



# Clean indoor air!

**HERU® energy recovery units  
for energy and environmental savings  
and a healthier indoor climate**

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# QUALITY OF AIR IS QUALITY OF LIFE



## Clean comfortable indoor air

Most apartments and houses have poor ventilation. There is a direct connection between the quality of the indoor air and allergies, which effects our ability to concentrate and perform productively.

Today heating and cooling often is one of the house owners largest expense, that's why during the past decades building regulations have dictated that new buildings must be airtight to reduce energy costs, but this has lead to excessive moisture and mould occurring.

The most comfortable climate comes from controlled ventilation, exhaust and supply air, filtration and energy recovery, which will result in lower heating costs for the supply air. This is why we at AB C.A. Östberg designed and manufactured the prize winning energy recovery unit HERU®.

HERU® provides the house with warm or cool filtered, clean, fresh air, at the same time HERU® recovers the used indoor heat (alternatively cooled air) from the exhaust airstream. HERU® has a temperature efficiency of up to 84%.

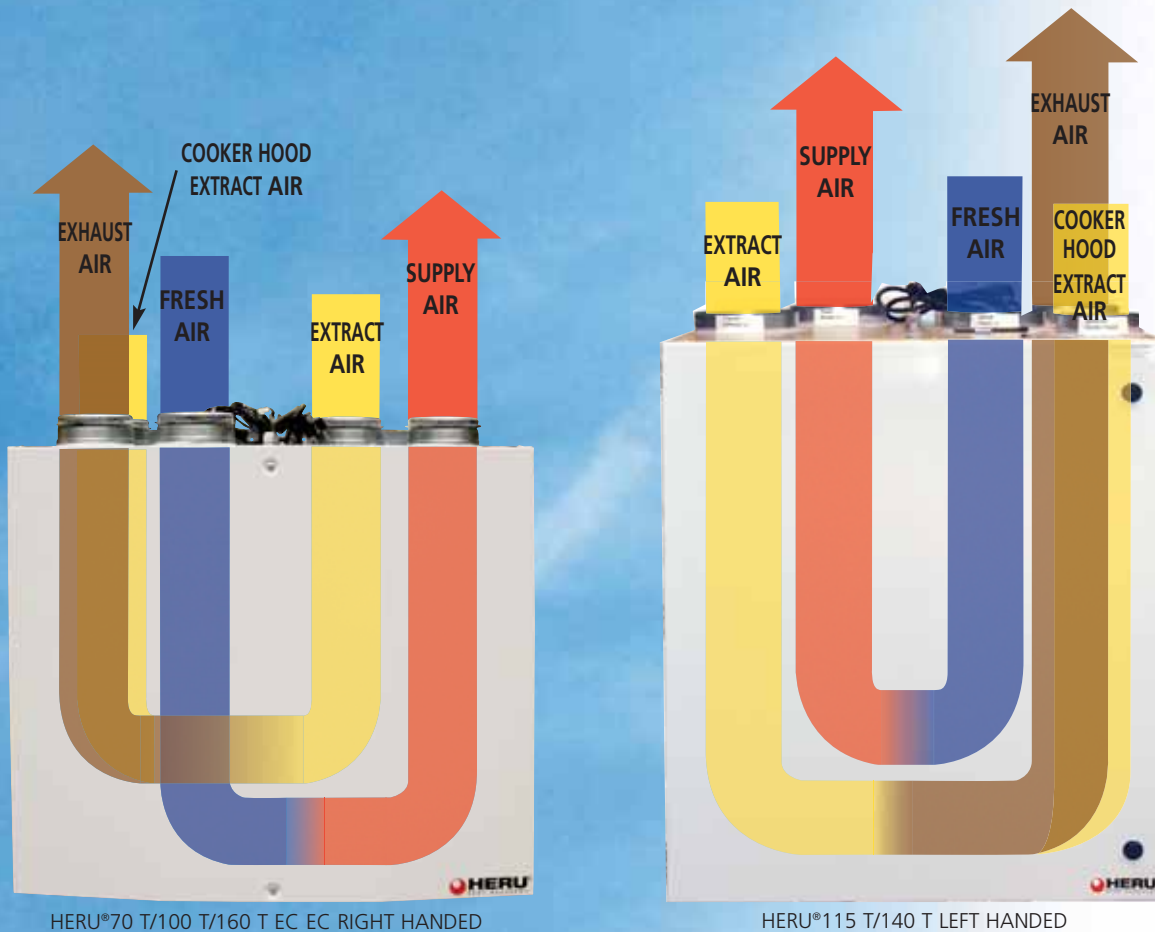
There are two models and 12 sizes of HERU® for you to choose from.



- Particle of dust
- Bacteria
- Mildew
- Grain of pollen



- Mould
- Radon
- Casein bearing tempera
- Evaporating chemical



HERU®70T/100 T EC/160 T EC can be ordered for right or left handing application, with or without connection to cooker hood.  
HERU®115T/140 T is supplied for left handing application only with connection to cooker hood.

HERU®S is supplied for right handing application but can be changed to left handed.



AB C.A. Östberg was the first company in Europe to develop small energy recovery units for apartments and houses utilizing with a rotating heat exchanger at competitive prices.

The Swedish Government Energy Department selected HERU® as the winner of their big nationwide competition for energy recovery units.

Many have discovered that HERU® offers energy savings and increased comfort at low cost investment.

The high temperature efficiency of HERU® also works when the outside air is below zero, in contrast to cross or contra flow plate heat exchanger where defrosting or reduced supply air through the exchanger is a necessity to prevent freezing!

The defrosting reduces the efficiency with 5-10% according to SP (Swedish Test and Research Institute), and also extra energy is needed to warm up the supply air that is not passing through the heat exchanger.

This is comparable with an exhaust air heat pump where 100% of the supply air has to be warmed up by the heating system in the house!





## HERU® energy recovery units

HERU® is designed for supply and exhaust air ventilation combined with energy recovery and it is equipped with fine mesh filters for both exhaust and supply air before the exchanger, this is suitable for homes, offices and other premises where there are great demands of high efficiency, low energy consumption (SFP), low sound levels, and of course, clean comfortable indoor air.

HERU® has been tested by the Swedish Test and Research Institute, SP, and recovers up to 84% of the energy that would be lost with a conventional ventilation system.

The airtightness of the HERU® has been tested by SP, the leakage is only, depending on the external pressure, 1.5-3.0%.

### REDUCE YOUR ENERGY USE EVEN MORE!

HERU® is available with both EC- or AC-motors. HERU®EC can reduce the energy use by up to 50% compared with the conventional AC.

HERU® comes in two different models: the wall model HERU®T for placing in warm space e.g. in the utility room, and the HERU®S for placing in warm or cold space.

There are five capacities of HERU®T and seven of HERU®S.





### ROTARY EXCHANGER

HERU® has a regenerative rotating exchanger manufactured from aluminium. This exchanger has an exceptional high efficiency when reviewed over all the year. This depending on the high temperature efficiency, up to 84%. No defrosting or condensed water drain is necessary since there is no ice formation in the exchanger. Therefore, the total efficiency (enthalpy) is up to 25% higher than plate heat exchangers manufactured from aluminium.

Another advantage is that HERU® with its rotary heat exchanger, can automatically mix the cool outside summer nighttime air with the warmer inside air to make sleeping comfortable.



*HERU® is delivered with built-in electric duct heater as standard.*

 Fan speed  
 Temperature  
 **Boost**  
 Overpressure

 100 % SM  

---

 23°C 23°C   
 22°C 22°C   

---

Boost : Overpr.

Main Menu  
 **Fan speed**  
 Temperature  
 Boost



## Wireless control unit

HERU® is operating via a simple to use wireless control unit. The operating range is approximately 50 meters and works through walls and ceilings.

### REGULATION FUNCTIONS

The wireless remote control is used to preset the required parameters e.g:

- Desired fan speed.
- Desired supply, room or extract air temperature.
- Setting the electrical heater.
- Time set for boost.
- Pressure compensation when supplementary heating is in use, i.e. an open fire or stove.
- Program the weekly timer to change the fan speed from one speed to another.
- Summer cooling, the fan speed is boosted without heat recovery.

### INFORMATION

The wireless control unit will monitor the status, e.g:

- Current temperature efficiency.
- Temperature of fresh air, exhaust air, extract air and indoor air after heat exchanger.
- Temperature in supply air duct.
- The fan speed.
- If the heat exchanger is operating.
- Heating requirement, status.
- Cooling requirement, status.
- Carbon dioxide level (if sensor is connected).
- Relative air humidity (if sensor is connected).
- If overpressure is on/off.
- If boost is on/off.
- Day and time.

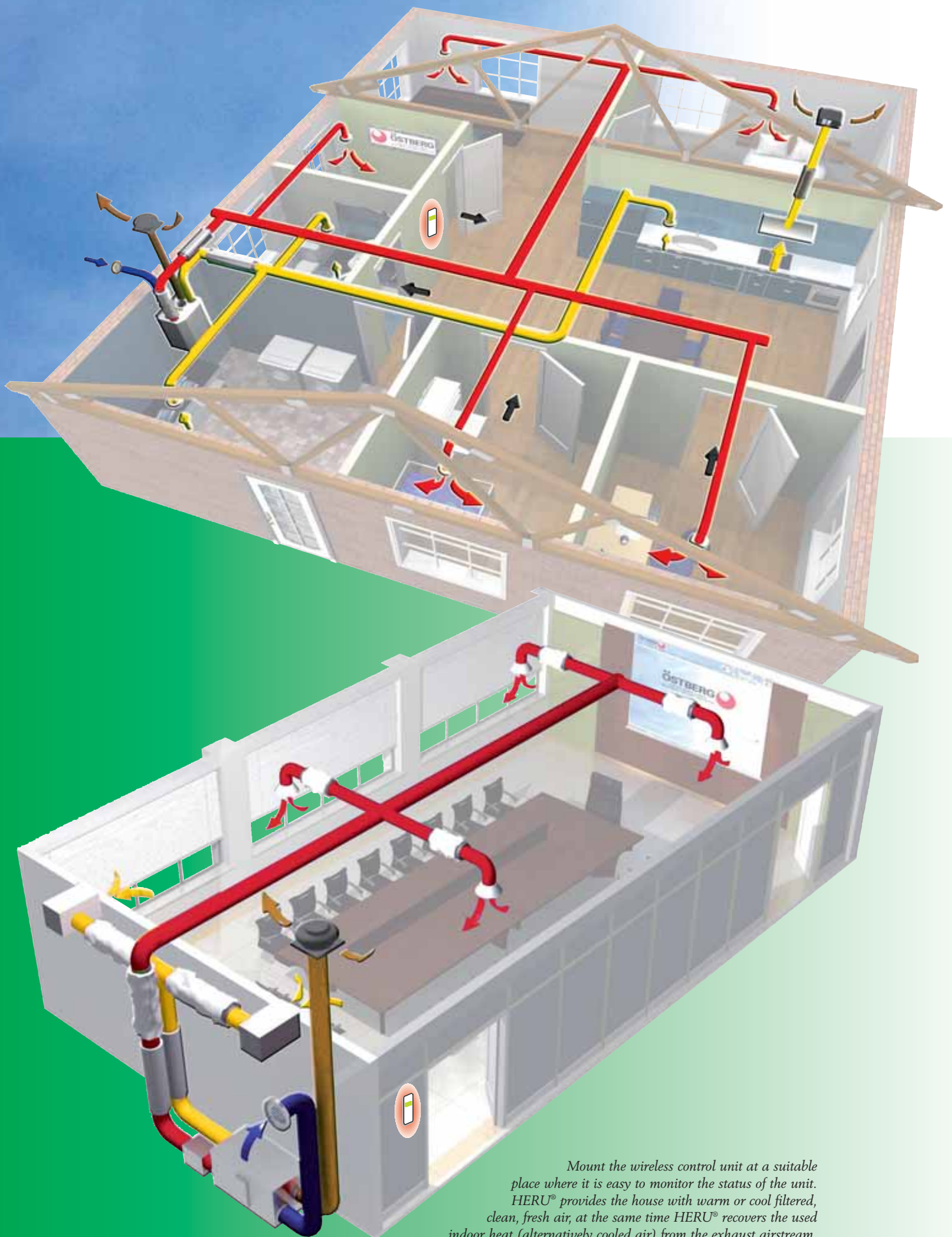


### ALARMS

Alarms are shown for:

- If filter pressure drop is too high.
- Indication fault for the heat exchanger.
- If supply air temperature is too low.
- Triggered smoke detector.
- Triggered freeze protection for the heating coil.





Mount the wireless control unit at a suitable place where it is easy to monitor the status of the unit. HERU® provides the house with warm or cool filtered, clean, fresh air, at the same time HERU® recovers the used indoor heat (alternatively cooled air) from the exhaust airstream.





## Easy installation, service and cleaning

HERU® is easy to install and easy to regulate with the wireless control unit. Very quickly you will enjoy the advantage of high air quality and savings on heating and cooling.

HERU®S and HERU®70 T/100 T EC has a unique design where all thermal bridges have been minimized!!

### INSTALLATION

HERU®S can be mounted in a warm or cold space and has 50 mm insulated, double skinned galvanised sheet steel casing.

HERU®S is supplied for right handing application. Changes can be made with the wireless control unit.

HERU®T wall model is mounted in a warm space as e.g. the utility room.

Ducts are mounted to the different rooms; kitchen and bathroom

for the exhaust air, living room and bedroom for the supply air.

A cooker hood can be connected to HERU®T, with a separate duct, after the heat exchanger.

### LONG LIFETIME

HERU® is developed in Sweden with our high quality standards. AB C.A. Östberg has a long experience of manufacturing small energy recovery units with rotating heat exchangers! The demands that are put on both the unit and its components guarantees a problem free operation year after year.

A great benefit was to make service and cleaning as easy as possible and the unit is almost maintenance free. The only requirement is a filter change approximately once a year in combination with a general inspection.

### FILTER CHANGE

As standard HERU® is equipped with fine mesh filters, model F7. HERU®S has bag filters and HERU®T has disposable rigid filters.

Filter should be change when the wireless control unit alarms at adjusted time (picture 1).

### SERVICE AND CLEANING

HERU® has two reliable, high quality radial fans with a low sound level and the highest efficiency.

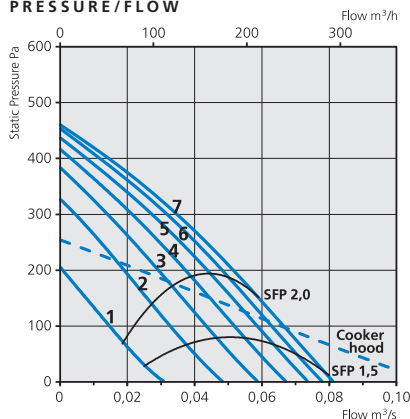
The fans are connected with quick connections and are easy to remove for cleaning (picture 2).

It is also possible to clean the heat exchanger (picture 3).

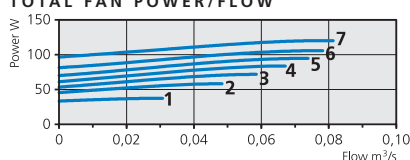
# HERU®70 T



## PRESSURE/FLOW

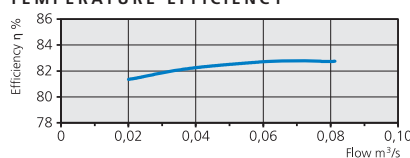


## TOTAL FAN POWER/FLOW



The pressure/flow diagrams applies to both supply and extract air. Indicated power and SFP applies to both fans together.

## TEMPERATURE EFFICIENCY



## TRANSFORMER STEP

1	2	3	4	5	6	7
100V	130V	150V	170V	190V	210V	230V

The sound data has been compiled by means of the following methods:  
Pressure and flow: SS-ISO 5801.  
Determination of acoustic sound power level in duct: SS-ISO 5136.  
Determination of acoustic sound power level in reverberation room: SS-EN ISO 3741.

## DESIGNATIONS

The table presents the total A-weighted sound power level,  $L_{WA}$ , as well as in octave bands in dB(A) (ref  $10^{-12}$ W). In the "Technical Data" above, the total sound pressure,  $L_{pA}$ , calculated from the total surrounding sound power level,  $L_{WA}$ , at 230 V is presented in dB(A) (ref  $20 \times 10^{-6}$ Pa). The relation between sound pressure and sound power

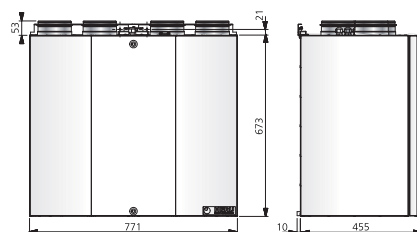
$$L_{pA} = L_{WA} + 10 \times \log \left( \frac{Q}{4\pi r^2} + \frac{4}{A_{Ekv}} \right)$$

where  $Q$  is the propagation factor,  $r$  is the distance from the unit and  $A_{Ekv}$  is the equivalent absorption area. When calculating the  $L_{WA}$  it has been assumed that  $Q=2$ ,  $r=3$  m and  $A_{Ekv}=20$  m<sup>2</sup>, which gives  $L_{pA} \approx L_{WA} - 7$ .

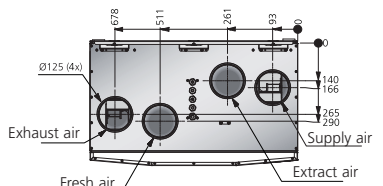
## TECHNICAL DATA

HERU®70 T	A	B	C
Voltage, V/Hz	230/50	230/50	230/50
Fan current, A	0,52	0,52	0,52
Total current, A	5,8	3,23	0,62
Total fan input, W	120	120	120
Total input, W	1350	747	147
Input electric heater, W/A 1200/5,2 600/2,6	-	-	-
Sound pressure level, $L_{pA}$	40	40	40
Weight, kg	67	67	66

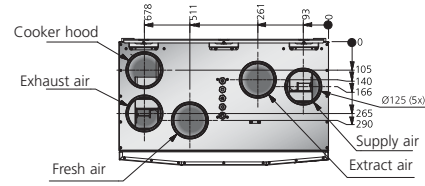
## DIMENSIONS (mm)



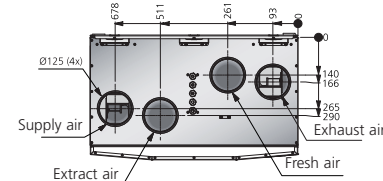
## RIGHT



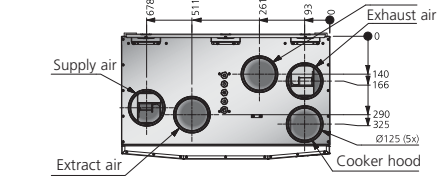
## RIGHT with cooker hood connection



## LEFT



## LEFT with cooker hood connection



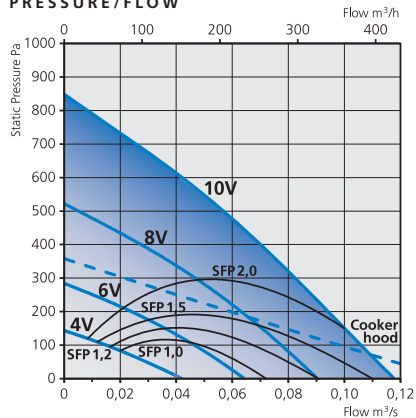
## SOUND DATA

230 V / 62 l/s	Total ( $L_{WA}$ )	63 Hz	125 Hz	250 Hz	500 Hz	1k Hz	2k Hz	4k Hz	8k Hz
Surrounding	47	34	42	43	37	30	28	28	27
Supply air	65	55	60	60	55	45	45	44	37
Extract air	54	43	47	50	45	46	37	32	21
210 V / 60 l/s	Total ( $L_{WA}$ )	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
Surrounding	46	32	41	42	37	29	29	27	27
Supply air	64	55	59	59	55	44	44	43	36
Extract air	54	43	47	50	45	45	36	31	20
190 V / 57 l/s	Total ( $L_{WA}$ )	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
Surrounding	45	32	41	42	36	28	27	27	27
Supply air	63	54	58	59	54	43	43	42	34
Extract air	54	43	46	51	44	44	35	30	19
170 V / 52 l/s	Total ( $L_{WA}$ )	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
Surrounding	42	31	38	38	33	28	26	26	26
Supply air	61	53	56	57	52	41	40	39	31
Extract air	53	43	45	51	42	42	34	28	18
150 V / 47 l/s	Total ( $L_{WA}$ )	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
Surrounding	42	30	38	37	32	28	26	26	27
Supply air	59	51	55	55	49	38	37	35	26
Extract air	54	41	44	53	40	40	31	25	16
130 V / 40 l/s	Total ( $L_{WA}$ )	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
Surrounding	38	31	34	33	30	26	24	25	26
Supply air	55	50	50	50	45	35	32	28	19
Extract air	47	40	39	43	37	37	27	21	16
100 V / 27 l/s	Total ( $L_{WA}$ )	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
Surrounding	34	26	28	25	24	25	23	26	27
Supply air	49	46	42	40	37	26	19	15	11
Extract air	39	34	31	31	32	30	21	19	16

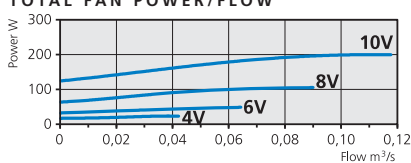


# HERU®100 T EC

## PRESSURE/FLOW

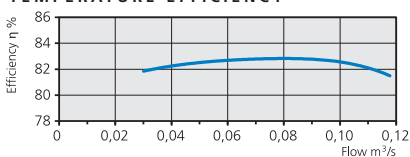


## TOTAL FAN POWER/FLOW



The pressure/flow diagrams applies to both supply and extract air. Indicated power and SFP applies to both fans together.

## TEMPERATURE EFFICIENCY



The sound data has been compiled by means of the following methods:  
Pressure and flow: SS-ISO 5801.  
Determination of acoustic sound power level in duct: SS-ISO 5136.  
Determination of acoustic sound power level in reverberation room: SS-EN ISO 3741.

## DESIGNATIONS

The table presents the total A-weighted sound power level,  $L_{WA}$ , as well as in octave bands in dB(A) (ref 10<sup>-12</sup>W). In the "Technical Data" above, the total sound pressure,  $L_{pA}$ , calculated from the total surrounding sound power level,  $L_{WA}$ , at 230 V is presented in dB(A) (ref 20x10<sup>-6</sup>Pa). The relation between sound pressure and sound power

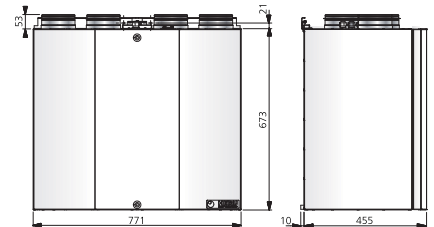
$$L_{pA} = L_{WA} + 10 \times \log \left( \frac{Q}{4\pi r^2} + \frac{4}{A_{Ekv}} \right)$$

where  $Q$  is the propagation factor,  $r$  is the distance from the unit and  $A_{Ekv}$  is the equivalent absorption area. When calculating the  $L_{WA}$  it has been assumed that  $Q=2$ ,  $r=3$  m and  $A_{Ekv}=20$  m<sup>2</sup>, which gives  $L_{pA} \approx L_{WA} - 7$ .

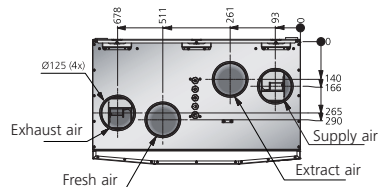
## TECHNICAL DATA

HERU®100 T EC	A	B	C
Voltage, V/Hz	230/50	230/50	230/50
Fan current, A	1,63	1,63	1,63
Total current, A	6,9	4,33	1,73
Total fan input, W	200	200	200
Total input, W	1430	827	227
Input electric heater, W/A	1200/5,2	600/2,6	-
Sound pressure level, $L_{pA}$	48	48	48
Weight, kg	65	65	64

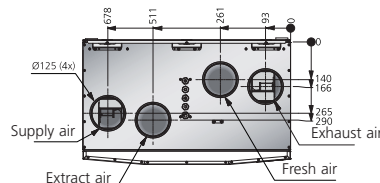
## DIMENSIONS (mm)



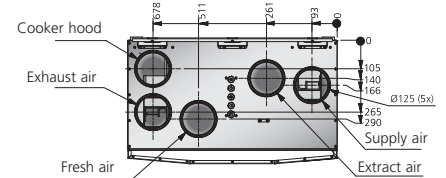
## RIGHT



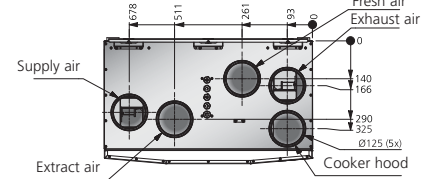
## LEFT



## RIGHT with cooker hood connection



## LEFT with cooker hood connection



## SOUND DATA

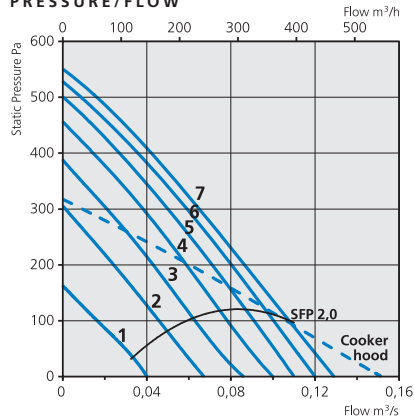
10 V / 90 l/s	Total ( $L_{WA}$ )	63 Hz	125 Hz	250 Hz	500 Hz	1k Hz	2k Hz	4k Hz	8k Hz
Surrounding	55	46	52	49	46	36	36	33	28
Supply air	74	58	65	66	73	56	54	53	43
Extract air	59	46	52	53	53	53	45	39	26
8 V / 77 l/s	Total ( $L_{WA}$ )	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
Surrounding	50	41	47	46	37	30	30	29	27
Supply air	68	56	62	64	59	48	48	47	35
Extract air	55	44	49	48	48	48	39	33	22
6 V / 51 l/s	Total ( $L_{WA}$ )	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
Surrounding	44	38	41	39	31	26	26	26	27
Supply air	63	52	55	60	52	41	40	36	23
Extract air	51	39	43	48	42	41	32	27	22
4 V / 33 l/s	Total ( $L_{WA}$ )	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
Surrounding	38	29	34	32	25	25	24	26	27
Supply air	54	48	50	49	43	31	28	23	15
Extract air	42	33	35	33	37	33	25	25	21



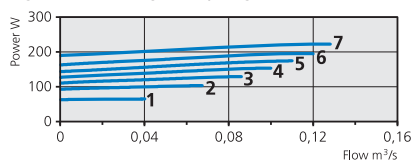
# HERU®115 T



## PRESSURE/FLOW

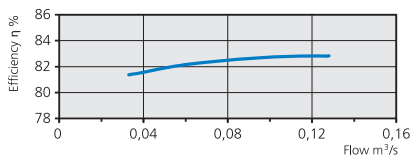


## TOTAL FAN POWER/FLOW



The pressure/flow diagrams applies to both supply and extract air. Indicated power and SFP applies to both fans together.

## TEMPERATURE EFFICIENCY



## TRANSFORMER STEP

1	2	3	4	5	6	7
100V	130V	150V	170V	190V	210V	230V

The sound data has been compiled by means of the following methods:  
 Pressure and flow: SS-ISO 5801.  
 Determination of acoustic sound power level in duct: SS-ISO 5136.  
 Determination of acoustic sound power level in reverberation room: SS-EN ISO 3741.

## DESIGNATIONS

The table presents the total A-weighted sound power level,  $L_{WA}$ , as well as in octave bands in dB(A) (ref 10<sup>-12</sup>W). In the "Technical Data" above, the total sound pressure,  $L_{pA}$ , calculated from the total surrounding sound power level,  $L_{WA}$ , at 230 V is presented in dB(A) (ref 20x10<sup>-4</sup>Pa). The relation between sound pressure and sound power is

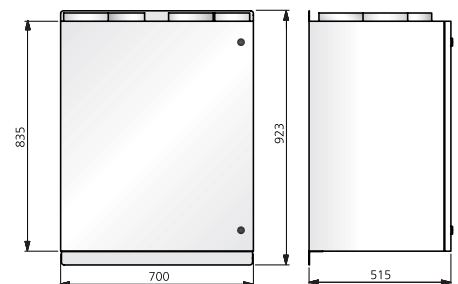
$$L_{pA} = L_{WA} + 10 \times \log \left( \frac{Q}{4\pi r^2} + \frac{4}{A_{Ekv}} \right)$$

where  $Q$  is the propagation factor,  $r$  is the distance from the unit and  $A_{Ekv}$  is the equivalent absorption area. When calculating the  $L_{WA}$  it has been assumed that  $Q=2$ ,  $r=3$  m and  $A_{Ekv}=20$  m<sup>2</sup>, which gives  $L_{pA} \approx L_{WA} - 7$ .

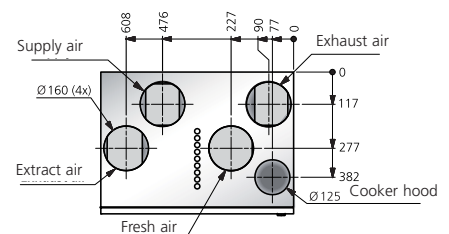
## TECHNICAL DATA

HERU®115 T	
Voltage, V/Hz	230/50
Fan current, A	0,97
Total current, A	8,5
Total fan input, W	223
Total input, W	1950
Input electric heater, W/A	1700/7,4
Sound pressure level, $L_{pA}$	49
Weight, kg	81

## DIMENSIONS (mm)



## LEFT with cooker hood connection



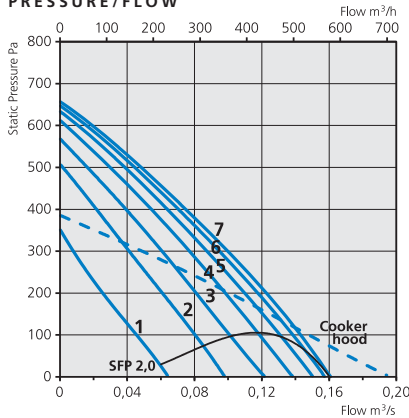
## SOUND DATA

230 V / 100 l/s	Total ( $L_{WA}$ )	63 Hz	125 Hz	250 Hz	500 Hz	1k Hz	2k Hz	4k Hz	8k Hz
Surrounding	54	42	51	50	41	40	39	39	32
Supply air	77	61	66	72	72	67	65	64	59
Extract air	59	40	49	57	50	47	43	40	29
210 V / 95 l/s	Total ( $L_{WA}$ )	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
Surrounding	54	41	49	52	40	39	37	36	30
Supply air	74	57	64	70	67	65	63	61	54
Extract air	60	39	49	59	50	47	43	40	29
190 V / 87 l/s	Total ( $L_{WA}$ )	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
Surrounding	52	40	48	49	38	38	36	35	29
Supply air	73	56	63	70	66	63	62	60	52
Extract air	61	38	48	60	49	46	42	38	28
170 V / 81 l/s	Total ( $L_{WA}$ )	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
Surrounding	50	40	47	44	37	38	35	33	28
Supply air	73	55	62	70	65	62	61	58	50
Extract air	61	36	48	60	47	44	40	36	28
150 V / 69 l/s	Total ( $L_{WA}$ )	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
Surrounding	49	40	46	44	36	37	33	32	27
Supply air	69	54	59	66	62	58	57	54	44
Extract air	59	35	45	59	45	42	37	33	27
130 V / 55 l/s	Total ( $L_{WA}$ )	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
Surrounding	47	37	43	44	35	34	30	29	26
Supply air	66	52	55	63	59	55	53	49	38
Extract air	54	33	41	53	42	39	34	30	27
100 V / 36 l/s	Total ( $L_{WA}$ )	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
Surrounding	43	36	42	29	30	33	26	27	26
Supply air	56	46	51	49	51	47	43	36	22
Extract air	42	28	38	37	34	31	26	26	27

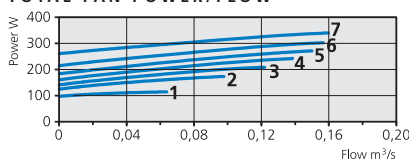
# HERU®140 T



## PRESSURE/FLOW

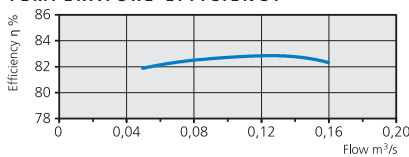


## TOTAL FAN POWER/FLOW



The pressure/flow diagrams applies to both supply and extract air. Indicated power and SFP applies to both fans together.

## TEMPERATURE EFFICIENCY



## TRANSFORMER STEP

1	2	3	4	5	6	7
100V	130V	150V	170V	190V	210V	230V

The sound data has been compiled by means of the following methods:  
Pressure and flow: SS-ISO 5801.  
Determination of acoustic sound power level in duct: SS-ISO 5136.  
Determination of acoustic sound power level in reverberation room: SS-EN ISO 3741.

## DESIGNATIONS

The table presents the total A-weighted sound power level,  $L_{WA}$ , as well as in octave bands in dB(A) (ref 10<sup>-12</sup>W). In the "Technical Data" above, the total sound pressure,  $L_{pA}$ , calculated from the total surrounding sound power level,  $L_{WA}$ , at 230 V is presented in dB(A) (ref 20x10<sup>-6</sup>Pa). The relation between sound pressure and sound power

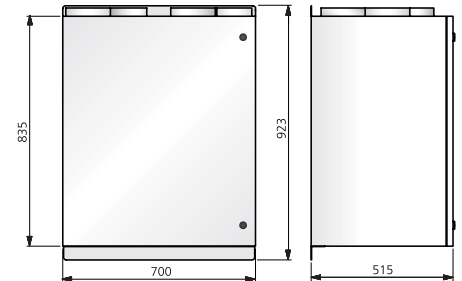
$$L_{pA} = L_{WA} + 10 \times \log \left( \frac{Q}{4\pi r^2} + A_{E_{KV}} \right)$$

where  $Q$  is the propagation factor,  $r$  is the distance from the unit and  $A_{E_{KV}}$  is the equivalent absorption area. When calculating the  $L_{WA}$  it has been assumed that  $Q=2$ ,  $r=3$  m and  $A_{E_{KV}}=20$  m<sup>2</sup>, which gives  $L_{pA} \approx L_{WA} - 7$ .

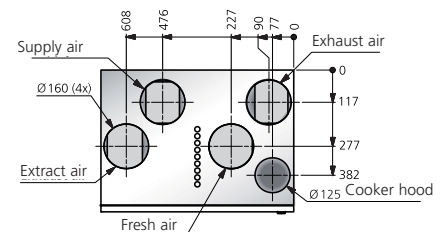
## TECHNICAL DATA

HERU®140 T	
Voltage, V/Hz	230/50
Fan current, A	1,54
Total current, A	9,0
Total fan input, W	340
Total input, W	2070
Input electric heater, W/A	1700/7,4
Sound pressure level, $L_{pA}$	47
Weight, kg	81

## DIMENSIONS (mm)



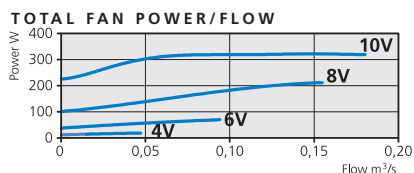
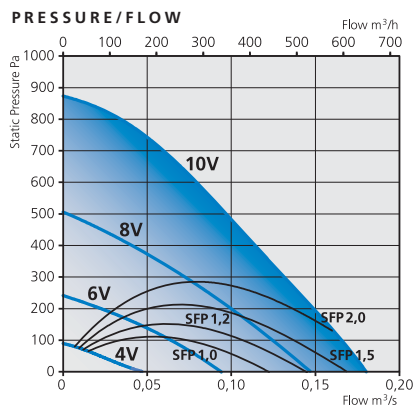
## LEFT with cooker hood connection



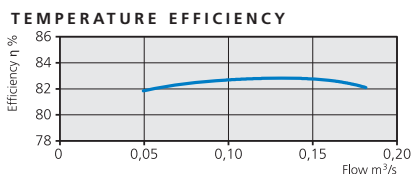
## SOUND DATA

230 V / 126 l/s	Total ( $L_{WA}$ )	63 Hz	125 Hz	250 Hz	500 Hz	1k Hz	2k Hz	4k Hz	8k Hz
Surrounding	54	46	49	52	44	41	34	29	26
Supply air	77	62	67	69	72	70	67	63	54
Extract air	64	54	58	60	56	50	41	31	17
210 V / 123 l/s	Total ( $L_{WA}$ )	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
Surrounding	54	46	49	52	43	41	35	30	26
Supply air	76	62	66	68	71	69	66	62	53
Extract air	63	54	57	59	55	49	40	30	16
190 V / 118 l/s	Total ( $L_{WA}$ )	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
Surrounding	55	46	47	54	42	40	34	29	26
Supply air	74	62	64	67	70	67	65	59	51
Extract air	63	53	55	61	53	47	38	28	15
170 V / 110 l/s	Total ( $L_{WA}$ )	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
Surrounding	55	46	46	54	40	39	31	27	26
Supply air	73	60	62	66	70	64	62	56	46
Extract air	61	51	53	60	51	44	36	25	14
150 V / 98 l/s	Total ( $L_{WA}$ )	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
Surrounding	53	42	43	52	38	35	29	26	25
Supply air	68	57	58	60	64	59	57	50	40
Extract air	57	47	50	54	47	40	31	21	12
130 V / 83 l/s	Total ( $L_{WA}$ )	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
Surrounding	44	36	41	38	34	32	28	26	25
Supply air	63	53	54	56	58	54	51	42	30
Extract air	51	42	47	45	42	35	28	16	12
100 V / 58 l/s	Total ( $L_{WA}$ )	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
Surrounding	40	28	37	31	29	30	27	26	25
Supply air	54	44	46	48	48	44	38	27	21
Extract air	45	35	42	38	35	27	18	15	11

# HERU®160 T EC



The pressure/flow diagrams applies to both supply and extract air. Indicated power and SFP applies to both fans together.



The sound data has been compiled by means of the following methods:  
Pressure and flow: SS-ISO 5801.  
Determination of acoustic sound power level in duct: SS-ISO 5136.  
Determination of acoustic sound power level in reverberation room: SS-EN ISO 3741.

## DESIGNATIONS

The table presents the total A-weighted sound power level,  $L_{WA}$ , as well as in octave bands in dB(A) (ref  $10^{-12}$ W). In the "Technical Data" above, the total sound pressure,  $L_{pA}$ , calculated from the total surrounding sound power level,  $L_{WA}$ , at 230 V is presented in dB(A) (ref  $20 \times 10^{-6}$ Pa). The relation between sound pressure and sound power

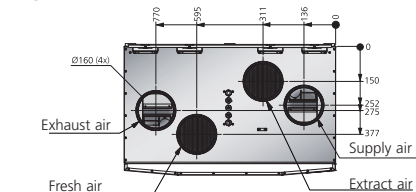
$$L_{pA} = L_{WA} + 10 \times \log \left( \frac{Q}{4\pi r^2} + \frac{4}{A_{EKV}} \right)$$

where  $Q$  is the propagation factor,  $r$  is the distance from the unit and  $A_{EKV}$  is the equivalent absorption area. When calculating the  $L_{WA}$  it has been assumed that  $Q=2$ ,  $r=3$  m and  $A_{EKV}=20$  m<sup>2</sup>, which gives  $L_{pA} \approx L_{WA} - 7$ .

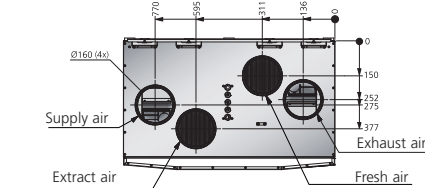
## TECHNICAL DATA

HERU®160 T	A	B	C
Voltage, V/Hz	230/50	230/50	230/50
Fan current, A	2,53	2,53	2,53
Total current, A	10,0	6,3	2,63
Total fan input, W	321	321	321
Total input, W	2050	1200	348
Input electric heater, W/A 1700/7,4 850/3,7	-	-	-
Sound pressure level, $L_{pA}$	48	48	48
Weight, kg	91	91	90

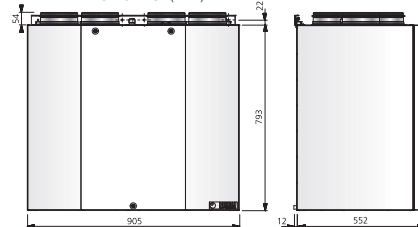
## RIGHT



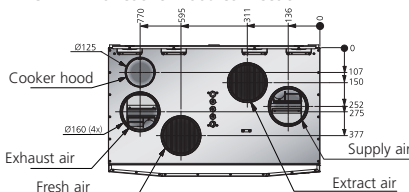
## LEFT



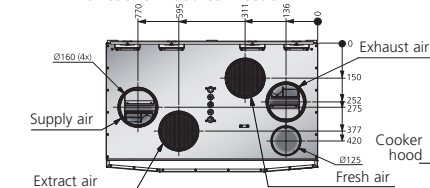
## DIMENSIONS (mm)



## RIGHT with cooker hood connection



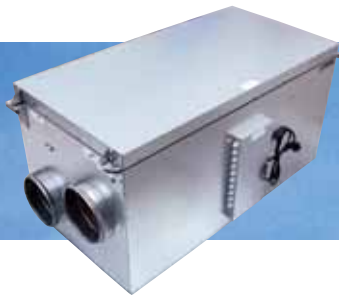
## LEFT with cooker hood connection



## SOUND DATA

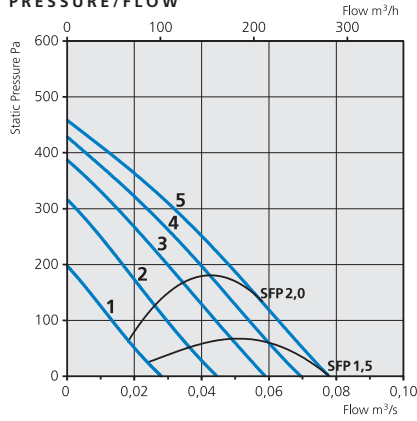
10 V / 131 l/s	Total ( $L_{WA}$ )	63 Hz	125 Hz	250 Hz	500 Hz	1k Hz	2k Hz	4k Hz	8k Hz
Surrounding	55	43	50	52	43	39	38	36	31
Supply air	74	69	68	69	65	58	59	52	45
Extract air	63	54	56	57	58	54	44	37	27
8 V / 104 l/s	Total ( $L_{WA}$ )	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
Surrounding	51	43	46	49	59	35	33	31	29
Supply air	70	62	64	66	61	53	54	47	40
Extract air	59	52	53	51	54	50	39	33	24
6 V / 67 l/s	Total ( $L_{WA}$ )	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
Surrounding	45	35	39	42	35	29	30	38	29
Supply air	63	57	57	59	52	43	43	35	27
Extract air	53	47	45	48	45	41	30	24	21
4 V / 33 l/s	Total ( $L_{WA}$ )	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
Surrounding	39	26	31	36	25	26	23	27	29
Supply air	50	46	46	42	38	28	25	17	18
Extract air	41	36	34	29	36	31	23	21	21



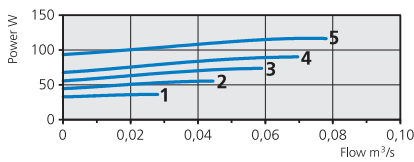


# HERU®50 S 2

## PRESSURE/FLOW

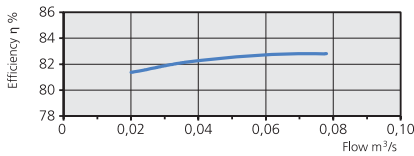


## TOTAL FAN POWER/FLOW



The pressure/flow diagrams applies to both supply and extract air. Indicated power and SFP applies to both fans together.

## TEMPERATURE EFFICIENCY



## TRANSFORMER STEP

1	2	3	4	5
100V	130V	160V	190V	230V

The sound data has been compiled by means of the following methods:  
Pressure and flow: SS-ISO 5801.  
Determination of acoustic sound power level in duct: SS-ISO 5136.  
Determination of acoustic sound power level in reverberation room: SS-EN ISO 3741.

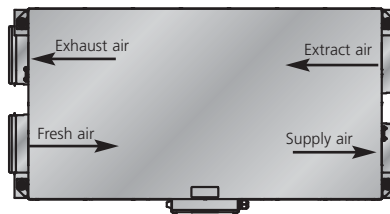
## DESIGNATIONS

The table presents the total A-weighted sound power level,  $L_{WA}$ , as well as in octave bands in dB(A) (ref  $10^{-12}$ W). In the "Technical Data" above, the total sound pressure,  $L_{pA}$ , calculated from the total surrounding sound power level,  $L_{WA}$ , at 230 V is presented in dB(A) (ref  $20 \times 10^{-6}$ Pa). The relation between sound pressure and sound power is  $L_{pA} = L_{WA} + 10 \times \log \left( \frac{Q}{4\pi r^2} + \frac{4}{A_{EKV}} \right)$  where  $Q$  is the propagation factor,  $r$  is the distance from the unit and  $A_{EKV}$  is the equivalent absorption area. When calculating the  $L_{WA}$  it has been assumed that  $Q=2$ ,  $r=3$  m and  $A_{EKV}=20$  m<sup>2</sup>, which gives  $L_{pA} \approx L_{WA} - 7$ .

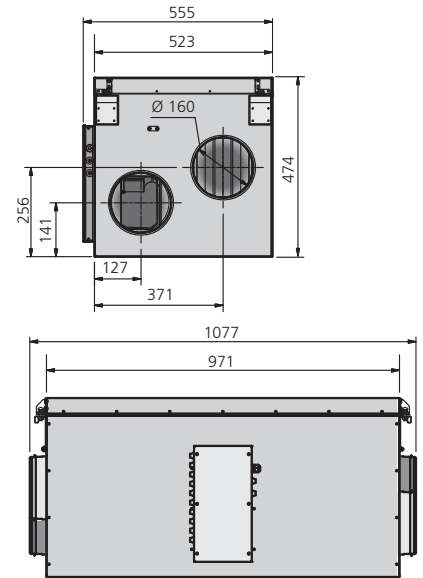
## TECHNICAL DATA

HERU®50 S 2	A	B	C
Voltage, V/Hz	230/50	230/50	230/50
Fan current, A	0,61	0,61	0,61
Total current, A	5,8	3,30	0,71
Total fan input, W	117	117	117
Total input, W	1340	744	144
Input electric heater, W/A 1200/5,2 600/2,6	-	-	-
Sound pressure level, $L_{pA}$	40	40	40
Weight, kg	63	63	63

## FLOW DIRECTION RIGHT



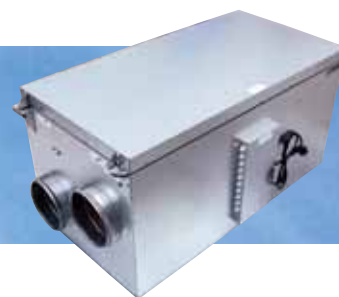
## DIMENSIONS (mm)



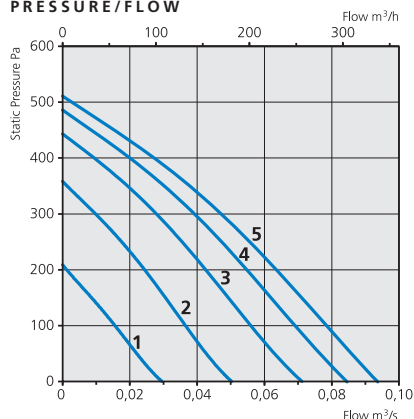
## SOUND DATA

230 V / 52 l/s	Total $L_{WA}$	63 Hz	125 Hz	250 Hz	500 Hz	1k Hz	2k Hz	4k Hz	8k Hz
Surrounding	47	36	41	44	38	33	29	27	27
Supply air	72	55	59	66	69	65	59	57	47
Extract air	58	42	55	49	54	46	39	29	20
190 V / 47 l/s	Total $L_{WA}$	63 Hz	125 Hz	250 Hz	500 Hz	1k Hz	2k Hz	4k Hz	8k Hz
Surrounding	45	32	39	42	36	31	28	26	27
Supply air	72	54	58	65	70	63	57	55	44
Extract air	57	42	54	49	53	41	37	27	19
160 V / 43 l/s	Total $L_{WA}$	63 Hz	125 Hz	250 Hz	500 Hz	1k Hz	2k Hz	4k Hz	8k Hz
Surrounding	43	32	39	40	33	29	26	26	27
Supply air	68	52	56	63	64	59	54	51	39
Extract air	55	38	52	47	49	38	34	25	18
130 V / 30 l/s	Total $L_{WA}$	63 Hz	125 Hz	250 Hz	500 Hz	1k Hz	2k Hz	4k Hz	8k Hz
Surrounding	41	26	37	37	30	26	24	26	27
Supply air	65	49	54	60	61	53	48	44	31
Extract air	53	33	51	42	45	33	30	22	17
100 V / 17 l/s	Total $L_{WA}$	63 Hz	125 Hz	250 Hz	500 Hz	1k Hz	2k Hz	4k Hz	8k Hz
Surrounding	38	25	36	29	28	24	24	25	27
Supply air	61	44	50	50	60	46	39	34	22
Extract air	52	30	51	36	45	30	27	21	16

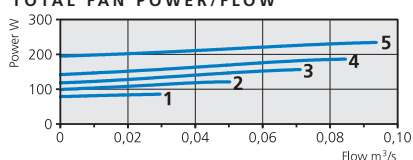
# HERU®75 S 2



## PRESSURE/FLOW

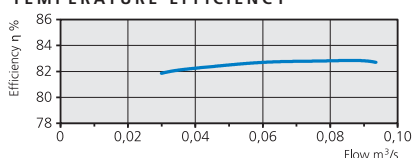


## TOTAL FAN POWER/FLOW



The pressure/flow diagrams applies to both supply and extract air. Indicated power and SFP applies to both fans together.

## TEMPERATURE EFFICIENCY



## TRANSFORMER STEP

1	2	3	4	5
100V	130V	160V	190V	230V

The sound data has been compiled by means of the following methods:  
 Pressure and flow: SS-ISO 5801.  
 Determination of acoustic sound power level in duct: SS-ISO 5136.  
 Determination of acoustic sound power level in reverberation room: SS-EN ISO 3741.

## DESIGNATIONS

The table presents the total A-weighted sound power level,  $L_{WA}$ , as well as in octave bands in dB(A) (ref  $10^{-12}$ W). In the "Technical Data" above, the total sound pressure,  $L_{pA}$ , calculated from the total surrounding sound power level,  $L_{WA}$ , at 230 V is presented in dB(A) (ref  $20 \times 10^{-6}$ Pa). The relation between sound pressure and sound power

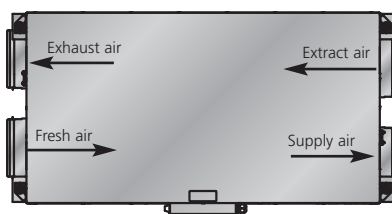
$$L_{pA} = L_{WA} + 10 \times \log \left( \frac{Q}{4\pi r^2} + \frac{4}{A_{Ekv}} \right)$$

where  $Q$  is the propagation factor,  $r$  is the distance from the unit and  $A_{Ekv}$  is the equivalent absorption area. When calculating the  $L_{WA}$  it has been assumed that  $Q=2$ ,  $r=3$  m and  $A_{Ekv}=20$  m², which gives  $L_{pA} \approx L_{WA} - 7$ .

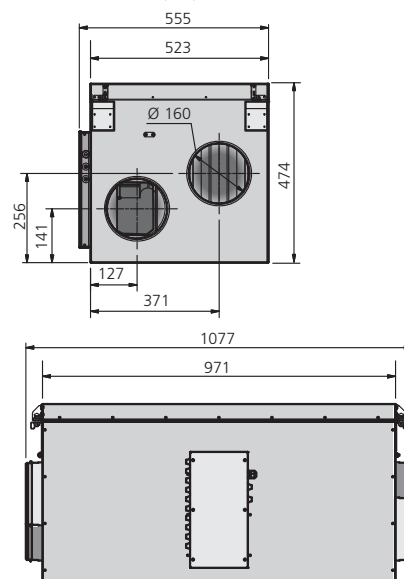
## TECHNICAL DATA

HERU®75 S 2	A	B	C
Voltage, V/Hz	230/50	230/50	230/50
Fan current, A	0,95	0,95	0,95
Total current, A	6,3	3,65	1,05
Total fan input, W	235	235	235
Total input, W	1460	1100	496
Input electric heater, W/A 1200/5,2 600/2,6	-	-	-
Sound pressure level, $L_{pA}$	44	44	44
Weight, kg	63	63	63

## FLOW DIRECTION RIGHT

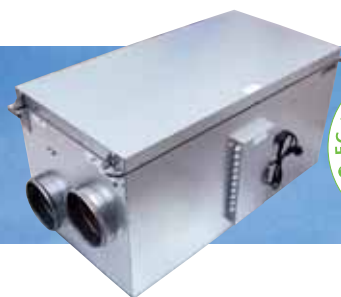


## DIMENSIONS (mm)



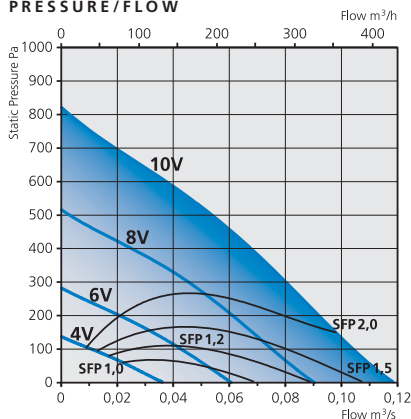
## SOUND DATA

230 V / 65 l/s	Total $L_{WA}$	63 Hz	125 Hz	250 Hz	500 Hz	1k Hz	2k Hz	4k Hz	8k Hz
Surrounding	51	34	44	48	46	37	35	32	28
Supply air	76	57	63	68	72	68	66	61	50
Extract air	62	46	57	55	57	46	41	30	20
190 V / 62 l/s	Total $L_{WA}$	63 Hz	125 Hz	250 Hz	500 Hz	1k Hz	2k Hz	4k Hz	8k Hz
Surrounding	50	33	42	47	45	36	33	30	26
Supply air	74	58	65	68	70	66	62	59	47
Extract air	61	48	57	56	56	45	38	28	17
160 V / 53 l/s	Total $L_{WA}$	63 Hz	125 Hz	250 Hz	500 Hz	1k Hz	2k Hz	4k Hz	8k Hz
Surrounding	48	32	42	44	40	32	30	27	26
Supply air	72	57	63	66	67	63	59	56	43
Extract air	60	46	57	55	53	42	35	25	13
130 V / 36 l/s	Total $L_{WA}$	63 Hz	125 Hz	250 Hz	500 Hz	1k Hz	2k Hz	4k Hz	8k Hz
Surrounding	46	31	41	44	36	29	27	26	26
Supply air	70	56	62	65	64	60	55	52	39
Extract air	59	48	56	53	53	39	32	22	12
100 V / 21 l/s	Total $L_{WA}$	63 Hz	125 Hz	250 Hz	500 Hz	1k Hz	2k Hz	4k Hz	8k Hz
Surrounding	40	32	36	37	30	25	23	24	26
Supply air	62	53	58	57	55	51	46	40	24
Extract air	53	43	51	45	42	31	24	12	7

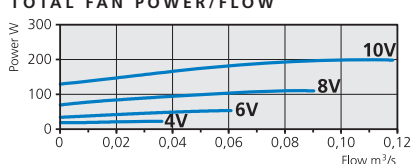


# HERU®100 S EC

## PRESSURE/FLOW

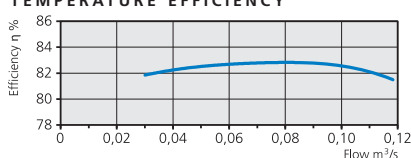


## TOTAL FAN POWER/FLOW



The pressure/flow diagrams applies to both supply and extract air. Indicated power and SFP applies to both fans together.

## TEMPERATURE EFFICIENCY



The sound data has been compiled by means of the following methods:  
Pressure and flow: SS-ISO 5801.  
Determination of acoustic sound power level in duct: SS-ISO 5136.  
Determination of acoustic sound power level in reverberation room: SS-EN ISO 3741.

## DESIGNATIONS

The table presents the total A-weighted sound power level,  $L_{WA}$ , as well as in octave bands in dB(A) (ref 10<sup>-12</sup>W). In the "Technical Data" above, the total sound pressure,  $L_{pA}$ , calculated from the total surrounding sound power level,  $L_{WA}$ , at 230 V is presented in dB(A) (ref 20x10<sup>-6</sup>Pa). The relation between sound pressure and sound power

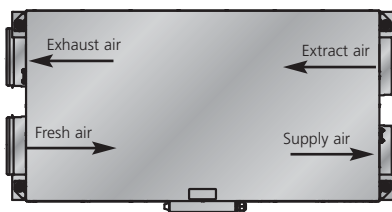
$$L_{pA} = L_{WA} + 10 \times \log \left( \frac{Q}{4\pi r^2} + \frac{4}{A_{E_{KV}}} \right)$$

where  $Q$  is the propagation factor,  $r$  is the distance from the unit and  $A_{E_{KV}}$  is the equivalent absorption area. When calculating the  $L_{WA}$  it has been assumed that  $Q=2$ ,  $r=3$  m and  $A_{E_{KV}}=20$  m<sup>2</sup>, which gives  $L_{pA} \approx L_{WA} - 7$ .

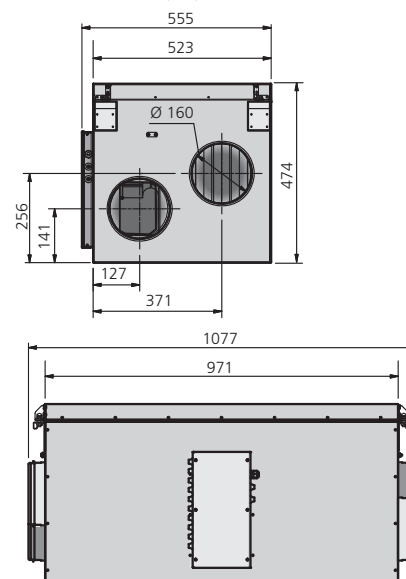
## TECHNICAL DATA

HERU®100 S EC	A	B	C
Voltage, V/Hz	230/50	230/50	230/50
Fan current, A	1,61	1,61	1,61
Total current, A	6,9	4,32	1,71
Total fan input, W	199	199	199
Total input, W	1430	826	226
Input electric heater, W/A 1200/5,2 600/2,6	-	-	-
Sound pressure level, $L_{pA}$	46	46	46
Weight, kg	62	62	62

## FLOW DIRECTION RIGHT



## DIMENSIONS (mm)

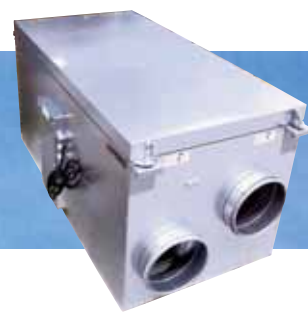


## SOUND DATA

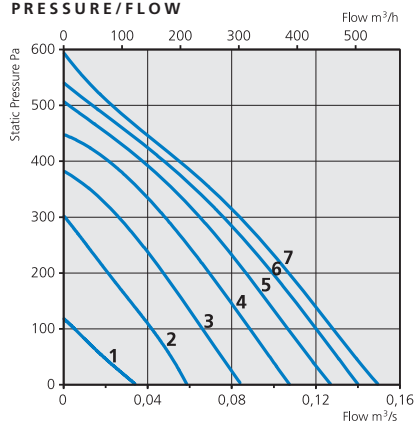
10 V / 87 l/s	Total ( $L_{WA}$ )	63 Hz	125 Hz	250 Hz	500 Hz	1k Hz	2k Hz	4k Hz	8k Hz
Surrounding	54	42	49	48	50	42	35	31	28
Supply air	82	62	67	71	80	73	69	66	57
Extract air	72	56	57	60	71	53	46	37	23
9 V / 75 l/s	Total ( $L_{WA}$ )	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
Surrounding	52	39	46	44	49	39	32	29	28
Supply air	77	60	64	69	75	71	65	62	52
Extract air	70	55	56	59	69	51	44	35	20
8 V / 61 l/s	Total ( $L_{WA}$ )	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
Surrounding	48	38	46	42	40	35	29	28	27
Supply air	75	59	63	70	70	68	63	61	50
Extract air	63	54	54	60	56	48	41	32	18
7 V / 55 l/s	Total ( $L_{WA}$ )	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
Surrounding	46	36	44	40	37	32	27	27	27
Supply air	71	58	60	65	67	63	60	57	45
Extract air	59	48	52	56	53	43	38	28	16
6 V / 42 l/s	Total ( $L_{WA}$ )	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
Surrounding	45	34	44	37	33	28	25	26	27
Supply air	67	56	56	62	63	58	55	50	38
Extract air	58	46	50	55	50	39	35	23	14
5 V / 36 l/s	Total ( $L_{WA}$ )	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
Surrounding	42	30	41	33	30	26	23	26	27
Supply air	62	54	53	56	57	52	50	43	30
Extract air	52	42	49	47	46	35	30	18	14
4 V / 28 l/s	Total ( $L_{WA}$ )	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
Surrounding	42	27	42	31	27	24	23	26	27
Supply air	57	51	50	50	51	47	43	36	22
Extract air	50	38	49	40	41	31	25	16	14



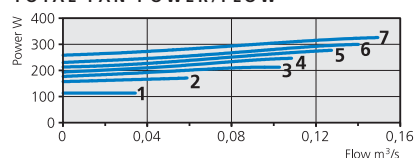
# HERU®130 S 2



## PRESSURE/FLOW

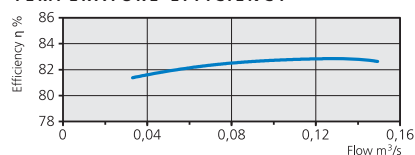


## TOTAL FAN POWER/FLOW



The pressure/flow diagrams applies to both supply and extract air. Indicated power and SFP applies to both fans together.

## TEMPERATURE EFFICIENCY



## TRANSFORMER STEP

1	2	3	4	5	6	7
100V	130V	150V	170V	190V	210V	230V

The sound data has been compiled by means of the following methods:  
 Pressure and flow: SS-ISO 5801.  
 Determination of acoustic sound power level in duct: SS-ISO 5136.  
 Determination of acoustic sound power level in reverberation room: SS-EN ISO 3741.

## DESIGNATIONS

The table presents the total A-weighted sound power level,  $L_{WA}$ , as well as in octave bands in dB(A) (ref  $10^{-12}$ W). In the "Technical Data" above, the total sound pressure,  $L_{pA}$ , calculated from the total surrounding sound power level,  $L_{WA}$ , at 230 V is presented in dB(A) (ref  $20 \times 10^{-6}$ Pa). The relation between sound pressure and sound power

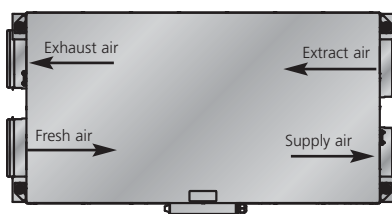
$$\text{is } L_{pA} = L_{WA} + 10 \times \log \left( \frac{Q}{4\pi r^2} + \frac{4}{A_{Ekv}} \right)$$

where  $Q$  is the propagation factor,  $r$  is the distance from the unit and  $A_{Ekv}$  is the equivalent absorption area. When calculating the  $L_{WA}$  it has been assumed that  $Q=2$ ,  $r=3$  m and  $A_{Ekv}=20$  m<sup>2</sup>, which gives  $L_{pA} \approx L_{WA} - 7$ .

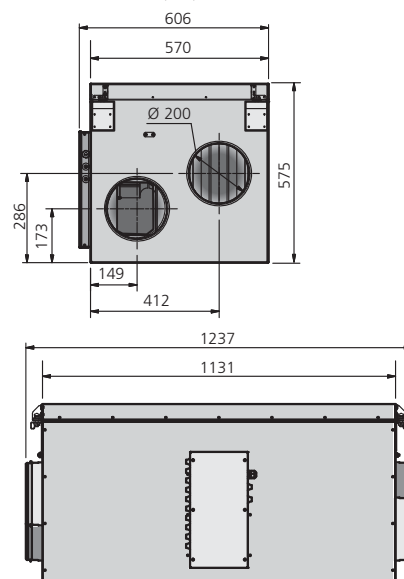
## TECHNICAL DATA

HERU®130 S 2	A	B	C
Voltage, V/Hz	230/50	230/50	230/50
Fan current, A	1,43	1,43	1,43
Total current, A	8,9	5,2	1,53
Total fan input, W	326	326	326
Total input, W	2050	1200	353
Input electric heater, W/A 1700/7,4 850/3,7	-	-	-
Sound pressure level, $L_{pA}$	42	42	42
Weight, kg	100	100	100

## FLOW DIRECTION RIGHT

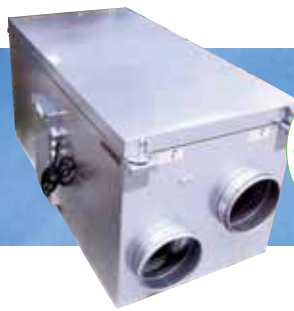


## DIMENSIONS (mm)



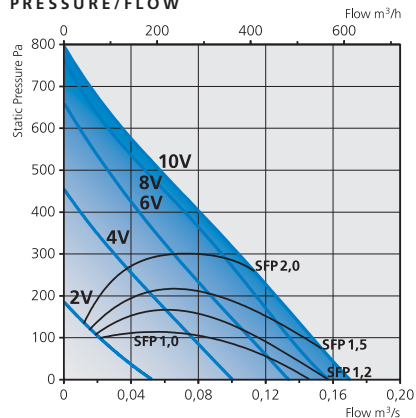
## SOUND DATA

230 V / 119 l/s	Total $L_{WA}$	63 Hz	125 Hz	250 Hz	500 Hz	1k Hz	2k Hz	4k Hz	8k Hz
Surrounding	49	33	40	45	42	37	35	30	26
Supply air	77	62	67	69	72	70	67	63	54
Extract air	64	54	58	60	56	50	41	31	17
210 V / 113 l/s	Total $L_{WA}$	63 Hz	125 Hz	250 Hz	500 Hz	1k Hz	2k Hz	4k Hz	8k Hz
Surrounding	49	34	41	46	43	38	35	31	26
Supply air	76	62	66	68	71	69	66	62	53
Extract air	63	54	57	59	55	49	40	30	16
190 V / 104 l/s	Total $L_{WA}$	63 Hz	125 Hz	250 Hz	500 Hz	1k Hz	2k Hz	4k Hz	8k Hz
Surrounding	49	33	41	46	42	36	34	30	26
Supply air	74	62	64	67	70	67	65	59	51
Extract air	63	53	55	61	53	47	38	28	15
170 V / 91 l/s	Total $L_{WA}$	63 Hz	125 Hz	250 Hz	500 Hz	1k Hz	2k Hz	4k Hz	8k Hz
Surrounding	47	31	39	44	40	34	31	28	26
Supply air	73	60	62	66	70	64	62	56	46
Extract air	61	51	53	60	51	44	36	25	14
150 V / 73 l/s	Total $L_{WA}$	63 Hz	125 Hz	250 Hz	500 Hz	1k Hz	2k Hz	4k Hz	8k Hz
Surrounding	43	29	38	39	36	31	28	26	25
Supply air	68	57	58	60	64	59	57	50	40
Extract air	57	47	50	54	47	40	31	21	12
130 V / 54 l/s	Total $L_{WA}$	63 Hz	125 Hz	250 Hz	500 Hz	1k Hz	2k Hz	4k Hz	8k Hz
Surrounding	40	26	37	33	31	29	25	25	25
Supply air	63	53	54	56	58	54	51	42	30
Extract air	51	42	47	45	42	35	28	16	12
100 V / 31 l/s	Total $L_{WA}$	63 Hz	125 Hz	250 Hz	500 Hz	1k Hz	2k Hz	4k Hz	8k Hz
Surrounding	39	23	38	27	27	27	23	25	25
Supply air	54	44	46	48	48	44	38	27	21
Extract air	45	35	42	38	35	27	18	15	11

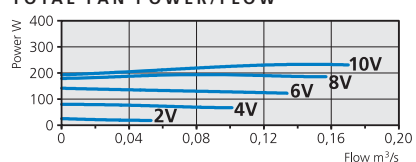


# HERU®130 S EC 2

## PRESSURE/FLOW

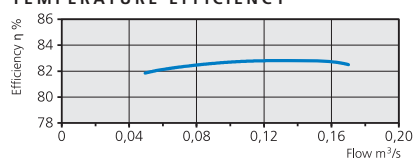


## TOTAL FAN POWER/FLOW



The pressure/flow diagrams applies to both supply and extract air. Indicated power and SFP applies to both fans together.

## TEMPERATURE EFFICIENCY



The sound data has been compiled by means of the following methods:  
Pressure and flow: SS-ISO 5801.  
Determination of acoustic sound power level in duct: SS-ISO 5136.  
Determination of acoustic sound power level in reverberation room: SS-EN ISO 3741.

## DESIGNATIONS

The table presents the total A-weighted sound power level,  $L_{WA}$ , as well as in octave bands in dB(A) (ref  $10^{-12}$ W). In the "Technical Data" above, the total sound pressure,  $L_{pA}$ , calculated from the total surrounding sound power level,  $L_{WA}$ , at 230 V is presented in dB(A) (ref  $20 \times 10^{-6}$ Pa). The relation between sound pressure and sound power

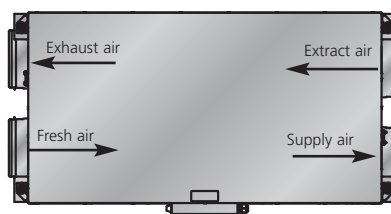
$$\text{is } L_{pA} = L_{WA} + 10 \times \log \left( \frac{Q}{4\pi r^2} + \frac{4}{A_{EkV}} \right)$$

where  $Q$  is the propagation factor,  $r$  is the distance from the unit and  $A_{EkV}$  is the equivalent absorption area. When calculating the  $L_{WA}$  it has been assumed that  $Q=2$ ,  $r=3$  m and  $A_{EkV}=20$  m<sup>2</sup>, which gives  $L_{pA} \approx L_{WA} - 7$ .

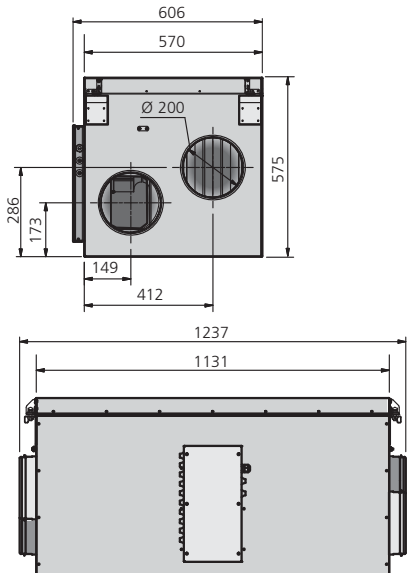
## TECHNICAL DATA

HERU®130 S 2	A	B	C
Voltage, V/Hz	230/50	230/50	230/50
Fan current, A	1,96	1,96	1,96
Total current, A	8,4	5,7	2,0
Total fan input, W	233	233	233
Total input, W	1960	1110	261
Input electric heater, W/A	1700/7,4	850/3,7	-
Sound pressure level, $L_{pA}$	48	48	48
Weight, kg	99	99	99

## FLOW DIRECTION RIGHT



## DIMENSIONS (mm)



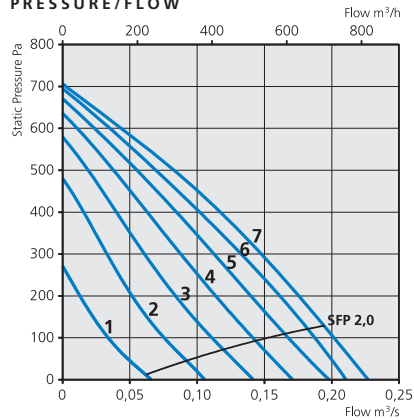
## SOUND DATA

10 V / 137 l/s	Total ( $L_{WA}$ )	63 Hz	125 Hz	250 Hz	500 Hz	1k Hz	2k Hz	4k Hz	8k Hz
Surrounding	55	44	47	49	51	47	38	31	29
Supply air	80	63	68	77	73	71	67	64	56
Extract air	68	54	61	63	64	53	44	34	29
8 V / 130 l/s	Total ( $L_{WA}$ )	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
Surrounding	54	43	45	51	50	39	37	30	28
Supply air	79	62	67	76	71	69	65	62	54
Extract air	67	54	61	63	60	51	43	33	28
7 V / 120 l/s	Total ( $L_{WA}$ )	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
Surrounding	51	42	43	47	46	38	36	29	29
Supply air	76	62	65	73	70	68	64	60	52
Extract air	69	52	59	68	58	50	42	32	28
6 V / 110 l/s	Total ( $L_{WA}$ )	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
Surrounding	51	41	42	47	46	37	34	29	28
Supply air	75	61	63	71	68	66	62	58	50
Extract air	67	50	58	66	57	48	40	31	28
5 V / 100 l/s	Total ( $L_{WA}$ )	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
Surrounding	48	39	40	45	38	35	32	28	28
Supply air	73	60	62	70	66	63	60	56	47
Extract air	66	48	56	66	54	47	38	29	28
4 V / 85 l/s	Total ( $L_{WA}$ )	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
Surrounding	46	36	38	43	35	36	30	27	28
Supply air	72	59	60	69	65	60	56	52	43
Inlet	63	46	54	62	52	44	36	29	28
3 V / 65 l/s	Total ( $L_{WA}$ )	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
Surrounding	41	31	35	30	38	34	27	27	28
Supply air	64	56	58	55	58	55	50	44	35
Extract air	54	42	49	48	48	41	32	28	28
2 V / 45 l/s	Total ( $L_{WA}$ )	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
Surrounding	39	27	36	25	30	33	25	27	28
Supply air	58	48	53	49	52	48	41	35	29
Extract air	50	36	46	43	43	38	28	28	28

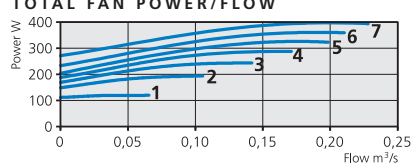
# HERU®180 S 2



## PRESSURE/FLOW

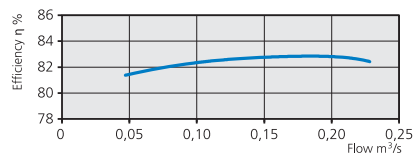


## TOTAL FAN POWER/FLOW



The pressure/flow diagrams applies to both supply and extract air. Indicated power and SFP applies to both fans together.

## TEMPERATURE EFFICIENCY



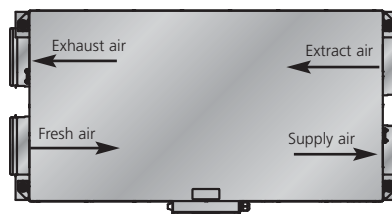
## TRANSFORMER STEP

1	2	3	4	5	6	7
100V	130V	150V	170V	190V	210V	230V

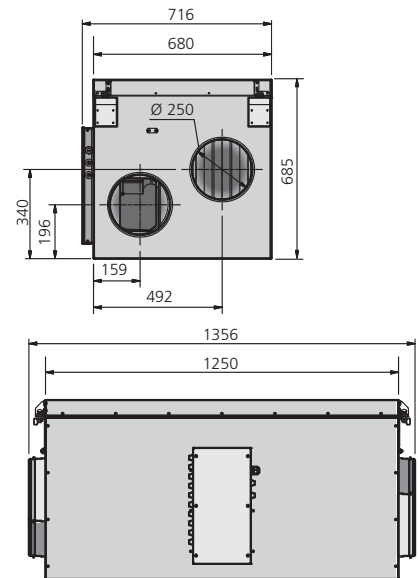
## TECHNICAL DATA

HERU®180 S 2	A	B	C
Voltage, V/Hz	230/50	230/50	230/50
Fan current, A	1,73	1,73	1,73
Total current, A	11,8	6,8	1,83
Total fan input, W	397	397	397
Total input, W	2723	1570	424
Input electric heater, W/A 2300/10,01150/5,0	-	-	-
Sound pressure level, L <sub>pA</sub>	43	43	43
Weight, kg	136	136	136

## FLOW DIRECTION RIGHT



## DIMENSIONS (mm)



## SOUND DATA

230 V / 185 l/s	Total L <sub>WA</sub>	63 Hz	125 Hz	250 Hz	500 Hz	1k Hz	2k Hz	4k Hz	8k Hz
Surrounding	50	43	44	44	44	39	38	35	31
Supply air	77	53	60	64	75	70	68	63	57
Extract air	59	48	53	54	52	45	37	34	27
190 V / 181 l/s	Total L <sub>WA</sub>	63 Hz	125 Hz	250 Hz	500 Hz	1k Hz	2k Hz	4k Hz	8k Hz
Surrounding	48	41	44	43	42	37	33	31	30
Supply air	75	51	59	63	71	68	67	61	55
Extract air	56	46	50	50	51	41	36	32	25
170 V / 152 l/s	Total L <sub>WA</sub>	63 Hz	125 Hz	250 Hz	500 Hz	1k Hz	2k Hz	4k Hz	8k Hz
Surrounding	47	40	43	41	40	35	31	30	30
Supply air	71	50	58	61	66	66	64	58	51
Extract air	55	44	49	48	51	39	34	30	24
150 V / 116 l/s	Total L <sub>WA</sub>	63 Hz	125 Hz	250 Hz	500 Hz	1k Hz	2k Hz	4k Hz	8k Hz
Surrounding	45	39	42	40	34	31	28	29	29
Supply air	67	51	54	60	61	60	60	54	47
Extract air	52	44	47	49	42	36	31	28	24

The sound data has been compiled by means of the following methods:  
 Pressure and flow: SS-ISO 5801.  
 Determination of acoustic sound power level in duct: SS-ISO 5136.  
 Determination of acoustic sound power level in reverberation room: SS-EN ISO 3741.

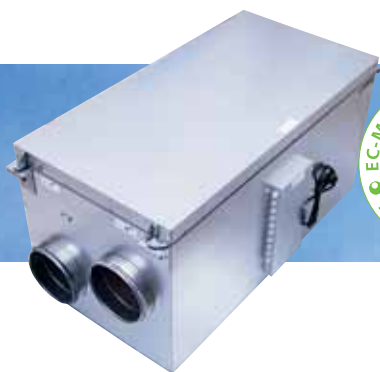
## DESIGNATIONS

The table presents the total A-weighted sound power level,  $L_{WA}$ , as well as in octave bands in dB(A) (ref 10<sup>-12</sup>W). In the "Technical Data" above, the total sound pressure,  $L_{pA}$ , calculated from the total surrounding sound power level,  $L_{WA}$ , at 230 V is presented in dB(A) (ref 20x10<sup>-6</sup>Pa). The relation between sound pressure and sound power

$$L_{pA} = L_{WA} + 10 \times \log \left( \frac{Q}{4\pi r^2} + \frac{4}{A_{Ekv}} \right)$$

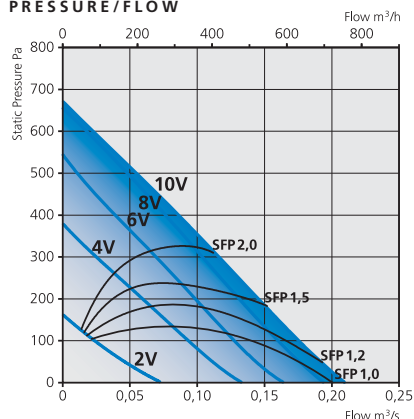
where  $Q$  is the propagation factor,  $r$  is the distance from the unit and  $A_{Ekv}$  is the equivalent absorption area. When calculating the  $L_{WA}$  it has been assumed that  $Q=2$ ,  $r=3$  m and  $A_{Ekv}=20$  m<sup>2</sup>, which gives  $L_{pA} \approx L_{WA} - 7$ .



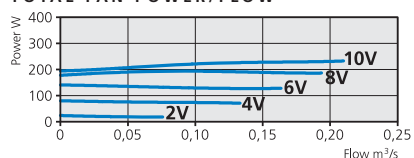


# HERU®180 S EC 2

## PRESSURE/FLOW

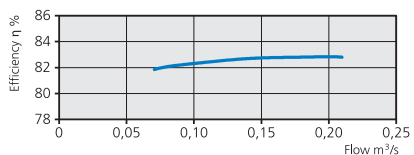


## TOTAL FAN POWER/FLOW



The pressure/flow diagrams applies to both supply and extract air. Indicated power and SFP applies to both fans together.

## TEMPERATURE EFFICIENCY



The sound data has been compiled by means of the following methods:  
Pressure and flow: SS-ISO 5801.  
Determination of acoustic sound power level in duct: SS-ISO 5136.  
Determination of acoustic sound power level in reverberation room: SS-EN ISO 3741.

## DESIGNATIONS

The table presents the total A-weighted sound power level,  $L_{WA}$ , as well as in octave bands in dB(A) (ref 10<sup>-12</sup>W). In the "Technical Data" above, the total sound pressure,  $L_{pA}$ , calculated from the total surrounding sound power level,  $L_{WA}$ , at 230 V is presented in dB(A) (ref 20x10<sup>-6</sup>Pa). The relation between sound pressure and sound power

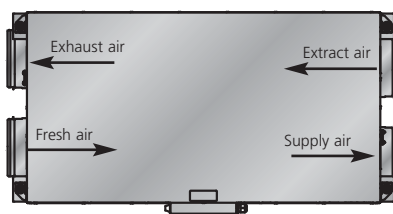
$$L_{pA} = L_{WA} + 10 \times \log \left( \frac{Q}{4\pi r^2} + \frac{4}{A_{E_{KV}}} \right)$$

where  $Q$  is the propagation factor,  $r$  is the distance from the unit and  $A_{E_{KV}}$  is the equivalent absorption area. When calculating the  $L_{WA}$  it has been assumed that  $Q=2$ ,  $r=3$  m and  $A_{E_{KV}}=20$  m<sup>2</sup>, which gives  $L_{pA} \approx L_{WA} - 7$ .

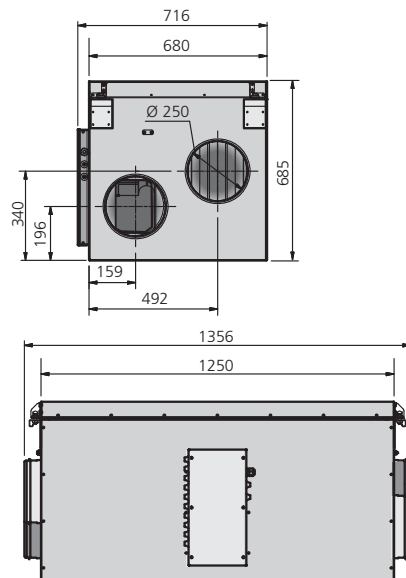
## TECHNICAL DATA

HERU®180 S EC 2	A	B	C
Voltage, V/Hz	230/50	230/50	230/50
Fan current, A	1,93	1,93	1,93
Total current, A	12,0	7,0	2,0
Total fan input, W	232	232	232
Total input, W	2560	1410	259
Input electric heater, W/A 2300/10,01150/5,9	-	-	-
Sound pressure level, $L_{pA}$	52	52	52
Weight, kg	135	135	135

## FLOW DIRECTION RIGHT



## DIMENSIONS (mm)



## SOUND DATA

10 V / 160 l/s	Total ( $L_{WA}$ )	63 Hz	125 Hz	250 Hz	500 Hz	1k Hz	2k Hz	4k Hz	8k Hz
Surrounding	58	49	50	53	53	50	38	33	29
Supply air	78	59	62	73	72	71	70	63	52
Extract air	65	52	55	63	58	49	45	36	33
8 V / 150 l/s	Total ( $L_{WA}$ )	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
Surrounding	54	48	49	50	46	41	37	32	29
Supply air	76	59	61	71	71	69	68	61	49
Extract air	63	51	54	60	55	46	43	35	33
7 V / 145 l/s	Total ( $L_{WA}$ )	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
Surrounding	52	48	47	48	44	39	35	31	28
Supply air	74	58	60	67	69	68	66	59	47
Extract air	61	50	53	58	53	45	42	34	33
6 V / 130 l/s	Total ( $L_{WA}$ )	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
Surrounding	51	47	45	47	44	38	33	30	28
Supply air	73	57	58	68	67	66	64	56	44
Extract air	59	49	51	57	51	43	40	33	33
5 V / 120 l/s	Total ( $L_{WA}$ )	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
Surrounding	49	45	43	46	40	36	31	29	27
Supply air	71	56	56	67	65	63	62	53	41
Extract air	59	47	50	57	49	41	38	32	33
4 V / 105 l/s	Total ( $L_{WA}$ )	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
Surrounding	47	45	43	43	39	34	30	28	27
Supply air	69	54	55	66	62	60	58	49	38
Extract air	57	45	48	56	46	39	36	32	33
3 V / 80 l/s	Total ( $L_{WA}$ )	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
Surrounding	44	42	41	35	37	34	26	27	27
Supply air	62	50	55	54	55	55	51	41	34
Extract air	51	40	47	45	42	35	32	32	33
2 V / 60 l/s	Total ( $L_{WA}$ )	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz
Surrounding	39	33	36	27	31	32	26	27	27
Supply air	54	44	47	46	48	47	39	33	33
Extract air	45	36	40	38	37	32	30	31	33



# ACCESSORIES



## COOLING COIL KIT

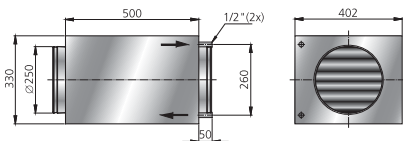
2,5 kW incl. 2- or 3-way valve and valve motor.

### Air:

Flow:	0,20 m³/s	0,15 m³/s
Speed:	2,2 m/s	1,7 m/s
Temp. in:	25°C, 50% Rh	25°C, 50% Rh
Temp. out:	14,4°C	13,5°C
Efficiency:	2,5 kW	2,0 kW

### Cold water:

Flow:	0,16 l/s	0,13 l/s
Speed:	0,8 m/s	0,6 m/s
Temp. supply pipe:	7°C	7°C
Temp. return pipe:	12°C	12°C
Pressure drop:	12,4 k Pa	8,8 k Pa



## HEATING COIL KIT

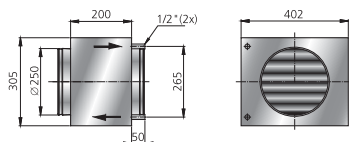
5 kW incl. 2- or 3-way valve, valve motor and freeze protection sensor

### Air:

Flow:	0,20 m³/s
Speed:	2,2 m/s
Temp. in:	10°C
Temp. out:	30,5°C
Efficiency:	5,0 kW

### Warm water:

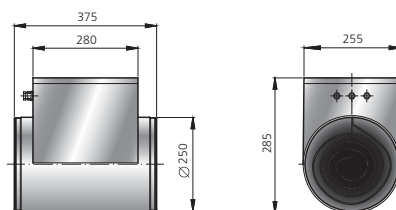
Flow:	0,10 l/s
Speed:	0,86 m/s
Temp. supply pipe:	60°C
Temp. return pipe:	40°C
Pressure drop:	15,0 k Pa



## EXTERNAL ELECTRIC DUCT HEATER

HERU® can be fitted with a built-in electrical heater with pulser as standard. The built-in electric heater can be replaced with an external electric duct heater as needed.

Min. air speed:	Efficiency:	Min. flow
1,5 m/s	5,0 kW	74 l/s



## FREEZE PROTECTION SENSOR

To placement on the return pipe of the heating coil.

## CARBON DIOXIDE SENSOR, CO<sub>2</sub>

For installation in room.

## HUMIDITY SENSOR, RH

For installation in room.

## ROOM SENSOR TEMPERATURE

To placement in room for room regulation.

## PRESSURE SENSOR

For differential pressure measurement.

## DAMPER MOTOR

230 V with pull back spring.

## RELAY PUMP CONTROL

For pump control of heating/cooling battery.

## BAG FILTER

Bag filter F5 to HERU®S the same for exhaust and supply air.

## SILENCER

Lengths of 600 mm and 900 mm.

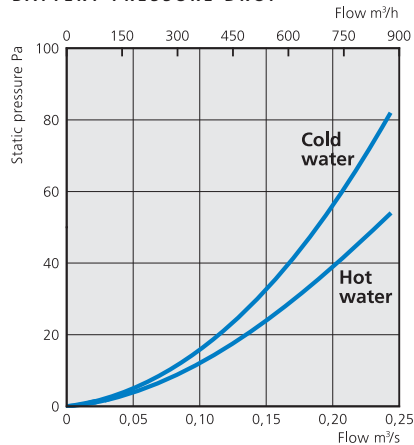
## COOKER HOOD

To HERU® T.

## FLOOR STAND

To HERU®115 T, 140 T and 160 TEC

## BATTERY PRESSURE DROP





## ÖSTBERG

**FOR HEALTHY INDOOR CLIMATE  
WITH ENERGY EFFICIENT VENTILATION**

Östberg is one of the leading producers of fans in the world.

In the early 1970s the founder and owner of the company designed the first circular and rectangular in-line radial duct fan with external rotor motor and straight-through airflow (180°) in the history.

We have continued to develop new products and today we offer a wide product range of centrifugal in-line duct fans, roof fans, wall fans and energy recovery units.

Our goal is to always offer quality products at competitive prices.



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