# License Information

**Scope –** Tests a candidate's knowledge of the installation, maintenance, repair, fabrication, alteration, and extension of air conditioning, refrigeration, piping vessels, warm air heating, low 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 75% Correct required to pass

Exam Topic	%
HARV General	25
Air Conditioning	20
Heat-Warm Air-Low Pressure Boilers	18
Ventilation	15
Controls	10
Piping	8
Insulation	4

## References

The following references **are allowed** in the testing center.

- Uniform Mechanical Code, 2006, International Association of Plumbing and Mechanical Officials (IAPMO), 5001 E. Philadelphia St., Ontario, CA 91761, www.iapmo.org.
- 2. ACCA Duct Slide Rule, Air Conditioning Contractors of America, 2800 Shirlington Road, Suite 300, Arlington, VA 22206, www.acca.org.
- Fibrous Glass Duct Construction Standards, Fifth Edition, 2002, North American Insulation Manufacturers Association (NAIMA), 44 Canal Center Plaza, Suite 310, Alexandria, VA 22314, www.naima.org.
- 4. *Pipefitters Handbook,* Third Edition, 1967, Industrial Press, Inc., 989 Avenue of the Americas, New York, NY 10018, www.industrialpress.com.

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

- Low Pressure Boilers, Third Edition, 2008, American Technical Publishers (ATP), 1155 West 175<sup>th</sup> Street, Homewood, IL 60430-4600, www.go2atp.com.
- Modern Hydronic Heating for Residential and Light Commercial Buildings, Second Edition, 2004, Delmar Learning, P.O. Box 6904, Florence, KY 41022.
- 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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