

- 200mm - 760mm diameter
- Volume flow up to 9.2m³/s
- Static pressures up to 1000 Pa
- Four fan types allowing versatility of performance
- Rugged fibre glass construction casings
- Completely assembled units
- Mounting angle up to 30° slope
- Three types of mounting
- Wide range of motor options
- Commonality of appearance
- Full range of accessories available
- Inverter controllable

SIZES

DSP/DPI: 315, 355, 400, 450, 500, 630, 710mm diameter.
 DSM: 200, 250, 330, 400, 500, 630 and 760 diameter.
 DSC: 200, 250, 330, 400, 500 and 630mm diameter.
 Larger sizes are available please enquire for further details.
 DSJ Cowls are also available for use with our JM fans.
 These are available to suit the following sizes: 315, 400, 450 & 500mm diameter.

FAN PERFORMANCE

Wide performance ranges are obtained by using 3 impeller designs to suit all types of applications. DPI units for input, volume flow is reduced by 10% compared with corresponding DSP figures and are supplied without anti-backdraught shutters.

IMPELLERS

DSP/DPI: Impeller is as used in 2101GP fan. Product often used in low pressure applications.
 DSM/DSC: For higher pressure development, purpose designed mixed flow (DSM) and centrifugal (DSC) impellers are available.
 DSJ: Roof unit available with JM Aerofoil impeller. Please contact your local Express distributor for further details.

MOTORS

All motors are totally enclosed and are rated to class F. Most motors are suitable for inverter speed control down to 20% of full speed and are IE2 where within scope.

ELECTRICAL SUPPLY

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

TEMPERATURE RANGE

-40°C to 50°C without shutters.
 -20°C to 50°C with shutters.
 (All motors are not suitable for starting at temperatures lower than -20°C.)



EXPRESS RANGE

CASINGS

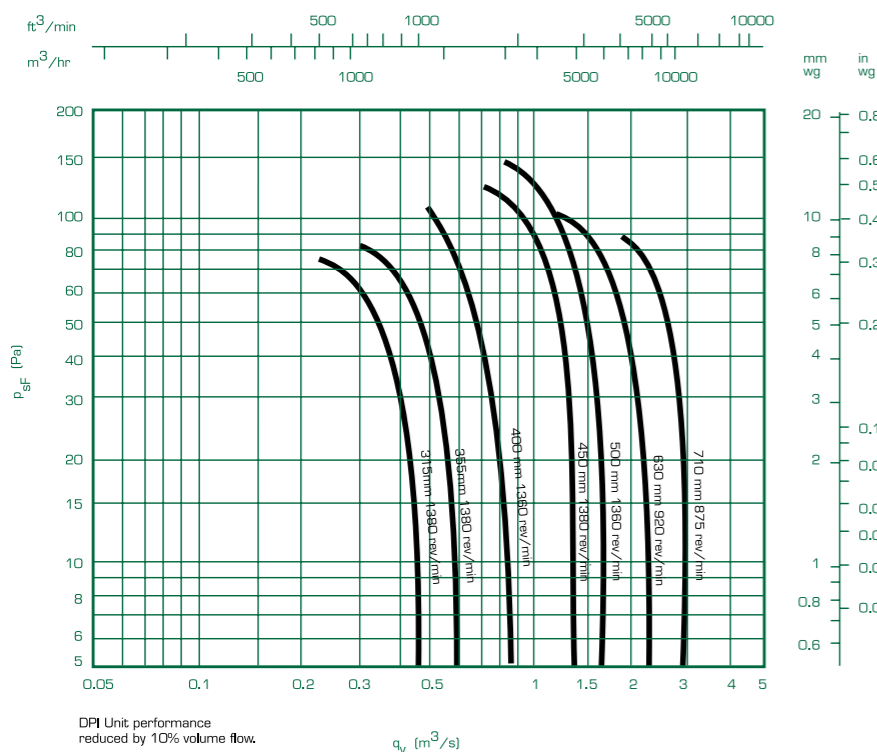
The cowls are manufactured from cold pressed fibre glass which offers long life in the severest weather conditions. The colouring contains an ultra violet stabiliser which ensures the cowls will not fade due to sunlight.

Standard colourant: BS 5252 10 A05 (Goose wing grey). The units are fully assembled, and leave our works in sturdy packaging. This allows quick and easy installation on site. Three methods of mounting, curb for a flat roof, purlin for a sloping roof or wall mounting (by using a Fläkt Woods adaptor). Suitable for mounting up to 30° from horizontal.

ACCESSORIES

Bird Guards, Soaker Sheets, Inlet Guards, Purlin Boxes, Acoustic Curbs, Local Isolators, Electronic and transformer type speed controllers and frequency inverters. For a full range of accessories please see pages 90-92.

Performance Data



Product Code	Speed rev/min	m ³ /s at Pa (Static)					
		0	25	50	75	100	125
DSP/315	1380	0.45	0.41	0.34	0.23		
DSP/355	1380	0.62	0.55	0.46	0.35		
DSP/400	1360	0.9	0.8	0.67	0.6	0.48	
DSP/450	1380	1.38	1.29	1.18	1.05	0.9	
DSP/500	1360	1.64	1.55	1.4	1.3	1.18	1
DSP/630	920	2.33	2.08	1.83	1.57	1.25	
DSP/710	875	3	2.81	2.6	2.25		

Sound pressure levels quoted are average dBA at 3m distance over a sphere, under free field conditions and are presented for comparative purposes only.

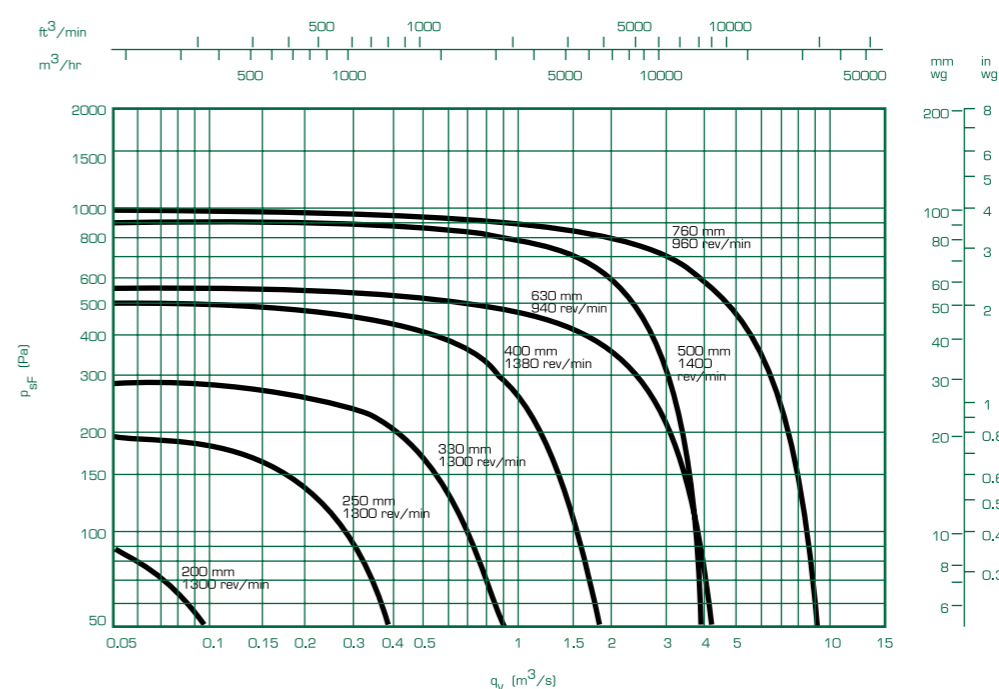
Electrical Data

Product Code	Speed rev/min	Motor	220-240V/50Hz/1 Ph							Sound Levels dBA
			Product Number	Motor Rating (kW)	Full Load Current (at 230V) (A)	Starting Current (at 230V) (A)	Wiring Diagram Ref	Speed Controller		
								Electronic	Transformer	
DSP315	1380	BT4	WD212169	0.055	0.4	0.8	CD2405	N/A	N/A	51
DSP355	1380	BT4	WD222169	0.095	0.8	1.3	CD2405	ME1.1	MT1.5	55
DSP400	1360	BT5	WD242168	0.18	1.4	2.2	CD2405	ME1.3	MT1.5	54
DSP450	1380	BT9	WD252168	0.32	2.2	5.0	CD2405	ME1.3	MT1.5	58
DSP500	1360	CT5	WD272164	0.52	3.9	7.8	CD2405	ME1.6	MT1.5	61
DSP630	920	CT9	WD303166	0.5	3.5	6.3	CD2405	ME1.6	MT1.5	60
DSP710	875	CT9	WD313166	0.54	4.0	7.8	CD2405	ME1.6	MT1.5	62

Product Code	Speed rev/min	Motor	380-420V/50Hz/3 Ph							Sound Levels dBA
			Product Number	Motor Rating (kW)	Full Load Current (at 400V) (A)	Starting Current (at 400V) (A)	Wiring Diagram Ref	Speed Controller		
								Transformer	Inverter	
DSP315	1380	BT4	WD212366	0.1	0.4	1.0	CD2408	MT3.1	FWX1	51
DSP355	1380	BT4	WD222366	0.13	0.50	1.1	CD2410	MT3.1	FWX1	55
DSP400	1360	BT9	WD242367	0.29	1.0	3.0	CD2410	MT3.1	FWX1	54
DSP450	1380	BT9	WD252368	0.29	1.0	3.0	CD2410	MT3.1	FWX1	58
DSP500	1360	CT5	WD272367	0.54	1.8	4.9	CD2410	MT3.2	FWX1	61
DSP630	920	CT9	WD303369	0.49	1.6	4.7	CD2410	MT3.2	FWX1	60
DSP710	875	CT9	WD313364	0.68	2.0	5.7	CD2410	N/A	FWX1	62

The fan noise levels shown are for the specified operating point. When an electronic controller is incorporated, a magnetic note (enhanced motor noise) can occur - particularly if the fan is operating at speeds well below maximum. For noise sensitive applications FWL recommend using an auto transformer speed controller. For larger sizes please enquire. Wiring diagrams can be found on pages 84-87. **Bold text denotes Super Express Product, next day delivery available if ordered by 4pm.**

Performance Data



Product Code	Speed rev/min	m ³ /s at Pa (Static)							
		0	50	125	200	250	375	500	750
DSM/200	1300	0.22	0.1						
DSM/250	1300	0.53	0.4	0.22					
DSM/330	1300	1.05	0.9	0.67	0.4	0.22			
DSM/400	1380	1.8	1.65	1.45	1.2	1.05	0.6		
DSM/500	1400	4.1	4.0	3.78	3.55	3.37	2.9	2.4	1.1
DSM/630	920	4.55	4.23	3.7	3.15	2.74	1.76	0.62	
DSM/760	960	9.2	8.9	8.3	7.6	7.2	6.1	4.95	2.45

Electrical Data

Product Code	Speed rev/min	Motor	220-240V/50Hz/1 Ph							Sound Levels dBA
			Product Number	Motor Rating (kW)	Full Load Current (at 230V) (A)	Starting Current (at 230V) (A)	Wiring Diagram Ref	Speed Controller		
								Electronic	Transformer	
DSM200	1300	BT4	WE162163	0.055	0.4	0.8	CD2405	N/A	N/A	45
DSM250	1300	BT4	DE182163	0.095	0.8	1.3	CD2405	ME1.1	MT1.5	51
DSM330	1300	BT5	DE232163	0.21	1.9	2.3	CD2405	ME1.3	MT1.5	56
DSM400	1380	CT5	DE242164	0.52	3.9	7.8	CD2405	ME1.6	MT1.5	61
DSM500	1400	F22	WE272164	2.3	12.3	48	CD2405	N/A	MT1.12	71

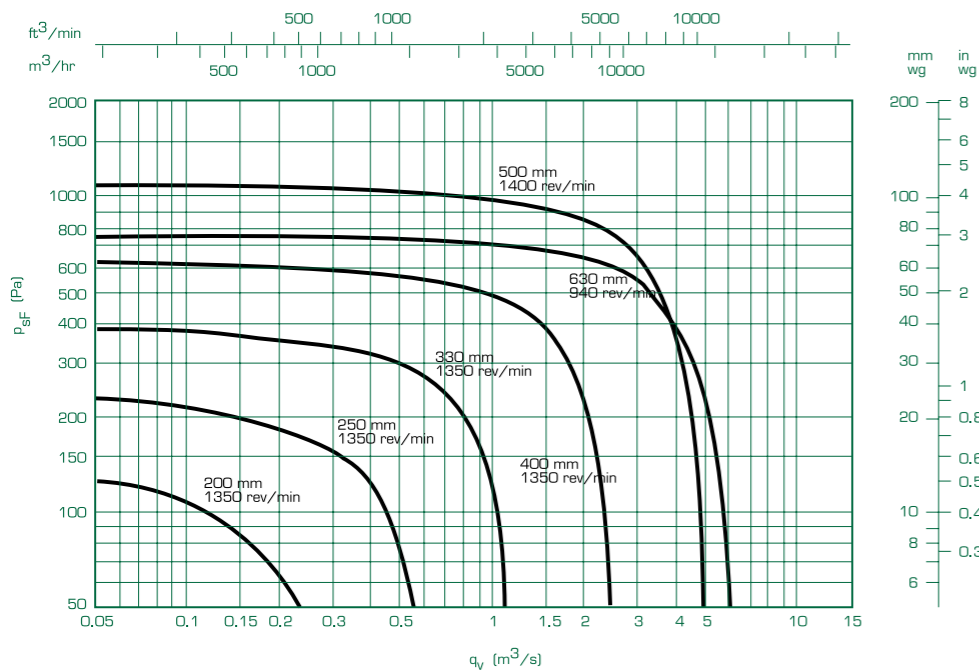
Product Code	Speed rev/min	Motor	380-420V/50Hz/3 Ph							Sound Levels dBA
			Product Number	Motor Rating (kW)	Full Load Current (at 400V) (A)	Starting Current (at 400V) (A)	Wiring Diagram Ref	Speed Controller		
								Transformer	Inverter	
DSM200	1300	BT4	WE162362	0.040	0.2	0.6	CD2408	N/A	FWX1	45
DSM250	1300	BT4	WE182362	0.13	0.5	1.1	CD2408	MT3.1	FWX1	51
DSM330	1300	BT9	WE232363	0.29	1.0	3.0	CD2407	MT3.1	FWX1	56
DSM400	1380	CT5	WE242364	0.53	1.8	4.9	CD2408	MT3.2	FWX1	61
DSM500	1400	100L	EW272364	2.64	5.49	30.82	CD2416	N/A	FWX4	71
DSM630	920	100L	EW303362	1.8	4.23	18.55	CD2416	N/A	FWX4	66
DSM760	960	132M	EW323365	6.6	14.7	81.92	CD2417	N/A	FWX6	75



EXPRESS - ROOF EXTRACT UNITS

EXPRESS - ROOF EXTRACT UNITS

Performance Data



Product Code	Speed rev/min	m³/s at Pa (Static)						
		0	50	125	200	250	500	750
DSC/200	1350	0.32	0.22	0.053				
DSC/250	1350	0.66	0.55	0.38	0.15			
DSC/330	1350	1.3	1.19	1	0.8	0.65		
DSC/400	1350	2.5	2.4	2.2	2	1.85	1	
DSC/500	1400	5.1	5	4.7	4.5	4.3	3.5	2.5
DSC/630	940	6.6	6.3	5.9	5.5	5.2	3.3	

Sound pressure levels quoted are average dBA at 3m distance over a sphere, under free field conditions and are presented for comparative purposes only.

Electrical Data

Product Code	Speed rev/min	Motor	Product Number	Motor Rating (kW)	220-240V/50Hz/1 Ph			Speed Controller		Sound Levels dBA
					Full Load Current (at 230V) (A)	Starting Current (at 230V) (A)	Wiring Diagram Ref	Electronic	Transformer	
								ME1.3	MT1.5	
DSC200	1350	BT4	WL162163	0.055	0.4	0.8	CD2405	N/A	N/A	48
DSC250	1350	BT5	DL182163	0.16	1.1	2.2	CD2405	ME1.3	MT1.5	54
DSC330	1350	CT5	DL232163	0.45	4.2	6	CD2405	ME1.6	MT1.5	60
DSC400	1350	CT9	DL242163	1.2	7.8	18.7	CD2405	ME1.12	MT1.8	66

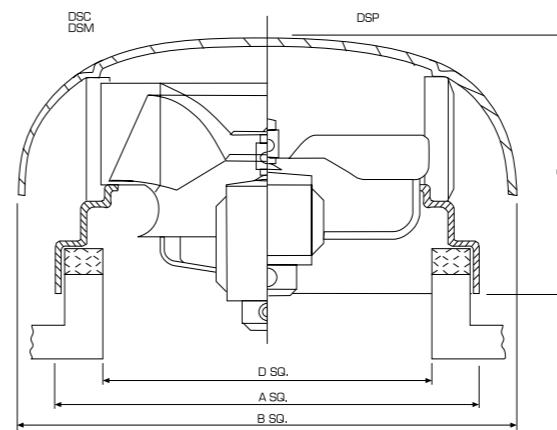
Product Code	Speed rev/min	Motor	Product Number	Motor Rating (kW)	380-420V/50Hz/3 Ph			Speed Controller		Sound Levels dBA
					Full Load Current (at 400V) (A)	Starting Current (at 400V) (A)	Wiring Diagram Ref	Transformer	Inverter	
								MT3.1	FWX1	
DSC200	1350	BT4	WL162362	0.040	0.2	0.6	CD2416	N/A	FWX1	48
DSC250	1350	BT5	WL182363	0.18	0.7	1.8	CD2408	MT3.1	FWX1	54
DSC330	1350	CT5	WL232364	0.54	1.8	4.9	CD2410	MT3.2	FWX1	60
DSC400	1350	80	LW242363	1.27	2.66	14.63	CD2416		FWX2	66
DSC500	1400	112M	LW272364	4.8	9.69	49.53	CD2417		FWX4	72
DSC630	940	132M	LW303365	4.8	10.9	56.76	CD2417		FWX5	70

The fan noise levels shown are for the specified operating point. When an electronic controller is incorporated, a magnetic note (enhanced motor noise) can occur - particularly if the fan is operating at speeds well below maximum. For noise sensitive applications FWL recommend using an auto transformer speed controller.

For larger sizes please enquire. Wiring diagrams can be found on pages 84-87.

Bold text denotes Super Express Product, next day delivery available if ordered by 4pm.

Dimensions and Drawings



All dimensions shown in mm

Product Code	Motor	DSP				Weight (kg)
		A	B	C	D	
DSP315	BT4	525	600	310	325	17
DSP355	BT4	525	600	310	325	19
DSP400	BT5/BT9	600	710	355	400	20
DSP450	BT9	700	820	400	500	27
DSP500	CT5	700	820	400	500	29
DSP630	CT9	900	1030	475	700	46
DSP710	CT9	1050	1300	550	800	50

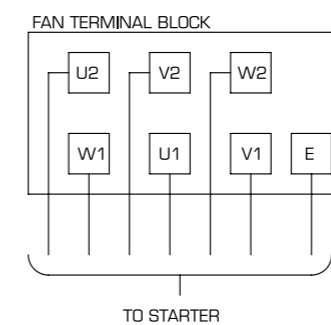
Product Code	Motor	DSM				Weight (kg)
		A	B	C	D	
DSM200	BT4	450	480	280	250	16
DSM250	BT4	525	600	310	325	20
DSM330	BT5/BT9	600	710	355	400	26
DSM400	CT5	700	820	400	500	33
DSM500	F22	900	1030	475	700	64
DSM500	100L	900	1030	475	700	69
DSM630	100L	1050	1300	550	800	86
DSM760	132	1250	1700	710	1000	129

Product Code	Motor	DSC				Weight (kg)
		A	B	C	D	
DSC200	BT4	450	480	280	250	17
DSC250	BT5	525	600	310	325	22
DSC330	CT5	600	710	355	400	28
DSC400	CT9	700	820	400	500	35
DSC400	80	700	820	400	500	40
DSC500	112M	900	1030	475	700	73
DSC630	132M	1050	1300	550	800	109

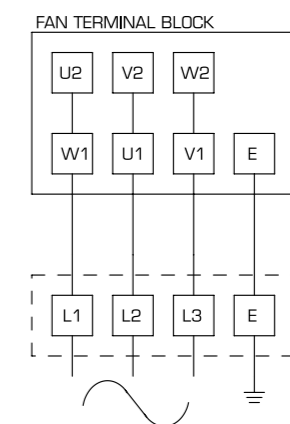
Wiring Diagrams

CD1343

Fan



CONNECT AS ABOVE FOR STAR/Delta STARTING



CONNECT AS ABOVE FOR DIRECT ONLINE

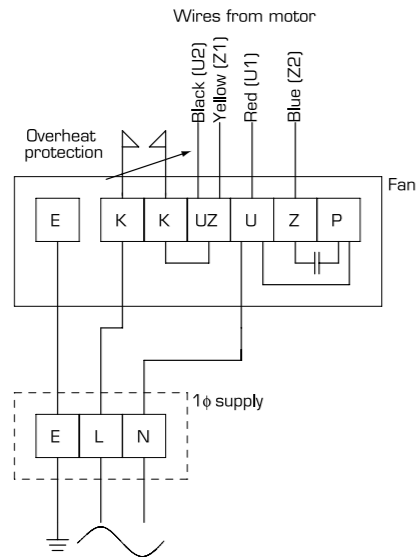
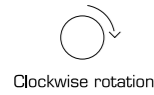
NOTE - FOR OTHER CIRCUITS IF FITTED
HH ANTI CONDENSATION HEATERS
KK OVERHEAT CUT OUT (MAX 2.5 AMPS)
SS THERMISTOR (OPERATING RESISTANCE 3KΩ)

Wiring Diagrams

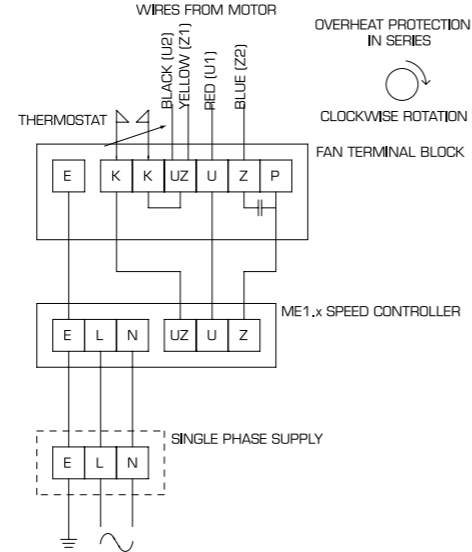
CD2405

Fan

Overheat protection in series

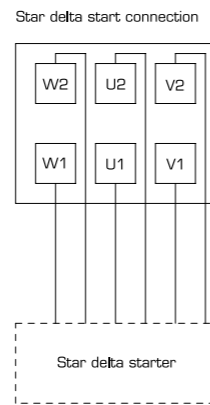
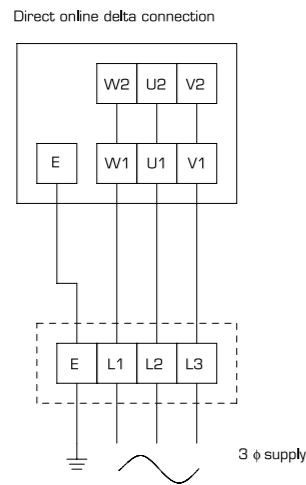
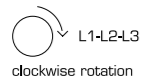


Fan + Transformer Controller



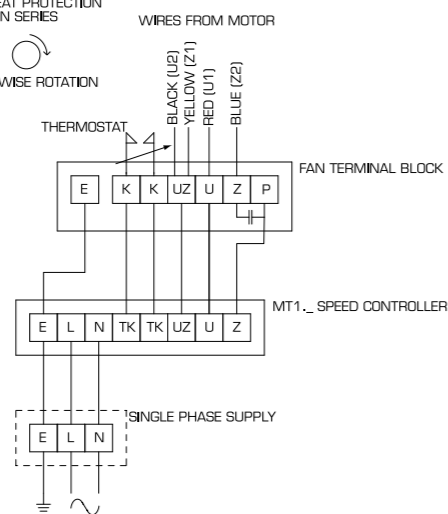
CD2385

Fan



CD2385

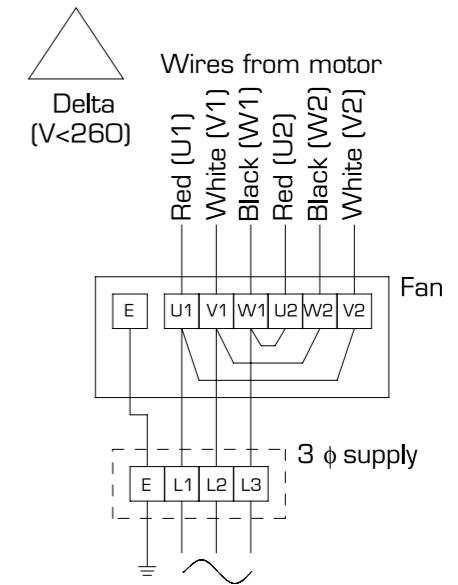
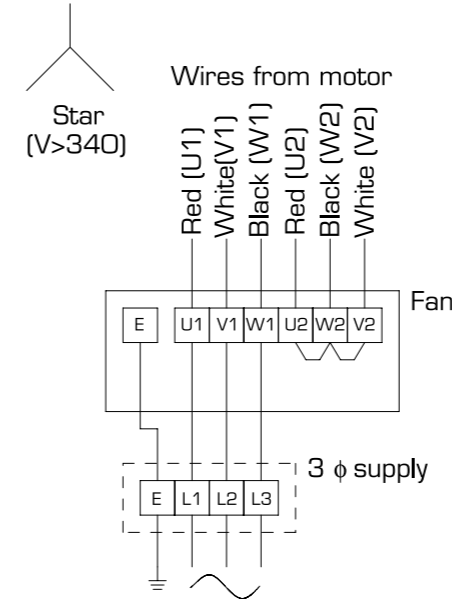
Fan + Transformer Controller



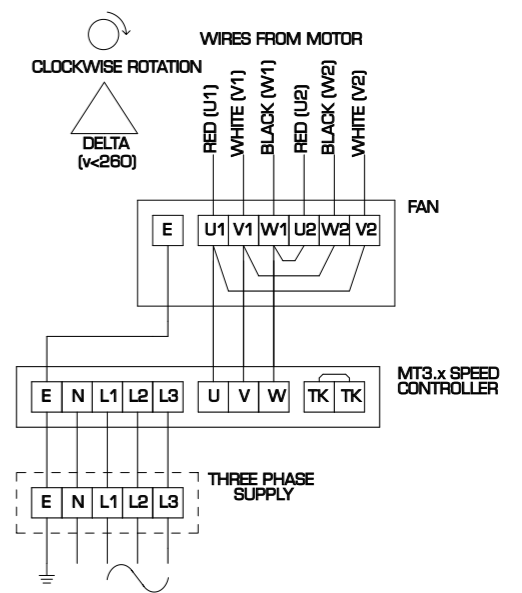
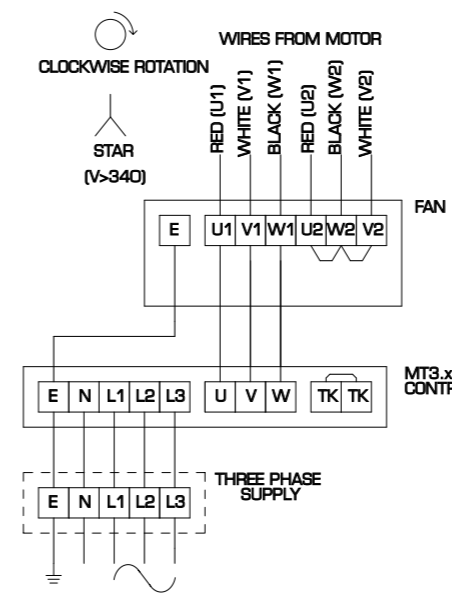
Wiring Diagrams

CD2408

Fan



Fan + Transformer Controller

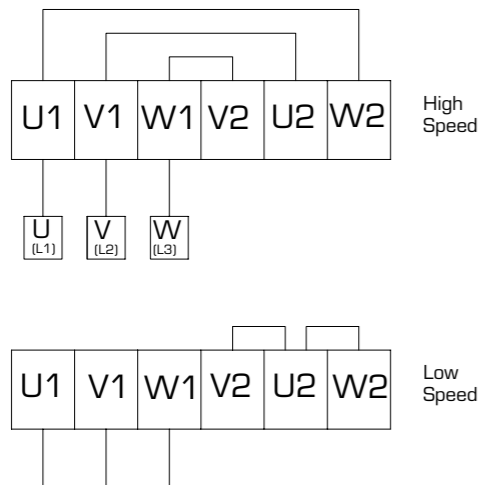


NOTE: CONNECT FAN'S THERMOSTAT ACROSS CONTROLLERS TK TERMINALS. IF FAN HAS NO THERMOSTAT CONNECT LINK ACROSS TK'S AS SHOWN.

Wiring Diagrams

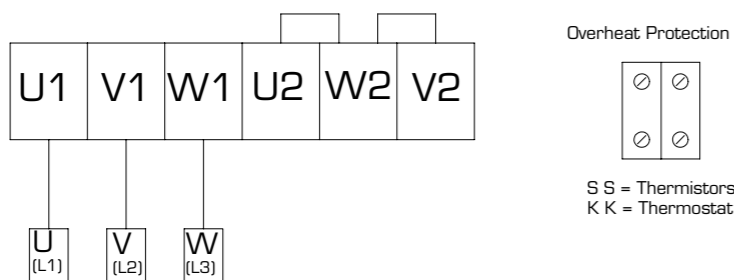
CD2410

Fan

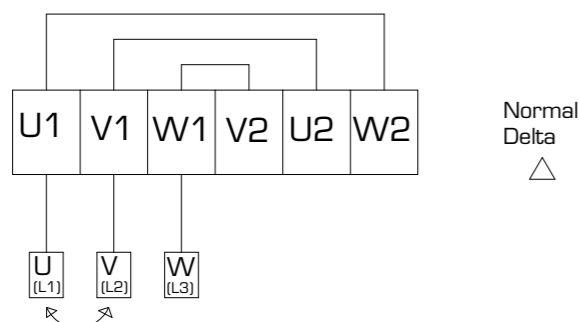


CD2416

Star

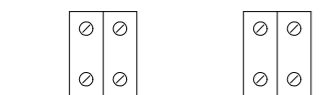


CD2417



Additional circuits when fitted

Thermal protection A/C Heaters



S S = Thermistors H H = Heaters
K K = Thermostat

* When fitted *

For ACDE rotation interchange supply leads L1 & L2

Introduction

Fläkt Woods Wall Units represent another part of the flexibility and family concept of the Colchester Roof Unit Range.

The DSP, DSM, DSC units are readily converted to the wall mounted WDP, WDM, WDC by means of a wall adaptor and louvre shutters. Performance Data may be taken from page 81 (DSP), 82 (DSM), and 83 (DSC).

The adaptor has been load tested to ensure a generous structural factor of safety enabling it to withstand all normally encountered weather conditions.

The wall unit is secured to the adaptor by stainless steel screws.

Specification

Wall Adaptor

The adaptor is moulded in ultra violet stabilised polyester resin, glass reinforced, rendered fire retardant to BS.476: Part 7. Colourant to BS.4800:08B-21 is built in.

Shutters

An attractive unit with rigid PVC vanes and aluminium frame. Operated by fan pressure, shutters are enclosed when fan stops. These replace the roof unit shutters.

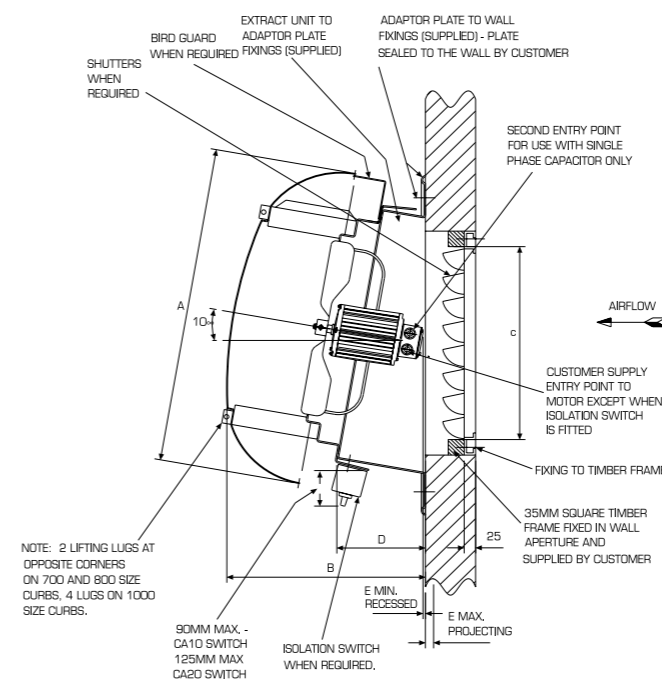
Fan performance loss is small but varies with fan type, size and duty pressure.

Shutters should only be used with the two higher fan speeds in each size.

Performance Data

Wall Unit	Max. Volume m ³ /s	Max. Static Pressure Pa
WDP	1.65	140
WDM	1.8	400
WDC	2.5	500

Dimensions and Drawings



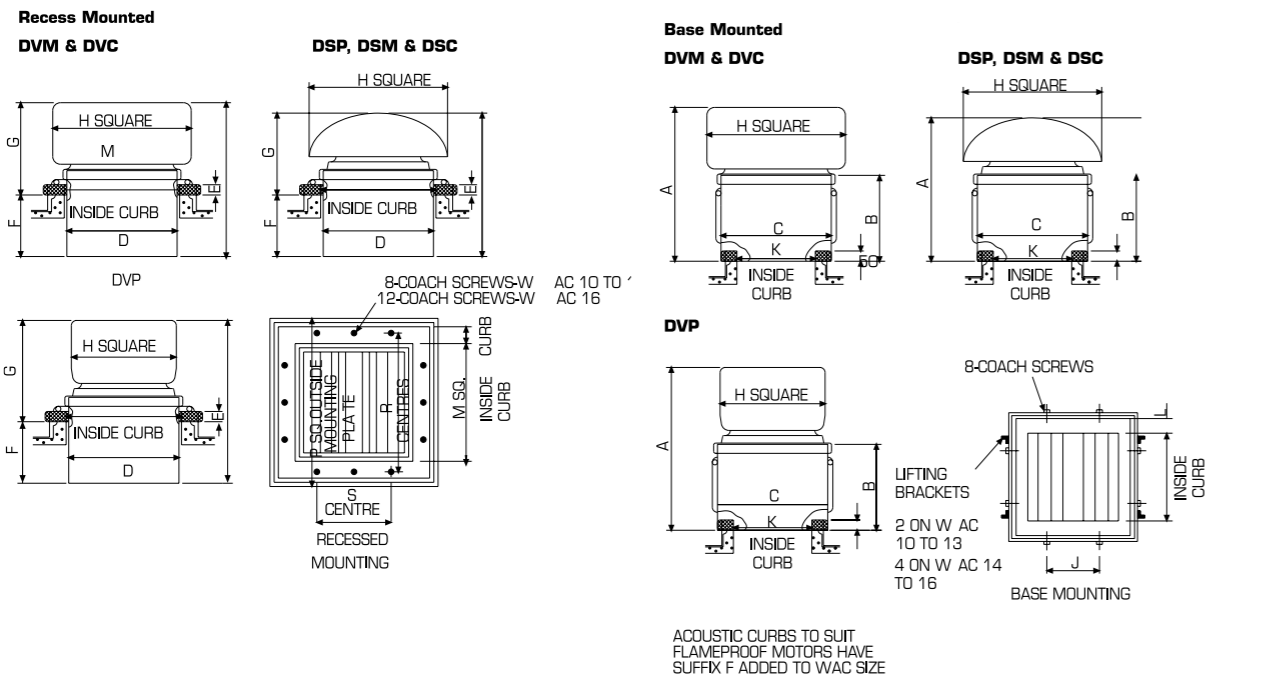
NOTE: 2 LIFTING LUGS AT OPPOSITE CORNERS ON 700 AND 800 SIZE CURBS. 4 LUGS ON 1000 SIZE CURBS.

Fan Size	A	B	C	D	E	G	H	J	Weight (Wall Adaptor) kg
WDP 250, WDM 200, WDC 200	480	347	285	168	45	270	600	355	2.4
WDP315/355, WDM 250, WDC 250	600	383	385	181	22	310	670	455	2.8
WDP 400, WDM 330, WDC 330	710	435	435	194	18	350	750	505	3.4
WDP 450/500, WDM 400, WDC 400	820	495	535	212	0	400	850	605	4

All dimensions shown in mm



Dimensions and Drawings



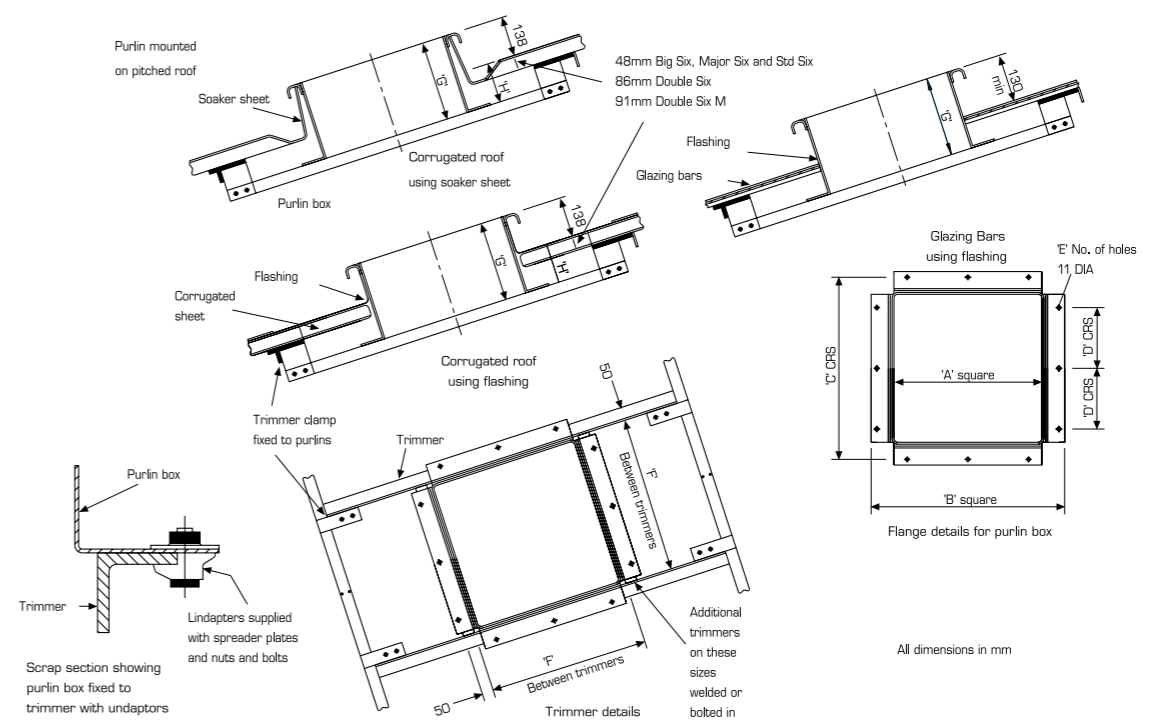
Dim	WAC10		WAC11		WAC12		WAC13		WAC14		WAC15		WAC16							
	DSP 250 DSM 250 DSC 250	DSP 315/355 DSM 250 DSC 250	DVM 250 DVC 250	DVP 355	DSP 400 DSM 330 DSC 330	DVM 330 DVC 330	DVP 400	DSP 450/500 DSM 400 DSC 400	DVM 400 DVC 400	DVP 500	DSP 500 DSM 500 DSC 500	DVM 500 DVC 500	DVP 630	DSP 630 DSM 630 DSC 630	DVM 630 DVC 630	DVP 780	DSP 780 DSM 780 DSC 780	DVM 780 DVC 780	DVP 1000	
A	708	813	875	918	888	953	993	943	1023	1073	1053	1143	1208	1228	1348	1428	1478	1558	1648	
B	500		575			60			615			650			750			840		
C	420		495			570			670			670			870			1220		
D	420		495			570			670			670			870			1220		
E	708	813	875	918	888	953	993	943	1023	1073	1053	1143	1208	1228	1348	1428	1478	1558	1648	
F	Max	330		405		435			446			480			580			670		
	Min	50		55		85			96			60			90			110		
G	Max	658	758	820	863	803	868	908	847	927	977	993	1083	1148	1138	1258	1338	1368	1448	1538
	Min	378	408	470	513	453	518	558	497	577	627	573	663	728	648	768	848	808	888	978
H	480	600	600	470	710	710	530	920	920	630	1030	1030	780	1300	1260	950	1700	1560	1180	
J	150		20			250			350			550			650			850		
K	250		325			400			500			700			800			1000		
L	75		75			75			75			75			100			100		
M	500		600			600			700			900			1200			1500		
N	75		75			75			75			100			100			100		
P	984		784			784			884			1140			1440			1740		
R	575		675			675			775			1000			1300			1600		
S	260		320			320			360			450			800			980		
Weights	18kg		25kg			31kg			37kg			55kg			74kg			109kg		
Curb Weights Recess	25kg		33kg			38kg			37kg			70kg			100kg			147kg		

All dimensions shown in mm

Dimensions & Weights

DSP	DVP	DSM DSC	DVM	DVC	A	B	C	D	E	F	G	H
250		200			345	520	475	250	8	360	272	134
315												
355	355	250	250	250	420	595	550	320	8	435	272	134
400	400	330	330	330	495	670	625	200	12	510	272	134
450	450											
500	500	400	400	400	595	770	725	250	12	610	302	164
630	630	500	500	500	792	970	925	230	16	810	322	184
710	710											
800	800	630	630	630	942	1120	1075	210	20	960	642	204
1000	1000	760	760	760	1140	1320	1275	250	20	1160	352	214

All dimensions shown in mm



Anti-backdraught shutters

Shutters are of aluminium and are an optional extra. Synthetic rubber buffers are provided to ensure quiet operation. Use of shutters does not reduce fan unit performance, but will improve weathering under extreme conditions.

Inlet Guard

A flat square wire guard can be supplied to close off the opening in a ceiling slab. See unit drawing. Fixings not supplied.

Bird Guards

Guards can be provided to prevent entry of birds via air discharge openings. Fixings supplied.

Burglar Bars

Robustly manufactured in steel, with double row of steel bars for extra security.

Motorised Dampers

To meet requirements where heat loss is critical - motorised dampers mount into the ceiling opening.

Manufactured in aluminium with opposed multi-leaf blades, supplied complete with motor.

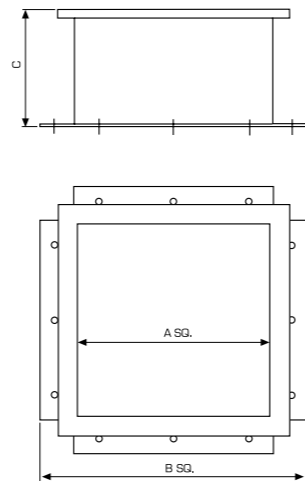
Prefabricated Metal Upstand

Where it is not convenient to form a timber or concrete upstand, Fläkt Woods can provide a preformed pre-galvanised steel curb.

Purlin Box - Roof Extract Units

Product Code DSJ	Product Number DSJ	Product Code DSP	Product Number DSP	Product Code DSM/DSC	Product Number DSM/DSC	A	B	C	Weight (kg)
		250	AS16266	200	AS16265	345	520	272	7.2
315	DA502969	315/355	AS16266	250	DA502969	420	595	272	8.8
355/400	DA502970	400	AS16267	330	DA502970	495	670	272	10.3
450/500	DA502971	450/500	AS16268	400	DA502971	595	770	302	16.2
		630	AS16269	500		792	970	322	22.6
		710/800	AS16270	630		942	1120	342	34.5
		1000		760		1140	1320	352	42.7

All dimensions shown in mm



Other Units - Roof Extract Units

High Temperature Units



Fan Type - DVA

- Vertical discharge
- 4 Unit Sizes up to 500mm to 1000mm
- Volume Flow up to 10m³/s
- Air Pressure up to 500 Pa available
- Incorporating Fläkt Woods H.T. Aerofoil Fans

Roof Input Units

Fan Type - ASP Input Units

- Three alternatives
- Part assembled for easy installation
- For flat or pitched roof
- Fresh Air Input
- Recirculation for heat recovery
- Filtration
- Heating
- Adjustable air distribution

Fan Type - DPI

- 2101 GP fan powered roof input unit
- Suitable for curb or purlin mounting
- Basic fan details as DSP unit (Less Shutters)
- Performance offered is 90% of DSP volume flow

Fan Type - DMI

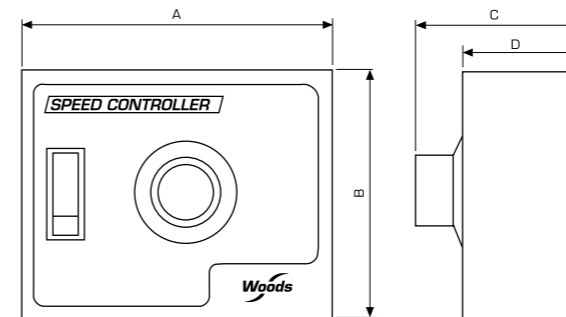
- Mixed Flow roof input unit
- Suitable for curb or purlin mounting
- Basic fan details as DSM unit (Less Shutters)
- Available in 3 sizes, 500, 700 and 1000mm only

Fan Type - MF-TAF Input Units

- Mixed Flow Roof Input Unit
- Units suitable for flat roof or sloping roof
- Bird guards are fitted as standard
- Filters can be disposable synthetic fibre or glass fibre, washable foam, 25mm or 50mm thickness
- Units available without fans.
- Available for wall mounting

Accessories

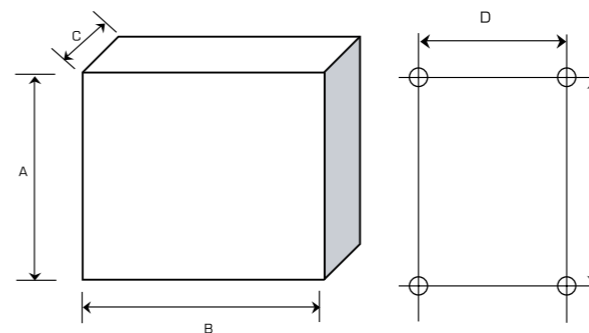
Speed Controller- Electronic



Type	Product Number	A	B	C	D
ME1.1	DA410289	104	83	55	40
ME1.3	DA410290	148	87	62	47
ME1.6	DA410291	148	87	62	47
ME1.12	DA414855	210	180	81	65

All dimensions shown in mm

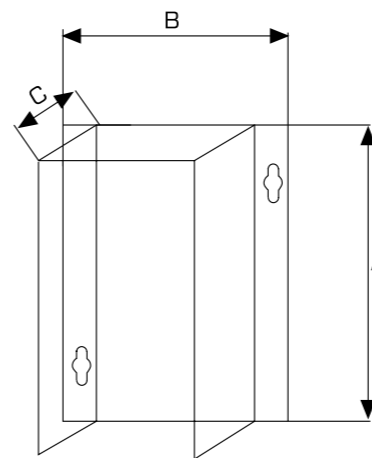
Speed Controller- Transformer



Type	Number Product	A	B	C	D	E	Max. Weight (kg)
MT1.1.5	402008	205	115	100	98	140	2.1
MT1.5	423099	255	170	140	155	194	5.5
MT1.8	402009	325	300	185	255	255	8
MT1.12	402010	325	300	185	255	255	15.6
MT3.1	402011	255	170	140	155	194	7.7
MT3.2	402012	325	300	175	255	255	12.8
MT3.7	402013	425	300	235	255	355	26

All dimensions shown in mm

Inverter



Type	Product Number	A	B	C	Weight (kg)
FWX1	430412	420	242	195	14.2
FWX2	430413	420	242	195	14.2
FWX3	430414	420	242	195	14.2
FWX4	430415	420	242	195	14.2
FWX5	430416	420	242	195	14.2
FWX6	430417	420	242	195	14.2
FWD7	416522	480	242	260	23
FWD8	416523	480	242	260	23
FWD9	416524	480	242	260	23

All dimensions shown in mm

Bold text denotes Super Express Product, next day delivery available if ordered by 4pm.