

# Acoustic Twin Fans (ATQ)

- Improved efficiency available in sizes from 100 to 500mm dia
- Acoustically treated housing, Class 'O' rated, now with sandwich construction for maximum noise absorption
- Now manufactured in Aluzinc for internal and external use
- Motor insulation Class B
- Maximum operating temperature 50°C
- Standard Thermal Overload Protection
- Manufacture controlled to BS EN ISO 9001
- Performance tested to BS 848 Part 1 & 2
- 2 Year Guarantee



Vent-Axia ATQ fans feature an acoustic foam of dual density sandwich construction specially selected for maximum sound absorption and quiet operation. The housing is designed to be as compact as possible for concealed false ceiling applications. Manufactured in Aluzinc sheet metal, with integral anchorage points to allow the fan to be suspended horizontally via drop rods or anti vibration mounts, ensuring a quick and easy solution to installation. The access panel is easily removed for inspection. Individual gravity operated shutters prevent air from passing through the unit during shut down periods.

The full range of acoustic fans are manufactured from Aluzinc and as such are suitable for both internal and external mounting as standard.

Ten models are available in sizes 100, 125, 150, 160, 200, 250, 315, 400 and 500, providing air volumes from 0.057m<sup>3</sup>/s to 1.40m<sup>3</sup>/s (205m<sup>3</sup>/h to 5040m<sup>3</sup>/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 high efficiency backward curved impeller 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). The size 500 utilizes an internal rotor motor with Class B insulation (from -15°C to +40°C).

All Acoustic fans are suitable for speed control, an Auto Transformer is recommended to ensure minimum noise levels during speed control so eliminating any possibility of motor harmonic noise.

Auto-changeover control is available from the Trackmaster range of controls providing autochangeover control on fan failure and duty sharing options. All controls provide BMS operation via volt free contacts and the option for remote indication.

For eDemand controls refer to Accessories & Controllers Section.

## Terminal Box

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

## Performance and Sound

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  $2 \times 10^{-5}$ Pa (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).

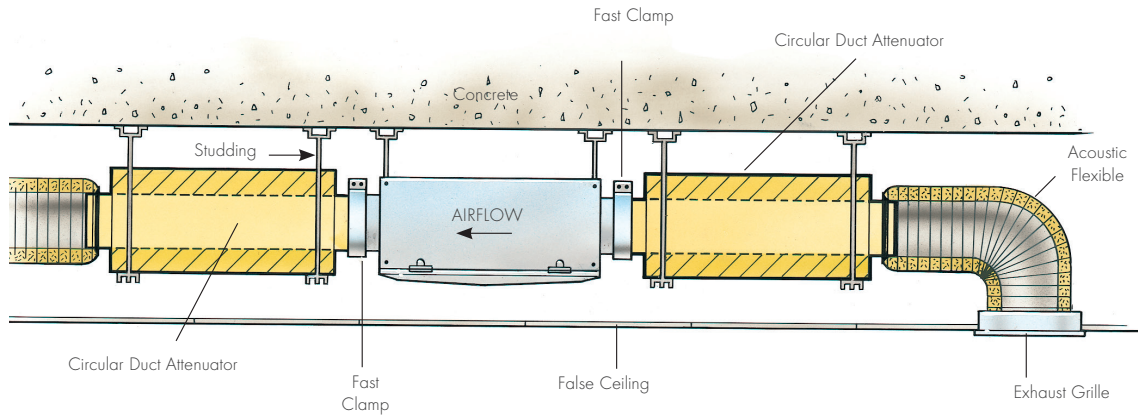
## Electrical

The ATQ range is supplied with motors wound to suit a 230V/1ph/50Hz supply capacitor start and run.

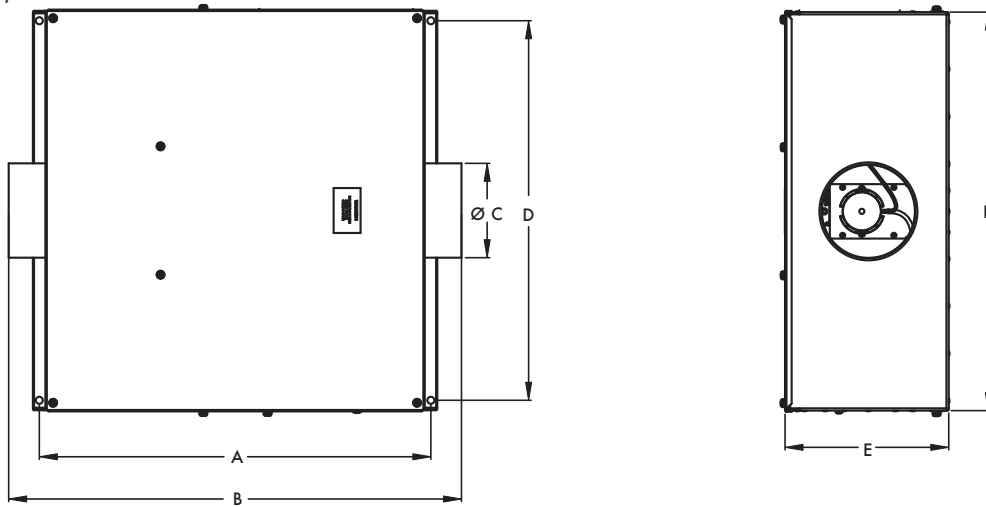
## Quality Assurance

Design and manufacture is in accordance with BS EN ISO 9001.

## Typical Installation



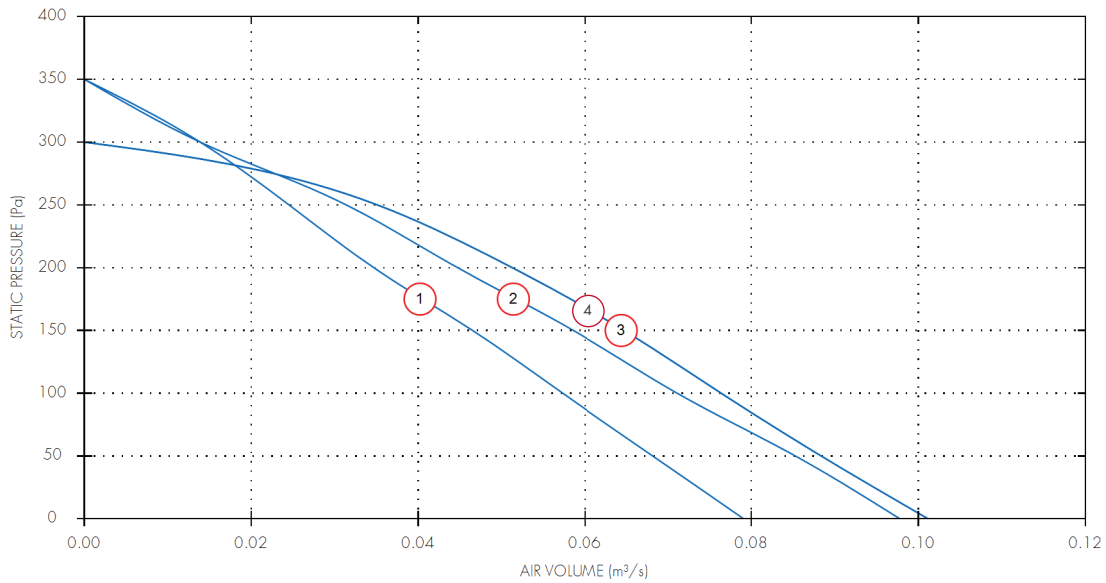
## Dimensions (mm)



Stock Ref	Duct Diameter mm				Weight		
	A	B	ØC	D	E	F	kg
ATQ10012D	610	705	100	591	256	622	26
ATQ12512D	610	705	125	591	256	622	26
ATQ15012D	610	705	150	591	256	622	26
ATQ16012D	610	705	160	591	256	622	26
ATQ20012D	801	896	200	703	343	734	39
ATQ25012D	925	1020	250	798	354	829	48
ATQ31512LD	935	1035	315	846	426	892	88
ATQ31514HD	1255	1353	315	1145	536	1176	90
ATQ40014D	1255	1353	400	1145	536	1176	90
ATQ50014D	1492	1590	500	1533	675	1564	175

## Performance Curve

ATQ100 to ATQ160 - 1 Phase - 2 Pole



## Performance Guide

Airflow, m³/s @ Pa

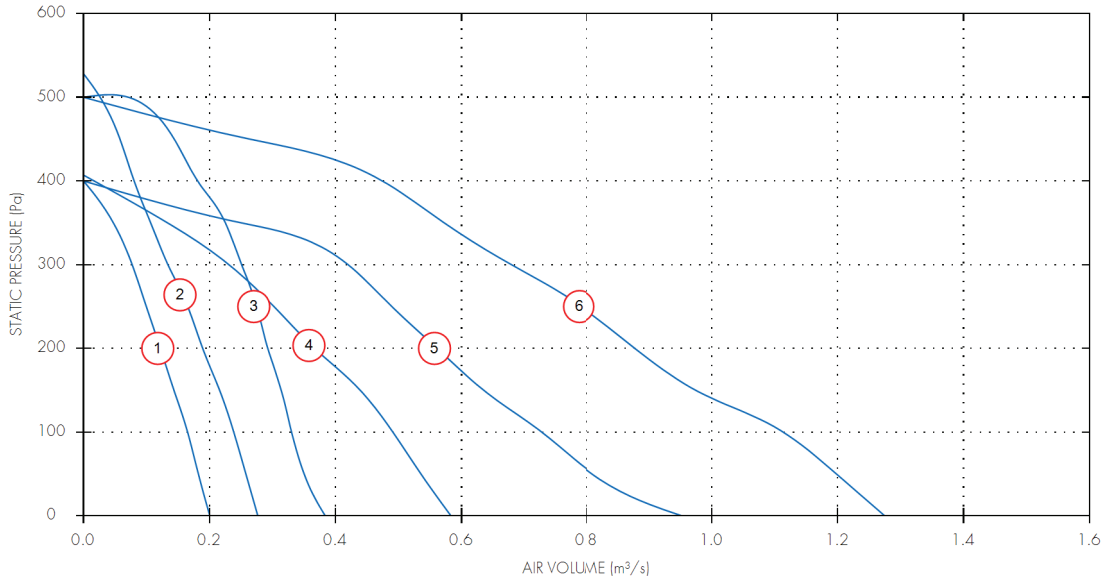
Dia.	Motor Phase	Stock Ref	r.p.m	Curve Ref.	0	50	100	150	200	250	300	Motor kW	S.C. Amps	F.L.C Amps
100	1	ATQ10012D	2450	1	0.08	0.07	0.06	0.05	0.03	0.02	0.01	0.06	1.04	0.26
125	1	ATQ12512D	2450	2	0.1	0.09	0.07	0.06	0.04	0.03	0.01	0.06	1.04	0.26
150	1	ATQ15012D	2450	3	0.1	0.09	0.08	0.06	0.05	0.04		0.06	1.04	0.26
160	1	ATQ16012D	2450	4	0.1	0.09	0.08	0.06	0.05	0.04		0.06	1.04	0.26

## Sound Power Level Spectra dB (re 10<sup>-12</sup> Watts)

Dia.	Stock Ref	Spectrum	63	125	250	500	1k	2k	4k	8k	dBA @ 3m
100	ATQ10012D	Inlet	53	59	68	58	50	45	34	33	41
100	ATQ10012D	Outlet	54	57	63	59	60	54	49	42	43
100	ATQ10012D	Breakout	46	51	58	48	41	38	31	32	31
125	ATQ12512D	Inlet	51	65	73	62	51	46	36	36	45
125	ATQ12512D	Outlet	52	62	67	64	62	55	52	45	46
125	ATQ12512D	Breakout	48	52	59	49	41	40	33	32	32
150	ATQ15012D	Inlet	54	60	70	59	52	46	38	36	42
150	ATQ15012D	Outlet	56	58	63	58	59	56	49	43	43
150	ATQ15012D	Breakout	48	52	58	51	43	38	31	33	32
160	ATQ16012D	Inlet	54	60	70	59	52	46	38	36	42
160	ATQ16012D	Outlet	56	58	63	58	59	56	49	43	43
160	ATQ16012D	Breakout	48	52	58	51	43	38	31	33	32

# Performance Curve

ATQ200 to ATQ500 - 1 Phase - 2 Pole



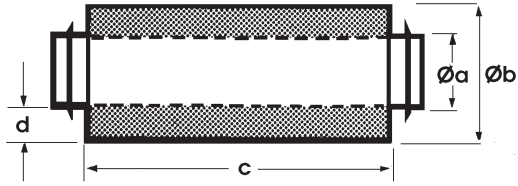
## Performance Guide

Dia.	Motor Phase	Stock Ref	r.p.m	Curve Ref.	Airflow, m³/s @ Pa											Motor kW	S.C. Amps	F.L.C Amps	
					0	50	100	150	200	250	300	350	400	450					
200	1	ATQ20012D	2700	1	0.2	0.18	0.17	0.14	0.12	0.1	0.08	0.05					0.12	1.92	0.48
250	1	ATQ25012D	2400	2	0.28	0.26	0.24	0.22	0.19	0.17	0.13	0.11	0.08	0.06	0.13	3	0.65		
315	1	ATQ31512LD	2550	3	0.38	0.35	0.33	0.31	0.29	0.27	0.25	0.23	0.18	0.14	0.23	5	1.02		
315	1	ATQ31514HD	1330	4	0.58	0.54	0.49	0.44	0.37	0.3	0.23	0.13	0.02		0.27	4.72	1.18		
400	1	ATQ40014D	1340	5	0.95	0.81	0.73	0.64	0.56	0.49	0.42	0.25			0.47	9.32	2.33		
500	1	ATQ50014D	1330	6	1.27	1.2	1.11	0.98	0.88	0.79	0.68	0.57	0.47	0.26	0.73	12.84	3.21		

## Sound Power Level Spectra dB (re 10<sup>-12</sup> Watts)

Dia.	Stock Ref	Spectrum	63	125	250	500	1k	2k	4k	8k	dB@ 3m
200	ATQ20012D	Inlet	60	65	63	68	58	55	54	46	46
200	ATQ20012D	Outlet	60	63	68	72	68	67	62	53	53
200	ATQ20012D	Breakout	53	58	57	55	46	41	35	34	34
250	ATQ25012D	Inlet	64	74	72	67	57	55	56	53	48
250	ATQ25012D	Outlet	64	74	75	69	70	71	65	64	56
250	ATQ25012D	Breakout	52	57	68	52	44	40	36	38	39
315	ATQ31512LD	Inlet	72	69	79	67	63	62	60	61	52
315	ATQ31512LD	Outlet	69	68	74	70	70	71	66	70	56
315	ATQ31512LD	Breakout	60	61	67	56	55	51	44	42	41
315	ATQ31514HD	Inlet	66	78	68	60	52	49	42	40	45
315	ATQ31514HD	Outlet	67	75	77	71	69	62	56	49	53
315	ATQ31514HD	Breakout	53	67	61	52	47	41	34	33	36
400	ATQ40014D	Inlet	73	82	79	68	62	55	50	49	52
400	ATQ40014D	Outlet	72	78	78	75	74	66	58	53	57
400	ATQ40014D	Breakout	57	68	61	56	51	45	39	34	38
500	ATQ50014D	Inlet	77	85	78	71	64	62	54	52	54
500	ATQ50014D	Outlet	74	83	82	78	77	72	64	58	61
500	ATQ50014D	Breakout	66	78	71	62	56	49	42	41	46

## Duct Attenuators Dimensions (mm)



Stock						kg
Length	Ref.	Øa	Øb	c	d	approx
300	10534100	100	200	300	50	2.6
300	10534125	125	225	300	50	3.6
300	10534150	150	250	300	50	4
300	10534160	160	250	300	50	4
600	10535100	100	200	600	50	4
600	10535125	125	225	600	50	4.5
600	10535150	150	250	600	50	6
600	10535160	160	250	600	50	6
600	10535200	200	315	600	57.5	7.4
600	10535250	250	355	600	52.5	10.2
600	10535315	315	450	600	67.5	13
600	10535400	400	606	600	103	18.5
900	10536100	100	200	900	50	7
900	10536125	125	225	900	50	8
900	10536150	150	250	900	50	9
900	10536160	160	250	900	50	9
900	10536200	200	315	900	57.5	11
900	10536250	250	355	900	52.5	14.7
900	10536315	315	450	900	67.5	18
900	10336400	400	606	900	103	38
900	10536500	500	711	900	105.5	43
1200	10537200	200	315	1200	57.5	14
1200	10537250	250	355	1200	52.5	18.5
1200	10537315	315	450	1200	67.5	21.5
1200	10537400	400	606	1200	103	50
1200	10537500	500	711	1200	105.5	60

## Duct Attenuator Insertion Losses

Stock Ref.	Length	Duct Ø	Insertion Losses (dB)							
			63	125	250	500	1k	2k	4k	8k
10534100	300	100	3	4	10	18	23	25	25	12
10534125	300	125	3	4	8	17	21	23	21	11
10534150	300	150	3	3	6	14	20	23	21	11
10534160	300	160	3	3	6	14	20	23	21	11
10535100	600	100	5	8	16	33	39	40	36	17
10535125	600	125	4	8	13	30	34	35	31	15
10535150	600	150	4	7	13	23	29	36	31	15
10535160	600	160	4	7	13	23	29	36	31	20
10535200	600	200	4	5	11	21	26	32	20	9
10535250	600	250	3	6	10	19	24	29	19	8
10535315	600	315	3	5	8	16	21	22	16	15
10535400	600	400	3	4	7	14	18	19	14	13
10536100	900	100	10	13	20	39	45	38	35	18
10536125	900	125	9	12	18	37	41	37	32	16
10536150	900	150	8	9	15	30	37	37	33	17
10536160	900	160	8	9	15	30	37	37	33	17
10536200	900	200	7	9	14	27	31	36	25	12
10536250	900	250	5	8	13	24	30	31	22	11
10536315	900	315	4	7	11	20	31	27	17	12
10536400	900	400	3	5	9	19	26	20	13	11
10536500	900	500	3	4	9	15	23	17	12	11
10537200	1200	200	10	12	17	35	40	43	27	13
10537250	1200	250	7	9	15	31	36	38	26	12
10537315	1200	315	6	8	13	23	32	30	18	11
10537400	1200	400	6	8	14	24	30	28	17	9
10537500	1200	500	5	7	13	18	26	23	15	9

Accessories



Size	Standard Fan Stock Ref.	*ITC Man/Auto Changeover Controller Stock Ref.	**ITC-DS 12/24hr Auto Changeover Controller Stock Ref.
100	ATQ10012D	10314200	10314210
125	ATQ12512D	10314200	10314210
150	ATQ15012D	10314200	10314210
160	ATQ16012D	10314200	10314210
200	ATQ20012D	10314200	10314210
250	ATQ25012D	10314200	10314210
315	ATQ31512LD	10314200	10314210
315	ATQ31514HD	10314200	10314210
400	ATQ40014D	10314200	10314210
500	ATQ50014D	10314200	10314210

\*\*Not suitable for use with eDemand controllers. For compatible changeover panel, see Accessories and Controllers Section



Size	eDemand Auto Changeover Stock Ref.	eDemand Voltage Controller Stock Ref.	*Anti-Vibration Mounts Stock Ref.	RVC Remote Visual Indicator Stock Ref.	Auto Transformer Stock Ref.
100	444180	444164	68MP033G	10314220	10314103
125	444180	444164	68MP033G	10314220	10314103
150	444180	444164	68MP033G	10314220	10314103
160	444180	444164	68MP033G	10314220	10314103
200	444180	444164	68MP033G	10314220	10314103
250	444180	444164	68MP033G	10314220	10314103
315	444180	444164	68MP033G	10314220	10314103
400	444180	444164	68MP033G	10314220	10314105
500	444180	444164	68MP033G	10314220	10314105

\*Set of 4



Size	Backdraught Shutter Stock Ref.	Fast Clamp Stock Ref.	Duct Attenuator			
	Stock Ref.	Stock Ref.	300mm Stock Ref.	600mm Stock Ref.	900mm Stock Ref.	1200mm Stock Ref.
100	10542100	10540100	10534100	10535100	10536100	-
125	10542125	10540125	10534125	10535125	10536125	-
150	10542150	10540150	10534150	10535150	10536150	-
160	-	10540160	-	10535160	-	-
200	10542200	10540200	-	10535200	10536200	10537200
250	10542250	10540250	-	10535250	10536250	10537250
315	10542315	10540315	-	10535315	10536315	10537315
400	10542400	10540400	-	10535400	10536400	10537400
500	-	-	-	-	10536500	-