

CONDAIR GS

Condensing gas-fired
steam humidifier



Humidification and Evaporative Cooling

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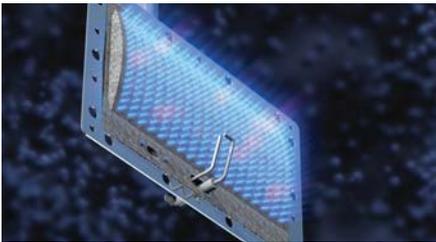
Condensing gas-fired technology improves efficiency and lowers operating costs

AHU or direct room humidification



The Condair GS can provide humidification to an AHU/duct or directly to an area with a fan unit.

Flat burner & spark ignition



Provides long-lasting, reliable operation and incorporates a four-stage, fail-safe mechanism for utmost peace-of-mind.

Touch screen control & BMS

The latest touch screen technology provides intuitive operation and reporting. The system seamlessly integrates with BMS with connections to Modbus and BACnet IP/MSTP (slave) as standard. LonWorks and BTL certified BACnet options available.

Stainless steel heat exchanger

The curved design encourages scale to dislodge during normal operation and the pipes are well spaced for easy access to the inner edges.

Easily accessible water tank

The water tank has been designed with rounded corners and a lip-free fascia to make scale removal as simple as possible.



CONDAIR GS

Condensing gas-fired steam humidifier



Condensing secondary heat exchanger

Transfers heat from exhaust flue gases to the incoming water supply, making the Condair GS the world's most efficient gas-fired humidifier.



Heated incoming water

The condensing secondary heat exchanger heats the incoming water before it enters the water tank. This improves humidity control as the tank's temperature remains more consistent.

Plastic flue



The lower flue gas temperature, created by the condensing technology, allows the use of plastic rather than stainless steel flues. This reduces the installation cost when compared to non-condensing gas-fired humidifiers.

Wide range



From compact 23kg/h units that can be wall-mounted to high capacity 272kg/h models.

Drain water cooling

Water from the boiling chamber can be cooled prior to release in order to protect a building's drainage pipe work.

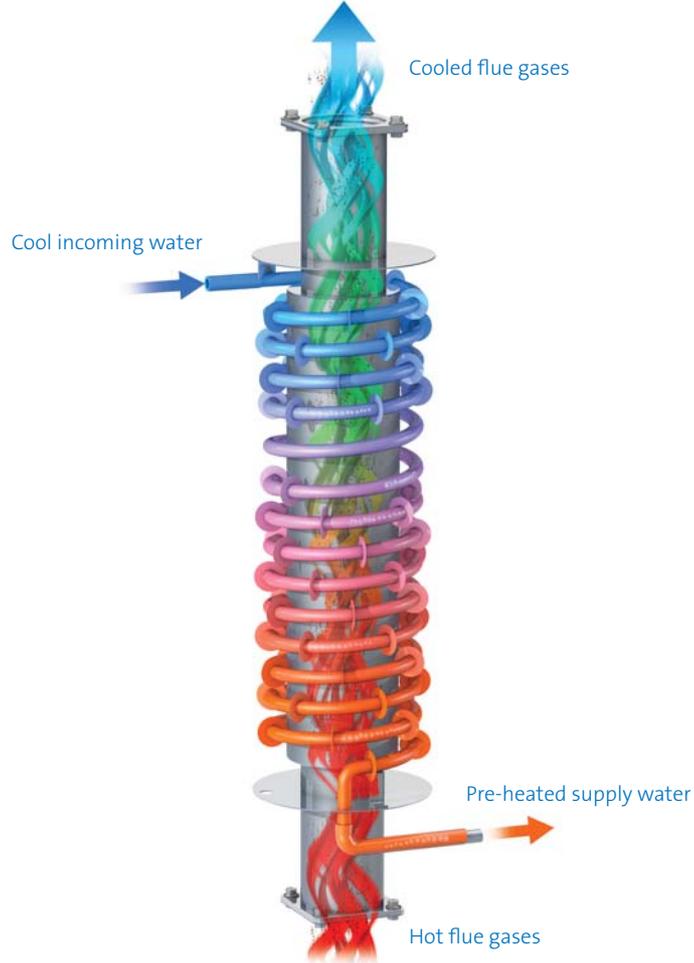
The Condair GS condensing gas-fired humidifier provides economic steam humidification. Its wide range of outputs, from 23-272kg/h, makes it suitable for many commercial applications and an ideal alternative to

electric steam humidifiers. Due to its advanced condensing technology, it is the most efficient humidifier of its type in the world.

Heat is recovered from the flue gases and used to heat the incoming supply water. This reduces energy

consumption and also improves humidity control, as the water tank's temperature and steam output is less affected by the introduction of fresh water.

The humidifier has a very compact design and small footprint, allowing some models to be wall-mounted.



Heat is recovered from hot flue gases into the incoming supply water to save energy

Efficient condensing gas-fired technology

The Condair GS incorporates a secondary heat exchanger that recovers heat from the flue gases into the incoming water supply. This improves efficiency when compared to a non-condensing gas-fired humidifier, reducing operating costs and helping to improve a building's carbon emissions.

By heating the incoming water supply in the secondary heat exchanger, the temperature of the water tank is less affected, as it's not being cooled by the

fresh water. This improves humidity control, when compared to non-condensing gas humidifiers, as the steam output remains more consistent.

As the flue gases are exhausted at a lower temperature than non-condensing units, plastic PVC flue pipes can be used, rather than insulated stainless steel. This makes installation simpler to undertake and reduces the overall cost.



Lower flue gas temperatures allow the use of PVC rather than stainless steel flue

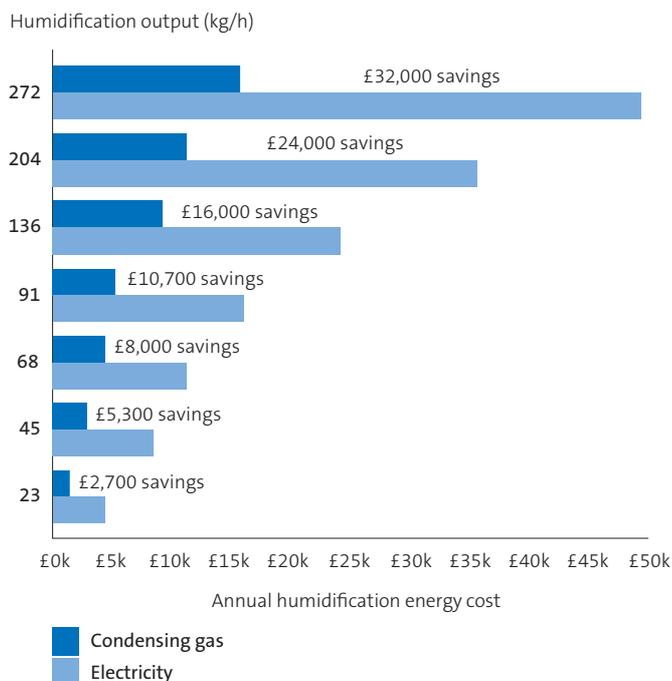


The lower energy price of gas significantly reduces the operating cost of a humidification system

The benefits of gas-fired steam humidification

Steam humidifiers provide the ultimate in hygienic humidity control. Gas-fired humidification offers sterile steam without the high energy costs associated to electric steam humidifiers.

Replacing existing steam humidifiers with a gas-fired system can pay for itself within one to two years with significant savings thereafter.



Based on full humidifier output for 2,500 hours per year, gas at 3p/kWh and 91% efficiency and electricity at 9p/kWh and 94% efficiency.



Touch screen controller for intuitive operational control and advanced reporting

Control at your fingertips

The Condair GS incorporates the latest touch screen control panel, providing intuitive operation and extensive reporting information.

All operating parameters can be seen at a glance with on-screen features offering the user further information on operation and detailed troubleshooting suggestions.

A USB connection allows all performance data to be recorded and exported into Excel for advanced diagnostics. Upgrades to software can also easily be made via the USB port.

BMS connectivity is included as standard using Modbus, BACnet IP and BACnet MSTP (slave). An optional PCB for LonWorks and BTL certified BACnet is also available.

Modbus®



Operational status, fault and maintenance data is recorded via USB and analysed in Excel.



A comprehensive range of options make the Condair GS the most versatile gas-fired humidifier available

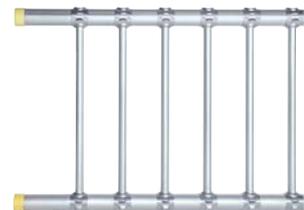
Condair GS options



Outdoor weather-proof enclosure
An outdoor model is available with weather-proof enclosure.



Fan unit
A fan unit can supply steam humidification directly to a room's atmosphere.



Short evaporation steam manifold
The Optisorp manifold offers very short evaporation distances in AHUs.

Wall or floor mounted
The 23 and 45kg/h models can be wall-mounted. An optional stand is available for floor mounting.

Internal/external air supply
Models are available that use air for combustion from either the room or an external air source.

Drain water cooler
To reduce the temperature of the drain water to below 60°C waste water can be mixed with fresh water.

Typical system overview

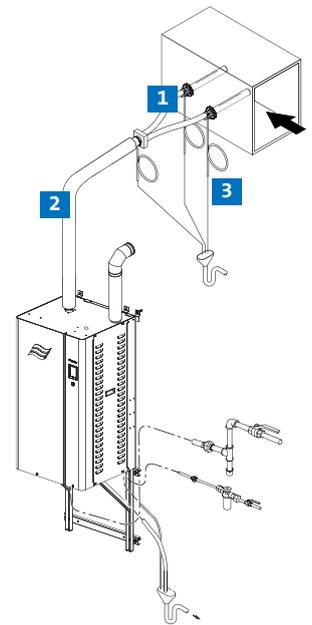
- Stainless steel tank and heat exchanger
- Integrated touch screen controller
- Modbus and BACnet IP/MSTP (slave)
- Real time clock
- Floor stand

Accessories

- 1 Steam distribution system for duct installation
- 2 Steam distribution hose
- 3 Condensate drain hose

Options

- Humidity sensors and humidistats
- Lonworks and BTL certified BACnet
- Condair Optisorp steam distribution manifold
- Wall mounting bracket
- Sump pump



Technical data



Condensing high efficiency model								
Model reference	GS 23-CS	GS 45-CS	GS 65-CS	GS 90-CS	GS 130-CS	GS 195-CS	GS 260-CS	
Weight dry / operating (kg)	86.2 / 154.2	95.3 / 165.6	145.1 / 226.8	217.7 / 351.5	217.7 / 362.8	362.9 / 544.3	412.8 / 703.1	
Min exhaust vent diameter (mm)	60	80		100		150		
Non-condensing mid efficiency model								
Model reference	GS 23	GS 45	GS 65	GS 90	GS 130	GS 195	GS 260	
Weight dry / operating (kg)	79.6 / 147.4	88.5 / 158.8	131.5 / 167.8	199.6 / 333.4	199.6 / 344.7	340.2 / 521.6	383.3 / 673.6	
Min exhaust vent diameter (mm)	80	80		100		150		
Condensing high efficiency and non-condensing mid efficiency models								
Max output (kg/h)	23	45	68	91	136	204	272	
Dimensions HxWxD m(mm)	1102x598x539		1410x684x705		1410x960x705		1410x1580x705	1410x1859x705
Voltage	230V, 1Ph 50-60Hz							
Admissible duct air pressure	1,490Pa			2,490Pa				
Admissible water quality	Mains or RO							
Water inlet valve connection	3/4in BSPP (male plastic thread)							
Drain outlet connection	19mm O.D. (unthreaded)							

Outdoor model non-condensing						
Model reference	GS40 OC	GS80 OC	GS120 OC	GS160 OC	GS200 OC	GS240 OC
Weight dry / operating (kg)	209 / 280	251 / 362	342 / 563	353 / 563	458 / 778	470 / 779
Min exhaust vent diameter (mm)	76	101	127	127	152	152
Max output (kg/h)	40	80	120	160	200	240
Dimensions HxWxD (mm)	1380x1262x545	1380x1262x708	1380x1262x1104	1380x1262x1104	1380x1262x1500	1380x1262x1500
Voltage	230V, 1Ph 50-60Hz					
Admissible duct air pressure	-800..+1700Pa					
Admissible water quality	Mains or RO					
Water inlet valve connection	1/2in BSP					
Drain outlet connection	3/4in BSP					

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