Baxter Elastomeric Pumps

CLINICIAN GUIDE

Promoting Patient Mobility

Health Technology Safety Research Team
University Health Network

Baxter

Portfolio Overview:

Baxter Elastomeric Pumps are non-electronic medication pumps designed to provide ambulatory infusion therapy. Medication is delivered to the patient as the elastomeric "balloon" consistently deflates and gently pushes solution through the IV tubing and into the catheter/port.

The elastomeric technology promotes patient recovery and improves patient quality of life by allowing ambulatory treatment without the inconvenience of programming, power sources or alarms.

Baxter offers two different Elastomeric Pumps that operate using the same base technology:

Infusors:

- Offer duration infusion times from 12 hours to 7 days.
- Designed for ambulatory infusion of: Infusional Chemotherapy, Pain Management & Chelation Therapy.
- Available in a variety of volumes and flow rates.
- Multi-rate and Patient Control Module (PCM) formats available.
- SV Infusors (other than SV1 – 2C1701KP) flow within +/- 12.5% of the labelled flow rate.
- LV & SV1 Infusors flow within +/- 10% of the labelled flow rate.

  ***Please refer to Package Insert or the 'Consider These 5 Conditions' section of this booklet, as some environmental factors can affect the accuracy of the above flow rate parameters.**

Intermates:

- Offer duration infusion times from 30 minutes to 5 hours.
- Designed for ambulatory infusion of: Antibiotic & Antiviral medications.
- Available in a variety of volumes and flow rates.
- Flow within +/- 15% of the labelled flow rate.

  ***Please refer to Package Insert or the 'Consider These 5 Conditions' section of this booklet, as some environmental factors can affect the accuracy of the above flow rate parameters.**

Small Volume (SV) Devices: Small Elastomeric Reservoirs that can hold 105 to 130 ml of solution.

Large Volume (LV) Devices: Large Elastomeric Reservoirs that can hold 275 to 300 ml of solution.

Extra Large Volume (XLV) Devices: Extra large Elastomeric Reservoirs that can hold 550 ml of solution.

Indications:

- Infusional Chemotherapy
- Pain Management
  - Continuous Peripheral Nerve Block (CPNB)
  - Continuous Wound Infusion (CWI)
- Antibiotic/Antiviral Therapy (i.e. Cystic Fibrosis, Osteomyelitis, HIV)
- Iron Chelation

Administration Routes:

- Intravenous (IV)
- Intra-arterial
- Subcutaneous
- Epidural

* Baxter Elastomeric Pumps are safe to use on all central access lines, including PICCs.

Pump Features & Benefits:

- Ambulatory Design – No Cords, Outlets, Batteries or IV Poles
- Lightweight & discreet design
- Single-use disposable
- Latex-Free
- Silent Operation
- No programming required
- Built-in flow regulator eliminates rate manipulation
- Easy to Use

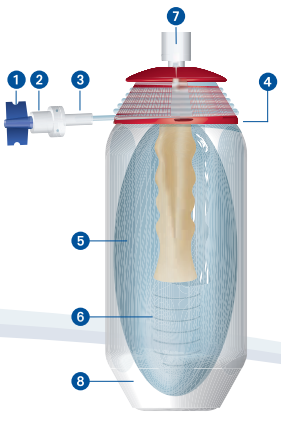
The Baxter Elastomeric Pump offers patients a medication delivery system that is comfortable, portable and adaptable to both their therapy and lifestyle needs.

The Infusor System

Bottle Top Colour	Code	Description	Nominal + Residual Volume	Nominal Flow Rate	Nominal Delivery Time	Maximum Volume	Units / Case
JACKSON DEVICES (SMALL VOLUME)							
	2C1073KJP	Half Day Infusor	60 ml + 1.5 ml	5 ml / hr	12 hours	65 ml	12
	2C1071KJP	Single Day Infusor	48 ml + 1.5 ml	2 ml / hr	1 day	65 ml	12
	2C1075KJP	Two Day Infusor	96 ml + 2.5 ml	2 ml / hr	2 days	105 ml	12
	S2C1083KJP	Infusor for Desferioxamine	48 ml + 1.5 ml	1 ml / hr	2.5 days	65 ml	12
	2C1080KJP	Multi-day Infusor	60 ml + 1.5 ml	0.5 ml / hr	5 days	65 ml	12
	2C1082KJP	Seven Day Infusor	84 ml + 2.5 ml	0.5 ml / hr	7 days	95 ml	12
SMALL VOLUME INFUSORS							
	2C1702KP	Infusor SV 2	96 ml + 1 ml	2 ml / hr	2 days	130 ml	12
	2C1701KP	Infusor SV 1	96 ml + 1 ml	1 ml / hr	4 days	130 ml	12
MULTI-RATE INFUSORS							
	2C1154KP	Infusor SV 1, 2, 3	96 ml + 1 ml	1, 2, 3 ml / hr	96-48-32 hours	130 ml	12
	2C1155KP	Infusor LV 2, 3, 5	240 ml + 3 ml	2, 3, 5 ml / hr	120-80-48 hours	300 ml	12
REGIONAL ANALGESIA MULTI-RATE INFUSOR WITH PREATTACHED PATIENT CONTROL MODULE							
	2C1811K	Infusor LV 5, 7, 12	240 ml + 3 ml	5, 7, 12 ml / hr	48, 34, 20 hours	300 ml	6
LARGE VOLUME INFUSORS							
	2C1063KP	Infusor LV 10	240 ml + 3 ml	10 ml / hr	1 day	300 ml	12
	2C1156KP	Infusor LV 7	272 ml + 3 ml	7 ml / hr	39 hours	300 ml	12
	2C1009KP	Infusor LV 5	240 ml + 3 ml	5 ml / hr	48 hours	300 ml	12
	2C1008KP	Infusor LV 2	240 ml + 3 ml	2 ml / hr	5 days	300 ml	12
	2C1087KP	Infusor LV 1.5	252 ml + 3 ml	1.5 ml / hr	7 days	300 ml	12
BASAL / BOLUS INFUSORS			**Residual Volume**				
	2C1955KJP	Basal / Bolus Infusor** Bolus 2 ml	1.5 ml	Basal 0.5 ml	Maximum 5 days	65 ml	12
	2C1976KJ	Basal / Bolus Infusor** Bolus 2 ml	2.5 ml	Basal 2 ml	Maximum 2 days	96 ml	6
	**** Must be used with Patient Control Module**						
	2C1079K	PCM 0.5 mL					12
	2C1067K	PCM 2.0 mL					6
	2C1100	Belt Bag					6

Diagram 1

Large Volume Infusor
Small Volume Infusor



Jackson Device

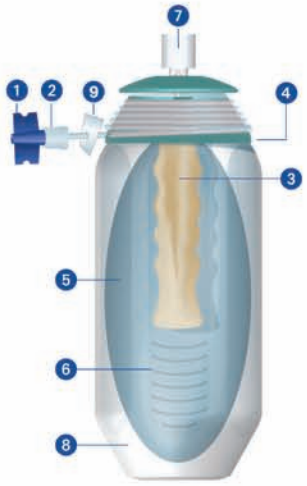
1. **Winged Luer Cap** protects the opening and stops the flow of medication.
2. **Luer Lock Connector** at the end of the tubing attaches the Infusor/Intermate to the catheter/port.
3. **Flow Restrictor** controls the infusion rate of the medication.
4. **Tubing** is kink-resistant and carries the medication from the device into the patient's body.
5. **Balloon Reservoir** holds the medication.
6. **Progression Lines** may be horizontal or vertical on the plastic housing. These show you the progress of the infusion.
7. **Fill Port Cap** protects the Infusor/Intermate device.
8. **Plastic Housing**.

The Intermate® System

Bottle Top Colour	Code	Description	Nominal + Residual Volume	Nominal Flow Rate	Nominal Delivery Time	Maximum Volume	Units / Case
SMALL VOLUME INTERMATES							
	2C1734K	Intermate SV 200	100 ml + 1 ml	200 ml / hr	30 minutes	105 ml	48
	2C1732K	Intermate SV 100	100 ml + 1 ml	100 ml / hr	1 hour	105 ml	48
	2C1730K	Intermate SV 50	100 ml + 1 ml	50 ml / hr	2 hours	105 ml	48
LARGE VOLUME INTERMATES							
	2C1744K	Intermate LV 250	250 ml + 3 ml	250 ml / hr	1 hour	275 ml	24
	2C1742K	Intermate LV 100	250 ml + 3 ml	100 ml / hr	2.5 hours	275 ml	24
	2C1740K	Intermate LV 50	250 ml + 3 ml	50 ml / hr	5 hours	275 ml	24
EXTRA LARGE VOLUME INTERMATES							
	2C1064K	Intermate XLV	500 ml + 5 ml	250 ml / hr	2 hours	550 ml	12
	2C1100	Belt Bag					6

Diagram 2

Large Volume Intermate
Small Volume Intermate



1. **Winged Luer Cap** protects the opening and stops the flow of medication.
2. **Luer Lock Connector** at the end of the tubing attaches the Infusor/Intermate to the catheter/port.
3. **Flow Restrictor** controls the infusion rate of the medication.
4. **Tubing** is kink-resistant and carries the medication from the device into the patient's body.
5. **Balloon Reservoir** holds the medication.
6. **Progression Lines** may be horizontal or vertical on the plastic housing. These show you the progress of the infusion.
7. **Fill Port Cap** protects the Infusor/Intermate device.
8. **Plastic Housing**.
9. **Slide Clamp.**

The Infusor System

CONSIDER THESE 5 CONDITIONS

The following factors will further impact delivery time

Ensure that patients are provided and instructed on accompanying patient guide

	CLINICAL INFORMATION	PRACTICAL GUIDANCE
1	**The Infusor flow rate is most accurate at 33.3˚C or 92˚F.*** Flow rate will decrease ~ 2.3% per 1˚C decrease in temperature. Flow rate will increase ~ 2.3% per 1˚C increase in temperature. *Half Day Infusor (2C1073KJP), LV10 Infusor (2C1063KP) and LV1.5 (2C1087KP) Infusor are designed to operate at optimum flow rate when Luer Lock Connector is at 31.1˚C or 88˚F.	Keep Luer Lock Connector at a constant temperature during infusion. Do NOT expose Infusor to extreme heat or forced re-warming. If Infusor is refrigerated, remove it from the refrigerator and allow the device to reach room temperature prior to use. * How to achieve the correct temperature during infusion: A temperature of 33.3˚C or 92˚F is achieved when the Luer Lock Connector is taped to a central (i.e. torso) location on the patient's skin.* A temperature of 31.1˚C or 88˚F is achieved when the Luer Lock Connector is taped to a peripheral (ie. limbs) location on the patient's skin.*
2	**The Infusor flow rate is most accurate with a diluent solution of 5% Dextrose.** An Infusor filled with 0.9% Sodium Chloride (NaCl) as a diluent will flow ~10% faster than labelled rate.	The viscosity of the solution may be affected by the temperature of the solution (drug &/or diluent), and the concentration of the solution thereby impacting the flow rate.
3	To ensure an accurate flow rate, the access system should be **22 GAUGE** or larger when using an Infusor.	A catheter smaller than 22 gauge will decrease the labelled flow rate. Ensure that patient's catheter is patent before connecting Infusor.
4	**Infusor flow rate is most accurate when filled to the labelled nominal volume.** Infusors flow faster than labelled flow rate if UNDERFILLED (filled to < 81% of optimal fill volume).	Infusors flow faster if underfilled. Use aseptic technique throughout the filling process. In context of a surgical procedure, do not place the Infusors into a sterile field. The fluid path is sterile whereas the outside of the device is not.
5	**Flow rate is most accurate when the balloon reservoir and the Luer Lock Connector are at the same height.** Flow rate can decrease ~ 0.5% per 2.5 cm if the balloon reservoir is below the Luer Lock Connector. Flow rate can increase ~ 0.5% per 2.5 cm if the balloon reservoir is above the Luer Lock Connector.	Once connected to the patient's catheter/port, instruct the patient to keep the top of the Infusor as close to the level of the Luer Lock Connector as possible. Provide a carrying case to assist patients in meeting this requirement.

The Intermate System

CONSIDER THESE 5 CONDITIONS

The following factors will further impact delivery time

Ensure that patients are provided and instructed on accompanying patient guide

	CLINICAL INFORMATION	PRACTICAL GUIDANCE
1	**The Intermate flow rate is most accurate at 21.1˚C or 70˚F.** Flow rate will decrease ~ 2.3% per 1˚C decrease in temperature. Flow rate will increase ~ 2.3% per 1˚C increase in temperature.	Keep Intermate at a constant temperature during infusion. Do NOT expose Intermate to extreme heat or forced re-warming. If Intermate is refrigerated, remove it from the refrigerator and allow the device to reach room temperature prior to use. Ensure that the Intermate remains close to the body and at room temperature (approx. 21.1˚C or 70˚F) while in use.
2	**The Intermate flow rate is most accurate with a diluent solution of 0.9% Sodium Chloride (NaCl).** An Intermate filled with 5% Dextrose as a diluent will flow ~10% slower than labelled rate.	The viscosity of the solution may be affected by the temperature of the solution (drug &/or diluent), and the concentration of the solution thereby impacting the flow rate.
3	To ensure an accurate flow rate, the access system should be **18 GAUGE** or larger when using an Intermate.	A catheter smaller than 18 gauge will decrease the labelled flow rate. Ensure that patient's catheter/port is patent before connecting Intermate.
4	**Intermate flow rate is most accurate when filled to the labelled nominal volume.** Intermates flow faster than labelled flow rate if UNDERFILLED (filled to < 81% of optimal fill volume).	Intermates flow faster if underfilled. Use aseptic technique throughout the filling process. In context of a surgical procedure, do not place the Intermate into a sterile field. The fluid path is sterile whereas the outside of the device is not.
5	**Flow rate is most accurate when the balloon reservoir and the Luer Lock Connector are at the same height.** Flow rate can decrease ~ 0.5% per 2.5 cm if the balloon reservoir is below the Luer Lock Connector. Flow rate can increase ~ 0.5% per 2.5 cm if the balloon reservoir is above the Luer Lock Connector.	Once connected to the patient's catheter/port, instruct the patient to keep the top of the Intermate as close to the level of the Luer Lock Connector as possible. Provide a carrying case to assist patients in meeting this requirement.

Pharmacy:

1) Jackson Device Filling Instructions:

1.

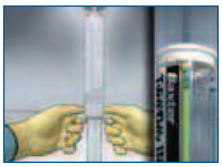
Ensure Winged Luer Cap is fastened to distal end of tubing. Remove paper tubing tape from the Jackson Device tubing.

2.

Draw up required drug and diluent syringes. Remove all the air from the syringes.

3.

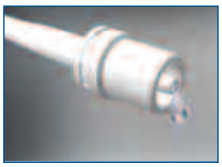
Remove Fill Port Cap retaining it for later use. Beginning with the diluent filled syringe, **gently** insert the tip of the syringe into the Fill Port and turn clockwise to lock.* (Do not attach a needle to the syringe as this will damage the Fill Port.)

4. 

Place the end of syringe plunger on work surface. Keeping the unit vertical, grasp syringe barrel and push slowly downward on the syringe to gradually force fluid into the Elastomeric Reservoir. Do not grasp the Jackson Device Housing during filling.

5.

Remove the syringe from the Fill Port. Replace the Fill Port Cap and lock by twisting in a counter clockwise direction.*

6. 

Remove the Winged Luer Cap retaining it for later use. This will allow the solution to move through the tubing and purge air from the system. Allow three drops of diluent to fall onto a 70% alcohol swab to visually confirm that the contents of the Jackson Device are flowing.

7.

If the device is flowing, attach the Winged Luer Cap. Continue filling the device (step 2-4) until all required solution has been added. Upon removal of the final syringe, replace the Fill Port Cap and lock by twisting in a counter clockwise direction.* If the Jackson Device is not flowing follow steps 8-11.

8.

Attach a luer adaptor or stopcock to the Jackson Device Luer Lock Connector.

9.

Attach a 10 ml syringe to the other side of the stopcock or luer adaptor. Ensure the stopcock is in the 'open' position.

10.

Pull back syringe plunger to create suction. Continue to apply suction to the distal end until fluid is observed in the syringe.

11.

Visually confirm that the contents of the Jackson Device are flowing and that the tubing is clear of air before use. Replace Winged Luer Cap.

***Caution: Gently lock syringe or Fill Port Cap. Overtightening can result in damage to Fill Port. Use aseptic technique throughout the procedure.**

Do not re-use the Jackson Device.

Pharmacy:

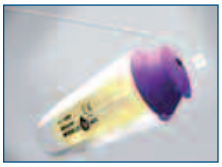
2) Infusor SV & LV Filling Instructions:

1.
Draw up require drug and diluent in syringes. Remove all air from syringes.

2.
Remove paper tubing tape from the Infusor tubing. Ensure Winged Luer Cap is fastened to distal end of tubing (Luer Lock Connector).

3.
Remove Fill Port Cap, retaining it for later use. Beginning with the diluent filled syringe, **gently** insert the tip of the syringe into the Fill Port and turn clockwise to lock.* (Do not attach a needle to the syringe as this will damage the Fill Port.)

4.
Place end of syringe plunger on work surface. Keeping the unit vertical, grasp syringe barrel and push slowly downward on the syringe to gradually force fluid into the Elastomeric Reservoir. Do not grasp the Infusor device Housing during filling.

5. 
Remove the syringe from the Fill Port. Replace the Fill Port Cap and lock by twisting in a counter clockwise direction.*

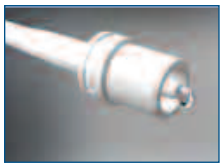
6.
Remove the Winged Luer Cap from the distal end of the tubing and retain for later use. This will allow the solution to move through the tubing and purge air from the system. Allow three drops of diluent to fall onto a 70% alcohol swab to visually confirm that the Infusor is flowing. Re-attach the Winged Luer Cap.

7.
If the Infusor is flowing, re-attach the Winged Luer Cap and go to step 12. If the Infusor is not flowing, follow steps 8-11.

8.
Remove Winged Luer Cap retaining it for later use. Luer lock a syringe tip connector or stopcock to the distal end of the Infusor tubing.

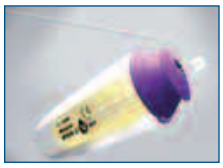
9.
Luer lock a 10 ml syringe to the syringe tip connector or stopcock. Ensure the stopcock is in the 'open' position.

10.
Pull back syringe plunger to create suction until fluid is observed in the syringe. Once fluid is observed close the stopcock, then, remove the syringe. Remove the syringe tip connector or the stopcock from the tubing.

11. 
Allow three drops of diluent to fall onto a 70% alcohol swab to visually confirm that the Infusor is flowing. Re-attach Winged Luer Cap.

12.
Remove Fill Port Cap retaining it for later use. Insert tip of drug filled syringe into Fill Port and turn clockwise to lock.*

13.
Place end of syringe plunger on work surface. Keeping the unit vertical, grasp syringe barrel and push slowly downward on the syringe to gradually force fluid into the Elastomeric Reservoir. Repeat with remaining syringes until all required solution has been added.

14. 
Upon removal of the final syringe, replace the Fill Port Cap and lock by twisting in a counter clockwise direction.* Wind the tubing around the top of the infusor, securing it in place.

***Caution: Gently lock syringe or Fill Port Cap. Overtightening can result in damage to Fill Port.**
Use aseptic technique throughout the procedure.

Do not re-use the Infusor.

Pharmacy:

3) Multi-rate Infusor Filling Instructions:

1.

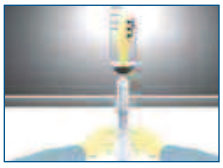
Remove the Fill Port Cap and retain for later use.

2.

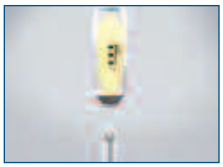
Remove all air from a 60 ml syringe.

3.

Insert tip of filled syringe into Fill Port and turn gently to lock.*

4. 

Place the end of syringe plunger on work surface. Keeping the unit vertical, grasp syringe barrel or flanges and push slowly downward on the syringe to gradually force fluid into the Elastomeric Reservoir. Do not grasp the Multirate Infusor device Housing during filling. To fill the Multriate Infusor to the desired volume, steps 2-4 may need to be repeated.

5. 

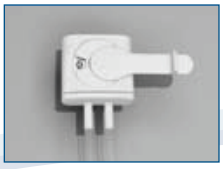
After the Multirate System is filled, remove syringe.

6.

Replace the Fill Port Cap.*

7.

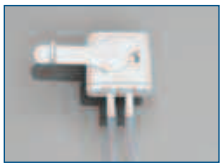
Remove the Winged Luer Cap and retain for later use.

8. 

Insert the Rate Adjustment Tool into the Multirate Infusor Control Module. Using the Rate Adjustment Tool, change the rate to the lowest labelled rate to initiate priming. Medication will automatically begin to purge air from the system. Visually confirm flow of fluid. If the Multirate Infusor is not flowing, follow steps A – D of the Force prime procedure.

9.

Using the Rate Adjustment Tool, turn counter-clockwise to change the rate to the middle labelled rate to continue priming the Multirate Infusor. Visually confirm flow of fluid. If the Multirate Infusor is not flowing follow steps A – D of the Force prime procedure.

10. 

Using the Rate Adjustment Tool, change rate to the highest labelled rate to continue priming the Multirate Infusor. When priming is complete, visually confirm flow of fluid and **adjust the Multirate Infuor System to prescribed flow rate**. Adjustment tool should be removed after the clinician has set the flow rate as it is not intended to be provided to the patient. Replace the Winged Luer Cap.

Force Prime Procedure:

A.

Attach a luer adaptor or stopcock to the Multirate Infusor Luer Lock Connector.

B.

Attach a 10 mL syringe to the other side of luer adaptor (or stopcock).

C.

Pull back syringe plunger to create suction.

D.

Visually confirm flow of fluid from Luer Lock Connector before using Multirate Infusor System. Ensure all air is purged from the delivery tubing. Replace the Winged Luer Cap.

***Caution: Gently lock syringe or Fill Port Cap. Overtightening can result in damage to Fill Port.**
Use aseptic technique throughout the procedure.

Do not re-use the Multirate Infusor System.

Pharmacy:

4) Regional Analgesia Infusor Filling Instructions:

1.

   Do not remove PCM shipping tab until system is primed. Confirm that the flow rate module setting is at 0.

2.

   Ensure all air is removed from syringe or filling device.

3.

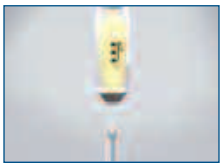
   Remove the Fill Port Cap and retain for later use.

4.

   Insert the tip of the filled syringe or filling device into the Fill Port and turn to lock.*

5.

   Place end of syringe plunger on work surface. Keeping the unit vertical, grasp syringe barrel or flanges and push slowly downward on the syringe to gradually force fluid into the Elastomeric Reservoir. Do not grasp the Regional Analgesia Infusor device Housing during filling. To fill the Regional Analgesia Infusor to the desired volume, steps 3-5 may need to be repeated.

6. 

   After the Regional Analgesia Infusor system is filled, remove the syringe or filling device.

7.

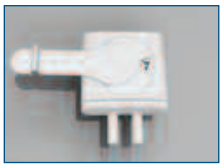
   Replace the Fill Port Cap.*

8.

   Remove the Winged Luer Cap and retain for later use.

9.

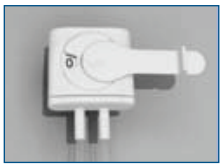
   Remove the Rate Adjustment Tool from the Regional Analgesia Infusor System tubing and insert into the Multirate Control Module. Using the Rate Adjustment Tool, change the rate to the lowest-labelled rate to initiate priming. Medication will automatically begin to purge air from the system. Visually confirm fluid is past the Y connector. If the Regional Analgesia Infusor is not flowing follow steps A – D of the Force prime procedure.

10. 

    Using the Rate Adjustment Tool, turn counter-clock wise to change the rate to middle labelled rate to continue priming the Regional Analgesia Infusor. Visually confirm flow of fluid. If the Regional Analgesia Infusor is not flowing follow steps A – D of the Force prime procedure.

11.

    Using the Rate Adjustment Tool, change the rate to the highest labelled rate to continue priming of the Multirate Infusor. Visually confirm flow of fluid. If the Regional Analgesia Infusor is not flowing follow steps A – D of the Force prime procedure.

12. 

    Change the flow rate of the flow control module to “0” with the rate adjustment tool.

13.

    Observe air and fluid flow into unclamped tubing and PCM through clear base. Visually confirm all air is purged through delivery tubing and fluid is flowing from distal end luer lock. Force prime PCM if fluid is not flowing from PCM.

14.

    Replace and tighten Winged Luer Cap.

Pharmacy:

4) Regional Analgesia Infusor Filling Instructions (continued):

15

Remove PCM Shipping Tab from PCM before connecting device to patient. Pull up on Shipping Tab to remove. Do not push down on Shipping Tab. **Failure to remove Shipping Tab will cause continuous infusion through PCM line and patient may receive higher than intended basal dose of medication.**

Force Prime Procedure:

A

To force prime the Multirate module: First, close the Slide clamp, and attach a luer adaptor or stopcock to the Regional Analgesia Infusor Luer Lock Connector. To force prime PCM: First, set the Flow Control Module to “0”, and attach a luer adaptor (or stopcock) to Luer Lock Connector.

B

Attach a 10 mL syringe to the other side of luer adaptor (or stopcock).

C

Pull back syringe plunger to create suction until fluid flow is visually confirmed (into PCM reservoir when force priming the PCM).

D

Visually confirm flow of fluid from Luer Lock Connector before using Multirate Infusor System. Ensure all air is purged from the delivery tubing. Replace Winged Luer Cap. If Multirate module is primed, open the Slide Clamp.

***Caution: Gently lock syringe or Fill Port Cap. Overtightening can result in damage to Fill Port. Use aseptic technique throughout the procedure.**

Do not re-use the RA Infusor System.

Pharmacy:

5) SV & LV Intermate Filling Instructions:

1.

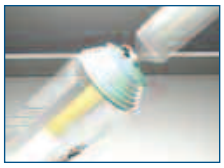
   Close the Slide Clamp.

2.

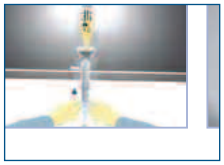
   With the delivery tubing in place, remove the Fill Port Cap and retain for later use.

3.

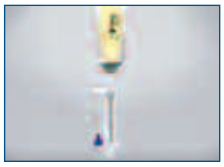
   Draw up required diluent and drug syringes. Expel all air from syringes. **Do not attach a needle to the syringes or you will damage the Fill Port**.

4. 

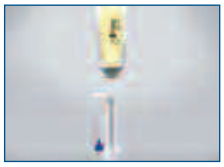
   Gently insert the syringe tip into the Fill Port and turn it clockwise to lock.*

5. 

   Use steady downward pressure on the syringe flanges or the syringe barrel. The steady downward pressure on the syringe will gradually push fluid into the Elastomeric Reservoir. Steps 3-5 may need to be repeated.

6. 

   After the Intermate is filled, remove the syringe.

7. 

   Gently twist the syringe counter-clockwise to separate from the Intermate.

8.

   Lock the Port Cap onto the Fill Port by carefully twisting in a clockwise direction.*

9.

   To prime the delivery tubing, remove the Winged Luer Cap. **Note: Failure to prime set at time of filling may result in flow rate difficulties.**

10.

    Open the Slide Clamp and let the delivery tubing prime. Visually confirm the flow of medication in the tubing and expel the air before use.

11.

    After the delivery tubing has primed, make certain the Slide Clamp is in the 'closed' position.

12.

    Reattach the Winged Luer Cap.

***Caution: Gently lock syringe or Fill Port Cap. Overtightening can result in damage to Fill Port. Use aseptic technique throughout the procedure.**

Do not re-use the Intermate.

Volume:

The flow rate of Baxter Elastomeric Pumps is most accurate when filled to the labeled nominal volume.

- Infusors and Intermates flow faster than labelled flow rate if underfilled (filled to < 81% of nominal fill volume).
- Nominal flow rate is achieved by utilizing the fill volumes listed in the Directions for use.

Solution Viscosity:

Infusors:

- The Infusor flow rate is most accurate with a diluent solution of 5% Dextrose.
- An Infusor filled with 0.9% Sodium Chloride (NaCl) will flow ~10% faster than labelled rate.

Intermates:

- The Intermate flow rate is most accurate with a diluent solution of 0.9% Sodium Chloride (NaCl).
- An Intermate filled with 5% Dextrose will flow ~10% slower than labelled rate.

Storage Instructions:

The Infusor/Intermate may need to be stored either in the refrigerator or at room temperature depending upon the medication being administered.

When stored in a refrigerator please ensure that the Infusor/Intermate is brought to room temperature before use. Do not use any external heat source to bring the Infusor/Intermate to room temperature.

REFRIGERATOR STORAGE:

- Ensure the area of the refrigerator where you store the Infusor/Intermate is clean and separate from food products.
- Keep the Infusor/Intermate within the plastic pouch provided or a zip loc bag when storing in a refrigerator.

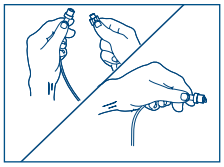
ROOM TEMPERATURE STORAGE:

- Ensure storage area is clean.
- Keep out of direct sunlight.
- Keep away from extreme heat sources such as an oven or heater.

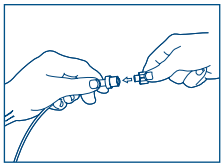
Nursing:

Connecting the Device:

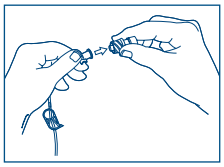
Connecting the Infusor or Intermate to the catheter/port:

1. 

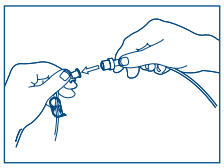
REMOVE THE WINGED LUER CAP FROM THE END OF THE INFUSOR OR INTERMATE TUBING. Check to make sure that liquid has moved to the end of the tubing.

2. 

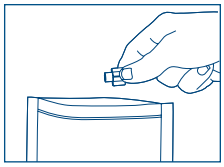
Replace the Winged Luer Cap.

3. 

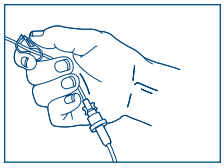
Flush the IV line as per institution protocol. Make sure that the patient's catheter is clamped, then remove and discard the catheter end cap.

4. 

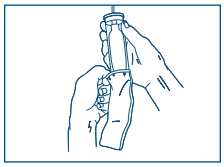
While still holding the IV line, pick up the Infusor/Intermate tubing, remove the Winged Luer Cap and connect the device tubing to the catheter with a quarter clockwise turn. Tape the Luer Lock Connector securely to the patient's skin (Infusor only).

5. 

Store the Winged Luer Cap in the bag the Infusor/Intermate came in. (You may need it later).

6. 

REMEMBER, unclamp the catheter and open any clamp on the device so that the fluid can start flowing.

7. 

Place the Infusor or Intermate either in its carrying bag, in a beltbag or pocket where it won't fall out or get damaged. Ensure the top of the device is carried as close to the level of the Luer Lock Connector as possible.

How Should the Device be Carried?

- The Luer Lock Connector (refer to Diagram 1) should always be taped to the patient's skin at approximately the same level as the top of the device (i.e. Fill Port Cap – refer to Diagram 1) of the Infusor/Intermate in order to maintain a consistent flow rate.
- Flow rate is most accurate when the Elastomeric Reservoir and the Luer Lock Connector are at the same height.
- Flow rate can decrease 0.5% per 2.5 cm if the Elastomeric Reservoir is below the Luer Lock Connector.
- Flow rate can increase 0.5% per 2.5 cm if the Elastomeric Reservoir is above the Luer Lock Connector.
- Provide a carrying case to assist patients in keeping the top of the device as close to the level of the Luer Lock Connector as possible.

Monitoring Infusion Progress

- Since the Infusor/Intermate delivers medication at a slow rate the elastomeric “balloon” reservoir will appear to be shrinking over several hours or days.
- Ensure that the IV tubing is not clamped or kinked.
- Utilize progression lines on the Infusor/Intermate housing to monitor infusion progress over time.
- Infusion is complete when the “balloon” is completely deflated and all eight indicator bumps (four on either side of balloon) on the inside of the device are clearly visible (refer to Diagram 3).

Diagram 3

1. **Indicator Bumps**
2. **Progression Lines**

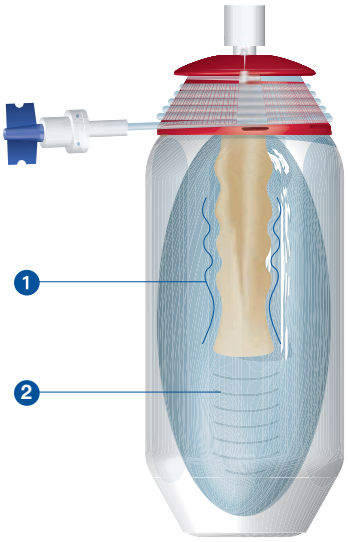
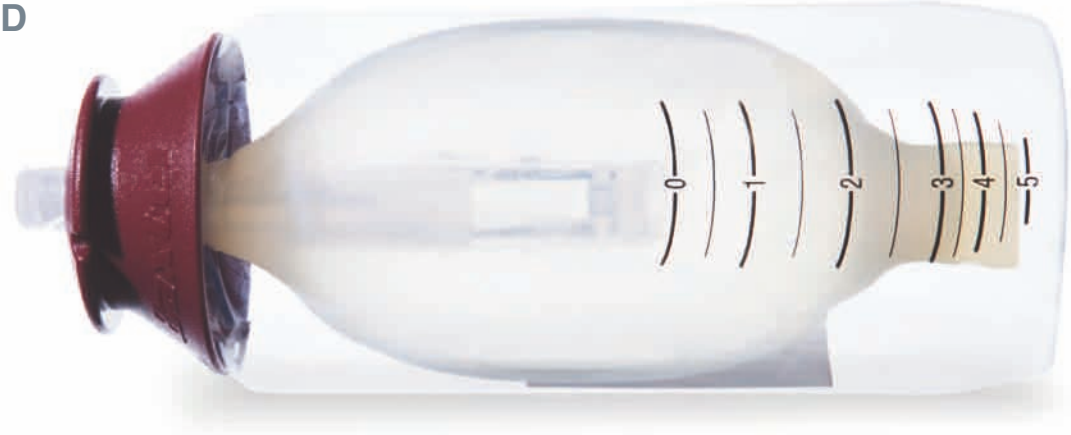


Diagram 4

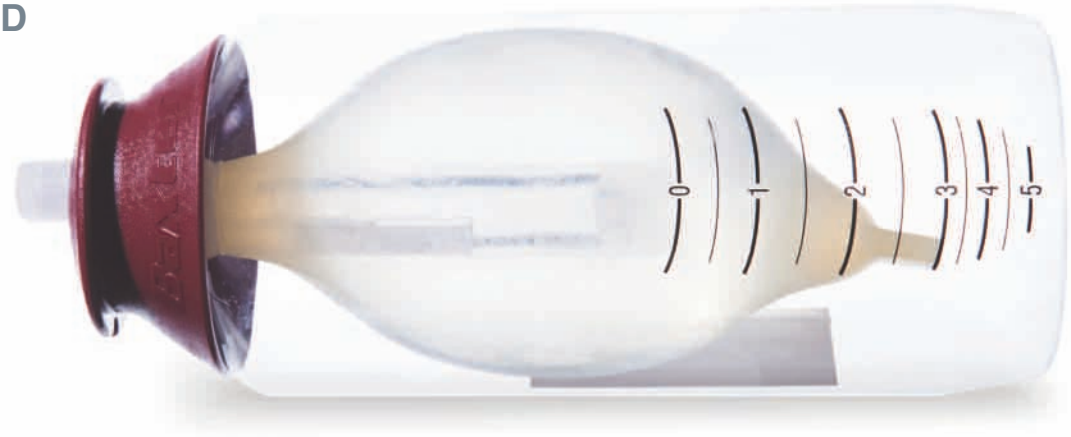
Infusion Progression - LV5 (2C1009KP)

Delivering accurate infusion. Continuously.

12 HRS INFUSED



24 HRS INFUSED



36 HRS INFUSED

Diagram 5

Infusion Progression - LV1.5 (2C1087KP)

Delivering accurate infusion. Continuously.

2 DAYS INFUSED

4 DAYS INFUSED

6 DAYS INFUSED

Patient FAQ's:

Bathing

- The Infusor/Intermate device should not be submerged or exposed to a direct stream of water.
- Place the Infusor/Intermate in a plastic bag OR on a flat surface outside the shower/bath.

Sleeping

- Place the Infusor/Intermate at approximately the same level to where the device connects to your catheter/port.
- The device can be placed on its side under your pillow.

Exercise

- It is acceptable to exercise with the Infusor/Intermate as long as the product remains close to room temperature and is not exposed to water. Follow your healthcare provider guidelines.

Pets

- The device is safe to use around pets, but ensure that it is protected from chewing and playing.

Environment

- The Infusor/Intermate can be utilized during everyday activities (e.g. cooking) as long as the device is in a location where it can remain at room temperature and is not exposed to extreme heat/cold.
- Keep device out of direct sunlight.

Travel

- It is safe to travel on planes that have pressurized cabins.

If you have any questions about what you've read here, please contact us at 1-888-719-9955.

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