

MINUTES

DRAFT / UNOFFICIAL

TECHNICAL COMMITTEE 8.7

2023 Annual Conference

June 26, 2023

Note: These draft minutes have not been approved and not the official, approved record until approved by the Technical Committee.



1791 Tullie Circle, N.E./Atlanta, GA 30329

404-636-8400

DRAFT

TC/TG/MTG/TRG MINUTES COVER SHEET

(Minutes of all Meetings are to be distributed to all persons listed below within 60 days following the meeting.)

TC/TG/MTG/TRG No. 8.7 DATE

TC/TG/MTG/TRG TITLE Variable Refrigerant Flow

DATE OF MEETING June 26, 2023 LOCATION Tampa, FL

MEMBERS PRESENT	YEAR APPTD	MEMBERS ABSENT	YEAR APPTD	EX-OFFICIO MEMBERS AND ADDITIONAL ATTENDANCE
Shawn Andrews, Chair	2022			
Scott McGinnis, Vice Chair	2022			
Douglas Tucker, Secretary	2021			
Kyle Gluesenkamp	2022			
Walter Hunt	2022			
Badri Patel	2022			
Christopher Williams	2022			

DISTRIBUTION: All Members of TC/TG/MTG/TRG plus the following:

TAC Section Head:	SH8@ashrae.net Where x is the section number
All Committee Liaisons As Shown On TC/TG/MTG/TRG Rosters (Research, Standards, ALI, etc.)	See ASHRAE email alias list for needed addresses.
Mike Vaughn, Manager Of Research & Technical Services	MORTS@ashrae.net

1. Call to Order

The meeting was called to order at 1:15pm.

2. ASHRAE Policies

- a. **Code of Ethics** – The Chair reviewed the ASHRAE Code of Ethics statement.
- b. **Anti-Trust Policy** – The Chair reviewed the ASHRAE Anti-Trust statement.
- c. **Recording Policy** – Recording (audio, video, screenshots) of ASHRAE meetings, including online meetings, is strictly prohibited.

3. Welcome / Introductions

- a. Introductions were made.

4. Minutes

- a. No minutes were distributed from the previous meeting. A draft was prepared by the secretary, but the meeting was “unofficial” because the roster issues had not yet been sorted out.

5. Agenda Review / Updates

- a. The agenda was reviewed and accepted during the meeting.

6. Chair Comments

- a. No update from TC Chair Breakfast. No input from members and guests.
- b. July 1, 2023, roster changes should now be effective. The TC reviewed roster changes.
- c. Prospective TC members should send their email with ASHRAE member number to ASHRAE staff if they cannot apply online.

7. Subcommittee Reports

- a. **Handbook:** Chris Williams reported that Chapter 18 edits and additions for the 2024 HVAC Systems and Equipment handbook have been completed and submitted to ASHRAE staff through the Handbook Portal.
- b. **Membership:** Madhav Kashinath, Membership Subcommittee Chair, was not present (he had previously asked for a volunteer to handle membership).
- c. **Programs:** Badri Patel, Program Subcommittee Chair, was not present when this agenda item was discussed. Chris Williams has an abstract prepared for Chicago. Scott McGinniss shared an idea from the program subcommittee call held last week, a panel discussion on the future of VRF in an A2L world. Badri would like to meet with potential participants after the TC 8.7 meetings, and a co-sponsor would be helpful to get this on the program for Chicago. Shawn suggested that a presentation on the new DOE VRF test procedure could be held during the AHR Expo in Chicago. Kevin Frost sent an email with the following: “Just mention that we have three researchers willing to share their results on air-source VRF systems in the upper Midwest and Northeast. My takeaways are that 1) air-source VRF will be an important electrification technology, 2) VRF saves energy, costs, and emissions, compared to other systems 3) There are still significant installation concerns as adoption increases, sometimes leaving owners very upset, and 4) When it works people are happy and units seem to operate well in cold-climates.”

Discussion continued when Badri joined the meeting: Badri discussed the eight program tracks for Chicago. An abstract from Scott and Kevin covering the field research study proposal can

be ready in the next few weeks. VRF study can be submitted under the equipment track, and the A2L/VRF topic in the refrigerant track. The deadline is August 2. Badri is to set up a call in July to review with participants, and the abstracts should be uploaded to Basecamp for discussion. TC 8.7 approved a motion to submit two programs for Chicago. To recap:

- Future of VRF in an A2L world Abstract will be submitted as a Panel Discussion under the HVAC Systems and Equipment Track
 - Chris Williams' ASHRAE 15 and VRF will be submitted as a Seminar under the Refrigeration and Refrigerants Tracks
 - Kevin Frost's "VRF Energy Efficiency" will be submitted as a Seminar under the Decarbonization and Climate Change Track
 - Walter Hunt's "Changes to ARI 1230" will be moved to an AHRI presentation (however that happens)
 - If the Panel Discussion is picked up, as a natural course of the discussion it will include part of Chris' ASHRAE 15, part of Kevin Frost's Energy efficiency and part of Walter's Changes to 1230
 - Chris also volunteered to see if he could get a Co-Sponsorship from MTG-Low GWP for any or all the above.
- d. **Research:** Chris Laughman was not in attendance. Doug reported that Chris intends to continue as research subcommittee chair and will attend the TC 8.7 meeting in Chicago in 2024.
- e. **Standards:** Chandra Gollapudi was not present.
- f. **ALI.** Brian Bogdan reported that the VRF training class needs to be revised. At the meeting in Toronto, John Cummings, Walt Hunt, and Chandra Gollapudi volunteered to collaborate with Brian on the update. One specific area to update is standards and code compliance with UL 60335-2-40 and ASHRAE Standard 15. Another update is the efficiency testing change with AHRI 1230-2021 and IEER/EER levels that are effective on 1/1/2024.
- g. **Webmaster** No report.

8. Liaison reports

- a. ASHRAE SSPC 90.1: John Cummings reported that the committee will be chaired by Dick Lord (Carrier) effective July 1, 2023. Not as many motions or proposed addenda as typical. A big sticking point is the current misalignment between the IECC and ASHRAE 90.1 (diverging in some of the thinking on how to manage energy credits, addenda in general).
- b. ASHRAE SSPC 62.1: Shifflett reported that he is not attending 62.1 and can't be the liaison.
- c. ASHRAE SSPC 205: Walt reported that the 205 has been published but does not include VRF. The SSPC 205 VRF working group met twice in 2022 with a goal of providing a data entry method. The TC should follow. Walt deferred to others who may be attending 205; Jeff Whitelaw volunteered.
- d. ASHRAE SGPC 41: Chris reported that ASHRAE pushed out the republished guideline to late 2023. There are three addenda now and all comments have been resolved. A work statement has been prepared, 3 CMPs planned (2L, commissioning, hydronic systems). Asked for TC 8.7 input.
- e. ASHRAE 189.1: To best of our knowledge the VRF table has not changed, which is okay given changes to the test procedure, need to verify.
- f. ASHRAE 15: Chris reported that there are new subcommittees to supplement existing 15.2 subcommittee: Refrigeration, administrative, and commercial subcommittees. This allows for

more participation because subcommittees don't have balance requirements. 3 CMPs of interest – calculating effective dispersal volume, adapting quadratic equation (study for calculating charge), ETRS (Enhanced Tightness Refrigeration System). There is interest pursuing ETRS moving forward. Considering changes to 500 micron vacuum leak test for production test. [not in the UL standards].

- g.** ASHRAE MTG.LowGWP: Meetings of MTG and Codes & Standards Subcommittee will be held in Tampa, also Seminar 60; Doug encouraged attendance.

9. Old Business

- a.** Membership issues have been addressed by ASHRAE staff. Roster will be growing and voting status corrected as reported at the last meeting.
- b.** Research Subcommittee: Doug verified that Chris Laughman will continue to chair.

10. New Business

- a.** Chris Williams provided a presentation on Standard 15 “designing for A2L refrigerants in occupied spaces.”
- b.** Roster update again: Walt is changing responsibilities and Jeff Whitelaw would like to be a voting member. They should contact Tara Thomas.

11. Adjourn

- a.** The meeting was adjourned at 4:00pm.