

D. G. C. Trap and Valve Company, Inc.

1-E. 43 Street New York Murray Hill 2-7320

Makers of Cryer Radiator Control Valves, Radiator Traps and Steam Traps
Distributors in All Principal Cities

The Cryer Radiator Control Valve

What the Valve Does

The Cryer Radiator Control Valve gives two-pipe steam systems the same operating economies and the same delightful range of medium temperatures as provided by hot water heating systems, while maintaining the inherent advantages of steam heating such as low first cost, flexibility of control, etc.

The Cryer Radiator Control Valve controls the steam flow into the radiator in an entirely new and unique way, and in addition **mixes the steam with the air and vapor** already in the radiator. Then it circulates this humid mixture of air and steam continuously throughout the radiator. Not merely admitting steam to a few sections. Mixing a small quantity of steam at about 212° with a larger quantity of relatively cool air produces a heating medium very much below steam temperature.

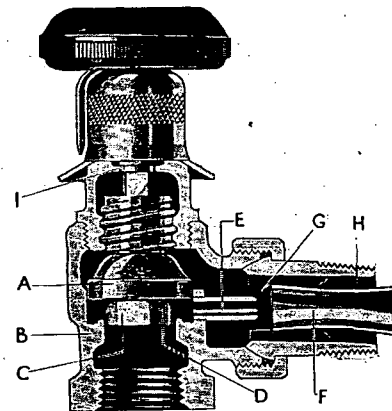
The temperature of the whole radiator may be varied at will by increasing or decreasing the amount of steam supplied through the radiator control valve. The possible variations of temperature are approximately those obtained with hot water, from 90° to 212° F., if desired. When opened less than $\frac{1}{8}$, this valve heats the entire radiator to one temperature, 150° for example, and holds it there.

Where Used

The Cryer Radiator Control Valve is not part of any one heating system, nor is its use confined to any particular system. It can be installed on any steam system, whether vapor, vacuum, or gravity.

How the Valve Operates

When the disc is raised, the slot D is gradually exposed, allowing a small amount of steam to flow through it. This steam passes into the nozzle E and through the Venturi tube F. This flow creates a partial vacuum at G. The incoming steam shoots across the top of the radiator, descends to the bottom, thereby being mixed with the gases and vapor in the radiator. The partial vacuum at G draws the steam and air mixture in the nearest section of the radiator up and around the Venturi tube. When this mixture reaches G it is struck by the incoming jet of steam and recirculated.



Parts of Cryer Radiator Control Valve

- A—Valve disc holder.
- B—Rounded Seat.
- C—Sleeve, attached to valve disc.
- D—Slot for entrance of steam.
- E—Nozzle for directing steam.
- F—Modified Venturi Tube
- G—Vacuum Chamber.
- H—Spud.
- I—Tight Upper Seat.

When the disc is raised above a certain point, the entire seat is exposed, allowing a full opening of the valve and the maximum amount of steam to flow through it. This steam enters the radiator through the large port over the nozzle E as well as through the nozzle, and flows through the spud H as well as tube F, thus providing a means of quickly filling the radiator.

Seven Important Advantages

Saves Steam. Exhaustive engineering tests have frequently demonstrated that a radiator with Cryer Radiator Control Valve opened one-eighth, uses only **one-tenth** of the steam used when valve is opened full.

Gives Comfort and Economies of Hot Water. Use of Cryer Radiator Control Valves on steam systems gives the benefits of hot water heating in health and operating cost, plus the economy of steam heat as to first cost.

They Cost No More. Cryer Radiator Control Valves cost little or no more than plain radiator valves with no control, and considerably less than many modulating radiator valves.

Eliminate Trouble on Return Line. The Cryer Radiator Control Valve thoroughly prevents the passage of steam into the return line. Only condensate and air go into the return line. This prevents trouble with return lines due to steam leakage.

Used with Any Trap or on Gravity Systems. Any ordinary radiator trap may be used with the Cryer Radiator Control Valve on the usual vacuum system. The valve will also operate on gravity lines.

No Special Installation. The valve comes to the job complete and ready to use. It is not necessary to waste time adjusting it to suit the size or location of the radiator. It is not necessary to make complicated internal adjustments or to insert discs or change it to suit local conditions and variations in steam pressure. There are no delicate adjustments to get out of order.

Attractive and Substantial. The valve body is a bronze casting of exceptionally heavy design and strength. The working parts are of brass and have strength and long life. The entire valve is nickel plated with a smooth polish on certain parts, and presents a very attractive appearance.

Weights and Sizes

Number	Inlet Size	Radiator Connection	Capacity Square Feet
1	1/2"	3/4"	20
2	3/4"	1"	60
3	1"	1 1/4"	200
4	1 1/4"	1 1/2"	Above 200

Nickel finish. Approximate shipping weight, 2 1/4 lbs. Extension handles or special designs can be furnished.

SPECIFICATIONS

All radiators or other direct heating units, except as otherwise noted or hereinafter specified, shall be equipped with the Cryer Radiator Control Valve, as made by the D.G.C. Trap & Valve Co., Inc. These shall be of the angle or corner type and constructed of bronze with nickel finish.

The J-M Ball Steam Trap

For heavy duty, high or low pressure.

The J-M Ball Steam Trap is simple, dependable, and durable. There is little or no servicing, due to the unusual simplicity of the Trap design, with only **one** moving part. The trap is accessible and easily disassembled. You are able to inspect it and clean it in a few minutes without disconnecting the trap from the line, by merely removing the cover.

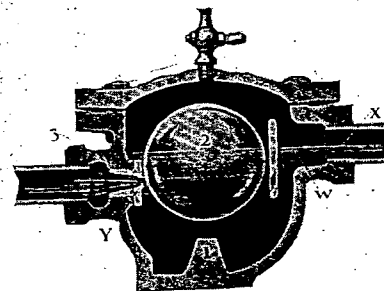
It has a relatively great capacity, and discharges the air along with the condensate—an important feature. Small in size and light in weight.

And it is **inexpensive**. Not only is the initial cost low, but there is genuine economy in maintenance and in saving of steam.

The operation of the J-M Ball Steam Trap is as follows:

When condensation first flows into the trap at (X) and begins flowing out of the discharge orifice (Y), the ball (2) floats up to and is held against the discharge bushing (3) by the steam pressure. The discharge orifice is completely sealed until the water level (W) in the trap begins to rise. Then the buoyant force of the water rolls the ball upward on the face of the discharge bushing (3), exposing either part or the entire area of the discharge orifice (Y), depending upon the quantity of water entering the trap at (X), and the trap discharges both air and water.

When the quantity of water entering the trap at (X) decreases, the level of the water drops to the point where the ball again partially or completely covers the discharge orifice (Y) and is held tightly against the face of the bushing (3). In this way a water seal is provided between the steam in the top of the trap and the discharge orifice (Y), eliminating all possibility of steam leakage.



Cross-Sectional View of J-M Ball Steam Trap Discharging

The Cryer Organization

Cryer heating systems and devices have been installed in thousands of buildings all over the world. Established in 1898, the

Cryer organization has been responsible for many of the great advances in the art of heating.