

*Interior Model



*Exterior Model

PW40

INSPIRAIR® COMMERCIAL

ENERGY RECOVERY VENTILATOR



Nominal Capacity

2000-4000 CFM
Maximum 2 in.w.g. External Static Pressure

Wheel Exchanger

Wheel (sensible and latent heat transfer)

Casing

- 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" (25 mm) NPT
- Insulation: 1" (25 mm)

(Optional)

- Painted white baked enamel outside finish
- Supply and exhaust hoods with bird screens

Mounting (Standard)

- Standard Platform
- 18-gauge galvanized roof curb (insulation optional)

Electrical & Controls (Standard)

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

Electrical

- Non-Fused disconnect
 - » Optional Fused disconnect
- 24 V transformer for controls

Filters

Quantity: 6 supply, 6 exhaust

Type: MERV 8

Dimensions: 16" x 20" x 2" (407 mm x 508 mm x 305 mm)

(Optional)

MERV 13 Filters (single filter rack for supply/exhaust air circuit)

Blowers & Motors

Blowers:

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

Motors:

- Type: ODP or TEFC, Inverter duty 10:1
- Maximum Power: 5 HP
- Available Voltages:
 - » 208, 230 V / 1ph / 60Hz
 - » 208, 230, 460, 575 V / 3ph / 60Hz

Variable Speed (Optional)

VFD:

- Quantity: 2 (1 per air stream)
- Motor Type: ODP or TEFC
- Blower Type: Forward-curved
- Permanently sealed and lubricated ball bearings

ECM:

- Quantity: 2 (1 per air stream)
- Plenum Type: Backward Inclined
- Permanently sealed and lubricated ball bearings
- Direct Drive
- Available Voltages:
 - » 208, 230, 460 V / 3ph / 60Hz

Frost Prevention/Control (Optional)

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

Frost control activated by a temperature reference:
5°F (-15°C)

Internal Pre-Heat by Electric Coil:

- Powered by unit, SSR control

Internal Pre-Heat by Hot Water Coil:

- Controlled by the unit
- Piping connections in front or back of the unit

Wheel Speed Variation:

- VFD on the wheel

Exhaust Defrost:

- Supply air blower shuts down and outside air damper closes. Warm exhaust air defrosts the wheel for a factory-set duration.
- Includes motorized and insulated damper on fresh air intake (OA)

Recirculation Defrost:

- Exhaust air blower shuts down, outside air damper closes, exhaust air damper closes, and recirculation damper (included) opens. Warm exhaust air defrosts the wheel for a predetermined amount of time (see table at right)
- Includes motorized and insulated damper on fresh air (OA) and exhaust air (EA) intake

Post-Heat Coils

Post-Heat by Electric Coil:

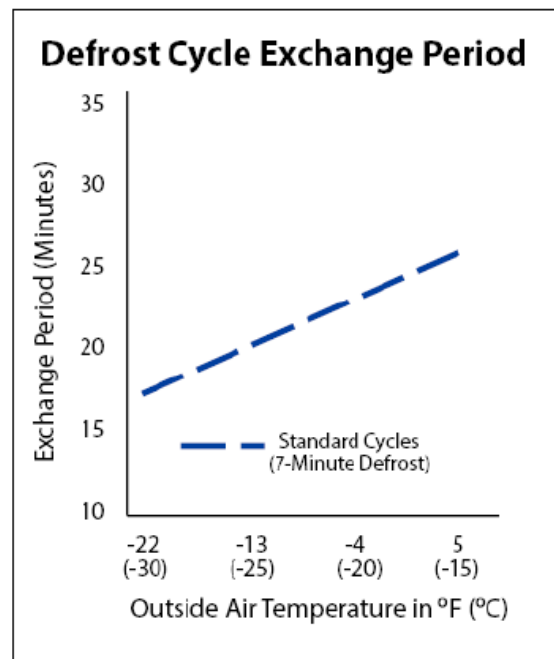
- Powered by unit, SSR control
- 0-10VDC signal by others (standard)
- 0-10VDC signal to maintain supply air temperature (optional)

Post-Heat by Hot Water Coil:

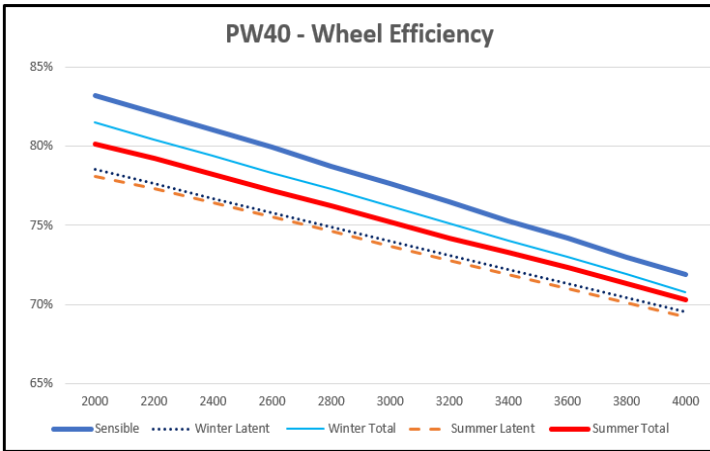
- 0-10VDC signal by others (standard)
- 0-10VDC signal to maintain supply air temperature (optional)

Optional Components

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



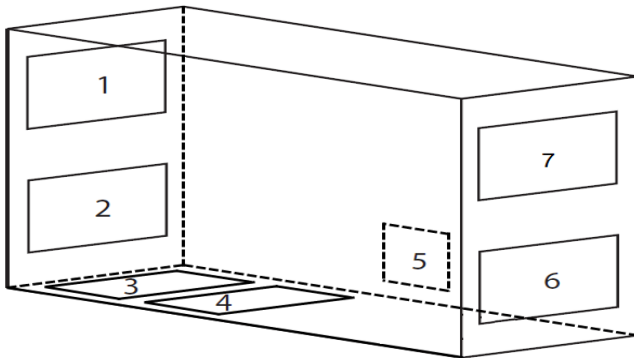
Wheel Performance



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.

PW40 Configurations & Weights



PW15 WEIGHTS & DIMENSIONS †	
Wheel Type	Wheel
Minimum Unit Weight	904 lbs (411 kg)
Maximum Unit Weight	1124 lbs (511 kg)
Minimum Shipping Weight	1009 lbs (459 kg)
Maximum Shipping Weight	1282 lbs (583 kg)

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

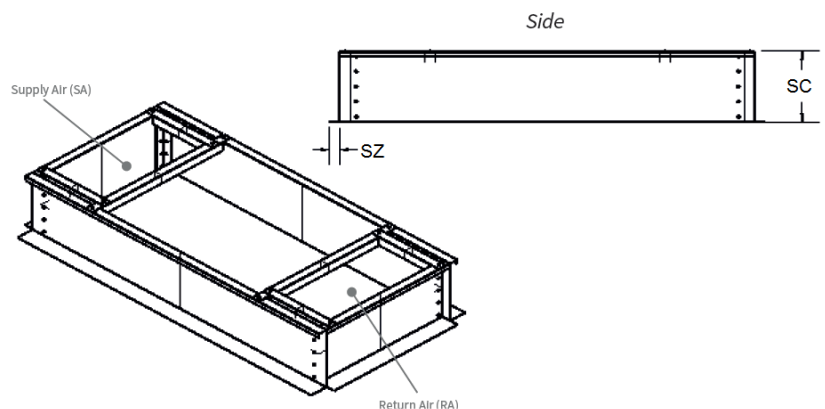
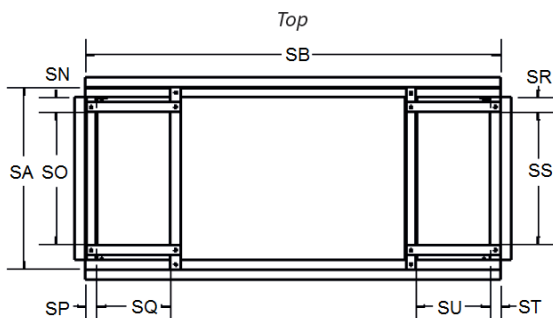
† Actual weight may vary by ±10%.

AVAILABLE CONFIGURATIONS
1-2-6-7 (indoor)
1-2-5-7 (outdoor only)
3-4-5-7 (outdoor only)

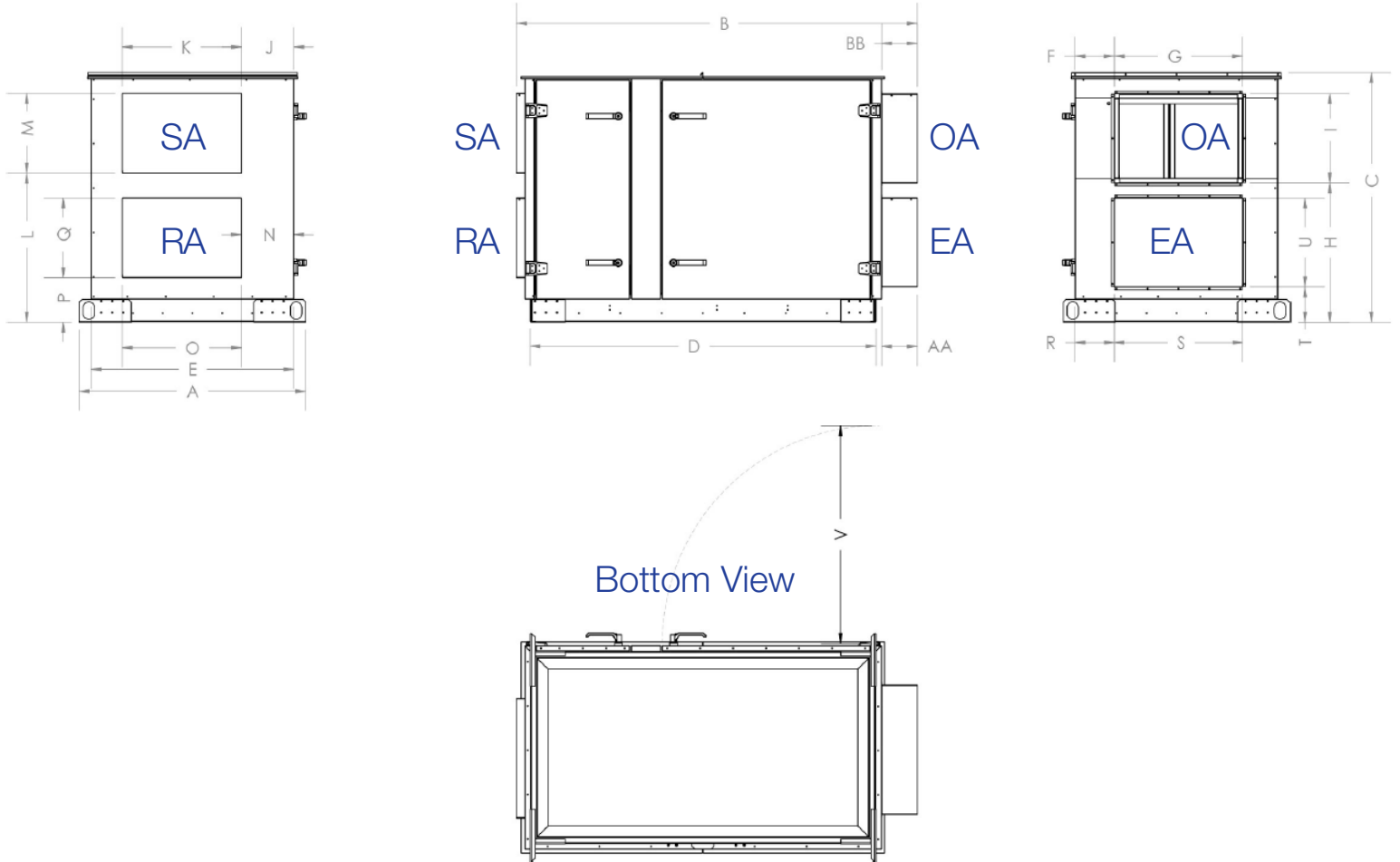
PW40 Roof Curb Dimensions with options (Inches)

	SA	SB*	SC	SN	SO	SP	SQ	SR	SS	ST	SU	SZ
PW40	48	78	14	22	12.25	2.75	13.5	7.75	32.5	41.5	16	2

* Add 20" to width of Roof Curb for each extension



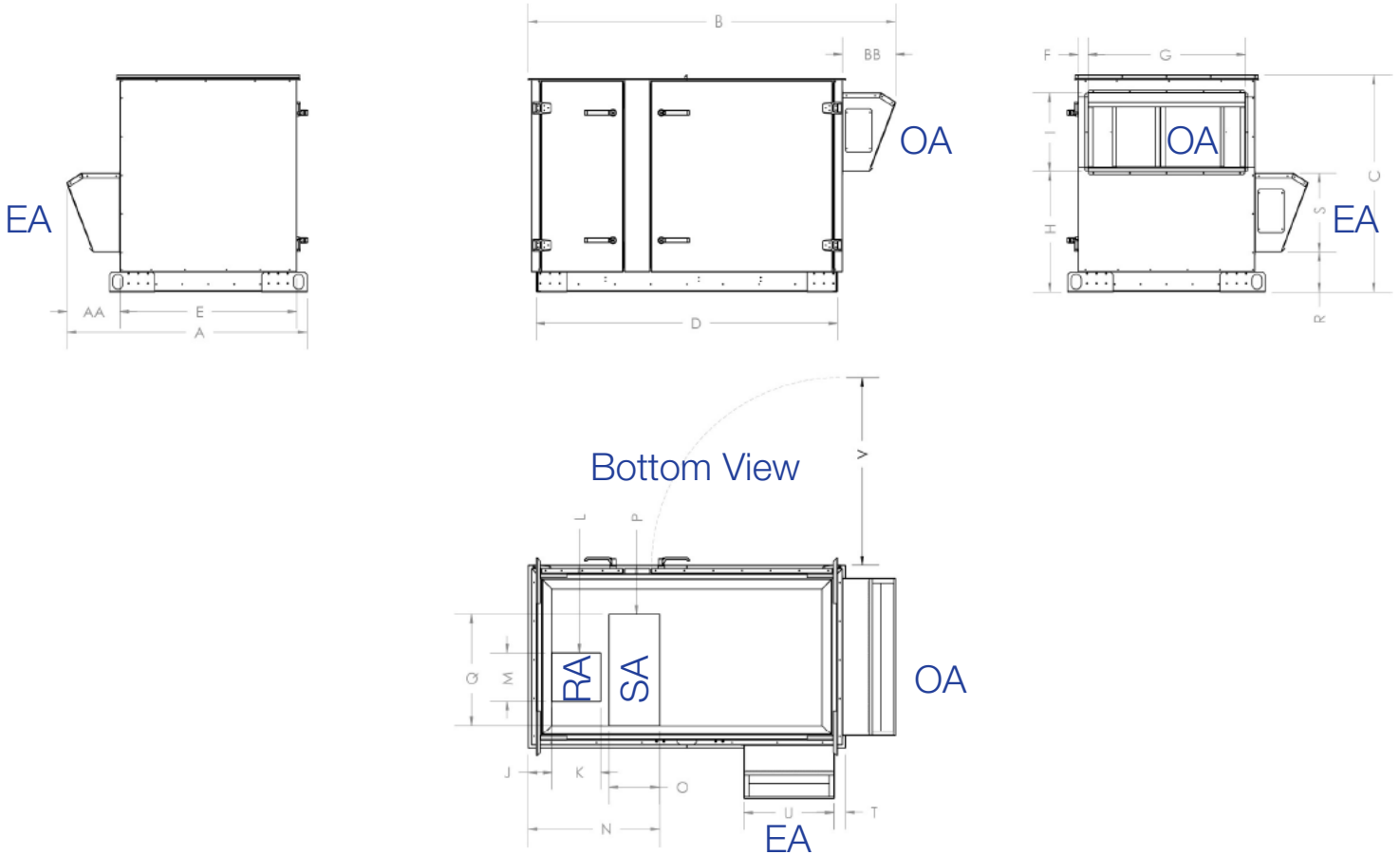
PW40 Indoor Units Dimensions (Standard - Inches)



Dimension with Options (inches)												
A		B			C	D			E		F	
Overall	Bypass	Overall	1 Extension	2 Extensions		Overall	1 Extension	2 Extensions	Overall	Bypass	Overall	Bypass
57.5	N/A	91.5	111.5	N/A	60.75	80.5	100.5	N/A	50.5	N/A	7	N/A
G	H	I	J		K	L	M	N		O	P	Q
			Overall	Bypass				Overall	Bypass			
36.5	38.75	17.25	9.75	N/A	36.5	38.75	17.25	9.25	N/A	36.5	8.5	17.25
R		S	T	U	V	W	X	Y	Z	AA	AB	
Overall	Bypass											
7	N/A	36.5	8.5	17.25	40	N/A	N/A	N/A	N/A	7.5	7.5	

* 1 Extension is used when adding a Post-heat coil

PW40 Outdoor Units Dimensions (Standard - Inches)



Dimension with Options (inches)												
A		B			C	D			E		F	
Overall	Bypass	Overall	1 Extension	2 Extensions		Overall	1 Extension	2 Extensions	Overall	Bypass	Overall	Bypass
66	N/A	94.25	114.25	N/A	60.75	80.5	100.5	N/A	50.5	N/A	2.5	N/A
G	H	I	J		K	L	M	N		O	P	Q
			Overall	Bypass				Overall	Bypass			
44	37.5	19.75	4	N/A	13.75	23.25	12.25	37.75	N/A	16	9	32.5
R		S	T	U	V	W	X	Y	Z	AA	AB	
Overall	Bypass											
10.75	N/A	16.25	1.75	18.75	40	N/A	N/A	N/A	N/A	11	11	

* 1 Extension is used when adding a Post-heat coil

Selection Information

MODEL: PW40
SERIES: InspirAIR® Commercial
NOMINAL CAPACITY: 2000-4000 CFM

Standard Feature
 Optional Feature
(check the box to select this option)

REMEMBER TO: Send your completed selection to your ALDES Representative.

UNIT

CABINET FINISH

- Galvanized
- Painted

DUCT CONFIGURATION

- 1-2-6-7 (Indoor Unit)
- 1-2-5-7 (Outdoor Unit)
- 3-4-5-7 (Outdoor Unit)

CONFIGURATION OPTIONS

- None (Indoor Unit)
- Rooftop Installation (Outdoor Unit)
- Mirror Configuration*
(*Doors are located to the opposite side)

FROST CONTROL

- None
- Exhaust Defrost
- Recirculation Defrost
- Wheel Speed Variation
- Pre-Heat (Electrical Coil)
- Pre-Heat (Hot Water Coil)

HEATING OPTIONS

- None
- Post-Heat (Electrical Coil)
- Post-Heat (Hot Water Coil)

BLOWERS & MOTORS

MOTOR TYPE

- ODP
- TEFC
- EC (208V/3p, 230V/3p and 460V/3p only)

SPEED

- Single Speed
- VFD
- ECM (208V/3p, 230V/3p and 460V/3p only)

FILTERS

- MERV 8
- MERV 13

ELECTRICAL REQUIREMENTS

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

DISCONNECT

- Non-fused
- Fused

OPTIONAL ADD-ONS

- Motorized & Insulated Damper for OA
- Motorized & Insulated Damper for EA
- Non-Insulated Backdraft Damper for EA
- End-Switch on Dampers
- BacNET MSTP Controller
- BacNET IP Controller
- Remote Display Panel (with BACnet Controller Only)
- Programmable Timer (Inside Control Panel or Shipped Loose)
- Free Cooling Management
- Post-Heat Management
- Low Temperature Limit (with Post-Heat Only)
- Carbon Dioxide Sensor (Inside Unit or Wall-Mounted)
- CO2 Management
- Dry Contact For Dirty Filter Alarm
- Independent Motor Management
- Low Airflow Limit Switch
- Phase-Loss Detection
- Fan Interlock on Exhaust
- Relative Humidity Sensor
- Wheel Rotation Detection Sensor
- Mechanical Purge (Between 5° to 15°) _____
- MERV 8 Filter Set (Spare Filter Set)
- MERV 13 Filter Set (Spare Filter Set)
- Spare Belts QTY: _____

OPERATING CONDITIONS

REQUIRED AIRFLOW (CFM) _____

EXTERNAL STATIC PRESSURE (IN.W.G.) _____

PROJECT LOCATION (CITY/TOWN) _____

For more information, contact your Aldes sales advisor, visit aldes-na.com, call 1.800.255.7749, or find us on

