

# Instructions

**HERU 50**

**HERU 75**



**ÖSTBERG**  
THE FAN COMPANY

## **EC declaration of conformity (as defined by the Machinery Directive 98/37/EEC, appendix 2A)**

**We hereby confirm that HERU 50 and HERU 75 comply with the requirements in the following EC-directives and harmonized standards.**

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### **Machinery Directive (MD) 98/37/EEC**

#### Harmonized standards:

- EN 292-1 »Safety of machinery - Basic concepts, general principles for design - Part 1: Basic terminology, methodology«
- EN 292-2 »Safety of machinery - Basic concepts, general principles for design - Part 2: Technical principles and specifications«
- EN 294 »Safety of machinery - Safety distances to prevent danger zones being reached by the upper limbs«

Installation must be done in accordance with enclosed instructions.

### **Low Voltage Directive (LVD) 73/23/EEC and changes 93/68/EEC**

#### Harmonized standards:

- EN 60 335-1 »Safety of household and similar electrical appliances - Part 1: General requirements«
- EN 60 335-2-80 »Safety of household and similar electrical appliances - Part 2: Particular requirements for fans«

EN 60 204-1 1 »Safety of machinery - Electrical equipment of machines - Part 1: General requirements« is valid for fans including motor with automatic thermo protector.

### **Directive for Electromagnetic Compatibility (EMC) 89/336/EEC and changes 92/31/EEC and 93/68/EEC**

#### Harmonized standards:

- EN 50 081-1 »Electromagnetic compatibility - Generic emission standard - Part 1: Residential, commercial and light industry«
- EN 50 081-2 »Electromagnetic compatibility - Generic emission standard - Part 2: Industrial environment«
- EN 50 082-1 »Electromagnetic compatibility - Generic immunity standard - Part 1: Residential, commercial and light industry«
- EN 50 082-2 »Electromagnetic compatibility - Generic immunity standard - Part 2: Industrial environment«

Avesta 2001-10-12

A handwritten signature in black ink, appearing to read 'Stefan Viberg'.

STEFAN VIBERG  
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## Unit description

The heat recovery unit HERU is designed for supply and exhaust ventilation with heat exchange. HERU can be used in houses, office spaces, apartments etc. where there is a great need for heat-recovery, low energy consumption, low sound level and high operation safety.

### HERU consists of:

- Rotating heat exchanger, manufactured from aluminium, centrally placed in the unit.
- Radial fans with B-wheels and external rotor motor. The fans are connected with quick change coupling switches, easy to remove for cleaning.
- EU7 or EU5 filter. Pressure gauge that indicates when the filter is dirty.
- An external operating unit with a three-position changeover switch for voltage regulation (*minimum, normal and accelerated ventilation*). There is also a possibility to turn off the rotor drive motor, if you want to

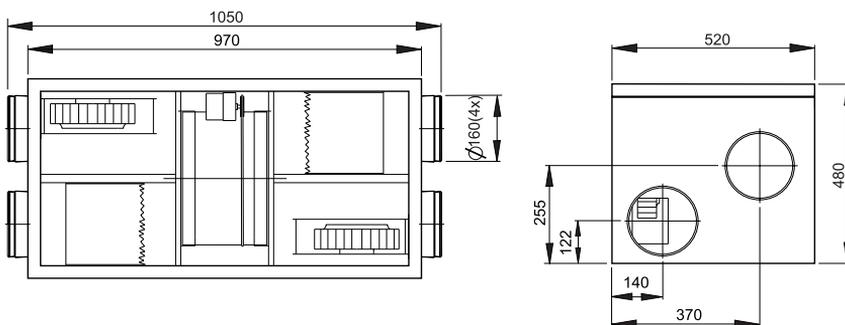
disconnect the heat exchange for instance during the summertime. There are indicators for operation (green) and change of filter (red).

- Unit housing and additional metal plate details are manufactured from galvanized steel.\*

HERU can be placed in warm or cold areas, since the unit housing is insulated with rock wool.

\*The standard unit is unpainted.

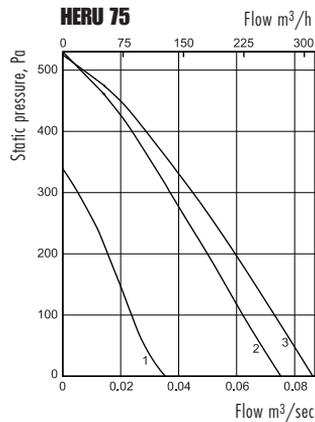
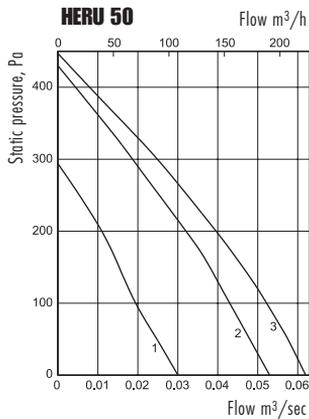
## Measurements



Technical data	HERU 50	HERU 75
VOLTAGE	230V 50Hz 1phase	230V 50Hz 1phase
CURRENT	0,58A	0,90A
POWER	132 W	200 W
WEIGHT	63 kg	65 kg
CONNECTIONS	$\varnothing 160$ mm	$\varnothing 160$ mm

**Operating central:** Terminal for connection in the unit, electrical installation must be made by a qualified electrician.

## Pressure- and flow



## Sound data

### HERU 50

41 l/s 100 Pa	$L_{pA}$	$L_{WA}$ tot dB(A)	63	125	250	500	1K	2K	4K	8K
Unit room	31	38	34	31	32	32	29	26	28	30
Inlet duct	56	63	50	54	54	58	57	54	50	36
Outlet duct	42	49	42	44	41	44	38	33	33	18

### HERU 75

60 l/s 100 Pa	$L_{pA}$	$L_{WA}$ tot dB(A)	63	125	250	500	1K	2K	4K	8K
Unit room	38	45	35	37	40	41	35	31	30	30
Inlet duct	59	66	47	56	59	61	60	56	51	37
Outlet duct	44	51	39	47	43	47	39	30	22	9

## Explanations to sound data

The sound data have been compiled by means of sound measurement methods as follows:

**Pressure and flow:** ISO 5801

**Determination of acoustic sound level in duct:** ISO 5136

**Determination of acoustic sound level in reverberation room:** ISO 3741

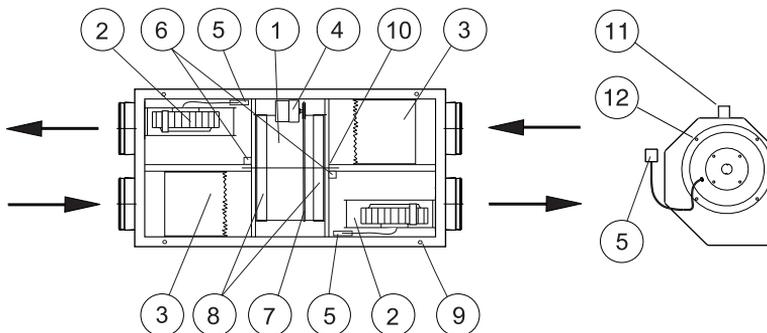
## Designations

$L_{WA}$  tot: Total A-weighted sound power level dB(A) (ref  $10^{-12}$  W)=the sum of the sound power level in the octave ranges.

$L_{WA}$ : A-weighted sound power level in octave range dB(A) (ref  $10^{-12}$  W).

$L_{pA}$ : A-weighted sound pressure level in dB(A) according to normed A-weighting correction and relating to an effective absorption area of  $20 \text{ m}^2$  with half spherical translation at a distance of 3 meters.

1. Rotor
2. Fan
3. Filter
4. Rotor motor
5. Quick switch
6. Brush joint
7. Belt
8. Rotor sealing
9. Screws for lid
10. Hexagonal screws
11. Handle
12. Screws for motor plate



## Cleaning

- Always disconnect the current and make sure that the unit cannot be turned on.
  - Open the lid by taking out the four screws **9**.
  - When indicated\*, change the filters as soon as possible. Otherwise there is a risk that the preadjusted flow cannot be reached. The filters **3** are removed by pulling them straight out from their mounting strip. It is recommended to check the fans for dirt when changing the filters.
  - The fans **2** are taken out, once the quick switch **5** is pulled apart, by taking a firm hold of the handle **11** on the fan cover and pulling it straight out from the unit. Dismount the motor plate from the fan housing (the four outer screws, **12**) and lift out the motor and fan wheel. Fan housing and fan wheel can be cleaned with a damp cloth, if necessary.
- Unit housing can be cleaned on the inside, if necessary.

\*Indication of dirty filters, pressure gauge, is preset for 100Pa at normal operation. (HERU 50, position 2: 41 l/s. HERU 75, 180 Pa, position 2: 60 l/s) At forced ventilation (position 3) the pressure gauge can indicate the need for filter change without this being necessary, when pressure exceeds the filter level at increased flow.

## Instructions for belt / sealing change

### Equipment

- Screwdriver PH1
- 2 Hexagonal keys 6 mm (preferably ball ended)
- Service set 6000102

### Dismounting

1. Disconnect the current and make sure the unit cannot be turned on.
2. Loosen the quick switches **5** and carefully pull out the fans **2**.
3. Pull out the filters **3**.
4. Dismount the brush joints **6** with screwdriver PH1.
5. Remove the tape that keeps the rotor sealings in place **8**, and move them in towards the rotor centre **1**.
6. Lift the belt **7** off from the rotor motor **4** and remove the screws that hold the rotor motor. Place the rotor motor on the edge of unit cover.
7. Loosen both of the hexagonal screws **10**. Lift out the rotor.

### Mounting

1. Change the rotor sealings **8** and belt **7** on the rotor.
2. Lift the rotor **1** into the box using the new belt. Mount with hexagonal screws and distancing.
3. Push the rotor sealings **8** towards the middle wall of the unit. Mount with new tape.
4. Mount the rotor motor **4** and lift the new belt onto the belt pulley.
5. Change the brush joint **6** in brush joint grip and remount.
6. Mount filters and fans carefully not damaging the joints.
7. Mount electrical switches. Check operation, fans and rotor before putting on the lid.

## Fault detection

### Type of fault

#### 1. Unit has stopped

Check the circuit breaker on operating unit. Set circuit breaker for the fan speed in position 2.

### If fault persists

Make sure the fuse, in the main electrical fuse box, is not broken. If it is see p.2.

#### 2. Lack of inlet- or outlet air

Check the quick switches to the fans in the unit. If they are not connected; break electrical current, reconnect the switches.

The fans may have stopped due to overheating. Check to see that no foreign object has come into the fan. To restore the overheating security: Break the electrical current, wait a few minutes, reconnect electricity.

#### 3. Only cold air is let in

Check the circuit breaker on operating unit for the rotor. Turn the switch for the rotor to position 1.

Break the electrical current, open the unit and check if the rotor can be rotated by hand. Make sure the driving-belt is not damaged.

#### 4. Not enough air is being let in/out

Make sure the circuit breaker for fan speed on the operating unit is in its correct position (2). Also check the indicator lamp for filter-change. If indicated, change filters.

Check inlet grid and filters. (see Cleaning)

**If none of the above helps, contact your electrician or contractor.**

## Spare parts component list

Name	Art. No.	Reference-number in sketch on page 5	
EU7 filter	1250110	3	Same for inlet/outlet
Filter EU5	1250123		Same for inlet/outlet
Motor with fan wheel, motor plate and switch	5700012 HERU 50	2 / 5	Same for inlet/outlet
Motor with fan wheel, motor plate and switch	5700017 HERU 75	2 / 5	Same for inlet/outlet
Driving motor for rotor	6000126	4	
External control unit, complete	6000078		
Circuit switch for rotor (0 I )	4020135		
Circuit switch for fan speed ( I II III )	4020132		
Indication lamp operation (green)	4020048		
Indication lamp filter change (red)	4020134		
Pressure gauge for filter	9500067		
Service kit, belt, rotor sealing and brush-joint	6000102		

## Planning instructions

During the planning, considerations should be taken to existing demands and recommendations concerning location, access, duct insulation etc.

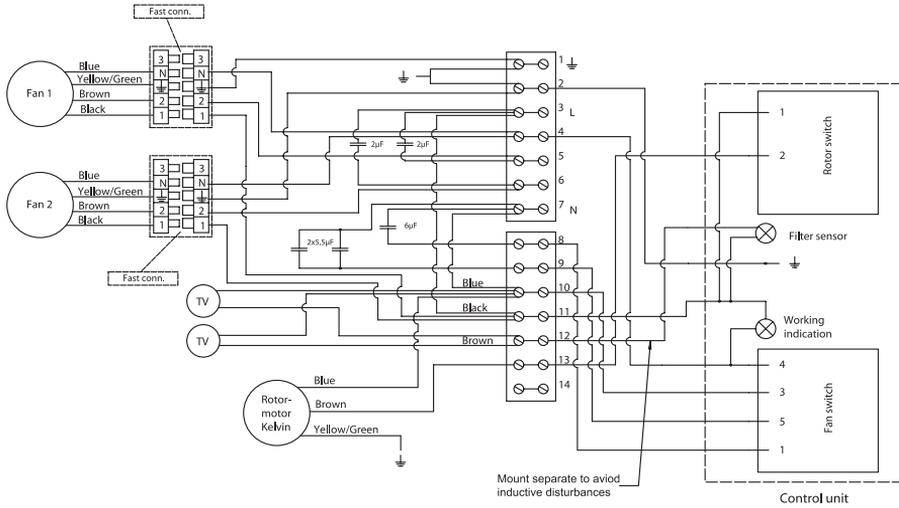
- To eliminate frame vibrations the unit should be placed on a insulation plate. Vibration-free duct connection, type cloth captures or duct clamps are likewise a requirement to avoid transmission of possible vibrations.
- Inlet duct and outlet duct should be heatinsulated in cold areas.
- Inlet duct should be insulated in warm areas. We also recommend the exhaust duct to be insulated.
- A cooker hood *must not* be connected to the unit, this because of the increased necessity for cleaning.
- HERU can be placed with the lid upwards or to the side, not vertically though or with the lid downwards. Consideration must be taken to access for service and maintenance.
- Adjustment to correct flow should be made by a professional to achieve best possible ventilation and to secure a negative pressure.

Continuous operation is the absolute best for the heat-recovery unit.

- Position 1 is a min. flow, used at a long absence from the house.
- Position 2 is normal working conditions.
- Position 3 is for forced air circulation.

# Wiring diagrams

## HERU 50



## HERU 75

