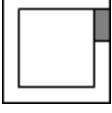
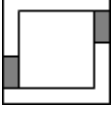
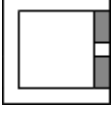
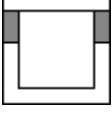
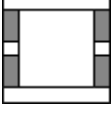


**Table 1** Summary for natural ventilation tests

Geometrical Configuration	ATEX calculus of air-flow recirculation $Q_{aw}$  Referred to $W = 1$ m/s (wind speed)	Vent 1 small $V1s = 0.35$ m <sup>2</sup>  Vent 1 big $V1b = 0.70$ m <sup>2</sup>	Theoretical ATEX value of  $Q_{aw}$	NV 40 l/min	NV 90 l/min	NV 180 l/min
				Efficient Y/N	Efficient Y/N	Efficient Y/N
				TEST n°	TEST n°	TEST n°
	$Q_{aw} = 0.025 A W$  $A = V1$	$V1s = 0.35$ m <sup>2</sup>  $V1b = 0.70$ m <sup>2</sup>	$Q_{aw} = 0.009$ m <sup>3</sup> /s  $Q_{aw} = 0.018$ m <sup>3</sup> /s	N	N	N
				1; 2; 5	/	/
	$Q_{aw} = c_s A_{aw} W (\Delta c_p)^{0.5}$  $\Delta c_p = 0.2$ (difficult ventilation) $c_s = 0.65$ (fixed constant value)	$V1s = 0.35$ m <sup>2</sup>  $V1b = 0.70$ m <sup>2</sup>	$Q_{aw} = 0.037$ m <sup>3</sup> /s  $Q_{aw} = 0.04$ m <sup>3</sup> /s	Y*	N	N
				3; 4; 9; 10; 13; 14; 17	11; 23	/
	$Q_{aw} = 0.025 A W$  $A = V1 + V3$	$V1s = 0.35$ m <sup>2</sup>  $V1b = 0.70$ m <sup>2</sup>	$Q_{aw} = 0.018$ m <sup>3</sup> /s  $Q_{aw} = 0.026$ m <sup>3</sup> /s	Y	N	N
				15	/	/
	$Q_{aw} = c_s A_{aw} W (\Delta c_p)^{0.5}$  $\Delta c_p = 0.2$ (difficult ventilation) $c_s = 0.65$ (fixed constant value)	$V1s = 0.35$ m <sup>2</sup>  $V1b = 0.70$ m <sup>2</sup>	$Q_{aw} = 0.037$ m <sup>3</sup> /s  $Q_{aw} = 0.04$ m <sup>3</sup> /s	Y(**)	N	N
				16	/	/
	$Q_{aw} = c_s A_{aw} W (\Delta c_p)^{0.5}$  $\frac{1}{A_{aw}^2} = \frac{1}{(V1 + V3)^2} + \frac{1}{(V2 + V4)^2}$ $\Delta c_p = 0.2$ (difficult ventilation) $c_s = 0.65$ (fixed constant value)	$V1s = 0.35$ m <sup>2</sup>  $V1b = 0.70$ m <sup>2</sup>	$Q_{aw} = 0.07$ m <sup>3</sup> /s  $Q_{aw} = 0.08$ m <sup>3</sup> /s	Y	Y	N
				/	21	/
				Y	Y	N
				/	20	22

(\*) In addition tests 38; 39; 40; 41 has been performed adopting a different geometry of the sensors.

(\*\*) In addition tests 34; 35; 36; 37 has been performed adopting a different geometry of the sensors.