

# Installation Service Manual & Parts

EmberGlo® Model AR60



## CAUTION:

**This steamer to be used with distilled water only (demineralized).** Without treated water, deposits can build up in steam generators causing reduced steam volume and eventual stoppage of steam production. Clogged or limed steam generators caused by use of non-distilled water will not be covered under the terms of the warranty.

## Warranty

### Midco International Inc Express Limited Warranty Policy Exclusions Terms, Customer Requirements and Instructions

Only Authorized Service Providers are authorized to provide Express Limited Warranty service on all EmberGlo, a Division of Midco International Inc., food equipment as described under and Midco® International Express Limited Warranty Policy. A list of providers can be found on our web site: [www.emberglo.com](http://www.emberglo.com)

#### Provisions:

In lieu of an implied warranty, all repairs and replacement parts furnished under our Express Limited Warranty shall be f.o.b. point of distribution, but the owner must pay the necessary freight, delivery and labor costs involved when required. Any Federal, State or Local taxes are also extra. This Express Limited Warranty is effective for a period of 90 days from the date of original installation. If the product registration cards are returned within those 90 days, the warranty will be one year from date of installation. EmberGlo® Char Broilers and EmberGlo® Electric Food Preparation Equipment manufactured by Midco International, sold under the EmberGlo trademark, are guaranteed to be free from defect in material and workmanship under normal use and service for a period of 90 days from the date of original installation or for 1 (one) year when the registration card is returned within a reasonable time after the date of original installation. Midco's obligation under this Express Limited Warranty Policy shall be limited to repairing or replacing, at our option, any part of said equipment which Midco examination shall disclose to its satisfaction to be thus defective.

#### Exclusions:

This Express Limited Warranty Policy does not apply to damages resulting from accident, misuse, abuse or alteration, nor does it apply to limed steam generators, nor does it apply to any consequential damages. Most geographical areas require

the use of distilled or demineralized water. Tap water is permissible only with ES Series Steamers. Midco's obligation will be the replacement of the product or parts removed.

#### Terms:

Under the terms of this Express Limited Warranty Policy, models considered portable (devices with cords and plug caps such as EmberGlo Steamers) must be taken or returned to the nearest service provider, transportation prepaid, returned transportation collect. Non-portable units with permanent wiring will be serviced on the customer's premises. Under these terms, Midco agrees, within the terms of this Express Limited Warranty period, to make all repairs at no charge by the authorized service provider. Labor and mileage charges submitted by any other provider not authorized will be the responsibility of the customer.

#### Customer Requirements:

All charges related to repairs made after the 90 day or one (1) year, when the registration card is returned within a reasonable time after the date of original installation, during the Express Limited Warranty period will be the responsibility of the customer unless the registration card has been properly filled out and returned to Midco International Inc. The product registration information is located on the product I.D. plate.

If a part is defective due to workmanship or materials and is removed from the product within the applicable warranty period and returned to Midco in accordance with the following procedure described, Midco will, at its option, either repair or replace the part.

**Call the factory for instructions on returned goods.**

**No equipment may be returned without written authorization from MIDCO. Returned goods must be shipped prepaid to the factory.**

**⚠ WARNING: Improper installation and use of this product could result in personal or property injury.**

#### Specifications:

- 120 volts 60HZ AC 1500 watts max 13 amp
- Automatic timer operation
- Single shot operation
- End of cycle buzzer (10 seconds)

**SAFETY INFORMATION TERMS:** The following terms are used to identify hazards, safety precautions or special notations and have standard meanings throughout this manual. When you see the safety alert symbol and one of the safety information terms, as shown below, be aware of the hazard potential.



**DANGER:** Identifies the most serious hazards which **will** result in severe personal injury or death.

**WARNING:** Signifies hazards that **could** result in personal injury or death.

**CAUTION:** Identifies unsafe practices which **would** result in minor personal injury or product and property damage.



**EmberGlo®**

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## Installation

1. Position steamer on level surface and plug power cord into 3-hole 120 volt AC grounded receptacle. If an adapter is used, it must be grounded properly.
2. Pull out water pan and fill with distilled (NOT HOT OR BOILING) water to 1/4" from the top of the water pan baffles; then close drawer. Unit is now ready for operation.
3. EmberGlo Steamers do not require a separate hood for vapor produced during operation according to the Uniform Mechanical Codes per the International Conference of Building Officials Code.

## Operation

1. Move toggle switch to ON position. The pilot light remains on at all times. Allow 15-20 minutes to reach operating temperature.
2. Open food drawer, place food in pan; close drawer and operate lever as required per cooking guide.
3. At end of time cycle, open drawer and remove food.
4. Keep drawer closed when not in use.
5. To shut off unit move toggle switch to OFF position.

**⚠ Caution: Operate lever to the left and return to vertical position. Rapid repeated operation will over steam the unit. The amount of steaming necessary is determined by the type and amount of food to be heated. For more than one shot, wait 15 seconds between shots. A "shot" is one operation of the lever.**

## Maintenance Daily as Required

The food pan is removed by lifting up. Clean the inside thoroughly and wipe the outside to remove any material which might have accumulated.

- To remove the food drawer, pull the drawer out until it stops, release stop located at rear underside of drawer to unlock, and pull out the frame. Wipe the drawer and frame clean and return by inserting the drawer slide into the slide of the frame, then push the food pan to the rear until the lock engages automatically.

## Service

**⚠ DANGER: READ AND UNDERSTAND THIS BULLETIN THOROUGHLY BEFORE STARTING ANY TROUBLE SHOOTING. AN INADVERTENT SERVICE ERROR COULD RESULT IN SEVERE PERSONAL INJURY OR DEATH. ONLY A TRAINED EXPERIENCED SERVICE TECHNICIAN SHOULD ATTEMPT ANY REPAIR PROCEDURE.**

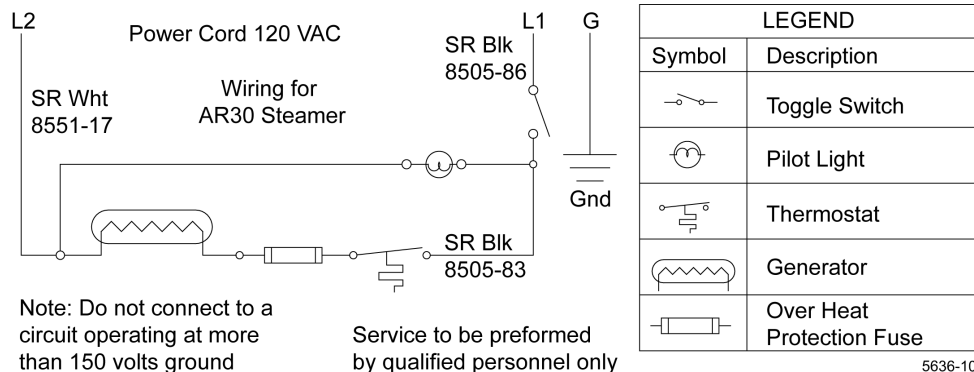
Qualified serviced agencies are available at most locations - Refer to EmberGlo listing of AUTHORIZED SERVICE AGENCIES included in Standard Equipment Catalog.

**Note:** Before attempting service, unplug power cord. For service or examination, all "working parts" of the steamer are exposed by removing first the cabinet top, then the back. the wiring diagram and spare cleanout gasket is located on inside of back.

### Electric Switch/Thermostat

The on-off switch should audibly "click" when operated manually. To determine if electrically operative, a continuity check should be made.

- The thermostat overheat protection fuse is set for a single use and is non-adjustable and should not be repaired. Replace if defective with a non-adjustable, non-repairable fuse.



**Figure 1. Wiring for AR60 Steamer**

## Pump System

Operate pump lever and observe length of pump shaft travel. It should travel approximately  $\frac{7}{8}$ ". If travel is less, check for broken or disengaged pins, links, crank or half moon key.

- Disconnect brass fitting at water riser tube and bend tube up slightly so discharging water will clear front of unit. Operate pump lever; water should shoot out about 15 feet. If water does not shoot out, remove and inspect inlet tube assembly for leaks. Any air entering tube will break the suction on the water. Check installation and alignment of dip tube spring as detailed under next section. If water still doesn't shoot out, pump should be replaced.
- A strainer is located in the inlet tube at pump fitting. Loosen fitting and remove pump inlet tube. Dump strainer out of tube and wash under running water, then replace.

## Dip Tube and Spring

If the dip tube does not enter the water pan properly it must be replaced. When replacing, the open end or point of hook must be at the bottom and the eye must be in a vertical plane, like a coin standing on edge.

## Steam Generator

1. **To Clean.** Remove cabinet top and generator insulation. This will expose a square plate on the generator, which is removable for cleaning water passages.

- Check the three exposed holes when the clean-out cover is removed. If any of these holes are clogged, clean them out by hand-twisting a  $\frac{7}{64}$ " drill for the center hole and a  $\frac{3}{16}$ " drill for the two side holes.
- After thoroughly cleaning the three holes, plug in power supply and operate lever to steam unit. **THE UNIT MUST BE HOT.** Operate several times to blow out any accumulation.
- Replace the clean out cover, using new gasket. With the unit hot, operate lever. The unit should steam properly. If it does not, and the pump is operative as detailed under PUMP SYSTEM, the entire generator assembly is probably limed and must be disassembled and cleaned or replaced.
- To clean generator assembly, separate casting from plate and clean lime from cavity in casting.

**⚠ Caution: Do not damage plate by scratching or polishing the finish.**

2. Information on use of the overheat label (8451-98)

**⚠ Caution: To prevent accidental shock, disconnect electrical plug from receptacle before attempting service.**

- An overheat label is located on the clean-out cover of the steam generator. The triangle in the center of the label, as shown below, is normally gold color. This triangle turns black at 450° F, indicating that the generator has overheated at least once. The operating temperature of the generator should be between 350° and 400° F. If it is not, the thermostat should be replaced.

Note: The overheat label will not return to its original gold color once it has turned black. It should be scraped off and replaced so that the thermostat can be monitored at all times. In addition, in the event that the thermostat has to be replaced, it is important to replace the label immediately afterwards so that someone at a later inspection will not suspect a faulty thermostat.

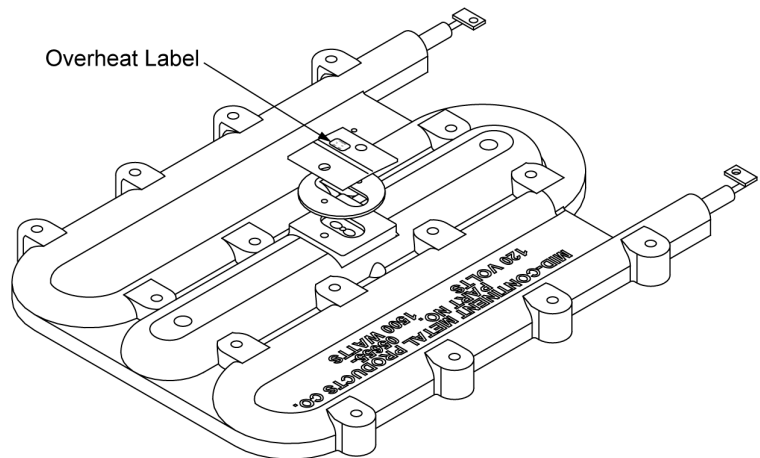


Figure 2. Steam Generator Overheat Label placements

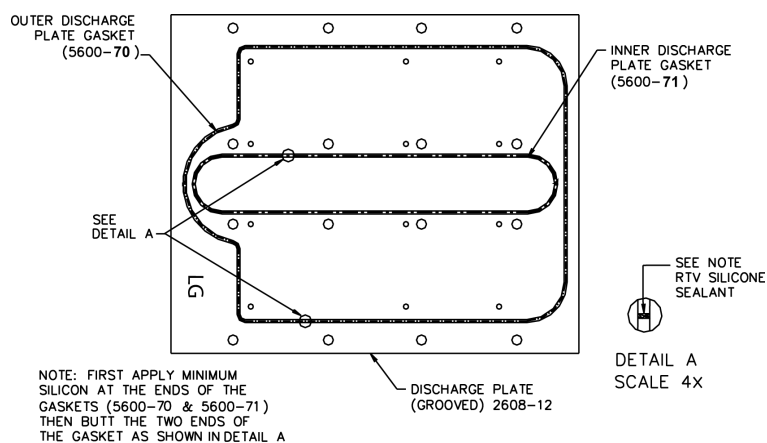
## Service Continued

### 3. To Remove.

- Disconnect the water riser tube.
- Disconnect electric wiring at the two terminals.
- Remove 16 hex nuts. **Note:** Remove food drawer and hold screws up to prevent turning.
- Lift off generator.

### 4. To Replace.

- Install the gaskets (#5600-70 & #5600-71) in the discharge plate (#2608-12) grooves as shown in *Figure 3*. (Note: First apply minimum **silicone [Use Dow Corning 732 or GE 159 RTV silicone]** at the ends of the gaskets [5600-70 & 5600-71] then butt the two ends of the gasket).
- Place discharge plate & gasket assembly on the steamer (gasket facing up towards generator) so that steam holes line up with the twelve round holes in steam chamber.
- Place the generator (#5655-00) on the above assembly so that mounting holes line up with the sixteen round holes in the discharge plate. Tape the carriage bolts in place from inside steam chamber and then tighten the nuts with lock washers. Remove all the tape.



*Figure 3. Generator Casting*

## Trouble Chart

**Note:** Also refer to Trouble Shooting Guide (8471-08) for addition service information.

### 1. Unit will not heat up; light out.

- a. No power.
- b. Plug out.
- c. Loose internal connection.
- d. Defective switch.

### 2. Unit will not heat up; light on.

- a. Defective thermostat.
- b. Loose heating element connection.
- c. Defective generator electrical unit.
- d. Defective or thermal fuse or open

### 3. Unit heats up light will not light.

- a. Defective light in switch.
- b. Loose connection.

### 4. Unit heats up; does not steam.

- a. No water in pan.
- b. Defective pump.
- c. Cam, pins or linkage broken or disengaged.
- d. Leak in inlet tube.
- e. Dip tube spring assembly misaligned.
- f. Clogged steam generator, or strainer.

**Note:** If electrical trouble is other than loose connections, it is recommended that parts be replaced rather than repaired.

# Heating and Cooking Guide

## Cooking Instructions

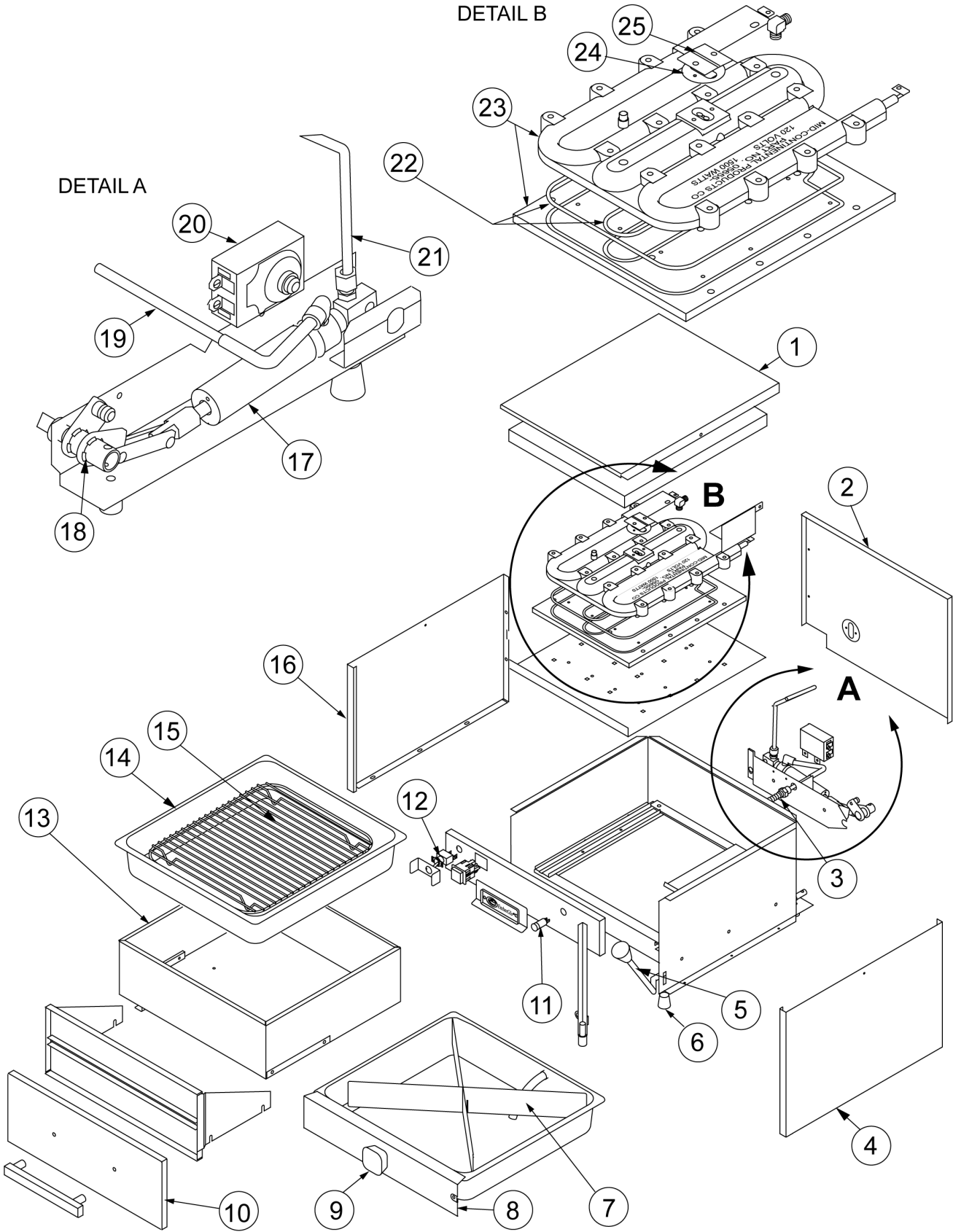
These suggestions are made only to help the operator get started. Since each location will have different portions and different requirements, each operator must determine his own operation habits. Please remember that the steamer conserves its steam in the drawer and therefore does not often need repeated shots. The main exception is when frozen product must be defrosted.

**If a product is at room temperature or refrigerated**, start with 2 shots. This ensures that the food pan is full of steam.

**If a product is frozen**, start with 3 shots because condensation on the cold product eliminates the steam quickly.

	Shots	Seconds
<b>Meats</b>		
Sliced meats	2	10-20
Hamburger patties (precooked)	2	30
Cheeseburger (precooked)		
patty with cheese	2	30
patty with cheese on bottom bun	2	90
Hot Dogs	2	60-90
Bacon (precooked)	2	45
Link Sausage (precooked)	2	60
1/2 Chicken (1lb)	2	60
Ribs (precooked)	2	30
<b>Eggs</b>		
Poached	2 shots/60 sec. then 2 shots/30 sec.	
Soft Boiled	2 shots/60 sec. then 2 shots/90 sec.	
<b>Bread</b>		
Buns (open)	1	10
Buns (closed)	2	20
Rolls	2	20
<b>Pasta</b>		
Macaroni and Cheese (casserole)	3	90-120
Rice (precooked)	2	45-60
Spaghetti (precooked)	2	45-60
Vegetables (precooked)	2	30-45
Chop Suey (casserole)	3	90-120
Shrimp (unfrozen)	3	90

Excellent results can also be achieved with many other precooked or frozen foods such as any non-breaded seafood... clams... lobster tails... scallops... red snapper... crab legs... all breads and rolls... french bread loaves... hoagies... onion buns... many specialty foods... tortillas... enchiladas... pizza slices... and much more!



ITEM	PART #	DESCRIPTION	QTY
1	5676-50	AR60 CABINET TOP	1
2	5677-00	CABINET BACK AR60	1
3	5604-30	DIP TUBE SPRING ASSEMBLY	1
4	5660-81	A/BR30 RIGHT CABINET SIDE	1
5	5615-02	PUMP HANDLE	1
6	8450-25	SOCKET TIP- LEG CUSHIONS	4
7	5686-00	WATER PAN BAFFLE	2
8	5688-00	WATER PAN WELDMENT	1
9	8445-01	COVER KNOB	1
10	5678-00	FOOD DOOR	1
11	8408-51	RED PILOT LIGHT	1
12	8423-43	ON/OFF TOGGLE SWITCH	1
13	5686-50	FOOD DRAWER RIVETMENT	1
14	5683-50	FOOD PAN MODEL AR60 (2/3 SIZE)	1
15	5682-50	FOOD PAN GRID	1
16	5660-80	A/BR30 LEFT CABINET SIDE	1
17	5660-00	AR SERIES MANUAL PUMP	1
18	5617-90	AR30 CRANK (INCLUDE 5662-90)	1
19	5693-10	DIP TUBE ASSEMBLY	1
20	8425-08	THERMOSTAT	1
21	5673-00	AR60 RISER TUBE	1
22	5600-73	KIT: OUTER & INNER "O" RINGS	1
23	2641-00	KIT: DISCHARGE PLATE & GENTR CAST-120V	1
24	5602-20	GASKET	1
25	5601-90	CLEAN OUT COVER	1

ITEM ARE NOT SHOWN IN DIAGRAM

1412-41	THERMAL FUSE - REPLACEMENT KIT	1
2618-00	POWER CORD	1
8445-04	FOOD DRAWER HANDLE	1

**Avoid error in parts selection.** When ordering, use complete EmberGlo part number and description. Furnish model number, bill of material number and date code or serial number from specification plate.

**IMPORTANT:** Availability of parts as well as specifications are subject to change without notice. Please consult factory for item availability.

