

POWERLINE Engineered for Peak Airflow Performance



The **PowerLine Series** of inline centrifugal and mixed-flow fans is designed for a wide range of duct mounted applications. They are most suitable in commercial and industrial applications where medium to high air pressure is required.



FANTECH
Intelligent Ventilation

The Powerline Range of Inline Fans

The Powerline Series of inline centrifugal and mixed-flow fans are designed for general ventilation and industrial applications where large volumes of clean air are required at medium to high pressures. Our inline centrifugal and mixed flow fans provide the performance of a centrifugal design with the space-saving advantages of an axial-type fan. With a variety of models to choose from, these fans offer the flexibility to meet the performance and application requirements at very high efficiencies.

Trusted in Australia's Most Demanding Data Environments

M2 Melbourne is a 60MW hyperscale data centre and Victoria's only Tier IV certified facility. It provides organisations with unmatched resilience and reliability 24/7, backed by NEXTDC's industry-leading 100% uptime SLA and full fault tolerance.

To support its advanced cooling requirements, over 200 Fantech Powerline inline fans were installed due to their capacity to move high volumes of air against significant pressure. This made them ideal for extended duct runs and system bends. The Powerline fans deliver stable, powerful airflow, essential for overcoming the static pressure created by ductwork, filters, and other system components in the critical infrastructure environment of this NextDC M2 data centre.

As Australia's newest and rapidly growing cloud region, M2 offers the power and direct interconnection capabilities that digital enterprises demand. It is purpose-built to accommodate high-density power and compute loads, with support for an average of up to 10kW per rack.

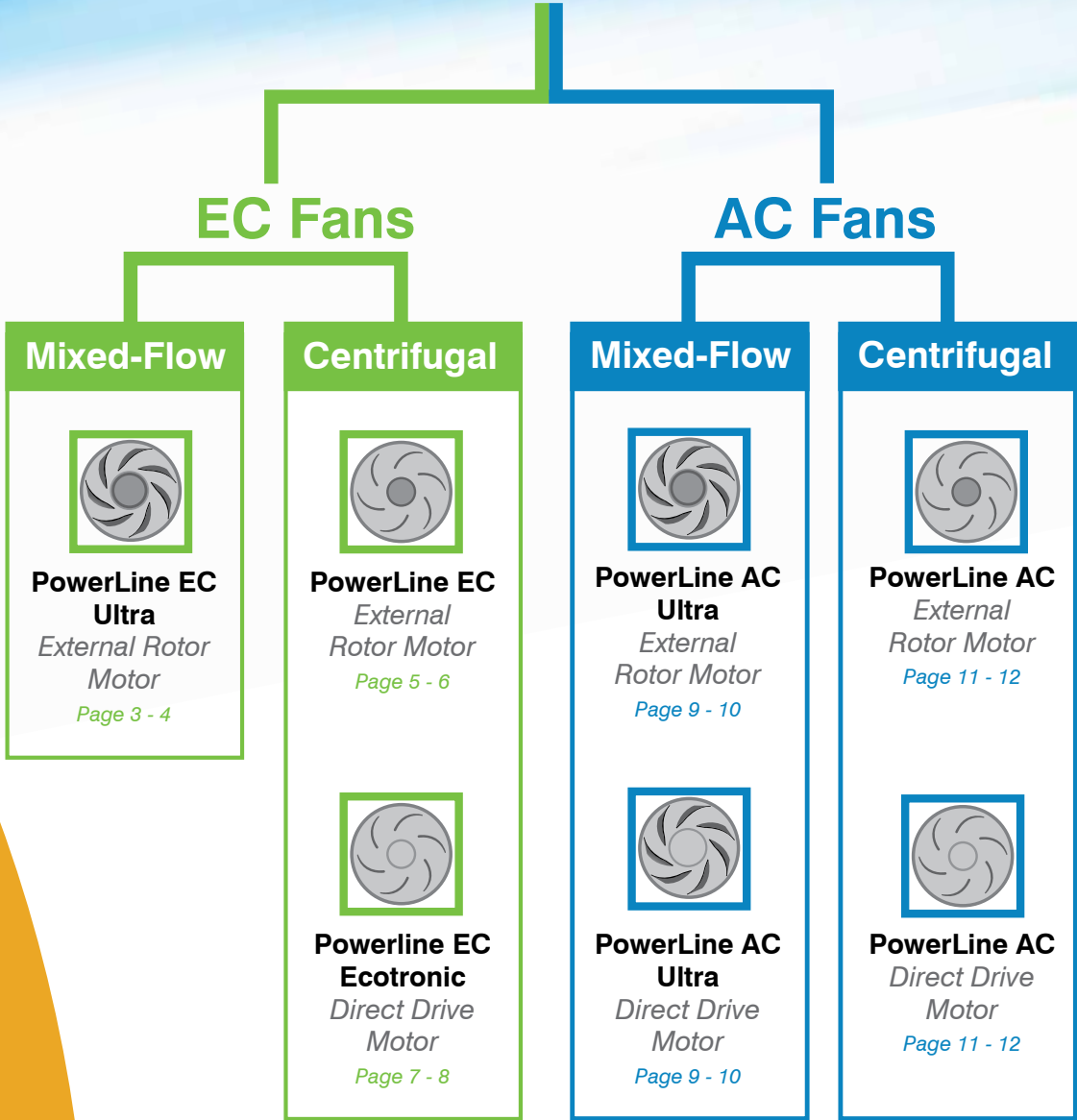
M2 sets the benchmark for operational excellence, sustainability, and energy efficiency. With a targeted PUE of just 1.28, it delivers power efficiency well above industry standards, significantly reducing energy consumption and optimising power usage throughout the facility.



M2 Melbourne Data Centre



PowerLine Quick Select



PowerLine Ultra Mixed-Flow EC

The **PowerLine Ultra** mixed-flow fan with EC external rotor motor features fully integrated, infinitely variable speed control which eliminates the need for external VSDs, current overloads and motor phase protection. Optional matching sensors monitor the ambient conditions and provide real time feedback to the fan. The fan's on-board microprocessor then adjusts its speed and therefore modulates the ventilation rate to match the specific requirements of the area. They are a simple "plug and play" system which means installers do not need to have specialised control programming knowledge.

There are eight sizes, ranging from 280mm to 630mm in diameter.



Energy
Efficient

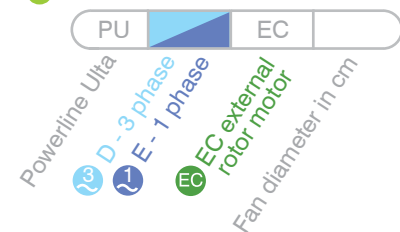


High
air flow



Low
noise

How to order



Features

- EC motor features reverse polarity protection, locked rotor protection and soft starting.
- No additional electrical protection such as contactors are required.
- All models supplied standard with 0-10V control input.
- Diameter sizes from 400mm and above can be pre-configured to suit specific sensors and specific applications.
- A full range of sensors are available including differential pressure, humidity, temperature, air velocity and pollutant.
- Can be run as an independent ventilation source or integrated into most building management systems.
- Robust, yet lightweight galvanised steel construction.
- Mixed-Flow impellers suit applications where medium to high air pressure is required.
- Easy to fit 35mm TDF profile flange connections.
- Can be mounted in any position.

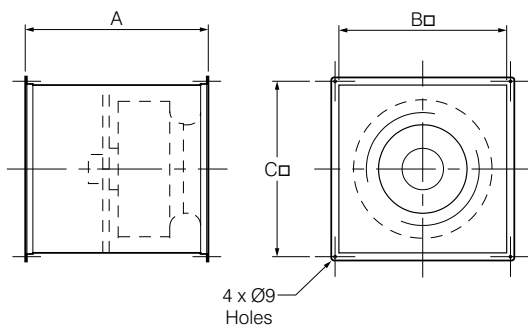


Technical Data

Model	* Max. Fan Speed rev/sec	Max. operating (Deg °C)	Avg. dB(A) @ 3m	① PUEEC.. 1 ph.		③ PUDEC.. 3ph.	
				kW	Amps	kW	Amps
PUEEC28	34	60	50	0.29	1.26	-	-
PUEEC31	35	55	56	0.55	2.42	-	-
PUEEC35	28	55	48	0.50	2.19	-	-
PUEEC40	26	55	53	0.84	3.68	-	-
PUEEC45	20	60	52	0.65	2.84	-	-
PUDEC50	23	40	58	-	-	1.40	2.21
PUDEC56	24	60	58	-	-	2.65	4.05
PUDEC63	22	40	59	-	-	3.52	5.36

* The fan will maintain the set speed whether run on 50 or 60Hz supply.
Please use Fans by Fantech Selection Program for sound power levels.

Dimensions



Model	Dimensions, mm			Approx. weight kg.
	A	B	C	
PUEEC28	350	350	383	14
PUEEC31	400	400	433	17
PUEEC35	425	450	483	20
PUEEC40	450	500	533	25
PUEEC45	475	550	583	29
PUDEC50	500	650	683	32
PUDEC56	550	725	758	54
PUDEC63	550	800	833	68



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PowerLine Centrifugal EC

The **PowerLine EC Series** of inline centrifugal fans feature an innovative, energy-efficient EC external rotor motor, making them ideal for applications with varying conditions throughout the day. They include fully integrated, infinitely variable speed control, removing the need for external VSDs, current overload protection, or motor phase protection.

They are available in 7 sizes ranging from 315 to 630mm diameter.



Integrated
variable
speed drive

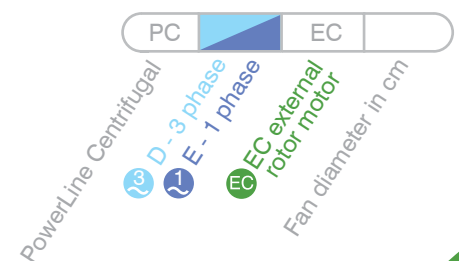


Energy
Efficient

Features

- EC motor features reverse polarity protection, locked rotor protection and soft starting.
- No additional electrical protection such as contactors are required.
- All models supplied standard with 0-10V control input.
- Diameter sizes from 450mm and above can be pre-configured to suit specific sensors and specific applications.
- A full range of sensors are available including differential pressure, humidity, temperature, air velocity and pollutant.
- Can be run as an independent ventilation source or integrated into most building management systems.
- Robust, yet lightweight galvanised steel construction.
- Centrifugal fans suit applications where medium to high air pressure is required.
- Easy to fit 35mm TDF profile flange connections.
- Can be mounted in any position.

How to order



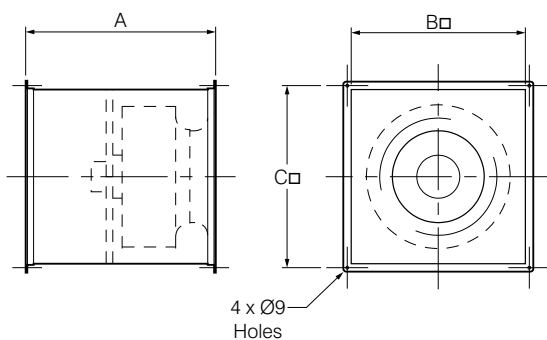
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Technical Data

Model PCDEC.. PCEEC..	* Max. Fan Speed rev/sec	Avg. dB(A) @ 3m	①		③	
			PCEEC.. 1 ph. kW	Amps	PCDEC.. 3 ph. kW	Amps
31	34	59	0.29	1.65	-	-
35	27	54	0.27	1.50	-	-
40	20	50	0.21	1.35	-	-
45	24	53	0.64	3.90	-	-
50	23	58	-	-	0.83	2.10
56	21	59	-	-	1.09	2.06
63	21	62	-	-	2.05	4.40

* The fan will maintain the set speed whether run on 50 or 60Hz supply.
Please use Fans by Fantech Selection Program for sound power levels.

Dimensions



Model PCDEC.. PCEEC..	Dimensions, mm			Approx. weight kg.
	A	B	C	
31	400	400	433	18
35	425	450	483	22
40	450	500	533	27
45	475	550	583	37
50	500	650	683	42
56	550	725	758	58
63	550	800	833	84



PowerLine ECOtronic Centrifugal EC

The **ECOtronic EC Series** of PowerLine centrifugal fans feature an IE6*-rated Electronically Commutated (EC) direct-drive motor, providing ultra energy-efficient performance with integrated variable speed control. Compatible with a range of standard control signals, the ECOtronic is easily integrated into Demand Control Ventilation systems without the need for a VSD or overload protection.

The series is available in 6 sizes ranging from 315 to 560mm diameter.



Ultra Energy
Efficient



In-built
variable
speed control

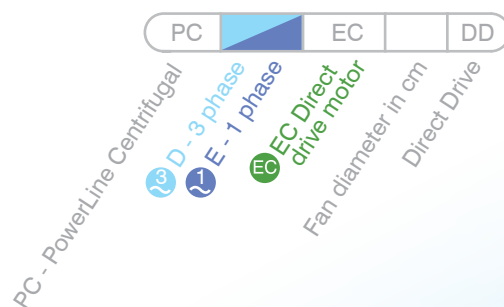


Low
noise

Features

- EC motor features reverse polarity protection, locked rotor protection and soft start
- No additional protection such as current overloads are required
- Can be manually speed controlled by pressing 2 internal motor buttons
- Can be remote speed controlled with either a 2-10V, 4-20mA, or 80-1600Hz input signal
- Can be run as an independent ventilation source or integrated into most building management systems
- On board fault identification LED will flash according to fault type
- Integrated "Fire Mode" function forces motor to continue working under adverse conditions (at full speed)
- Easy to fit 35mm TDF profile flange connections
- Robust, yet lightweight galvanised steel construction
- Operating temperature: -20 °C to +60 °C when air velocity exceeds 5 m/s, otherwise -20 °C to +40 °C

How to order



* Future IE6 level of efficiency, considering 20% less losses than IE5 according to IEC TS 60034-30-2 for variable speed electric motors.



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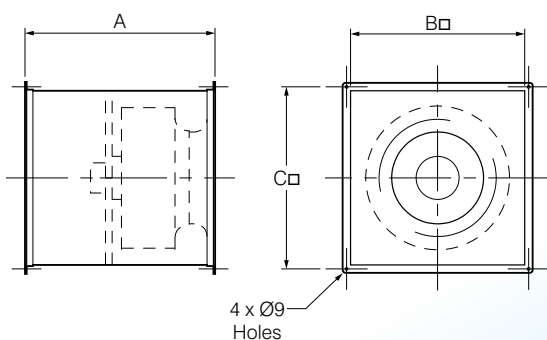
Technical Data

Model PCDEC..DD PCEEC..DD	Max. Fan Speed rev/sec*	Avg. dB(A) [#] @ 3m	① PCEEC..DD 1 ph		③ PCDEC..DD 3 ph.	
			kW	Amps	kW	Amps
31.	30	54	0.37	3.2	-	-
35.	30	58	0.55	4.2	-	-
40.	30	60	1.10	8.9	-	-
45.	25	59	-	-	1.50	2.9
50.	25	63	-	-	1.50	2.9
56.	25	67	-	-	3.00	5.7

* The fan will maintain the set speed whether run on 50 or 60Hz supply.

[#] Please use Fans By Fantech Selection Program for sound power levels.

Dimensions



Model PCDEC..DD PCEEC..DD	Dimensions, mm			Approx. weight kg.
	A	B	C	
31.	500	400	433	25
35.	550	450	483	30
40.	550	500	533	36
45.	600	550	583	50
50.	700	650	683	58
56.	800	725	758	80



PowerLine Ultra Mixed-Flow

The quiet and high performance **PowerLine Ultra** features a cutting edge mixed-flow impeller that has virtually no air redirecting losses and as a result produces a more efficient air flow. The fully optimised and compact design of the PowerLine Ultra creates higher air flow rates without increasing noise levels. This can often result in smaller model sizes meeting the required performance.

The series is available in 9 sizes, extending from 250 to 630mm diameter.



High
air flow

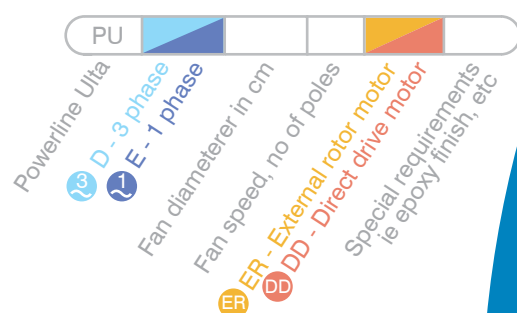


Low
noise

Features

- Robust, yet lightweight galvanised steel construction.
- Easy to fit 35mm TDF profile flange connections.
- Choice of external rotor or standard direct-drive motors.
- Large choice of speeds available.
- To improve energy efficiency, motors can be speed-controlled.
- Can be mounted in any position.
- A range of matched ancillaries is also available.

How to order



Note: Three phase, external rotor motor configuration are not available.

Technical Data

Model PUD.. PUE..	Max. Fan Speed rev/sec	PUD/PUE... AVG. dB(A) @3m [#]	1 ER PUE..ER 1ph		1 DD PUE..DD 1ph		3 DD PUD..DD 3ph
			kW	Amps	kW	Amps	kW*
254**	24	38	0.10	0.48	0.09	0.09	0.37
284**	24	40	0.13	0.66	0.09	0.09	0.37
314	23	46	0.22	1.10	0.25	1.80	0.37
316	15	36	0.09	0.48	0.12	1.05	0.37
318	13	33	-	-	-	-	-
354	23	42	0.37	1.85	0.25	1.80	0.37
356	16	33	0.12	0.56	0.12	1.05	0.37
358	13	29	-	-	-	-	-
404	22	49	0.58	2.60	0.75	4.90	0.75
406	15	40	0.28	1.35	0.18	1.55	0.37
408	11	33	-	-	-	-	-
454	23	51	1.10	5.20	-	-	1.10
456	15	40	0.37	1.75	-	-	0.37
458	9	28	-	-	-	-	-
504	21	56	1.65	7.40	-	-	1.50
506	14	48	0.54	2.50	-	-	0.55
508	11	40	-	-	-	-	-
564	22	56	-	-	-	-	3.00
566	15	48	0.84	4.20	-	-	0.75
568	13	44	-	-	-	-	-
634	24	61	-	-	-	-	5.50
636	15	50	-	-	-	-	1.10
638	12	45	-	-	-	-	-

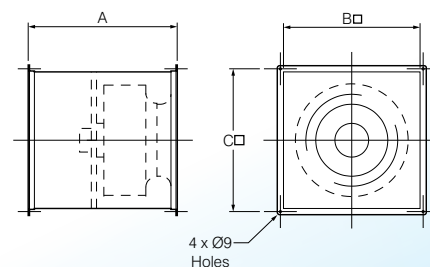
[#] Average Inlet sound level

Please use Fans By Fantech Selection Program for sound power levels.

* Amperages for standard TE motors can be obtained at time of order. Check fan name plate for exact amperage of all motors.

** Sound data for single phase external rotor motors

Dimensions



Model PUD.. PUE..	Dimensions, mm				App. wt. kg [#]
	A*	A**	B	C	
25.	430	330	325	358	27
28.	450	350	350	383	29
31.	500	400	400	433	32
35.	550	425	450	483	36
40.	550	450	500	533	48
45.	600	475	550	583	55
50.	700	500	650	683	67
56.	800	550	725	758	101
63.	850	550	800	833	138

* Fan with direct-drive motor - DD

** Fan with external rotor motor - ER

[#] Weight for fan with direct-drive motor only



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PowerLine Centrifugal

The PowerLine Series

of In-Line Centrifugal Fans is designed for a wide range of duct-mounted applications, offering a reliable and cost-effective solution for demanding ventilation needs. Ideal for commercial and industrial settings, these fans perform exceptionally well in systems requiring medium to high air pressure.

They are available in various speed options and 8 sizes, extending from 315 to 710mm diameter.

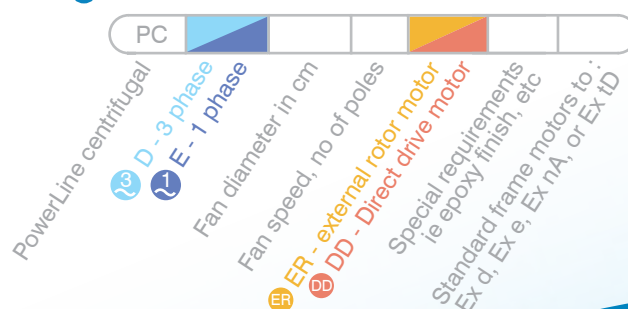


Speed
controllable
motor



Cost
effective

How to order



Note: Three phase external rotor motor configuration are not available.

Features

- Robust, yet lightweight galvanised steel construction.
- Easy to fit 35mm TDF profile flange connections.
- Choice of external rotor or standard direct-drive motors.
- Large choice of speeds available.
- To improve energy efficiency, motors can be speed-controlled
- Motors complying with Ex d, Ex e, Ex nA and Ex tD Standards can be fitted.
- Can be mounted in any position.
- A range of matched ancillaries is also available (See pages 13 and 14)



Technical Data

Model PCD.. PCE..	Nom. Speed rev/sec	PCE/D..DD Avg. dB(A) @ 3m [#]		1 ER PCE..ER. 1ph kW Amps		1 DD PCE..DD 1ph kW*		3 DD PCD..DD 3ph kW*	
		Low Air Flow	High Air Flow						
314	23	47	48	0.14	0.62	0.25		0.37	
316	15	40	42	0.08	0.57 †	-		0.37	
354	23	52	51	0.27	1.30	0.25		0.37	
356	15	43	43	0.11	0.49	-		0.37	
404	23	56	54	0.43	1.90	0.55		0.37	
406	15	44	44	0.17	0.83	-		0.37	
408	11	39	40	-	-	-		-	
454	21	59	57	0.77	3.60	0.75		0.75	
456	15	47	46	0.30	1.40	-		0.37	
458	11	41	43	-	-	-		-	
504	23	62	61	1.30	5.80	1.50		1.10	
506	15	50	50	0.48	2.40	-		0.37	
508	11	43	45	0.21	0.99	-		-	
564	23	65	65	-	-	-		2.20	
566	15	54	54	0.66	3.00	-		0.55	
568	11	44	47	0.35	1.65	-		-	
634	23	69	70	-	-	-		4.00	
636	15	60	58	-	-	-		1.10	
638	11	46	50	-	-	-		0.55	
716	15	63	61	-	-	-		2.20	
718	11	48	53	-	-	-		1.10	
711	9	41	46	-	-	-		-	

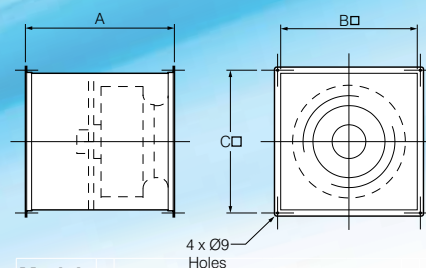
* Amperages for standard TE motors can be obtained at time of order. Check fan nameplate for exact amperages of all motors.

† The PCE316ER unit is not speed controllable.

[#] Average Inlet sound level

Please use Fans By Fantech Selection Program for sound power levels.

Dimensions



Model PCD.. PCE..	Dimensions, mm				App. wt. kg [#]
	A*	A**	B	C	
31.	500	400	400	433	36
35.	550	425	450	483	40
40.	550	450	500	533	42
45.	600	475	550	583	54
50.	700	500	650	683	67
56.	800	550	725	758	95
63.	850	550	800	833	117
71.	900	600	900	933	132

* Fan with direct-drive motor - DD

** Fan with external rotor motor - ER

[#] Weight for fan with direct-drive motor only



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Ancillaries

Fantech offers a range of ancillaries that are compatible with the PowerLine AC and EC ranges.

For more information on our ancillaries, visit the ancillaries section on the Fantech website.



Vibration Isolators



Fantech offers a comprehensive range of vibration isolators designed to minimise the transfer of noise and vibration from fans to building structures. These isolators support, suspend, and isolate equipment while also helping to protect it from damage during seismic events.

Inline Fan Mounting Feet



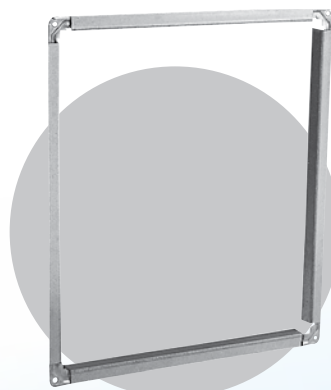
These in-line mounting feet are designed to support the assemblies in a horizontal plane. If feet are required to support the fans in a vertical plane please contact Fantech.

Speed Controller



A range of electronic speed controllers are available for manual fan speed adjustment, including 0–10V controllers compatible with EC fans, VSDs, or any device that accepts a 0–10V control signal. Options include wall-mounted switch plates and standalone controllers suitable for installation on or near the fan enclosure.

Matching Flanges



Fabricated from folded galvanised sheet metal, these in-line flanges are designed to match the end flanges of the PowerLine. Dimensions are provided with the corresponding fan specifications.

Danfoss VLT HVAC Drive FC 102



The VLT HVAC FC 102 Drive is designed to bring optimised process control to all heating, ventilation and air conditioning applications. This drive is supplied with built-in smarts that reduce installation costs and features a trouble-free set up to ensure fast and efficient commission. It uses a wide range of functions specifically developed for HVAC fans, pumps, and compressors to save energy and meet environmental regulations.

Features

- Onboard Smart Logic Controller removes need for an external PLC.
- Fire Mode with 8 speeds for continuous vital fan operation regardless of control signals, warnings or alarms.
- Built-in RFI filters to remove electromagnetic interference and lower harmonic levels.
- DC choke to mitigate harmonics and balance voltage drops and spikes.
- Thermistor input to prevent motors from overheating.
- Range of Option Cards available.
- IP55/UL Type 12 or IP66/UL Type 4X class protection enclosures.

Danfoss VLT HVAC Drive FC 131



The VLT HVAC FC 131 is a dedicated drive designed to work with heating, ventilation, and air conditioning systems. The drive is easy to install and features a trouble-free set up which ensures fast and efficient commissioning. It incorporates a highly effective heat management system that makes it ideal for demanding environments and where drive space is restricted.

Features

- Integrated fan / pump control for a more efficient startup.
- Normal operation or switch to special operation mode with up to 16 different zones in two setups
- Built-in PI controller for smooth variable speed control.
- Fire Mode for continuous vital fan operation regardless of control signals, warnings or alarms.
- Built-in RFI filters to remove electromagnetic interference and lower harmonic levels.
- DC choke to mitigate harmonics and balance voltage drops and spikes.
- Thermistor input to prevent motors from overheating.
- IP54 class protection enclosure.

Pressure Controller



The sensor control module for differential pressure measures and indicates the pressure or, optionally, the volume flow in a ventilation system. The calculation of the volume flow is performed by entering the K-factor of the fan inlet ring.

Features

- Quick and easy to install and commission
- Pre-set parameters to control a EC fan's speed in proportion to demand
- 10-24V DC Supply Voltage
- 0-10V DC Output Signal
- 2 x Setpoints selectable via Digital Input

Temperature Controller



The temperature controller combined with matching sensors can be used in a range of applications including extraction and supply air systems.

Features

- Quick and easy to install and commission
- Pre-set parameters to control an EC fan's speed in proportion to demand
- 10-24V DC Supply Voltage
- 0-10V DC Output Signal
- 2 x Setpoints selectable via Digital Input
- Requires additional KTY 81-210 or PT 1000 type sensor for temperature sensing



FANTECH

Intelligent Ventilation

Fantech Pty. Ltd.

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