



Stainless Steel Fabrication

Commercial Kitchen Design and Installation

Ventilation strategy for the below address

Address

The Shack Kitchen & Bar
32 Sun St,
Hitchin
SG5 1AH

Installation of extraction system proposed at the above address to *EMAQ Guidance Control of Odour and Noise from Commercial Kitchen Exhaust Systems*

All canopy and ductwork to *BESA DW172 DW144*

If required a noise assessment can be undertaken we recommend noiseharvest.com

Canopy dimensions to Dw172 in mm

Length	Width	Depth Back	Depth Front
4450	1200	500	500

Extraction Filtration

Longar type 3 baffle filters

Supply Air Filtration

Longar G4 Filter

Odour control

1 x Rydair ry500 electrostatic precipitation unit
1 x double pass Carbon filter unit 0.8 sec dwell time
1 x mesh filter 495 x 495 x 50mm
1 x G4 Pleated filter 495 x 495 50mm



Stainless Steel Fabrication
Commercial Kitchen Design and Installation

UNIT 5 FIREFLY SQUARE PLANTATION ROAD BURSCOUGH L408JT

Tel: 01704-893945 Fax: 0844-4122296

Email: fusionhot1@gmail.com Web: www.facebook.com/fusionhot

Stainless Steel Fabrication Commercial Kitchen Design and Installation

Extract Fan Model	Maximum absorbed power (W)	Maximum absorbed current (A)		Maximum air volume (m3/h)	Sound pressure level* (dB(A)3m)	Speed (r.p.m.)	Weight (Kg)
		230v	400v				
CVAT/4-12000/560 ND 2,2	2093	7.3	4.2	11.100	51	1470	82
Supply Air Fan	Maximum absorbed power (W)	Maximum absorbed current (A)		Maximum air volume (m3/h)	Sound pressure level* (dB(A)3m)	Speed (r.p.m.)	Weight (Kg)
		230V	400V				
CVAT/4-9000/500 ND 1,1	1347	4.4	2.5	7.900	48	1480	58

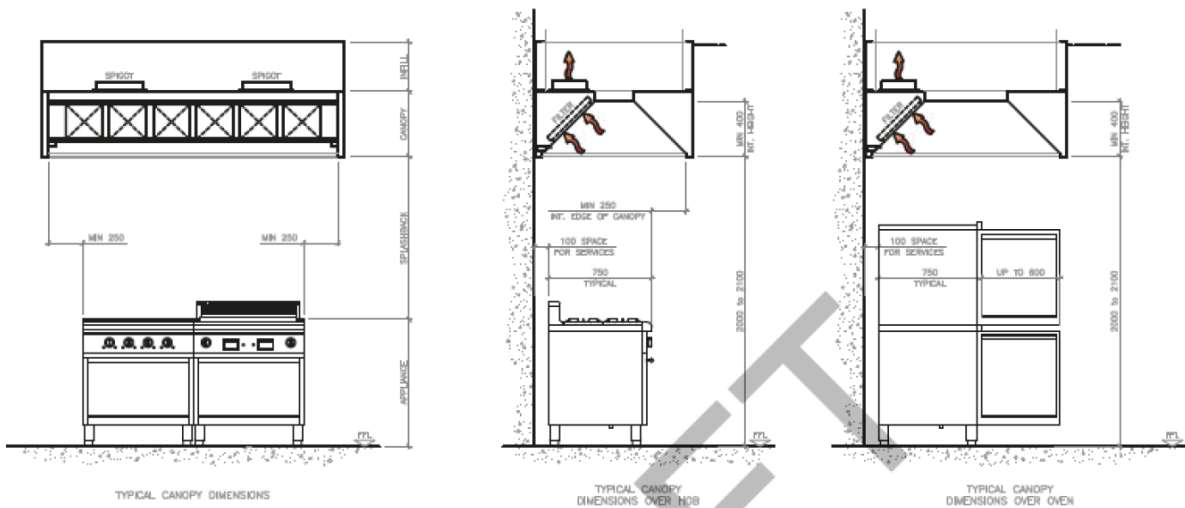
Attenuation Octave – Band Mid Frequencies (Hz)									
Diameter	Length	63	125	250	500	1000	2000	4000	8000
500 x 2 1D Supply Air	500	2	3	6	13	14	10	10	5
560 x 2 1D Extract	560	2	4	7	14	14	9	10	7

Cleaning and maintenance

Cleaning and maintenance schedule to be supplied to client to TR19 guidelines
This must be carried out by a competent registered BESA Ductwork cleaner no longer than 12 month intervals or earlier

Stainless Steel Fabrication Commercial Kitchen Design and Installation

Typical extraction canopy's below



FUSIONHOT



Stainless Steel Fabrication
Commercial Kitchen Design and Installation

UNIT 5 FIREFLY SQUARE PLANTATION ROAD BURSCOUGH L408JT

Tel: 01704-893945 Fax: 0844-4122296

Email: fusionhot1@gmail.com Web: www.facebook.com/fusionhot

Stainless Steel Fabrication Commercial Kitchen Design and Installation

Risk Assessment for Odour EMAQ

Odour control must be designed to prevent odour nuisance in a given situation. The following score methodology is suggested as a means of determining odour control requirements using a simple risk assessment approach. The odour control requirements considered here are consistent with the performance requirements listed in this report.

Criteria	Score	Score	Details
Dispersion	Very poor	20	Low level discharge, discharge into courtyard or restriction on stack.
	Poor	15	Not low level but below eaves, or discharge at below 10 m/s.
	Moderate	10	Discharging 1m above eaves at 10 -15 m/s.
	Good	5	Discharging 1m above ridge at 15 m/s.
Proximity of receptors	Close	10	Closest sensitive receptor less than 20m from Kitchen discharge.
	Medium	5	Closest sensitive receptor between 20 and 100m from kitchen discharge.
	Far	1	Closest sensitive receptor more than 100m from kitchen discharge ¹ .
Size of kitchen	Large	5	More than 100 covers or large sized take away.
	Medium	3	Between 30 and 100 covers or medium sized take away.
	Small	1	Less than 30 covers or small take away ¹ .
Cooking type (odour and grease loading)	Very high	10	Pub (high level of fried food), fried chicken, burgers or fish & chips. <i>Turkish, Middle Eastern or any premises cooking with solid fuel</i>
	High	7	Vietnamese, Thai, Indian, <i>Japanese, Chinese, steakhouse</i>
	Medium	4	<i>Cantonese, Italian, French, Pizza (gas fired),</i>
	Low	1	<i>Most pubs (no fried food, mainly reheating and sandwiches etc), Tea rooms¹</i>



Stainless Steel Fabrication

Commercial Kitchen Design and Installation

Premises type	Dispersion	Proximity of receptors	Size of Kitchen	Cooking Type	Total Score
Takeaway	20	10	3	10	43

Impact Risk	Odour Control Requirement	Significance Score*
Low to Medium	Low level odour control	Less than 20
High	High level odour control	20 to 35
Very High	Very high level odour control	More than 35
* based on the sum of contributions from dispersion, proximity of receptors, size of kitchen and cooking type:		



Stainless Steel Fabrication
Commercial Kitchen Design and Installation

UNIT 5 FIREFLY SQUARE PLANTATION ROAD BURSCOUGH L408JT

Tel: 01704-893945 Fax: 0844-4122296

Email: fusionhot1@gmail.com Web: www.facebook.com/fusionhot

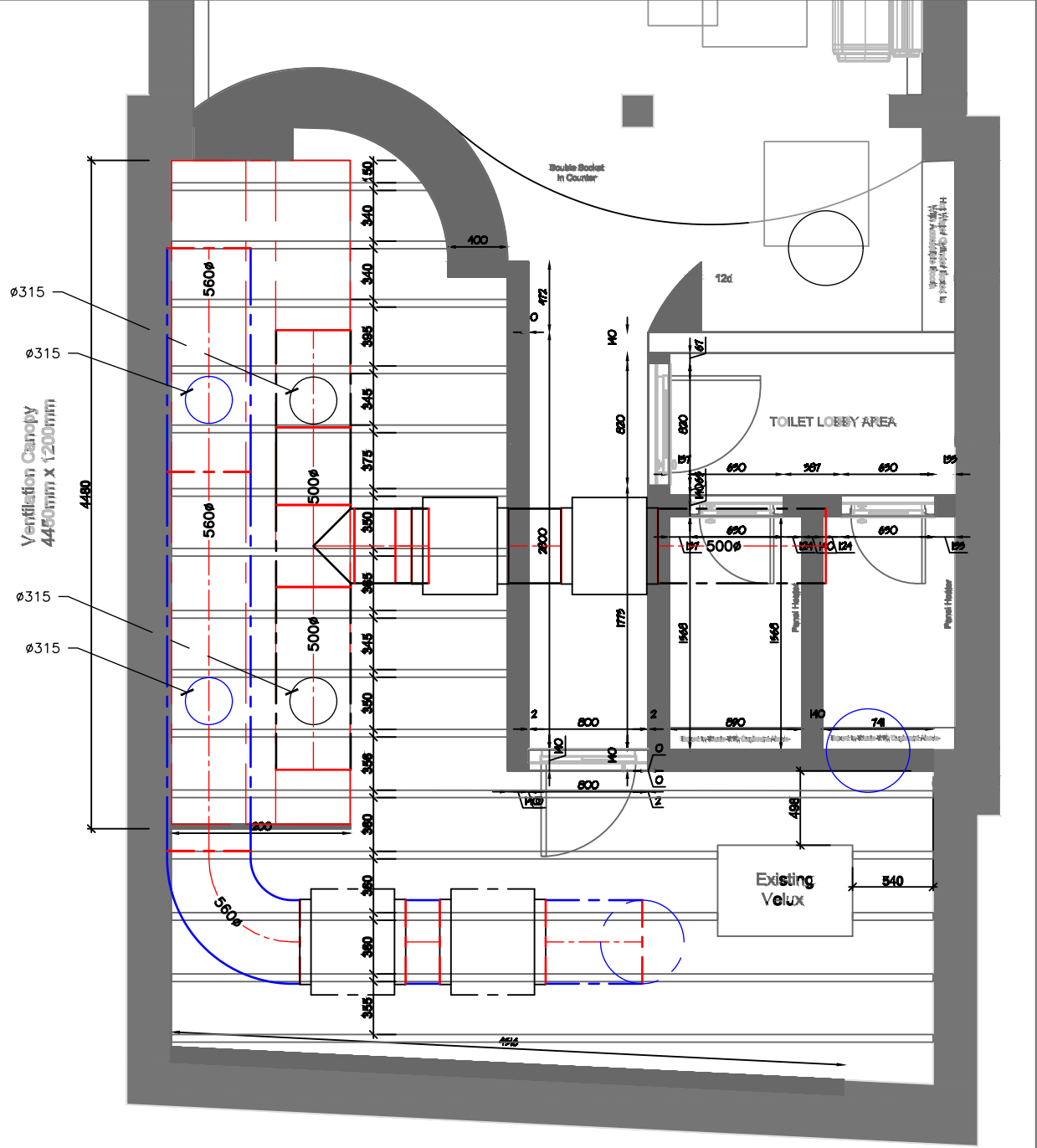
Stainless Steel Fabrication

Commercial Kitchen Design and Installation

Odour Arrestment Plant Performance	
Low to medium level control may include:	1. Fine filtration or ESP followed by carbon filtration (carbon filters rated with a 0.1 second Residence time). 2. Fine filtration followed by counteractant/neutralising system to achieve the same level of Control as 1.
High level odour control may include	1. Fine filtration or ESP followed by carbon filtration (carbon filters rated with a 0.2 - 0.4 second residence time). 2. Fine filtration or ESP followed by UV ozone system to achieve the same level of control as 1.
Very high level of odour control may include:	1. Fine filtration or ESP followed by carbon filtration (carbon filters rated with a 0.4 0.8 Second residence time). 2. Fine filtration or ESP followed by carbon filtration and by counteractant/neutralising system To achieve the same level of control as 1. 3. Fine filtration or ESP followed by UV ozone system to achieve the same level of control As 1.

Supply Air
1 x 500 cvat acoustic box Fan mounted
on unistrut av kit
1 x G4 Filter Box
2 x 500 Silencers

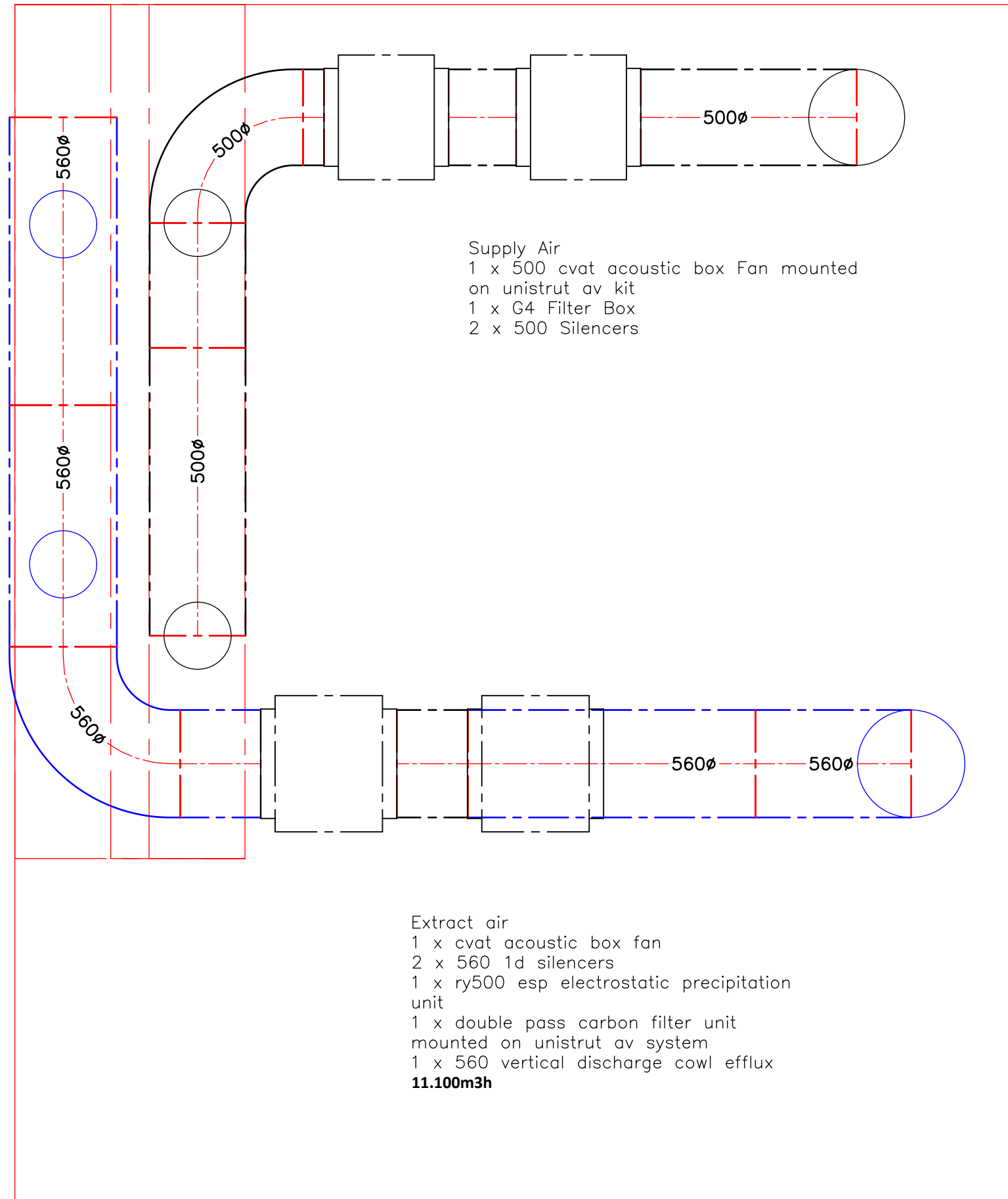
Extract air
1 x cvat acoustic box fan
2 x 560 1d silencers
1 x ry500 esp electrostatic precipitation
unit
1 x double pass carbon filter unit
mounted on unistrut av system
1 x 560 vertical discharge cowl efflux
11.100m3h



Colin Hill Bar & Catering Supplies Limited
Colin Hill Building Solutions Limited
www.colin-hill.com

6" x 2" JOISTS

Designed by	Colin Hill Building Solutions Limited	Drawn by	Colin Hill Building Solutions Limited
Checked by	Colin Hill Building Solutions Limited	Reviewed by	Colin Hill Building Solutions Limited
Approved by	Colin Hill Building Solutions Limited	Project Manager	Colin Hill Building Solutions Limited
Date	2024-01-01	Revision	01



ACOUSTIC KITCHEN EXTRACT FANS

CVAB / CVAT ND series

Range of direct drive backward curved centrifugal cabinet fans designed for ventilation of commercial kitchens and industrial applications.

Cabinet fan manufactured from aluminium profiles and double thickness side panels internally lined with 25 mm thickness of fireproof fibreglass acoustic insulation. All versions except 6000/500:- circular duct connection flange on the inlet and outlet. 6000/500 versions - circular duct on the inlet, square on the outlet. CVAB-N/ CVAT-N incorporates direct drive backward curved centrifugal impeller, manufactured from aluminium (CVAB-N) or steel (CVAT-N) sheet, with motor fitted inside the air stream.

Motors

CVAB-ND

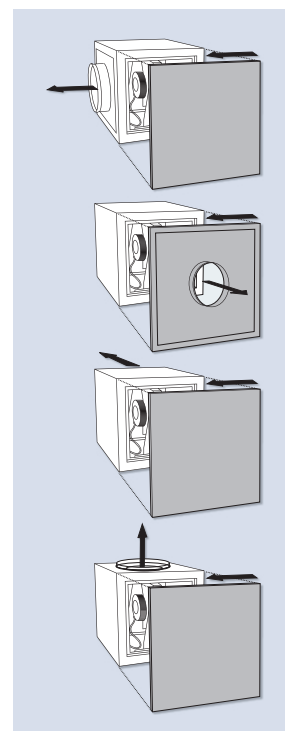
Single-phase external rotor motors 230V 50Hz, IP55, class F, with thermal protection, speed controllable by voltage. Working temperature from -40°C to 60°C.

CVAT-ND

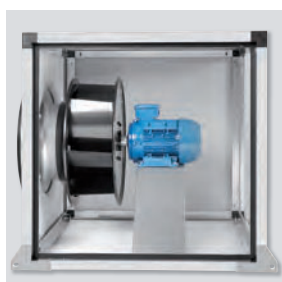
Three-phase 4 and 6 pole motors 230/400V 50Hz, IP55, class F, with thermal protection (PTC), speed controllable by inverter. Working temperature from -20°C to 40°C.



PART L2: 2013
COMPLIANT

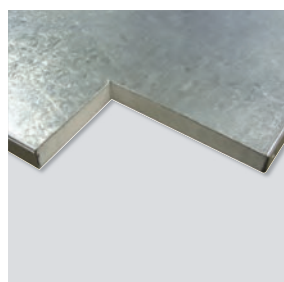


Versatile design



Backward curved centrifugal impellers

To prevent the build-up of dirt. Dynamically balanced.



Low noise level

Double thickness side panels lined with 25 mm thickness of fireproof fibreglass acoustic insulation.



Robustness

Quality finished aluminium profiles and plastic corners provides a robust construction.

Specific applications



Commercial
kitchens

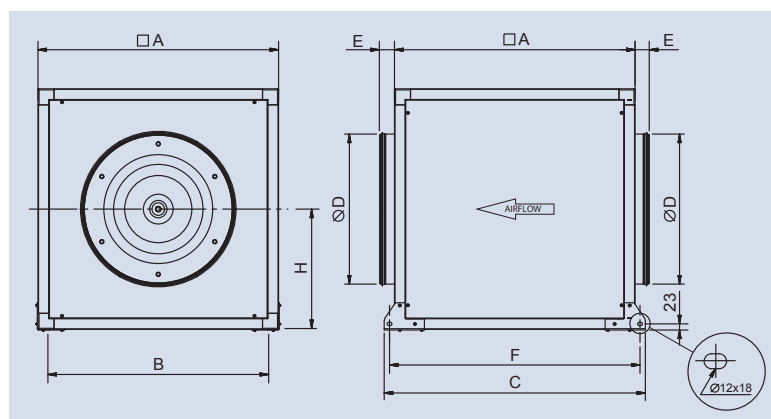
TECHNICAL CHARACTERISTICS

Before installation check that the product electrical characteristics listed on the data plate label (voltage, power, frequency, etc.) match those of the intended electrical supply.

Model	Speed (rpm)	Maximum absorbed power (W)	Maximum absorbed current (A)		Maximum airflow (m³/h)	Sound pressure level* (dB(A))	Weight (kg)
			230V	400V			
SINGLE PHASE 4 POLE							
CVAB/4-1400/250 ND	1300	107	0,5	–	1280	39	13,0
CVAB/4-2000/315 ND	1390	169	0,7	–	1820	43	13,0
CVAB/4-3000/355 ND	1370	312	1,3	–	2800	45	30,0
CVAB/4-4000/400 ND	1390	557	2,3	–	4210	50	32,0
CVAB/4-6000/450 ND	1380	930	3,6	–	6140	54	46,0
CVAB/4-6000/500 ND	1470	924	3.9		6122	59	38,0
CVAB/4-9000/500 ND	1390	1289	5,3	–	7580	57	58,0
THREE PHASE 4 POLE							
CVAT/4-1400/250 ND 0,18	1480	116	0,9	0,5	1.230	33	13,0
CVAT/4-2000/315 ND 0,18	1460	169	0,9	0,5	1.830	37	13,0
CVAT/4-3000/355 ND 0,18	1430	251	0,9	0,5	2.660	40	30,0
CVAT/4-4000/400 ND 0,37	1445	438	1,6	0,9	3.850	43	32,0
CVAT/4-6000/450 ND 0,75	1465	747	3,0	1,7	5.620	45	46,0
CVAT/4-6000/500 ND 0.92	1470	943	3.1	1.8	6.277	59	38,0
CVAT/4-9000/500 ND 1,1	1480	1347	4,4	2,5	7.900	48	58,0
CVAT/4-12000/560 ND 2,2	1470	2093	7,3	4,2	11.100	51	82,0
CVAT/4-16000/630 ND 3	1460	3234	10,3	5,9	14.640	53	113,0
THREE PHASE 6 POLE							
CVAT/6-15000/710 ND 1.5	970	1828	6.3	3.6	14.320	55	149,0

* sound pressure level measured in free field condition at 3m.

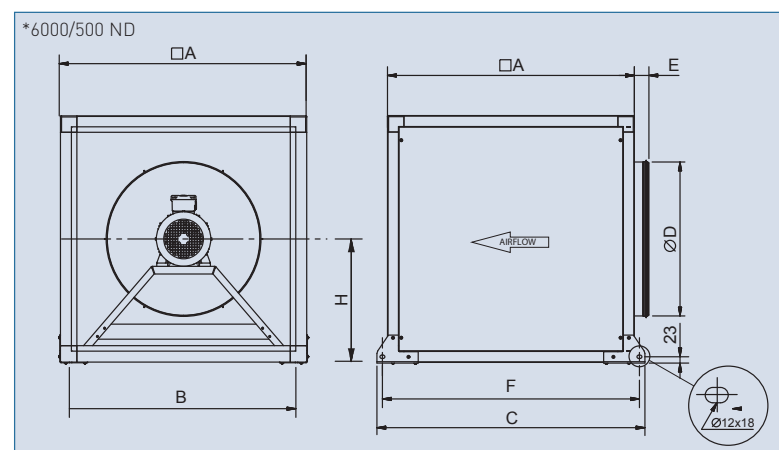
DIMENSIONS (mm)



Model CVAB - CVAT	A	B	C	ØD	E	F	H
1400/250 ND	500	457	574	250*	58	534	250
2000/315 ND	500	457	574	315*	58	534	250
3000/355 ND	650	607	724	355*	58	684	325
4000/400 ND	650	607	724	400*	58	684	325
6000/450 ND	750	707	824	450*	58	784	375
6000/500 ND*	650	607	724	500 ^²	58	684	325
9000/500 ND	800	757	874	500*	58	834	400
12000/560 ND	900	826	977	560*	58	937	450
16000/630 ND	1000	959	1077	630*	58	1037	500
15000/710 ND	1100	1059	1177	710*	58	1137	550

* inlet and outlet

^² inlet only



Performance Data



Axial airflow configuration with outlet spigot plate fitted

Model	Pascals	0	50	100	150	200	250	300	350	400	450	500	550	600
SINGLE PHASE														
CVAB/4-1400/250 ND	0.356	0.313	0.266	0.197	0.093									
CVAB/4-2000/315 ND	0.506	0.460	0.414	0.363	0.307	0.237	0.049							
CVAB/4-3000/355 ND	0.779	0.729	0.675	0.613	0.544	0.464	0.364	0.162						
CVAB/4-4000/400 ND	1.173	1.113	1.052	0.987	0.913	0.826	0.729	0.623	0.499	0.301				
CVAB/4-6000/450 ND	1.706	1.640	1.572	1.500	1.420	1.332	1.235	1.130	1.017	0.886	0.728	0.508	0.215	
CVAB/4-6000/500 ND	1.700	1.640	1.570	1.490	1.390	1.320	1.220	1.110	0.989	0.863	0.715	0.487	-	
CVAB/4-9000/500 ND	2.104	2.031	1.957	1.880	1.799	1.712	1.621	1.526	1.424	1.309	1.181	1.040	0.827	
THREE PHASE														
CVAT/4-1400/250 ND	0.342	0.306	0.262	0.206	0.080									
CVAT/4-2000/315 ND	0.505	0.461	0.421	0.378	0.309	0.108								
CVAT/4-3000/355 ND	0.739	0.691	0.639	0.577	0.501	0.394	0.187							
CVAT/4-4000/400 ND	1.070	1.016	0.959	0.900	0.837	0.767	0.676	0.537	0.292					
CVAT/4-6000/450 ND	1.562	1.503	1.443	1.379	1.309	1.233	1.153	1.064	0.949	0.786	0.488			
CVAT/4-6000/500 ND	1.740	1.700	1.600	1.520	1.440	1.350	1.240	1.130	1.020	0.874	0.728	0.489	-	
CVAT/4-9000/500 ND	2.267	2.203	2.138	2.072	2.003	1.929	1.849	1.756	1.639	1.504	1.373	1.229	1.031	
CVAT/4-12000/560 ND	3.084	3.015	2.946	2.875	2.803	2.727	2.646	2.558	2.462	2.352	2.224	2.080	1.932	
CVAT/4-16000/630 ND	4.069	3.989	3.908	3.825	3.742	3.656	3.568	3.477	3.381	3.280	3.172	3.055	2.928	
CVAT/6-15000/710 ND	3.963	3.828	3.688	3.538	3.368	3.158	2.864	2.531	2.236	1.876	1.258	0.478		



Axial airflow configuration with no outlet spigot plate

Model	Pascals	0	50	100	150	200	250	300	350	400	450	500	550	600
SINGLE PHASE														
CVAB/4-1400/250 ND	0.373	0.330	0.283	0.215	0.111									
CVAB/4-2000/315 ND	0.533	0.488	0.442	0.391	0.334	0.265	0.077							
CVAB/4-3000/355 ND	0.819	0.769	0.715	0.653	0.584	0.504	0.404	0.202						
CVAB/4-4000/400 ND	1.227	1.167	1.106	1.041	0.967	0.880	0.783	0.677	0.553	0.355				
CVAB/4-6000/450 ND	1.799	1.733	1.665	1.592	1.512	1.424	1.327	1.223	1.109	0.978	0.820	0.601	0.307	
CVAB/4-6000/500 ND	1.785	1.722	1.649	1.565	1.460	1.386	1.281	1.166	1.038	0.906	0.751	0.511	-	
CVAB/4-9000/500 ND	2.206	2.133	2.060	1.983	1.901	1.814	1.723	1.628	1.526	1.412	1.283	1.142	0.930	
THREE PHASE														
CVAT/4-1400/250 ND	0.359	0.323	0.279	0.223	0.097									
CVAT/4-2000/315 ND	0.532	0.488	0.448	0.405	0.337	0.136								
CVAT/4-3000/355 ND	0.779	0.731	0.679	0.617	0.541	0.434	0.227							
CVAT/4-4000/400 ND	1.124	1.070	1.013	0.954	0.891	0.821	0.730	0.591	0.346					
CVAT/4-6000/450 ND	1.654	1.596	1.536	1.471	1.401	1.325	1.245	1.157	1.041	0.878	0.580			
CVAT/4-6000/500 ND	1.827	1.785	1.680	1.596	1.512	1.418	1.302	1.187	1.071	0.918	0.764	0.513	-	
CVAT/4-9000/500 ND	2.370	2.306	2.241	2.174	2.105	2.032	1.951	1.858	1.741	1.607	1.475	1.332	1.133	
CVAT/4-12000/560 ND	3.222	3.153	3.084	3.013	2.941	2.865	2.784	2.696	2.600	2.490	2.362	2.218	2.070	
CVAT/4-16000/630 ND	4.261	4.181	4.100	4.017	3.934	3.848	3.760	3.669	3.573	3.472	3.364	3.247	3.120	
CVAT/6-15000/710 ND	4.152	4.017	3.877	3.727	3.557	3.347	3.053	2.720	2.425	2.065	1.447	0.667		



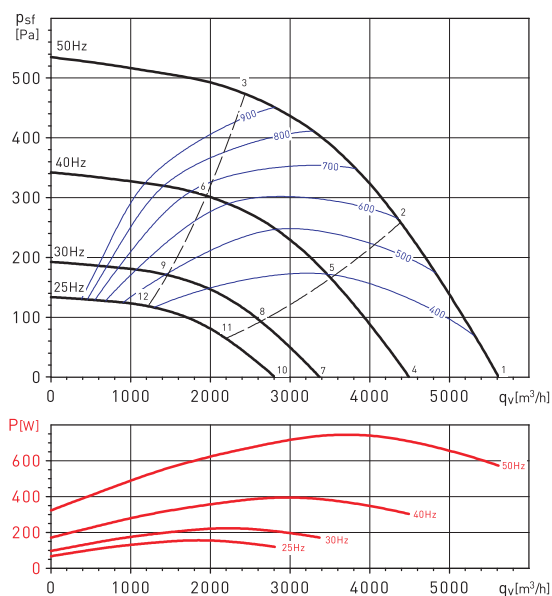
90° side outlet configuration with no outlet spigot plate

Model	Pascals	0	50	100	150	200	250	300	350	400	450	500	550	600
SINGLE PHASE														
CVAB/4-1400/250 ND	0.391	0.345	0.297	0.225	0.115									
CVAB/4-2000/315 ND	0.559	0.511	0.462	0.409	0.349	0.277	0.079							
CVAB/4-3000/355 ND	0.858	0.805	0.748	0.684	0.612	0.527	0.423	0.210						
CVAB/4-4000/400 ND	1.285	1.223	1.159	1.090	1.012	0.921	0.819	0.708	0.578	0.370				
CVAB/4-6000/450 ND	1.884	1.815	1.743	1.667	1.583	1.491	1.389	1.279	1.160	1.023	0.856	0.626	0.318	
CVAB/4-6000/500 ND	1.869	1.803	1.726	1.638	1.528	1.451	1.341	1.220	1.087	0.949	0.786	0.535	-	
CVAB/4-9000/500 ND	2.311	2.235	2.157	2.077	1.991	1.900	1.804	1.704	1.597	1.477	1.342	1.194	0.971	
THREE PHASE														
CVAT/4-1400/250 ND	0.376	0.338	0.292	0.234	0.101									
CVAT/4-2000/315 ND	0.558	0.511	0.469	0.424	0.352	0.141								
CVAT/4-3000/355 ND	0.816	0.766	0.711	0.646	0.566	0.454	0.237							
CVAT/4-4000/400 ND	1.178	1.120	1.061	0.999	0.933	0.859	0.764	0.618	0.361					
CVAT/4-6000/450 ND	1.732	1.671	1.608	1.540	1.466	1.387	1.303	1.210	1.089	0.917	0.605			
CVAT/4-6000/500 ND	1.913	1.869	1.759	1.671	1.583	1.484	1.363	1.242	1.121	0.961	0.800	0.538	-	
CVAT/4-9000/500 ND	2.483	2.416	2.348	2.278	2.205	2.128	2.044	1.946	1.823	1.682	1.544	1.393	1.185	
CVAT/4-12000/560 ND	3.376	3.304	3.231	3.157	3.081	3.001	2.916	2.824	2.723	2.608	2.473	2.322	2.166	
CVAT/4-16000/630 ND	4.465	4.380	4.295	4.209	4.121	4.031	3.939	3.842	3.742	3.636	3.522	3.399	3.266	
CVAT/6-15000/710 ND	4.350	4.208	4.062	3.904	3.725	3.505	3.196	2.846	2.537	2.158	1.510	0.690		

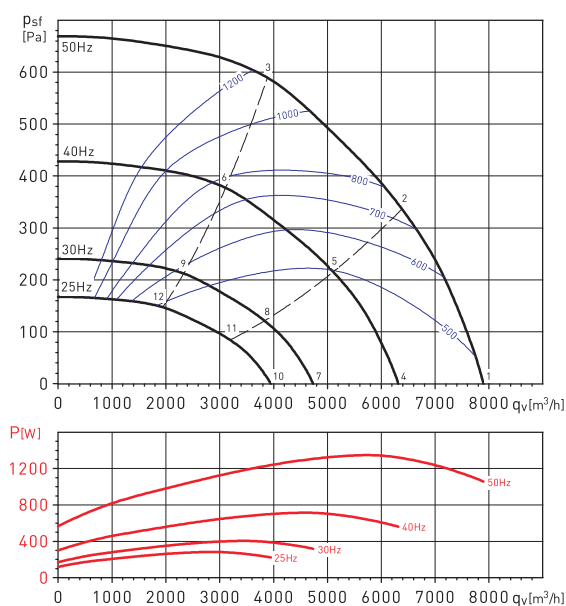
PERFORMANCE CURVES - ACOUSTIC CHARACTERISTICS

- q_v : Airflow in m^3/h .
- p_{st} : Static pressure in Pa.
- P: Input power in W.
- SFP: Specific fan power in $W/m^3/s$ (blue curves).
- Performance data in accordance with ISO 5801 and AMCA 210-99 Standards.

CVAT/4-6000/450N D 0,75kW



CVAT/4-9000/500N D 1,1kW



Working point		63	125	250	500	1000	2000	4000	8000	LwA
1	Inlet	48	71	73	74	71	74	67	62	80
	Outlet	55	70	72	74	75	72	64	55	80
	Break-Out	43	59	61	59	58	58	49	41	66
2	Inlet	46	69	72	72	70	69	64	59	78
	Outlet	52	68	72	70	75	67	60	53	78
	Break-Out	41	58	60	58	57	53	46	38	65
3	Inlet	49	68	69	70	68	66	61	57	75
	Outlet	52	65	67	70	67	64	59	52	75
	Break-Out	44	57	58	56	55	51	44	37	63
4	Inlet	43	66	69	69	67	69	62	57	75
	Outlet	50	65	67	69	70	68	59	51	75
	Break-Out	38	54	56	55	54	54	44	37	62
5	Inlet	41	64	67	67	65	64	59	54	73
	Outlet	47	63	67	65	70	62	56	48	74
	Break-Out	36	53	55	53	52	48	41	33	60
6	Inlet	44	63	65	65	63	61	57	52	71
	Outlet	48	61	62	66	62	60	54	47	70
	Break-Out	40	52	53	51	51	46	39	32	58
7	Inlet	37	60	62	63	60	63	56	51	69
	Outlet	44	59	61	62	64	61	53	44	69
	Break-Out	32	48	50	48	47	47	38	30	55
8	Inlet	35	58	61	61	59	57	52	47	67
	Outlet	41	57	61	59	64	56	49	42	67
	Break-Out	30	46	49	47	46	42	35	27	53
9	Inlet	38	57	58	58	57	54	50	46	64
	Outlet	41	54	56	59	56	53	47	41	64
	Break-Out	33	46	47	45	44	40	33	26	52
10	Inlet	33	56	58	59	56	59	52	47	65
	Outlet	40	55	57	58	60	57	49	40	65
	Break-Out	28	44	46	44	43	43	34	26	51
11	Inlet	31	54	57	57	55	54	48	43	63
	Outlet	37	53	57	55	60	52	45	38	63
	Break-Out	26	43	45	43	42	38	31	23	50
12	Inlet	34	53	54	54	53	50	46	42	60
	Outlet	37	50	52	55	52	49	43	37	60
	Break-Out	29	42	43	41	40	36	29	22	48

Working point		63	125	250	500	1000	2000	4000	8000	LwA
1	Inlet	51	73	75	75	73	77	68	63	82
	Outlet	58	73	74	76	77	75	67	57	83
	Break-out	46	61	63	61	60	60	50	43	68
2	Inlet	48	73	75	75	73	72	66	61	81
	Outlet	56	72	77	74	78	71	64	57	82
	Break-out	43	61	64	61	59	56	49	41	68
3	Inlet	54	73	74	73	72	70	65	61	80
	Outlet	58	71	72	75	72	69	62	56	79
	Break-out	49	62	63	59	58	54	48	41	67
4	Inlet	46	68	71	70	68	72	64	58	77
	Outlet	53	68	70	71	72	70	62	52	78
	Break-out	41	56	59	56	55	55	45	38	63
5	Inlet	44	68	71	70	68	67	61	56	76
	Outlet	52	67	72	69	74	66	59	52	77
	Break-out	39	56	59	56	55	51	44	36	63
6	Inlet	49	68	69	68	67	65	60	56	75
	Outlet	53	66	67	70	67	64	58	51	74
	Break-out	44	57	58	54	54	49	43	36	62
7	Inlet	40	62	64	64	62	66	57	52	71
	Outlet	47	62	63	65	66	64	56	46	71
	Break-out	35	50	52	50	49	49	39	32	57
8	Inlet	37	62	64	64	62	61	55	50	70
	Outlet	45	61	65	63	67	60	53	46	71
	Break-out	32	50	53	50	48	44	37	30	57
9	Inlet	42	61	63	62	60	59	54	50	68
	Outlet	46	60	61	64	61	57	51	45	68
	Break-out	38	50	52	48	47	43	37	30	56
10	Inlet	36	58	60	60	58	62	53	48	67
	Outlet	43	58	59	61	62	60	52	42	68
	Break-out	31	46	48	46	45	45	35	28	53
11	Inlet	33	58	60	60	58	57	51	46	66
	Outlet	41	57	62	59	63	56	49	42	67
	Break-out	28	46	49	46	44	40	33	26	53
12	Inlet	39	57	59	58	56	55	50	46	64
	Outlet	42	56	57	60	57	53	47	41	64
	Break-out	34	47	48	44	43	39	33	26	52

ACOUSTIC KITCHEN EXTRACT FANS

CVAB / CVAT ND series

Range of direct drive backward curved centrifugal cabinet fans designed for ventilation of commercial kitchens and industrial applications.

Cabinet fan manufactured from aluminium profiles and double thickness side panels internally lined with 25 mm thickness of fireproof fibreglass acoustic insulation. All versions except 6000/500:- circular duct connection flange on the inlet and outlet. 6000/500 versions - circular duct on the inlet, square on the outlet. CVAB-N/ CVAT-N incorporates direct drive backward curved centrifugal impeller, manufactured from aluminium (CVAB-N) or steel (CVAT-N) sheet, with motor fitted inside the air stream.

Motors

CVAB-ND

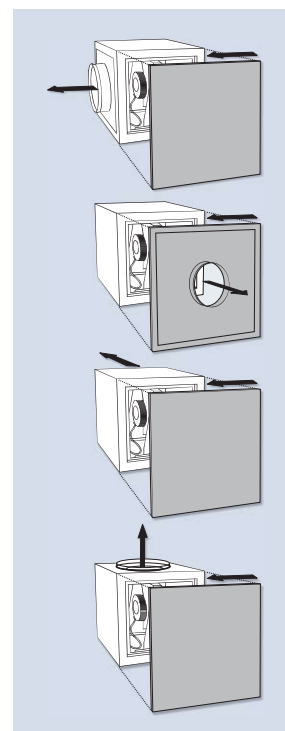
Single-phase external rotor motors 230V 50Hz, IP55, class F, with thermal protection, speed controllable by voltage. Working temperature from -40°C to 60°C.

CVAT-ND

Three-phase 4 and 6 pole motors 230/400V 50Hz, IP55, class F, with thermal protection (PTC), speed controllable by inverter. Working temperature from -20°C to 40°C.



PART L2: 2013
COMPLIANT



Versatile design



Backward curved centrifugal impellers

To prevent the build-up of dirt. Dynamically balanced.



Low noise level

Double thickness side panels lined with 25 mm thickness of fireproof fibreglass acoustic insulation.



Robustness

Quality finished aluminium profiles and plastic corners provides a robust construction.

Specific applications



Commercial
kitchens

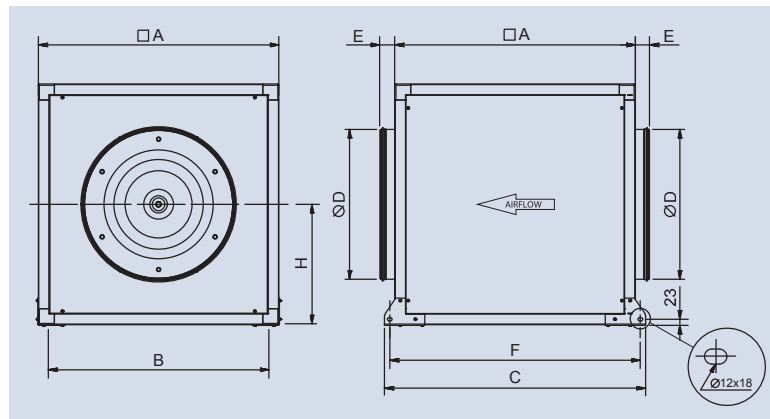
TECHNICAL CHARACTERISTICS

Before installation check that the product electrical characteristics listed on the data plate label (voltage, power, frequency, etc.) match those of the intended electrical supply.

Model	Speed (rpm)	Maximum absorbed power [W]	Maximum absorbed current (A)		Maximum airflow (m³/h)	Sound pressure level* (dB(A))	Weight (kg)
			230V	400V			
SINGLE PHASE 4 POLE							
CVAB/4-1400/250 ND	1300	107	0,5	–	1280	39	13,0
CVAB/4-2000/315 ND	1390	169	0,7	–	1820	43	13,0
CVAB/4-3000/355 ND	1370	312	1,3	–	2800	45	30,0
CVAB/4-4000/400 ND	1390	557	2,3	–	4210	50	32,0
CVAB/4-6000/450 ND	1380	930	3,6	–	6140	54	46,0
CVAB/4-6000/500 ND	1470	924	3.9		6122	59	38,0
CVAB/4-9000/500 ND	1390	1289	5,3	–	7580	57	58,0
THREE PHASE 4 POLE							
CVAT/4-1400/250 ND 0,18	1480	116	0,9	0,5	1.230	33	13,0
CVAT/4-2000/315 ND 0,18	1460	169	0,9	0,5	1.830	37	13,0
CVAT/4-3000/355 ND 0,18	1430	251	0,9	0,5	2.660	40	30,0
CVAT/4-4000/400 ND 0,37	1445	438	1,6	0,9	3.850	43	32,0
CVAT/4-6000/450 ND 0,75	1465	747	3,0	1,7	5.620	45	46,0
CVAT/4-6000/500 ND 0.92	1470	943	3.1	1.8	6.277	59	38,0
CVAT/4-9000/500 ND 1,1	1480	1347	4,4	2,5	7.900	48	58,0
CVAT/4-12000/560 ND 2,2	1470	2093	7,3	4,2	11.100	51	82,0
CVAT/4-16000/630 ND 3	1460	3234	10,3	5,9	14.640	53	113,0
THREE PHASE 6 POLE							
CVAT/6-15000/710 ND 1,5	970	1828	6,3	3,6	14.320	55	149,0

* sound pressure level measured in free field condition at 3m.

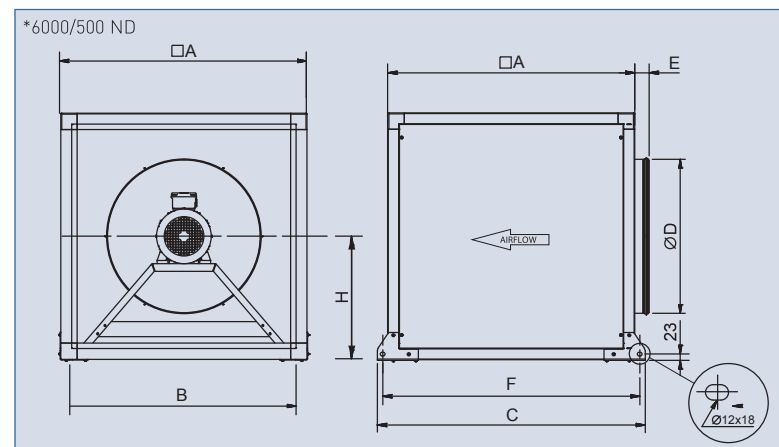
DIMENSIONS (mm)



Model CVAB - CVAT	A	B	C	ØD	E	F	H
1400/250 ND	500	457	574	250*	58	534	250
2000/315 ND	500	457	574	315*	58	534	250
3000/355 ND	650	607	724	355*	58	684	325
4000/400 ND	650	607	724	400*	58	684	325
6000/450 ND	750	707	824	450*	58	784	375
6000/500 ND*	650	607	724	500 ^Δ	58	684	325
9000/500 ND	800	757	874	500*	58	834	400
12000/560 ND	900	826	977	560*	58	937	450
16000/630 ND	1000	959	1077	630*	58	1037	500
15000/710 ND	1100	1059	1177	710*	58	1137	550

* inlet and outlet

^Δ inlet only

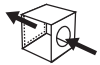


Performance Data



Axial airflow configuration with outlet spigot plate fitted

Model	Pascals	0	50	100	150	200	250	300	350	400	450	500	550	600
SINGLE PHASE														
CVAB/4-1400/250 ND	0.356	0.313	0.266	0.197	0.093									
CVAB/4-2000/315 ND	0.506	0.460	0.414	0.363	0.307	0.237	0.049							
CVAB/4-3000/355 ND	0.779	0.729	0.675	0.613	0.544	0.464	0.364	0.162						
CVAB/4-4000/400 ND	1.173	1.113	1.052	0.987	0.913	0.826	0.729	0.623	0.499	0.301				
CVAB/4-6000/450 ND	1.706	1.640	1.572	1.500	1.420	1.332	1.235	1.130	1.017	0.886	0.728	0.508	0.215	
CVAB/4-6000/500 ND	1.700	1.640	1.570	1.490	1.390	1.320	1.220	1.110	0.989	0.863	0.715	0.487	-	
CVAB/4-9000/500 ND	2.104	2.031	1.957	1.880	1.799	1.712	1.621	1.526	1.424	1.309	1.181	1.040	0.827	
THREE PHASE														
CVAT/4-1400/250 ND	0.342	0.306	0.262	0.206	0.080									
CVAT/4-2000/315 ND	0.505	0.461	0.421	0.378	0.309	0.108								
CVAT/4-3000/355 ND	0.739	0.691	0.639	0.577	0.501	0.394	0.187							
CVAT/4-4000/400 ND	1.070	1.016	0.959	0.900	0.837	0.767	0.676	0.537	0.292					
CVAT/4-6000/450 ND	1.562	1.503	1.443	1.379	1.309	1.233	1.153	1.064	0.949	0.786	0.488			
CVAT/4-6000/500 ND	1.740	1.700	1.600	1.520	1.440	1.350	1.240	1.130	1.020	0.874	0.728	0.489	-	
CVAT/4-9000/500 ND	2.267	2.203	2.138	2.072	2.003	1.929	1.849	1.756	1.639	1.504	1.373	1.229	1.031	
CVAT/4-12000/560 ND	3.084	3.015	2.946	2.875	2.803	2.727	2.646	2.558	2.462	2.352	2.224	2.080	1.932	
CVAT/4-16000/630 ND	4.069	3.989	3.908	3.825	3.742	3.656	3.568	3.477	3.381	3.280	3.172	3.055	2.928	
CVAT/6-15000/710 ND	3.963	3.828	3.688	3.538	3.368	3.158	2.864	2.531	2.236	1.876	1.258	0.478		



Axial airflow configuration with no outlet spigot plate

Model	Pascals	0	50	100	150	200	250	300	350	400	450	500	550	600
SINGLE PHASE														
CVAB/4-1400/250 ND	0.373	0.330	0.283	0.215	0.111									
CVAB/4-2000/315 ND	0.533	0.488	0.442	0.391	0.334	0.265	0.077							
CVAB/4-3000/355 ND	0.819	0.769	0.715	0.653	0.584	0.504	0.404	0.202						
CVAB/4-4000/400 ND	1.227	1.167	1.106	1.041	0.967	0.880	0.783	0.677	0.553	0.355				
CVAB/4-6000/450 ND	1.799	1.733	1.665	1.592	1.512	1.424	1.327	1.223	1.109	0.978	0.820	0.601	0.307	
CVAB/4-6000/500 ND	1.785	1.722	1.649	1.565	1.460	1.386	1.281	1.166	1.038	0.906	0.751	0.511	-	
CVAB/4-9000/500 ND	2.206	2.133	2.060	1.983	1.901	1.814	1.723	1.628	1.526	1.412	1.283	1.142	0.930	
THREE PHASE														
CVAT/4-1400/250 ND	0.359	0.323	0.279	0.223	0.097									
CVAT/4-2000/315 ND	0.532	0.488	0.448	0.405	0.337	0.136								
CVAT/4-3000/355 ND	0.779	0.731	0.679	0.617	0.541	0.434	0.227							
CVAT/4-4000/400 ND	1.124	1.070	1.013	0.954	0.891	0.821	0.730	0.591	0.346					
CVAT/4-6000/450 ND	1.654	1.596	1.536	1.471	1.401	1.325	1.245	1.157	1.041	0.878	0.580			
CVAT/4-6000/500 ND	1.827	1.785	1.680	1.596	1.512	1.418	1.302	1.187	1.071	0.918	0.764	0.513	-	
CVAT/4-9000/500 ND	2.370	2.306	2.241	2.174	2.105	2.032	1.951	1.858	1.741	1.607	1.475	1.332	1.133	
CVAT/4-12000/560 ND	3.222	3.153	3.084	3.013	2.941	2.865	2.784	2.696	2.600	2.490	2.362	2.218	2.070	
CVAT/4-16000/630 ND	4.261	4.181	4.100	4.017	3.934	3.848	3.760	3.669	3.573	3.472	3.364	3.247	3.120	
CVAT/6-15000/710 ND	4.152	4.017	3.877	3.727	3.557	3.347	3.053	2.720	2.425	2.065	1.447	0.667		



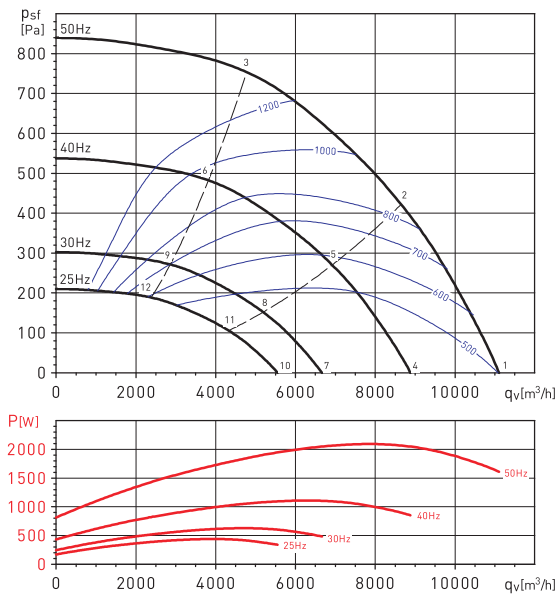
90° side outlet configuration with no outlet spigot plate

Model	Pascals	0	50	100	150	200	250	300	350	400	450	500	550	600
SINGLE PHASE														
CVAB/4-1400/250 ND	0.391	0.345	0.297	0.225	0.115									
CVAB/4-2000/315 ND	0.559	0.511	0.462	0.409	0.349	0.277	0.079							
CVAB/4-3000/355 ND	0.858	0.805	0.748	0.684	0.612	0.527	0.423	0.210						
CVAB/4-4000/400 ND	1.285	1.223	1.159	1.090	1.012	0.921	0.819	0.708	0.578	0.370				
CVAB/4-6000/450 ND	1.884	1.815	1.743	1.667	1.583	1.491	1.389	1.279	1.160	1.023	0.856	0.626	0.318	
CVAB/4-6000/500 ND	1.869	1.803	1.726	1.638	1.528	1.451	1.341	1.220	1.087	0.949	0.786	0.535	-	
CVAB/4-9000/500 ND	2.311	2.235	2.157	2.077	1.991	1.900	1.804	1.704	1.597	1.477	1.342	1.194	0.971	
THREE PHASE														
CVAT/4-1400/250 ND	0.376	0.338	0.292	0.234	0.101									
CVAT/4-2000/315 ND	0.558	0.511	0.469	0.424	0.352	0.141								
CVAT/4-3000/355 ND	0.816	0.766	0.711	0.646	0.566	0.454	0.237							
CVAT/4-4000/400 ND	1.178	1.120	1.061	0.999	0.933	0.859	0.764	0.618	0.361					
CVAT/4-6000/450 ND	1.732	1.671	1.608	1.540	1.466	1.387	1.303	1.210	1.089	0.917	0.605			
CVAT/4-6000/500 ND	1.913	1.869	1.759	1.671	1.583	1.484	1.363	1.242	1.121	0.961	0.800	0.538	-	
CVAT/4-9000/500 ND	2.483	2.416	2.348	2.278	2.205	2.128	2.044	1.946	1.823	1.682	1.544	1.393	1.185	
CVAT/4-12000/560 ND	3.376	3.304	3.231	3.157	3.081	3.001	2.916	2.824	2.723	2.608	2.473	2.322	2.166	
CVAT/4-16000/630 ND	4.465	4.380	4.295	4.209	4.121	4.031	3.939	3.842	3.742	3.636	3.522	3.399	3.266	
CVAT/6-15000/710 ND	4.350	4.208	4.062	3.904	3.725	3.505	3.196	2.846	2.537	2.158	1.510	0.690		

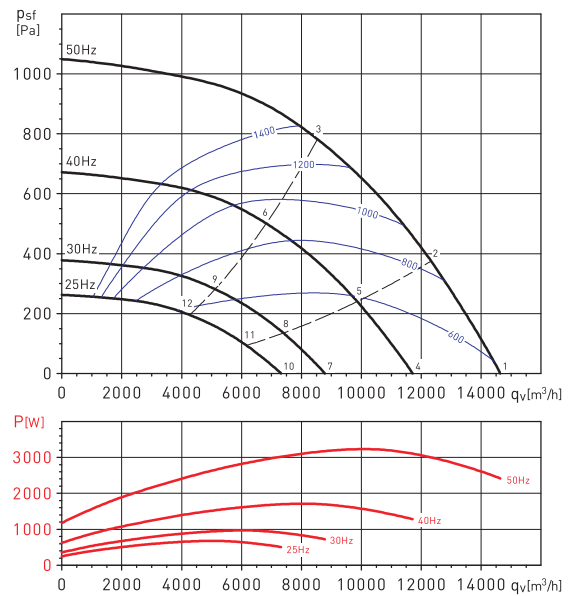
PERFORMANCE CURVES - ACOUSTIC CHARACTERISTICS

- q_v : Airflow in m^3/h .
- p_{sf} : Static pressure in Pa.
- P : Input power in W.
- SFP: Specific fan power in $W/m^3/s$ (blue curves).
- Performance data in accordance with ISO 5801 and AMCA 210-99 Standards.

CVAT/4-12000/560N D 2,2kW



CVAT/4-16000/630N D 3kW



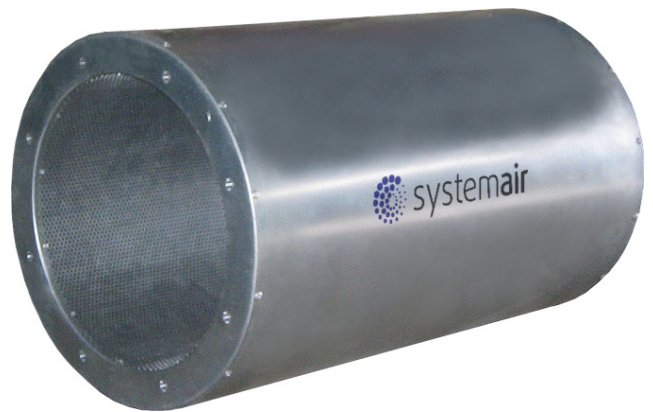
Working point		63	125	250	500	1000	2000	4000	8000	LwA
1	Inlet	55	77	79	78	76	81	72	66	86
	Outlet	63	78	78	81	81	78	71	60	87
	Break-Out	49	64	67	64	62	63	53	46	72
2	Inlet	51	76	78	77	76	75	69	64	84
	Outlet	60	76	80	77	81	73	67	60	85
	Break-Out	46	64	67	63	61	58	51	44	71
3	Inlet	56	75	76	74	73	72	67	63	81
	Outlet	60	74	74	78	74	70	64	58	81
	Break-Out	51	65	66	61	60	55	49	43	70
4	Inlet	50	72	74	73	71	76	67	61	81
	Outlet	58	73	73	76	76	74	66	55	82
	Break-Out	44	60	63	59	58	59	49	41	67
5	Inlet	46	71	73	72	71	70	64	59	79
	Outlet	55	71	75	72	76	68	62	55	81
	Break-Out	41	59	62	58	57	53	46	39	66
6	Inlet	51	70	71	69	68	67	62	58	77
	Outlet	55	69	69	73	69	65	59	53	77
	Break-Out	46	60	61	56	55	50	45	39	65
7	Inlet	44	66	68	67	65	70	61	55	75
	Outlet	52	67	67	69	70	67	60	49	76
	Break-Out	38	53	56	52	51	52	42	35	61
8	Inlet	39	65	67	66	64	64	57	52	73
	Outlet	49	65	69	66	70	62	56	49	74
	Break-Out	34	53	56	52	50	47	40	33	60
9	Inlet	45	64	65	63	62	61	56	52	70
	Outlet	49	63	62	66	62	59	53	47	70
	Break-Out	40	53	55	49	49	44	38	32	59
10	Inlet	40	62	64	63	61	66	57	51	71
	Outlet	48	63	63	65	66	63	56	45	72
	Break-Out	34	49	52	49	47	48	38	31	57
11	Inlet	36	61	63	62	61	60	53	48	69
	Outlet	45	61	65	62	66	58	52	45	70
	Break-Out	31	49	52	48	46	43	36	29	56
12	Inlet	41	60	61	59	58	57	52	48	66
	Outlet	45	59	59	62	59	55	49	43	66
	Break-Out	36	49	51	45	45	40	34	28	55

Working point		63	125	250	500	1000	2000	4000	8000	LwA
1	Inlet	57	79	81	80	78	84	74	68	88
	Outlet	67	82	81	84	84	81	74	62	90
	Break-Out	52	67	70	65	64	66	56	48	74
2	Inlet	53	79	82	80	78	78	71	66	87
	Outlet	64	81	84	81	85	76	70	64	89
	Break-Out	48	68	71	66	64	60	53	47	74
3	Inlet	61	81	81	78	78	77	71	68	87
	Outlet	66	81	79	84	79	75	69	64	88
	Break-Out	56	70	71	65	64	59	54	48	75
4	Inlet	53	75	77	75	74	79	69	63	83
	Outlet	62	77	76	79	79	76	69	57	85
	Break-Out	47	62	66	61	59	61	51	43	69
5	Inlet	48	75	77	75	74	74	66	61	82
	Outlet	60	76	79	76	80	72	65	59	84
	Break-Out	43	63	66	61	59	55	48	42	69
6	Inlet	56	76	77	74	73	72	67	63	82
	Outlet	61	76	74	79	74	71	64	59	83
	Break-Out	52	65	67	60	59	54	49	44	70
7	Inlet	46	68	70	69	67	73	63	57	77
	Outlet	56	70	70	73	73	70	63	51	78
	Break-Out	41	56	59	54	53	55	45	37	63
8	Inlet	42	68	71	69	67	67	60	55	76
	Outlet	53	69	73	69	74	65	59	53	78
	Break-Out	37	57	60	54	53	49	42	36	63
9	Inlet	50	70	70	67	67	66	60	57	76
	Outlet	55	70	68	72	68	64	58	53	76
	Break-Out	45	59	60	53	53	48	43	37	64
10	Inlet	42	64	66	65	63	69	59	53	73
	Outlet	52	67	66	69	69	66	59	47	74
	Break-Out	37	52	55	50	49	51	41	33	59
11	Inlet	38	64	67	65	63	63	56	51	72
	Outlet	49	65	69	65	70	61	55	49	74
	Break-Out	33	53	56	50	49	45	38	32	59
12	Inlet	46	66	66	63	63	62	56	53	72
	Outlet	51	66	64	69	64	60	54	49	72
	Break-Out	41	55	56	49	49	44	39	33	60

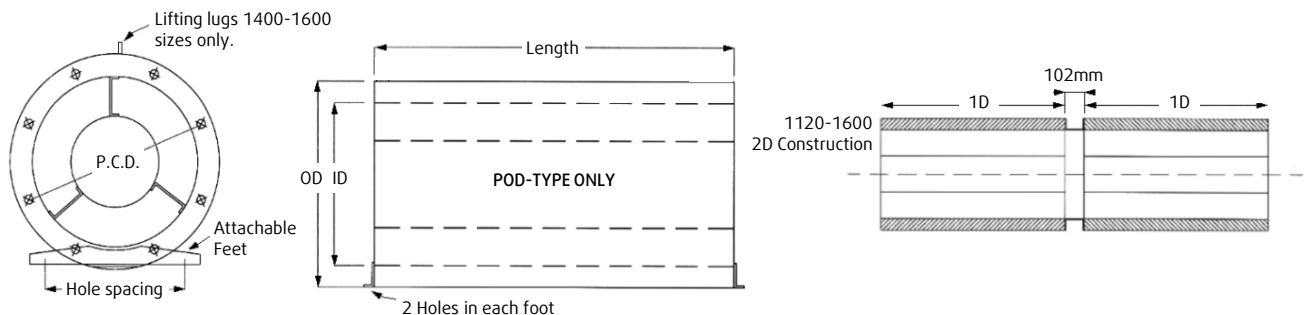
CYLINDRICAL SILENCERS (TYPE LP AND HP)

Features

- Casing are rolled, pre-galvanised sheet steel with spun end rings incorporating tapped inserts for fixing.
- Absorbent material is acoustic grade mineral fibre with a layer of erosion resistant facing and is further protected by a sheet of pre-galvanised perforated steel.
- Moisture resistant lining available for wet conditions or critically clean applications.
- Type LP silencer bore diameters range from 315mm to 1600mm in lengths of equal to or twice the bore diameter (1D or 2D). Pressure loss for type LP silencers is the same as a plain duct.
- Type HP silencers have a centrally mounted absorbent pod in the airway for increased attenuation.



Dimensions



In metric

Metric (mm)									Weight (kg)			
Sizes		No. of Holes	P.C.D.	Thread	Mounting Foot		Length		Type LP		Type HP	
ID	OD				Holes Dia.	Spacing	1D	2D	1D	2D	1D	2D
315	415	8	355	M8	10	265	315	630	10	17	13	19
355	455	8	395	M8	10	305	355	710	12	20	15	24
400	500	8	450	M8	12	350	400	800	15	25	18	30
450	600	8	500	M8	12	400	450	900	20	33	24	39
500	650	12	560	M8	12	450	500	1000	25	41	29	48
560	710	12	620	M8	12	510	560	1120	30	50	35	58
630	780	12	690	M8	12	580	630	1260	35	61	42	72
710	860	16	770	M8	12	660	710	1420	44	76	53	90
800	1000	16	860	M8	12	750	800	1600	55	96	66	116
900	1100	16	970	M12	14	850	900	1800	70	129	84	150
1000	1200	16	1070	M12	14	950	1000	2000	82	157	100	182
1120	1320	20	1160	M12	14	1070	1120	2342	100	211	118	247
1250	1450	20	1320	M12	18	1150	1250	2540	127	266	147	306
1400	1600	20	1470	M12	18	1300	1400	2902	193	399	220	453
1600	1800	24	1680	M16	18	1500	1600	3302	311	637	362	739

Acoustic Performance

TYPE LP Attenuation

Metric (mm)									
Bore Dia. mm	Length	Octave – Band Mid Frequencies (Hz)							
		63	125	250	500	1000	2000	4000	8000
315	1D	1	2	4	9	11	10	9	7
	2D	1	2	5	11	16	12	11	10
355	1D	1	2	4	10	12	10	9	7
	2D	1	3	6	13	17	14	11	11
400	1D	1	3	5	10	13	11	9	8
	2D	2	4	7	14	18	15	11	12
450	1D	2	3	6	12	13	11	10	6
	2D	3	4	8	17	18	15	11	11
500	1D	2	3	6	12	13	11	10	6
	2D	3	4	8	19	18	14	11	10
560	1D	2	4	7	14	14	9	10	7
	2D	3	5	9	19	18	14	12	11
630	1D	2	5	7	15	13	8	9	8
	2D	3	6	9	19	19	14	13	12
710	1D	2	5	7	15	13	9	9	8
	2D	4	6	9	19	17	13	12	11
800	1D	3	5	8	16	12	9	9	8
	2D	4	6	10	19	15	12	11	10
900	1D	3	5	10	17	13	11	10	8
	2D	4	6	12	19	15	12	11	10
1000	1D	3	5	11	16	11	10	8	9
	2D	4	6	13	19	14	12	11	11
1120	1D	4	5	11	17	11	9	8	8
	2D	4	6	13	19	14	12	11	8
1250	1D	4	6	12	17	10	9	8	7
	2D	4	6	14	19	14	11	11	9
1400	1D	4	6	12	16	10	8	7	6
	2D	4	7	14	18	13	10	10	8
1600	1D	4	7	12	16	10	8	7	6
	2D	4	8	15	18	12	10	9	7

TYPE HP Attenuation

Metric (mm)									
Bore Dia. mm	Length	Octave – Band Mid Frequencies (Hz)							
		63	125	250	500	1000	2000	4000	8000
315	1D	2	5	5	9	18	20	18	15
	2D	2	6	6	12	20	25	20	17
355	1D	2	5	6	9	18	22	19	16
	2D	2	6	7	13	25	27	21	17
400	1D	2	6	6	10	19	24	20	17
	2D	3	7	8	14	29	29	23	18
450	1D	2	4	7	13	20	23	22	17
	2D	2	5	9	16	29	29	21	20
500	1D	2	3	8	16	21	22	21	17
	2D	2	4	10	20	29	30	20	26
560	1D	3	5	8	16	20	18	19	15
	2D	4	5	10	20	29	28	21	23
630	1D	3	5	8	15	19	16	14	12
	2D	5	6	10	19	29	25	21	20
710	1D	3	5	8	15	19	15	14	12
	2D	5	6	10	20	26	23	18	17
800	1D	4	5	8	16	19	15	14	13
	2D	5	7	11	22	23	21	16	14
900	1D	4	5	9	17	19	15	14	13
	2D	5	7	12	24	23	21	16	15
1000	1D	5	5	12	18	19	15	14	13
	2D	5	7	13	26	24	20	16	16
1120	1D	5	7	11	19	18	14	13	12
	2D	5	8	13	25	23	18	16	13
1250	1D	5	8	12	19	17	14	12	10
	2D	5	8	14	25	17	17	17	12
1400	1D	5	8	12	18	16	13	11	9
	2D	5	9	15	23	22	17	15	10
1600	1D	5	8	13	17	16	13	11	8
	2D	6	10	17	21	20	17	14	9

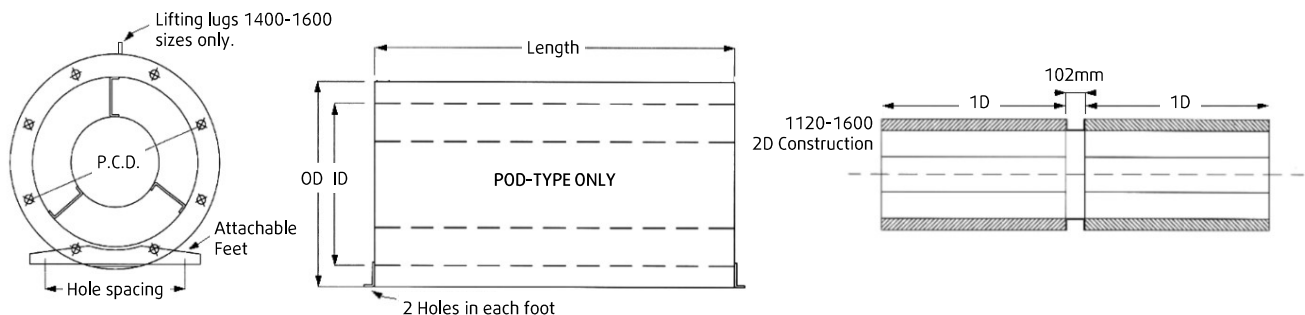
CYLINDRICAL SILENCERS (TYPE LP AND HP)

Features

- Casing are rolled, pre-galvanised sheet steel with spun end rings incorporating tapped inserts for fixing.
- Absorbent material is acoustic grade mineral fibre with a layer of erosion resistant facing and is further protected by a sheet of pre-galvanised perforated steel.
- Moisture resistant lining available for wet conditions or critically clean applications.
- Type LP silencer bore diameters range from 315mm to 1600mm in lengths of equal to or twice the bore diameter (1D or 2D). Pressure loss for type LP silencers is the same as a plain duct.
- Type HP silencers have a centrally mounted absorbent pod in the airway for increased attenuation.



Dimensions



In metric

Metric (mm)									Weight (kg)			
Sizes		No. of Holes	P.C.D.	Thread	Mounting Foot		Length		Type LP		Type HP	
ID	OD				Holes Dia.	Spacing	1D	2D	1D	2D	1D	2D
315	415	8	355	M8	10	265	315	630	10	17	13	19
355	455	8	395	M8	10	305	355	710	12	20	15	24
400	500	8	450	M8	12	350	400	800	15	25	18	30
450	600	8	500	M8	12	400	450	900	20	33	24	39
500	650	12	560	M8	12	450	500	1000	25	41	29	48
560	710	12	620	M8	12	510	560	1120	30	50	35	58
630	780	12	690	M8	12	580	630	1260	35	61	42	72
710	860	16	770	M8	12	660	710	1420	44	76	53	90
800	1000	16	860	M8	12	750	800	1600	55	96	66	116
900	1100	16	970	M12	14	850	900	1800	70	129	84	150
1000	1200	16	1070	M12	14	950	1000	2000	82	157	100	182
1120	1320	20	1160	M12	14	1070	1120	2342	100	211	118	247
1250	1450	20	1320	M12	18	1150	1250	2540	127	266	147	306
1400	1600	20	1470	M12	18	1300	1400	2902	193	399	220	453
1600	1800	24	1680	M16	18	1500	1600	3302	311	637	362	739

Acoustic Performance

TYPE LP Attenuation

Metric (mm)									
Bore Dia. mm	Length	Octave – Band Mid Frequencies (Hz)							
		63	125	250	500	1000	2000	4000	8000
315	1D	1	2	4	9	11	10	9	7
	2D	1	2	5	11	16	12	11	10
355	1D	1	2	4	10	12	10	9	7
	2D	1	3	6	13	17	14	11	11
400	1D	1	3	5	10	13	11	9	8
	2D	2	4	7	14	18	15	11	12
450	1D	2	3	6	12	13	11	10	6
	2D	3	4	8	17	18	15	11	11
500	1D	2	3	6	13	14	10	10	5
	2D	3	4	8	19	18	14	11	10
560	1D	2	4	7	14	14	9	10	7
	2D	3	5	9	19	18	14	12	11
630	1D	2	5	7	15	13	8	9	8
	2D	3	6	9	19	19	14	13	12
710	1D	2	5	7	15	13	9	9	8
	2D	4	6	9	19	17	13	12	11
800	1D	3	5	8	16	12	9	9	8
	2D	4	6	10	19	15	12	11	10
900	1D	3	5	10	17	13	11	10	8
	2D	4	6	12	19	15	12	11	10
1000	1D	3	5	11	16	11	10	8	9
	2D	4	6	13	19	14	12	11	11
1120	1D	4	5	11	17	11	9	8	8
	2D	4	6	13	19	14	12	11	8
1250	1D	4	6	12	17	10	9	8	7
	2D	4	6	14	19	14	11	11	9
1400	1D	4	6	12	16	10	8	7	6
	2D	4	7	14	18	13	10	10	8
1600	1D	4	7	12	16	10	8	7	6
	2D	4	8	15	18	12	10	9	7

TYPE HP Attenuation

Metric (mm)									
Bore Dia. mm	Length	Octave – Band Mid Frequencies (Hz)							
		63	125	250	500	1000	2000	4000	8000
315	1D	2	5	5	9	18	20	18	15
	2D	2	6	6	12	20	25	20	17
355	1D	2	5	6	9	18	22	19	16
	2D	2	6	7	13	25	27	21	17
400	1D	2	6	6	10	19	24	20	17
	2D	3	7	8	14	29	29	23	18
450	1D	2	4	7	13	20	23	22	17
	2D	2	5	9	16	29	29	21	20
500	1D	2	3	8	16	21	22	21	17
	2D	2	4	10	20	29	30	20	26
560	1D	3	5	8	16	20	18	19	15
	2D	4	5	10	20	29	28	21	23
630	1D	3	5	8	15	19	16	14	12
	2D	5	6	10	19	29	25	21	20
710	1D	3	5	8	15	19	15	14	12
	2D	5	6	10	20	26	23	18	17
800	1D	4	5	8	16	19	15	14	13
	2D	5	7	11	22	23	21	16	14
900	1D	4	5	9	17	19	15	14	13
	2D	5	7	12	24	23	21	16	15
1000	1D	5	5	12	18	19	15	14	13
	2D	5	7	13	26	24	20	16	16
1120	1D	5	7	11	19	18	14	13	12
	2D	5	8	13	25	23	18	16	13
1250	1D	5	8	12	19	17	14	12	10
	2D	5	8	14	25	17	17	17	12
1400	1D	5	8	12	18	16	13	11	9
	2D	5	9	15	23	22	17	15	10
1600	1D	5	8	13	17	16	13	11	8
	2D	6	10	17	21	20	17	14	9

LONGAR® Type 3

Low Pressure Baffle Filter



*Stainless steel 240 grit finish - standard handles



*Stainless steel bright annealed finish - optional fixed high temp handles

LONGAR® TYPE 3 FEATURES:

- Low pressure loss
- Polished finish or 240 grit dull grain finish
- Fully welded construction – all stainless steel construction
- Robust construction, our strongest filter yet
- Folding handles and drain holes standard (optional rigid handle available)
- Meets HVCA DW172 requirements
- Stock Sizes 2-3 days delivery, custom sizes available
- Cutsafe safety edges

APPLICATIONS

- Commercial kitchens
- Water mist separation
- Spark arrestors
- Sand filtration

LONGAR® TYPE 3 BAFFLE FILTER

For use in commercial kitchens and ventilation to extract grease laden air and offer a barrier to flame. The Type 3 has been developed for customers that require a lower pressure baffle filter, it still holds many of the features of the premium Type 2 yet offer a lower resistance to air. The Type 3 is available in standard depths of 20mm and 45mm. Custom sizes available on request. Meets DW172 and ISO9001.

CONSTRUCTION / MATERIAL SPECIFICATION

As standard all baffles are manufactured with Stainless Steel 430 polished finish and 240 Grit Dull Grain Finish. Maximum Operating temperature 400C or 750F.

FITTING INSTRUCTIONS

- Fit products, handles in direction of air in.
- Product vertical in air stream.

HANDLING

- Handle with care when unpacking.
- Store in dry and frost protected place.

MAINTENANCE

- All maintenance should be carried out in accordance with the planned maintenance set by installation contractor.
- When handling any components suitable PPE should be used - gloves & eye protection and access equipment.
- Filters should be cleaned by a trained operative either daily for heavy use or weekly for light use.
- For more exact guide to cleaning you should contact a cleaning specialist.

PACKAGING

All units are packaged in double wall boxes with separators for standard sizes, glued closed for protection whilst in transit against contamination.

FILTER CLASSIFICATION:

- Filter Class G2.
- UL Class 2.

MANUFACTURED TO:

- DW172.
- ISO9001.

For technical specifications, part numbers and ordering information, please see overleaf.

LONGAR® Type II

Pleated Panel Filters



LONGAR® TYPE II FEATURES:

- Moisture resistant cardboard frame.
- G4 efficiency to provide a good base level of filtration.
- Fully supported media bonded to expanded mesh grid.
- The filtering media is bonded to the case to eliminate air by-pass.
- Strong, robust construction.
- Extended surface area.
- High dust holding capacity.
- Dimensions of product are part marked into frame for positive ID.

APPLICATIONS

- Hotels
- Offices
- Food production
- Air conditioning
- Hospitals
- Pre-filtration asbestos removal

LONGAR® TYPE II PLEATED PANEL FILTER

Used in a variety of HEVAC applications where higher level air cleanliness is needed over the standard pre filters. Glass media is unacceptable in food and pharmaceutical industries and in some hospital areas. Especially useful where the installation requires a combination of high arrestance coupled with control over smaller particles. The high capacity version is selected when space is at a premium; filter sizes match the rated capacities of bag filters.

CONSTRUCTION / MATERIAL SPECIFICATIONS

The LONGAR® Type II is manufactured with pleated synthetic media, and an expanded diamond grid with 97% open area. The casing is constructed from a heavy duty rigid water resistant card, with support members along the diagonals. The media is bonded to the support grid and the frame in order to avoid the possibility of air bypass. The case is designed for minimum resistance and maximum free area, the case is also crease formed to stop moisture ingress. The product can be manufactured in a variety of depths from 22mm to 97mm deep. Optional metal frame available as shown above.

22mm (1") Filters are 9 Pleats per 300mm (1ft)

47mm (2") Filters are 9 Pleats per 300mm (1ft)

97mm (4") Filters are 9 Pleats per 300mm (1ft)

TYPE II HIGH CAPACITY PLEATED PANEL

We are able to manufacture the Type II with increased filter media over the standard product, for situations where an increase in air volume is required.

22mm (1") Filters are 12 Pleats per 300mm (1ft)

47mm (2") Filters are 12 Pleats per 300mm (1ft)

97mm (4") Filters are 12 Pleats per 300mm (1ft)

TYPE II HIGH EFFICIENCY PLEATED PANEL

Where situations arise we manufacture the Type II with a higher grade of filter media, F6, F7, F8 are available.

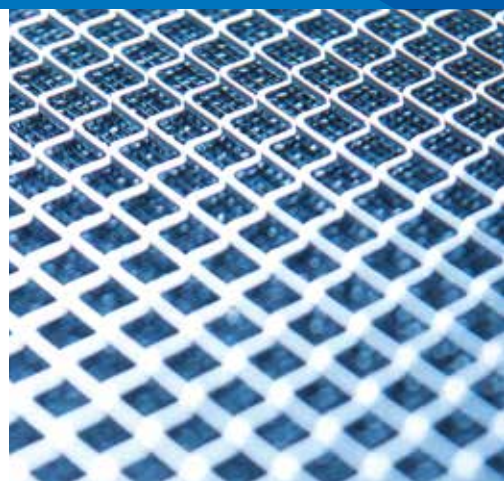
LONGAR® TYPE II IMPREGNATED CARBON PLEATED PANELS

For less demanding situations the use of impregnated media can be considered. They utilise non-woven synthetic media, which is then impregnated with activated carbon. They offer an alternative to our granular carbon systems however they cannot offer either the life span or dwell time that can be found with the rest of the range.

For technical specifications, part numbers and ordering information, please see overleaf.

LONGAR® Type 4

Mesh Filter



LONGAR® TYPE 4 FEATURES:

- The LONGAR® Type 4 Mesh filter is manufactured using a patented expanded mesh, this offers a unique design based on many years of R&D. This results in a mesh that delivers greater air or grease arrestance, integral strength and low pressure loss.
- Comes with a safety edge channel to offer greater strength and safety over conventional products available on the market place.
- Using an Expanded metal multi-layer pad we are able to offer a panel with greater rigidity and importantly the pad cannot migrate particles, which can be found in 'knit mesh' filters, these types of panels can be hazardous where strands can break away from the filter.
- Due to the nature of the material that we use, its integral strength means when it comes to cleaning it will stand up well, and outlast panels of lesser constructions.
- Tested to Eurovent 4/5.
- Handles and drain holes are available.
- Available in Galvanised Steel, Stainless Steel and Aluminium.

APPLICATIONS

- Primary air filtration G2/G3
- Kitchens
- Cooker hoods
- All types of grease extraction
- General heating and ventilation pre-filtration

LONGAR® TYPE 4 MESH FILTER

The LONGAR® Type 4 Mesh filter is the result of years of experience in the manufacture and development of filters for the HEVAC world. With over 40 years of manufacturing experience the products brought to the market place today are clearly world class in price and product.

The LONGAR® Type 4 is a superior grease filter, available in a large selection of sizes and materials options.

Our Mesh filters are of robust construction and are used for a variety of applications, grease and air or dust collection applications, coalescer and spark arrestance, ideal as a prefilter for large particle contaminants and widely used in high air volume applications.

CONSTRUCTION DETAILS / MATERIAL SPECIFICATION

Media: Expanded metal patented design to aid filtration, available in stainless steel, galvanised steel, and aluminium.

Frame: U shaped section supplied with safety edge, available in stainless steel, galvanised steel and aluminium.

Filter thickness: Filter panels are available in actual thicknesses of: 8,10,12,20,25,40,45,50 and 95mm. Other sizes available on request.

Support mesh: Our own Q14 mesh is used in the grease filter as the support mesh.

Handles and drain holes: Folding handles and drain holes can be supplied as an option when required. They are fitted by default to the short dimension, unless otherwise stated by the customer at the time of ordering.

Housings: We can supply front withdrawal housings where required, see separate data sheet.

For technical specifications, part numbers and ordering information, please see overleaf.

LONGAR® Type 8

Activated Carbon Filters



LONGAR® TYPE 8 FEATURES:

- High grade carbon / High carbon content / Low pressure loss
- Robust modular construction
- Carbon Unit or panel format / Standard and Custom sizes available
- CNC manufactured / Precision products every time

APPLICATIONS

- Reduction of Cooking Odours
- Removal of Kerosene Exhaust Fumes
- General Odour Reduction
- Neutralisation of Ammonia and its Derivatives
- Removal of Formaldehyde
- Removal of Airborne Pollutants and Contaminants
- Removal of Acid Gases (please enquire as to specific contaminant)

LONGAR® TYPE 8 ACTIVATED CARBON FILTERS

Activated carbon has for many years been used to remove airborne noxious fumes and gases. Its origins date back to the First World War, when gas masks were first filled with Activated carbon to remove chlorine gas. Today Longar produces a wide range of carbon filters to deal with a variety of air pollution scenarios.

There are many situations where carbon filtration is used to eliminate toxic or offensive odours, some of these are sewage works, hospitals, slaughterhouses, restaurant kitchens, airports, toilets, wash rooms, laboratories, and office blocks.

PRE FILTRATION

Carbon filters are designed to remove fumes and odours, they are not suitable for removing dust and fine particles. If left unprotected, the life of the carbon product is severely reduced. To protect the filters use the correct pre filtration. If you are unsure please enquire for further information.

LONGAR® TYPE 8 ACTIVATED CARBON PANELS

The Activated carbon panel are sealed into a galvanised steel frame; a scrim is then added to protect the carbon surface from dust contamination. Sealing the carbon panel stops any air by-pass; our panels are manufactured using CNC technology to ensure precision manufacture with exact tolerances.

Our panels are the strongest on the market place with a wide range of standard sizes available, custom sizes are also available on request.

LONGAR® TYPE 8 ACTIVATED CARBON UNITS (ACU)

For a modular approach to fume removal the ACU is the ideal solution. The ACU unit is manufactured from a number of carbon panels held in place by a CNC made corrosion proof metal casing. The carbon panels inside the units are 25mm thick, sealed into the frames using polymer which eliminates the possibility of any air by-pass around the carbon.

LONGAR® TYPE 8 CYLINDRICAL FILTER

These are constructed from perforated galvanised steel then formed into cylindrical cartridges containing high grade or impregnated carbon. The cylinders have a bayonette fit into the filter mounting plate.

All cylinders have a unique feature of having the option to replace any spent carbon and then refill with new replenished carbon.

For technical specifications, part numbers and ordering information, please see overleaf.

LONGAR® Type 8

Activated Carbon Housing



LONGAR® TYPE 8 FEATURES:

- High grade carbon / High carbon content / Low pressure loss
- Robust modular construction
- Carbon Unit or panel format / Standard and Custom sizes available
- CNC manufactured / Precision products every time

APPLICATIONS

- Reduction of Cooking Odours
- Removal of Kerosene Exhaust Fumes
- General Odour Reduction
- Neutralisation of Ammonia and its Derivatives
- Removal of Formaldehyde
- Removal of Airborne Pollutants and Contaminants
- Removal of Acid Gases (please enquire as to specific contaminant)

LONGAR® TYPE 8 ACTIVATED CARBON FILTERS

Activated carbon has for many years been used to remove airborne noxious fumes and gases. Its origins date back to the First World War, when gas masks were first filled with activated carbon to remove chlorine gas. Today Longar produces a wide range of carbon filters to deal with a variety of air pollution scenarios.

There are many situations where carbon filtration is used to eliminate toxic or offensive odours, some of these are sewage works, hospitals, slaughterhouses, restaurant kitchens, airports, toilets, wash rooms, laboratories, and office blocks..

PRE FILTRATION

Carbon filters are designed to remove fumes and odours, they are not suitable for removing dust and fine particles. If left unprotected, the life of the carbon product is severely reduced. To protect the filters use the correct pre filtration. If you are unsure please enquire for further information.



LONGAR® TYPE 8 ACTIVATED CARBON PANELS

The activated carbon panels are sealed into a galvanised steel frame; a scrim is then added to protect the carbon surface from dust contamination. Sealing the carbon panel stops any air by-pass; our panels are manufactured using CNC technology to ensure precision manufacture with exact tolerances.

Our panels are the strongest on the market place with a wide range of standard sizes available, custom sizes are also available on request.

LONGAR® TYPE 8 ACTIVATED CARBON UNITS (ACU)

For a modular approach to fume removal the ACU is the ideal solution. The ACU unit is manufactured from a number of carbon panels held in place by a CNC made corrosion proof metal casing. The carbon panels inside the units are 25mm thick, sealed into the frames using polymer which eliminates the possibility of any air by-pass around the carbon.

LONGAR® TYPE 8 CYLINDRICAL FILTER

These are constructed from perforated galvanised steel then formed into cylindrical cartridges containing high grade or impregnated carbon. The cylinders have a bayonette fit into the filter mounting plate.

All cylinders have a unique feature of having the option to replace any spent carbon and then refill with new replenished carbon.

For technical specifications, part numbers and ordering information, please see overleaf.



RY 5000B

Electrostatic Air Cleaner

(Without Blower)

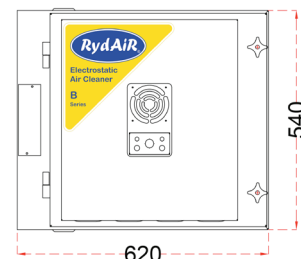


Industrial grade Electrostatic Air Cleaners for collection of dry and wet particulates like dust, oil mist, cooking fumes and various pollutants. Typical application include commercial kitchen exhausts, Air Handling Units (AHUs), factories, workshops, CNC machine shops and many other premises.

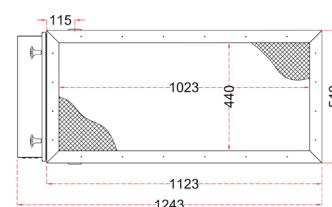


SPECIFICATIONS

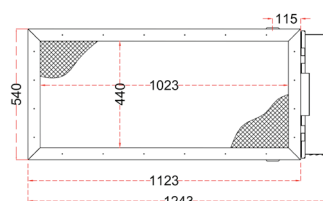
Dimensions/Weight	H:540 x W:1243 x L:620mm / 90Kg
Cabinet	Galvanized Steel, 1.4mm / 16 Gauge
Finishing	Powder Coated, Dark Blue
Air Volume (Rated-Max)#	CFM: 3000 – 4100; CMH: 5000-7000; L/s: 1400-1900
Static Pressure	50 pa / 0.2"
Voltage & Power	230 VAC +/-10%, 50/60Hz, 75Watts
Ionising Voltages	High Voltage: 12KVdc, Low Voltage: 6KVdc
Power Supply	High Frequency solid state and self regulating design
Air Flow Direction	Default : Right to Left; Reversible : Left to Right
Features	*Short circuit, arc protection and auto restore power supply *BMS (Building Management System) terminals provided *Auto power cut-off when door is opened *Indicator LEDs for normal or wash indicator *Set of Terminals for remote LED normal or wash indicator
Particle size	From 0.01 microns - 10 microns
Efficiency	DOP Test, up to 95% single pass, up to 99% double pass, calculated. ASHRAE 52.2-2012, up to 96% single pass, up to 99% double pass, calculated. NIOSH 5026 OIL MIST FIELD TEST : UP TO 96%
MERV Ratings	Meets MERV 15 at velocity of 2.5m/s to 3.8m/s
Pre-Filter	Aluminum wire mesh, Washable x 2
Electrostatic Cell	H: 472mm, W: 550mm, L: 340mm
No of Cells / Weight	2/16.5Kg
No Of Plates per Cell	59
Total Collecting Area	12.14 Sq meters
Post Filter (Optional)	Aluminum Wire Mesh, Washable x 2
Installation	Ceiling Suspended; Wall or Frame Mounted, Multiple Units Stack



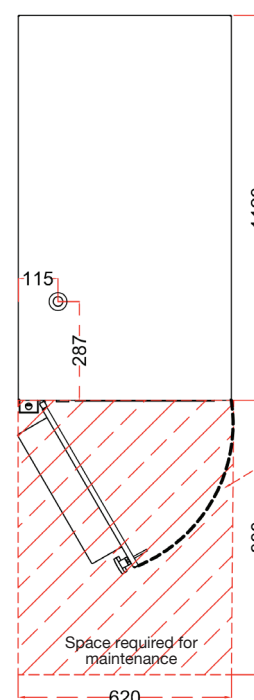
Front View



Air Intake View

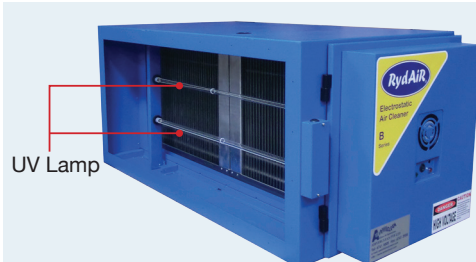


Air Discharge View



Top View

RY5000B with UV Ozone Lamp



RY5000B-UV03

ODOUR CONTROL OPTION:

- UV ozone Lamp fitted after electrostatic cell
- Lamp Wattage : 150 watts (75 W x 2 lamps)
- Ozone output : 14 Grams/Hour
- Lamp Life : 13,000 Hours
- Lamp Operation Blue LEDs on Unit's Panel
- All accessories are contained in RY Unit

Roof hood

HF



Description

Ventilation hood for air exit above roof, suitable for both industrial and comfort ventilation. The air is ejected in an upwards-directed jet. This avoids contaminating the air in the vicinity of the hood, and soiling of the area around the hood. The ejection is so effective that you can install a fresh air inlet in the immediate vicinity of the hood, without any special precautions.

The hood is made of galvanised sheet steel, and can also be supplied in other materials such as stainless steel sheet 1.4301, stainless acid-resistant steel sheet 1.4404, aluzinc AZ185 and painted in various colours, to special order. It has a net over the opening and an internal rain funnel to collect rainwater and snow, which is drained out of the hood through a hose. The hose can withstand temperatures of between -45 and +65 °C.

The hood has a flange connection, which includes a mating flange.

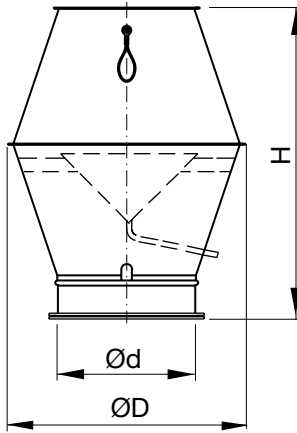
To avoid damage to the net in the opening the hood is supplied with transport protection. This must be removed before the hood is taken into service.

The hood is delivered with three turnable lifting and anchoring wire-loops. A single wire-loop shall not be exposed for forces exceeding 1500 N.

Ordering example

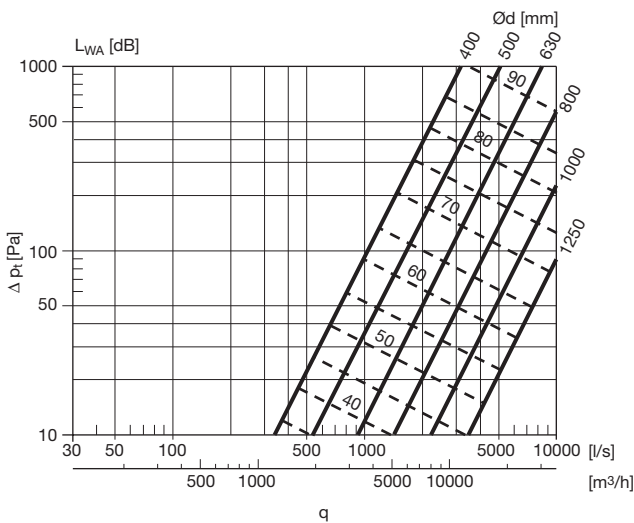
Product code **HF**
Dimension $\varnothing d$ **630**

Dimensions



				Roof through con- nection TGR	
Ød nom	ØD mm	H mm	m kg	50 mm	100 mm
				Size	
400	685	905	11,1	5	6
500	855	1055	20,0	6	7
630	1075	1295	38,0	8	9
800	1360	1640	63,0	9	10
1000	1600	2110	89,1	11	12
1250	2020	2615	118	14	15

Technical data



The H Frame Range

the base solution for mounting your services on the roof

The ILP H Frame foot is a convenient, adaptable and low-cost answer for supporting hardware & roof apparatus or the furnishings of a plant room. This may surround projects involving pipe work, duct work, cable trays and/or air conditioning equipment

ILP assists you in keeping your installations low cost by recommending you source your own strut. Consequently, the H Frame feet are manufactured with either a pre-moulded 41mm² or 50mm² Core, so when formulating frameworks on site, having both these options readily available, ensures your project is consistently flexible

Where a greater load spread is required you can upgrade to a 500mm x 500mm square foot or for securing your Ductwork and light weight plant why not use our 12kg or 25kg foot for extra ballast

One of the greatest features of this product, is that it is moulded as a ONE piece item; therefore, no fiddly plastic inserts or awkward rubber pads are required. The feet are despatched as individual products, resulting in NO wasted packaging on site or remnants of assembly kits that are surplus to requirements during installations

The 'Heavy Ballast' Foot



COMBI94



COMBI26 – Heavy Ballast



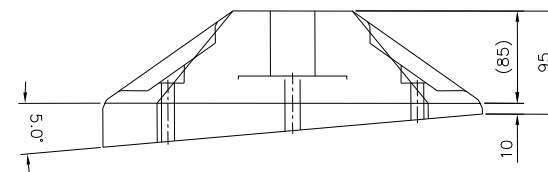
Support Systems



100% UK Manufacture
100% UK Sourced Materials



The 'Angled' Foot @ 2.5° & 5°



For sloped roofs, the 'Angled' Feet have again been moulded uniquely as one component in either 2.5° or 5° angles

Each foot has an integrally moulded, load bearing, 2mm zinc plate as standard. All 41mm x 41mm core feet also have centrally located plastic insert for greater stability

Product Code	Model	Foot Size (mm ²)	Height (mm)	Max Loading per Foot (kg)	Weight per foot (kg)	Load Bearing (Steel Plate)	Depth of core
COMBI 01	Support Systems 350	350	95	350	5.2	95mm ² x 2mm	60mm
COMBI 02	Angled Foot 350 @ 2.5°	350	95-110	350	5.8	95mm ² x 2mm	60mm
COMBI 03	Angled Foot 350 @ 5°	350	95-130	350	6.5	95mm ² x 2mm	60mm
COMBI 27	Support Systems 350 - 12kg Heavy Ballast	350	165	350	12	95mm ² x 2mm	60mm
COMBI 04	Support Systems 500	500	130	500	13.5	130mm ² x 2mm	90mm
COMBI 05	Angled Foot 500 @ 2.5°	500	130-153	500	15.9	130mm ² x 2mm	90mm
COMBI 06	Angled Foot 500 @ 5°	500	130-176	500	17.5	130mm ² x 2mm	90mm
COMBI 26	Support Systems 500 - 25kg Heavy Ballast	500	195	500	25	130mm ² x 2mm	90mm
COMBI 94	Support Systems 450 - 25kg Heavy Ballast	450	155	500	25	130mm ² x 2mm	90mm

MATERIAL SPECIFICATION

The rubber is milled, sieved & graded Styrene Butadiene rubber (Black SBR) in reclaimed truck/lorry tyre shred & granular form. Bound together using a 8% ratio of moisture curing Polyurethane Pre-Polymer
UV Resistant Recycled Rubber
Working Temperature Range: -35°C to +80°C
All dimensions +/- 2mm. Weight per unit +/- 3%

The 82mm x 41mm Back to Back Foot

the solution for all roof installations

Issue 06-1: May 2017



Support Systems

100% UK Manufacture
100% UK Sourced Materials

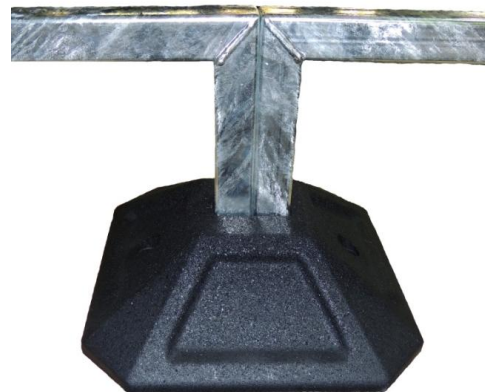


The ILP H Frame Foot Range is a convenient, adaptable and low-cost answer for supporting hardware & roof apparatus or the furnishings of a plant room. This may surround projects involving pipe work, duct work, cable trays and/or air conditioning equipment

ILP assists you in keeping your installations low cost by recommending you source your own strut. This strong, versatile, unbreakable foot with a Double Core (80mm x 40mm) or Twin Core (2no x 41mm) is ideal for back to back strut or joining 2x frames

One of the greatest features of this product, is that it is moulded as a ONE piece item. Therefore, no fiddly plastic inserts or awkward rubber pads are required.

They are despatched as individual products, therefore, there is NO wasted packaging or assembly kits surplus to requirements during installations



Each foot has an integrally moulded, load bearing, 2mm zinc plate as standard. All 41mm x 41mm core feet also have centrally located plastic insert for greater stability

Product Code	Model	Foot Size (mm ²)	Height (mm)	Max Loading per Foot (kg)	Weight per foot (kg)	Load Bearing (Steel Plate)	Depth of core
COMBI 58	Support Systems 350 Back to Back 82mm x 41mm Core	350	95	350	5.2	90 x 105 x 2mm	60mm
COMBI 59	Support Systems 500 Back to Back 82mm x 41mm Core	500	130	500	13.5	135mm ² x 2mm	90mm

MATERIAL SPECIFICATION

The rubber is milled, sieved & graded Styrene Butadiene rubber (Black SBR) in reclaimed truck/lorry tyre shred & granular form. Bound together using a 8% ratio of moisture curing Polyurethane Pre-Polymer
UV Resistant Recycled Rubber
Working Temperature Range: -35°C to +80°C
All dimensions +/- 2mm. Weight per unit +/- 3%

Circular duct

SR



Description

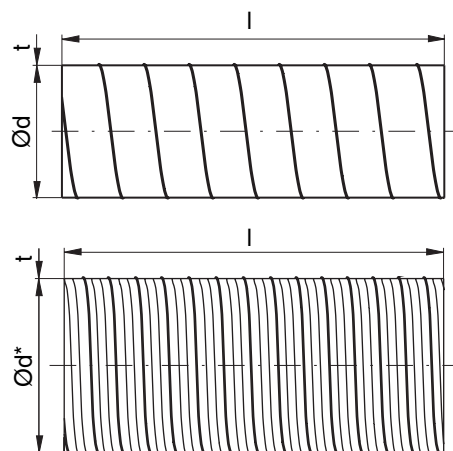
Circular duct.

Ducts are always produced locally and can therefore have different thicknesses and other specifications per country.

The ducts can be produced both with and without click function (notches).

Please specify when ordering.

Dimensions



Ød std nom	O πd m	A $\pi d^2/4$ m ²	t std [mm]	l std [mm]	ml std kg/m
63	0,198	0,003	0,5	3000	0,89
80	0,251	0,005	0,45	3000	0,91
100	0,314	0,008	0,45	3000	1,14
112	0,352	0,010	0,5	3000	1,42
125	0,393	0,012	0,45	3000	1,41
140	0,440	0,015	0,5	3000	1,76
150	0,471	0,018	0,5	3000	1,89
160	0,503	0,020	0,5	3000	2,02
180	0,565	0,025	0,5	3000	2,26
200	0,628	0,031	0,5	3000	2,56
224	0,704	0,039	0,6	3000	3,42
250 *	0,785	0,049	0,5	3000	3,18
280	0,880	0,062	0,55	3000	3,92
300 *	0,942	0,071	0,55	3000	4,20
315 *	0,990	0,078	0,55	3000	4,41
355 *	1,115	0,099	0,55	3000	4,96
400 *	1,257	0,126	0,55	3000	6,01
450 *	1,414	0,159	0,7	3000	8,60
500 *	1,571	0,196	0,7	3000	9,54
560 *	1,759	0,246	0,8	3000	12,2
600 *	1,885	0,283	0,7	3000	13,1
630 *	1,979	0,312	0,7	3000	12,0
710 *	2,231	0,396	0,8	3000	15,5
800 *	2,513	0,503	0,8	3000	17,4
900 *	2,827	0,636	0,9	3000	21,7
1000 *	3,142	0,785	0,9	3000	24,1
1120 *	3,519	0,985	0,9	3000	27,0
1250 *	3,927	1,227	0,9	3000	30,2
1400 *	4,398	1,539	1,25	2400	48,0
1500 *	4,712	1,767	1,25	2400	51,4
1600 *	5,027	2,011	1,25	2400	54,8

* With outturned stiffening corrugation.

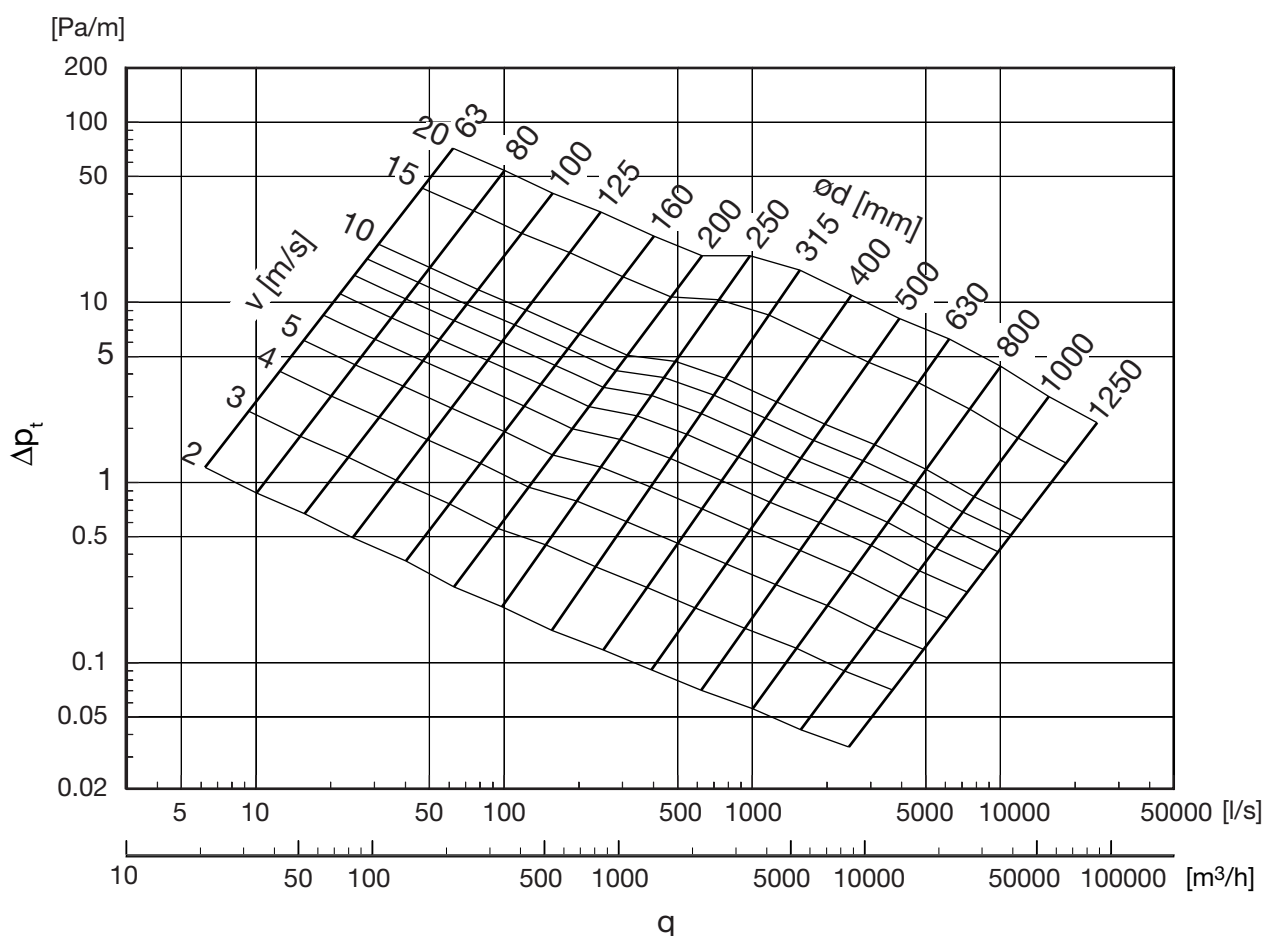
Ordering example

	SR	200	3000	CLIC
Product				
Dimension Ød				
Length l				
Type				

Circular duct

SR

Technical data



Special versions

We can supply ducts with the following special designs:

- In intermediate dimensions, see page 15.
- Extra tight, with nitrile rubber seal in the lock seam
- In other sheet metal thicknesses

Extra tight, with seam seal

When extremely good sealing is required in the spiral seam, the ducts can also be supplied with a special rubber seal in the seam.

This seal is very effective at stopping leakage of vegetable oils and greases, and most petroleum products including white spirit.

Other sheet metal thicknesses

If extra stability is needed in ducts, because of high negative pressure etc., they can be supplied with thicker sheet metal than standard. Remember that the thickness increase always reduces the inner diameter. Fittings for such special ducts must be specified separately and sometimes have to be made specially.

Reinforcement corrugations

Ducts of $\phi 250$ mm and above are normally given stiffening corrugations to increase radial stiffness.



Circular duct

SR

Technical data

Strength

Positive pressure

In case of high positive pressure, the seal moulding lips will first start to whistle. At considerably higher pressure, the joints between the ducts will be forced apart. If you manage to fix the connections very well, the ducts will burst at their seams at even higher pressure. The high pressures needed for this to happen are not relevant to ventilation installations.

Negative pressure

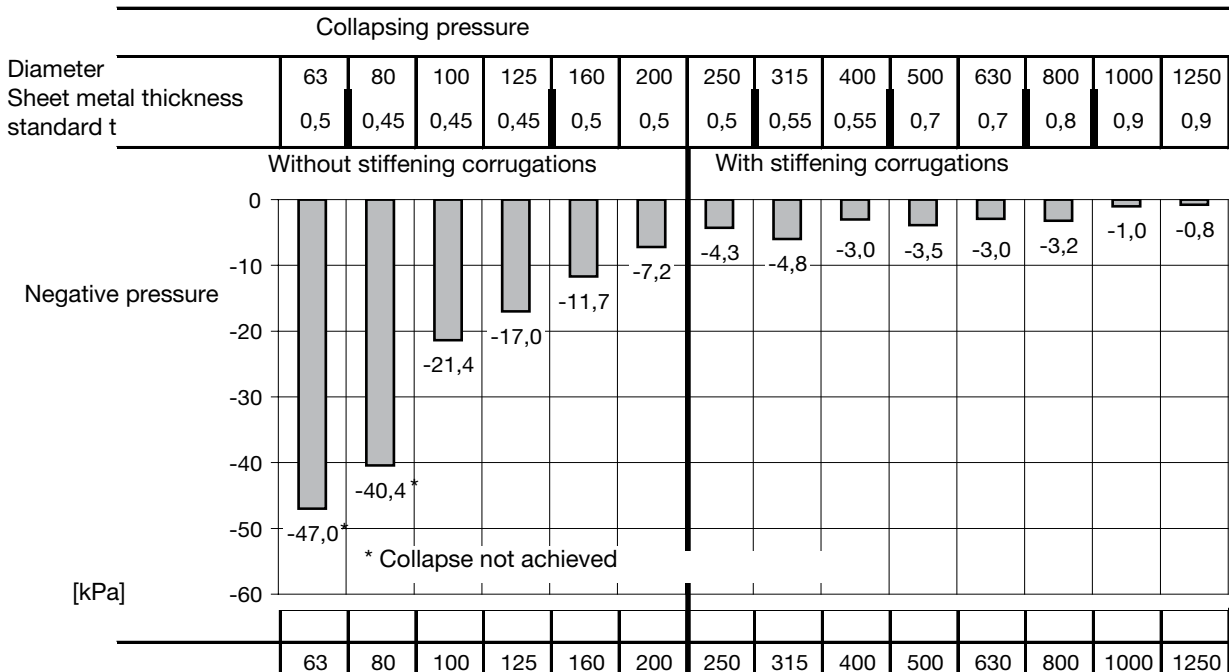
In installations with high negative pressure, there is a risk that the ducts could collapse.

This phenomenon is referred to as buckling, and can suddenly happen at the weakest point in the system. Buckling wanders along the duct, which can be completely flattened. The weakest point is frequently a "transport dent" on a duct. For this reason, only use undamaged ducts in systems which are close to the critical pressure!

Strength and leakage

The performance of the gasket ability for tightness is different from the pressure limits and is shown in the table below.

In exceptional cases, additional strong ducts and fittings are needed. Lindab has developed a system that can withstand down to 5000 Pascal's negative pressure. To minimize costs and to be sure of the performance of the specific system, contact Lindab for precise dimensioning.



	Min Dim [nom]	Max Dim [nom]	Max Negative pressure [Pa]	Min Positive pressure [Pa]
Safe Gasket stability	63	1600	-5000	3000
Duct system Eurovent certified	63	315	-5000	2000
Duct system Eurovent certified	400	1250	-750	2000
Duct system according to EN 12237	63	1250	-750	2000
Duct system - Strong solution on request	63	1600	-5000	3000



Stainless Steel Fabrication

Commercial Kitchen Design and Installation

System Maintenance

It is important that the system is well maintained in order to operate a system that is functional on providing a high level of performance.

Maintenance requirements will vary, subject to the intensity of use and type of cooking. Therefore, frequency of cleaning and filter replacement will be adjusted to suit. The Tenant will ensure the following minimum levels of maintenance are adhered to.

The most advanced filtration systems and ductwork designs will quickly become completely ineffective at mitigating grease, smoke and odour, when the detailed maintenance regime is not followed the table below provides requirements for the type and frequency of maintenance in accordance with EMAQ guidelines.

We would recommend the following in accordance with BESA TR19 guidance guidelines on cleaning and maintenance.

Cleaning of ductwork – 1 month Heavy use 3 months Medium use and every 6 months light use.

Canopy on each session before or after session

G4 filters every 3 weeks or if system seems to have reduced suction/ performance (Extract & Supply) **if installed**

Cleaning baffle filters – after each service

Carbon filters – 3 months heavy use 6 months medium use 8 month light use. **If Installed**

Extract— 1 Month heavy used 3 Months moderate use 6 Months light use.

Extract full services – 12 months. For your insurance this is required

ESP Filter changing/cleaning – 3 months heavy use 6 months medium use 8 months light use. **If Installed**



Stainless Steel Fabrication
Commercial Kitchen Design and Installation

Unit5 Firefly Square Plantation Road Burscough Industrial Estate L40 8JT

VAT No. 245073616

Tel: 01704-893945 Fax: 0844-4122296

Email: fusionhot1@gmail.com Web: www.FusionHot.co.uk

Stainless Steel Fabrication

Commercial Kitchen Design and Installation

Kitchen extract component	Recommended maintenance intensity
Grease Smoke and Solid Filtration	
Grease filter – mesh/baffle/cartridge/water wash	Daily cleaning
Canopy UV	Quarterly clean replace lamps after 8000 hours of operation
Cold water mist hood	Daily cleaning
Electrostatic Precipitation	Clean every 4 weeks
Low intensity odour control	
3 stage fine filters	Replacement every 2 weeks or replace when system is reduced performance
Odour control	
UV odour control	Clean every 4 weeks annual lamp replacement
Ozone Injection unit	self-sufficient no need to clean
Ozone generation unit	No need to clean out of airstream
Adsorption activated carbon filter	3 to 5 months filter replacement of when system has reduced performance

Usage	Frying time	Minimum clean frequency
Heavy Use	12-16 hours per day	3 Monthly
Moderate use	6-12 hours per day	6 Monthly
Low Use	2-6 hours per	12 Monthly

All duct work should be cleaned by a qualified tr19 person, who should issue a certificate after cleaning, this is important for your insurance.

Please note these are only guidelines as all systems are designed differently

TERMS AND CONDITIONS

By ordering the goods you agree to be bound by our terms and conditions below and recognise the services/products we have not included in our quotation for you unless otherwise stated.

- Ventilation system to EMAQ Guidelines (subject to further quotation).
- Odour control.
- Noise management.
- Fire rated ductwork.
- Fire rated insulation.
- Fire rating of walls that ductwork passes through.
- Planning permission (client's responsibility – work will not start without sufficient authority approval).
- Hanging of canopies over 4500mm from FFL.
- Infill panels to make good between the top of the canopy and ceiling.
- Masking gaps that occur during canopy installation due to inaccuracies in the building structure.
- Any specialist fixings to suit building structure.
- Balancing and commissioning of canopies.
- All electrical works.
- Final electrical connections and controls commissioning.
- Gas works including gas valve (interlock).
- Pipe work and inclusion of valves.
- Builders works and weather proofing of openings (scaffolding or lifting equipment).
- Structural works to roof area.
- Protection to flooring internal.
- Lifting of plant to roof level / scaffolding.
- Edge protection.
- Thermal insulation.
- Boarding to ceiling void areas.
- Canopy protection on completion of installation.
- Fire suppression.
- Strip out / Removal of existing canopies / ductwork.
- Any items not specifically itemized within your quotation are excluded.
- Earth bonding.
- Out of hours working (Normal working hours being Mon-Fri 8.30-5.30pm excluding bank holidays, hours include travelling time) any extra hours due to any unforeseen circumstances will be charged at £50ph payable direct to fitters.
- Notifications to local authorities, building, planning, fire etc.
- Builders, joiners, scaffolding, electrical, plumbing, roofing works.
- Waterproofing of walls and roofs where ductwork terminates exits (roofer will be required to seal roofs).
- Ductwork insulation.
- Inspection hatches to TR19 to be installed by others.
- Extraction canopy fan/speed control wiring to mains/board.
- All new fans are covered under manufactures warranty if claiming for a fault a new fan must be purchased and the fan in question sent back to the manufacture for inspection at your cost, if fan is found at fault under warranty, they will reimburse the cost of the fan.
- Fan inspection and warranty call outs to inspect/replace fans are not covered, and labour costs paid by the client.
- Extraction fan / controller fail due to incorrect wiring, replacement parts to be paid by client and parts send back to manufacturer for inspection at clients cost.
- Heater battery for air input system.
- Provision of grease traps if required.
- Finding of asbestos all works must stop until made safe by others.
- Return visit to site due to services being incorrect or not live and enabled for commissioning, a chargeable site instruction. would be required for any visits beyond our control.
- We specifically exclude any works not mentioned.
- VAT.
- Once payment made any refund will be subject to a 25% restocking charge and fee incurred.
- The company (FUSIONHOT LTD) is suppliers. Fitting is carried out by a third-party company and is the customer's responsibility to check all relevant details of that company, any problems with the fitting is between the customer and the third-party company. All correspondence should be between these two and not FUSIONHOT LTD.