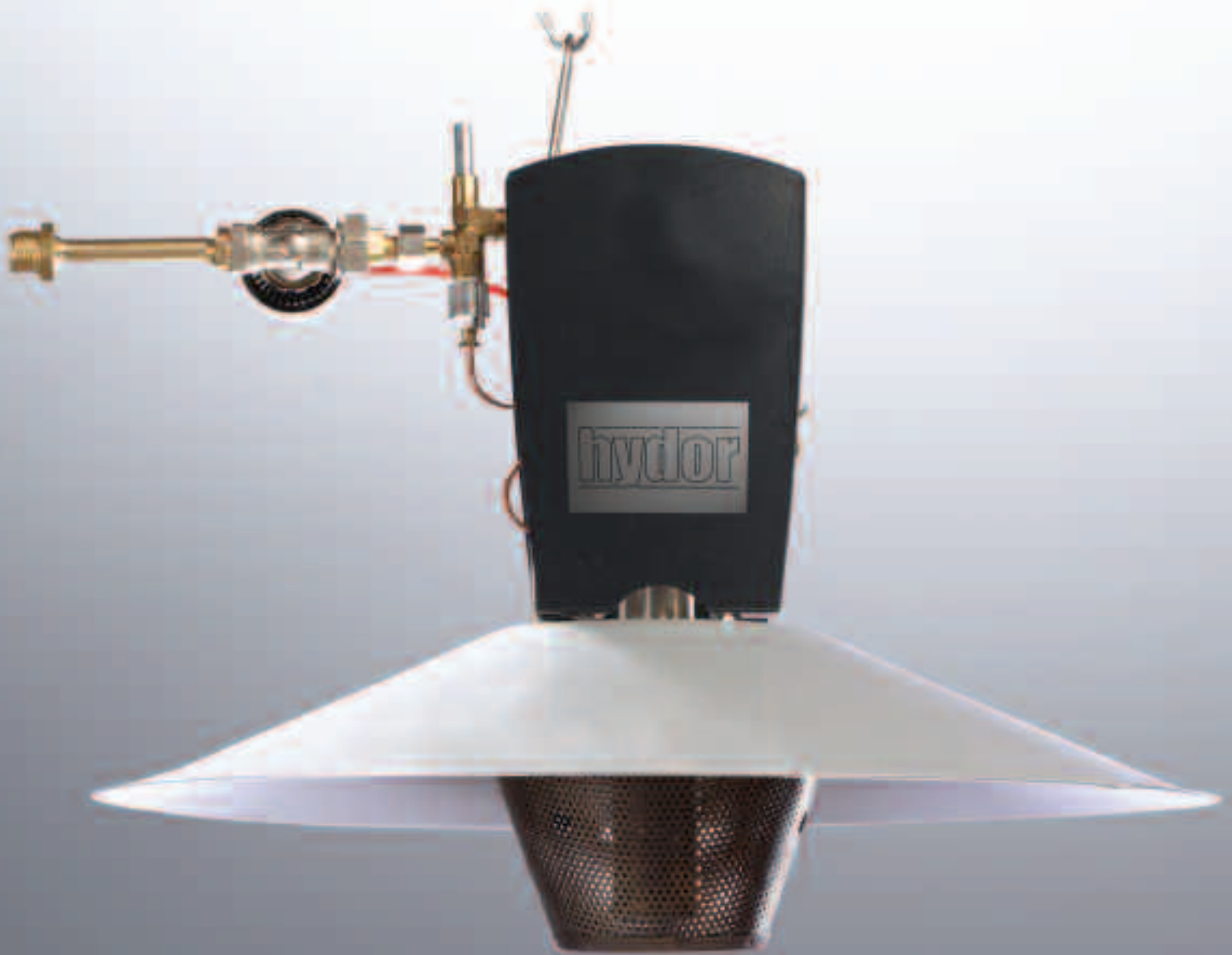


# Poultry Brooders



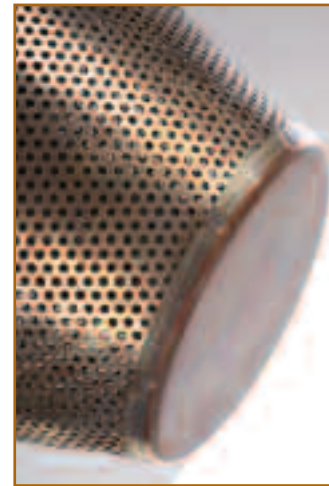
**Hydor**

# HRB Poultry Brooders

The Hydor 'HRB' range of radiant brooders has been specifically designed to provide heating on poultry farms, with particular emphasis upon commercial rearing of broilers, pullets and other birds, whilst equally suited for smaller domestic poultry applications.

The Hydor brooder enables poultry farmers to achieve optimum output in the production of infra-red radiation, as well as the homogeneous production of heat.

Hydor radiant heaters are operated by propane gas, using high or low pressure systems, with a variety of options available, such as individual thermostatic valves and air filters.



## Features & Benefits

- The unique design enables this radiant brooder to provide progressive heat – (10% to 100%)
- The infra-red radiation is emitted in a perpendicular direction to the source of heat that emits it.
- The design reduces the temperature on the floor under the brooder compared to other brooders.
- Increases the peripheral heat on the floor +2°C in a 3.5m radius around the brooder.
- Typically reduces the temperature by 9°C under the ceiling.
- Uses less propane gas than other brooders on the market.
- Increases the heating homogeneity which means that the birds will feel better.
- Options such as the thermostatic valve allow you to control the temperature individually without a need for regulation in the poultry farm.
- The burner is manufactured from punched stainless steel sheet which means that it can resist high temperatures. The safety shield at the end of the burner prevents glowing particles from falling to the surface.
- Overheat 'klikson' protection ensures that the gas valve closes when the security temperature is surpassed and resets automatically as soon as the temperature of the brooder decreases, this replaces conventional fusible security systems.

## Effective Heat Diffusion

The Hydor radiant brooders have been developed to emit heat positively in all directions. Because of their design, the brooder is able to direct maximum heat in a uniform manner to the floor of the poultry house.

As you can see from Figure 1.0, there is an even spread of heat with the overhead areas above the Hydor brooder no longer heated, which means that the temperature in the ceiling of the building is significantly lower, therefore heat is being used more efficiently

When compared with conventional radiant brooders, the heat directed does not achieve the spread of the Hydor brooder, and the deflector design does allow heat to escape into the ceiling, thereby increasing the temperature at this height, as illustrated in Figure 2.0

By comparing the drawings, there is a temperature differential of 9°C in the ceiling area, therefore the efficiency of the Hydor brooder ensures lower overall costs in gas consumption for the poultry farmer.

The reason for this efficiency with the Hydor brooder is the ability to transform the energy when burning the propane gas into Infra-red radiation more successfully. The energy is never lost, it is transformed more efficiently relative to other radiant brooders on the market.

Figure 1.0

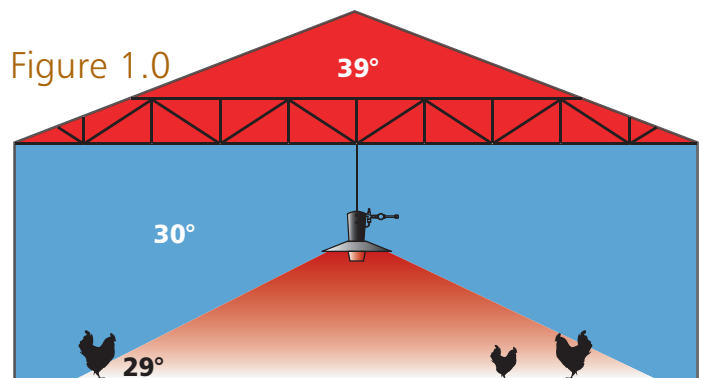
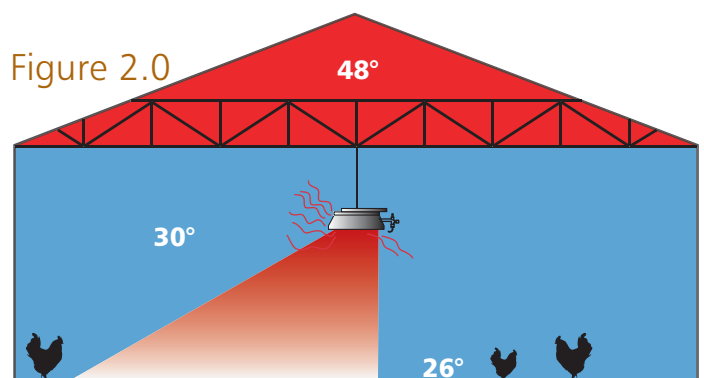
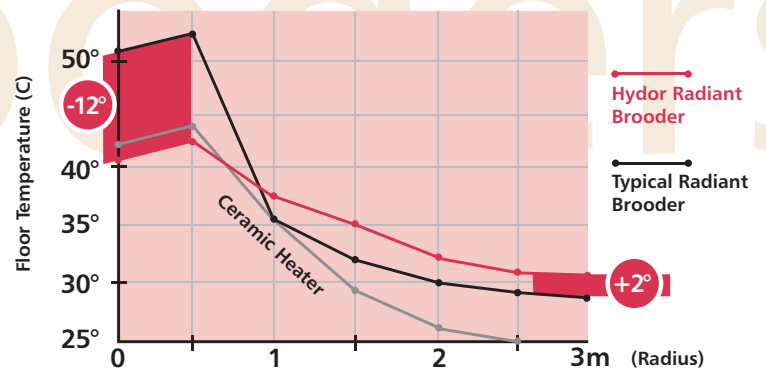


Figure 2.0



The design and shape of the reflector without opening, and the burner with a centralised deflector produce the following results, outlined in Graph 1.0 when compared with a 'typical' radiant heater of competitors.

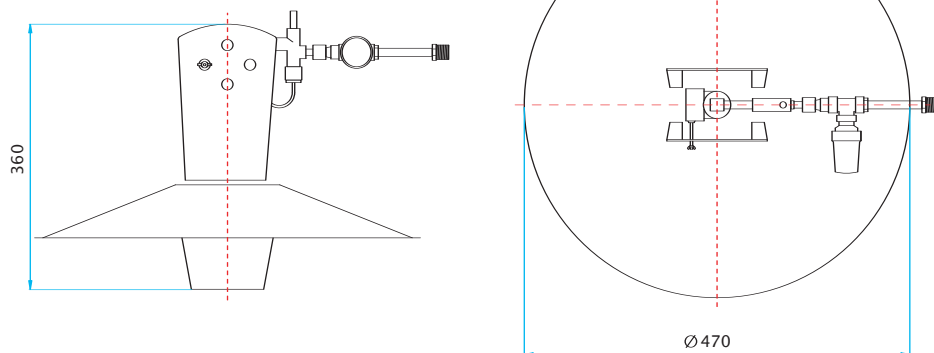
Graph 1.0



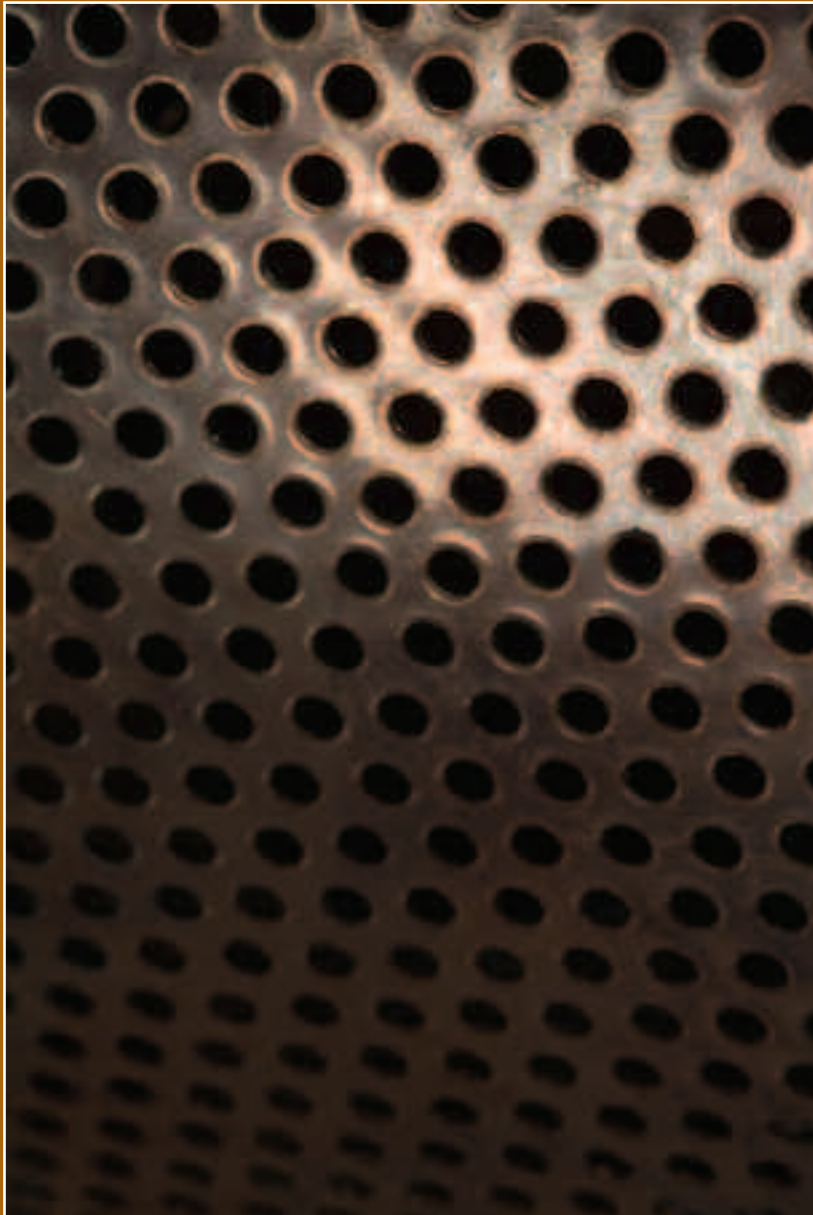
In an area of 38 m<sup>2</sup>, the central 3.5m<sup>2</sup> benefits from a more moderate floor temperature of approximately 12°C lower, while the remaining 25 m<sup>2</sup> obtains a floor temperature which is generally 2°C higher. This is due to the fact that the Hydor brooder is able to send the infra-red radiation further than conventional radiant heaters due to the angle of the burner, providing 2°C more at three metres distance to the floor with the same power.

With the temperature being as much as 12°C below, this has the benefit of encouraging poultry to feel more comfortable when they are beneath a Hydor brooder, as illustrated (left) in the poultry house.

## HRB Performance & Dimensional Data



| Hydor HRB Range              |           | HRB1-H                | HRB2-H                | HRB3-H                | HRB4-H                | HRB1-L              |
|------------------------------|-----------|-----------------------|-----------------------|-----------------------|-----------------------|---------------------|
|                              |           | High Pressure (HP)    |                       |                       |                       | Low Pressure (LP)   |
| Maximum Input Rating Watts/h |           | 3500                  | 5000                  | 6500                  | 11600                 | 7200                |
| Minimum Input Rating Watts/h |           | 650                   | 602                   | 746                   | 1400                  | 952                 |
| Maximum Input Rating Btu's/h |           | 12000                 | 17000                 | 22000                 | 40000                 | 25000               |
| Minimum Input Rating Btu's/h |           | 2200                  | 2000                  | 2500                  | 4700                  | 3200                |
| STOCK CAPACITIES             | BROILERS  | 1200                  | 1400                  | 1750                  | 2700                  | 1800                |
|                              | PULLETS   | 900                   | 1100                  | 1300                  | 2000                  | 1300                |
|                              | TURKEYS   | 500                   | 600                   | 700                   | 1000                  | 700                 |
|                              | DUCKS     | 400                   | 500                   | 580                   | 900                   | 600                 |
|                              | PHEASANTS | 800                   | 1000                  | 1200                  | 1800                  | 1200                |
| MOUNTING HEIGHT              |           | 1200 mm<br>(48 in)    | 1200 mm<br>(48 in)    | 1200 mm<br>(48 in)    | 1400 mm<br>(56 in)    | 1200mm<br>(48 in)   |
| BROODING SPACE               |           | 5 m<br>16.4 ft        | 6 m<br>20 ft          | 7 m<br>23 ft          | 11 m<br>36 ft         | 7.5 m<br>24.5 ft    |
| REFLECTOR DIAMETER           |           | 470 mm                | 470 mm                | 470 mm                | 470 mm                | 470 mm              |
| BROODER HEIGHT               |           | 360 mm                | 360 mm                | 360 mm                | 360 mm                | 360 mm              |
| BROODER WEIGHT               |           | 2.5 kg                | 2.5 kg                | 2.86 kg               | 2.86 kg               | 2.86 kg             |
| PROPANE GAS                  |           |                       |                       |                       |                       |                     |
| CONSUMPTION MAX              |           | 250 g/h               | 357 g/h               | 464 g/h               | 828 g/h               | 514 g/h             |
| CONSUMPTION MIN              |           | 47 g/h                | 43 g/h                | 53 g/h                | 100 g/h               | 68 g/h              |
| SUPPLY PRESSURE              | MAX       | 1400 mbar<br>20.3 psi | 1400 mbar<br>20.3 psi | 1400 mbar<br>20.3 psi | 1400 mbar<br>20.3 psi | 200 mbar<br>2.9 psi |
|                              | MIN       | 25 mbar<br>0.36 psi   | 20 mbar<br>0.29 psi   | 20 mbar<br>0.29 psi   | 20 mbar<br>0.29 psi   | 5 mbar<br>0.072 psi |



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FANS

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