

# Control Line Fluid Loading Procedure

**IMPORTANT** Read and understand the safety data sheet (100-7227) before using this quick reference.

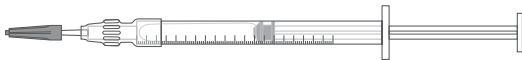
Control line fluid syringes are prefilled according to a specific IFC (integrated fluidic circuit) type.

IFC Types	Number of Syringes	Volume per Syringe (µL)
<ul style="list-style-type: none"> <li>48.48 Dynamic Array™ (GE or GT)</li> <li>LP 48.48</li> <li>LP 8.8.6</li> <li>Access Array™ 48.48</li> <li>12.765 Digital Array™</li> <li>48.770 Digital Array</li> <li>qdPCR 37K™</li> </ul>	2	300
<ul style="list-style-type: none"> <li>48.Atlas™ IFC</li> <li>96.96 Dynamic Array</li> <li>Flex Six™ (GE or GT)</li> <li>Juno™ LP 192.24</li> </ul>	2	150
<ul style="list-style-type: none"> <li>Juno 96.96 (GT)*</li> </ul>	4	150
<ul style="list-style-type: none"> <li>192.24 Dynamic Array (GE or GT)</li> <li>24.192 Dynamic Array (GE)</li> </ul>	1	150

\* 2 syringes are need to fill the accumulators; the other 2 syringes are for filling reservoirs [see the Genotyping with Juno Getting Started Guide (100-7074) for instructions].

- ❑ 1 Remove the syringes from the packaging and remove the IFC from the box and foil envelope.

**IMPORTANT** Do not evacuate air from the syringes prior to injecting control line fluid (Step 4).



- ❑ 2 Actuate the check valves:
  - a Place the IFC on a flat surface.
  - b Use the syringe with the shipping cap in place to actuate both check valves of the IFC with gentle pressure. Ensure that the poppets can move freely up and down (Figure 1).

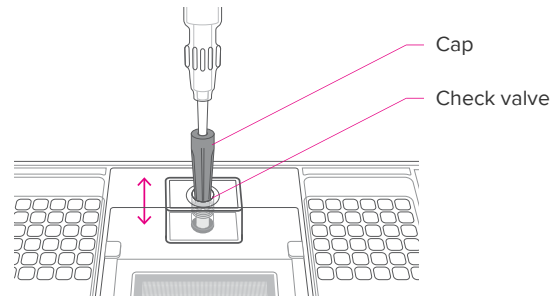


Figure 1. Actuating the check valve (96.96 IFC shown)

- ❑ 3 Hold the syringe firmly in 1 hand with the tip facing up and away from the IFC, pull back on the plunger slightly to create negative pressure, and remove the shipping cap with the other hand.
- ❑ 4 Holding the IFC at a 45° angle, insert the syringe tip into an accumulator (Figure 2).

**IMPORTANT**

- Avoid bending the syringe tip. Be careful when removing the syringe cap to prevent drips.
- Avoid getting control line fluid on the exterior of the IFC or in the inlets because this makes the IFC unusable. If this occurs, use a new IFC.

**2A. 192.24, 24.192, and 48.Atlas IFCs**

A1 corner\*

45°

\* Note the orientation of the A1 corner for the 192.24 and 24.192 Dynamic Array IFCs.

**2B. 96.96 and Flex Six IFCs**

45°

96.96 IFC shown

**2C. 48.48, LP 8.8.6, qdPCR 37K, and Digital Array IFCs**

45°

LP 48.48 IFC shown

Figure 2. Inserting the syringe into the accumulator

- 5 **For 192.24, 24.192, and 48.Atlas IFCS:** Use the syringe tip to press down gently on the black O-ring to move it (Figure 3A).

**For all other IFCS:** Insert the syringe tip into one of the spaces between the arms of the “X” at the top of the valve and then press down gently to move the black O-ring to the side (Figures 3B and 3C).

Visually confirm that the O-ring has moved.

- 6 Release the control line fluid:
  - a Press the syringe plunger to release the control line fluid into the accumulator while maintaining the 45° angle to allow the fluid to flow away from the O-ring.
  - b Slowly inject the control line fluid by pushing down on the syringe plunger. The control line fluid flows into the accumulator through the open check valve. Use the entire contents of the syringe.
  - c After fully depressing the plunger, wait approximately 5 sec before withdrawing the syringe. Before removing the syringe from the accumulator, ensure that all of the control line fluid and air are purged from the syringe to avoid dripping fluid on the surface of the IFC. Control line fluid or air remaining in the syringe tip is normal.
- 7 Check to ensure that the O-ring returns to its normal position after the syringe is removed.
- 8 Follow the instructions in the protocol to either prime the IFC on the IFC controller or Juno, or pipet additional reagents into the IFC reservoirs.

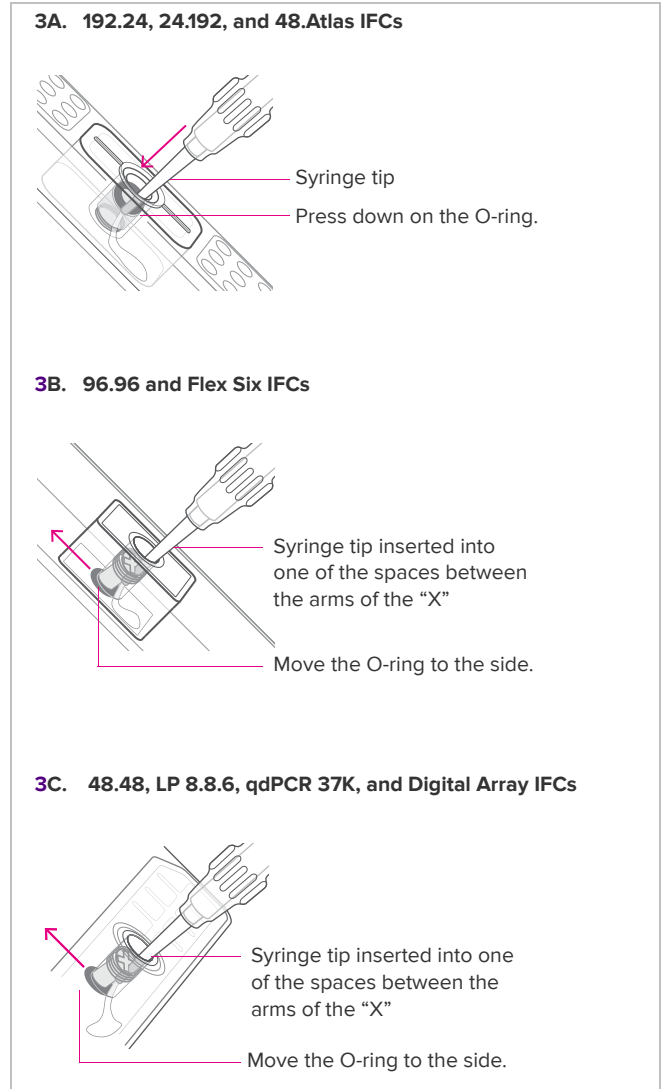


Figure 3. Injecting control line fluid into the IFC

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