

Advanced Air 



35SST SERIES "STEALTH"
FAN POWERED
TERMINALS

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**Series Flow Constant Volume
Model 35SST STEALTH - Super Quiet Operation**



Models:

35SST Cooling Only

35SEST Electric Heat

35SWST Hot Water Heat

The **Model 35SST 'STEALTH'** has been especially designed for the most demanding applications where premium quality design and performance characteristics are desired.

Features:

- Unique 18swg (1.2mm thick) galvanised steel channel space frame construction provides extreme rigidity and 18 swg casing components.
- 18swg (1.2mm thick) galvanised steel inclined opposed blade primary air damper operating on a 45° arc.
- STEALTH design technology provides significant reductions in radiated sound levels
- Unique perforated baffle on primary air discharge optimises mixing with induced air for rapid and effective temperature equalisation. The baffle also converts low frequency primary air damper generated sound into more readily attenuated higher frequencies.
- Pressure independent primary airflow control.
- Multi-point averaging flow sensor.
- Terminal may be field installed either way up, providing the additional flexibility of right or left field connections.
- Access panels on three sides of terminal for ease of maintenance and service to motor and fan from below or from the side of unit.
- Energy saving Nailor EPIC fan technology
- Motor fan assembly mounted on special 16swg. (1.6mm thick) angles and isolated from casing with rubber isolators.
- Removable door on controls enclosure.
- Acoustic/thermal lining - the terminal is internally lined with a 25mm thick acoustic/thermally insulating foam which is Melamine based open cellular construction, having a non-woven black tissue facing and complying with class O fire rating. This material is adhered to all internal surfaces and inside box/channel sections.
- Available with electric or hot water supplementary heat.
- All controls are mounted on exterior of terminal providing ready access for field adjustment.
- Each terminal factory tested prior to shipment.
- Single point electrical connections.
- Discharge opening designed for flanged duct connection.

Controls

- Analogue electronic controls. Factory supplied, mounted and calibrated.
- Digital controls. Factory mounting and wiring of DDC controls supplied by BMS Controls Manufacturers.

Options & Accessories

- Induced air filter
- Fan disconnect switch (except units with electric heat, when disconnect is an electric heat option and includes fan).
- Melinex liner
- Solid metal inner liner.
- Perforated metal liner.
- Fan airflow switch for night shutdown (analogue electronic controls).
- Night setback fan/heat cycle (analogue).
- Fan mounted total air sensor.
- Top entry induced air inlet.



Recommended Primary Airflow Ranges for Fan Powered Terminal Units



The recommended airflow ranges below are for terminal units with pressure independent controls. For a given unit size, the minimum and the maximum flow settings must be within the range limits to ensure pressure independent operation, accuracy and repeatability. For these reasons, factory settings will not be made outside these ranges. A minimum setting of zero (shut-off) is also available.

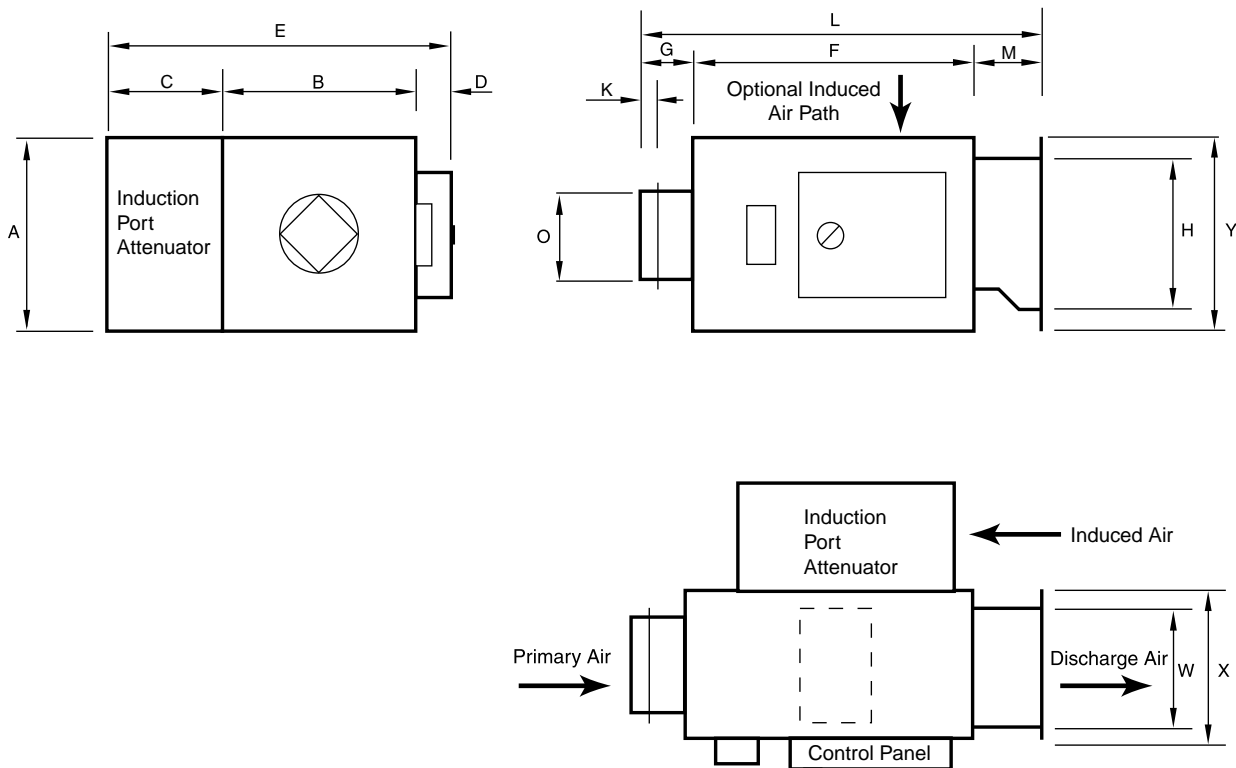
When digital or other controls are factory mounted, but supplied by others, these values are guidelines only, based upon experience with the majority of controls currently available. Controls supplied by others for factory mounting are configured and calibrated in the field.

For a detailed analysis of fan powered terminal selection procedures with working examples, consult the engineering section of this catalogue

Air Volume Range

Unit Size	Inlet Spigot dia mm	Min l/s	Max l/s
3	150	0	236
3	200	0	330
3	250	0	520
5	250	0	520
5	315	0	750
5	355	0	900
7	400	0	1400
7	450	0	1700

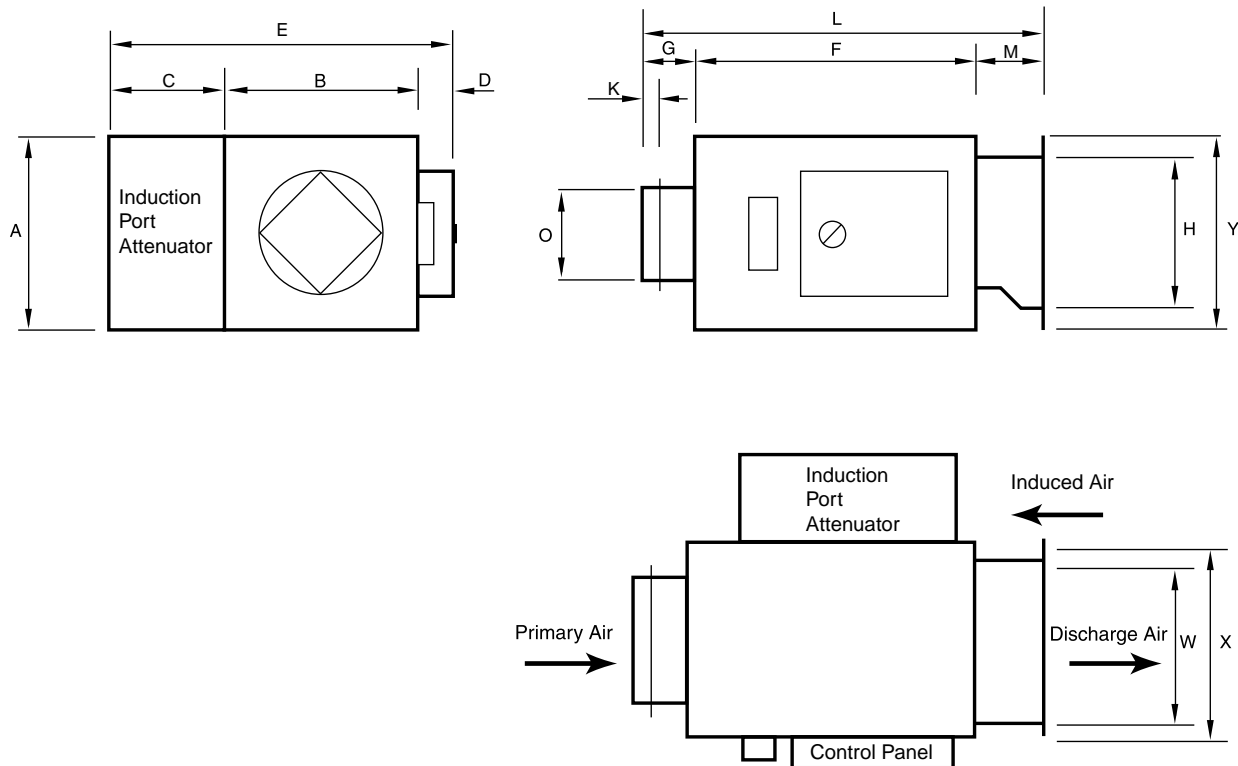
Model 35SST STEALTH - Series Flow - Size 3



Model 35SST STEALTH Size 3 Terminal Dimensions

Terminal Size	O mm	A mm	B mm	C mm	D mm	E mm	F mm	G mm	K mm	M mm	L mm	W mm	H mm	X mm	Y mm	Wgt kg
3-150	146	470	470	287	100	857	914	150	40	175	1238	400	400	460	460	70.0
3-200	196	470	470	287	100	857	914	150	40	175	1238	400	400	460	460	70.0
3-250	246	470	470	287	100	857	914	150	40	175	1238	400	400	460	460	70.0

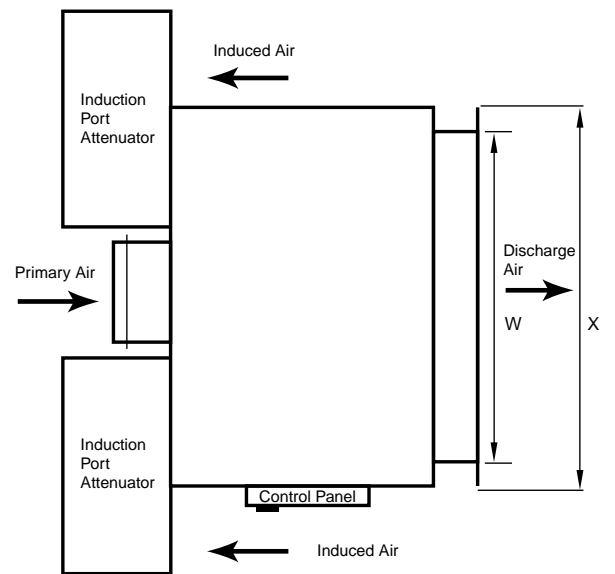
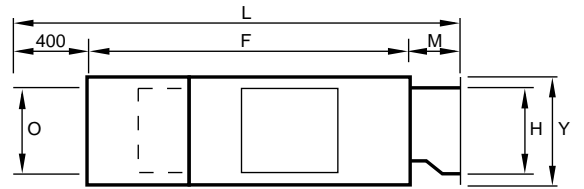
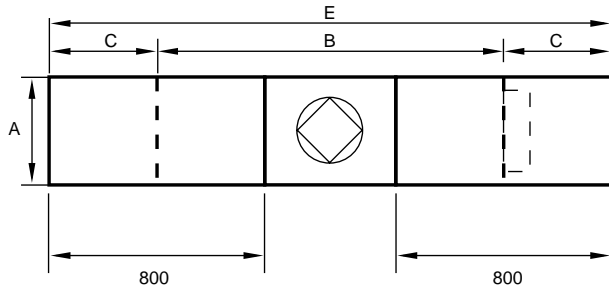
Model 35SST STEALTH - Series Flow - Size 5



Model 35SST STEALTH Size 5 Terminal Dimensions

Terminal Size	O mm	A mm	B mm	C mm	D mm	E mm	F mm	G mm	K mm	M mm	L mm	W mm	H mm	X mm	Y mm	Wgt kg
5-250	246	470	670	374	100	1144	1050	150	40	175	1375	600	400	660	460	82.5
5-315	311	470	670	374	100	1144	1050	150	40	175	1375	600	400	660	460	82.5
5-355	351	470	670	374	100	1144	1050	150	40	175	1375	600	400	660	460	82.5

Model 35SST STEALTH - Series Flow - Size 7



Model 35SST STEALTH Size 7 Terminal Dimensions

Terminal Size	O mm	A mm	B mm	C mm	D mm	E mm	F mm	G mm	K mm	M mm	L mm	W mm	H mm	X mm	Y mm	Wgt kg
7-400	396	470	1321	400	100	2134	1050	150	40	175	1375	1200	400	1260	460	165.0
7-450	513x352	470	1321	400	100	2134	1050	150	40	175	1375	1200	400	1260	460	165.0

Model 35SST STEALTH • Series Flow • Acoustic Data

Radiated NC Levels

Terminal Size	Air Flow l/s	Min. inlet ΔPs Pa	NC Levels @ Inlet Pressure (DPs) shown					
			Fan Only	Minimum ΔPs	125 Pa.	250Pa.	375 Pa.	500Pa.
3-200	330	12	-	-	20	24	25	31
3-200	283	12	-	-	-	21	25	29
3-200	212	12	-	-	-	-	21	24
3-250	519	12	24	23	27	30	30	35
3-250	425	12	-	-	24	26	29	31
3-250	330	12	-	-	-	24	24	29
3-250	212	12	-	-	-	-	21	25
5-315	755	12	31	29	29	31	33	37
5-315	661	12	28	25	30	29	33	35
5-315	566	12	24	23	21	26	29	33
5-315	495	12	-	20	20	25	29	33
5-355	909	12	31	30	33	35	34	37
5-355	802	12	29	28	30	33	34	36
5-355	661	12	30	24	26	29	30	33
5-355	496	12	-	-	-	24	26	29
7-400	1652	60	42	40	41	44	46	49
7-400	1416	42	39	36	39	41	44	46
7-400	1180	30	34	33	35	39	41	44
7-400	944	17	29	25	30	36	39	41
7-400	708	12	23	20	25	32	36	38

Performance Notes

1. Application data is based on procedures and factors found in the ARI Standard 885-98; 'Procedure for estimating occupied space sound levels in the application of air terminal units and outlets'.
2. Min. inlet ΔPs is the minimum operating pressure of the primary air damper.
3. Dash (-) in space denotes an NC level of less than 20.
4. Discharge (external) static pressure is 63 Pa in all cases.

Performance Data Series Flow (Constant Volume) Radiated Sound Power Levels

Terminal Size	Air Flow l/s	Min. inlet ΔPs Pa	Fan and 100% Primary Air- Sound Power Octave Bands @ Inlet Pressure Shown																																			
			Fan Only						125 Pa. ΔPs OBCF -Hz.						250Pa ΔPs OBCF -Hz.						375Pa ΔPs OBCF -Hz.						500Pa ΔPs OBCF -Hz.											
			125	250	500	1k	2k	4k	125	250	500	1k	2k	4k	125	250	500	1k	2k	4k	125	250	500	1k	2k	4k	125	250	500	1k	2k	4k						
3-200	330	12	55	51	46	38	33	30	57	51	45	38	33	28	61	56	47	42	36	35	62	58	51	45	41	42	65	60	53	47	43	46	66	65	57	50	45	48
	283	12	55	50	45	37	33	29	55	50	44	37	31	27	59	55	46	40	35	35	65	57	49	44	41	41	64	60	52	46	43	45	64	63	55	48	44	47
	212	12	51	42	42	33	30	24	50	46	40	32	28	22	57	51	44	39	34	34	58	54	46	40	37	36	63	57	50	45	42	42	60	59	52	45	43	44
3-250	519	12	60	58	50	44	38	33	59	58	50	43	37	33	64	62	52	46	41	37	66	64	55	49	44	43	67	64	57	51	46	47	68	68	59	53	47	50
	425	12	58	55	48	41	35	30	56	54	47	39	33	30	61	59	50	43	38	35	63	61	52	46	42	42	65	63	55	49	44	46	66	65	57	51	46	49
	330	12	53	51	45	36	31	27	52	49	43	35	29	25	57	55	46	40	35	33	60	58	50	44	40	40	62	59	52	46	43	44	63	63	55	49	45	47
	212	12	50	47	41	32	28	21	48	45	40	31	26	19	54	50	43	37	33	31	56	55	43	40	38	37	59	57	49	43	41	42	59	60	51	46	43	45
5-315	755	12	71	61	52	47	45	40	69	62	52	47	44	41	69	63	57	49	45	42	69	65	57	51	47	45	71	66	61	54	50	51	71	70	63	56	51	54
	661	12	68	57	49	45	41	37	66	57	49	42	40	37	68	60	54	45	42	39	68	63	56	49	45	45	68	66	59	52	48	50	70	68	63	55	50	53
	566	12	66	55	47	42	39	35	64	54	46	40	37	34	62	57	51	43	40	38	65	61	54	48	44	44	66	63	57	50	47	49	67	66	60	52	48	51
	495	12	61	52	45	39	35	32	61	52	43	37	33	30	61	56	49	41	38	37	62	60	52	46	43	43	64	63	56	48	46	48	66	66	58	50	48	50
5-355	909	12	71	63	54	50	47	44	69	64	56	51	47	45	71	66	58	52	49	47	72	68	59	53	50	50	73	67	61	54	51	53	73	70	62	55	52	55
	802	12	69	62	53	48	46	42	68	62	53	48	45	42	69	64	55	49	46	44	70	66	57	51	48	48	71	67	59	52	50	52	71	69	61	54	51	54
	661	12	66	59	50	45	42	39	65	57	49	43	40	37	67	60	52	45	43	41	67	63	54	48	46	46	68	63	56	50	48	50	69	66	59	52	50	53
	496	12	61	53	45	39	35	32	59	52	43	37	34	31	61	55	47	41	39	37	63	59	50	44	43	44	63	61	53	46	46	48	64	63	55	48	48	51
7-400	1642	60	76	71	63	56	53	50	74	68	62	54	48	46	75	68	62	54	48	47	77	69	63	55	50	50	79	69	65	57	52	53	81	72	67	58	54	56
	1416	42	73	67	62	52	47	44	71	65	58	51	44	42	73	65	59	51	45	43	75	66	61	52	48	47	77	68	63	55	50	52	79	70	65	57	53	54
	1180	30	69	63	57	49	45	41	68	61	56	45	39	37	70	61	56	47	42	40	73	64	59	50	47	47	75	64	61	52	49	50	77	68	63	55	51	53
	944	17	65	57	52	44	37	33	62	55	50	39	33	30	66	57	53	43	40	37	71	61	56	48	45	45	73	63	59	50	47	49	75	66	62	53	50	52
	708	10	61	53	48	37	32	28	59	51	46	35	29	25	63	54	50	40	37	34	68	58	54	45	43	43	71	61	57	48	46	47	72	63	60	51	48	50

1. Discharge (external) static pressure is 63 Pa in all cases. It is the difference (ΔPs) in static pressure from terminal discharge to the room.
2. Radiated sound power is the breakout noise transmitted through the unit casing walls and induction port.
3. Sound power levels are in decibels, dB re 10⁻¹² watts.
4. All sound data listed by octave bands is raw data without any corrections for room absorption or duct attenuation.
5. Min. inlet ΔPs is the minimum operating pressure of the primary air damper section.
6. Data derived from independent tests conducted in accordance with ANSI/ASHRAE Std. 130-1996 and ARI Standard 880-98.

Model 35SST STEALTH • Series Flow • Acoustic Data

Discharge NC Levels

Terminal Size	Air Flow l/s	Min. inlet ΔPs Pa	NC Levels @ Inlet Pressure (DPs) shown					
			Fan Only	Minimum ΔPs	125 Pa.	250Pa.	375 Pa.	500Pa.
3-200	330	12	-	-	-	-	-	-
3-200	283	12	-	-	-	-	-	-
3-200	212	12	-	-	-	-	-	-
3-250	519	12	-	-	-	-	-	-
3-250	425	12	-	-	-	-	-	-
3-250	330	12	-	-	-	-	-	-
3-250	212	12	-	-	-	-	-	-
5-315	755	12	-	-	-	-	-	-
5-315	661	12	-	-	-	-	-	-
5-315	566	12	-	-	-	-	-	-
5-315	495	12	-	-	-	-	-	-
5-355	909	12	22	22	23	24	24	24
5-355	802	12	20	-	20	20	20	20
5-355	661	12	-	-	-	-	-	-
5-355	496	12	-	-	-	-	-	-
7-400	1652	60	39	32	34	35	35	35
7-400	1416	42	33	29	29	30	32	33
7-400	1180	30	26	23	24	25	27	30
7-400	944	17	20	-	-	22	25	26
7-400	708	12	-	-	-	-	22	25

Performance Notes

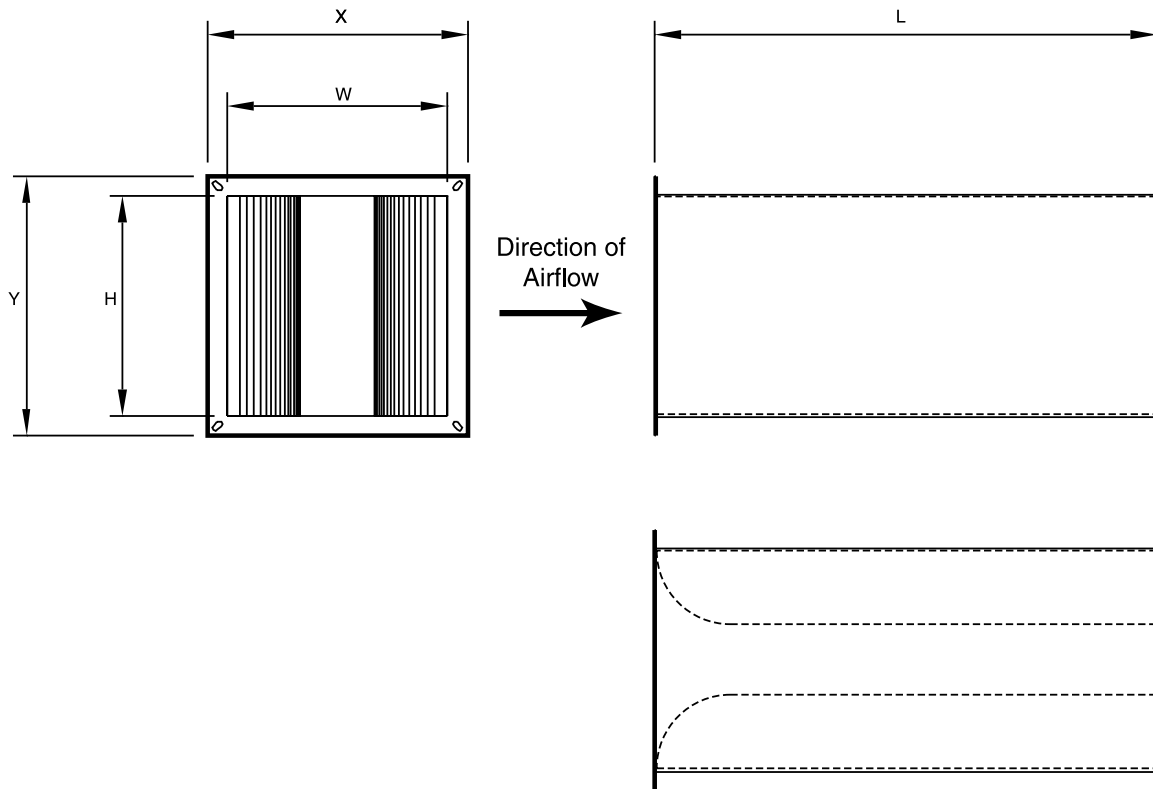
1. Application data is based on procedures and factors found in the ARI Standard 885-90; 'Procedure for estimating occupied space sound levels in the application of air terminal units and outlets'.
2. Min. inlet ΔPs is the minimum operating pressure of the primary air damper.
3. Dash (-) in space denotes an NC level of less than 20.
4. Discharge (external) static pressure is 63 Pa in all cases.

Performance Data Series Flow (Constant Volume) Discharge Sound Power Levels

Terminal Size	Air Flow l/s	Min. inlet ΔPs Pa	Fan and 100% Primary Air- Sound Power Octave Bands @ Inlet Pressure Shown																													
			Fan Only				Min. ΔPs OBCF -Hz.				125 Pa. ΔPs OBCF -Hz.				250Pa ΔPs OBCF -Hz.				375Pa ΔPs OBCF -Hz.				500Pa ΔPs OBCF -Hz.									
			125	250	500	1k	2k	4k	125	250	500	1k	2k	4k	125	250	500	1k	2k	4k	125	250	500	1k	2k	4k	125	250	500	1k	2k	4k
3-200	330	12	56	56	59	56	52	48	57	56	59	55	51	48	58	58	60	56	52	48	59	59	60	56	52	48	61	61	61	58	52	48
	283	12	56	55	58	55	51	46	56	55	58	54	50	45	57	57	50	55	51	46	58	58	59	55	51	46	59	58	59	55	49	46
	212	12	55	52	54	50	46	38	55	52	54	50	45	37	56	53	55	50	45	38	57	54	55	50	45	38	57	55	55	49	44	38
3-250	519	12	62	64	68	65	62	61	61	64	68	64	63	61	65	67	68	64	63	61	66	67	69	66	64	62	67	67	69	67	61	62
	425	12	60	61	64	61	58	56	59	61	63	60	57	55	61	63	65	62	59	56	63	64	65	63	60	57	64	64	65	63	60	58
	330	12	57	58	59	55	52	48	57	58	58	55	51	48	59	59	60	57	53	49	60	60	60	57	54	50	60	59	60	57	53	50
3-250	212	12	57	56	54	50	46	38	56	56	54	50	45	38	57	56	55	51	46	39	58	57	55	50	46	39	58	57	55	50	45	40
	755	12	67	68	69	69	66	65	67	67	68	67	64	63	69	69	69	68	65	65	70	70	69	68	65	65	70	70	69	68	64	64
	661	12	66	66	67	66	63	62	64	64	65	64	61	61	67	66	66	64	62	62	68	67	66	65	62	62	68	67	66	65	62	61
5-315	566	12	62	62	63	62	59	58	60	61	62	60	57	57	63	63	62	61	58	57	64	63	63	61	58	57	64	63	63	61	57	57
	495	12	60	59	59	58	55	53	58	58	59	57	53	53	60	59	59	58	54	53	62	60	59	57	54	53	62	60	59	57	54	53
	909	12	73	74	73	74	71	70	73	74	73	73	70	70	73	74	74	73	70	70	74	75	74	73	71	70	74	75	74	73	70	70
5-355	802	12	71	71	70	70	67	67	69	69	70	69	66	66	71	71	71	70	67	66	72	71	71	70	67	66	72	71	70	69	66	66
	661	12	67	67	67	63	63	64	64	66	62	61	61	61	67	67	65	65	62	62	68	66	66	65	62	62	68	65	66	65	61	61
	496	12	60	60	61	60	56	54	59	59	59	58	54	53	60	60	60	58	55	54	61	60	60	58	54	54	63	61	60	58	54	54
7-400	1642	60	73	76	76	77	75	75	69	71	74	73	71	69	70	71	74	73	71	71	72	73	74	74	71	72	74	73	75	74	72	72
	1416	42	70	71	73	73	70	70	66	67	69	69	66	66	67	68	70	69	67	66	70	70	71	70	68	68	71	71	72	71	69	69
	1180	30	65	66	68	67	64	63	61	62	64	63	60	59	63	63	65	64	61	60	66	66	66	65	63	62	69	68	67	65	64	64
	944	17	59	60	63	61	57	56	55	56	58	57	53	51	59	59	60	58	56	53	63	62	61	60	59	58	65	65	63	61	61	61
	708	10	53	55	56	54	50	47	50	51	53	51	46	43	55	54	54	53	51	47	59	59	57	56	57	54	62	62	60	59	60	58

1. Discharge (external) static pressure is 63 Pa in all cases. It is the difference (ΔPs) in static pressure from terminal discharge to the room.
2. Radiated sound power is the breakout noise transmitted through the unit casing walls and induction port.
3. Sound power levels are in decibels, dB re 10⁻¹² watts.
4. All sound data listed by octave bands is raw data without any corrections for room absorption or duct attenuation.
5. Min. inlet ΔPs is the minimum operating pressure of the primary air damper section.
6. Data derived from independent tests conducted in accordance with ANSI/ASHRAE Std. 130-1996 and ARI Standard 880-98.

Secondary Attenuators-Dimensions
Model 35SFBST and 35SFGST



Terminal Size	W mm	H mm	X mm	Y mm	L mm	Wgt kg
3-150	400	400	460	460	600	21.00
3-150	400	400	460	460	900	28.00
3-150	400	400	460	460	1200	35.00
3-200	400	400	460	460	600	21.00
3-200	400	400	460	460	900	28.00
3-200	400	400	460	460	1200	35.00
3-250	400	400	460	460	600	21.00
3-250	400	400	460	460	900	28.00
3-250	400	400	460	460	1200	35.00
5-250	600	400	660	460	600	28.00
5-250	600	400	660	460	900	36.00
5-250	600	400	660	460	1200	44.00
5-315	600	400	660	460	600	28.00
5-315	600	400	660	460	900	36.00
5-315	600	400	660	460	1200	44.00
5-355	600	400	660	460	600	28.00
5-355	600	400	660	460	900	36.00
5-355	600	400	660	460	1200	44.00
7-400	1200	400	1260	460	600	45.00
7-400	1200	400	1260	460	900	59.00
7-400	1200	400	1260	460	1200	73.00
7-450	1200	400	1260	460	600	45.00
7-450	1200	400	1260	460	900	59.00
7-450	1200	400	1260	460	1200	73.00

Secondary Attenuators

All Nailor terminal units are available with attached secondary attenuators

Casing:

Manufactured from 18 swg. (1.2mm thick) folded Galvanised Mild Steel sheet, formed into a rectangular casing, all longitudinal casing joints are mechanically sealed.

Flanges:

Intake and discharges incorporate rectangular flanges, which are mechanically fixed to the main body of the attenuator.

Splitters:

Arranged within the casing are vertical attenuating splitter sections manufactured from 21swg. (0.8mm thick) galvanised mild steel, fixed to the casing by rivets. Splitters are fitted at inlet and discharge with aerodynamically shaped bullnose fairings. Splitters are fitted with 22 swg. (0.7mm thick) expanded or perforated metal facings. Horizontal splitters are also available if required.

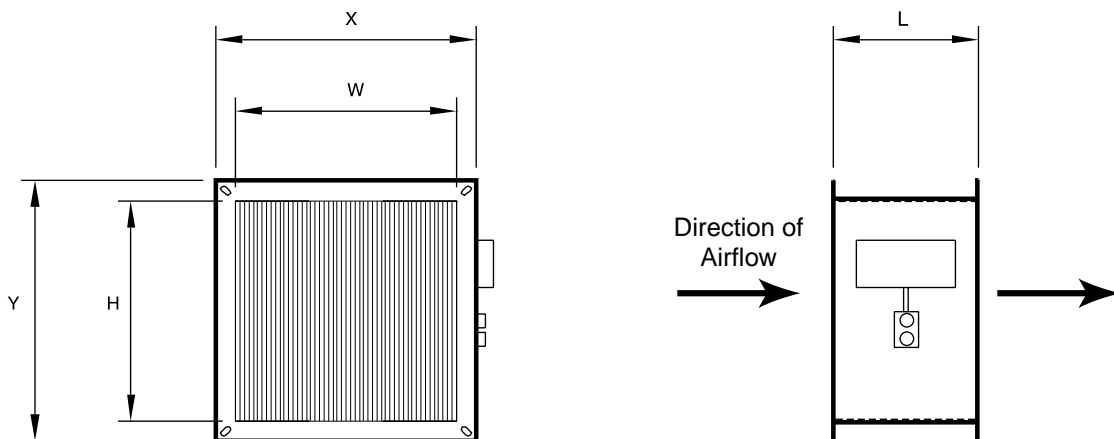
Acoustic infill:

Splitters and side linings are filled with an inert, non combustible, non hygroscopic, vermin and rot proof mineral fibre slab which will not support bacterial growth. Usually faced with a glass fibre tissue (FB), however hermetically sealed Melinex membrane bags (FG) are available wherever indoor air quality conditions demand.

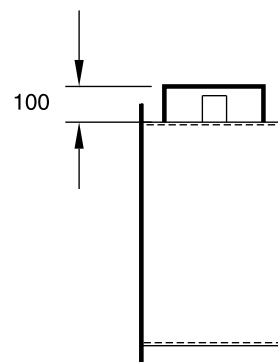
Acoustic Performance Data - Secondary Attenuator Static Insertion Loss dB
Model 35SFBST and 35SFGST

Terminal size	Air vol. l/s.	Air vol. m³/h	Press. drop Pa.	width mm.	height mm.	length mm.	O.B.C.F.-Hz					
							125	250	500	1k	2k	4k
3-150	24	324	neg.	400	400	600	6	8	15	18	13	9
3-150	236	1872	15	400	400	600	6	8	15	18	13	9
3-150	24	324	neg.	400	400	900	9	12	20	25	19	12
3-150	236	1872	15	400	400	900	9	12	20	25	19	12
3-150	24	324	neg.	400	400	1200	11	16	30	36	25	15
3-150	236	1872	20	400	400	1200	11	16	30	36	25	15
3-200	30	324	neg.	400	400	600	6	8	15	18	13	9
3-200	330	1872	15	400	400	600	6	8	15	18	13	9
3-200	30	324	neg.	400	400	900	9	12	20	25	19	12
3-200	330	1872	15	400	400	900	9	12	20	25	19	12
3-200	30	324	neg.	400	400	1200	11	16	30	36	25	15
3-200	330	1872	20	400	400	1200	11	16	30	36	25	15
3-250	50	324	neg.	400	400	600	6	8	15	18	13	9
3-250	520	1872	15	400	400	600	6	8	15	18	13	9
3-250	50	324	neg.	400	400	900	9	12	20	25	19	12
3-250	520	1872	15	400	400	900	9	12	20	25	19	12
3-250	50	324	neg.	400	400	1200	11	16	30	36	25	15
3-250	520	1872	20	400	400	1200	11	16	30	36	25	15
5-250	60	216	neg.	600	400	600	1	3	5	6	5	2
5-250	640	2304	60	600	400	600	1	3	5	6	5	2
5-250	60	216	neg.	600	400	900	2	5	8	10	7	3
5-250	640	2304	60	600	400	900	2	5	8	10	7	3
5-250	60	216	neg.	600	400	1200	3	6	10	13	9	4
5-250	640	2304	65	600	400	1200	3	6	10	13	9	4
5-315	75	270	neg.	600	400	600	1	3	5	6	5	2
5-315	750	2700	60	600	400	600	1	3	5	6	5	2
5-315	75	270	neg.	600	400	900	2	5	8	10	7	3
5-315	750	2700	60	600	400	900	2	5	8	10	7	3
5-315	75	270	neg.	600	400	1200	3	6	10	13	9	4
5-315	750	2700	65	600	400	1200	3	6	10	13	9	4
5-355	105	378	neg.	600	400	600	1	3	5	6	5	2
5-355	900	3240	60	600	400	600	1	3	5	6	5	2
5-355	105	378	neg.	600	400	900	2	5	8	10	7	3
5-355	900	3240	60	600	400	900	2	5	8	10	7	3
5-355	105	378	neg.	600	400	1200	3	6	10	13	9	4
5-355	900	3240	65	600	400	1200	3	6	10	13	9	4
7-400	130	468	1	1200	400	600	9	14	19	32	31	23
7-400	1400	5040	37	1200	400	600	9	14	19	32	31	23
7-400	130	468	1	1200	400	900	12	18	25	42	41	29
7-400	1400	5040	43	1200	400	900	12	18	25	42	41	29
7-400	130	468	1	1200	400	1200	14	22	31	50	50	35
7-400	1400	5040	45	1200	400	1200	14	22	31	50	50	35
7-450	150	540	3	1200	400	600	9	14	19	32	31	23
7-450	1700	6120	40	1200	400	600	9	14	19	32	31	23
7-450	150	540	3	1200	400	900	12	18	25	42	41	29
7-450	1700	6120	43	1200	400	900	12	18	25	42	41	29
7-450	150	540	3	1200	400	1200	14	22	31	50	50	35
7-450	1700	6120	47	1200	400	1200	14	22	31	50	50	35

Low Pressure Hot Water Supplementary Heater Batteries - Dimensions - Model 35SWST



Terminal Size	W mm	H mm	L mm	X mm	Y mm	Wgt kg
3-150	400	400	200	460	460	15.00
3-200	400	400	200	460	460	15.00
3-250	400	400	200	460	460	15.00
5-250	600	400	200	660	460	18.00
5-315	600	400	200	660	460	18.00
5-355	600	400	200	660	460	18.00
7-400	1200	400	200	1260	460	25.00
7-450	1200	400	200	1260	460	25.00



All terminal units are available with factory installed low pressure hot water supplementary heater batteries.

Casing:

Manufactured from 18swg. (1.2mm thick) folded galvanised mild steel sheet, formed into a rectangular casing, all casing joints are mechanically sealed.

Inlets and outlets incorporate rectangular flanges, which are mechanically fixed to the main body of the casing.

Water Tubes:

Manufactured from 10mm diam. copper tube to BS 1278 table Y.

Pipe Connections:

Plain male ends suitable for solder jointing.

Heat Exchange Fins:

Manufactured from 0.13mm thick rectangular aluminium plates, mechanically bonded to the copper tubes. Fins are spaced at 2.5mm intervals.

All low pressure hot water supplementary heater batteries incorporate an air vent and drain point.

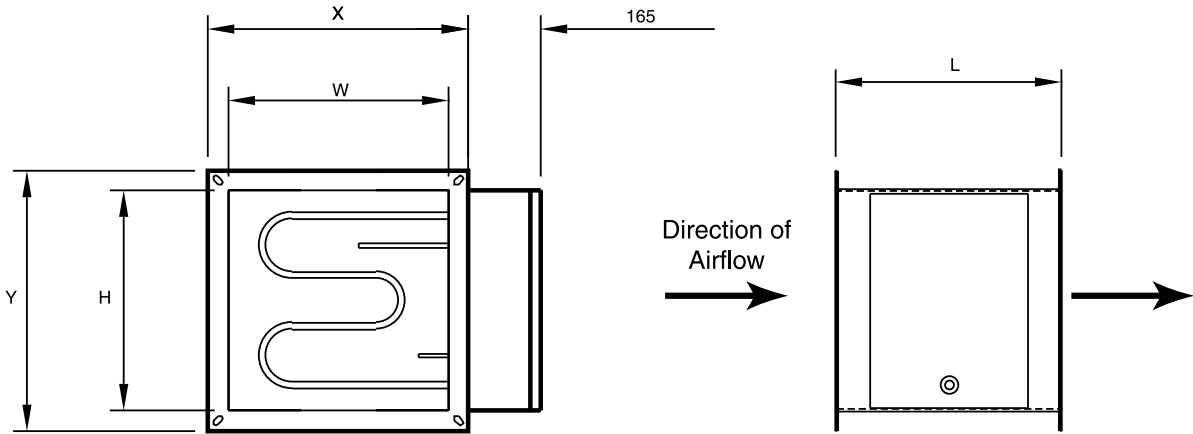
Pressure Testing:

All low pressure hot water supplementary heater batteries are air pressure tested under water to a pressure of 3,000 kPa.

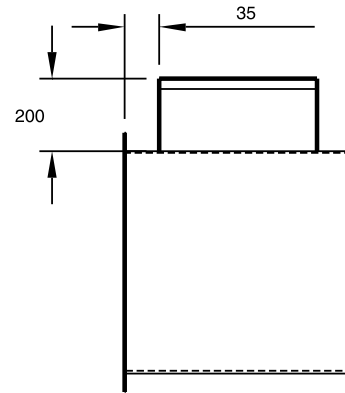
LPHW Supplementary Heater Battery Performance 82°C Flow, 71°C Return, 10 fpi
Model 35SWST

Terminal Size	Air Vol. l/s	Air Vol. m³/h	Dimensions Width mm	Dimensions Height mm	Face Vel m/s	Air On °C	1 Row Duty kW	Air Off °C	Water Pd KPa	Water kg/s	Air Pd Pa	2 Row Duty kW	Air Off °C	Water Pd kPa	Water kg/s	Air Pd Pa
3-150	95	342	400	400	0.6	13	3.2	41	0.9	69.5	2.4	4.9	56	1.2	106.5	4
3-150	110	396	400	400	0.7	13	3.7	41	1.1	80.5	3.1	5.7	56	1.6	124.2	5
3-150	150	540	400	400	0.9	13	5.0	41	2.0	108.9	5.2	7.9	57	3.0	170.1	9
3-150	185	666	400	400	1.2	13	6.0	40	2.7	129.0	7.4	9.4	55	4.20	203.5	13
3-200	210	756	400	400	1.3	13	6.5	39	3.2	140.5	9.2	10.3	54	5.	224.0	16
3-200	283	1019	400	400	1.8	13	8.0	37	4.8	174.0	15	13.1	51	7.8	282.7	27
3-200	330	1188	400	400	2.1	13	8.9	35	5.8	193.3	20	14.7	50	9.7	203.5	35
3-250	210	756	400	400	1.3	13	6.5	39	3.2	140.5	9.2	10.3	54	5.0	224.0	16
3-250	330	1188	400	400	2.1	13	8.9	35	5.8	193.3	20	14.7	50	9.7	317.3	35
3-250	425	1530	400	400	2.7	13	10.6	34	8.0	229.7	30	17.7	48	14.0	383.1	53
3-250	520	1872	400	400	3.2	13	12.4	33	10.7	267.7	43	20.8	46	19.0	450.2	75
5-250	210	756	600	400	0.9	13	7.3	42	4.5	157.6	4.6	11.3	58	6.3	245.5	8
5-250	330	1188	600	400	1.4	13	10.4	39	8.7	224.9	9.9	16.6	55	12.9	358.7	17
5-250	425	1530	600	400	1.8	13	11.7	36	5.9	252.4	16	19.0	50	13.4	411.5	27
5-250	520	1872	600	400	2.2	13	13.4	34	7.7	289.4	22	22.1	48	17.8	477.9	37
5-315	495	1782	600	400	2.1	13	12.9	35	7.2	280.1	20	21.3	49	16.6	461.0	32
5-315	565	2034	600	400	2.3	13	14.1	39	8.5	306.3	25	23.4	42	20.0	507.6	43
5-315	660	2376	600	400	2.7	13	15.7	33	6.4	339.8	32	26.3	46	24.9	569.3	57
5-315	750	2700	600	400	3.1	13	17.4	32	12.6	376.4	40	29.2	45	30.5	633.1	70
5-355	495	1782	600	400	2.1	13	12.9	35	7.2	280.1	20	21.3	49	16.6	461.0	32
5-355	660	2376	600	400	2.7	13	15.7	33	6.4	339.8	32	26.3	46	24.9	569.3	57
5-355	800	2880	600	400	3.3	13	18.2	32	13.7	393.9	45	30.7	45	33.5	664.9	78
5-355	910	3276	600	400	3.8	13	19.9	3.1	16.2	429.9	56	33.7	44	40.1	730.5	98
7-400	948	3413	1200	400	2.0	13	26.9	37	10.8	583.3	18	36.9	45	14.8	799.4	32
7-400	1080	3888	1200	400	2.2	13	29.5	36	12.8	638.5	23	40.0	44	17.7	865.8	40
7-400	1274	4586	1200	400	2.6	13	33.0	35	15.9	714.3	30	45.0	42	22.0	974.0	53
7-400	1440	5184	1200	400	3.0	13	36.0	34	18.5	779.2	37	49.0	41	26.0	1060.6	65
7-450	944	3398	1200	400	2.0	13	27.0	37	10.8	584.4	18	36.0	45	19.7	779.2	32
7-450	1227	4417	1200	400	2.6	13	32.0	35	15.0	692.6	28	44.0	43	21.0	952.4	50
7-450	1534	5522	1200	400	3.2	13	38.0	34	21.0	822.5	42	52.0	41	29.0	1125.5	73
7-450	1723	6023	1200	400	3.6	13	41.5	33	24.0	898.3	50	57.0	40	34.0	1233.8	89

Electric Supplementary Heater Batteries - Dimensions
Model 35SEST



Terminal Size	W mm	H mm	L mm	X mm	Y mm	Wgt kg
3-150	400	400	370	40	460	11.00
3-200	400	400	370	40	460	11.00
3-250	400	400	370	40	460	11.00
5-250	600	400	370	660	460	15.00
5-315	600	400	370	660	460	15.00
5-355	600	400	370	660	460	15.00
7-400	1200	400	370	1260	460	25.00
7-450	1200	400	370	1260	460	25.00



All terminal units are available with factory installed electric supplementary heater batteries.

Casing:

Manufactured from 18 swg. (1.2mm thick) folded galvanised mild steel sheet, formed into a rectangular casing, all casing joints are mechanically sealed.

Intake and discharges incorporate rectangular flanges, which are mechanically fixed to the main body of the casing.

Electric Elements:

Manufactured from stainless steel tubing with copper resistance wire and magnesium oxide insulation.

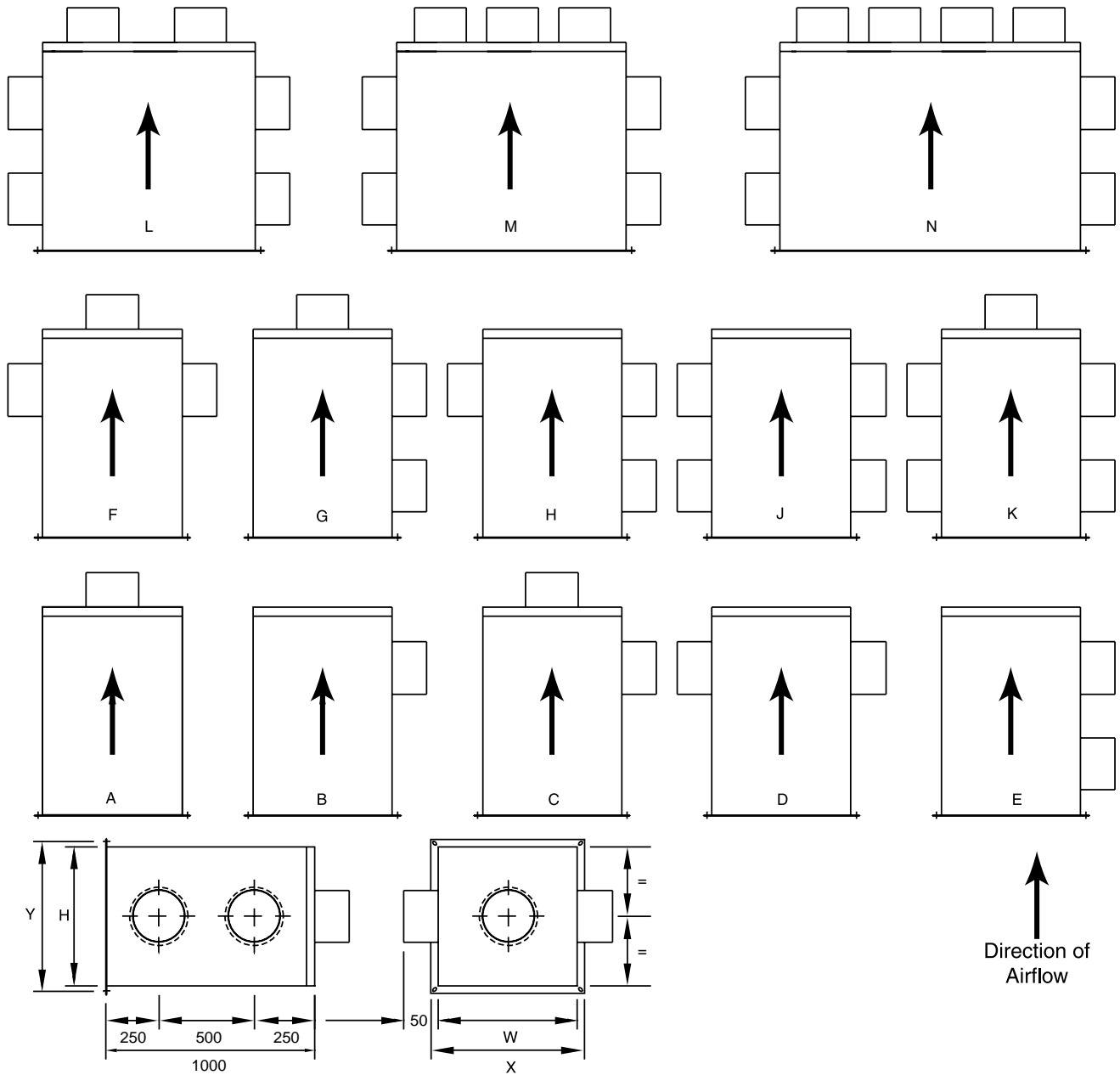
High Temperature Cut-Out:

All electric supplementary heater batteries incorporate automatic and manual high temperature cut-out safety devices, which disconnect the electrical power in the event that the air temperature exceeds a pre set maximum.

Pressure Switch:

All electric supplementary heater batteries incorporate a positive pressure switch which does not permit the heating elements to be energised unless there is positive air pressure (indicating airflow) available.

Multiple Outlet Plenums - Dimensions
Models 35GB and 35GG



Model 35GB - Insulation faced with non woven tissue as standard.

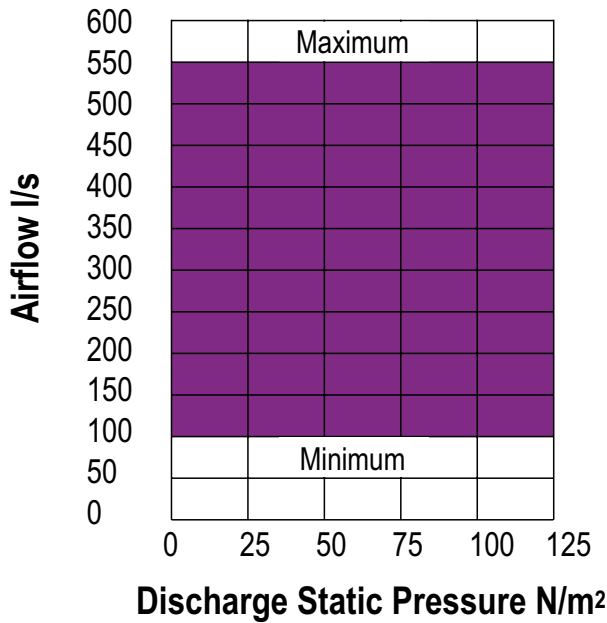
Model 35GG - Insulation covered with hermetically sealed Melinex membrane bags for indoor air quality applications.

Terminal Size	W mm	H mm	X mm	Y mm	Spigot diam mm	Spigot qty	Spigot diam mm	Spigot qty	Spigot diam mm	Spigot qty	Spigot diam mm	Spigot qty	Wgt kg
3-150	400	400	460	460	150	A-K	200	A-K	250	A-K	315	A-K	15.0
3-200	400	400	460	460	150	A-K	200	A-K	250	A-K	315	A-K	15.0
3-250	400	400	460	460	150	A-K	200	A-K	250	A-K	315	A-K	15.0
5-250	600	400	660	460	150	A-L	200	A-L	250	A-K	315	A-K	25.5
5-315	600	400	660	460	150	A-L	200	A-L	250	A-K	315	A-K	25.5
5-355	600	400	660	460	150	A-L	200	A-L	250	A-K	315	A-K	25.5
7-400	1200	400	1260	460	150	A-N	200	A-N	250	A-M	315	A-L	45.0
7-450	1200	400	1260	460	150	A-N	200	A-N	250	A-M	315	A-L	45.0

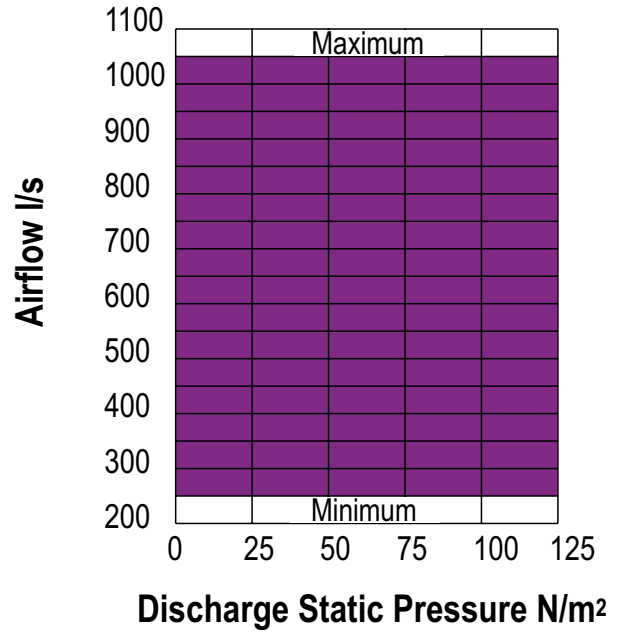
Series Flow ECM Brushless DC Motor Performance Data
Model 35SST

Fan Curves - Airflow vs. Downstream Static Pressure

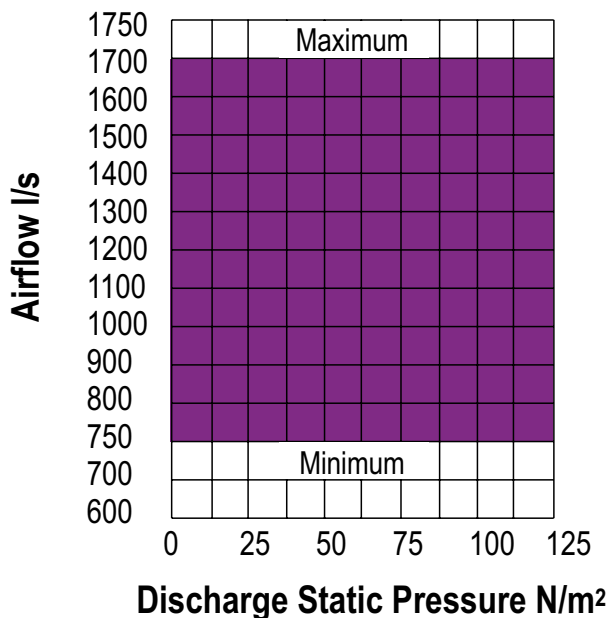
Unit Size 3 (1/2 H.P.)



Unit Size 5 (3/4 H.P.)



Unit Size 7 (2 @ 3/4 H.P.)



Notes

- The fan curves for the ECM motor are unlike those for traditional induction motors. The ECM motor is constant volume and airflow does not vary with changing static pressure conditions. The motor compensates for any changes in external static pressure or varying internal conditions such as filter loading.
- Airflow can be set to operate on a horizontal performance line at any point within the shaded area using the solid state volume controller provided.
- Fan powered terminal units featuring the ECM motor have considerably wider turn-down ratios than conventional induction motors. Hence, only three unit sizes are required in order to provide the same fan airflow range that would require six terminal unit/fan sizes when equipped with induction motors. A reduction in the number of different terminal sizes required on a typical project simplifies design lay-out and installation and reduces inventory of field service parts.
- Fan curves shown are applicable to 230 volt, single phase ECM motors. ECM motors, although DC in operation, include a built-in inverter.

