



# GEOVENT

## GRTU 3800

Roof mounted Air Handling Unit – Art.no. 02-602

Geovent GRTU roof top unit is a straightforward and efficient ventilation unit with minimal installation expenses. The unit's large range of accessories makes it suitable for a variety of ventilation applications where high heat recovery and low energy consumption is required.

GRTU 3800 is based on a rotating heat exchanger, which has an efficiency of up to 84% of the warmth in the extracted air. The air inlet and outlet is integrated in the sides of the unit and effective filters insure that the high efficiency on the heat exchanger is maintained.

The EC fans with directly driven B-impellers and lives up to the standard of energy effectiveness class IE3 (applicable from 2015). The fans are 100% continuously adjustable, why the airflow easily is balanced for the required task.

The entire construction is galvanized and sealed in the joints. Modular construction with rail systems makes inspection / replacement of components easier, and gives the unit flexibility in regards to accessories and installation.

GRTU 3800 can be mounted on both flat and sloping roofs. In both cases only one roof base is required. The unit's mounting frame makes it easy to place in the roof base. GRTU 3800 can also be mounted indoors where this is preferred, and which is to be addressed when ordering.



Extraction and supply air is placed at the bottom of the unit and fixed channel connections or diffuser solution can be selected. Geovent generally recommends the solution with channels which provides a better distribution of the air.

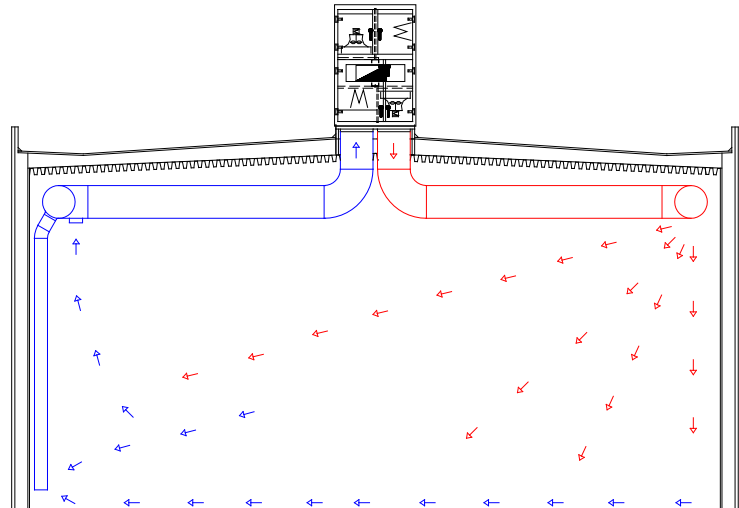




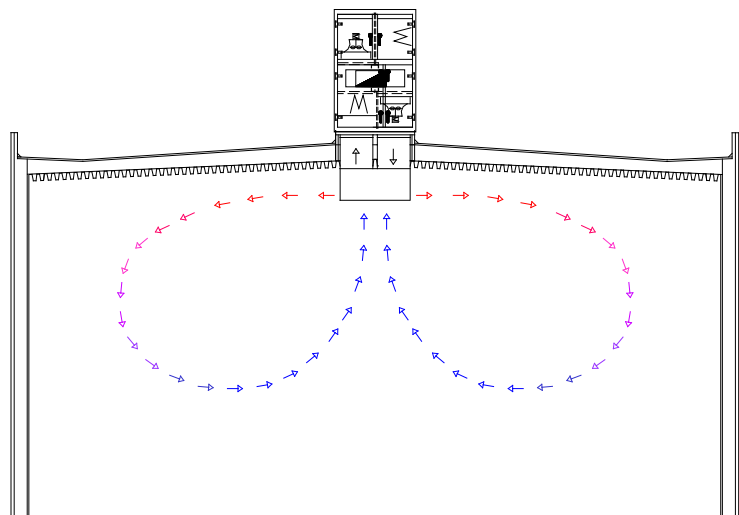
### Installation example for GRTU 3800

The GRTU 3800 has low energy consumption and a highly effective impeller.

The GRTU 3800 comes complete with control panel and must be connected to 3x400V. By default, the automatic are set to a fixed airflow (pressure control) and with the built-in day / week timer the unit is programmed to only ventilate during the periods that are needed.

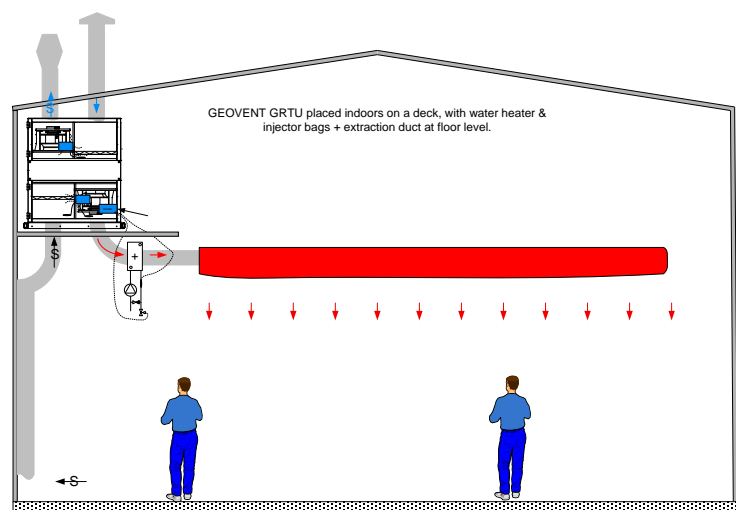


For instance, in auto repair shops, where extraction of heavier gases and vapors can occur, the diffuser solution is not recommended. Instead it is recommended that 60% of the contaminated exhaust air is removed by the floor and 40% at the ceiling. Supply air with injector bags, nozzles, grids or anemostats.



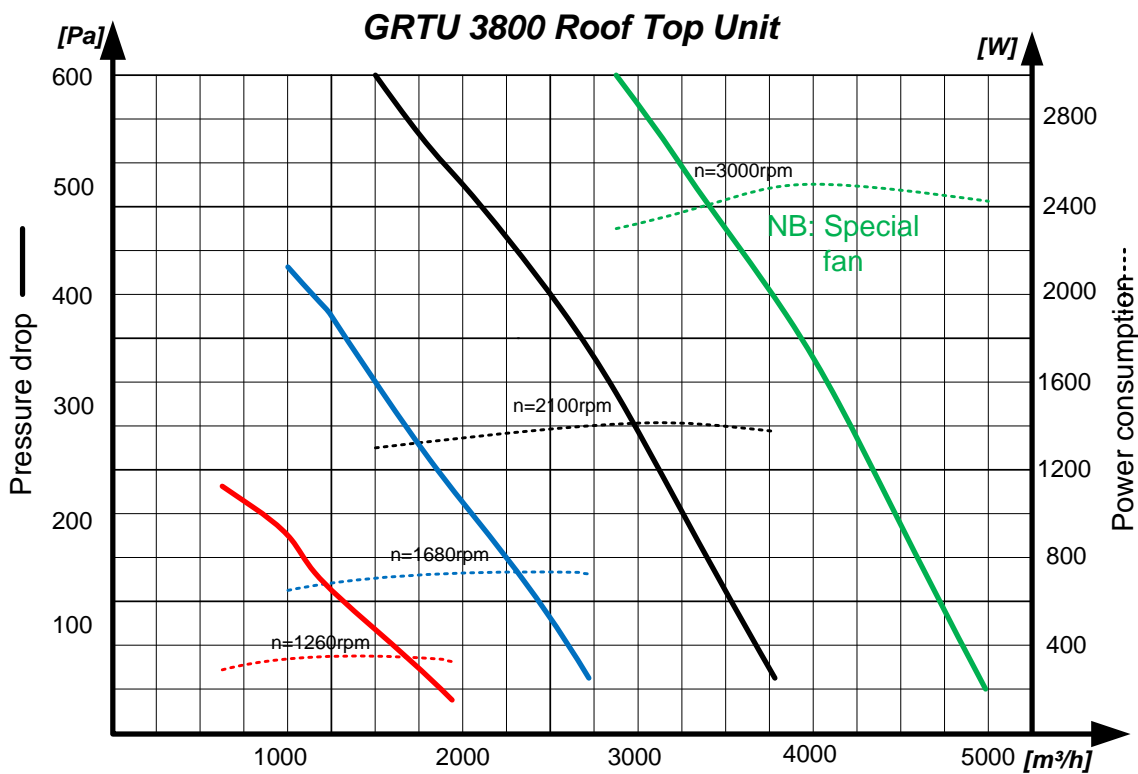
Indoor placed GRTU located at deck, in special execution, incl. circular connections in the top for air inlet/outlet.

Example shows solution with supply air bags and extraction at floor level. Furthermore, a heater is mounted.





### Pressure loss for GRTU 3800

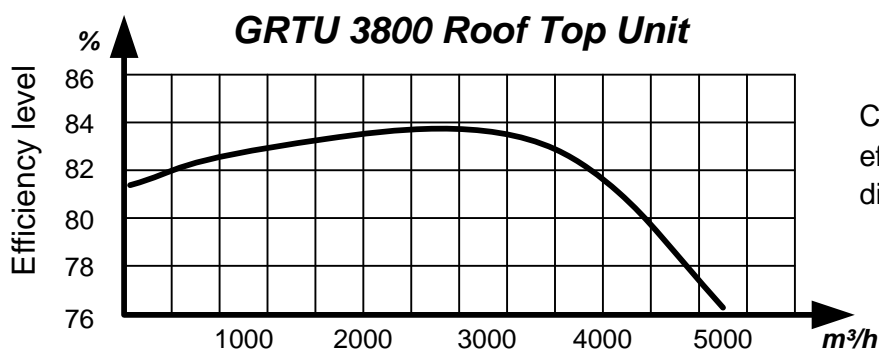


The fan diagram displays the available pressure for duct system. The outer curve shows max air flow for the GRTU 3800 + (order number: 02-602A). GRTU 3800 + is used in situations where there is a need for higher available pressure.

Noise data from fan @ 2100rpm.

The units own isolation is not included in the shown data

Hz	63	125	250	500	1000	2000	4000	8000	Total
Extraction side	43	55	64	64	61	59	56	56	70 dB(A)
Pressure side	45	57	66	67	63	61	58	58	72 dB(A)



Curve showing the efficiency of the rotor at different airflows



### Technical data for GRTU 3800

Supply power 3x400V, 50Hz

Cabinet: Galvanized sheet metal, 50mm isolation.

Fans: 2 stk. German produced EC-blue with plastic impeller. 1,4kW, 50Hz, 3x400V, 2,4-1,9A, k-factor 172.

3800+ German produced EC-blue with aluminium impeller. 2,2kW, 50Hz, 3x400V, 4,0-3,2A, k-factor 95.

Filter: The filter as standard is F5. Upon surcharge a F7/EN779 envelope filter can be mounted.

Rotor: Alu coil with 1,6mm wave height. Galvanized steel frame for horizontal mounting. Motor: 3x400V 0,04kw.

Weight: 400 kg.

Control: Master automatics cabinet is placed inside the unit

3x400V 50 Hz supply



## Controls for GRTU 3800

### General:

The GRTU 3800 consists of 3 main control elements. Main control panel with master controller, fan control and filter guard (2 pcs.), and hand-held terminal for programming and monitoring. Everything is internally wired and ready for use (excl. sensors outside the unit, which must be installed at site).

The controller maintains the preset airflow and regulates the fan continuously. The controller features a day- /week program and gives alarm in case of malfunction and filter change. The integrated controller also handles (optional) reheating and recirculation components.

### Master controller:

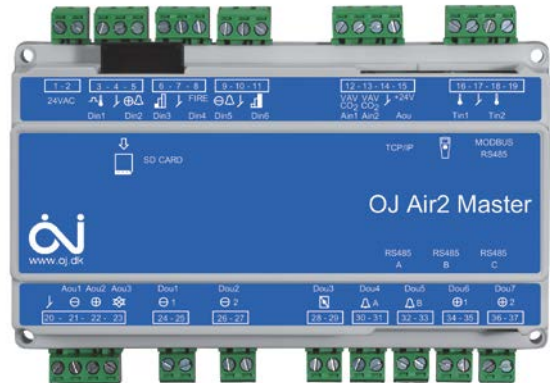
- User-friendly, flexible & gives good overview
- Web server access on 3 individual levels
- Provides lowest possible energy consumption and optimum reliability

### Fan IO:

- Input and output module with dual pressure transmitter
- Monitors filters and ensure correct fan flow

### Hand terminal:

- Easy to operate for the end user, but can also be used by the installer
- Informative display, that ensures minimal time consumption, high quality and low life cycle costs.

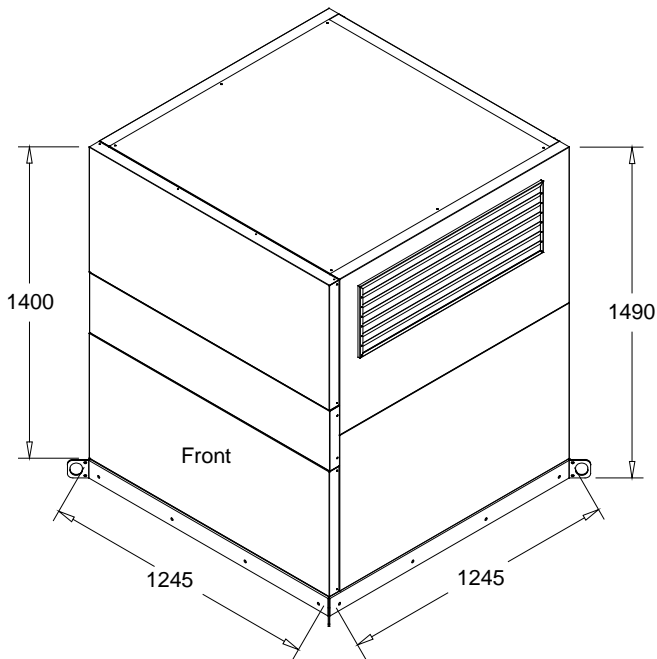


Master controller

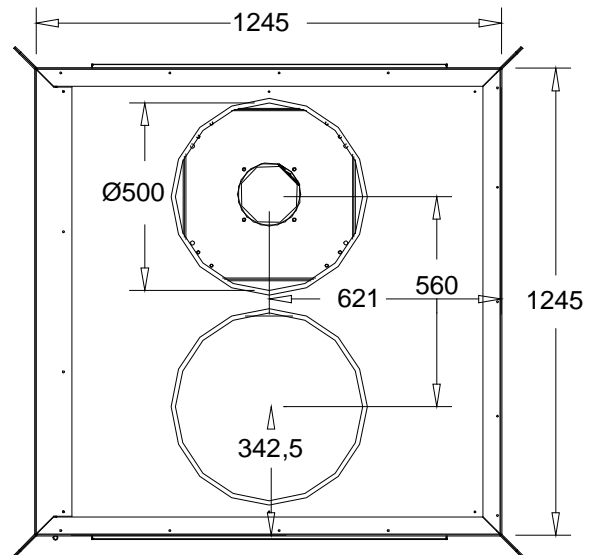




### Measures for GRTU 3800

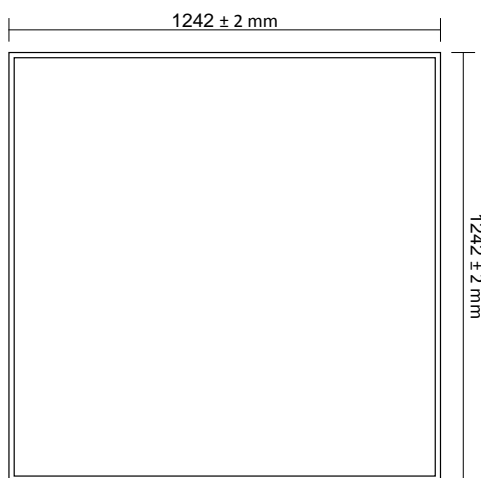


Measures (Shown without rain cover on inlet/outlet)



GRTU measures, below.

### Measures for mounting base



Outer measures mounting base



Example of base on sloping roof



### Accessories for GRTU 3.800

**Art.no: 02-703**

Shut-off damper incl. motor.  
Used in both inlet / outlet as  
well as recirculation damper



**Art.no: 02-761**

Extension channel  
800 x 800 x 500



**Art.no : 02-762**

Extension channel  
800 x 800 x 1000

**Art.no: 02-710**

Motor for damper  
LMC 24 A



**Art.no: 02-712**

2 way valve R210 +  
motor TR24 SR



Used for 10KW water  
heater

**Art.no: 02-211**

Water heater  
10 KW water 70/40.  
Used when only venting.  
For mounting on channel.



**Art.no: 02-714**

2 way valve R212 +  
motor TR24SR  
Used for 25KW water  
heater



**Art.no: 02-703**

Water heater  
25 KW water 70/40.  
Used for heating / re-  
circulation.  
For mounting on channel



**Art.no: 02-717**

Room sensor (used when  
heating)



**Art.no: 02-704**

Frost sensor

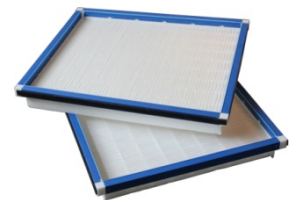
**Art.no: 02-715**

**Diffuser kit**  
Consists of a transition  
piece for mounting on the  
GRTU, Flex hose ø500 incl.  
hose clamps & diffuser  
mounted underneath  
800 x 800 square channel



**Art.no: 02-717**

Cassette filter F7  
The kit consist of 2 filters  
+ adaption pcs. for each  
airflow



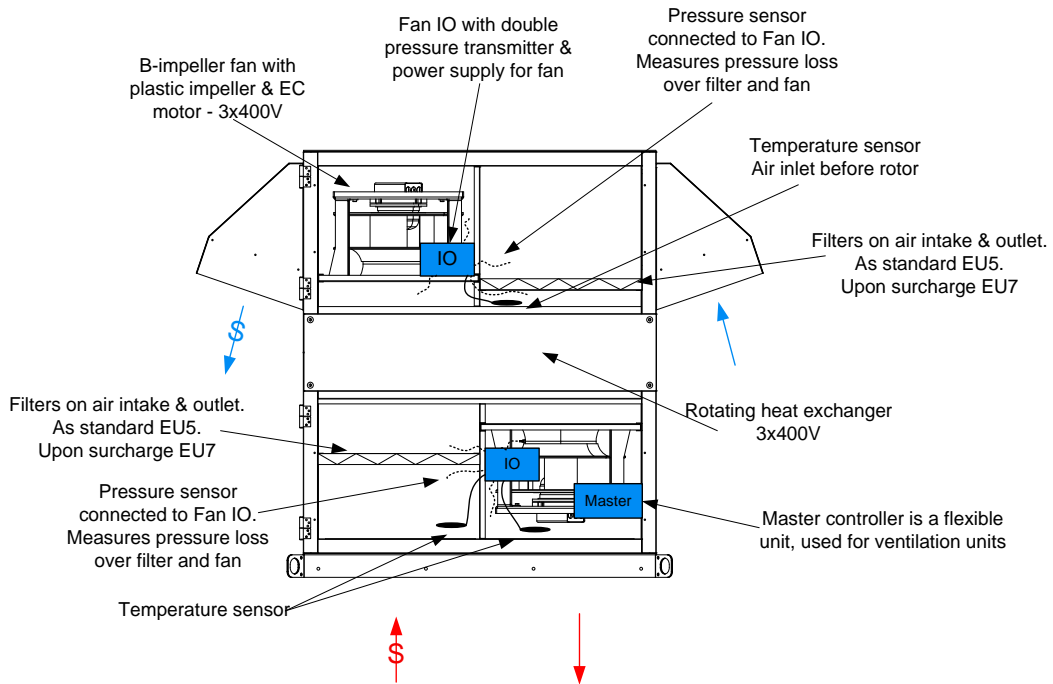
**Art.no: 02-716**

Plain filter F5  
(Standard)

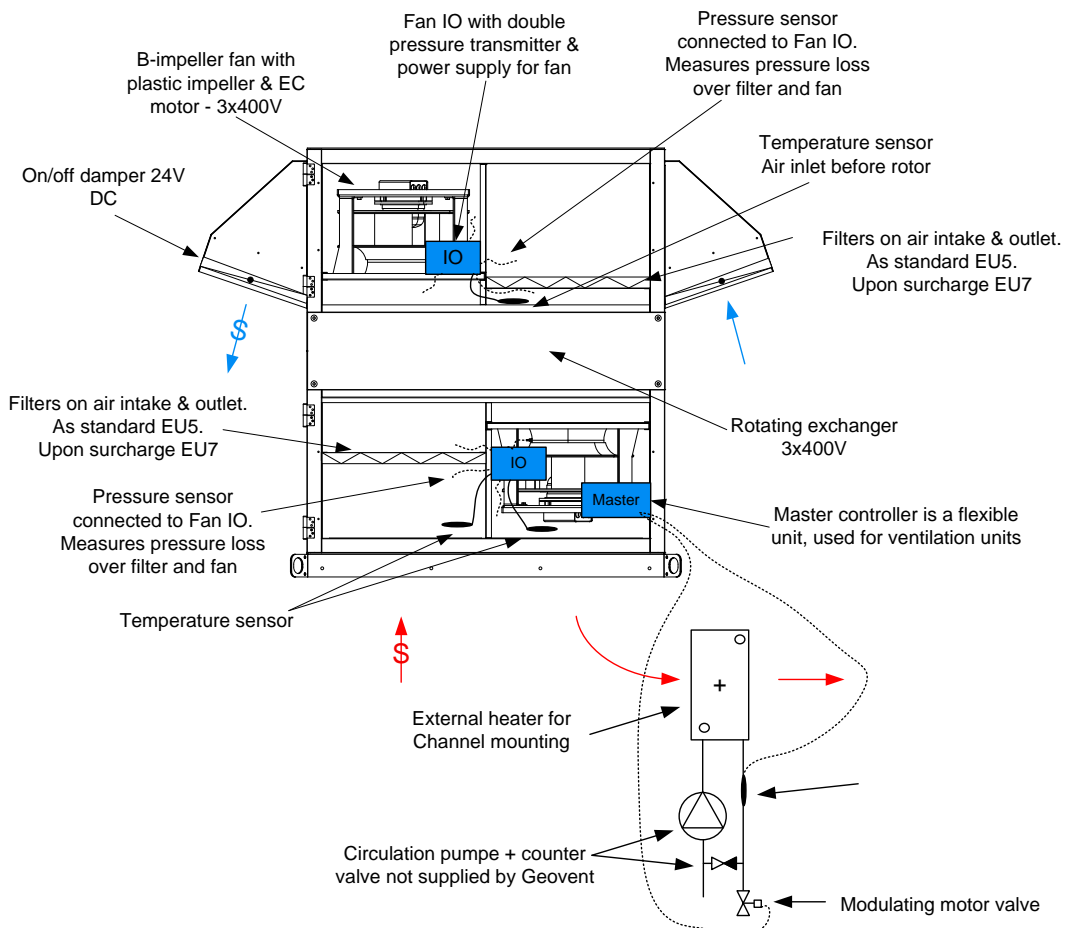




### TYPE 1



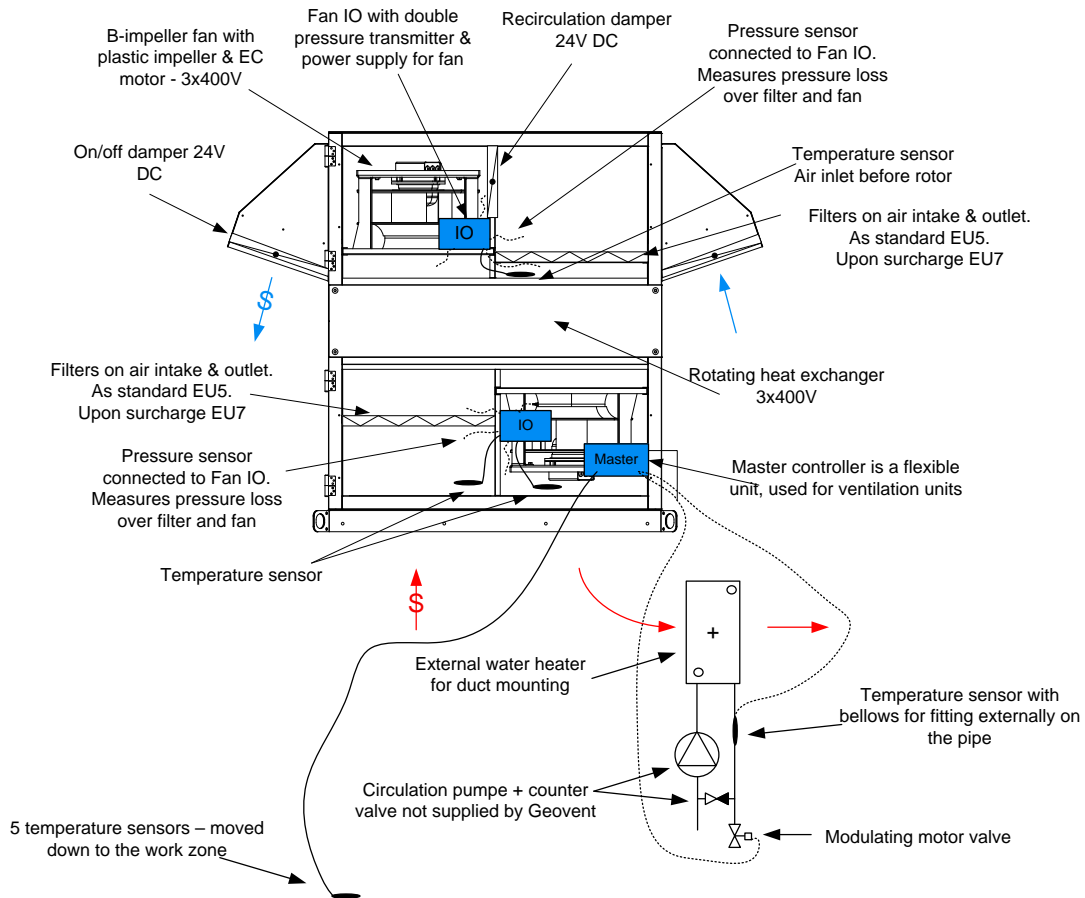
### TYPE 2 with water heater







### TYPE 3 for recirculation & water heater



### GEOVENT GRTU placed out doors on the roof, with water heater & injector bag, and extraction outlet by the floor.

