

Square Duct Fans - ESTOC Range



Features

- Sizes from 355 to 710 mm diameter
- Air flow 1,900 m³/h (5.2 m³/s)
- Static pressures up to 1150 Pa
- Maximum temperature from +40° C to +70° C (depending on the model)
- Adjustable external rotor motors
- Multiple outlet orientations

Electrical Supply

220 - 240V / 50Hz / 1 Ph
380 - 420V / 50Hz / 3 Ph

Sizes

355, 400, 450, 500, 560, 630 and 710.

Features and Construction

The Estoc casing is made from galvanized sheet steel with PentaPost construction and acoustic insulation made from mineral wool with a thickness of 20 mm.

Impeller

The Estoc has a backward curved centrifugal impellers made of plastic with galvanised steel support plates for those up to 450 mm. Fans with a diameter of 500 mm and larger have high efficiency backward curved centrifugal impellers made of aluminium.

Motor

The impellers together with the external rotor motors are dynamically balanced to quality standard G2,5 DIN ISO 19410

Speed Controllers

Speed is 100% infinitely variable using auto transformers or electronic control (please see page 99).

Product Code

Estoc 50-355-3

- ESTOC - Product Name
- 50 = Box Size ie, 50 = 500mm; 67 = 670mm; 80 = 800mm;
102 = 1020mm
- 355 = Spigot Diameter size
- 3 = 3 Phase or 1 Phase

Accessories

The range of accessories include dampers, flexible connectors, service doors, outlet covers, guards, side covering and insulating connections . A quick reference guide is shown below. For full details on these items please see pages 57-62.



SFC



SSC



SAD



SOC



SWR



CIG

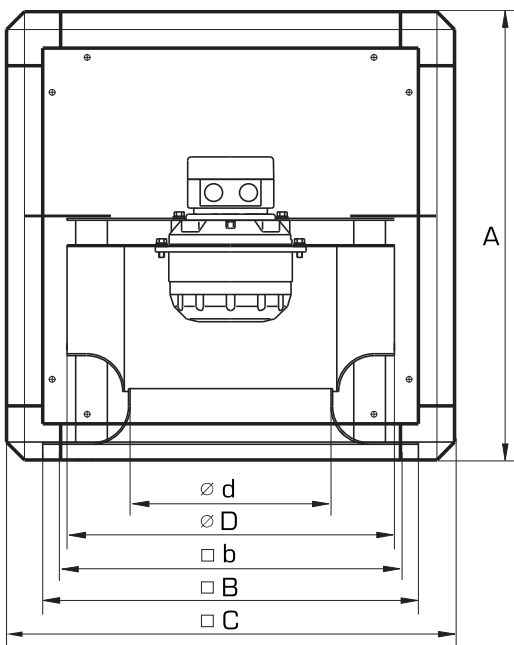
Electrical Details and Sound Levels

Product Code	Product Number	Speed rpm	Motor Frame	Electrical Supply	Electrical Current			Wiring Diagrams	Maximum Operating Temp °C	Breakout * Sound Level db(A) (3m)	** Speed Controllers Transformer
					Motor (kW)	Full Load Current (A)	Starting Current (A)				
ESTOC 50-355-1	UB503514	1325	Integral	220-240 V-50 Hz-1 Ph	0.29	1.25	2.5	CD3005	55	33	T
ESTOC 50-355-3	BI101216	1355	Integral	380-420V-50 Hz-3 Ph	0.3	0.66	2.18	CD3003	50	34	I
ESTOC 50-355-3	UB503544	1355	Integral	380-420 V-50 Hz-3 Ph	0.3	0.66	2.18	CD3003	50	34	T
ESTOC 67-400-1	UB674414	1360	Integral	220-240 V-50 Hz-1 Ph	0.53	2.4	4.9	CD3005	45	45	T
ESTOC 67-400-3	BI101217	1335	Integral	380-420V-50 Hz-3 Ph	0.48	0.9	2.88	CD3003	50	37	I
ESTOC 67-400-3	UB674044	1355	Integral	380-420 V-50 Hz-3 Ph	0.48	0.9	2.88	CD3003	50	37	T
ESTOC 67-450-1	UB674514	1270	Integral	220-240 V-50 Hz-1 Ph	0.76	3.5	7.35	CD3005	45	41	T
ESTOC 67-450-3	BI101218	1240	Integral	380-420V-50 Hz-3 Ph	0.67	1.33	3.46	CD3003	50	37	I
ESTOC 67-450-3	UB674544	1240	Integral	380-420 V-50 Hz-3 Ph	0.67	1.33	3.46	CD3003	50	37	T
ESTOC 67-500-1	UB675514	1310	Integral	220-240 V-50 Hz-1 Ph	1.57	7.3	16.79	CD3005	40	45	T
ESTOC 67-500-3	BI101219	1380	Integral	380-420V-50 Hz-3 Ph	1.8	3.7	17.76	CD3003	40	44	I
ESTOC 67-500-3	UB675044	1380	Integral	380-420 V-50 Hz-3 Ph	1.8	3.7	17.76	CD3003	40	44	T
ESTOC 80-560-3	BI101220	1350	Integral	380-420V-50 Hz-3 Ph	2.5	4.8	20.16	CD3003	40	47	I
ESTOC 80-560-3	UB805644	1350	Integral	380-420 V-50 Hz-3 Ph	2.5	4.8	20.16	CD3003	40	44	T
ESTOC 80-630-3	BI101221	1380	Integral	380-420V-50 Hz-3 Ph	3.65	6.6	27.72	CD3003	45	55	I
ESTOC 80-630-3	UB806344	1380	Integral	380-420 V-50 Hz-3 Ph	3.65	6.6	27.72	CD3003	45	55	T
ESTOC 102-710-3	BI101222	890	Integral	380-420V-50 Hz-3 Ph	2.45	4.7	18.8	CD3003	45	49	I
ESTOC 102-710-3	UB107166	890	Integral	380-420 V-50 Hz-3 Ph	2.45	4.7	18.8	CD3003	45	49	T

Key: T = Transformer, I = Inverter

*Sound power levels are average dBA at 3 metres distance over sphere, under free field conditions and are presented for comparative purposes only. Values taken at the mid point on the wave at the highest point. **For speed controllers, please see page 99.

Drawings and Dimensions



Product Code	A	B	b	C	Ø D	Ø E	Weight max (kg)
ESTOC 50-355	500	450	420	500	365	224	33
ESTOC 67-400	670	620	590	670	404	253	49
ESTOC 67-450	670	620	590	670	454	286	58
ESTOC 67-500	670	620	590	670	504	321	66
ESTOC 80-560	800	720	690	800	570	361	95
ESTOC 80-630	800	720	690	800	634	407	105
ESTOC 102-710	1020	940	910	1020	718	438	157

All dimensions in mm

Wiring Diagrams

CD3003



CD3005



Clockwise



ENVIRONMENT
ECONOMICAL
EXPERTISE

TDID – TRANSFORMER THREE PHASE

INDEPENDENT DRIVE

FEATURES

- Independent 5 step transformer drive with motor overheat protection via thermostats
- Supply: 400 VAC, 50/60 Hz, 3 Phase
- IP54 ingress protection
- In built motor overheat protection via motor thermostats (Tk)
- Switch: 5 positions with off-position
- Indicator light
- 230 VAC unregulated output
- Enclosure: plastic (R-ABS, UL94-V0, RAL 7035) / sheet steel (RAL 7035)
- Maximum ambient temperature: 50°C

DESCRIPTION

Our TDID transformer speed controllers are based on the principle of voltage control using auto-transformers. They are applicable to three phase voltage-controllable motors (400 VAC, 50/60 Hz), to control the rotational speed of fans in five steps.

They are fitted out with contacts for motors equipped with thermostat (Tk) overheat protection.

RANGE

To ensure correct drive selection, please choose a drive that has an amp rating that is equal to or above the fan motor full load current (FLC).

Model	TDID2.5A	TDID4A	TDID8A	TDID11A
Part	EA900025	EA900026	EA900027	EA900028
Lmax (A)	2.5	4	8	11
IP Rate	IP54	IP54	IP54	IP54



WIRING DIAGRAM

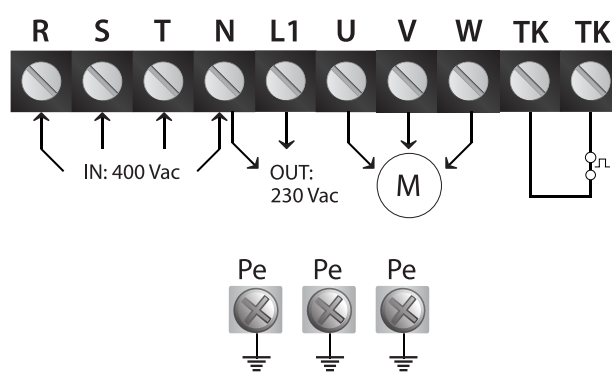
R S T - power supply 400 VAC– 50/60 Hz N - Neutral

L1 - unregulated output 230 VAC (2 A)

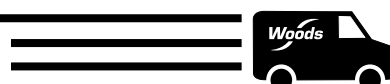
U V W - motor connection

TK - input thermal contacts of the motor

Pe - earth connections

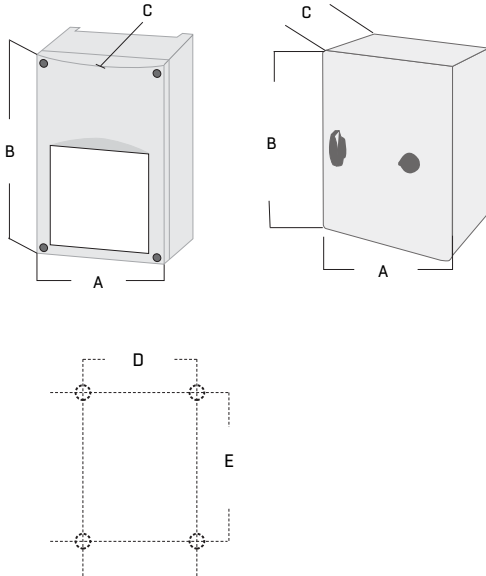


Products in **bold** are available from our UK Distributors on next day delivery, if ordered by 4pm. Please call to confirm availability on 01206 222 555.





DIMENSIONS AND WEIGHTS



Model	A	B	C	D	E	Net kg	Gross kg	Enclosure
TDID2.5A	300	325	175	255	255	13.2	13.5	Steel
TDID4A	300	425	175	255	355	18.2	18.7	Steel
TDID8A	300	425	235	255	355	36.4	37	Steel
TDID11A	400	430	235	355	355	38.4	39	Steel

COMPATIBILITY

Speed controller for three phase voltage controllable motors.

MOUNTING

Break (Isolate) mains voltage. Ensure that this controller is mounted on a smooth flat surface. Connect voltage supply, motor(s) and earth as shown in the scheme with cables of the proper diameter.

ISOLATION AND WIRING (SEE DIAGRAM ON PREVIOUS PAGE)

A safety isolator/disconnect switch should be installed on the mains electricity side of all motor drives; Please refer to SISO product.

TRANSPORT AND STOCK KEEPING

Avoid shocks. Stock in original packing. Avoid extreme conditions.

WARRANTY

Any modifications or alterations to the product relieve the manufacturer of all responsibility. The manufacturer bears no responsibility for any misprints or mistakes in this data, and modifications or improvements to the product can be made at any time after date of publication.

MAINTENANCE

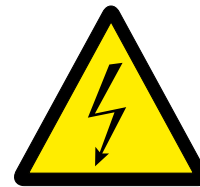
In normal conditions our controllers are maintenance-free. If external surfaces requires light cleaning, please use a dry or slightly damp cloth. If heavy cleaning is needed, then we recommend the use of a non-aggressive cleaning product. Particular attention should be paid to ensure that no fluids enter the controller. Only reconnect the controller to the mains electrical supply when it is completely dry.

MOTOR PROTECTION

The controller has contacts for motors with thermostat (Tk) overheat protection (NC-contact). When motor overheating (or a power failure) is detected the controller stops power to the motor. The red indicator light and alarm output will signal this error condition. (Reset: main switch to off position and back).



General danger



Electrical hazard

All works may only be carried out by skilled personnel following the local regulations and AFTER the controller is completely isolated from the mains.

ALSO AVAILABLE FROM THE **WOODS** RANGE



**JMv
Aerofoil**



MaXfan²



**JM
Aerofoil**



**HT JM
Aerofoil**



**JM
Bifurcated**



Series 33



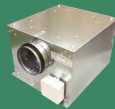
Plate Fans



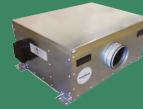
**Cased &
Plate Axial
Accessories**



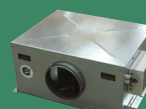
Tube Fans



**Sabina EC
Box Fans**



**Daisho AC
Box Fans**



**Daisho EC
Box Fans**



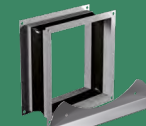
Estoc



Estoc Targe



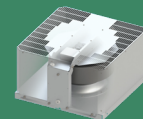
Estoc EC



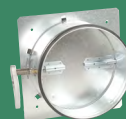
**Tube & Box
Accessories**



**Roof Units
Horizontal**



**Roof Units
Vertical**



**Fire
Dampers**



**Iris
Dampers**



Fire Valves



**Valves
Supply KE**



**Valves
Extract KK**



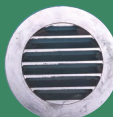
**Valves
Exhaust
VEFS**



**Nozzles DK
& DR**



**Louvres/
Cowls
EYMA and
DYMA**



**External
Louvres
USAV**



Controllers

Selected products available from our UK Distributors on next day delivery, if ordered by 4pm. Please call 01206 222 555 for more information.





HIGH PERFORMANCE CASED AXIAL MAXFAN COMPAC

PRODUCT FACTS

- Volumes up to 4.9m³/s
- Static Pressures up to 900 Pa (Non-stalling characteristic)
- Fans tested to ISO5801 and BS848
- High efficiency energy saving IE2 motor
- Low breakout noise levels
- Motor protection and terminal block IP55 (DW172 & Defra Compliant)
- Ambient temperatures up to 80°C (dependent on size)
- Overheat protection as standard
- Compact robust light weight construction
- Galvanised casing for high corrosion resistance
- Full inverter control and flexibility

ELECTRICAL SUPPLY

230v/50Hz/1 Ph (3 Ph Motor) - L Type

TEMPERATURE RANGE

Suitable for temperatures up to 80°C*

*dependent on the fan size, please refer to the specific fan technical page.

SIZES

315, 355, 400, 450, 500, 560 and 630 mm

IMPELLERS

A unique high efficiency aerofoil section blade with a smoothed hub and clamp plate offers a high efficiency solution.

The Fläkt Woods impellers are all high pressure die cast to offer thin aerofoil sections for low generation of noise. Every cast aluminium component is X-ray examined using Real Time Radiography inspection prior to assembly. The maximum pitch angles shown allow for speed control by frequency inverter.

MOTORS

All motors are totally enclosed air stream rated with class F insulation. Constructed from aluminium or cast iron as standard with special pad mounted fixings. Although this product incorporates a three phase electric motor, by using a matched inverter solution it is suitable for use with a single phase electrical supply on site. In addition, using a frequency inverter allows the speed to be turned down to 20% of maximum speed. Suitable for horizontal or vertical shaft operation. Supplied IP55, with removable drain plugs.

Sealed for life bearings lubricated with wide temperature range grease. The complete range of motors are fitted with Thermistor OHP as standard. Motors are IE2 efficiency class as standard.



CASING

The MaXfan Compac is available with a galvanised casing, complete with an externally mounted pre-wired electrical terminal box. Casings are spun from sheet steel with integral pre-drilled and radiused inlet flanges. The galvanised finish gives a high resistance to corrosion and is ideal for external as well as internal use.

PRODUCT CODE

40 MaXfan Compac

- 40 - denotes the fan impeller diameter in centimetres



Mounting Feet



Rubber AV's



Flexible Connector & Clips



0-10v Potentiometer



Silencer
B10/B20 Standard
& Melinex



Matching Flange



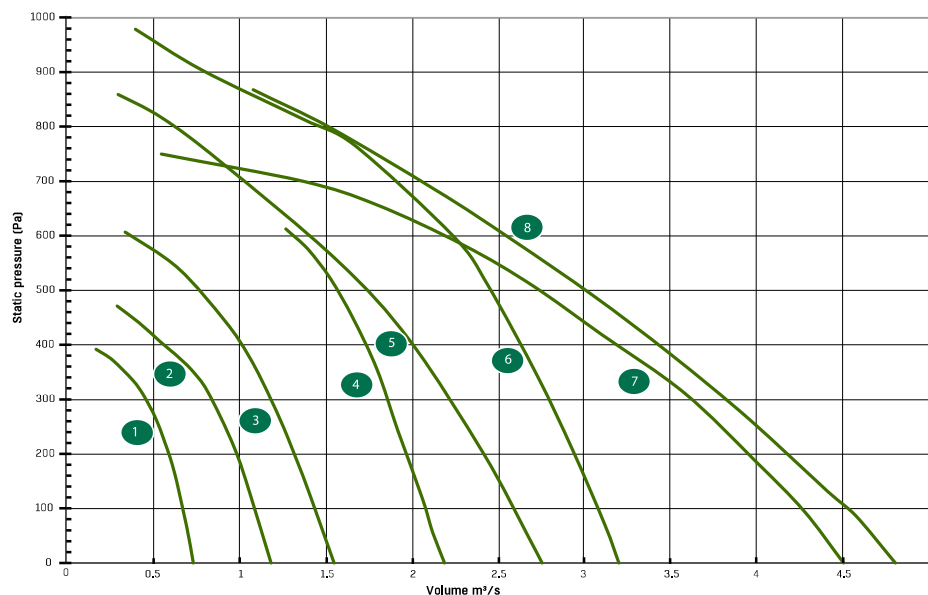
Damper



Acoustic Jacket

MAXFAN COMPAC PRODUCT PERFORMANCE & ELECTRICAL DATA

220-240V/50HZ/1 ϕ L TYPE PERFORMANCE CHART



PERFORMANCE TABLE

Ref	Part Number	Fan Description	m³/s @ Pa (Static)											
			0	50	100	200	300	400	500	600	700	800	900	
1	EJ313266	31 MaXfan Compac	0.74	0.71	0.68	0.59	0.46							
2	EJ353266	35 MaXfan Compac	1.19	1.14	1.09	0.99	0.85	0.57						
3	EJ413456	40 MaXfan Compac	1.55	1.49	1.44	1.31	1.18	1.02	0.78	0.41				
4	EJ463266	45 MaXfan Compac	2.19	2.14	2.07	1.98	1.87	1.74	1.58	1.33	0.89	0.6	0.35	
5	EJ513255	50 SC MaXfan Compac	2.77	2.67	2.59	2.42	2.23	1.99	1.72	1.4	1.04	0.61		
6	EJ513266	50 MaXfan Compac	3.21	3.15	3.09	2.97	2.78	2.64	2.47	2.25	2.00	1.48	0.81	
7	EJ563236	56 MaXfan Compac	4.54	4.4	4.22	3.96	3.62	3.24	2.78	2.25	1.33			
8	EJ623236	63 MaXfan Compac	4.87	4.66	4.52	4.19	3.81	3.44	3.00	2.51	2.1	1.53	0.79	

PRODUCT AND ELECTRICAL TABLE

Ref	Part Number	Fan Description	Temperature (°C)	Frame	kW	Max Input Amps	FLC (A)	SC (A)	Phase	Voltage	Inverter Model	Wiring Diagram	Breakout Sound Level dB(A) @ 3m	Fan Weight (kg)	Casing Length (mm)
1	EJ313266	31 MaXfan Compac	80	80	0.9	11.6	3.3	18.7	1	230	4.2	CD3042	45	33	375
2	EJ353266	35 MaXfan Compac	80	80	0.9	11.6	3.3	18.7	1	230	4.2	CD3042	45	33	375
3	EJ413456	40 MaXfan Compac	80	80	1.32	18.7	5.1	25.5	1	230	6.8	CD3042	40	35	375
4	EJ463266	45 MaXfan Compac	55	80	1.32	18.7	5.1	25.5	1	230	6.8	CD3042	43	37	375
5	EJ513255	50 SC MaXfan Compac	65	80	1.73	18.7	6.3	35.5	1	230	6.8	CD3042	49	32	375
6	EJ513266	50 MaXfan Compac	65	90	2.64	26.4	9.4	52.8	1	230	9.6	CD3042	48	51	520
7	EJ563236	56 MaXfan Compac	70	90	2.64	26.4	9.4	52.8	1	230	9.6	CD3042	48	55	520
8	EJ623236	63 MaXfan Compac	55	90	2.64	26.4	9.4	52.8	1	230	9.6	CD3042	50	61	520

For ErP efficiency ratings and grades please refer to our Fan Selector for more information. For speed controllers please see pages 250-297.

Sound pressure levels quoted are at the inlet, and are average dBA at 3m distance over a sphere at the mid point at the highest angle given, under free field conditions. These are presented for comparative purposes only.

Products in **bold** are available from our UK Distributors on next day delivery, if ordered by 4pm. Please call to confirm availability on 01206 222 580.





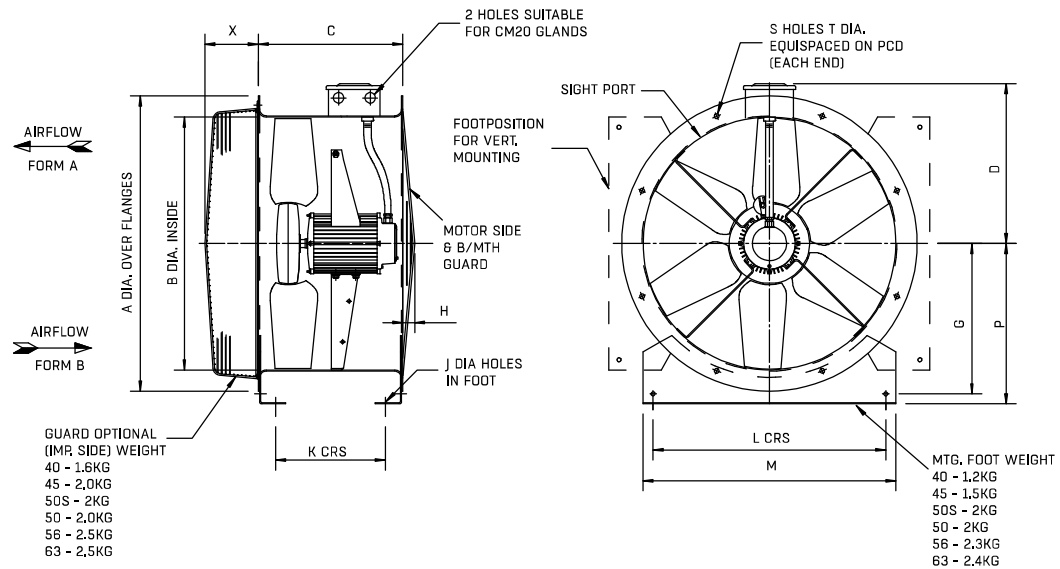
SOUND DATA - MAXFAN COMPAC

Fan Description	Ps Sound data at	Pa Static		Sound Spectrum (Hz)								Overall	
				63	125	250	500	1k	2k	4k	8k	Lw*	LpA @ 3m**
31 MaXfan Compac	0.53 m3/s	252	Inlet*	81	79	80	82	80	76	71	66	88	63
31 MaXfan Compac	0.53 m3/s	252	Outlet*	83	80	81	82	80	77	72	67	89	64
31 MaXfan Compac	0.53 m3/s	252	Breakout*	73	68	64	66	61	53	51	47	75	45
35 MaXfan Compac	0.84 m3/s	302	Inlet*	82	80	84	83	80	77	73	69	89	65
35 MaXfan Compac	0.84 m3/s	302	Outlet*	83	80	85	84	81	78	74	69	90	65
35 MaXfan Compac	0.84 m3/s	302	Breakout*	74	68	68	67	60	54	53	51	76	47
40 MaXfan Compac	1.32 m3/s	200	Inlet*	75	76	82	79	78	77	74	70	86	63
40 MaXfan Compac	1.32 m3/s	200	Outlet*	77	77	85	80	79	77	75	71	88	64
40 MaXfan Compac	1.32 m3/s	200	Breakout*	67	62	65	59	53	48	50	48	70	40
45 MaXfan Compac	1.86 m3/s	300	Inlet*	78	81	88	82	80	80	78	75	91	66
45 MaXfan Compac	1.86 m3/s	300	Outlet*	79	81	88	82	81	80	79	77	91	67
45 MaXfan Compac	1.86 m3/s	300	Breakout*	69	63	66	59	56	52	57	53	72	43
50 SC MaXfan Compac	2 m3/s	400	Inlet*	81	82	89	85	87	87	83	79	95	72
50 SC MaXfan Compac	2 m3/s	400	Outlet*	81	82	91	86	87	87	85	81	96	73
50 SC MaXfan Compac	2 m3/s	400	Breakout*	71	64	69	63	62	59	63	57	75	49
50 MaXfan Compac	2.63 m3/s	400	Inlet*	83	79	87	88	86	85	81	78	94	71
50 MaXfan Compac	2.63 m3/s	400	Outlet*	85	79	90	89	86	86	81	79	95	72
50 MaXfan Compac	2.63 m3/s	400	Breakout*	75	61	68	66	61	58	59	55	77	48
56 MaXfan Compac	3.22 m3/s	400	Inlet*	86	93	88	90	88	85	79	77	97	72
56 MaXfan Compac	3.22 m3/s	400	Outlet*	87	95	89	90	88	85	80	79	98	72
56 MaXfan Compac	3.22 m3/s	400	Breakout*	77	74	63	65	63	58	61	55	79	48
63 MaXfan Compac	3.4 m3/s	400	Inlet*	85	95	93	91	87	84	83	81	99	72
63 MaXfan Compac	3.4 m3/s	400	Outlet*	86	98	94	91	87	85	84	83	100	73
63 MaXfan Compac	3.4 m3/s	400	Breakout*	76	77	68	66	62	58	65	59	80	50

*Lw dB re 10⁻¹² W

**dBA re 2x10⁻⁵ Pa

DRAWING - MAXFAN COMPAC



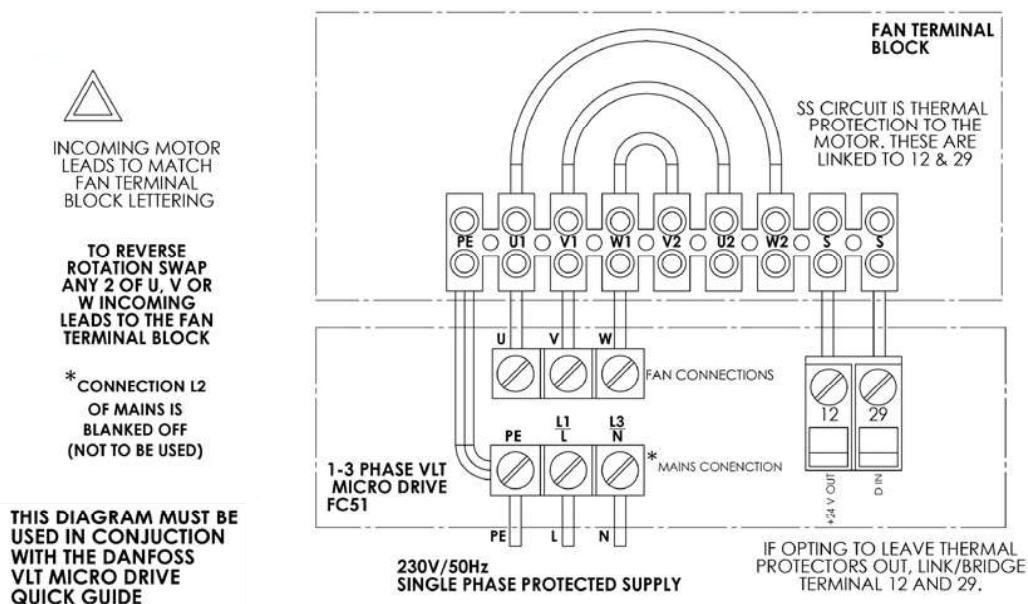
Product Code	Motor Frame	A	B	C	D	G	H	J	K	L	M	P	S	T	x	Weight (kg)
31 MaXfan Compac	80	395	315	375	229	200	30	10	285	265	315	200	8	10	137	33
35 MaXfan Compac	80	435	355	375	249	225	30	10	285	305	355	225	8	10	137	33
40 MaXfan Compac	80	480	400	375	279	225	30	10	290	350	400	250	8	12	137	35
45 MaXfan Compac	80	530	450	375	306	255	30	10	290	400	450	280	8	12	137	37
50 SC MaXfan Compac	80	594	500	375	338	290	30	10	290	450	500	315	12	12	137	32
50 MaXfan Compac	90	594	500	520	338	290	30	10	290	450	500	315	12	12	137	51
56 MaXfan Compac	90L	654	560	520	368	330	50	10	434	510	560	355	12	12	137	55
63 MaXfan Compac	90S	724	630	520	403	375	50	10	434	580	630	400	12	12	137	61



WIRING DIAGRAMS - MAXFAN COMPAC

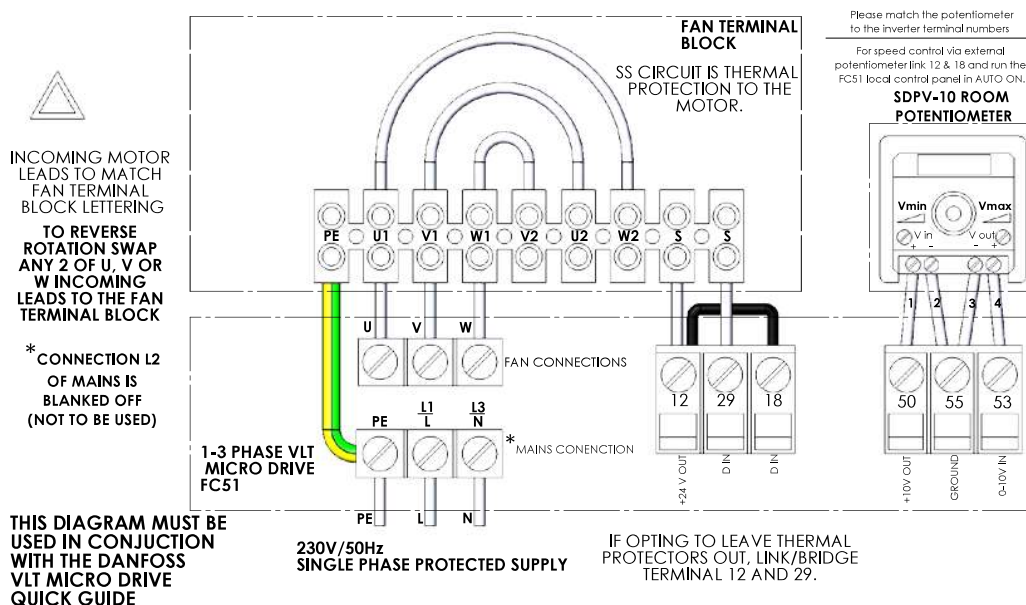
CD3042 - MAXFAN COMPAC

Mode - On hand (Speed controlled via the up and down arrows on key pad)



CD3043 - MAXFAN COMPAC INCLUDING POTENTIOMETER

Mode - Auto (Speed controlled via 0-10 volt potentiometer)



The Maxfan Compac can also be fitted using a remote switch connected between 12 & 18