



Munters »Heat-X« type G

Heating systems

The »Heat-X« Type G is an indirect gas fired heater with a closed combustion system, especially designed for poultry houses.

Advantages

- No exhaust gases in the stable
- Energy saving due to lower air flow rates
- Approx. 15 % humidity reduction (better litter)
- Better animal performance
- Lower loss rate per stable
- Easy installation, no exhaust analysis needed
- Easy to service due to precise error indications
- Due to big openings the heat exchanger can be easily cleaned
- Lower insurance costs
- Well-engineered techniques
- Fan heater entirely made of stainless steel



Example calculation for cost savings in poultry farming (42 days) based on »Heat-X« type 4G:

Average heating capacity per fattening period: e.g. 35,000 kWh

Average gas price: € 0.040/kWh to € 0.065/kWh

Average heating cost savings in the year:
(Assumption ≈ 23 % savings in the year)

Gas price €/kWh	Heating costs per fattening period	Saving with the »Heat-X« type 4G per fattening period
0.040	1,400 €	322.00 €
0.045	1,575 €	362.25 €
0.050	1,750 €	402.50 €
0.055	1,925 €	442.75 €
0.060	2,100 €	483.00 €
0.065	2,275 €	523.25 €

Increasing energy costs and legal regulations force farmers to use efficient heating systems with low energy consumptions. The »Heat-X« Type G-line fully meets these requirements.

A closed combustion system means that the combustion air is taken from the outside, and the combustion gases are transported back to the outside. As a result no CO₂ and no water vapor are brought into the poultry house.

Therefore the big advantage is that the volume of the ventilated air can be strongly reduced so that energy can be saved.

Also, the closed combustion system decreases the humidity level. Consequently the feed stays drier which prevents from typical diseases like Podo. So, the sickness and mortality rate decreases which leads to a higher output per bird flock.

There is no open flame with a closed combustion system so that this effects insurance costs positively.



»Heat-X« Type 4G with a mobile console

Munters »Heat-X« type G

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The robust »Heat-X« Type G housing is entirely made of stainless steel and therefore perfectly usable for poultry houses.

Of course the heater is CE-certified and every single »Heat-X« Type G undergoes a final check. Electrical safety, correct emission values as well as general functions will be tested within this check.

The heat exchanger

The heat exchanger is made out of S-shaped tubes, each tube is featured with its own atmospheric gas burner that automatically sucks in the combustion air. With the atmospheric combustion mode the ambient air is used for the combustion and the combustion sucks in the needed amount of air automatically - analog to the direct combustion.

This combustion mode is insensitive to dust and well-suited for more robust applications. The installation is easy and no exhaust analysis is

needed. Depending on the output of the heater more or less burners and tubes are integrated in the device. (Modular design)

The chimney

The flue gas connection respectively the chimney port are connected to flexible ducts. These ducts allow a flexible installation of the heater. The heater can be mounted underneath the ceiling or be placed in a very handy mobile console. Flue gas tracts of up to 7 meters are possible. Short flue gas tracts outside of the building prevent from ice formation during winter time.

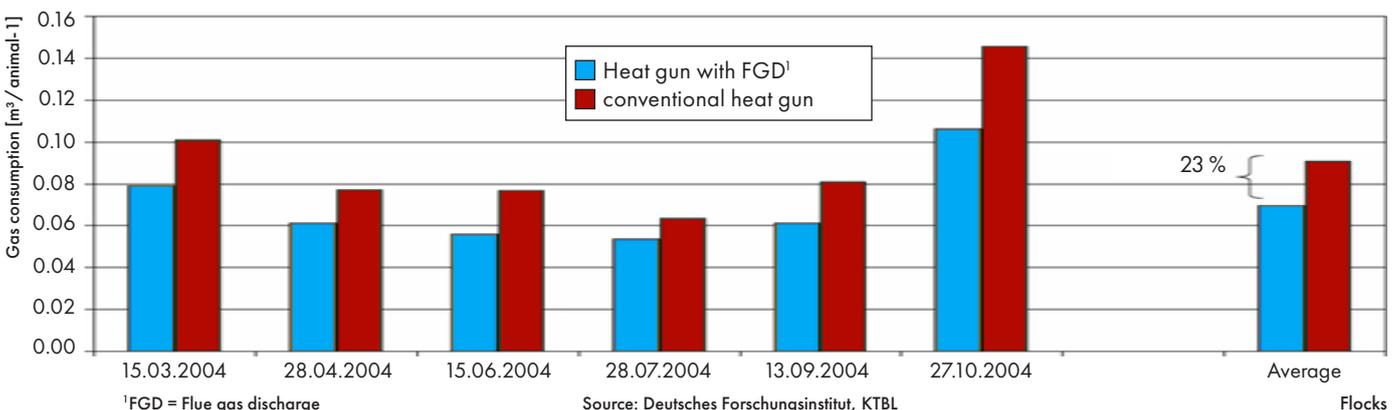
Cleaning

The »Heat-X« Type G is due to its big openings easy to clean.

Technical specifications

		»Heat-X« Typ 3G	»Heat-X« Typ 4G	»Heat-X« Typ 5G
Power input/output	[kW]	44 - 66 / 39 - 60	54 - 83 / 48 - 76	74 - 108 / 66 - 99
Efficiency with max. power	[%]	91.5	91.5	91.8
Air volume flow (heating)	[m ³ /h]	6,000	8,000	10,000
Throwing range	[m]	≈ 40	≈ 45	≈ 50
Noise level	[dB(A)]	≤ 68	≤ 68	≤ 68
Fan connected load		230V; 3.5A; 800W	230V; 3.9A; 900W	230V; 6.1A; 1,400W
Thermostatic control		on/off	on/off	on/off
Protective class		IPX4D	IPX4D	IPX4D
Gas connection		¾"	¾"	¾"
Gas consumption G20 (natural gas)	[m ³ /h]	6.9	8.8	11.4
Gas connection pressure G20	[mbar]	17 - 60	17 - 60	17 - 60
Gas consumption G25 (natural gas)	[m ³ /h]	7.8	9.9	12.8
Gas connection pressure G25	[mbar]	20 - 60	20 - 60	20 - 60
Gas consumption G30 (butane)	[kg/h]	3.9	5.0	6.5
Gas connection pressure G30	[mbar]	25 - 60	25 - 60	25 - 60
Gas consumption G31 (propane)	[kg/h]	5.2	6.6	8.6
Gas connection pressure G31	[mbar]	25 - 60	25 - 60	25 - 60
Fresh air / exhaust air duct	[mm]	130	130	130
Dimensions	[H x W x L / mm]	1,080 x 650 x 2,100	1,080 x 650 x 2,100	1,080 x 815 x 2,100
Weight	[kg]	140	150	175

Energy savings due to low air flow rates



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