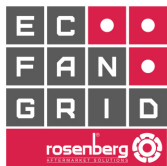
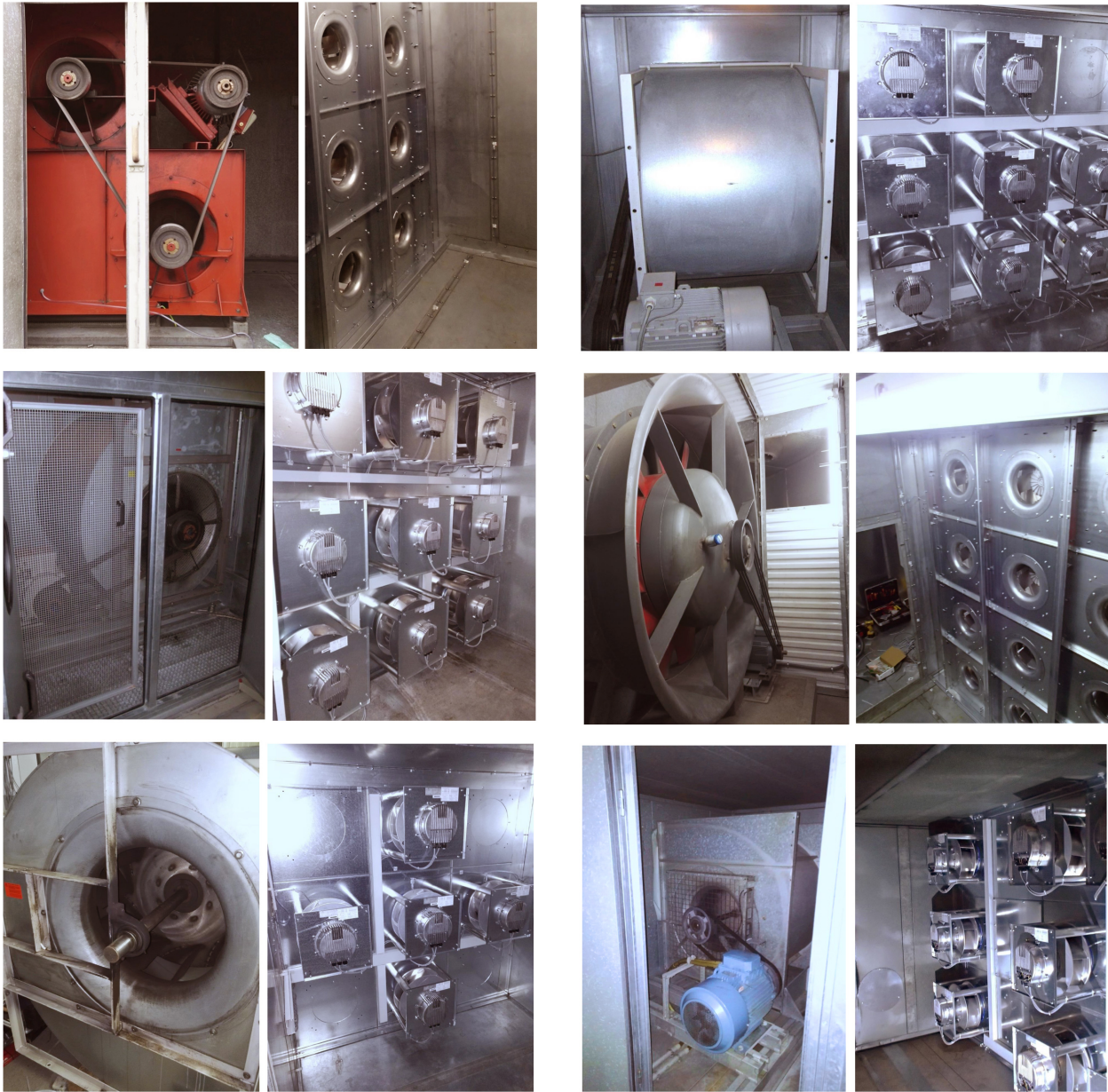


ECFanGrid

HVAC RETROFIT INSTALLATION EXAMPLES



- **Flexible.**
Fits in all Air Handling Units.
Manufacturer-Independent.
- **Complete.**
Kit mechanically complete
(Fans, Wiring Cabinet, Grid,
Screws).
- **Mobile.**
Fit through every standard
Door, Staircase or Lift.



The Benefits of the Rosenberg ECFanGrid System are ...

- comfortable transportation through existing standard doors, stairwells or elevators with two Persons.
- usage of energy efficient EC-Fans, which are easy controllable through the related Wiring Cabinet.
- redundancy by system and a clever, continuous concept for the best possible availability of the AHU.
- flexibility in Design and optimal usage of the existing Space. Extensions possible.
- floor-free installation results in a comfortable cleaning, which meets Highest Hygienic Standards.
- ease of maintenance and straight forward replacement within few minutes.

We Measure. You Treasure!



SITE EXAMINATION

The Testo 310 residential combustion analyzer sets a new standard in affordable flue gas analysis with its rugged housing, simple design, and advanced sensor technology. With five different fuels to select from, it provides the flexibility you need for applications like checking furnace efficiency, boiler tuning, and water heater checks.



3x3 ECFanGrid Installation Example



3x3 ECFanGrid with central wiring cabinet and integrated Air Flow Measurement and Display.

Left. Inlet Area.
Center. Outlet Area.
Right. Wiring Cabinet.



Retrofit – Best-Practice



ECFanGrid 2x3

Input Power

15 kW

22 A

Twin-Belt-Drive

Input Power

19 kW

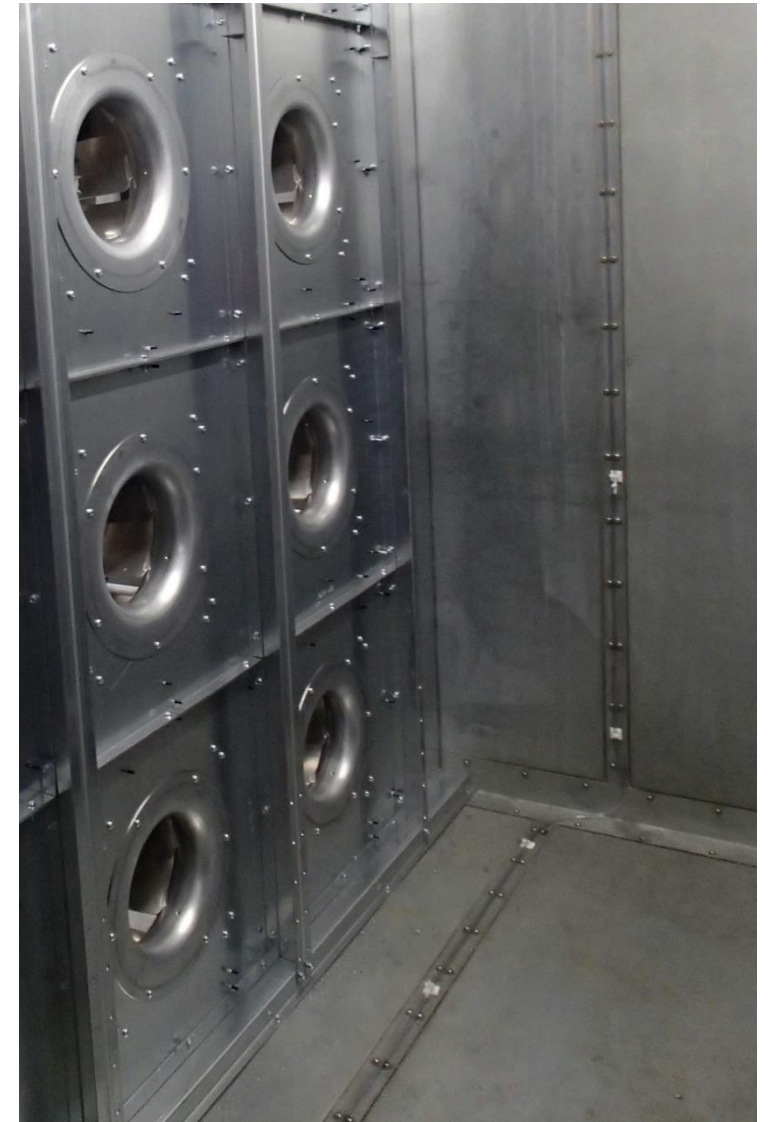
36 A

Amortization

3,1 Years

CO₂

13 t / Year



Additional Saving Potential through demand speed control not included!

Retrofit – Best-Practice



ECFanGrid 3x3

Input Power

15 kW

23 A

Belt-Driven

Input Power

20 kW

50 A

Amortization

2,9 Years

CO₂

15 t / Year



Additional Saving Potential through demand speed control not included!

Retrofit – Best-Practice



2x ECFanGrid 3x3

Input Power

46 kW

70 A

**2x Forward Curved
Impeller**

Input Power

67 kW

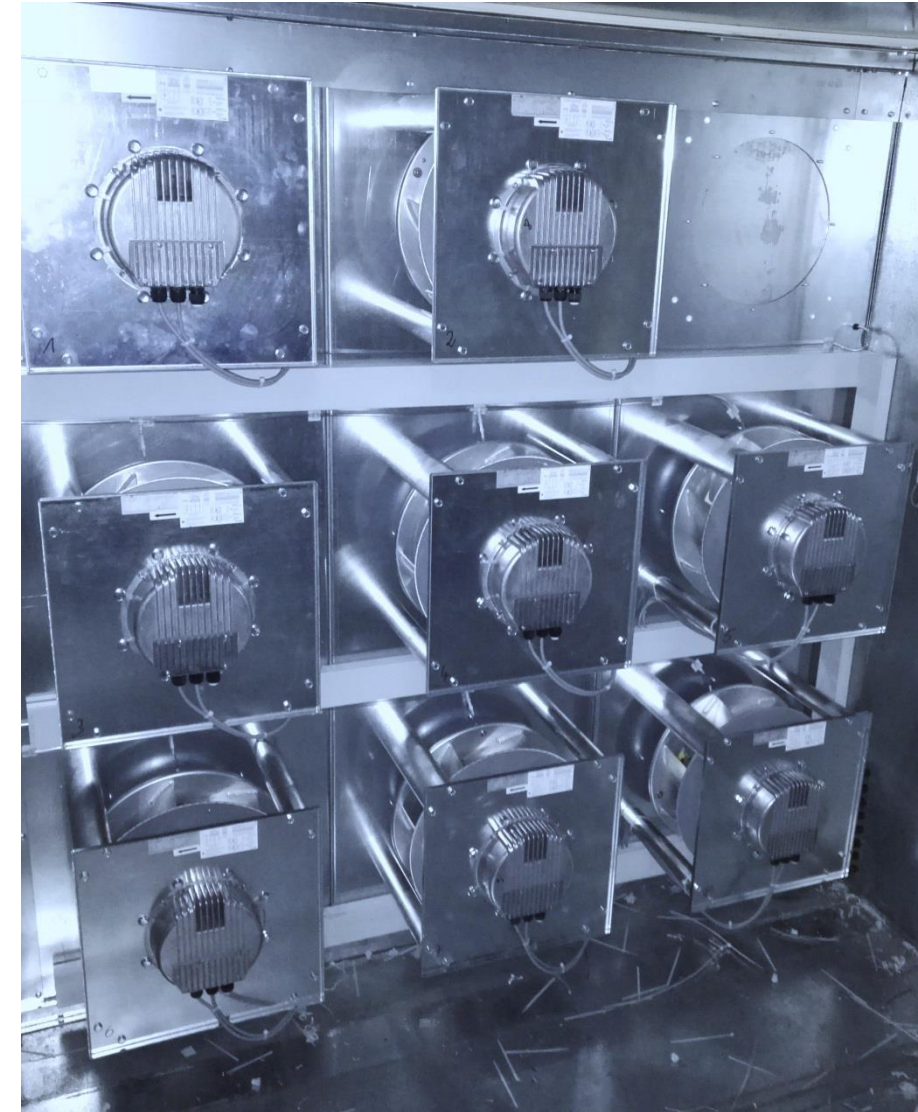
105 A

Amortization

1,5 Years

CO₂

100 t / Year



Retrofit – Best-Practice



ECFanGrid 3x3

Input Power

27 kW

41 A

Forward Curved Impeller

Input Power

35 kW

67 A

Amortization

2,3 Years

CO₂

20 t / Year



Retrofit – Best-Practice



ECFanGrid 4x3

Input Power

26 kW

49 A

Belt-Driven

Input Power

32 kW

51 A

Amortization

2,6 Years

CO₂

14 t / Year



Retrofit – Best-Practice



2x ECFanGrid 3x3

Input Power

26 kW

40 A

2x Belt-Driven

Input Power

36 kW

50 A

Amortization

3,5 Years

CO₂

15 t / Year



Retrofit – Best-Practice



ECFanGrid 3x4

Input Power

23 kW

34 A

Axial Fan

Input Power

27 kW

40 A

Amortization

3,4 Years

CO₂

12 t / Year



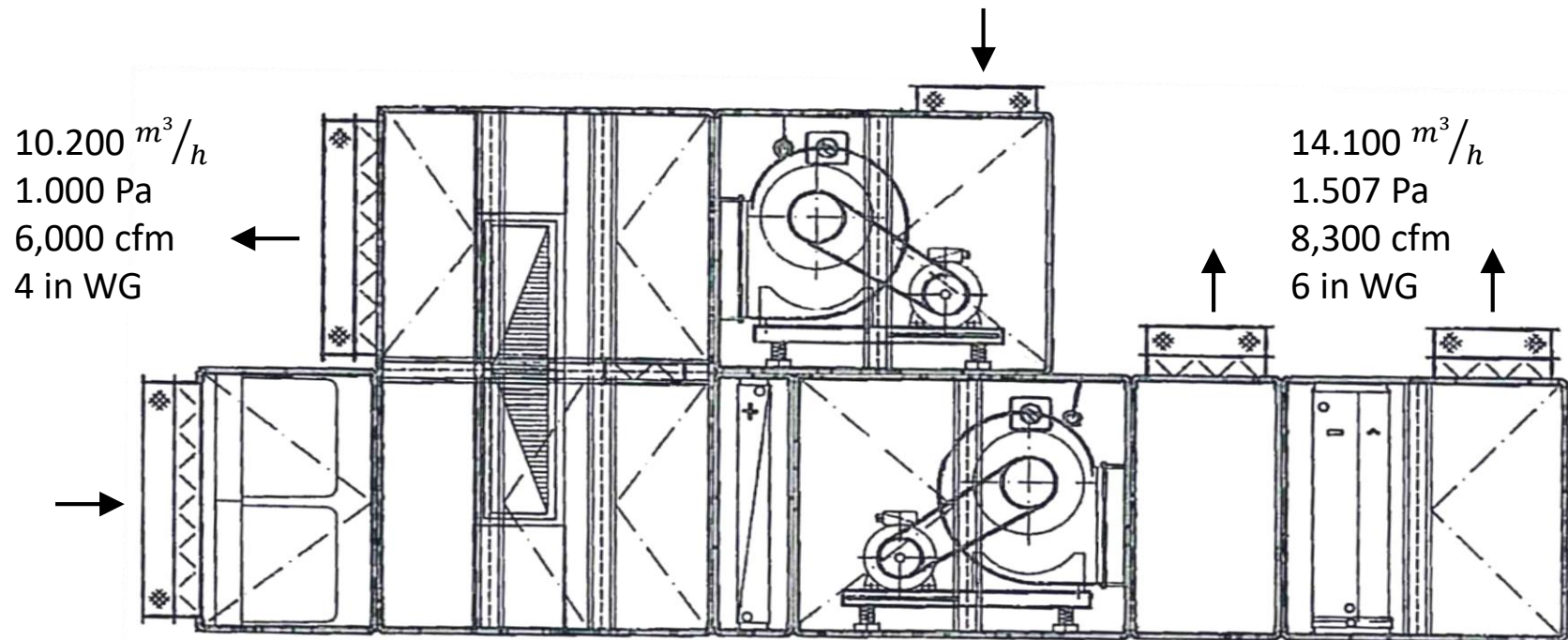
Retrofit – Project Example

PROJECT 3

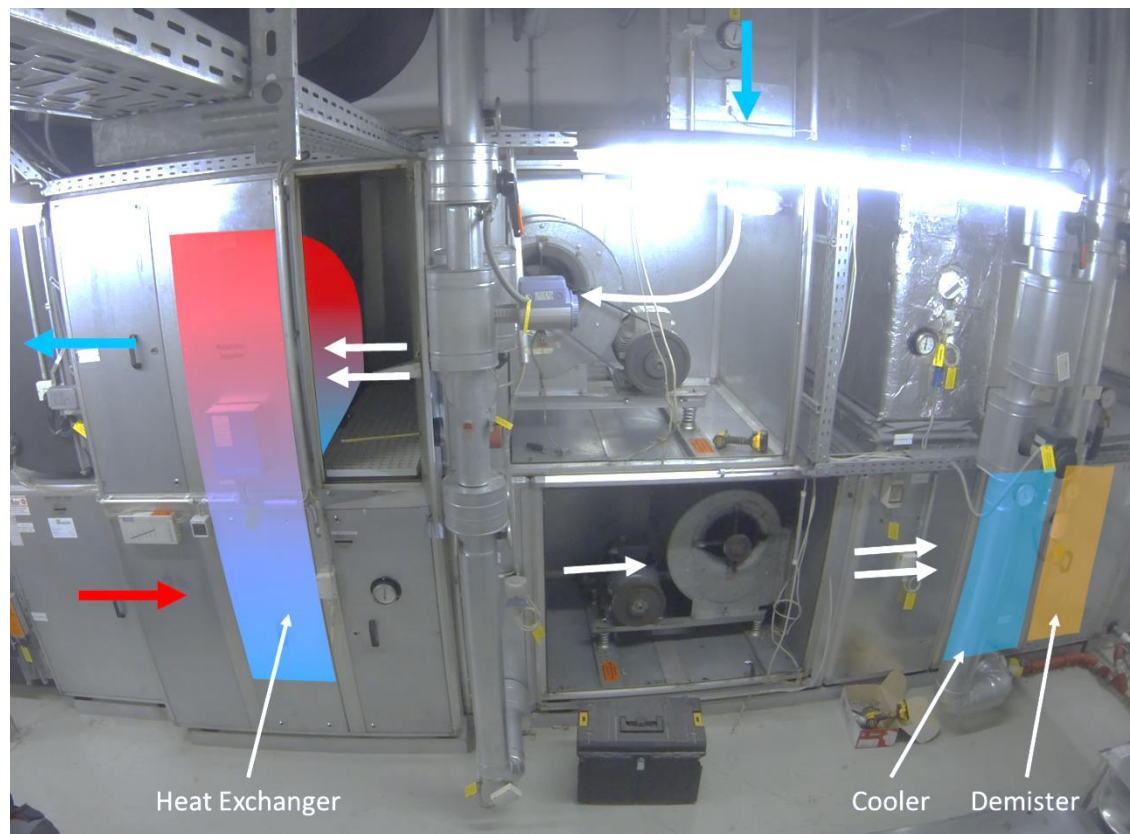
Operating since: **September 2015**

RETROFIT UNIT FROM 1997 with 1x2 (Exhaust) and 2x2 (Supply) ECFanGrid.

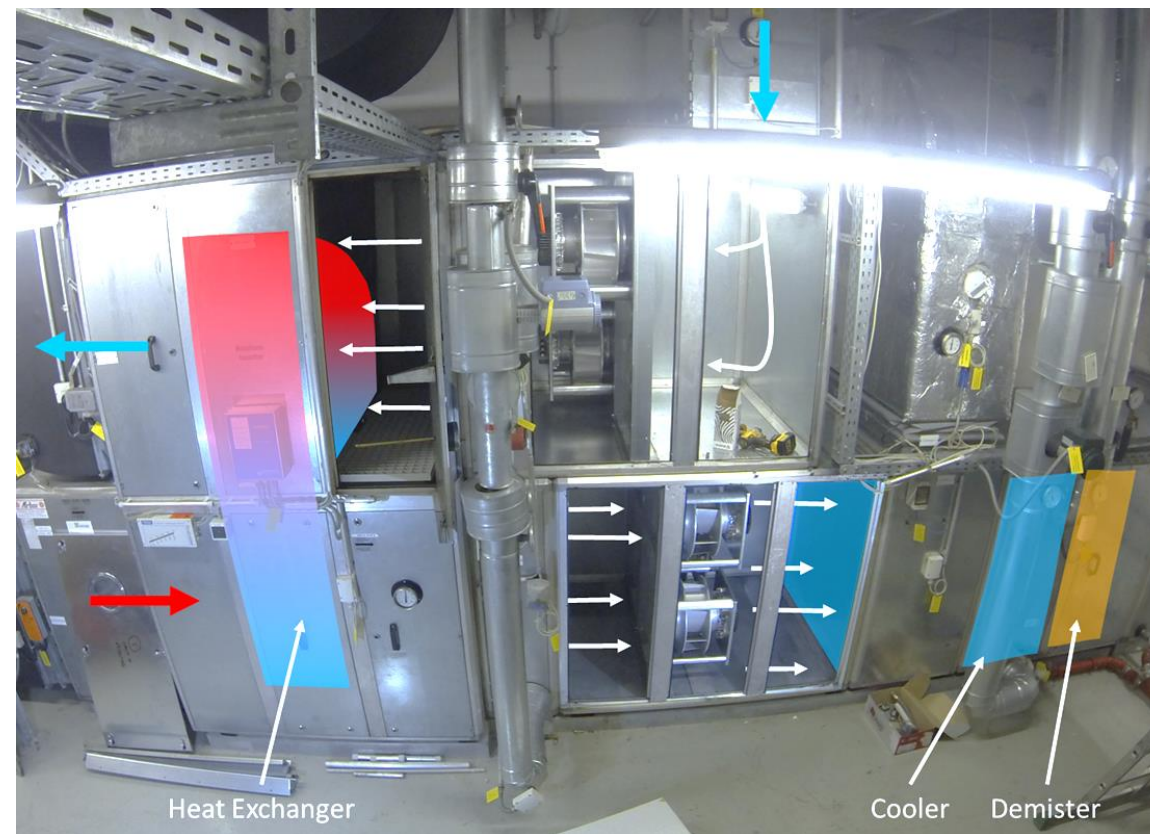
In this arrangement frequency drives were malfunctioned. Customer wants to change to the more reliable ECFanGrid System in order to reduce future replacement costs.



Retrofit – Project Example



Before. Flow towards Heat Exchanger and Cooler was uneven and punctual.



After. Flow is more evenly distributed over the cross section.

Retrofit – Project Example

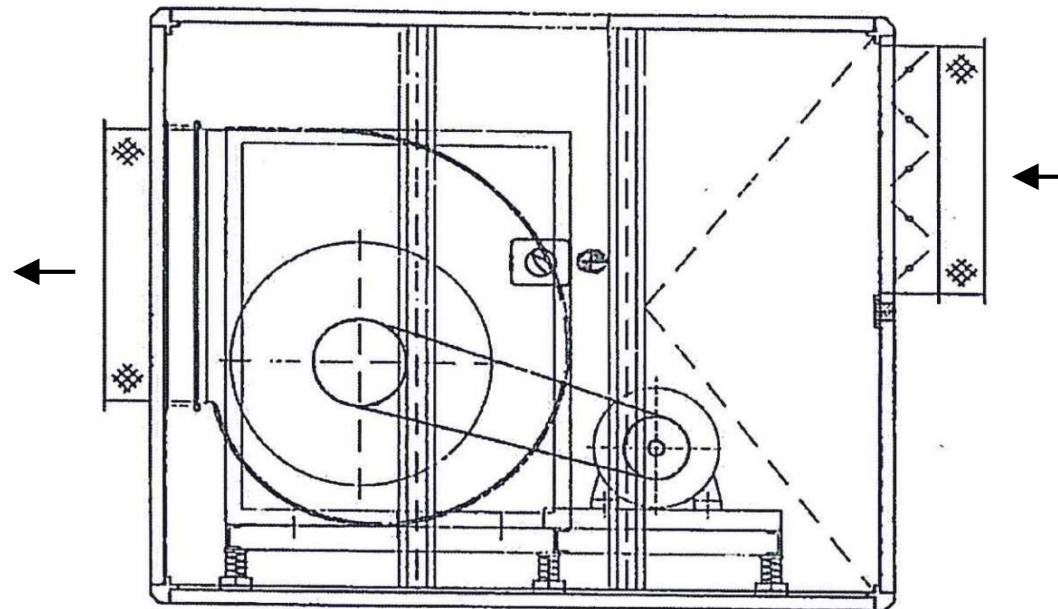
PROJECT 7

Operating since: **August 2015**

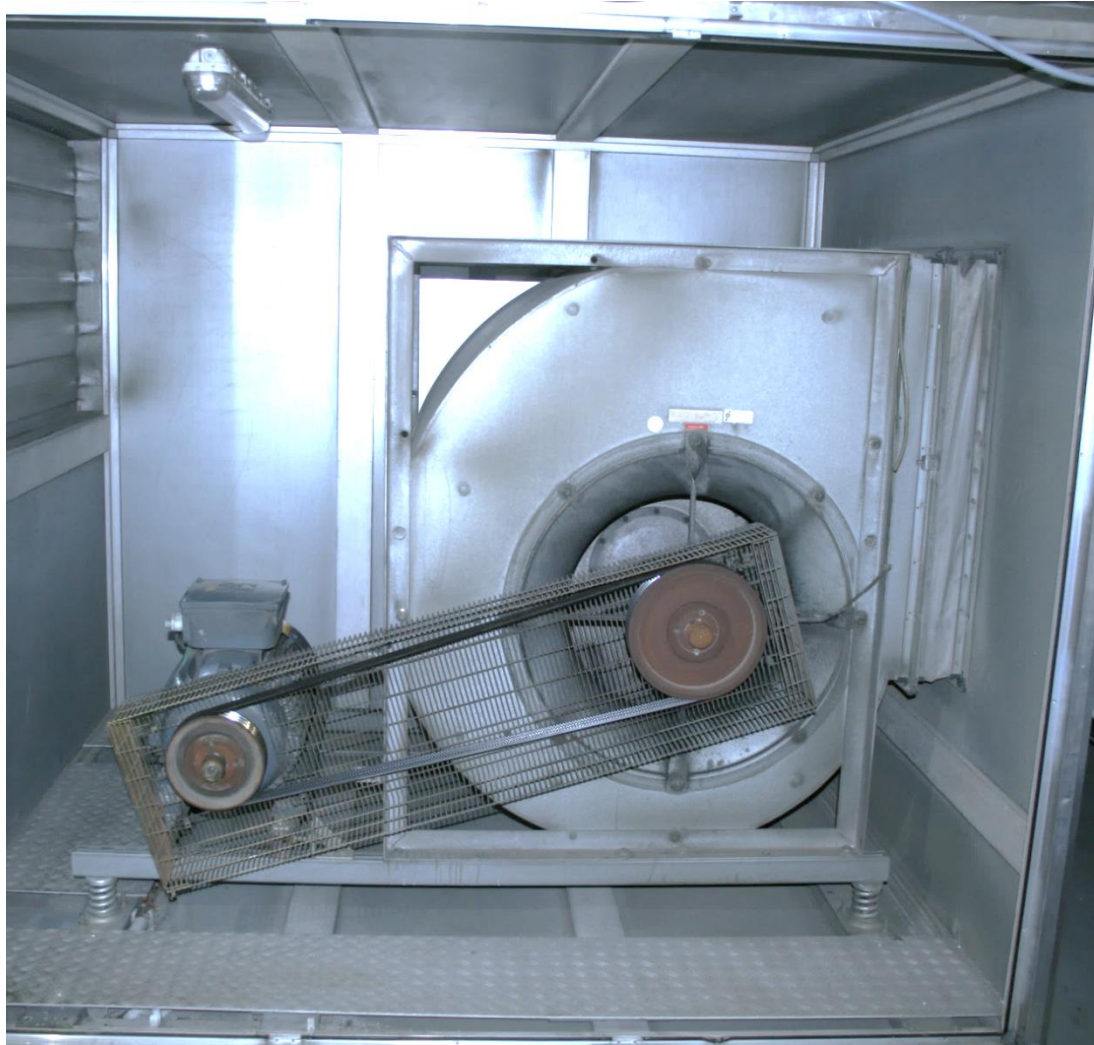
RETROFIT UNIT FROM 2001 with 2x3 ECFanGrid.

The challenge was to replace the old existing malfunctioned belt driven fans with a system, where future replacements were due to limitations in the access area easy to handle by two people.

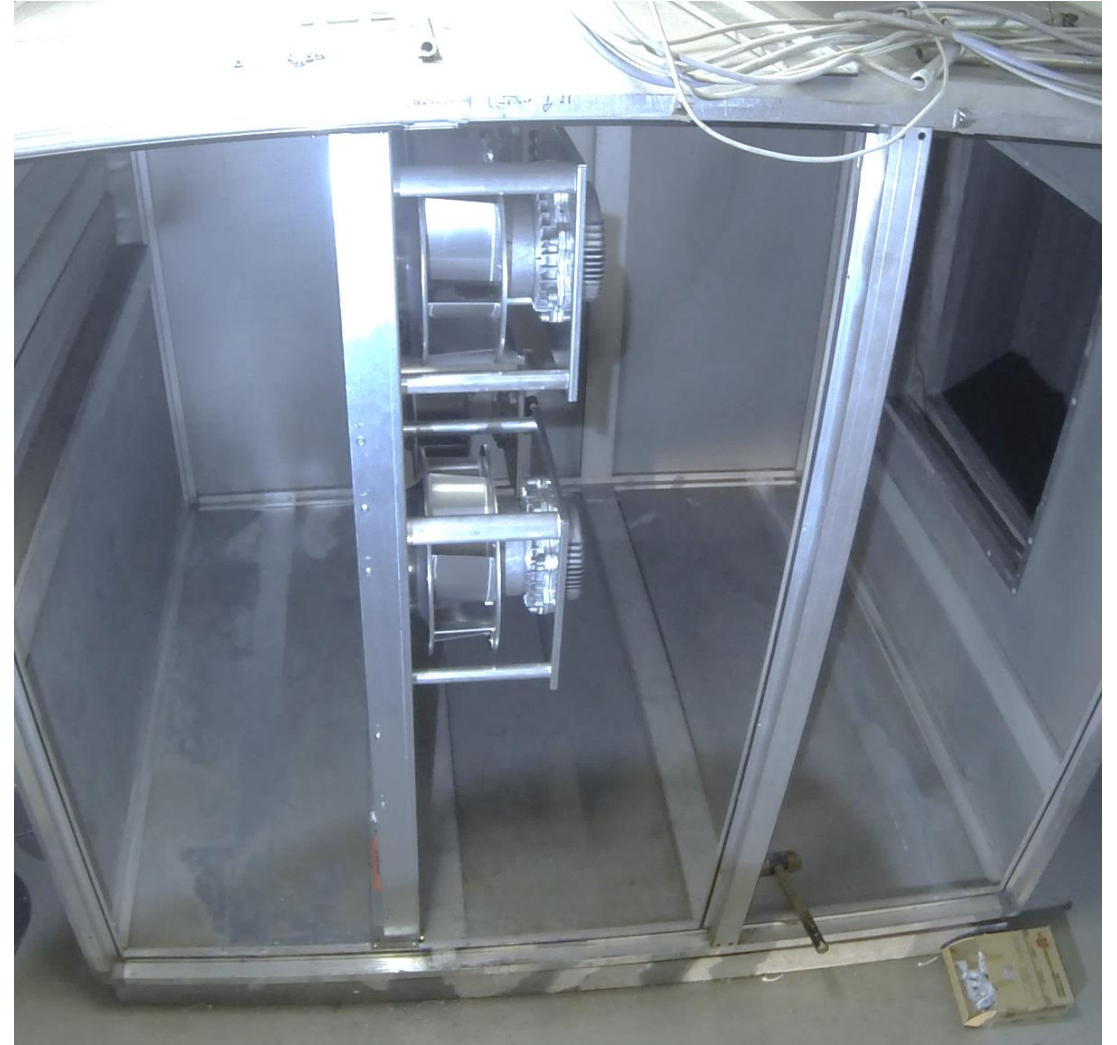
35.000 m^3/h
1.000 Pa
20,600 cfm
4 in WG



Retrofit – Project Example



Before. Maintenance Intense belt driven centrifugal fan.



After. Maintenance-Free direct driven EC-Fans. The bottom row is prepared for a performance upgrade.

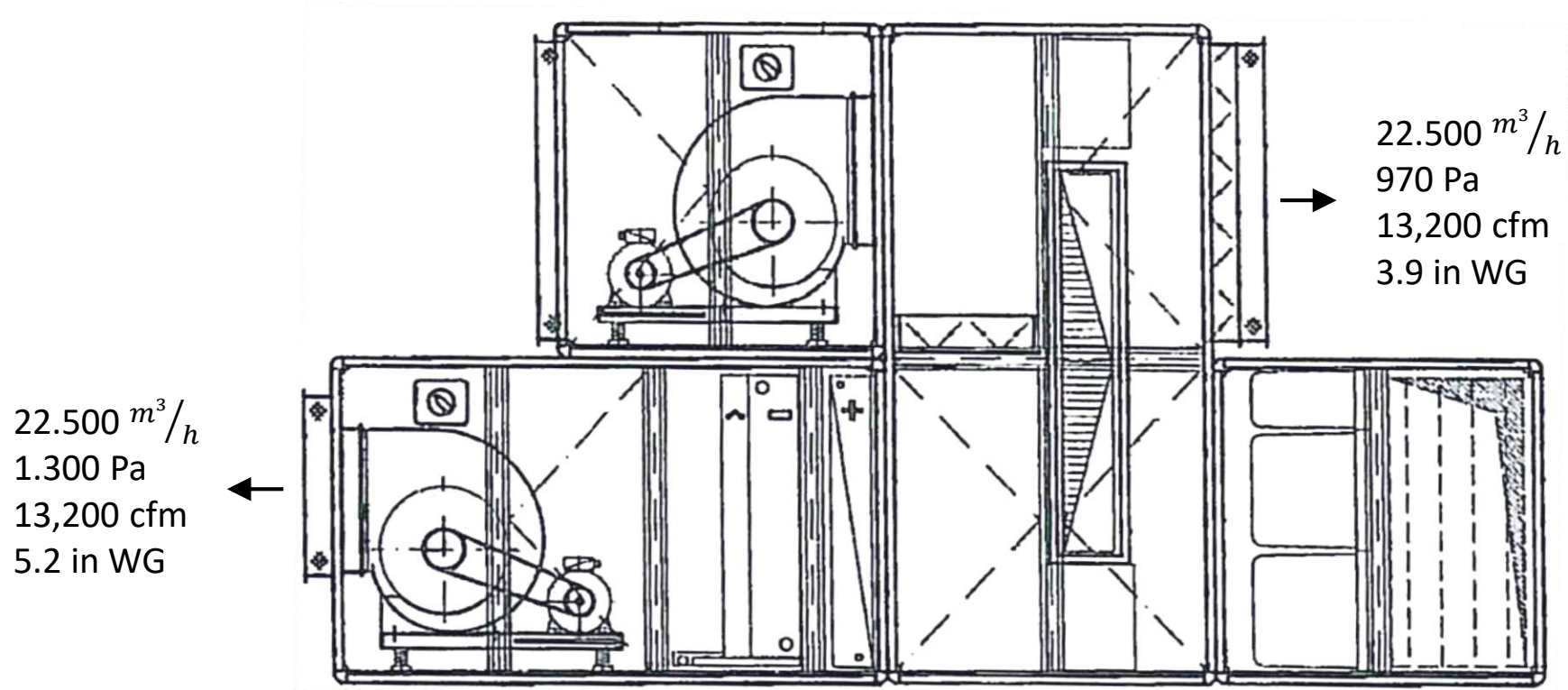
Retrofit – Project Example

PROJECT 10

Operating since: **September 2015**

RETROFIT UNIT FROM 1996 with two 2x2 ECFanGrids

Efficient replacement of two end of life belt driven fans with backward curved impellers.



Retrofit – Project Example



Left. ECFanGrid Retrofit Unit after the installation with wiring cabinets.

Right. Inlet Area. Efficient cleaning through Floor-Free installation.





<https://rosenbergcanada.com>



<http://ecfangrid.ca>