Calculating the Cost per Print
of the Mitsubishi CP-W5000DW Duplex Dye-Sublimation Printer

Determining the actual cost per print on the CP-W5000DW dye-sublimation duplex printer is different from cut sheet prints because paper media is roll-fed, and calculated according to the length consumed, while ink is consumed per panel regardless of the size printed. Thus, careful planning of print jobs can increase throughput and reduce cost per print substantially.

For example, when printing one single 4x6 duplex photo on the CP-W5000DW Duplex printer, the actual paper used will be 4x8 -- 4 inches of the paper roll will be forwarded to print, while the vertical slitter will cut off the unused 2 inches to the right and discard it. As for the donor ink consumption, each side of the 4x6 print will consume one entire panel of 8x12 ink sheet, therefore consuming two 8x12 ink panels for this one, single 4x6 duplex print.

Assuming that a box of CK5000 paper in a roll of 8" x 3000" long costs $185 per box, and a box of PK5812 Donor Ink containing two rolls of 500 panels of 8"x12" ink sheets cost $285 per box. Below are some costs per print for your reference.

Print Size (Imperial)	Print Size (Metric)	Optimal Planned Clustered Printing Number per 8x12 Sheet	Single Print or Planned Clustered Printing	Cost Per two-photo Dual-sided Print when Planned as a Cluster	Cost Per two-photo Dual-sided Print when Printing Single Pieces
8in x 12in	203mm x 305mm	1	Single	$ 1.88	$ 1.88
8 x 11.7	203 x 297	1	Single	$ 1.88	$ 1.88
8 x 11	203 x 279	1	Single	$ 1.88	$ 1.88
8 x 10	203 x 254	1	Single	$ 1.76	$ 1.76
8 x 8	203 x 203	1	Single	$ 1.63	$ 1.88
8 x 6 -or- 6 x 8	203 x 152	2	Clustered	$ 0.94	$ 1.51
8 x 4 -or- 4 x 8	203 x 102	3	Clustered	$ 0.63	$ 1.39
7 x 5 -or- 5 x 7	178 x 127	2	Clustered	$ 0.78	$ 1.45
6.8 x 9.6	173 x 244	1	Single	$ 1.76	$ 1.88
6.8 x 4.8	173 x 122	2	Clustered	$ 0.88	$ 1.51
6 x 12	152 x 305	2	Clustered	$ 0.94	$ 1.51
6 x 6	152 x 152	2	Clustered	$ 0.94	$ 1.51
6 x 4 -or- 4 x 6	152 x 102	3	Clustered	$ 0.63	$ 1.39

To maximize media throughput and minimize cost, print jobs sent to the CP-W5000DW duplex printer need to be planned in terms of 8x12. The table below referencing the trim stops will help you remember where the vertical slitter can trim each print width, as well as where the horizontal cutter can advance and trim the paper length.

Vertical Slitter and Horizontal Cutter Trim Stops

Vertical Trim Stops	8"	7"	6.8"	6"	
Horizontal Trim Stops	12"	11.7"	11"	10"	9.6"
	8"	6"	5"	4.8"	4"

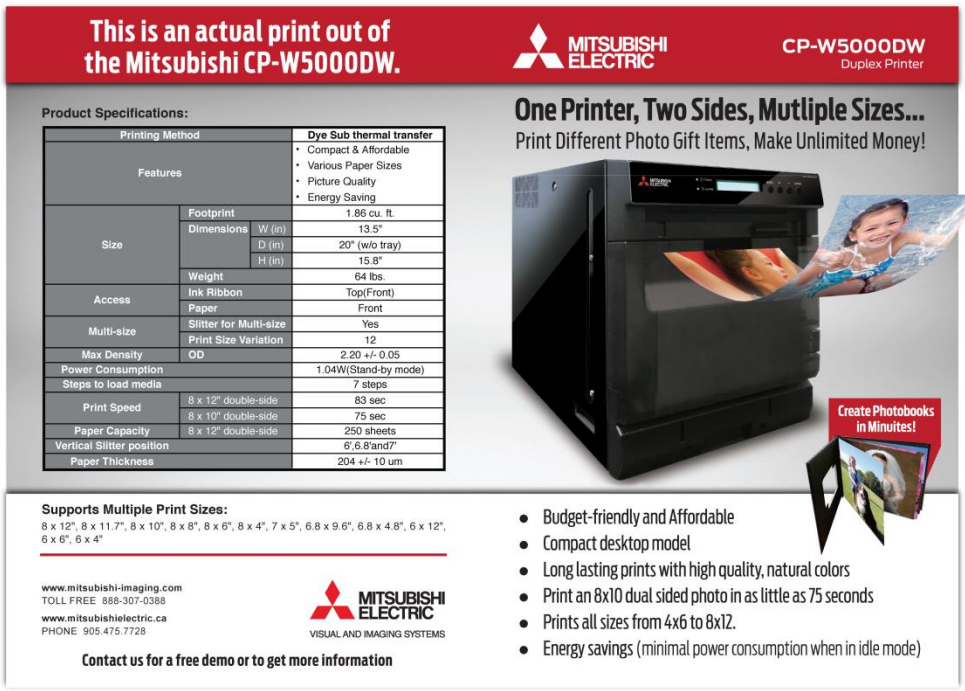
Try to maximize combination of prints to make 12" length, for example a piece of 4x8 plus a piece of 8x8, or 3 pieces of 4x6, or 2 pieces of 6x6 or 6x8. These combinations all have a total length of 12 inches, so each job will use up an 8x12 donor ink panel with minimal waste.

Calculating the cost per print is based on the price paid for the CK5000 paper roll PLUS the PK-5812 donor ink. Each box of CK5000 contains a roll of duplex printable photo paper that is 8" wide and up to 3,000 inches long. That is equivalent to 250 sheets of 8x12 duplex print papers capable of producing up to 500 pages of 8x12 images. Assuming a cost of $185 per box as the sample given in the first table above, the paper cost is approximately 6.17 cents per inch. Therefore, every 1x8 strip of paper advanced will be 6.17 cents. Since a 4x6 print will advance a 4x8 piece of paper, that paper consumption would cost 24.67 cents.

Donor ink cost is calculated per panel of 8x12, so it is strongly recommended to maximize print jobs and minimize cost by combining prints that will use up an entire 8x12 panel per print job. Each box of PK5812 contains 2 rolls of donor ink, each roll yields 250 panels, so 500 panels per box. When printing nothing but 8x12 size images, CK5000 and PK5812 will have a 1-to-1 ratio in producing 250 sheets of dual sided 8x12 photo prints, totaling 500 pages.

Assuming that the PK5812 donor ink is acquired at a price of $285 per box, cost per 8x12 panel is 57 cents. Any print that is smaller than 8x12 per job will still use up an entire 8x12 ink panel per page for that job. So printing nothing but a 4x6 duplex print would have used up 2 panels of 8x12 ink at 57 cents each, one per page or side of this 4x6 duplex print, making the total ink cost $1.14. By combining 6 photos of 4x6 into one print job, 3 duplex 4x6 prints can be created out of the same 2 panels of 8x12 ink, thus incurring the same ink cost of $1.14. So combining prints amortizes the cost of the 8x12 panel, distributing it across the total number of prints, thus lowering the cost per print.

To calculate the total print cost, add the cost of your printed paper to the cost of the ink panel used to generate the print. Refer to the top table above for the different cost per print generated by each size. Again, please note that print cost can be significantly reduced if you plan your prints and combine different sizes together to maximize each print job, for example, combining a 4x8 with an 8x8, or a 5x7 and a 6x8, etc.



Unlike other dye-sub duplex printers available today, the roll-fed paper mechanism of the Mitsubishi CP-W5000DW duplex printer is the most economical in terms of media consumption. It also allows the printer to provide the maximum capacity of prints while maintaining its compact, desktop size. Plus, the unique built-in vertical slitter along with its horizontal cutter gives you versatility and economy no other dye sub printer can offer, while offering a wide variety of print sizes.

Mitsubishi CP-W5000DW is the most versatile dye-sublimation duplex printer in the market when you consider the print sizes it offers along with its capacity. For more information or a free demo, please contact as at (888) 307-0309 or email us at TSupport@meus.mea.com.