

Technical Guide

FOR USE WITH SPLIT SYSTEM COOLING ONLY.
ELECTRIC, HYDRONIC HEAT AND HEAT PUMPS.

Models:

SEHX/CEHX Direct Expansion Cooling/ Electric Heating

SDXW/CDXW Direct Expansion Cooling /Hot Water Heating

SCWE/CCWE Chilled Water Cooling /Electric Heating

SCWW/CCWW Chilled Water Cooling /Hot Water Heating

*SEE PAGE 2 FOR MODEL NOMENCLATURE



Description:

These air handlers are designed for horizontal mounting into a furred down ceiling, and will supply up to 1200 CFM and up to 3 tons of cooling with a DX cooling or heat pump coil, or chilled water coil.

For DX cooling requirements these air handlers can be matched with most manufacturer's condensing units and heat pumps.

The "S" series air handlers are exposed blower type, and the "C" series is equipped with an insulated cabinet over the top and sides. The bottom of the case is open to accommodate a filtered louvered access panel.

The cased units have a knockout for rear return air. Return air duct flanges and filter racks are field supplied.

Standard Features:

- PSC or ECM motor options available.
- Electric heat models are 208/240/1/60.
- Hot water heat models are 115/1/60.
- Water circulating pump is factory installed on hot water heat models.
- Space saving design.
- Galvanized steel blower wheels.
- Prewired for cooling and heating.
- Control transformer.
- Primary and secondary condensate drain pans.
- Easy access for service and maintenance.
- High efficiency copper tubes with aluminum fin coils.

Field Installed Options:

Louvered or non-louvered ceiling access panels.

Factory Installed Options:

R410a Thermostatic expansion valve. Expansion valves are suitable for heat pump application.



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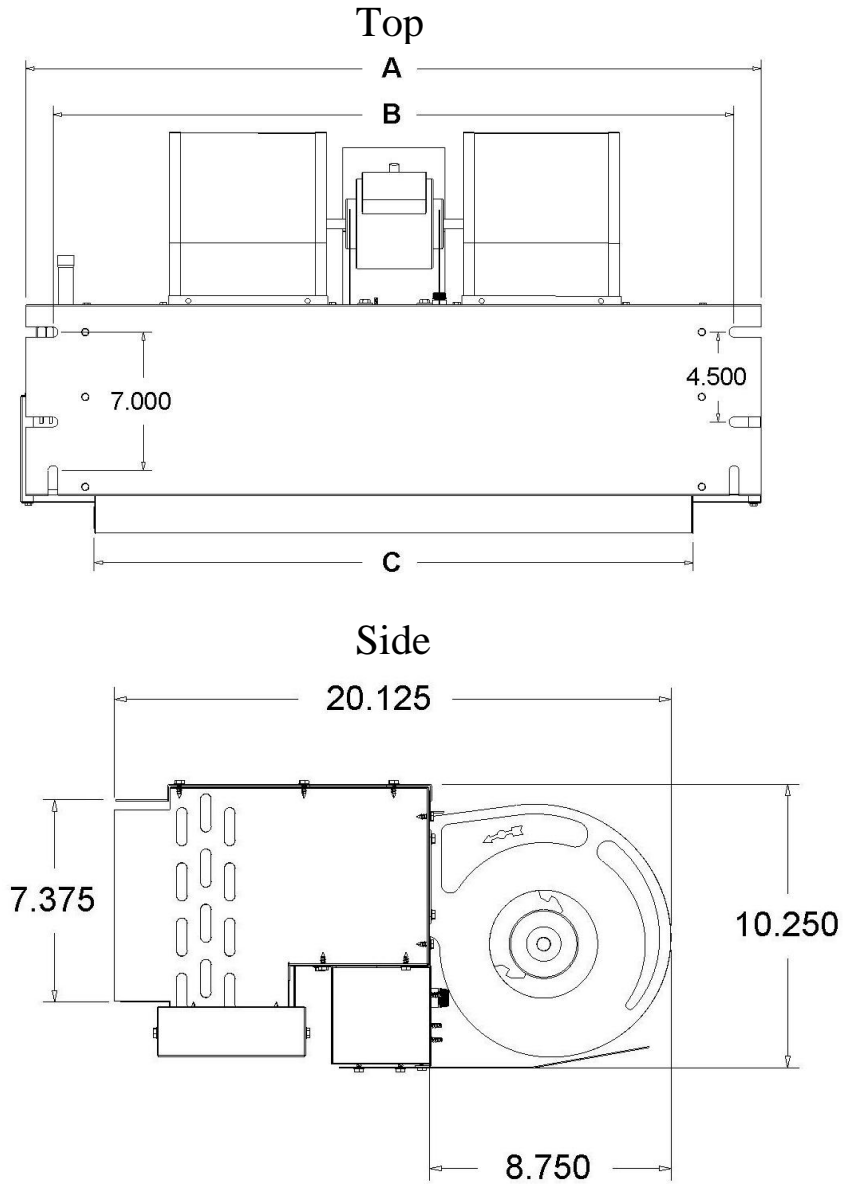
Unit Nomenclature

	S	EHX	- 2 4	- 0 3	- E	D	- 1	C	79
Series	_____								
S - Horizontal Firdown Unit (Uncased)									
C - Horizontal FirDown Unit (Cased)									
Type	_____								
EHX - DX Coil and Electric Heat									
DXW - DX Coil and Hot Water Heat									
CWW-Chilled Water Coil and Hot Water Heat									
CWE - Chilled Water Coil and Electric Heat									
Tons	_____								
Nominal Cooling Capacity									
Heating Capacity	_____								
03 - Electric Heating Capacity (KW)									
26 - Hot Water Heat Capacity (M/BTUH)									
Expansion Device Code	_____								
E - Expansion Valve (Standard)									
Orifice or Expansion Valve Number	_____								
D - TXV4-A (R-410A, 1.5 to 2.5 Ton)									
Y - TXV4-A (R-410A, 3.0 Ton)									
Time Delay Relay (TDR)	_____								
1 - With TDR (Standard)									
Unit Voltage	_____								
A - 115V									
C - 208/240V									
Blower Motor & Wheel Package	_____								
65 - 1/4 HP, 208/240V, PSC, with (2) 6.25 x 8.00									
70 - 1/4 HP, 115V, PSC, with (2) 6.25 x 8.00									
78 - 1/4 HP, 115V, PSC, with (2) 6.25 x 6.88									
79 - 1/4 HP, 240V, PSC, with (2) 6.25 x 6.88									
80 - 1/3 HP, 208/240V, CT, with (2) 7.00 x 8.00									
81 - 1/2 HP, 208/240V, CT, with (2) 7.00 x 9.00									
82 - 1/3 HP, 115V, CT, with (2) 7.00 x 8.00									
83 - 1/2 HP, 115V, CT, with (2) 7.00 x 9.00									



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Physical Dimension Data-Uncased



SEHX, SCWE, SDXW, SCWW Dimensional Table

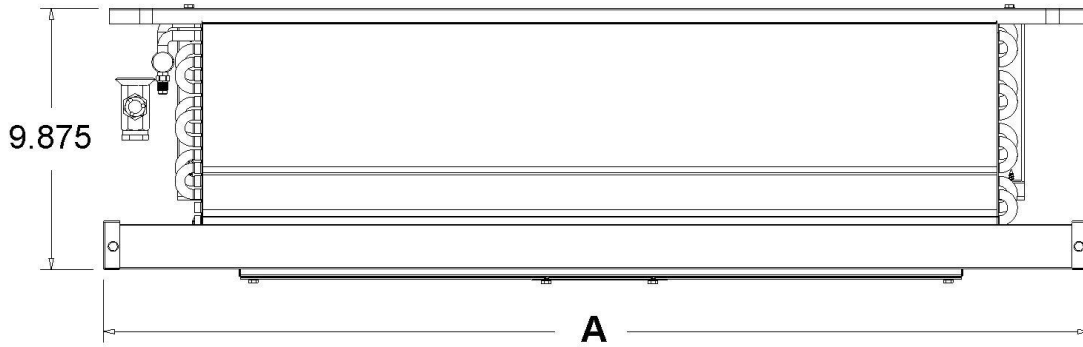
Model	A	B	C
18,19,24	37.00	34.25	30.00
25,30,31	45.00	42.25	38.00
34,35	49.00	46.25	42.00
36,37	56.00	53.25	49.00



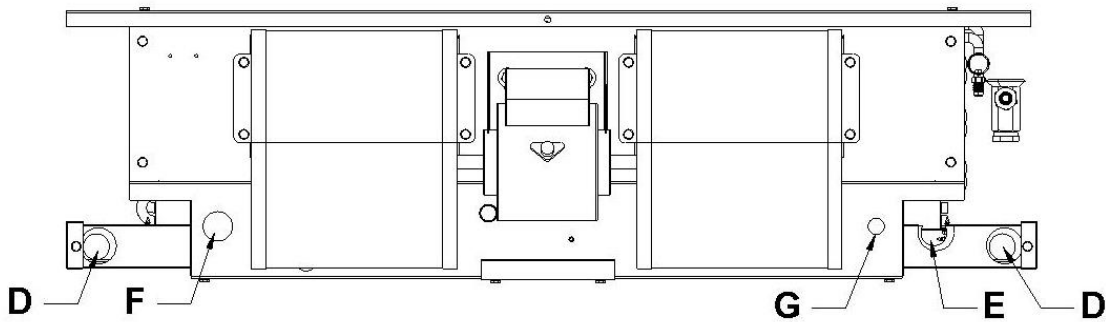
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Physical Dimension Data-Uncased

Front



Rear



- D - 3/4" Male Drain Connection Primary
- E - 3/4" Male Drain Connection Secondary
- F - 7/8" Power Connection
- G - 9/16" Thermostat Connection

SEHX, SCWE, SDXW, SCWW Dimensional Table

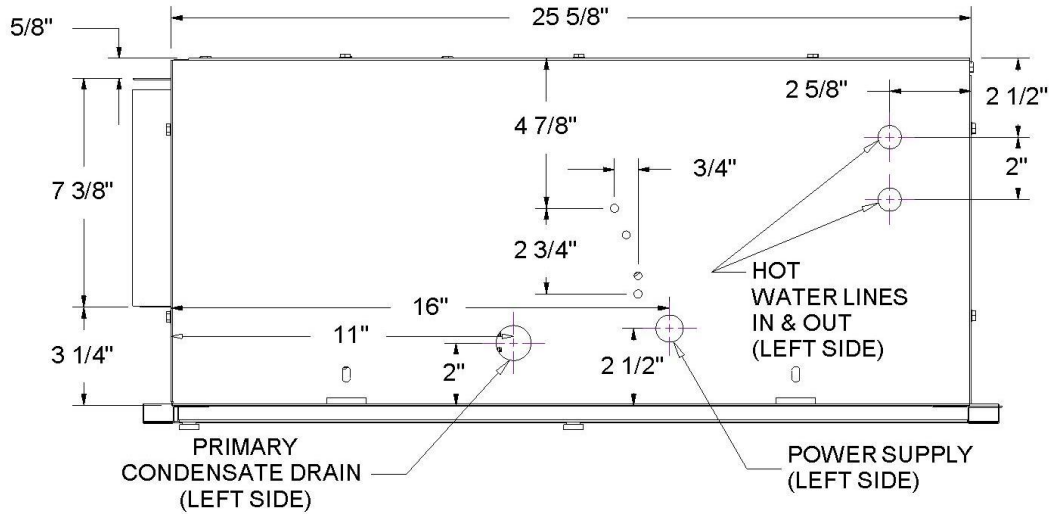
Model	A	B	C
18,19,24	37.00	34.25	30.00
25,30,31	45.00	42.25	38.00
34,35	49.00	46.25	42.00
36,37	56.00	53.25	49.00



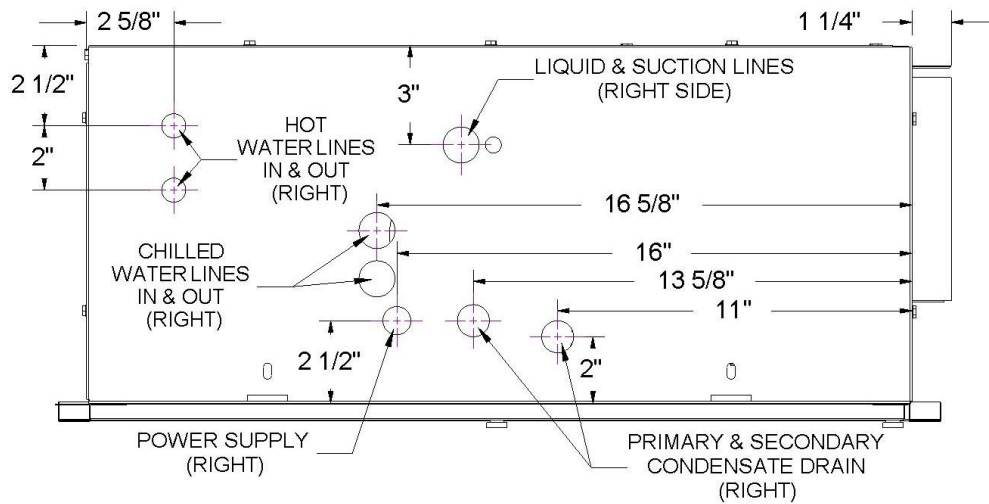
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Cased Dimensional Data

Left Side

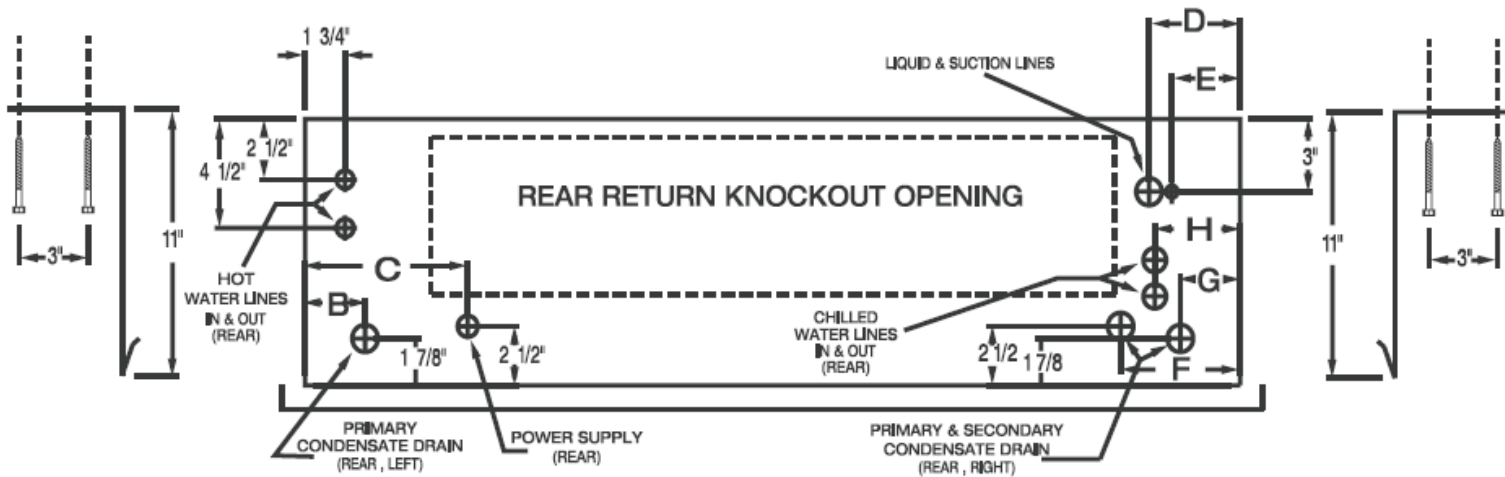
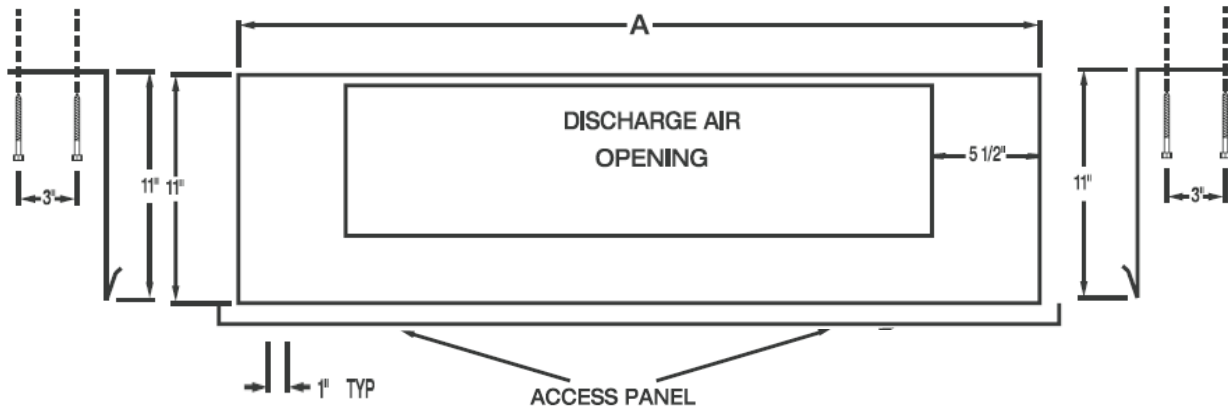


Right Side



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Cased Dimensional Data



Model	A	B	C	D	E	F	G	H
18,19,24	41"	2-5/8"	7-1/8"	4"	3"	5-1/4"	2-5/8"	3-3/4"
25,30,31	47"	2"	10-1/2"	2-1/2"	1-1/2"	4-5/8"	2"	2-11/16"
34,35	53-1/2"	3-1/4"	13-3/4"	3-1/4"	2-3/4"	5-7/8"	3-1/4"	3-15/16"
36,37	60-1/2"	3-1/4"	17-1/2"	3-1/4"	2-3/4"	5-7/8"	3-1/4"	3-15/16"

Discharge Air	
18/19/24	30" x 7-1/4"
25/30/31	38" x 7-1/4"
34,35	42" x 7-1/4"
36,37	49" x 7-1/4"

Rear Return Knockout Opening	
18/19/24	30" x 6-1/2"
25/30/31	38" x 6-1/2"
34,35	42" x 6-1/2"
36,37	49" x 6-1/2"



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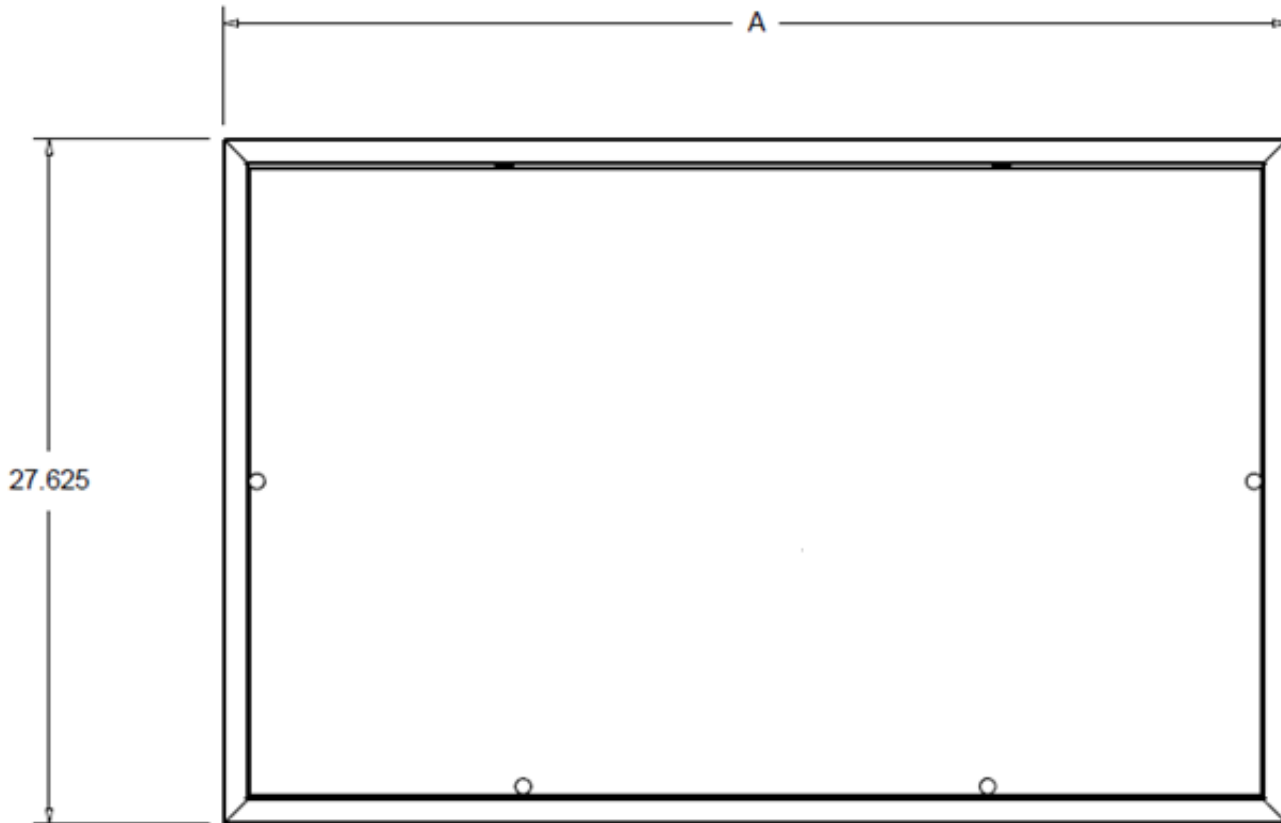
Suntherm Ceiling Access Panels

Ceiling Panels	Description	Shipping Weights
CPNL1	Solid Panel - Fits HEU/C (A body) or C/SEHX-18/19/24	18 LB
CPNL2	Solid Panel - Fits HEU/C (B body) or C/SEHX-25/31	20 LB
CPNL3	Solid Panel - Fits HEU/C (C body) or C/SEHX-34/35	21 LB
CPNL4	Solid Panel - Fits HEU/C (D body) or C/SEHX-36/37	22 LB
CPL1	Louvered Panel - Fits C/SEHX-18/19/24 (PSC motor)	18 LB
CPL2	Louvered Panel - Fits C/SEHX-25/31 (PSC motor)	20 LB
CPL3	Louvered Panel - Fits C/SEHX-34/35 (PSC motor)	21 LB
CPL4	Louvered Panel - Fits C/SEHX-36/37 (PSC motor)	22 LB
HCPL1	Louvered Panel - HEC/U (A body) or C/SEHX18/19/24 with ECM	18 LB
HCPL2	Louvered Panel - HEC/U (B body) or C/SEHX25/31 with ECM	20 LB
HCPL3	Louvered Panel - HEC/U (C body) or C/SEHX34/35 with ECM	21 LB
HCPL4	Louvered Panel - HEC/U (D body) or C/SEHX36/37 with ECM	22 LB



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CPNL Non-Louvered Panel



Model	"A" Dimension
CPNL1	43"
CPNL2	49"
CPNL3	55-1/2"
CPNL4	62-1/2"



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HCPL Louvered Panel



Model	"A" Dimension	Model	Filters
HCPL1	43"	HCPL1	(2) 16x16x1
HCPL2	49"	HCPL2	(2) 16x20x1
HCPL3	55-1/2"	HCPL3	(2) 16x25x1
HCPL4	62-1/2"	HCPL4	(2) 16x25x1



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SEHX, CEHX, SCWE, CCWE ECM Fan Data (5 Row DX)
208/240VAC

Model	Motor HP	DX Rows	CFM @ External Static Pressure (Tap 5)					
			0.10"	0.20"	0.25"	0.30"	0.40"	0.50"
19-**-**-1C80	1/3HP	5 Row	921	876	859	842	788	742
25-**-**-1C81	1/2HP	5 Row	1110	1047	1005	993	925	873
35-**-**-1C81	1/2HP	5 Row	1369	1307	1262	1226	1157	1089
37-**-**-1C81	1/2HP	5 Row	1415	1364	1321	1287	1220	1155
Model	Motor HP	DX Rows	CFM @ External Static Pressure (Tap 4)					
			0.10"	0.20"	0.25"	0.30"	0.40"	0.50"
19-**-**-1C80	1/3HP	5 Row	821	777	754	738	689	640
25-**-**-1C81	1/2HP	5 Row	1010	932	896	877	821	758
35-**-**-1C81	1/2HP	5 Row	1262	1200	1162	1135	1077	1010
37-**-**-1C81	1/2HP	5 Row	1277	1215	1204	1166	1098	1045
Model	Motor HP	DX Rows	CFM @ External Static Pressure (Tap 3)					
			0.10"	0.20"	0.25"	0.30"	0.40"	0.50"
19-**-**-1C80	1/3HP	5 Row	761	722	697	676	626	578
25-**-**-1C81	1/2HP	5 Row	896	818	789	777	694	641
35-**-**-1C81	1/2HP	5 Row	1173	1095	1065	1035	965	889
37-**-**-1C81	1/2HP	5 Row	1177	1122	1093	1063	1001	934
Model	Motor HP	DX Rows	CFM @ External Static Pressure (Tap 2)					
			0.10"	0.20"	0.25"	0.30"	0.40"	0.50"
19-**-**-1C80	1/3HP	5 Row	640	583	557	530	478	465
25-**-**-1C81	1/2HP	5 Row	749	680	646	625	550	492
35-**-**-1C81	1/2HP	5 Row	1059	971	951	910	822	749
37-**-**-1C81	1/2HP	5 Row	1069	1001	961	920	855	777
Model	Motor HP	DX Rows	CFM @ External Static Pressure (Tap 1)					
			0.10"	0.20"	0.25"	0.30"	0.40"	0.50"
19-**-**-1C80	1/3HP	5 Row	562	502	478	453	402	352
25-**-**-1C81	1/2HP	5 Row	611	540	497	486	410	352
35-**-**-1C81	1/2HP	5 Row	978	896	852	814	732	677
37-**-**-1C81	1/2HP	5 Row	987	913	870	840	760	698

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SCWW AND CCWW Physical Data (PSC Version)

Model	Motor HP	DX Rows	CW Rows	HW Rows	Suction Conn.	Liquid Conn.	CW Conn.	HW Conn.	Shipping Weight
18	1/4HP	N/A	4	2	N/A	N/A	5/8"	5/8"	93 LB
19	1/4HP	N/A	5	2	N/A	N/A	5/8"	5/8"	100 LB
24	1/4HP	N/A	4	2	N/A	N/A	5/8"	5/8"	93 LB
25	1/4HP	N/A	5	2	N/A	N/A	5/8"	5/8"	108 LB
30	1/4HP	N/A	4	2	N/A	N/A	5/8"	5/8"	103 LB
31	1/4HP	N/A	5	2	N/A	N/A	5/8"	5/8"	108 LB
34	1/4HP	N/A	4	2	N/A	N/A	5/8"	5/8"	107 LB
35	1/4HP	N/A	5	2	N/A	N/A	5/8"	5/8"	113 LB
36	1/4HP	N/A	4	2	N/A	N/A	5/8"	5/8"	118 LB
37	1/4HP	N/A	5	2	N/A	N/A	5/8"	5/8"	123 LB

SEHX AND CEHX Physical Data (ECM Version)

Model	Motor HP	DX Rows	CW Rows	HW Rows	Suction Conn.	Liquid Conn.	CW Conn.	HW Conn.	Shipping Weight
18	1/3HP	4	N/A	N/A	3/4"	3/8"	N/A	N/A	70 LB
19	1/3HP	5	N/A	N/A	3/4"	3/8"	N/A	N/A	75 LB
24	1/3HP	4	N/A	N/A	3/4"	3/8"	N/A	N/A	70 LB
25	1/2HP	5	N/A	N/A	3/4"	3/8"	N/A	N/A	85 LB
30	1/2HP	4	N/A	N/A	3/4"	3/8"	N/A	N/A	80 LB
31	1/2HP	5	N/A	N/A	3/4"	3/8"	N/A	N/A	85 LB
34	1/2HP	4	N/A	N/A	3/4"	3/8"	N/A	N/A	84 LB
35	1/2HP	5	N/A	N/A	3/4"	3/8"	N/A	N/A	90 LB
36	1/2HP	4	N/A	N/A	3/4"	3/8"	N/A	N/A	95 LB
37	1/2HP	5	N/A	N/A	3/4"	3/8"	N/A	N/A	100 LB

SDXW AND CDXW Physical Data (ECM Version)

Model	Motor HP	DX Rows	CW Rows	HW Rows	Suction Conn.	Liquid Conn.	CW Conn.	HW Conn.	Shipping Weight
18	1/3HP	4	N/A	2	3/4"	3/8"	N/A	5/8"	102 LB
19	1/3HP	5	N/A	2	3/4"	3/8"	N/A	5/8"	107 LB
24	1/3HP	4	N/A	2	3/4"	3/8"	N/A	5/8"	102 LB
25	1/2HP	5	N/A	2	3/4"	3/8"	N/A	5/8"	117 LB
30	1/2HP	4	N/A	2	3/4"	3/8"	N/A	5/8"	112 LB
31	1/2HP	5	N/A	2	3/4"	3/8"	N/A	5/8"	117 LB
34	1/2HP	4	N/A	2	3/4"	3/8"	N/A	5/8"	116 LB
35	1/2HP	5	N/A	2	3/4"	3/8"	N/A	5/8"	122 LB
36	1/2HP	4	N/A	2	3/4"	3/8"	N/A	5/8"	127 LB
37	1/2HP	5	N/A	2	3/4"	3/8"	N/A	5/8"	132 LB

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SCWE AND CCWE Physical Data (ECM Version)

Model	Motor HP	DX Rows	CW Rows	HW Rows	Suction Conn.	Liquid Conn.	CW Conn.	HW Conn.	Shipping Weight
18	1/3HP	N/A	4	N/A	N/A	N/A	5/8"	N/A	70 LB
19	1/3HP	N/A	5	N/A	N/A	N/A	5/8"	N/A	75 LB
24	1/3HP	N/A	4	N/A	N/A	N/A	5/8"	N/A	70 LB
25	1/2HP	N/A	5	N/A	N/A	N/A	5/8"	N/A	85 LB
30	1/2HP	N/A	4	N/A	N/A	N/A	5/8"	N/A	80 LB
31	1/2HP	N/A	5	N/A	N/A	N/A	5/8"	N/A	85 LB
34	1/2HP	N/A	4	N/A	N/A	N/A	5/8"	N/A	84 LB
35	1/2HP	N/A	5	N/A	N/A	N/A	5/8"	N/A	90 LB
36	1/2HP	N/A	4	N/A	N/A	N/A	5/8"	N/A	95 LB
37	1/2HP	N/A	5	N/A	N/A	N/A	5/8"	N/A	100 LB

SCWW AND CCWW Physical data (ECM Version)

Model	Motor HP	DX Rows	CW Rows	HW Rows	Suction Conn.	Liquid Conn.	CW Conn.	HW Conn.	Shipping Weight
18	1/3HP	N/A	4	2	N/A	N/A	5/8"	5/8"	105 LB
19	1/3HP	N/A	5	2	N/A	N/A	5/8"	5/8"	110 LB
24	1/3HP	N/A	4	2	N/A	N/A	5/8"	5/8"	105 LB
25	1/2HP	N/A	5	2	N/A	N/A	5/8"	5/8"	120 LB
30	1/2HP	N/A	4	2	N/A	N/A	5/8"	5/8"	115 LB
31	1/2HP	N/A	5	2	N/A	N/A	5/8"	5/8"	120 LB
34	1/2HP	N/A	4	2	N/A	N/A	5/8"	5/8"	119 LB
35	1/2HP	N/A	5	2	N/A	N/A	5/8"	5/8"	125 LB
36	1/2HP	N/A	4	2	N/A	N/A	5/8"	5/8"	130 LB
37	1/2HP	N/A	5	2	N/A	N/A	5/8"	5/8"	135 LB



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Electric Heat Data

Furnace Model	Motor Code	Motor HP	Volts 1 Ph	Motor Type	Motor Amps 240V	Motor Amps 208V	Electric Heater Data				Total Load					Minimum Circuit Ampacity					Maximum Overcurrent Protection							
							No Circuits	KW 240V	KW 208V	KW Amps 240V	KW Amps 208V	Amps 115V	Amps 208V	Amps 208V	Amps 240V	Amps 240V	MCA 115V	MCA 208V	MCA 208V	MCA 240V	MCA 240V	MOCP 115V	MOCP 208V	MOCP 208V	MOCP 240V	MOCP 240V		
																											Cr 1	Cr 1
SEHX-12/15/18/19/24	-1C79	1/4	208/240	PSC	1.20	1.02	1	0.0	0.0	0.0	0.0	-	1.02	-	1.20	-	-	1.28	-	1.50	-	-	15	-	15	-		
								3.0	2.3	12.5	10.9	-	11.9	-	13.7	-	-	14.9	-	17.1	-	-	15	-	20	-	-	-
								5.0	3.8	20.8	18.2	-	19.2	-	22.0	-	-	24.0	-	27.5	-	-	25	-	30	-	-	-
								6.0	4.5	25.0	21.9	-	22.9	-	26.2	-	-	28.7	-	32.8	-	-	30	-	35	-	-	-
								8.0	6.0	33.3	29.2	-	30.2	-	34.5	-	-	37.8	-	43.1	-	-	40	-	45	-	-	-
SEHX-18/19/24	-1C80	1/3	208/240	CT	0.74	0.85	1	0.0	0.0	0.0	0.0	-	0.85	-	0.74	-	-	1.06	-	0.93	-	-	15	-	15	-		
								3.0	2.3	12.5	10.9	-	11.8	-	13.2	-	-	14.7	-	16.6	-	-	20	-	20	-	-	-
								5.0	3.8	20.8	18.2	-	19.1	-	21.5	-	-	23.8	-	26.9	-	-	25	-	30	-	-	-
								6.0	4.5	25.0	21.9	-	22.8	-	25.7	-	-	28.4	-	32.2	-	-	30	-	35	-	-	-
								8.0	6.0	33.3	29.2	-	30.1	-	34.0	-	-	37.6	-	42.6	-	-	40	-	45	-	-	-
SEHX-25/30/31	-1C65	1/4	208/240	PSC	1.20	1.02	1	0.0	0.0	0.0	0.0	-	1.02	-	1.20	-	-	1.28	-	1.50	-	-	15	-	15	-		
								3.0	2.3	12.5	10.9	-	11.9	-	13.7	-	-	14.9	-	17.1	-	-	20	-	20	-	-	-
								5.0	3.8	20.8	18.2	-	19.2	-	22.0	-	-	24.0	-	27.5	-	-	25	-	30	-	-	-
								6.0	4.5	25.0	21.9	-	22.9	-	26.2	-	-	28.7	-	32.8	-	-	30	-	35	-	-	-
								8.0	6.0	33.3	29.2	-	30.2	-	34.5	-	-	37.8	-	43.1	-	-	40	-	45	-	-	-
SEHX-25/30/31	-1C81	1/2	208/240	CT	0.82	0.94	1	0.0	0.0	0.0	0.0	-	0.94	-	0.82	-	-	1.18	-	1.03	-	-	15	-	15	-		
								3.0	2.3	12.5	10.9	-	11.8	-	13.3	-	-	14.8	-	16.7	-	-	15	-	20	-	-	-
								5.0	3.8	20.8	18.2	-	19.1	-	21.6	-	-	23.9	-	27.0	-	-	25	-	30	-	-	-
								6.0	4.5	25.0	21.9	-	22.8	-	25.8	-	-	28.6	-	32.3	-	-	30	-	35	-	-	-
								8.0	6.0	33.3	29.2	-	30.1	-	34.1	-	-	37.7	-	42.7	-	-	40	-	45	-	-	-
SEHX-34/35	-1C65	1/4	208/240	PSC	1.20	1.02	1	0.0	0.0	0.0	0.0	-	1.02	-	1.20	-	-	1.28	-	1.50	-	-	15	-	15	-		
								3.0	2.3	12.5	10.9	-	11.9	-	13.7	-	-	14.9	-	17.1	-	-	20	-	20	-	-	-
								5.0	3.8	20.8	18.2	-	19.2	-	22.0	-	-	24.0	-	27.5	-	-	25	-	30	-	-	-
								6.0	4.5	25.0	21.9	-	22.9	-	26.2	-	-	28.7	-	32.8	-	-	30	-	35	-	-	-
								8.0	6.0	33.3	29.2	-	30.2	-	34.5	-	-	37.8	-	43.1	-	-	40	-	45	-	-	-
SEHX-34/35	-1C81	1/2	208/240	CT	1.13	1.30	1	0.0	0.0	0.0	0.0	-	1.30	-	1.13	-	-	1.62	-	1.41	-	-	15	-	15	-		
								3.0	2.3	12.5	10.9	-	12.2	-	13.6	-	-	15.2	-	17.0	-	-	20	-	20	-	-	-
								5.0	3.8	20.8	18.2	-	19.5	-	21.9	-	-	24.4	-	27.4	-	-	25	-	30	-	-	-
								6.0	4.5	25.0	21.9	-	23.2	-	26.1	-	-	29.0	-	32.7	-	-	30	-	35	-	-	-
								8.0	6.0	33.3	29.2	-	30.5	-	34.4	-	-	38.1	-	43.0	-	-	40	-	45	-	-	-
SEHX-36/37	-1C65	1/4	208/240	PSC	1.20	1.02	1	0.0	0.0	0.0	0.0	-	1.02	-	1.20	-	-	1.28	-	1.50	-	-	15	-	15	-		
								3.0	2.3	12.5	10.9	-	11.9	-	13.7	-	-	14.9	-	17.1	-	-	20	-	20	-	-	-
								5.0	3.8	20.8	18.2	-	19.2	-	22.0	-	-	24.0	-	27.5	-	-	25	-	30	-	-	-
								6.0	4.5	25.0	21.9	-	22.9	-	26.2	-	-	28.7	-	32.8	-	-	30	-	35	-	-	-
								8.0	6.0	33.3	29.2	-	30.2	-	34.5	-	-	37.8	-	43.1	-	-	40	-	45	-	-	-
SEHX-36/37	-1C81	1/2	208/240	CT	1.09	1.25	1	0.0	0.0	0.0	0.0	-	1.25	-	1.09	-	-	1.57	-	1.36	-	-	15	-	15	-		
								3.0	2.3	12.5	10.9	-	12.2	-	13.6	-	-	15.2	-	17.0	-	-	20	-	20	-	-	-
								5.0	3.8	20.8	18.2	-	19.5	-	21.9	-	-	24.3	-	27.4	-	-	25	-	30	-	-	-
								6.0	4.5	25.0	21.9	-	23.2	-	26.1	-	-	28.9	-	32.6	-	-	30	-	35	-	-	-
								8.0	6.0	33.3	29.2	-	30.5	-	34.4	-	-	38.1	-	43.0	-	-	40	-	45	-	-	-



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