

NATE

M A G A Z I N E

Helping Technicians in
the U.S. and Beyond

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PARTNERSHIPS RAISE THE
CERTIFICATION STANDARD

CHP-5 OR TRADITIONAL PATHWAY?

THE HVACR WORKFORCE



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HVACR Training and Certification

KEYS TO A STRONG, GLOBAL INDUSTRY



In this field, you need to invest in your technicians to retain your talent and stay competitive. This past winter, we worked with an independent opinion research company to survey technicians and contractors from across the country to better understand how NATE training and testing aligns with the career development path of technicians today. One of the questions we asked was what technicians looked for in an employer. More than three-quarters of the technicians we surveyed said they were more likely to stay with employers that provided career training and support for their certification. And we found that contractors recognize the importance of supporting technician development. In fact, four out of five NATE-certified technicians have received training support and financial assistance for certification exams from their employers.

We understand how important career development is to both technicians and contractors, and that is why we have worked hard to make the NATE exam process more accessible. Two years ago, we introduced a new certification pathway, the Certified HVAC Professional (CHP-5). With our Core and Specialty exams traditional pathway and the new CHP-5 pathway, technicians can now choose a path to certification that best fits their needs, learning style, and exam preferences. In our feature article, you can read more about our traditional certification pathway and the CHP-5 (page 18). We talked with technicians who recently earned their NATE certification about how they chose which exams to take, as well as industry veterans about their recommendations for technicians on which certification pathway to choose.

And while NATE may stand for North American Technician Excellence, we have been working to support HVACR technicians across the world. In this issue, you can read more about our partnerships with organizations in India and the Middle East that are developing unified technician training and certification standards. You can find our conversation with Vikram Murthy, a representative of AHRI, who is working with the HVACR industry in India, as well as our interview with Srinivasan Rangan and Ansar Fasillullah of Rheem, Middle East and Africa (MEA), Dubai, United Arab Emirates (UAE). Thanks to these partnerships, we have been able to share the value of NATE certification—and ultimately further our mission to be the leader in developing and recognizing professional HVACR technicians.

It is incredible to see how our organization has evolved since our founding 25 years ago. I had the chance to reflect on our work this week when our Board of Trustees met for our spring meeting to discuss NATE's work and help shape our plans for the coming year. During our meeting, we talked extensively about the ways our team has expanded and modernized our organization to better meet the needs of the HVACR community. Our discussions left me feeling immensely proud of the ways NATE has evolved to prioritize the training and recognition of today's technician, and eager for our future work. This is an incredible time for NATE, and I am looking forward to the next steps our organization, and our greater HVACR industry, takes. ●



DAIKIN *ATMOSPHERA* – OPENING DOORS TO NEW OPPORTUNITIES



Discover our next generation of single zone ductless products with low Global Warming Potential (GWP) R-32 refrigerant. Daikin *ATMOSPHERA* is available in four sizes from 9,000 to 24,000 BTU and is the first product from Daikin to use R-32 refrigerant in North America. Daikin *ATMOSPHERA* reduces the Global Warming Potential impact on the environment by up to 80% compared to similar R-410A systems. And R-32 has been shown in Daikin's labs to increase efficiency by up to 12% over R-410A with comparable products, lowering electricity consumption and indirect emissions. A noteworthy new feature includes a new hybrid cooling technology that dehumidifies even in low cooling loads and continues to maintain dehumidification once a set-point temperature is reached. The indoor unit also includes built-in Wi-Fi for connectivity to the Daikin Comfort Control App. In addition to the included wireless I/R controller, Daikin *ATMOSPHERA* is compatible with several other Daikin controllers, including the Daikin *One+* smart thermostat.



ADDITIONAL INFORMATION

Before purchasing this appliance, read important information about its estimated annual energy consumption, yearly operating cost, or energy efficiency rating that is available from your retailer.

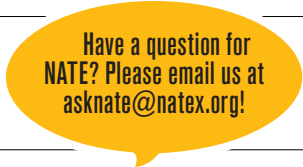
R32

Up to 27.4 SEER
Up to 13.8 HSPF
Up to 16.3 EER



You Asked, We Answered

QUESTIONS ASKED BY NATE-CERTIFIED TECHNICIANS, ANSWERED BY THE NATE TEAM AND SHARED WITH YOU.



I HAVE A QUESTION, BUT I CAN'T MAKE A CALL. CAN I TEXT MESSAGE NATE QUESTIONS?

Yes, there is a new way to contact the NATE customer service team. You can now text us at 703-945-1914 to connect with a NATE customer service representative. You can also message us on Facebook by searching @NATETechnicians. If you prefer phone or email communication, you can also call us toll-free at 877-420-6283 (NATE) or send us an email at askNATE@natex.org. The NATE customer service team is available 9 a.m. to 5 p.m. Monday through Friday.

I AM A NATE PROCTOR AND JUST COMPLETED A TESTING SESSION. HOW LONG CAN I KEEP THE PAPER EXAMS?

Used exams must be mailed to NATE within two business days of the test session. You should verify you and the candidate have both initialed and sealed their exam materials before mailing. Additionally, you should make sure all test booklets and materials (including the Mylar pack the test came in, as well as the test session audit form) are placed in the envelope. Please make sure packages have a tracking number.

If you have any unused exams, you can keep test booklets and materials in a secure location until your next scheduled exam session.

IN WHAT LANGUAGES DO YOU OFFER NATE EXAMS?

Currently, the only other language NATE exams are offered in is Spanish. The following exams are available in Spanish:

- Ready-to-Work Exam
- HVAC Support Technician Exam
- CORE Exam
- Air Conditioning Service Exam
- Air to Air Heat Pump Service Exam
- Gas Heating Service Exam

If you wish to take the exam with a translator, please complete the Request for Non-standard Accommodation form.

Please note that for remote Live Online Proctor (LOP) sessions, translators cannot be used and candidates are not permitted to use online translation services, translation dictionaries, or any other outside materials during the exams. If you are registering for a Spanish exam online using LOP, Examity proctors will speak English only. The proctors' responsibilities will be to greet and set you up at the start of the exam and to monitor the testing room for the duration of the exam.

Word Search

1. Wiring	F P M M G U I C D G L O B A L
2. Global	L E A C F N O R O B V Z J E Y
3. Pathway	O T A T S G N I N I A R T X G
4. Flow	W O I T H Y E D O C L D E A V
5. Install	E D A L K W T Y I Y C G A M V
6. Training	N L J M P T A I Q H N R S E T
7. Capacity	L E S N J S Y Y C A E E M D D
8. Comfort	N D Z R Q D F Y H A R M R T U
9. Change	I B E R T D B C N V P J W R E
10. Testing	O J H M B U B W I T Q A G O R
11. Coil	Z K O E D I R C N J H N C F N
12. Exam	D D N U H J E J N N I Y F M D
13. Service	C R K U W S Q H J R A R B O A
14. Code	T E S T I N G U I W I K F C I
15. Split	J D Y E O P J W C E H L W T O



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NATE News

ELIGIBLE HVACR CONTRACTORS ENCOURAGED TO BECOME NATE-RECOGNIZED TRAINING PROVIDERS

If you provide training for HVACR technicians, you can apply to become a NATE Recognized Training Provider (RTP) and register your courses with NATE. Manufacturers, wholesalers and distributors, contractors, association partners, trade association chapters, and educational/training facilities are all eligible to become a NATE-Recognized Training Provider. By registering your courses with NATE, NATE-certified technicians can automatically receive continuing education hours (CEHs) towards their recertification.

The NATE website, NATEX.org, provides all the necessary tools and information needed to submit courses, to pay and renew courses, and to submit attendance records via the myNATE portal. Get started today with the free Recognized Training Provider application at www.natex.org.

SPRING RECERTIFICATION REMINDER

In March, NATE mailed out reminders to technicians who need to complete their recertification this spring to maintain NATE certification. Every two years, NATE technicians must earn 16 hours of training related to their certification specialty or in general areas such as safety, electricity, controls, codes, and regulations in order to maintain their certification. Technicians can track their credit hour progress through their myNATE account. For more information about the recertification policies, fees, and common FAQs, visit NATE’s recertification webpage. If you or your technicians have any questions about the recertification process, reach out to NATE at recertify@NATEX.org, or call NATE customer service at 877-420-6283.

NATE CERTIFIED HVAC PROFESSIONAL (CHP-5)

There are now two different ways technicians can become NATE certified—the Traditional Pathway with the Core exam and a Specialty exam, or the new Certified HVAC Professional (CHP-5) pathway. With the CHP-5, technicians can earn their NATE certification through a series of five 30-question exams, each on a different subject domain: HVAC Fundamentals, Electrical and Controls, Comfort and Airflow, Installation, and Service. Technicians can take the exams in any order they choose and can take up to six months between each exam to study and prepare.

NATE’s goal with the CHP-5 is to help HVAC technicians feel more prepared while studying for their certification by grouping together exam subject areas. “We wanted to create a full development certification path that mirrors the on-the-job training that many technicians receive,” says John Lanier, NATE COO. “It gives technicians the opportunity to demonstrate their competency each step of the way,” as they take each exam. For more information, visit www.NATEX.org/CHP5, and check out the article on certification pathways in this issue.

NATE EXAMS APPROVED BY VIRGINIA BOARD OF EDUCATION

The Virginia Board of Education recently announced that three NATE certification exams will be a part of the state’s approved Industry Certifications for the 2022-2023 school year. Now Virginia post-secondary students can earn their NATE certification as part of their career and technical education graduation requirements. The three approved exams are the Air Conditioning Service, Gas Heating Service, and Heat Pump Service specialty exams. Visit the NATE website for more information on these specialty exams and NATE certification.

EVENT/MEETING	DATE	CITY
Skills USA	June 20-24	Atlanta, Georgia
American School Counselor Association (ASCA)	July 9-12	Austin, Texas

Industry News



DAIKIN CHANGES ITS NAME AND RESTRUCTURES

With the goal of becoming the No. 1 HVACR company in North America, Daikin unified Daikin, Goodman, and Amana® HVACR brands under a new corporate name—Daikin Comfort Technologies—and created a stronger focus on environmental advancement.

This name change and new structure aligns brand sales efforts with the mission to enhance customer experiences and become North America's No. 1 indoor comfort solutions provider. The name change and new organizational structure became effective April 1, 2022.

"We are uniting under a single name, Daikin Comfort Technologies, capturing a culture and identity that reflects one vision that will create an even stronger and more unified Daikin," says Satoru Akama, Daikin CEO. "By fusing Daikin's strengths, core technologies, and environmental solutions with Goodman's extensive sales and distribution network, we will enrich our customer experience, improve organizational efficiency, and transform the North American HVACR market by promoting environmental solutions that impact people where they live, work, and play," adds Takayuki "Taka" Inoue, chief sales and marketing officer.

LENNOX INDUSTRIES OPENS NOMINATIONS FOR ITS "FEEL THE LOVE" PROGRAM

Residents of the U.S. and Canada can nominate local heroes and deserving homeowners until August 31 to receive heating or cooling equipment and installations at no cost, thanks to Lennox Industries' annual "Feel The Love" program. Now in its 13th year, the program awards heating or cooling equipment and installation free of charge to deserving community heroes in the U.S. and Canada.

Lennox encourages family members, friends, neighbors, co-workers, and local organizations to nominate deserving community heroes who are in need of a new HVACR unit to feel safer and to breathe the perfect air in their own space. Selected recipients will receive brand new heating or cooling equipment during this year's Feel The Love Installation Week, taking place October 8-15, 2022.

The Feel The Love program is made possible through continued partnership and collaboration with the Lennox dealer network across North America. Since the inaugural Feel The Love program in 2009, Lennox and its dealers have completed over 1,500 free installations, with 130 installations occurring in 2021. Through this program, Lennox continues to advocate for the importance of indoor air quality and the accessibility of clean, comfortable air for all.

LG ELECTRONICS RECOGNIZED BY THE US ENVIRONMENTAL PROTECTION AGENCY

LG Electronics (LG) has been named 2022 ENERGY STAR® Partner of the Year-Sustained Excellence by the U.S. Environmental Protection Agency (EPA). The honor recognizes the company's commitment to protecting the environment through leadership in ENERGY STAR-certified products and promotions.

Under its Zero Negative Environmental Impact initiative, LG plans to establish more production sites that make a positive impact on the environment. To ensure that the company reaches its stretch goals for carbon neutrality and circular economy, LG announced its intention to reduce the use of petrochemical-based plastics by introducing up to 600,000 tons of recycled plastic into its manufacturing process by 2030 and nearly double the recovery of electronic waste to 8 million tons by then.

Each year, the ENERGY STAR program honors a group of businesses and organizations that have made outstanding contributions to protecting the environment through superior energy achievements. ENERGY STAR award winners lead their industries in the production, sale, and adoption of energy-efficient products, homes, buildings, services, and strategies. These efforts are essential to fighting the climate crisis and protecting public health.





Producing Quality HVACR Techs in the Gulf Cooperation Council Countries

RHEEM'S DUBAI FACILITY IS HELPING THE MANUFACTURER MEET ITS 250,000 TRAINED TECHNICIAN GOAL BY EMBRACING NATE AND ITS CHP-5 CERTIFICATION PROGRAM.

Rheem Manufacturing has worked with NATE in a variety of ways over the past two decades. In the U.S., Rheem offers over 80 NATE-certified online and classroom trainings for technicians and frequently advocates for NATE certification on social media. “Rheem is proud to partner and support NATE in all of their efforts to elevate the HVAC industry through training and certifications for technicians,” explains Randy Roberts, who is the vice president of sales and marketing for Rheem, as well as a NATE Board member.

Now, Rheem is finding ways to help technicians internationally by implementing NATE training and testing in Gulf Cooperation Council (GCC) countries—Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates (UAE). With NATE certification, Rheem is clearly defining the standards and knowledge they expect of their international technicians, in a region where technician requirements may vary greatly across countries.

Cooling and refrigeration contractors in GCC countries work with technicians from different countries with different training requirements. Five workers from five GCC or African

countries may have five different skill levels. The question becomes how do contractors reconcile this knowledge—or lack of knowledge—with the installation requirements of the project?

“In the GCC, technicians have to be qualified as per their individual country of origin requirements,” says Srinivasan Rangan, director of marketing, product management, Rheem, Middle East and Africa (MEA), Dubai, UAE. He explains that “HVACR technicians study educational programs and are trained in their individual countries. When they arrive in the GCC, they are generally getting on-the-job training that complies with their individual organization’s safety and technical job requirements.”

Ensuring that technicians have the basic HVACR skill sets can be difficult for GCC HVACR contractors because there is no regional standard. In addition, each HVACR firm may have its own set of safety and technical standards, and the firm’s supervisor may have an additional set of rules.

Rangan explains how NATE certification could help mitigate the differences in regional standards. “We believe that there’s an opportunity to improve technician skill sets through a scientific licensing regulation,” he notes. “This puts everyone on par, enhances their skill sets, and offers the best service technicians for GCC customers. It’s not possible to unify global courses with people who come from

“WE BELIEVE THAT THERE’S AN OPPORTUNITY TO IMPROVE TECHNICIAN SKILL SETS THROUGH A SCIENTIFIC LICENSING REGULATION.”

— Srinivasan Rangan, director of marketing, product management, Rheem, Middle East and Africa (MEA), Dubai, UAE



different parts of the world, so perhaps the best way of addressing that is to do it at the place of destination.”

Ansar Fasillullah, Rheem MEA regional service manager who also conducts training, adds: “Since we have a workforce coming from different parts of the world, a unification or alignment in the work methodology is very important. The way they approach the job, aligning their technical skills with the complex air conditioning equipment available in the market, is very important. That’s where training them is important; training them locally is even more important.”

However, a technician must obtain a work visa to work outside his native country. These visas must be renewed by the employer, so sometimes HVACR technicians end up in their home country again or they retire. Regardless, there is a constant influx of workers in GCC countries, making it even more difficult to standardize the knowledge base of a company’s HVACR techs. “We have a continuous need for competent technicians because of the nature of work visas,” Rangan says.

And with the tremendous growth in Middle Eastern countries over the last two decades, construction has been booming. Unfortunately, COVID-19 and the Russia-Ukraine war bring uncertainty to the region. However, the World Bank estimates that the Middle East and North Africa regions’ economies will rise by 5.2% in 2022, the fastest rate since 2016.

360-DEGREE APPROACH

Rheem Mfg. Co. invested heavily in its training capabilities by building four Rheem Innovation Learning Centers across the U.S. States: Oxnard, California; Waterbury, Connecticut; Roswell, Georgia; and Lewisville, Texas. While these sites are still closed due to the COVID-19 pandemic, the air conditioner and water heater manufacturer offers many e-learning opportunities for technicians.

The first Middle Eastern Rheem Innovation Learning Center opened in July 2020—a partnership between Rheem MEA and UAE distributor Leminar Air Conditioning Co.

“It is a state-of-the-art training facility where technicians are getting live training on products and best installation and servicing

EXTREME CONDITIONS, COMPLEX AC ISSUES

Temperature conditions in Gulf countries are much different than in the U.S., another factor that technicians have to manage. Cooling equipment here is typically rated for 95° F (35° C). Yet, in the Persian Gulf region, that rating goes up to nearly 115° F (46° C), explains Srinivasan Rangan, director of marketing, product management, Rheem, Middle East and Africa (MEA), Dubai, United Arab Emirates.

“We have extreme conditions here,” he says. “During testing, units must run at 52° C (125.6° F) for a couple of hours without tripping. In some markets, it even goes further—some units are rated for 48° C (118.4° F) and some go as high as 55° C (131° F).”

The winter months (January and February) bring cooler temps—50° F to 57° F (10° C to 14° C).

As a manufacturer, Rheem MEA also considers the efficiency levels mandated for D3 and D4 drought conditions, as the region sees very little rain in any season.

A D3 drought classification (extreme drought) produces possible environmental impacts of major crop and pasture losses and widespread water shortages or restrictions. A D4 classification (exceptional drought) can mean exceptional and widespread crop/pasture losses and shortages of water in reservoirs, streams, and wells, creating water emergencies.

In the western U.S., most drought conditions are at a D1 (moderate drought) or D2 (severe drought), with very few areas at D4.

Rangan notes that direct expansion (DX) systems found in the GCC are slim indoor units. Condensing outside units use both side and top discharge. “The condensing units are rated for higher ambient temperature to work up to 52° C due to the aggressive environment,” he says. “It’s about optimizing the available volumetric space in the room, having a lower fall ceiling, and reduced maintenance and installation costs.”

Rangan adds that the market is moving from legacy DX systems to inverter technology; regulations will be coming out in the region to address this.

“The GCC market trend is a complex product mix of ducted, package, mini-splits, and variable refrigerant flow (VRF) systems,” Rangan explains. “These systems cater to all types of applications ranging from villas, small to high-rise buildings, and various types of commercial applications. This is one of the biggest markets for DX systems.”

Dealing with high temperatures, dangerous drought conditions, and a varied product mix means that Gulf HVACR techs must have the knowledge to properly install equipment to meet these demanding conditions and the needs of their clients.



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AS SEEN ON
HOLMES
FAMILY RESCUE

practices,” Rangan explains. “After running it for a year and benchmarking the best-in-class training practices by Rheem USA, it was decided to move to the next phase. We reached out to the Air-Conditioning, Heating & Refrigeration Institute and NATE to launch the NATE training and testing facility in Dubai.”

The GCC countries spearheaded by UAE, Saudi Arabia, and Oman are signatories to the Climate Change Commitments in Paris agreement. The Gulf countries have made sustainable development one of the pillars in their socioeconomic goals. For Rheem MEA, it’s about contributing to the HVACR industry.

“We are not only selling equipment, we are interested in the welfare of our technicians,” Rangan says. “We are interested in offering the best installation and service, and in the process, it’s one of the best ways to contribute to sustainability. If you have good installations, the equipment will work at the optimum energy-efficiency levels. Technicians will know how to handle refrigerant properly, so there will be fewer leakages.”

One of Rheem’s global pillars, declared by top management, is to train 250,000 technicians, contractors, and plumbers by 2025—and not just basic training, but top-quality training.

Rheem MEA headquarters and Innovation Center in Dubai are certified as accredited NATE testing organizations. “Rheem MEA has pioneered the introduction of the high-quality NATE certification program in the Middle East,” Rangan says.

From the manufacturer’s perspective, NATE training and certification fill a distinct need in the Middle East.

“NATE is a scientific program for enhancing the technical and practical skill sets of the technicians,” Rangan explains. “The organization has a robust process for renewing the certification. So, NATE ensures that the quality



“I BELIEVE THAT NATE ADDS A LOT OF VALUE TO OUR TRAINING PROGRAM.”

— Ansar Fasillulah, Rheem MEA regional service manager, trainer

of technicians is maintained. With the Middle East’s aggressive environment, if units are not selected or installed properly, there are performance penalties and potential safety hazards. NATE certification helps us to successfully mitigate this.”

Rheem MEA chose to focus on NATE’s Certified Heating Professional (CHP-5) certification program rather than the traditional route of the core exam and individual specialty exams.

“The CHP-5 program, unlike other certification programs, covers all aspects of the heating, ventilation, air conditioning and refrigeration field,” Fasillulah explains. “The one thing that stands out with me is that it’s more practical, both in terms of training and evaluation. Having taken the NATE exam, I can say that the questions are not simple questions; they describe real, practical scenarios that a technician would encounter in the field.

“The evaluation exams,” he continues, “cover everything from HVACR fundamentals to electrical controls, service installation, and airflow. It’s a 360-degree approach to training, enabling an engineer or a technician to be fully trained in a wide range of topics.”

He adds that the online option for taking the exams is extremely beneficial to technicians so they can easily schedule them around work and personal obligations.

Fasillulah is the first Rheem MEA trainer to take the CHP-5 exams and become a NATE-certified trainer. He has been a Rheem trainer since 2018 to facilitate the company’s goal of 250,000 trained technicians; he also is Rheem MEA’s sustainability ambassador.

“I believe that NATE adds a lot of value to our training program,” he notes. “How it adds value comes down to the practical nature of the NATE exam and training. It enables a technician to be well-versed in the correct practices to be successful in the field. It covers the dos and don’ts in the field and helps technicians avoid making many mistakes.”

So far, technicians like the CHP-5 program. “Simultaneously,” says Fasillulah, “we’re training contractors and distributors in UAE and Saudi Arabi, and the feedback has been extremely positive. They like the practical nature of NATE—and the structured way of the training, moving from fundamentals to higher levels of understanding.”

Rangan and Fasillulah are passionate about the HVACR industry; they understand the repercussions that unequally trained technicians have in their region. With extreme conditions, a workforce from many nations, and a sustainability goal focused on training, partnering with AHRI and NATE has helped bridge the gap in the HVACR workforce.

And offering GCC techs a practical approach to HVACR training and testing through the CHP-5 certification program makes it much easier to reach the 250,000 trained tech goal. ●

Kelly Faloon is a contributor to the *NATE Magazine*.

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NATE Work Extends Beyond North America, Thanks to Partner Organizations

PARTNER ORGANIZATIONS USE NATE'S ENTRY-LEVEL, READY-TO-WORK CERTIFICATE TO PREPARE TECHNICIANS FOR WORK ACROSS THE WORLD.



North American Technician Excellence (NATE) focuses on supporting technicians in North America but also partners with many organizations that have an international reach. These close relationships with international organizations often means that despite having “North America” in its name, NATE often works to support the training and certification of HVACR technicians globally. Air Conditioning, Heating and Refriger-

ation Institute (AHRI) works closely with NATE and has international offices in China, Canada, and the United Emirates. Through their collaboration, the organizations have announced a new partnership to raise the standard of the industry in India.

The partnership is a result of a long-standing relationship between NATE and AHRI, according to Gurminder Sidhu, senior director of business operations for NATE.

“NATE and AHRI have a great relationship with each other,” Sidhu says. “Whenever AHRI has an opportunity that allows NATE’s involvement, they make the introduction, and we begin a new partnership.” These partnerships help develop and recognize technicians, which is a part of NATE’s mission statement.

Vikram Murthy, a representative of AHRI and the owner of a heating and air conditioning company, is heading one such program in India.

He's been working with AHRI since 2016. Seventy percent of the air conditioners sold in India every year are residential units—7 to 8 million such air conditioners annually. Murthy notes that the industry is ripe for more standardization.

"The problem," he says, "is these air conditioners are installed by one of three types of technicians: those who are attached to companies, which probably train them well and who do the work well; those who are aggregated by a large aggregator and are assigned to their services; and those who are completely unattached. This type of technician...goes around and attends to calls on his own. The point is, there is a need to certify those who are doing such work."

HOW THE PROGRAM WORKS

NATE was introduced to Murthy in 2021, and work has progressed quickly since then.

"We were introduced when an initiative was proposed in 2021 in which an organization had an ambitious goal to certify technicians. That's when we started to work with Vikram on how we could help achieve that goal in India with our NATE exams," explains Sidhu.

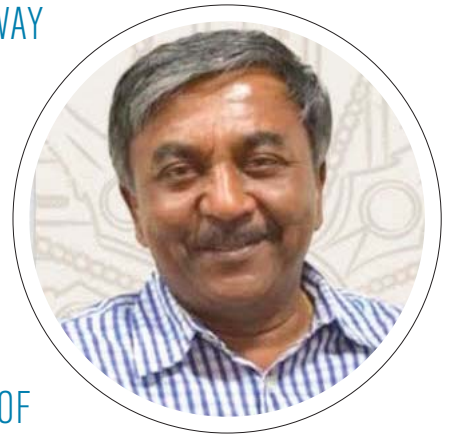
Murthy says the partnership is starting with the entry-level Ready-to-Work and HVAC Support exams. He said nearly 20 technicians had taken the tests on two separate weekends in April alone.

"This exam is a very nice way of getting [technicians] ready," Murthy says. "There is a curriculum with all the details of what kind of questions will be asked. There's a well-illustrated study guide that is available."

As more and more technicians are certified, more advanced exams will be offered.

So far, two proctors are certified to oversee the certification exams. "We want to have many proctors," Murthy

"THIS EXAM IS A VERY NICE WAY OF GETTING [TECHNICIANS] READY. THERE IS A CURRICULUM WITH ALL THE DETAILS OF WHAT KIND OF QUESTIONS WILL BE ASKED. THERE'S A WELL-ILLUSTRATED GUIDEBOOK AND A LEARNING BOOK—ALL OF THESE TOOLS ARE AVAILABLE."



— Vikram Murthy, a representative of AHRI and the owner of a heating and air conditioning company

says. "There are at least 30-50 cities where there are many air conditioning technicians, so we must start spreading to all those cities and have proctors in all of them." The proctors have taken the first two exams...so that they are fully familiar with the questions."

GETTING THE WORD OUT

The effort to grow the numbers of certified technicians is starting with Murthy and working its way outward from there, he explains.

"We are building the NATE certification program so that technicians are certified, the word spreads, and more and more come to be certified," explains Murthy. "The world today has changed to looking at your phone much more easily, so a social media campaign may work for these technicians. Do we get into Facebook? What messages will reach them? Another way is to have an app or a website, which will attract them to register."

Murthy notes they also are developing an app with videos that he expects will spread throughout the technician community rapidly, bringing them to the website to register for the program.

The next step will be to get the attention of owners, who will either mandate or encourage their technicians to become certified.

"AHRI has a budget for advertising in India already, and they advertise in a magazine [similar to] the ASHRAE magazine in America as well as some other magazines that also have a web presence," according to Murthy. "The advertisements will be seen by owners, and that will be a good way for people to know [about the program]."

Over time, companies that are in the AHRI program will recognize the certification as an opportunity—and that will continue to multiply the numbers. Murthy also hopes to have more representatives come on board to help AHRI and NATE accomplish their goals, especially among the manufacturers that operate in the country.

Murthy has contacted a number of manufacturers to get them on board with the certification project including Hitachi and Johnson Controls. Daikin, York, McQuay, and Carrier are next on the list.

"It is the fundamental knowledge [technicians are gaining with certification]," Murthy says. "It's being

able to name the part. It's being able to name the right tool. It's being able to recognize a problem. We've got to make them understand all that—and that is best done in a program AHRI and NATE can conduct.”

Murthy's goal is to have 1,000 technicians certified in the first year of the program.

CHALLENGES TO OVERCOME

One of the biggest dilemmas facing the program is the fact that the exams are in English. The major issue is that technicians may not be familiar with the technical terms on the exams because of the language barrier.

Another issue Murthy is working to overcome is the fact that the types of air conditioners that are covered in the more advanced exams (installing and servicing air conditioners), as well as the accompanying training materials, do not exist in India.

“NATE will help us with that and will make questions more oriented to the type of air conditioners we have in India,” Murthy says. “There are different versions in India, and so the technician can become confused when encountering those questions.”

Answering a variety of questions from various stakeholders and educating them about the program and its benefits is another issue Murthy is handling.

Questions that are typically asked include: Why should I be certified? What is this North American Technician Excellence doing in India? Will my employer recognize me for it? Will my customers treat me better? Will my employee run away with that certificate because he's a better guy?”

One encouraging piece of news, according to Murthy, is the fact that a recent survey proved that certifying technicians is a step that customers would appreciate.

“A think tank,” he says, “did a survey of 10,000 or more homes in many cities

in India that asked many questions to users or owners of air conditioners: Would you want a certified technician to come to your house? Are you happy with your service? How often do you service? How much do you pay for your service? They found that almost everybody said, “I would prefer a certified technician.”

NATE recently surveyed U.S. contractors and found U.S. consumers had similar preferences. The majority of the contractors surveyed said they found NATE certification worth the time and effort it took to complete and an asset for finding work.

Companies, technicians, and customers must feel good about the program in order for it to succeed, according to Murthy.

NATE is continuing to be a hands-on partner in the efforts in India.

“We are meeting with Vikram and his team regularly to ensure that they have all the training material and know-how to administer the exams for the technicians that are ready to test,” says Sidhu. “If Vikram has any questions, he knows he can email us, and we will get back to him right away.” ●

Elaine Yetzer Simon is a contributor to the *NATE Magazine*.

PARTNERSHIP WITH THE US ARMY

Vikram Murthy's work in India to prepare technicians is not the only international location where technicians have earned NATE's Ready-to-Work certificate. NATE has several military training partners, including the U.S. Army Ordnance School in Virginia and Sheppard Airforce Base in Texas. At these bases, the Airforce, Army, and Navy administer the NATE Ready-to-Work certification exam to all soldiers in HVACR-related Military Occupational Specialties (MOS). Additionally, the U.S. Army awards promotion points to soldiers who earn NATE certification.

The soldiers with HVACR specialties are responsible for maintaining and repairing heating and cooling equipment on military bases around the world. Anthony Spagnoli, director of testing and education at NATE, explains, “The military educational facilities we work with appreciate our partnership because it ensures that soldiers who earn the Ready-to-Work certificate are prepared to work and know the basic essentials in their field.”

Once soldiers have completed their HVACR training, they are sent on their job assignments. While many are deployed to installations across the U.S., many others are sent to military bases overseas. The Army benefits by having servicemen and women who have achieved civilian certifications in their industry and are continually seeking out new training. They become experts in their discipline and share that experience with others.

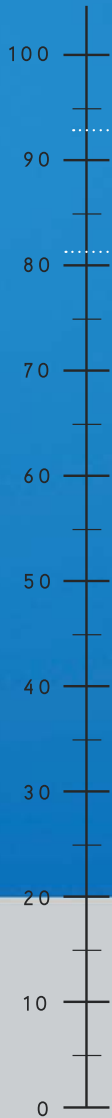
Spagnoli shared that soldier technicians who have earned the NATE certificate have spoken positively about their experience: “They are excited for the professional development opportunity while serving, and if they are in the Army Reserves or National Guard, the ability to leave with an additional certification.”

The U.S. military also recognizes how NATE certification can help service members obtain a job or advance professionally in the HVACR industry once they are discharged or retire. The Department of Veterans Affairs will pay for NATE examination and certification fees for eligible personnel to help them attain NATE certification.

NATE recognizes and supports certified military service members. “From the day a NATE-certified military service member deploys, their NATE certification is deferred until they return,” says Spagnoli, “ensuring that the technician comes back to work with the same qualifications as when he or she left.” Upon their return, the technicians receive all new NATE certification documents and NATE extends the expiration date of their certification to reflect their time in service.

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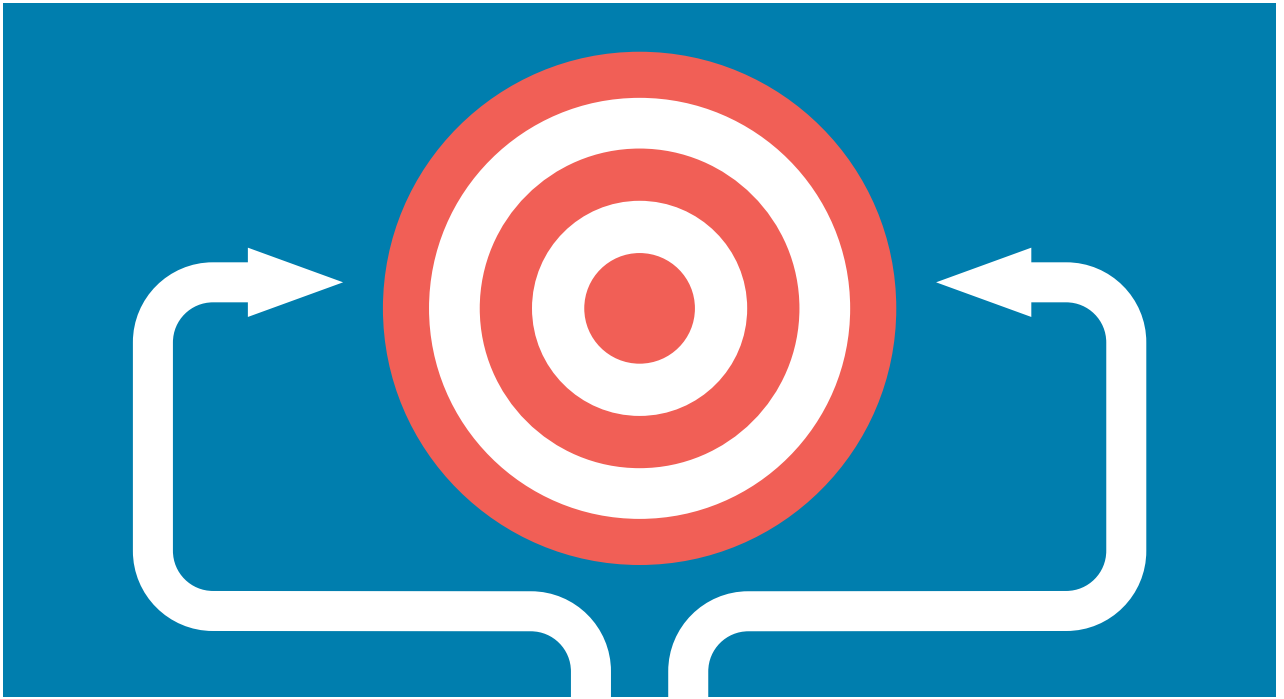
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CHP-5 or Traditional?

Two Convenient Pathways to Earn NATE Certification

HVACR TECHNICIANS SEEKING NATE CERTIFICATION CAN CHOOSE THE TRADITIONAL OR CHP-5 PATHWAY TO ACHIEVE THEIR DREAMS.

HVACR technicians can earn their NATE certification through the traditional pathway or the Certified HVAC Professional (CHP-5) program that was launched in 2020. Which one should HVACR technicians choose?

“Technicians can choose whichever pathway works best for them,” says Anthony Spagnoli, director, testing and education, NATE. “The CHP-5 was designed with technicians newer to the industry in mind, taking each piece as they learn it. The traditional pathway is still generally preferred by more senior technicians.”

He urges test candidates to look at features and requirements of each test. “Candidates can review the Job Task Analysis for each exam, which provides a list of the topics covered by the exam. The CHP-5 covers a lot of the same material, just split into multiple exams.” Go to the “Getting Started” section on the NATE site to begin: <https://www.natex.org/chp5>.

Rather than forcing everyone into a one-size-fits-all certification, NATE enables technicians to select the certification that best meets their needs, explains Doug Donovan, CEO, Interplay Learning. “The traditional

NATE certification pathway is better suited for technicians who want to focus more on a specific type of equipment, and the CHP-5 is ideal for technicians who prefer a breadth of knowledge.”

Donovan adds that the CHP-5 streamlines the certification process and groups content in a more straightforward way. “Technicians complete a series of short, 30-question exams covering functional areas of the trade as an alternative to the longer Core and Specialty exams. This simplified approach allows technicians to demonstrate competency in smaller,

more manageable components. Both programs cover similar material, but CHP-5 offers a more flexible path to training and earning certification.”

NATE has teamed up with Interplay Learning to create the NATE Training Academy, a new online training platform for HVACR technicians. Certification candidates can sign up for NATE Training Academy courses through Interplay Learning’s website or through their myNATE account in the CHP-5 tab at the main NATE site. Monthly and yearly subscription options are available. NATE Training Academy is designed to provide technicians a way to train for NATE certification exams online, at their own pace.

OBSERVATIONS ON THE PATHWAYS

Matt Dill successfully gained his NATE certification January 2022 by following the traditional path. He has been in the HVACR industry for over 15 years and works for Emergency Services and Consulting Group Inc. “I will say the traditional pathway is very stressful when taking the Core and a Specialty exam in the same day like I did. If I had to do it over, I would separate those two. That being said, I think the CHP-5 offering would be less stressful because NATE spreads out the testing.”

Dill adds that there is a need to measure technicians’ knowledge. “The NATE certification process does an excellent job preparing you for situations where you have to take a step back, pull out a manufacturer’s manual, and do a comprehensive audit of a 5-ton system before attempting to service. For example, a technician may be sent to a commercial site that cannot be without cooling due to servers or telecommunication equipment, and it is on this technician’s



“THE TRADITIONAL NATE CERTIFICATION PATHWAY IS BETTER SUITED FOR TECHNICIANS WHO WANT TO FOCUS MORE ON A SPECIFIC TYPE OF EQUIPMENT, AND THE CHP-5 IS IDEAL FOR TECHNICIANS WHO PREFER A BREADTH OF KNOWLEDGE.”

— Doug Donovan, CEO, Interplay Learning

shoulders to provide capacity as soon as possible. This can be very stressful, too, and I firmly believe that the tests help prepare you for these scenarios.”

He believes the following is a worthy goal of a skills-credentialing program: “It is to have a strong comprehension of HVACR systems and how they are designed to work and how to find those parameters that are provided by the manufacturer. I am in favor of any pathway that helps prepare technicians the right way to be competent when they are sent to a service call.”

For the long-term, Dill advises: “I also suggest that technicians continue their training through any means necessary, whether it is via Trane, Carrier, a local supply house, any class they can enroll in, or sign up for Never Stop Learning. My favorite quote is: ‘If I am the smartest person in the room, I am in the wrong room.’”

“My recommendation to anybody who asks is that they take the CHP-5,” says Jack Cooksey, a NATE-certified HVACR professional as of January 2022, who works for Lucas Heating and Air Conditioning, Allen, Texas. He explains that while the CHP-5 breaks down learning and preparation into smaller chunks, its scope is much wider than the traditional pathway. He notes that the CHP-5 is more comprehensive because it consists of five

30-question exams. Each exam covers one of five different subject domains.

Earning NATE certification is a major accomplishment, Cooksey explains. “People in industry, and even in education, don’t know the difference between the two pathways. They each carry the same amount of weight. On my work shirt, I have my NATE certification heating and cooling professional patch—that’s all anybody cares about. If you are NATE-certified, consumers know that means something—that you, as an HVACR technician, have achieved something important.”

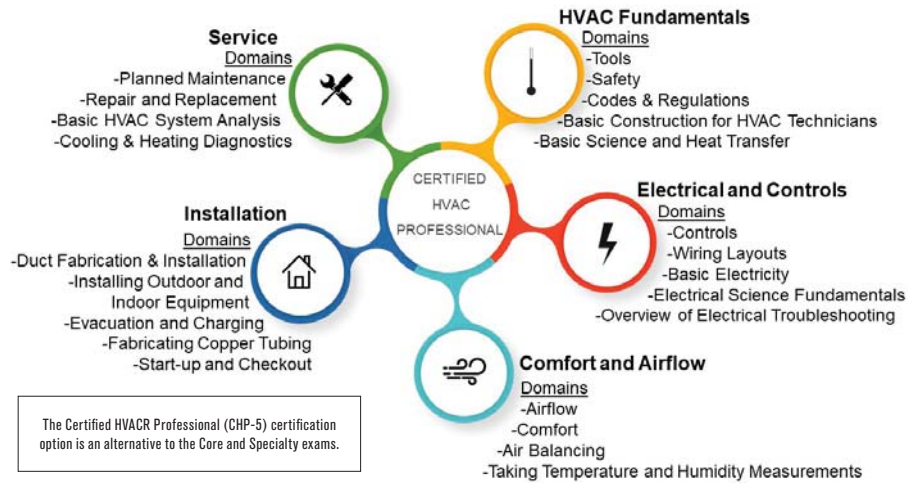
Cooksey, who is 66, says his background may be a little different from the typical technician preparing to go through the rigors of NATE certification. “I had retired from a very long career in nursing. I am board-certified in perioperative nursing.” Yet, Cooksey has been completing lots of mechanical tasks and projects all of his life.

He explains that he earned his third college degree from Collin College at its technical campus in Allen, Texas. “The degree,” he says, “is in Heating, Ventilation, Air Conditioning and Refrigeration Technology. I graduated this past December—which is a crazy story for an old guy—top of my class, 4.0 GPA, summa cum laude. I said to myself, ‘Well, if I can excel with this

HVACR coursework and get a degree in this discipline, why would I not be prepared to go and pass my NATE certification?”

Cooksey knows which pathway he would take if he had to do it over. “Just do it with this newer method, the CHP-5. It offers more flexibility, convenience, and simplicity.” Cooksey adds that the questions on the CHP-5 exams are challenging. “I did a lot of studying and prep for it. I acquired and read the NATE study guide. There’s a standard text in the industry called ‘Fundamentals of HVACR’ by Carter Stanfield and David Skaves. It was the main text in our program at Collin College. I went back and re-read 43 chapters in the book over 28 days. I took the tests one at a time.” Readers: An official CHP-5 study guide with practice questions is available at the NATE online store. Go here for information: <https://store.natex.org/>.

Spencer Fullmer has been working as an HVACR technician a little over three years for Salt Lake City-based Utah Engineering. He says that earning his NATE certification via the traditional pathway (Core plus Heat Pump Service exams) has given his career a boost. “I am in a traditional four-year apprenticeship, and when I graduate in about a year, I will have



an associate degree with four years of traditional schooling. The good part about NATE is that its certification validates that schooling. It shows that I’ve taken my career seriously and that I’m working to be a good technician.” He adds that his NATE certification helps him stand out in the crowd among his fellow technicians.

Fullmer says that earning his NATE certification demonstrates his value to the industry. “It shows prospective employers that you are dedicated to learning in a more traditional way, which is good, because technicians need both hands-on training as well as formal schooling, not just one or the other, so they understand theory.”

Fullmer says he sees the monetary worth of his NATE certification each

payday. “I got a pretty good pay raise coming to my current job. When I was hired, one thing my employer-manager noticed was that I had passed my NATE heat pump certification; the good part about it is my employer knows what NATE certification is and how difficult it can be to achieve.”

WEIGHING IN ON CERTIFICATION OPTIONS

“As the exclusive online training partner for the NATE Training Academy, our courses are aligned directly to the five NATE CHP-5 exam domains and can prepare technicians to sit for any CHP-5 exam on their chosen pathway to certification,” Donovan explains. He adds that Interplay Learning’s skilled trades training platform powers the NATE Training Academy. “The comprehensive online courses are available on-demand and can be taken anywhere, anytime.”

Deborah Shipp, an HVAC quality assurance manager at Motili (<https://www.motili.com>), has been NATE-certified for many years via the traditional path. Motili’s technology platform helps single-family, multi-family, and commercial property owners manage HVACR and hot water building systems through proactive and reactive repair and replacement projects.



“THEY EACH CARRY THE SAME AMOUNT OF WEIGHT. ON MY WORK SHIRT, I HAVE MY NATE CERTIFICATION HEATING AND COOLING PROFESSIONAL PATCH—THAT’S ALL ANYBODY CARES ABOUT.”

— Jack Cooksey, a NATE-certified HVACR professional

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Shipp, who encourages all HVACR technicians to earn their NATE certification, has extensive experience in the industry. “Although I have not taken the CHP-5 pathway myself, I am familiar with the process. From the perspective of being a technician, and as a technical trainer of 18 years, the new CHP-5 is significantly better for an entry-level technician. However, if you have experience in the field, then the traditional path is most likely the best course of action,” she explains.

Shipp says that prior to the creation of the new pathway, the NATE certification was designed for technicians that had industry experience. “The certification gave employers accurate insight into a technician’s experience level,” she says. “The CHP-5 pathway is great for entry-level technicians as it provides a clear, straightforward path to preparing for the exam as it groups subjects together; they can align the subjects to match what they are currently working on in the field. However, if a technician already has many years of experience and knowledge from being in the field, the traditional exam is the best path.”

“Each of the NATE certification pathways available has value to HVACR technicians and a unique set of benefits,” says Jeff Warther, HVACR training manager for The Chemours Company (<https://www.chemours.com/en>), a global chemistry firm. He adds that technicians can best assess the pathways by considering their individual experience and where they envision going next in their job or career.

“The CHP-5 pathway,” he continues, “provides more of a broad-strokes education of each key area, while the traditional Core and Specialty pathway develops understanding on specific areas by doing a deeper, more detailed exploration of topics. Selecting one over the other comes down to the HVACR journey the professional wants to pursue.”



“I AM IN FAVOR OF ANY PATHWAY THAT HELPS PREPARE TECHNICIANS THE RIGHT WAY TO BE COMPETENT WHEN THEY ARE SENT TO A SERVICE CALL.”

— Matt Dill, Emergency Services and Consulting Group Inc.

Warther says it’s also important to consider that even if you see yourself being more of a “specialist” in HVACR, CHP-5 can open opportunities in the near- or longer-term future. “Technicians that are already certified in a specific area frequently look to grow within their company when opportunities arise to take a management or field supervisor position, for example. These types of positions generally require knowledge of all aspects of the HVACR industry.”

He concludes that for technicians, completing CHP-5 certification achieves a number of goals. “It will not only provide this broad base of understanding but also can be one of the best ways to demonstrate to employers that you are interested in advancing in your job as well as proactively preparing for the next stage of your career.”

FUTURE PLANS FOR NATE CERTIFICATION

NATE is continuing to find ways to better support technicians and the HVACR community. “We work closely with contractors, distributors, manufacturers, and training providers to not only keep the community aware of our resources and how we can help them grow but also learn more about their work and how we can respond to their needs,” explains John Lanier, chief operating officer, NATE. “Our goals for the future are all about being

accessible to the industry. The HVACR industry advances and evolves at an exciting pace. It’s incredibly important that we work together to make sure we give technicians the information and tools they need to excel.”

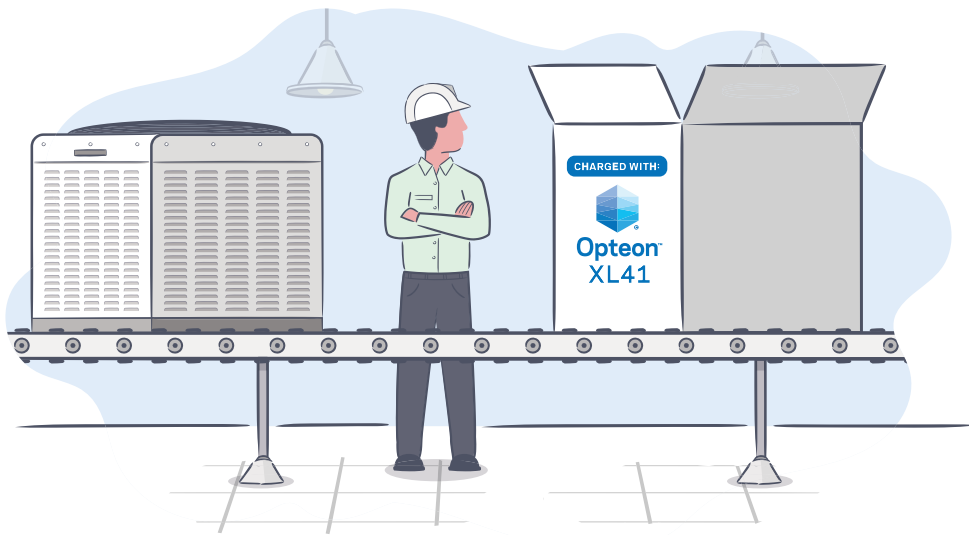
Along with NATE’s focus on supporting technicians as they prepare for NATE certification, the organization is also setting its sights on the NATE senior level certification. NATE currently offers a Senior Efficiency Analyst certification for technicians who have years of experience in the field. The exam is designed for the highest-level senior technician and tests a candidate’s knowledge of the installation, service, maintenance, and repair of HVACR system operations to maintain high levels of energy efficiency. Technicians that take the exam must already hold two NATE service specialty certifications.

NATE is working with its Technical Committee to update the knowledge areas of technical expertise (KATES) covered by the exam, as well as to update the prerequisites to allow technicians that earned the CHP-5 certification to sit for the exam. “It’s important to us to provide technicians at all experience levels with the opportunity to demonstrate their knowledge and technical expertise,” says Gurminder Sidhu, senior director of business operations, NATE. ●

Michael Keating is a contributor to the *NATE Magazine*.

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It's no secret that the construction industry — and the specialized trades such as HVACR — has had a labor shortage challenge for the last couple of decades. The rate of baby-boomer retirements far outpaces the addition of new workers, partially due to the perception of these “blue-collar” occupations.

The industry must attract 650,000 workers in addition to the “normal pace of hiring in 2022 to meet the demand for labor,” notes a February 2022 report from the Associated Builders and Contractors (ABC) (<https://bit.ly/37vy4Rr>).

“ABC’s 2022 workforce shortage analysis sends a message loud and clear: The construction industry desperately needs qualified, skilled craft professionals to build America,” notes Michael Bellaman, ABC president and CEO. “The Infrastructure Investment and Jobs Act passed in November and stimulus from COVID-19 relief will pump billions in new spending into our nation’s most critical infrastructure. Qualified craft professionals are essential to efficiently modernize projects across the country.”

Attracting younger people to the construction trades has been an uphill battle for the industry as it tries to compete with more “professional” occupations requiring a four-year college degree. Many parents and school counselors still regard college as the only way to a successful career — but construction professionals know differently.

The ABC report notes that “based on historical Census Bureau Job-to-Job

flow data, an estimated 1.2 million construction workers will leave their jobs to work in other industries in 2022. It is expected that this will be offset by an anticipated 1.3 million workers who will leave other industries to work in construction.”

“The workforce shortage is the most acute challenge facing the construction industry despite sluggish spending growth,” ABC Chief Economist Anirban Basu explains. “After accounting for inflation, construction spending has likely fallen over the past 12 months. As outlays from the infrastructure bill increase, construction spending will expand, exacerbating the chasm between supply and demand for labor.

“An added concern is the decline in the number of construction workers ages 25-54, which fell 8 percent over the past decade,” he adds. “Meanwhile, the share of older workers exiting the workforce soared. According to the Centers for Disease Control and Prevention, the industry’s average age of retirement is 61, and more than 1 in 5 construction workers are currently older than 55.”

More importantly, the construction workforce has an inadequate number of qualified, skilled workers to handle the increased amount of work, Basu says.

“More than 40 percent of construction workforce growth over the past decade is comprised of low-skilled construction laborers, who represent just 19 percent of the workforce,” he explains. “The roughly 650,000 workers needed must quickly acquire special-

ized skills. With many industries outside of construction also competing for increasingly scarce labor, the industry must take drastic steps to ensure future workforce demands are met.”

So, how does the HVACR field attract younger generations to manage the increased residential and commercial work that will help companies grow?

GENERATIONAL DIFFERENCES

Bryan Orr, co-founder and co-owner of Kalos Services (Clermont, Fla.) and founder of HVACRschool.com, spoke to HVACR contractors at the 2022 HVACR Educators and Trainers Conference, March 21-23. There he offered tips and advice on recruiting the next generation of technicians.

Understanding the different generations and what they want from a job or career is critical, he notes:

BABY BOOMERS, 1946-1964.

This generation has a strong work ethic centered around the concept of “paying your dues.” Orr explains, “You start at the bottom and work your way to the top. ‘I did it; I pulled myself up by my bootstraps. And by golly, you should do the same.’”

GENERATION X, 1965-1980.

Orr notes that more Gen X women entered the U.S. workforce, and more people went to college. “College tended to have a pretty good return on investment, meaning that what you would make in your lifetime would be more than what you paid for college,” he says.

“WHEN YOU POLL MILLENNIALS ABOUT WHAT THEY LOOK FOR IN THEIR WORK, THEY’LL ALWAYS SAY PURPOSE OR IMPACT...THEY WANT TO SEE THAT THEIR WORK MATTERS.”

— Bryan Orr, co-founder and co-owner of Kalos Services



Older Gen Xers are, like their baby-boomer counterparts, retiring at a strong pace.

MILLENNIALS OR GENERATION Y, 1981-1996.

For this generation, traditional education is still important; there is still value. And millennials use college as a status symbol, Orr says.

Millennials saw their parents prosper in this era, so working for a purpose became more important to them. “When you poll millennials about what they look for in their work, they’ll always say purpose or impact,” he adds. “They want to see that their work matters.”

GENERATION Z, 1997-2012.

This generation wants to be “famous” as influencers. “Their work ethic isn’t about world impact; it’s more about being seen,” Orr says. “But a lot of that is an entrepreneurial mindset, too. And they value things such as experiences; they don’t value stuff.”

So, potential workers in the millennial and Gen Z generations are not “career-patient,” they don’t want to wait three or four years to get a degree or start at the bottom and work their way up.

“That type of language doesn’t work for them,” Orr explains. “You’re going

to turn them off. You’re not going to attract them. You have to think about what steps they can take quickly. How can they move from here to here, to here, to here quickly? I’m not telling you anything that hasn’t been said in the past, even for millennials, but this is getting more and more extreme, more and more pronounced as we move forward.”

APPEALING TO YOUNGER WORKERS

Pushing the concepts of less debt and less commitment is useful to attract potential millennial and Gen Z workers.

“We get cranky that they don’t like commitment, but it’s an advantage for us in the initial recruiting,” Orr notes. “What is a bigger commitment than going four years to a university to do something you don’t even know if you want to do?”

Many baby boomers and older Gen Xers may see the amount of time younger generations spend on gaming sites and social media sites as a waste. Orr disagrees: Many of those sites teach young people problem-solving, building and creating things, and pride of ownership, pride in their work.

“No one in this age bracket wants to work in a factory,” he says.

Orr adds that learning a trade while

making money instead of raking in more debt from college is an attractive quality for Gen Z workers, who tend to be more conservative when it comes to money matters. Most likely, their parents don’t like the idea. Orr attributes much of that to peer pressure from other parents whose children may be going to expensive universities.

“When a parent at a party says, ‘My kid’s going to Berkeley, and he’s studying theoretical cat physics,’ and you respond, ‘Oh, my son’s working as an air-conditioning technician. He went to trade school,’ that’s not as sexy,” he says.

It’s a huge issue because many people don’t know what people in the trades do. Young people use social media to talk about their lives; it’s not something baby boomers or Gen Xers are comfortable doing. How do we get other generations to understand what we do in the heating and cooling trades if we don’t tell them?

Some of the benefits of working in the trades are:

- **Money.** Baby boomers may not have seen substantial paychecks in their trade careers, but younger trade workers see higher pay. Many in the HVACR trade can make more than someone who went for a four-year degree — with no debt.
- **Reliable work.** As mentioned previously, job growth in the construction trades is rapidly rising. And HVACR techs are considered essential workers — who else will fix your furnace in the dead of winter? Finally, trade jobs cannot be outsourced to another country.
- **Global demand.** An HVACR technician can work in any part of the world with those skills. That is very interesting to younger workers, Orr notes, especially millennials.

- **Transferable skills.** Much of what is learned in trade school can transfer to another industry. For example, learning to work with electricity as an electrician will also help you if you decide to go into HVACR — even if you want to be a plumber.
- **Engaging work.** Gen Z, in particular, has short attention spans, driven by technology, Orr says; the HVACR industry is a good fit for them. Trade workers don't do the same thing every day; they move from job to job.
- **Energy efficiency and other sustainable efforts.** Again, younger workers are looking to impact people's lives. The construction industry's green movement is an area where they can help the planet while saving people money and making them more comfortable where they live and work. "We affect the world in terms of energy and global climate change more than anyone else," Orr notes.

WHAT WE CAN DO BETTER

Orr explains that it doesn't matter how we were brought up or how we learned the trade; it matters how the industry — educators and company management, will work to make younger workers successful in the HVACR trade.

"We get math-y in our trade sometimes," he says. "We get excited as educators about math. I think sometimes that's a mistake. Math is good, but think about what we're trying to accomplish with math. We're using math to solve problems, to teach them the relationships between things. However, sometimes we make people think that this industry is not for them because we immediately hit them with a bunch of math."

The calculations are not the most important thing; it's learning the meaning behind them. "Let people who love science, love science, be good at science

and be good technicians without hassling them so much about the math," Orr notes.

And avoid creating false expectations to attract poor candidates. "They may be extremely intelligent, kinesthetic learners, hands-on, visual, but you get them in an environment where there's going to be a lot of stuff thrown at them, they become very nervous — and those nerves lead to bad results," he says.

The industry needs to illustrate the different opportunities within the trades — something Orr says it does not do well. Young people can have a lucrative and rewarding career in the HVACR trade, and there are different paths they can take.

To help HVACR technicians stay successful, Orr notes that more emphasis should be placed on rewarding creativity rather than punishing weaknesses. "There are a thousand different ways to do everything in the real world," he says. "So, creativity, being willing to make mistakes, and learning from your mistakes is actually how the world works."

When you make up your recruiting plan, Orr says to focus on these things: be mindful of the focus on mental health and offer mental health days or a flexible time off schedule; be specific about health-care benefits and your pay scale; describe an HVACR career as a parallel path to a college-degreed occupation, and compare the benefits; make sure the company website gives a clear picture of what you do and how you do it, and has photos posted of your staff and blog posts about company activities; and bring in tradespeople or industry influencers to talk about the trade to school groups, community events, etc.

"The No. 1 key to get better at recruiting, training and hiring any generation is to stop whining about it and do it," Orr notes. "Stop complaining; it doesn't help. With the younger generations, be appreciative of what they *do* know and teach them the stuff they don't." ●

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SECURING SKILLED WORKERS

Many contractors today are hiring technicians with little to no HVACR experience, says John Lanier, COO of North American Technician Excellence (NATE). This puts more pressure on contractors to train technicians quickly.

"We've found that contractors recognize the importance of supporting technician development and are working to find ways to provide training to their new hires," says Lanier. He explains that in a 2021 survey, NATE found that 84% of HVACR companies that employed NATE-certified technicians provided training and financial support to their technicians working towards certification.

NATE has focused its recent efforts to better support new technicians entering the HVACR industry. In 2020, the organization introduced a new certification pathway, the Certified HVAC Professional (CHP-5), which is geared towards new technicians and mirrors the learning process they go through when they first enter the field.

Additionally, in 2022 NATE launched NATE Training Academy, an online training platform that prepares technicians for each of the CHP-5 exams. Lanier explains that the goal of the NATE Training Academy is to "create a clear training path for technicians who are just entering the industry, and a way for contractors to make sure their technicians are developing the fundamental skills they need in their day-to-day work."

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Contractor Pursues the American Dream—and NATE Certifications

NORMAN DOMINGO, OWNER OF NORTECH HEATING, COOLING & REFRIGERATION, DIFFERENTIATES HIMSELF FROM COMPETITORS VIA NATE CERTIFICATIONS.



While growing up and attending college in the Philippines, Norman P. Domingo sometimes dreamed of moving to America and achieving success in the U.S. That dream is now a reality. Domingo is the owner and operator of Nortech Heating, Cooling & Refrigeration, which is based in Seattle.

Nortech Heating, Cooling & Refrigeration has been in business for more

than 30 years, helping homeowners and businesses in the Puget Sound area with furnace and heat pump service, maintenance, and ductless mini split systems, as well as commercial refrigeration services. The company employs eight technicians and 10 office support staff.

“I was born and raised in the Philippines,” Domingo says. “Living in a poor household, I learned the

value of a dollar by working several jobs for my relatives in exchange for pursuing a college education. I was determined to achieve my Bachelor of Science in Electrical Engineering and Electronics and Communications Engineering and became a licensed electrical engineer in 1985.”

Although he was already working as an engineer in Manila after college, Domingo’s goal of moving to America

was always on his mind. “I was lucky enough to meet my wife in 1988, and after two weeks, we got married and are still together 34 years later with our two kids.”

Domingo’s dream came true in 1989 when he immigrated to the U.S. “As a foreigner, I faced difficulties finding an engineering job. I ended up working as an electronics technician fixing radios and TVs for almost 10 years. That company closed down, and I decided to start my own business as Nortech Electronics, specializing in TV repair.”

After five years, the TV repair business declined, so Domingo quickly turned to appliance repair. However, that wasn’t enough to grow the business. He then expanded into electrical and HVACR jobs. “It was an easy decision because of my background in engineering and tech. I had already passed certification and license exams that are required to become an electrical/HVACR contractor.”

COMPANY SNAPSHOT

Today, Nortech Heating, Cooling & Refrigeration is fully licensed, bonded, and insured to serve customers in the Puget Sound area in Washington. “We only employ the most qualified HVACR contractors using industrial-grade service equipment,” he notes, “and take the necessary steps to perform every job properly. As a result, we offer a 100% satisfaction guarantee on our services.” The company is top-rated by the *Better Business Bureau* with excellent reviews touting high-quality work done by professional, friendly technicians, Domingo adds.

“We recruit technicians from the HVACR training school in our area. Also, we hire based on personal recommendations as long as the candidate has a good attitude, is teachable, and has a passion for technical work. We send them to short courses to learn



THE TV REPAIR BUSINESS DECLINED, SO DOMINGO QUICKLY TURNED TO APPLIANCE REPAIR. HOWEVER, THAT WASN'T ENOUGH TO GROW THE BUSINESS. HE THEN EXPANDED INTO ELECTRICAL AND HVACR JOBS. “IT WAS AN EASY DECISION BECAUSE OF MY BACKGROUND IN ENGINEERING AND TECH. I HAD ALREADY PASSED CERTIFICATION AND LICENSE EXAMS THAT ARE REQUIRED TO BECOME AN ELECTRICAL/HVACR CONTRACTOR.”

basic HVACR principles and train them in the field.”

Business growth for both Domingo and his company has gone hand in hand with training. “When I saw larger companies servicing HVACR, I knew that I wanted to do the same because it would create more profitability for my business. In 2000, I started to attend short technical courses on refrigeration and HVAC. In 2004, I passed my HVACR license required by Washington State, which allowed me to work on HVACR equipment installation and repair.

“Once I received the license,” he continues, “I was obligated to complete an annual eight-hour continuing education course in order to renew my license, and attend factory service training.” Spurring that desire for training was the fact that Domingo has always been interested in the field of service engineering, electronic/electrical, and HVACR.

“Securing multiple licenses to stay in the business has been a huge part of my journey,” Domingo notes. Along with NATE certification, he has earned an Electrical Licensed specialization in HVACR (06A in Washington State), City of Seattle Journeyman Refrigeration license, and General Administrator Electrical License.

Domingo gained the following NATE credentials in 2021:

- Air to Air Heat Pump Installation
- Air to Air Heat Pump Service
- Air Conditioning Installation
- Air Conditioning Service
- Gas Heating (Air) Installation
- Gas Heating (Air) Service.

CERTIFICATION ADDS VALUE

What was his incentive to gain those certifications? “To prove that my company, Nortech, is qualified for any job and has met all the national requirements to provide the best ser-

vice. This qualification separates us from other businesses,” explains Domingo. Two of his employees earned NATE certifications in 2021, as well.

Domingo says that NATE training and certification add value to his business and himself as a contractor and business owner. It actually creates more trust in customers. To that end, the company markets itself by touting NATE-certified technicians via its website, social media, and business cards.

“I encourage all of our technicians to attend NATE training,” he says. “Nortech pays all expenses. Also, in order to renew their Washington State HVACR 06A training license, they must complete 48 hours of continuing education units.”

Training and certification are important because the HVACR field is a challenging business that requires continuous learning. Technology is moving fast, and contractors must keep up-to-date with the knowledge, especially as the use of software-driven technology expands. Customers today can change and monitor the temperature of their homes via a smartphone.

“Troubleshooting can guide techs on repair and installation issues and help them determine what parts need to be replaced,” Domingo explains. “Scheduling can be done online, and customer dispatch can implement GPS tracking. Customers can research topics online ranging from finding the correct parts, pricing, and how to fix systems by watching videos on YouTube.”

One business challenge is finding technicians that are NATE-certified and trade-licensed to be in compliance with the state. “The HVACR industry is fast-paced,” Domingo notes, “and NATE helps by requiring us to continue education in order to update our knowledge and separate us from our competitors.”



NATE offers two pathways to certification—traditional exam and CHP-5 (multiple, shorter exams). Domingo completed the traditional exams, which forced him to study hard and measure his abilities in the field of technical troubleshooting. He believes CHP-5 is a good option for himself and his employees in the future. “This new certification is one method to test competency on HVACR fundamentals, electrical and controls, comfort and airflow, installation, and service. It can be completed online, which gives technicians the opportunity to take the exams at their convenience.”

OVERCOMING CHALLENGES

Over the years, Nortech Heating, Cooling & Refrigeration has faced many challenges as the business has grown. For example, language barrier is one personal challenge that Domingo has faced.

Trying to achieve better customer service reviews online is another challenge. “Social media is a challenge, but we’re learning how to use it,” Domingo says. The company first started gaining customers through word of mouth as well as phone book and newspaper ads. Nowadays, there are many positives to be gained by a good social media presence and having high ratings on Yelp and Google.

“We’re currently working towards marketing via social media, receiving higher ratings on our services, and being more searchable (easy to find) online.”

Competing with larger established companies is another challenge. “We don’t have access to some high-end equipment because there are not enough authorized dealers in our area. We are authorized to use three brands—Daikin, Mitsubishi and Goodman.” Another challenge is finding NATE-certified technicians because there are very few in the area.

Growing the Nortech team has helped grow the company. For example, Domingo recently hired a managing director to help him run the business. The company now has a social media team that is running ads, posting content, and promoting the business online. Nortech also has expanded its call center in the Philippines, so there is always someone answering customer calls during high-volume business hours.

“Since our business is growing rapidly, it’s important to reduce my time in the field so I can better oversee the business. Building the Nortech team and dividing tasks has provided more stability and growth as everyone is working together,” Domingo notes. “The call center that we established in the Philippines has



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NATE has teamed up with Interplay Learning to create a new online platform with on-demand interactive courses that prepares technicians for the CHP-5 exams.

been helpful to Nortech and to my hometown as it provides people with jobs, employment, and fair pay.”

Domingo plans to add new equipment to the company lineup in the near future. “Because of the shortage of supplies these days, we are stocking and pre-ordering a lot of equipment. Our suppliers tell us the waiting period is three to four weeks because of the pandemic and supply chain issues.”

What lies ahead for Nortech Heating, Cooling & Refrigeration? Domingo has three goals moving forward: to continue to improve customer satisfaction, to keep his employees happy, and to grow the business. “It’s important to create trust with our customers, by having effective communication skills, showing up on time, and getting the job done quickly and efficiently. As for our employees, we are all treated as family. Also, I will continue to send my technicians to training so they can gain more certifications.” ●

Neal Lorenzi is a contributor to the *NATE Magazine*.



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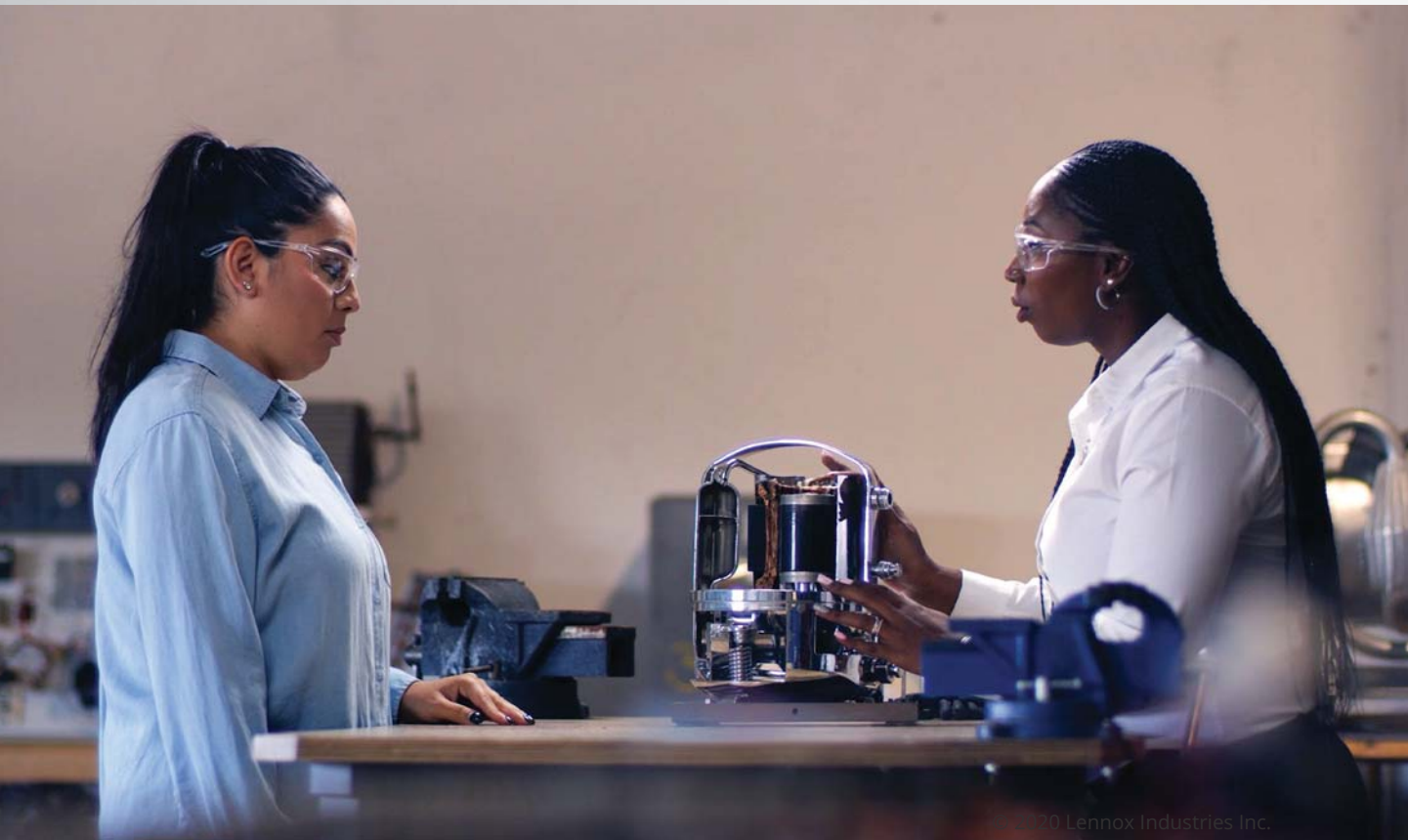
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