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#### **Summary of Job Duties**

Heating and Air Conditioning Mechanics and Installers <u>Video</u> - Install, service, or repair heating and air conditioning systems in residences or commercial establishments.

Source: This information is based on O\*NET<sup>™</sup> data. O\*NET is a trademark registered to the U.S. Department of Labor, Employment and Training Administration.

#### **Detailed Job Description**

**Heating and Air Conditioning Mechanics and Installers** HVACR technicians install, maintain, and repair heating, cooling, and refrigeration systems.

Heating, air conditioning, and refrigeration mechanics and installers—often called HVACR technicians—work on heating, ventilation, cooling, and refrigeration systems that control the temperature and air quality in buildings.

Duties

Heating, air conditioning, and refrigeration mechanics and installers typically do the following:

- Install, clean, and maintain HVACR systems
- Install electrical components and wiring
- Inspect and test HVACR systems and components
- Discuss system malfunctions with customers
- Repair or replace worn or defective parts
- Recommend maintenance to improve system performance
- Keep records of work performed

Heating and air conditioning systems control the temperature, humidity, and overall air quality in homes, businesses, and other buildings. By providing a climate-controlled environment, refrigeration systems make it possible to store and transport food, medicine, and other perishable items.

Some HVACR technicians specialize in one or more specific aspects of HVACR, such as radiant heating systems, solar panels, testing and balancing, or commercial refrigeration.

When installing or repairing air conditioning and refrigeration systems, technicians must follow government regulations regarding the conservation, recovery, and recycling of refrigerants. The regulations include those concerning the proper handling and disposal of fluids and pressurized gases.

Some HVACR technicians sell service contracts to their clients, providing periodic maintenance of heating and cooling systems. The service usually includes inspecting the system, cleaning ducts, replacing filters, and checking refrigerant levels.

Other workers sometimes help HVACR technicians install or repair cooling and heating systems. For example, on a large air conditioning installation job, especially one in which workers are covered by union contracts, ductwork may be installed by sheet metal workers, electrical work by electricians, and pipework by plumbers, pipefitters, and steamfitters. Boiler systems are sometimes installed by a boilermaker.

Home appliance repairers usually service window air conditioners and household refrigerators.

Source: U.S. Department of Labor Bureau of Labor Statistics

### Job Zone

The section below shows the job zone information for Heating and Air Conditioning Mechanics and Installers. Job Zone Three: Medium Preparation Needed.

Education	Experience	Training
Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate's degree.	Previous work-related skill, knowledge, or experience is required for these occupations. For example, an electrician must have completed three or four years of apprenticeship or several years of vocational training, and often must have passed a licensing exam, in order to perform the job.	Employees in these occupations usually need one or two years of training involving both on-the-job experience and informal training with experienced workers. A recognized apprenticeship program may be associated with these occupations.

Source: This information is based on O\*NET<sup>™</sup> data. O\*NET is a trademark registered to the U.S. Department of Labor, Employment and Training Administration.

#### Jobs Available

This section shows the number of job openings advertised online in Louisiana for Heating and Air Conditioning Mechanics and Installers and for the related occupational group of Installation, Maintenance, and Repair Occupations on November 23, 2020 (Jobs De-duplication Level <u>2</u>).

Occupation	Job Openings
Heating and Air Conditioning Mechanics and Installers	<u>85</u>
Installation, Maintenance, and Repair Occupations	<u>1,489</u>

BRIGHT OUTLOOK NATIONALLY

Source: Online advertised jobs data

### **Monthly Job Count**

This section shows the number of job openings advertised online for Heating and Air Conditioning Mechanics and Installers in Louisiana October, 2020 (Jobs De-duplication Level 2).

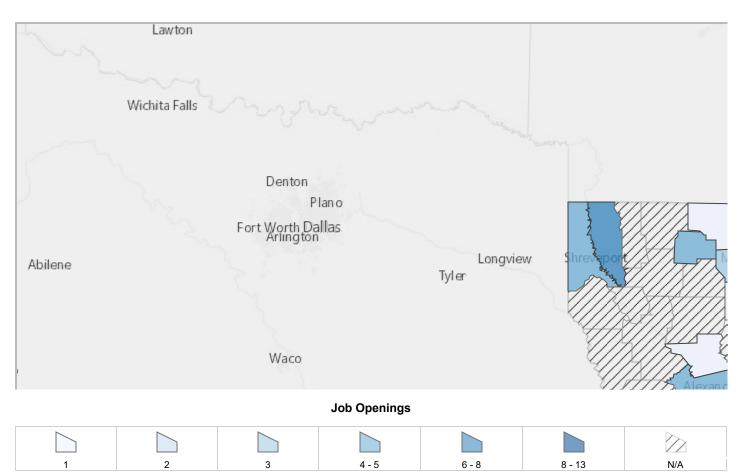
Heating and Air Conditioning Mechanics and Installers

STATIONALLY STATIONALLY STATIONALLY

Source: Online advertised jobs data

### Jobs Area Distribution

This section shows the distribution of number of job openings advertised online for Heating and Air Conditioning Mechanics and Installers in Louisiana by parishes on November 23, 2020 (Jobs Deduplication Level <u>2</u>).



Job Source: Online advertised jobs data

Wage Source: Labor Market Statistics, Occupational Employment Statistics Program The median wage is the estimated 50th percentile; 50 percent of workers in an occupation earn less than the median wage, and 50 percent earn more than the median wage. Data is from a 2019 survey.

### **Jobs in Related Occupations**

This section shows the number of job openings advertised online in Louisiana for occupations related to Heating and Air Conditioning Mechanics and Installers on November 23, 2020 (Jobs Deduplication Level <u>2</u>).

Rank	Occupation	Median Wage	Job Openings	*Related By
1	Automotive Specialty Technicians	\$38,386	<u>141</u>	O*NET
2	Maintenance and Repair Workers, General	\$35,576	<u>109</u>	O*NET
3	<u>Electricians</u>	\$50,806	<u>106</u>	O*NET
4	Heating and Air Conditioning Mechanics and Installers • <i>•</i>	\$43,564	<u>85</u>	N/A
5	<u>Plumbers</u> 🔶 🕖	\$55,149	<u>75</u>	O*NET

Rank	Occupation	Median Wage	Job Openings	*Related By
6	<u>Control and Valve Installers and Repairers,</u> <u>Except Mechanical Door</u>	\$45,315	<u>65</u>	O*NET
7	<u>Maintenance Workers, Machinery</u>	\$44,228	<u>61</u>	SOC4
8	<u>Mobile Heavy Equipment Mechanics,</u> <u>Except Engines</u>	\$47,800	<u>51</u>	O*NET
9	Automotive Master Mechanics	\$38,386	<u>48</u>	O*NET
10	Refrigeration Mechanics and Installers •	\$43,564	<u>48</u>	O*NET
11	Telecommunications Equipment Installers and Repairers, Except Line Installers	\$65,186	<u>44</u>	O*NET
12	Construction Carpenters > <	\$45,602	<u>37</u>	O*NET
13	Pipe Fitters and Steamfitters • <	\$55,149	<u>37</u>	O*NET
14	<u>Millwrights</u> • <i>•</i>	\$58,468	<u>24</u>	O*NET
15	Electrical and Electronics Repairers, Commercial and Industrial Equipment <i> </i>	\$62,553	<u>18</u>	O*NET
16	<u>HelpersInstallation, Maintenance, and</u> <u>Repair Workers</u> • <i>•</i>	\$30,118	<u>18</u>	SOC4
17	Installation, Maintenance, and Repair Workers, All Other	\$41,228	<u>18</u>	SOC4
18	Industrial Machinery Mechanics	\$55,230	<u>14</u>	O*NET
19	Electrical Power-Line Installers and Repairers • •	\$57,653	<u>14</u>	SOC4
20	Security and Fire Alarm Systems Installers	\$43,300 <u>12</u>		O*NET
21	Telecommunications Line Installers and Repairers	\$40,750	<u>9</u>	SOC4
22	Coin, Vending, and Amusement Machine Servicers and Repairers	\$32,492	<u>8</u>	SOC4
23	Medical Equipment Repairers	\$41,592	<u>5</u>	O*NET
24	Precision Instrument and Equipment Repairers, All Other	\$59,804	<u>5</u>	SOC4
25	Electro-Mechanical Technicians	\$65,257	<u>4</u>	O*NET
26	Manufactured Building and Mobile Home Installers	N/A	<u>4</u>	SOC4
27	Explosives Workers, Ordnance Handling Experts, and Blasters	N/A	<u>3</u>	O*NET
28	<u>Riggers</u>	\$46,315	<u>3</u>	SOC4
29	Motorboat Mechanics and Service Technicians	\$42,684	<u>2</u>	O*NET
30	Locksmiths and Safe Repairers	\$43,717	<u>2</u>	SOC4
31	Robotics Technicians	\$65,257	<u>1</u>	O*NET
32	Home Appliance Repairers	\$32,408	<u>1</u>	O*NET

STRIGHT OUTLOOK NATIONALLY

Job Source: Online advertised jobs data

Wage Source: Labor Market Statistics, Occupational Employment Statistics Program The median wage is the estimated 50th percentile; 50 percent of workers in an occupation earn less than the median wage, and 50 percent earn more than the median wage. Data is from a 2019 survey. \*Related By: O\*NET<sup>™</sup> - The <u>Occupational Information Network</u>. O\*NET is a registered trademark of the <u>US Department of Labor/Employment and Training Administration</u>.

SOC4 - Occupational grouping based on 1st 4 digits of the <u>Standard Occupational Classification</u> system.

### **Candidates Available**

This section shows potential candidates in the workforce system in Louisiana for Heating and Air Conditioning Mechanics and Installers and for the related occupational group of Installation, Maintenance, and Repair Occupations on November 23, 2020.

Candidates
351
9,756

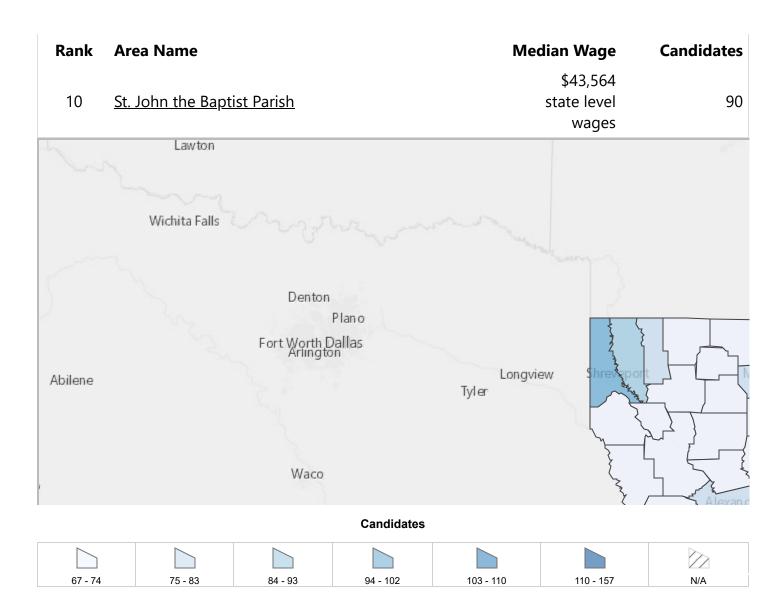
BRIGHT OUTLOOK NATIONALLY

Source: Individuals with active résumés in the workforce system.

### **Candidate Area Distribution**

This section shows the distribution of potential candidates in the workforce system for Heating and Air Conditioning Mechanics and Installers in Louisiana by parishes on November 23, 2020.

Rank	Area Name	Median Wage	Candidates
1	Orleans Parish	\$43,564 state level wages	157
2	Jefferson Parish	\$43,564 state level wages	153
3	East Baton Rouge Parish	\$43,564 state level wages	110
4	<u>Caddo Parish</u>	\$43,564 state level wages	102
5	<u>St. Charles Parish</u>	\$43,564 state level wages	102
6	Livingston Parish	\$43,564 state level wages	98
7	<u>St. Tammany Parish</u>	\$43,564 state level wages	96
8	Bossier Parish	\$43,564 state level wages	93
9	<u>St. Bernard Parish</u>	\$43,564 state level wages	92



Candidate Source: Individuals with active résumés in the workforce system. Wage Source: Labor Market Statistics, Occupational Employment Statistics Program The median wage is the estimated 50th percentile; 50 percent of workers in an occupation earn less than the median wage, and 50 percent earn more than the median wage. Data is from a 2019 survey.

### **Candidates in Related Occupations**

This section shows how many potential candidates in the workforce system were looking for work in Louisiana in occupations related to Heating and Air Conditioning Mechanics and Installers on November 23, 2020.

Rank	Occupation	Median Wage	Candidates	*Related By
1	Construction Carpenters	\$45,602	2,141	O*NET
2	Maintenance and Repair Workers, General	\$35,576	1,759	O*NET
3	<u>Electricians</u> • <i>P</i>	\$50,806	1,461	O*NET
4	Pipe Fitters and Steamfitters • •	\$55,149	1,365	O*NET
5	<u>HelpersInstallation, Maintenance, and</u> <u>Repair Workers</u>	\$30,118	981	SOC4
6	<u>Riggers</u>	\$46,315	734	SOC4
7	Electrical and Electronics Repairers, Commercial and Industrial Equipment <b></b>	\$62,553	555	O*NET
8	Installation, Maintenance, and Repair Workers, All Other	\$41,228	424	SOC4

Rank	Occupation	Median Wage	Candidates	*Related By
9	<u>Millwrights</u> • <i>P</i>	\$58,468	382	O*NET
10	Insulation Workers, Mechanical	\$45,672	364	O*NET
11	Heating and Air Conditioning Mechanics and Installers • <i>•</i>	\$43,564	351	N/A
12	Automotive Specialty Technicians	\$38,386	289	O*NET
13	Industrial Machinery Mechanics	\$55,230	278	O*NET
14	Maintenance Workers, Machinery	\$44,228	237	SOC4
15	Automotive Master Mechanics	\$38,386	185	O*NET
16	<u>Control and Valve Installers and Repairers,</u> <u>Except Mechanical Door</u>	\$45,315	176	O*NET
17	<u>Telecommunications Equipment Installers</u> and Repairers, Except Line Installers	\$65,186	170	O*NET
18	<u>Commercial Divers</u>	\$43,960	169	O*NET
19	<u>Plumbers</u> • <i>P</i>	\$55,149	159	O*NET
20	Gas Plant Operators	\$66,142	127	O*NET
21	<u>Mobile Heavy Equipment Mechanics,</u> <u>Except Engines</u>	\$47,800	113	O*NET
22	Telecommunications Line Installers and Repairers	\$40,750	112	SOC4
23	Precision Instrument and Equipment Repairers, All Other	\$59,804	112	SOC4
24	Electrical Power-Line Installers and Repairers	\$57,653	65	SOC4
25	<u>Coin, Vending, and Amusement Machine</u> <u>Servicers and Repairers</u>	\$32,492	58	SOC4
26	Electro-Mechanical Technicians	\$65,257	52	O*NET
27	Refrigeration Mechanics and Installers	\$43,564	49	O*NET
28	<u>Explosives Workers, Ordnance Handling</u> Experts, and Blasters	N/A	45	O*NET
29	Security and Fire Alarm Systems Installers	\$43,366	42	O*NET
30	<u>Electronic Equipment Installers and</u> <u>Repairers, Motor Vehicles</u>	\$34,980	23	O*NET
31	<u>Refractory Materials Repairers, Except</u> <u>Brickmasons</u>	N/A	22	SOC4
32	Robotics Technicians	\$65,257	19	O*NET
33	Farm Equipment Mechanics and Service Technicians	\$41,845	19	O*NET
34	Home Appliance Repairers \$32		18	O*NET
35	Fish and Game Wardens N/A		13	O*NET
36	<u>Glass Blowers, Molders, Benders, and</u> <u>Finishers</u>	\$27,396	13	O*NET
37	Motorboat Mechanics and Service Technicians	\$42,684	11	O*NET

Rank	Occupation	Median Wage	Candidates	*Related By
38	<u>Heating, Air Conditioning, and</u> <u>Refrigeration Mechanics and Installers</u>	\$43,564	10	SOC4
39	Medical Equipment Repairers	\$41,592	10	O*NET
40	Manufactured Building and Mobile Home Installers	N/A	10	SOC4
41	Musical Instrument Repairers and Tuners	N/A	8	SOC4
42	<u>Camera and Photographic Equipment</u> <u>Repairers</u>	\$39,384	7	SOC4
43	Geothermal Technicians	\$41,228	6	SOC4
44	Forest and Conservation Technicians	N/A	5	O*NET
45	Mechanical Door Repairers	\$41,529	5	SOC4
46	Fabric Menders, Except Garment	N/A	5	SOC4
47	Locksmiths and Safe Repairers	\$43,717	4	SOC4
48	Elevator Installers and Repairers	Confidential	2	O*NET
49	Signal and Track Switch Repairers	N/A	2	O*NET

STATIONALLY GREEN OCCUPATIONS

Candidate Source: Individuals with active résumés in the workforce system.

Wage Source: Labor Market Statistics, Occupational Employment Statistics Program The median wage is the estimated 50th percentile; 50 percent of workers in an occupation earn less than the median wage, and 50 percent earn more than the median wage. Data is from a 2019 survey. \*Related By: O\*NET<sup>™</sup> - The <u>Occupational Information Network</u>. O\*NET is a registered trademark of

the US Department of Labor/Employment and Training Administration.

SOC4 - Occupational grouping based on 1st 4 digits of the <u>Standard Occupational Classification</u> system.

### Jobs and Candidates Available

This section shows the number of job openings advertised online, as well as potential candidates in the workforce system in Louisiana for Heating and Air Conditioning Mechanics and Installers and for the related occupational group of Installation, Maintenance, and Repair Occupations on November 23, 2020 (Jobs De-duplication Level <u>2</u>).

Occupation	Job Openings	Candidates	Candidates per Job		
Heating and Air Conditioning Mechanics and Installers	<u>85</u>	351	4.13		
Installation, Maintenance, and Repair Occupations	<u>1,489</u>	9,756	6.55		

SRIGHT OUTLOOK NATIONALLY

Job Source: Online advertised jobs data

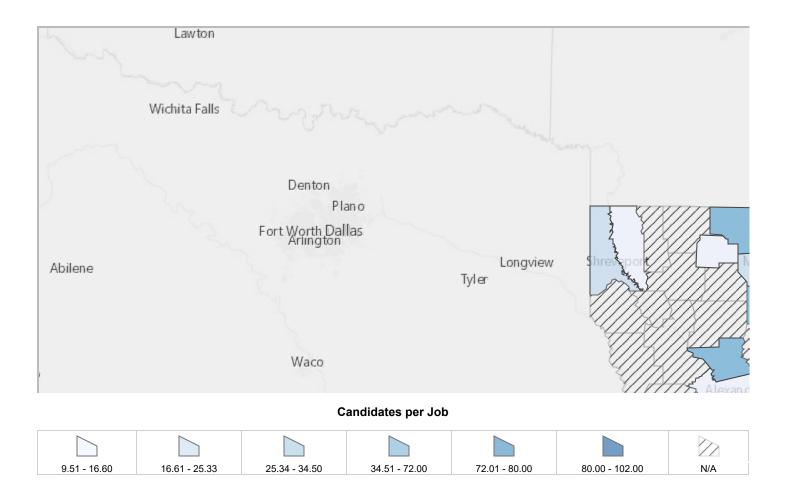
Candidate Source: Individuals with active résumés in the workforce system.

### Jobs and Candidates Area Distribution

This section shows the distribution of number of job openings advertised online, as well as potential candidates in the workforce system for Heating and Air Conditioning Mechanics and Installers in Louisiana by parishes on November 23, 2020 (Jobs De-duplication Level <u>2</u>).

Rank	Area Name	Median Job Candidates	Candidates
RAIIK	Area Maine	Wage Openings	per Job

Rank	Area Name	Median Wage	Job Openings	Candidates	Candidates per Job
1	<u>St. Charles Parish</u>	\$43,564 state level wages	<u>1</u>	102	102.00
2	<u>St. Tammany Parish</u>	\$43,564 state level wages	<u>1</u>	96	96.00
3	<u>St. Bernard Parish</u>	\$43,564 state level wages	<u>1</u>	92	92.00
4	Lafourche Parish	\$43,564 state level wages	1	80	80.00
5	<u>Terrebonne Parish</u>	\$43,564 state level wages	<u>1</u>	78	78.00
6	Evangeline Parish	\$43,564 state level wages	<u>1</u>	77	77.00
7	<u>Grant Parish</u>	\$43,564 state level wages	<u>1</u>	72	72.00
8	<u>Union Parish</u>	\$43,564 state level wages	<u>1</u>	71	71.00
9	Morehouse Parish	\$43,564 state level wages	<u>1</u>	70	70.00
10	Caldwell Parish	\$43,564 state level wages	<u>1</u>	69	69.00



Job Source: Online advertised jobs data

Candidate Source: Individuals with active résumés in the workforce system.

Wage Source: Labor Market Statistics, Occupational Employment Statistics Program The median wage is the estimated 50th percentile; 50 percent of workers in an occupation earn less than the median wage, and 50 percent earn more than the median wage. Data is from a 2019 survey.

### **National Supply and Demand Summary**

**Heating and Air Conditioning Mechanics and Installers** Employment of heating, air conditioning, and refrigeration mechanics and installers is projected to grow 15 percent from 2016 to 2026, much faster than the average for all occupations.

Commercial and residential building construction is expected to drive employment growth. The growing number of sophisticated climate-control systems is also expected to increase demand for qualified HVACR technicians.

Repair and replacement of HVACR systems is a large part of what technicians do. The growing emphasis on energy efficiency and pollution reduction is likely to increase the demand for HVACR technicians as climate-control systems are retrofitted, upgraded, or replaced entirely.

Job Prospects

Job opportunities for HVACR technicians are expected to be good. Candidates familiar with tablet computers and electronics, as well as those who have developed troubleshooting skills, will have the best job prospects.

Technicians who specialize in new installation work may experience periods of unemployment when the level of new construction activity declines. Maintenance and repair work, however, usually remains relatively stable. Business owners and homeowners depend on their climate-control or refrigeration systems year round and must keep them in good working order, regardless of economic conditions.

Source: U.S. Department of Labor Bureau of Labor Statistics

# **Employers by Number of Job Openings**

This section shows the employers with the highest number of job openings advertised online for Heating and Air Conditioning Mechanics and Installers in Louisiana on November 23, 2020 (Jobs Deduplication Level <u>2</u>).

1 J		
, ,	Iohnson Controls	<u>15</u>
2 N	McDonald's Franchisee	<u>7</u>
3 L	ennox International Inc.	<u>4</u>
4 L	ouisiana Department of Civil	<u>3</u>
5 A	Aire Serv LLC	<u>2</u>
6 A	Albritton Service Co	<u>2</u>
7 A	Aptim	<u>2</u>
8 C	Daikin Applied	<u>2</u>
9 H	HCA Healthcare, Inc.	<u>2</u>
10 \	/aco	<u>2</u>

#### Source: Online advertised jobs data

### **Advertised Job Skills**

This section shows the top advertised detailed job skills found in job openings advertised online for Heating and Air Conditioning Mechanics and Installers in Louisiana in October, 2020. (Jobs Deduplication Level 1)

Rank	Advertised Detailed Job Skill	Advertised Skill Group	Job Opening Match Count
1	Customer service	Customer Service Skills	<u>39</u>
2	Preventative maintenance	Maintenance Technician Skills	<u>25</u>
3	Work independently	Basic Skills	<u>23</u>
4	Must be flexible	Basic Skills	<u>16</u>
5	Self motivated	Basic Skills	<u>15</u>
6	Building maintenance	Maintenance Technician Skills	<u>9</u>
7	Appliance repairs	Appliance Repair Technician Skills	<u>8</u>
8	Positive work ethic	Basic Skills	<u>7</u>
9	Answer questions	Basic Skills	<u>6</u>
10	Attention to detail	Basic Skills	<u>6</u>

Source: Online advertised jobs data

### **Advertised Tools and Technology**

This section shows the top advertised detailed tools and technologies found in job openings advertised online for Heating and Air Conditioning Mechanics and Installers in Louisiana in October, 2020. (Jobs De-duplication Level 1)

Rank	Advertised Detailed Tool or	or Advertised Tool and	
Nalik	Technology	Technology Group	

Rank	Advertised Detailed Tool or Technology	Advertised Tool and Technology Group	Job Opening Match Count
1	Air conditioning systems	Air Conditioners	<u>63</u>
2	Ladders	Ladders	<u>16</u>
3	Boilers	Cooking Machinery	<u>14</u>
4	Heat pumps	Heat Pumps	<u>9</u>
5	Ventilation equipment	Air Exhausters	<u>8</u>
6	Personal protective equipment	Hazardous Material Protective Apparel	<u>8</u>
7	Water filters	Water Filters	<u>7</u>
8	Aerial Lift	Manlift or Personnel Lift	<u>7</u>
9	Scissor Lift	Scissor Lift or Lift Table	<u>7</u>
10	Refrigeration systems	Refrigerated Tanks	<u>7</u>
Source: Opling advertised jobs data			

Source: Online advertised jobs data

### **Typical Job Skills**

This section shows the job skills that are related to Heating and Air Conditioning Mechanics and Installers.

Rank	Typical Job Skills	Typical Skill Category
1	Repair pipes to stop leaking	Work Output
2	Test electrical circuits or components for proper functioning	Information Input
3	Service heating, ventilation or air-conditioning (HVAC) systems or components	Work Output
4	Repair worn, damaged, or defective mechanical parts	Work Output
5	Replace worn, damaged, or defective mechanical parts	Work Output
6	Confer with customers or users to assess problems	Interacting With Others
7	Install heating, ventilation, or air conditioning (HVAC) equipment	Work Output
8	Adjust equipment to ensure optimal performance	Work Output
9	Interpret blueprints, specifications, or diagrams to inform installation, development or operation activities	Information Input
10	Connect electrical components or equipment	Work Output
11	Inspect systems to determine if they are operating properly	Information Input
12	Document operational activities	Work Output
13	Install energy-efficient heating, ventilation, or air conditioning (HVAC) equipment	Work Output
14	Advise others on issues related to repairs, installation, or equipment design	Interacting With Others
15	Drill holes in parts, equipment, or materials	Work Output
16	Cut materials according to specifications or needs	Work Output

Rank	Typical Job Skills	Typical Skill Category
17	Measure distances or dimensions	Information Input
18	Assemble mechanical components or machine parts	Work Output
19	Position equipment using hand tools, power tools, or heavy equipment	Work Output
20	Fabricate parts or components	Work Output
21	Install insulation in equipment or structures	Work Output

### **Personal Skills**

This section shows the personal skills that are most useful for Heating and Air Conditioning Mechanics and Installers. Click on a link in the Personal Skills column to view more detailed information.

Personal Skill	Skill Description	Rank by Importance (Out of 100)
Installation	Installing equipment, machines, wiring, or programs to meet specifications.	72
<u>Quality Control</u> <u>Analysis</u>	Conducting tests and inspections of products, services, or processes to evaluate quality or performance.	72
<u>Equipment</u> <u>Maintenance</u>	Performing routine maintenance on equipment and determining when and what kind of maintenance is needed.	72
Troubleshooting	Determining causes of operating errors and deciding what to do about it.	72
<u>Repairing</u>	Repairing machines or systems using the needed tools.	69
<u>Operation</u> <u>Monitoring</u>	Watching gauges, dials, or other indicators to make sure a machine is working properly.	69
Active Listening	Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.	66
<u>Critical Thinking</u>	Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.	56
<u>Reading</u> <u>Comprehension</u>	Understanding written sentences and paragraphs in work related documents.	56
<u>Operation and</u> <u>Control</u>	Controlling operations of equipment or systems.	56
<u>Time</u> <u>Management</u>	Managing one's own time and the time of others.	53
<u>Equipment</u> <u>Selection</u>	Determining the kind of tools and equipment needed to do a job.	53

Personal Skill	Skill Description	Rank by Importance (Out of 100)
<u>Active Learning</u>	Understanding the implications of new information for both current and future problem-solving and decision-making.	53
<u>Speaking</u>	Talking to others to convey information effectively.	53
<u>Monitoring</u>	Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.	50
<u>Complex</u> <u>Problem</u> <u>Solving</u>	Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.	50
<b>Coordination</b>	Adjusting actions in relation to others' actions.	50
<u>Judgment and</u> <u>Decision</u> <u>Making</u>	Considering the relative costs and benefits of potential actions to choose the most appropriate one.	50
<u>Systems</u> <u>Analysis</u>	Determining how a system should work and how changes in conditions, operations, and the environment will affect outcomes.	50
<u>Systems</u> Evaluation	Identifying measures or indicators of system performance and the actions needed to improve or correct performance, relative to the goals of the system.	47
Instructing	Teaching others how to do something.	47
<u>Social</u> <u>Perceptiveness</u>	Being aware of others' reactions and understanding why they react as they do.	47
<b>Mathematics</b>	Using mathematics to solve problems.	47
<u>Writing</u>	Communicating effectively in writing as appropriate for the needs of the audience.	47
<u>Learning</u> <u>Strategies</u>	Selecting and using training/instructional methods and procedures appropriate for the situation when learning or teaching new things.	44
<u>Service</u> Orientation	Actively looking for ways to help people.	44
Persuasion	Persuading others to change their minds or behavior.	44
<u>Negotiation</u>	Bringing others together and trying to reconcile differences.	35
<u>Management of</u> <u>Personnel</u> <u>Resources</u>	Motivating, developing, and directing people as they work, identifying the best people for the job.	35
<u>Management of</u> <u>Material</u> <u>Resources</u>	Obtaining and seeing to the appropriate use of equipment, facilities, and materials needed to do certain work.	28
<u>Operations</u> <u>Analysis</u>	Analyzing needs and product requirements to create a design.	28
<u>Technology</u> <u>Design</u>	Generating or adapting equipment and technology to serve user needs.	28
<u>Science</u>	Using scientific rules and methods to solve problems.	25

Personal Skill	Skill Description	Rank by Importance (Out of 100)
<u>Management of</u> <u>Financial</u> <u>Resources</u>	Determining how money will be spent to get the work done, and accounting for these expenditures.	25
Programming	Writing computer programs for various purposes.	10

### **Typical Education Requirements**

**Heating and Air Conditioning Mechanics and Installers** Heating and Air Conditioning Mechanics and Installers usually require at least a Postsecondary non-degree award. However, not all employers may make this a hiring requirement.

Source: This information is based on the BLS Occupational Outlook Handbook (OOH).

### **Required Level of Education**

This section shows the results of a national survey listing the most common required level of education for Heating and Air Conditioning Mechanics and Installers.

Rank	Required Level of Education	Percentage of Respondents
1	Post-Secondary Certificate - awarded for training completed after high school (for example, in agriculture or natural resources, computer services, personal or culinary services, engineering technologies, healthcare, construction trades, mechanic and repair technologies, or precision production)	54.50%
2	Associate's Degree (or other 2-year degree)	15.70%
3	High School Diploma - or the equivalent (for example, GED)	12.83%
4	Bachelor's Degree	6.67%
5	Some College Courses	6.31%
6	Less than a High School Diploma	3.97%

Source: This information is based on O\*NET<sup>™</sup> data. O\*NET is a trademark registered to the U.S. Department of Labor, Employment and Training Administration.

#### **On The Job Training**

This section shows the results of a national survey listing the most common lengths of on the job training for Heating and Air Conditioning Mechanics and Installers.

Rank	On The Job Training	Percentage of Respondents
1	Over 6 months, up to and including 1 year	24.81%
2	Over 2 years, up to and including 4 years	23.33%
3	Over 4 years, up to and including 10 years	19.52%
4	Over 1 month, up to and including 3 months	10.27%
5	Over 3 months, up to and including 6 months	8.24%
6	None or short demonstration	7.74%

Rank	On The Job Training	Percentage of Respondents
7	Anything beyond short demonstration, up to and including 1 month	4.63%
8	Over 1 year, up to and including 2 years	1.46%

### **On-Site or In-Plant Training**

This section shows the results of a national survey listing the most common lengths of on-site or inplant training for Heating and Air Conditioning Mechanics and Installers.

Rank	On-Site or In-Plant Training	Percentage of Respondents
1	Over 4 years, up to and including 10 years	25.67%
2	Up to and including 1 month	15.88%
3	None	14.55%
4	Over 6 months, up to and including 1 year	11.71%
5	Over 1 year, up to and including 2 years	8.48%
6	Over 2 years, up to and including 4 years	8.12%
7	Over 1 month, up to and including 3 months	8.06%
8	Over 3 months, up to and including 6 months	7.53%

Source: This information is based on O\*NET<sup>™</sup> data. O\*NET is a trademark registered to the U.S. Department of Labor, Employment and Training Administration.

### **Education Level of Jobs and Candidates**

This section shows the minimum level of education requested by employers on job openings advertised online, as well as the educational attainment of potential candidates in the workforce system that are looking for jobs as Heating and Air Conditioning Mechanics and Installers in Louisiana on November 23, 2020. There were 67 job openings advertised online that did not specify a minimum education requirement (Jobs De-duplication Level <u>2</u>).

Rank	Education Level	Job Openings	Percentage of Job Openings	Potential Candidates	Percentage of Potential Candidates
1	No Minimum Education Requirement	<u>5</u>	5.88%	0	N/A
2	Less than High School	0	N/A	25	7.12%
3	High School Diploma or Equivalent	<u>9</u>	10.59%	127	36.18%
4	1 Year of College or a Technical or Vocational School	0	N/A	43	12.25%
5	2 Years of College or a Technical or Vocational School	0	N/A	43	12.25%
6	3 Years of College or a Technical or Vocational School	0	N/A	14	3.99%
7	Vocational School Certificate	<u>1</u>	1.18%	66	18.80%

Rank	Education Level	Job Openings	Percentage of Job Openings	Potential Candidates	Percentage of Potential Candidates
8	Associate's Degree	<u>2</u>	2.35%	26	7.41%
9	Bachelor's Degree	<u>1</u>	1.18%	4	1.14%
10	Master's Degree	0	N/A	2	0.57%
11	Specialized Degree (e.g. MD, DDS)	0	N/A	1	0.28%
12	Not Specified	<u>67</u>	78.82%	0	N/A

Job Source: Online advertised jobs data Candidate Source: Individuals with active résumés in the workforce system.

# **Education Training Programs**

This section shows the Education Training Programs for Heating and Air Conditioning Mechanics and Installers in Louisiana.

Provider Name	Program Name	Location	Tuition	Length	WIOA Eligible
<u>American</u> <u>School</u> <u>Of</u> <u>Business</u>	<u>Heat and Air</u> Conditioning Technician	Shreveport, LA	\$13,500	10 Months	
<u>Ayers</u> <u>Career</u> <u>College</u>	Heating/AC/Refrigeration An industry-recognized certificate or certification	Shreveport, LA	\$15,900	36 Weeks	0
<u>Baton</u> <u>Rouge</u> <u>Community</u> <u>College</u>	<u>Air Conditioning &amp;</u> <u>Refrigeration</u> An industry-recognized certificate or certification	Baton Rouge, LA	\$7,947	4 Semesters	0
<u>Baton</u> <u>Rouge</u> <u>Community</u> <u>College</u>	<u>HVAC Central Air</u> <u>Conditioning</u> An industry-recognized certificate or certification	Baton Rouge, LA	\$450	90 Hours	•
<u>Baton</u> <u>Rouge</u> <u>Community</u> <u>College</u>	<u>HVAC Commercial</u> <u>Refrigeration</u> An industry-recognized certificate or certification	Baton Rouge, LA	\$450	90 Hours	•
<u>Baton</u> <u>Rouge</u> <u>Community</u> <u>College</u>	<u>HVAC Principles of</u> <u>Electricity</u> An industry-recognized certificate or certification	Baton Rouge, LA	\$450	90 Hours	•
<u>Baton</u> <u>Rouge</u> <u>Community</u> <u>College</u>	<u>HVAC Principles of</u> <u>Refrigeration</u> An industry-recognized certificate or certification	Baton Rouge, LA	\$450	90 Hours	•
<u>Baton</u> <u>Rouge</u> <u>Community</u> <u>College</u>	<u>HVAC/R Technician</u> (Voucher Included) An industry-recognized certificate or certification	Baton Rouge, LA	\$2,895	162 Hours	•

Provider Name	Program Name	Location	Tuition	Length	WIOA Eligible
<u>Baton</u> <u>Rouge</u> <u>Community</u> <u>College</u>	<u>HVAC/R Technician</u> (Voucher Included) An industry-recognized certificate or certification	Baton Rouge, LA	\$2,895	162 Hours	0
<u>Baton</u> <u>Rouge</u> <u>Community</u> <u>College</u>	<u>HVAC/R Technician</u> (Voucher Included) An industry-recognized certificate or certification	New Roads, LA	\$2,895	162 Hours	•

Source: U.S. Department of Commerce, Bureau of the Census, Midyear Estimates

### **Advertised Job Certifications**

This section shows the top advertised certification groups found in job openings advertised online for Heating and Air Conditioning Mechanics and Installers in Louisiana in October, 2020. (Jobs Deduplication Level 1)

Rank	Advertised Certification Group	Advertised Certification Sub-Category	Job Opening Match Count
1	National Association of Personnel Services (NAPS)	Human Resources	1
	Source: Onl	ine advertised jobs data	

### **Training Program Completers**

There is no data available for Heating and Air Conditioning Mechanics and Installers in Louisiana.

### National Education, Training, Licensing and Qualifications

**Heating and Air Conditioning Mechanics and Installers** Educational services; state, local, and private 4

Retail trade 4 Wholesale trade 3

HVACR technicians work mostly in homes, schools, stores, hospitals, office buildings, or factories. Some technicians are assigned to specific jobsites at the beginning of each day. Others travel to several different locations, making service calls.

Although most technicians work indoors, some may have to work on outdoor heat exchangers, even in bad weather. Technicians often work in awkward or cramped spaces, and some work in buildings that are uncomfortable because the air conditioning or heating system is not working properly.

Injuries and Illnesses

HVACR technicians have one of the highest rates of injuries and illnesses of all occupations. Potential hazards include electrical shock, burns, muscle strains, and injuries from handling heavy equipment.

Appropriate safety equipment is necessary in handling refrigerants, because they are hazardous and contact can cause skin damage, frostbite, or blindness. When working in tight spaces, inhalation of refrigerants is also a potential hazard. Several refrigerants are highly flammable and require additional care.

Work Schedules

The majority of HVACR technicians worked full time in 2016. Evening or weekend shifts may be

required, and HVACR technicians often work overtime or irregular hours during peak heating and cooling seasons.

Source: U.S. Department of Labor Bureau of Labor Statistics

# **Typical Work Experience Requirements**

**Heating and Air Conditioning Mechanics and Installers** Employees in these occupations usually need one or two years of training involving both on-the-job experience and informal training with experienced workers. A recognized apprenticeship program may be associated with these occupations.

Source: This information is based on O\*NET<sup>™</sup> data. O\*NET is a trademark registered to the U.S. Department of Labor, Employment and Training Administration.

### **Related Work Experience**

This section shows the results of a national survey listing the most common related work experience for Heating and Air Conditioning Mechanics and Installers.

Rank	Related Work Experience	Percentage of Respondents
1	Over 2 years, up to and including 4 years	23.24%
2	Over 6 months, up to and including 1 year	22.60%
3	Over 1 year, up to and including 2 years	21.88%
4	None	11.92%
5	Over 4 years, up to and including 6 years	8.21%
6	Over 6 years, up to and including 8 years	7.36%
7	Over 3 months, up to and including 6 months	3.97%
8	Over 10 years	0.52%
9	Over 8 years, up to and including 10 years	0.30%

Source: This information is based on O\*NET<sup>™</sup> data. O\*NET is a trademark registered to the U.S. Department of Labor, Employment and Training Administration.

#### **Work Experience of Jobs and Candidates**

This section shows the minimum required work experience requested by employers on job openings advertised online, as well as the experience level of potential candidates in the workforce system that are looking for jobs as Heating and Air Conditioning Mechanics and Installers in Louisiana on November 23, 2020. There were 69 job openings advertised online that did not specify a minimum experience requirement (Jobs De-duplication Level <u>2</u>).

Rank	Experience	Job Openings	Percentage of Job Openings	Potential Candidates	Percentage of Potential Candidates
1	Not Specified	69	81.18%	0	N/A
2	Entry Level	3	3.53%	0	N/A
3	Less than 1 year	0	N/A	22	6.27%
4	1 Year to 2 Years	6	7.06%	18	5.13%
5	2 Years to 5 Years	7	8.24%	27	7.69%
6	5 Years to 10 Years	0	N/A	35	9.97%

Rank	Experience	Job Openings	Percentage of Job Openings	Potential Candidates	Percentage of Potential Candidates
7	More than 10 Years	0	N/A	249	70.94%

Job Source: Online advertised jobs data

Candidate Source: Individuals with active résumés in the workforce system.

#### **Current Job Order Wage Information**

The employer has NOT indicated a salary range for this job. The information below shows statistics on typical salaries in the local labor market for Heating and Air Conditioning Mechanics and Installers. This data is NOT an indication of what this employer is willing to pay for this job.

### **Employment Wage Statistics**

This section shows the estimated employment wage statistics for individuals in Louisiana employed for Heating, Air Conditioning, and Refrigeration Mechanics and Installers (no data available for Heating and Air Conditioning Mechanics and Installers) in 2019.

Rate Type / Statistical Type	Entry level	Median	Experienced
Annual wage or salary	\$25,429	\$43,564	\$64,559
Hourly wage	\$12.23	\$20.94	\$31.04

Source: Labor Market Statistics, Occupational Employment Statistics Program The median wage is the estimated 50th percentile; 50 percent of workers in an occupation earn less than the median wage, and 50 percent earn more than the median wage. Entry level and Experienced wage rates represent the means of the lower 1/3 and upper 2/3 of the wage distribution,

respectively. Data is from an annual survey.

#### Wage Rates on Advertised Jobs

This section shows a statistical breakdown of available wage data on the <u>85</u> job openings advertised online for Heating and Air Conditioning Mechanics and Installers in Louisiana that posted a salary on November 23, 2020.

Rate Type / Statistical Type	Entry Level	Median	Experienced
Annual wage or salary	\$34,085	\$42,952	\$46,672
Hourly Wage	\$16.39	\$20.65	\$22.44

Source: Online advertised jobs data

Note: This information is based on actual job orders and is not based on a statistically valid labor market survey. Hourly wage rate calculations in this section assume a 40 hour work week.

### **Desired Salary of Available Candidates**

This section shows the desired salary of potential candidates in the workforce system that are looking for jobs as Heating and Air Conditioning Mechanics and Installers in Louisiana on November 23, 2020.

Ra	ank	Desired Salary	Potential Candidates	Percentage of Potential Candidates
	1	Not Specified	83	23.38%
	2	\$5,000 - \$19,999	3	0.85%

Rank	Desired Salary	Potential Candidates	Percentage of Potential Candidates
3	\$20,000 - \$34,999	96	27.04%
4	\$35,000 - \$49,999	118	33.24%
5	\$50,000 - \$64,999	41	11.55%
6	\$65,000 - \$79,999	11	3.10%
7	\$80,000 - \$94,999	2	0.56%
8	\$95,000 or more	1	0.28%

Source: Individuals with active résumés in the workforce system.

### **Wage Rates Area Distribution**

There is no data available for Heating, Air Conditioning, and Refrigeration Mechanics and Installers (no data available for Heating and Air Conditioning Mechanics and Installers) in Louisiana.

### Wage Rates in Related Occupations

This section shows a comparison of 2019 median annual rates for occupations that are in the same occupational family as Heating and Air Conditioning Mechanics and Installers for Louisiana.

Rank	Occupation	Median	*Related By
1	Gas Plant Operators	\$66,142	O*NET
2	Electro-Mechanical Technicians	\$65,257	O*NET
3	Robotics Technicians <i>P</i>	\$65,257	O*NET
4	<u>Telecommunications Equipment Installers and</u> <u>Repairers, Except Line Installers</u>	\$65,186	O*NET
5	Electrical and Electronics Repairers, Commercial and Industrial Equipment	\$62,553	O*NET
6	Precision Instrument and Equipment Repairers, All Other	\$59,804	SOC4
7	<u>Millwrights</u> • •	\$58,468	O*NET
8	Electrical Power-Line Installers and Repairers >	\$57,653	SOC4
9	Industrial Machinery Mechanics	\$55,230	O*NET
10	Pipe Fitters and Steamfitters • <	\$55,149	O*NET
11	<u>Plumbers</u> > <i>p</i>	\$55,149	O*NET
12	<u>Electricians</u> • <i>P</i>	\$50,806	O*NET
13	<u>Mobile Heavy Equipment Mechanics, Except</u> <u>Engines</u>	\$47,800	O*NET
14	<u>Riggers</u>	\$46,315	SOC4
15	Insulation Workers, Mechanical	\$45,672	O*NET
16	Construction Carpenters > <	\$45,602	O*NET
17	<u>Control and Valve Installers and Repairers, Except</u> <u>Mechanical Door</u>	\$45,315	O*NET
18	Maintenance Workers, Machinery	\$44,228	SOC4
19	Commercial Divers	\$43,960	O*NET

Rank	Occupation	Median	*Related By
20	Locksmiths and Safe Repairers	\$43,717	SOC4
21	Heating, Air Conditioning, and Refrigeration Mechanics and Installers	\$43,564	SOC4
22	Heating and Air Conditioning Mechanics and Installers • <i>e</i>	\$43,564	N/A
23	Refrigeration Mechanics and Installers	\$43,564	O*NET
24	Security and Fire Alarm Systems Installers	\$43,366	O*NET
25	Motorboat Mechanics and Service Technicians	\$42,684	O*NET
26	Farm Equipment Mechanics and Service Technicians	\$41,845	O*NET
27	Medical Equipment Repairers	\$41,592	O*NET
28	Mechanical Door Repairers	\$41,529	SOC4
29	<u>Installation, Maintenance, and Repair Workers, All</u> <u>Other</u>	\$41,228	SOC4
30	Geothermal Technicians /	\$41,228	SOC4
31	Telecommunications Line Installers and Repairers	\$40,750	SOC4
32	Camera and Photographic Equipment Repairers	\$39,384	SOC4
33	Automotive Master Mechanics	\$38,386	O*NET
34	Automotive Specialty Technicians	\$38,386	O*NET
35	Maintenance and Repair Workers, General 🔶 🖉	\$35,576	O*NET
36	<u>Electronic Equipment Installers and Repairers,</u> <u>Motor Vehicles</u>	\$34,980	O*NET
37	Coin, Vending, and Amusement Machine Servicers and Repairers	\$32,492	SOC4
38	Home Appliance Repairers	\$32,408	O*NET
39	HelpersInstallation, Maintenance, and Repair Workers • 🖉	\$30,118	SOC4
40	Glass Blowers, Molders, Benders, and Finishers	\$27,396	O*NET
*	Elevator Installers and Repairers	Confidential	O*NET
	BRIGHT OUTLOOK NATIONALLY STREEN OCCUPATIONS		

\* Rank is suppressed for confidential data.

Source: Labor Market Statistics, Occupational Employment Statistics Program The median wage is the estimated 50th percentile; 50 percent of workers in an occupation earn less than the median wage, and 50 percent earn more than the median wage. Entry level and Experienced wage rates represent the means of the lower 1/3 and upper 2/3 of the wage distribution, respectively. Data is from an annual survey.

\*Related By: O\*NET<sup>™</sup> - The <u>Occupational Information Network</u>. O\*NET is a registered trademark of the <u>US Department of Labor/Employment and Training Administration</u>.

SOC4 - Occupational grouping based on 1st 4 digits of the <u>Standard Occupational Classification</u> system.

### Wage Rates by Industry

There is no data available for Heating and Air Conditioning Mechanics and Installers in Louisiana.

### **National Earnings Data Summary**

**Heating and Air Conditioning Mechanics and Installers** The median annual wage for heating, air conditioning, and refrigeration mechanics and installers was \$45,910 in May 2016. The median wage is the wage at which half the workers in an occupation earned more than that amount and half earned less. The lowest 10 percent earned less than \$28,440, and the highest 10 percent earned more than \$73,350.

In May 2016, the median annual wages for heating, air conditioning, and refrigeration mechanics and installers in the top industries in which they worked were as follows:

Wholesale trade \$48,730 Educational services; state, local, and private 48,190 Retail trade 46,870 Plumbing, heating, and air-conditioning contractors 44,390

Apprentices usually earn about half of the wage paid to experienced workers. As they learn to do more, their pay increases.

The majority of HVACR technicians worked full time in 2016. Evening or weekend shifts may be required, and HVACR technicians often work overtime or irregular hours during peak heating and cooling seasons.

Source: U.S. Department of Labor Bureau of Labor Statistics

#### **Occupational Employment & Future Employment Outlook**

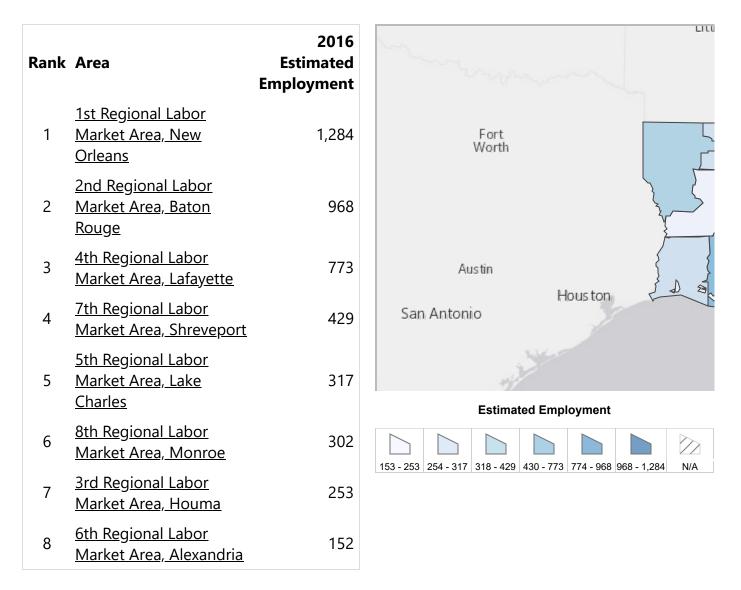
This section shows the long term employment projections for Heating, Air Conditioning, and Refrigeration Mechanics and Installers (no data available for Heating and Air Conditioning Mechanics and Installers) in Louisiana from 2016-2026.

Occupation	2016 Estimated Employment	2026 Projected Employment	Total 2016- 2026 Employment Change	2016-2026 Annual Avg. Percent Change
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	4,502	4,998	496	1.05%
Total All	2,034,986	2,203,144	168,158	0.80%

Source: Occupational Employment Projections

#### **Employment Data Area Distribution**

This section shows the distribution of the 2016 estimated employment for Heating, Air Conditioning, and Refrigeration Mechanics and Installers (no data available for Heating and Air Conditioning Mechanics and Installers) in Louisiana by regional labor market area.



Source: Labor Market Statistics, Occupational Employment Projections Program

### **Employment Data in Related Occupations**

This section shows the 2016 Estimated Employment in Louisiana for occupations related to Heating and Air Conditioning Mechanics and Installers.

Rank	Occupation	2016 Estimated Employment	*Related By
1	Maintenance and Repair Workers, General 🔶 🖉	26,983	O*NET
2	Construction Carpenters • •	18,228	O*NET
3	<u>Electricians</u> • <i>e</i>	11,774	O*NET
4	Pipe Fitters and Steamfitters • •	11,194	O*NET
5	<u>Plumbers</u> • <i>F</i>	11,194	O*NET
6	Automotive Master Mechanics	8,887	O*NET
7	Automotive Specialty Technicians	8,887	O*NET
8	Industrial Machinery Mechanics	7,260	O*NET
9	Heating and Air Conditioning Mechanics and Installers • <i>•</i>	4,502	SOC4
10	Heating, Air Conditioning, and Refrigeration Mechanics and Installers	4,502	SOC4
11	Refrigeration Mechanics and Installers	4,502	O*NET
12	Geothermal Technicians	4,129	SOC4
13	Installation, Maintenance, and Repair Workers, All Other	4,129	SOC4

Rank	Occupation	2016 Estimated Employment	*Related By
14	<u>Telecommunications Equipment Installers and</u> <u>Repairers, Except Line Installers</u>	4,063	O*NET
15	<u>Riggers</u>	4,023	SOC4
16	HelpersInstallation, Maintenance, and Repair Workers • <i>•</i>	3,931	SOC4
17	Insulation Workers, Mechanical	2,884	O*NET
18	Maintenance Workers, Machinery	2,849	SOC4
19	<u>Mobile Heavy Equipment Mechanics, Except</u> <u>Engines</u>	2,820	O*NET
20	<u>Millwrights</u> • •	1,310	O*NET
21	Electrical Power-Line Installers and Repairers •	1,093	SOC4
22	Security and Fire Alarm Systems Installers	957	O*NET
23	Electrical and Electronics Repairers, Commercial and Industrial Equipment <i>•</i>	913	O*NET
24	Commercial Divers	878	O*NET
25	Telecommunications Line Installers and Repairers	863	SOC4
26	Gas Plant Operators	740	O*NET
27	<u>Control and Valve Installers and Repairers, Except</u> <u>Mechanical Door</u>	643	O*NET
28	Coin, Vending, and Amusement Machine Servicers and Repairers	572	SOC4
29	Farm Equipment Mechanics and Service Technicians	431	O*NET
30	Locksmiths and Safe Repairers	411	SOC4
31	Medical Equipment Repairers	292	O*NET
32	Home Appliance Repairers	279	O*NET
33	Precision Instrument and Equipment Repairers, All Other	205	SOC4
34	Glass Blowers, Molders, Benders, and Finishers	188	O*NET
35	Motorboat Mechanics and Service Technicians	158	O*NET
36	Signal and Track Switch Repairers	145	O*NET
37	<u>Electronic Equipment Installers and Repairers,</u> <u>Motor Vehicles</u>	132	O*NET
38	Forest and Conservation Technicians	71	O*NET
*	Camera and Photographic Equipment Repairers	Confidential	SOC4
*	Electro-Mechanical Technicians	Confidential	O*NET
*	Elevator Installers and Repairers	Confidential	O*NET
*	<u>Explosives Workers, Ordnance Handling Experts,</u> and Blasters	Confidential	O*NET
*	Fish and Game Wardens	Confidential	O*NET
*	Manufactured Building and Mobile Home Installers	Confidential	SOC4
*	Mechanical Door Repairers >	Confidential	SOC4
*	Musical Instrument Repairers and Tuners	Confidential	SOC4

Rank	Occupation	2016 Estimated Employment	*Related By
*	Refractory Materials Repairers, Except Brickmasons	Confidential	SOC4
*	Robotics Technicians 🖉	Confidential	O*NET
*	Watch Repairers	Confidential	SOC4
	BRIGHT OUTLOOK NATIONALLY		

\* Rank is suppressed for confidential data.

Source: Occupational Employment Projections

\*Related By: O\*NET<sup>™</sup> - The <u>Occupational Information Network</u>. O\*NET is a registered trademark of the <u>US Department of Labor/Employment and Training Administration</u>.

SOC4 - Occupational grouping based on 1st 4 digits of the <u>Standard Occupational Classification</u> system.

### **Projected Annual Openings**

This section shows the long term projected annual openings for Heating, Air Conditioning, and Refrigeration Mechanics and Installers (no data available for Heating and Air Conditioning Mechanics and Installers) in Louisiana from 2016 to 2026.

Occupation	Total Annual Average Openings	Annual Average Openings Due to Growth	Annual Average Openings Due to Replacement
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	N/A	N/A	N/A
Installation, Maintenance, and Repair	N/A	N/A	N/A

Source: Labor Market Statistics, Occupational Employment Projections Program

### **Projected Annual Openings Area Distribution**

This section shows the distribution of the total annual average openings for Heating, Air Conditioning, and Refrigeration Mechanics and Installers (no data available for Heating and Air Conditioning Mechanics and Installers) in Louisiana by regional labor market area from 2016 to 2026.

Rank	Area	Total Annual Average Openings
1	<u>1st Regional Labor Market</u> <u>Area, New Orleans</u>	N/A
2	<u>2nd Regional Labor</u> Market Area <u>, Baton Rouge</u>	N/A
3	<u> 3rd Regional Labor Market</u> <u>Area, Houma</u>	N/A
4	<u>4th Regional Labor Market</u> <u>Area, Lafayette</u>	N/A
5	<u>5th Regional Labor Market</u> <u>Area, Lake Charles</u>	N/A
6	<u>6th Regional Labor Market</u> <u>Area, Alexandria</u>	N/A
7	<u>7th Regional Labor Market</u> <u>Area, Shreveport</u>	N/A
8	<u>8th Regional Labor Market</u> <u>Area, Monroe</u>	N/A

There is no total annual average openings data available for Heating and Air Conditioning Mechanics and Installers in Louisiana.

Source: Labor Market Statistics, Occupational Employment Projections Program

### **Projected Annual Openings in Related Occupations**

This section shows the projected total annual average openings in Louisiana for occupations related to Heating and Air Conditioning Mechanics and Installers from 2016 to 2026.

Rank	Occupation	Total Annual Average Openings	*Related By
1	Automotive Master Mechanics	N/A	O*NET
2	Automotive Specialty Technicians	N/A	O*NET
3	Coin, Vending, and Amusement Machine Servicers and Repairers	N/A	SOC4
4	Commercial Divers	N/A	O*NET
5	Construction Carpenters • <	N/A	O*NET
6	<u>Control and Valve Installers and Repairers, Except</u> <u>Mechanical Door</u>	N/A	O*NET
7	Electrical and Electronics Repairers, Commercial and Industrial Equipment	N/A	O*NET
8	Electrical Power-Line Installers and Repairers	N/A	SOC4
9	<u>Electricians</u> • <i>F</i>	N/A	O*NET
10	<u>Electronic Equipment Installers and Repairers,</u> <u>Motor Vehicles</u>	N/A	O*NET
11	Farm Equipment Mechanics and Service Technicians	N/A	O*NET
12	Forest and Conservation Technicians	N/A	O*NET
13	Gas Plant Operators	N/A	O*NET
14	<u>Geothermal Technicians</u>	N/A	SOC4

Rank	Occupation	Total Annual Average Openings	*Related By
15	Glass Blowers, Molders, Benders, and Finishers	N/A	O*NET
16	Heating and Air Conditioning Mechanics and Installers • <i>•</i>	N/A	SOC4
17	Heating, Air Conditioning, and Refrigeration Mechanics and Installers	N/A	SOC4
18	<u>HelpersInstallation, Maintenance, and Repair</u> <u>Workers</u>	N/A	SOC4
19	Home Appliance Repairers	N/A	O*NET
20	Industrial Machinery Mechanics <i>P</i>	N/A	O*NET
21	Installation, Maintenance, and Repair Workers, All Other	N/A	SOC4
22	Insulation Workers, Mechanical	N/A	O*NET
23	Locksmiths and Safe Repairers	N/A	SOC4
24	Maintenance and Repair Workers, General 🗇 🖉	N/A	O*NET
25	Maintenance Workers, Machinery	N/A	SOC4
26	Medical Equipment Repairers	N/A	O*NET
27	<u>Millwrights</u> • <i>P</i>	N/A	O*NET
28	<u>Mobile Heavy Equipment Mechanics, Except</u> <u>Engines</u>	N/A	O*NET
29	Motorboat Mechanics and Service Technicians	N/A	O*NET
30	Pipe Fitters and Steamfitters	N/A	O*NET
31	<u>Plumbers</u> > <i>p</i>	N/A	O*NET
32	Precision Instrument and Equipment Repairers, All Other	N/A	SOC4
33	Refrigeration Mechanics and Installers	N/A	O*NET
34	<u>Riggers</u>	N/A	SOC4
35	Security and Fire Alarm Systems Installers	N/A	O*NET
36	Signal and Track Switch Repairers	N/A	O*NET
37	<u>Telecommunications Equipment Installers and</u> <u>Repairers, Except Line Installers</u>	N/A	O*NET
38	Telecommunications Line Installers and Repairers	N/A	SOC4
*	Camera and Photographic Equipment Repairers	Confidential	SOC4
*	Electro-Mechanical Technicians	Confidential	O*NET
*	Elevator Installers and Repairers	Confidential	O*NET
*	<u>Explosives Workers, Ordnance Handling Experts,</u> and Blasters	Confidential	O*NET
*	Fish and Game Wardens -	Confidential	O*NET
*	Manufactured Building and Mobile Home Installers	Confidential	SOC4
*	Mechanical Door Repairers	Confidential	SOC4
*	Musical Instrument Repairers and Tuners	Confidential	SOC4
*	Refractory Materials Repairers, Except Brickmasons	Confidential	SOC4
*	Robotics Technicians 🖉	Confidential	O*NET

Rank	Occupation		Total Annual Averag Opening		
*	Watch Repairers		Confidentia	al SOC4	
		<b>BRIGHT OUTLOOK</b> NATIONALLY	GREEN OCCUPATIONS		

\* Rank is suppressed for confidential data.

Source: Occupational Employment Projections

### **Industries by Employment**

This section shows the industries that employed the highest number of Heating, Air Conditioning, and Refrigeration Mechanics and Installers (no data available for Heating and Air Conditioning Mechanics and Installers) in Louisiana in 2016.

Rank	Industry Title	Estimated Employment	Percent of Total Employment
1	Specialty Trade Contractors	2,929	65.06%
2	<u>Self-Employed and Unpaid Family Workers, Primary</u> Job	409	9.08%
3	Repair and Maintenance	151	3.35%
4	Merchant Wholesalers, Durable Goods	118	2.62%
5	Real Estate	67	1.49%
6	<u>Hospitals</u>	67	1.49%
*	Crop Production	Confidential	Confidential
*	<u>Utilities</u>	Confidential	Confidential
*	Construction of Buildings	Confidential	Confidential
*	Heavy and Civil Engineering Construction	Confidential	Confidential

\* Rank is suppressed for confidential data.

Source: Louisiana Workforce Commission, Occupational Projections Program

### **Work Activities**

This section shows the most common work activities required by Heating and Air Conditioning Mechanics and Installers in order of importance. Click on a link in the Work Activity column to view more detailed information.

Work Activity	Work Activity Description	Rank by Importance (Out of 100)
<u>Repairing and</u> <u>Maintaining Mechanical</u> <u>Equipment</u>	Servicing, repairing, adjusting, and testing machines, devices, moving parts, and equipment that operate primarily on the basis of mechanical (not electronic) principles.	90
<u>Updating and Using</u> <u>Relevant Knowledge</u>	Keeping up-to-date technically and applying new knowledge to your job.	85
<u>Making Decisions and</u> Solving Problems	Analyzing information and evaluating results to choose the best solution and solve problems.	82

Work Activity	Work Activity Description	Rank by Importance (Out of 100)
Getting Information	Observing, receiving, and otherwise obtaining information from all relevant sources.	81
<u>Handling and Moving</u> <u>Objects</u>	Using hands and arms in handling, installing, positioning, and moving materials, and manipulating things.	81
Inspecting Equipment, Structures, or Material	Inspecting equipment, structures, or materials to identify the cause of errors or other problems or defects.	81
Performing General Physical Activities	Performing physical activities that require considerable use of your arms and legs and moving your whole body, such as climbing, lifting, balancing, walking, stooping, and handling of materials.	79
Controlling Machines and Processes	Using either control mechanisms or direct physical activity to operate machines or processes (not including computers or vehicles).	78
<u>Repairing and</u> <u>Maintaining Electronic</u> <u>Equipment</u>	Servicing, repairing, calibrating, regulating, fine-tuning, or testing machines, devices, and equipment that operate primarily on the basis of electrical or electronic (not mechanical) principles.	76
<u>Analyzing Data or</u> Information	Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.	74
<u>Operating Vehicles,</u> <u>Mechanized Devices, or</u> <u>Equipment</u>	Running, maneuvering, navigating, or driving vehicles or mechanized equipment, such as forklifts, passenger vehicles, aircraft, or water craft.	74
<u>Establishing and</u> <u>Maintaining</u> <u>Interpersonal</u> <u>Relationships</u>	Developing constructive and cooperative working relationships with others, and maintaining them over time.	74
<u>Communicating with</u> <u>Supervisors, Peers, or</u> <u>Subordinates</u>	Providing information to supervisors, co- workers, and subordinates by telephone, in written form, e-mail, or in person.	73
<u>Scheduling Work and</u> <u>Activities</u>	Scheduling events, programs, and activities, as well as the work of others.	71
<u>Organizing, Planning,</u> and Prioritizing Work	Developing specific goals and plans to prioritize, organize, and accomplish your work.	71
<u>Training and Teaching</u> <u>Others</u>	Identifying the educational needs of others, developing formal educational or training programs or classes, and teaching or instructing others.	71
Thinking Creatively	Developing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions.	70

Work Activity	Work Activity Description	Rank by Importance (Out of 100)
Evaluating Information to Determine Compliance with Standards	Using relevant information and individual judgment to determine whether events or processes comply with laws, regulations, or standards.	70
<u>Monitor Processes,</u> <u>Materials, or</u> <u>Surroundings</u>	Monitoring and reviewing information from materials, events, or the environment, to detect or assess problems.	70
Processing Information	Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.	70
Identifying Objects, Actions, and Events	Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.	69
Interpreting the Meaning of Information for Others	Translating or explaining what information means and how it can be used.	67
Coordinating the Work and Activities of Others	Getting members of a group to work together to accomplish tasks.	66
<u>Communicating with</u> <u>Persons Outside</u> <u>Organization</u>	Communicating with people outside the organization, representing the organization to customers, the public, government, and other external sources. This information can be exchanged in person, in writing, or by telephone or e- mail.	65
<u>Performing for or</u> <u>Working Directly with</u> <u>the Public</u>	Performing for people or dealing directly with the public. This includes serving customers in restaurants and stores, and receiving clients or guests.	65
Judging the Qualities of Things, Services, or People	Assessing the value, importance, or quality of things or people.	64
Developing Objectives and Strategies	Establishing long-range objectives and specifying the strategies and actions to achieve them.	64
<u>Guiding, Directing, and</u> <u>Motivating Subordinates</u>	Providing guidance and direction to subordinates, including setting performance standards and monitoring performance.	62
<u>Coaching and</u> Developing Others	Identifying the developmental needs of others and coaching, mentoring, or otherwise helping others to improve their knowledge or skills.	61
<u>Drafting, Laying Out,</u> and Specifying Technical <u>Devices, Parts, and</u> <u>Equipment</u>	Providing documentation, detailed instructions, drawings, or specifications to tell others about how devices, parts, equipment, or structures are to be fabricated, constructed, assembled, modified, maintained, or used.	60

Work Activity	Work Activity Description	Rank by Importance (Out of 100)
Documenting/Recording Information	Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.	59
<u>Resolving Conflicts and</u> <u>Negotiating with Others</u>	Handling complaints, settling disputes, and resolving grievances and conflicts, or otherwise negotiating with others.	58
<u>Developing and Building</u> <u>Teams</u>	Encouraging and building mutual trust, respect, and cooperation among team members.	58
Provide Consultation and Advice to Others	Providing guidance and expert advice to management or other groups on technical, systems-, or process-related topics.	58
Estimating the Quantifiable Characteristics of Products, Events, or Information	Estimating sizes, distances, and quantities; or determining time, costs, resources, or materials needed to perform a work activity.	57
<u>Selling or Influencing</u> <u>Others</u>	Convincing others to buy merchandise/goods or to otherwise change their minds or actions.	55
<u>Assisting and Caring for</u> <u>Others</u>	Providing personal assistance, medical attention, emotional support, or other personal care to others such as coworkers, customers, or patients.	53
<u>Performing</u> <u>Administrative Activities</u>	Performing day-to-day administrative tasks such as maintaining information files and processing paperwork.	52
Interacting With Computers	Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.	50
<u>Monitoring and</u> <u>Controlling Resources</u>	Monitoring and controlling resources and overseeing the spending of money.	44
<u>Staffing Organizational</u> <u>Units</u>	Recruiting, interviewing, selecting, hiring, and promoting employees in an organization.	37

### Tasks

This section shows the most common tasks required by Heating and Air Conditioning Mechanics and Installers in order of importance. Click on a link in the Task column to view more detailed information.

Tasks	Task Description	Rank by Importance (Out of 100)
<u>Test pipe or tubing joints or connections for leaks,</u> using pressure gauge or soap-and-water solution.	Core	87

Tasks	Task Description	Rank by Importance (Out of 100)
Test electrical circuits or components for continuity, using electrical test equipment.	Core	86
<u>Repair or replace defective equipment, components, or wiring.</u>	Core	85
Discuss heating or cooling system malfunctions with users to isolate problems or to verify that repairs corrected malfunctions.	Core	84
Repair or service heating, ventilating, and air conditioning (HVAC) systems to improve efficiency, such as by changing filters, cleaning ducts, or refilling non-toxic refrigerants.	Core	82
Install, connect, or adjust thermostats, humidistats, or timers.	Core	80
<u>Connect heating or air conditioning equipment to</u> <u>fuel, water, or refrigerant source to form complete</u> <u>circuit.</u>	Core	80
Study blueprints, design specifications, or manufacturers' recommendations to ascertain the configuration of heating or cooling equipment components and to ensure the proper installation of components.	Core	79
<u>Comply with all applicable standards, policies, or</u> procedures, such as safety procedures or the maintenance of a clean work area.	Core	79
Install auxiliary components to heating or cooling equipment, such as expansion or discharge valves, air ducts, pipes, blowers, dampers, flues, or stokers.	Core	78
Lay out and connect electrical wiring between controls and equipment, according to wiring diagrams, using electrician's hand tools.	Core	77
Inspect and test systems to verify system compliance with plans and specifications or to detect and locate malfunctions.	Core	77
Record and report time, materials, faults, deficiencies, or other unusual occurrences on work orders.	Core	77
Install and test automatic, programmable, or wireless thermostats in residential or commercial buildings to minimize energy usage for heating or cooling.	Core	76
Adjust system controls to settings recommended by manufacturer to balance system.	Core	75
Recommend, develop, or perform preventive or general maintenance procedures, such as cleaning, power-washing, or vacuuming equipment, oiling parts, or changing filters.	Core	74
Install dehumidifiers or related equipment for spaces that require cool, dry air to operate efficiently, such as computer rooms.	Core	74

Tasks	Task Description	Rank by Importance (Out of 100)
Install magnetic-centrifugal chillers, compressors, or related equipment to cool air temperatures through the use of recirculating water.	Core	74
<u>Cut or drill holes in floors, walls, or roof to install</u> equipment, using power saws or drills.	Core	73
<u>Measure, cut, thread, or bend pipe or tubing, using</u> <u>pipe fitter's tools.</u>	Core	72
Install or repair air purification systems, such as specialized filters or ultraviolet (UV) light purification systems.	Core	70
Assemble, position, and mount heating or cooling equipment, following blueprints or manufacturer's specifications.	Core	70
Fabricate, assemble, or install duct work or chassis parts, using portable metal-working tools or welding equipment.	Core	65
Install radiator controls for room-level zone control heating of residential or commercial buildings.	Core	64
Install or repair self-contained ground source heat pumps or hybrid ground or air source heat pumps to minimize carbon-based energy consumption and reduce carbon emissions.	Supplemental	75
Wrap pipes, securing insulation in place with cement or wire bands.	Supplemental	62

### **National Working Conditions**

Heating and Air Conditioning Mechanics and Installers HVACR technicians work indoors and outdoors.

Heating, air conditioning, and refrigeration mechanics and installers held about 332,900 jobs in 2016. The largest employers of heating, air conditioning, and refrigeration mechanics and installers were as follows:

Plumbing, heating, and air-conditioning contractors 64% Self-employed workers 9 Educational services; state, local, and private 4 Retail trade 4 Wholesale trade 3

HVACR technicians work mostly in homes, schools, stores, hospitals, office buildings, or factories. Some technicians are assigned to specific jobsites at the beginning of each day. Others travel to several different locations, making service calls.

Although most technicians work indoors, some may have to work on outdoor heat exchangers, even in bad weather. Technicians often work in awkward or cramped spaces, and some work in buildings that are uncomfortable because the air conditioning or heating system is not working properly.

Injuries and Illnesses

HVACR technicians have one of the highest rates of injuries and illnesses of all occupations. Potential hazards include electrical shock, burns, muscle strains, and injuries from handling heavy equipment.

Appropriate safety equipment is necessary in handling refrigerants, because they are hazardous and contact can cause skin damage, frostbite, or blindness. When working in tight spaces, inhalation of refrigerants is also a potential hazard. Several refrigerants are highly flammable and require additional care.

Work Schedules

The majority of HVACR technicians worked full time in 2016. Evening or weekend shifts may be required, and HVACR technicians often work overtime or irregular hours during peak heating and cooling seasons.

Source: U.S. Department of Labor Bureau of Labor Statistics

# **Typical Work Conditions**

This section shows the most common work conditions required by Heating and Air Conditioning Mechanics and Installers in order of importance.

Work Condition	Work Condition Description	Rank by Importance (Out of 100)
Face-to-Face Discussions	How often do you have to have face- to-face discussions with individuals or teams in this job?	91
Outdoors, Exposed to Weather	How often does this job require working outdoors, exposed to all weather conditions?	90
Spend Time Using Your Hands to Handle, Control, or Feel Objects, Tools, or Controls	How much does this job require using your hands to handle, control, or feel objects, tools or controls?	88
Telephone	How often do you have telephone conversations in this job?	87
In an Enclosed Vehicle or Equipment	How often does this job require working in a closed vehicle or equipment (e.g., car)?	86
Indoors, Not Environmentally Controlled	How often does this job require working indoors in non-controlled environmental conditions (e.g., warehouse without heat)?	85
Spend Time Standing	How much does this job require standing?	85
Wear Common Protective or Safety Equipment such as Safety Shoes, Glasses, Gloves, Hearing Protection, Hard Hats, or Life Jackets	How much does this job require wearing common protective or safety equipment such as safety shoes, glasses, gloves, hard hats or life jackets?	84
Exposed to Contaminants	How often does this job require working exposed to contaminants (such as pollutants, gases, dust or odors)?	84

Work Condition	Work Condition Description	Rank by Importance (Out of 100)
Contact With Others	How much does this job require the worker to be in contact with others (face-to-face, by telephone, or otherwise) in order to perform it?	84
Freedom to Make Decisions	How much decision making freedom, without supervision, does the job offer?	83
Time Pressure	How often does this job require the worker to meet strict deadlines?	82
Very Hot or Cold Temperatures	How often does this job require working in very hot (above 90 F degrees) or very cold (below 32 F degrees) temperatures?	81
Responsible for Others' Health and Safety	How much responsibility is there for the health and safety of others in this job?	79
Frequency of Decision Making	How frequently is the worker required to make decisions that affect other people, the financial resources, and/or the image and reputation of the organization?	79
Impact of Decisions on Co- workers or Company Results	What results do your decisions usually have on other people or the image or reputation or financial resources of your employer?	78
Sounds, Noise Levels Are Distracting or Uncomfortable	How often does this job require working exposed to sounds and noise levels that are distracting or uncomfortable?	78
Work With Work Group or Team	How important is it to work with others in a group or team in this job?	77
Exposed to Minor Burns, Cuts, Bites, or Stings	How often does this job require exposure to minor burns, cuts, bites, or stings?	75
Structured versus Unstructured Work	To what extent is this job structured for the worker, rather than allowing the worker to determine tasks, priorities, and goals?	74
Exposed to Hazardous Conditions	How often does this job require exposure to hazardous conditions?	72
Cramped Work Space, Awkward Positions	How often does this job require working in cramped work spaces that requires getting into awkward positions?	71
Exposed to High Places	How often does this job require exposure to high places?	70
Responsibility for Outcomes and Results	How responsible is the worker for work outcomes and results of other workers?	70

Work Condition	Work Condition Description	Rank by Importance (Out of 100)
Deal With External Customers	How important is it to work with external customers or the public in this job?	69
Exposed to Hazardous Equipment	How often does this job require exposure to hazardous equipment?	68
Spend Time Kneeling, Crouching, Stooping, or Crawling	How much does this job require kneeling, crouching, stooping or crawling?	68
Importance of Being Exact or Accurate	How important is being very exact or highly accurate in performing this job?	67
Physical Proximity	To what extent does this job require the worker to perform job tasks in close physical proximity to other people?	66
Spend Time Bending or Twisting the Body	How much does this job require bending or twisting your body?	63
Coordinate or Lead Others	How important is it to coordinate or lead others in accomplishing work activities in this job?	62
Indoors, Environmentally Controlled	How often does this job require working indoors in environmentally controlled conditions?	62
Spend Time Walking and Running	How much does this job require walking and running?	61
Extremely Bright or Inadequate Lighting	How often does this job require working in extremely bright or inadequate lighting conditions?	60
Deal With Unpleasant or Angry People	How frequently does the worker have to deal with unpleasant, angry, or discourteous individuals as part of the job requirements?	56
Spend Time Climbing Ladders, Scaffolds, or Poles	How much does this job require climbing ladders, scaffolds, or poles?	55
Frequency of Conflict Situations	How often are there conflict situations the employee has to face in this job?	50
Level of Competition	To what extent does this job require the worker to compete or to be aware of competitive pressures?	48
Consequence of Error	How serious would the result usually be if the worker made a mistake that was not readily correctable?	48
Spend Time Making Repetitive Motions	How much does this job require making repetitive motions?	48
Electronic Mail	How often do you use electronic mail in this job?	44

Work Condition	Work Condition Description	Rank by Importance (Out of 100)
Importance of Repeating Same Tasks	How important is repeating the same physical activities (e.g., key entry) or mental activities (e.g., checking entries in a ledger) over and over, without stopping, to performing this job?	43
Outdoors, Under Cover	How often does this job require working outdoors, under cover (e.g., structure with roof but no walls)?	39
Wear Specialized Protective or Safety Equipment such as Breathing Apparatus, Safety Harness, Full Protection Suits, or Radiation Protection	How much does this job require wearing specialized protective or safety equipment such as breathing apparatus, safety harness, full protection suits, or radiation protection?	39
Letters and Memos	How often does the job require written letters and memos?	28
Spend Time Keeping or Regaining Balance	How much does this job require keeping or regaining your balance?	24
Spend Time Sitting	How much does this job require sitting?	22

#### **Work Values and Needs**

This section shows the information on the current work values for your selected occupation.

Work Value	Work Value Description	Rank By Extent (Out of 100)
Support	Occupations that satisfy this work value offer supportive management that stands behind employees. Corresponding needs are Company Policies, Supervision: Human Relations and Supervision: Technical.	78
Independence	Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.	67
Achievement	Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.	50
Working Conditions	Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.	50

Work Value	Work Value Description	Rank By Extent (Out of 100)
Relationships	Occupations that satisfy this work value allow employees to provide service to others and work with co-workers in a friendly non-competitive environment. Corresponding needs are Co-workers, Moral Values and Social Service.	45
Recognition	Occupations that satisfy this work value offer advancement, potential for leadership, and are often considered prestigious. Corresponding needs are Advancement, Authority, Recognition and Social Status.	33

## **Typical Tools**

This section shows common tools used by Heating and Air Conditioning Mechanics and Installers.

Detailed Tool	Tool Group
Adjustable wrenches	Adjustable wrenches
Air flow sensors	Air velocity and temperature monitors
Air velocity meters	Air velocity and temperature monitors
Ammeters	Ammeters
Milliamp/microamp meters	Ammeters
Hot wire anemometers	Anemometers
Awls	Awls
Riggings	Blocks or pulleys
Acetylene torches	Blow torch
4-wire resistance sensors	Calibrated resistance measuring equipment
Resistance meters	Calibrated resistance measuring equipment
Capacitor analyzers	Capacitance meters
Carbon monoxide detectors	Carbon monoxide analyzer
Caulking equipment	Caulking guns
Caulking guns	Caulking guns
Chart recorders	Chart recorders
Circuit analyzers	Circuit tester
Circuit tracers	Circuit tracers
Claw hammers	Claw hammer
Water level meters	Depth indicators
Desktop computers	Desktop computers
Diagonal cutting pliers	Diagonal cut pliers
Drill presses	Drill press or radial drill

#### **Detailed Tool**

High-voltage probes Side cutting pliers **Combustion analyzers** Venturi meters Water flow meters Pitot tubes Turbine flow meters Combustible gas leak detectors **Receptacle testers** Hand hacksaws Power hacksaws Hammers Soft face hammers **Tinners hammers** Handheld thermometers Infrared thermometers Hex wrenches Hoists Humidity sensors Hygrosticks Inspection mirrors Ladders Laser printers Smoke pens Levels Refrigerant leak detectors Long nose pliers Magnetic pickup tools **Manometers** Megohmmeters Duct slicers Metal snips Moisture meters Autoranging meters Clamp-on multimeters **Multimeters** Nut drivers Milliohm meters **Ohmmeters** Oil guns

#### Tool Group

Electronic measuring probes End cut pliers **Explosimeters** Flow sensors Flow sensors Flowmeters Flowmeters Gas detectors GFI circuit testers Hacksaw Hacksaw Hammers Hammers Hammers Handheld thermometer Heat tracing equipment Hex keys Hoists Hygrometers Hygrometers Inspection mirror Ladders Laser printers Leak testing equipment Levels Liquid leak detectors Longnose pliers Magnetic tools Manometers Megohmmeters Metal cutters Metal cutters Moisture meters **Multimeters Multimeters Multimeters** Nut drivers **Ohmmeters Ohmmeters** Oil gun

#### **Detailed Tool**

Oxygen testers Personal computers pH meters **Pipe benders Pipe cutters Pipe reamers** Pipe wrenches Staging equipment Dataloggers Portable drills Power drills Flaring tools **Power grinders** Circular saws Jig saws Reciprocating saws Differential pressure detectors Duplex pressure gauges Pneumatic air gauges Pressure gauges Refrigerant pressure meters Water pressure gauges Bourdon tubes Wet bulb/dew point meters Box cutters Insulation knives Reclaiming equipment Refrigerant recovery machines Resistance temperature detectors Safety glasses Scaffolding Flared tip screwdrivers Phillips head screwdrivers Slotted screwdrivers Duct knives Shears Hand seamers Carbon dioxide CO2 testers Slings

Groove pliers

### Oxygen gas analyzers Personal computers pH meters Pipe bending tools Pipe or tube cutter Pipe reamer **Pipe wrenches** Platform lift Portable data input terminals Power drills Power drills Power flaring tool **Power grinders** Power saws Power saws Power saws Pressure indicators **Pressure indicators** Pressure indicators Pressure indicators **Pressure indicators** Pressure indicators Pressure sensors **Psychrometers** Razor knives Razor knives **Refrigerant compressors Refrigerant compressors Resistance thermometers** Safety glasses Scaffolding Screwdrivers Screwdrivers Screwdrivers Shears Shears Sheet metal pliers Single gas monitors Slings Slip or groove joint pliers

**Tool Group** 

Detailed Tool	Tool Group
Smoke detector canisters	Smoke detectors
Soldering equipment	Soldering iron
Revolutions per minute RPM meters	Speed sensors
Strap wrenches	Strap wrenches
Wire strippers	Stripping tools
Non-contact surface temperature heads	Surface thermometers
Swaging tools	Swaging tools
Temperature/humidity testers	Temperature humidity testers
Bead type thermocouples	Thermocouples
Pipe clamp thermocouples	Thermocouples
Thermocouples	Thermocouples
Pipe threaders	Threading dies
Tongs	Tongs
Tubing benders	Tube bending machine
Two way radios	Two way radios
Utility knives	Utility knives
Duct vacuums	Vacuum cleaners
Vacuum gauges	Vacuum gauges
Refrigerant vacuum pumps	Vacuum pumps
Alternating current AC line splitters	Voltage or current meters
Electrical current meters	Voltage or current meters
Heating ventilation and air-conditioning/refrigeration HVAC/R clamp meters	Voltage or current meters
Non-contact voltage detectors	Voltage or current meters
Voltmeters	Voltage or current meters
Water testers	Water analyzers
Contaminant content tests	Water samplers
Watt transducers	Wattmeters
Wattmeters	Wattmeters
Brazing equipment	Welder torch
Welding hoods	Welding masks
Wire cutters	Wire cutters
	Whe catters

## **Typical Technology**

This section shows common technology used by Heating and Air Conditioning Mechanics and Installers.

Detailed Technology
Autodesk AutoCAD

AC tools software Compu- ntact management systems Custor softwa ta entry software Data b ta logging software Data b tabase software Data b obe Acrobat Docum	uter aided design CAD software uter aided design CAD software mer relationship management CRM re ase user interface and query software ase user interface and query software ase user interface and query software ment management software onic mail software
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	5
1 Notes Electro	nic mail software
crosoft Outlook Electro	nic mail software
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mputerized maintenance management system IMS	es management software
orks CMMS Facilitie	es management software
/ Maximo Asset Management Facilitie	es management software
nagerPlus Facilitie	es management software
aphics software Graphi	cs or photo imaging software
erton Ascent Compass Indust	rial control software
Iding automation software Indust	rial control software
Ita Controls inteliWEB Indust	rial control software
neywell WEBs-N4 Indust	rial control software
nnson Controls Metasys Indust	rial control software
mens APOGEE Building Automation Software Indust	rial control software
ernet browser software Interne	et browser software
crosoft Office Office	suite software
crosoft PowerPoint Presen	tation software
crosoft Excel Spread	Isheet software
readsheet software Spread	Isheet software
as Construction Business Forms Word	processing software
crosoft Word Word	5

## **Licensing Information**

There is no data available for Heating and Air Conditioning Mechanics and Installers in Louisiana.

## **Typical Knowledge Categories**

This section shows the most common knowledge categories required by Heating and Air Conditioning Mechanics and Installers in order of importance. Click on a link in the Knowledge Category column to view more detailed information.

Knowledge Category	Knowledge Category Description	Rank by Importance (Out of 100)
<u>Mechanical</u>	Knowledge of machines and tools, including their designs, uses, repair, and maintenance.	88
<u>Customer and</u> <u>Personal Service</u>	Knowledge of principles and processes for providing customer and personal services. This includes customer needs assessment, meeting quality standards for services, and evaluation of customer satisfaction.	80
<u>Building and</u> Construction	Knowledge of materials, methods, and the tools involved in the construction or repair of houses, buildings, or other structures such as highways and roads.	72
<u>Design</u>	Knowledge of design techniques, tools, and principles involved in production of precision technical plans, blueprints, drawings, and models.	60
<u>Physics</u>	Knowledge and prediction of physical principles, laws, their interrelationships, and applications to understanding fluid, material, and atmospheric dynamics, and mechanical, electrical, atomic and sub- atomic structures and processes.	60
<u>English Language</u>	Knowledge of the structure and content of the English language including the meaning and spelling of words, rules of composition, and grammar.	59
<u>Computers and</u> <u>Electronics</u>	Knowledge of circuit boards, processors, chips, electronic equipment, and computer hardware and software, including applications and programming.	57
<b>Mathematics</b>	Knowledge of arithmetic, algebra, geometry, calculus, statistics, and their applications.	55
Sales and Marketing	Knowledge of principles and methods for showing, promoting, and selling products or services. This includes marketing strategy and tactics, product demonstration, sales techniques, and sales control systems.	54
<u>Engineering and</u> <u>Technology</u>	Knowledge of the practical application of engineering science and technology. This includes applying principles, techniques, procedures, and equipment to the design and production of various goods and services.	49
<u>Public Safety and</u> <u>Security</u>	Knowledge of relevant equipment, policies, procedures, and strategies to promote effective local, state, or national security operations for the protection of people, data, property, and institutions.	49

Knowledge Category	Knowledge Category Description	Rank by Importance (Out of 100)
<u>Chemistry</u>	Knowledge of the chemical composition, structure, and properties of substances and of the chemical processes and transformations that they undergo. This includes uses of chemicals and their interactions, danger signs, production techniques, and disposal methods.	48
<u>Law and</u> <u>Government</u>	Knowledge of laws, legal codes, court procedures, precedents, government regulations, executive orders, agency rules, and the democratic political process.	46
<u>Administration and</u> <u>Management</u>	Knowledge of business and management principles involved in strategic planning, resource allocation, human resources modeling, leadership technique, production methods, and coordination of people and resources.	45
<u>Personnel and</u> <u>Human Resources</u>	Knowledge of principles and procedures for personnel recruitment, selection, training, compensation and benefits, labor relations and negotiation, and personnel information systems.	40
<u>Production and</u> <u>Processing</u>	Knowledge of raw materials, production processes, quality control, costs, and other techniques for maximizing the effective manufacture and distribution of goods.	35
<u>Clerical</u>	Knowledge of administrative and clerical procedures and systems such as word processing, managing files and records, stenography and transcription, designing forms, and other office procedures and terminology.	33
Economics and Accounting	Knowledge of economic and accounting principles and practices, the financial markets, banking and the analysis and reporting of financial data.	25
Telecommunications	Knowledge of transmission, broadcasting, switching, control, and operation of telecommunications systems.	25
<u>Psychology</u>	Knowledge of human behavior and performance; individual differences in ability, personality, and interests; learning and motivation; psychological research methods; and the assessment and treatment of behavioral and affective disorders.	21
<u>Communications</u> and Media	Knowledge of media production, communication, and dissemination techniques and methods. This includes alternative ways to inform and entertain via written, oral, and visual media.	20

## **Typical Work Abilities Required**

This section shows the results of a national survey listing the most common work abilities required by Heating and Air Conditioning Mechanics and Installers in order of importance. Click on a link in the Work Ability column to view more detailed information.

Work Ability	Work Ability Description	Rank by Importance (Out of 100)
<u>Problem</u> <u>Sensitivity</u>	The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.	69
<u>Finger Dexterity</u>	The ability to make precisely coordinated movements of the fingers of one or both hands to grasp, manipulate, or assemble very small objects.	66
<u>Near Vision</u>	The ability to see details at close range (within a few feet of the observer).	66
<u>Visualization</u>	The ability to imagine how something will look after it is moved around or when its parts are moved or rearranged.	66
<u>Manual</u> <u>Dexterity</u>	The ability to quickly move your hand, your hand together with your arm, or your two hands to grasp, manipulate, or assemble objects.	63
<u>Arm-Hand</u> <u>Steadiness</u>	The ability to keep your hand and arm steady while moving your arm or while holding your arm and hand in one position.	60
<u>Deductive</u> <u>Reasoning</u>	The ability to apply general rules to specific problems to produce answers that make sense.	60
<u>Extent</u> <u>Flexibility</u>	The ability to bend, stretch, twist, or reach with your body, arms, and/or legs.	60
<u>Inductive</u> <u>Reasoning</u>	The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).	60
Information Ordering	The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).	56
<u>Multilimb</u> Coordination	The ability to coordinate two or more limbs (for example, two arms, two legs, or one leg and one arm) while sitting, standing, or lying down. It does not involve performing the activities while the whole body is in motion.	56
<u>Oral</u> Comprehension	The ability to listen to and understand information and ideas presented through spoken words and sentences.	56
<u>Perceptual</u> <u>Speed</u>	The ability to quickly and accurately compare similarities and differences among sets of letters, numbers, objects, pictures, or patterns. The things to be compared may be presented at the same time or one after the other. This ability also includes comparing a presented object with a remembered object.	56
<u>Speech</u> <u>Recognition</u>	The ability to identify and understand the speech of another person.	56

Work Ability	Work Ability Description	Rank by Importance (Out of 100)
<u>Trunk Strength</u>	The ability to use your abdominal and lower back muscles to support part of the body repeatedly or continuously over time without 'giving out' or fatiguing.	56
<u>Control</u> <u>Precision</u>	The ability to quickly and repeatedly adjust the controls of a machine or a vehicle to exact positions.	53
Oral Expression	The ability to communicate information and ideas in speaking so others will understand.	53
<u>Selective</u> <u>Attention</u>	The ability to concentrate on a task over a period of time without being distracted.	53
<u>Speed of</u> <u>Closure</u>	The ability to quickly make sense of, combine, and organize information into meaningful patterns.	53
<u>Visual Color</u> Discrimination	The ability to match or detect differences between colors, including shades of color and brightness.	53
<u>Written</u> <u>Comprehension</u>	The ability to read and understand information and ideas presented in writing.	53
<u>Category</u> <u>Flexibility</u>	The ability to generate or use different sets of rules for combining or grouping things in different ways.	50
Far Vision	The ability to see details at a distance.	50
<u>Flexibility of</u> <u>Closure</u>	The ability to identify or detect a known pattern (a figure, object, word, or sound) that is hidden in other distracting material.	50
Speech Clarity	The ability to speak clearly so others can understand you.	50
Static Strength	The ability to exert maximum muscle force to lift, push, pull, or carry objects.	50
<u>Written</u> <u>Expression</u>	The ability to communicate information and ideas in writing so others will understand.	50
<u>Depth</u> <u>Perception</u>	The ability to judge which of several objects is closer or farther away from you, or to judge the distance between you and an object.	47
<u>Fluency of</u> Ideas	The ability to come up with a number of ideas about a topic (the number of ideas is important, not their quality, correctness, or creativity).	47
<u>Gross Body</u> <u>Equilibrium</u>	The ability to keep or regain your body balance or stay upright when in an unstable position.	47
Memorization	The ability to remember information such as words, numbers, pictures, and procedures.	47
<u>Speed of Limb</u> <u>Movement</u>	The ability to quickly move the arms and legs.	47
Time Sharing	The ability to shift back and forth between two or more activities or sources of information (such as speech, sounds, touch, or other sources).	47
<u>Auditory</u> <u>Attention</u>	The ability to focus on a single source of sound in the presence of other distracting sounds.	44

Work Ability	Work Ability Description	Rank by Importance (Out of 100)
<u>Gross Body</u> <u>Coordination</u>	The ability to coordinate the movement of your arms, legs, and torso together when the whole body is in motion.	44
<u>Hearing</u> Sensitivity	The ability to detect or tell the differences between sounds that vary in pitch and loudness.	44
<u>Mathematical</u> <u>Reasoning</u>	The ability to choose the right mathematical methods or formulas to solve a problem.	44
Reaction Time	The ability to quickly respond (with the hand, finger, or foot) to a signal (sound, light, picture) when it appears.	44
<u>Stamina</u>	The ability to exert yourself physically over long periods of time without getting winded or out of breath.	44
Number Facility	The ability to add, subtract, multiply, or divide quickly and correctly.	41
<u>Originality</u>	The ability to come up with unusual or clever ideas about a given topic or situation, or to develop creative ways to solve a problem.	41
<u>Dynamic</u> <u>Strength</u>	The ability to exert muscle force repeatedly or continuously over time. This involves muscular endurance and resistance to muscle fatigue.	38
<u>Response</u> Orientation	The ability to choose quickly between two or more movements in response to two or more different signals (lights, sounds, pictures). It includes the speed with which the correct response is started with the hand, foot, or other body part.	35
<u>Spatial</u> Orientation	The ability to know your location in relation to the environment or to know where other objects are in relation to you.	35
<u>Rate Control</u>	The ability to time your movements or the movement of a piece of equipment in anticipation of changes in the speed and/or direction of a moving object or scene.	31
<u>Wrist-Finger</u> <u>Speed</u>	The ability to make fast, simple, repeated movements of the fingers, hands, and wrists.	31
<u>Glare Sensitivity</u>	The ability to see objects in the presence of glare or bright lighting.	25
<u>Night Vision</u>	The ability to see under low light conditions.	25
<u>Peripheral</u> <u>Vision</u>	The ability to see objects or movement of objects to one's side when the eyes are looking ahead.	25
<u>Sound</u> Localization	The ability to tell the direction from which a sound originated.	25
<u>Explosive</u> <u>Strength</u>	The ability to use short bursts of muscle force to propel oneself (as in jumping or sprinting), or to throw an object.	16
<u>Dynamic</u> <u>Flexibility</u>	The ability to quickly and repeatedly bend, stretch, twist, or reach out with your body, arms, and/or legs.	10

### **Typical Work Interests**

This section shows the results of a national survey listing the most common work interests for Heating and Air Conditioning Mechanics and Installers in order of importance.

Work Interest	Work Interest Description	Rank by Importance (Out of 100)
Realistic	Realistic occupations frequently involve work activities that include practical, hands-on problems and solutions. They often deal with plants, animals, and real-world materials like wood, tools, and machinery. Many of the occupations require working outside, and do not involve a lot of paperwork or working closely with others.	100
Investigative	Investigative occupations frequently involve working with ideas, and require an extensive amount of thinking. These occupations can involve searching for facts and figuring out problems mentally.	61
Conventional	Conventional occupations frequently involve following set procedures and routines. These occupations can include working with data and details more than with ideas. Usually there is a clear line of authority to follow.	61
Enterprising	Enterprising occupations frequently involve starting up and carrying out projects. These occupations can involve leading people and making many decisions. Sometimes they require risk taking and often deal with business.	33

Source: This information is based on O\*NET<sup>™</sup> data. O\*NET is a trademark registered to the U.S. Department of Labor, Employment and Training Administration.

# **Typical Work Styles**

This section shows the most common work styles required by Heating and Air Conditioning Mechanics and Installers in order of importance. Click on a link in the Work Style column to view more detailed information.

Work Style	Work Style Description	Rank by Importance (Out of 100)
Attention to Detail	Job requires being careful about detail and thorough in completing work tasks.	89
Independence	Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.	86
Analytical Thinking	Job requires analyzing information and using logic to address work-related issues and problems.	84
<u>Dependability</u>	Job requires being reliable, responsible, and dependable, and fulfilling obligations.	84

Work Style	Work Style Description	Rank by Importance (Out of 100)
<u>Initiative</u>	Job requires a willingness to take on responsibilities and challenges.	81
Self Control	Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.	81
<u>Persistence</u>	Job requires persistence in the face of obstacles.	79
<u>Cooperation</u>	Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.	78
Integrity	Job requires being honest and ethical.	77
Concern for Others	Job requires being sensitive to others' needs and feelings and being understanding and helpful on the job.	76
Stress Tolerance	Job requires accepting criticism and dealing calmly and effectively with high stress situations.	76
<u>Achievement/Effort</u>	Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.	74
Innovation	Job requires creativity and alternative thinking to develop new ideas for and answers to work-related problems.	71
<u>Adaptability/Flexibility</u>	Job requires being open to change (positive or negative) and to considerable variety in the workplace.	71
<u>Leadership</u>	Job requires a willingness to lead, take charge, and offer opinions and direction.	69
Social Orientation	Job requires preferring to work with others rather than alone, and being personally connected with others on the job.	53

### **Related Occupations**

This section shows a list of occupations related to Heating and Air Conditioning Mechanics and Installers. Click an occupation title to see more information about that occupation.

Rank	Related Occupations	Duties	*Related By
1	<u>Electrical Power-</u> Line Installers and Repairers	Install or repair cables or wires used in electrical power or distribution systems. May erect poles and light or heavy duty transmission towers.	SOC4
2	<u>Heating, Air</u> <u>Conditioning, and</u> <u>Refrigeration</u> <u>Mechanics and</u> <u>Installers</u>	Install or repair heating, central air conditioning, or refrigeration systems, including oil burners, hot-air furnaces, and heating stoves.	SOC4

Rank	Related Occupations	Duties	*Related By
3	<u>Manufactured</u> <u>Building and Mobile</u> <u>Home Installers</u>	Move or install mobile homes or prefabricated buildings.	SOC4
4	<u>Refractory Materials</u> <u>Repairers, Except</u> <u>Brickmasons</u>	Build or repair equipment such as furnaces, kilns, cupolas, boilers, converters, ladles, soaking pits and ovens, using refractory materials.	SOC4
5	<u>Camera and</u> <u>Photographic</u> <u>Equipment</u> <u>Repairers</u>	Repair and adjust cameras and photographic equipment, including commercial video and motion picture camera equipment.	SOC4
6	<u>Coin, Vending, and</u> <u>Amusement</u> <u>Machine Servicers</u> <u>and Repairers</u>	Install, service, adjust, or repair coin, vending, or amusement machines including video games, juke boxes, pinball machines, or slot machines.	SOC4
7	<u>Fabric Menders,</u> Except Garment	Repair tears, holes, and other defects in fabrics, such as draperies, linens, parachutes, and tents.	SOC4
8	<u>Geothermal</u> <u>Technicians</u> <i>•</i>	Perform technical activities at power plants or individual installations necessary for the generation of power from geothermal energy sources. Monitor and control operating activities at geothermal power generation facilities and perform maintenance and repairs as necessary. Install, test, and maintain residential and commercial geothermal heat pumps.	SOC4
9	<u>Helpers</u> Installation <u>,</u> Maintenance, and Repair Workers • •	Help installation, maintenance, and repair workers in maintenance, parts replacement, and repair of vehicles, industrial machinery, and electrical and electronic equipment. Perform duties such as furnishing tools, materials, and supplies to other workers; cleaning work area, machines, and tools; and holding materials or tools for other workers.	SOC4
10	<u>Installation,</u> <u>Maintenance, and</u> <u>Repair Workers, All</u> <u>Other</u>	All installation, maintenance, and repair workers not listed separately.	SOC4
11	Locksmiths and Safe Repairers	Repair and open locks; make keys; change locks and safe combinations; and install and repair safes.	SOC4
12	<u>Maintenance</u> Workers, Machinery	Lubricate machinery, change parts, or perform other routine machinery maintenance.	SOC4
13	<u>Mechanical Door</u> <u>Repairers</u> >	Install, service, or repair automatic door mechanisms and hydraulic doors. Includes garage door mechanics.	SOC4
14	<u>Musical Instrument</u> <u>Repairers and</u> <u>Tuners</u>	Repair percussion, stringed, reed, or wind instruments. May specialize in one area, such as piano tuning.	SOC4
15	<u>Precision</u> Instrument and Equipment Repairers, All Other	All precision instrument and equipment repairers not listed separately.	SOC4
16	<u>Riggers</u>	Set up or repair rigging for construction projects, manufacturing plants, logging yards, ships and shipyards, or for the entertainment industry.	SOC4

Rank	Related Occupations	Duties	*Related By
17	<u>Telecommunications</u> <u>Line Installers and</u> <u>Repairers</u>	Install and repair telecommunications cable, including fiber optics.	SOC4
18	Watch Repairers	Repair, clean, and adjust mechanisms of timing instruments, such as watches and clocks. Includes watchmakers, watch technicians, and mechanical timepiece repairers.	SOC4
19	<u>Commercial Divers</u>	Work below surface of water, using scuba gear to inspect, repair, remove, or install equipment and structures. May use a variety of power and hand tools, such as drills, sledgehammers, torches, and welding equipment. May conduct tests or experiments, rig explosives, or photograph structures or marine life.	O*NET
20	Construction Carpenters	Construct, erect, install, and repair structures and fixtures of wood, plywood, and wallboard, using carpenter's hand tools and power tools.	O*NET
21	<u>Electricians</u> > <i>P</i>	Install, maintain, and repair electrical wiring, equipment, and fixtures. Ensure that work is in accordance with relevant codes. May install or service street lights, intercom systems, or electrical control systems.	O*NET
22	Elevator Installers and Repairers	Assemble, install, repair, or maintain electric or hydraulic freight or passenger elevators, escalators, or dumbwaiters.	O*NET
23	<u>Explosives Workers,</u> Ordnance Handling Experts, and Blasters	Place and detonate explosives to demolish structures or to loosen, remove, or displace earth, rock, or other materials. May perform specialized handling, storage, and accounting procedures. Includes seismograph shooters.	O*NET
24	Insulation Workers, Mechanical >	Apply insulating materials to pipes or ductwork, or other mechanical systems in order to help control and maintain temperature.	O*NET
25	<u>Millwrights</u> <b>&gt;</b> <i>P</i>	Install, dismantle, or move machinery and heavy equipment according to layout plans, blueprints, or other drawings.	O*NET
26	<u>Pipe Fitters and</u> <u>Steamfitters</u> ⇔₽	Lay out, assemble, install, or maintain pipe systems, pipe supports, or related hydraulic or pneumatic equipment for steam, hot water, heating, cooling, lubricating, sprinkling, or industrial production or processing systems.	O*NET
27	<u>Plumbers</u> > <i>p</i>	Assemble, install, or repair pipes, fittings, or fixtures of heating, water, or drainage systems, according to specifications or plumbing codes.	O*NET
28	Refrigeration Mechanics and Installers	Install and repair industrial and commercial refrigerating systems.	O*NET
29	<u>Automotive Master</u> <u>Mechanics</u>	Repair automobiles, trucks, buses, and other vehicles. Master mechanics repair virtually any part on the vehicle or specialize in the transmission system.	O*NET
30	Automotive Specialty Technicians	Repair only one system or component on a vehicle, such as brakes, suspension, or radiator.	O*NET

Rank	Related Occupations	Duties	*Related By
31	<u>Control and Valve</u> Installers and <u>Repairers, Except</u> <u>Mechanical Door</u>	Install, repair, and maintain mechanical regulating and controlling devices, such as electric meters, gas regulators, thermostats, safety and flow valves, and other mechanical governors.	O*NET
32	Electrical and Electronics Repairers, Commercial and Industrial Equipment <b>•</b>	Repair, test, adjust, or install electronic equipment, such as industrial controls, transmitters, and antennas.	O*NET
33	Electro-Mechanical Technicians	Operate, test, maintain, or calibrate unmanned, automated, servo-mechanical, or electromechanical equipment. May operate unmanned submarines, aircraft, or other equipment at worksites, such as oil rigs, deep ocean exploration, or hazardous waste removal. May assist engineers in testing and designing robotics equipment.	O*NET
34	<u>Electronic</u> <u>Equipment Installers</u> and Repairers <u>,</u> Motor Vehicles	Install, diagnose, or repair communications, sound, security, or navigation equipment in motor vehicles.	O*NET
35	Farm Equipment Mechanics and Service Technicians	Diagnose, adjust, repair, or overhaul farm machinery and vehicles, such as tractors, harvesters, dairy equipment, and irrigation systems.	O*NET
36	Fish and Game Wardens 🖉	Patrol assigned area to prevent fish and game law violations. Investigate reports of damage to crops or property by wildlife. Compile biological data.	O*NET
37	Forest and Conservation Technicians	Provide technical assistance regarding the conservation of soil, water, forests, or related natural resources. May compile data pertaining to size, content, condition, and other characteristics of forest tracts, under the direction of foresters; or train and lead forest workers in forest propagation, fire prevention and suppression. May assist conservation scientists in managing, improving, and protecting rangelands and wildlife habitats.	O*NET
38	Gas Plant Operators	Distribute or process gas for utility companies and others by controlling compressors to maintain specified pressures on main pipelines.	O*NET
39	<u>Glass Blowers,</u> <u>Molders, Benders,</u> and Finishers	Shape molten glass according to patterns.	O*NET
40	<u>Home Appliance</u> <u>Repairers</u>	Repair, adjust, or install all types of electric or gas household appliances, such as refrigerators, washers, dryers, and ovens.	O*NET
41	Industrial Machinery Mechanics	Repair, install, adjust, or maintain industrial production and processing machinery or refinery and pipeline distribution systems.	O*NET

Rank	Related Occupations	Duties	*Related By
42	<u>Maintenance and</u> <u>Repair Workers,</u> <u>General</u> • <i>•</i>	Perform work involving the skills of two or more maintenance or craft occupations to keep machines, mechanical equipment, or the structure of an establishment in repair. Duties may involve pipe fitting; boiler making; insulating; welding; machining; carpentry; repairing electrical or mechanical equipment; installing, aligning, and balancing new equipment; and repairing buildings, floors, or stairs.	O*NET
43	<u>Medical Equipment</u> <u>Repairers</u>	Test, adjust, or repair biomedical or electromedical equipment.	O*NET
44	<u>Mobile Heavy</u> <u>Equipment</u> <u>Mechanics, Except</u> <u>Engines</u>	Diagnose, adjust, repair, or overhaul mobile mechanical, hydraulic, and pneumatic equipment, such as cranes, bulldozers, graders, and conveyors, used in construction, logging, and surface mining.	O*NET
45	<u>Motorboat</u> <u>Mechanics and</u> <u>Service Technicians</u>	Repair and adjust electrical and mechanical equipment of inboard or inboard-outboard boat engines.	O*NET
46	<u>Robotics</u> <u>Technicians</u> =	Build, install, test, or maintain robotic equipment or related automated production systems.	O*NET
47	Security and Fire Alarm Systems Installers	Install, program, maintain, or repair security or fire alarm wiring and equipment. Ensure that work is in accordance with relevant codes.	O*NET
48	<u>Signal and Track</u> Switch Repairers	Install, inspect, test, maintain, or repair electric gate crossings, signals, signal equipment, track switches, section lines, or intercommunications systems within a railroad system.	O*NET
49		Install, set-up, rearrange, or remove switching, distribution, routing, and dialing equipment used in central offices or headends. Service or repair telephone, cable television, Internet, and other communications equipment on customers' property. May install communications equipment or communications wiring in buildings.	O*NET

STATIONALLY STATIONALLY

Source: \*\*Related By: O\*NET<sup>™</sup> - The <u>Occupational Information Network</u>. O\*NET is a registered trademark of the <u>US Department of Labor/Employment and Training Administration</u>.
 SOC4 - Occupational grouping based on 1st 4 digits of the <u>Standard Occupational Classification</u> system.

### **Career Ladder**

This section shows the top 10 occupations and the corresponding individuals in the workforce system who were previously Heating and Air Conditioning Mechanics and Installers and have changed their occupation over the last 5 years.

Occupation Title	Number of Individuals that Moved	Percentage of Individuals that Moved
Refrigeration Mechanics and Installers	105	25.86%
Maintenance and Repair Workers, General • 🖉	98	24.14%
Laborers and Freight, Stock, and Material Movers, Hand •	35	8.62%

Occupation Title	Number of Individuals that Moved	Percentage of Individuals that Moved
Construction Laborers • •	31	7.64%
HelpersInstallation, Maintenance, and Repair Workers • 🖉	29	7.14%
<u>Electricians</u> • <i>P</i>	28	6.90%
Sheet Metal Workers • •	28	6.90%
HelpersElectricians >	19	4.68%
Electrical and Electronics Repairers, Commercial and Industrial Equipment	18	4.43%
Driver/Sales Workers	15	3.69%

SRIGHT OUTLOOK NATIONALLY SREEN OCCUPATIONS

Source: Individuals with active résumés in the workforce system.

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