POWERLINE® DOUBLE SKIN SERIES

In-line Centrifugal Fan

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Description

The PowerLine Double Skin Series of In-Line Centrifugal 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. They are available in various speed options and 8 sizes, extending from 315 to 710mm diameter.

Typical Applications

Commercial and industrial supply or exhaust air applications such as shopping centres, office buildings, exhibition centres, hotels, health centres, schools and universities.

Features

- Corrosion resistant aluminum frame with fibreglass reinforced corners for strength and durability.
- Unit is constricted from double insulated panels filled with 25mm polyurethane (PU) insulation reducing.
- Removable side panel, provides easy access of onsite inspection and maintenance.
- Standard direct-drive TEFC 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.
- A range of matched ancillaries is also available.

Construction

The casing shall be constructed from self-supporting corrosion-resistant extruded aluminium section assembled with fibreglass reinforced corners and 25mm thick double skinned panels. Double skin panels are manufactured from pre-painted galvanised steel for outer skin and pre-galvanised steel inner skin, in-filled with Polyurethane (PU) injected insulation.

Backward-curved centrifugal impellers. Impellers are made from aluminum.

Motor

- Supplied with direct-drive TEFC motors.
- Electricity supply - single or three-phase to suit a wide range of voltages and frequencies.
- Ball Bearing - sealed for life.
- Standard direct-drive TEFC motors can be single or multi-speed and can be speed-controlled using a variable speed drive.
- See pages O-3/4 for details on standard direct-drive TEFC motors.
- If standard frame motors complying with Ex d, Ex e, Ex nA and Ex tD Standards are required, selection can be made from these pages.

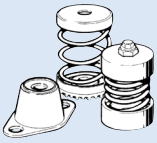
Internal Thermal Protection

Optional extra on standard frame motors.

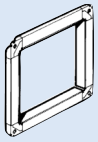
Testing

- Airflow tests to ISO5801:2007
- Noise tests to BS848:Part 2, 1985
  *Performance tests & data are based on PowerLine Series

Ancillary Equipment

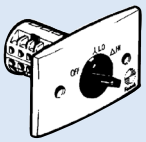


Vibration Isolators
Ref. *Section I*



POW - Matching Flanges
Ref. *Section J*

VA - Speed controller
Ref. *Section M*



SD - Star/Delta switch
Ref. *Section M*

Variable speed drives
Ref. *Section M*

Suggestion Specification

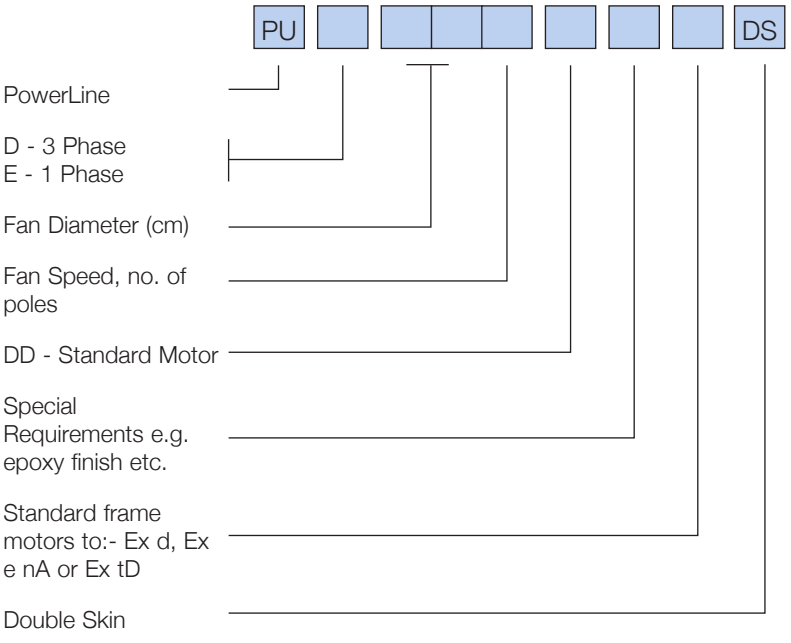
The duct mounted fans shall be of the In-line Centrifugal PowerLine Double Skin Series as designed and manufactured by Elta Fans and be of the model numbers shown on the schedule/drawings.

They shall include double skin cabinet housing with 25mm PU injected panels.

The backward-curved centrifugal impellers driven by standard direct-drive motors as nominated.

All performance data shall be for a complete assembled unit based on ISO5801 for air flow and BS848: Part 2, 1985 or ISO13347-3 for noise.
*Performance tests & data are based on PowerLine Double Skin Series

Suggestion Specification



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Additional Information

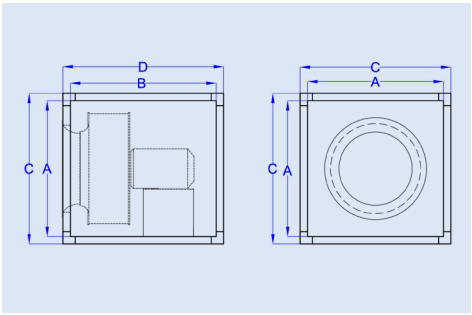
Performance curves shown are based on nominal speeds.

As motor speeds may vary from one manufacturer to another, and from one motor type to another, it is possible actual fan speeds may differ and, therefore, the performance of the fan.

For external rotor motor performance refer to Intelligent Ventilation Selection Program.

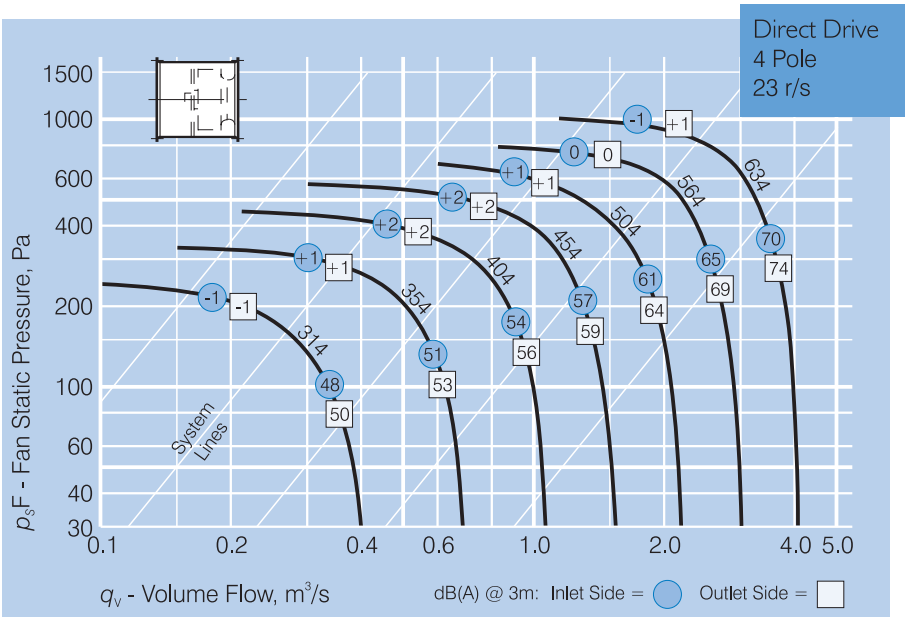
*Performance tests & data are based on PowerLine Series

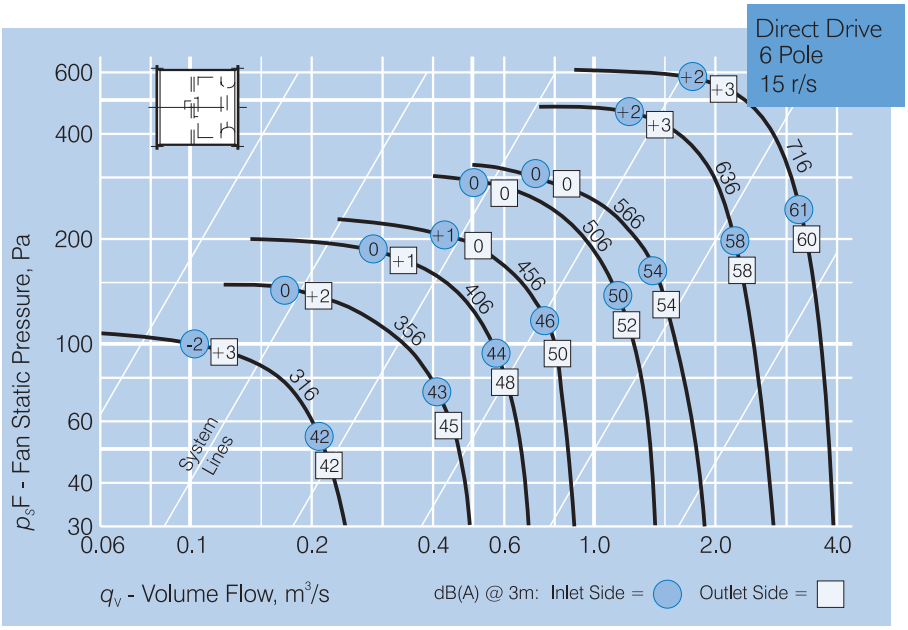
Dimensions

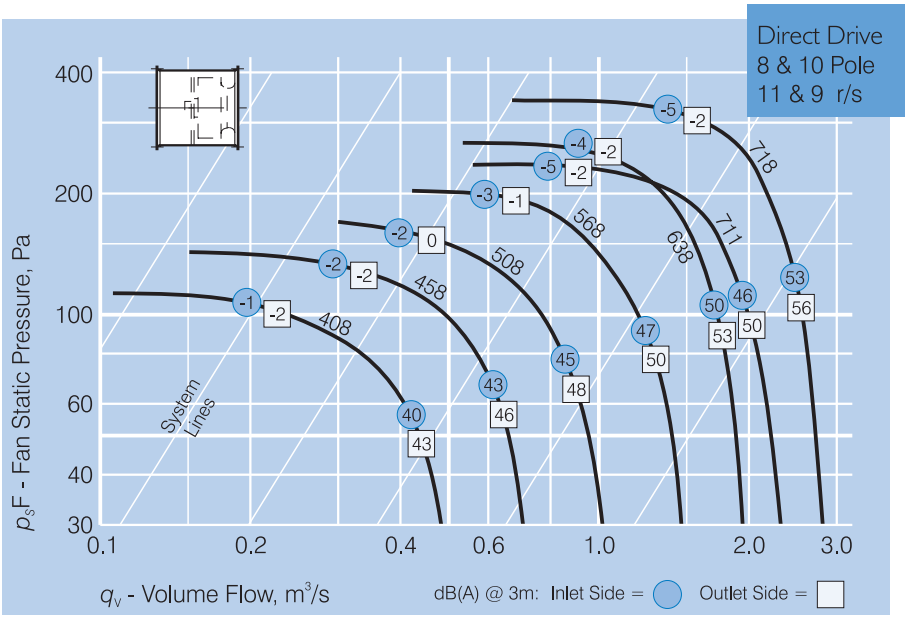


Model PCD...DD-DS PCE...DD-DS	Dimensions, mm A□	B	C□	D	App. wt. kg#
31.	400	460	460	520	36
35.	450	510	510	570	40
40.	500	510	560	570	42
45.	550	560	610	620	54
50.	650	660	710	720	67
56.	725	760	785	820	95
63.	800	810	860	870	117
71.	900	860	960	920	132

*Dimensions exluding matching flange







POWERLINE® DOUBLE SKIN SERIES

Technical Data & Noise Levels

Model PCD...DD-DS PCE...DD-DS	Nom. speed, rev/sec		PCE/D...DD-DS Avg. dB(A) @ 3m Low Air Flow	High Air Flow	PCE/D...DD-DS 1 ph. kW*	3 ph. kW*	In-Duct Spectrum Corrections, dB** 63	125	250	500	1k	2k	4k	8k
		Inlet	47	48	0.25	0.37	35	29	21	18	10	10	8	2
314	23	Outlet	49	50			31	25	19	19	14	12	7	0
		Inlet	40	42	-	0.37	34	26	22	18	12	12	6	0
316	15	Outlet	45	42			31	27	18	18	16	11	7	3
		Inlet	52	51	0.25	0.37	28	26	22	19	10	12	11	1
354	23	Outlet	54	53			24	27	16	17	16	14	8	1
		Inlet	43	43	-	0.37	33	25	22	19	14	8	3	0
356	15	Outlet	47	45			31	27	18	18	16	11	7	3
		Inlet	56	54	0.55	0.37	28	26	21	18	11	12	12	5
404	23	Outlet	58	56			26	26	17	17	16	13	10	6
		Inlet	44	44	-	0.37	33	28	22	19	14	10	7	3
406	15	Outlet	49	48			27	24	17	17	15	12	9	1
		Inlet	39	40	-	-	33	26	19	16	14	14	12	3
408	11	Outlet	41	43			30	23	16	15	16	15	11	1
		Inlet	59	57	0.75	0.75	27	25	20	17	11	12	12	8
454	23	Outlet	61	59			28	24	17	17	16	12	11	10
		Inlet	47	46	-	0.37	31	30	21	18	13	11	9	5
456	15	Outlet	50	50			24	22	17	16	15	13	11	0
		Inlet	41	43	-	-	33	26	19	16	14	14	12	3
458	11	Outlet	44	46			30	23	16	15	16	15	11	1
		Inlet	62	61	1.50	1.10	26	26	21	15	12	12	12	9
504	23	Outlet	65	64			26	24	17	16	16	10	9	8
		Inlet	50	50	-	0.37	30	29	22	16	12	10	8	6
506	15	Outlet	52	52			27	25	18	17	16	13	11	2
		Inlet	43	45	-	-	32	26	20	16	14	13	12	4
508	11	Outlet	48	48			32	24	17	16	16	14	11	1
		Inlet	65	65	-	2.20	26	27	23	14	13	12	12	10
564	23	Outlet	69	69			25	25	17	16	17	8	8	7
		Inlet	54	54	-	0.55	29	29	23	15	12	10	8	7
566	15	Outlet	54	54			30	27	19	17	16	12	10	3
		Inlet	44	47	-	-	30	27	22	15	15	11	11	6
568	11	Outlet	49	50			33	24	18	17	16	13	10	1
		Inlet	69	70	-	4.00	24	28	24	12	13	11	12	10
634	23	Outlet	75	74			24	27	18	16	18	7	7	7
		Inlet	60	58	-	1.10	28	29	24	14	12	10	8	8
636	15	Outlet	61	58			32	28	19	17	15	11	8	4
		Inlet	46	50	-	0.55	28	27	23	14	14	9	10	6
638	11	Outlet	51	53			34	24	18	17	16	11	9	0
		Inlet	63	61	-	2.20	28	29	24	14	12	10	8	8
716	15	Outlet	63	60			32	28	19	17	15	11	8	4
		Inlet	48	53	-	1.10	28	27	23	14	14	9	10	6
718	11	Outlet	54	56			34	24	18	17	16	11	9	0
		Inlet	41	46	-	-	28	27	23	14	14	9	10	6
711	9	Outlet	48	50			34	24	18	17	16	11	9	0

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

** Add the In-Duct Spectrum Corrections to the appropriate dB(A) level to obtain the In-Duct Sound Power Level. Note: there are noise levels for both the Inlet and Outlet Sides of the Units.

*** Test and Performance data are based on Powerline Series.

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PDSS-07-2025 Issue A