Power-Line (TDF)

- Direct Drive Twin Fan (Run & standby)
- Backward Curved Radial Impellors
- Performance range up to 3.5m^3/s
- Static Pressure Development up to 500Pa
- Speed Controllable
- Quality assured to BS EN ISO 9001
- Performance listed to BS 848 Part 1

The TDF range uses twin backward curved radial impellors (Run & Standby) and is designed for induct installations.

Casings

Robustly constructed from aluzinc sheet steel, fitted with proprietary flanges at each end in accordance with DW142.

Impellers

Aerodynamically designed backward curved radial impeller constructed in a moulded GRP reinforced Polypropylene to suit the performance requirements.

The rotor of the external rotor motor forms the hub of the impeller. Rotors and impellers are factory matched and statically and dynamically balanced on precision machines according to VDI2060 quality class Q6.3.

Motors

Maintenance free external rotor motors with generously dimensioned sealed for life ball bearings encapsulating a high temperature lubricant. The bearings allow for the fan to be mounted at any angle.

Insulation is Class B with the enclosure IP44 according to DIN 40050. The electrical design corresponds to VDE 0530/12.84. The motors are suitable for operation in atmosphere up to 95% RH and ambients up to 40°C.

Motors are wound to suit either 240V 50HZ 1PH or 415V 50HZ 3PH electrical supply. All motors are fitted with Hot Spot protection by means of a thermal contact switch incorporated in the motor windings to prevent motor damage due to overloading. As the motors have a special torque-speed characteristic they are ideally suited for speed control by voltage reduction.

Performance

Performance figures given have been tested using installation Type 'D' in accordance with BS848 Part 1 1980 and BS848 Part 2 1985. The aerodynamic performance data being to tolerance Class 'C' as recommended by BSI C.A.M.E Scheme, Certification No CM005.

Sound Levels

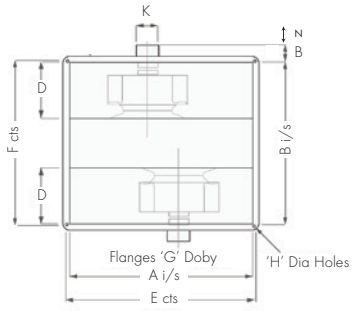
Sound Levels are measured in a reverberant chamber in accordance with BS848 Part 2. Sound level measurements are taken with the fan operating at 20% of its maximum pressure development.

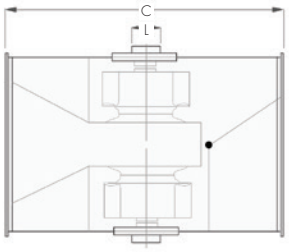
Published dBA figures are sound pressure levels measured at a distance of 3m with spherical sound level propagation. It is included for comparative purposes only and the real sound level experienced will depend on the acoustic characteristics of the area being served.

Quality Assurance

Design and manufacture is in accordance with Quality Assured to BS EN ISO9001.

Fan Dimensions (mm)

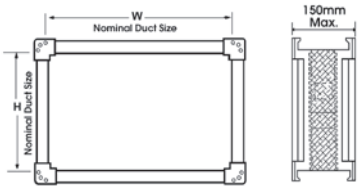




Unit Size	A	B	C	D	E	F	G	H	J	K	L	N	Max Weight kg
320	500	655	900	230	525	680	30	9	50	150	130	220	65
380	550	745	1015	260	585	780	30	11	50	160	130	240	75
420	625	830	1130	295	600	865	30	11	50	230	230	220	103
480	700	925	1250	325	735	960	30	11	65	230	230	300	112
520	775	1055	1385	355	810	1090	30	11	50	230	230	350	145
600	850	1200	1530	400	885	1235	30	11	55	230	230	400	180

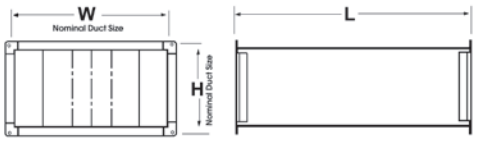
Note: For motor removal allow D+J minimum clearance

Power Line TDF Flexible Connections



	Dimensions (mm)		
Unit Code	W	H	Doby Flange
320	500	655	30
380	550	745	30
420	625	830	30
480	700	925	30
520	775	1055	30
600	850	1200	30

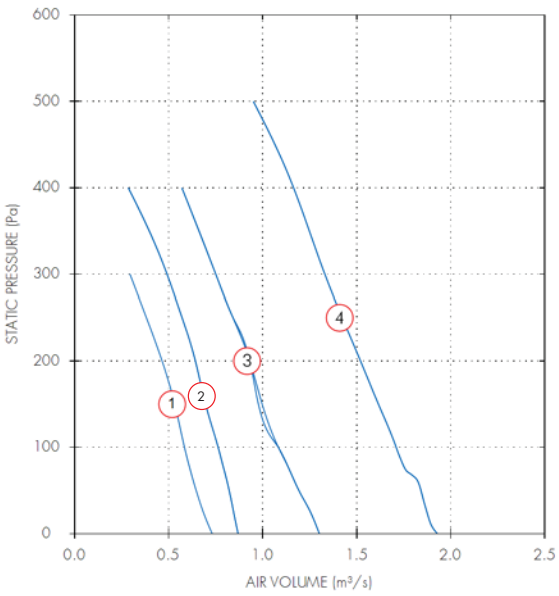
Power Line TDF Attenuators



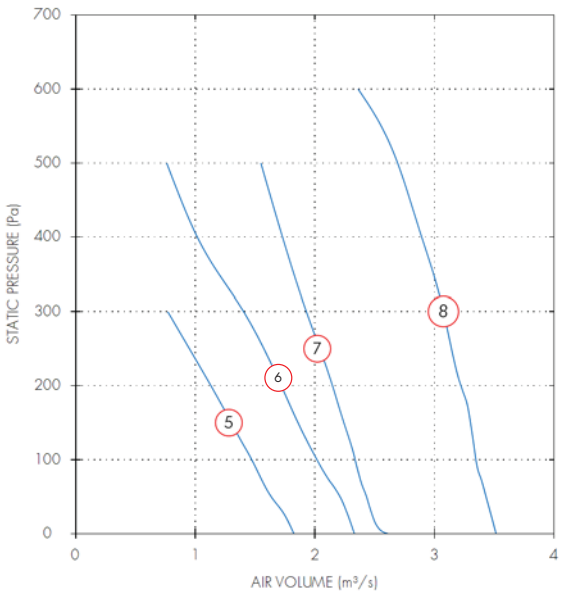
Unit Code RUTDS	W	L	H	Doby	Weight kg
320	500	900	655	30	30
380	550	1200	745	30	62
420	625	1200	830	30	70
480	700	1500	925	30	96
520	775	1500	1055	30	110
600	850	1800	1200	30	150

Performance Curve

TDF220 to TDF480 - 1 & 3 Phase - 4 Pole



TDF220 to TDF280 - 3 Phase - 4 & 6 Pole



Performance Guide

Unit Size	Motor Phase	Stock Ref	r.p.m	Curve Ref.	Airflow, m³/s @ Pa 0	100	200	300	400	500	600	Motor kW	S.C. Amps	F.L.C Amps	dBA @ 3m
320	1	TDF32014	1390	1	0.73	0.58	0.46	0.29				0.37	5.5	1.85	58
380	1	TDF38014	1270	2	0.87	0.76	0.64	0.49	0.28			0.58	6	2.6	59
380	3	TDF38034	1290	2	0.87	0.76	0.64	0.49	0.28			0.54	4.2	1.2	59
420	1	TDF42014	1380	3	1.3	1.08	0.93	0.75	0.57			1.1	17	5.2	61
420	3	TDF42034	1370	3	1.3	1.08	0.93	0.75	0.57			1	9.5	1.95	61
480	1	TDF48014	1350	4	1.93	1.71	1.52	1.33	1.16	0.95		1.65	22	7.4	66
480	3	TDF48034	1280	4	1.93	1.71	1.52	1.33	1.16	0.95		1.45	9.5	2.8	66
520	3	TDF52034	1330	6	2.61	2.34	2.15	1.93	1.73	1.55		2.5	22	4.6	67
520	3	TDF52036	920	5	1.82	1.47	1.13	0.77				0.86	9	2.2	55
600	3	TDF60034	1425	8	3.52	3.35	3.22	3.07	2.89	2.69	2.36	3.9	26	6.6	70
600	3	TDF60036	925	7	2.33	2.02	1.72	1.4	1.02	0.76		1.2	17	2.7	56

Sound Power Level Spectra dB (re 10^{-12} Watts)

Unit Size	Stock Ref	Spectrum	63	125	250	500	1k	2k	4k	8k	dBA @ 3m
320	TDF32014	Inlet	65	84	79	77	73	70	65	58	58
320	TDF32014	Outlet	65	84	79	77	73	70	65	58	58
320	TDF32014	Breakout	65	69	64	62	58	55	50	43	43
380	TDF38014	Inlet	66	84	78	79	75	71	66	59	60
380	TDF38014	Outlet	66	84	78	79	75	71	66	59	60
380	TDF38014	Breakout	66	69	63	64	60	56	51	44	45
380	TDF38034	Inlet	66	84	78	79	75	71	66	59	60
380	TDF38034	Outlet	66	84	78	79	75	71	66	59	60
380	TDF38034	Breakout	66	69	63	64	60	56	51	44	45
420	TDF42014	Inlet	74	91	83	81	76	72	69	65	62
420	TDF42014	Outlet	74	91	83	81	76	72	69	65	62
420	TDF42014	Breakout	74	76	68	66	61	57	54	50	47
420	TDF42034	Inlet	74	91	83	81	76	72	69	65	62
420	TDF42034	Outlet	74	91	83	81	76	72	69	65	62
420	TDF42034	Breakout	74	76	68	66	61	57	54	50	47
480	TDF48014	Inlet	76	95	88	86	81	76	76	71	67
480	TDF48014	Outlet	76	95	88	86	81	76	76	71	67
480	TDF48014	Breakout	76	80	73	71	66	61	61	56	52
480	TDF48034	Inlet	76	95	88	86	81	76	76	71	67
480	TDF48034	Outlet	76	95	88	86	81	76	76	71	67
480	TDF48034	Breakout	76	80	73	71	66	61	61	56	52
520	TDF52034	Inlet	80	96	89	86	83	78	72	66	68
520	TDF52034	Outlet	80	96	89	86	83	78	72	66	68
520	TDF52034	Breakout	80	81	74	71	68	63	57	51	53
520	TDF52036	Inlet	80	81	78	80	71	62	60	52	58
520	TDF52036	Outlet	80	81	78	80	71	62	60	52	58
520	TDF52036	Breakout	80	66	63	65	56	47	45	37	44
600	TDF60034	Inlet	83	99	94	90	87	85	75	70	72
600	TDF60034	Outlet	83	99	94	90	87	85	75	70	72
600	TDF60034	Breakout	83	84	79	75	72	70	60	55	57
600	TDF60036	Inlet	84	86	80	77	73	66	61	56	58
600	TDF60036	Outlet	84	86	80	77	73	66	61	56	58
600	TDF60036	Breakout	84	71	65	62	58	51	46	41	44

Power-Line Silencers Type TDS

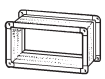
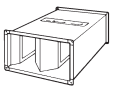
Unit	Attenuation across Sound Spectrum H_3							
Code TDS	63	125	250	500	1K	2K	4K	8K
320	3	8	17	24	32	32	25	20
380	6	12	23	32	45	45	33	28
420	6	10	20	31	43	43	33	27
480	4	9	17	27	36	36	24	13
520	3	7	14	22	27	21	15	10
600	4	8	15	24	30	26	14	8

Accessories



Size		Transformer Speed Controller	*eDemand Controller		
			Auto Changeover	Voltage Control	3 Phase Inverter
W x H	Fan Stock Ref.	Stock Ref.	Stock Ref.	Stock Ref.	Stock Ref.
500 x 655	TDF32014	10314103	444180	444164	-
550 x 745	TDF38014	10314103	444180	444164	-
550 x 745	TDF38034	10314301	444179	444166	444172
625 x 830	TDF42014	10314105	444180	444164	-
625 x 830	TDF42034	10314304	444179	444166	444172
700 x 925	TDF48014	10314113	444180	444165	-
700 x 925	TDF48034	10314304	444179	444166	444173
775 x 1055	TDF52034	10314304	444179	444166	444173
775 x 1055	TDF52036	10314304	444179	444166	444172
850 x 1200	TDF60034	10314311	444179	444167	444175
850 x 1200	TDF60036	10314304	444179	444166	444173


Size	**ITC-DS 12/24hr Auto Ch'over	RVC Remote Visual Indicator	Weather Proof Treatment
W x H	Stock Ref.	Stock Ref.	Stock Ref.
500 x 655	10314210	10314220	ECP2
550 x 745	10314210	10314220	ECP2
625 x 830	10314210	10314220	ECP3
700 x 925	10314210	10314220	ECP3
775 x 1055	10314210	10314220	ECP3
850 x 1200	10314210	10314220	ECP4

Size	Mounting Feet & AVs (Set of 4)	Flexible Connection	Matching Attenuator	Acoustic Jacket	Discharge Cowl	Roof Canopy
W x H	Stock Ref.	Stock Ref.	Stock Ref.	Stock Ref.	Stock Ref.	Stock Ref.
500 x 655	PAVM10	TFC320	RUTDS320	TAJ320	-	TRC320
550 x 745	PAVM10	TFC380	RUTDS380	TAJ380	TDW380	TRC380
625 x 830	PAVM20	TFC420	RUTDS420	TAJ420	TDW420	TRC420
700 x 925	PAVM20	TFC480	RUTDS480	TAJ480	TDW480	TRC480
775 x 1055	PAVM30	TFC520	RUTDS520	TAJ520	TDW520	TRC520
850 x 1200	PAVM30	TFC600	RUTDS600	TAJ600	TDW600	TRC600

**Not suitable for use with eDemand controllers. For compatible changeover panel, see Accessories and Controllers Section.