CVap®
A WINSTON INDUSTRIES INNOVATION

HOLDING CABINET
Owner's Manual

HA4 Series
HA4002
HA4003
HA4005
HA4503
HA4507
HA4508
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HMA018

WINSTON INDUSTRIES
THE TASTE OF INNOVATION

CVap holding cabinet

welcome

Thank you for your purchase of a Winston CVap® holding/proofing cabinet. The benefits you will enjoy from this cabinet include longer hold times, better quality food, quicker service, higher productivity, and safer food temperatures.

This CVap holding cabinet utilizes Controlled Vapor (CVap) technology. Using a combination of dry and moist heat, CVap holding cabinets keep foods hot and maintain texture, whether moist or crisp, throughout long serving periods. The two electronic differential control dials are easy to understand and reliable. **The controls never need field calibration.** The FOOD TEMP dial allows precise control of food temperature from 90˚F (32˚C) to 180˚F (82˚C). The FOOD TEXTURE dial maintains just cooked texture with settings labeled very moist, firm moist, and crisp. No guesswork required.

CVap holding/proofing cabinets are built with durable stainless steel construction and full insulation, and they are designed for high volume usage.

If you have any questions, or if anything held in your CVap holding/proofing cabinet doesn't meet your satisfaction, please call our Customer Service Center at 1-800-234-5286 or 502-495-5400, or email us at CustomerService@WinstonInd.com.

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Need to contact us? Choose the most convenient method.

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Includes all HA40, HA45, HL and HMA Series Models

Please read this entire owners manual before operating your CVap holding cabinet. The manual contains important safety information and operating instructions.

As is the case with many kitchen appliances, your CVap holding cabinet should be used with caution. Please read the following warnings to avoid injuries.

⚠ DANGER

Electrical Hazard
Can cause serious injury or death.
Do not attempt to install or service this equipment unless you are a licensed electrician or trained servicer.

1. Because this equipment utilizes high voltage, it should only be installed and serviced by a licensed electrician or trained servicer. Attempting to install or service the equipment yourself could result in serious, potentially fatal injuries.
2. If an electrical shock is felt when touching appliance, shut off power immediately (either pull power cord or turn off circuit breaker) and call a trained servicer for repair. Failure to do so could result in serious, potentially fatal injuries.
3. Always turn power switch off any time equipment is not in use.
4. This appliance utilizes heated water vapor, which transfers heat much more quickly

⚠ WARNING

Burn Hazard
Can cause serious injury.
Avoid heated vapor when opening or closing equipment door.

and efficiently than dry air of the same temperature. Use caution when opening doors or reaching into the equipment, as heated vapor can quickly cause burns.

5. Clean equipment daily to prevent buildup of food residue or chlorides, which can also damage stainless steel and

⚠ WARNING

Contamination Hazard
Can cause serious illness or damage to equipment.
Clean equipment daily to avoid potential contamination hazard.

contaminate food. **Failure to follow proper cleaning procedures can void your warranty.**
6. **Prior to using equipment for the first time, perform the daily cleaning procedure listed on pages 16 and 17.**
7. Always allow equipment to cool before

⚠ CAUTION

Burn Hazard
Can cause injury.
Allow 30 minutes for equipment to cool before attempting to clean.

cleaning, to avoid potential burns.

⚠ CAUTION

High Temperature and Grease Hazard
Can cause damage to equipment.
Avoid placing equipment near high heat or in grease laden atmosphere.

8. Do not place equipment in areas where air temperature exceeds 100˚F (38˚C). A heat shield may be required to prevent heat exposure and grease laden vapors from affecting the equipment if near heat, vapor, or grease generating devices (such as grills, steamers, ovens, etc.). Excess heat and grease inside the equipment cavities may cause electrical components to fail.

CVap holding cabinet

receiving your cabinet

Shipping Damage
Examine equipment thoroughly for shipping damage before, during and after unloading. All Winston products are carefully inspected and verified to be in good condition before leaving our factory. The carrier delivering your cabinet has assumed responsibility for its safe arrival. If you notice any damage (obvious or hidden), a claim must be made to the carrier.

Obvious Loss or Damage
Please note any obvious loss or damage on the freight bill or express receipt, and have the carrier's agent sign to acknowledge the claim. The carrier will supply the necessary forms. If you do not obtain and complete the forms before the carrier's agent departs, the carrier might refuse your damage claim.

Concealed Loss or Damage
Sometimes loss or damage is not obvious until the product has been unpacked. If you notice damage that was concealed by packaging or crating, contact the carrier in writing to notify them of the damage. The carrier should agree to inspect the damage within 15 days. Please retain all packing materials. The carrier will supply an inspection report and the required claim forms.

Physical
Casters are non-marking; back casters are non-locking, front are locking.

Water Supply
In order to operate properly, the evaporator in this cabinet must be filled with clean, potable water. An optional automatic water fill system is available. This option includes hardware to connect the equipment to a copper line in your facility's water system. If your facility has plastic or galvanized pipes, contact a licensed plumber to connect the water supply. Equipment should be installed to comply with applicable federal, state, or local plumbing codes.

Equipment with automatic water fill systems are to be installed with adequate backflow protection to comply with federal, state, and local codes.

Model	Height with 3" Casters (IN / MM)	Width (IN / MM)	Depth (IN / MM)	Weight (LBS / KG)
HA4002	33.2/843	19.9/505	27.1/688	120/55
HA4003	36.1/916	19.9/505	27.1/688	135/61
HA4005	43.5/1105	19.9/505	27.1/688	215/98
HA4503	36.1/916	19.9/505	27.1/688	135/61
HA4507	36.2/919	27.6/701	34.5/876	210/96
HA4508	41.4/1051	24.6/625	34.5/876	250/113
HA4009	41.2/1046	27.6/701	34.5/876	225/102
HA4509	41.2/1046	27.6/701	34.5/876	225/102
HA4511	45.8/1165	27.6/701	34.5/876	280/127
HA4519	73.1/1857	24.6/625	34.5/876	369/168
HA4022	73.1/1857	27.6/701	34.5/876	355/162
HA4522	73.1/1857	27.6/701	34.5/876	405/184
HL4022	73.1/1857	27.6/701	34.5/876	355/162
HL4522	73.1/1857	27.6/701	34.5/876	405/184
HMA018	66.5/1689	29.5/749	39.0/991	370/168

Includes all HA40, HA45, HL and HMA Series Models

As water evaporates, minerals in the water will deposit on the surface of the evaporator. These mineral deposits will inhibit the transfer of heat. Deposits can also degrade and damage stainless steel. To avoid mineral deposits clean the appliance daily. It is advisable to contact your water utility for advice on minimizing deposit buildup.

installing auto water fill

Automatic water fill is available as an optional feature. To remove the plastic tubing from the water line connector, use your fingers to carefully press the small brass capture ring in toward the body of the connector. Then gently pull the tubing out of the connector. To insert tubing back into connector, push the tubing **fully** into the connector. Once seated, try to pull the tubing out of the connector so that the capture ring comes out (about 1/16" (1.6mm)) and the tubing cannot be removed. See drawing below. Auto water fill systems must be hooked up to a potable water supply line. Winston RECOMMENDS that the tap valve included with the kit be attached to **cold water**, copper, brass or steel line (the valve can handle any size line from 3/8" to 1" (9.5mm to 25.4mm)). The **maximum incoming water temperature may not exceed 140˚F (60˚C) and the incoming water pressure must be between 20 and 150 psi (1.4 Kgf/cm2 to 10.5 Kgf/cm2 (kilogram-force per sq. centimeter))**.

⚠ CAUTION

High Temperature Hazard
Can cause damage to equipment.
Fill evaporator with water prior to turning power on, and do not allow evaporator to run dry.

Equipment with auto water fill systems MUST NOT BE ALLOWED TO RUN DRY. Heat damage to the water valve may result.

It is the responsibility of the owner and installer to make sure that installation complies with all applicable local and state plumbing codes.
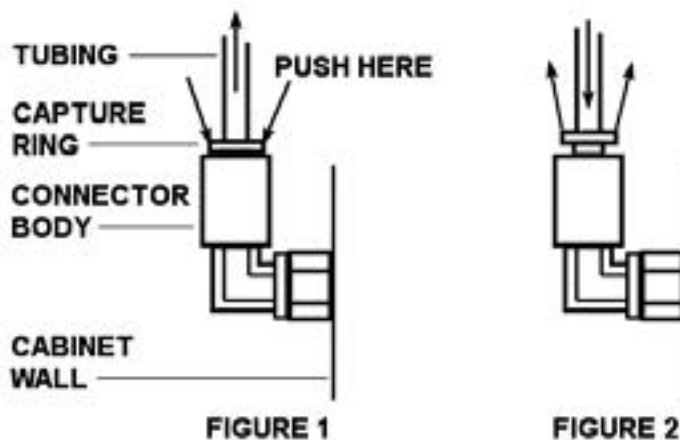
PUSH BRASS CAPTURE RING AGAINST CONNECTOR BODY BEFORE REMOVING TUBING. WHEN PLACING TUBING BACK INTO CONNECTOR, PUSH TUBE <u>FULLY</u> INTO CONNECTOR AND MAKE SURE CAPTURE RING IS FULLY EXTENDED.

CVap holding cabinet

electrical

The equipment is shipped from the factory with a 7' (213cm) (minimum) power cord and plug. Refer to the table below to determine the correct electrical outlet. It may be necessary for a licensed electrician to install the correct outlet or wiring. Winston does not recommend wiring the appliance direct.

Below is electrical information for various models of Winston's CVap® holding cabinets.

Model	Volts	Hertz	PH	Amps	Watts	Circuit Amp	Plug Type
HA4002	120	60	1	17.0	2040	US 20/CAN 30	US 5-20P/CAN 5-30P
INTERNATIONAL	230	50	1	8.8	2024	N/A	N/A
HA4003	120	60	1	17.6	2112	US 20/CAN 30	US 5-20P/CAN 5-30P
INTERNATIONAL	230	50	1	8.8	2024	N/A	N/A
HA4503	120	60	1	18.6	2232	20	5-20P
INTERNATIONAL	230	50	1	9.1	2106	N/A	N/A
HA4005	120	60	1	14.8	1775	US 15/CAN 20	US 5-15P/CAN 5-20P
HA4507	120	60	1	19.3	2320	US 20/CAN 30	US 5-20P/CAN 5-30P
INTERNATIONAL	230	50	1	10.1	2320	N/A	N/A
HA4009	120	60	1	14.2	1700	US 15/CAN 20	US 5-15P/CAN 5-20P
HA4508	120	60	1	19.1	2290	US 20/CAN 30	US 5-20P/CAN 5-30P
INTERNATIONAL	230	50	1	8.8	2020	N/A	N/A
HA4509	120	60	1	19.3	2320	US 20/CAN 30	US 5-20P/CAN 5-30P
INTERNATIONAL	230	50	1	10.1	2320	N/A	N/A
HA4511	120	60	1	19.3	2320	US 20/CAN 30	US 5-20P/CAN 5-30P
INTERNATIONAL	230	50	1	10.1	2320	N/A	N/A
HA4519	120	60	1	19.3	2320	US 20/CAN 30	US 5-20P/CAN 5-30P
INTERNATIONAL	230	50	1	10.1	2320	N/A	N/A
HA4022	120	60	1	17.6	2112	US 20/CAN 30	US 5-20P/CAN 5-30P
INTERNATIONAL	230	50	1	9.2	2112	N/A	N/A
HA4522	120	60	1	19.3	2320	US 20/CAN 30	US 5-20P/CAN 5-30P
INTERNATIONAL	230	50	1	10.1	2320	N/A	N/A
HL4022	120	60	1	14.0	1685	US 15/CAN 20	US 5-15P/CAN 5-20P
HL4522	120	60	1	14.4	1730	US 15/CAN 20	US 5-15P/CAN 5-20P
HMA018	120	60	1	15.0	1840	US 15/CAN 20	US 5-15P/CAN 5-20P
INTERNATIONAL	230	50/60	1	8.0	1840	N/A	N/A

Includes all HA40, HA45, HL and HMA Series Models

ventilation requirements

Ventilation clearances - To operate properly, the equipment will need sufficient space for air circulation. Allow at least 2" (51mm) clearance on all sides, particularly around ventilation holes. Care should be taken to prevent placing the equipment close to anything combustible. It must be installed with its supplied legs, feet, or casters. Counter top equipment supplied without legs or casters may be placed directly upon a counter top of non-combustible material. In this situation, the appliance may have to be sealed to the counter top with a food-grade silicone sealant (check local health codes). Half size equipment may be stacked upon each other using only a Winston supplied stacking kit and following the instructions enclosed with the kit. Your warranty may be void if you do not adhere to these ventilation requirements.

⚠CAUTION

High Temperature and Grease Hazard
Can cause property damage.
Avoid placing equipment near high heat or in grease laden atmosphere.

Do not place equipment in an area where ambient temperature (air temperature around the equipment) exceeds 100°F (38°C). A heat shield may be required to prevent excessive heat exposure and grease laden vapors from affecting the equipment if adjacent to heat, vapor, or grease generating devices (such as grills, steamers, ovens, etc.). Excess heat and grease inside the equipment cavities may cause electrical components to fail.

Vent hood - Generally this equipment does not need to be installed under a mechanical ventilation system (vent hood). Check local health and fire codes for requirements specific to your location.

CVap holding cabinet

component identification

Full size cabinet shown. Elements are common to all holding cabinets.
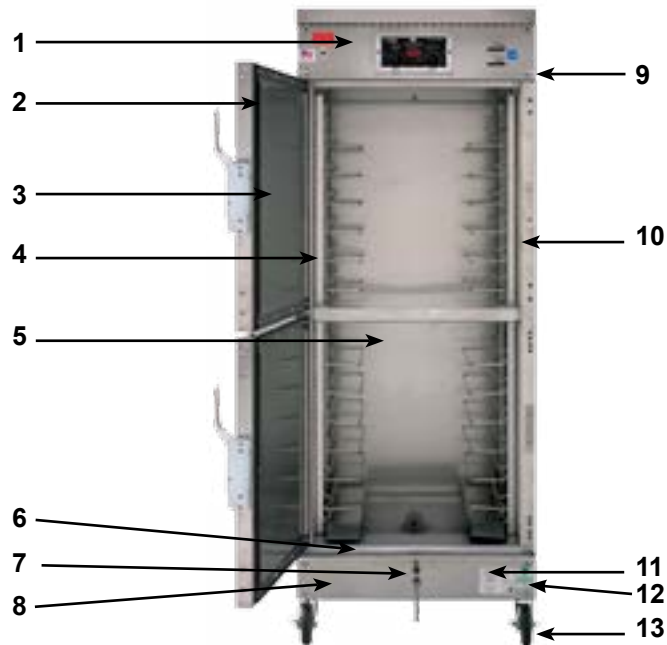
1. **Control panel** - contains power switch and control escutcheon. Allows operator to program food temperature and food texture. Escutcheon is removable for servicing or replacing microprocessor.

2. **Door Gasket** seals food chamber against heat or vapor loss.

3. **Door & Latch** can be reversed on site.

4. **Adjustable Rack Supports** - located on both sides inside equipment, hold trays, pans, shelves, and racks.

5. **Food chamber** - holding cavity where the dual heat system combines to create the perfect holding environment.

6. **Trough** collects moisture that condenses on door.

7. **Drain Cap** is removable for draining water from evaporator.

8. **Evaporator and Heaters** (not visible) - supply vapor atmosphere to the food chamber by heating water within the evaporator.

9. **Cord Wrap** (behind unit) provides storage for power cord.

10. **Air Heaters** (not visible) - supply heat for precise food texture control.

11. **Name Plate** identifies model number and serial number (important for servicing and ordering parts), voltage, power, and electrical information. **Electrical Requirements Label** identifies that equipment is for use with an individual branch circuit only.

12. **U.L. Sanitation Label** shows that equipment is in accordance with NSF standard.

13. **Casters** provide easy movement when front casters are in unlocked position.

Includes all HA40, HA45, HL and HMA Series Models

controls

1. **Power Switch** controls electrical power to the appliance.

2. **Digital LED Readout** shows current cabinet temperature(s). The default temperature display on the A series control is the temperature of the water in the evaporator. To view current air temperature, turn the Food Texture dial up or down 5° F, then immediately back to set temperature. The actual air temperature will display for five seconds. After five seconds the default evaporator temperature will be displayed.

3. **Food Temp Dial** controls the temperature of the water in the evaporator, which directly controls the temperature of the food being held.

4. **F˚/C˚ Button** is used to switch appliance display between Centigrade and Fahrenheit temperature scales.

   On older cabinet models, simply press button to switch from one mode to the other.

Newer cabinet models allow the operator to program the default temperature display scale, and at the same time choose between the display of evaporator (Food Temp) or air (Food Texture) temperature. Briefly pressing the ˚F/˚C key will cause the display to cycle through the following readings: EF (Evaporator Fahrenheit), EC (Evaporator Celsius), AF (Air Fahrenheit), and AC (Air Celsius). Continue to give the key brief presses until the temperature mode you desire is displayed. This changes the default display from the factory setting (EF) to the selected mode.

5. **Food Texture Dial** controls the air temperature within the food chamber. The "+" temperature scale indicates the number of degrees that the air temperature is elevated above the Food Temp setting. A texture setting at or near the food temp setting will provide a moist texture. Elevating the texture setting will deliver a progressively drier and crisper texture.

daily operating procedures

⚠ WARNING

Contamination Hazard
Can cause serious illness.
Clean equipment prior to first use, to remove traces of industrial chemicals and oils.

Prior to using equipment for the first time, please perform the daily cleaning procedure listed on pages 16 and 17.

⚠ CAUTION

High Temperature Hazard
Can cause damage to appliance.
Fill evaporator with water prior to turning power on, and do not allow evaporator to run dry.

Please make certain evaporator has an adequate supply of water prior to turning on power switch. Water level should be approximately 1" (2.5 cm) from overflow.

1. Set appropriate food temperature using the **FOOD TEMP** dial (set in accordance with local health codes). Set desired texture (from moist to crisp) using the **FOOD TEXTURE** dial. See guidelines on pages 12-15 for specific settings.

2. Fill evaporator to within 1" (25mm) of overflow with water.
   NOTE: For locations with hard water, add 1 tablespoon (15ml) of white vinegar or lemon juice to water to help minimize scale buildup. Please consider contacting your local water authority to obtain advice on possible water treatment to protect the equipment. Some water supplies are high enough in chemical content to be capable of damaging stainless steel (if used untreated). The evaporation process can concentrate the chemicals in the water to a level which could cause a damaging reaction with the stainless steel. If you are using the optional automatic water fill with your equipment, and water is of unknown quality, please make the water connection via a deionizer/demineralizer. **Failure to do so could void the warranty!**

3. Toggle **Power Switch** on. Allow 30 minutes for warm-up.

4. Insert food.

5. Adjust **FOOD TEMP** or **FOOD TEXTURE** dials as needed to achieve desired food quality.

KEEP DOOR(S) CLOSED WHEN NOT IN USE. If food temperature becomes too low during serving period, increase **FOOD TEMP** setting by 10-20°F (11-17°C) to maintain desired food temperature.

Food Holding Reference Chart		
Product	**Food Temp**	**Food Texture**
Very moist foods Sauces, gravies, vegetables, etc.	140˚F (60˚C)	+5˚F (3˚C)
Soft moist foods Bakery, meats, fish, chicken, etc.	140˚F (60˚C)	+10˚F (6˚C)
Firm moist foods Finger foods, baked potatoes, etc.	140˚F (60˚C)	+15-30˚F (8-17˚C)
Crisp dry foods Crispy fried chicken, french fries, etc.	140˚F (60˚C)	+50-60˚F (28-33˚C)

See Holding Guidelines Charts on pages 12-13 for product recommendations with F/C settings.

NOTE: 1. *The actual temperature of crisp dry foods may substantially exceed optimal serving temperatures, making it necessary to reduce the* **FOOD TEMP** *setting as much as 20-30˚F (11-17˚C) to obtain the desired temperature.*

2. *Total Food Texture (air temperature) setting equals the addition of the* **FOOD TEMP** *and* **FOOD TEXTURE** *settings. For example, a* **FOOD TEMP** *setting of 140˚F (60˚C) and a* **FOOD TEXTURE** *setting of +10˚F (+6˚C) is equal to an evaporator temperature of 140˚F (60˚C) and an air temperature of 150˚F (66˚C) (140+10˚F (60+6˚C)).*

CVap holding cabinet

general market guidelines - HA45 series

PRODUCT	FAHRENHEIT		CELSIUS	
	Food Temp F°	Food Texture F°	Food Temp C°	Food Texture C°
BREAD PRODUCTS				
Biscuits	140-150	+20	60-66	+11
Rolls	140-150	+10	60-66	+5
Danishes	140-150	+10	60-66	+5
Croissants	140-150	+10	60-66	+5
White/Wheat Bread	140-150	+10	60-66	+5
French/Italian Bread	140-150	+15	60-66	+8
Pancakes/Waffles	140-150	+10	60-66	+5
French Toast	140-150	+10	60-66	+5
Fruit Pies	140-150	+15	60-66	+8
Gingerbreads	140-150	+15	60-66	+8
DAIRY & EGG PRODUCTS				
Eggs (Benedict, Fried, Scrambled, Poached)	145-150	+5	62-66	+2
Omelets	150-160	+10	66-71	+5
Puddings/Custards	140-150	+5	60-66	+2
MEATS				
Beef (Prime Rib, Roasts, Steaks, BBQ)	130-140	+15	54-60	+8
Pork (Roasts, Chops, BBQ, Bacon, Ham, Sausage)	140-150	+15	60-66	+8
Lamb & Veal	140-150	+15	60-66	+8
Hamburger Patties	150-160	+10	66-71	+5
Hot Dogs	150-160	+10	66-71	+5
POULTRY				
Chicken				
Fried, Soft	150-160	+15	66-71	+8
Fried, Crisp	130-140	+50	54-60	+27
Roasted	150-160	+15	66-71	+8
BBQ	150-160	+15	66-71	+8
Turkey, Goose, Duck	150-160	+15	66-71	+8
SEAFOOD & SHELLFISH				
Fish, Fried	130-140	+50	54-60	+27
Fish, Broiled/Baked	150-160	+15	66-71	+8
Shrimp, Fried	130-140	+50	54-60	+27
Fish/Shrimp in Sauce/Gravy	150-160	+5	66-71	+2

PRODUCT	FAHRENHEIT		CELSIUS	
	Food Temp F°	Food Texture F°	Food Temp C°	Food Texture C°
VEGETABLES				
Vegetables, Unbreaded	150-160	+5	66-71	+2
Vegetables, Breaded	130-140	+60	54-60	+33
Potatoes, Baked	150-160	+15	66-71	+8
STARCHES				
Spaghetti	140-150	+5	60-66	+2
Rice	140-150	+5	60-66	+2
Lasagna	150-160	+10	66-71	+5
Beans	140-150	+15	60-66	+8
Soups & Sauces	140-150	+5	60-66	+2
Cooked Cereals	150-160	+10	66-71	+5
Casseroles	150-160	+5	66-71	+2
CRISP TEXTURED FOODS				
Pizza	130-140	+60	54-60	+33
Pastry Shells	130-140	+60	54-60	+33
Crisp Breadings	130-140	+60	54-60	+33
Crisp, Dry Foods	130-140	+60	54-60	+33
French Fries	100	+60	38	+33
PREPARED FOODS				
Seafood in Sauce	150-160	+15	66-71	+8
Hamburgers in Buns	150-160	+10	66-71	+5
Cheeseburgers in Buns	150-160	+10	66-71	+5
Open Sandwich w/Sauce/Gravy	150-160	+5	66-71	+2
Plated Foods	150-160	+5	66-71	+2
Entrees	140-150	+15	60-66	+8
Corn Dogs	140-150	+40	60-66	+22
PROOFING				
Dough (Yeast Rolls, Danish Dough)	100	+10	38	+5

Notes:
1. The recommendations in this chart should be regarded as starting points. If user desires a more firm/dry textured product, increase the **Food Texture** setting; for a more soft/moist textured product, decrease the **Food Texture** setting.
2. The holding time for very crisp foods may be less than for other products.
3. Use a thermometer to assure compliance with local health codes.

Includes all HA40, HA45, HL and HMA Series Models

CVap holding cabinet

school guidelines - HA45 series

PRODUCT	FAHRENHEIT		CELSIUS	
	Food Temp F°	Food Texture F°	Food Temp C°	Food Texture C°
PROOFING	90-100	+5	*32-38*	*+3*
BREAKFAST				
Breakfast Pizza	145	+40	*63*	*+22*
Cinnamon Rolls	140	+20	*60*	*+11*
Eggs, Scrambled	150	+10	*66*	*+5*
Grits	150	+10	*66*	*+5*
Muffins	140	+5	*63*	*+2*
Pancakes	150	+5	*66*	*+2*
Piggiestix	150	+5	*66*	*+2*
Sausage Patties	150	+5	*66*	*+2*
Waffles	145	+10	*63*	*+5*
LUNCH				
Pizza				
Thin Crust	140	+50	*60*	*+27*
Thick Crust	145	+30	*63*	*+16*
Parbaked Thin Crust	140	+50	*60*	*+27*
Parbaked Thick Crust	145	+30	*63*	*+16*
Tony's ReadyRise	145	+30	*63*	*+16*
Sandwiches				
Ham & Cheese Melt	130	+30	*54*	*+16*
Hamburgers on Bun	150	+10	*66*	*+5*
Hot Dogs on Bun	150	+10	*66*	*+5*
Meats				
BBQ Pork, Chopped	150	+10	*66*	*+5*
Chicken, Baked	150	+20	*66*	*+11*
Fish, Baked	150	+5	*66*	*+2*
Hamburger Patties	150	+5	*66*	*+2*
Hot Dog Wieners	150	+5	*66*	*+2*
Meat Loaf	150	+5	*66*	*+2*
Pork Chops	150	+10	*66*	*+5*
Salisbury Steak	150	+5	*66*	*+2*
Turkey, Whole Roasted	150	+20	*66*	*+11*
Casseroles				
Beef-a-Roni	150	+10	*66*	*+5*
Ravioli	150	+10	*66*	*+5*
Squash Casserole	150	+15	*66*	*+8*
Turkey Tetrazzini	150	+15	*66*	*+8*

PRODUCT	FAHRENHEIT		CELSIUS	
	Food Temp F°	Food Texture F°	Food Temp C°	Food Texture C°
Breaded Foods				
Chicken, Fried	130	+50	*54*	*+27*
Chicken, Fillet	130	+50	*54*	*+27*
Chicken, Fingers	130	+50	*54*	*+27*
Chicken, Nuggets	140	+40	*63*	*+22*
Corn Dogs	150	+20	*66*	*+11*
Breaded Beef Patty	140	+30	*63*	*+16*
VEGETABLES				
Broccoli	150	+5	*66*	*+2*
Baked Beans	150	+5	*66*	*+2*
Green Beans	150	+5	*66*	*+2*
Corn on Cob	150	+5	*66*	*+2*
Peas & Carrots	150	+5	*66*	*+2*
Potato, Baked	150	+20	*66*	*+11*
Mexican Beans	150	+5	*66*	*+2*
Vegetables, Steamed	150	+5	*66*	*+2*
Squash	150	+5	*66*	*+2*
BREADS				
Biscuits	140	+20	*63*	*+11*
Cornbread/Muffins	150	+20	*66*	*+11*
Rolls, Yeast	140	+20	*63*	*+11*
SIDE ITEMS				
Apples, Baked	150	+10	*63*	*+5*
French Fries, Oven Style	130	+80	*54*	*+44*
Macaroni & Cheese	150	+10	*66*	*+5*
Rice	150	+5	*66*	*+2*
Tater Tots, Oven Style	130	+60	*54*	*+33*
DESSERT				
Fruit Cobbler	150	+20	*66*	*+11*
Apple Fritter	150	+40	*66*	*+11*

Notes:
1. The recommendations in this chart should be regarded as starting points. If user desires a more firm/dry textured product, increase the **Food Texture** setting; for a more soft/moist textured product, decrease the **Food Texture** setting.
2. The holding time for very crisp foods may be less than for other products.
3. Use a thermometer to assure compliance with local health codes.

CVap holding cabinet

general market guidelines - HA40 series

PRODUCT	FAHRENHEIT Food Temp F°	FAHRENHEIT Food Texture F°	CELSIUS Food Temp C°	CELSIUS Food Texture C°
BREAD PRODUCTS				
Biscuits	150-160	+20	66-71	+11
Rolls	150-160	+10	66-71	+5
Danishes	150-160	+10	66-71	+5
Croissants	150-160	+10	66-71	+5
White/Wheat Bread	150-160	+10	66-71	+5
French/Italian Bread	150-160	+15	66-71	+8
Pancakes/Waffles	150-160	+10	66-71	+5
French Toast	150-160	+10	66-71	+5
Fruit Pies	150-160	+15	66-71	+8
Gingerbreads	150-160	+15	66-71	+8
DAIRY & EGG PRODUCTS				
Eggs (Benedict, Fried, Scrambled, Poached)	155-160	+5	68-71	+2
Omelets	160-170	+10	71-77	+5
Puddings/Custards	150-160	+5	66-71	+2
MEATS				
Beef (Prime Rib, Roasts, Steaks, BBQ)	150-160	+15	66-71	+8
Pork (Roasts, Chops, BBQ, Bacon, Ham, Sausage)	150-160	+15	66-71	+8
Lamb & Veal	150-160	+15	66-71	+8
Hamburger Patties	160-170	+10	71-77	+5
Hot Dogs	160-170	+10	71-77	+5
POULTRY				
Chicken				
Fried, Soft	160-170	+15	71-77	+8
Fried, Crisp	140-150	+50	60-66	+27
Roasted	160-170	+15	71-77	+8
BBQ	160-170	+15	71-77	+8
Turkey, Goose, Duck	160-170	+15	71-77	+8
SEAFOOD & SHELLFISH				
Fish, Fried	140-150	+50	60-66	+27
Fish, Broiled/Baked	160-170	+15	71-77	+8
Shrimp, Fried	140-150	+50	60-66	+27
Fish/Shrimp in Sauce/Gravy	160-170	+5	71-77	+2

PRODUCT	FAHRENHEIT Food Temp F°	FAHRENHEIT Food Texture F°	CELSIUS Food Temp C°	CELSIUS Food Texture C°
VEGETABLES				
Vegetables, Unbreaded	160-170	+5	71-77	+2
Vegetables, Breaded	140-150	+60	60-66	+33
Potatoes, Baked	160-170	+15	71-77	+8
STARCHES				
Spaghetti	150-160	+5	66-71	+2
Rice	150-160	+5	66-71	+2
Lasagna	160-170	+10	71-77	+5
Beans	150-160	+15	66-71	+8
Soups & Sauces	150-160	+5	66-71	+2
Cooked Cereals	160-170	+10	71-77	+5
Casseroles	160-170	+5	71-77	+2
CRISP TEXTURED FOODS				
Pizza	140-150	+60	60-66	+33
Pastry Shells	140-150	+60	60-66	+33
Crisp Breadings	140-150	+60	60-66	+33
Crisp, Dry Foods	140-150	+60	60-66	+33
French Fries	110	+60	43	+33
PREPARED FOODS				
Seafood in Sauce	160-170	+15	71-77	+8
Hamburgers in Buns	160-170	+10	71-77	+5
Cheeseburgers in Buns	160-170	+10	71-77	+5
Open Sandwich w/Sauce/Gravy	160-170	+5	71-77	+2
Plated Foods	160-170	+5	71-77	+2
Entrees	150-160	+15	66-71	+8
Corn Dogs	150-160	+40	66-71	+22
PROOFING				
Dough (Yeast Rolls, Danish Dough)	110	+10	43	+5

Notes:
1. The recommendations in this chart should be regarded as starting points. If user desires a more firm/dry textured product, increase the **Food Texture** setting; for a more soft/moist textured product, decrease the **Food Texture** setting.
2. The holding time for very crisp foods may be less than for other products.
3. Use a thermometer to assure compliance with local health codes.

Includes all HA40, HA45, HL and HMA Series Models

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CVap holding cabinet

school guidelines - HA40 series

PRODUCT	FAHRENHEIT		CELSIUS	
	Food Temp F°	Food Texture F°	Food Temp C°	Food Texture C°
PROOFING	100-110	+5	*38-43*	*+2*
BREAKFAST				
Breakfast Pizza	160	+30	*71*	*+16*
Cinnamon Rolls	160	+10	*71*	*+5*
Eggs, Scrambled	160	+5	*71*	*+2*
Grits	160	+5	*71*	*+2*
Muffins	160	+10	*71*	*+5*
Pancakes	160	+5	*71*	*+2*
Piggiestix	160	+10	*71*	*+5*
Sausage Patties	160	+5	*71*	*+2*
Waffles	160	+10	*71*	*+5*
LUNCH				
Pizza				
Thin Crust	155	+30	*68*	*+16*
Thick Crust	155-160	+15	*68-71*	*+8*
Parbaked Thin Crust	155	+30	*68*	*+16*
Parbaked Thick Crust	155-160	+15	*68-71*	*+8*
Tony's ReadyRise	155-160	+15	*68-71*	*+8*
Sandwiches				
Ham & Cheese Melt	140	+20	*60*	*+11*
Hamburgers on Bun	160	+10	*71*	*+5*
Hot Dogs on Bun	160-170	+10	*71-77*	*+5*
Meats				
BBQ Pork, Chopped	160	+5	*71*	*+2*
Chicken, Baked	160-170	+10	*71-77*	*+5*
Fish, Baked	160	+5	*71*	*+2*
Hamburger Patties	160	+5	*71*	*+2*
Hot Dog Wieners	160-170	+5	*71-77*	*+2*
Meat Loaf	160	+5	*71*	*+2*
Pork Chops	160	+5	*71*	*+2*
Salisbury Steak	160	+5	*71*	*+2*
Turkey, Whole Roasted	160	+10	*71*	*+5*
Casseroles				
Beef-a-roni	160	+5	*71*	*+2*
Ravioli	160	+5	*71*	*+2*
Squash Casserole	160	+10	*71*	*+5*
Turkey Tetrazzini	160	+10	*71*	*+5*

PRODUCT	FAHRENHEIT		CELSIUS	
	Food Temp F°	Food Texture F°	Food Temp C°	Food Texture C°
Breaded Foods				
Chicken, Fried	140-150	+30	*60-66*	*+16*
Chicken, Fillet	160	+30	*71*	*+16*
Chicken, Fingers	160	+30	*71*	*+16*
Chicken, Nuggets	160	+30	*71*	*+16*
Corn Dogs	160	+10	*71*	*+5*
Breaded Beef Patty	140-150	+20	*60-66*	*+11*
VEGETABLES				
Broccoli	160	+2	*71*	*+1*
Baked Beans	160	+5	*71*	*+2*
Green Beans	160	+5	*71*	*+2*
Corn on Cob	160	+5	*71*	*+2*
Peas & Carrots	160	+5	*71*	*+2*
Potato, Baked	160-170	+5	*71-77*	*+2*
Mexican Beans	160	+5	*71*	*+2*
Vegetables, steamed	160	+5	*71*	*+2*
Squash	160	+5	*71*	*+2*
BREADS				
Biscuits	150	+10	*66*	*+5*
Cornbread/Muffins	160	+10	*71*	*+5*
Rolls, Yeast	165	+10	*74*	*+5*
SIDE ITEMS				
Apples, Baked	160	+5	*71*	*+2*
French Fries, Oven Style	140	+80	*60*	*+44*
Macaroni & Cheese	160	+5	*71*	*+2*
Rice	160	+5	*71*	*+2*
Tater Tots, Oven Style	130-140	+50	*54-60*	*+27*
DESSERT				
Fruit Cobbler	160	+10	*71*	*+5*
Apple Fritter	160	+20-30	*71*	*+11-16*

Notes:
1. The recommendations in this chart should be regarded as starting points. If user desires a more firm/dry textured product, increase the **Food Texture** setting; for a more soft/moist textured product, decrease the **Food Texture** setting.
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CVap holding cabinet

daily cleaning

Required Cleaning Accessories & Supplies

- Pan for draining evaporator
- Food grade germicidal detergent
- Descaling agent

⚠ DANGER

Electrical and Burn Hazard
Can cause serious injury or death.
Do not attempt to install or service this equipment unless you are a licensed electrician or trained servicer.

This equipment utilizes high voltage electrical systems, high temperature heating systems, and hot water vapor. If used improperly, any of these hazards are capable of causing serious injury or death. To avoid the potential for an accident, please have equipment installed by a licensed electrician, and serviced only by trained servicers. Please make this page available to the servicer.

⚠ DANGER

Electrical Hazard
Can cause serious injury or death.
Disconnect equipment and contact licensed electrician or trained servicer.

If an electrical shock is felt during operation or cleaning, unplug equipment and have it serviced before placing back into service.

⚠ WARNING

Contamination Hazard
Can cause serious illness or damage to equipment.
Clean equipment daily to avoid potential contamination hazard.

Ensure safe operation by cleaning equipment daily. Failure to do so can allow harmful deposits to develop, increasing the potential for food contamination, and endangering your customers.

⚠ CAUTION

Corrosion Hazard
Can cause damage to equipment.
Clean equipment daily to avoid potential corrosion damage.

Clean evaporator daily to prevent chlorides (salts) from accumulating. Chlorides can cause the evaporator tank to corrode, to the extent that leaks can occur. Leaks caused by corrosion, which is caused by a failure to clean daily, are not covered under the manufacturer's warranty.

⚠ WARNING

Contamination Hazard
Can cause serious illness.
Clean equipment prior to first use, to remove traces of industrial chemicals and oils.

Prior to using equipment for the first time, perform the daily cleaning procedure listed on the facing page.

## daily cleaning procedure

> ⚠️ **CAUTION**
>
> **Burn Hazard**
> Can cause injury.
> Allow 30 minutes for equipment to cool before attempting to clean.

Before each cleaning procedure, disconnect equipment from its electrical power source and allow to cool for at least one half hour.

1. Place empty pan under drain cap, remove cap and allow evaporator to drain.

2. Remove and clean rack supports using a food-grade germicidal agent. Rinse and allow to dry.

3. Spray food chamber and evaporator with a food grade germicidal detergent.

4. Wipe inside surfaces to remove all food deposits.

5. Inspect for scale build-up on the tank surface, sensor (optional automatic water fill sensor shown), and probe (see photo below). If present, apply descaling agent. Read ALL warnings and follow directions listed on descaling agent package.
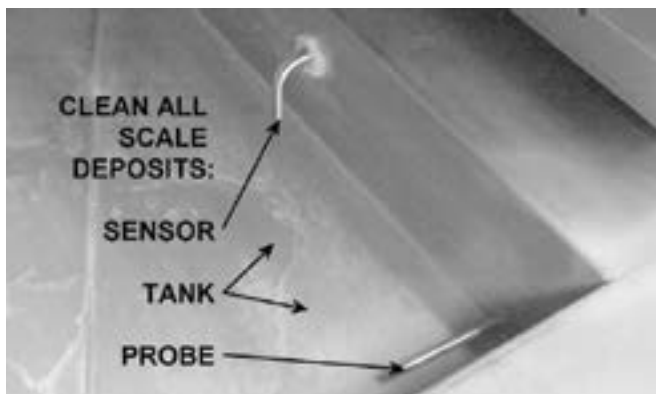
6. Inspect heating elements (if exposed). The elements are stainless steel. If cleaning is needed, scrub with Teflon™ or nylon bristle brush to remove heavy food particles. Further cleaning may be done with a plastic scouring pad and alkaline based cleansers. DO NOT use wire brushes, scrapers, steel wool pads or chloride based cleansers. Follow cleanser manufacturer's instructions for use on stainless steel. Rinse well with clean water and wipe immediately.

7. Rinse all inside surfaces, including evaporator, and dry with clean towel.

> ⚠️ **WARNING**
>
> **Electrical Hazard**
> Can cause serious personal injury or damage to equipment.
> Avoid spraying equipment exterior or controls with water.

Do not spray outside of equipment or controls with water.

8. Replace rack supports.

9. Verify O-ring is on drain pipe, replace drain cap, and refill evaporator.

10. Reconnect equipment to electrical power and make ready for use.

CLEAN ALL SCALE DEPOSITS: SENSOR, TANK, PROBE

troubleshooting

We know how frustrating and costly it can be when a critical piece of equipment is down for repairs. It is our goal to minimize service disruptions, to get you back up and operating in the shortest time possible.

We carefully analyze all service calls. This analysis helps us to improve our manufacturing processes, and reduces product service issues. Generally speaking, most equipment failures can be attributed to the following three causes:

- Faulty use and care practices.

- Electrical supply problems.

- Equipment faults.

Please refer to the Troubleshooting Chart on the next page for common problems and solutions. If the problem you're experiencing isn't listed, or if the standard solution fails to resolve your problem, you will need a qualified servicer to diagnose and repair the problem.

If your equipment is still under warranty, or you are uncertain whether or not warranty is still in place, please call Winston Customer Service at 1-800-234-5286 (or 502-495-5400). Our friendly staff will help you verify coverage, and if under warranty, will arrange for a servicer to call on you.

If your equipment is no longer under warranty, you can call our Customer Service line at 1-800-234-5286, or visit our website at **www.winstonind.com**, and click the Service tab to locate an authorized servicer near you.

In order to expedite service, please have the complete model and serial number (found on the equipment's identification tag) on hand when you contact us.

**Service parts may be purchased directly from the factory online.
Visit *www.winstonparts.com***

Please have the following information on hand when contacting Winston Industries regarding product service.

1. **Model _____Serial # _____**
   (located on name plate)
2. **Your name_____**
3. **Company name _____**
4. **Company address _____**
   _____
5. **Company phone_____**
6. **Type of problem _____**
   _____
   _____
   _____

troubleshooting

TROUBLE	FAULT CODE
Digital display fails to light	A
Flooding/leaking water	C, H, I
Food drying out	B, E, F, H
Food excessively moist	D, G
Food not hot enough	E, G, H
Food too hot	D, F
Injury or accident	J

FAULT	CORRECTION
A. Circuit breaker tripped	Adjust
Fuse blown	Replace
Power cord not plugged in	Plug in
Faulty cordset	Call servicer
Faulty power switch	Call servicer
B. Evaporator (water) tank empty	See page 9
C. Drain pipe o-ring defective or missing	Replace
D. Food Temp setting too high	See page 9
E. Food Temp setting too low	See page 9
F. Food Texture setting too high	See page 9
G. Food Texture setting too low	See page 9
H. Door gasket defective	Replace
I. Drain cap defective or missing	Replace
J. Injury or accident, call manufacturer	1-800-234-5286

Includes all HA40, HA45, HL and HMA Series Models

troubleshooting

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SERVICE PARTS	PART NO.	SERVICE PARTS	PART NO.
Power Switch (120V-240V)	PS2304	Gasket, Door	
Switch Guard		HA4005	PS2913
HA4005	PS2981	HA4507	PS2554
Circuit Board Asm		HA4509	PS1444
(before 4/1/05)		HA4519 (Top)	PS1442
120V	PS2720	HA4519 (Bottom)	PS1446
208V-240V	PS2891	HA4522 (Top)	PS2151
HA4522		HA4522 (Bottom)	PS2150
HA4022		Probe, Air	PS2255
HA4519		Probe, Water	PS2177
(after 4/1/05)		Heater, Air	
120V	PS2827	HA4002 120V	PS2556
208V-240V	PS2842	HA4003 120V	PS2557
HA4507		HA4003 208V-240V	PS2558
HA4509		HA4005 120V	PS2908
HA4511		HA4503 120V	PS2388
(after 7/18/05)		All Others 120V	PS2067
120V	PS2827	All Others 240V	PS2099
208V-240V	PS2842	Heater, Water	
HA4005	PS2860	HA4002 & 4003 120V	PS2198
Circulating Fan 120V	PS2051	HA4003 208V-240V	PS2389
Circulating Fan 208V-240V	PS2100	HA4005 120V	PS2909
Cooling Fan 120V	PS2066	HA4503 120V	PS2198
Cooling Fan 208V-240V	PS2098	All Others 120V	PS2068
Latch, Door	PS1774	All Others 208V-240V	PS1711
Hinge Kit, Door	PS2116	Casters	
Hinge Kit, Self Close Door		3" Locking	PS2146
HA4005	PS2703	3" Non-Locking	PS2147
Gasket, Door		5" Locking	PS2142
HA4002	PS2555	5" Non-Locking	PS2141
HA4003, HA4503	PS1440		

Warranty and Terms and Condition

Limited 1 year Warranty (excluding gaskets, lamps, hoses, power cords, glass panels, fryer baskets, batteries, and evaporators). Warranty disclaimer for failure to clean.
WINSTON EXPRESSLY DISCLAIMS ALL OTHER WARRANTIES, EITHER EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE AND ANY IMPLIED WARRANTY OF MERCHANTABILITY.

Ask us for a complete warranty disclosure or go to:
www.winstonind.com/documents/4272V089_zap_warranty_agreement.pdf.
Terms and Conditions of Sale for Winston Industries' products are available here:
www.winstonind.com/documents/4272X833_terms_and_conditions_of_sale.pdf.
Both the Warranty and Terms and Conditions of Sale are integral to this document.

Buy Winston Parts Online!

Parts and accessories for our products are available to purchase through our online, secure site – it's your one-stop shop for genuine Winston replacement parts. These parts are designed specifically for our products and can help you save on costly repairs while maintaining valuable warranty coverage.

http://www.winstonparts.com/

CVap holding cabinet

Notes

Includes all HA40, HA45, HL and HMA Series Models

Notes

WINSTON INDUSTRIES
THE TASTE OF INNOVATION