



Advantage **

Installation & Service Manual



N6DHP(L/M/H)A, N6DHP(LR/MR), N6DNHPL

HIGH PERFORMANCE MULTI-SHELF MERCHANDISER Medium Temperature Self Serve Display Cases

This manual has been designed to be used in conjunction with the General (UL/NSF) Installation & Service Manual.

Save the Instructions in Both Manuals for Future Reference!!

This merchandiser conforms to the American National Standard Institute & NSF International Health and Sanitation standard ANSI/NSF 7 - 2003.

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N6DHP(L/M/H)A, Installation & Service Manual N6DHP(LR/MR), N6DNHPL

The following High Performance Medium Temperature, Multi-Shelf Dairy, Deli, Produce and Juice Merchandiser models are covered in this manual:

MODEL	DESCRIPTION
N6DHPLA	4', 6', 8' & 12' HIGH PERF. MED. TEMP. MERCHANDISER WITH 18" FRONT
N6DHPMA	4', 6', 8' & 12' HIGH PERF. MED. TEMP. MERCHANDISER WITH 22" FRONT
N6DHPHA	6', 8' & 12' HIGH PERF. MED. TEMP. MERCHANDISER WITH 26" FRONT
N6DHPLR	8' & 12' HIGH PERF. MED. TEMP. MERCHANDISER WITH 18" FRONT AND REAR DOORS
N6DHPMR	8' & 12' HIGH PERF. MED. TEMP. MERCHANDISER WITH 22" FRONT AND REAR DOORS
N6DNHPL	4', 6', 8' & 12' HIGH PERF. NARROW MED. TEMP. MERCHANDISER WITH 18" FRONT



SPECIFICATIONS

N6DHP(LA, MA, HA, LR, MR) High Perf. Med. Temp. Merchandisers

Refrigeration Data:

			CAPACI	TY (BTUH / FT)			DISCHARG	E AIR	AVG. REF.
MODEL	CASE LENGTH	CASE USAGE	PARALLEL	CONVENTIONAL	EVAPORATOR (°F)	UNIT SIZING (°F)	TEMPERATURE (°F)	VELOCITY (FPM)	CHARGE (LBS/FT)
N6DHPLA	4'/6'/8'/12'	MED TEMP	1,138*	1,198*	+28**	+26	+34	170***	0.55****
N6DHPMA	4'/6'/8'/12'	MED TEMP	1,092*	1,150*	+28**	+26	+34	170***	0.55****
N6DHPHA	6'/8'/12'	MED TEMP	1,046*	1,101*	+28**	+26	+34	170***	0.55****
N6DHPLR	8'/12'	MED TEMP	1,504*	1,617*	+28**	+26	+31	176***	0.48****
N6DHPMR	8'/12'	MED TEMP	1,458*	1,569*	+28**	+26	+31	176***	0.48****

^{*} Capacity data listed for cases with 2 rows of T-8 canopy lights and 4 rows of unlighted 22" deep shelves. Adjustments must be made to this base rating for each option installed on this case. ADD 23 BTUH/FT for each row of lighted shelves. For cases using peg bars, ADD 132 BTUH/FT to parallel load or ADD 153 BTUH/FT to conventional load. NOTE: Baffles are required above each peg bar row to provide proper air flow around the food products. For sizing all refrigeration equipment other than TYLER, use conventional BTUH values.

FOR SPECIFIC COMPRESSOR SIZING INFORMATION, REFER TO TYLER APPLICATIONS FOR RACK SYSTEM COMPRESSORS AND/OR THE COMPRESSOR MANUFACTURERS FOR SINGLE COMPRESSORS. FOR LINE SIZING INFORMATION, REFER TO THE MISCELLANEOUS SECTION "BUFF" IN THE TYLER SPECIFICATION GUIDE.

Electrical Data:

Fans and Heaters (120 Volt)

	CASE	FANS/		OTAL ARD FANS		OTAL I FANS		OTAL SWEATS
MODEL	LENGTH	CASE	AMPS	WATTS	AMPS	WATTS	AMPS	WATTS
N6DHP(L/M)A	4'	1	0.36	42.0	0.35	26.0	N/A	N/A
N6DHP(L/M/H)A	6'	2	0.72	84.0	0.70	52.0	N/A	N/A
N6DHP(L/M/H)A	8'	2	0.72	84.0	0.70	52.0	N/A	N/A
N6DHP(L/M/H)A	12'	3	1.08	126.0	1.05	78.0	N/A	N/A
N6DHP(LR/MR)	8'	2	0.72	84.0	0.70	52.0	N/A	N/A
N6DHP(LR/MR)	12'	3	1.08	126.0	1.05	78.0	N/A	N/A

T-8 Lighting with Electronic Ballasts (120 Volt)

		CANOF	Y LIGHT	'S* PE	R ROW				SH	ELF LIG	HTS - PI	ER ROW				NOSE LIGHT		MAX.LIGHTING (8 ROWS)	
MODEL	1 2 1 2		1	AMPS 1 2 3 4 5					2	WATTS 3	4	5	AMPS	WATTS	AMPS	WATTS			
N6DHPA	4'	0.35	0.50	42.0	60.0	0.45	0.60	0.80	0.95	1.30	54.0	72.0	96.0	114.0	156.0	0.35	42.0	2.15	258.0
N6DHPA	6'	0.40	0.75	48.0	90.0	0.60	0.90	1.20	1.50	1.90	72.0	108.0	144.0	180.0	228.0	0.40	48.0	3.05	366.0
N6DHPA/ N6DHPR	8'	0.50	0.95	60.0	114.0	0.90	1.20	1.60	1.90	2.40	108.0	144.0	192.0	228.0	288.0	0.50	60.0	3.85	462.0
N6DHPA/ N6DHPR	12'	0.70	1.40	84.0	168.0	1.35	1.80	2.40	2.85	3.55	162.0	216.0	288.0	342.0	426.0	0.70	84.0	5.65	678.0

^{*} Standard lighting for this case is 2 rows of canopy lights.

Defrost Data:

100		DURATION	ELEK. THERMO AIR SENSOR SE		PR IGS ****	CONVENTIONAL COMPRESSOR SETTINGS*****				DEFROST		
DEFROST TYPE*	DEFROSTS PER DAY**	TIME (MIN)***	USAGE	CUT-IN	сит-оит	R22 (PSIG)			PSIG) CUT-OUT		(PSIG) CUT-OUT	WATER (LB / FT / DAY)
TIME OFF	4	18	FRONT LOAD - ALL APPLICATIONS	33°F	32°F	52	66	50	36	64	47	5.2 (max.)
TIME OFF	6	16	REAR LOAD - ALL APPLICATIONS	32°F	30°F	52	66	50	36	64	47	4.3

^{*} All high performance cases use OFF CYCLE defrost

SHELVING NOTES: Shelving widths available for these cases are 15", 18", 20" and 22". When two sizes are used, the smaller must be on top. UL SANITATION approved in accordance with ANSI/NSF – 7.

CASE BTUH REQUIREMENTS are calculated to produce approximately the indicated entering-air temperature with absolute maximum operating ambient limits of 75°F & 55RH.

The information contained herein is based on technical analysis and/or tests performed in a controlled lab environment that are consistent with industry practices, and is intended as a reference for system sizing and configuration purposes only and for use by persons having technical skill at their own discretion and risk. Conditions of use are outside of Tyler's control and we do not assume and hereby disclaim any liability for results obtained or damages incurred through application of or reliance on the data presented, including but not limited to specific energy consumption with any particular model or installed application. SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

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^{**} Evaporator temperature is based on the saturated pressure leaving the case.

^{***} Air velocity measured 1 hour after defrost at the top discharge air duct using an ALNOR JR. velometer with a scoop. DEDUCT 5 FPM for front load case using peg bars. DEDUCT 20 FPM for rear load case using peg bars.

^{****} This is an average refrigeration charge per foot based on R22 and R404A refrigerant usage.

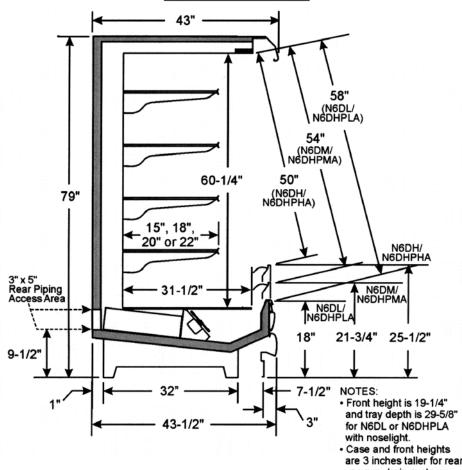
^{**} NOTE: Mixed case line-ups require a defrost schedule change. Mixed case line-ups consist of front load with rear load cases or front load with corner cases. Front and rear load case line-ups require 6 defrosts at 16 minutes. Front load with corner case line-ups require 6 defrosts at 18 minutes.

NOTE: 18 or 16 minutes is for EPR with suction stop for defrost isolation. Defrost times increases by four minutes when defrost isolation is by pump down.

^{****} If EPR is utilized, use the settings shown in the chart. ADD 0.5# to EPR setting for each 1000 foot rise in elevation.
***** Recommended setup for a conventional unit uses an electronic thermostat to assure accurate temperature control.

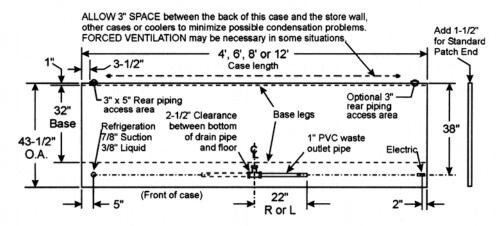
	CASE-TO-CASE SUCTION LINE SUB-FEED BRANCH LINE SIZING														
MODEL	4'	6'	8'	12'	16'	20'	24'	28'	32'	36'	40'	44'	48'	52'	
N6DHPA/ N6DHPR (R22)	7/8"	7/8"	7/8"	7/8"	7/8"	1-1/8"	1- 1/8"	1-1/8"	1-1/8"	1-3/8"	1-3/8"	1- 3/8"	1-3/8"	1-3/8"	

N6DHPA CROSS SECTION



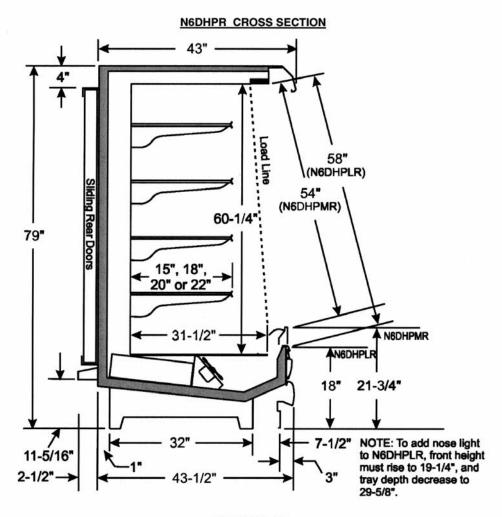
are 3 inches taller for rear vacuum drain systems.

FLOOR PLAN

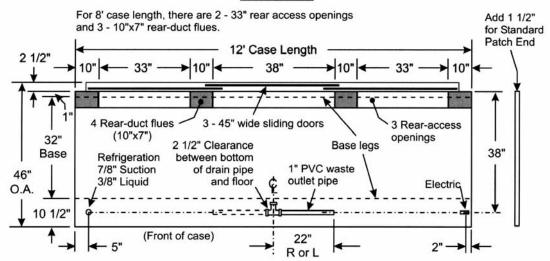


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FLOOR PLAN



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N6DHP(L/M/H)A, Installation & Service Manual N6DHP(LR/MR), N6DNHPL

N6DNHPL High Perf. Narrow Multishelf Med. Temp. Merchandisers

Refrigeration Data:

			CAPACI	TY (BTUH / FT)			DISCHARG	E AIR	AVG. REF.
MODEL	CASE LENGTH	CASE USAGE	PARALLEL	CONVENTIONAL	EVAPORATOR (°F)	UNIT SIZING (°F)	TEMPERATURE VELOCITY (°F) (FPM)		CHARGE (LBS/FT)
N6DNHPL	4'/6'/8'/12'	MED TEMP	1,243	1,356	+28**	+26	+32	193***	0.55****

Capacity data listed for cases with 2 rows of T-8 canopy lights and 5 rows of unlighted 20" deep shelves. Adjustments must be made to this base rating for each option installed on this case. ADD 23 BTUH/FT for each row of lighted shelves. NOTE: Contact TYLER for Peg Bar or Produce Insert Usage and Capacity Adjustments. For sizing all refrigeration equipment other than TYLER, use conventional BTUH values.

FOR SPECIFIC COMPRESSOR SIZING INFORMATION, REFER TO TYLER APPLICATIONS FOR RACK SYSTEM COMPRESSORS AND/OR THE COMPRESSOR MANUFACTURERS FOR SINGLE COMPRESSORS. FOR LINE SIZING INFORMATION, REFER TO THE MISCELLANEOUS SECTION "BUFF" IN THE TYLER SPECIFICATION GUIDE.

Electrical Data:

Fans and Heaters (120 Volt)

	CASE	FANS/		OTAL ARD FANS		OTAL M FANS	TOTAL ANTI-SWEATS		
MODEL	LENGTH	CASE	AMPS	WATTS	AMPS	WATTS	AMPS	WATTS	
N6DNHPL	4'	1 .	0.36	42.0	0.35	26.0	N/A	N/A	
N6DNHPL	6'	2	0.72	84.0	0.70	52.0	N/A	N/A	
N6DNHPL	8'	2	0.72	84.0	0.70	52.0	N/A	N/A	
N6DNHPL	12'	3	1.08	126.0	1.05	78.0	N/A	N/A	

T-8 Lighting with Electronic Ballasts (120 Volt)

			LIGHTS* DWS				SHEI	LF LIGHT	S – PER	ROW				NOSE	LIGHT	MAX.LIGHTING (3 ROWS)	
MODEL	CASE LENGTH	AMPS	WATTS	1	2	AMPS 3	4	5	1	2	WATTS 3	4	5	AMPS	WATTS	AMPS	WATTS
N6DNHPL	4'	0.50	60	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.35	42	0.85	102
N6DNHPL	6'	0.75	90	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.40	48	1.15	138
N6DNHPL	8'	0.95	114	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.50	60	1.45	174
N6DNHPL	12'	1.40	168	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.70	84	2.10	252

Standard lighting for this case is 2 rows of canopy lights.

Defrost Data:

		DURATION		ELEK. THERMOSTAT / EPR AIR SENSOR SETTINGS SETTINGS ***		CONVENTIONAL COMPRESSOR SETTINGS****				DEFROST		
DEFROST TYPE*	DEFROSTS PER DAY	TIME (MIN)**	USAGE	CUT-IN	сит-оит	R22 (PSIG)	R404A (PSIG)		PSIG) CUT-OUT	R404A CUT-IN		WATER (LB / FT / DAY)
TIME OFF	6	20	FRONT LOAD - ALL APPLICATIONS	32°F	30°F	52	66	50	36	64	47	7.8 (max.)

All high performance cases use OFF CYCLE defrost

UL SANITATION approved in accordance with ANSI/NSF - 7.

CASE BTUH REQUIREMENTS are calculated to produce approximately the indicated entering-air temperature with absolute maximum operating ambient limits of 75°F & 55RH.

The information contained herein is based on technical analysis and/or tests performed in a controlled lab environment that are consistent with industry practices, and is intended as a reference for system sizing and configuration purposes only and for use by persons having technical skill at their own discretion and risk. Conditions of use are outside of Tyler's control and we do not assume and hereby disclaim any liability for results obtained or damages incurred through application of or reliance on the data presented, including but not limited to specific energy consumption with any particular model or installed application. SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

^{**} Evaporator temperature is based on the saturated pressure leaving the case.

^{***} Air velocity measured 1 hour after defrost at the top discharge air duct using an ALNOR JR. velometer with a scoop.

^{****} This is an average refrigeration charge per foot based on R22 and R404A refrigerant usage.

^{**} NOTE: 20 minutes is for EPR with suction stop for defrost isolation. Defrost times increases by four minutes when defrost isolation is by pump down.

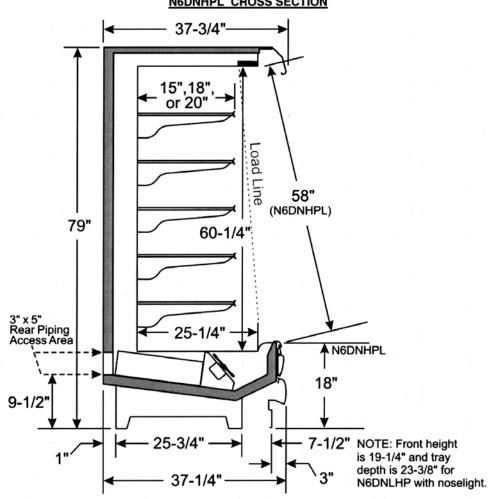
If EPR is utilized, use the settings shown in the chart. ADD 0.5# to EPR setting for each 1000 foot rise in elevation.
Recommended setup for a conventional unit uses an electronic thermostat to assure accurate temperature control.

SHELVING NOTES: Shelving widths available for these cases are 15", 18" and 20". When two sizes are used, the smaller must be on top.

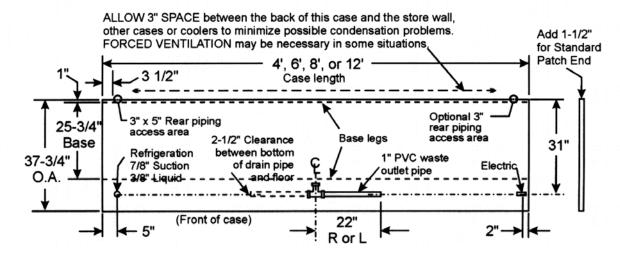


CASE-TO-CASE SUCTION LINE SUB-FEED BRANCH LINE SIZING																
MODEL	4'	6'	8'	10'	12'	16'	20'	24'	28'	32'	36'	40'	44'	48'	52'	56'
N6DNHPL - R22	7/8"	7/8"	7/8"	7/8"	7/8"	7/8"	1-1/8"	1-1/8"	1-1/8"	1-3/8"	1-3/8"	1-3/8"	1-3/8"	1-3/8"	1-3/8"	1-3/8"

N6DNHPL CROSS SECTION



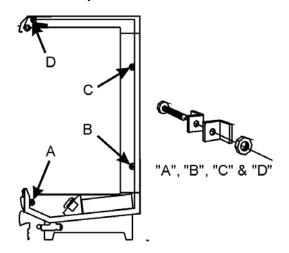
FLOOR PLAN



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INSTALLATION PROCEDURES

Carpentry Procedures Case Pull-Up Locations



All N6DHPA, N6DHPR and N6DNHPL models have four pull-ups at each end of the case. Pull-ups A, B, C and D are located as shown and should be installed and tightened starting with A and finishing with D.

NOTE

If extra pull-up bolts are needed, use the bolts from the side shipping supports.

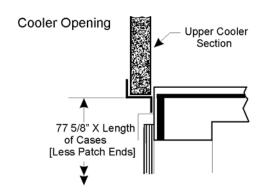
See "General-UL/NSF I&S Manual" for line-up assembly instructions.

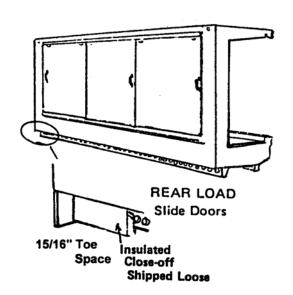
Joining Rear Load Cases to Coolers (N6DHPLR and N6DHPMR only)

For U.L. and temperature performance requirements, N6DHPLR and N6DHPMR cases must be backed by a refrigerated area. TYLER walk-in coolers are available with the necessary special parts and instructions to make the installation.

NOTE

Please ensure that the cooler opening is insulated and sealed completely to the rear of the display case.







Refrigeration Procedures

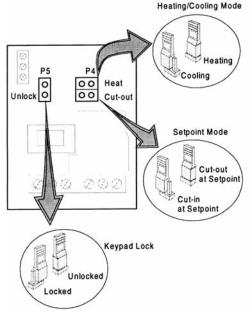
Refrigeration system and superheat instructions can be found in the "General (UL/NSF) I&S Manual". Case electronic temperature control information is listed below.

Electronic Temperature Control

Whenever an N6DHPA, N6DHPR or N6DNHPL uses an electronic thermostat and solenoid valve for temperature control, use the following in-structions to properly set-up the electronic thermostat.

Setting the Electronic Thermostat

- 1. Remove the four screws and cover from the electronic thermostat.
- Connect sensor wires to the common (COM) and sensor (SEN) terminals of the terminal strip located at the top left of the printed circuit board. The sensor leads are interchangeable.



- 3. Set the Heating/Cooling jumper blocks to the "COOL" position.
- 4. Set the Cut-in at Setpoint/Cut-out at Setpoint jumper blocks to the "Cut-out at Setpoint" position.
- 5. Set the keypad Locked/Unlocked jumper blocks to the "Unlocked" position.
- 6. Replace the electronic thermostat cover and secure with four screws.

- 7. To adjust the setpoint:
 - a. Push the Menu Button. "SP" will flash on the LCD display.
 - Push the Menu Button one more time and a setpoint temperature will be displayed.
 - c. Push the Up or Down Button until the desired setpoint is displayed.
 N6DHPA (all applications) = 32°F
 N6DHPR/N6DNHPL = 30°F
 (all applications)
 - d. Push the Menu Button.
- 8. To adjust the differential:
 - a. Push the Menu Button. "SP" will flash on the LCD display.
 - b. Push the Down Button until "DIF" is shown on the LCD display.
 - Push the Menu Button one more time and a differential number will be displayed.
 - d. Push the Up or Down Button until the desired differential setting is displayed.
 N6DHPA (all applications) = 1°F
 N6DHPR/N6DNHPL = 2°F (all applications)
 - d. Push the Menu Button.

With the cooling mode selected, the differential is ABOVE the setpoint. The relay will energize and the LED indicator will illuminate when the temperature reaches the differential setting. When the temperature drops to the setpoint, the relay and LED indicator will de-energize and refrigeration will stop.

The settings above are specific to TYLER N6DHPA, N6DHPR and N6DNHPL cases. Other applications will require different setpoints and differentials.

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Electrical Procedures

Electrical Considerations

CAUTION

Make sure all electrical connections at components and terminal blocks are tight. This will prevent burning of electrical terminals and/or premature component failure.

NOTE

Raceway covers will be shipped loose. See the "General-UL/NSF I&S Manual" for raceway cover installation and removal instructions.

Case Fan Circuit

This circuit is to be supplied by an uninterrupted, protected 120V circuit. The case fan circuit is not cycled.

Fluorescent Lamp Circuit

The standard lighting for the N6DHPA, N6DHPR and N6DNHPL cases is 2-rows of T-8 canopy lights. Optional T-8 Nose Lighting is also available on all these cases. Optional T-8 shelf lighting and a third-row of T-8 canopy lighting are also available on the N6DHPA and N6DHPR cases. The N6DNHPL cases do not offer these options.

Defrost Information

See "General-UL/NSF I&S Manual" for operational descriptions for each type of defrost control.

Defrost Control Chart

		Defrost
Defrost	Defrosts	Duration
<u>Type</u>	<u>Per Day</u>	<u>(Min)</u>
N6DHPA	(front load - all app	olications)
Off Time	4	18*
N6DHPR	(rear load - all app	lications)
Off Time	6	16*
N6DNHP	L (front load - all a _l	pplications)
Off Time	6	20*

*18, 16 or 20 minutes is for EPR only.

Defrost duration increases by 4 minutes when controller methods do not include an EPR valve.

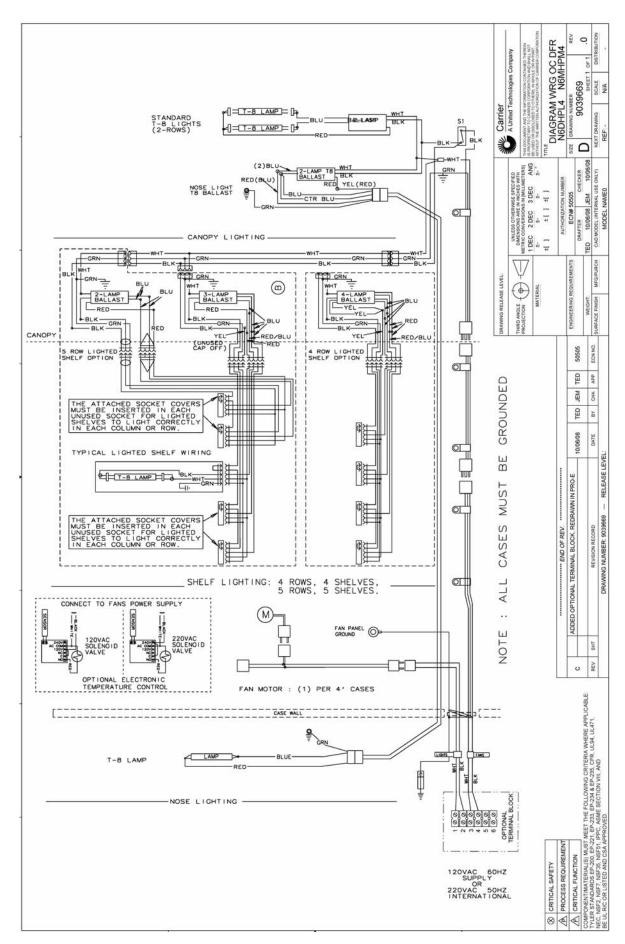
WIRING DIAGRAMS

ELECTRICIAN NOTE - OVERCURRENT PROTECTION

120V circuits should be protected by 15 or 20 Amp devices per the requirements noted on the cabinet nameplate or the National Electrical Code, Canadian Electrical Code - Part 1, Section 28. 208V defrost circuits employ No. 12 AWG field wire leads for field connections. On remote cases intended for end to end line-ups, bonding for ground may rely upon the pull-up bolts.

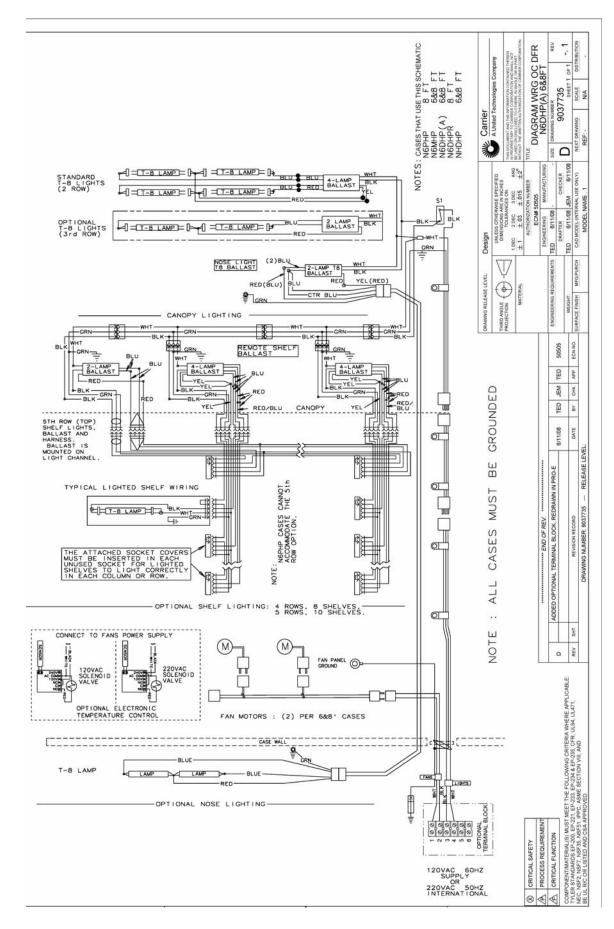
The following wiring diagrams on pages 12 through 17 will cover the N6DHPA, N6DHPR & N6DNHPL case circuits. The defrost and lighting circuits are covered in the case circuit diagrams.

N6DHPLA Domestic & Export (50 Hz) Case Circuits (4' Cases)

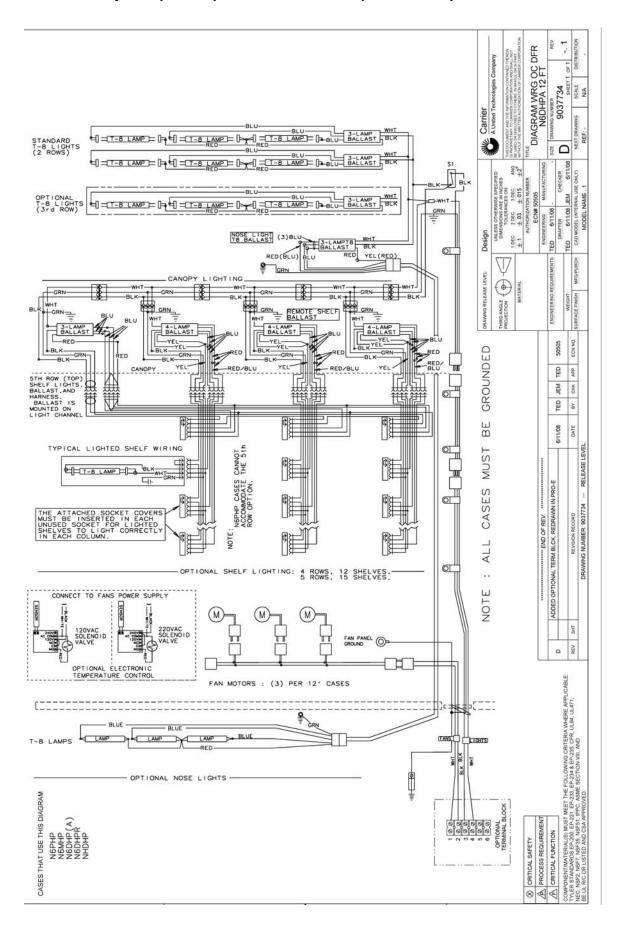


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N6DHP(L/M/H)A & N6DHP(LR/MR) Domestic & Export (50 Hz) Case Circuits (6' & 8' Cases)

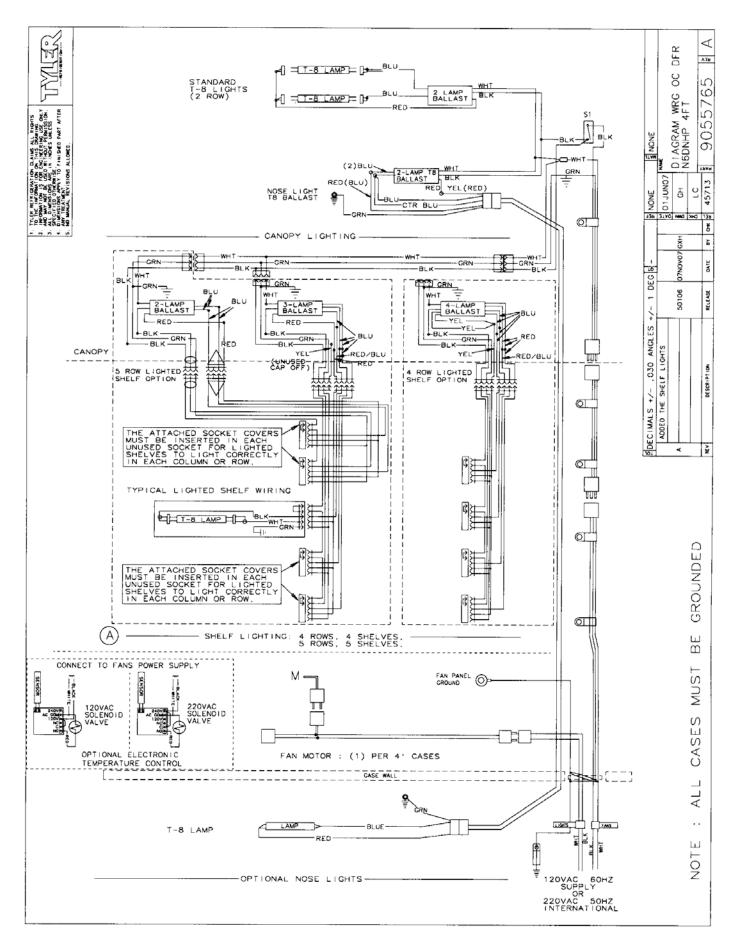


N6DHP(L/M/H)A & N6DHP(LR/MR) Domestic & Export (50 Hz) Case Circuits (12' Cases)

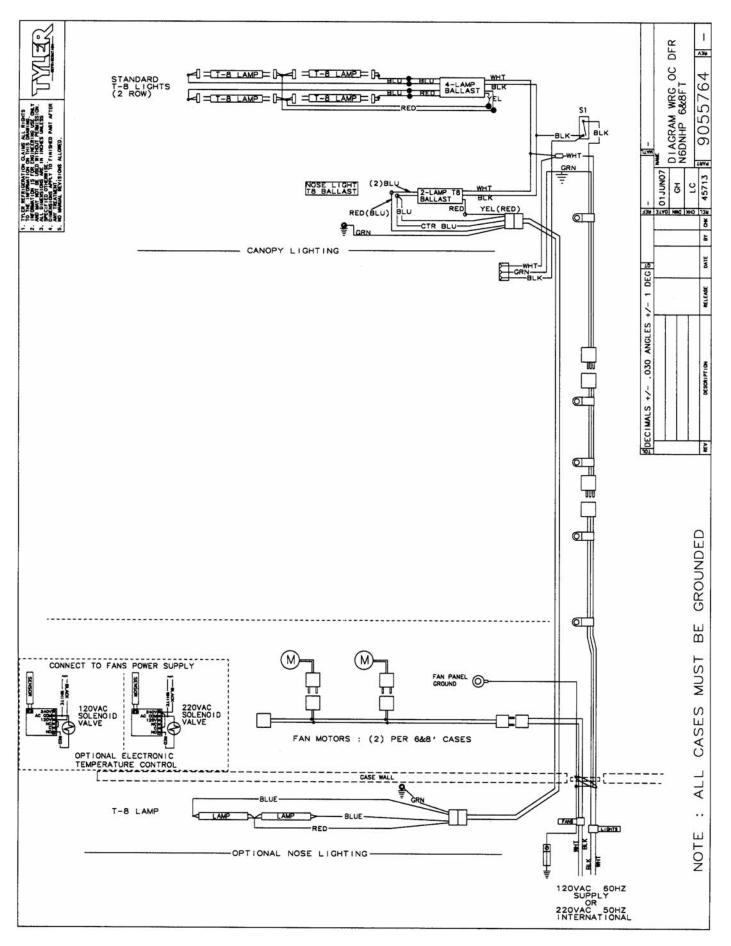


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N6DNHPL Domestic & Export (50 Hz) Case Circuits (4' Cases)

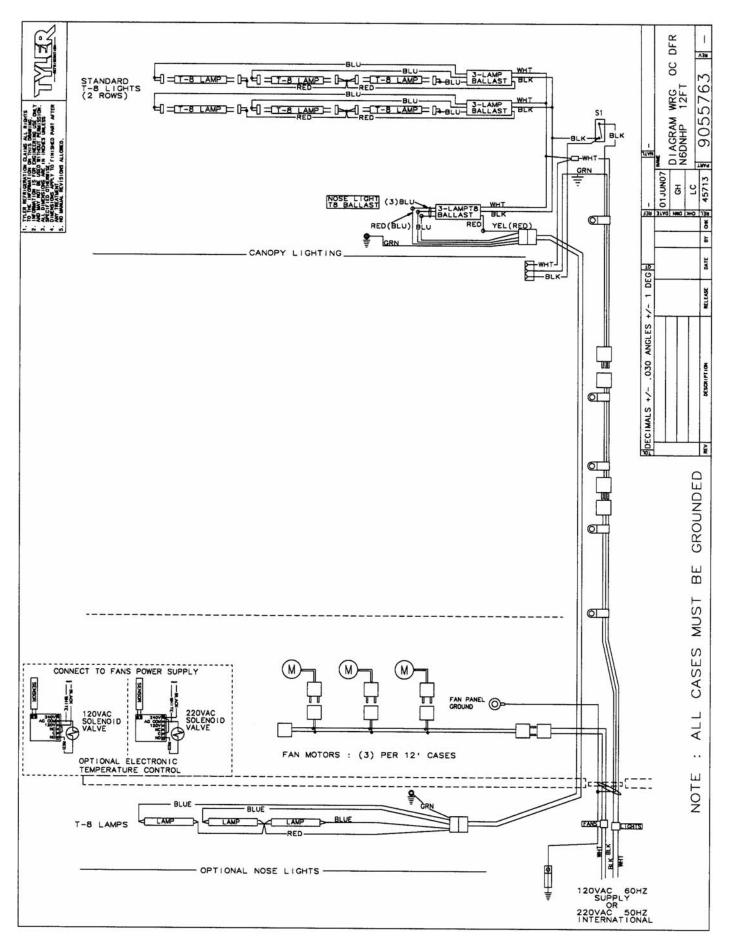


N6DNHPL Domestic & Export (50 Hz) Case Circuits (6' & 8' Cases)



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N6DNHPL Domestic & Export (50 Hz) Case Circuits (12' Cases)





CLEANING AND SANITATION

Component Removal and Installation Instructions for Cleaning

Shelves and Shelf Brackets

- 1. Remove product from shelves.
- If shelf has a light, unplug the light cord from the socket in the rear duct panel.
 Completely insert socket cover in the light socket to protect the receptacle.
- 3. Push shelves back and then lift up and out to remove them from the shelf brackets.
- 4. Remove shelf brackets from slots in rear uprights.
- 5. After cleaning, replace in reverse order.

Bottom Trays

- 1. Remove product from bottom of case.
- Grasp and lift out each of the bottom trays from the case interior.
- 3. After cleaning, replace in reverse order.

Front Air Ducts

- 1. Remove lower trays, see this page.
- 2. Lift out front air duct sections.
- 3. After cleaning, replace in reverse order.

Rear Duct Panels (w/o Shelf Light Sockets)

- 1. Remove shelves and bottom trays, see above.
- 2. Remove mounting screws and rear duct panels from case.
- 3. After cleaning, replace and secure rear duct panels in reverse order.

(with Shelf Light Sockets)

- 1. Remove shelves and bottom trays, see above.
- For cases with 5 rows of lighted shelves, remove screw above top shelf socket and push socket assembly back through the hole in the rear duct panel.

- 3. Remove mounting screws from rear duct panel.
- 4. Slowly lift out rear duct panel until the shelf harness connector near the top of the panel can be accessed.
- Disconnect shelf harness connector and complete removing the rear duct panel.

WARNING

Rear duct panels with electrical receptacles can be cleaned without removing the electrical receptacles. Do not get moisture on electrical wires when cleaning under this cover. Moisture on wires could cause premature product failure and/or personal injury or death from electrical shock.

 After cleaning, reconnect the shelf harness connector: install the top socket assembly: replace and secure rear duct panels in reverse order.

Discharge Air Honeycomb

1. Loosen screws securing rear retainer plate.

NOTE

Note position of the honeycomb grid during removal so it can be reinstalled the same way.

Slide rear retainer plate back until the honeycomb grid sections can be removed from the top duct.

CAUTION

Improper installation of the honeycomb grid section could result in improper air flow and/or poor refrigeration.

3. After cleaning, replace honeycomb grid sections as they were removed and secure with the rear retainer plate and screws.

Top Duct

- 1. Remove shelves and shelf brackets, see above.
- 2. Remove screws, rear retainer plate and honeycomb grid sections from top of case.
- 3. Remove screws and top duct from case.
- 4. After cleaning, replace top duct and remaining components in reverse order.

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Front Cladding

- 1. Remove front kickplate and raceway cover. (See General-UL/NSF I&S Manual.)
- 2. Remove color band, bumper and bumper retainer from the case. (See General-UL/NSF I&S Manual.)
- 3. Remove screws for top and bottom of front cladding and remove cladding.
- 4. After cleaning, replace front cladding and remaining front components in reverse order.

Cleaning Instructions

WARNING

TYLER Refrigeration does not recommend the use of high pressure cleaning equipment on display cases!! High pressure cleaners can penetrate and/or damage joint seals. Damaged seals allow water leaks and/or air leaks that can cause poor case refrigeration.

CAUTION

- When cleaning this case, try not to introduce water into the case faster than it can be carried away by the waste outlet.
- Liquid chlorine bleach is corrosive to metals. The use of bleach or products containing bleach will damage metal surfaces and void the case warranty.
- Sanitize the case with Quaternary Ammonium Solutions (ex: KAYQUAT II, J-512 Sanitizer, SANIQUAT 512, etc...) approved per 21CFR 178.1010, followed by adequate draining and air drying. These solutions may be obtained from Kay Chemical Co., Johnson Wax Professional, Coastwide Laboratories, etc....
- Always use a soft cloth or sponge with mild detergent and water to clean any glass.
 Never use abrasives or scouring pads to clean glass. They can scratch and/or damage the glass.

See "General (UL/NSF) I&S Manual" for case cleaning instructions.

Stainless Steel Cleaning Methods

The cleaning data in the following stainless steel cleaning chart was supplied by AISI. The information was supplied by Prime Metals Division, Alumax Aluminum Corporation.

TYPE OF CLEANING	CLEANING AGENT*	APPLICATION METHOD**	EFFECT ON FINISH	
Routine cleaning	Soap, ammonia or detergent and water.	Sponge with cloth, then rinse with clear water and wipe dry.	Satisfactory for use on all finishes.	
Smears and finger- prints	Arcal 20, Lac-O-Nu, Lumin Wash O'Cedar Cream Polish, Stainless Shine	Rub with cloth as directed on the package.	Satisfactory for use on all finishes. Provides barrier film	
Stubborn spots and stains, baked-on splatter, and other light discolorations	Allchem Concentrated Cleaner	Apply with damp sponge or cloth.	Satisfactory for use on all finishes.	
	Samae, Twinkle, or Cameo Copper Cleaner	Rub with damp cloth.	Satisfactory for use on all finishes if rubbing is light.	
	Grade FFF Italian pumice, whiting or talc	Rub with damp cloth.	Use in direction of polish lines on No. 4 (polished) finish. May scratch No. 2 (mill) and No. 7 and 8 (polished) finishes.	
	Liquid NuSteel	Rub with dry cloth. Use a small amount of cleaner.	Use in direction of polish lines on No. 4 (polished) finish. May scratch No. 2 (mill) and No. 7 and 8 (polished) finishes.	



TYPE OF CLEANING	CLEANING AGENT*	APPLICATION METHOD**	EFFECT ON FINISH
TIPE OF CLEANING	Paste NuSteel or DuBois Temp	Rub with dry cloth. Use a small amount of cleaner.	Use in direction of polish lines on No. 4 (polished) finish. May scratch No. 2 (mill) and No. 7 and 8 (polished) finishes.
	Cooper's Stainless Steel Cleaner, Revere Stainless Steel Cleaner	Apply with damp sponge or. cloth.	Use in direction of polish lines on No. 4 (polished) finish. May scratch No. 2 (mill) and No. 7 and 8 (polished) finishes.
	Grade F Italian pumice, Steel Bright, Lumin Cleaner, Zud or Restoro	Rub with a damp cloth.	Use in direction of polish lines on No. 4 (polished) finish. May scratch No. 2 (mill) and No. 7 and 8 (polished) finishes.
	Penny-Brite or Copper-Brite	Rub with a dry cloth. Use a small amount of cleaner.	Use in direction of polish lines on No. 4 (polished) finish. May scratch No. 2 (mill) and No. 7 and 8 (polished) finishes.
Heat tint or heavy discoloration	Penny-Brite or Copper-Brite	Rub with a dry cloth.	Use in direction of polish lines on No. 4 (polished) finish. May scratch No. 2 (mill) and No. 7 and 8 (polished) finishes.
	Paste NuSteel or DuBois Temp	Rub with dry cloth. Use a small amount of cleaner.	Use in direction of polish lines on No. 4 (polished) finish. May scratch No. 2 (mill) and No. 7 and 8 (polished) finishes.
	Revere Stainless Steel Cleaner	Apply with a damp sponge or cloth.	Use in direction of polish lines on No. 4 (polished) finish. May scratch No. 2 (mill) and No. 7 and 8 (polished) finishes.
	Allen Polish, Steel Bright, Wyandotte or Zud	Rub with a damp cloth.	Use in direction of polish lines on No. 4 (polished) finish. May scratch No. 2 (mill) and No. 7 and 8 (polished) finishes.
Burnt-on foods and grease, fatty acids, milkstone (where swab- bing or rubbing is not practical)	Easy-Off, De-Grease-It, 4-6% hot solution of such agents as trisodium tripolyphospate, or 5-15% caustic soda solution	Apply generous coating. Allow to stand for 10-15 min. Repeated application may be necessary.	Excellent removal, satisfactory for use on all finishes.
Tenacious deposits, rusty discolorations, industrial atmospheric stains	Oakite No. 33, Dilac, Texo 12, Texo N.Y., Flash-Klenz, Caddy Cleaner, Turco Scale 4368 or Permag 57.	Swab and soak with clean cloth. Let stand 15 minutes or more according to directions on package. Rinse and dry.	Satisfactory for use on all finishes.
Hard water spots and scale	Vinegar	Swab or wipe with a cloth. Rinse with water and dry.	Satisfactory for use on all finishes.
	5% oxalic acid, 5% sulamic acid, 5-10% phospheric acid, or Dilac, Oakite No. 33, Texo 12 or Texo N.Y.	Swab or soak with a cloth. Let stand 10-15 minutes. Always follow with neutralizer rinse, and dry.	Satisfactory for use on all finshes. Effective on tenacious deposites or where scale has built up.
Grease and oil	Organic solvents such as carbon tetrachloride, tri- chlorethylene, acetone, kero- sene, gasoline, benzene, alcohol and chlorethane n.u.	Rub with a cloth. Organic solvents may be flammable and/or toxic. Observe all precautions against fire. Do not smoke while vapors are present. Be sure area is well ventilated.	Satisfactory for use on all finishes.

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- * Use of proprietary names is intended only to indicate a type of cleaner, and does not constitute an endorsement, nor is omission of any proprietary cleanser to imply its inadequacy. It should be emphasized that all products should be used in strict accordance with instructions on package.
- ** In all applications a sponge or fibrous brush or pad are recommended. DO NOT use ordinary steel wool, steel brushes, chlorine bleach or products containing bleach for cleaning or sanitizing stainless steel.

GENERAL INFORMATION

NSF Product Thermometer Installation

Unwrap the thermometer and bracket assembly shipped loose with the case.

NOTE

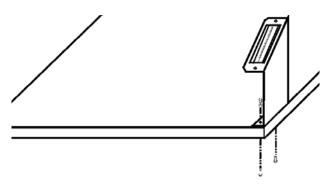
Recommended bottom tray position is with the lips up.

- Position bracket in front right corner of the left-most bottom tray. Making sure the bracket is flush with the left edge, use the bracket holes as a template for where to drill the holes.
- 3. Drill two .196" holes in the bottom tray.

NOTE

For ease of installation, position the washers and capnuts on the top side of the bracket and bottom tray.

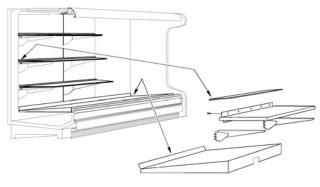
4. Mount the bracket to the bottom tray with two screws, washers and capnuts.



Egg Merchandiser Kit (All Models)

All egg shelves come galvanized or stainless steel. The upper egg shelves are 15" x 48" and come with 82 degree fixed white brackets. The brackets are available in one position only. The upper egg shelves assemblies include a rear air close-off.

Tilted base egg shelves come in 4' modules. They are designed and notched to fit inside the existing 2' bottom trays.

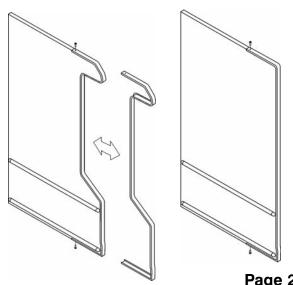


NOTE

Egg shelves are designed to catch and hold spilled liquids so they can be cleaned up before getting further into the case. If the tilted base shelves are used upside down, improper shelf support will result causing the middle of each shelves to sag. Upside down usage also allows drippage to get into the case making cleaning very difficult. Good sanitation is essential for egg merchandising.

Removing Metal Edge Trim

For those who have chosen a metal trim option on Tyler patch ends, the edge trim can be easily removed and reinstalled, or replaced. The diagrams below show the locations of two screws on the top and bottom of each piece of metal trim. Locate and unscrew the fasteners first, then carefully pull the edge trim from the end.





Peg Bar Information (All Models)

The hang up blister pack has become a standard means of marketing sliced luncheon meats and other delicacies. It appears that all that is needed to adapt multi-shelf cases for these packages is to add peg bars and pegs. However, it isn't quite that simple, because the removal of shelves changes more than the appearance of the case.

Figure 1 shows the air flow in a Multi-Deck display merchandiser with shelves. Air flow from the top and back forms a protective barrier to ambient air.

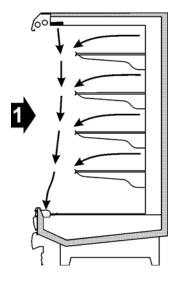
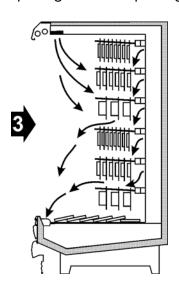
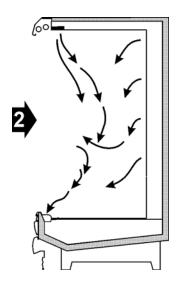


Figure 3 depicts what happens to the air flow in a case full of peg bars. The air falls through openings between packages and fails to main



tain a protective barrier. When the bars are fully stocked, the effect is minimized, but product temperatures will not be as good as they could be. Sweating may be noticed on the top duct panel above the bars. The coil will also frost faster, requiring more frequent defrosts.

Figure 2 shows what happens to the air flow when the shelves are removed. The air drifts back to the rear duct and swirls about. This breaks the protective barrier, causing the case air to mix with ambient air to a great extent.



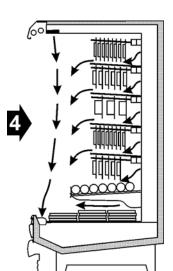


Figure 4 shows the proper air flow for cases with peg bars. The addition of a baffle above each row of peg bars, except the top row and a bottom shelf, maintains proper air flows and temperatures in the case. Nonload bearing air baffles should run the same width as the peg bars.

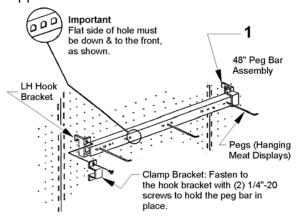
CAUTION

Always use one row of shelves below the lowest row of peg bars. Use air baffles above each row of peg bars, except the top row. The air baffle should be solid in design and positioned 1" in front of the rear duct and 5.5" back from the rear edge of the card moulding. This provides and maintains the protective air flow in the case and proper product cooling and storage.

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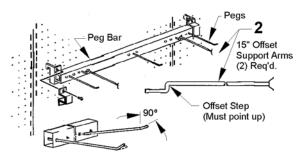
Peg Bar Information for Cannon Magna Peg Bar Display Systems (TYLER supplied)

Air baffle shelves should always be used with peg bars for hanging meat displays. Air baffle shelves are non-load bearing and are used only to help direct the air flow. The air baffles should be installed above each row of peg bars, except the top row, along with a bottom shelf. Air baffles are available from TYLER that are compatible with 15" offset support arms.



1. 48" peg bar with 52 holes to accept pegs.

Flat side of holes in peg bar must be down and to the front of the bar. Attach two hook brackets to peg bar with two clamp brackets and four screws. Position and install peg bar in slotted holes in back of case.



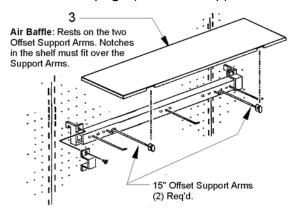
Pegs: After marking the desired locations for the Pegs on the Peg Bar, insert the Pegs by holding them at 90 °, and insert into the holes so Peg points are up. Pull out Peg to seat properly on the Peg Bar.

2. 15" pegs and offset support arms lock in place on the peg bar.

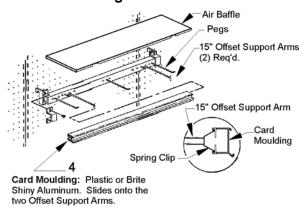
After marking the desired locations in the peg bar, install the pegs into peg bar holes. Hold peg at 90° angle to peg bar. Insert peg into hole in peg bar. Rotate peg until angled end

points up. Pull peg out until peg sits properly in the peg bar.

Offset support arms must be installed in the peg bar so the notches in the air baffle can fit over them. Install support arms in the same manner as the pegs (with offset up).



3. Non-load bearing air baffle should run the same width as the peg bar. Air baffle rests on the two offset support arms. The notches in the air baffle must fit over the support arms. NOTE: The air baffle should be solid in design and positioned 1" in front of the rear duct and 5.5" back from the rear edge of the card moulding.



4. Card moulding is offset 2" in front and 3/4" above the pegs.

Slide the card moulding onto the two offset support arms. Center the card moulding so it is aligned with the peg bar. Secure the card moulding on the offset support arms with two spring clips. To remove card moulding, squeeze each spring clip together until the card moulding releases.



TYLER 8 and 12 foot cases have four foot sections for merchandising. 6 foot cases have three foot sections for merchandising. Further guidelines for section to section merchandising are listed below:

There are three basic ways that peg bars are used in our cases:

All peg bars at the same elevation: TYLER recommends that peg bar rows in adjacent sections of a case (including baffles) be installed at the same elevation. This will ensure that air flow from the perforated rear duct panels flows in and around the food products displayed on the pegs to best maintain the foods at the desired core product temperatures.

Peg bars at different elevations: If you choose this merchandising method, TYLER recommends that a vertical plexiglas partition be installed between the adjoining sections. This will ensure that air flow from the perforated rear duct panels flows in and around the food products displayed on the pegs to best maintain the foods at the desired core product temperatures.

Peg bars adjacent to TYLER shelving:

TYLER recommends a vertical plexiglas partition be installed between the adjoining sections. This will ensure that air flow from the perforated rear duct panels flows in and around the food products displayed on the pegs to best maintain the foods at the desired core product temperatures.

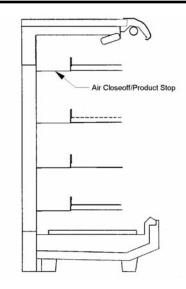
Rear Load Air Close-Off Information (N6DHPR Models)

NOTE

The air close-off/product stops are attached to the shelves at the factory.

- 8' cases use 32 1/2" air close-offs.
- 12' cases use 32 1/2" RH & LH side air close-offs and 37 1/4" center air close-offs.

Shelves are shipped in the proper position. If shelves are removed, be sure they are

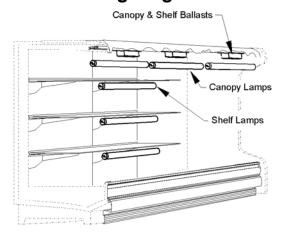


replaced in the proper order. It is necessary for proper air flow in the case. Omit shelf shown by dotted line for cases with only three rows of shelves.

SERVICE INSTRUCTIONS

See "General-UL/NSF I&S Manual" for T-8 lamp, canopy ballast, fan blade and motor, and color band and bumper replacement instructions.

Ballast and Lighting Locations



All light ballasts are located under the canopy and mounted above or on the top of the canopy light channel. This includes remote ballasts for optional shelf lights and optional nose lights, (if applicable). The canopy light(s) are under the canopy light channel in the top of the case. The optional shelf lights are mounted under the top interior liner above each shelf section.

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PARTS INFORMATION

Operational Parts List

Case Usage	Domestic					
Electrical Circuit		115 Volt	60 Hertz			
Case Size	4'	6'	8'	12'		
Fan Motors	9329327 16 Watt	9329327 16 Watt	9329327 16 Watt	9329327 16 Watt		
Opt. Fan Motor (Export) (N6DHPA/N6DNHPL)	9458941 16 Watt	9458941 16 Watt	9458941 16 Watt	9458941 16 Watt		
Fan Motor Brackets	5205112	5205112	5205112	5205112		
Fan Bracket Plate	9041077	9041077	9041077	9041077		
Fan Blades (8.75" 22° 5B)(N6DHPA)	9040683	9040683	9040683	9040683		
(8.75" 35° 5B) (N6DNHPL)	5643563	5643563	5643563	5643563		
(8.75" 37° 5B)(N6DHPR)			9305517	9305517		
Opt. ECM Fan Motors (N6DHPA/N6DNHPL)	9025003 16 Watt	9025003 16 Watt	9025003 16 Watt	9025003 16 Watt		
Opt. ECM Fan Motor Brackets	5205112	5205112	5205112	5205112		
Opt. ECM Fan Blades (8.75" 15° 5B)(N6DHPA)	9302353	9302353	9302353	9302353		
(8.75" 30° 5B)(N6DNHPL)	9407319	9407319	9407319	9407319		
T-8 Ballast (two lamp canopy)	5991029	5966635	5966635	5991030		
Opt. Ballast (T-8 shelf lamps) (N6DHPA/N6DHPR)	5966635	5966635	5966635	5966635		
Opt. Ballast (5th row shelf lamp) (N6DHPA/N6DHPR)	5991029	5991029	5991029	5991030		
T-8 Shelf Lampholder	5232279	5232279	5232279	5232279		
Light Switch	5100565	5100565	5100565	5100565		
NSF Product Thermometer	5967100	5967100	5967100	5967100		

For information on operational parts not listed above contact the TYLER Service Parts Department.



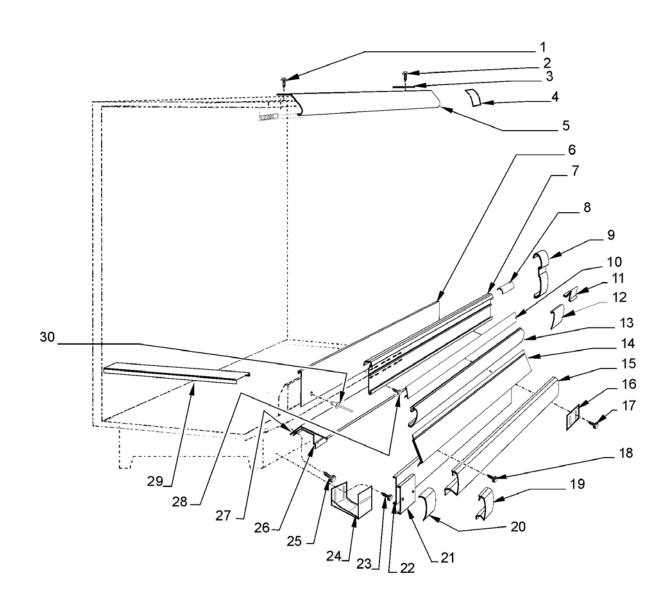
Cladding and Trim Parts List

Item	Description	4'	6'	8'	12'
1	Screw	5183536 (4)	5183536 (4)	5183536 (6)	5183536 (8)
2	Screw	5183536 (8)	5183536 (8)	5183536 (8)	5183536 (8)
3	End Cover	9026103 (2)	9026103 (2)	9026103 (2)	9026103 (2)
4	Canopy Joint Trim	9029422	9029422	9029422	9029422
5	Canopy Hood, Ptd.	9025221	9025222	9025223	9025224
6	Front Panel	9311775	5636774	5203468	5203469
7	Hand Rail/Bumper Retainer		color pe	er order	
8	Hand Rail Backer	9025316	9025316	9025316	9025316
9	Bumper End Trim		color pe	er order	
10	Color Band, Ptd.	9023790	9023795	9023798	9023800
11	Color Band Backer, Ptd.	9040223	9040223	9040223	9040223
12	Bumper Backer		color pe	er order	
13	Bumper		color pe	er order	
14	Front Cladding, Ptd.				
	(N6DHPLA)	9311746	9025135	9025136	9025137
	(N6DHPMA)	9304843	9025647	9025648	9025649
	(N6DHPHA)		9300395	9025650	9025651
	(N6DHPLR)			9025648	9025649
	(N6DHPMR)			9025650	9025651
	(N6DNHPL)	9311746	9025135	9025136	9025137
15	Raceway Cover		color pe	er order	
16	Raceway Cover Retainer	9023841 (2)	9023841 (2)	9023841 (4)	9023841 (6)
17	Screw (per retainer)	5183536 (2)	5183536 (2)	5183536 (2)	5183536 (2)
18	Screw	5183536 (5)	5183536 (7)	5183536 (9)	5183536 (12)
19	Raceway Cover End Trim		color pe	er order	
20	Raceway Cover Backer		color pe	er order	
21	Kickplate Joint Trim, Ptd.	9039020	9039020	9039020	9039020
22	Metal Kickplate, Ptd.	9324388	9324394	9324402	9324407
23	Shoulder Screw	9025833 (8)	9025833 (6)	9025833 (8)	9025833 (8)
24	Kickplate Support Assy.	9043402 (4)	9043402 (3)	9043402 (4)	9043402 (4)
25	Screw	5183536 (4)	5183536 (8)	5183536 (12)	5183536 (16)
26	Raceway Support	9041322 (4)	9041322 (4)	9041322 (6)	9041322 (8)
27	Raceway	9311760	9300242	9300243	9300244
28	Screw, Shoulder	9025833 (8)	9025833 (12)	9025833 (16)	9025833 (24)

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Item	Description	4'	6'	8'	12'
29	Horizontal End Trim (N6DHPA)	5211585	5211585	5211585	5211585
	(N6DHPR)			5211585	5211585
	(N6DNHPL)	9311972	9311972	9311972	9311972
30	Pop Rivet	5105037 (5)	5105037 (5)	5105037 (10)	5105037 (14)



N6DHPMA ILLUSTRATED



Revision Log

This log sheet is intended to track both major and minor revisions to this manual, and to describe what the nature of the revision is. Revision identification is located in the lower right corner of the cover page.

Major revisions are lettered alphabetically, dated accordingly, and require reprinting for inclusion with the product at shipment. Minor revisions are denoted after the major revision with a "period" followed by a sequential number, and do not require a printed update. All manuals with any revision changes will be available in electronic PDF format on the Tyler Refrigeration website.

Content changes that determine the type of revisions are decided on a case-by-case basis by Tyler internal management. This revision log was created in October of 2008.

	REVISION TYPE			
DATE	MAJOR	MINOR	DESCRIPTION	RESULTS
Oct 2008		G.1	Changed wiring diagrams Updated General Information	added terminal blocks to electrical added metal edge trim replacement.

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