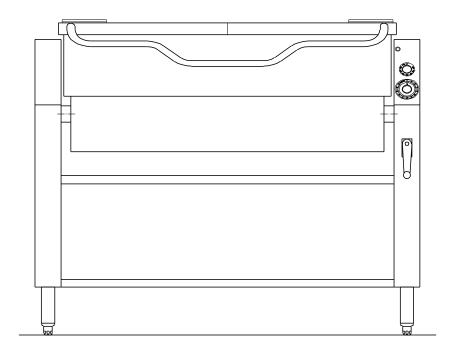


IMPORTANT FOR FUTURE REFERENCE
Please complete this information and retain this manual for the life of the equipment:
Model #:
Serial #:
Date Purchased:

# INSTALLATION & OPERATION MANUAL

UniVerse Plus - Electric Tilting Skillet 30P-STEL (-LX) 40P-STEL (-LX) 40P-STEM (-LX)



#### 

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

#### **CROWN FOOD SERVICE EQUIPMENT**

A Middleby Company

70 Oakdale Road, Downsview (Toronto) Ontario, Canada, M3N 1V9
Telephone: 919-762-1000 www.crownsteamgroup.com
Printed in Canada







#### IMPORTANT NOTES FOR INSTALLATION AND OPERATION



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

Do not attempt to operate this unit in the event of a power failure.

Adequate clearances must be maintained for servicing and proper operation.



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

This manual should be retained for future reference.

Intended for commercial use only. Not for household use.

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#### **SERVICE CONNECTIONS**

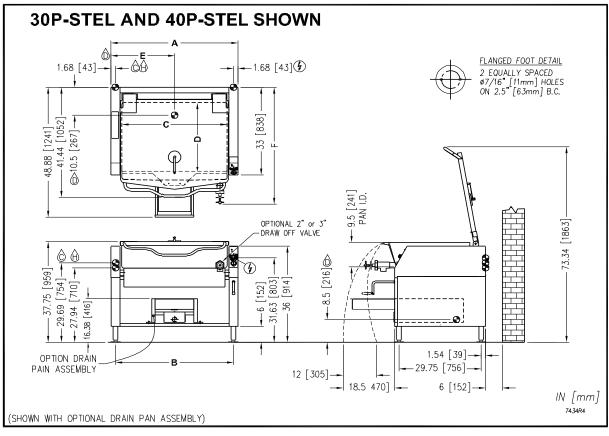
- (7) Electrical connection to be as specified on data plate.
- Ô − COLD WATER: 3/8" O.D. tubing to faucet (OPTIONAL)
- ♠ HOT WATER: 3/8" O.D. tubing to faucet (OPTIONAL)
- ⑥ DRAIN: 1 1/2" NPT, (OPTIONAL DRAIN PAN ASSEMBLY)

#### **ELECTRICAL CHARACTERISTICS**

MODEL	kW	PHASE	AMPS PER LINE							
WIODEL	IVIODEL KVV		208V	220V	240V	380V	415V	480V	600V	
30P-STEL (LX)	12	1	57,7	54,5	50.0	N/A	N/A	N/A	N/A	
30P-STEM (LX)	ΙZ	3	33,3	31,5	28,9	18,2	16,7	14,4	11.5	
40P-STEL (LX)	18	1	86.5	81.8	75.0	N/A	N/A	N/A	N/A	
40P-STEM (LX)	10	3	50.0	47.2	43.3	27.3	25.0	21.7	17.3	

#### **DIMENSIONS**

MODEL	SHP. WT.	CAPACITY	UNITS	Α	В	С	D	E	F
									ø2 ø3
30P-STEL (LX)	515 lbs[234 kg]	30 gallons	Inches	36	32.63	27.88	25,75	18	38,25 42.75
30P-STEM (LX)	545 lbs[248 kg]	114 litres	mm	914	829	708	654	457	972 1086
40P-STEL (LX)	630 lbs 286 kg	40 gallons	Inches	46	42.63	37.88	25.75	23	38,25 42.75
40P-STEM (LX)	660 lbs[300 kg]	152 litres	mm	1168	1083	962	654	584	972 1086



As continued product improvement is a policy of Crown, specifications are subject to change without notice.

#### INTRODUCTION:

This manual contains general information, installation, operation, principles of operation, troubleshooting guide and maintenance information for the electrically operated UniVerse Tilting Skillet.

#### **DESCRIPTION**

The Market Forge Industries UniVerse Models 30P-STEL (12 kW input) and 40P-STEL (18 kW input) are electrically operated skillets, tilting type, with 30- and 40-gallon capacities, respectively. They are equipped with a solid-state thermostat and high-limit control with a 100°F-to-450°F temperature scale.

#### **BASIC FUNCTIONS**

The UniVerse Tilting Skillet is a very versatile cooking appliance. It can perform basic cooking functions, such as braising meat, sautéing, pan-frying chicken, steaming vegetables, boiling, and simmering. Refer to Section 3 - Cooking Guidelines, which gives detailed information on the various types of food products that can be cooked in the skillet.

#### **BASIC OPERATION**

- 1. Ensure that electric power connection has been made correctly and that branch circuit breaker at building supply box is ON.
- 2. Ensure that skillet is in full down position and clean before using.
  - NOTE: Electric power automatically shuts off when skillet is tilted more than 10° above normal horizontal cooking position.
- 3. Set thermostat at desired temperature by turning thermostat control knob clockwise. See Section 3 Cooking Guidelines for thermostat settings.
- 4. Preheat to desired temperature (with cover down) before grilling, pan-frying, or any other method of cooking except boiling.

NOTE: For best results, allow unit to cycle ON/OFF once.

#### **BASIC FUNCTIONS** (Continued)

- 5. Ensure that cover is up for most types of cooking except for simmering, braising, or boiling. Cover has drip-lip at rear to direct condensate into skillet.
- 6. Remove cooked food immediately to prevent over-cooking. Tilt skillet by turning hand crank clockwise or pushing tilt switch.
- 7. Lower skillet by turning hand crank counterclockwise or pushing tilt switch.

Turn thermostat control knob counterclockwise to OFF when no further heating is desired.

Unit must be cleaned after each use. Proceed as follows:

- 1. When all food has been removed from skillet, add water to loosen/dissolve any remaining food.
- 2. Wash skillet using mild detergent, water and nylon brush. If food is stuck to skillet surface, soak and apply heat to loosen food.



Do not get water on wiring or in controls. Be sure to wash inside of skillet pan, inside of cover including under drip-lip, and pouring spout area.

3. Rinse and dry entire unit.

#### 1.0 INSTALLATION INSTRUCTIONS

#### **UNPACKING**

Immediately after unpacking, check for possible shipping damage. If the tilting skillet is found to be damaged, save the packaging material and contact the carrier within 15 days of delivery.

Before installing, verify that the electrical service agrees with the specifications on the rating plate located on the right side panel as you face the front of the skillet. If the supply and equipment requirements do not agree, contact your dealer.

#### **LOCATION**

The installation location must allow adequate clearances for servicing and proper operation. A minimum front clearance of 36", and rear clearance of 6" is required.

#### **INSTALLATION CODES AND STANDARDS**

Your Tilting Skillet must be installed in accordance with:

- 1. Provincial and local codes, or in the absence of local codes, with: C.S.A. C22.1 Canadian Electrical Code, Part 1, or in the U.S.A. state and local codes, or in the absence of local codes, with the National Electrical Code ANSI/NFPA-70 (latest edition).
- 2. ANSI NFPA Standard #96, "Vapor Removal from Cooking Equipment," (latest edition), available from the National Fire Protection Association, Batterymarch Park, Quincy, MA, 02269.

#### LEVELLING AND ANCHORING TILTING SKILLET

- 1. Place skillet in the installation position.
- 2. Place a carpenter's level on top of the skillet pan and turn the adjustable feet to level skillet side-to-side and front-to-back.
- 3. Mark hole locations on the floor through the anchoring holes provided in the rear flanged adjustable feet.

#### LEVELLING AND ANCHORING TILTING SKILLET (Continued)

- 4. Remove skillet from installation position and drill holes in locations marked on the floor. (See installation diagram on page 4.) Insert proper anchoring devices (not supplied).
- 5. Place skillet back in the installation position.
- 6. Place carpenter's level on top of skillet and re-level side-to-side and front-to-back.
- 7. Bolt and anchor skillet securely to the floor.
- 8. Seal bolts and flanged feet with Silastic or equivalent compound.
- 9. If faucet is provided, connect water supply and check operation.
- 10. Turn power on and check for proper operation.



WARNING: Electrical and grounding connections must comply with the applicable portions of the National Electrical Code and/or other local codes.

#### **ELECTRICAL CONNECTIONS**



WARNING: Before performing any maintenance disconnect the electrical power supply and place a tag at the disconnect switch to indicate that you are working on the circuit.

NOTE: Do not install in such a manner that a service person cannot remove control box cover.

Connect unit to a branch circuit having a voltage and circuit type specified on name plate and of sufficient size to carry load. The amps per line wire for the various voltage ratings are shown in table on page 10.

#### **ELECTRICAL CONNECTIONS** (Continued)

NOTE: Supply wires must be suitable for temperature of at least 90°C (200°F). Additionally, all wiring must conform to the requirements of local and national electric codes. Conduit and fittings must be watertight.

Connect ground wire from electrical service to ground lug.

Ensure that skillet is firmly seated on frame before checking connection and functioning of controls.

NOTE: Unit is equipped with an interlock switch that shuts off current to heating elements when skillet pan is more than (10°) above normal horizontal cooking position.

Switch on current supply to unit. Check for proper functioning of controls and heating elements (see Section 2.0 Operating Instructions).

#### **SERVICE CONNECTIONS**

All internal wiring for the skillet is complete.

Make service connections as indicated on page 4 and electrical connections above.

If a faucet is provided, connect the water supplies and check for proper operation.

#### 2.0 OPERATION INSTRUCTIONS



WARNING: The tilting skillet and its parts are hot. Use care when operating, cleaning and servicing the tilting skillet.

#### **BEFORE FIRST USE**

Using a non-corrosive, grease-dissolving commercial cleaner, clean the protective metal oils from all surface parts and the interior of the tilting skillet. Follow the cleaner manufacturer's directions. Rinse thoroughly and drain the pan. Wipe dry with a soft clean cloth.

#### **CONTROLS**

**Red Temperature Light** - Illuminates when heating elements are supplying heat to the tilting

skillet.

**Thermostat** - Turns tilting skillet ON and maintains set temperature by

controlling power supply. Temperature settings range from 100°F

to 450°F. (See COOKING GUIDELINES in this manual for

temperature settings.)

**Hand crank** To raise and lower pan.

**Tilt Switch - Optional** Push UP to raise pan; push DOWN to lower tilting braising pan.

**Timer** 1 hour mechanical timer (Time Cooking Time).

#### START-UP PROCEDURE

1. Ensure that the skillet pan is in the DOWN position.

- Turn THERMOSTAT dial to desired temperature (reference Cooking Guidelines, Page 13).
   The red TEMPERATURE light will come on.
- 3. When skillet pan has reached set temperature, the red TEMPERATURE light will go off and the heating elements will shut off. The heating elements will cycle on and off thereafter to maintain set temperature. The red TEMPERATURE light will cycle on and off with the heating elements.

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#### **START-UP PROCEDURE** (Continued)

- 4. Preheat skillet pan and allow it to cycle to equalize heat across the entire surface.
- 5. Water will boil faster with the lid down.
- 6. Turn THERMOSTAT to OFF when skillet is not in use.

#### DAILY SHUTDOWN PROCEDURE

To turn tilting skillet off, turn THERMOSTAT dial to OFF.

#### TILTING THE SKILLET

- 1. DO NOT try to tilt skillet with lid down.
- 2. Make sure the receiving pan is in place.
- 3. Turn hand crank clockwise or for power tilt, push and hold TILT SWITCH in the UP mode until desired pan position has been reached. The pan will empty when raised to the top tilt position.
  - When the braising pan is raised  $10^{\circ}$  or more, the heating elements will be turned off automatically.
- 4. Food is poured through the removable strainer into a food receiving pan positioned under the lip of the pouring spout.
- 5. To lower pan, turn hand crank counterclockwise or push and hold TILT SWITCH in the DOWN mode.

#### 3.0 COOKING GUIDELINES

#### All Modular and Tubular Leg Models

The UniVerse Skillet is one of the most versatile pieces of equipment to be found in any restaurant or institutional kitchen. It enables the cook to stew, simmer, pan-fry, braise, grill, or sauté, and all with a very uniform heat pattern. The figures given below are suggested quantities and temperature settings and estimated numbers of orders per load and per hour. When two temperatures are given, the first is to start the product, the second to finish the product.

The following temperatures should be used:

	Temperature (°F)
Simmering	200 Maximum
Sautéing	225 - 275
Searing	300 - 350
Frying	325 - 375
Grilling	350 - 450

	PORTION	TEMP.	BATCHES PER	PER	ALLON LOAD	40 GA PER I	_OAD
<u>ITEM</u>	SIZE	<u>(°F)</u>	<u>HOUR</u>	QTY.	PORTIONS	QTY.	PORTIONS
BREAKFAST FO	OODS						
Bacon	3 slices	350	12	2 lb	10	3 lb	15
Eggs							
- Boiled - Hard	1 egg	225	5	50 eggs	50	75 eggs	75
- Boiled-Soft	1 egg	225	8	50 eggs	50	75 eggs	75
- Fried	1 egg	400	4	30 eggs	30	45 eggs	45
- Poached	1 egg	225	5	36 eggs	36	60 eggs	60
- Scrambled	1-1/2 eggs	300 - 200	1	18 gallons	720	28 gallons	1100
French Toast	3 slices	450	7	35 slices	12	50 slices	17
Regular Oatmeal	½ cup	250	2	20 lb (100 cups)	500	40 lb (200 cups)	1000
Pancakes	2 each	400	10	30 ea.	15	50 ea.	25

	PORTION	TEMP.	BATCHES PER	30 GALLON PER LOAD		40 GALLON PER LOAD	
<u>ITEM</u>	SIZE	(°F)	HOUR	QTY.	PORTIONS	QTY.	PORTIONS
FISH							
Clams	1 pt.	400	10	10 qts.	20	15 qts.	30
Fish Cakes	2 - 3 oz	400	5	70 - 3 oz	35	110 - 3 oz	55
Haddock Fillet	4 oz	400	4	60 - 4 oz	60	90 - 4 oz	90
Halibut Steak	5 oz	450	3	60 - 4 oz	60	90 - 4 oz	90
Lobster	1 - 1 lb	350	4	20 - 1 lb	20	30 - 1 lb	30
Swordfish	5 oz	450	3	50 - 5 oz	50	75 - 5 oz	75
SAUCES, GRAV	IES, SOUP	S					
Brown Gravy	1 oz	350 - 200	2	18 gallons	2300	35 gallons	4500
Cream Sauce	2 oz	250 - 175	1	18 gal.	1150	35 gal.	2250
Cream Soup	6 oz	200	1	18 gal.	375	35 gal.	725
French Onion Soup	6 oz	225	1	18 gal.	350	35 gal.	700
Meat Sauce	4 oz	350 - 200	1	18 gal.	575	35 gal.	1100
VEGETABLES							
CANNED	3 oz	400	6	30 lb	125	45 lb	200
FRESH							
Beans, Wax, Green	3 oz	400	3	25 lb	125	50 lb	250
Beets	3 oz	400	1	30 lb	125	60 lb	300
Broccoli	3 oz	400	3	25 lb	125	40 lb	200
Cabbage	3 oz	400	5	20 lb	80	30 lb	125
Carrots	3 oz	400	2	35 lb	150	70 lb	300
Cauliflower	3 oz	250	5	15 lb	75	25 lb	125
Corn	1 ear	400	8	50 ears	50	75 ears	75
Potatoes	3 oz	400	2	40 lb	200	60 lb	300
Spinach	4 oz	250	10	6 lb	25	9 lb	35

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ITEM	PORTION SIZE	TEMP. <u>(°F)</u>	BATCHES PER HOUR		GALLON R LOAD PORTIONS		ALLON LOAD PORTIONS
Turnips	4 oz	400	2	20 lb	100	30 lb	150
•	4 02	400	2	20 10	100	30 lb	130
FROZEN							
Beans, French Green	3 oz	400	6	15 lb	60	22-1/2 lb	90
Lima Beans	3 oz	250	4	15 lb	60	22-1/2 lb	90
Broccoli	3 oz	400	8	12 lb	50	18 lb	75
Sliced Carrots	3 oz	250	6	15 lb	60	22-1/2 lb	90
Small Whole Carrots	3 oz	250	3	15 lb	50	22-1/2 lb	90
Corn	3 oz	250	18	15 lb	50	22-1/2 lb	90
Small Whole Onions	3 oz	250	7	15 lb	50	22-1/2 lb	90
Peas	3 oz	400	10	15 lb	75	22-1/2 lb	110
Spinach	3 oz	400	3	15 lb	75	22-1/2 lb	110
DESSERTS, PU	DDINGS, SV	VEET SAU	CES				
Butterscotch Sauce	1 oz	200	1	18 gal.	2300	35 gal.	4500
Cherry Cobbler	3 oz	200	1	18 gal.	750	35 gal.	1500
Chocolate Sauce	1 oz	200	1	18 gal.	2300	35 gal.	4500
Cornstarch Pudding	4 oz	200	1	18 gal.	575	35 gal.	1100
Fruit Gelatin	3 oz	250	2	18 gal.	750	35 gal.	1500
MEAT							
BEEF							
American Chop Suey	6 oz	400 - 225	2	18 gal.	350	35 gal.	700
Beef Stew	8 oz	300	-	18 gal.	280	35 gal.	560
Corned Beef Hash	5 oz	400	5	16 lb	50	25 lb	75

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<u>ITEM</u>	PORTION SIZE	TEMP. <u>(°F)</u>	BATCHES PER HOUR		ALLON LOAD PORTIONS		LLON LOAD PORTIONS
Cheeseburger	3 oz	300	12	7 lb	35	10 lb	50
Hamburger	3 oz	300	15	7 lb	35	10 lb	50
Meatballs	1 oz	400 - 225	3	12-1/2 lb	65	18 lb	100
Pot Roast	2 oz	350 - 200		120 lb	500	180 lb	750
Salisbury Steak	5 oz	400	3	16 lb	50	24 lb	75
Sirloin Steak	6 oz	400	5	15 lb	40	22-1/2 lb	60
Swiss Steak	4 oz	300 - 200	1	25 lb	110	40 lb	160
POULTRY							
CHICKEN							
Pan Fried	2-1/4's	350	3	50 pieces	25	80 pieces	40
Whole	2 oz	350 - 200		16 - 5 lb	200	24-5 lb	265
FRANKFURTER	s						
Grilled	2 oz	300	8	22 lb	176	33 lb	264
Boiled	2 oz	250	12	16 lb	128	25 lb	200
PORK							
Bacon	3 slices	350	12	2 lb	10	3 lb	15
Ham Steak	3 oz	400	8	10 lb	50	15 lb	75
Pork Chops	5 oz	350	4	15 lb	50	25 lb	75
Sausage Links	3 links	350	7	30 lb	120	45 lb	180
TURKEY							
Off Carcass	2 oz	400 - 200	_	3 26-30 lb	200	4 26-30 lb	275
On Carcass	2 oz	400 - 200	_	4 16-20 lb	175	6 16-20 lb	265
MISCELLANEO	us						
Grilled Cheese Sandwich	1 sand.	400	8	35 sand.	35	50 sand.	50
Macaroni & Cheese	8 oz	200	2	18 gal.	300	35 gal.	525

	PORTION	BATCHES 30 GALLON TEMP. PER PER LOAD					LLON LOAD
<u>ITEM</u>	SIZE	<u>(°F)</u>	<u>HOUR</u>	QTY.	PORTIONS	QTY.	PORTIONS
Rice	4 oz	350 - 225	1	20 lb raw	320	40 lb raw	650
Spaghetti	4 oz	350 - 225	2	8 lb raw	200	12 lb raw	300

#### 4.0 CLEANING INSTRUCTIONS



WARNING: Disconnect electrical power supply before cleaning.

Before cleaning allow the tilting skillet to cool and then clean it. Keep exposed cleanable areas of the tilting skillet clean at all times. Do not get water in electrical box or any electrical component.

- 1. Thoroughly wash pan, pouring spout, lid and exterior surfaces with detergent and warm water. If necessary, soak pan to remove food that is stuck to pan surface. Rinse thoroughly and wipe dry with a soft clean cloth.
- 2. Clean removable strainer and receiving pan support with detergent and warm water. Rinse thoroughly and wipe dry with a soft clean cloth.

#### 5.0 TROUBLESHOOTING GUIDE

Problem	Probable Cause	Remedy
1. UNEVEN HEATING.	a. Defective element.	a. Replace element.
	b. Uneven torque of element block nuts.	b. Re-torque element block nuts on bottom of skillet. Torque the first nuts evenly to 30 inch - lb. Holding first nut, torque the second nut to 100 inch - lb.
	c. Temperature control out of calibration or defective.	c. Calibrate or replace.
2. SIGNAL LIGHT OUT.	a. Burnt out bulb.	a. Replace.
	b. Defective temperature control or thermocouple.	b. Replace.
	c. Loose electrical connection.	c. Repair.
3. UNIT FAILS TO HEAT.	a. Circuit breaker is off.	a. Reset circuit breaker.
	b. Malfunction of interlock switch.	b. Adjust or replace.
	c. Contactor does not pull in.	c. Replace contactor.
	d. Defective temperature control or thermocouple.	d. Replace temperature control or thermocouple.

#### 6.0 MAINTENANCE



WARNING: The tilting skillet pan and its parts are hot. Use care when operating, cleaning and servicing the tilting skillet.



WARNING: Disconnect electrical power supply and place a tag at the disconnect switch to indicate that you are working on the circuit before performing any maintenance.

#### **ADJUSTMENTS**

All tilting skillets are adjusted at the factory.

At least twice a year, have an authorized service person clean and adjust the tilting skillet for maximum performance.