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101,571 kWh	Energy per year	DHW/ Total
£26,408	Saving per Year	
21,076 kg	CO ₂ per Year	
47,307 kWh	Energy per year	Heating
£12,300	Saving per Year	
9,816 kg	CO ₂ per Year	

It's nice to get mail that's not a bill isn't it?
In fact, this is the very *opposite* of an energy bill.

Using the information you supplied about your premises, our DextCalc system has worked out how much money and energy a Dext heat recovery system could potentially save you and your organisation, as well as the reduction in CO₂ emissions.

You'll see the headline savings at the top right of this letter.
For straightforward comparison, we've split these into two sections:

Total (including domestic hot water) is the total our system offers for reuse within the building in one year.

Heating is the total our system offers for heating incoming air in one heating season of just 170 days¹.

Cost savings are determined using a rate of 0.26 pence per kilowatt³, and detailed calculations are presented overleaf.

It's important to understand that these figures represent the performance the DexThermic is *capable* of, but we need to make sure you actually use and take advantage of all the energy it recoups.

We can advise your team on how to integrate the system intelligently into your premises to wring every bit of value from it.
...Otherwise it's a bit like having a high performance battery constantly charged up, and not plugging anything into it!

We know that customers appreciate transparent communication and we're passionate about providing practical solutions built for the real world.

Proposed product & system:

DAHX - 850 - 550 - 1800 - 19 - 500H - 1595 - C2 - COHP² Heat Pump Version

Cost & Energy saving accumulative forecast:

Potential domestic hot water

Year 1:	Saving = £ 26,408	Energy = 101,571 kWh
Year 2:	Saving = £ 52,817	Energy = 203,141 kWh
Year 3:	Saving = £ 79,225	Energy = 304,712 kWh
Year 4:	Saving = £ 105,634	Energy = 406,283 kWh
Year 5:	Saving = £ 132,042	Energy = 507,854 kWh

Potential space heating

Year 1:	Saving = £ 12,300	Energy = 47,307 kWh
Year 2:	Saving = £ 24,600	Energy = 94,614 kWh
Year 3:	Saving = £ 36,899	Energy = 141,921 kWh
Year 4:	Saving = £ 49,199	Energy = 189,228 kWh
Year 5:	Saving = £ 61,499	Energy = 236,535 kWh

Over 5 years, each site is forecast to save a potential 508MW and £132k total.
There are potential savings of 237MW and £61k on heating alone, over 5 years.

For much of the year, the DexThermic-CO-HP has the potential to meet all heating and hot water requirements and is ideally suited to extract temperatures of below 35°C. During the UK's harshest winter months, it can work alongside an eco-friendly heat pump if required to provide any additional heat. It uses the contaminated extract air stream as a source of consistently warm temperatures for a heat pump to perform optimally. It is *possible* that the building's heating and hot water requirements could be less than the DexThermic's potential provision. In which case, the product would not require support from additional or existing heating.

To explore more about the product range, or to delve into performance data in more depth – our DexThermic technical brochure can provide additional detail.²

We are looking forward to discussing your project and its potential savings (both financial and environmental) in more detail.

I will be in touch within the next 4-5 working days to agree on a mutually convenient meeting time for further discussions. Alternatively, you can reach out to me using the contact information provided below.

Yours sincerely,
Neil Bracewell
Commercial Director



Operational parameters:

Air extract volumetric flowrate : 3.5 m³/s

Maximum temperature in extract duct : Max extract temp = 40°C

Minimum temperature in extract duct : Min extract temp = 30°C

Energy cost³ : Based on current market conditions or client data = 0.26 P/kWh

Carbon Intensity⁴ : Natural Gas emits: 0.200kg CO₂/kWh, Grid Electricity: 0.215kg CO₂/kWh with an average of: 0.207kg CO₂/kWh

Operation time : 12 hours a day

Average recovered energy : Based on 30°C to 40°C Extract : RCVY Quantity (Q) = 27.39kW, RCVY Quality, Condenser setpoint (T) = 50°C

DAHx air side pressure drop : Air P-Drop (ΔP) = 35.0Pa

DAHx fluid side pressure drop : Fluid P-Drop (ΔP) = 67.3KPa

Total heat flow from heat pump system : TOT. HP-Out (Q Total) = 31.6kW

Average power input, the energy to run the system : AVG. P-Input = 4.2kW

Coefficient of performance : COP = 7.5

Average energy output : AVG. E-Output = 23.2kWh

Day energy output : Day E-Output = 278.3kWh

Length of heating season¹ : Heating Season = 170 Days/Yr

Year space heating energy saving potential: SH E-Saving Potential = 47,307 kWh/Yr

Year domestic hot water energy saving potential: DHW E-Saving Potential = 101,571 kWh/Yr

Year space heating cost saving potential: SH £-Saving Potential = £12,300/Yr

Year domestic hot water cost saving potential: DHW £-Saving Potential = £26,408/Yr

Year space heating CO₂ saving potential: SH CO₂ savings ≈ 9,816 kg/yr

Year domestic hot water CO₂ saving potential: SH CO₂ savings ≈ 21,076 kg/yr

Performance & savings overview:

DextCalc works out your potential savings by looking at minimum and maximum performance variables and taking an average. We've laid out the individual performance cases for clarity below.

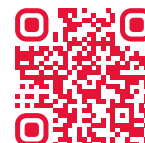
Case 1.1 [MAX] Input		Case 1.2 [MIN] Input		Case 1.3 [AVRG] Input	
Extract Flow	3.5 m³/s	Extract Flow	3.5 m³/s	Extract Flow	3.5 m³/s
Extract Temp	40.0 °C	Extract Temp	30.0 °C	Extract Temp	35.0 °C
RCVY Quantity (Q)	31.1 kW	RCVY Quantity (Q)	23.7 kW	RCVY Quantity (Q)	27.4 kW
RCVY Quality (T)	50.0 °C	RCVY Quality (T)	50.0 °C	RCVY Quality (T)	50.0 °C
Air P-Drop (ΔP)	35.0 Pa	Air P-Drop (ΔP)	35.0 Pa	Air P-Drop (ΔP)	35.0 Pa
Fluid P-Drop (ΔP)	67.3 kPa	Fluid P-Drop (ΔP)	67.3 kPa	Fluid P-Drop (ΔP)	67.3 kPa
TOT. HP-Out (Q)	35.3 kW	TOT. HP-Out (Q)	27.9 kW	TOT. HP-Out (Q)	31.6 kW
AVG. P-Input	4.2 kWh	AVG. P-Input	4.2 kWh	AVG. P-Input	4.2 kWh
COP	8.4	COP	6.6	COP	7.5
Operation Time	12.0 Hr/Day	Operation Time	12.0 Hr/Day	Operation Time	12.0 Hr/Day
AVG. E-Output	26.9 kWh	AVG. E-Output	19.5 kWh	AVG. E-Output	23.2 kWh
Day E-Output	322.4 kWh	Day E-Output	234.2 kWh	Day E-Output	278.3 kWh
Heating Season	170 Days/Yr	Heating Season	170 Days/Yr	Heating Season	170 Days/Yr
SH E-Saving Potential	54,802 kWh/Yr	SH E-Saving Potential	39,812 kWh/Yr	SH E-Saving Potential	47,307 kWh/Yr
DHW E-Saving Potential	117,663 kWh/Yr	DHW E-Saving Potential	85,479 kWh/Yr	DHW E-Saving Potential	101,571 kWh/Yr
Energy Cost	0.26 P/kWh	Energy Cost	0.26 P/kWh	Energy Cost	0.26 P/kWh
Carbon Intensity	0.208 kg CO ₂ /kWh	Carbon Intensity	0.208 kg CO ₂ /kWh	Carbon Intensity	0.208 kg CO ₂ /kWh
SH £-Saving Potential	14,248 £/Yr	SH £-Saving Potential	10,351 £/Yr	SH £-Saving Potential	12,300 £/Yr
DHW £-Saving Potential	30,592 £/Yr	DHW £-Saving Potential	22,224 £/Yr	DHW £-Saving Potential	26,408 £/Yr
SH CO ₂ Savings	≈11,371 kg/Yr	SH CO ₂ Savings	≈8,261 kg/Yr	SH CO ₂ Savings	≈9,816 kg/Yr
DHW CO ₂ Savings	≈24,415 kg/Yr	DHW CO ₂ Savings	≈17,737 kg/Yr	DHW CO ₂ Savings	≈21,076 kg/Yr

Case 1.1 [MAX] - DHW Forecast Savings			Case 1.2 [MIN] - DHW Forecast Savings			Case 1.3 [AVRG] - DHW Forecast Savings		
Year	Savings	Energy	Year	Savings	Energy	Year	Savings	Energy
1	£30,592	117,663 kWh	1	£22,224	85,479 kWh	1	£26,408	101,571 kWh
2	£61,185	235,325 kWh	2	£44,449	170,958 kWh	2	£52,817	203,141 kWh
3	£91,777	352,988 kWh	3	£66,673	256,436 kWh	3	£79,225	304,712 kWh
4	£122,369	470,651 kWh	4	£88,898	341,915 kWh	4	£105,634	406,283 kWh
5	£152,961	588,313 kWh	5	£111,122	427,394 kWh	5	£132,042	507,854 kWh

Case 1.1 [MAX] - SH Forecast Savings			Case 1.2 [MIN] - SH Forecast Savings			Case 1.3 [AVRG] - SH Forecast Savings		
Year	Savings	Energy	Year	Savings	Energy	Year	Savings	Energy
1	£14,248	54,802 kWh	1	£10,351	39,812 kWh	1	£12,300	47,307 kWh
2	£28,497	109,604 kWh	2	£20,702	79,624 kWh	2	£24,600	94,614 kWh
3	£42,745	164,405 kWh	3	£31,053	119,436 kWh	3	£36,899	141,921 kWh
4	£56,994	219,207 kWh	4	£41,405	159,248 kWh	4	£49,199	189,228 kWh
5	£71,242	274,009 kWh	5	£51,756	199,060 kWh	5	£61,499	236,535 kWh



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Disclaimer

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3. Department for Business, Energy & Industrial Strategy. Prices of fuels purchased by non-domestic consumer in the United Kingdom, 30/3/2023, <https://www.gov.uk/government/statistical-data-sets/gas-and-electricity-prices-in-the-non-domestic-sector>
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