New Zealand

HRU Heat Recovery Units

Ultra High Efficiency Premium Heat Recovery Units

ErP 2018

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Systemair New Zealand is a wholly-owned subsidiary of global HVAC leader Systemair Group. With 28 production facilities and sales organisations in 50+ countries, Systemair Group is **#ByYourSide.**

Simplicity and reliability:
The values and business concepts of Systemair Group are core; manufacture and market high-quality ventilation products. Based on our Group business concept and values, and with our customers in focus, we aim to be your most efficient and helpful partner in mastering your indoor air quality challenges.

Selection software:
We save you time and money with our online selection software and REVit plugin. Transposition errors caused by manually entering BIM data is a thing of the past.

Green Ventilation:
As the Green Ventilation solutions leader, our products have outstanding energy efficiency combined with well-thought-out material consumption and production methods. We actively develop solutions and techniques such as heat recovery, night cooling, and demand-control-ventilation for the New Zealand building market.

Quality and customer experience:
Proud to launch our Generation 2 HRU range based on market feedback after the initial launch 3 years ago. Your customer experience is always our priority. When you need an indoor air quality solution, we manage the process with you from quote to despatch. Our Customer Service Group is with you for the long-haul, just like our fans.

Testing:
We manufacture to the highest standard. All HRU units have been tested in accordance to AMCA standard.
Aerodynamic Performance tested to AMCA210.
Sound Power Level tested to AMCA300-24.
The units are also tested for internal and external leakage.
The test report is available upon request.

- **High efficiency counter-flow non-permeable with heat recovery efficiency up to 85%.**
- **Complies with European Energy Directive ErP 2018**
- **Double skin insulated case**
- **Stainless steel case and fittings**
- **C5 anti corrosion class**

Description

HRU heat recovery units are equipped with a high efficiency counter-flow non-permeable heat exchanger. This premium range of ceiling mounted units for commercial applications range from 50l/s to 1000l/s. The slimline design makes the units easy to mount in small spaces, ceiling voids and above false ceilings. The stainless steel construction makes the units suitable for the harsh environment. The units are designed for residential and commercial interiors such as shops, offices, classrooms, restaurants, spa pools and sport facilities.

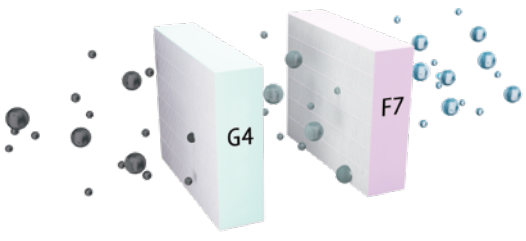
Casing – Double skin

The casing panel is made of stainless steel with painted finish with 20mm mineral wool for model 300, 550 and 900 and 40mm for the model of 1500, 2500, 3000 and 3500. Corrosion class C5 according to ISO12944. Smooth internal surface for superior hygienic qualities.

Filter

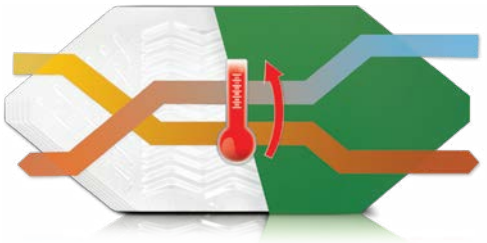
Units are supplied with G4 panel filter on both supply air side and extract air side. The supply air side can be fitted with F7 filter as an option.

HRU 300/550/900 have side withdraw filter, HRU 1500/2500/3000/3500 large models have both side and bottom filter access.



Fans

High efficiency EC motor with backward-curved centrifugal impeller. Low power consumption and low noise with stable operation at any speed in any climate.



Heat exchanger

High efficiency counter-flow non-permeable with heat recovery efficiency up to 85%. This complies to European energy directive ErP-2018. The high efficiency significantly reduces the building heating/cooling load and lowers the running cost of HVAC systems.

Bypass

The units are equipped with core bypass damper with actuator that operates automatic free-cooling and free-heating functions.

Control

The units are equipped with an integrated automation system. The on-board control board has various I/O that enables unit control by wall mount controller, external sensors or by a third party smart home system and BMS. The units can be controlled via Modbus or BACnet network.

- Mobile APP control via wifi network
- Stand-by pre-configured set speeds
- 7 days timer control
- In-built PI controller for controlling air quality, humidity and temperature
- Boost model function
- Auto By-pass operation
- External 0-10V speed control function
- 0-10V output for electric heater modulation control
- In-built temperature sensors for real time temperature display and temperature control
- Fire alarm input to shut down the operation in the event of fire

Sound Level

HRU300

Frequency	63	125	250	500	1k	2k	4k	8k	Total LwA
Sound Power Level	dB	dB	dB	dB	dB	dB	dB	dB	dBA
Supply Air	63	62	77	71	64	69	62	56	81
Outdoor Air	60	57	65	58	47	49	44	42	66
Exhaust Air	64	64	79	72	65	69	59	52	67
Return Air	51	58	65	54	48	48	40	37	83
Break Out	44	50	68	57	41	41	36	39	66

HRU550

Frequency	63	125	250	500	1k	2k	4k	8k	Total LwA
Sound Power Level	dB	dB	dB	dB	dB	dB	dB	dB	dBA
Supply Air	75	69	77	60	50	48	38	21	81
Outdoor Air	74	68	71	70	64	70	73	78	66
Exhaust Air	78	77	85	60	57	53	44	20	67
Return Air	64	68	69	55	50	49	43	38	83
Break Out	56	60	71	58	43	42	39	40	66

HRU900

Frequency	63	125	250	500	1k	2k	4k	8k	Total LwA
Sound Power Level	dB	dB	dB	dB	dB	dB	dB	dB	dBA
Supply Air	79	73	81	75	71	73	69	63	81
Outdoor Air	76	68	69	62	55	55	52	50	66
Exhaust Air	81	77	86	78	74	76	68	61	67
Return Air	68	71	72	61	58	56	50	47	83
Break Out	60	62	72	61	49	47	44	47	66

HRU1500

Frequency	63	125	250	500	1k	2k	4k	8k	Total LwA
Sound Power Level	dB	dB	dB	dB	dB	dB	dB	dB	dBA
Supply Air	84	83	87	81	80	80	73	68	86
Outdoor Air	82	78	77	69	61	56	46	40	73
Exhaust Air	78	78	84	79	78	77	71	67	84
Return Air	79	72	74	66	59	53	44	37	69
Break Out	68	62	64	53	49	39	41	37	63

HRU2500

Frequency	63	125	250	500	1k	2k	4k	8k	Total LwA
Sound Power Level	dB	dB	dB	dB	dB	dB	dB	dB	dBA
Supply Air	80	83	87	77	80	76	70	64	84
Outdoor Air	82	79	78	66	60	54	46	39	72
Exhaust Air	80	80	83	77	78	74	70	64	82
Return Air	82	76	74	64	59	53	46	39	69
Break Out	74	70	71	60	54	45	45	38	65

HRU3000

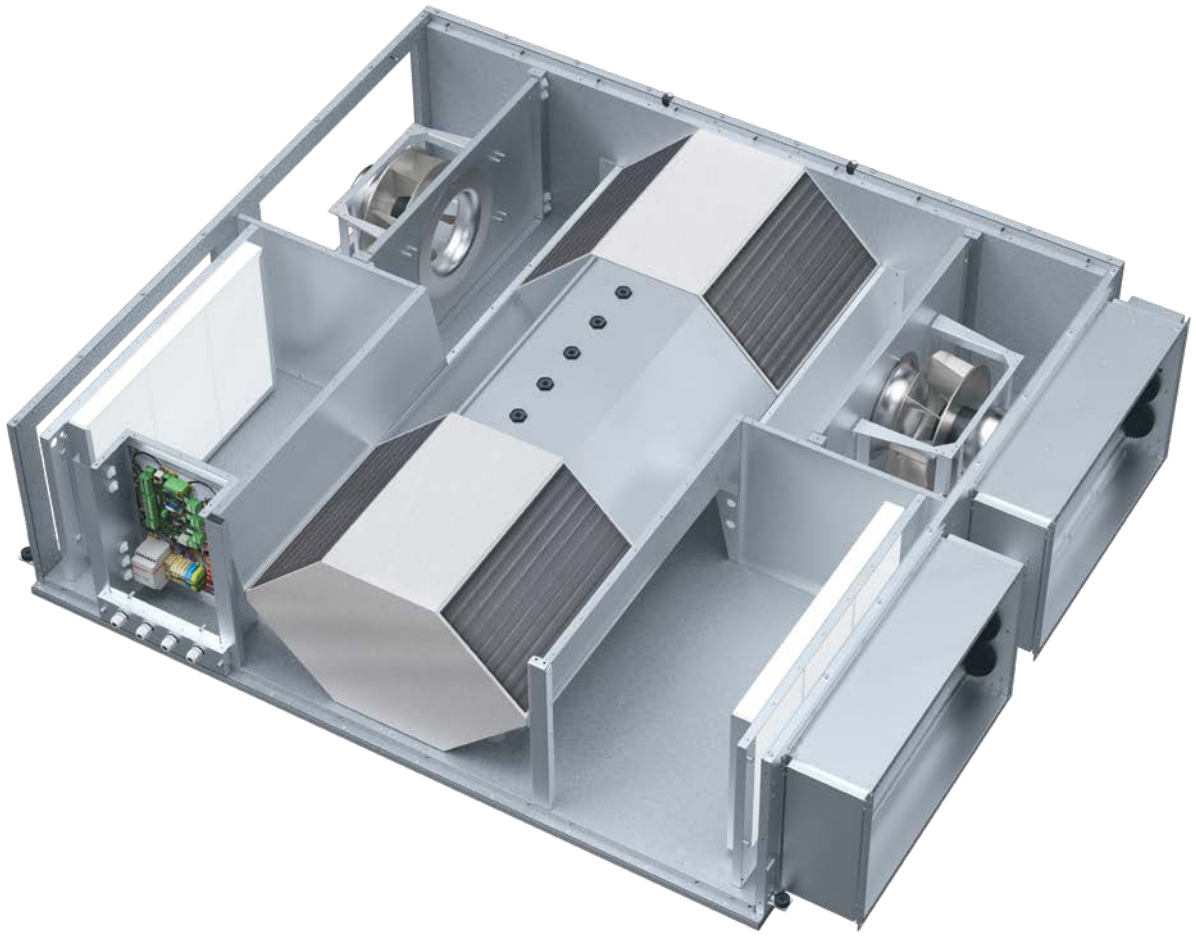
Frequency	63	125	250	500	1k	2k	4k	8k	Total LwA
Sound Power Level	dB	dB	dB	dB	dB	dB	dB	dB	dBA
Supply Air	78	87	86	75	77	70	68	71	82
Outdoor Air	79	82	79	64	57	48	45	37	69
Exhaust Air	76	83	83	70	71	67	65	58	77
Return Air	74	80	75	59	53	45	43	33	65
Break Out	64	66	67	46	43	33	40	30	61

HRU3500

Frequency	63	125	250	500	1k	2k	4k	8k	Total LwA
Sound Power Level	dB	dB	dB	dB	dB	dB	dB	dB	dBA
Supply Air	81	86	85	80	83	78	71	75	86
Outdoor Air	82	81	78	69	63	56	48	41	73
Exhaust Air	79	82	82	75	77	75	68	62	81
Return Air	77	79	74	64	59	53	46	37	69
Break Out	67	65	66	51	49	41	43	34	65

Technical Data

Unit	HRU300	HRU550	HRU900	HRU1500	HRU2500	HRU3000	HRU3500
Power Supply (V/PH)	230/1	230/1	230/1	230/1	230/1	230/1	400/3
Max Unit Power Without Electric Heater (W)	180	297	460	1000	1600	1600	3000
Integrated Electric Heater (kW)	1.5	2	3.3	N/A	N/A	N/A	N/A
Max Unit Current Without Electric Heater (A)	1.4	2.4	3.3	4.6	7.1	7.1	4.6
Integrated Electric Heater current (A)	6.5	8.7	14.3	N/A	N/A	N/A	N/A
Fan Full Speed (RPM)	3270	3100	2700	3080	3030	3030	2750
Operating Temperature (°C)	-5 to 40 °C	-5 to 40 °C	-5 to 40 °C	-5 to 40 °C	-5 to 40 °C	-5 to 40 °C	-5 to 40 °C
Case Material	Stainless Steel + Painting	Stainless Steel + Painting	Stainless Steel + Painting	Stainless Steel + Painting	Stainless Steel + Painting	Stainless Steel + Painting	Stainless Steel + Painting
Panel	Double Skin	Double Skin	Double Skin	Double Skin	Double Skin	Double Skin	Double Skin
Insulation	20mm Mineral Wool	20mm Mineral Wool	20mm Mineral Wool	40mm Mineral Wool	40mm Mineral Wool	40mm Mineral Wool	40mm Mineral Wool
Anti Corrosion Class	C5	C5	C5	C5	C5	C5	C5
By-pass Damper	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated
Extract Filter	G4	G4	G4	G4	G4	G4	G4
Supply Filter	G4 (F7 Option)	G4 (F7 Option)	G4 (F7 Option)	G4 (F7 Option)	G4 (F7 Option)	G4 (F7 Option)	G4 (F7 Option)
Connection size (mm)	160Ø	200Ø	250Ø	600x350	600x350	600x500	600x500
Weight (kg)	44	67	111	215	220	220	290
Heat Recovery Efficiency (%)	Up to 85%	Up to 85%	Up to 85%	Up to 85%	Up to 85%	Up to 85%	Up to 85%
Heat Exchanger Type	Counterflow Non-Permeable	Counterflow Non-Permeable	Counterflow Non-Permeable	Counterflow Non-Permeable	Counterflow Non-Permeable	Counterflow Non-Permeable	Counterflow Non-Permeable



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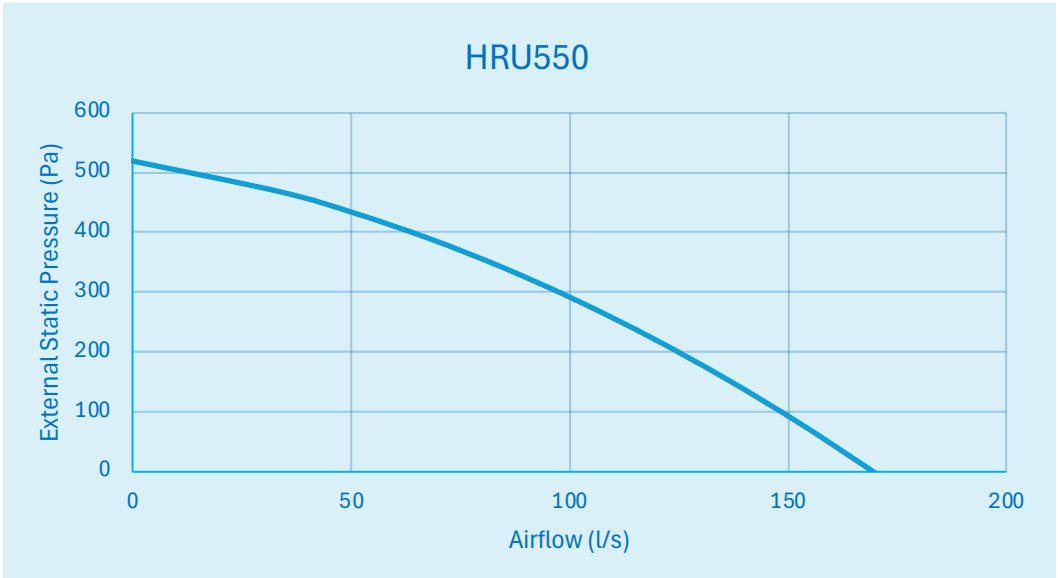
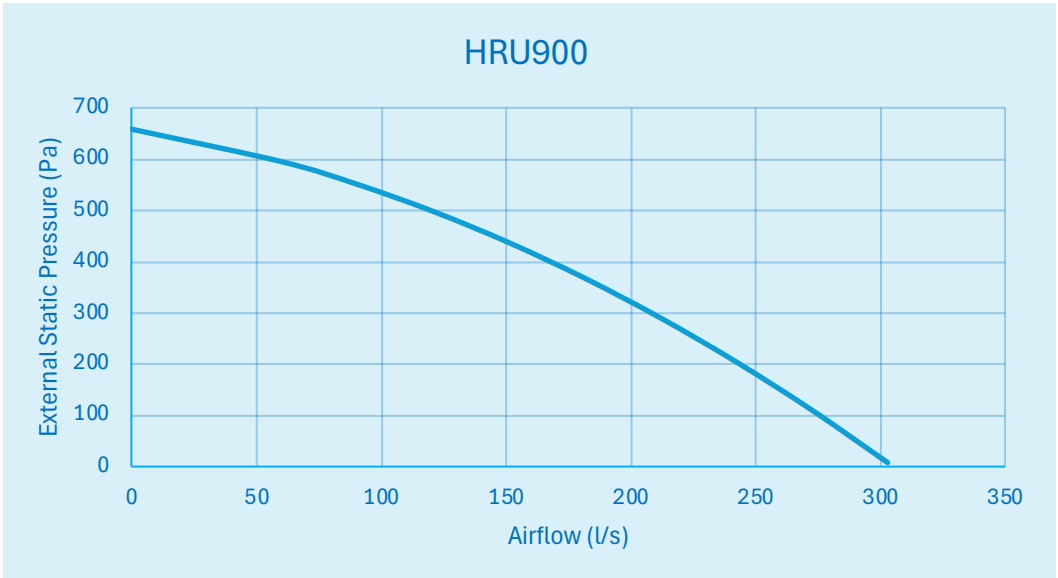
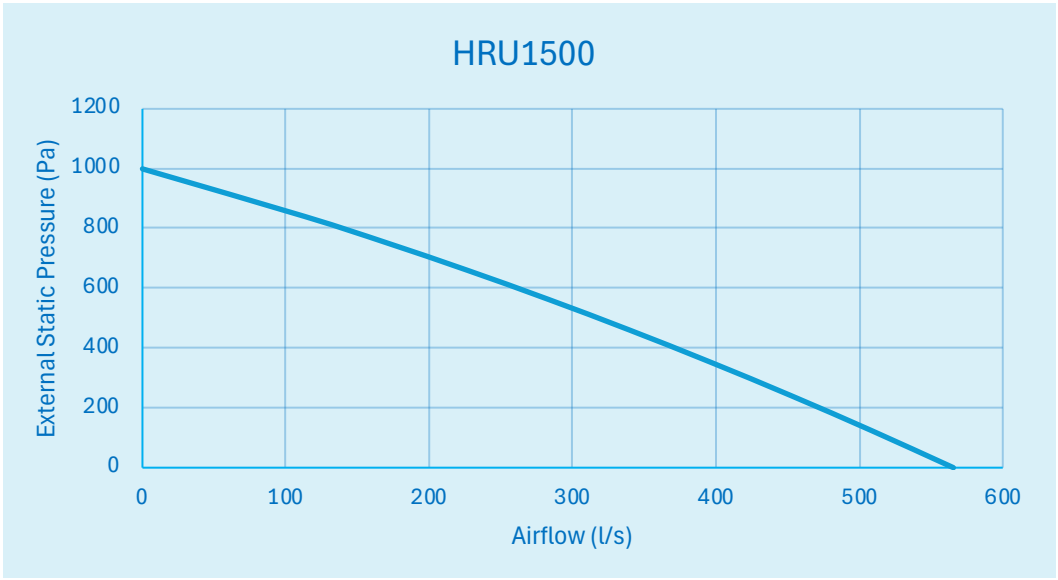
Fan Curves

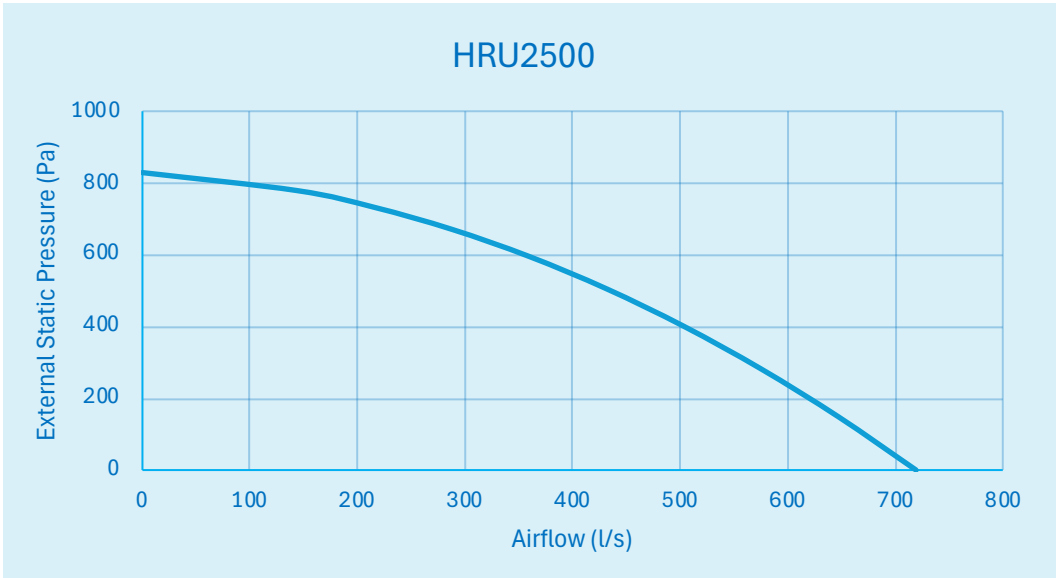

HRU300
External Static Pressure (Pa)
500
400
300
200
100
0
0
10
20
30
40
50
60
70
80
90
100
Airflow (l/s)

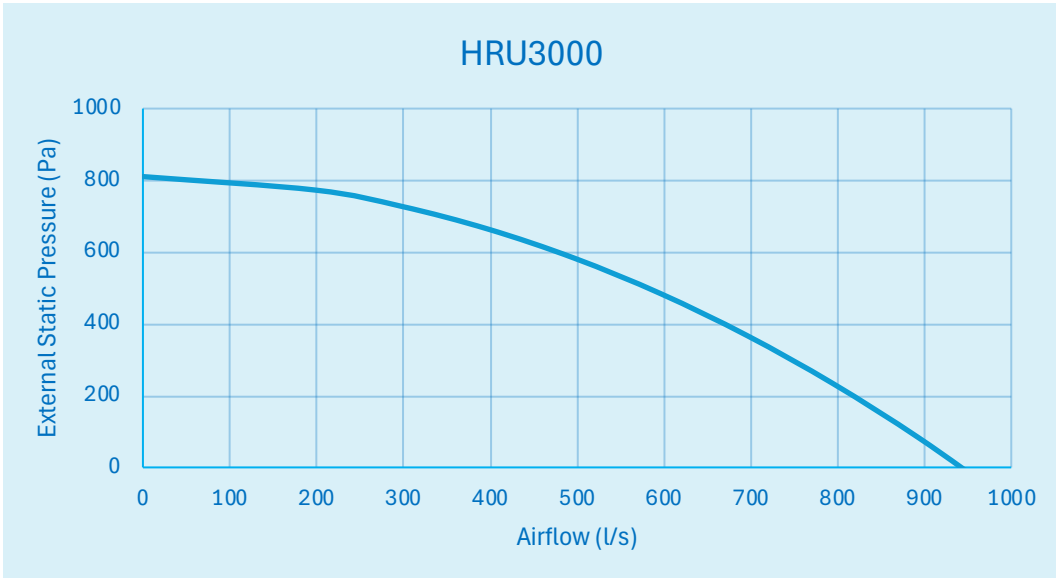

HRU550
External Static Pressure (Pa)
600
500
400
300
200
100
0
0
50
100
150
200
Airflow (l/s)

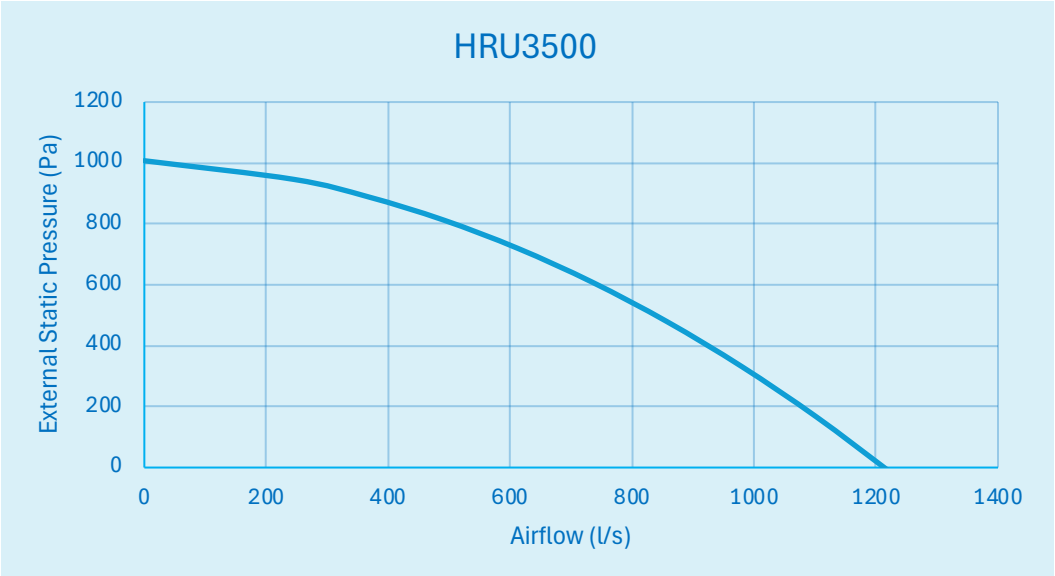

HRU900
External Static Pressure (Pa)
700
600
500
400
300
200
100
0
0
50
100
150
200
250
300
350
Airflow (l/s)

Fan Curves

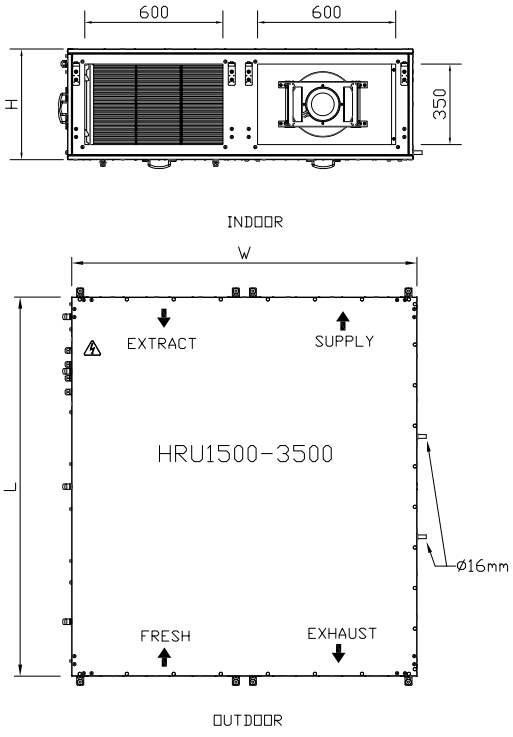

HRU1500
External Static Pressure (Pa)
1200
1000
800
600
400
200
0
0
100
200
300
400
500
600
Airflow (l/s)

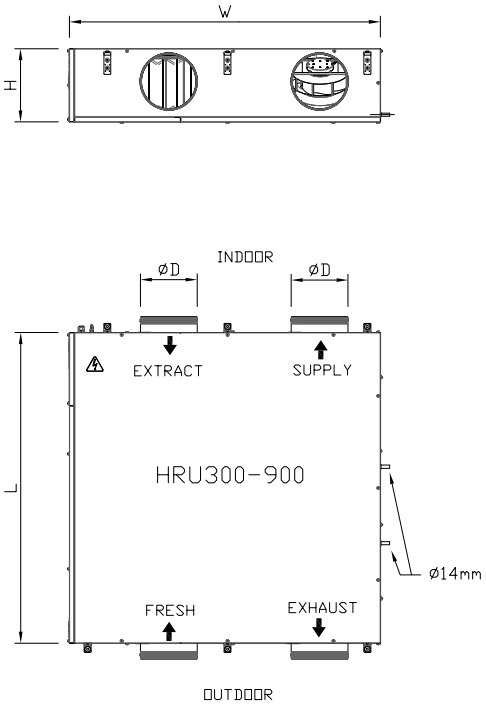

HRU2500
External Static Pressure (Pa)
1000
800
600
400
200
0
0
100
200
300
400
500
600
700
800
Airflow (l/s)


HRU3000
External Static Pressure (Pa)
1000
800
600
400
200
0
0
100
200
300
400
500
600
700
800
900
1000
Airflow (l/s)



Dimensions





HRU1500-3500

MODEL	HRU1500	HRU2500	HRU3000	HRU3500
L	1646	1646	1880	1880
W	1500	1500	1500	1500
H	480	480	630	630
Connection	600x350	600x350	600x500	600x500
Weight (kg)	215	220	285	290

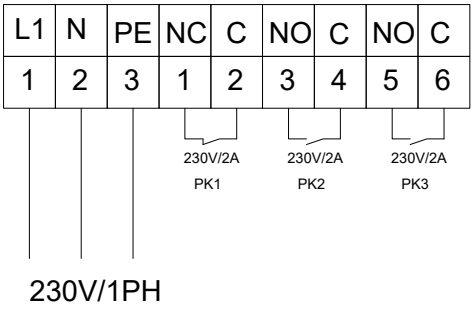
HRU300-900

MODEL	HRU300	HRU550	HRU900
L	1238	1238	1349
W	485	827	1351
H	281	280	318
Connection	160Ø	200Ø	250Ø
Weight (kg)	44	67	111

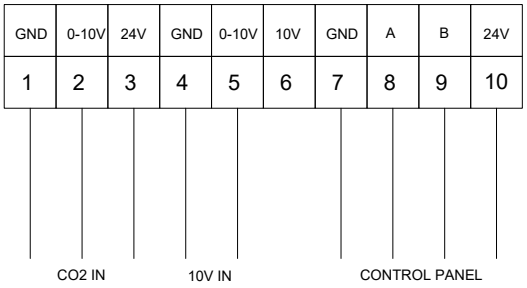
Controller Wiring Diagram

HRU300-900

X1



X2



X1

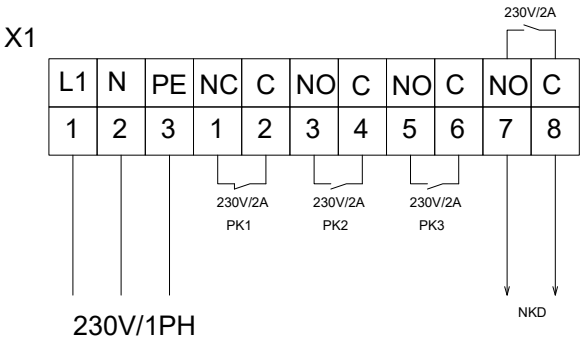
DESIGNATION	NAME	CABLE TYPE	CONTACT TYPE	SWITCH VOLTAGE
PK1	CONTACT FROM FIRE PANEL	2 X 0.75	NC	2A, 230V, AC
PK2	FIREPLACE MODE INPUT	2 X 0.75	NO	2A, 230V, AC
PK3	BOOST MODE INPUT	2 X 0.75	NO	2A, 230V, AC

X2

DESIGNATION	NAME	CABLE TYPE	SIGNAL TYPE	SIGNAL VOLTAGE
CO2 IN	CO2 SENSOR 0-10V	CAT	ANALOGUE	0-10V, DC
10V IN	EXTERNAL 0-10V	CAT	ANALOGUE	0-10V, DC
PANEL	CONTROL PANEL CONNECTION	CAT	MODBUS	24V, DC

HRU1500-3500

X1



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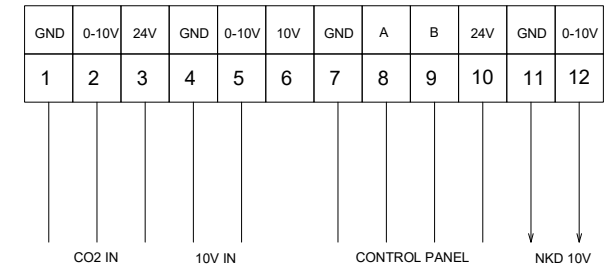

X1

DESIGNATION	NAME	CABLE TYPE	CONTACT TYPE	SWITCH VOLTAGE
PK1	CONTACT FROM FIRE PANEL	2 X 0.75	NC	2A, 230V, AC
PK2	FIREPLACE MODE INPUT	2 X 0.75	NO	2A, 230V, AC
PK3	BOOST MODE INPUT	2 X 0.75	NO	2A, 230V, AC
NKD	HEATER RELEASE OUTPUT	2 X 0.75	NO	2A, 230V, AC

X2

DESIGNATION	NAME	CABLE TYPE	SIGNAL TYPE	SIGNAL VOLTAGE
CO2 IN	CO2 SENSOR 0-10V	CAT	ANALOGUE	0-10V, DC
10V IN	EXTERNAL 0-10V	CAT	ANALOGUE	0-10V, DC
PANEL	CONTROL PANEL CONNECTION	CAT	MODBUS	24V, DC
NKD 10V	HEATER OUTPUT 0-10V	CAT	ANALOGUE	0-10V, DC

Prioritise. Simplify. Trust.

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