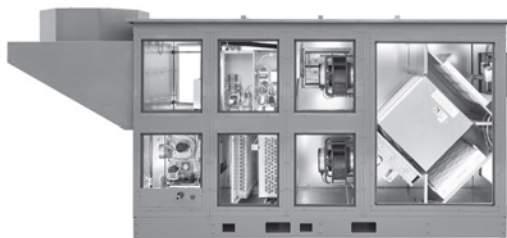


# DN 3RT

## ROOFTOP UNIT

Dedicated Outside Air System  
Unit with Energy Recovery

**NEW**



DN2RT, ERV + DX + HGRH + GH (BT) shown

Energy Recovery Core is AHRI Certified®



**ERV** - Energy Recovery Ventilator

**EH** - Electric Heater

**HC** - Heating Coil

**GH** - Gas Heat Module

**HGRH** - Hot Gas Reheat Coil

**DX** - Direct Expansion (for DOAS units  
with Packaged Refrigeration)

**BT** - Blow Thru

**DT** - Draw Thru

## Dedicated Outdoor Air System Packaged Refrigeration



### SPECIFICATIONS

#### Energy Recovery Type:

Static plate total energy transfer

**Typical Airflow Range:** 750-3,300 CFM

#### AHRI 1060 Certified Core:

Three L-125-G5

#### ETL Certification:

Tested to UL standards 1812 and 1995

#### Standard Features:

EC Motors for both airstreams  
Direct Drive backward inclined plenum  
Higher ESP of up to 2.5" w.g. at 3,000 CFM  
Integrated programmable controls  
True 100% Face and bypass enthalpy based modulating economizer  
Class 1 low leakage motorized isolation dampers  
Stainless steel double-sloped drain pan with cooling option  
1", 20 gauge galvanized double wall foam-injected R6.5 insulation  
Modbus RTU or IP Integration

#### Packaged Refrigeration Features:

EC motor for condenser fan (with the exception of 575V models, which are VFD driven)  
DX cooling coil  
Packaged refrigeration controls  
BLDC scroll compressor(s)  
Condensing coil

#### Inlets/Outlets:

OA & RA Inlets: 36" x 16"  
SA Outlet: 24" x 16"  
EA Outlet: 20" x 16"

#### Filters:

Total qty. 6, MERV 8:  
20" x 20" x 2"

**Unit Weight for 1" Cabinets:** 3400 - 4900 lbs.

#### Max. Shipping Dimensions & Weight for 1" Cabinets:

**Cabinets:**  
187 1/8" L x 90" W x 83 1/2" H  
3575 - 5175 lbs.

**Unit Weight for 2" Cabinets:** 3525-5100 lbs.

#### Max. Shipping Dimensions & Weight for 2" Cabinets:

**Cabinets:**  
189 1/8" L x 90" W x 84 1/2" H  
3700-5375 lbs.

#### Motor(s):

Qty. 2, Direct drive motorized impeller packages

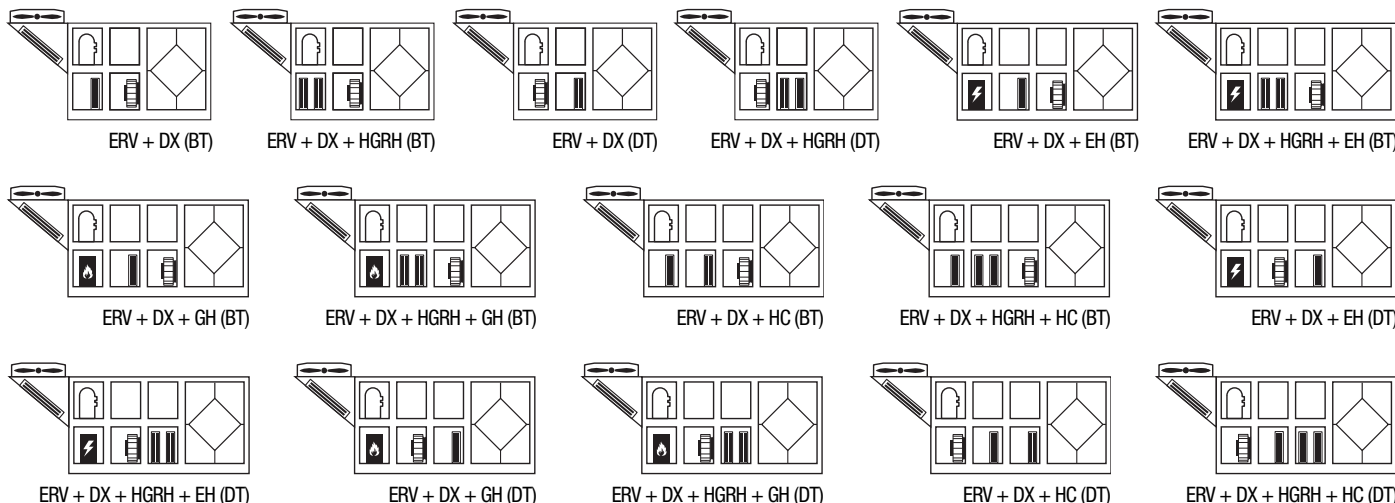
#### Options:

Modulating hot gas reheat  
Steam or hot water coil, gas heat module or electric heater  
Onboard variable frequency drives (VFDs) - both airstreams  
Fused disconnect  
Spring isolators (VFDs only)  
2", 20 gauge galvanized double wall foam-injected R13 insulation with thermal break construction  
Exterior paint - grey, white, custom color  
Salt spray - 2500 hour  
BACNET factory activation  
GFCI convenience outlet  
Recirculation damper  
Drain overflow switch  
Mist eliminator  
Electrofin coating for coils

#### Accessories:

Filters - MERV 13, 2" and 4" (shipped loose),  
MERV 14, 2" and 4" (shipped loose)  
Additional filters available upon request  
Roof curb - standard 14"  
Custom hurricane or seismic rated curbs  
Curb clip kit  
Carbon dioxide sensor/control - wall mount (CO2-W), duct mount (CO2-D)  
IAQ sensor - wall mount (IAQ-W), duct mount (IAQ-D)  
Motion occupancy sensor/control - ceiling mount (MC-C), wall mount (MC-W)  
Smoke detector  
Room temperature and humidity sensor  
Duct static pressure sensor with display to 10", without display 0-2"  
Room pressure sensor with display to 1", without display 0-1"  
Waterless trap negative pressure  
Waterless trap positive pressure  
Remote display

### INTERNAL OPTIONS FOR HEATING AND COOLING





## Dedicated Outdoor Air System Packaged Refrigeration

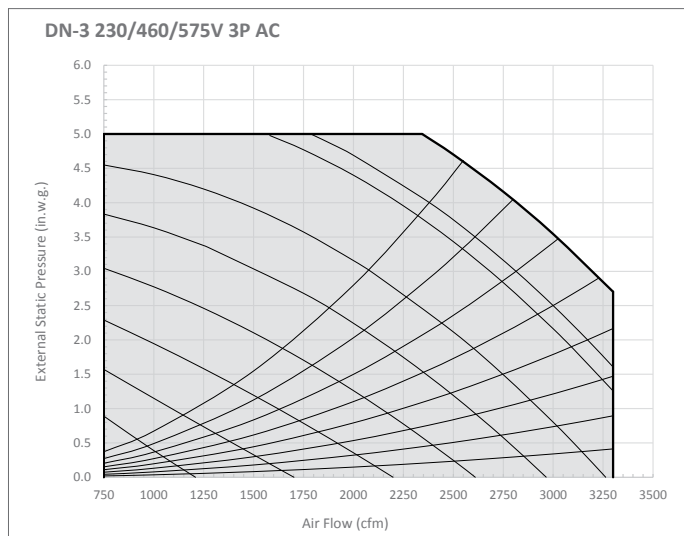
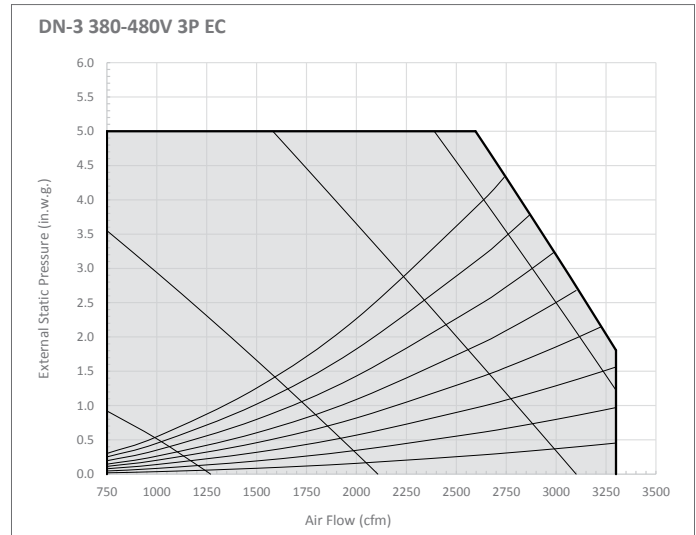
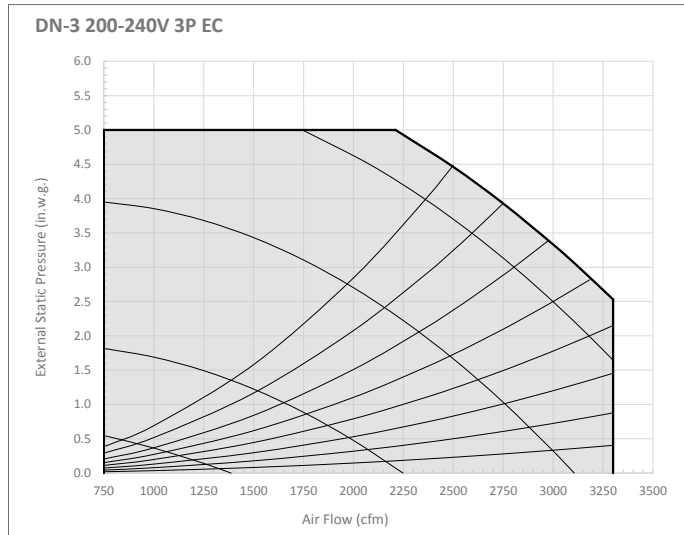


### ELECTRICAL DATA

| Electrical Specifications |         |           |       |                    |                                             |                              |                  |                       |                  |                                               |                                  |
|---------------------------|---------|-----------|-------|--------------------|---------------------------------------------|------------------------------|------------------|-----------------------|------------------|-----------------------------------------------|----------------------------------|
| Spd<br>Ctl                | Unit    |           |       |                    |                                             | Supply Air & Exhaust Air Fan |                  | Condenser Fan         |                  | Compressors                                   |                                  |
|                           | Volts   | Frequency | Phase | Min. Cir.<br>Amps. | Max.<br>Overcurrent<br>Protection<br>Device | Motor Qty/kW<br>or HP        | FLA<br>per motor | Motor Qty/kW<br>or HP | FLA<br>per motor | Variable<br>Speed<br>Compressor<br>Drive Amps | Fixed Speed<br>Compressor<br>MCC |
| EC                        | 200-240 | 50/60 Hz  | Three | 155.9              | 200                                         | 2 @ 2.70 kW ea.              | 8.6-7.2          | 2 @ 3.60 kW ea.       | 11.0-9.2         | 50.4                                          | 53                               |
|                           | 380-480 | 50/60 Hz  | Three | 79.8               | 100                                         | 2 @ 3.70 kW ea.              | 6.0-4.6          | 2 @ 3.70 kW ea.       | 6.0-4.7          | 24.5                                          | 25                               |
| VFD                       | 208-230 | 50/60 Hz  | Three | 166.5              | 200                                         | 2 @ 5HP ea.                  | 13.9-13.4/6.7    | 2 @ 3.60 kW ea.       | 11.0-9.2         | 50.4                                          | 53                               |
|                           | 460     | 50/60 Hz  | Three | 81.2               | 100                                         | 2 @ 5HP ea.                  | 6.7              | 2 @ 3.70 kW ea.       | 6.0-4.7          | 24.5                                          | 25                               |
|                           | 575     | 50/60 Hz  | Three | 71.1               | 90                                          | 2 @ 5HP ea.                  | 5.3              | 2 @ 2.8 kW ea.        | 3.7              | 26.3                                          | 20.2                             |

**Note:** Electrical data shown is for a standard unit with largest compressor available, but without heating. Refer to [cores.renewaire.com](http://cores.renewaire.com) for project specific submittal for electrical data for the specific unit with all included options.

### AIRFLOW PERFORMANCE



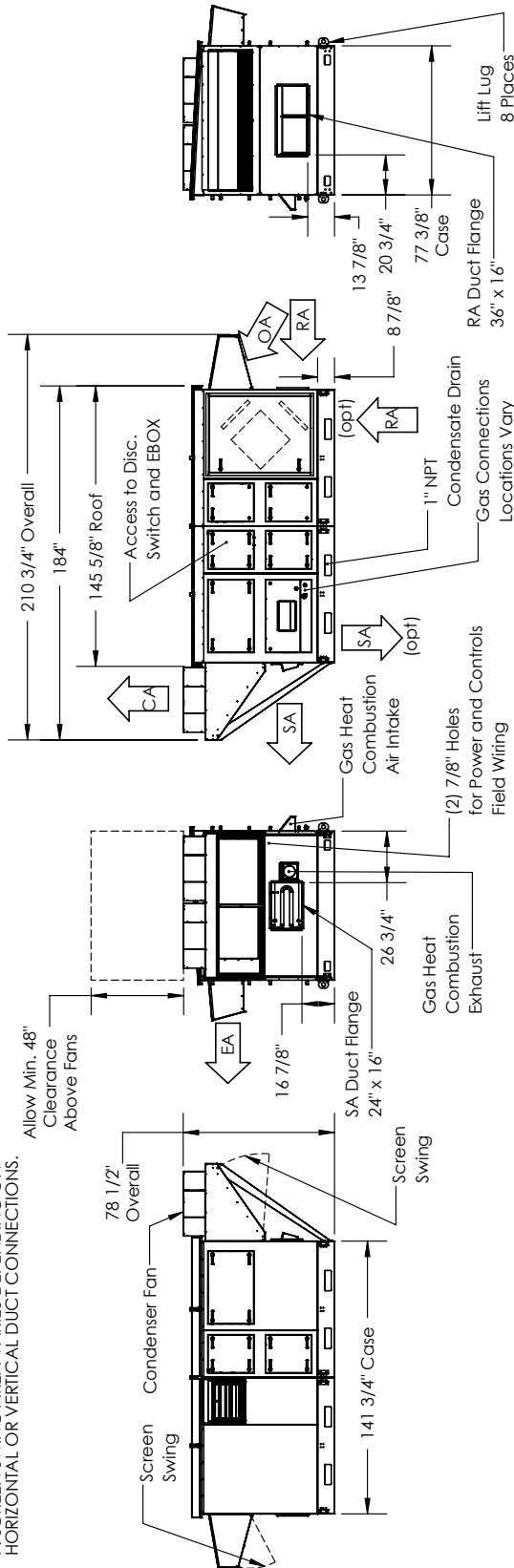
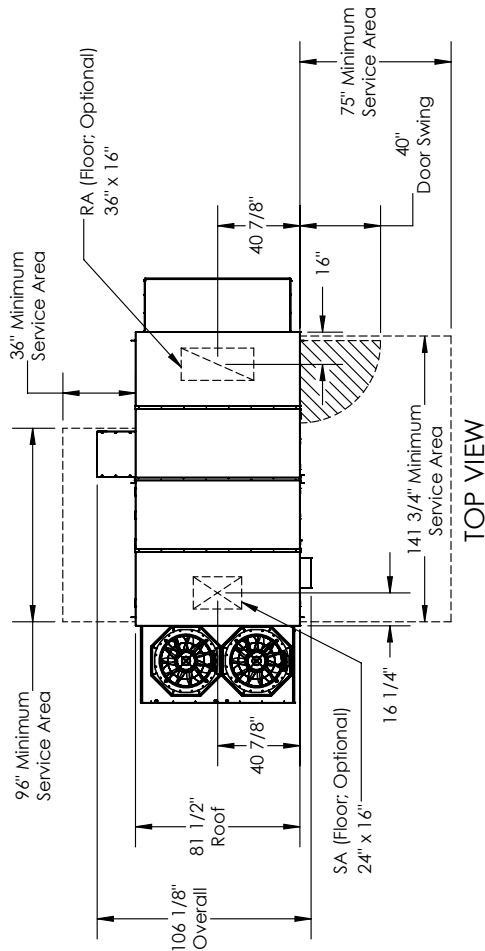
# **DN3RT** Dedicated Outdoor Air System Packaged Refrigeration Standard 1" Cabinet

**ABBREVIATIONS**  
 EA: Exhaust Air to outside  
 OA: Outside Air intake  
 RA: Room Air to be exhausted  
 SA: Supply Air to inside  
 CA: Condenser Air

**INSTALLATION ORIENTATION**  
 Unit must be installed in orientation shown.

**NOTE**

1. UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE ROUNDED TO THE NEAREST EIGHTH OF AN INCH.
2. SPECIFICATIONS MAY BE SUBJECT TO CHANGE WITHOUT NOTICE.
3. FOR PIPE CONNECTION DETAILS REFER TO CORES OR UNIT SELECTION SUBMITTAL.
4. UNIT, UNIT DOORS, AND COILS CANNOT BE MIRRORRED.
5. FOR CURB DETAILS REFER TO CURB DRAWING.
6. FOR PROJECT SPECIFIC DRAWINGS REFER TO PROJECT SUBMITTAL.
7. SCREEN SWING AREA VARIES DEPENDING ON HORIZONTAL OR VERTICAL DUCT CONNECTIONS.

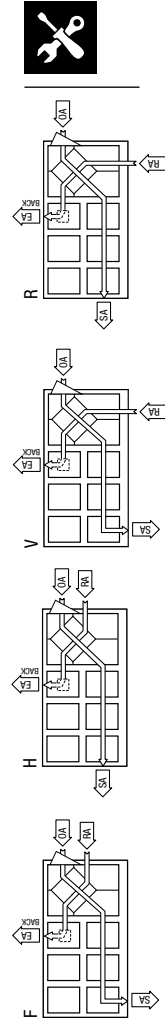


RIGHT VIEW

FRONT VIEW

LEFT VIEW

BACK VIEW



**AIRFLOW ORIENTATION**  
 Available as shown:



**UNIT MOUNTING & APPLICATION**  
 Must be mounted as shown. Airstreams can not be switched.

Dimension drawings for the DN depict largest cabinet size available.  
 Refer to CORES.RenewAire.com for project specific unit drawings.

# **DN3RT** Dedicated Outdoor Air System Packaged Refrigeration Standard 2" Cabinet

**ABBREVIATIONS**  
 EA: Exhaust Air to outside  
 OA: Outside Air Intake  
 RA: Room Air to be exhausted  
 SA: Supply Air to inside  
 CA: Condenser Air

**INSTALLATION ORIENTATION**  
 Unit must be installed in orientation shown.

**NOTE**  
 1. UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE ROUNDED TO THE NEAREST EIGHTH OF AN INCH.

2. SPECIFICATIONS MAY BE SUBJECT TO CHANGE WITHOUT NOTICE.

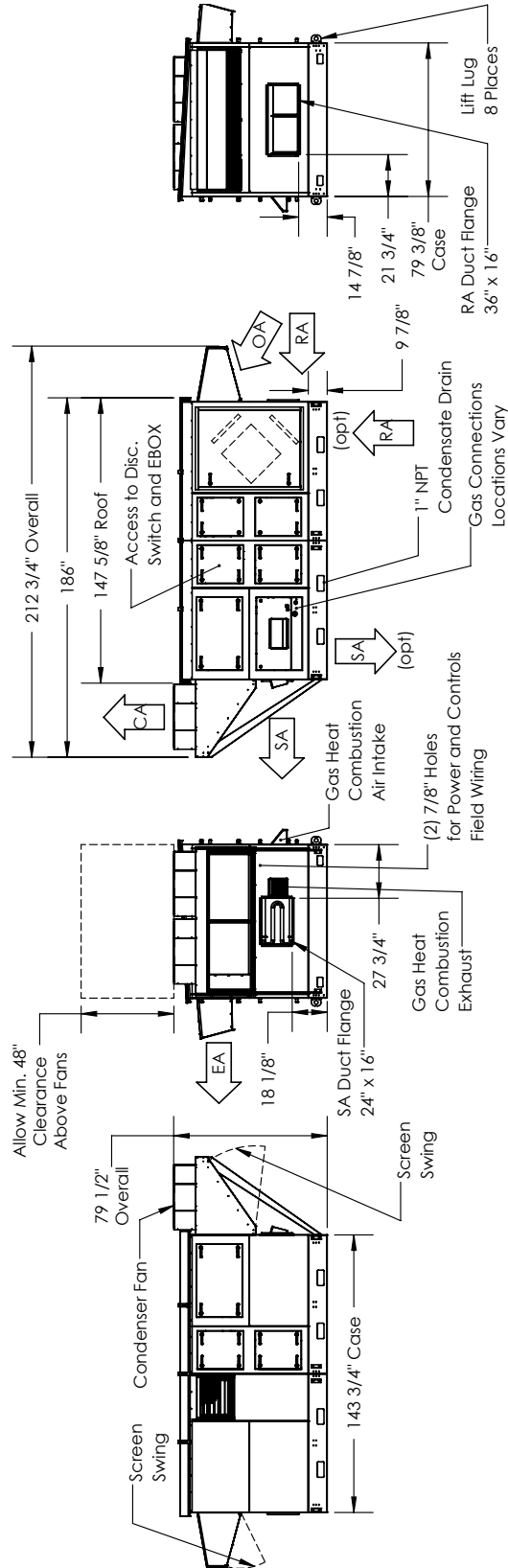
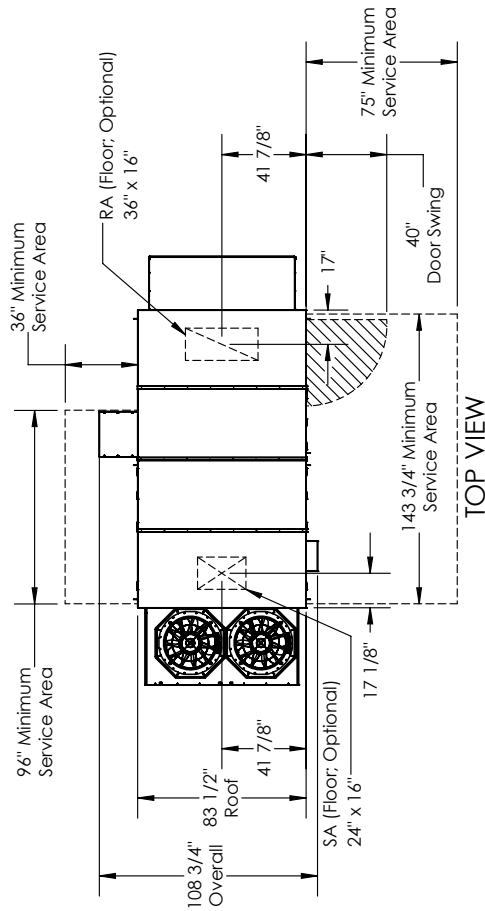
3. FOR PIPE CONNECTION DETAILS REFER TO CORES OR UNIT SELECTION SUBMITTAL.

4. UNIT, UNIT DOORS, AND COILS CANNOT BE MIRRORRED.

5. FOR CURB DETAILS REFER TO CURB DRAWING.

6. FOR PROJECT SPECIFIC DRAWINGS REFER TO PROJECT SUBMITTAL.

7. SCREEN SWING AREA VARIES DEPENDING ON HORIZONTAL OR VERTICAL DUCT CONNECTIONS.



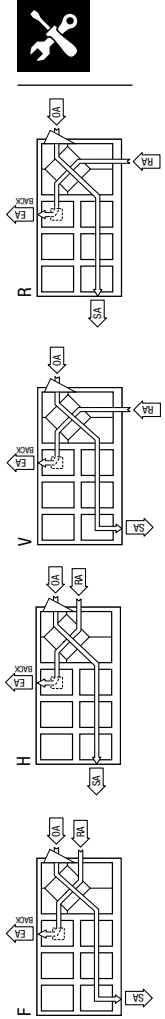
RIGHT VIEW

FRONT VIEW

LEFT VIEW

BACK VIEW

**UNIT MOUNTING & APPLICATION**  
 Must be mounted as shown. Airstreams can not be switched.



**AIRFLOW ORIENTATION**  
 Available as shown:

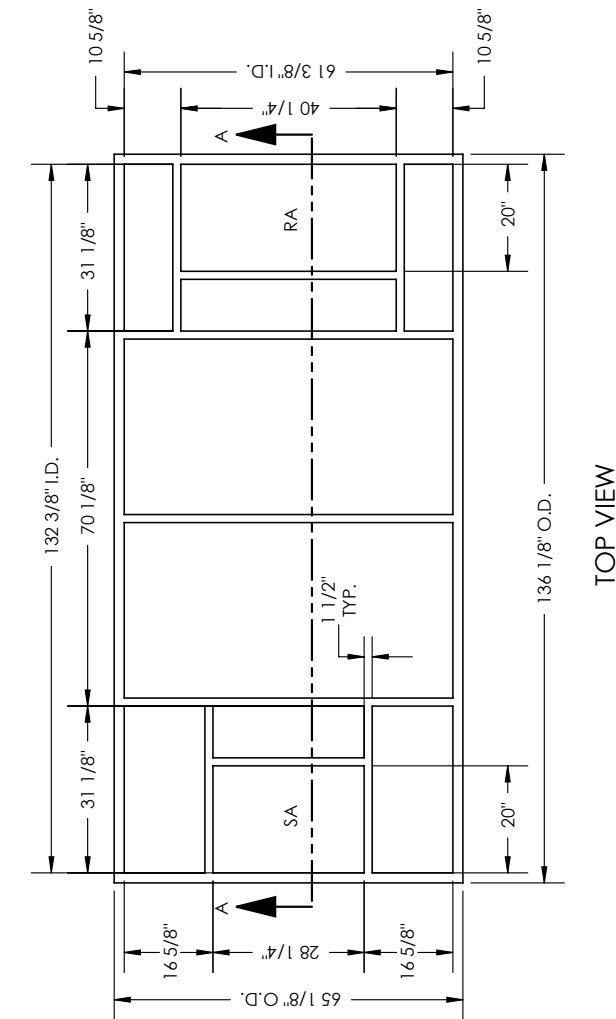


# **DN3RT** Dedicated Outdoor Air System Packaged Refrigeration Curbs

DUCT SUPPORT DIMENSIONS  
WIDTH: 1 1/2" DEPTH: 3"

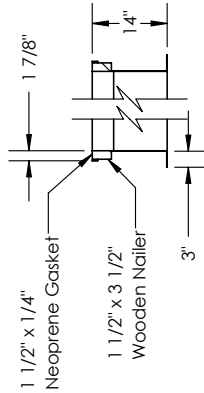
RA: Room Air to be exhausted  
SA: Supply Air to inside

## **DN3RT** **CURB DN3-ERV+C+H**



END VIEW

## **CURB CROSS-SECTION A-A (TYP.)**

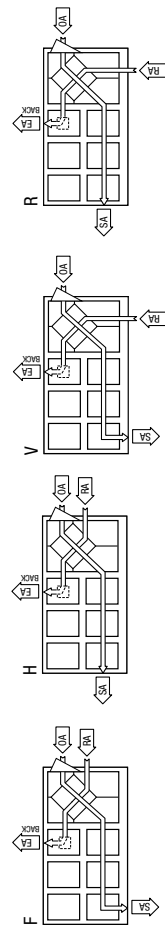


SECTION A-A

TOP VIEW

FRONT VIEW

**AIRFLOW ORIENTATION**  
Available as shown:



**UNIT MOUNTING & APPLICATION**  
This universal DN Series curb can be used in conjunction with RTF, RTH, RTV and RTR models.



Dimension drawings for the DN depict largest cabinet size available.  
Refer to [CORES.RenewAire.com](http://CORES.RenewAire.com) for project specific unit drawings.