

**INTERPRETATION IC 90.1-2016-11 OF
ANSI/ASHRAE/IES STANDARD 90.1-2016
Energy Standard for Buildings Except Low-Rise Residential Buildings**

Date Approved: October 12, 2019

Request from: Richard Lord, Carrier Corporation, 2003 Irby Lane, Murfreesboro, TN 37127.

Reference: This request for interpretation refers to the requirements presented in ANSI/ASHRAE/IES Standard 90.1-2016, Section 6.4.1.2.2 and Table 6.8.1-3, regarding proof of compliance with Table 6.8.1-3 for centrifugal chillers applied with glycol in the evaporator or condenser.

Background: In Section 6.4.1.2.2 it states the following;

6.4.1.2.2 Positive Displacement (Air- and Water-Cooled) Chilling Packages Equipment with an evaporator leaving fluid temperature higher than 32.00°F and watercooled positive displacement chilling packages with a condenser leaving fluid temperature below 115.00°F shall show compliance with Table 6.8.1-3 when tested or certified with water at standard rating conditions, per the referenced test procedure.

This section provides a means to show compliance with ASHRAE/IES Standard 90.1, Table 6.8.1-3, when the chiller is applied with glycol in the condenser or evaporator and meets the criteria listed in 6.4.1.2.2. But the section specifically states that the chiller is positive displacement which means the compressor is a scroll, screw or reciprocating compressor. It does not include centrifugal chillers and as done on purpose because centrifugal chillers often have physical design changes when applied with glycol due to the higher lift. Some manufacturers are claim compliance with ASHRAE/IES Standard 90.1, Table 6.8.1-3, with glycols by providing AHRI certified performance outputs with water as the fluid.

This practice does not seem to be in compliance with the requirements of 6.4.1.2.2 and centrifugal chillers equipped with glycol should not be claiming compliance with ASHRAE/IES Standard 90.1, Table 6.8.1-3.

Interpretation: Centrifugal chillers using glycol in the condenser or evaporator cannot use the requirements of Section 6.4.1.2.2 to claim compliance with ASHRAE/IES Standard 90.1.

Question: Is this interpretation correct?

Answer: Yes

Comments: Centrifugal chillers using glycol in the condenser or evaporator do not have requirements listed in the standard.