

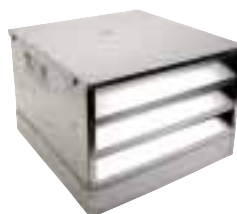
TWINFLOW
STDR/STBR



Direct & Belt Drive
Twin Roof Fans

Twinflow STDR & STBR

Features & Benefits



The Twinflow STDR and STBR is a range of direct and belt driven centrifugal fans for external roof mounting, manufactured in aluminium alloy with a mill finish and a louvred air discharge. Ideal for external mounting on roof tops where ceiling voids and roof spaces are inadequate or the unit is too large to fit internally, they are available with or without acoustic lining dependant on whether lower breakout noise levels are required.

- STDR & STBR air volume flow rates of 1.4 m³/s and 7.3 m³/s respectively.
- STDR & STBR static pressures of between 400 Pa and 900 Pa respectively .
- STDR has 7 standard sizes.
- STBR has 6 standard sizes.
- Robust mill finish aluminium alloy casing.
- Supplied with or without acoustic lining.
- Double inlet, double width, forward curved centrifugal impeller.
- Single speed squirrel cage induction motor.
- Louvred air discharge guard.
- Pre-wired to IP55 isolator.
- Suitable for operating temperatures of up to 40°C (STDR) and 50°C (STBR).
- In built vibration isolation.
- Lower noise levels.

Features & Benefits

Material Strength – This robust and durable unit has a casing manufactured from mill finish aluminium alloy, with a louvred air discharge which provides protection against ingress from the elements and is self draining.

Functionality – Non return gravity shutters are fitted on the fan outlets which means preventing the recirculation of air between the fans and the backdraughts 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.

Alternative – An alternative position of the intake spigot can be fitted on the end of the unit for when the ventilation riser is not directly over the unit, this allows the unit to be fixed adjacent to ducting.

Low noise - Twin fans have the option of being acoustically lined with Class O acoustic foam 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 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 STDR units have integral thermal overload protection which prevents the motor from overheating.

Flexibility – STBR 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 factory fitted IP55 isolator.

Tested to the very latest standards – STDR & STBR 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 STDR & STBR has a 12 month warranty.

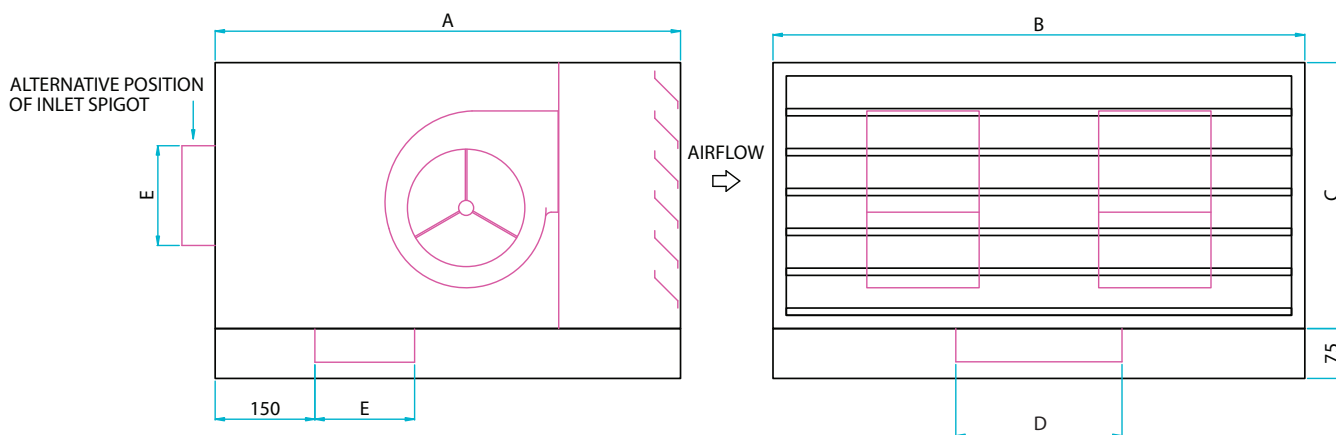
Full accessory range - Auto changeover panels.

Typical Applications

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

Twinflow STDR

Dimensional Data



Product Code	A	B	C	D	E	F	Weight kg
STDR 1/L*	500	500	275	175	100	150	16
STDR 2/L*	700	740	350	225	150	150	27
STDR 3/L*	700	800	400	250	150	150	39
STDR 4/L*	800	950	450	350	200	150	53
STDR 5/L*	950	950	550	400	325	150	67
STDR 6/L*	1050	1050	550	450	350	150	78
STDR 7/L*	1150	1150	650	650	400	200	110

* Suffix 'L' applicable to acoustically lined units

Twinflow STDR

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	STDR/STDR/L	STDR/STDR/L
STDR1/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
STDR2/L	1330	0.179	0.158	0.133	0.107	0.070							0.43	1.38	0.098	36/35	32/31
STDR3/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
STDR4/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
STDR5/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
STDR6/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
STDR7/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

* Suffix 'L' applicable to acoustically lined units.

Silencer Data

Product Code	Silencer Attenuation & Pressure Drop Data					
	600L		900L		1200L	
	600L	900L	1250L	600L	900L	1250L
STDR1/L	-6	-9	-11	10	11	12
STDR2/L	-6	-9	-10	18	20	22
STDR3/L	-6	-9	-10	26	28	30
STDR4/L	-5	-6	-8	12	13	14
STDR5/L	-7	-9	-11	21	23	25
STDR6/L	-7	-9	-11	20	22	24
STDR7/L	-8	-10	-13	16	17	18

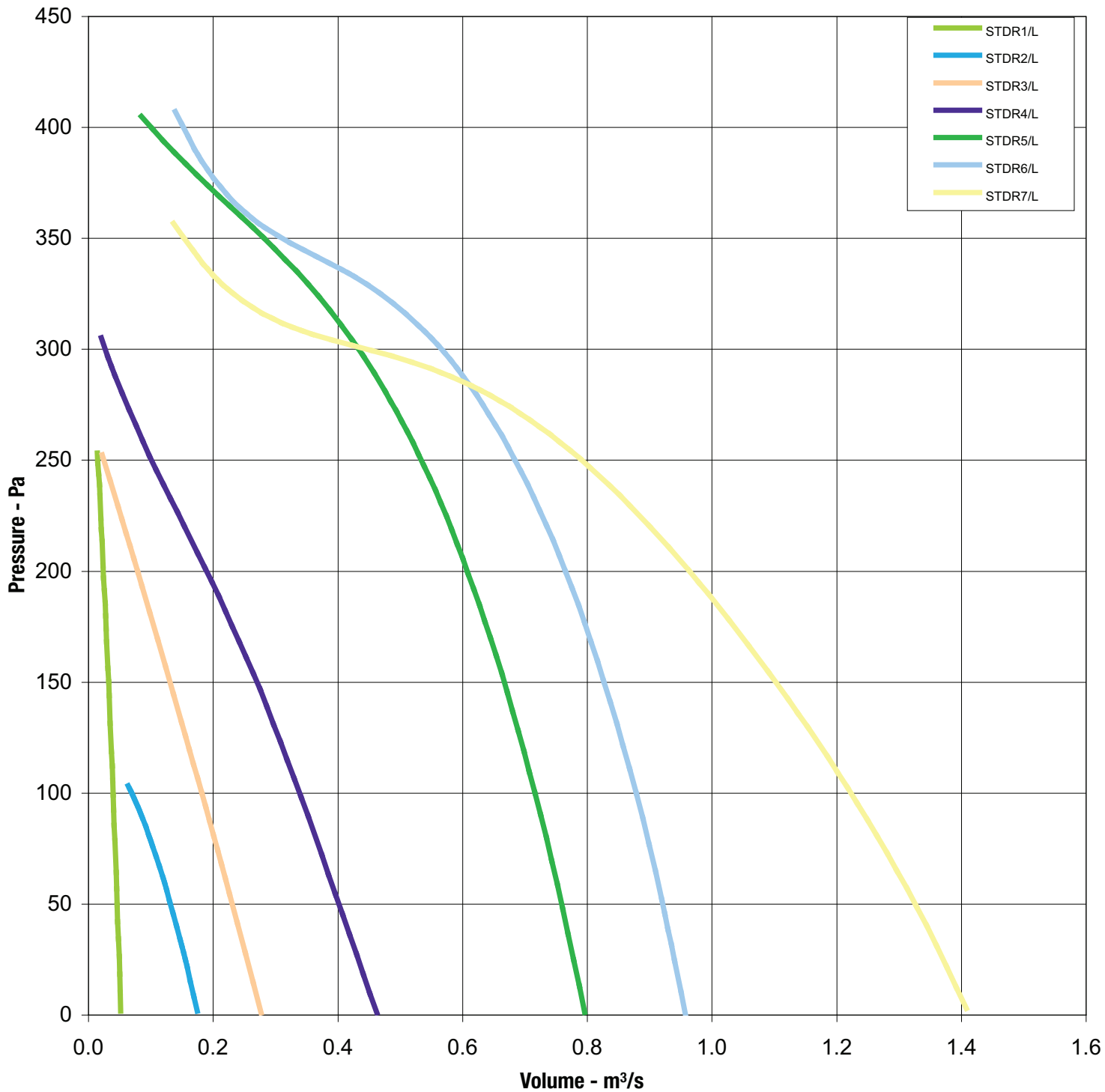
Sound levels are average spherical free field values at 50% peak pressure for comparative purposes only.

For silencer selection refer to Elta Fans.

Twinflow STDR Performance Curves



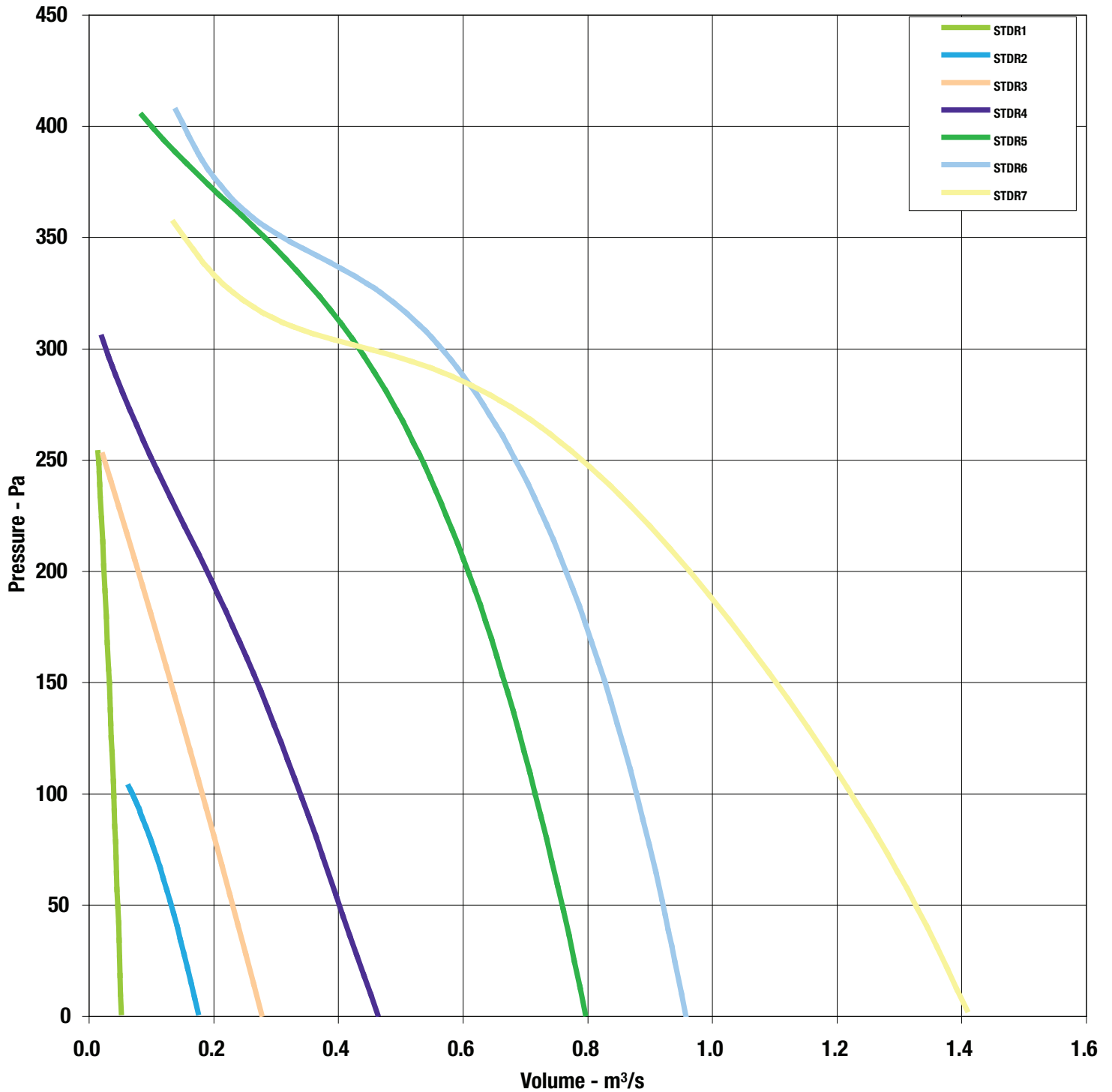
STDR/L



Twinflow STDR Performance Curves



STDR



Twinflow STDR

Sound Data

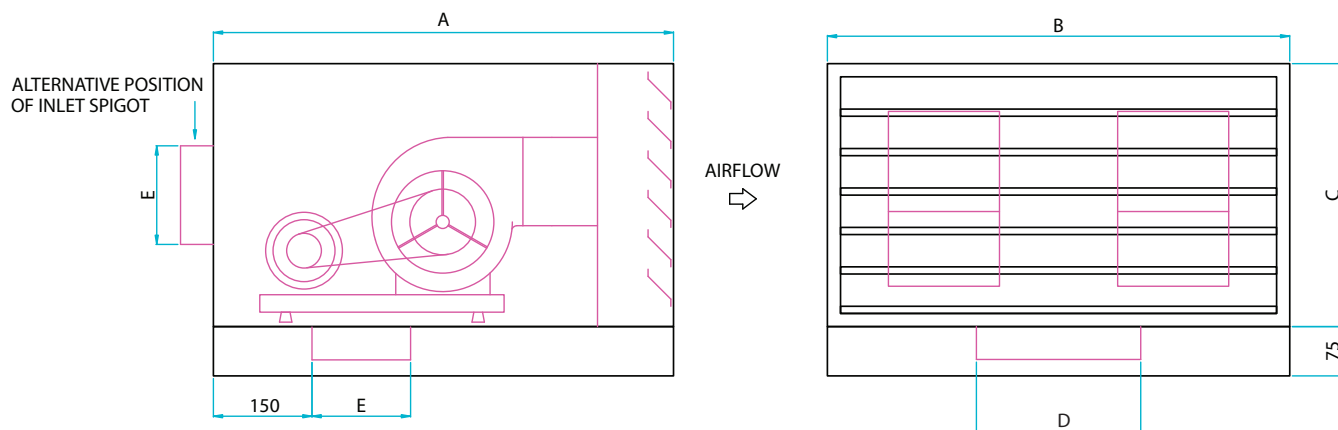


STDR- SINGLE Phase

Product Code	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	dBA @ 3m
STDR1	58	57	54	45	42	38	35	29	29
STDR2	68	63	58	54	50	46	44	40	36
STDR3	75	71	65	62	61	58	56	49	45
STDR4	84	78	71	63	64	56	59	52	49
STDR5	84	76	69	64	65	63	61	53	50
STDR6	84	80	74	67	67	69	67	59	54
STDR7	81	77	71	65	66	68	63	56	52
STDR1-L	58	57	54	44	39	34	32	26	28
STDR2-L	68	63	59	54	46	42	41	37	35
STDR3-L	75	71	66	62	58	54	53	46	44
STDR4-L	84	78	70	61	60	52	56	48	47
STDR5-L	84	76	70	64	61	59	58	50	48
STDR6-L	84	80	74	66	64	65	64	56	52
STDR7-L	81	77	72	64	63	64	60	53	50

Twinflow STBR

Dimensional Data



Product Code	A	B	C	D	E	Weight kg
STBR 1/L*	1100	900	500	600	300	90
STBR 2/L*	1300	1100	600	800	350	115
STBR 3/L*	1600	1200	700	850	450	170
STBR 4/L*	1600	1550	800	1100	500	220
STBR 5/L*	2000	2000	1050	1500	700	340
STBR 6/L*	2000	2300	1100	1800	800	390

Alternative inlet spigot on request

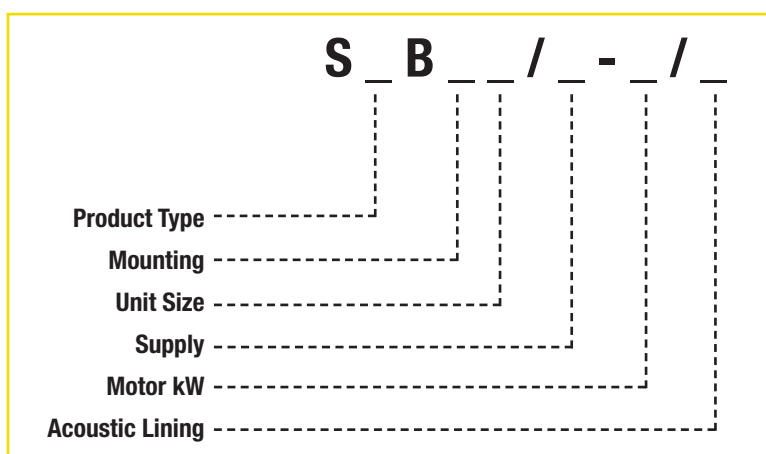
ROOF MOUNTED

Twinflow STBR

Performance & Electrical Data



Belt Drive Product Selector



Example

Duty: 0.5m³/s @ 200Pa

Unit Type: Twin Flow

Unit Size: 1

Mounting: Roof

Supply: 3 phase

Acoustic Lining: No

From Graph STBR1

Motor = 0.55kW

r/min = 1500r/min

Product Code

STBR1/3-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 STBR

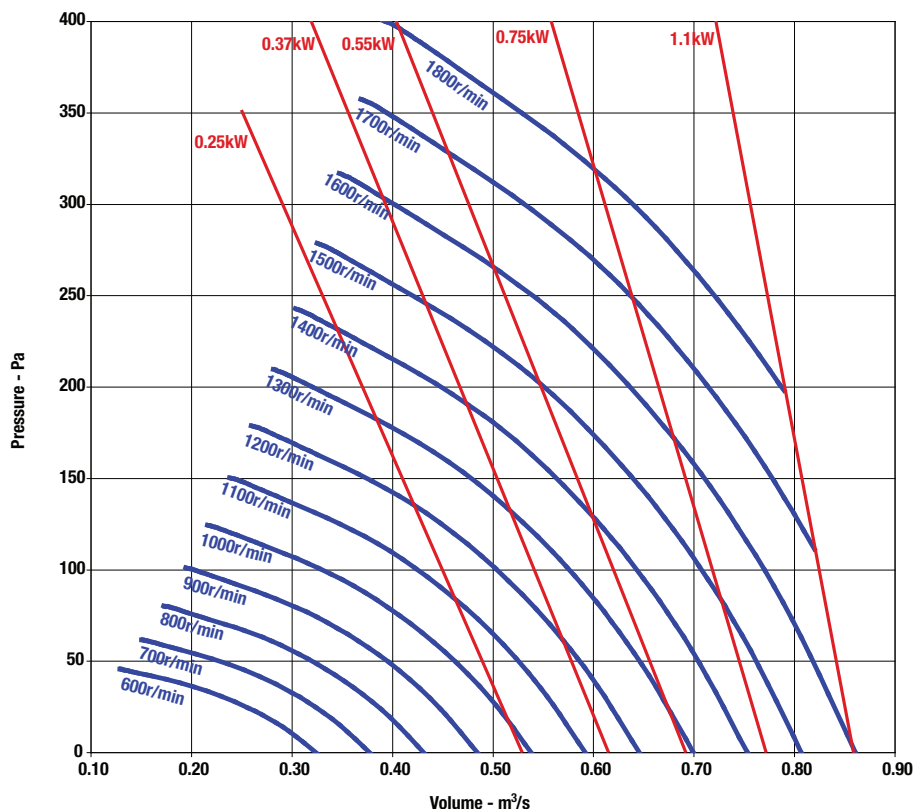
Performance & Electrical Data



STBR1 STBR1/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

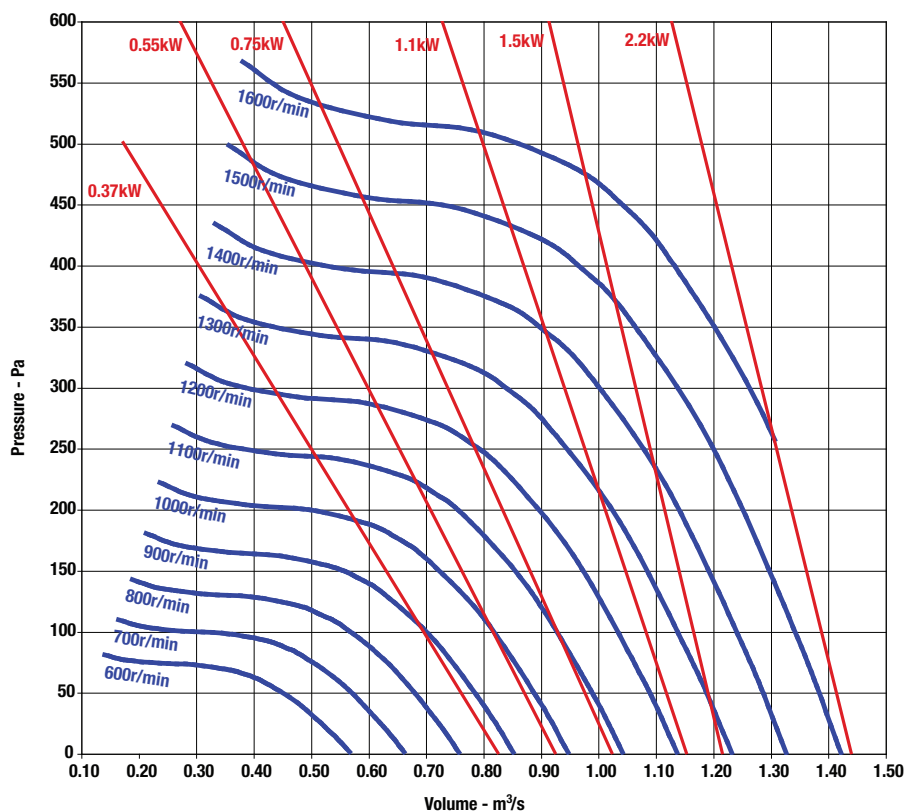
Sound levels are average spherical free field values at 50% peak pressure for comparative purposes only.



STBR2 STBR2/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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ROOF MOUNTED

Twinflow STBR

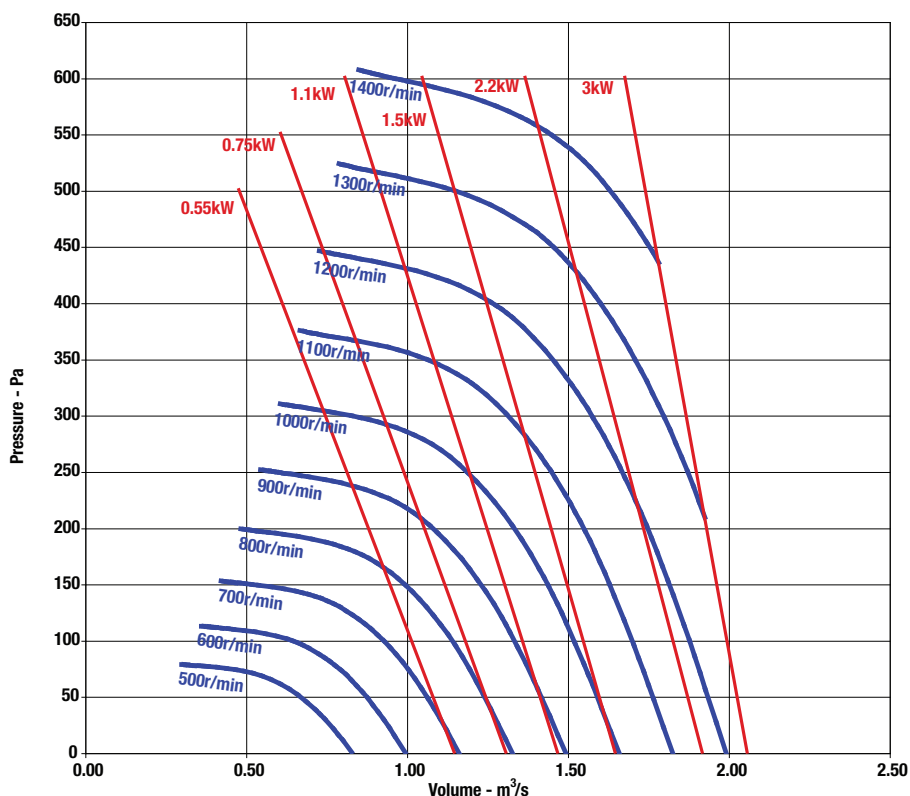
Performance & Electrical Data



STBR3 STBR3/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

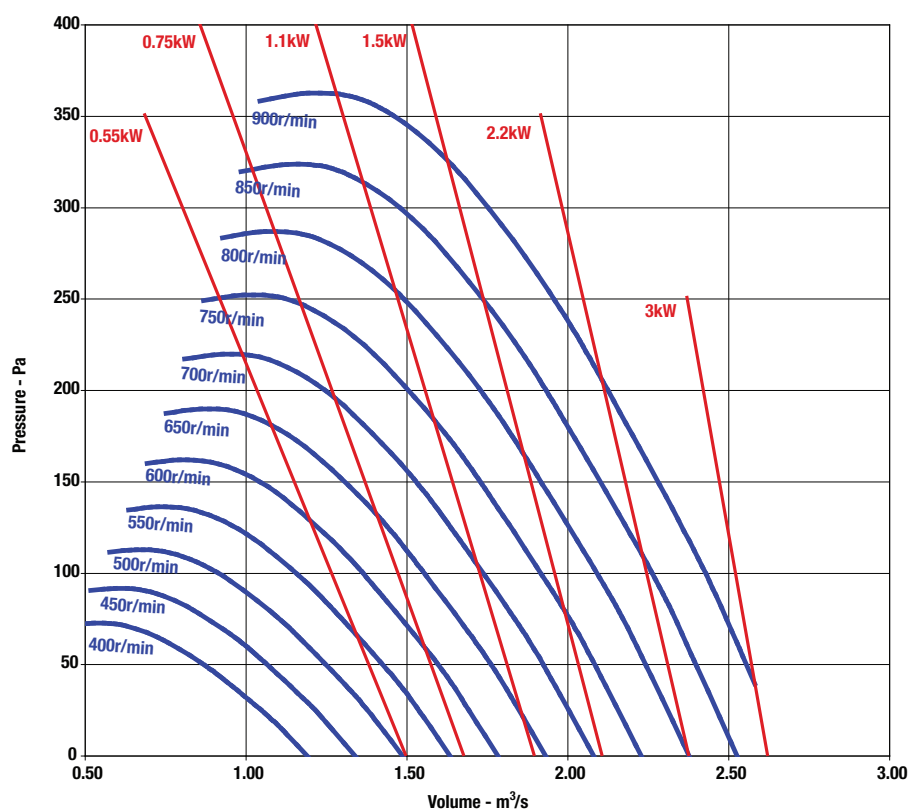
Sound levels are average spherical free field values at 50% peak pressure for comparative purposes only.



STBR4 STBR4/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.



ROOF MOUNTED

Twinflow STBR

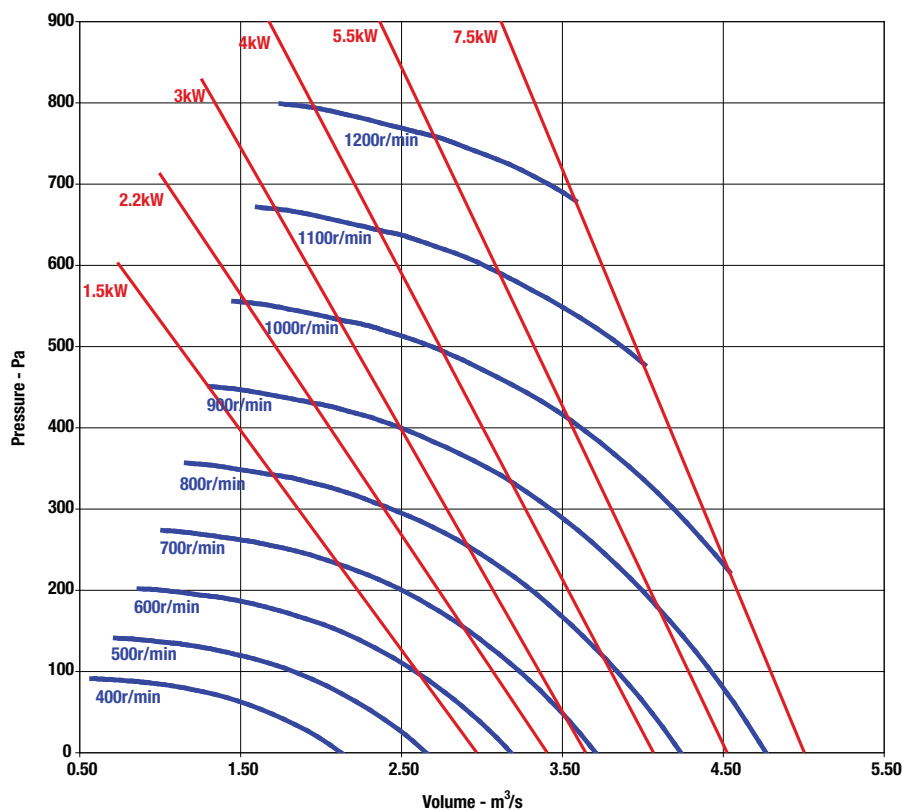
Performance & Electrical Data



STBR5 STBR5/L

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

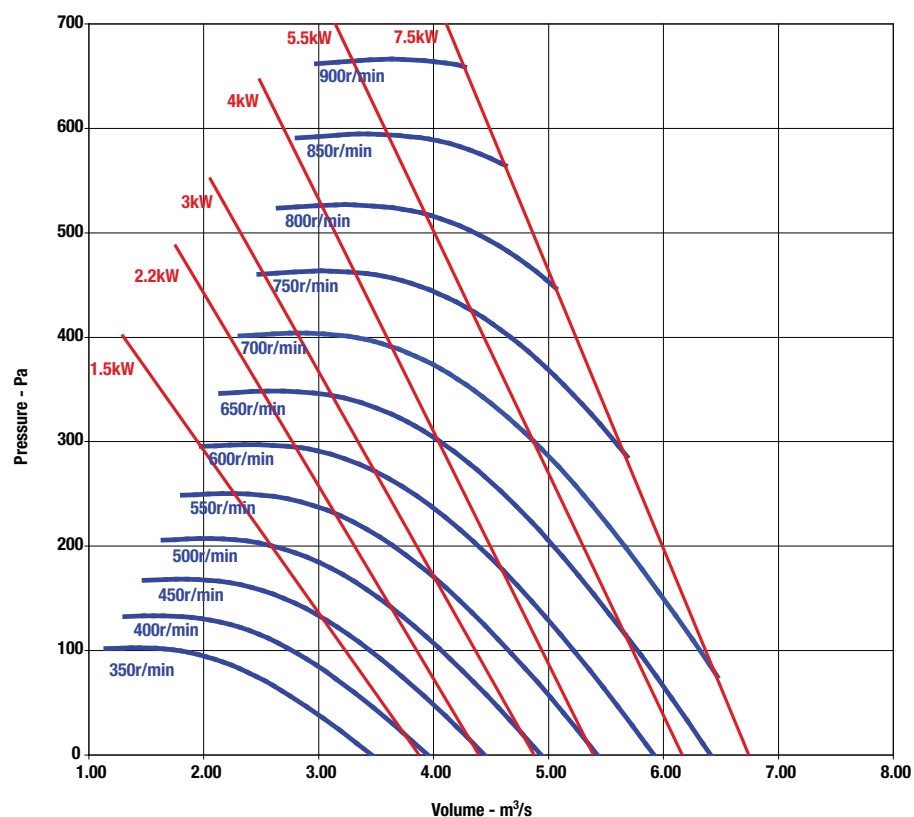
Sound levels are average spherical free field values at 50% peak pressure for comparative purposes only.



STBR6 STBR6/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.



ROOF MOUNTED

Twinflow STBR

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 STBR

Sound Data



STBR - SINGLE & THREE Phase

Product Code	Speed	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	dBA @ 3m
STBR1	600	31	44	52	57	55	53	48	40	39
STBR1	700	32	47	55	59	58	57	53	44	42
STBR1	800	34	50	58	62	62	60	58	47	46
STBR1	900	36	51	60	64	65	63	60	51	49
STBR1	1000	36	51	61	66	67	64	61	52	50
STBR1	1100	38	52	63	68	70	67	64	56	53
STBR1	1200	39	53	63	69	72	68	66	59	55
STBR1	1300	41	54	66	72	74	71	68	62	57
STBR1	1400	41	55	66	73	75	72	69	64	58
STBR1	1500	43	56	68	75	76	74	71	66	60
STBR1	1600	43	57	69	76	77	75	72	68	61
STBR1	1700	45	58	70	77	79	77	74	70	63
STBR1	1800	46	59	70	79	80	79	76	71	64

Product Code	Speed	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	dBA @ 3m
STBR2	600	33	47	54	58	55	53	46	38	39
STBR2	700	36	50	58	62	59	57	52	42	44
STBR2	800	37	52	62	65	63	60	56	45	47
STBR2	900	39	54	64	67	66	63	60	49	50
STBR2	1000	41	56	66	70	70	66	63	52	53
STBR2	1100	43	57	68	72	73	69	65	56	56
STBR2	1200	42	56	67	73	74	69	66	57	57
STBR2	1300	44	57	69	75	76	71	68	60	59
STBR2	1400	45	59	70	77	78	73	70	63	61
STBR2	1500	45	59	70	78	79	74	70	64	62
STBR2	1600	46	59	71	79	80	76	72	66	63

Product Code	Speed	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	dBA @ 3m
STBR3	500	46	54	58	59	57	55	49	40	41
STBR3	600	50	57	60	64	54	53	50	45	43
STBR3	700	49	60	63	68	65	60	55	48	49
STBR3	800	51	62	66	70	66	54	60	50	50
STBR3	900	54	66	70	72	71	68	64	54	55
STBR3	1000	55	67	72	74	73	70	66	60	57
STBR3	1100	56	68	73	76	75	71	68	60	59
STBR3	1200	57	70	76	78	78	73	70	62	61
STBR3	1300	58	70	77	79	80	75	71	64	63
STBR3	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 STBR

Sound Data



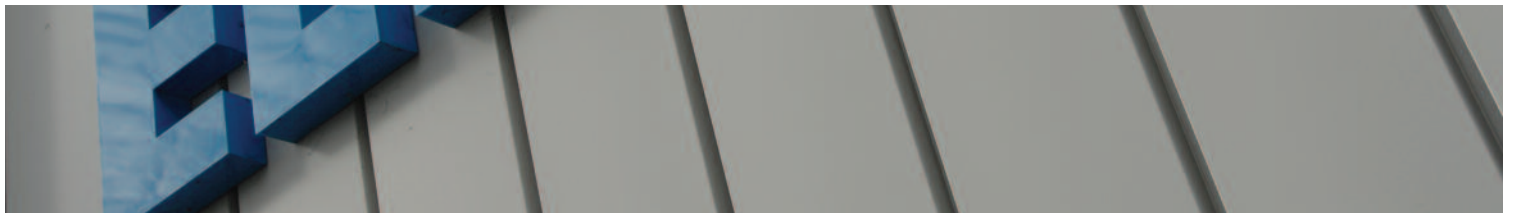
STBR - SINGLE & THREE Phase

Product Code	Speed	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	dBA @ 3m
STBR4	400	32	42	52	55	57	57	52	47	41
STBR4	450	32	44	53	58	59	59	55	49	44
STBR4	500	34	46	55	61	61	61	58	52	46
STBR4	550	35	48	56	63	63	64	61	54	49
STBR4	600	35	49	57	65	64	65	62	56	50
STBR4	650	36	51	58	67	66	67	64	58	52
STBR4	700	36	52	58	68	67	68	66	59	53
STBR4	750	38	54	61	70	70	70	68	62	55
STBR4	800	39	55	62	71	71	72	70	63	57
STBR4	850	40	56	64	72	73	73	71	65	58
STBR4	900	41	56	65	73	75	74	73	67	60

Product Code	Speed	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	dBA @ 3m
STBR5	400	62	67	58	59	58	56	54	50	43
STBR5	500	67	72	63	64	64	61	59	55	48
STBR5	600	71	76	68	69	68	65	64	60	53
STBR5	700	75	80	72	72	72	69	67	63	56
STBR5	800	78	83	75	76	75	72	71	67	60
STBR5	900	81	86	78	79	78	75	73	69	62
STBR5	1000	84	89	80	81	80	78	76	72	65
STBR5	1100	86	91	82	83	83	80	78	74	67
STBR5	1200	88	93	85	86	85	82	80	76	69

Product Code	Speed	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	dBA @ 3m
STBR6	350	65	65	60	64	58	57	54	50	45
STBR6	400	68	68	64	67	61	60	57	53	48
STBR6	450	71	71	67	70	64	63	60	56	51
STBR6	500	73	74	69	73	66	66	63	59	53
STBR6	550	76	76	71	75	69	68	65	61	56
STBR6	600	78	78	74	77	71	70	67	63	58
STBR6	650	80	80	76	79	73	72	69	65	60
STBR6	700	82	82	77	81	75	74	71	67	62
STBR6	750	83	84	79	83	76	76	73	69	63
STBR6	800	85	86	81	84	78	77	74	70	65
STBR6	850	86	87	82	86	80	79	76	72	67
STBR6	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.



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