STANDARD COMMERCIAL

SE1000i

Energy Recovery Ventilator

PRODUCT SPECIFICATIONS & TECHNICAL DATA

NOMINAL CAPACITY

500-1000 CFM

CASING – STANDARD

- Double-wall cabinet
- 22-gauge galvanized steel interior and exterior
- Access doors with quarter-turn handles
- 22-gauge galvanized steel drain pan
- Drain Connections: 1″ NPT
- Insulation: 1″ (25 mm)

CASING – OPTIONAL

- Painted white baked enamel outside finish
- Pool Construction: TEFC motors, stainless steel interior, and epoxy-coated fans (NOTE: ERV not recommended for indoor pool applications)
- Removable access panels

MOUNTING – STANDARD

On platform

BLOWERS & MOTORS – STANDARD OPTIONS

Blowers:

- Quantity: 2
- Forward-curved
- Permanently sealed and lubricated ball bearings
- Power transmission by adjustable pulleys and belts

Motors:

- Type: Inverter duty 10:1
- Maximum Power: 2 hp
- Available Voltage:
  - » 120, 208, 230 V / 1ph / 60Hz
  - » 208, 230, 460, 575 V / 3ph / 60Hz

(See table on page 2 for details)

PLATE EXCHANGER OPTIONS

Standard Enthalpy (sensible and latent heat transfer)

Quantity: 1
Pitch: 0.14″ (3.5 mm)
Dimensions: 21-7/32″ x 21-7/32″ x 19-3/8″
(539 mm x 539 mm x 492 mm)

High-Efficiency Enthalpy (sensible and latent heat transfer)

Quantity: 1
Pitch: 0.10″ (2.5 mm)
Dimensions: 21-7/32″ x 21-7/32″ x 19-3/8″
(539 mm x 539 mm x 492 mm)

High-Latent-Transfer Enthalpy (sensible and latent heat transfer)

Quantity: 1
Pitch: 0.10″ (2.5 mm)
Dimensions: 21-7/32″ x 21-7/32″ x 19-3/8″
(539 mm x 539 mm x 492 mm)

FROST PREVENTION/CONTROL

See page 2 for details

ELECTRICAL & CONTROLS – STANDARD

- 24 V double motor contactor with start-stop dry contact
- Non-fused disconnect (NEMA 4)
- 24 V transformer for controls

ELECTRICAL & CONTROLS – OPTIONAL

- Fused disconnect
- 24 VAC, 20 VA power available for accessories

FILTERS – STANDARD

Quantity: 1 supply, 1 exhaust
Type: MERV 8
Dimensions: 18″ x 20″ x 2″ (457 mm x 508 mm x 51 mm)

FILTERS – OPTIONAL

MERV 13 Filters (substitute on supply air circuit only)

WARRANTY

Core Assembly:

- Standard & High-Efficiency Enthalpy: Limited 10-year
- High-Latent-Transfer: Limited 2-year

All Other Covered Components: Limited 2-year

LISTED BY

Intertek

SE1000i Features (Continued)

FROST PREVENTION/CONTROL – OPTIONS

If no defrost mode is selected, it is the customer's responsibility to protect the core from freezing.

Frost control activated by a temperature reference: 14°F (-10°C)

Exhaust Defrost:

- Supply air blower shuts down and outside air damper closes. Warm exhaust air defrosts the core until it is completely defrosted.
- Includes motorized and insulated damper on fresh air intake (OA)

OPTIONAL COMPONENTS

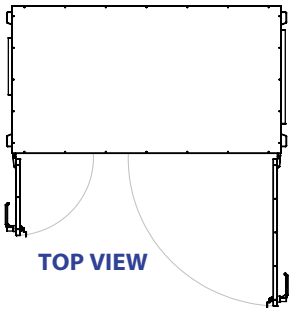
- Motorized and insulated damper for exhaust port (EA)
- Non-insulated backdraft damper for exhaust port (EA)
- Motorized and insulated damper on fresh air intake (OA) (included with exhaust defrost)

SE1000i Motor & Blower Options*

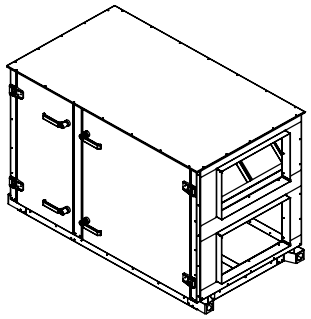
		PARAMETERS														
		HP				VOLTAGE & PHASE							MOTOR SPEED			
		3/4	1	1.5	2	1-PHASE			3-PHASE				SINGLE SPEED	2-SPEED		VARIABLE SPEED	
						120 V	208 V	230 V	208 V	230 V	460 V	575 V		MOTOR	VFD	MOTOR	VFD
MOTOR TYPE & EFFICIENCY†	ODP, EPAct	√	√	√	√	√	√	√					√	√	√		√
	TEFC, EPAct	√	√			√	√	√					√		√		√
	TEFC, Premium			√	√				√	√	√	√	√		√		√

*See page 8 for motor sizing.
†Premium efficiency required when available.

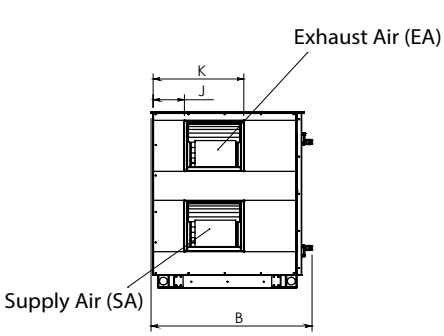
SE1000i Dimensions



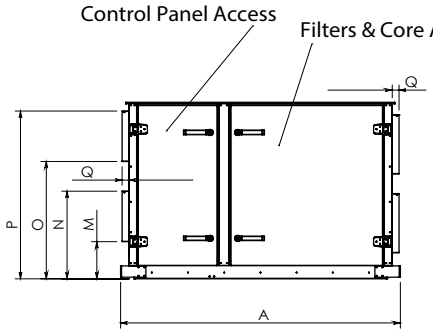
TOP VIEW



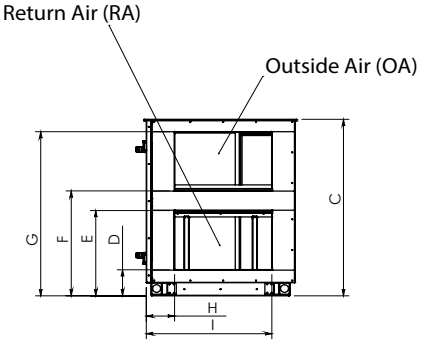
Keep a minimum clearance of 42" (1067 mm) in front the unit and 24" (610 mm) behind it



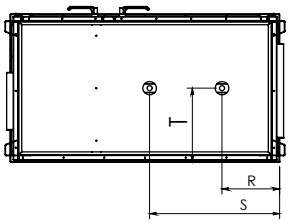
LEFT VIEW



FRONT VIEW



RIGHT VIEW



BOTTOM VIEW

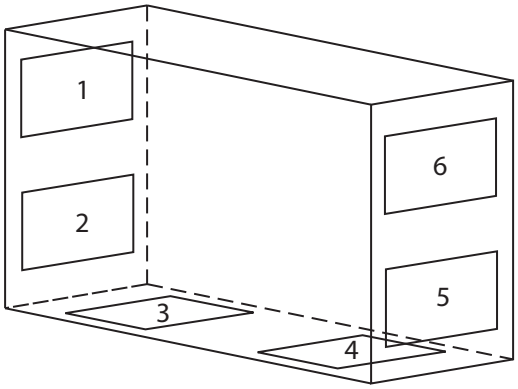
DIMENSIONS in inches (mm)											
Overall			Openings								
A*	B	C	D	E	F	G	H	I	J	K	M
61.88 (1572)	35.63 (905)	40.38 (1026)	6 (152)	19.5 (495)	24 (610)	37.5 (953)	6.25 (159)	27.75 (705)	6.875 (175)	20 (508)	8.5 (216)

Openings						
N	O	P	Q	R	S	T
20 (508)	26.88 (683)	38.38 (975)	1.5 (38)	12.13 (308)	28.13 (714)	16.5 (419)

*Optional motorized and insulated damper for exhaust port (EA) adds 7" (178 mm) to overall unit width

SE1000i Configurations & Weights

AVAILABLE CONFIGURATIONS*
1-2-5-6
1-3-5-6
1-2-4-6
1-3-4-6



DUCT CONNECTION KEY	
1	Exhaust Air (EA)
2, 3	Supply Air (SA)
4, 5	Return Air (RA)
6	Outside Air (OA)

*Mirror Image Cabinet Also Available

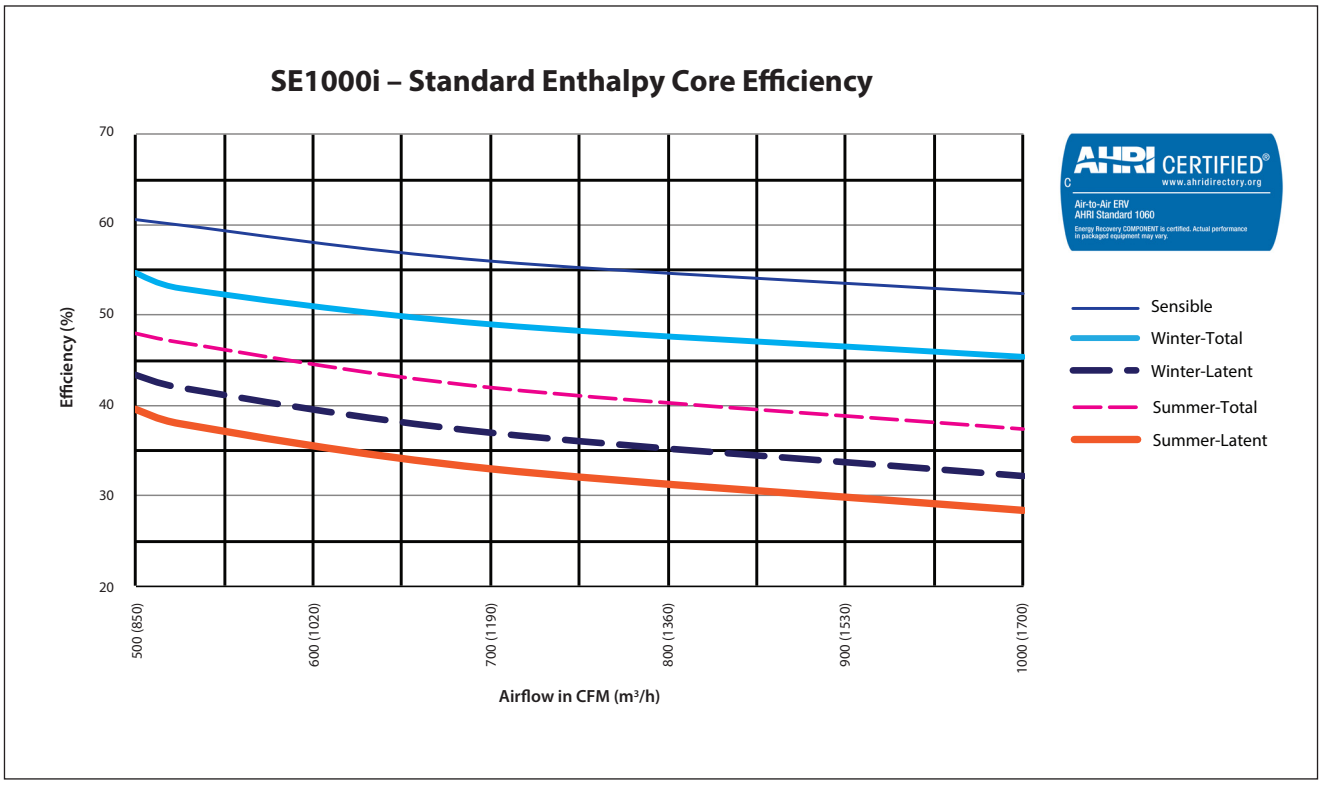
SE1000i WEIGHTS & DIMENSIONS †	
Minimum Unit Weight	557 lbs (253 kg)
Maximum Unit Weight	665 lbs (302 kg)
Minimum Shipping Weight	602 lbs (273 kg)
Maximum Shipping Weight	710 lbs (322 kg)

† Actual weight may vary by ±10%.

Standard Enthalpy Core Performance

AHRI STANDARD CONDITIONS	CONDITIONS	
Outside Air Temperature	**Winter**	**Summer**
Dry Bulb	35°F (1.7°C)	95°F (35°C)
Wet Bulb	33°F (0.6°C)	78°F (25.6°C)
Exhaust Air Temperature	**Winter**	**Summer**
Dry Bulb	70°F (21.1°C)	75°F (23.9°C)
Wet Bulb	58°F (14.4°C)	63°F (17.2°C)

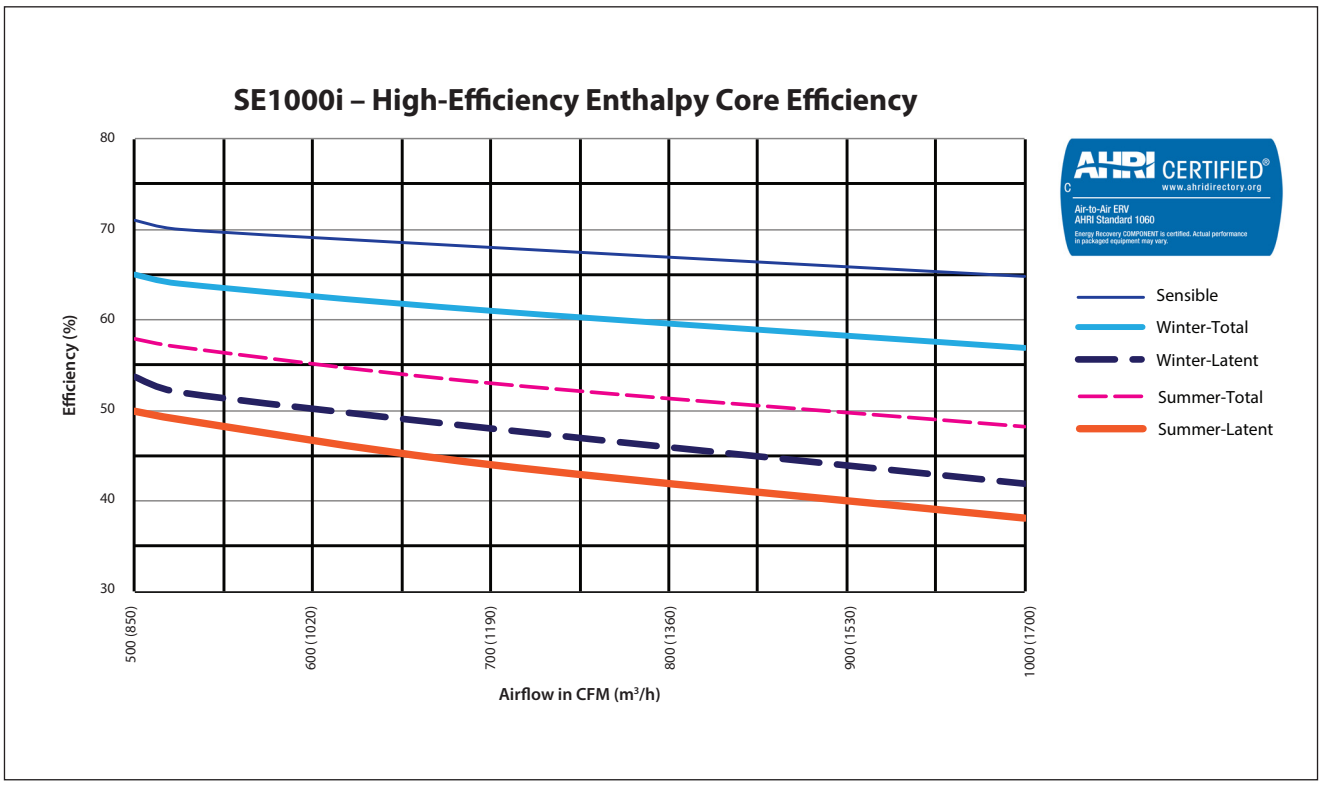
Note: Efficiencies are based on AHRI standard winter conditions.



High-Efficiency Enthalpy Core Performance

AHRI STANDARD CONDITIONS	CONDITIONS	
Outside Air Temperature	**Winter**	**Summer**
Dry Bulb	35°F (1.7°C)	95°F (35°C)
Wet Bulb	33°F (0.6°C)	78°F (25.6°C)
Exhaust Air Temperature	**Winter**	**Summer**
Dry Bulb	70°F (21.1°C)	75°F (23.9°C)
Wet Bulb	58°F (14.4°C)	63°F (17.2°C)

Note: Efficiencies are based on AHRI standard winter conditions.

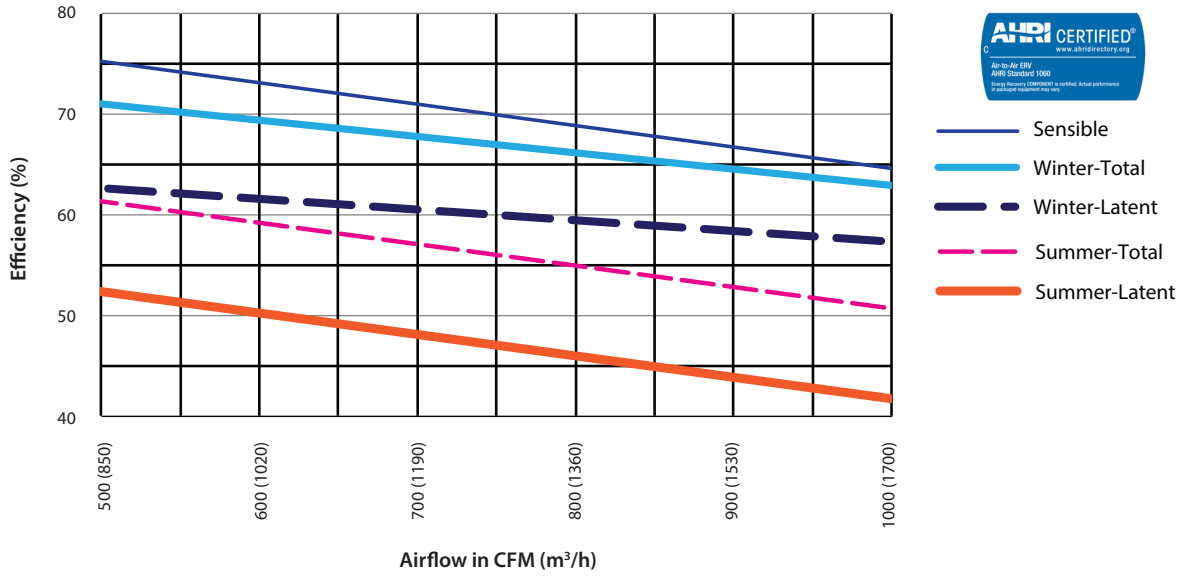


High-Latent-Transfer Enthalpy Core Performance

AHRI STANDARD CONDITIONS	CONDITIONS	
Outside Air Temperature	**Winter**	**Summer**
Dry Bulb	35°F (1.7°C)	95°F (35°C)
Wet Bulb	33°F (0.6°C)	78°F (25.6°C)
Exhaust Air Temperature	**Winter**	**Summer**
Dry Bulb	70°F (21.1°C)	75°F (23.9°C)
Wet Bulb	58°F (14.4°C)	63°F (17.2°C)

Note: Efficiencies are based on AHRI standard winter conditions.

SE1000i – High-Latent-Transfer Enthalpy Core Efficiency



Motor Selection – Standard Enthalpy Core

SUPPLY/EXHAUST																				
MOTOR	CFM (m^3/h)	EXTERNAL STATIC PRESSURE (inH_20) - SUPPLY/EXHAUST																		MOTOR
		0.25 (60 Pa)			0.50 (125 Pa)			0.75 (185 Pa)			1.00 (250 Pa)			1.25 (310 Pa)			1.50 (375 Pa)			
		RPM	BHP	HP	RPM	BHP	HP	RPM	BHP	HP	RPM	BHP	HP	RPM	BHP	HP	RPM	BHP	HP	
3/4 hp	500 (850)	917	0.14	0.17	1057	0.19	0.23	1179	0.25	0.30	1287	0.32	0.38	1385	0.38	0.46	1476	0.45	0.54	3/4 hp
	600 (1020)	983	0.18	0.22	1117	0.24	0.29	1235	0.31	0.37	1341	0.38	0.46	1437	0.45	0.54	1527	0.53	0.64	
	700 (1190)	1042	0.23	0.28	1173	0.30	0.36	1288	0.37	0.44	1392	0.45	0.54	1487	0.53	0.64	1576	0.62	0.74	
	800 (1360)	1099	0.28	0.34	1231	0.37	0.44	1343	0.45	0.54	1445	0.54	0.65	1538	0.62	0.74	1626	0.71	0.85	1 hp
	900 (1530)	1151	0.34	0.41	1281	0.44	0.53	1394	0.53	0.64	1495	0.62	0.74	1587	0.72	0.86	1673	0.82	0.98	
	1000 (1700)	1199	0.41	0.49	1326	0.51	0.61	1439	0.61	0.73	1541	0.72	0.86	1633	0.82	0.98	1718	0.93	1.12	1.5 hp

Motor Selection – High-Efficiency Enthalpy Core

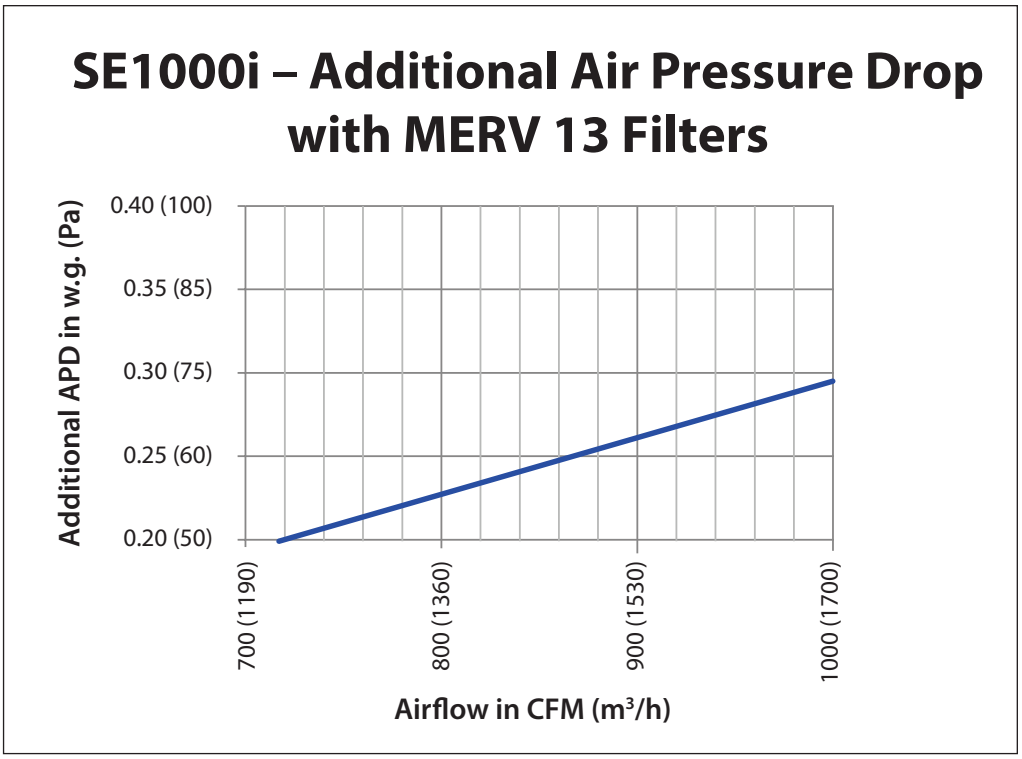
SUPPLY/EXHAUST																				
MOTOR	CFM (m^3/h)	EXTERNAL STATIC PRESSURE (inH_20) - SUPPLY/EXHAUST																		MOTOR
		0.25 (60 Pa)			0.50 (125 Pa)			0.75 (185 Pa)			1.00 (250 Pa)			1.25 (310 Pa)			1.50 (375 Pa)			
		RPM	BHP	HP	RPM	BHP	HP	RPM	BHP	HP	RPM	BHP	HP	RPM	BHP	HP	RPM	BHP	HP	
3/4 hp	500 (850)	1031	0.18	0.22	1155	0.24	0.29	1265	0.30	0.36	1366	0.37	0.44	1458	0.44	0.53	1545	0.51	0.61	3/4 hp
	600 (1020)	1102	0.24	0.29	1221	0.30	0.36	1328	0.37	0.44	1426	0.45	0.54	1516	0.52	0.62	1601	0.60	0.72	
	700 (1190)	1173	0.30	0.36	1288	0.37	0.44	1392	0.45	0.54	1487	0.53	0.64	1576	0.62	0.74	1659	0.70	0.84	1 hp
	800 (1360)	1240	0.37	0.44	1352	0.46	0.55	1453	0.54	0.65	1546	0.63	0.76	1633	0.72	0.86	1714	0.81	0.97	
	900 (1530)	1309	0.46	0.55	1419	0.55	0.66	1517	0.65	0.78	1608	0.74	0.89	1693	0.84	1.01	1773	0.94	1.13	1.5 hp
	1000 (1700)	1372	0.55	0.66	1482	0.66	0.79	1578	0.76	0.91	1667	0.86	1.03	1751	0.97	1.16	1829	1.08	1.30	

Motor Selection – High-Latent-Transfer Enthalpy Core

SUPPLY/EXHAUST																				
MOTOR	CFM (m^3/h)	EXTERNAL STATIC PRESSURE (inH_20) - SUPPLY/EXHAUST																		MOTOR
		0.25 (60 Pa)			0.50 (125 Pa)			0.75 (185 Pa)			1.00 (250 Pa)			1.25 (310 Pa)			1.50 (375 Pa)			
		RPM	BHP	HP	RPM	BHP	HP	RPM	BHP	HP	RPM	BHP	HP	RPM	BHP	HP	RPM	BHP	HP	
3/4 hp	500 (850)	1068	0.20	0.24	1188	0.26	0.31	1295	0.32	0.38	1393	0.39	0.47	1483	0.46	0.55	1568	0.53	0.64	3/4 hp
	600 (1020)	1152	0.26	0.31	1266	0.33	0.40	1369	0.40	0.48	1463	0.48	0.58	1551	0.55	0.66	1634	0.63	0.76	1 hp
	700 (1190)	1226	0.33	0.40	1335	0.41	0.49	1435	0.49	0.59	1527	0.57	0.68	1613	0.65	0.78	1694	0.74	0.89	
	800 (1360)	1295	0.41	0.49	1401	0.50	0.60	1498	0.58	0.70	1588	0.67	0.80	1672	0.76	0.91	1752	0.86	1.03	1.5 hp
	900 (1530)	1364	0.50	0.60	1467	0.60	0.72	1561	0.69	0.83	1649	0.79	0.95	1732	0.89	1.07	1810	0.99	1.19	
	1000 (1700)	1426	0.60	0.72	1530	0.71	0.85	1622	0.81	0.97	1708	0.92	1.10	1789	1.02	1.22	1866	1.13	1.36	

NOTES: hp = bhp x 1.2
Internal static pressure will vary based on selected options.

Additional Air Pressure Drop with MERV 13 Filters



Selection Information

▲ = Standard Feature
☐ = Optional Feature (check the box to select this option)
Send your completed selection to your American ALDES Representative.

MODEL

Series: Standard Commercial (SE)
Nominal Capacity: 500-1000 CFM
Application: Interior (i)

CASING & CORE

Cabinet Finish
- ▲ Galvanized
- ☐ Painted
- ☐ Pool Construction

Duct Configuration (see pg. 4)
- ▲ 1-2-5-6
- ☐ 1-3-5-6
- ☐ 1-2-4-6
- ☐ 1-3-4-6

Mirror Image Cabinet
- ☐ Optional

Access Doors
- ▲ Fixed/Hinged
- ☐ Removable Panels

Plate Exchanger
- ▲ Standard Enthalpy
- ☐ High-Efficiency Enthalpy
- ☐ High-Latent-Transfer Enthalpy

BLOWERS & MOTORS [1]

Supply Blower
- ☐ 3/4 hp
- ☐ 1 hp
- ☐ 1.5 hp
- ☐ 2 hp

Exhaust Blower
- ☐ 3/4 hp
- ☐ 1 hp
- ☐ 1.5 hp
- ☐ 2 hp

Motor Type
- ☐ ODP
- ☐ TEFC

Speed
- ▲ Single Speed
- ☐ 2-Speed
- ☐ 2-Speed VFD
- ☐ Variable Speed Motor
- ☐ Variable Speed VFD

ELECTRICAL REQUIREMENTS [1]

- ☐ 120V/1ph/60Hz
- ☐ 208V/1ph/60Hz
- ☐ 230V/1ph/60Hz
- ☐ 208V/3ph/60Hz
- ☐ 230V/3ph/60Hz
- ☐ 460V/3ph/60Hz
- ☐ 575V/3ph/60Hz

DISCONNECT

- ▲ Non-Fused
- ☐ Fused

FROST CONTROL

- ▲ None
- ☐ Exhaust Defrost [2]

FILTERS (SUPPLY)

- ▲ MERV 8
- ☐ MERV 13

ADD-ONS

- ☐ Motorized & Insulated Damper for OA [2]
- ☐ Motorized & Insulated Damper for EA
- ☐ Non-Insulated Backdraft Damper for EA
- ☐ 24 VAC, 10 VA terminals for OA and/or EA dampers by others
- ☐ 24 VAC, 20 VA power available for accessories by others
- ☐ Spare Filters QTY: _____
- ☐ Spare Belts QTY: _____

[1] See pg. 2 for motor and blower restrictions.
[2] OA Motorized & Insulated Damper included

Project:		**Architect:**	
Location:		**Engineer:**	
Model #:		**Contractor:**	
Quantity:		**Comments:**	
Submitted By:			
Date:			

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