

**AMERICAN SOCIETY OF HEATING, REFRIGERATING AND
AIR-CONDITIONING ENGINEERS, INC.**

**1791 Tullie Circle, N.E.
Atlanta, GA 30329
404-636-8400**

TC MINUTES COVER SHEET

TC/TG/TRG NO _____ TC 5. _____ DATE March 24, 2012

TC/TG/TRG TITLE Duct Design

DATE OF MEETING January 24, 2012 LOCATION Chicago, IL

MEMBERS PRESENT	TERM TO	MEMBERS ABSENT	YEAR APPTD	EX-OFFICIO MEMBERS AND ADDITIONAL ATTENDANCE
Mark Terzigni	6/30/13	Johnny Andersson	6/30/13	Wes Davis (CM)
Larry Smith	6/30/15	Richard Evans	6/30/13	Tim Eorgan (CM)
Bob Reid	6/30/14			Kevin Gebke (CM)
Bass Abushakra	6/30/12			John Gierzak (CM)
Herman Behls	6/30/12			Steve Idem (CM)
Pat Brooks	6/30/13			Ralph Koerber (CM)
John Hamilton	6/30/13			Gary Miller (CM)
Chris Van Rite	6/30/13			Vikram Murthy (CM)
				Mike Resetar (CM)
				Mark Smith (CM)
				Bill Stout (CM)
				Craig Wray (CM)
				Giustino Mastro (TAC Section Head)
				Larry Brewer (Guest)
				Dennis Flores (Guest, McGill Airflow)
				Scott Hobbs (Guest, McGill Airflow)
				David John (Guest, Metalaire)
				Alex Kouvolos (Guest)
				Tom Schlachter (Guest, Engineered Air Balance)
				Andrew Wengerd (Guest, SSM Engineers & Consultants)

DISTRIBUTION

<i>All Members of TC plus the following:</i>	
TAC Section Head	Giustino Mastro
TAC Chair	Charles Culp
2012 Handbook Liaison	Cindy Callaway
2013 Handbook Liaison	James Aswegan
RAC Liaison	Piotr Domanski
Standards Liaison	Steven Bruning
Special Pubs	William Fleming
ALI/PDC	John Nix
Manager of Research & Technical Services	Mike Vaughn

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ASHRAE Annual Meeting, Chicago, II
TC 5.2 Duct Design

Tuesday, January 24, 2012
Location: Palmer House, Buckingham
Time: 3:30 – 6:00 pm

2011/2012 Roster:

Voting Members (10): Mark Terzigni (Chair), Larry Smith (Vice Chair), Bob Reid (Secretary), Herman Behls, Johnny Andersson (non-quorum), Rich Evans (non-quorum), Pat Brooks, Bass Abushakra, John Hamilton, Chris VanRite

Corresponding Members (CM): Kevin Gebke, Steve Idem, Tom Ponder, Marcus Bianchi, Charlie Culp, Wes Davis, Tim Eorgan, John Gierzak, Mark Hooks, Eli Howard, Ralph Koerber, Bruce Meyer, Gary Miller, Vikram Murthy, Vernon Peppers, Mike Resetar, Donald Seibert, Mark Smith, Bill Stout, Craig Wray

Provisional Corresponding Members: Jeff Boldt, Erik Emblem, Norman Grusnick, Vishal Jadawala, Mark Modera, Ahmed Sleiti

1. **Call to order:** Chairman Mark Terzigni called the meeting to order at 3:30 PM

2. **Introduction/Attendance**
 - a. Voting Members Present: Mark Terzigni, Bob Reid, Larry Smith, Chris Van Rite, Herman Behls, John Hamilton, Pat Brooks, Bass Abushakra.
 - b. Voting Members Not Present: Rich Evans (non-quorum); Johnny Andersson (non-quorum), however Johnny Andersson was present for the sub-committee meetings on Sunday.
 - c. Corresponding members: see cover sheet of attendees.
 - d. Provisional Members: see cover sheet of attendees.
 - e. Guests: see cover sheet of attendees.
 - f. There is a quorum for the meeting (8 of 8 voting members present).

3. **Montreal (June 2011) Meeting Minutes**
 - Minutes are posted on the T.C. 5.2 Web site. Minutes approved by email vote ending 9/6/11. Approved 6-0-4 (12). Andersson, Elosh, Evans and VanRite abstained because they were not in attendance,

4. **Section Head Report (Gus Mastro- Section Head, Mark Terzigni TC 5.2 Chair)**
 - a. The Section Head report by Gus Mastro is provided as Attachment E.
 - b. Roster update: Looking for first draft tonight. Final draft due headquarters 2/15/12. Final document 3/31/12. Completed (approved) roster will be returned to TC May 2012.

- c. Want activity feedback form electronically as soon as possible;
- d. Web Site: please keep updated and post minutes.
- e. ASHRAE has a new logo and branding that is being unveiled this week.
- f. TC members were reminded that they serve as individuals and are not permitted to speak for the TC before other groups unless they are the official liaison for the TC to that group and any position that they present on an issue is supported by a TC vote.
- g. Hightower Award: Dr. Don Beatty has been selected as the 2011/2012 recipient of the Hightower Award.

5. Subcommittee Reports

a. Handbook (Kevin Gebke, Chair)

- Duct Construction, Chapter 19, HVAC Systems and Equipment, 2012. Galleys to be reviewed before March, Note: Reviewed galleys returned to Handbook editor 15 March 2012. Attachment A is a summary of voting for the 2012 Duct Construction chapter,
- Duct Design, Chapter 21, Fundamentals, 2013. The Duct Design chapter with known corrections will be sent to all TC members by 1 May. Leakage section will be entirely rewritten. TC members are requested to review and provide comments as soon as possible.
- Electronic Content for Handbooks on the Web. Ideas are requested by the June meeting,---

b. Membership (Mark Terzigni TC 5.2 Chair)

- See the TC 5.2 website (<http://tc5.2.ashraetcs.org>) for the official 2011-2012 roster.
- Abushakra and Behls will be rolling off. Corresponding Members interested in becoming voting members should indicate that desire on the sign-in sheet.

c. Programs (Steve Idem, Chair)

- Chicago: two programs sponsored by TC5.2 are taking place:
 1. A seminar session titled "Air-Handling System Leakage: Benefits and Costs of Field Tests"
 2. A technical paper session on "Pressure Loss Measurements in Air Duct Junctions"

Session consists of two papers: (1) Laboratory Testing of Saddle Type Tees to Determine Loss Coefficients, and (2) .Measurement of Flat Oval Diverging Flow Fitting Loss Coefficients.
- San Antonio (June 2012): Will resubmit seminar on "Air Dispersion Systems."
- Dallas (January 2013): Will propose program encompassing "CFD Shootout Contest" papers.

d. Special Publications

- ASHRAE Duct Fitting Database (Herman Behls, Administrator)
 1. Version 6/00/00 has been released for this meeting. Version 6 is available to Version 5 owners at a 40% discount from \$169.
 2. Version 6 essentially makes it easier for the Administrator to maintain the database.

- ASHRAE Duct Design Guide: (Pat Brooks, Chair)
 1. Attachment B is a Table of Contents that shows the current status of each chapter.
 2. Chapters 4, 5, 6, 7, 8, 10 and 13 are on a Web site for review by all. If you need the Link contact Pat Brooks.
 3. Appendixes A, B, and C are also on the Web site for review.
 4. Chapters 8, 10 and 13 have been sent to the respective TCs for review.

e. Research (Herman Behls, Chair)

- RP 1493 “CFD Shootout Contest-Prediction of Duct Fitting losses”: Steve Idem reports the project is complete and the papers will be presented at a future meeting.
- RP 1606: Laboratory Testing of Flat Oval Transitions to Determine Loss Coefficients
 1. Report from Dr. Zhang on the status of this research project.
 2. At the Sunday subcommittee meeting Seven Ford also presented project progress.
 3. SPIDA is furnishing flat oval ductwork and fitting. For these material the PMS and University of Illinois agreed on additional scope.
- Future RTAR: The research subcommittee will investigate which fittings contractors can fabricate that are not in the ASHRAE Duct Fitting Database. These fittings will be the basis for an RTAR.

6. Standards (Tom Ponders, Chair)

- Standard 90.1-2010 (Larry Smith, Liaison): the second Public Review of terminal box leakage will go out late March.
- Standard 193-2010 “Method of Testing for Determining the Air-Leakage Rate of HVAC Equipment”: TC 5.3 requested that terminal units be removed from that standard. The Research Committee denied the request.
- SPC 120 -- MOT Flow Resistance of HVAC Duct and Fittings (Kevin Gebke, Chair)
 1. Inaugural meeting at Chicago
 2. Developed a workflow calendar
- SPC 126 -- MOT HVAC Air Ducts (Kevin Gebke, Chair)
 1. Inaugural meetings at Chicago
 2. Developed a workflow calendar
- BSR/SMACNA 023: SMACNA has initiated with ANSI a Method of Test System Leakage Standard and has agreed to cosponsor with ASHRAE. ASHRAE’s representatives are Dr, Mark Modera (VM) and Jeff Boldt (NVM). First meeting of task force is in February. Standard to develop a method of test and establish pass/fail criteria.

7. Website (Mark Smith, Webmaster)

- Please review TC 5.2 Web site and forward comments to Mark Smith.

8. Awards: (Dr. Idem)

- Nothing to report.

9. Deadlines

- 2013 Handbook: Duct Design chapter; Due end of December.

10. Unfinished Business: None

11. New Business

- a. A **Multidisciplinary Task Group (MTG.EAS)** is being formed to promote Energy Efficient Air-Handling Systems for Non-Residential Buildings). The MTG.EAS was approved at this meeting by TAC. Mark Terzigni has proposed himself as the voting member and Larry Smith as the alternate representing TC5.2.
- b. **ADI Duct Size Calculator:** Chris Van Rite requested the approval of TC5.2 for a joint ADI/ASHRAE duct calculator based upon the one presented to the committee (see attachment C). A motion was made by Herman Behls to approve and seconded by Pat Brooks. In discussion, John Hamilton asked to delete reference to 4% compression and fully stretched because they are laboratory conditions, not actual use. TC consensus was that it be considered as an editorial comment. It was also brought up that the final version might include flat oval duct. TC consensus was that we wished to see a final version incorporating changes and suggestions before granting approval. The original motion was amended by Herman to change to a “motion to proceed” with developing a final version incorporating changes and to be presented to TC5.2 for a final vote. The motion was seconded by Pat Brooks. The “motion to proceed” was passed (7-0-0 CNV).
- c. **AMCA Certified Rating for Ducts.** Larry reports that AMCA has formed a committee to develop standards for duct testing for performance. They will be a part of AMCA Publication 511 (Certified Ratings Program – Product Rating Manual for Air Control). Section 15 is attached for your convenience (Attachment D)
- d. **Standard 90.1: Duct Leakage Test.** Larry Smith made a motion asking approval to initiate discussions as the TC5.2 representative to the 90.1 Standards Committee that involve changes to duct leakage testing (6.4.4.2.2). Any proposed changes coming from those discussions will not go forward without being brought back to TC5.2 for further discussion and vote by TC5.2. Second by Chris Van Rite. The motion was approved (6-0-1 Abstention).

12. Adjournment

- Pat Brooks made motion to adjourn. Chris VanRite second. Passed unanimously.

Next Meeting --- 2012 ASHRAE Summer Meetings --- June 23-27 in San Antonio, TX

Attachment A

A1. Duct Construction chapter, less the HVAC System Leakage section

- a. Chapter without Leakage section was approved 9-0-0 (12) with 4 substantive comments by voting members (Table A1). Three non-voting members (Eli Howard, Gary Miller, and Larry Smith) provided an additional 10 substantive comments.

Table A1 Approval of Duct Construction Chapter (Leakage Section Not Included) – (Voting Members																
	Abushakra	Behls	Brooks	Evans	Hamilton ⁴	Hamilton	Idem	Reid	Van Rite	Andersson	Elosh	Terzigni	Vote Summary			Result
													Y	N	A	
Approved w/o Comments	Y			Y	Y	Y	Y		Y	Did Not Respond	Did Not Respond	Did Not Respond	6	0	0	Passed 9-0-0 (12)
Approved with Comments		Y	Y					Y					3	0	0	

Note: Voting TC 5.2 members are from the 2010-2011 roster.

- b. Of the 14 substantive comments 8 were approved 8-0-0 (12) (Table A2) and 6 had a split vote. Of the 6 split votes 5 failed and 1 passed (Table A3).

Table A2 Substantive Comment Voting, Duct Construction Chapter Less Leakage Section																
Substantive Comment	Abushakra	Andersson	Behls	Brooks	Evans	Gebke	Idem	Reid	Hamilton	Elosh	Terzigni	Van Rite	Vote Summary			Result
													Y	N	A	
#1	Y	Y	Y	Y	Y	Y	Y	Y	Did Not Respond	Did Not Respond	Did Not Respond	Did Not Respond	8	0	0	Passed 8-0-0 (12)
#4	Y	Y	Y	Y	Y	Y	Y	Y					8	0	0	Passed 8-0-0 (12)
#6	Y	Y	Y	Y	Y	Y	Y	Y					8	0	0	Passed 8-0-0 (12)
#7	Y	Y	Y	Y	Y	Y	Y	Y					8	0	0	Passed 8-0-0 (12)
#8	Y	Y	Y	Y	Y	Y	Y	Y					8	0	0	Passed 8-0-0 (12)
#10	Y	Y	Y	Y	Y	Y	Y	Y					8	0	0	Passed 8-0-0 (12)
#11	Y	Y	Y	Y	Y	Y	Y	Y					8	0	0	Passed 8-0-0 (12)
#13	Y	Y	Y	Y	Y	Y	Y	Y					8	0	0	Passed 8-0-0 (12)

Table A3 Substantive Comment Voting, Duct Construction Chapter Less Leakage Section																
Substantive Comment	Abushakra	Andersson	Behls	Brooks	Evans	Gebke	Hamilton	Idem	Reid	Elosh	Terzigni	Van Rite	Vote Summary			Result
													Y	N	A	
#2	Y	N	N	N	N	N	N	Y	N	Did Not Respond	Did Not Respond	Did Not Respond	2	7	0	Failed 7-2-0 (12)
#3	N	N	Y	N	A	Y	N	N	N				2	6	1	Failed 6-2-1 (12)
#5	N	N	N	N	N	N	N	N	N				0	9	0	Failed 9-0-0 (12)
#9	N	N	N	N	N	N	N	N	N				0	9	0	Failed 9-0-0 (12)
#12	N	N	Y	N	N	N	N	N	N				1	8	0	Failed 8-1-0 (12)
#14	N	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	Y ¹	N				7	2	0	Passed 7-2-0 (12)

Y¹: Yes with text changes noted.

A2.2 Duct Construction chapter, HVAC System Leakage section

- a. In the period after the Montreal meeting to 11 July 2011 (end date of official comment period) significant changes were received and the text revised.
- b. Because of significant changes the Leakage section was entirely re-voted. The vote was 9-1-0 (10) for approval (Table A4) with Mark Terzigni being the negative vote. Fifteen (15) substantive comments were received from Johnny Andersson (1), Herman Behls (1), Peyton Collie (7), and Eli Howard (6). Mark Terzigni's reasons for voting "negative" are as follow:

"I have two major concerns about this chapter.

The first is that as written it puts no responsibility on the designer to first design a system that, if properly installed, would meet the pass/fail criteria. Instead it implies that regardless of the systems design the installing contractor or contractors can magically bring the system into compliance to some arbitrary value.

I feel as a handbook for designers, "designing systems to reduce leakage" would be a better focus for the chapter. **Behls response: This will take place in the 2013 Duct Design chapter. This chapter is Duct Construction.**

The second major concern is that the basic premise of the pass fail criteria is not compliant with any of the codes which (for duct leakage) use test pressure, surface area, and leakage classes to determine a pass fail criteria. If you want to use a percent of airflow as a goal or guide, it should be the designer's responsibility to properly evaluate and design the system to meet that value. Then and only then could you expect a contractor to pass a test or tests (which may or may not be based on a percent of airflow). I can supply research (from ASHRAE) that shows components of HVAC systems have leakage that is clearly not a function of airflow. **Wray response: Leakage Class, as specified by ASHRAE Standard 90.1-2010, can be translated to fractional (%) leakage using the equation or table provided in the chapter.**

There are other concerns, but you can review the comments.

I can not vote to approve the chapter. Primarily for the two reasons provided above."

Table A4 Approval of the Leakage Section of the 2012 Duct Construction Chapter – Voting Members														
	Abushakra	Andersson	Behls	Brooks	Evans	Hamilton	Reid	Smith	Terzigni	Van Rite	Vote Summary			Result
											Y	N	A	
Approved w/o Comments	X			X	X		X	X		X	6	0	0	Passed 9-1-0 (10)
Approved with Comments		X	X			X					3	0	0	
Reject									X		0	1	0	

Note: Voting TC 5.2 members are from the 2011-2012 roster.

Table A5 shows how each member of TC 5.2 voted for the substantive comments and the result.

Table A5 Substantive Comment Voting, Leakage Section Only																				
Substantive Comment	Abushakra	Andersson	Behls	Brooks	Evans	Hamilton	Reid	Smith	Terzigni	Van Rite	Vote Summary						Result			
											Yes	No	Abstain	Accept Comment	Reject Comment	Approve Text w/o comments		Approve Text with Comments	Reject Revised Text	
#1	A	A	A	A	A	A	A	A	DID NOT RESPOND	A						9	0		Passed 9-0-0 (10)	
#2	A	A	A	A	A	A	A	A		A							9	0	0	Approve Revised Text 9-0-0 (10)
#3																				No vote (Same as #2)
#4-1	Y	A	Y	Y	Y	Y	Y	Y		Y	8	0	1							Passed 8-0-1 (10)
#4-2	N	Y	Y	A ¹	Y	Y	Y	Y		Y	7	1	1							Passed 7-1-1 (10)
#5-1	Y	Y	Y	Y	Y	Y	Y	Y		Y	9	0	0							Passed 9-0-0 (10)
#5-2	Y	Y	Y	Y	Y	Y	Y	Y		Y	9	0	0							Passed 9-0-0 (10)
#6-1	R	A	R	R	R	R	R	R		R				1	8					Reject Comment 8-1-0 (10)
#6-2	A	A	A	A	A	A	A	A		A	9	0								Accept Response 9-0-0 (10)
#7	A	A ²	A	A ²	A	A	A	A		A						7	2			Approve Table 1 9-0-0 (10) w/2 comments
#8	R	R	R	R	R	A	R	R		R				1	8					Reject Comment 8-1-0 (10)
#9-1	R	R	R	R	R	R	R	R		R				0	9					Reject Comment 9-0-0 (10)
#9-2	A	A	A	A	A	A	A	A	A						9	0			Approve Text 9-0-0 (10)	
#10	R	A	R	R	R	R	R	R	R				1	8					Reject Comment 8-1-0 (10)	
#11	R	R	R	R	R	R	R	R	R				0	9					Reject Comment 9-0-0 (10)	
#12	R	R	R	R	R	R	R	R	R						0	0	9		Reject Revised Text 9-0-0 (10)	

Table A5 Substantive Comment Voting, Leakage Section Only																			
Substantive Comment	Abushakra	Andersson	Behls	Brooks	Evans	Hamilton	Reid	Smith	Terzigni	Van Rite	Vote Summary						Result		
											Yes	No	Abstain	Accept Comment	Reject Comment	Approve Text w/o comments		Approve Text with Comments	Reject Revised Text
#13	R	R	R	R	R	R	R	R		R				0	9				Reject Comment 9-0-0 (10)
#14	A	R	R	R	R	R	R	R		R				1	8				Reject Comment 8-1-0 (10)
#15	A	A	A	A	A	A	A	A		A						9	0		Approve Revised Text 9-0-0 (10)

¹Abstained (Either way is fine with me)

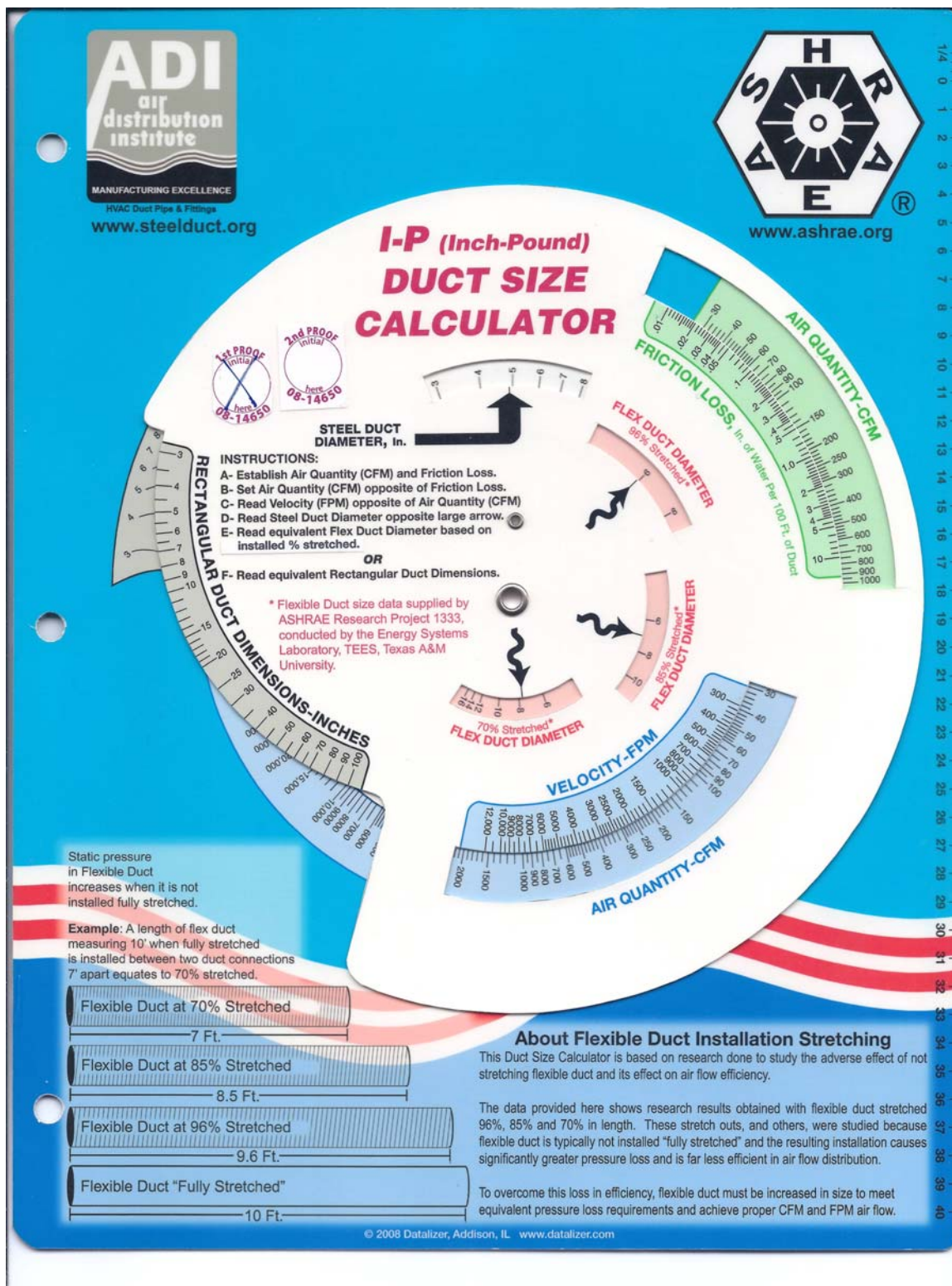
²Approved Table with Comments (Cite Source).

Attachment B

Chapter	Title	Rev	Sub-Sections	Draft to PJB	Reviewed by PJB	Comments Incorporated	To WEB Site
	Table of Contents	17					Rev 17 (2/2/12)
	Foreword						
1	Introduction						
2	Duct Design Considerations	0					
3	Fan Room Locations & Duct Layout (including length limitation due to 90.1)						
4	Sectioning a Duct System for Design	1		1/14/12	1/16/12	Yes	1/17/12
5	Duct Design Methods	3		1/3/12	1/5/12	Yes	1/11/12
6	Duct Design – Equal Friction	1		1/3/12; Notes 1&3	1/5/12	Yes	1/11/12
7	Duct Design – Static Regain	1		1/3/12; Note 2	1/5/12	Yes	1/11/12
8	Duct Design – Local Exhaust Systems (Constant Velocity)	2		1/10/12	1/12/12	Yes (To G. Knutson 2/2/12; TC 5.8 2/12/12)	1/21/12
9	Air Dispersion Systems	1		Sent to K. Gebke & P. Brooks 2/15/12			
10	Fan Selection	1		1/26/12	1/31/12	Yes: (To Craig Wray & John Murphy 2/3/12)	2/1/12
11	Acoustical Analysis of Duct Systems						
12	Specialty Topics		Duct Leakage				
			Materials				
		0	Duct Sizes				
			Controls, Static Pressure				

Chapter	Title	Rev	Sub-Sections	Draft to PJB	Reviewed by PJB	Comments Incorporated	To WEB Site
13	HVAC System Commissioning	1		1/26/12	1/29/12	1/29/12 (To C. Wray) (To Kenneth Peet 2/6/12)	1/31/12
14	Master Specification for HVAC System Leakage			Assign to Larry Smith 1/26/12			
Appendix A	Fundamentals	1		11/30/11	12/12/11	Yes	1/11/12
Appendix B	Design Tools	1		12/20/11	1/2/12	Yes	1/11/12
Appendix C	Supplement to Chapter 8	0		1/10/12	1/12/12	Yes	1/21/12
Appendix D	Supplement for Chapter 11	0		Not sent, but completed 2/23/12			
Appendix E	Design Tables for Acoustics	0					
Appendix E -- CD	EXCEL Files		Master Spreadsheets:				
			1. Equal Friction 2. Static Regain 3. Constant Velocity				
			Psychometrics				
	Index						

Attachment C



Attachment D

AMCA 511-07 Rev. xx/07

16. Air Performance Product Rating Requirements for Spiral Ducts

16.1 Testing requirements

16.1.1 All spiral duct air leakage testing shall be in accordance with Section 7 of ANSI/ASHRAE/SMACNA Standard 126-2000.

16.1.2 The test sample shall consist of a ~~640~~ 600 mm (24 in.) diameter by ~~3050~~ 3000 mm (120 in.) long section of spiral duct. The ends shall be capped and sealed by the manufacturer and shall also include two pipe to barb fitting receptacles.

16.1.3 A bubble test shall be conducted prior to the leakage test to ensure there is no end cap leakage. See ANSI/AMCA 500-D-07 Section 8.2.3.2.

16.1.3.4 Testing shall be performed at 1.5 times the normal maximum design pressure of 2.5 kPa (10 in. wg). ~~and Testing~~ is required to be run on ~~28, 26, 24, 22, 20, 18, and 16~~ ~~and 14~~ gauges of metal ductwork. As an option, testing may also be run on with 14 gauge being optional of metal ductwork. A bubble test shall be conducted if leakage is observed during the test.

If the manufacturer only makes a limited number of gauges, the literature must clearly state that only the gauges certified are covered.

16.2 Calculated performance

16.2.1 Air leakage performance shall be corrected from actual conditions to standard conditions using the equations shown in ANSI/ASHRAE/SMACNA Standard 126-2000 Section 7.4.

16.2.2 The calculated air leakage performance in m³/hr (cfm) shall be converted to m³/hr per 9.29 m² (cfm per 100 ft²) of duct wall surface.

16.3 Published ratings

16.3.1 Published rating of air leakage performance shall be a statement of the maximum tested air leakage flow rate for each gauge at 3.75 kPa (15 in. wg) ΔP_s in m³/hr per 9.29 m² (cfm per 100 ft²) of duct wall surface area at standard air density.

16.3.2 Published data shall state the length, gauge and diameter of the test sample.

16.3.3 Published data shall state that air leakage is based on testing conducted between 10°C - 40°C (50°F - 104°F).

16.3.4 Published data shall clearly identify the certified product.

16.3.5 Each gauge of spiral duct published in a catalog must be certified.

Attachment E

Announcements and Reminders for TC/TG/TRG & MTG Chairs Chicago 2012

**Announcements and Reminders for TC/TG/TRG & MTG Chairs
Chicago 2012**

1. The Rebranding of ASHRAE

A new logo and tagline 'Shaping Tomorrow's Built Environment Today' was unveiled at the plenary session of this meeting on Saturday as the first step in a rebranding plan for ASHRAE. For more information on why ASHRAE has decided it is time to rebrand our identity and answers to other questions on this topic, please refer to the attached document entitled *ASHRAE Key Messages and Frequently Asked Question*.

TCs will be asked to support this effort by updating their TC website to reflect the new logo and tagline before March 1st this year. ASHRAE staff will provide each TC webmaster with the necessary files and assistance needed to update the TC's website for this change. Please notify your webmaster that he or she will be contacted by ASHRAE staff in the month of February with more information on how to implement this change to the TC's website.

2. 2011-2012 Hightower Award Recipient – Donald Beaty, TC 9.9

Don Beaty is being honored by TC 9.9 for being a driving force on TC 9.9 since its inception and as a result for its success in the involvement of its members and the quality of its guides and its handbook chapter. He has been co-author on numerous TC 9.9 guides published for ASHRAE with the most recent being "Structural and Vibration Guidelines for Datacom Equipment Centers -2007" and "Best Practices for Datacom Facility Energy Efficiency -2008" and served in a variety of positions on the TC. He also gives freely of his time in presenting ASHRAE seminars around the world that cover TC 9.9 technical areas as well as working with ALI in presenting on-line courses.

3. YEA/TC Mixer Sunday Afternoon in Chicago

Is your TC in search for new members? If so, please plan to attend the first Young Engineers of ASHRAE (YEA) / TC Mixer at the Chicago meeting on Sunday, 1/22, from 4 p.m. to 7 p.m. in the Salon 1 room on the 3rd floor of the Palmer House Hilton Hotel. Food and beverages will be available at this casual gathering as well as ice-breaker games to help get these young engineers of the Society talking with TC representatives at the event.

4. 12-13 Roster update process and process for adding provisional CMs

Remember, the current 2011-2012 roster for your TC, TG or MTG is in effect until after the June meeting this year. The new committee rosters for 2012-2013 will be created based upon the update information that each TC, TG or MTG provides to their section head at this meeting by midnight, Tuesday, 1/24/12 and these new rosters will go into effect on July 1, 2012. Please see your section head for the 2012-2013 Roster Update form if you still need a copy.

By now, each TC, TG and MTG chair should have received a PDF & MS-Excel file of their current 2011-2012 roster from their Section Head for distribution to the committee. In addition, each member can view all of the rosters of their committees on the ASHRAE Website. Go to www.ashrae.org <<http://www.ashrae.org>>, click on the "Membership" tab in the header, click on "Manage Your Membership" text in the left sidebar, and log in (if you have not logged in lately, you might need to set up a new username and password). Click on the "Biographical Record System" link. Now, you should see your current "bio info". Click on "My Committees" on the left sidebar; all of the committees you are a member of

will appear. Click on the "blue" roster text at the left hand side of a committee to reveal the roster with linked contact information. Make sure everyone on your committee also knows how to access the roster.

The Provisional Corresponding Member position is a relatively new position on TC/TG/TRG rosters. This position allows potential new members to be added by staff to the committee roster any time a request for membership is made by an individual. The position has a 2-year term on the committee. Staff will notify the chair and reissue a new roster to the committee any time a provisional member is added. The TC/TG/TRG chair has the option each year during the regular roster update process to convert provisional CMs that have been active participants on the committee the past year into regular CMs or voting members or drop them.

5. TC/TG/TRG Chair's Training Workshop Reminder

Sunday January 22 9:45-10:45a in the Palmer House Hilton Hotel, Crystal Room (3rd floor level). As with the Breakfast meeting, both the Chair and Vice-Chair are expected to attend; attendance will be tracked so that we can assess who has been trained. Bring questions - if you need an answer, it's quite likely others also need the same answer. This particular session will also include at the beginning a brief presentation and Q&A session with the San Antonio program chair of the Conferences & Exhibitions Committee (CEC), Dunstan Macauley, concerning the next Society meeting technical program and recent or planned changes to it.

6. Need for Existing Building O&M Guidance Source - A Survey by the AEDG Steering Committee


The AEDG Steering Committee is looking for volunteers from the technical and standards committees to provide input in defining the need and format for a document or source library for best practices in Operations and Maintenance (O&M). The committee has put together a survey in MS-Word format (attached) that will be e-mailed to you by me for distribution to your committee. We are specifically looking for input from the following ASHRAE Committee's: SSPC 180, SSPC 100, SSPC 90.1, TC 2.8, TC4.3, TC 4.10, TRG4, TC 7.2, TC 7.3, TC 7.6, TC 7.7, TC 7.8, TC 9.6, TC 9.7, and MTG.BPM.

They would like as many surveys as possible returned to the AEDG Steering Committee by **February 15, 2012**.

People interested in participating in the survey should send their complete survey to betheredge@ashrae.org

On behalf of the AEDG Steering Committee, we thank you in advance for your support of this project.

7. TC members cannot speak for TC before other bodies without TC approved position statement

 Please remind all members of your committee that they serve as individuals and are not permitted to speak for the TC before other groups (SSPCs, standing committees, outside groups, etc.) unless they are the official liaison for the TC to that group and any TC position that they present on an issue is supported by a prior TC vote.

8. **Location of Section Head Mailboxes & Free WiFi Access at this Society meeting**
Boxes are located just outside ASHRAE Headquarters Office (Palmer House Hilton Hotel – 3rd Floor – Salon 3 Room). In addition, all meeting attendees staying at the Palmer House Hilton Hotel this meeting should have free WiFi access in their sleeping rooms.

9. **Upcoming Advanced Energy Design Guide (AEDG) Broad Peer Reviews**
None at this time

The Peer Review for the 90% Final Draft of the ASHRAE Advanced Energy Design Guide for Large Hospitals (50% Energy Savings) closed on Friday, December 2, 2011. The input from that review is being compiled and distributed to the Project Committee for review and consideration. A summary of their responses will be posted here when available. Publication planned for 2nd qtr 2012

Please check the AEDG section of the ASHRAE website at the following link for the latest information: <http://www.ashrae.org/technology/page/938>

10. **Special effort to welcome new members, and visitors (potential members), particularly international members, to TC meetings**

Potential new members for your committee have been encouraged to drop-by your meeting in Chicago. As a result, please make a special effort to recognize and warmly welcome all visitors to your meeting – A TC can never have too many willing and able volunteers.

11. **Useful TC/TG/TRG Chair Information on ASHRAE website**

Information for TC/TG/TRG chairs can be found on the Technical Committee page of the ASHRAE website at the following link: <http://www.ashrae.org/technology/page/104>.

The TC/TG/TRG Manual of Procedures (MOP) has been revised to include a new committee type, Multidisciplinary Task Groups (MTGs). MTGs are different from TCs, TGs, and TRGs. The objective of the MTG is to first try and better coordinate and focus the activities of the affiliated TC and non-TC groups (EHC, REF, SSPCs, outside groups, etc) that make-up the MTG on the task for which the MTG was created without duplicating the functions of a TC or TG so that the task can be completed as efficiently as possible. In special cases, MTGs may be authorized by TAC to assume some TC/TG functions, such as research, if it is deemed necessary to better complete their task assignment. Since the need, purpose, and progress of each MTG is reassessed and reaffirmed by TAC each year, there are no term limits for the MTG Chair, Vice Chair, Members and Alternates.

12. **CEC proposed or recently implemented technical program changes or announcements**

Conferences and Expositions Committee (CEC) had the following announcements concerning the Society's Technical Program for upcoming meetings:

- CEC is implementing a new process to verify that TC's have truly voted to sponsor a submitted program before it is published in the meeting program as a program sponsored by a particular TC.
- Each TC will be asked to annually submit a list of volunteers from the TC that are willing to serve as paper reviewers or session chairs for sessions that are related to the TC's scope.

- Due to a low number of conference papers that were submitted for the annual meeting in San Antonio next June, there are now a greater number of slots available for seminars and forums for that meeting. The submission deadline for seminar and forums proposals for the San Antonio meeting is February 13, 2012. Submit proposals to www.ashrae.org/SanAntonio
- Starting with the next winter meeting in Dallas, entire sessions can now be proposed through the meeting program submission website www.ashrae.org/Dallas. The submission deadline for proposals is March 19, 2012. CEC strongly encourages TCs to consider proposing an entire session.
- CEC will be offering training at this meeting to TC Program Subcommittee chairs on Tuesday, 1/24, at 11 a.m. in the Speaker's Lounge.

Also, the TC/TG/TRG Chair's Training Workshop on Sunday morning will include a brief presentation and Q&A session with the San Antonio meeting program chair of the Conferences & Exhibitions Committee (CEC), Dunstan Macauley, concerning the next Society meeting technical program and recent or planned changes to it.

13. **Upcoming Program Submission Dates**

San Antonio Meeting - June 23-27, 2012

- San Antonio seminar and forum session proposals are due February 13, 2012
- Final technical papers and final conference papers due March 7, 2012
- Notifications of seminar and forum accept/reject distributed March 16, 2012
- Conference Papers accept/reject notifications distributed March 30, 2012
- Conference Website: <http://www.ashrae.org/sanantonio/>

Track 1 HVAC&R Systems & Equipment

Track 2 HVAC&R Fundamentals and Applications

Track 3 Integrated Energy Systems

Track 4 Building Modeling Applications

Track 5 Refrigeration Applications

Track 6 Indoor Environmental Applications

Track 7 Integrated Building Controls

Dallas Meeting - January 26-30, 2013

- Conference site live: January 22, 2012
- Conference Paper abstract/Conf. Paper session proposals due March 19, 2012
- Conference Papers submitted for review are due early July 2012
- Dallas seminar and forum session proposals are due early August 2012
- Conference Website: <http://www.ashrae.org/dallas/>

Track 1 HVAC&R Systems & Equipment

Track 2 HVAC&R Fundamentals and Applications

Track 3 Standards, Guidelines, and Codes

Track 4 Energy Conservation

Track 5 Refrigeration

Track 6 Large Building Design

Track 7 Facility Management; Operations, Tech. and Energy Improvements

Track 8 – Special Interest Track

The Conferences and Expositions Committee (CEC) oversees ASHRAE's annual and winter conferences and other specialty conferences and expositions globally. The CEC continually works to improve the conference experience for all attendees. To help keep a

"pulse" on the technical issues facing professionals in the HVAC&R marketplace, the CEC seeks ideas for tracks for the Denver, New York and annual and winter conferences beyond as well as topics for specialty conferences from TC members.

Please submit your suggestion using the following link:

<http://www.ashrae.org/events/page/2537>

14. Report on TC/TG/TRG websites in Section (SHs need to report to TCs which sites are not up to date.)

Is your committee website up to date? If not, please ask your webmaster to at least post the latest minutes and the Chicago meeting times and agenda. If your website has been neglected, add an action item for this meeting to appoint a responsible member of the TC/TG/TRG who will bring it back to life. This form of communication is critical to the efficient operation of your committee, and for attracting new members.

TAC and the Electronic Communications Committee (ECC) recently posted a webinar recording on how to set-up and maintain a basic TC website using the ASHRAE server and TC website template at the following link:

<http://media.ashrae.biz/webinar/TrainingWebinar.wmv>

15. Training Webinars Posted for ASHRAE Google Groups/Sites and ASHRAE Hosted Websites for TCs/TGs and TRGs

TAC and the Electronic Communications Committee (ECC) recently posted a webinar recording on how to set-up and maintain a basic TC website using the ASHRAE server and TC website template at the following link:

<http://media.ashrae.biz/webinar/TrainingWebinar.wmv>

There is also a webinar recording posted on the Technical Committee page of the ASHRAE website on how to utilize online collaboration tools like Google Groups or Sites for TC work between meetings.

Please also make sure that your Research Subcommittee Chair attends the Research Subcommittee breakfast on Monday, January 23rd at 6:30 a.m.-8:00 a.m. in the Palmer House Hilton Hotel, Grand Ballroom, (4th Floor level). A large portion of the meeting will be dedicated to training and interface time with your Research Liaison

16. Send requests in for new "Help Wanted" section on technical committee page of ASHRAE website

A new "Help Wanted" section will be added to the Technical Committee page of the ASHRAE website so that TCs can advertise requests for help. Requests could include calls for new members, a webmaster, reviewers and contributors for a handbook chapter or special publication, special expertise that resides outside the TC, equipment donors for a research project, etc. Requests should be for needs that need to be fulfilled within the next 6-12 months. Chapter Technology Transfer Committee (CTTC) will assist in this effort by making sure ASHRAE chapters are aware of this request list. Please pass on any requests for your TC to the Manager of Research and Technical Services, Mike Vaughn, at mvaughn@ashrae.org or MORTS@ashrae.net

17. Option for TC Subcommittee Meetings via Conference Calls and Web Meetings

More and more TCs are taking advantage of a new Society service that allows TCs to hold subcommittee meetings by phone and/or web. Many TCs are finding this to be a more

efficient way for them to conduct subcommittee business and it also allows TC members that can't travel to meetings on a regular basis a way to still contribute to the TC. Such a change can also eliminate potential conflicts with the TC's program sessions at Society meetings. Please pass your conference call/web meeting/webinar requests on to the Manager of Research and Technical Services, Mike Vaughn, at mvaughn@ashrae.org or MORTS@ashrae.net

18. Upcoming Conferences:

- **High Performance Buildings Conference – A Focus on Deep Energy Savings**, March 12-13, 2012 – San Diego, CA <http://www.ashrae.org/events/page/hpbconf>
- **International Conference on Energy Research and Development**, April 9-11, 2012, Kuwait. info@icerd5.org, or www.icerd5.org
- **CR2012: The 23rd International Exhibition for Refrigeration, Air-conditioning, Heating and Ventilation, Frozen Food Processing, Packaging and Storage**, April 11-13, 2011, Beijing, China. <http://www.cr-expo.com/EN/Index.asp>
- **CIBSE ASHRAE Technical Symposium -- Buildings Systems and Services for the 21st Century**, April 18-19, 2012, Imperial College, London. <http://www.cibse.org/>
- **Fan 2012: International Conference on Fan Noise, Technology & Numerical Methods**, April 18-20, 2011, Senlis, France, <http://www.fan2012conference.org/>
- **5th International Building Physics Conference**, May 28-31, 2012, Kyoto, Japan, http://rcpt.kyoto-bauc.or.jp/IBPC2012/general_information_id.html
- **Purdue Summer Conferences 2012**
21st International Compressor Engineering Conference,
14th International Refrigeration and Air Conditioning Conference
2nd International High Performance Buildings Conference
July 16-19, 2012, on the campus of Purdue University in West Lafayette, Indiana
<http://engineering.purdue.edu/Herrick/Events/2012>
- **COBEE (2ND International Conference on Building Energy & Environment)**, August 1-4, 2012, Millennium Harvest House, Boulder CO
<http://www.colorado.edu/cobee2012>
- **ICCCS 2012- International Symposium on Contamination Control 2012**, September 3-7, 2012, ETH Zurich, Switzerland <http://icccs.net/>
- **12th Cryogenics 2012, IIR International Conference**, September 10-14, 2012, Dresden, Germany, <http://www.icaris.cz/conf/Cryogenics2012> - Abstract deadline January 31, 2012
- **Cold Climate HVAC 2012**, November 12-14, 2012, Calgary, Alberta, Canada.
<http://www.ashrae.org/events/page/coldclimate2012>

19. **ASHRAE Learning Institute (ALI)**

The ASHRAE Learning Institute (ALI) offers courses in a variety of lengths and modes of delivery. All of the courses are developed by subject matter experts through a peer-review process. For more information, visit www.ashrae.org/education to view the winter 2012 course offerings.

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ASHRAE Key Messages and Frequently Asked Questions

ASHRAE is truly shaping tomorrow's built environment today. Whether it's providing leadership in the HVAC&R industry and building communities, or exploring new research and developing new standards – ASHRAE is at the forefront of these evolving changes.

These key messages stand as proof points on how ASHRAE is shaping tomorrow's built environment today.

- ASHRAE consistently provides leadership and direction for the built environment;
- ASHRAE standards are the basis for worldwide building codes, recommended design and operating practices and energy-efficient technologies; and
- ASHRAE is an essential resource for optimizing the performance of building and energy systems throughout their life cycles.

I. Why is ASHRAE launching a new brand identity?

The ASHRAE brand reflects our focus in serving as a leader to advance sustainable design, construction and operation for new and existing built environments.

Our commitment to sustainability is imperative for us to improve the quality of the built environment while leaving a lasting legacy for future generations. The ASHRAE brand supports our focus on improving engineering standards and our market position as a global community of engineers and related professionals united by knowledge, mission, standards and a code of ethics to build better places for people to live, work and play.

By uniting our core strengths and expanding upon our global footprint into a wider area, the Society needs a re-introduction to the world. The new branding is the first step in this evolutionary process.

It is important for ASHRAE to present a consistent image to our members, our partners and to external audiences, reinforcing our unique position as a Society whose focus is broader than ever.

II. How can I champion the new brand?

By taking an active role you can be an advocate of the new brand through several ways. This is an exciting time for ASHRAE and for you.

The new brand identity is more than just a logo and tagline, it's the evolution of ASHRAE. ASHRAE is broadening our focus, membership, expertise and commitment to education, collaboration and funding in research.

Branching out into new opportunities is of significant value. You can work with your local region, chapter, section and student branch to identify which assets are impacted and need to be changed.

Educating other members and associates on what the new branding is and what it means will help the Society transition better internally.

V. How does ASHRAE benefit?

We are a leader in the HVAC&R industry and have strengthened our ability in providing total guidance for the built environment. ASHRAE's new brand identity reinforces our commitment to leadership, education, research, standards writing and innovation, all of which make up our brand identity

Our visual identity has been updated to present a fresh and innovative look to our members, participating industries, governments, peer organizations and the media as the "go to source" for any and all issues relating to HVAC&R, green buildings, sustainability and innovative building technology.

With our refreshed brand identity, we are communicating ASHRAE's mission of "advancing the arts and sciences of heating, ventilating, air-conditioning and refrigerating to serve humanity and promote a more sustainable world." We are also emphasizing our commitment to our goals outlined in the four strategic directions:

ASHRAE will be a leader in advancing sustainable design, construction and operation for new and existing built environments.

ASHRAE will be a world-class provider of education and certification programs.

ASHRAE will position itself as an essential resource for optimizing the performance of building and energy systems throughout their life cycles.

ASHRAE will be a global leader in the building and energy system community.

Consistent brand style and identities will also help in cutting the clutter from current diluted brand elements.

All previous forms of the ASHRAE logo will no longer be valid, and we will begin the transition to the new logo in 2012.

VIII. Who reviewed and voted for the new logo and tagline?

The ASHRAE Logo Ad Hoc Committee presented the top five designs of the logo and tagline for the Board of Directors to vote on. The Board of Directors approved the logo being launched at the 2012 Winter Conference.

The Board's decision was based on logo designs that were tested with a variety of focus groups:

- Members globally
- YEA members
- Presidential Members

IX. How many interviews took place?

ASHRAE identified specific stakeholder groups and a marketing firm, MSL Atlanta, conducted 2,466 interviews with:

- ASHRAE stakeholders
- Logo Ad Hoc Committee members
- Members globally
- YEA members
- Presidential Members

XII. What color(s) does the new logo come in?

ASHRAE has identified four colors to use in the logo signatures (i.e., chapter, section or student branch names) for regions, chapters, sections and student branches.

Each region, chapter, section and student branch will have the option of choosing their own color that best represents their entity.

Colors to choose from include:

- Pantone 376 – ASHRAE Green
- Pantone 312 – Light Blue
- Pantone 300 – Barbados Blue
- Cool Gray 11 – Light Gray

For a clear definition on the color palette, please refer to the ASHRAE Logo Guide.

XIII. Who decides on which color to use?

Each region, chapter and student branch will be contacted by ASHRAE Headquarters to determine which color they wish to have for their logo. Chapters will determine logo color for the sections sponsored by them.

A representative from each group will send in a request for their specific logo to ASHRAE with additional information on this process being made available after the 2012 Winter Conference.

XVII. Who created the new logo and tagline?

- ASHRAE collaborated with marketing firm MSL Atlanta to create the new logo
- Parameters that guided the design exploration were:
 - Retain the heritage of the hexagonal shape
 - The dominant color used throughout is “ASHRAE Blue” and other shades of blue
 - The logo should be easily reproduced on both small and large scale
 - Is easily adaptable for use by chapters, regions, sections, student branches, programs, committees and conferences
 - Needs to work as a lapel pin.

XVIII. How do I use these new brand assets?

A new ASHRAE Logo Guide will be distributed to our membership. The rules for use, authorization and application are found in this document.

For any questions regarding the use and application of the new ASHRAE logo, please contact the ASHRAE Marketing/Public Relations department: publicrelations@ashrae.org

XIX. Will the new logo be difficult to print?

No, the new ASHRAE logo is specifically designed for multi-purpose print production.

The primary Society logo can be printed in black and white, grayscale and reversed out in ASHRAE blue. See the ASHRAE Logo Guide for specific details on printing configurations.

XXII. Glossary of branding terms

A **corporate brand** is the name, term, symbol or design (or a combination of them) intended to signify the goods or services of a company or association and to differentiate them from the competition

A **brand identity** is an outward expression of a brand, including the name, trademark, communications and visual appearance.

A **brand identity system** will support the overall look of a company's or association's communications. Effective identity is achieved by the consistent use of particular visual elements to create distinction, such as specific fonts, colors and graphic elements

A **brand migration plan** is developed to roll out a new or refreshed brand across an organization, identifying timelines, deliverables, and areas of impact

A **brand strategy** grows from the products/services and then gives back over time. It's deeply rooted in the vision and mission. A brand strategy evolves with time

A **brand's personality** is defined as a set of human characteristics associated with the name of a product, service, company or association.

The first part of the report discusses the general situation in the country and the progress made in the various fields of activity.

The second part of the report deals with the economic situation and the measures taken to improve it.

The third part of the report concerns the social and cultural aspects of the country's development.

The fourth part of the report discusses the foreign relations of the country and its participation in international organizations.

The fifth part of the report deals with the military situation and the country's defense capabilities.

The sixth part of the report discusses the country's progress in the field of science and technology.

The seventh part of the report deals with the country's progress in the field of education and health.

The eighth part of the report discusses the country's progress in the field of agriculture and industry.

The ninth part of the report deals with the country's progress in the field of transportation and communication.

The tenth part of the report discusses the country's progress in the field of environment and natural resources.

The eleventh part of the report deals with the country's progress in the field of sports and recreation.

The twelfth part of the report discusses the country's progress in the field of law and justice.