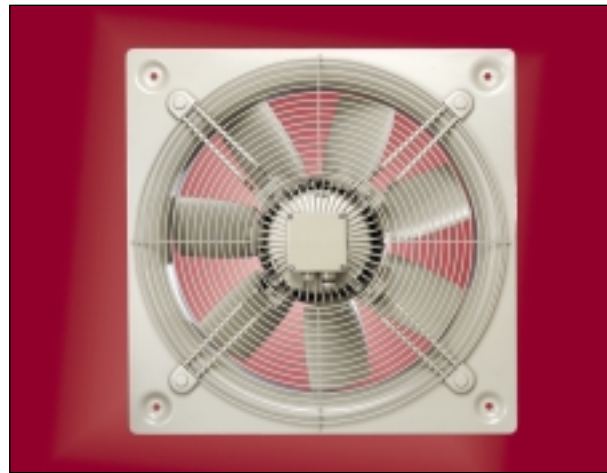


# PLATE MOUNTED AXIAL FANS



- Sizes 250 to 630 protected to IP54
- Motor Insulation Class F
- Operating Temperatures from -40°C up to +70°C
- HOT SPOT Protection
- All units available as Supply or Extract
- Tough epoxy paint finish to RAL 7035
- Quality Assurance to BS EN ISO 9001:1994
- Performance tested to BS848 Part 1 1980

The plate mounted axial fans, shall be as supplied from **Roof Units**, designed around a high performance aluminium impeller and efficient matched motor, to ensure a compact and flush fitting design. The fan shall incorporate into its design, a bellmouth inlet with motor and impeller mounted on to a mounting plate, ensuring excellent performance and sound levels.

The mounting plate shall be pressed from a single sheet of steel, with the complete fan protected by a tough **fawn grey epoxy paint finish to RAL 7035**, suitable for coastal environments. When provided, wire finger guards and motor mounting supports, shall be manufactured from steel rod, electro welded for strength ensuring safety in operation.

Sizes 250 to 630, shall have finger guards fitted as standard to the motor side, giving protection to **BS848 Part 5**. All manufacturing of shall be controlled to **BS EN ISO 9001** Standards. Impeller side guards are available as optional accessories.

## IMPELLERS

The impellers shall be aerodynamically designed, utilising computer technology combining the impeller with the motor. The motor and impeller shall be factory matched, statically and dynamically balanced on precision machines, to **VDI 2060** Quality Class G.6.3. The aerodynamic blades and motor housing shall be of die cast aluminium.

## MOTORS

Sizes 250 to 630, shall be protected to **IP54 against dust and water jets complying with BE EN 60529:1992**. With motor insulation **Class F** as a minimum, suitable for **operating temperatures from -40°C to +70°C** (Sizes 315 & 355, 2 pole, 50°C Max.)

The motors shall be wound, to suit a 230V/1ph/50Hz or a 400V/3ph/50Hz electrical supply. 1 phase motors shall be permanent capacitor type to optimise efficiency. **HOT SPOT** protection, by means of a thermal contact switch incorporated within the windings, shall be provided to prevent motor damage due to overloading/overheating. Most models are suitable for speed control by either electronic, voltage reduction, or frequency inverter where permissible.

## TERMINAL BOX

An **IP54** terminal box, shall be supplied with all models from 250 to 630 mm, with 20 mm and PG11 entry protected against dust and water jets from any angle ensuring suitability for external use.

## EUROSERIES FORM OF RUNNING

Euroseries plate mounted axial fans, shall be supplied as standard for extract, with a **Form 'A'** impeller. When used for intake and extract the fan can be wired for reverse running but a 30% (min.) reduction in performance will occur on input only (reversed running). If supply only is required, the unit shall be supplied with **Form 'B'** impeller ensuring optimum performance. Please note in this installed condition a guard may be required for the impeller side.

## PERFORMANCE

The fan performance, shall be in accordance with **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 shall be in accordance with the standard for quality management systems **BS EN ISO 9001:1994**.

## ACCESSORIES

A full range of accessories are available with the plate axial fans such as:

- Electronic Speed Controllers
- Auto Transformer Speed Controllers
- D.O.L. Starters
- Backdraught Shutters
- Wire Guards



# PLATE MOUNTED AXIAL FANS

## PERFORMANCE GUIDE & ELECTRICAL DATA

Unit Code	Nom. RPM	Phase	Duty - m <sup>3</sup> /s @ Pa											Motor kW	Amps FLC	Amps SC	dBA @3m			
			0	25	50	75	100	125	150	200	250	300	350							
<b>2 Pole</b>																				
E250/2/1A	2500	1															0.25	1.2	4.8	
E250/2/3A	2500	3	0.600	0.575	0.548	0.518	0.482	0.442	0.381								0.25	0.5	3.0	60
E315/2/1A	2500	1	0.879	0.850	0.820	0.788	0.750	0.702	0.650	0.461	0.217	0.086					0.48	2.2	8.8	66
E315/2/3A	2600	3	0.907	0.880	0.851	0.820	0.789	0.750	0.700	0.572	0.308	0.171	0.10				0.54	1	6	
E350/2/1A	2000	1	1.060	0.991	0.921	0.851	0.775	0.680	0.545	0.200							0.52	2.45	9.8	70
E350/2/3A	2400	3	1.170	1.130	1.090	1.050	1.010	0.950	0.891	0.721	0.365	0.200					0.60	1.86	11.16	
<b>4 Pole</b>																				
E250/4/1A	1330	1															0.06	0.3	1.2	45
E250/4/3A	1330	3	0.337	0.287													0.06	0.2	1.2	
E315/4/1A	1300	1															0.1	0.6	2.4	49
E315/4/3A	1300	3	0.653	0.585	0.490	0.365											0.15	0.3	1.8	
E350/4/1A	1225	1															0.2	1	4	53
E350/4/3A	1260	3	0.969	0.865	0.710	0.540											0.2	0.5	3	
E400/4/1A	1200	1															0.34	1.6	6.4	57
E400/4/3A	1350	3	1.408	1.332	1.223	1.065	0.889										0.30	0.8	4.8	
E450/4/1A	1290	1															0.48	2.3	9.2	59
E450/4/3A	1230	3	1.877	1.744	1.610	1.471	1.320	1.110									0.5	1	6	
E500/4/1A	1290	1															0.65	3	12	63
E500/4/3A	1350	3	2.555	2.425	2.271	2.106	1.924	1.732	1.480								0.66	1.6	9.6	
E560/4/1A	1250	1															0.98	4.9	19.6	
E560/4/1AS	1250	1	3.466	3.330	3.150	2.950	2.750	2.540	2.320								1.1	6.1	24.4	67
E560/4/3A	1320	3															1.21	2.3	13.8	
E630/4/3A	1420	3	4.738	4.580	4.420	4.235	4.025	3.800	3.540	2.800							1.55	3	18	69
E630/4/3HA	1410	3	5.000	4.840	4.700	4.590	4.380	4.210	4.010	3.710	3.210						2.20	4.3	25.4	69
<b>6 Pole</b>																				
E350/6/1A	800	1															0.09	0.5	2	39
E350/6/3A	875	3	0.614	0.470													0.09	0.3	1.8	
E400/6/1A	750	1															0.11	0.6	2.4	44
E400/6/3A	830	3	0.944	0.801	0.555												0.11	0.3	1.8	
E450/6/1A	835	1															0.22	1.2	4.8	47
E450/6/3A	835	3	1.263	1.103	0.900												0.19	0.5	3	
E500/6/1A	840	1															0.29	1.6	6.4	50
E500/6/3A	840	3	1.616	1.405	1.160												0.25	0.5	3	
E560/6/1A	900	1															0.42	2.4	9.6	55
E560/6/3A	900	3	2.186	2.045	1.710	1.330											0.41	0.9	5.4	
E630/6/1A	800	1															0.51	2.6	10.4	56
E630/6/3A	810	3	2.986	2.812	2.520	2.069											0.46	1.2	7.2	
<b>8 Pole</b>																				
E630/8/1A	585	1															0.32	1.7	6.8	49
E630/8/3A	635	3	2.316	1.970	1.370												0.31	0.8	4.8	

FLC = Full Load Current SC = Starting Current

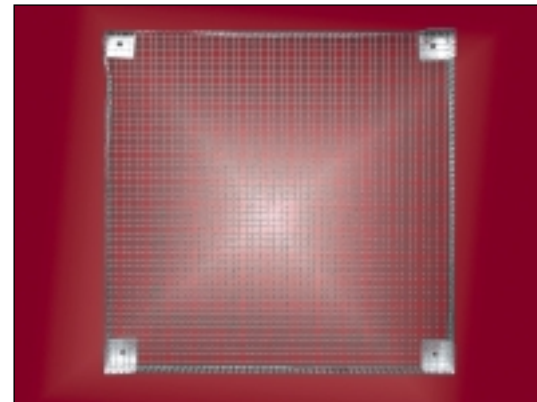
# PLATE MOUNTED AXIAL FANS

## ACCESSORIES

Unit Code	Electronic Controller Code	Auto Transformer Controller Code	D.O.L. Starter Code	Louvre Shutter Code	Discharge Side Charge Code	Impeller Disch. Guard for use with LS shutter Code
E250/2/1A	-	-	RDO1D	LS315	DEF-325D	DEF-375D
E250/2/3A	-	-	RDO3B	LS315	DEF-325D	DEF-375D
E315/2/1A	-	-	RDO1E	LS315	DEF-325D	DEF-375D
E315/2/3A	-	-	RDO3D	LS315	DEF-325D	DEF-375D
E350/2/1A	-	-	RDO1F	LS350	DEF-375D	DEF-450D
E350/2/3A	-	-	RDO3E	LS350	DEF-375D	DEF-450D
E250/4/1A	SP5001	SPM5026	RDO1A	LS315	DEF-325D	DEF-375D
E250/4/3A	-	RDTK1	-	LS315	DEF-325D	DEF-375D
E315/4/1A	SP5001	SPM5026	RDO1B	LS315	DEF-325D	DEF-375D
E315/4/3A	-	RDTK1	RDO3A	LS315	DEF-325D	DEF-375D
E350/4/1A	SP5001	SPM5026	RDO1D	LS350	DEF-375D	DEF-450D
E350/4/3A	-	RDTK1	RDO3B	LS350	DEF-375D	DEF-450D
E400/4/1A	SP5025	SPM5026	RDO1E	LS400	DEF-450D	DEF-525D
E400/4/3A	-	RDTK1	RDO3C	LS400	DEF-450D	DEF-525D
E450/4/1A	SP5025	SPM5055	RDO1E	LS450	DEF-525D	DEF-630D
E450/4/3A	-	RDTK2	RDO3D	LS450	DEF-525D	DEF-630D
E500/4/1A	SP5050	SPM5055	RDO1F	LS500	DEF-525D	DEF-630D
E500/4/3A	-	RDTK2	RDO3E	LS500	DEF-525D	DEF-630D
E560/4/1A	-	SPM5070	RDO1G	LS560	DEF-630D	DEF-630D
E560/4/3A	-	RDTK4 *	RDO3E	LS560	DEF-630D	DEF-630D
E630/4/3A	-	*	RDO3F	LS630	DEF-630D	DEF-800D
E630/4/3HA	-	*	RDO3G	LS630	DEF-630D	DEF-800D
E350/6/1A	SP5001	SPM5026	RDO1B	LS350	DEF-375D	DEF-450D
E350/6/3A	-	RDTK1	RDO3A	LS350	DEF-375D	DEF-450D
E400/6/1A	SP5001	SPM5026	RDO1B	LS400	DEF-450D	DEF-525D
E400/6/3A	-	RDTK1	RDO3A	LS400	DEF-450D	DEF-525D
E450/6/1A	SP5001	SPM5026	RDO1D	LS450	DEF-525D	DEF-630D
E450/6/3A	-	RDTK1	RDO3B	LS450	DEF-525D	DEF-630D
E500/6/1A	SP5025	SPM5026	RDO1E	LS500	DEF-525D	DEF-630D
E500/6/3A	-	RDTK1	RDO3B	LS500	DEF-525D	DEF-630D
E560/6/1A	SP5050	SPM5055	RDO1F	LS560	DEF-630D	DEF-630D
E560/6/3A	-	RDTK2 *	RDO3C	LS560	DEF-630D	DEF-630D
E630/6/1A	SP5050	SPM5055	RDO1F	LS630	DEF-630D	DEF-800D
E630/6/3A	-	RDTK2 *	RDO3D	LS630	DEF-630D	DEF-800D
E630/8/1A	SP5025	SPM5026	RDO1E	LS630	DEF-630D	DEF-800D
E630/8/3A	-	RDTK1 *	RDO3C	LS630	DEF-630D	DEF-800D

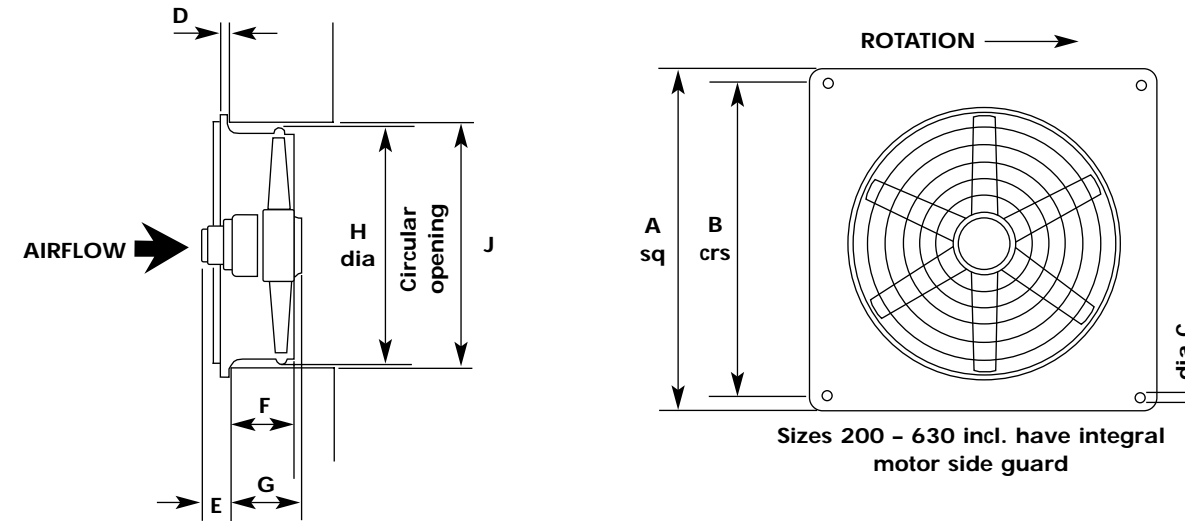
**NOTE:** All \* models are suitable for frequency inverter speed control. When speed control is required on all other models a 5 step auto transformer speed controller is recommended, to ensure low noise levels.

**Guards:** Some installations may occur where additional safety parts are needed, to ensure safety in operation. For example, the unit may be fitted at the inlet or outlet end of a ducted ventilation system, thereby exposing the impeller/motor to unguarded access. In this event, the installer must fit a safety guard complying to current regulations. These guards are available as an optional extra. Pre-fitted inlet side guards are supplied as part of the plate mounted axial from sizes 250mm to 630mm, to comply with these regulations.



# PLATE MOUNTED AXIAL FANS

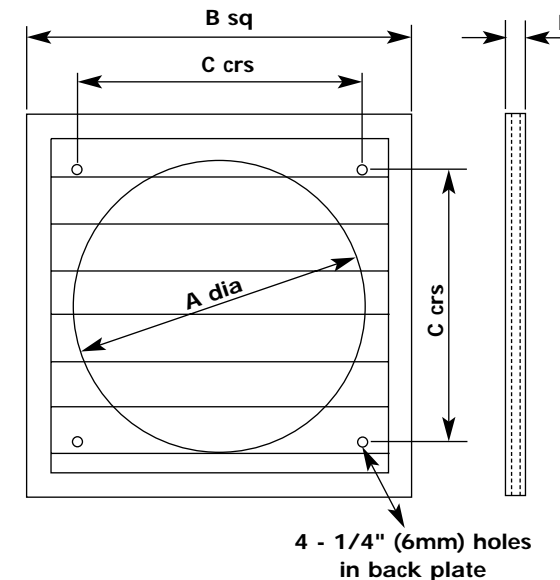
## DIMENSIONAL DATA (mm)



Unit Size	Dimensions in Millimetres									Weight kg
	A	B	C	D	E†	F	G*	HØ	JØ	
E250	315	260	10	12	124	53	63	254	294	5
E315	400	330	10	12	110	73	105	316	329	7
E350	450	380	10	12	110	75	84	355	371	8
E400	500	420	10	12	105.5	78	88.5	400	422	9
E450	560	480	10	12	113	94	102	450	476	13
E500	630	560	10	12	109.5	97	105.5	500	536	16
E560	710	630	10	12	175.5	100	108	560	596	22
E630	800	710	12	12	175.5	103	109	630	674	25
E630/HA	800	710	12	12	175.5	103	109	630	674	26

† Includes Terminal Box \* Approximate

## ACCESSORY DIMENSIONS (mm)



Unit Size	Dimensions in millimetres			
	A	B	C	D
LS315	310	344	276	26
LS350	360	398	312	26
LS400	420	458	365	26
LS450	460	499	395	31
LS500	510	544	444	31
LS560	-	605	533	31
LS630	-	694	627	31

**N.B.** Fixings shown are for circular wall apertures. For square apertures timber filling should be used to pick up fixing points.

# PLATE MOUNTED AXIAL FANS

## SOUND DATA

### SOUND POWER LEVEL SPECTRA dB (ref 10<sup>-12</sup> Watts)

Unit Code	MID OCTAVE BANDS								dBA @ 3m
	63	125	250	500	1000	2000	4000	8000	
<b>2 Pole</b>									
E250/2	75	77	77	77	74	73	66	57	60
E315/2	82	85	86	78	76	75	72	69	66
E350/2	84	86	91	81	80	78	74	70	70
<b>4 Pole</b>									
E250/4	68	66	65	62	60	58	52	41	45
E315/4	62	63	65	65	66	62	56	47	49
E350/4	63	75	65	69	70	65	60	51	53
E400/4	66	78	67	71	74	69	65	42	57
E450/4	65	81	71	72	77	70	66	57	59
E500/4	75	84	76	77	79	76	71	60	63
E560/4	72	88	79	86	82	78	73	64	67
E630/4	77	91	82	85	86	82	76	67	69
E630/4H	78	91	82	84	86	82	76	69	69
<b>6 Pole</b>									
E350/6	64	61	55	56	53	53	47	36	39
E400/6	59	62	58	63	60	59	52	40	44
E450/6	60	66	61	65	64	61	55	44	47
E500/6	64	68	64	67	67	64	58	48	50
E560/6	66	71	69	71	71	69	63	52	55
E630/6	68	75	71	74	71	68	66	55	56
<b>8 Pole</b>									
E630/8	70	64	66	67	63	63	57	45	49

**Note:** The above Sound Power Level Spectra is for **A-Form** Running Fans.

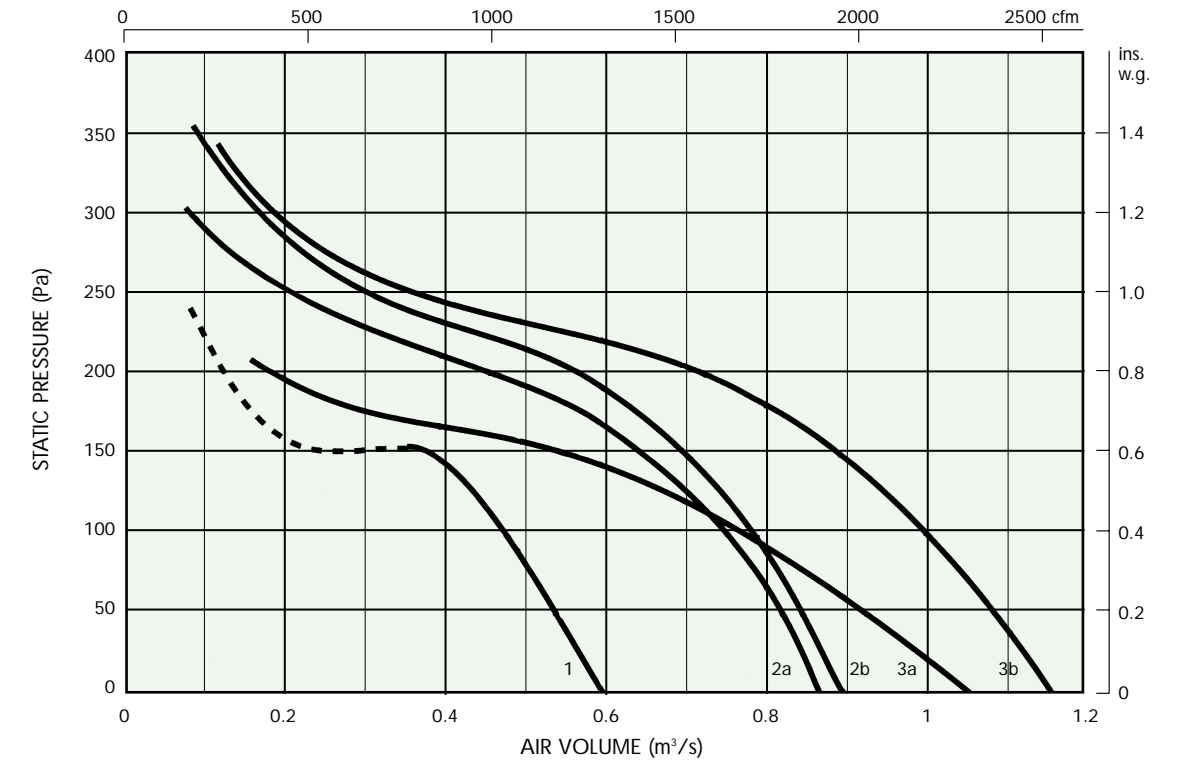
Published dBA figures, are free field sound levels at 3m, with spherical propagation at a reference level of 2 x 10<sup>-5</sup> Pa. The sound power level spectra figure, are dB with reference of 10<sup>-12</sup> Watts.

To ensure minimum noise levels during speed control, an auto transformer speed controller is recommended.

# PLATE MOUNTED AXIAL FANS

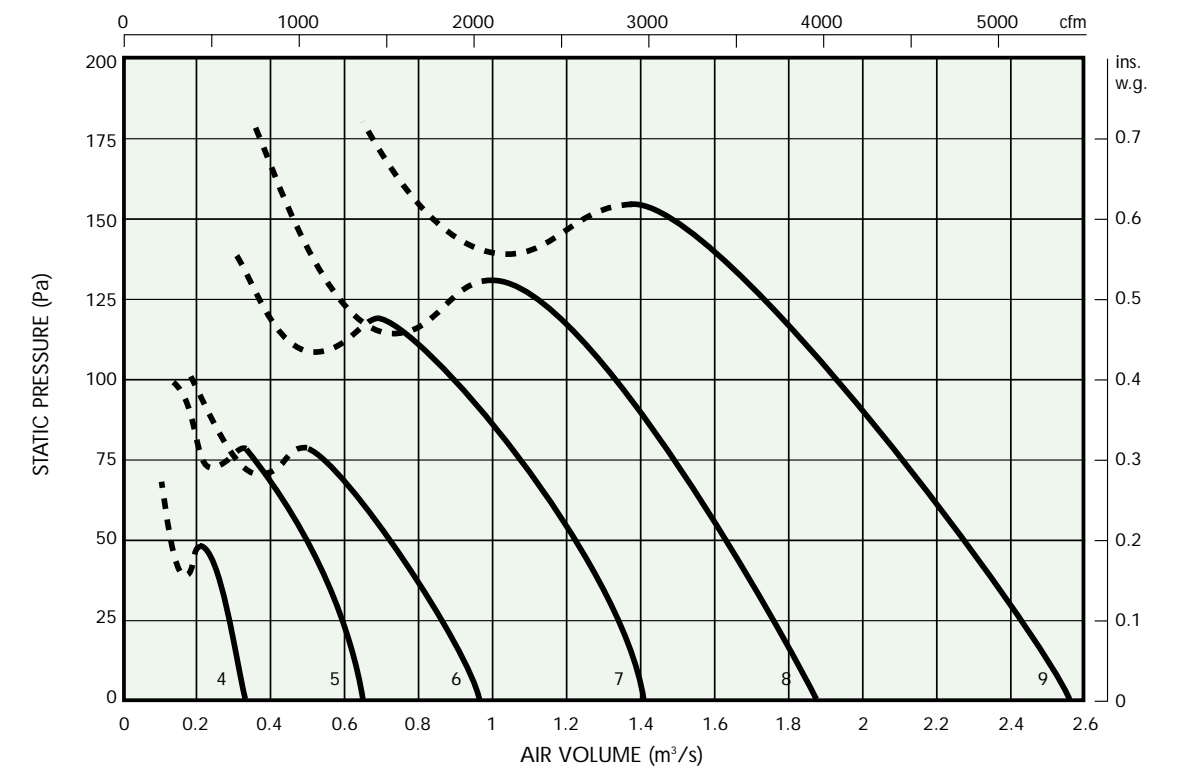
## PERFORMANCE CURVES

### 2 POLE MOTORS



Size	250	315-1ph	315-3ph	350-1ph	350-3ph
	1	2a	2b	3a	3b

### 4 POLE MOTORS



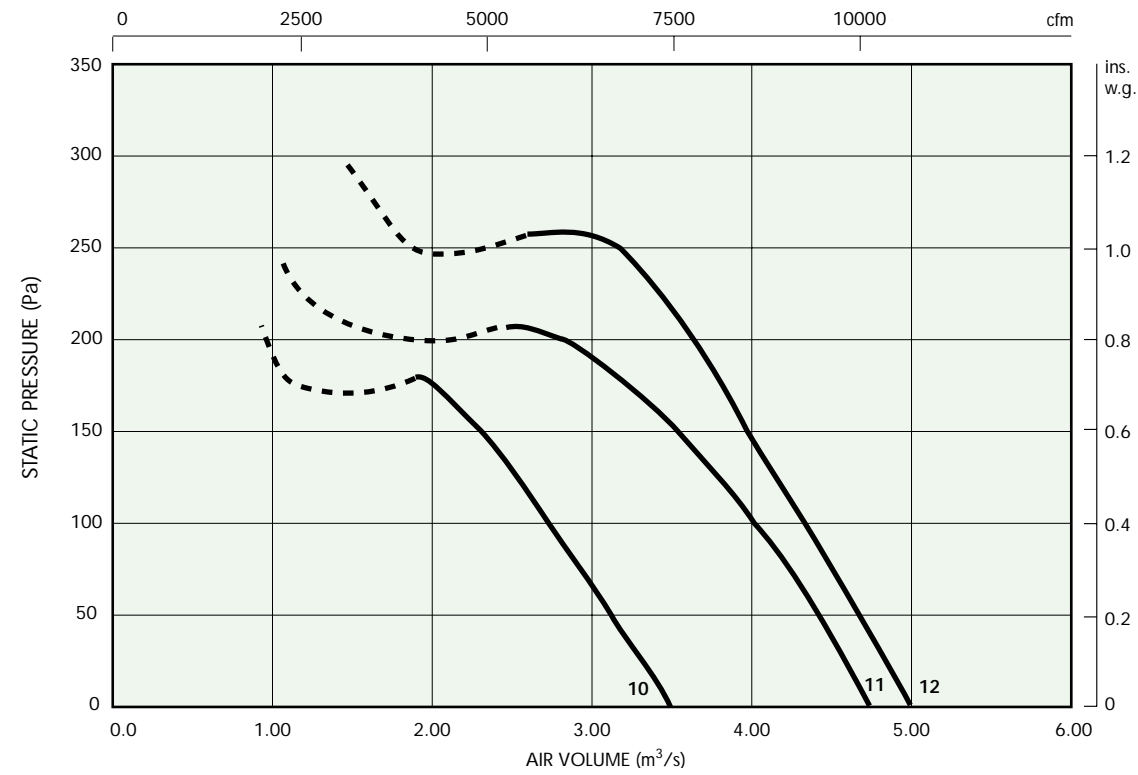
Size	250	315	350	400	450	500
	4	5	6	7	8	9

**Note:** The broken points of all performance curves are for illustration purposes only and not for selection.

# PLATE MOUNTED AXIAL FANS

## PERFORMANCE CURVES

### 4 POLE MOTORS

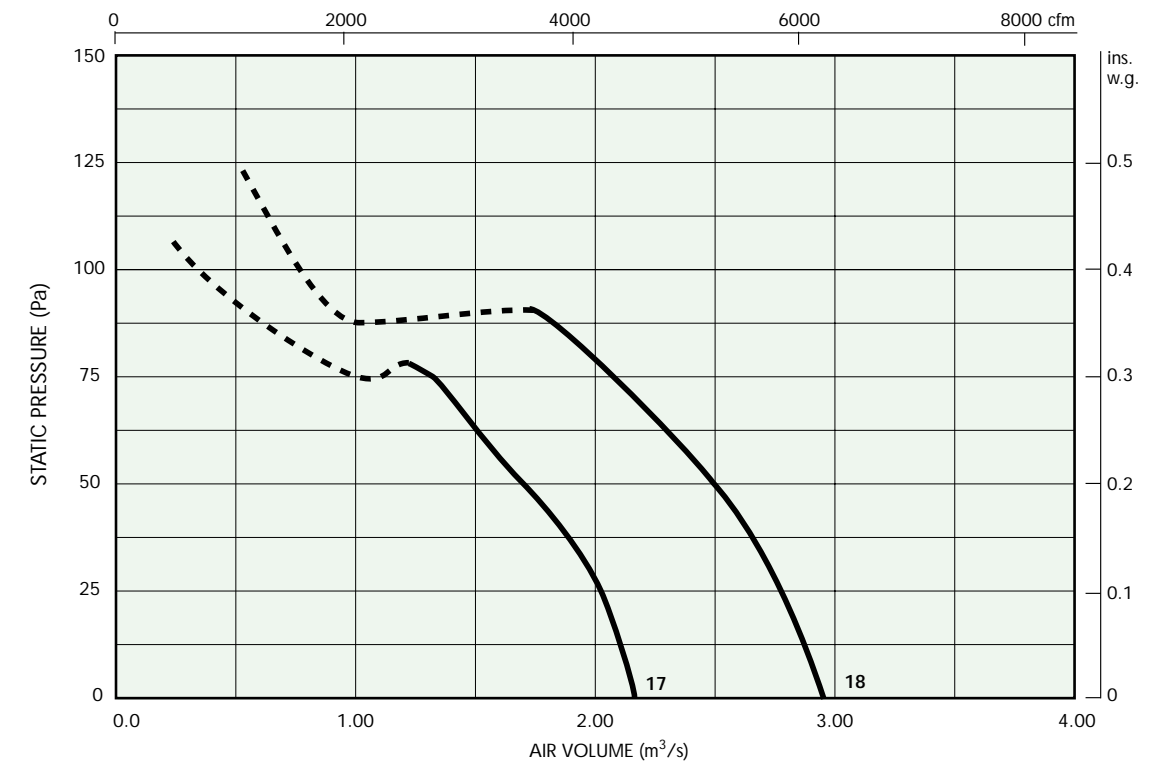


Size	560	630	630H
	10	11	12

# PLATE MOUNTED AXIAL FANS

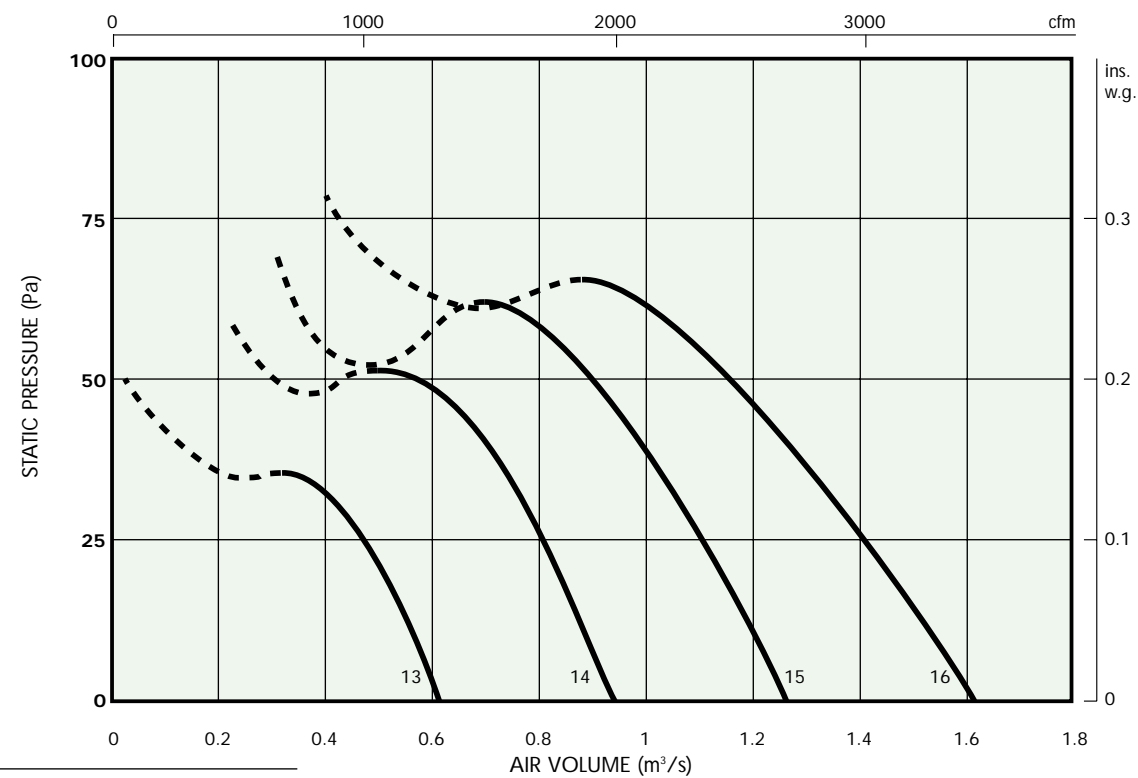
## PERFORMANCE CURVES

### 6 POLE MOTORS



Size	560	630
	17	18

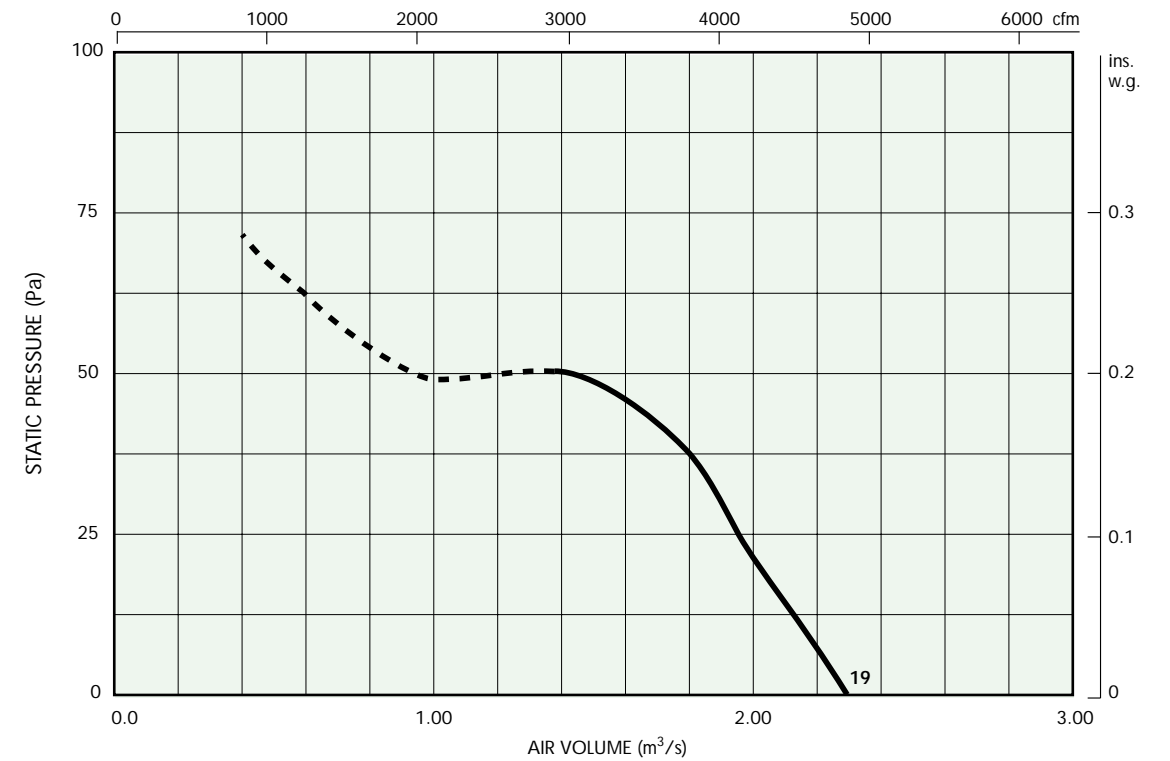
### 6 POLE MOTORS



Size	350	400	450	500
	13	14	15	16

**Note:** The broken points of all performance curves are for illustration purposes only and not for selection.

### 8 POLE MOTORS

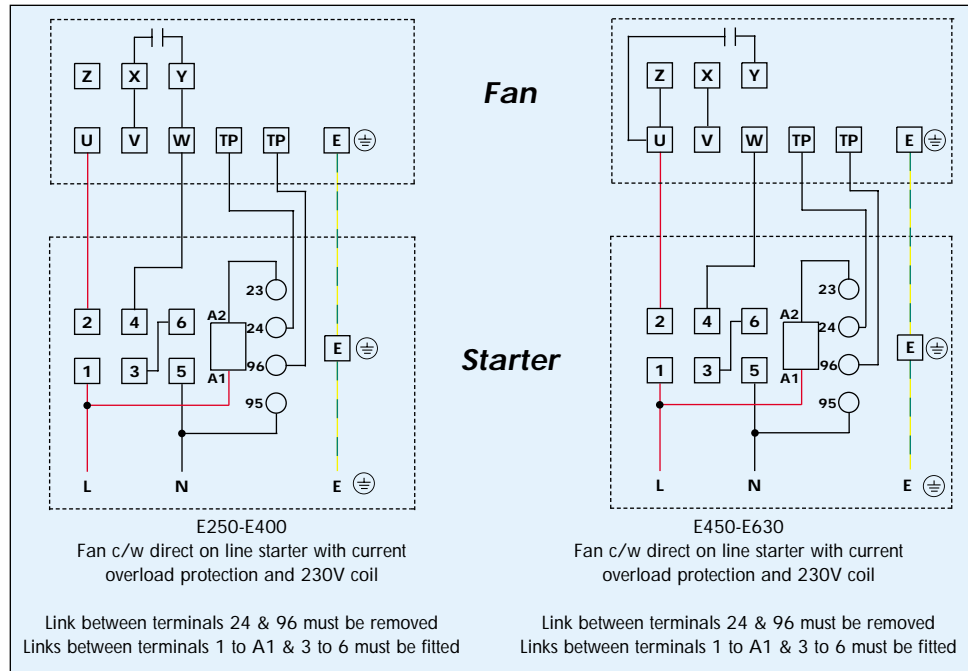


Size	630
	19

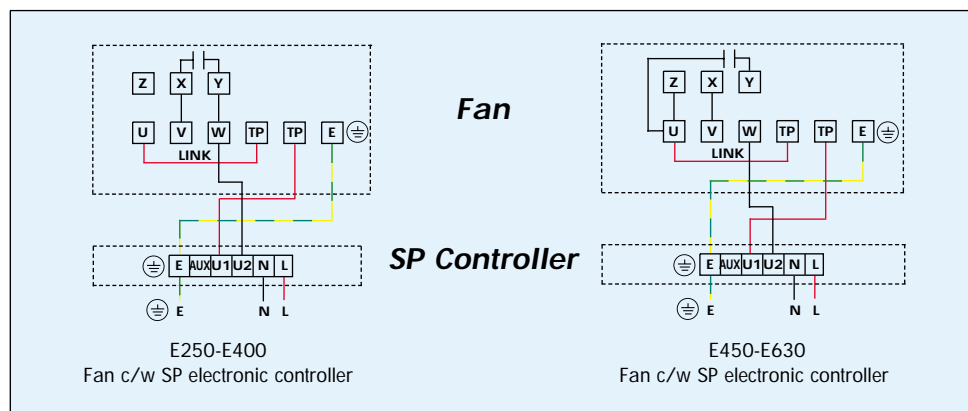
**Note:** The broken points of all performance curves are for illustration purposes only and not for selection.

# SINGLE PHASE PLATE MOUNTED AXIAL FANS WIRING DIAGRAMS 230V 1PH 50Hz SUPPLY

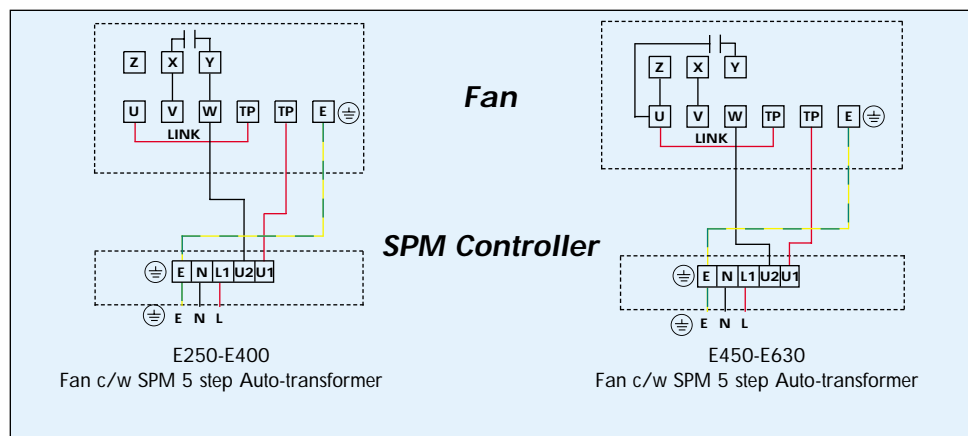
## D.O.L. STARTER WIRING DIAGRAMS



## SINGLE PHASE ELECTRONIC SPEED CONTROLLER WIRING DIAGRAMS

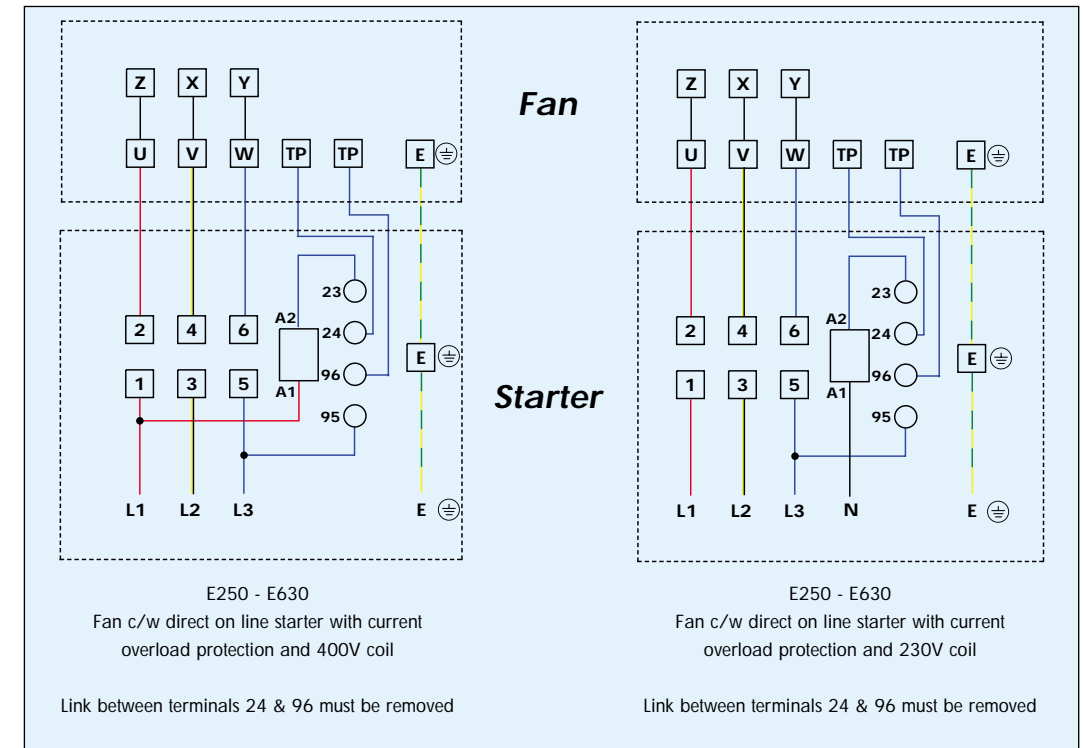


## SINGLE PHASE AUTO TRANSFORMER SPEED CONTROLLER WIRING DIAGRAMS

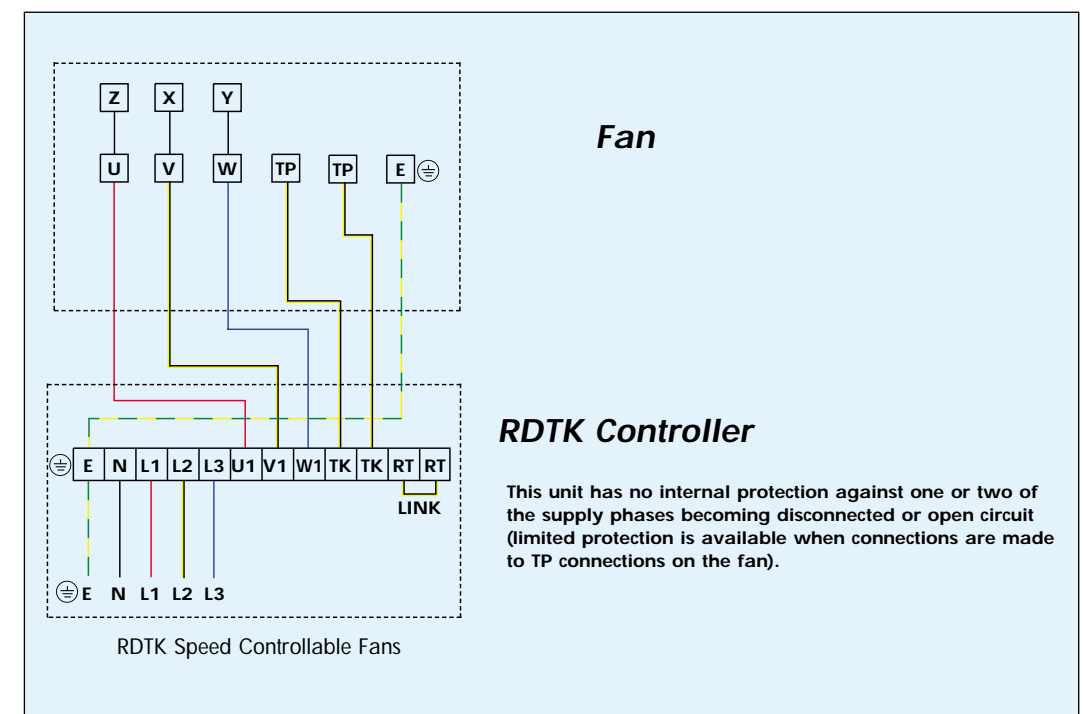


# THREE PHASE PLATE MOUNTED AXIAL FANS WIRING DIAGRAMS 400V 3PH 50Hz SUPPLY

## D.O.L. STARTER WIRING DIAGRAM



## THREE PHASE AUTO TRANSFORMER SPEED CONTROLLER WIRING DIAGRAM



These products must be installed by a suitably qualified and competent person in accordance with current applicable regulations

Note: 2 pole units are not speed controllable

These products must be installed by a suitably qualified and competent person in accordance with current applicable regulations