

Latex 360 vs Roland XF-640 – Energy consumption comparison

Energy consumption has been calculated under the following scenario:

HP Latex 360 vs Roland XF with the external dryer when required to ensure prints are completely dry as in the HP Latex printers.

Use case has been built considering a monthly production of 5400sqft/mo (500sqm/mo), with an average of 3 warm ups during the day since the printer is not constantly printing and considering that HP latex printer can be turned off during the weekend whilst ecosolvent devices need to be ON to maintain printheads life.

The printmode and print speed utilized to make calculation has been the indoor quality mode at 183 sqft/hr (17sqm/hr) for the HP Latex 360 and the equivalent in quality performance for Roland XF-640, 8pass mode at 160sqft/hr (15sqm/hr)

Energy price considered for the scenario is an average price of \$0.068/KWh.

Under these conditions described above the difference in price of energy consumption by month is \$7.5 more expensive HP Latex 360 than Roland XF.

Assumptions detailed:

Enter data for calculation (only white cells)	Latex 360	Roland XF-640
Job size per month (ft ²)	5400	5400
Production Speed (ft ² /hour)	183	160
Warm-ups by day	3	3
Price of Energy (\$/KWh)	0.068	0.068
State of the printer at the end of working days (Sleep/Off)	Sleep	Sleep
State of the printer during the weekend (Sleep/Off)	Off	Sleep

Results of measures:

Calculate data	Latex 360	Roland XF-640
Printing Energy by ft ² (kWh/ft ²)	0.02	0.003
Warm-up Energy (kWh)	0.1619	0.0110
Printing + Drying Energy by ft ² (kWh/ft ²)	0.2607	0.2167
Printing Time (hours/week)	7.35	8.33
Off Time (hours/week)	48.00	0.00
Sleep Time (hours/week)	111.15	158.17
Ready time (hours/week)	1.50	1.50
Off Energy per week (kWh)	0.0048	0.0000
Sleep Energy per week (kWh)	0.8080	3.4797
Ready Energy per week (kWh)	0.1266	0.6812
Warm-up Energy per week (Kwh)	2.4292	0.1647

Printing Energy per week (KWh)	32.5882	4.2333
Total Energy per week (KWh)	35.957	8.559
Total Energy per month (kWh)	143.827	34.235
Total cost Energy (\$/month)	9.84	2.34
Cost of Energy by ft2 (\$/ft2)	0.0018	0.0004
CO ₂ emissions per year (Tons/year)	0.8630	0.2054
Number of trees needed to absorb CO ₂ emissions per year	43	10
