# Master Unlimited Air Conditioning

Catalog Number: C31014 Exam Number: 914809 Effective Date: 01/31/11

### **License Information**

Scope – Tests a candidate's knowledge of the design, installation, maintenance, repair, fabrication, alteration, and extension of air conditioning, refrigeration, piping vessels, warm air heating, low and high pressure boilers, ventilation systems, duct systems, insulation, and related appurtenances within a complete system unlimited in horsepower or tonnage.

# **Examination Outline**

## Open Book 100 Questions – Four-hour time limit 70% Correct required to pass

Exam Topic	%
HVAC/R General	20
Low and High Pressure Boilers	10
Warm Air Heating	10
Ventilation	15
Controls	10
Piping	10
Gas Piping	10
Load Calculations	5
Insulation	5
Safety	5

### References

NOTE: The following references were used to develop this exam. With the exception of the Code books, you may use newer editions of references as they become available at your own discretion. However, newer editions may or may not contain applicable information to the content on the exam. You assume the risk of using a more current reference than that listed below. In regards to Code books, only the edition of the Code book listed below will be allowed into the test site.

The following references are allowed in the testing center.

- Uniform Mechanical Code, 2009, International Association of Plumbing and Mechanical Officials, 5001 E. Philadelphia St., Ontario, CA 91761, www.iapmo.org.
- 29 CFR 1926 OSHA Construction Industry Regulations, July 1, 2009, MANCOMM, 315 West 4<sup>th</sup> Street, Davenport, IA 52801.

3. ACCA Duct Slide Rule, Air Conditioning Contractors of America, 2800 Shirlington Road, Suite 300, Arlington, VA 22206, www.acca.org.

The following references were used to create exam questions but are not allowed in the testing center.

- Code of Federal Regulations, Title 29, Part 1926 (OSHA), July 1, 2009, Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954, www.access.gpo.gov.
- Low Pressure Boilers, Third Edition, 2008, American Technical Publishers (ATP), 1155 West 175<sup>th</sup> Street, Homewood, IL 60430, www.go2atp.com.
- 3. Modern Refrigeration and Air Conditioning, 18th Edition, 2004, Goodheart-Willcox Company, Inc., 18604 West Creek Drive, Tinley Park, IL 60477-6243, www.g-w.com.

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