

Dandy Highwayman

Specific Extract Flow Rate Calculation

Project Number	E23453	Project Name	Dandy Highwayman	Client	Carlton
Canopy Size	4900 x 1250	Canopy Type	Wall Canopy (Open Both Ends)	Date	06/11/2025



Item Ref:	Appliance	Fuel Source	Appliance Dimensions		Area (M ²)	Coefficient	Extract Volume
			Width (mm)	Depth (mm)			
1	Deep Fat Fryer	Electric	600	600	0.36	0.45	0.16
2	Chargrill / Charbroiler	Electric	900	620	0.558	0.52	0.29
3	Convection Oven	Electric	600	623	0.3738	0.3	0.11
4	Convection Oven	Electric	600	623	0.3738	0.3	0.11
5	Hob Top	Electric	600	620	0.372	0.25	0.09
6	Deep Fat Fryer	Electric	270	410	0.1107	0.45	0.05
7	Griddle (Mild Steel)	Electric	730	470	0.3431	0.25	0.09

Duct & Spigot Sizes					System Volume Details	
	Number	Velocity	Square	Ø (mm)		
Extract Duct Single Branch	1	7.0 M/Sec	422 mm	476 Ø	Theoretical Extract Volume	0.91 M ³ /Sec
Supply Duct Single Branch	1	7.0 M/Sec	389 mm	439 Ø	Canopy Factor	1.25
Extract Spigots	2	6.0 M/Sec	322 mm	257 Ø	DW172 Extract Volume	1.13 M ³ /Sec
Supply Spigots	2	4.0 M/Sec	364 mm	290 Ø	DW172 Supply Volume (85%)	0.96 M ³ /Sec
Extract Weather Louvre (50% Free Area)	1	3.0 M/Sec	911 mm	-	Safety Margin Over DW172 Requirement	10%
Supply Weather Louvre (50% Free Area)	1	3.0 M/Sec	840 mm	-	Project Design Extract Volume	1.24 M³/Sec
					Project Design Supply Volume	1.06 M³/Sec

Calculation is based on BESA DW172 Thermal Convection Method relates to under canopy equipment only .

No allowance has been made for general kitchen ventilation.