SINGLEFlow
SSDR/SSBR

ELTA FANS

Direct & Belt Drive
Single Roof Fans

Singleflow SSDR & SSBR
Features & Benefits

The Singleflow SSDR and SSBR 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 to protect against rain and bird ingress. 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.

- **SSDR & SSBR air volume flow rates of 1.41 m^3/s and 2.7 m^3/s respectively.**
- **SSDR & SSBR static pressures of between 400 Pa and 600 Pa respectively.**
- **SSDR has 7 standard sizes.**
- **SSBR has 4 standard sizes.**
- **Robust mill finish aluminium alloy casing.**
- **Supplied with or without acoustic lining.**
- **Double inlet, double width, forward curved centrifugal fan.**
- **Single speed squirrel cage induction motor.**
- **Louvred air discharge guard.**
- **Pre wired to IP55 isolator.**
- **Suitable for operating temperatures of up to 40°C (SSDR) and 50°C (SSBR).**
- **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.

Reliability – Motors have sealed for life bearings.

Low noise - Single fans have the option of being acoustically lined with Class O acoustic foam so that breakout noise levels are significantly lowered.

Alternative - Alternative position of the intake spigot can be fitted on the end of the unit when the ventilation riser is not directly under the unit, this allows the unit to be fixed adjacent to ducting.

Adjustable - SSBR Belt driven options provide the flexibility to change duties via belt and pulley changes to match the system requirements, easily adjustable on site.

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 the lid which means easier provision for 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 SSDR units have integral thermal overload protection which prevents the motor from overheating.

Ease of wiring – The motors are pre-wired to a factory fitted IP55 Isolator.

Tested to the very latest standards – SSDR & SSBR 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 SSDR & SSBR has a 12 month warranty.

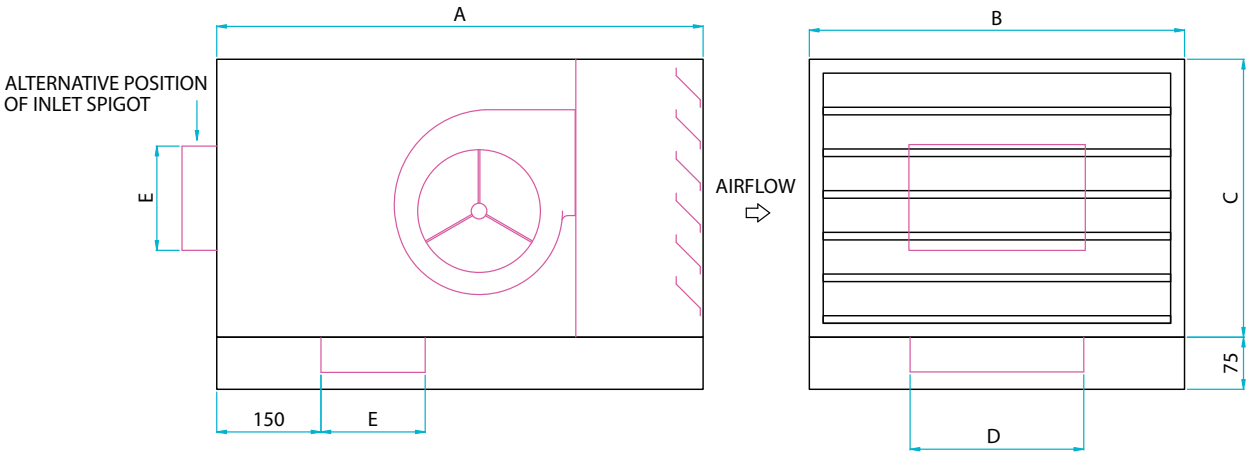
Full accessory range - SSDR accessories include speed controllers. SSBR accessories include inverters.

Typical Applications

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

ROOF MOUNTED

Singleflow SSDR
Dimensional Data



Product Code	A	B	C	D	E	Weight kg
SSDR 1/L*	500	340	275	175	100	11
SSDR 2/L*	700	500	350	225	150	17
SSDR 3/L*	700	540	400	250	150	24
SSDR 4/L*	800	650	450	350	200	31
SSDR 5/L*	950	650	550	400	325	37
SSDR 6/L*	1050	750	550	450	350	39
SSDR 7/L*	1150	800	650	650	400	57

* Suffix 'L' applicable to acoustically lined units

ROOF MOUNTED

Singleflow SSDR
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			Speed Control		Sound Level dBA @ 3m	Breakout dBA @ 3m
		0	25	50	75	100	150	200	250	300	350	400	FLC Amps	SC Amps	Input kW	Electr-onic	Trans-former	SSDR/ SSDR/L	SSDR/ SSDR/L
SSDR1/L	2250	0.056	0.053	0.050	0.047	0.043	0.036	0.028	0.019				0.37	1.41	0.085	EL31	TC12	32/31	27/26
SSDR2/L	1330	0.179	0.158	0.133	0.107	0.070							0.43	1.38	0.098	EL31	TC12	38/37	31/30
SSDR3/L	1220	0.280	0.257	0.232	0.209	0.184	0.133	0.082	0.028				1.20	4.80	0.250	EL31	TC12	45/43	36/34
SSDR4/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	EL61	TC14	50/48	44/42
SSDR5/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	EL61	TC18	50/48	43/41
SSDR6/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	EL61	TC18	54/52	46/44
SSDR7/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	EL101	TC110	55/53	47/45

* 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
SSDR1/L	-7	-9	-11	10	11	12
SSDR2/L	-7	-9	-11	18	20	22
SSDR3/L	-6	-8	-9	26	28	30
SSDR4/L	-6	-8	-10	12	13	14
SSDR5/L	-7	-9	-12	21	23	25
SSDR6/L	-7	-9	-11	20	22	24
SSDR7/L	-8	-11	-14	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.

ROOF MOUNTED

Singleflow SSDR

Sound Data

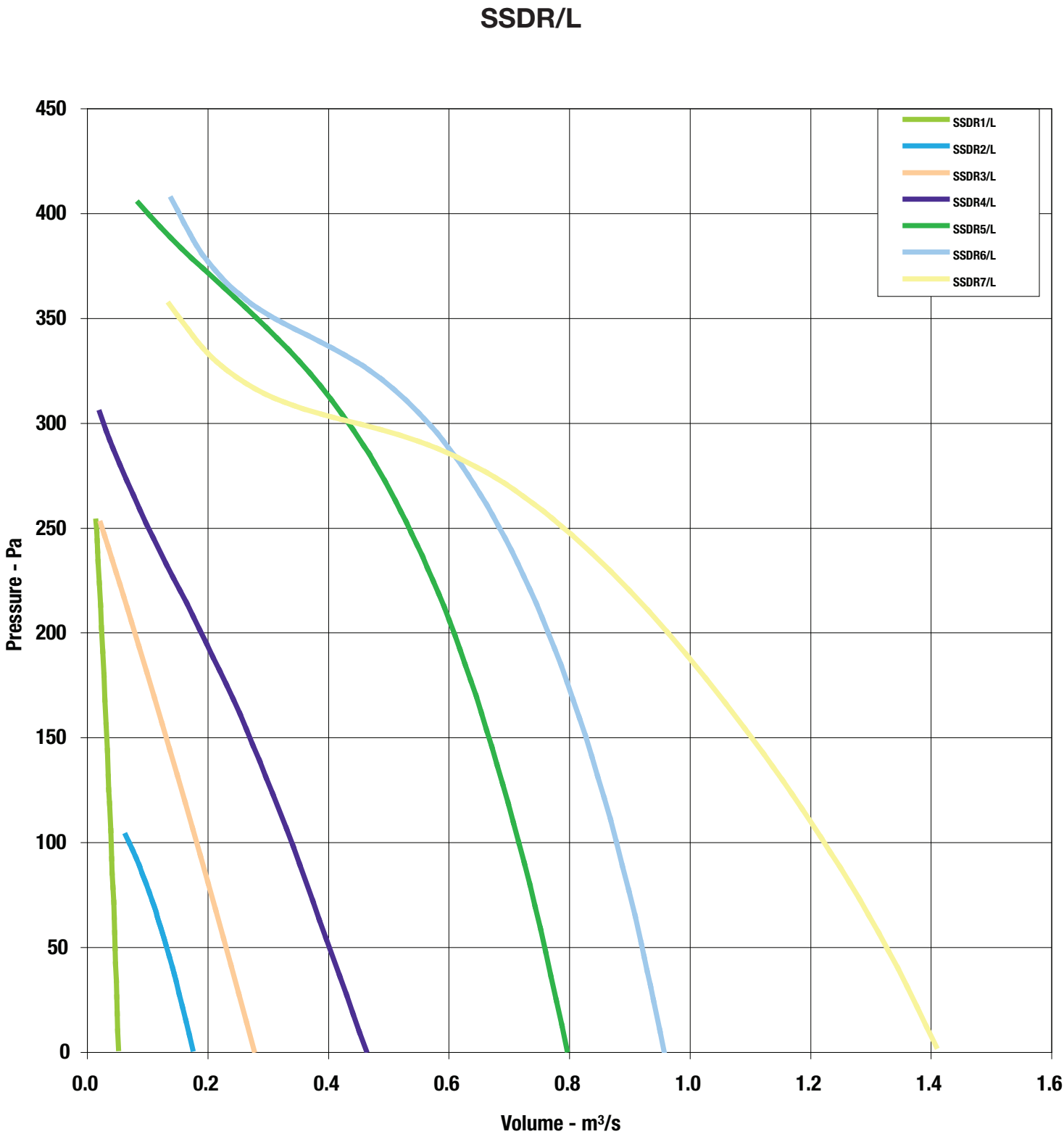
SSDR - SINGLE Phase

Product Code	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	dBA @ 3m
SSDR1	57	61	54	48	47	42	39	34	32
SSDR2	66	64	60	56	52	50	46	42	38
SSDR3	73	73	64	62	60	57	54	49	45
SSDR4	82	77	71	63	65	62	62	53	50
SSDR5	82	77	67	65	65	64	61	53	50
SSDR6	85	80	75	67	68	70	64	55	54
SSDR7	81	80	74	67	71	71	64	56	55
SSDR1-L	57	61	54	48	45	38	36	31	31
SSDR2-L	66	64	60	56	49	47	43	39	37
SSDR3-L	73	73	64	60	57	53	51	46	43
SSDR4-L	82	77	71	62	62	58	59	50	48
SSDR5-L	82	77	67	64	62	60	58	50	48
SSDR6-L	85	80	75	66	65	66	61	52	52
SSDR7-L	81	80	74	67	68	67	61	53	53

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. 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.

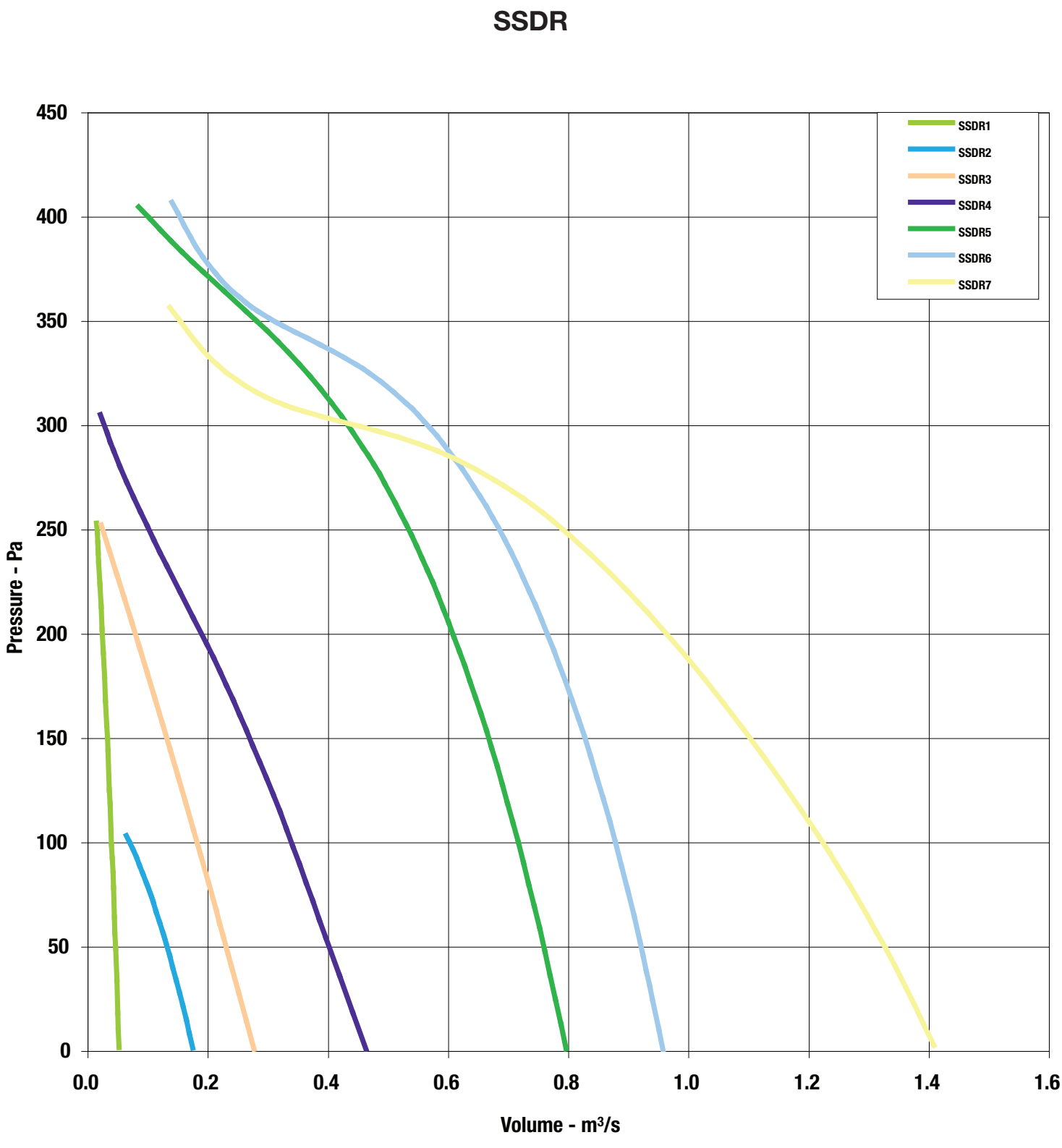
Singleflow SSDR - Direct Roof Mounted

Performance Curves

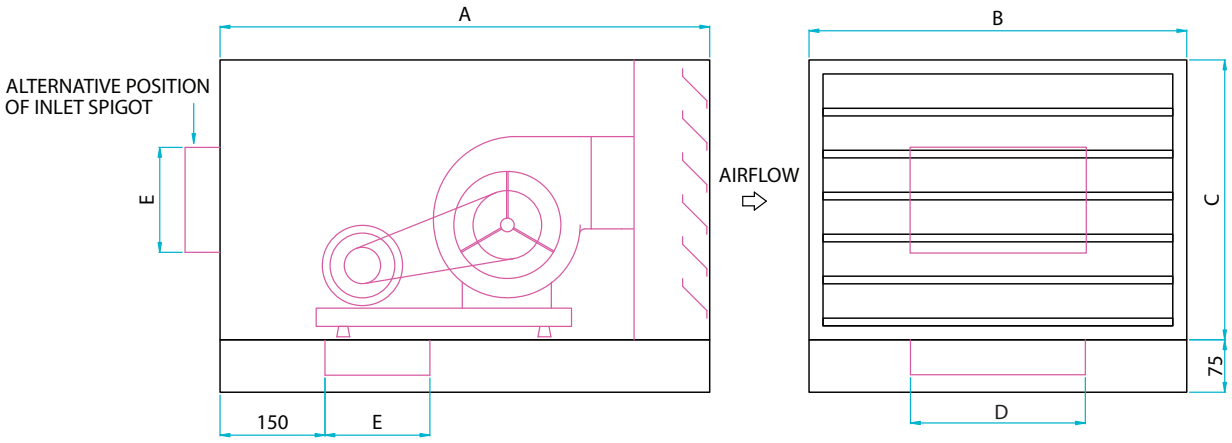


Singleflow SSDR - Direct Roof Mounted

Performance Curves



Singleflow SSBR
Dimensional Data



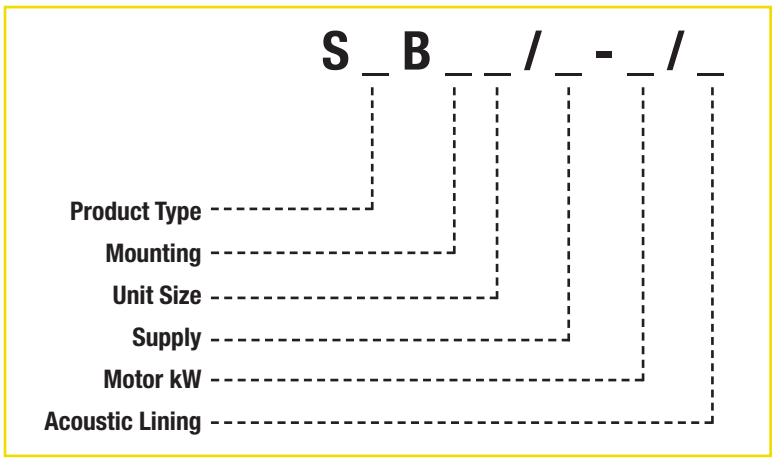
Product Code	A	B	C	D	E	Weight kg
SSBR 1/L*	1100	600	500	400	400	60
SSBR 2/L*	1300	800	600	600	500	77
SSBR 3/L*	1600	950	700	650	600	114
SSBR 4/L*	1600	1100	800	800	700	146

Alternative inlet spigot on request

ROOF MOUNTED

Singleflow SSBR
Performance & Electrical Data

Belt Drive Product Selector



Example

Duty: 0.5m3/s @ 200Pa
Unit Type: Single Flow
Unit Size: 1
Mounting: Roof
Supply: 3 phase
Acoustic Lining: No

From Graph SSBR1
Motor = 0.55kW
r/min = 1500r/min

Product Code
SSBR1/3-C

Product Type
S – Singleflow
T – Twinflow

Mounting
D – Duct
R – Roof

Unit Size
1, 2, 3, 4, 5, 6

Acoustic Lining
No code – Unlined
L – Lined

Supply
1 – Single Phase (Maximum 1.1kW) (Sizes 1-4 only)
3 – Three Phase

Motor kW
A – 0.25 B – 0.37 C – 0.55
D – 0.75 E – 1.1 F – 1.5
G – 2.2 H – 3.0 J – 4.0
K – 5.5 L – 7.5

ROOF MOUNTED

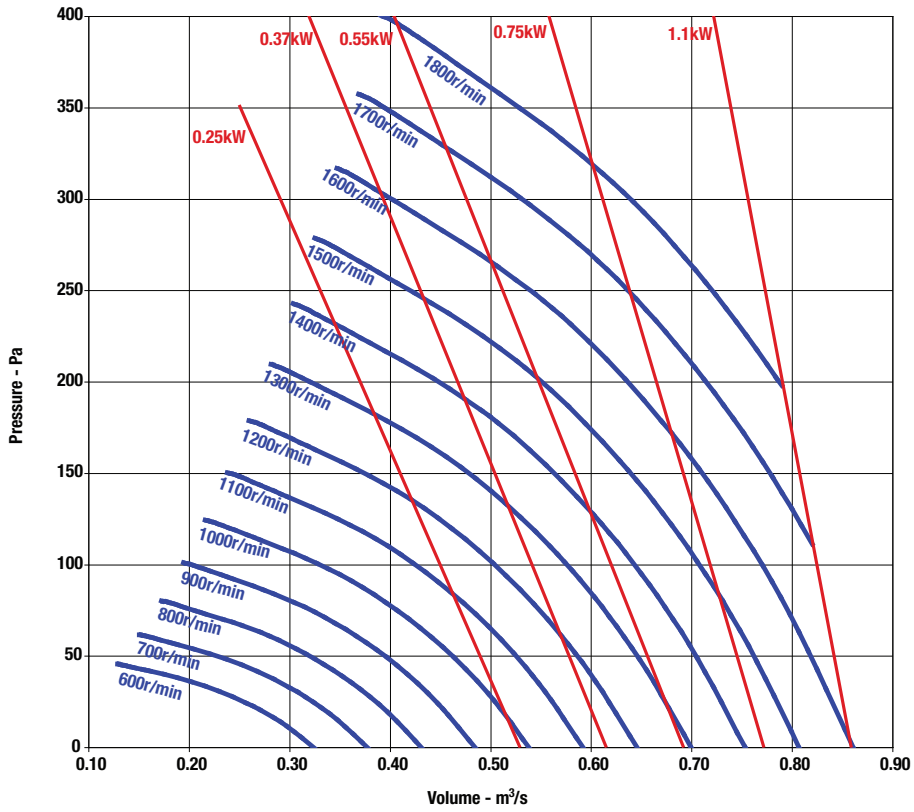
Singleflow SSBR
Performance & Electrical Data

ROOF MOUNTED

SSBR1
SSBR1/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

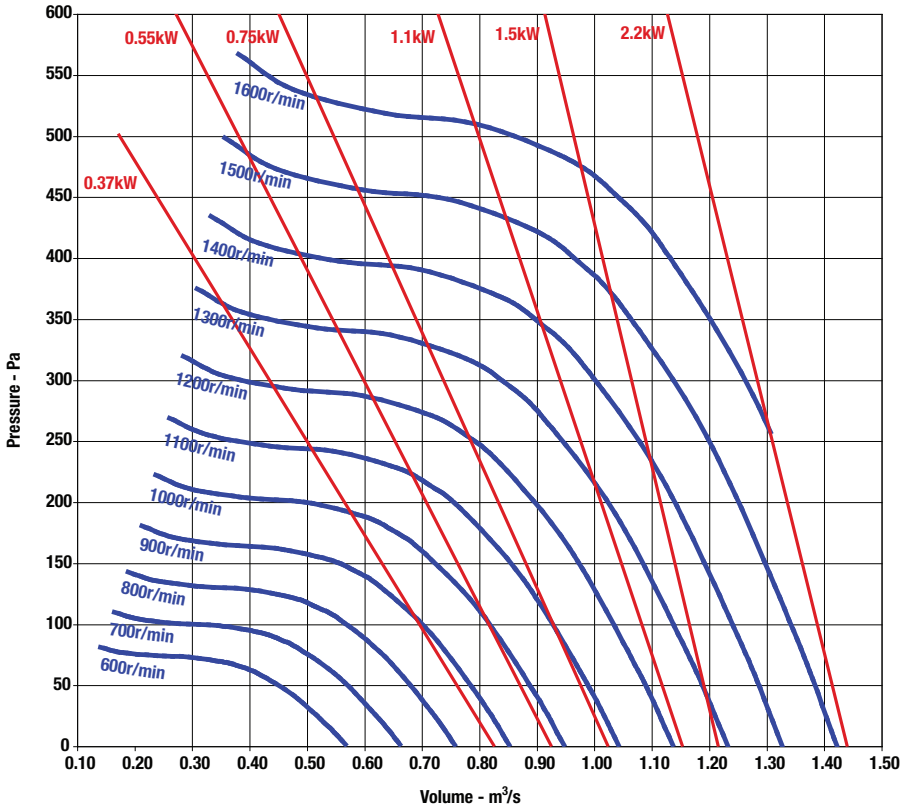
Sound levels are average spherical free field values at 50% peak pressure for comparative purposes only.



SSBR2
SSBR2/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

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



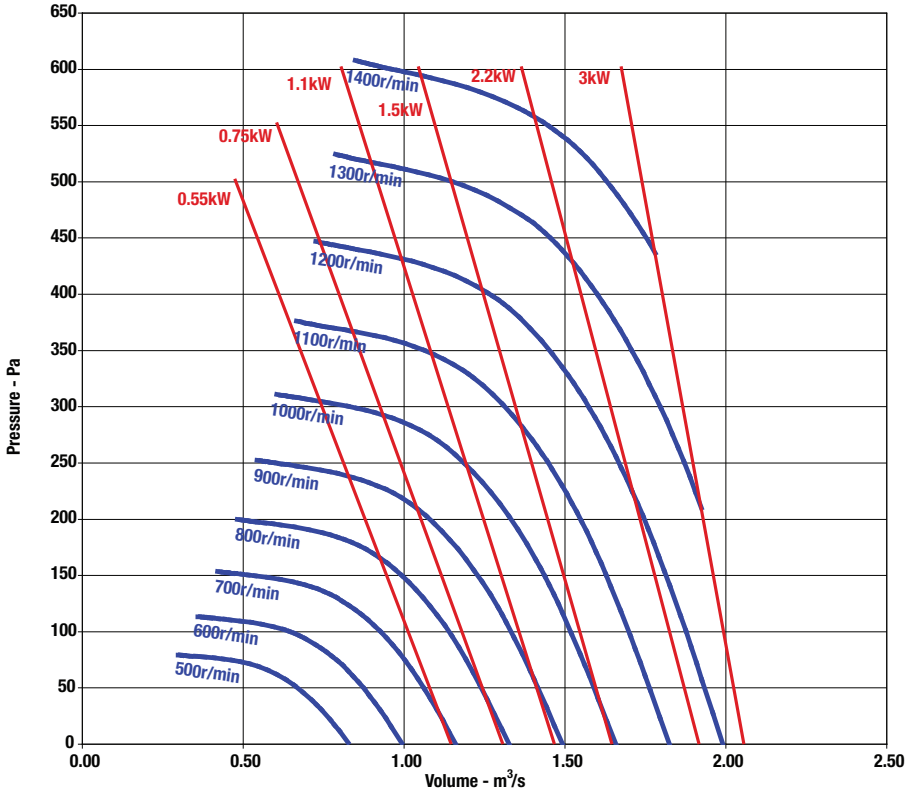
Singleflow SSBR
Performance & Electrical Data

ROOF MOUNTED

SSBR3
SSBR3/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

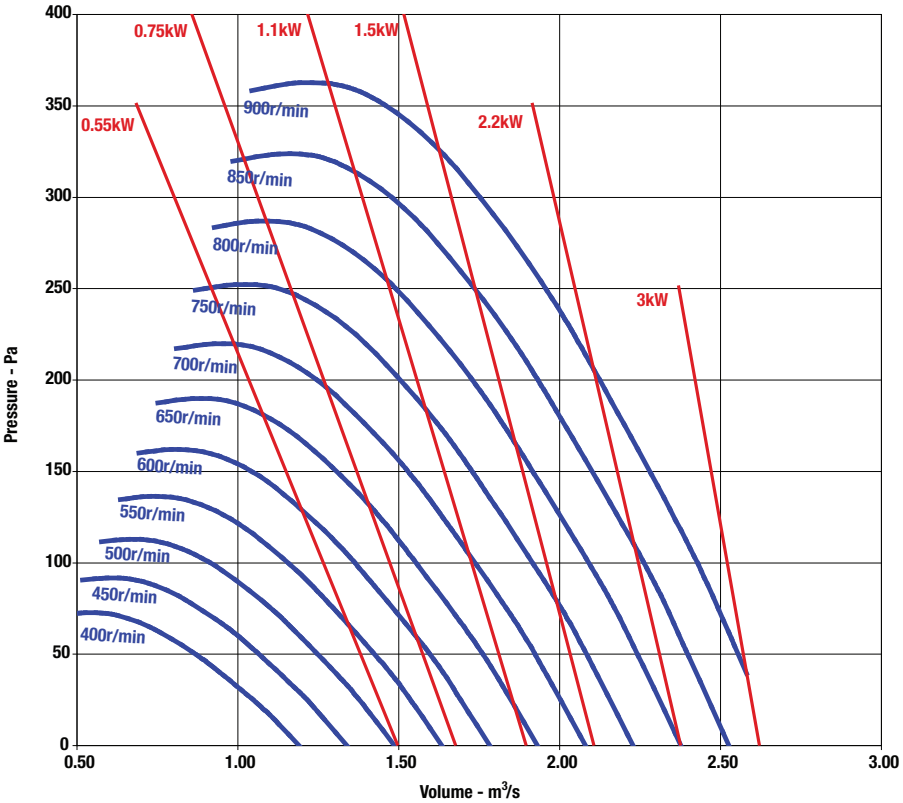
Sound levels are average spherical free field values at 50% peak pressure for comparative purposes only.



SSBD4
SSBD4/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.



Singleflow SSBR
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	18	24.2	30.25	53.2

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	5.77	8.53	10.14	15.37	22.36	30.55	42.7	57.28	86.1

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	4.66	9.94	11.51	20.33	24.45	35.55	46.5	61.13	84.8	113.6

Singleflow SSBR

Sound Data

SSBR - SINGLE & THREE Phase

Product Code	Speed	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	dBA @ 3m
SSBR1	600	31	44	52	57	55	53	48	40	39
SSBR1	700	32	47	55	59	58	57	53	44	42
SSBR1	800	34	50	58	62	62	60	58	47	46
SSBR1	900	36	51	60	64	65	63	60	51	49
SSBR1	1000	36	51	61	66	67	64	61	52	50
SSBR1	1100	38	52	63	68	70	67	64	56	53
SSBR1	1200	39	53	63	69	72	68	66	59	55
SSBR1	1300	41	54	66	72	74	71	68	62	57
SSBR1	1400	41	55	66	73	75	72	69	64	58
SSBR1	1500	43	56	68	75	76	74	71	66	60
SSBR1	1600	43	57	69	76	77	75	72	68	61
SSBR1	1700	45	58	70	77	79	77	74	70	63
SSBR1	1800	46	59	70	79	80	79	76	71	64

Product Code	Speed	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	dBA @ 3m
SSBR2	600	33	47	54	58	55	53	46	38	39
SSBR2	700	36	50	58	62	59	57	52	42	44
SSBR2	800	37	52	62	65	63	60	56	45	47
SSBR2	900	39	54	64	67	66	63	60	49	50
SSBR2	1000	41	56	66	70	70	66	63	52	53
SSBR2	1100	43	57	68	72	73	69	65	56	56
SSBR2	1200	42	56	67	73	74	69	66	57	57
SSBR2	1300	44	57	69	75	76	71	68	60	59
SSBR2	1400	45	59	70	77	78	73	70	63	61
SSBR2	1500	45	59	70	78	79	74	70	64	62
SSBR2	1600	46	59	71	79	80	76	72	66	63

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.

Singleflow SSBR

Sound Data

SSBR - SINGLE & THREE Phase

Product Code	Speed	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	dBA @ 3m
SSBR3	500	46	54	58	59	57	55	49	40	41
SSBR3	600	50	57	60	64	54	53	50	45	43
SSBR3	700	49	60	63	68	65	60	55	48	49
SSBR3	800	51	62	66	70	66	54	60	50	50
SSBR3	900	54	66	70	72	71	68	64	54	55
SSBR3	1000	55	67	72	74	73	70	66	60	57
SSBR3	1100	56	68	73	76	75	71	68	60	59
SSBR3	1200	57	70	76	78	78	73	70	62	61
SSBR3	1300	58	70	77	79	80	75	71	64	63
SSBR3	1400	58	71	78	80	81	76	72	65	64

Product Code	Speed	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	dBA @ 3m
SSBR4	400	32	42	52	55	57	57	52	47	41
SSBR4	450	32	44	53	58	59	59	55	49	44
SSBR4	500	34	46	55	61	61	61	58	52	46
SSBR4	550	35	48	56	63	63	64	61	54	49
SSBR4	600	35	49	57	65	64	65	62	56	50
SSBR4	650	36	51	58	67	66	67	64	58	52
SSBR4	700	36	52	58	68	67	68	66	59	53
SSBR4	750	38	54	61	70	70	70	68	62	55
SSBR4	800	39	55	62	71	71	72	70	63	57
SSBR4	850	40	56	64	72	73	73	71	65	58
SSBR4	900	41	56	65	73	75	74	73	67	60

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