

AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR-CONDITIONING
ENGINEERS, INC.
1791 Tullie Circle, N.E.
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TC MINUTES COVER SHEET

TC/TG/TRG NO. TC 5.2 DATE June 28, 2022

TC/TG/TRG TITLE Duct Design

DATE OF MEETING June 28, 2022 3:30 PM Eastern Time LOCATION Toronto (Hybrid)

MEMBERS PRESENT	TERM TO	MEMBERS ABSENT	Y E A	EX-OFFICIO MEMBERS AND ADDITIONAL ATTENDANCE
John Constantine, Chair	6/30/23			Dr. Jamie Fine, Handbook, CM
Cindy Bittel, Vice Chair	6/30/25			Ralph Koerber, Code Interaction, CM
	6/30/23	Akshay Bhargava, Secretary	X	Christopher Ruch, Webmaster, CM
Robert Reid, Programs	6/30/23			Larry Smith, TAC Chair, CM
Kevin Gebke, Research	6/30/23			Rick Smith, CM
Patrick Brooks, DFDB	6/30/25			Robert Hassler, CM
Dr. Stephen Idem, Endowment	6/30/23			Perry Philp, CM
Vikram Murthy *	6/30/23			Chris Van Rite, CM
Randy Young, Membership	6/30/23			Wes Davis, CM
	6/30/22	Scott Hobbs		John Hamilton, CM
				Timothy Eorgan, CM
				Walter Robison, CM
				Ruben Abreu, PCM
				Jeremy Zeedyk, PCM
				Ian Cavanaugh, PCM
				Ed Janowiak, PCM
				Shawn Ohara, G
				Benjamin Heyser, G
				Steven Rogers, G
				Juliana Pellegrini, G
				Austin L'Ecuyer, G
				Steven Rogers, G

			Kevin Marple, G, Section Head
			Jin Wen, G, Research Liaison
			Mark Owens, G, ASHRAE Director of Publication and Education

*** Member Non-Quorum**

CM = Corresponding Member

PCM = Provisional Corresponding Member

G = Guest

DISTRIBUTION

All Members of TC plus the following:	
TAC Section Head	Kevin Marple
TAC Chair	Larry Smith
Handbook Liaison (Fundamentals)	Jeff Boldt
Handbook Liaison (Systems & Equipment)	Satish Iyengar
Research Liaison	Jen Win
Standards Liaison	Kwang Woo Kim
Staff Liaison	Steven J Hammerling

**ASHRAE 2022 Annual Conference
ASHRAE TC 5.2 Duct Design
FULL COMMITTEE MEETING**

AGENDA

**Tuesday, June 28, 2022
Time: 3:30 PM – 5:30 PM Eastern Time
Location Sheraton Peel (M)
Toronto, ON, Canada
and
Virtual Meeting**

Virtual Meeting Access Information:

Meeting link:

<https://ashrae.webex.com/ashrae/j.php?MTID=mac25fddc26987aaac6c7fa9ffc1791d7>

Meeting number: 2344 187 4311

Password: TC5.2

Join by video system

Dial 23441874311@ashrae.webex.com

You can also dial 173.243.2.68 and enter your meeting number.

Join by phone

18662994153 United States of America Toll Free

+14702385742 US Toll

Access code: 2344 187 4311

1) Call to Order

2) ASHRAE Code of Ethics Commitment – John Constantinide

“In this and all other ASHRAE meetings, we will act with honesty, fairness, courtesy, competence, inclusiveness and respect for others, which exemplify our core values of excellence, commitment, integrity, collaboration, volunteerism and diversity, and we shall avoid all real or perceived conflicts of interests.”

- a) ASHRAE Code of Ethics: <https://www.ashrae.org/about-ashrae/ashrae-code-of-ethics>
- b) ASHRAE Core Values: <https://www.ashrae.org/about/ashrae-s-core-values>

3) Introductions and Attendance

- a) Recognise attendees
- b) Quorum reached? 8 out of 10 voting members attending (Requires 6 present)
- c) Corrections/additions offered for agenda approval
 - i) Moved by Randy Young, Second by Kevin Gebke, agenda approved.

4) 2022 Hybrid Winter Meeting Minutes

- a) The DRAFT minutes will be posted to Basecamp in the Files > Minutes folder for Voting Members to review.

- b) Approval of Minutes by Letter Ballot
- c) Approved FINAL minutes will be uploaded to the TC Web Page and Basecamp.

5) **Reminders – John Constantinide**

- a) ASHRAE Mission: To serve humanity by advancing the arts and science of heating, ventilation, air conditioning, refrigeration and their allied fields.
- b) ASHRAE Vision: A healthy and sustainable built environmental for all.
- c) TC 5.2 Scope: TC 5.2 is concerned with the design, characteristics and construction of all types of ductwork for the handling of air and other gases, but does not include chimneys.
- d) Virtual Meeting Protocols
- e) TC 5.2 MBOs are reflected by our Strategic Plan and referenced on the agenda with asterisk symbols (**)

6) **Section 5 and TAC Report – Kevin Marple**

- a) MOPs have been changed and there is now a FG MOP and MTG MOP
- b) Check out leadership training available on the ASHRAE TAC website at www.ashrae.org/tac.

7) **Herman and Dorothy Behls Endowment – Dr. Stephen Idem**

- a) Report on status of awards
 - i) No awards made yet
 - ii) 2 awards available for travel and for certification
 - iii) Worked last year to simplify and reduce requirements
 - iv) No applications received to date
 - 1. Navigation was to ASHRAE website, Communities Tab, then 2 separate tabs
 - v) How are we advertising?
 - 1. So far only word of mouth and TC website
 - 2. **Action Item:** Constantinide will connect Idem with YEA and Student Activities to advertise the travel award.
 - 3. Connect with YEA for email newsletter and social media to include a short blurb for the scholarships.
 - 4. Propose to highlight the scholarships more prominently on the TC and ASHRAE websites
 - vi) Application does refer to requiring someone with some background and relevance in the field, but it should not be overly restrictive.
 - vii) Scholarships do apply to any international ASHRAE YEA and student members as well.

8) **Subcommittee Reports**

- a) **Membership – Randy Young**
 - i) Recognize new Provisional Corresponding Members (PCMs) since January 2022.
 - 1. Ruben Abreu, June 26, 2022
 - 2. Darrin Affeldt, May 23, 2022
 - 3. Ed Janowiak, May 5, 2022
 - ii) Create outreach plan to meet Strategic Plan goal to recruit at least two (2) TC members from the following industry segments**:
 - a) Duct Design Engineers

- b) Academics and Researchers Focused on Duct Design
 - c) Code Authorities/Authorities Having Jurisdiction
 - d) Building Owners/Managers and Owner Authorized Representatives
 - e) General Contractors, Mechanical/Sheet Metal (including SMACNA) Contractors, and Associated Technicians
 - iii) Track recruitment to assess whether Strategic Plan goal is met
- b) **Handbook** – Dr. Jamie Fine
 - i) Status report on 2024 Handbook Revision (Duct Construction Chapter)
 - a) 6 months ago we planned to edit, but learned that the deadline was later than expected.
 - b) Systems and Equipment Chapter
 - a. Jamie will send out a word file to be edited by July 16, 2022
 - b. Assign/volunteer for who to make what revisions Sept 1
 - c. All revisions due to Jamie Fine by Dec 1st
 - d. Conflicts can potentially be addressed at Winter conference in Feb in Atlanta
 - e. Jamie will edit and by March 1st will distribute to the TC to review
 - f. Potential virtual meeting of voting
 - g. TC will vote on revisions during Annual Meeting in June 2023 in Tampa
 - h. Submittal required by July 31, 2023 for the 2024 Handbook
 - ii) **Action Item:** Jamie Fine is going to create/publish a timeline on Basecamp to help members organize Handbook chapter revisions
- c) **Programs** – Robert Reid
 - i) Status Report
 - a) TC 7.4 Exergy Analysis asked us today to co-sponsor a workshop
 - a. **Action Item:** Bob Reid is going to reach out to TC 7.4 to get title, speakers, and an abstract for the program and will communicate to the TC after the meeting.
 - b. Letter ballot can be sent after Action Item completion if TC 5.2 is interested in co-sponsoring.
 - ii) Grassroots Outreach Update^{**}: Aim for Strategic Plan goal of having at least one (1) ASHRAE Chapter seminar every six (6) months addressing a topic within the scope of TC 5.2.
 - a) Defer update from Chris Ruch and Randy Young on chapter program about ducted return to next interim meeting.
 - b) Defer update from Larry Smith and Kevin Gebke about a possible seminar on DDG and DFDB to chapters to next interim meeting.
 - iii) Distinguished Lecturer Nominations^{**}: Aim for Strategic Plan goal of nominating DL candidates to CTTC to address one or more topics on duct systems leakage.
 - a) No TC 5.2 members applied or were accepted in the previous DL review cycle last December. Defer update on nominations to next interim meeting.
- d) **Duct Design Guide (DDG)** – Pat Brooks
 - i) Create an education program utilizing content from the Duct Design Guide.^{**}

- a) Prioritize creating an educational program for the DDG. Educational program will be created ASAP.
 - ii) Create a plan to publicize the Duct Design Guide education program to ASHRAE and non-ASHRAE members.**
 - a) Status on DDG program for Atlanta Winter Conference from Larry Smith, Stephen Iden, and Pat Brooks
 - iii) DDG has no SI version due to requirements waived initially. Now, TC must work on creating an SI version. Can we outsource this work?
 - a) **Action Item:** Larry Smith will contact ASHRAE Halifax Chapter President to ask for help converting equations and content in DDG to SI units.
- e) **Duct Fitting Database** (DFDB) – Jamie Fine**
 - i) Subcommittee Report
 - a) Working on developing a training seminar
 - b) Mark Owen in attendance to sort out the App vs the desktop version
 - a. Concern with the app not being kept up to date AND possibility that it is contradictory with the updated subscription version
 - b. Concern with the cost of the app (owned in perpetuity vs the annual subscription)
 - c. App has sold approximately 200/year but the online subscription is “substantial” (amount to be verified).
 - d. Suggest using the app as an intro to the full subscription program by removing some of the functionality (paring down to bare basics)
 - 10. **Action Item:** Vikram Murthy will test the current iOS DFDB app and give recommendations regarding functionality of a new Basic/Light DFDB app.
 - 11. Report back to DFDB committee by Oct 1, 2022 or monthly meetings
 - 12. **Action Item:** DFDB subcommittee will determine what could be considered “basic” to lure people in with a new app, vs what could be more “premium” with the subscription service.
 - ii) Create a user guide assisting practitioners with utilizing the Duct Fitting Database, with a timeline for publication of the user guide.**
 - a) Bernardo Baldasso is currently working on the User Manual.
 - i) Organize at least one (1) conference workshop or a TC-sponsored session that trains professionals on the Duct Fitting Database and accompanying user guide.**
 - a) Discussion about the possibility of having a perpetual workshop at meetings and/or virtual workshop with 1st year subscription as additional incentive
 - a. Could have it as an ALI short course
 - b. Could have a program within the TC to bypass CEC approval process, possibly using the Monday morning timeslot
 - i. Slant either option toward a package deal with DDG and subscription or trial version of DFDB

b) **Action Item:** DFDB Subcommittee (Larry Smith, Jamie Fine, Pat Brooks, and Bernardo Baldasso) will work with Mark Owen to submit as an ALI course with DDG and DFDB subscription package deal.

f) **Research** – Kevin Gebke

- i) RTAR 1941 – Passed by TC 8-0-0-2 CV. Refer to **Attachment A**.
 - a) Approved via letter ballot between meeting
 - b) Attempts to close existing DFDB gaps and issues
- ii) Bob Reid – RTAR Proposal “Duct Take-offs, Taps”
- iii) Brandon Cudequest – WS 1919 Overview

g) **Codes & Standards Interaction** - Ralph Koerber

- i) Refer to Attachment B. Discussion deferred to interim meeting.

h) **Webmaster** – Chris Ruch

- i) TC 5.2 Website: <https://TC0502.ashraetcs.org/>
 - a) Updated website
 - b) Call to members – please inform Chris of any issues or recommendations to making changes to the website
- ii) Talk to Chris about joining TC 5.2 Basecamp.

i) **Historian** - Bob Reid

- i) Discussion on Herman Behls library and papers deferred to interim meeting.

9) Deadlines

10) Notifications

11) Action Items

TC 5.2 Duct Design Action Items (Review of Action Items deferred to interim meeting)			
Number	Description	Assigned to	Status
1	Get Dr. Jamie Fine access to the Duct Construction handbook chapter.	John Constantinide	Complete
2	Feedback for Duct Construction handbook chapter will be solicited.	Jamie Fine	Ongoing
3	Create an ASHRAE chapter seminar on ducted returns	Chris Ruch & Randy Young	Ongoing

12) New Business

- a) Do we want to consider a consolidation of TC 5.2 with TC 5.3?
 - i) Larry Smith: A group of people got together and saw some synergies between the two committees, discussed how much has come out of this committee in the past few years and how much we can see from the current and upcoming talent in future.
 - 1. There are a few members in TC 5.2 that have accomplished a lot of work in the past, but “where is the muscle to carry on?”
 - 2. Can this committee be absorbed by TC 5.3 as a subcommittee?
 - a. TC 5.3 has a well-run leadership and past successes.
 - 3. MOP specifies that membership be diversified. Is that an issue or reason?
 - a. No – this is not from TAC or section head, we do not have a problem with MOP
 - ii) Bob Reid: Same concerns about the lack of or aging talent to do the work in TC 5.3, as well.
 - iii) John Constantinide: Is this something to wait out? Do we want to cross this bridge when we come to it? Both options have risk.
 - iv) Kevin Marple: Lived through this with TCs in different sections
 - 1. Evident that there was a lot of overlap between membership within the 2 committees
 - 2. Can be done and has been done on quick timeline
 - 3. Do not see a problem having a conversation with TC 5.3, rather than being forced into a corner to consolidate or merge on the last minute
 - v) Kevin Gebke: Don’t mind the overlap but don’t see more than 6 or so duplicate members
 - 1. Concern of TC 5.2 being a subcommittee of 5.3... tail wagging the dog situation. Fit doesn’t seem to be proper.
 - 2. John Constantinide: Recommend consolidation rather than a Duct Design Subcommittee, because, from a design standpoint, duct design and air system distribution are considered to be incidental and approached as one system for a full systems approach
 - vi) Vikram Murthy: If there is a committee working together for duct design and air distribution, it makes sense
 - vii) John Constantinide: TC 5.2 has recent problems with making quorum and Voting Members responding to letter ballots
 - viii) Kevin Gebke: TC 5.3 includes a lot of tech that we do not consider in TC 5.2, such as air curtains, chilled beams, VAV boxes, etc.
 - 1. Very diversified committee with a lot of material for programs, research etc.
 - 2. Maybe less hours spent toward bookkeeping etc and more hours spent toward work.
 - ix) Craig Wray: Since Herman passed, the committee has gone downhill with its productivity. Consolidating with TC 5.3 is one way of infusing energy.
 - 1. There has been friction between the 2 TCs in the past because of not being permitted to include air terminal units, diffusers, etc., with the duct design research, programs, and other TC functions.
 - 2. Consolidation will mean less people doing the tedious overhead work.

3. TC 5.3 has been very productive with a small group of people, but there are benefits of working together and considering the system as a whole.
 4. We can get over quotas from TAC or RAC or others or work around it, if needed.
- x) Bob Reid: Why can't the coordination be done at the Section level? (Bob Reid)
1. Larry Smith: As Section Head, there was a breakfast meeting where Larry proposed consolidating TCs into their sections and having only about 10 TCs. The question was how to get the people into the same room?
 - a. Bob Reid: Do we want to have an environment with so many people in the room like SSPC 90.1?
- xi) **Action Item:** Constantinide will research ways of TC 5.2 better collaborating with TC 5.3.

13) Adjournment

- a) Motion to adjourn by Chris Ruch, with no objections. Adjourned at 5:45PM

Information about upcoming ASHRAE Conference Meetings are available at <https://www.ashrae.org/conferences/ashrae-conferences>.