EuroSeries® (ESC)

- External rotor motors
- Die cast aluminium impellers
- Fully speed controllable
- Air Volumes up to 13.89m^3/s
- Sizes 250 to 1000 protected to IP54
- Operating Temperatures from -40°C up to +70°C
- Motor Insulation Class F
- HOT SPOT Protection
- Reversible for supply or extract
- Tough epoxy paint finish
- Quality Assurance to BS EN ISO 9001:1994
- Performance tested to BS848 Part 1 1980

The EuroSeries® ESC Short Cased axial blade fans, feature a single shot die cast aluminium blade & external rotor motor design.

The EuroSeries® ESC range is available in eleven sizes with the extract performances up to 13.89m^3/s, with pressure characteristics of up 300Pa. All units are designed for & fully speed controllable.

Impellers

All sizes are supplied with cast aluminium impellers, ensuring performance when working against outdoor conditions and abrasive airflow.

Motors

External rotor motors are specially designed and styled for this range of fan. Ball bearings are greased for life. Rotors are dynamically balanced to ISO 1940. Sizes 250-1000mm, motors are protected to IP54, against dust and moisture complying with BS EN 60529:1992. They are ribbed aluminium body castings for efficient cooling. Motor insulation is Class 'F' (from -40°C to +70°C).

Electrical

Single phase 220-240V 50Hz. Capacitor start and run. Three phase 380-415V 50Hz. An IP54 terminal box are supplied with most models with 20mm and PGII entry. All motors are fitted with thermal overload Protection which should be wired into all controller circuits and into starter contactors. Models are available with either 2,4, 6 & 8 pole motors.

Terminal Box

Terminal Box to IP54 as standard, protected against dust and water from any angle allowing outside applications.

Performance

The fan performance is in accordance with tests to BS848 Part 1 1980.

Sound Levels

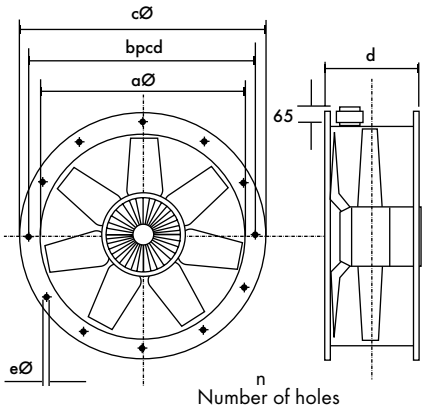
Fan sound levels, measured in a reverberant chamber in accordance with BS848 Part 2 1985. Published dB(A) figures are free field sound pressure levels at 3m with spherical propagation at a reference level of 2 x 10^{-5} Pa (20 micro-Pascal). The sound power level spectra figures are dB with reference level of 10^{-12} Watts (1 pico-watt). To ensure minimum noise levels during speed control, an auto transformer speed control is recommended.

Accessories

A full range of accessories:

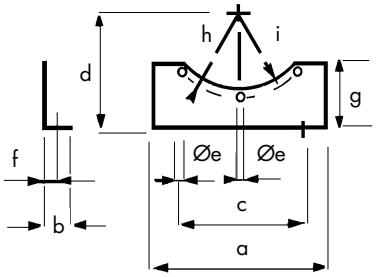
- Electronic Speed Controllers
- Auto Transformer Speed Controllers
- D.O.L. Starters & Overloads
- Ancillary Packs (comprising:- 4 AVM's, 2 mounting feet, 2 matching flanges, 2 flexible connectors + clips)
- Wire Guards
- Attenuators
- Mounting Feet
- Matching Flanges
- Anti Vibration Mounts
- Louvre Shutters

Dimensions (mm)



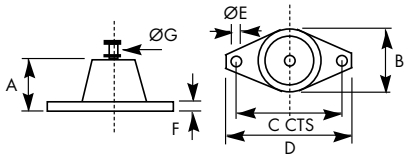
Dia	Øa	Øb	Øc	d	Øe	n	kg
250	254	286	306	110	7	8	5
315	316.5	356	382	135	9.5	8	6.1
355	356	395	421	135	9.5	8	7.1
400	400	438	466	155	9.5	12	8.1
450	451	487	515	160	9.5	12	13.4
500	503	541	567	166	9.5	12	15.7
560	559	605	635	210	11.5	16	20.1
630	634	674	707	220	11.5	16	44
710	711	751	785	260	11.5	16	31
800	797	837	871	280	11.5	24	39
1000	1001	1043	1080	330	11.5	24	73

Mounting Feet



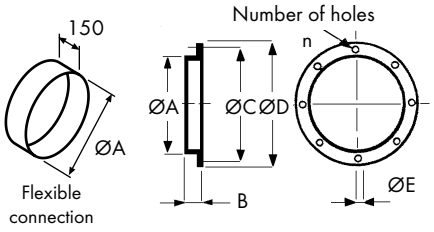
Stock Ref	a	b	c	d	Øe	f	g	h	i
MFZ315	315	40	265	200	10	20	71	178	166
MFZ355	350	40	300	225	10	20	81.5	198	186
MFZ400	250	40	220	250	10	20	78	219	205
MFZ450	275	40	240	275	10	20	82	244	230
MFZ500	315	50	280	315	1	25	100	271	255
MFZ560	355	50	320	355	12	25	97	303	285
MFZ630	400	50	360	400	12	25	109	337	320
MFZ710	465	50	415	450	12	25	119	376	362
MFZ800	458	50	420	518	12	25	176	419	405

Anti Vibration Mountings

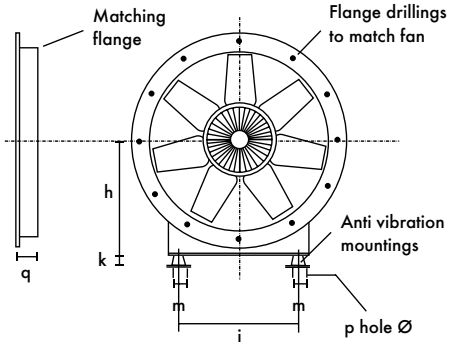


Stock Ref	A	B	C	D	ØE	F	ØG
68MP033G	27	37	54	67	7	3	M8

Coupling Flanges

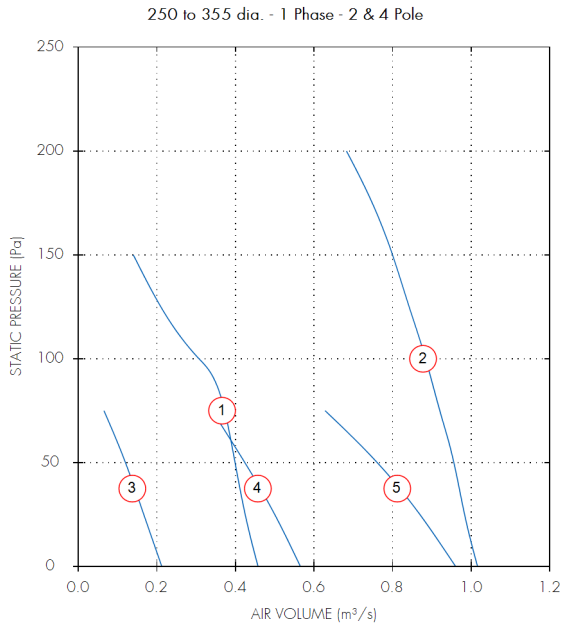


Stock Ref	ØA	B	ØC	ØD	ØE	n	Flexible Connection
CFZ315	313	40	356	382	10	8	FCZ315
CFZ355	353	40	395	421	10	8	FCZ355
CFZ400	398	45	438	466	10	12	FCZ400
CFZ450	448	45	487	515	10	12	FCZ450
CFZ500	498	45	541	567	10	12	FCZ500
CFZ560	558	45	605	635	12	16	FCZ560
CFZ630	628	45	674	707	12	16	FCZ630
CFZ710	708	50	751	785	12	16	FCZ710
CFZ800	798	50	837	871	12	24	FCZ800



Unit size	h	j	k†	m	pØ	q
315	200	265	27	54	7	40
355	225	300	27	54	7	40
400	250	220	27	54	7	45
450	275	240	27	54	7	45
500	315	280	27	54	7	45
560	355	320	27	54	7	45
630	400	360	27	54	7	45
710	450	415	27	54	7	50
800	518	420	27	54	7	50

Performance Guide



Dia.	Motor Phase	Stock Ref	Poles	r.p.m	IP Rating	Curve Ref.	m³/s @ Pa 0	50	100	150	200	Motor kW	S.C. Amps	F.L.C Amps	dB(A) @ 3m
250	1	ESC25012	2	2440	IP44	1	0.46	0.4	0.31	0.14		0.12	1.15	0.54	59
315	1	ESC31512	2	2690	IP54	2	1.02	0.96	0.88	0.8	0.68	0.56	7.2	2.4	64
250	1	ESC25014	4	1340	IP44	3	0.21	0.12				0.04	0.3	0.16	44
315	1	ESC31514	4	1300	IP54	4	0.57	0.42				0.15	1.38	0.7	50
355	1	ESC35514	4	1330	IP54	5	0.96	0.76				0.19	1.45	0.84	53

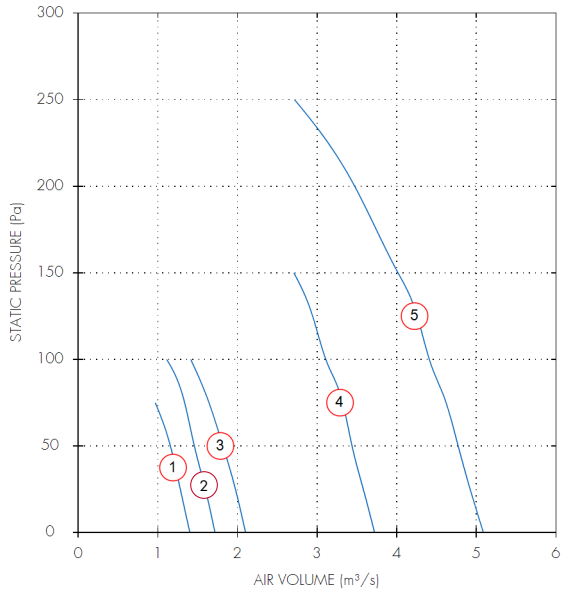
For Fans wired to reverse run, duty reduced by 30%
ESC25012, ESC31512 and ESC25014 not suitable for reverse airflow

Sound Power Level Spectra dB (ref 10^{-12} Watts)

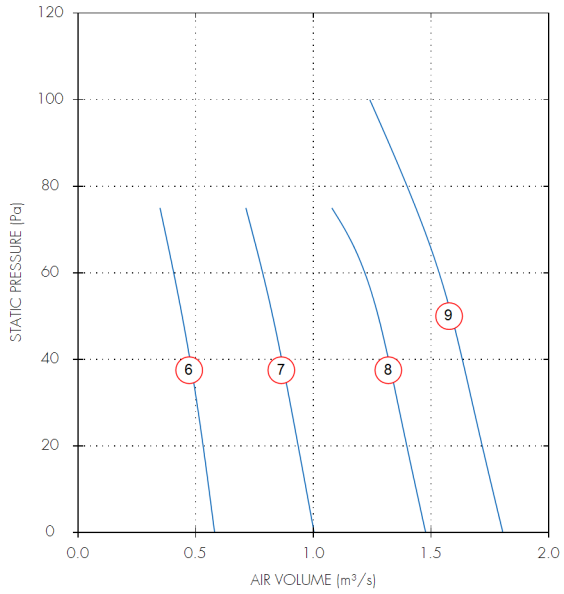
Dia.	Motor Phase	Stock Ref	Poles	Spectrum	63	125	250	500	1k	2k	4k	8k	dB(A) @ 3m
250	1	ESC25012	2	Inlet	69	70	76	76	70	70	67	59	57
250	1	ESC25012	2	Outlet	69	70	76	76	70	70	67	59	57
315	1	ESC31512	2	Inlet	69	73	79	74	74	76	73	66	61
315	1	ESC31512	2	Outlet	69	73	79	74	74	76	73	66	61
250	1	ESC25014	4	Inlet	70	72	63	58	54	52	45	35	41
250	1	ESC25014	4	Outlet	70	72	63	58	54	52	45	35	41
315	1	ESC31514	4	Inlet	70	68	66	61	60	62	58	51	47
315	1	ESC31514	4	Outlet	70	68	66	61	60	62	58	51	47
355	1	ESC35514	4	Inlet	65	70	67	65	64	64	62	55	50
355	1	ESC35514	4	Outlet	65	70	67	65	64	64	62	55	50

Performance Guide

400 to 630 dia. - 1 Phase - 4 Pole



315 to 450 dia. - 3 Phase - 4 Pole



Dia.	Motor Phase	Stock Ref	Poles	r.p.m	IP Rating	Curve Ref.	m³/s @ Pa 0	50	100	150	200	250	Motor kW	S.C. Amps	F.L.C Amps	dB(A) @ 3m
400	1	ESC40014	4	1350	IP54	1	1.4	1.16					0.29	2.4	1.45	56
450	1	ESC45014	4	1370	IP54	2	1.72	1.46	1.11				0.36	3.6	1.6	61
500	1	ESC50014	4	1290	IP54	3	2.1	1.82	1.41				0.51	4.3	2.3	55
560	1	ESC56014	4	1320	IP54	4	3.72	3.44	3.11	2.71			1.4	9.3	6	63
630	1	ESC63014	4	1320	IP54	5	5.09	4.77	4.41	4.02	3.47	2.72	2.2	28	9.9	70
315	3	ESC31534	4	1390	IP54	6	0.58	0.44					0.11	2.1	0.27	46
355	3	ESC35534	4	1370	IP54	7	1	0.83					0.17	1.35	0.37	49
400	3	ESC40034	4	1350	IP54	8	1.48	1.27					0.26	2.1	0.56	51
450	3	ESC45034	4	1380	IP54	9	1.8	1.59	1.24				0.36	2.6	0.8	56

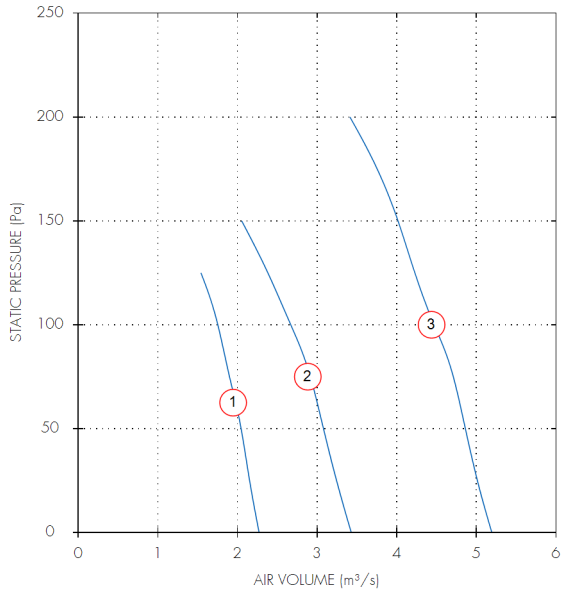
For Fans wired to reverse run, duty reduced by 30%

Sound Power Level Spectra dB (ref 10^{-12} Watts)

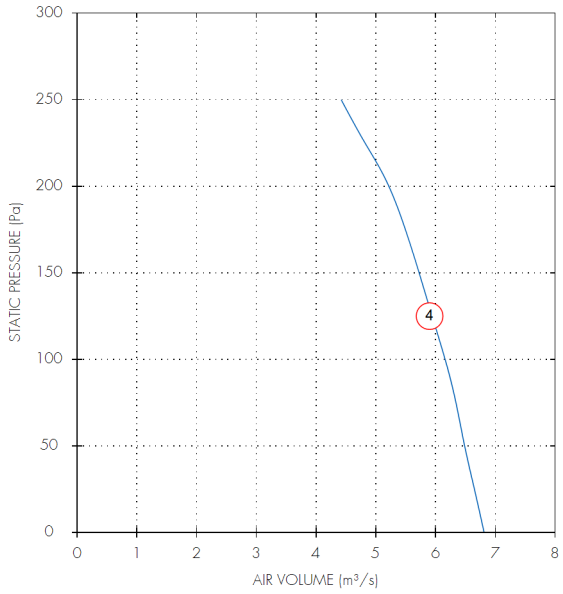
Dia.	Motor Phase	Stock Ref	Poles	Spectrum	63	125	250	500	1k	2k	4k	8k	dB(A) @ 3m
400	1	ESC40014	4	Inlet	70	72	67	66	65	65	64	56	51
400	1	ESC40014	4	Outlet	70	72	67	66	65	65	64	56	51
450	1	ESC45014	4	Inlet	69	76	73	72	70	71	70	62	57
450	1	ESC45014	4	Outlet	69	76	73	72	70	71	70	62	57
500	1	ESC50014	4	Inlet	65	75	69	70	70	71	69	62	56
500	1	ESC50014	4	Outlet	65	75	69	70	70	71	69	62	56
560	1	ESC56014	4	Inlet	100	90	89	84	82	79	75	68	67
560	1	ESC56014	4	Outlet	100	90	89	84	82	79	75	68	67
630	1	ESC63014	4	Inlet	82	86	79	79	80	78	75	70	64
630	1	ESC63014	4	Outlet	82	86	79	79	80	78	75	70	64
315	3	ESC31534	4	Inlet	64	67	69	63	62	60	58	53	47
315	3	ESC31534	4	Outlet	64	67	69	63	62	60	58	53	47
355	3	ESC35534	4	Inlet	58	73	63	64	64	65	64	58	50
355	3	ESC35534	4	Outlet	58	73	63	64	64	65	64	58	50
400	3	ESC40034	4	Inlet	62	73	65	65	67	69	67	60	53
400	3	ESC40034	4	Outlet	62	73	65	65	67	69	67	60	53
450	3	ESC45034	4	Inlet	65	82	75	76	73	72	69	62	58
450	3	ESC45034	4	Outlet	65	82	75	76	73	72	69	62	58

Performance Guide

500 to 630 dia. - 3 Phase - 4 Pole



710 dia. - 3 Phase - 4 Pole



Dia.	Motor Phase	Stock Ref	Poles	r.p.m	IP Rating	Curve Ref.	m³/s @ Pa 0	50	100	150	200	250	Motor kW	S.C. Amps	F.L.C Amps	dB(A) @ 3m
500	3	ESC50034	4	1380	IP54	1	2.27	2.05	1.75				0.55	4.2	1.05	58
560	3	ESC56034	4	1220	IP54	2	3.43	3.08	2.67	2.05			1.25	7.7	2.2	70
630	3	ESC63034	4	1360	IP54	3	5.19	4.86	4.47	4.02	3.41		1.9	14	3.2	64
710	3	ESC71034	4	1290	IP54	4	6.81	6.49	6.16	5.72	5.22	4.42	2.9	19	5.3	72

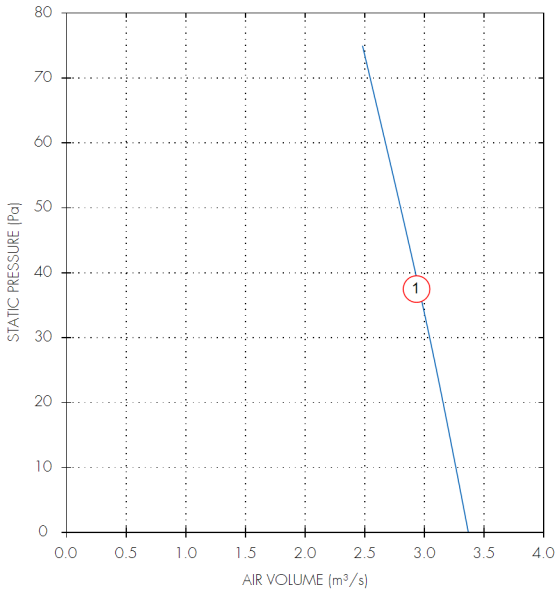
For Fans wired to reverse run, duty reduced by 30%

Sound Power Level Spectra dB (ref 10^{-12} Watts)

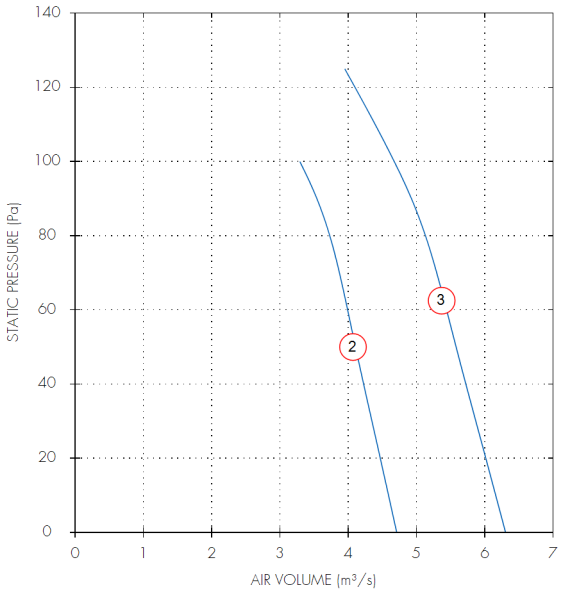
Dia.	Motor Phase	Stock Ref	Poles	Spectrum	63	125	250	500	1k	2k	4k	8k	dB(A) @ 3m
500	3	ESC50034	4	Inlet	67	71	69	72	70	71	68	61	56
500	3	ESC50034	4	Outlet	67	71	69	72	70	71	68	61	56
560	3	ESC56034	4	Inlet	85	79	77	76	76	75	72	66	61
560	3	ESC56034	4	Outlet	85	79	77	76	76	75	72	66	61
630	3	ESC63034	4	Inlet	71	88	82	83	82	81	78	72	67
630	3	ESC63034	4	Outlet	71	88	82	83	82	81	78	72	67
710	3	ESC71034	4	Inlet	80	87	86	88	89	86	83	79	72
710	3	ESC71034	4	Outlet	80	87	86	88	89	86	83	79	72

Performance Guide

630 dia. - 3 Phase - 6 Pole



710 to 800 dia. - 3 Phase - 6 Pole



Dia.	Motor Phase	Stock Ref	Poles	r.p.m	IP Rating	Curve Ref.	m³/s @ Pa 0	25	50	75	100	125	Motor kW	S.C. Amps	F.L.C Amps	dB(A) @ 3m
630	3	ESC63036	6	890	IP54	1	3.37	3.1	2.8	2.48			0.59	3.6	1.3	59
710	3	ESC71036	6	860	IP54	2	4.71	4.41	4.11	3.8	3.29		1.1	7.7	2.2	62
800	3	ESC80036	6	900	IP54	3	6.3	5.94	5.58	5.22	4.67	3.95	1.4	9.8	2.7	64

For Fans wired to reverse run, duty reduced by 30%

Sound Power Level Spectra dB (ref 10^{-12} Watts)

Dia.	Motor Phase	Stock Ref	Poles	Spectrum	63	125	250	500	1k	2k	4k	8k	dB(A) @ 3m
630	3	ESC63036	6	Inlet	67	78	76	74	73	72	77	59	60
630	3	ESC63036	6	Outlet	67	78	76	74	73	72	77	59	60
710	3	ESC71036	6	Inlet	80	77	78	75	76	75	70	64	60
710	3	ESC71036	6	Outlet	80	77	78	75	76	75	70	64	60
800	3	ESC80036	6	Inlet	75	75	73	71	72	70	64	57	56
800	3	ESC80036	6	Outlet	75	75	73	71	72	70	64	57	56

Models & Accessories

	Speed Controller					Speed Controller
Fan	Electronic	Auto Transfor.	Starter	Overload	Fan	Auto Transfor.
Stock Ref	Stock Ref	Stock Ref	Stock Ref	Stock Ref	Stock Ref	Stock Ref
1 Phase 2 Pole					3 Phase 4 Pole	
ESC25012	SC5001	SPM5020	444744	444699		
ESC31512	SC5030TK	SPM5035	444744	444701	ESC31534	RDTK10
1 Phase 4 Pole					ESC35534	RDTK10
ESC25014	SC5001	SPM5020	444744	444696	ESC40034	RDTK10
ESC31514	SC5001	SPM5020	444744	444699	ESC45034	RDTK10
ESC35514	SC5030TK	SPM5020	444744	444699	ESC50034	RDTK20
ESC40014	SC5030TK	SPM5020	444744	444701	ESC56034	RDTK40
ESC45014	SC5030TK	SPM5035	444744	444701	ESC63034	RDTK40
ESC50014	SC5030TK	SPM5035	444744	444702	ESC71034	RDTK70
ESC56014	SC5010TK	SPM5075	444744	444704	3 Phase 6 Pole	
ESC63014	-	-	444744	444706		
					ESC63036	RDTK20
					ESC71036	RDTK40
					ESC80036	RDTK40

*Not suitable for voltage speed control. Inverter speed control with sine filters only.

	1D Long - No Pod	1D Long - With Pod	2D Long - No Pod	2D Long - With Pod
Size	Stock Ref	Stock Ref	Stock Ref	Stock Ref
250	ACZ2501D	-	ACZ2502D	-
315	ACZ3151D	ACZ3151DP	ACZ3152D	ACZ3152DP
355	ACZ3551D	ACZ3551DP	ACZ3552D	ACZ3552DP
400	ACZ4001D	ACZ4001DP	ACZ4002D	ACZ4002DP
450	ACZ4501D	ACZ4501DP	ACZ4502D	ACZ4502DP
500	ACZ5001D	ACZ5001DP	ACZ5002D	ACZ5002DP
560	ACZ5601D	ACZ5601DP	ACZ5602D	ACZ5602DP
630	ACZ6301D	ACZ6301DP	ACZ6302D	ACZ6302DP
710	ACZ7101D	ACZ7101DP	ACZ7102D	ACZ7102DP
800	ACZ8001D	ACZ8001DP	ACZ8002D	ACZ8002DP

Starter	Overload	Ancillary Packs	Mounting Feet (pair)	Matching Flanges (each)	Wire Guards (each)	Anti-Vibration Mounts (set of 4)
Stock Ref	Stock Ref	Stock Ref	Stock Ref	Stock Ref	Stock Ref	Stock Ref
444747	444699	APZ250	MFZ250	CFZ250	WGZ250	68MP033G
444747	444700	APZ315	MFZ315	CFZ315	WGZ315	68MP033G
		APZ250	MFZ250	CFZ250	WGZ250	68MP033G
444747	444697	APZ315	MFZ315	CFZ315	WGZ315	68MP033G
444747	444698	APZ355	MFZ355	CFZ355	WGZ355	68MP033G
444747	444699	APZ400	MFZ400	CFZ400	WGZ400	68MP033G
444747	444699	APZ450	MFZ450	CFZ450	WGZ450	68MP033G
444747	444700	APZ500	MFZ500	CFZ500	WGZ500	68MP033G
444747	444701	APZ560	MFZ560	CFZ560	WGZ560	68MP033G
444747	444702	APZ630	MFZ630	CFZ630	WGZ630	68MP033G
444747	444703	APZ710	MFZ710	CFZ710	WGZ710	68MP033G

Note:
- The Standard roof cowl colour is BS 00A 05 (Goose Wing Grey) for all special B.S. or RAL colours contact Vent-Axia.
- When speed control is required a 5 step auto transformer speed controller is recommended, to ensure low noise levels.
- All 3 phase models are suitable for frequency inverter speed control.
- Vent-Axia only recommends using inverters with integral sine filters for reliable operation.