Syringe loading
Alaris™ PCA and Syringe Modules

Step one—open the syringe barrel clamp (clear piece).
1. Pull the clamp out and hold it out.
2. Rotate the clamp to left clockwise or counterclockwise and gently release it.

Step two—raise the drive head (gray in color) to the fully extended position.
1. Twist the gripper control clockwise and hold it.
2. Raise the drive head to the full extension.
3. Gently release the gripper control.

Step three—load the syringe.
1. Insert the syringe barrel flange between the barrel flange grippers.
   
   **Note:** Ensure the syringe is loaded with the syringe labeling and graduation marks facing forward for easier viewing.

Step four—lock the syringe in place.
1. Pull the syringe barrel clamp (clear piece) out and hold and rotate it until it lines up with the syringe.
2. Gently release the clamp against the syringe.

Step five—lower the drive head and lock the plunger in place.
1. Twist the gripper control clockwise and hold it.
2. While holding the gripper control open and holding smaller syringes by the plunger, gently lower the drive head until it contacts the plunger.
3. Gently release the gripper control.

Additional instructions
1. Ensure an approved syringe is used (reference the user manual or tip sheets titled: Alaris™ Syringe module: compatible syringes and flow rate ranges and Alaris™ Syringe Module: compatible prefilled normal saline syringes and flow rate ranges).
2. Ensure the syringe is chosen correctly on the display. Selecting an incorrect syringe manufacturer and size may cause an underinfusion or overinfusion to the patient.
3. To decrease start-up delays, delivery inaccuracies and delayed generation of occlusion alarms, use the smallest syringe size possible and prime the tubing with the device, using the Prime Set with Syringe feature.
4. If the installed syringe is loaded correctly, but not recognized, check for the following:
   - If a label is between the syringe barrel and the barrel clamp, make sure that it does not erroneously enlarge the barrel size of the syringe.
   - If a needle-free valve or other component is added to the syringe, ensure that it is no larger than the diameter of the syringe barrel.

Thick labeling or adding a component to the syringe that is larger than the diameter of the syringe may prevent the device from correctly recognizing the installed syringe. Selecting an incorrect syringe may cause an underinfusion or overinfusion to the patient. If the issue continues despite the above troubleshooting, send the device to your facility’s biomedical engineering department for servicing.

For product support, contact Customer Advocacy at 888.812.3266 or customerfeedback@bd.com
For technical support, contact Instrument Technical Support at 866.488.1408.
For product orders, contact Customer Order Management at 800.482.4822.

⚠️ See reverse side for applicable warnings and cautions.

要点：For complete instructions, refer to the BD Alaris™ System User Manual at bd.com
WARNING: Before loading the syringe, check it for damage or defects.

WARNING: Ensure that syringe barrel, flange and plunger are installed and secured correctly. Failure to install syringe correctly can result in uncontrolled fluid flow to the patient, and can cause serious injury or death.

WARNING: Ensure syringe sizes and models are compatible with the syringe module. Use of incompatible syringes can cause improper pump operation resulting in inaccurate fluid delivery, insufficient occlusion (blockage) sensing and other potential problems.

WARNING: Use the smallest compatible syringe size necessary to deliver the fluid or medication; this is especially important when infusing high-risk or life-sustaining medications at low infusion rates (for example, <5 mL/h, and especially flow rates <0.5 mL/h). Using a larger syringe when infusing at low rates can lead to inadequate syringe pump performance including delivery inaccuracies, delay of therapy and delayed generation of occlusion alarms. This is due to the increased friction and compliance of the syringe stopper with larger syringes.

WARNING: Electronically prime the syringe pump system before starting an infusion or after replacing a near-empty syringe with a replacement syringe.

WARNING: Failure to use the PRIME SET WITH SYRINGE feature after every syringe change can significantly delay the infusion delivery start-up time and lead to delivery inaccuracies.

WARNING: Before loading or unloading the syringe, always turn off fluid flow to the patient, using the tubing clamp or stopcock. Uncontrolled fluid flow can occur when the administration set is not clamped or turned off, and can cause serious injury or death.

WARNING: Ensure that the displayed syringe manufacturer and syringe size correctly identify the installed syringe. Mismatches might cause an underinfusion or overinfusion to the patient that could result in serious injury and/or death.

WARNING: Selecting an incorrect syringe may cause an underinfusion or overinfusion to the patient.

CAUTION: When initially loading the syringe, allow for the volume of fluid contained in the administration set and retained in the syringe at the end of an infusion, as this “dead space” will not be infused.

CAUTION: To avoid an occlusion when loading a smaller size syringe, use extra care to close off administration set tubing and gently lower drive head against syringe plunger.

CAUTION: For smaller syringes (such as 1, 3 or 5 mL), stabilize the syringe plunger with thumb and index finger while carefully lowering the drive head. Ensure that the syringe plunger head makes contact with the small black sensor, located on the bottom of the drive head (between the plunger grippers).

CAUTION: Use the PRIME SET WITH SYRINGE channel option on the Alaris™ syringe module to speed up the engagement of the module’s mechanical components and decrease the syringe’s internal friction. These recommendations are especially important when infusing high-risk or life-sustaining medications at low infusion rates (for example, <5 mL/h and especially at flow rates <0.5 mL/h).

CAUTION: When using a 10 mL or smaller syringe, BD strongly recommends using an extension set with a pressure sensing disc, for improved pressure monitoring and shorter times to occlusion alarm.