press the manual defrost key on the unit keypad for (5) seconds.

Time delay maintains the in-range light energized throughout the defrost cycle and for 30 minutes after termination of defrost.

6. MATERIALS AND COATINGS

6.1. Materials

Main frame	5000 and 6000 aluminum
Evaporator Compartment	Riveted, formed 3000 or 5000 Aluminum
Motor mounts/stators	A380 series die cast aluminum
Control box	"Weather tight" design
Door	Aluminum, includes treated polycarbonate window, and removable hinge pins.
Gasket	Closed cell neoprene
Access Panels	Two aluminum faced, insulated and gasketed panels. The upper left (cable side) panel houses the air exchange assembly.
Insulation (Foam)	Non-CFC blown (R-134a)
Average thickness	57.2 mm (2.25 inch)
Nominal density	32 kg/m^3 (2 lbs/ft^3)
Peripheral Air Seal	Flat PVC wiper.
Machine screws, hinges	ASTM type 300 stainless steel bolts/nuts/washers, and rivets.
Self-tapping screws	ASTM type 410 stainless steel with proprietary coating.
Charging/ service valves	Brass
Exposed dissimilar metals	Fitted with mylar 0.25 mm (0.010 inch) thick
Discharge Pressure Regulating Valve	Copper body – internal components are brass and stainless steel

6.2. Coatings

Main frame, compressor base and compartment, control box and door, fan venturi and grill, panels	Chemical cleaning, Chromate conversion coating, One coat of (triglycidylisocyanurate) polyester paint, electrostatically applied powder process, oven baked.
Filter drier	Baked powder paint
Pressure relief device, high pressure switch, exposed refrigerant lines, liquid line charging valve, service valves, quench TXV	Hand applied vinyl or polyurethane protective coating.

7. FEATURES FOR POST-PRODUCTION INSTALLATION

Some options, not included during the original production, can be added in the field. The unit is designed to simplify installation of the following kit options unless the provision is specifically omitted.

*Power Line Remote Monitoring
*Dual voltage by transformer module
*Vent position sensing
*Water cooled condenser
Receiver and water cooled condenser assemblies are interchangeable

8. LISTING OF OPTIONS INCLUDED AND INSTALLED IN THE UNIT

Power-Up Rechargeable Battery

A rechargeable battery pack is provided to allow access to the microprocessor operator-adjustable parameters when no mains power is present. This allows the user to adjust parameters such as set point, defrost interval and current limit. User can also retrieve DataCorder data when not connected to mains power. The battery pack includes the battery housing which fits into the controller module and Ni-Cad batteries that recharge when the unit is on.

The DataCorder will wake up and record information on a regular (selectable) interval when in the USDA cold treatment mode. Battery provides a minimum of 72 hours of service from full charge when operating at -18°C (0°F) at 1 hour logging intervals.

Dehumidification Control

The unit is equipped with the ability to dehumidify. The function is selected via code select method, and indicated by the flashing of the supply probe indicator light. The set point range is 65% to 95%. The sensor is located near the evaporator fan motor (right side facing unit). Sensor accuracy is +/-3% from 50 to 80% relative humidity and +0/-2% from 80 to 98% humidity. Dehumidification is achieved by energizing the heaters during the cool mode. Heaters are not energized when out of the control temperature set point range.

USDA Cold Treatment

The unit is prepared for the recording of three pulp temperatures for the purpose of meeting the USDA cold treatment criteria. An optional fourth probe can be added, but is not included as a USDA cold treatment requirement. For the connection of the USDA pulp probes, Deutsch HD10-3-96 P style receptacles are provided. The optional probes are thermistor type. Connectors are mounted on the controller side of the evaporator sheet metal.

Partlow Provision (Electrical and Mechanical)

The unit is specially configured for ease of field installation of either the Electronic or Mechanical Partlow. This includes wiring, brackets and mounting holes.

TransFresh Port Provision

For ease of field installation of the TransFresh system, unit penetrations for the purge port are included.

REFRIGERATION PIPING DIAGRAM