



**BSR/ASHRAE Addendum p  
to ANSI/ASHRAE Standard 15-2022**

**First Public Review Draft**

# **Proposed Addendum p to Standard 15-2022, Safety Standard for Refrigeration Systems**

**First Public Review (April 2024)  
(Draft shows Proposed Changes to Current Standard)**

This draft has been recommended for public review by the responsible project committee. To submit a comment on this proposed standard, go to the ASHRAE website at <https://www.ashrae.org/technical-resources/standards-and-guidelines/public-review-drafts> and access the online comment database. The draft is subject to modification until it is approved for publication by the Board of Directors and ANSI. Until this time, the current edition of the standard (as modified by any published addenda on the ASHRAE website) remains in effect. The current edition of any standard may be purchased from the ASHRAE Online Store at [www.ashrae.org/bookstore](http://www.ashrae.org/bookstore) or by calling 404-636-8400 or 1-800-727-4723 (for orders in the U.S. or Canada).

This standard is under continuous maintenance. To propose a change to the current standard, use the change submittal form available on the ASHRAE website, [www.ashrae.org](http://www.ashrae.org).

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(This foreword is not part of this standard. It is merely informative and does not contain requirements necessary for conformance to the standard. It has not been processed according to the ANSI requirements for a standard and may contain material that has not been subject to public review or a consensus process. Unresolved objectors on informative material are not offered the right to appeal at ASHRAE or ANSI.)

## FOREWORD

*This proposed addendum updates both the normative and informative references in Standard 15.*

**Note:** This addendum makes proposed changes to the current standard. These changes are indicated in the text by underlining (for additions) and ~~strike through~~ (for deletions) except where the reviewer instructions specifically describe some other means of showing the changes. Only these changes to the current standard are open for review and comment at this time. Additional material is provided for context only and is not open for comment except as it relates to the proposed changes.

## Addendum p to Standard 15-2022

***Modify Section 13 as follows. The remainder of Section 13 remains unchanged.***

### 13. NORMATIVE REFERENCES

This section contains a complete list of normative references. A complete list of references that are solely informative is included in Informative Appendix B. References in this standard are numbered in the order in which they appear in the document, so the numbers for the informative references are shown for the convenience of the user.

1. See *Informative Appendix B*, “Informative References.”
2. ASHRAE. ~~2024~~2022. ANSI/ASHRAE Standard 15.2, *Safety Standard for Refrigeration Systems in Residential Applications*. Peachtree Corners, GA: ASHRAE.
3. ASHRAE. ~~2024~~2019. ANSI/ASHRAE Standard 34, *Designation and Safety Classification of Refrigerants*. Peachtree Corners, GA: ASHRAE.
4. NFPA. ~~2023~~2020. NFPA 80, *National Electric Code*<sup>®</sup>. Quincy, MA: National Fire Protection Association.
5. UL. ~~2022~~2019. ANSI/UL 60335-2-40, Edition 4, ~~Standard for Household and Similar Electrical Appliances—Safety—Part 2-40: Particular Requirements for Electrical Heat Pumps, Air-Conditioners and Dehumidifiers~~. Northbrook, IL: UL, LLC.
6. CSA. ~~2022~~2019. CAN/CSA C22.2 No. 60335-2-40, Edition 4, ~~Household and Similar Electrical Appliances—Safety—Part 2-40: Particular Requirements for Electrical Heat Pumps, Air-Conditioners and Dehumidifiers~~. Toronto, Canada: CSA Group.

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9. ASME. ~~2023~~2015. ANSI/ASME A13.1, *Scheme for the Identification of Piping Systems*. New York, NY: American Society of Mechanical Engineers.
10. AHRI. ~~2019~~2016. AHRI 700-~~2019~~2016, *Specifications for Refrigerants*, and AHRI Standard 700C-2014, Appendix C to AHRI Standard 700—*Analytical Procedures for AHRI Standard 700-2014*. Arlington, VA: Air-Conditioning, Heating and Refrigeration Institute.

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15. ASME. ~~2023~~2019. *Boiler and Pressure Vessel Code*. New York, NY: American Society of Mechanical Engineers.
16. See *Informative Appendix B*, “Informative References.”
17. ASME. ~~2022~~2016. ANSI/ASME B31.5, *Refrigeration Piping and Heat Transfer Components*. New York, NY: American Society of Mechanical Engineers.
18. ASTM. ~~2022~~2018. ASTM A53/A53M, *Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless*. West Conshohocken, PA: American Society for Testing and Materials.
19. UL. ~~2022~~2014. UL 207, *Standard for Refrigerant-Containing Components and Accessories, Nonelectrical—Ninth~~Eighth~~ Edition*. Northbrook, IL: UL, LLC.

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22. ASTM. 2019. ASTM B210/B210M (Rev A), *Standard Specification for Aluminum and Aluminum-Alloy Drawn Seamless Tubes*. West Conshohocken, PA: American Society for Testing and Materials.
23. ASTM. ~~2023~~2015. ASTM B491/B491M, *Standard Specification for Aluminum and Aluminum-Alloy Extruded Round Tubes for General-Purpose Applications*. West Conshohocken, PA: American Society for Testing and Materials.
24. ASTM. ~~2020~~2015. ASTM B43, *Standard Specification for Seamless Red Brass Pipe, Standard Sizes*. West Conshohocken, PA: American Society for Testing and Materials.
25. ASTM. ~~2020~~2015. ASTM B42 (~~Rev A~~), *Standard Specification for Seamless Copper Pipe, Standard Sizes*. West Conshohocken, PA: American Society for Testing and Materials.

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28. ASTM. ~~2020~~2013. ANSI/ASTM B75/B75M, *Standard Specification for Seamless Copper Tube*. West Conshohocken, PA: American Society for Testing and Materials.
29. ASTM. ~~2022~~2016. ANSI/ASTM B88, *Standard Specification for Seamless Copper Water Tube*. West Conshohocken, PA: American Society for Testing and Materials.
30. ASTM. ~~2023~~2018. ANSI/ASTM B280, *Standard Specification for Seamless Copper Tube for Air Conditioning and Refrigeration Field Service*. West Conshohocken, PA: American Society for Testing and Materials.
31. ASTM. ~~2019~~2018. ASTM B819, *Standard Specification for Seamless Copper Tube for Medical Gas Systems*. West Conshohocken, PA: American Society for Testing and Materials.
32. ASTM. ~~2023~~2016. ASTM B1003, *Standard Specification for Seamless Copper Tube for Linesets*. West Conshohocken, PA: American Society for Testing and Materials.
33. ASTM. ~~2022~~2018. ASTM A312/A312M (Rev A), *Standard Specification for Seamless, Welded, and Heavily Cold Worked Austenitic Stainless Steel Pipes*. West Conshohocken, PA: American Society for Testing and Materials.
34. ASTM. ~~2022~~2015. ASTM A269/A269M (~~Rev A~~), *Standard Specification for Seamless and Welded Austenitic Stainless Steel Tubing for General Service*. West Conshohocken, PA: American Society for Testing and Materials.
35. ASTM. ~~2019~~2014. ASTM A632 (~~Rev A~~), *Standard Specification for Seamless and Welded Austenitic Stainless Steel Tubing (Small-Diameter) for General Service*. West Conshohocken, PA: American Society for Testing and Materials.
36. ASTM. 2019. ASTM A106/A106M (Rev A), *Standard Specification for Seamless Carbon Steel Pipe for High-Temperature Service*. West Conshohocken, PA: American Society for Testing and Materials.

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38. ASTM. ~~2019~~2012. ASTM A254/A254M, *Standard Specification for Copper Brazed Steel Tubing*. West Conshohocken, PA: American Society for Testing and Materials.
39. ASTM. ~~2021~~2016. ASTM A334/A334M (Rev A), *Standard Specification for Seamless and Welded Carbon and Alloy-Steel Tubes for Low-Temperature Service*. West Conshohocken, PA: American Society for Testing and Materials.

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43. ASME. ~~2021~~2016. ANSI/ASME B16.24, *Cast Copper Alloy Pipe Flanges, Flanged Fittings, and Valves: Classes 150, 300, 600, 900, 1500 and 2500*. New York, NY: American Society of Mechanical Engineers.
44. ASME. ~~2021~~2018. ANSI/ASME B16.18, *Cast Copper Alloy Solder Joint Pressure Fittings*. New York, NY: American Society of Mechanical Engineers.
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47. ASME. ~~2021~~2013. ANSI/ASME B16.50, *Wrought Copper and Copper Alloy Brazed-Joint Pressure Fittings*. New York, NY: American Society of Mechanical Engineers.

48. ASTM. ~~2022~~2019. ASTM A403/A403M (Rev B), *Standard Specification for Wrought Austenitic Stainless Steel Piping Fittings*. West Conshohocken, PA: American Society for Testing and Materials.
49. ASME. ~~2021~~2016. ANSI/ASME B16.11, *Forged Fittings, Socket-Welding and Threaded*. New York, NY: American Society of Mechanical Engineers.
50. ASTM. ~~2023~~2018. ASTM A105/A105M, *Standard Specification for Carbon Steel Forgings for Piping Applications*. West Conshohocken, PA: American Society for Testing and Materials.
51. ASTM. ~~2023~~2014. ASTM A181/A181M, *Standard Specification for Carbon Steel Forgings, for General-Purpose Piping*. West Conshohocken, PA: American Society for Testing and Materials.
52. ASTM. ~~2023~~2017. ASTM A193/A193M, *Standard Specification for Alloy-Steel and Stainless Steel Bolting for High Temperature or High Pressure Service and Other Special Purpose Applications*. West Conshohocken, PA: American Society for Testing and Materials.
53. ASTM. ~~2023~~2018. ASTM A234/A234M (Rev A), *Standard Specification for Piping Fittings of Wrought Carbon Steel and Alloy Steel for Moderate and High Temperature Service*. West Conshohocken, PA: American Society for Testing and Materials.
54. ASTM. ~~2022~~2016. ASTM A420/A420M (Rev A), *Standard Specification for Piping Fittings of Wrought Carbon Steel and Alloy Steel for Low-Temperature Service*. West Conshohocken, PA: American Society for Testing and Materials.
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56. AWS. ~~2019~~2012. A5.8M/A5.8, *Specification for Filler Metals for Brazing and Braze Welding—11<sup>th</sup> 10<sup>th</sup>-Edition, Amendment 1*. Doral, FL: American Welding Society.

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61. ASME. 2005. ANSI/ASME B1.13M (R2020R2015), *Metric Screw Threads: M Profile*. New York, NY: American Society of Mechanical Engineers.
62. ASME. ~~2019~~2005. ANSI/ASME B1.1 (R2018), *Unified Inch Screw Threads, (UN and UNR Thread Form)*. New York, NY: American Society of Mechanical Engineers.

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***Modify Informative Appendix A as follows. The remainder of Informative Appendix A remains unchanged.***

## INFORMATIVE APPENDIX B—INFORMATIVE REFERENCES

This appendix contains a full list of informative references. A full list of normative references is included in Section 13, “Normative References.” References in this standard are numbered in the order in which they appear in the document, so the numbers for the normative references are shown for the convenience of the user.

1. IIAR. ~~2021~~2019. ANSI/IIAR 2-~~2021~~2014 with addendum A, *American National Standard for Safe Design of Closed-Circuit Ammonia Refrigeration Systems*. Alexandria, VA: International Institute of Ammonia Refrigeration.

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16. ASHRAE. ~~2021~~2017. *ASHRAE Handbook—Fundamentals*. Peachtree Corners, GA: ASHRAE.

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~~and Applied Chemistry, Research Triangle Park, NC.~~