



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 % 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. Since the flame is monitored, 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 type 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	30	40	40	50
Weight	kg	48	51	55	55	65
Dimensions (L x W x H)	cm	129 x 52 x 46	129 x 58 x 52	129 x 63 x 57	129 x 63 x 57	129 x 63 x 57

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 the DXC and RGA models, 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.



Type		DXC 60	DXC 80	DXC 100
Output	kW	60	76	99
Combustible		Natural gas or propane	Natural gas or propane	Natural gas or propane
Consumption	m ³ /h / kg/h	6.9 / 5.2	8.8 / 6.6	11.4 / 8.6
Air flow rate	m ³ /h	6000	8000	10000
Throwing range	m	40	45	50
Weight	kg	140	150	175
Dimensions (L x W x H)	cm	210x74x108	210x74x108	210x82x108

Connection values: 230 V, 50 Hz for all types Gas connection: ¾ inches

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	7000	7000	4100	7500
Throwing range	m	50	40	40	50
Weight	kg	132	130	75	135
Dimensions (L x W x H)	cm	218x73x71	215x91x65	138x69x63	178x83x78

Connection values: 230 V, 50 Hz for all types Gas connection: 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 are installed at 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	m ³ /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 (L x W x H)	cm	120 x 139 x 83	120 x 139 x 90	120 x 139 x 100	80 x 98 x 92	100 x 120 x 94	90 x 70 x 70	98 x 90 x 80	108 x 110 x 108

* 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.

Type		Galvanized fin heater	Aluminium fin heater
Heat output*	W/m	460	400
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



Fin heater made of aluminium

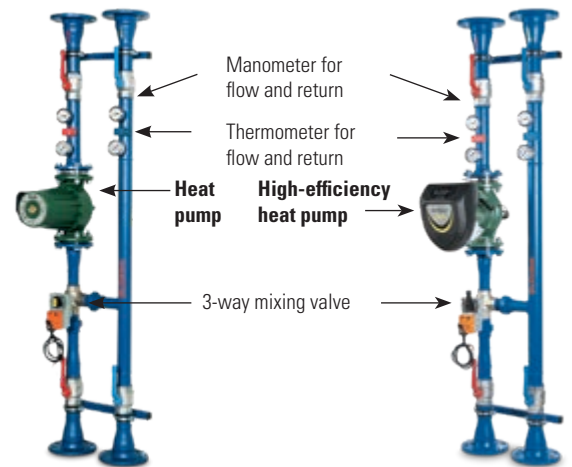
3-way mixing group

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 %. 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 the 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.

Type		M 8	G 12
Output	kW	5	12
Connection pressure	• Natural gas	20–50	28
	• Propane gas	20–1400	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



Gas brooder type M8



Gas brooder type G12

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 % 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: natural gas: 20 mbar, propane: 50 mbar



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