

TWINFLOW
STDD/STBD



Direct & Belt Drive
Twin In-Line Fans

Twinflow STDD & STBD

Features & Benefits



The Twinflow STDD and STBD is a range of direct and belt driven in-line centrifugal fans for duct mounting, with rectangular spigot connections all manufactured in galvanised sheet steel with a natural finish. These compact, reliable units are designed to overcome space restrictions in buildings such as ceiling voids, as well as providing the option of acoustic lining where lower breakout noise levels are required.

- STDD & STBD Air volume flow rates of 1.41 m³/s and 7.3 m³/s respectively.
- STDD & STBD Static pressures of between 400 Pa and 900 Pa respectively.
- STDD has 7 standard sizes.
- STBD has 6 standard sizes.
- Robust galvanised sheet steel casing.
- Supplied with or without acoustic lining.
- Double inlet, double width, forward curved centrifugal impeller.
- Single speed motor.
- External rotor, squirrel cage induction motor.
- Suitable for operating temperatures of up to 40° C (STDD) and 50° C (STBD).
- In built vibration isolation.
- Lower noise levels.

Features & Benefits

Material Strength - A robust, lightweight unit with a galvanised sheet steel casing which is suitably braced to provide rigidity.

Functionality – Non-return gravity shutters are fitted on the fan outlets which prevents the recirculation of air between the fans when the unit is not operating.

Detection – Each unit is fitted with airflow detection switches which are pre wired into the units terminal block for connection to a suitable control panel to allow auto changeover in the event of fan failure.

Reliability – Motors have sealed for life bearings.

Low noise - Twin fans have the option of being acoustically lined so that breakout noise levels are significantly lowered.

Low profile - Casings have a low profile design which allows ease of fitting in to roof spaces.

Design appeal – Anti-vibration mounts are fitted between the motor mounting arms and the fan casing which ensures smooth running.

Quality impellers – Either direct or belt driven double inlet, double width forward curved centrifugal impellers, housed in a purpose designed scroll with integral deep drawn inlet rings to maximize efficiency and a smooth airflow.

Easy access - There is easy access to the fan via screws on the lid which means provision for easier servicing.

Ease of installation – All models are designed for direct connection to standard ductwork with 50 mm long rectangular spigots for ease of connection.

Motor protection – All STDD units have integral thermal overload protection which prevents the motor from overheating.

Flexibility – STBD Belt driven options provide the flexibility to change duties via belt and pulley changes to match the system requirements, easily adjustable on site.

Ease of wiring – The motors are pre-wired to a terminal box on the outside of the casing.

Mounting - Mounting brackets are supplied fixed to the sides of the STDD casing for ease of installation (optional for STBD).

Space saving - The impeller axis runs horizontally across the unit which minimises the overall height of the unit and enables it to be fitted into roof voids.

Tested to the very latest standards – STDD & STBD units are tested to ISO 5801:1997 (airside performance) and to BS 848 Pt 2:1985 (sound performance) at Elta Fans own test facility, meaning accurate, up to date information on performance and noise data that can be relied upon.

Quality assurance – All units are designed and manufactured with procedures as defined in BS EN ISO 9001: 2000.

Warranty – Each STDD & STBD has a 12 month warranty.

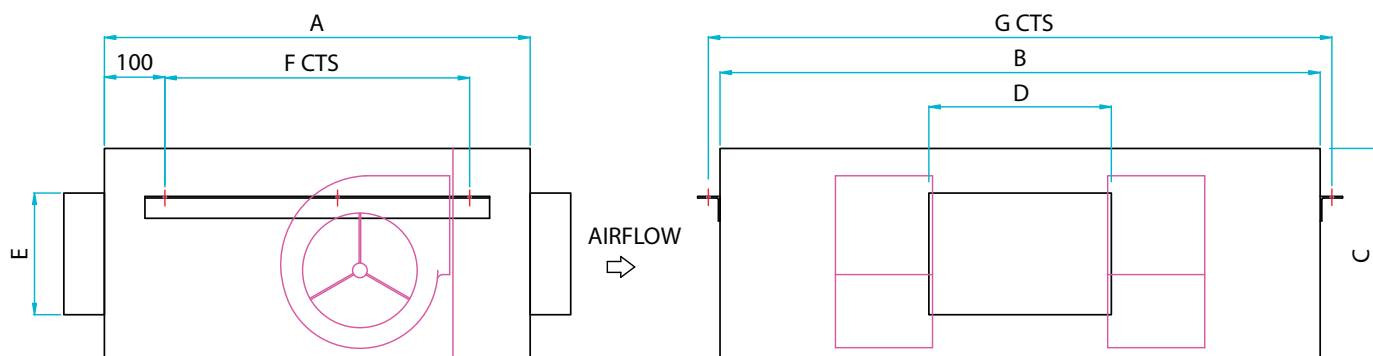
Full accessory range - Accessories include mounting brackets, anti-vibration mounts, isolators, auto changeover panels and flexible connectors.

Applications

Industrial buildings, banks, hospitals, offices, hotels and shopping malls.

Twinflow STDD

Dimensional Data



Product Code	A	B	C	D	E	F	G	Weight kg
STDD1/L	425	530	210	175	100	225	580	14
STDD2/L	525	740	260	225	150	325	790	24
STDD3/L	600	800	360	250	150	400	850	36
STDD4/L	700	950	390	350	200	500	1000	48
STDD5/L	800	1000	440	400	325	600	1050	61
STDD6/L	800	1100	440	450	350	600	1150	71
STDD7/L	1000	1250	575	650	400	800	1300	101

N.B. Units illustrated with optional mounting brackets.

Twinflow STDD

Performance & Electrical Data



Direct Drive SINGLE Phase - 220V-240V / 50Hz

Product Code	Speed r/min	Airflow m ³ /s @ Static Pressure Pa.											Motor Electrical Data			Sound Level dBA @ 3m	Breakout dBA @ 3m
		0	25	50	75	100	150	200	250	300	350	400	FLC Amps	SC Amps	Input kW	STDD STDD/L	STDD STDD/L
STDD1/L	2250	0.056	0.053	0.050	0.047	0.043	0.036	0.028	0.019				0.37	1.41	0.085	29/28	27/26
STDD2/L	1330	0.179	0.158	0.133	0.107	0.070							0.43	1.38	0.098	36/35	32/31
STDD3/L	1220	0.280	0.257	0.232	0.209	0.184	0.133	0.082	0.028				1.20	4.80	0.250	45/44	38/36
STDD4/L	1415	0.465	0.436	0.404	0.372	0.340	0.272	0.190	0.104	0.030			2.70	9.60	0.500	49/47	46/44
STDD5/L	1250	0.800	0.778	0.760	0.734	0.716	0.660	0.604	0.534	0.430	0.279	0.100	4.40	12.60	0.960	50/48	46/42
STDD6/L	1310	0.960	0.945	0.915	0.898	0.875	0.825	0.770	0.682	0.565	0.302	0.150	5.20	18.90	1.100	54/52	48/46
STDD7/L	820	1.410	1.370	1.320	1.280	1.220	1.100	0.965	0.785	0.430	0.150		7.00	20.70	1.400	52/50	45/44

Sound levels are average spherical free field values at 50% peak pressure for comparative purposes only.

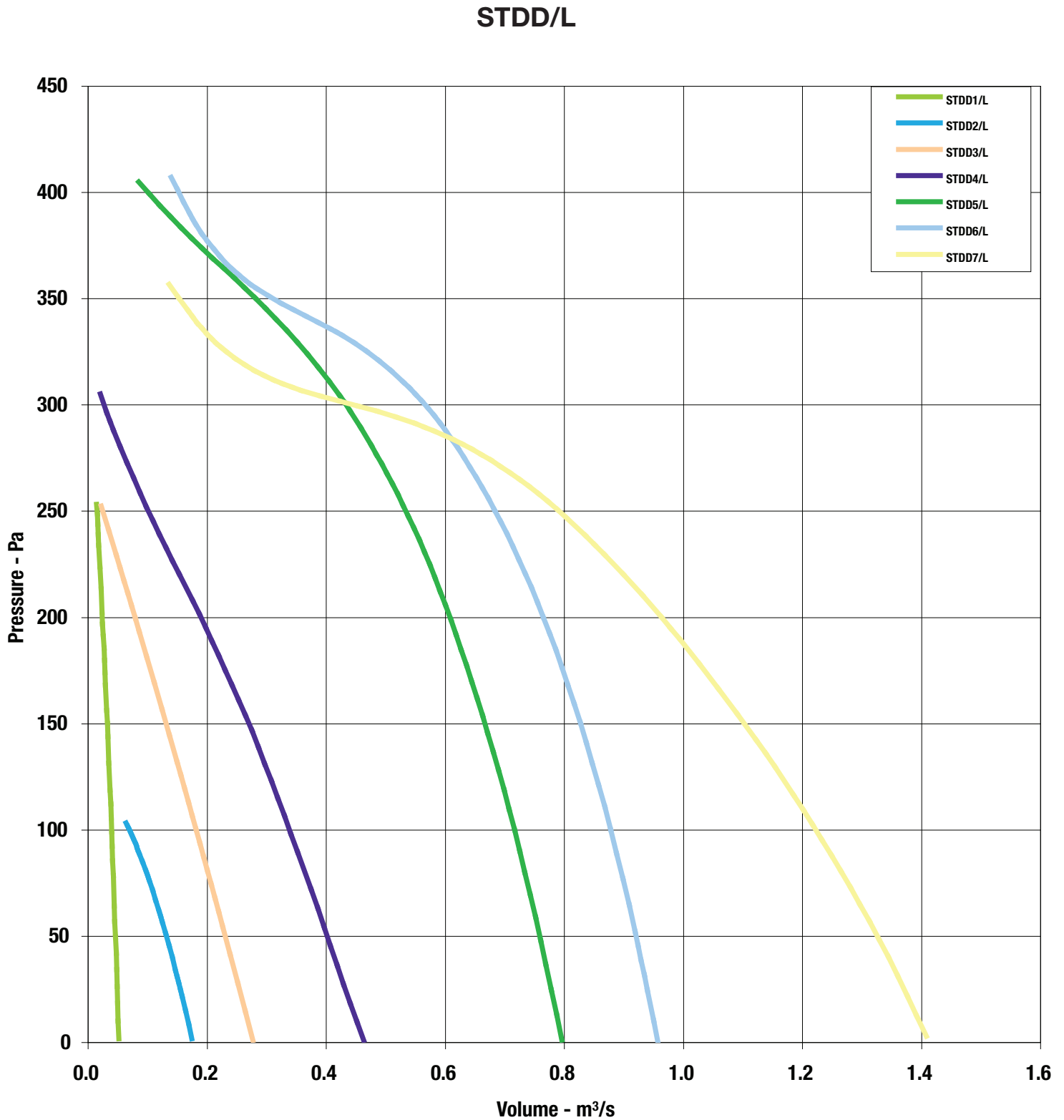
Motors wound for 220-240V/1Ph/60Hz supply are available upon request - Contact Elta Fans for these requirements.

Silencer Data - SINGLE Phase

Product Code	dBA Attenuation			ΔP (Pa)		
	600L	900L	1250L	600L	900L	1250L
STDD1/L	-6	-9	-11	10	11	12
STDD2/L	-6	-9	-10	18	20	22
STDD3/L	-6	-9	-10	26	28	30
STDD4/L	-5	-3	-8	12	13	14
STDD5/L	-7	-9	-11	21	23	25
STDD6/L	-7	-9	-11	20	22	24
STDD7/L	-8	-10	-13	16	17	18

Twinflow STDD

Performance Curves

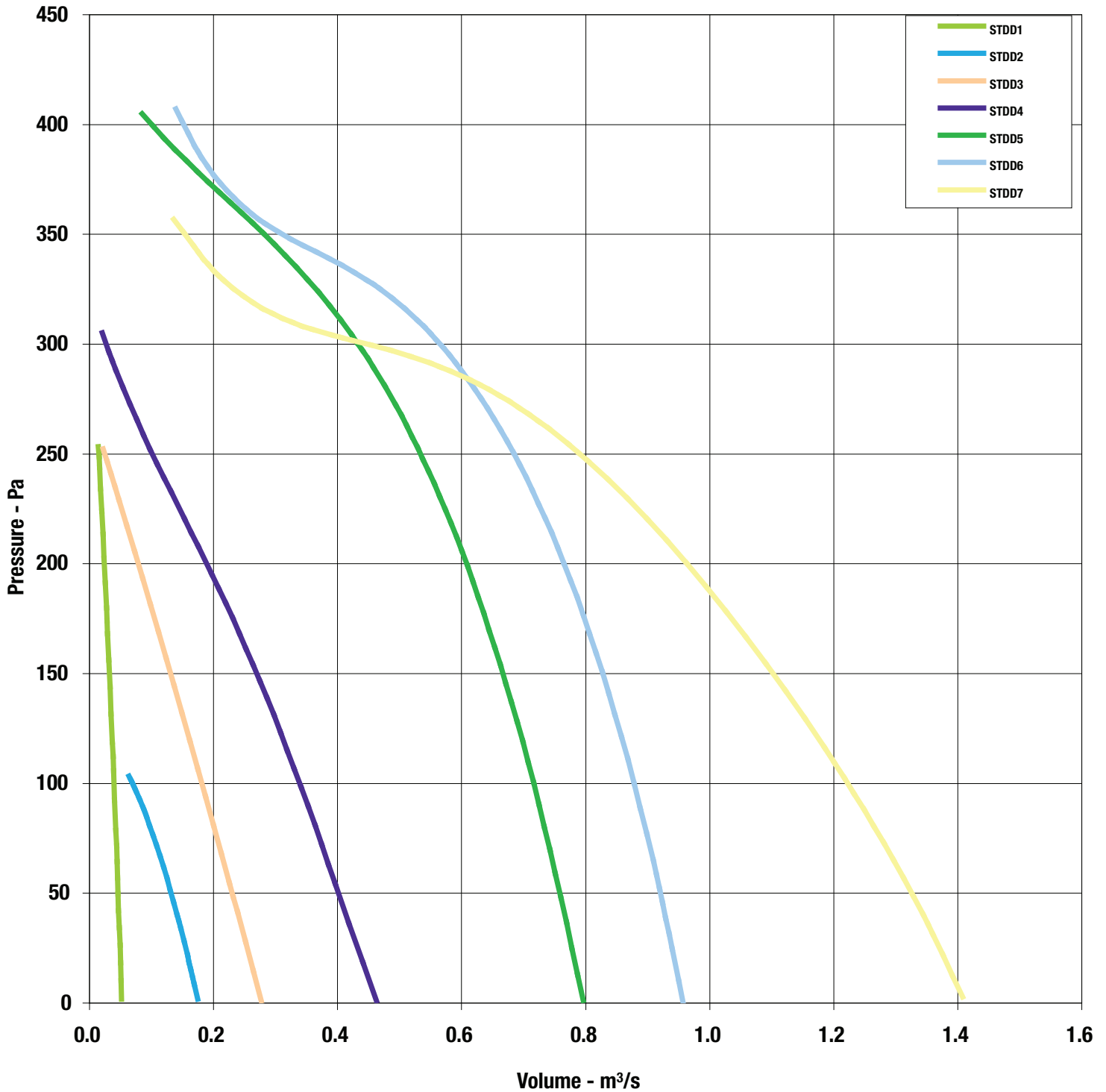


Twinflow STDD

Performance Curves



STDD



Twinflow STDD

Sound Data

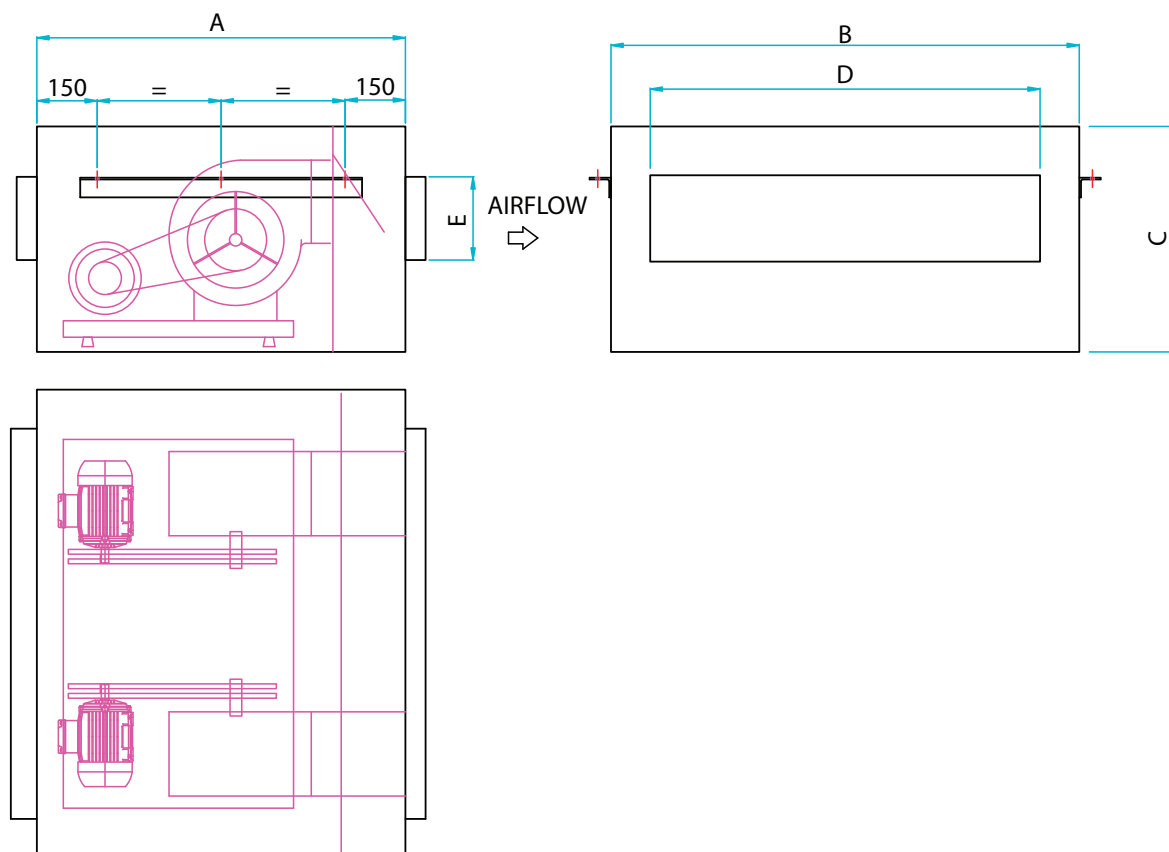


STDD - SINGLE Phase

Product Code	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	dBA @ 3m
STDD1	58	57	54	45	42	38	35	29	29
STDD2	68	63	58	54	50	46	44	40	36
STDD3	75	71	65	62	61	58	56	49	45
STDD4	84	78	71	63	64	56	59	52	49
STDD5	84	76	69	64	65	63	61	53	50
STDD6	84	80	74	67	67	69	67	59	54
STDD7	81	77	71	65	66	68	63	56	52
STDD1-L	58	57	54	44	39	34	32	26	28
STDD2-L	68	63	59	54	46	42	41	37	35
STDD3-L	75	71	66	62	58	54	53	46	44
STDD4-L	84	78	70	61	60	52	56	48	47
STDD5-L	84	76	70	64	61	59	58	50	48
STDD6-L	84	80	74	66	64	65	64	56	52
STDD7-L	81	77	72	64	63	64	60	53	50

Twinflow STBD

Dimensional Data



Product Code	A	B	C	D	E	Weight kg
STBD1/L	1000	900	450	600	300	120
STBD2/L	1200	1100	550	800	350	155
STBD3/L	1500	1200	650	1000	350	190
STBD4/L	1500	1550	750	1100	500	250
STBD5/L	2000	2000	1000	1500	700	370
STBD6/L	2000	2000	1000	1500	700	420

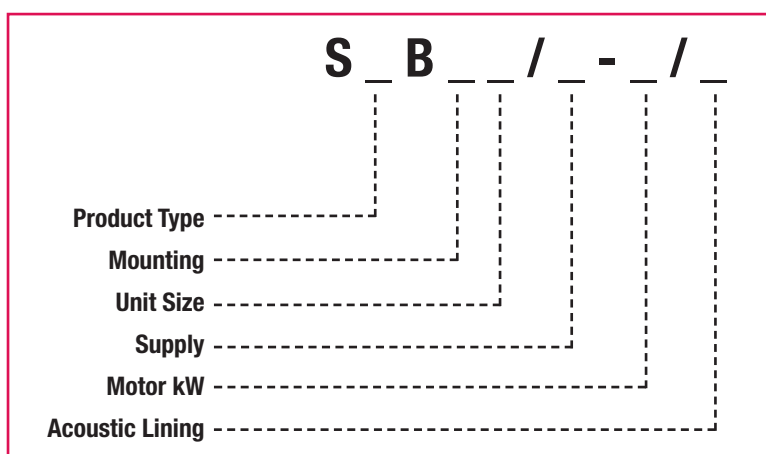
N.B. Units illustrated with optional mounting brackets.

Singleflow STBD

Performance & Electrical Data



Belt Drive Product Selector



Example

Duty: 0.5m³/s @ 200Pa

Unit Type: Twin Flow

Unit Size: 1

Mounting: Duct

Supply: 3 phase

Acoustic Lining: No

From Graph STBD1

Motor = 0.55kW

r/min = 1500r/min

Product Code

STBD1/3-C

Product Type	Mounting	Unit Size	Acoustic Lining
S – Singleflow T – Twinflow	D – Duct R – Roof	1, 2, 3, 4, 5, 6	No code – Unlined L – Lined
Supply	Motor kW		
1 – Single Phase (Maximum 1.1kW) (Sizes 1-4 only) 3 – Three Phase	A – 0.25 D – 0.75 G – 2.2 K – 5.5	B – 0.37 E – 1.1 H – 3.0 L – 7.5	C – 0.55 F – 1.5 J – 4.0

Twinflow STBD

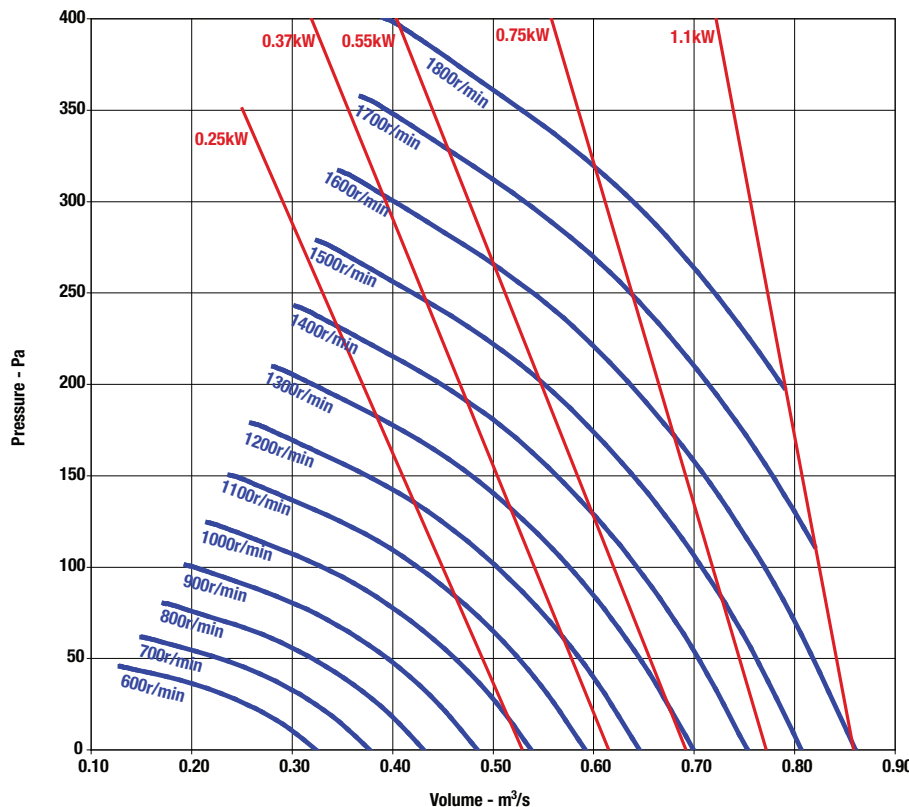
Performance & Electrical Data



Belt Drive STBD1 STBD1/L

Speed r/min	dBA @3m
600	39
700	42
800	46
900	49
1000	50
1100	53
1200	55
1300	57
1400	58
1500	60
1600	61
1700	63
1800	64

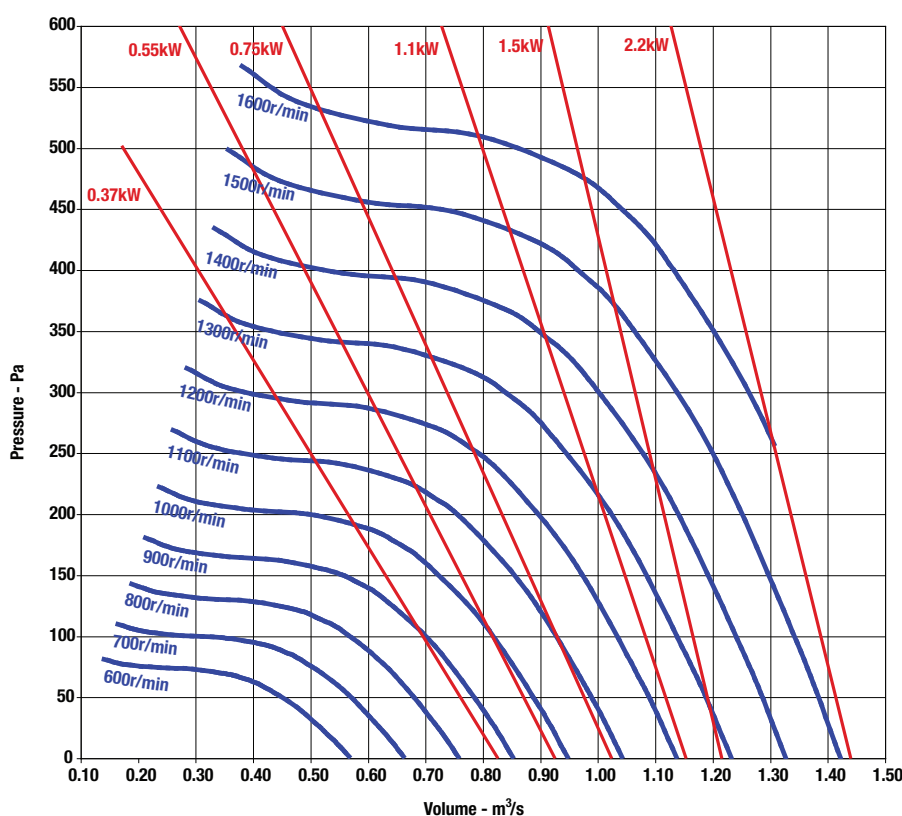
Sound levels are average spherical free field values at 50% peak pressure for comparative purposes only.



STBD2 STBD2/L

Speed r/min	dBA @3m
600	39
700	44
800	47
900	50
1000	53
1100	56
1200	57
1300	59
1400	61
1500	62
1600	63

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Twinflow STBD

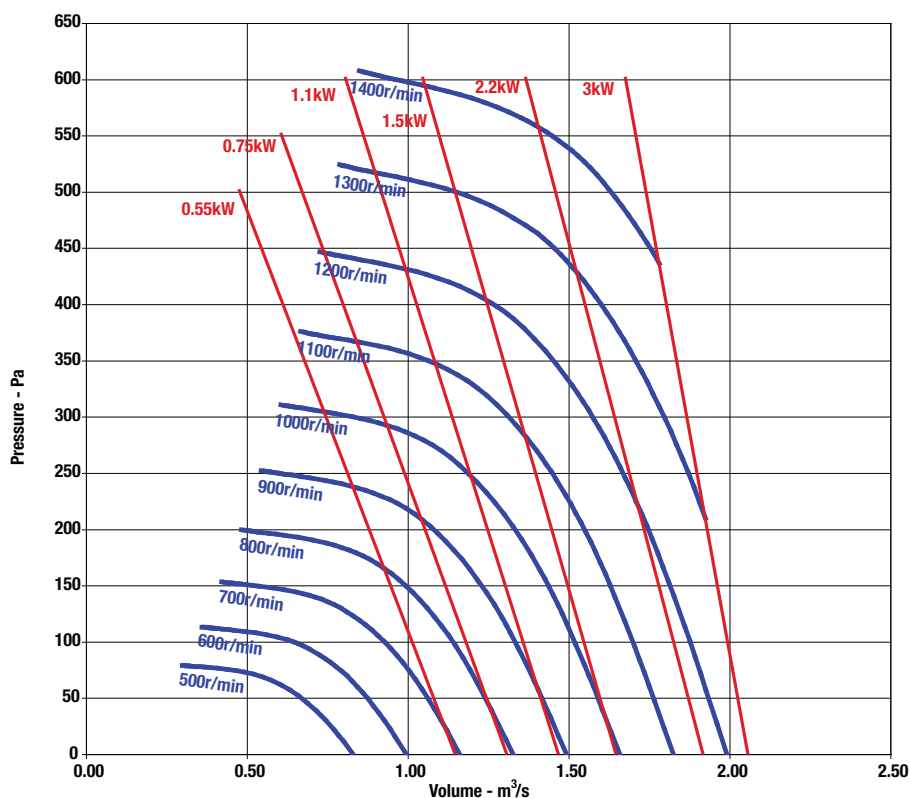
Performance & Electrical Data



STBD3 STBD3/L

Speed r/min	dBA @3m
500	41
600	43
700	49
800	50
900	55
1000	57
1100	59
1200	61
1300	63
1400	64

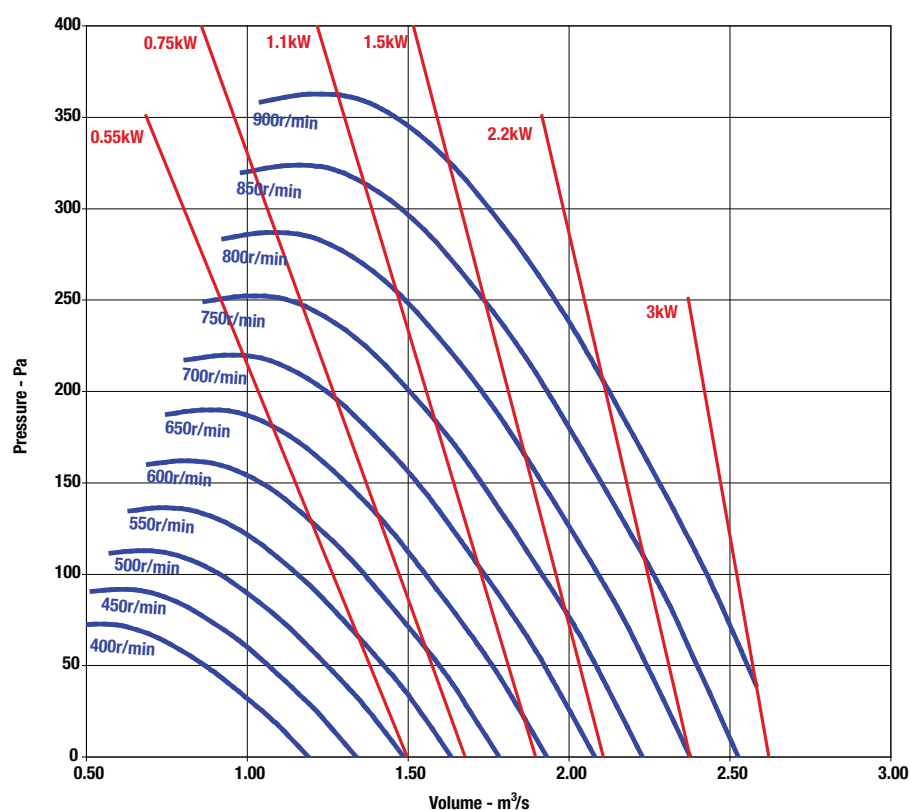
Sound levels are average spherical free field values at 50% peak pressure for comparative purposes only.



STBD4 STBD4/L

Speed r/min	dBA @3m
400	41
450	44
500	46
550	49
600	50
650	52
700	53
750	55
800	57
850	58
900	60

Sound levels are average spherical free field values at 50% peak pressure for comparative purposes only.



Twinflow STBD

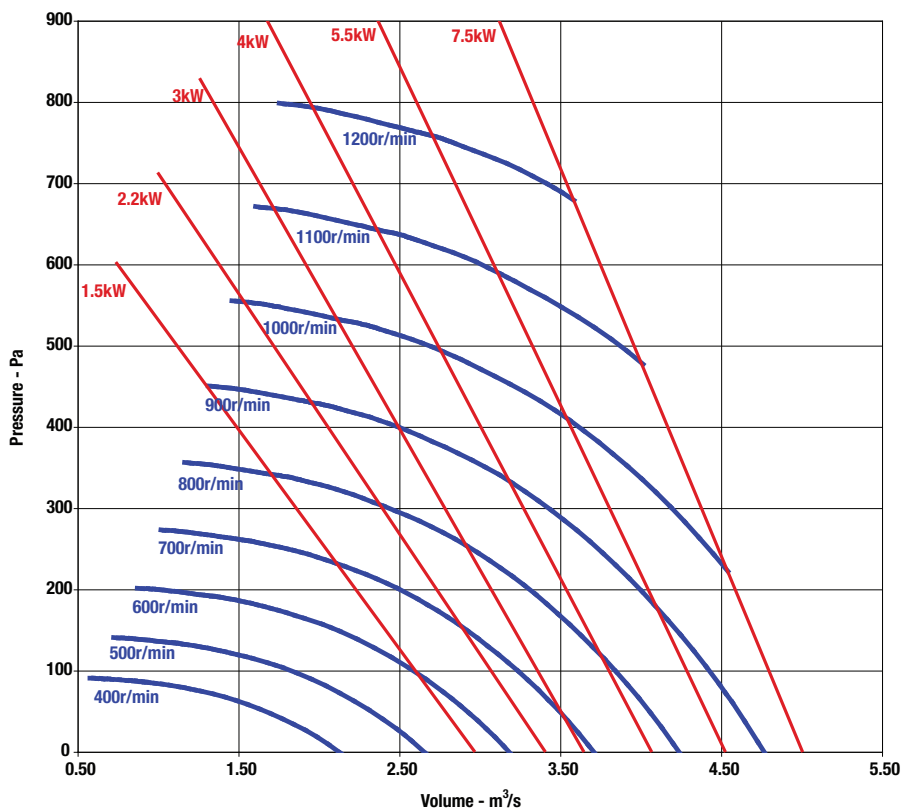
Performance & Electrical Data



STBD5 STBD5/L

Speed r/min	dBA @3m
400	43
500	48
600	53
700	56
800	60
900	62
1000	65
1100	67
1200	69

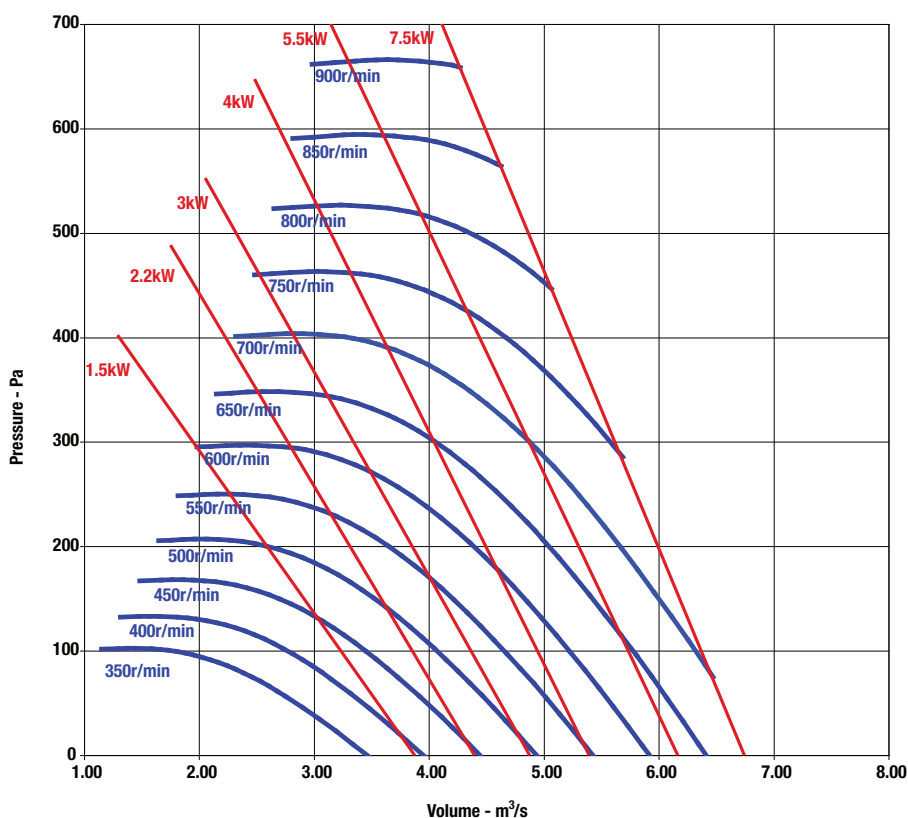
Sound levels are average spherical free field values at 50% peak pressure for comparative purposes only.



STBD6 STBD6/L

Speed r/min	dBA @3m
350	45
400	48
450	51
500	53
550	56
600	58
650	60
700	62
750	63
800	65
850	67
900	68

Sound levels are average spherical free field values at 50% peak pressure for comparative purposes only.



Twinflow STBD

Performance & Electrical Data



Electrical Data

230V / 1Ph / 50Hz

Product Code	4 pole Motor Size kW				
	0.25	0.37	0.55	0.75	1.1
FLC (A)	2.2	3	4.4	5.5	7.6
Start (A)	13.64 x 2*	18 x 2*	24.2 x 2*	30.25 x 2*	53.2 x 2*

*Please note that on initial start up both fans will momentarily start on twin fans.

400V / 3Ph / 50Hz

Product Code	6 pole Motor Size kW									
	0.25	0.37	0.55	0.75	1.1	1.5	2.2	3	4	5.5
FLC (A)	0.96	1.11	1.61	1.95	2.9	4.3	5.36	7	8.95	12.3
Start (A)	4.99 x 2*	5.77 x 2*	8.53 x 2*	10.14 x 2*	15.37 x 2*	22.36 x 2*	30.55 x 2*	42.7 x 2*	57.28 x 2*	86.1 x 2*

*Please note that on initial start up both fans will momentarily start on twin fans.

400V / 3Ph / 50Hz

Product Code	4 pole Motor Size kW										
	0.25	0.37	0.55	0.75	1.1	1.5	2.2	3	4	5.5	7.5
FLC (A)	0.78	1.06	1.42	1.77	2.71	3.26	4.74	6.2	8.15	10.6	14.2
Start (A)	4.29 x 2*	4.66 x 2*	9.94 x 2*	11.51 x 2*	20.33 x 2*	24.45 x 2*	35.55 x 2*	46.5 x 2*	61.13 x 2*	84.8 x 2*	113.6 x 2*

*Please note that on initial start up both fans will momentarily start on twin fans.

Twinflow STBD

Sound Data



STBD - SINGLE & THREE Phase

Product Code	Speed	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	dBA @ 3m
STBD1	600	31	44	52	57	55	53	48	40	39
STBD1	700	32	47	55	59	58	57	53	44	42
STBD1	800	34	50	58	62	62	60	58	47	46
STBD1	900	36	51	60	64	65	63	60	51	49
STBD1	1000	36	51	61	66	67	64	61	52	50
STBD1	1100	38	52	63	68	70	67	64	56	53
STBD1	1200	39	53	63	69	72	68	66	59	55
STBD1	1300	41	54	66	72	74	71	68	62	57
STBD1	1400	41	55	66	73	75	72	69	64	58
STBD1	1500	43	56	68	75	76	74	71	66	60
STBD1	1600	43	57	69	76	77	75	72	68	61
STBD1	1700	45	58	70	77	79	77	74	70	63
STBD1	1800	46	59	70	79	80	79	76	71	64

Product Code	Speed	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	dBA @ 3m
STBD2	600	33	47	54	58	55	53	46	38	39
STBD2	700	36	50	58	62	59	57	52	42	44
STBD2	800	37	52	62	65	63	60	56	45	47
STBD2	900	39	54	64	67	66	63	60	49	50
STBD2	1000	41	56	66	70	70	66	63	52	53
STBD2	1100	43	57	68	72	73	69	65	56	56
STBD2	1200	42	56	67	73	74	69	66	57	57
STBD2	1300	44	57	69	75	76	71	68	60	59
STBD2	1400	45	59	70	77	78	73	70	63	61
STBD2	1500	45	59	70	78	79	74	70	64	62
STBD2	1600	46	59	71	79	80	76	72	66	63

Product Code	Speed	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	dBA @ 3m
STBD3	500	46	54	58	59	57	55	49	40	41
STBD3	600	50	57	60	64	54	53	50	45	43
STBD3	700	49	60	63	68	65	60	55	48	49
STBD3	800	51	62	66	70	66	54	60	50	50
STBD3	900	54	66	70	72	71	68	64	54	55
STBD3	1000	55	67	72	74	73	70	66	60	57
STBD3	1100	56	68	73	76	75	71	68	60	59
STBD3	1200	57	70	76	78	78	73	70	62	61
STBD3	1300	58	70	77	79	80	75	71	64	63
STBD3	1400	58	71	78	80	81	76	72	65	64

Acoustic data: tests and preparation of data have been carried out in accordance with BS848 Part 2(1985). The In-duct Sound Power Level Spectra are in dB re 1pW. The overall A-Scale sound pressure level is at a distance of three metres with spherical propagation. In duct sound power level spectra and overall A-Scale spherical free field sound pressure level at 3m for mid-point of the operating curve. It is expressed in dB re 20uPa and is presented for comparative purposes only as in practice the semi-reverberant nature of any installation and directivity effects can give a different level.

Twinflow STBD

Sound Data



STBD - SINGLE & THREE Phase

Product Code	Speed	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	dBA @ 3m
STBD4	400	32	42	52	55	57	57	52	47	41
STBD4	450	32	44	53	58	59	59	55	49	44
STBD4	500	34	46	55	61	61	61	58	52	46
STBD4	550	35	48	56	63	63	64	61	54	49
STBD4	600	35	49	57	65	64	65	62	56	50
STBD4	650	36	51	58	67	66	67	64	58	52
STBD4	700	36	52	58	68	67	68	66	59	53
STBD4	750	38	54	61	70	70	70	68	62	55
STBD4	800	39	55	62	71	71	72	70	63	57
STBD4	850	40	56	64	72	73	73	71	65	58
STBD4	900	41	56	65	73	75	74	73	67	60

Product Code	Speed	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	dBA @ 3m
STBD5	400	62	67	58	59	58	56	54	50	43
STBD5	500	67	72	63	64	64	61	59	55	48
STBD5	600	71	76	68	69	68	65	64	60	53
STBD5	700	75	80	72	72	72	69	67	63	56
STBD5	800	78	83	75	76	75	72	71	67	60
STBD5	900	81	86	78	79	78	75	73	69	62
STBD5	1000	84	89	80	81	80	78	76	72	65
STBD5	1100	86	91	82	83	83	80	78	74	67
STBD5	1200	88	93	85	86	85	82	80	76	69

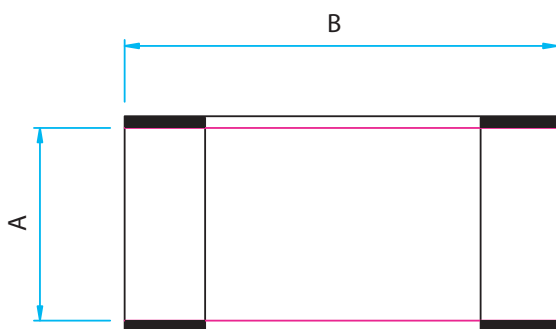
Product Code	Speed	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	dBA @ 3m
STBD6	350	65	65	60	64	58	57	54	50	45
STBD6	400	68	68	64	67	61	60	57	53	48
STBD6	450	71	71	67	70	64	63	60	56	51
STBD6	500	73	74	69	73	66	66	63	59	53
STBD6	550	76	76	71	75	69	68	65	61	56
STBD6	600	78	78	74	77	71	70	67	63	58
STBD6	650	80	80	76	79	73	72	69	65	60
STBD6	700	82	82	77	81	75	74	71	67	62
STBD6	750	83	84	79	83	76	76	73	69	63
STBD6	800	85	86	81	84	78	77	74	70	65
STBD6	850	86	87	82	86	80	79	76	72	67
STBD6	900	88	88	84	87	81	80	77	73	68

Acoustic data: tests and preparation of data have been carried out in accordance with BS848 Part 2(1985). The In-duct Sound Power Level Spectra are in dB re 1pW. The overall A-Scale sound pressure level is at a distance of three metres with spherical propagation. In duct sound power level spectra and overall A-Scale spherical free field sound pressure level at 3m for mid-point of the operating curve. It is expressed in dB re 20uPa and is presented for comparative purposes only as in practice the semi-reverberant nature of any installation and directivity effects can give a different level.

Twinflow STDD & STBD Accessories



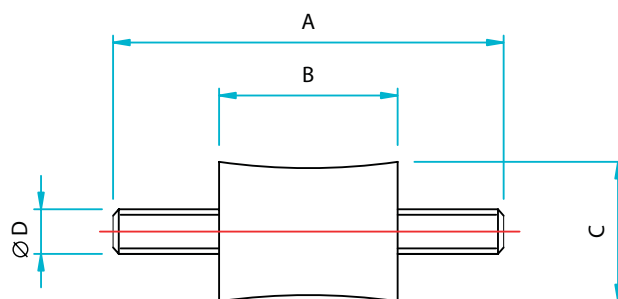
Flexible Connectors



- Fix directly onto spigot
- Provides flexible connection between fan and accessory or duct
- PVC coated polyester with galvanised sheet steel

Product Code	A	B	Weight kg
063-TDD01-FLEX	175 x 100	150	0.2
063-TDD02-FLEX	225 x 150	150	0.2
063-TDD03-FLEX	250 x 150	150	0.3
063-TDD04-FLEX	350 x 200	150	0.5
063-TDD05-FLEX	400 x 325	150	0.7
063-TDD06-FLEX	450 x 350	150	0.7
063-TDD07-FLEX	650 x 400	150	1.0
063-TBD01-FLEX	600 x 300	150	1.0
063-TBD02-FLEX	800 x 300	150	1.0
063-TBD03-FLEX	1000 x 350	150	1.3
063-TBD04-FLEX	1100 x 500	150	1.3
063-TBD05-FLEX	1500 x 700	150	1.4
063-TBD06-FLEX	1500 x 700	150	1.4

Anti-Vibration Mounts



- Fit directly to fan
- Rubber with steel insert
- Supplied as set of 4, complete with fixings

Product Code	A	B	C	D	Weight kg (Per Set)
062-SEL01	45	19	13	M5	0.044
062-SEL02	40	15	15	M5	0.052
062-SEL03	70	32	25	M8	0.210
062-SEL04	60	20	25	M8	0.186
062-SEL05	60	20	25	M8	0.187

For use with STDD models only.
STBD models have internal A.V. mounts.



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