

KITCHEN EXTRACT

ESP RANGE

1500 | 3000 | 4500 | 6000

purifiedair®

COMMERCIAL KITCHEN FILTRATION EXPERTS

Purified Air Ltd. has been manufacturing and servicing market-leading technology to filter and control oil, grease, smoke and odour from commercial kitchens since 1984.

CONTENTS

02

TECHNICAL OVERVIEW

Key Features	02
ESP Technology	03
How It Works	04
Benefits of ESP	05
Technical Specification	06

08

ABOUT US

An Overview	
Our Coverage	

09

GET IN TOUCH

Contact Details	
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KITCHEN EXTRACT

ESP RANGE

1500 | 3000 | 4500 | 6000



Our ESP's have been specifically designed for kitchen extract systems; they have integral sumps to collect the oil, grease and smoke particles filtered out of the exhaust.

This not only simplifies servicing but eradicates potentially dangerous spillage from the bottom of the units and greatly cuts down on build-ups of grease within the ducting.

The ionisation voltage has been designed to run at a negative potential which enhances the ionisation of particles and also produces more ozone which is helpful in reducing cooking odours.



KEY FEATURES

- Eliminates up to 98% of oil, grease and smoke particles
- Filters particles down to sub-micron levels
- Produces Ozone to help reduce malodours
- Designed with an integral sump
- Modular in design
- Specifically designed for commercial kitchen application
- Energy efficient: - uses no more than 50W
- Greatly reduces grease build-up within the duct run
- IP65 rated for outside location

FILTERS REMOVE



Smoke



Steam

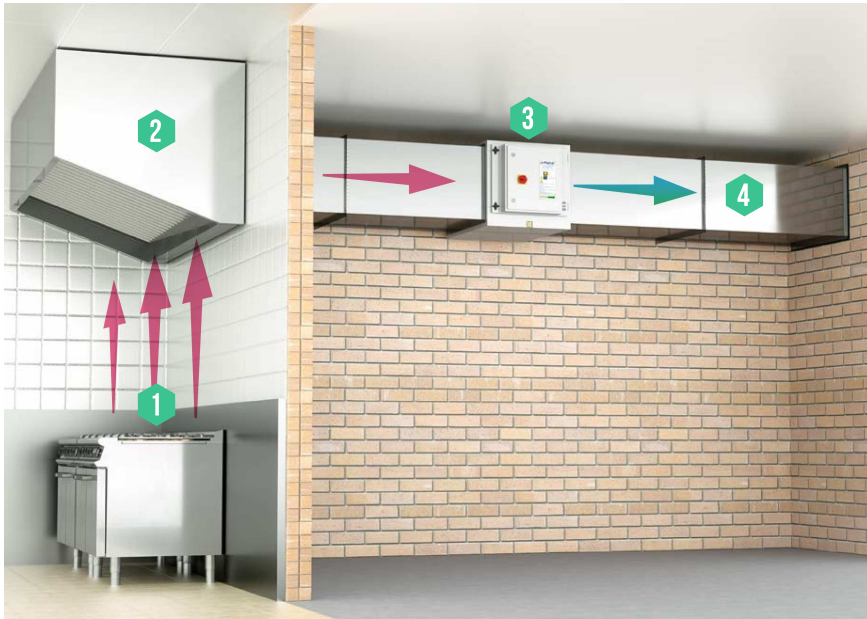


Oil



Grease

HOW IT WORKS



Our ESP units fit in-line with the kitchen ducting and can be configured modularly to cope with all extract volume requirements.

- 01 Cooking particulates and odours
- 02 Canopy Grease Filter

- 03 ESP - Particulate Control Unit
- 04 Airflow

OUR SERVICES



Design

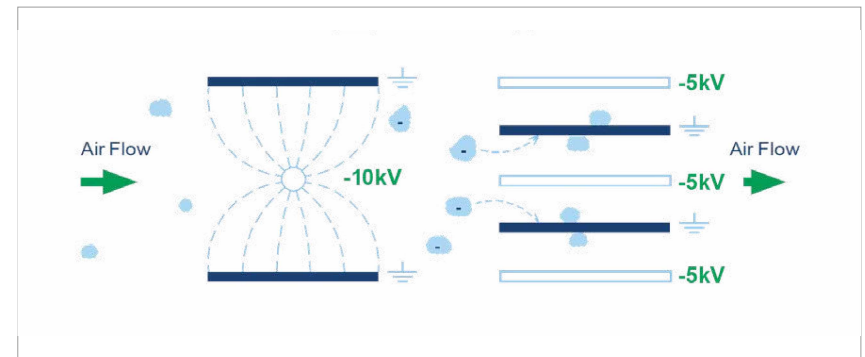


Manufacture



Maintain

THE ELECTROSTATIC PROCESS



The above diagram shows, in a basic visual, how an electrostatic precipitator works:

As air passes into the combined ioniser / collector cell, the particulates in the air stream are polarised. As they continue through the ioniser and between the collector cell plates,

the polarised particulates are repelled away from the negatively charged plates and attracted to the earthed plates where they stick and so are filtered out of the air flow.

THE BENEFITS OF ELECTROSTATIC TECHNOLOGY



Eliminates up to 99% of particles



Filters particles down to sub-micron levels



Modular design



Energy efficient

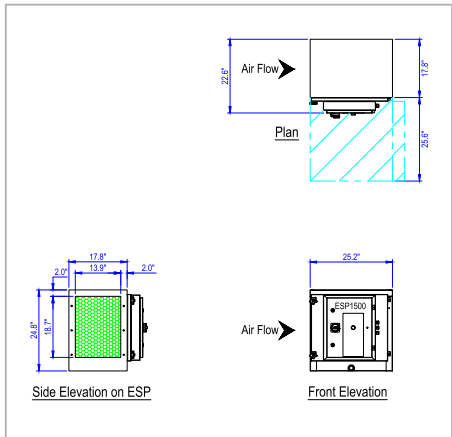
TECHNICAL SPECIFICATION

	ESP 1500	ESP 3000	ESP 4500	ESP 6000
Supply	115 _{V/1PH 50-60HZ}	115 _{V/1PH 50-60HZ}	115 _{V/1PH 50-60HZ}	115 _{V/1PH 50-60HZ}
Power Consumption	20 _W	30 _W	40 _W	50 _W
Maximum Airflow	1500 _{CFM (UP TO)}	3000 _{CFM (UP TO)}	4500 _{CFM (UP TO)}	6000 _{CFM (UP TO)}
Dimensions (Inches)	W 17.7 H 24.8 D 25.2	W 35.4 H 24.8 D 25.2	W 53.1 H 24.8 D 25.2	W 70.9 H 24.8 D 25.2
Dimensions (mm)	W 450 H 630 D 640	W 900 H 630 D 640	W 1350 H 630 D 640	W 1800 H 630 D 640
Weight (lb)	122 _{LBS}	188 _{LBS}	260 _{LBS}	338 _{LBS}

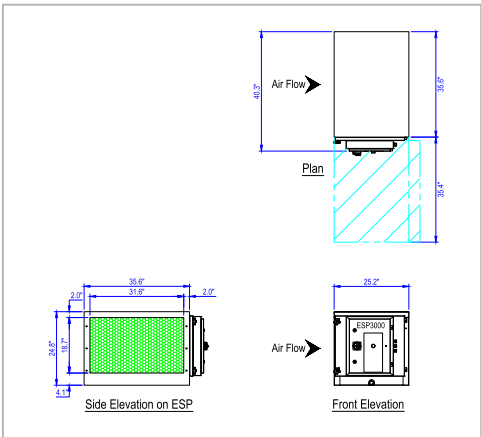
Please note: This equipment needs to be interlocked with the extract fan.

DRAWINGS

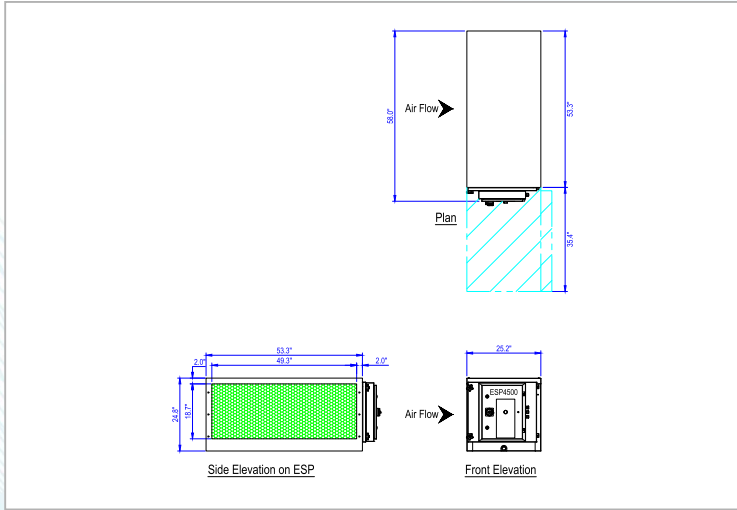
ESP 1500



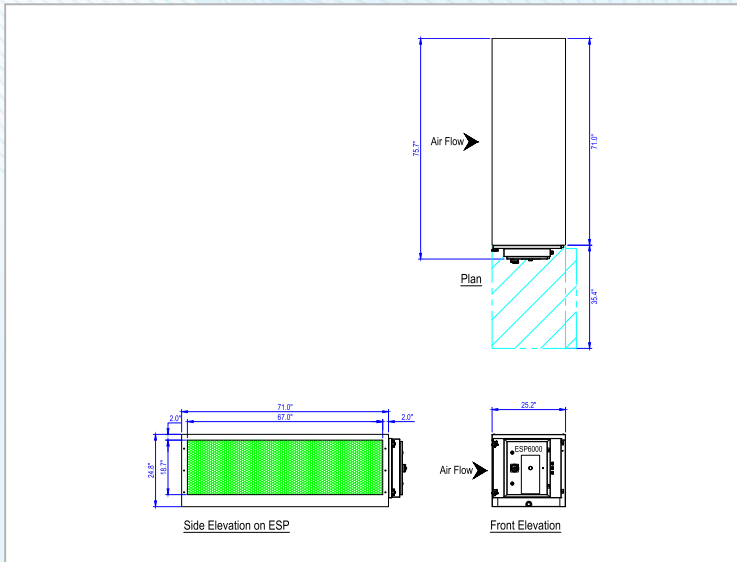
ESP 3000



ESP 4500



ESP 6000





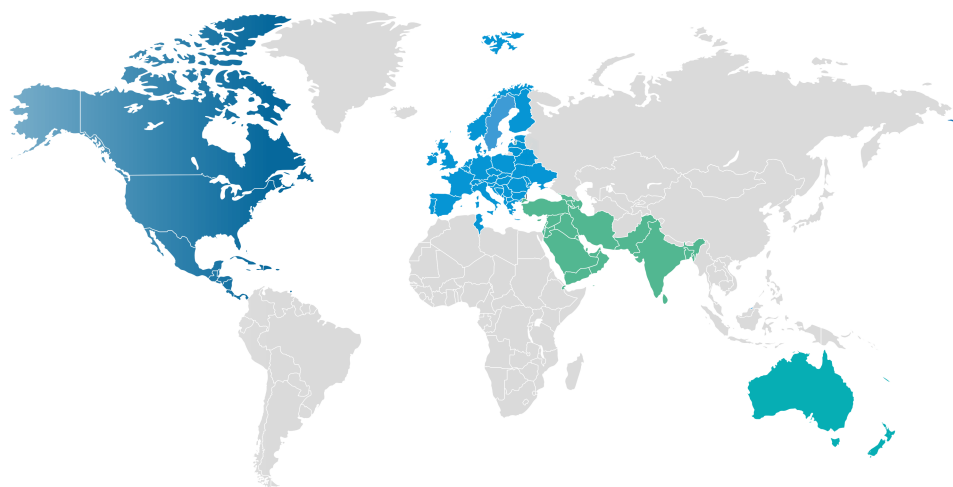
ABOUT US

Purified Air Ltd. has been striving to find the best and most cost-effective way to filter and control oil, smoke, fat and odour produced by commercial kitchens and service since 1984.

Purified Air manufactures filtration and odour control products for stock and bespoke systems, supplying systems to many sectoral brands. The design of each solution is based on the type of food cooked, the cooking process used, and the extracted air volume providing tried and tested purified kitchen exhaust air for Fast Food, Casual Dining and Luxury Concept Restaurant (Fine Dining) markets. By working with these variables, we can design and supply some of the world's best commercial kitchen filtration and odour control systems.

WORLDWIDE COVERAGE

- United Kingdom
- Middle East
- Europe
- North America
- Asia
- Australasia



GET IN TOUCH

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KITCHEN EXTRACT

UV-0 RANGE

500 | 1000

purified[®]air

COMMERCIAL KITCHEN FILTRATION EXPERTS

Purified Air Ltd. has been manufacturing and servicing market-leading technology to filter and control oil, grease, smoke and odour from commercial kitchens since 1984.

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Key Features	02
UV-O Technology	03
How It Works	04
Benefits of UV-O	05
Technical Specification	06

08

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KITCHEN EXTRACT

UV-O RANGE

500 | 1000



Unlike other UV-C systems, our UV-O units are located outside of the kitchen extract duct and are connected via a spigot and spiral ducting.

KEY FEATURES

- ➔ Easy to install
- ➔ Can be retro-fitted into existing duct
- ➔ Virtually no pressure loss
- ➔ No monthly maintenance needed

UV-O TECHNOLOGY

The UV-O range uses UV-C technology which is based on the synergy of oxygen and ultraviolet light to produce ozone. The ozone acts on the gases by changing their molecular structure, reduce the smells and breaking down odours in the ductwork ready for extraction.

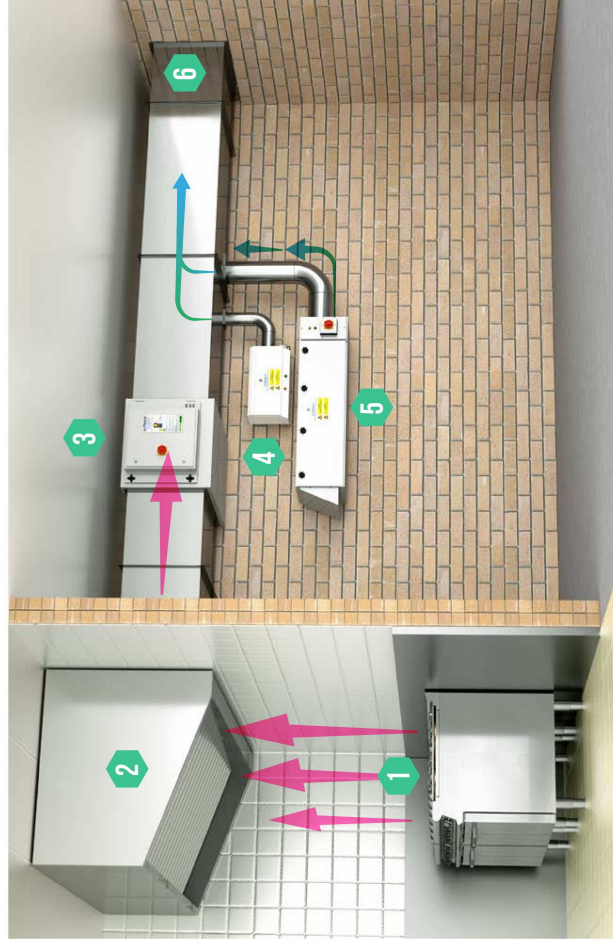
Unlike other UV-C systems, our UV-O units are located outside of the kitchen extract duct and are connected via a spigot and small diameter ducting.

Although it is widely accepted that the best way to apply UV-C light is directly in-line with the air stream itself, performance will be impacted as the lamps get dirty.

With our UV-O units the air flow does not come from the exhaust duct but from the ambient air around the unit, which is filtered on entry. This means that it is able to provide a uniform supply of ozone and hydroxyl free radicals into the extract system with an extremely low pressure loss.

For optimum performance we would recommend between 2 & 6 seconds of dwell time to allow the ozone to work effectively upon the malodorous gasses within the duct.

HOW IT WORKS



For optimum performance, we would recommend between 2 & 6 seconds of dwell time to allow the ozone to work effectively upon the malodorous gasses within the duct.

When installed correctly our UV-O systems can reduce cooking odours by up to 90%.

01 Cooking particulates and odours

02 Canopy Grease Filter

03 ESP - Particulate Control Unit

04 UV-O 500

05 UV-O 1000

06 Ozone breaks down odours within the duct

THE BENEFITS OF UV-O TECHNOLOGY



Reduces odours by up to 90%



Easy to retro fit



Low maintenance



Low pressure loss

TESTED & VERIFIED BY

This unit's tried and tested UV-C technology allows commercial kitchens to be sited in locations such as residential areas and shopping centres, where previously planning permission may not have been granted. After extensive research and development Purified Air are able to devise the best combination of lamps to provide the most effective odour control.

OUR SERVICES



Design



Manufacture



Maintain

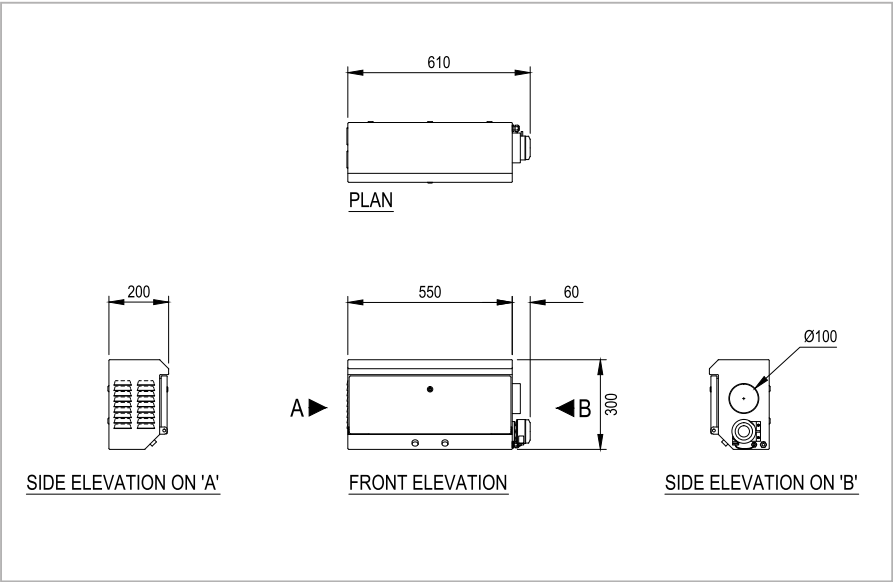
TECHNICAL SPECIFICATION

	UV-O 500	UV-O 1000
Supply	220-240 V 50-60HZ	220-240 V 50-60HZ
Power Consumption	140 _W	640 _W
Maximum Airflow	1.5 M ³ /SEC (UP TO)	2.5 M ³ /SEC (UP TO)
Dimensions (mm)	W 610 H 300 D 200	W 1521 H 350 D 404
Weight	10.5 KG (APPROX)	50 KG (APPROX)

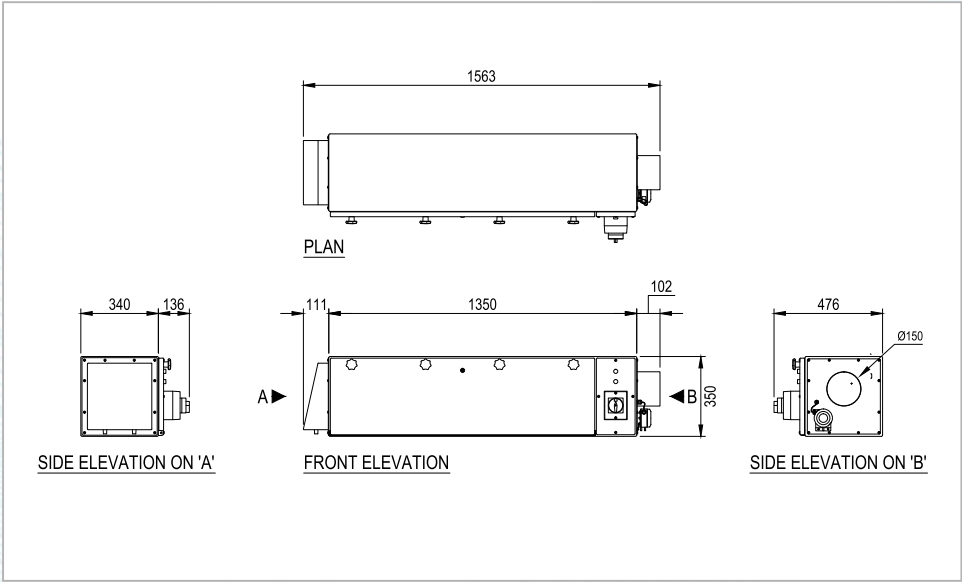
Please note: This equipment needs to be interlocked with the extract fan.

DRAWINGS

UV-O 500



UV-O 1000





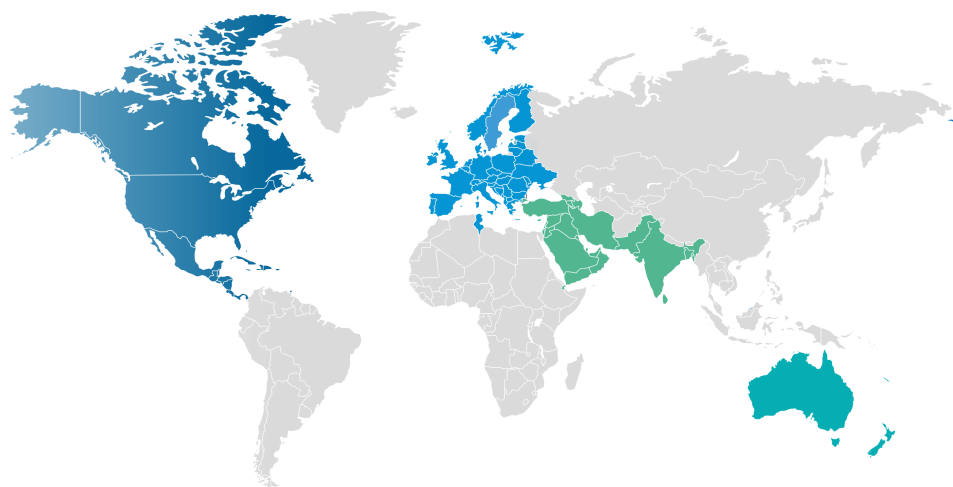
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LONGAR® Type 3

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.



Range of cylindrical cased axial fans fitted with aluminium impellers and manufactured from high grade rolled galvanised steel and protected against corrosion by cataforesis primer and black polyester paint finish. Fitted with 2 contra rotating complementary impellers manufactured from die-cast aluminium. All models are supplied with pre-wired wiring junction box located on the outside of the fan casing for easy wiring access. Available with single or three phase 4 poles motors.

Motors

All the motors are IP65, Class F insulation (1), equipped with thermal protection. Single phase motors are variable voltage (Excepted TCBBX2/4-630). Three phase motors suitable for inverter control.

Electrical supplies:

Single phase 230V-50Hz (Capacitor located inside the wiring terminal box)
Three phase 230/400V-50Hz.

(1) Working temperatures from -40°C up to 70°C.



Contra rotating: High pressure

Contra rotating system with two complementary impellers allowing the duplication of the pressure with the same air volume.



Corrosion resistance

Rolled steel casings and motor support protected by cataforesis primer and black polyester paint finish. Stainless steel screws.



Terminal box

Wiring terminal box with cable gland PG-11.



Impeller dynamically balanced

Impellers are dynamically balanced, according to ISO 1940 standard, giving vibration free operation.

CONTRA ROTATING CASED AXIAL FANS

TCBBx2 / TCBTx2 Series



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)	Diameter (mm)	Maximum absorbed power (W)	Maximum absorbed current (A)		Sound pressure level* (dB(A))	Maximum air volume (m³/h)	Weight (kg)	Speed controller RMB/T	Variable frequency inverter				
				to 230 V	to 400 V					VFTM		VFKB		
										1/230V**	3/400V	1/230V**	3/400V	
SINGLE PHASE														
TCBBx2/4-450	1420	450	1316	5,7	–	74	7.430	42	RMB-8	–	–	–	–	
TCBBx2/4-500	1370	500	1957	9,0	–	76	9.950	50	RMB-10	–	–	–	–	
TCBBx2/4-560	1370	560	2972	13,6	–	78	13.930	66	–	–	–	–	–	
TCBBx2/4-630	1400	630	3671	16,3	–	79	16.560	80	–	–	–	–	–	
THREE PHASE														
TCBTx2/4-450	1430	450	1309	5,2	3	74	7.250	42	RMT-5	VFTM MONO 1,1	VFTM TRI 1,1	VFKB 27	VFKB 45	
TCBTx2/4-500	1390	500	1700	5,8	3,4	76	9.800	50	RMT-5	VFTM MONO 1,1	VFTM TRI 1,5	VFKB 27	VFKB 45	
TCBTx2/4-560	1390	560	3173	10,0	5,8	78	15.170	66	–	VFTM MONO 2,2	VFTM TRI 3	–	VFKB 48	
TCBTx2/4-630	1445	630	4014	–	7,4	79	17.810	80	–	–	VFTM TRI 4	–	VFKB 48	

* Sound pressure level, measured in free field condition at a distance equivalent of three times the diameter of the impeller or a minimum of 1.5 meters whichever is the greater.

** Only for fans fitted with three phase motors 230/400V.

ACOUSTIC CHARACTERISTICS

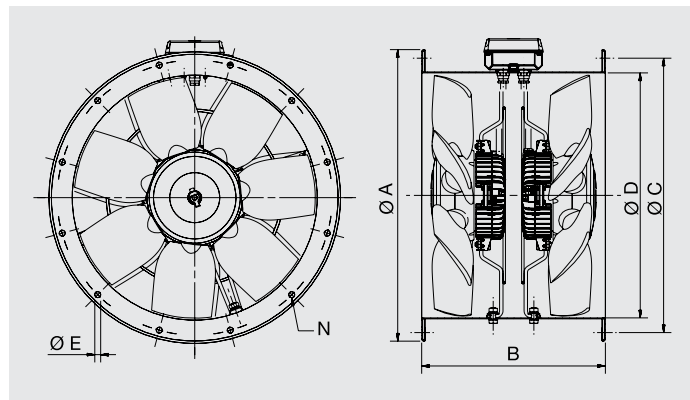
The sound levels –NPS– shown in the technical characteristic chart, correspond to the value of sound pressure dB(A), measured in free field conditions at a distance equivalent to three times the diameter of the impeller with a minimum of 1.5 meters.

The following table shows the sound power level spectrums in dB(A) measured with the fan ducted, at both inlet and discharge sides.

Model	Air volume m³/h	63	125	250	500	1000	2000	4000	8000	Global
450 Inlet	6.600	46	73	85	82	85	79	72	64	90
	5.850	46	73	84	81	83	79	71	64	88
	4.300	58	70	80	80	83	79	71	64	87
450 Outlet	6.600	63	75	86	85	87	82	74	67	92
	5.850	53	73	85	84	87	81	74	67	91
	4.300	58	70	82	83	86	82	74	67	90
500 Inlet	9.000	48	78	87	85	87	81	74	67	92
	7.500	52	76	85	85	85	80	73	65	90
	6.000	60	73	83	82	85	80	73	66	89
500 Outlet	9.000	65	76	87	88	90	84	77	70	94
	7.500	62	75	86	87	88	83	76	69	92
	6.000	59	72	86	85	88	83	76	69	92

Model	Air volume m³/h	63	125	250	500	1000	2000	4000	8000	Global
560 Inlet	13.720	50	85	87	88	91	85	78	73	95
	10.800	57	79	83	86	89	84	78	72	93
	9.000	63	79	81	86	89	84	78	72	92
560 Outlet	13.720	74	86	85	91	94	88	81	75	97
	10.800	70	82	84	88	92	87	81	74	95
	9.000	74	81	85	89	92	87	81	74	95
630 Inlet	17.500	51	85	91	89	93	87	80	74	97
	15.600	55	85	85	88	91	86	80	73	95
	12.000	64	80	84	88	90	86	80	73	94
630 Outlet	17.500	73	87	88	93	95	89	83	77	99
	15.600	71	87	86	91	94	89	83	76	98
	12.000	67	84	86	90	94	89	84	76	97

DIMENSIONS (mm)



Model	Ø A	B	Ø C	Ø D	Ø E	Number of holes N
450	537	375	500	450	12	8
TCBBx2/4-500	595	520	560	500	12	12
TCBTx2/4-500	595	375	560	500	12	12
560	655	520	620	560	12	12
630	725	520	690	630	12	12

PLATE MOUNTED AXIAL FLOW FANS

COMPACT HCBB / HCBT series

Range of low profile plate mounted axial fans fitted with aluminium impellers and single phase motor (HCBB) or three phase motor (HCBT) IP65 (1) Class F insulation (2), equipped with thermal protection (3).

(1) Models 800, 900 and 1000 are IP55.

(2) Working temperatures from -40°C up to +70°C.

Except models Ø 800, 900 and 1000 suitable for usage in environments from -20°C to +40°C.

(3) Except models Ø 800 to 1000.

Motors

Available, depending upon the model, with single or three phase motors in 4 poles.

All motors are speed controllable by auto-transformer except models /4-630, B/710, T/4-710, T/800, T/900 and T/1000.

Three phase models are speed controllable by inverter.

Electrical supplies:

Single phase 230V-50Hz.(except HCBB/4-250H 230~50/60Hz.

[Capacitor located inside the wiring terminal box).

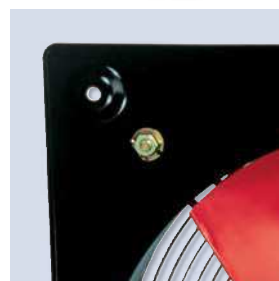
Three phase 230/400V-50Hz or 400V-50Hz.

Standard air direction: form (A) configuration. (Motor over Impeller).



Configuration for models Ø 800 to 1000

Special design of motor over impeller, which provides compactness and tightness IP55.



Corrosion resistance

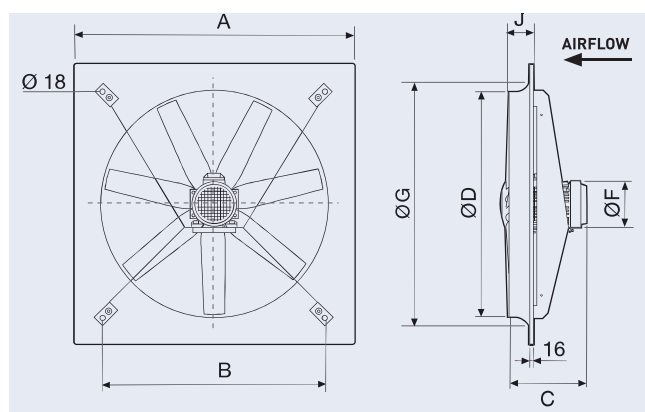
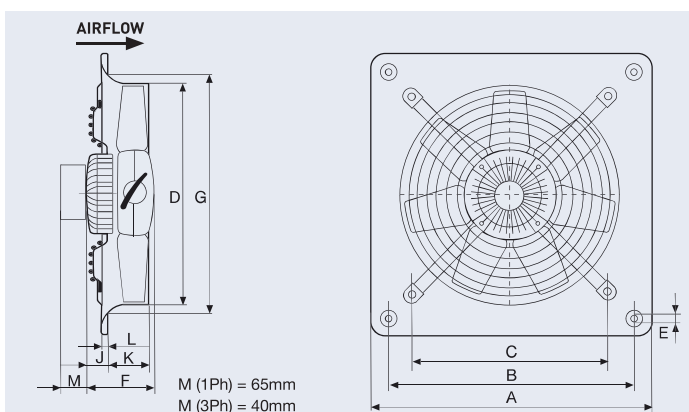
Mounting plate, motor support and finger proof guard protected by cataforesis primer and black polyester paint finish. Stainless steel screws.



Terminal box

Wiring terminal box with cable gland PG-11.

DIMENSIONS (mm)



Model	□A	□B	C	ØD	ØE	F	ØG	J	K	L
250	315	260	220	254	10	122	294	59	53	12
315	400	330	280	315	10	122	329	32	68	12
355	450	380	315	355	10	129	371	45	75	12
400	500	420	355	400	10	129	422	40.5	78	12
450	560	480	400	450	10	150	476	48	91	12
500	630	560	450	500	10	150	536	44.5	97	12
560	710	630	510	560	10	218.5	596	110.5	98.5	12
630	800	710	580	630	12	218.5	674	110.5	103	12
710	900	800	636	710	12	218.5	733	134	91.5	16.5

Model	□A	□B	ØD	J	ØG	C		ØF	
						L	H	L	H
800	1000	800	800	92	926	345	380	181	203
900	1120	900	900	120	1060	392	439	203	280
1000	1250	1000	1000	110	1154	380	485	203	280

TECHNICAL DATA

Model	Speed (r.p.m.)	Maximum absorbed power (W)	Maximum current (A)		Sound pressure level @3m (dB(A))	Maximum air volume (m³/h)	Weight (Kg)	Speed controller		Inverter Control	
			230 V	400 V				ELECTRONIC	AUTO- TRANSFORMER	S&P VFD*	

SINGLE PHASE 4 POLE

HCBB/4-250/H	1325	84	0,4		49	1.130	5	REB-1	REV-3N		
HCBB/4-315/H	1295	140	0,7		55	2.310	7	REB-1	REV-3N		
HCBB/4-355/H	1385	193	0,9		59	3.560	8	REB-3	REV-3N		
HCBB/4-400/H	1360	315	1,5		62	4.830	9	REB-3	REV-5N		
HCBB/4-450/H	1410	626	2,8		65	7.180	13	REB-3	REV-5N		
HCBB/4-500/H	1365	787	3,4		68	8.810	16	REB-5	REV-5N		
HCBB/4-560/H	1370	1266	5,7		70	12.580	22	REB-8	REV-7N		
HCBB/4-630/H	1360	1879	8,3		71	16.550	25	-	-		

THREE PHASE 4 POLE

HCBT/4-250/H	1330	81	0,3	0,2	49	1.120	5		-	-M 10A	-T 5A
HCBT/4-315/H	1320	162	0,7	0,4	55	2.370	7		-	-M 10A	-T 5A
HCBT/4-355/H	1370	182	0,8	0,5	59	3.480	8		-	-M 10A	-T 5A
HCBT/4-400/H	1320	288	1,1	0,6	62	4.880	9		-	-M 10A	-T 5A
HCBT/4-450/H	1350	511	1,6	0,9	65	6.310	13		-	-M 10A	-T 5A
HCBT/4-500/H	1390	809	2,7	1,6	68	9.030	16		-	-M 10A	-T 5A
HCBT/4-560/H	1390	1287	4,0	2,3	70	12.760	22		-	-M 10A	-T 5A
HCBT/4-630/H	1385	1736	5,4	3,1	73	16.840	25		-	-M 10A	-T 5A
HCBT/4-710/H	1350	2554	7,6	4,4	74	22.330	27		-	-M 10A	-T 6.8A
HCBT/4-800/L-X (1,5 kW)	1410	2632	7,3	4,2	78	23.290	37		-	-M 10A	-T 5A
HCBT/4-800/H-X (3 kW)	1440	4595	12,8	7,4	84	33.100	52		-	-M 16A	-T 9A
HCBT/4-900/L-X (3 kW)	1450	3909	12,0	6,9	82	34.270	96		-	-M 16A	-T 9A
HCBT/4-900/H-X (5,5 kW)	1455	7893		13,4	87	46.270	112		-		-T 17A
HCBT/4-1000/L-X (3 kW)	1415	5048	14,2	8,2	86	39.910	67		-	-M 16A	-T 9A
HCBT/4-1000/H-X (7,5 kW)	1470	8675		14,6	93	53.700	101		-		-T 17A

* Inverter control: VFD-M - 1-Phase 230V Input, 3-Phase 400V Output.

VFD-T - 3-Phase 400V Input, 3-Phase 400V Output.

PERFORMANCE DATA

Airflow m³/s @ Static Pressure Pa

Model	0	25	50	75	100	125	150	175	200	250	300	350	400
SINGLE PHASE 4 POLE													
HCBB/4-250/H	0.314	0.268											
HCBB/4-315/H	0.633	0.567	0.439										
HCBB/4-355/H	0.996	0.921	0.836	0.718									
HCBB/4-400/H	1.394	1.299	1.191	1.045	0.839								
HCBB/4-450/H	1.889	1.807	1.720	1.613	1.470	1.326	1.194						
HCBB/4-500/H	2.458	2.369	2.271	2.150	1.993	1.824	1.651	1.463					
HCBB/4-560/H	3.721	3.620	3.512	3.390	3.245	3.074	2.886	2.685	2.482	2.283			
HCBB/4-630/H	4.604	4.495	4.346	4.194	4.039	3.879	3.707	3.514	3.278	2.969			
THREE PHASE 4 POLE													
HCBT/4-250/H	0.311	0.263											
HCBT/4-315/H	0.661	0.593	0.481										
HCBT/4-355/H	0.979	0.896	0.812	0.673									
HCBT/4-400/H	1.394	1.299	1.191	1.045	0.839								
HCBT/4-450/H	1.889	1.807	1.720	1.613	1.470	1.326	1.194						
HCBT/4-500/H	2.539	2.450	2.356	2.247	2.097	1.909	1.744						
HCBT/4-560/H	3.598	3.485	3.368	3.242	3.096	2.916	2.705	2.483	2.202				
HCBT/4-630/H	4.677	4.543	4.405	4.258	4.093	3.906	3.694	3.462	3.224				
HCBT/4-710/H	6.203	6.024	5.842	5.653	5.452	5.235	4.992	4.714	4.379	3.488			
HCBT/4-800/L-X (1,5kW)	6.468	6.314	6.156	5.993	5.817	5.624	5.408	5.159	4.882	4.315	3.525	2.862	2.395
HCBT/4-800/H-X (3kW)	9.193	9.029	8.862	8.690	8.511	8.319	8.107	7.871	7.601	6.925	6.117	5.268	4.475
HCBT/4-900/L-X (3kW)	9.519	9.312	9.103	8.890	8.668	8.435	8.188	7.922	7.635	6.982	6.227	5.395	4.386
HCBT/4-900/H-X (5,5kW)	13.819	13.566	13.314	13.061	12.809	12.555	12.298	12.033	11.757	11.137	10.401	9.545	8.591
HCBT/4-1000/L-X (3kW)	11.193	10.924	10.655	10.384	10.110	9.831	9.546	9.249	8.936	8.226	7.408	6.561	5.760
HCBT/4-1000/H-X (7,5kW)	14.855	14.551	14.287	13.661	13.970	13.388	13.099	12.756	12.406	11.688	11.004	10.166	9.246

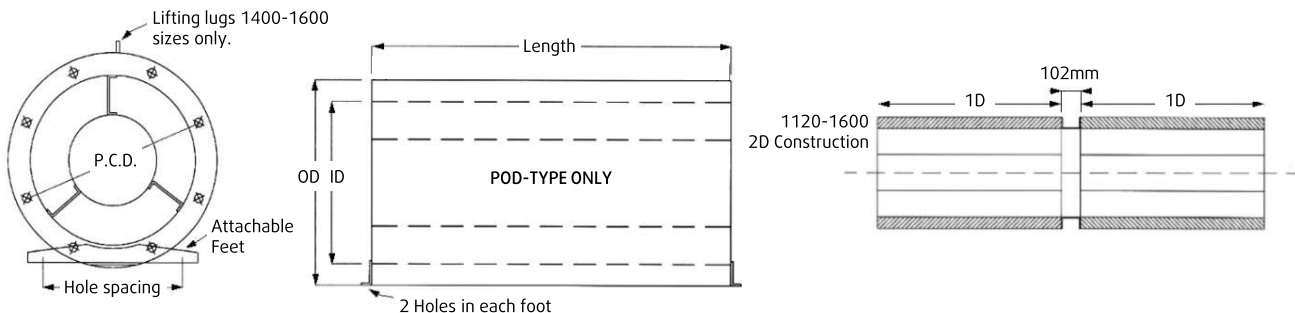
CYLINDRICAL SILENCERS (TYPE LP AND HP)

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

Product Data Sheet



Product Code:	Issue No.	Issue Date:	Issue by:
TC103-60	A	03.10.09	D.B.P

Description

Light Duty Cantilever Arm Support - 600mm

Features

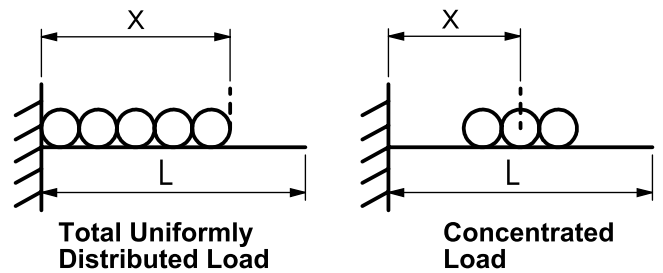
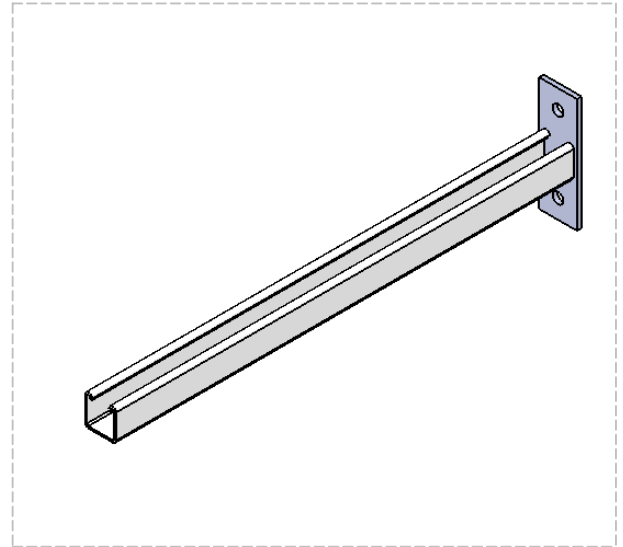
Brackets are designed to comply with BS6946

Manufactured from 6mm thick steel

Special Finish: All channel brackets are post hot dipped galvanised to BS729

General Characteristics

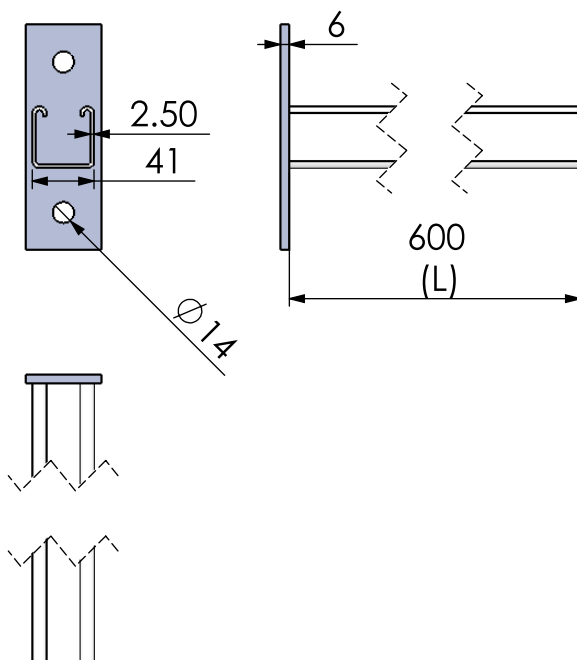
Material	Low carbon steel strip (BSEN10142:2000)
Finish	Hot Dipped Zinc
Cantilever Arm	41 x 41mm strut 2.5mm channel
Cantilever length	600mm
Suitable for Tray width	450mm

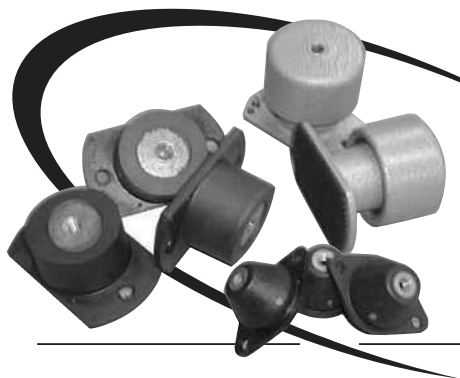


Recommended Safe Loads (kg)

x (m)	Total Uniformly Distributed Load (kg)	Concentrated Load (kg)
0.10	684	342
0.15	608	342
0.20	542	283
0.25	452	226
0.30	377	188
0.35	323	162
0.40	283	141
0.45	251	126
0.50	226	113
0.55	206	103
0.60	188	94
0.65	174	87
0.70	162	81
0.75	151	75

Dimensions





Anti Vibration Mounts (AV's)

Introduction

Anti-vibration mounting kits are available in both rubber and spring type, the correct selection and type employed will depend on the accurate calculation of the weight of the assembly to be supported.

Installation

AV mounts should not be fitted to a fan/silencer assembly unless there are flexible connectors fitted between the assembly and associated duct work.

AV mounts should be installed with the matched mounting feet and positioned such that they carry an equal proportion of the assembly weight. This is particularly important where fans and silencers are installed on suspension rods.

Figure 1. NAV 1 to NAV 5 (Resilient Rubber)

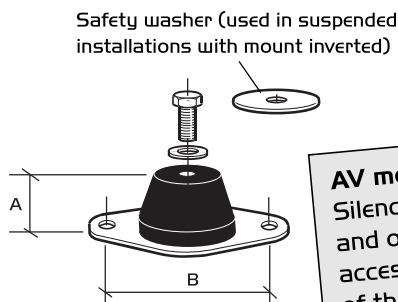


Figure 2. NAV 6 (Resilient Rubber)

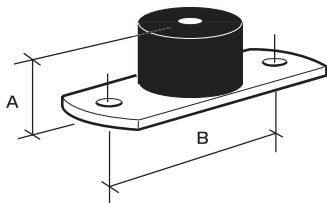
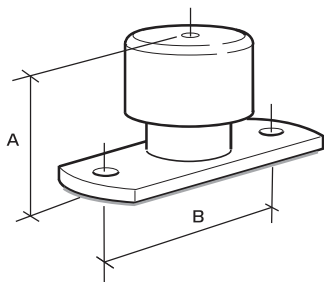


Figure 3. NAV 49 to NAV 58 (Spring)



AV mounts are maintenance free but a periodical inspection is recommended to check security of fixings and condition of rubbers and springs.

Resilient Mounting Details

Figure 4.

NAV 1 to NAV 5 shown in floor (Figure 4) and suspended configurations (Figure 5).

Fans using size NAV 6 upwards require supporting steelwork to be designed (by others) for suspended applications.

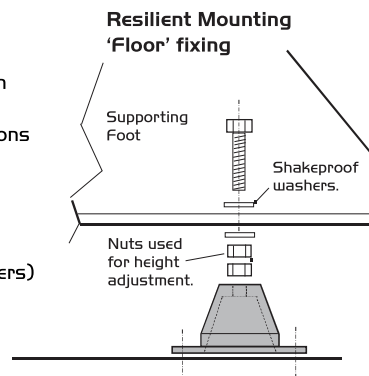
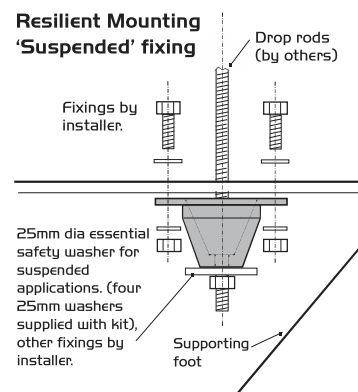


Figure 5.



AV mounts isolate the fan only. Silencers/backdraught dampers and other "significant mass" accessories should form part of the fixed ductwork after the flexible connection.

Dimensions (mm) and Weights

Rubber Type

Code	A	B	Max. kg per kit
NAV1	30	50	20
NAV2	40	75	80
NAV3	40	75	180
NAV4	40	75	260
NAV5	40	75	130
NAV6	50	100	320

Spring Type

NAV49	77	76	400
NAV50	77	76	480
NAV51	77	76	520
NAV52	87	127	600
NAV53	87	127	700
NAV54	87	127	800
NAV55	87	127	950
NAV56	87	127	1110
NAV57	87	127	1270
NAV58	87	127	1430



Nuaire Limited Western Industrial Estate Caerphilly United Kingdom CF83 1NA
Telephone: 029 2088 5911 Facsimile: 029 2088 7033
Email: info@nuaire.co.uk www.nuaire.co.uk

Leaflet Number 671224 October 2004

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.

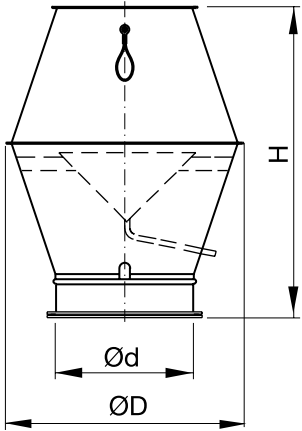
To avoid damage to the net in the opening the hood is supplied with transport protection. This must be removed before the hood is taken into service.

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

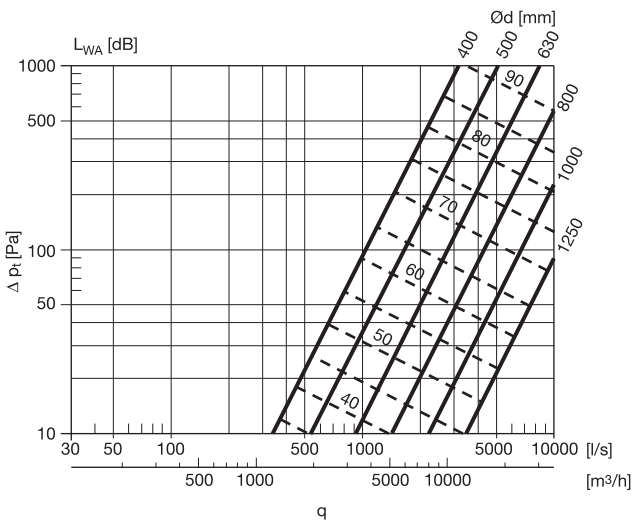
Product code **HF**
Dimension $\varnothing d$ **630**

Dimensions



$\varnothing d$ nom	$\varnothing D$ mm	H mm	m kg	Roof through con- nection TGR	
				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



Circular duct

SR



Description

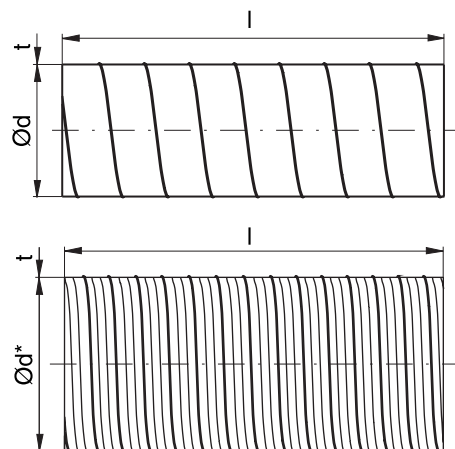
Circular duct.

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				



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

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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



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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.