

## **Shelleyglas®/Shelleysteel® Serving Lines**

### **Installation, Operation and Maintenance Manual**



\*Some models shown with optional accessories

#### **Caution**

**Original Document**

Read this instruction before operating this equipment.



## Safety Notices

### **Warning**

Read this manual thoroughly before operating, installing or performing maintenance on the equipment. Failure to follow instructions in this manual can cause property damage, injury or death.

### **DANGER**

Failure to disconnect the power at the main power supply disconnect could result in serious injury or death. The power switch DOES NOT disconnect all incoming power.

### **DANGER**

Do not install or operate equipment that has been misused, abused, neglected, damaged, or altered/modified from that of original manufactured specifications.

### **DANGER**

All utility connections and fixtures must be maintained in accordance with local and national codes.

### **DANGER**

Serious injury or death can occur from inhaling high concentrations of refrigerant vapors. These vapors also reduce oxygen levels in confined areas. Contact with liquid can cause frostbite. All containers, equipment and hoses are under high pressure. Do not puncture or damage these components.

### **Warning**

Use caution when handling metal surface edges of all equipment.

### **Warning**

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 concerning use of the appliance by a person responsible for their safety. Do not allow children to play with this appliance.

### **Warning**

Do not store or use gasoline or other flammable vapors or liquids in the vicinity of this or any other appliance. Never use flammable oil soaked cloths or combustible cleaning solutions, for cleaning.

### **Warning**

This product contains chemicals known to the State of California to cause cancer and/or birth defects or other reproductive harm. Operation, installation, and servicing of this product could expose you to airborne particles of glasswool or ceramic fibers, crystalline silica, and/or carbon monoxide. Inhalation of airborne particles of glasswool or ceramic fibers is known to the State of California to cause cancer. Inhalation of carbon monoxide is known to the State of California to cause birth defects or other reproductive harm.

### **Warning**

Authorized Service Representatives are obligated to follow industry standard safety procedures, including, but not limited to, local/national regulations for disconnection / lock out / tag out procedures for all utilities including electric, gas, water and steam.

### **Warning**

DO NOT touch refrigeration lines inside units; some may exceed temperatures of 200°F (93.3°C).

### **Warning**

Do not damage the refrigeration circuit when installing, maintaining or servicing the unit.

### **Caution**

Maintenance and servicing work, other than cleaning as described in this manual, must be done by an authorized service personnel.

### **Notice**

Proper installation, care and maintenance are essential for maximum performance and trouble-free operation of your equipment. Visit our website [www.mtwkitchencare.com](http://www.mtwkitchencare.com) for manual updates, translations, or contact information for service agents in your area.



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# Section 1

## General Information

### Model Numbers

This manual covers the following standard counters.

Description	Shelleyglas®	Shelleysteel®
<b>Mobile All-Purpose Counters</b>	KC-28	SC-28
	KC-28-NU	SC-28-NU
	KC-36	SC-36
	KC-36-NU	SC-36-NU
	KC-50	SC-50
	KC-50-NU	SC-50-NU
	KC-60	SC-60
	KC-60-NU	SC-60-NU
	KC-74	SC-74
	KC-74-NU	SC-74-NU
	KC-96	SC-96
	KC-96-NU	SC-96-NU
<b>Frost Top Serving Counters</b>	KCFT-36-NUP	SCFT-36-NUP
	KCFT-50-NUP	SCFT-50-NUP
	KCFT-60-NUP	SCFT-60-NUP
	KCFT-74-NUP	SCFT-74-NUP
	KCFT-96-NUP	SCFT-96-NUP
<b>Mobile Ice Pan Counter</b>	KCI-36	SCI-36
	KCI-36-NU	SCI-36-NU
	KCI-50	SCI-50
	KCI-50-NU	SCI-50-NU
	KCI-60	SCI-60
	KCI-60-NU	SCI-60-NU
	KCI-74	SCI-74
	KCI-74-NU	SCI-74-NU
	KCI-96	SCI-96
	KCI-96-NU	SCI-96-NU
<b>Mobile Cashier's Counters</b>	KCS-30	SCS-30
	KCS-36	SCS-36
	KCS-50	SCS-50
<b>Refrigerated Cold Pan Serving Counters</b>	KCSC-36BP	SCSC-36BP
	KCSC-50BP	SCSC-50BP
	KCSC-60BP	SCSC-60BP
	KCSC-74BP	SCSC-74BP
	KCSC-96BP	SCSC-96BP
<b>Refrigerated Cold Pan Serving Counters with LiquiTec</b>	KCSC-36-EFP	SCSC-36-EFP
	KCSC-50-EFP	SCSC-50-EFP
	KCSC-60-EFP	SCSC-60-EFP
	KCSC-74-EFP	SCSC-74-EFP
	KCSC-96-EFP	SCSC-96-EFP
<b>Triangle Corner Counter</b>	NA	SC-TRIOS
<b>Mobile Tray and Silver Stands</b>	KCTS-28	SCTS-28
	KCTS-36	SCTS-36

Description	Shelleyglas®	Shelleysteel®
<b>Mobile Beverage Counters</b>	KCU-36	SCU-36
	KCU-36-NU	SCU-36-NU
	KCU-50	SCU-50
	KCU-50-NU	SCU-50-NU
	KCU-60	SCU-60
	KCU-60-NU	SCU-60-NU
	KCU-74	SCU-74
	KCU-74-NU	SCU-74-NU
	KCU-96	SCU-96
<b>Heated Serving Counters</b>	KH-2	SH-2
	KH-2-NU	SH-2-NU
	KH-3	SH-3
	KH-3-NU	SH-3-NU
	KH-4	SH-4
	KH-4-NU	SH-4-NU
	KH-5	SH-5
	KH-5-NU	SH-5-NU
	KH-6	SH-6
<b>Heated and Ice Cooled Combo Counters</b>	KHC-50-NU	SHC-50-NU
	KHC-60-NU	SHC-60-NU
	KHC-74-NU	SHC-74-NU
	KHC-96-NU	SHC-96-NU
	NA	SH2C-62-NU
	KH2C-74-NU	SH2C-74-NU
	KH2C-96-NU	SH2C-96-NU
	KH3C-96-NU	SH3C-96-NU
	KH4C-96-NU	SH4C-96-NU
<b>Heated and Refrigerated Combo Counters</b>	KHCR-50-BP	SHCR-50-BP
	KHCR-60-BP	SHCR-60-BP
	KHCR-74-BP	SHCR-74-BP
	KHCR-96-BP	SHCR-96-BP
	NA	SH2CR-62-BP
	KH2CR-74-BP	SH2CR-74-BP
	KH2CR-96-BP	SH2CR-96-BP
	KH3CR-96-BP	SH3CR-96-BP
	KH4CR-96-BP	SH4CR-96-BP

Discription	Shelleyglas®	Shelleysteel®
<b>FlexiWell™ Mobile Hot and Cold Combination Serving Counters</b>	KFW-1-NU	SFW-1-NU
	KFW-2-NU	SFW-2-NU
	KFW-3-NU	SFW-3-NU
	KFW-4-NU	SFW-4-NU
	KFW-5-NU	SFW-5-NU
	KFW-6-NU	SFW-6-NU



## Options

This manual covers the following options. For other custom counters, consult the customer service department.

Description	Option
<b>Self Contained Combination Hot/Cold Food Wells</b>	N8630P
	N8643P
	N8656P
	N8669P
	N8681P
<b>Individually Controlled Energy Savings Heated Food Wells</b>	1 Well DESP
	2 Well DESP
	3 Well DESP
	4 Well DESP
	5 Well DESP
	6 Well DESP

## Serial Number Location

**Always have the serial number of your unit available when calling for parts or service. Serial numbers are printed on serial tags.**


- Heated counter serial tags are located above the louvered panel near the on/off switch.
- Refrigerated counter serial tags are located in the compressor area near the on/off switch.
- Utility counters with understorage often have the serial tag located on the left inside the storage area.
- All purpose counters, utility equipment or delivery carts do not require serial numbers but a serial tag is placed at the top of the pylon on the back of the unit.

## Warranty Information



- Register your product for warranty,
  - Verify warranty information,
  - View and download a copy of your warranty,
- at [www.delfield.com/warranty](http://www.delfield.com/warranty)

## Regulatory Certifications

All models are certified by:

-  National Sanitation Foundation (NSF)

All models with electrical are certified by:

-  Underwriters Laboratories (UL)
-  Underwriters Laboratories of Canada (cUL)



## Section 2 Installation

### **DANGER**

Installation must comply with all applicable fire and health codes in your jurisdiction.

### **DANGER**

Use appropriate safety equipment during installation and servicing

### **Warning**

Remove all removable panels before lifting and installing.

## Location

### **Warning**

This equipment must be positioned so that the plug is accessible unless other means for disconnection from the power supply (e.g., circuit breaker or disconnect switch) is provided.

### **Warning**

Adequate means must be provided to limit the movement of this appliance without depending on or transmitting stress to the electrical conduit or gas lines.

### **Warning**

To avoid instability the installation area must be capable of supporting the combined weight of the equipment and product. Additionally the equipment must be level side to side and front to back.

### **Warning**

This equipment is intended for indoor use only. Do not install or operate this equipment in outdoor areas.

### **Caution**

Do not position the air intake vent near steam or heat exhaust of another appliance.

The location selected for the equipment must meet the following criteria. If any of these criteria are not met, select another location.

- Units are intended for indoor use only.
- The location **MUST** be level, stable and capable of supporting the weight of the equipment.
- The location **MUST** be free from and clear of combustible materials.
- Equipment **MUST** be level both front to back and side to side.
- Position the equipment so it will not tip or slide.
- Front casters **MUST** be locked once positioned.
- Recommended air temperature is 60° - 100°F (16° - 38°C).
- Proper air supply for ventilation is **REQUIRED AND CRITICAL** for safe and efficient operation. Refer to Clearance Requirements chart on page 9.
- Do not obstruct the flow of ventilation air. Make sure the air vents of the equipment are not blocked.
- Do not install the equipment directly over a drain. Steam rising up out of the drain will adversely affect operation, air circulation, and damage electrical / electronic components.

## Weight

Shelleyglas®	Shelleysteel®	Weight
<b>Mobile All-Purpose Counters</b>		
KC-28	SC-28	165lbs (75kg)
KC-28-NU	SC-28-NU	120lbs (54kg)
KC-36	SC-36	185lbs (84kg)
KC-36-NU	SC-36-NU	160lbs (73kg)
KC-50	SC-50	205lbs (93kg)
KC-50-NU	SC-50-NU	180lbs (82kg)
KC-60	SC-60	240lbs (109kg)
KC-60-NU	SC-60-NU	210lbs (95kg)
KC-74	SC-74	270lbs (123kg)
KC-74-NU	SC-74-NU	240lbs (109kg)
KC-96	SC-96	310lbs (141kg)
KC-96-NU	SC-96-NU	280lbs (127kg)
<b>Frost Top Serving Counters</b>		
KCFT-36-NUP	SCFT-36-NUP	380lbs (172kg)
KCFT-50-NUP	SCFT-50-NUP	455lbs (206kg)
KCFT-60-NUP	SCFT-60-NUP	540lbs (245kg)
KCFT-74-NUP	SCFT-74-NUP	610lbs (277kg)
KCFT-96-NUP	SCFT-96-NUP	680lbs (308kg)



Shelleyglas®	Shelleysteel®	Weight
<b>Mobile Ice Pan Counter</b>		
KCI-36	SCI-36	240lbs (109kg)
KCI-36-NU	SCI-36-NU	200lbs (91kg)
KCI-50	SCI-50	285lbs (129kg)
KCI-50-NU	SCI-50-NU	245lbs (111kg)
KCI-60	SCI-60	320lbs (145kg)
KCI-60-NU	SCI-60-NU	280lbs (127kg)
KCI-74	SCI-74	360lbs (163kg)
KCI-74-NU	SCI-74-NU	330lbs (150kg)
KCI-96	SCI-96	400lbs (181kg)
KCI-96-NU	SCI-96-NU	380lbs (172kg)
<b>Mobile Cashier's Counters</b>		
KCS-30	SCS-30	180lbs (82kg)
KCS-36	SCS-36	210lbs (95kg)
KCS-50	SCS-50	270lbs (122kg)
<b>Refrigerated Cold Pan Serving Counters</b>		
KCSC-36BP	SCSC-36BP	350lbs (159kg)
KCSC-50BP	SCSC-50BP	425lbs (193kg)
KCSC-60BP	SCSC-60BP	500lbs (227kg)
KCSC-74BP	SCSC-74BP	575lbs (261kg)
KCSC-96BP	SCSC-96BP	650lbs (295kg)
<b>Refrigerated Cold Pan Serving Counters with LiquiTec</b>		
KCSC-36-EFP	SCSC-36-EFP	350lbs (159kg)
KCSC-50-EFP	SCSC-50-EFP	425lbs (193kg)
KCSC-60-EFP	SCSC-60-EFP	500lbs (227kg)
KCSC-74-EFP	SCSC-74-EFP	575lbs (261kg)
KCSC-96-EFP	SCSC-96-EFP	650lbs (295kg)
<b>Triangle Corner Counter</b>		
NA	SC-TRI	160lbs (73kg)
	SC-TRIOS	160lbs (73kg)
<b>Mobile Tray and Silver Stands</b>		
KCTS-28	SCTS-28	150lbs (68kg)
KCTS-36	SCTS-36	192lbs (87kg)
<b>Mobile Beverage Counters</b>		
KCU-36	SCU-36	200lbs (91kg)
KCU-36-NU	SCU-36-NU	170lbs (77kg)
KCU-50	SCU-50	230lbs (104kg)
KCU-50-NU	SCU-50-NU	190lbs (86kg)
KCU-60	SCU-60	270lbs (123kg)
KCU-60-NU	SCU-60-NU	230lbs (104kg)
KCU-74	SCU-74	300lbs (136kg)
KCU-74-NU	SCU-74-NU	260lbs (118kg)
KCU-96	SCU-96	340lbs (154kg)
KCU-96-NU	SCU-96-NU	300lbs (136kg)
<b>Heated Serving Counters</b>		
KH-2	SH-2	380lbs (172kg)
KH-2-NU	SH-2-NU	225lbs (102kg)
KH-3	SH-3	460lbs (209kg)
KH-3-NU	SH-3-NU	275lbs (125kg)
KH-4	SH-4	550lbs (250kg)
KH-4-NU	SH-4-NU	330lbs (150kg)
KH-5	SH-5	660lbs (299kg)
KH-5-NU	SH-5-NU	420lbs (191kg)
KH-6	SH-6	720lbs (327kg)
KH-6-NU	SH-6-NU	510lbs (231kg)

Shelleyglas®	Shelleysteel®	Weight
<b>Heated and Ice Cooled Combo Counters</b>		
KHC-50-NU	SHC-50-NU	300lbs (136kg)
KHC-60-NU	SHC-60-NU	350lbs (159kg)
KHC-74-NU	SHC-74-NU	400lbs (181kg)
KHC-96-NU	SHC-96-NU	425lbs (193kg)
NA	SH2C-62-NU	350lbs (159kg)
KH2C-74-NU	SH2C-74-NU	410lbs (186kg)
KH2C-96-NU	SH2C-96-NU	430lbs (195kg)
KH3C-96-NU	SH3C-96-NU	450lbs (204kg)
KH4C-96-NU	SH4C-96-NU	460lbs (209kg)
<b>Heated and Refrigerated Combo Counters</b>		
KHCR-50-BP	SHCR-50-BP	475lbs (216kg)
KHCR-60-BP	SHCR-60-BP	575lbs (261kg)
KHCR-74-BP	SHCR-74-BP	688lbs (312kg)
KHCR-96-BP	SHCR-96-BP	730lbs (331kg)
NA	SH2CR-62-BP	575lbs (261kg)
KH2CR-74-BP	SH2CR-74-BP	690lbs (313kg)
KH2CR-96-BP	SH2CR-96-BP	740lbs (336kg)
KH3CR-96-BP	SH3CR-96-BP	750lbs (340kg)
KH4CR-96-BP	SH4CR-96-BP	760lbs (345kg)

Shelleyglas®	Shelleysteel®	Weight
<b>FlexiWell™ Mobile Hot and Cold Combo Serving Counters</b>		
KFW-1-NU	SFW-1-NU	300lbs (136kg)
KFW-2-NU	SFW-2-NU	380lbs (172kg)
KFW-3-NU	SFW-3-NU	460lbs (209kg)
KFW-4-NU	SFW-4-NU	550lbs (249kg)
KFW-5-NU	SFW-5-NU	660lbs (299kg)
KFW-6-NU	SFW-6-NU	720lbs (327kg)

**OPTION WEIGHTS**

Option	Weight
<b>Self Contained Combination Hot/Cold Food Wells</b>	
N8630P	164lbs (74kg)
N8643P	198lbs (90kg)
N8656P	233lbs (106kg)
N8669P	266lbs (121kg)
N8681P	301lbs (137kg)
<b>Individually Controlled Energy Savings Heated Food Wells</b>	
1 Well DESP	41lbs (19kg)
2 Well DESP	99lbs (45kg)
3 Well DESP	134lbs (61kg)
4 Well DESP	166lbs (75kg)
5 Well DESP	186lbs (84kg)
6 Well DESP	236lbs (107kg)



## Clearance Requirements

### **⚠ DANGER**

The flooring under the appliance must be made of a noncombustible material.

### **⚠ DANGER**

Risk of fire/shock. Do not obstruct vents or openings.

Equipment	Clearance
Option Self Contained Combination Hot/Cold Food Wells, N8600 Series	3" (8cm) on sides and bottom
Option Individually Controlled Energy Savings Heated Food Wells, DESP Series	3" (8cm) on sides and bottom

## Dimensions

Shelleyglas®	Shelleysteel®	Length	Depth	Height
<b>Mobile All-Purpose Counters</b>				
KC-28	SC-28	28"	30"	36"
KC-28-NU	SC-28-NU	(71cm)	(76cm)	(91cm)
KC-36	SC-36	36"	30"	36"
KC-36-NU	SC-36-NU	(91cm)	(76cm)	(91cm)
KC-50	SC-50	50"	30"	36"
KC-50-NU	SC-50-NU	(127cm)	(76cm)	(91cm)
KC-60	SC-60	60"	30"	36"
KC-60-NU	SC-60-NU	(152cm)	(76cm)	(91cm)
KC-74	SC-74	74"	30"	36"
KC-74-NU	SC-74-NU	(188cm)	(76cm)	(91cm)
KC-96	SC-96	96"	30"	36"
KC-96-NU	SC-96-NU	(244cm)	(76cm)	(91cm)
<b>Frost Top Serving Counters</b>				
KCFT-36-NUP	SCFT-36-NUP	36"	30"	36"
		(91cm)	(76cm)	(91cm)
KCFT-50-NUP	SCFT-50-NUP	50"	30"	36"
		(127cm)	(76cm)	(91cm)
KCFT-60-NUP	SCFT-60-NUP	60"	30"	36"
		(152cm)	(76cm)	(91cm)
KCFT-74-NUP	SCFT-74-NUP	74"	30"	36"
		(188cm)	(76cm)	(91cm)
KCFT-96-NUP	SCFT-96-NUP	96"	30"	36"
		(244cm)	(76cm)	(91cm)
<b>Mobile Ice Pan Counter</b>				
KCI-36	SCI-36	36"	30"	36"
KCI-36-NU	SCI-36-NU	(91cm)	(76cm)	(91cm)
KCI-50	SCI-50	50"	30"	36"
KCI-50-NU	SCI-50-NU	(127cm)	(76cm)	(91cm)
KCI-60	SCI-60	60"	30"	36"
KCI-60-NU	SCI-60-NU	(152cm)	(76cm)	(91cm)
KCI-74	SCI-74	74"	30"	36"
KCI-74-NU	SCI-74-NU	(188cm)	(76cm)	(91cm)
KCI-96	SCI-96	96"	30"	36"
KCI-96-NU	SCI-96-NU	(244cm)	(76cm)	(91cm)
<b>Mobile Cashier's Counters</b>				
KCS-30	SCS-30	30"	30"	36"
		(76cm)	(76cm)	(91cm)
KCS-36	SCS-36	36"	30"	36"
		(91cm)	(76cm)	(91cm)
KCS-50	SCS-50	50"	30"	36"
		(127cm)	(76cm)	(91cm)
<b>Refrigerated Cold Pan Serving Counters</b>				
KCSC-36BP	SCSC-36BP	36"	30"	36"
		(91cm)	(76cm)	(91cm)
KCSC-50BP	SCSC-50BP	50"	30"	36"
		(127cm)	(76cm)	(91cm)
KCSC-60BP	SCSC-60BP	60"	30"	36"
		(152cm)	(76cm)	(91cm)
KCSC-74BP	SCSC-74BP	74"	30"	36"
		(188cm)	(76cm)	(91cm)
KCSC-96BP	SCSC-96BP	96"	30"	36"
		(244cm)	(76cm)	(91cm)



Shelleyglas®	Shelleysteel®	Length	Depth	Height
<b>Refrigerated Cold Pan Serving Counters with LiquiTec</b>				
KCSC-36-EFP	SCSC-36-EFP	36" (91cm)	30" (76cm)	36" (91cm)
KCSC-50-EFP	SCSC-50-EFP	50" (127cm)	30" (76cm)	36" (91cm)
KCSC-60-EFP	SCSC-60-EFP	60" (152cm)	30" (76cm)	36" (91cm)
KCSC-74-EFP	SCSC-74-EFP	74" (188cm)	30" (76cm)	36" (91cm)
KCSC-96-EFP	SCSC-96-EFP	96" (244cm)	30" (76cm)	36" (91cm)
<b>Triangle Corner Counter</b>				
NA	SC-TRI SC-TRIOS	30" (76cm)	30" (76cm)	36" (91cm)
<b>Mobile Tray and Silver Stands</b>				
KCTS-28	SCTS-28	28" (71cm)	30" (76cm)	36" (91cm)
KCTS-36	SCTS-36	36" (91cm)	30" (76cm)	36" (91cm)
<b>Mobile Beverage Counters</b>				
KCU-36	SCU-36	36" (91cm)	30" (76cm)	36" (91cm)
KCU-50	SCU-50	50" (127cm)	30" (76cm)	36" (91cm)
KCU-60	SCU-60	60" (152cm)	30" (76cm)	36" (91cm)
KCU-74	SCU-74	74" (188cm)	30" (76cm)	36" (91cm)
KCU-96	SCU-96	96" (244cm)	30" (76cm)	36" (91cm)
<b>Heated Serving Counters</b>				
KH-2	SH-2	36" (91cm)	30" (76cm)	36" (91cm)
KH-3	SH-3	50" (127cm)	30" (76cm)	36" (91cm)
KH-4	SH-4	60" (152cm)	30" (76cm)	36" (91cm)
KH-5	SH-5	74" (188cm)	30" (76cm)	36" (91cm)
KH-6	SH-6	96" (244cm)	30" (76cm)	36" (91cm)
<b>Heated and Ice Cooled Combo Counters</b>				
KHC-50-NU	SHC-50-NU	50" (127cm)	30" (76cm)	36" (91cm)
KHC-60-NU	SHC-60-NU	60" (152cm)	30" (76cm)	36" (91cm)
KHC-74-NU	SHC-74-NU	74" (188cm)	30" (76cm)	36" (91cm)
KHC-96-NU	SHC-96-NU	96" (244cm)	30" (76cm)	36" (91cm)
NA	SH2C-62-NU	62" (157cm)	30" (76cm)	36" (91cm)
KH2C-74-NU	SH2C-74-NU	74" (188cm)	30" (76cm)	36" (91cm)
KH2C-96-NU	SH2C-96-NU	96" (244cm)	30" (76cm)	36" (91cm)
KH3C-96-NU	SH3C-96-NU	96" (244cm)	30" (76cm)	36" (91cm)
KH4C-96-NU	SH4C-96-NU	96" (244cm)	30" (76cm)	36" (91cm)

Shelleyglas®	Shelleysteel®	Length	Depth	Height
Heated and Refrigerated Combo Counters				
KHCR-50-BP	SHCR-50-BP	50" (127cm)	30" (76cm)	36" (91cm)
KHCR-60-BP	SHCR-60-BP	60" (152cm)	30" (76cm)	36" (91cm)
KHCR-74-BP	SHCR-74-BP	74" (188cm)	30" (76cm)	36" (91cm)
KHCR-96-BP	SHCR-96-BP	96" (244cm)	30" (76cm)	36" (91cm)
NA	SH2CR-62-BP	62" (157cm)	30" (76cm)	36" (91cm)
KH2CR-74-BP	SH2CR-74-BP	74" (188cm)	30" (76cm)	36" (91cm)
KH2CR-96-BP	SH2CR-96-BP	96" (244cm)	30" (76cm)	36" (91cm)
KH3CR-96-BP	SH3CR-96-BP	96" (244cm)	30" (76cm)	36" (91cm)
KH4CR-96-BP	SH4CR-96-BP	96" (244cm)	30" (76cm)	36" (91cm)
FlexiWell™ Mobile Hot and Cold Combo Serving Counters				
KFW-1-NU	28" (71cm)		30" (76cm)	36" (91cm)
SFW-1-NU	26" (66cm)			
KFW-2-NU	50" (127cm)		30" (76cm)	36" (91cm)
SFW-2-NU	45" (114cm)			
KFW-3-NU	60" (152cm)		30" (76cm)	36" (91cm)
SFW-3-NU	55" (140cm)			
KFW-4-NU	78" (198cm)		30" (76cm)	36" (91cm)
SFW-4-NU	75" (191cm)			
KFW-5-NU	96" (244cm)		30" (76cm)	36" (91cm)
SFW-5-NU	92" (134cm)			
KFW-6-NU	138" (351cm)		30" (76cm)	36" (91cm)
SFW-6-NU	108" (274cm)			



**OPTION DIMENSIONS**

Option	Length	Depth	Height
<b>Self Contained Combination Hot/Cold Food Wells</b>			
N8630P	30.75" (78cm)	26" (66cm)	26.4" (67cm)
N8643P	43.5" (111cm)	26" (66cm)	26.4" (67cm)
N8656P	56.25" (143cm)	26" (66cm)	26.4" (67cm)
N8669P	69" (175cm)	26" (66cm)	26.4" (67cm)
N8681P	81.75" (208cm)	26" (66cm)	26.4" (67cm)
<b>Individually Controlled Energy Savings Heated Food Wells</b>			
1 Well DESP	17.89" (45cm)	26" (66cm)	9.5" (24cm)
2 Well DESP	31.76" (81cm)	26" (66cm)	9.5" (24cm)
3 Well DESP	45.63" (116cm)	26" (66cm)	9.5" (24cm)
4 Well DESP	59.50" (151cm)	26" (66cm)	9.5" (24cm)
5 Well DESP	73.37" (186cm)	26" (66cm)	9.5" (24cm)
6 Well DESP	87.24" (222cm)	26" (66cm)	9.5" (24cm)

**Electrical Service****⚠ DANGER**

Check all wiring connections, including factory terminals, before operation. Connections can become loose during shipment and installation.

**⚠ Warning**

This appliance must be grounded and all field wiring must conform to all applicable local and national codes. Refer to rating plate for proper voltage. It is the responsibility of the end user to provide the disconnect means to satisfy the authority having jurisdiction.

**VOLTAGE**

All electrical work, including wire routing and grounding, must conform to local, state and national electrical codes.

The following precautions must be observed:

- The equipment must be grounded.
- A separate fuse/circuit breaker must be provided for each unit.
- The maximum allowable voltage variation is  $\pm 10\%$  of the rated voltage at equipment start-up (when the electrical load is highest).
- Check all green ground screws, cables and wire connections to verify they are tight before start-up.

**GROUND FAULT CIRCUIT INTERRUPTER**

Ground Fault Circuit Interrupter (GFCI/GFI) protection is a system that shuts down the electric circuit (opens it) when it senses an unexpected loss of power, presumably to ground. Welbilt does not recommend the use of GFCI/GFI circuit protection to energize our equipment. If code requires the use of a GFCI/GFI then you must follow the local code. The circuit must be dedicated, sized properly and there must be a panel GFCI/GFI breaker. We do not recommend the use of GFCI/GFI outlets to energize our equipment as they are known for more intermittent nuisance trips than panel breakers.



**RATED AMPERAGES, HORSEPOWER & VOLTAGE CHART**

Shelleyglas®	Shelleysteel®	Voltage, Cycle, Phase	Amps	HP	Nema Plug
Mobile All-Purpose Counters					
KC Series KC-NU Series	SC Series SC-NU Series	NA			
Frost Top Serving Counters					
KCFT-36-NUP	SCFT-36-NUP	115/60/1	2.4	1/5	5-15P
KCFT-50-NUP	SCFT-50-NUP	115/60/1	2.4	1/5	5-15P
KCFT-60-NUP	SCFT-60-NUP	115/60/1	3.7	1/4	5-15P
KCFT-74-NUP	SCFT-74-NUP	115/60/1	3.7	1/4	5-15P
KCFT-96-NUP	SCFT-96-NUP	115/60/1	4.8	1/3	5-15P
Mobile Ice Pan Counter					
KCI Series KCI-NU Series	SCI Series SCI-NU Series	NA			
Mobile Cashier's Counters					
KCS Series	SCS Series	NA			
Refrigerated Cold Pan Serving Counters					
KCSC-36BP	SCSC-36BP	115/60/1	2.4	1/5	5-15P
KCSC-50BP	SCSC-50BP	115/60/1	2.4	1/5	5-15P
KCSC-60BP	SCSC-60BP	115/60/1	3.7	1/4	5-15P
KCSC-74BP	SCSC-74BP	115/60/1	3.7	1/4	5-15P
KCSC-96BP	SCSC-96BP	115/60/1	4.8	1/3	5-15P
Refrigerated Cold Pan Serving Counters with LiquiTec					
KCSC-36-EFP	SCSC-36-EFP	115/60/1	2.4	1/5	5-15P
KCSC-50-EFP	SCSC-50-EFP	115/60/1	2.4	1/5	5-15P
KCSC-60-EFP	SCSC-60-EFP	115/60/1	3.7	1/4	5-15P
KCSC-74-EFP	SCSC-74-EFP	115/60/1	3.7	1/4	5-15P
KCSC-96-EFP	SCSC-96-EFP	115/60/1	4.8	1/3	5-15P
Triangle Corner Counter					
NA	SC-TRI SC-TRIOS	NA			
Mobile Tray and Silver Stands					
KCTS Series	SCTS Series	NA			
Mobile Beverage Counters					
KCU Series KCU-NU Series	SCU Series SCU-NU Series	NA			
Heated Serving Counters					
KH-2	SH-2	120/208-230/60/1	15.0	NA	14-20P
KH-2-NU	SH-2-NU	120/208-230/60/1	11.0		14-20P
KH-3	SH-3	120/208-230/60/1	20.0		14-30P
KH-3-NU	SH-3-NU	120/208-230/60/1	16.0		14-20P
KH-4	SH-4	120/208-230/60/1	26.0		14-50P
KH-4-NU	SH-4-NU	120/208-230/60/1	22.0		14-30P
KH-5	SH-5	120/208-230/60/1	31.0		14-50P
KH-5-NU	SH-5-NU	120/208-230/60/1	28.0		14-50P
KH-6	SH-6	120/208-230/60/1	37.0		14-50P
KH-6-NU	SH-6-NU	120/208-230/60/1	33.0		14-50P
Heated and Ice Cooled Combo Counters					
KHC-50-NU	SHC-50-NU	120/60/1	9.0	NA	5-15P
KHC-60-NU	SHC-60-NU	120/60/1	9.0		5-15P
KHC-74-NU	SHC-74-NU	120/60/1	9.0		5-15P
KHC-96-NU	SHC-96-NU	120/60/1	9.0		5-15P
NA	SH2C-62-NU	120/208-230/60/1	11.0		14-20P
KH2C-74-NU	SH2C-74-NU	120/208-230/60/1	11.0		14-20P
KH2C-96-NU	SH2C-96-NU	120/208-230/60/1	11.0		14-20P
KH3C-96-NU	SH3C-96-NU	120/208-230/60/1	16.0		14-20P
KH4C-96-NU	SH4C-96-NU	120/208-230/60/1	22.0		14-30P



Shelleyglas®	Shelleysteel®	Voltage, Cycle, Phase	Amps	HP	Nema Plug
<b>Heated and Refrigerated Combo Counters</b>					
KHCR-50-BP	SHCR-50-BP	120/60/1	11.4	1/5	5-20P
KHCR-60-BP	SHCR-60-BP	120/60/1	11.4	1/5	5-20P
KHCR-74-BP	SHCR-74-BP	120/60/1	11.4	1/5	5-20P
KHCR-96-BP	SHCR-96-BP	120/60/1	12.7	1/4	5-20P
NA	SH2CR-62-BP	120/208-230/60/1	12.8	1/5	14-20P
KH2CR-74-BP	SH2CR-74-BP	120/208-230/60/1	13.4	1/5	14-20P
KH2CR-96-BP	SH2CR-96-BP	120/208-230/60/1	14.7	1/4	14-20P
KH3CR-96-BP	SH3CR-96-BP	120/208-230/60/1	18.4	1/5	14-30P
KH4CR-96-BP	SH4CR-96-BP	120/208-230/60/1	24.4	1/5	14-550P

<b>FlexiWell™ Mobile Hot and Cold Combo Serving Counters</b>							
Shelleyglas®	Shelleysteel®	12" x20" Pan Capacity	Hot Electrical	Cold Electrical	Nema Plug	BTU Load	System Capacity
KFW-1-NU	SFW-1-NU	1	120/208-230	2.9A - 1/5HP	14-20P	310	625
KFW-2-NU	SFW-2-NU	2	120/208-230	2.9A - 1/5HP	14-20P	620	906
KFW-3-NU	SFW-3-NU	3	120/208-230	2.9A - 1/5HP	14-30P	929	1066
KFW-4-NU	SFW-4-NU	4	120/208-230	5.7A - (2) 1/5HP	14-50P	1239	1812
KFW-5-NU	SFW-5-NU	5	120/208-230	5.7A - (2) 1/5HP	14-50P	1549	1972
KFW-6-NU	SFW-6-NU	6	120/208-230	5.7A - (2) 1/5HP	14-50P	1859	2132

**OPTION AMPERAGES, HORSEPOWER & VOLTAGE CHART**

Self Contained Combination Hot/Cold Food Wells				
Option	Voltage, Cycle, Phase	Amps	HP	Nema Plug
N8630P	120/60/1	25.0	1/5	Must be hard wired in the field
N8643P	120/240 /60/1	21.0	1/5	
N8656P	120/240 /60/1	21.0	1/4	
N8669P	120/240 /60/1	42.0	1/4	
N8681P	120/240 /60/1	42.0	1/3	
Individually Controlled Energy Savings Heated Food Wells				
Option	Voltage, Cycle, Phase	Amps	Optional 240V Amps	Nema Plug
1 Well DESP	208-230/60/1	2.4/2.7	2.1	Must be hard wired in the field
2 Well DESP	208-230/60/1	4.8/5.4	4.2	
3 Well DESP	208-230/60/1	7.2/8.1	6.3	
4 Well DESP	208-230/60/1	9.6/10.8	8.4	
5 Well DESP	208-230/60/1	12.0/13.5	10.5	
6 Well DESP	208-230/60/1	14.4/16.2	12.6	



## Drain Connections

### Warning

Moisture collecting from improper drainage can create a slippery surface on the floor and a hazard to employees. It is the owner's responsibility to provide a container or outlet for drainage.

### Heated Wells

- Hot wells come standard with drains, plumbed to a common valve.

### Cooled Wells

### Warning

If a refrigerated base does not have a condensate evaporator supplied, you must connect the condensate line to a suitable drain. Otherwise, water will collect on the floor, causing a potentially hazardous situation.

Refrigerated units have a drain that exits the unit on the bottom, and is located on the operator's left side.

- Standard units on casters or legs will have a bronze faucet that fits a standard garden hose.
- On standard units, a stainless steel access panel or hinged louver will be provided for access to drain connections.
- Units on legs with optional remote drain valve handle will have 1" (2.54cm) threaded pipe extending from bottom of unit.
- Option self contained combination hot/cold food wells, series N8600, have a 1" (2.54cm) drain. It must have an outlet to an appropriate drainage area or container.

## Refrigeration

Shelleyglas®	Shelleysteel®	BTU/ Hour Capacity	Heat of Rejection	R290 Charge in grams
Mobile All-Purpose Counters				
KC Series KC-NU Series	SC Series SC-NU Series	NA		
Frost Top Serving Counters				
KCFT-36-NUP	SCFT-36-NUP	435	566	120g
KCFT-50-NUP	SCFT-50-NUP	595	774	120g
KCFT-60-NUP	SCFT-60-NUP	717	932	120g
KCFT-74-NUP	SCFT-74-NUP	827	1075	120g
KCFT-96-NUP	SCFT-96-NUP	921	1197	120g
Mobile Ice Pan Counter				
KCI Series KCI-NU Series	SCI Series SCI-NU Series	NA		
Mobile Cashier's Counters				
KCS Series	SCS Series	NA		
Refrigerated Cold Pan Serving Counters				
KCSC-36BP	SCSC-36BP	1006	405	120g
KCSC-50BP	SCSC-50BP	1186	608	120g
KCSC-60BP	SCSC-60BP	1339	810	120g
KCSC-74BP	SCSC-74BP	1471	1013	120g
KCSC-96BP	SCSC-96BP	1586	1215	150g
Refrigerated Cold Pan Serving Counters with LiquiTec				
KCSC-36-EFP	SCSC-36-EFP	1006	405	120g
KCSC-50-EFP	SCSC-50-EFP	1186	608	120g
KCSC-60-EFP	SCSC-60-EFP	1339	810	120g
KCSC-74-EFP	SCSC-74-EFP	1471	1013	150g
KCSC-96-EFP	SCSC-96-EFP	1586	1215	150g
Triangle Corner Counter				
NA	SC-TRI SC-TRIOS	NA		
Mobile Tray and Silver Stands				
KCTS Series	SCTS Series	NA		
Mobile Beverage Counters				
KCU Series KCU-NU Series	SCU Series SCU-NU Series	NA		
Heated Serving Counters				
KH Series KH-NU Series	SH Series SH-NU Series	NA		
Heated and Ice Cooled Combo Counters				
KHC-NU Series	SHC-NU Series	NA		
Heated and Refrigerated Combo Counters				
KHCR-50-BP	SHCR-50-BP	1006	405	120g
KHCR-60-BP	SHCR-60-BP	1006	405	120g
KHCR-74-BP	SHCR-74-BP	1006	405	120g
KHCR-96-BP	SHCR-96-BP	1186	608	120g
NA	SH2CR-62-BP	1471	1013	120g
KH2CR-74-BP	SH2CR-74-BP	1006	405	120g
KH2CR-96-BP	SH2CR-96-BP	1339	810	120g
KH3CR-96-BP	SH3CR-96-BP	1186	608	120g
KH4CR-96-BP	SH4CR-96-BP	1006	405	120g



**OPTION REFRIGERATION**

Option	BTU/Hour Capacity	Heat of Rejection	R290 Charge in grams
<b>Self Contained Combination Hot/Cold Food Wells</b>			
N8630P	1112	379	120g
N8643P	1259	569	120g
N8656P	1373	758	120g
N8669P	1469	948	120g
N8681P	1787	1138	150g
<b>Individually Controlled Energy Savings Heated Food Wells</b>			
DESP Series	NA		

**Leveling**

After the cabinet has been placed in the desired location, cabinets with legs must be leveled. Level units from front to back and from side to side. Leveling will insure proper door operation and removal of condensate. Cabinets with casters must have the caster brake set so the cabinet cannot move.

**Stabilizing**

It is very important that all legs are properly adjusted to keep the cabinet level, evenly distribute the weight and to make sure the unit will not rock, lean or be unstable.

**Leg & Caster Installation****⚠ DANGER**

Legs or casters must be installed and the legs or casters must be screwed in completely to prevent bending. When casters are installed the mass of this unit will allow it to move uncontrolled on an inclined surface. These units must be tethered/secured to comply with all applicable codes.

**⚠ Warning**

The unit must be installed in a stable condition with the front wheels locked. Locking the front casters after installation is the owner's and operator's responsibility.

**⚠ Warning**

Use a jack to lift the refrigeration unit off the ground just far enough to remove the leg/caster. Place blocking underneath the unit. Do not work underneath a raised unit without proper blocking. Do not lift the unit more than necessary to remove the leg/caster. Lifting the unit too far can make the unit unstable.

**⚠ Caution**

All single-section units require that the swivel casters be mounted on the front and rigid casters be mounted on the rear.

**Accessory Installation**

Over shelves and other items mounted to the top of the counters should never be installed in the field due to the potential damage to the refrigeration system.



## Section 3

### Operation

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#### **DANGER**

The on-site supervisor is responsible for ensuring that operators are made aware of the inherent dangers of operating this equipment.

#### **DANGER**

Do not operate any appliance with a damaged cord or plug. All repairs must be performed by a qualified service company.

#### **DANGER**

Never stand on the unit! They are not designed to hold the weight of an adult, and may collapse or tip if misused in this manner.

#### **Warning**

The operator of this equipment is solely responsible for ensuring safe holding temperature levels for all food items. Failure to do so could result in unsafe food products for customers.

#### **Warning**

Do not contact moving parts.

#### **Warning**

All covers and access panels must be in place and properly secured, before operating this equipment.

#### **Warning**

Damp or wet hands may stick to cold surfaces.

#### **Warning**

Never use sharp objects or tools to remove ice or frost. Do not use mechanical devices or other means to accelerate the defrosting process.

#### **Warning**

Do not block the supply and return air grills or the air space around the air grills. Keep plastic wrappings, paper, labels, etc. from being airborne and lodging in the grills. Failure to keep the air grills clear will result in unsatisfactory operation of the system.

#### **Caution**

Units with pans should be operated with pans in place. Operating the unit without all pans in place will lower efficiency and may damage the unit.

#### **Notice**

Never place food directly in well. Always use pans.

#### **Note**

Drain the water from units daily for unit longevity.



## Frost Top Serving Counter Operation

Frost top counters are designed to maintain an even layer of frost to pleasantly display product. Once turned on, the compressor will run continuously. There is no temperature control. The ON/OFF switch is the only means available to cycle the unit.

Since it takes time for the frost to accumulate initially, the unit should be turned on approximately one hour before it is required. Product should not be placed on the frost top prior to turning the unit on, because it may freeze to the surface of the unit.

The unit must be turned off when not in use or overnight for defrosting and cleaning.

## Refrigerated Cold Pan with LiquiTec Serving Counter Operation

### Note

The cold pan is not intended to be used with ice.

There is a switch on the compressor housing front to turn counters on and off. Turn it off when not in use or overnight for defrosting and cleaning.

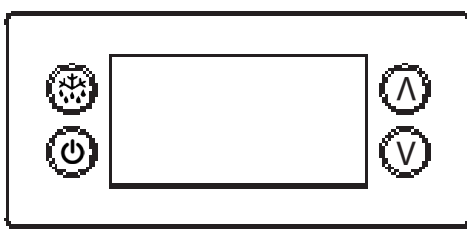
The are adjusted at the factory to provide proper operation without any further adjustments.

## ERC112 TEMPERATURE CONTROL & DISPLAY

### Notice

Temperature displayed is for refrigeration set point purposes only. Display does not reflect air or product temps in unit.

1. At initial start-up or anytime power is disconnected, then reconnected to the unit, the control will go into normal cooling mode.
2. The temperature control will cycle the compressor and condenser fan motor to maintain proper temperature.



### Press upper or lower right button.

- Display show actual set-point (blinking).
  - If buttons untouched for 3 seconds returns to normal.

- Increase set-point by pressing upper button. Max value depends on parameters in control.
- Decrease set-point by pressing lower button. Min value depends on parameters in control.
  - If buttons untouched for 3 seconds returns to normal and stores new set-point.

### Press lower left button for 5 seconds.

- Unit goes into stand-by mode.
  - The display will read Off, then a period.
- Press the lower left button again for 5 seconds.
  - The display will read On.
  - The unit will then start up in normal cooling mode.

Operation / Indication			
Status	Displayed		Comments
Normal (°C)	Temp. [°C]		Unit depends on setting (parameters in control)
Normal (°F)	Temp. [°F]		
Show set-point	Temp.		
Sensor 1 defect	E01	X	Air sensor
Sensor 2 defect	E02	X	Open
Sensor 3 defect	E03	X	Open
Sensor 4 defect	E04	X	Open
High temperature alarm	Hi	X	Automatically switching at 2 sec rate
Low temperature alarm	Lo	X	
Line voltage too high	uHi	X	
Line voltage too low	uLi	X	
Control calls for cooling for more than 24 hours straight	LEA	X	Time includes defrost. Error will go away if the control cycles off the compressor or if the power is shut off. If error is on a cold pan it could be related to a high ambient temperature or not shutting the rail off nightly.

## Temperature Alarm

The alarm will sound and flash HI or LO 90 minutes after the unit has reached its alarm temperature point or after any power interruption if the temperature is above or below the alarm set points.



## CHANGING DISPLAY FROM FAHRENHEIT TO CELSIUS ON ERC112 CONTROL

1. Simultaneously hold the up and down arrows for 5 seconds to access menu for password protected parameters.



2. Screen should temporarily flash **PAS** and then move to a numeric screen.



3. Scroll to **187** using the up/down arrows and push the stand-by button (lower left button) to enter.



4. Scroll to **dis** using the up/down arrows and push the stand-by button (lower left button) to enter into the display menu.



5. Scroll to **CFu** using the up/down arrows and push the stand-by button (lower left button) to enter the display unit menu.



6. **-F** should be displayed indicating Fahrenheit. Use the down arrow to change it to **-C** for Celsius and hit the stand-by button (lower left button) to enter the change.



7. Push the defrost button (upper left button) to move out of the display unit menu.



8. Push the defrost button (upper left button) to move out of the display menu and back to the normal display.

NOTE: For steps 7 and 8, display will return back to normal display after 30 seconds of inactivity.





## Heated Serving Counter Operation

### Including:

#### Heated and Ice Cooled Combo Counter Operation

#### Trimline L-shaped Heated Serving Counter Operation

#### Carving Counter Operation

### DANGER

When operated at the highest temperature setting, the top of the unit will become very hot. Staff and customers using the equipment should be informed about this.

These units are designed to hold warm food product between 140°F to 160°F (60°C to 71°C). They may be operated wet (with water in the wells) or dry. Wet operation is recommended for better performance.

### First Time Use

Verify the unit is plugged in; turn the unit on. Before the unit is used the first time for serving, turn the temperature knob to HI and heat each well for 20 to 30 minutes.

Do not be alarmed if smoke appears; this preheat should burn off any residue or dust that has adhered to the heater element.

### Daily Use

Verify the unit is plugged in; turn the unit on. A knob and indicator light are provided for each individual heated food well. Select desired temperature by rotating temperature control.

If the same temperature settings for each well are used every day, the temperature knobs can be left in their set position and the wells can be turned off using the on/off switch.

- When serving thick sauces always use the hot food well in wet operation. This provides more uniform temperature for the sauce.
- Never place food directly in well. Always use pans.
- For most efficient operation, keep covered pans in each well during preheating or when empty.
- Always place covers on pans when not serving to prevent food from drying out.

## Wet Operation

### DANGER

Steam can cause serious burns. Always use some type of protective covering on your hands and arms when removing lids from the unit. Lift the lid in a way that will direct escaping steam away from your face and body.

### Caution

Never use anything other than plain water in the wells or tank. Failure to observe this warning may result in personal injury or damage to the unit.

### Caution

Using ice in a hot food well can cause condensation and damage to the well over time.

### Note

Drain the water from units daily for unit longevity.

Fill the food well with a minimum of 2.0" (5.1cm) of water and cover with lid or empty pan. To preheat water, set temperature control at HI. With pans in place, wells will boil water. Food temperature will vary depending on type and amount of product. To minimize steam and water usage, set control at lowest setting that will maintain proper food temperature. To reduce preheating time, use hot water to fill the well.

## Dry Operation

### DANGER

When operated dry, the well bottoms become very hot. Do not allow unprotected skin to contact any well surface.

Wet operation is usually much more efficient and is preferred. However, these units may be operated without water with no damage to the unit.

When operated dry, the bottom of the well will discolor. To clean, use a stainless steel cleaner or mild abrasive.

### Operation of optional heated understorage

Verify the unit is plugged in; turn the unit on. If necessary, preheat the heated understorage to desired temperature. Temperature range of understorage is 100°F to 200°F (38°C to 93°C). The temperature control knob and indicator lights are always on the far left of the panel.



## Heated and Refrigerated Combo Counter Operation

### HEATED SECTION OPERATION

#### DANGER

When operated at the highest temperature setting, the top of the unit will become very hot. Staff and customers using the equipment should be informed about this.

These units are designed to hold warm food product between 140°F to 160°F (60°C to 71°C). They may be operated wet (with water in the wells) or dry. Wet operation is recommended for better performance.

#### First Time Use

Verify the unit is plugged in; turn the unit on. Before the unit is used the first time for serving, turn the temperature knob to HI and heat each well for 20 to 30 minutes.

Do not be alarmed if smoke appears; this preheat should burn off any residue or dust that has adhered to the heater element.

#### Daily Use

Verify the unit is plugged in; turn the unit on. A knob and indicator light are provided for each individual heated food well. Select desired temperature by rotating temperature control.

If the same temperature settings for each well are used every day, the temperature knobs can be left in their set position and the wells can be turned off using the on/off switch.

- When serving thick sauces always use the hot food well in wet operation. This provides more uniform temperature for the sauce.
- Never place food directly in well. Always use pans.
- For most efficient operation, keep covered pans in each well during preheating or when empty.
- Always place covers on pans when not serving to prevent food from drying out.

### Wet Operation

#### DANGER

Steam can cause serious burns. Always use some type of protective covering on your hands and arms when removing lids from the unit. Lift the lid in a way that will direct escaping steam away from your face and body.

#### Caution

Never use anything other than plain water in the wells or tank. Failure to observe this warning may result in personal injury or damage to the unit.

#### Caution

Using ice in a hot food well can cause condensation and damage to the well over time.

#### Note

Drain the water from units daily for unit longevity.

Fill the food well with a minimum of 2.0" (5.1cm) of water and cover with lid or empty pan. To preheat water, set temperature control at HI. With pans in place, wells will boil water. Food temperature will vary depending on type and amount of product. To minimize steam and water usage, set control at lowest setting that will maintain proper food temperature. To reduce preheating time, use hot water to fill the well.

### Dry Operation

#### DANGER

When operated dry, the well bottoms become very hot. Do not allow unprotected skin to contact any well surface.

Wet operation is usually much more efficient and is preferred. However, these units may be operated without water with no damage to the unit.

When operated dry, the bottom of the well will discolor. To clean, use a stainless steel cleaner or mild abrasive.



## Option Self Contained Combination Hot/Cold Food Wells, N8600 Series, Operation

### Hot Operation

#### **DANGER**

When operated at the highest temperature setting, the top of the unit will become very hot. Staff and customers using the equipment should be informed about this.

#### **Caution**

Never use anything other than plain water in the wells or tank. Failure to observe this warning may result in personal injury or damage to the unit.

#### **Caution**

Using ice in a hot food well can cause condensation and damage to the well over time.

N8600 Series hot and cold combination pans must be operated with water in the well for proper hot operation. Fill well with a minimum of 4.0" (10.2cm) of water. Place function switch in HOT position to begin heating. Turn thermostat dial to the desired temperature.

To turn unit off, simply move the function switch to OFF position. Drain water and allow unit to cool before cleaning or switching to cold operation.

### Switching From Hot To Cold Operation

1. Place the function switch in the OFF position and drain out hot water.
2. Allow the unit to cool until it can be safely cleaned.
3. When clean up procedures are complete, unit will be ready for cold operation. This takes about one hour.

#### **Caution**

To assure maximum compressor life, do not switch from "hot" to "cold" operation without allowing a cool down period. Never switch from hot to cold operation while hot water remains in the pans. Failure to observe this warning will greatly reduce compressor life and eventually cause premature compressor failure.

### Cold Operation

Simply place the function switch to the COLD position. The compressor controller has been factory set and no temperature adjustment should be necessary.

If the cold pan is to be used with ice, it is recommended that the optional perforated bottoms be used. These will allow ice to melt properly.

### Switching From Cold To Hot Operation

No special procedure is required to switch from the cold to hot operation. Be certain to fill with a minimum of 4.0" of water.

#### **Note**

The unit is designed so that the compressor and the heating elements cannot operate at the same time. Continued operation of the compressor in the hot position is not normal. Call for service if this happens.

The unit must be turned off when not in use or overnight for defrosting and cleaning.

### N8600 Immersion Heater High Limit

As a safety feature, the N8600 food well immersion heater includes a high limit safety switch. If the heater gets too hot the safety switch will trip and turn the heater off. A pilot light on the control panel will illuminate when the safety switch is tripped. To reset the safety switch, first turn OFF the thermostat or Power switch and then determine if low water is the cause. If low water is not the cause, contact service for resolution. If low water is the cause, carefully remove food pans and refill the water. This will allow the immersion heater to cool and the safety switch will automatically reset. The unit must be turned OFF as directed or safety switch will not reset even if water is refilled to proper level. Replace food pans and turn thermostat or Power switch back on.



## Option Individually Controlled Energy Savings Heated Food Wells, DESP Series, Operation

These units are designed to hold warm food product between 140°F to 160°F (60°C to 71°C).

DESP series individually heated hot food units may be operated wet (with water in the wells) or dry. However, dry operation using 6.0" deep pans produces optimum performance.

A power switch and digital control are provided for each individual heated food well. After the unit is hard wired to the electrical system, turn the power switch ON to energize the control; the digital display will read OFF. Press Set and then use the arrows to select the desired temperature setting (1-10). The new temperature setting is entered 3 seconds after the last button is pressed. When the power switch is used to turn the well OFF and back ON the temperature setting will remain.

### Note

Never place food directly in well. Always use pans.

For most efficient operation, keep covered inserts in each well during preheating or when empty.

Always place covers on pans when not serving to prevent food from drying out.

### Dry Operation

#### ⚠ DANGER

When operated dry, the well bottoms become very hot. Do not allow unprotected skin to contact any well surface.

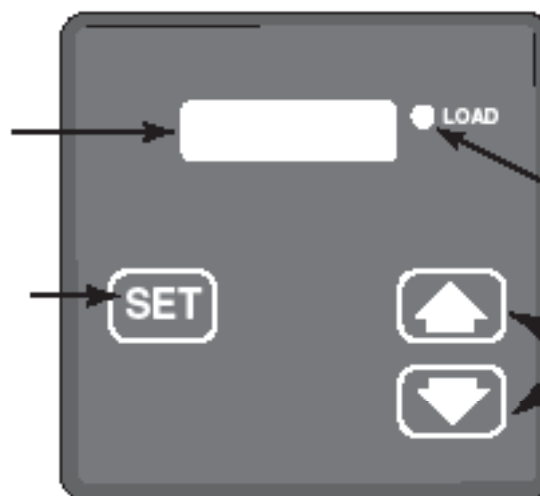
Dry operation is more efficient and is preferred.

When operated dry, the bottom of the well will discolor. To clean, use a stainless steel cleaner or mild abrasive.

### N8700-DESP Temperature Control Operation

LED Display: Indicates the temperature setting 0-10. At the first startup the display will read OFF.

SET: When SET is depressed, the temperature setting is displayed and can be adjusted with the arrows.



LOAD Light: Lit when well is heating.

Arrows: After pressing SET, press the Up-Arrow to increase the temperature setting, press the Down-Arrow to decrease the temperature setting. The new temperature setting is entered 3 seconds after the last arrow is pressed.

### Wet Operation

#### ⚠ DANGER

When operated at the highest temperature setting, the top of the unit will become very hot. Staff and customers using the equipment should be informed about this.

#### ⚠ DANGER

Steam can cause serious burns. Always use some type of protective covering on your hands and arms when removing lids from the unit. Lift the lid in a way that will direct escaping steam away from your face and body.

#### ⚠ Caution

Never use anything other than plain water in the wells or tank. Failure to observe this warning may result in personal injury or damage to the unit.

#### ⚠ Caution

Using ice in a hot food well can cause condensation and damage to the well over time.

### Note

Drain the water from units daily for unit longevity.

Fill the food well with a minimum of 2" (5cm) of water and cover with lid or empty pan. To preheat water, set temperature control at 3. With pans in place, wells will boil water. Food temperature will vary depending on type and amount of product. To minimize steam and water usage, set control at lowest setting that will maintain proper food temperature. To reduce preheating time, use hot water to fill the well. Preheating time with room temperature water is one hour.



**ELECTRONIC HIGH-VOLUME AUTO FILL OPTION**

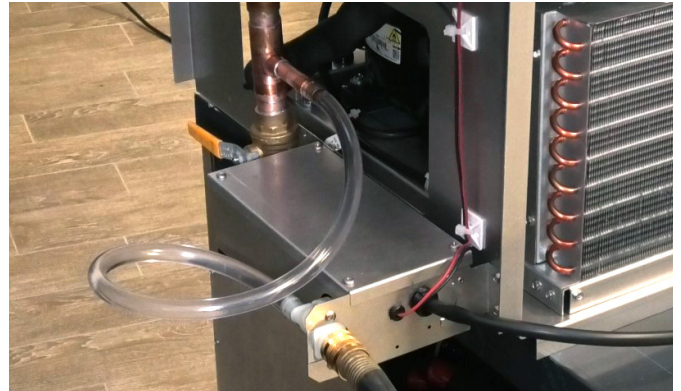
Wet operation units can be manufactured with an optional high-volume auto fill feature. The high-volume auto fill feature is installed with a regular garden hose and the units power. The remote lighted on/off switch will operate the water flow and allow the sensors within the well to dictate when the high-volume auto fill will need to add water into the well after normal evaporation occurs. These high-volume auto fills must be installed in the factory and cannot be installed in the field.

**Electronic High-Volume Auto Fill Operation**

Close the drain valve to the well. Turn the on/off switch to the on position. A 30-60 second delay will occur before the unit will begin water flow up from the drain. Once the water flow reaches the sensor, the unit will stop flow of water. YOU DO NOT NEED TO TURN THE SWITCH OFF. Heated water will evaporate and eventually lower the water level below the sensor. A 30-60 second delay will occur and then the high-volume auto fill will begin to fill the well up to the sensor. At the end of the night/shift turn the high-volume auto fill switch to the off position and drain the well with the drain valve under the well and clean the unit once cool enough to touch.

**Electronic High-Volume Auto Fill Cleaning**

Sensors must be free of build-up and calcium deposits. Failure to do so may result in overflow and/or malfunction. Sensors should be cleaned regularly and wells daily.





## Section 4

### Maintenance

#### DANGER

It is the responsibility of the equipment owner to perform a personal protective equipment hazard assessment to ensure adequate protection during maintenance procedures.

#### DANGER

Failure to disconnect the power at the main power supply disconnect could result in serious injury or death. The power switch DOES NOT disconnect all incoming power.

#### DANGER

Disconnect electric power at the main power disconnect for all equipment being serviced. Observe correct polarity of incoming line voltage. Incorrect polarity can lead to erratic operation.

#### Warning

Never use sharp objects or tools to remove ice or frost. Do not use mechanical devices or other means to accelerate the defrosting process.

#### Warning

Use a jack to lift the refrigeration unit off the ground just far enough to remove the leg. Place blocking underneath the unit. Do not work underneath a raised unit without proper blocking. Do not lift the unit more than necessary to remove the leg. Lifting the unit too far can make the unit unstable.

#### Warning

Never use a high-pressure water jet for cleaning or hose down or flood interior or exterior of units with water. This will void the warranty. Do not use power cleaning equipment, steel wool, scrapers or wire brushes on stainless steel or painted surfaces.

### Cleaning and Sanitizing Procedures

#### Caution

Maintenance and servicing work other than cleaning as described in this manual must be done by an authorized service personnel.

### GENERAL

#### Warning

When using cleaning fluids or chemicals, rubber gloves and eye protection (and/or face shield) must be worn.

You are responsible for maintaining the equipment in accordance with the instructions in this manual. Maintenance procedures are not covered by the warranty.

Maintenance	Daily	Weekly	Monthly	After Prolonged Shutdown	At Start-Up
Interior	X			X	X
Gasket	X			X	X
Exterior	X			X	X
Drain		X		X	X
Condenser Coil			X	X	X



## INTERIOR CLEANING

The interior can be cleaned using soap and warm water. If this isn't sufficient, try ammonia and water or a nonabrasive liquid cleaner.

Door gaskets require regular cleaning to prevent mold and mildew build up and also to retain the elasticity of the gasket. Clean them with water and mild soap (not citrus based). Avoid full strength cleaning products on gaskets as this can cause them to become brittle and crack. Never use sharp tools or knives to scrape or clean the gasket. Gaskets can be easily replaced and do not require the use of tools or an authorized service person. The gaskets are Dart style and can be pulled out of the groove in the door. Place gasket in warm water to make the material more pliable for installation. Dry and press into place.

### Preventing Blower Coil Corrosion

To help prevent corrosion of the blower coil, store all acidic items, such as pickles and tomatoes, in seal-able containers. Immediately wipe up all spills.

## EXTERIOR CLEANING

### Warning

When cleaning the unit, care should be taken to avoid the front power switch and the rear power cord. Keep water and/or cleaning solutions away from these parts.

### Caution

Never use an acid based cleaning solution! Many food products have an acidic content, which can deteriorate the finish. Be sure to clean the stainless steel surfaces of ALL food products.

Clean the area around the unit as often as necessary to maintain cleanliness and efficient operation.

Wipe casters with a damp cloth to prevent corrosion.

Wipe surfaces with a damp cloth rinsed in water to remove dust and dirt from the unit. Always rub with the "grain" of the stainless steel to avoid marring the finish. If a greasy residue persists, use a damp cloth rinsed in a mild dish soap and water solution. Wipe dry with a clean, soft cloth.

Never use steel wool or abrasive pads for cleaning. Never use chlorinated, citrus based or abrasive cleaners.

Stainless steel has a clear coating that is stain resistant and easy to clean. Products containing abrasives will damage the coating and scratch the panels. Daily cleaning may be followed by an application of stainless steel cleaner which will eliminate water spotting and fingerprints. Early signs of stainless steel breakdown are small pits and cracks. If this has begun, clean thoroughly and start to apply stainless steel cleaners in attempt to restore the steel.

Fiberglass can be polished to eliminate water spotting, fingerprints and bring out the color of the fiberglass. To maintain the rich, brilliant color of the fiberglass and to remove shallow surface scratches, wax twice a year. This can be done in the same manner in which a car is waxed.

### Counter Protector Glass & Hardware Cleaning

Routine cleaning can be done with soap and water. Extreme stains or grease should be cleaned with a nonabrasive cleaner and plastic scrub pad. Polish the chrome when necessary with a soft cotton cloth.



**Defrosting**

Refrigerated cold pans should be defrosted daily. Never use sharp objects or tools to clean or scrape ice/frost build up from the refrigerated cold pans. A puncture to the pan could cause irreparable damage to the refrigeration system. Units with a Eutectic Fluid Cold Pan require the same precautions. The fluid is NOT refillable and loss of fluid due to a puncture would cause irreparable damage.

**CLEANING THE CONDENSER COIL**

In order to maintain proper refrigeration performance, the condenser fins must be cleaned of dust, dirt and grease regularly. It is recommended that this be done monthly. If conditions are such that the condenser is totally blocked in a month, the frequency of cleaning should be increased. Clean the condenser with a vacuum cleaner or stiff brush. If extremely dirty, a commercially available condenser cleaner may be required.

Failure to maintain a clean condenser coil can initially cause high temperatures and excessive run times. Continuous operation with a dirty or clogged condenser coil can result in compressor failure. Neglecting the condenser coil cleaning procedures will void any warranties associated with the compressor and cost to replace the compressor.

**DRAIN MAINTENANCE**

Each refrigerated unit has a drain located inside the unit that removes the condensation from the evaporator coil and routes it to an external condensate evaporator pan. Each drain can become loose or disconnected during normal use. If you notice water accumulation under the unit, be sure the drain tube is connected to the evaporator drain pan and the end of the drain tube is in the condensate evaporator. The leveling of the unit is important as the units are designed to drain properly when level. Be sure all drain lines are free of obstructions.

**DOORS/HINGES**

Over time and with heavy-use doors, the hinges may become loose. If this happens, tighten the screws that mount the hinge brackets to the frame of the unit. Loose or sagging doors can cause the hinges to pull out of the frame, which may damage both the doors and the hinges. In some cases this may require qualified service agents or maintenance personnel to perform repairs.



## GFCI Troubleshoot

Cabinet trips GFCI (ground fault circuit interrupter):

A GFCI receptacle protects against “ground faults” whenever an electrical product is plugged into the GFCI outlet. GFCI outlets or GFCI breakers constantly monitor the current flowing from a hot to a neutral. If the current leaving the receptacle is greater than what is returning, then this imbalance will cause the GFCI to trip in order to protect the user from electrical shock.

Heaters are prone to absorbing moisture into the heater itself during long periods of not being used such as shipping or summer breaks. There are a couple ways to resolve this issue (GFCI tripping – Nuisance tripping is not covered under warranty)

Below is a way of resolving GFCI tripping issue on units that are just being started up or have been sitting for a length of time:

1. Fill each Hot food well up with roughly 1.5” -2” of water (where applicable).
2. Flip the On/Off switch to the “On position” and turn the first [2] wells to the # 1 position. The orange light will appear for each well lit.
3. Wait 5 minutes and turn the next [2] wells to # 1 position. The orange light will appear for each well.
4. Wait another 10 minutes and rotate the dial to the # 2 position for all wells.
5. Wait another 10 minutes and rotate the dial to the # 3 position for all wells
6. Wait another 10 minutes and rotate the dial to the # 4 position for all wells.
7. Do NOT go beyond # 4 position for 20+ minutes if even needed, as that is typically the tripping point.
8. If the breaker trips during the process, let the breaker sit for a few minutes and then reset. Turn the dial back 1-2 positions and restart the process over

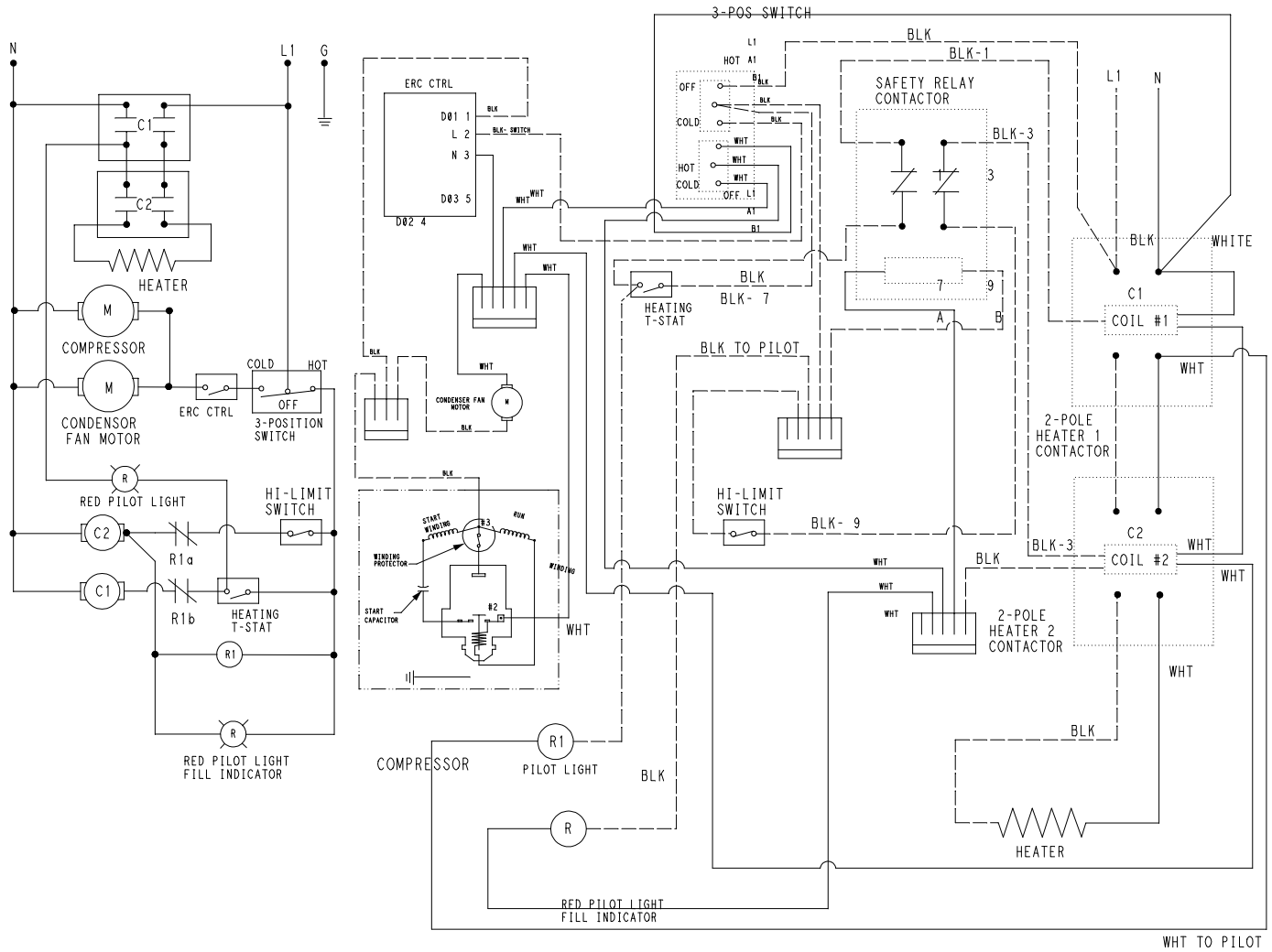


# Section 5

## Wiring Diagrams

### N8630P Units

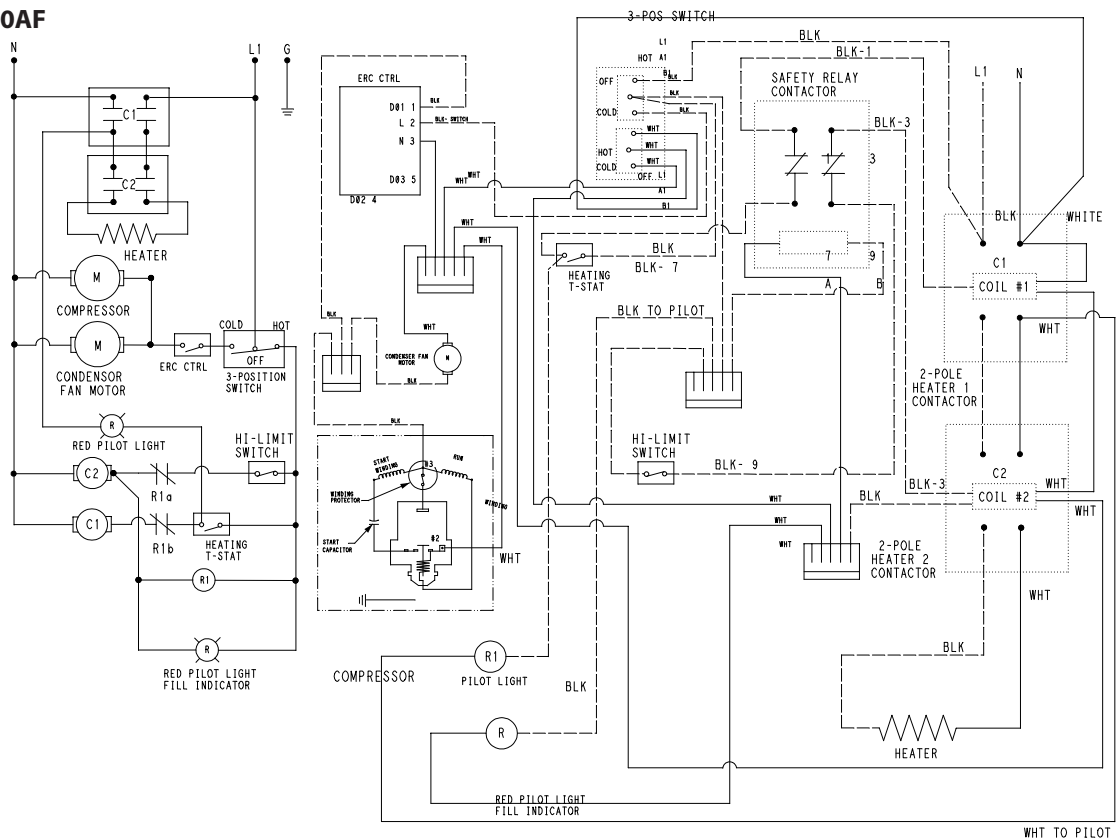
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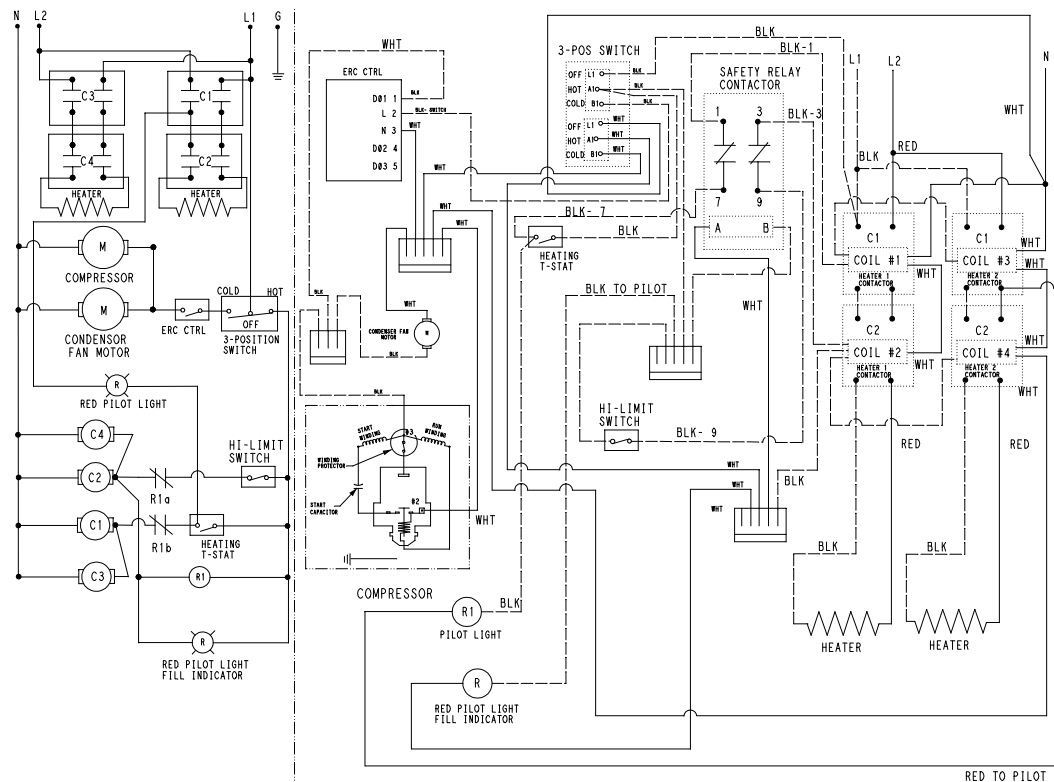
## N8643P/N8656P Units

**000-SCH-00AF**



## N8669P/N8681P Units

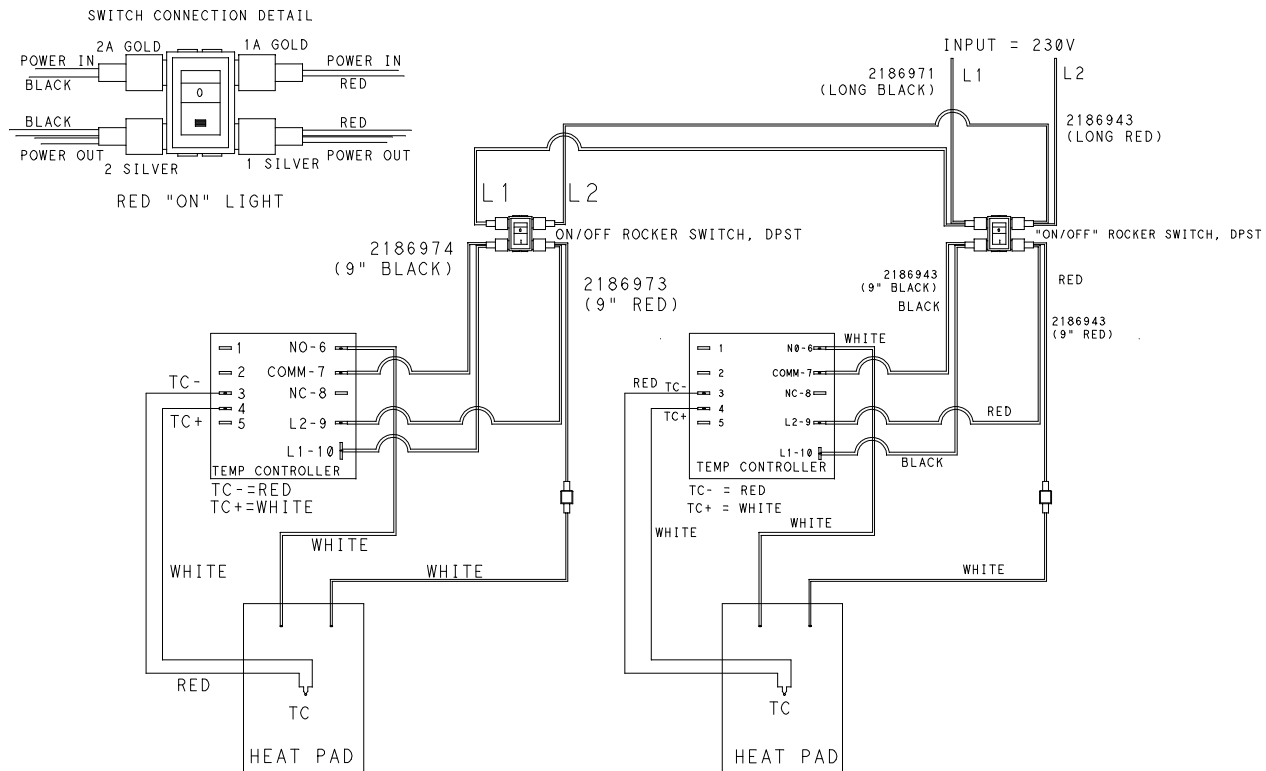
**000-SCH-00AG**





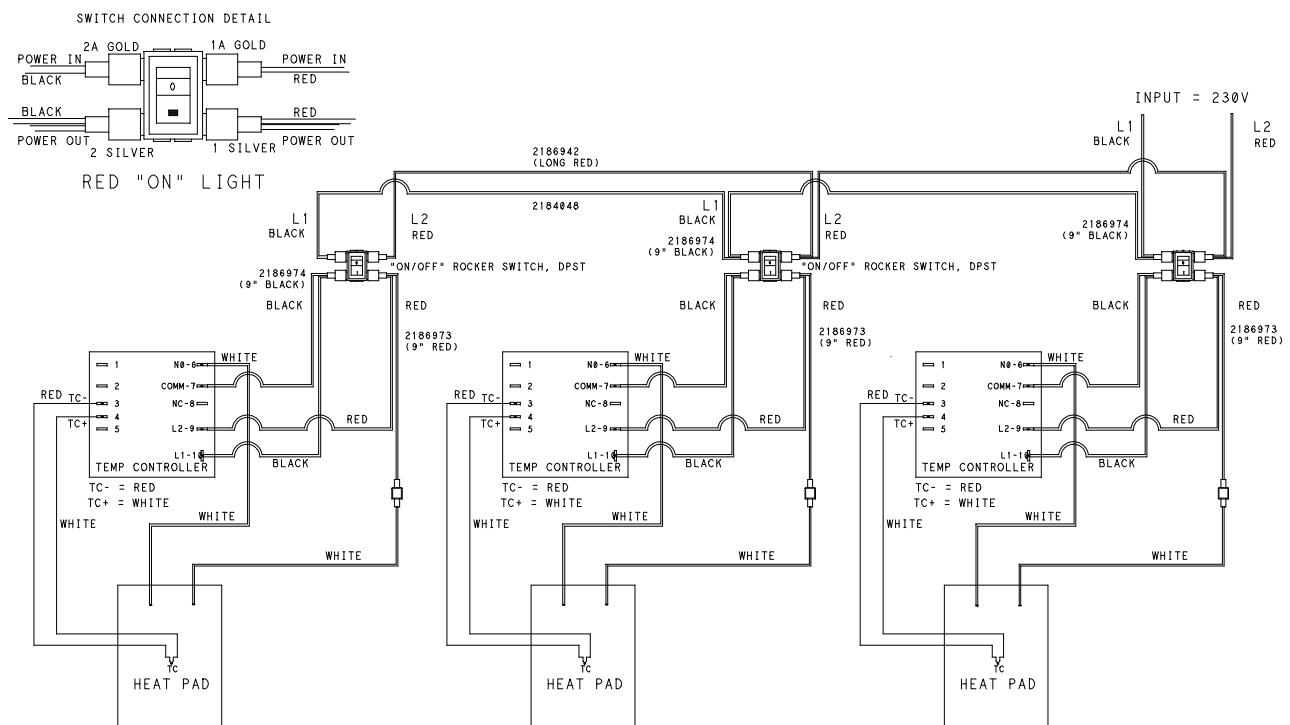
## 2 Well DESP Units

### 000-SCH-0096

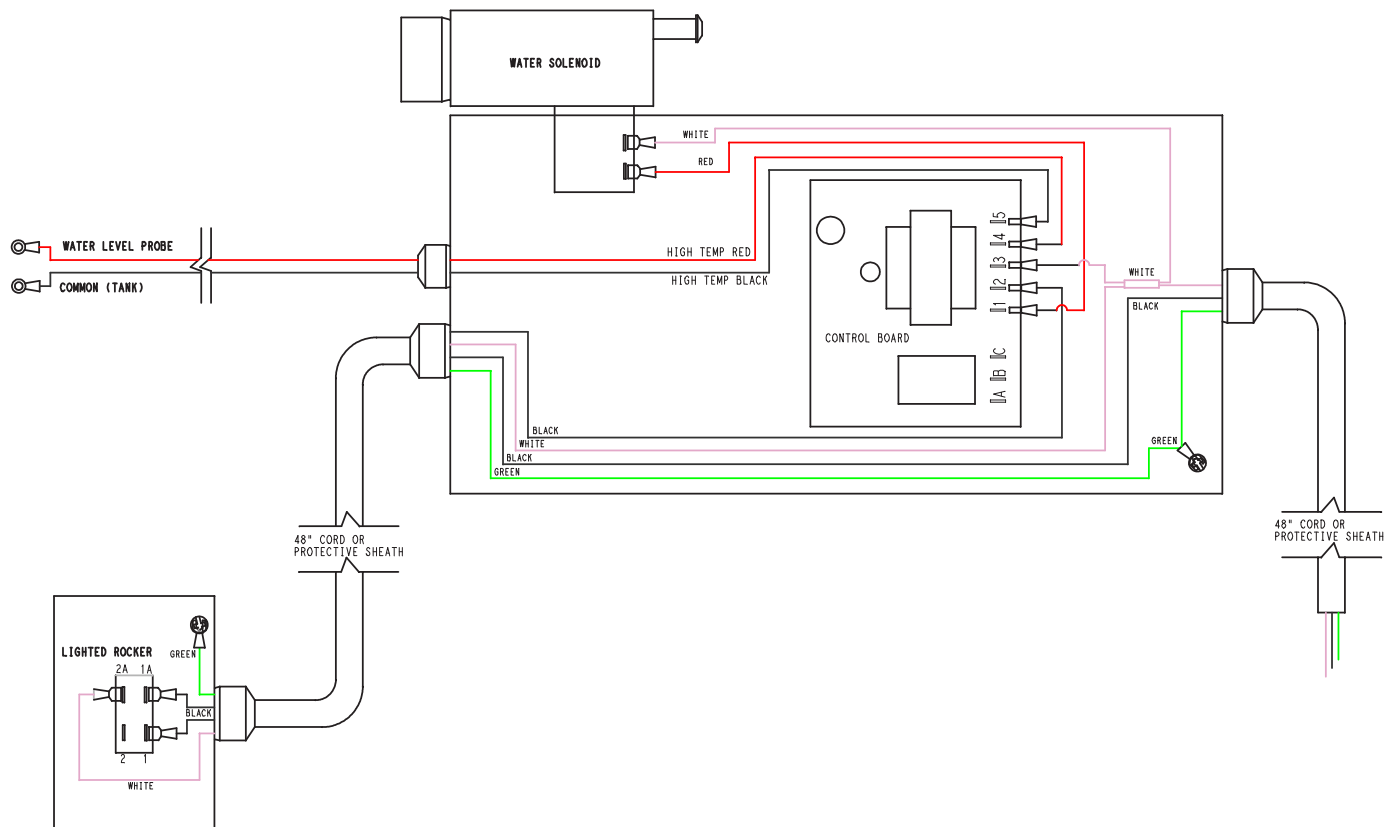


## 3 Well DESP Units

### 000-SCH-0097





**Auto Fill****000-SCH-00AW**





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