



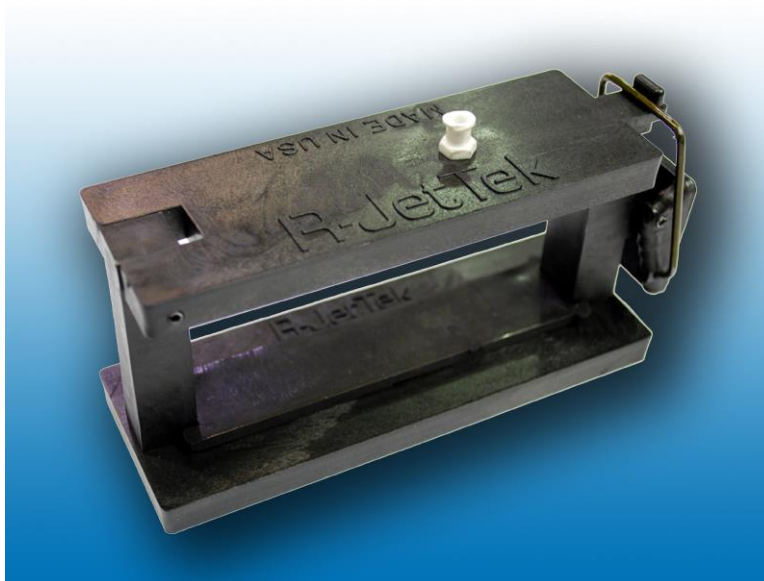
EasyFill-M1

Instructions

(#1120)

Specific Cartridges:

Canon: PGI-5, 220, 225, 250
CLI-8, 42, 221, 226, 251
HP: 564, 902, 920, 934, 935
Lexmark: 100



Kit Contents:

- (4) each #1951, 30 ml/cc Syringe
- (1) each #1952, 60 ml/cc Syringe
- (1) each #1120, EasyFill-M1 (see details below)

Parts Breakdown for the EasyFill-M1 (#1120)

Part Name	Qty	Purpose
M1 Fixture	1	Main body which holds the cartridge
Round Rubber Seal	1	Seals the Exit Port (Egress) of the cartridge
Rubber Spacer (small)	1	Levels taller cartridges, like the Canon CLI-8 and CLI-42
Rubber Spacer (medium)	1	Levels medium cartridges like the HP 920
Rubber Spacer (large)	1	Levels shorter cartridges like the Canon 225
Long Rubber Seal	1	Seals the top of the cartridge (upside down in M1)
Height Spacer (H)	1	Adjust the height of all HP 564, 902, 934, 935, 920, & some Canon cartridges
Cartridge Guide (H1)	1	Aligns the HP 564XL, 902XL, 920XL, and 935XL CMY cartridges
Cartridge Guide (H2)	1	Aligns the HP 564XL, 902, and 934 Black cartridges
Cartridge Guide (H3)	1	Aligns the HP 902XL, 920XL, and 934XL Black cartridges
Height Spacer (C)	1	Adjust the height of the smaller Canon cartridges
Cartridge Guide (C1)	1	Aligns the Canon CLI-8 and CLI-42 cartridges
Cartridge Guide (C2)	1	Aligns the Canon PGI-220/225 cartridges
Cartridge Guide (C3)	1	Aligns the Canon CLI-221/226 cartridges
Cartridge Guide (C4)	1	Aligns the Canon PGI-5 cartridge
Cartridge Guide (C5)	0	Aligns the Canon 250/251 cartridge (not included)
Height Spacer (L)	1	Adjust the height of Lexmark 100 series cartridges
Cartridge Guide (L1)	1	Aligns the Lexmark 100A Black cartridge
Cartridge Guide (L2)	1	Aligns the Lexmark 100A CMY cartridges

Other Suggested Products

Visit the R-JetTek website at www.rjettek.com to see all inks and other available items. Below are the most popular items for these cartridges:

Products Available at R-JetTek

- #1813-OR, Small Cap (seals exit port for Canon and HP cartridges)
- #1814-OR, Large Cap (seals exit port for Canon and HP cartridges)
- Cartridge Specific Labels
- Anti-Static or Poly Bags
- Cartridge Boxes
- #1120-C5, Canon 250/251 Cartridge Guide for the EasyFill-M1
- #LAB109, Yellow Remove Tab – used with the Sealing Tape shown below

Products Available at Alternate Sources

- Sealing Tape, 3/8 in. x 180 yds, Red (p/n: JVCC BST-24) – used to seal the Air Vent opening on top of the cartridges
- 140 ml/cc syringe – used for filling the HP 902XL, 920XL, and 934XL black cartridges

Cartridge Setup Guide

Select the cartridge you would like to fill below, and then use the listed items beneath the cartridge to help you configure the EasyFill-M1 fixture. **Caution:** It is very important to select the correct parts in order to insure an air tight seal around the cartridge while it is mounted in the M1 fixture.

HP 564XL, 902, 934 Black

- **Medium** Rubber Spacer
- **H** Height Spacer
- Long Rubber Seal ([indent down](#))
- **H2** Cartridge Guide

HP 902XL, 920XL, 934XL Black

- **Medium** Rubber Spacer
- **H** Height Spacer
- Long Rubber Seal ([indent down](#))
- **H3** Cartridge Guide

HP 564, 564XL, 902XL, 920, 920XL, 935XL Colors

- **Medium** Rubber Spacer
- **H** Height Spacer
- Long Rubber Seal ([indent down](#))
- **H1** Cartridge Guide

Canon PGI-220/225 Black

- **Large** Rubber Spacer
- **C** Height Spacer
- **H** Height Spacer (as needed)
- Long Rubber Seal ([indent down](#))
- **C2** Cartridge Guide

Canon CLI-221/226 Color

- **Large** Rubber Spacer
- **C** Height Spacer
- **H** Height Spacer (as needed)
- Long Rubber Seal ([indent down](#))
- **C3** Cartridge Guide

Canon PGI-250 and CLI-251

- **Medium** or **Large** Rubber Spacer
- **C** Height Spacer
- **H** Height Spacer (as needed)
- Long Rubber Seal ([indent down](#))
- **C5** Cartridge Guide ([purchased separately Part #: 1120-C5](#))

Canon PGI-5 Black

- **Small** Rubber Spacer
- **H** Height Spacer (as needed)
- Long Rubber Seal ([indent down](#))
- **C1** Cartridge Guide

Canon CLI-8, CLI-42 Color

- **Small** Rubber Spacer
- **H** Height Spacer (as needed)
- Long Rubber Seal ([indent down](#))
- **C1** Cartridge Guide

Lexmark 100A Black

- **Large** Rubber Spacer
- **L** Height Spacer
- Long Rubber Seal ([indent up](#))
- **L2** Cartridge Guide

Lexmark 100A Color

- **Large** Rubber Spacer
- **L** Height Spacer
- Long Rubber Seal ([indent up](#))
- **L1** Cartridge Guide

Note: The EasyFill-M1 may work with more cartridges than are listed above.

Recommendations:

1. It is recommended that you **use virgin cartridges** for the initial cycle. Cartridges that have been remanufactured using other methods may prevent a vacuum from developing, which is required using the M1.
2. Some Canon cartridges are transparent. This may assist you in learning the M1 process by viewing the ink flow inside the cartridge.
3. Use the Cartridge Spec Chart (pages 6-7) to obtain the cartridges weights and the associated inks.
4. Reference the Cartridge Diagram on page 8 as needed.

Cartridge Filling Process Instructions

Start with an empty cartridge. See the Cartridge Spec Chart (pages 7-8) for the weights and associated inks. Use a centrifuge to obtain the correct empty weight for the EasyFill-M1 filling process. Reference the cartridge diagram on page 8 as needed.

1. Place the appropriate Rubber Spacer (see Cartridge Setup Guide on page 3) into the small rectangular hole in the EasyFill-M1 lid. [Figure 1](#)
2. Place the appropriate Height Spacer (see page 3) into the bottom of the EasyFill-M1. [Figure 2](#)
3. Place the Long Rubber Seal on top of the Height Spacer ([Figure 3](#)). **Caution:** To prevent a vacuum leak from occurring place the small **indent facing down** in the Long Rubber Seal for **HP and Canon** cartridges. For **Lexmark** place the **indent facing up**.
4. Place the appropriate Cartridge Guide(s) (see page 3) over the Long Rubber Seal. [Figure 4](#)
5. Place the Round Seal on the lid as shown in [Figure 5a and 5b](#). **Note:** This may already be installed on your M1 fixture.
6. Place the cartridge into the selected Cartridge Guide in the M1 fixture with the top of the cartridge facing down, and the Exit/Egress Port on the right as shown in [Figure 6](#). The Exit Port must line up directly beneath the Luer Fitting and the Round Rubber Seal. See [Figure 5b & 7](#).
7. Close and latch the lid to the base of the M1. [Figure 7](#).

Note: Use a new syringe, because old syringes may cause a loss of vacuum. Expect about a 25 fill life cycle from one syringe. Select the proper size syringe for the cartridge you are filling. Use at least a 30 ml/cc syringe for the regular sized cartridges, and for the larger black cartridges use the 60 ml/cc syringe. For the HP **902XL**, **920XL**, and **934XL** Black Cartridges you will need to use a 140 ml/cc syringe ([available online](#)).

8. Test the cartridge and M1 fixture for an air tight seal by attaching the syringe to the luer fitting and pulling up on the syringe plunger. The plunger should return to about the 1ml mark. If you have a good seal go to the next step, if not go to the Troubleshooting Guide (page 8).



Figure 1



Figure 2



Figure 3



Figure 4

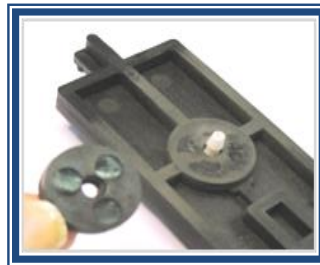


Figure 5a



Figure 5b



Figure 6

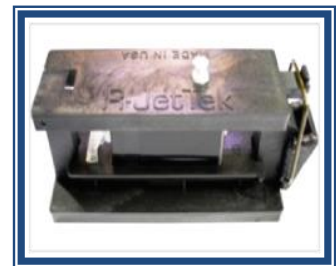


Figure 7

9. Select the correct ink and filling amount for the cartridge you are filling from the Cartridge Ink and Weight Chart (pages 6-7). **Special Note:** You may want to add 2-3 extra milliliters as a buffer (this will be explained later).



Figure 8



Figure 9

10. Attach the syringe to the luer on the top of the EasyFill-M1 (see Figure 8). **Caution:** Do not over tighten the syringe to the luer fitting as this may damage the luer or syringe threads, and may cause a vacuum leak.
11. Pull up on the syringe plunger to remove air from the inside the cartridge. Bubbles will appear in the syringe, this is to be expected. See Figure 9
12. Keep the plunger extended for a couple of seconds, and then release the plunger. The vacuum created will pull the ink into the cartridge. You may need to repeat steps 10 and 11 until the ink will no longer be pulled into the cartridge. At this point the cartridge is as full as it can or should be.



Figure 10



Figure 11

Note: During the filling process ink will have filled in the area above the sponge. It is approximately 1-2 ml of ink (expect maybe 3 ml for the 902XL, 920XL, and 934XL Black cartridges).

13. This can be removed by pulling on the syringe until you extract out 1-2 ml of ink, and then hold the syringe plunger in place while you remove the syringe from the M1. **Note:** This step will prevent ink from getting in the Vent Maze at the top of the cartridge.



Figure 12



Figure 13

14. Set the cartridge right side up on a paper towel for a couple of minutes to catch any excess ink (if any).
15. Clean the cartridge and place a cap on the Exit Port using the #1813-OR (small) or #1814-OR (large), but only for Canon and HP. See Figure 10 (this picture shows the large)
16. Place the appropriate "Remanufactured" cartridge label over the top of the OEM label.
17. Place a piece of sealing tape over the opening of the air vent maze to seal it. You may want to also add a Pull Tab (#LAB109) to the end of the sealing tape for ease of removal. See Figure 11
18. It is recommended to seal the cartridge in an anti-static bag (if it has a chip), or a poly bag (if no chip).
19. If you are going to fill the next cartridge using a different color ink you will need to clean the M1. Remove and clean the Round Rubber Seal, and run water through the White Luer Fitting (Figure 12). Wipe dry and replace the seal as shown in Figure 13.

Cartridge Ink and Weight Chart

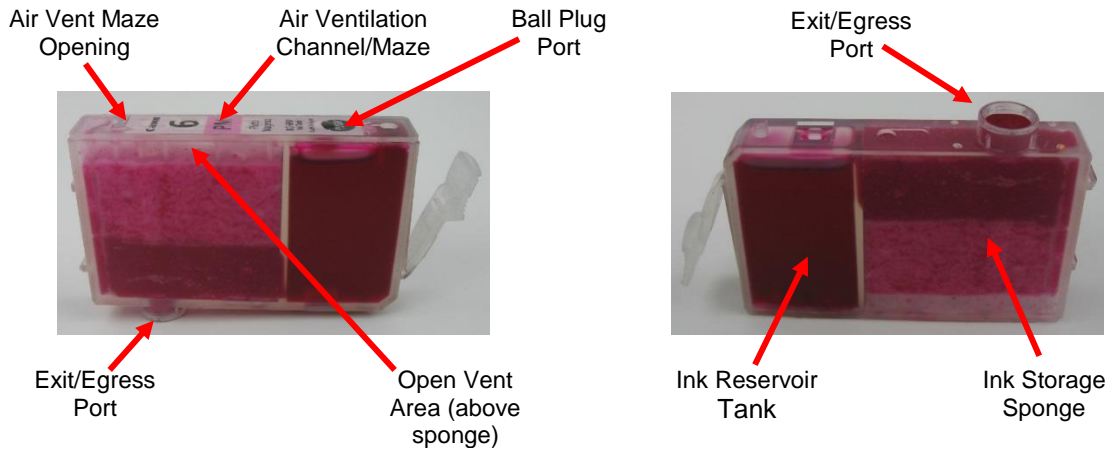
Mfg	Cart No.	Ink Type	Ink Part #	OEM Full Wt(g)	Empty Wt(g)	Ink Fill Amount (ml)	
Canon							
Canon	PGI-5 BK	Pigment	IJBKP44	46	20	26	
Canon	CLI-8 BK	Dye	IJBK797	27	14	13	
Canon	CLI-8 C	Dye	IJC122	27	14	13	
Canon	CLI-8 M	Dye	IJM122	27	14	13	
Canon	CLI-8 Y	Dye	IJY122	27	14	13	
Canon	CLI-42 BK	Dye	BK159	27	14	13	
Canon	CLI-42 C	Dye	C158	27	14	13	
Canon	CLI-42 M	Dye	M158	27	14	13	
Canon	CLI-42 Y	Dye	Y158	27	14	13	
Canon	CLI-42 PC	Dye	CL159	27	14	13	
Canon	CLI-42 PM	Dye	ML159	27	14	13	
Canon	CLI-42 GY	Dye	BK158	27	14	13	
Canon	CLI-42 LGY	Dye	BK157	27	14	13	
Canon	PGI-220 BK	Pigment	IJBKP44	35	16	19	
Canon	CLI-221 BK	Dye	IJBK124	21	11	10	
Canon	CLI-221 C	Dye	IJC144	20	11	9	
Canon	CLI-221 M	Dye	IJM144	20	11	9	
Canon	CLI-221 Y	Dye	IJY144	20	11	9	
Canon	CLI-221 GY	Dye	IJBK123	20	11	9	
Canon	PGI-225 BK	Pigment	IJBKP44	35	16	19	
Canon	CLI-226 BK	Dye	IJBK124	20	11	9	
Canon	CLI-226 C	Dye	IJC144	20	11	9	
Canon	CLI-226 M	Dye	IJM144	20	11	9	
Canon	CLI-226 Y	Dye	IJY144	20	11	9	
Canon	CLI-226 GY	Dye	IJBK123	20	11	9	
Canon	PGI-250 BK	Pigment	BKP235	33	18	15	
Canon	CLI-251 BK	Dye	BK135	19	13	6	
Canon	CLI-251 C	Dye	C135	19	13	6	
Canon	CLI-251 M	Dye	M135	19	13	6	
Canon	CLI-251 Y	Dye	Y135	19	13	6	
Canon	CLI-251 GY	Dye	BK130	19	13	6	
Canon	PGI-250XL BK	Pigment	BKP235	40	18	22	
Canon	CLI-251XL BK	Dye	BK135	24	13	11	
Canon	CLI-251XL C	Dye	C135	24	13	11	
Canon	CLI-251XL M	Dye	M135	24	13	11	
Canon	CLI-251XL Y	Dye	Y135	24	13	11	
Canon	CLI-251XL GY	Dye	BK130	24	13	11	
Canon	PGI-255XXL BK	Pigment	BKP235	59	24	35	

Cartridge Ink and Weight Chart – 2nd Sheet

Mfg	Cart No.	Ink Type	Ink Part #	OEM Full Wt(g)	Empty Wt(g)	Ink Fill Amount (ml)	
HP							
HP	564 BK	Pigment	BKP249/BKP89	31	20	11	
HP	564 BK	Dye	BK143	21	16	5	
HP	564 C	Dye	IJC143	21	16	5	
HP	564 M	Dye	IJM143	21	16	5	
HP	564 Y	Dye	IJY143	21	16	5	
HP	564XL BK	Pigment	BKP249/BKP89	38	20	18	
HP	564XL BK	Dye	BK143	25	16	9	
HP	564XL C	Dye	IJC143	27	16	11	
HP	564XL M	Dye	IJM143	27	16	11	
HP	564XL Y	Dye	IJY143	27	16	11	
HP	902 BK	Pigment	BKP227	30	20	10	
HP	*902 CMY						
HP	902XL BK	Pigment	BKP227	60	35	25	
HP	902XL C	Pigment	CP227	28	15	13	
HP	902XL M	Pigment	MP227	28	15	13	
HP	902XL Y	Pigment	YP227	28	15	13	
HP	920 BK	Pigment	IJBKP89/249	34	20	14	
HP	920 C	Dye	IJC143	21	16	5	
HP	920 M	Dye	IJM143	21	16	5	
HP	920 Y	Dye	IJY143	21	16	5	
HP	920XL BK	Pigment	IJBKP89/249	72	34	38	
HP	920XL C	Dye	IJC143	25	15	10	
HP	920XL M	Dye	IJM143	25	15	10	
HP	920XL Y	Dye	IJY143	25	15	10	
HP	934 BK	Pigment	BKP225	34	20	14	
HP	*935 CMY						
HP	934XL BK	Pigment	BKP225	63	33	30	
HP	935XL C	Pigment	CP225	28	15	13	
HP	935XL M	Pigment	MP225	28	15	13	
HP	935XL Y	Pigment	YP225	28	15	13	
Lexmark							
Lex	100A BK	Pigment	BKP100	29	20	9	
Lex	100A C	Dye	C85	17	13	5	
Lex	100A M	Dye	M80	17	13	5	
Lex	100A Y	Dye	Y72	17	13	5	
Lex	100XLA BK	Pigment	BKP100	41	22	19	
Lex	100XLA C	Dye	C85	23	14	9	
Lex	100XLA M	Dye	M80	23	14	9	
Lex	100XLA Y	Dye	Y72	23	14	9	

***Important:** Please note that the HP 902 and 935 standard yield cartridges are not shown here. Although they are similar in the exterior design of the HP 920 cartridges, the internal design is different. This design difference will not work with the M1.

Cartridge Diagram



Troubleshooting Guide for the EasyFill-M1

Pre-Test: Perform a pre-test on the EasyFill-M1 unit before each use. This will insure that the unit is performing as expected before filling a batch of cartridges, and will help in identifying defective cartridges. You will need a known good (virgin empty) cartridge, a new syringe, and all the required parts installed with the cartridge in the M1 fixture.

1. Take the syringe, and make sure that the plunger is all the way down. Then attach the syringe to the top of the M1 fixture, with the cartridge and all required parts installed.
2. Pull up on the syringe and release. The syringe should go back down to about the 1ml mark. Pull up on the syringe a couple of more times, and again, it should return to about the same mark. If not then you may have a leak.

If the unit fails to hold a vacuum try troubleshooting/replacing the following items in order:

- Make sure the long rubber seal is installed against the top side of the cartridge, and if it is a Canon or HP cartridge that the indent on the seal is facing down (away from the cartridge).
- Replace the test cartridge.
- Check the round rubber seal in the inside top of the fixture, and make sure that it is not cracked. If it is cracked then replace it.
- Make sure you have the correct parts installed for the cartridge you are testing. Including the correct rectangular rubber spacer.
- Replace the syringe, because sometimes these will leak when worn. This is why we suggest using a new syringe for the test.
- Make sure the cartridge is aligned in the fixture, and that the Egress/Exit port of the cartridge is aligned with the round rubber seal and the fill nipple of the fixture.
- If you still cannot get a good seal and vacuum call Tech Support at R-JetTek (719-578-0506, Ext. 105).

Cartridge Will Not Fill (either partially or not at all)

This is usually caused by one main factor, and that is air is getting into the cartridge (leaking). Leaking issues apply to troubleshooting steps 3-10 below:

1. Make sure that the cartridge is empty before starting. Use a centrifuge to empty cartridges.
2. The ink port element may be clogged with dry ink. Try pre-soaking with the Exit/Egress Port facing down onto a couple of layers of paper towels saturated with JIR99, and centrifuge afterward.

3. The cartridge has been remanufactured by a method where the ball plug was removed. This can cause air to seep around the plug, and prevents the syringe from pulling vacuum (or full vacuum). Use virgin cartridges to start, and then only virgins or cartridges where only this process was used.
4. The syringe is worn and leaking. Replace syringe.
5. The cartridge is not seated properly into Cartridge Guide, or centered between seals. Reseat the cartridge.
6. Check that the Round Rubber Seal is in place and properly installed. The seal must be installed with the 3 circles facing outward. Inspect the seal for cracks, because this can also cause a leak. Replace if cracked.
7. Check that the Long Rubber Seal is in place and properly installed. If cartridge height spacer was placed on top of the long rubber seal then switch them, because the long rubber seal must be against the cartridge in order for there to be an airtight seal. Also, if you are filling HP or Canon cartridges the indent hole must be facing down, away from the cartridge. Only face the indent upward if you are filling the Lexmark cartridges.
8. Check that you have the correct Rubber Spacer installed in the lid for the cartridge you are filling. This space insures that the cartridge will sit level and seal against the Long Rubber Spacer under the cartridge.
9. The label may have too many layers (if refilled several times) causing the top of the cartridge not to seal against the Long Rubber Seal. Remove labels or discard cartridge.
10. Cartridge is damaged and leaking...Discard.
11. If you continue to have issues with the cartridge not filling correctly or leaking call our Tech Support at 719-578-0506, Ext: 105.

Cartridge Will Not Print or Stops Printing (ink will not flow)

1. The ventilation maze can become clogged with ink. This prevents air from getting into the cartridge, and therefore, not releasing the ink into the printer. This can be caused by over filling. Make sure to fill by the charted OEM ink volume. You may have to discard the cartridge if you cannot clean the ink from the maze.
2. The "Pull" tape, which seals the end of the ventilation maze, has not been removed.
3. The printhead may be clogged. Run the "Clean Printhead" function on the printer.

Cartridge Leaks – from the ventilation maze or the exit/egress port

1. Cartridge was overfilled. Check cartridges vent area (visible Canon cartridges) during the filling process. If ink is in this area draw back on the syringe (before it is removed) to evacuate enough ink out to clear the vent area above the sponge. If there is ink in the maze you may have to clean and reprocess the cartridge.
2. Non-virgins can also cause leaks when filled by a more intrusive method, like removing the ball plug, which can damage the label or ball plug port.
3. Cartridges were transported from a low to a high altitude, or exposed to a hot environment during storage or shipment, which can over pressurize the cartridge and cause it to leak.