



ADVANCED COOLING TECHNOLOGIES

AIR-TO-AIR HEAT PIPE HEAT EXCHANGER (AAHX)

# STILL SPINNING A WHEEL?

## A Cleaner, Simpler Alternative to Energy Recovery Wheels

Energy recovery wheels promised efficiency—but they delivered a lifetime of moving parts, IAQ concerns, and maintenance headaches. ACT's passive, sealed air-to-air heat pipe heat exchangers give you the energy savings you expect without the mechanical complexity or cross-contamination risk. With ACT, energy recovery becomes cleaner, more reliable, and far easier to own.



## 4 BIG REASONS TO BREAK THE WHEEL HABIT

**Zero moving parts. Zero headaches.** No motors, belts, bearings, or control assemblies. Heat pipes transfer energy with a sealed phase change process, delivering reliable performance without the service burden of wheels.

**No cross-contamination. Ever.** Supply and exhaust airstreams stay fully separated through a sealed heat exchanger. No leakage paths, no media carryover, no IAQ compromises.

**Maintenance that looks like...coil cleaning.** Skip wheel media washing, drive tuning, seal adjustments, and nuisance alarms. ACT heat pipes require simple, familiar coil-style maintenance—nothing more.

**Freedom to design without side-by-side airstreams.** Wheels force cramped, restrictive layouts. ACT heat pipe solutions let designers keep supply and exhaust streams feet—or floors—apart, opening up new possibilities for retrofits and tight mechanical rooms.

**Where Heat Pipe  
Energy Recovery  
Wins Big**



**Commercial & Institutional**  
Fits tight footprints and  
retrofit constraints



**Healthcare & Labs**  
Avoids risk of  
cross-contamination

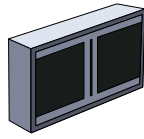


**Any owner tired of paying  
for wheel maintenance  
or replacement**

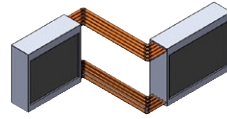
# SPECIFICATIONS

## Heat Pipes vs Energy Wheels: The Real-World Difference

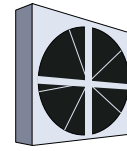
Both technologies recover exhaust energy. Only one does it without moving parts, leakage concerns, or recurring maintenance frustrations.



AIR-TO-AIR HEAT PIPE HEAT EXCHANGER (AAHX)



SPLIT-LOOP THERMOSYPHON HEAT EXCHANGER (SLTS-AAHX)



ENERGY WHEEL

Mechanism	Sealed heat pipes transfer energy passively via phase change	Sealed heat pipes transfer energy passively via phase change	Rotating media alternates between airstreams
Moving Parts	None	None	Motor, drive, bearings, seals
Airstream Separation	Fully sealed; no path for cross-contamination	Fully sealed; no path for cross-contamination	Inherent leakage, carryover, and bypass between airstreams
Energy Recovered	Sensible	Sensible	Sensible and latent
Maintenance	Simple coil inspection and cleaning	Simple coil inspection and cleaning	Media cleaning, drive service, and seal adjustments

### Installation Flexibility by Technology

Energy wheels only work when supply and exhaust streams are side-by-side, while ACT heat pipe systems open the door to designs wheels simply cannot achieve.

	AAHX	SLTS-AAHX	ENERGY WHEEL
Exhaust-Supply Distance	Up to 12 ft	Up to 30 ft	Must be side-by-side
Horizontal Separation	Up to 12 ft	Up to 30 ft (passive); Up to 300 ft (fully pumped)	Not possible
Vertical Separation	Single story	Multi-story (up to 30 ft)	Not possible
Airflow (CFM)	>100,000 CFM	>100,000 CFM	<100,000 CFM

### Need More Freedom?

With an optional fully pumped system, ACT solutions can support up to 300 feet of airstream separation, unlocking design possibilities no wheel can match.

Let's build a long-life system that saves energy without the maintenance burden.

### TALK TO AN EXPERT

Scan the QR code or visit  
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