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ST-AS STEAM COOKER

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HOW TO USE THIS MANUAL

This manual contains maintenance and service instructions for the Automatic, Direct-Connected Steam-It, Style H Model ST-AS.

The exploded view drawings of components are aids to the identification, disassembly and assembly of parts. The parts listings provide information necessary for the ordering of replacement parts (proper part names and part numbers). When requesting parts or service, always furnish the model and serial number of your unit. These numbers are located on the name plate affixed to the top surface of the Steam-It.

OPERATION SEQUENCE

- STEP 1. Put the food in a proper pan for the cooking to be performed and place it in the Steam-It in keeping with proper loading techniques.
- STEP 2. Close and lock the door into position by placing the tongue of the door lock under the roller of the fulcrum casting and press downward until the handle comes to a firm stop. This lock makes the initial seal and when steam pressure builds up within the cooking chamber the door will be forced to a tighter closed position.
- STEP 3. Turn the Steam-It on by setting the timer clock <u>past</u> <u>and then</u> back to the desired cooking period. The pilot light will go on to signify that cooking is in progress.
- STEP 4. The steam exhaust valve will automatically close, the steam inlet valve will open, and a period of free-venting through the open steam trap will occur. During this period of free-venting, trapped cold air is exhausted from the cooking chamber and replaced with live steam.

- STEP 5. The steam trap closes from the intense heat generated by steam acting upon its thermostatic element and free-venting will cease.
- STEP 6. A full steam pressure build-up to approximately 14 P.S.I, will occur within the cooking chamber. The Steam-It door must be kept locked until the cooking • period has completely finished.
- STEP 7. The timer will return to "zero" position and cooki ng wilt be terminated. The inlet valve will close, the exhaust valve will open, the buzzer will again sound, and the pilot light wll go out. The buzzer will continue to sound until the timer is turned to the "off" position.

STEAM REQUISITES

The ST-AS Steam-It is designed for operation with a piped-in steam supply not in excess of 14 lbs per square inch. Should it be used with a system of steam generation that exceeds 14 lbs per square inch, a pressure regulator must be used on the steam input line to reduce and regulate the steam pressures within the operational range of the Steam-It.

SUGGESTED STEAM CONNECTIONS

The illustration shows a recommended system of installation which provides a regulating valve for delivery of 14 lbs of steam pressure, a globe valve for emergency shut off, a pressure gauge to measure the pressure input from the source of supply, and a ball-float trap to prevent dirt and water from entering the unit. The globe valve, regulating valve, and ball-float trap and pressure gauge are not furnished with this equipment. The pres-gauge must be selected to operate within the range of the pressures experienced at the place of installation. With the introduction of a pressure reducing valve, the Steam-It will then require input steam pressures in excess of 14 lbs from its source of supply.

NOTE: With pressure constant and between 11 and 14 PSI, use the same system of installation with the pressure reducing valve omitted.



BALL FLOAT TRAP PART NUMBER 10-5336

PART NUMBER 10-5473, CHROME



| ltem | Description | Part No. |
|------|--------------------|----------|
| 1 | Cover Bolt and Nut | 10-5644 |
| 2 | Cover Gasket | 10-5639 |
| 3 | Valve and Sea | 10-5640 |
| 4 | Bracket and Screw | 10-5642 |
| 5 | Lever Assembly | 10-5641 |
| 6 | Ball Float | 10-5643 |
| | | |



ST-AS STEAMIT

MASTER ILLUSTRATION PARTS LIST

| Item | Description | Part No. |
|------|---|----------|
| 1 | Body Assembly | 95-2156 |
| | Defety Value | 10 4020 |
| 2 | Salety valve | 10-4636 |
| 3 | Strainer Ass y | 95-0516 |
| 4 | Handle Bumper | 10-0226 |
| 5 | No. 8 - 32 x 3/8" Binding Hd. Screw | 10-1774 |
| 6 | | 95-0116 |
| 1 | 1 /4" Shakeproot Washer | 10-2513 |
| 8 | 1/4" - 20 X 3/4" R0. H0. SCIEW | 10-1763 |
| 9 | 1/4" - 20 x 7/8" Hex. Hd. Screw | 10-1790 |
| 10 | Street Elbow, 90° | 10-2811 |
| 11 | Solenoid Valve (Inlet) | 10-5859 |
| 12 | | 10-0280 |
| 13 | EIDOW 1/2" I.P.S. X 5/8 U. D. | 10-2837 |
| 14 | lubing | 95-2997 |
| 15 | 1/2" I.P.S. x 5/8 0. D. Straight Connector | 10-2867 |
| 16 | Nipple 1/2"I.P.S. | 10-1107 |
| 17 | Bracket | 95-0065 |
| 18 | Elbow & Bracket Ass'y. | 95-0064 |
| 19 | 1/4" Lockwasher | 10-2500 |
| 20 | 1/4" - 20 x 1/2 Hex. Hd. Screw | 10-2073 |
| 21 | Solenoid Valve (Outlet) | 10-5787 |
| 22 | Tubing | 95-3154 |
| 23 | Nut, Grip 1/4" - 20 | 10-2312 |
| 24 | Elbow 1/2" I.P.S. St'd. 90° | 10-2853 |
| 25 | Nipple 1/2"I.P.S. | 10-2864 |
| 26 | Support Bracket, Buzzer | 95-2007 |
| 27 | Buzzer | 10-4563 |
| 28 | No. 8 - 32 x 3/8" Rd. Hd. Screw | 10-1717 |
| 29 | No.8 Lockwasher | 10-2518 |
| 30 | Hex. Nut, #8- 32 | 10-2378 |
| 31 | Handy Box – Raco | 10-5163 |
| 32 | Ground Lug | 10-5492 |
| 33 | No. 10 - 32 x 3/8" Rd. Hd. Screw | 10-1759 |
| 34 | Cover, Handy Box - Raco | 10-5164 |
| 35 | 5/16"- 18 x 1"Hex. Hd. Screw | 10-2105 |
| 36 | 5/16" Flat Washer | 10-2405 |
| 37 | Hex. Nut 5/16"- 18 | 10-2307 |
| 38 | Pan Support - Left Side | 95-0097 |
| 39 | Pan Support - Right Side | 95-0096 |
| 40 | Steam Trap | 10-6156 |
| 41 | Bracket, Pilot Light | 95-3408 |
| 42 | Pilot Light | 10-5052 |
| 43 | Front Lower Panel Ass'y. | 95-3185 |
| 44 | Case - Top Front Upper | 95-3131 |
| 45 | Case - Left Side | 95-3140 |
| 46 | Case - Right Side | 95-3141 |
| 47 | Case - Back | 95-3126 |
| 48 | No. 8 x 3/8" Phil. Truss Hd. Screw Ty. "A" | 10-1956 |
| 49 | Nameplate Panel (60 Cy.) | 10-6587 |
| 50 | Decal, Dial Overlay (50 Cy.) | 10-6577 |
| 51 | No. 10 - 32 x 1/2" Binding Hd. Screw | 10-1776 |
| 52 | Flue Ass'y. | 95-3135 |
| 53 | Pressure Gauge | 10-5399 |
| 54 | Tubing - Press. Gauge | 95-3285 |
| 55 | Timer, 60 Minute | 95-3393 |
| 56 | Knob, Dial | 10-6381 |
| 57 | Comp. Conn., 1/8" I.P.S. F'male x 3/16" 0. D. | 10-3361 |
| 58 | Comp. El. 900, 1/8" I.P.S. Male x 3/16" 0. D. | 10-3360 |

THE BUZZER

The function of the Buzzer is to signify to the operator that the cycle of cooking has been terminated.

The Buzzer is mounted on a bracket which is positioned at the front of the unit just under the front removable panel.

HOW THE BUZZER WORKS

The Buzzer electrical circuit is controlled by the timer. When the timer reaches "ZERO" (at the end of the cooking cycle), the circuit will be completed and the Buzzer will continue to sound until the timer knob is turned to the "OFF" position.

THE COOKER DOOR ASSEMBLY

The door of the Cooker has been engineered to establish a positive method of sealing the steam pressure within the cooking cylinder. As steam pressure builds up within the cylinder, the door seal will tend to become more positive. However, the door should be adjusted to make a good initial seal between the door gasket and the door opening without the added assistance of internal cylinder steam pressures. With the simple action of securing the door handle down in a locked position, the door gasket should be sufficiently compressed against the door opening, all the way around, to prevent any steam leakage from occurring.

DOOR ASSEMBLY - Parts List

| ltem | Description | Part No. |
|------|---|----------|
| 1 | Pivot Spring Bearing | 10-6765 |
| 2 | Door Lift Springs (pair) | 10-2785 |
| 3 | 10 - 32 Machine Screw 1/2" long . | 101776 |
| 4 | Door Gasket | 10-2666 |
| 5 | Door & Door Spring Assy. | 95-3204 |
| 6 | Door Spring | 95-0127 |
| | Complete Door Assembly (Items 1 thru 6) | 95-0124 |
| | | |

THE DOOR GASKET

Keep the gasket clean. With normal closing and locking of the door assembly, a steam-tight seal should be made between the door gasket and the door opening. This seal cannot be maintained if particles of foreign matter are allowed to accumulate upon either of the contacting surfaces.

If leakage should occur by the door gasket before the additional pressure of a steam build up within the cooking chamber causes it to stop, the door assembly must be regarded as improperly adjusted and a readjustment must be made of the adjustment screw.

To change the door gasket, remove the entire door assembly as a unit, remove and discard the old gasket, replace it with a new one (no cement is required), and reinstall the door assembly. Make an operational check for leakage and adjust the door if necessary.



DOOR ADJUSTMENT

The door adjustment is located in the fulcrum casting at the base of the door opening. This adjustment employs the use of a screw and locknut. To adjust the Cooker door to a tighter closed position (to prevent steam from leaking by the door gasket as pressure builds up), it is necessary to loosen the locknut and back off the screw at least one-quarter of a turn and retighten the locknut.



TO REMOVE THE DOOR ASSEMBLY

The Door Assembly can be removed from the inner cooking chamber as a unit without the use of any special tools or equipment. However, a systematic approach to this is warranted as the clearances through the portal are close and much confusion can result if not removed in the sequence described below.

- 1. First, lift off and remove the two pan supports to expose the door linkages on either side of the inner cooking chamber.
- Raise the door to a fully opened position and disengage the door spring from each of the door spring studs. Accomplish this by counter-acting the force of the door lift spring with one hand while working the end of the door spring of the door assembly.
- 3. When the ends of the door spring have been completely freed from their respective door spring studs, the door lift springs on either side of the door assembly can easily be slipped off their studs.
- 4. Rotate the entire door assembly out through the door opening, passing the door handle through the opening first, and then one end of the door spring as shown in the illustration. The remainder of the door assembly will then pass through the door opening quite easily.

5. To replace the door assembly, reverse the step by step procedure described above.

DOOR LIFT SPRING REPLACEMENTS

Market Forge Company supplies replacement Door Lift Springs in sets only. This policy has been found to be in the best interest of the customer. Through continuous use, some of the original qualities of the springs are lost and it becomes advantageous to make replacements to <u>both</u> the left and right Door Lift Springs in the event one becomes damaged or broken.

Replacement Door Lift Springs are marked with tabs at the factory prior to shipping to identify a right from a left spring. These must be installed with the right Door Lift Spring on the right and the left Door Lift Spring on the left of the door as viewed from the front of the Cooker.





DOOR HANDLE ASSEMBLY - PARTS LIST

| Item | Description | Part No. | ltem | Description | Part No. |
|------|----------------------------|----------|------|--------------------------------|----------|
| 1 | No. 10 - 32 Acorn Nut | 10-2318 | 10 | Door Handle Bearing Bracket | 95-0659 |
| 2 | #10 Shakeproof Lockwasher | 10-2514 | 11 | 1/4" Shakeproof Lockwasher | 10-2513 |
| 3 | Locking Screw | 95-0563 | 12 | 1/4"-20 x 5/8" Rd. Hd. Screw | 10-1731 |
| 4 | Bearing Spacer | 95-0120 | 13 | Door Lock Ass'y. | 95-3223 |
| 5 | 3/8" Shakeproof Lockwasher | 10-2517 | 14 | Door Lock Knob Ass'y. (Items 1 | 95-0145 |
| 7 | Door Handle Casting | 95-0134 | 15 | Complete Door Handle Ass'y. | |
| 8 | 1/4"- 20 Acorn Nut | 10-2359 | | (Items 1 thru 13) | 95.0144 |
| 9 | Door Handle Bearing Stud | 95-0658 | | | |

THE FULCRUM ASSEMBLY

The Fulcrum Assembly is located at the lower front of the cooking cylinder and furnishes a sturdy anchorage for the door locking system of the door handle. Also provided in this assembly is a means of adjustment for the door seal.

FULCRUM ASSEMBLY - Parts List

| Item | Description | Part No. |
|------|-----------------------------------|----------|
| 1 | Fulcrum Casting | 95-2176 |
| 2 | 1/4 -20x 3/8 Helicoil | 10-3111 |
| 3 | 1 /4" Shakeproof Washer | 10-2513 |
| 4 | 1/4-20 Cap Screw, 7/8" long | 10-1790 |
| 5 | 10-32 Hex Nut | 10-2339 |
| 6 | #10 Shakeproof Lockwasher | 10-2514 |
| 7 | Bronze Bearing | 10-1578 |
| 8 | Bearing Spacer | 95-0120 |
| 9 | 10 - 32 Machine Screw, 1 1/2"long | 95-0563 |
| 10 | Roller Assembly (Items 5 thru 9) | 95-0149 |
| 11 | 1/4-20 Machine Screw, 3/4"long | 10-1763 |
| 12 | 1/4-20 Allen Set Screw | 10-2087 |
| 13 | 1/4-20 Famine Nut | 10-2358 |
| 14 | 1/4-20x 5/8 Helicoil | 10-3116 |
| | Complete Fulcrum Assy. | 95-2003 |
| | (Items 1-14 less item 2A) | |

ROLLER ASSEMBLY CLEANING

The Roller Assembly provides a sturdy, free-rolling anchor for the hooked arm of the door handle. Note that items 5, 6, 7, 8, and 9 in the illustration above makes up the complete Roller Assembly, item 10.

The Roller Assembly must be kept free-rolling at all times. Should this assembly become "frozen" due to

accumulations of dirt or food matter, strain will be put upon the door handle and the fulcrum casting when the door is being locked. Use only a dry lubricant such as graphite, as oil or grease will tend to attract dirt to this area.

THE SAFETY VALVE

The Safety Valve is set to automatically relieve the cooking compartment of excessive pressure buildups by opening at a point between 151/2 lbs. and 16 lbs.



CHECKING THE SAFETY VALVE

If the Safety Valve should leak continually with a pressure buildup, or should it cause an interruption of the cooking cycle prematurely (less than 151/2 lbs. on the steam gauge), it must be determined to be defective and be replaced. However, the steam gauge should first be checked for accuracy before making this determination. The steam gauge should register absolute zero with no pressure in the cooking cylinder. If the normal zero setting has advanced somewhat through usage (a characteristic of steam gauges), the amount of advancement from absolute zero must be <u>subtracted</u> from its registered reading to determine the true steam pressure.

THE FLUE

The Flue serves as a protective shield for the steam trap (B) and the safety valve (A) as well as, a front facing mount for the steam gauge (D). As servicing of these parts may at times require the removal of the Flue, an exploded view drawing is provided to show their proper relative positions within the Flue and the method of their assembly to the cooking cylinder.

TO REMOVE THE FLUE

- Detach the 3/16" copper tube connector or (C) from the steam gauge (D) at the ferrule nearest the steam gauge. Then, remove the copper tube entirely by freeing it at the other ferrule.
- Apply inward pressure at either side of the Flue at points

 and (2) with a screwdriver. This will collapse the side walls slightly to allow the small fluted sections of sheet metal to clear the edges of the flue opening in the outer shell of the Steam-It. With the restrictions of the flutes removed, the Flue may then be lifted over the parts it houses.
- 3. To replace the Flue, reverse steps above.

FLUE -Parts List

| ltem | Description | Part No. |
|------|--------------------------|----------|
| Α | 1/2"- 15 lb Safety Valve | 10-4636 |
| В | 1/2" Steam Trap | 10-6156 |
| С | Pressure Gauge Tubing | 10-3285 |
| D | 0 - 30 lb Pressure Gauge | 10-5399 |

THE STEAM PRESSURE GAUGE

Located at the top rear of the Steam-It and mounted into the forward face of the flue for visibility, the Steam Pressure Gauge registers the pressure within the Steam-It cooking chamber. To replace this unit it is necessary to disconnect the 3/16" copper tube connector and remove the two nuts holding the gauge framework in place. Normal pressure reading during a cycle of cooking will be:

- 1. Immediately after the Steam-It is set into operation; a gradual rise to approximately 5 P.S.I.
- After full free-venting has exhausted all cold air from the cylinder; an increase in pressure to approximately 1 4 P.S.I.
- 3. During the remainder of the cooking period; a relatively constant pressure reading of about 14 P.S.I.
- After the timer has returned to the "ZERO" position and complete exhaust venting has occurred; a pressure reading of zero.



THE STEAM TRAP

The Steam Trap is located within the flue at the top rear of the Steam-It. It has the very important automatic, dual function of exhausting all cold air from the cooking compartment and of making a suitable seal to allow a pressure build-up of live steam during the cooking cycle. Failure of this unit to operate properly will result in uneven cooking.

HOW IT WORKS

With the introduction of steam into the cooking compartment, the cold air escapes through the Steam Trap. When sufficient generated steam displaces the cold air, it passes through the Steam Trap, and the thermostatic element becomes heated and expands to "make" a seal against the seal against the seat. This action encloses the live steam within the cooking compartment and allows a steam pressure build-up to occur.

TROUBLE SHOOTING

The first indication of defective Steam Trap operation will usually be evidenced by uneven cooking. If working properly, the steam temperature will be even and cooking will be uniform through the cooking compartment. Trouble may occur either through premature closing of the Steam Trap before all the cold air has been exhausted or by its failure to close sufficiently to enable a proper steam pressure build-up. Either case warrants the replacement of the Steam Trap.

NOTE: The Steam Trap cannot exhaust cold air properly if the thermostatic element is already heated to its closed position prior to the start of a new cycle. Therefore, a short interval is recommended between cooking cycles to allow it to sufficiently cool. Usually the normal unloading and reloading time is sufficient.

THE PILOT LIGHT

The Pilot Light is located at the lower right front of the front panel. This unit is wired to operate only when the timer is set to a cooking cycle. The circuit will be broken when the timer returns to the "ZERO" position. Thus, when lit, it signifies that the Steam-It is in the act of cooking.

THE TIMER

The Timer, located at the lower right front of the Steam-It, provides a means of manual control. The Steam-It is put into an automatic cycle of cooking with the setting of the Timer to any of its calibrated periods of cooking.

TROUBLE SHOOTING

If setting the Timer fails to operate the Steam-It and the pilot light also fails to light, look first for a break in the electric supply line (main switch off, burned out fuse, defective wiring, etc.). Then look for poor connections or defective wiring within the Steam-It itself. With these initial checks accomplished satisfactorily and the unit still inoperative:

1. If the pilot light comes on but timer fails to operate then check terminals 11 and 12 to see if 115V is present. If not, replace the timer.

2. Apply 115 volts across the solenoid coil terminals of the steam inlet valve and the steam exhaust valve, in turn, to determine if their solenoids or valves are in proper working order.

The Timer is replaceable only as a complete unit as factory repairs of it are not practical in the economic interest of the customer

| TROUBLE SHOOTING GUIDE | | | |
|---|--|---|--|
| TROUBLE | POSSIBLE CAUSE | CORRECTION | |
| Setting the timer tails to light the pilot light. | Power not reaching unit. Pilot light burned out; connections loose; defective wiring. Timer circuit not completed; loose connections; defective wiring; defective timer. | Check for interruption in your electrical input line. Replace pilot light assembly; tighten connections; replace defective wiring. Check connections; replace defective wiring; If pilot light lights and unit is inoperative-check for defective timer. Replace if defective. | |
| Steam fails to enter cooking chamber. | Operating circuit broken; inlet valve defective; timer defective. | 1. Check for faulty connections or defective wiring - tighten or replace. Make continuity check of solenoid coil. Replace any defective components. If okay -replace timer. | |
| Steam-It fails to build up to approx. 14 lbs pressure. | Induced steam to unit has in- sufficient pressure. Steam leaks around door. Steam trap fails to properly close. Safety valve blows off below 14lbs pressure. Exhaust valve fails to close. | Provide suitable pressurized steam to unit. Check for worn gasket. Adjust door or replace gasket. Replace the steam trap. 4. Replace safety valve. Check exhaust valve solenoid coil continuity. Check for binding valve. Replace defective components. | |
| Steam-It does not shut down when timer reaches zero. | If unit fails to exhaust all steam: Circuit to exhaust valve solenoid is broken or exhaust valve is binding in a closed position. If neither the exhaust valve or the inlet valve operates to shut-down position, timer is defective. Check to see if cirucit to inlet valve solenoid is broken or inlet valve is binding in an open position. | Make continuity checks of exhaust valve solenoid coil. Re-establish circuit if found broken. Repair or replace valve if found binding. Replace timer. Make continuity checks to inlet valve solenoid coil. Reestablish circuit if found broken. Repair or replace valve if found binding. | |
| Uneven cooking. Buzzer fails to stop buzzing when timer dial reaches | Steam trap closing prematurely. Short. | Replace the steam trap. Check connections or replace wire where needed. | |
| | | | |



OPTIONAL STEAM-IT STAND

Market Forge Steam-Its can be supplemented with an optional stand for utility where maximum compactness is desired. The-sturdy stainless steel stand unit is equipped with adjustable leg extensions which allow the unit to be installed and leveled over existing contours in the floor.

The open under-shelf of the stand gives added utility, providing a handy tabouret for cooking utensils. The open design lends itself to maximum sanitary conditions because of the ease in which periodic cleanings can be made.

Though simple in design and appearance, the Steam-It Stand is the ideal arrangement for mounting in that it elevates the unit to the most efficient working height, can be leveled easily, and may easily be maintained in a state of cleanliness.

STEAMIT STAND ASSEMBLY - Parts List

| ltem | Description | Part No. |
|---|---|---|
| 1 2 3 4 5 6 7 8 9 | Shelf Corner Bracket with set screw 27" Leg Leg Top Rd. Hd. Screw 1/4" - 20 x 5/8" . Lockwasher1/4" Flat Washer 1/16" th'k Cap Bracket Complete Stand Ass'y | 95-1680 25-1507 10-0634 10-0635 10-1804 10-2520 10-2520 95-3211 95-0300 |
| | • | |







| 24 INCH CABINET BASE - Parts List | | | | | |
|-----------------------------------|----------|--------------------------------|----------|----------|----------------------------------|
| ITEM NO. | PART NO. | DESCRIPTION | ITEM NO. | PART NO. | DESCRIPTION |
| 1 | 90-3013 | Rear Panel St. Steel | 8 | 90-3210 | Bracket — Magnetic Catch |
| | 90-3020 | Rear Panel Enamel | 9 | 10-5561 | Magnetic Catch |
| 2 | 909039 | Side Panels R & L St. Steel | 10 | 90-9057 | Door Handle |
| | 90-9041 | Side Panels R & L Enamel | 11 | 10-2422 | Special Washer |
| 3 | 10-0631 | Leg | 12 | 10-1869 | No. 10-32 x 1/2" Flat Head Screw |
| 4 | 90-8974 | Ass'y. 24" x 33" Modular Frame | 13 | 10-0454 | Cabinet Hinge Right Bottom |
| 5 | 90-9098 | DoorAss'y. St. Steel | 14 | 90-3185 | Double Washer |
| | 90-9099 | Door Ass'y - Enamel | 15 | 10-2511 | Washer |
| 6 | 90-2663 | Panel MTG Bracket | 16 | 10-2147 | Hex. Nut |
| 7 | 10-0493 | Feature Strip | 17 | 10-1982 | Self Tapping Screw |
| | | · | 18 | 10-2514 | #10 Lockwasher |

7



Replacement Parts for Type W3/4 Pressure Reducing Valve

ITEM 1 PART NO. 10 DESCRIPTION Adjusting Spring 1083

| 2 | 10 1082 | Diaphragm |
|----|---------|------------------------------|
| 3 | 10 1075 | Diaphragm Gasket |
| 4 | 10-1076 | Diaphragm Button Stem Assy. |
| 5 | 10 1077 | Strainer |
| 6 | 10-1078 | Bottom Plug |
| 7 | 10 1079 | Bottom Spring |
| 8 | 10-1080 | Seat |
| 9 | 10-1081 | Disc Assy. |
| 10 | 10-1033 | 3/4" Complete valve-Enameled |
| | 10-1034 | 3/4" Complete valve-Chrome |

WATTS PRESSURE REDUCING VALVE- % INCH

To provide adequate steam pressure regulation steam cookers are equipped with a steam pressure

reducing valve. The 3/4" Watts pressure reducing valve is designed to operate from a 7 to 50 P.S.I, source of steam pressure and reduce this to 5 P.S.I, for delivery to your cooker. Installation must be made from your source of steam supply, through the pressure reducing valve, and into the manifold input port of the steam cooker.

WARNING: Before final connection is made, blow down your steam line to remove all dirt, scale, packing and compound which may have accumulated during the installation of piping **to** the cooker.

OPERATION OF WATTS 3/4 REDUCING VALVE

Steam enters the valve at the inlet port and passes upward through the seat (8) into the discharge side

of the valve. As pressure in the discharge side increases, it forces the diaphragm (2) upward, overcoming the tension of the adjusting spring (1) and closing valve. As the pressure drops, the adjusting spring forces the dia phragm down, reopening the valve. Where demand and initial pressures are fairly constant, the valve opens to the proper position and maintains the desired reduced pressure.

ADJUSTING WATTS 3/4 REDUCING VALVE

- Release the adjusting screw lock nut and loosen the adjusting screw enough to release all tension on adjusting spring (1).
- Turn steam on slowly. Then turn adjusting screw clockwise just enough to allow the valve to open slightly. Allow cooker to operate in this manor several minutes.
- 3 Turn adjusting screw down slowly, at intervals, until reduced pressure reaches the desired Point. (5 P.S.I.)
- 4. Tighten adjusting screw lock nut.
- If chattering noise should occur turn adjusting screw located in bottom half of valve body, clockwise or counterclockwise, until chattering stops.

INSPECTION - MAINTENANCE - REPAIRS

Reports of unsatisfactory regulation of the pressure reducing valve is usually due to dirt, pipe compound, etc., blocking the internal strainer, or gumming up the seat and disc assembly. To clean the strainer, seat, and disc assembly remove the bottom plug (6) and remove strainer screen (5), bottom spring (7) and disc assy. (9) Clean the lower part of the valve. This can be accomplished without removing the valve from the line or unbolting the cover. If cleaning the strainer and disc assy. does not correct fault, the disc assy. and seat should be replaced. Also the top cover should be removed and the diaphragm button stem assembly should be removed and cleaned.