Colin Barden - Dri-Eaz

Lab Report

Performance Testing of Dri-Eaz DRIZAIR 1200 Dehumidifier

ENJ897

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1. Introduction

A single unit of a Dri-Eaz DRIZAIR 1200 production model dehumidifier, type F430, serial no. 36408, was received for performance testing over a range of temperatures and humidities.

The environmental conditions were:

20C, 60% RH
30C, 80% RH
32.2C, 90% RH

2. Experimental

The dehumidifier unit was placed inside a Thermotron walk-in environmental test chamber, calibration date 29th Feb 2012. The power cable and drain hose were fed through a hole in the chamber wall. The chamber was programmed to go to each test condition, starting at the lowest level and stabilise over a period of three hours. The unit was then switched on and allowed to settle for a further 30 minutes before collecting the pumped water in a 1000 ml measuring cylinder over a one hour period. This was repeated for the other two test conditions.

3. Results

Figure 1 shows the outside of the test chamber and figure 2 shows the unit inside the chamber. Figure 3 shows the measuring cyclinder used to collect the extracted water. Figures 4 to 6 show the test chamber control panel display at the three test conditions.

Table 1 below summarises the performance of the DRIZAIR 1200 unit

Test condition	Vol collected in 1 hr (ml)	Vol (L)/24 hrs
20C, 60% RH	890	21.4
30C, 80% RH	2070	49.7
32.2C, 90% RH	2360	56.6

Table 1. Water collection data

4. Discussion

The DRIZAIR 1200 unit supplied exceeded its specified water extraction rate of 55L/day at the 32.2C, 90%RH test condition.

Figure 1. Outside of test chamber

Figure 2. DRIZAIR 1200 inside test chamber

Figure 3. Water collection method

Figure 4. Test chamber control panel at test condition 1 and cal label

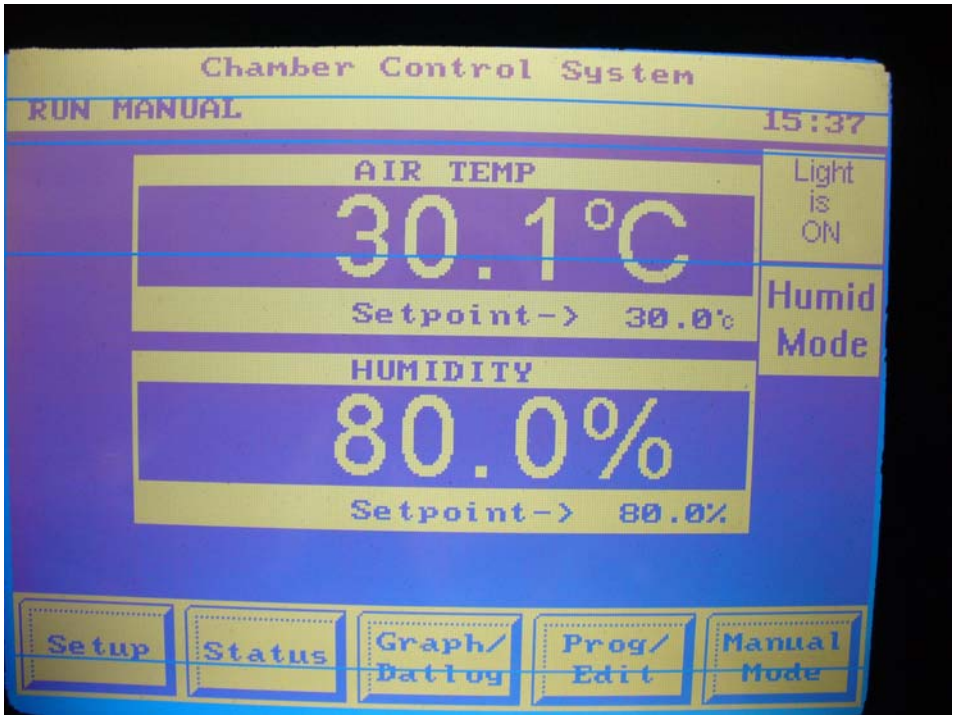

Figure 5. Test chamber control panel at test condition 2

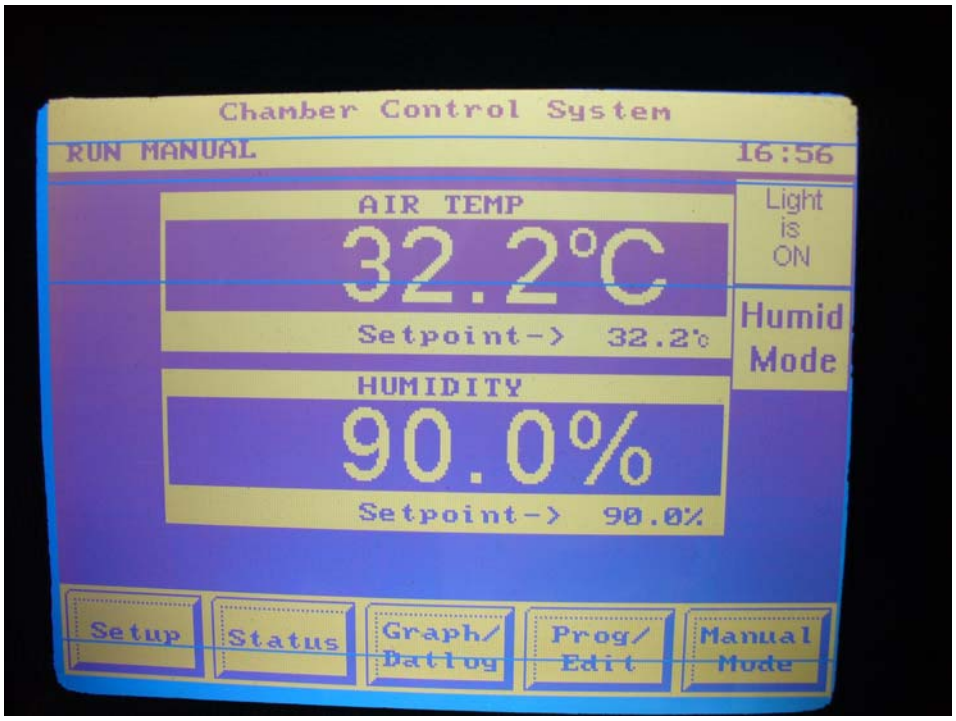

Figure 6. Test chamber control panel at test condition 3