



Your Solutions Partner

Installation and Operation Manual

Drop-In Cold Pans:

**Mechanical Ice Assist - 5" and 8" Deep
Standard and Slimline**

**Mechanical NSF7- 8" and 10" Deep
Standard and Slimline**



ADI-4M



4MD-N7



ADI-4MD



SLIMLINE
ADI-3MSL



SLIMLINE
ADI-3MDSL-N7

CAUTION: Please read this manual completely before attempting to install, operate or service this equipment

 **WARNING for CA residents:** go to www.dukemfg.com/prop65 for prop 65 warning

*This manual is Copyright © 2020 Duke Manufacturing Co. All rights reserved.
Reproduction without written permission is prohibited. Duke is a registered
trademark of the Duke Manufacturing Co.*

**P/N 229229
REV B 6/24/2020**

TABLE OF CONTENTS

Important Safety Instructions..... 2-3

Wire Diagrams 4

 Wire Diagram- Mechanical Assist 4

 Wire Diagram - Standard 7 and Slimline 5

Specifications..... 10

 Specifications Mechanical Assist - 5" and 8" Deep 6-7

 Specifications Mechanical Assist - 5" and 8" Deep - Slimline 8-9

 Specifications Standard 7 - 8" and 10" 10

 Specifications Drop-in Slimline 10" NSF7 11

Installation 12

Operation 9

Cleaning Instructions..... 10

Preventive Maintenance 11

IMPORTANT SAFETY INSTRUCTIONS

Throughout this manual, you will find the following safety words and symbols that signify important safety issues with regards to operating or maintaining the equipment.



Indicates a hazardous situation which, if not avoided, could result in death or serious injury.



Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.



Indicates Important Information



Indicates electrical shock hazard which, if not avoided, could result in death or serious injury and/or equipment damage.

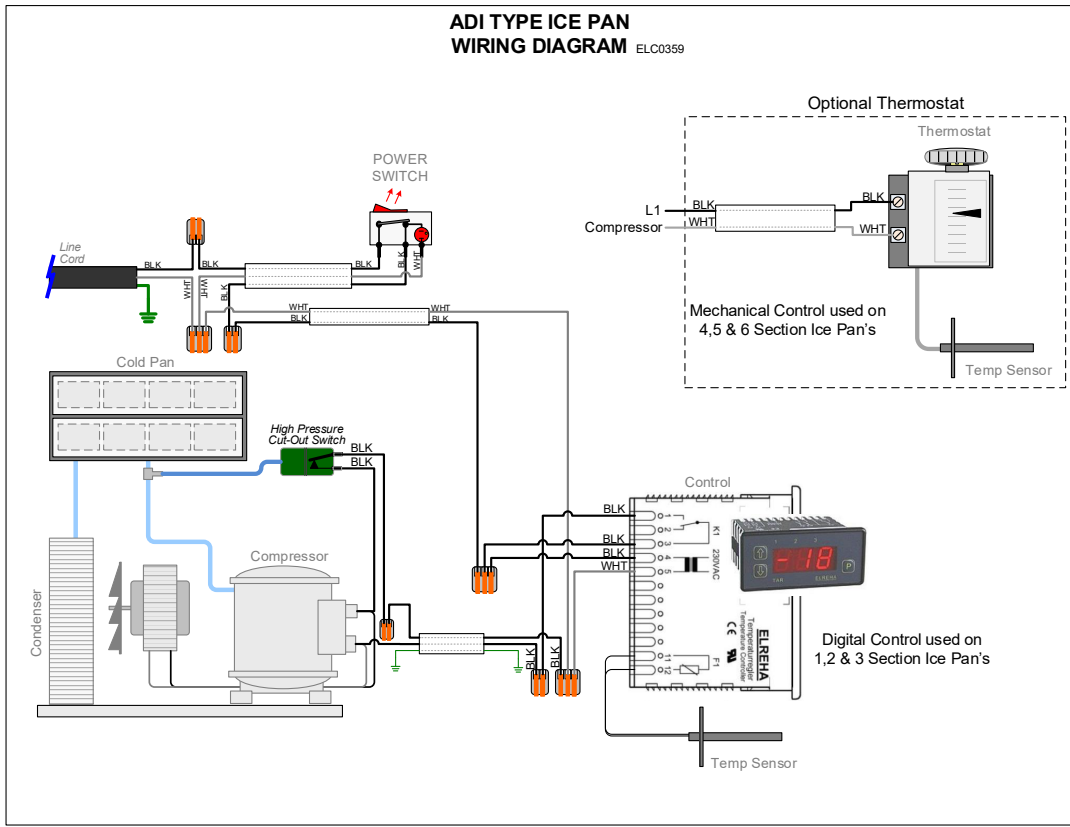
In addition to the warnings and cautions in this manual, use the following guidelines for safe operation of the unit.

- Read all instructions before using equipment.
- For your safety, the equipment is furnished with a properly grounded cord connector. Do not attempt to remove or disconnect the grounded connector.
- Install or locate the equipment only for its intended use as described in this manual.
- Do not use corrosive chemicals on this equipment.
- Do not operate this equipment if it has a damaged cord or plug, if it is not working properly, or if it has been damaged or dropped.
- This equipment should be serviced by qualified personnel only. Contact the nearest Duke authorized service facility for adjustment or repair.
- Do not block or cover any openings on the unit.
- Do not immerse cord or plug in water.
- Keep cord away from heated surfaces.
- Do not allow cord to hang over edge of table or counter.

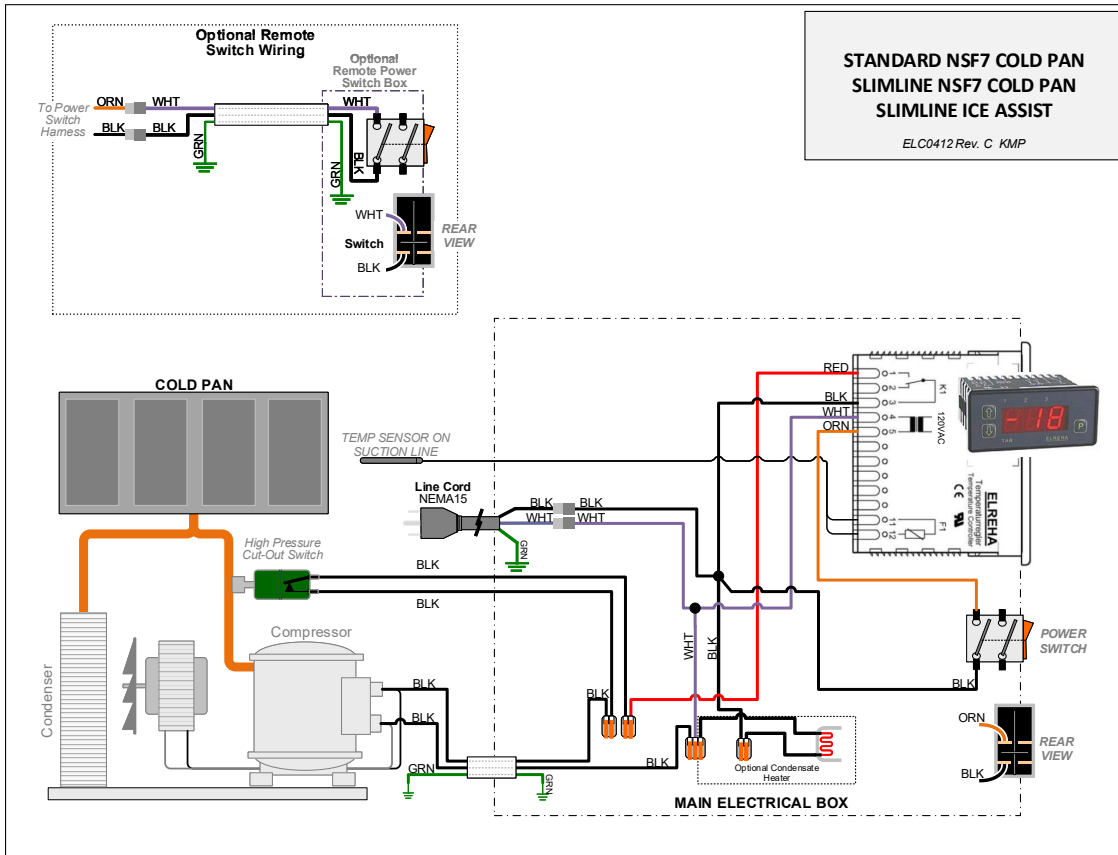
The following warnings and cautions appear throughout this manual and should be carefully observed.

- Turn the unit off, disconnect the power source and allow unit to cool down before performing any service or maintenance on the unit.
- The procedures in this manual may include the use of chemical products. You must read the Material Safety Data Sheets before using any of these products.
- The unit should be grounded according to local electrical codes to prevent the possibility of electrical shock. It requires a grounded receptacle with dedicated electrical lines, protected by fuses or circuit breaker of the proper rating, in accordance with all applicable regulations.
- Disposal of the unit must be in accordance with local environmental codes and/or any other applicable codes.
- This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.

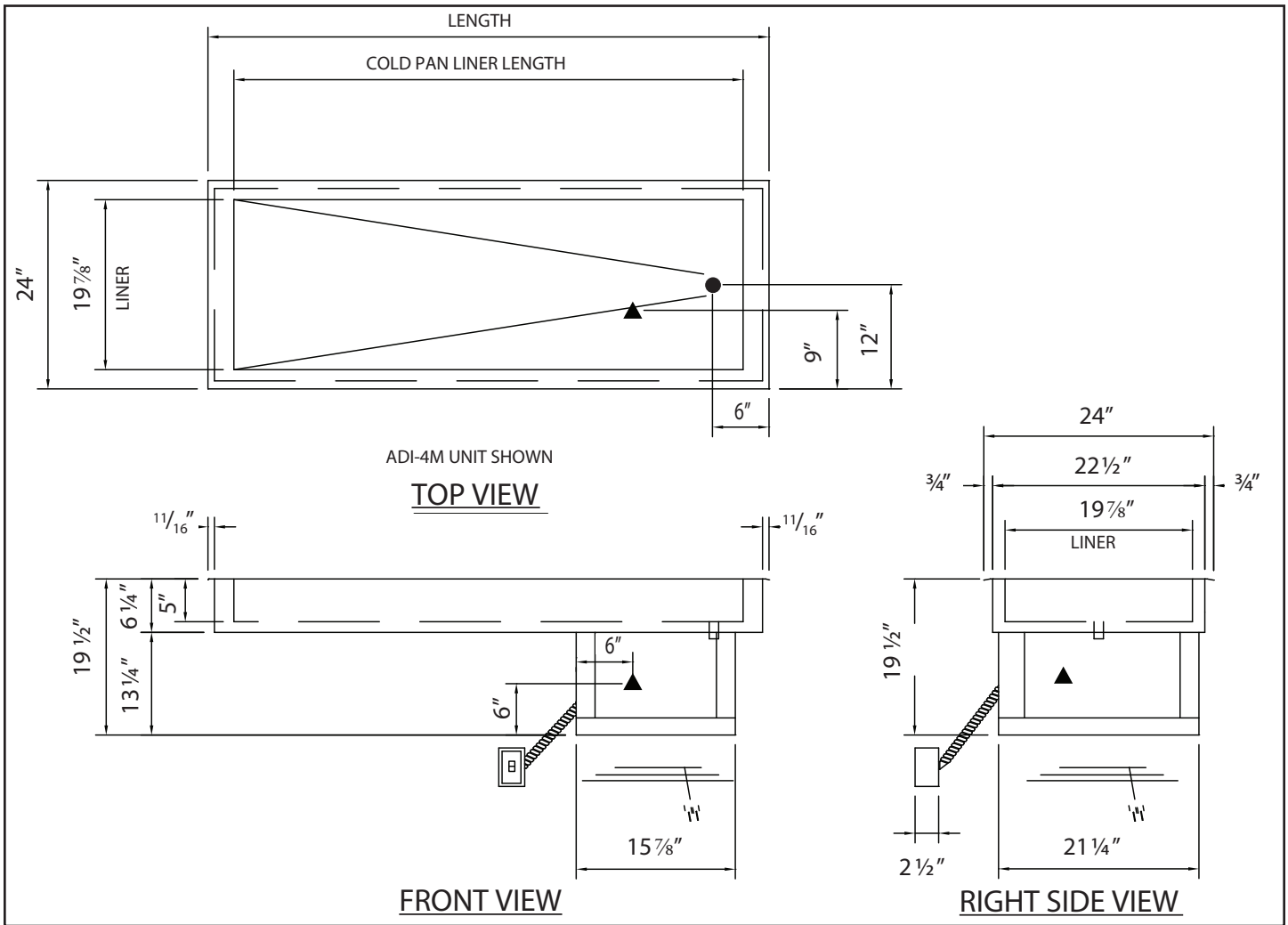
WIRE DIAGRAM- MECHANICAL ASSIST



WIRE DIAGRAM - STANDARD 7 AND SLIMLINE



SPECIFICATIONS MECHANICAL ASSIST - 5" DEEP



ELECTRICAL SPECIFICATIONS: 120V, 1P, 60Hz

DIMENSIONS:

Liner Depth - 4.00" (10.16cm)

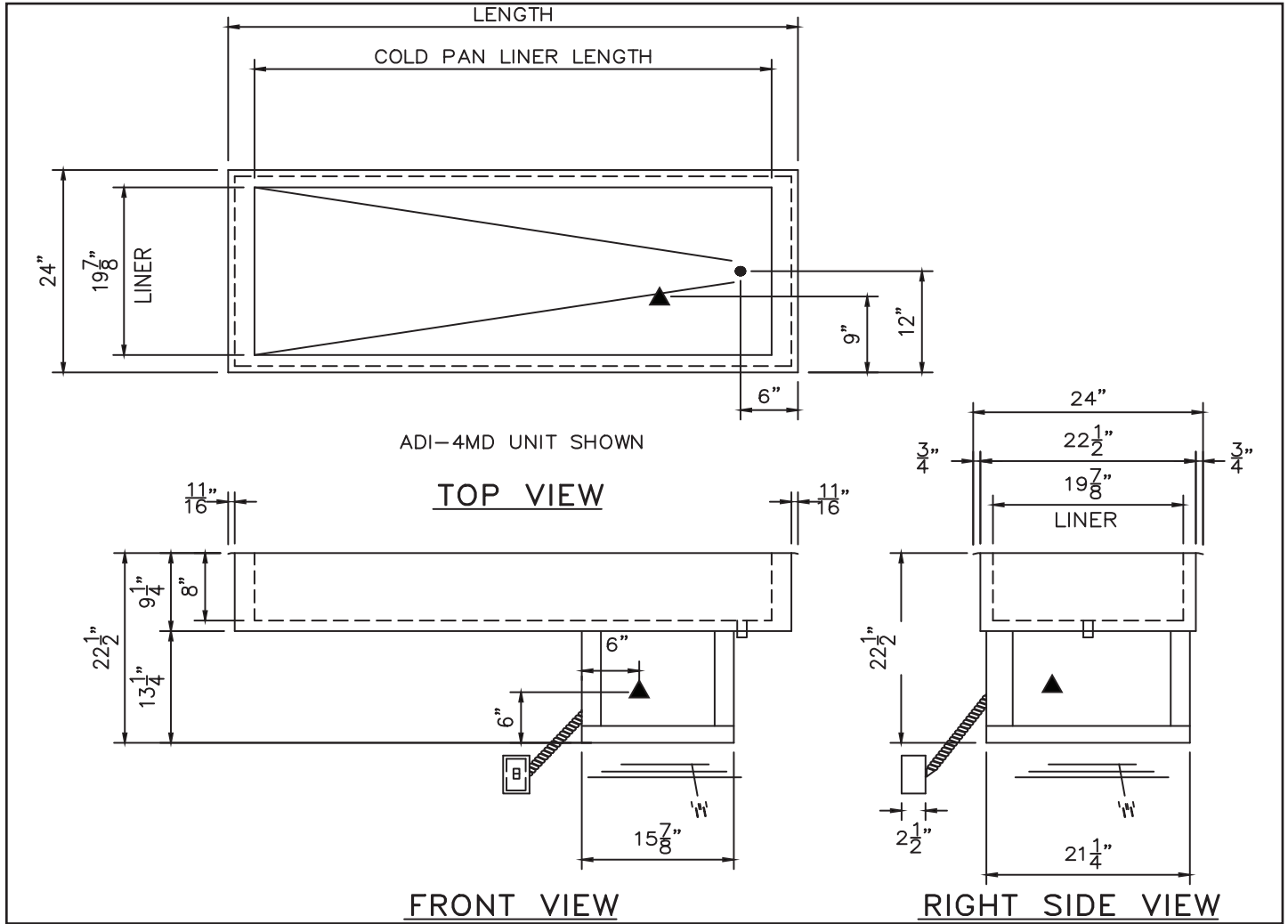
Overall Width - 19-7/8" (50.6 cm)

Width Cutouts - 23.0" (58.4 cm)

REMOTE CONTROL CUTOUT IS 4-1/8" H X 2-3/16" W

Model	AMPS	HP	Refrig. R448a	Overall Length		Cold Pan - Liner Length		Cutout -Length		Adapter Bars
			ozs./grms	in	cm	in	cm	in	cm	
ADI-1M	5.15	1/4	9.5/269	18	45.7	12	30.5	17	44.5	0
ADI-2M	5.15	1/4	11/312	32	81.3	26	66.0	31	80.0	1
ADI-3M	5.15	1/4	11/312	46	116.8	40	101.6	45	115.6	2
ADI-4M	5.15	1/4	16/453	60	152.4	54	137.2	59	151.1	3
ADI-5M	5.15	1/4	17/482	74	188.0	68	172.7	73	186.7	4
ADI-6M	5.15	1/4	19.75/560	88	223.5	82	208.3	87	222.3	5

SPECIFICATIONS MECHANICAL ASSIST - 8" DEEP



ELECTRICAL SPECIFICATIONS: 120V, 1P, 60Hz

DIMENSIONS:

Liner Depth - 6.00" (15.24 cm)

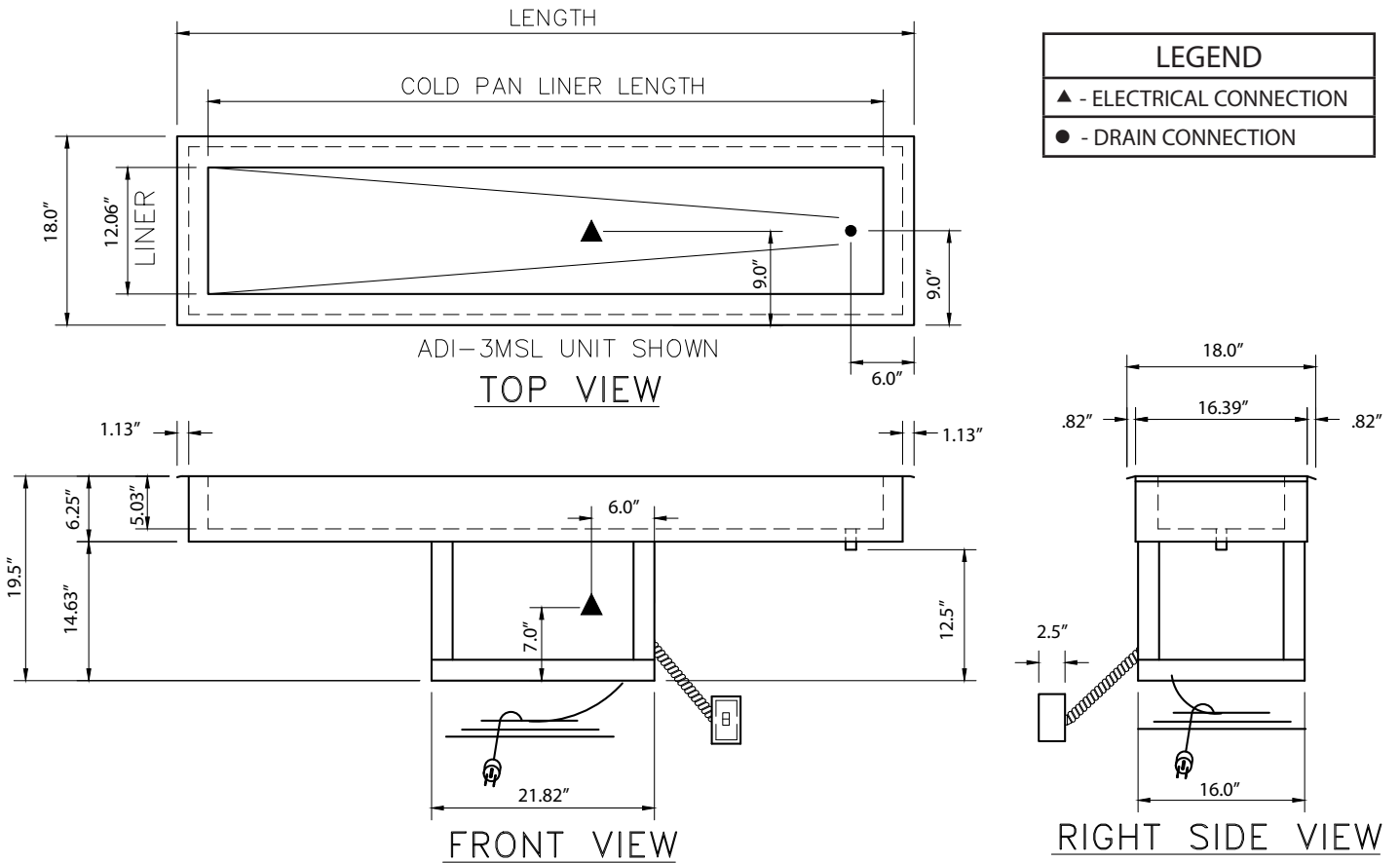
Overall Width - 19-7/8" (50.6 cm)

Width Cutouts - 23.0" (58.4 cm)

REMOTE CONTROL CUTOUT IS 4-1/8" H X 2-3/16" W

Model	AMPS	HP	Refrig. R448a	Overall Length		Cold Pan - Liner Length		Cutout -Length		Adapter Bars
			ozs./grms	in	cm	in	cm	in	cm	
ADI-1MD	5.15	1/4	9/255	18	45.7	12	30.5	17	44.5	0
ADI-2MD	5.15	1/4	10.5/298	32	81.3	26	66.0	31	80.0	1
ADI-3MD	5.15	1/4	9.25/262	46	116.8	40	101.6	45	115.6	2
ADI-4MD	5.15	1/4	15/425	60	152.4	54	137.2	59	151.1	3
ADI-5MD	5.15	1/4	15/425	74	188.0	68	172.7	73	186.7	4
ADI-6MD	5.15	1/4	12/340	88	223.5	82	208.3	87	222.3	5

SPECIFICATIONS MECHANICAL ASSIST - 5" DEEP - SLIMLINE



ELECTRICAL SPECIFICATIONS

Model	120 Volt	
	Amps	HP
ADI-2MSL	4.26	1/4
ADI-3MSL	4.26	1/4

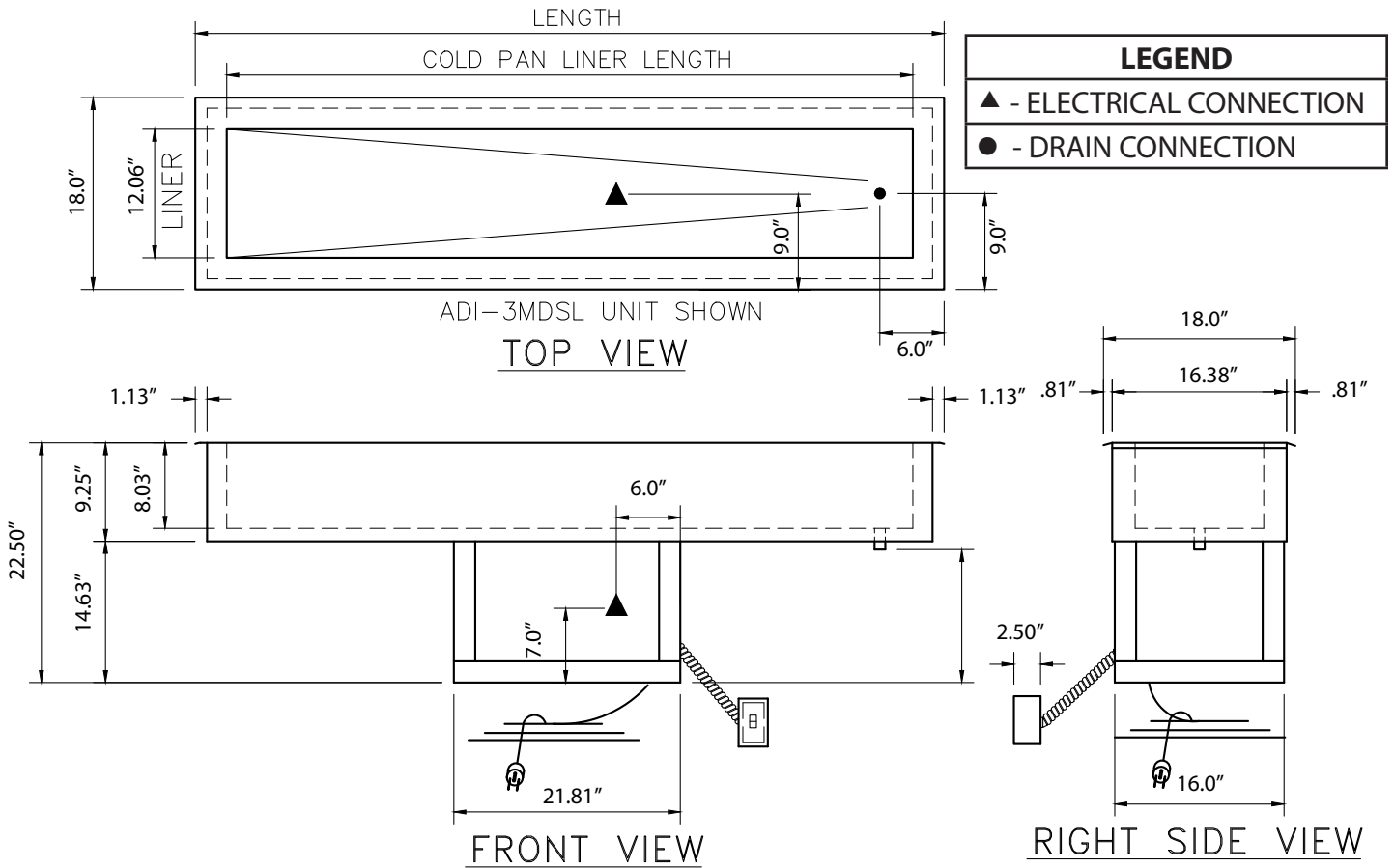
DIMENSIONS - Liners are 11-7/8" (30.3 cm) W; cutouts 16-3/4" (42.3cm) W

FREIGHT CLASS: 100

Model	Length		Width		Height		Cube ft crated	Weight		Cold Pan - L		Cutout - L	
	in.	cm	in	cm	in	cm		lbs	kg	in	cm	in	cm
ADI-2MSL	48 ¼	122.6	18	45.7	19 ½	46.4	18.1	155	70.5	42 ¼	107.3	47	121.9
ADI-3MSL	70 ¼	178.4	18	45.7	19 ½	46.4	25.5	205	93.2	64 ¼	163.2	69	178.0

REMOTE CONTROL CUTOUT IS 4-1/8" H X 2-3/16" W

SPECIFICATIONS MECHANICAL ASSIST - 8" DEEP - SLIMLINE



ELECTRICAL SPECIFICATIONS

Model	120 Volt	
	Amps	HP
ADI-2MDSL	4.26	1/4
ADI-3MDSL	4.26	1/4

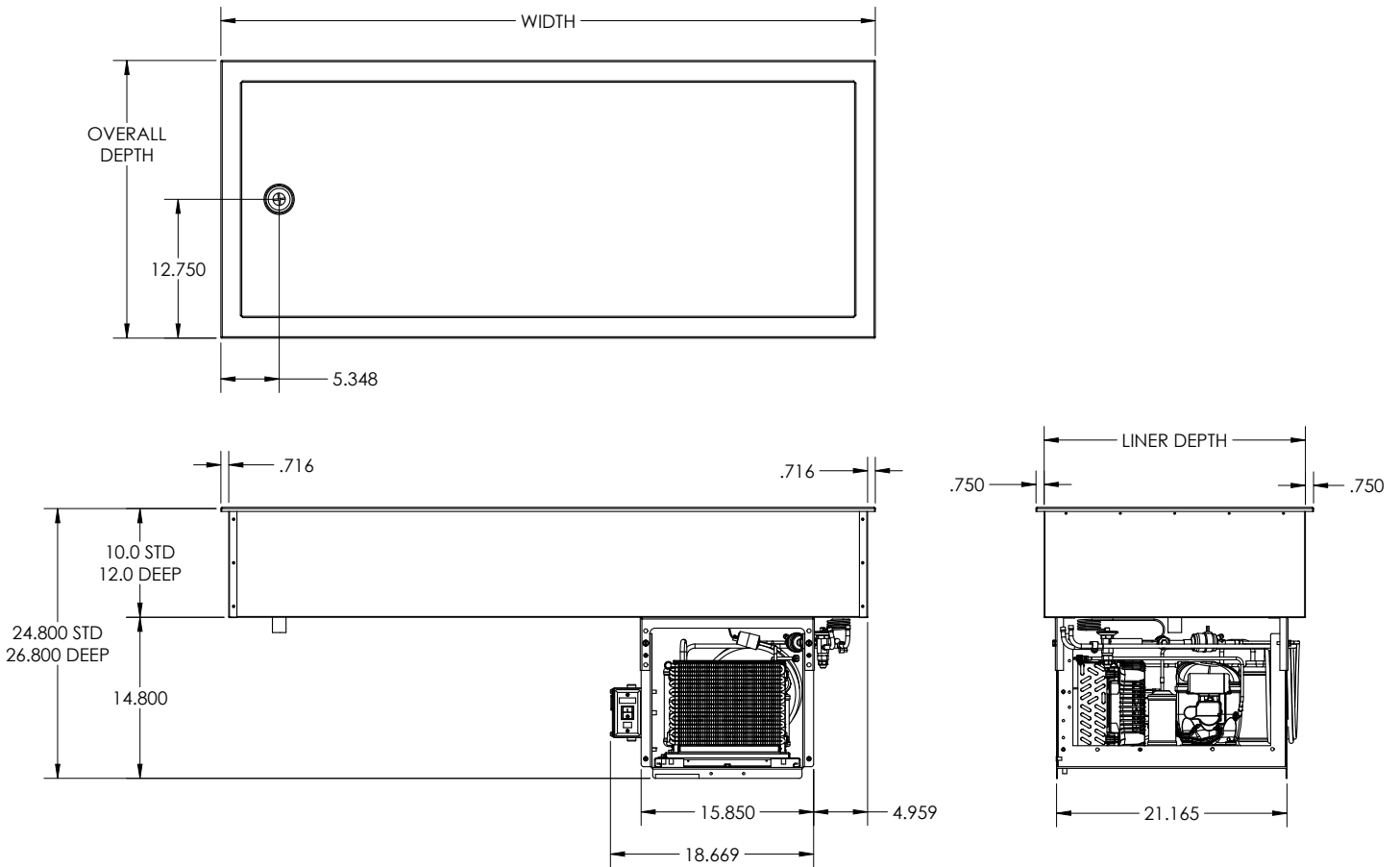
DIMENSIONS - Liners are 11-7/8" (34.7cm) W; cutouts 16-3/4" (42.3cm) W

FREIGHT CLASS: 100

Model	Length		Width		Height		Cube ft crated	Weight		Cold Pan - L		Cutout - L	
	in	cm	in	cm	in	cm		lbs	kg	in	cm	in	cm
ADI-2MDSL	48 1/4	122.6	18	45.7	22 1/2	57.2	20.2	165	75.0	42 1/4	107.3	47	119.4
ADI-3MDSL	70 1/4	178.4	18	45.7	22 1/2	57.2	28.4	225	102.3	64 1/4	163.2	69	175.3

REMOTE CONTROL CUTOUT IS 4-1/8"H X 2-3/16"W

SPECIFICATIONS STANDARD 7 - 8" AND 10"



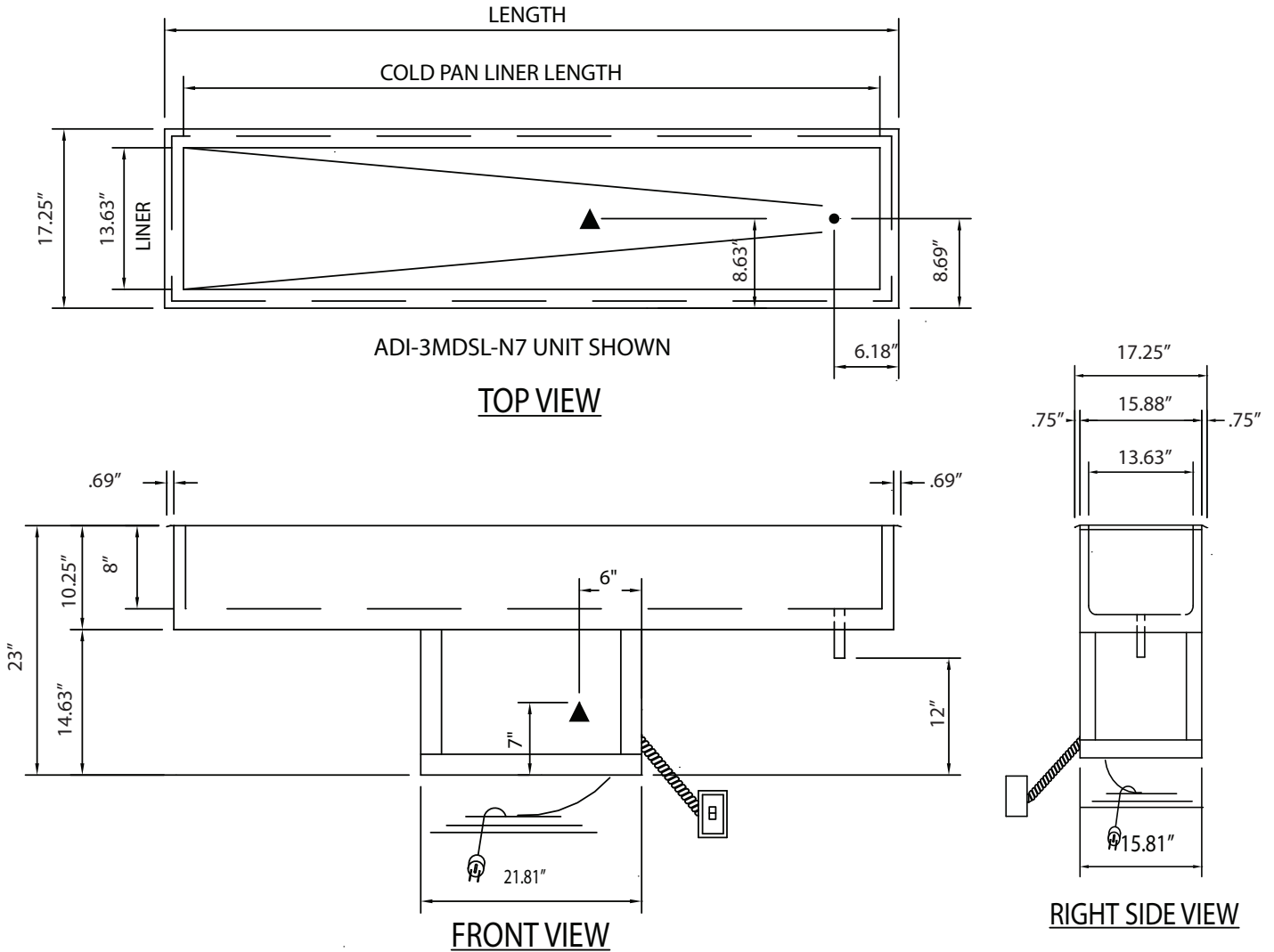
ELECTRICAL SPECIFICATIONS: 120V, 1P, 60Hz

DIMENSIONS:

Liner Depth - 24.00" (60.96cm)
Overall Depth - 25-1/2" (64.77cm)
Depth Cutouts - 24-3/4" (62.3 cm)

Model	AMPS	HP	Refrig.	Overall Width		Cold Pan - Liner Width		Cutout -Width	
			R448a	in	cm	in	cm	in	cm
1M-N7	6.14	.33	13.25	18.875	45.7	16.750	42.55	17.250	43.82
2M-N7	6.14	.33	15.25	32.875	81.3	30.750	78.11	31.250	79.38
3M-N7	6.78	.5	15.5	46.875	116.8	44.750	113.67	45.250	114.94
4M-N7	6.78	.5	17	60.875	152.4	58.750	149.23	59.250	150.49
5M-N7	6.78	.5	20	74.875	188.0	72.750	184.79	73.250	186.06
6M-N7	6.78	.5	20.25	88.875	223.5	86.750	220.35	87.250	221.62
1MD-N7	6.14	.33	13.25	18.875	45.7	16.750	42.55	17.250	43.82
2MD-N7	6.14	.33	15.25	32.875	81.3	30.750	78.11	31.250	79.38
3MD-N7	6.78	.5	15.5	46.875	116.8	44.750	113.67	45.250	114.94
4MD-N7	6.78	.5	17	60.875	152.4	58.750	149.23	59.250	150.49
5MD-N7	6.78	.5	20	74.875	188.0	72.750	184.79	73.250	186.06
6MD-N7	6.78	.5	20.25	88.875	223.5	86.750	220.35	87.250	221.62

SPECIFICATIONS DROP-IN SLIMLINE 8" NSF7



ELECTRICAL:

Model	120 Volt	
	Amps	HP
ADI-2MSL-N7	4.26	1/4
ADI-3MSL-N7	4.26	1/4

LEGEND	
▲	ELECTRICAL CONNECTION
●	DRAIN CONNECTION

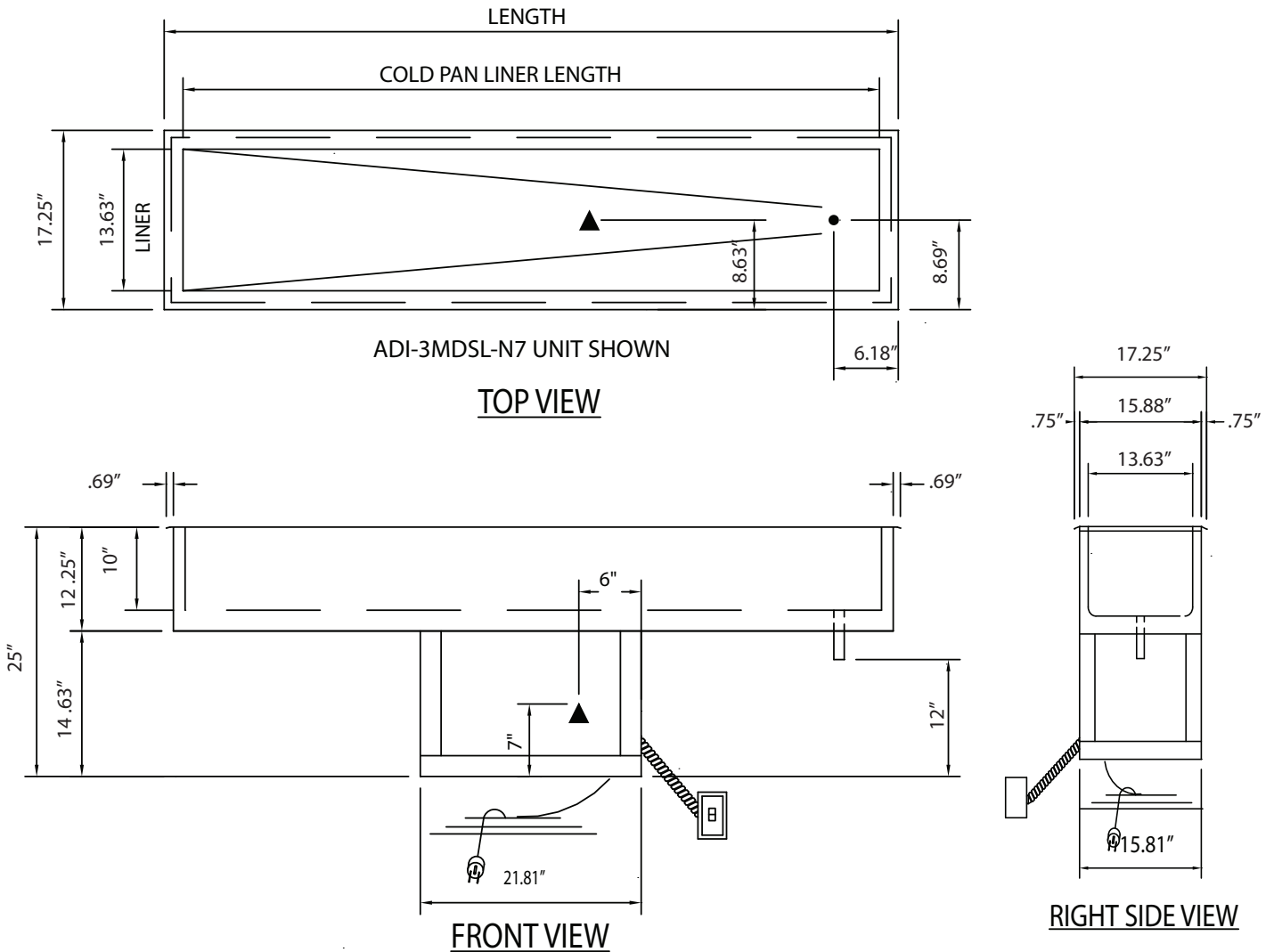
DIMENSIONS - Liners are 13-5/8" (34.7 cm) W; cutouts 16-3/4" (42.5 cm) W

FREIGHT CLASS: 100

Model	Length		Width		Height		Cube ft crated	Adapter Bars	Weight		Cold Pan - L		Cutout - L	
	in.	cm	in	cm	in	cm			lbs	kg	in	cm	in	cm
ADI-2MSL-N7	48 3/4	123.8	17-3/8	44.2	23	61.0	18.1	1	155	70.5	45-1/8	114.3	47 3/4	121.9
ADI-3MSL-N7	70 3/4	179.7	17-3/8	44.2	23	61.0	25.5	2	205	93.2	67-1/8	170.2	69 3/4	177.8

REMOTE CONTROL CUTOUT IS 4-1/8" H X 2-3/16" W

SPECIFICATIONS DROP-IN SLIMLINE 10" NSF7



ELECTRICAL:

Model	120 Volt	
	Amps	HP
ADI-2MDSL-N7	4.26	1/4
ADI-3MDSL-N7	4.26	1/4

LEGEND	
▲	ELECTRICAL CONNECTION
●	DRAIN CONNECTION

DIMENSIONS - Liners are 13-5/8" (34.7 cm) W; cutouts 16-3/4" (42.5 cm) W

FREIGHT CLASS: 100

Model	Length		Width		Height		Cube ft crated	Adapter Bars	Weight		Cold Pan - L		Cutout - L	
	in.	cm	in	cm	in	cm			lbs	kg	in	cm	in	cm
ADI-2MDSL-N7	48 3/4	123.8	17-3/8	44.2	25	61.0	20.2	1	165	75	45-1/8	114.3	47 3/4	121.9
ADI-3MDSL-N7	70 3/4	179.7	17-3/8	44.2	25	61.0	28.4	2	225	102.3	67-1/8	170.2	69 3/4	177.8

REMOTE CONTROL CUTOUT IS 4-1/8" H X 2-3/16" W

INSTALLATION

WHEN MOUNTING BY THE OVERHANGING TOP RIM (IN A CUT-OUT IN THE COUNTER TOP):

The underside of the overhanging top rim should have applied to it a generous bead of food grade silicone sealant before the unit is set into the cut-out in the counter top. In order to relieve part of the load from the top rim, the unit should be supported from below with metal components in a manner compatible with the construction of the counter. Any excess sealant which squeezes out between the unit top rim and counter top should be wiped off before the sealant cures or stripped away with a sharp knife after curing.

⚠️ WARNING Improper installation, adjustment, alteration, service or maintenance can cause property damage, injury or death. Read the installation, operating and maintenance instructions thoroughly before installing this equipment.

⚠️ CAUTION When installing a drop-in refrigerated unit it is essential to insure proper air flow into and out of the cabinet surrounding the unit. Improper ventilation will cause your compressor to burn out and will void the warranty.

⚠️ CAUTION **This equipment is to be installed to comply with applicable Federal, State or Local Plumbing Code. Consult local codes as to the type of drain hook-up required in your area.**

DRAIN CONNECTION:

The unit is designed to be used with or without a drain hook-up. The drain is supplied with a hose attached for use with a drain pan, or may be hooked up to a floor or sink drain.

⚠️ CAUTION ⚡ Electricity and water do not mix. Unplug the unit before cleaning. If repairs are required, use a qualified service agent. While repairs are being made, be sure the unit is not plugged in. Do not store highly combustible substances on or near the unit. Be sure the compressor compartment has adequate ventilation.

⚠️ CAUTION

ELECTRICAL CONNECTIONS:

The unit is designed to be operated on one (1) 15 amp dedicated circuit. The unit must be grounded. The receptacle, wired circuit, and protection should meet the required local codes for proper operation. If the supply cord is damaged, it must be replaced by the manufacturer, it's service agent or an authorized service company in order to avoid a hazard.

⚠️ CAUTION

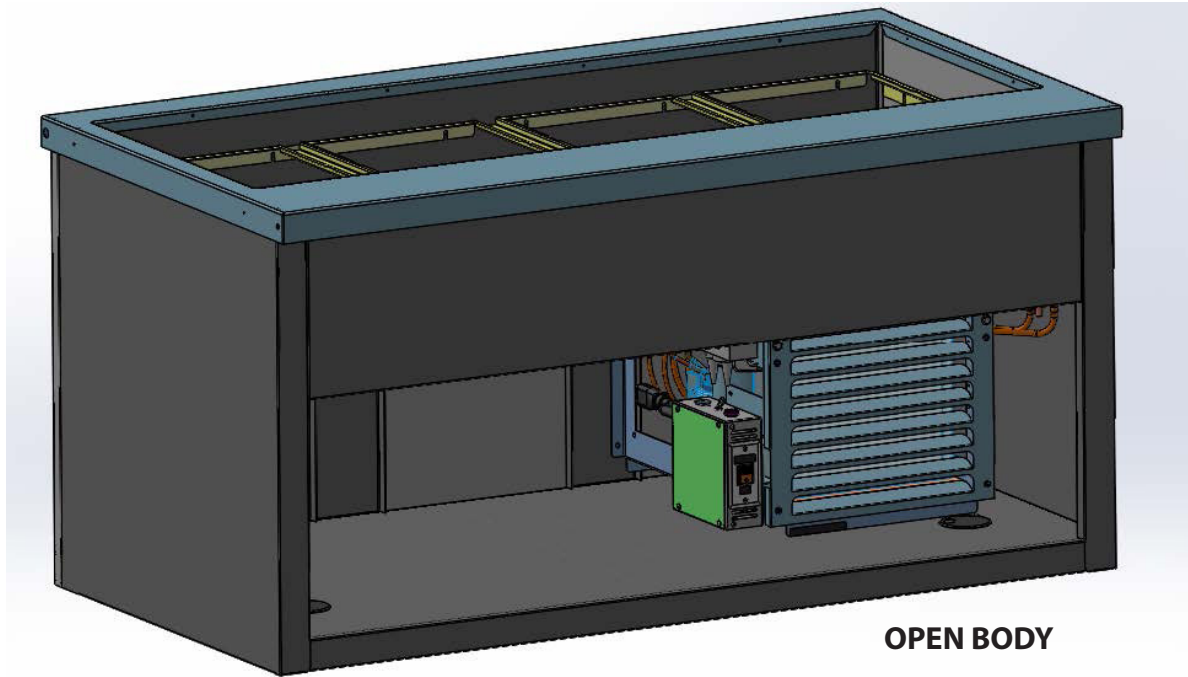
The cold pan is designed to hold pre-chilled products at suitable serving temperature. It is **not** designed to chill products or store them for long periods of time. Due to the variety of food products served from the cold pan, they should be stirred periodically to maintain consistent temperature. Foods that are not stirred periodically can become too warm on the top surface and freeze at the bottom.

Prior to use, the unit should be turned on to lower the pan temperature before the chilled product is set in place. The unit should shut down daily for defrosting and cleaning.

INSTALLATION - continued

DROP-IN COLD PAN - AIR FLOW OPEN BODY

Air intake louver mounts directly to cage support.
No shroud or exhaust required for open body configuration.

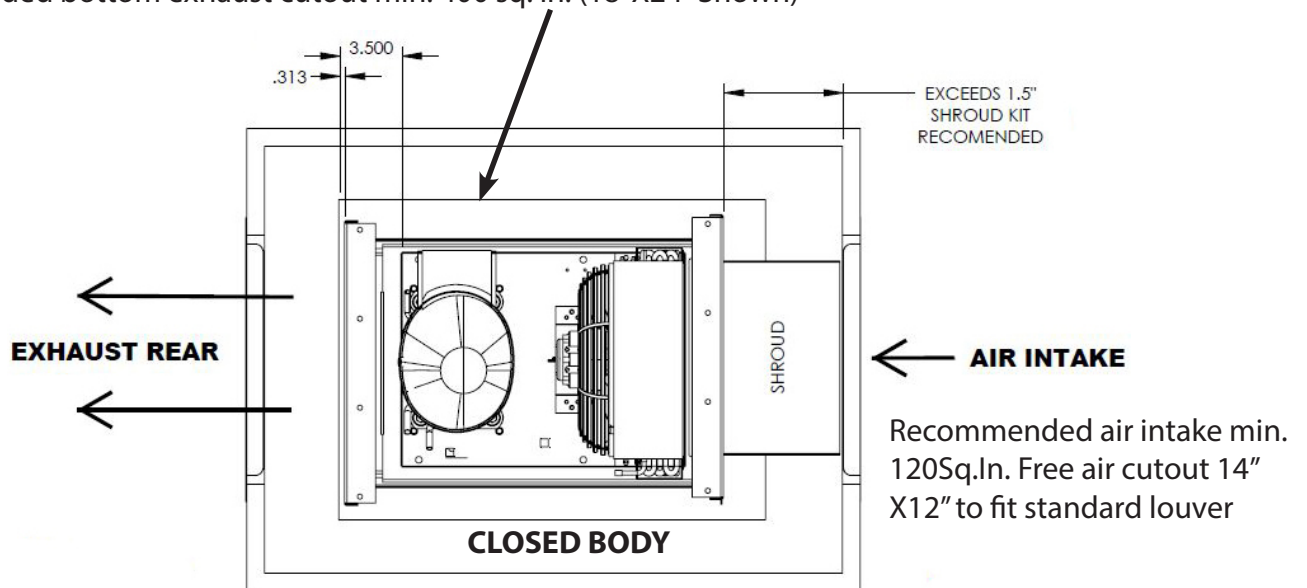


DROP-IN COLD PAN - AIR FLOW CLOSED BODY

Exhaust options rear or bottom required for closed body configuration.

EXHAUST OPTION-1

Recommended bottom exhaust cutout min. 400 sq. in. (18"X24" Shown)



EXHAUST OPTION 2

Recommended rear exhaust min. 200 Sq. In.
Free air cutout 18"X16" to fit standard louver.

OPERATION - MECHANICAL ICE ASSIST UNITS

ADDING ICE:

This unit is designed to add ice for optimum performance. For food safety fill unit with ice until it touches the bottom of all food pans and maintain during operation.

CONTROLS:

Your mechanical cold pan or salad bar has been preset in the factory to satisfy most applications. Due to conditions which may exist in your operation, you should not need to adjust the pressure control on your unit for colder or warmer temperature. The pressure control is located behind the louvered grill in the compressor compartment. Normally, the pressure control set point & differential are marked on control as factory settings. It is possible to adjust the temperatures for special cases but it is recommend to contact an authorized service agent prior to field adjustments to controls.

NOTE: New Cold Pans are all pressure control. The thermostat has been removed.

PRESSURE CONTROL: The pressure control is set at the factory for optimized settings that work in all ambient temperatures. Adjusting is not recommended unless the manufacture suggests. If Cold Pan appears to require an adjustment to the control settings please contact authorized service agent.

CAUTION Field adjustment of the “differential” setting must not be made by other than qualified refrigeration service personnel. Unauthorized tampering with the “differential” setting may void the warranty on this equipment.

MECHANICAL THERMOSTAT



On mechanical assist Only
4M, 4MD, 5M, 5MD, 6M, 6MD

Probe attached to the Evaporator outlet tube (Unless Noted Otherwise)

DIGITAL CONTROL



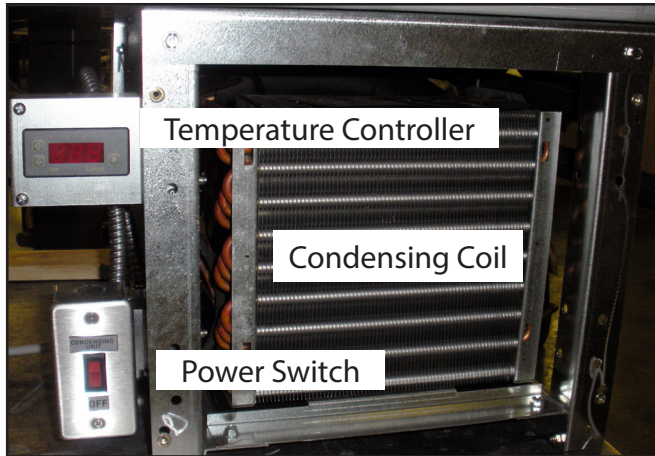
ON ALL OTHER MODELS

SEE WIRE DIAGRAMS FOR DETAIL

OPERATION - STANDARD 7 AND SLIMLINE UNITS

General Operating Instructions:

Turn Cold Pan Unit on by positioning power switch to the up position.



Power Switch



Digital Display

Adjusting Thermostatic Digital Control :

Your cold pan has been preset in the factory to satisfy most applications. Due to conditions which may exist in your operation, you may need to adjust the thermostat on your unit for colder or warmer temperature. The thermostat is located under the unit and to the left of the condensing unit. The temperature of your unit may be adjusted by pressing the up (to raise) or down (to lower) arrow. The set point is shown in the display and starts blinking. Press up or down arrow to change set point. After 3 seconds the display stops blinking and returns to actual temperature.

CLEANING INSTRUCTIONS - DROP-IN COLD PAN

GENERAL CLEANING:

- Always clean equipment thoroughly before first use.
- Scoop out any remaining ice.
- Drain any ice melt from unit.

CAUTION Make sure there is a bucket or that the unit is above a floor drain.

DAILY CLEANING:

- Clean unit, using warm, soapy water or mild detergent.
- A plastic scouring pad and a mild detergent may be used to remove hardened food.

WARNING Do not use steel wool as this will cause the unit to rust and void any warranty.

PREVENTIVE MAINTENANCE

REFRIGERATED UNIT CONDENSER COILS:

- Turn off unit at breaker before doing extensive refrigeration compartment cleaning or servicing.

If any buildup is present on the coil take the following steps:

- If the buildup on the coil consists of only light dust and debris the condenser coil can be cleaned with a simple brush, heavier dust build up may require a vacuum or even compressed air to blow through the condenser coil.
- If heavy grease is present degreasing agents are available for refrigeration use and specifically for the condenser coils. The condenser coil may require a spray with the degreasing agent and then blown through from the inside out, with compressed air.
- Failure to maintain a clean condenser coil can initially cause high temperatures and excessive run times. Continuous operation with dirty or clogged condenser coils can result in compressor or fan failures. Neglecting the condenser coil cleaning procedures will void any warranties associated with the compressor or cost to replace the compressor and/or fan.



Your Solutions Partner

Duke Manufacturing Co.

2305 N. Broadway
St. Louis, MO 63102

Phone: 314-231-1130

Toll Free: 1-800-735-3853

Fax: 314-231-5074

www.dukemfg.com