

Acoustic In-Line Fans (ACQ)

Features and Benefits

- **50mm Acoustically treated housing, Class 'O' rated, self extinguishing, zero burn, resists ignition, no toxic fumes**
- **Motors protected to IP44**
- **Motor insulation Class 'B'**
- **Maximum operating temperature 50°C**
- **Standard Thermal Overload Protection**
- **Quick release access panel**
- **Fully weatherproof units available**
- **All models speed controllable**
- **Manufacture controlled to BS EN 150 9001**
- **Performance tested to BS 848 parts 1 and 2**

The ACQ fans feature a 50mm acoustic lined sound controlled housing rated Class 'O' for use where quiet operation is required. The housing is designed to be as compact as possible for concealed false ceiling applications.

Manufactured in galvanised sheet metal, with integral anchorage points to allow the fan to be suspended at any angle, via drop rods or anti vibration mounts, ensuring a quick and easy solution to installation of the in-line acoustic fans. The access panel is easily removed for inspection using the four quick release catches provided.

The full range of Acoustic fans are also available, finished with optional C.R.P (Chlorinated Rubber Paint), ensuring the unit is fully weatherproofed and suitable for external mounting. All weatherproofed units

are manufactured to order. Note the standard product codes are suffixed with 'WP' eg ACQ100-12CWP.

Eleven models are available in sizes 100, 125, 150, 160, 200, 250, 315, 400 and 500, providing air volumes from 0.075m³/s to 1.609m³/s (270m³/h to 5,792 m³/h) at free air. Designed for pressures up to 550 Pa.

Motors

At the heart of the range is a proven external rotor motor and forward curved galvanised impeller assembly specially selected for its performance. The assembly is dynamically balanced to ISO 1940. Motors are rated to IP44 according to BS EN 60529. Ball bearings are greased for life and allow the fan to run at any angle. Insulation is Class 'B' (from -15°C to +50°C).

All Acoustic fans are suitable for speed control with either an electronic or auto transformer. An Auto Transformer is recommended to ensure minimum noise levels during speed control so eliminating any possibility of motor harmonic noise.

Terminal Box

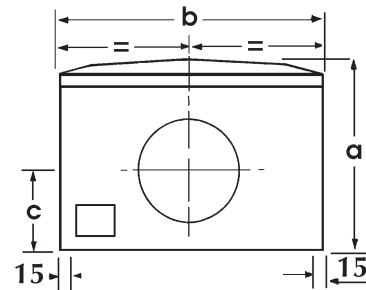
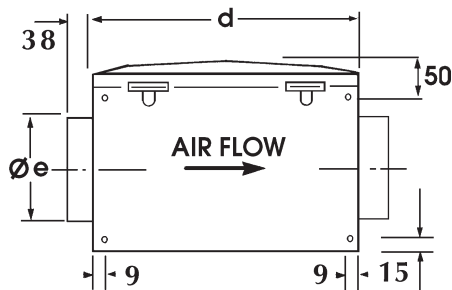
An IP54 Terminal Box is supplied with all models with 20mm cable gland entry.

Sound and Performance

Tested to BS 848 Parts 1 & 2. Published dB(A) figures are free field sound pressure levels at 3m with spherical propagation at a reference level of 2 x 10⁻⁵Pa (20 micro-Pascal). The inlet, outlet and breakout sound power level spectra figures are dB with a reference of 10⁻¹² Watts (1 pico-watt).



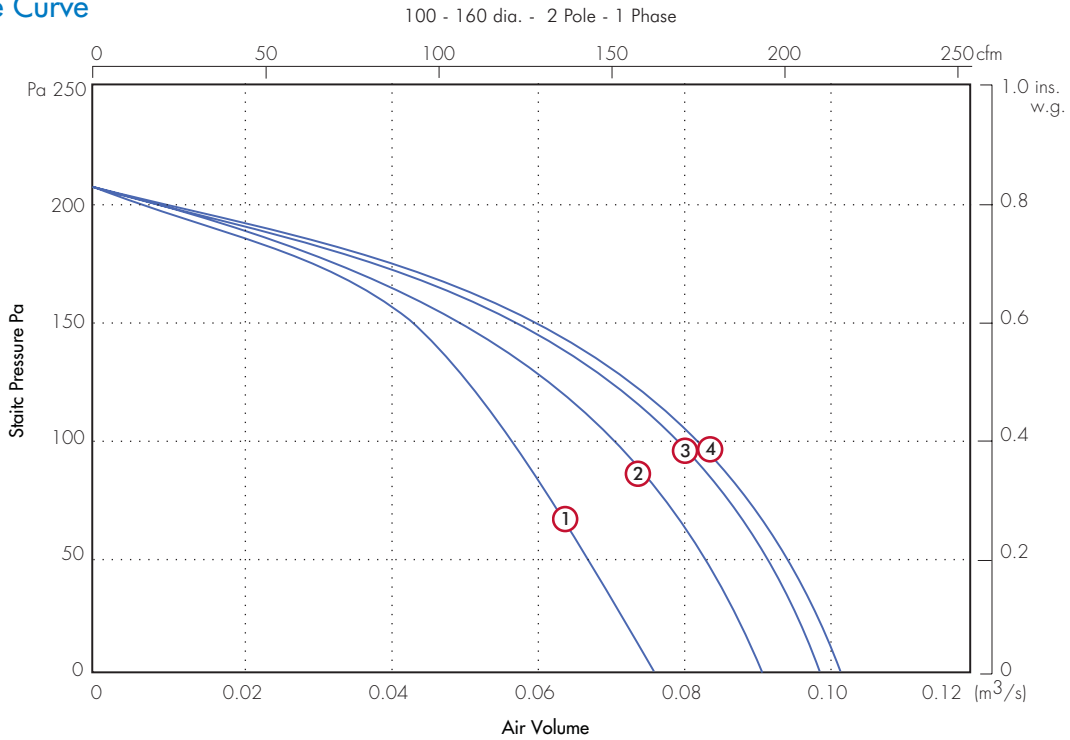
Fan Dimensions (mm)



Unit Size	a	b	c	d	e	Weight Kg
ACQ10012C	291	363	171	272	97	14
ACQ12512C	291	363	171	272	122	14
ACQ15012C	291	363	171	272	147	14
ACQ16012C	291	363	171	272	157	14
ACQ20012C	345	400	203	336	197	20
ACQ25012C	400	489	233	336	247	25
ACQ31512LC	458	537	258	446	312	35
ACQ31514HC	495	614	295	499	312	45
ACQ40014C	495	660	253	499	397	50
ACQ50014C	649	732	357	670	497	75

Acoustic In-Line Fans (ACQ)

Performance Curve



Performance Guide

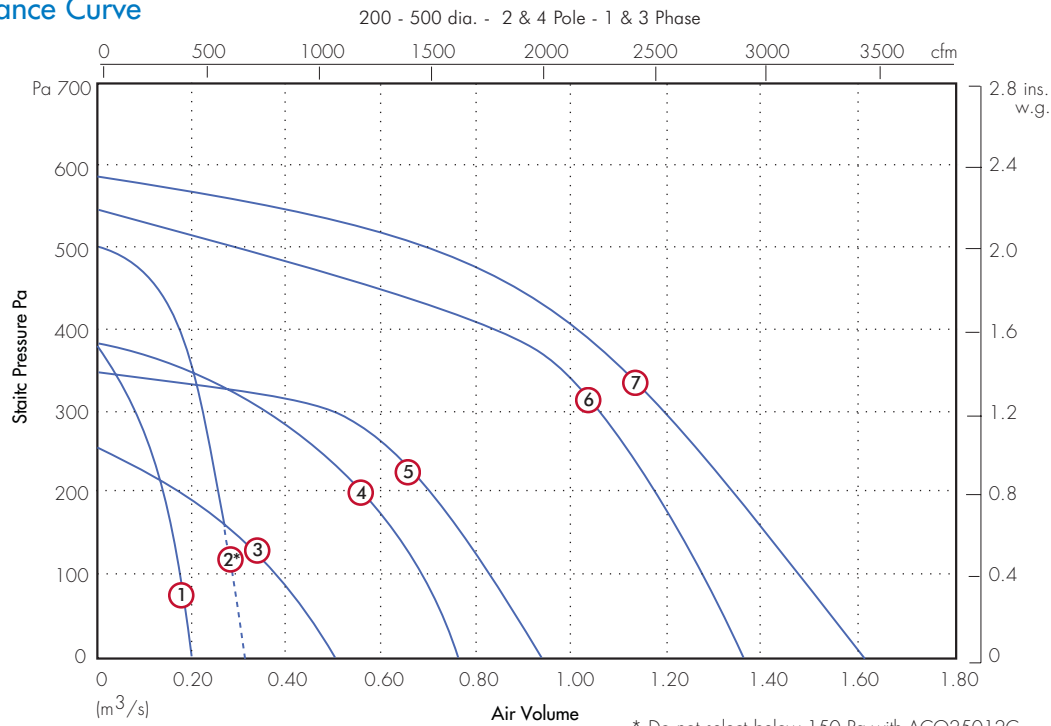
Unit Code	Nom. RPM	Phase	Curve Ref.	m ³ /s at Pa					Motor kW	Amps F.L.C.	Amps S.C.
				0	50	100	150	200			
ACQ10012C	1650	1	①	0.075	0.067	0.056	0.043	0.005	0.08	0.34	0.36
ACQ12512C	1650	1	②	0.09	0.081	0.07	0.051	0.005	0.08	0.34	0.36
ACQ15012C	1650	1	③	0.098	0.09	0.079	0.058	0.005	0.08	0.34	0.36
ACQ16012C	1650	1	④	0.101	0.093	0.081	0.06	0.005	0.08	0.34	0.36

S.C. = STARTING CURRENT, F.L.C. = FULL LOAD CURRENT

Sound Power Level Spectra dB (re 10⁻¹² Watts)

Unit Code	Unit	Mid Octave Bands								dBa @ 3m
		63	125	250	500	1k	2k	4k	8k	
ACQ10012C	Inlet	55	56	44	39	37	37	34	25	25
ACQ10012C	Outlet	50	57	50	47	51	50	49	47	36
ACQ10012C	Breakout	48	46	43	36	34	32	20	20	20
ACQ12512C	Inlet	54	57	43	40	37	37	36	25	25
ACQ12512C	Outlet	49	58	54	50	54	53	52	50	39
ACQ12512C	Breakout	48	47	43	38	34	32	20	20	20
ACQ15012C	Inlet	55	57	45	43	39	41	38	28	27
ACQ15012C	Outlet	50	58	54	52	54	54	52	51	39
ACQ15012C	Breakout	51	50	44	37	33	32	20	20	20
ACQ16012C	Inlet	54	58	43	41	37	40	37	28	26
ACQ16012C	Outlet	50	54	53	51	54	53	52	51	39
ACQ16012C	Breakout	50	49	43	37	33	32	20	20	20

Performance Curve



Performance Guide

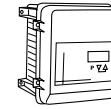
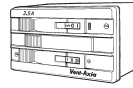
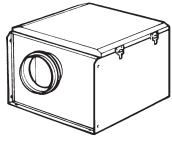
Unit Code	Nom. RPM	Phase	Curve Ref.	m³/s at Pa												Motor kW	Amps F.L.C.	Amps S.C.	
				0	50	100	150	200	250	300	350	400	450	500	550				
ACQ20012C	1700	1	①	0.197	0.188	0.174	0.159	0.134	0.108	0.08	0.04						0.175	0.77	0.92
ACQ25012C	2050	1	②				0.278	0.262	0.246	0.222	0.18	0.131	0.065				0.3	1.31	1.5
ACQ31512LC	1900	1	③	0.5	0.44	0.384	0.303	0.166									0.36	1.58	3.3
ACQ31514HC	1280	1	④	0.76	0.712	0.664	0.614	0.551	0.46	0.36	0.155						0.525	2.29	4.4
ACQ40014C	1230	1	⑤	0.926	0.873	0.825	0.763	0.692	0.615	0.498							1.06	5.38	8.5
ACQ50014C	1120	1	⑥	1.368	1.323	1.28	1.23	1.18	1.12	1.06	1	0.852	0.54	0.271			1.52	6.5	11
ACQ50034C	1185	3	⑦	1.609	1.549	1.486	1.427	1.359	1.285	1.198	1.11	1.021	0.88	0.715	0.35		2	3.3	10

Sound Power Level Spectra dB (re 10⁻¹² Watts)

Unit Code		Mid Octave Bands								dBa @ 3m
		63	125	250	500	1k	2k	4k	8k	
ACQ20012C	Inlet	66	65	56	50	46	47	46	40	35
ACQ20012C	Outlet	52	62	59	60	62	61	59	58	47
ACQ20012C	Breakout	59	63	52	43	36	27	25	25	29
ACQ25012C	Inlet	66	73	62	59	50	52	47	42	41
ACQ25012C	Outlet	60	72	67	66	67	65	65	65	52
ACQ25012C	Breakout	63	66	61	56	48	43	43	39	37
ACQ31512LC	Inlet	64	65	59	55	47	51	49	38	38
ACQ31512LC	Outlet	59	68	65	66	67	63	64	62	51
ACQ31512LC	Breakout	60	62	57	51	49	42	39	32	34
ACQ31514HC	Inlet	67	74	62	56	51	51	47	44	41
ACQ31514HC	Outlet	65	71	67	66	69	66	67	65	53
ACQ31514HC	Breakout	63	68	60	55	51	46	42	36	38
ACQ40014C	Inlet	71	71	68	61	56	57	54	50	44
ACQ40014C	Outlet	66	72	71	70	72	69	69	67	56
ACQ40014C	Breakout	71	72	63	57	52	51	51	44	41
ACQ50014C	Inlet	77	69	65	59	56	56	52	48	43
ACQ50014C	Outlet	75	71	69	70	71	67	67	64	55
ACQ50014C	Breakout	71	70	64	60	54	53	51	44	42
ACQ50034C	Inlet	79	71	66	60	57	58	54	51	45
ACQ50034C	Outlet	76	72	71	71	74	69	70	66	57
ACQ50034C	Breakout	74	73	67	62	57	55	54	50	45

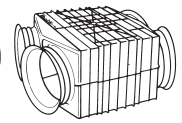
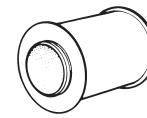
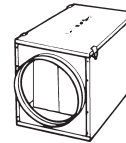
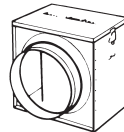
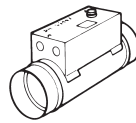
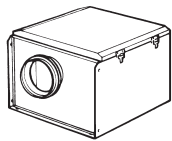
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Accessories



Dia	Weatherproofed		Electronic controller	Auto transformer	*eDemand Controller		
	StdUnit	Unit			Voltage Control	1/3 Phase Inverter	3 Phase Inverter
	Stock Ref.	Stock Ref.	Stock Ref.	Stock Ref.	Stock Ref.	Stock Ref.	Stock Ref.
100	ACQ10012C	ACQ100-12CWP	W103 03 102M	10314103	444164	-	-
125	ACQ12512C	ACQ125-12CWP	W10303102M	10314103	444164	-	-
150	ACQ15012C	ACQ150-12CWP	W10303102M	10314103	444164	-	-
160	ACQ16012C	ACQ160-12CWP	W10303102M	10314103	444164	-	-
200	ACQ20012C	ACQ200-12CWP	W10303102M	10314103	444164	-	-
250	ACQ25012C	ACQ250-12CWP	W10303102M	10314103	444164	-	-
315	ACQ31512LC	ACQ315-12LCWP	W10303102M	10314103	444164	-	-
400	ACQ40014C	ACQ400-14CWP	10303110A	10314107	444164	-	-
500	ACQ50014C	ACQ500-14CWP	10303110A	10314107	444164	-	-
500	ACQ50034C	ACQ500-34CWP	-	10314304	444165	-	-

*For full range of speed controller options, see Accessories & Controllers Section



Dia	Weatherproofed		Anti-Vibration Mounts (each)	Duct air heater	Filter cassette	Bag filter cassette	*Duct	
	StdUnit	Unit					attenuator 600mm	Heat exchange unit
	Stock Ref.	Stock Ref.	Stock Ref.	Stock Ref.	Stock Ref.	Stock Ref.	Stock Ref.	Stock Ref.
100	ACQ10012C	ACQ100-12CWP	10523033	10531100T1	10532100A	10533100	10535100	-
125	ACQ12512C	ACQ125-12CWP	10523033	10531125T1	10532125A	10533125	10535125	-
150	ACQ15012C	ACQ150-12CWP	10523033	10531150T1	10532150A	10533150	10535150	-
160	ACQ16012C	ACQ160-12CWP	10523033	-	10532160A	10533160	10535160	-
200	ACQ20012C	ACQ200-12CWP	10523033	10531200T1	10532200A	10533200	10535200	10538290 +10577315 +10578315
250	ACQ25012C	ACQ250-12CWP	10523033	10531250T1	10532250A	10533250	10535250	10538290 +10577315 +10578315
315	ACQ31512LC	ACQ315-12LCWP	10523033	10531315T1	10532315A	10533315	10535315	10538290 +10577315
400	ACQ40014C	ACQ400-14CWP	10523033	10531400T3	10532400A	10533400	10535400	-
500	ACQ50014C	ACQ500-14CWP	10523033	10531500T3	10532500A	10533500	10536500*	-
500	ACQ50034C	ACQ500-34CWP	10523033	10531500T3	10532500A	10533500	10536500*	-

*For alternative attenuator lengths, refer to Accessories and Controllers section

