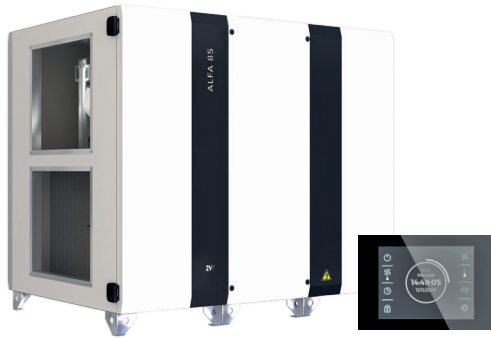




Rotary wheel heat exchanger



Sorption rotary wheel heat exchanger



BASIC FEATURES

ALFA 85

Wide and flexible range of heat recovery units with a rotary wheel with a purge sector suitable for both indoor and outdoor installations designed for commercial and retail constructions such as **offices, shops, coffee bars, restaurants, sport facilities and public premises.**

- **11 sizes of vertical version with air flows 700–14000 m³/h**
- **9 sizes of version with upper outlets with air flows 700–5000 m³/h**
- Ecodesign directive 1253/2014 compliant
- **Rotary wheel** with heat recovery efficiency up 85% (EN308) and moisture transfer ability
- **Sorption wheel** with heat recovery efficiency up 85% and (EN308) and increased moisture transfer ability up to 93%
- Energy-efficient EC fans with low SFP and quiet operation
- Double skin mineral wool insulation 50mm
- Modular construction for easy manipulation and installation (size 3200m³/h and bigger)
- Integrated electric or water post-heater, modular C/O or DX coil post-heater (all optional)
- **AirGENIO Superior** control system with an option of CAV, VAV or DCV mode, other supplementary modes, antifreeze protection, BMS control via ModBUS RTU, TCP or BACnet.

ALFA 85 heat recovery unit is designed to be operated at an indoor / outdoor environment and at an ambient temperature in the range from -20°C up to +60°C.

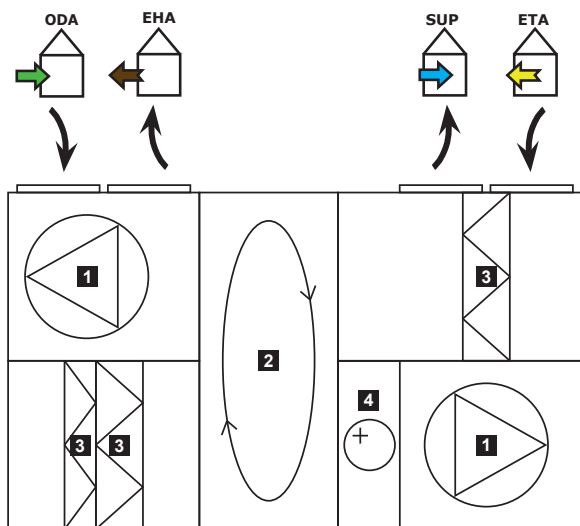
The unit is designed for transporting standard atmospheric air that is free of dust, grease, chemical emissions and other impurities. The transported air relative humidity must not exceed 90%.

The unit casing is made from double skin mineral wool insulation panels of the thickness 50mm. The unit, when installed in the ducting system has an IP rating of 43.

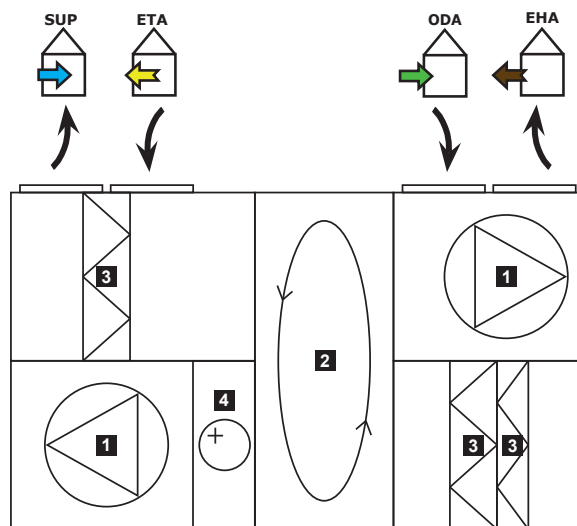
The design of the ventilation project must be **always designed by a qualified HVAC designer, engineer or architect.**

Version with upper outlets

Operational diagram right version upper connections



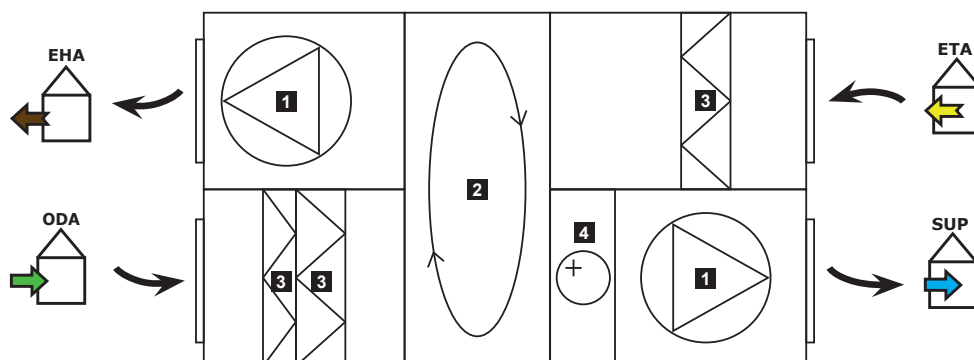
Operational diagram left version upper connections



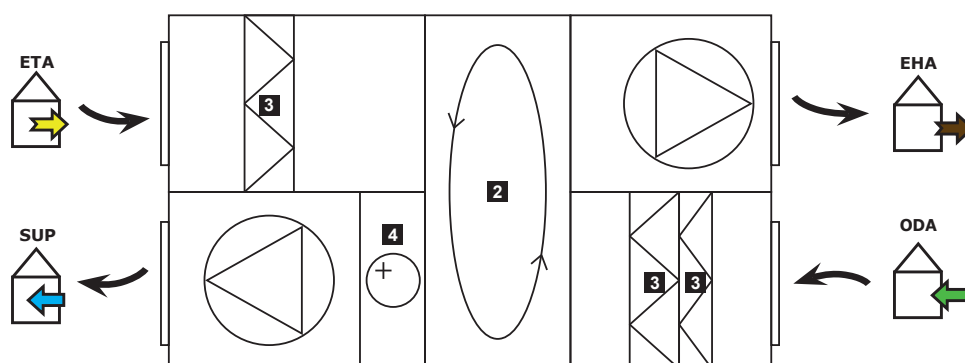
1 Fan 2 Heat exchanger 3 Filter 4 Postheater

Version with side outlets

Operational diagram right version side connections



Operational diagram left version side connections



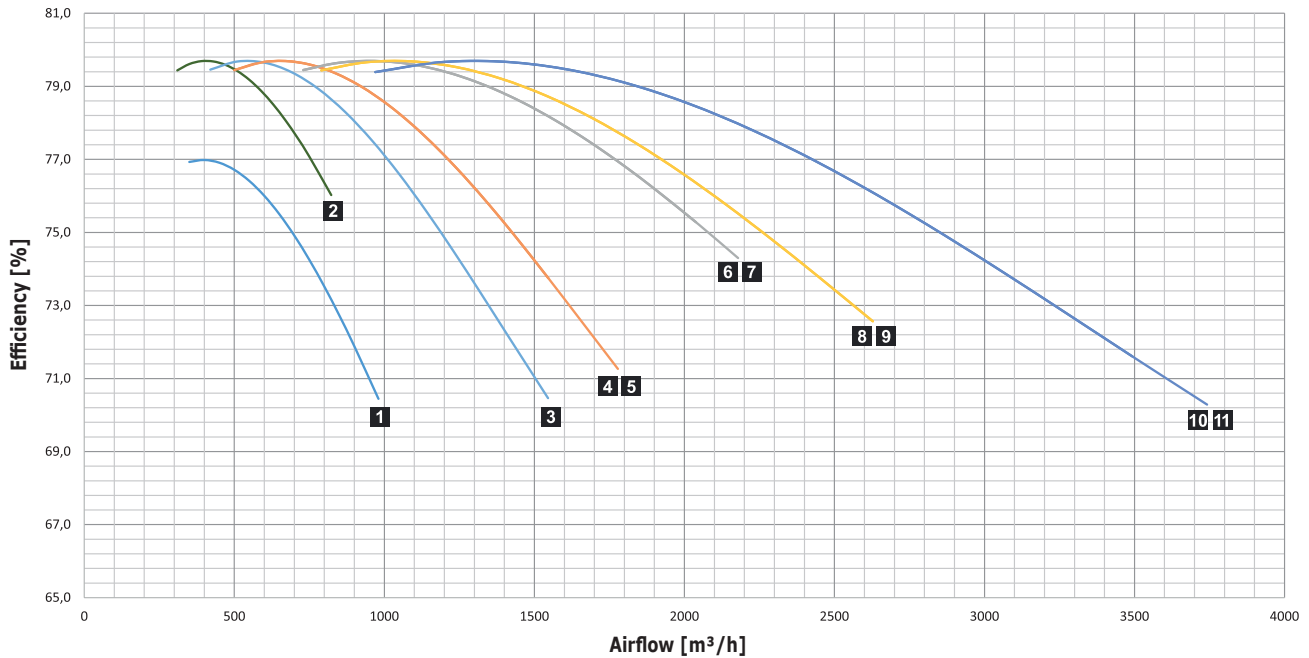
1 Fan 2 Heat exchanger 3 Filter 4 Postheater



PRIMARY PARAMETERS

Heat recovery efficiency:

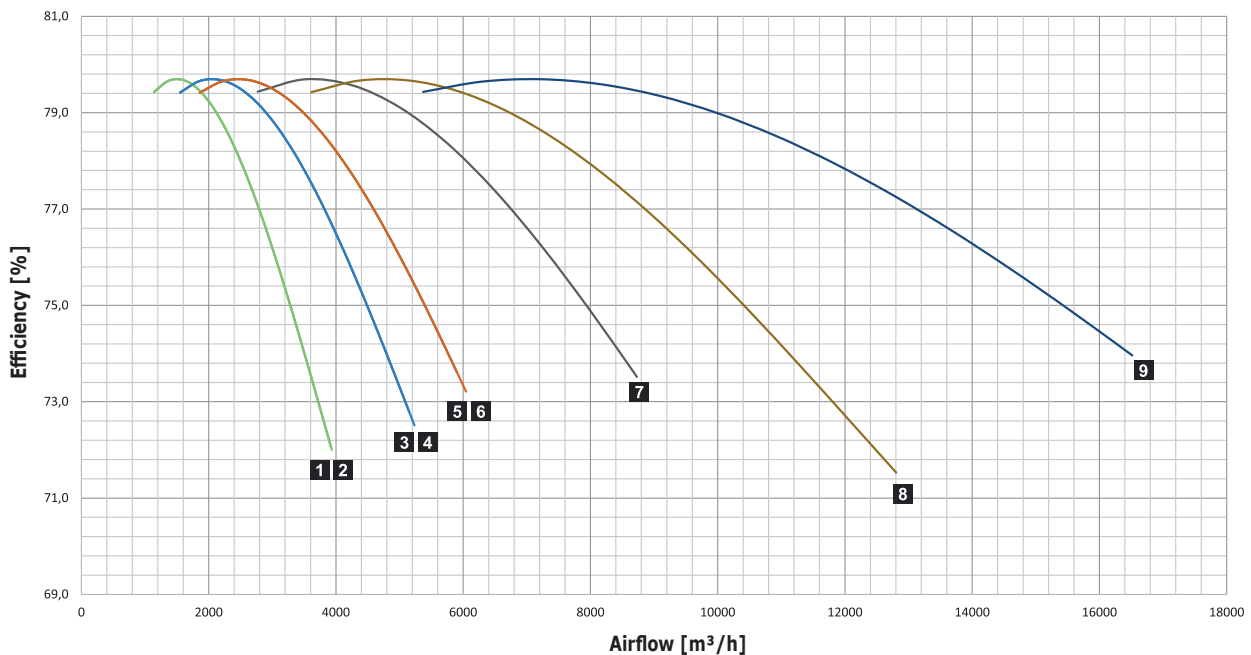
Standard rotary exchanger - summer conditions EN308 (35°C/50%RH, 25°C/50%RH)



- | | | | | | |
|--------------|--------------|--------------|---------------|---------------|--------------|
| 1 HR852-070V | 2 HR852-070U | 3 HR852-090U | 4 HR852-100V | 5 HR852-120U | 6 HR852-150V |
| 7 HR852-160U | 8 HR852-200V | 9 HR852-200U | 10 HR852-250V | 11 HR852-250U | |

Heat recovery efficiency:

Standard rotary exchanger - summer conditions EN308 (35°C/50%RH, 25°C/50%RH)



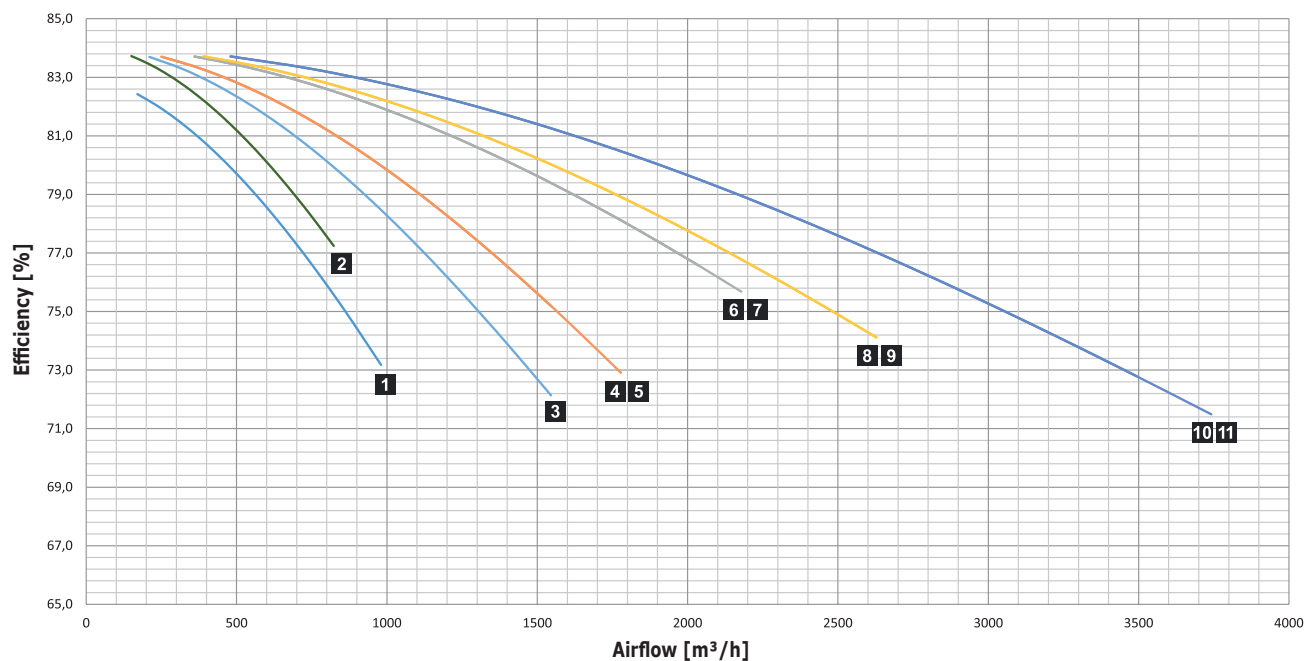
- | | | | | |
|--------------|--------------|--------------|--------------|--------------|
| 1 HR852-320V | 2 HR852-320U | 3 HR852-400V | 4 HR852-400U | 5 HR852-500V |
| 6 HR852-500U | 7 HR852-700V | 8 HR852-10KV | 9 HR852-14KV | |



PRIMARY PARAMETERS

Heat recovery efficiency:

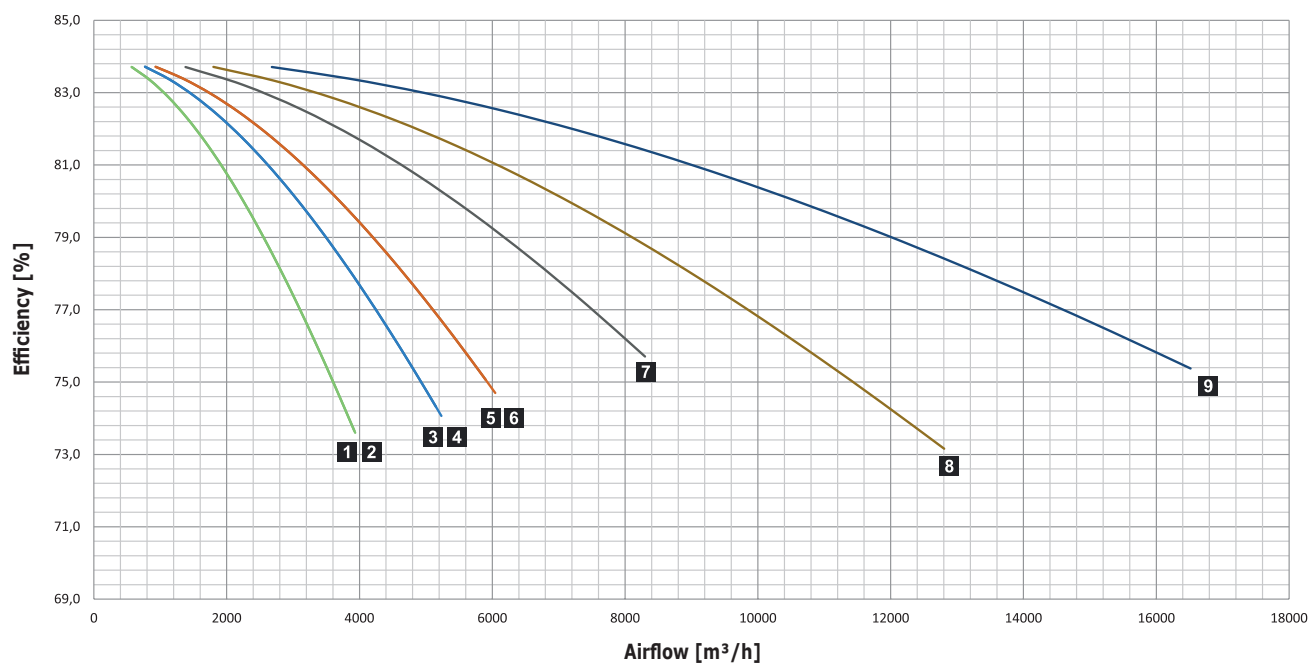
Standard rotary exchanger - winter conditions EN308 (5°C/72%RH, 25°C/28%RH)



- | | | | | | |
|--------------|--------------|--------------|---------------|---------------|--------------|
| 1 HR852-070V | 2 HR852-070U | 3 HR852-090U | 4 HR852-100V | 5 HR852-120U | 6 HR852-150V |
| 7 HR852-160U | 8 HR852-200V | 9 HR852-200U | 10 HR852-250V | 11 HR852-250U | |

Heat recovery efficiency:

Standard rotary exchanger - winter conditions EN308 (5°C/72%RH, 25°C/28%RH)



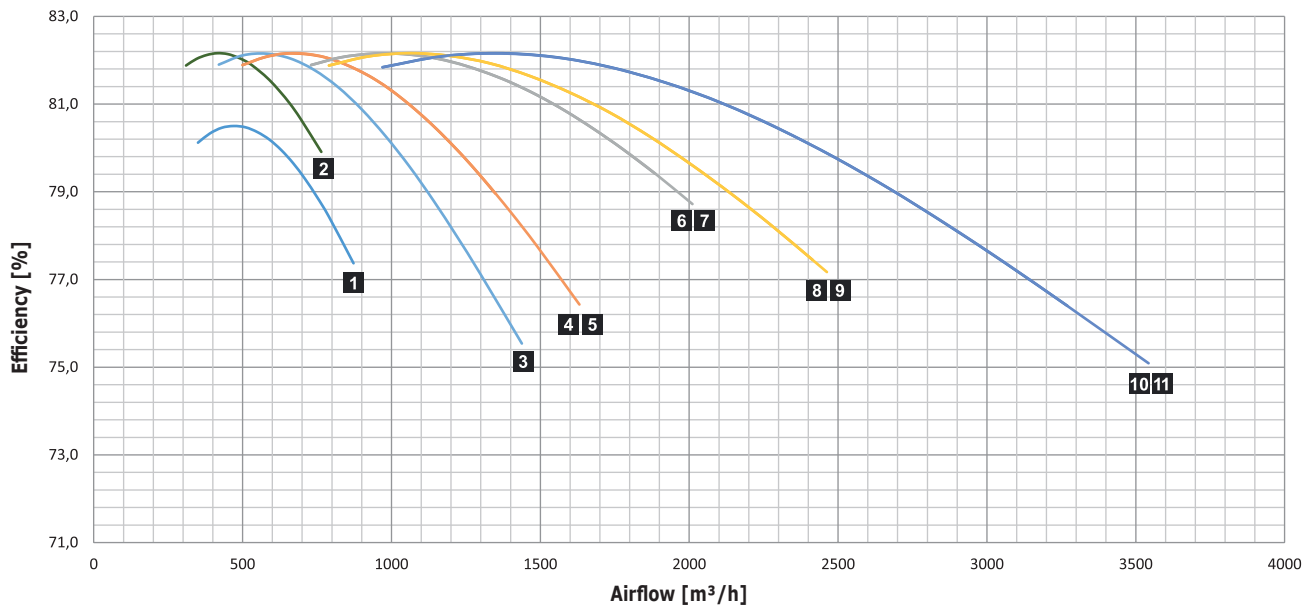
- | | | | | |
|--------------|--------------|--------------|--------------|--------------|
| 1 HR852-320V | 2 HR852-320U | 3 HR852-400V | 4 HR852-400U | 5 HR852-500V |
| 6 HR852-500U | 7 HR852-700V | 8 HR852-10KV | 9 HR852-14KV | |



PRIMARY PARAMETERS

Heat recovery efficiency:

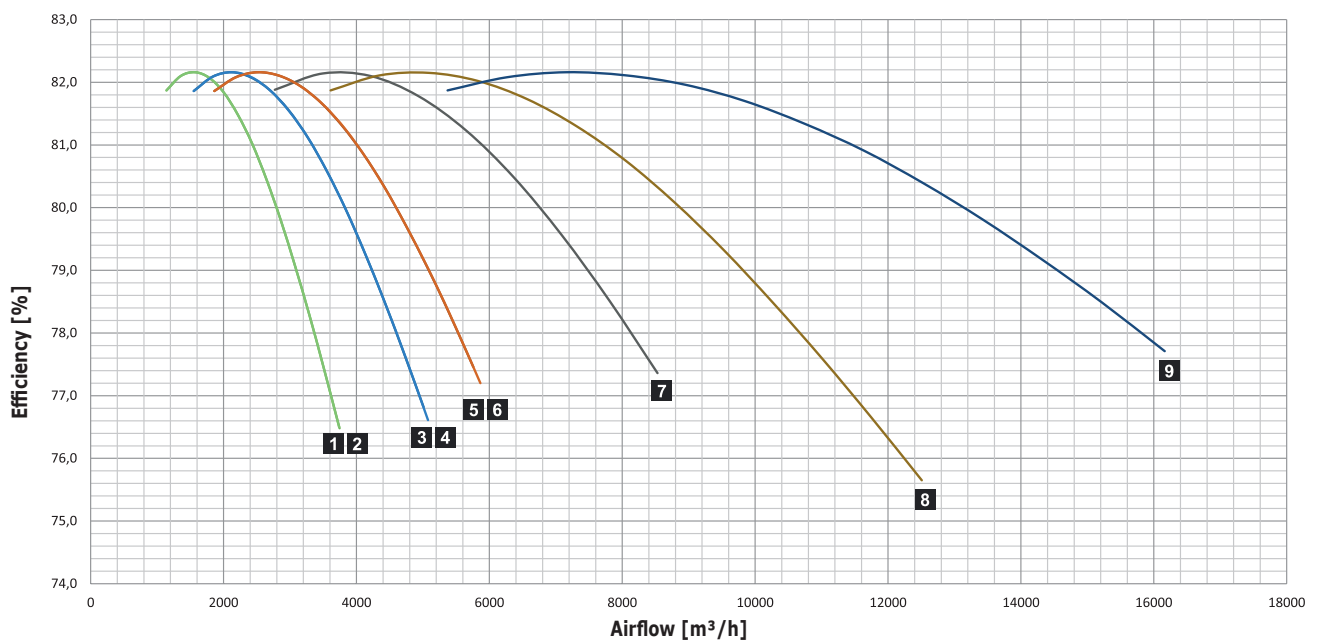
Sorption rotary exchanger - summer conditions EN308 (35°C/50%RH, 25°C/50%RH)



- 1 HR852-070V 2 HR852-070U 3 HR852-090U 4 HR852-100V 5 HR852-120U 6 HR852-150V
 7 HR852-160U 8 HR852-200V 9 HR852-200U 10 HR852-250V 11 HR852-250U

Heat recovery efficiency:

Sorption rotary exchanger - summer conditions EN308 (35°C/50%RH, 25°C/50%RH)



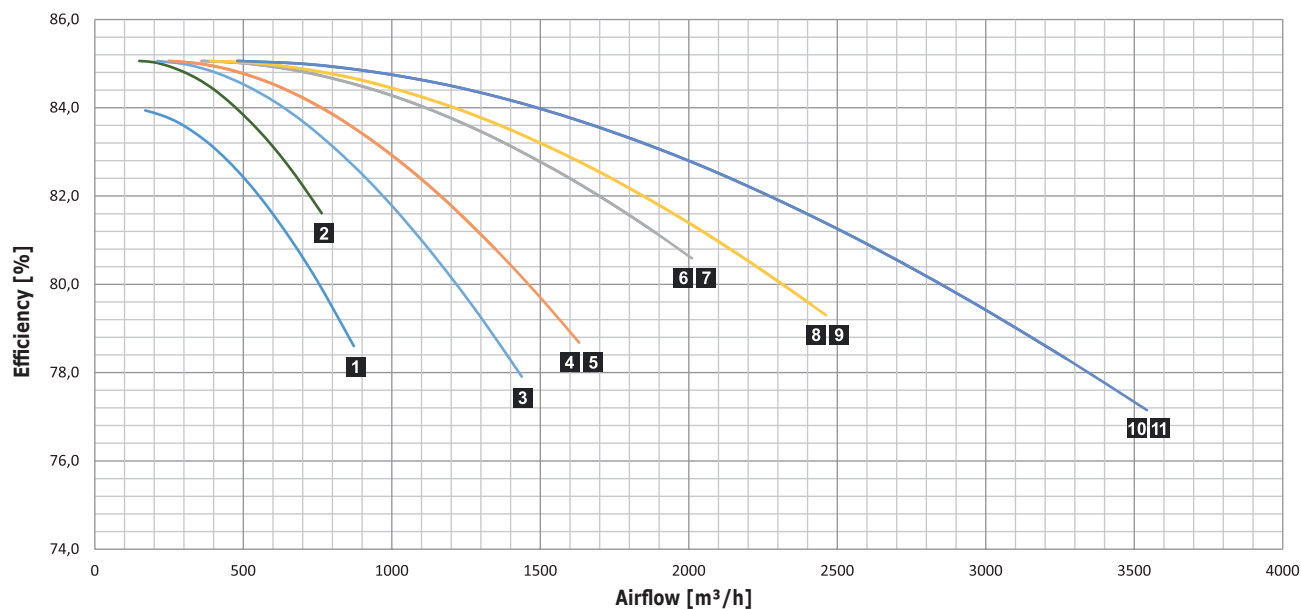
- 1 HR852-320V 2 HR852-320U 3 HR852-400V 4 HR852-400U 5 HR852-500V
 6 HR852-500U 7 HR852-700V 8 HR852-10KV 9 HR852-14KV



PRIMARY PARAMETERS

Heat recovery efficiency:

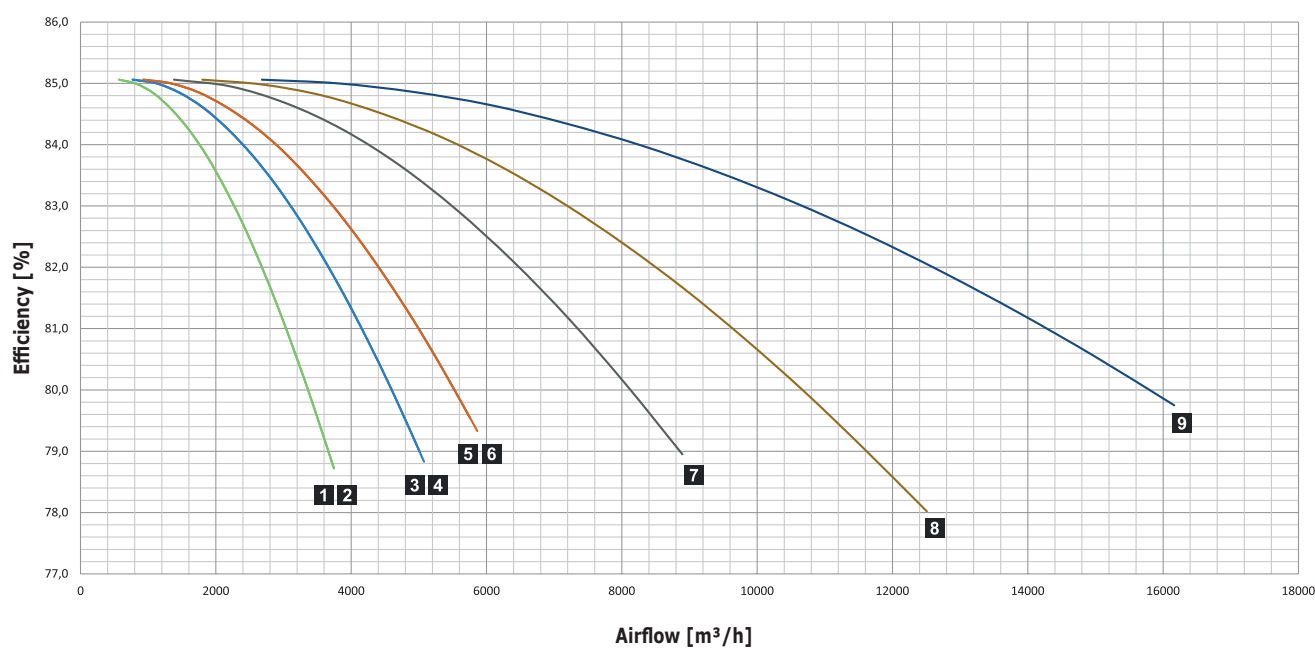
Sorption rotary exchanger - winter conditions EN308 (5°C/72%RH, 25°C/28%RH)



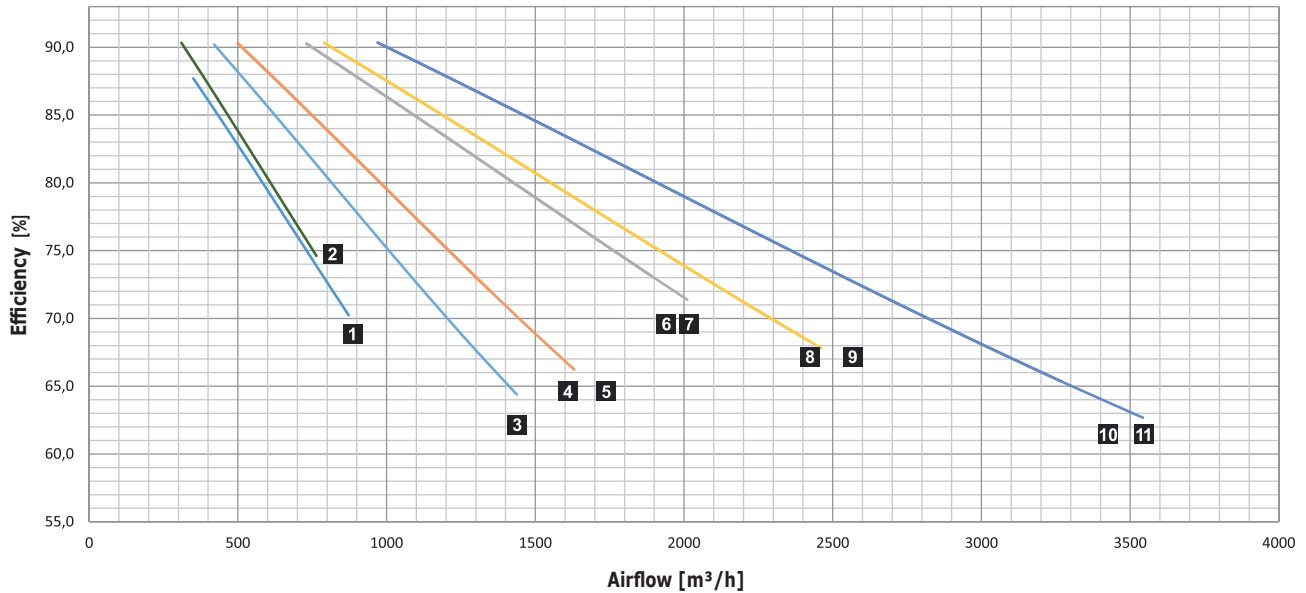
- | | | | | | |
|--------------|--------------|--------------|---------------|---------------|--------------|
| 1 HR852-070V | 2 HR852-070U | 3 HR852-090U | 4 HR852-100V | 5 HR852-120U | 6 HR852-150V |
| 7 HR852-160U | 8 HR852-200V | 9 HR852-200U | 10 HR852-250V | 11 HR852-250U | |

Heat recovery efficiency:

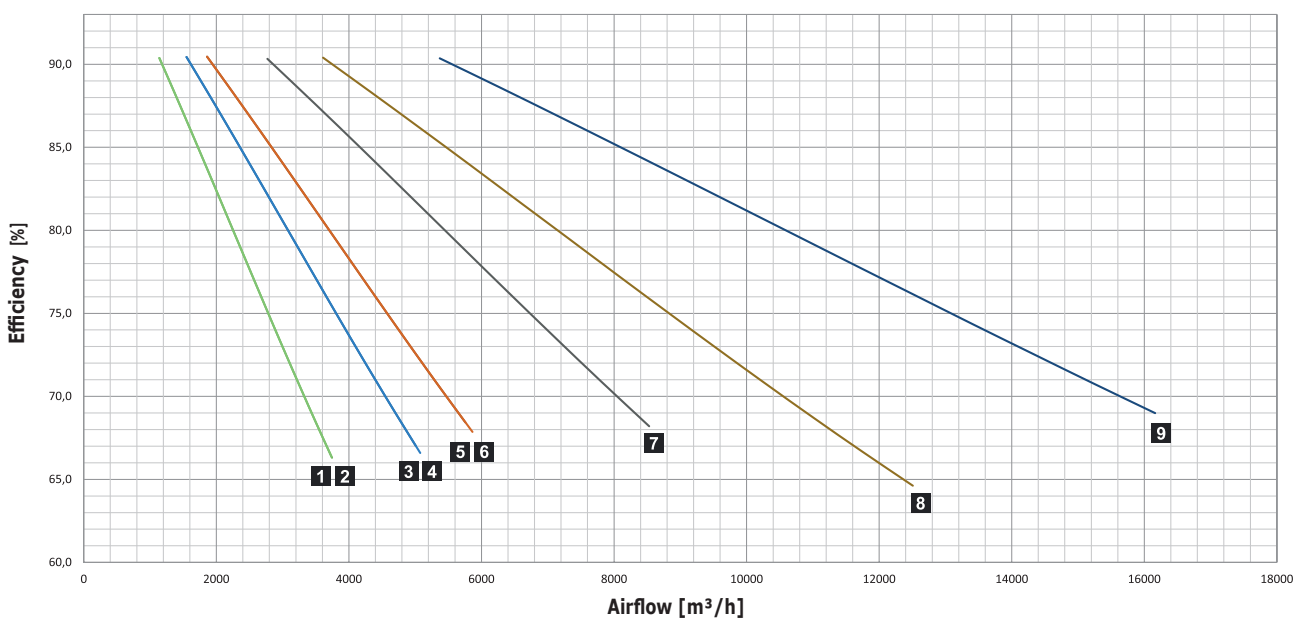
Sorption rotary exchanger - winter conditions EN308 (5°C/72%RH, 25°C/28%RH)



- | | | | | |
|--------------|--------------|--------------|--------------|--------------|
| 1 HR852-320V | 2 HR852-320U | 3 HR852-400V | 4 HR852-400U | 5 HR852-500V |
| 6 HR852-500U | 7 HR852-700V | 8 HR852-10KV | 9 HR852-14KV | |

**PRIMARY PARAMETERS****Moisture transfer efficiency:****Sorption rotary exchanger - summer conditions EN308 (35°C/50%RH, 25°C/50%RH)**

- | | | | | | |
|---------------------|---------------------|---------------------|----------------------|----------------------|---------------------|
| 1 HR852-070V | 2 HR852-070U | 3 HR852-090U | 4 HR852-100V | 5 HR852-120U | 6 HR852-150V |
| 7 HR852-160U | 8 HR852-200V | 9 HR852-200U | 10 HR852-250V | 11 HR852-250U | |

Moisture transfer efficiency:**Sorption rotary exchanger - summer conditions EN308 (35°C/50%RH, 25°C/50%RH)**

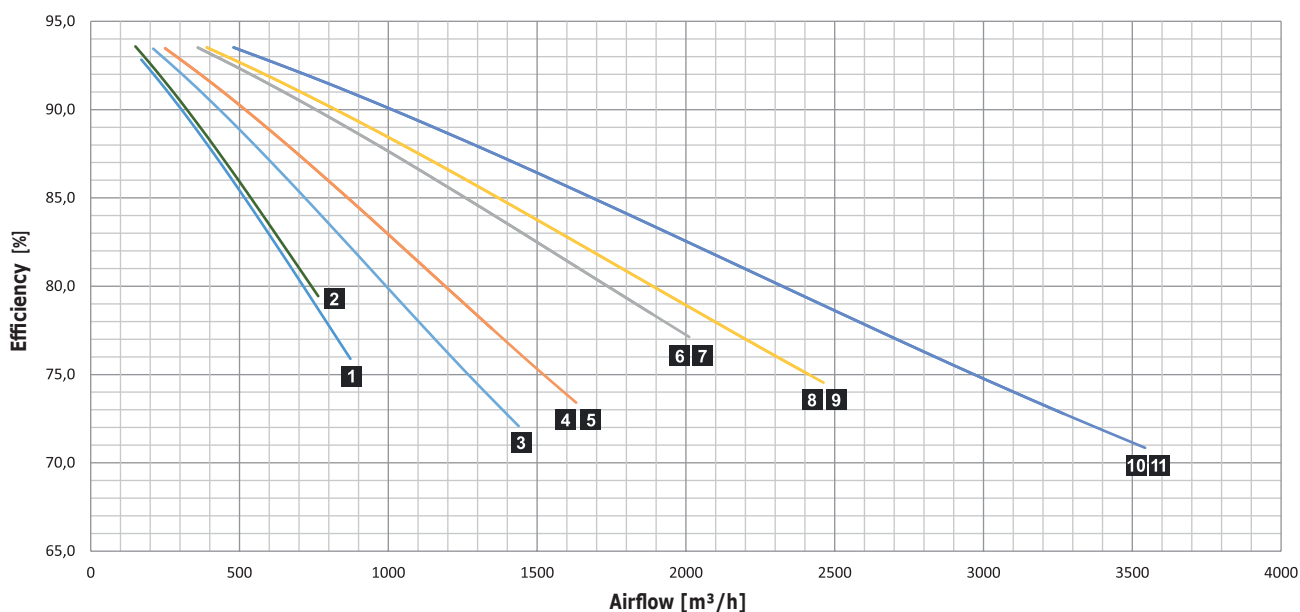
- | | | | | |
|---------------------|---------------------|---------------------|---------------------|---------------------|
| 1 HR852-320V | 2 HR852-320U | 3 HR852-400V | 4 HR852-400U | 5 HR852-500V |
| 6 HR852-500U | 7 HR852-700V | 8 HR852-10KV | 9 HR852-14KV | |



PRIMARY PARAMETERS

Moisture transfer efficiency:

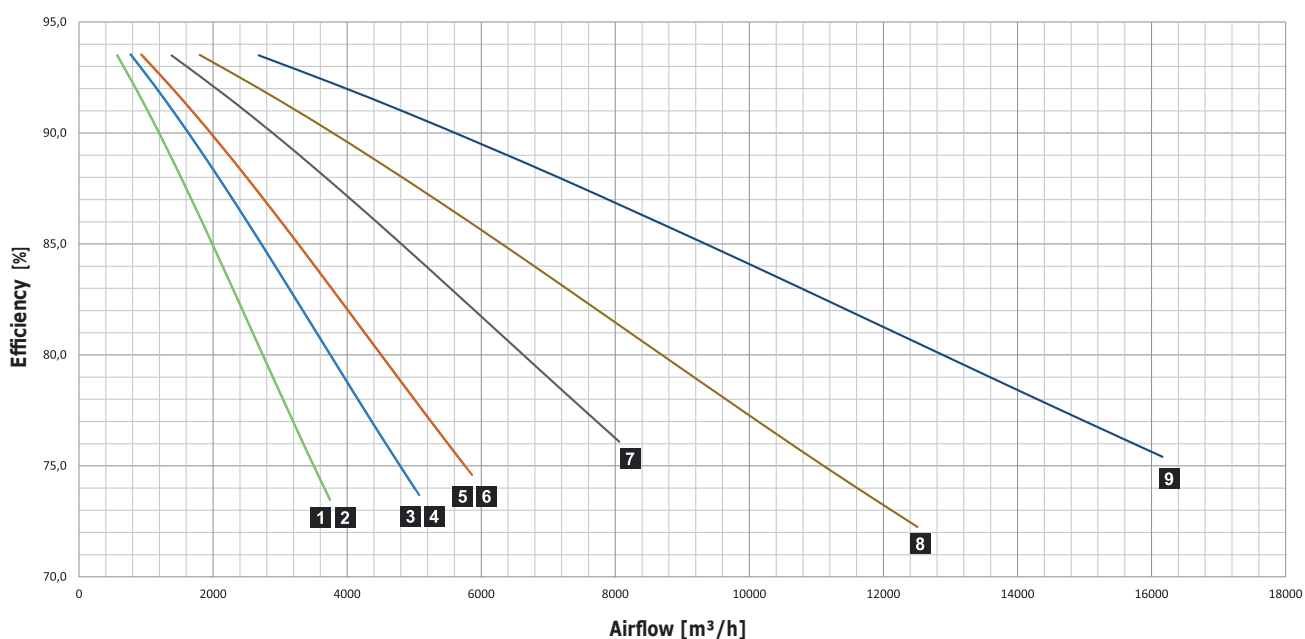
Sorption rotary exchanger - winter conditions EN308 (5°C/72%RH, 25°C/28%RH)



- | | | | | | |
|--------------|--------------|--------------|---------------|---------------|--------------|
| 1 HR852-070V | 2 HR852-070U | 3 HR852-090U | 4 HR852-100V | 5 HR852-120U | 6 HR852-150V |
| 7 HR852-160U | 8 HR852-200V | 9 HR852-200U | 10 HR852-250V | 11 HR852-250U | |

Moisture transfer efficiency:

Sorption rotary exchanger - winter conditions EN308 (5°C/72%RH, 25°C/28%RH)



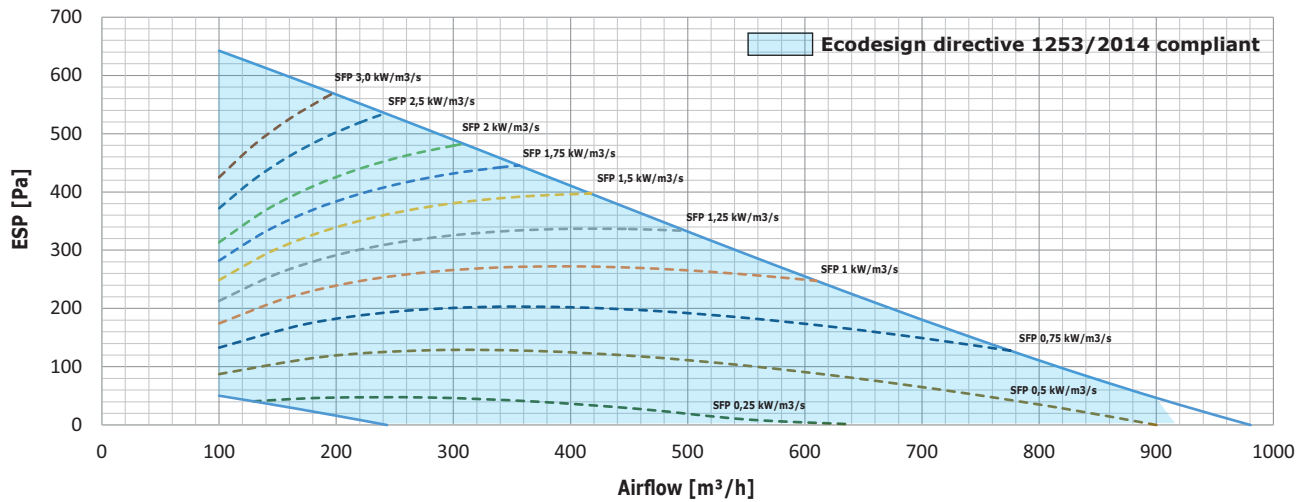
- | | | | | |
|--------------|--------------|--------------|--------------|--------------|
| 1 HR852-320V | 2 HR852-320U | 3 HR852-400V | 4 HR852-400U | 5 HR852-500V |
| 6 HR852-500U | 7 HR852-700V | 8 HR852-10KV | 9 HR852-14KV | |



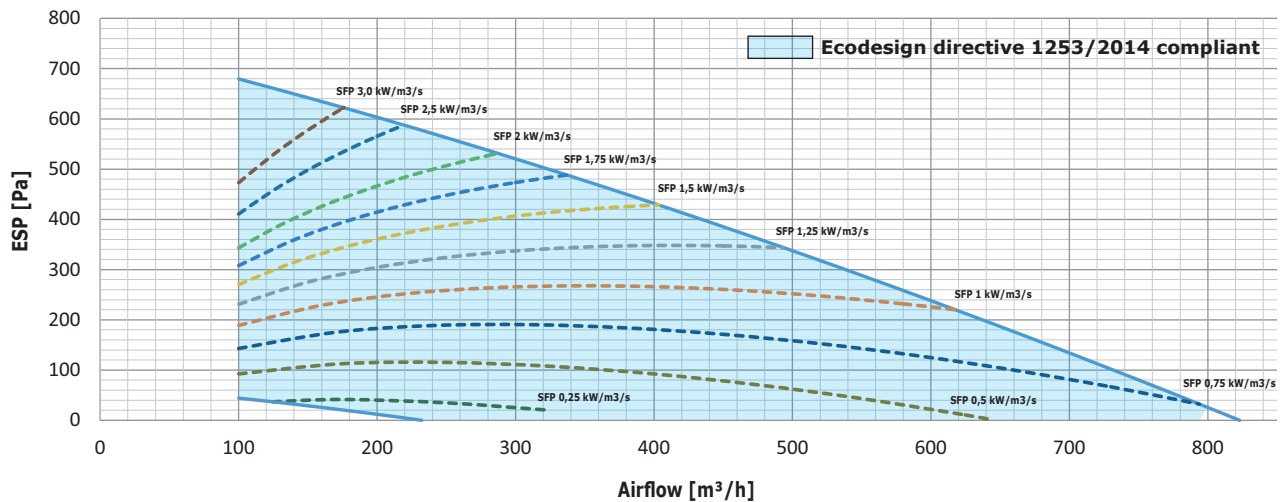
PRIMARY PARAMETERS

SFP = Fan Power input / supply airflow ($\text{kW}/\text{m}^3/\text{s}$)

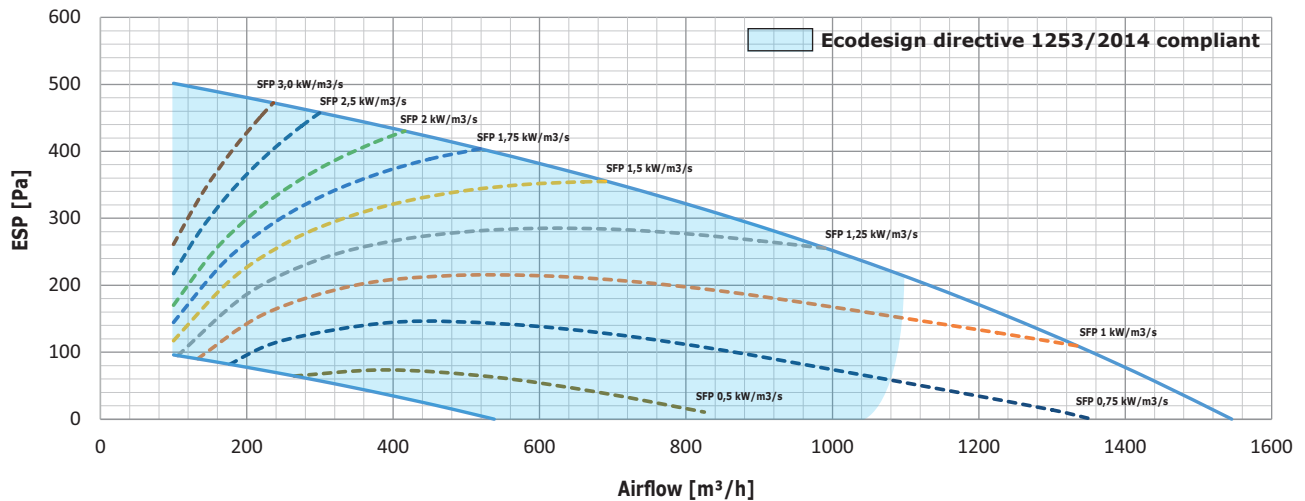
HR852-070 V



HR852-070 U



HR852-090 U

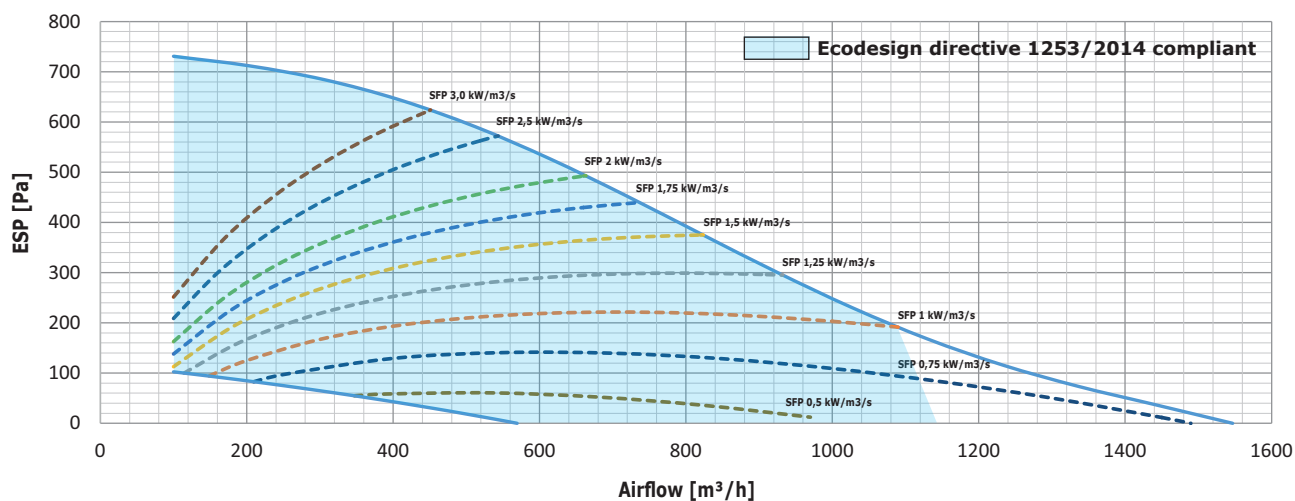




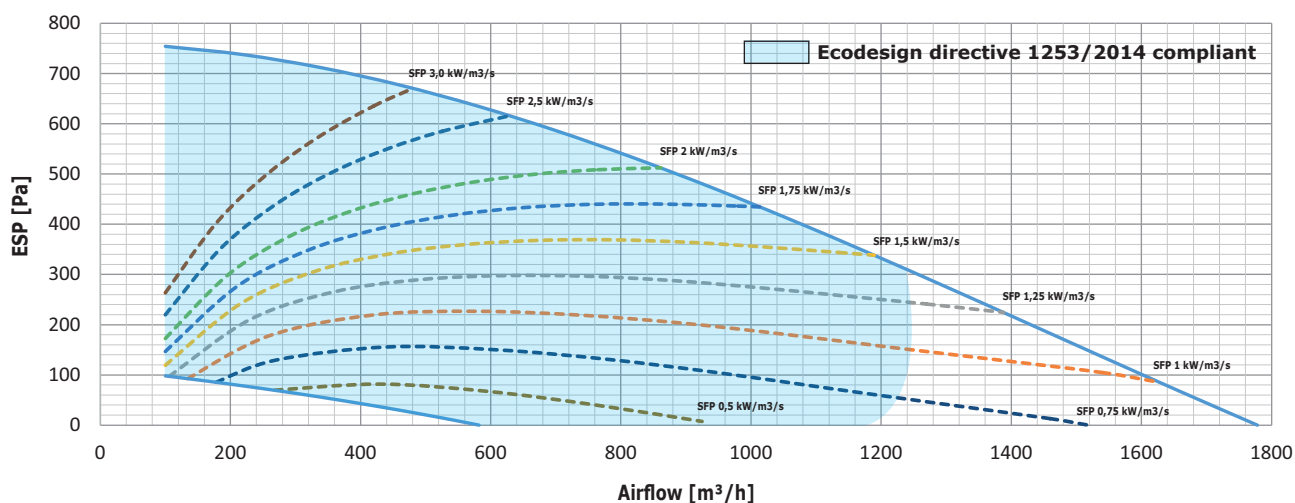
PRIMARY PARAMETERS

SFP = Fan Power input /supply airflow (kW/m³/s)

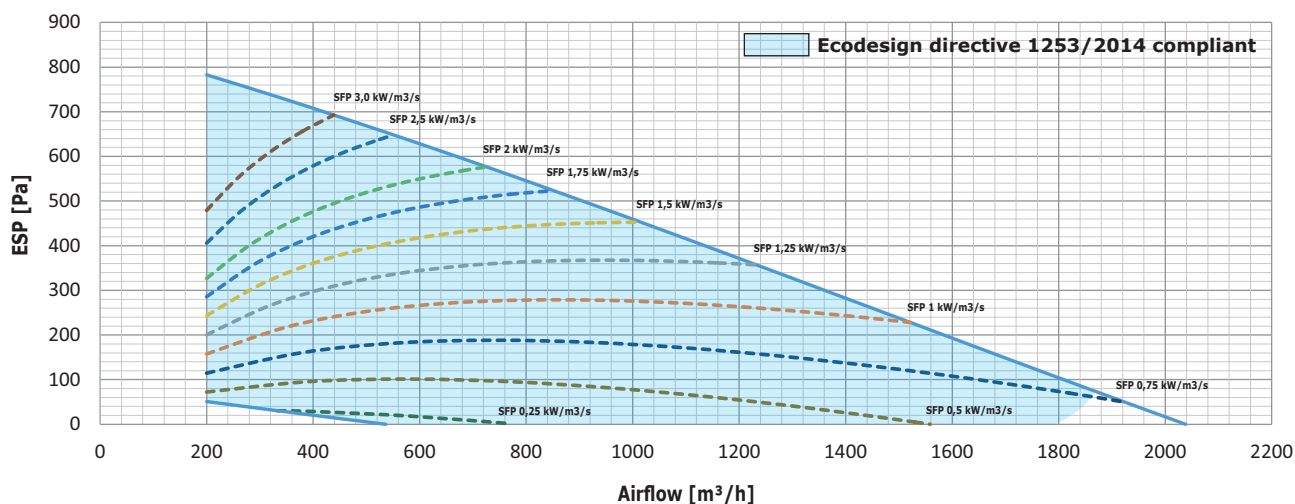
HR852-100 V



HR852-120 U



HR852-150 V

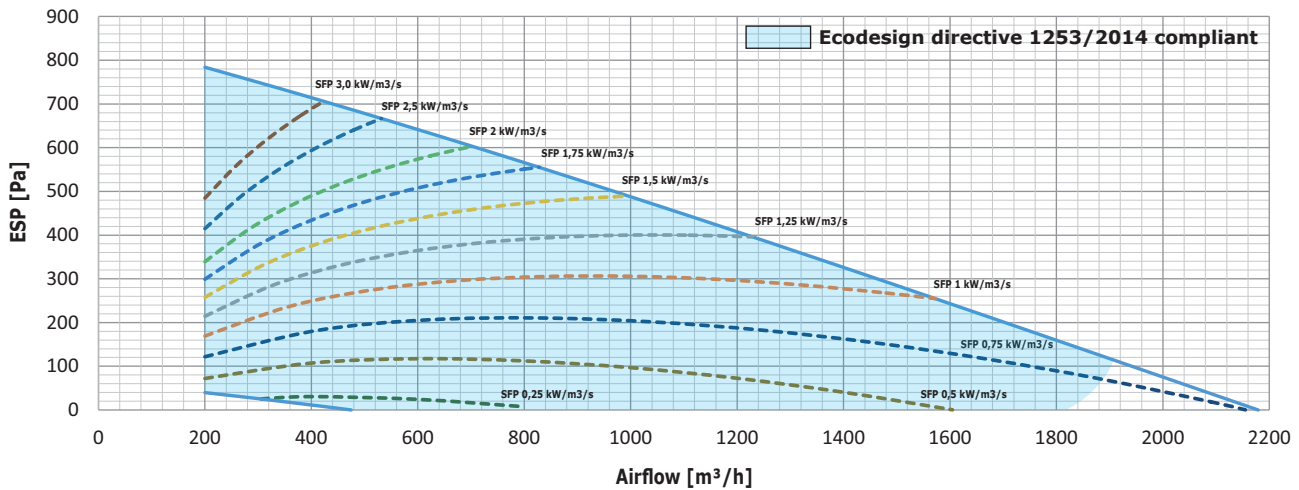




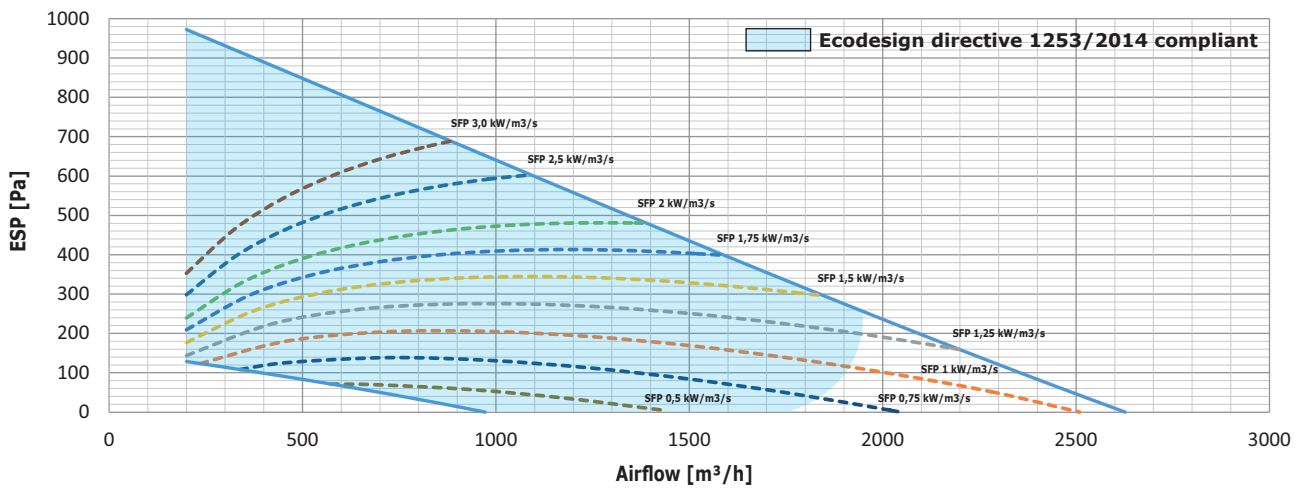
PRIMARY PARAMETERS

SFP = Fan Power input / supply airflow (kW/m³/s)

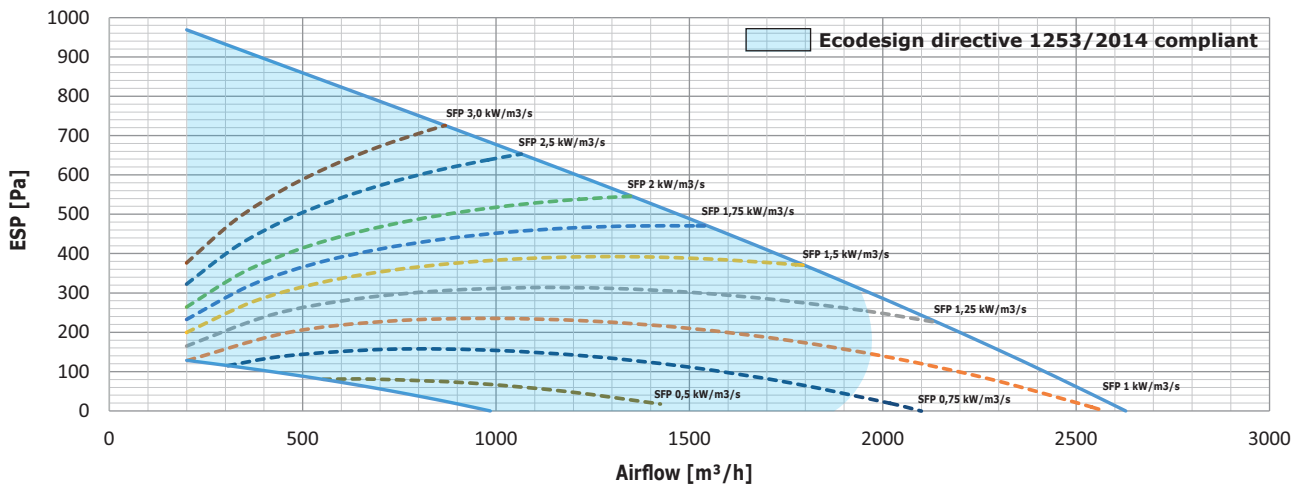
HR852-160 U



HR852-200 V



HR852-200 U

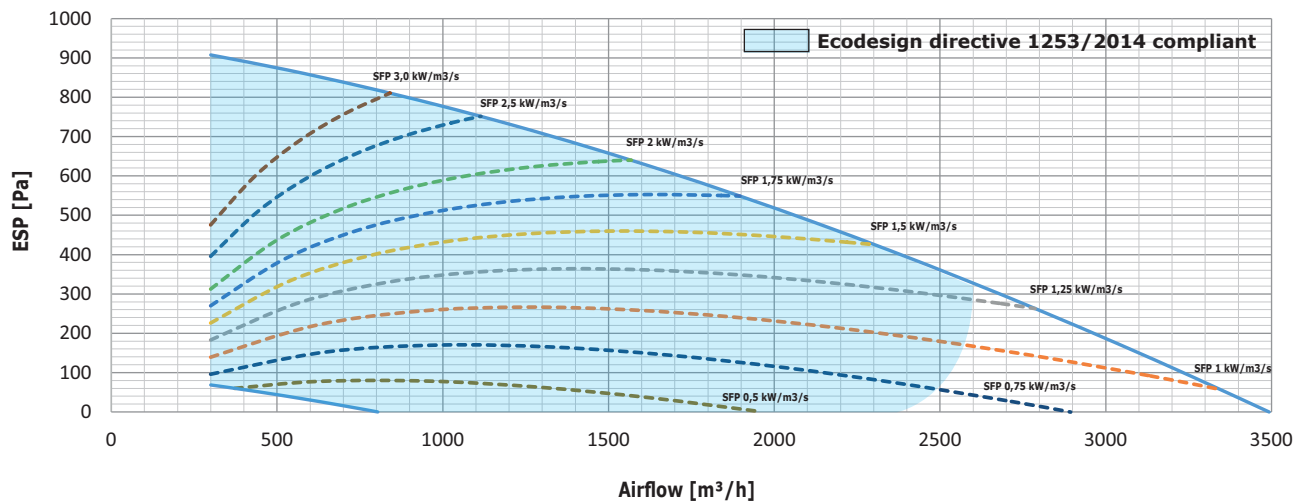




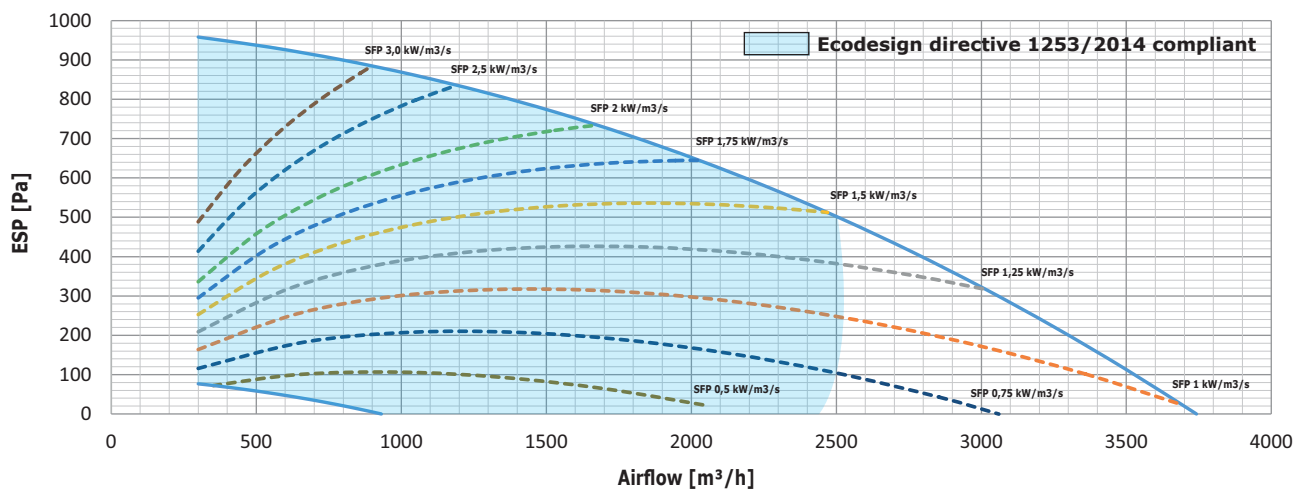
PRIMARY PARAMETERS

SFP = Fan Power input / supply airflow (kW/m³/s)

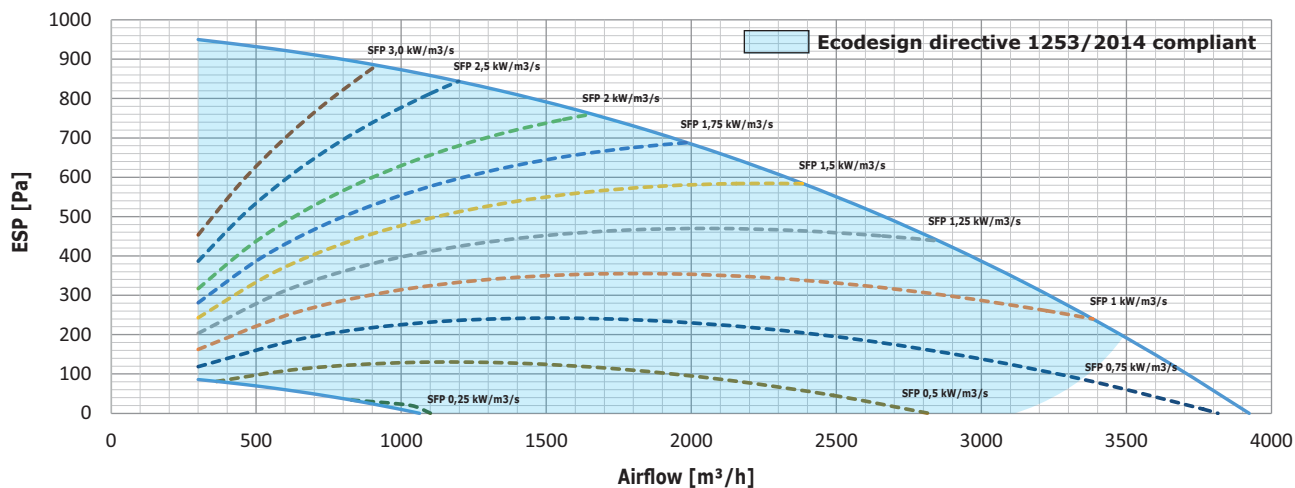
HR852-250 V



HR852-250 U



HR852-320 V

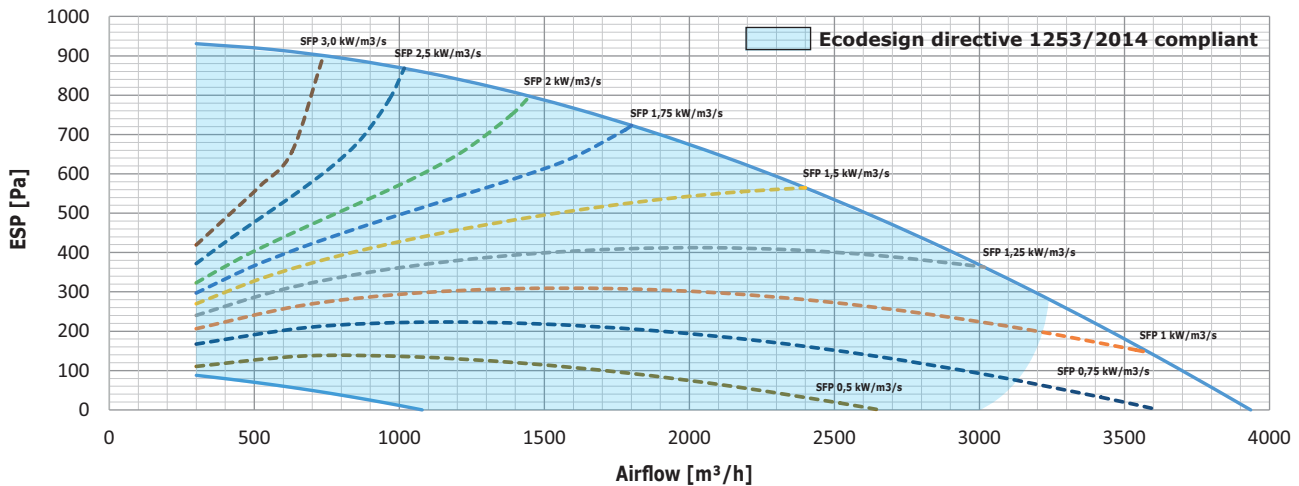




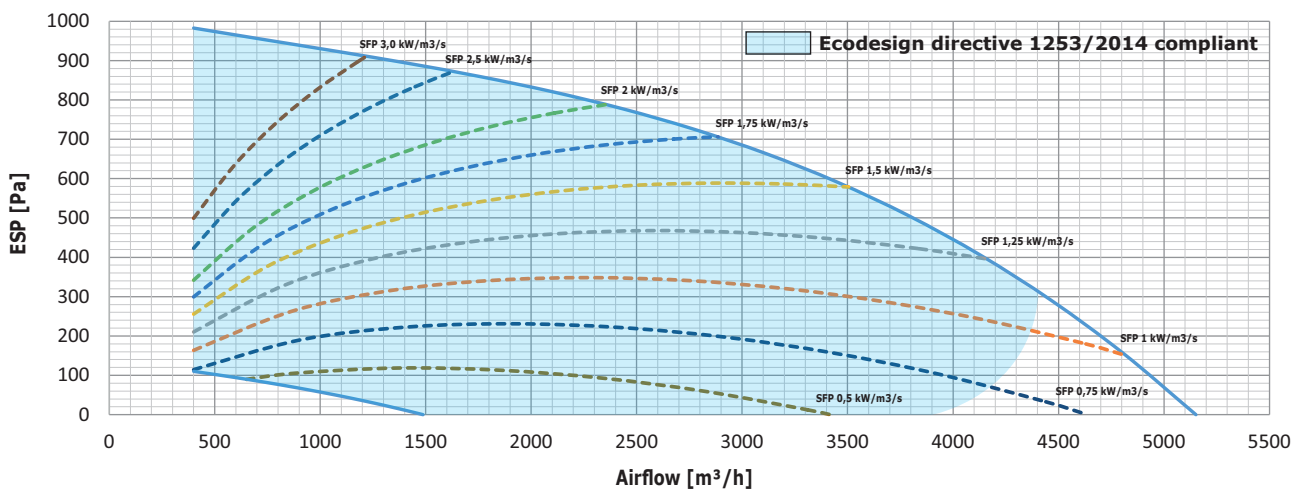
PRIMARY PARAMETERS

SFP = Fan Power input / supply airflow (kW/m³/s)

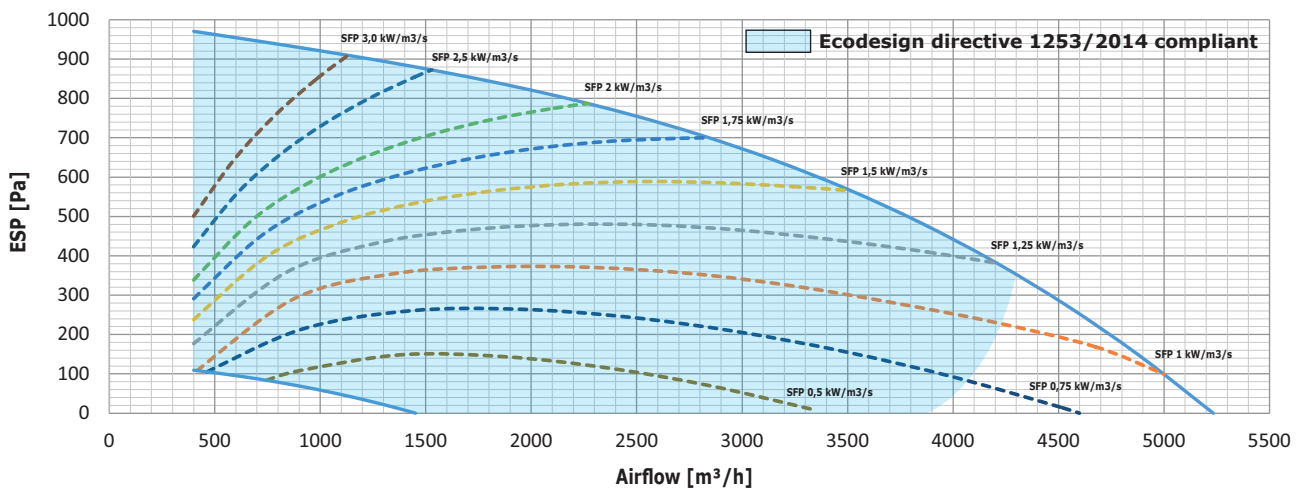
HR852-320 U



HR852-400 V



HR852-400 U

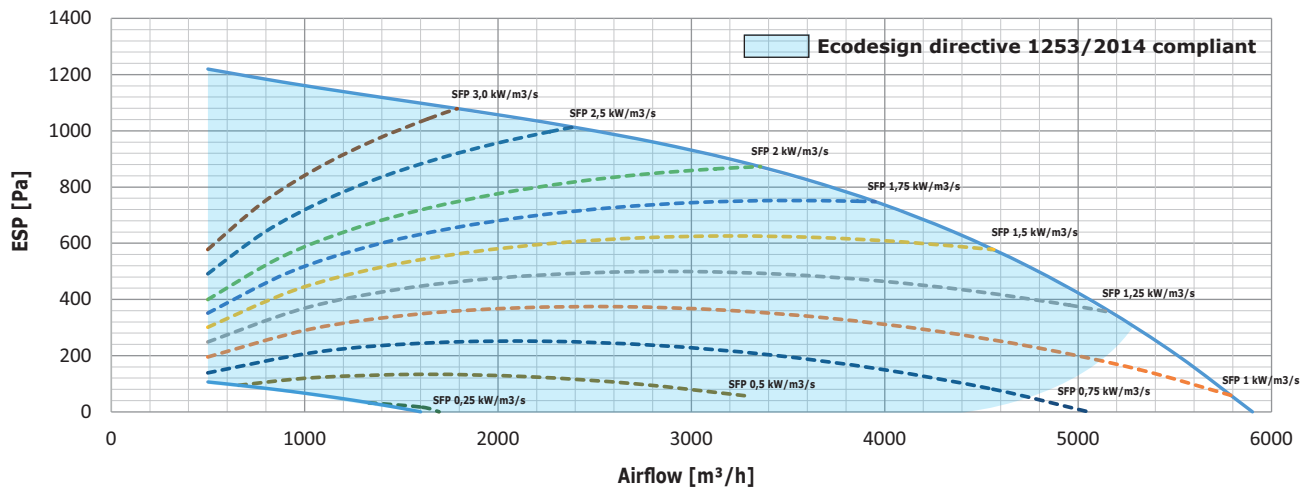




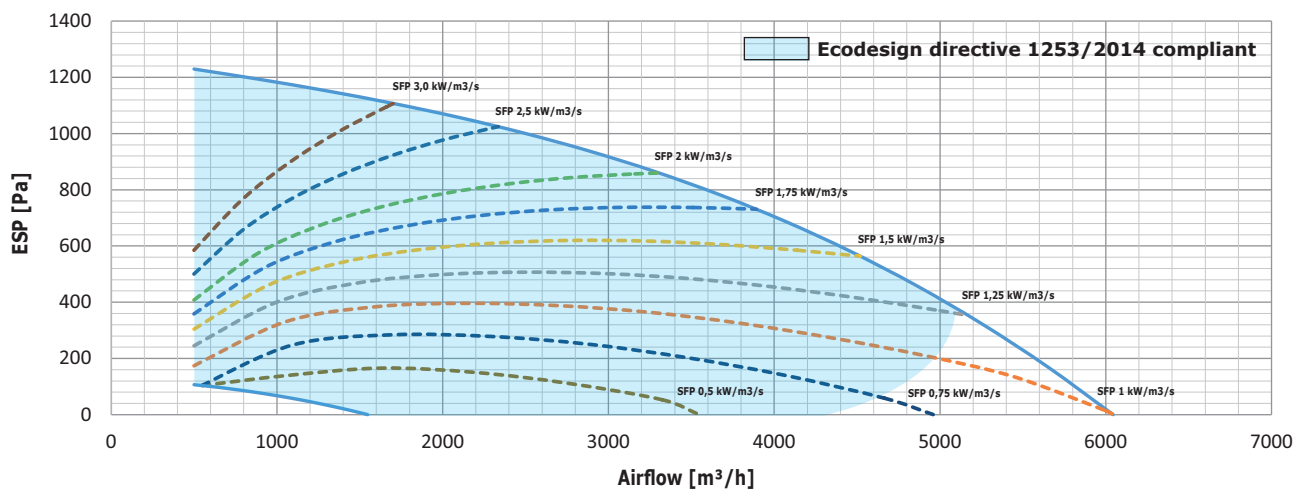
PRIMARY PARAMETERS

SFP = Fan Power input / supply airflow (kW/m³/s)

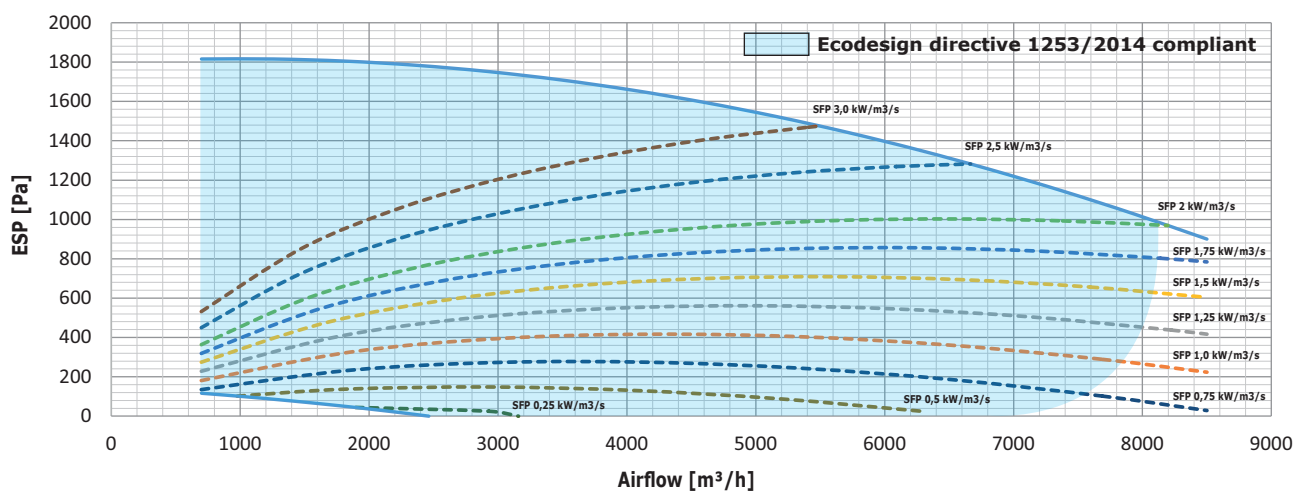
HR852-500 V



HR852-500 U



HR852-700 V

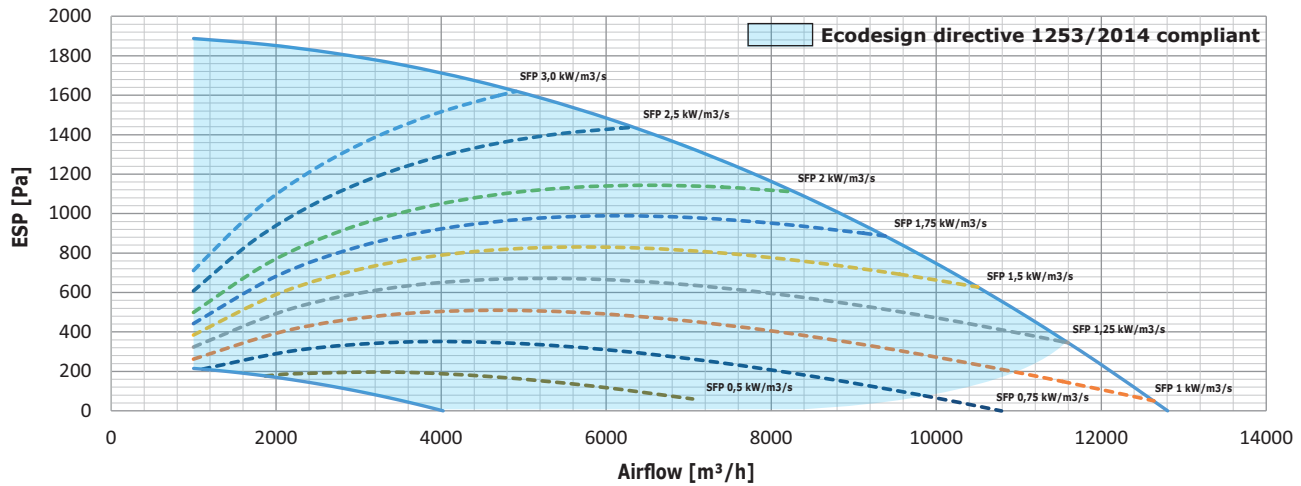




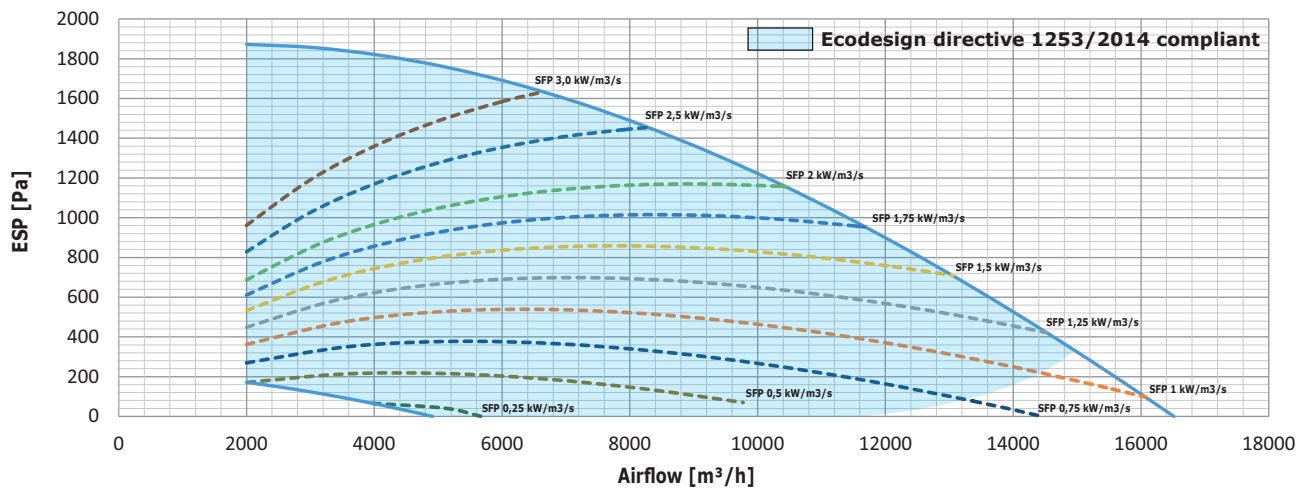
PRIMARY PARAMETERS

SFP = Fan Power input / supply airflow (kW/m³/s)

HR852-10K



HR852-14K



Noise specifications (casing radiated):

Type	Airflow [m³/h]	Pressure [Pa]	Sound power level per frequency band L _w (dB(A))								Overall	
			63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	L _w [dB]	L _{pA} [dB] at 3m
HR852-070V	700	150	34	38	48	44	47	46	45	28	63	31
	500	150	30	36	44	43	44	42	39	23	59	28
	300	150	24	37	41	41	41	39	33	21	57	25
HR852-070U	700	150	32	41	44	44	45	45	40	29	62	29
	500	150	30	41	45	42	42	42	36	26	61	28
	300	150	30	43	40	39	38	38	30	23	62	25
HR852-090U	900	150	39	47	53	50	46	46	40	23	68	34
	600	150	37	46	49	48	43	44	36	21	66	32
	300	150	38	45	43	48	43	43	34	21	66	30
HR852-100V	1000	200	41	47	53	46	51	52	46	31	70	36
	650	200	40	47	53	44	48	48	42	27	69	34
	300	200	32	41	45	38	41	40	34	21	62	27
HR852-120U	1200	250	44	49	56	54	52	52	46	29	72	38
	800	250	42	48	54	51	47	48	42	25	70	35
	400	250	41	48	50	49	44	45	38	22	70	33
HR852-150V	1500	250	44	50	60	49	54	54	51	30	73	40
	1000	250	39	51	55	47	52	53	46	27	70	37
	500	250	39	53	48	44	50	48	40	22	71	34
HR852-160U	1600	250	43	49	60	49	53	54	50	30	73	40
	1200	250	39	49	56	46	51	52	46	26	70	37
	800	250	36	51	49	44	50	49	42	22	69	34
HR852-200V	2000	250	50	54	60	56	57	59	53	34	78	43
	1500	250	49	51	59	52	54	56	50	31	77	40
	1000	250	46	50	58	50	52	53	47	27	74	39
HR852-200U	2000	250	49	52	59	54	56	57	52	33	77	41
	1500	250	47	50	58	51	53	54	49	29	75	39
	1000	250	44	49	57	48	50	51	44	25	72	37
HR852-250V	2500	250	45	53	63	57	58	59	56	40	76	44
	2000	250	43	52	64	54	55	57	53	37	75	44
	1500	250	43	52	63	50	53	54	49	33	75	42
HR852-250U	2500	250	42	49	65	54	55	57	53	37	76	44
	2000	250	39	48	63	50	52	53	49	33	73	41
	1500	250	38	49	58	46	49	50	44	29	70	37
HR852-320V	3000	300	41	47	59	57	60	58	52	40	72	43
	2000	300	37	47	55	54	58	55	49	36	69	39
	1000	300	40	53	51	50	54	51	43	32	71	36
HR852-320U	3000	300	43	51	62	56	59	58	54	43	75	43
	2000	300	41	52	62	51	54	54	49	38	74	41
	1000	300	43	56	54	46	49	51	42	34	74	37
HR852-400V	4000	300	46	51	61	60	60	58	52	40	75	43
	3000	300	42	51	59	57	58	56	49	38	73	41
	2000	300	41	54	57	55	56	54	46	36	73	40
HR852-400U	4000	300	46	51	63	61	60	57	51	48	76	44
	3000	300	44	52	61	58	59	57	50	47	74	42
	2000	300	43	56	58	55	57	56	49	46	75	41
HR852-500V	5000	300	52	55	64	63	63	59	55	44	80	46
	3500	300	43	51	60	58	58	56	49	37	73	41
	2000	300	41	54	57	54	55	53	45	35	73	39
HR852-500U	5000	300	52	55	67	65	63	59	55	47	81	48
	3500	300	44	51	61	59	59	56	50	47	74	43
	2000	300	43	56	58	54	57	56	49	46	75	41
HR852-700V	7000	300	54	67	65	62	59	56	58	42	85	48
	5000	300	50	61	58	56	55	51	51	34	80	42
	3000	300	46	54	52	50	51	46	42	27	75	36
HR852-10K	10000	400	55	67	70	67	63	61	63	53	86	51
	8000	400	51	66	65	62	60	57	60	45	84	47
	6000	400	48	62	60	57	58	54	55	39	80	43
HR852-14K	14000	400	53	67	72	68	69	63	75	55	87	55
	11000	400	47	66	65	63	66	59	70	47	84	50
	8000	400	44	61	59	58	62	57	60	40	79	44

Basic technical parameters of the heat recovery units

Model without post-heater / with water post heater

Type	Voltage [V]	Phase [pcs]	Frequency [Hz]	Rated input [kW]	Total current [A]
HR852-070	230	1	50/60	0,4	3,2
HR852-090	230	1	50/60	0,9	4,1
HR852-100	230	1	50/60	0,9	4,1
HR852-120	230	1	50/60	0,9	4,1
HR852-150	230	1	50/60	1,0	6,5
HR852-160	230	1	50/60	1,0	6,5
HR852-200	230	1	50/60	1,6	9,7
HR852-250	400	3	50/60	2,1	3,8
HR852-320	400	3	50/60	2,1	3,8
HR852-400	400	3	50/60	3,5	5,7
HR852-500	400	3	50/60	3,5	5,7
HR852-700	400	3	50/60	9,1	14,1
HR852-10K	400	3	50/60	9,1	14,1
HR852-14K	400	3	50/60	11,5	18,5

Model with electrical post-heater

Type	Voltage [V]	Phase [pcs]	Frequency [Hz]	Rated input [kW]	Total current [A]
HR852-070	230	1	50/60	3,1	14,7
HR852-090	400	3	50/60	4,9	10,0
HR852-100	400	3	50/60	4,9	10,0
HR852-120	400	3	50/60	4,9	10,0
HR852-150	400	3	50/60	8,0	16,6
HR852-160	400	3	50/60	8,0	16,6
HR852-200	400	3	50/60	8,6	19,8
HR852-250	400	3	50/60	10,5	15,9
HR852-320	400	3	50/60	12,9	19,4
HR852-400	400	3	50/60	17,0	25,2
HR852-500	400	3	50/60	20,3	29,9
HR852-700	400	3	50/60	32,7	48,2
HR852-10K	400	3	50/60	42,7	62,6
HR852-14K	400	3	50/60	58,9	87,0

Characteristics of electric motor (1 pc)

Type	Voltage [V]	Phases [pcs]	Frequency [Hz]	Rated input [W]	Total current [A]	Maximum rotation speed [rpm]	Protection IP
HR852-070	230	1	50/60	180	1,4	2930	IP 44
HR852-090	230	1	50/60	395	1,8	2650	IP 54
HR852-100	230	1	50/60	395	1,8	2650	IP 54
HR852-120	230	1	50/60	395	1,8	2650	IP 54
HR852-150	230	1	50/60	470	3,0	2435	IP 54
HR852-160	230	1	50/60	470	3,0	2435	IP 54
HR852-200	230	1	50/60	750	4,6	2480	IP 54
HR852-250	400	3	50/60	1000	1,6	2580	IP 54
HR852-320	400	3	50/60	1000	1,6	2580	IP 54
HR852-400	400	3	50/60	1700	2,6	2600	IP 54
HR852-500	400	3	50/60	1700	2,6	2600	IP 54
HR852-700	400	3	50/60	4500	6,8	2480	IP 55
HR852-10K	400	3	50/60	4500	6,8	2480	IP 55
HR852-14K	400	3	50/60	5700	9,0	2250	IP 55

Characteristics of electric battery

Type	Phase [pcs]	Voltage [V]	Frequency [Hz]	Rated input [kW]	Total current [A]
HR852-070	1	230	50/60	2,7	11,5
HR852-090	3	400	50/60	4,0	10,0
HR852-100	3	400	50/60	4,0	10,0
HR852-120	3	400	50/60	4,0	10,0
HR852-150	3	400	50/60	7,0	10,1
HR852-160	3	400	50/60	7,0	10,1
HR852-200	3	400	50/60	7,0	10,1
HR852-250	3	400	50/60	8,40	12,1
HR852-320	3	400	50/60	10,80	15,6
HR852-400	3	400	50/60	13,50	19,5
HR852-500	3	400	50/60	16,80	24,2
HR852-700	3	400	50/60	23,60	34,1
HR852-10K	3	400	50/60	33,60	48,5
HR852-14K	3	400	50/60	47,40	68,5

Characteristics of LPHW coil

Type	Rated input [kW]	Outlet air temperature [°C]	Water pressure loss [kPa]	Water flow [m³/h]	Air pressure loss [Pa]	Air flow [m³/h]	Connection diameter
**HR852-070	6,9	43,9	16,2	0,31	10,8	700	1/2
HR852-090	9,5	45,8	16,7	0,42	10,7	900	1/2
HR852-100	8,8	40,6	14,1	0,39	13,8	1000	1/2
HR852-120	10,8	41,3	12,5	0,48	17,1	1200	1/2
HR852-150	15,3	44,9	5,0	0,68	13,4	1500	3/4
HR852-160	15,8	43,9	5,3	0,70	14,9	1600	3/4
HR852-200	17,5	40,5	6,4	0,78	21,3	2000	3/4
HR852-250	23,0	41,9	12,3	1,02	19,9	2500	3/4
HR852-320	30,6	42,9	15,2	1,36	18,2	3200	3/4
HR852-400	35,9	41,2	21,2	1,90	22,4	4000	3/4
HR852-500	43,6	40,5	23,5	1,94	24,2	5000	3/4
HR852-700	61,0	40,5	24,3	2,71	23,3	7000	1
HR852-10K	82,2	39,0	23,4	3,65	26,9	10000	1
HR852-14K	123,9	40,9	50,4	5,50	23,5	14000	1

* For water temperature gradient 90/70 °C and inlet air temperature 15°C.

** External coil.

Correction coefficients LPHW coil

Correction coefficients of the powers of the hot water coil*						
Air inlet temperature [°C]	Water regime					
	90/70	85/65	80/60	75/55	70/50	65/45
0	1,23	1,15	1,06	0,97	0,89	0,80
5	1,16	1,07	0,98	0,89	0,81	0,72
10	1,08	0,99	0,90	0,82	0,73	0,64
15	1,00	0,91	0,83	0,74	0,65	0,56
20	0,92	0,83	0,75	0,66	0,57	0,48

* Coefficients to correct the power at different water temperature ranges from 90°C/70°C water temperature range and 15°C for the inlet air temperature.

Characteristics of C/O water coil for heating

Type	Rated input [kW]	Outlet air temperature [°C]	Water pressure loss [kPa]	Water flow [m³/h]	Air pressure loss [Pa]	Air flow [m³/h]	Connection diameter
HR852-070	8,32	44,4	2,2	0,31	29,6	700	3/4"
HR852-090	9,87	47,0	1,5	0,43	23,5	900	3/4"
HR852-100	9,91	44,0	1,8	0,43	41,3	1000	3/4"
HR852-120	12,26	44,9	2,2	0,54	37,2	1200	3/4"
HR852-150	16,30	46,8	2,4	0,71	34,7	1500	1"
HR852-160	17,11	46,3	2,6	0,75	38,5	1600	1"
HR852-200	20,17	44,5	3,5	0,88	55,1	2000	1"
HR852-250	24,59	43,7	3,7	1,08	56,8	2500	1"
HR852-320	32,09	44,3	4,6	1,40	60,4	3200	1"
HR852-400	39,72	44,0	5,8	1,74	63,7	4000	1"
HR852-500	49,97	44,2	7,0	2,19	74,5	5000	1 1/2"
HR852-700	71,23	44,7	5,4	3,12	71,5	7000	1 1/4"
HR852-10K	99,09	44,0	4,8	4,34	78,7	10000	1 1/2"
HR852-14K	139,91	44,2	3,9	6,12	85,7	14000	2"

* For water temperature gradient 60/40 °C and inlet air temperature 15°C.

** External coil for unit size 070-250

Characteristics of C/O water coil for cooling

Type	Rated input [kW]	Outlet air temperature [°C]	Water pressure loss [kPa]	Water flow [m³/h]	Air pressure loss [Pa]	Air flow [m³/h]	Connection diameter
HR852-070	5,29	13,4	19,2	0,91	40,1	700	3/4"
HR852-090	7,47	12,4	13,2	1,28	33,5	900	3/4"
HR852-100	7,26	13,7	14,9	1,25	58,4	1000	3/4"
HR852-120	9,08	13,3	18,9	1,56	52,8	1200	3/4"
HR852-150	12,13	12,6	20,4	2,08	52,0	1500	1"
HR852-160	12,68	12,8	22,1	2,18	57,6	1600	1"
HR852-200	14,68	13,6	29,1	2,52	82,0	2000	1"
HR852-250	17,69	13,9	29,7	3,07	84,3	2500	1"
HR852-320	23,38	13,6	38,7	4,01	89,9	3200	1"
HR852-400	39,96	15,7	48,1	4,95	94,7	4000	1"
HR852-500	35,68	13,8	55,8	6,12	116,7	5000	1 1/2"
HR852-700	51,28	13,6	44,0	8,80	112,3	7000	1 1/4"
HR852-10K	70,62	13,9	38,1	12,12	123,1	10000	1 1/2"
HR852-14K	100,49	13,8	31,3	17,24	134,4	14000	2"

* For water temperature gradient 7/12 and inlet air temperature 25°C with 70% of relative humidity.

** External coil for unit size 070-250

Correction coefficients of the powers of the hot water coil (C/O)*

Air inlet temperature [°C]	Water regime			
	60/40	55/50	45/40	35/30
0	1,44	1,53	1,24	0,94
5	1,30	1,39	1,09	0,80
10	1,15	1,25	0,95	0,65
15	1,00	1,11	0,81	0,51
20	0,85	0,96	0,66	0,36

* To apply to the rated power in the characteristics of the water coil.

Correction coefficients of the powers of the cool water coil (C/O)*

Air inlet temperature [°C]	Water regime		
	7/12	6/11	5/10
25	1,00	1,11	1,23
24	0,89	0,99	1,10
28	1,37	1,53	1,59
32	1,93	2,06	2,18

* To apply to the rated power in the characteristics of the water coil.

Characteristics of direct evaporator (DX)

Type	Rated input [kW]	Outlet air temperature [°C]	RH after coil [%]	Refrigerant pressure loss [kPa]	Air pressure loss [Pa]	Air flow [m³/h]	Connection diameter of liquid coil	Connection diameter of gas coil
HR852-070	4,2	14,1	83,5	33,9	20	700	3/8"	1/2"
HR852-090	6,0	13,1	85,8	28,3	14	900	1/2"	5/8"
HR852-100	5,5	15,0	81,9	60,4	25	1000	1/2"	5/8"
HR852-120	7,0	14,5	82,6	37,8	22	1200	1/2"	5/8"
HR852-150	8,8	14,5	82,3	31,8	19	1500	5/8"	3/4"
HR852-160	9,1	14,8	81,6	33,9	21	1600	5/8"	3/4"
HR852-200	10,2	15,9	79,1	41,2	30	2000	5/8"	3/4"
HR852-250	13,2	15,5	80,4	45,2	31	2500	5/8"	7/8"
HR852-320	18,5	14,5	83,5	36,1	49	3200	3/4"	7/8"
HR852-400	21,1	15,4	81,1	48,7	51	4000	3/4"	7/8"
HR852-500	27,3	15,1	82,0	37,6	56	5000	7/8"	1 1/8"
HR852-700	37,0	15,3	81,8	59,4	53	7000	2x 3/4"	2x 7/8"
HR852-10K	52,8	15,3	81,5	48,9	59	10000	3x 16,00 mm	3x 22,00 mm
HR852-14K	74,7	15,3	81,7	39,5	64	14000	3x 22,00 mm	3x 22,00 mm

* For inlet air temperature 25°C with 70% of relative humidity and evaporation temperature 5°C, refrigerant R32.

** External coil for unit size 070-250

Weight of units

Type	without heater [kg]	with electric heater [kg]	with water coil [kg]	with C/O coil [kg]	with DX coil [kg]
HR852-070 U	135	137	-	-	-
HR852-070 V	127	129	-	-	-
HR852-090 U	197	200	202	-	-
HR852-100 V	188	191	193	-	-
HR852-120 U	198	201	203	-	-
HR852-150 V	231	235	238	-	-
HR852-160 U	243	247	250	-	-
HR852-200 U	257	262	264	-	-
HR852-200 V	245	250	252	-	-
HR852-250 U	304	308	311	-	-
HR852-250 V	290	296	297	-	-
HR852-320 U	368	376	378	417	413
HR852-320 V	348	355	358	397	393
HR852-400 U	435	443	445	489	484
HR852-400 V	414	422	424	468	463
HR852-500 U	481	489	493	544	537
HR852-500 V	449	457	461	512	505
HR852-700 V	600	610	616	677	668
HR852-10K V	830	846	861	944	944
HR852-14K V	1155	1175	1210	1321	1327

Recommended K_{vs} for different temperature gradients

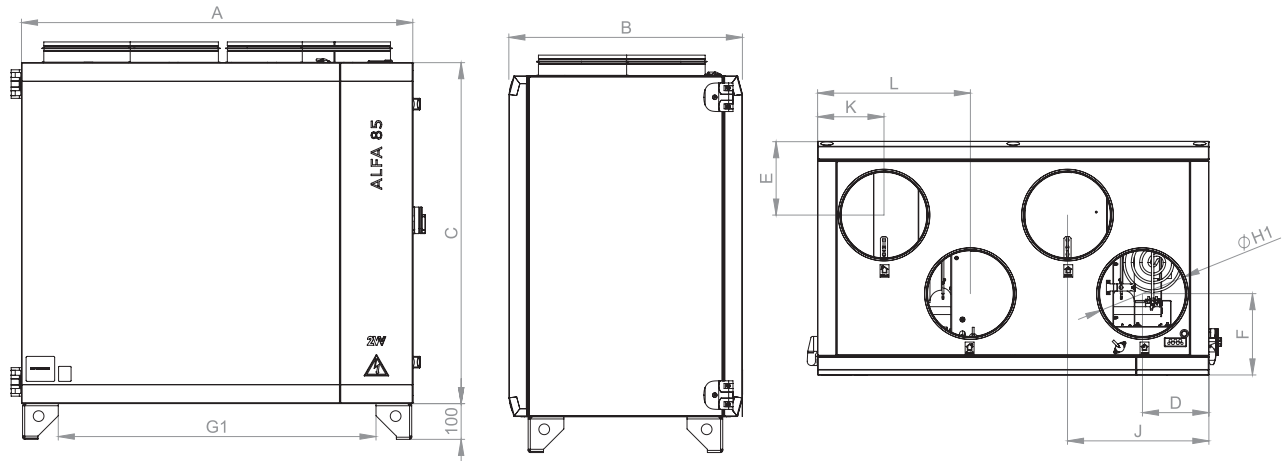
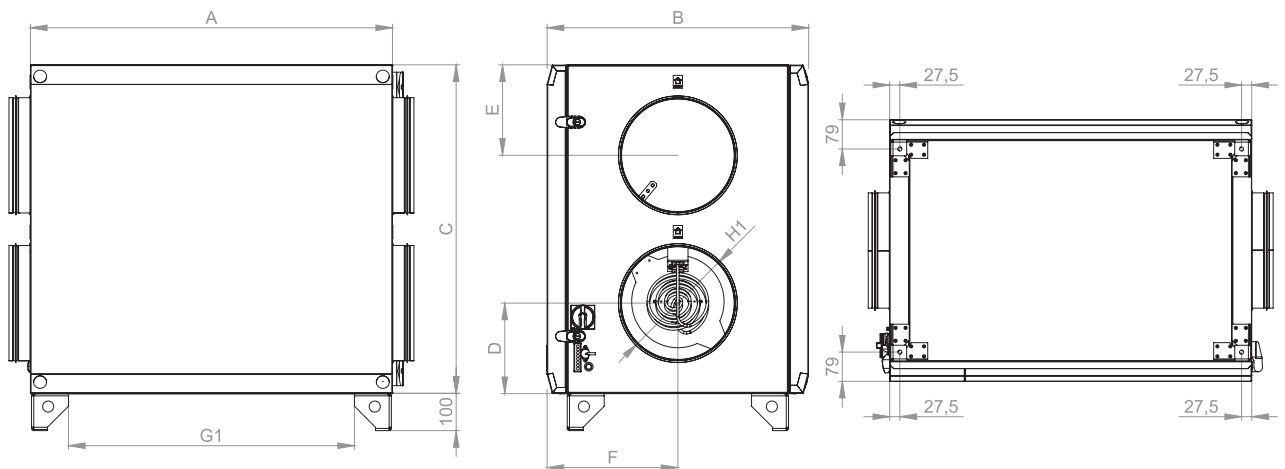
Water heating coil

Type	Inlet/outlet temperature of water [°C]	K_{vs} [flow / kPa]	Water flow [m³/h]	Recommended pump head [m]
HR852-070	90/70	1,00	0,31	3,9
	80/60	1,00	0,25	2,7
	70/50	0,63	0,20	2,4
	60/40	0,63	0,15	1,4
HR852-090	90/70	1,60	0,42	2,8
	80/60	1,00	0,34	2,7
	70/50	1,00	0,27	1,7
	60/40	0,63	0,19	1,4
HR852-100	90/70	1,60	0,39	2,4
	80/60	1,00	0,32	2,3
	70/50	1,00	0,25	1,4
	60/40	0,63	0,18	1,3
HR852-120	90/70	1,60	0,47	3,6
	80/60	1,60	0,39	2,5
	70/50	1,00	0,30	2,1
	60/40	0,63	0,22	1,9
HR852-150	90/70	2,50	0,68	1,5
	80/60	1,60	0,55	1,7
	70/50	1,60	0,43	1,1
	60/40	1,00	0,30	1,1
HR852-160	90/70	2,50	0,70	1,6
	80/60	2,50	0,57	1,1
	70/50	1,60	0,44	1,1
	60/40	1,00	0,31	1,2
HR852-200	90/70	2,50	0,77	1,9
	80/60	2,50	0,63	1,3
	70/50	1,60	0,48	1,3
	60/40	1,00	0,34	1,4
HR852-250	90/70	4,00	1,02	2,0
	80/60	2,50	0,83	2,1
	70/50	2,50	0,65	1,3
	60/40	1,60	0,47	1,2
HR852-320	90/70	4,00	1,35	2,9
	80/60	4,00	1,11	2,0
	70/50	2,50	0,87	2,0
	60/40	2,50	0,63	1,1
HR852-400	90/70	6,30	1,59	2,7
	80/60	4,00	1,31	2,6
	70/50	4,00	1,03	1,6
	60/40	2,50	0,75	1,5
HE852-500	90/70	6,30	1,93	3,3
	80/60	6,30	1,59	2,3
	70/50	4,00	1,24	2,0
	60/40	4,00	0,90	1,1
HR852-700	90/70	12,0	2,70	2,0
	80/60	6,30	2,21	2,3
	70/50	6,30	1,73	1,4
	60/40	4,00	1,24	1,3
HR852-10K	90/70	12,0	3,64	2,2
	80/60	12,0	2,98	1,5
	70/50	6,30	2,31	1,9
	60/40	6,30	1,65	1,0
HR852-14K	90/70	24,0	5,49	2,7
	80/60	12,0	4,52	3,0
	70/50	12,0	3,55	1,9
	60/40	6,30	2,59	2,3

Recommended K_{vs} for different temperature gradients

C/O water coil for heating / cooling

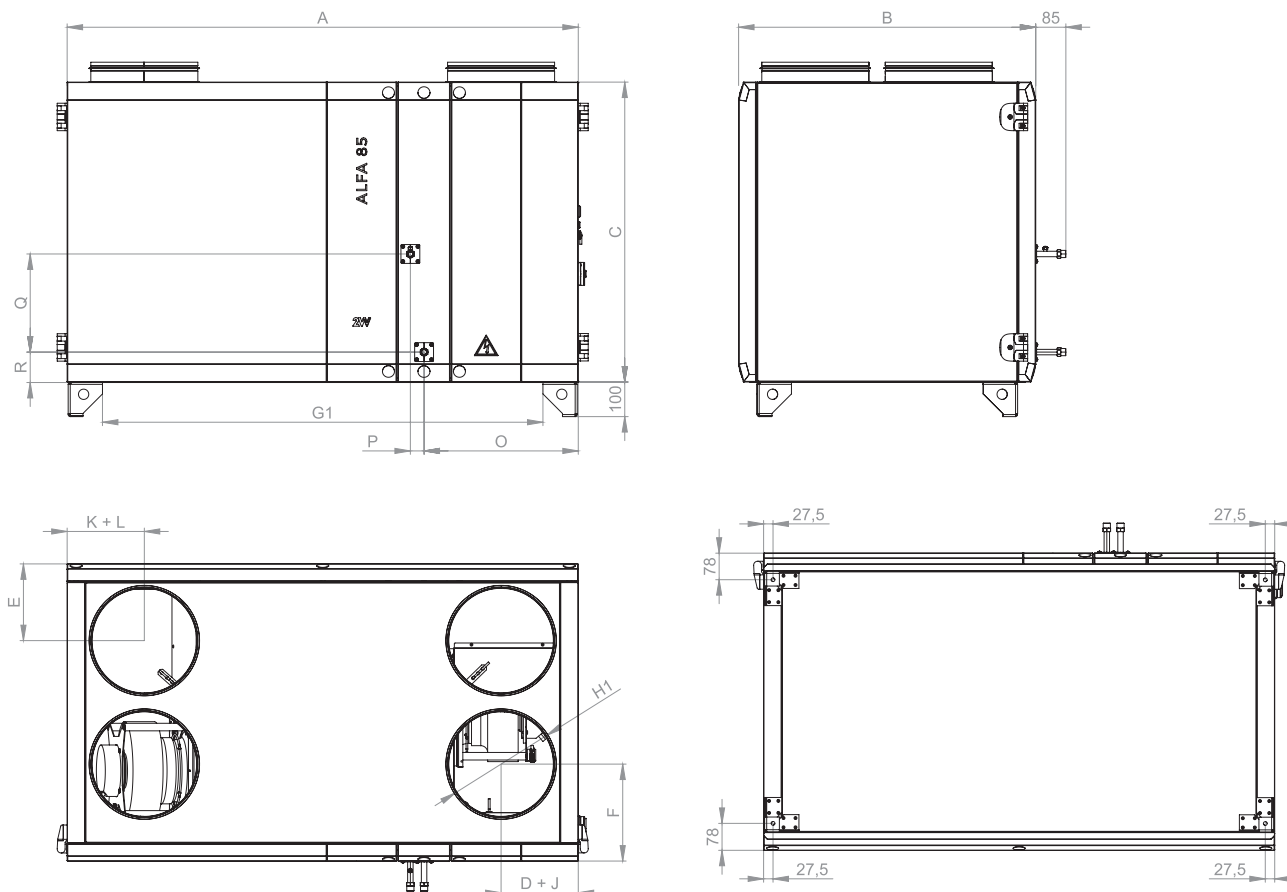
Type	"heating - inlet/outlet temperature of water [°C]"	K_{vs} [flow / kPa]	"cooling - inlet/outlet temperature of water" [°C]		
			7/12	6/11	5/10
			Recommended pump head [m]		
HR852-070	60/40	1,0	4,2	5,00	6,03
	55/50	2,5	7,0	6,98	6,98
	45/40	2,5	3,9	3,87	3,87
	35/30	2,5	1,7	1,80	1,99
HR852-090	60/40	2,5	1,6	1,95	2,42
	55/50	4,0	6,2	6,19	6,19
	45/40	4,0	3,4	3,40	3,40
	35/30	4,0	1,4	1,61	1,84
HR852-100	60/40	2,5	1,6	1,91	2,33
	55/50	4,0	7,1	7,10	7,10
	45/40	4,0	3,9	3,88	3,88
	35/30	4,0	1,6	1,71	1,91
HR852-120	60/40	2,5	2,5	3,04	3,46
	55/50	4,0	9,8	9,81	9,81
	45/40	4,0	5,3	5,34	5,34
	35/30	4,0	2,2	2,48	2,69
HR852-150	60/40	2,5	3,5	4,32	5,26
	55/50	6,3	5,9	5,92	5,92
	45/40	6,3	3,3	3,26	3,26
	35/30	6,3	1,4	1,52	1,70
HR852-160	60/40	2,5	3,8	4,71	5,76
	55/50	6,3	6,6	6,57	6,57
	45/40	6,3	3,6	3,61	3,61
	35/30	6,3	1,5	1,66	1,86
HR852-200	60/40	4,0	2,4	2,89	3,48
	55/50	6,3	9,4	9,37	9,37
	45/40	6,3	5,1	5,11	5,11
	35/30	6,3	2,1	2,30	2,58
HR852-250	60/40	4,0	3,2	3,93	4,81
	55/50	12,0	7,8	7,80	7,80
	45/40	6,3	6,4	6,43	6,43
	35/30	6,3	2,6	2,75	3,16
HR852-320	60/40	6,3	2,4	2,89	3,49
	55/50	12,0	8,5	8,49	8,49
	45/40	12,0	4,7	4,68	4,68
	35/30	12,0	1,9	2,09	2,30
HR852-400	60/40	6,3	3,6	4,31	5,21
	55/50	12,0	11,2	11,15	11,15
	45/40	12,0	6,1	6,09	6,09
	35/30	12,0	2,5	2,72	3,03
HE852-500	60/40	6,3	5,2	6,38	7,80
	55/50	24,0	9,8	9,83	9,83
	45/40	24,0	5,3	5,33	5,33
	35/30	12,0	3,1	3,40	3,89
HR852-700	60/40	12,0	3,3	3,95	4,78
	55/50	24,0	11,4	11,36	11,36
	45/40	24,0	6,2	6,17	6,17
	35/30	24,0	2,5	2,67	2,97
HR852-10K	60/40	12,0	5,5	6,77	8,29
	55/50	40,0	10,0	10,03	10,03
	45/40	24,0	7,6	7,59	7,59
	35/30	24,0	3,0	3,26	3,73
HR852-14K	60/40	24,0	2,8	3,41	4,12
	55/50	40,0	10,2	10,23	10,23
	45/40	40,0	5,6	5,60	5,60
	35/30	40,0	2,3	2,46	2,74

**Technical specifications:****ALFA 85 070 U - compact monoblock****- Right version with duct system connection from the top****ALFA 85 070 V - compact monoblock****- Right version with duct system connection from the side**

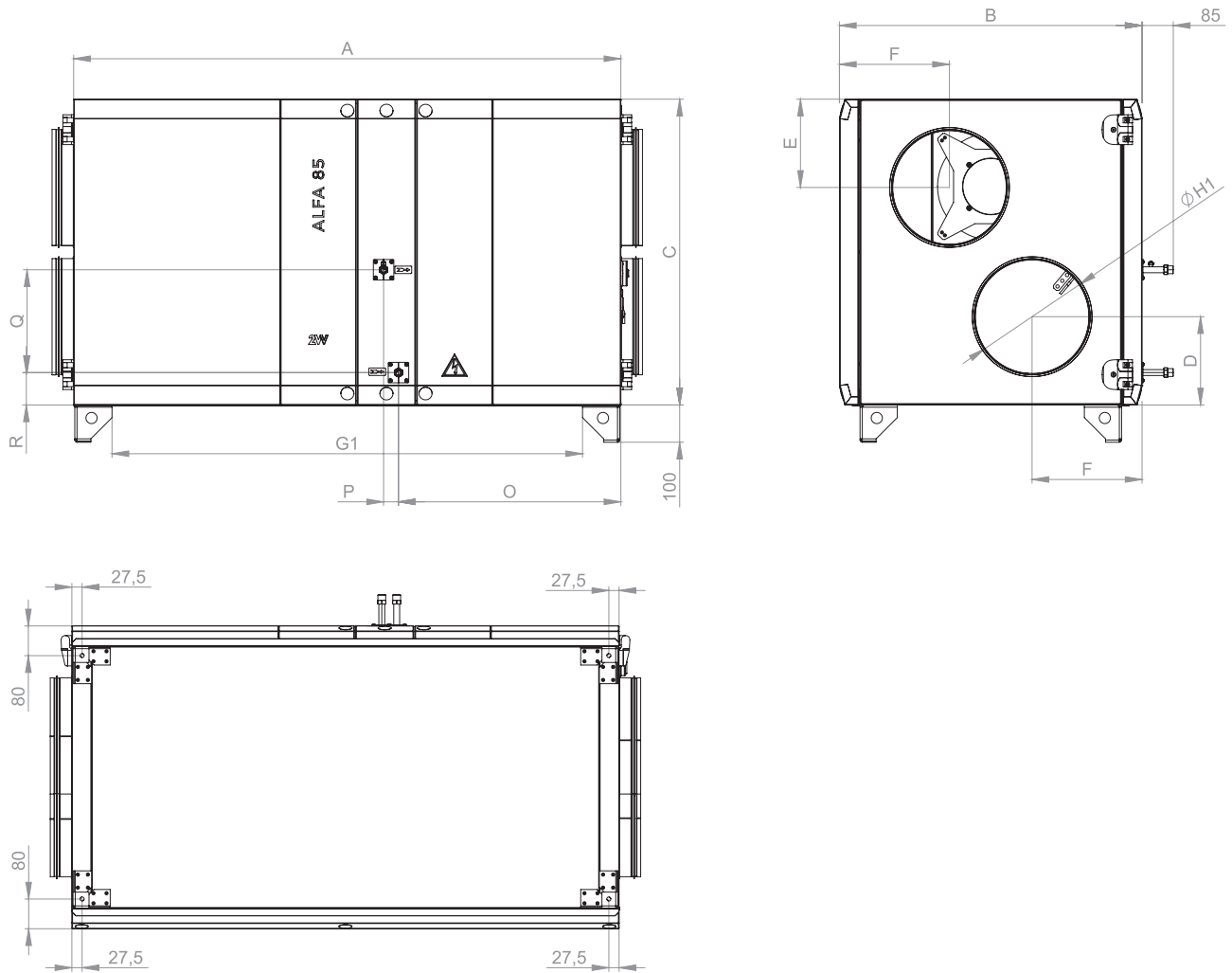
Type	Dimensions										
	A	B	C	D	E	F	G1	H1	J	K	L
HR852-070 U	1095	655	955	186	205	225	890	250	395	185	430
HR852-070 V	980	708	890	245	245	355	775	315			

ALFA 85 090 - 250 U - compact monoblock

- Right version with duct system connection from the top



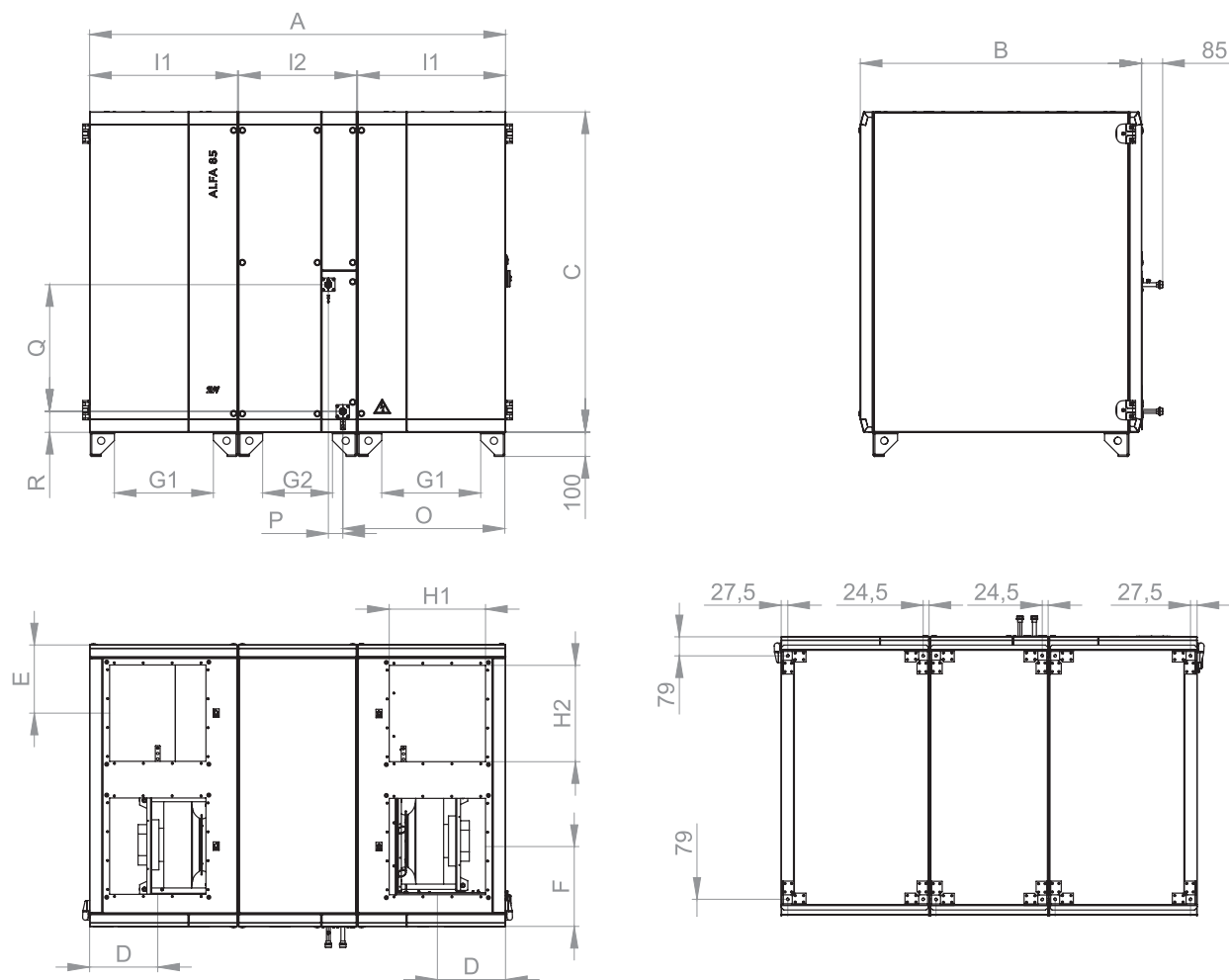
Type	Dimensions														
	A	B	C	D	E	F	G1	H1	J	K	L	O	P	Q	R
HR852-090 U	1490	867	874	225	225	283	1284	315	225	225	225	450	40	286	87
HR852-120 U	1490	867	874	225	225	283	1284	315	225	225	225	450	40	286	87
HR852-160 U	1550	957	1085	255	238	285	1341	355	255	255	255	478	50	390	87
HR852-200 U	1550	957	1085	255	238	250	1341	355	255	255	255	478	50	390	87
HR852-250 U	1672	986	1225	250	254	302	1464	355	250	250	250	496	50	454	87

ALFA 85 100 - 250 V - compact monoblock**- Right version with duct system connection from the side**

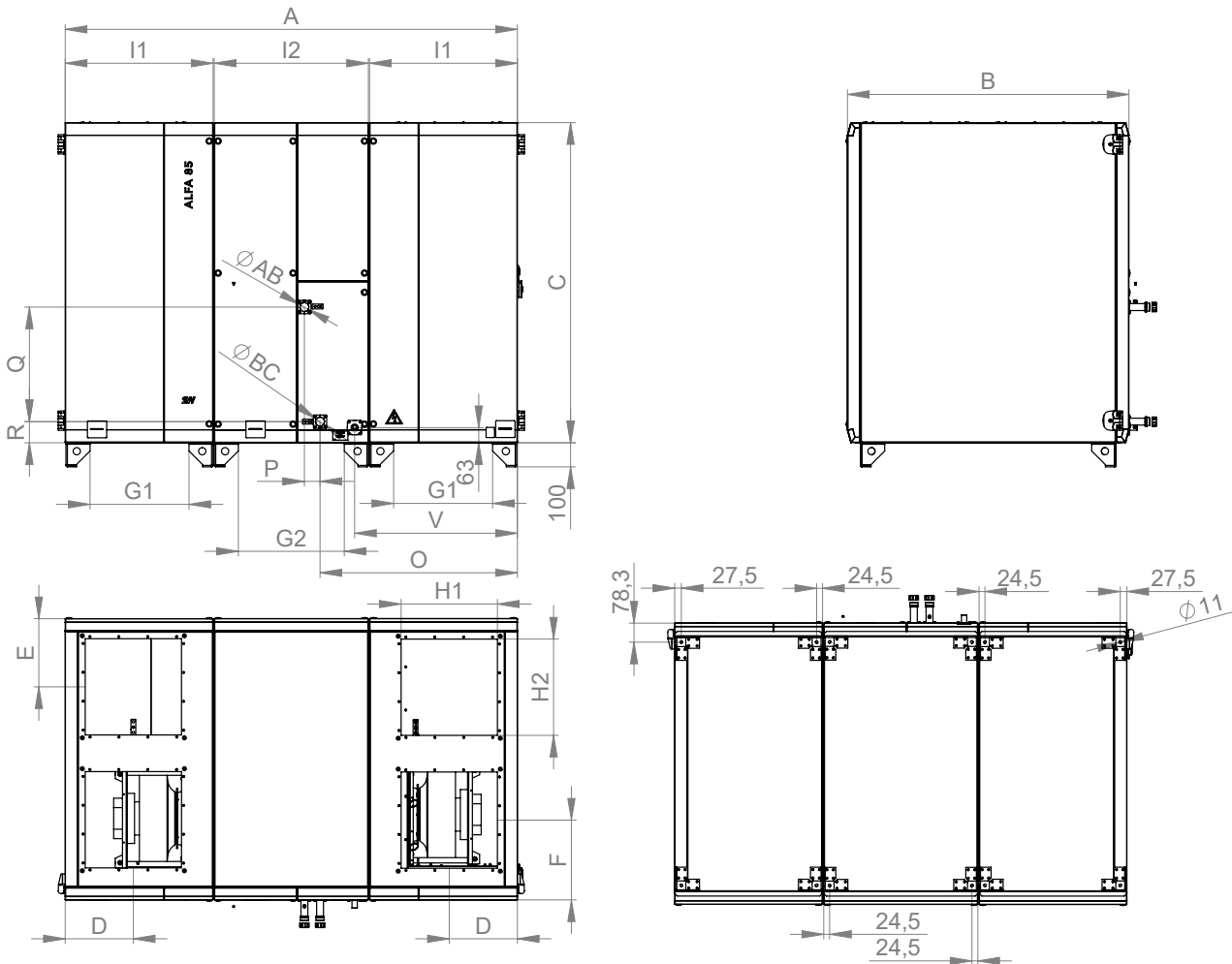
Type	Dimensions											
	A	B	C	D	E	F	G1	H1	O	P	Q	R
HR852-100 V	1470	813	824	239	239	294	1264	315	600	40	276	87
HR852-150 V	1500	958	1085	298	298	480	1294	400	618	50	390	87
HR852-200 V	1500	958	1085	298	298	480	1294	400	618	50	390	87
HR852-250 V	1645	988	1232	340	340	492	1439	400	652	50	454	87

ALFA 85 320 - 500 U - modular design

- Right version with duct system connection from the top



Type	Dimensions															
	A	B	C	D	E	F	G1	G2	H1	H2	I1	I2	O	P	Q	R
HR852-320 U	1720	1170	1330	283	283	330	411	290	400	400	614	490	676	60	526	87
HR852-400 U	1825	1258	1380	283	318	356	445	316	400	400	650	520	735	60	552	87
HR852-500 U	1935	1358	1430	283	333	383	500	316	400	500	705	520	790	60	576	87

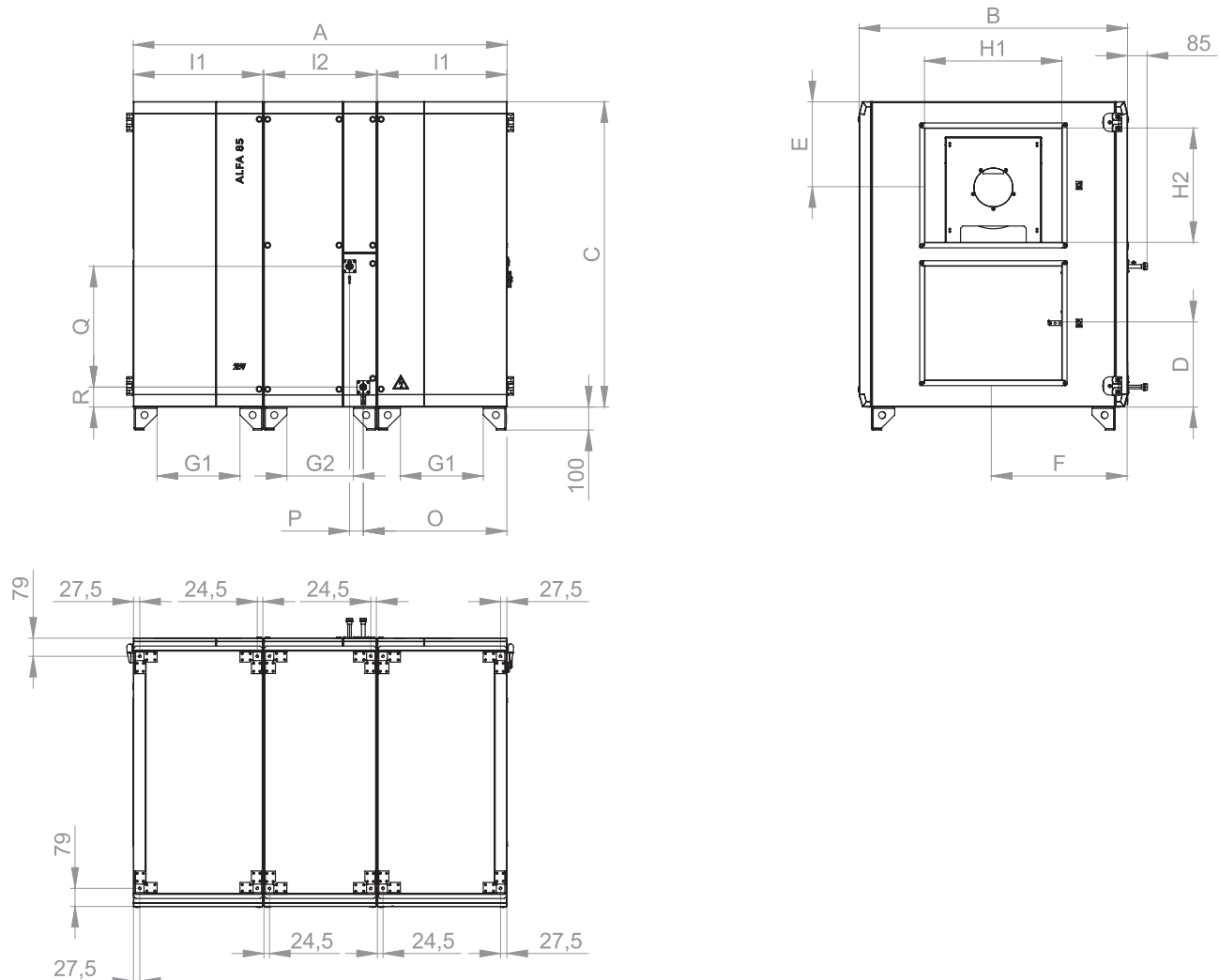
ALFA 85 320 - 500 U - modular design**- Right version with duct system connection from the top with integrated C/O or DX coil**

Type	Dimensions																
	A	B	C	D	E	F	G1	G2	H1	H2	I1	I2	O	P	Q	R	V
HR852-320 U CO / DX	1875	1170	1330	283	283	330	411	440	400	400	614	640	820	65	476	87	676
HR852-400 U CO / DX	1975	1258	1380	283	318	356	468	316	400	400	668	520	879	65	476	87	730
HR852-500 U CO / DX	2085	1358	1430	283	333	383	468	316	400	500	670	520	892	85	576	87	776

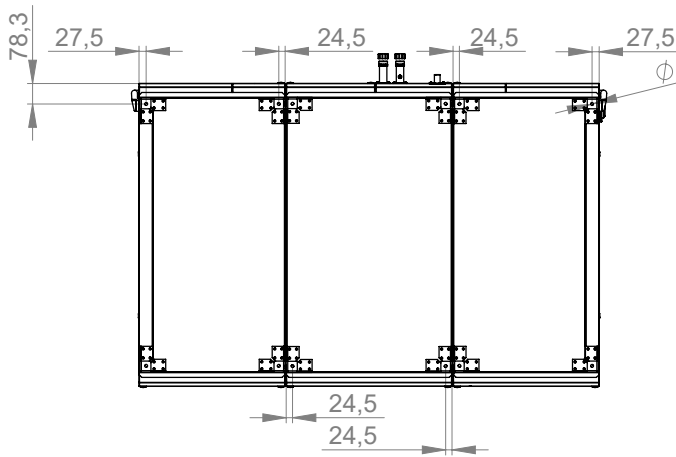
Model	Dimensions [mm]	
	AB	BC
HR852-320 U CO	G1	G1
HR852-320 U DX	3/4"	7/8"
HR852-400 U CO	G1	G1
HR852-400 U DX	3/4"	7/8"
HR852-500 U CO	G1 1/2	G1 1/2
HR852-500 U DX	7/8"	1 1/8"

ALFA 85 320 - 700 V - modular design

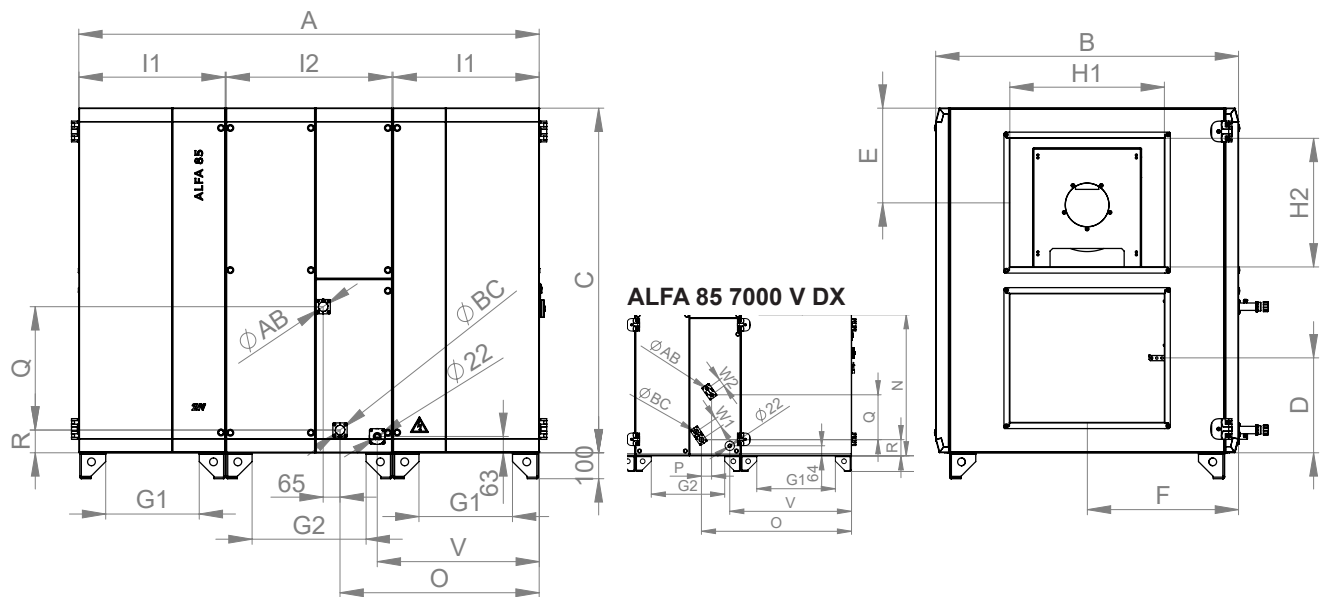
- Right version with duct system connection from the side



Type	Dimensions															
	A	B	C	D	E	F	G1	G2	H1	H2	I1	I2	O	P	Q	R
HR852-320 V	1625	1170	1330	370	365	585	361	290	600	500	564	490	626	60	526	87
HR852-400 V	1725	1258	1380	375	375	630	395	316	600	500	600	520	685	60	552	87
HR852-500 V	1835	1358	1430	390	390	680	450	316	800	500	655	520	740	60	576	87
HR852-700 V	1935	1608	1670	435	435	804	500	316	1200	600	705	520	790	60	696	87

ALFA 85 320 - 700 V - modular design**- Right version with duct system connection from the side with integrated C/O or DX coil**

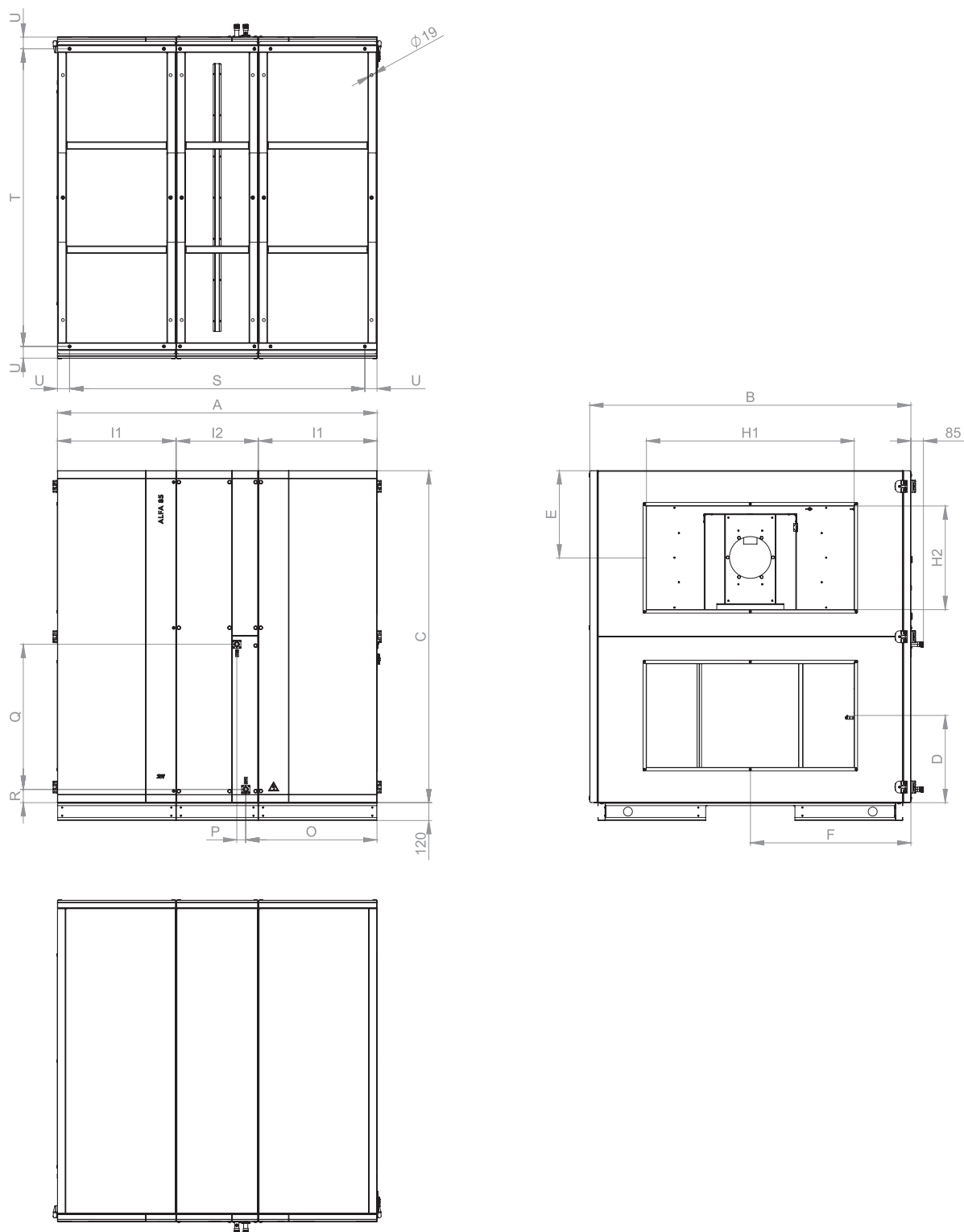
Model	Dimensions [mm]			
	AB	BC	W1	W2
ALFA 85 3200 V CO	G1	G1		
ALFA 85 3200 V DX	3/4"	7/8"		
ALFA 85 4000 V CO	G1	G1		
ALFA 85 4000 V DX	3/4"	7/8"		
ALFA 85 5000 V CO	G1 1/2	G1 1/2		
ALFA 85 5000 V DX	7/8"	1"1/8"		
ALFA 85 7000 V CO	G1 1/2	G1 1/2		
ALFA 85 7000 V DX	3/4"	7/8"	60	48



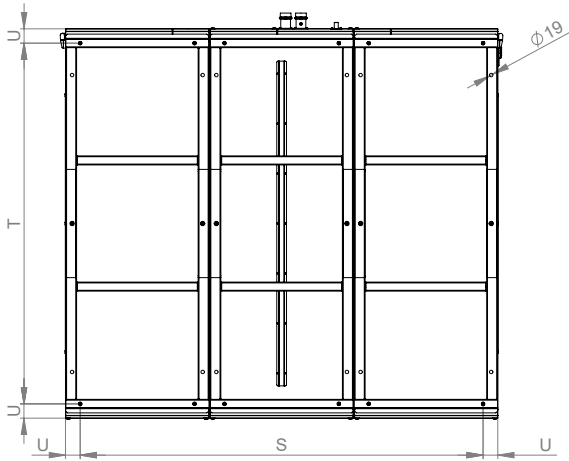
Type	Dimensions																
	A	B	C	D	E	F	G1	G2	H1	H2	I1	I2	O	P	Q	R	V
HR852-320 V CO / DX	1775	1170	1330	370	365	585	361	440	600	500	564	640	770	65	476	87	625
HR852-400 V CO / DX	1875	1258	1380	375	375	630	395	468	600	500	600	670	685	60	552	87	686
HR852-500 V CO / DX	1985	1358	1430	390	390	680	450	468	800	500	655	670	740	60	576	87	726
HR852-700V CO	2085	1608	1670	435	435	804	500	468	1200	600	705	670	892	85	676	87	776
HR852-700V DX	2085	1608	1670	435	435	804	500	468	1200	600	705	670	957	64	286	104	776

ALFA 85 10K - 14K V - modular design

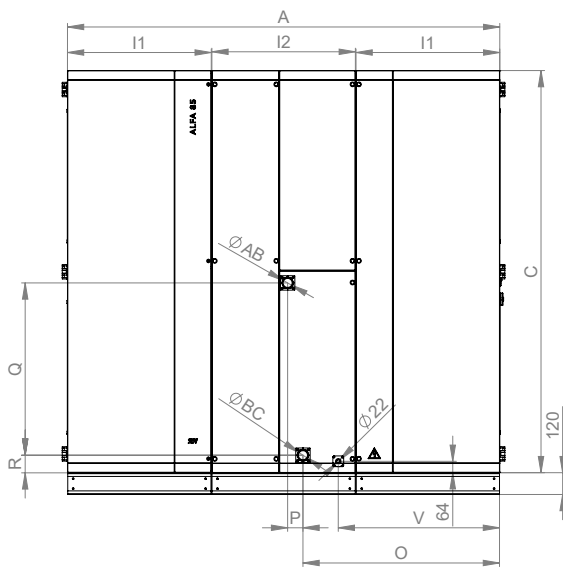
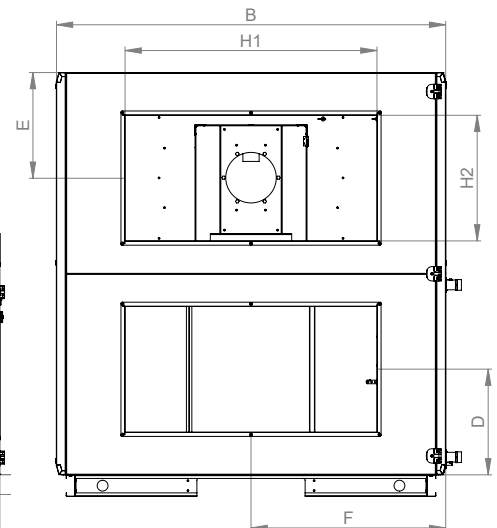
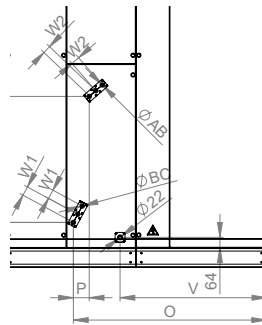
- Right version with duct system connection from the side



Type	Dimensions																
	A	B	C	D	E	F	H1	H2	I1	I2	O	P	Q	R	S	T	U
HR852-10K V	2000	1810	1880	500	500	905	1400	700	735	520	822	60	800	87	1837	1651	80
HR852-14K V	2150	2160	2230	585	585	1080	1400	700	795	550	882	60	975	87	1985	2000	80

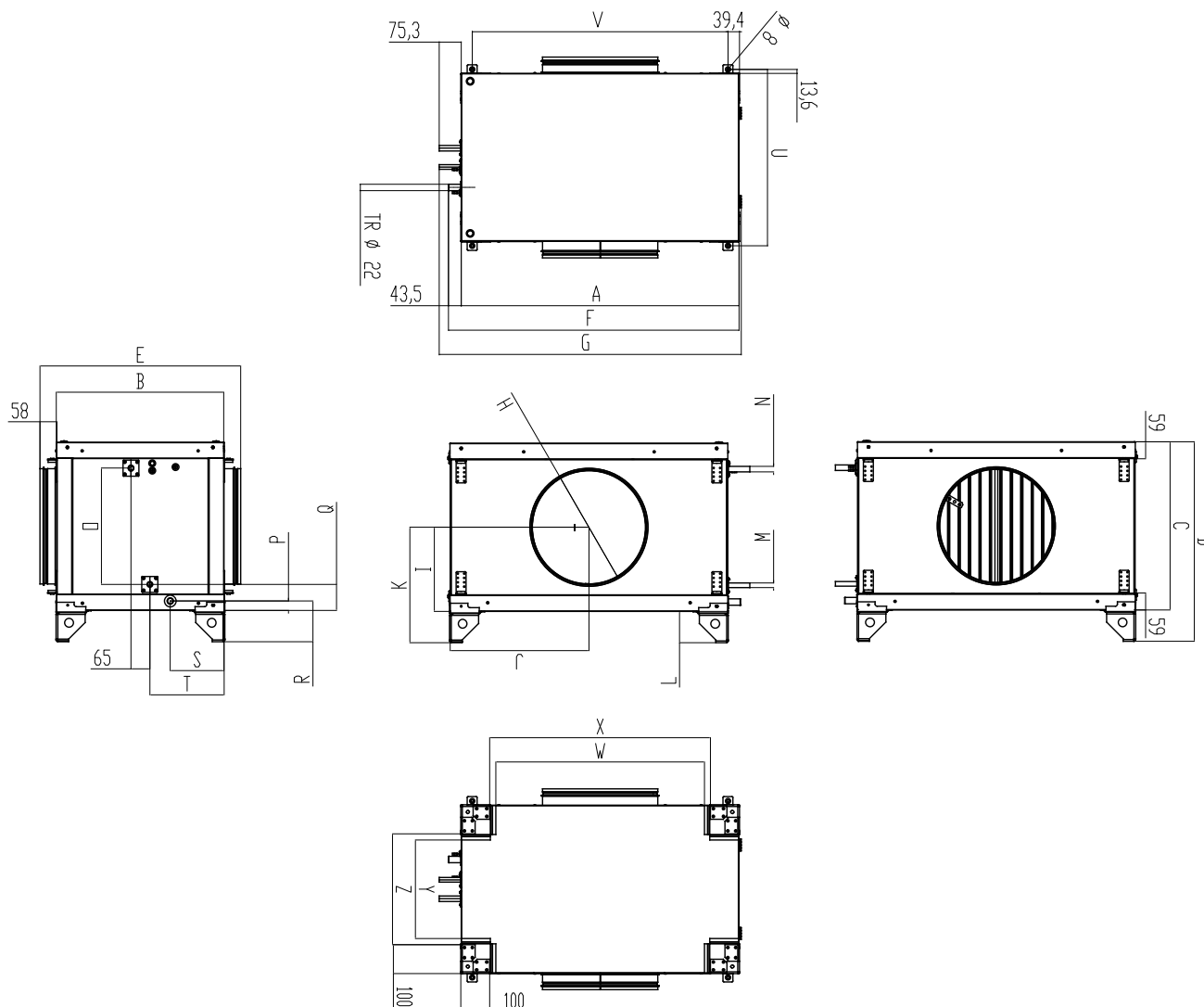
ALFA 85 10K - 14K V - modular design**- Right version with duct system connection from the side with integrated C/O or DX coil**

Model	Dimensions [mm]			
	AB	BC	W1	W2
ALFA 85 10K CO	G1 1/2"	G1 1/2"		
ALFA 85 10K DX	5/8"	7/8"	46	55
ALFA 85 14K CO	2"	2"		
ALFA 85 14K DX	7/8"	7/8"	57	53

**ALFA 85 10K-14K V DX**

Type	Dimensions																	
	A	B	C	D	E	F	H1	H2	I1	I2	O	P	Q	R	S	T	U	V
ALFA 85 10K-V CO	2215	1810	1880	500	500	905	1400	700	735	735	1004	85	800	87	2054	1651	80	807
ALFA 85 10K-V DX	2215	1810	1880	500	500	905	1400	700	735	735	1088	103	647	103	2054	1651	80	807
ALFA 85 14K-V CO	2400	2160	2230	585	585	1080	1400	700	795	795	1091	85	955	98	2233	2000	80	895
ALFA 85 14K-V DX	2400	2160	2230	585	585	1080	1400	700	795	795	1180	96	769	155	2233	2000	80	895

ALFA 85 070 - 250 external modules



Type	Dimensions																				
	A	B	C	D	E	F	G	H	I	J	K	L	O	P	Q	R	S	T	U	V	W
HR852-070 U/V	710	578	458	575	692	753,5	797	315	236,5	354	346	117	276	32,5	91	150	185	255,5	608	634	482
HR852-090/100	813	578	458	565	692	857,5	890	315	517,5	230	337	107,5	276	32,5	91	140	185	255,5	608	739	576
HR852-120	868	578	508	615	692	882,5	945	315	542,5	434	362	107,5	326	32,5	91	140	185	255,5	608	789	626
HR852-150/160/200	958	578	580	687,6	692	1002	1033	400	296	478	397,6	107,5	400,5	32,5	89,5	140	185	255,5	608	882	720
HR852-250	988	578	654,5	762,1	692	1032	1063	400	333,3	493	397,6	107,5	476	32,5	89,5	140	185	255,5	608	912	750

ALFA 85 070	M	N
water heater	G 1/2"	G 1/2"
heater/cooler (C/O)	G 3/4"	G 3/4"
direct evaporator (DX)	3/8"	1/2"

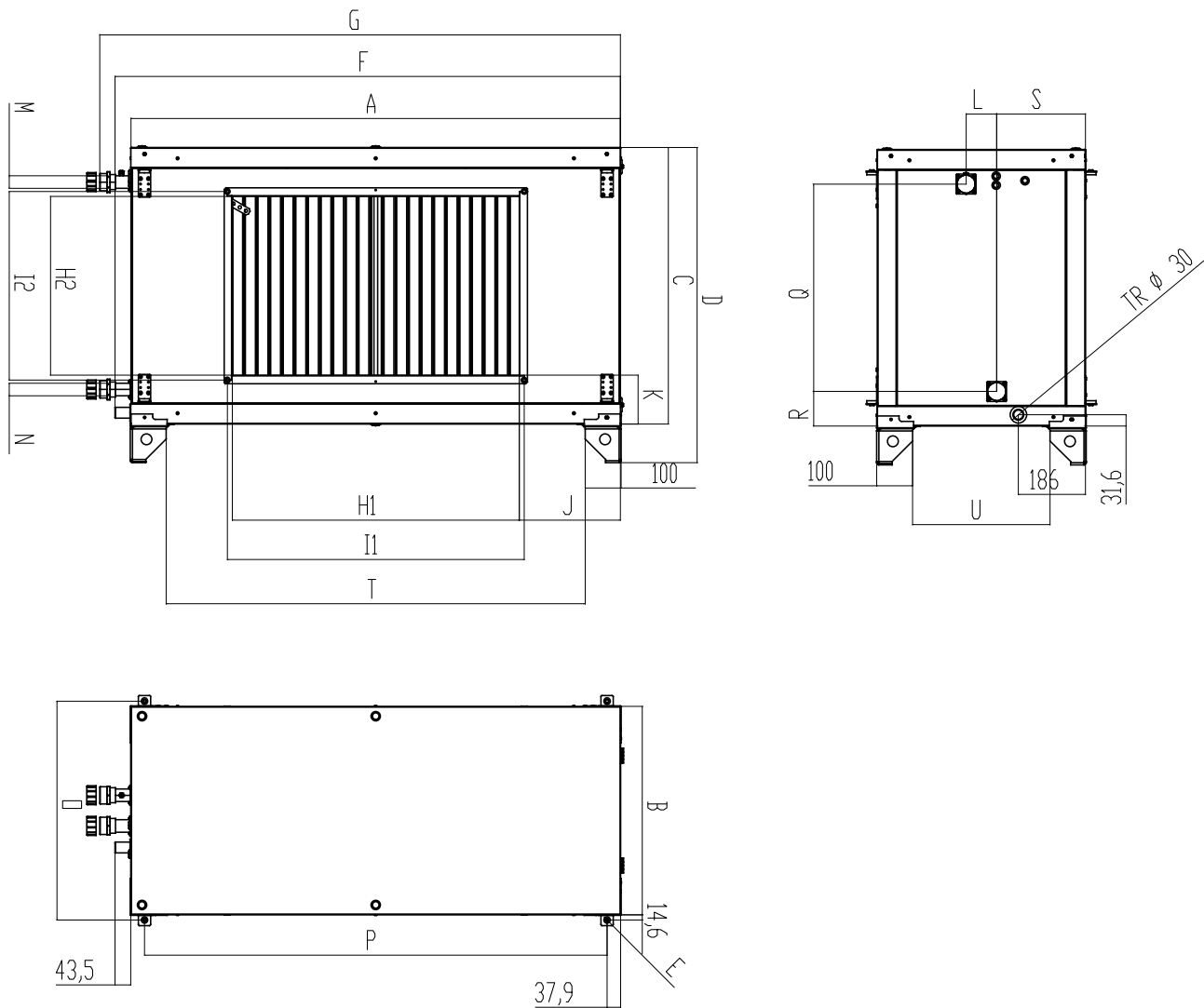
ALFA 85 100	M	N
heater/cooler (C/O)	G 3/4"	G 3/4"
direct evaporator (DX)	1/2"	5/8"

ALFA 85 090/120	M	N
heater/cooler (C/O)	G 3/4"	G 3/4"
direct evaporator (DX)	1/2"	5/8"

ALFA 85 150/160/200	M	N
heater/cooler (C/O)	G 1"	G 1"
direct evaporator (DX)	5/8"	3/4"

ALFA 85 250	M	N
heater/cooler (C/O)	G 1"	G 1"
direct evaporator (DX)	5/8"	7/8"

ALFA 85 320 - 500 external modules



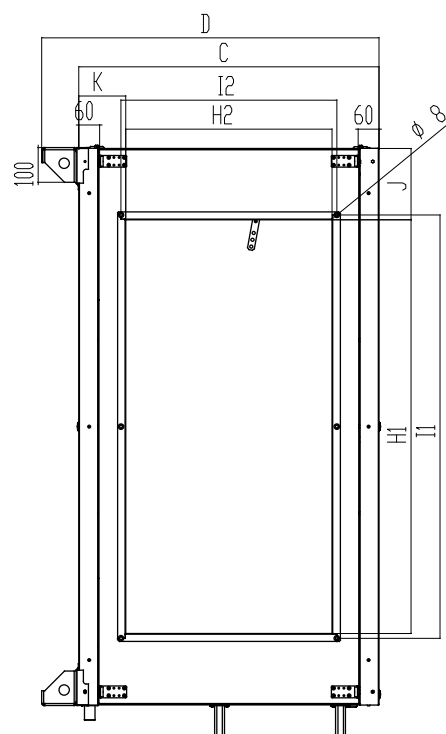
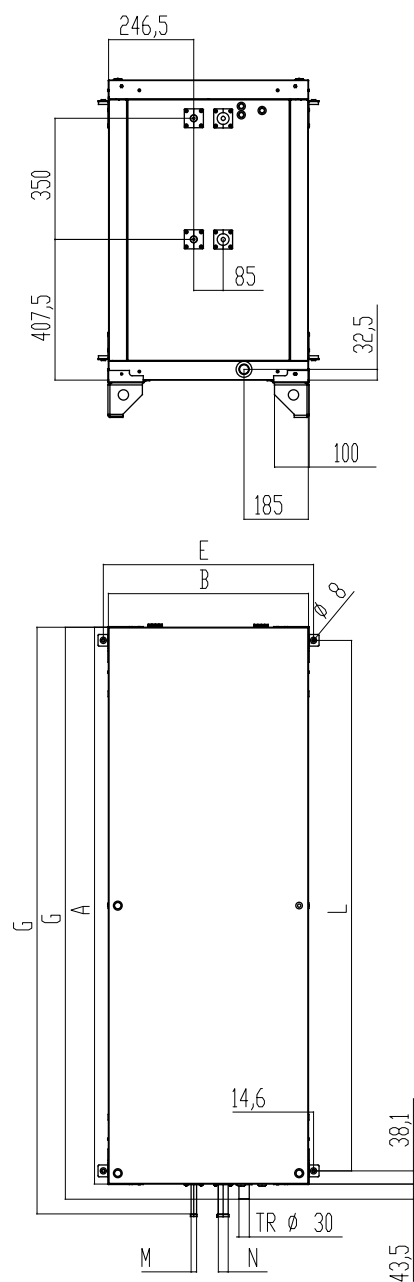
Type	Dimensions																				
	A	B	C	D	E	F	G	H1	H2	I1	I2	J	K	L	O	P	Q	R	S	T	U
HR852-320 U / V	1166	578	696	803,5	Ø8	1210,5	1255	600	500	624	524	285	100	65	608	1092	476	110,5	255,5	971	382
HR852-400 U / V	1258	578	718	825,5	Ø8	1302,5	1345	600	500	624	524	330	111	65	608	1184	526	96,0	255,5	1063	382
HR852-500 U / V	1358	578	768	875,5	Ø8	1402,5	1445	800	500	824	524	280	136	85	608	1284	576	96,0	246,5	1163	382

ALFA 85 320	M	N
heater/cooler (C/O)	G 1"	G 1"
direct evaporator (DX)	3/4"	7/8"

ALFA 85 500	M	N
heater/cooler (C/O)	G 1 1/2"	G 1 1/2"
direct evaporator (DX)	7/8"	1 1/8"

ALFA 85 400	M	N
heater/cooler (C/O)	G 1"	G 1"
direct evaporator (DX)	3/4"	7/8"

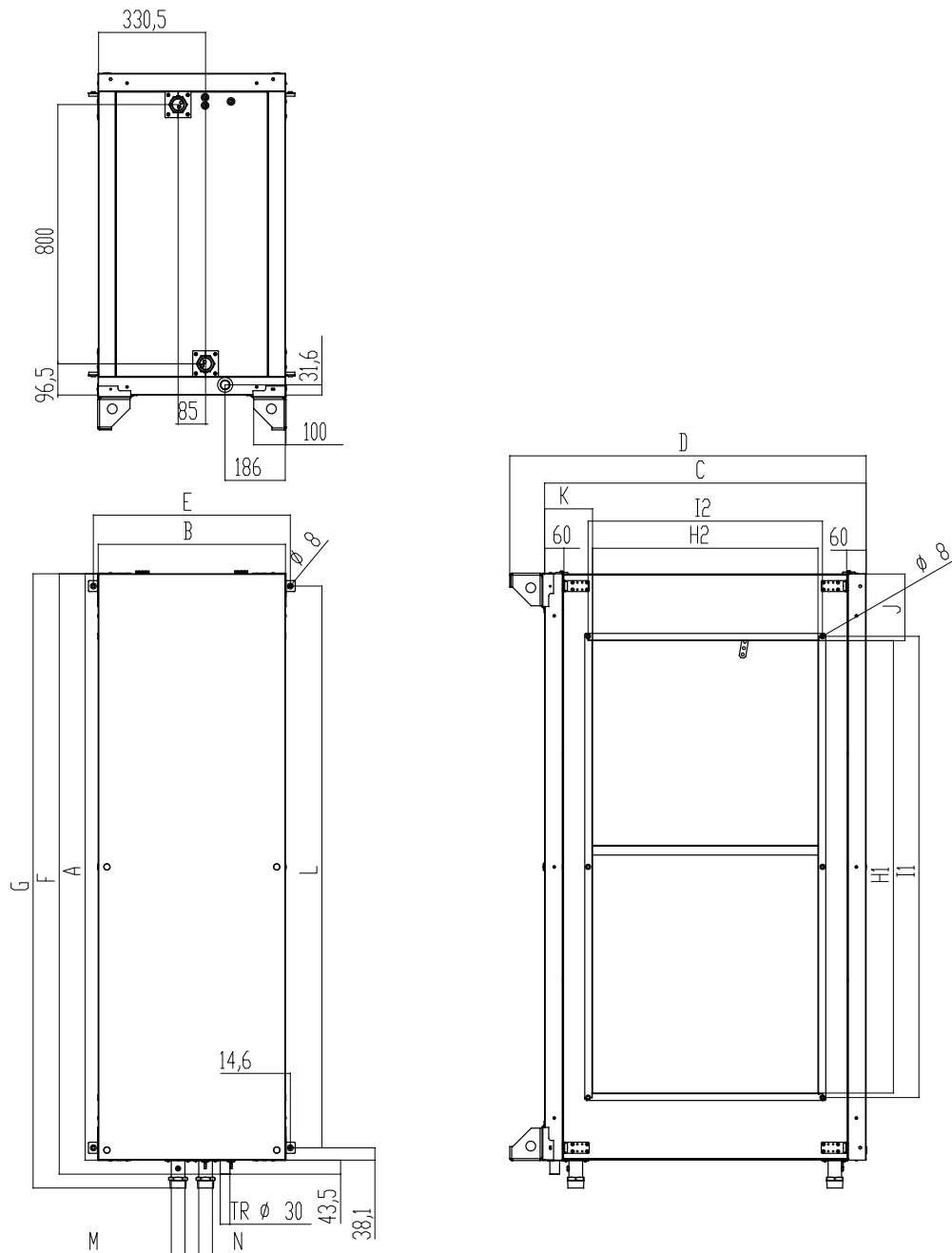
ALFA 85 700 external modules



Type	Dimensions													
	A	B	C	D	E	F	G	H1	H2	I1	I2	J	K	L
HR852-700	1610	578	868	975,5	608	1653,5	1700	1200	600	1224	624	206	136	1534

ALFA 85 700	M	N
heater/cooler (C/O)	G 1 1/2"	G 1 1/2"
direct evaporator (DX)	2 x 3/4"	2 x 7/8"

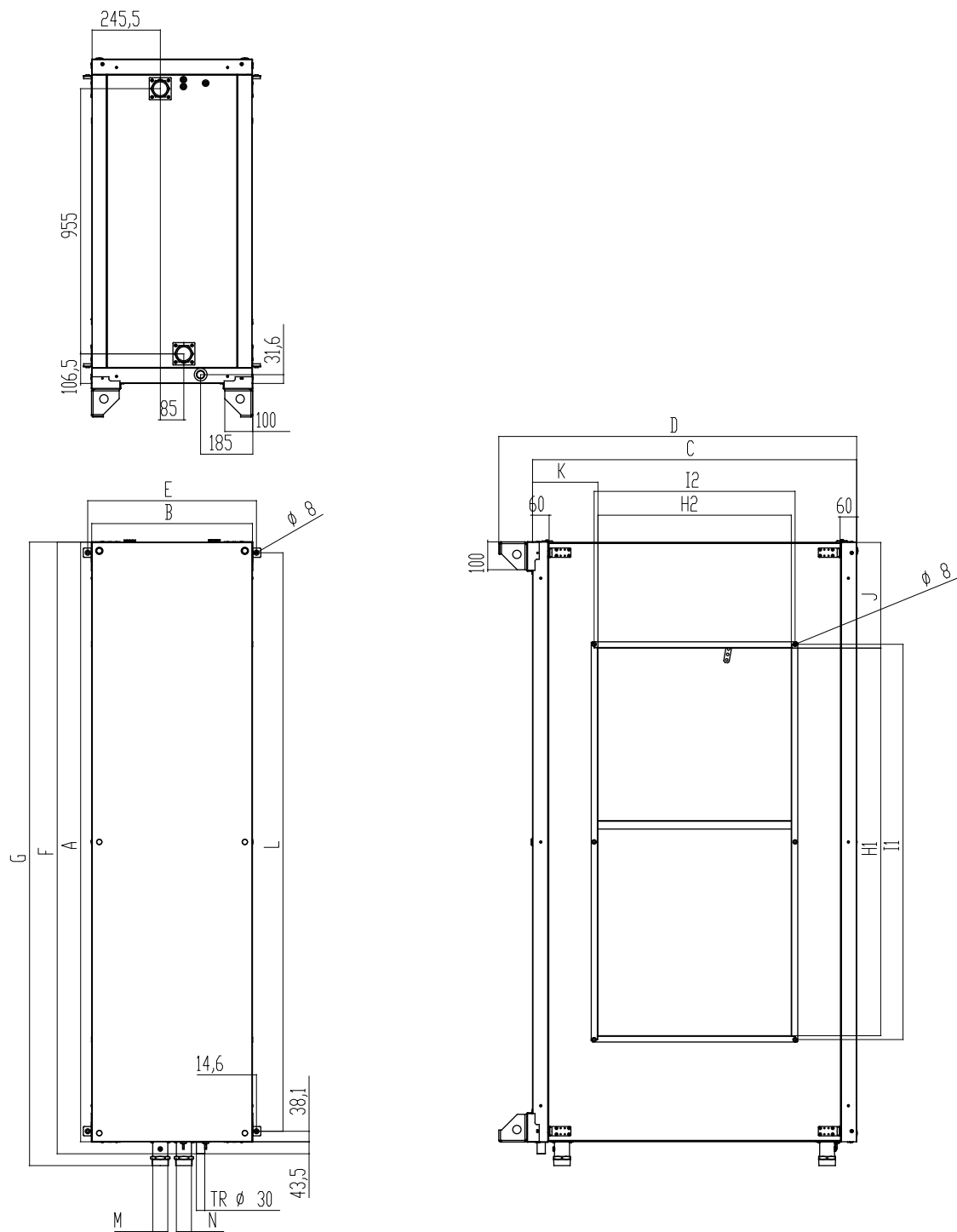
ALFA 85 10K external modules



Type	Dimensions													
	A	B	C	D	E	F	G	H1	H2	I1	I2	J	K	L
HR852-10K	1810	578	993	1114	608	1853,5	1896	1400	700	1424	724	206	148	1734

ALFA 85 10K	M	N
heater/cooler (C/O)	G 1 1/2"	G 1 1/2"
direct evaporator (DX)	22	16

ALFA 85 14K external modules



Type	Dimensions													
	A	B	C	D	E	F	G	H1	H2	I1	I2	J	K	L
HR852-14K	2160	578	1168	1289	608	2203	2245	1400	700	1424	724	380	235	2084

ALFA 85 14K	M	N
heater/cooler (C/O)	G 2"	G 2"
direct evaporator (DX)	22	22

External modules weight

Model	Type		
	CO [kg]	DX [kg]	Water [kg]
T700U / T700V	46	44	40
T1000V	50	48	x
T900U / T1200M	55	52	x
T1500V / T1600U / 2000V/U	66	62	x
T2500U / T2500V	73	68	x
T3200U / T3200V	81	77	x
T4000U / T4000V	91	86	x
T5000U / T5000V	100	93	x
T7000V	123	113	x
T10000V	176	172	x
T14000V	216	210	x



KEY TO CODING

MO852- 070 X X 00 0 0 - X C4 X- 0 A0

- A0** - Reserve code
- 0** - Standard RAL
- X** - Without control
- V1** - Water post-heater (only for size 070)
- C4** - C/O water post-heater (sizes 070 - 14K)
- D3** - DX post-heater (sizes 070 - 14K)
- X** - Without pre-heater
- 0** - n/a
- 0** - n/a
- 0** - n/a
- 00** - n/a
- X** - Universal installation
- X** - Universal for both V/U version
- 070** - Nominal flow rate 700m³/h
- 100** - Nominal flow rate 900-1000m³/h
- 120** - Nominal flow rate 1200m³/h
- 200** - Nominal flow rate 1500-2000m³/h
- 250** - Nominal flow rate 2500m³/h
- 320** - Nominal flow rate 3200m³/h
- 400** - Nominal flow rate 4000m³/h
- 500** - Nominal flow rate 5000m³/h
- 700** - Nominal flow rate 7000m³/h
- 10K** - Nominal flow rate 10000m³/h
- 14K** - Nominal flow rate 14000m³/h

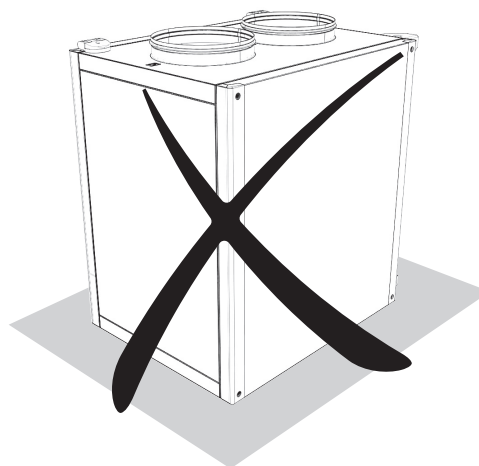
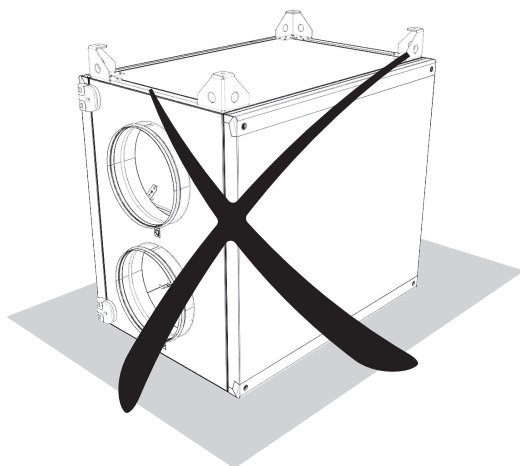
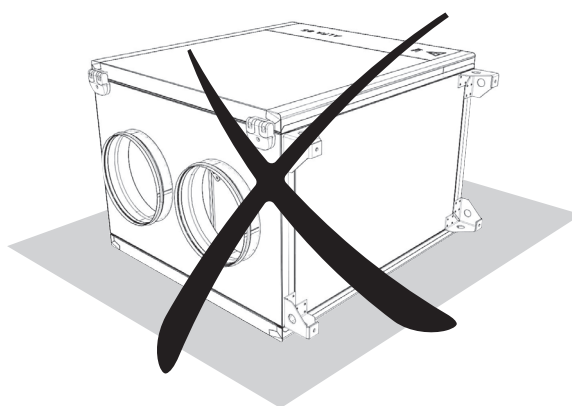
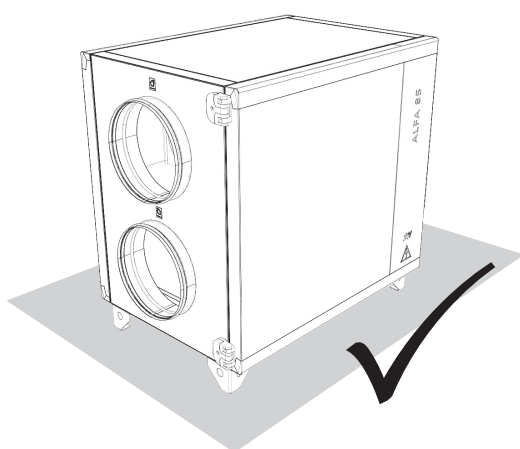
External module **ALFA 85 2nd generation**



INSTALLATION AND ASSEMBLY

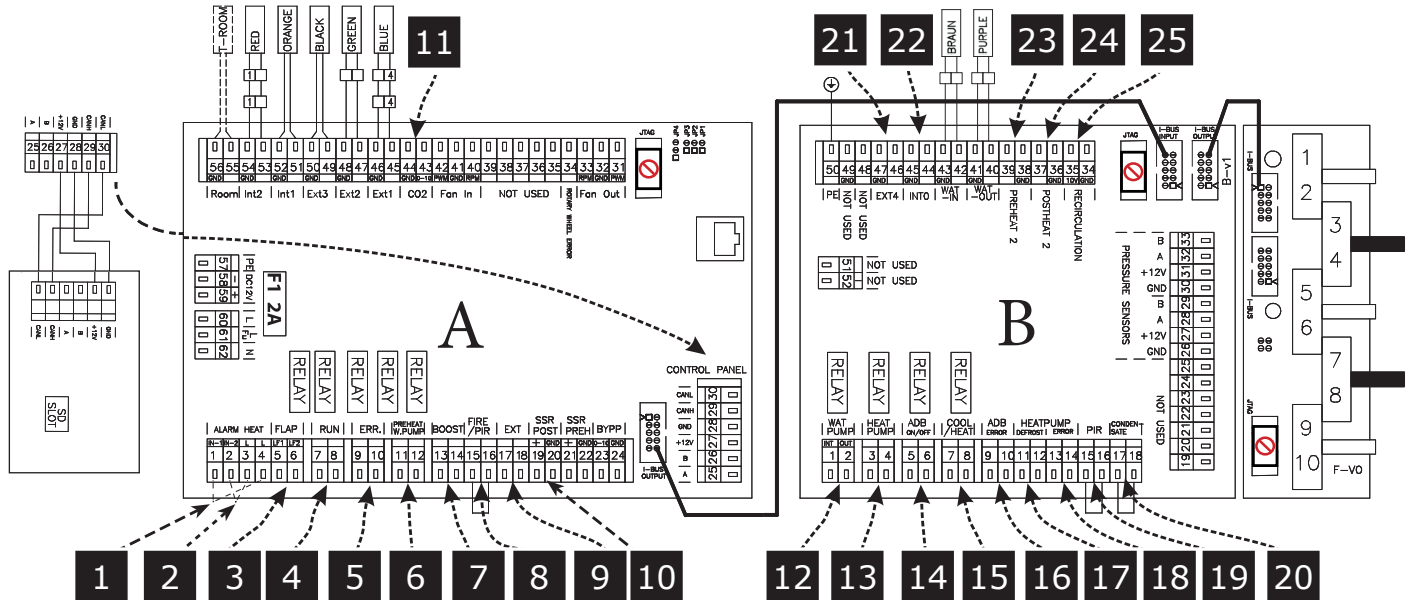
All vertical types of ventilation units must be installed according to the pictures (see below).

The unit must be installed in such a way that the direction of the air blown corresponds to the direction of air circulation in the distribution system. The unit must be installed so as to give free access for maintenance, service or dismantling. This is to allow access to service doors and possibility to open them, access to the lid of the control panel, access to the lateral connections and access to the filter cover.





WIRING DIAGRAMS



1.	A (1,4)	SAFETY THERMOSTAT POSTHEATING
2.	A (2,3)	SAFETY PREHEATING THERMOSTAT
3.	A (5-6)	LF1 - FLAP INLET (output L-open), LF2 - FLAP OUTLET (output L-open)
4.	A (7-8)	RUN CONTACT (output - NO/NC settable)
5.	A (9-10)	ERROR CONTACT (output NO)
6.	A (11-12)	PREHEATER WATER PUMP (11 - Lint, 12 - Lout)
7.	A (13-14)	BOOST (input NO)
8.	A (15-16)	FIRE (input NC)
9.	A (17-18)	EXTERNAL CONTROL ON/OFF (input NC)
10.	A (19,20)	OUTPUT PERFORMANCE OF POSTHEATING (0-10V OR PWM)
11.	A (43-44)	AQS SENSOR 0-10V (input)
12.	B (1-2)	WATER PUMP (1 - Lint, 2 - Lout)
13.	B (3-4)	HEAT PUMP CONTROL settable (output - ON/OFF)
14.	B (5-6)	ADIABATIC MODULE (output - ON/OFF)
15.	B (7-8)	COOL / HEAT settable (CO = NC/NO - DX = output settable)
16.	B (9-10)	ADIABATIC MODULE ERROR (input NO)
17.	B (11-12)	HEAT PUMP DEFROST settable (input NC/NO)
18.	B (13-14)	HEAT PUMP ERROR settable (input NC/NO)
19.	B (15-16)	PIR (input NC)
20.	B (17-18)	CONDENSATE OVERFLOW (input NC)
21.	B (46-47)	EXTERNAL TEMPERATURE SENSOR (external postheater - input)
22.	B (44-45)	EXTERNAL TEMPERATURE SENSOR (adiabatic module / recirc. chamber - input)
23.	B (38-39)	EXTERNAL PREHEATER (output 0-10V)
24.	B (36-37)	EXTERNAL POSTHEATER (output 0-10V)
25.	B (34-35)	RECIRCULATION CHAMBER (output 0-10V)



CONTROL

AirGENIO SUPERIOR - Main control functions

- Touch-screen control panel for easy control and complete overview of device operational status (recommended connecting data cable to control panel is UTP cable and it should not exceed 50m length).
- Manual stepless fans control (PWM)
- CAV, VAV or DCV ventilation in automatic mode
- BOOST mode - intensive airflow for a pre-set time period
- Freecooling mode - night ventilation (cooling)
- Occupancy mode - reducing ventilation intensity according to the PIR sensor
- FIRE protection mode with settable logic
- Thermal wheel control (temperature control: freecooling, antifreeze protection)
- Integrated timer (day, week, year)
- Optional connection of sensors: CO₂, RH, VOC (0-10)
- Clogged filter indication by pressure sensors
- Stepless post-heating control
- Electric coil control (PWM) and LPHW coil control (0-10 V)
- Change-over control with automatic detection of the heating / cooling (0-10 V)
- Wide choice of different ways for DX coil control*
- Possible control of external pre-heater and post-heater
- Offset fan adjustment (over-pressure / underpressure)
- BMS control via Modbus RTU / TCP or BACnet
- Remote control via smart device



*AirGENIO SUPERIOR control system allows a different ways of DX coil control

- ON-OFF
- 0-10 V
- 0-10 V - 0-10 V signal control
- On/Off - On/Off switching
- Off/On - Off/On switching
- 0-10 V + On/Off - On/Off switching + 0-10 V signal control
- 0-10 V + Off/On - Off/On switching + 0-10 V signal control

With reverse control cycle (heating - cooling mode)

- 10-0 V + On/Off - On/Off switching + 0-10 V signal control cooling, heating 10-0 V
- 10-0 V Off/On - Off/On switching + 0-10 V signal control cooling, heating 10-0 V

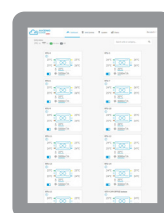
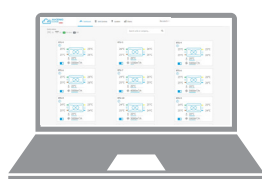
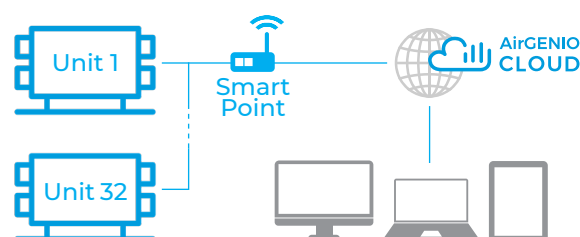
2V Service software:

- Easy and quick commissioning from your computer
- Error log - error display and identification
- Easy service (device status loading/reset to backup setting)
- Fast FW update
- OFFLINE version

AirGENIO CLOUD - Connections you can trust

2V Service software operated on secure cloud server.

- Control, monitoring and servicing
- Web communication interface with clear and structured layout
- Easy customization of settings
- History logs providing accurate and timely info
- Smart notifications and warning/error messages clearly displayed in overview dashboard
- Backup and restore settings

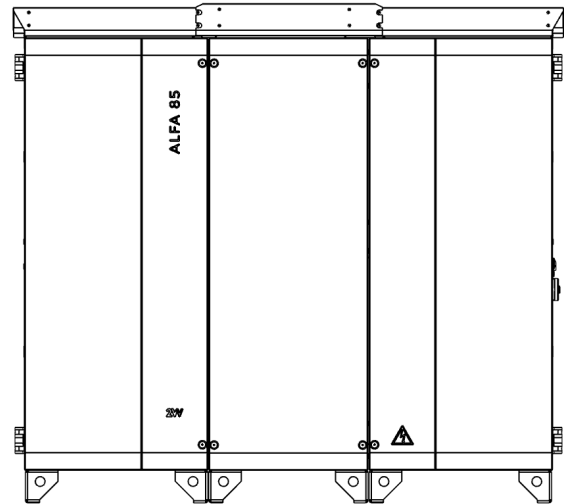


**ACCESSORIES****Rain protection roofs**

The rainproof roofs for outdoor installation of vertical units

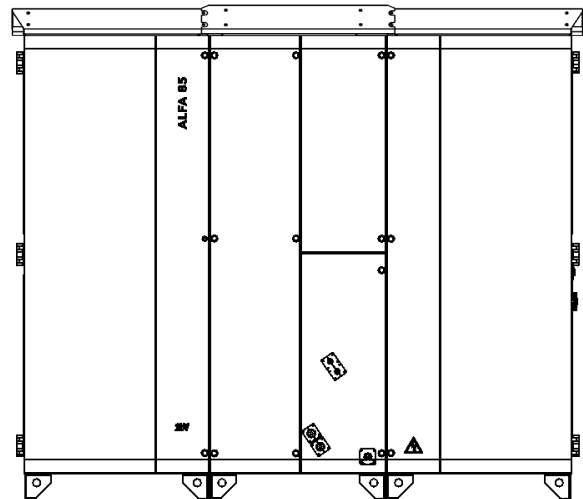
Integrated electric or LPHW coil post-heater / without heater

Unit type	Rainproof roofs
vertical	
HR852-070V	HR852-070V-ROOF-X-0A0
HR852-100V	HR852-100V-ROOF-X-0A0
HR852-150V	HR852-200V-ROOF-X-0A0
HR852-200V	HR852-200V-ROOF-X-0A0
HR852-250V	HR852-250V-ROOF-X-0A0
HR852-320V-S0/E1/V1	HR852-320V-ROOF-X-0A0
HR852-400V-S0/E1/V1	HR852-400V-ROOF-X-0A0
HR852-500V-S0/E1/V1	HR852-500V-ROOF-X-0A0
HR852-700V-S0/E1/V1	HR852-700V-ROOF-X-0A0
HR852-10KV-S0/E1/V1	HR852-10KV-ROOF-X-0A0
HR852-14KV-S0/E1/V1	HR852-14KV-ROOF-X-0A0



Integrated C/O or DX coil post-heater

Unit type	Rainproof roofs
vertical	
HR852-320V-C4/D3	HR852-320V-RFCD-X-0A0
HR852-400V-C4/D3	HR852-400V-RFCD-X-0A0
HR852-500V-C4/D3	HR852-500V-RFCD-X-0A0
HR852-700V-C4/D3	HR852-700V-RFCD-X-0A0
HR852-10KV-C4/D3	HR852-10KV-RFCD-X-0A0
HR852-14KV-C4/D3	HR852-14KV-RFCD-X-0A0



Electric heater

EOKO – The heater output is controlled by the ALFA852 unit control system via 0-10 V.



Recommended combinations:

Unit type	Type of electric Pre-heater
HR852-070U	EOKO2-250-XX-X-D
HR852-070V	EOKO2-315-XX-X-D
HR852-090U	EOKO2-315-XX-X-D
HR852-100V	EOKO2-315-XX-X-D
HR852-120U	EOKO2-315-XX-X-D
HR852-150V	EOKO2-400-XX-X-D
HR852-160U	EOKO2-355-XX-X-D
HR852-200V	EOKO2-400-XX-X-D
HR852-200U	EOKO2-355-XX-X-D
HR852-250V	EOKO2-400-XX-X-D
HR852-250U	EOKO2-355-XX-X-D

Unit type	Type of electric Pre-heater
HR852-320V	EOKO2-560-XX-X-D
HR852-320U	EOKO2-500-XX-X-D
HR852-400V	EOKO2-560-XX-X-D
HR852-400U	EOKO2-500-XX-X-D
HR852-500V	EOKO2-630-XX-X-D
HR852-500U	EOKO2-400-XX-X-D
HR852-700V	EOKO2-630-XX-X-D
HR852-10KV	EOKO2-630-XX-X-D
HR852-14KV	EOKO2-630-XX-X-D

Square/circular adapter

PR - Adapter from four sided to circular pipes made of galvanised metal sheet.



Unit type	Circular adapter
Vertical	
HR852-320V	PR-VO-0600X500-D560-L300
HR852-400V	PR-VO-0600X500-D560-L300
HR852-500V	PR-O-800X500-D560-L400
HR852-700V	PR-O-1200X600-D630-L600
HR852-10K / 14K	PR-O-1400X700-D710-L700

Unit type	Circular adapter
Upper	
HR852-320U	PR-VO-0400X400-D500-L300
HR852-400U	PR-VO-0400X400-D500-L300
HR852-500U	PR-O-0500X400-D400-L300

Shutting Flap

KRTK-A



Recommended combinations

Unit type	Shutting Flap without servo drive	Shutting Flap with servo drive
HR852-070U	KRTK-A-250	KRTK-A-250-SB
HR852-070V	KRTK-A-315	KRTK-A-315-SB
HR852-090U		
HR852-100V		
HR852-120U		
HR852-150V	KRTK-A-400	KRTK-A-400-SB
HR852-160U	KRTK-A-355	KRTK-A-355-SB
HR852-200U		
HR852-200V	KRTK-A-400	KRTK-A-400-SB
HR852-250V		
HR852-250U	KRTK-A-355	KRTK-A-355-SB

Filtration inserts**FILTR-HR852** – replacement filtration inserts of various filtration classes.

Unit type	Pre-filter type – Coarse 65% (standard)	Inlet filter type – ePM 1 60% (standard)	Inlet filter type – ePM 1 80% (optional)	Extract filter type – ePM 10 50% (standard)
vertical				
HR852-070V	HR852-070V-FI-G4-0A0	HR852-070V-FI-F7-0A0	HR852-070V-FI-F9-0A0	HR852-070V-FI-M5-0A0
HR852-100V	HR852-100V-FI-G4-0A0	HR852-100V-FI-F7-0A0	HR852-100V-FI-F9-0A0	HR852-100V-FI-M5-0A0
HR852-150V	HR852-150V-FI-G4-0A0	HR852-150V-FI-F7-0A0	HR852-150V-FI-F9-0A0	HR852-150V-FI-M5-0A0
HR852-200V	HR852-200V-FI-G4-0A0	HR852-200V-FI-F7-0A0	HR852-200V-FI-F9-0A0	HR852-200V-FI-M5-0A0
HR852-250V	HR852-250V-FI-G4-0A0	HR852-250V-FI-F7-0A0	HR852-250V-FI-F9-0A0	HR852-250V-FI-M5-0A0
HR852-320V	HR852-320V-FI-G4-0A0	HR852-320V-FI-F7-0A0	HR852-320V-FI-F9-0A0	HR852-320V-FI-M5-0A0
HR852-400V	HR852-400V-FI-G4-0A0	HR852-400V-FI-F7-0A0	HR852-400V-FI-F9-0A0	HR852-400V-FI-M5-0A0
HR852-500V	HR852-500V-FI-G4-0A0	HR852-500V-FI-F7-0A0	HR852-500V-FI-F9-0A0	HR852-500V-FI-M5-0A0
HR852-700V	HR852-700V-FI-G4-0A0	HR852-700V-FI-F7-0A0	HR852-700V-FI-F9-0A0	HR852-700V-FI-M5-0A0
HR852-10KV	HR852-10KV-FI-G4-0A0	HR852-10KV-FI-F7-0A0	HR852-10KV-FI-F9-0A0	HR852-10KV-FI-M5-0A0
HR852-14KV	HR852-14KV-FI-G4-0A0	HR852-14KV-FI-F7-0A0	HR852-14KV-FI-F9-0A0	HR852-14KV-FI-M5-0A0

Unit type	Pre-filter type – Coarse 65% (standard)	Inlet filter type – ePM 1 60% (standard)	Inlet filter type – ePM 1 80% (optional)	Extract filter type – ePM 10 50% (standard)
upper				
HR852-070U	HR852-070U-FI-G4-0A0	HR852-070U-FI-F7-0A0	HR852-070U-FI-F9-0A0	HR852-070U-FI-M5-0A0
HR852-090U	HR852-090U-FI-G4-0A0	HR852-090U-FI-F7-0A0	HR852-090U-FI-F9-0A0	HR852-090U-FI-M5-0A0
HR852-120U	HR852-120U-FI-G4-0A0	HR852-120U-FI-F7-0A0	HR852-120U-FI-F9-0A0	HR852-120U-FI-M5-0A0
HR852-160U	HR852-160U-FI-G4-0A0	HR852-160U-FI-F7-0A0	HR852-160U-FI-F9-0A0	HR852-160U-FI-M5-0A0
HR852-200U	HR852-200U-FI-G4-0A0	HR852-200U-FI-F7-0A0	HR852-200U-FI-F9-0A0	HR852-200U-FI-M5-0A0
HR852-250U	HR852-250U-FI-G4-0A0	HR852-250U-FI-F7-0A0	HR852-250U-FI-F9-0A0	HR852-250U-FI-M5-0A0
HR852-320U	HR852-320U-FI-G4-0A0	HR852-320U-FI-F7-0A0	HR852-320U-FI-F9-0A0	HR852-320U-FI-M5-0A0
HR852-400U	HR852-400U-FI-G4-0A0	HR852-400U-FI-F7-0A0	HR852-400U-FI-F9-0A0	HR852-400U-FI-M5-0A0
HR852-500U	HR852-500U-FI-G4-0A0	HR852-500U-FI-F7-0A0	HR852-500U-FI-F9-0A0	HR852-500U-FI-M5-0A0

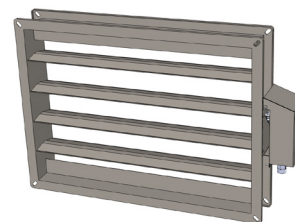
Four-sided closing flap without servo drive MLKR/S



Unit type	Four-sided closing flap without servo drive	Recommended servo drive
HR852-300V	MLKR/S-600X505	SERVO-LM230-05
HR852-400V		
HR852-320U	MLKR/S-400X405	
HR852-400U		
HR852-500V	MLKR/S-800x500	
HR852-500U	MLKR/S-500X400	
HR852-700V	MLKR/S-1200x605	
HR852-10KV	MLKR/S-1405x710	
HR852-14KV		

Four-sided closing flap with servo drive MLKR

Unit type	Four-sided closing flap with servo drive
HR852-300V	MLKR-0600-0500-SR
HR852-400V	
HR852-320U	MLKR-0400-0400-SR
HR852-400U	
HR852-500V	MLKR-0800-0500-SR
HR852-500U	MLKR-0500-0400-SR
HR852-700V	MLKR-1200-0600-SR
HR852-10KV	MLKR-1400-0700-SR
HR852-14KV	



* **SR** - servodrive with spring, **SX** - servodrive without spring

Mixing valve

the **SMU** mixing unit is designed for controlling the heat-output of water-type heat exchangers. It is used especially for controlling standalone water-type air heaters, heaters inbuilt into the ventilation units.

Recommended values for individual types of the **ALFA 85** units:

SMU2-024-06,3-SC

- SC** – with short circuit
- WO** – without short circuit
- 00,6** – mixing valve – k_{VS} 0,6
- 01,0** – mixing valve – k_{VS} 1,0
- 01,6** – mixing valve – k_{VS} 1,6
- 02,5** – mixing valve – k_{VS} 2,5
- 04,0** – mixing valve – k_{VS} 4,0
- 06,3** – mixing valve – k_{VS} 6,3
- 12,0** – mixing valve – k_{VS} 12,0
- 24,0** – mixing valve – k_{VS} 24,0
- 40,0** – mixing valve – k_{VS} 40,0
- 024** – 24V stepless control
- SMU2** – mixing unit



Mixing chamber

Mixing chamber module for heat recovery units ALFA 852

Type	Phase [pcs]	Voltage [V]	Frequency [Hz]	Protection IP	Weight [kg]
HR852-070V-MOMC-X-0A0	1	230	50-60	43	102
HR852-100V-MOMC-X-0A0	1	230	50-60	43	108
HR852-200V-MOMC-X-0A0	1	230	50-60	43	132
HR852-250V-MOMC-X-0A0	1	230	50-60	43	127
HR852-320V-MOMC-X-0A0	1	230	50-60	43	154
HR852-400V-MOMC-X-0A0	1	230	50-60	43	156
HR852-500V-MOMC-X-0A0	1	230	50-60	43	172
HR852-700V-MOMC-X-0A0	1	230	50-60	43	210
HR852-10KV-MOMC-X-0A0	1	230	50-60	43	235
HR852-14KV-MOMC-X-0A0	1	230	50-60	43	250

Roof for a mixing chamber

Rain protection roof for a mixing chamber of ALFA 852

Mixing chamber type	Roof type
HR852-070V-MOMC-X-0A0	HR852-070V-MCRF-X-0A0
HR852-100V-MOMC-X-0A0	HR852-100V-MCRF-X-0A0
HR852-200V-MOMC-X-0A0	HR852-250V-MCRF-X-0A0
HR852-250V-MOMC-X-0A0	HR852-250V-MCRF-X-0A0
HR852-320V-MOMC-X-0A0	HR852-400V-MCRF-X-0A0
HR852-400V-MOMC-X-0A0	HR852-400V-MCRF-X-0A0
HR852-500V-MOMC-X-0A0	HR852-500V-MCRF-X-0A0
HR852-700V-MOMC-X-0A0	HR852-700V-MCRF-X-0A0
HR852-10KV-MOMC-X-0A0	HR852-10KV-MCRF-X-0A0
HR852-14KV-MOMC-X-0A0	HR852-14KV-MCRF-X-0A0

**HR852- 070 V- MOMC- X- 0 A0**

- A0** - Reserve
- 0** - Standard RAL
- X** - Universal service access (right/left)
- MOMC** - Module of Mixing chamber
- MCRF** - Rain protection roof for a mixing chamber
- V** - Vertical outlets, floor standing unit
- 070** - for HR852-070
- 100** - for HR852-090, HR852-100, HR852-120
- 200** - for HR852-150, HR852-200
- 250** - for HR852-250
- 320** - for HR852-320
- 400** - for HR852-400
- 500** - for HR852-500
- 700** - for HR852-700
- 10K** - for HR852-10K
- 14K** - for HR852-14K

Accessories for ALFA 85 2nd generation

Channel sensor CO₂ CI-CO2-22DC-11

The transmitter is ideally suited for duct mounting in the fields of building management and demand controlled ventilation. The elegant, compact housing enables easy installation directly at the ventilation duct using a mounting flange.



Duct sensor of relative humidity CI-RH-22DTH-11M

Duct sensor for measuring relative humidity in air-conditioning systems



Spatial sensor CO₂ CI-CO2-R

Sensor combines CO₂. The snap-in mounting concept stands for easy installation



Spatial sensor RH CI-RH-R

Capacitive relative humidity sensor with 0-10V analog and relay output.



Signal combiner CI-AQS-COMBI

The signal combiner for AQS sensors uses 0-10V logic which you can connect up to 10 different sensors. The input signal with the highest voltage will be the signal that is on the output terminal.



PIR sensor CI-PIR

Spatial infrared sensor for automatic ventilation based on presence of people in the ventilated area.
Power supply of this sensor must be outsourced. Unit doesn't support this kind of power supply (12V DC).



AirGENIO CLOUD smart point AirGENIO-SMART-POINT

2V cloud service operated on secure cloud server





KEY TO CODING

HR852- 070 V P RS E 7 5- X S0 S- 0 A 0

- 0** - Reserve code
- A** - compact packaging (sizes 10K-14K modular packaging in three separate modules)
- B** - modular packaging in three separate modules (sizes 320 - 700)
- 0** - Standard RAL
- S** - SUPERIOR AirGENIO control
- X** - Without control
- S0** - Without post-heater
- E1** - With el. post-heater
- V1** - Water post-heater (sizes 090 - 14K)
- C4** - C/O water post-heater (sizes 320 - 14K)
- D3** - DX post-heater (sizes 320 - 14K)
- X** - Without pre-heater
- 5** - Extract filter ePM 10 50%
- 7** - Supply filter ePM 1 60% + prefilter Coarse 60%
- E** - EC fans
- RS** - Standard Rotary Wheel
- RQ** - Sorption Rotary Wheel
- P** - Right
- L** - Left
- V** - Vertical outlets, floor-standing unit
(070, 100, 150, 200, 250, 320, 400, 500, 700, 10K, 14K)
- U** - Upper outlets
(070, 090, 120, 160, 200, 250, 320, 400, 500)
- 070** - Nominal flow rate 700m³/h
- 090** - Nominal flow rate 900m³/h
- 100** - Nominal flow rate 1000m³/h
- 120** - Nominal flow rate 1200m³/h
- 150** - Nominal flow rate 1500m³/h
- 160** - Nominal flow rate 1600m³/h
- 200** - Nominal flow rate 2000m³/h
- 250** - Nominal flow rate 2500m³/h
- 320** - Nominal flow rate 3200m³/h
- 400** - Nominal flow rate 4000m³/h
- 500** - Nominal flow rate 5000m³/h
- 700** - Nominal flow rate 7000m³/h
- 10K** - Nominal flow rate 10000m³/h
- 14K** - Nominal flow rate 14000m³/h

Heat recovery unit **ALFA 85 2nd generation**