



# STANDARD COMMERCIAL SH1000i Heat 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
- 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

Polypropylene (sensible heat transfer)

- Quantity: 1
- Pitch: 0.16" (4 mm)
- Dimensions: 21" x 21" x 19-3/8"  
(533 mm x 533 mm x 492 mm)



Aluminum (sensible heat transfer)

- Quantity: 1
- Pitch: 0.17" (4.2 mm)
- Dimensions: 19-3/8" x 19-3/8" x 19-3/8"  
(492 mm x 492 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: Limited 10-year
- All Other Covered Components: Limited 2-year

## LISTED BY



## SH1000i 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: 23°F (-5°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)

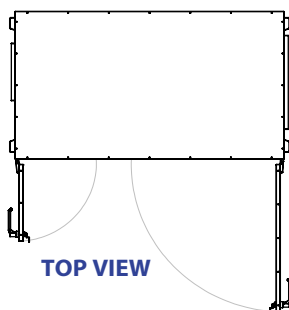
## SH1000i Motor & Blower Options\*

		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 7 for motor sizing.

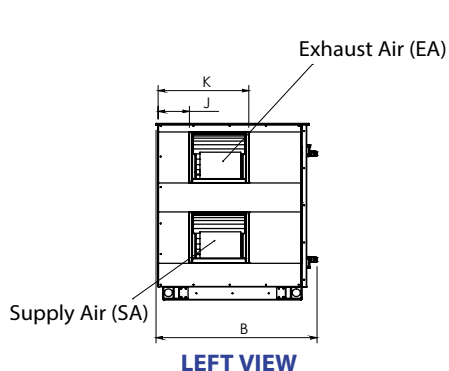
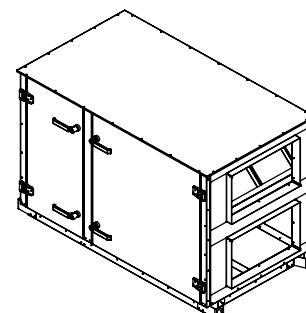
†Premium efficiency required when available.

# SH1000i Dimensions

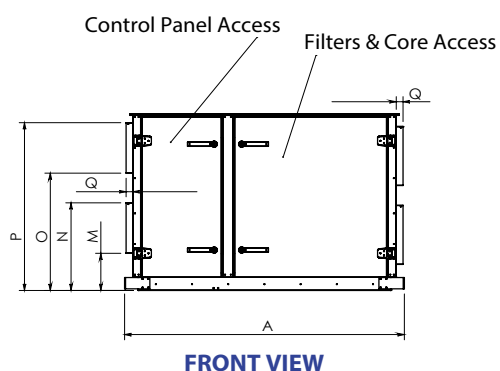


TOP VIEW

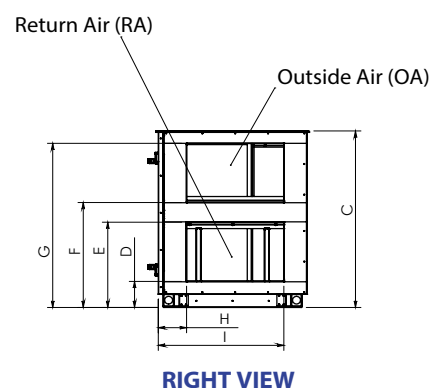
Keep a minimum clearance of 42" (1067 mm) in front the unit and 24" (610 mm) behind it



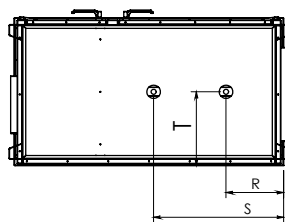
LEFT VIEW



FRONT VIEW



RIGHT VIEW



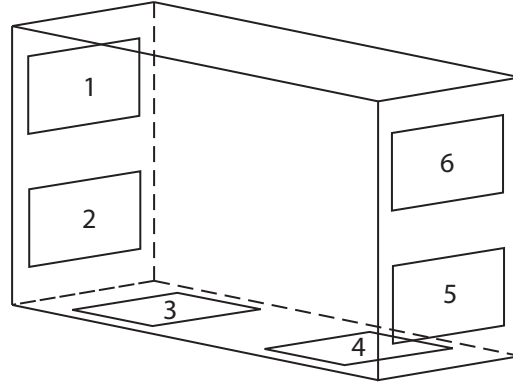
BOTTOM VIEW

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

# SH1000i 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

SH1000i WEIGHTS & DIMENSIONS †		
Core Type	Polypropylene	Aluminum
Minimum Unit Weight	553 lbs (251 kg)	563 lbs (255 kg)
Maximum Unit Weight	661 lbs (300 kg)	671 lbs (304 kg)
Minimum Shipping Weight	598 lbs (271 kg)	608 lbs (276 kg)
Maximum Shipping Weight	706 lbs (320 kg)	716 lbs (325 kg)

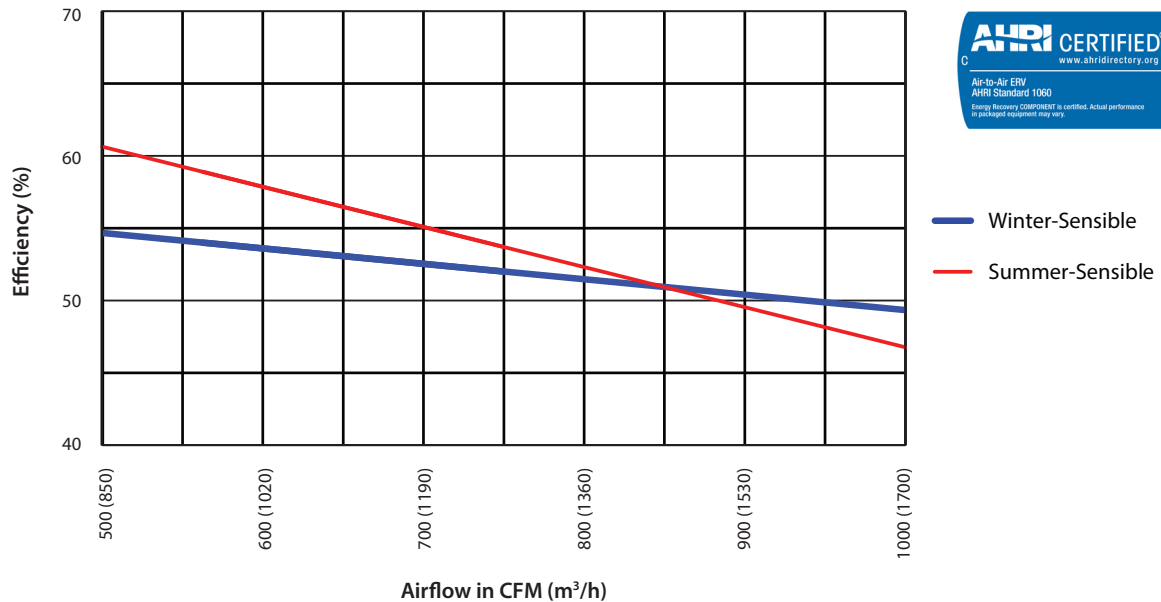
† Actual weight may vary by ±10%.

# Polypropylene 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 conditions.

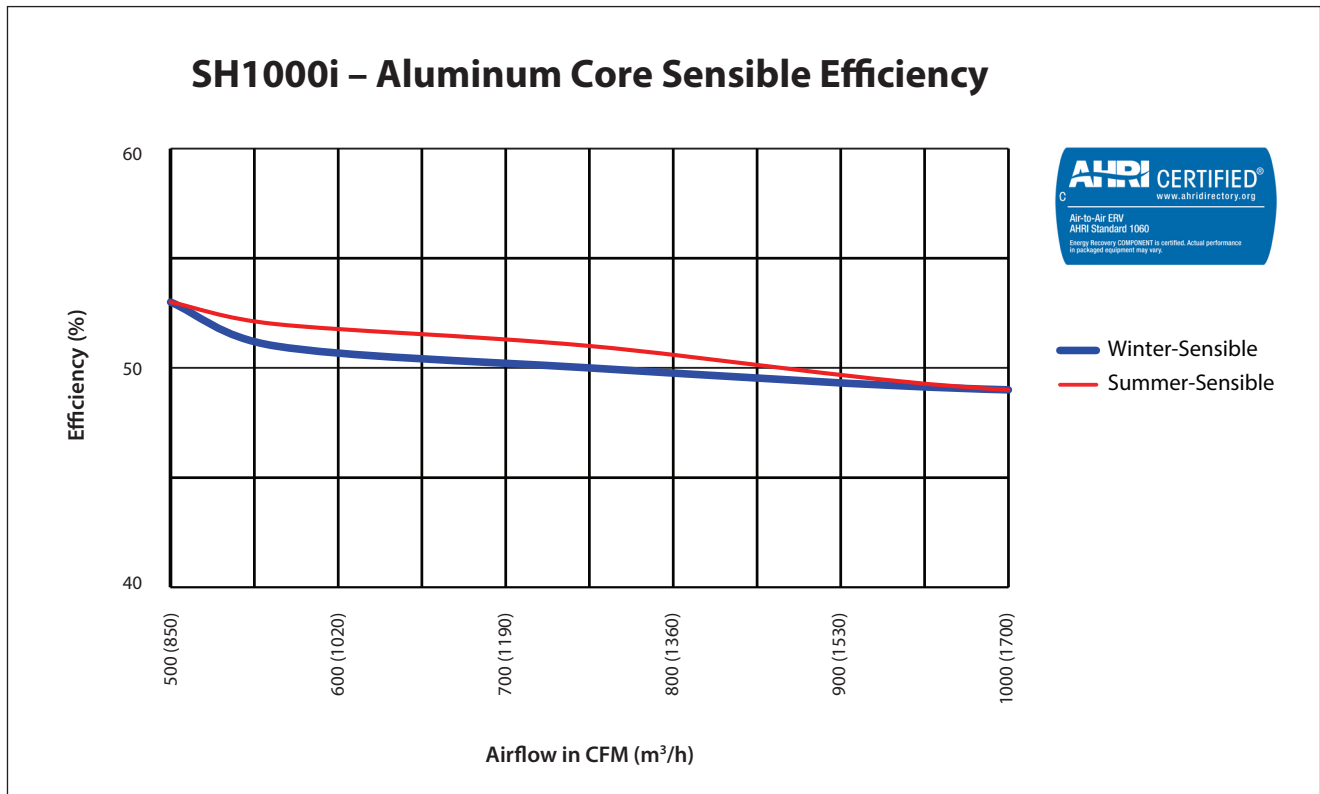
## SH1000i – Polypropylene Core Sensible Efficiency



# Aluminum 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 conditions.



## Motor Selection – Polypropylene Core

SUPPLY																				
MOTOR	CFM (m³/h)	EXTERNAL STATIC PRESSURE (inH <sub>2</sub> O) - SUPPLY																		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)	911	0.14	0.17	1052	0.19	0.23	1174	0.25	0.30	1282	0.31	0.37	1381	0.38	0.46	1473	0.45	0.54	3/4 hp
	600 (1020)	994	0.18	0.22	1127	0.25	0.30	1244	0.32	0.38	1349	0.39	0.47	1445	0.46	0.55	1534	0.54	0.65	
	700 (1190)	1081	0.25	0.30	1207	0.32	0.38	1319	0.40	0.48	1420	0.48	0.58	1513	0.56	0.67	1600	0.64	0.77	1 hp
	800 (1360)	1165	0.32	0.38	1286	0.41	0.49	1393	0.49	0.59	1491	0.58	0.70	1581	0.67	0.80	1665	0.76	0.91	
	900 (1530)	1246	0.41	0.49	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	1.5 hp
	1000 (1700)	1331	0.51	0.61	1444	0.62	0.74	1545	0.72	0.86	1636	0.83	1.00	1722	0.93	1.12	1802	1.04	1.25	

EXHAUST																				
MOTOR	CFM (m³/h)	EXTERNAL STATIC PRESSURE (inH₂O) - 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)	840	0.11	0.13	993	0.17	0.20	1122	0.22	0.26	1236	0.29	0.35	1339	0.35	0.42	1433	0.42	0.50	3/4 hp
	600 (1020)	881	0.14	0.17	1033	0.20	0.24	1161	0.27	0.32	1274	0.34	0.41	1376	0.41	0.49	1470	0.48	0.58	
	700 (1190)	914	0.17	0.20	1071	0.24	0.29	1197	0.31	0.37	1310	0.39	0.47	1412	0.47	0.56	1505	0.55	0.66	
	800 (1360)	942	0.20	0.24	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	
	900 (1530)	975	0.24	0.29	1128	0.33	0.40	1261	0.42	0.50	1377	0.52	0.62	1479	0.61	0.73	1572	0.70	0.84	1 hp
	1000 (1700)	998	0.28	0.34	1150	0.37	0.44	1282	0.47	0.56	1400	0.58	0.70	1507	0.68	0.82	1600	0.78	0.94	

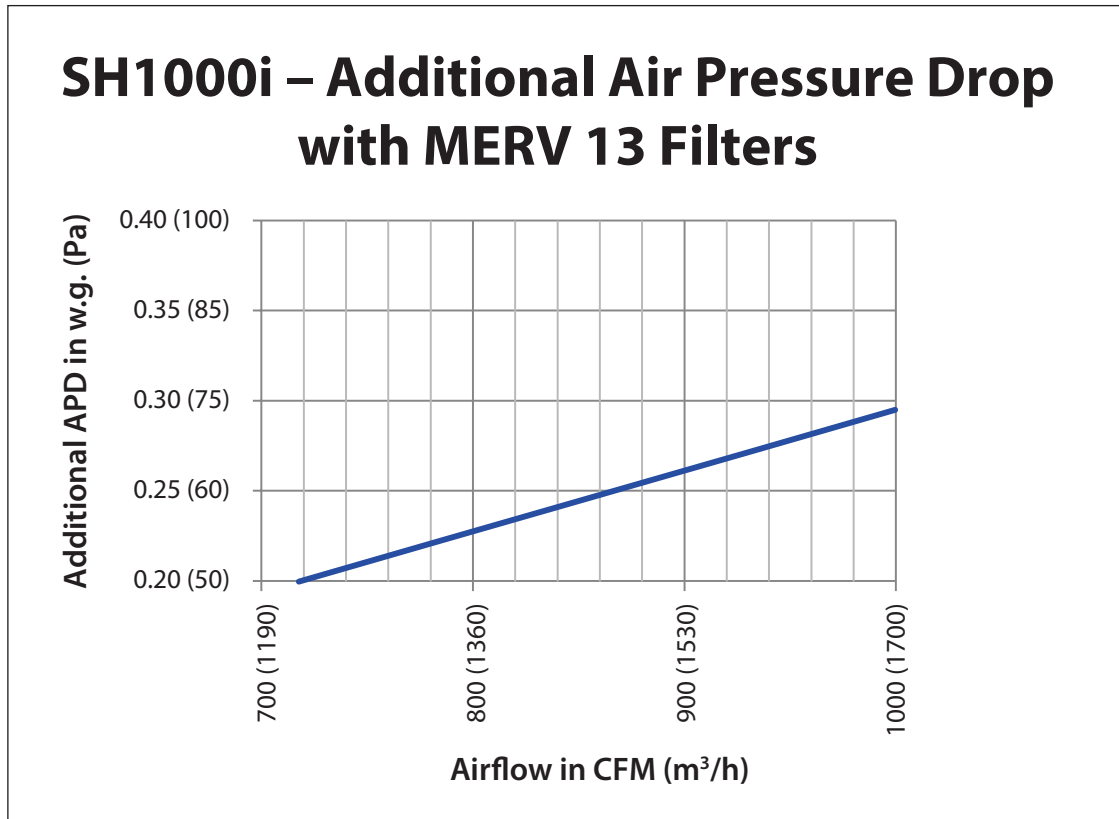
## Motor Selection – Aluminum Core

SUPPLY/EXHAUST																				
MOTOR	CFM (m³/h)	EXTERNAL STATIC PRESSURE (inH₂O) - 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)	1093	0.28	0.34	1226	0.36	0.43	1339	0.45	0.54	1441	0.53	0.64	1535	0.62	0.74	1622	0.71	0.85	1 hp
	900 (1530)	1162	0.35	0.42	1291	0.44	0.53	1403	0.54	0.65	1502	0.63	0.76	1594	0.73	0.88	1679	0.82	0.98	
	1000 (1700)	1226	0.43	0.52	1350	0.53	0.64	1461	0.64	0.77	1560	0.74	0.89	1650	0.84	1.01	1735	0.95	1.14	

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 (SH)

**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

- ▲ Polypropylene  
☐ Aluminum

## BLOWERS & MOTORS <sup>1</sup>

### Supply Blower

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

### Exhaust Blower

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

### Motor Type

- ☐ ODP  
☐ TEFC

### Speed

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

## ELECTRICAL REQUIREMENTS <sup>1</sup>

- ☐ 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 <sup>2</sup>

## FILTERS (SUPPLY)

- ▲ MERV 8      ☐ MERV 13

## ADD-ONS

- ☐ Motorized & Insulated Damper for OA <sup>2</sup>  
☐ 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: \_\_\_\_\_

<sup>1</sup> See pg. 2 for motor and blower restrictions.

<sup>2</sup> OA Motorized & Insulated Damper included

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