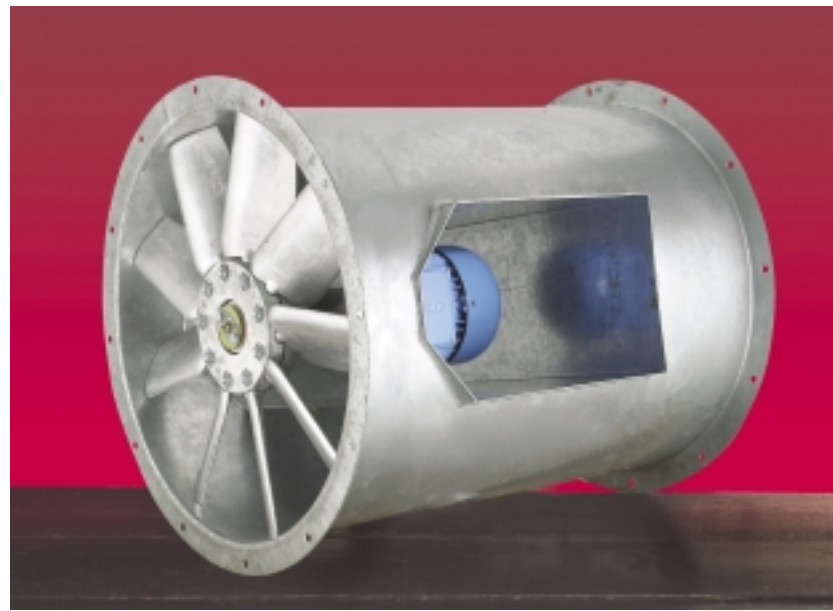


VENT-AXIA BIFURCATED CASE AXIAL FANS (BIF)



- ✓ Sizes 250 to 800 dia.
- ✓ Motors protected to **IP55**.
- ✓ Motor insulation Class 'F'.
- ✓ Maximum ambient temperature 200°C.
- ✓ Speed controllable via transformer or inverter (when the ambient air temperature is not higher than 60°C).
- ✓ **IP55** terminal box.
- ✓ Suitable for relative humidity levels up to 95% R.H.
- ✓ Manufactured to **BS EN ISO 9001**.
- ✓ Performance tested to **BS 848 parts 1, 2** and **ISO 5801**.
- ✓ **2 Year Guarantee**.

BIFURCATED CASE AXIAL FANS

The Bifurcated Case Axial range has been specifically developed to meet the need for an axial fan which can handle atmospheres normally detrimental to the life of the fan motor.

By isolating the motor from the system airstream, the bifurcated fan can handle a wide variety of saturated and dust-laden atmospheres, heated air and hot gases.

The range has a split airway with a direct driven motor operating in ambient air within the motor compartment. They are suitable, as standard, for handling air temperatures up to +200°C.

MOTORS

The motors are specially selected to operate within the motor compartment with the airstream in the duct system, at an elevated temperature.

Motors are of the B3 foot mounting type, totally enclosed and fan cooled.

Being foot mounted the motors can, in the event of a failure, be readily interchanged with a comparable frame size from a wide range of manufacturers to cover temperatures of up to 200°C.

The motor is suitable for speed control by either an inverter or a 5-step auto transformer speed controller when the ambient air temperature is not higher than 60°C.

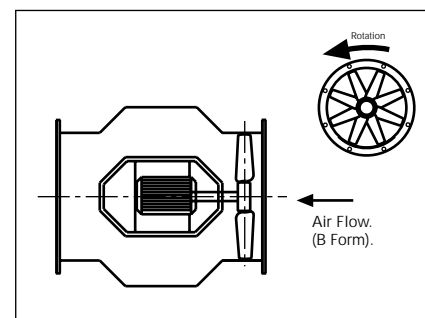
ELECTRICAL

Single phase 220-240V/50 Hz supply are available in two sizes 250 and 315 dia. in either 2 or 4 pole versions. Three phase 380-440V/50Hz supply are available in six sizes 250, 315, 400, 500, 630 and 800 dia. in either 2 or 4 pole versions (630 and 800 dia are available as 4 pole).

IMPELLERS AND CASING

The aluminium alloy impellers are die cast and have an adjustable pitch which allows a wide range of air outputs to be selected. All the casings are manufactured in steel and hot dipped galvanised to **BS EN ISO 1461** after fabrication. Motor mountings and fixings used in the assembly of the fan are zinc plated and passivated.

FORM OF RUNNING



Bifurcated fans have arrows showing the direction of the impeller rotation and airflow. Ex-stock models are Form B running.

TERMINAL BOX

To **IP55**, protected against dust and water jets from any angle, allowing outside applications.

PERFORMANCE

Tested to **BS 848 Part 1 & 2**. Published dB(A) figures are free field sound pressure levels at 3m with spherical propagation at a reference level of 2 x 10⁻⁶Pa (20 micro-Pascal). The inlet and outlet sound power level spectra figures are dB with a reference of 10⁻¹² Watts (1 pico-watt).

COOLING

External cooling is provided by a fan mounted at the non-drive end of the motor, protected by a cover with a grid air intake. The airflow, guided by the fan cover, is directed longitudinally on the entire periphery of the motor in the channels formed by the frame ribs.

Adequate space is provided within the motor compartment to ensure a plentiful supply of cooling air. The air within the motor compartment must not exceed 40°C. For ambients in excess of this, please consult our Technical Services Department for further information.



BIFURCATED CASE AXIAL FANS PERFORMANCE GUIDE

Red tabulations indicate a stock fan with a preset pitch angle. Black tabulations indicate the duty range of the preset fans in 2° increment. The impellers will be factory set and dispatched within two days.

2 POLE

			m³/s at Pa								
Dia.	Phase	Pitch									dBA @ 3m
		Pole Angle	0	25	50	75	100	125	150	175	
BIF 250 / 1 or 3	/ 2 / 8°	0.27	0.25	0.23	0.22	0.21	0.19	0.17	0.16	58	
BIF 250 / 1 or 3	/ 2 / 10°	0.29	0.28	0.26	0.25	0.23	0.22	0.21	0.19	58	
BIF 250 / 1 or 3	/ 2 / 12°	0.32	0.31	0.29	0.28	0.26	0.25	0.23	0.20	58	
BIF 250 / 1 or 3	/ 2 / 14°	0.35	0.33	0.32	0.30	0.29	0.28	0.26	0.23	58	
BIF 250 / 1 or 3	/ 2 / 16°	0.37	0.36	0.34	0.32	0.31	0.29	0.28	0.25	58	
BIF 250 / 1 or 3	/ 2 / 18°	0.40	0.38	0.37	0.35	0.34	0.32	0.31	0.28	58	
BIF 250 / 1 or 3	/ 2 / 20°	0.42	0.40	0.39	0.38	0.36	0.34	0.33	0.31	58	
BIF 250 / 1 or 3	/ 2 / 22°	0.44	0.43	0.41	0.40	0.38	0.37	0.35	0.33	58	
BIF 250 / 1 or 3	/ 2 / 24°	0.47	0.45	0.43	0.42	0.40	0.39	0.37	0.35	58	
BIF 250 / 1 or 3	/ 2 / 26°	0.49	0.47	0.46	0.44	0.42	0.40	0.39	0.37	58	
BIF 250 / 1 or 3	/ 2 / 28°	0.51	0.49	0.48	0.46	0.44	0.43	0.41	0.38	58	
BIF 250 / 1 or 3	/ 2 / 30°	0.54	0.52	0.50	0.48	0.47	0.45	0.43	0.40	58	
BIF 250 / 1 or 3	/ 2 / 32°	0.55	0.53	0.51	0.49	0.48	0.46	0.44	0.42	58	

			m³/s at Pa							
Dia.	Phase	Pitch							dBA @ 3m	
		Pole Angle	0	50	100	150	200	250		300
BIF 315 / 1 or 3	/ 2 / 8°	0.54	0.48	0.46	0.42	0.38	0.34			66
BIF 315 / 1 or 3	/ 2 / 10°	0.58	0.55	0.51	0.48	0.44	0.40			66
BIF 315 / 1 or 3	/ 2 / 12°	0.64	0.61	0.57	0.53	0.49	0.44			65
BIF 315 / 1 or 3	/ 2 / 14°	0.69	0.66	0.62	0.59	0.55	0.50			65
BIF 315 / 1 or 3	/ 2 / 16°	0.75	0.70	0.66	0.63	0.59	0.54			65
BIF 315 / 1 or 3	/ 2 / 18°	0.80	0.76	0.72	0.68	0.64	0.60	0.53		65
BIF 315 / 1 or 3	/ 2 / 20°	0.83	0.80	0.77	0.73	0.69	0.64	0.59		65
BIF 315 / 1 or 3	/ 2 / 22°	0.88	0.84	0.80	0.77	0.73	0.69	0.64		65
BIF 315 / 1 or 3	/ 2 / 24°	0.94	0.89	0.85	0.81	0.77	0.73	0.68		65
BIF 315 / 1 or 3	/ 2 / 26°	0.98	0.93	0.89	0.85	0.81	0.77	0.71		65
BIF 315 / 1 or 3	/ 2 / 28°	1.01	0.97	0.94	0.90	0.85	0.80	0.74		65
BIF 315 / 1 or 3	/ 2 / 30°	1.07	1.03	0.98	0.94	0.89	0.84	0.78		66

			m³/s at Pa						
Dia.	Phase	Pitch						dBA @ 3m	
		Pole Angle	0	100	200	300	400		450
BIF 400 / 3	/ 2 / 8°	1.10	0.99	0.89	0.79	0.68	0.60		76
BIF 400 / 3	/ 2 / 10°	1.23	1.13	1.04	0.93	0.80	0.71		76
BIF 400 / 3	/ 2 / 12°	1.34	1.24	1.14	1.02	0.90	0.81		75
BIF 400 / 3	/ 2 / 14°	1.47	1.37	1.26	1.15	1.01	0.93		75
BIF 400 / 3	/ 2 / 16°	1.61	1.50	1.40	1.27	1.13	1.04		75
BIF 400 / 3	/ 2 / 18°	1.72	1.61	1.51	1.38	1.24	1.14		74
BIF 400 / 3	/ 2 / 20°	1.80	1.69	1.59	1.48	1.33	1.22		74
BIF 400 / 3	/ 2 / 22°	1.93	1.80	1.69	1.57	1.42	1.30		74

			m³/s at Pa							
Dia.	Phase	Pitch								dBA @ 3m
		Pole Angle	0	100	200	300	400	500	600	
BIF 500 / 3	/ 2 / 8°	1.82	1.71	1.60	1.48	1.36	1.24	1.08	0.89	76
BIF 500 / 3	/ 2 / 10°	2.18	2.03	1.87	1.74	1.62	1.50	1.32	1.08	76
BIF 500 / 3	/ 2 / 12°	2.57	2.40	2.22	2.03	1.87	1.69	1.46	1.26	76
BIF 500 / 3	/ 2 / 14°	2.72	2.56	2.40	2.24	2.08	1.87	1.69	1.45	76
BIF 500 / 3	/ 2 / 16°	2.91	2.78	2.65	2.47	2.29	2.14	1.91	1.66	76
BIF 500 / 3	/ 2 / 18°	3.22	3.06	2.89	2.73	2.60	2.35	2.12	1.80	76
BIF 500 / 3	/ 2 / 20°	3.43	3.29	3.15	2.98	2.79	2.54	2.20	1.93	76

VENT-AXIA BIFURCATED CASE AXIAL FANS PERFORMANCE GUIDE

Red tabulations indicate a stock fan with a preset pitch angle. Black tabulations indicate the duty range of the preset fans in 2° increment. The impellers will be factory set and dispatched within two days.

4 POLE

m³/s at Pa

Dia.	Phase	Pole	Pitch Angle	m³/s at Pa							dBA @ 3m	
				0	10	20	30	40	50	60		70
BIF 250 / 1 or 3 / 4 /	8°			0.14	0.12	0.11	0.10	0.08				42
BIF 250 / 1 or 3 / 4 /	10°			0.15	0.13	0.12	0.11	0.10				42
BIF 250 / 1 or 3 / 4 /	12°			0.16	0.15	0.14	0.13	0.11				42
BIF 250 / 1 or 3 / 4 /	14°			0.17	0.16	0.15	0.15	0.12				42
BIF 250 / 1 or 3 / 4 /	16°			0.19	0.17	0.16	0.15	0.13				42
BIF 250 / 1 or 3 / 4 /	18°			0.20	0.19	0.17	0.16	0.15				42
BIF 250 / 1 or 3 / 4 /	20°			0.21	0.20	0.19	0.17	0.16				42
BIF 250 / 1 or 3 / 4 /	22°			0.22	0.21	0.20	0.18	0.17				42
BIF 250 / 1 or 3 / 4 /	24°			0.23	0.22	0.21	0.19	0.18				42
BIF 250 / 1 or 3 / 4 /	26°			0.24	0.23	0.22	0.20	0.19				42
BIF 250 / 1 or 3 / 4 /	28°			0.25	0.24	0.23	0.21	0.20				42
BIF 250 / 1 or 3 / 4 /	30°			0.27	0.25	0.24	0.22	0.21				42
BIF 250 / 1 or 3 / 4 /	32°			0.28	0.26	0.25	0.23	0.22				42

Dia.	Phase	Pole	Pitch Angle	m³/s at Pa							dBA @ 3m	
				0	10	20	30	40	50	60		70
BIF 315 / 1 or 3 / 4 /	8°			0.27	0.25	0.23	0.22	0.21	0.19	0.17	0.15	50
BIF 315 / 1 or 3 / 4 /	10°			0.29	0.28	0.26	0.25	0.23	0.22	0.20	0.19	50
BIF 315 / 1 or 3 / 4 /	12°			0.32	0.31	0.29	0.28	0.26	0.25	0.23	0.20	49
BIF 315 / 1 or 3 / 4 /	14°			0.35	0.33	0.32	0.30	0.29	0.28	0.26	0.23	49
BIF 315 / 1 or 3 / 4 /	16°			0.37	0.36	0.34	0.32	0.31	0.29	0.28	0.25	49
BIF 315 / 1 or 3 / 4 /	18°			0.40	0.38	0.37	0.35	0.34	0.32	0.31	0.28	49
BIF 315 / 1 or 3 / 4 /	20°			0.42	0.40	0.39	0.38	0.36	0.34	0.33	0.30	49
BIF 315 / 1 or 3 / 4 /	22°			0.44	0.43	0.41	0.39	0.38	0.37	0.35	0.33	49
BIF 315 / 1 or 3 / 4 /	24°			0.47	0.45	0.43	0.42	0.40	0.39	0.37	0.35	49
BIF 315 / 1 or 3 / 4 /	26°			0.49	0.47	0.45	0.44	0.42	0.40	0.39	0.37	49
BIF 315 / 1 or 3 / 4 /	28°			0.51	0.49	0.48	0.46	0.44	0.43	0.41	0.38	49
BIF 315 / 1 or 3 / 4 /	30°			0.54	0.52	0.50	0.48	0.47	0.45	0.43	0.40	50
BIF 315 / 1 or 3 / 4 /	32°			0.55	0.53	0.51	0.49	0.48	0.46	0.44	0.41	50

Dia.	Phase	Pole	Pitch Angle	m³/s at Pa							dBA @ 3m	
				0	20	40	60	80	100	120		140
BIF 400 / 3	/ 4 /	8°		0.55	0.50	0.46	0.43	0.38	0.34	0.27		61
BIF 400 / 3	/ 4 /	10°		0.62	0.58	0.54	0.50	0.45	0.40	0.33		60
BIF 400 / 3	/ 4 /	12°		0.67	0.63	0.59	0.55	0.50	0.45	0.38		60
BIF 400 / 3	/ 4 /	14°		0.74	0.70	0.65	0.61	0.56	0.50	0.44		59
BIF 400 / 3	/ 4 /	16°		0.80	0.76	0.72	0.68	0.62	0.56	0.50		59
BIF 400 / 3	/ 4 /	18°		0.86	0.81	0.77	0.73	0.68	0.62	0.54		59
BIF 400 / 3	/ 4 /	20°		0.90	0.86	0.81	0.77	0.73	0.66	0.57		58
BIF 400 / 3	/ 4 /	22°		0.97	0.91	0.87	0.82	0.77	0.71	0.62		58
BIF 400 / 3	/ 4 /	24°		1.01	0.96	0.92	0.87	0.82	0.75	0.65		58
BIF 400 / 3	/ 4 /	26°		1.05	1.00	0.95	0.90	0.85	0.78	0.70		58
BIF 400 / 3	/ 4 /	28°		1.09	1.04	0.99	0.94	0.89	0.83	0.74		58
BIF 400 / 3	/ 4 /	30°		1.12	1.07	1.02	0.98	0.93	0.86	0.76		58
BIF 400 / 3	/ 4 /	32°		1.14	1.10	1.06	1.01	0.95	0.89	0.79		58

BIFURCATED CASE AXIAL FANS PERFORMANCE GUIDE

Green tabulations indicate fans available on request. Please contact your local Sales Office for delivery information.

4 POLE

m³/s at Pa

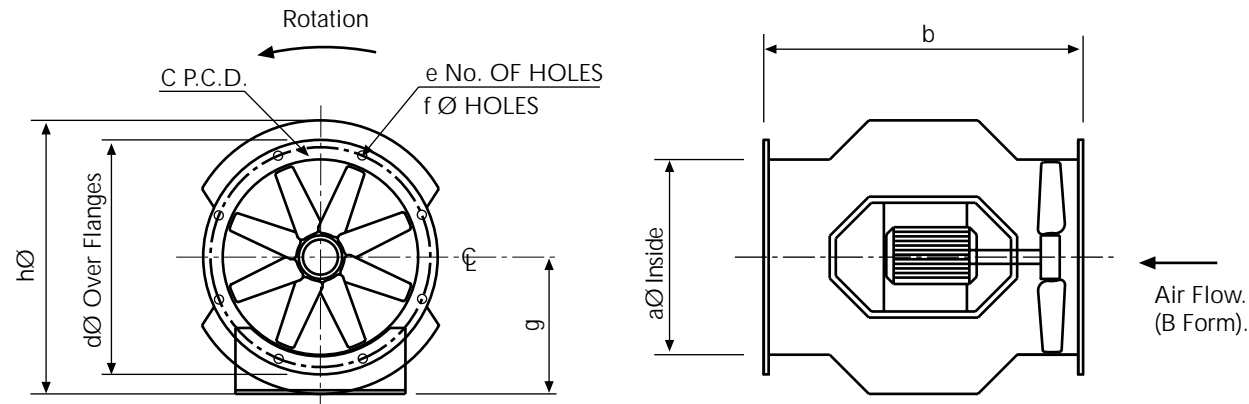
Dia.	Phase	Pole	Pitch Angle	m³/s at Pa							dBA @ 3m	
				0	25	50	75	100	125	150		175
BIF 500 / 3	/ 4 /	8°		0.91	0.86	0.80	0.74	0.68	0.62	0.54	0.45	60
BIF 500 / 3	/ 4 /	10°		1.09	1.01	0.94	0.87	0.81	0.75	0.66	0.54	60
BIF 500 / 3	/ 4 /	12°		1.29	1.20	1.11	1.01	0.94	0.84	0.73	0.63	60
BIF 500 / 3	/ 4 /	14°		1.36	1.28	1.20	1.12	1.04	0.93	0.84	0.73	60
BIF 500 / 3	/ 4 /	16°		1.46	1.39	1.33	1.23	1.14	1.07	0.95	0.83	60
BIF 500 / 3	/ 4 /	18°		1.61	1.53	1.45	1.37	1.30	1.17	1.06	0.90	60
BIF 500 / 3	/ 4 /	20°		1.72	1.65	1.58	1.49	1.39	1.27	1.10	0.97	60
BIF 500 / 3	/ 4 /	22°		1.82	1.75	1.68	1.60	1.50	1.37	1.18	1.02	61
BIF 500 / 3	/ 4 /	24°		1.94	1.87	1.78	1.69	1.59	1.45			58
BIF 500 / 3	/ 4 /	26°		2.11	1.99	1.89	1.79	1.68	1.55			58
BIF 500 / 3	/ 4 /	28°		2.21	2.11	2.02	1.89	1.76	1.62			58
BIF 500 / 3	/ 4 /	30°		2.27	2.18	2.08	1.96	1.81	1.63			58

Dia.	Phase	Pole	Pitch Angle	m³/s at Pa							dBA @ 3m	
				0	50	100	150	200	250	300		350
BIF 630 3	/ 4 /	8°		1.82	1.68	1.54	1.39	1.23	1.04	0.76		77
BIF 630 3	/ 4 /	10°		2.18	1.99	1.80	1.64	1.49	1.25	0.95		77
BIF 630 3	/ 4 /	12°		2.57	2.35	2.12	1.91	1.68	1.39	1.17		77
BIF 630 3	/ 4 /	14°		2.72	2.52	2.31	2.12	1.86	1.64	1.29		77
BIF 630 3	/ 4 /	16°		2.91	2.75	2.56	2.32	2.13	1.84	1.48		77
BIF 630 3	/ 4 /	18°		3.22	3.03	2.81	2.63	2.34	2.04	1.61		77
BIF 630 3	/ 4 /	20°		3.43	3.26	3.07	2.83	2.53	2.12	1.78		77
BIF 630 3	/ 4 /	22°		3.64	3.48	3.28	3.06	2.70	2.27	1.87		78
BIF 630 3	/ 4 /	24°		3.87	3.69	3.47	3.23	2.88				75
BIF 630 3	/ 4 /	26°		4.21	3.92	3.67	3.41	3.09				75

Dia.	Phase	Pole	Pitch Angle	m³/s at Pa						dBA @ 3m	
				0	100	200	300	400	500		600
BIF 800 3	/ 4 /	8°		3.82	3.43	2.95	2.58	1.99	1.31		80
BIF 800 3	/ 4 /	10°		4.42	4.06	3.55	3.05	2.48	1.69		80
BIF 800 3	/ 4 /	12°		5.13	4.58	4.13	3.57	2.95	2.21		80
BIF 800 3	/ 4 /	14°		5.57	5.02	4.55	4.03	3.33	2.42		80
BIF 800 3	/ 4 /	16°		6.06	5.57	5.03	4.48	3.77	2.69		80
BIF 800 3	/ 4 /	18°		6.55	6.10	5.61	5.05	4.02	3.19		80

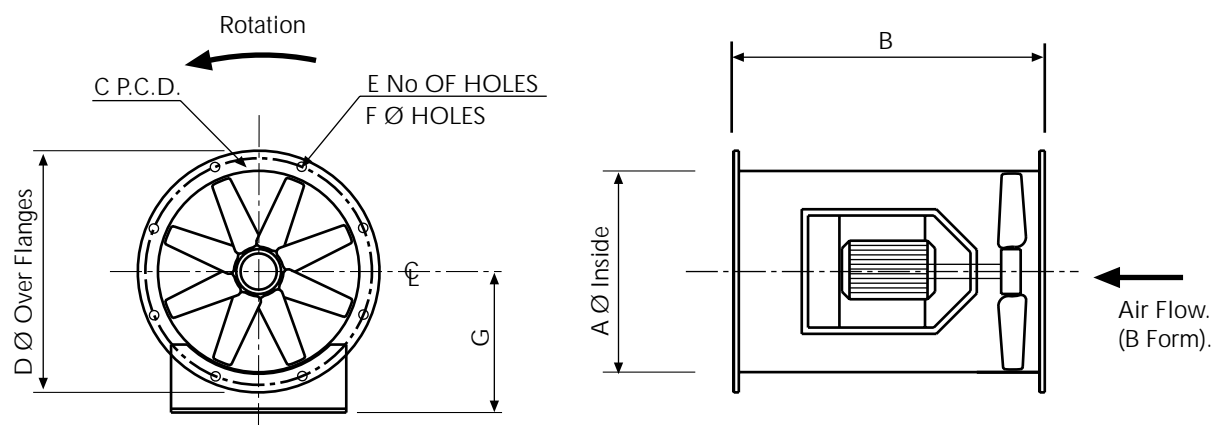
VENT-AXIA BIFURCATED CASE AXIAL FANS DIMENSIONS (mm)

BIF250-BIF500 DIMENSIONS



Stock Ref. No.	a	b	c	d	e	f	g	h	Approx. Weight Kg
BIF250 / 2 & 4 / 1&3 / 8-32	250	535	302	328	8	10	200	452	30
BIF315 / 2 & 4 / 1&3 / 8-30	315	535	355	385	8	10	224	452	35
BIF400 / 2 & 4 / 3 / 8-22	400	625	450	480	8	10	280	585	49
BIF500 / 4 / 3 / 8-22	500	660	560	590	12	12	315	695	66
BIF500 / 2 / 3 / 8-20	500	710	560	590	12	12	315	695	87

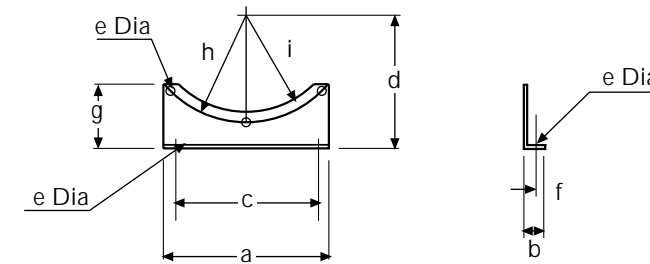
BIF630-BIF800 DIMENSIONS



Stock Ref. No.	A	B	C	D	E	F	G	Approx. Weight Kg
BIF630 / 4 / 3 / 8-26	630	790	690	728	12	12	400	106
BIF800 / 4 / 3 / 8-18	800	880	860	890	16	12	450	155

BIFURCATED CASE AXIAL FANS ACCESSORIES DETAILS

MOUNTING FOOT

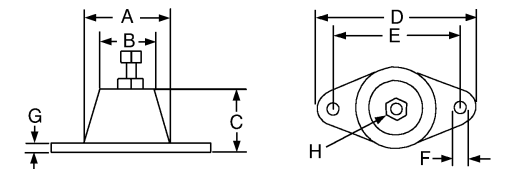


Stock Ref. No.	a	b	c	d	e	f	g	h	i
105 03 250	232	24	180	200	10	14	115	146	130
105 03 315	275	24	224	224	10	14	115	177.5	167
105 03 400	348	24	280	280	12	14	135	225	213
105 03 500	425	24	315	315	12	14	135	280	268
105 03 630	520	24	400	400	12	14	175	345	333
105 03 800	800	40	700	450	12	22	262	430	405

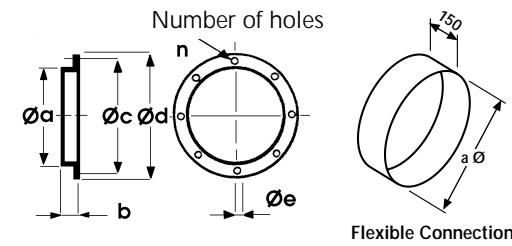
AXIAL ANCILLARY PACK

consists of:

- 2 Matching flanges
- 2 Flexible connectors
- 2 Mounting feet
- 4 Anti vibration mounts
- 4 Worm drive clips



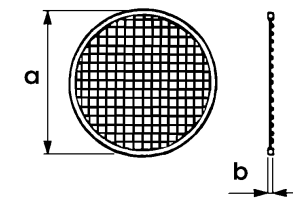
Stock Ref. No.	A	B	C	D	E	F	G	H	Max. Load kg
105-23-033	37	26	27	67	54	7	3	M8	23
105-23-055	37	26	27	67	54	7	3	M8	35
105-23-133	57	46	35	95	76	10.5	4	M12	91
105-23-165	57	46	35	95	76	10.5	4	M12	215



COUPLING FLANGE

Rolled from mild steel. Dimensionally matched to fan flange and fixing holes.

Stock Ref. No.	overall a	spigot b	pcd c	ext dia d	hole dia e	No. holes
105 06 250	254	55	292	327	10	4
105 06 315	315	30	355	385	10	8
105 06 400	400	45	450	480	12	8
105 06 500	500	0	560	590	12	12
105 06 630	630	75	690	720	12	12
105 06 800A	800	40	860	884	12	13



INLET WIRE GUARD

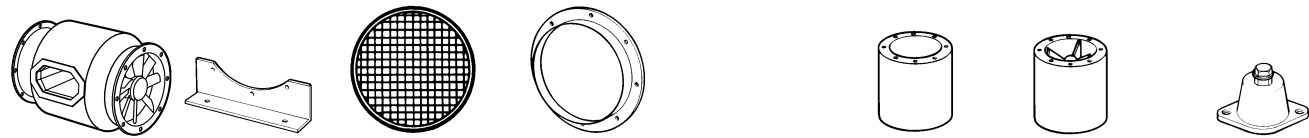
'K' factor loss 0.25

Available for direct fixing to either side of the fan using flange sizing holes. Constructed to meet BS 848 Part 5.

Stock Ref. No.	a	b
105 05 250	245	3
105 05 315	380	3
105 05 400	475	3
105 05 500	595	3
105 05 630	725	3
105 05 800	870	10

VENT-AXIA BIFURCATED CASE AXIAL FANS ACCESSORIES

ACCESSORIES

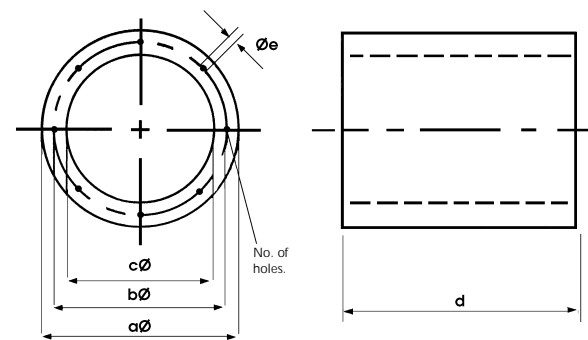
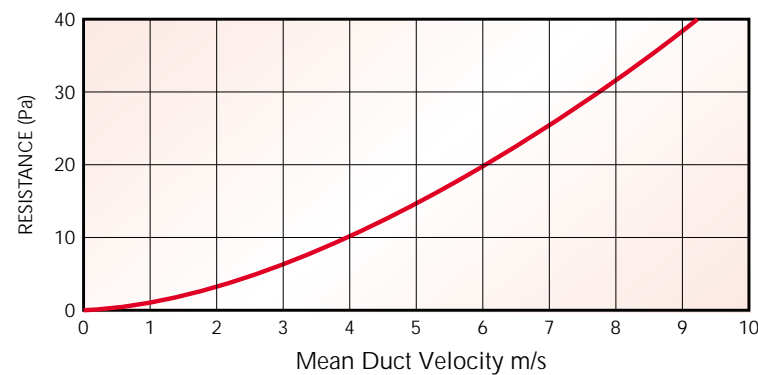


Model	Mounting Feet	Inlet Wire Guard	Coupling Flange	Ancillary Pack	Attenuator	Attenuator inc. Pod	Anti-Vibration Mount
BIF250	105 03 250	105 05 250	105 06 315	105 13 250HT	105 14 250	105 00 250	105 23 033
BIF315	105 03 315	105 05 315	105 06 315	105 13 315HT	105 14 315	105 00 315	105 23 033
BIF400	105 03 400	105 05 400	105 06 400	105 13 400HT	105 14 400	105 00 400	105 23 033
BIF500	105 03 500	105 05 500	105 06 500	105 13 500HT	105 14 500	105 00 500	105 23 055
BIF630	105 03 630	105 05 630	105 06 630	105 13 630HT	105 14 630	105 00 630	105 23 055
BIF800	105 03 800A	105 05 800	105 06 800A	105 13 800HT	105 14 800A	105 00 800A	105 23 133

BIFURCATED CASE AXIAL FAN ATTENUATORS DIMENSIONS

An attenuator without pod offers negligible resistance to air flow, and therefore the pressure loss can be considered to be the same as that for the equivalent length of ducting.

RESISTANCE GRAPH FOR AXIAL
ATTENUATOR WITH POD



Model	Stock Ref. No.	Dia a	Dia b	Dia c	Length d	Dia e	No. holes
BIF250	105 00 250	350	292	254	375	M8	4
BIF300	105 00 315	415	355	315	475	M8	8
BIF400	105 00 400	500	450	400	600	M10	8
BIF500	105 00 500	600	560	500	750	M10	12
BIF630	105 00 630	730	690	630	940	M10	12
BIF800	105 00 800A	900	860	796	1200	M10	16

Melinox lined attenuators are available on request

BIFURCATED CASE AXIAL FANS ATTENUATOR DETAILS

ATTENUATOR INSERTION LOSS DATA

Diameter	Stock Ref. No.	63	125	250	500	1k	2k	4k	8k	kg approx
250	105 14 250	2	3	6	11	16	11	10	6	20
315	105 14 315	2	3	6	11	16	11	10	6	22
355	105 14 355	2	3	6	12	16	11	10	6	30
400	105 14 400	2	3	6	13	16	12	10	6	41
450	105 14 450	2	4	6	14	17	12	10	6	50
500	105 14 500	3	4	7	14	17	14	11	7	59
560	105 14 560	2	4	8	15	18	14	11	7	70
630	105 14 630	3	4	8	16	18	14	11	7	82
800	105 14 800A	1	2	6	9	12	10	6	2	100

CASE AXIAL ATTENUATOR FITTED WITH POD INSERTION LOSSES

Diameter	Stock Ref. No.	63	125	250	500	1k	2k	4k	8k	kg approx + POD
315	105 00 315	6	7	12	18	27	25	22	19	32
355	105 00 355	3	8	12	18	28	26	22	19	44
400	105 00 400	3	8	12	18	28	26	23	19	60
450	105 00 450	4	8	14	20	28	26	23	19	73
500	105 00 500	4	8	14	20	29	26	23	19	87
560	105 00 560	4	9	14	20	29	26	23	19	102
630	105 00 630	4	9	14	20	29	26	23	19	120
800	105 00 800A	6	10	20	30	35	28	25	22	149

VENT-AXIA BIFURCATED CASE AXIAL FANS ELECTRICAL DETAILS

1 PHASE 2 POLE MOTORS

Stock Ref. No.	Pitch Angle Range	Nominal rpm	Motor kW	Amps F.L.C.	Amps S.C.	Type of Starter	1 Phase	5 Step
							Starter 103-11-240 Overload	Auto-Transformer 1 Phase
BIF250 / 2 / 1 / 32	8 TO 32	2900	0.25	3.8	8.0	D.O.L	103 12 070	N/A
BIF315 / 2 / 1 / 30	8 TO 30	2900	0.75	5.0	15.0	D.O.L	103 12 070	N/A

1 PHASE 4 POLE MOTORS

Stock Ref. No.	Pitch Angle Range	Nominal rpm	Motor kW	Amps F.L.C.	Amps S.C.	Type of Starter	Starter 103-11-240	Auto-Transformer
							Overload	1 Phase
BIF250 / 4 / 1 / 32	8 TO 32	1440	0.18	3.6	9.7	D.O.L	103 12 070	103 14 105
BIF315 / 4 / 1 / 32	8 TO 32	1440	0.18	3.6	9.7	D.O.L	103 12 070	103 14 105

3 PHASE 2 POLE MOTORS

Stock Ref. No.	Pitch Angle Range	Nominal rpm	Motor kW	Amps F.L.C.	Amps S.C.	Type of Starter	3 Phase	5 Step
							Starter 103 11 240 Coil	Auto-Transformer 3 Phase
BIF250 / 2 / 3 / 32	8 TO 32	2900	0.37	1.0	4.4	D.O.L	103 12 018	N/A
BIF315 / 2 / 3 / 30	8 TO 30	2900	0.75	1.6	8.8	D.O.L	103 12 027	N/A
BIF400 / 2 / 3 / 22	8 TO 22	2900	2.20	4.6	28.0	D.O.L	103 12 070	N/A

3 PHASE 2 POLE MOTORS

Stock Ref. No.	Pitch Angle Range	Nominal rpm	Motor kW	Amps F.L.C.	Amps S.C.	Type of Starter	1 Phase	5 Step
							Starter 103 15 415 Coil	Auto-Transformer 3 Phase
BIF500 / 2 / 3 / 20	8 TO 20	2900	4.00	7.5	50.0	STAR DELTA	103 12 070	N/A

3 PHASE 4 POLE MOTORS

Stock Ref. No.	Pitch Angle Range	Nominal rpm	Motor kW	Amps F.L.C.	Amps S.C.	Type of Starter	1 Phase	5 Step
							Starter 103 11 240 Coil	Auto-Transformer 3 Phase
BIF250 / 4 / 3 / 32	8 TO 32	1440	0.25	1.0	3.9	D.O.L	103 12 018	103 14 301
BIF315 / 4 / 3 / 32	8 TO 32	1440	0.25	1.0	3.9	D.O.L	103 12 018	103 14 301
BIF400 / 4 / 3 / 32	8 TO 32	1440	0.55	1.4	6.4	D.O.L	103 12 018	103 14 304
BIF500 / 4 / 3 / 32	8 TO 32	1440	1.10	2.6	11.5	D.O.L	103 12 040	103 14 304
BIF630 / 4 / 3 / 26	8 TO 26	1440	2.20	5.0	27.0	D.O.L	103 12 070	103 14 307

3 PHASE 4 POLE MOTORS

Stock Ref. No.	Pitch Angle Range	Nominal rpm	Motor kW	Amps F.L.C.	Amps S.C.	Type of Starter	1 Phase	5 Step
							Starter 103 15 415 Coil	Auto-Transformer 3 Phase
BIF800 / 4 / 3 / 18	8 TO 18	1440	4.00	8.4	50.0	STAR DELTA	103 12 070	-

The motor is suitable for speed control by either an inverter or a 5-step auto transformer speed controller when the ambient air temperature is not higher than 60°C.

SPEED CONTROLLER

Used in conjunction with speed controllable fans Vent-Axia offers a choice of speed controllers, the traditional Five-Step Auto Transformer or the Inverter Speed Controller.

The Five-Step-Auto Transformer provides five stepped speed settings without the electronic motor harmonic noise associated with all electronic or solid state type Speed Controllers. **Must be interlaced with a D.O.L. Starter.**

The Inverter Speed Controller offers a more flexible solution to speed control and is infinitely variable. The inverter controller package, comprises of the inverter controller, a built in or separate filter where applicable and separate Inverter Low Voltage Controller. The Inverter Controller is installed adjacent to the fan. The Low Voltage Controller can then be installed up to a distance of 50m away from the Inverter Controller and is wired using 5 core low voltage wire. This controller has a rotary speed control and separate On/Off switch. The Inverter Controller package is factory matched to the individual fan for ease of installation.

BIFURCATED CASE AXIAL FANS INVERTER DETAILS



2 POLE

Stock Ref. No.	Pitch Angle Range	Single	Three
		Phase Supply	Phase Supply
BIF250/2/3/32'	8 TO 32	103 20 101 08	103 20 301 08
BIF315/2/3/30'	8 TO 30	103 20 101 09	103 20 301 09
BIF400/2/3/22'	8 TO 22	103 20 103 02	103 20 303 05
BIF500/2/3/20'	8 TO 20	-	103 20 305 06

4 POLE

BIF250/4/3/32'	8 TO 32	103 20 101 10	103 20 301 10
BIF315/4/3/32'	8 TO 32	103 20 101 10	103 20 301 10
BIF400/4/3/32'	8 TO 32	103 20 101 11	103 20 301 11
BIF500/4/3/32'	8 TO 32	103 20 102 02	103 20 302 11
BIF630/4/3/26'	8 TO 26	103 20 103 04	103 20 305 07
BIF800/4/3/18'	8 TO 18	-	103 20 350 06

INVERTER CONTROLLERS

Inverter (Variable speed drives) are suitable for all models of inverter controllable three phase fans. Offering complete user adaptability Vent-Axia Inverters offer the following benefits: -

Frequency control setting resolution from 0-100% in 0.1 increments (not only providing total speed control, but also enabling energy savings to be made through the fine tuning/optimisation of the fan)

Pre-settable minimum/maximum speed. Overload protection – 150% for 1 minute, therefore protecting the fan from drawing excessive current.

Stall prevention during acceleration, deceleration and constant speed, preventing nuisance tripping and problems.

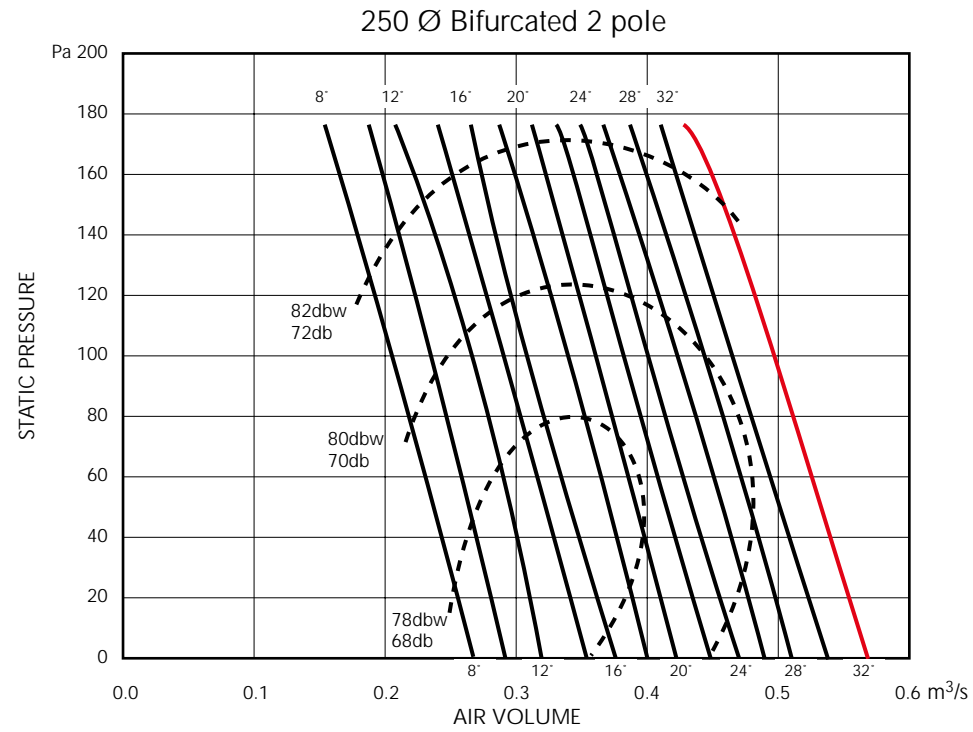
The versatility of the Inverter means that a single drive unit can be used to control the speed of multiple fans, provided that their combined loads do not exceed the drive capacity.

Using an Inverter is by far the most effective and efficient way of controlling and optimising your fan or fans.

The Inverter controller, will include either a built in or separate EMC filter, a ferrite coil and a low voltage variable speed controller. The controls set will be matched to each individual fan and factory set, this will eliminate the need for any programming of the inverter controller on site.

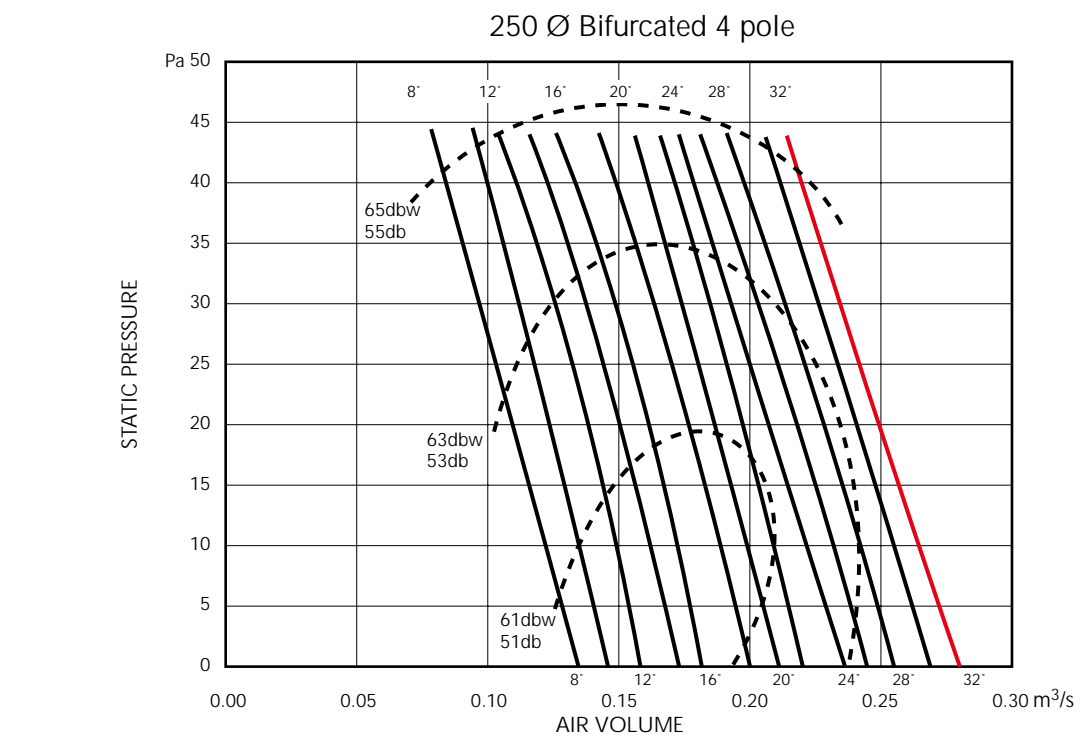
VENT-AXIA BIFURCATED CASE AXIAL FANS PERFORMANCE CURVES

To obtain the sound spectrum in the octave bands 63 to 8000 Hz, subtract the constants shown under each performance chart from the dBW figure on the chart.



IN DUCT	OCTAVE BAND MID-FREQUENCY Hz (c/s)							
SPECTRUM	63	125	250	500	1000	2000	4000	8000
CONSTANTS	6	8	6	9	11	16	20	21

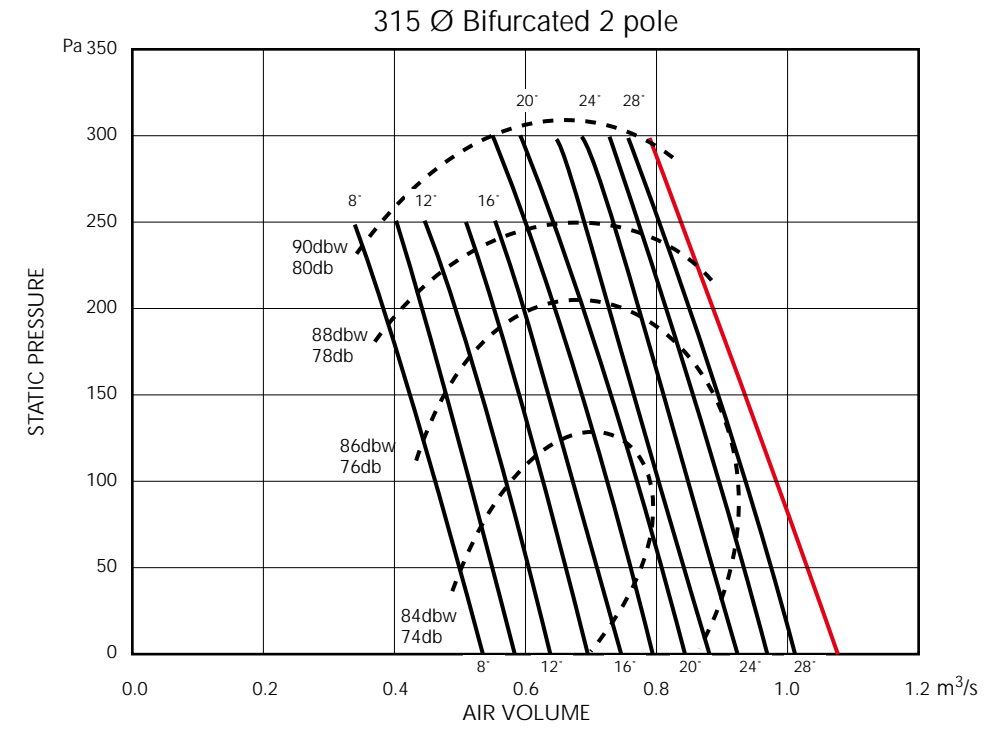
To obtain spectrum, subtract above constants from Sound Power Level etc



IN DUCT	OCTAVE BAND MID-FREQUENCY Hz (c/s)							
SPECTRUM	63	125	250	500	1000	2000	4000	8000
CONSTANTS	4	5	8	7	12	17	21	23

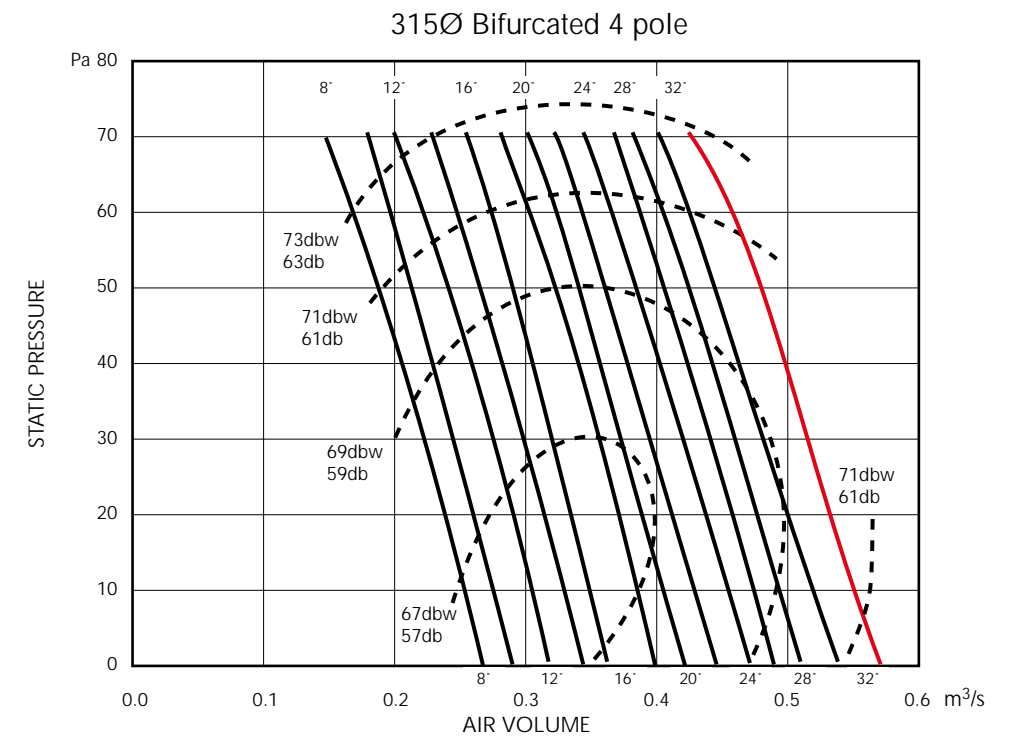
To obtain spectrum, subtract above constants from Sound Power Level etc

BIFURCATED CASE AXIAL FANS PERFORMANCE CURVES



IN DUCT	OCTAVE BAND MID-FREQUENCY Hz (c/s)							
SPECTRUM	63	125	250	500	1000	2000	4000	8000
CONSTANTS	7	9	5	9	10	15	19	21

To obtain spectrum, subtract above constants from Sound Power Level etc

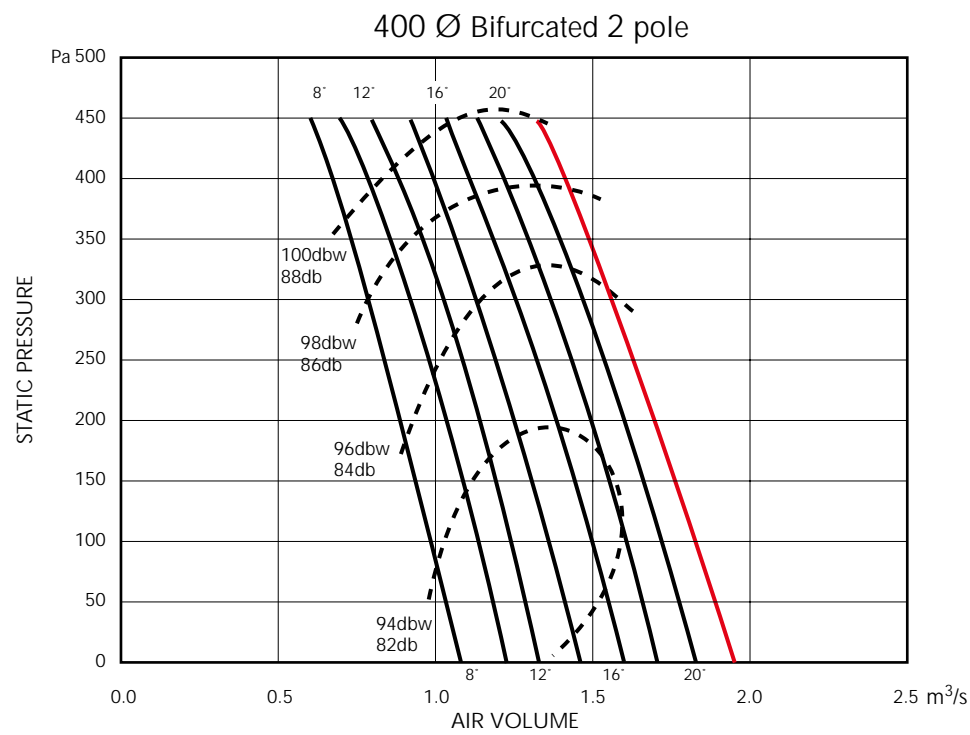


IN DUCT	OCTAVE BAND MID-FREQUENCY Hz (c/s)							
SPECTRUM	63	125	250	500	1000	2000	4000	8000
CONSTANTS	5	6	8	7	11	17	20	22

To obtain spectrum, subtract above constants from Sound Power Level etc

VENT-AXIA BIFURCATED CASE AXIAL FAN PERFORMANCE CURVES

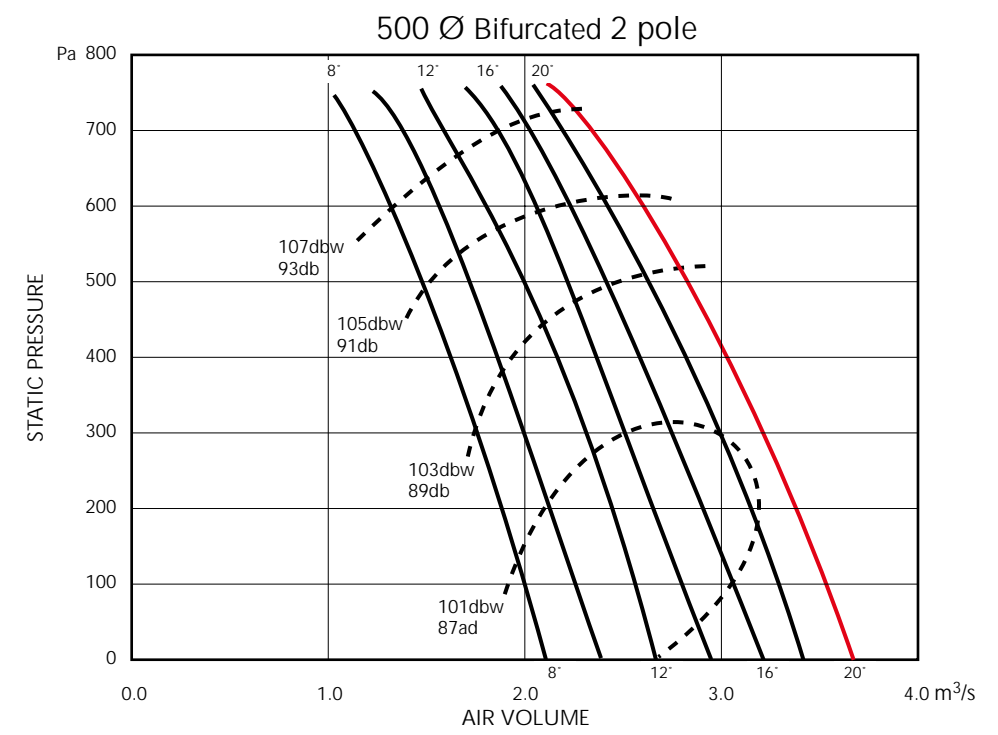
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IN DUCT	OCTAVE BAND MID-FREQUENCY Hz (c/s)							
SPECTRUM	63	125	250	500	1000	2000	4000	8000
CONSTANTS	6	7	7	9	11	16	21	23

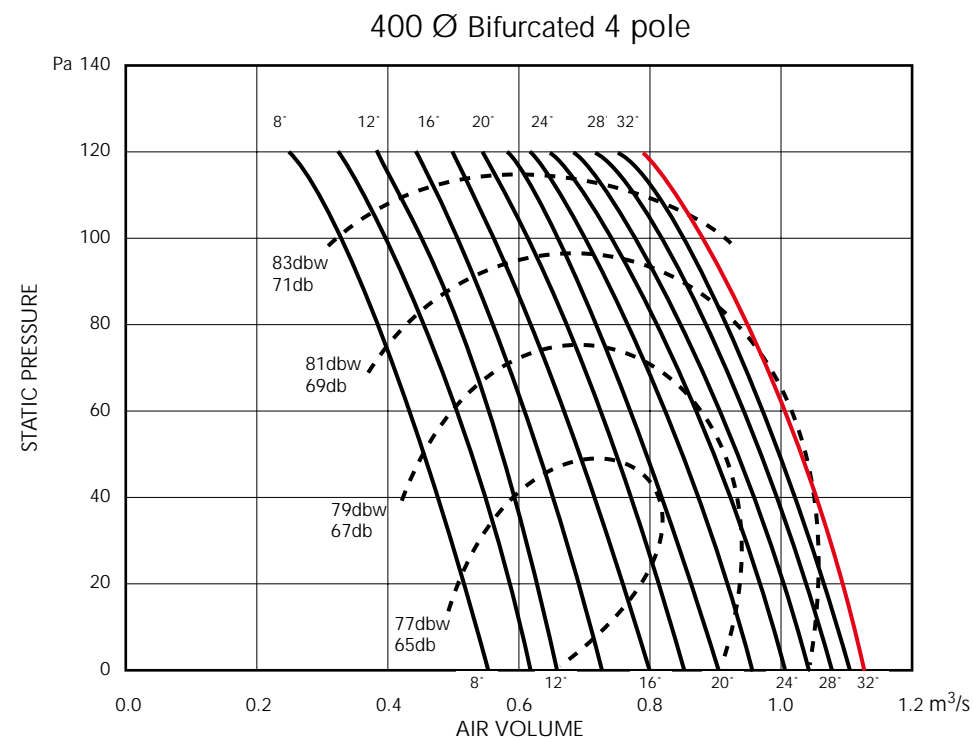
To obtain spectrum, subtract above constants from Sound Power Level etc

BIFURCATED CASE AXIAL FANS PERFORMANCE CURVES



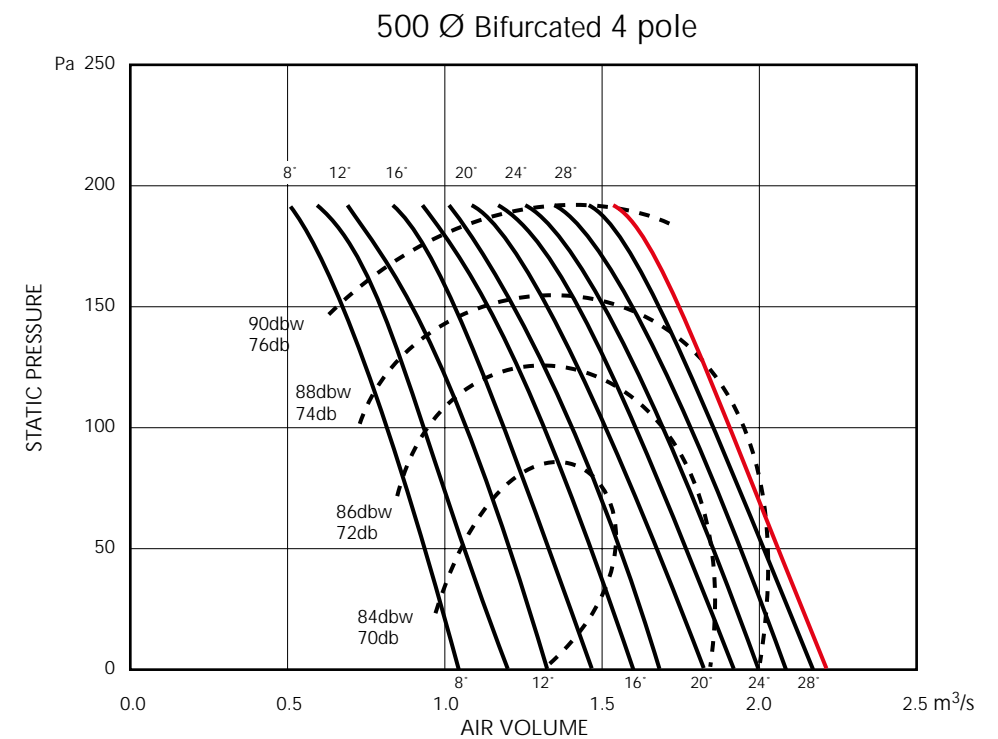
IN DUCT	OCTAVE BAND MID-FREQUENCY Hz (c/s)							
SPECTRUM	63	125	250	500	1000	2000	4000	8000
CONSTANTS	5	7	8	7	9	13	19	22

To obtain spectrum, subtract above constants from Sound Power Level etc



IN DUCT	OCTAVE BAND MID-FREQUENCY Hz (c/s)							
SPECTRUM	63	125	250	500	1000	2000	4000	8000
CONSTANTS	5	6	8	10	12	17	20	22

To obtain spectrum, subtract above constants from Sound Power Level etc

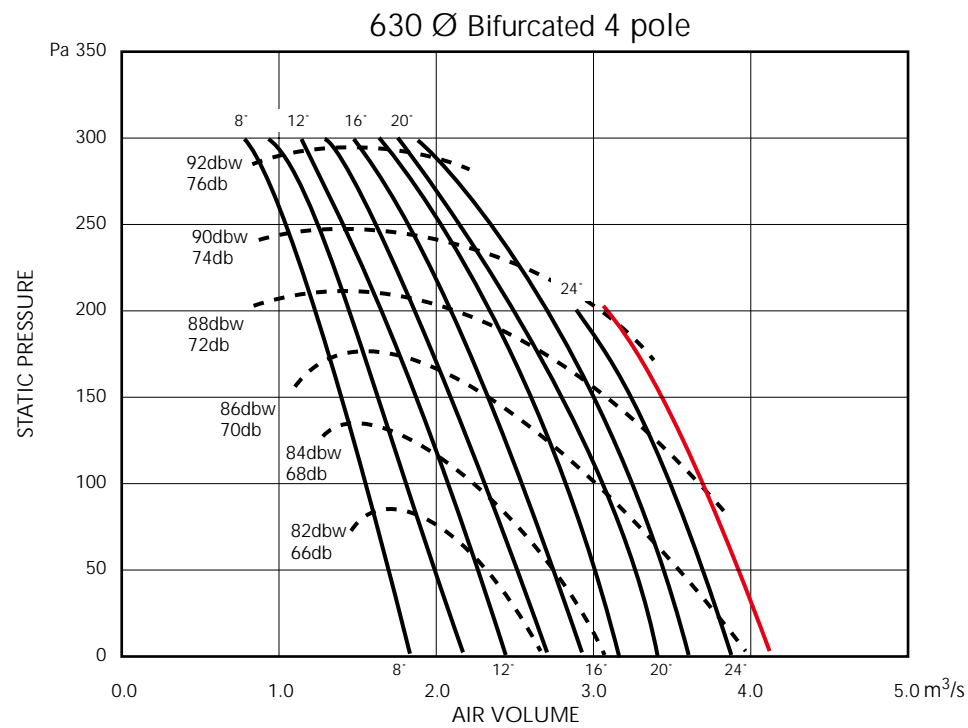


IN DUCT	OCTAVE BAND MID-FREQUENCY Hz (c/s)							
SPECTRUM	63	125	250	500	1000	2000	4000	8000
CONSTANTS	4	6	7	9	11	16	22	24

To obtain spectrum, subtract above constants from Sound Power Level etc

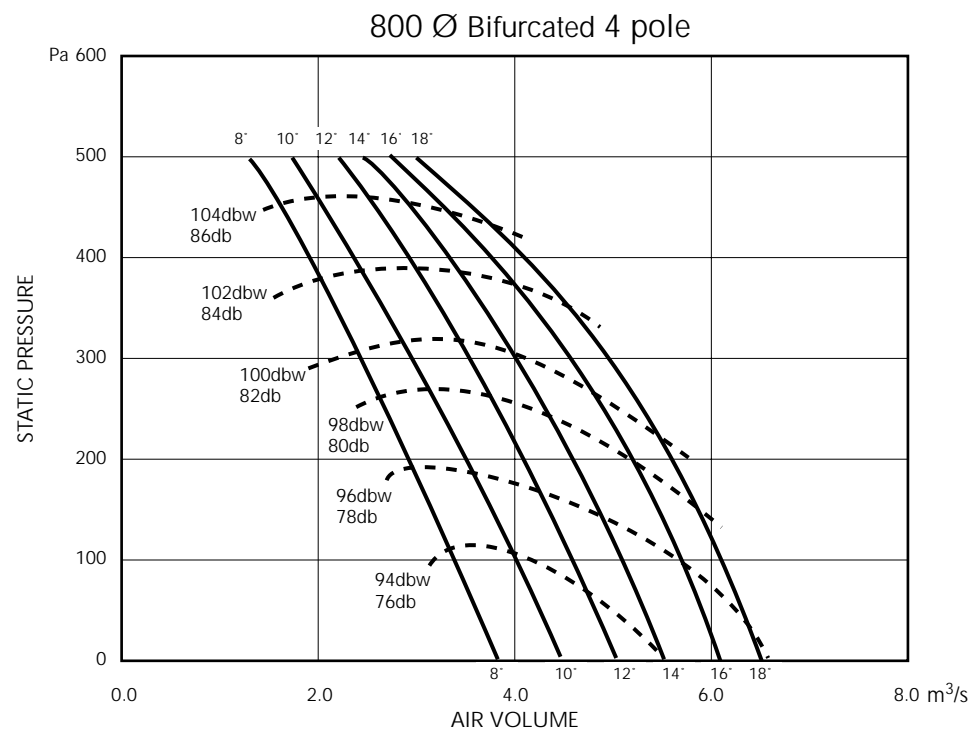
VENT-AXIA BIFURCATED CASE AXIAL FAN PERFORMANCE CURVES

To obtain the sound spectrum in the octave bands 63 to 8000 Hz, subtract the constants shown under each performance chart from the dBW figure on the chart.



IN DUCT	OCTAVE BAND MID-FREQUENCY Hz (c/s)							
SPECTRUM	63	125	250	500	1000	2000	4000	8000
CONSTANTS	6	9	8	10	12	14	19	21

To obtain spectrum, subtract above constants from Sound Power Level etc

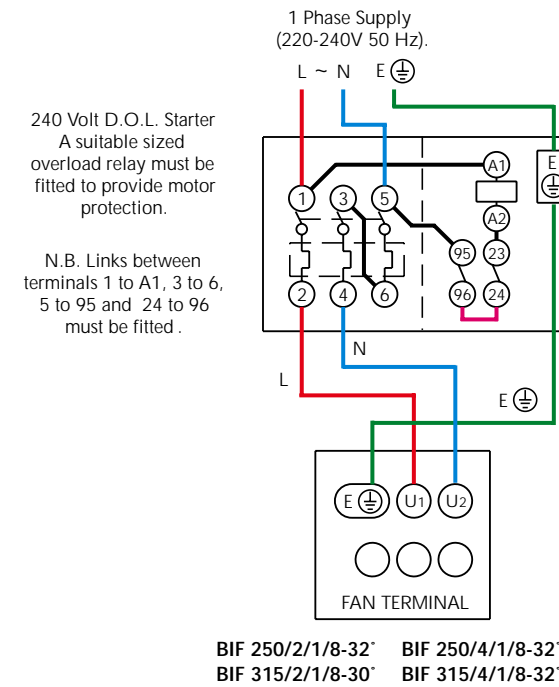


IN DUCT	OCTAVE BAND MID-FREQUENCY Hz (c/s)							
SPECTRUM	63	125	250	500	1000	2000	4000	8000
CONSTANTS	7	9	8	10	11	15	20	22

To obtain spectrum, subtract above constants from Sound Power Level etc

BIFURCATED CASE AXIAL FAN WIRING DIAGRAMS

SINGLE PHASE FAN CONNECTED TO A D.O.L. STARTER



SINGLE PHASE FAN CONNECTED TO A D.O.L. STARTER & 5.0 AMP AUTO TRANSFORMER

