

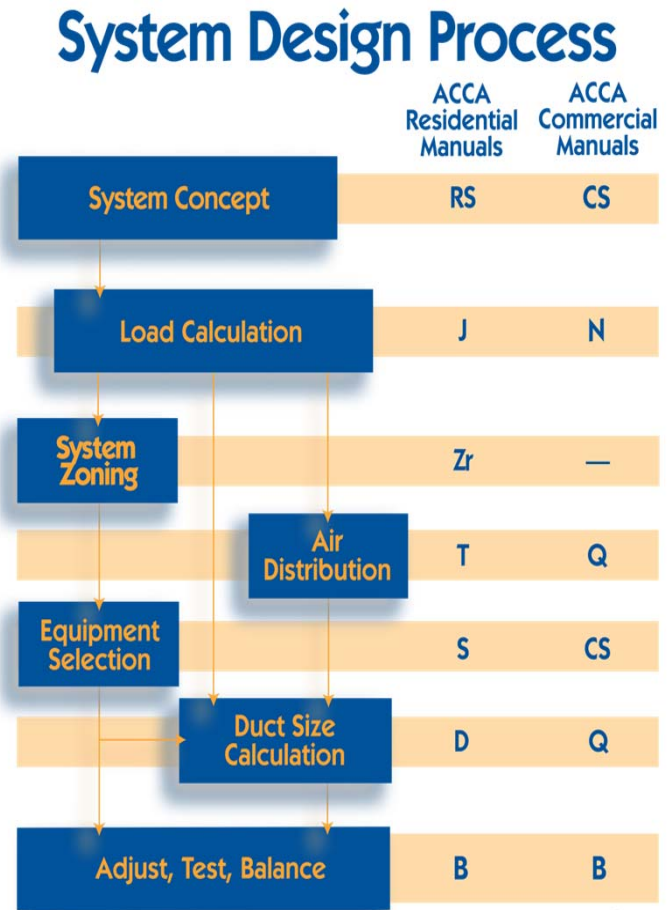
OVERVIEW: ACCA Training Offerings

ACCA's Educational Offerings for an Evolving Marketplace

Updated 22 October 2014

As a supplier of educational programs in the HVACR industry for well over 50 years, three factors serve as driving forces within ACCA. First and foremost is to make sure ACCA educational programs and services are of the highest quality; second is to stay a step ahead of the emerging industry needs and trends so that ACCA can offer contractors what they need when they need it, and finally be cost effective in developing and delivering educational programs and services to contractors. ACCA's Standards have been widely recognized and accepted by all sectors of the HVAC industry and several have become code requirements. The chart on the right provides a snapshot view of how ACCA Manuals combine to cover the Design Process

In advancing its training mission, ACCA avails itself of a number of approaches from face-to-face training, to video/CD training solutions, to the online certificate program, to webinars, to ensuring its manuals/standards/guides are on the cutting edge of industry good practices, to develop educational plot forms for **A) Contractors**, **B) Technicians**, **C) Consumers**, **D) Instructors**, and **E) Code Officials** [see attached sheets for specifics on each].



FACE-TO-FACE TECHNICAL EDUCATION ('Classroom Setting')

(For more information, contact training@acca.org or call 703-575-4477)

- **Residential Design For Quality Installations (RDQI):** A journeyman or higher level, three-day course covering Residential Design for Quality Installations includes: Manual J8[®] (Load Calculations), Manual D[®] (Duct Design), and the ANSI/ACCA 5-QI-2014 (HVAC Quality Installation Specification). Also included are: Manual T[®] (Air Distribution Basics), Manual S[®] (Equipment Selection), and ACCA's Duct Slide Rule. Thus, providing the students with all of the tools needed to properly design and supervise the installation of an HVAC system to meet code as well as Energy Star[®] requirements.
- **Educational Program Instructor Certification (EPIC):** Residential EPIC is a master or expert level course that covers the residential design process in depth and requires the use of a Windows-based lap top computer. Material provided and covered includes the following: Manual J8[®] (load Calculations), Manual S[®] (Equipment Selection), Manual D[®] (Duct Design), Manual H[®] (Heat Pump Systems), Manual P[®] (Psychrometrics), Manual T[®] (Air Distribution Basics), Manual TT[®] Understanding the Friction Chart), and Manual 4[®] (Perimeter Heating and Cooling).

For more Information check out the ACCA web site at: WWW.ACCA.ORG

Commercial EPIC parallels the residential EPIC course covering ACCA's commercial design materials: Manual CS[®] (Commercial Applications, Systems and Equipment), Manual N[®] (Commercial Load Calculation), Manual H[®] (Heat Pump Systems), Manual P[®] (Psychrometrics), Manual T[®] (Air Distribution Basics), and Manual Q[®] (Commercial Low Pressure, Low Velocity, Duct System Design)

- **Seminars at ACCA meetings, conferences, and councils:** ACCA's continues to evolve its seminar classroom opportunities that are made available in conjunction with various meetings and other events. These draw a large number of people where it is cost-effective to offer multiple learning modules:
 - ACCA Conference and IE3 Indoor Air EXPO.
 - Building Performance Forum (a two-day learning experience for contractors cosponsored by ACCA and BPI)
 - National HVACR Service Managers Forum (a two-day learning experience exclusively for service managers in contracting businesses)
 - Commercial Contracting Roundtable (the leading educational and networking experience for commercial HVACR contractors)
 - Numerous sessions provided at monthly local ACCA chapter meetings.

INDIVIDUALIZED STUDY

Embracing what ACCA sees as an important part in the education of the future, ACCA has developed individualized training so it can be used when and where the user wants. Individualized study materials are available in several formats designed to meet individual needs: CDs, Videos, and recorded webinars, and Manuals/Guides. ACCA's material provides high quality training reusable training materials at an affordable price so contractors can train employees when it is convenient.

- **Quality Assurance Accreditation Programs:** ACCA now offers a online training course with testing that allow contractors to receive accreditation for the Energy Star New Homes program (QA), ACCA's Existing Homes –Residential Service & Installation (RSI), and the RSI Verifier Program.
- **Energy and Home Performance Programs:** ACCA offers online training courses with testing that allow contractors to become program members. The programs include the Quality Assured (QA) program and the residential
- **Webinars for ACCA Members:** ACCA's provide members with access to the latest business practices and technology implementations through webinars. Webinars are seen as a hybrid methodology that allows those who want to participate access to very specific topics with the information at a more convenient.

INDUSTRY TRAINING COLLABORATIONS

- **North America Technician Excellence (NATE):** ACCA is committed to NATE certification as a mark of distinction and a way for consumers and contractors to gain a true comfort level with the professionalism of HAVC technicians.
- **Instructor Workshop:** ACCA has been working with the Council of Air-Conditioning and Refrigeration Educators (CARE) and to develop and disseminate the information HVACR instructors want and need.
- **Building Performance Forum:** ACCA forum for HVAC contractors, and raters involved in the home performance industry held in conjunction with the Building Performance Institute, Inc. (BPI).

ACCA values collaborative partnerships with business entities and allied associations to advance the goal of quality education in a cost effective manner.



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CONTRACTOR: ACCA Training Offerings

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Contractor To Contractor

For access to member benefits:

<http://members.acca.org/home>

- ACCA Conference
- Mixed Groups
- Code of Professional Conduct
- ACCA Blogs
 - Federal Affairs
 - State Affairs
 - Conference & Expo
 - Industry News & Opinion
 - Service Managers Forum
 - Building Performance



QA & RSI Training

Access to all contractors:

<http://www.acca.org/qa/resources/>

- QA Contractor Elements
- Participation Requirements
- Outdoor Load Calculation Design Conditions
- QA Sample Policy Template
- ENERGY STAR Checklists
- RSI HVAC Verifiers

Free To Members Video Training

Watch: <http://members.acca.org/acca/watch/>

1. Performance Reviews For Success
2. Stress in Service Contracting
3. 10 Easy Steps to Handling the Poor Performer

Plus, ACCA has an additional 133 additional Videos covering contracting management and employee relationship issues.

Safety Downloads

Risk Management Library:

<https://www.acca.org/issues/safety/>

- A SIR Program – It's Just the Ticket!
- Who Are You Insuring?
- Who Pays for Errors?
- Conduct a "Safety" Interview
- Don't Risk a Lot to Save a Little
- Distracted Driving: At What Cost?
- First Impressions Work Both Ways
- Set Driving Expectations
- Workers' Compensation Fraud
- How Much Is a Good Name Worth?
- Two to Hire, Two to Fire!
- Preparing for a Flu Pandemic
- Concentrate On Safety
- Real Value or Paper Value?
 - Winter Driving Woes
 - Battling Mother Nature
 - Business Interruption
 - Add TLC to Workers' Comp
 - Back to Back Safety

Free Member Downloads

Keeping contractors up to date:

<http://members.acca.org/home>

- Residential HVAC Design for Quality Installation (Jack Rise Course)
- Technical Bulletins
- Customizable Brochures
- Comfor Tools (to be customized for distribution to customers)
- Q&A Section
- Forms and Templates
- ACCA Annual Report
- Hurricane Last Minute Essentials Guide
- Sample Emergency Management Plan
- Open for Business Planning Package

Contractor Focused CD's & DVDs

Training Library:

<https://www.acca.org/for-contractors/>

- Contractor Soft Skills DVD
- Convert Phone Calls into More Sales DVD
- LEED, Follow or Get Out of the Way (Book and/or CD)

Forums & Annual Meeting

Live Training & Information:

<http://members.acca.org/home>

- ACCA Conference & IE3 Expo
- Service Manager Forum
- Building Performance Forum
- Radiant & Hydronic Forum

Free To Members Audio Training

Listen: <http://members.acca.org/acca/listen/>

- The Price Is Right! How To Properly Price Commercial Services
- The Next Generation of HVAC
- Private Label Products: Are They Worth It?

Plus, 30 Additional Audio Programs addressing business related issues.

Political Action Committee

Legislation Tracking, Grassroots Action Center and Federal affairs updates on the following

items brings the latest information on in following areas of interest to contractors:

<http://www.capwiz.com/acca/home/>

- Tax Legislation
- Regional standards
- Copper & Metal Theft
- Healthcare
- Labor
- Commercial Energy Efficiency Incentives
- Residential Energy Efficiency Incentives
- Refrigerants
- Regional Standards
- Regulatory reform
- Small Business Capital Investment
- Transportation

Breaking News

IE3 Media: <http://www.ie3media.com/>

- IE 3
- Insider Emails
- Special Interest Council News Letters:
 - Building Performance
 - Radiant and Hydronics

Why Join ACCA

Learn what ACCA has to offer Contractors:

<http://www.acca.org/join/>

- Free Training
- Free Technical & Legal Support
- Free Downloads
- Connect with:
 - Customers
 - Contractors
 - Job Seekers



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TECHNICIAN: ACCA Training Offerings

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Video and CD Training

ACCA on line store: www.acca.org/store

HVAC Essentials

- Understanding Manual J: Heat Gain & Heat Loss in the Real World
- Understanding manual D: Airflow & Duct Design in the Real World
- Understanding Section 608: refrigerant Handling in the Real World
- Understanding Manual N: Commercial Load Calculation in the Real World
- Understanding Quality Installation
- Understanding Electricity
- Understanding Manual Q: Low Pressure, Low Velocity Duct Design in the Real World
- Understanding Manual Zr
- HVAC Essentials Understanding 608
- Tips for Residential HVAC Installation CD
- Control System Basics for HVAC Technicians CD
- Refrigeration and Air Conditioning 7th Edition CD set

Nate Training CDs

- Mastering Core Service CD
- Mastering Heat Pump Service CD
- Mastering Core Installation CD
- Mastering Air Conditioning Inst. CD
- NATE Air Conditioning and Heat Pumps CD
- NATE Air Distribution CD
- NATE Gas and Oil Heating CD
- NATE Hydronics CD

Mobile App

<https://www.acca.org/mobile-apps/>

DuctWheel for iPad

Online Course Providing CEU's

Available at: <http://www.acca.org/ceus-ever/>

- Quality Installation
- NATE Essentials
- Understanding Section 608

Training Books and Materials

ACCA on line store: www.acca.org/store

- Study Guide for EPA Section 608 (English, Spanish, and Italian)
- Training Manual for EPA Section 608 (English, and Spanish)
- Section 608 Refresher Manual (English, and Spanish)
- EPA 609 Certification and Training Manual
- Calculator/Pocket Card Set
- Careers In the HVAC Industry
- Control System Basics for HVAC Technicians
- Customer Service Handbook For HVACR Technicians
- Airflow In Ducts
- Blueprints and Plans For HVAC
- Commercial System Quick Reference (CSQR)
- Digital Controls for HVAC Technicians
- Duct Calculation Slide Rule

- Energy Efficiency Manual
- Fans and V-Belt Drives
- Geothermal HVAC: Green Heating and Cooling
- Good HVAC Practices for Residential and Commercial Buildings (ACCA)
- Green Guide
- HVAC Equations, Data, and Rules of thumb, 2nd Edition
- HVAC Licensing Study Guide
- HVAC Spanish
- Math for the Technician
- Refrigeration and Air Conditioning 7th Edition
- Modern Refrigeration and Air Conditioning, 19th Edition
- Refrigeration for HVAC Technicians How Refrigeration Works
- Troubleshooting HVAC-R Equipment
- Building Science Principles Reference Guide
- Geothermal Heat Pump Training Manual
- Tech to Tech
- How Come?
- Modern Hydronic Heating
- Pumping Away, And other really cool piping options for hydronic system
- Residential Hydronic Heating, Installation and Design
- The Lost Art of Steam Heating
- Refrigeration for HVAC Technicians
- Bob's House
- Duct Diagnostics and Repair
- HVAC Installation Procedures Handbook
- HVAC Maintenance Procedures Handbook
- HVAC Service Procedures Handbook
- Layout for Duct Fittings
- Manual 4 Inst. Techniques for Perimeter heating and Cooling

- Tips for Residential HVAC Installation
- HVAC Servicing Procedures Handbook
- HVAC Installation Procedures Handbook
- HVAC Maintenance Procedures Handbook
- Installing Residential Forced Air Furnaces
- Layout For Duct Fittings

NATE Training Manuals

ACCA on line store:

<http://www.acca.org/education/nate-essentials/>

- NATE A/C & Heat Pumps Manual
- NATE Air Distribution
- NATE Essentials Manual
- NATE Gas and Oil Heating
- NATE Hydronics
- Mastering Air Distribution Service
- Mastering Hydronics – Gas Service
- Mastering Gas Furnace installation
- Mastering Gas Furnace Service
- NATE Core Essentials
- NATE Air Conditioning and Heat Pumps
- NATE Air Distribution
- NATE Gas and Oil Heating
- NATE Hydronics

Course Related Text and Work Books

ACCA on line store: www.acca.org/store

- Technician's Guide for Quality Installations
- Manual B Balancing and Testing Air and Hydronic Systems
- Manual H Heat Pump Systems and Applications
- Controls – Level 1 Fundamentals
- Life Cycle Costing for HVAC Systems
- Principles of Mechanical Refrigeration

Consumer: ACCA Training Offerings

ACCA's Educational Offerings for an Evolving Marketplace

Updated 22 October, 2014

ACCA develops innovative consumer education materials for light commercial and residential customers. Tools are designed to help consumers locate and evaluate HVACR contractors. They help consumers recognize contractors who have differentiated themselves by offering standards-based quality installation services. Extensive web information on how to:

1. Find a contractor
2. Select a contractor
3. What questions to ask a contractor
4. What the QI is
5. Contractor proposal evaluation checklists
6. Commonly asked questions and answers
7. Texts that explain basic HVAC design and installation principles in non technical language

Consumer Videos

Animated Videos:

- *Comfort Health Safety* <http://www.acca.org/homes/>
- *When Is The Best Time To Ask These Questions?* <http://www.acca.org/homes/>



Videos:

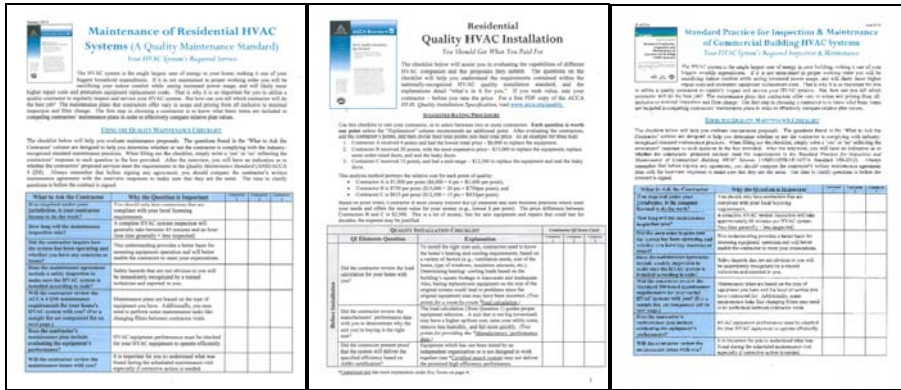
- *A Guide For Home Heating and Air Conditioning* <http://www.acca.org/homes/>
- *A Guide For Business Heating AND Air Conditioning Services* <http://www.acca.org/buildings/>



Consumer Checklists

Quality Installation Checklist (*English & Spanish*) <http://www.acca.org/homes/>

Quality Maintenance Checklist (*Residential and Commercial Versions*) <http://www.acca.org/homes/>



Frequently Asked Questions & The Right Questions To Ask

Found at: <http://www.acca.org/homes/>

- **Are your technicians NATE certified?** NATE certification is the industry’s standard for technician excellence. You should never accept anything less.
- **Do you offer continuing education to your employees?** This industry changes rapidly. Ask the contractor to describe their training program.
- **Can you provide local references?** Get the names of neighbors who have used the company’s services, and then follow up with them.
- **Do you offer a service agreement plan?** Well-maintained equipment runs more efficiently and lasts longer.
- **Are you properly licensed?** Unfortunately, every state, city, or county could have different contractor licensing rules. Ask for proof!
- **Do you follow the industry standards?** Make sure your contractor knows what “Manual J” and “Quality Installation” are, just for a start. Scroll down on this page to find out what these standards are and why they are important to you!

Texts Designed For End Users

Found at: <http://www.acca.org/store/>

Bob’s House, a case study for understanding the residential HVAC design process and Manual RS-Comfort, Air Quality, & Efficiency by Design are designed to be used by those who want a basic understanding of HVAC design practices





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INSTRUCTOR: ACCA Training Offerings

ACCA's Educational Offerings for an Evolving Marketplace

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ACCA participates in HVACR Instructor Work Shops and develops education materials for light commercial and residential training. ACCA helps instructors provide the training that contractors need today's technicians to have. The net result of using ACCA's HVACR training materials is to provide students with market place skills based on the HVACR industry's good practices and procedures.

Free Downloads From The ACCA Website

The image shows three educational materials. On the left is a video thumbnail for 'Manual N Speedsheet' comparing manual calculations with a spreadsheet. In the middle is a video thumbnail for 'Manual Jae Speedsheet' showing a spreadsheet for window calculations. On the right is the cover of the 'ACCA Standard HVAC Quality Installation Specification' document.

Manual N Speedsheet video

Manual Jae Speedsheet video

QI Standards

Speedsheet Videos available at: www.acca.org/standards/acca-speed-sheets/

Other Supporting Resource Materials Available as Free Downloads:

Standards available at: www.acca.org/standards/quality/:

- HVAC Quality Installation Specification (English)
- HVAC Quality Installation Specification (Spanish)
- Home Performance Evaluation & Improvement
- HVAC Quality Installation Protocols
- Quality Maintenance of Residential HVAC Systems
- HVAC System Cleanliness & Restoration

Instructor Power Point Presentations on CD's

Cd's developed for Instructor Use In the Classroom

Power points available at: www.acca.org/store

- Controls – Level 1 Fundamentals
- Life Cycle Costing for HVAC Systems
- Principles of Mechanical Refrigeration
- Simutech –Simuair- Air Conditioning Simulator Training System
- Water Piping and Heat Pumps- Instructor
- Residential Design Instructor Power point
- Commercial design Instructor Power Point
- 608 Certification Program (Refrigerant Transition and recovery Certification Instructor manual includes lesson plans and *overhead* masters) Procter Sign Up: <http://www.acca.org/for-contractors/>
- Understanding Section 608

North American Technical Excellence Instructor's CDs

NATE CDs available at: www.acca.org/store

- NATE A/C & Heat Pumps Manual
- NATE Air Distribution
- NATE Essentials Manual
- NATE Gas and Oil Heating
- NATE Hydronics

ACCA's Educational Program Instructor Certification (EPIC)

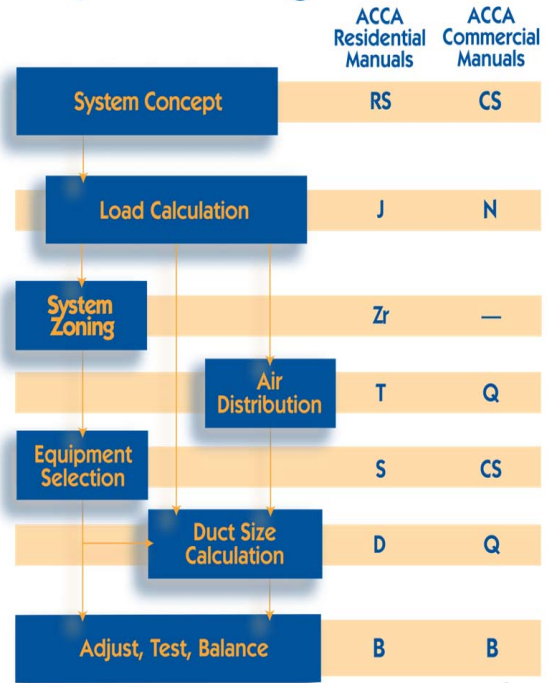
ACCA's Educational Program Instructor Certification (EPIC) is a 4 day course designed for those instructors with a master's level experience in HVAC systems. Participants must supply their own windows based computer system. The following covered Manuals and materials are provided by ACCA:

Residential EPIC available at:

www.acca.org/education/epic/

- Manual D (Duct Design)
- Manual J (Load Calculation)
- Manual H (Heat Pump Systems)
- Manual P (Psychrometrics)
- Manual S (Equipment Selection)
- Manual T (Air Distribution Basics)
- Manual 4 (Perimeter Heating & Cooling)
- Manual TT-102 (Understanding the Friction Chart)

System Design Process



Apprenticeship Program

ACCA developed a training series of manuals designed to teach what contractors need entry level technicians to know. Designed to be a two or four year program the books are available with an Instructor's Guide CD. The following Courses are designed to build upon one another:

- HVACR 101 Book and Instructor's Guide on CD
- HVACR 201 Book and Instructor's Guide on CD
- HVACR 301 Book and Instructor's Guide on CD
- HVACR 401 Book and Instructor's Guide on CD

Available at: www.acca.org/store

Instructor's Training Certification Manual

ACCA has a Geothermal Heat Pump Training Certification Instructor Manual available for those who wish to teach the basics of Geothermal Heat Pump design and installations. Available at: www.acca.org/store

For more Information check out the ACCA web site at: WWW.ACCA.ORG



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CODE OFFICIALS: ACCA Training Resources

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ACCA develops education materials for light commercial and residential Code Officials. Tools are designed to help them understand the basic requirements for HVACR designs. Additionally, ACCA is available as a trusted unbiased HVACR industry expert to answer Code Official's questions one on one when they call in.

Building Code Requirements for ACCA Manuals

The following national codes make reference to specific ACCA procedures in order to comply. Jurisdictions that adopt these codes require the use of ACCA procedures as outlined in our technical manuals.

- The **IAPMO's Uniform Mechanical Code** requires the use of Manual J (Residential Load Calculation), Manual N (Commercial Load Calculation), Manual D (Residential Duct Systems), and Manual Q (Commercial Duct Systems).
- The **ICC's International Mechanical Code** requires the use of Manual D (Residential Duct Systems).
- The **ICC's International Residential Code** requires the use of Manual J (Residential Load Calculation) and Manual S (Residential Equipment Selection).
- The **ICC's International Energy Conservation Code** requires the use of Manual J (Residential Load Calculation) and Manual S (Residential Equipment Selection).

Codes 101 Brochure

Available at: <http://www.acca.org/standards/codes/>

The image shows a brochure titled "CODES 101: An Introduction to Codes and Standards for the HVACR Contractor". The cover features the ACCA logo and contact information. The content pages include sections on "WHAT ARE CODES...", "CODES AND THE HVAC INDUSTRY", "PRIMARY BUILDING CODE BODIES", and "... AND STANDARDS?".

WHAT ARE CODES ...

Codes are minimum standards that aim to guide government agencies in meeting their obligations to protect the general welfare of the population they serve. The objectives of codes are to prevent damage to property, injury or loss of life by persons. This is accomplished by applying accumulated knowledge and best practices, to the avoidance, reduction, or elimination of potential dangers.

Codes generally apply to the built environment and, when adopted by pertinent authorities, become lawful requirements that mandate compliance. An authority may write its own code document or may adopt other code documents. Different states and/or municipalities are free to adopt different codes.

CODES AND THE HVAC INDUSTRY

As the intent of code developers is to: safeguard the consumer; ensure a minimum level of system performance; and reduce safety problems; hundreds of different national, state and local codes exist. Obviously, not all of the codes and standards that exist apply to HVAC contractors. Of the many codes and standards, a number are recognized to have more direct impact on the HVAC industry. These primarily include: **ENERGY** codes; **FUEL GAS** codes; **MECHANICAL** codes; **PLUMBING** codes; **RESIDENTIAL** codes; **BUILDING** codes; **ELECTRICAL** codes; **SOLAR** codes; **EQUIPMENT** and **DUCT SIZING** standards; **VENTILATION** standards; **IAQ** standards; and **DUCT CONSTRUCTION** standards.

PRIMARY BUILDING CODE BODIES

In the United States, there are three main organizations that are involved in the development of the model codes that affect the HVAC industry.

The **International Association of Plumbing and Mechanical Officials (IAPMO)** develops and maintains the Uniform Mechanical Code (UMC) and the Uniform Plumbing Code (UPC).

The **International Code Council (ICC)** develops and maintains the International Mechanical Code (IMC), International Residential Code (IRC), International Energy Conservation Code (IECC), International Fuel Gas Code (IFGC), and others.

The **National Fire Protection Association (NFPA)** develops and maintains the National Fuel Gas Code (NFPA 54), the National Electric Code (NEC), the NFPA 500, and others.

... AND STANDARDS?

Standards are generally considered by an authority or general consensus as a basis of comparison, an approved model. Standards are usually regarded as recommendations that do not have the force of law unless the standard is adopted by an authority having jurisdiction. It is common for sections of a local code to refer to nationally recognized standards. In many instances, sections of a standard (or the entire standard) are adopted into the code by reference, and then become legally enforceable.

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2800 Shirlington Road, Suite 300
Arlington, VA 22206
www.acca.org

Sponsored by the ACCA Codes Committee

For more information, contact:
Luis Romeo Escobar
ACCA, Manager of Codes & Standards
luis.escobar@acca.org
Phone: 703-824-8870