Installation Data Pack for Ashburton Court (West) Data & UPS Room - Revised

Address	Castle Complex Winchester Hampshire
Pipe Type	Europe
Date	29/01/08
Installer	Prestige Fire Protection
Calculated By	Ian Wilson
Units	Metric
Altitude	0.0m
Designed with Hole Sizes	2.5;3.0mm

Detector : Data Centre - A/C 1 & 2

Type	VESDA VLC V2 80m/240ft
Endcap Usage	Create a Balanced Design
Application	default
Fire	0.200%/m
Air Temperature	20.0°C
Absolute Pressure	1013hPa
System Flowrate	82.0l/min
Total Pipe Length	16.3m
Number Of Sample Points	40
Maximum Transport Time	20
Minimum Hole Flow Rate	2.0l/min
Exhaust Length	0.0m
Exhaust Diameter	21.0mm
Exhaust Pressure Drop	0Pa
Inverted Detector	No

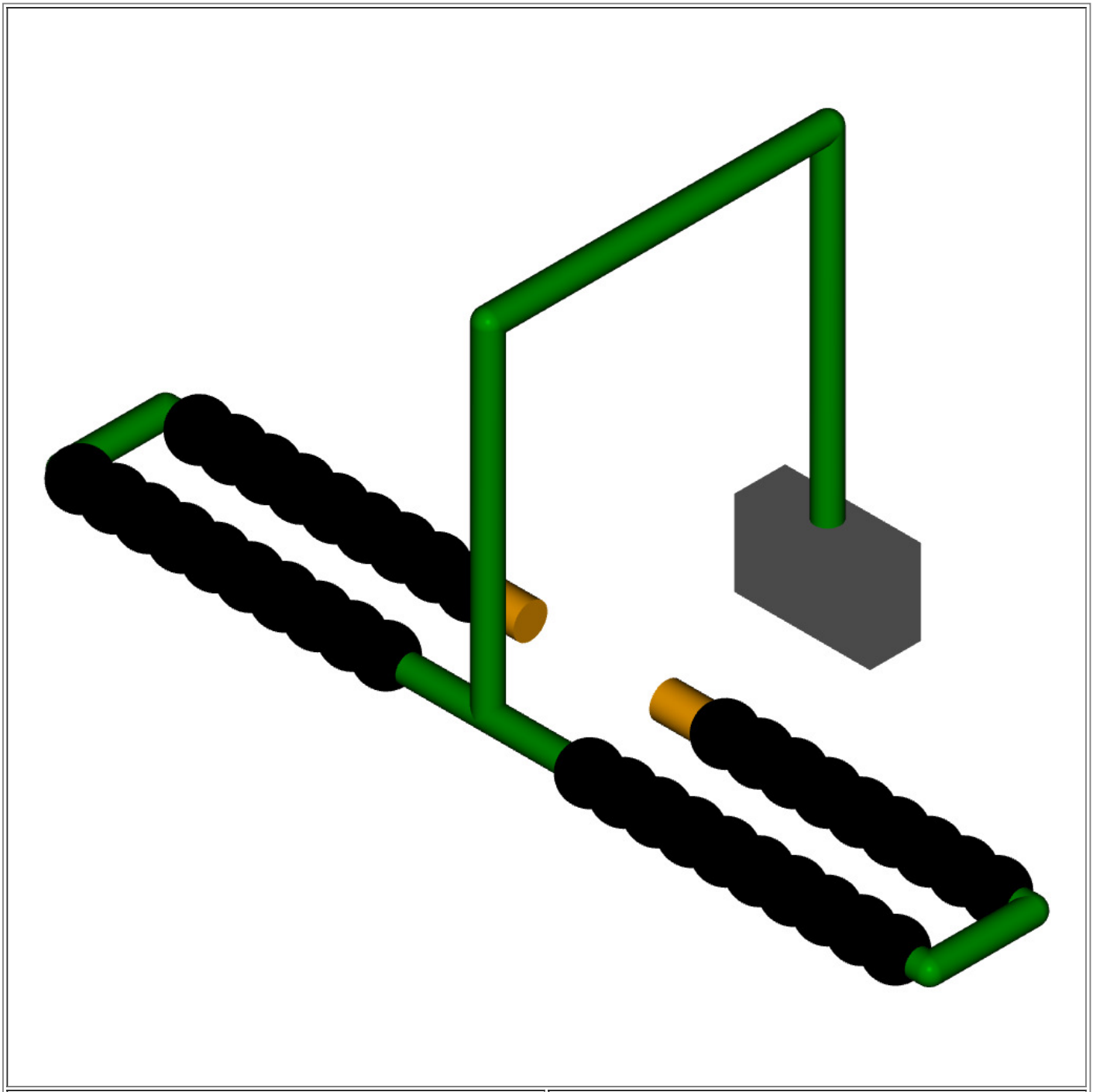
Sampling Point Sensitivity

Threshold	Level	Classification	Hole Aggregation
Fire	0.200%/m		1

Group Details

	Hole Sensitivity	Pressure	Transport Time	Hole Diameter	[Default Group]
Group Type					
Max Target Aggregate Sensitivity					0.300
Min Target Aggregate Sensitivity					0.100
Contribution ratio(%)					100
Applied Max Aggregate Sensitivity					0.300
Applied Min Aggregate Sensitivity					0.100
Target Suction Pressure					25
Target Balance					70
Exclude from Autobalance					0
1:Section1-1	7.243	47	4	2.5	X
1:Section1-2	7.666	46	4	2.5	X
1:Section1-3	7.729	46	4	2.5	X
1:Section1-4	7.783	45	5	2.5	X
1:Section1-5	7.832	44	5	2.5	X
1:Section1-6	7.877	44	5	2.5	X
1:Section1-7	7.919	43	5	2.5	X
1:Section1-8	7.957	43	5	2.5	X
1:Section1-9	7.992	43	6	2.5	X
1:Section1-10	8.024	42	6	2.5	X
1:Section1-11	8.190	41	8	2.5	X
1:Section1-12	8.216	40	8	2.5	X
1:Section1-13	8.237	40	8	2.5	X
1:Section1-14	8.255	40	9	2.5	X
1:Section1-15	8.271	40	10	2.5	X
1:Section1-16	8.284	40	11	2.5	X
1:Section1-17	8.294	40	12	2.5	X
1:Section1-18	8.302	40	13	2.5	X
1:Section1-19	8.308	39	16	2.5	X
1:Section1-20	7.766	39	20	2.5	X
1:Section2-1	7.248	47	4	2.5	X
1:Section2-2	7.668	46	4	2.5	X
1:Section2-3	7.728	46	4	2.5	X
1:Section2-4	7.782	45	5	2.5	X
1:Section2-5	7.831	44	5	2.5	X
1:Section2-6	7.876	44	5	2.5	X
1:Section2-7	7.918	43	5	2.5	X
1:Section2-8	7.956	43	5	2.5	X
1:Section2-9	7.991	43	6	2.5	X
1:Section2-10	8.022	42	6	2.5	X
1:Section2-11	8.203	41	8	2.5	X
1:Section2-12	8.228	40	8	2.5	X
1:Section2-13	8.249	40	9	2.5	X
1:Section2-14	8.268	40	9	2.5	X
1:Section2-15	8.283	40	10	2.5	X
1:Section2-16	8.296	40	11	2.5	X

1:Section2-17	8.307	39	12	2.5	X
1:Section2-18	8.315	39	13	2.5	X
1:Section2-19	8.320	39	16	2.5	X
1:Section2-20	7.778	39	20	2.5	X
Number of holes					40
Flow Share(%)					100
Aggregate Sensitivity					0.200
Balance(%)					87
Suction pressure (least)					39



Isometric Data Centre - A/C 1 & 2	

Pipe:Main Pipe

Total Pipe Length 16.3m
Ambient Pressure 0Pa
Sector Pressure 161Pa
Number of Sample Points 40
Pipe Flowrate 82.0l/min

Section0

Pipe Diameter 21.0mm

#		Distance m	Relative m	Direction	Hole Diameter	Capillary Length	Transport Time	Pressure	Flow	Flow %	Hole Sensitivity	Pipe Diameter mm	Capillary Diameter	Intersection Pressure
-	Bend 90	2.00	2.00	B										
-	Bend 90	4.00	2.00	D										
-	Tee	6.00	2.00	L										

Section1

Pipe Diameter 21.0mm

#		Distance m	Relative m	Direction	Hole Diameter mm	Capillary Length	Transport Time sec	Pressure Pa	Flow l/min	Flow %	Hole Sensitivity %/m	Pipe Diameter mm	Capillary Diameter	Intersection Pressure
1:Section1-1	Hole	6.60	0.60		2.5		4	47	2.3	2.8	7.243	21.0		
1:Section1-2	Hole	6.80	0.20		2.5		4	46	2.1	2.6	7.666	21.0		
1:Section1-3	Hole	7.00	0.20		2.5		4	46	2.1	2.6	7.729	21.0		
1:Section1-4	Hole	7.20	0.20		2.5		5	45	2.1	2.6	7.783	21.0		
1:Section1-5	Hole	7.40	0.20		2.5		5	44	2.1	2.6	7.832	21.0		
1:Section1-6	Hole	7.60	0.20		2.5		5	44	2.1	2.5	7.877	21.0		
1:Section1-7	Hole	7.80	0.20		2.5		5	43	2.1	2.5	7.919	21.0		
1:Section1-8	Hole	8.00	0.20		2.5		5	43	2.1	2.5	7.957	21.0		
1:Section1-9	Hole	8.20	0.20		2.5		6	43	2.1	2.5	7.992	21.0		
1:Section1-10	Hole	8.40	0.20		2.5		6	42	2.0	2.5	8.024	21.0		
-	Bend 90	8.50	0.10	F										
-	Bend 90	9.10	0.60	R										
1:Section1-11	Hole	9.30	0.20		2.5		8	41	2.0	2.4	8.190	21.0		
1:Section1-12	Hole	9.50	0.20		2.5		8	40	2.0	2.4	8.216	21.0		
1:Section1-13	Hole	9.70	0.20		2.5		8	40	2.0	2.4	8.237	21.0		
1:Section1-14	Hole	9.90	0.20		2.5		9	40	2.0	2.4	8.255	21.0		
1:Section1-15	Hole	10.10	0.20		2.5		10	40	2.0	2.4	8.271	21.0		
1:Section1-16	Hole	10.30	0.20		2.5		11	40	2.0	2.4	8.284	21.0		
1:Section1-17	Hole	10.50	0.20		2.5		12	40	2.0	2.4	8.294	21.0		
1:Section1-18	Hole	10.70	0.20		2.5		13	40	2.0	2.4	8.302	21.0		
1:Section1-19	Hole	10.90	0.20		2.5		16	39	2.0	2.4	8.308	21.0		
1:Section1-20	Endcap	11.10	0.20		2.5		20	39	2.1	2.6	7.766	21.0		

Section2

Pipe Diameter 21.0mm

#		Distance	Relative	Direction	Hole Diameter	Capillary Length	Transport Time	Pressure	Flow	Flow %	Hole Sensitivity	Pipe Diameter	Capillary Diameter	Intersection Pressure

		m	m		mm		sec	Pa	l/min		%/m	mm		
1:Section2-1	**Hole**	6.60	0.60		2.5		4	47	2.3	2.8	7.248	21.0		
1:Section2-2	**Hole**	6.80	0.20		2.5		4	46	2.1	2.6	7.668	21.0		
1:Section2-3	**Hole**	7.00	0.20		2.5		4	46	2.1	2.6	7.728	21.0		
1:Section2-4	**Hole**	7.20	0.20		2.5		5	45	2.1	2.6	7.782	21.0		
1:Section2-5	**Hole**	7.40	0.20		2.5		5	44	2.1	2.6	7.831	21.0		
1:Section2-6	**Hole**	7.60	0.20		2.5		5	44	2.1	2.5	7.876	21.0		
1:Section2-7	**Hole**	7.80	0.20		2.5		5	43	2.1	2.5	7.918	21.0		
1:Section2-8	**Hole**	8.00	0.20		2.5		5	43	2.1	2.5	7.956	21.0		
1:Section2-9	**Hole**	8.20	0.20		2.5		6	43	2.1	2.5	7.991	21.0		
1:Section2-10	**Hole**	8.40	0.20		2.5		6	42	2.0	2.5	8.022	21.0		
-	**Bend 90**	8.60	0.20	F										
-	**Bend 90**	9.20	0.60	L										
1:Section2-11	**Hole**	9.40	0.20		2.5		8	41	2.0	2.4	8.203	21.0		
1:Section2-12	**Hole**	9.60	0.20		2.5		8	40	2.0	2.4	8.228	21.0		
1:Section2-13	**Hole**	9.80	0.20		2.5		9	40	2.0	2.4	8.249	21.0		
1:Section2-14	**Hole**	10.00	0.20		2.5		9	40	2.0	2.4	8.268	21.0		
1:Section2-15	**Hole**	10.20	0.20		2.5		10	40	2.0	2.4	8.283	21.0		
1:Section2-16	**Hole**	10.40	0.20		2.5		11	40	2.0	2.4	8.296	21.0		
1:Section2-17	**Hole**	10.60	0.20		2.5		12	39	2.0	2.4	8.307	21.0		
1:Section2-18	**Hole**	10.80	0.20		2.5		13	39	2.0	2.4	8.315	21.0		
1:Section2-19	**Hole**	11.00	0.20		2.5		16	39	2.0	2.4	8.320	21.0		
1:Section2-20	**Endcap**	11.20	0.20		2.5		20	39	2.1	2.6	7.778	21.0		

Detector : Data Centre - A/C 3 & 4

Type	VESDA VLC V2 80m/240ft
Endcap Usage	Create a Balanced Design
Application	default
Fire	0.200%/m
Air Temperature	20.0°C
Absolute Pressure	1013hPa
System Flowrate	82.0l/min
Total Pipe Length	16.3m
Number Of Sample Points	40
Maximum Transport Time	20
Minimum Hole Flow Rate	2.0l/min
Exhaust Length	0.0m
Exhaust Diameter	21.0mm
Exhaust Pressure Drop	0Pa
Inverted Detector	No

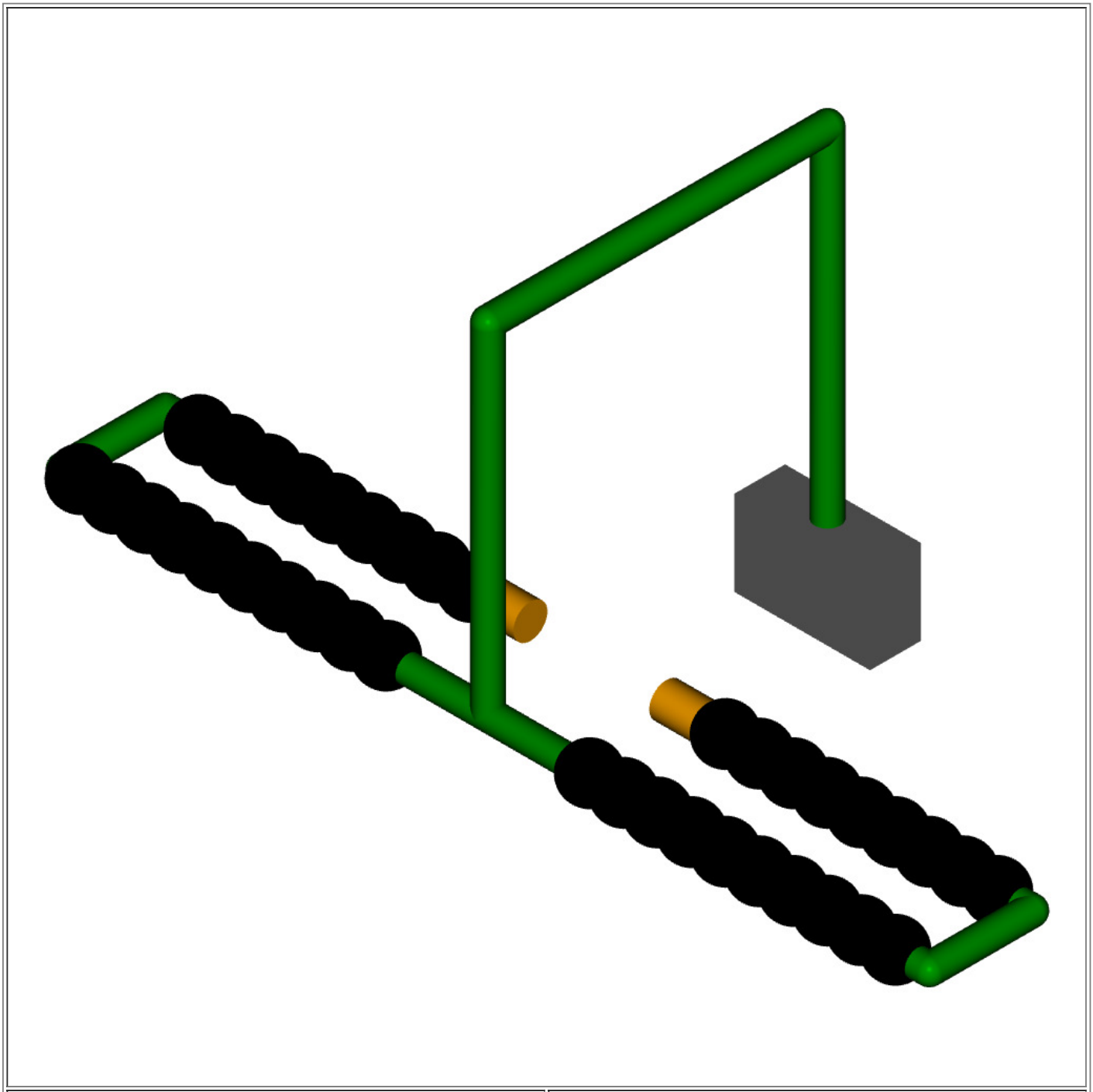
Sampling Point Sensitivity

Threshold	Level	Classification	Hole Aggregation
Fire	0.200%/m		1

Group Details

	Hole Sensitivity	Pressure	Transport Time	Hole Diameter	[Default Group]
Group Type					
Max Target Aggregate Sensitivity					0.300
Min Target Aggregate Sensitivity					0.100
Contribution ratio(%)					100
Applied Max Aggregate Sensitivity					0.300
Applied Min Aggregate Sensitivity					0.100
Target Suction Pressure					25
Target Balance					70
Exclude from Autobalance					0
1:Section1-1	7.243	47	4	2.5	X
1:Section1-2	7.666	46	4	2.5	X
1:Section1-3	7.729	46	4	2.5	X
1:Section1-4	7.783	45	5	2.5	X
1:Section1-5	7.832	44	5	2.5	X
1:Section1-6	7.877	44	5	2.5	X
1:Section1-7	7.919	43	5	2.5	X
1:Section1-8	7.957	43	5	2.5	X
1:Section1-9	7.992	43	6	2.5	X
1:Section1-10	8.024	42	6	2.5	X
1:Section1-11	8.190	41	8	2.5	X
1:Section1-12	8.216	40	8	2.5	X
1:Section1-13	8.237	40	8	2.5	X
1:Section1-14	8.255	40	9	2.5	X
1:Section1-15	8.271	40	10	2.5	X
1:Section1-16	8.284	40	11	2.5	X
1:Section1-17	8.294	40	12	2.5	X
1:Section1-18	8.302	40	13	2.5	X
1:Section1-19	8.308	39	16	2.5	X
1:Section1-20	7.766	39	20	2.5	X
1:Section2-1	7.248	47	4	2.5	X
1:Section2-2	7.668	46	4	2.5	X
1:Section2-3	7.728	46	4	2.5	X
1:Section2-4	7.782	45	5	2.5	X
1:Section2-5	7.831	44	5	2.5	X
1:Section2-6	7.876	44	5	2.5	X
1:Section2-7	7.918	43	5	2.5	X
1:Section2-8	7.956	43	5	2.5	X
1:Section2-9	7.991	43	6	2.5	X
1:Section2-10	8.022	42	6	2.5	X
1:Section2-11	8.203	41	8	2.5	X
1:Section2-12	8.228	40	8	2.5	X
1:Section2-13	8.249	40	9	2.5	X
1:Section2-14	8.268	40	9	2.5	X
1:Section2-15	8.283	40	10	2.5	X
1:Section2-16	8.296	40	11	2.5	X

1:Section2-17	8.307	39	12	2.5	X
1:Section2-18	8.315	39	13	2.5	X
1:Section2-19	8.320	39	16	2.5	X
1:Section2-20	7.778	39	20	2.5	X
Number of holes					40
Flow Share(%)					100
Aggregate Sensitivity					0.200
Balance(%)					87
Suction pressure (least)					39



Isometric Data Centre - A/C 3 & 4	

Pipe:Main Pipe

Total Pipe Length 16.3m
Ambient Pressure 0Pa
Sector Pressure 161Pa
Number of Sample Points 40
Pipe Flowrate 82.0l/min

Section0

Pipe Diameter 21.0mm

#		Distance m	Relative m	Direction	Hole Diameter	Capillary Length	Transport Time	Pressure	Flow	Flow %	Hole Sensitivity	Pipe Diameter mm	Capillary Diameter	Intersection Pressure
-	Bend 90	2.00	2.00	B										
-	Bend 90	4.00	2.00	D										
-	Tee	6.00	2.00	L										

Section1

Pipe Diameter 21.0mm

#		Distance m	Relative m	Direction	Hole Diameter mm	Capillary Length	Transport Time sec	Pressure Pa	Flow l/min	Flow %	Hole Sensitivity %/m	Pipe Diameter mm	Capillary Diameter	Intersection Pressure
1:Section1-1	Hole	6.60	0.60		2.5		4	47	2.3	2.8	7.243	21.0		
1:Section1-2	Hole	6.80	0.20		2.5		4	46	2.1	2.6	7.666	21.0		
1:Section1-3	Hole	7.00	0.20		2.5		4	46	2.1	2.6	7.729	21.0		
1:Section1-4	Hole	7.20	0.20		2.5		5	45	2.1	2.6	7.783	21.0		
1:Section1-5	Hole	7.40	0.20		2.5		5	44	2.1	2.6	7.832	21.0		
1:Section1-6	Hole	7.60	0.20		2.5		5	44	2.1	2.5	7.877	21.0		
1:Section1-7	Hole	7.80	0.20		2.5		5	43	2.1	2.5	7.919	21.0		
1:Section1-8	Hole	8.00	0.20		2.5		5	43	2.1	2.5	7.957	21.0		
1:Section1-9	Hole	8.20	0.20		2.5		6	43	2.1	2.5	7.992	21.0		
1:Section1-10	Hole	8.40	0.20		2.5		6	42	2.0	2.5	8.024	21.0		
-	Bend 90	8.50	0.10	F										
-	Bend 90	9.10	0.60	R										
1:Section1-11	Hole	9.30	0.20		2.5		8	41	2.0	2.4	8.190	21.0		
1:Section1-12	Hole	9.50	0.20		2.5		8	40	2.0	2.4	8.216	21.0		
1:Section1-13	Hole	9.70	0.20		2.5		8	40	2.0	2.4	8.237	21.0		
1:Section1-14	Hole	9.90	0.20		2.5		9	40	2.0	2.4	8.255	21.0		
1:Section1-15	Hole	10.10	0.20		2.5		10	40	2.0	2.4	8.271	21.0		
1:Section1-16	Hole	10.30	0.20		2.5		11	40	2.0	2.4	8.284	21.0		
1:Section1-17	Hole	10.50	0.20		2.5		12	40	2.0	2.4	8.294	21.0		
1:Section1-18	Hole	10.70	0.20		2.5		13	40	2.0	2.4	8.302	21.0		
1:Section1-19	Hole	10.90	0.20		2.5		16	39	2.0	2.4	8.308	21.0		
1:Section1-20	Endcap	11.10	0.20		2.5		20	39	2.1	2.6	7.766	21.0		

Section2

Pipe Diameter 21.0mm

#		Distance	Relative	Direction	Hole Diameter	Capillary Length	Transport Time	Pressure	Flow	Flow %	Hole Sensitivity	Pipe Diameter	Capillary Diameter	Intersection Pressure

		m	m		mm		sec	Pa	l/min		%/m	mm		
1:Section2-1	**Hole**	6.60	0.60		2.5		4	47	2.3	2.8	7.248	21.0		
1:Section2-2	**Hole**	6.80	0.20		2.5		4	46	2.1	2.6	7.668	21.0		
1:Section2-3	**Hole**	7.00	0.20		2.5		4	46	2.1	2.6	7.728	21.0		
1:Section2-4	**Hole**	7.20	0.20		2.5		5	45	2.1	2.6	7.782	21.0		
1:Section2-5	**Hole**	7.40	0.20		2.5		5	44	2.1	2.6	7.831	21.0		
1:Section2-6	**Hole**	7.60	0.20		2.5		5	44	2.1	2.5	7.876	21.0		
1:Section2-7	**Hole**	7.80	0.20		2.5		5	43	2.1	2.5	7.918	21.0		
1:Section2-8	**Hole**	8.00	0.20		2.5		5	43	2.1	2.5	7.956	21.0		
1:Section2-9	**Hole**	8.20	0.20		2.5		6	43	2.1	2.5	7.991	21.0		
1:Section2-10	**Hole**	8.40	0.20		2.5		6	42	2.0	2.5	8.022	21.0		
-	**Bend 90**	8.60	0.20	F										
-	**Bend 90**	9.20	0.60	L										
1:Section2-11	**Hole**	9.40	0.20		2.5		8	41	2.0	2.4	8.203	21.0		
1:Section2-12	**Hole**	9.60	0.20		2.5		8	40	2.0	2.4	8.228	21.0		
1:Section2-13	**Hole**	9.80	0.20		2.5		9	40	2.0	2.4	8.249	21.0		
1:Section2-14	**Hole**	10.00	0.20		2.5		9	40	2.0	2.4	8.268	21.0		
1:Section2-15	**Hole**	10.20	0.20		2.5		10	40	2.0	2.4	8.283	21.0		
1:Section2-16	**Hole**	10.40	0.20		2.5		11	40	2.0	2.4	8.296	21.0		
1:Section2-17	**Hole**	10.60	0.20		2.5		12	39	2.0	2.4	8.307	21.0		
1:Section2-18	**Hole**	10.80	0.20		2.5		13	39	2.0	2.4	8.315	21.0		
1:Section2-19	**Hole**	11.00	0.20		2.5		16	39	2.0	2.4	8.320	21.0		
1:Section2-20	**Endcap**	11.20	0.20		2.5		20	39	2.1	2.6	7.778	21.0		

Detector : Data Centre - A/C 5 & 6

Type	VESDA VLC V2 80m/240ft
Endcap Usage	Create a Balanced Design
Application	default
Fire	0.200%/m
Air Temperature	20.0°C
Absolute Pressure	1013hPa
System Flowrate	82.0l/min
Total Pipe Length	16.3m
Number Of Sample Points	40
Maximum Transport Time	20
Minimum Hole Flow Rate	2.0l/min
Exhaust Length	0.0m
Exhaust Diameter	21.0mm
Exhaust Pressure Drop	0Pa
Inverted Detector	No

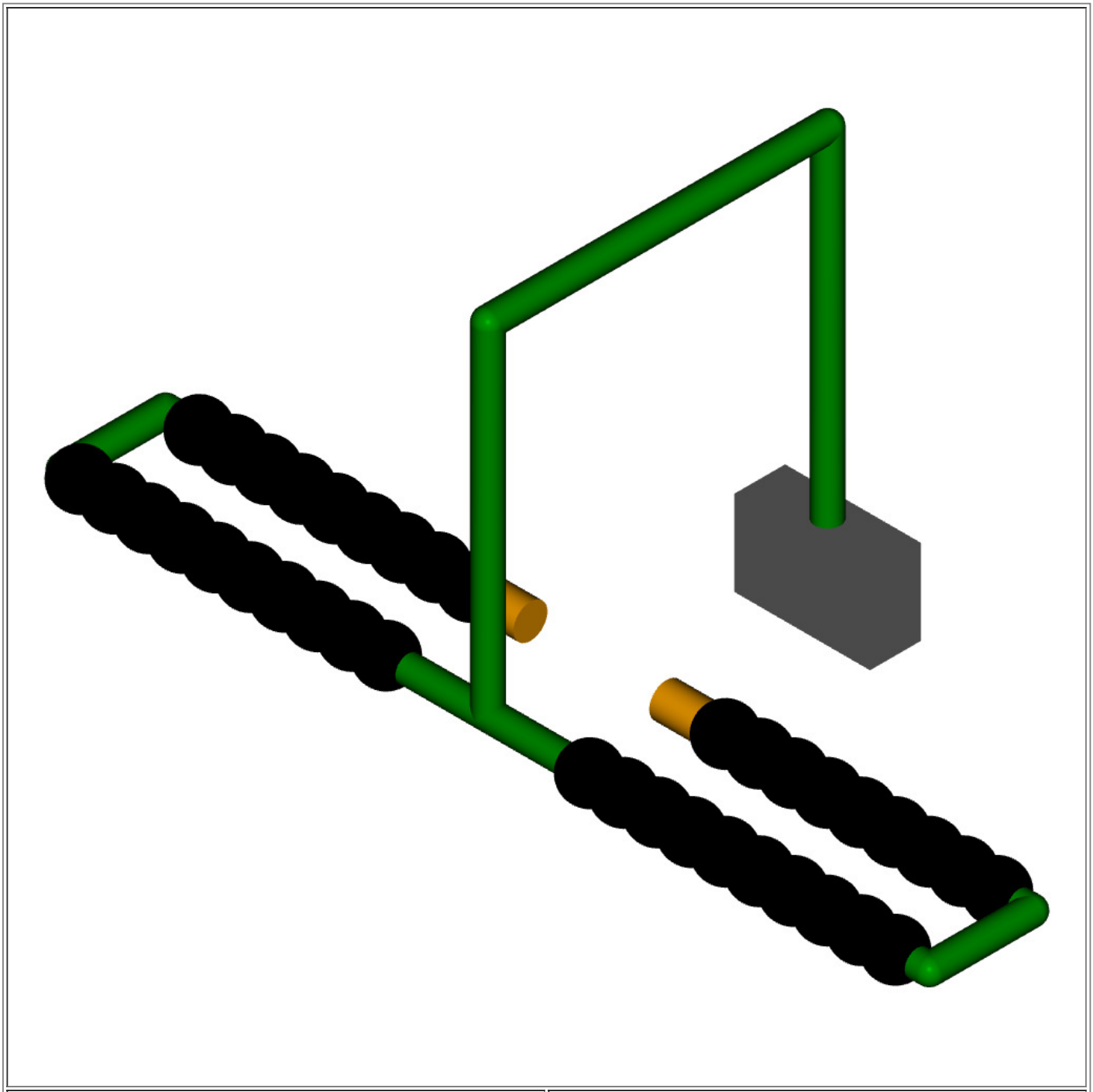
Sampling Point Sensitivity

Threshold	Level	Classification	Hole Aggregation
Fire	0.200%/m		1

Group Details

	Hole Sensitivity	Pressure	Transport Time	Hole Diameter	[Default Group]
Group Type					
Max Target Aggregate Sensitivity					0.300
Min Target Aggregate Sensitivity					0.100
Contribution ratio(%)					100
Applied Max Aggregate Sensitivity					0.300
Applied Min Aggregate Sensitivity					0.100
Target Suction Pressure					25
Target Balance					70
Exclude from Autobalance					0
1:Section1-1	7.243	47	4	2.5	X
1:Section1-2	7.666	46	4	2.5	X
1:Section1-3	7.729	46	4	2.5	X
1:Section1-4	7.783	45	5	2.5	X
1:Section1-5	7.832	44	5	2.5	X
1:Section1-6	7.877	44	5	2.5	X
1:Section1-7	7.919	43	5	2.5	X
1:Section1-8	7.957	43	5	2.5	X
1:Section1-9	7.992	43	6	2.5	X
1:Section1-10	8.024	42	6	2.5	X
1:Section1-11	8.190	41	8	2.5	X
1:Section1-12	8.216	40	8	2.5	X
1:Section1-13	8.237	40	8	2.5	X
1:Section1-14	8.255	40	9	2.5	X
1:Section1-15	8.271	40	10	2.5	X
1:Section1-16	8.284	40	11	2.5	X
1:Section1-17	8.294	40	12	2.5	X
1:Section1-18	8.302	40	13	2.5	X
1:Section1-19	8.308	39	16	2.5	X
1:Section1-20	7.766	39	20	2.5	X
1:Section2-1	7.248	47	4	2.5	X
1:Section2-2	7.668	46	4	2.5	X
1:Section2-3	7.728	46	4	2.5	X
1:Section2-4	7.782	45	5	2.5	X
1:Section2-5	7.831	44	5	2.5	X
1:Section2-6	7.876	44	5	2.5	X
1:Section2-7	7.918	43	5	2.5	X
1:Section2-8	7.956	43	5	2.5	X
1:Section2-9	7.991	43	6	2.5	X
1:Section2-10	8.022	42	6	2.5	X
1:Section2-11	8.203	41	8	2.5	X
1:Section2-12	8.228	40	8	2.5	X
1:Section2-13	8.249	40	9	2.5	X
1:Section2-14	8.268	40	9	2.5	X
1:Section2-15	8.283	40	10	2.5	X
1:Section2-16	8.296	40	11	2.5	X

1:Section2-17	8.307	39	12	2.5	X
1:Section2-18	8.315	39	13	2.5	X
1:Section2-19	8.320	39	16	2.5	X
1:Section2-20	7.778	39	20	2.5	X
Number of holes					40
Flow Share(%)					100
Aggregate Sensitivity					0.200
Balance(%)					87
Suction pressure (least)					39



Isometric Data Centre - A/C 5 & 6	

Pipe:Main Pipe

Total Pipe Length 16.3m
Ambient Pressure 0Pa
Sector Pressure 161Pa
Number of Sample Points 40
Pipe Flowrate 82.0l/min

Section0

Pipe Diameter 21.0mm

#		Distance m	Relative m	Direction	Hole Diameter	Capillary Length	Transport Time	Pressure	Flow	Flow %	Hole Sensitivity	Pipe Diameter mm	Capillary Diameter	Intersection Pressure
-	Bend 90	2.00	2.00	B										
-	Bend 90	4.00	2.00	D										
-	Tee	6.00	2.00	L										

Section1

Pipe Diameter 21.0mm

#		Distance m	Relative m	Direction	Hole Diameter mm	Capillary Length	Transport Time sec	Pressure Pa	Flow l/min	Flow %	Hole Sensitivity %/m	Pipe Diameter mm	Capillary Diameter	Intersection Pressure
1:Section1-1	Hole	6.60	0.60		2.5		4	47	2.3	2.8	7.243	21.0		
1:Section1-2	Hole	6.80	0.20		2.5		4	46	2.1	2.6	7.666	21.0		
1:Section1-3	Hole	7.00	0.20		2.5		4	46	2.1	2.6	7.729	21.0		
1:Section1-4	Hole	7.20	0.20		2.5		5	45	2.1	2.6	7.783	21.0		
1:Section1-5	Hole	7.40	0.20		2.5		5	44	2.1	2.6	7.832	21.0		
1:Section1-6	Hole	7.60	0.20		2.5		5	44	2.1	2.5	7.877	21.0		
1:Section1-7	Hole	7.80	0.20		2.5		5	43	2.1	2.5	7.919	21.0		
1:Section1-8	Hole	8.00	0.20		2.5		5	43	2.1	2.5	7.957	21.0		
1:Section1-9	Hole	8.20	0.20		2.5		6	43	2.1	2.5	7.992	21.0		
1:Section1-10	Hole	8.40	0.20		2.5		6	42	2.0	2.5	8.024	21.0		
-	Bend 90	8.50	0.10	F										
-	Bend 90	9.10	0.60	R										
1:Section1-11	Hole	9.30	0.20		2.5		8	41	2.0	2.4	8.190	21.0		
1:Section1-12	Hole	9.50	0.20		2.5		8	40	2.0	2.4	8.216	21.0		
1:Section1-13	Hole	9.70	0.20		2.5		8	40	2.0	2.4	8.237	21.0		
1:Section1-14	Hole	9.90	0.20		2.5		9	40	2.0	2.4	8.255	21.0		
1:Section1-15	Hole	10.10	0.20		2.5		10	40	2.0	2.4	8.271	21.0		
1:Section1-16	Hole	10.30	0.20		2.5		11	40	2.0	2.4	8.284	21.0		
1:Section1-17	Hole	10.50	0.20		2.5		12	40	2.0	2.4	8.294	21.0		
1:Section1-18	Hole	10.70	0.20		2.5		13	40	2.0	2.4	8.302	21.0		
1:Section1-19	Hole	10.90	0.20		2.5		16	39	2.0	2.4	8.308	21.0		
1:Section1-20	Endcap	11.10	0.20		2.5		20	39	2.1	2.6	7.766	21.0		

Section2

Pipe Diameter 21.0mm

#		Distance	Relative	Direction	Hole Diameter	Capillary Length	Transport Time	Pressure	Flow	Flow %	Hole Sensitivity	Pipe Diameter	Capillary Diameter	Intersection Pressure

		m	m		mm		sec	Pa	l/min		%/m	mm		
1:Section2-1	**Hole**	6.60	0.60		2.5		4	47	2.3	2.8	7.248	21.0		
1:Section2-2	**Hole**	6.80	0.20		2.5		4	46	2.1	2.6	7.668	21.0		
1:Section2-3	**Hole**	7.00	0.20		2.5		4	46	2.1	2.6	7.728	21.0		
1:Section2-4	**Hole**	7.20	0.20		2.5		5	45	2.1	2.6	7.782	21.0		
1:Section2-5	**Hole**	7.40	0.20		2.5		5	44	2.1	2.6	7.831	21.0		
1:Section2-6	**Hole**	7.60	0.20		2.5		5	44	2.1	2.5	7.876	21.0		
1:Section2-7	**Hole**	7.80	0.20		2.5		5	43	2.1	2.5	7.918	21.0		
1:Section2-8	**Hole**	8.00	0.20		2.5		5	43	2.1	2.5	7.956	21.0		
1:Section2-9	**Hole**	8.20	0.20		2.5		6	43	2.1	2.5	7.991	21.0		
1:Section2-10	**Hole**	8.40	0.20		2.5		6	42	2.0	2.5	8.022	21.0		
-	**Bend 90**	8.60	0.20	F										
-	**Bend 90**	9.20	0.60	L										
1:Section2-11	**Hole**	9.40	0.20		2.5		8	41	2.0	2.4	8.203	21.0		
1:Section2-12	**Hole**	9.60	0.20		2.5		8	40	2.0	2.4	8.228	21.0		
1:Section2-13	**Hole**	9.80	0.20		2.5		9	40	2.0	2.4	8.249	21.0		
1:Section2-14	**Hole**	10.00	0.20		2.5		9	40	2.0	2.4	8.268	21.0		
1:Section2-15	**Hole**	10.20	0.20		2.5		10	40	2.0	2.4	8.283	21.0		
1:Section2-16	**Hole**	10.40	0.20		2.5		11	40	2.0	2.4	8.296	21.0		
1:Section2-17	**Hole**	10.60	0.20		2.5		12	39	2.0	2.4	8.307	21.0		
1:Section2-18	**Hole**	10.80	0.20		2.5		13	39	2.0	2.4	8.315	21.0		
1:Section2-19	**Hole**	11.00	0.20		2.5		16	39	2.0	2.4	8.320	21.0		
1:Section2-20	**Endcap**	11.20	0.20		2.5		20	39	2.1	2.6	7.778	21.0		

Detector : UPS Room - A/C 1

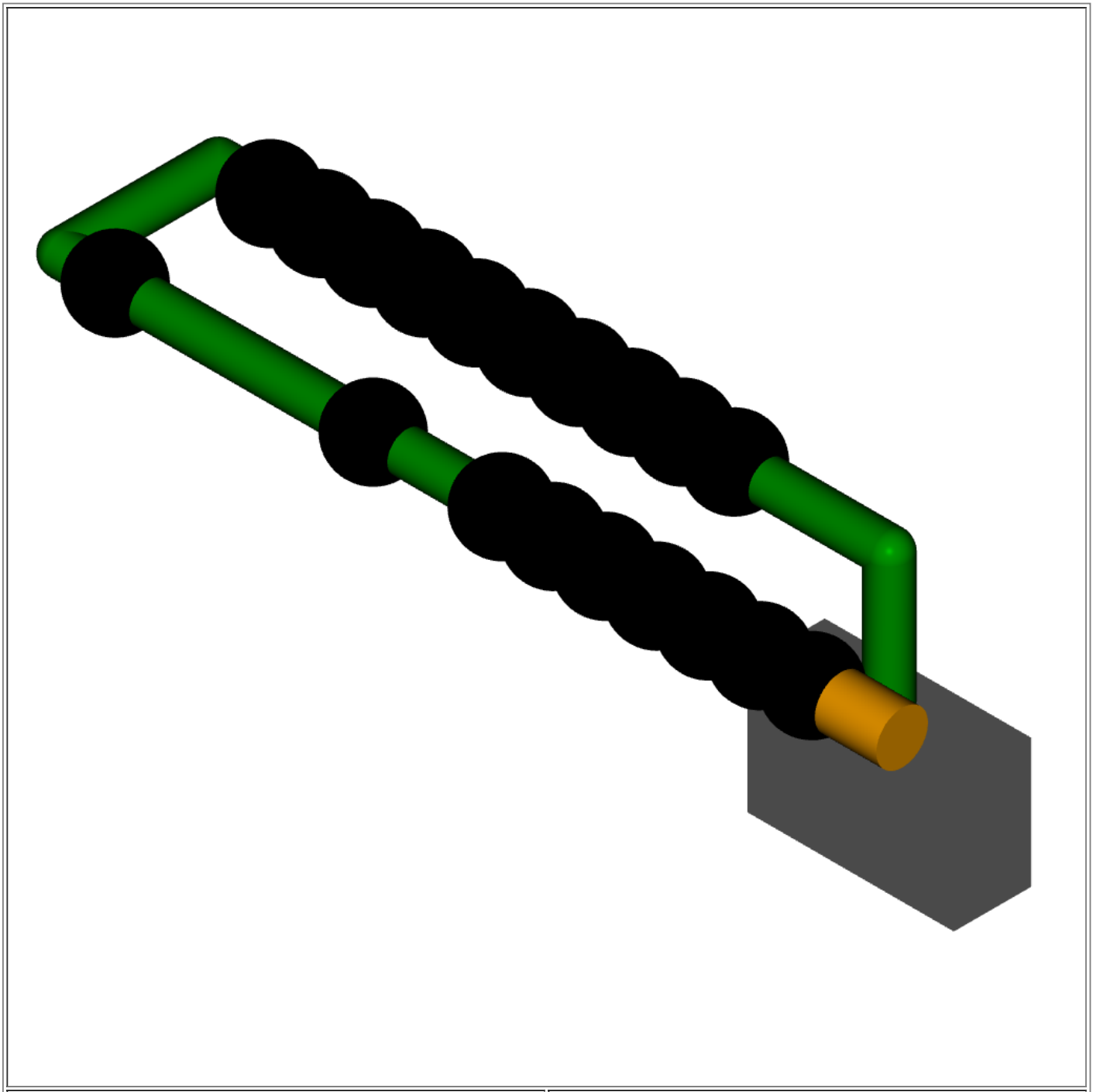
Type	VESDA VLF-500
Endcap Usage	Create a Balanced Design
Application	default
Fire	0.200%/m
Air Temperature	20.0°C
Absolute Pressure	1013hPa
System Flowrate	50.8l/min
Total Pipe Length	6.8m
Number Of Sample Points	20
Maximum Transport Time	16
Minimum Hole Flow Rate	2.0l/min
Exhaust Length	0.0m
Exhaust Diameter	21.0mm
Exhaust Pressure Drop	0Pa
Inverted Detector	No

Sampling Point Sensitivity

Threshold	Level	Classification	Hole Aggregation
Fire	0.200%/m		1

Group Details

	Hole Sensitivity	Pressure	Transport Time	Hole Diameter	[Default Group]
Group Type					
Max Target Aggregate Sensitivity					0.300
Min Target Aggregate Sensitivity					0.100
Contribution ratio(%)					100
Applied Max Aggregate Sensitivity					0.300
Applied Min Aggregate Sensitivity					0.100
Target Suction Pressure					25
Target Balance					70
Exclude from Autobalance					0
1:Section0-1	3.622	73	3	2.5	X
1:Section0-2	3.821	72	3	2.5	X
1:Section0-3	3.852	71	3	2.5	X
1:Section0-4	3.880	70	3	2.5	X
1:Section0-5	3.904	69	3	2.5	X
1:Section0-6	3.926	68	3	2.5	X
1:Section0-7	3.945	67	4	2.5	X
1:Section0-8	3.961	67	4	2.5	X
1:Section0-9	3.976	66	4	2.5	X
1:Section0-10	3.990	66	4	2.5	X
1:Section0-11	4.068	63	5	2.5	X
1:Section0-12	4.123	62	6	2.5	X
1:Section0-13	4.147	61	7	2.5	X
1:Section0-14	4.155	61	7	2.5	X
1:Section0-15	4.161	60	8	2.5	X
1:Section0-16	4.166	60	9	2.5	X
1:Section0-17	4.171	60	9	2.5	X
1:Section0-18	4.174	60	11	2.5	X
1:Section0-19	4.176	60	12	2.5	X
1:Section0-20	3.904	60	16	2.5	X
Number of holes					20
Flow Share(%)					100
Aggregate Sensitivity					0.200
Balance(%)					87
Suction pressure (least)					60



Isometric UPS Room - A/C 1

Pipe:Main Pipe

Total Pipe Length	6.8m
Ambient Pressure	0Pa
Sector Pressure	82Pa
Number of Sample Points	20
Pipe Flowrate	50.8l/min

Section0

Pipe Diameter 21.0mm

#		Distance m	Relative m	Direction	Hole Diameter mm	Capillary Length	Transport Time sec	Pressure Pa	Flow l/min	Flow %	Hole Sensitivity %/m	Pipe Diameter mm	Capillary Diameter	Intersection Pressure
-	**Bend 90**	0.50	0.50	L										
1:Section0-1	**Hole**	1.10	0.60		2.5		3	73	2.8	5.5	3.622	21.0		
1:Section0-2	**Hole**	1.30	0.20		2.5		3	72	2.7	5.2	3.821	21.0		
1:Section0-3	**Hole**	1.50	0.20		2.5		3	71	2.6	5.2	3.852	21.0		
1:Section0-4	**Hole**	1.70	0.20		2.5		3	70	2.6	5.2	3.880	21.0		
1:Section0-5	**Hole**	1.90	0.20		2.5		3	69	2.6	5.1	3.904	21.0		
1:Section0-6	**Hole**	2.10	0.20		2.5		3	68	2.6	5.1	3.926	21.0		
1:Section0-7	**Hole**	2.30	0.20		2.5		4	67	2.6	5.1	3.945	21.0		
1:Section0-8	**Hole**	2.50	0.20		2.5		4	67	2.6	5.0	3.961	21.0		
1:Section0-9	**Hole**	2.70	0.20		2.5		4	66	2.6	5.0	3.976	21.0		
1:Section0-10	**Hole**	2.90	0.20		2.5		4	66	2.5	5.0	3.990	21.0		
-	**Bend 90**	3.10	0.20	B										
-	**Bend 90**	3.70	0.60	R										
1:Section0-11	**Hole**	3.90	0.20		2.5		5	63	2.5	4.9	4.068	21.0		
1:Section0-12	**Hole**	4.90	1.00		2.5		6	62	2.5	4.9	4.123	21.0		
1:Section0-13	**Hole**	5.40	0.50		2.5		7	61	2.5	4.8	4.147	21.0		
1:Section0-14	**Hole**	5.60	0.20		2.5		7	61	2.4	4.8	4.155	21.0		
1:Section0-15	**Hole**	5.80	0.20		2.5		8	60	2.4	4.8	4.161	21.0		
1:Section0-16	**Hole**	6.00	0.20		2.5		9	60	2.4	4.8	4.166	21.0		
1:Section0-17	**Hole**	6.20	0.20		2.5		9	60	2.4	4.8	4.171	21.0		
1:Section0-18	**Hole**	6.40	0.20		2.5		11	60	2.4	4.8	4.174	21.0		
1:Section0-19	**Hole**	6.60	0.20		2.5		12	60	2.4	4.8	4.176	21.0		
1:Section0-20	**Endcap**	6.80	0.20		2.5		16	60	2.6	5.1	3.904	21.0		

Detector : UPS Room - A/C 2

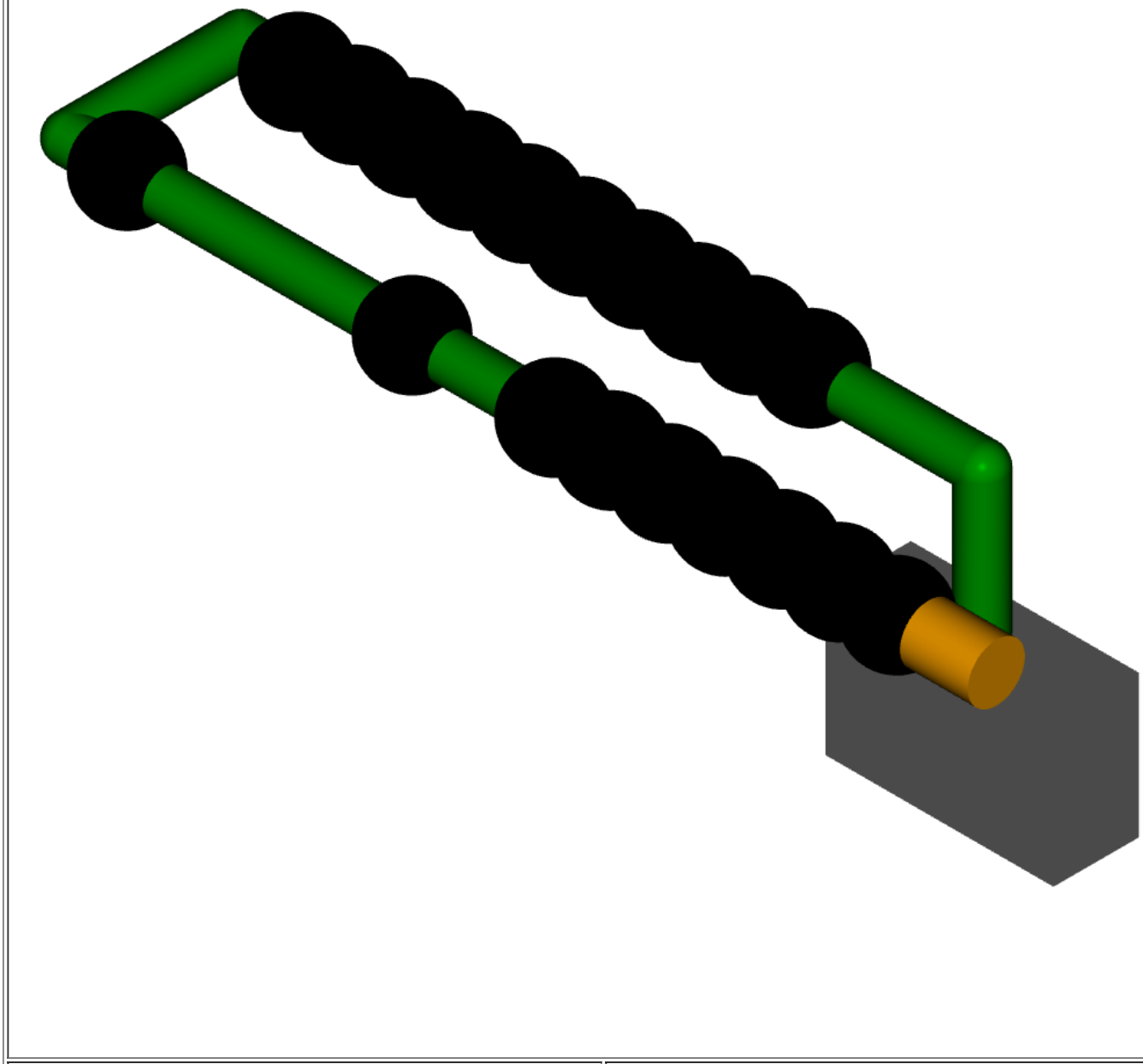
Type	VESDA VLF-500
Endcap Usage	Create a Balanced Design
Application	default
Fire	0.200%/m
Air Temperature	20.0°C
Absolute Pressure	1013hPa
System Flowrate	50.8l/min
Total Pipe Length	6.8m
Number Of Sample Points	20
Maximum Transport Time	16
Minimum Hole Flow Rate	2.0l/min
Exhaust Length	0.0m
Exhaust Diameter	21.0mm
Exhaust Pressure Drop	0Pa
Inverted Detector	No

Sampling Point Sensitivity

Threshold	Level	Classification	Hole Aggregation
Fire	0.200%/m		1

Group Details

	Hole Sensitivity	Pressure	Transport Time	Hole Diameter	[Default Group]
Group Type					
Max Target Aggregate Sensitivity					0.300
Min Target Aggregate Sensitivity					0.100
Contribution ratio(%)					100
Applied Max Aggregate Sensitivity					0.300
Applied Min Aggregate Sensitivity					0.100
Target Suction Pressure					25
Target Balance					70
Exclude from Autobalance					0
1:Section0-1	3.622	73	3	2.5	X
1:Section0-2	3.821	72	3	2.5	X
1:Section0-3	3.852	71	3	2.5	X
1:Section0-4	3.880	70	3	2.5	X
1:Section0-5	3.904	69	3	2.5	X
1:Section0-6	3.926	68	3	2.5	X
1:Section0-7	3.945	67	4	2.5	X
1:Section0-8	3.961	67	4	2.5	X
1:Section0-9	3.976	66	4	2.5	X
1:Section0-10	3.990	66	4	2.5	X
1:Section0-11	4.068	63	5	2.5	X
1:Section0-12	4.123	62	6	2.5	X
1:Section0-13	4.147	61	7	2.5	X
1:Section0-14	4.155	61	7	2.5	X
1:Section0-15	4.161	60	8	2.5	X
1:Section0-16	4.166	60	9	2.5	X
1:Section0-17	4.171	60	9	2.5	X
1:Section0-18	4.174	60	11	2.5	X
1:Section0-19	4.176	60	12	2.5	X
1:Section0-20	3.904	60	16	2.5	X
Number of holes					20
Flow Share(%)					100
Aggregate Sensitivity					0.200
Balance(%)					87
Suction pressure (least)					60



Isometric UPS Room - A/C 2

Pipe:Main Pipe

Total Pipe Length	6.8m
Ambient Pressure	0Pa
Sector Pressure	82Pa
Number of Sample Points	20
Pipe Flowrate	50.8l/min

Section0

Pipe Diameter 21.0mm

#		Distance m	Relative m	Direction	Hole Diameter mm	Capillary Length	Transport Time sec	Pressure Pa	Flow l/min	Flow %	Hole Sensitivity %/m	Pipe Diameter mm	Capillary Diameter	Intersection Pressure
-	**Bend 90**	0.50	0.50	L										
1:Section0-1	**Hole**	1.10	0.60		2.5		3	73	2.8	5.5	3.622	21.0		
1:Section0-2	**Hole**	1.30	0.20		2.5		3	72	2.7	5.2	3.821	21.0		
1:Section0-3	**Hole**	1.50	0.20		2.5		3	71	2.6	5.2	3.852	21.0		
1:Section0-4	**Hole**	1.70	0.20		2.5		3	70	2.6	5.2	3.880	21.0		
1:Section0-5	**Hole**	1.90	0.20		2.5		3	69	2.6	5.1	3.904	21.0		
1:Section0-6	**Hole**	2.10	0.20		2.5		3	68	2.6	5.1	3.926	21.0		
1:Section0-7	**Hole**	2.30	0.20		2.5		4	67	2.6	5.1	3.945	21.0		
1:Section0-8	**Hole**	2.50	0.20		2.5		4	67	2.6	5.0	3.961	21.0		
1:Section0-9	**Hole**	2.70	0.20		2.5		4	66	2.6	5.0	3.976	21.0		
1:Section0-10	**Hole**	2.90	0.20		2.5		4	66	2.5	5.0	3.990	21.0		
-	**Bend 90**	3.10	0.20	B										
-	**Bend 90**	3.70	0.60	R										
1:Section0-11	**Hole**	3.90	0.20		2.5		5	63	2.5	4.9	4.068	21.0		
1:Section0-12	**Hole**	4.90	1.00		2.5		6	62	2.5	4.9	4.123	21.0		
1:Section0-13	**Hole**	5.40	0.50		2.5		7	61	2.5	4.8	4.147	21.0		
1:Section0-14	**Hole**	5.60	0.20		2.5		7	61	2.4	4.8	4.155	21.0		
1:Section0-15	**Hole**	5.80	0.20		2.5		8	60	2.4	4.8	4.161	21.0		
1:Section0-16	**Hole**	6.00	0.20		2.5		9	60	2.4	4.8	4.166	21.0		
1:Section0-17	**Hole**	6.20	0.20		2.5		9	60	2.4	4.8	4.171	21.0		
1:Section0-18	**Hole**	6.40	0.20		2.5		11	60	2.4	4.8	4.174	21.0		
1:Section0-19	**Hole**	6.60	0.20		2.5		12	60	2.4	4.8	4.176	21.0		
1:Section0-20	**Endcap**	6.80	0.20		2.5		16	60	2.6	5.1	3.904	21.0		

Detector : Data Centre

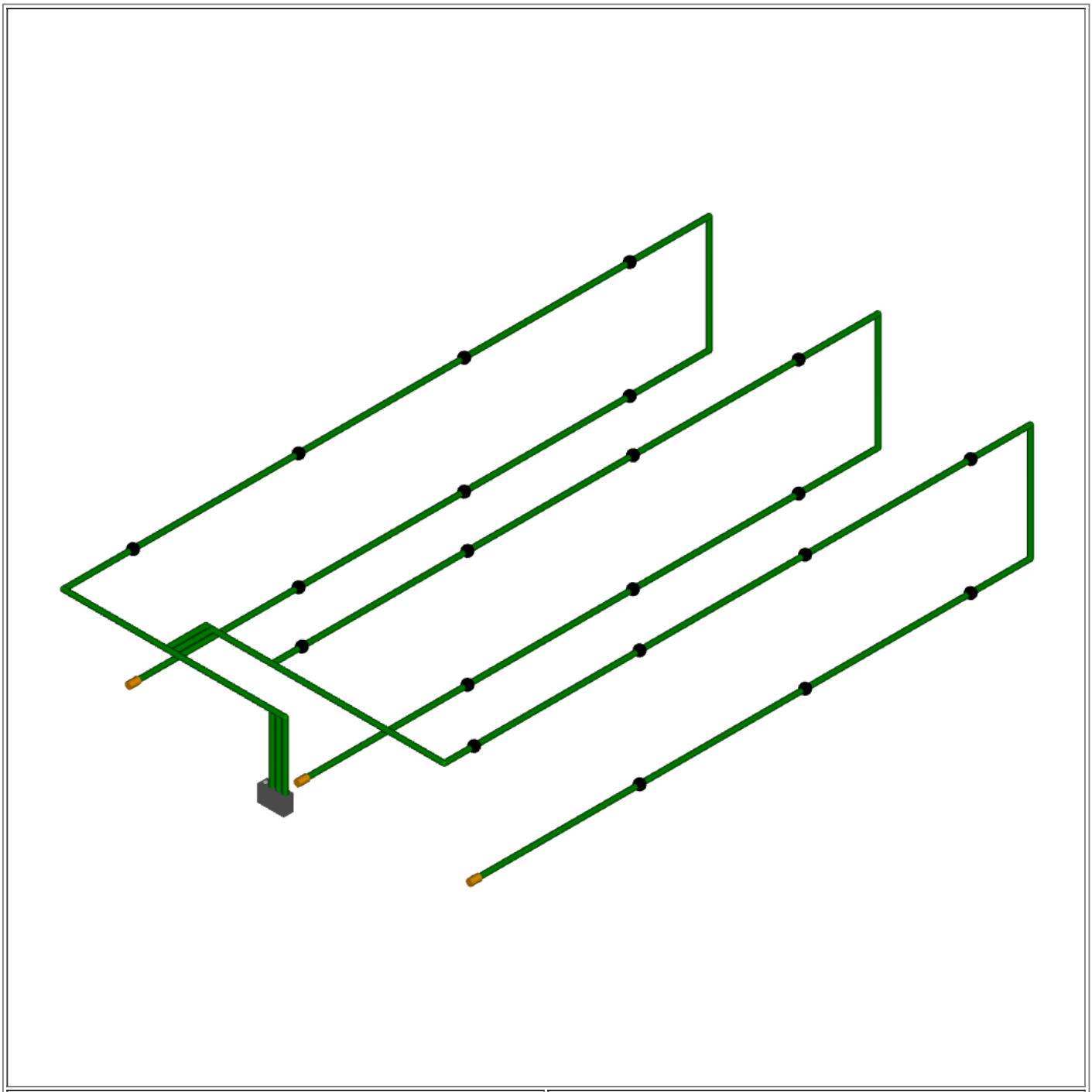
Type	VESDA VLP
Endcap Usage	Create a Balanced Design
Application	default
Aspirator Speed	3600
Fire	0.200%/m
Air Temperature	20.0°C
Absolute Pressure	1013hPa
System Flowrate	89.8l/min
Total Pipe Length	148.1m
Number Of Sample Points	24
Maximum Transport Time	65
Minimum Hole Flow Rate	2.0l/min
Exhaust Length	0.0m
Exhaust Diameter	21.0mm
Exhaust Pressure Drop	0Pa
Inverted Detector	No

Sampling Point Sensitivity

Threshold	Level	Classification	Hole Aggregation
Fire	0.200%/m		1

Group Details

	Hole Sensitivity	Pressure	Transport Time	Hole Diameter	[Default Group]
Group Type					
Max Target Aggregate Sensitivity					0.300
Min Target Aggregate Sensitivity					0.100
Contribution ratio(%)					100
Applied Max Aggregate Sensitivity					0.300
Applied Min Aggregate Sensitivity					0.100
Target Suction Pressure					25
Target Balance					70
Exclude from Autobalance					0
1:Section0-1	4.443	107	10	3.0	X
1:Section0-2	4.664	97	13	3.0	X
1:Section0-3	4.866	89	16	3.0	X
1:Section0-4	5.038	83	20	3.0	X
1:Section0-5	5.245	77	28	3.0	X
1:Section0-6	5.362	73	35	3.0	X
1:Section0-7	5.446	71	45	3.0	X
1:Section0-8	4.669	70	65	3.0	X
2:Section0-1	4.246	117	7	3.0	X
2:Section0-2	4.450	107	10	3.0	X
2:Section0-3	4.637	98	13	3.0	X
2:Section0-4	4.797	92	17	3.0	X
2:Section0-5	5.016	84	26	3.0	X
2:Section0-6	5.123	80	33	3.0	X
2:Section0-7	5.199	78	42	3.0	X
2:Section0-8	4.456	77	60	3.0	X
3:Section0-1	4.269	116	7	3.0	X
3:Section0-2	4.475	105	10	3.0	X
3:Section0-3	4.664	97	13	3.0	X
3:Section0-4	4.825	91	17	3.0	X
3:Section0-5	5.047	83	26	3.0	X
3:Section0-6	5.155	79	33	3.0	X
3:Section0-7	5.232	77	43	3.0	X
3:Section0-8	4.484	76	61	3.0	X
Number of holes					24
Flow Share(%)					100
Aggregate Sensitivity					0.200
Balance(%)					78
Suction pressure (least)					70



Isometric Data Centre	

Pipe:Pipe 1

Total Pipe Length	51.6m
Ambient Pressure	0Pa
Sector Pressure	143Pa
Number of Sample Points	8
Pipe Flowrate	29.1l/min

Section0

Pipe Diameter 21.0mm

#		Distance m	Relative m	Direction	Hole Diameter mm	Capillary Length	Transport Time sec	Pressure Pa	Flow l/min	Flow %	Hole Sensitivity %/m	Pipe Diameter mm	Capillary Diameter	Intersection Pressure
-	**Bend 90**	2.00	2.00	L										
-	**Bend 90**	5.40	3.40	F										
-	**Bend 90**	6.60	1.20	R										
-	**Bend 90**	13.60	7.00	F										
1:Section0-1	**Hole**	14.50	0.90		3.0		10	107	4.0	4.5	4.443	21.0		
1:Section0-2	**Hole**	19.50	5.00		3.0		13	97	3.9	4.3	4.664	21.0		
1:Section0-3	**Hole**	24.50	5.00		3.0		16	89	3.7	4.1	4.866	21.0		
1:Section0-4	**Hole**	29.50	5.00		3.0		20	83	3.6	4.0	5.038	21.0		
-	**Bend 90**	31.30	1.80	D										
-	**Bend 90**	34.80	3.50	B										
1:Section0-5	**Hole**	36.60	1.80		3.0		28	77	3.4	3.8	5.245	21.0		
1:Section0-6	**Hole**	41.60	5.00		3.0		35	73	3.3	3.7	5.362	21.0		
1:Section0-7	**Hole**	46.60	5.00		3.0		45	71	3.3	3.7	5.446	21.0		
1:Section0-8	**Endcap**	51.60	5.00		3.0		65	70	3.8	4.3	4.669	21.0		

Pipe:Pipe 2

Total Pipe Length	47.8m
Ambient Pressure	0Pa
Sector Pressure	143Pa
Number of Sample Points	8
Pipe Flowrate	30.4l/min

Section0

Pipe Diameter 21.0mm

#		Distance m	Relative m	Direction	Hole Diameter mm	Capillary Length	Transport Time sec	Pressure Pa	Flow l/min	Flow %	Hole Sensitivity %/m	Pipe Diameter mm	Capillary Diameter	Intersection Pressure
-	**Bend 90**	2.00	2.00	L										
-	**Bend 90**	5.40	3.40	F										
-	**Bend 90**	6.60	1.20	R										
-	**Bend 90**	8.60	2.00	F										
2:Section0-1	**Hole**	9.50	0.90		3.0		7	117	4.2	4.7	4.246	21.0		
2:Section0-2	**Hole**	14.50	5.00		3.0		10	107	4.0	4.5	4.450	21.0		
2:Section0-3	**Hole**	19.50	5.00		3.0		13	98	3.9	4.3	4.637	21.0		
2:Section0-4	**Hole**	24.50	5.00		3.0		17	92	3.7	4.2	4.797	21.0		
-	**Bend 90**	26.90	2.40	D										
-	**Bend 90**	30.40	3.50	B										
2:Section0-5	**Hole**	32.80	2.40		3.0		26	84	3.6	4.0	5.016	21.0		
2:Section0-6	**Hole**	37.80	5.00		3.0		33	80	3.5	3.9	5.123	21.0		
2:Section0-7	**Hole**	42.80	5.00		3.0		42	78	3.5	3.8	5.199	21.0		
2:Section0-8	**Endcap**	47.80	5.00		3.0		60	77	4.0	4.5	4.456	21.0		

Pipe:Pipe 3

Total Pipe Length	48.7m
Ambient Pressure	0Pa
Sector Pressure	143Pa
Number of Sample Points	8
Pipe Flowrate	30.3l/min

Section0

Pipe Diameter 21.0mm

#		Distance m	Relative m	Direction	Hole Diameter mm	Capillary Length	Transport Time sec	Pressure Pa	Flow l/min	Flow %	Hole Sensitivity %/m	Pipe Diameter mm	Capillary Diameter	Intersection Pressure
-	**Bend 90**	2.00	2.00	L										
-	**Bend 90**	8.30	6.30	F										
3:Section0-1	**Hole**	10.40	2.10		3.0		7	116	4.2	4.7	4.269	21.0		
3:Section0-2	**Hole**	15.40	5.00		3.0		10	105	4.0	4.5	4.475	21.0		
3:Section0-3	**Hole**	20.40	5.00		3.0		13	97	3.9	4.3	4.664	21.0		
3:Section0-4	**Hole**	25.40	5.00		3.0		17	91	3.7	4.1	4.825	21.0		
-	**Bend 90**	27.80	2.40	D										
-	**Bend 90**	31.30	3.50	B										
3:Section0-5	**Hole**	33.70	2.40		3.0		26	83	3.6	4.0	5.047	21.0		
3:Section0-6	**Hole**	38.70	5.00		3.0		33	79	3.5	3.9	5.155	21.0		
3:Section0-7	**Hole**	43.70	5.00		3.0		43	77	3.4	3.8	5.232	21.0		
3:Section0-8	**Endcap**	48.70	5.00		3.0		61	76	4.0	4.5	4.484	21.0		

Detector : UPS Room

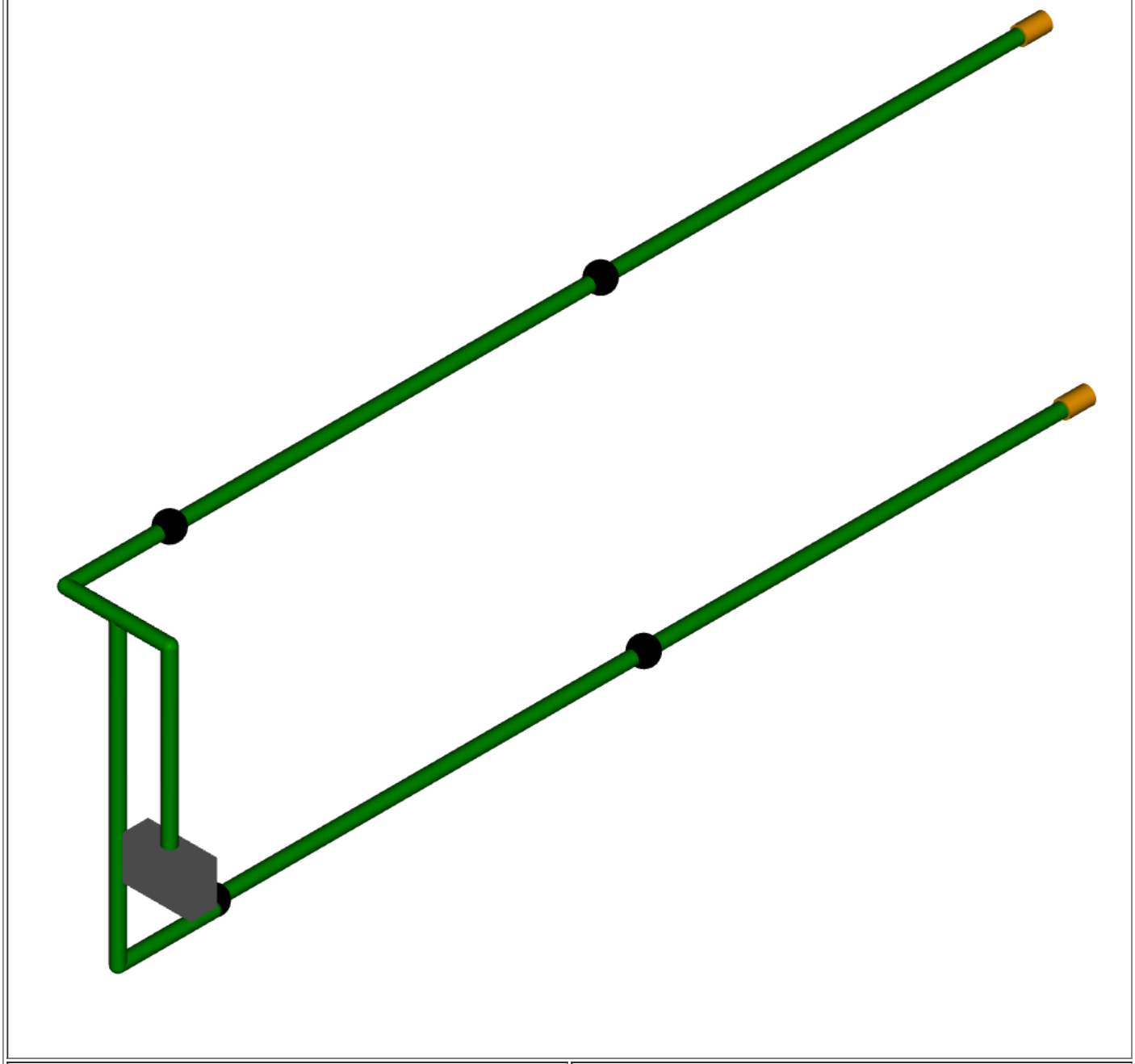
Type	VESDA VLC V2 80m/240ft
Endcap Usage	Create a Balanced Design
Application	default
Fire	0.200%/m
Air Temperature	20.0°C
Absolute Pressure	1013hPa
System Flowrate	34.4l/min
Total Pipe Length	29.2m
Number Of Sample Points	6
Maximum Transport Time	26
Minimum Hole Flow Rate	2.0l/min
Exhaust Length	0.0m
Exhaust Diameter	21.0mm
Exhaust Pressure Drop	0Pa
Inverted Detector	No

Sampling Point Sensitivity

Threshold	Level	Classification	Hole Aggregation
Fire	0.200%/m		1

Group Details

	Hole Sensitivity	Pressure	Transport Time	Hole Diameter	[Default Group]
Group Type					
Max Target Aggregate Sensitivity					0.300
Min Target Aggregate Sensitivity					0.100
Contribution ratio(%)					100
Applied Max Aggregate Sensitivity					0.300
Applied Min Aggregate Sensitivity					0.100
Target Suction Pressure					25
Target Balance					70
Exclude from Autobalance					0
1:Floor Void-1	1.266	194	9	3.0	X
1:Floor Void-2	1.278	190	15	3.0	X
1:Floor Void-3	1.092	188	26	3.0	X
1:Section0-1	1.254	197	5	3.0	X
1:Section0-2	1.266	194	12	3.0	X
1:Section0-3	1.082	192	23	3.0	X
Number of holes					6
Flow Share(%)					100
Aggregate Sensitivity					0.200
Balance(%)					85
Suction pressure (least)					188



Isometric UPS Room	

Pipe:Main Pipe

Total Pipe Length	29.2m
Ambient Pressure	0Pa
Sector Pressure	209Pa
Number of Sample Points	6
Pipe Flowrate	34.4l/min

Section0

Pipe Diameter 21.0mm

#		Distance m	Relative m	Direction	Hole Diameter	Capillary Length	Transport Time	Pressure	Flow	Flow %	Hole Sensitivity	Pipe Diameter mm	Capillary Diameter	Intersection Pressure
-	Bend 90	2.00	2.00	L										
-	Branch	2.60	0.60	D										
-	Bend 90	3.20	0.60	F										
1:Section0-1	Hole	4.40	1.20		3.0		5	197	5.5	15.9	1.254	21.0		
1:Section0-2	Hole	9.40	5.00		3.0		12	194	5.4	15.8	1.266	21.0		
1:Section0-3	Endcap	14.40	5.00		3.0		23	192	6.4	18.5	1.082	21.0		

Floor Void

Pipe Diameter 21.0mm

#		Distance m	Relative m	Direction	Hole Diameter mm	Capillary Length	Transport Time sec	Pressure Pa	Flow l/min	Flow %	Hole Sensitivity %/m	Pipe Diameter mm	Capillary Diameter	Intersection Pressure
-	Bend 90	6.10	3.50	F										
-	Bend 90	7.20	1.10	L										
-	Bend 90	7.30	0.10	F										
1:Floor Void-1	Hole	7.40	0.10		3.0		9	194	5.4	15.8	1.266	21.0		
1:Floor Void-2	Hole	12.40	5.00		3.0		15	190	5.4	15.6	1.278	21.0		
1:Floor Void-3	Endcap	17.40	5.00		3.0		26	188	6.3	18.3	1.092	21.0		