



The Most Cost-Effective Way to
Reduce Energy Consumption and Costs for
Package Terminal Air Conditioning (PTAC) Units

www.PTACenergysaver.com

PTACs are common in:

- Hotels
- Motels
- Hospitals
- Condominiums
- Senior Living Facilities
- Single Family Residential Spare Rooms



It's Time to Save 20% or more on Energy:

HVAC equipment
accounts for
40 percent
of energy usage in
commercial buildings
– *U.S. Small Business
Administration*



How it works:

Smart temperature sensors and
Variable fan speeds

REDUCE ENERGY COSTS

Highlights

HVAC Energy Savings over 20%

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More than 40,000 units in operation

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Ideal for Retrofits and New Construction

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Utility Incentives (Rebates) available in multiple States

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FAST INSTALLATION and PAYBACK TIME

The next set of slides highlight specific aspects of the device.

ON/Bypass Power Switch



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AUTO/MANUAL Switch

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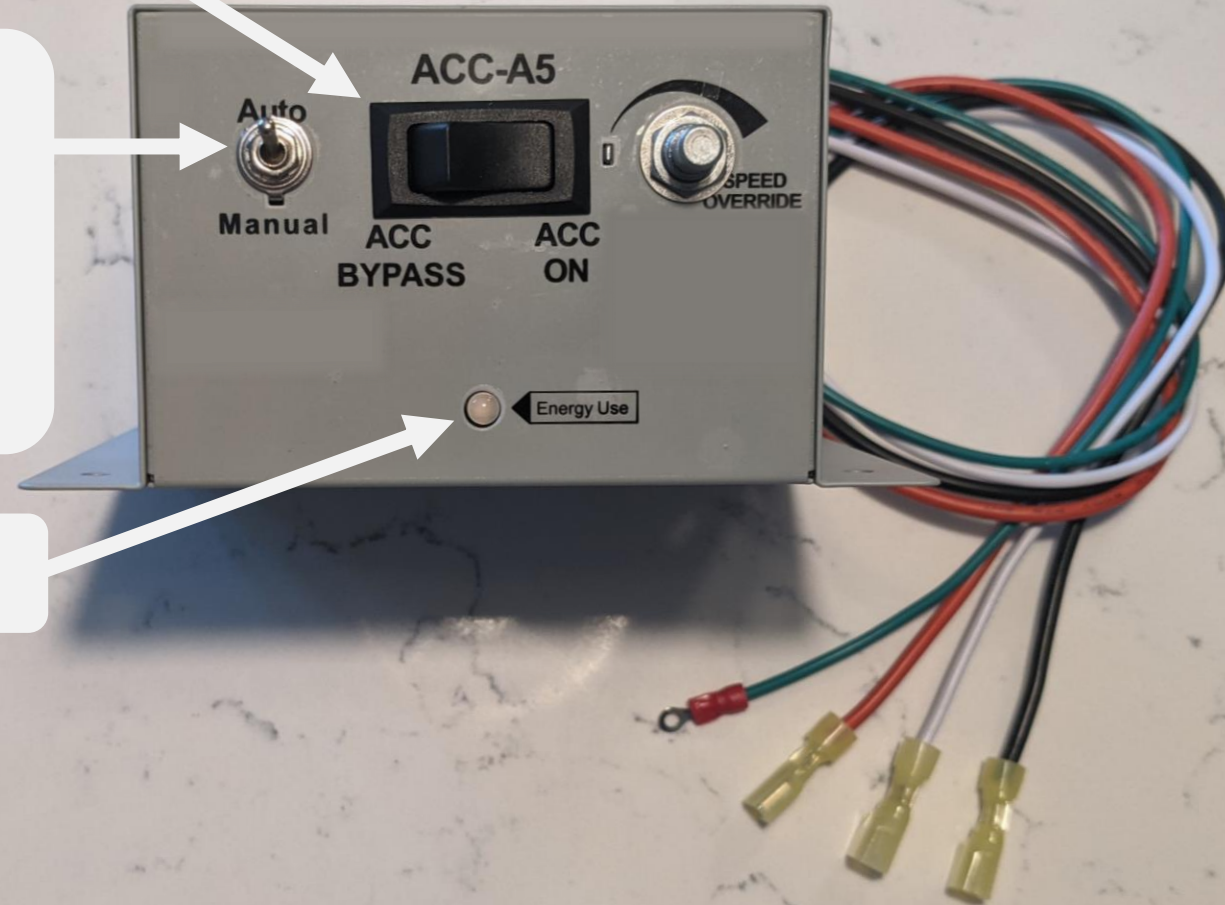


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LED Energy Indicator



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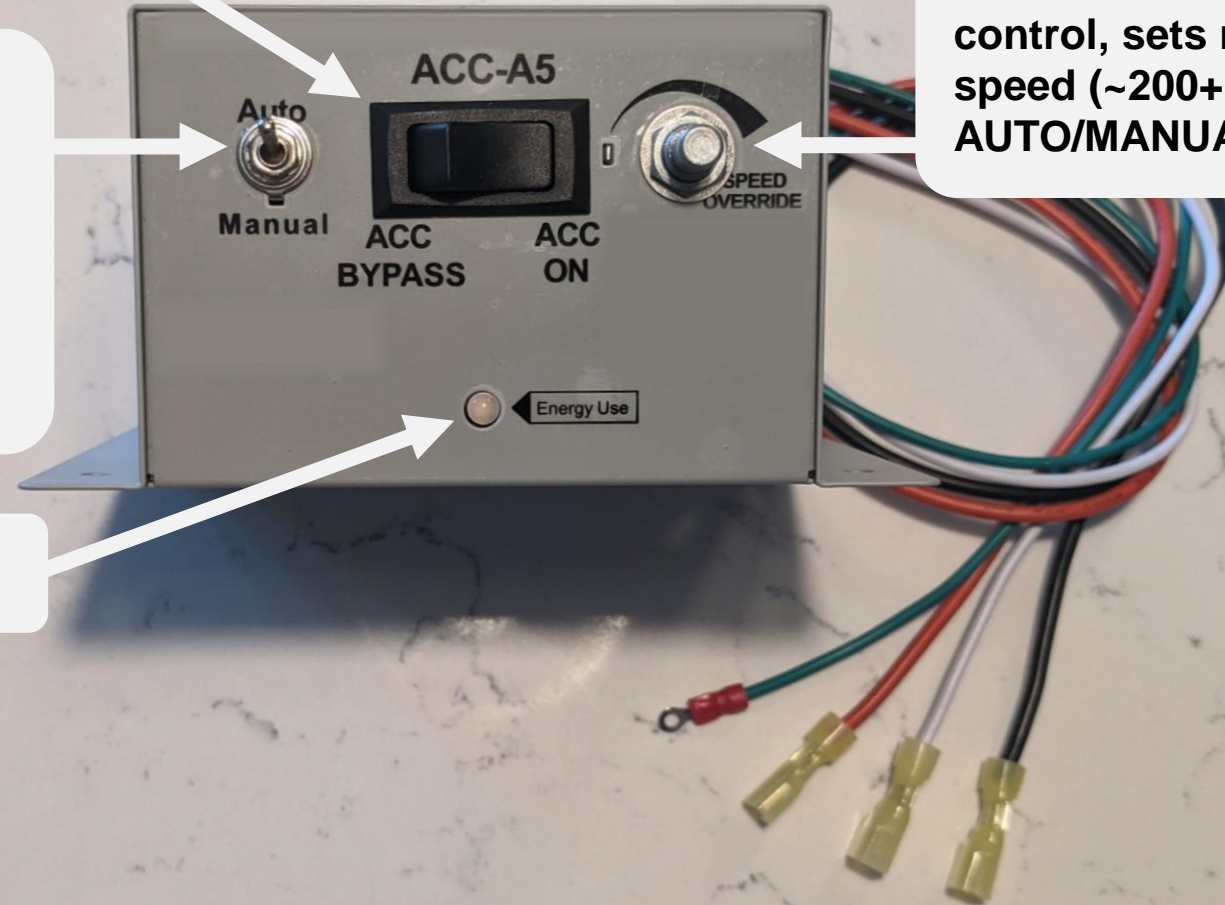
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SPEED Knob

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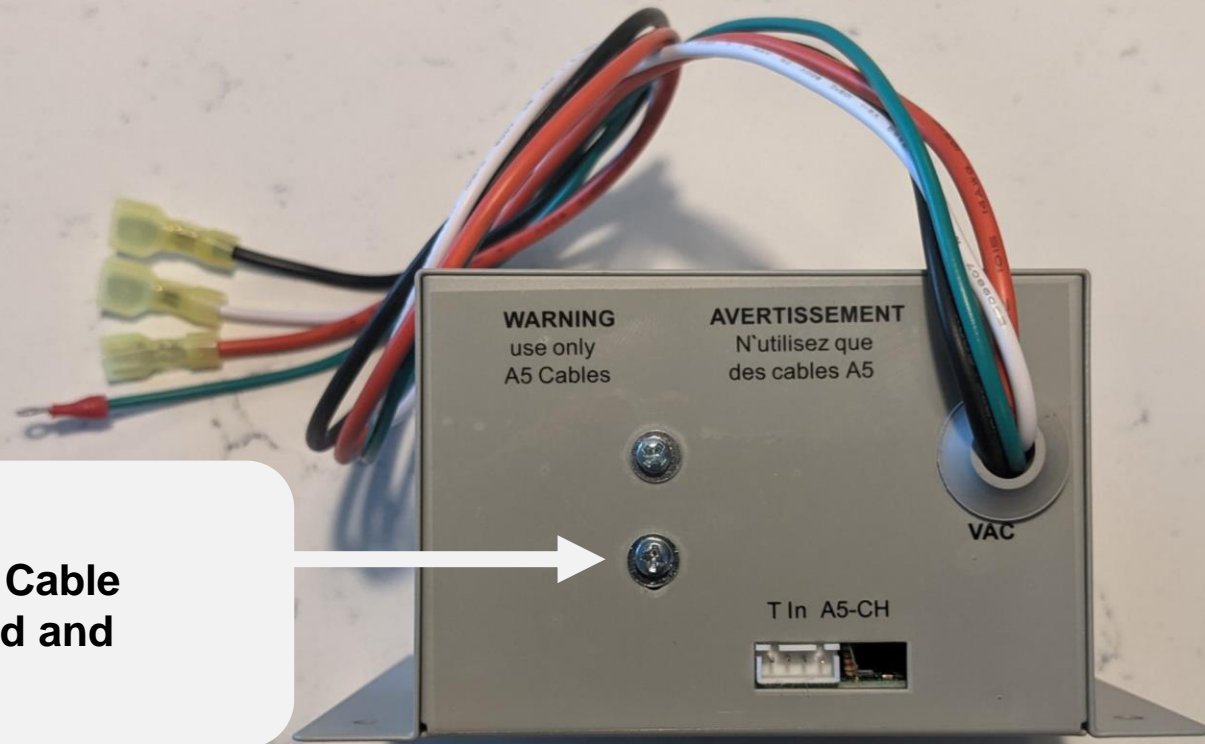
Manual override motor speed control, sets minimum idle motor speed (~200+ RMPS) when AUTO/MANUAL switch is in AUTO

CONNECTOR Cables

- **Green:** Physical Ground or Neutral Cable
- **Red:** Motor Connection Cable
- **Black & White :** AC Power Cables



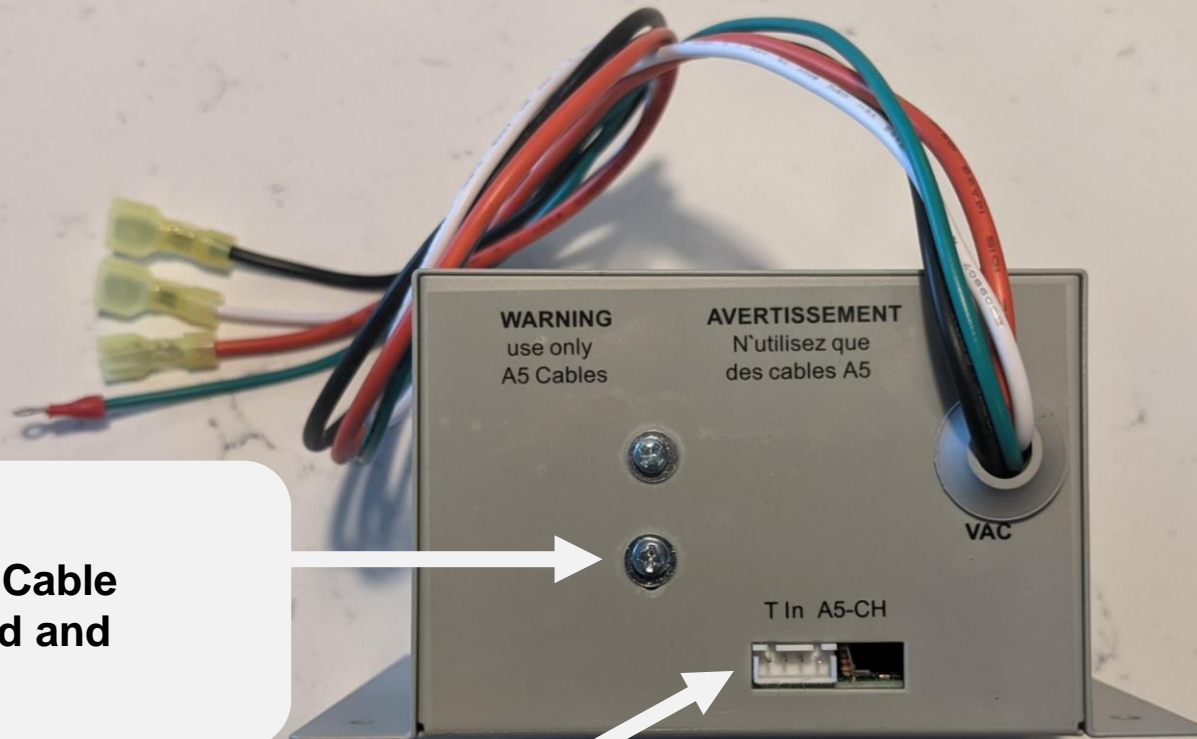
OPPOSITE SIDE



Screw

**For Physical Ground Cable
(if equipped, indicated and
designated by label)**

OPPOSITE SIDE



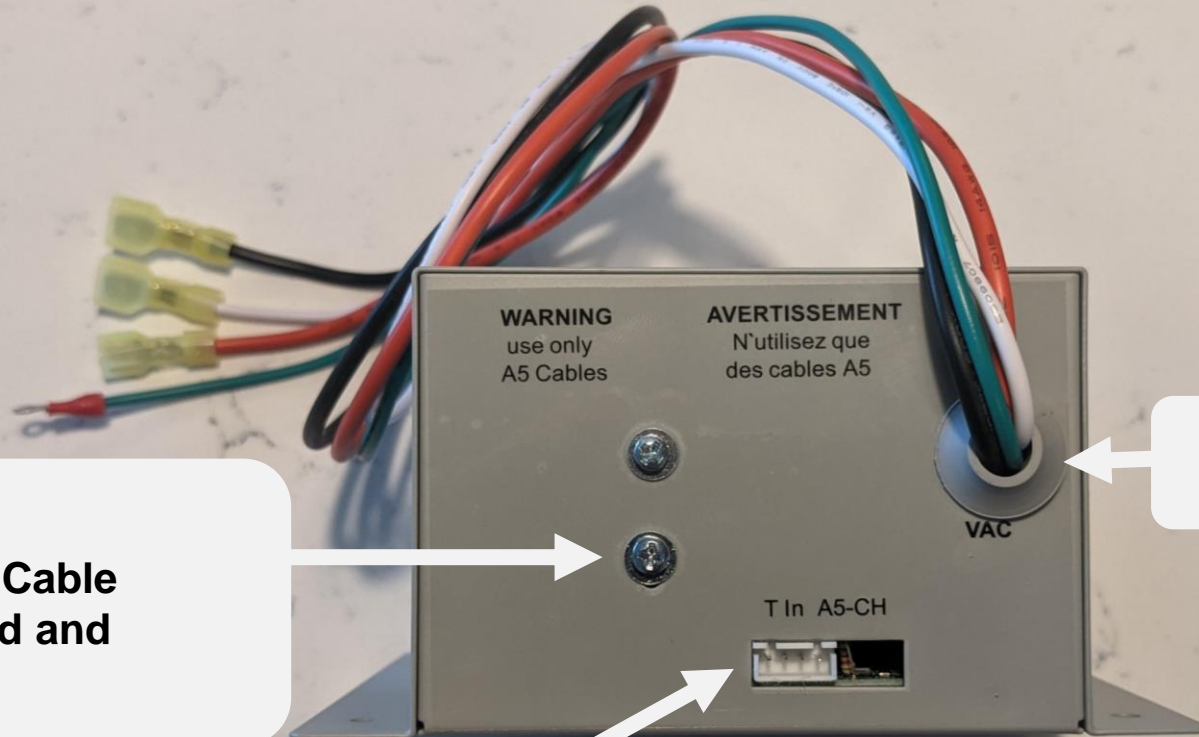
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T In

Temperature Probe Connector
Input Port

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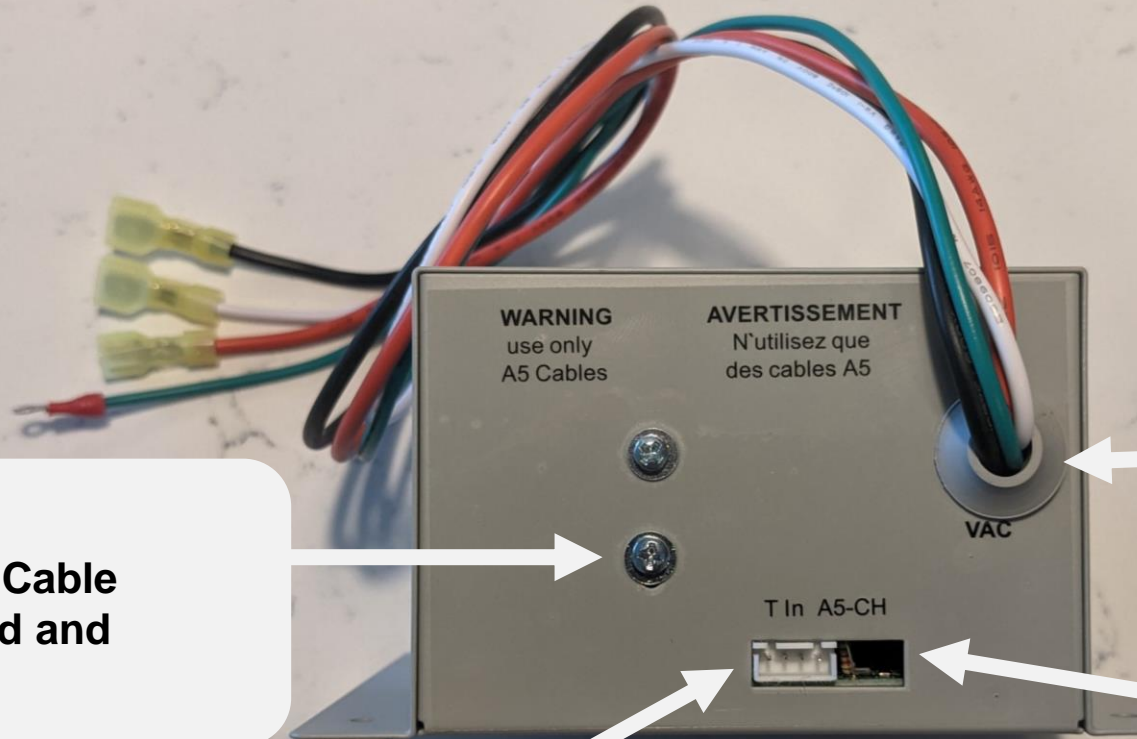


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CONNECTOR Cables

OPPOSITE SIDE



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CONNECTOR Cables

A5-CH

**Expansion Port
(currently not in use)**

T In

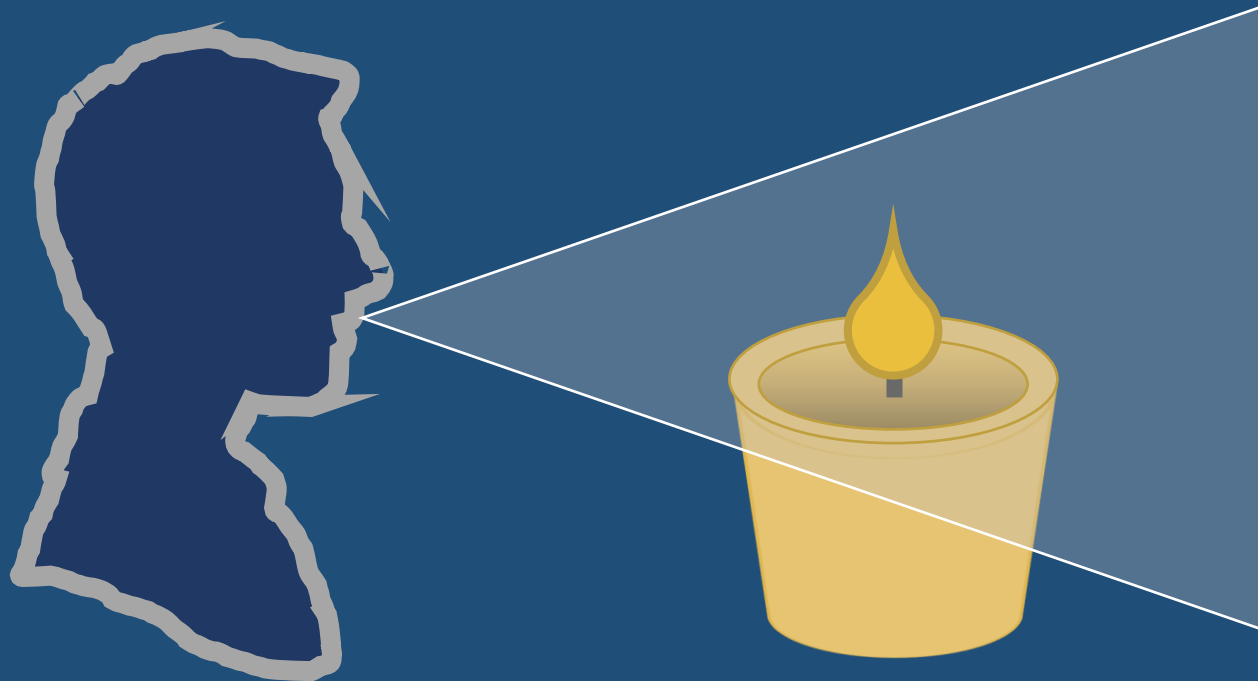
**Temperature Probe Connector
Input Port**

THERMODYNAMICS 101

Temperature is transferred more efficiently when air speed is adjusted to the temperature source.

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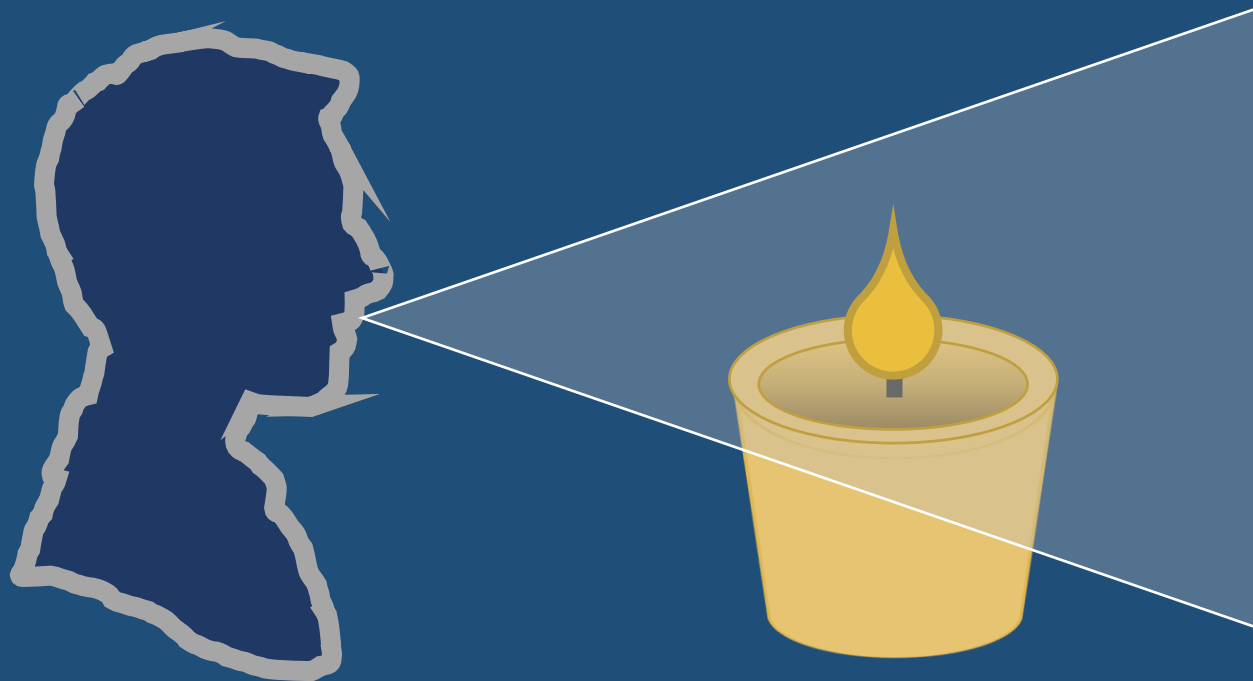
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HEATING Example:
Candle

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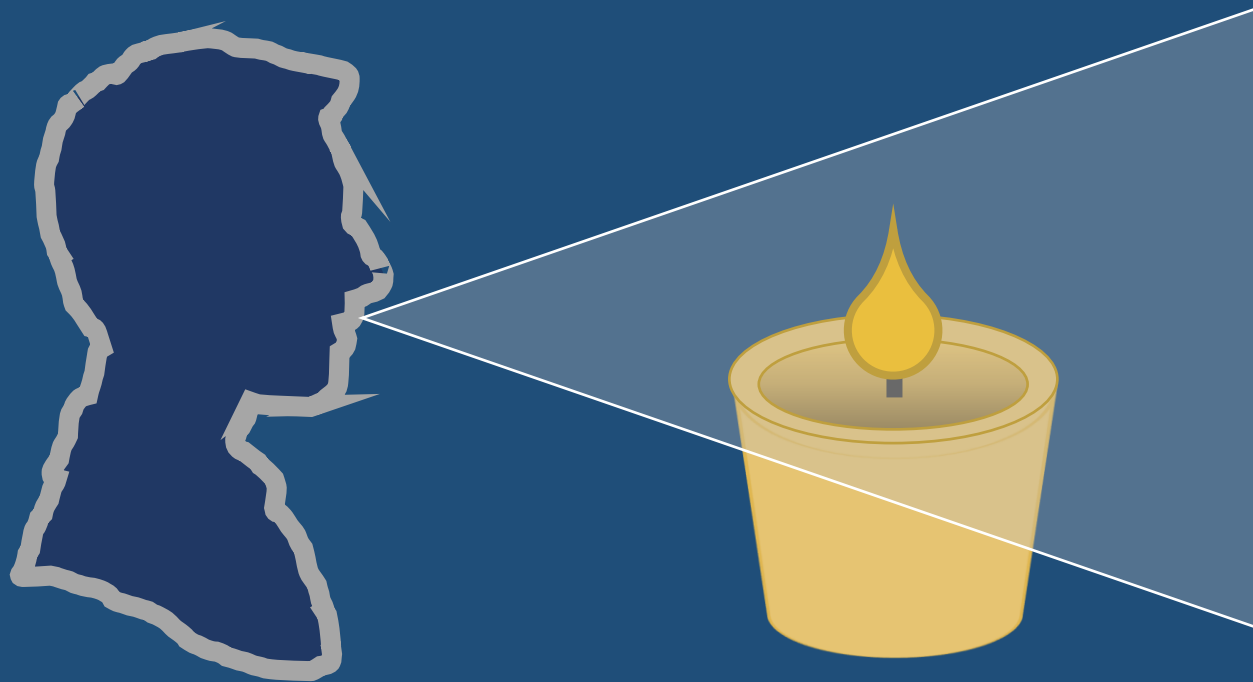


HEATING Example:
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- Too fast air may extinguish the flame

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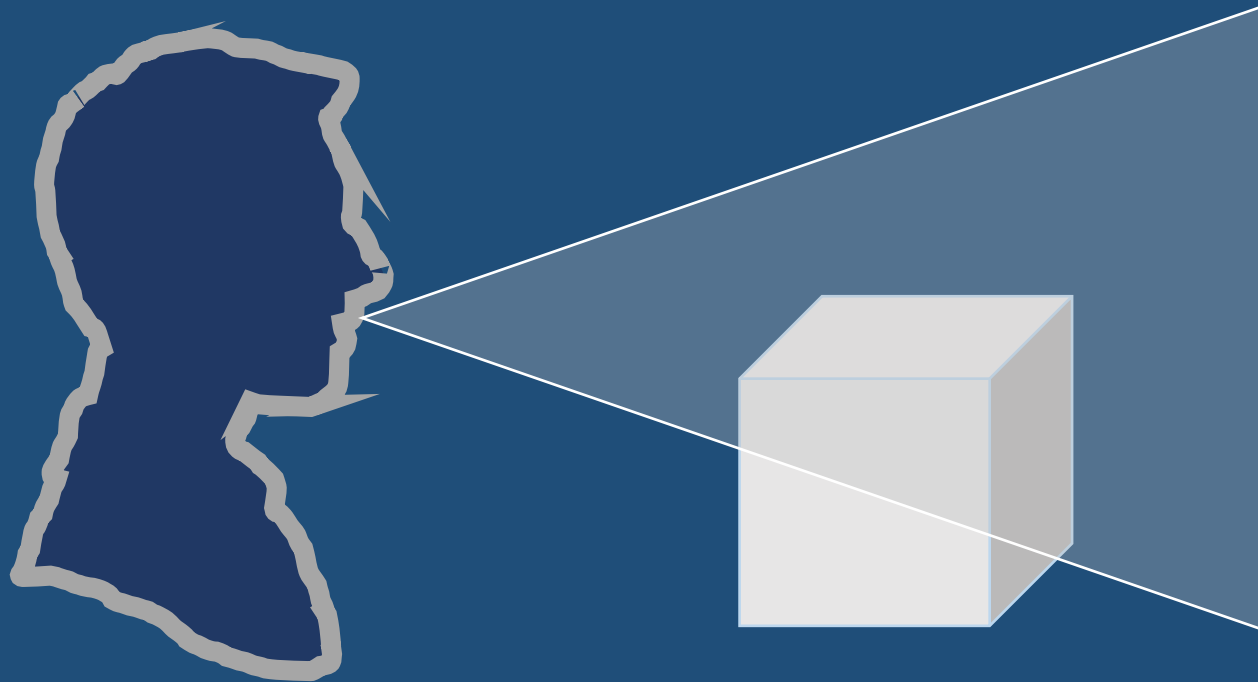


HEATING Example: Candle

- Too fast air may extinguish the flame
- Too slow air doesn't transfer much warm air

THERMODYNAMICS 101

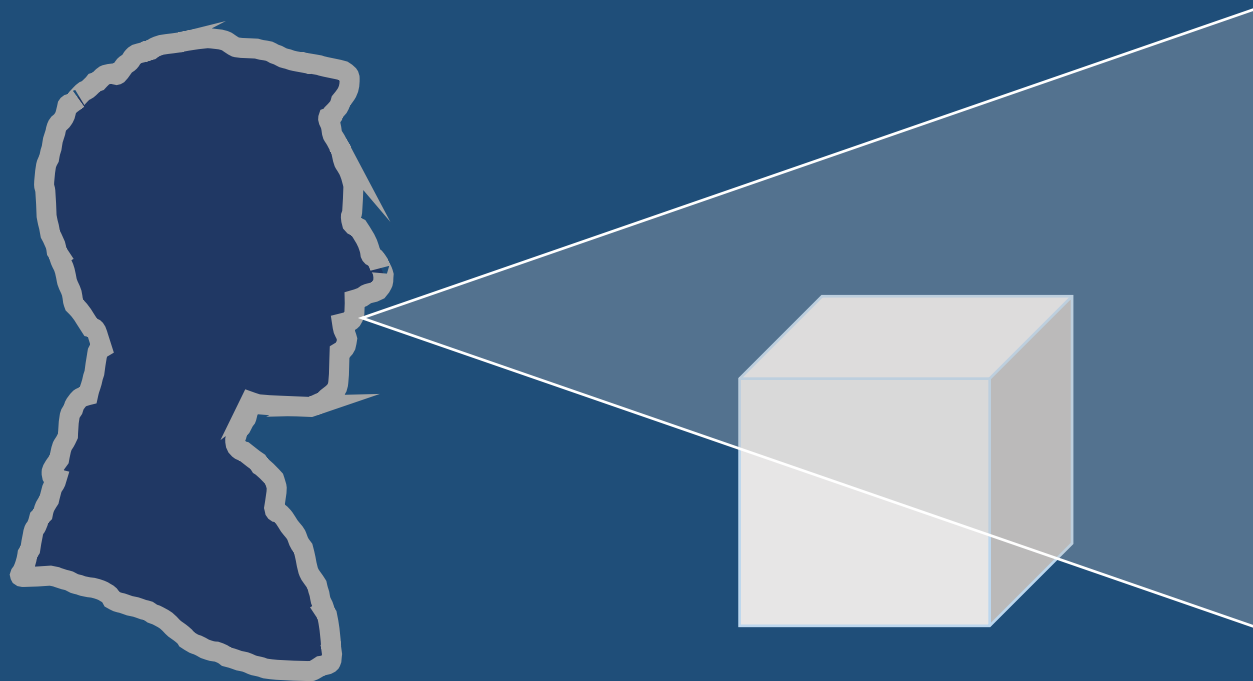
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COOLING Example:
ice cube

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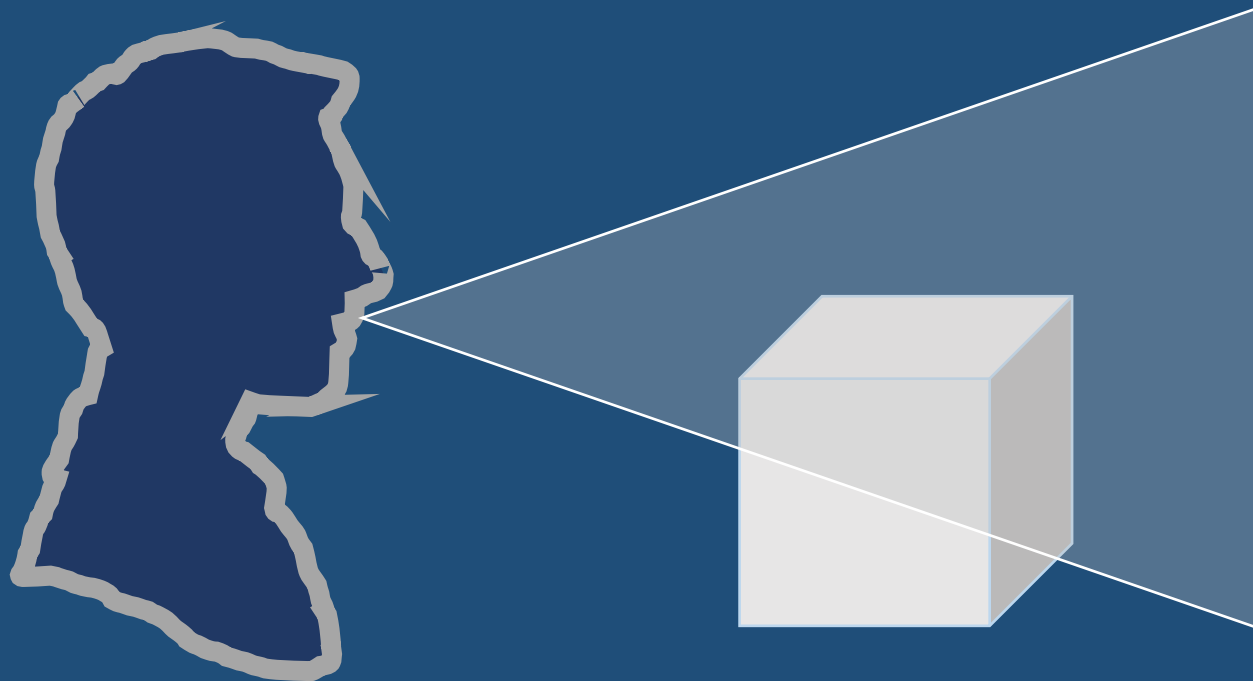


COOLING Example:
ice cube

- Too fast air may melt the cube faster than desired

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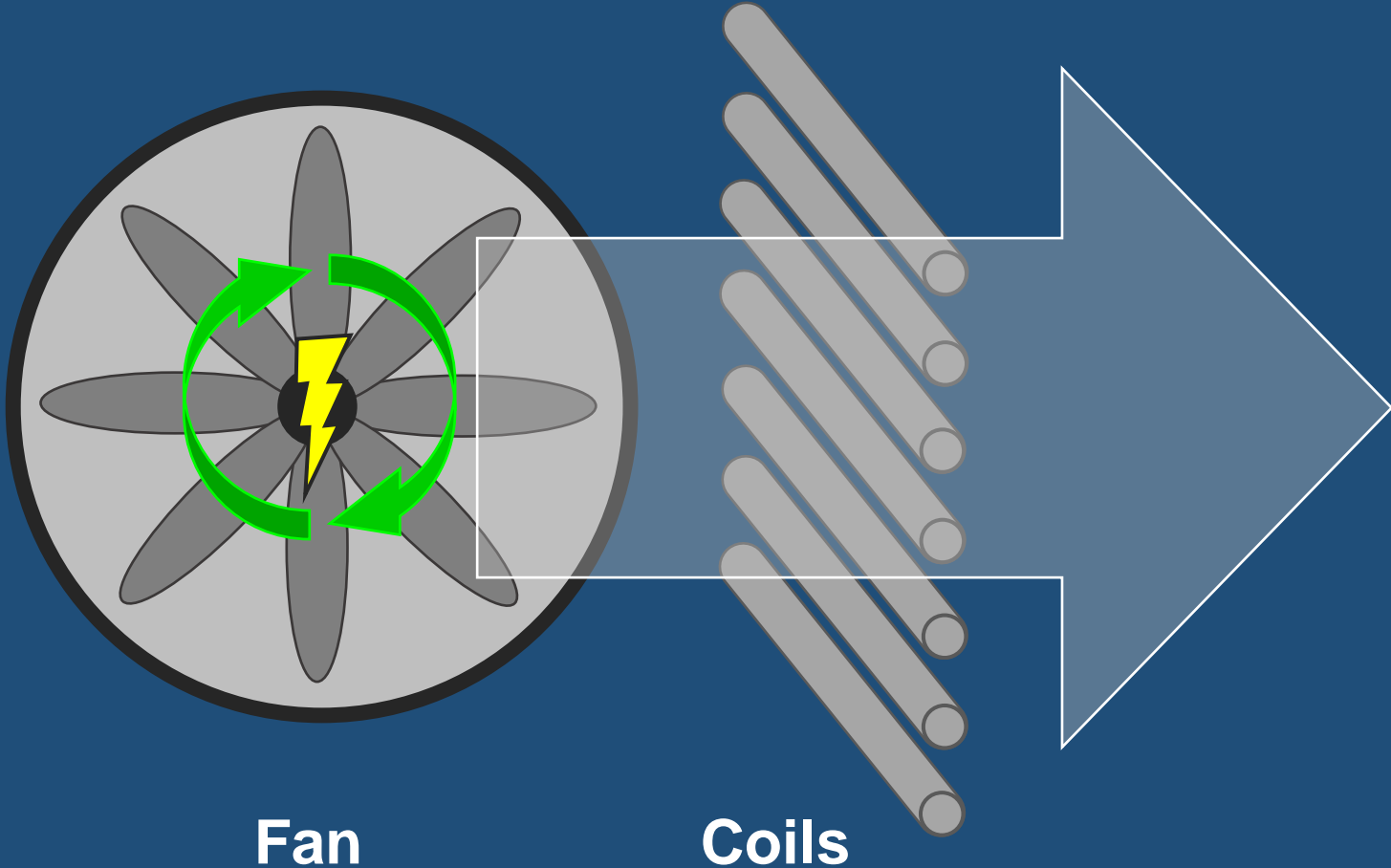
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COOLING Example: ice cube

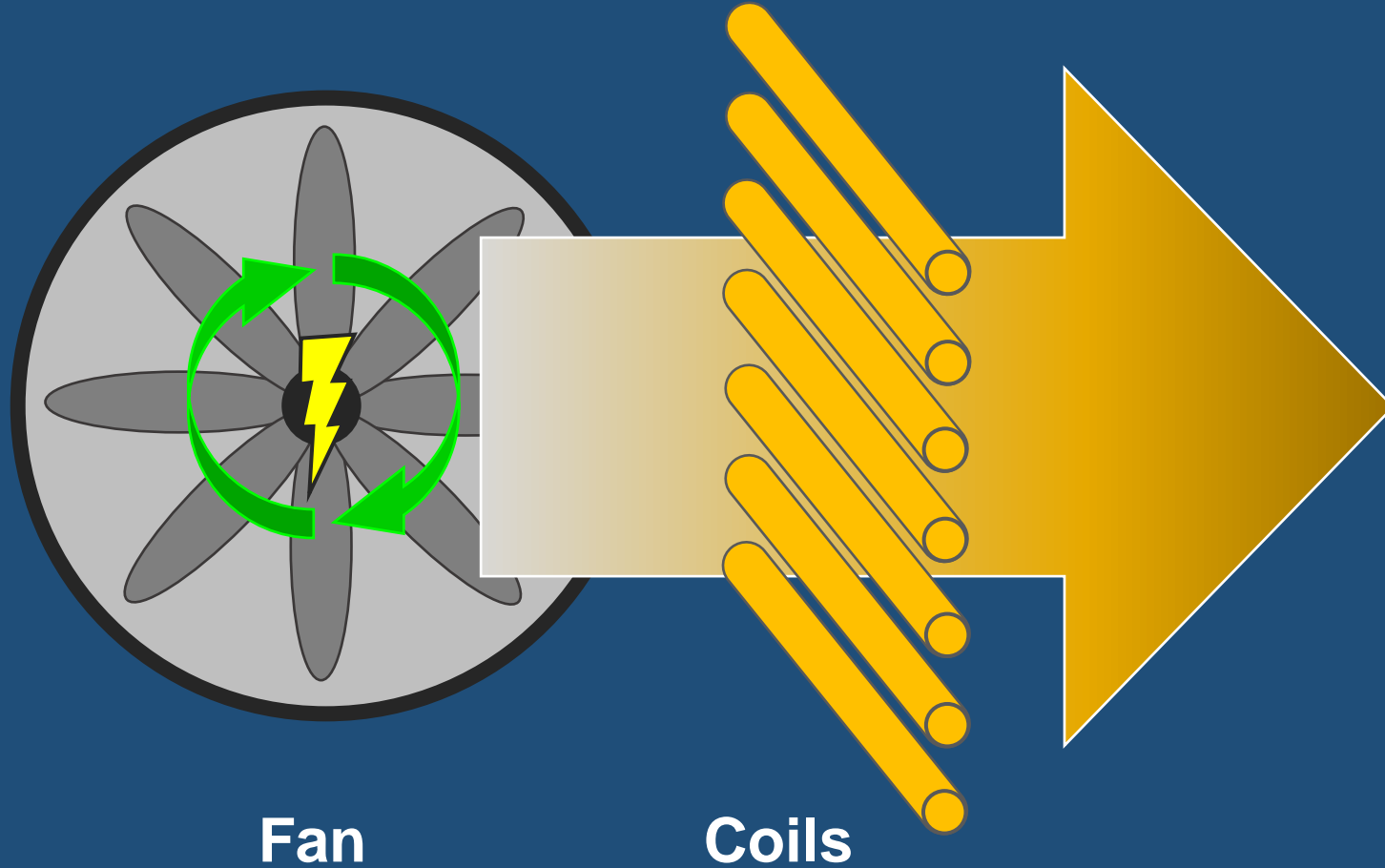
- Too fast air may melt the cube faster than desired
- Too slow air doesn't transfer much cool air.

For HVAC PTAC Units



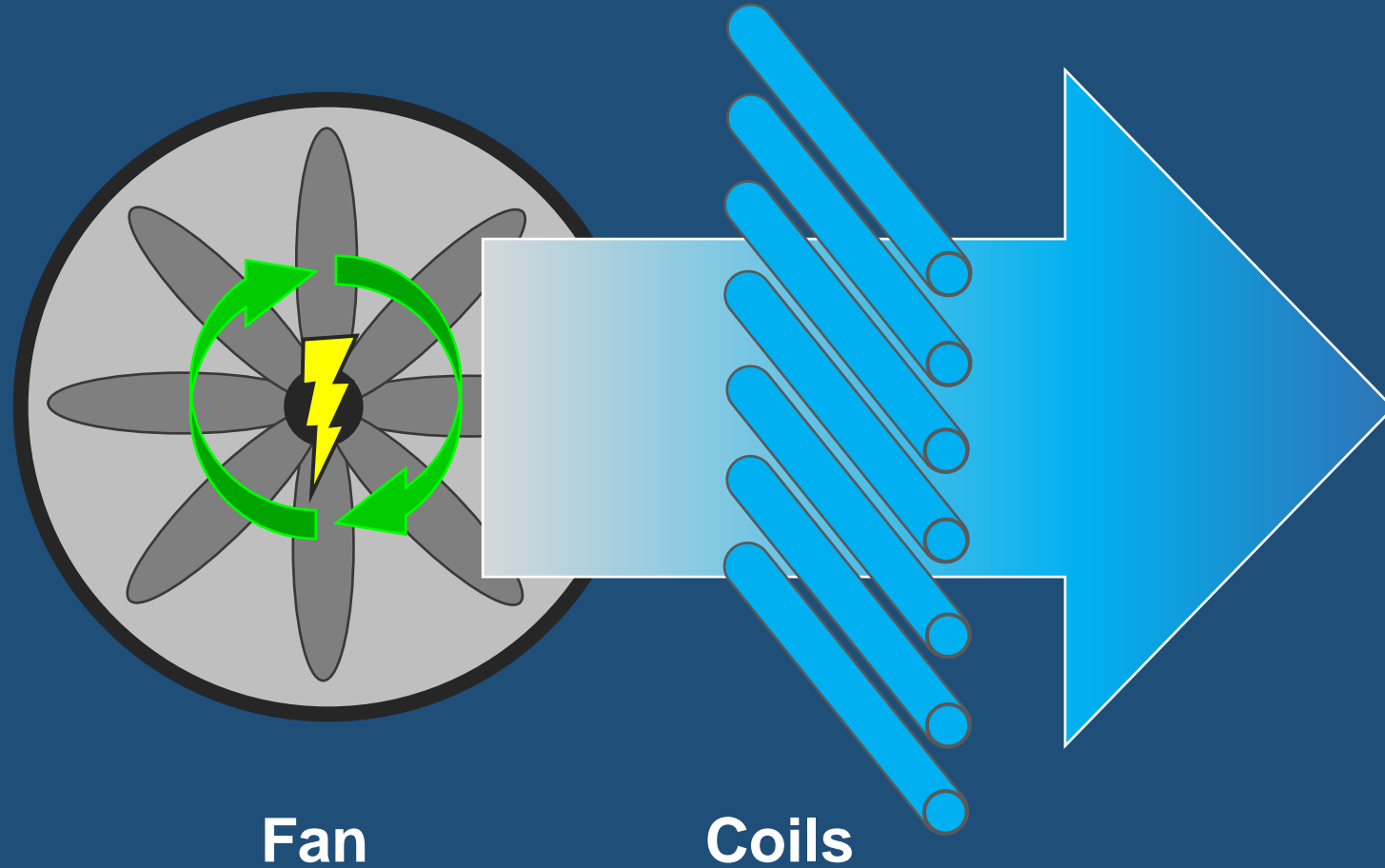
The key is to **OPTIMIZE** the Air Speed, and set it to the Coil Temperature

For HVAC PTAC Units



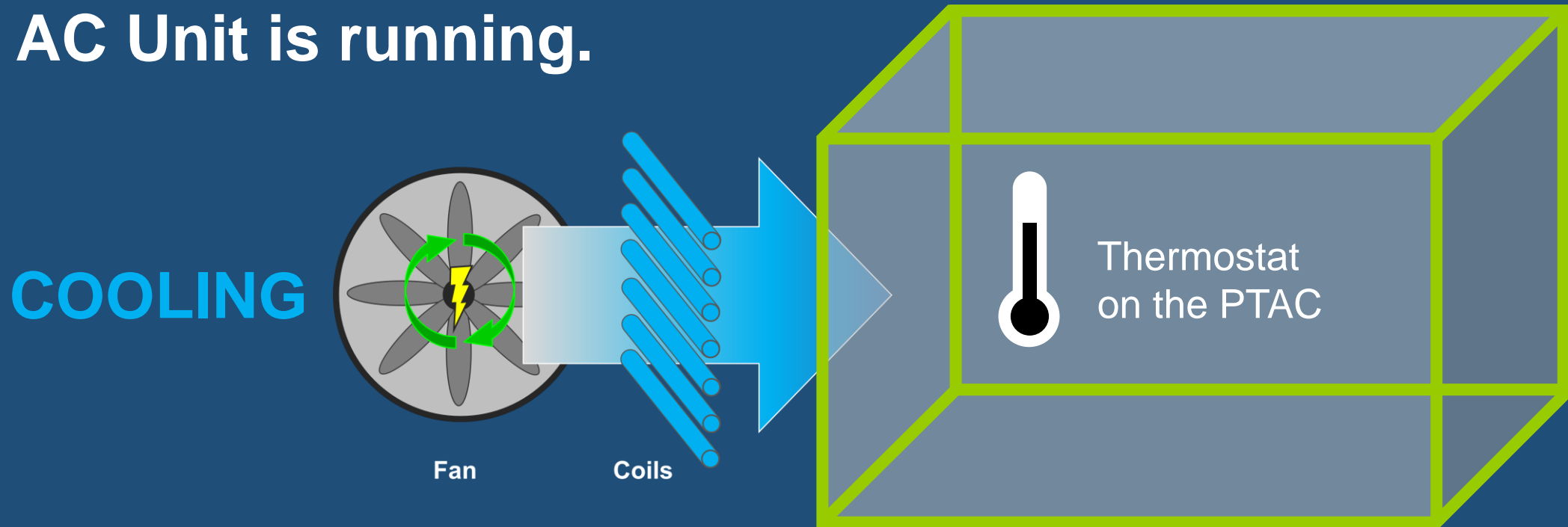
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For HVAC PTAC Units



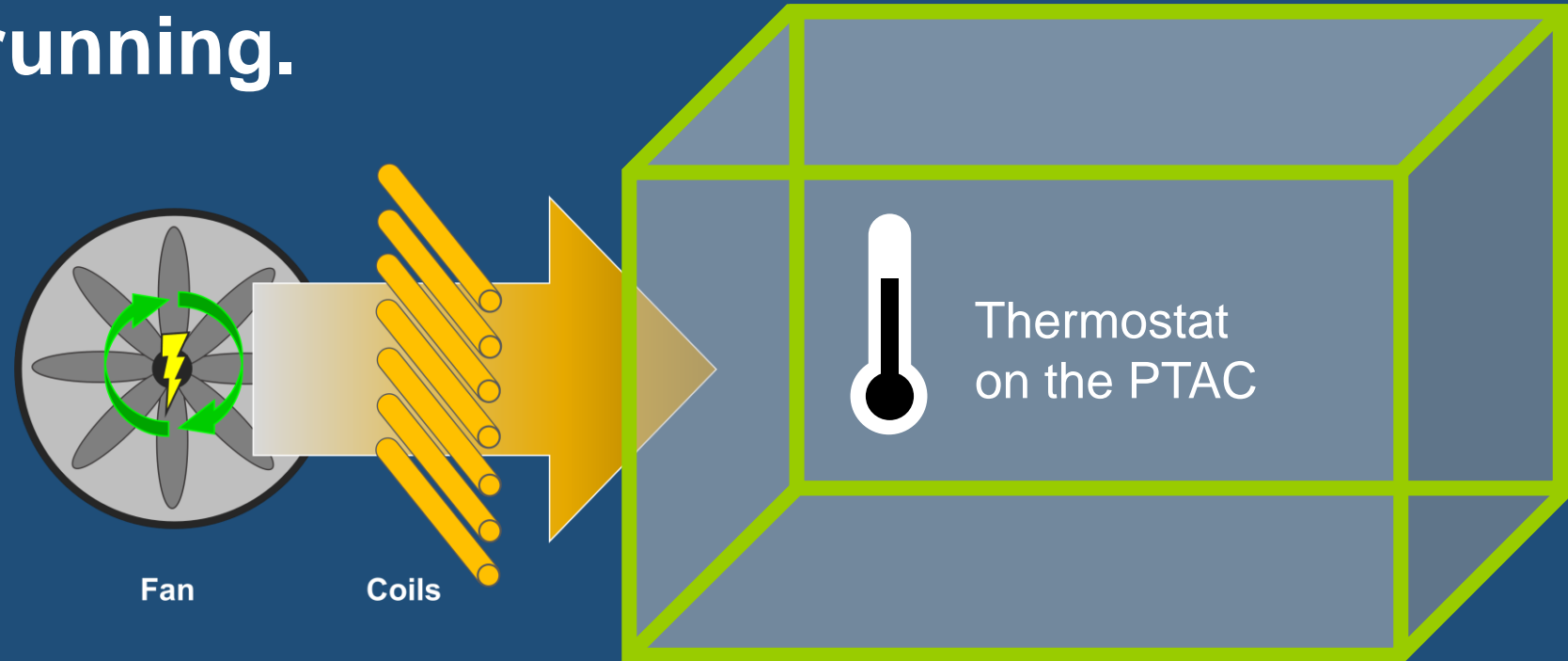
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Temperature
for **COOLING**

Operators typically leave their Fan on “Auto”
and it only runs when the
AC Unit is running.



Operators typically leave their Fan on “Auto”
and it only runs when the
Heater is running.

HEATING



The Problem:
When the Fan is set on “Auto” the speed is
FIXED
and not adjusted to
the temperature of the coils.

The Solution:
Install the PTAC Energy Saver and set the Fan to
“On”.

The speed is
VARIABLE
when it is running and adjusts to
the temperature of the coils.

 of  = **SAVINGS**

The TIMING of POWER Consumption = SAVINGS

Compressors typically consume about 70% of the electricity for Air Conditioning.

With PTACs the electricity cost for heating is much higher than the cost of running the fan.

With the PTAC Energy Saver, the timing of the power consumption will generate energy savings from the fans and even greater savings from the AC compressor and during heating cycles.



Timing Highlights (sample 8 hours of a day)

9:00 AM 10:00 AM 11:00 AM 12:00 PM 1:00 PM 2:00 PM 3:00 PM 4:00 PM 5:00 PM

Without
PTAC
Energy Saver



Off



Off



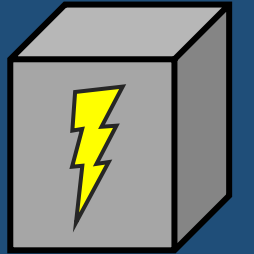
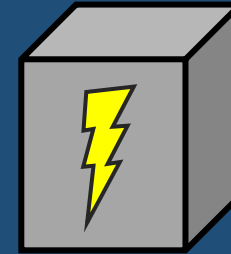
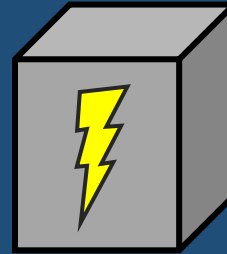
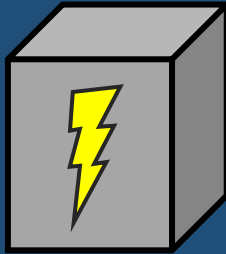
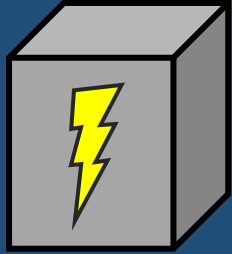
Off



Off



Fan set to
"Auto"



On “Auto” the Fan and the Compressor have to work hard in spikes to keep the room at the desired temperature. The same is true for the heating seasons.



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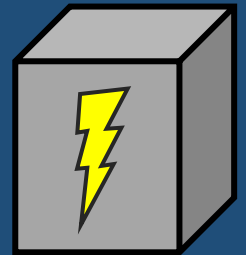
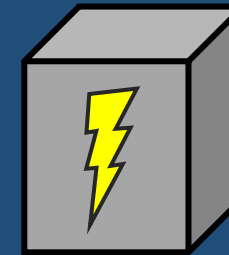
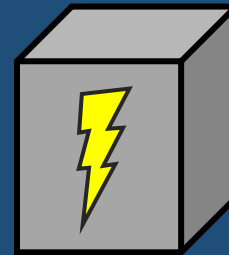
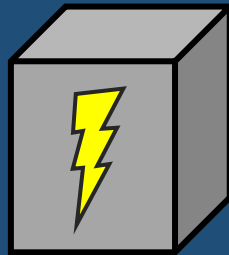
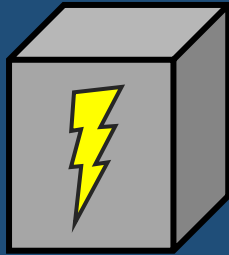
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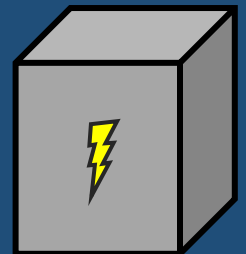
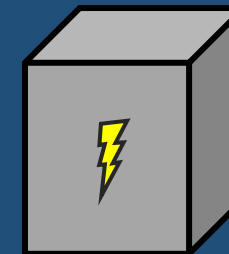
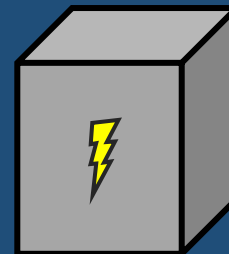
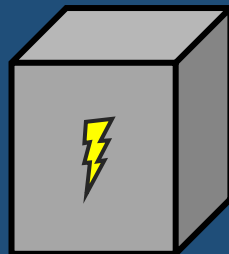
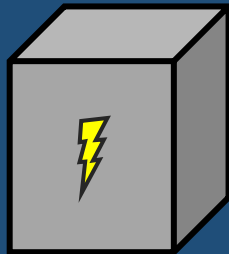
Fan set to
"Auto"



With
PTAC
Energy Saver



Fan set to
"On"



With the PTAC Energy Saver and Fan set to “On”:

You save energy on the fan and more importantly, you save energy on the compressor and heater.

The variable speeds are within each hour as well as over the hours of each day.

Think of this “smart” optimization as a tailored diet for your body. Your stomach can process food more efficiently with five smaller meals each day than three larger meals.

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Surges of food are like surges of air into the rooms, and it costs more to climate control large volumes of air with energy spikes than to keep the air at the desired temperature each minute of the day.

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You **SAVE MONEY** and reduce greenhouse gases along the path towards a more sustainable future.

Visit us online and contact us for more information



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