

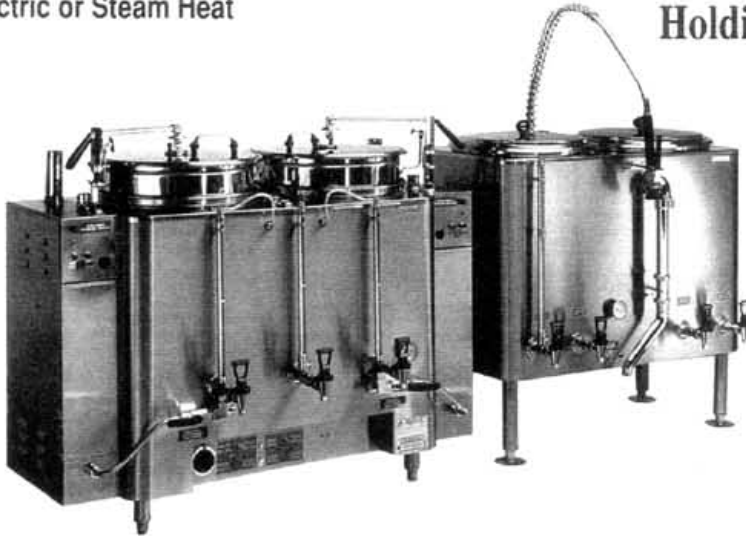


High Volume

AMERICAN METAL WARE
SINCE 1883

MODELS: AMV 60, AMV 80, AMV 120, AMV 160
Electric or Steam Heat

Banquet Coffee Brewing Holding System
Flexibility to Brew from 200 to 4,000 Cups
Holding Capacity up to 4,000 Cups



HISTORY AND GENERAL DESCRIPTION OF HIGH VOLUME COFFEE BREWING/HOLDING SYSTEMS

The major application of a high volume coffee brewing/holding system is in banquet style operations involving 1000 people or more. Such banquet operations may be involved with hotels or motels or they may be involved in large convention center operations. Other uses would be in-plant feeding operations or in-office feeding operations or the military, detention centers, or correctional facilities.

Analysis of Banquet Operation Methods and Procedures

The ultimate goal of a banquet operation involving coffee is to provide the customer with the highest quality coffee at the most desirable serving temperature, delivered into his cup at the table at approximately the same time for all persons, and with the lowest possible overall costs.

Brewing

Up until about 15 years ago, most banquet coffee involving over 500 people was brewed using a single purpose 50, 100 or 150 gallon unit. These units were manufactured by Groen, Vulcan Hart, Legion and others, and used the kettle/recirculation method of brewing. They really are a gigantic steam kettle, with a pump to circulate hot water over the ground coffee bed in the huge filter basket, and then recirculating the resulting weak coffee over the coffee grounds again. A chain hoist was required, in many cases, to remove the extremely heavy brew basket with the wet grounds. It was almost impossible to achieve the quality brewing recommendations of the Coffee Brewing Center and/or General Coffee Industry Standards. Also, there is no flexibility to brew in small batch quantity. As a result, equipment stood idle a large amount of the time and additional equipment was needed for variable quantity daily uses.

Within the last 15 years, the single purpose kettle brewing units have been retained only in the extremely large banquet operations involving 1500 to 5000 people. For most other banquet operations, the trend has been to use automatic coffee urns, commercially available, in multiples of one, two or three, mostly in the twin 10 gallon size. These

urns brew on one side at a time, and generally use the disposable filter paper. Electric heat has become the dominant source for heat, and almost all operations in this country are very familiar with automatic volume brewing coffee urns. Generally speaking, at the present time, banquets up to 1000 persons would normally be handled using standard automatic coffee urns with insulated coffee jugs to provide additional holding capacity for all at one time serving. Above this size, the banquet brewing system by American is more economical and labor saving.

Holding For "All At One Time" Transfer/Fill

With the very large single purpose "kettle units" described under "Brewing", the holding function was performed by this unit. However, in order to provide more than one transfer/fill faucet, it was necessary to draw off the coffee from the large volume single purpose unit into multiple insulated jugs with faucets, in order to be able to more rapidly fill the 64 ounce coffee pots used in the waiter service operation.

Transfer/Fill — Waiter Table Servicing

Most hotel operations in this country use one waiter for each 15 to 16 customers. This means approximately 60 waiters per 1000 guests. These waiters each have a 64 ounce coffee serving pot and the goal is to provide these serving pots filled, ready for the waiters at approximately the same time. This function is common to all systems, and is directly involved with the extreme pressures of attempting to serve all customers at as nearly the same time as possible. For example, with a banquet of 2000 persons, and approximately 120 waiters serving 16 customers per waiter, there will be needed 120 — 64 ounce coffee pots at approximately the same time. This is where the older systems tend to breakdown. They do not have the holding urn and the transfer/fill faucet capacity to easily and rapidly fill the 64 ounce coffee pots.



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SOME OF THE MAJOR ADVANTAGES AND BENEFITS OF SUCH A SYSTEM FOR HIGH VOLUME COFFEE BREWING/HOLDING ARE LISTED BELOW:

FRESH ROASTED FRESH BREWED COFFEE MADE IN BANQUET QUANTITIES

Delicious real coffee flavor and aroma, at perfect serving temperature. Far better than other substitute methods.

LOWEST ORIGINAL INVESTMENT

Automatic coffee urns included in the system are standard commercial equipment, with manufacturing economy based on many years' development and field use, and with U.L. and NSF requirements already amortized.

HIGHEST RETURN ON INVESTMENT

Flexibility in brewing quantities allows use of equipment for day to day usage in 10 gallon batch quantities as well as the large volume use when needed. This allows for maximum use of the equipment and highest return on its investment. Brew only the quantity needed.

LOWEST OVERALL LABOR COST AND EASIEST OPERATOR TRAINING

Fully automatic brewing in 10 gallon batches, using disposable filter paper, saves time and labor, and results in the highest quality, most uniform fresh roasted coffee brew. Using the same brewing urns for volume or for other time smaller uses makes for easy operator training.

EASIEST, FASTEST, SAFEST DRAW-OFF INTO SERVING POTS USING MULTIPLE COFFEE FAUCETS

GREATEST RELIABILITY

The use of standard automatic coffee urns proven in the field provides very high reliability. Also, manufacturer's warranty is one year parts and labor.

ENERGY SAVING

Minimum heat loss, saves on air conditioning load. Dual wall construction with fiberglass insulation also helps prevent operator burns and saves cleaning time as stains do not bake on.

FLEXIBILITY OF PLAN VIEW ARRANGEMENTS

Depending on space and system capacity, various configurations are available. Standard set-ups and alternate arrangements are shown further on.

NOTE: The holding urn shown can be separated from the brewing equipment by as much as 25 feet. Please contact the factory for just the right layout for your job.

OPTIONAL FEATURES

HIGH SPEED PUMP/JUG FILL HOSE SYSTEM. AVAILABLE ONLY ON HOLDING URN.

This system provides fast, safe fill of containers, filling at a rate of approximately 2 gallons per minute. Pump system permits filling coffee containers when the containers are at the proper serving height on mobile trucks. Eliminates the hazards and difficulty of lifting 75-125 lb. insulated coffee jugs from low level, as required for gravity filling, up to the serving height of mobile carts.

The system includes a pump, a flexible 6' long insulated hose, an insulated hand grip control faucet and a special "hook on" spout for coffee. Pump is mounted in a housing on the right hand end of the urn and includes a 120 Volt 3 wire cord and plug for connection to a standard 15 amp outlet. Allow 6" additional space for pump housing on the right end of the urn.

EXTRA COFFEE DISPENSING FAUCET ON HOLDING URN

May be located on end or working front or rear. Option 77 extension shanks available for through-wall application. Available with or without gauge glass/shield.

EXTRA DISPENSING FAUCET(S) INSTALLED ON BREWING URN

Coffee or hot water, with or without gauge glass/shield. Consult factory for possible locations and also extensive coupling shanks for through-wall mounting.

GRAVITY FEED JUG FILLER HOSE ASSEMBLY

May be coupled onto one or more special dispensing faucets with union coupling thread. Standard length hose is 6'-0", and includes hand grip and shut-off faucet.

SEVEN DAY TIMER WITH DAILY ON-OFF PROGRAMMING

Controls all units of system with separate override control switch for each unit. Includes stainless steel console/housing mounted on holding urn, completely factory wired and tested.

OVERFILL PROTECTION SYSTEM ON HOLDING URN

Prevents starting coffee transfer pump(s) if holding urn is at full level.

SPECIAL DUAL HOLDING TANK

Allows operator to hold regular and decaf coffee.

TAMPER RESISTANT PACKAGE

Special design safeguards against unauthorized tampering of equipment in correctional facilities.





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GENERAL DESCRIPTION OF SYSTEM

American's Banquet Coffee Brewing/Holding System provides the greatest advantages to the user in the three major functions of banquet coffee brewing, involving 1) Brewing of the highest quality, fresh roasted, delicious, aromatic coffee, and 2) Holding of this coffee at the ideal temperature, and 3) The easiest, fastest, safest drawoff into serving pots using multiple coffee faucets. The basic design parameters of the system provide the lowest original investment cost for a given capacity, the highest return on this investment, with the lowest overall labor cost and the easiest operator training available. In addition, a great range of brewing capacity is provided. As little as 200 cups of coffee may be brewed or up to 4000 cups of coffee may be brewed and held at one time ready for serving in the largest system listed. Energy saving is provided by the dual wall fiberglass insulated construction of all components of the system. In addition, American offers flexibility in design to allow special arrangements of the components.

A basic banquet coffee brewing/holding system consists of (1 or 2) high speed automatic coffee brewing urns of twin 10 gallon coffee capacity and a holding coffee urn with multiple drawoff faucets. All these components are constructed of AISI 304 18-8 stainless steel, and all these component units are of dual wall fiberglass insulated construction.

AMERICAN VALUE ADDED STANDARD FEATURES OF BREWING URN

Each high speed automatic coffee brewing urn is capable of simultaneously brewing on both sides. It has 2 complete sprayover systems with individual sprayover pump, and half/full batch timer, and spray arm with an adjustable bypass valve capable of bypassing up to 50% of the amount of water sprayed over.

AUTOMATIC COFFEE AGITATION

Delayed 120 seconds after brew. This agitation is automatic and specially programmed to operate only when not using the transfer pump system.

DUAL WALL FIBERGLASS INSULATION

Energy Saving. Minimum heat loss, saves on air conditioning.

LOW WATER CUTOFF SYSTEM

Solid state probe sensor system provides positive protection against heater burnout, at startup or in operation.

AUTOMATIC REFILL OF WATER COMPARTMENT

Saves time and attention required to manually fill. Insures always available unlimited supply of hot water for tea, etc.

HALF/FULL BATCH TIMER

SPECIAL PINPOINT CONTROL THERMOSTAT

Super sensitive because it controls contactor that carries the heavy

amperage electric heater power. Highest accuracy and reliability, lowest service cost. On steam heat, thermostat controls industrial type steam solenoid valve.

"CLOSED CHAMBER" BREWING

Brews with NSF approved covers on brew basket. Prevents costly steam/moisture loss to room. Saves energy with savings of air conditioner load.

VELVET SMOOTH SPRAY ARMS

Special teflon coating on spray arm piston prevents liming and insures smooth operation. Also includes positive "stops" for operator safety.

DRAIN VALVE IN BOTTOM WITH HOSE CONNECTION

DIAL THERMOMETER WITH MARKED BREW ZONE

TWO ALL STAINLESS STEEL BREW BASKETS

TWO ALL STAINLESS STEEL COFFEE LINER FILTER SCREENS

Screens prevent any possibility of coffee grounds clogging transfer pumps or hoses.

TWO COFFEE TRANSFER PUMPS WITH TRANSFER BALL VALVES

Includes start-stop push button timers for pumps and teflon lined stainless steel braided covered hoses to connect to holding urn.

AMERICAN VALUE ADDED STANDARD FEATURES OF HOLDING URN

Each Brewing/Holding system includes one special all AISI 304 18-8 stainless steel holding coffee urn. Capacity is 40, 60, 80 or 120 gallons. Available electrically heated only. Standard holding coffee urn has 4 coffee faucets with approximately 10" clearance under the faucet spouts. This arrangement of faucets allows a very rapid transfer/fill of 64 oz. coffee serving pots. One 64 oz. pot can be filled within 15 seconds from any one of the 4 faucets. One operator can operate 2 of the coffee drawoff faucets simultaneously and fill 6-64 oz. coffee pots per minute.

DUAL WALL FIBERGLASS INSULATION

Urn body, top and covers. Energy saving. Minimum heat loss, saves on air conditioning.

OVERHEAD FLEXIBLE RINSE HOSE

Flushes and rapidly cleans interior of holding urn

STANDPIPE OVERFLOW

CALIBRATED COFFEE GAGE ON ONE FAUCET

FOUR COFFEE DRAWOFF FAUCETS

THERMOSTATIC CONTROL OF COFFEE TEMPERATURE

Holds coffee at 180° F.

LOW WATT DENSITY ELECTRIC HEATERS

Bottom mounted, blanket type heaters.

DIAL THERMOMETER

CHART A — PRODUCTION ENGINEERING DATA

SYSTEM NUMBER	AMV-60	AMV-80	AMV-120	AMV-160
Total Coffee Capacity Held	60 Gallons	80 Gallons	120 Gallons	160 Gallons
Brewing Urn(s)	One	One	Two	Two
	Twin 10 Gallon	Twin 10 Gallon	Twin 10 Gallon	Twin 10 Gallon
Brewing Urn(s)				
Holding Capacity	20 Gallons	20 Gallons	40 Gallons	40 Gallons
Holding Urn Capacity	40 Gallons	60 Gallons	80 Gallons	120 Gallons
Total Capacity Brew Time	45 Minutes	60 Minutes	45 Minutes	60 Minutes
Transfer Time	10 Minutes	15 Minutes	10 Minutes	15 Minutes
Total Preparation Time, (No Heat Up)	55 Minutes	75 Minutes	55 Minutes	75 Minutes
Equivalent Number				
5 oz. Servings	1500	2000	3000	4000
Equivalent Number				
6 oz. Servings	1250	1700	2500	3300

Based on spraying over 10.5 gallons water each batch.
 Based on simultaneous 2-side brewing.
 Applies to electric or steam heat.
 NOTE: System requires connection to 140° F Hot water line.

CHART B — ELECTRIC HEAT

SYSTEM NUMBER	AMV-60E	AMV-80E	AMV-120E	AMV-160E
Number of BREWING URNS	One	One	Two	Two
Each KW Heater Size	15KW	15KW	15KW	15KW
Electrical Supply Volts	240 208	240 208	240 208	240 208
Amps Drawn 1 Phase	63 72	63 72	63 72	63 72
Amps Drawn 3 Phase	36 42	36 42	36 42	36 42
Total KW Heater Load	15KW	15KW	30KW	30KW
Pumps and Controls: Requires Separate 120 volts single phase 3 wire 20 amp outlet for each brewing urn and holding urn. 3 wire cord and plug supplied on each.				
Total Pump/Control Load for Brewing Urns	15 Amps	15 Amps	30 Amps	30 Amps
HOLDING URN	One	One	One	One
KW Heater Load	2.0	2.0	2.0	2.0
Electrical Supply Volts	120	120	120	120
Amps Drawn 1 Phase	16.5	16.5	16.5	16.5

For 480 Volt 3 Phase 3 Wire, Divide Amperes for 240 Volt 3 Phase by 2.
 NOTES: Provide separate service for heater load for each brewing urn.
 Specify One:
 208 Volt—1 Phase—2 Wire 208 Volt—3 Phase—3 Wire 480 Volt—3 Phase—3 Wire
 240 Volt—1 Phase—2 Wire 208 Volt—3 Phase—3 Wire Extra Cost

CHART C — STEAM HEAT

SYSTEM NUMBER	AMV-60S	AMV-80S	AMV-120S	AMV-160S
Number of BREWING URNS	One	One	Two	Two
Maximum Steam Demand				
Lbs. Per Hour Total	70	70	140	140
Total Boiler Horsepower	2.3	2.3	4.6	4.6
Pumps and Controls: Requires Separate 120 volts single phase 3 wire 20 amp outlet for each brewing and holding urn.				
Total Pump/Control Load for Brewing Urns	15 Amps	15 Amps	30 Amps	30 Amps
HOLDING URN	One	One	One	One
KW Heater Load	2.0	2.0	2.0	2.0
Electrical Supply Volts	120	120	120	120
Amps Drawn 1 Phase	16.5	16.5	16.5	16.5

NOTES:
 Holding Urn available electric heat only
 Steam Inlet and Outlet are 1/2" FPT.
 Standard Operating Steam Pressure = 10-25 PSI Gage.
 Provide separate 120 Volt Single Phase 3 Wire 20 Amp Outlet for each Brewing Urn and for Holding Urn. 3 Wire Cord and Plug Supplied on each Urn.
 Steam Trap Must be Supplied by Others.
 Contact Factory for Steam Connection Roughing-In Drawing.

DESIGN SPECIFICATION

HIGH VOLUME BANQUET COFFEE BREWING/HOLDING SYSTEM

The American high volume/banquet coffee brewing/holding system consists of (1 or 2) high speed automatic coffee brewing urns of twin 10 gallon coffee capacity and a holding coffee urn with multiple draw-off faucets. All units constructed of AISI 304 18-8 stainless steel, and all units to be dual wall fiberglass insulated construction.

Each high speed automatic coffee brewing urn to be capable of simultaneously brewing on both sides, with two spray arms and with adjustable bypass valve capable of bypassing up to 50% of the amount sprayed over. Included to be two all stainless steel brew baskets for use with filter paper, automatic refill, positive low water cutoff system, and special automatic end-of-brew air agitation system programmed to operate when needed. Each coffee liner in the brewing coffee urn is to be equipped with a transfer pump system, consisting of a transfer ball valve, pump, timer, and a removable stainless steel coffee liner filter screen. Also, a teflon hose with stainless steel braided covering for transferring brewed coffee to the holding urn of the system.

The holding urn shall be of _____ gallon capacity (see Chart A) and shall be designed to hold the coffee at a temperature of 180° to 190° F, using low watt density bottom mounted electrical heaters. Unit shall be thermostatically controlled and provided with 3 wire cord and plug. Holding urn to be equipped with indicating thermometer, overflow, built-in gooseneck spray rinse hose, and multiple faucets for filling coffee pitchers.

The total rated capacity of the system shall be _____ 5 oz. or _____ 6 oz. cups (see Chart A). The system shall be capable of brewing and transferring its total rated capacity of coffee within _____ minutes (see Chart A). **System requires connection to 140° F hot water line.** Entire system shall be U.L. listed and NSF approved under Standard No. 4. If electric heat, specify the electric services to be used for the immersion heaters in the brewing coffee urns (see Chart B). If steam heated, specify operating steam pressure (standard is 10-25 psig) (see Chart C). All systems, whether electrically heated or steam heated, require 120 volts single phase 3 wire outlets of 20 amp capacity for the controls and pumps on each brewing urn and for the electric heaters on the coffee holding urn.

Select American Metal Ware Model AMV-60 or AMV-80 or AMV-120 or AMV-160. Add E for electric, add S for steam.

The following options are available and may be added to the design specifications:

- Extra coffee dispensing faucet on holding urn
- Gravity or high speed pump/jug fill hose system
- Extra dispensing faucet(s) installed on brewing urn(s).
- Seven day timer with console/housing and override switches to control all units of system.
- Overflow protection system on holding urn.

