

Comparative Evaluation of Energy Consumption

SEPTEMBER 2014

HP Officejet Pro 6230 vs. Laser Devices

**TEST OBJECTIVE**

Buyers Laboratory LLC was commissioned by Hewlett-Packard to conduct comparative energy consumption testing of the HP Officejet Pro 6230 inkjet model vs. the following laser devices: Dell C1660w and Samsung SL-C410W. Testing was conducted using the Energy Star Typical Electricity Consumption (TEC) method (see details on page 2).

EXECUTIVE SUMMARY

The HP inkjet device demonstrated a dramatic advantage over the laser units during BLI's Energy Star Typical Electricity Consumption (TEC) testing. The total TEC result for the HP Officejet Pro 6230, at 0.20 kilo-Watt hours (kWh), is well below those of the competitive models, which produced total TEC test results ranging from 1.35 kWh for the Dell C1660w to 1.21 kWh for the Samsung SL-C410W. Overall, the HP inkjet unit consumed between 83.1% and 84.8% less electricity than the competitive laser models during the TEC test.

Typical Electricity Consumption (TEC) Testing

BLI conducted a comparative energy-consumption evaluation using test methods consistent with the Energy Star Typical Electricity Consumption (TEC) methodology, with the energy consumed recorded as kilo-Watt hours (kWh). The test measures the energy that is consumed over a specified period, during which each device prints multiple single-sided sets of a 12-page black document and also spends time in sleep mode, warm-up mode and ready mode. For the units comprising this group, typical usage is assumed as being 288 pages per day. The TEC values that are reported for each device have been calculated to reflect one week's worth of electricity consumption.

In the TEC tests conducted by BLI, the HP inkjet model proved by a significant margin to be the most energy efficient of all the tested devices. As can be seen the table below, the HP Officejet Pro 6230 unit consumed between 83.1% and 84.8% less electricity than the competitive laser models.

Typical Weekly Electricity Consumption for HP Officejet Pro 6230 vs. Laser Models

	Typical Electricity Consumption (kWh)	Percent Less Energy Consumption with HP Officejet Pro 6230
HP Officejet Pro 6230	0.20	-
Dell C1660w	1.35	83.1%
Samsung SL-C410W	1.21	84.8%

Based on BLI's testing, it is projected that during a typical week of usage the HP Officejet Pro 6230 would consume an average of 0.20 kWh, the Dell C1660w would consume an average of 1.35 kWh and the Samsung SL-C410W would consume about 1.21 kWh.

Typical Weekly Electricity Consumption (kWh)



Typical Electricity Consumption is calculated based on each device printing 288 pages per day, with the device spending the remainder of the time in idle and sleep modes after printing is completed. The Yokogawa WT210 power meter is used to measure energy usage during printing and in sleep mode for each device.

Test Environment

Testing was conducted under ambient conditions of 68°F to 78°F and 45% RH (+/- 10%), with daily conditions monitored by an Extech RH520 temperature/humidity digital recorder and Honeywell Model 61 Seven-Day Temperature/Humidity Chart Recorder, in BLI's test facility located at 20 Railroad Avenue, Hackensack, NJ (U.S.A).

Test Equipment

BLI's dedicated test network, consisting of Windows 2003 servers, Windows XP workstations, 10BaseT/100BaseTX network switches and CAT5 cabling, Yokogawa WT210 power meter, Pacific Smart-Source 140-AMX AC Power Source, and a Superior Electric Powerstat voltage regulator.

Test Procedures

For electricity consumption testing, a similar method consistent with the Energy Star Typical Electricity Consumption (TEC) procedures was used to determine typical weekly electricity consumption for each device, which is based on 288 pages per day, with the devices spending the remainder of the time in idle and sleep modes after printing is completed.

About Buyers Laboratory

Buyers Laboratory LLC (BLI) is the world's leading independent provider of analytical information and service to the digital imaging and document management industry. For over 50 years, buyers have relied on BLI to help them differentiate products' strengths and weaknesses and make the best purchasing decisions, while industry sales, marketing and product professionals have turned to BLI for insightful competitive intelligence and valued guidance on product development, competitive positioning and sales channel and marketing support. Using BLI's web-based bliQ and Solutions Center services, 40,000 professionals worldwide create extensive side-by-side comparisons of hardware and software solutions for over 15,000 products globally, including comprehensive specifications and the performance results and ratings from BLI's unparalleled Lab, Solutions and Environmental Test Reports, the result of months of hands-on evaluation in its US and UK labs. The services, also available via mobile devices, include a comprehensive library of BLI's test reports, an image gallery, hard to find manufacturers' literature and valuable tools for configuring products, calculating total cost of ownership (TCO) and annual power usage. BLI also offers consulting and private, for-hire testing services that help manufacturers develop and market better products and consumables.