

**Sentinel Kinetic B**


Main features	
Description	HRV unit with summer bypass, integrated controller and electronic motor control
Application	whole-house HRV unit designed for ventilation of residential houses of living area up to 200 sqm
Installation	wall hung
Controller	integrated in the unit, control panel located on its front
Bypass	automatic, based on the outdoor and inner temperatures; it helps cool down inner space in the summer
<b>Code</b>	<b>10176</b>

Performance data	
Max. air flow rate *	275 m <sup>3</sup> /h
Heat recovery efficiency	max. 92 %
Low air flow	20 % (preset)
Medium air flow	30 % (preset)
High air flow	50 % (preset)
Purge	100 %
Incoming air temperature	0 až 45 °C
Ambient temperature	-20 až 45 °C
Humidity (operation, storing)	up to 95 % RH
Condensate hose	Ø 22 mm
Spigot diameter	125 mm
Height x width x depth	550 x 550 x 285 (bez necks)
Weight	15 kg

\* flow rates for specific installations shall be modified by performance diagrams

Electric data	
Power supply	220 - 240 V AC, 50 Hz
Power supply fuse	3 A (external fuse)
Unit fuse	2 A (internal fuse)
Nominal power input	max. 128 W
IP rating	IP 22

Acoustic data	
Sound level (at 3 m)	20 dB(A) for medium-speed mode 36 dB(A) for high-speed mode

Accessories	
Module for connection to IR via CIB	code 16769

Flow rate adjustment depending on the total floor area of rooms to be ventilated							
Max. ventilated room		Low speed		Medium speed		High speed (boost)	
area	volume	setting	[m <sup>3</sup> /h]	setting	[m <sup>3</sup> /h]	setting	[m <sup>3</sup> /h]
80 m <sup>2</sup>	200 m <sup>3</sup>	25%	40	40%	70	60%	70
100 m <sup>2</sup>	250 m <sup>3</sup>	30%	50	50%	100	70%	100
120 m <sup>2</sup>	300 m <sup>3</sup>	35%	60	60%	130	80%	130
150 m <sup>2</sup>	375 m <sup>3</sup>	40%	70	70%	160	100%	160

Preset values can be changed freely. Switching between low and medium speed is automatic following the preset time program. Boost mode can be switched on either periodically, or by schedule, or by pressing a key \*. Repeated pressing the key returns the unit to medium speed.

Product fiche according to the European Commission Regulation (EC) No. 1254/2014		
a) Supplier's name or trade mark	-	<b>Regulus</b>
b) Supplier's model identifier	-	<b>Sentinel Kinetic B</b>
c) specific energy consumption (SEC) for warm / average / cold climate	[kWh/(m <sup>2</sup> .a)]	<b>-85,69/ -41,41 / -16,49</b>
	class	<b>A</b>
d) Declared typology in accordance with Article 2 of this Regulation	-	<b>bidirectional</b>
e) Type of drive installed or intended to be installed	-	<b>multi-speed</b>
f) Type of heat recovery system	-	<b>recuperative</b>
g) Thermal efficiency of heat recovery	[%]	<b>87</b>
h) Maximum flow rate *	[m <sup>3</sup> /h]	<b>237</b>
i) Electric power input of the fan drive, including any motor control equipment, at maximum flow rate	[W]	<b>128</b>
j) Sound power level	[dB]	<b>54</b>
k) Reference flow rate	[m <sup>3</sup> /s]	<b>0,0462</b>
l) Reference pressure difference	[Pa]	<b>50</b>
m) SPI	[W/(m <sup>3</sup> /h)]	<b>0,34</b>
n) Control factor / control typology	-	<b>0,65 / local demand control</b>
o) Declared maximum internal / external leakage rates	[%]	<b>&lt; 5 / &lt; 5</b>
q) Position and description of visual filter warning	-	<b>see Manual</b>
s) Internet address for pre-/dis-assembly instructions	-	<a href="http://www.regulus.eu">www.regulus.eu</a>
v) The annual electricity consumption (AEC)	[kWh/a]	<b>2,23</b>
w) The annual heating saved (AHS) for warm / average / cold climate	[kWh/a] **	<b>90,6 / 46,31 / 20,94</b>

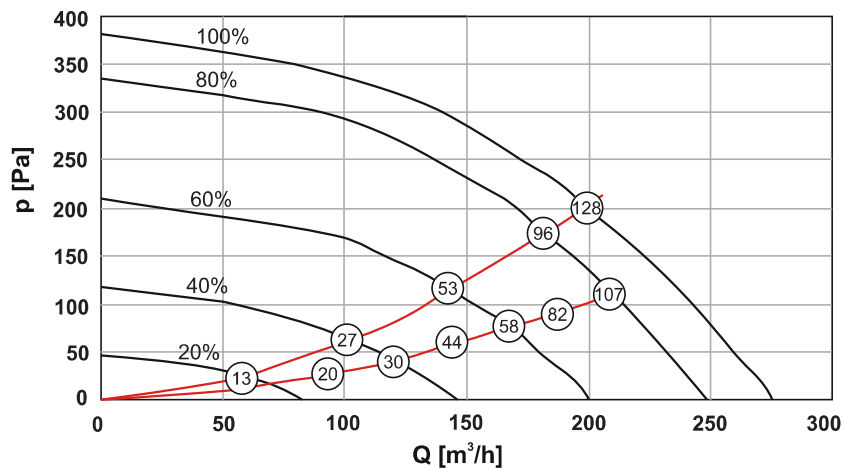
\* value measured at 100 Pa static pressure as per the European Commission Regulation No. 1254/2014

\*\* kWh of primary energy per year

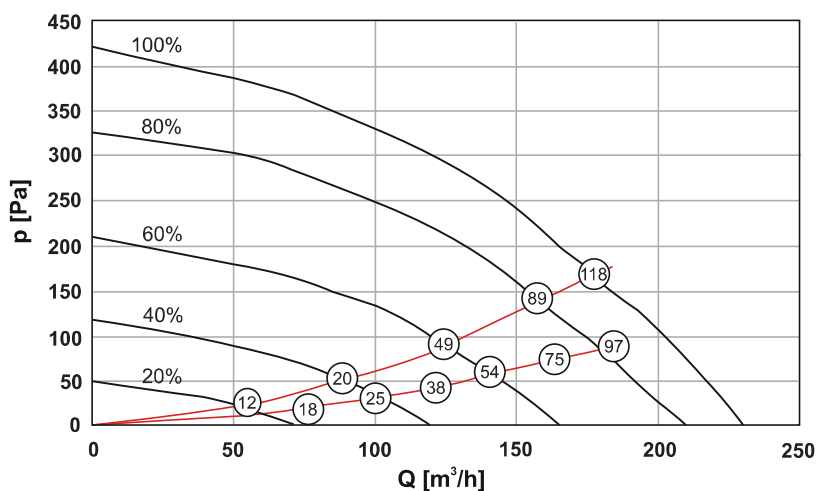
Values of sound power levels and sound pressure levels at various air flow rates													
Volume [m <sup>3</sup> /h]	Speed	Test mode		Octave band frequency [Hz]									
				63	125	250	500	1000	2000	4000	8000		
36	20%	supply	Sound power level [dB]	47,8	40,2	38,0	31,1	28,2	22,1	23,6	30,9	Sound pressure level [dB] *	21,4
		extract		47,0	38,7	36,0	29,9	25,0	22,4	23,3	30,8		20,6
		breakout		43,6	36,2	37,4	30,9	27,4	23,3	24,2	31,4		18,6
72	40%	supply		54,0	46,6	50,2	44,5	44,4	38,3	28,8	31,9		31,2
		extract		46,8	40,5	34,6	34,2	34,6	25,9	23,7	30,3		22,9
		breakout		45,9	39,9	40,6	35,7	33,5	28,4	25,3	31,2		21,0
108	60%	supply		58,1	54,5	57,6	52,5	51,7	47,6	38,6	35,8		38,5
		extract		47,6	46,2	38,7	41,3	42,8	33,9	26,4	30,5		28,4
		breakout		45,2	42,4	48,2	40,8	37,7	35,2	30,0	31,1		25,2
144	80%	supply	65,2	58,4	62,3	58,0	56,5	52,5	44,1	41,4	43,6		
		extract	53,5	53,0	44,0	47,7	48,1	39,7	31,5	31,5	33,5		
		breakout	50,9	47,6	47,4	48,1	42,5	40,8	36,3	34,4	29,3		
180	100%	supply	66,4	63,2	66,3	62,5	61,7	57,4	50,0	47,8	48,3		
		extract	64,2	55,2	48,0	50,9	52,1	44,5	35,9	35,0	37,2		
		breakout	55,0	51,0	51,3	51,6	46,9	46,0	42,0	38,3	33,2		

\* at 3 m

Graph of performance data



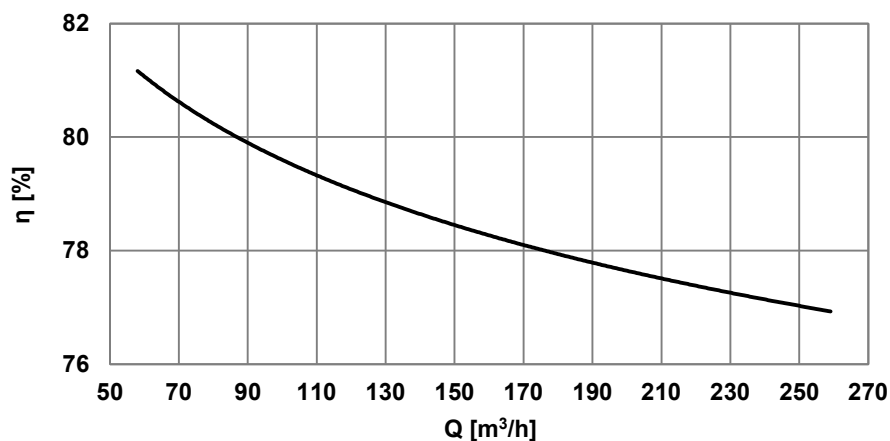
vertical air outlets



horizontal air outlets

Note: red curves represent usual pressure drop in air ducts, the numbers in circles show the power input of a whole HRV unit in Watts

Graph of efficiency depending on airflow acc. to EN 308

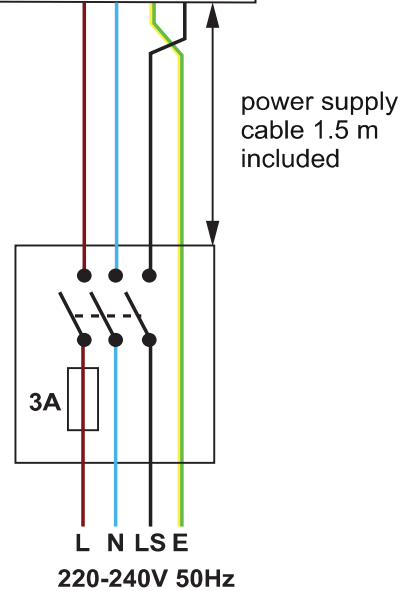


For  $t_e = +5\text{ }^\circ\text{C}$  a  $t_i = +25\text{ }^\circ\text{C}$

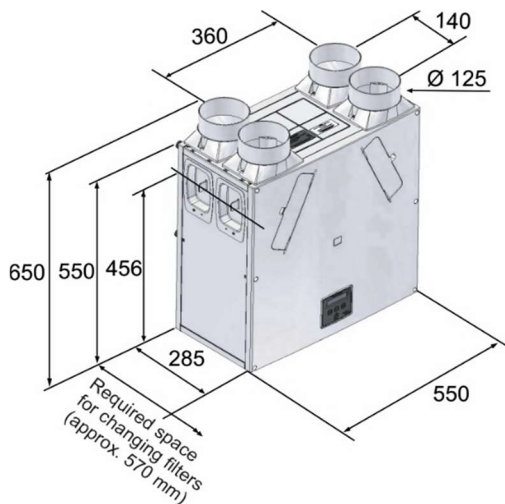
### Wiring of terminals, switches and sensors



- BMS** wiring to Building Management System
- NET** network
- J4** Vent-wise terminals
- S/W1** when jumper is used omit terminals 3-4, these terminals are designed for volt-free contacts for sensor input between + and - terminals
- S/W2**
- S/W3**
- SW4** volt-free contact for sensor input between + and - terminals
- SW5**
- P1 0-10 V** 0-10 V proportional sensor input is received between S and - terminals; 24 V DC sensor supply is output between the + and - terminals
- P2 0-10 V**
- LED** 5 V LED driving signal output between the + and -
- L** live, 220-240 V AC, 50 Hz
- N** neutral, 220-240 V AC, 50 Hz
- E** PE, protective earth in TN-S network
- LS** control phase, 220-240 V AC, 50 Hz



### Dimensions



### Inlet / outlet marking

