



FAN POWERED TERMINAL UNIT WITH EPIC ECM MOTOR

SERIES FLOW • CONSTANT OR VARIABLE VOLUME
MODELS: 35S, 35SW AND 35SE • UNIT SIZES 1 – 6

DESCRIPTION:

- 18 ga. (1.31) galvanized steel channel frame with 20 ga. (1.00) casing components.
- 16 ga. (1.61) galvanized steel inclined opposed blade damper. 45° rotation. CW to close.
- Ultra-high efficiency ECM fan motor. EPIC fan volume controller.
- Multi-point averaging Diamond Flow sensor. Supplied with balancing tees.
- Full size access panels on three sides.
- 3/4" (19) dual density insulation, exposed edges coated to prevent air erosion. Meets requirements of NFPA 90A and UL 181.
- Single point electrical and/or pneumatic main air connection.
- Discharge opening for flanged duct connection.
- Full primary air valve low voltage NEMA 1 type enclosure for factory mounted DDC and analog electronic controls.
- Controls mounted as standard on RH side as shown. Terminals ordered with LH controls (optional) are inverted and discharge duct hanging elevation will therefore change.

OPTIONS:

Digital Controls:

- Factory mounted (supplied by others)
- Field mounted (supplied by others)
- Nailor EZvav. See separate submittal.

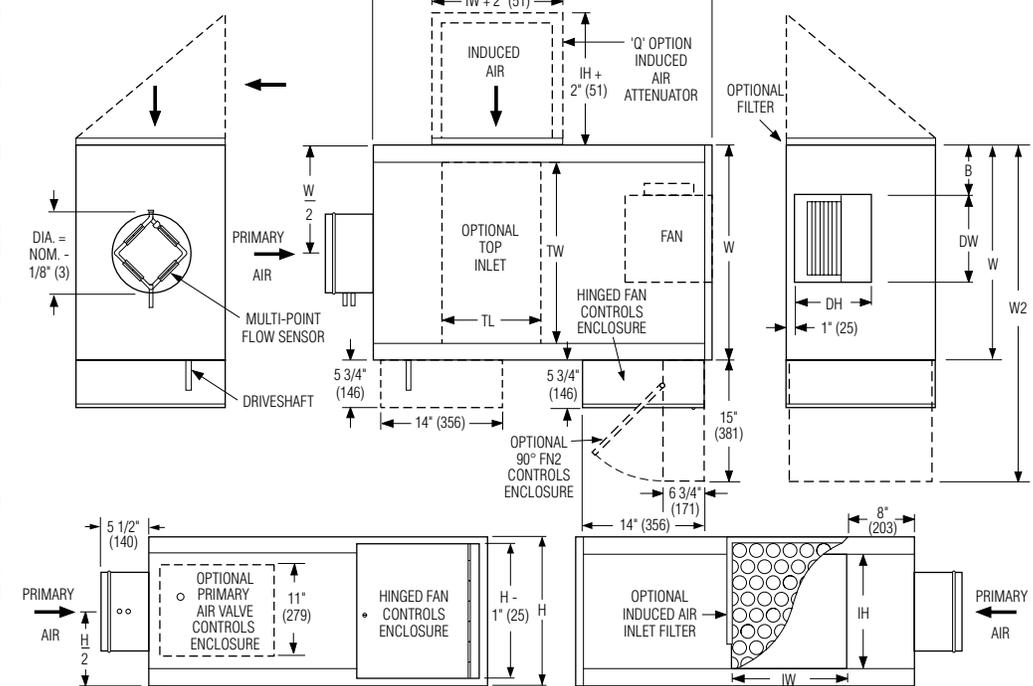
Liner:

- Steri-liner
- Steri-liner + Perforated metal
- Fiber-free
- Perforated metal
- Solid metal
- 1" (25) fiberglass
- Low temperature construction

Other:

- Left-hand controls location
- Toggle disconnect switch
- Fan unit fusing
- 24/24V Isolation transformer
- Cross Flow Sensor
- 'Q' Option – Induced Air Inlet Attenuator
- Top entry induced air inlet
- 1" (25) Throwaway filter
- 2" (51) MERV 8 filter
- Hanger brackets.
- 1/4-turn fasteners (access panel)
- FN2 90° Line Voltage Enclosure

Model 35S • Basic Unit



Dimensional Data

Unit Size	Inlet Size	W	W2	H	L	B	Induced Air Inlet		Outlet Discharge DW x DH	Filter Size	
							Side (std.) IW x IH	Top (opt.) TL x TW		Side Inlet (std.)	Top Inlet (opt.)
1	5, 6, 8** (127, 152, 203)	20 (508)	35 (889)	14 (356)	36 (914)	6 (152)	8 x 10 (203 x 254)	10 x 14 (254 x 356)	8 1/8 x 4 1/4 (206 x 108)	10 x 12 (254 x 305)	14 x 16 (356 x 406)
2	6, 8 (152, 203)	18 (457)	33 (838)	14 (356)	36 (914)	3 1/2 (89)	8 x 10 (203 x 254)	10 x 14 (254 x 356)	9 1/4 x 10 1/2 (235 x 267)	10 x 12 (254 x 305)	14 x 16 (356 x 406)
3	6, 8, 10, 12 (152, 203, 254, 305)	18 (457)	33 (838)	18 (457)	36 (914)	3 1/2 (89)	12 x 14 (305 x 356)	14 x 14 (356 x 356)	9 1/4 x 10 1/2 (235 x 267)	14 x 16 (356 x 406)	16 x 16 (406 x 406)
4	8, 10, 12, 14 (203, 254, 305, 356)	26 (660)	41 (1041)	18 (457)	41 (1041)	6 (152)	14 x 14 (356 x 356)	12 x 22 (305 x 559)	12 x 10 1/2 (305 x 267)	16 x 16 (406 x 406)	16 x 25 (406 x 635)
5	10, 12, 14 (254, 305, 356)	26 (660)	41 (1041)	18 (457)	41 (1041)	5 (127)	14 x 14 (356 x 356)	12 x 22 (305 x 559)	13 1/4 x 11 1/2 (337 x 292)	16 x 16 (406 x 406)	16 x 25 (406 x 635)
6	12, 14, 16 (305, 356, 406)	30 (762)	45 (1143)	19 (483)	44 (1118)	6 (152)	16 x 15 (406 x 381)	14 x 26 (356 x 660)	13 1/4 x 11 1/2 (337 x 292)	17 x 18 (432 x 457)	18 x 28 (457 x 711)

**ECM Only.

- FN3 Remote Line Voltage Controls Enclosure (See submittal FN3)
- Dust tight enclosure seal
- Remote user disconnect

Seismic Certification:

- Seismic Source International (Standard)
- HCAI (formerly OSHPD, California)
- Special Features: _____



Electrical Data

Unit Size	EPIC ECM Motor FLA	Motor HP			
		120V	208V	240V	277V
1	*	2.1	1.4	1.3	1.2
2	*	4.0	2.7	2.6	2.6
3	*	5.0	3.4	3.3	3.3
4	*	6.9	4.6	4.5	4.2
5	*	9.0	6.1	5.8	5.6
6	*	11.9	7.3	7.3	7.2

* The ECM is a variable horsepower motor. Refer to Selectworks schedule for actual power consumption. FLA = Full load amperage. All motors are single phase/60 Hz.

SCHEDULE TYPE:

PROJECT:

ENGINEER:

CONTRACTOR:

Page 1 of 2. For heat options; see page 2. Dimensions are in inches (mm).

DATE	B SERIES	SUPERSEDES	DRAWING NO.
1 - 7 - 25	3500	2 - 6 - 23	35S-1



**FAN POWERED TERMINAL UNIT WITH
EPIC ECM MOTOR • HEAT ACCESSORIES
SERIES FLOW • CONSTANT OR VARIABLE VOLUME
MODELS: 35S, 35SW AND 35SE • UNIT SIZES 1 – 6**

Hot Water Coil Section Model 35SW

Standard Features:

- Coil section installed on unit discharge.
- Coil (and header on multi-circuit units) is installed in insulated casing for increased thermal efficiency.
- 1/2" (13) copper tubes.
- Aluminum ripple fins.
- Sweat Connections:
Size 1 – 3: 1 Row 1/2" (13), 2 and 3 Row 7/8" (22); O.D. male solder.
- Size 4 – 6: 1, 2, and 3 Row 7/8" (22); O.D. male solder.
- Top and bottom access panels for inspection and coil cleaning.
- Flanged outlet duct connection.

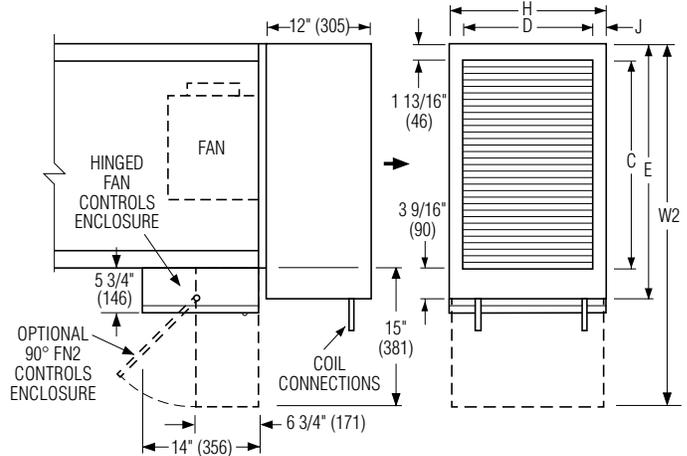
Coil Rows:

- 1-Row 2-Row 3-Row

Coil Hand Connections:

(Looking in direction of airflow).

- Right hand (illustrated). Standard.
 Left hand. Optional.



Unit Size	Outlet Duct Size C x D	W2	E	H	J
1	16 x 12 1/8 (406 x 308)	35 (889)	21 3/8 (543)	14 (356)	1 (25)
2	16 x 12 1/8 (406 x 308)	33 (838)	21 3/8 (543)	14 (356)	1 (25)
3	16 x 14 7/8 (406 x 378)	33 (838)	21 3/8 (543)	18 (457)	1 1/2 (38)
4, 5	24 x 14 7/8 (610 x 378)	41 (1041)	29 3/8 (746)	18 (457)	1 1/2 (38)
6	28 x 17 1/8 (711 x 435)	45 (1143)	33 3/8 (848)	19 (483)	1 (25)

Electric Coil Section Model 35SE

Standard Features:

- Unique hinged heater design permits easy access, removal and replacement of heater element without disturbing ductwork.
- Coil installed on unit discharge.
- Insulated coil element wrapper.
- Automatic reset high limit cut-outs (one per element).
- Single point electrical connection (except 600V).
- Positive pressure airflow switch.
- Flanged outlet duct connection.
- Class A 80/20 Ni/Cr wire.
- Terminal unit with coil is ETL Listed as an assembly.
- Controls mounted as standard on RH side as shown. Terminals ordered with LH controls (optional) are inverted and discharge duct hanging elevation will therefore change.

Voltage:

Single phase, 60 Hz.

- 208V 240V 277V

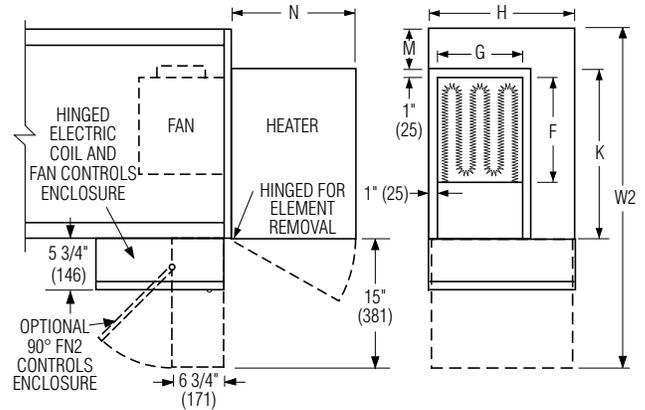
Three phase, 60 Hz.

- 208V 480V (4 wire wye).

- 600V (dual point connection). _____

Options:

- Toggle disconnect switch (includes fan).
- SCR control.
- Door interlock disconnect switch.
- Quiet type contactors.
- Mercury contactors.
- Power circuit fusing.
- Dust tight construction.
- Manual reset secondary thermal cut out.



Unit Size	Outlet Duct Size F x G	W2	K	H	M	N
1	10 1/4 x 10 1/2 (260 x 267)	35 (889)	16 (406)	14 (356)	4 (102)	12 1/2 (318)
2	10 1/4 x 10 1/2 (260 x 267)	33 (838)	15 1/2 (394)	14 (356)	2 1/2 (64)	12 1/2 (318)
3	10 1/4 x 10 1/2 (260 x 267)	33 (838)	15 1/2 (394)	18 (457)	2 1/2 (64)	15 1/4 (387)
4	13 x 10 1/2 (330 x 267)	41 (1041)	21 (533)	18 (457)	5 (127)	15 1/4 (387)
5	14 1/4 x 11 3/4 (362 x 298)	41 (1041)	22 (559)	18 (457)	4 (102)	15 1/4 (387)
6	14 1/4 x 11 3/4 (362 x 298)	45 (1143)	25 (635)	19 (483)	5 (127)	15 1/4 (387)

SCHEDULE TYPE:

PROJECT:

ENGINEER:

CONTRACTOR:

Page 2 of 2.
Dimensions are in inches (mm).

DATE

B SERIES

SUPERSEDES

DRAWING NO.

1 - 7 - 25

3500

2 - 6 - 23

35S-1



**FAN POWERED TERMINAL UNIT WITH
EPIC ECM MOTOR
SERIES FLOW • CONSTANT OR VARIABLE VOLUME
MODELS: 35S, 35SW AND 35SE • UNIT SIZE 7**

DESCRIPTION:

- 18 ga. (1.31) galvanized steel channel frame with 20 ga. (1.00) casing components.
- 16 ga. (1.61) galvanized steel inclined opposed blade damper. 45° rotation. CW to close.
- Ultra-high efficiency ECM fan motor. EPIC fan volume controller.
- Multi-point averaging Diamond Flow sensor. Supplied with balancing tees.
- Full size access panels on three sides.
- 3/4" (19) dual density insulation, exposed edges coated to prevent air erosion. Meets requirements of NFPA 90A and UL 181.
- Single point electrical and/or pneumatic main air connection.
- Discharge opening for flanged duct connection.
- Full primary air valve low voltage NEMA 1 type enclosure for factory mounted DDC and analog electronic controls.
- Controls mounted as standard on RH side as shown. Terminals ordered with LH controls (optional) are inverted and discharge duct hanging elevation will therefore change.

OPTIONS:

Digital Controls:

- Factory mounted (supplied by others)
- Field mounted (supplied by others)
- Nailor EZvav. See separate submittal.

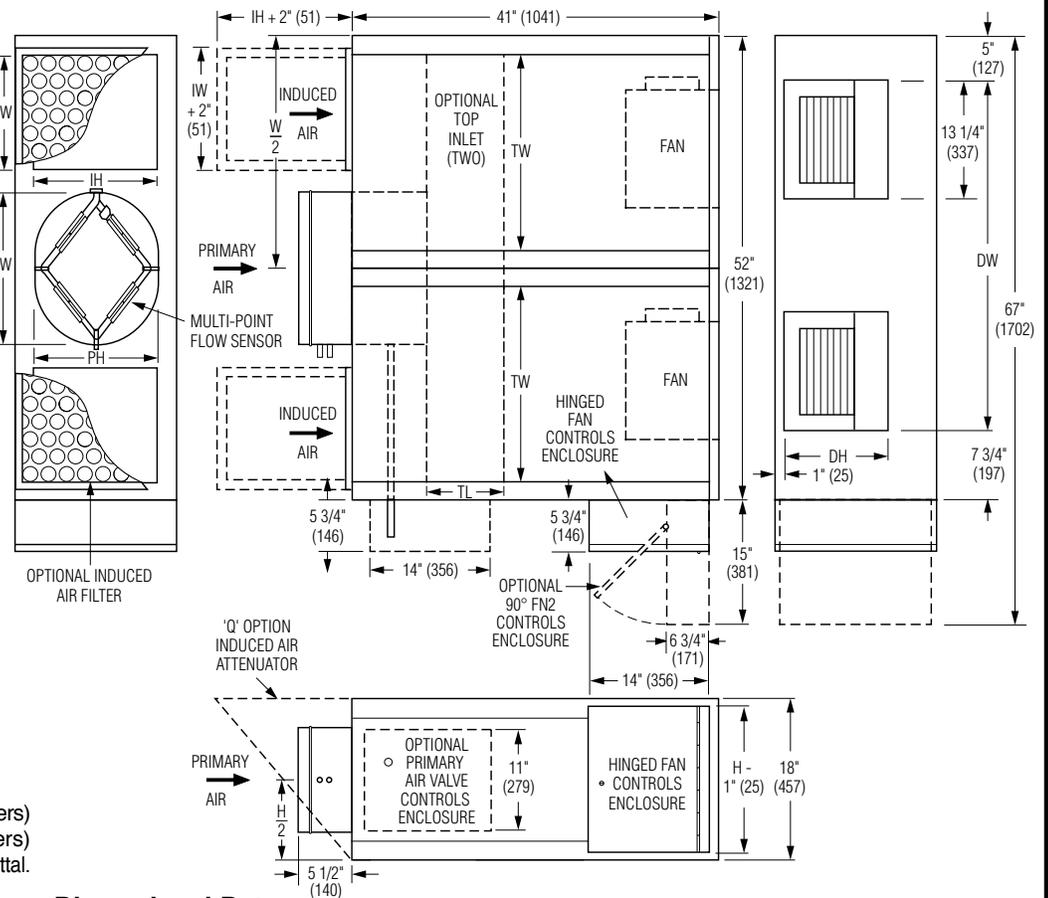
Liner:

- Steri-liner
- Steri-liner + Perforated metal
- Fiber-free
- Perforated metal
- Solid metal
- 1" (25) fiberglass
- Low temperature construction

Other:

- Left-hand controls location
- Toggle disconnect switch
- Fan unit fusing
- 24/24V Isolation transformer
- Cross Flow Sensor
- 'Q' Option – Induced Air Inlet Attenuator
- Top entry induced air inlet
- 1" (25) Throwaway filter
- 2" (51) MERV 8 filter
- Hanger brackets.
- 1/4-turn fasteners (access panel)
- FN2 90° Line Voltage Enclosure
- FN3 Remote Line Voltage Controls Enclosure (See submittal FN3)
- Dust tight enclosure seal
- Remote user disconnect

Model 35S • Basic Unit



Dimensional Data

Unit Size	Inlet		Induced Air Inlet		Outlet Discharge DW x DH	Filter Size	
	Size	PW x PH	Side (std.) IW x IH	Top (opt.) TL x TW		Side Inlet (std.)	Top Inlet (opt.)
7	14 (356) Rd.	13 7/8 (352)	12 x 14	8 1/2 x 22	39 1/4 x 11 1/2 (997 x 292)	14 x 16 (356 x 406)	16 x 25 (406 x 635)
	16 (406) Rd.	15 7/8 (403)	Qty. of 2	Qty. of 2			
	18 (457) Oval	20 3/16 x 13 7/8 (513 x 352)					

Electrical Data

Unit Size	EPIC ECM Motor FLA				
	Motor HP	120V	208V	240V	277V
7	*	15.9	10.5	9.9	10.0

* The ECM is a variable horsepower motor. Refer to Selectworks schedule for actual power consumption. FLA = Full load amperage. All motors are single phase/60 Hz.

Seismic Certification:

- Seismic Source International (Standard)
- HCAI (formerly OSHPD, California)
- Special Features: _____



Intertek



SCHEDULE TYPE:		DATE	B SERIES	SUPERSEDES	DRAWING NO.
PROJECT:		4 - 25 - 23	3500	2 - 6 - 23	35S-2
ENGINEER:					
CONTRACTOR:					



**FAN POWERED TERMINAL UNIT WITH
EPIC ECM MOTOR • HEAT ACCESSORIES
SERIES FLOW • CONSTANT OR VARIABLE VOLUME
MODELS: 35SW AND 35SE • UNIT SIZE 7**

Hot Water Coil Section Model 35SW

Standard Features:

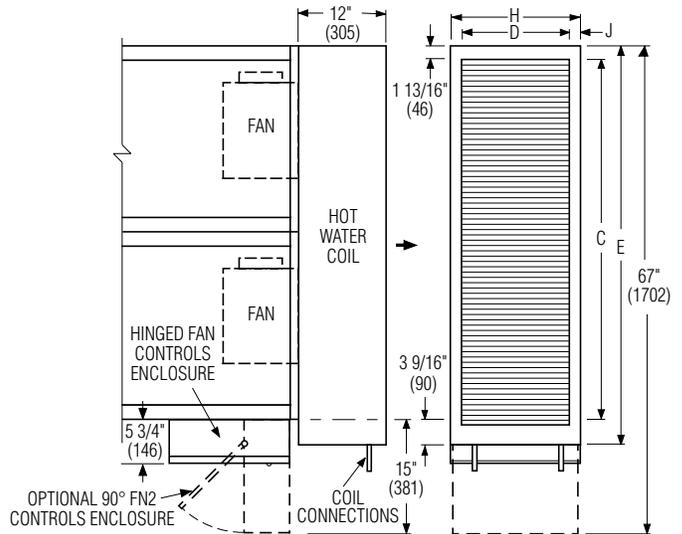
- Coil section installed on unit discharge.
- Coil and header are installed in insulated casing for increased thermal efficiency.
- 1/2" (13) copper tubes.
- Aluminum ripple fins.
- Sweat connections: 1 and 2 row, 7/8" (22) O. D. male solder.
3 row 1 3/8" (35) O.D. male solder.
- Top and bottom access panels for inspection and coil cleaning.
- Flanged outlet duct connection.

Coil Rows:

- 1-Row 2-Row 3-Row

Coil Hand Connections:

- (Looking in direction of airflow).
 Right hand (illustrated). Standard.
 Left hand. Optional.



Unit Size	Outlet Duct Size C x D	E	H	J
7	50 x 14 7/8 (1270 x 378)	55 3/8 (1407)	18 (457)	1 9/16 (40)

Electric Coil Section Model 35SE

Standard Features:

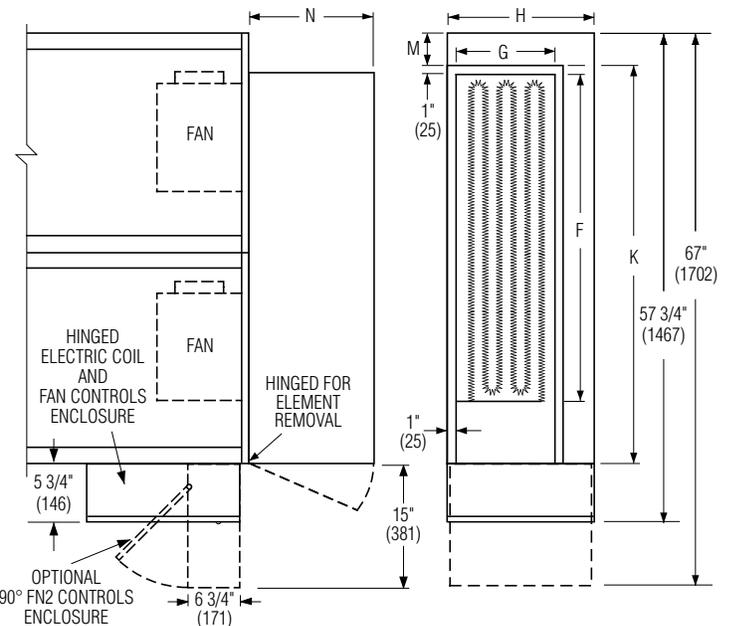
- Unique hinged heater design permits easy access, removal and replacement of heater element without disturbing ductwork.
- Coil installed on unit discharge.
- Insulated coil element wrapper.
- Automatic reset high limit cut-outs (one per element).
- Single point electrical connection (except 600V).
- Positive pressure airflow switch.
- Flanged outlet duct connection.
- Class A 80/20 Ni/Cr wire.
- Terminal unit with coil is ETL Listed as an assembly.
- Controls mounted as standard on RH side as shown. Terminals ordered with LH controls (optional) are inverted and discharge duct hanging elevation will therefore change.

Voltage:

- Single phase, 60 Hz.
 208V 240V 277V
 Three phase, 60 Hz.
 208V 480V (4 wire wye).
 600V (dual point connection).

Options:

- Toggle disconnect switch (includes fan).
- SCR control.
- Door interlock disconnect switch.
- Mercury contactors.
- Power circuit fusing.
- Dust tight construction.
- Manual reset secondary thermal cut out.



Unit Size	Outlet Duct Size F x G	K	H	M	N
7	40 1/4 x 11 3/4 (1022 x 298)	48 (1219)	18 (457)	4 (102)	15 1/4 (387)

SCHEDULE TYPE:

PROJECT:

ENGINEER:

CONTRACTOR:

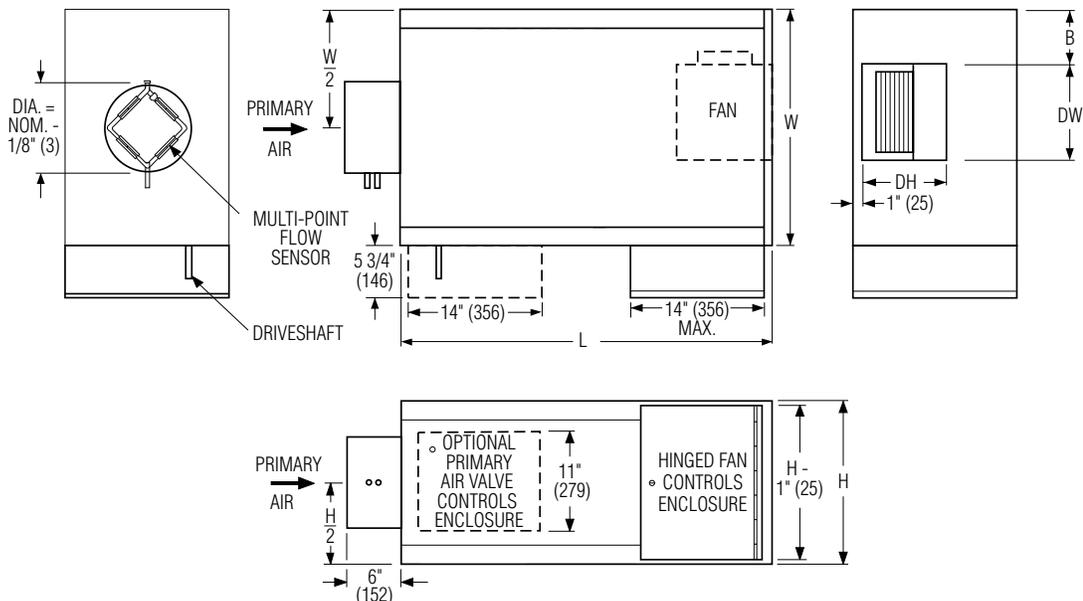
Page 2 of 2.
Dimensions are in inches (mm).

DATE	B SERIES	SUPERSEDES	DRAWING NO.
4 - 25 - 23	3500	2 - 6 - 23	35S-2



**FAN POWERED PRESSURIZATION TERMINAL UNIT
EPIC ECM MOTOR
SERIES FLOW • CONSTANT VOLUME
MODELS: 35S-CVP, 35SW-CVP AND 35SE-CVP
UNIT SIZES 3 & 5**

Model 35S-CVP



Dimensional Data

Unit Size	Inlet Size	W	H	L	B	Outlet Discharge DW x DH
3	6, 8, 10 (152, 203, 254)	18 (457)	18 (457)	36 (914)	3 1/2 (89)	9 1/4 x 10 1/2 (235 x 267)
5	8, 10, 12 (203, 254, 305)	26 (660)	18 (457)	41 (1041)	5 (127)	13 1/4 x 11 1/2 (337 x 292)

Electrical Data

Unit Size	EPIC ECM Motor HP	EPIC ECM Motor FLA			
		120V	208V	240V	277V
3	*	4.8	3.3	3.2	3.1
5	*	9.6	6.2	5.9	5.8

* The EPIC ECM is a variable horsepower motor. Refer to Selectworks schedule for actual power consumption.
FLA = Full load amperage.
All motors are single phase/60 Hz.

APPLICATION:

'Smart' Brushless DC motor technology provides continuous monitoring, automatic compensation and precise control and maintenance of discharge airflow regardless of discharge static pressure variations incurred by a HEPA filter. Available in three unit sizes, suitable for 200 – 3000 cfm (94 – 1416 l/s) zone designs with up to a maximum total external discharge static pressure of 1.0" w.g. (250 Pa).

Ideally suited to clean room applications such as hospital isolation wards, operating rooms, pharmaceutical and biotechnology manufacturing and research facilities.

DESCRIPTION:

- 18 ga. (1.31) galv. steel channel frame with 20 ga. (1.00) casing components.
- 16 ga. (1.61) galvanized steel inclined opposed blade primary air damper. 45° rotation. CW to close.
- Multi-point averaging 'Diamond' flow sensor.
- Low leakage access panels on all 4 sides.
- Ultra Energy efficient ECM fan motor with overload protection and Nailor EPIC volume controller.
- Solid metal 'IAQ' liner. Meets requirements of NFPA 90A and UL 181.

- Single point electrical connection.
- Discharge opening for flanged duct connection.
- Controls mounted as standard on RH side as shown. Terminals ordered with LH controls (optional) are inverted and discharge duct hanging elevation will therefore change.

OPTIONS:

- Fan unit fusing.
- Hanger brackets.
- Special features _____
- Toggle disconnect switch.
- Left hand control location option.



SCHEDULE TYPE:

PROJECT:

ENGINEER:

CONTRACTOR:

Page 1 of 2.
Dimensions are in inches (mm).

DATE	B SERIES	SUPERSEDES	DRAWING NO.
3 - 25 - 17	3500	2 - 8 - 16	35S-CVP-1



FAN POWERED PRESSURIZATION TERMINAL UNIT
EPIC ECM MOTOR • HEAT ACCESSORIES
SERIES FLOW • CONSTANT VOLUME
MODELS: 35SW-CVP AND 35SE-CVP • UNIT SIZES 3 & 5

Hot Water Coil Section Model 35SW-CVP

Standard Features:

- Coil section installed on unit discharge.
- Coil (and header on multi-circuit units) is installed in insulated casing for increased thermal efficiency.
- 1/2" (13) copper tubes.
- Aluminum ripple fins.
- Sweat Connections: Size 3 one row 1/2" (13) O.D. male solder. All others 7/8" (22) O.D. male solder.
- Top and bottom access panels for inspection and coil cleaning. Caulked for low leakage.
- Flanged outlet duct connection.

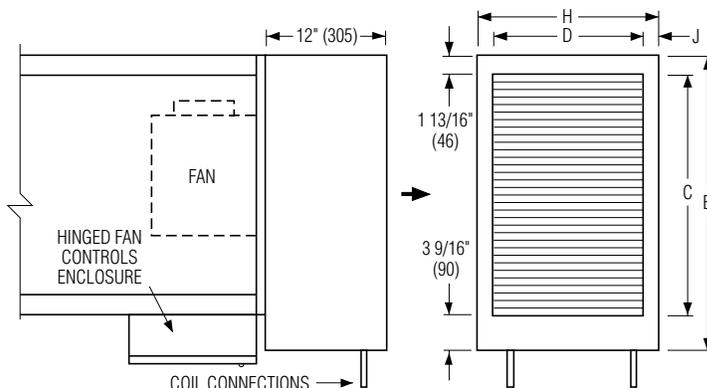
Coil Rows:

- 1-Row 2-Row 3-Row

Coil Hand Connections:

(Looking in direction of airflow).

- Right hand (illustrated). Standard.
 Left hand. Optional.

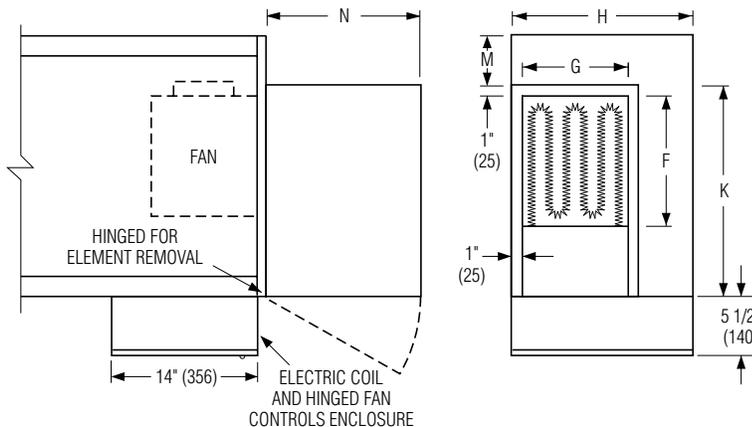


Unit Size	Outlet Duct Size C x D	E	H	J
3	16 x 14 7/8 (406 x 378)	21 3/8 (543)	18 (457)	1 9/16 (40)
5	24 x 14 7/8 (610 x 378)	29 3/8 (746)	18 (457)	1 9/16 (40)

Electric Coil Section Model 35SE-CVP

Standard Features:

- Unique hinged heater design permits easy access, removal and replacement of heater element without disturbing ductwork.
- Coil installed on unit discharge.
- Insulated coil element wrapper.
- Automatic reset high limit cut-outs (one per element).
- Single point electrical connection (except 600V).
- Positive pressure airflow switch.
- Flanged outlet duct connection.
- Class A 80/20 Ni/Cr wire.
- Terminal unit with coil is ETL Listed as an assembly.
- Controls mounted as standard on RH side as shown. Terminals ordered with LH controls (optional) are inverted and discharge duct hanging elevation will therefore change.



Unit Size	Outlet Duct Size F x G	K	H	M	N
3	10 1/4 x 10 1/2 (260 x 267)	15 1/2 (394)	18 (457)	2 1/2 (64)	15 1/4 (387)
5	14 1/4 x 11 3/4 (362 x 298)	22 (559)	18 (457)	4 (102)	15 1/4 (387)

Voltage:

Single phase, 60 Hz.

- 120V 208V 240V 277V

Three phase, 60 Hz.

- 208V 480V (4 wire wye).

- 600V (Dual Point Connection). _____

Options:

- Toggle disconnect switch (includes fan).
- Door interlock disconnect switch.
- Mercury contactors.
- Power circuit fusing.
- Dust tight construction.
- Manual reset secondary thermal cut out.
- SCR Control.

SCHEDULE TYPE:

PROJECT:

ENGINEER:

CONTRACTOR:

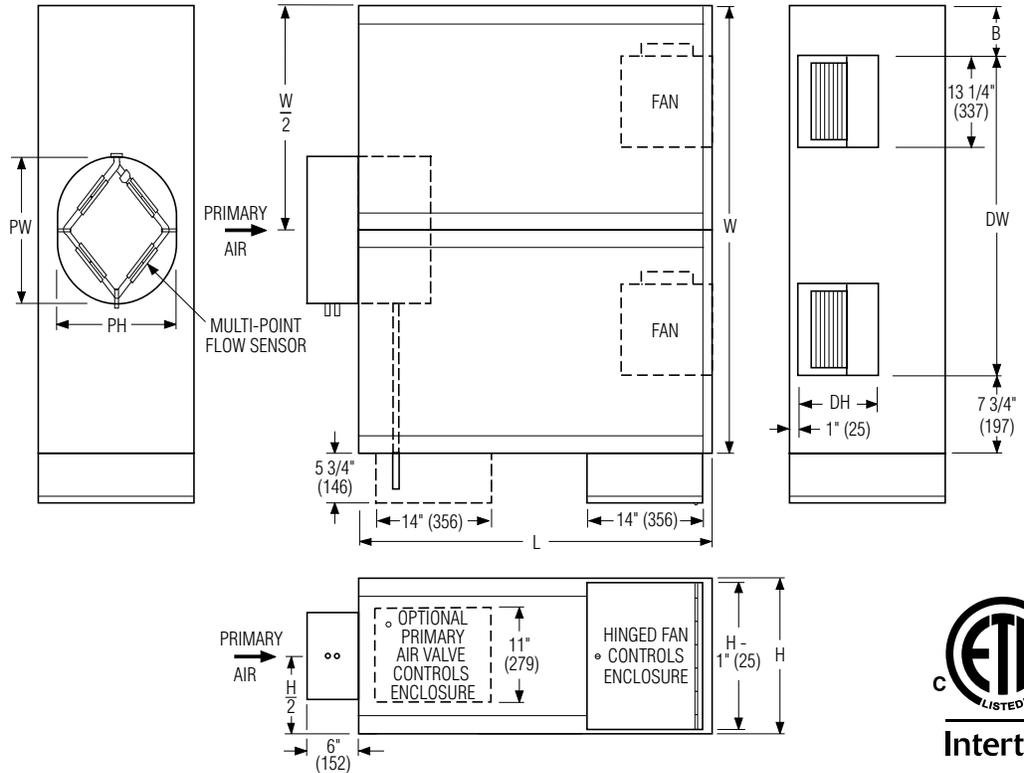
Page 2 of 2.
 Dimensions are in inches (mm).

DATE	B SERIES	SUPERSEDES	DRAWING NO.
3 - 25 - 17	3500	2 - 8 - 16	35S-CVP-1



**FAN POWERED PRESSURIZATION TERMINAL UNIT
EPIC ECM MOTOR
SERIES FLOW • CONSTANT VOLUME
MODELS: 35S-CVP, 35SW-CVP AND 35SE-CVP
UNIT SIZE 7**

Model 35S-CVP



Dimensional Data

Unit Size	Inlet Size	PW x PH	W	H	L	B	Outlet Discharge DW x DH
7	14 (356) rnd.	13 7/8 (352)	52 (1321)	18 (457)	41 (1041)	5 (127)	39 1/4 x 11 1/2 (997 x 292)
	16 (407) rnd.	15 7/8 (403)					
	*18 (457) oval	20 3/16 x 13 7/8 (513 x 352)					

* Flat oval inlets

APPLICATION:

'Smart' Brushless DC motor technology provides continuous monitoring, automatic compensation and precise control and maintenance of discharge airflow regardless of discharge static pressure variations incurred by a HEPA filter. Available in three unit sizes, suitable for 200 – 3000 cfm (94 – 1416 l/s) zone designs with up to a maximum total external discharge static pressure of 1.0" w.g. (250 Pa). Ideally suited to clean room applications such as hospital isolation wards, operating rooms, pharmaceutical and biotechnology manufacturing and research facilities.

DESCRIPTION:

- 18 ga. (1.31) galv. steel channel frame with 20 ga. (1.00) casing components.
- 16 ga. (1.61) galvanized steel inclined opposed blade primary air damper. 45° rotation. CW to close.
- Multi-point averaging 'Diamond' flow sensor.

Electrical Data

Unit Size	EPIC ECM Motor FLA				
	Motor HP	120V	208V	240V	277V
7	*	17.5	11.1	11.4	11.4

* The EPIC ECM is a variable horsepower motor. Refer to Selectworks schedule for actual power consumption. FLA = Full load amperage. All motors are single phase/60 Hz.

- Low leakage access panels on all 4 sides.
- Ultra Energy efficient ECM fan motor with overload protection and Nailor EPIC volume controller.
- Solid metal 'IAQ' liner. Meets requirements of NFPA 90A and UL 181.
- Single point electrical connection.
- Discharge opening for flanged duct connection.
- Controls mounted as standard on RH side as shown. Terminals ordered with LH controls (optional) are inverted and discharge duct hanging elevation will therefore change.

OPTIONS:

- Fan unit fusing.
- Hanger brackets.
- Special features _____
- Toggle disconnect switch.
- Left hand control location option.

SCHEDULE TYPE:
PROJECT:
ENGINEER:
CONTRACTOR:

Page 1 of 2.
Dimensions are in inches (mm).

DATE	B SERIES	SUPERSEDES	DRAWING NO.
3 - 25 - 17	3500	2 - 8 - 16	35S-CVP-2



FAN POWERED PRESSURIZATION TERMINAL UNIT
EPIC ECM MOTOR • HEAT ACCESSORIES
SERIES FLOW • CONSTANT VOLUME
MODELS: 35SW-CVP AND 35SE-CVP • UNIT SIZE 7

Hot Water Coil Section Model 35SW-CVP

Standard Features:

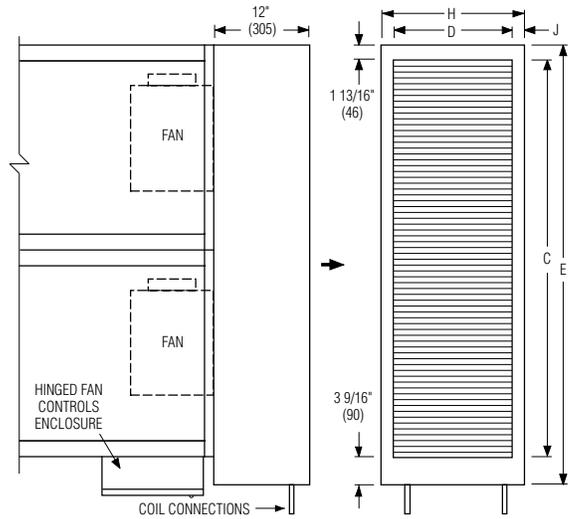
- Coil section installed on unit discharge.
- Coil (and header on multi-circuit units) is installed in insulated casing for increased thermal efficiency.
- 1/2" (13) copper tubes.
- Aluminum ripple fins.
- Sweat Connections: 1 and 2 Row 7/8" (22); 3 Row 1 3/8" (35); male solder.
- Top and bottom access panels for inspection and coil cleaning. Caulked for low leakage.
- Flanged outlet duct connection.

Coil Rows:

- 1-Row 2-Row 3-Row

Coil Hand Connections:

- (Looking in direction of airflow).
- Right hand (illustrated). Standard.
 - Left hand. Optional.



Unit Size	Outlet Duct Size C x D	E	H	J
7	50 x 14 7/8 (1270 x 378)	55 3/8 (1407)	18 (457)	1 9/16 (40)

Electric Coil Section Model 35SE-CVP

Standard Features:

- Unique hinged heater design permits easy access, removal and replacement of heater element without disturbing ductwork.
- Coil installed on unit discharge.
- Insulated coil element wrapper.
- Automatic reset high limit cut-outs (one per element).
- Single point electrical connection for (except 600V).
- Positive pressure airflow switch.
- Flanged outlet duct connection.
- Class A 80/20 Ni/Cr wire.
- Terminal unit with coil is ETL Listed as an assembly.
- Controls mounted as standard on RH side as shown. Terminals ordered with LH controls (optional) are inverted and discharge duct hanging elevation will therefore change.

Voltage:

Single phase, 60 Hz.

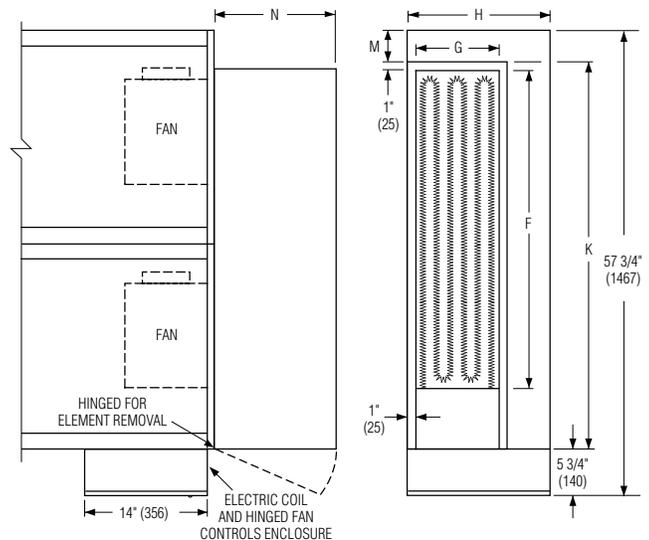
- 208V 240V 277V

Three phase, 60 Hz.

- 208V 480V (4 wire wye).
 600V (Dual Point Connection). _____ .

Options:

- Toggle disconnect switch (includes fan).
- Door interlock disconnect switch.
- Mercury contactors.
- Power circuit fusing.
- Dust tight construction.
- Manual reset secondary thermal cut out.
- SCR Control.



Unit Size	Outlet Duct Size F x G	K	H	M	N
7	40 1/4 x 11 3/4 (1022 x 298)	48 (1219)	18 (457)	4 (102)	15 1/4 (387)

SCHEDULE TYPE:

PROJECT:

ENGINEER:

CONTRACTOR:

Page 2 of 2.
Dimensions are in inches (mm).

DATE	B SERIES	SUPERSEDES	DRAWING NO.
3 - 25 - 17	3500	2 - 8 - 16	35S-CVP-2



**FAN POWERED TERMINAL UNIT WITH
OUTSIDE AIR INLET • EPIC ECM MOTOR
SERIES FLOW • CONSTANT OR VARIABLE VOLUME
MODELS: 35S-OAI, 35SW-OAI AND 35SE-OAI
UNIT SIZES 2 – 6**

DESCRIPTION:

- 18 ga. (1.31) galvanized steel channel frame with 20 ga. (1.00) casing components.
- 16 ga. (1.61) galvanized steel inclined opposed blade dampers. 45° rotation. RH CW to close. LH CCW to close.
- Separate outside ventilation air inlet.
- Ultra-high efficiency ECM fan motor. EPIC fan volume controller.
- Multi-point averaging Diamond Flow sensor. Supplied with balancing tees.
- Universal access panels on all 4 sides.
- 3/4" (19) dual density insulation, coated to prevent air erosion, meets requirements of NFPA 90A and UL 181.
- Single point electrical and/or pneumatic main air connection.
- Discharge opening for flanged duct connection.
- Full enclosure for factory mounted DDC and analog electronic controls.
- Choice of right or left-hand primary inlet location. Hand of unit is determined by location of primary inlet looking in direction of airflow. Right-hand illustrated.

OPTIONS:

Digital Controls:

- Factory mounted (supplied by others)
- Field mounted (supplied by others)

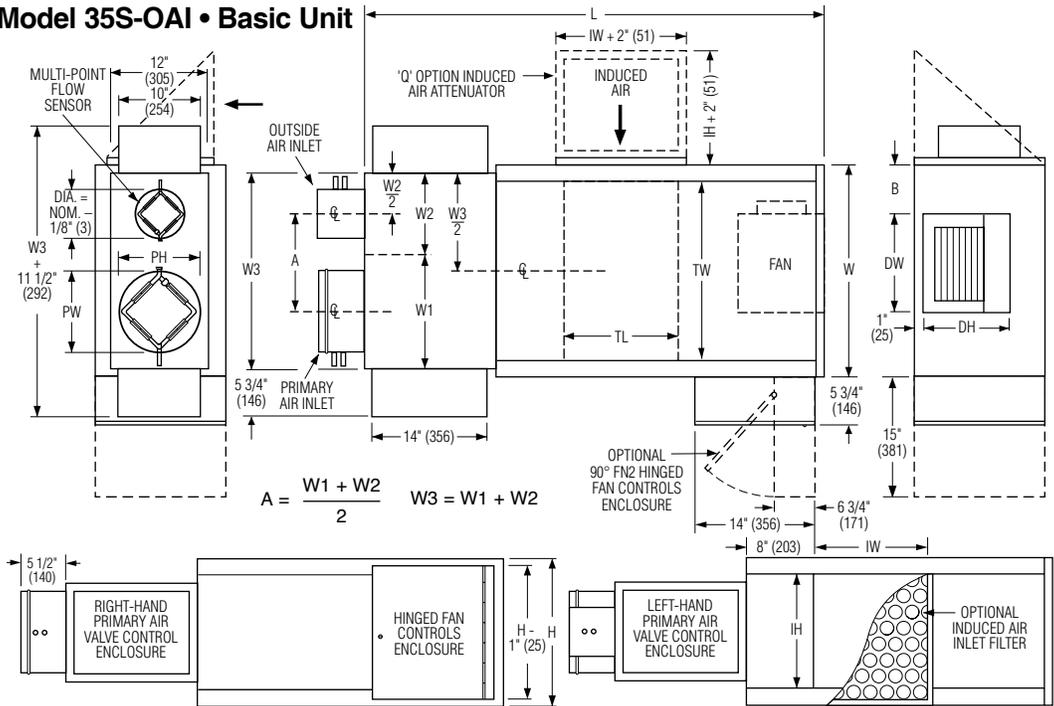
Liner:

- Fiber-free
- Steri-liner
- Steri-liner + Perforated metal
- Perforated metal
- Solid metal
- 1" (25) fiberglass

Other:

- Left-hand controls location
- Left-hand primary inlet location
- Toggle disconnect switch
- Fan unit fusing
- 24/24V Isolation transformer
- Cross Flow Sensor (not on primary inlet)
- 'Q' Option – Induced Air Inlet Attenuator. (not available w/FN2 option).
- Top entry induced air inlet
- 1" (25) Throwaway filter
- 2" (51) MERV 8 filter
- Hanger brackets.
- 1/4-turn fasteners (access panel)
- FN2 90° Line Voltage Enclosure

Model 35S-OAI • Basic Unit



Dimensional Data

Unit Size	Inlet Size	Outside Inlet Size	W	H	L	B	Induced Air Inlet		Outlet Discharge DW x DH	Filter Size	
							Side (std.) IW x IH	Top (opt.) TL x TW		Side Inlet (std.)	Top Inlet (opt.)
2	6, 8 (152, 203)	4, 5, 6 (102, 127, 152)	18 (457)	14 (356)	51 1/2 (1308)	6 (152)	8 x 10 (203 x 254)	10 x 14 (254 x 356)	9 1/4 x 10 1/2 (235 x 267)	10 x 12 (254 x 305)	14 x 16 (356 x 406)
3	6, 8, 10 (152, 203, 254)	4, 5, 6 (102, 127, 152)	18 (457)	18 (457)	51 1/2 (1308)	3 1/2 (89)	12 x 14 (305 x 356)	14 x 14 (356 x 356)	9 1/4 x 10 1/2 (235 x 267)	14 x 16 (356 x 406)	16 x 16 (406 x 406)
4	8, 10, 12** (203, 254, 305)	6, 7, 8 (152, 178, 203)	26 (660)	18 (457)	56 1/2 (1435)	6 (152)	14 x 14 (356 x 356)	12 x 22 (305 x 559)	12 x 10 1/2 (305 x 267)	16 x 16 (406 x 406)	16 x 25 (406 x 635)
5	10, 12**, 14** (254, 305, 356)	6, 7, 8 (152, 178, 203)	26 (660)	18 (457)	56 1/2 (1435)	5 (127)	14 x 14 (356 x 356)	12 x 22 (305 x 559)	13 1/4 x 11 1/2 (337 x 292)	16 x 16 (406 x 406)	16 x 25 (406 x 635)
6	10, 12**, 14** (254, 305, 356)	6, 7, 8 (152, 178, 203)	30 (762)	19 (483)	59 1/2 (1511)	6 (152)	16 x 15 (406 x 381)	14 x 26 (356 x 660)	13 1/4 x 11 1/2 (337 x 292)	17 x 18 (432 x 457)	18 x 28 (457 x 711)

Primary/Inlet Dimensions

**Flat oval inlets

Size	W1 or W2
4, 5, 6	12 (305)
7, 8	14 (356)
10	16 (406)
12**	19 (483)
14**	20 (508)

Oval Inlet Dimensions

Size	PW x PH
12**	12 13/16 x 9 13/16 (325 x 249)
14**	16 1/16 x 9 13/16 (408 x 249)

- FN3 Remote Line Voltage Controls Enclosure. (See submittal FN3)
- Dust tight enclosure seal
- Remote user disconnect

Seismic Certification:

- Seismic Source International (Standard)
- HCAI (formerly OSHPD, California)
- Special Features: _____



* The ECM is a variable horsepower motor. Refer to Selectworks schedule for actual power consumption. FLA = Full load amperage. All motors are single phase/60 Hz.

SCHEDULE TYPE:

PROJECT:

ENGINEER:

CONTRACTOR:

Page 1 of 2. For heat options; see page 2. Dimensions are in inches (mm).

DATE	B SERIES	SUPERSEDES	DRAWING NO.
2 - 6 - 23	3500	11 - 15 - 22	35S-OAI-1



**FAN POWERED TERMINAL UNIT WITH
OUTSIDE AIR INLET • EPIC ECM MOTOR
HEAT ACCESSORIES**
SERIES FLOW • CONSTANT OR VARIABLE VOLUME
MODELS: 35SW-OAI AND 35SE-OAI • UNIT SIZES 2 – 6

Hot Water Coil Section Model 35SW-OAI

Standard Features:

- Coil section installed on unit discharge.
- Coil (and header on multi-circuit units) is installed in insulated casing for increased thermal efficiency.
- 1/2" (13) copper tubes.
- Aluminum ripple fins.
- Sweat Connections:
Size 2 – 3: 1 Row 1/2" (13), 2 and 3 Row 7/8" (22); O.D. male solder.
Size 4 – 6: 1, 2, and 3 Row 7/8" (22); O.D. male solder.
- Top and bottom access panels for inspection and coil cleaning.
- Flanged outlet duct connection.

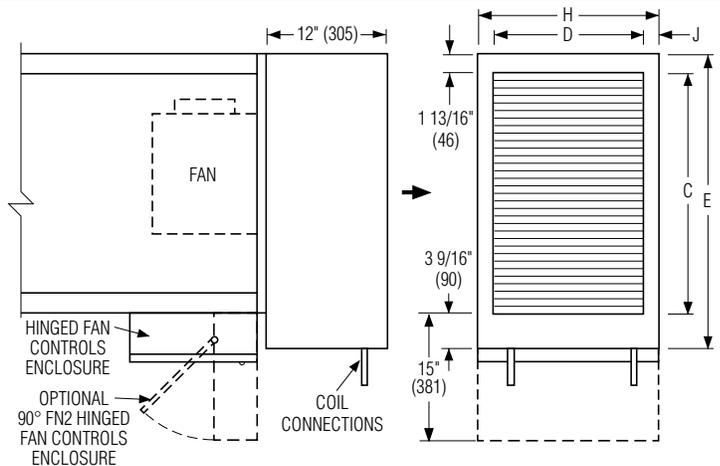
Coil Rows:

- 1-Row 2-Row 3-Row

Coil Hand Connections:

(Looking in direction of airflow).

- Right hand (illustrated). Standard.
 Left hand. Optional.

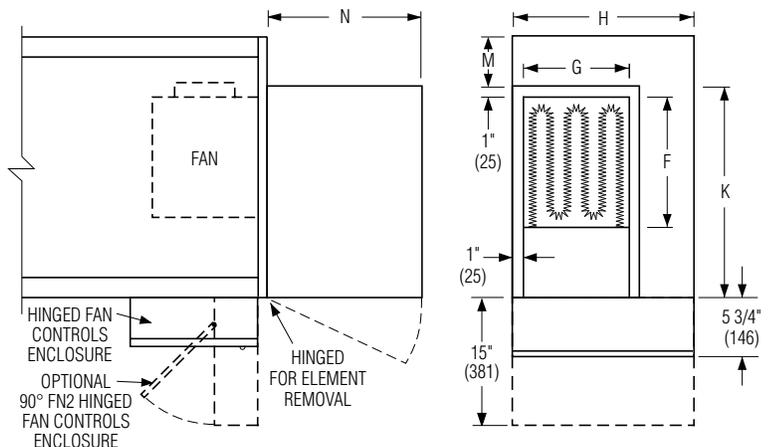


Unit Size	Outlet Duct Size C x D	E	H	J
2	16 x 12 1/8 (406 x 308)	21 3/8 (543)	14 (356)	15/16 (24)
3	16 x 14 7/8 (406 x 378)	21 3/8 (543)	18 (457)	1 9/16 (40)
4, 5	24 x 14 7/8 (610 x 378)	29 3/8 (746)	18 (457)	1 9/16 (40)
6	28 x 17 1/8 (711 x 435)	33 3/8 (848)	19 (483)	15/16 (24)

Electric Coil Section Model 35SE-OAI

Standard Features:

- Unique hinged heater design permits easy access, removal and replacement of heater element without disturbing ductwork.
- Coil installed on unit discharge.
- Insulated coil element wrapper.
- Automatic reset high limit cut-outs (one per element).
- Single point electrical connection (except 600V).
- Positive pressure airflow switch.
- Flanged outlet duct connection.
- Class A 80/20 Ni/Cr wire.
- Terminal unit with coil is ETL Listed as an assembly.
- Controls mounted as standard on RH side as shown. Terminals ordered with LH controls (optional) are inverted and discharge duct hanging elevation will therefore change.



Voltage:

Single phase, 60 Hz.

- 120V 208V 240V 277V

Three phase, 60 Hz.

- 208V 480V (4 wire wye).

- 600V (Dual point connection) _____

Options:

- Toggle disconnect switch (includes fan).
- Door interlock disconnect switch.
- SCR Control.
- Mercury contactors.
- Power circuit fusing.
- Dust tight construction.
- Manual reset secondary thermal cut out.

Unit Size	Outlet Duct Size F x G	K	H	M	N
2	10 1/4 x 10 1/2 (260 x 267)	15 1/2 (394)	14 (356)	2 1/2 (64)	12 1/2 (318)
3	10 1/4 x 10 1/2 (260 x 267)	15 1/2 (394)	18 (457)	2 1/2 (64)	15 1/4 (387)
4	13 x 10 1/2 (330 x 267)	21 (533)	18 (457)	5 (127)	15 1/4 (387)
5	14 1/4 x 11 3/4 (362 x 298)	22 (559)	18 (457)	4 (102)	15 1/4 (387)
6	14 1/4 x 11 3/4 (362 x 298)	25 (635)	19 (635)	5 (127)	15 1/4 (387)

SCHEDULE TYPE:

PROJECT:

ENGINEER:

CONTRACTOR:

DATE

B SERIES

SUPERSEDES

DRAWING NO.

2 - 6 - 23

3500

11 - 15 - 22

35S-OAI-1



**FAN POWERED TERMINAL UNIT WITH
OUTSIDE AIR INLET • EPIC ECM MOTOR
SERIES FLOW • CONSTANT OR VARIABLE VOLUME
MODELS: 35S-OAI, 35SW-OAI AND 35SE-OAI
UNIT SIZE 7**

DESCRIPTION:

- 18 ga. (1.31) galvanized steel channel frame with 20 ga. (1.00) casing components.
- 16 ga. (1.61) galvanized steel inclined opposed blade dampers. 45° rotation. RH CW to close. LH CCW to close.
- Separate outside ventilation air inlet.
- Ultra-high efficiency ECM fan motor. EPIC fan volume controller.
- Multi-point averaging Diamond Flow sensor. Supplied with balancing tees.
- Universal access panels on all 4 sides.
- 3/4" (19) dual density insulation, coated to prevent air erosion, meets requirements of NFPA 90A and UL 181.
- Single point electrical and/or pneumatic main air connection.
- Discharge opening for flanged duct connection.
- Full enclosure for factory mounted DDC and analog electronic controls.

- Choice of right or left-hand primary inlet location. Hand of unit is determined by location of primary inlet looking in direction of airflow. Right-hand illustrated.

OPTIONS:

Digital Controls:

- Factory mounted (supplied by others)
- Field mounted (supplied by others)

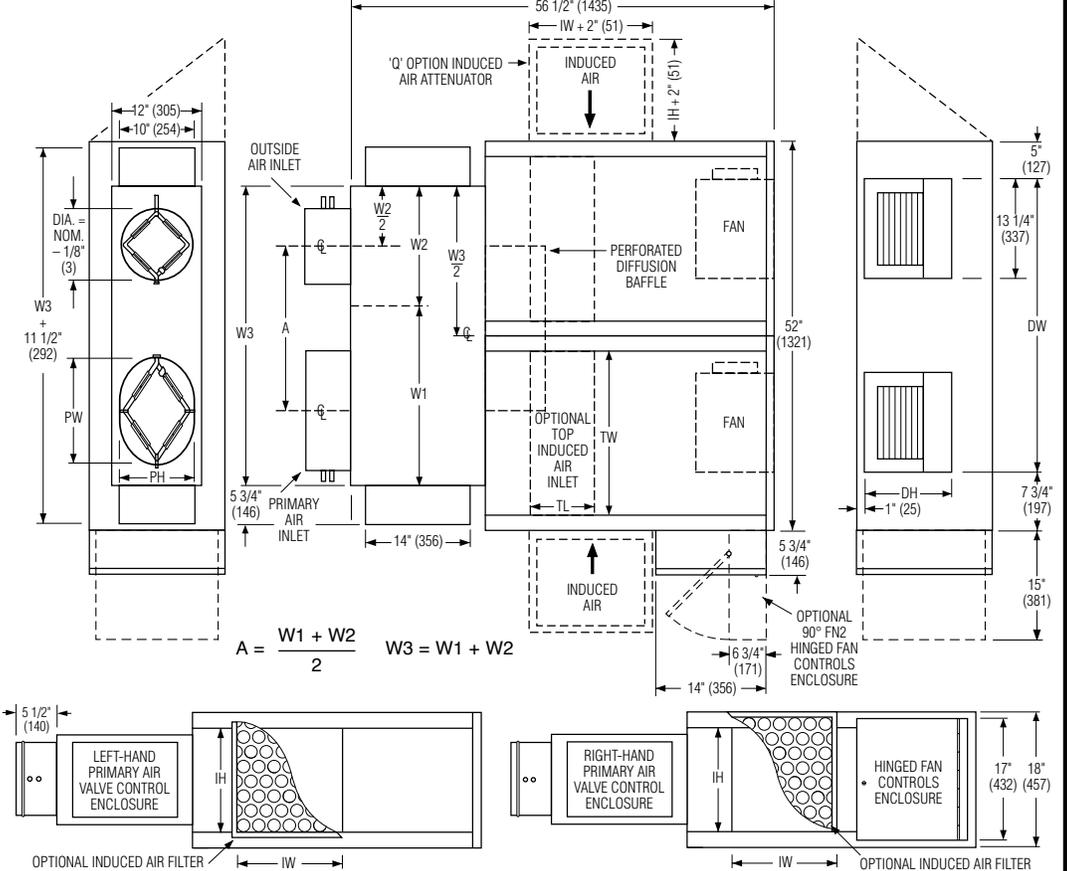
Liner:

- Steri-liner
- Steri-liner + Perforated metal
- Fiber-free
- Perforated metal
- Solid metal
- 1" (25) fiberglass

Other:

- Left-hand controls location
- Left-hand primary inlet location
- Toggle disconnect switch
- Fan unit fusing
- 24/24V Isolation transformer
- Cross Flow Sensor (not on primary inlet)
- 'Q' Option – Induced Air Inlet Attenuator. (not available w/FN2 option).
- Top entry induced air inlet
- 1" (25) Throwaway filter
- 2" (51) MERV 8 filter
- Hanger brackets.
- 1/4-turn fasteners (access panel)

Model 35S-OAI • Basic Unit



Dimensional Data

Unit Size	Primary Inlet Size	Outside Inlet Size	Induced Air Inlet		Outlet Discharge DW x DH	Filter Size	
			Side (std.) IW x IH	Top (opt.) TL x TW		Side Inlet (std.)	Top Inlet (opt.)
7	12**, 14**, 16** (203**, 254**, 305**)	6, 7, 8, 10 (152, 178, 203, 254)	12 x 14 (305 x 356)	8 1/2 x 22 (216 x 559)	39 1/4 x 11 1/2 (997 x 292)	14 x 16 (356 x 406)	10 x 25 (254 x 635)

**Flat oval inlets

Primary/Inlet Dimensions

Size	W1 or W2
6	12 (305)
7, 8	14 (356)
10	16 (406)
12**	19 (483)
14**	20 (508)
16**	24 (610)

Electrical Data

Unit Size	EPIC ECM Motor FLA			
	Motor HP	120V	208V	240V 277V
7	*	15.9	10.5	9.9 10.0

* The ECM is a variable horsepower motor. Refer to Selectworks schedule for actual power consumption. FLA = Full load amperage. All motors are single phase/60 Hz.

Oval Inlet Dimensions

Size	PW x PH
12**	12 13/16 x 9 13/16 (325 x 249)
14**	16 1/16 x 9 13/16 (408 x 249)
16**	19 3/16 x 9 13/16 (487 x 249)

- FN2 90° Line Voltage Enclosure
- FN3 Remote Line Voltage Controls Enclosure (See submittal FN3)
- Dust tight enclosure seal
- Remote user disconnect

Seismic Certification:

- Seismic Source International (Standard)
- HCAI (formerly OSHPD, California)
- Special Features: _____



SCHEDULE TYPE:

PROJECT:

ENGINEER:

CONTRACTOR:

Page 1 of 2. For heat options; see page 2. Dimensions are in inches (mm).

DATE	B SERIES	SUPERSEDES	DRAWING NO.
2 - 6 - 23	3500	11 - 15 - 22	35S-OAI-2



**FAN POWERED TERMINAL UNIT WITH
OUTSIDE AIR INLET • EPIC ECM MOTOR
HEAT ACCESSORIES**
SERIES FLOW • CONSTANT OR VARIABLE VOLUME
MODELS: 35SW-OAI AND 35SE-OAI • UNIT SIZE 7

Hot Water Coil Section Model 35SW-OAI

Standard Features:

- Coil section installed on unit discharge.
- Coil (and header on multi-circuit units) is installed in insulated casing for increased thermal efficiency.
- 1/2" (13) copper tubes.
- Aluminum ripple fins.
- Sweat connections: 1 and 2 row, 7/8" (22) O. D. male solder. 3 row 1 3/8" (35) O.D. male solder.
- Top and bottom access panels for inspection and coil cleaning.
- Flanged outlet duct connection.

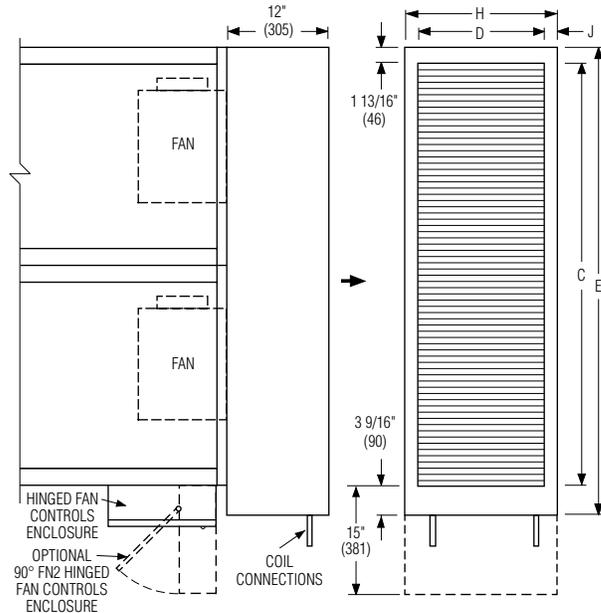
Coil Rows:

- 1-Row 2-Row 3-Row

Coil Hand Connections:

(Looking in direction of airflow).

- Right hand (illustrated). Standard.
 Left hand. Optional.



Unit Size	Outlet Duct Size C x D	E	H	J
7	50 x 14 7/8 (1270 x 378)	55 3/8 (1407)	18 (457)	1 9/16 (40)

Electric Coil Section Model 35SE-OAI

Standard Features:

- Unique hinged heater design permits easy access, removal and replacement of heater element without disturbing ductwork.
- Coil installed on unit discharge.
- Insulated coil element wrapper.
- Automatic reset high limit cut-outs (one per element).
- Single point electrical connection (except 600V).
- Positive pressure airflow switch.
- Flanged outlet duct connection.
- Class A 80/20 Ni/Cr wire.
- Terminal unit with coil is ETL Listed as an assembly.
- Controls mounted as standard on RH side as shown. Terminals ordered with LH controls (optional) are inverted and discharge duct hanging elevation will therefore change.

Voltage:

Single phase, 60 Hz.

- 120V 208V 240V 277V

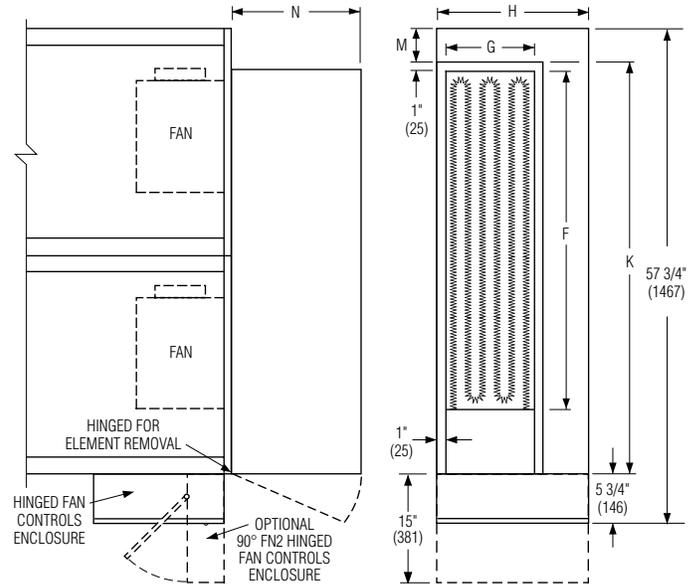
Three phase, 60 Hz.

- 208V 480V (4 wire wye).

- 600V (Dual point connection) _____

Options:

- Toggle disconnect switch (includes fan).
- Door interlock disconnect switch.
- SCR Control.
- Mercury contactors.
- Power circuit fusing.
- Dust tight construction.
- Manual reset secondary thermal cut out.



Unit Size	Outlet Duct Size F x G	K	H	M	N
7	40 1/4 x 11 3/4 (1022 x 298)	48 (1219)	18 (457)	4 (102)	15 1/4 (387)

SCHEDULE TYPE:				
PROJECT:				
ENGINEER:	DATE	B SERIES	SUPERSEDES	DRAWING NO.
CONTRACTOR:	2 - 6 - 23	3500	11 - 15 - 22	35S-OAI-2

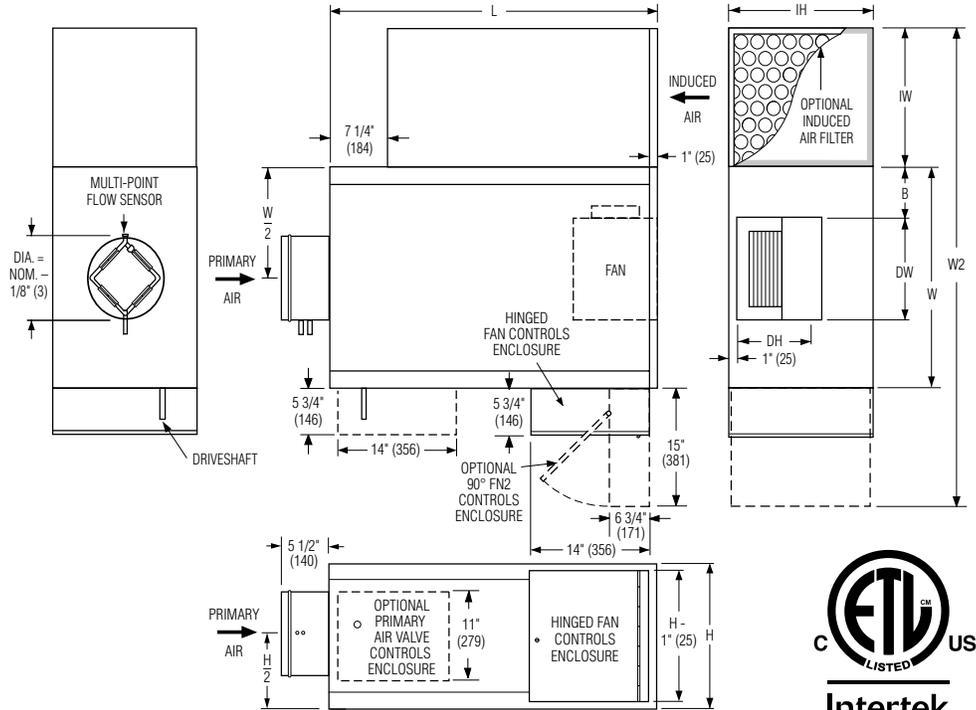


**FAN POWERED TERMINAL UNIT WITH
EPIC ECM MOTOR
STEALTH • SERIES FLOW
CONSTANT OR VARIABLE VOLUME
MODELS: 35SST, 35SWST AND 35SEST • UNIT SIZES 1 – 6**

DESCRIPTION:

- 18 ga. (1.31) galvanized steel channel frame with 20 ga. (1.00) casing components.
- 16 ga. (1.61) galvanized steel inclined opposed blade damper. 45° rotation. CW to close.
- Ultra-high efficiency ECM fan motor. EPIC fan volume controller.
- Multi-point averaging Diamond Flow sensor. Supplied with balancing tees.
- Full size access panels on three sides.
- 3/4" (19) dual density insulation, exposed edges coated to prevent air erosion. Meets requirements of NFPA 90A and UL 181.
- Single point electrical and /or pneumatic main air connection.
- Discharge opening for flanged duct connection.
- Full primary air valve low voltage NEMA 1 type enclosure for factory mounted DDC and analog electronic controls.
- Controls mounted as standard on RH side as shown. Terminals ordered with LH controls (optional) are inverted and discharge duct hanging elevation will therefore change.

Model 35SST • Basic Unit



Dimensional Data

Unit Size	Inlet Size	W	W2	H	L	B	Induced Air Inlet IW x IH	Outlet Discharge DW x DH	Filter Size
1	5, 6, 8** (127, 152, 203)	20 (508)	44 (1118)	14 (356)	36 (914)	6 (152)	9 x 14 (229 x 356)	8 1/8 x 4 1/4 (206 x 108)	10 x 14 (254 x 356)
2	6, 8 (152, 203)	18 (457)	42 (1067)	14 (356)	36 (914)	3 1/2 (89)	9 x 14 (229 x 356)	9 1/4 x 10 1/2 (235 x 267)	10 x 14 (254 x 356)
3	6, 8, 10, 12 (152, 203, 254, 305)	18 (457)	44 (1118)	18 (457)	36 (914)	3 1/2 (89)	11 x 18 (279 x 457)	9 1/4 x 10 1/2 (235 x 267)	12 x 18 (305 x 457)
4	8, 10, 12, 14 (203, 254, 305, 356)	26 (660)	56 3/4 (1441)	18 (457)	41 (1041)	6 (152)	15 3/4 x 14 (400 x 356)	12 x 10 1/2 (305 x 267)	16 x 14 (406 x 356)
5	10, 12, 14 (254, 305, 356)	26 (660)	55 1/2 (1410)	18 (457)	41 (1041)	5 (127)	14 1/2 x 18 (368 x 457)	13 1/4 x 11 1/2 (337 x 292)	14 x 18 (356 x 457)
6	12, 14, 16 (305, 356, 406)	30 (762)	62 1/2 (1588)	19 (483)	44 (1118)	6 (152)	17 1/2 x 19 (445 x 483)	13 1/4 x 11 1/2 (337 x 292)	18 x 19 (457 x 483)

** ECM Only.

Electrical Data

Unit Size	EPIC ECM Motor FLA				
	Motor HP	120V	208V	240V	277V
1	*	2.1	1.4	1.3	1.2
2	*	4.0	2.7	2.6	2.6
3	*	5.0	3.4	3.3	3.3
4	*	6.9	4.6	4.5	4.2
5	*	9.0	6.1	5.8	5.6
6	*	11.9	7.3	7.3	7.2

* The ECM is a variable horsepower motor. Refer to Selectworks schedule for actual power consumption. FLA = Full load amperage. All motors are single phase/60 Hz.

Page 1 of 2. For heat options; see page 2. Dimensions are in inches (mm).

OPTIONS:

Digital Controls:

- Factory mounted (supplied by others)
- Field mounted (supplied by others)
- Nailor EZvav. See separate submittal.

Liner:

- Steri-liner
- Steri-liner + Perforated metal
- Fiber-free
- Perforated metal
- Solid metal
- 1" (25) fiberglass
- Low temperature construction

Other:

- Left-hand controls location
- Toggle disconnect switch
- Fan unit fusing
- 24/24V Isolation transformer
- Cross Flow Sensor
- 1" (25) Throwaway filter
- 2" (51) MERV 8 filter
- Hanger brackets.
- 1/4-turn fasteners (access panel)
- FN2 90° Line Voltage Enclosure
- FN3 Remote Line Voltage Controls Enclosure (See submittal FN3)
- Dust tight enclosure seal
- Remote user disconnect

Seismic Certification:

- Seismic Source International (Standard)
- HCAI (formerly OSHPD, California)
- Special Features: _____



SCHEDULE TYPE:

PROJECT:

ENGINEER:

CONTRACTOR:

DATE	B SERIES	SUPERSEDES	DRAWING NO.
1 - 17 - 25	3500	12 - 2 - 24	35SST-1



**FAN POWERED TERMINAL UNIT WITH
EPIC ECM MOTOR • HEAT ACCESSORIES
STEALTH • SERIES FLOW
CONSTANT OR VARIABLE VOLUME
MODELS: 35SST, 35SWST AND 35SEST • UNIT SIZES 1 – 6**

**Hot Water Coil Section
Model 35SWST STEALTH**

Standard Features:

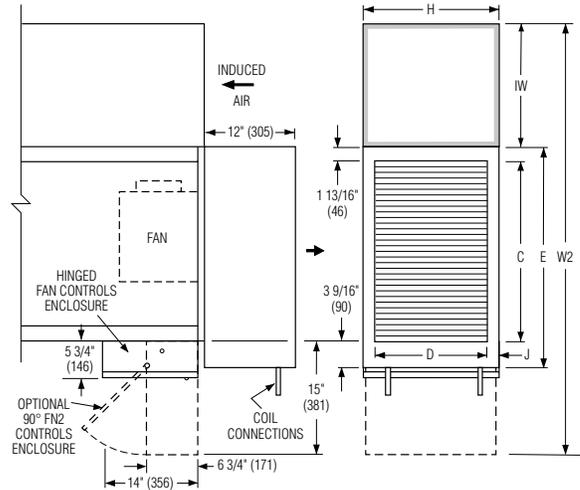
- Coil section installed on unit discharge.
- Coil (and header on multi-circuit units) is installed in insulated casing for increased thermal efficiency.
- 1/2" (13) copper tubes.
- Aluminum ripple fins.
- Sweat Connections:
Size 1 – 3: 1 Row 1/2" (13), 2 and 3 Row 7/8" (22); O.D. male solder.
- Size 4 – 6: 1, 2, and 3 Row 7/8" (22); O.D. male solder.
- Top and bottom access panels for inspection and coil cleaning.
- Flanged outlet duct connection.

Coil Rows:

- 1-Row 2-Row 3-Row

Coil Hand Connections:

- (Looking in direction of airflow).
- Right hand (illustrated). Standard.
 - Left hand (terminals are inverted). Optional.
Connections must be selected same hand as controls enclosure location.



Unit Size	Outlet Duct Size C x D	W2	E	H	J
1	16 x 12 1/8 (406 x 308)	44 (1118)	21 3/8 (543)	14 (356)	1 (25)
2	16 x 12 1/8 (406 x 308)	42 (1067)	21 3/8 (543)	14 (356)	1 (25)
3	16 x 14 7/8 (406 x 378)	44 (1118)	21 3/8 (543)	18 (457)	1 1/2 (38)
4, 5	24 x 14 7/8 (610 x 378)	56 3/4 (1441)	29 3/8 (746)	18 (457)	1 1/2 (38)
6	28 x 17 1/8 (711 x 435)	62 1/2 (1588)	33 3/8 (848)	19 (483)	1 (25)

Electric Coil Section Model 35SEST STEALTH

Standard Features:

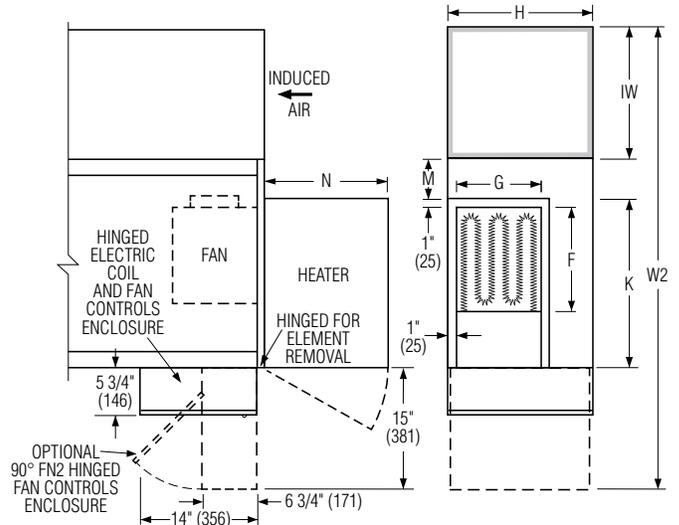
- Unique hinged heater design permits easy access, removal and replacement of heater element without disturbing ductwork.
- Coil installed on unit discharge.
- Insulated coil element wrapper.
- Automatic reset high limit cut-outs (one per element).
- Single point electrical connection (except 600V).
- Positive pressure airflow switch.
- Flanged outlet duct connection.
- Class A 80/20 Ni/Cr wire.
- Terminal unit with coil is ETL Listed as an assembly.
- Controls mounted as standard on RH side as shown. Terminals ordered with LH controls (optional) are inverted and discharge duct hanging elevation will therefore change.

Voltage:

- Single phase, 60 Hz.
 120V 208V 240V 277V
 Three phase, 60 Hz.
 208V 480V (4 wire wye).
 600V (dual point connection). _____

Options:

- Toggle disconnect switch (includes fan).
- SCR control.
- Door interlock disconnect switch.
- Mercury contactors.
- Power circuit fusing.
- Dust tight construction.
- Manual reset secondary thermal cut out.



Unit Size	Outlet Duct Size F x G	W2	K	H	M	N
1	10 1/4 x 10 1/2 (260 x 267)	44 (1118)	16 (406)	14 (356)	4 (102)	12 1/2 (318)
2	10 1/4 x 10 1/2 (260 x 267)	42 (1067)	15 1/2 (394)	14 (356)	2 1/2 (64)	12 1/2 (318)
3	10 1/4 x 10 1/2 (260 x 267)	44 (1118)	15 1/2 (394)	18 (457)	2 1/2 (64)	15 1/4 (387)
4	13 x 10 1/2 (330 x 267)	56 3/4 (1441)	21 (533)	18 (457)	5 (127)	15 1/4 (387)
5	14 1/4 x 11 3/4 (362 x 298)	55 1/2 (1410)	22 (559)	18 (457)	4 (102)	15 1/4 (387)
6	14 1/4 x 11 3/4 (362 x 298)	62 1/2 (1588)	25 (635)	19 (483)	5 (127)	15 1/4 (387)

SCHEDULE TYPE:

PROJECT:

ENGINEER:

CONTRACTOR:

Page 2 of 2.
Dimensions are in inches (mm).

DATE

B SERIES

SUPERSEDES

DRAWING NO.

1 - 17 - 25

3500

12 - 2 - 24

35SST-1

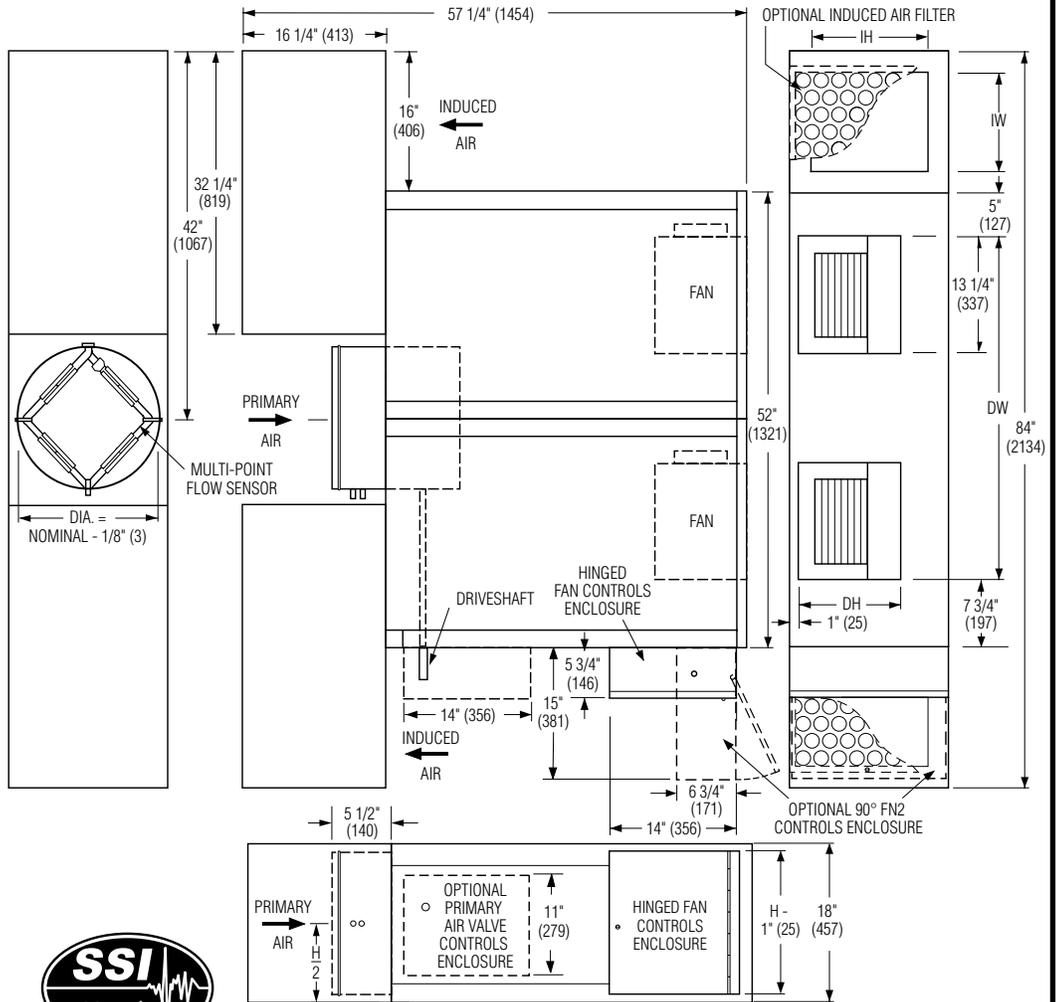


**FAN POWERED TERMINAL UNIT WITH
EPIC ECM MOTOR
STEALTH • SERIES FLOW
CONSTANT OR VARIABLE VOLUME
MODELS: 35SST, 35SWST AND 35SEST • UNIT SIZE 7**

DESCRIPTION:

- 18 ga. (1.31) galvanized steel channel frame with 20 ga. (1.00) casing components.
- 16 ga. (1.61) galvanized steel inclined opposed blade damper. 45° rotation. CW to close.
- Stealth tuned inlet attenuators. Shipped loose for field mounting.
- Ultra-high efficiency ECM fan motor. EPIC fan volume controller.
- Multi-point averaging Diamond Flow sensor. Supplied with balancing tees.
- Universal access. Panels on all 4 sides.
- 3/4" (19) dual density insulation, exposed edges coated to prevent air erosion. Meets requirements of NFPA 90A and UL 181.
- Single point electrical and/or pneumatic main air connection.
- Discharge opening for flanged duct connection.
- Full primary air valve low voltage NEMA 1 type enclosure for factory mounted DDC and analog electronic controls.
- Controls mounted as standard on RH side as shown. Terminals ordered with LH controls (optional) are inverted and discharge duct hanging elevation will therefore change.

Model 35SST • Basic Unit



OPTIONS:

Digital Controls:

- Factory mounted (supplied by others)
- Field mounted (supplied by others)
- Nailor EZvav. See separate submittal.

Liner:

- Steri-liner
- Steri-liner + Perforated metal
- Fiber-free
- Perforated metal
- Solid metal
- 1" (25) fiberglass
- Low temperature construction

Other:

- Left-hand controls location
- Toggle disconnect switch
- Fan unit fusing
- 24/24V Isolation transformer
- Cross Flow Sensor
- 1" (25) Throwaway filter
- 2" (51) MERV 8 filter
- Hanger brackets.
- 1/4-turn fasteners (access panel)



- FN2 90° Line Voltage Enclosure
- FN3 Remote Line Voltage Controls Enclosure (See submittal FN3)
- Dust tight enclosure seal
- Remote user disconnect

Seismic Certification:

- Seismic Source International (Standard)
- HCAI (formerly OSHPD, California)
- Special Features: _____

Dimensional Data

Unit Size	Inlet Size	Induced Air Inlet IW x IH	Outlet Discharge DW x DH	Filter Size
7	14, 16 (356, 406)	11 1/4 x 13 1/4 (286 x 337) Qty. of 2	39 1/4 x 11 1/2 (997 x 292)	14 x 14 (356 x 356) Qty. of 2

Electrical Data

Unit Size	EPIC ECM Motor FLA				
	Motor HP	120V	208V	240V	277V
7	*	15.9	10.5	9.9	10.0

* The ECM is a variable horsepower motor. Refer to Selectworks schedule for actual power consumption.
FLA = Full load amperage. All motors are single phase/60 Hz.



Intertek

SCHEDULE TYPE:				
PROJECT:				
ENGINEER:		DATE	B SERIES	SUPERSEDES
CONTRACTOR:		1 - 17 - 25	3500	12 - 2 - 24
				DRAWING NO.
				35SST-2



**FAN POWERED TERMINAL UNIT WITH
EPIC ECM MOTOR • HEAT ACCESSORIES
STEALTH • SERIES FLOW
CONSTANT OR VARIABLE VOLUME
MODELS: 35SWST AND 35SEST • UNIT SIZE 7**

Hot Water Coil Section Model 35SWST STEALTH

Standard Features:

- Coil section installed on unit discharge.
- Coil (and header on multi-circuit units) is installed in insulated casing for increased thermal efficiency.
- 1/2" (13) copper tubes.
- Aluminum ripple fins.
- Sweat connections: 1 and 2 row, 7/8" (22) O.D. male solder. 3 row 1 3/8" (35) O.D. male solder.
- Top and bottom access panels for inspection and coil cleaning.
- Flanged outlet duct connection.

Coil Rows:

- 1-Row 2-Row 3-Row

Coil Hand Connections:

(Looking in direction of airflow).

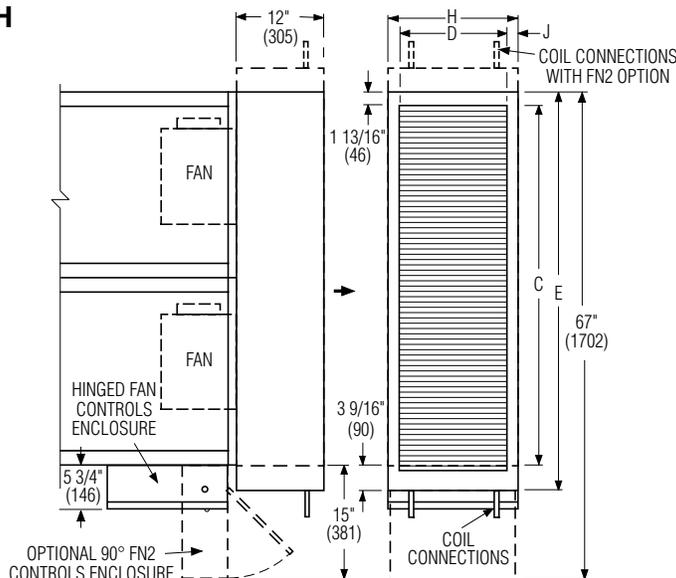
Standard Line Voltage Enclosure:

- Right hand (illustrated). Standard.
 Left hand. Optional.

With 90° Line Voltage Enclosure (FN2 option):

Connections must be selected opposite hand to FN2 controls enclosure location.

- Left hand (illustrated with dotted line). Standard.
 Right hand (terminals are inverted). Optional.



Unit Size	Outlet Duct Size C x D	E	H	J
7	50 x 14 7/8 (1270 x 378)	55 3/8 (1407)	18 (457)	1 9/16 (40)

Electric Coil Section Model 35SEST STEALTH

Standard Features:

- Unique hinged heater design permits easy access, removal and replacement of heater element without disturbing ductwork.
- Coil installed on unit discharge.
- Insulated coil element wrapper.
- Automatic reset high limit cut-outs (one per element).
- Single point electrical connection (except 600V).
- Positive pressure airflow switch.
- Flanged outlet duct connection.
- Class A 80/20 Ni/Cr wire.
- Terminal unit with coil is ETL Listed as an assembly.
- Controls mounted as standard on RH side as shown. Terminals ordered with LH controls (optional) are inverted and discharge duct hanging elevation will therefore change.

Voltage:

Single phase, 60 Hz.

- 208V 240V 277V

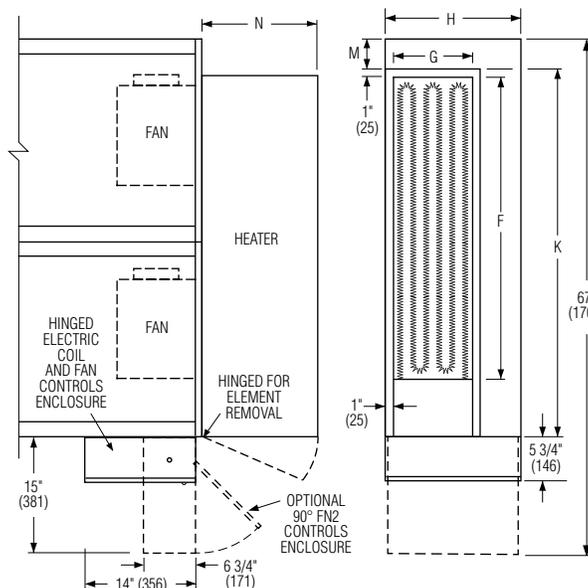
Three phase, 60 Hz.

- 208V 480V (4 wire wye).

- 600V (dual point connection). _____

Options:

- Toggle disconnect switch (includes fan).
 SCR control.
 Door interlock disconnect switch.
 Mercury contactors.
 Power circuit fusing.
 Dust tight construction.
 Manual reset secondary thermal cut out.



Unit Size	Outlet Duct Size F x G	K	H	M	N
7	40 1/4 x 11 3/4 (1022 x 298)	48 (1219)	18 (457)	4 (102)	15 1/4 (387)

SCHEDULE TYPE:				
PROJECT:				
ENGINEER:	DATE	B SERIES	SUPERSEDES	DRAWING NO.
CONTRACTOR:	1 - 17 - 25	3500	12 - 2 - 24	35SST-2



**FAN POWERED TERMINAL UNIT WITH
OUTSIDE AIR INLET • EPIC ECM MOTOR • STEALTH™
SERIES FLOW • CONSTANT OR VARIABLE VOLUME
MODELS: 35SST-OAI, 35SEST-OAI AND 35SWST-OAI
UNIT SIZES 2 – 6**

DESCRIPTION:

- 18 ga. (1.31) galvanized steel channel frame with 20 ga. (1.00) casing components.
- 16 ga. (1.61) galvanized steel inclined opposed blade dampers. 45° rotation. RH CW to close. LH CCW to close.
- Separate outside ventilation air inlet.
- Ultra-high efficiency ECM fan motor. EPIC fan volume controller.
- Multi-point averaging Diamond Flow sensor. Supplied with balancing tees.
- Universal access panels on all 4 sides.
- 3/4" (19) dual density insulation, coated to prevent air erosion, meets requirements of NFPA 90A and UL 181.
- Single point electrical and/or pneumatic main air connection.
- Discharge opening for flanged duct connection.
- Full enclosure for factory mounted DDC and analog electronic controls.
- Choice of right or left-hand primary inlet location. Hand of unit is determined by location of primary inlet looking in direction of airflow. Right-hand illustrated.

OPTIONS:

Digital Controls:

- Factory mounted (supplied by others)
- Field mounted (supplied by others)

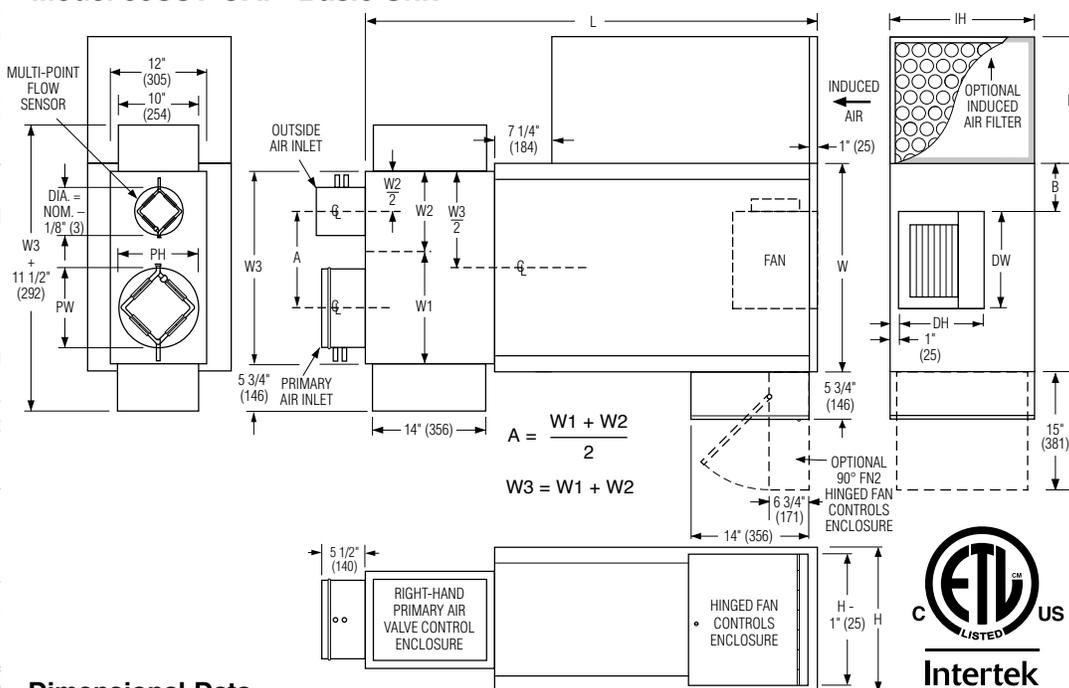
Liner:

- Fiber-free
- Steri-liner
- Steri-liner + Perforated metal
- Perforated metal
- Solid metal
- 1" (25) fiberglass

Other:

- Left-hand controls location
- Left-hand primary inlet location
- Toggle disconnect switch
- Fan unit fusing
- 24/24V Isolation transformer
- Cross Flow Sensor (not on primary inlet)
- Top entry induced air inlet
- 1" (25) Throwaway filter
- 2" (51) MERV 8 filter
- Hanger brackets.
- 1/4-turn fasteners (access panel)
- FN2 90° Line Voltage Enclosure

Model 35SST-OAI • Basic Unit



Dimensional Data

Unit Size	Inlet Size	Outside Inlet Size	W	H	L	B	Induced Air		Filter Size Side Inlet (std.)
							Inlet IW x IH	Outlet Discharge DW x DH	
2	6, 8 (152, 203)	4, 5, 6 (102, 127, 152)	18 (457)	14 (356)	51 1/2 (1308)	6 (152)	9 x 14 (229 x 356)	9 1/4 x 10 1/2 (235 x 267)	10 x 14 (254 x 356)
3	6, 8, 10 (152, 203, 254)	4, 5, 6 (102, 127, 152)	18 (457)	18 (457)	51 1/2 (1308)	3 1/2 (89)	11 x 18 (279 x 457)	9 1/4 x 10 1/2 (235 x 267)	12 x 18 (305 x 457)
4	8, 10, 12** (203, 254, 305)	6, 7, 8 (152, 178, 203)	26 (660)	18 (457)	56 1/2 (1435)	6 (152)	15 3/4 x 14 (400 x 356)	12 x 10 1/2 (305 x 267)	16 x 14 (406 x 356)
5	10, 12**, 14** (254, 305, 356)	6, 7, 8 (152, 178, 203)	26 (660)	18 (457)	56 1/2 (1435)	5 (127)	14 1/2 x 18 (368 x 457)	13 1/4 x 11 1/2 (337 x 292)	14 x 18 (356 x 457)
6	10, 12**, 14** (254, 305, 356)	6, 7, 8 (152, 178, 203)	30 (762)	19 (483)	59 1/2 (1511)	6 (152)	17 1/2 x 19 (445 x 483)	13 1/4 x 11 1/2 (337 x 292)	18 x 19 (457 x 483)

Primary/Inlet Dimensions **Flat oval inlets

Size	W1 or W2
4, 5, 6	12 (305)
7, 8	14 (356)
10	16 (406)
12**	19 (483)
14**	20 (508)

Oval Inlet Dimensions

Size	PW x PH
12**	12 13/16 x 9 13/16 (325 x 249)
14**	16 1/16 x 9 13/16 (408 x 249)

FN3 Remote Line Voltage Controls Enclosure. (See submittal FN3)

- Dust tight enclosure seal
- Remote user disconnect

Seismic Certification:

- Seismic Source International (Standard)
- HCAI (formerly OSHPD, California)
- Special Features: _____

Electrical Data

Unit Size	EPIC ECM Motor FLA				
	Motor HP	120V	208V	240V	277V
2	*	4.0	2.7	2.6	2.6
3	*	5.0	3.4	3.3	3.3
4	*	6.9	4.6	4.5	4.2
5	*	9.0	6.1	5.8	5.6
6	*	11.9	7.3	7.3	7.2

* The ECM is a variable horsepower motor. Refer to Selectworks schedule for actual power consumption. FLA = Full load amperage. All motors are single phase/60 Hz.



SCHEDULE TYPE:

PROJECT:

ENGINEER:

CONTRACTOR:

Page 1 of 2. For heat options; see page 2. Dimensions are in inches (mm).

DATE	B SERIES	SUPERSEDES	DRAWING NO.
2 - 6 - 23	3500	11 - 15 - 22	35SST-OAI-1



**FAN POWERED TERMINAL UNIT WITH
OUTSIDE AIR INLET • EPIC ECM MOTOR • STEALTH™
HEAT ACCESSORIES
SERIES FLOW • CONSTANT OR VARIABLE VOLUME
MODELS: 35SWST-OAI AND 35SEST-OAI • UNIT SIZE
2 – 6**

**Hot Water Coil Section Model 35SWST-OAI
STEALTH™**

Standard Features:

- Coil section installed on unit discharge.
- Coil (and header on multi-circuit units) is installed in insulated casing for increased thermal efficiency.
- 1/2" (13) copper tubes.
- Aluminum ripple fins.
- Sweat Connections:
Size 2 – 3: 1 Row 1/2" (13), 2 and 3 Row 7/8" (22); O.D. male solder.
Size 4 – 6: 1, 2, and 3 Row 7/8" (22); O.D. male solder.
- Top and bottom access panels for inspection and coil cleaning.
- Flanged outlet duct connection.

Coil Rows:

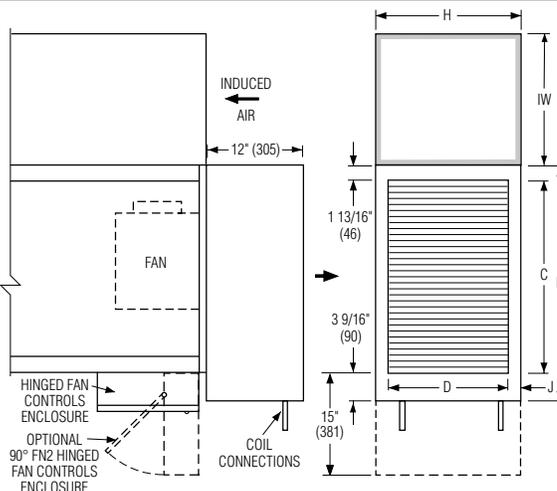
- 1-Row 2-Row 3-Row

Coil Hand Connections:

(Looking in direction of airflow).

- Right hand (illustrated). Standard.
 Left hand (terminals are inverted). Optional.

Connections must be selected same hand as controls enclosure location.



Unit Size	Outlet Duct Size C x D	E	H	J
2	16 x 12 1/8 (406 x 308)	21 3/8 (543)	14 (356)	15/16 (24)
3	16 x 14 7/8 (406 x 378)	21 3/8 (543)	18 (457)	1 9/16 (40)
4, 5	24 x 14 7/8 (610 x 378)	29 3/8 (746)	18 (457)	1 9/16 (40)
6	28 x 17 1/8 (711 x 435)	33 3/8 (848)	19 (483)	15/16 (24)

Electric Coil Section Model 35SEST-OAI STEALTH™

Standard Features:

- Unique hinged heater design permits easy access, removal and replacement of heater element without disturbing ductwork.
- Coil installed on unit discharge.
- Insulated coil element wrapper.
- Automatic reset high limit cut-outs (one per element).
- Single point electrical connection (except 600V).
- Positive pressure airflow switch.
- Flanged outlet duct connection.
- Class A 80/20 Ni/Cr wire.
- Terminal unit with coil is ETL Listed as an assembly.
- Controls mounted as standard on RH side as shown. Terminals ordered with LH controls (optional) are inverted and discharge duct hanging elevation will therefore change.

Voltage:

Single phase, 60 Hz.

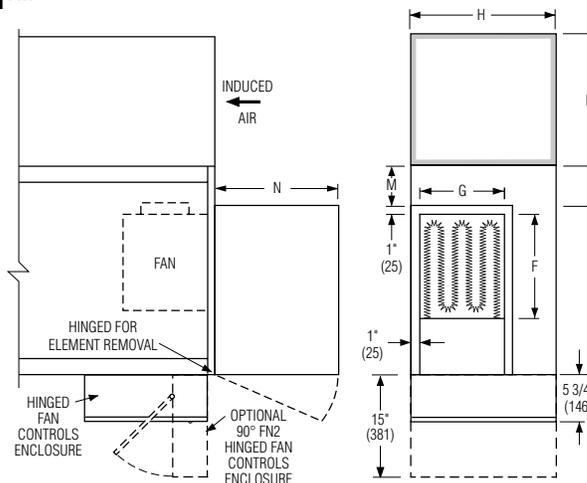
- 120V 208V 240V 277V

Three phase, 60 Hz.

- 208V 480V (4 wire wye).
 600V (Dual point connection) _____

Options:

- Toggle disconnect switch (includes fan).
- Door interlock disconnect switch.
- SCR Control.
- Mercury contactors.
- Power circuit fusing.
- Dust tight construction.
- Manual reset secondary thermal cut out.



Unit Size	Outlet Duct Size F x G	K	H	M	N
2	10 1/4 x 10 1/2 (260 x 267)	15 1/2 (394)	14 (356)	2 1/2 (64)	12 1/2 (318)
3	10 1/4 x 10 1/2 (260 x 267)	15 1/2 (394)	18 (457)	2 1/2 (64)	15 1/4 (387)
4	13 x 10 1/2 (330 x 267)	21 (533)	18 (457)	5 (127)	15 1/4 (387)
5	14 1/4 x 11 3/4 (362 x 298)	22 (559)	18 (457)	4 (102)	15 1/4 (387)
6	14 1/4 x 11 3/4 (362 x 298)	25 (635)	19 (635)	5 (127)	15 1/4 (387)

Page 2 of 2.

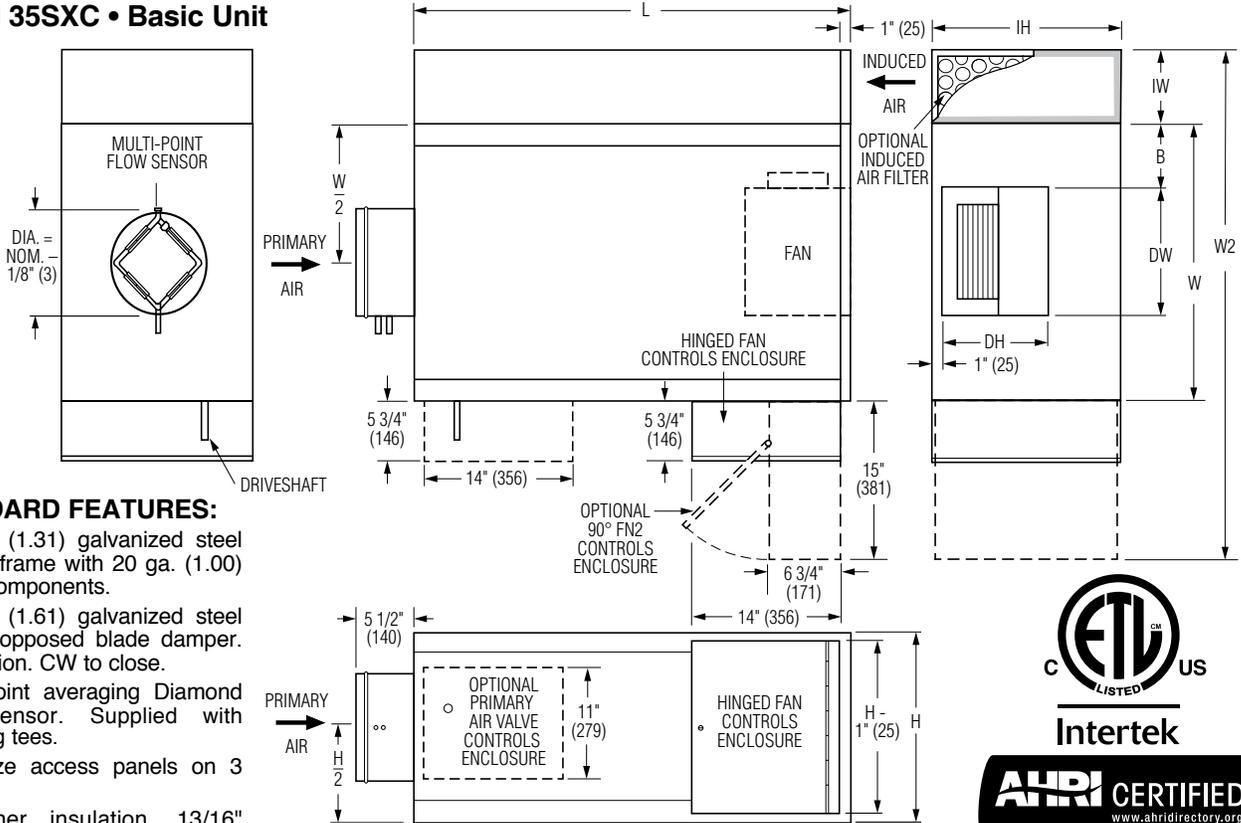
Dimensions are in inches (mm).

SCHEDULE TYPE:				
PROJECT:				
ENGINEER:	DATE	B SERIES	SUPERSEDES	DRAWING NO.
CONTRACTOR:	2 - 6 - 23	3500	11 - 15 - 22	35SST-OAI-1



FAN POWERED TERMINAL UNIT W/ EPIC ECM MOTOR
STEALTH XC • SERIES FLOW • SUPER QUIET
EXPOSED CEILING APPLICATIONS
VARIABLE VOLUME FAN OPERATION
MODELS: 35SXC, 35SWXC & 35SEXC • UNIT SIZES 1, 3 & 5

Model 35SXC • Basic Unit



STANDARD FEATURES:

- 18 ga. (1.31) galvanized steel channel frame with 20 ga. (1.00) casing components.
- 16 ga. (1.61) galvanized steel inclined opposed blade damper. 45° rotation. CW to close.
- Multi-point averaging Diamond Flow sensor. Supplied with balancing tees.
- Full size access panels on 3 sides.
- Steri-liner insulation. 13/16" (21) thick, 4 lb./sq. ft. (64 kg/m³) density rigid fiberglass with alum. FSK facing. Meets requirements of NFPA 90A and UL 181.
- Stealth XC tuned inlet silencer. Perforated galvanized steel liner with fiberglass acoustic media.
- Single point electrical connection.
- Discharge opening for flanged duct connection.
- Full primary air valve low voltage NEMA 1 type enclosure for factory mounted DDC controls.
- Controls mounted as standard on RH side as shown. Terminals ordered with LH controls (optional) are inverted and discharge duct hanging elevation will therefore change.
- Ultra-high efficiency ECM fan motor. EPIC fan volume controller.

OPTIONS:

- Digital Controls:**
- Factory mounted (supplied by others)
 - Field mounted (supplied by others)

Dimensional Data

Unit Size	Inlet Size	W	W2	H	L	B	Induced Air Inlet IW x IH	Outlet Discharge DW x DH	Filter Size
1	6, 8 (152, 203)	20 (508)	41 (1041)	14 (356)	36 (914)	6 (152)	6 x 14 (152 x 356)	8 1/8 x 4 1/4 (206 x 108)	6 x 14 (152 x 356)
3	6, 8, 10, 12 (125, 203, 254, 305)	26 (660)	47 (1194)	18 (457)	41 (1041)	7 (178)	6 x 18 (152 x 457)	9 1/8 x 10 1/2 (232 x 267)	6 x 18 (152 x 457)
5	10, 12, 14 (254, 305, 356)	26 (660)	53 (1346)	20 (508)	55 (1397)	7 (178)	12 x 20 (305 x 508)	13 1/8 x 15 5/8 (333 x 397)	12 x 20 (305 x 508)

Terminal Liner:

- Steri-liner
- Steri-liner + Perforated metal

Silencer Liner:

- Fiberglass acoustic media
- Steri-Liner/Polymer film

Other:

- Left-hand controls location
- Toggle disconnect switch
- Fan unit fusing
- 24/24V Isolation transformer
- Cross Flow Sensor
- 1" (25) Throwaway filter

- Hanger brackets
- 1/4-turn fasteners (access panel)
- FN2 90° Line Voltage Enclosure
- FN3 Remote Line Voltage Controls Enclosure (See submittal FN3)
- Dust tight enclosure seal
- Remote user disconnect
- Special features:

Electrical Data

Unit Size	EPIC ECM Motor FLA Motor HP	EPIC ECM Motor FLA			
		120V	208V	240V	277V
1	*	2.1	1.4	1.3	1.2
3	*	4.8	3.4	3.1	3.0
5	*	10.5	6.8	6.4	6.2

* The ECM is a variable horsepower motor. Refer to Selectworks schedule for actual power consumption. FLA = Full load amperage. All motors are single phase/60 Hz.

SCHEDULE TYPE:	
PROJECT:	
ENGINEER:	
CONTRACTOR:	

DATE	B SERIES	SUPERSEDES	DRAWING NO.
1 - 3 - 25	3500	12 - 18 - 24	35SXC-1



**FAN POWERED TERMINAL UNIT W/ EPIC ECM MOTOR
HEAT ACCESSORIES • STEALTH XC • SERIES FLOW
SUPER QUIET • EXPOSED CEILING APPLICATIONS
VARIABLE VOLUME FAN OPERATION
MODELS: 35SXC, 35SWXC & 35SEXC • UNIT SIZES 1, 3 & 5**

**Hot Water Coil Section
Model 35SWXC STEALTH XC**

Standard Features:

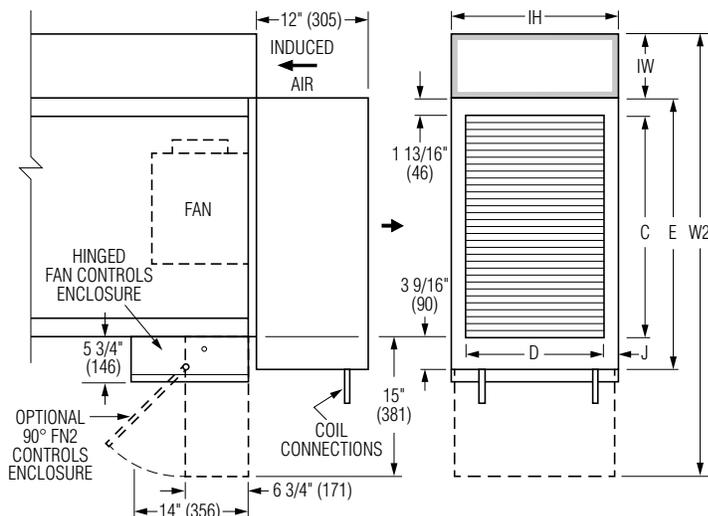
- Coil section installed on unit discharge.
- Coil (and header on multi-circuit units) is installed in insulated casing for increased thermal efficiency.
- 1/2" (13) copper tubes.
- Aluminum ripple fins.
- Sweat Connections:
Size 1: 1 Row 1/2" (13), 2 and 3 Row 7/8" (22); O.D. male solder.
- Sizes 3 & 5: 1, 2, and 3 Row 7/8" (22); O.D. male solder.
- Top and bottom access panels for inspection and coil cleaning.
- Flanged outlet duct connection.

Coil Rows:

- 1-Row 2-Row 3-Row

Coil Hand Connections:

- (Looking in direction of airflow.)
- Right hand (illustrated). Standard.
 - Left hand (terminals are inverted). Optional.
- Connections must be selected same hand as controls enclosure location.



Unit Size	Outlet Duct Size C x D	W2	E	H	J
1	16 x 12 1/8 (406 x 308)	41 (1041)	21 3/8 (543)	14 (356)	1 (25)
3	16 x 14 7/8 (406 x 378)	47 (1194)	21 3/8 (543)	18 (457)	1 1/2 (38)
5	24 x 14 7/8 (610 x 378)	53 (1346)	29 3/8 (746)	20 (508)	1 1/2 (38)

Electric Coil Section Model 35SEXC STEALTH XC

Standard Features:

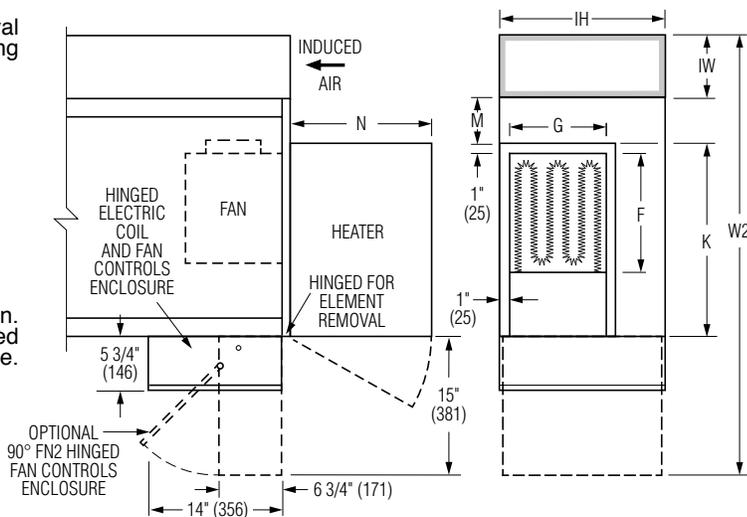
- Unique hinged heater design permits easy access, removal and replacement of heater element without disturbing ductwork.
- Coil installed on unit discharge.
- Insulated coil element wrapper.
- Automatic reset high limit cut-outs (one per element).
- Single point electrical connection (except 600V).
- Positive pressure airflow switch.
- Flanged outlet duct connection.
- Class A 80/20 Ni/Cr wire.
- Terminal unit with coil is ETL Listed as an assembly.
- Controls mounted as standard on RH side as shown. Terminals ordered with LH controls (optional) are inverted and discharge duct hanging elevation will therefore change.

Voltage:

- Single phase, 60 Hz.
 120V 208V 240V 277V
 Three phase, 60 Hz.
 208V 480V (4 wire wye). _____ .

Options:

- Toggle disconnect switch (includes fan).
- SCR control.
- Door interlock disconnect switch.
- Mercury contactors.
- Power circuit fusing.
- Dust tight construction.
- Manual reset secondary thermal cut out.



Unit Size	Outlet Duct Size F x G	W2	K	H	M	N
1	10 1/4 x 10 1/2 (260 x 267)	41 (1041)	16 (406)	14 (356)	4 (102)	12 1/2 (318)
3	12 1/4 x 10 3/4 (311 x 273)	47 (1194)	22 (559)	18 (457)	4 (102)	15 1/4 (387)
5	16 1/4 x 15 3/4 (413 x 400)	53 (1346)	22 (559)	20 (508)	4 (102)	15 1/4 (387)

SCHEDULE TYPE:

PROJECT:

ENGINEER:

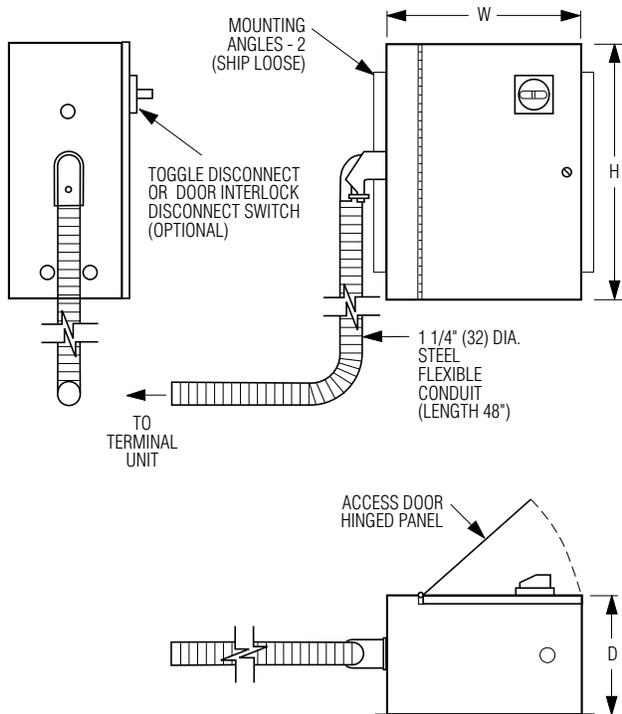
CONTRACTOR:

Page 2 of 2.
Dimensions are in inches (mm).

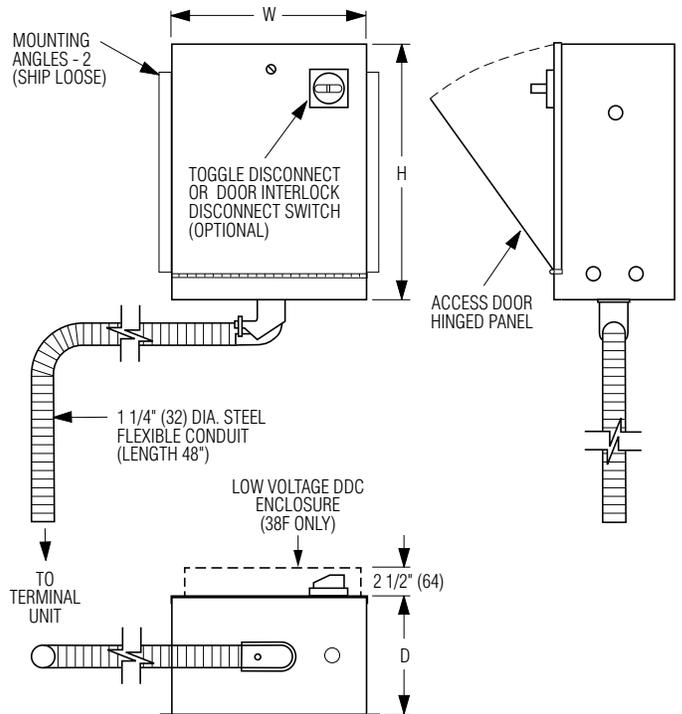
DATE	B SERIES	SUPERSEDES	DRAWING NO.
1 - 3 - 25	3500	12 - 18 - 24	35SXC-1



FN3 REMOTE LINE VOLTAGE CONTROLS ENCLOSURE
FAN POWERED TERMINAL UNIT OPTION
MODEL SERIES: 33SZ, 35S(ST), 37S(ST), 38F AND 38S



33SZ / 35S(ST) / 37S(ST) DESIGN
(Ceiling Mounted Terminal Unit)



38F / 38S DESIGN
(Underfloor Terminal Unit)

Dimensional Data

Model Series	Unit Size	W	H	D
33SZ	10	15 (381)	8 1/2 (216)	6 3/4 (171)
	30, 35	15 (406)	11 (279)	6 3/4 (171)
	40, 50, 55	17 (432)	14 (356)	5 3/4 (146)
35S(ST)	1, 2	14 (356)	13 (330)	5 3/4 (146)
	3, 4, 5, 6, 7	14 (356)	17 (432)	5 3/4 (146)
37S(ST)	1, 2, 3, 4	15 (381)	11 (279)	6 3/4 (171)
38F	1, 3, 5, 6, 33, 3S, 3H, 6H, 33H	15 (381)	11 (279)	6 3/4 (171)
38S	1, 3, 5	15 (381)	11 (279)	6 3/4 (171)



NOTES:

- The FN3 line voltage enclosure is an ETL listed option. The FN3 was developed for Nailor fan powered terminal units in order to help meet NEC clearance requirements. Standard enclosures are mounted on the side of the unit and effectively add 42" (1067) to the terminals width footprint. Very often there is insufficient clearance in the ceiling plenum due to physical obstructions to accommodate this. The FN3 provides flexibility in that it may be field positioned in any orientation that provides the NEC clearance requirement.
- The FN3 Line voltage enclosure ships loose with a 48" (1219) flexible conduit connection to the terminal unit. The enclosure should be field mounted either on or remote from the terminal unit in a position that meets (NEC) clearance requirements.
 The controls enclosure is supplied with mounting angles, which ship loose for field attachment.

SCHEDULE TYPE:		Dimensions are in inches (mm)			
PROJECT:					
ENGINEER:	DATE	B SERIES	SUPERSEDES	DRAWING NO.	
CONTRACTOR:	1 - 12 - 22	FN	8 - 3 - 21	FN3	



**TERMINAL UNITS
LINER OPTIONS
TYPE: FIBERGLASS DUAL DENSITY INSULATION**

DESCRIPTION

Tuf-Skin® dual-density fiberglass insulation is the most widely-used insulation for HVAC equipment applications. The combination of high-density skin and low-density core provides high acoustical values in the high and low frequency ranges normally encountered in HVAC equipment.

Application. Tuf-Skin® provides effective thermal and acoustical control in air conditioning and heating equipment.

Advantage. The porosity and inherent structure of the flame-attenuated glass fiber blankets are highly effective in reducing thermal transfer.

Tuf-Skin® readily withstands damage from mechanical abrasion during assembly and from air erosion in service.

INSULATION CHARACTERISTICS

Material: Dual density fiberglass, surface treated to prevent erosion (Tuf-Skin® II)
 Available Thicknesses: 1/2" (13), 3/4" (19), 1" (25) (Consult individual model submittal for thickness used).
 Density: 4.0 lb/cu.ft. (64 kg/m³) skin, 1.5 lb/cu.ft. (24 kg/m³) core
 Thermal Conductance: 1/2" (13) - 0.52 BTU / hr-ft²-°F @ 75°F (2.95 W / m²-°C @ 24°C),
 3/4" (19) - 0.36 BTU / hr-ft²-°F @ 75°F (2.04 W / m²-°C @ 24°C),
 1" (25) - 0.26 BTU / hr-ft²-°F @ 75°F (1.47 W / m²-°C @ 24°C)
 Thermal Resistance: 1/2" (13) - 1.9 hr-ft²-°F / BTU (0.34 m²-°C / W),
 (Effective R-Value) 3/4" (19) - 2.8 hr-ft²-°F / BTU (0.49 m²-°C / W),
 1" (25) - 3.8 hr-ft²-°F / BTU (0.68 m²-°C / W)
 Flame Spread Index: 25
 Smoke Developed Index: 50

MAXIMUM AIR VELOCITY

3,600 FPM (1,097 mpm). Tested at two and one-half times (9,000 fpm) (2,743 mpm) the maximum recommended service velocity. Meets the erosion requirements of UL 181.

TEMPERATURE LIMIT

250°F (121°C).

STANDARD AND CODE COMPLIANCE

- ASTM E84, UL 723 and CAN/ULC S102 Flame/Smoke (25/50)
- NFPA 90A and 90B
- ASTM C 1071

Tuf-Skin® is a registered trademark of Johns Manville.

SCHEDULE TYPE:	Dimensions are in inches (mm)			
PROJECT:				
ENGINEER:	DATE	B SERIES	SUPERSEDES	DRAWING NO.
CONTRACTOR:	5 - 12 - 22	VAV.ACC.	3 - 30 - 22	VAV-FDD



**TERMINAL UNITS
LINER OPTIONS
SOUND POWER LEVEL CORRECTION FACTORS
TYPE: FIBER-FREE**

INSULATION CHARACTERISTICS

Material: Engineered Polymer Foam Insulation (EPFI). Closed cell.
Zero permeability and water absorption.

Available Thicknesses: 1/2" (13), 3/4" (19), 1" (25) (Consult individual model submittal for thickness used).

Density: 1.5 lb/cu.ft. (24 kg/m³).

Thermal Conductivity: 0.27 BTU-in / hr-ft²-°F @ 75°F (0.039 W / m-°K @ 24°C).
(K-Factor)

Thermal Resistance: 1/2" (13): 1.9 hr-ft²-°F / BTU (0.33 m²-°C / W).
(R-Value) 3/4" (19): 2.8 hr-ft²-°F / BTU (0.49 m²-°C / W).
1" (25): 3.7 hr-ft²-°F / BTU (0.65 m²-°C / W).

Flame Spread Index: 25

Smoke Developed Index: 50

Mold Growth: None

Erosion: None

STANDARD AND CODE COMPLIANCE

- UL 181 Class I
- ASTM E84 and UL 723 Flame/Smoke (25/50)
- NFPA 90A (Heating and Cooling Equipment)
- ASTM C 209
- ASTM C 665

ACOUSTICAL PERFORMANCE

Correction factors to cataloged sound power level data (standard liner) are shown below.

Single Duct Terminal Units • 3000 Series Basic Unit • All sizes.

Octave Band	2	3	4	5	6	7	NC Impact
Center Frequency (Hz)	125	250	500	1000	2000	4000	(Average)
Discharge Sound	0	0	0	0	0	0	0
Radiated Sound	-1	-2	-2	-3	-3	-3	-2

Single Duct Terminal Units with Integral Attenuator • 3000 Series • All Sizes.

Octave Band	2	3	4	5	6	7	NC Impact
Center Frequency (Hz)	125	250	500	1000	2000	4000	(Average)
Discharge Sound	+1	+1	+3	+4	+7	+8	+3
Radiated Sound	-1	-2	-2	-3	-3	-3	-2

Fan Powered Terminal Units • 33SZ, 35N, 35S, 37N and 37S Series • All sizes.

Octave Band	2	3	4	5	6	7	NC Impact
Center Frequency (Hz)	125	250	500	1000	2000	4000	(Average)
Discharge Sound	0	0	0	0	0	0	0
Radiated Sound	+2	+2	+4	+2	+2	+2	+3

Fan Powered Terminal Units • 35SST and 37SST "Stealth" Series • All sizes.

Octave Band	2	3	4	5	6	7	NC Impact
Center Frequency (Hz)	125	250	500	1000	2000	4000	(Average)
Discharge Sound	0	0	0	0	0	0	0
Radiated Sound	+2	+2	+4	+2	+2	+2	+3

SCHEDULE TYPE:	Dimensions are in inches (mm)			
PROJECT:				
ENGINEER:	DATE	B SERIES	SUPERSEDES	DRAWING NO.
CONTRACTOR:	5 - 12 - 22	VAV.ACC.	4 - 17 - 20	VAV-FF



**TERMINAL UNITS
LINER OPTIONS
SOUND POWER LEVEL CORRECTION FACTORS
TYPE: STERI-LINER**

INSULATION CHARACTERISTICS

Material: Rigid board form fiberglass with a thermosetting resin. Fire resistant reinforced aluminum foil-scrim-kraft (FSK) facing.

Available Thicknesses: 1/2" (13), 13/16" (21), 1" (25) (Consult individual model submittal for thickness used).

Density: 4.1 lb/cu.ft. (66 kg/m³).

Thermal Conductivity: 0.23 BTU-in / hr-ft²-°F @ 75°F (0.033 W / m-°K @ 24°C).
(K-Factor)

Thermal Resistance: 1/2" (13) - 2.2 hr-ft²-°F / BTU (0.48 m²-°C / W).
(R-Value) 13/16" (21) - 3.5 hr-ft²-°F / BTU (0.76 m²-°C / W).
1" (25) - 4.3 hr-ft²-°F / BTU (0.96 m²-°C / W).

Flame Spread Index: 25

Smoke Developed Index: 50

Mold Growth: None

STANDARD AND CODE COMPLIANCE

- UL 181 Class I
- ASTM E84, UL 723 Flame/Smoke (25/50) and CAN/ULC S102 (25/50)
- NFPA 90A and 90B
- ASTM C 1071 Air Velocity (2000 fpm max.)
- ASTM C 665
- ASTM C 1338, G21 and G22 Fungi and Bacteria Resistance

ACOUSTICAL PERFORMANCE

Correction factors to cataloged sound power level data (standard liner) are shown below.

Single Duct Terminal Units • 3000 Series Basic Unit • All sizes.

Octave Band	2	3	4	5	6	7	NC Impact (Average)
Center Frequency (Hz)	125	250	500	1000	2000	4000	
Discharge Sound	0	0	0	0	0	0	0
Radiated Sound	-1	-2	-2	-3	-3	-3	-2

Single Duct Terminal Units with Integral Attenuator • 3000 Series • All Sizes.

Octave Band	2	3	4	5	6	7	NC Impact (Average)
Center Frequency (Hz)	125	250	500	1000	2000	4000	
Discharge Sound	+1	+1	+3	+4	+7	+8	+3
Radiated Sound	-1	-2	-2	-3	-3	-3	-2

Fan Powered Terminal Units • 33SZ, 35N, 35S, 37N and 37S Series • All sizes.

Octave Band	2	3	4	5	6	7	NC Impact (Average)
Center Frequency (Hz)	125	250	500	1000	2000	4000	
Discharge Sound	0	0	0	0	0	0	0
Radiated Sound	+2	+3	+6	+11	+10	+3	+3

Fan Powered Terminal Units • 35SST and 37SST "Stealth" Series • All sizes.

Octave Band	2	3	4	5	6	7	NC Impact (Average)
Center Frequency (Hz)	125	250	500	1000	2000	4000	
Discharge Sound	0	0	0	0	0	0	0
Radiated Sound	-5	-4	-4	0	+3	+5	-4

SCHEDULE TYPE:	Dimensions are in inches (mm)			
PROJECT:				
ENGINEER:	DATE	B SERIES	SUPERSEDES	DRAWING NO.
CONTRACTOR:	5 - 15 - 25	VAV.ACC.	5 - 17 - 22	VAV-SL



**VAV TERMINAL UNITS
LINER OPTIONS
TYPE: SOLID METAL LINER
(DOUBLE WALL CONSTRUCTION)**

A Solid metal liner completely isolates the standard insulation and its raw edges from the airstream within the terminal. The solid metal liner option, also referred to as double wall construction, offers excellent protection against exposure of fiberglass particles to the airstream. This option is ideal for applications where Indoor Air Quality (IAQ) is a concern and where terminals will be wiped down and cleaned on a regular basis. This option is also resistant to moisture.

ISOLATED INSULATION

Material: Dual Density flame attenuated glass fiber.
 Thickness: 3/4" (19). (37N, 37S, 37SST and 33SZ Size 30 Low Profile Fan Powered Terminal Units use 1/2" (13) material).
 Density: 4.0 lb/cu. ft. (64 kg/m³) skin.
 1.5 lb/cu. ft. (24 kg/m³) core.
 Thermal Conductance: 0.36 BTU / hr-ft²-°F @ 75°F (2.04 W / m²-°C @ 24°C).
 (C) For 1/2" (13) material: 0.52 BTU / hr-ft²-°F @ 75°F (2.95 W / m²-°C @ 24°C).

STANDARD AND CODE COMPLIANCE

- UL 181 Class I
- ASTM E84 and UL 723 Flame/Smoke (25/50)
- NFPA 90A and 90B
- ASTM C 1071 Air Velocity (2000 fpm max.)
- ASTM C 665

ACOUSTICAL PERFORMANCE

Correction factors to cataloged sound power level data (standard dual density insulation) are shown below.

Single Duct Terminal Units • 3000 Series Basic Unit • All sizes.

Octave Band	2	3	4	5	6	7	NC Impact
Center Frequency (Hz)	125	250	500	1000	2000	4000	(Average)
Discharge Sound	0	0	0	0	0	0	0
Radiated Sound	-1	-2	-2	-3	-3	-3	-2

Fan Powered Terminal Units • 33SZ, 35N, 35S, 37N and 37S Series • All sizes.

Octave Band	2	3	4	5	6	7	NC Impact
Center Frequency (Hz)	125	250	500	1000	2000	4000	(Average)
Discharge Sound	0	0	0	0	0	0	0
Radiated Sound	+2	+1	+2	+6	+13	+14	+3

Fan Powered Terminal Units • 35SST and 37SST "Stealth" Series • All sizes.

Octave Band	2	3	4	5	6	7	NC Impact
Center Frequency (Hz)	125	250	500	1000	2000	4000	(Average)
Discharge Sound	0	0	0	0	0	0	0
Radiated Sound	-5	-4	-4	0	+3	+5	-4

Dual Duct Terminal Units • 3230 and 3240 "Blendmaster" Series • All sizes.

Nailor has independently tested and cataloged their dual duct sound data based upon the use of Steri-Liner (high density foil back insulation) rather than standard dual density fiberglass insulation as used in the above terminal units. This is because it is the most popular specification for dual duct terminals, where IAQ is frequently a concern. Solid metal liner is acoustically reflective in a manner similar to Steri-Liner. The cataloged data may therefore be used without correction when a solid metal liner is required.

SCHEDULE TYPE				
PROJECT				
ENGINEER	DATE	B SERIES	SUPERSEDES	DRAWING NO.
CONTRACTOR	8 - 19 - 16	VAV.ACC.	11 - 19 - 12	VAV - SML

Recommended Primary Valve Airflow Ranges For All Fan Powered Terminal Units

The recommended airflow ranges below are for fan powered terminal units with pressure independent controls and are presented as ranges for total and controller specific minimum and maximum airflow. Airflow ranges are based upon maintaining reasonable sound levels and controller limits using Nailor's Diamond Flow Sensor as the airflow measuring device. For a given unit size, the minimum, auxiliary and the maximum flow setting must be within the range limits to ensure pressure independent operation, accuracy and repeatability.

Minimum airflow limits are based upon .02" w.g. (5 Pa) differential pressure signal from Diamond Flow Sensor on analog/digital controls and .03" (7.5) for pneumatic controllers. This is a realistic low limit for many transducers used in the digital controls industry. Check your controls supplier for minimum limits. Setting airflow minimums lower, may cause hunting and failure to meet minimum ventilation requirements.

The high end of the tabulated Total Airflow Range on pneumatic and analog electronic controls represents the Diamond Flow Sensor's differential pressure reading at 1" w.g. (249 Pa). The high end airflow range for digital controls is represented by the indicated transducer differential pressure.

ASHRAE 130 "Performance Rating of Air Terminals" is the method of test for the certification program. The "standard rating condition" (certification rating point) airflow volumes for each terminal unit size are tabulated below per AHRI Standard 880. These air volumes equate to an approximate inlet velocity of 2000 fpm (10.2 m/s).

When digital or other controls are mounted by Nailor, 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. Airflow settings on pneumatic and analog controls supplied by Nailor are factory preset when provided.

Imperial Units, Cubic Feet per Minute

Inlet Size	Inlet Type	Total Airflow Range, cfm	Airflow at 2000 fpm Inlet Velocity (nom.), cfm	Range of Minimum and Maximum Settings, cfm							
				Pneumatic 3000 Controller		Analog Electronic Controls		Digital Controls			
				Transducer Differential Pressure (w.g.)							
				Min.	Max.	Min.	Max.	Min.	Max.	Max.	
.03	1.0	.02	1.0	.02	1.0	1.25	≥ 1.5				
4	Round	0 – 225	150	30	180	25	180	25	180	200	225
5		0 – 400	250	55	325	45	325	45	325	360	400
6		0 – 550	400	80	450	65	450	65	450	500	550
7		0 – 800	550	115	650	95	650	95	650	725	800
8		0 – 1100	700	155	900	125	900	125	900	1000	1100
10		0 – 1840	1100	260	1500	215	1500	215	1500	1675	1840
12		0 – 2500	1600	355	2050	290	2050	290	2050	2290	2500
14		0 – 3370	2100	475	2750	390	2750	390	2750	3075	3370
16		0 – 4510	2800	640	3700	520	3700	520	3700	4120	4510
12		Flat Oval	0 – 2500	1600	355	2050	290	2050	290	2050	2300
14	0 – 3125		2100	440	2550	360	2550	360	2550	2850	3125
16	0 – 3725		2800	525	3040	430	3040	430	3040	3400	3725
18	0 – 5265		3500	750	4300	610	4300	610	4300	4800	5265
14 x 8	Rect.	0 – 2450	1560	350	2000	290	2000	290	2000	2240	2450
14 x 10		0 – 2950	1900	420	2400	340	2400	340	2400	2700	2950

Metric Units, Liters per Second

Inlet Size	Inlet Type	Total Airflow Range, l/s	Airflow at 10.2 m/s Inlet Velocity (nom.), l/s	Range of Minimum and Maximum Settings, l/s							
				Pneumatic 3000 Controller		Analog Electronic Controls		Digital Controls			
				Transducer Differential Pressure (Pa)							
				Min.	Max.	Min.	Max.	Min.	Max.		
7.5	249	5	249	5	249	311	≥ 374				
4	Round	0 – 106	71	14	85	12	85	12	85	94	106
5		0 – 189	118	26	153	21	153	21	153	170	189
6		0 – 260	189	38	212	31	212	31	212	236	260
7		0 – 378	260	54	307	45	307	45	307	342	378
8		0 – 519	330	73	425	59	425	59	425	472	519
10		0 – 868	519	123	708	101	708	101	708	790	868
12		0 – 1180	755	168	967	137	967	137	967	1081	1080
14		0 – 1590	991	224	1298	184	1298	184	1298	1451	1590
16		0 – 2128	1321	302	1746	245	1746	245	1746	1944	2128
12		Flat Oval	0 – 1180	755	168	967	137	967	137	967	1085
14	0 – 1475		991	208	1203	170	1203	170	1203	1345	1475
16	0 – 1758		1321	248	1435	203	1435	203	1435	1604	1758
18	0 – 2485		1652	354	2029	288	2029	288	2029	2265	2485
14 x 8	Rect.	0 – 1156	736	165	944	137	944	137	944	1057	1156
14 x 10		0 – 1392	897	198	1133	160	1133	160	1133	1274	1392

Performance Data Explanation

Sound Power Levels vs. NC Levels

The **Nailor Model Series: 35S, 35SST, 37S, 37SST, 35N and 37N** fan powered terminal unit performance data is presented in two forms.

The laboratory obtained discharge and radiated sound power levels in octave bands 2 through 7 (125 through 4000 Hz) center frequency for each unit size at various flow rates and inlet static pressures is presented. This data is derived in accordance with ANSI/ASHRAE Standard 130 and AHRI Standard 880. This data is raw with no attenuation deductions and includes AHRI Certification standard rating points.

Nailor also provides an "NC Level" table as an application aid in terminal selection, which include attenuation allowances as explained below. The suggested attenuation allowances are typical and are not representative of specific job site conditions. It is recommended that the sound power level data be used and a detailed NC calculation be performed using the procedures outlined in AHRI Standard 885, Appendix E for accurate space sound levels.

Explanation of NC Levels

Tabulated NC levels are based on attenuation values as outlined in AHRI Standard 885 Procedure for Estimating Occupied Space Sound Levels in the Application of Air Terminals and Air Outlets". AHRI Standard 885, Appendix E provides typical sound attenuation values for air terminal discharge sound and air terminal radiated sound.

As stated in AHRI Standard 885, Appendix E, These values can be used as a quick method of estimating space sound levels when a detailed evaluation is not available. The attenuation values are required for use by manufacturers to catalog application sound levels. In product catalogs, the end user environments are not known and the following factors are provided as typical attenuation values. Use of these values will allow better comparison between manufacturers and give the end user a value which will be expected to be applicable for many types of space.

Radiated Sound

Table E1 of Appendix E provides typical radiated sound attenuation values for three types of ceiling: Type 1 – Glass Fiber; Type 2 – Mineral Fiber; Type 3 – Solid Gypsum Board.

Since Mineral Fiber tile ceilings are the most common construction used in commercial buildings, these values have been used to tabulate Radiated NC levels.

The following table provides the calculation method for the radiated sound total attenuation values based on AHRI Standard 885.

	Octave Band					
	2	3	4	5	6	7
Environmental Effect	2	1	0	0	0	0
Ceiling/Space Effect	16	18	20	26	31	36
Total Attenuation Deduction	18	19	20	26	31	36

The ceiling/space effect assumes the following conditions:

1. 5/8" (16) tile, 20 lb/ft³ (320 kg/m³) density.
2. The plenum is at least 3 feet (914) deep.
3. The plenum space is either wide [over 30 feet (9 m)] or lined with insulation.
4. The ceiling has no significant penetration directly under the unit.

Discharge Sound

Table E1 of Appendix E provides typical discharge sound attenuation values for three sizes of terminal unit.

1. Small box; Less than 300 cfm (142 l/s)
[Discharge Duct 8" x 8" (203 x 203)].
2. Medium box; 300 – 700 cfm (142 - 330 l/s)
[Discharge Duct 12" x 12" (305 x 305)].
3. Large box; Greater than 700 cfm (330 l/s)
[Discharge Duct 15" x 15" (381 x 381)].

These attenuation values have been used to tabulate Discharge NC levels applied against the terminal airflow volume and not terminal unit size.

The following tables provide the calculation method for the discharge sound total attenuation values based on AHRI Standard 885.

Small Box <300 cfm	Octave Band					
	2	3	4	5	6	7
Environmental Effect	2	1	0	0	0	0
5 ft. (1.5 m) 1" (25) Duct Lining	2	6	12	25	29	18
Branch Power Division (1 outlet)	0	0	0	0	0	0
5 ft. (1.5 m), 8 in. dia. (203) Flex Duct	5	10	18	19	21	12
End Reflection	10	5	2	1	0	0
Space Effect	5	6	7	8	9	10
Total Attenuation Deduction	24	28	39	53	59	40

Medium Box 300 – 700 cfm	Octave Band					
	2	3	4	5	6	7
Environmental Effect	2	1	0	0	0	0
5 ft. (1.5 m) 1" (25) Duct Lining	2	4	10	20	20	14
Branch Power Division (2 outlets)	3	3	3	3	3	3
5 ft. (1.5 m), 8 in. dia. (203) Flex Duct	5	10	18	19	21	12
End Reflection	10	5	2	1	0	0
Space Effect	5	6	7	8	9	10
Total Attenuation Deduction	27	29	40	51	53	39

Large Box >700 cfm	Octave Band					
	2	3	4	5	6	7
Environmental Effect	2	1	0	0	0	0
5 ft. (1.5 m) 1" (25) Duct Lining	2	3	9	18	17	12
Branch Power Division (3 outlets)	5	5	5	5	5	5
5 ft. (1.5 m), 8 in. dia. (203) Flex Duct	5	10	18	19	21	12
End Reflection	10	5	2	1	0	0
Space Effect	5	6	7	8	9	10
Total Attenuation Deduction	29	30	41	51	52	39

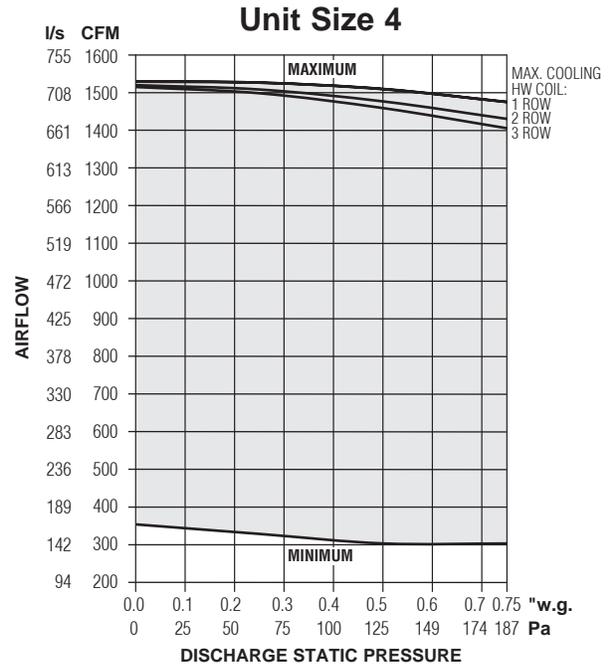
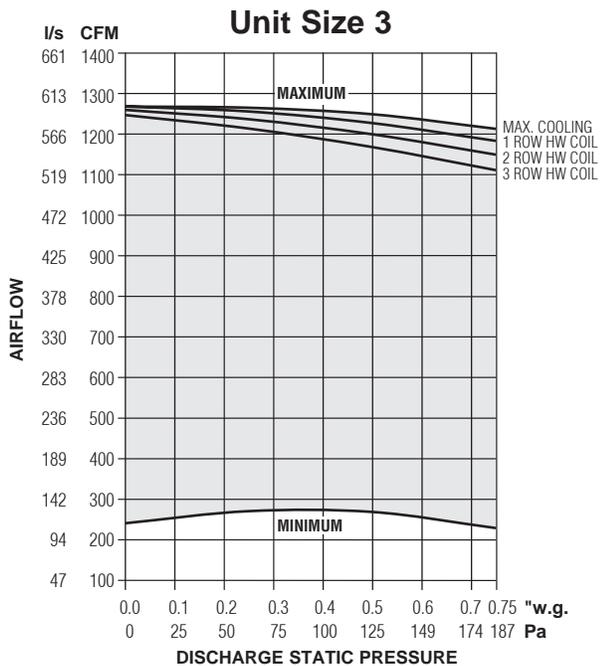
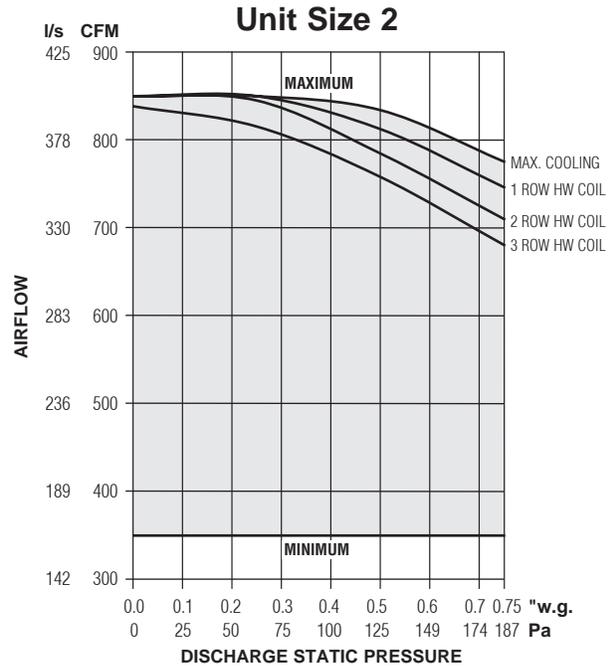
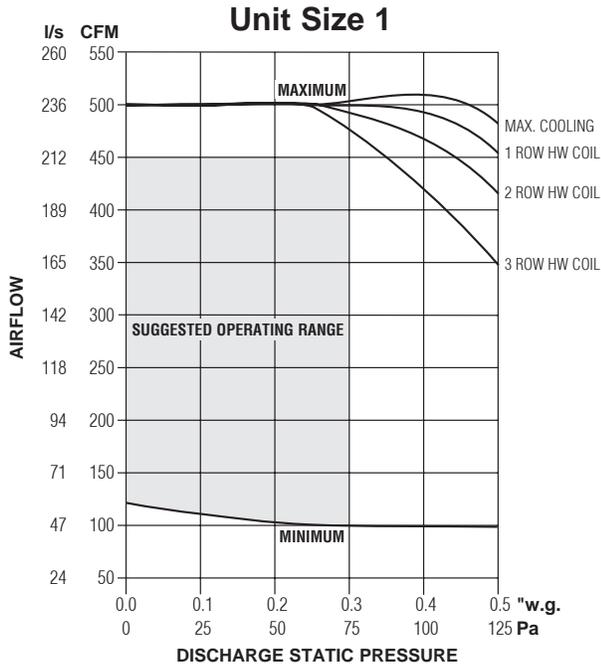
1. Flexible duct is non-metallic with 1" (25) insulation.
2. Space effect (room size and receiver location) 2500 ft.³ (69 m³) and 5 ft. (1.5 m) distance from source.

For a complete explanation of the attenuation factors and the procedures for calculating room NC levels, please refer to the acoustical engineering guidelines at the back of this catalog and AHRI Standard 885.

Performance Data

ECM Motor Fan Curves – Airflow vs. Downstream Static Pressure

35S Series • Series Flow



Electrical Data

Unit Size	EPIC ECM Motor FLA				
	Motor HP	120V	208V	240V	277V
1	*	2.1	1.4	1.30	1.2
2	*	4.0	2.7	2.6	2.6
3	*	5.0	3.4	3.3	3.3
4	*	6.9	4.6	4.5	4.2

* The EPIC ECM is a variable horsepower motor. Refer to Selectworks schedule for actual power consumption.

FLA = Full load amperage.

All motors are single phase/60 Hz.

NOTES:

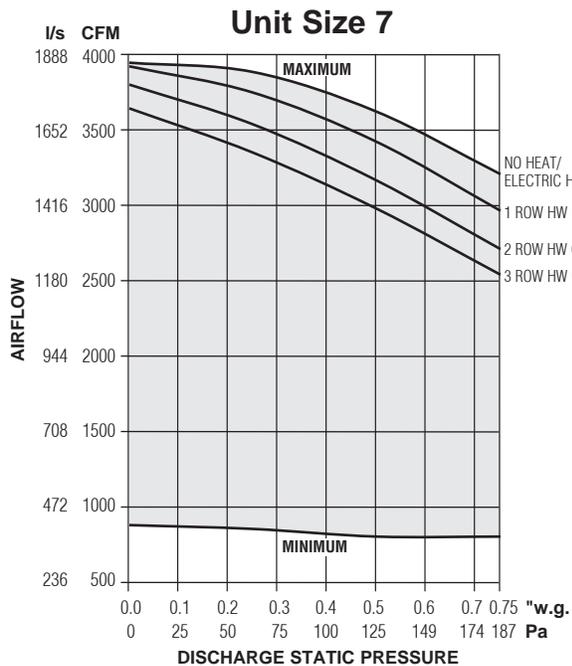
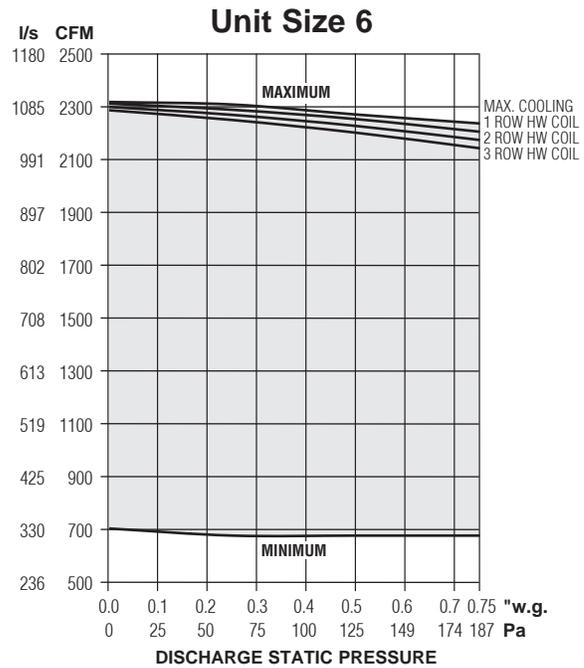
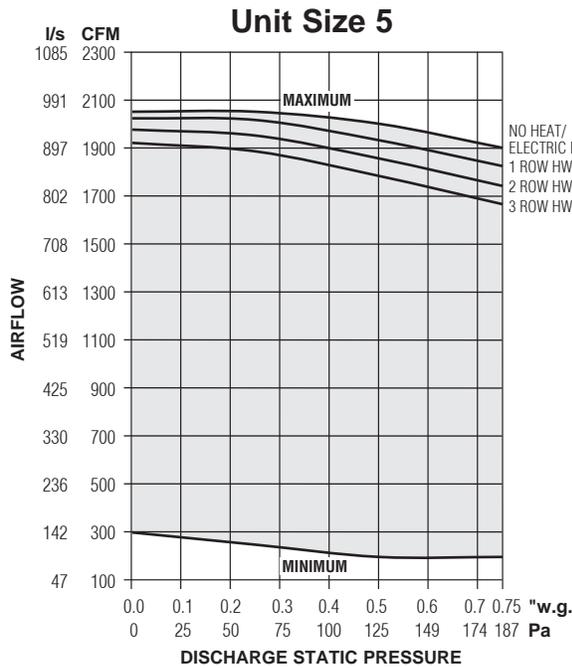
- The ECM is pressure independent and constant volume in operation at factory or field set point within the shaded area. Airflow does not vary with changing static pressure conditions. The motor compensates for any changes in external static pressure or induced air conditions such as filter loading.
- Airflow can be set to operate on horizontal performance line at any point within shaded area using the solid state volume controller provided.
- Fan curves shown are applicable to 120, 208, 240 and 277 volt, single phase ECM's. ECM's, although DC in operation, include a built-in AC/DC converter.



Performance Data

ECM Motor Fan Curves – Airflow vs. Downstream Static Pressure

35S Series • Series Flow



Electrical Data

Unit Size	EPIC ECM Motor FLA				
	Motor HP	120V	208V	240V	277V
5	*	9.0	6.1	5.8	5.6
6	*	11.9	7.3	7.3	7.2
7	*	15.9	10.5	9.9	10.0

* The EPIC ECM is a variable horsepower motor. Refer to Selectworks schedule for actual power consumption.

FLA = Full load amperage.
All motors are single phase/60 Hz.

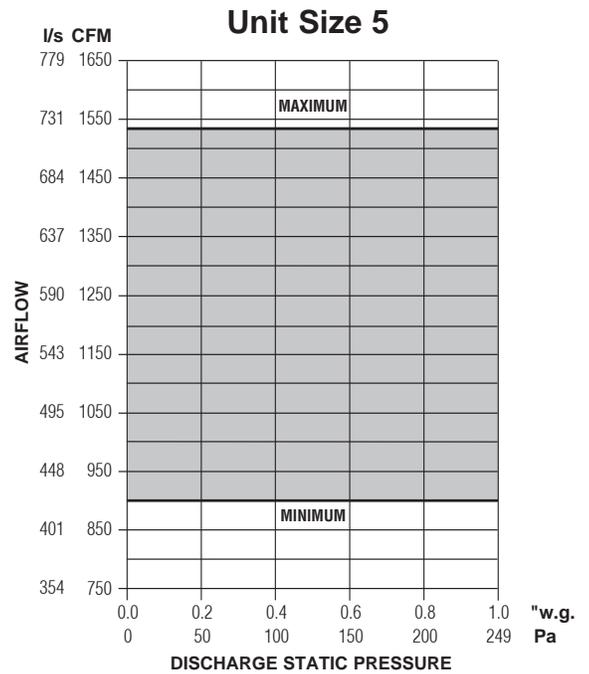
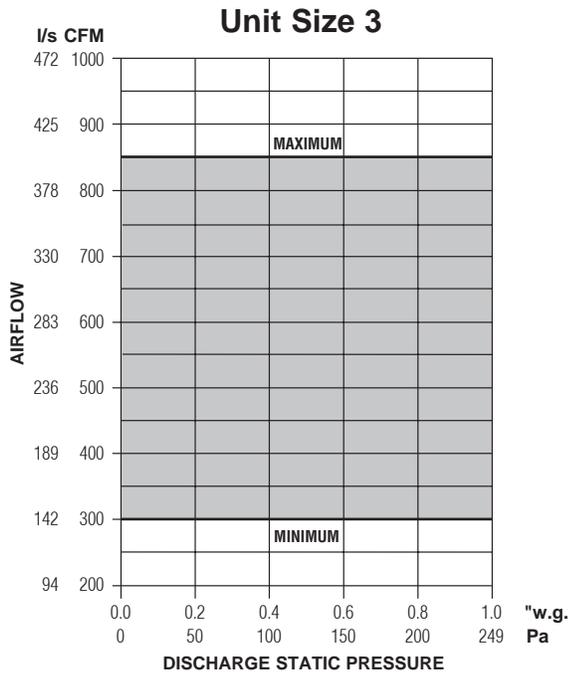
NOTES:

- The ECM is pressure independent and constant volume in operation at factory or field set point within the shaded area. Airflow does not vary with changing static pressure conditions. The motor compensates for any changes in external static pressure or induced air conditions such as filter loading.
- Airflow can be set to operate on horizontal performance line at any point within shaded area using the solid state volume controller provided.
- Fan curves shown are applicable to 120, 208, 240 and 277 volt, single phase ECM's. ECM's, although DC in operation, include a built-in AC/DC converter.

Performance Data

ECM Motor Fan Curves – Airflow vs. Downstream Static Pressure

35S Series with CVP • Constant Volume • Pressurization Unit



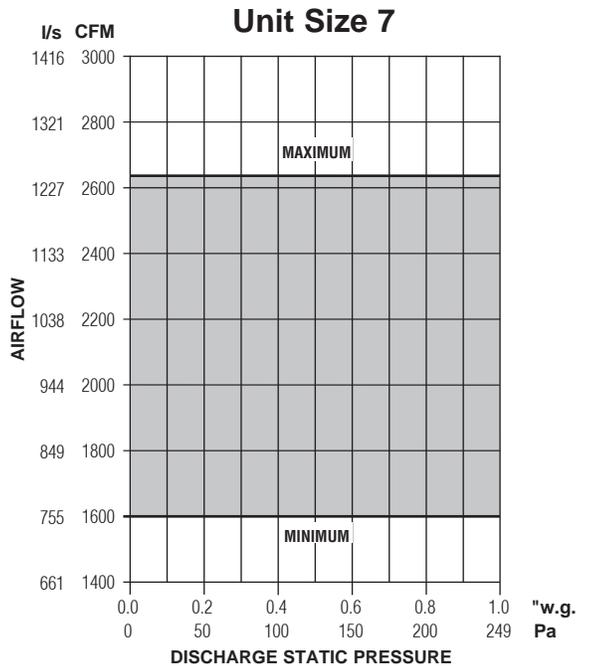
NOTES:

- The ECM is pressure independent and constant volume in operation at factory or field set point within the shaded area. Airflow does not vary with changing static pressure conditions. The motor compensates for any changes in external static pressure or induced air conditions such as filter loading.
- Airflow can be set to operate on horizontal performance line at any point within shaded area using the solid state volume controller provided.
- Fan curves shown are applicable to 120, 208, 240 and 277 volt, single phase ECM's. ECM's, although DC in operation, include a built-in AC/DC converter.

Electrical Data

Unit Size	Motor HP	EPIC ECM Motor FLA			
		120V	208V	240V	277V
3	*	4.8	3.3	3.2	3.1
5	*	9.6	6.2	5.9	5.8
7	*	17.5	11.1	11.4	11.4

* The EPIC ECM is a variable horsepower motor. Refer to Selectworks schedule for actual power consumption. FLA = Full load amperage. All motors are single phase/60 Hz.



Performance Data • NC Level Application Guide

Model Series 35S • Series Flow • Basic Unit

Fiberglass Liner

Unit Size	Inlet Size	Airflow		Min. inlet ΔPs		NC Levels @ Inlet Pressure (ΔPs) shown												
						DISCHARGE						RADIATED						
						Fan Only	Min. ΔPs	0.5 w.g. (125 Pa)	1.0" w.g. (250 Pa)	1.5" w.g. (375 Pa)	2.0" w.g. (500 Pa)	Fan Only	Min. ΔPs	0.5" w.g. (125 Pa)	1.0" w.g. (250 Pa)	1.5" w.g. (375 Pa)	2.0" w.g. (500 Pa)	
1	6	550	260	0.22	54	37	36	36	39	39	36	36	35	36	37	37		
		400	189	0.12	30	30	26	26	29	30	30	30	30	31	33	33		
		300	142	0.07	17	20	-	20	25	29	29	25	25	26	28	29	30	
		200	94	0.04	9	-	-	-	20	20	20	-	-	-	22	24	25	
		100	47	0.01	3	-	-	-	-	-	-	-	-	-	-	-	21	
	8	550	260	0.06	15	37	35	35	35	38	38	36	36	35	36	37	37	
		400	189	0.03	8	30	26	26	28	29	31	30	30	30	31	33	33	
		300	142	0.02	5	20	-	-	24	26	28	25	24	25	28	29	30	
		200	94	0.01	2	-	-	-	-	-	-	-	-	-	21	23	24	
		100	47	0.01	1	-	-	-	-	-	-	-	-	-	-	-	20	
2	6	550	260	0.20	50	23	25	28	29	31	33	24	23	25	29	32	33	
		400	189	0.11	27	-	-	-	24	28	29	-	-	21	24	29	30	
		200	94	0.04	10	-	-	-	-	-	-	-	-	-	22	25	28	
	8	850	401	0.11	28	31	34	36	34	35	36	35	33	34	35	36	36	
		700	330	0.08	19	28	30	34	31	34	35	28	30	30	33	34	35	
		550	260	0.05	12	23	24	26	26	30	31	24	23	24	28	31	33	
		400	189	0.02	6	-	-	-	21	25	26	-	-	20	24	28	30	
		200	94	0.01	2	-	-	-	-	-	-	-	-	-	21	24	26	
	3	6	550	260	0.20	50	23	25	25	28	30	31	26	28	29	32	34	34
			400	189	0.11	27	-	-	-	21	23	24	21	22	23	25	29	29
8		1100	519	0.12	30	31	31	31	33	35	36	34	34	34	36	38	38	
		900	425	0.08	20	26	28	28	30	33	34	30	31	32	34	36	36	
		700	330	0.05	12	23	24	24	26	30	30	26	28	29	31	34	34	
		400	189	0.02	5	-	-	-	-	20	21	21	22	23	25	29	29	
10		1215	573	0.03	7	34	34	34	35	36	36	35	34	35	37	38	38	
		1100	519	0.03	7	31	30	31	33	34	35	34	33	34	36	37	37	
		900	425	0.02	4	26	25	26	28	30	33	30	30	31	33	35	35	
		700	330	0.01	2	23	21	23	24	28	28	26	26	28	31	33	33	
400	189	0.01	1	-	-	-	-	-	-	21	21	22	24	28	28			
4	10	1550	731	0.10	25	39	37	39	41	43	44	35	35	37	39	41	43	
		1400	661	0.08	19	35	34	36	38	39	41	33	33	35	37	40	41	
		1200	566	0.05	13	31	29	33	35	37	38	30	30	33	36	39	40	
		900	425	0.03	7	25	25	28	29	30	31	25	25	30	32	35	36	
		700	330	0.02	4	21	23	25	24	26	28	22	22	26	30	33	34	
	12	1550	731	0.05	12	39	36	38	40	41	43	35	35	37	39	41	43	
		1400	661	0.03	8	35	33	35	37	38	40	33	33	35	37	40	41	
		1200	566	0.02	5	31	29	33	35	36	38	30	30	33	35	38	39	
		900	425	0.01	3	25	23	26	26	29	30	25	25	29	32	34	36	
		700	330	0.01	2	21	21	23	23	24	25	22	21	26	29	32	33	
5	12	2050	967	0.06	15	39	38	39	41	43	43	40	38	39	40	41	43	
		1850	873	0.05	12	36	35	36	38	39	40	38	36	37	38	39	40	
		1600	755	0.04	10	33	31	34	35	37	38	34	34	35	36	38	38	
		1350	637	0.03	7	28	26	30	31	34	35	29	30	31	34	36	37	
		1100	519	0.02	5	23	24	26	29	30	30	26	25	28	30	33	34	
	14	2050	967	0.04	10	39	37	38	40	41	41	40	38	39	40	41	43	
		1850	873	0.03	8	36	34	36	37	38	39	38	36	37	38	39	40	
		1600	755	0.03	7	33	30	33	35	36	37	34	34	35	36	38	38	
		1350	637	0.02	5	28	26	29	30	33	34	29	29	30	34	36	37	
		1100	519	0.01	3	23	21	25	26	28	28	26	25	28	30	33	34	
6	14	2400	1133	0.08	20	40	38	39	41	43	43	43	39	41	44	46	46	
		2100	991	0.06	15	37	36	37	39	40	40	40	37	38	41	44	44	
		1700	802	0.04	10	31	29	33	34	36	36	36	33	34	37	40	40	
		1400	661	0.03	6	26	25	27	29	30	30	33	28	29	34	37	37	
7	16	4000	1888	0.15	38	40	38	39	41	43	44	46	44	44	45	46	47	
		3500	1652	0.12	29	37	35	36	38	40	41	43	40	41	43	45	45	
		2800	1321	0.08	19	31	30	33	35	37	35	38	36	37	39	41	43	
		2100	991	0.04	11	25	24	26	29	29	30	34	33	33	35	38	40	
		1600	755	0.03	6	21	-	23	24	24	26	30	28	30	33	36	38	
	18	4000	1888	0.10	25	40	38	38	40	41	43	46	44	44	45	46	47	
		3500	1652	0.07	18	37	35	35	38	39	40	43	40	41	43	45	45	
		2800	1321	0.05	11	31	29	31	34	36	35	38	36	37	39	41	41	
		2100	991	0.02	5	25	21	25	28	28	28	34	33	33	35	38	39	
		1600	755	0.02	4	21	-	20	21	21	24	30	28	29	32	36	37	

Performance Notes: 1. NC Levels are calculated based on procedures as outlined on page C160.

2. Dash (-) in space indicates a NC less than 20.

FAN POWERED TERMINAL UNITS

Performance Data • Discharge Sound Power Levels

Model Series 35S • Series Flow • Basic Unit

Fiberglass Liner



Unit Size	Inlet Size	Airflow		Min. inlet ΔPs		Fan Only		Fan and 100% Primary Air—Sound Power Octave Bands @ Inlet pressure (ΔPs) shown																																	
								Minimum ΔPs					0.5" w.g. (125Pa) ΔPs					1.0" w.g. (249Pa) ΔPs					1.5" w.g. (375Pa) ΔPs					2.0" w.g. (500Pa) ΔPs													
								2	3	4	5	6	7	2	3	4	5	6	7	2	3	4	5	6	7	2	3	4	5	6	7	2	3	4	5	6	7				
1	6	550	260	0.22	54	79	76	71	69	66	63	78	75	69	67	64	62	78	75	69	67	64	61	78	75	70	68	64	62	80	78	71	69	65	63	79	78	71	69	65	63
		400	189	0.12	30	74	70	66	64	60	57	70	67	63	60	56	53	70	67	62	60	56	53	71	69	63	60	57	53	72	70	64	60	57	54	72	72	65	60	57	54
		300	142	0.07	17	67	62	59	55	50	46	65	61	56	53	48	44	67	62	57	54	49	45	69	66	59	55	50	46	71	69	61	56	51	48	71	69	62	57	52	49
		200	94	0.04	9	58	52	47	-	-	-	58	51	45	-	-	-	58	52	45	41	-	-	64	59	50	44	38	33	64	60	55	48	42	38	64	61	55	48	43	39
		100	47	0.01	3	57	44	34	-	-	-	56	44	35	-	-	-	57	47	37	28	-	-	58	49	42	32	25	24	58	50	47	35	29	28	59	50	48	37	31	30
	8	550	260	0.06	15	79	76	71	69	66	63	77	74	68	67	64	62	77	74	68	67	64	61	77	74	69	68	64	62	79	77	70	69	65	63	78	77	70	69	65	63
		400	189	0.03	8	74	70	66	64	60	57	69	67	63	59	56	53	69	67	62	59	56	53	70	68	63	59	57	53	71	69	63	59	57	54	71	71	64	60	57	54
		300	142	0.02	5	67	62	59	55	50	46	63	60	55	52	48	44	65	61	56	53	49	45	67	65	58	54	50	46	69	67	60	55	51	48	69	68	61	56	52	49
		200	94	0.01	2	58	52	47	-	-	-	56	49	44	-	-	-	56	50	45	40	-	-	62	58	49	43	37	33	62	58	54	47	41	38	62	60	54	47	42	39
		100	47	0.01	1	57	44	34	-	-	-	54	43	34	-	-	-	55	46	36	28	-	-	56	48	41	31	25	23	56	49	45	34	29	28	57	49	47	36	31	29
2	6	550	260	0.20	50	66	64	61	58	55	52	70	66	62	58	54	51	72	68	62	59	55	52	72	69	62	58	54	50	74	71	63	58	54	51	75	72	63	58	54	52
		400	189	0.11	27	63	60	57	54	50	45	63	60	56	52	48	42	64	61	56	52	48	42	69	65	57	52	48	43	71	68	58	53	48	44	71	69	59	53	48	45
		200	94	0.04	10	57	52	48	44	37	28	58	52	46	42	34	26	62	55	47	42	35	27	62	58	49	43	36	29	63	59	51	47	37	32	63	59	52	45	38	33
		850	401	0.11	28	74	72	67	68	64	63	76	74	68	67	64	62	78	76	70	68	65	63	76	74	68	66	63	61	77	75	68	66	63	61	78	76	68	66	63	61
		700	330	0.08	19	70	68	64	63	60	57	73	70	65	63	60	57	76	73	67	65	62	59	73	71	64	62	59	56	75	73	65	62	59	57	76	74	65	62	59	57
	8	550	260	0.05	12	66	64	61	58	55	52	68	65	60	58	54	51	70	67	61	59	55	52	70	67	61	57	54	50	72	70	61	58	54	51	73	71	62	58	54	52
		400	189	0.02	6	63	60	57	54	50	45	61	58	55	52	47	42	63	60	55	51	47	42	67	63	56	52	47	42	69	66	57	52	48	44	69	67	58	52	48	44
		200	94	0.01	2	57	52	48	44	37	28	56	50	45	41	34	26	59	53	46	41	34	27	60	57	48	42	36	29	61	58	50	43	36	31	60	57	50	44	37	33
		850	401	0.11	28	74	72	67	68	64	63	76	74	68	67	64	62	78	76	70	68	65	63	76	74	68	66	63	61	77	75	68	66	63	61	78	76	68	66	63	61
		700	330	0.08	19	70	68	64	63	60	57	73	70	65	63	60	57	76	73	67	65	62	59	73	71	64	62	59	56	75	73	65	62	59	57	76	74	65	62	59	57
3	6	550	260	0.20	50	66	64	63	59	55	51	68	66	64	59	54	49	69	66	65	60	54	50	73	68	65	60	54	50	73	70	65	60	54	51	75	71	65	60	54	51
		400	189	0.11	27	62	56	55	51	45	36	65	59	57	51	45	36	65	60	57	51	46	36	68	63	57	51	46	37	68	64	58	51	46	39	69	65	58	52	46	40
		1100	519	0.12	30	73	72	71	69	65	63	73	72	71	68	64	62	73	72	71	69	64	62	75	73	71	69	64	62	76	75	71	69	64	62	76	76	71	68	64	62
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		700	330	0.05	12	66	64	63	59	55	51	66	65	63	59	54	50	67	65	64	59	55	50	70	67	64	59	55	51	71	70	64	59	55	51	72	70	64	59	55	51
	8	550	260	0.02	5	62	56	55	51	45	36	64	58	56	51	45	36	64	58	57	51	45	36	66	61	57	51	45	37	67	62	57	51	45	39	67	63	58	52	46	40
		1100	519	0.03	7	75	74	73	72	68	66	74	74	72	70	67	65	73	74	72	70	67	65	73	74	72	70	67	65	75	75	73	71	67	65	76	76	73	70	67	65
		900	425	0.02	4	70	68	67	64	60	58	67	67	66	63	59	56	72	72	70	68	64	62	73	73	70	68	64	62	74	74	70	68	64	62	75	75	71	68	64	62
		700	330	0.01	2	66	64	63	59	55	51	64	63	62	58	54	49	65	64	62	58	54	50	68	65	62	58	54	50	69	68	63	59	54	51	70	68	63	58	54	51
		400	189	0.01	1	62	56	55	51	45	36	62	56	55	50	44	35	62	57	55	50	45	36	64	59	55	50	45	37	64	61	56	50	45	38	65	61	56	51	45	39
4	10	1550	731	0.10	25	80	79	74	74	70	69	78	77	74	73	70	68	82	79	75	74	70	69	83	81	76	74	71	70	85	82	76	75	72	71	86	83	77	75	72	71
		1400	661	0.08	19	77	75	71	71	67	66	76	74	71	69	66	65	79	76	73	71	67	66	81	78	73	71	68	67	83	79	74	72	69	67	84	81	75	73	69	68
		1200	566	0.05	13	74	72	69	67	64	62	73	70	69	67	63	61	77	73	70	68	64	63	80	75	71	69	65	83	81	77	72	69	66	84	83	78	73	70	66	65
		900	425	0.03	7	69	67	64	61	57	54	69	67	64	61	56	53	74	69	66	63	58	55	74	70	65	62	58	54	76	71	66	63	58	55	77	72	67	63	59	56
		700	330	0.02	4	65	63	60	57	53	48	66	64	61	57	53	48	71	66	62	59	55	51	69	65	61	57	53	48	71	67	62	58	53	49	72	68	62	58	54	50
	12	1550	731	0.05	12	80	79	74	74	70	69	78	76	73	73	70	68	81	78	74	74	70	69	83	80	75	74	71	70	84	81	76	75	72	71	85	82	76	75	72	71
		1400	661	0.03	8	77	75	71	71	67	66	75	73	71	69	66	65	78	75	72	71	67	66	80	77	73	71	68	67	82	78	73	72	69	67	83	80	74	73	69	68
		1200	566	0.02	5	74	72	69	67	64	62	72	70	68	66	63	61	76	73	69	67	64	63	78	75	70	68	65	83	79	76	71	69	66	84	81	78	72	70	66	65
		900	425	0.01	3	69	67	64	61	57	54	67	65	63	61	56	53	72	68	65	62	58	55	72	68	64	61	58	54	73	70	65	62	58	55	75	71	65	63	59	56
		700	330	0.01	2	65	63	60	57	53	48	64	63	60	57	52	47	69	64	61	58	54	51	67	64	60	57	52	48												

Performance Data • AHRI Certification and Performance Notes

Model Series 35S • Series Flow • Basic Unit • AHRI Certification Rating Points
Fiberglass Liner

Unit Size	Inlet Size	Fan Airflow		Fan ^Σ Watts	Fan Only* @ .25" w.g. (62 Pa) ΔPs														Primary Airflow		Min. Inlet ΔPs		Fan + 100% Primary @ 1.5" w.g. (375 Pa) ΔPs w/ .25" w.g. (62 Pa) Discharge ΔPs						
					Discharge							Radiated											Radiated						
					2	3	4	5	6	7	2	3	4	5	6	7	cfm	l/s					"w.g.	Pa	2	3	4	5	6
1	6	400	189	105	74	70	66	64	60	57	64	60	55	48	44	40	400	189	0.12	30	67	62	57	54	57	58			
2	8	700	330	155	70	68	64	63	60	57	62	58	53	51	44	40	700	330	0.08	19	68	63	58	56	57	61			
3	10	1100	519	270	73	72	71	69	65	63	65	62	59	56	52	48	1100	519	0.03	7	68	65	62	62	61	62			
4	12	1550	731	430	80	79	74	74	70	69	68	64	58	57	55	53	1550	731	0.05	12	73	70	66	65	62	63			
5	14	2050	967	800	82	79	74	75	72	71	74	69	62	60	57	54	2050	967	0.04	10	73	70	65	62	62	63			
6	14	2100	991	790	77	77	75	77	74	73	72	69	62	60	59	57	2100	991	0.06	15	77	72	65	63	63	64			
7	16	2800	1321	760	76	72	70	69	66	64	70	67	61	55	50	49	2800	1321	0.08	19	71	69	66	61	58	59			

^Σ Motor = ECM.

* Primary air valve is closed and therefore primary cfm is zero.



Ratings are certified in accordance with AHRI Standards.

Performance Notes for Sound Power Levels:

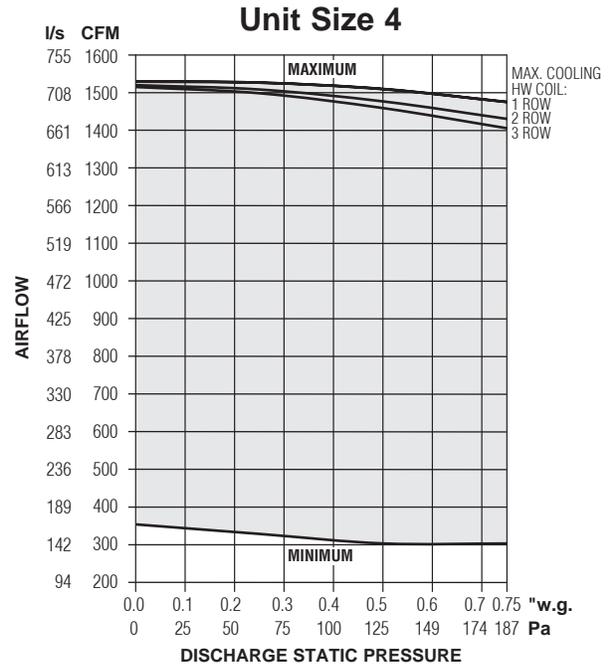
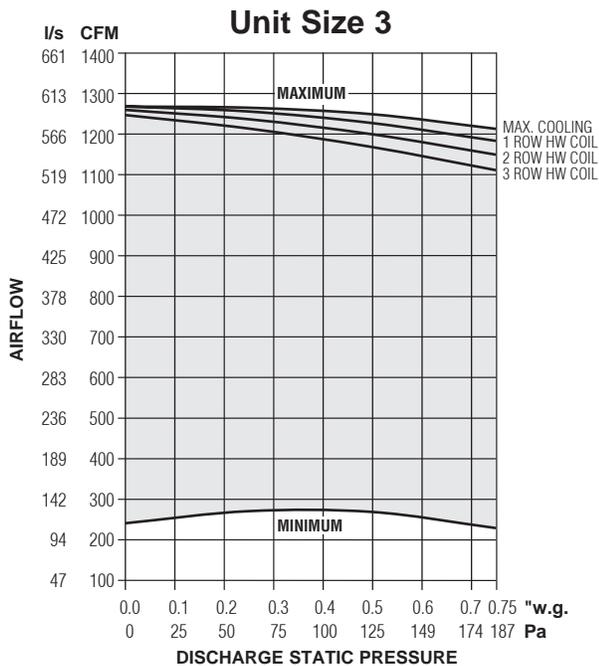
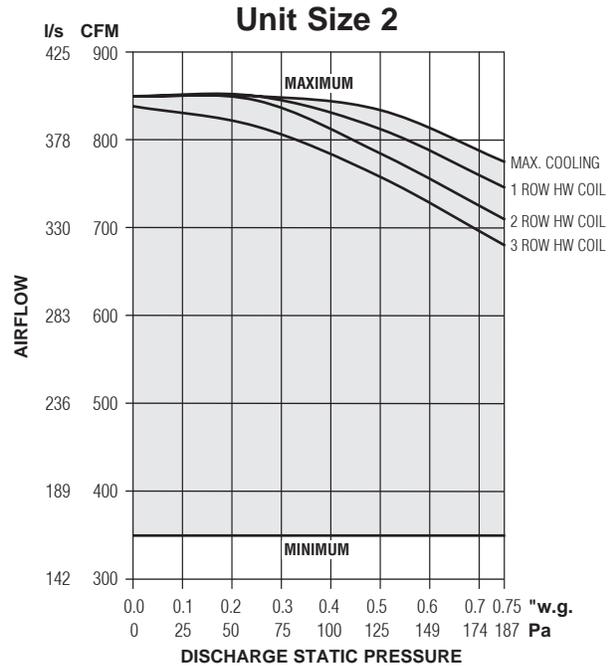
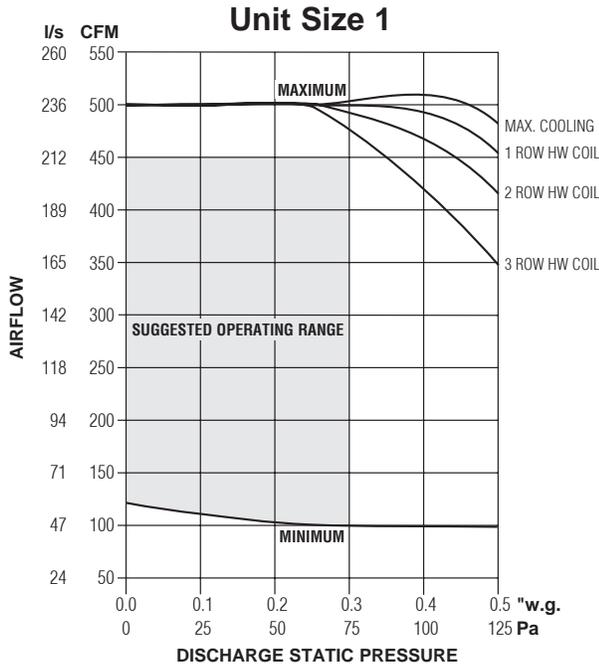
- Discharge (external) static pressure is 0.25" w.g. (63 Pa) in all cases, which is the difference (ΔPs) in static pressure from terminal discharge to the room. Discharge Sound Power Levels (SWL) now include duct end reflection energy as part of the standard rating. Including the duct end correction provides sound power levels that would normally be transmitted into an acoustically, non-reflective duct. The effect of including the energy correction to the discharge SWL, is higher sound power levels when compared to previous AHRI certified data. For more information on duct end reflection calculations see AHRI Standard 880.
- Radiated sound power is the breakout noise transmitted through the unit casing walls.

- Sound power levels are in decibels, dB re 10⁻¹² watts.
- All sound data listed by octave bands is raw data without any corrections for room absorption or duct attenuation. Dash (-) in space indicates sound power level is less than 20 dB or equal to background.
- Min. inlet ΔPs is the minimum operating pressure of the primary air valve section.
- Asterisk (*) in space indicates that the minimum inlet static pressure requirement is greater than 0.5" w.g. (125 Pa) at rated airflow.
- Data derived from independent tests conducted in accordance with ANSI / ASHRAE Standard 130 and AHRI Standard 880.

Performance Data

ECM Motor Fan Curves – Airflow vs. Downstream Static Pressure

35SST Stealth™ Series • Series Flow



Electrical Data

Unit Size	EPIC ECM Motor FLA				
	Motor HP	120V	208V	240V	277V
1	*	2.1	1.4	1.30	1.2
2	*	4.0	2.7	2.6	2.6
3	*	5.0	3.4	3.3	3.3
4	*	6.9	4.6	4.5	4.2

* The EPIC ECM is a variable horsepower motor. Refer to Selectworks schedule for actual power consumption.

FLA = Full load amperage.

All motors are single phase/60 Hz.

NOTES:

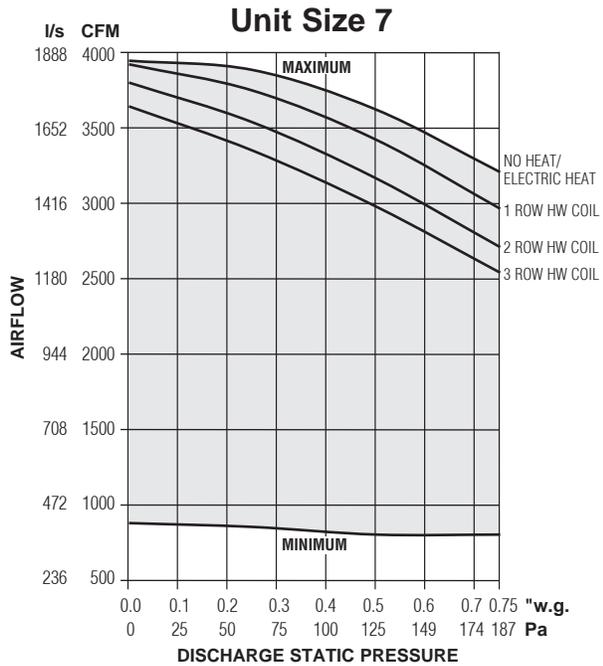
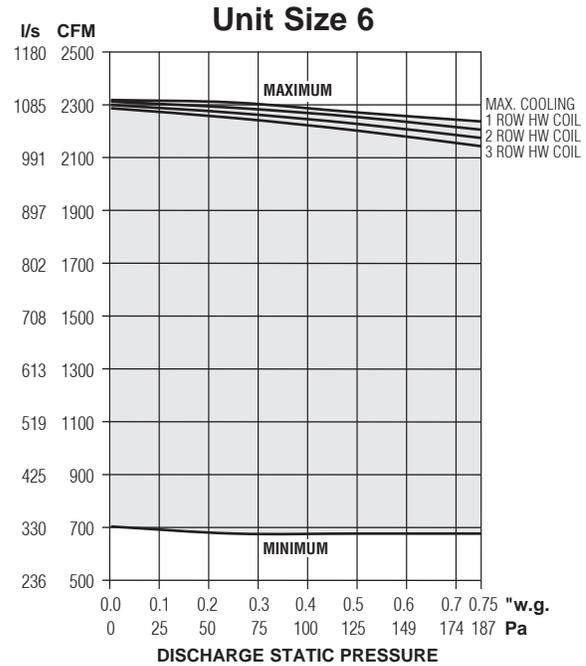
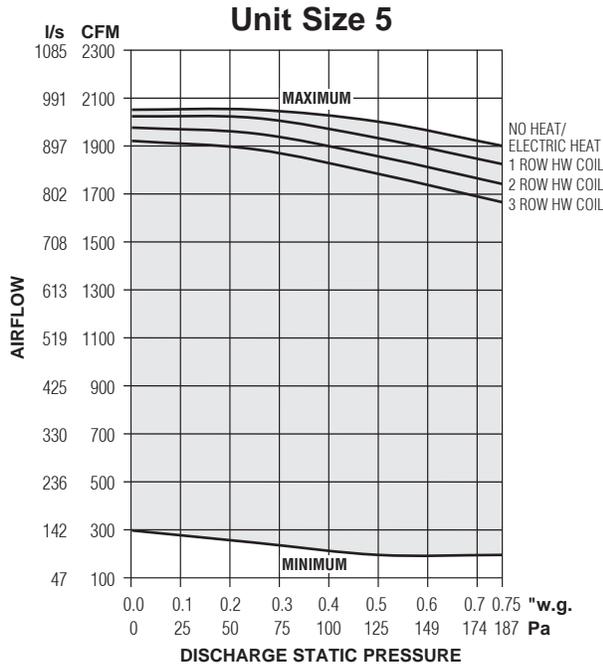
- The ECM is pressure independent and constant volume in operation at factory or field set point within the shaded area. Airflow does not vary with changing static pressure conditions. The motor compensates for any changes in external static pressure or induced air conditions such as filter loading.
- Airflow can be set to operate on horizontal performance line at any point within shaded area using the solid state volume controller provided.
- Fan curves shown are applicable to 120, 208, 240 and 277 volt, single phase ECM's. ECM's, although DC in operation, include a built-in AC/DC converter.



Performance Data

ECM Motor Fan Curves – Airflow vs. Downstream Static Pressure

35SST Stealth™ Series • Series Flow



Electrical Data

Unit Size	EPIC ECM Motor FLA	EPIC ECM Motor FLA			
		Motor HP	120V	208V	240V
5	*	9.0	6.1	5.8	5.6
6	*	11.9	7.3	7.3	7.2
7	*	15.9	10.5	9.9	10.0

* The EPIC ECM is a variable horsepower motor. Refer to Selectworks schedule for actual power consumption.

FLA = Full load amperage. All motors are single phase/60 Hz.

NOTES:

- The ECM is pressure independent and constant variable volume in operation at factory or field set point within the shaded area. Airflow does not vary with changing static pressure conditions. The motor compensates for any changes in external static pressure or induced air conditions such as filter loading.
- Airflow can be set to operate on horizontal performance line at any point within shaded area using the solid state volume controller provided.
- Fan curves shown are applicable to 120, 208, 240 and 277 volt, single phase ECM's. ECM's, although DC in operation, include a built-in AC/DC converter.

Performance Data • NC Level Application Guide

Model Series 35SST Stealth™ • Series Flow

Fiberglass Liner

Unit Size	Inlet Size	Airflow		Min. inlet ΔPs		NC Levels @ Inlet Pressure (ΔPs) shown												
						DISCHARGE					RADIATED							
						Fan Only	Min. ΔPs	0.5 w.g. (125 Pa)	1.0" w.g. (250 Pa)	1.5" w.g. (375 Pa)	2.0" w.g. (500 Pa)	Fan Only	Min. ΔPs	0.5" w.g. (125 Pa)	1.0" w.g. (250 Pa)	1.5" w.g. (375 Pa)	2.0" w.g. (500 Pa)	
1	6	550	260	0.22	54	36	36	34	35	36	36	36	35	35	36	38	38	
		400	189	0.12	30	28	26	26	28	29	29	29	29	30	31	33	34	
		300	142	0.07	17	-	-	20	20	21	23	24	25	25	28	29	30	
		200	94	0.04	9	-	-	-	-	-	-	-	-	-	-	21	23	
		100	47	0.01	3	-	-	-	-	-	-	-	-	-	-	-	-	
	8	550	260	0.06	15	36	35	33	34	35	35	36	35	35	36	38	38	
		400	189	0.03	8	28	25	25	26	28	29	29	29	30	31	33	34	
		300	142	0.02	5	-	-	-	-	20	21	24	25	25	28	29	30	
		200	94	0.01	2	-	-	-	-	-	-	-	-	-	-	21	23	
		100	47	0.01	1	-	-	-	-	-	-	-	-	-	-	-	-	
2	6	550	260	0.20	50	21	24	25	28	30	31	21	23	25	29	33	34	
		400	189	0.11	27	-	-	-	23	25	26	-	-	-	24	30	33	
		200	94	0.04	10	-	-	-	20	-	20	-	-	-	-	23	24	
	8	850	401	0.11	28	31	34	34	34	35	36	30	34	34	35	36	37	
		700	330	0.08	19	26	29	30	30	33	34	26	29	31	33	34	35	
		550	260	0.05	12	21	21	24	25	29	30	21	23	25	29	33	34	
		400	189	0.02	6	-	-	-	20	23	24	-	-	-	24	29	31	
		200	94	0.00	1	-	-	-	-	-	-	-	-	-	-	21	24	
	3	6	550	260	0.20	50	23	25	25	29	30	30	21	20	23	28	33	33
			400	189	0.11	27	-	-	-	20	20	23	23	-	-	23	26	26
8		1100	519	0.12	30	33	31	31	33	34	35	31	29	30	33	35	35	
		900	425	0.08	20	28	26	28	29	31	33	26	24	26	30	34	34	
		700	330	0.05	12	23	24	24	26	29	30	21	20	23	28	33	33	
		400	189	0.02	5	-	-	-	-	20	20	-	-	-	21	26	26	
10		1215	573	0.03	7	35	34	34	35	35	36	33	31	33	34	36	36	
		1100	519	0.03	7	33	31	31	31	34	35	31	29	30	33	35	35	
		900	425	0.02	4	28	25	25	28	30	31	26	24	26	30	34	34	
		700	330	0.01	3	23	21	23	24	26	28	21	20	23	28	33	33	
4	10	1550	731	0.10	25	39	37	40	40	43	44	34	33	35	37	39	40	
		1400	661	0.08	19	35	34	37	39	40	40	31	30	33	35	38	38	
		1200	566	0.05	13	30	30	33	33	39	37	38	28	26	30	33	36	
		900	425	0.03	7	25	25	28	31	30	31	21	21	25	28	31	31	
		700	330	0.02	4	21	23	25	26	26	26	-	-	23	25	28	29	
	12	1550	731	0.05	12	39	36	39	40	41	43	34	33	35	37	39	40	
		1400	661	0.03	8	35	33	36	38	39	40	31	30	33	35	38	38	
		1200	566	0.02	5	30	29	33	37	37	37	28	26	30	33	36	37	
		900	425	0.01	3	25	23	26	30	29	29	21	21	25	28	31	31	
		700	330	0.01	2	21	20	24	25	24	24	-	-	23	24	28	29	
5	12	2050	967	0.06	15	39	39	40	41	43	44	37	36	36	37	39	39	
		1850	873	0.05	12	36	36	37	39	40	40	34	33	34	36	37	38	
		1600	755	0.04	10	33	33	35	37	37	38	30	31	33	34	36	37	
		1350	637	0.03	7	29	28	31	33	34	35	28	28	29	31	34	35	
		1100	519	0.02	5	25	25	28	29	31	30	24	24	26	29	31	33	
	14	2050	967	0.04	10	39	39	39	41	43	43	37	36	36	37	39	39	
		1850	873	0.03	8	36	35	37	38	39	40	34	33	34	36	37	38	
		1600	755	0.03	7	33	31	34	36	37	38	30	31	33	34	36	37	
		1350	637	0.02	5	29	28	30	33	34	35	28	28	29	31	34	35	
		1100	519	0.01	3	25	23	25	28	29	29	24	24	26	29	31	33	
6	14	2400	1133	0.08	20	40	40	40	43	44	45	38	36	37	39	41	41	
		2100	991	0.06	15	37	36	38	39	40	41	36	33	35	37	40	40	
		2000	944	0.05	13	36	35	37	38	39	40	36	31	35	37	39	39	
		1700	802	0.04	10	33	30	34	35	36	37	33	28	30	34	37	37	
		1400	661	0.03	6	26	24	27	29	30	30	28	24	26	30	35	35	
7	14	3370	1590	0.20	50	39	37	38	40	41	43	40	36	38	39	40	41	
		2800	1321	0.15	37	34	31	34	36	37	36	36	33	33	35	38	39	
		2100	991	0.10	25	26	24	28	28	30	30	30	29	29	31	34	36	
		1600	755	0.07	17	21	21	23	24	26	28	28	25	26	29	33	34	
		1100	519	0.05	12	-	-	-	20	23	25	25	24	24	26	29	31	
	16	4000	1888	0.15	38	43	39	40	41	44	45	44	39	40	41	43	44	
		3500	1652	0.12	29	39	36	37	39	40	41	40	36	38	39	40	41	
		2800	1321	0.08	19	34	30	33	35	37	36	36	33	33	35	38	39	
		2100	991	0.04	11	26	24	26	28	29	30	30	29	29	31	34	35	
		1600	755	0.03	6	21	-	21	21	21	24	26	28	25	26	29	32	34

Performance Notes: 1. NC Levels are calculated based on procedures as outlined on page C160

2. Dash (-) in space indicates a NC less than 20.

FAN POWERED TERMINAL UNITS

Performance Data • Discharge Sound Power Levels

Model Series 35SST Stealth™ • Series Flow

Fiberglass Liner



Unit Size	Inlet Size	Airflow		Min. inlet ΔPs		Fan Only		Fan and 100% Primary Air—Sound Power Octave Bands @ Inlet pressure (ΔPs) shown																																		
								Minimum ΔPs							0.5" w.g. (125Pa) ΔPs							1.0" w.g. (249Pa) ΔPs							1.5" w.g. (375Pa) ΔPs							2.0" w.g. (500Pa) ΔPs						
								2	3	4	5	6	7	2	3	4	5	6	7	2	3	4	5	6	7	2	3	4	5	6	7	2	3	4	5	6	7	2	3	4	5	6
1	6	550	260	0.22	54	78	75	69	67	64	61	78	75	68	66	63	60	76	73	67	65	62	59	77	74	67	66	62	59	78	75	68	66	62	60	78	75	68	66	62	60	
		400	189	0.12	30	71	68	64	60	57	54	71	67	63	60	56	53	71	67	62	59	55	52	71	68	63	59	55	52	72	69	63	59	55	52	73	69	64	60	56	53	
		300	142	0.07	17	66	61	59	53	49	45	66	60	57	53	49	45	67	61	57	53	48	44	67	62	58	53	49	45	68	63	59	54	49	45	68	64	60	54	50	46	
		200	94	0.04	9	62	53	52	45	39	32	60	52	49	43	38	31	60	54	51	44	38	32	62	56	53	46	40	34	63	58	54	47	41	36	62	58	55	48	42	38	
		100	47	0.01	3	59	49	43	37	30	22	58	48	41	35	28	21	58	49	43	36	30	22	59	50	45	38	32	26	60	51	49	40	33	28	58	50	47	40	34	30	
	8	550	260	0.06	15	78	75	69	67	64	61	77	74	67	66	63	60	75	72	66	65	62	59	76	73	66	66	62	59	77	74	67	66	62	60	77	74	67	66	62	60	
		400	189	0.03	8	71	68	64	60	57	54	70	66	62	59	56	53	70	66	62	58	55	52	70	67	63	59	55	52	70	68	63	59	55	52	71	68	64	59	56	53	
		300	142	0.02	5	66	61	59	53	49	45	64	59	56	52	49	45	65	60	56	52	48	44	65	61	57	52	49	45	66	62	57	53	49	45	66	63	59	54	50	46	
		200	94	0.01	2	62	53	52	45	39	32	59	51	48	43	38	31	59	52	50	44	38	32	60	54	52	45	40	34	61	56	53	46	41	36	60	57	54	47	42	37	
		100	47	0.01	1	59	49	43	37	30	22	55	46	39	35	28	21	55	47	42	36	29	22	56	49	44	38	31	25	57	50	47	39	33	28	56	49	46	39	34	30	
2	6	550	260	0.20	50	66	63	59	57	54	51	66	65	61	57	53	49	69	66	62	57	53	50	72	68	62	57	53	50	75	70	62	58	54	51	76	71	63	58	54	51	
		400	189	0.11	27	62	59	56	53	49	44	63	61	56	52	48	43	65	61	57	52	48	42	69	64	57	52	48	43	71	66	58	53	48	44	71	67	59	53	49	45	
		200	94	0.04	10	58	52	49	44	38	28	59	53	48	44	36	27	62	54	49	44	37	28	64	57	51	45	38	30	63	58	53	46	38	32	64	58	53	46	39	33	
		850	401	0.11	28	73	72	67	68	64	62	76	74	68	67	64	62	76	74	68	66	63	61	76	74	68	66	63	61	77	75	68	66	63	61	78	76	68	66	63	61	
		700	330	0.08	19	69	67	63	62	59	57	70	69	64	62	59	56	72	70	64	61	59	56	73	70	64	61	58	56	75	72	65	62	59	57	76	73	65	62	59	57	
	8	550	260	0.05	12	66	63	59	57	54	51	65	63	59	56	53	49	67	65	60	57	53	50	70	66	61	57	53	50	73	69	61	58	54	51	73	70	62	58	54	51	
		400	189	0.02	6	62	59	56	53	49	44	62	59	55	52	47	42	63	59	55	51	47	42	67	62	56	52	47	43	69	64	57	52	48	44	69	65	58	53	48	44	
		200	94	0.00	1	58	52	49	44	38	28	57	51	47	43	36	27	59	53	48	43	37	28	61	55	50	44	37	30	61	56	51	45	38	32	61	56	52	45	38	33	
		550	260	0.20	50	65	64	63	59	55	51	68	66	64	59	54	49	69	66	65	59	54	50	74	67	65	59	54	50	75	70	65	59	54	51	75	70	65	60	55	51	
		400	189	0.11	27	63	57	55	51	45	37	66	60	57	51	45	36	66	61	58	52	46	37	67	61	57	51	46	38	68	64	58	51	47	41	68	64	58	52	48	43	
3	8	1100	519	0.12	30	73	73	71	69	66	63	73	72	71	68	64	62	73	72	71	68	64	62	75	73	71	68	64	62	77	74	71	68	64	62	77	75	71	68	64	62	
		900	425	0.08	20	69	69	68	64	61	58	69	68	68	63	59	56	70	69	68	63	60	57	73	70	68	64	60	57	75	72	68	64	60	57	75	73	68	64	60	57	
		700	330	0.05	12	65	64	63	59	55	51	66	65	63	59	54	50	67	65	64	59	55	50	72	67	63	59	55	50	72	69	64	59	55	51	73	70	64	59	55	52	
		400	189	0.02	5	63	57	55	51	45	37	65	58	56	51	45	36	64	59	57	52	46	37	66	60	57	51	45	38	66	62	57	51	47	41	66	62	58	52	47	42	
		1215	573	0.03	7	76	75	73	72	68	66	74	74	72	70	67	64	74	74	72	70	67	65	75	75	72	70	67	65	77	75	73	70	67	65	77	76	73	70	67	65	
	10	1100	519	0.03	7	73	73	71	69	66	63	71	72	70	67	64	62	72	72	70	68	64	62	73	72	70	68	64	62	75	74	70	68	64	62	76	75	71	67	64	62	
		900	425	0.02	4	69	69	68	64	61	58	67	67	66	63	59	56	68	67	66	63	60	57	71	69	66	63	60	57	73	71	67	63	60	57	73	72	67	63	60	57	
		700	330	0.01	3	65	64	63	59	55	51	64	63	62	58	54	49	65	64	62	58	54	50	70	65	62	58	54	50	70	67	63	58	54	50	70	67	63	58	54	51	
		400	189	0.01	1	63	57	55	51	45	37	62	56	55	50	44	35	62	57	56	51	45	37	63	58	55	50	45	37	64	60	56	50	46	40	64	60	56	51	47	42	
		1550	731	0.10	25	80	79	74	75	71	70	78	77	74	73	69	69	82	80	75	74	71	70	83	80	76	74	71	70	85	82	77	75	72	71	86	83	77	76	72	71	
4	10	1400	661	0.08	19	77	75	72	71	67	66	75	74	71	69	66	65	80	77	73	71	67	66	83	79	75	72	69	68	83	80	74	72	69	68	84	80	75	73	69	68	
		1200	566	0.05	13	73	71	69	67	64	62	73	71	69	67	63	61	78	73	70	68	64	63	84	78	73	71	67	66	82	77	72	70	66	65	82	78	72	70	66	65	
		900	425	0.03	7	69	67	64	62	58	54	69	67	64	61	56	53	74	69	66	63	58	56	78	72	68	65	60	57	76	71	66	63	58	55	76	72	67	63	58	55	
		700	330	0.02	4	66	63	61	58	54	49	66	64	61	57	53	48	71	66	62	59	55	51	72	67	63	60	55	52	71	67	62	58	53	49	71	67	62	58	54	49	
		1550	731	0.05	12	80	79	74	75	71	70	77	76	73	73	69	69	82	79	74	74	71	70	82	80	75	74	71	70	84	81	76	75	72	71	85	82	77	76	72	71	
	12	1400	661	0.03	8	77	75	72	71	67	66	74	73	71	69	66	65	79	76	72	71	67	66	82	78	74	72	69	68	82	79	74	72	69	68	83	80	74	72	69	68	
		1200	566	0.02	5	73	71	69	67	64	62	71	70	68	66	63	61	76	73	69	67	64	63	82	77	73	70	67	66	80	77	71	70	66	65	80	77	72	69	66	65	
		900	425	0.01	3	69	67	64	62	58	54	67	65	63	61	56	53	72	68	65	62	58	56	75	71	67	64	60	57	74	70	65	62	58	55	74	70	65	62	58	55	
		700	330	0.01	2	66	63	61	58	54	49	64	62	59	57	52	48	69	64	61	59	54	51	70	66	62	59	55	51	69	65	60	57	53	49	69	65	61	58	53	49	
		2050	967	0.06	15	82	79	75	76	72	71	82	79	75</																												

Performance Data • AHRI Certification and Performance Notes

Model Series 35SST Stealth™ • Series Flow • AHRI Certification Rating Points

Fiberglass Liner

Unit Size	Inlet Size	Fan Airflow		Fan Watts ^Σ	Fan Only* @ .25" w.g. (62 Pa) ΔPs														Primary Airflow		Min. Inlet ΔPs		Fan + 100% Primary @ 1.5" w.g. (375 Pa) ΔPs w/ .25" w.g. (62 Pa) Discharge ΔPs						
					Discharge							Radiated											Radiated						
					2	3	4	5	6	7	2	3	4	5	6	7	cfm	l/s					"w.g.	Pa	2	3	4	5	6
1	6	400	189	105	71	68	64	60	57	54	62	59	52	45	41	37	400	189	0.12	30	64	62	54	47	45	44			
2	8	700	330	155	69	67	63	62	59	57	59	57	50	45	41	37	700	330	0.08	19	67	63	55	49	45	45			
3	10	1100	519	270	73	73	71	69	66	63	63	61	53	49	45	42	1100	519	0.03	7	64	64	56	53	49	48			
4	12	1550	731	430	80	79	74	75	71	70	68	63	56	53	53	50	1550	731	0.05	12	72	68	62	58	54	53			
5	14	2050	967	800	82	79	75	76	72	71	71	66	59	56	52	49	2050	967	0.04	10	72	68	62	57	54	52			
6	14	2100	991	790	78	77	75	77	73	72	70	65	59	55	51	47	2100	991	0.06	15	73	69	62	57	54	53			
7	16	2800	1321	760	77	74	71	70	67	66	69	65	56	53	50	46	2800	1321	0.08	19	72	66	61	55	51	49			

^Σ Motor = ECM.

* Primary air valve is closed and therefore primary cfm is zero.



Ratings are certified in accordance with AHRI Standards.

Performance Notes for Sound Power Levels:

1. Discharge (external) static pressure is 0.25" w.g. (63 Pa) in all cases, which is the difference (ΔPs) in static pressure from terminal discharge to the room.
Discharge Sound Power Levels (SWL) now include duct end reflection energy as part of the standard rating. Including the duct end correction provides sound power levels that would normally be transmitted into an acoustically, non-reflective duct. The effect of including the energy correction to the discharge SWL, is higher sound power levels when compared to previous AHRI certified data. For more information on duct end reflection calculations see AHRI Standard 880.
2. Radiated sound power is the breakout noise transmitted through the unit casing walls.
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. Dash (-) in space indicates sound power level is less than 20 dB or equal to background.
5. Min. inlet ΔPs is the minimum operating pressure of the primary air valve section.
6. Asterisk (*) in space indicates that the minimum inlet static pressure requirement is greater than 0.5" w.g. (125 Pa) at rated airflow.
7. Data derived from independent tests conducted in accordance with ANSI / ASHRAE Standard 130 and AHRI Standard 880.

Performance Data • Radiated Sound Power Levels

Model Series 35SST Stealth™ • Series Flow

Fiberglass Liner



Unit Size	Inlet Size	Airflow		Min. inlet ΔPs		Fan Only		Fan and 100% Primary Air-Sound Power Octave Bands @ Inlet pressure (ΔPs) shown																																	
								Minimum ΔPs					0.5" w.g. (125Pa) ΔPs					1.0" w.g. (249Pa) ΔPs					1.5" w.g. (375Pa) ΔPs					2.0" w.g. (500Pa) ΔPs													
								2	3	4	5	6	7	2	3	4	5	6	7	2	3	4	5	6	7	2	3	4	5	6	7	2	3	4	5	6	7				
1	6	550	260	0.22	54	65	65	57	50	47	42	66	64	57	50	46	42	65	64	56	49	46	43	66	65	57	50	47	45	67	67	58	52	48	47	67	67	58	52	49	48
		400	189	0.12	30	62	59	52	45	41	37	61	59	52	45	41	36	62	60	52	45	42	38	63	61	53	46	43	41	64	62	54	47	45	44	64	63	54	47	45	45
		300	142	0.07	17	58	55	48	42	38	34	58	56	48	42	38	34	58	56	48	42	39	35	59	58	50	43	40	38	60	59	51	44	42	40	60	60	51	44	43	41
		200	94	0.04	9	-	45	-	32	29	23	-	46	40	32	29	23	52	49	42	34	32	28	53	51	44	36	34	31	54	53	46	38	36	35	54	54	47	39	36	36
		100	47	0.01	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	28	27	28	-	-	-	32	29	31	-	-	-	34	30	32
	8	550	260	0.06	15	65	65	57	50	47	42	66	64	57	49	46	42	65	64	56	49	46	42	66	65	57	50	47	44	67	67	58	51	48	47	67	67	58	51	48	48
		400	189	0.03	8	62	59	52	45	41	37	61	59	51	44	41	36	62	60	51	45	42	37	63	61	52	46	43	40	64	62	53	47	44	43	64	63	53	47	45	44
		300	142	0.02	5	58	55	48	42	38	34	58	56	48	41	38	33	58	56	48	41	38	34	59	58	49	42	40	37	60	59	50	43	41	39	60	60	51	43	42	40
		200	94	0.01	2	-	45	40	32	29	23	-	45	40	31	28	23	51	48	42	34	31	27	52	50	44	36	33	30	53	53	45	37	35	34	54	54	46	38	35	35
		100	47	0.01	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	27	26	27	-	-	-	31	28	30	-	-	-	33	29	31
2	6	550	260	0.20	50	57	53	46	39	36	33	57	54	47	40	37	34	58	56	50	45	42	40	60	59	52	46	43	43	63	61	54	47	45	45	63	63	55	48	45	46
		400	189	0.11	27	52	48	41	34	29	23	51	48	41	33	28	21	55	51	43	36	34	31	58	55	47	40	38	36	60	60	51	43	43	42	61	62	52	45	44	44
		200	94	0.04	10	52	45	37	30	24	-	49	44	38	30	25	-	52	48	41	35	33	28	53	51	44	38	35	32	54	54	47	40	37	35	55	55	49	42	40	36
		850	401	0.11	28	62	60	54	49	45	42	65	63	55	49	45	41	66	63	54	49	45	42	66	64	56	50	46	44	67	65	57	51	47	46	67	66	57	51	47	47
		700	330	0.08	19	59	57	50	45	41	37	64	59	51	45	41	37	65	61	51	46	43	40	66	62	53	47	44	43	67	63	55	49	45	45	67	64	55	49	46	46
	8	550	260	0.05	12	57	53	46	39	36	33	57	54	46	40	37	33	58	56	49	44	41	39	60	59	51	45	43	42	63	61	53	46	44	44	63	63	54	47	44	45
		400	189	0.02	6	52	48	41	34	29	23	51	47	40	32	28	21	55	50	43	36	33	30	57	55	47	39	37	35	60	59	50	43	41	41	61	61	52	44	43	43
		200	94	0.00	1	52	45	37	30	24	-	48	43	37	29	24	-	51	47	40	34	32	27	53	50	43	37	34	30	54	53	46	39	36	34	55	55	48	40	37	35
		1100	519	0.12	30	63	61	53	49	45	42	61	59	52	48	44	41	62	60	53	49	45	42	63	62	55	51	47	46	64	64	57	53	49	49	64	64	57	53	49	49
		900	425	0.08	20	59	57	50	45	41	37	58	55	49	44	40	37	59	57	50	46	42	39	61	60	52	48	44	43	63	63	55	51	48	48	63	63	55	51	48	48
3	6	1100	519	0.05	12	55	53	47	41	36	32	56	52	46	41	36	32	56	54	48	44	40	37	58	58	51	47	44	43	60	61	53	50	48	49	60	61	53	50	48	49
		900	425	0.02	5	55	49	43	38	35	27	52	49	42	37	33	26	54	51	43	38	36	32	56	54	46	42	41	39	58	57	49	45	46	46	58	57	49	45	46	46
		700	330	0.02	5	55	53	47	41	36	32	56	52	46	40	36	32	57	54	47	43	39	36	59	58	50	46	43	42	61	62	53	49	47	47	61	62	53	49	47	47
		400	189	0.02	5	55	49	43	38	35	27	51	48	42	37	32	26	53	50	43	38	35	31	55	53	46	42	40	38	57	57	49	45	45	45	57	57	49	45	45	45
		1215	573	0.03	7	64	62	54	51	47	43	62	61	53	50	45	42	64	62	54	51	47	44	64	63	56	52	48	46	65	65	57	54	50	49	65	65	57	54	50	49
	8	1100	519	0.03	7	63	61	53	49	45	42	61	59	52	48	43	40	62	60	52	48	45	41	63	62	54	50	47	45	64	64	56	53	49	48	64	64	56	53	49	48
		900	425	0.02	4	59	57	50	45	41	37	58	55	49	43	39	36	59	57	50	45	41	38	61	60	52	48	44	43	63	63	54	50	47	47	63	63	54	50	47	47
		700	330	0.01	3	55	53	47	41	36	32	56	52	45	39	35	31	56	54	47	42	38	35	58	58	50	45	42	41	60	61	52	48	46	46	60	61	52	48	46	46
		400	189	0.01	1	55	49	43	38	35	27	51	48	42	36	31	25	53	50	43	37	34	30	55	53	45	40	39	36	57	56	48	44	43	43	57	56	48	44	43	43
		1550	731	0.10	25	68	63	56	53	53	50	66	62	55	52	50	49	69	64	58	55	52	51	71	66	60	57	53	52	72	68	62	59	54	53	73	69	63	60	55	54
4	10	1400	661	0.08	19	66	61	55	51	49	48	65	60	53	49	47	46	68	62	55	51	49	47	69	64	58	54	51	49	71	67	60	58	53	52	71	67	62	59	54	52
		1200	566	0.05	13	63	58	52	48	45	44	62	57	52	47	45	44	66	60	54	49	47	45	67	62	57	53	49	48	69	65	59	56	51	50	69	66	60	57	52	51
		900	425	0.03	7	59	53	47	42	40	37	58	52	47	42	39	37	62	56	50	46	42	40	63	58	53	49	46	44	65	61	55	53	49	47	65	61	56	54	50	49
		700	330	0.02	4	57	50	44	39	35	31	56	49	44	38	35	30	60	53	48	43	39	36	61	56	50	46	43	40	61	58	53	50	47	45	61	59	54	51	48	47
		1550	731	0.05	12	68	63	56	53	53	50	66	62	55	51	49	48	69	64	58	54	51	51	71	66	60	56	53	52	72	68	62	58	54	53	73	69	63	60	55	54
	12	1400	661	0.03	8	66	61	55	51	49	48	65	60	53	49	47	46	68	62	55	51	48	47	69	64	58	54	50	49	71	67	60	57	52	51	71	67	62	59	53	52
		1200	566	0.02	5	63	58	52	48	45	44	62	57	51	46	44	43	66	60	54	49	46	45	67	62	56	52	49	47	69	65	59	55	51	49	69	66	60	57	52	50
		900	425	0.01	3	59	53	47	42	40	37	58	52	47	41	38	36	62	56	50	45	42	39	63	58	52	48	45	42	65	61	55	52	48	46	65	61	56	53	49	48
		700	330	0.01	2	57	50	44	39	35	31	55	49	44	37	34	29	60	53	47	42	38	35	60	55	50	46	42	39	61	57	53	49	45	44	61	58	54	50	47	

Performance Data • AHRI Certification and Performance Notes

Model Series 35SST Stealth™ • Series Flow • AHRI Certification Rating Points

Fiberglass Liner

Unit Size	Inlet Size	Fan Airflow		Fan ^Σ Watts	Fan Only* @ .25" w.g. (62 Pa) ΔPs														Primary Airflow		Min. Inlet ΔPs		Fan + 100% Primary @ 1.5" w.g. (375 Pa) ΔPs w/ .25" w.g. (62 Pa) Discharge ΔPs						
					Discharge							Radiated											Radiated						
					2	3	4	5	6	7	2	3	4	5	6	7	cfm	l/s					"w.g.	Pa	2	3	4	5	6
1	6	400	189	105	71	68	64	60	57	54	62	59	52	45	41	37	400	189	0.12	30	64	62	54	47	45	44			
2	8	700	330	155	69	67	63	62	59	57	59	57	50	45	41	37	700	330	0.08	19	67	63	55	49	45	45			
3	10	1100	519	270	73	73	71	69	66	63	63	61	53	49	45	42	1100	519	0.03	7	64	64	56	53	49	48			
4	12	1550	731	430	80	79	74	75	71	70	68	63	56	53	53	50	1550	731	0.05	12	72	68	62	58	54	53			
5	14	2050	967	800	82	79	75	76	72	71	71	66	59	56	52	49	2050	967	0.04	10	72	68	62	57	54	52			
6	14	2100	991	790	78	77	75	77	73	72	70	65	59	55	51	47	2100	991	0.06	15	73	69	62	57	54	53			
7	16	2800	1321	760	77	74	71	70	67	66	69	65	56	53	50	46	2800	1321	0.08	19	72	66	61	55	51	49			

Σ Motor = ECM.

* Primary air valve is closed and therefore primary cfm is zero.



Ratings are certified in accordance with AHRI Standards.

Performance Notes for Sound Power Levels:

1. Discharge (external) static pressure is 0.25" w.g. (63 Pa) in all cases, which is the difference (ΔPs) in static pressure from terminal discharge to the room.
Discharge Sound Power Levels (SWL) now include duct end reflection energy as part of the standard rating. Including the duct end correction provides sound power levels that would normally be transmitted into an acoustically, non-reflective duct. The effect of including the energy correction to the discharge SWL, is higher sound power levels when compared to previous AHRI certified data. For more information on duct end reflection calculations see AHRI Standard 880.
2. Radiated sound power is the breakout noise transmitted through the unit casing walls.
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. Dash (-) in space indicates sound power level is less than 20 dB or equal to background.
5. Min. inlet ΔPs is the minimum operating pressure of the primary air valve section.
6. Asterisk (*) in space indicates that the minimum inlet static pressure requirement is greater than 0.5" w.g. (125 Pa) at rated airflow.
7. Data derived from independent tests conducted in accordance with ANSI / ASHRAE Standard 130 and AHRI Standard 880.

FAN POWERED TERMINAL UNITS

Performance Data • AHRI Certification and Performance Notes

Model Series 35SST Stealth™ • Series Flow • AHRI Certification Rating Points

Fiberglass Liner

Unit Size	Inlet Size	Fan Airflow		Fan ^Σ Watts	Fan Only* @ .25" w.g. (62 Pa) ΔPs														Primary Airflow		Min. Inlet ΔPs				Fan + 100% Primary @ 1.5" w.g. (375 Pa) ΔPs w/ .25" w.g. (62 Pa) Discharge ΔPs						
		cfm	l/s		Discharge							Radiated							cfm	l/s	ΔPs		Radiated								
					2	3	4	5	6	7	2	3	4	5	6	7	"w.g.	Pa			2	3	4	5	6	7					
1	6	400	189	105	71	68	64	60	57	54	62	59	52	45	41	37	400	189	0.12	30	64	62	54	47	45	44					
2	8	700	330	155	69	67	63	62	59	57	59	57	50	45	41	37	700	330	0.08	19	67	63	55	49	45	45					
3	10	1100	519	270	73	73	71	69	66	63	63	61	53	49	45	42	1100	519	0.03	7	64	64	56	53	49	48					
4	12	1550	731	430	80	79	74	75	71	70	68	63	56	53	53	50	1550	731	0.05	12	72	68	62	58	54	53					
5	14	2050	967	800	82	79	75	76	72	71	71	66	59	56	52	49	2050	967	0.04	10	72	68	62	57	54	52					
6	14	2100	991	790	78	77	75	77	73	72	70	65	59	55	51	47	2100	991	0.06	15	73	69	62	57	54	53					
7	16	2800	1321	760	77	74	71	70	67	66	69	65	56	53	50	46	2800	1321	0.08	19	72	66	61	55	51	49					

^Σ Motor = ECM.

* Primary air valve is closed and therefore primary cfm is zero.



Ratings are certified in accordance with AHRI Standards.

Performance Notes for Sound Power Levels:

1. Discharge (external) static pressure is 0.25" w.g. (63 Pa) in all cases, which is the difference (ΔPs) in static pressure from terminal discharge to the room.
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2. Radiated sound power is the breakout noise transmitted through the unit casing walls.
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. Dash (-) in space indicates sound power level is less than 20 dB or equal to background.
5. Min. inlet ΔPs is the minimum operating pressure of the primary air valve section.
6. Asterisk (*) in space indicates that the minimum inlet static pressure requirement is greater than 0.5" w.g. (125 Pa) at rated airflow.
7. Data derived from independent tests conducted in accordance with ANSI / ASHRAE Standard 130 and AHRI Standard 880.

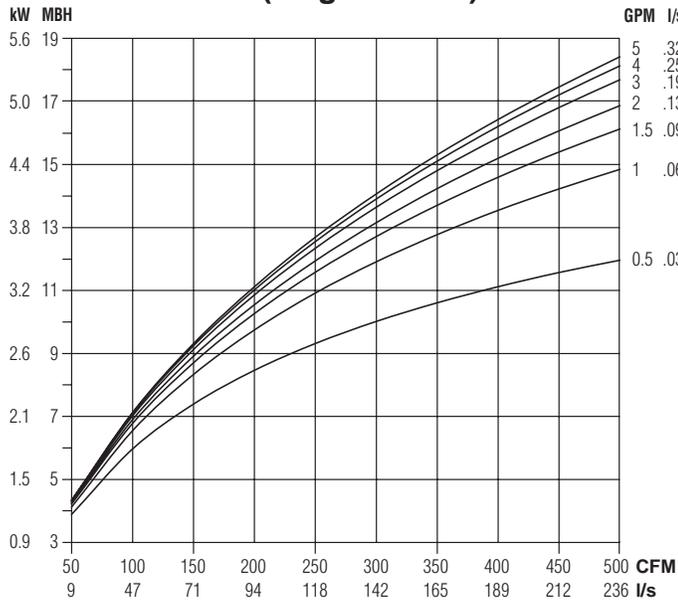
FAN POWERED TERMINAL UNITS

Performance Data • Hot Water Coil

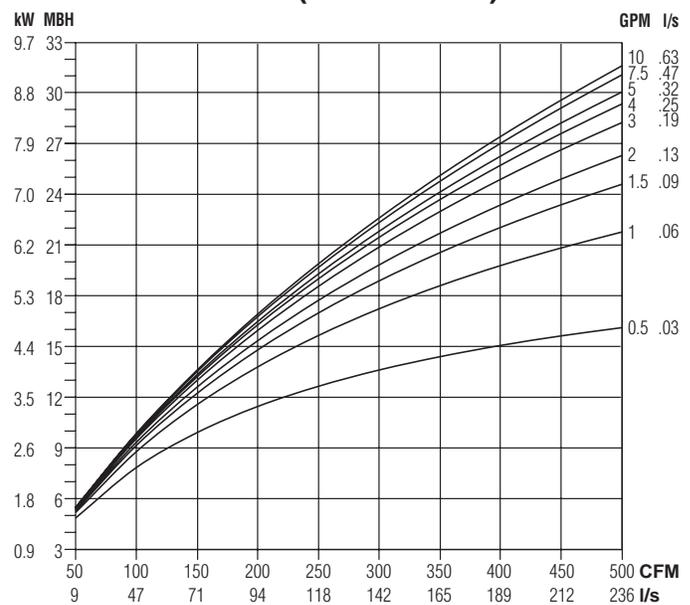
Models: 35SW, 35SWST, 35SW-OAI, 35SWST-OAI, 35SW-CVP • Series Flow

Unit Size 1

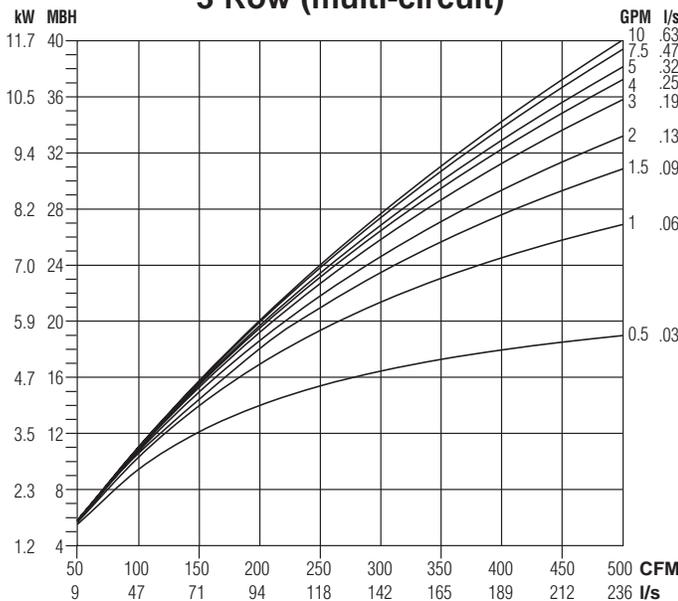
1 Row (single circuit)



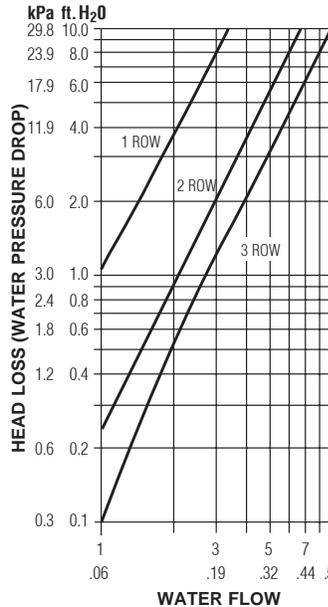
2 Row (multi-circuit)



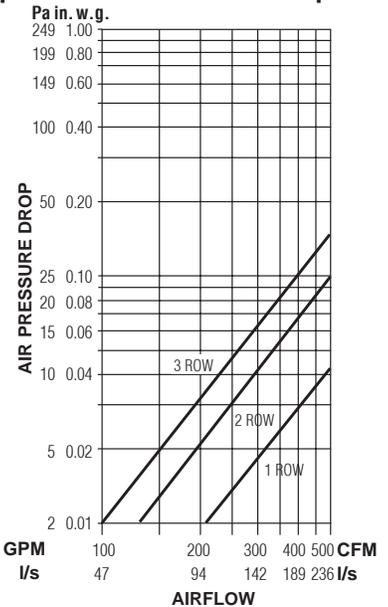
3 Row (multi-circuit)



Water Pressure Drop



Air Pressure Drop



NOTES:

1. Capacities are in MBH (kW), **thousands of Btu per hour (kiloWatts)**.

2. MBH (kW) values are based on a Δt (temperature difference) of 110°F (61°C) between entering air and entering water. For other Δt 's; multiply the MBH (kW) values by the factors below.

3. Air Temperature Rise.

$$\text{ATR (}^\circ\text{F)} = 927 \times \frac{\text{MBH}}{\text{cfm}}, \text{ ATR (}^\circ\text{C)} = 829 \times \frac{\text{kW}}{\text{l/s}}$$

4. Water Temp. Drop.

$$\text{WTD (}^\circ\text{F)} = 2.04 \times \frac{\text{MBH}}{\text{GPM}}, \text{ WTD (}^\circ\text{C)} = .224 \times \frac{\text{kW}}{\text{l/s}}$$

5. Connections: 1 Row 1/2" (13), 2 and 3 Row 7/8" (22); O.D. male solder.

Altitude Correction Factors:

Altitude ft. (m)	Sensible Heat Factor
0 (0)	1.00
2000 (610)	0.94
3000 (914)	0.90
4000 (1219)	0.87
5000 (1524)	0.84
6000 (1829)	0.81
7000 (2134)	0.78

Correction factors at other entering conditions:

Δt °F (°C)	50 (28)	60 (33)	70 (39)	80 (44)	90 (50)	100 (56)	110 (61)	120 (67)	130 (72)	140 (78)	150 (83)
Factor	.455 (.459)	.545 (.541)	.636 (.639)	.727 (.721)	.818 (.820)	.909 (.918)	1.00 (1.00)	1.09 (1.10)	1.18 (1.18)	1.27 (1.28)	1.36 (1.36)

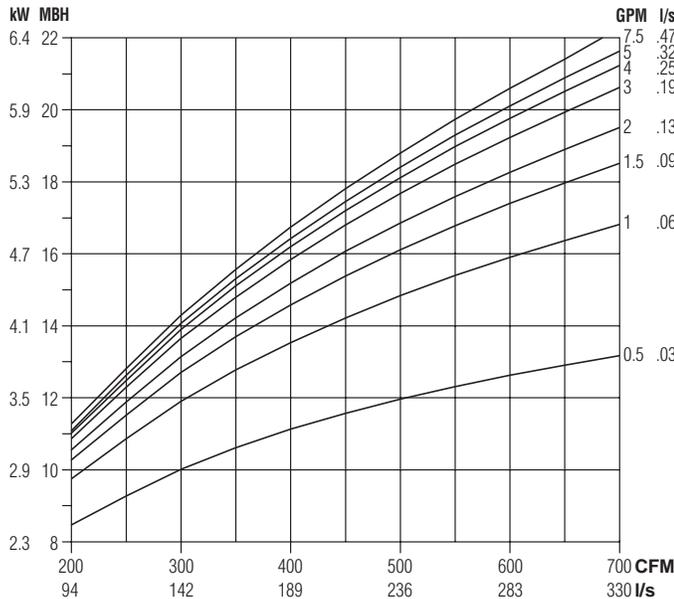
FAN POWERED TERMINAL UNITS

Performance Data • Hot Water Coil

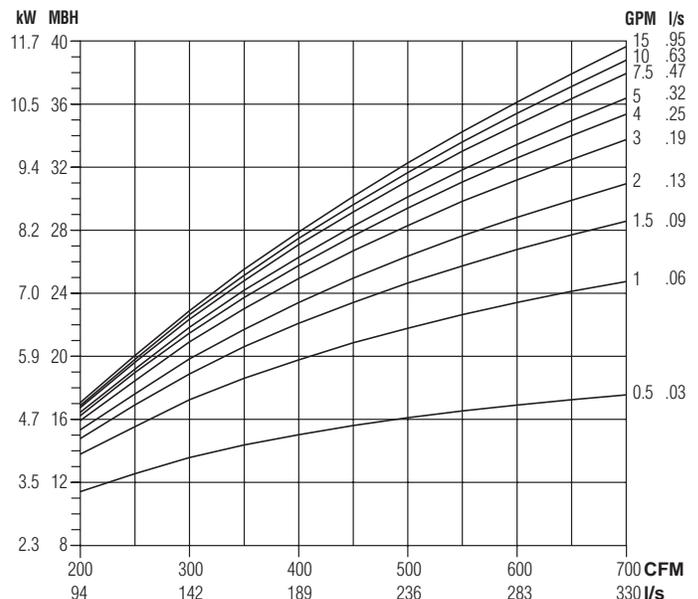
Models: 35SW, 35SWST, 35SW-OAI, 35SWST-OAI, 35SW-CVP • Series Flow

Unit Size 2

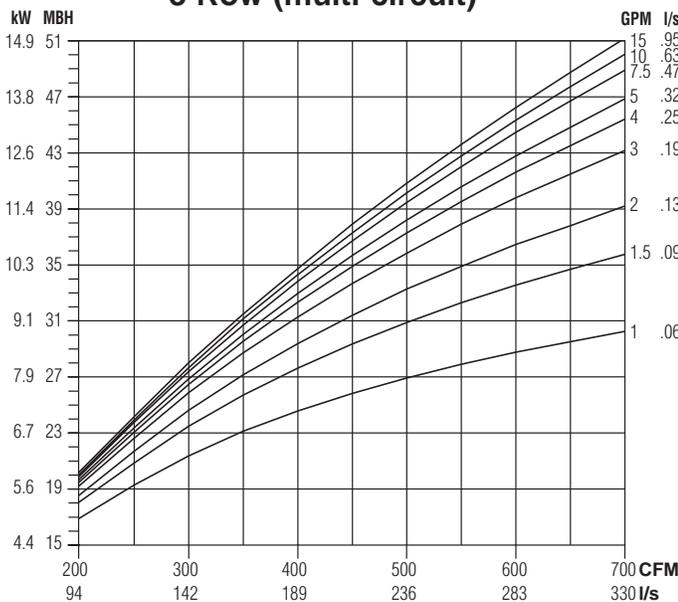
1 Row (single circuit)



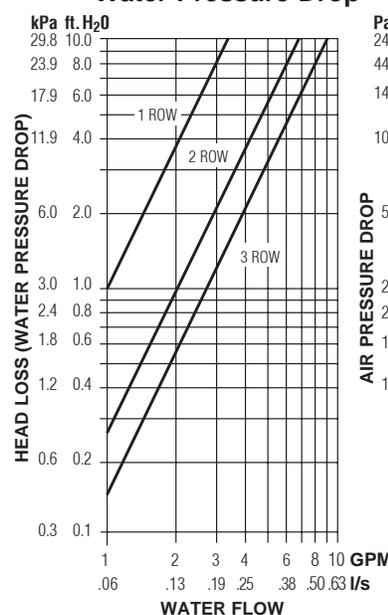
2 Row (multi-circuit)



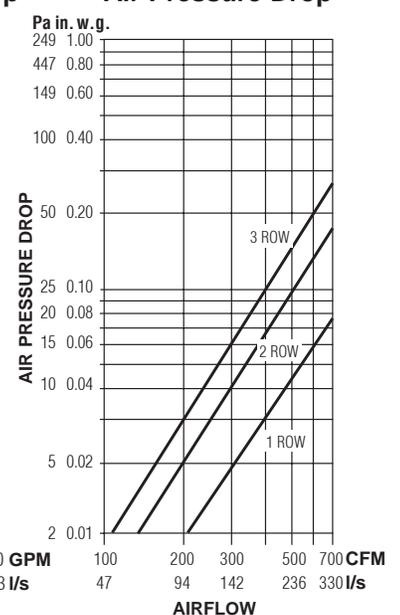
3 Row (multi-circuit)



Water Pressure Drop



Air Pressure Drop



NOTES:

- Capacities are in MBH (kW), *thousands of Btu per hour (kiloWatts)*.
- MBH (kW) values are based on a Δt (temperature difference) of 110°F (61°C) between entering air and entering water. For other Δt 's; multiply the MBH (kW) values by the factors below.

- Air Temperature Rise.

$$\text{ATR (}^\circ\text{F)} = 927 \times \frac{\text{MBH}}{\text{cfm}}, \text{ ATR (}^\circ\text{C)} = 829 \times \frac{\text{kW}}{\text{I/s}}$$

- Water Temp. Drop.

$$\text{WTD (}^\circ\text{F)} = 2.04 \times \frac{\text{MBH}}{\text{GPM}}, \text{ WTD (}^\circ\text{C)} = .224 \times \frac{\text{kW}}{\text{I/s}}$$

- Connections: 1 Row 1/2" (13), 2 and 3 Row 7/8" (22); O.D. male solder.

Altitude Correction Factors:

Altitude ft. (m)	Sensible Heat Factor
0 (0)	1.00
2000 (610)	0.94
3000 (914)	0.90
4000 (1219)	0.87
5000 (1524)	0.84
6000 (1829)	0.81
7000 (2134)	0.78

Correction factors at other entering conditions:

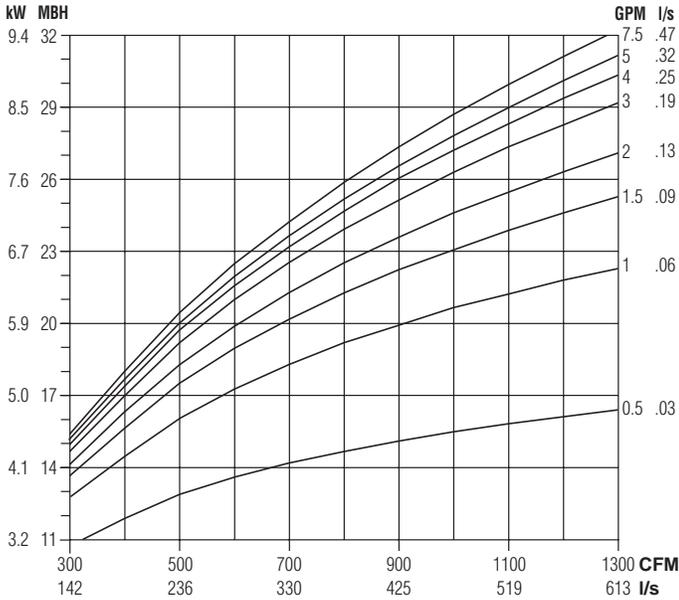
Δt °F (°C)	50 (28)	60 (33)	70 (39)	80 (44)	90 (50)	100 (56)	110 (61)	120 (67)	130 (72)	140 (78)	150 (83)
Factor	.455 (.459)	.545 (.541)	.636 (.639)	.727 (.721)	.818 (.820)	.909 (.918)	1.00 (1.00)	1.09 (1.10)	1.18 (1.18)	1.27 (1.28)	1.36 (1.36)

Performance Data • Hot Water Coil

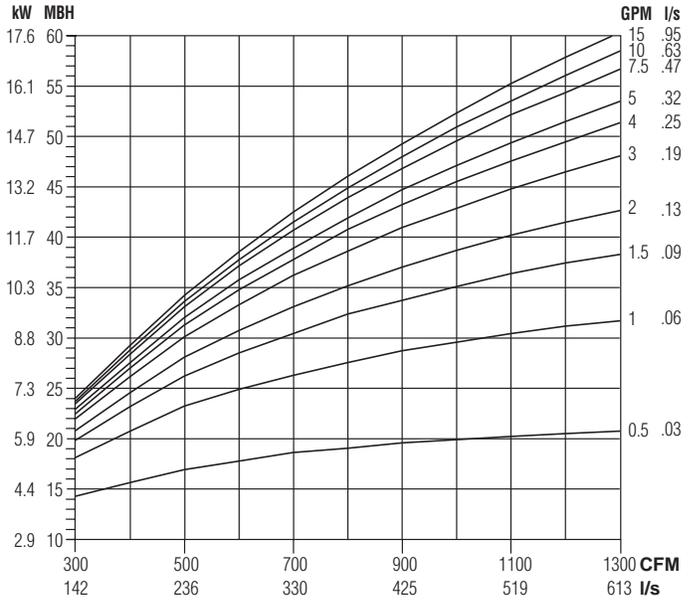
Models: 35SW, 35SWST, 35SW-OAI, 35SWST-OAI, 35SW-CVP • Series Flow

Unit Size 3

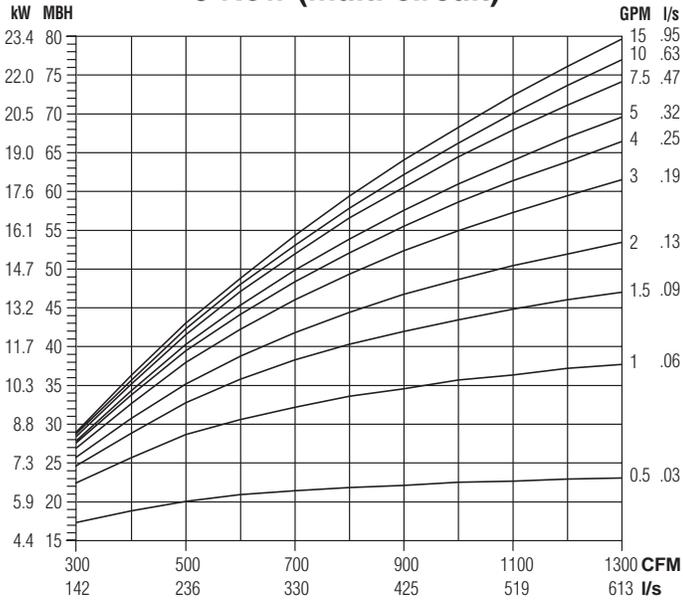
1 Row (single circuit)



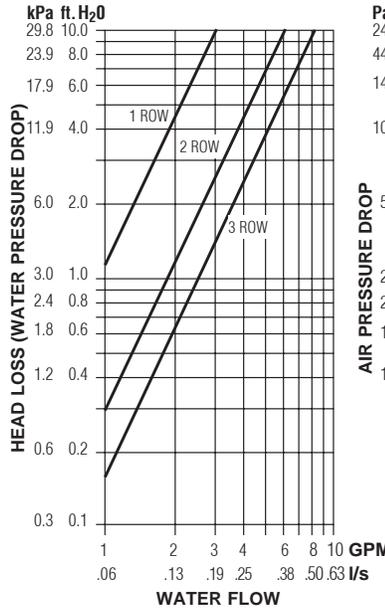
2 Row (multi-circuit)



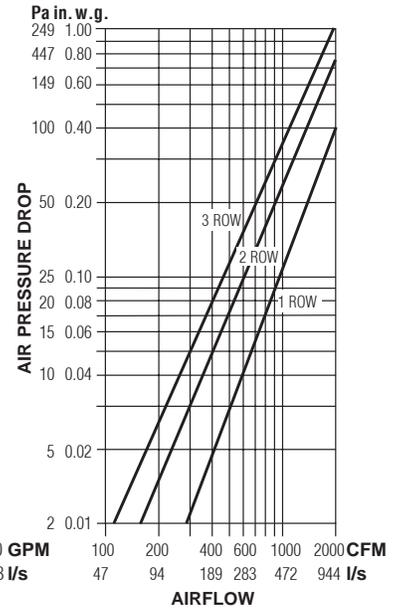
3 Row (multi-circuit)



Water Pressure Drop



Air Pressure Drop



NOTES:

- Capacities are in MBH (kW), *thousands of Btu per hour (kiloWatts)*.
- MBH (kW) values are based on a Δt (temperature difference) of 110°F (61°C) between entering air and entering water. For other Δt 's; multiply the MBH (kW) values by the factors below.

- Air Temperature Rise.

$$\text{ATR (}^\circ\text{F)} = 927 \times \frac{\text{MBH}}{\text{cfm}}, \text{ATR (}^\circ\text{C)} = 829 \times \frac{\text{kW}}{\text{l/s}}$$

- Water Temp. Drop.

$$\text{WTD (}^\circ\text{F)} = 2.04 \times \frac{\text{MBH}}{\text{GPM}}, \text{WTD (}^\circ\text{C)} = .224 \times \frac{\text{kW}}{\text{l/s}}$$

- Connections: 1 Row 1/2" (13), 2 and 3 Row 7/8" (22); O.D. male solder.

Altitude Correction Factors:

Altitude ft. (m)	Sensible Heat Factor
0 (0)	1.00
2000 (610)	0.94
3000 (914)	0.90
4000 (1219)	0.87
5000 (1524)	0.84
6000 (1829)	0.81
7000 (2134)	0.78

Correction factors at other entering conditions:

Δt °F (°C)	50 (28)	60 (33)	70 (39)	80 (44)	90 (50)	100 (56)	110 (61)	120 (67)	130 (72)	140 (78)	150 (83)
Factor	.455 (.459)	.545 (.541)	.636 (.639)	.727 (.721)	.818 (.820)	.909 (.918)	1.00 (1.00)	1.09 (1.10)	1.18 (1.18)	1.27 (1.28)	1.36 (1.36)

FAN POWERED TERMINAL UNITS

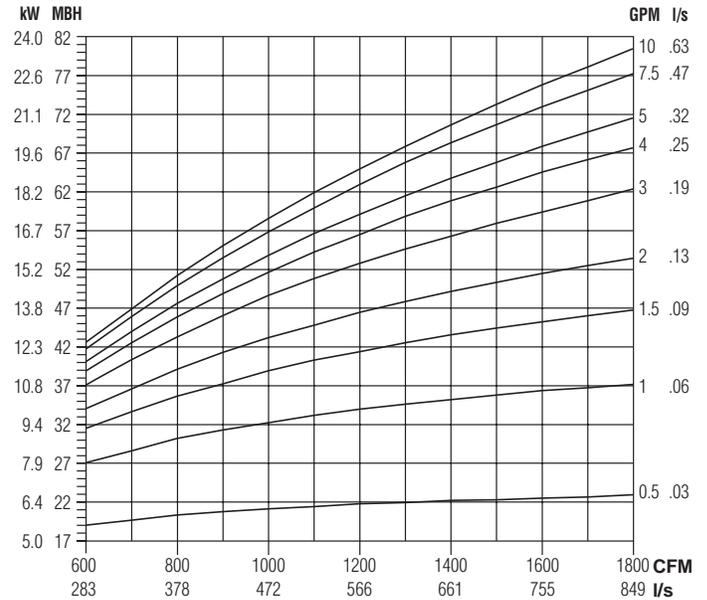
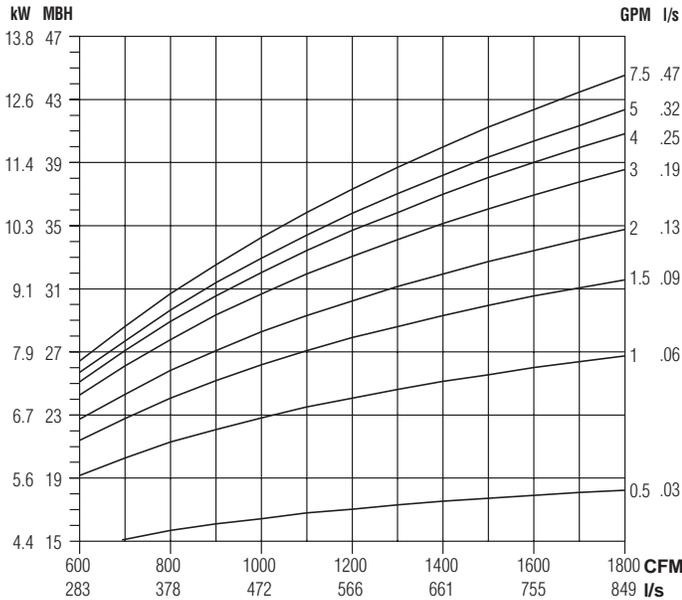
Performance Data • Hot Water Coil

Models: 35SW, 35SWST, 35SW-OAI, 35SWST-OAI, 35SW-CVP • Series Flow

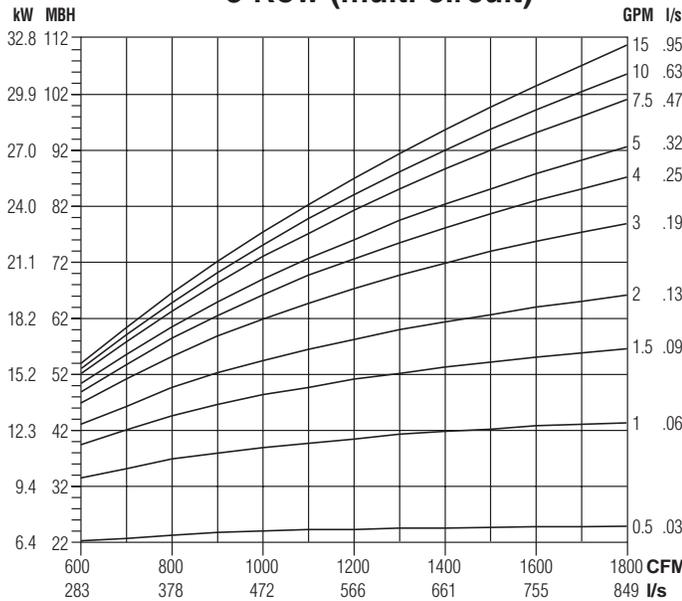
Unit Sizes 4 & 5

1 Row (multi-circuit)

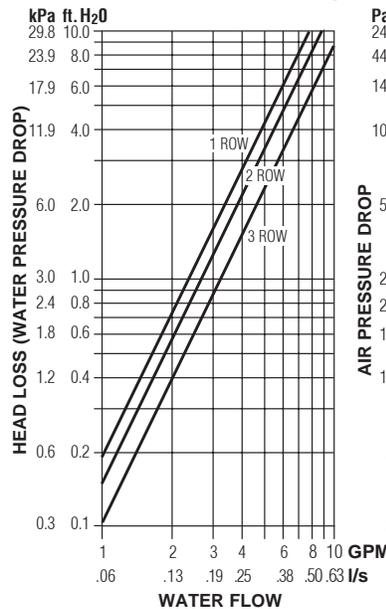
2 Row (multi-circuit)



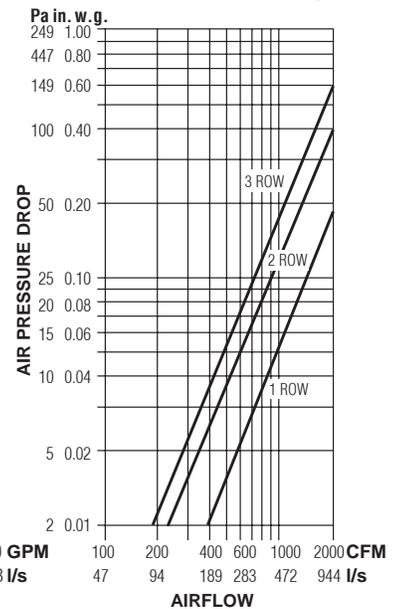
3 Row (multi-circuit)



Water Pressure Drop



Air Pressure Drop



NOTES:

- Capacities are in MBH (kW), *thousands of Btu per hour (kiloWatts)*.
- MBH (kW) values are based on a Δt (temperature difference) of 110°F (61°C) between entering air and entering water. For other Δt 's; multiply the MBH (kW) values by the factors below.

- Air Temperature Rise.
 $ATR (^\circ F) = 927 \times \frac{MBH}{cfm}$, $ATR (^\circ C) = 829 \times \frac{kW}{l/s}$
- Water Temp. Drop.
 $WTD (^\circ F) = 2.04 \times \frac{MBH}{GPM}$, $WTD (^\circ C) = .224 \times \frac{kW}{l/s}$
- Connections: 1, 2 and 3 Row 7/8" (22); O.D. male solder.

Altitude Correction Factors:

Altitude ft. (m)	Sensible Heat Factor
0 (0)	1.00
2000 (610)	0.94
3000 (914)	0.90
4000 (1219)	0.87
5000 (1524)	0.84
6000 (1829)	0.81
7000 (2134)	0.78

Correction factors at other entering conditions:

Δt °F (°C)	50 (28)	60 (33)	70 (39)	80 (44)	90 (50)	100 (56)	110 (61)	120 (67)	130 (72)	140 (78)	150 (83)
Factor	.455 (.459)	.545 (.541)	.636 (.639)	.727 (.721)	.818 (.820)	.909 (.918)	1.00 (1.00)	1.09 (1.10)	1.18 (1.18)	1.27 (1.28)	1.36 (1.36)

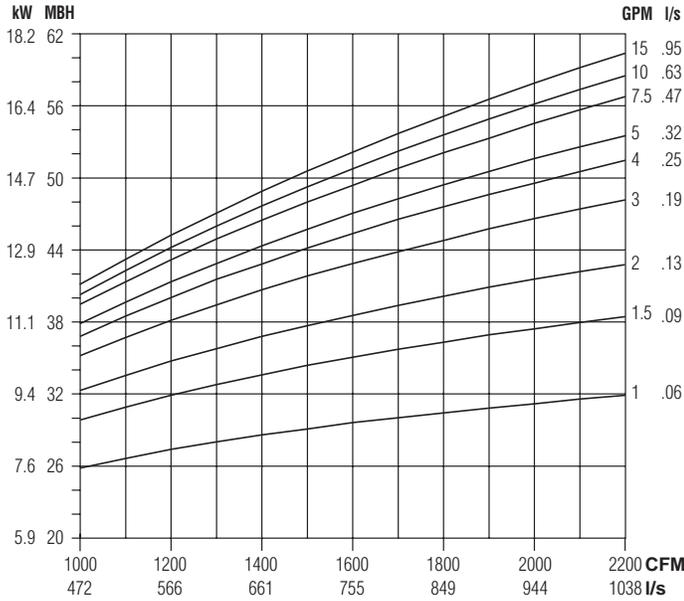


Performance Data • Hot Water Coil

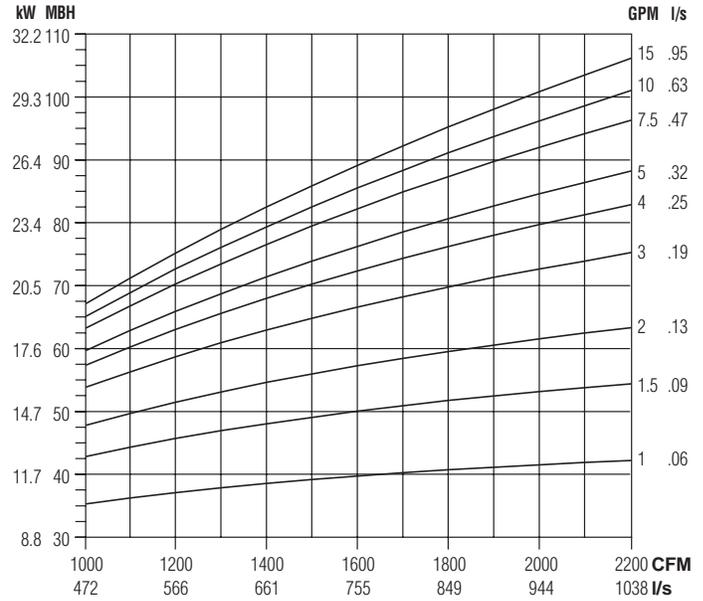
Models: 35SW, 35SWST, 35SW-OAI, 35SWST-OAI, 35SW-CVP • Series Flow

Unit Size 6

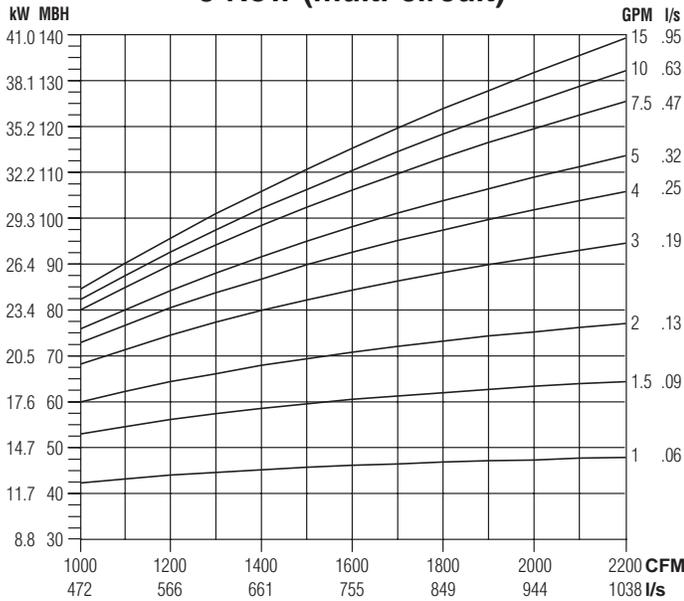
1 Row (multi-circuit)



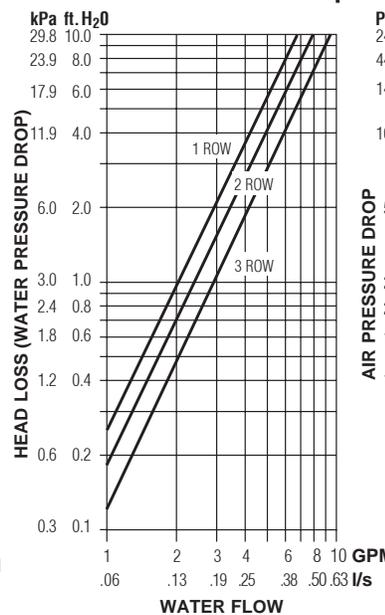
2 Row (multi-circuit)



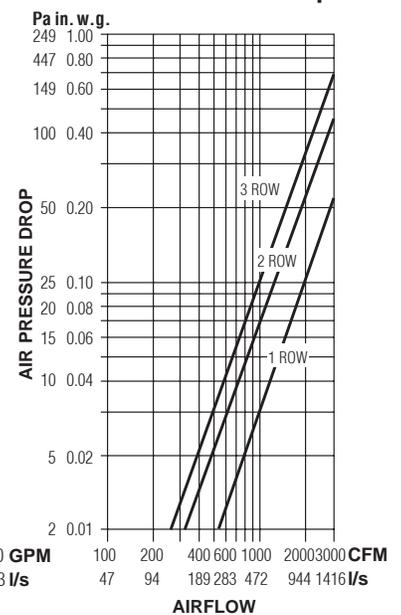
3 Row (multi-circuit)



Water Pressure Drop



Air Pressure Drop



NOTES:

- Capacities are in MBH (kW), *thousands of Btu per hour (kiloWatts)*.
- MBH (kW) values are based on a Δt (temperature difference) of 110°F (61°C) between entering air and entering water. For other Δt 's; multiply the MBH (kW) values by the factors below.
- Air Temperature Rise.
 $ATR (^\circ F) = 927 \times \frac{MBH}{cfm}$, $ATR (^\circ C) = 829 \times \frac{kW}{l/s}$
- Water Temp. Drop.
 $WTD (^\circ F) = 2.04 \times \frac{MBH}{GPM}$, $WTD (^\circ C) = .224 \times \frac{kW}{l/s}$
- Connections: 1, 2 and 3 Row 7/8" (22); O.D. male solder.

Altitude Correction Factors:

Altitude ft. (m)	Sensible Heat Factor
0 (0)	1.00
2000 (610)	0.94
3000 (914)	0.90
4000 (1219)	0.87
5000 (1524)	0.84
6000 (1829)	0.81
7000 (2134)	0.78

Correction factors at other entering conditions:

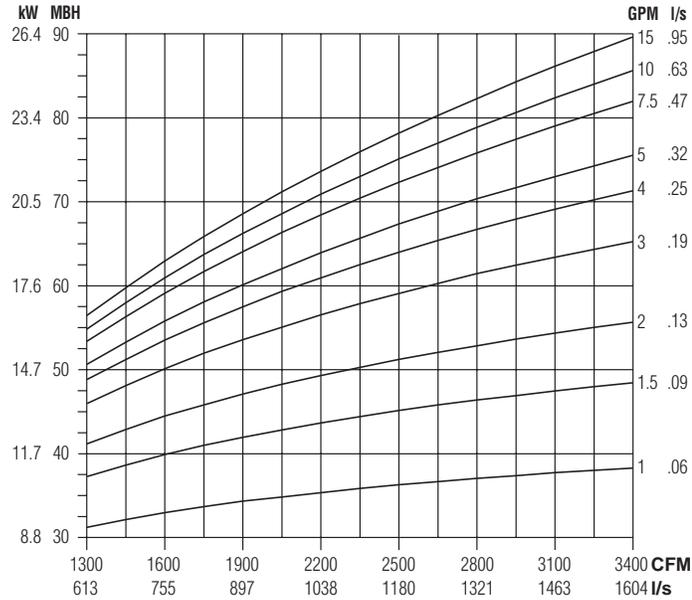
Δt °F (°C)	50 (28)	60 (33)	70 (39)	80 (44)	90 (50)	100 (56)	110 (61)	120 (67)	130 (72)	140 (78)	150 (83)
Factor	.455 (.459)	.545 (.541)	.636 (.639)	.727 (.721)	.818 (.820)	.909 (.918)	1.00 (1.00)	1.09 (1.10)	1.18 (1.18)	1.27 (1.28)	1.36 (1.36)

Performance Data • Hot Water Coil

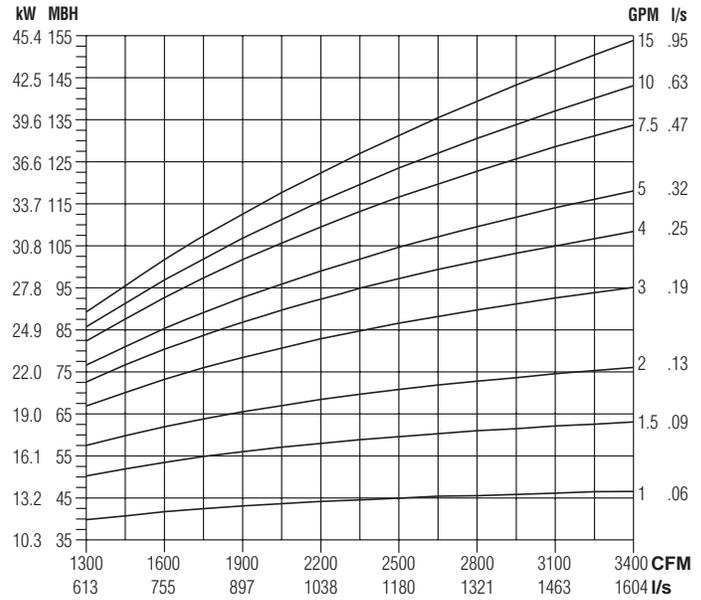
Models: 35SW, 35SWST, 35SW-OAI, 35SWST-OAI, 35SW-CVP • Series Flow

Unit Size 7

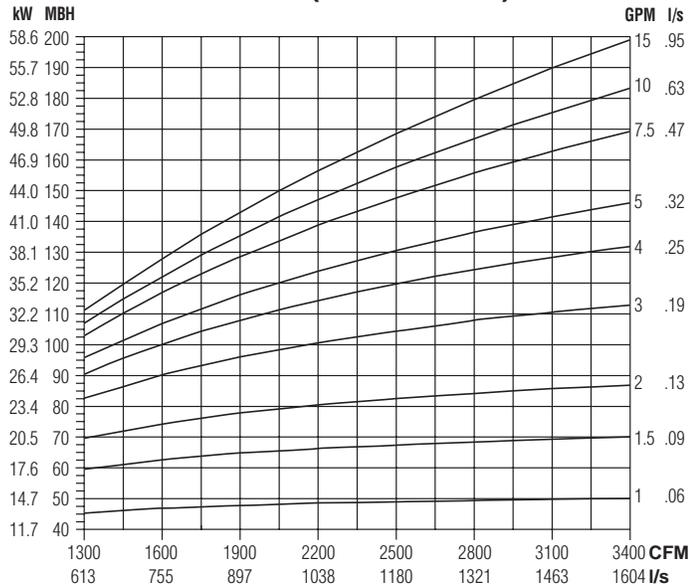
1 Row (multi-circuit)



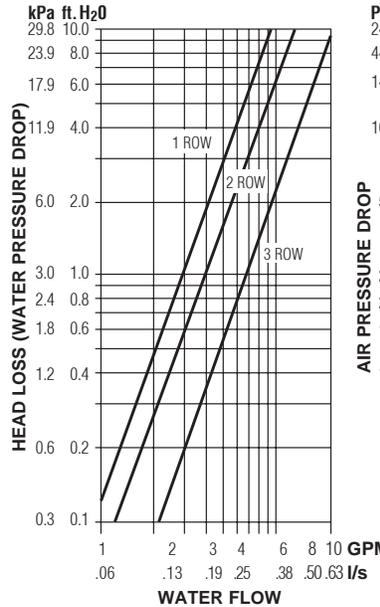
2 Row (multi-circuit)



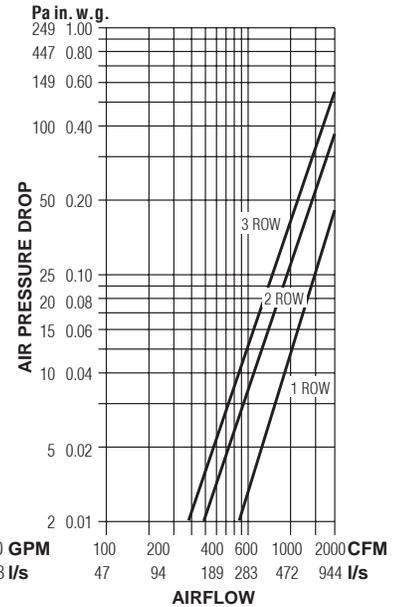
3 Row (multi-circuit)



Water Pressure Drop



Air Pressure Drop



NOTES:

- Capacities are in MBH (kW), *thousands of Btu per hour (kiloWatts)*.
- MBH (kW) values are based on a Δt (temperature difference) of 110°F (61°C) between entering air and entering water. For other Δt 's; multiply the MBH (kW) values by the factors below.

- Air Temperature Rise.

$$\text{ATR (}^\circ\text{F)} = 927 \times \frac{\text{MBH}}{\text{cfm}}, \quad \text{ATR (}^\circ\text{C)} = 829 \times \frac{\text{kW}}{\text{l/s}}$$

- Water Temp. Drop.

$$\text{WTD (}^\circ\text{F)} = 2.04 \times \frac{\text{MBH}}{\text{GPM}}, \quad \text{WTD (}^\circ\text{C)} = .224 \times \frac{\text{kW}}{\text{l/s}}$$

- Connections: 1 and 2 Row 7/8" (22), 3 Row 1 3/8" (35); O.D. male solder.

Altitude Correction Factors:

Altitude ft. (m)	Sensible Heat Factor
0 (0)	1.00
2000 (610)	0.94
3000 (914)	0.90
4000 (1219)	0.87
5000 (1524)	0.84
6000 (1829)	0.81
7000 (2134)	0.78

Correction factors at other entering conditions:

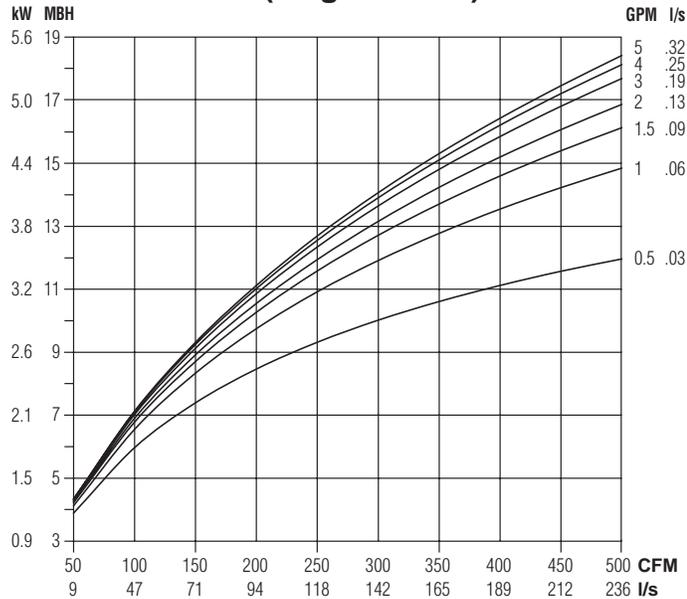
Δt °F (°C)	50 (28)	60 (33)	70 (39)	80 (44)	90 (50)	100 (56)	110 (61)	120 (67)	130 (72)	140 (78)	150 (83)
Factor	.455 (.459)	.545 (.541)	.636 (.639)	.727 (.721)	.818 (.820)	.909 (.918)	1.00 (1.00)	1.09 (1.10)	1.18 (1.18)	1.27 (1.28)	1.36 (1.36)

Performance Data • Hot Water Coil

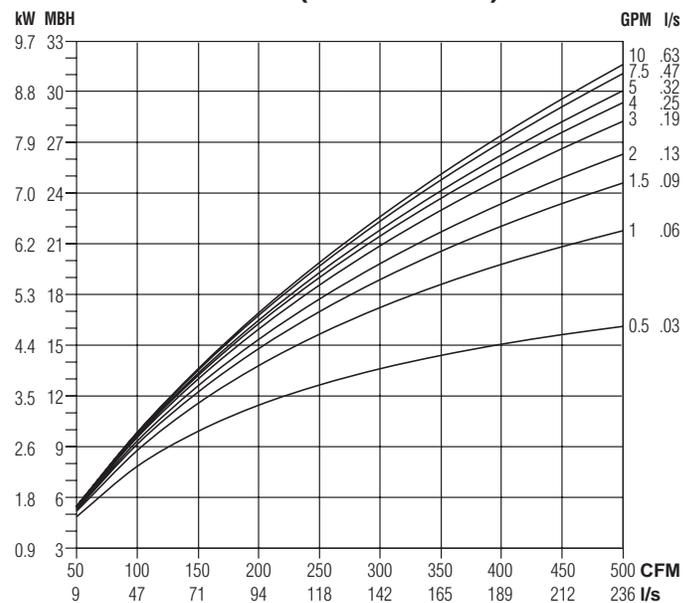
Model: 35SWXC • Series Flow

Unit Size 1

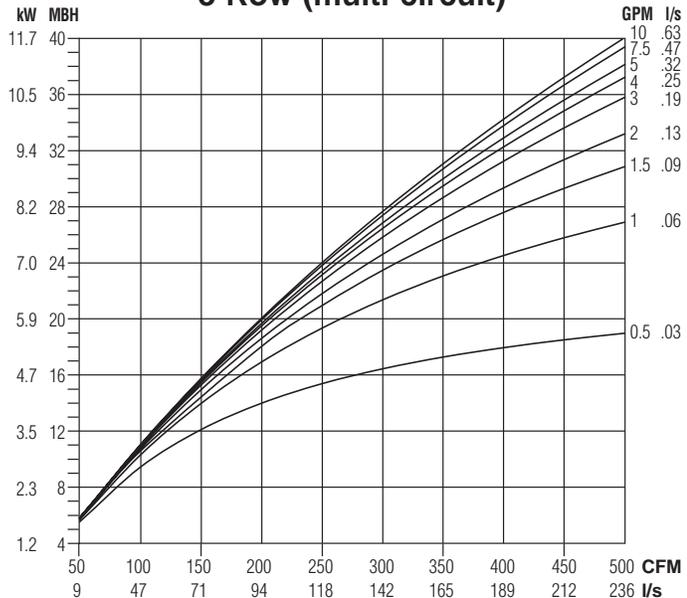
1 Row (single circuit)



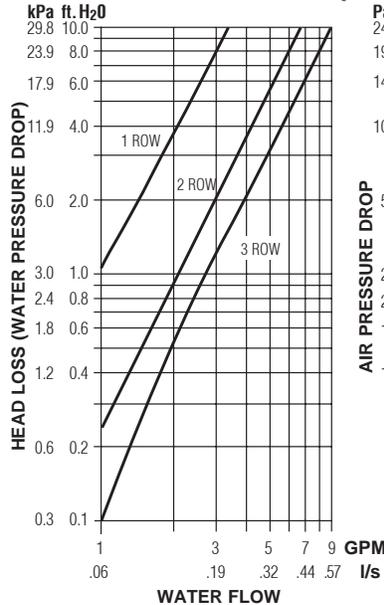
2 Row (multi-circuit)



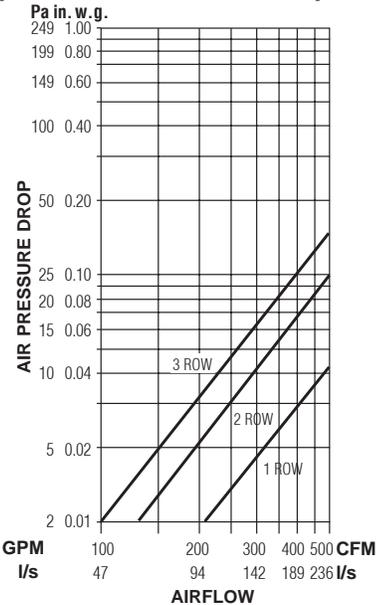
3 Row (multi-circuit)



Water Pressure Drop



Air Pressure Drop



NOTES:

- Capacities are in MBH (kW), **thousands of Btu per hour (kiloWatts)**.
- MBH (kW) values are based on a Δt (temperature difference) of 110°F (61°C) between entering air and entering water. For other Δt 's; multiply the MBH (kW) values by the factors below.

- Air Temperature Rise.

$$\text{ATR (°F)} = 927 \times \frac{\text{MBH}}{\text{cfm}}, \quad \text{ATR (°C)} = 829 \times \frac{\text{kW}}{\text{l/s}}$$

- Water Temp. Drop.

$$\text{WTD (°F)} = 2.04 \times \frac{\text{MBH}}{\text{GPM}}, \quad \text{WTD (°C)} = .224 \times \frac{\text{kW}}{\text{l/s}}$$

- Connections: 1 Row 1/2" (13), 2 and 3 Row 7/8" (22); O.D. male solder.

Altitude Correction Factors:

Altitude ft. (m)	Sensible Heat Factor
0 (0)	1.00
2000 (610)	0.94
3000 (914)	0.90
4000 (1219)	0.87
5000 (1524)	0.84
6000 (1829)	0.81
7000 (2134)	0.78

Correction factors at other entering conditions:

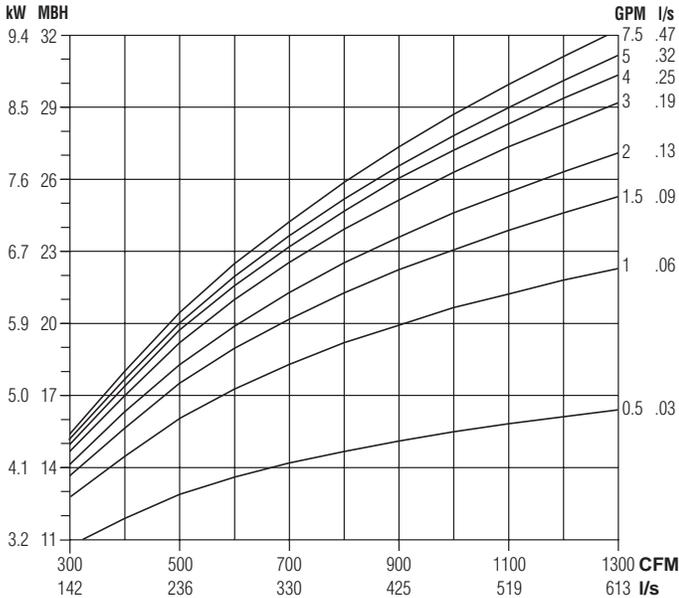
Δt °F (°C)	50 (28)	60 (33)	70 (39)	80 (44)	90 (50)	100 (56)	110 (61)	120 (67)	130 (72)	140 (78)	150 (83)
Factor	.455 (.459)	.545 (.541)	.636 (.639)	.727 (.721)	.818 (.820)	.909 (.918)	1.00 (1.00)	1.09 (1.10)	1.18 (1.18)	1.27 (1.28)	1.36 (1.36)

Performance Data • Hot Water Coil

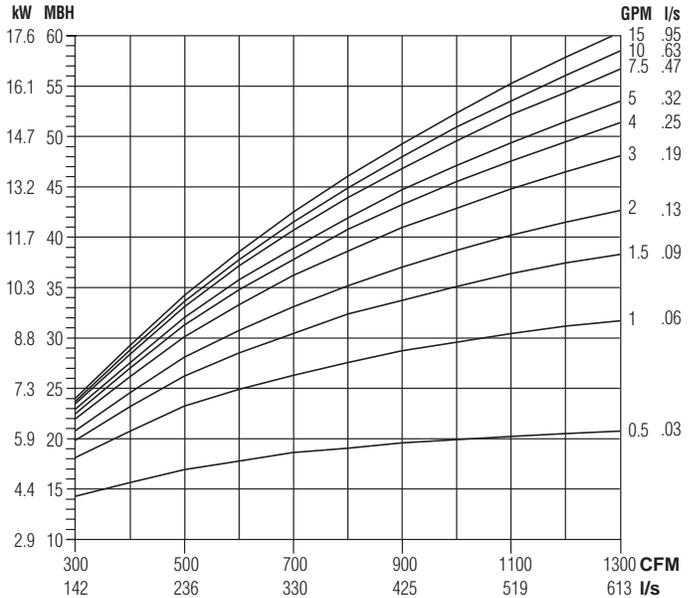
Model: 35SWXC • Series Flow

Unit Size 3

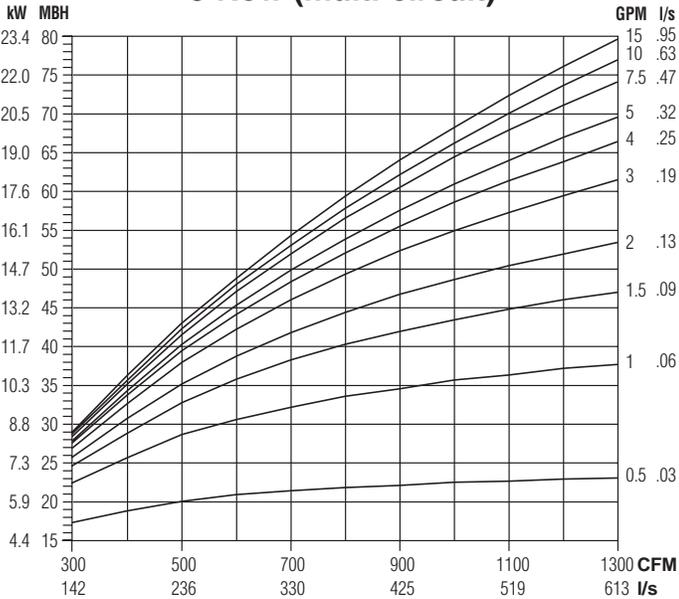
1 Row (single circuit)



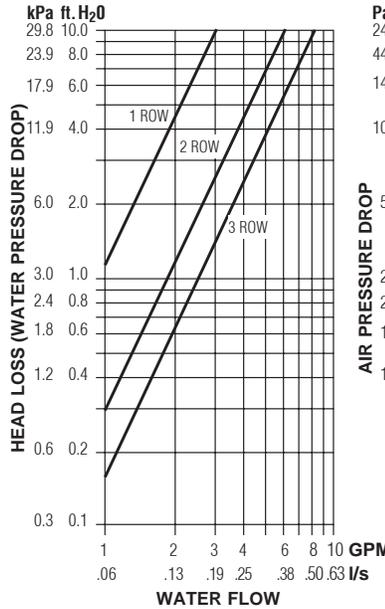
2 Row (multi-circuit)



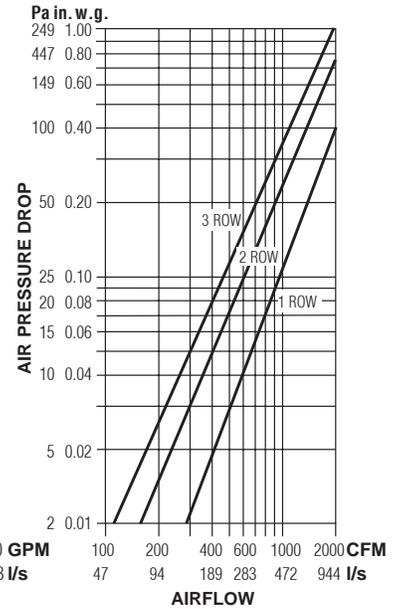
3 Row (multi-circuit)



Water Pressure Drop



Air Pressure Drop



NOTES:

- Capacities are in MBH (kW), **thousands of Btu per hour (kiloWatts)**.
- MBH (kW) values are based on a Δt (temperature difference) of 110°F (61°C) between entering air and entering water. For other Δt 's; multiply the MBH (kW) values by the factors below.
- Air Temperature Rise.
 $ATR (^\circ F) = 927 \times \frac{MBH}{cfm}$, $ATR (^\circ C) = 829 \times \frac{kW}{l/s}$
- Water Temp. Drop.
 $WTD (^\circ F) = 2.04 \times \frac{MBH}{GPM}$, $WTD (^\circ C) = .224 \times \frac{kW}{l/s}$
- Connections: 1 Row 1/2" (13), 2 and 3 Row 7/8" (22); O.D. male solder.

Altitude Correction Factors:

Altitude ft. (m)	Sensible Heat Factor
0 (0)	1.00
2000 (610)	0.94
3000 (914)	0.90
4000 (1219)	0.87
5000 (1524)	0.84
6000 (1829)	0.81
7000 (2134)	0.78

Correction factors at other entering conditions:

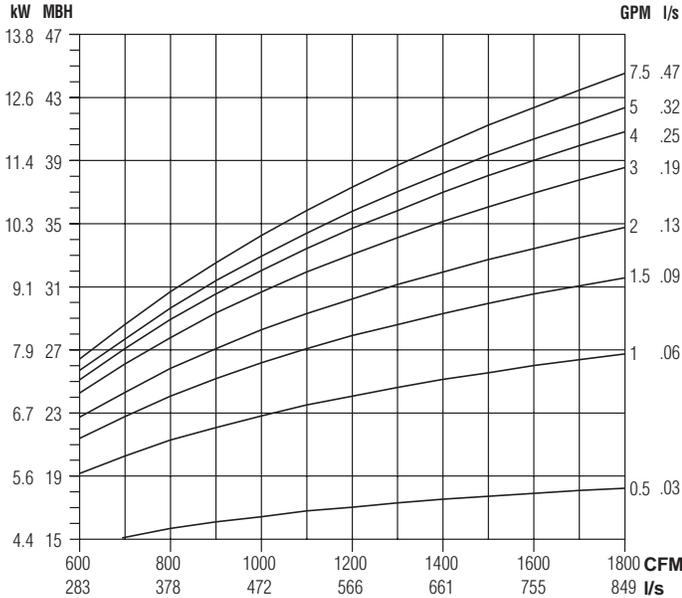
Δt °F (°C)	50 (28)	60 (33)	70 (39)	80 (44)	90 (50)	100 (56)	110 (61)	120 (67)	130 (72)	140 (78)	150 (83)
Factor	.455 (.459)	.545 (.541)	.636 (.639)	.727 (.721)	.818 (.820)	.909 (.918)	1.00 (1.00)	1.09 (1.10)	1.18 (1.18)	1.27 (1.28)	1.36 (1.36)

Performance Data • Hot Water Coil

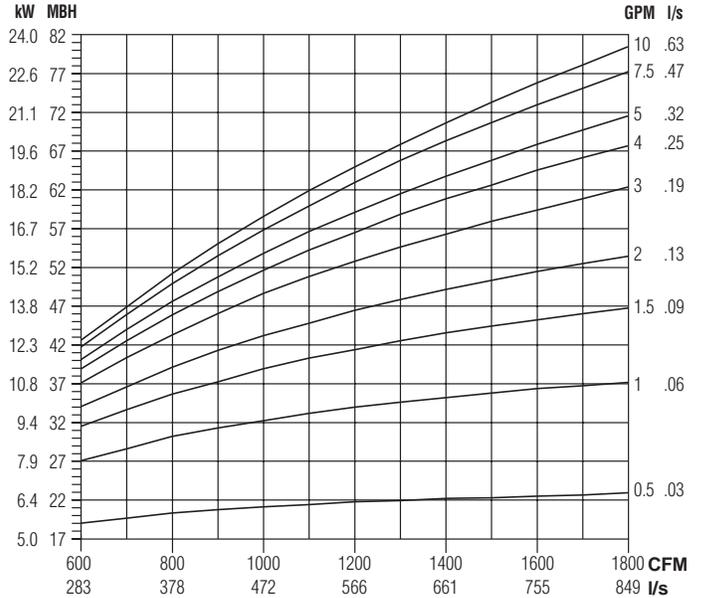
Model: 35SWXC • Series Flow

Unit Size 5

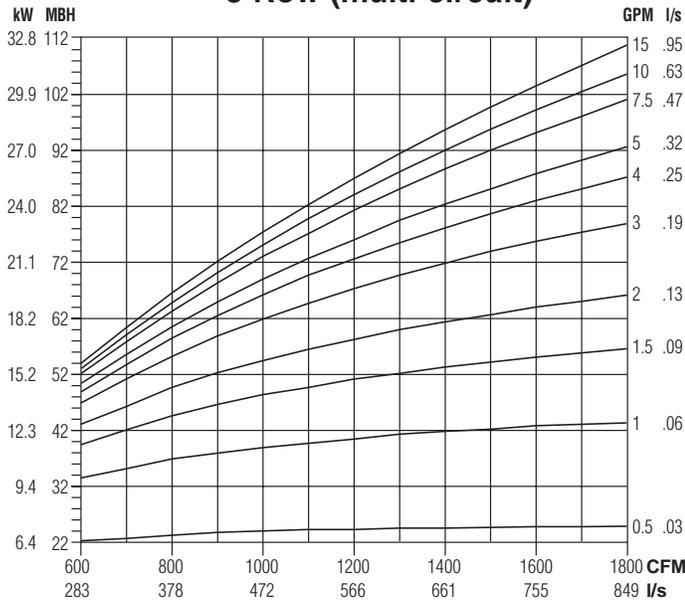
1 Row (multi-circuit)



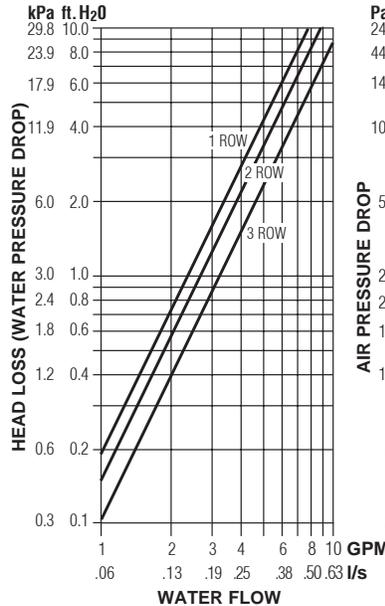
2 Row (multi-circuit)



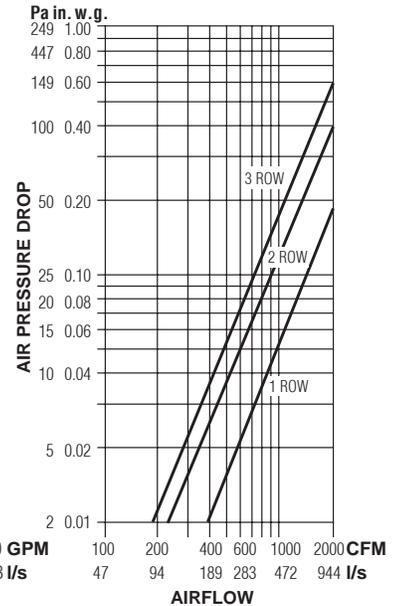
3 Row (multi-circuit)



Water Pressure Drop



Air Pressure Drop



NOTES:

- Capacities are in MBH (kW), *thousands of Btu per hour (kiloWatts)*.
- MBH (kW) values are based on a Δt (temperature difference) of 110°F (61°C) between entering air and entering water. For other Δt 's; multiply the MBH (kW) values by the factors below.

- Air Temperature Rise.

$$\text{ATR (}^\circ\text{F)} = 927 \times \frac{\text{MBH}}{\text{cfm}}, \quad \text{ATR (}^\circ\text{C)} = 829 \times \frac{\text{kW}}{\text{l/s}}$$

- Water Temp. Drop.

$$\text{WTD (}^\circ\text{F)} = 2.04 \times \frac{\text{MBH}}{\text{GPM}}, \quad \text{WTD (}^\circ\text{C)} = .224 \times \frac{\text{kW}}{\text{l/s}}$$

- Connections: 1, 2 and 3 Row 7/8" (22); O.D. male solder.

Altitude Correction Factors:

Altitude ft. (m)	Sensible Heat Factor
0 (0)	1.00
2000 (610)	0.94
3000 (914)	0.90
4000 (1219)	0.87
5000 (1524)	0.84
6000 (1829)	0.81
7000 (2134)	0.78

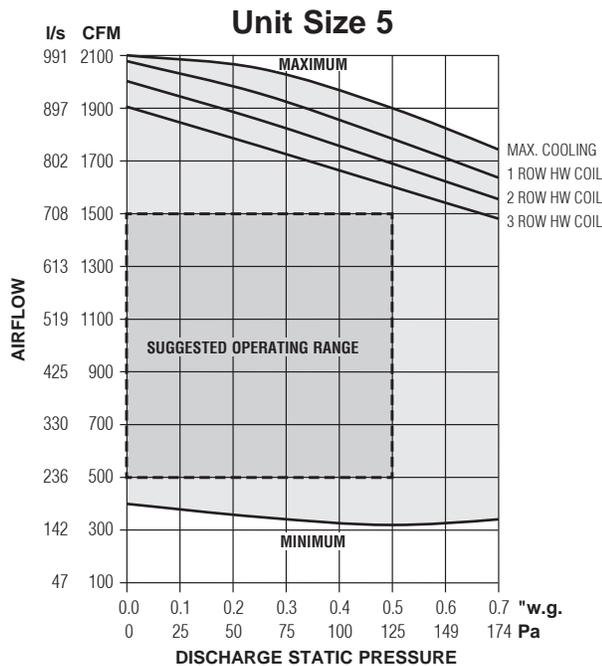
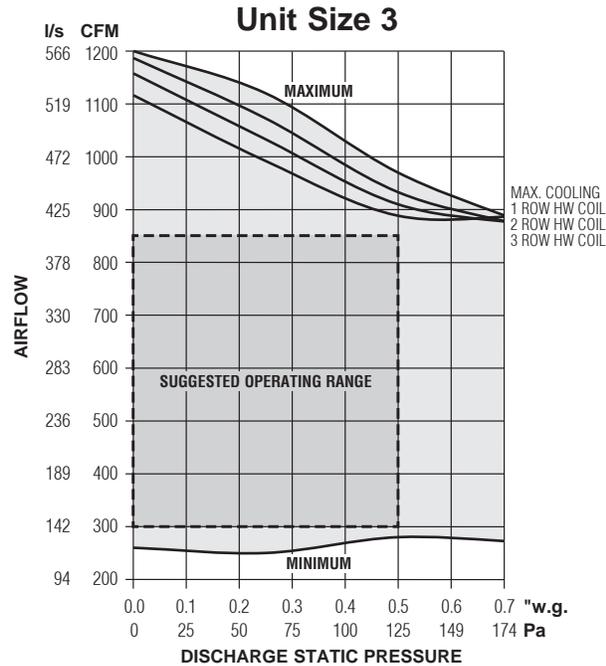
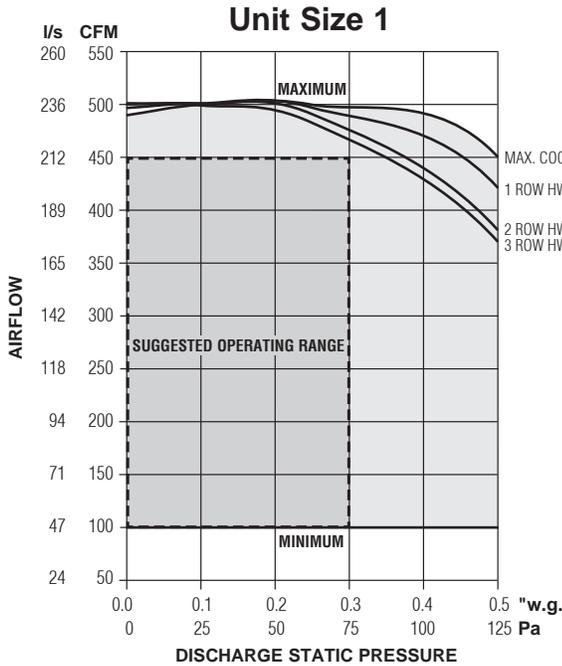
Correction factors at other entering conditions:

Δt °F (°C)	50 (28)	60 (33)	70 (39)	80 (44)	90 (50)	100 (56)	110 (61)	120 (67)	130 (72)	140 (78)	150 (83)
Factor	.455 (.459)	.545 (.541)	.636 (.639)	.727 (.721)	.818 (.820)	.909 (.918)	1.00 (1.00)	1.09 (1.10)	1.18 (1.18)	1.27 (1.28)	1.36 (1.36)

Performance Data

EPIC ECM Motor Fan Curves – Airflow vs. Downstream Static Pressure

Model Series 35SXC Stealth XC • Series Flow



Electrical Data

Unit Size	EPIC ECM Motor FLA				
	Motor HP	120V	208V	240V	277V
1	*	2.1	1.4	1.3	1.2
3	*	4.8	3.4	3.0	3.0
5	*	9.9	6.4	6.1	5.9

* The EPIC ECM is a variable horsepower motor. Refer to Selectworks schedule for actual power consumption.
 FLA = Full load amperage.
 All motors are single phase/60 Hz.

NOTES:

- The EPIC ECM is a pressure independent constant volume device at set point and airflow does not vary with changing static pressure conditions. The motor compensates for any changes in static pressure such as filter loading.
- Airflow can be set to operate at any point within shaded area under the selected water coil curve using the EPIC volume controller card provided. Manual or Auto/Dynamic fan volume control can be selected on the EPIC card. The manual setting is for constant volume fan operation (adjustment is achieved using a pot. on the

card). Dynamic variable volume fan airflow adjustment is achieved by a DDC controller based on room demand using an analog 0-10 VDC input.

- Selections within the suggested operating range (dashed lines) will help ensure acceptable sound levels and optimized energy efficiency.
- Fan curves shown are applicable to 120/208/240 and 277 volt, single phase EPIC ECM (motors).



Performance Data • NC Level Application Guide

Model Series 35SXC Stealth XC • Series Flow

Steri-Liner

Unit Size	Inlet Size	Primary Airflow		Fan		Min. inlet ΔPs		NC Levels @ Inlet Pressure (ΔPs) shown							
								DISCHARGE NC PER 885 APPENDIX E				RADIATED NC NO CEILING			
								Fan Only	0.5 w.g. (125 Pa)	1.0" w.g. (250 Pa)	1.5" w.g. (375 Pa)	Fan Only	0.5" w.g. (125 Pa)	1.0" w.g. (250 Pa)	1.5" w.g. (375 Pa)
1	6	400	189	400	189	0.10	2.7	24	32	32	32	33	36	37	38
		300	142	300	142	0.06	1.9	21	26	26	26	30	34	35	36
		200	95	200	95	0.03	1.1	-	-	-	-	26	31	32	33
		100	47	100	47	0.01	0.4	-	-	-	-	20	26	28	28
		75	35	75	35	0.00	0.2	-	-	-	-	-	24	26	27
	8	400	189	400	189	0.03	2.7	24	29	29	30	33	33	35	36
		300	142	300	142	0.02	1.9	21	23	23	24	30	32	33	34
		200	95	200	95	0.01	1.1	-	-	-	-	26	29	30	31
		100	47	100	47	0.00	0.4	-	-	-	-	20	24	26	26
		75	35	75	35	0.00	0.2	-	-	-	-	18	22	24	24
3	6	550	260	550	260	0.20	3.8	29	28	28	28	38	38	40	41
		400	189	400	189	0.10	2.7	25	25	25	25	32	35	37	38
		300	165	300	165	0.06	1.5	21	22	22	22	28	33	35	36
		250	118	250	118	0.04	1.5	21	23	23	23	25	32	34	35
		200	95	200	95	0.03	1.1	22	25	25	25	21	30	32	33
	8	700	331	700	331	0.10	3.8	32	27	27	27	42	42	44	45
		650	307	650	307	0.09	2.7	34	29	29	29	41	41	43	44
		500	236	500	236	0.05	1.9	30	27	27	27	36	39	41	42
		350	165	350	165	0.03	1.5	26	24	24	24	30	36	38	39
		200	95	200	95	0.01	1.1	22	23	23	23	21	32	34	35
	10	1100	520	1100	520	0.10	6.6	41	31	31	31	51	39	41	42
		950	449	950	449	0.08	5.9	39	30	30	30	48	38	40	41
		700	331	700	331	0.04	4.7	35	27	27	27	42	36	38	39
		450	213	450	213	0.02	3.1	33	27	27	27	34	32	34	35
		200	95	200	95	0.00	1.1	22	20	20	20	21	26	28	29
5	10	1100	520	1100	520	0.10	6.6	31	31	31	31	44	42	44	45
		900	425	900	425	0.07	5.7	30	28	28	28	39	40	42	43
		700	331	700	331	0.04	4.1	30	24	24	24	33	38	39	40
		600	284	600	284	0.03	4.1	31	21	21	22	30	36	38	38
		500	236	500	236	0.02	3.4	33	-	-	-	27	34	36	37
	12	1800	851	1800	851	0.13	6.6	35	37	37	37	55	48	49	50
		1300	615	1300	615	0.07	5.7	32	31	32	32	47	43	44	45
		1000	473	1000	473	0.04	4.7	30	27	27	28	42	39	41	42
		700	331	700	331	0.02	4.1	30	21	22	22	33	36	37	38
		500	236	500	236	0.01	3.4	33	-	-	-	27	32	34	35
	14	2050	969	2050	969	0.09	9.0	36	36	37	37	58	47	49	50
		1600	756	1600	756	0.06	8.1	34	32	33	33	52	43	45	46
		1350	638	1350	638	0.04	7.4	33	30	30	30	48	41	42	43
		900	425	900	425	0.02	5.7	30	23	23	23	39	36	38	39
		500	236	500	236	0.01	3.4	33	-	-	-	27	30	32	33

Performance Notes:

- Discharge NC Levels are calculated based on procedures as outlined on page C160 (Using AHRI 885 Appendix E). Radiated NC levels are based on mock-up tests conducted in the Energetics Laboratory with no ceiling. (Specific applications require acoustical evaluation - contact factory).
- Dash (-) in space indicates a NC less than 20.

FAN POWERED TERMINAL UNITS

Performance Data • Discharge Sound Power Levels

Model Series 35SXC Stealth XC • Series Flow

Steri-Liner



Unit Size	Inlet Size	Primary Airflow		Fan		Min. inlet ΔPs		Fan Only		Fan and 100% Primary Air – Sound Power Octave Bands @ Inlet pressure (ΔPs) shown																					
										0.5" w.g. (125Pa) ΔPs							1.0" w.g. (249Pa) ΔPs							1.5" w.g. (375Pa) ΔPs							
										cfm	l/s	cfm	l/s	"w.g.	Pa	2	3	4	5	6	7	2	3	4	5	6	7	2	3	4	5
1	6	400	189	400	189	0.10	2.7	68	63	60	62	58	55	73	67	61	62	58	55	74	67	61	61	58	55	74	67	61	61	58	55
		300	142	300	142	0.06	1.9	65	60	57	57	53	49	69	61	56	56	51	47	69	61	55	55	51	47	69	61	55	55	51	47
		200	95	200	95	0.03	1.1	63	55	52	51	46	41	62	53	47	48	42	36	62	53	47	47	42	36	63	53	46	47	42	36
		100	47	100	47	0.01	0.4	57	47	44	40	34	28	51	40	33	33	25	17	51	40	33	33	25	17	51	40	32	32	25	17
		75	35	75	35	0.00	0.2	55	43	40	36	29	22	46	34	27	27	19	9	46	34	27	27	19	9	47	34	26	26	19	9
	8	400	189	400	189	0.03	2.7	68	63	60	62	58	55	71	65	59	60	56	53	72	65	59	59	56	53	72	65	59	59	56	53
		300	142	300	142	0.02	1.9	65	60	57	57	53	49	67	59	54	54	49	45	67	59	53	53	49	45	67	59	53	53	49	45
		200	95	200	95	0.01	1.1	63	55	52	51	46	41	60	51	45	46	40	34	60	51	45	45	40	34	61	51	44	45	40	34
		100	47	100	47	0.00	0.4	57	47	44	40	34	28	49	38	31	31	23	15	49	38	31	31	23	15	49	38	30	30	23	15
		75	35	75	35	0.00	0.2	55	43	40	36	29	22	44	32	25	25	17	7	44	32	25	25	17	7	45	32	24	24	17	7
3	6	550	260	550	260	0.20	3.8	76	67	64	63	58	55	75	67	65	61	58	55	75	68	65	61	58	56	75	68	66	61	58	56
		400	189	400	189	0.10	2.7	73	64	60	58	54	50	73	64	62	58	54	51	73	65	62	58	54	51	73	65	62	58	54	51
		300	142	300	142	0.06	1.5	70	61	57	54	50	45	71	62	59	54	51	46	71	62	59	55	51	47	71	63	59	55	51	47
		250	118	250	118	0.04	1.5	68	59	55	51	47	42	70	60	57	52	48	44	70	61	57	52	49	44	70	61	57	53	49	44
		200	95	200	95	0.03	1.1	66	56	52	48	44	38	68	58	54	50	46	40	68	59	55	50	46	41	68	59	55	50	46	41
	8	700	331	700	331	0.10	3.8	79	70	67	66	62	59	75	67	66	62	59	57	75	68	66	62	59	57	75	68	66	62	59	58
		650	307	650	307	0.09	2.7	78	69	66	65	61	58	74	67	65	61	58	56	74	67	65	61	58	56	74	68	65	61	58	56
		500	236	500	236	0.05	1.9	75	66	63	61	57	54	73	64	62	58	55	52	73	65	62	58	55	52	73	65	63	58	55	53
		350	165	350	165	0.03	1.5	72	62	59	56	52	48	70	61	58	54	50	47	70	62	59	54	51	47	70	62	59	54	51	47
		200	95	200	95	0.01	1.1	66	56	52	48	44	38	66	56	52	48	44	38	66	57	53	48	44	39	66	57	53	48	44	39
	10	1100	520	1100	520	0.10	6.6	84	75	72	73	68	67	76	69	69	65	62	62	76	70	69	65	62	62	76	70	69	65	62	62
		950	449	950	449	0.08	5.9	82	73	71	71	66	65	75	68	67	63	60	60	75	69	67	63	60	60	75	69	67	63	61	60
		700	331	700	331	0.04	4.7	79	70	67	66	62	59	73	65	64	60	57	55	73	66	64	60	57	55	73	66	64	60	57	56
		450	213	450	213	0.02	3.1	74	65	62	60	56	52	70	61	59	55	51	48	70	62	59	55	52	49	70	63	59	55	52	49
		200	95	200	95	0.00	1.1	66	56	52	48	44	38	64	54	50	46	42	36	64	55	51	46	42	37	64	55	51	46	42	37
5	10	1100	520	1100	520	0.10	6.6	76	73	71	71	67	66	76	73	71	70	66	65	77	73	72	70	69	66	77	73	72	71	70	67
		900	425	900	425	0.07	5.7	75	72	70	69	66	64	74	70	69	67	63	62	74	70	69	67	65	63	74	70	69	68	67	63
		700	331	700	331	0.04	4.1	73	70	68	67	64	62	70	66	66	63	59	58	70	67	66	63	61	59	71	67	66	64	63	59
		600	284	600	284	0.03	4.1	72	69	67	66	63	60	68	64	64	61	56	55	68	65	64	61	58	56	69	65	64	61	60	57
		500	236	500	236	0.02	3.4	71	68	66	65	61	59	65	62	62	58	53	52	66	62	62	58	55	53	66	62	62	59	57	54
	12	1800	851	1800	851	0.13	6.6	79	76	74	75	71	70	81	77	75	75	73	72	82	78	76	76	75	72	82	78	76	76	77	73
		1300	615	1300	615	0.07	5.7	77	74	72	72	69	67	77	73	71	70	67	66	77	73	72	71	70	67	77	73	72	71	71	67
		1000	473	1000	473	0.04	4.7	75	72	70	70	67	65	73	69	68	66	63	62	74	70	68	67	65	63	74	70	68	67	67	63
		700	331	700	331	0.02	4.1	73	70	68	67	64	62	68	64	64	61	57	56	68	65	64	61	59	57	69	65	64	62	61	57
		500	236	500	236	0.01	3.4	71	68	66	65	61	59	63	60	60	56	51	50	64	60	60	56	53	51	64	60	60	57	55	52
	14	2050	969	2050	969	0.09	9.0	79	77	74	76	72	71	81	77	75	75	73	72	82	77	75	76	76	73	82	78	75	76	77	73
		1600	756	1600	756	0.06	8.1	78	75	73	74	70	69	78	74	72	72	69	68	78	74	72	72	71	68	78	74	72	72	73	69
		1350	638	1350	638	0.04	7.4	77	74	72	72	69	67	75	71	70	69	66	65	76	72	70	69	68	66	76	72	70	70	70	66
		900	425	900	425	0.02	5.7	75	72	70	69	66	64	70	66	65	63	59	58	70	66	65	63	61	59	70	66	65	64	63	59
		500	236	500	236	0.01	3.4	71	68	66	65	61	59	61	58	58	54	49	48	62	58	58	54	51	49	62	58	58	55	53	50

For performance table notes, see page C104; highlighted numbers indicate embedded AHRI certification points.

FAN POWERED TERMINAL UNITS

Performance Data • Radiated Sound Power Levels

Model Series 35SXC Stealth XC • Series Flow

Steri-Liner



Unit Size	Inlet Size	Primary Airflow		Fan		Min. inlet ΔPs		Fan Only		Fan and 100% Primary Air–Sound Power Octave Bands @ Inlet pressure (ΔPs) shown																					
										0.5" w.g. (125Pa) ΔPs							1.0" w.g. (249Pa) ΔPs							1.5" w.g. (375Pa) ΔPs							
										2	3	4	5	6	7	2	3	4	5	6	7	2	3	4	5	6	7				
1	6	400	189	400	189	0.10	2.7	54	49	43	38	34	30	57	53	46	41	36	35	58	54	47	42	37	37	58	54	48	43	38	38
		300	142	300	142	0.06	1.9	52	47	40	35	30	27	55	51	44	39	34	33	56	52	45	40	35	35	56	52	46	41	36	37
		200	95	200	95	0.03	1.1	50	44	37	31	25	23	53	48	41	37	31	31	54	49	42	38	33	33	54	49	43	39	33	34
		100	47	100	47	0.01	0.4	47	39	32	23	16	16	49	42	36	32	27	27	49	43	37	33	28	29	50	44	37	34	29	30
		75	35	75	35	0.00	0.2	45	37	30	20	13	13	47	40	34	30	25	25	48	41	35	31	26	27	48	42	35	32	27	29
	8	400	189	400	189	0.03	2.7	54	49	43	38	34	30	55	51	44	39	34	33	56	52	45	40	35	35	56	52	46	41	36	36
		300	142	300	142	0.02	1.9	52	47	40	35	30	27	53	49	42	37	32	31	54	50	43	38	33	33	54	49	44	39	34	35
		200	95	200	95	0.01	1.1	50	44	37	31	25	23	51	46	39	35	29	29	52	47	40	36	31	31	52	47	41	37	31	32
		100	47	100	47	0.00	0.4	47	39	32	23	16	16	47	40	34	30	25	25	47	41	35	31	26	27	48	42	35	32	27	28
		75	35	75	35	0.00	0.2	45	37	30	20	13	13	45	38	32	28	23	23	46	39	33	29	24	25	46	40	33	30	25	27
3	6	550	260	550	260	0.20	3.8	60	53	46	41	37	33	61	55	48	41	38	36	62	56	49	42	40	39	63	57	50	43	41	41
		400	189	400	189	0.10	2.7	56	49	42	36	31	26	58	52	45	38	35	34	59	53	46	39	37	37	60	54	47	40	38	38
		300	142	300	142	0.06	1.5	53	46	39	31	25	20	56	49	42	35	33	32	57	50	43	37	35	34	57	51	44	37	36	36
		250	118	250	118	0.04	1.5	52	44	37	28	21	16	54	47	40	34	32	30	55	48	41	35	34	33	56	49	42	36	35	34
		200	95	200	95	0.03	1.1	49	41	34	25	17	11	52	45	38	32	30	28	53	46	39	33	32	31	54	47	40	34	33	33
	8	700	331	700	331	0.10	3.8	62	56	49	45	42	38	65	59	52	45	42	40	66	60	53	46	44	43	67	61	54	47	45	45
		650	307	650	307	0.09	2.7	61	55	48	44	41	37	64	58	51	44	41	40	65	60	53	45	43	42	66	60	53	46	44	44
		500	236	500	236	0.05	1.9	59	52	45	39	35	31	62	56	49	42	39	38	63	57	50	43	41	40	64	58	51	44	42	42
		350	165	350	165	0.03	1.5	55	48	41	34	28	23	59	52	45	39	36	35	60	54	47	40	38	37	61	54	47	41	39	39
		200	95	200	95	0.01	1.1	49	41	34	25	17	11	54	47	40	34	32	30	55	48	41	35	34	33	56	49	42	36	35	35
	10	1100	520	1100	520	0.10	6.6	67	62	54	52	51	48	63	57	50	43	39	38	64	59	52	44	41	41	65	59	52	45	42	42
		950	449	950	449	0.08	5.9	65	60	53	50	48	45	62	56	49	42	38	37	63	57	50	43	40	39	64	58	51	44	41	41
		700	331	700	331	0.04	4.7	62	56	49	45	42	38	59	53	46	39	36	34	60	54	47	40	38	37	61	55	48	41	39	39
		450	213	450	213	0.02	3.1	58	51	44	38	33	29	55	49	42	35	32	31	56	50	43	36	34	33	57	51	44	37	35	35
		200	95	200	95	0.00	1.1	49	41	34	25	17	11	48	41	34	28	26	24	49	42	35	29	28	27	50	43	36	30	29	29
5	10	1100	520	1100	520	0.10	6.6	67	59	50	45	44	41	69	62	53	45	42	44	70	63	55	46	44	44	70	64	55	47	45	44
		900	425	900	425	0.07	5.7	64	56	47	41	39	36	66	59	51	42	40	42	67	60	52	44	42	42	68	61	53	44	43	42
		700	331	700	331	0.04	4.1	61	53	44	37	33	30	63	56	48	40	38	40	64	57	49	41	39	40	64	57	50	42	40	40
		600	284	600	284	0.03	4.1	59	51	42	34	30	26	61	54	46	38	36	38	62	55	47	39	38	38	62	55	48	40	38	39
		500	236	500	236	0.02	3.4	57	49	40	30	26	22	58	51	44	36	34	36	59	52	45	37	36	37	60	53	46	38	37	37
	12	1800	851	1800	851	0.13	6.6	73	65	57	54	55	53	73	66	57	48	46	46	74	68	59	49	47	47	75	68	59	50	48	47
		1300	615	1300	615	0.07	5.7	69	61	52	48	47	45	69	62	53	44	42	43	70	63	55	46	44	44	71	64	55	46	45	44
		1000	473	1000	473	0.04	4.7	66	58	49	43	42	39	66	58	50	41	39	41	67	60	51	43	41	41	67	60	52	43	42	41
		700	331	700	331	0.02	4.1	61	53	44	37	33	30	61	54	46	38	36	38	62	55	47	39	37	38	62	55	48	40	38	38
		500	236	500	236	0.01	3.4	57	49	40	30	26	22	56	49	42	34	32	34	57	50	43	35	34	35	58	51	44	36	35	35
	14	2050	969	2050	969	0.09	9.0	74	67	58	57	58	57	73	66	57	47	45	46	74	67	58	49	46	46	75	68	59	49	47	46
		1600	756	1600	756	0.06	8.1	71	64	55	52	52	50	70	63	54	45	42	43	71	64	55	46	44	44	71	65	56	47	45	44
		1350	638	1350	638	0.04	7.4	69	61	53	49	48	46	68	61	52	43	41	42	69	62	53	44	42	42	69	62	54	45	43	42
		900	425	900	425	0.02	5.7	64	56	47	41	39	36	62	55	47	38	36	38	63	56	48	40	38	38	64	57	49	40	39	38
		500	236	500	236	0.01	3.4	57	49	40	30	26	22	54	47	40	32	30	32	55	48	41	33	32	33	56	49	42	34	33	33

For performance table notes, see page C104; highlighted numbers indicate embedded AHRI certification points.

FAN POWERED TERMINAL UNITS

Performance Data • AHRI Certification and Performance Notes

Model Series 35SXC Stealth XC • Series Flow • AHRI Certification Rating Points

Steri-Liner

Unit Size	Inlet Size	Fan Airflow		Fan Σ Watts	Fan Only* @ .25" w.g. (62 Pa) Δ Ps														Primary Airflow	Min. Inlet Δ Ps	Fan + 100% Primary @ 1.5" w.g. (375 Pa) Δ Ps w/ .25" w.g. (62 Pa) Discharge Δ Ps						
					Discharge							Radiated									Radiated						
					2	3	4	5	6	7	2	3	4	5	6	7	cfm	l/s			"w.g.	Pa	2	3	4	5	6
1	6	400	189	165	68	63	60	62	58	55	54	49	43	38	34	30	400	189	0.10	2.7	58	54	48	43	38	38	
3	8	700	331	400	79	70	67	66	62	59	62	56	49	45	42	38	700	331	0.10	3.8	67	61	54	47	45	45	
5	10	1100	520	680	76	73	71	71	67	66	67	59	50	45	44	41	1100	520	0.10	6.6	70	64	55	47	45	44	

Σ Motor = ECM.

* Primary air valve is closed and therefore primary cfm is zero.



Ratings are certified in accordance with AHRI Standards.

Performance Notes for Sound Power Levels:

- Discharge (external) static pressure is 0.25" w.g. (63 Pa) in all cases, which is the difference (Δ Ps) in static pressure from terminal discharge to the room.
Discharge Sound Power Levels (SWL) include duct end reflection energy as part of the standard rating. Including the duct end correction provides sound power levels that would normally be transmitted into an acoustically, non-reflective duct. The effect of including the energy correction to the discharge SWL, is higher sound power levels when compared to previous AHRI certified data. For more information on duct end reflection calculations see AHRI Standard 880.
- Radiated sound power is the breakout noise transmitted through the unit casing walls and induction port.
- Sound power levels are in decibels, dB re 10^{-12} watts.
- All sound data listed by octave bands is raw data without any corrections for room absorption or duct attenuation. Dash (-) in space indicates sound power level is less than 20 dB or equal to background.
- Min. inlet Δ Ps is the minimum operating pressure of the primary air valve section.
- Asterisk (*) in space indicates that the minimum inlet static pressure requirement is greater than 0.5" w.g. (125 Pa) at rated airflow.
- Data derived from independent tests conducted in accordance with ANSI / ASHRAE Standard 130 and AHRI Standard 880.

Electric Heating Coils

Features, Selection and Capacities

Nailor Electric Coils are tested with terminal units in accordance with UL Standard 1995 and meet all requirements of the NEC (National Electric Code) and CSA (Canadian Standards Association). Units are listed and labeled by the ETL Testing Laboratory as a total package. All controls are enclosed in a NEMA 1 electrical enclosure on the side of the fan package for easy access.

All wiring for the motor and heater terminates in the enclosure for single point electrical connection in the field. Each unit is supplied with a wiring diagram. Note: NEC requires a means to disconnect the heater power supply within sight or on the terminal.

Standard Features:

- Automatic reset high limit thermal cut-outs.
- Magnetic contactors per stage on terminals with DDC or analog electronic controls.
- P.E. switch per stage to carry load or pilot duty with magnetic contactors as required with pneumatic control.
- Positive pressure airflow safety switch.
- P.E. switch for fan on parallel terminals (P35NE) with pneumatic control.
- Fan relay for DDC fan terminals.
- Control voltage transformer (Class II) for DDC or analog electronic terminals.
- Class A 80/20 Ni/Cr wire.

Options:

- Toggle disconnect switch.
- Door interlocking disconnect switch.
- Mercury contactors.
- Power circuit fusing.
- Dust tight control enclosure.
- Manual reset high limits.
- SCR Control.

SCR Control Option:

The SCR (Silicon Controlled Rectifier) option provides infinite solid state heater control using a proportional signal (0 – 10 Vdc or 4 – 20 mA). This option may be specified compatible with pneumatic, analog electronic or digital (DDC) controls.

Time proportional control of the electric heater provides superior comfort and energy savings. The SCR controller modulates the heater to supply the exact amount of heat based upon the zone requirement. Room set points are maintained more accurately, undershoot and overshoot as associated with staged heat are eliminated, reducing operation costs.

SCR controllers provide silent operation, as mechanical staged contactors are eliminated. Zero cross switching of the thyristor prevents electrical noise.



Models	Unit Size	Maximum KiloWatts - 1 Stage Heat				
		120 Volt 1 phase	208/240 Volt 1 phase	277 Volt 1 phase	208 Volt 3 phase	480 & 600 Volt 3 phase
33SZE	30	4.5	10*	11.5	14.5	15
	40	4.5	10*	11.5	14.5	18
	50	4.5	10*	11.5	14.5	25
35SE 35SEST	1	–	8	8	10	8
	2	–	8	8	10	8
	3	–	8	11.5	10	14
	4	–	8	11.5	10	16
	5	–	8	11.5	14.5	20.5
	6	–	8	11.5	14.5	26
	7	–	8	11.5	14.5	30
37SE 37SEST	1	–	5.5	5.5	5.5	5.5
	2	–	10.5**	12	12	12
	3	–	10***	12	15.5	17
	4	–	8	11.5	14.5	27
35NE	2	–	8	8	10	8
	3	–	8	11.5	10	14
	5	–	8	11.5	14.5	20.5
	6	–	8	11.5	14.5	26
37NE	2	–	8	11.5	11.5	11.5
	3	–	8	11.5	13.5	16
	4	–	8	11.5	14.5	27

*208V max is 8.5
 **208V max is 9.0
 ***208V max is 8.5

Recommended Selection:

The table above is a quick reference guide, to illustrate the relationship between electrical power supply, heater capacity in kiloWatts and terminal unit size that are available for fan powered units.

- Digital and pneumatic control terminals are available with up to 3 stages of heat. Analog electronic control terminals are available with 1 or 2 stages of heat only. A minimum of 0.5 kW per stage is required.

- Voltage and kilowatt ratings are sized so as not to exceed 48 amps, in order to avoid the NEC code requirement for circuit fusing.

- A minimum airflow of 70 cfm (33 l/s) per kW is required for any given terminal in order to avoid possible nuisance tripping of the thermal cutouts.

- Discharge air temperature should not exceed 120°F (49°C).



Tested and approved to the following standards:
ANSI/UL 1995, 1st ed.
CSA C22.2 No. 236.

Electric Heating Coils (continued)

Application Guidelines

Discharge Air Temperature

When considering the capacity and airflow for the heater, discharge air temperature can be an important factor. Rooms use different types of diffusers and they are intended to perform different functions. Slots that blend the air at the glass and set up air curtains within the room, must be able to blow the air very low in the room. Hot air will be too buoyant to be effective in this case. Discharge air temperatures for this application should be in the 85 – 90°F (29 – 32°C) range.

Diffusers in the center of the room blend their discharge air as it crosses the ceiling. Discharge air temperatures in this application can be as high as 105°F (41°C) and still be effective. However, if the return air grilles are in the discharge air pattern, the warm air will be returned to the plenum before it heats the room. Again, the air temperature needs to be blended down to an acceptable temperature that can be forced down into the occupied space by the time the air gets to the walls. Discharging warm air into the room at temperatures above 105°F (41°C) usually will set up stratification layers and will not keep the occupants warm if there is a ceiling return because only the top 12" – 24" (300 – 600 mm) of the room will be heated.

The maximum approved discharge air temperature for any Nailor Fan Powered Terminal Unit with supplemental heat is 120°F (49°C). No heater should be applied to exceed this temperature.

Electric Heater Selection

To properly select an electric heater, three things must be determined: the heat requirement for the room, the entering air temperature and the desired discharge air temperature. The heat requirement for the room is the sum of the heat loss calculation and the amount of heat required to raise the entering air temperature to the desired room temperature. Usually, the second item is small compared to the first for fan powered terminal units in a return air plenum. MBH can be converted to kW by using the chart or by calculation. There are 3.413 MBH in 1 kW. If using the chart, find the MBH on the left scale, then move horizontally to the right and read kW.

Next, the desired discharge air temperature should be ascertained. This will depend on the type of diffusers that are in the room.

The desired heating airflow for the room can then be calculated using the following equation:

$$cfm = \frac{kW \times 3160}{\Delta t \text{ (discharge air temp - inlet air temp.) } ^\circ F}$$

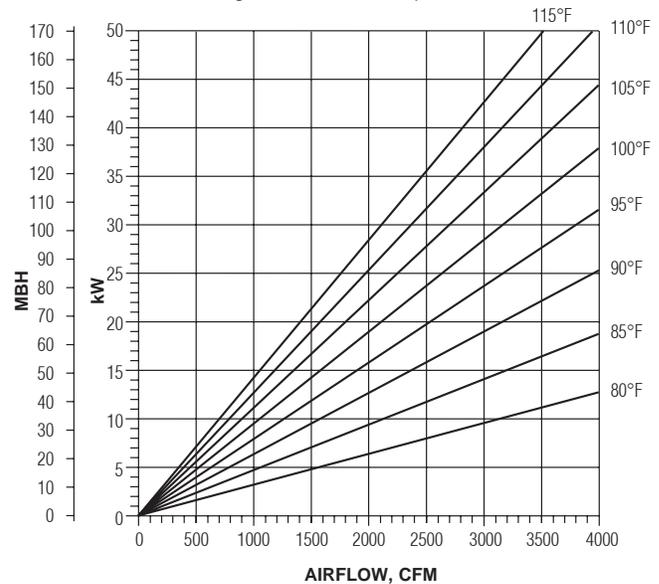
Assuming 70°F (21°C) supply air temperature to the heater, the room airflow can be selected directly from the chart. Start at the left at the design kW. Move horizontally to the desired discharge air temperature. Then, move vertically down to the cfm at the bottom of the chart.

The kW can be selected directly from the chart. Start at the bottom with the design cfm into the room. Move vertically up to the line that represents the desired discharge air temperature. Then, move left to the kW.

The discharge air temperature can also be selected directly from the chart. Start at the bottom with the design cfm into the room. Move to the left side of the chart and find the design kW. Move horizontally and vertically into the chart until the lines intersect. The intersection will be the desired discharge air temperature. Interpolation between the curves is linear.

Heater Selection Chart

Assuming 70°F inlet air temperature at heater.



Diagonal lines are constant output temperature.