

Who we are and What we do:

EXHAUSTO was founded in 1957 in the town of Sorø on the Danish island of Zealand. The background was the unique idea to build a chimney fan for installation on the top of a chimney to obtain the ideal draught in open fireplaces, wood-burning stoves and boilers able to withstand the Scandinavian climate.

Our commitment to quality, honesty and integrity has helped us to become the world market leader within the market for Mechanical Chimney Draught.

Having worked in the UK for more than 30 years we have developed a substantial knowledge about the British standards, and the specific needs of the British market place.

EXHAUSTO Ltd is represented in and works close with most important trade organisations internationally and in the UK ensuring safe evacuation of combustion materials from any heating appliance.

EXHAUSTO Technology Centers

The EXHAUSTO Chimney Draught Systems are available through our network of EXHAUSTO Technology Centers (ETC), who distribute the full range of EXHAUSTO Chimney Draught Systems throughout the UK.

Each ETC has a certified EXHAUSTO product manager. The product manager is knowledgeable of EXHAUSTO's full Chimney Draught product range and will be able to answer all of your questions. All ETCs hold EXHAUSTO products in stock and therefore items can usually be delivered within 24 hours.

Our ETCs are also certified to use the EXHAUSTO calculation programme and will therefore be able to size and select the correct fan for each application and provide a written quotation.

Alternatively call us on 01494 465 166 to discuss your specific requirements and we will be more than happy to suggest the most suitable design.

Want to know more about Chimney Automation Solutions?

We have a number of CPD seminars that cover your business requirements in connection with the design of boiler systems and/or fireplaces.

Our seminars will help you to take full advantage of the possibilities that Mechanical Chimney Draught gives you to design energy efficient, flexible, and guaranteed safe boiler or fireplace systems.



Please feel free to contact us for further information on our CPD seminars or our Chimney Automation Solutions.

We will

Help you succeed in providing your customers with exactly what they want; A guaranteed safe and efficient operating heating system.

We do this by;

- Only suggesting solutions that we know will work.
- Only suggesting solutions that meet your customer's requirements.
- Providing you with a guaranteed quotation within 48 hours.
- Offering commissioning that guarantees optimum operation of the equipment.
- Giving you continued technical support in the future.

Peace of mind guarantee:

EXHAUSTO systems are supplied with a peace of mind guarantee:

- 6 months money back guarantee,
- 3 year warranty against any mechanical failure to the systems
- 10 year warranty against corrosion.

Dealer:





Chimney Automation Systems



Why Most Boilers Don't Work At Their Best.....

AIR!

Air is an essential ingredient in the combustion process. It supplies oxygen and also becomes part of the products of combustion or flue gases. The precise supply of air to the burner and the precise exhaust rate from the appliance is extremely important during the process. If not properly controlled, it can cause inefficient combustion, increased running costs, excessive emissions, and reduce life-expectancy of the entire heating system.

Uncontrolled supply of combustion air can lead to starvation of the heating appliance, flame roll-outs or pilot light failures – and in cold climates, even to frozen pipe work.

Air Supply Affects Efficiency

For a heating appliance to obtain maximum efficiency and produce the lowest possible emission level, it must maintain a perfect flame and maximize heat transfer. A perfect flame can only be obtained by maintaining a precise fuel-to-air ratio.

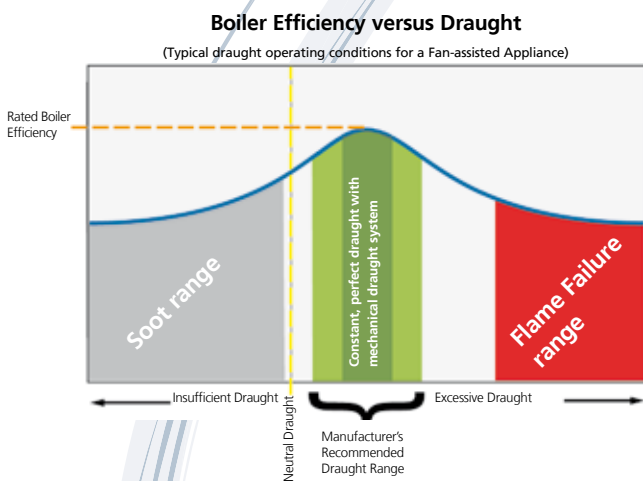
Correct air supply and draught control are essential in achieving this.

It is not uncommon to see high-efficiency boilers operating at efficiency levels comparable to lower efficiency boilers. This is purely a result of lack of draught control whereby the additional investment in a high-efficiency appliance is wasted.

Draught is Crucial for Efficiency

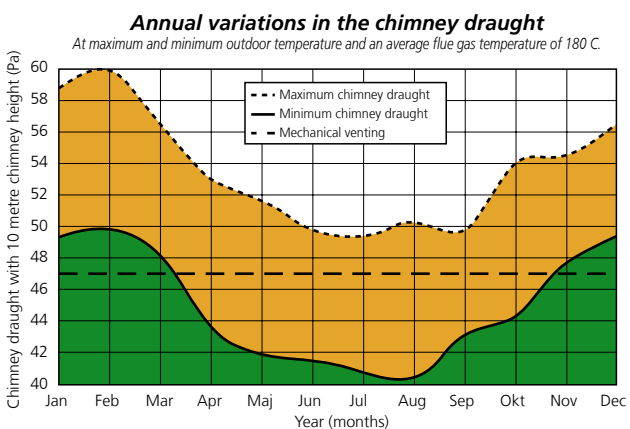
Temperatures and chimney height have the greatest impact on natural draught in chimneys, flues and stacks.

Modular and modulating boiler systems have gained acceptance as an energy-saving concept. Although great energy saving may be achieved, there still is a tremendous amount of energy wasted. More often than not the chimney will be "oversized" during the modulation process, which can lead to potential spillage, downdraught, overdraught, condensation and inefficient operation.



Natural Draught is Never Constant!

Natural draught constantly changes as boilers start up or shut down. The draught is also affected by outdoor temperature, barometric pressure and wind. Therefore a chimney is an inefficient draught controller. It is a fact that draught variations due to fluctuations in outdoor air temperature alone can be substantial.



Not Only That.. But to Give Your Customers What They Need...

Safety – Always a Concern

It is required to have all naturally vented heating appliances tested for spillage. As the test only shows the actual draught at a specific moment in time, and the fact that natural draught is never a constant, it is dangerous to rely on spillage tests alone

Design - Always a Challenge

Building layouts can put limitations on how combustion air and plant room ventilation is designed. Flue layouts may take up more space than necessary and terminations become aesthetic eyesores. Air grilles take up large wall areas and allow noise to break out from the boiler room.



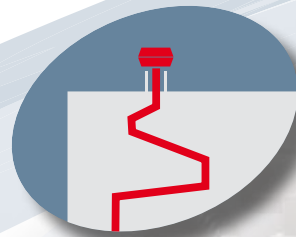
Building Regulations - Another Challenge

Design and installation is governed by national and European regulations and procedures. This is to assure proper and safe venting. However, unintentionally the building regulations can be so restrictive that natural draught designs become impossible. The solution is very often a fan assisted design that ensures compliance with the regulations and procedures.

... and What to do about it?

“EXHAUSTO helps you to achieve full flexibility in design with enhanced efficiency and guaranteed safety”

We do this through;



Design it Your Way

- Long horizontal flue runs are possible
- Placement of boilers where you want them
- Placement of chimneys where you want them
- Minimal flue size = optimum utilization of floor space



Keeping People Safe and Buildings Operational

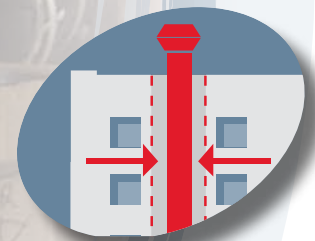
- The only system that guarantees safe evacuation of the products of combustion
- Fail-safe operation in accordance with all relevant British Standards
- Constant controlled pressure in entire flue system
- The only purpose designed system
- 3 year warranty against mechanical failure
- 10 year warranty against corrosion

Chimney Draught Solutions by EXHAUSTO



Reduction in Your Customer's Operating Costs

- The only solution that guarantees the energy efficiency of your heating appliances
- Improves boiler efficiency through constant optimum output of boilers
- Savings of up to 30% on heating costs can be made
- Modulating fan speed keeps running costs very low
- Cast aluminium fans ensure long life and low maintenance costs



Enabling Quick Return On Investment

- The only solution that guarantees the energy efficiency of your heating appliances
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Mechanical Chimney Draught Solutions with “on-demand” Control

The CAS, Chimney Automation System, is a well-tested concept in mechanical venting of commercial boilers and water heaters. It features “on-demand” control, that maintains a precise draught by constantly adjusting the exhaust rate to meet current needs.

The concept can provide substantial savings over natural draught systems and offers significantly better draught control.

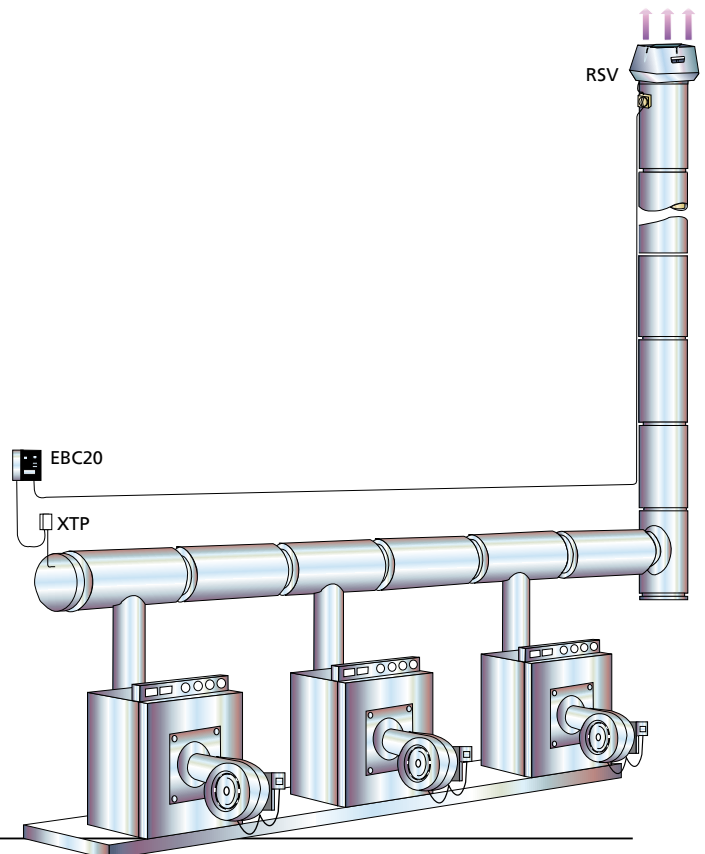
The Chimney fan is installed at the termination point on the exterior of the building guaranteeing an optimum pressure in the entire flue system.

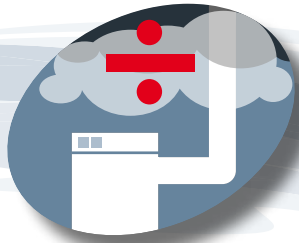
The heating appliances will operate more efficiently and produce a higher output.

- Full modulation and 100% draught control.
- Interlocks 2 appliances (standard) or as many as necessary with relay boxes (optional extra).
- Easy programming of essential functions - 35 parameters are programmable for customised solutions.
- Cast aluminum chimney fan and impeller for use with condensing and non-condensing appliances.
- Maintains low emissions, including NOx.
- High-temperature TEFC-motor with a Class H temperature rating and direct drive.
- Low maintenance and service-friendly design.
- Meets BS5440:2000 and BS6644:2005 for fail-safe operation.

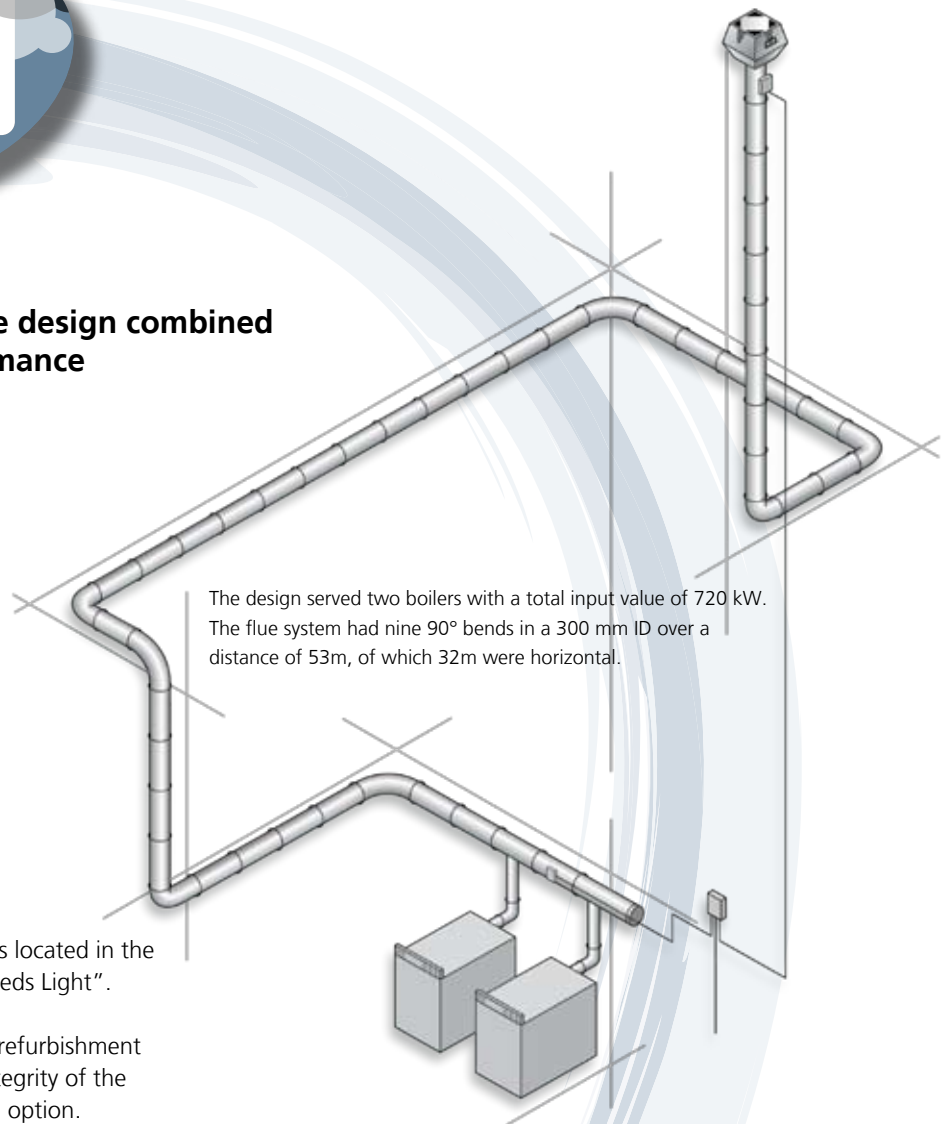


Exhaust Unit:	RSV or RSG Fan
On Chimney or wall:	FR Steel Chimney Flange or PLX, Plenum Box for multiple fan installation.
Control System:	EBC 20 – integrated control with constant pressure modulation.
Speed Control:	For 1-phase fans the speed control is provided directly by the EBC control. For 3-phase fans the speed control is provided by a Frequency Converter FRK.





Case Study of flexibility in flue design combined with enhanced energy performance



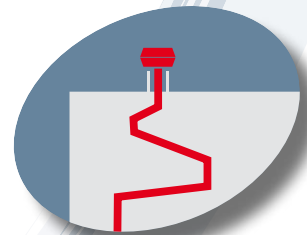
The design served two boilers with a total input value of 720 kW. The flue system had nine 90° bends in a 300 mm ID over a distance of 53m, of which 32m were horizontal.

The prestigious ESPORTA Leeds fitness club is located in the new city centre leisure development "The Leeds Light".

The project was a mixture of new build and refurbishment and in order to maintain the architectural integrity of the building running the flue outside was not an option.

In conjunction with a local flue specialist, EXHAUSTO proposed their automated chimney system CAS 8002 to utilising existing ventilation ducts, eliminating the need to run flue along the outside of the building. This system achieved a constant negative pressure throughout the entire flue thus providing the customer with an enhanced energy efficient and safe system.

"It looked impossible, but the EXHAUSTO system solved the problem and reduced the cost of flue" Flue specialist, Leeds"



Mechanical Combustion Air Supply

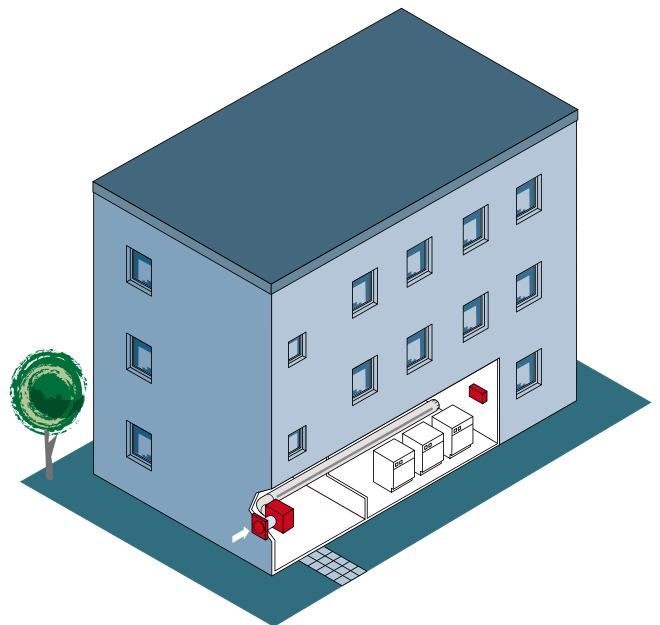
The MCAS, Modulating Combustion Air Supply System assures that the amount of combustion air brought into the plant room is always optimum for the operation of the boilers.

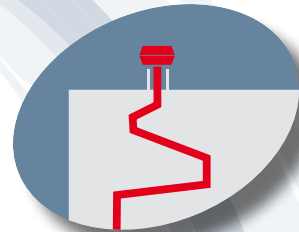
It features "on-demand" control, that maintains a precise pressure condition in the plant room by constantly adjusting the air supply rate to meet current needs.

The concept can provide substantial savings on grille sizing and offers significantly better control of combustion supply air.

- Full modulation and 100% draught control.
- Interlocks 2 appliances (standard) or as many as necessary with relay boxes (optional extra).
- Easy programming of essential functions - 35 parameters are programmable for customised solutions.
- Cast aluminum ventilator and impeller for use with condensing and non-condensing appliances.
- Maintains low emissions, including NOx.
- High-temperature TEFC-motor with a Class H temperature rating and direct drive.
- Low maintenance and service-friendly design.
- Meets IGE/UP/10 and BS6644:2005 for fail-safe operation.

Supply Unit:	BESB or BESF Box Ventilator.
Extract Unit:	DTV or VVR Ventilator.
On roof or wall:	PFT/FDTH Base plate.
Control System:	EBC 20 - integrated control with constant pressure regulation of supply air. Controls EFC or SR enable variable speed control of the EXHAUSTO fans.
Speed Control:	For 1-phase fans the speed control is provided directly by the EBC control, the SR or the EFC controls. For 3-phase fans the speed control is provided by a Frequency Converter FRK.





Case Study of enhanced energy performance and safety

The project at "Help the Aged" Lindby in Nottinghamshire involved an extremely compact plant room located in a basement.

As there were no external walls for vents, ventilation had to take place via 10 m duct runs which had a high resistance due to five 90° bends which resulted in very low air flow rates.

Due to insufficient ventilation, the room was getting far too hot and the flues were not drawing effectively.

This meant that the boilers could not operate efficiently and the plant room became a health hazard, being in non-compliance with British Standards.

EXHAUSTO solved the problem by supplying two BESF box ventilator fans and an EXHAUSTO control system, which ensured that the fans were balanced.

As a result, the Help the Aged building was able to supply and extract air at a sufficient rate to comply with British Standards (BS6644:2005), enhancing the energy performance of the Boiler installation keeping the people safe and the building Operational.



System Components for CAS8001 and CAS8002

Top mounted fans

CAS8001/2



The EXHAUSTO RSV fan is installed on top of the chimney. The fan provides a constant pressure in the flue to prevent any spillage from the appliance. Problems with condensation are minimised due to the correct venting of the entire flue system.

The fan type RSV has a powerful vertical discharge column and can be used with domestic and commercial boilers up to 2 MW.

Wall mounted fans

CAS8001



The EXHAUSTO RSG fan is installed on the external wall enabling a gas appliance to be installed without a chimney.

The fan gives a downward discharge of flue gases through secure grilles on the underside of the fan housing.

The fan has a build-in pressure differential switch, which is part of the fail-safe system.

The RSG fan allows for long horizontal flue runs and is suitable for appliances up to 150 kW where regulations allow.

Control units

CAS8001/2



The EXHAUSTO Boiler Control Type EBC20 with a pressure transducer (XTP-sensor) is used with chimney fans Type RSV in connection with 1- or 2-step boilers and modulating boilers or, alternatively, with chimney fans Type RSG in connection with water heaters.

The XTP-sensor (pressure transducer) is used for monitoring the correct chimney draught and at the same time supervising the fail-safe function.

The control unit EBC20 also offers an external input option from a pressure switch or alarm sensor as well as having an alarm contact that can be connected to facility management systems or similar.

EBC20 provide fail-safe systems in compliance with BS5440 and BS6644.

The Frequency converter FRK is used for variable speed control of 3 phased motors in connection with EBC20.

Flange and Plenumbox

CAS8001/2



The flanges are made of stainless steel. The spigot of the flange FR is inserted into the flue. The fan and flange assembly is located on top of the chimney.

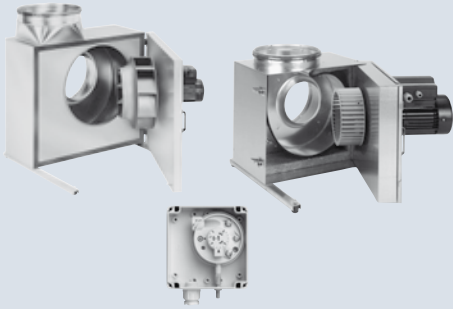
The range offers alternatives to suit any fan model and most flue IDs.

For multiple fan installations a plenum box can be used.

System Components for MCAS

Box Ventilators

MCAS



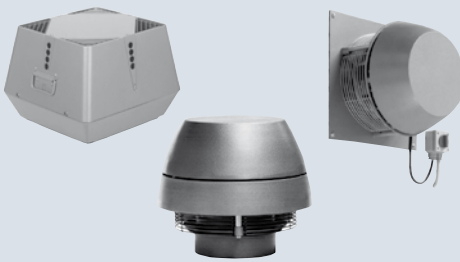
The Box Ventilators are constructed with a “swing-out” service door which provides easy access to the impeller and fan housing when they require cleaning.

The Box Ventilator BESB has a built-in measuring point to be used when commissioning the volume of ventilation and combustion air.

The pressure switch has an adjustable dial allowing for correct commissioning of the fail-safe lock out system.

Fans

MCAS



The Roof and Wall Fans are constructed of corrosion resistant cast aluminium.

The DTV fan has a powerful vertical discharge column.

The DTH fan has horizontal discharge.

The Wall Fan VVR generates low noise levels and high air pressure allowing for long runs of duct work.

Control units

MCAS



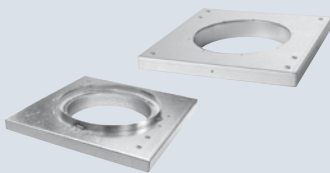
The control units EFC or SR make it easy to adjust the fan speed on all EXHAUSTO ventilation fans.

The control unit EBC20 can control the supply of fresh air in the boilerroom when the default set-up is changed. The EBC20 can also be used as a 2-stage regulator or to control positive pressure systems.

The Frequency converter FRK is used for variable speed control of 3 phased motors in connection with EBC20.

PFT/PDTH

MCAS



The PFT & PDTH are base plates for connecting DTV and DTH to existing square or round ducting respectively. The installer will be required to build an upstand, or use suitable duct size with dimensions to match the plates.