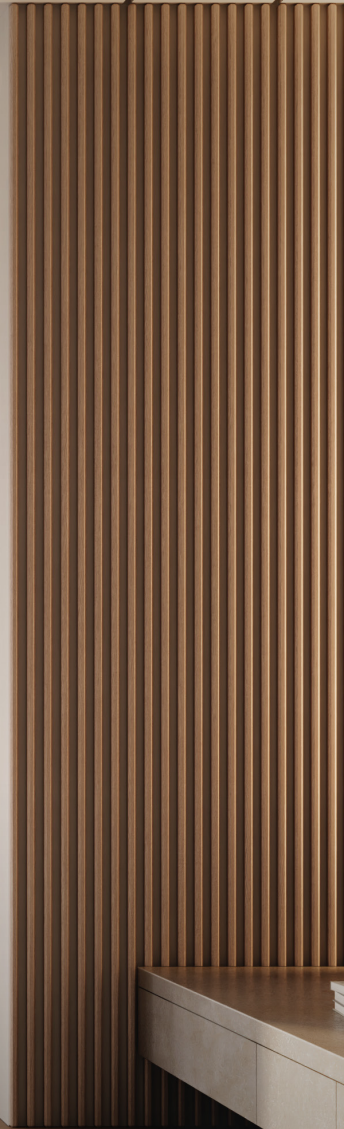


CONSTRUCT

KOVA



# KOVA Comfort Intelligent HVAC

[kovaproducts.com](http://kovaproducts.com)

Climate change, national emissions targets and energy codes demand better HVAC solutions, but basic heating and cooling technology hasn't really changed much since 1902.

# Why not leverage machine learning to *build a better system for projects, people and the planet?*

Heating and cooling spaces and people accounts for:

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15%

15% of greenhouse emissions globally.\*

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55%

55% of annual household energy use.\*\*

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2X+

More than twice as much energy usage than the average car.\*\*





\* <https://www.wsj.com/articles/the-race-to-build-a-better-air-conditioner-601b28fc>

\*\* <https://www.anthropocenemagazine.org/2020/07/the-race-is-on-to-build-an-ac-unit-that-doesnt-cook-the-planet/>

# Introducing KOVA Comfort Intelligent HVAC, the only residential solution leveraging machine learning and advanced AI to lower energy use and create greater comfort.

Through embedded machine learning, KOVA Comfort uses behavioral, environmental and occupant inputs to adapt, personalize and maximize comfort in each unique living environment. The user becomes part of an algorithm that feeds the functionality of the unit.

Perfect for multifamily, hospitality, student housing, and single-family environments.

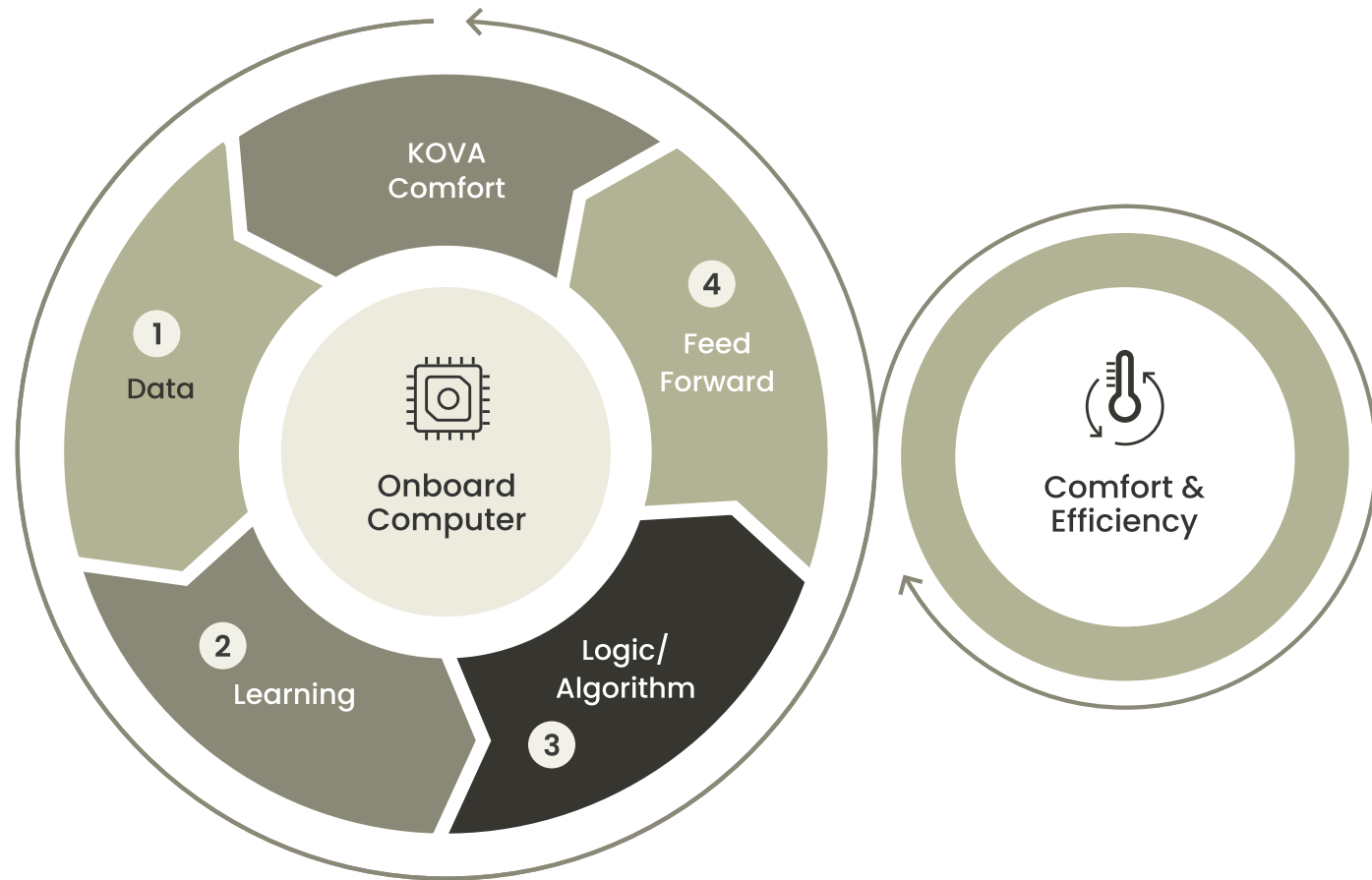
-  30% more efficient than conventional systems
-  Integrated design means no intrusion on the interior and better air delivery
-  Easy to install, saves time and labor in the field
-  Easy to repair and replace, less downtime and disruption.



More comfort for people, less impact on the planet.

# How It Works

KOVA Comfort Intelligent HVAC is designed around a powerful onboard processor to create the first system with the ability to capture, analyze, learn and optimize comfort and performance over time.



## 1 Data Inputs

- Temperature
- Humidity
- Real-Time Occupancy
- Light Intensity
- Habits and usage

## 2 Comfort Models

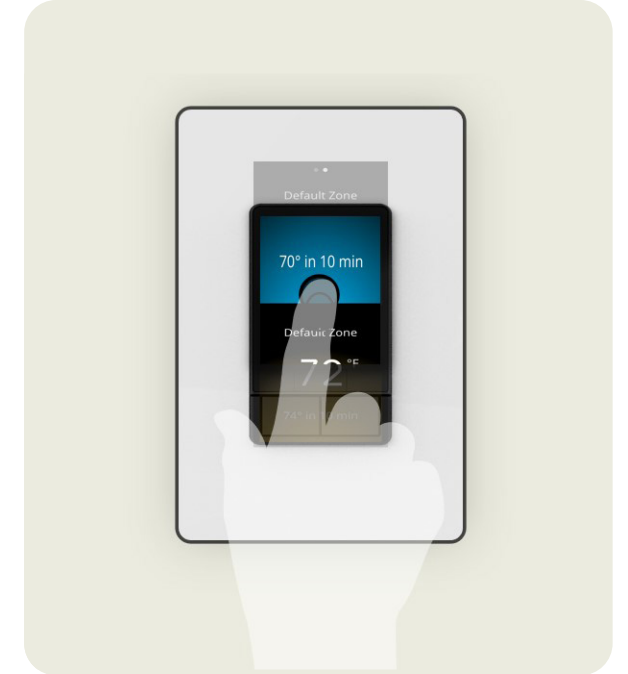
- Adaptive Comfort
- Occupancy Model
- Environmental Model
- Cooperative Control

## 3 Turning learning into algorithm— independent of input

## 4 Putting machine learning into practice to create comfort & efficiency

## Intuitive User Interface

- Intuitive built-in control, easy to navigate.
- Control single HVAC or orchestrate control across an entire living space.
- Standard thermostat controls and schedules with AI-enabled selections that optimize for comfort and/or energy efficiency.
- Built-in sensors to optimize operations, comfort and performance.



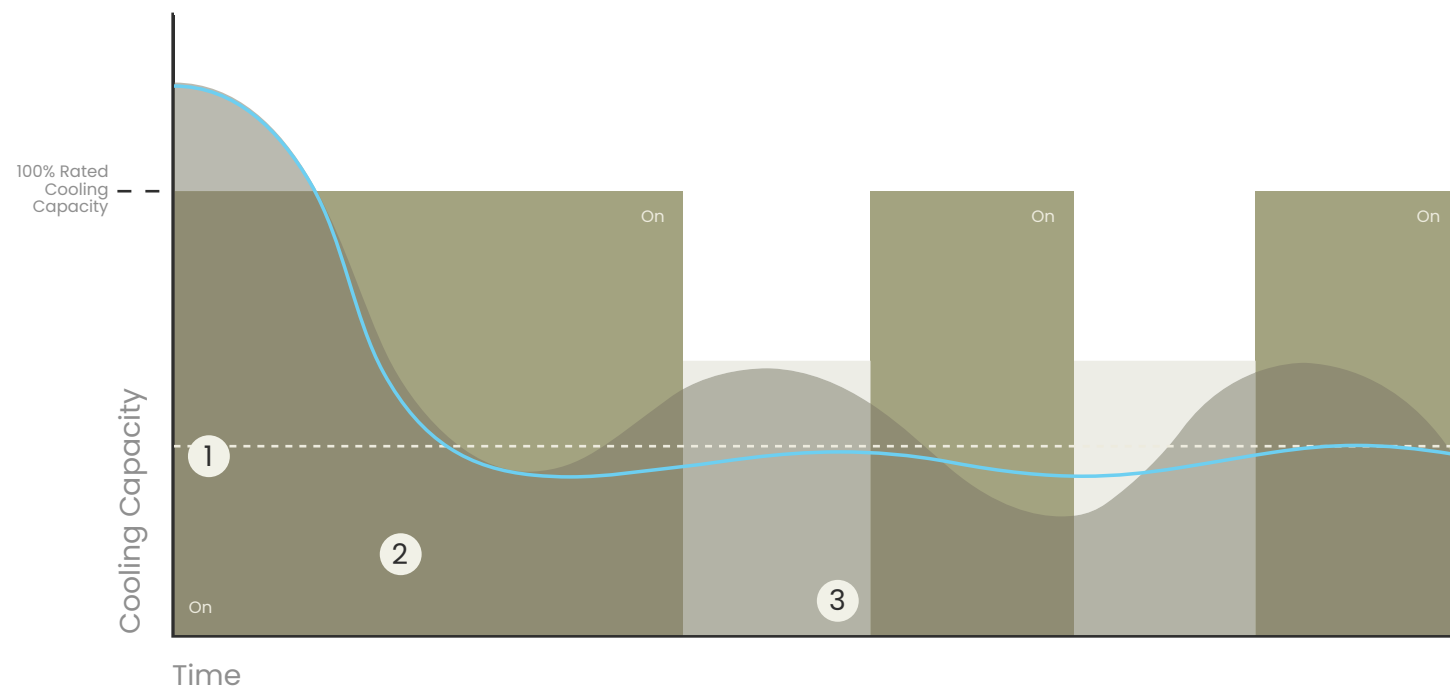
# Superior Performance & Comfort

Flexible to operate as an individual unit or engage with multiple units, KOVA Intelligent HVAC leverages machine learning and the use of advanced variable speed technologies for superior performance and efficiency.

## 30%+ energy savings

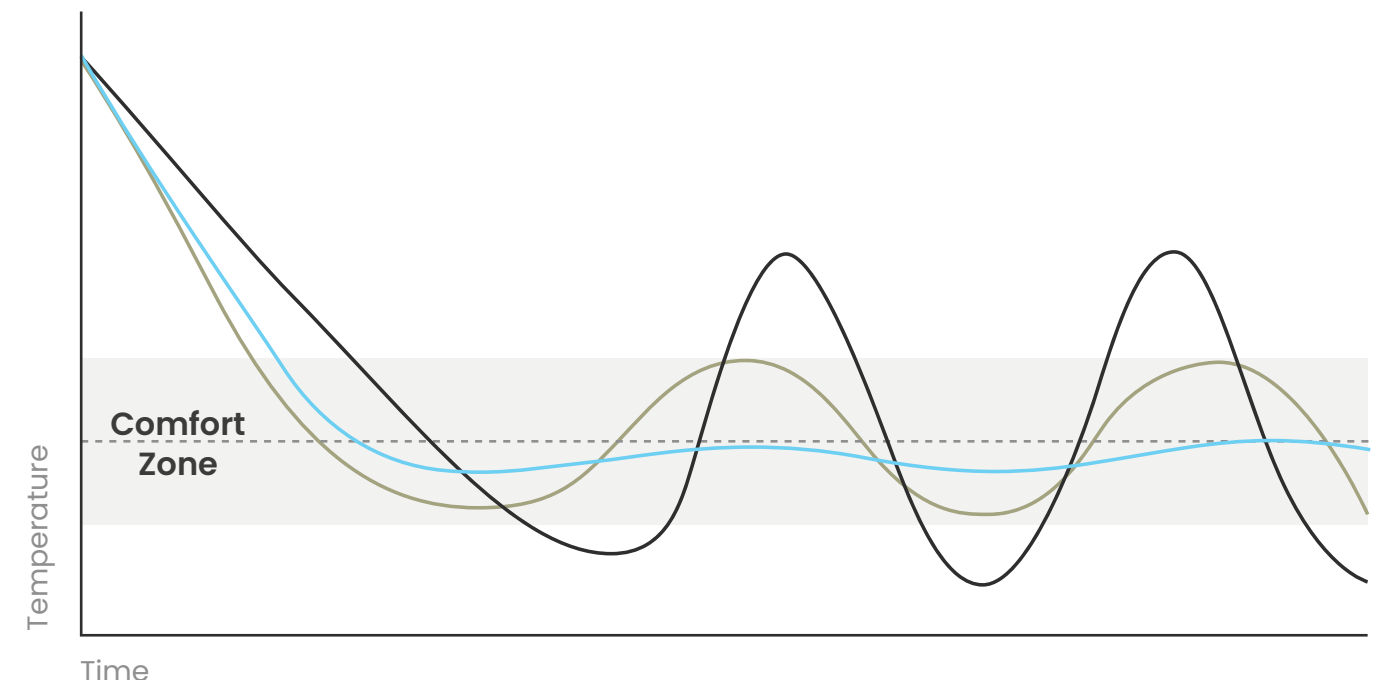
AI-driven optimization and a variable-speed compressor work together to use only the energy needed to meet heating or cooling loads. This creates less bouncing of power, greater comfort and less energy use throughout the day delivering up to 40% energy savings

Variable speed system operations and machine learning work in tandem to optimize system performance and save energy.



- 1 System engages when occupancy sensors indicate to quickly heat or cool the space
  - 2 When comfort level is reached, system load backs off to maintenance
  - 3 AI-model feeds forward to predict necessary loads
- Comfort Zone
  - Set Temperature
  - Traditional Fixed Speed HVAC
  - Traditional Variable Speed HVAC
  - KOVA Intelligent HVAC

Data and system work together to create personal comfort zones and to keep spaces more comfortable throughout the day.



- Comfort Zone
- Set Temperature
- Traditional Fixed Speed HVAC
- Traditional Variable Speed HVAC
- KOVA Intelligent HVAC



# Product Detail

## Specifications

Power Supply	208/230/1/60
Power Supply Operating Range	187-253 (v)
Compressor	Variable Speed Rotary
Indoor Blower	Backward Curve Blower
Outdoor Fan	Axial Fan

Electric Heat (Power/AMPS)	1300 (W) / 3.25 (A)
Dimensions (HxWxD)	89-in x 14.3-in x 11.75in
Weight	110 lbs



# Optimized Installation

## Engineered for easy installation.

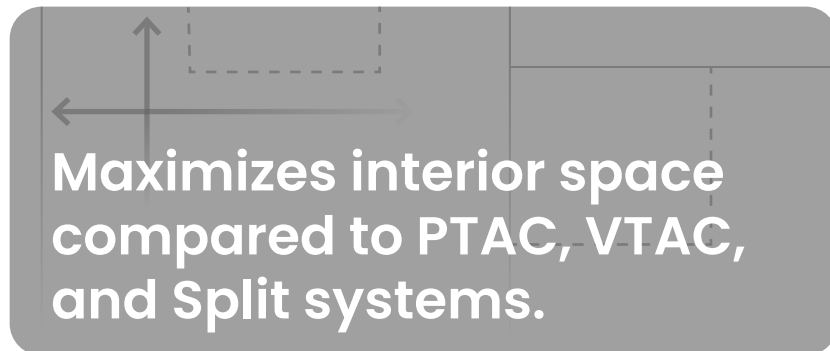
Uncomplicated product assembly and installation that produces positive implications for time on site, material use, and labor costs.



Easy to access and service from the interior



Pairs with large glazing units

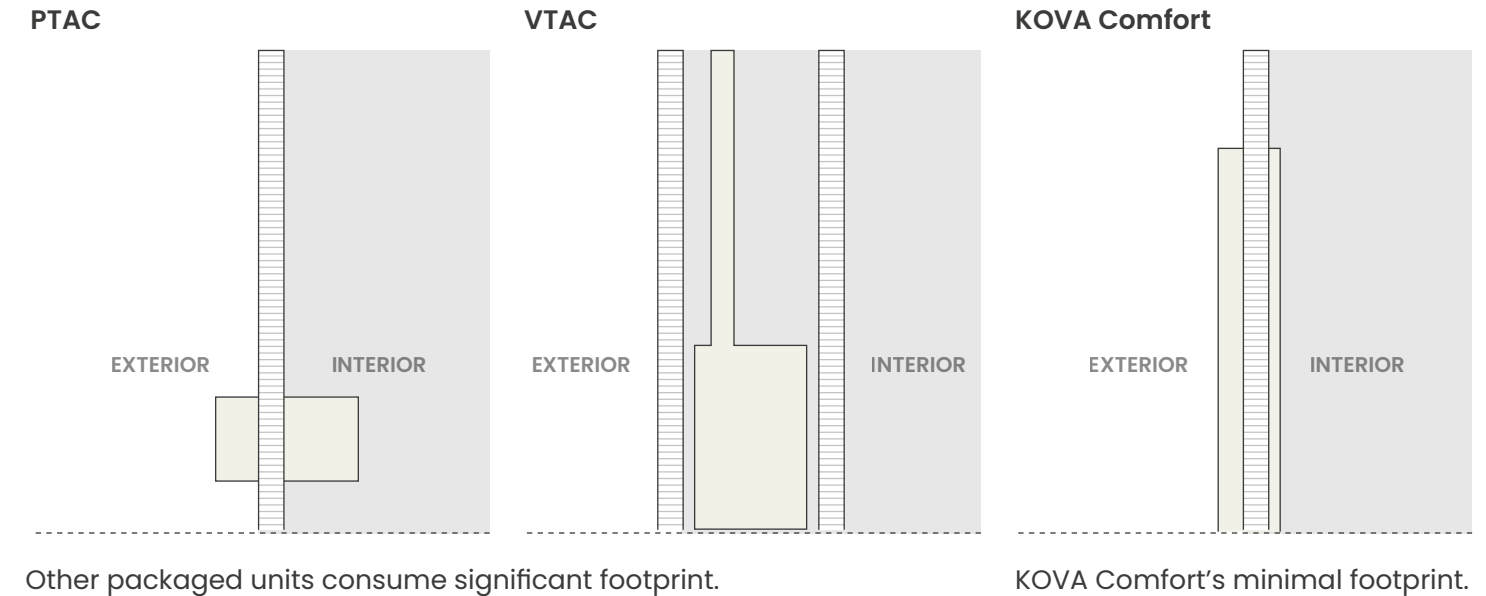


Maximizes interior space compared to PTAC, VTAC, and Split systems.

## Integrated Architectural Design

A clean, modern aesthetic and slim profile provides a compact footprint that does not consume valuable interior space and allows for pairing with large glazing units.

# Maximizes Footprint & Lowers Construction Costs



	VTAC	Split	KOVA Comfort
<b>Installation Requirements</b>	<ul style="list-style-type: none"> <li>• Base platform</li> <li>• Plenum opening</li> <li>• Electrical installation</li> </ul>	<ul style="list-style-type: none"> <li>• Concrete base for the outdoor unit</li> <li>• Metal frame prep hanging indoor unit</li> <li>• Electrical installation</li> </ul>	<ul style="list-style-type: none"> <li>• Easily fits standard stud wall</li> </ul>
<b>Installation Process</b>	<ul style="list-style-type: none"> <li>• Drain pan</li> <li>• VTAC installation on base platform</li> <li>• Water proofing</li> </ul>	<ul style="list-style-type: none"> <li>• Refrigerant lines</li> <li>• Fill refrigerant gas and seal</li> <li>• Indoor blower unit install</li> <li>• Outdoor unit install</li> </ul>	<ul style="list-style-type: none"> <li>• Trim and waterproofing occur in factory</li> <li>• Only requires electric installation and sleeve &amp; support bracket installation</li> </ul>
<b>Finishing Requirements</b>	<ul style="list-style-type: none"> <li>• Ducting</li> <li>• Waterproofing &amp; plumbing</li> <li>• Drywall work</li> <li>• Vent cover installation</li> </ul>	<ul style="list-style-type: none"> <li>• Ducting</li> <li>• Waterproofing &amp; plumbing</li> <li>• Drywall work</li> <li>• Vent cover installation</li> </ul>	<ul style="list-style-type: none"> <li>• Minor drywall work</li> <li>• Interior panel installation</li> </ul>

We create solutions from building envelope to the smallest interior detail. All aimed at creating more harmonious, healthier, more sustainable living, working, playing spaces...for humans.

**KOVA Construct**



Architectural Glazing Systems



Glass Railing Systems



Intelligent HVAC



Multi-trade Assemblies



Windows

**KOVA Connect**



Interior Storefront



Privacy Pods



Modular Wall Systems

**KOVA Components**



Bath & Kitchen Kits



Tubs, Sinks, Toilets



Plumbing



Lighting



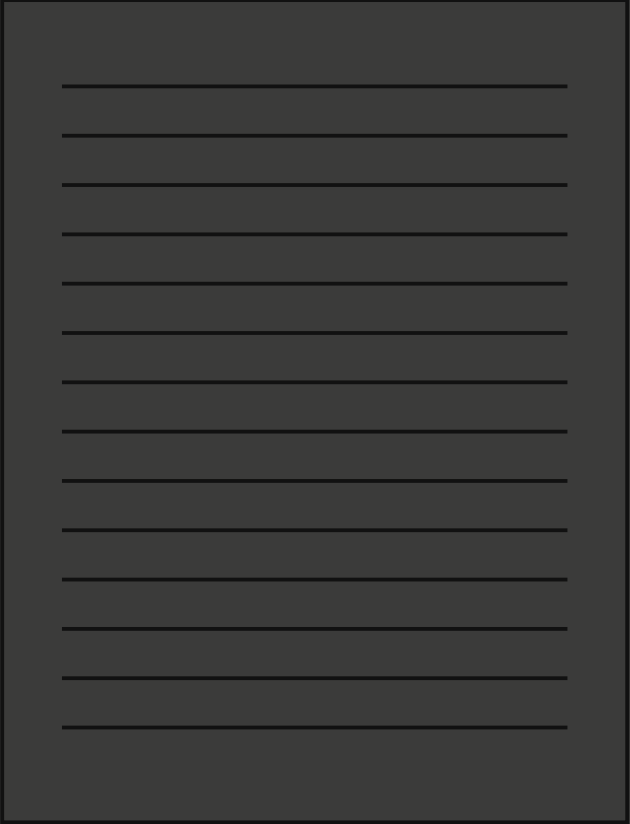
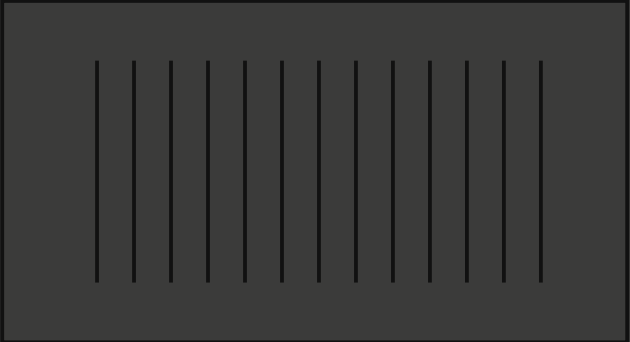
Finishes



Accessories



Trim





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**KOVA** Go. Build.

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