



# Trane Creative Solutions

IntelliPak™ Integral  
Energy Recovery



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## IntelliPak™ Heat Recovery Advantages

Utilizing Energy Recovery options in a standard Trane IntelliPak™ Rooftop will reduce unit cooling and heating energy requirements, with annual energy consumption dramatically reduced.

### Options

- Total Energy Recovery (latent & sensible) Wheels
- (1000-40,000 cfm) (Partial or 100% outside air)
- Plate Exchangers (1000-20,000 cfm) Sensible or Total
- Energy Transfer
- Single Point Power - Single Lift
- VFDs on Wheels, Supply Fans, Exhaust Fans
- Frost Control
- Electric Preheat If Required
- Air Flow Measurement (Traq Dampers)
- Aluminum or Silica Gel Wheels
- Single or Dual Exhaust Fans
- Fits Standard Roof Curb
- Flexible Layouts - Vertical or Horizontal Airflow

### Replacement Market

Projects with older IntelliPak units that are being replaced with new models, utilizing the existing roof curbs are ideal candidates for including heat recovery without increasing unit size. Additional internal loads or increased ventilation requirements can be offset by load reduction from partial recovery. Rapid replacement of units minimizes down time of the facility and installation costs.



Utilize Standard Curb



40,000 cfm - 100%  
Outside Air Casino Project



Internal Wheel with Economizer  
and Bypass Dampers



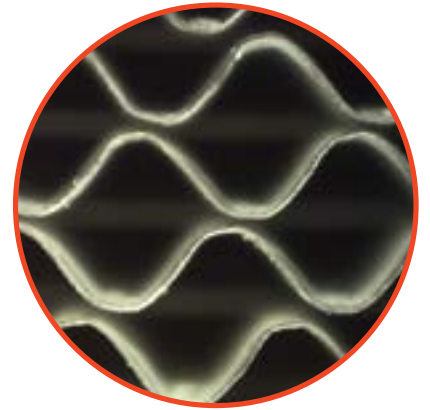
Extended Roof Elevations to  
Accommodate Larger Wheels

## Energy Wheel Choices

Trane Creative Solutions has the flexibility to provide various types of wheels for total energy recovery, however most applications are well served with the option of a desiccant coated aluminum media, with laminar flow, eliminating or reducing the need for filtration on both sides of the wheel.

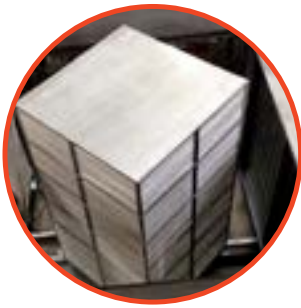
## Optional Plate Exchangers

ARI Rated Plate heat exchangers, available from 1000 to 20,000 cfm outside air, in Sensible only, or both Sensible and Latent (Total Recovery) can also be installed in the IntelliPak™ unit. Ideal for commercial and institutional applications where cross contamination is a concern or no moving parts is preferred. Typically 2" - 30% filtration is recommended on both outside and exhaust airstreams.



### Non Clogging, Cleanable Media

Years of applications in airstreams, as severe as smoke laden Casino exhaust air, have proven that this wheel design can be applied without the expense of providing and maintaining filters which adds to the cost of fan energy.



Core Heat Exchanger

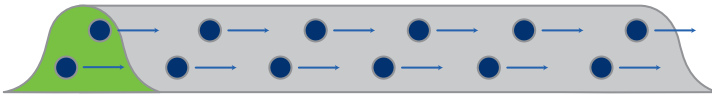


100% Outside Air - 12,000 cfm

## Laminar Flow Results in Low Pressure Drops

### Laminar Flow: Particles pass through flute

- No plugging of wheel 800 Micron Particle can pass
- Lowest pressure drop, most efficient operation



### Turbulent Flow: Particles collect on the flute wall

- High pressure drop
- Flutes plug



Velocity	Recovery
400	86.0
600	80.5
800	77.0
1000	74.5
Velocity (fpm)	Pressure Loss (in w.g.)
400	0.37
400	0.37
600	0.56
800	0.79
1000	1.05

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Learn more at [trane.com/creativesolutions](https://trane.com/creativesolutions)



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