

LC/SC



Long & Short
Cased **Axial Fans**





LC/SC

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LC/SC



Elta Fans Limited, being a key member of the Elta Group of companies, are recognised as a global supplier of high quality, engineered standard and bespoke Axial Flow fan products.

Established for over 35 years, with manufacturing plants in the UK, Australia, Malaysia and South Africa and with extensive global distribution networks, Elta Fans has grown substantially over this period by employing the latest technology and manufacturing standards, underpinned by a vast knowledge of axial fan design.



We are able to meet applications requirements ranging from the simple wall mounted fan to ventilate a factory building or electrical sub-station to major applications including marine, traction, refrigeration, car park impulse and induction systems through to smoke control by pressurisation and extraction systems.

Our Long Case (LC) and Short Case (SC) range of Axial Flow fan products are available in diameters from 315mm up to 2000mm with six hub sizes, alternative blade materials, single or two speed motor combinations, single and three phase 50 or 60 Hz supplies. This allows us to offer the most efficient full and fractional solidity impeller combinations perfectly matched to your application.

With volume flow ranges from as small as 0.20 m³/s to in excess of 100.00 m³/s at over 2000Pa external static pressure (50Hz) and 3500Pa external static pressure (60Hz), Elta Fans has a product available to meet your needs.

To complete the package, Elta Fans are able to add guide vane units and a full range of ancillary items.

Our design and sales engineers are continually updating their knowledge and skills so that our clients can remain confident in the product they specify, install and maintain whilst obtaining the level of service required.



BS EN ISO 9001:2008



MEMBER



long cased - LC Series

Standard long cased (LC) axial units of which there are 80 different models, incorporate integral mounting flanges with industry standard drillings. This feature allows fan removal from in-line duct application with relative ease. The centrally mounted motor is wired to an IP55 protected, duct mounted terminal box on the outside of the fan casing, using a flexible and weatherproof cable.



short cased - SC Series

Standard short cased (SC) axial units of which there are also 80 different models, incorporate integral mounting flanges with industry standard drillings. The configuration of this fan allows the rear of the platform mounted motor to partially protrude beyond the flange. An external duct mounted terminal box is available on request. This configuration particularly suits end-of-duct or O.E.M. applications or applications with limited space.



features & benefits

- 160 standard size models.
- Multiple impeller diameters; 315mm to 2000mm.
- High aerodynamic efficiency.
- A wide range of nominal speeds can be provided.
- Standard speeds from 2 to 8 pole, alternative speeds including 2 speed options are available.
- A wide range of impeller hub sizes and impeller blade combinations.
- Numerous performance variations are available.
- Minimum IP55 protection, others on application.
- 220-240 Volts / 1 Phase - 50 & 60 Hz.
- 220-240 / 380-415 Volts - 3 Phase 50 Hz.
- 440-480 Volts - 3 Phase 60 Hz.
- Other voltages are available on request.
- Standard operating temperature range -20°C to + 54°C (standard models) up to 1000m above sea level.

cost effective

High efficiency impellers are a very economical method of moving high volumes of air at low to medium pressures.

material strength

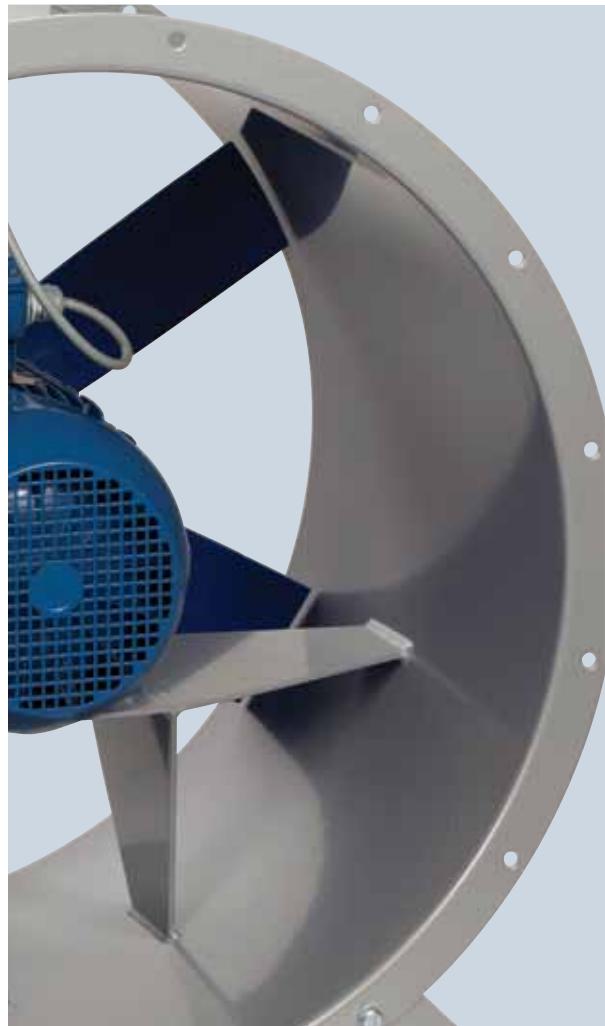
LC/SC axial fans have a robust, heavy duty construction for strength and durability. Fan casings are heavy gauge, sheet steel, roll formed, welded and hot dipped galvanised after fabrication to BS EN ISO1461:2009.

impeller design

Adjustable pitch aerofoil section impellers with GRP, aluminium or carbon loaded composite blades. Hubs are made from high quality cast aluminium. Alternative versions are available including truly reversible and 2 stage contra-rotating.

choice

An extensive range of 17 sizes from 315mm to 2000mm diameter giving a wider performance and greater choice for the engineer. Other diameters are available on request.



flexible performance

Fully adjustable aerofoil impellers in various alternative hub and blade arrangements to optimise air performance.

ease of installation

The centrally mounted motor is connected via a flexible weatherproofed cable system to an externally located IP55 protected terminal box for long cased versions.

accessories

Full accessory range – Flexible connectors and clips, matching flanges, anti-vibration mounts, mounting feet, silencers, wire guards, bell mouth inlets, non return dampers, downstream guide vanes and access doors.

tested to the latest standards

LC/SC units are tested to ISO 5801:2007 (Airsides performance) Installation Category D and to BS 848 Part 2:1985 (Sound performance) at Elta Fans own test facility for accurate, reliable and up-to-date performance and sound data.

quality assurance

All units are designed and manufactured to high standards as defined in BS EN ISO 9001: 2008.





specification

casing

The all metal fan casing provides a very durable and robust construction. The fan casings are constructed from a heavy gauge mild sheet steel, rolled, spun flanged and fully welded, then hot dip galvanised to BS EN ISO 1461:2009 after fabrication. Both motors and axial impellers are mounted within the length of the casing on LC fans, while the motor body projects outside the casing on SC fans.

Casings are also available manufactured from stainless steel. Mild steel casings are available in an epoxy coated finish and other special finishes are available on request.

impellers

Adjustable pitch aerofoil impellers are provided with blades made from high quality cast aluminium, GRP or carbon loaded composite. Impellers are factory set to meet specific customer requirements.

The hubs are manufactured from cast aluminium alloy.

All impellers are balanced to ISO 14694:2003.

motors

Motors can be foot or pad mounted, totally enclosed metric type to IP55 with a standard industrial paint finish and Class F insulation to BS EN 60034-5:2001, suitable for operating temperatures of up to +54°C. Motors are wired via a weatherproofed cable to an IP55 protected terminal box mounted on the outside of the fan casing for LC units, while customer wiring is direct to the motor terminal box for SC units.

quality management

Fans are designed and manufactured with procedures as defined in BS EN ISO 9001: 2008.

variants

As illustrated, many alternative speeds are available as standard. 2 stage contra-rotating and single stage (with guide vanes) are also available for high pressure applications. Truly reversible models can also be provided upon request. Bifurcated, Belt driven, Hazardous area (ATEX) and smoke ventilation fans are also available from Elta Fans.

detailed fan performance data

Performance data sheets are available for each impeller diameter, blade angle and speed. Each of our data sheets contains complete air performance characteristics. This includes sound data across the frequency spectrum and uses a zoning method to qualify any variations in sound data along a fan's individual operating performance characteristic curve.

LC/SC units are tested to ISO 5801:2007 (Airside performance) Installation Category D and to BS 848 Part 2:1985 (Sound performance).

hubs

6 Hub sizes from 150mm to 550mm diameter provide almost infinite possibilities, whether performance sound levels or power consumption is the key requirement. All hubs are cast from high-grade aluminium alloy.

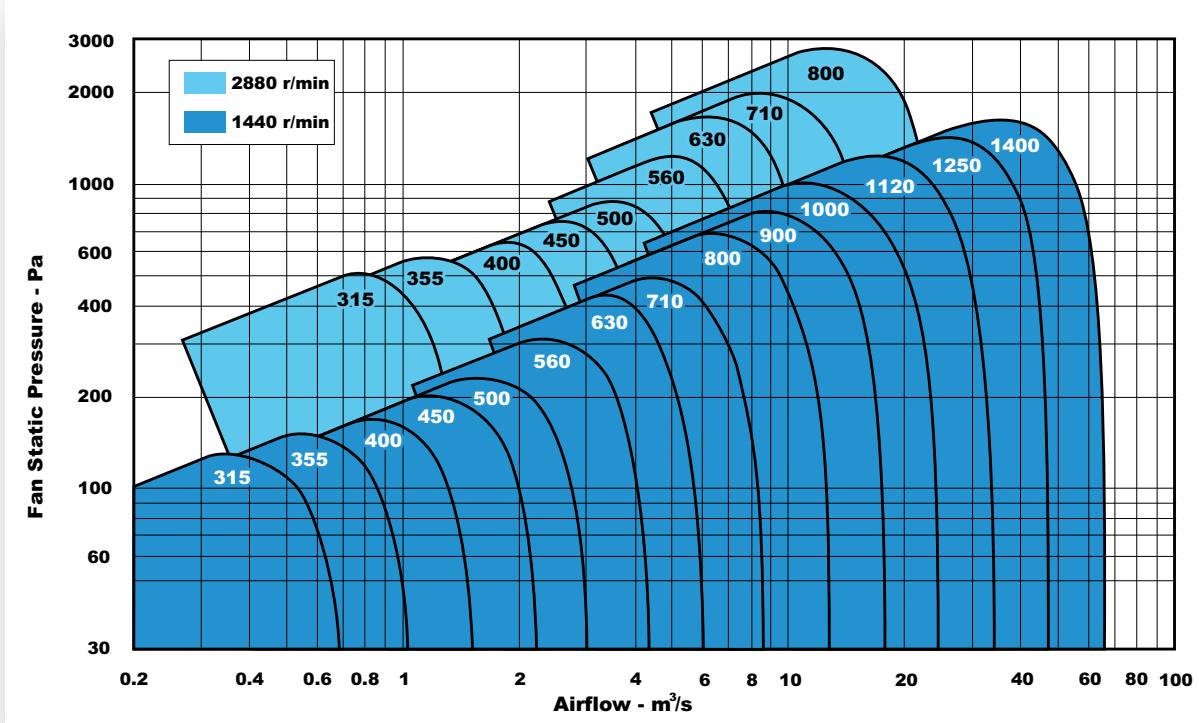


performance data

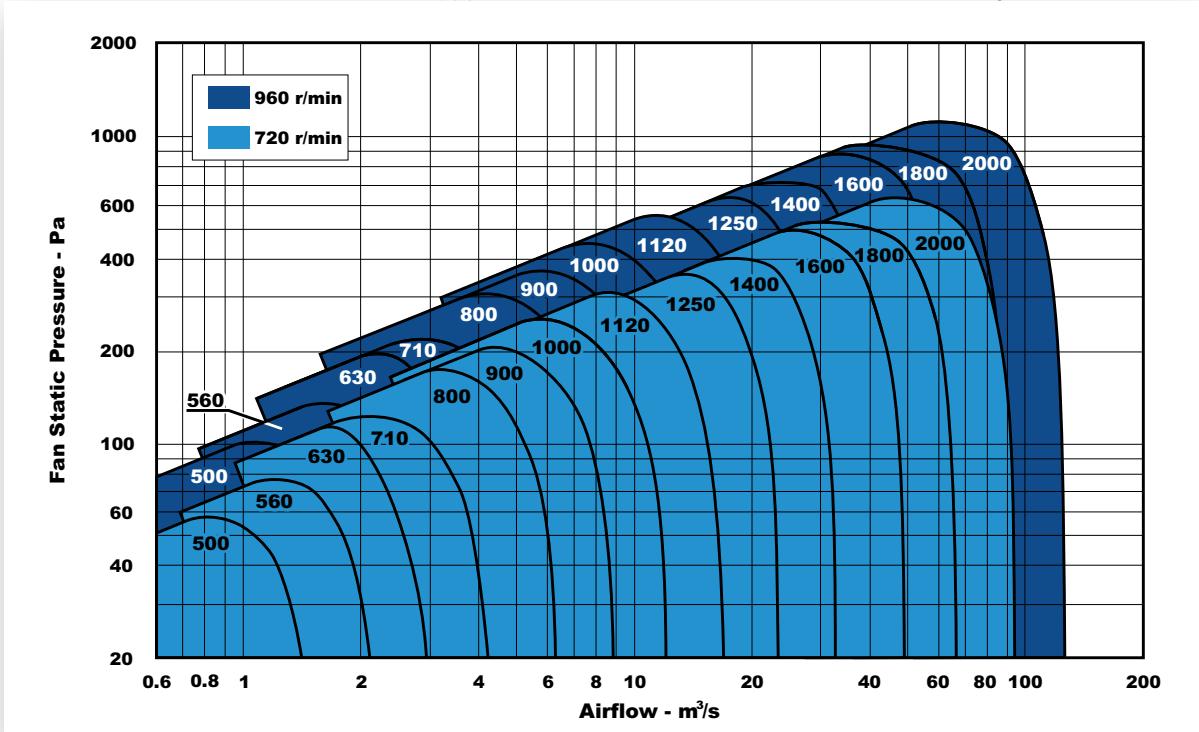
LC/SC units are tested to ISO 5801:2007 (Airside performance) Installation Category D and to BS 848 Part 2:1985 (Sound performance).

Standard units operating at 50 Hz

50Hz - 2880 and 1440 r/min - 2 & 4 Pole

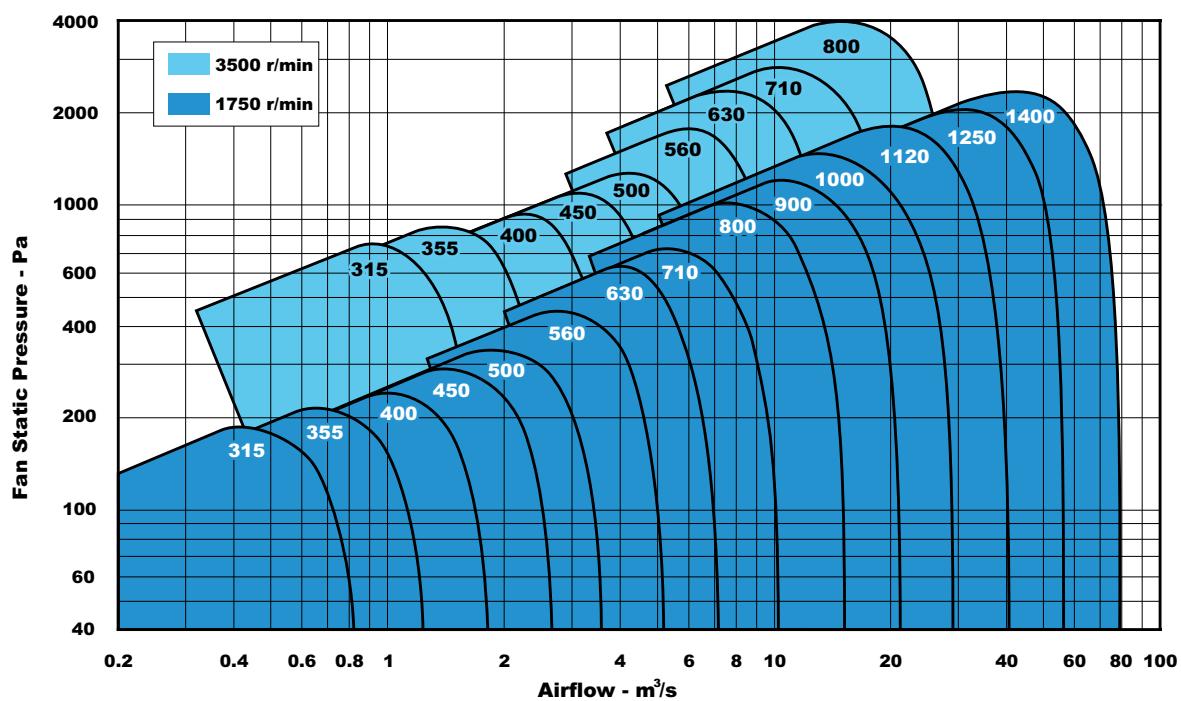


50 Hz – 960 and 720 r/min - 6 & 8 Pole

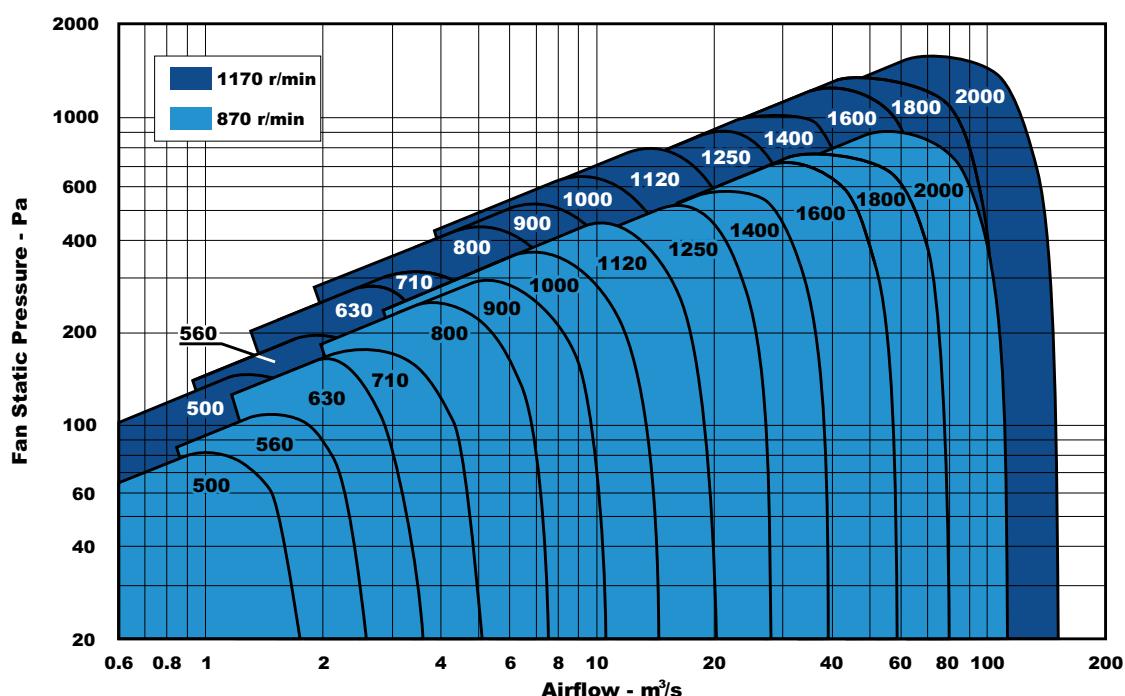


Standard units operating at 60 Hz

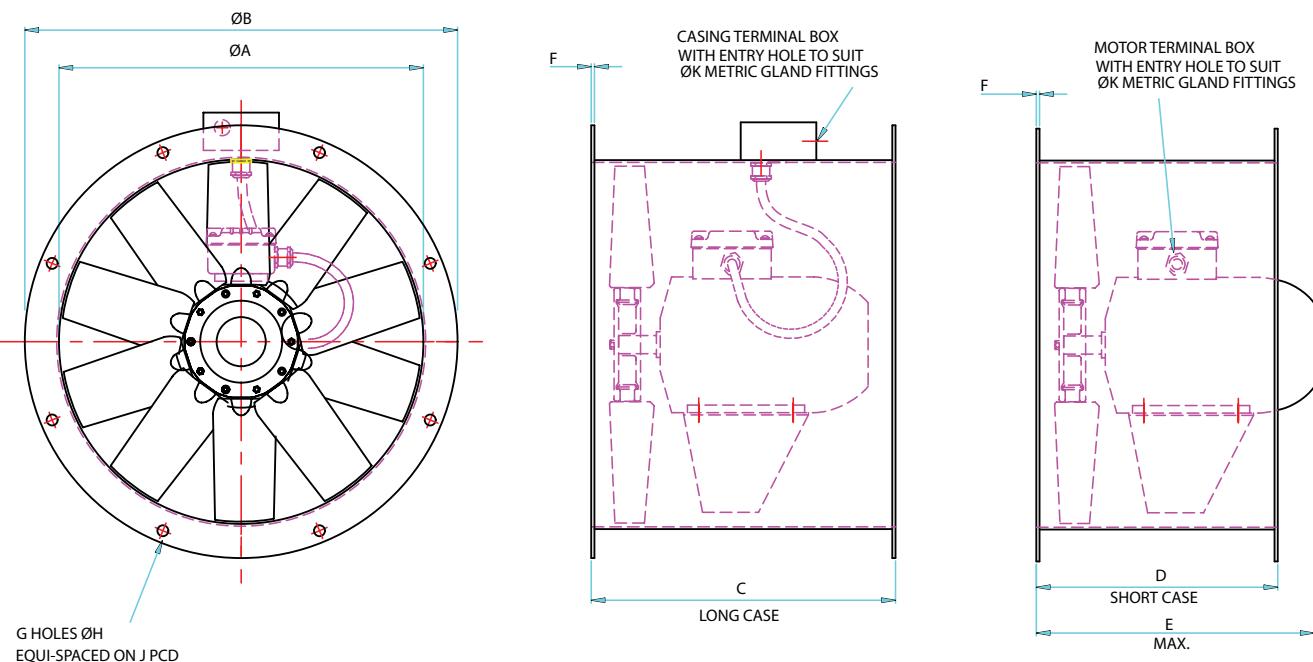
60 Hz – 3500 and 1750 r/min - 2 & 4 Pole



60 Hz – 1170 and 870 r/min - 6 & 8 Pole



dimensional data



Product code	A	B	C	D	E	F	G	H	J	K	Weight kg LC	Weight kg SC	
315-63/71	315	375	300	180	295	2	8	10	355	21	21	19	
315-80			400	220	324	2				21	27	24	
355-63/71	355	425	300	220	295	3	8	10	395	21	25	23	
355-80/90			400	220	375	3				21	41	36	
400-63/71/80/90	400	475	400	220	375	3	8	12	450	21	45	39	
450-63/71/80/90	450	530	400	220	375	3	8	12	500	21	46	40	
450-100/112			450	250	435	3				21/26	72	65	
500-63/71/80/90			400	220	375	3				21	52	45	
500-100/112	500	585	450	250	435	3	12	12	560	21/26	77	70	
560-71/80/90			400	220	375	3				21	55	47	
560-100/112	560	645	450	250	435	3	12	12	620	21/26	82	74	
560-132				570	300	555	3			26	121	110	
630-71/80/90				400	250	375	3			21	60	53	
630-100/112	630	715		450	250	435	3	12	12	690	21/26	87	78
630-132				570	300	555	3			26	130	117	
630-160				710	400	685	4			33	205	186	
710-80/90/100/112				450	250	435	3			21/26	102	91	
710-132				570	300	555	3			26	141	127	
710-160	710	795		710	400	685	4	16	12	770	33	223	201
710-180				790	500	760	4			42	296	276	
710-200				840	550	822	5			53	362	337	
800-80/90/100/112				450	250	435	3			21/26	107	95	
800-132				570	300	555	3			26	150	134	
800-160	800	885		710	400	685	4	16	12	860	33	233	209
800-180				790	500	760	4			42	307	284	
800-200				840	550	822	5			53	389	360	
900-80/90/100/112				450	250	435	4			21/26	129	112	
900-132	900	1000		570	300	555	4	16	15	970	26	179	155
900-160				710	420	685	4			33	250	224	
900-180				790	500	760	4			42	329	304	

Elta Fans Limited has a policy of continuous product development and improvement and therefore reserves the right to supply products which may differ from those illustrated and described in this publication. Confirmation of dimensions and data will be supplied on request. All dimensions are in mm.

Product code	A	B	C	D	E	F	G	H	J	K	Weight kg L/CA	Weight kg S/CA
1000-80/90/100			450	300	440	4				21	134	120
1000-112/132			590	300	570	4				26	196	168
1000-160	1000	1110	790	420	700	5	16	15	1070	33	297	252
1000-180			790	500	760	5				42	372	336
1000-200			840	550	822	5				53	435	399
1000-225			1000	590	941	6				53	663	602
1120-112/132			590	300	570	4				26	215	183
1120-160	1120	1240	790	420	700	5	20	15	1190	33	325	273
1120-180			790	500	760	5				42	401	361
1120-200			840	550	822	5				53	458	418
1250-112/132			590	300	570	5				26	261	217
1250-160			790	420	700	5				33	356	299
1250-180	1250	1380	790	500	760	5	20	15	1320	42	434	390
1250-200			840	550	822	6				53	523	469
1250-225			1000	590	941	6				53	739	663
1250-250			1100	590	1020	6				63	849	755
1400-132			590	300	570	5				26	299	249
1400-160			790	420	700	5				33	399	335
1400-180			790	500	760	5				42	480	430
1400-200	1400	1540	840	550	822	6	20	15	1470	53	574	514
1400-225			1000	590	941	6				53	794	709
1400-250			1100	650	1020	6				63	909	816
1400-280			1200	800	1147	6				63	1208	1125
1400-315			1400	O/A	O/A	6				63	1689	O/A
1600-132			590	300	570	5				26	325	268
1600-160/180			790	500	760	5				33/42	517	459
1600-200			840	550	822	6				53	636	567
1600-225	1600	1750	1000	590	941	6	24	19	1680	53	867	769
1600-250			1100	650	1020	6				63	985	878
1600-280			1200	800	1147	6				63	1297	1202
1600-315			1400	O/A	O/A	6				63	1812	O/A
1800-160/180			790	500	760	5				33/42	586	522
1800-200			840	550	822	6				53	711	634
1800-225	1800	1950	1000	590	941	6	24	19	1880	53	934	825
1800-250			1100	650	1020	6				63	1057	938
1800-280			1200	800	1147	6				63	1367	1261
1800-315			1400	O/A	O/A	6				63	1908	O/A
2000-160/180			790	550	760	6				33/42	684	613
2000-200			840	550	822	6				53	770	685
2000-225	2000	2150	1000	590	941	6	24	19	2080	53	1001	879
2000-250			1100	650	1020	6				63	1131	997
2000-280			1200	800	1147	6				63	1445	1327
2000-315			1400	O/A	O/A	6				63	1998	O/A

Product Code Key:

710-132
 Fan diameter (mm) Motor frame size

mounting dimensions

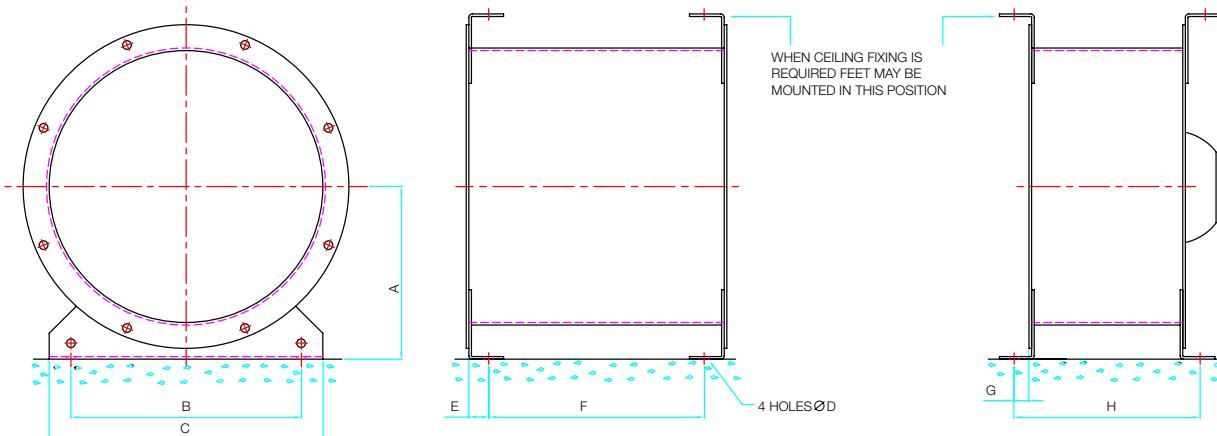
Below are some typical examples of rigid and resiliently mounted installations. When using resilient mounting "flexible connections" are required between the fan casing and duct work. (see accessories page).



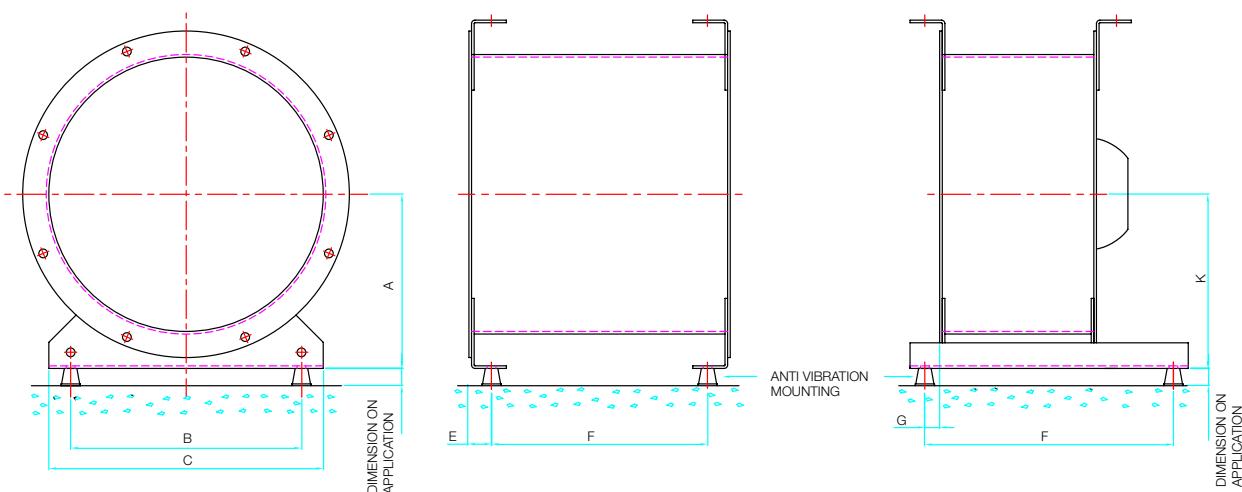
Note!

If a fan is mounted adjacent to vibration sources e.g. compressors and engines. A/V mounts and flexible connections must be used to avoid damage to motor bearings.

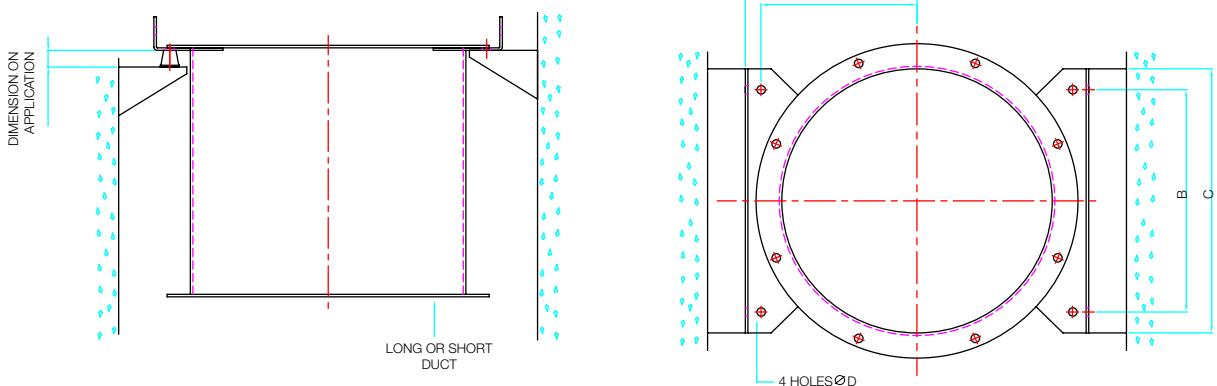
rigid foot mounted - horizontal



resilient foot mounted - horizontal



resilient & rigid mounted - vertical



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Product code	LCA Length	SCA Length	A	B	C	D	E	F	G	H	J	K
315-63/71	300	180	200	265	315	9	25	250	18	216	180	203
315-80	400	220					25	350	18	256		
355-63/71	300	220	230	300	355	9	26	248	17	254	210	233
355-80/90	400	220					26	348	17	254		
400-63/71/80/90	400	220	250	350	400	9	30.5	339	20.5	261	230	254
450-63/7180/90	400	220		280	400	450	11	30.5	339	20.5	261	
450-100/112	450	250					30.5	389	20.5	291	255	284
500-63/71/80/90	400	220	315	450	500	11	30	340	20	260	290	319
500-100/112	450	250					30	390	20	290		
560-71/80/90	400	220					35	330	24	268		
560-100/112	450	250	355	510	560	11	35	380	24	298	330	360
560-132	570	300					35	500	24	348		
630-71/80/90	400	250					35	330	24	298		
630-100/112	450	250	400	580	630	11	35	380	24	298	375	405
630-132	570	300					35	500	24	348		
630-160	710	400					36	638	23	446		
710-80/90/100/112	450	250					35	380	24	298		
710-132	570	300					35	500	24	348		
710-160	710	400	450	660	710	11	36	638	23	446	425	455
710-180	790	500					36	718	23	546		
710-200	840	550					37	766	22	594		
800-80/90/100/112	450	250					35	380	24	298		
800-132	570	300					35	500	24	348		
800-160	710	400	500	750	800	11	36	638	23	446	475	505
800-180	790	500					36	718	23	546		
800-200	840	550					37	766	22	594		
900-80/90/100/112	450	250					40	370	26	302		
900-132	570	300					40	490	26	352		
900-160	710	420	560	850	900	11	40	630	26	472	530	566
900-180	790	500					40	710	26	552		
1000-80/90/100	460	300					40	370	26	352		
1000-112/132	590	300					40	510	26	352		
1000-160	790	420	630	950	1000	13	41	708	25	470	595	636
1000-180	790	500					41	708	25	550		
1000-200	840	550					41	758	25	600		
1000-225	1000	590					42	916	24	638		
1120-112/132	590	300					40	510	26	352		
1120-160	790	420	650	1070	1120	13	41	708	25	470	615	656
1120-180	790	500					41	708	25	550		
1120-200	840	550					41	758	25	600		
1250-112/132	590	300					41	508	25	350		
1250-160	790	420					41	708	25	470		
1250-180	790	500	780	1200	1250	13	41	708	25	550	745	786
1250-200	840	550					42	756	24	598		
1250-225	1000	590					42	916	24	638		
1250-250	1100	590					42	1016	24	638		
1400-132	590	300					58	474	40	380		
1400-160	790	420					58	674	40	500		
1400-180	790	500					58	674	40	580		
1400-200	840	550	813	1300	1400	13	59	722	39	628	773	821
1400-225	1000	590					59	882	39	668		
1400-250	1100	650					59	982	39	728		
1400-280	1200	800					59	1082	39	878		
1400-315	1400	O/A					59	1282	39	O/A		
1600-132	590	300					58	474	40	380		
1600-160/180	790	500					58	674	40	580		
1600-200	840	550					59	722	39	628		
1600-225	1000	590	950	1500	1600	19	59	882	39	668	900	958
1600-250	1100	650					59	982	39	728		
1600-280	1200	800					59	1082	39	878		
1600-315	1400	O/A					59	1282	39	O/A		
1800-160/180	790	500					58	674	40	580		
1800-200	840	550					59	722	39	628		
1800-225	1000	590	1050	1700	1800	19	59	882	39	668	1000	1058
1800-250	1100	650					59	982	39	728		
1800-280	1200	800					59	1082	39	878		
1800-315	1400	O/A					59	1282	39	O/A		
2000-160/180	790	550					59	672	39	628		
2000-200	840	550					59	722	39	628		
2000-225	1000	590	1150	1900	2000	19	59	882	39	668	1100	1158
2000-250	1100	650					59	982	39	728		
2000-280	1200	800					59	1082	39	878		
2000-315	1400	O/A					59	1282	39	O/A		



silencers

Elta offer 2 types of cylindrical silencers as standard; Type ENP (without pod) and EP (with pod).

construction

Both types are rigidly constructed in galvanised sheet steel, with a highly absorbent sound attenuating lining between the outer casing and the inner perforated steel lining. The end faces of the silencer have a series of threaded holes for direct mounting to the LC/SC fan fixing flange/flexible collar.

The EP (podded versions) will provide an improved level of attenuation. The inner acoustic pod is constructed from perforated steel sheet with a sound absorbent in-fill.

Melinex lined silencers available on request.

3 options of each type can be provided with differing lengths – 1D = 1 times fan diameter, 1.5D = 1.5 times fan diameter or 2D = 2 times fan diameter.

silencer attenuation

To determine the sound level of a fan fitted with a silencer, the dynamic insertion loss should be subtracted from the sound power level spectrum (dBW) of the LC and SC fan.

This should be carried out for the entire octave band mid-frequency spectrum as published in the Elta fans characteristic data (obtainable on request).

The fan dBW ratings and silencer attenuation apply equally to in duct applications, with a silencer connected between the fan and the duct system.

important note!

In highly noise sensitive areas, where circular silencers cannot achieve the necessary attenuation levels, Elta can design and build splitter silencers for greater effect.

The velocity through EP silencers should not exceed 15m/s.

Silencer Type	Approx dBA reduction
1DENP	7-10
2DENP	10-13
1DEP	12-15
2DEP	15-18

dynamic insertion loss

The silencer attenuation is defined as the “dynamic insertion loss”. The values quoted in the table below represent the difference between the sound power level of a fan and silencer combination (dBW) and that of the fan alone (dBW).

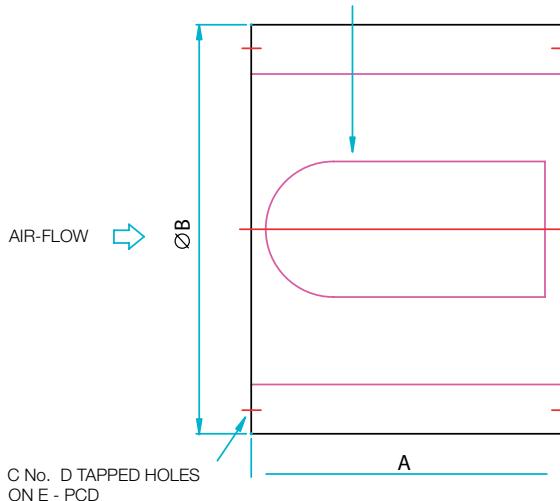
The dynamic insertion losses shown are the attenuations recorded under ideal working conditions. The achieved attenuation will vary according to the air velocity and flow pattern in the airways. Noise regeneration can occur at higher velocities, especially in EP silencers.

Fan Sizes	Silencer Length	Silencer Type	Insertion Loss @ Octave Band (Hz)							
			63	125	250	500	1k	2k	4k	8k
315-560	1D	ENP	-2	-5	-6	-9	-13	-11	-6	-6
		EP	-4	-6	-8	-11	-18	-19	-17	-14
	1.5D	ENP	-3	-6	-9	-13	-18	-14	-9	-8
		EP	-5	-8	-10	-16	-22	-22	-20	-18
	2D	ENP	-4	-8	-12	-17	-23	-17	-12	-10
		EP	-7	-10	-12	-21	-26	-26	-24	-22
630-800	1D	ENP	-3	-4	-9	-15	-15	-8	-7	-6
		EP	-4	-6	-8	-17	-23	-20	-18	-10
	1.5D	ENP	-4	-6	-11	-18	-18	-10	-9	-7
		EP	-6	-8	-12	-22	-27	-25	-23	-14
	2D	ENP	-6	-8	-13	-22	-22	-13	-12	-9
		EP	-8	-11	-16	-27	-32	-31	-29	-19
900-1400	1D	ENP	-3	-4	-9	-14	-13	-7	-7	-6
		EP	-4	-6	-11	-20	-18	-15	-13	-11
	1.5D	ENP	-4	-6	-11	-17	-15	-9	-9	-7
		EP	-6	-8	-14	-23	-22	-20	-17	-13
	2D	ENP	-6	-8	-13	-21	-18	-12	-11	-9
		EP	-8	-11	-18	-26	-27	-26	-22	-16
1600-2000	1D	ENP	-4	-5	-10	-14	-11	-6	-6	-5
		EP	-8	-9	-14	-19	-17	-11	-10	-9
	1.5D	ENP	-4	-6	-11	-16	-14	-9	-8	-7
		EP	-9	-11	-17	-22	-22	-18	-13	-11
	2D	ENP	-5	-7	-12	-19	-18	-13	-11	-9
		EP	-10	-14	-21	-25	-27	-25	-16	-14

Product Code	Fan Dia	A 1D	A 1.5D	A 2D	B	C	D	E	Weight kg						
									1DENP	1DEP	1.5DENP	1.5DEP	2DENP	2DEP	
068-0315-*D**P	315	315	472.5	630	416	8	M8	355	9	11	12	14	15	17	
038-0355-*D**P	355	355	532.5	710	456	8	M8	395	11	13	14	17	18	21	
068-0400-*D**P	400	400	600	800	503	8	M10	450	13	16	17	21	22	26	
068-0450-*D**P	450	450	675	900	604	8	M10	500	15	18	21	25	27	31	
068-0500-*D**P	500	500	750	1000	657	12	M10	560	18	22	25	30	32	37	
068-0560-*D**P	560	560	840	1120	714	12	M10	620	22	26	30	36	39	46	
068-0630-*D**P	630	630	945	1260	784	12	M10	690	26	31	38	45	48	57	
068-0710-*D**P	710	710	1065	1420	864	16	M10	770	32	39	45	55	59	71	
068-0800-*D**P	800	800	1200	1600	954	16	M10	860	40	49	57	70	74	90	
068-0900-*D**P	900	900	1350	1800	1103	16	M12	970	55	67	78	95	102	123	
068-1000-*D**P	1000	1000	1500	2000	1203	16	M12	1070	66	82	95	117	124	151	
068-1120-*D**P	1120	1120	1680	2240	1320	20	M12	1190	91	117	130	165	198	253	
068-1250-*D**P	1250	1250	1875	2500	1450	20	M12	1320	111	140	160	200	240	300	
068-1400-*D**P	1400	1400	2100	2800	1600	20	M12	1470	140	180	240	315	300	385	
068-1600-*D**P	1600	1600	2400	3200	1800	24	M16	1680	190	235	323	405	400	495	
068-1800-*D**P	1800	1800	2700	3600	2000	24	M16	1880	270	352	445	590	560	732	
068-2000-*D**P	2000	2000	300	4000	2200	24	M16	2080	325	415	535	695	675	865	

1, 1.5 or 2 ← E - With Pod or
See Dia A EN - Without Pod

POD FITTED TO EP TYPE ONLY



Determining Silencer Attenuation

To determine the sound level of a fan fitted with a silencer, the dynamic insertion loss should be subtracted from the dBW rating of the LC and SC fan across the octave band mid frequency spectrum.

The fan dBW ratings and silencer attenuation apply to in-duct operation, with a silencer connected between the fan and duct system. Where a silencer is connected directly to the free inlet, or free discharge of a fan, the low frequency attenuation may be increased by the 'End Reflection Values' shown in the table. These values are added to the dynamic insertion loss at each frequency.

End Reflection Values

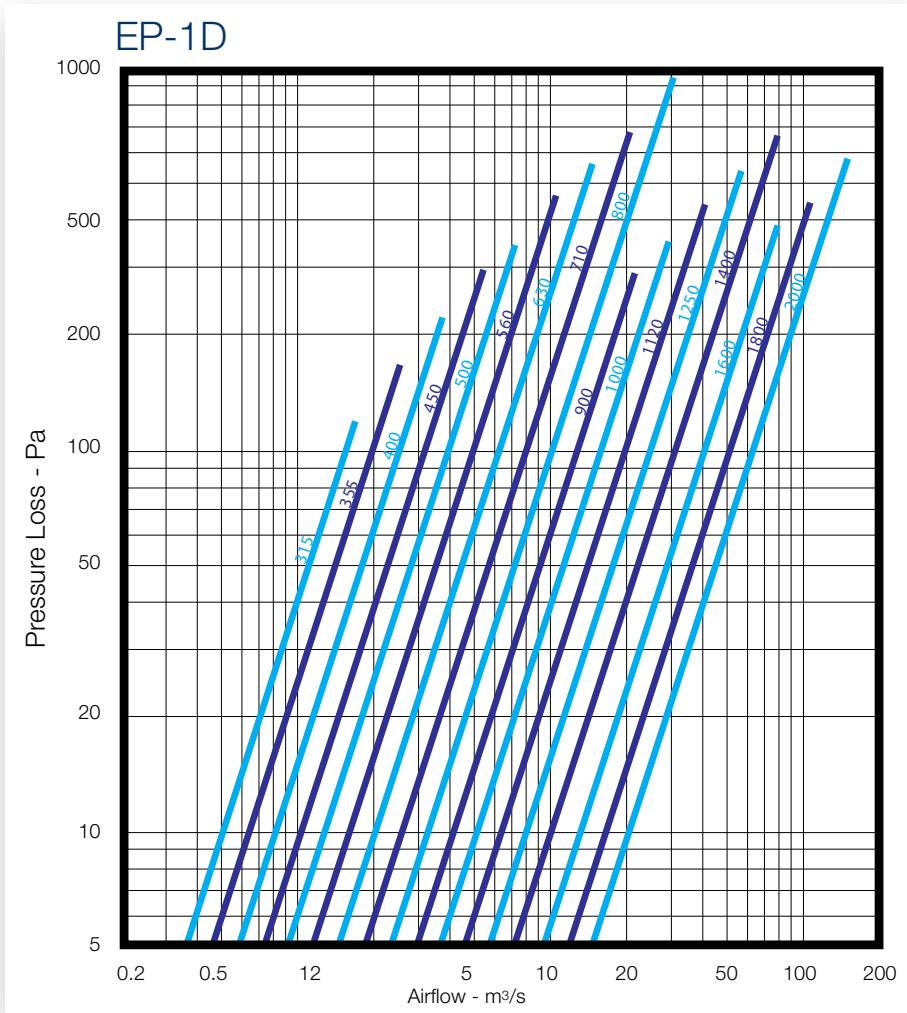
Fan Sizes	Insertion Loss @ Octave Band (Hz)			
	63	125	250	500
315	15	9	5	1
355	14	9	5	1
400	13	8	4	1
450	12	7	3	0
500	11	6	2	0
560	10	6	2	0
630	9	5	1	0
710	9	4	1	0
800	8	4	1	0
900	7	3	0	0
1000	6	2	0	0
1120	5	2	0	0
1250	5	1	0	0
1400	4	1	0	0
1600	4	1	0	0
1800	3	0	0	0
2000	2	0	0	0

Note: This data is based on theoretical considerations only, and assumes spherical free-field conditions.

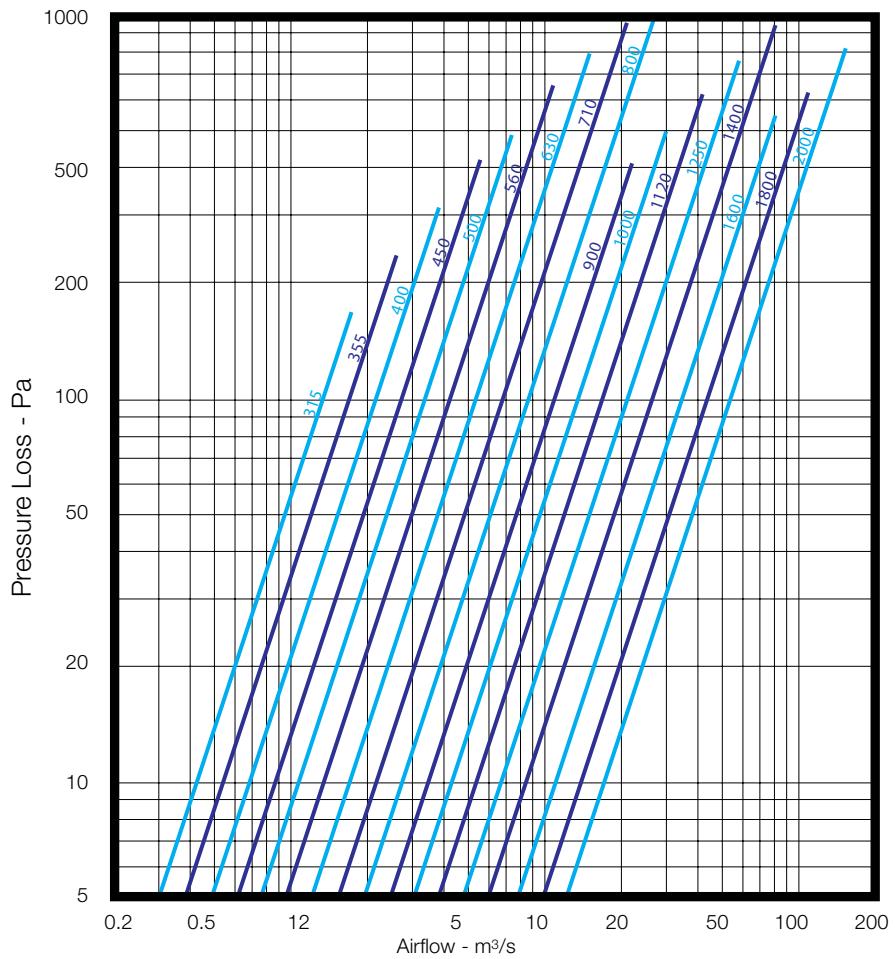
silencer pressure loss



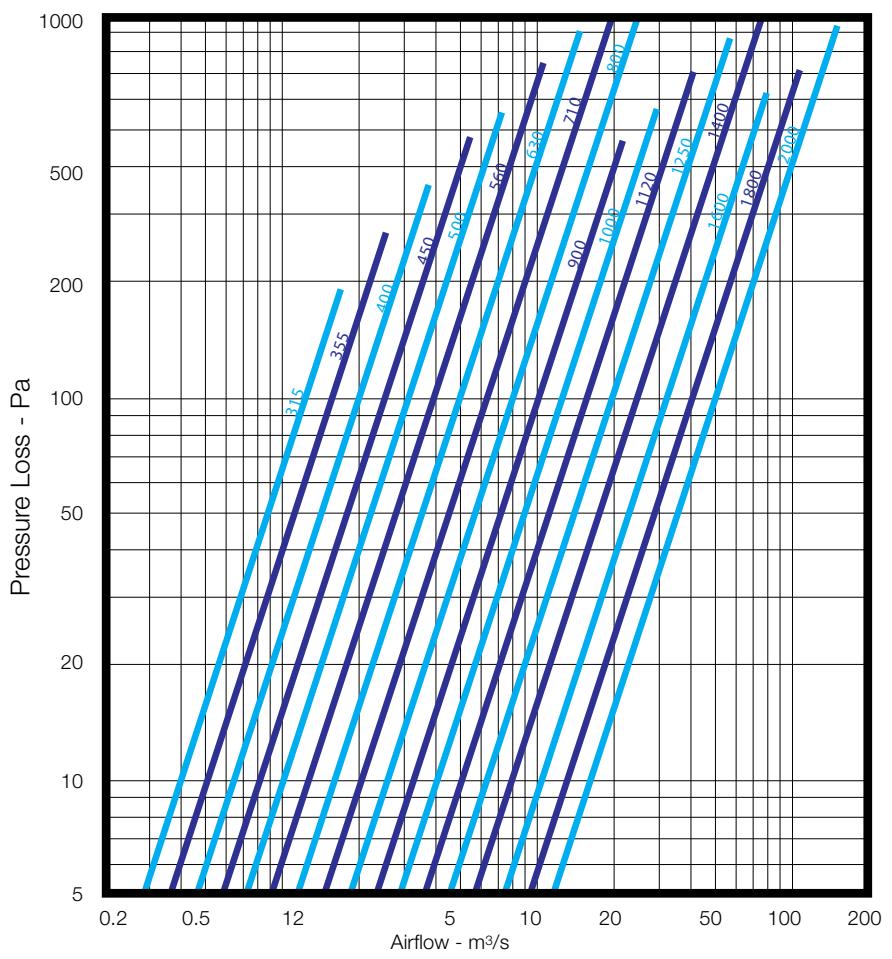
The graphs illustrated below provide the pressure losses for EP podded silencers at various airflows. ENP non-podded silencers do not create any meaningful losses.



EP-1.5D

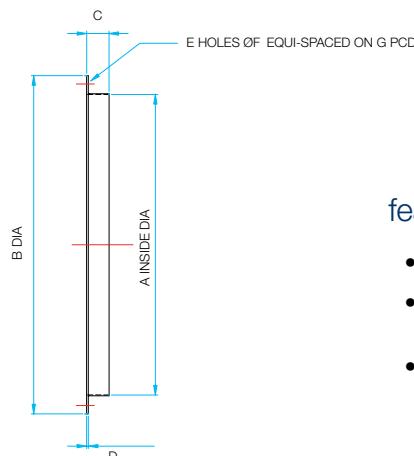


EP-2D



accessories

matching flange



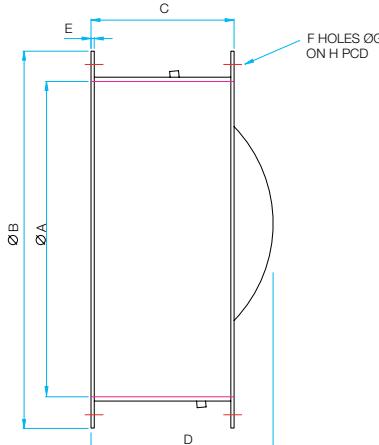
features & benefits

- Fits directly to the fan case flange.
- Provides easy connection to flexible connector or ducting.
- Hot dipped galvanised steel.

Product Code	Fan Dia A	B	C	D	E	F	G	Weight kg
061B-0315	315	375	30	1.5	8	10	355	0.7
061B-0355	355	425	40	1.5	8	10	395	1.0
061B-0400	400	475	40	1.5	8	12	450	1.2
061B-0450	450	530	40	1.5	8	12	500	1.4
061B-0500	500	585	45	2.0	12	12	560	2.2
061B-0560	560	645	45	2.0	12	12	620	2.4
061B-0630	630	715	45	2.0	12	12	690	2.7
061B-0710	710	795	45	2.0	16	12	770	3.0
061B-0800	800	885	50	2.5	16	12	860	4.5

Product Code	Fan Dia A	B	C	D	E	F	G	Weight kg
061B-0900	900	1000	50	2.5	16	15	970	5.5
061B-1000	1000	1110	50	2.5	16	15	1070	6.5
061B-1120	1120	1240	50	2.5	20	15	1190	7.6
061B-1250	1250	1380	50	2.5	20	15	1320	8.7
061B-1400	1400	1540	65	3.0	20	15	1470	13.9
061B-1600	1600	1750	65	3.0	24	19	1680	16.5
061B-1800	1800	1950	65	3.0	24	19	1880	18.5
061B-2000	2000	2150	65	4.0	24	19	2080	27.2

non return dampers



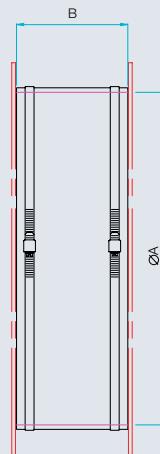
features & benefits

- Limits reverse flow of air when a fan unit is not operating.
- Fixed directly to fan case flange.
- Casings are hot dipped galvanised steel with pre-galvanised butterfly type blades.
- Standard damper (STD) suitable for horizontal or vertical (upward airflow) installation.
- Counter balanced (CB) option for vertical (downward airflow) installation.

Product Code	Fan Dia A	B	C		D	E	F	G	H	Weight kg	Short	Long
			Short	Long								
019-0315-STD	315	375	180	300	210	2.0	8	10	355	5	7	
019-0355-STD	355	425	185	375	241	3.0	8	10	395	9	14	
019-0400-STD	400	475	220	400	270	3.0	8	12	450	11	16	
019-0450-STD	450	530	220	400	297	3.0	8	12	500	13	19	
019-0500-STD	500	585	220	400	330	3.0	12	12	560	15	22	
019-0560-STD	560	645	220	450	375	3.0	12	12	620	16	26	
019-0630-STD	630	715	250	450	420	3.0	12	12	690	21	30	
019-0710-STD	710	795	250	570	460	3.0	16	12	770	25	42	
019-0800-STD	800	885	300	570	525	3.0	16	12	860	33	51	
019-0900-STD	900	1000	300	710	590	4.0	16	15	970	47	83	
019-1000-STD	1000	1110	420	790	646	4.0	16	15	1070	65	101	
019-1120-STD	1120	1240	420	790	700	4.0	20	15	1190	78	119	
019-1250-STD	1250	1380	420	840	795	5.0	20	15	1320	104	169	
019-1400-STD	1400	1540	420	900	874	5.0	20	15	1470	123	205	
019-1600-STD	1600	1750	550	1000	970	5.0	24	19	1680	186	300	
019-1800-STD	1800	1950	550	1100	1060	5.0	24	19	1880	244	366	
019-2000-STD	2000	2150	550	1300	1275	6.0	24	19	2080	330	560	

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flexible connectors



features & benefits

- Fit to matching flanges to provide flexible connection.
- PVC coated polyester.
- Supplied with plated steel band fixings.
- Alternative materials available.

Product Code	Fan Dia A	B	Weight kg
063-0315-MAN150	315	150	0.6
063-0355-MAN150	355	150	0.7
063-0400-MAN150	400	150	0.9
063-0450-MAN150	450	150	1.1
063-0500-MAN150	500	150	1.2
063-0560-MAN150	560	150	1.3
063-0630-MAN200	630	200	1.4
063-0710-MAN200	710	200	2.0
063-0800-MAN200	800	200	2.3

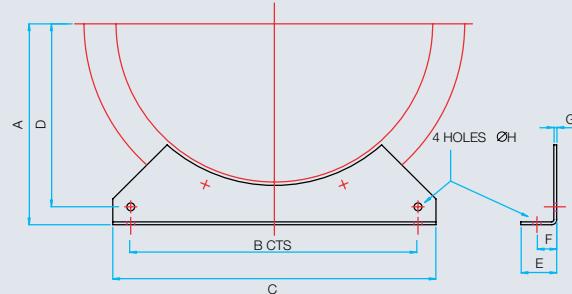
Product Code	Fan Dia A	B	Weight kg
063-0900-MAN200	900	200	2.7
063-1000-MAN250	1000	250	3.0
063-1120-PC70	1120	250	4.0
063-1250-PC70	1250	250	5.0
063-1400-PC70	1400	250	6.0
063-1600-PC70	1600	250	7.0
063-1800-PC70	1800	250	8.0
063-2000-PC70	2000	250	10.0

mounting feet



features & benefits

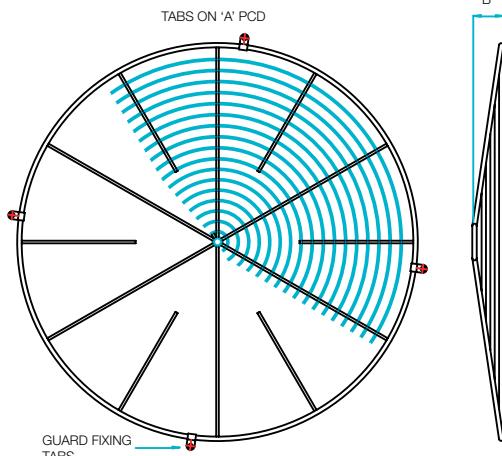
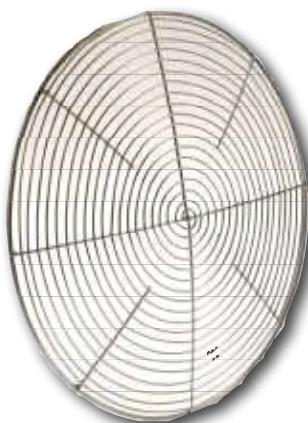
- For free standing mounting of ducted fans.
- Fixes directly to fan case flange.
- Hot dipped galvanised steel.



Product Code	Fan Dia	A	B	C	D	E	F	G	H	Weight kg
060B-0315	315	200	265	315	180	40	23	3	9	0.6
060B-0355	355	230	300	350	210	40	23	3	9	0.8
060B-0400	400	250	350	400	230	50	27.5	4	9	1.2
060B-0450	450	280	400	450	255	50	27.5	4	11	1.5
060B-0500	500	315	450	500	290	50	27.5	4	11	2.0
060B-0560	560	355	510	560	330	60	32	5	11	3.3
060B-0630	630	400	580	630	375	60	32	5	11	4.1
060B-0710	710	450	660	710	425	60	32	5	11	4.3
060B-0800	800	500	750	800	475	60	32	5	11	5.2
060B-0900	900	560	850	900	530	70	36	6	11	7.8
060B-1000	1000	630	950	1000	595	70	36	6	13	9.7
060B-1120	1120	650	1070	1120	615	70	36	6	13	11.0
060B-1250	1250	780	1200	1250	745	70	36	6	13	16.4
060B-1400	1400	813	1300	1400	773	100	53	8	13	26.4
060B-1600	1600	950	1500	1600	900	100	53	8	19	32.5
060B-1800	1800	1050	1700	1800	1000	100	53	8	19	38.0
060B-2000	2000	1150	1900	2000	1100	100	53	8	19	43.5

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impeller guards



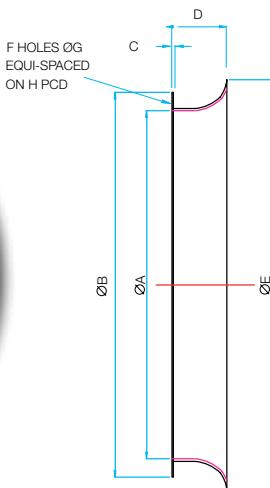
features & benefits

- Bright zinc plated steel or galvanised.
- Fix kit included (when supplied with a fan unit.).

Product Code	Fan Dia	A PCD	B	Weight kg
078C-0315-C	315	355	21	1.1
078C-0355-C	355	395	23	1.4
078C-0400-C	400	450	26	1.6
078C-0450-C	450	500	29	1.8
078C-0500-C	500	560	32	2.2
078C-0560-C	560	620	32	2.5
078C-0630-C	630	690	40	2.6
078C-0710-C	710	770	50	3.2
078C-0800-C	800	860	50	3.5

Product Code	Fan Dia	A PCD	B	Weight kg
078B-0900-C	900	970	50	5.0
078B-1000-C	1000	1070	75	6.0
078B-1120-C	1120	1190	75	7.0
078B-1250-C	1250	1320	75	8.0
078B-1400-C	1400	1470	125	9.0
078B-1600-C	1600	1680	125	10
078B-1800-C	1800	1880	150	11
078B-2000-C	2000	2080	150	12

bell mouth inlets



features & benefits

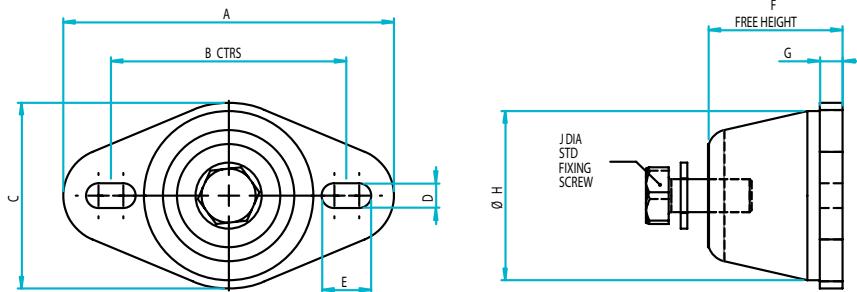
- Improved inlet airflow for end of duct applications.
- Fixed directly to fan case flange.
- Hot dipped galvanised steel.

Product code	Fan Dia A	B	C	D	E	F	G	H	Weight kg
241B-0355-BELL	355	425	3	65	472	8	10	395	4.0
241B-0400-BELL	400	475	3	75	522	8	12	450	4.8
241B-0450-BELL	450	530	3	80	582	8	12	500	5.8
241B-0500-BELL	500	585	3	85	642	12	12	560	6.8
241B-0560-BELL	560	645	3	95	712	12	12	620	8
241B-0630-BELL	630	715	3	105	792	12	12	690	9.8
241B-0710-BELL	710	795	3	120	882	16	12	770	12
241B-0800-BELL	800	885	3	135	1000	16	12	860	15.3

Product code	Fan Dia A	B	C	D	E	F	G	H	Weight kg
241B-0900-BELL	900	1000	3	150	1100	16	15	970	18.3
241B-1000-BELL	1000	1110	3	165	1220	16	15	1070	22.4
241B-1120-BELL	1120	1240	3	185	1350	20	15	1190	27.3
241B-1250-BELL	1250	1380	3	205	1500	20	15	1320	33.3
241B-1400-BELL	1400	1540	3	230	1710	20	15	1470	42.8
241B-1600-BELL	1600	1750	3	265	1910	24	19	1680	53.1
241B-1800-BELL	1800	1950	4	295	2110	24	19	1880	83.9
241B-2000-BELL	2000	2150	4	295	2192	24	19	2080	84.8

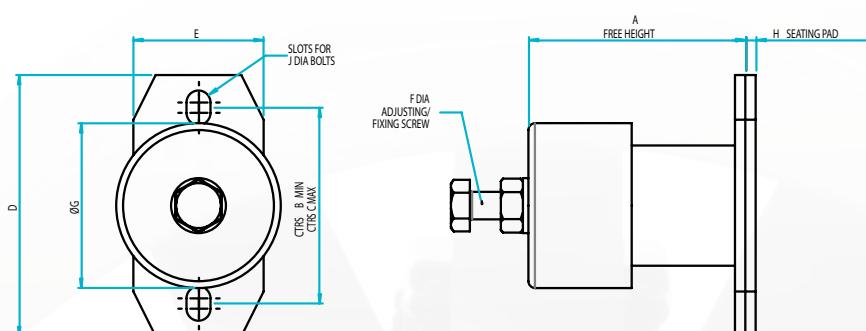
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av mounts - rubber



Product code	A	B	C	D	E	F	G	H	J	Max Rated Load Per A/V kg
062-05.103	64	50	43	Ø7	N/A	20	2	33.5	M6	9
062-19.100	80	57	45	9	12	32	5	41	M8	80
062-19.101	95	71	60	9	14	45	5	56	M10	280
062-19.102	150	115	86	11	22	70	6	82	M12	400

av mounts - spring

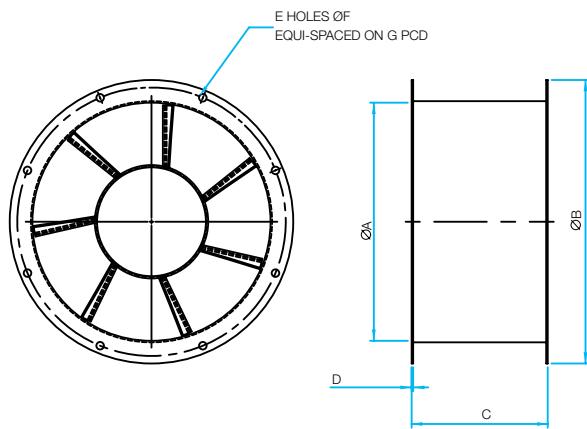


Product code	A	B	C	D	E	F	G	H	J	Max Rated Load Per A/V kg
062-ES20	63	54	60	76	38	M8	48	3	M6	100
062-ES25	88	85	90	110	70	M10	78	6	M8	250
062-ECS25	127	130	150	180	95	M16	111	6	M12	1200



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guide vanes



Bolted

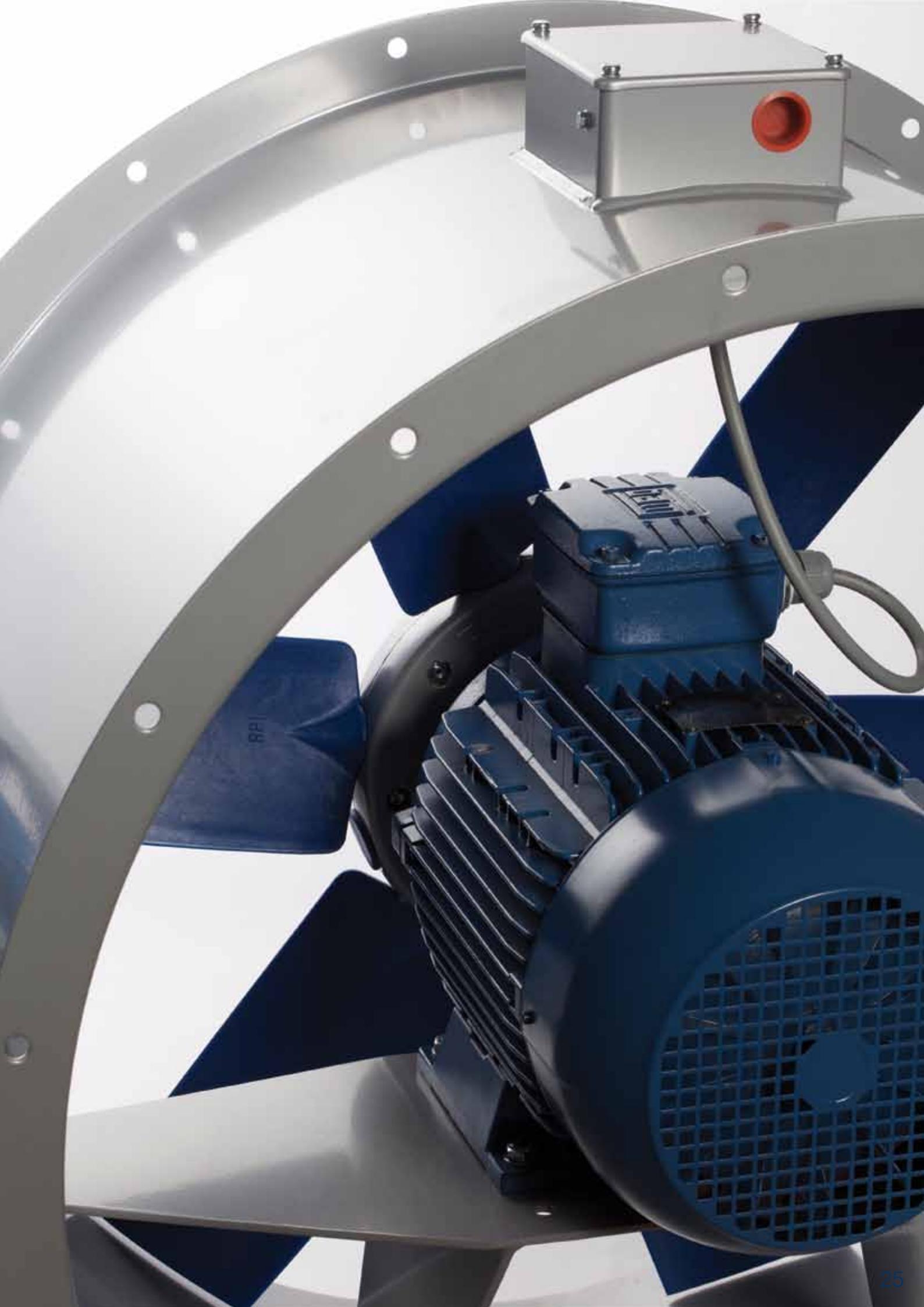
Product code	A	B	150	C / HUB Ø 250/251/255	350	D (Max)	E	F	G	Weight kg (Max)
280B-0315-150-7B	315	375	180	N/A	N/A	3	8	10	355	7
280B-0355-150-7B	355	425	180	N/A	N/A	3	8	10	395	8
280B-0400-150-7B	400	475	220	N/A	N/A	3	8	12	450	10
280B-0450-150-7B	450	530	220	N/A	N/A	3	8	12	500	12
280B-0500-150-7B	500	585	220	N/A	N/A	3	12	12	560	13
280B-0560-***-B	560	645	220	250	N/A	3	12	12	620	16
280B-0630-***-B	630	715	250	250	300	3	12	12	690	21
280B-0710-***-B	710	795	250	300	300	3	16	12	770	24
280B-0800-***-B	800	885	250	300	300	3	16	12	860	30
280B-0900-***-B	900	1000	N/A	300	300	3	16	15	970	32
280B-1000-***-B	1000	1110	N/A	300	420	3	16	15	1070	46

Fully Welded

(Medium to heavy duty application)

Product code	A	B	150	C / HUB Ø 250/251/255	350	400	550	D (Max)	E	F	G	Weight kg (Max)
280B-0315-150-7	315	375	180	N/A	N/A	N/A	N/A	2	8	10	355	6
280B-0355-150-7	355	425	180	N/A	N/A	N/A	N/A	2	8	10	395	7
280B-0400-150-7	400	475	220	N/A	N/A	N/A	N/A	2	8	12	450	9
280B-0450-150-7	450	530	220	N/A	N/A	N/A	N/A	3	8	12	500	13.5
280B-0500-150-7	500	585	220	N/A	N/A	N/A	N/A	3	12	12	560	15.5
280B-0560-***-*	560	645	220	250	N/A	N/A	N/A	3	12	12	620	25
280B-0630-***-*	630	715	250	250	300	N/A	N/A	3	12	12	690	30
280B-0710-***-*	710	795	250	300	300	350	N/A	4	16	12	770	55
280B-0800-***-*	800	885	250	300	300	350	350	4	16	12	860	65
280B-0900-***-*	900	1000	N/A	300	300	400	400	4	16	15	970	76
280B-1000-***-7	1000	1110	N/A	300	420	420	420	4	16	15	1070	85
280B-1120-***-7	1120	1240	N/A	420	420	450	450	4	20	15	1190	93
280B-1250-***-7	1250	1380	N/A	420	420	450	450	5	20	15	1320	109
280B-1400-***-7	1400	1540	N/A	N/A	420	500	550	6	24	19	1470	187
280B-1600-***-7	1600	1750	N/A	N/A	N/A	550	550	6	24	19	1680	213
280B-1800-***-7	1800	1950	N/A	N/A	N/A	650	650	6	24	19	1880	265
280B-2000-***-7	2000	2150	N/A	N/A	N/A	N/A	650	6	24	19	2080	295

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introduction

Variable Speed Drives, also known as Inverters, are now a common feature in the control of ventilation fans. The main reasons for this are cost savings through reduction in energy usage at reduced fan speeds and the ability to control the fan via sensors such as humidity, temperature and pressure to offer demand control ventilation.

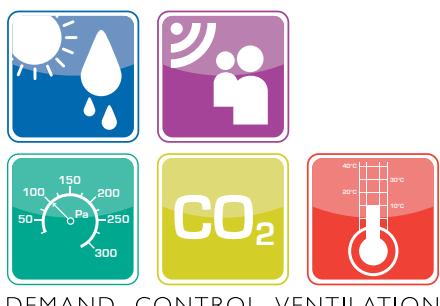
It is common practice for system designers to select fans to perform either in excess of the ventilation rates required or solely based on the maximum rate needed for a short duration.

Reducing the speed of the fan via an inverter when the maximum ventilation rate is not needed can reduce the power consumed and provide significant savings.

Reducing energy usage also cuts the level of CO₂ emissions, a major contributor to climate change and the dramatic affects on our environment.

The Eltadriver range of inverters has been designed to meet the rigorous demands of industry and applicable legislation encompassing the latest technology, combining robustness with reliability.

For further details or to request a copy of the Eltadriver Brochure please contact Elta Fans.



introduction

Demand Control Ventilation or DCV, is a technological innovation that provides an effective, efficient means of using variable speed ventilation solutions to meet variable occupancy levels in spaces requiring ventilation.

Building ventilation system rates are based on maximum occupancy, therefore are traditionally very wasteful.

The most advantageous benefit of using the DCV system is the reduction in energy wastage, not just from the fan operation itself, but compounded by the energy required to condition that air, resulting in the reduction of CO₂ emissions and in some cases significant savings in running costs.

At the heart of the Elta Fans DCV system is the Zone controller, designed to monitor and control one or more fan units simultaneously, with 6 pre-programmed fan applications.

Each application has its own factory set parameters (input value range, set-points, P-band, min and max speeds) and control function.

features & benefits

- IP55 and IP20 duties available.
- Single or three phase options available.
- Small mechanical envelope for ease of installation.
- Simple mechanical and electrical installation.
- Integral RFI filter.
- Rugged industrial 50°C ambient rating for hot and tough applications.
- Simple operation, powerful features easy to use.
- Up to 11 size and input variants available.
- The Eltadriver product range conforms to the low voltage directive and to EN 61800-5-1: 2003, EN 61800-3-2nd Ed: 2004 and EN 55011: 2007.
- Designed and manufactured with procedures as defined in BS EN ISO 9001:2000.
- 14 basic parameters for ease of set up.
- Cost effective - Eltadriver Inverters can reduce the number of control and protection devices needed in a complete installation as well as providing the opportunity to reduce energy consumption.
- Eltadriver's are available on 'Next Day' delivery.

All of which can be changed in field via the Room Controller (RC unit), which is connected via a SELV cable and incorporates a digital display.

The DCV systems various sensors provide continuous real time feedback monitoring of the ambient air conditions through, temperature, humidity, CO₂ or pressure in the occupied space.

The DCV unit is normally fitted directly to a fan, but can also be retrofitted and used in conjunction with the Eltadriver range of inverters, to accommodate your on-site requirements.

Control Functions

- Remote enable (BMS).
- Trickle and Boost.
- Damper operation.
- Heater battery operation.
- Fan run status (Fan fail).
- Control input signal.
- Manual speed control.
- Master / Slave fan operation.
- Twin fan operation (c/w 6 Hour duty share change over).
- Min/max speed settings for master or slave fans.



Applications

- **Humidity** 30% through 95%RH.
- **Voltage** 0-10V input (i.e BMS).
- **Pressure** 0 through 1000Pa.
- **CO₂** 0 through 2000ppm (P-band).
- **Temperature** +5°C through 30°C.
- Manual Speed Control.

additional Elta products

hazardous area fans

With such an extensive range of fans – the possibilities may seem endless, but fan engineered products are only worth having if they comply with the very highest standards of quality, reliability, performance, function and safety.

Our hazardous application fans are no exception to this approach, whereby Elta continue to make every effort to develop the highest specification products, by matching our capabilities to the very latest standards.

These capabilities are reflected by our ability to manufacture a comprehensive range of axial flow fans to meet the ATEX Directive, and the current form of the BS EN 14986 standard. This relatively new, but evolving standard, requires a range of design refinements to the features Elta Fans have incorporated within their hazardous fans for more than 30 years.



bifurcated fans

Elta Bifurcated axial fans are high quality and durable, direct motor driven units, specially developed for handling hostile air conditions. Hot, dust laden air, corrosive fumes, or gases can all be handled, although detailed specifications should be discussed with Elta at the time of selection.

The units are designed so that the air throughput totally by-passes the motor, avoiding any detrimental effect to the motor life. Two alternative model ranges and temperature options are available with cylindrical or conical cases.



emergency ventilation

Elta Fans has a wealth of experience and knowledge in the design and manufacture of axial flow fans for emergency smoke ventilation systems with or without fresh air supply and extract functionality.

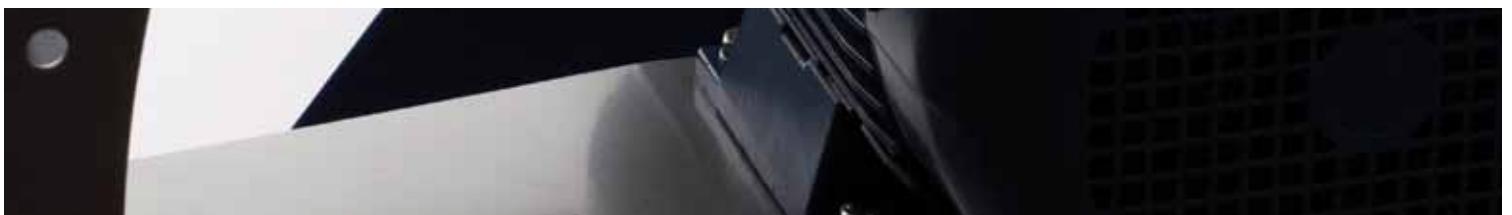
The SmokeVent range is specifically developed for general ventilation and emergency smoke extract at 200°C or 300°C for 2 hours up to 2000mm in diameter, and 400°C for 2 hours up to 1250mm in diameter.

It is a mandatory requirement in the European Union that all smoke extract fans are independently tested to EN12101-3:2002 Smoke and Heat Control Systems - Specification for powered smoke and heat exhaust ventilators. This standard covers the testing, design and production controls that are required before the manufacturer can obtain product certification from the appropriate accredited body.

Elta Fans has extended its EN Certification for smoke related fan units with BSI, with both its UK production facilities manufacturing the SmokeVent range, making it one of the largest certified standard product ranges available within Europe.

The SmokeVent Range is approved by the Loss Prevention Certification Board (LPCB) and is listed in www.redbooklive.com.





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