



11 Commercial Street - Newport



DW 172 - Typical Cookline Calculation

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Revision
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Kitchen Ventilation Design - "Example Cookline For Vendor"

Project	11 Commercial Street Newport	Designed By	Shane Burchell	Date	15/06/2025
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Item Ref	Appliance	Width (m)	Depth (m)	Area (m²)	Power	Coefficient	Volume
	Benches, Table & Worktops	0.600	0.800	0.480	N/A	0.03	0.014
	Deep Fat Fryer *(3no.)	0.600	0.800	0.480	Electric	0.45	0.216
	Benches, Table & Worktops	0.600	0.800	0.480	N/A	0.03	0.014
	Deep Fat Fryer *(3no.)	0.350	0.500	0.175	Electric	0.45	0.079
	Induction Hob, Ceramic Stove	0.380	0.600	0.228	Electric	0.20	0.046
	Mild Steel Griddle	0.900	0.600	0.540	Electric	0.25	0.135
	Bains Marie, Hot Cupboard	0.600	0.300	0.180	Electric	0.15	0.027
Drawing Ref	Drawing			Theoretical Extract Volume Required (m³/sec)			0.531
Revision	Rev 0	Canopy Factor		Overhead Wall (OPEN BOTH ENDS)			1.25

CANOPY DETAILS			
Canopy Type	Wall - Extract Only		
Canopy Length	3000	mm	
Canopy Depth	1300	mm	
Canopy Back Height	500	mm	
Canopy Front Height	500	mm	
Canopy Area	3.900	m²	
Face Velocity Method	0.975	m³/sec	

FILTER DETAILS			
Filter Type	Baffle Filter		
Filter Size	500 x 500	mm	
Number Of Filters	4	no.	
Volume Per Filter	0.166	m³/sec	
Free Area Per Filter	0.098	m²	
Velocity Per Filter	1.7	m/s	
Pressure Loss	27	Pa	

GRILLE DETAILS			
Grille Type	Canopy - Perforated		
Grille Size	1395 x 345	mm	
Number Of Grilles	2	no.	
Volume Per Grille	0.325	m³/sec	
Free Area Per Grille	0.193	m²	
Velocity Per Grille	1.7	m/s	
Pressure Loss	38	Pa	

EXTRACT SYSTEM DETAILS			
Extract Volume Required	0.664	0.800	m³/sec
Header Velocity (Advised 6 - 9)	6.3	m/s	
Header Duct Size (Rectangle)	500 x 250	mm	
Number Of Spigot	1	no.	
Spigot Velocity (Advised 5 - 7)	6.3	m/s	
Spigot Duct Size (Rectangle)	500 x 250	mm	
Termination Type			
Termination Velocity		m/s	
Termination Size (Rectangle)		mm	
Estimated System Meterage		m	
Pressure Loss Of Ductwork		Pa	
Inlet Attenuation	TBC	mm	
Outlet Attenuation	TBC	mm	
Odour Control	TBC		
Smoke Control	TBC		
Grease Control	TBC		
Number Of Access Doors	TBC		

SUPPLY AIR SYSTEM DETAILS			
81% Supply Volume Required	0.650	m³/sec	
Header Velocity (Advised 6 - 8)	7.0	m/s	
Header Duct Size (Rectangle)	400 x 250	mm	
Number Of Spigot	1	no.	
Spigot Velocity (Advised 3 - 5)	5.0	m/s	
Spigot Duct Size (Rectangle)	500 x 250	mm	
Termination Type			
Termination Velocity		m/s	
Termination Size (Rectangle)		mm	
Estimated System Meterage		m	
Pressure Loss Of Ductwork		Pa	
Outlet Attenuation	TBC	mm	
Inlet Attenuation	TBC	mm	
G4 Pleated Filters		mm	
Number Of G4 Pleated Filters		no.	
Electric Heat Battery 16° Rise	TBC	kW	
Insulation	TBC	m²	