

## License Information

**Scope-** Tests a candidate's knowledge of the installation, maintenance, repair, fabrication, alteration, and extension of air conditioning, refrigeration, heating, ventilation systems, duct systems, warm air systems, low pressure boiler and unfired pressure vessel systems, solar heating and cooling systems, and related appurtenances unlimited in horsepower or tonnage.

## Examination Outline

### Open Book

**100 Questions – 4-1/2-hour time limit**

**70% Correct Required to Pass**

| SUBJECT AREA                                | PERCENTAGE |
|---|------------|
| HARV GENERAL                                | 15         |
| HEATING – WARM AIR AND LOW PRESSURE BOILERS | 15         |
| REFRIGERATION                               | 15         |
| VENTILATION                                 | 10         |
| FUEL GAS SYSTEMS                            | 10         |
| CONTROLS                                    | 10         |
| PIPING                                      | 8          |
| LOAD CALCULATIONS/PSYCHROMETRIC ANALYSIS    | 8          |
| INSULATION                                  | 5          |
| SAFETY                                      | 4          |

## References

*The following references ARE allowed in the testing center:*

1. *ACCA Duct Slide Rule*, Air Conditioning Contractors of America, 2800 Shirlington Road, Suite 300, Arlington, VA 22206, www.acca.org.
2. *Code of Federal Regulations, Title 29, Part 1926 (OSHA)*, 2005, Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250-7954, www.access.gpo.gov.

OR

*OSHA Excerpts for Contractors*, Fourth Edition, Prometric, 1260 Energy Lane, St. Paul, MN 55108.

3. *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. *Florida Building Code: Building Volume*, 2004, International Code Council (ICC), 4051 West Flossmoor Road, Country Club Hills, IL 60478-5795, www.iccsafe.org.

5. *Florida Building Code: Fuel Gas Volume*, 2004, International Code Council (ICC), 4051 West Flossmoor Road, Country Club Hills, IL 60478-5795, www.iccsafe.org.
6. *Florida Building Code: Mechanical Volume*, 2004, International Code Council (ICC), 4051 West Flossmoor Road, Country Club Hills, IL 60478-5795, www.iccsafe.org.
7. *Low Pressure Boilers*, Second Edition, 2005 American Technical Publishers (ATP), 1155 West 175<sup>th</sup> Street, Homewood, IL 60430-4600, www.go2atp.com.
8. *Manual D – Residential Duct Systems*, 1995 Edition, Air Conditioning Contractors of America, 2800 Shirlington Road, Suite 300, Arlington, VA 22206, www.acca.org.
9. *Manual J – Residential Load Calculation*, Eighth Edition, 2002, Air Conditioning Contractors of America, 2800 Shirlington Road, Suite 300, Arlington, VA 22206, www.acca.org.
10. *Manual N – Commercial Load Calculation*, Fourth Edition, 1988, Air Conditioning Contractors of America, 2800 Shirlington Road, Suite 300, Arlington, VA 22206, www.acca.org.
11. *Modern Refrigeration and Air Conditioning*, Eighteenth Edition, 2004, Goodheart-Willcox Company, Inc., 18604 West Creek Drive, Tinley Park, IL 60477-6243, www.g-w.com.
12. *Pipefitters Handbook*, Third Edition, 1967, Industrial Press, Inc., 200 Madison Avenue, New York, NY 10016, www.industrialpress.com.
13. *TRANE Air Conditioning Manual*, Revised Edition, 1996, TRANE Company, c/o Inland Marketing Services, 3030 Airport Road, La Crosse, WI 54603, www.trane.com/bookstore.
14. *TRANE Ductulator*, TRANE Company, c/o Inland Marketing Services, 3030 Airport Road, La Crosse, WI 54603, www.trane.com/bookstore.

*For information on how to obtain examination references, please call toll-free 877.624.2562.*

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