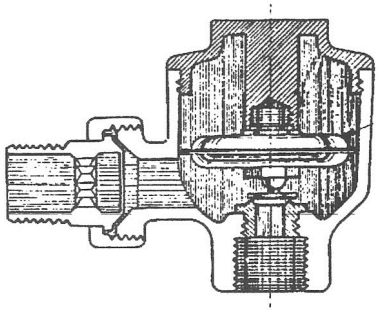
MARSHALL ENGINEERED PRODUCTS CO.

# STEAM SPECIALTIES

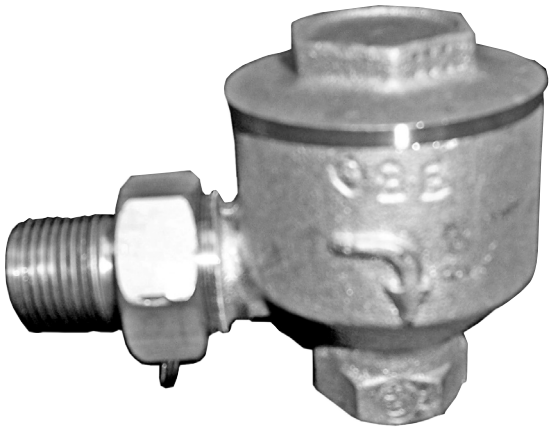
## Radiator Trap, Low Pressure No. 1R

### APPLICATION

The MEPCO Model 1R Low Pressure Radiator Trap is applicable to all types of low pressure or sub-atmospheric steam heating systems and operates efficiently with pressures from 25" vacuum to 25 PSI. Its purpose is to efficiently drain water and vent air from a radiator or heating element and to prevent steam from entering return piping. It is specifically designed as an exact replacement for the Warren Webster 1/2" angle pattern, Models 502, 702, 902, 762A and 762AM.



Model 1R (Interior)



Low Pressure Radiator Trap

Model No. 1R

## FEATURES

**1. Simple, rugged construction** - The trap consists of a cast brass body and cover with a fluid filled thermostatic expansion disc and a renewable screw in seat. All working parts are made of non-corrosive metals especially adapted for dependable service.

**2. Sensitive thermostatic action** - Sealing the thermostatic disc under high vacuum assures sensitive and positive response to temperature and pressure over trap's entire operating range. Disc corrugations are shaped to reduce hinge action at the rim of the disc and distribute disc motion.

**3. Minimum wear on working parts** - Due to the unique design of the floating valve and rounded seat, corrosive elements and dirt normally found in heating system piping will not seriously affect the operation of the trap. The valve's square and tight seating is assured by the ball swivel joint which holds the valve and disc together. This swivel joint prevents localized stresses on the disc and also prolongs the life of the valve and seat by preventing wear in any one spot.

**4. Freedom from clogging** - Slightly raised and rounded seat permits intimate contact with valve and reduces area for accumulation of incrustants. Large valve opening permits easy passage of water and dirt, thereby ridding trap of foreign matter which could cause clogging.

**5. Thorough tests** - In addition to tests made of the completed trap, each thermostatic disc is checked by an automatic leak detector. Each thermostatic disc must pass a test which will detect a leak so small that in a year's time less than 1/100 of an ounce of thermostatic fluid could escape. All traps are 100% test operated before leaving the factory.

**6. Minimum maintenance** - Permanent adjustment for correct operation is built into each MEPCO trap. Stop shoulder in trap cover permits disc assembly to be screwed in a predetermined distance. This distance provides the proper amount of clearance between valve and seat for free drainage of condensate and also enables the valve to seat squarely and tightly when in closed position. If, under unusual conditions,it is necessary to replace a thermostatic element, even then no adjustment is necessary.

# OPERATION

Fluid in the thermostatic disc of the Radiator Trap is vaporized by the heat of steam, and an internal pressure is developed which overcomes the surrounding steam pressure. This expands the disc member and carries the valve toward its seat with a positive force.

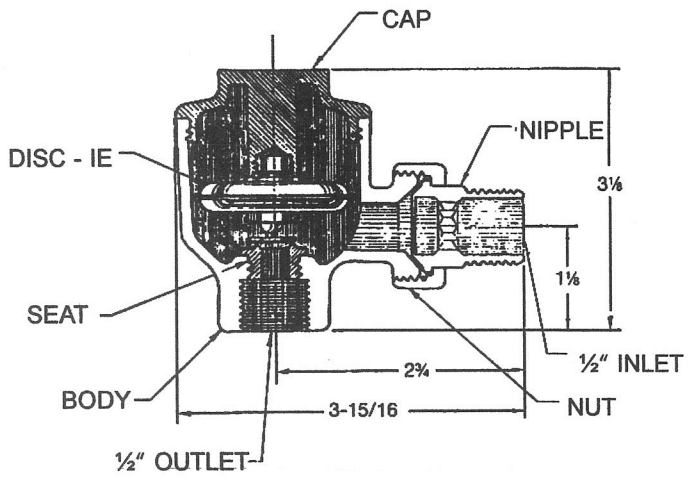
The MEPCO thermostatic trap quickly adjusts itself to a position determined by the temperature and pressure conditions encountered and permits a continuous flow of water and air from the radiator at the rate required for highest heating efficiency.

# CAPACITIES, DIMENSIONS & WEIGHT

**STANDARD RATING (1/4 PER EDR PER HOUR)**
**INDICATED BY SHADED PORTION**

| Trap No. | Pattern | Tapping |
|---|---|---|
| 1R | AP | 1/2" |

| Capacity — EDR | | | Shipping Weight (Lbs.) |
|---|---|---|---|
| Pressure Differential | | | |
| 1/2 Lb. | 1 Lb. | 1-1/2 Lb. | |
| 120 | 165 | 200 | 1-1/2 |




## TYPICAL SPECIFICATIONS

The contractor shall furnish & install as specified in the plans and in accordance with the manufacturer's instructions 1/2", AP, MEPCO Trap 1R Low Pressure Radiator Trap, which has a capacity rating of _____ LBS/HR. @ PSI differential. The trap body and cap shall be made of cast brass. All other parts shall be made of non-corrosive materials. The thermal expansion disc shall be of non-corrosive materials, and have annual corrugations to reduce fatigue on welded joints. It is fluid-filled and sealed under vacuum, factory calibrated for quick accurate field replacement, and securely mounted in the cap. The trap shall have a flat valve piece attached to the disc with a ball swivel joint to assure positive shut-off. The disc design shall be tested to endure 10,000,000 cycles with no hermetic failure. The trap body shall have a large diameter seat opening for abundantly high resistance to wear. The trap shall operate efficiently at pressures from 25" vacuum to 25 PSI.



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