

Airtrak™ In-Line Centrifugal Duct Fans (ACH)

Features & Benefits

- Available in sizes 100 to 315
- Motor Insulation Class B, protected to IP44
- Operating Temperatures from -15°C up to +40°C
- HOT SPOT Protection
- All units suitable for speed control
- Quality Assurance to BS EN ISO 9001:1994
- Performance tested to BS848 Part 1 1980

The 'ACH' Airtrak in-line centrifugal duct fans are as supplied from ventilation, designed around an efficient backward curved centrifugal impeller and external rotor motor to ensure a compact design, high performance and low sound levels.

The in-line fan is constructed from spun steel and incorporates an aerodynamically designed airflow guide vane, ensuring maximum performance from the unit. All models have 30mm inlet and discharge spigots for ease of installation and come complete with mounting feet for horizontal or vertical mounting. ACH is available in six models; sizes 100, 125, 150, 200, 250 & 315mm diameter. The range provides a performance from 0.069m³/s to 0.51m³/s with a maximum pressure development of up to 700 Pa.

Impellers

The impellers are aerodynamically designed centrifugal backward curved type, manufactured from steel or polyamide. The motor and impeller is factory matched, statically and dynamically balanced in two planes to ISO 1940, Grade G 6.3.

Motors

All sizes from 100 to 315 are protected to IP44 in accordance with BS EN 60529:1992. With motor insulation Class B, suitable for operating temperatures from -15°C to +40°C and atmospheres up to 95% RH. The range incorporates maintenance free external rotor motors, fitted with sealed for life ball bearings, ideally suited for speed control by electronic or voltage reduction.

The motors are wound to suit a 230V/1PH/50Hz electrical supply, with all motors permanent capacitor type to optimise efficiency. HOT SPOT protection by means of a thermal contact switch incorporated within the windings are provided to prevent motor damage due to overloading/overheating.

Terminal Box

An IP44 terminal box is supplied with all models with 20mm entry.

Performance

The fan performance is in accordance with tests to BS848 Part 1 1980, with the fan sound levels measured in a reverberant chamber in accordance with BS848 Part 2 1985.

Quality Assurance

Design and manufacture is in accordance with the standard for quality management systems BS EN ISO 9001:1994.

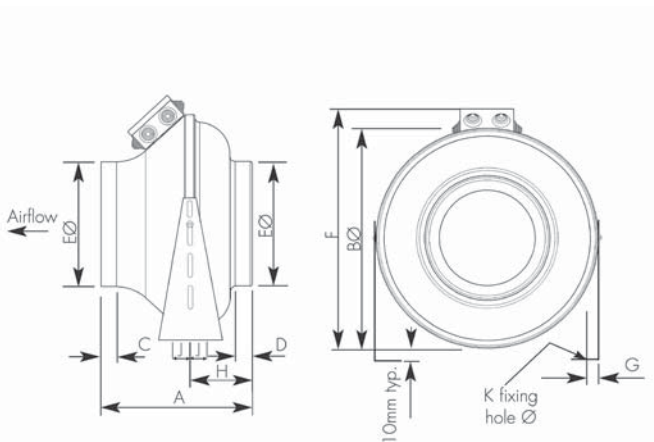
Accessories

A full range of accessories are available with the Euroflow in-line centrifugal duct fans such as:

- Electronic Speed Controllers
- Auto Transformer Speed Controllers
- D.O.L. Starters
- Pre & Secondary Filter Cassettes
- Electric Heater Batteries
- In-Line Attenuators
- Backdraught Shutters
- Fast Clamps
- Flexible Ducting
- Wall Terminals
- Roof Terminals

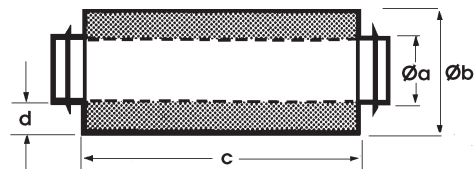


Fan Dimensions (mm)



Unit Size	A	BØ	C	D	EØ	F	G	H	J	KØ	Weight Kg
ACH100B	240	250	35	36	98	280	41.5	120	42.5	7	3
ACH125B	240	250	35	36	123	280	41.5	120	42.5	7	3
ACH150B	250	342	35	36	148	372	41.5	120	42.5	7	5
ACH200B	239	349	25	27	198	379	41.5	99	42.5	7	5
ACH250B	259	349	25	27	248	379	41.5	129	42.5	7	5.5
ACH315B	259	399	32	27	313	441	41.5	139	42.5	7	6

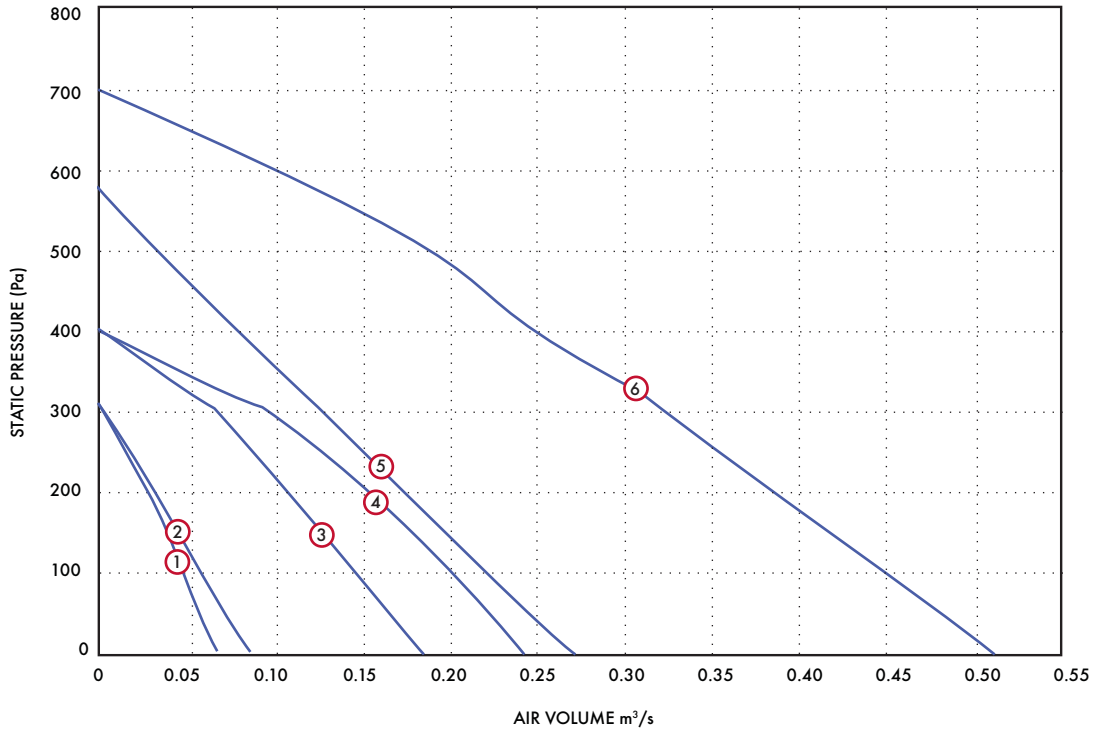
Attenuator Dimensions (mm)



Stock Ref	Øa	Øb	c	d	kg
10534100	100	200	300	50	2.4
10534125	125	225	300	50	2.6
10534150	150	250	300	50	4.1
10535100	100	200	600	50	2.9
10535125	125	225	600	50	4.5
10535150	150	250	600	50	5.8
10535200	200	315	600	57.5	7
10535250	250	355	600	52.5	8.6
10535315	315	450	600	67.5	9.8
10536100	100	200	900	50	6.6
10536125	125	225	900	50	7.6
10536150	150	250	900	50	9
10536200	200	315	900	57.5	10
10536250	250	355	900	52.5	12.2
10536315	315	450	900	67.5	15
10537200	200	315	1200	57.5	14
10537250	250	355	1200	52.5	18
10537315	315	450	1200	67.5	21

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Performance Curve



Performance Guide

Stock Ref	Nom. rpm	Phase	Curve Ref	Duty - m³/s @ Pa											Motor Watts	Amps FLC	Amps SC	dBA @ 3m	
				0	50	100	150	200	250	300	400	500	600						
ACH100B	2450	1	1	0.069	0.059	0.05	0.041	0.030	0.015							80	0.36	1.44	47
ACH125B	2450	1	2	0.087	0.073	0.059	0.046	0.033	0.017							80	0.36	1.44	47
ACH150B	2700	1	3	0.186	0.167	0.146	0.126	0.106	0.086	0.064						85	0.38	1.52	51
ACH200B	2700	1	4	0.242	0.221	0.199	0.175	0.15	0.122	0.093						150	0.66	2.64	54
ACH250B	2600	1	5	0.27	0.244	0.218	0.194	0.17	0.147	0.124	0.077	0.032				155	0.7	2.8	53
ACH315B	2460	1	6	0.51	0.482	0.446	0.416	0.383	0.353	0.321	0.246	0.188	0.100			230	1.05	4.2	61

FLC = Full Load Current SC = Starting Current

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

Stock Ref		Mid Octave Bands								dBA @ 3m
		63	125	250	500	1000	2000	4000	8000	
ACH100B	Inlet	57	58	66	58	60	56	54	47	47
ACH100B	Outlet	56	55	67	57	59	57	56	50	47
ACH125B	Inlet	52	58	60	59	59	57	54	48	46
ACH125B	Outlet	57	61	67	59	59	56	55	50	47
ACH150B	Inlet	58	59	69	67	64	59	54	46	51
ACH150B	Outlet	59	59	69	62	61	57	53	45	49
ACH200B	Inlet	58	63	66	71	67	62	57	49	54
ACH200B	Outlet	59	66	65	69	65	63	59	49	53
ACH250B	Inlet	60	64	65	69	64	57	56	49	52
ACH250B	Outlet	61	64	65	68	65	63	58	51	53
ACH315B	Inlet	64	70	77	74	71	71	70	70	61
ACH315B	Outlet	64	70	75	74	71	73	68	67	61

Published dB(A) figures are free field sound levels at 3m with spherical propagation at a reference level of 2 x 10⁻⁵ Pa. The free field sound power level spectra figure are dB with reference of 10⁻¹² Watts. To ensure minimum noise levels during speed control an auto transformer speed controller is recommended.

Accessories



Stock Ref	Electronic Controller Stock Ref	Auto Transformer Stock Ref	D.O.L. Starter & Coil Stock Ref	*eDemand Controller Voltage Control Stock Ref	Duct Air Heater Stock Ref	Filter Cassette Stock Ref	Bag filter Cassette Stock Ref
ACH100	W10303102M	10314103	444744 + 444698	444164	10531100T1	10532100	10533100
ACH125	W10303102M	10314103	444744 + 444698	444164	10531125T1	10532125	10533125
ACH150	W10303102M	10314103	444744 + 444698	444164	10531150T1	10532150	10533150
ACH200	W10303102M	10314103	444744 + 444699	444164	10531200T1	10532200	10533200
ACH250	W10303102M	10314103	444744 + 444699	444164	10531250T1	10532250	10533250
ACH315	W10303102M	10314103	444744 + 444700	444164	10531315T1	10532315	10533315

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



Stock Ref	Duct Attenuator				Heat Exchange Unit Stock Ref	Backdraught Shutter Stock Ref	Fast Clamp Stock Ref
	300mm Stock Ref	600mm Stock Ref	900mm Stock Ref	1200mm Stock Ref			
ACH100	10534100	10535100	10536100	-	-	10542100	10540100
ACH125	10534125	10535125	10536125	-	-	10542125	10540125
ACH150	10534150	10535150	10536150	-	-	10542150	10540150
ACH200	-	10535200	10536200	10537200	10538290 + 10577315 + 10578315	10542200	10540200
ACH250	-	10535250	10536250	10537250	10538290 + 10577315 + 10577315	10542250	10540250
ACH315	-	10535315	10536315	10537315	10538315 + 10577315	10542315	10540315

Duct Attenuator Insertion Losses

Stock Ref	Length	Duct Ø	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
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
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

Stock Ref	Length	Duct Ø	63	125	250	500	1k	2k	4k	8k
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
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
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

For accessory details, see Non-Residential Accessories & Controls section