BUILDING A HIGHER STANDARD

DESIGN

TESTING

INNOVATION

WHEN EXCELLENCE MATTERS

American Standard Heating and Air Conditioning is the top choice for dealers and homeowners who won't settle for less than the most well-engineered and trusted equipment.

Don't Just Take Our Word For It

Our products are routinely recognized by homeowners and industry analysts for their Top Tier standing in Owner Satisfaction and Reliability.

Top Tier Owner Satisfaction for Heat Pumps, Gas Furnaces, and Central Air Conditioning[1]

Top Tier Reliability for Heat Pumps[2]

[1]American Standard was rated Top Tier in Owner Satisfaction for Gas Furnaces in 2019 & 2022, Top Tier in Owner Satisfaction for Heat Pumps in 2019 & 2022, and Top Tier in Owner Satisfaction for Central Air Conditioning in 2021 & 2018 by National Product Testing and Research Magazine.

[2]American Standard heat pumps were rated Top Tier in Reliability in 2022 by National Product Testing and Research Magazine.

Committed to Innovation and Home Comfort

1875
James Arrott and Francis Torrance found Standard Manufacturing while John Pierce founds the Pierce Steam Heating Company six years later.

1929
The plumbing and heating business merge to form American Standard.

1969
American Standard designs and engineers the NASA Mobile Quarantine Facility, transporting astronauts returning to Earth.

1984
The innovative System Extreme Environmental Test lab opens in Tyler, TX.

1988
The American Standard HVAC brand is born, building on a long history of manufacturing and expertise.

1989
American Standard launches the first ever Variable Speed hermetic compressor.

2006
American Standard AccuClean® reinvents whole-home air purification.

2014
Nexia Home and Diagnostics launches, enabling remote system control and monitoring (now American Standard Home and Diagnostics).

2022
American Standard Link debuts, simplifying installation, commissioning, monitoring, and servicing of variable speed systems.

DESIGN

TESTING

INNOVATION

ENGINEERED FOR EXCELLENCE

It's not complicated; we design our HVAC systems with homeowners in mind with features that make their homes more comfortable, more energy efficient, and even healthier. We only work with the best available materials and configure our units to be easy to install and service, all to build the most worry-free equipment possible.

PROVE OUR METAL

Great design means nothing without superior performance. Homeowners and dealers trust us to provide the most reliable equipment possible, and we take that responsibility seriously. We subject our equipment to a gauntlet of punishing tests at every stage to make sure it performs in even the most extreme conditions.

BUILDING THE FUTURE

In 1885, we began using cast-iron radiators to heat homes cleanly and affordably, and that innovative spirit continues today. From next generation technology like remote diagnostics and real-time jobsite assistance, to indoor air quality and improvements in sustainability, we are always looking to design for the future.

DESIGN

ENGINEERED FOR EXCELLENCE

Excellence is achieved by designing to a higher standard. Our units are loaded with features that deliver maximum comfort to homeowners while also improving ease of installation and serviceability. We select the best materials and top-quality, innovative parts like our all-aluminum Spine Fin™ coils. The result? The most well-engineered equipment possible.

OUTDOOR UNITS — AIR CONDITIONERS & HEAT PUMPS

American Standard's outdoor units are designed to provide superior energy-efficient cooling and quiet, reliable operation. We've designed down to the smallest detail, from the most complex parts to the most basic features, like the cabinet and basepan.

Spine Fin™ Coils

The novel design enhances airflow and heat transfer while resisting corrosion and leaks. These exclusive all-aluminum coils have proven far more reliable than traditional coils with copper and aluminum. Plus, aqueous glue releases fewer VOCs.

Durabase™ Rustproof Basepan

The basepan won't crack, corrode, rust, or warp.

Quick Panel Removal

All of the panels can be removed in approximately three minutes by removing 14 screws for easy access to the unit.

Duration™ Variable Speed Compressor

The heart of American Standard's variable speed technology, it automatically adjusts itself while maintaining constant and consistent comfort.

Powder-Coated Exterior

Galvanized steel is treated with zinc phosphate, creating a gritty surface with which our electrostatically-charged powder coat paint bonds, fortifying the unit against the elements.

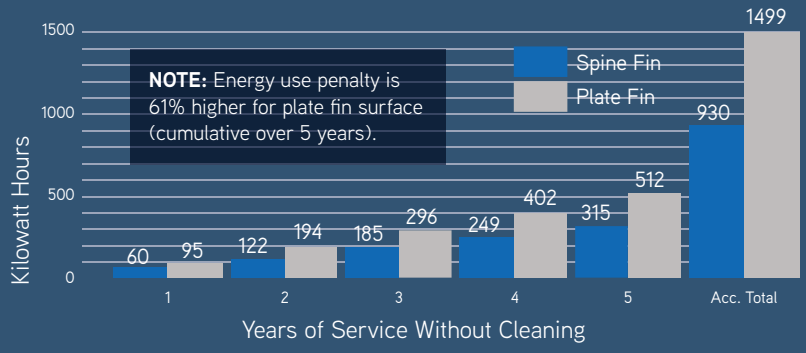
U.S. Naval Research Confirms Benefits of Aluminum

Heavy concentrations of salt and pollution in coastal and urban environments introduce substantial corrosion to heat exchangers. According to a study at the United States Navy Civil Engineering Laboratory, Naval Construction Battalion Center, aluminum construction resists corrosion better than conventional copper and steel construction.

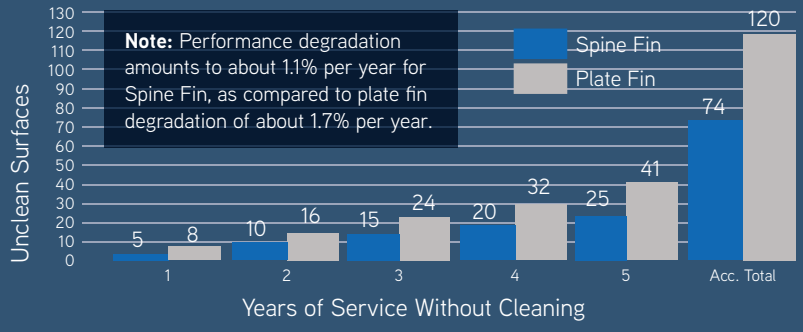
A 24-month study demonstrated that aluminum heat exchangers performed 32% better than those made with both copper and aluminum.

Purdue University Validates the Advantages of Spine Fin™

Energy Use Penalty due to contaminated condenser surfaces in 3-ton 10 SEER systems (1500 Hrs/Yr operation)



Operating Cost Penalty for contaminated condenser surfaces in 3-ton 10 SEER systems



INDOOR UNITS — AIR HANDLERS & FURNACES

American Standard's multi-functional air handlers combine patented technology and flexibility to work with our complete range of heating and cooling products. Our furnaces are designed to deliver premium indoor comfort with precise control and come in a range of options to fit each unique application.

FOREFRONT

AIR HANDLER

Double-wall construction, enclosed foam insulation, and positive pressure airflow virtually eliminate sweating and condensation and improve air quality.

FEATURES

Vortica™ Blower*

The unique contoured edge increases airflow efficiency and reduces noise.

Variable-Speed Motor
with Comfort-R™ Technology*

The motor strategically ramps up airflow to minimize cold air during heating and dehumidification while cooling.

Easy Disassembly/Assembly

The composite cabinet can be disassembled either horizontally or vertically, separating the cabinet into two sections to fit into tight spaces.

Contained Insulation

No exposed fiberglass insulation means that loose particles won't enter the home's air system.

Double-Sloped Drain Pan

Made from rust-resistant polycarbonate, the pan is designed to eliminate standing water and minimize microbial growth.

S9-SERIES

HIGH EFFICIENCY FURNACE

Design inspired by our very own dealers enables easier serviceability of parts like the heat exchanger, blower, and burners.

FEATURES

Vortica™ Blower*

The unique contoured edge increases airflow efficiency and reduces noise.

Variable-Speed Motor
with Comfort-R™ Technology*

The motor strategically ramps up airflow to minimize cold air during heating and dehumidification while cooling.

Stainless Steel Primary Heat Exchanger

Stainless steel withstands higher temperatures, resists corrosion, and is efficient at heat transfer, while improving airflow efficiency in both winter and summer.

Formed Steel Door with Acrylic View Windows

Windows allow monitoring of key internal components without removing the door.

Multi-Port In-Shot Burners

Creates the optimal flame shape to provide maximum heat while using less fuel and reducing operating noise.

** American Standard exclusive*

PACKAGED UNITS

With all-in-one HVAC systems that bundle heating and cooling in a single outdoor cabinet, packaged units offer simplified comfort. They are ideal for rooftop or ground installations.

HYBRID DUAL-FUEL

PACKAGED UNIT

Efficient electric heat pump operation is supplemented by the gas furnace only if needed.

FEATURES

Vortica™ Blower*

The unique contoured edge increases airflow efficiency and reduces noise.

Variable-Speed Motor

with Comfort-R™ Technology*

The motor strategically ramps up airflow to minimize cold air during heating and dehumidification while cooling.

All-aluminum Spine Fin™ Coil*

One continuous piece requires fewer brazed joints, so it offers extreme resistance to corrosion and leaks.

Simplified Maintenance and Serviceability

The compressor, blower, and controls are conveniently located on a single side, while accessible coils and foil-faced insulation make for easy cleaning.

Duration™ Two-Stage Compressor

Legendary reliability with two stages of cooling for efficiency and quiet operation.

Double-Sloped Drain Pan

The slope minimizes standing water.

** American Standard exclusive*

Since 2018, American Standard has offered ductless products through a joint venture with Mitsubishi Electric.

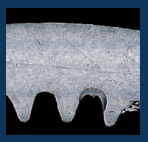
Corrosion-Resistant Coils

Our Platinum Coil is the industry's first truly reliable, all-aluminum indoor coil, leading the field in formicary corrosion prevention. That legacy of quality continues with our top-of-the-line autobrazing process.

Formicary Corrosion Test

In an accelerated formicary corrosion test, aluminum tubes ***(below, left)*** showed only minor surface corrosion after 127 days of exposure, while copper tubes ***(below, right)*** failed after 12 days.*

ALUMINUM



62x

500x

COPPER

62x

500x

After 500 hours of salt spray a galvanized steel tube sheet with copper tubing ***(below, right)*** shows substantial corrosion, while an all-aluminum tube sheet and tubes ***(below, left)*** shows virtually no corrosion.

ALUMINUM

COPPER

**Note: The test for formicary susceptibility of Alloys A (Aluminum) and C (Copper) was performed by Corrosion Testing Laboratories, Inc. in August 2004.*

TESTING

PROVE OUR METAL

In order to earn our reputation for well-engineered equipment, we freeze, broil, stress, drop, shock, expose, and listen to our equipment – redesigning and retesting until it proves its reliability — because if it's going to carry the American Standard name off the line, it has to be built to last.

SEET TESTED™

SEET stands for System Extreme Environmental Test, and it's where we expose our equipment to the harshest conditions and situations imaginable.

At our SEET Lab in Tyler, TX, we push our systems to the limit to satisfy our higher standards. We subject them to bone-chilling cold, blistering heat, extreme moisture, and power fluctuations. They endure eight consecutive two-week sessions under accelerated conditions, adding up to more than 2,600 hours of continuous testing. That's years' worth of wear and tear concentrated into four months. All to ensure only the best, most reliable systems make it into our customers' homes.

SEET TESTING, ROUND BY ROUND

ROUND 1
Voltage: Low

25° 80°

Heating Defrost with Snow and Ice

In this test, the system must heat while operating in sub-freezing conditions, including snow and ice. In order to pass, the coil must be free of ice buildup and the compressor must function under very stressful conditions such as defrost operation.

ROUND 2
Voltage: Nominal

100° 75°

Cooling with Fan Failure

By simulating outdoor fan failure, this test causes the system to cycle on overload and ensure it will restart after cooling down.

ROUND 3
Voltage: High

0° 80°

Minimum Load Heating

Simulating minimum refrigerant flow puts compressor bearings at seizure risk. Because of their innovative design, Duration™ compressors have the velocity necessary to pull oil back in to lubricate all bearing surfaces.

ROUND 4
Voltage: Off

Power Shut-off

The system is shut down for 12 hours during which refrigerant migration can cause oil to drain or be washed off bearing surfaces. At the end of this round, we restart the system to confirm the compressor can operate with little or no oil pressure, similar to after a power outage or seasonal startup.

ROUND 5
Voltage: High

125° 100°

Cooling Maximum Load #1

This searing heat test forces the compressor to run continuously at high temperatures, removing excess indoor heat and sending it outside. The system is cycled and must restart and run without tripping off.

ROUND 6
Voltage: Nominal

85° 80°

Cooling Flood, Indoor Blower Off

This test subjects the compressor to the mechanical stresses of liquid refrigerant floodback, simulating gross system overcharge or blocked indoor airflow.

ROUND 7
Voltage: Low

125° 80°

Cooling Maximum Load #2

This test attempts to force the compressor to shut down under the stress of high load.

ROUND 8
Voltage: Off

Power Shut-off

The compressor is shut off and restarted with low bearing oil pressure, once again simulating a power outage or seasonal startup.

TESTED IN OUR NEIGHBORHOOD BEFORE IT REACHES YOURS

While the SEET Lab tests the performance of our systems as a whole, we're also continuously testing individual units and components to make sure they earn our trust.

From specialized testing to in-line manufacturing audits, we employ an extensive system of checks and balances to ensure the highest level of quality and reliability.

Here are some highlights from our comprehensive testing program:

Outdoor Units | Packaged Units | Furnaces | Air Handlers | Cased Coils

Sound Rooms

We have three sound rooms (including a Hemi-Anechoic Chamber that's structurally isolated from the surrounding building and insulated for sound) dedicated to testing the sound quality and power of our equipment and isolating potential sound problems. Our completely soundproof Reverberation Chamber is used to determine the acoustic performance of our products.

Air Flow Plenums

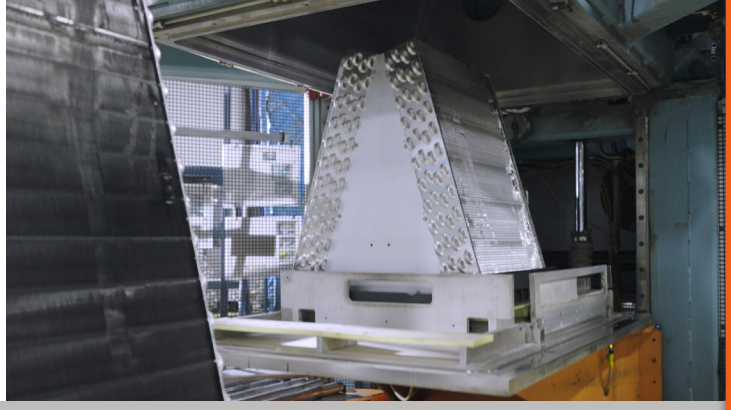
Our Air Flow Plenum testing areas capture empirical performance data, enabling us to map the motor and fan for use in simulations and modeling as well as replicate and troubleshoot air flow issues in the field.

Gas Lab

Twelve individual stands allow us to test our units using natural gas, propane, or butane. In addition to running dozens of ANSI performance tests and CSA, ET, and UL certifications, the lab supports product development, evaluates field issues, and establishes safety limits.

Mass Spectrometer Test

We double-braze the metals on our coil slabs to ensure an impermeable refrigerant circuit and then send it through our Mass Spectrometer's vacuum-sealed chamber to verify there are no leaks. To pass, the unit must have a leak rate of lower than .25 ounces/year — the equivalent of losing a 12 oz. can of refrigerant over 48 years.



Compressor Calorimeters

Our calorimeters measure power and refrigeration capacity to map compressor performance and allow for accurate system-level modeling and simulation. We also use them to evaluate and compare compressors from different suppliers.

Field Tests

Before introducing our products to the public, we put them through their paces in the real world, testing a wide range of scenarios and pushing the systems to their limit in the homes of our employees and channel partners. The information we collect leads to improved performance where it counts the most, with our homeowners.

End-of-Line Tests

All along our manufacturing lines, we test every unit and cycle all of its components. We also electronically verify key components, ensuring the correct parts are matched to their specific model. At the end, a computer sequences the unit through a series of run tests and only prints a shipping label for those that pass.

Shipping Tests

We run our equipment through a gauntlet of transportation tests, including the Shake Table, the Inclined Impactor, and the Drop Test. These tests simulate the various vibrations, slams, and drops our units — and their packaging — may encounter once they leave the safety of our factory.

INNOVATION

BUILDING THE FUTURE

For over a hundred years, we've made some of the most awarded, well-engineered heating and air conditioning equipment and earned a reputation for doing things right.

From adopting the cast iron radiator, to innovating Spine Fin™ and variable speed technology, to optimizing indoor environments for returning astronauts, we have always challenged existing standards.

That innovative spirit lives on today as we continue to find new ways to provide our neighbors with quality products that redefine the expectations of the modern world.

CONNECTED COMFORT SOLUTIONS

DELIVERING NEXT-LEVEL INSIGHT AND CONTROL

Our Connected Comfort Solutions unlock the full potential of our systems, offering homeowners a new level of comfort, control, and peace of mind while providing our dealers with the tools to provide exceptional service and stand out from the competition.

American Standard Diagnostics

PROVIDING POWERFUL INSIGHT AND PROACTIVE SUPPORT

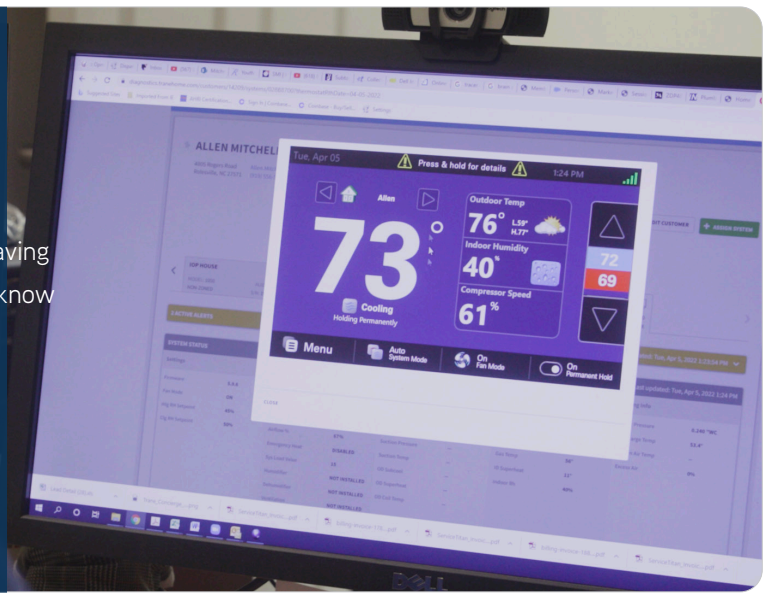
American Standard Diagnostics allows dealers to remotely monitor an HVAC system's performance and can alert them of potential issues before the homeowner calls (or even knows there's an issue). Technicians can access real-time and historical performance data, allowing them to diagnose and grab the right parts before they head to a customer's house; and in some cases, avoid a service call altogether.

The insight provided by American Standard Diagnostics empowers dealers to create stronger relationships with homeowners and more efficient service departments while building on our reputation as the most reliable brand in the industry.

To hear what dealers say about Diagnostics, scan this QR code.

"Diagnostics really helps our company save money because we know which parts to bring to a house, saving us extra trips, and because we can let the customer know that they have issues before they even notice."

— **MARK**, *HVAC dealer in Florida*



Diagnostics™

American Standard Link

ENHANCED INSIGHT GETS THE JOB DONE RIGHT

From the moment it's turned on through the life of the unit, American Standard Link makes installation, maintenance, and service smarter with its revolutionary communication and diagnostics technology.

Link's set-up wizard and sensor-verified installs mean technicians of all skill levels can leave every job confident it was done right—which means fewer callbacks. With SmartCharge™, techs can connect and Link will automatically charge refrigerant to the correct levels — minimizing errors and freeing them up to do other work. The mobile app allows technicians to connect to system components through Bluetooth and verification reports provide peace-of-mind for both dealers and homeowners. Finally, additional sensors in Link-enabled equipment provide exponentially more data through Diagnostics.

To hear why dealers love Link, scan this QR code.

"This Link equipment has enabled us to offer something of absolute intangible value. The only thing that's going to prevent you from selling Link is not offering it."

— **MICHAEL**, HVAC dealer in Florida

American Standard Home App

COMFORT, CONTROLLED FROM ANYWHERE

The American Standard Home app, which is available for both Android and Apple, lets homeowners harness the power of their HVAC system and smart thermostat. They can program setpoint schedules and even adjust the temperature when they're not home — helping to save money and energy. When paired with Amazon Alexa and Google Home, the app allows customers to control their comfort with their voice.

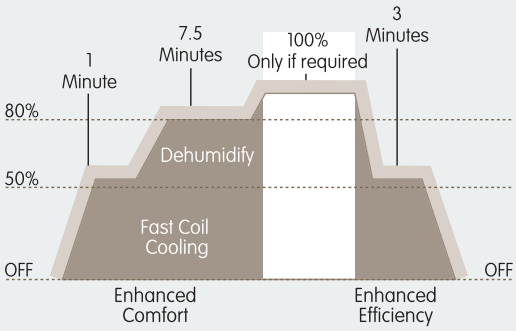
Finally, with American Standard Home, users can allow dealers to access their home's system through American Standard Diagnostics, for remote support and even troubleshooting.

To find out more about American Standard Home, scan this QR code.

American Standard Zoning Systems

COMFORT, EXACTLY WHERE YOU WANT IT

American Standard zoning systems use a network of controls, sensors, and motorized dampers to optimize temperature and humidity throughout a home. By delivering heat or cooling to the rooms that need it, these systems eliminate temperature fluctuations over the course of the day and provide consistent comfort year-round. Plus, the American Standard Home app gives users the power to conveniently control each zone from the palm of their hand.



Comfort-R™ Technology

COMFORT, ALL YEAR ROUND

American Standard's exclusive Comfort-R technology optimizes humidity control in non-communicating systems with variable speed motors by linking the blower speed to a sophisticated humidity sensor, allowing systems to draw humid air more slowly over coils at the beginning of a cooling cycle. This capability, available only on American Standard systems paired with an American Standard thermostat, can remove up to four times as much moisture compared to a standard cooling system. With Comfort-R, air feels more comfortable more quickly with less heating or cooling.

Variable Speed Technology

COMFORT, WITHIN HALF A DEGREE

American Standard pioneered variable speed technology back in 1989, and today we continue building on that innovation with enhanced communicating capabilities. Our variable speed units are our most efficient — capable of running at more than 700 different speeds* with incremental speed changes as small as 1/10th of 1% to maintain temp within a 1/2 degree. When paired with American Standard Link, they offer next-level comfort with zoning and improved humidity control.

Plus, our refrigerant-cooled inverters keep electronic components at consistent temperatures, improving performance and reliability.

American Standard Smart Thermostats

COMFORT, AT YOUR FINGERTIPS

American Standard's line of smart thermostats give homeowners the flexibility to automate, monitor, and control their comfort settings from anywhere, and reduce utility costs by setting a schedule or putting the system into energy-savings mode. Plus, when the homeowner connects their smart thermostat to the American Standard Home app, they can even change the temperature and adjust their settings when they're away from home.

*XV20i and XV18 have 700+ speeds

INDOOR AIR QUALITY

MAKING HOMES HEALTHIER WITH CLEANER AIR

Over the past few years, homeowners have become increasingly aware of the importance of indoor air quality. They want their homes to be a refuge, free of the dust, allergens, mold, and viruses that can lead to illness and respiratory issues. Using the right air filtration system can dramatically reduce these undesirable particulates.

AccuClean® Whole Home Air Cleaner

LEAVING HEPA FILTERS IN THE DUST

American Standard AccuClean removes up to 99.98% of airborne particles[1] and is the first whole home air cleaner certified asthma and allergy friendly by the Asthma and Allergy Foundation of America.* It connects directly to a home's HVAC system, and because it uses a powerful, patented ifD Corona field to electrically charge and trap pollutants, air flows more freely and efficiently than through a filtered system.[2] It captures particles up to 700 times smaller than the width of the human hair,[3] making it 100 times more effective than traditional filters and eight times more effective than medical-grade HEPA filtration systems.[4]

Learn more about AccuClean by scanning this QR code.

[1]Based on 3rd party testing of particle removal efficiency down to 0.3 microns (2005) | [2]As reported by airmid healthgroup in ASCR092142v2 (2015) [3]Assuming <1% removal rate of 0.3–10 micron particles | [4]Verified Zero Ozone per UL 2998, Intertek certificate #: Z0Z-90113-2023c

***Disclaimer:** The CERTIFIED ASTHMA & ALLERGY FRIENDLY Mark is a Registered Certification Mark of the ASTHMA AND ALLERGY FOUNDATION OF AMERICA and ALLERGY STANDARDS LTD*

REDUCING OUR ENVIRONMENTAL IMPACT

Transitioning to all-electric systems

We offer a range of solutions to help homeowners transition away from fossil fuels. To convert to all-electric, our P-Series air handler easily replaces a gas furnace and pairs with a heat pump. For colder climates, our versatile hybrid dual fuel systems increase energy efficiency while lowering reliance on natural gas. And to meet California state regulatory requirements, we offer an ultra-low NOx furnace.

Taking charge in Trenton

At our manufacturing facility in Trenton, New Jersey, we've installed the state's largest solar array — 5,500 panels generating nearly 2 million kilowatt-hours (kWh) of clean energy every year. We've also made changes inside, including a LED lighting project that reduces the facility's energy use by 1.5 million kWh annually.

WE'RE TAKING STEPS TO SHRINK OUR CARBON FOOTPRINT —

moving away from fossil fuels through fully electric and hybrid systems, offering more energy efficient products, incorporating more eco-friendly manufacturing processes, and dedicating countless hours to source lower Global Warming Potential refrigerants that exceed government regulations.

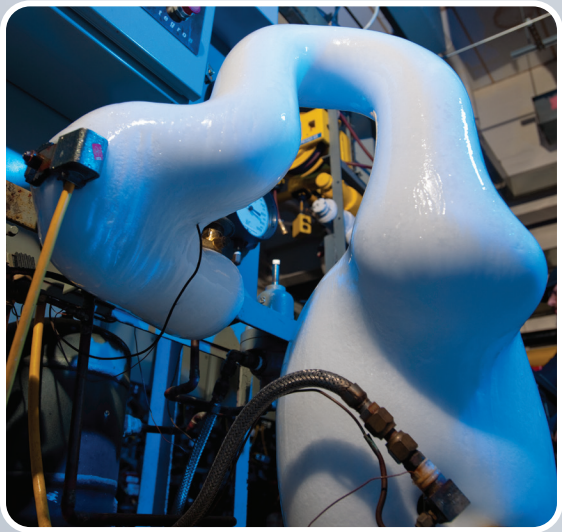
Keeping waste out of landfills

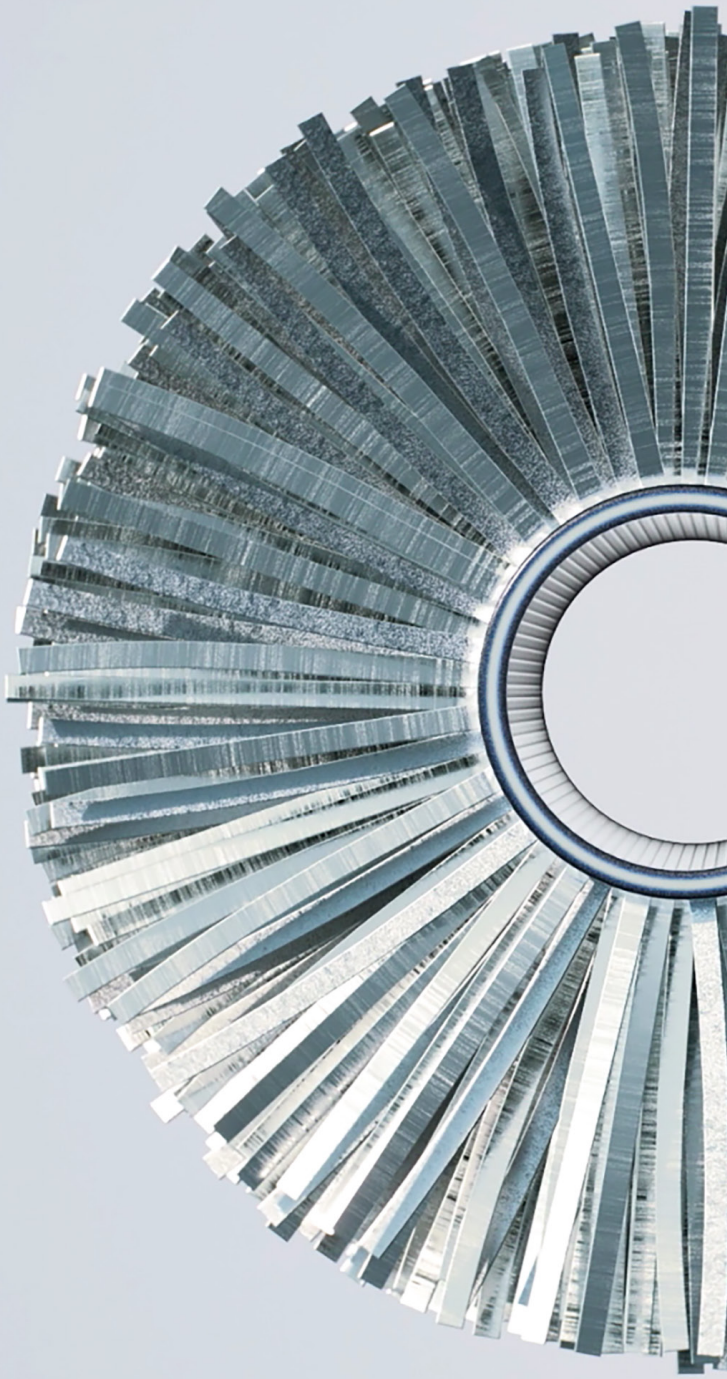
Our Tyler, Texas plant is proud to be a Zero Waste to Landfill facility. We implement comprehensive strategies – focused on recycling, reusing, and repurposing – to make sure none of the manufacturing waste we generate ends up in a landfill.

Choosing more responsible materials

We leverage recycled steel content, or "green steel", which is 80% less carbon intensive than traditional steel, and we're taking action to drive market demand for low-carbon materials and tech.

AN ODE TO
SNOWBALL





Way back in 1972
A sent-back compressor was eyed by a few
Experts who could find no spot of trouble
They tested it anyway (just to stay humble)

Day after day and week after week
Onlookers arrived to take a peek
At this wonder of comfort, encased in snow
It wasn't long before all would know

This compressor showed no signs of stopping
Happily working, capacity not dropping
Like a car doing 60 for millions of miles
This discarded unit made everyone smile

That compressor ran for twenty-eight years,
Anniversaries marked with admiring cheers
A Higher Standard had been set for all
By our little-compressor-who-could — Snowball.