

Topflo - Vertical HRU HRPVX-EC

Counterflow Heat Recovery Units
Vertical Intake and Discharge
Up to 2.1 m³/s



*ventilation
systems*



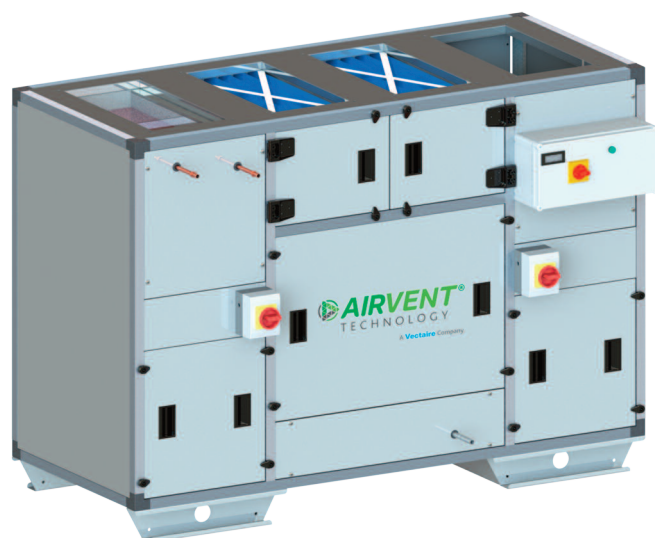


Features and Benefits

Vertical HRU

HRPVX-EC

- 3 sizes, left or right configuration
- ErP 2018 compliant
- EC fans to suit L2
- Fitted Controls
- Optional internal heater (LPHW or Electric)



MODEL DESCRIPTION

HRPVX-1EC-L

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

- 1 - HR - heat recovery
- 2 - P - plant room
- 3 - V - vertical intake and discharge
- 4 - X - counterflow heat exchanger
- 5 - 1 - model size
- 6 - EC - EC motor
- 7 - L - left handing

Products manufactured in the UK to ISO 9001

Enhanced case construction to reduce noise breakout

25mm double skin construction on all units to reduce noise breakout

Acoustic high-density in-fill option available

Low energy use - Direct Drive EC Fans

Latest energy efficient EC fans to meet L2 regulations and provide the best available acoustic and power performance.

Counterflow Heat Exchanger for increased energy recovery

ErP compliant heat exchangers

Motorised and full bypass for summer ventilation

No mixing of airflows

Compact solution to assist installation in restricted areas

Ideal for locations within internal cupboards and plant spaces where plant footprint is limited

Multiple access for easy maintenance

Controls fitted to front of unit for easy commissioning and isolation.

Front access for fans, PHXE and filter maintenance.

Energy Saving Controls

Factory fitted controls available

- basic and enhanced controls to suit most requirements
- demand ventilation via CO₂ or PIR

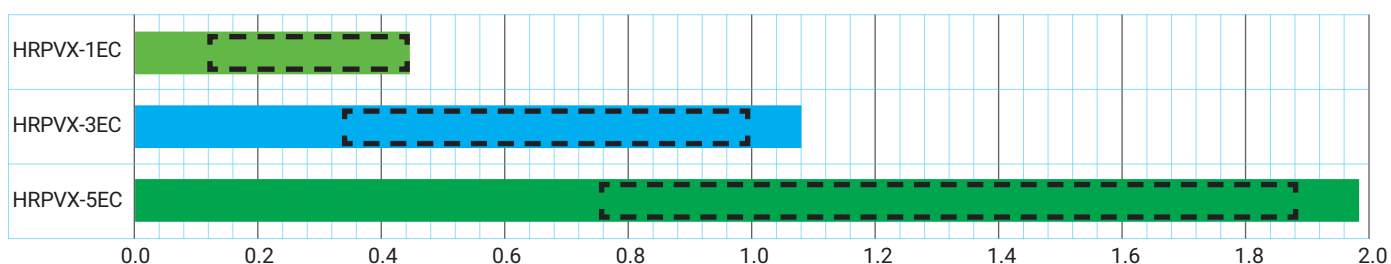
Additional Options

- external DX or chilled water cooling modules
- shut-off dampers
- sound attenuators

Please contact Vectaire for ancillary codes

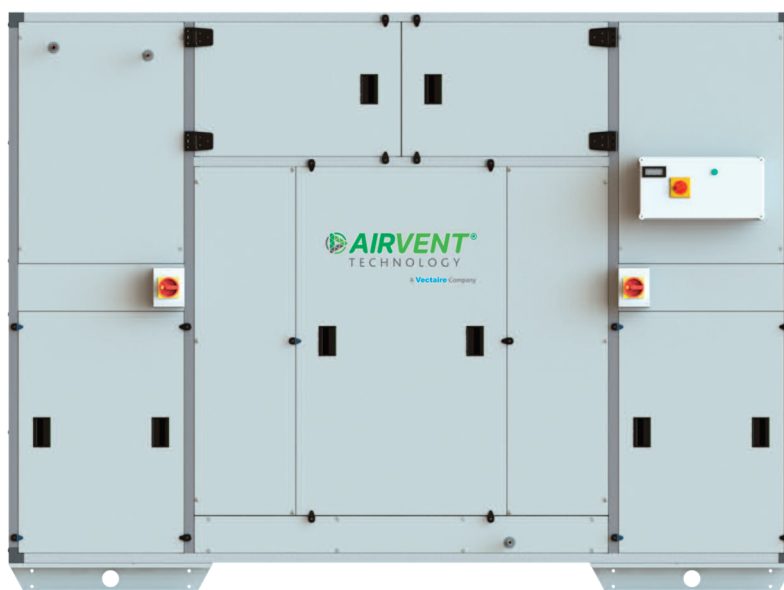


Maximum Air Volume (m³/sec) at 150Pa External Static



- recommended air volume range

SUPPLY **RETURN** **FRESH** **EXHAUST**



NB: ABOVE MODEL IS HRPVX-5EC-L (left handing)

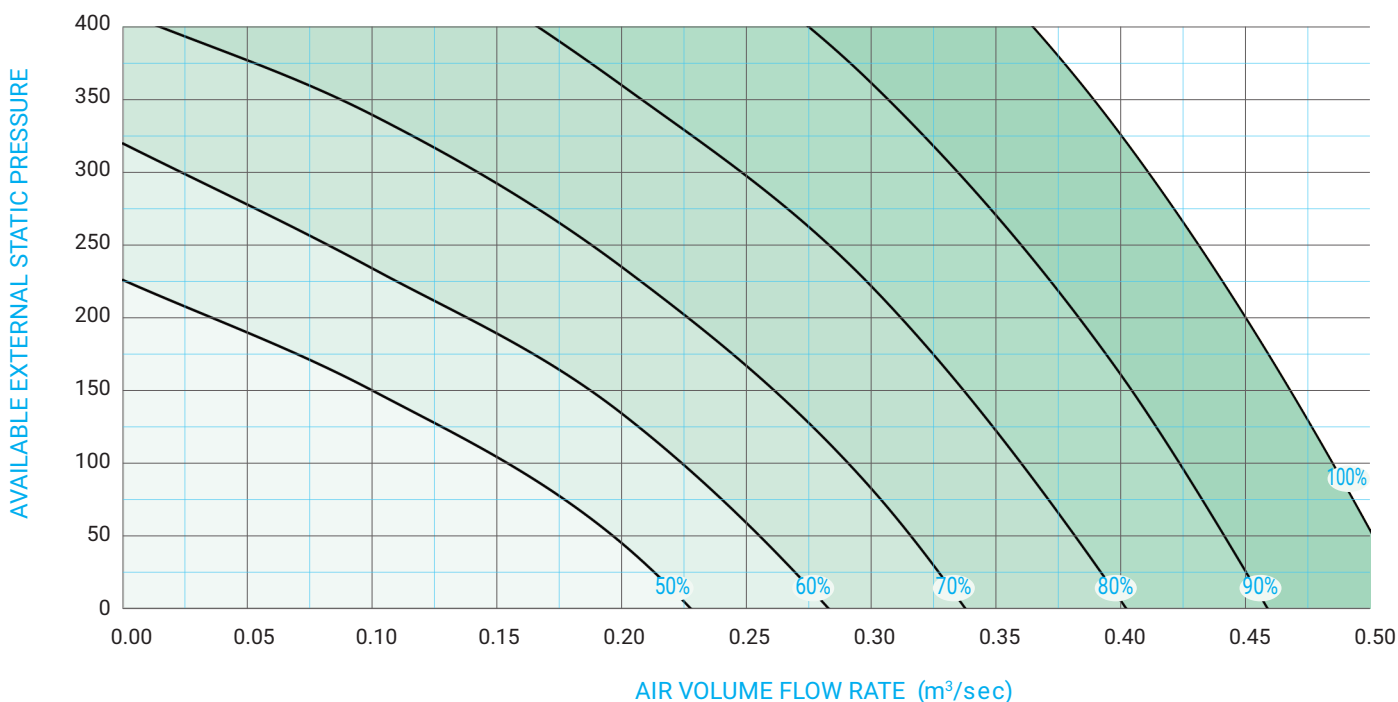
HRPVX-EC

Vertical Heat Recovery Units with EC Motors



TECHNICAL DATA - HRPVX-1EC

FAN SPEED



ELECTRICAL DATA per FAN
 Maximum drawn current for UNIT - 6A
 (fuse/circuit breaker rating does NOT include ancillaries)

| MODEL | FAN POWER kW | SUPPLY | FLC A |
|-----------|--------------|----------|-------|
| HRPVX-1EC | 0.5 | 230V 1Ph | 2.5 |

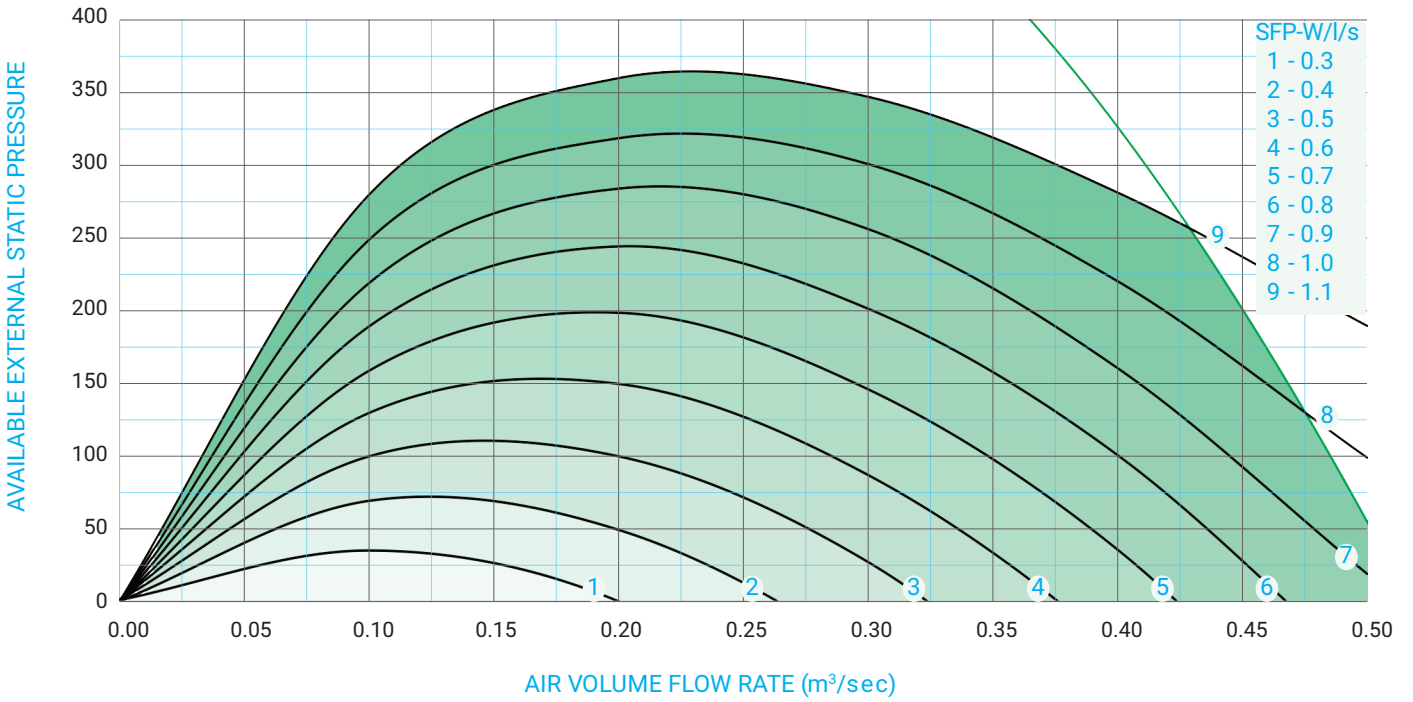
| HRPVX-1EC @ 150 Pa External Static | | Mid Octave Frequency band / Hz | | | | | | | SWL In Duct | | Breakout @ 1m | | Breakout @ 3m | | |
|---------------------------------------|-------------------|--------------------------------|-----|-----|-----|----|----|----|-------------|----|---------------|-------|---------------|-------|----|
| | | 63 | 125 | 250 | 500 | 1k | 2k | 4k | 8k | dB | dB(A) | dB(A) | NR | dB(A) | NR |
| 0.47m³/s @100% | Inlet in duct dB | 75 | 55 | 69 | 65 | 64 | 59 | 56 | 53 | 77 | 68 | 46 | 45 | 37 | 35 |
| | Outlet in duct dB | 79 | 59 | 74 | 70 | 74 | 69 | 65 | 61 | 82 | 77 | | | | |
| 0.41m³/s @90% | Inlet in duct dB | 65 | 56 | 66 | 62 | 62 | 57 | 54 | 51 | 71 | 66 | 44 | 43 | 34 | 33 |
| | Outlet in duct dB | 68 | 60 | 72 | 68 | 72 | 67 | 62 | 58 | 77 | 75 | | | | |
| 0.34m³/s @80% | Inlet in duct dB | 57 | 63 | 65 | 61 | 59 | 54 | 51 | 47 | 69 | 64 | 43 | 42 | 33 | 32 |
| | Outlet in duct dB | 59 | 67 | 71 | 66 | 70 | 64 | 59 | 54 | 76 | 73 | | | | |
| 0.26m³/s @70% | Inlet in duct dB | 57 | 67 | 60 | 58 | 56 | 52 | 47 | 43 | 69 | 61 | 41 | 38 | 32 | 27 |
| | Outlet in duct dB | 58 | 73 | 66 | 63 | 66 | 60 | 55 | 50 | 75 | 69 | | | | |
| 0.19m³/s @60% | Inlet in duct dB | 57 | 68 | 54 | 54 | 50 | 47 | 42 | 36 | 69 | 57 | 39 | 37 | 29 | 26 |
| | Outlet in duct dB | 57 | 71 | 58 | 59 | 60 | 55 | 49 | 43 | 72 | 64 | | | | |
| 0.10m³/s @50% | Inlet in duct dB | 72 | 70 | 59 | 56 | 51 | 46 | 40 | 33 | 74 | 59 | 41 | 38 | 31 | 27 |
| | Outlet in duct dB | 72 | 71 | 63 | 60 | 60 | 55 | 47 | 40 | 75 | 64 | | | | |

HRPVX-EC

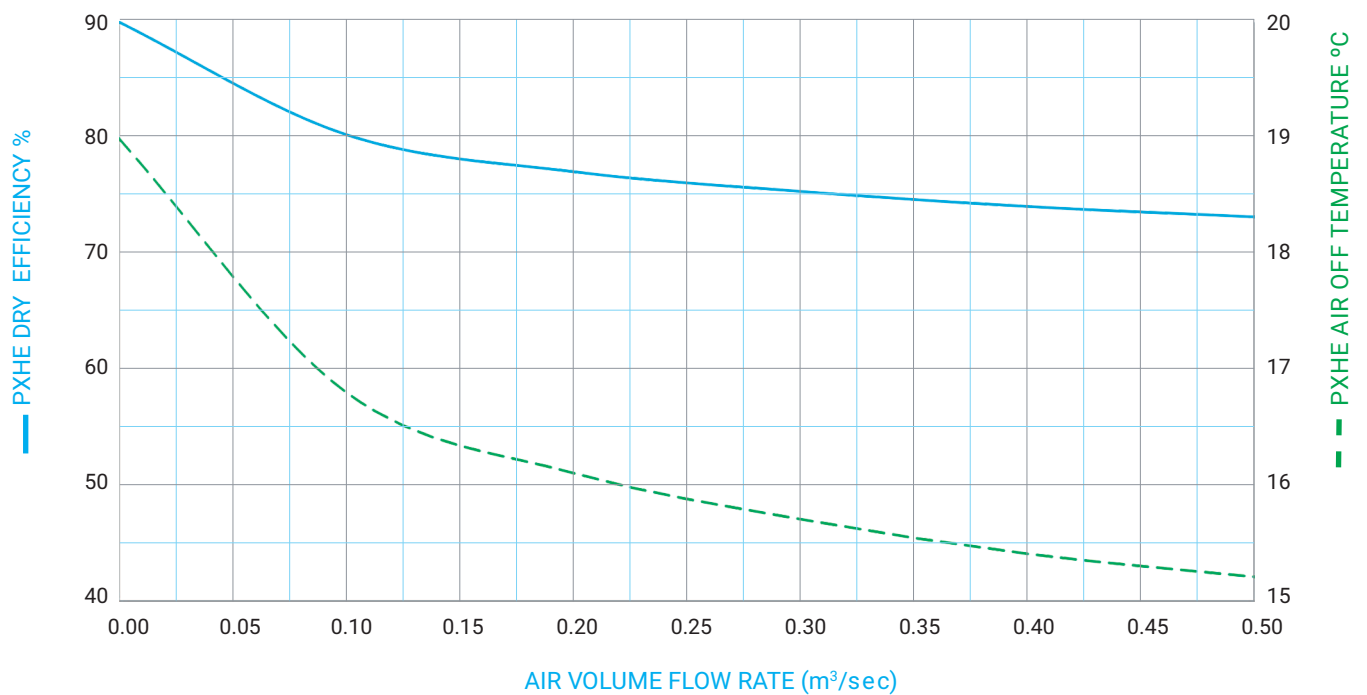
Vertical Heat Recovery Units with EC Motors



SPECIFIC FAN POWER - FOR EACH FAN



PHXE EFFICIENCY CURVES AT 20°C RETURN AIR AND -5°C FRESH AIR



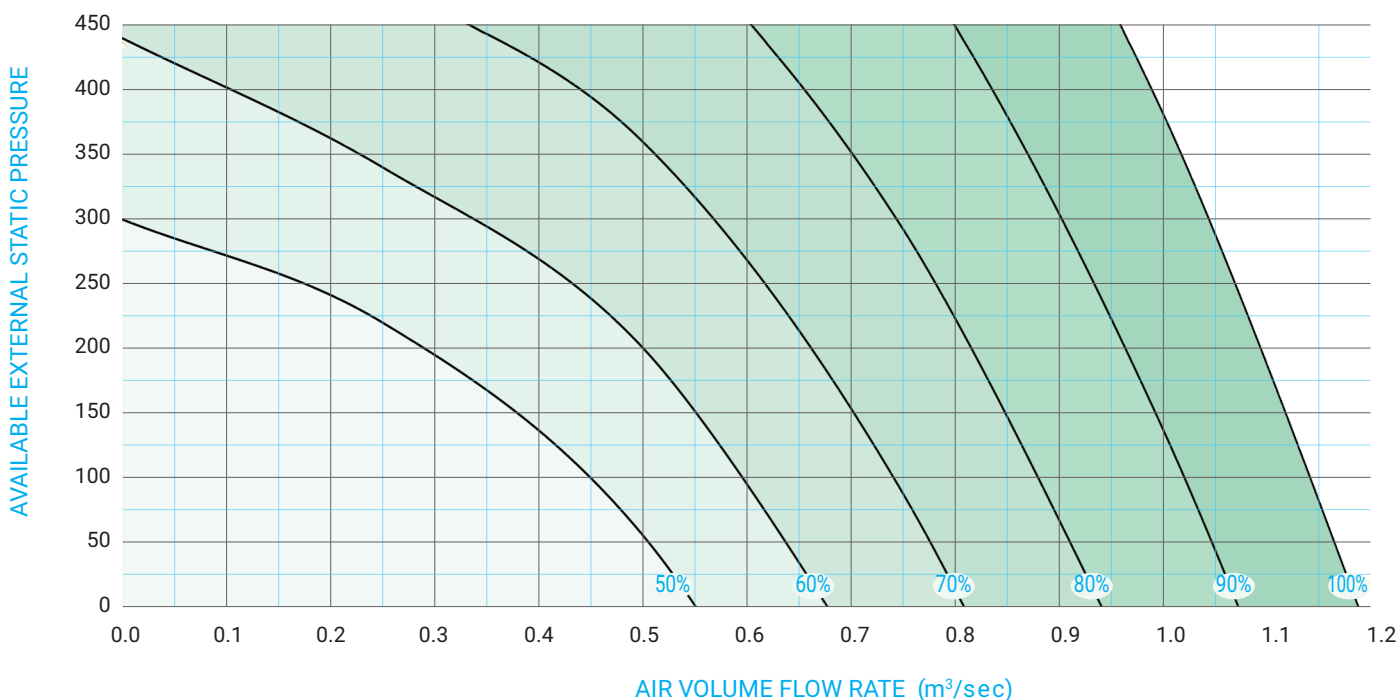
HRPVX-EC

Vertical Heat Recovery Units with EC Motors



TECHNICAL DATA - HRPVX-3EC

FAN SPEED



ELECTRICAL DATA per FAN
 Maximum drawn current for UNIT - 15A
 (fuse/circuit breaker rating does NOT include ancillaries)

| MODEL | FAN POWER kW | SUPPLY | FLC A |
|-----------|--------------|----------|-------|
| HRPVX-3EC | 1.3 | 230V 1Ph | 6.6 |

| HRPVX-3EC @ 150 Pa External Static | | Mid Octave Frequency band / Hz | | | | | | | | SWL In Duct | | Breakout @ 1m | | Breakout @ 3m | |
|---------------------------------------|-------------------|--------------------------------|-----|-----|-----|----|----|----|----|-------------|-------|---------------|----|---------------|----|
| | | 63 | 125 | 250 | 500 | 1k | 2k | 4k | 8k | dB | dB(A) | dB(A) | NR | dB(A) | NR |
| 1.12m³/s @100% | Inlet in duct dB | 73 | 73 | 76 | 73 | 68 | 64 | 62 | 65 | 81 | 75 | 53 | 53 | 43 | 42 |
| | Outlet in duct dB | 74 | 74 | 81 | 77 | 78 | 78 | 73 | 73 | 86 | 84 | | | | |
| 1.00m³/s @90% | Inlet in duct dB | 70 | 70 | 70 | 69 | 64 | 62 | 59 | 61 | 76 | 71 | 49 | 48 | 40 | 38 |
| | Outlet in duct dB | 71 | 71 | 77 | 74 | 75 | 75 | 71 | 70 | 83 | 81 | | | | |
| 0.85m³/s @80% | Inlet in duct dB | 67 | 65 | 66 | 65 | 61 | 59 | 57 | 56 | 73 | 67 | 46 | 45 | 36 | 35 |
| | Outlet in duct dB | 68 | 68 | 74 | 71 | 72 | 72 | 67 | 65 | 80 | 77 | | | | |
| 0.70m³/s @70% | Inlet in duct dB | 64 | 63 | 61 | 61 | 58 | 56 | 53 | 51 | 69 | 64 | 41 | 38 | 31 | 27 |
| | Outlet in duct dB | 65 | 69 | 67 | 67 | 69 | 68 | 63 | 60 | 76 | 74 | | | | |
| 0.55m³/s @60% | Inlet in duct dB | 64 | 65 | 58 | 57 | 53 | 51 | 48 | 45 | 69 | 59 | 38 | 33 | 28 | 22 |
| | Outlet in duct dB | 64 | 68 | 62 | 64 | 65 | 63 | 59 | 55 | 73 | 69 | | | | |
| 0.38m³/s @50% | Inlet in duct dB | 57 | 65 | 55 | 53 | 51 | 48 | 43 | 37 | 66 | 57 | 37 | 33 | 27 | 22 |
| | Outlet in duct dB | 58 | 69 | 60 | 60 | 60 | 59 | 53 | 48 | 71 | 65 | | | | |

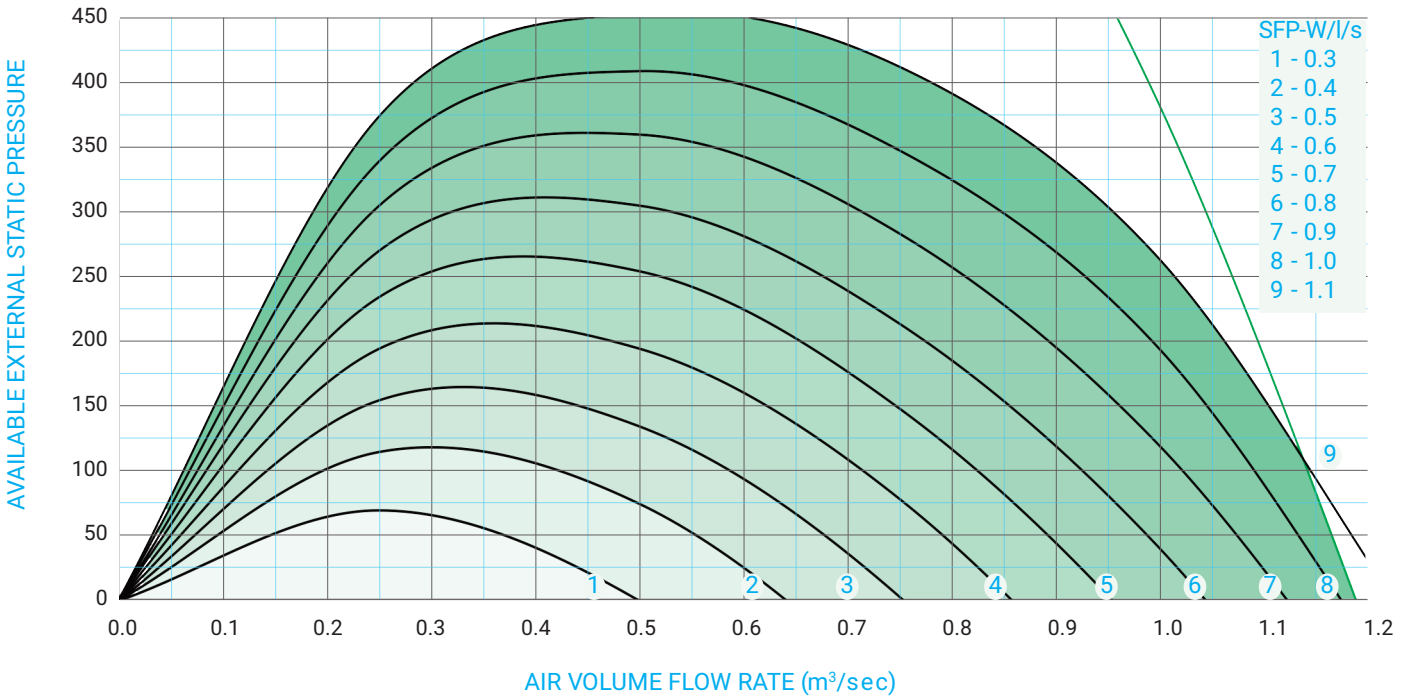
HRPVX-EC

Vertical Heat Recovery Units with EC Motors

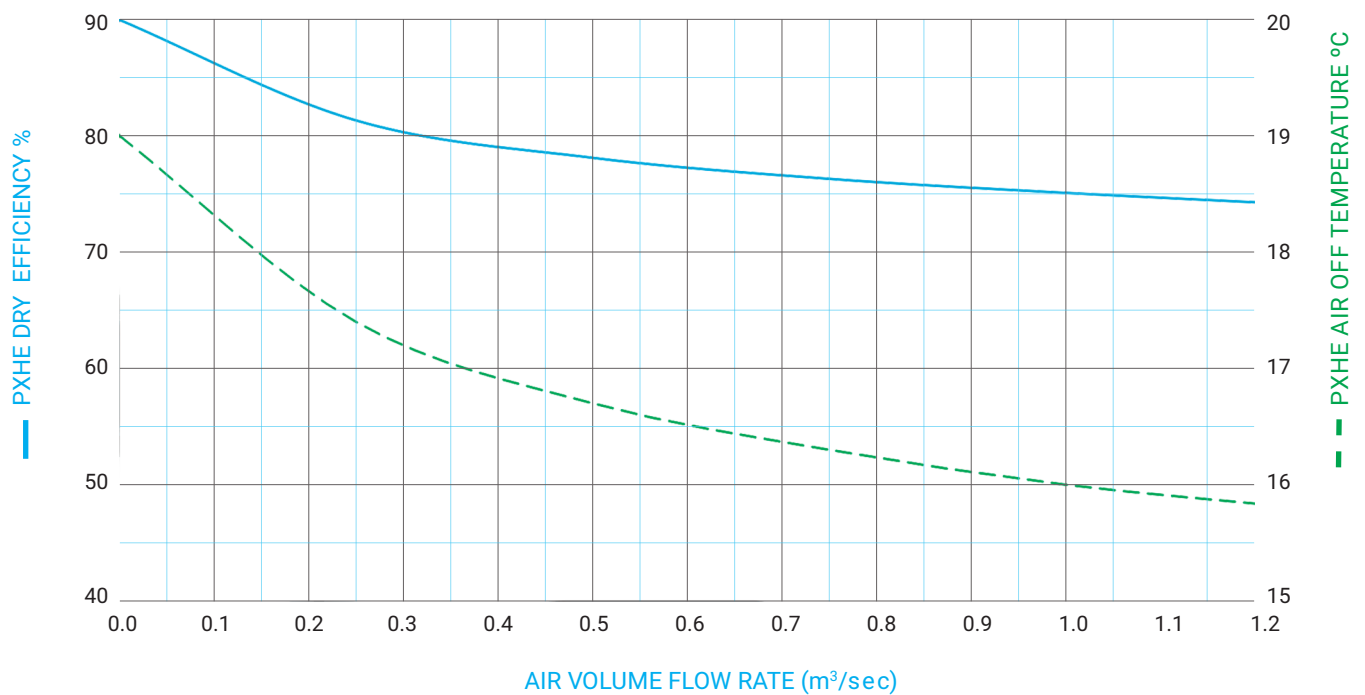


TECHNICAL DATA - HRPVX-3EC

SPECIFIC FAN POWER - FOR EACH FAN



PHXE EFFICIENCY CURVES AT 20°C RETURN AIR AND -5°C FRESH AIR



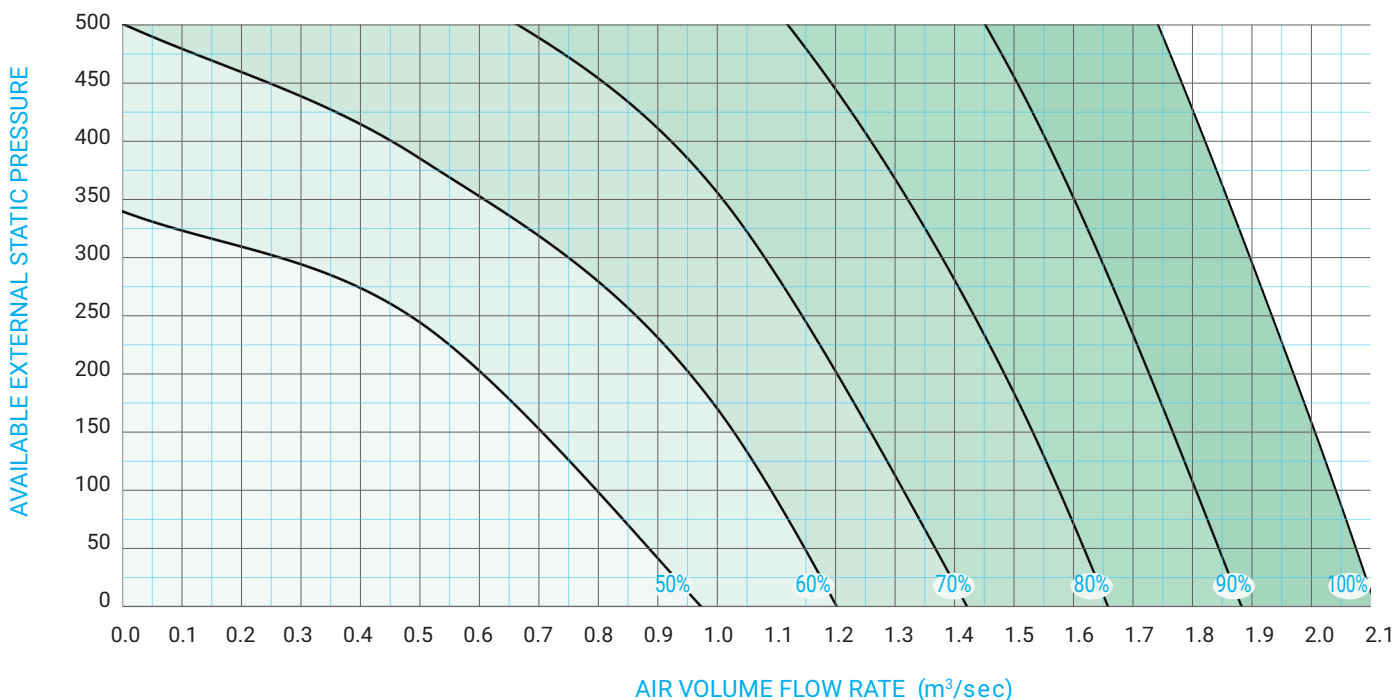
HRPVX-EC

Vertical Heat Recovery Units with EC Motors



TECHNICAL DATA - HRPVX-5EC

FAN SPEED



ELECTRICAL DATA per FAN
 Maximum drawn current for UNIT - 10A
 (fuse/circuit breaker rating does NOT include ancillaries)

| MODEL | FAN POWER kW | SUPPLY | FLC A |
|-----------|--------------|----------|-------|
| HRPVX-5EC | 2.5 | 400V 3Ph | 4.0 |

| HRPVX-5EC @ 150 Pa External Static | | Mid Octave Frequency band / Hz | | | | | | | | SWL In Duct | | Breakout @ 1m | | Breakout @ 3m | |
|---------------------------------------|-------------------|--------------------------------|-----|-----|-----|----|----|----|----|-------------|-------|---------------|----|---------------|----|
| | | 63 | 125 | 250 | 500 | 1k | 2k | 4k | 8k | dB | dB(A) | dB(A) | NR | dB(A) | NR |
| 2.00m³/s @100% | Inlet in duct dB | 77 | 77 | 80 | 79 | 71 | 68 | 68 | 72 | 85 | 80 | 59 | 59 | 49 | 49 |
| | Outlet in duct dB | 78 | 79 | 87 | 84 | 82 | 77 | 74 | 77 | 91 | 87 | | | | |
| 1.76m³/s @90% | Inlet in duct dB | 76 | 76 | 76 | 74 | 68 | 65 | 64 | 67 | 82 | 76 | 54 | 54 | 45 | 44 |
| | Outlet in duct dB | 76 | 80 | 82 | 81 | 79 | 74 | 70 | 71 | 87 | 83 | | | | |
| 1.54m³/s @80% | Inlet in duct dB | 73 | 75 | 74 | 70 | 65 | 62 | 61 | 62 | 80 | 72 | 51 | 48 | 42 | 38 |
| | Outlet in duct dB | 73 | 81 | 76 | 78 | 76 | 71 | 67 | 67 | 85 | 80 | | | | |
| 1.26m³/s @70% | Inlet in duct dB | 66 | 69 | 67 | 66 | 62 | 59 | 57 | 54 | 74 | 68 | 45 | 42 | 36 | 32 |
| | Outlet in duct dB | 67 | 75 | 71 | 74 | 72 | 68 | 63 | 59 | 80 | 76 | | | | |
| 1.02m³/s @60% | Inlet in duct dB | 60 | 69 | 64 | 63 | 60 | 55 | 53 | 47 | 72 | 65 | 44 | 40 | 34 | 29 |
| | Outlet in duct dB | 62 | 75 | 66 | 72 | 69 | 64 | 59 | 53 | 78 | 73 | | | | |
| 0.70m³/s @50% | Inlet in duct dB | 65 | 67 | 60 | 58 | 55 | 51 | 45 | 39 | 70 | 60 | 40 | 37 | 31 | 26 |
| | Outlet in duct dB | 66 | 72 | 63 | 67 | 64 | 59 | 51 | 45 | 75 | 68 | | | | |

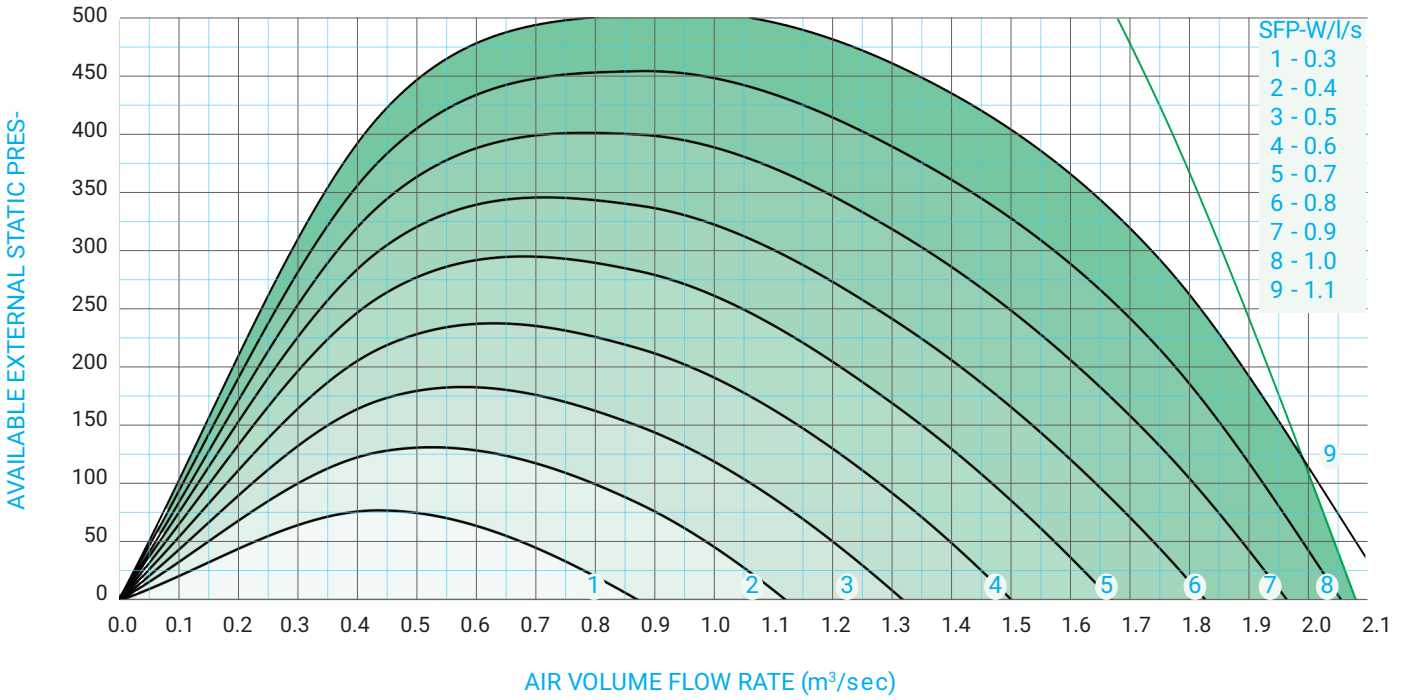
HRPVX-EC

Vertical Heat Recovery Units with EC Motors

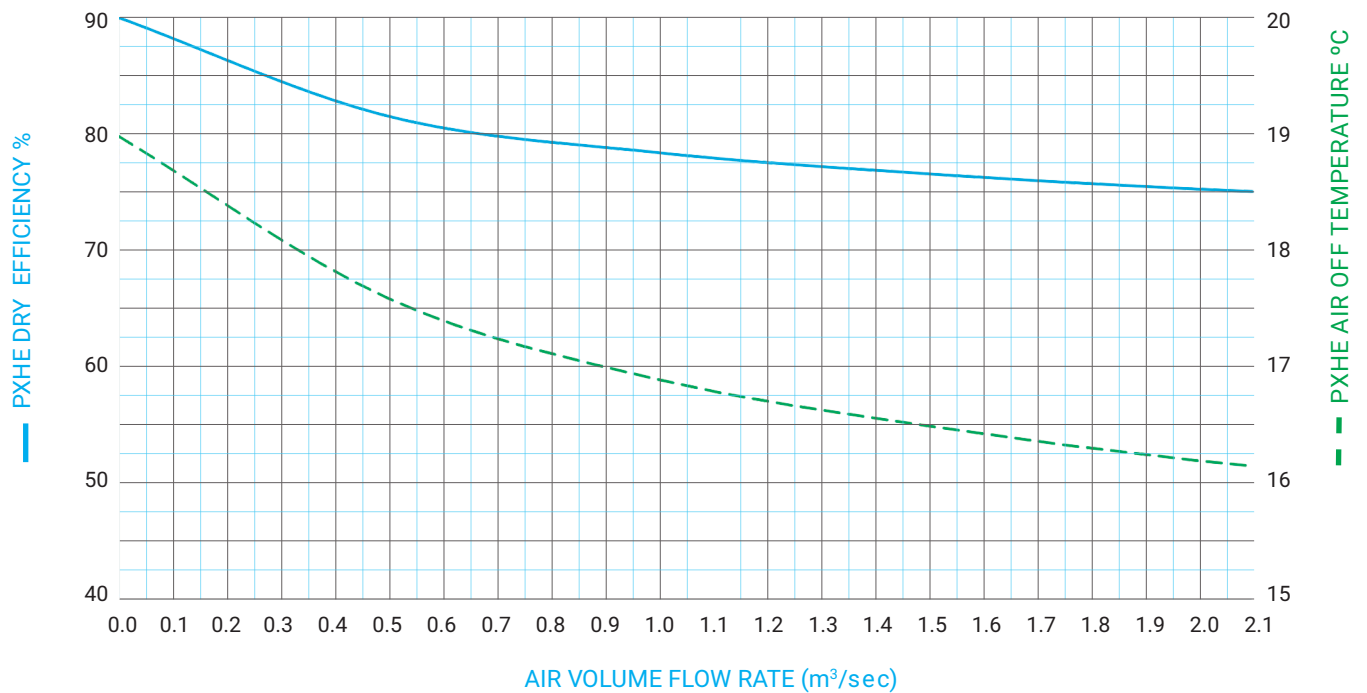


TECHNICAL DATA - HRPVX-5EC

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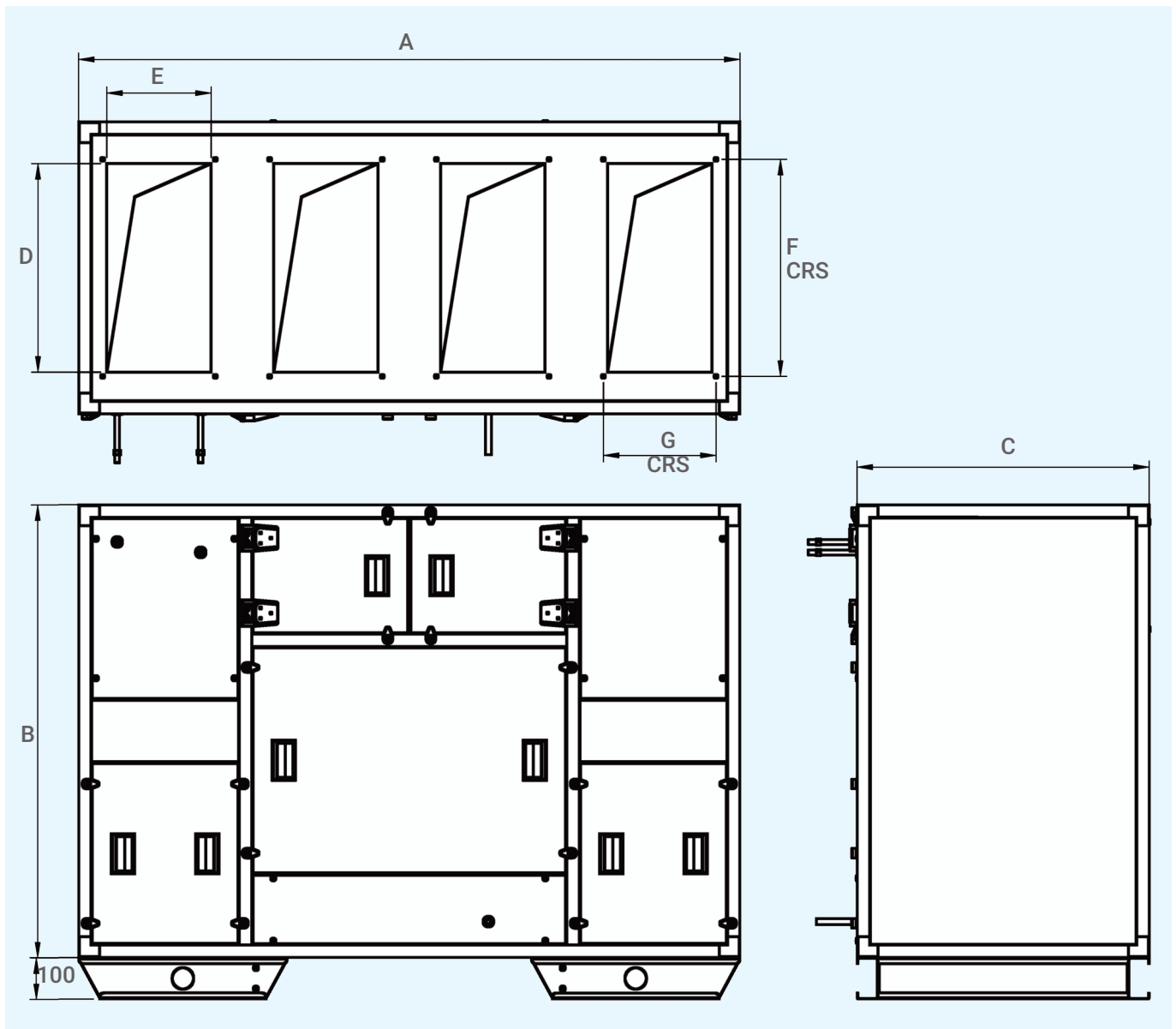


HRPVX-EC

Vertical Heat Recovery Units with EC Motors



DIMENSIONS



| Model | A - mm | B - mm | C - mm | D - mm | E - mm | F - mm | G - mm | Weight - kg |
|-----------|--------|--------|--------|--------|--------|--------|--------|-------------|
| HRPVX-1EC | 1675 | 1085 | 700 | 500 | 250 | 520 | 270 | 145 |
| HRPVX-3EC | 2050 | 1420 | 1000 | 850 | 350 | 880 | 380 | 265 |
| HRPVX-5EC | 2500 | 1750 | 1260 | 1100 | 450 | 1130 | 480 | 430 |

HRPVX-EC

Vertical Heat Recovery Units with EC Motors

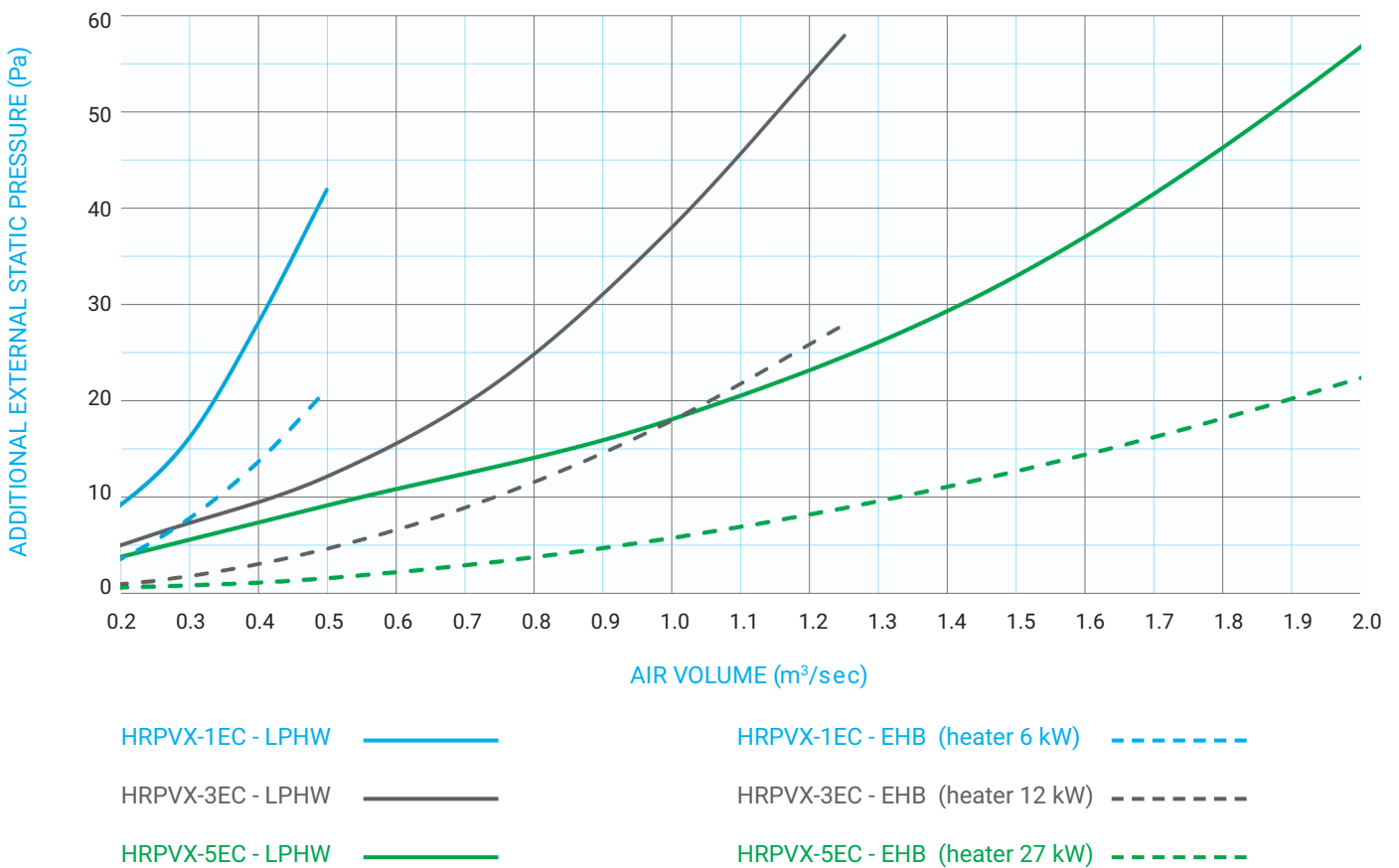


ANCILLARIES

Internally fitted ancillaries:

- LPHW coil or electric heater
 - Heaters sizes to achieve $\Delta T=15^{\circ}\text{C}$ in supply air temperature
 - Matched electric heater thyristor control or LPHW valve and actuator kits available

HRPVX-EC INTERNAL HEATER P.D



Wide range of duct-mounted ancillaries available on request

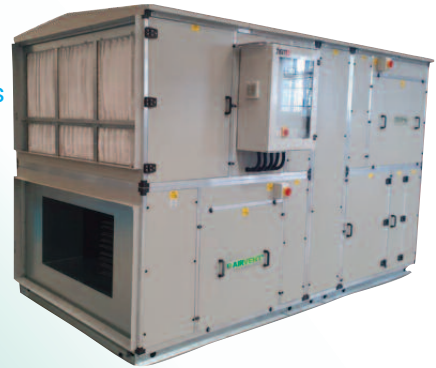
- Chilled water or DX cooling coils
- Sound attenuators
- Shut-off dampers

Other Commercial/Industrial Products with EC Motors



STP/STR bespoke Air Handling Units

- Bespoke or modular, supply, extract or combined
- Plantroom or weatherproof, stacked, side x side and vertical models up to 20m³/s air volume
- Adhere to specialist sector specification
- Versatile fitted control options
- Sectionalised units and flat pack available



HRPSL/HRRSL - Heat Recovery Units

- Standard designs up to 4m³/s air volume
- Plantroom or weatherproof, stacked or side x side models
- High efficiency Counterflow heat exchanger
- Versatile fitted control options



BAHU - Compact Supply Air Handling Units

AHU - Supply Air Handling Units

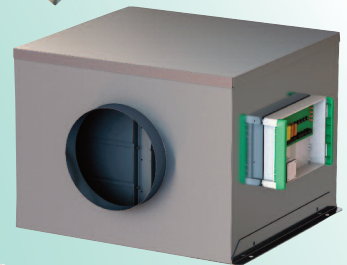
- Pre-designed units up to 1.2m³/s air volume
- Plantroom and weatherproof models
- Electric or water heating options
- Matched control panel options



DMSQ/RMS - Acoustic Cabinet Fans

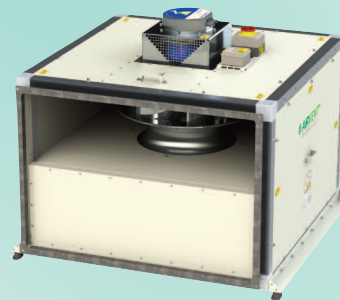
DMTSQ/RMTS - Acoustic Twin Cabinet Fans

- Pre-designed units up to 2.5m³/s air volume
- Plantroom and weatherproof models
- Matched control panels. Twin fans with auto-changeover facility



QBK - High Temperature Extract Fans

- Plantroom and weatherproof models
- Up to 8m³/s air volume
- Fire rated options available
- Matched control panel options including gas interlock



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