

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

**1791 Tullie Circle, N.E./Atlanta, GA 30329
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SPC MINUTES COVER SHEET

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

TC/TG/TRG NO SPC 127-2007R DATE 2/23/2010

TC/TG/TRG TITLE Revision of Standard 127-2007R, Method of Testing for Rating Computer and Data Processing Room Unitary Air-Conditioners

DATE OF MEETING 2/23/2010 LOCATION Phone & Web

MEMBERS		Voting Member	PRESENT	MEMBERS	Voting Member	PRESENT			
		Member	ABSENT			ABSENT			
Fred Stack (Chair)		Y	P						
John Bean		Y	P	Geof Lawler	Y	A			
Don Beaty		Y	P	Greg Jeffers	Y	P			
Terry Rodger		Y	P	David Quirk	Y	P			
Mukesh Khattar		Y	P	Jeff Trower	Y	A			
Davis Wilson	A	Nick Gangemi	A	Mark Seymour	A	Roger Schmidt	A	Sang Lee	P
Bob Blough	A	Mark Houricon	A	Jack Glass	A	Tim McCann	A		

DISTRIBUTION

<i>All Members of TC/TG/TRG plus the following:</i>	
TAC Section Head:	Van Baxter
Standards Committee Liaison to SPC 127	Bill Dean

These draft minutes have not been approved and are not the official, approved record until approved by this committee

Roster Voting Member Role Call

- Quorum present 6/2/1 (Present / Absent / Chair)

Scope of Work discussed. No final decisions made.

Began by discussing the suggestion supplied by John Dean and included in the 2/11 meeting minutes. The summary below reflects changes suggested by various members. We do not have consensus on this so this information is shown to help support continued discussion.

row based cooling: cooling products collocated with the IT Processing Equipment, typical installations may include: interspersed between and adjacent to racks housing IT Equipment, directly above racks housing IT equipment, immediately over the hot aisle parallel to racks housing IT Equipment or immediately over the cold aisle parallel to racks housing IT equipment. Row based cooling may or may not be further augmented with containment of the hot air circulation path (IT Exhaust into cooling equipment) and or cool air circulation path (cooling equipment supply air to IT Equipment inlet).

contained return air path: a continuous physical barrier that provides a conduit for return of heated IT Equipment exhaust air to the cooling equipment return air intake that substantially eliminates mixing and interaction of the heated air with cool supply air.

contained supply air path: a continuous physical barrier that provides a conduit from the supply air discharge of the cooling equipment to the cool air intake of racks housing IT Equipment that substantially eliminates the mixing and interaction of the cool supply air with the heated return air from IT Equipment.

air ratio class: the various physical embodiments of cooling apparatus and containment schemes (over aisle, rack adjacent, rack top, etc...) have typical air circulation ratios of cooler air to IT equipment air that are unique to each physical arrangement. A class system has been adopted for the purpose of categorizing the generic anticipated performance of each physical embodiment. The purpose of the air ratio class is to establish a consistent mixing ratio thereby allowing the establishment of appropriate cooler return air temperatures for rating point

Class	Types of Equipment	Test Temperature °C (°F)	Cooler Airflow to IT Equipment Airflow
1	Row based with containment (hot and or cold)	37.8 (100)	1.1 to 1
2	over hot aisle, rack top	35 (95)	1.2 to 1
3	Row based with no containment	32.2 (90)	1.3 to 1
4	over cold aisle, CRAC w/ contained cold air	29 (85)	1.4 to 1
5	Perimeter Units	27 (80)	1.4 to 1

6	Perimeter w/ducted return or cold aisle containment	29 (85)	1.3 to 1
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The above seemed too complicated for many, thus two alternatives were suggested.

1. Require two rating points based on return air condition for each type of equipment. one high and one lower (ex. 100 F and 80 F).
2. Require two rating points based on supply air condition for each type of equipment. One consistent supply temperature (ex. 75 F) and two air delta t across the equipment ex. 15 and 30 F).

The discussion was positive that one of these approaches was better than the 6 Classes, but the opinion of which is best was divided. More favored the supply approach, but there was concern that not all suppliers offer supply control as a control mechanism and the technical feasibility of specifying an air delta t as a control parameter.

The group adjourned with the task of studying this supply approach to determine its feasibility prior to the next meeting.

Item not discussed, but open.

- Provide some guidance or limitation on the CW pressure drop allowed for the required 12 F delta t of the chilled water loop.

The next several meetings will be via phone conference. They will be scheduled for 4:00 PM EST on the following Thursdays. They will be held to one hour. Please mark your calendars.

- March 11 and 25
- April 8 and 22

The call information will always be

USA Call 866 962.6634

Global Call 857 350.9999

Passcode 10793151