

Clinical Need	Infusion Strategy	SmartBlock Programmability Feature
Maximize analgesia	Set the flow rate to meet the individual patient's needs	Set and re-set the pump flow rate throughout the patient's recovery
Minimize motor block	Dilute medication concentration by adding saline to the pump reservoir	Fill and re-fill the pump reservoir as many times as needed
Anesthetize severe pain	Set the bolus volume to meet the individual patient's needs	Set and re-set the bolus volume through the patient's recovery
Therapy duration	Adjust the reservoir volume according to the equation: Volume = (flow rate X 24 x days)	Fill and re-fill the pump reservoir as many times as needed

Proposed CPNB Strategy for Common Surgical Procedures		
Surgical Procedure	Suggested CPNB	Suggested Infusion Strategy
Total shoulder arthroplasty Rotator cuff repair Shoulder arthrodesis	Continuous interscalene block Continuous cervical paravertebral block	0.2% ropivacaine at 5 ml/hr 5 ml bolus
Total elbow arthroplasty Total wrist arthroplasty	Continuous cervical paravertebral block Continuous infraclavicular block	
Total hip	Continuous femoral nerve block	0.1% ropivacaine at 5 ml/hr 5 ml bolus
Total knee		
Ankle fusion	Continuous subgluteal sciatic nerve block	0.2% ropivacaine at 5 ml/hr 5 ml bolus
Total ankle arthroplasty		

Diluted Formulation (for every 100ml medication)				
Original Concentration	Desired Concentration	Volume		
		Original ml	Saline ml	Total ml
0.75%	0.70%	93	7	100
	0.65%	86	14	100
	0.60%	80	20	100
	0.55%	73	27	100
0.50%	0.45%	90	10	100
	0.40%	80	20	100
	0.35%	70	30	100
	0.30%	60	40	100
0.25%	0.20%	80	20	100
	0.15%	60	40	100
	0.10%	40	60	100

Flexibility and adaptability are important to achieving the optimal continuous nerve block for each patient. The chosen strategy should be designed to suit the needs of the individual patient. The infusion rate, concentration of the drug, reservoir volume and bolus volume should be modified as warranted to achieve the optimal nerve block. The ability to constantly change the SmartBlock's settings is a major advantage to utilizing CPNB with the SmartBlock over other pain therapy alternatives that cannot be easily modified and may therefore create a greater likelihood of unwanted side-effects or complications.

NOTE: This material is provided for educational purposes ONLY. The method and amount of medication administered, if any, is solely the decision of the physician.

WARNING: Medications used with this system should be administered in accordance with instructions and maximum dosage guidelines provided by the drug manufacturer.



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C4501 Rev.0

SmartBlock™

PERSONALIZING THE CONTINUOUS NERVE BLOCK

An easy to use mechanical device that delivers programmability options as unique as each individual patient.



Medical Team Operation Instructions

SmartBlock™

The SmartBlock provides a continuous, stable delivery of local anesthetic solution to the Nerve Block catheter. The SmartBlock enables the anesthesiologist to tailor the infusion strategy to best match each individual patient's unique pain needs throughout the course of treatment.

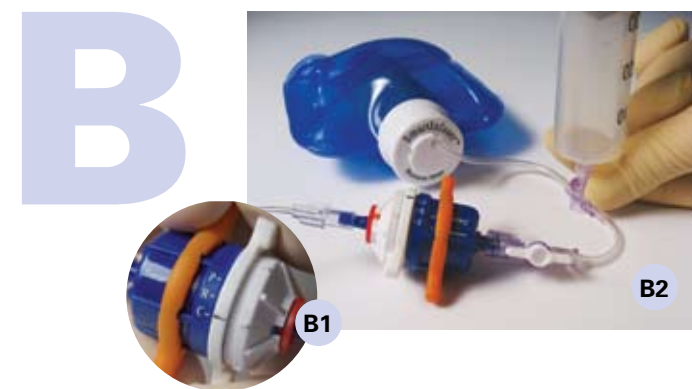
CONNECTING THE ADMINISTRATION SET



1. Remove the SmartInfuser Set from the sterile packaging.
2. Remove the compression unit from the sterile packaging.
3. Remove the caps from the regulator input port and from the compression unit tubing exit port and connect the male luer-lock connector of the tubing to the regulator input port.

NOTE: Verify that the luer-lock connectors are tightened.

FILLING THE PUMP



1. Position the SmartReg at C (closed, See Figure B1).
2. Remove the cap and fill the pump through the check valve using 50/60 cc syringe (which is also included in the set, See Figure B2).
3. Place the cap back on the check valve inlet port.
4. Complete the medication sticker and attach it to the regulating set. Place the other completed pump sticker on the patient record.

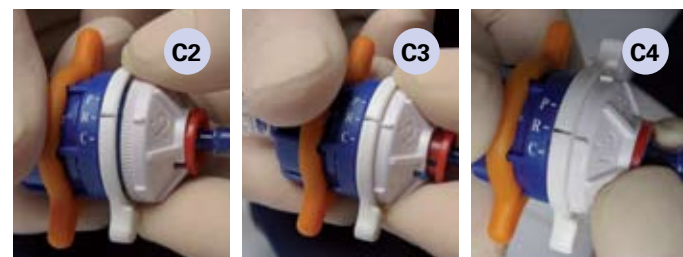
NOTE: The Maximum Volume is either 500ml or 1000ml depending on the SmartBlock model used.

WARNING: Use aseptic technique to fill the reservoir. After use, handle and discard in accordance with standard medical protocols.

SELECT THE PUMP SETTING



1. Position the SmartReg at P (priming). Hold the compression unit and the bolus so that the exit port is positioned facing up and the bolus tubing is positioned upwards. Tap the body of the SmartReg with one finger (See Figure C1).
2. When all the air bubbles have drained from the set tube and from the catheter, position the SmartReg Position Ring at R (regulating, See Figure C2).
3. Select the desired flow rate by aligning the digit on the SmartReg Adjusting Ring with the black line. Push the ring toward the regulator body to secure and to permanently lock out the Priming function (See Figure C3).
4. To permanently set and lock the flow rate prior to the patient being released, push the red locking sleeve toward the regulator body (See Figure C4).



5. Select the desired volume of the MultiBolus by aligning the arrow with the digit by moving the Lever, secure the selected volume by turning the Lock 180° clockwise (See Figure C5).
6. To permanently lock the bolus volume, push the Lock downward (See Figure C6).



The Anesthesiologist has the ability to tailor the SmartBlock's settings throughout the course of treatment to best match the needs of the patient.



Reservoir

When needed, dilute the medication or adjust the volume to extend the therapy duration by adding more solution to the reservoir.

- Remove the cap from the designated check valve.
- Fill the added volume by using a disposable syringe.
- Place the cap back on the check valve.

Warning: Use aseptic technique.



Flow Rate

When needed, address the individual patient's pain needs by re-selecting the flow-rate.

- Pull out the white Adjusting Ring from the secure setting.
- Dial to select the new required flow rate.
- Push in the Adjusting Ring into the secure setting.



Bolus Volume

When needed, address the individual patient's breakthrough pain needs by re-selecting the bolus volume.

- Turn the Lock 180° counter-clockwise to release the volume Lever.
- Use the Lever to dial and select the new required volume.
- Turn the Lock 180° clockwise to secure the new selected volume.

SmartBlock™ Technical Data

- Reservoir volume:
Any volume up to 500ml or any volume up to 1000ml depending on SmartBlock Model used
- Flow rate:
ANYWHERE from 5 to 15 ml/hr
Bolus volume: from 0 to 5 ml

CPNB Procedure	CPT Code
Continuous Sciatic	64446
Continuous Femoral	64448
Continuous Brachial Plexus	64416
Continuous Lumbar Plexus	64449
Ultrasound Guided	76942