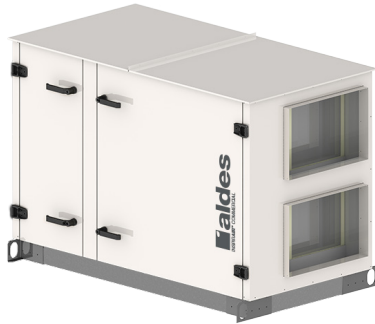




PW40

INSPIRAIR® COMMERCIAL

ENERGY RECOVERY VENTILATOR



*Interior Model



*Exterior Model



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:

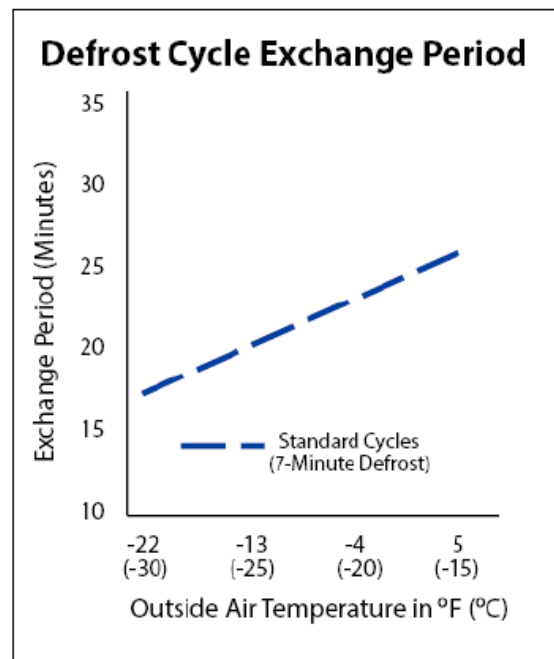
- Powered by unit, SSR control
- 0-10VDC signal by others (standard)
- 0-10VDC signal to maintain supply air temperature (optional)

Post-Heat by Hot Water Coil:

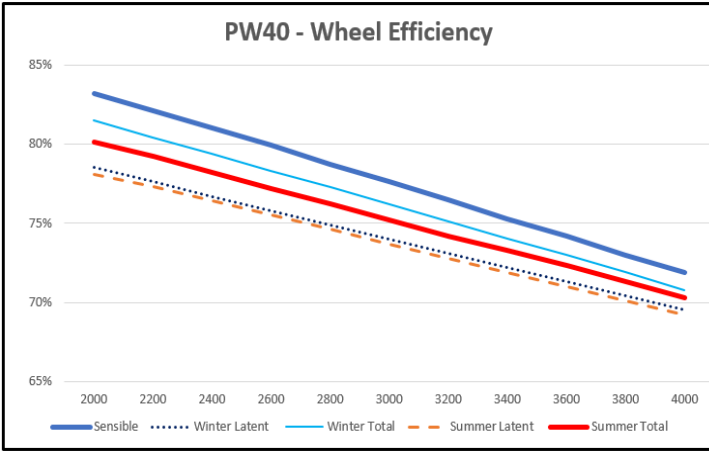
- 0-10VDC signal by others (standard)
- 0-10VDC signal to maintain supply air temperature (optional)

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)



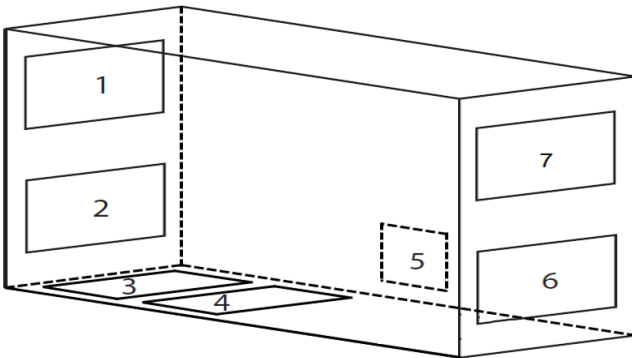
Wheel Performance



| 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 (5583 kg) |

† Actual weight may vary by ±10%.

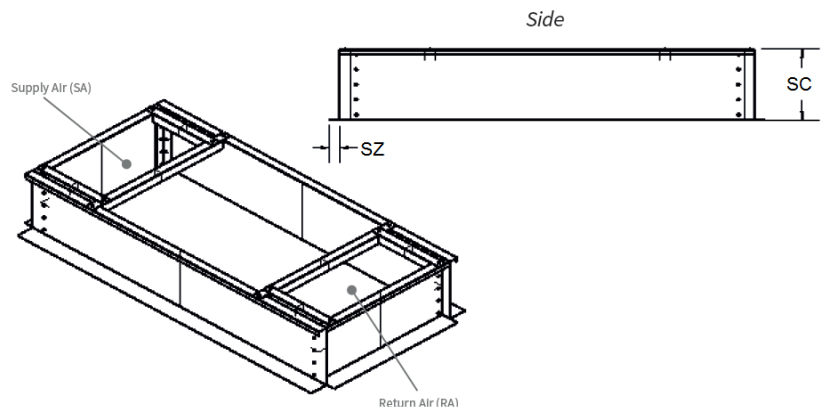
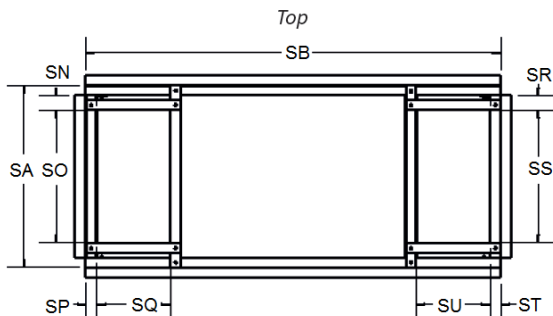
| DUCT CONNECTION KEY | |
|---------------------|------------------|
| 1,3 | Supply Air (SA) |
| 2,4 | Return Air (RA) |
| 5,6 | Exhaust Air (EA) |
| 7 | Outside Air (OA) |

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

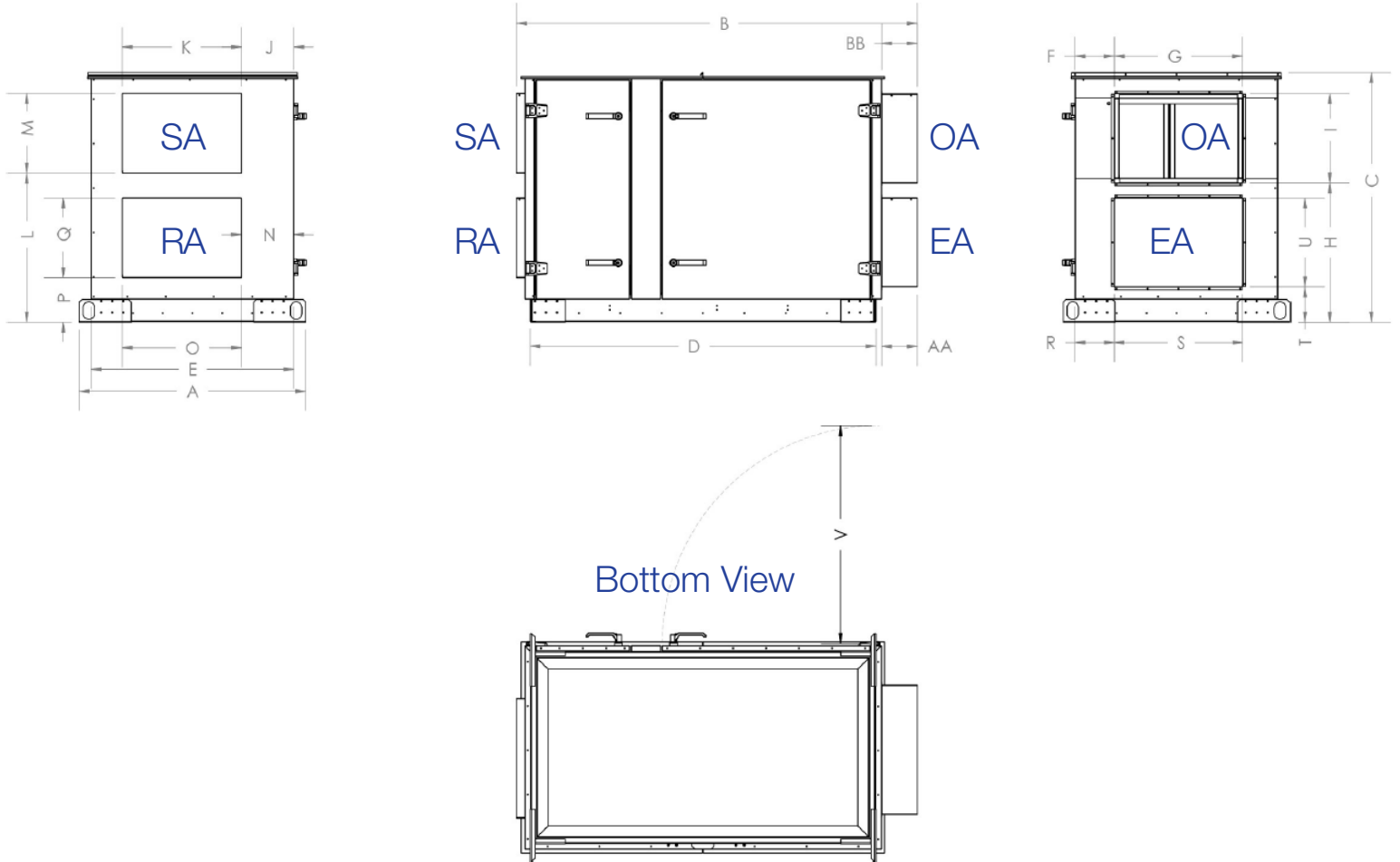
PW40 Roof Curb Dimensions with options (Inches)

| | 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



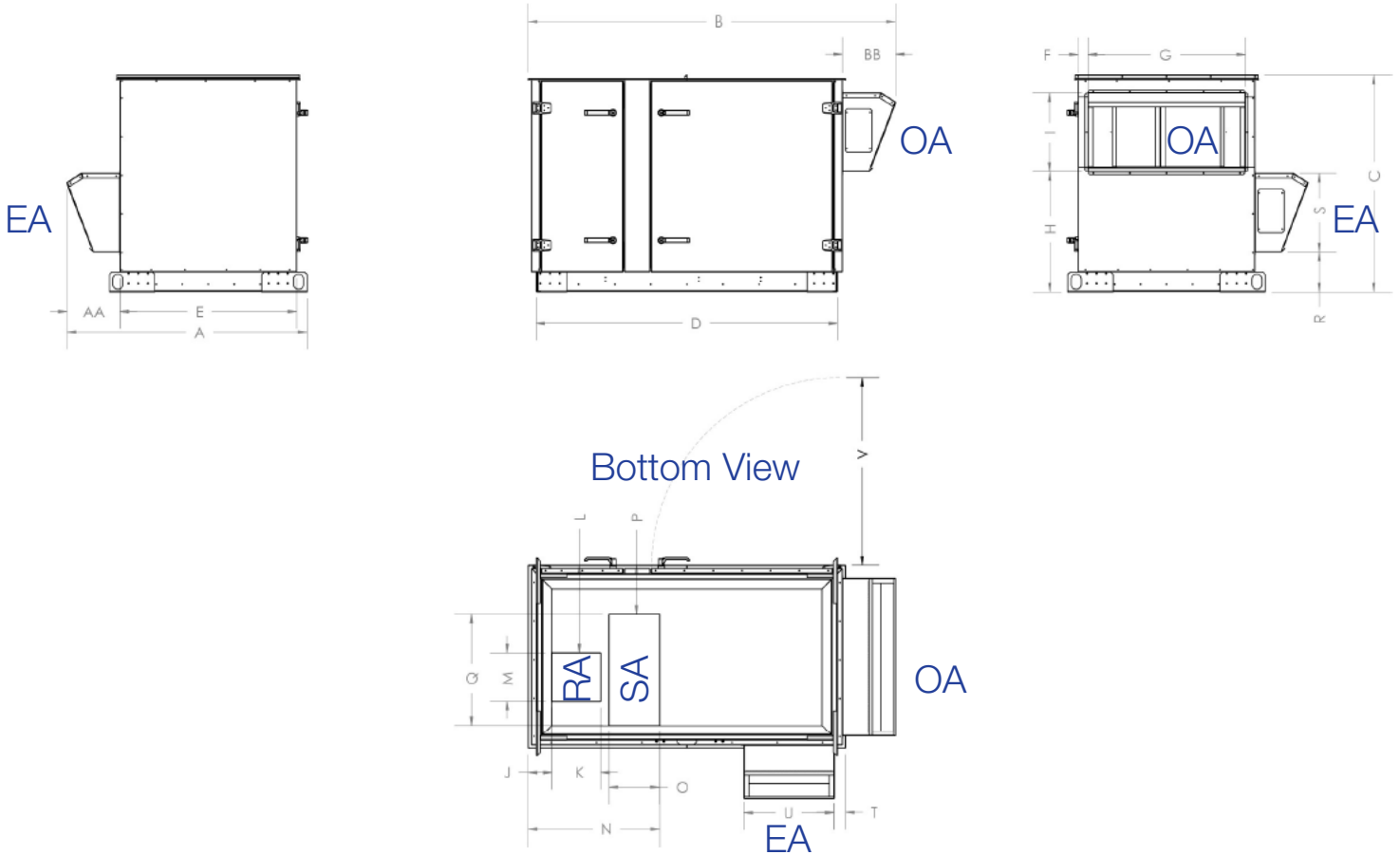
PW40 Indoor Units Dimensions (Standard - Inches)



| 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