



Big Dutchman®



Heating Systems

An ideal temperature in every poultry house

Heaters and equipment for ideal house temperatures

Ideal house temperatures have a substantial influence on the health and performance of your birds. Adequate heating systems are therefore a necessity in many climate zones. The overall goal is to maximise the thermal

yield and to transfer it to the birds in the best possible way to keep energy costs as low as possible. Big Dutchman offers several different heaters that are fuelled by gas, oil or hot water. Please

let our experts advise you to find the best heating system for your barn!

JetMaster Heaters with 100 percent heat output

JetMaster is a tried and tested heater that has been part of the Big Dutchman product range for many years. JetMaster heaters are available for operation with natural gas or propane as well as fuel oil and are thermostat-controlled. Due to the flame monitoring, the gas supply is immediately interrupted should

the heater not ignite or the flame extinguish. The built-in fan provides a wide throwing range and distributes the warm air ideally in the house. The Automatic Control Unit (ACU) provides information about the heater's operating state. Advantages of JetMaster include:

- ✓ the generated heat is 100 % beneficial to the birds → no heat loss;
- ✓ no chimney connection necessary;
- ✓ easy to install;
- ✓ attractive price/performance ratio.



JetMaster type P 100 for operation with fuel oil



JetMaster GP 70 for operation with natural gas or propane



JetMaster type P 80 for operation with fuel oil, mobile

| Type | | GP 14 | GP 40 | GP 70 | GP 95 | GP 120 |
|-------------------------------|-------------------|--------------|---------------|---------------|---------------|---------------|
| Output | kW | 14 | 40 | 70 | 95 | 120 |
| Gas consumption | | | | | | |
| • Natural gas | m ³ /h | 1.3 | 3.7 | 6.5 | 9.2 | 11.1 |
| • Propane gas | kg/h | 0.9 | 2.7 | 4.5 | 6.3 | 7.0 |
| Gas connection | Inches | ½ | ½ | ¾ | ¾ | ¾ |
| Air flow rate | m ³ /h | 1 200 | 3 900 | 4 500 | 6 500 | 8 000 |
| Throwing range | m | 15 | 40 | 50 | 40 | 40 |
| Weight | kg | 14 | 25 | 28 | 38 | 46 |
| Dimensions (L x W x H) | cm | 60 x 47 x 48 | 120 x 60 x 44 | 120 x 60 x 44 | 115 x 66 x 48 | 145 x 72 x 53 |

Connection values: 230 V, 50 Hz for all types

Flame monitoring by means of ionisation

Connection pressure: 20 mbar for natural gas and 50 mbar for propane gas

| Type | | P 40 | P 60 | P 80 | P 100 | P 120 |
|-------------------------------|-------------------|----------------|----------------|---------------|---------------|---------------|
| Output | kW | 40 | 60 | 80 | 100 | 120 |
| Fuel oil consumption | l/h | 4 | 6 | 8 | 10 | 12 |
| Air flow rate | m ³ /h | 4 400 | 6 200 | 7 700 | 7 700 | 7 700 |
| Throwing range | m | 30 | 40 | 50 | 50 | 50 |
| Weight | kg | 48 | 51 | 55 | 55 | 65 |
| Dimensions (L x W x H) | cm | 129 x 52 x 455 | 129 x 58 x 505 | 129 x 63 x 55 | 129 x 63 x 55 | 139 x 63 x 55 |

Connection values: 230 V, 50 Hz for all types

Flame monitoring by means of a photocell

JetMaster with flue gas exhaust

Heaters with indirect combustion and low energy consumption

JetMaster heaters with flue gas exhaust are available for operation with fuel oil, natural gas or propane. Due to the closed combustion chamber, the house air remains free of excess carbon dioxide and other harmful gases, as these are guided towards the outside via a chimney. The built-in fan provides a wide

throwing range and distributes the warm air ideally in the house. With RGA 95 and 100, fresh air required for combustion is drawn in from the outside through a double-walled chimney. The fresh air is pre-heated in this manner, which increases efficiency.

Advantages include:

- ✓ no flue gases reach the house air;
- ✓ the air flow rate can be reduced;
- ✓ a double-walled chimney increases efficiency;
- ✓ there is no open flame in the barn.



JetMaster type RGA 100 with double-walled chimney



JetMaster type BGH 100 with chimney and fresh air hose

| Type | | RGA 95 | RGA 100 | BGH 50 | BGH 100 |
|-------------------------------|-------------------|---------------|------------------------|----------------------------------|----------------------------------|
| Output | kW | 95 | 100 | 50 | 100 |
| Combustible | | Fuel oil | Natural gas or propane | Fuel oil, natural gas or propane | Fuel oil, natural gas or propane |
| Air flow rate | m ³ /h | 7 000 | 7 000 | 4 100 | 7 500 |
| Throwing range | m | 50 | 40 | 40 | 50 |
| Weight | kg | 132 | 130 | 75 | 135 |
| Dimensions (L x W x H) | cm | 218 x 73 x 71 | 215 x 91 x 65 | 138 x 69 x 63 | 178 x 83 x 78 |

Connection values: 230 V, 50 Hz for all types Gas connection for RGA 100 and BGH 100: ¾ inches

HeatMaster

Hot-water heating, future-proof and sustainable

Hot-water heating continues to be very popular because it significantly improves the air quality (low CO₂ concentration in the house air). The objective is to maximise the heat output. This is achieved by a radiator with a

large surface. Renewable energy sources such as wood chips or straw pellets are an ideal solution for the preparation of hot water. Boilers fired by gas or fuel oil can also be used, of course. Especially the use of waste

heat produced by a CHP or biogas plant is a great advantage. Big Dutchman can offer three HeatMaster models, all of which consist of a fin system, a fan and a distribution unit.



HeatMaster R series



HeatMaster V series



HeatMaster H series

The HeatMaster models of the R and V series are suspended centrally in the house at even intervals based on their throwing range. They have a distance of approx. 1 m to the bird area and their height can be adjusted by means of a winch. The air is drawn in from the upper part of the house and is then guided through the fin system, which is filled with hot water.

For the R series, the fan distributes the warm air evenly in the bird area thanks to the hexagonal profile of its openings. In the case of the V series, a distribution plate with eight compartments ensures the even distribution of the warm air. The HeatMaster models of the H series are either suspended along the side of the house at the height of the fresh air inlets or

mounted by means of a wall bracket. The built-in fan provides a wide throwing range and distributes the warm air ideally in the house. Advantages include:

- ✓ no flue gases reach the house air;
- ✓ a great variety of combustibles can be used;
- ✓ there is no open flame in the barn.

| Type | | 40 R | 50 R | 60 R | 3 V | 4 V | 2 H | 3 H | 4 H |
|-------------------------------|--------|------------|------------|-------------|----------|------------|----------|----------|-------------|
| Output* | kW | 53 | 62 | 72 | 48 | 90 | 30 | 48 | 90 |
| Output** | kW | 43 | 50 | 60 | 37 | 72 | 22 | 37 | 72 |
| Pipe thread connection | Inches | 1 | 1 | 1¼ | ¾ | 1 | ¾ | ¾ | 1 |
| Air flow rate | m³/h | 7 000 | 9 000 | 9 000 | 5 000 | 7 500 | 3 000 | 5 000 | 7 500 |
| Throwing range | m | 13/side | 15/side | 15/side | 20 | 25 | 30 | 45 | 55 |
| Weight with water | kg | 135 | 160 | 180 | 84 | 128 | 56 | 74 | 118 |
| Dimensions (LxWxH) | cm | 120x139x83 | 120x139x90 | 120x139x100 | 80x98x92 | 100x120x94 | 90x70x70 | 98x90x80 | 108x110x108 |

* Flow temperature 90°C/return temperature 70°C; intake air temperature 35°C ** Flow temperature 80°C/return temperature 60°C; intake air temperature 35°C Connection values: 3 phases 400 V, 50 Hz

Fin heater

Hot-water heating with a large surface area for high heat output

The fin heater offered by Big Dutchman is made of a galvanized or aluminium pipe with an epoxy powder coating. Hot water is pumped through the pipe. The fins have a large surface area of 1 m² per running metre. Heat emerges from these fins and causes a strong thermal. The spacing between the fins is large enough to ensure that dust does not accumulate. The fin heater is mounted directly beneath the fresh air inlets to heat the incoming air.

Advantages include:

- ✓ high heat output;
- ✓ low space requirements;
- ✓ high functional reliability due to automatic aeration;
- ✓ low weight (aluminium);
- ✓ simple, time-saving installation by means of a special coupling.



Fin heater made of aluminium

| Type | | Galvanized fin heater | Aluminium fin heater |
|-----------------------------|--------|-----------------------|----------------------|
| Heat output* | W/m | 480 | 600 |
| Pipe diameter | Inches | 1 / 1½ | 1½ |
| Weight without water | kg/m | 7,0 | 2,8 |

* Flow temperature 90°C/return temperature 70°C; ambient temperature 35°C



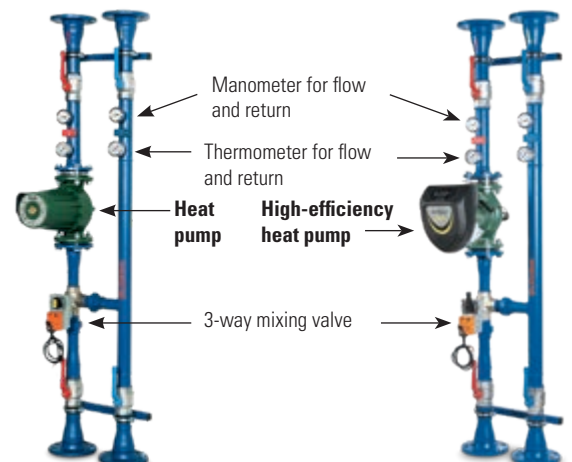
Special coupling with clamps

3-way mixing group

Powerful and reliable

In combination with the ViperTouch climate and production computer, the powerful 3-way mixing group from Big Dutchman controls houses with hot-water heating in such a way that they always maintain the required temperature level, steplessly from 0 to 100 percent. This means that the birds do not experience any temperature fluctuations.

To supply houses of different sizes, this control unit is available with 150, 300 and 600 kW. The temperature difference between flow and return is 20 K. The control group can be shut off entirely by means of four ball valves.



Circulation fans

For an improved distribution of warm air in the barn

Circulation fans distribute warm air very evenly, especially in long houses, thus improving bird distribution in the barn as well. The fans are installed at a distance of approx. 20 to 30 m to the heaters.

The powerful FC050-4EQ circulation fan is additionally equipped with a guide vane. Thanks to its large throwing range and the bundled air jet it produces, this fan is especially well-suited for narrow and low

houses as well as the use of our Earny heat exchanger.



6E50 circulation fan



FC050-4EQ circulation fan with guide vane

| Type | | 6E50 | FC050-4EQ with guide vane |
|-------------------------------|-------------------|--------------|---------------------------|
| Air flow rate | m ³ /h | 6 400 | 7 100 |
| Throwing range | m | 25 | 35 |
| Dimensions (H x W x D) | cm | 62 x 62 x 32 | 66 x 66 x 36 |

Gas brooders

For a directed supply of heat

Gas brooders are especially well-suited if it is necessary to supply birds with intensive heat in a specific area and for a defined

amount of time. Examples include turkeys, ducks, broilers and pullets during the rearing phase. The fact that these gas

brooders do not require a power supply is a great advantage.



Gas brooder type M8



Gas brooder type G12

| Type | | M 8 | G 12 |
|----------------------------|--|-----------------------------|----------|
| Output | kW | 5 | 12 |
| Connection pressure | <ul style="list-style-type: none"> • Natural gas • Propane gas | mbar 20–50 mbar 20–1 400 | 28 28 |
| Pilot light | | | x |
| Installation height | cm | 90–150 | 130–170 |
| Weight | kg | 1.5 | 7 |

Connection values for the G12 gas brooder: 230 V, 50 Hz

Infrared tube heaters

Use of radiant heat, space-saving, no noise and no draughts

Infrared tube heaters are fired by gas and mainly produce radiant heat. The heat rays are similar to solar radiation: they pass through air without significant losses. The rays are thus converted to sensible heat only where they hit a surface. At lower ambient temperatures, this creates a very comfortable temperature sensation for the birds.

The fresh air required for combustion is drawn in from outside. Flue gas is removed to the outside by means of a double-walled chimney

so that the house air remains free of combustion gases and the fresh air is pre-heated at the same time.

Infrared tube heaters can reduce energy costs by up to 35 percent compared to direct heaters.

The EPA 25 infrared tube heater offered by Big Dutchman has the following advantages:

- ✓ high thermal comfort for the birds at low energy requirements;
- ✓ made entirely of stainless steel;

- ✓ aluminised heating tube for improved heat emission;
- ✓ reflector with ideal angle;
- ✓ patented TISS™ safety device (Tube Integrity Safety System) as emergency shutdown;
- ✓ easy to clean with a high-pressure cleaner (IP 55);
- ✓ can be fired by both natural gas and propane.



Reflector with optimised angle

| Type | EPA 25 | |
|-----------------------|--------|------|
| Output | kW | 24 |
| Gas connection | Inches | ½ |
| Total length | m | 3.80 |
| Weight | kg | 70 |

Connection values: 230 V, 50 Hz

Connection pressure: 20 mbar for natural gas and 50 mbar for propane gas



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