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OPERATOR'S MANUAL TECHNICAL SUPPLEMENT PARTS AND ELECTRICAL DIAGRAMS



Donut Icer Model: HI18F • HI24F

□ 20028 HI18F, 120V-60-1 □ 20026 HI24F, 120V-60-1 □ 20029-3 HI18F, 208/240V-60-1 □ 20027-4 HI24F, 208/240V-60-1 □ (Other)

SERIAL NUMBER

Item Number / Serial Number are listed on a data tag attached to the equipment. This manual should only be used with the Item Number(s) shown above.







Econo-Icer HI18/HI24 Operator's Manual

Belshaw Bros., Inc. 814 44TH ST NW, Suite 103 Auburn, WA 98001 USA

Phone: (206) 322-5474 ■ Fax: (206) 322-5425

Email: service@belshaw.com ■ http://www.belshaw.com

BELSHAW FREIGHT DAMAGE POLICY

Belshaw has made every effort to insure that your equipment arrives in excellent condition. For your protection, please inspect your shipment for any signs of damage that may have occurred during transport. Please note any damage that is found during inspection and file a freight claim with the shipping company immediately. Acceptance of damaged equipment may become the responsibility of the acceptor.

IMPORTANT

Keep This Manual For Future Reference.



EQUIPMENT RECORD

Please provide the information below when you correspond with us about your machine.

Purchased by	
Installed by	
Date of installation	Model number
Serial number	

040618

MN-1747EN

Belshaw Bros., Inc.

814 44th Street NW, Suite 103

Auburn, WA 98001 USA

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CERTIFICATE OF COMPLIANCE

Certificate Number

20151109-E30669

Report Reference

E30669-20151106

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Issued to:

BELSHAW BROS INC

Suite 103

814 44Th St Nw Auburn WA 98001

This is to certify that representative samples of

COMMERCIAL COOKING APPLIANCES

Commercial Electric Donut Icers - HI18C, HI18F, HI24C,

HI24F

Have been investigated by UL in accordance with the

Standard(s) indicated on this Certificate.

Standard(s) for Safety:

UL 197, Standard for Commercial Electric Cooking

Appliances

CAN/CSA C22.2 No. 109-M1981, Standard for Commercial

Cooking Appliances

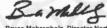
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Look for the UL Certification Mark on the product.



Bruce Mahrenholz, Director North American Certification Program

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Preface

The **HI18/HI24 Econo-Icer** is designed for quickly and easily icing donuts and a variety of baking products.

The **HI18/HI24 Econo-Icer** is meant to be used on a flat, stationary surface, with the operator standing on the handled side. The operator must work safely at all times and follow the instructions and warnings in this manual.

The HI18/HI24 Econo-Icer uses electrical elements to heat frosting in its kettle. The machine is available with the following electrical configurations:

- √ 120 volts, 1 phase, 60 hertz
- √ 220 volts, 1 phase, 60 hertz

The HI18/HI24 Econo-Icer produces less than 70 dB(A) of equivalent continuous A-weighted sound pressure at work stations. This has been determined during a run of the machine with shortening in the kettle, using a Bruel & Kjaer sound level meter, type 2236.

To use the **HI18/HI24 Econo-Icer** safely, heed the following warnings:

riangle UNPLUG the machine before attempting any adjustment, repair, disassembly, or cleaning to avoid electrocution or other injury.

assemble, disassemble, operate, clean, or maintain the machine.

⚠ To prevent unintentional startup and possible fire, UNPLUG the machine if there is a local power outage. When the power is restored, it is safe to plug the machine in again.



 $lack \Delta$ MAKE SURE that all electrical cords are routed so that no one will trip over them.



lack M To avoid electrocution, MAKE SURE that no electrical cords are fraved or cracked and that they do not pass through any water or icing.



 $lack \Lambda$ NEVER TOUCH the icing pan once the machine is on. The pan gets very hot, which may cause serious burns.



⚠ DO NOT OVERFILL the icing pan with icing. If shortening overflows the icing pan, it could cause serious burns or could cause someone to slip on the floor and be seriously injured.



⚠ MAKE SURE that the machine and the icing are cool before attempting any adjustment, repair, disassembly, or cleaning. Hot icing can cause serious burns.



⚠ BE CAREFUL never to get icing, water, or other materials on the floor. If anything does get spilled on the floor, mop it up immediately. Materials on the floor can cause people to slip or fall, resulting in serious injury or loss of life.

1

Operation

Operation

1. FILL **Icing Pan** with icing approximately 1/2" from the top of the pan.



- 2. TURN ON Heater.
- 3. ALLOW icing to heat for 45 minutes to reach desired icing temperature. The **Heating Indicator Light** will turn off, and the **Temperature Controller** will display the icing temperature.

NOTE: Periodic stirring of the icing is necessary to ensure constant, even heating of the icing.





- 4. ROTATE **Wire / Frame** over icing.
- 5. SLIDE the rack of donuts into the **Rack Holder**.



- 6. ROTATE the **Wire / Frame** over the rack of donuts to be iced.
- 7. FIRMLY GRIP the two (2) handles and rotate the Wire / Frame and rack of donuts to be iced.



8. RETURN the empty donut rack to the original position.



9. PUSH DOWN on the Icing Lift Handle to raise the Icing Pan until it reaches desired height.



10. LOWER the Icing Pan.



11. ROTATE the empty donut rack over the iced donuts.



12. FIRMLY GRIP the two (2) handles and rotate the Wire / Frame and donut rack to the original position.



13. ROTATE the **Wire / Frame** over the icing, remove iced donuts, and repeat steps 1-13.

2 Installing HI18/HI24 Digital Temperature Retrofit Kit

Parts Needed

- 1. Heater Control Box Assembly (HI24-1017) + Hardware:
 - ✓ 4X." Bolts
 - √ 8X ." Washers
 - ✓ 2X 6" High Temperature Wire Sleeves
- 2. 6X Wire Ties (990-0150)
- 3. Thermocouple Mounting Bracket (HI24-7008)
- 4. Heating Element Mounting Hardware:
 - √ 4X #10 Washers
 - ✓ 2X #10 Nuts

Installation Instructions

- 1. UNPLUG HI Unit from power source.
- 2. REMOVE existing **Heater** Control Box:
 - ✓ Remove Icing Pan.
 - ✓ Remove Top Cover from

- Heating Panel (4X Bolts).
- ✓ Remove wires from Heating Element.
- ✓ Remove old Heating Control Box Front Cover (4X Bolts).
- ✓ Remove 4X bolts connecting the old Heating Control Box to Heating Panel.
- ✓ Remove old Heating Control Box, including wire for connecting to Heating Elements, and Wire Sleeves.
- 3. ATTACH Retrofit Heating **Control Box:**
 - ✓ Remove 5X bolts securing the Front Cover of the new Heating Control Box Assembly and remove the cover.
 - ✓ Place Wire Sleeves on 12 GA white wires sticking out of the backside of the new Heater Control Box. (See Figure 1.)
 - ✓ Insert the wires and sleeves through heating box holes. (See Figure 1.)
 - ✓ Ensure sleeves are located as shown below. (See Figure 1.)
 - ✓ NOTE: Grommets located in

- the new Heating Control Box pop off easily. **Use care when moving wire through grommets.**
- ✓ Remove Front Cover of the new Heating Control Box Assembly.
- ✓ Remove 4X nuts and 4X washers from long bolts on back of new Heater Control Box.
- ✓ Install the new Heating
 Control Panel onto the
 Heating Box using
 corresponding holes and
 hardware provided in this kit.
- Replace Heating Control Box Front Cover (5X Bolts), making sure not to pinch any wires under the cover. DO NOT over-tighten Front Cover bolts. Doing so could lead to gasket leakage.
- 4. Reinstall the Top Cover of Heating Panel (5X Bolts).
- 5. Replace Icing Pan.
- 6. Route Female Thermocouple wire under the unit. (See Figures 3 and 4.)
 - ✓ Attach shielded thermocouple wire to Frame using supplied wire ties. (See Figure 4.)
- 7. Place Thermocouple into indicated alignment hole on Thermocouple Bracket. (See Figure 5.)
- 8. PLACE Thermocouple Bracket on

- Icing Pan. (See Figure 6, 7, and 8.)
- 9. PLUG in unit and verify all functions work properly.
 - ✓ Rotate Green ON/OFF Switch (located furthest to the left of the unit) to the ON position. The green light in the switch should illuminate. (See Figure 9.)
 - ✓ Omron Controller (far right) should power up and display Current Temperature (PV, large number) and Set Point temperature (SV, small number). (See Figure 10.)
 - ✓ To test digital temperature controller, wrap hand around Thermocouple, and ensure the indicated temperature (PV, displayed in large text) rises.
 - ✓ The Set Point (SV) can be changed by pushing the D or U arrows. (See Figure 10.)
 - ✓ Heat Cycle light should turn on after approximately 5 seconds.

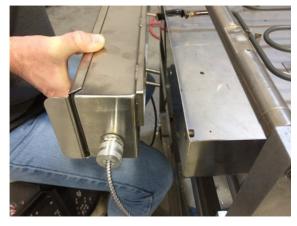


Figure 1, Installing New Control Panel



Figure 4, Thermocouple Routing 2



Figure 2, Element Connections on Relay

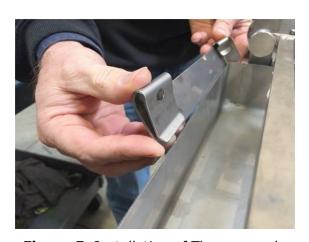


Figure 5, Installation of Thermocouple Bracket



Figure 3, Thermocouple Routing 1



Figure 6, Installation of Thermocouple



Figure 7, Installation of Thermocouple



Figure 9, Controls



Figure 8, Installation of Thermocouple

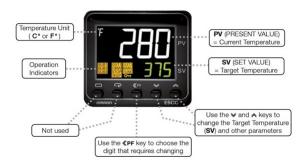


Figure 10, Temperature Controller

TROUBLESHOOTING	
Potential Issue	What To Do
Error or Alarm present on Digital Temperature Control	 Ensure Thermocouple is connected and functioning properly Cycle power (Green Power Switch, or unplug unit for 10 seconds, and plug back in)
Thermocouple becomes disconnected, Digital Temperature Control is flashing S.ERR	 Reconnect Thermocouple. S.ERR on temperature controller will disappear after a brief moment. Cycle power if necessary to clear controller error/alarm warning
Device on, indicated temperature not rising	 Ensure Thermocouple is connected, located in the Thermocouple Bracket and connected to the Icing Pan

3

Cleaning

Once a day, clean the **HI18/HI24 Econo-Icer** as explained below:

- REMOVE any debris from the work area before disassembling the HI18/HI24 Econo-Icer.
- 2. UNPLUG and REMOVE Thermocouple and Bracket from Icing Pan.
- To avoid being burned, WAIT for Icing Pan to cool before removing; REMOVE Icing Pan.
- 4. UNPLUG AND REMOVE heating panel assembly from unit.
- CLEAN the HI18/HI24 Econo-Icer with warm water and mild cleaner.
- 6. LIFT the **Tray Holder** over to the right side rest position, wash with warm soapy water, rinse, and wipe dry.
- 7. REMOVE **Retainer Knob** (HI24-0041, see parts list) that holds the **Wire / Frame** in place and lift out the **Wire / Frame**. Place **Wire / Frame** in automatic dishwasher. Use caution so that the wires do not get damaged.

8. RETURN the **Tray Holder** to the left side rest position.

For your safety, observe the following warnings throughout the entire cleaning process.

Thoroughly clean and dry the floor if icing, water, or other materials are spilled. Materials spilled on the floor can cause serious injury or loss of life.



✓ To avoid the possibility of shock, unplug the unit before cleaning.



✓ To avoid damage to the Wire / Frame, use caution when removing and transporting.



4

Maintenance

Lubrication

- USE several drops of Lubriplate FMO-900-AW gear oil on the Lift Handle Axle, located under the heating panel assembly. LUBRICATE EVERY TWO WEEKS.
- 2. USE Lubriplate FMO-900-AW gear oil to lubricate the tray **Holder** and **Wire Holder Pivot Pins**.
 LUBRICATE EVERY WEEK.

WARNING

To avoid serious burns or other injury, always disconnect the machine from the power source before lubricating.







Econo-Icer HI18/HI24 Technical Supplement

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Date of installation	Model number
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042615

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Preface

To transport the **HI18/HI24 Econo-Icer** to the workstation and unpack it, follow the steps listed below:

- 1. Use a fork lift or pallet jack to transport the shipping crate to workstation.
- 2. Break down the shipping crate.
- 3. Remove all packing materials, including foam, tape, brown paper, plastic, and white protective coating.

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The **HI18/HI24 Econo-Icer** is meant to be used on a flat, stationary surface, with the operator standing on the handled side. The operator must work safely at all times and follow the instructions and warnings in this manual.

The HI18/HI24 Econo-Icer uses electrical elements to heat frosting in its kettle. The machine is available with the following electrical configurations:

- ✓ 220 volts, 1 phase, 50 hertz
- √ 240 volts, 1 phase, 50 hertz

The HI18/HI24 Econo-Icer produces less than 70 dB(A) of equivalent continuous A-weighted sound pressure at work stations. This has been determined during a run of the machine with shortening in the kettle, using a Bruel & Kjaer sound level meter, type 2236.

To use the **HI18/HI24 Econo-Icer** safely, heed the following warnings:



 \triangle UNPLUG the machine before attempting any adjustment, repair, disassembly, or cleaning to avoid electrocution or other injury.



riangle NEVER USE force to assemble, disassemble, operate, clean, or maintain the machine.



⚠ To prevent unintentional startup and possible fire, UNPLUG the machine if there is a local power outage. When the power is restored, it is safe to plug the machine in again.



riangle MAKE SURE that all electrical cords are routed so that no one will trip over them.

To avoid electrocution, MAKE SURE that all electrical cords are not frayed or cracked and that they do not pass through any water or icing.



⚠ NEVER TOUCH the icing pan once the machine is on. The pan gets very hot, which may cause serious burns.



⚠ DO NOT OVERFILL the icing pan with icing. If shortening overflows the icing pan, it could cause serious burns or could cause someone to slip on the floor and be seriously injured.

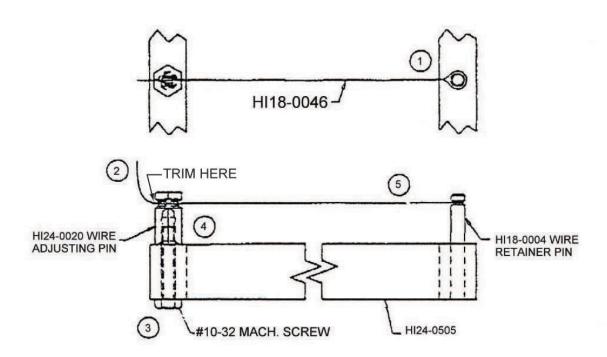


MAKE SURE that the machine and the icing are cool before attempting any adjustment, repair, disassembly, or cleaning. Hot icing can cause serious burns.



⚠ BE CAREFUL never to get icing, water, or other materials on the floor. If anything does get spilled on the floor, mop it up immediately. Materials on the floor can cause people to slip or fall, resulting in serious injury or loss of life.

Maintenance



Wire Tensioning and Replacement.

The following tools are required for wire tensioning and replacement:

- ✓ 5/16" Open-End Wrench
- ✓ Wire Cutter

IMPORTANT

Do not use a box wrench to tighten. This will cause too much torque, and frame may bend and bow.



- 1. PLACE looped end of wire over the **Wire Retainer Pin** (HI18-0004) placing it in the groove.
- 2. THREAD other end of wire through the hole in the **Wire Adjusting Pin** (HI24-0020) and BEND the end pointing up as shown.
- 3. With the 5/16" open-end wrench, LOOSEN the #10-32X1" machine screw.
- With the 5/16" open-end wrench, TURN the Wiring Adjusting Pin to tighten the wire. Be sure the wire winds in the groove of the pin. (This will

- also tighten the loop around the **Wire Retainer Pin**.)
- 5. TIGHTEN the wire until taut, removing all slack. Do Not Over Tighten! Over Tightening Will Cause The Frame To Bend And Bow.
- 6. TIGHTEN the **#10-32 machine screw** to hold pin in place.
- 7. TRIM excess tail of the end of wire with wire cutters.

2 Programming the Temperature Controller

The **TJ-0184D-1** or **2** Controller comes per-programmed and protected so the operator cannot change the setup parameters. To change any settings, you must first unlock the **Controller.**

Note: Only the settings that are changed from the factory settings are listed in this section.



Unlocking the Controller

To unlock the controller:

- 1. PRESS the □ + □ keys for more than 3 seconds.
- 2. PRESS the key to move to the next parameter.
- 4. PRESS the + keys for more than 1 second to return to operator screen.

PARAMETER	FACTORY DEFAULT SETTING		PANEL	EXPLANATION OF PRESENT SETTING
Protection Parameters				
Operation/Adjustment Protect	0	2	ōRPŁ	2:Display and change of only "PV" and "PV/SP" parameters are allowed. [2]
Initial Setting/Communications Protect	1	2	<i>CCP</i> Ł	2:Prohibited. [2]

Changing Operator Set Points

To change operator set points: (Must be unlocked to change Alarm Value 1.)

- 1. PRESS the key to move to the next parameter.
- 2. PRESS the **๑ or ▶ key** to change the parameter.
- 3. PRESS the **key** to return to operator screen.

PARAMETER	FACTORY DEFAULT SETTING	PRESENT SETTING		PANEL	EXPLANATION OF PRESENT SETTING
Operator Set Points					
Set Point	0.0	125.0/50.0	°F/°C		
Alarm Value 1	0.0	10.0/5.0	°F/°C	AL - I	

Changing Operator Level Parameters

To change operator level parameters: (Must be unlocked.)

- 1. PRESS the **key** for less than 1 second.
- 2. PRESS the key to move to the next parameter.
- 3. PRESS the **๑ or ⋈ key** to change the parameter.
- 4. PRESS the **key** to return to operator screen.

PARAMETER		PRESENT SETTING		PANEL	EXPLANATION OF PRESENT SETTING
Operator Level Parameters					
Process Value Input Shift	0.0	0.0	°F/°C	ZNS	This is the offset setting for calibration.
Hysteresis (Heating)	1.0	0.5	°F/°C	HY5	

Changing Initial Level Parameters

To change initial level parameters: (Must be unlocked.)

- 1. PRESS the \(\to \) **key** for more than 1 second to adjust intial parameters.
- 2. PRESS the key to move to the next parameter.
- 3. PRESS the **or v key** to change the parameter.

4. PRESS the **key** for more than 1 second return to

operator screen.

PARAMETER	FACTORY DEFAULT SETTING	PRESENT SETTING		FRONT PANEL	EXPLANATION OF PRESENT SETTING
Initial Level Parameters					
Input Type	5	8		ZN-E	8:Thermocouple [J] (-20.0 to 400.0°C or 0.0 to 750.0°F) [8]
Temperature Unit	0	1		d-U	°F [F]
SP Upper Limit	130.0	150.0/65.0	°F/°C	5L - H	
SP Lower Limit	-20.0	0.0	°F/°C	5L - L	
Alarm 2 Type	2	0		ALEZ	0:Alarm function OFF [0]
Alarm 3 Type	2	0	-	ALE3	0:Alarm function OFF [0]
Alarm 4 Type	2	0	-	ALEY	0:Alarm function OFF [0]

Changing Advanced Level Parameters

To change advanced level parameters: (Must be unlocked.)

1. UNLOCK the controller.

- 2. PRESS the **key** for more than 1 second to adjust intial parameters.
- 3. PRESS the **□ key** until you get to parameter RMaV.
- 4. PRESS the **or v** key to change RMaV parameter to 169.

PARAMETER	FACTORY DEFAULT SETTING		PANEL	EXPLANATION OF PRESENT SETTING
Advanced Level Parameters				
Alarm 1 Latch	0	1	A ILE	Enabled [oN]
PV/SP No. 1 Display Selection	4	1	7 C C 1	1:"PV/SP/No display" [1]
PV Decimal Point Display	1	0	PV dP	OFF [āFF]

Locking the Controller

After programming: To lock the controller:

- 1. PRESS the + □ keys for more than 3 seconds.
- 2. PRESS the **key** to move to the next parameter.
- 3. PRESS the **or v key** to change the parameter *APPL* and *EPPL* from 0 to 2.
- 4. PRESS the ① + ② keys for more than 1 second to return to operator screen.

Setting the Controller to Default Settings

To set the controller back to factory default settings: (Must be unlocked.)

- 1. PRESS the **key** for more than 1 second to adjust intial parameters.
- 2. PRESS the **□ key** until you get to **parameter** #MaV.
- 3. PRESS the **△ or ✓ key** to change #MāV parameter to **169**.
- 4. CHANGE **parameter** *INIL* from *GFF* to *FREL*.
- 5. PRESS the **key** for more than 1 second to return to initial screen.
- 6. PRESS the key for more than 1 second to return to operator screen.

3

Troubleshooting

If you have a problem with your **HI18/HI24 Econo-Icer** that you cannot solve, call your dealer or another qualified technician.

If your dealer cannot help you, please call Belshaw Adamatic at 800-578-2547. When you call, please specify the following:

- ✓ The MODEL NAME of the machine.
- ✓ The SERIAL NUMBER of the machine.
- ✓ The VOLTAGE, PHASE, and CYCLE of the machine.

CAUTION

IF YOU PERFORM REPAIRS YOURSELF,
OR HAVE THEM PERFORMED BY
ANYONE OTHER THAN A SERVICE
TECHNICIAN AUTHORIZED BY
BELSHAW ADAMATIC, YOU DO SO AT
YOUR OWN RISK.



THE POWER SOURCE BEFORE
DISASSEMBLING, REPAIRING, OR
WIRING.



Troubleshooting Specifics

NO HEAT AND ON/OFF SWITCH DOES NOT LIGHT UP				
Possible Causes	What To Do			
Unit not plugged in or wall electrical breaker is tripped.	Plug unit in and/or check electrical outlet.			
ON/OFF SWITCH ON AND LIT UP, HEATING LIGHT NOT ON				
Possible Causes	What To Do			
Loose wire.	Check wires.			
NO HEAT, ON/OFF SWITCH ON AND LIT UP, HEATING LIGHT ON				
Possible Causes	What To Do			
Heating element failure.	Check heating element of open circuit.			
Relay failure.	Check if relay turns on; replace if defective.			
UNEVEN ICING TEMPERATURE.				
Possible Causes	What To Do			
Icing needs stirring.	Stir icing.			
WIRES ARE NOT EVENLY TAUT				
Possible Causes	What To Do			
Wires are not evenly adjusted.	Tighten loose wires.			
NO HEAT, ON/OFF SWITCH ON AND LIT UP, HEATING LIGHT NOT ON				
Possible Causes	What To Do			
Loose wire.	Check wires.			
High limit tripped.	Wait 10 minutes and recheck.			
Temperature controller set too low.	Adjust set point higher.			
Thermocouple not plugged in.	Plug thermocouple into connector.			

Parts Diagrams for HI18F, HI24F

Mark the Item Number for your Icer below.

ABOUT ITEM NUMBERS:

Icer models are identified by an Item Number. You need your Icer's Item Number to find the correct parts diagrams for your glazer. The Item Number is located on a data tag on the icer. When the item number is known, it should be checked off on the cover page of this manual, and also in the table below.

MARK YOUR ICER'S ITEM NUMBER BELOW	ITEM NUMBER	MODEL	VOLTS	HERTZ
	20028	HI 18F	110-120 V	50/60 HZ
	20029-3	HI 18F	208-240 V	50/60 HZ
	20026	HI 24F	110-120 V	50/60 HZ
	20027-4	HI 24F	208-240 V	50/60 HZ

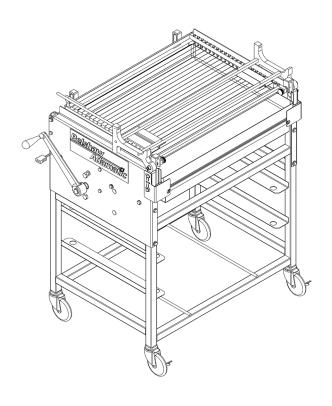
DIAGRAM: HI18-2015, OVERALL ASSEMBLY

120V and 208-240V models

Model: HI18F

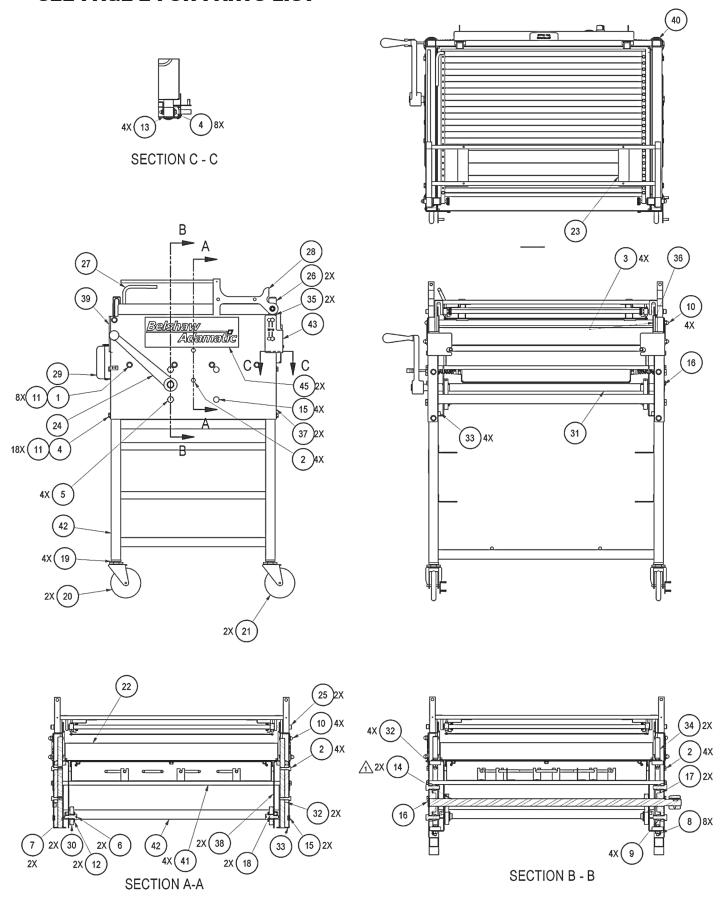
Item Numbers: 20028, 20029-3

TO IDENTIFY MODEL AND ITEM NUMBER, SEE DATA TAG ON ICER



l			↑ BILL OF MATERIAL
ITEM	QTY	PART NUMBER	DESCRIPTION
1	12	903-1319SS	5/16-18X1 UNC SS HEX HEAD MACHINE SCREW
2	12	903-133588	5/16-18X1-1/4 SS HEX CAP SCREW
3	4	903-1346SS.C	SCREW, CB, 5/16"-18 X 1-1/2" SS
4	8	903-135588	SCREW, HHMB, HH, 5/16-18 X 2, SST304
5	4	903-1796SS	SCREW, HHMB, 1/2-13 X 1-1/2 SS
6	2	903-1902	1/2X3/4X3/8-16 SHOULDER BOLT
7	2	903-6001	3/8-16 SS NYLON INSERT LOCKNUT
8	18	903-6025	5/16-18 SS NYLON INSERT LOCKNUT
9	4	903-6405	1/2-13 SS NYLON INSERT LOCKNUT
10	4	903-6455	5/16-18 SS ACORN NUT CAP
11	26	903-7540SS	WASHER.FLAT.5/16 SS SAE
12	4	903-7561SS	1/2 SS FLAT WASHER
13	4	905-0054-1.25	PLASTIC END CAP 1-1/4 SQ BLK
14	2	905-0248	MACHINE KEY, 1/4 X 1/4 X 3/4, UNDERSIZED, SQUARE ENDS
15	4	905-0586	HOLE PLUG FOR 9/16" HOLE, METAL
16	1	905-0587	HOLE PLUG FOR 1" HOLE, BLACK, PLASTIC
17	2	970-0081	SLEEVE BEARING, 1" ID, 2 BOLT FLANGE
18	2	970-0107	BUSHING, METAL W/ TEFLON, 1/2" ID X 3/4" LG.
19	4	FT6-0120	CASTER SOCKET; 18 GA, 1.25, RT-POLY
20	2	HG18-0031-4	SWIVEL CASTER, 4"
21	2	HG18-0031B-4	SWIVEL CASTER W/BRAKE, 4"
22	1	HI18-0001	ICING PAN
23	2	HI18-0021	TRAY HOLDER
24	1	HI18-0035	LIFT HANDLE
25	2	HI18-0506	HINGE BOLT ASSEMBLY
26	2	HI18-0521	ASSY; MOUNTING BRACKET; TRAY HOLDER
27	1	HI18-1002	ASSY,DONUT RETAINER FRAME
28	1	HI18-1003	ASSEMBLY, TRAY RETAINER
29	1	HI18-1300	HEATING PANEL ASSY; 120V
30	2	HI18-6006	LIFT CAM
31	1	HI18-6007	LIFT AXLE
32	2	HI18-6008	SHAFT SPACER-BACKUP
33	4	HI18-6009	LIFT BUSHING
34	2	HI18-6010	LIFT SHAFT
35	2	HI18-6011	PIVOT SUPPORT SPACER
36	1	HI18-6013	SPACER SHAFT; HARP SUPPORT
37	2	HI18-7003	SIDE PLATE
38	2	HI18-7004	LIFT TEE
39	1	HI18-7009	ICER ENTRY GUIDE, RIGHT
40	1	HI18-7010	ICER ENTRY GUIDE, LEFT
41	4	HI18-7016	SHAFT; SPACER-LONG
42	1	HI18-8003	WELDMENT; FRAME ASSEMBLY
43	1	HI18-8006	END STOP/PAN GUIDE WELDMENT, LEFT
44	1	HI18-8007	END STOP/ PAN GUIDE WELDMENT, RIGHT
4 5	2	LBL-9019	LABEL, BELSHAW 12" x 4"

SEE PAGE 2 FOR PARTS LIST



SEE PAGE 2 FOR PARTS LIST

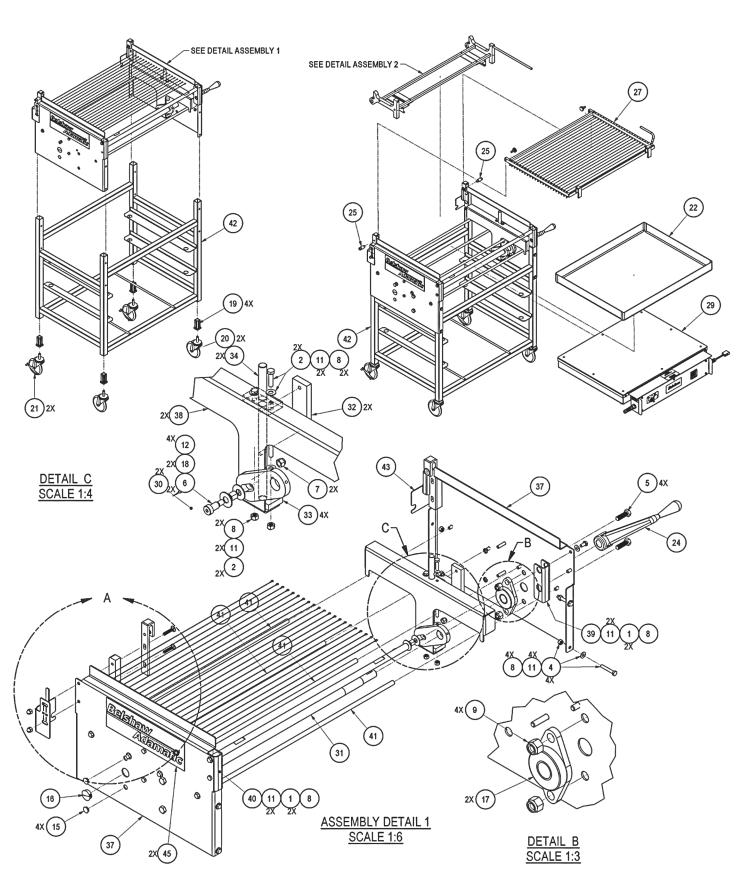


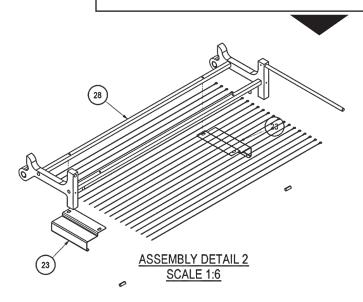
DIAGRAM: HI18-2015, OVERALL ASSEMBLY

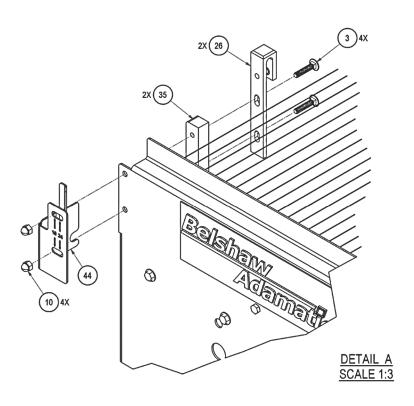
120V and 208-240V models

Model: HI18F

Item Numbers: 20028, 20029-3

TO IDENTIFY MODEL AND ITEM NUMBER, SEE DATA TAG ON ICER





SEE PAGE 2 FOR PARTS LIST

DIAGRAM: HI18-1300, HEATING PANEL ASSEMBLY

120V and 208-240V models

Model: HI18F

Item Numbers: 20028, 20029-3

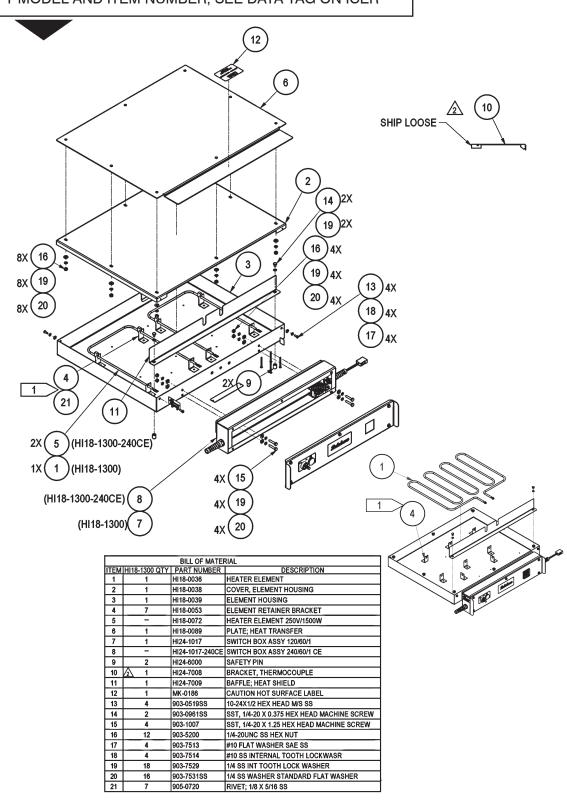
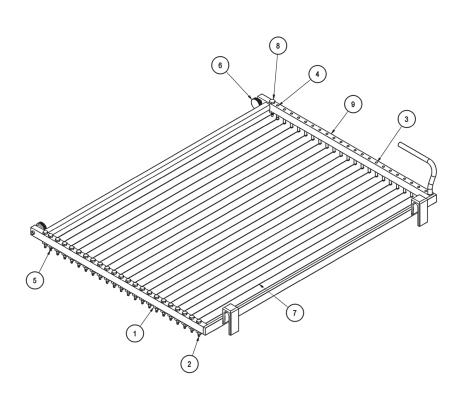


DIAGRAM: HI18-1002, DONUT RETAINER FRAME

120V and 208-240V models

Model: HI18F

Item Numbers 20028, 20029-3



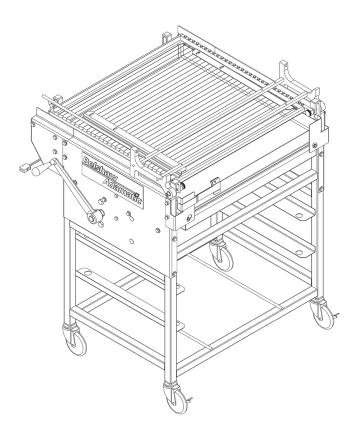
	BILL OF MATERIAL						
IT	ЕМ	QTY	PART NUMBER	DESCRIPTION			
	1	24	903-5205SS	1/4-28 SS HEX FINISH NUT			
	2	21	HI18-0002	TENSION BOLT WIRE			
	3	21	HI18-0004	WIRE RETAINER PIN			
	4	1	HI18-0019	WIRE RETAINER PIN - DUAL WIRE			
	5	3	HI18-0022	TENSION BOLT WIRE			
	6	2	HI18-0041	KNOB - DONUT RETAINER FRAME			
	7	23	HI18-0046	WIRE; S.S.			
	8	1	HI18-0504	SUB-ASSY; DONUT RETAINER FRAME			

DIAGRAM: HI24-2017, OVERALL ASSEMBLY

120V and 208-240V models

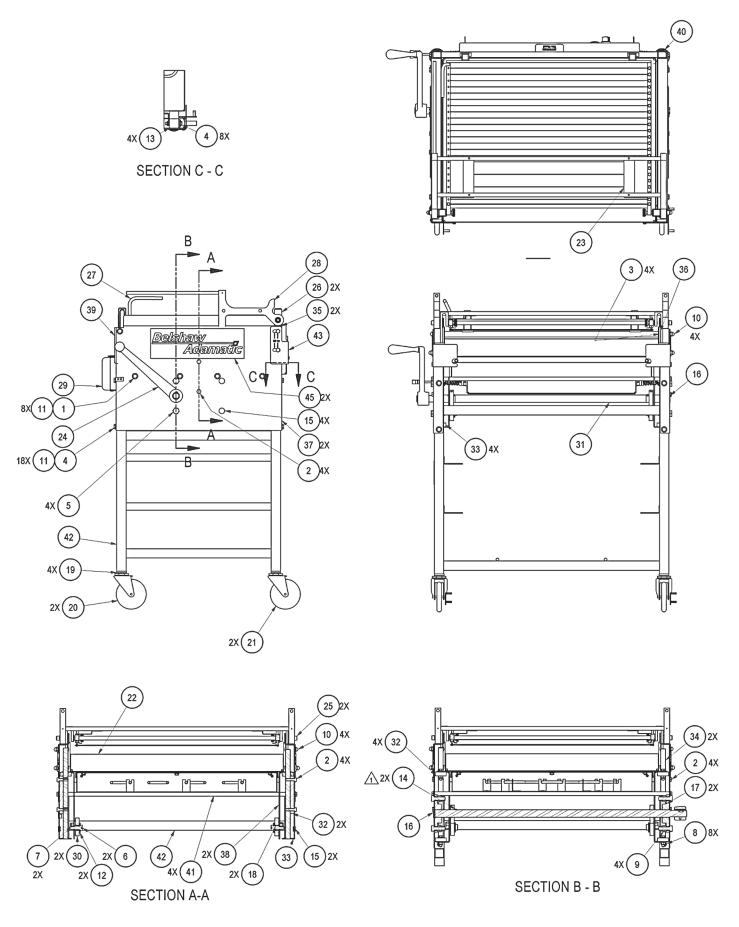
Model: HI24F

Item Numbers: 20026, 20027-4



BILL OF MATERIAL						
ITEM	M QTY PART NUMBER		DESCRIPTION			
1	4	FT6-0120	CASTER SOCKET; 18 GA, 1.25, RT-POLY			
2	2	HG18-0031-4	SWIVEL CASTER, 4"			
3	2	HG18-0031B-4	SWIVEL CASTER W/BRAKE, 4"			
4	1	HI18-0035	LIFT HANDLE			
5	2	HI18-0506	HINGE BOLT ASSEMBLY			
6	2	HI18-0521	ASSY; MOUNTING BRACKET; TRAY HOLDER			
7	2	HI18-6006	LIFT CAM			
8	1	HI18-6007	LIFT AXLE			
9	2	HI18-6008	SHAFT SPACER-BACKUP			
10	4	HI18-6009	LIFT BUSHING			
11	2	HI18-6010	LIFT SHAFT			
12	2	HI18-6011	PIVOT SUPPORT SPACER			
13	5	HI18-6012	SHAFT; SPACER-LONG			
14	1	HI18-6013	SPACER SHAFT; HARP SUPPORT			
15	2	HI18-7003	SIDE PLATE			
16	2	HI18-7004	LIFT TEE			
17	1	HI18-7017	PAN BACK STOP LEFT			
18	1	HI18-7018	PAN BACK STOP RIGHT			
19	1	HI18-8003	WELDMENT; FRAME ASSEMBLY			
20	1	HI24-0006	ICING PAN			
21	2	HI24-0018	TRAY HOLDER			
22	1	HI24-1002	ASSEMBLY; TRAY RETAINER			
24	1	HI24-1300	HEATING PANEL ASSY; 120V			
27	1	HI24-7011	24" ENTRY GUIDE RIGHT			
28	1	HI24-7012	24" PAN GUIDE RIGHT			
29	1	HI24-7013	24" PAN GUIDE LEFT			
30	1	HI24-7014	24" ENTRY GUIDE LEFT			
31	2	LBL-9019	LABEL, BELSHAW 12" x 4"			
32	20	903-1319SS	5/16-18X1 UNC SS HEX HEAD MACHINE SCREW			
33	12	903-133588	5/16-18X1-1/4 SS HEX CAP SCREW			
34	4	903-1346SS.C	SCREW, CB, 5/16"-18 X 1-1/2" SS			
35	8	903-135588	SCREW, HHMB, HH, 5/16-18 X 2, SST304			
37	4	903-1796SS	SCREW, HHMB, 1/2-13 X 1-1/2 SS			
38	2	903-1902	1/2X3/4X3/8-16 SHOULDER BOLT			
39	2	903-6001	3/8-16 SS NYLON INSERT LOCKNUT			
40	24	903-6025	5/16-18 SS NYLON INSERT LOCKNUT			
41	4	903-6405	1/2-13 SS NYLON INSERT LOCKNUT			
42	4	903-6455	5/16-18 SS ACORN NUT CAP			
43	36	903-7540SS	SST, 5/16 FLAT WASHER, REGULAR			
44	4	903-7561SS	1/2 SS FLAT WASHER			
45	4	905-0054-1.25	PLASTIC END CAP 1-1/4 SQ BLK			
46	4	905-0586	HOLE PLUG FOR 9/16" HOLE, METAL			
47	1	905-0587	HOLE PLUG FOR 1" HOLE, BLACK, PLASTIC			
48	2	970-0081	SLEEVE BEARING, 1" ID, 2 BOLT FLANGE			
49	2	970-0107	BUSHING, METAL W/ TEFLON, 1/2" ID X 3/4" LG.			
67	1	HI18-7019	BRACKET, THERMOCOUPLE, HI18/24			
68	2	HI18-0041	KNOB - DONUT RETAINER FRAME			
69	1	HI24-8010	SUB-ASSY; DONUT RETAINER FRAME			
70	1	HI18-0019	WIRE RETAINER PIN - DUAL WIRE			
71	31	903-520588	1/4-28 SS HEX FINISH NUT			
72	28	HI18-0004	WIRE RETAINER PIN			
73	30	HI18-0046	WIRE; S.S.			
74	2	HI18-0022	TENSION BOLT WIRE			
75	29	HI18-0002	TENSION BOLT WIRE			
76	2	905-0248	MACHINE KEY, 1/4 X 1/4 X 3/4, UNDERSIZED, SQUARE ENDS			

SEE PAGE 8 FOR PARTS LIST



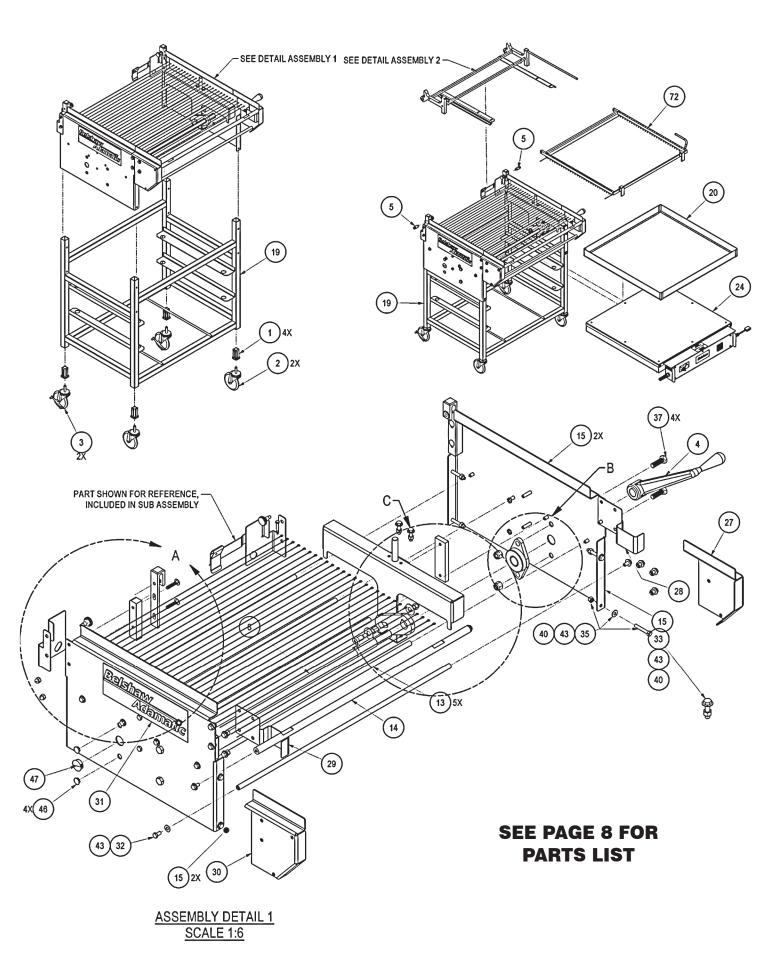


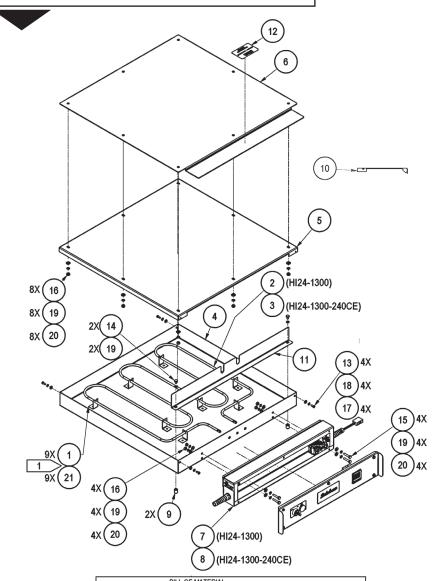
DIAGRAM: HI24-2017, OVERALL ASSEMBLY 120V and 208-240V models **Model: HI24F** 17 **Item Numbers:** 20026, 20027-4 TO IDENTIFY MODEL AND ITEM NUMBER, SEE DATA TAG ON ICER ASSEMBLY DETAIL 2 SCALE 1:6 33 **SEE PAGE 8 FOR PARTS LIST** 2X 48 (34)4X DETAIL B SCALE 1:3 ,2X(12) (42) 0 B Ó 16 DETAIL A B SCALE 1:3 DETAIL C SCALE 1:4

DIAGRAM: HI24-1300, HEATING PANEL ASSEMBLY

120V and 208-240V models

Model: HI24F

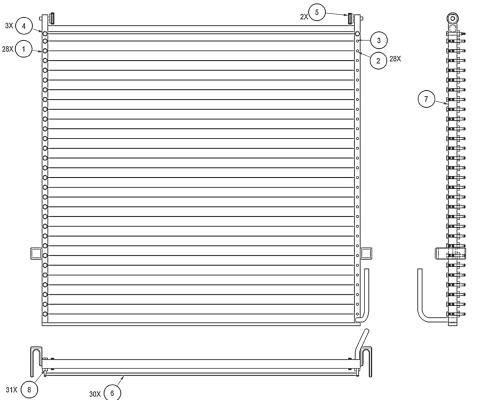
Item Numbers: 20026, 20027-4



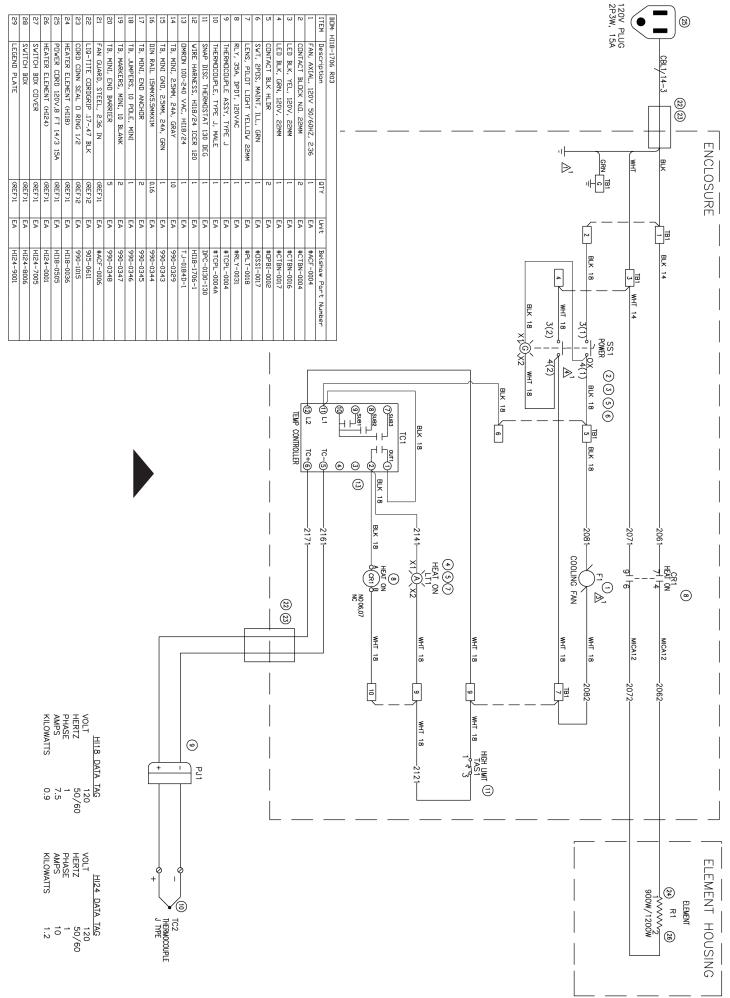
	BILL OF MATERIAL						
ITEM	HI24-1300 QTY	PART NUMBER	DESCRIPTION				
1	8	HI18-0053	ELEMENT RETAINER BRACKET				
2	1	HI24-0001	HEATING ELEMENT 120V/1200W				
3	-	HI24-0001-240	HEATING ELEMENT 240V/1200W				
4	1	HI24-0004	ELEMENT HOUSING				
5	1	HI24-0005	ELEMENT HOUSING COVER				
6	1	HI24-0011	HEAT TRANSFER PLATE				
7	1	HI24-1017	SWITCH BOX ASSY 120/60/1				
8	-	HI24-1017-240CE	SWITCH BOX ASSY 240/60/1 CE				
9	2	HI24-6000	SAFETY PIN				
10	<u>3</u> 1	HI24-7008	BRACKET, THERMOCOUPLE				
11	1	HI24-7009	BAFFLE; HEAT SHIELD				
12	1	MK-0186	CAUTION HOT SURFACE LABEL				
13	4	903-0519SS	10-24X1/2 HEX HEAD M/S SS				
14	2	903-0961SS	SST, 1/4-20 X 0.375 HEX HEAD MACHINE SCREW				
15	4	903-1007	SST, 1/4-20 X 1.25 HEX HEAD MACHINE SCREW				
16	12	903-5200	1/4-20UNC SS HEX NUT				
17	4	903-7513	#10 FLAT WASHER SAE SS				
18	4	903-7514	#10 SS INTERNAL TOOTH LOCKWASR				
19	18	903-7529	1/4 SS INT TOOTH LOCK WASHER				
20	16	903-7531SS	1/4 SS WASHER STANDARD FLAT WASHER				
21	8	905-0720	RIVET; 1/8 X 5/16 SS				

DIAGRAM: HI24-1001, DONUT RETAINER FRAME

Model: HI24F, Item Numbers 20026, 20027-4



	BILL OF MATERIAL						
	ITEM	QTY	PART NUMBER	DESCRIPTION			
<u></u>	1	28	HI18-0002	TENSION BOLT WIRE			
	2	28	HI18-0004	WIRE RETAINER PIN			
<u></u>	3	1	HI18-0019	WIRE RETAINER PIN - DUAL WIRE			
	4	3	HI18-0022	TENSION BOLT WIRE			
	5	2	HI18-0041	KNOB - DONUT RETAINER FRAME			
<u></u>	6	30	HI18-0046	WIRE; S.S.			
	7	1	HI24-0505	SUB-ASSY; DONUT RETAINER FRAME			
	8	31	903-520588	1/4-28 SS HEX FINISH NUT			

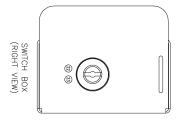


DIAGRAMS PAGE 14 © Belshaw Adamatic Bakery Group, Auburn, WA 98001 USA. All Rights Reserved. 01/20

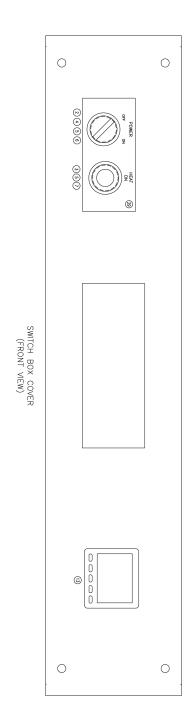
DIAGRAM: HI18-1706, ELECTRICAL ASSEMBLY/DIAGRAM

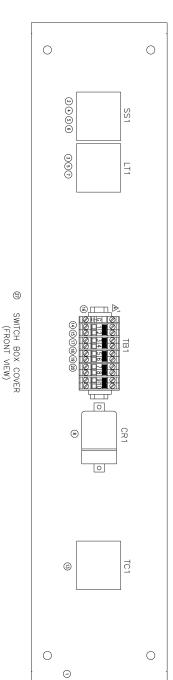
HI18F, HI24F (120-Volt models) Item Numbers: 20028, 20026

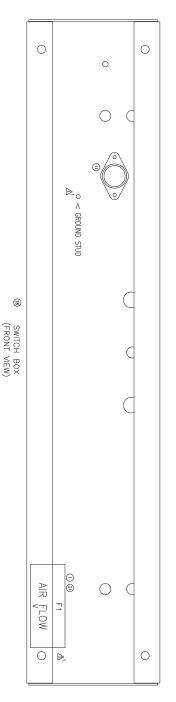












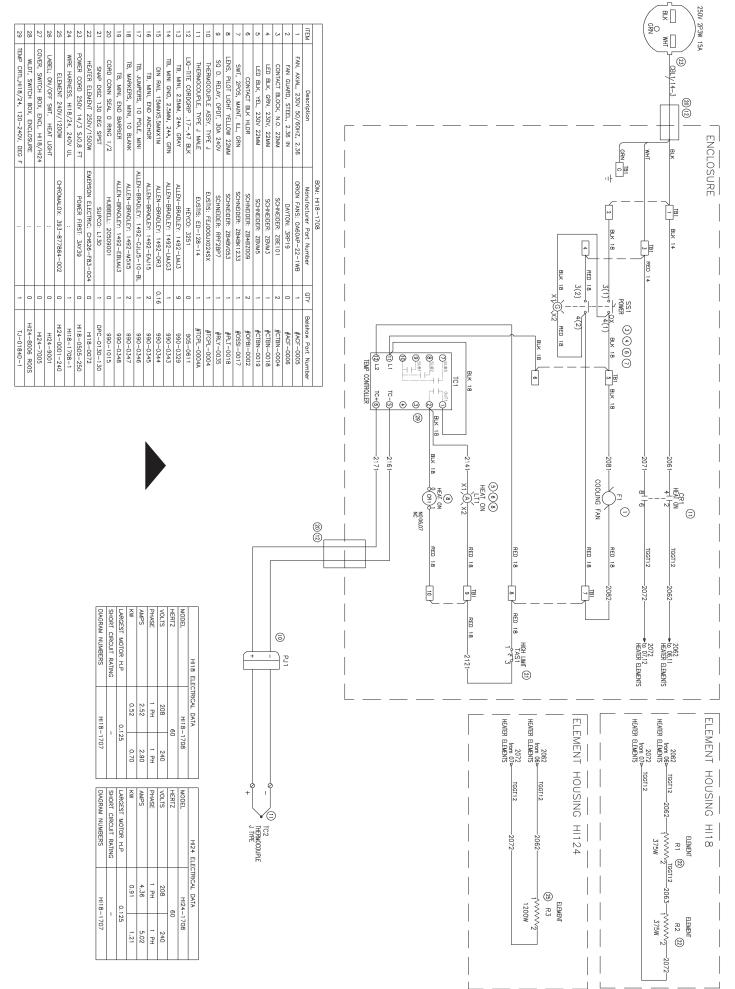
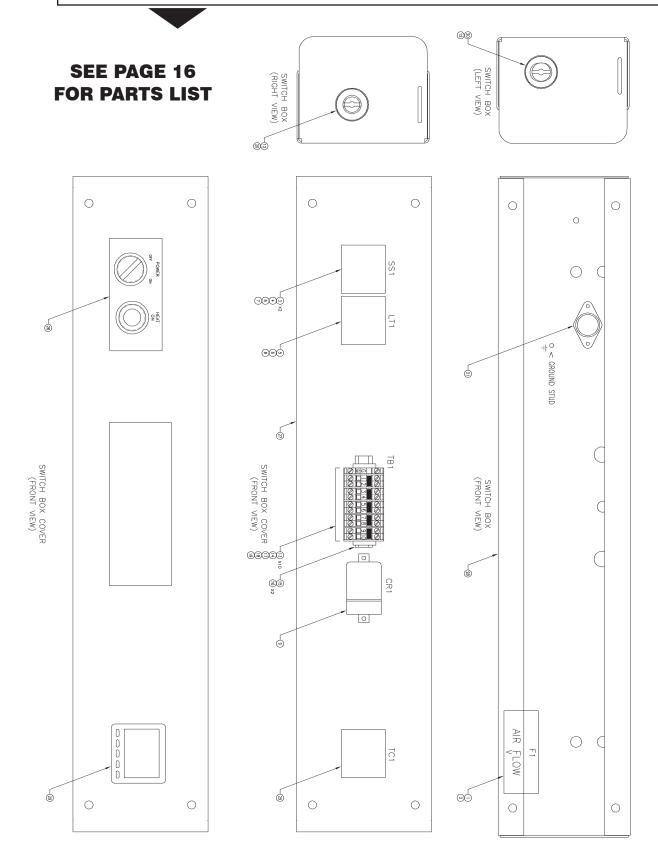


DIAGRAM: HI18-1708, ELECTRICAL ASSEMBLY/DIAGRAM

HI18F, HI24F (208-240 Volt models) Item Numbers: 20029-3, 20027-4





Belshaw!

Belshaw Adamatic Bakery Group

Limited Warranty / Return Policy

Subject to the terms and limitations set forth in this limited warranty ("Limited Warranty"), Belshaw Adamatic Bakery Group (also referred to as "the Manufacturer") warrants to the original purchaser ("Purchaser") of Manufacturer's equipment and parts ("Products"), Belshaw Adamatic Bakery Group's manufacture and assembly of Products to be free from defects in workmanship and material which would result in product failure under normal use and service. Belshaw Adamatic Bakery Group's entire liability under this Limited Warranty is limited to either repairing or replacing at Manufacturer's factory or on Purchaser's premises, at Belshaw Adamatic Bakery Group's option, any Products purchased by Purchaser which shall be determined by the Manufacturer to be defective. If necessary to return Products to Manufacturer's factory, Products must be shipped by Purchaser with transportation charges prepaid by Purchaser.

Belshaw Adamatic Bakery Group reserves the right to make changes in design or add any improvement to its Products at any time without incurring any obligations to install the same on Products previously sold

Possession, use or operation of Products sold hereunder for any other than their designed purpose, or use of Products which are in poor repair, modified, improperly operated, or neglected, is done at the Purchaser's risk. Belshaw Adamatic Bakery Group hereby disclaims any liability for these actions and shall not be liable for defects in or for any damages or loss to any property which is attributable to such actions.

Under no circumstances shall Belshaw Adamatic Bakery Group be liable for any indirect, special, incidental, or consequential damages arising out of, or from the use of its Products by Purchaser, its assignees, employees, agents or customers.

THIS LIMITED WARRANTY SHALL BE PURCHASER'S SOLE AND EXCLUSIVE REMEDY WITH RESPECT TO DEFECTIVE PRODUCTS.

Warranty Period

This Limited Warranty covers Products manufactured by Belshaw Adamatic Bakery Group and sold by Belshaw Adamatic Bakery Group or its authorized distributor ("Distributor") or authorized dealer ("Dealer"), and this Limited Warranty shall extend for a period of one (1) year from date of shipment to Purchaser, and to the original Purchaser only.

Limited Warranty

With respect to products not manufactured by Belshaw Adamatic Bakery Group, warranty coverage shall be limited to the warranty of the original manufacturer of the product, or the Belshaw Adamatic Bakery Group Limited Warranty, whichever is the lesser coverage period.

Replacement Products provided under the terms of this Limited Warranty are warranted for the remainder of the original warranty period applicable to the Product.

Exclusions

This Limited Warranty excludes from its coverage and does not apply to: (a) solenoid and relay coils; (b) lamps; (c) "O" rings; (d) belts; and (e) impellers. This Limited Warranty also excludes the cost of labor for removing and replacing Products subject to a warranty claim, other than the labor incurred directly by the Manufacturer when, in Belshaw Adamatic Bakery Group's opinion, a repair of the Product by the Manufacturer is justified.

Warranty Claims

In case of warranty claims relating to your Product, you must follow the instructions below.

Report Claims to Your Authorized Distributor or Dealer or to Belshaw Adamatic Bakery Group

As soon as you discover a problem, contact the Distributor or Dealer from whom you purchased the Product or Belshaw Adamatic Bakery Group. Your Distributor or Dealer will notify Belshaw Adamatic Bakery Group for you. Only Belshaw Adamatic Customer Service can approve or authorize warranty claims.

You must state the following:

- 1. Your name, company name, and telephone number
- The location, phone number, and contact name where the Product is located
- 3. The invoice number and date of purchase of the Product
- The Model and Serial Number of the Product, as written on the data tag attached to the Product
- 5. A description of the problem and how it occurred

Shipping Damage and Missing Items

Damage to the Packaging or Crate. On delivery, promptly check all packages thoroughly for any sign of damage. In cases of visible damage, always note the damage on the Delivery Receipt. Failure to note damage is taken by the Freight Carrier to mean that the package is in good condition at time of receipt, and can result in denial of a Freight Claim. Take photographs that clearly show the damage.

Damage to Products. If you find any damaged Product inside the shipment, photograph the damage both inside and outside of the package. Do not throw the packaging away. Photos of the package and contents are needed to show the condition of the Product at the time it was received.

Missing Items. As soon as you believe any items to be missing from a shipment, promptly report this to the Distributor or Dealer from whom the Product was purchased or to Belshaw Adamatic Bakery Group. If possible, photograph the entire contents of the delivery and email this to your Distributor or Dealer, or to Belshaw Adamatic Customer Service at service@belshaw.com.

Returning Products to Belshaw Adamatic Bakery Group

Under the terms of the Limited Warranty, you may be asked to return to Belshaw Adamatic Bakery Group any Product that is the subject of a warranty claim. These Products must be clearly labeled with a Return Goods Authorization Number ("RGA Number") given to you by your Distributor or Dealer, or by Belshaw Adamatic Customer Service. Products received without an RGA Number will not be processed. All Products must be shipped freight prepaid by the Purchaser to Belshaw Adamatic Bakery Group at the address below.

Contacting Belshaw Adamatic Bakery Group

At any time, you can contact Belshaw Adamatic Bakery Group customer service for assistance:

Belshaw Adamatic Bakery Group Customer Service 814 44th St. NW, Suite 103, Auburn WA 98001, USA

Phone: 800-578-2547 (USA/ Canada) or (+1)253-886-5340

(Worldwide)

Èmail: service@belshaw.com

Office Hours: Monday - Friday, 6am to 4pm, USA Pacific Time

Belshaw Bros., Inc. doing business as Belshaw Adamatic Bakery Group www.belshaw-adamatic.com, www.belshaw.com
Revised 08/31/15

Limited Warranty

Phone (+1) 253-886-5340 Page 1 of 1





The #1 Source for Donut and Bakery Equipment www.belshaw.com

BELSHAW ADAMATIC BAKERY GROUP 814 44th Street NW, Suite 103 Auburn, WA 98001 USA

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> > service@belshaw.com

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