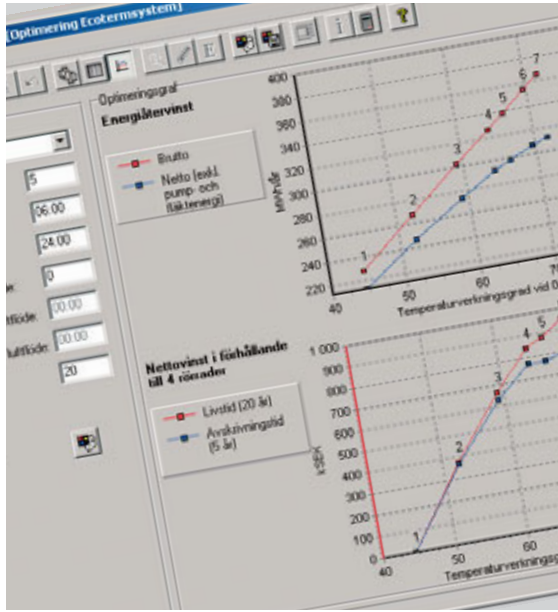
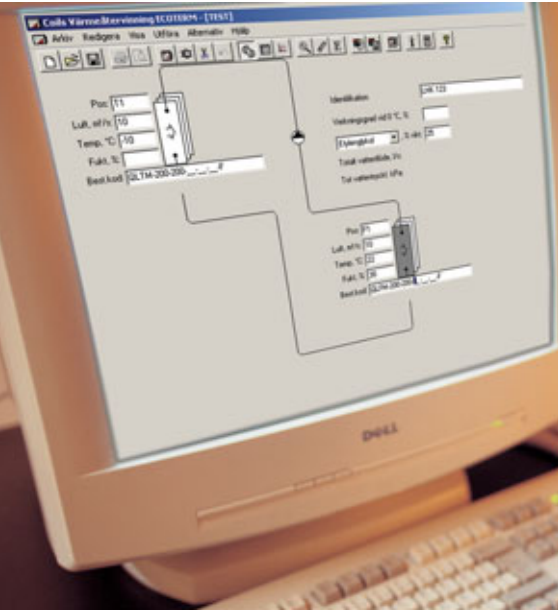
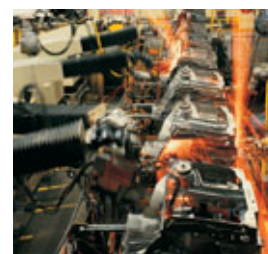


ECOTERM® Optima



Optimize more, it always pays!



Optimize your Heat Recovery System with ECOTERM® Optima

ECOTERM® is a liquid coupled heat recovery system, for transferring heat from extract air to supply air in ventilation systems. The ECOTERM® Optima is a tool for calculating the most

economic system for your specific climate and running conditions.

We have 30 years of experience dealing with heat recovery systems.



Coiltech heat recovery coils are used in the Vasa museum in Stockholm

Optimize, it always pays

ECOTERM® Optima

ECOTERM® recovers heat from exhaust air and therefore radically lowers heating costs for ventilation air. ECOTERM® can also be used for cooling recovery in warm areas and during summer time.

ECOTERM® has high temperature efficiency and is easy to install in existing ventilation installations.

Features

ECOTERM® gives high temperature efficiency and is easy to install in existing climate installations. Control is easy. ECOTERM® is energy efficient, which has a positive effect on the environment.

Strong points

ECOTERM® has numerous features like:

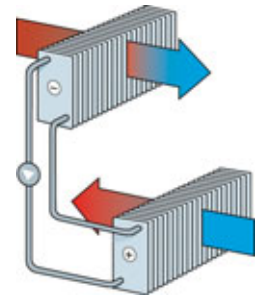
- Flexible solutions for use in refurbishment and conversion projects
- Flexible placement of the coils in the exhaust and supply air ducts
- No air leakage between the extract and supply air
- The elimination of leakage means that ECOTERM® can be safely used in hospitals, chemical industries or clean room environments
- Easy control

ECOTERM® Optima

The optimal saving is reached by calculating the influence of adding more tube rows to the initial 4 row coils. The change of operating costs and required interest on the investment are considered.

ECOTERM® Optima gives you the net present value of both the technical life span and stated depreciation time.

Of course more rows results into higher heat recovery efficiency as well as more savings, up to the point where running costs increase is equal to the increase of savings.

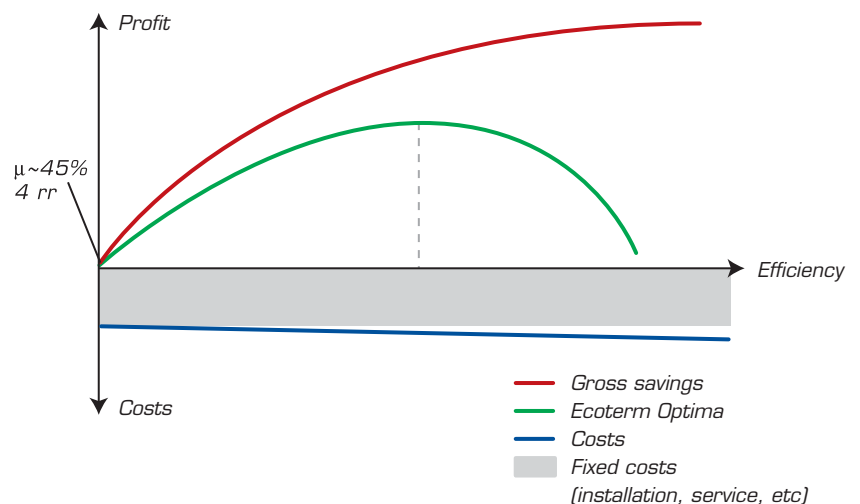


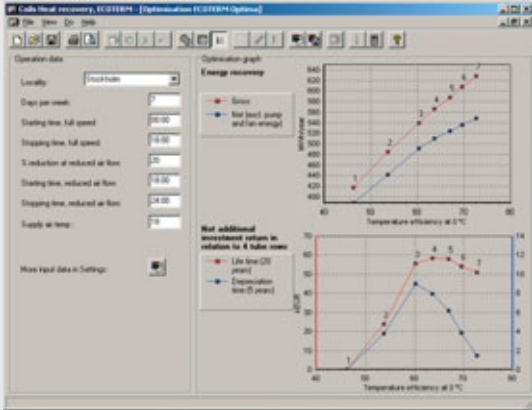
ECOTERM®-system



»ECOTERM® Optima helps you find the optimal saving for your climate and running conditions.«

Savings with ECOTERM® Optima



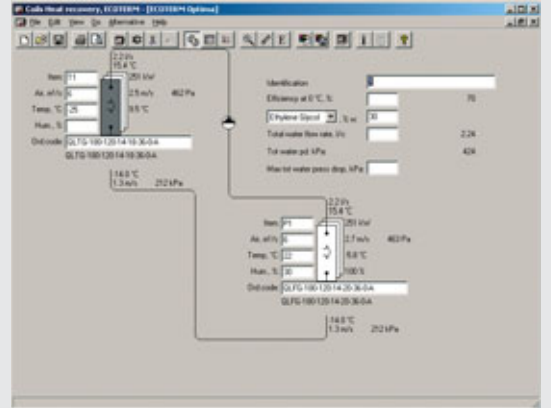


The top diagram shows the gross and net savings. The lower diagram shows the total savings for estimated lifetime, respectively requested depreciation time.

Heat Recovery System ECOTERM from Celltek h

Air	Supply air	6.8	m ³ /h			
	Return air	6.8	m ³ /h			
Liquid	Water with 30 % Ethylene Glycol					
	Flow rate	2.2	l/s			
	Coil pressure drop	426	Pa			
Performance	Supply air temperature in	-25	-8	8	8	°C
	Supply air temperature out	9.1	14.1	15.9	16.9	°C
	Recovery capacity	248	129	131	46	W/W
	Temperature efficiency	71	71	78	78	%
Additional information:						
In order to avoid frosting on the return air coil, the heat transferred should be multiplied constant and the efficiency should be allowed to decrease at ambient air temp below 0.0 °C. Additional Recombat request: -2.1 °C. The design performance data will be as follows:						
Supply air temperature out: -2.8 °C						
Recovery capacity: 163 W/W						
Temperature efficiency: 68 %						
Coil data	M	T1	P1			
	Capacity	146	146	W/W		
	Air					
	Flow rate in	6	6	m ³ /h		
	Temperature in	-25	22	°C		
	Humidity in	36	36	%		
	Temperature out	9.1	-8.5	°C		
	Humidity out	100	100	%		
	Velocity	1.5	2.7	m/s		
	Pressure drop	462	462	Pa		
	Liquid					
	Flow rate	2.24	2.24	l/s		
	Temperature in	13.1	13.1	°C		
	Temperature out	13.8	15.1	°C		
Velocity	1.3	1.3	m/s			
Pressure drop	113	113	Pa			
Weight	392	372	kg			
Volume	125	125	l			
Connection marked	58	58				
Coils	M	On factory coils				
	T1	QLTG 130-130-14-30-34-0-A				
	P1	QLTG 130-130-14-30-34-0-A				

Finally ECOTERM® Optima will produce a clear and detailed report containing all relevant technical data.



System data is entered in the same way as into our COILS selection program.

Operation data

Locality: Stockholm

Days per week: 7

Starting time, full speed: 00:00

Stopping time, full speed: 18:00

% reduction at reduced air flow: 20

Starting time, reduced air flow: 18:00

Stopping time, reduced air flow: 24:00

Supply air temp: 18

More input data in Settings: [Icon]

Operating data is entered here

Economy

Calculation interest rate, %: 5 [OK]

Life time, years: 20 [Cancel]

Depreciation time, years: 5 [Help]

Currency: EUR

Exchange rate rel. EUR: 1

Heating

Heat energy price, EUR/kWh: 0.033

Cost increase, % per year: 2

Electricity

Electric energy price, EUR/kWh: 0.08

Cost increase, % per year: 2

Total efficiency

Fan efficiency, %: 75

Pump efficiency, %: 70

The economic conditions are entered here

< **The result of optimization**
- see the back of tab!

Heat exchangers for the whole world



Coiltech has developed and manufactured coils for more than 50 years. We meet high quality demands and have experience from a variety of different industries.

 **COILTECH**

Coiltech AB, SE-614 81 Söderköping, Sweden
Phone +46 121-191 00 | Telefax +46 121-101 01
www.coiltech.com



Head Office:
33050 POCENIA (UD) | Via Giulio Locatelli, 22
Telephone +39 0432.772.001
Telefax +39 0432.779.594
www.ecogroup.com
e-mail: info@ecogroup.com